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**Ground-Water Data  
for the  
Sundre Aquifer System  
Ward and McHenry Counties,  
North Dakota**

**By  
Steve W. Pusc**

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**North Dakota Ground-Water Studies  
Number 92 - Part I  
North Dakota State Water Commission  
Vernon Fahy, State Engineer**

**Prepared by the  
North Dakota State Water Commission  
In Cooperation with the  
City of Minot, North Dakota**



**1987**

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## INTRODUCTION

The investigation of the hydrogeology of the Sundre aquifer system, Ward and McHenry Counties, was conducted cooperatively by the North Dakota State Water Commission (NDSWC) and the city of Minot, North Dakota. Results of the investigation are presented in two parts. Part I is a compilation of the ground-water data and part II is an interpretive report describing the hydrogeology of the Sundre aquifer system. Part I, (this report) makes available geologic and hydrologic data collected during the investigation and functions as a reference for Part II.

### Purpose and objectives

The purpose of this investigation was to gain a better understanding of the hydrogeology and ground-water potential of the Sundre aquifer system. The general objective was to further define the geometry of the aquifer and the occurrence and movement of water through the aquifer system. Specific objectives were to:

- 1) develop a conceptual model of ground-water flow in the area.
- 2) evaluate the effects 10 years of pumping have had on the ground-water flow systems in the area.
- 3) evaluate the hydraulic connection between the Souris River, Souris Valley aquifer and Sundre aquifer.
- 4) describe and interpret the quality of ground water both spatially and temporally.
- 5) develop a calibrated digital computer model to simulate ground-water flow in the area.
- 6) evaluate the sensitivity of the computer model.
- 7) evaluate the feasibility of utilizing the model as a predictive tool.

#### Location of study area

The study area is located in the northwestern part of the Drift Prairie District of the Central Lowlands physiographic province of North Dakota (fig. 1). Specifically the area includes Township 155 North, Ranges 82 and 83 West; Township 154 North, Ranges 81, 82, and 83 West all in Ward County; and Township 154 North, Ranges 79 and 80 West in McHenry County (pl. 1).

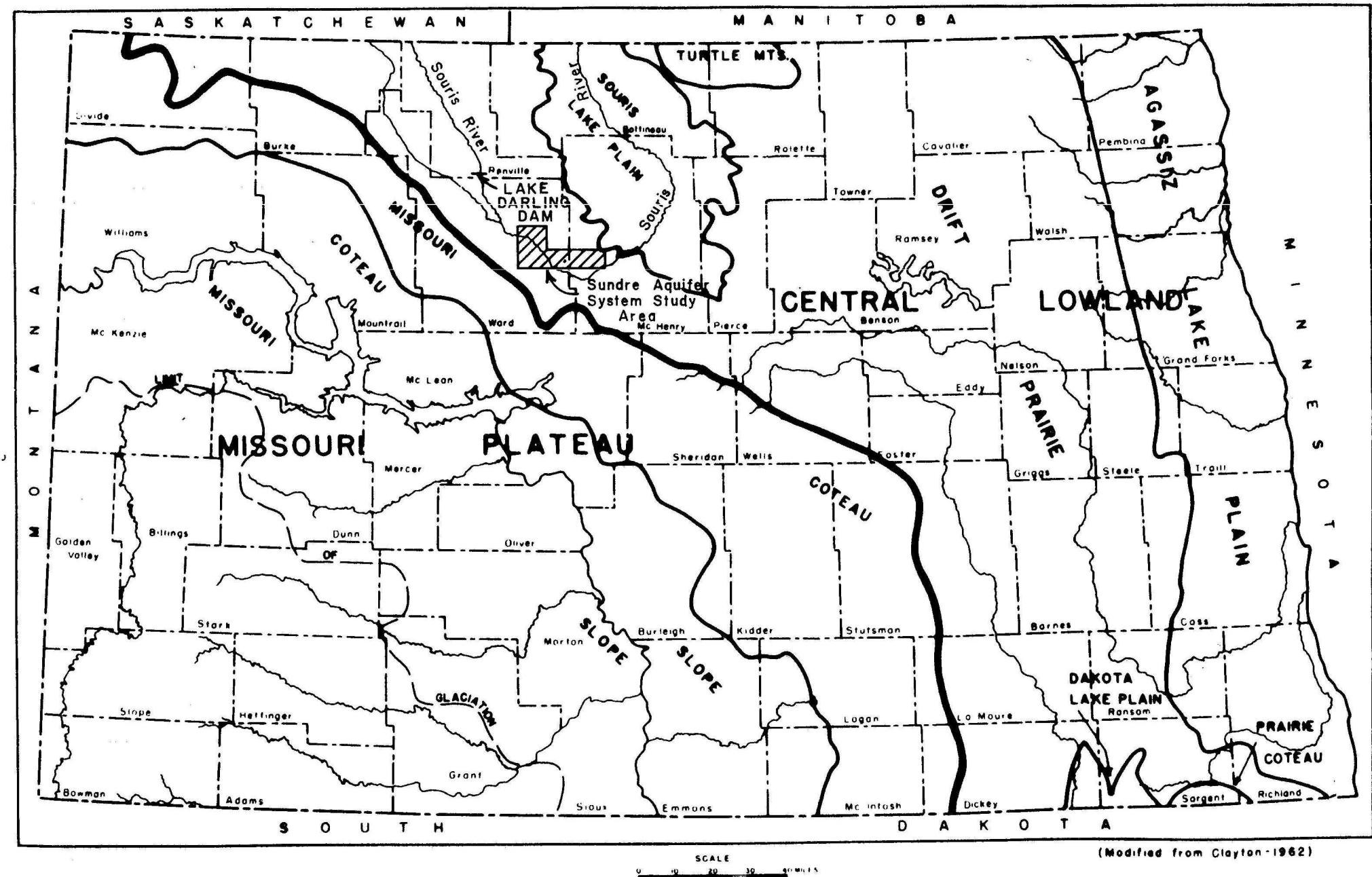
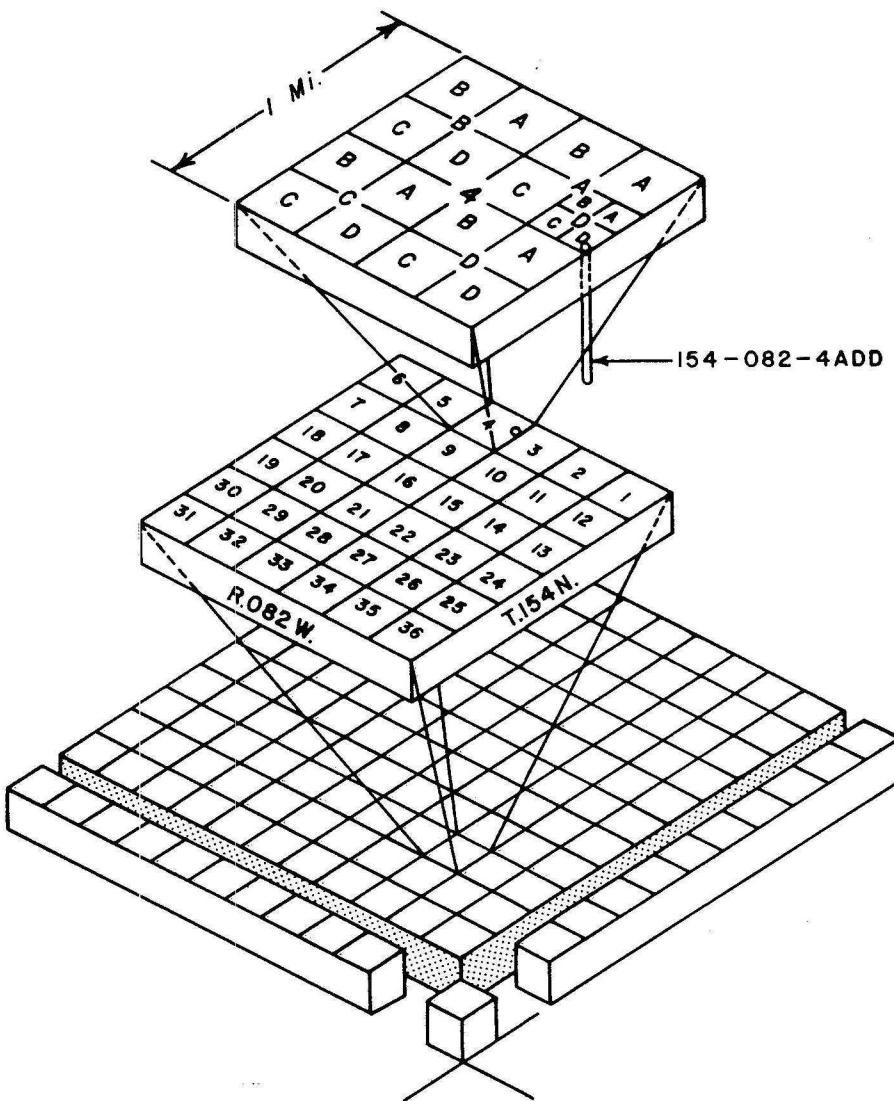


FIGURE I. MAP SHOWING PHYSIOGRAPHIC PROVINCES OF NORTH DAKOTA AND LOCATION OF THE SUNDRE AQUIFER SYSTEM STUDY AREA

#### Location numbering system

Wells and test holes presented on Plate 1 are numbered according to a system based on the location in the public land classification of the United States Bureau of Land Management (fig. 2). The first numeral denotes the township north of a base line, the second numeral denotes the range west of the fifth principal meridian, and the third numeral denotes the section in which the well is located. Letters A, B, C, and D designate, respectively, the northeast, northwest, southwest, and southeast quarter section, quarter-quarter section, and quarter-quarter-quarter section (10 acre tract). For example, well 154-82-04ADD is in the SE $\frac{1}{4}$ SE $\frac{1}{4}$ NE $\frac{1}{4}$  Section 4, Township 154 North, Range 82 West (fig. 2). Consecutive terminal numerals are added if more than one well is located in a 10-acre tract.



**FIGURE 2. Location-numbering system.**

### Acknowledgements

The collection of data for this report was made possible by the cooperation of residents and officials of Ward and McHenry Counties who furnished essential information on wells, allowed the drilling of test holes on their property and permitted water level measurements and collection of water samples. Mr. Robert Schempp, City Manager of Minot; Lyle Weeks, Director of Public Works; Dan Reiter, Water/Waste Water Superintendent; Byron Thronson, Supervisor of Minot's water treatment plant and Jeff Boucher, Water Program Manager, deserve special mention for their cooperation. Particular recognition is due the following personnel of the North Dakota State Water Commission: C. E. Naplin, L. L. Froelich, A. E. Comeskey, M. O. Lindvig, G. L. Sunderland, Lewis Knutson, and G. J. Calheim for drilling and logging test holes and contributions to the understanding of the stratigraphy; C. O. Muri and M. B. Osborne for chemical analyses of water samples and to M. H. Hove, K. K. Kunz, and M. B. Osborne for compiling the water level and water quality files. Special thanks to D. P. Ripley, J. C. Patch, and R. L. Cline for working on the data base computer programs for this report. Appreciation is also expressed to Toni Dally for typing multiple drafts of the report. Thanks to the private drilling companies that furnished well logs and other information used in this report.

## EXPLANATION OF DATA TABLES AND METHODS OF DATA COLLECTION

### Records of test holes and wells

Data presented in this report came from two main sources: (1) pertinent data published in earlier reports: Akin, 1947, LaRocque, 1963, Pettyjohn, 1965, and Pettyjohn, 1968 and (2) data collected by the North Dakota State Water Commission from 1969 to 1985. Data collected in McHenry County prior to 1981 can be obtained from the report, Randich, 1981.

Data collected as part of this study consists of the following: (1) geologic and hydrologic records of wells and test holes, (2) water level measurements in observation wells, (3) lithologic logs of test holes and wells, (4) chemical analyses of ground water and surface water from the area, (5) stage height and discharge measurements of the Souris River at selected sites, and (6) discharge measurements of the five Sundre aquifer production wells.

Records of selected test holes and observation wells are presented in table 1. Test holes were drilled primarily with a Failing Model 1250 forward mud rotary drilling rig owned by the NDSWC. Observation wells were constructed of either 1½-inch or 2-inch polyvinyl chloride (pvc) or 2-inch steel casing with 3 or 6 foot pvc or steel screens.

Prior to this study, observation wells were installed by setting the desired length of casing and screen into the test hole, backwashing with fresh water and then collapsing the formation with air. The annulus was then filled with drill cuttings. New wells were subsequently slugged with a small quantity of fresh water and pumped (airlift) a minimum of 10 hours before collection of water samples and measurement of water levels.

Two (2) inch steel piezometers were constructed specifically for this study by setting the desired length of casing and screen into the test hole, backwashing

gently with fresh water and then sand (silica sand) packing around the screen. Bentonite pellets were immediately poured on top of the sand pack and the remainder of the hole was filled with drill cuttings.

Nests of piezometers were also constructed for this study. Nest construction involved the drilling of an initial deep test hole to determine the number of piezometers to be installed at a particular site. The initial deep test hole also served as the hole for the deep piezometer. First, the desired length of casing and screen were inserted into the test hole. Silica sand was then placed around the screen using a tremie pipe. After sand packing the tremie pipe was lifted so that the bottom was above the top of the sand pack. Neat cement grout was then injected down the tremie pipe and upward in the annular space. This process continued until the grout overflowed around the casing at land surface. After the cement settled, additional cement was poured down the hole until the annular space was filled to land surface. The cement was allowed to "set" before the piezometers were slugged with a small quantity of fresh water and pumped with air for development. Wells installed in the tills were not, however, slugged with fresh water. Subsequent piezometers were completed at each nest site by moving the drilling rig ahead 15 to 20 feet and drilling the next hole. As many as five piezometers were installed at various depths at the same site using this technique.

### Logs of test holes and wells

Geologic logs obtained from water well drillers, pertinent logs from previous investigations, and logs of test holes drilled as part of this study are included in Table 1. Minor changes in word order have been made on some of the drillers' logs. However, geologic interpretations shown on commercial and private logs are those of the drillers.

Geologic samples of drill cuttings were collected and visually analyzed every five feet or whenever the lithology changed. Grain size determination for the United States Geological Survey (USGS) and NDSWC test holes refer to the Wentworth (1922) size scale. Color descriptions were determined by comparing fresh samples with the Geological Society of America's rock color chart (1963).

Resistivity and spontaneous potential logs were run in most of the NDSWC test holes. Several of the deeper test holes near First and Second Larson Coulees were investigated using 16-64 normal, gamma ray, neutron and density logs. Copies of the geophysical logs are available for inspection in the office of the NDSWC. Locations of all test holes and observation wells in the study area are presented on plate 1. Several test holes and observation wells shown on Plate 1 have no log associated with them in Table 1. These logs were already published and can be found in Pettyjohn, 1965, Pettyjohn, 1968, or Randich, 1981.

#### Water levels in selected wells

Listed in Table 3 are water levels in selected wells, in feet below or above (+) land surface. The bulk of the water level data presented in Table 3 were collected by the NDSWC from November 1968 to December 1985.

Depth to water measurements were recorded on a bi-monthly or monthly basis in a number of observation wells throughout the study area. Inclement weather and poor road conditions prevented measurements during a few of the winter months. Water levels in observation wells were monitored on a weekly basis during periods of heavy water use (late summer). Water levels were measured with steel tapes, electronic well sounders, continuous recorders and pressure gauges on flowing wells.

One continuous float type water level recorder was used to collect information for this study. The recorder was installed in October of 1976 on a large diameter well located at the south end of the Sundre well field at Township 154 North, Range 80 West, Section 3CDC<sub>3</sub> (pl. 1). This well also served as the pumping well during the 1969 Sundre aquifer test.

Listed in Table 4 are observation wells that are monitored for the NDSWC by the USGS. Water level data from wells listed in Table 3 can be obtained from the U. S. Geological Survey Water Resources Division, Bismarck, North Dakota.

Stage height of the Souris River at selected sites

Stage height of the Souris River was measured from two locations: (1) the south guardrail of the Saugstad Bridge, and (2) the south guardrail of the George E. Bell Bridge (pl. 1). Bimonthly or monthly measurements were made with a weighted steel tape (Table 2). Measurements were terminated shortly after winter freeze-up.

### Discharge measurements of the Souris River

Sets of discharge and river stage measurements were obtained along the course of the Souris River to establish baseflow conditions (pl. 1). Measurements were obtained at five sites during October and November of 1985 using either a pygmy or double A current meter (table 4). A gage height reading was also obtained at each site to establish a stage-discharge relationship for the river. The release of water from Lake Darling and freeze-up of the Souris River eventually terminated the gain-loss monitoring. Both sets of discharge measurements were, unfortunately, obtained when the river flow was greater than baseflow.

### Discharge measurements, Minot city wells, Sundre well field

Prior to this study, the discharge rate of each production well in the Sundre well field was a rough estimate based on the size of the pump installed in each well. Historically, reported yearly water use from the Sundre aquifer was a lumped total from all five production wells. Flow meters were not originally installed on each well due to the physical design of each well head.

Well discharge measurements were conducted for this study by pumping water from each well individually into a 30,000 gallon storage tank. The time it took to fill a specific volume of the tank was measured and a flow rate calculated. Tests were also conducted by pumping several wells at once. Discharge data obtained from these tests is presented in Table 5. For more details on the production well discharge measurements, the reader is referred to Patch, 1985.

### Water quality

Water quality data from the Sundre aquifer system study area are listed in Table 6. Pertinent water quality data from Pettyjohn, 1968 are also included.

Chemical analyses were made on water samples collected from selected observation wells and the Souris River. The water sampling procedure involved the collection of 250 millilitre (ml) of raw water, 250 ml of filtered water and 250 ml of filtered and acidified (nitric acid) water. Field measurements of specific conductance and water temperature were also made. Water temperature was, however, measured at land surface and does not represent an in situ temperature. The pH was measured in the lab.

Most of the samples were analyzed by the NDSWC Laboratory. Methods of analyses were generally those described by Brown and others (1970). The results are expressed in milligrams per liter (mg/l) or parts per million (ppm). Water samples were obtained from domestic and city supply wells by using the existing pumps. NDSWC observation wells were sampled using two methods: airlift and bailing. Airlift sampling was accomplished with a small diameter rubber hose attached to a portable air compressor.

Sampling with a bailer involved the removal of at least two casing volumes of water by airlift and/or bailing techniques to introduce formation water into the well. After evacuating at least two casing volumes of water, a variable capacity point source bailer (pvc) was lowered to just above the bottom of the well screen. Bailing continued until enough water was secured for the sample.

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Table 1  
Records and geologic logs of test holes and observation wells  
at selected sites

Explanation

Owner and number

SWC 5422 - North Dakota State Water Commission test hole number 5422  
Bison #1 - Bison Power Plant test hole number 1  
DH69-101(PB) - Bureau of Reclamation test hole

Altitude of land surface

1630(T) - Elevation obtained from USGS 7.5 minute quads  
1631.4(S) - Elevation surveyed in

Comments

E - Electric logs available from NDSWC  
QW - Chemical analyses in Table 6  
R - Continuous water level recorder installed  
C - Annulus of well is cemented, screen was sand packed

Source of data

SWC - North Dakota State Water Commission

**Test Hole and Observation Well Record**

|   |   |
|---|---|
| <b>Location:</b> 154-79-20BBB           | <b>Use of well:</b> Observation                       |
| <b>Owner and number:</b> SWC 11527      | <b>Principal aquifer:</b> New Rockford                |
| <b>Depth drilled (ft.):</b> 280         | <b>Altitude of land surface (ft., msl):</b> 1587.9(S) |
| <b>Screened interval (ft.):</b> 218-223 | <b>Lithologic log from:</b> SWC                       |
| <b>Casing diameter:</b> 1.25"           | <b>Comments:</b> E, QW                                |
| <b>Date completed:</b> 5/9/85           |   |

**Lithologic Log**

| <b>Unit description</b>                                      | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Topsoil and fill   | 2                      | 0 - 2              |
| Clay, yellowish brown, silty, sandy, pebbly, oxidized (till) | 33                     | 2 - 35             |
| Sand, fine to medium, oxidized                               | 11                     | 35 - 46            |
| Clay, olive gray, silty, sandy, pebbly (till)                | 16                     | 46 - 62            |
| Sand, fine to coarse, subrounded to rounded                  | 2                      | 62 - 64            |
| Clay, olive gray, silty, sandy, pebbly (till)                | 18                     | 64 - 82            |
| Clay, olive gray to grayish black, cohesive, plastic         | 5                      | 82 - 87            |
| Clay, olive gray, silty, sandy, pebbly (till)                | 9                      | 87 - 96            |
| Clay, olive gray, slightly silty, cohesive, plastic          | 60                     | 96-156             |
| Detrital lignite   | 4                      | 156-160            |
| Clay, olive gray, silty, sandy, pebbly (till)                | 6                      | 160-166            |
| Sand, gravelly, subrounded to rounded                        | 4                      | 166-170            |
| Clay, olive gray, silty, sandy, pebbly (till)                | 3                      | 170-173            |
| Clay, olive gray, silty                                      | 3                      | 173-176            |
| Clay, olive gray, silty, sandy, pebbly (till)                | 8                      | 176-184            |
| Gravel, fine to medium, sandy, subrounded to rounded         | 67                     | 184-251            |
| Clay, brownish gray (Fort Union)                             | 29                     | 251-280            |

**Test Hole and Observation Well Record**

|                                  |   |
|----------------------------------|---|
| Location: 154-79-30AAA           | Use of well: Observation                        |
| Owner and number: SWC 11526      | Principal aquifer: New Rockford                 |
| Depth drilled (ft.): 260         | Altitude of land surface (ft., msl): 1577.10(S) |
| Screened interval (ft.): 198-203 | Lithologic log from: SWC                        |
| Casing diameter: 1.25"           | Comments: E, QW                                 |
| Date completed: 5/8/85           |   |

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil  | 2               | 0 - 2       |
| Clay, yellowish brown, silty, sandy, pebbly, oxidized (till)                         | 14              | 2 - 16      |
| Clay, olive gray, silty, sandy, pebbly, interbedded sand and detrital lignite (till) | 24              | 16 - 40     |
| Sand, very fine to very coarse, gravelly, rounded                                    | 3               | 40 - 43     |
| Clay, olive gray, silty, sandy, pebbly (till)  | 7               | 43 - 50     |
| Clay, olive gray, very silty   | 14              | 50 - 64     |
| Clay, olive gray, silty, sandy, pebbly (till)  | 8               | 64 - 72     |
| Clay, olive gray, slightly silty, cohesive, plastic                                  | 9               | 72 - 81     |
| Sand, fine to medium, rounded  | 20              | 81-101      |
| Sand, medium to coarse, gravelly, subrounded to rounded                              | 21              | 101-122     |
| Gravel, pebble size, sandy, subrounded to rounded                                    | 122             | 122-224     |
| Sandstone, very fine, interbedded claystone (Fort Union)                             | 14              | 224-238     |
| Clay, sandy, bentonite   | 2               | 238-240     |

### Test Hole and Observation Well Record

Location: 154-80-18BBB                      Use of well: Test hole  
Owner and number: SWC 5419                      Principal aquifer:  
Depth drilled (ft.): 140                      Altitude of land surface (ft., msl): 1608(T)  
Screened interval (ft.): None                      Lithologic log from: SWC  
Casing diameter: None                              Comments:  
Date completed: 07/21/69

### Lithologic Log

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Clay, silty to gravelly, moderately cohesive and plastic, moderately calcareous, numerous sand to pebble size particles of limestone, dolostone, quartz, a few cobbles dusky yellow to moderate olive-brown (oxidized till)  | 25              | 0 - 25      |
| Clay, very silty, olive gray to dark greenish gray, slightly to moderately plastic and cohesive (becoming only slightly cohesive and plastic after 70') slightly calcareous, grayish-brown to olive gray, hard, (drills tight), sand to pebble size particles, limestone, dolostone, shale, lignite, some igneous rocks thin layers of sand and gravel | 69              | 25 - 94     |
| Claystone, slightly silty, light olive gray, shaley, very slightly calcareous, drills smooth and tight, interbedded with silty zones which are greenish-gray (bedrock, Fort Union)   | 46              | 94 -140     |

**Test Hole and Observation Well Record**

|                                  |  |
|----------------------------------|--|
| Location: 154-80-25AAAB          | Use of well: Observation                       |
| Owner and number: SWC 11528      | Principal aquifer: New Rockford                |
| Depth drilled (ft.): 329         | Altitude of land surface (ft., msl): 1592.9(S) |
| Screened interval (ft.): 278-283 | Lithologic log from: SWC                       |
| Casing diameter: 1.25"           | Comments: E, QW                                |
| Date completed: 5/9/85           |  |

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil  | 2               | 0 - 2       |
| Clay, yellowish brown, silty, sandy, pebbly, oxidized (till)                     | 14              | 2 - 16      |
| Clay, olive gray, silty, sandy, pebbly, unoxidized (till)                        | 40              | 16 - 56     |
| Gravel, coarse sand to fine gravel, subrounded to rounded, interbedded with till | 16              | 56 - 72     |
| Clay, olive gray, silty, sandy, pebbly (till)                                    | 20              | 72 - 92     |
| Clay, olive gray, slightly silty, slightly plastic                               | 112             | 92-204      |
| Clay, olive gray, silty, sandy, pebbly, interbedded sand and gravel (till)       | 42              | 204-246     |
| Clay, interbedded sand, gravel, and detrital lignite                             | 10              | 246-256     |
| Gravel, pebble size, sandy, subrounded to rounded, some interbedded clay         | 44              | 256-300     |
| Gravel, pebble size, sandy, no clay  | 23              | 300-323     |
| Clay, brownish gray (Fort Union)   | 6               | 323-329     |

Test Hole and Observation Well Record

Location: 154-81-08BBC                      Use of well: Test hole  
Owner and number: SWC 5421                      Principal aquifer:  
Depth drilled (ft.): 120                      Altitude of land surface (ft., msl): 1633(T)  
Screened interval (ft.): None                      Lithologic log from: SWC  
Casing diameter: None                      Comments: E  
Date completed: 7/22/69

Lithologic Log

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Clay, pale yellowish brown to mod.<br>yellowish brown, oxidized, silty,<br>slightly sandy, pebbly, cohesive<br>and plastic (till) | 28              | 0 - 28      |
| Sand, medium to very coarse, predom. coarse<br>and very coarse, angular to subangular,<br>oxidized to 35'                         | 25              | 28 - 53     |
| Clay, olive gray, very silty, sandy, cohesive,<br>interbedded medium to coarse sand (till)  | 37              | 53 - 90     |
| Siltstone, light bluish gray, interbedded<br>light bluish gray sandstone (Fort Union Fm.)   | 30              | 90 -120     |

Test Hole and Observation Well Record

|                                  |   |
|----------------------------------|---|
| Location: 154-81-08BCC           | Use of well: Observation  |
| Owner and number: SWC 5422       | Principal aquifer: Sundre   |
| Depth drilled (ft.): 320         | Altitude of land surface (ft., msl): 1631.4 (S)                   |
| Screened interval (ft.): 258-261 | Lithologic log from: SWC  |
| Casing diameter: 1.25 in.        | Comments: E, QW 1969, wouldn't pump, water level too low 11/21/83 |
| Date completed: 7/22/69          |   |

Lithologic Log

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Clay, yellowish brown, silty, sandy, mottled, calcareous, oxidized (till)  | 32              | 0 - 32      |
| Clay, silty, sandy, plastic, cohesive, calcareous  | 66              | 32 - 98     |
| Gravel, fine to very coarse, sandy, cobbly, poorly to moderately sorted, subangular to subrounded                      | 34              | 98 - 132    |
| Clay, very silty, sandy, slightly plastic and cohesive, calcareous   | 20              | 132 - 152   |
| Clay, olive gray, slightly silty, plastic, cohesive, calcareous  | 63              | 152 - 215   |
| Gravel, medium to very coarse, sandy, poorly to moderately sorted, subangular to subrounded, interbedded clay and silt | 82              | 215 - 297   |
| Claystone, dark greenish gray, interbedded siltstone and sandstone (Fort Union Formation)                              | 23              | 297 - 320   |

Test Hole and Observation Well Record

|                                  |   |
|----------------------------------|---|
| Location: 154-81-08CCC           | Use of well: Observation  |
| Owner and number: SWC 5416       | Principal aquifer: Sundre   |
| Depth drilled (ft.): 360         | Altitude of land surface (ft., msl): 1635.9(s)                        |
| Screened interval (ft.): 318-321 | Lithologic log from: SWC  |
| Casing diameter: 1.25"           | Comments: E, QW 1969, would not pump,<br>water level too low 11/21/83 |
| Date completed: 7/20/69          |   |

Lithologic Log

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil  | 2               | 0 - 2       |
| Clay, yellowish brown, very silty, sandy, pebbly, cobbly, cohesive, plastic, oxidized (till) | 62              | 2 - 64      |
| Clay, olive gray, very silty, sandy, pebbly, cobbly, bouldery, cohesive and plastic (till)   | 50              | 64 - 114    |
| Clay, olive gray, silty, very cohesive, plastic, (lacustrine)                                | 44              | 114 - 158   |
| Sand, very fine to medium, predom. very fine to fine, well sorted                            | 27              | 158 - 185   |
| Gravel, coarse to very coarse, sandy, poorly to moderately sorted, subangular to subrounded  | 15              | 185 - 200   |
| Sand, fine to coarse, moderately sorted, angular to subangular                               | 20              | 200 - 220   |
| Sand, medium to very coarse, gravelly, poorly to moderately sorted, subangular to subrounded | 59              | 220 - 279   |
| Clay, silty, sandy   | 5               | 279 - 284   |
| Sand, subangular to subrounded   | 54              | 284 - 338   |
| Sandstone, very fine to fine, clayey, silty, light bluish gray (Fort Union Fm.)              | 22              | 338 - 360   |

Test Hole and Observation Well Record

|                                  |  |
|----------------------------------|--|
| Location: 154-81-13DDD           | Use of well: Observation                       |
| Owner and number: SWC 5420       | Principal aquifer: Sundre                      |
| Depth drilled (ft.): 340         | Altitude of land surface (ft., msl): 1607.8(s) |
| Screened interval (ft.): 156-159 | Lithologic log from: SWC                       |
| Casing diameter: 1.25"           | Comments: E, QW                                |
| Date completed: 7/21/69          |  |

Lithologic Log

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Clay, pale yellowish brown, very silty, sandy pebbly, moderately cohesive and plastic, oxidized (till) | 23              | 0 - 23      |
| Clay, dark greenish gray, silty, sandy, pebbly, slightly cohesive and plastic (till)                   | 57              | 23 - 80     |
| Sand, fine to medium, predom. fine, well sorted  | 15              | 80 - 95     |
| Clay, light olive gray, slightly silty (lacustrine)  | 39              | 95 -134     |
| Sand, medium to coarse, moderately well sorted, subangular to subrounded, becomes gravelly with depth  | 21              | 134 -155    |
| Gravel, medium to very coarse, sandy, subangular to subrounded   | 35              | 155 -190    |
| Sand, fine to coarse, gravelly   | 80              | 190 -270    |
| Gravel, medium to coarse, sandy, subangular to subrounded  | 40              | 270 -310    |
| Siltstone, olive gray to greenish gray, interbedded with claystone and sandstone (Fort Union Fm.)      | 30              | 310 -340    |

**Test Hole and Observation Well Record**

|  |  |
|--|--|
| <b>Location:</b> 154-81-15BAB <sub>1</sub> | <b>Use of well:</b> Observation                        |
| <b>Owner and number:</b> SWC 11529A        | <b>Principal aquifer:</b> Sundre                       |
| <b>Depth drilled (ft.):</b> 300            | <b>Altitude of land surface (ft., msl):</b> 1637.40(s) |
| <b>Screened interval (ft.):</b> 265-270    | <b>Lithologic log from:</b> SWC                        |
| <b>Casing diameter:</b> 1.25"              | <b>Comments:</b> E, QW, C                              |
| <b>Date completed:</b> 5/10/85             |  |

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil   | 2                      | 0 - 2              |
| Clay, yellowish brown, silty, sandy, pebbly, interbedded sand and gravel, oxidized (till) | 34                     | 2 - 36             |
| Clay, olive gray, silty, sandy, pebbly (till)   | 27                     | 36 - 63            |
| Sand, medium to very coarse, gravelly, subrounded to rounded                              | 8                      | 63 - 71            |
| Clay, olive gray, silty, sandy, pebbly (till)   | 25                     | 71 - 96            |
| Clay, olive gray, silty, sandy, pebbly, interbedded sand and gravel (till)                | 6                      | 96 - 102           |
| Sand, coarse sand to fine gravel, subrounded to rounded, some interbedded clay            | 18                     | 102 - 120          |
| Clay, olive gray (till)   | 4                      | 120- 124           |
| Clay, gray  | 17                     | 124 - 141          |
| Sand, very fine to fine, silty, subrounded to rounded, interbedded silty clay             | 23                     | 141 - 164          |
| Gravel, very coarse sand to fine gravel, subrounded to rounded                            | 112                    | 164 - 276          |
| Clay, whitish gray, sandy, interbedded brownish green clay and lignite (Fort Union Fm.)   | 24                     | 276 - 300          |

**Test Hole and Observation Well Record**

Location: 154-81-15BAB<sub>2</sub>                      Use of well: Observation  
Owner and number: SWC 11529B                      Principal aquifer: Sundre  
Depth drilled (ft.): 200                          Altitude of land surface (ft., msl): 1637.80 (s)  
Screened interval (ft.): 190-195                  Lithologic log from: SWC  
Casing diameter: 1.25"                              Comments: 15' west of 154-81-15BAB<sub>1</sub>, QW, C  
Date completed: 5/13/85

**Lithologic Log**

| Unit description               | Thickness (ft.) | Depth (ft.) |
|--------------------------------|-----------------|-------------|
| See log for 15BAB <sub>1</sub> |                 |             |

**Test Hole and Observation Well Record**

Location: 154-81-15BAB<sub>3</sub>                      Use of well: Observation  
Owner and number: SWC 11529C                      Principal aquifer: Sundre  
Depth drilled (ft.): 160                          Altitude of land surface (ft., msl): 1638.10 (s)  
Screened interval (ft.): 145-150                  Lithologic log from: SWC  
Casing diameter: 1.25"                              Comments: 15' west of 154-81-15BAB<sub>2</sub>, QW, C  
Date completed: 5/14/85

**Lithologic Log**

| Unit description               | Thickness (ft.) | Depth (ft.) |
|--------------------------------|-----------------|-------------|
| See log for 15BAB <sub>1</sub> |                 |             |

**Test Hole and Observation Well Record**

Location: 154-81-15BAB<sub>4</sub>                      Use of well: Observation  
Owner and number: SWC 11529D                      Principal aquifer: Glacial till  
Depth drilled (ft.): 90                              Altitude of land surface (ft., msl): 1638.00 (S)  
Screened interval (ft.): 85-90                      Lithologic log from: SWC  
Casing diameter: 2"                                  Comments: Completed in glacial till, QW, C  
Date completed: 5/14/85

**Lithologic Log**

| Unit description               | Thickness (ft.) | Depth (ft.) |
|--------------------------------|-----------------|-------------|
| See log for 15BAB <sub>1</sub> |                 |             |

**Test Hole and Observation Well Record**

|   |   |
|---|---|
| <b>Location:</b> 154-81-15BBBB          | <b>Use of well:</b> Observation                       |
| <b>Owner and number:</b> SWC 5418       | <b>Principal aquifer:</b> Sundre                      |
| <b>Depth drilled (ft.):</b> 400         | <b>Altitude of land surface (ft., msl):</b> 1634.0(s) |
| <b>Screened interval (ft.):</b> 278-281 | <b>Lithologic log from:</b> SWC                       |
| <b>Casing diameter:</b> 1.25"           | <b>Comments:</b> E, QW                                |
| <b>Date completed:</b> 7/21/69          |   |

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil, black, very silty  | 1                      | 0 - 1              |
| Silt, yellowish brown, clayey   | 6                      | 1 - 7              |
| Clay, yellowish brown, very silty,<br>moderately cohesive and plastic,<br>oxidized (till)   | 30                     | 7 - 37             |
| Clay, olive gray, silty, sandy, gravelly,<br>slightly plastic, moderately cohesive,<br>some interbedded gravel (till)             | 55                     | 37 - 92            |
| Clay, olive gray, slightly silty, sandy and<br>pebbly, moderately plastic, very<br>cohesive, interbedded sand 115'-119'<br>(till) | 27                     | 92 -119            |
| Clay, greenish gray, slightly silty<br>(lacustrine)   | 21                     | 119 -140           |
| Sand, fine to medium, subangular to subrounded  | 22                     | 140 -162           |
| Gravel, medium to very coarse, subangular to<br>rounded, interbedded silt and clay  | 222                    | 162 -384           |
| Claystone, brownish gray (Fort Union Fm.)   | 16                     | 384 -400           |

**Test Hole and Observation Well Record**

|                               |   |
|-------------------------------|---|
| Location: 154-81-18ADD        | Use of well: Test Hole                        |
| Owner and number: SWC 5424    | Principal aquifer:                            |
| Depth drilled (ft.): 240      | Altitude of land surface (ft., msl): 1647 (T) |
| Screened interval (ft.): None | Lithologic log from: SWC                      |
| Casing diameter: None         | Comments: E                                   |
| Date completed: 7/23/69       |   |

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil  | 2               | 0 - 2       |
| Clay, pale yellowish brown, silty, sandy, pebbly, cohesive and plastic, oxidized (till)                            | 34              | 2 - 36      |
| Clay, olive gray, silty, sandy, pebbly, cohesive, plastic (till)   | 7               | 36 - 43     |
| Sand, medium to very coarse, gravelly, angular to subangular   | 10              | 43 - 53     |
| Clay, olive gray, silty, sandy, gravelly, slightly plastic, moderately cohesive interbedded sand and gravel (till) | 81              | 53 - 134    |
| Clay, light olive gray, slightly silty   | 13              | 134 - 147   |
| Sand, medium to coarse, becomes silty with depth, interbedded with silt  | 34              | 147 - 181   |
| Sand, very fine to fine, silty, well sorted, angular to subangular   | 13              | 181 - 194   |
| Claystone, olive gray to dark greenish gray, silty, brittle, interbedded with sandstone (Fort Union Fm.)           | 46              | 194 - 240   |

**Test Hole and Observation Well Record**

Location: 154-81-19BBB                      Use of well: Test hole  
Owner and number: SWC 5524                      Principal aquifer:  
Depth drilled (ft.): 140                      Altitude of land surface (ft., msl): 1536 (T)  
Screened interval (ft.): None                      Lithologic log from: SWC  
Casing diameter: None                              Comments: No electric log  
Date completed: 10/2/69

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil  | 1               | 0 - 1       |
| Clay, dark yellowish brown, very silty, cohesive,<br>plastic, laminated, oxidized (alluvium)                     | 15              | 1 - 16      |
| Sand, fine to coarse, silty, subangular to<br>rounded, oxidized  | 8               | 16 - 24     |
| Clay, olive gray to medium dark gray, very silty,<br>laminated (alluvium)  | 82              | 24 - 106    |
| Sandstone, brownish to bluish gray, very fine<br>grained, clayey, interbedded with<br>siltstone (Fort Union Fm.) | 34              | 106 - 140   |

**Test Hole and Observation Well Record**

Location: 154-81-21AAA                      Use of well: Test hole  
Owner and number: SWC 5417                      Principal aquifer:  
Depth drilled (ft.): 200                      Altitude of land surface (ft., msl): 1637 (T)  
Screened interval (ft.): None                      Lithologic log from: SWC  
Casing diameter: None                              Comments:  
Date completed: 7/21/69

**Lithologic Log**

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Topsoil   | 1               | 0 - 1       |
| Clay, grayish orange to moderate yellowish brown, silty, sandy, cohesive and plastic, oxidized (till) | 29              | 1 - 30      |
| Clay, olive gray, silty, sandy, gravelly, cohesive, plastic, interbedded sand and gravel (till)       | 63              | 30 - 93     |
| Clay, dark greenish gray, plastic, very cohesive (lacustrine)   | 44              | 93 - 137    |
| Shale, light olive gray to greenish gray, fissile (Fort Union Fm.)                                    | 63              | 137 - 200   |

**Test Hole and Observation Well Record**

Location: 154-82-01CCC                      Use of well: Observation  
 Owner and number: SWC 5210                      Principal aquifer: Sundre  
 Depth drilled (ft.): 360                      Altitude of land surface (ft., msl): 1624.0(S)  
 Screened interval (ft.): 297-303              Lithologic log from: SWC  
 Casing diameter: 1.25"                      Comments: E, QW  
 Date completed: 10/1/68

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil  | 1               | 0 - 1       |
| Clay, dark yellowish brown, silty, sandy, pebbly, cohesive, plastic, oxidized (till)                               | 27              | 1 - 28      |
| Gravel, fine to coarse, angular to subangular  | 2               | 28 - 30     |
| Clay, dark yellowish brown, silty, sandy, pebbly, cohesive, plastic, oxidized (till)                               | 8               | 30 - 38     |
| Gravel, fine to coarse, sandy, silty, clayey, angular to subangular  | 2               | 38 - 40     |
| Clay, dark yellowish brown to olive gray, silty, sandy, pebbly, cohesive, plastic, granite boulder 49'- 51' (till) | 11              | 40 - 51     |
| Clay, olive gray, silty, pebbly, cohesive, plastic (till)  | 21              | 51 - 72     |
| Gravel, fine to coarse, sandy, angular to subangular   | 68              | 72-140      |
| Clay, olive gray, very silty, cohesive, plastic (fluvial)  | 46              | 140-186     |
| Sand, very fine to very coarse, angular to subrounded, interbedded silty clay                                      | 14              | 186-200     |
| Gravel, fine to medium, sandy, interbedded silty clay  | 15              | 200-215     |
| Sand, very fine to very coarse, gravelly, angular to subrounded, interbedded with clayey silt                      | 15              | 215-230     |
| Gravel, fine to coarse, sandy, angular to subrounded   | 110             | 230-340     |
| Siltstone, bluish gray to brownish gray, clayey (Fort Union)   | 20              | 340-360     |

**Test Hole and Observation Well Record**

|                                |  |
|--------------------------------|--|
| Location: 154-82-02ADD         | Use of well: Observation                       |
| Owner and number: SWC 5209     | Principal aquifer: Sand and gravel, unnamed    |
| Depth drilled (ft.): 140       | Altitude of land surface (ft., msl): 1643.0(S) |
| Screened interval (ft.): 94-97 | Lithologic log from: SWC                       |
| Casing diameter: 1.25"         | Comments: Well destroyed                       |
| Date completed: 10/1/68        |  |

**Lithologic Log**

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Topsoil   | 1               | 0 - 1       |
| Clay, yellowish brown, silty, sandy, pebbly, cohesive, plastic, oxidized (till)               | 24              | 1 - 25      |
| Sand, very fine to very coarse, gravelly, angular to subrounded, oxidized                     | 21              | 25 - 46     |
| Gravel, fine to coarse, sandy, angular to subrounded, oxidized                                | 16              | 46- 62      |
| Clay, olive gray, silty, slightly sandy, pebbly, cohesive, plastic (till)                     | 3               | 62 - 65     |
| Gravel, fine to coarse, silty and clayey, angular to subrounded, oxidized                     | 2               | 65 - 67     |
| Clay, olive gray, silty, slightly sandy, pebbly, cohesive, plastic, boulder 77' to 79' (till) | 12              | 67 - 79     |
| Gravel, fine to coarse, sandy, silty, clayey, angular to subrounded                           | 11              | 79 - 90     |
| Clay, olive gray, silty, slightly sandy, pebbly, cohesive, plastic (till)                     | 4               | 90 - 94     |
| Gravel, fine to coarse, very sandy, angular to subrounded, interbedded silty clay             | 19              | 94-113      |
| Siltstone, medium bluish gray, interbedded with sandstone (Fort Union)                        | 27              | 113-140     |

**Test Hole and Observation Well Record**

**Location:** 154-82-02BBB

**Use of well:** Test hole

**Owner and number:** SWC 5198

**Principal aquifer:**

**Depth drilled (ft.):** 80

**Altitude of land surface (ft., msl):** 1624(T)

**Screened interval (ft.):** None

**Lithologic log from:** SWC

**Casing diameter:** None

**Comments:**

**Date completed:** 9/18/68

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Topsoil  | 1                      | 0 - 1              |
| Clay, yellowish brown, silty, slightly sandy, pebbly, cohesive, plastic, oxidized (till) | 19                     | 1 - 20             |
| Gravel, fine to coarse, very sandy, angular to rounded, oxidized                         | 14                     | 20 - 34            |
| Clay, olive gray, silty, pebbly, cohesive, slightly plastic (till)                       | 17                     | 34 - 51            |
| Clay, bluish to brownish gray (Fort Union)   | 29                     | 51 - 80            |

**Test Hole and Observation Well Record**

|  |   |
|--|---|
| <b>Location:</b> 154-82-02CCB          | <b>Use of well:</b> Observation                       |
| <b>Owner and number:</b> SWC 5208      | <b>Principal aquifer:</b> Sundre                      |
| <b>Depth drilled (ft.):</b> 260        | <b>Altitude of land surface (ft., msl):</b> 1539.6(S) |
| <b>Screened interval (ft.):</b> 97-100 | <b>Lithologic log from:</b> SWC                       |
| <b>Casing diameter:</b> 1.25"          | <b>Comments:</b> QW                                   |
| <b>Date completed:</b> 9/20/68         |   |

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil   | 1                      | 0 - 1              |
| Clay, yellowish brown, very silty, slightly sandy, oxidized (fluvial)   | 6                      | 1 - 7              |
| Clay, olive gray, very silty, cohesive, plastic, laminated (fluvial)  | 5                      | 7 -12              |
| Gravel, fine to coarse, slightly silty, sandy, angular to subrounded, oxidized                                | 68                     | 12 -80             |
| Sand, very fine to coarse, angular to subrounded, interbedded clayey silt.                                    | 12                     | 80 -92             |
| Gravel, fine to medium-predominantly fine, sandy, angular to subrounded                                       | 10                     | 92-102             |
| Sand, very fine to very coarse - predominantly fine to medium, silty, subangular to rounded, interbedded clay | 68                     | 102-170            |
| Gravel, fine to medium, silty, sandy, angular to subrounded, interbedded clayey silt                          | 20                     | 170-190            |
| Sand, very fine to coarse - predominantly very fine to medium, slightly gravelly, interbedded clayey silt     | 10                     | 190-200            |
| Gravel, fine to coarse - predominantly fine to medium, slightly silty, sandy, interbedded clayey silt         | 34                     | 200-234            |
| Siltstone, bluish to dark gray, clayey, moderately indurated, interbedded sandstone (Fort Union)              | 26                     | 234-260            |

**Test Hole and Observation Well Record**

**Location:** 154-82-02CCC

**Use of well:** Test hole

**Owner and number:** SWC 5205

**Principal aquifer:**

**Depth drilled (ft.):** 50

**Altitude of land surface (ft., msl):** 1538(T)

**Screened interval (ft.):** None

**Lithologic log from:** SWC

**Casing diameter:** None

**Comments:** Abandoned hole due to caving

**Date completed:** 9/26/68

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Topsoil  | 1                      | 0 - 1              |
| Clay, yellowish brown, very silty, cohesive,<br>plastic, laminated, oxidized (fluvial) | 14                     | 1 - 15             |
| Clay, olive gray, very silty, cohesive, plastic,<br>laminated (fluvial)                | 20                     | 15 - 35            |
| Gravel, fine to coarse, cobbley and bouldery,<br>angular to subrounded                 | 15                     | 35 - 50            |

**Test Hole and Observation Well Record**

|                                      |   |
|--------------------------------------|---|
| Location: 154-82-02CCCB <sub>1</sub> | Use of well: Observation                        |
| Owner and number: SWC 11494A         | Principal aquifer: Sundre                       |
| Depth drilled (ft.): 180             | Altitude of land surface (ft., msl): 1539.63(S) |
| Screened interval (ft.): 147-152     | Lithologic log from: SWC                        |
| Casing diameter: 1.25"               | Comments: QW                                    |
| Date completed: 9/27/84              |   |

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil  | 1               | 0 - 1       |
| Silt, yellowish brown, clayey, sandy (very fine), oxidized             | 17              | 1 - 18      |
| Gravel, granule to pebble size, sandy, subrounded to rounded, oxidized | 5               | 18 - 23     |
| Clay, olive gray, very silty, very sandy                               | 14              | 23 - 37     |
| Gravel, granule to pebble size, subrounded to rounded                  | 29              | 37 - 66     |
| Clay, olive gray, silty, sandy   | 23              | 66 - 89     |
| Sand, gravelly, subrounded to rounded                                  | 32              | 89-121      |
| Clay, olive gray, very silty, interbedded sand and gravel              | 18              | 121-139     |
| Gravel (poor cuttings return)  | 3               | 139-142     |
| Clay, olive gray, silty, interbedded sand and gravel                   | 30              | 142-172     |
| Sand, gravelly (poor cuttings return)                                  | 5               | 172-177     |
| Clay, olive gray, silty, interbedded sand and gravel                   | 3               | 177-180     |

**Test Hole and Observation Well Record**

**Location:** 154-82-02CCCB<sub>2</sub>

**Use of well:** Observation

**Owner and number:** SWC 11494B

**Principal aquifer:** Souris Valley

**Depth drilled (ft.):** 55

**Altitude of land surface (ft., msl):** 1539.73(S)

**Screened interval (ft.):** 41.6-46.6

**Lithologic log from:** SWC

**Casing diameter:** 1.25"

**Comments:** QW

**Date completed:** 10/1/84

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil   | 1                      | 0 - 1              |
| Silt, yellowish brown, clayey, oxidized                         | 17                     | 1 - 18             |
| Gravel, granule to pebble size, sandy,<br>subrounded to rounded | 37                     | 18 - 55            |

**Test Hole and Observation Well Record**

|                                      |   |
|--------------------------------------|---|
| <b>Location:</b> 154-82-03ABC        | <b>Use of well:</b> Test hole                       |
| <b>Owner and number:</b> SWC 5202    | <b>Principal aquifer:</b>                           |
| <b>Depth drilled (ft.):</b> 240      | <b>Altitude of land surface (ft., msl):</b> 1585(T) |
| <b>Screened interval (ft.):</b> None | <b>Lithologic log from:</b> SWC                     |
| <b>Casing diameter:</b> None         | <b>Comments:</b>                                    |
| <b>Date completed:</b> 9/20/68       |   |

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil   | 1                      | 0 - 1              |
| Gravel, fine to coarse, sandy, cobbly, angular to subrounded, oxidized          | 14                     | 1 - 15             |
| Clay, yellowish-brown, silty, sandy, pebbly, cohesive, plastic, oxidized (till) | 10                     | 15 - 25            |
| Clay, olive gray, silty, sandy, pebbly, cohesive, plastic (till)                | 15                     | 25 - 40            |
| Gravel, fine to coarse, sandy, angular to subrounded, oxidized stain            | 60                     | 40-100             |
| Clay, olive gray, very silty, slightly sandy, interbedded fine sand (fluvial)   | 48                     | 100-148            |
| Silt, olive gray, clayey, interbedded fine sand, cohesive, plastic              | 60                     | 148-208            |
| Gravel, fine to medium, sandy, angular to subrounded, interbedded clayey silt   | 11                     | 208-219            |
| Siltstone, bluish gray to medium gray, clayey, (Fort Union)                     | 21                     | 219-240            |

**Test Hole and Observation Well Record**

|   |   |
|---|---|
| <b>Location:</b> 154-82-3ACB            | <b>Use of well:</b> Observation                       |
| <b>Owner and number:</b> SWC 5200       | <b>Principal aquifer:</b> Sundre                      |
| <b>Depth drilled (ft.):</b> 300         | <b>Altitude of land surface (ft., msl):</b> 1554.9(S) |
| <b>Screened interval (ft.):</b> 208-214 | <b>Lithologic log from:</b> SWC                       |
| <b>Casing diameter:</b> 1.25"           | <b>Comments:</b> E, QW                                |
| <b>Date completed:</b> 9/18/68          |   |

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Topsoil  | 1                      | 0 - 1              |
| Gravel, fine to coarse, clayey, silty, cobbly, angular to rounded  | 15                     | 1 - 16             |
| Clay, yellowish brown, silty, sandy, pebbly, cohesive, plastic, oxidized (till)                            | 11                     | 16 - 27            |
| Gravel, fine to very coarse, predominantly medium, sandy, angular to subrounded, oxidized                  | 9                      | 27 - 36            |
| Sand, fine to very coarse, predominantly medium to coarse, gravelly, angular to subrounded, oxidized stain | 16                     | 36 - 52            |
| Sand, as above, cobbly and bouldery, less oxidized   | 17                     | 52 - 69            |
| Silt, interbedded with clay and fine sand  | 16                     | 69 - 85            |
| Sand, fine to medium, interbedded silt and sandy clay  | 21                     | 85-106             |
| Clay, olive gray, plastic  | 2                      | 106-108            |
| Silt, light gray to olive gray, clayey, sandy, laminated   | 9                      | 108-117            |
| Clay, olive gray, silty, very cohesive and plastic   | 15                     | 117-132            |
| Clay, interbedded silt, sand, and gravel   | 65                     | 132-197            |
| Gravel, fine to very coarse, sandy, subangular to subrounded   | 51                     | 197-248            |

## 154-82-3ACB cont.

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Sandstone, light greenish gray, very fine grain,<br>micaceous, indurated, calcareous<br>(Fort Union) | 3               | 248-251     |
| Clay, very sandy, calcareous   | 4               | 251-255     |
| Sand, dark greenish gray, very fine, friable,<br>micaceous   | 2               | 255-257     |
| Shale, dark brownish gray, silty, carbonaceous   | 7               | 257-264     |
| Sand, dark greenish gray, very fine, clayey  | 8               | 264-272     |
| Shale, greenish gray, silty  | 7               | 272-279     |
| Shale, light gray to brownish black, silty,<br>carbonaceous  | 21              | 279-300     |

**Test Hole and Observation Well Record**

**Location:** 154-82-03BBB

**Use of well:** Test hole

**Owner and number:** DH69-101(PR)

**Principal aquifer:**

**Depth drilled (ft.):** 50

**Altitude of land surface (ft., msl):** 1549.5(S)

**Screened interval (ft.):**

**Lithologic log from:** Bureau of Reclamation

**Casing diameter:**

**Comments:** Could not locate, 1983

**Date completed:** 11/26/69

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil   | 1                      | 0 - 1              |
| Clay, dark brown, sandy, oxidized                               | 4                      | 1 - 5              |
| Sand, fine to coarse, predominantly fine to medium<br>some clay | 5                      | 5 -10              |
| Clay, gray, silty, sandy, pebbly (till)                         | 22                     | 10 -32             |
| Sand, fine to coarse, silty, interbedded<br>clay and gravel     | 9                      | 32 -41             |
| Clay, dark gray to black, silty, sandy, gravelly<br>(till)      | 9                      | 41 -50             |

**Test Hole and Observation Well Record**

|   |   |
|---|---|
| <b>Location:</b> 154-82-03BCC           | <b>Use of well:</b> Observation                       |
| <b>Owner and number:</b> SWC 5213       | <b>Principal aquifer:</b> Sundre                      |
| <b>Depth drilled (ft.):</b> 280         | <b>Altitude of land surface (ft., msl):</b> 1542.6(S) |
| <b>Screened interval (ft.):</b> 217-223 | <b>Lithologic log from:</b> SWC                       |
| <b>Casing diameter:</b> 1.25"           | <b>Comments:</b> E, QW                                |
| <b>Date completed:</b> 10/8/68          |   |

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil   | 1                      | 0 - 1              |
| Clay, yellowish brown, very silty, slightly sandy, slightly cohesive, plastic, oxidized (fluvial)       | 14                     | 1 - 15             |
| Sand, very fine to medium, subangular, oxidized   | 15                     | 15 - 30            |
| Clay, olive gray, silty, cohesive, plastic, laminated (fluvial)   | 8                      | 30 - 38            |
| Sand, very fine to medium, predominantly very fine to fine, subangular to subrounded                    | 2                      | 38 - 40            |
| Clay, olive gray to medium dark gray, very silty, interbedded fine sand, cohesive, plastic (fluvial)    | 45                     | 40 - 85            |
| Gravel, fine to medium, sandy, angular to rounded   | 28                     | 85-113             |
| Clay, olive gray, very silty, cohesive, plastic, laminated, interbedded very fine sand (fluvial)        | 19                     | 113-132            |
| Sand, very fine to coarse, predominantly fine to medium, angular to subrounded, interbedded clayey silt | 20                     | 132-152            |
| Clay, olive gray, very silty, slightly sandy, cohesive, plastic (fluvial)                               | 34                     | 152-186            |
| Sand, very fine to very coarse, gravelly, subangular to rounded   | 14                     | 186-200            |
| Gravel, fine to coarse, predominantly fine to medium, sandy, angular to rounded                         | 36                     | 200-236            |
| Siltstone, brownish gray to medium dark gray, clayey  | 44                     | 236-280            |

**Test Hole and Observation Well Record**

|   |  |
|---|--|
| <b>Location:</b> 154-82-03BCCA1                           | <b>Use of well:</b> Observation                        |
| <b>Owner and number:</b> SWC 11491A                       | <b>Principal aquifer:</b> Sundre                       |
| <b>Depth drilled (ft.):</b> 230                           | <b>Altitude of land surface (ft., msl):</b> 1543.65(S) |
| <b>Screened interval (ft.):</b> 195-200                   | <b>Lithologic log from:</b> SWC                        |
| <b>Casing diameter:</b> Top 120', 2"<br>Bottom 77', 1.25" | <b>Comments:</b> E, QW, C                              |
| <b>Date completed:</b> 9/18/84                            |  |

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Topsoil  | 1                      | 0 - 1              |
| Silt, yellowish brown, clayey, oxidized  | 17                     | 1 - 18             |
| Clay, olive gray, silty  | 3                      | 18 - 21            |
| Sand, medium to very coarse, gravelly,<br>subrounded to rounded                        | 7                      | 21 - 28            |
| Clay, olive gray, silty, cohesive, plastic   | 35                     | 28 - 63            |
| Sand, fine to coarse, subrounded to<br>rounded   | 4                      | 63 - 67            |
| Clay, olive gray, silty  | 8                      | 67 - 75            |
| Sand, very fine to fine, subrounded to<br>rounded                                      | 5                      | 75 - 80            |
| Clay, olive gray, silty, plastic, interbedded<br>with some gravel and detrital lignite | 16                     | 80 - 96            |
| Clay, olive gray, very silty, interbedded<br>very fine sand                            | 35                     | 96-131             |
| Lignite, detrital, interbedded silt  | 10                     | 131-141            |
| Gravel, coarse sand to pebble size gravel,<br>subrounded to rounded                    | 16                     | 141-157            |
| Silt, olive gray, clayey, interbedded detrital<br>lignite                              | 15                     | 157-172            |

154-82-03BCCA<sub>1</sub>  
cont.

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Silt, olive gray, clayey  | 13              | 172-185     |
| Sand, coarse to very coarse, gravelly,<br>subrounded to rounded | 19              | 185-204     |
| Clay, olive gray  | 1               | 204-205     |
| Gravel, granule to pebble size, sandy                           | 25              | 205-230     |

**Test Hole and Observation Well Record**

Location: 154-82-03BCCA<sub>2</sub>                      Use of well: Observation  
 Owner and number: SWC 11491B                      Principal aquifer: Sundre  
 Depth drilled (ft.): 160                          Altitude of land surface (ft., msl): 1543.65(S)  
 Screened interval (ft.): 150-155                  Lithologic log from: SWC  
 Casing diameter: 2"                                Comments: QW, C  
 Date completed: 9/19/84

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil  | 1               | 0 - 1       |
| Silt, yellowish brown, clayey, oxidized                    | 18              | 1 - 19      |
| Clay, olive gray, silty                                    | 2               | 19 - 21     |
| Sand, fine to medium, subrounded to rounded                | 5               | 21 - 26     |
| Clay, olive gray, silty                                    | 58              | 26 - 84     |
| Clay, olive gray, silty, interbedded detrital lignite      | 12              | 84 - 96     |
| Clay, olive gray, silty                                    | 7               | 96-103      |
| Sand, silty (poor cuttings return)                         | 1               | 103-104     |
| Clay, olive gray, silty                                    | 33              | 104-137     |
| Sand, fine to very coarse, gravelly, subrounded to rounded | 19              | 137-156     |
| Clay, olive gray, silty                                    | 4               | 156-160     |

**Test Hole and Observation Well Record**

Location: 154-82-03BCCA<sub>3</sub>                      Use of well: Observation  
Owner and number: SWC 11491C                      Principal aquifer: Souris Valley  
Depth drilled (ft.): 35                              Altitude of land surface (ft., msl): 1543.90(S)  
Screened interval (ft.): 23-28                      Lithologic log from: SWC  
Casing diameter: 2"                                  Comments: QW, C  
Date completed: 9/19/84

**Lithologic Log**

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Topsoil   | 1               | 0 - 1       |
| Silt, yellowish brown, clayey, interbedded sand, oxidized | 18              | 1 -19       |
| Silt, olive gray, clayey                                  | 2               | 19 -21      |
| Sand, medium to very coarse, gravelly, fossiliferous      | 8               | 21 -29      |
| Clay, olive gray, silty                                   | 6               | 29 -35      |

**Test Hole and Observation Well Record**

**Location:** 154-82-03BCC<sub>1</sub>

**Use of well:** Municipal supply

**Owner and number:** City of Minot Well **principal aquifer:** Sundre  
A

**Depth drilled (ft.):** 242

**Altitude of land surface (ft., msl):** 1542 (T)

**Screened interval (ft.):** 195-230

**Lithologic log from:** C. A. Simpson & Son

**Casing diameter:** 16"

**Comments:** QW

**Date completed:** 7/5/75

**Lithologic Log**

| <b>Unit description</b>       | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|-------------------------------|------------------------|--------------------|
|                               | 1                      | 0 - 1              |
| Topsoil                       |                        |                    |
| Clay, yellowish brown, silty  | 14                     | 1 - 15             |
| Sand, fine to medium          | 9                      | 15 - 24            |
| Clay, olive gray, silty       | 64                     | 24 - 88            |
| Sand, medium to coarse        | 9                      | 88 - 97            |
| Gravel, fine to coarse, sandy | 13                     | 97-110             |
| Clay, silty                   | 32                     | 110-142            |
| Sand, medium to coarse        | 9                      | 142-151            |
| Silt, clayey                  | 7                      | 151-158            |
| Sand, fine to coarse          | 7                      | 158-165            |
| Silt, clayey                  | 24                     | 165-189            |
| Gravel, fine to coarse, sandy | 53                     | 189-242            |

**Test Hole and Observation Well Record**

Location: 154-82-03BCD1                  Use of well: Test hole  
Owner and number: SWC 11493A                  Principal aquifer:  
Depth drilled (ft.): 31                  Altitude of land surface (ft., msl): 1540(T)  
Screened interval (ft.): None                  Lithologic log from: SWC  
Casing diameter: None                  Comments: Abandoned hole due to  
Date completed: 9/25/84                  broken sub

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil  | 1               | 0 - 1       |
| Silt, yellowish brown, clayey, oxidized                    | 20              | 1 - 21      |
| Silt, olive gray, clayey, interbedded<br>very fine sand    | 3               | 21 - 24     |
| Sand, medium to coarse, gravelly,<br>subrounded to rounded | 7               | 24 - 31     |

**Test Hole and Observation Well Record**

|                                     |   |
|-------------------------------------|---|
| Location: 154-82-03BCD <sub>2</sub> | Use of well: Observation                        |
| Owner and number: SWC 11493B        | Principal aquifer: Sundre                       |
| Depth drilled (ft.): 242            | Altitude of land surface (ft., msl): 1545.54(S) |
| Screened interval (ft.): 230-235    | Lithologic log from: SWC                        |
| Casing diameter: 1.25"              | Comments: North well, E, QW, C                  |
| Date completed: 9/25/84             |   |

**Lithologic Log**

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Topsoil   | 1               | 0 - 1       |
| Silt, yellowish brown, clayey, oxidized   | 20              | 1 - 21      |
| Clay, olive gray, silty   | 1               | 21 - 22     |
| Sand, medium to very coarse, gravelly,<br>subrounded to rounded                             | 11              | 22 - 33     |
| Silt, olive gray, clayey, interbedded fine<br>sand and detrital lignite                     | 43              | 33 - 76     |
| Gravel, cobbly, sandy, subrounded to rounded  | 5               | 76 - 81     |
| Clay, olive gray, very silty, interbedded<br>with detrital lignite and carbonaceous<br>clay | 16              | 81 - 97     |
| Sand, gravelly (poor cuttings return)   | 18              | 97-115      |
| Clay, olive gray, silty, interbedded sand and<br>gravel                                     | 5               | 115-120     |
| Clay, olive gray, slightly silty  | 12              | 120-132     |
| Clay, olive gray, silty, interbedded sand,<br>gravel, and detrital lignite                  | 7               | 132-139     |
| Sand and gravel (poor cuttings return)  | 2               | 139-141     |
| Clay, olive gray, silty, interbedded sand,<br>gravel, and detrital lignite                  | 21              | 141-162     |
| Sand, gravelly, detrital lignite, subrounded<br>to rounded                                  | 8               | 162-170     |

154-82-03BCD<sub>2</sub> cont.

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Clay, olive gray, silty                                      | 3               | 170-173     |
| Sand, gravelly, detrital lignite (poor cuttings return)      | 12              | 173-185     |
| Clay, olive gray, silty, interbedded detrital lignite        | 5               | 185-190     |
| Sand and gravel  | 2               | 190-192     |
| Clay, olive gray, silty                                      | 2               | 192-194     |
| Sand, gravelly, detrital lignite                             | 16              | 194-210     |
| Clay, olive gray, silty                                      | 8               | 210-218     |
| Sand, coarse to very coarse, gravelly, subrounded to rounded | 33              | 218-241     |
| Clay, sandy, bentonitic                                      | 1               | 241-242     |

**Test Hole and Observation Well Record**

|                                     |   |
|-------------------------------------|---|
| Location: 154-82-03BCD <sub>3</sub> | Use of well: Observation                        |
| Owner and number: SWC 11493C        | Principal aquifer: Sundre                       |
| Depth drilled (ft.): 120            | Altitude of land surface (ft., msl): 1545.64(S) |
| Screened interval (ft.): 109-114    | Lithologic log from: SWC                        |
| Casing diameter: 1.25"              | Comments: Middle well, QW, C                    |
| Date completed: 9/26/84             |   |

**Lithologic Log**

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Topsoil   | 1               | 0 - 1       |
| Clay, yellowish brown, very silty                                       | 22              | 1 -23       |
| Clay, olive gray, silty, interbedded sand, gravel, and detrital lignite | 8               | 23 -31      |
| Gravel  | 6               | 31 -37      |
| Clay, olive gray, very silty  | 4               | 37 -41      |
| Sand, very fine to fine, detrital lignite                               | 21              | 41 -62      |
| Sand, interbedded clay and detrital lignite                             | 18              | 62 -80      |
| Cobbles   | 1               | 80 -81      |
| Clay, olive gray, very silty  | 16              | 81 -97      |
| Sand, gravelly (poor cuttings return)                                   | 20              | 97-117      |
| Clay, olive gray, silty   | 3               | 117-120     |

Test Hole and Observation Well Record

Location: 154-82-03BCD<sub>4</sub> Use of well: Observation  
Owner and number: SWC 11493D Principal aquifer: Souris Valley  
Depth drilled (ft.): 40 Altitude of land surface (ft., msl): 1545.59(S)  
Screened interval (ft.): 29-34 Lithologic log from: SWC  
Casing diameter: 1.25" Comments: South well, QW, C  
Date completed: 9/27/84

Lithologic Log

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Topsoil   | 1               | 0 - 1       |
| Silt, yellowish brown, clayey, oxidized                             | 19              | 1 - 20      |
| Clay, olive gray, very silty  | 2               | 20 - 22     |
| Gravel, coarse sand to pebble size gravel,<br>subrounded to rounded | 12              | 22 - 34     |
| Clay, olive gray, silty   | 6               | 34 - 40     |

**Test Hole and Observation Well Record**

Location: 154-82-03CAC<sub>1</sub>                      Use of well: Observation  
Owner and number: Bison #3                      Principal aquifer: Souris Valley  
Depth drilled (ft.): 170                      Altitude of land surface (ft., msl): 1527(T)  
Screened interval (ft.): 81-84                      Lithologic log from: SWC  
Casing diameter: 1.25"                      Comments: Well destroyed  
Date completed: 8/25/65

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Silt, yellowish brown, clayey, oxidized                              | 5               | 1 - 5       |
| Clay, grayish black, silty, slightly cohesive and plastic            | 10              | 5 -15       |
| Sand, fine to coarse, slightly gravelly, subangular to subrounded    | 14              | 15 -29      |
| Clay, olive gray, silty, very cohesive, plastic                      | 36              | 29 -65      |
| Sand, medium to coarse, gravelly, angular to subangular              | 4               | 65 -69      |
| Gravel, fine to coarse, sandy, angular                               | 19              | 69 -88      |
| Sand, fine to medium, predominantly medium, subangular to subrounded | 82              | 88-170      |

**Test Hole and Observation Well Record**

Location: 154-82-3CAC<sub>2</sub> Use of well: Industrial  
Owner and number: Bison Power Plant Principal aquifer: Souris Valley - Sundre  
production well  
Depth drilled (ft.): Altitude of land surface (ft., msl):  
Screened interval (ft.): 72-92 Lithologic log from: None  
Casing diameter: Comments: Listed as 154-82-3CDB<sub>3</sub> in Pettyjohn,  
Date completed: 1971

**Lithologic Log**

| Unit description | Thickness (ft.) | Depth (ft.) |
|------------------|-----------------|-------------|
|------------------|-----------------|-------------|

**Test Hole and Observation Well Record**

Location: 154-82-03CBAA<sub>1</sub> Use of well: Observation  
 Owner and number: SWC 11490A Principal aquifer: Sundre  
 Depth drilled (ft.): 240 Altitude of land surface (ft., msl): 1543.18(S)  
 Screened interval (ft.): 223.4-228.4 Lithologic log from: SWC  
 Casing diameter: 2" Comments: South well, E, QW, C  
 Date completed: 9/12/84

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil  | 2               | 0 - 2       |
| Clay, yellowish brown, very silty, plastic,<br>laminated, oxidized                         | 20              | 2 - 22      |
| Sand, gravelly, rounded  | 4               | 22 - 26     |
| Clay, olive gray, silty  | 16              | 26 - 42     |
| Sand, fine to coarse   | 7               | 42 - 49     |
| Clay, olive gray   | 3               | 49 - 52     |
| Sand, coarse (poor cuttings return)  | 4               | 52 - 56     |
| Clay, olive gray, silty  | 9               | 56 - 65     |
| Gravel, coarse sand to pebble size gravel,<br>predominantly gravel, interbedded silty clay | 5               | 65 - 70     |
| Clay, olive gray, silty  | 16              | 70 - 86     |
| Sand, coarse sand to pebble size gravel,<br>subrounded to rounded                          | 16              | 86-102      |
| Clay, olive gray, silty  | 38              | 102-140     |
| Gravel, sandy, rounded   | 23              | 140-163     |
| Clay, olive gray, silty  | 1               | 163-164     |
| Gravel, sandy, rounded, much detrital lignite  | 10              | 164-174     |
| Clay, olive gray, silty  | 1               | 174-175     |

154-82-03CBAAl  
cont.

| Unit description                                    | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Sand, gravelly, much detrital lignite               | 7               | 175-182     |
| Clay, olive gray, silty                             | 7               | 182-189     |
| Sand, gravelly, much detrital lignite               | 24              | 189-213     |
| Clay, olive gray, silty                             | 3               | 213-216     |
| Gravel, sandy, rounded                              | 20              | 216-236     |
| Sandstone, greenish, very fine, clayey (Fort Union) | 4               | 236-240     |

**Test Hole and Observation Well Record**

Location: 154-82-03CBAA2                      Use of well: Observation  
 Owner and number: - SWC 11490B                Principal aquifer: Sundre  
 Depth drilled (ft.): 160                        Altitude of land surface (ft., msl): 1543.03(S)  
 Screened interval (ft.): 153.5-158.5           Lithologic log from: SWC  
 Casing diameter: 2"                              Comments: 15' north of CBAA<sub>1</sub>, QW, C  
 Date completed: 9/17/84

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil  | 1               | 0 - 1       |
| Silt, yellowish brown, clayey, interbedded<br>very fine sand, oxidized | 18              | 1 - 19      |
| Clay, olive gray, silty  | 1               | 19 - 20     |
| Sand, medium sand to pebble size gravel,<br>subrounded to rounded      | 7               | 20 - 27     |
| Clay, olive gray, silty, interbedded detrital<br>lignite               | 15              | 27 - 42     |
| Sand, very fine to coarse, subrounded to rounded                       | 5               | 42 - 47     |
| Clay, olive gray, interbedded detrital lignite                         | 18              | 47 - 65     |
| Sand, gravelly, subrounded to rounded                                  | 4               | 65 - 69     |
| Clay, olive gray, interbedded gravel and detrital<br>lignite           | 22              | 69 - 91     |
| Gravel, sandy, interbedded detrital lignite                            | 11              | 91-102      |
| Clay, olive gray, silty  | 16              | 102-118     |
| Sand, gravelly   | 2               | 118-120     |
| Clay, olive gray, silty, interbedded detrital<br>lignite               | 21              | 120-141     |
| Sand, gravelly, subrounded to rounded                                  | 19              | 141-160     |

**Test Hole and Observation Well Record**

|                                      |  |
|--------------------------------------|--|
| Location: 154-82-03CBAA <sub>3</sub> | Use of well: Observation                         |
| Owner and number: SWC 11490C         | Principal aquifer: Sundre                        |
| Depth drilled (ft.): 105             | Altitude of land surface (ft., msl): 1543.23     |
| Screened interval (ft.): 94-99       | Lithologic log from: SWC                         |
| Casing diameter: 2"                  | Comments: 15' north of CBAA <sub>2</sub> , QW, C |
| Date completed: 9/17/84              |  |

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil  | 1               | 0 - 1       |
| Silt, yellow brown, clayey, oxidized   | 18              | 1 - 19      |
| Silt, olive gray, clayey   | 1               | 19 - 20     |
| Sand, very fine to coarse, subrounded to rounded   | 6               | 20 - 26     |
| Clay, olive gray, silty, interbedded detrital lignite  | 21              | 26 - 47     |
| Gravel, coarse sand to pebble size gravel, predominantly granule size gravel                   | 10              | 47 - 57     |
| Clay, olive gray, silty, interbedded detrital lignite  | 6               | 57 - 63     |
| Cobbles  | 1               | 63 - 64     |
| Gravel, sandy, subrounded to rounded   | 3               | 64 - 67     |
| Clay, olive gray, silty, interbedded detrital lignite  | 7               | 67 - 84     |
| Gravel, coarse sand to pebble size gravel, subrounded to rounded, interbedded detrital lignite | 17              | 84-101      |
| Clay, olive gray, silty  | 4               | 101-105     |

**Test Hole and Observation Well Record**

**Location:** 154-82-03CBAA<sub>4</sub>

**Use of well:** Observation

**Owner and number:** SWC 11490D

**Principal aquifer:** Souris Valley

**Depth drilled (ft.):** 60

**Altitude of land surface (ft., msl):** 1543.38(S)

**Screened interval (ft.):** 50-55

**Lithologic log from:** SWC

**Casing diameter:** 2"

**Comments:** 15' North of CBAA<sub>3</sub>, QW, C

**Date completed:** 9/18/84

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil   | 1                      | 0 - 1              |
| Silt, yellowish brown, clayey, oxidized                           | 18                     | 1 - 19             |
| Silt, olive gray, clayey  | 1                      | 19 - 20            |
| Sand, coarse to very coarse, gravelly,<br>subrounded to rounded   | 7                      | 20 - 27            |
| Clay, olive gray, very silty                                      | 5                      | 27 - 42            |
| Sand, coarse sand to pebble size gravel,<br>subrounded to rounded | 13                     | 42 - 55            |
| Clay, olive gray, silty   | 5                      | 55 - 60            |

**Test Hole and Observation Well Record**

Location: 154-82-03CBAA<sub>5</sub> Use of well: Observation  
Owner and number: SWC 11490E Principal aquifer: Souris Valley  
Depth drilled (ft.): 35 Altitude of land surface (ft., msl): 1543.38(S)  
Screened interval (ft.): 22-27 Lithologic log from: SWC  
Casing diameter: 2" Comments: North well, QW, C, well destroyed  
Date completed: 9/18/84

**Lithologic Log**

| Unit description                        | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Topsoil                                 | 1               | 0 - 1       |
| Silt, yellowish brown, clayey, oxidized | 18              | 1 -19       |
| Silt, olive gray, clayey                | 1               | 19 -20      |
| Sand, gravelly, subrounded to rounded   | 7               | 20 -27      |
| Clay, olive gray, silty                 | 8               | 27 -35      |

**Test Hole and Observation Well Record**

Location: 154-82-03CBAA6                      Use of well: Observation  
Owner and number: SWC 11797                      Principal aquifer: Souris Valley  
Depth drilled (ft.): 35                          Altitude of land surface (ft., msl): 1543.4  
Screened interval (ft.): 22-27                      Lithologic log from: SWC files  
Casing diameter: 2-inch                          Comments: Replacement well for 154-82-03CBAA5  
Date completed: 06/25/86

**Lithologic Log**

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Topsoil   | 1               | 0 - 1       |
| Silt, clayey, yellowish brown, oxidized,<br>slightly sandy  | 19              | 1 - 20      |
| Sand, gravelly, well rounded to subrounded,<br>taking water | 7               | 20 - 27     |
| Clay, olive gray, silty                                     | 8               | 27 - 35     |

**Test Hole and Observation Well Record**

|                                     |  |
|-------------------------------------|--|
| Location: 154-82-03CBA <sub>1</sub> | Use of well: Observation                     |
| Owner and number: Bison #4          | Principal aquifer: Souris Valley, Sundre     |
| Depth drilled (ft.): 120            | Altitude of land surface (ft., msl): 1527(T) |
| Screened interval (ft.): 96-99      | Lithologic log from: SWC                     |
| Casing diameter: 1.25"              | Comments: Destroyed, E, QW                   |
| Date completed: 8/26/65             |  |

**Lithologic Log**

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Fill  | 4.5             | 0 - 4.5     |
| Silt, olive brown to olive gray, clayey,<br>interbedded with very fine to fine sand | 7.5             | 4.5 -12     |
| Sand, fine to medium, fossiliforous   | 16              | 12 -28      |
| Clay, greenish gray, silty, sandy, fossiliforous                                    | 9               | 28 -37      |
| Sand, fine  | 12              | 37 -49      |
| Clay, dark gray   | 6               | 49 -55      |
| Sand, fine  | 6               | 55 -61      |
| Clay, olive gray, sandy   | 5               | 61 -66      |
| Sand, fine to coarse, gravelly, subangular<br>to subrounded                         | 37              | 66-103      |
| Shale, light olive gray, very silty   | 17              | 103-120     |

**Test Hole and Observation Well Record**

**Location:** 154-82-03CBA<sub>2</sub>

**Use of well:** Observation

**Owner and number:** SWC 5203

**Principal aquifer:** Sundre

**Depth drilled (ft.):** 280

**Altitude of land surface (ft., msl):** 1543.3(S)

**Screened interval (ft.):** 231-237

**Lithologic log from:** SWC

**Casing diameter:** 1.25"

**Comments:** Well destroyed, QW

**Date completed:** 9/25/68

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Topsoil  | 1                      | 0 - 1              |
| Clay, yellowish brown, very silty, slightly sandy, oxidized (fluvial)                                    | 17                     | 1 - 18             |
| Sand, very fine to medium, silty, subangular to rounded  | 10                     | 18 - 28            |
| Clay, olive gray, very silty, interbedded very fine to fine sand (fluvial)                               | 17                     | 28 - 45            |
| Sand, very fine to medium, slightly silty, subangular to subrounded, interbedded clayey silt             | 15                     | 45 - 60            |
| Silt, olive gray to dark greenish gray, clayey, slightly sandy, cohesive, plastic (fluvial)              | 18                     | 60 - 88            |
| Gravel, fine to coarse, predominantly fine to medium, silty, slightly sandy, angular to subrounded       | 8                      | 88 - 96            |
| Clay, olive gray to medium bluish gray, very silty, sandy, interbedded sand, cohesive, plastic (fluvial) | 41                     | 96-137             |
| Gravel, fine to medium, slightly sandy, interbedded clayey silt  | 87                     | 137-224            |
| Gravel, fine to coarse, predominantly fine to medium, sandy, angular to subrounded                       | 14                     | 224-238            |
| Shale, brown to medium dark gray, siliceous, moderately indurated (Fort Union)                           | 2                      | 238-240            |
| Sandstone, pale yellowish brown, very fine to fine, calcareous   | 1                      | 240-241            |
| Siltstone, medium bluish gray, slightly siliceous, indurated, bedded                                     | 39                     | 241-280            |

**Test Hole and Observation Well Record**

|  |   |
|--|---|
| <b>Location:</b> 154-82-03CBA <sub>3</sub> | <b>Use of well:</b> Observation                       |
| <b>Owner and number:</b> SWC 5212          | <b>Principal aquifer:</b> Sundre                      |
| <b>Depth drilled (ft.):</b> 300            | <b>Altitude of land surface (ft., msl):</b> 1539.7(S) |
| <b>Screened interval (ft.):</b> 257-263    | <b>Lithologic log from:</b> SWC                       |
| <b>Casing diameter:</b> 1.25"              | <b>Comments:</b> E, QW                                |
| <b>Date completed:</b> 10/8/68             |   |

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Topsoil  | 1                      | 0 - 1              |
| Clay, yellowish brown, very silty, sandy, cohesive, plastic, laminated, oxidized (fluvial)       | 10                     | 1 - 11             |
| Clay, olive gray, very silty, interbedded very fine sand, cohesive, plastic, laminated (fluvial) | 78                     | 11 - 89            |
| Sand, very fine to very coarse, gravelly, angular to subrounded                                  | 7                      | 89 - 96            |
| Clay, olive gray, very silty, interbedded with fine to medium sand                               | 12                     | 96-108             |
| Sand, very fine to medium, angular to subrounded   | 2                      | 108-110            |
| Clay, olive gray, very silty, interbedded very fine to fine sand, cohesive, plastic              | 37                     | 110-147            |
| Sand, very fine to coarse, angular to subrounded, interbedded clayey silt                        | 3                      | 147-150            |
| Clay, olive gray to dark greenish gray, very silty, cohesive, plastic (fluvial)                  | 70                     | 150-220            |
| Sand, fine to very coarse, predominantly medium to coarse, gravelly, angular to subrounded       | 45                     | 220-265            |
| Sandstone, very fine grain, clayey (Fort Union)  | 35                     | 265-300            |

**Test Hole and Observation Well Record**

|  |   |
|--|---|
| <b>Location:</b> 154-82-03CBA <sub>4</sub> | <b>Use of well:</b> Observation                       |
| <b>Owner and number:</b> SWC 5428          | <b>Principal aquifer:</b> Souris Valley - Sundre      |
| <b>Depth drilled (ft.):</b> 280            | <b>Altitude of land surface (ft., msl):</b> 1540.3(S) |
| <b>Screened interval (ft.):</b> 148-151    | <b>Lithologic log from:</b> SWC                       |
| <b>Casing diameter:</b> 1.25"              | <b>Comments:</b> E, QW                                |
| <b>Date completed:</b> 7/25/68             |   |

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| <b>Topsoil</b>  | 2                      | 0 - 2              |
| Silt, yellowish brown, clayey, interbedded sand and gravel, oxidized                      | 17                     | 2 - 19             |
| Clay, greenish gray to olive gray, slightly silty, cohesive, plastic                      | 56                     | 19 - 75            |
| Gravel, fine to very coarse, sandy, subangular to subrounded                              | 7                      | 75 - 82            |
| Sand, fine to coarse, gravelly, subangular to subrounded, interbedded silt and clay       | 19                     | 82-101             |
| Sand, fine to medium, very silty, interbedded clay  | 47                     | 101-148            |
| Gravel, very sandy  | 13                     | 148-161            |
| Silt, olive gray to greenish gray, clayey, some interbedded sand (lacustrine)             | 69                     | 161-230            |
| Gravel, medium to very coarse, sandy, subangular to subrounded, interbedded clay and silt | 40                     | 230-270            |
| Siltstone, dark brownish gray (Fort Union)  | 10                     | 270-280            |

**Test Hole and Observation Well Record**

Location: 154-82-03CBA<sub>5</sub> Use of well: Observation  
Owner and number: SWC 10260 Principal aquifer: Souris Valley  
Depth drilled (ft.): 60 Altitude of land surface (ft., msl): 1542(T)  
Screened interval (ft.): 27-33 Lithologic log from: SWC  
Casing diameter: 1.25" Comments: Destroyed  
Date completed: 9/11/68

**Lithologic Log**

| Unit description             | Thickness (ft.) | Depth (ft.) |
|------------------------------|-----------------|-------------|
| Topsoil                      | 1               | 0 - 1       |
| Clay, silty, yellowish brown | 20              | 1 - 21      |
| Sand                         | 1               | 21 - 22     |
| Clay, silty, gray            | 4               | 22 - 26     |
| Sand, fine                   | 5               | 26 - 31     |
| Clay, silty, sandy, gray     | 29              | 31 - 60     |

**Test Hole and Observation Well Record**

Location: 154-82-03CBB                      Use of well: Municipal supply  
Owner and number: Minot production              Principal aquifer: Sundre  
                  well B  
Depth drilled (ft.): 243                      Altitude of land surface (ft., msl): 1542(T)  
Screened interval (ft.): 180-243              Lithologic log from: C. A. Simpson & Son  
Casing diameter: 16"                              Comments: QW  
Date completed: 10/30/74

**Lithologic Log**

| Unit description                    | Thickness (ft.) | Depth (ft.) |
|-------------------------------------|-----------------|-------------|
| Clay, yellowish gray, silty         | 17              | 0 - 17      |
| Sand, medium to coarse              | 7               | 17 - 24     |
| Silt, clayey, interbedded fine sand | 36              | 24 - 60     |
| Sand, fine                          | 5               | 60 - 65     |
| Clay, very silty                    | 13              | 65 - 78     |
| Sand, fine to medium                | 9               | 78 - 87     |
| Gravel, medium to coarse, sandy     | 38              | 87 - 125    |
| Silt, clayey                        | 21              | 125 - 146   |
| Sand, interbedded detrital lignite  | 24              | 146 - 170   |
| Sand, fine to coarse                | 57              | 170 - 227   |
| Gravel, fine to coarse, sandy       | 16              | 227 - 243   |

**Test Hole and Observation Well Record**

|   |   |
|---|---|
| <b>Location:</b> 154-82-03CBC                       | <b>Use of well:</b> Municipal supply                |
| <b>Owner and number:</b> Minot production<br>well C | <b>Principal aquifer:</b> Sundre                    |
| <b>Depth drilled (ft.):</b> 297                     | <b>Altitude of land surface (ft., msl):</b> 1541(T) |
| <b>Screened interval (ft.):</b> 215-297             | <b>Lithologic log from:</b> C.A. Simpson & Son      |
| <b>Casing diameter:</b> 16"                         | <b>Comments:</b> QW                                 |
| <b>Date completed:</b> 7/5/75                       |   |

**Lithologic Log**

| <b>Unit description</b>                        | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Silt, clayey, oxidized                         | 14                     | 0 -14              |
| Silt, olive gray, clayey                       | 4                      | 14 -18             |
| Sand, fine to coarse                           | 3                      | 18 -21             |
| Clay, olive gray, silty                        | 7                      | 21 -28             |
| Sand, medium to coarse                         | 9                      | 28 -37             |
| Sand, interbedded clay                         | 21                     | 37 -58             |
| Clay, silty                                    | 15                     | 58 -73             |
| Sand, fine to medium, predominanatly<br>medium | 20                     | 73 -93             |
| Gravel, fine to coarse                         | 26                     | 93-119             |
| Clay, silty                                    | 41                     | 119-160            |
| Sand, medium                                   | 40                     | 160-200            |
| Gravel, fine to medium                         | 10                     | 200-210            |
| Sand, coarse to very coarse, gravelly          | 61                     | 210-271            |
| Gravel, coarse to very coarse                  | 26                     | 271-297            |

**Test Hole and Observation Well Record**

Location: 154-82-03CBCA<sub>1</sub>                      Use of well: Observation  
 Owner and number: SWC 11492A                      Principal aquifer: Sundre  
 Depth drilled (ft.): 263                              Altitude of land surface (ft., msl): 1546.18(S)  
 Screened interval (ft.): 242-247                      Lithologic log from: SWC  
 Casing diameter: Top 112' of 2"  
     bottom 132' of 1.25"  
 Date completed: 9/19/84                              Comments: East well, E, QW, C

**Lithologic Log**

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Topsoil   | 2               | 0 - 2       |
| Silt, yellowish brown, very sandy, slightly clayey                | 19              | 2 - 21      |
| Sand, very fine to very coarse, subrounded to rounded, oxidized   | 8               | 21 - 29     |
| Hard, very fine to very coarse, subrounded to rounded, unoxidized | 2               | 29 - 31     |
| Clay, olive gray, silty, interbedded detrital lignite             | 18              | 31 - 49     |
| Sand, gravelly, subangular to rounded                             | 13              | 49 - 62     |
| Clay, olive gray, slightly silty, carbonaceous, laminated         | 20              | 62 - 82     |
| Silt (poor cuttings return)                                       | 14              | 82 - 96     |
| Sand, coarse sand to pebble size gravel, subrounded to rounded    | 12              | 96-108      |
| Gravel, pebble size, sandy  | 12              | 108-120     |
| Clay, olive gray, silty   | 8               | 120-128     |
| Clay, olive gray, interbedded very fine sand and silt             | 9               | 128-137     |
| Sand, very fine to medium   | 4               | 137-141     |

154-82-03CBCA<sub>1</sub>  
cont.

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Clay, olive gray, silty, interbedded very fine to fine sand       | 19              | 141-160     |
| Gravel, composed of detrital lignite, interbedded with silty clay | 16              | 160-176     |
| Sand, gravelly, subrounded to rounded (poor cuttings return)      | 6               | 176-182     |
| Clay, silty, interbedded sand and gravel                          | 8               | 182-190     |
| Clay, silty, interbedded detrital lignite, sand, and gravel       | 11              | 190-201     |
| Sand, medium to coarse, subrounded to rounded                     | 16              | 201-217     |
| Clay, olive gray, silty   | 6               | 217-223     |
| Sand, gravelly, subrounded to rounded                             | 9               | 223-232     |
| Sand, interbedded with clay                                       | 9               | 232-241     |
| Gravel, pebble size, sandy, subrounded to rounded                 | 22              | 241-263     |

**Test Hole and Observation Well Record**

Location: 154-82-03CBCA<sub>2</sub>                      Use of well: Observation  
 Owner and number: SWC 11492B                      Principal aquifer: Sundre  
 Depth drilled (ft.): 220                          Altitude of land surface (ft., msl): 1546.30(S)  
 Screened interval (ft.): 175-180                  Lithologic log from: SWC  
 Casing diameter: 2"                                Comments: 25' west of CBCA<sub>1</sub>, E, QW, C  
 Date completed: 9/20/84

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil  | 1               | 0 - 1       |
| Silt, yellowish brown, clayey, gravelly,<br>fossiliferous, oxidized  | 20              | 1 - 21      |
| Sand, medium to very coarse, fossiliferous,<br>oxidized              | 8               | 21 - 29     |
| Sand, medium to very coarse, gravelly                                | 4               | 29 - 33     |
| Silt, olive gray, clayey   | 18              | 33 - 51     |
| Sand, medium to very coarse, gravelly,<br>subrounded to rounded      | 12              | 51 - 63     |
| Clay, olive gray, laminated (lacustrine)                             | 19              | 63 - 82     |
| Clay, olive gray, interbedded sand and gravel                        | 14              | 82 - 96     |
| Sand, medium to very coarse, gravelly,<br>subrounded to rounded      | 16              | 96-112      |
| Gravel, medium sand to pebble size gravel,<br>subrounded to rounded  | 8               | 112-120     |
| Silt, slightly clayey, interbedded fine sand<br>and detrital lignite | 24              | 120-144     |
| Clay, very silty, interbedded sand, gravel,<br>and detrital lignite  | 10              | 144-154     |
| Clay, olive gray, silty  | 4               | 154-158     |

154-82-03CB<sub>A</sub><sub>2</sub>  
cont.

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Sand, medium to very coarse, gravelly                                  | 6               | 158-164     |
| Clay, olive gray, silty  | 3               | 164-167     |
| Sand, medium to very coarse, gravelly                                  | 5               | 167-182     |
| Clay, olive gray, silty, interbedded detrital lignite, sand and gravel | 14              | 182-196     |
| Sand, gravelly (poor cuttings return)                                  | 5               | 196-201     |
| Clay, olive gray, silty  | 19              | 201-220     |

**Test Hole and Observation Well Record**

**Location:** 154-82-03CBCA3

**Use of well:** Observation

**Owner and number:** SWC 11492C

**Principal aquifer:** Sundre

**Depth drilled (ft.):** 120

**Altitude of land surface (ft., msl):** 1546.10(S)

**Screened interval (ft.):** 105-110

**Lithologic log from:** SWC

**Casing diameter:** 2"

**Comments:** 10' west of CBCA<sub>2</sub>, QW, C

**Date completed:** 9/25/84

**Lithologic Log**

| <b>Unit description</b>                                      | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Topsoil  | 1                      | 0 - 1              |
| Silt, yellowish brown, silty, oxidized                       | 20                     | 1 - 21             |
| Sand, gravelly, oxidized                                     | 7                      | 21 - 28            |
| Clay, olive gray, silty                                      | 23                     | 28 - 51            |
| Sand, medium to very coarse, gravelly, subangular to rounded | 12                     | 51 - 63            |
| Clay, olive gray, silty                                      | 13                     | 63 - 76            |
| Clay, olive gray, silty, interbedded sand                    | 21                     | 76 - 97            |
| Sand, gravelly, subrounded to rounded                        | 15                     | 97-112             |
| Boulder  | 1                      | 112-113            |
| Clay, silty, interbedded detrital lignite and sand           | 7                      | 113-120            |

**Test Hole and Observation Well Record**

Location: 154-82-03CBA4                      Use of well: Observation  
Owner and number: SWC 11492D                  Principal aquifer: Souris Valley  
Depth drilled (ft.): 65                        Altitude of land surface (ft., msl): 1546.10(S)  
Screened interval (ft.): 56-61                Lithologic log from: SWC  
Casing diameter: 2"                              Comments: West well, QW, C  
Date completed: 9/25/84

**Lithologic Log**

| Unit description                       | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil                                | 1               | 0 - 1       |
| Silt, yellowish brown, silty, oxidized | 21              | 1 - 22      |
| Sand, gravelly, oxidized               | 9               | 22 - 31     |
| Silt, olive gray, clayey               | 22              | 31 - 53     |
| Sand, medium to very coarse, gravelly  | 8               | 53 - 61     |
| Clay, olive gray, silty                | 4               | 61 - 65     |

**Test Hole and Observation Well Record**

**Location:** 154-82-03CCA

**Use of well:** Municipal supply

**Owner and number:** Minot production  
well D

**Principal aquifer:** Sundre

**Depth drilled (ft.):** 280

**Altitude of land surface (ft., msl):** 1541(T)

**Screened interval (ft.):** 195-280

**Lithologic log from:** C. A. Simpson & Son

**Casing diameter:** 16"

**Comments:** QW

**Date completed:** 7/5/75

**Lithologic Log**

| <b>Unit description</b>     | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|-----------------------------|------------------------|--------------------|
| Sand, fine, silty           | 4                      | 0 - 4              |
| Silt, clayey                | 23                     | 4 - 27             |
| Clay, olive gray, silty     | 8                      | 27 - 35            |
| ---                         | 15                     | 35 - 50            |
| Clay, olive gray, silty     | 32                     | 50 - 82            |
| Sand, very fine to fine     | 6                      | 82 - 88            |
| Sand, medium to coarse      | 19                     | 88-107             |
| Gravel                      | 3                      | 107-110            |
| Gravel, medium to coarse    | 5                      | 110-115            |
| Sand, medium                | 40                     | 115-155            |
| Sand, medium to coarse      | 20                     | 155-175            |
| Sand, coarse to very coarse | 26                     | 175-201            |
| Sand, fine to medium        | 3                      | 201-204            |
| Sand, coarse, gravelly      | 53                     | 204-257            |
| Gravel, fine to coarse      | 23                     | 257-280            |

**Test Hole and Observation Well Record**

|   |   |
|---|---|
| <b>Location:</b> 154-82-03CCD                       | <b>Use of well:</b> Municipal supply                |
| <b>Owner and number:</b> Minot production<br>well E | <b>Principal aquifer:</b> Sundre                    |
| <b>Depth drilled (ft.):</b> 260                     | <b>Altitude of land surface (ft., msl):</b> 1530(T) |
| <b>Screened interval (ft.):</b> 200-256             | <b>Lithologic log from:</b> C. A. Simpson & Son     |
| <b>Casing diameter:</b> 16"                         | <b>Comments:</b> QW                                 |
| <b>Date completed:</b> 9/10/74                      |   |

**Lithologic Log**

| <b>Unit description</b> | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|-------------------------|------------------------|--------------------|
| Topsoil                 | 1                      | 0 - 1              |
| Silt                    | 7                      | 1 - 8              |
| Clay, yellowish gray    | 8                      | 8 - 16             |
| Clay, olive gray        | 4                      | 16 - 20            |
| Sand, coarse            | 5                      | 20 - 25            |
| Clay, olive gray        | 17                     | 25 - 42            |
| Silt, interbedded clay  | 42                     | 42 - 84            |
| Sand, fine to coarse    | 30                     | 84-114             |
| Gravel, fine            | 18                     | 114-132            |
| Sand, medium to coarse  | 33                     | 132-165            |
| Gravel, fine            | 13                     | 165-178            |
| Sand, medium to coarse  | 82                     | 178-260            |

**Test Hole and Observation Well Record**

|                                  |   |
|----------------------------------|---|
| Location: 154-82-03CD BD1        | Use of well: Observation                        |
| Owner and number: SWC 11489A     | Principal aquifer: Sundre                       |
| Depth drilled (ft.): 140         | Altitude of land surface (ft., msl): 1541.97(S) |
| Screened interval (ft.): 105-110 | Lithologic log from: SWC                        |
| Casing diameter: 2"              | Comments: South well, E, QW, C                  |
| Date completed: 9/10/84          |   |

**Lithologic Log**

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Topsoil   | 3               | 0 - 3       |
| Clay, yellow brown, silty, sandy,<br>oxidized                           | 18              | 3 - 21      |
| Sand, very fine to fine   | 1               | 21 - 22     |
| Clay, olive gray, silty   | 4               | 22 - 26     |
| Sand, fine sand to pebble size gravel,<br>subrounded to rounded         | 4               | 26 - 30     |
| Clay, olive gray, silty   | 11              | 30 - 41     |
| Gravel, sandy, subangular to rounded                                    | 9               | 41 - 50     |
| Clay, olive gray, cohesive, plastic (lacustrine)                        | 11              | 50 - 61     |
| Clay, olive gray, cohesive, plastic, interbedded<br>fine to coarse sand | 11              | 61 - 72     |
| Gravel, pebble size, sandy, subrounded to<br>rounded                    | 21              | 72 - 93     |
| Clay, olive gray  | 1               | 93 - 94     |
| Gravel, as above  | 2               | 94 - 96     |
| Clay (poor cuttings return)   | 3               | 96 - 99     |
| Gravel, cobble size, sandy, subrounded<br>to rounded                    | 22              | 99-121      |
| Lignite   | 9               | 121-130     |
| Clay, gray, silty   | 10              | 130-140     |

**Test Hole and Observation Well Record**

Location: 154-82-03CDBD<sub>2</sub> Use of well: Observation  
Owner and number: SWC 11489B Principal aquifer: Souris Valley  
Depth drilled (ft.): 60 Altitude of land surface (ft., msl): 1541.62(S)  
Screened interval (ft.): 44-49 Lithologic log from: SWC  
Casing diameter: 2" Comments: 18' north of CDBD<sub>1</sub>, QW, C  
Date completed: 9/12/84

**Lithologic Log**

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Topsoil   | 1               | 0 - 1       |
| Clay, yellowish brown, very silty, oxidized               | 17              | 1 - 18      |
| Clay, olive gray, very silty, interbedded fine sand       | 9               | 18 - 27     |
| Sand, very fine to medium                                 | 4               | 27 - 31     |
| Clay, olive gray, silty                                   | 4               | 31 - 35     |
| Gravel, medium sand to fine gravel, subrounded to rounded | 14              | 35 - 49     |
| Clay, olive gray, silty                                   | 11              | 49 - 60     |

**Test Hole and Observation Well Record**

Location: 154-82-03CDBD<sub>3</sub> Use of well: Observation  
Owner and number: SWC 11489C Principal aquifer: Souris Valley  
Depth drilled (ft.): 33 Altitude of land surface (ft., msl): 1541.67(S)  
Screened interval (ft.): 27-32 Lithologic log from: SWC  
Casing diameter: 2" Comments: 12' north of CDBD<sub>2</sub>, QW, C  
Date completed: 9/12/84

**Lithologic Log**

| Unit description                                      | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Topsoil   | 1               | 0 - 1       |
| Fill  | 4               | 1 - 5       |
| Clay, yellowish brown, very silty, sandy,<br>oxidized | 13              | 5 -18       |
| Clay, olive gray, very silty, sandy, unoxidized       | 10              | 18 -28      |
| Sand, very fine to medium, silty, rounded             | 5               | 28 -33      |

Test Hole and Observation Well Record

|                                     |   |
|-------------------------------------|---|
| Location: 154-82-03CDB <sub>1</sub> | Use of well: Observation                      |
| Owner and number: Bison #1          | Principal aquifer: Souris Valley-Sundre       |
| Depth drilled (ft.): 100            | Altitude of land surface (ft., msl): 1542 (T) |
| Screened interval (ft.): 75-80      | Lithologic log from: SWC                      |
| Casing diameter: 1½"                | Comments: E, QW, Well destroyed               |
| Date completed: 9/26/65             |   |

Lithologic Log

| Unit description                              | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Silt, light olive gray                        | 14              | 0 - 14      |
| Sand, fine to medium                          | 7               | 14 - 21     |
| Silt, sandy, dark-greenish gray               | 4               | 21 - 25     |
| Till, dark greenish-gray                      | 4               | 25 - 29     |
| Sand, fine to coarse, abundant lignite chips  | 18              | 29 - 47     |
| Till, olive gray                              | 15              | 47 - 62     |
| Gravel, fine to coarse, abundance of boulders | 30              | 62 - 92     |
| Shale, sandy, dark greenish-gray              | 8               | 92 -100     |

**Test Hole and Observation Well Record**

Location: 154-82-03CDB<sub>2</sub>                      Use of well: Observation  
Owner and number: Bison #2                      Principal aquifer: Souris Valley - Sundre  
Depth drilled (ft.): 100                      Altitude of land surface (ft., msl): 1542.4(S)  
Screened interval (ft.): 88-91                      Lithologic log from: SWC  
Casing diameter: 1.25"                      Comments: E, QW  
Date completed: 8/25/65

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Fill   | 1               | 0 - 1       |
| Topsoil  | 1               | 1 - 2       |
| Clay, light olive gray, silty, sandy,<br>cohesive, plastic | 15              | 2 - 17      |
| Clay, dark greenish gray, very sandy                       | 2               | 17 - 19     |
| Sand, fine, well sorted, fossiliferous                     | 21              | 19 - 40     |
| Sand, fine to medium, interbedded silt                     | 20              | 40 - 60     |
| Sand, fine grading to gravel, interbedded<br>silty clay    | 20              | 60 - 80     |
| Gravel, coarse   | 20              | 80-100      |

**Test Hole and Observation Well Record**

|  |  |
|--|--|
| <b>Location:</b> 154-82-03CDC <sub>1</sub> | <b>Use of well:</b> Observation                        |
| <b>Owner and number:</b> SWC 5204          | <b>Principal aquifer:</b> Sundre                       |
| <b>Depth drilled (ft.):</b> 256            | <b>Altitude of land surface (ft., msl):</b> 1539.7 (S) |
| <b>Screened interval (ft.):</b> 231-237    | <b>Lithologic log from:</b> SWC                        |
| <b>Casing diameter:</b> 1.25"              | <b>Comments:</b> E, QW                                 |
| <b>Date completed:</b> 9/25/68             |  |

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil   | 1                      | 0 - 1              |
| Clay, yellowish brown, very silty, slightly sandy, slightly cohesive and plastic, oxidized (fluvial)                    | 9                      | 1 - 10             |
| Clay, olive gray, very silty, interbedded very fine to fine sand, slightly cohesive and plastic (fluvial)               | 5                      | 10 - 15            |
| Sand, very fine to fine, interbedded clayey silt, angular to subrounded   | 25                     | 15 - 40            |
| Clay, olive gray, very silty, interbedded very fine to fine sand, cohesive, plastic (fluvial)                           | 41                     | 40 - 81            |
| Gravel, fine to coarse, sandy, angular to subrounded  | 20                     | 81-101             |
| Sand, very fine to very coarse, gravelly, angular to rounded  | 53                     | 101-164            |
| Gravel, fine to coarse, predominantly fine to medium, sandy, angular to rounded, predominantly subangular to subrounded | 89                     | 164-253            |
| Sandstone, bluish gray to brownish gray, clayey, silty (Fort Union)   | 3                      | 253-256            |

**Test Hole and Observation Well Record**

**Location:** 154-82-03CDC<sub>2</sub>      **Use of well:** Observation  
**Owner and number:** SWC 5254      **Principal aquifer:** Sundre  
**Depth drilled (ft.):** 300      **Altitude of land surface (ft., msl):** 1538.9 (S)  
**Screened interval (ft.):** 217-223      **Lithologic log from:** SWC .  
**Casing diameter:** 1.25"      **Comments:** E, QW  
**Date completed:** 11/26/68

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil   | 1                      | 0 - 1              |
| Clay, yellowish brown, silty, sandy, cohesive                             | 14                     | 1 - 15             |
| Clay, dark olive gray, very silty, sandy, cohesive, plastic (fluvial)     | 4                      | 15 - 19            |
| Sand, fine to very coarse, gravelly, angular to subangular                | 5                      | 19 - 24            |
| Clay, dark olive gray, very silty, sandy, cohesive, plastic (fluvial)     | 10                     | 24 - 34            |
| Sand, medium to coarse, angular to subangular                             | 6                      | 34 - 40            |
| Clay, dark olive gray, silty, very cohesive, plastic (fluvial)            | 53                     | 40 - 93            |
| Gravel, fine to coarse, sandy, subangular to subrounded, interbedded clay | 22                     | 93-115             |
| Sand, medium to very coarse, gravelly, subangular to subrounded           | 5                      | 115-120            |
| Gravel, composed of detrital lignite, interbedded silt                    | 20                     | 120-140            |
| Silt, interbedded detrital lignite  | 20                     | 140-160            |
| Sand, fine to coarse  | 4                      | 160-164            |
| Silt, clayey, sandy, detrital lignite                                     | 10                     | 164-174            |
| Sand, medium to coarse, very gravelly, subangular                         | 16                     | 174-190            |

154-82-03CDC<sub>2</sub>

cont.

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Gravel, fine to coarse, slightly sandy, subangular to subrounded               | 50              | 190-240     |
| Sand, medium to coarse, gravelly, angular to subangular, some interbedded clay | 20              | 240-260     |
| Gravel, medium to coarse, sandy  | 14              | 260-274     |
| Clay, dark olive gray, silty, interbedded lignite (fort Union)                 | 26              | 274-300     |

**Test Hole and Observation Well Record**

**Location:** 154-82-3CDC<sub>3</sub>

**Use of well:** Recorder

**Owner and number:** SWC, recorder well **Principal aquifer:** Sundre

**Depth drilled (ft.):**

**Altitude of land surface (ft., msl):** 1540(T)

**Screened interval (ft.):** 170-220

**Lithologic log from:**

**Casing diameter:**

**Comments:** QW

**Date completed:**

**Lithologic Log**

**Unit description**

**Thickness (ft.)   Depth (ft.)**

See log for 3CDC<sub>4</sub>

**Test Hole and Observation Well Record**

|                                      |   |
|--------------------------------------|---|
| <b>Location:</b> 154-82-03CDC4       | <b>Use of well:</b> Test hole                       |
| <b>Owner and number:</b> SWC 5253    | <b>Principal aquifer:</b> Sundre                    |
| <b>Depth drilled (ft.):</b> 298      | <b>Altitude of land surface (ft., msl):</b> 1542(T) |
| <b>Screened interval (ft.):</b> None | <b>Lithologic log from:</b> SWC                     |
| <b>Casing diameter:</b> None         | <b>Comments:</b> E                                  |
| <b>Date completed:</b> 11/25/68      |   |

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Topsoil  | 1                      | 0 - 1              |
| Clay, yellowish brown, very silty  | 16                     | 1 - 17             |
| Clay, dark olive gray  | 3                      | 17 - 20            |
| Sand, fine to coarse, subangular,<br>some interbedded clay                           | 4                      | 20 - 24            |
| Clay, dark olive gray, very silty, sandy   | 23                     | 24 - 47            |
| Silt, dark olive gray, clayey, cohesive,<br>plastic                                  | 47                     | 47 - 94            |
| Sand, coarse to very coarse, gravelly,<br>some interbedded silt and clay             | 46                     | 94-140             |
| Sand, coarse to very coarse, subangular to<br>subrounded, gravelly, interbedded clay | 71                     | 140-211            |
| Gravel, fine to coarse, angular to subangular,<br>sandy                              | 5                      | 211-216            |
| Sand, fine to coarse, gravelly, angular to<br>subangular, interbedded clay           | 48                     | 216-264            |
| Clay, light bluish gray, silty, sandy (Fort<br>Union)                                | 34                     | 264-298            |

**Test Hole and Observation Well Record**

**Location:** 154-82-03CDC5

**Use of well:** Observation

**Owner and number:** SWC 10259

**Principal aquifer:** Souris Valley

**Depth drilled (ft.):** 60

**Altitude of land surface (ft., msl):** 1542(T)

**Screened interval (ft.):** 38-44

**Lithologic log from:** SWC .

**Casing diameter:** 1.25"

**Comments:** E

**Date completed:** 9/11/78

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Topsoil  | 1                      | 0 - 1              |
| Clay, yellowish brown, very silty, sandy,<br>cohesive, plastic | 18                     | 1 - 19             |
| Clay, olive gray, very silty, sandy                            | 17                     | 19 - 36            |
| Sand, fine to medium   | 11                     | 36 - 47            |
| Clay, olive gray, silty, cohesive, plastic                     | 13                     | 47 - 60            |

**Test Hole and Observation Well Record**

|                                     |   |
|-------------------------------------|---|
| Location: 154-82-03CDC <sub>6</sub> | Use of well: Observation                        |
| Owner and number: SWC 11359         | Principal aquifer: Sundre                       |
| Depth drilled (ft.): 266            | Altitude of land surface (ft., msl): 1541.2 (S) |
| Screened interval (ft.): 258-261    | Lithologic log from: SWC                        |
| Casing diameter: 1.25"              | Comments: 15' NW of recorder, QW, E,            |
| Date completed: 10/13/83            |   |

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil  | 1               | 0 - 1       |
| Clay, dark brownish gray, silty, cohesive, plastic   | 4               | 1 - 5       |
| Clay, yellow brown to yellow green, silty, oxidized  | 3               | 5 - 8       |
| Silt, yellow brown with light yellow gray stringers, slightly clayey, friable, oxidized  | 11              | 8 - 19      |
| Sand, fine to coarse, predominantly fine to medium, rounded, fossiliforous   | 7               | 19 - 26     |
| Clay, medium gray to olive gray, silty, plastic  | 16              | 26 - 42     |
| Silt, olive gray, clayey, interbedded very fine sand and detrital lignite  | 50              | 42 - 92     |
| Sand, very coarse sand to very coarse gravel, predominantly very coarse sand and fine gravel, angular to rounded, predominantly subangular | 16              | 92-108      |
| Silt, olive gray, clayey, interbedded sand and detrital lignite  | 72              | 108-180     |
| Sand, very coarse sand to pebble size gravel, angular to rounded, predominantly subrounded to rounded, interbedded clay                    | 81              | 180-261     |
| Bedrock (Fort Union)   | 5               | 261-266     |

**Test Hole and Observation Well Record**

Location: 154-82-03CDC<sub>7</sub>      Use of well: Observation  
Owner and number: SWC 11360      Principal aquifer: Sundre  
Depth drilled (ft.): 160      Altitude of land surface (ft., msl): 1541.3 (S)  
Screened interval (ft.): 155-160      Lithologic log from: SWC  
Casing diameter: 1.25"      Comments: Middle well, QW  
Date completed: 10/18/83

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil  | 2               | 0 - 2       |
| Silt, yellowish green to yellowish brown,<br>slightly clayey, oxidized   | 17              | 2 - 19      |
| Sand, coarse to very coarse, subangular to<br>subrounded   | 4               | 19 - 23     |
| Clay, olive gray, silty, interbedded with silt   | 26              | 23 - 49     |
| Silt, olive gray, clayey, some interbedded clay  | 13              | 49 - 62     |
| Clay, olive gray to dark gray, silty   | 31              | 62 - 93     |
| Sand, coarse sand to fine gravel, predominantly<br>very coarse sand, angular to rounded,<br>predominantly subrounded | 11              | 93-104      |
| Clay, dark gray, interbedded sand and detrital<br>lignite  | 36              | 104-140     |
| Sand, coarse to very coarse, predominantly<br>very coarse, subangular to rounded                                     | 20              | 140-160     |

**Test Hole and Observation Well Record**

Location: 154-82-03CDC8                      Use of well: Observation  
Owner and number: SWC 11361                      Principal aquifer: Sundre  
Depth drilled (ft.): 100                          Altitude of land surface (ft., msl): 1541.4 (S)  
Screened interval (ft.): 95-100                  Lithologic log from: SWC .  
Casing diameter: 1.25"                              Comments: Farthest NW well, QW  
Date completed: 10/18/83

**Lithologic Log**

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Topsoil   | 2               | 0 - 2       |
| Clay, yellow brown, oxidized  | 2               | 2 - 4       |
| Silt, yellow brown, clayey, interbedded sand and gravel, oxidized   | 90              | 4 - 94      |
| Sand, very coarse sand to fine gravel, predominantly very coarse sand, angular to rounded, predominantly subangular to subrounded | 6               | 94-100      |

**Test Hole and Observation Well Record**

|   |  |
|---|--|
| <b>Location:</b> 154-82-03DBB           | <b>Use of well:</b> Observation                        |
| <b>Owner and number:</b> SWC 5201       | <b>Principal aquifer:</b> Sundre                       |
| <b>Depth drilled (ft.):</b> 280         | <b>Altitude of land surface (ft., msl):</b> 1542.6 (S) |
| <b>Screened interval (ft.):</b> 227-233 | <b>Lithologic log from:</b> SWC                        |
| <b>Casing diameter:</b> 1.25"           | <b>Comments:</b> E, QW                                 |
| <b>Date completed:</b> 9/20/68          |  |

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Topsoil  | 1                      | 0 - 1              |
| Clay, yellowish brown, silty, sandy, cohesive, plastic, oxidized (till)  | 9                      | 1 -10              |
| Gravel, fine to coarse, sandy, angular to subrounded   | 30                     | 10 -40             |
| Sand, very fine to very coarse, predominantly medium to coarse, angular to subrounded  | 25                     | 40 -65             |
| Silt, olive gray to medium bluish gray, clayey, interbedded very fine to fine sand and detrital lignite, cohesive, plastic (fluvial) | 20                     | 65 -85             |
| Sand, very fine to medium, slightly silty, angular to rounded  | 37                     | 85-122             |
| Clay, bluish gray, very silty, interbedded very fine sand, cohesive, plastic (fluvial)   | 24                     | 122-146            |
| Sand, very fine to medium, slightly silty, clayey, angular to subrounded   | 14                     | 146-160            |
| Clay, bluish to brownish gray, very silty, interbedded fine sand, cohesive, plastic (fluvial)  | 25                     | 160-185            |
| Gravel, medium sand to medium gravel, angular to subrounded  | 5                      | 185-190            |
| Silt, clayey, interbedded fine sand, cohesive, plastic, carbonaceous   | 6                      | 190-196            |

154-82-03DBB  
cont.

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Gravel, fine to medium, silty, angular to subangular, interbedded clay   | 8               | 196-204     |
| Silt, olive gray, clayey, sandy, cohesive, plastic (fluvial)             | 24              | 204-226     |
| Gravel, fine to medium sandy, interbedded silt, angular to subrounded    | 14              | 226-240     |
| Siltstone, interbedded with sandstone, moderately indurated (Fort Union) | 40              | 240-280     |

**Test Hole and Observation Well Record**

**Location:** 154-82-03DBC

**Use of well:** Observation

**Owner and number:** SWC 10261

**Principal aquifer:** Souris Valley

**Depth drilled (ft.):** 45

**Altitude of land surface (ft., msl):** 1540(T)

**Screened interval (ft.):** 38-41

**Lithologic log from:** SWC

**Casing diameter:** 1.25"

**Comments:** Destroyed

**Date completed:** 9/11/78

**Lithologic Log**

| <b>Unit description</b>     | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|-----------------------------|------------------------|--------------------|
| Topsoil                     | 1                      | 0 - 1              |
| Clay, silty, sandy, gray    | 6                      | 1 - 7              |
| Clay, silty, sandy, brown   | 2                      | 7 - 9              |
| Clay, silty, sandy, gray    | 13                     | 9 - 22             |
| Sand, gray                  | 4                      | 22 - 26            |
| Clay, sandy and silty, gray | 5                      | 26 - 31            |
| Gravel, rocky               | 13                     | 32 - 45            |

**Test Hole and Observation Well Record**

Location: 154-82-03DCC<sub>1</sub> Use of well: Test hole  
Owner and number: SWC 11496A Principal aquifer:  
Depth drilled (ft.): 64 Altitude of land surface (ft., msl): 1540(T)  
Screened interval (ft.): None Lithologic log from: SWC  
Casing diameter: None Comments: Abandoned hole, caving  
Date completed: 10/2/84

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil  | 1               | 0 - 1       |
| Fill   | 4               | 1 - 5       |
| Silt, yellowish brown, clayey, oxidized                    | 14              | 5 -19       |
| Clay, olive gray, unoxidized                               | 2               | 19 -21      |
| Sand, medium sand to fine gravel,<br>subrounded to rounded | 3               | 21 -24      |
| Clay, olive gray (lacustrine)                              | 37              | 24 -61      |
| Gravel, cobbley  | 3               | 61 -64      |

**Test Hole and Observation Well Record**

**Location:** 154-82-03DCD

**Use of well:** Observation

**Owner and number:** SWC 5402

**Principal aquifer:** Souris Valley - Sundre

**Depth drilled (ft.):** 80

**Altitude of land surface (ft., msl):** 1541.3(S)

**Screened interval (ft.):** 58-61

**Lithologic log from:** SWC

**Casing diameter:** 1.25"

**Comments:** QW

**Date completed:** 7/15/69

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Clay, yellowish brown, very silty, slightly plastic, cohesive                        | 17                     | 0 - 17             |
| Clay, olive gray, silty, cohesive, plastic (lacustrine)                              | 35                     | 17 - 52            |
| Gravel, fine to coarse, sandy, angular to subangular, abandoned due to caving gravel | 28                     | 52 - 80            |

**Test Hole and Observation Well Record**

**Location:** 154-82-04AAD

**Use of well:** Observation

**Owner and number:** SWC 2214

**Principal aquifer:** Well screened in both the Souris Valley and Sundre aquifers

**Depth drilled (ft.):** 254

**Altitude of land surface (ft., msl):** 1544.3(S)

**Screened interval (ft.):** Multiple  
**openings:** 50-70, 85-100, 124-136,  
**Casing diameter:** 1.25" 200-220

**Lithologic log from:** SWC

**Date completed:** 11/13/63

**Comments:** E, QW, composite water level, dropped  
 from well run and replaced by  
 154-82-04AAD<sub>2</sub>

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| <b>Topsoil</b>  | 4                      | 0 - 4              |
| Clay, yellowish gray, silty, sandy  | 4                      | 4 - 8              |
| Gravel, coarse sand to medium gravel,<br>subrounded, oxidized                             | 12                     | 8 - 20             |
| Sand, fine to coarse, clayey, gravelly  | 10                     | 20 - 30            |
| Gravel, fine to medium, interbedded<br>coarse to very coarse sand and<br>detrital lignite | 50                     | 30 - 80            |
| Clay, olive gray, silty, cohesive, plastic,<br>interbedded with medium sand               | 10                     | 80 - 90            |
| Sand, fine to coarse, predominantly medium  | 20                     | 90-110             |
| Clay, olive gray, silty, plastic  | 10                     | 110-120            |
| Sand, medium to coarse, subrounded to rounded   | 50                     | 120-170            |
| Sand, clayey  | 20                     | 170-190            |
| Clay, olive gray, plastic   | 10                     | 190-200            |
| Sand, medium, rounded, silty, clayey  | 28                     | 200-228            |
| Sandstone, dark greenish gray, angular to<br>subangular, indurated                        | 3                      | 228-231            |
| Claystone, dark greenish gray, silty to sandy   | 23                     | 231-254            |

**Test Hole and Observation Well Record**

|                                     |   |
|-------------------------------------|---|
| Location: 154-82-04AAD <sub>2</sub> | Use of well: Observation                                |
| Owner and number: SWC 11495         | Principal aquifer: Sundre                               |
| Depth drilled (ft.): 220            | Altitude of land surface (ft., msl): 1543.60(S)         |
| Screened interval (ft.): 207-212    | Lithologic log from: SWC .                              |
| Casing diameter: 1.25"              | Comments: QW, replacement for 154-82-04AAD <sub>1</sub> |
| Date completed: 10/2/84             |   |

**Lithologic Log**

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Topsoil   | 1               | 0 - 1       |
| Silt, yellowish brown, slightly clayey,<br>very sandy, oxidized             | 6               | 1 - 7       |
| Gravel  | 1               | 7 - 8       |
| Sand, gravelly, oxidized  | 8               | 8 - 16      |
| Sand, gravelly, subrounded to rounded                                       | 26              | 16 - 42     |
| Silt, olive gray, clayey, interbedded sand,<br>gravel, and detrital lignite | 29              | 42 - 71     |
| Clay, olive gray, silty, slightly sandy                                     | 18              | 71 - 89     |
| Gravel  | 1               | 89 - 90     |
| Clay, olive gray, silty, interbedded sand,<br>gravel and detrital lignite   | 12              | 90-102      |
| Clay, olive gray, silty   | 21              | 102-123     |
| Clay, olive gray, silty, interbedded sand,<br>gravel, and detrital lignite  | 22              | 123-145     |
| Sand, medium to coarse, subrounded to rounded                               | 18              | 145-163     |
| Clay, olive gray, silty   | 22              | 163-185     |
| Clay, olive gray, silty, interbedded fine to<br>medium sand                 | 17              | 185-202     |
| Sand, fine to medium  | 10              | 202-212     |
| Clay, olive gray, silty, interbedded fine sand                              | 3               | 212-215     |
| Sand, fine to medium, silty   | 5               | 215-220     |

**Test Hole and Observation Well Record**

|                                 |               |   |             |
|---------------------------------|---------------|---|-------------|
| <b>Location:</b>                | 154-82-04ABA1 | <b>Use of well:</b>                         | Observation |
| <b>Owner and number:</b>        | SWC 2213      | <b>Principal aquifer:</b>                   | Sundre      |
| <b>Depth drilled (ft.):</b>     | 210           | <b>Altitude of land surface (ft., msl):</b> | 1541.0(S)   |
| <b>Screened interval (ft.):</b> | 80-100        | <b>Lithologic log from:</b>                 | SWC         |
| <b>Casing diameter:</b>         | 1.25"         | <b>Comments:</b>                            | E, QW       |
| <b>Date completed:</b>          | 11/6/63       |   |             |

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Topsoil  | 1                      | 0 - 1              |
| Clay, yellowish brown, silty   | 4                      | 1 - 5              |
| Clay, yellowish gray, silty, oxidized  | 5                      | 5 - 10             |
| Clay, yellowish gray, silty, interbedded<br>very silty clay                                      | 5                      | 10 - 15            |
| Silt, dark greenish gray, clayey   | 5                      | 15 - 20            |
| Clay, olive gray, silty, cohesive, plastic,<br>fossiliferous, interbedded fine to<br>medium sand | 65                     | 20 - 85            |
| Gravel, fine to coarse sandy, subrounded,<br>some interbedded clay                               | 40                     | 85-125             |
| Sand, fine to coarse, gravelly   | 5                      | 125-130            |
| Clay, olive gray, sandy, gravelly (till)   | 30                     | 130-160            |
| Clay, olive gray, sandy, cohesive, very plastic  | 50                     | 160-210            |

**Test Hole and Observation Well Record**

|  |   |
|--|---|
| <b>Location:</b> 154-82-04ABA2         | <b>Use of well:</b> Observation                       |
| <b>Owner and number:</b> SWC 5190      | <b>Principal aquifer:</b> Sundre                      |
| <b>Depth drilled (ft.):</b> 200        | <b>Altitude of land surface (ft., msl):</b> 1542.9(S) |
| <b>Screened interval (ft.):</b> 97-100 | <b>Lithologic log from:</b> SWC                       |
| <b>Casing diameter:</b> 1.25"          | <b>Comments:</b> Well destroyed, QW                   |
| <b>Date completed:</b> 9/11/68         |   |

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Topsoil  | 1                      | 0 - 1              |
| Clay, yellowish brown, very silty, slightly sandy, slightly cohesive, and plastic, oxidized (fluvial)                                      | 17                     | 1 - 18             |
| Sand, very fine to medium, silty, subangular to subrounded, oxidized   | 4                      | 18 - 22            |
| Clay, olive gray, very silty, interbedded very fine to fine sand, cohesive, plastic, laminated (fluvial)                                   | 64                     | 22 - 86            |
| Gravel, very coarse sand to coarse gravel, predominantly fine to medium gravel, angular to rounded, predominantly subangular to subrounded | 14                     | 86-100             |
| Sand, very fine to coarse, subangular to subrounded  | 2                      | 100-102            |
| Silt, olive gray, clayey, interbedded sand and gravel, cohesive, plastic, some laminations (fluvial)                                       | 43                     | 102-145            |
| Boulder  | 2                      | 145-147            |
| Siltstone, brownish to medium dark gray, clayey (Fort Union)   | 53                     | 147-200            |

**Test Hole and Observation Well Record**

|  |  |
|--|--|
| <b>Location:</b> 154-82-04ACA <sub>1</sub> | <b>Use of well:</b> Observation                    |
| <b>Owner and number:</b> SWC 5192          | <b>Principal aquifer:</b> Sundre                   |
| <b>Depth drilled (ft.):</b> 260            | <b>Altitude of land surface (ft., msl):</b> 1543.0 |
| <b>Screened interval (ft.):</b> 206-212    | <b>Lithologic log from:</b> SWC                    |
| <b>Casing diameter:</b> 1.25"              | <b>Comments:</b> Well destroyed, E, QW             |
| <b>Date completed:</b> 9/12/68             |  |

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil   | 1                      | 0 - 1              |
| Silt, yellowish brown, clayey, interbedded fine sand, cohesive, plastic, oxidized (fluvial)   | 19                     | 1 - 20             |
| Silt, olive gray, clayey, interbedded very fine to fine sand, laminated, cohesive, plastic (fluvial)  | 62                     | 20 - 82            |
| Gravel, coarse sand to coarse gravel, predominantly fine to medium, angular to rounded, predominantly subangular to subrounded, interbedded clayey silt | 32                     | 82-114             |
| Clay, olive gray, very silty, interbedded very fine to fine sand, cohesive, plastic, laminated (fluvial)  | 12                     | 114-126            |
| Sand, very fine to medium grain, subangular to subrounded, interbedded clayey silt  | 22                     | 126-148            |
| Gravel, fine to coarse, sandy, angular to subrounded  | 7                      | 148-155            |
| Clay, olive gray, silty, sandy, cohesive, plastic (fluvial)   | 5                      | 155-160            |
| Sand, very fine to coarse, predominantly very fine to medium, angular to rounded, predominantly subangular to subrounded, silty, interbedded silty clay | 10                     | 160-170            |

154-82-04ACA<sub>1</sub>  
cont.

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Clay, olive gray, very silty, cohesive,<br>plastic (fluvial)                          | 6               | 170-176     |
| Sand, very fine to coarse, subangular to<br>subrounded, interbedded silty clay        | 14              | 176-190     |
| Sand, fine sand to medium gravel, predominantly<br>fine to medium, angular to rounded | 41              | 190-231     |
| Boulder   | 2               | 231-233     |
| Shale, grayish brown (Fort Union)   | 27              | 233-260     |

**Test Hole and Observation Well Record**

Location: 154-82-04ACA<sub>2</sub>                      Use of well: Observation  
Owner and number: SWC 5193                      Principal aquifer: Sundre  
Depth drilled (ft.): 110                      Altitude of land surface (ft., msl): 1542.3(S)  
Screened interval (ft.): 102-105              Lithologic log from: SWC  
Casing diameter: 1.25"                      Comments: Well destroyed, QW  
Date completed: 9/13/68

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil  | 1               | 0 - 1       |
| Silt, yellowish brown, very clayey, cohesive,<br>plastic, oxidized (fluvial)   | 18              | 1 - 19      |
| Silt, olive gray, clayey, interbedded very fine<br>to fine sand, cohesive, plastic (fluvial)   | 71              | 19 - 90     |
| Gravel, medium sand to coarse gravel,<br>predominantly fine to medium gravel,<br>angular to rounded, predominantly<br>subangular to subrounded | 20              | 90-110      |

**Test Hole and Observation Well Record**

|                                  |  |
|----------------------------------|--|
| Location: 154-82-04ADD           | Use of well: Observation                     |
| Owner and number: SWC 5194       | Principal aquifer: Sundre                    |
| Depth drilled (ft.): 280         | Altitude of land surface (ft., msl): 1540(T) |
| Screened interval (ft.): 214-220 | Lithologic log from: SWC                     |
| Casing diameter: 1.25"           | Comments: Well destroyed, E                  |
| Date completed: 9/13/68          |  |

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil  | 1               | 0 - 1       |
| Silt, yellowish brown, clayey, interbedded<br>very fine sand, cohesive, plastic,<br>oxidized (fluvial)                     | 23              | 1 - 24      |
| Silt, olive gray, clayey, interbedded very<br>fine sand, cohesive, plastic,<br>laminated (fluvial)                         | 68              | 24 - 92     |
| Clay, olive gray, very silty, interbedded<br>very fine to coarse sand, cohesive, plastic,<br>laminated (fluvial)           | 10              | 92-102      |
| Gravel, fine sand to medium gravel, angular to<br>subrounded, interbedded silty clay                                       | 18              | 102-120     |
| Sand, very fine to coarse, predominantly fine<br>to medium, subangular to subrounded                                       | 4               | 120-124     |
| Clay, olive gray to medium dark gray, silty,<br>interbedded fine to coarse sand, cohesive,<br>plastic (fluvial)            | 14              | 124-138     |
| Gravel, fine sand to coarse gravel, predominantly<br>medium, angular to rounded, predominantly<br>subangular to subrounded | 11              | 138-149     |
| Sand, very fine to coarse, subangular to<br>subrounded   | 11              | 149-160     |
| Clay, olive gray to medium gray, silty,<br>interbedded fine to medium sand, cohesive,<br>plastic                           | 4               | 160-164     |

154-82-04ADD  
cont.

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Sand, very fine to coarse, predominantly very fine to medium, angular to rounded                 | 26              | 164-190     |
| Gravel, very fine sand to coarse gravel, predominantly fine gravel, angular to rounded           | 32              | 190-222     |
| Clay, olive gray, silty, slightly sandy  | 3               | 222-225     |
| Gravel, medium sand to coarse gravel, predominantly fine to medium gravel, angular to subrounded | 25              | 225-250     |
| Siltstone, bluish gray to brownish gray, clayey (Fort Union)                                     | 30              | 250-280     |

**Test Hole and Observation Well Record**

Location: 154-82-04BBB                      Use of well: Test hole  
Owner and number: SWC 5186                      Principal aquifer:  
Depth drilled (ft.): 120                      Altitude of land surface (ft., msl): 1558(T)  
Screened interval (ft.): None                      Lithologic log from: SWC  
Casing diameter: None                              Comments: E  
Date completed: 4/10/68

**Lithologic Log**

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Topsoil   | 1               | 0 - 1       |
| Clay, yellowish brown, silty, slightly sandy, pebbly, oxidized (till) | 2               | 1 - 3       |
| Sand, medium sand to medium gravel, subangular to subrounded          | 12              | 3 -15       |
| Clay, olive gray, silty, pebbly, cohesive, plastic (till)             | 63              | 15 -78      |
| Sand, fine to very coarse, angular to subrounded                      | 2               | 78 -80      |
| Sandstone, very fine to fine, silty                                   | 40              | 80-120      |

**Test Hole and Observation Well Record**

|   |   |
|---|---|
| <b>Location:</b> 154-82-04CCC           | <b>Use of well:</b> Observation                       |
| <b>Owner and number:</b> SWC 5214       | <b>Principal aquifer:</b> Sundre                      |
| <b>Depth drilled (ft.):</b> 460         | <b>Altitude of land surface (ft., msl):</b> 1714.2(S) |
| <b>Screened interval (ft.):</b> 418-424 | <b>Lithologic log from:</b> SWC                       |
| <b>Casing diameter:</b> 1.5"            | <b>Comments:</b> Plugged, E, QW                       |
| <b>Date completed:</b> 10/19/68         |   |

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
|  | 1                      | 0 - 1              |
| <b>Topsoil</b>   |                        |                    |
| Clay, yellowish brown, silty, sandy, cohesive, plastic, oxidized (till)  | 84                     | 1 - 85             |
| Clay, olive gray, silty, slightly sandy, pebbly, cohesive, plastic (till)  | 32                     | 85-117             |
| Sand, fine to very coarse, angular to subrounded   | 2                      | 117-119            |
| Clay, olive gray, silty, slightly sandy, pebbly, gravelly, cohesive, plastic (till)  | 63                     | 119-182            |
| Clay, olive gray, very silty, sandy, cohesive, slightly plastic (fluvial)  | 28                     | 182-210            |
| Sand, very fine to very coarse, predominantly medium to coarse, angular to rounded, predominantly subangular to subrounded, interbedded silty clay | 90                     | 210-300            |
| Gravel, fine to coarse, predominantly fine to medium, sandy, angular to subangular, interbedded clayey silt  | 10                     | 300-310            |
| Clay, olive gray to dark greenish gray, very silty, sandy, interbedded very fine to medium sand, cohesive, plastic (fluvial)                       | 72                     | 310-382            |
| Sand, very fine to very coarse, predominantly fine to coarse, angular to subrounded, interbedded silty clay  | 18                     | 382-400            |
| Gravel, fine to coarse, sandy, angular to subrounded   | 49                     | 400-449            |
| Siltstone, light gray to brownish gray, clayey (Fort Union)  | 11                     | 449-460            |

**Test Hole and Observation Well Record**

|   |   |
|---|---|
| <b>Location:</b> 154-82-04DBB           | <b>Use of well:</b> Observation                       |
| <b>Owner and number:</b> SWC 5195       | <b>Principal aquifer:</b> Sundre                      |
| <b>Depth drilled (ft.):</b> 319         | <b>Altitude of land surface (ft., msl):</b> 1565.1(S) |
| <b>Screened interval (ft.):</b> 252-258 | <b>Lithologic log from:</b> SWC .                     |
| <b>Casing diameter:</b> 1.25"           | <b>Comments:</b> QW, E                                |
| <b>Date completed:</b> 9/13/68          |   |

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil   | 1                      | 0 - 1              |
| Clay, yellowish brown, silty, sandy, pebbly, cohesive, plastic, oxidized (till)                                     | 19                     | 1 - 20             |
| Clay, yellowish brown, very silty, sandy, cohesive, plastic, oxidized (fluvial)                                     | 20                     | 20 - 40            |
| Sand, fine to very coarse, subangular to subrounded   | 5                      | 40 - 45            |
| Clay, olive gray, silty, slightly sandy, cohesive, plastic (fluvial)  | 7                      | 45 - 52            |
| Gravel, medium sand to coarse gravel, silty, clayey, angular to subrounded  | 28                     | 52 - 80            |
| Sand, fine to very coarse, gravelly, angular to subrounded  | 20                     | 80-100             |
| Clay, olive gray, silty, slightly sandy, interbedded very fine to fine sand, cohesive, plastic, laminated (fluvial) | 18                     | 100-118            |
| Gravel, fine sand to coarse gravel, predominantly fine to medium gravel, angular to subrounded                      | 29                     | 118-147            |
| Clay, olive gray, silty, slightly sandy, cohesive, plastic, interbedded very fine to fine sand (fluvial)            | 5                      | 147-152            |
| Sand, fine to very coarse, subangular to rounded, interbedded clay  | 8                      | 152-160            |
| Clay, olive gray, silty, cohesive, plastic, interbedded very fine to medium sand (fluvial)                          | 10                     | 160-170            |

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Gravel, medium sand to coarse gravel,<br>predominantly fine to medium gravel,<br>angular to subrounded  | 10              | 170-180     |
| Clay, olive gray, silty, cohesive, plastic<br>(fluvial)   | 10              | 180-190     |
| Gravel, fine to coarse, predominantly fine<br>to medium, sandy, angular to subrounded   | 10              | 190-200     |
| Clay, olive gray, silty, slightly sandy,<br>slightly cohesive, plastic (fluvial)  | 15              | 200-215     |
| Sand, very fine to very coarse, angular to<br>subrounded  | 5               | 215-220     |
| Gravel, very fine sand to coarse gravel,<br>predominantly fine to medium gravel,<br>angular to rounded, predominantly<br>subangular to subrounded | 95              | 220-315     |
| Sandstone, fine to medium, angular to rounded,<br>indurated (Fort Union)  | 4               | 315-319     |

**Test Hole and Observation Well Record**

**Location:** 154-82-04DBD                    **Use of well:** Observation  
**Owner and number:** SWC 5196                **Principal aquifer:** Sundre  
**Depth drilled (ft.):** 300                    **Altitude of land surface (ft., msl):** 1567.5(S)  
**Screened interval (ft.):** 246-252            **Lithologic log from:** SWC  
**Casing diameter:** 1.25"                      **Comments:** Plugged, QW  
**Date completed:** 9/16/68

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil   | 1                      | 0 - 1              |
| Sand, fine sand to coarse gravel, angular to subrounded, silty, oxidized  | 14                     | 1 - 15             |
| Clay, yellowish brown, silty, sandy, pebbly, cohesive, plastic, oxidized (till)   | 5                      | 15 - 20            |
| Clay, dark yellowish brown to olive gray, very silty, slightly cohesive and plastic, interbedded sand (fluvial)         | 20                     | 20 - 40            |
| Sand, very fine to very coarse, angular to subrounded   | 14                     | 40 - 54            |
| Clay, olive gray to medium dark gray, very silty, slightly cohesive, plastic, laminated (fluvial)                       | 44                     | 54 - 60            |
| Clay, yellowish brown, silty, sandy, pebbly, cohesive, plastic, oxidized (till)   | 21                     | 60--81             |
| Sand, fine sand to coarse gravel, predominantly medium to very coarse sand, angular to subrounded                       | 24                     | 81-105             |
| Clay, brownish gray to medium dark gray, very silty, interbedded sand, gravel, and detrital lignite (fluvial)           | 51                     | 105-154            |
| Sand, fine to very coarse, gravelly, angular, to subrounded, interbedded clay   | 26                     | 154-180            |
| Clay, dark greenish gray, very silty, slightly sandy, slightly cohesive, plastic, interbedded sand and gravel (fluvial) | 60                     | 180-240            |

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Gravel, medium sand to coarse gravel,<br>angular to subrounded, some interbedded<br>clay | 20              | 240-260     |
| Gravel, fine to coarse, clayey, silty, angular<br>to subrounded                          | 26              | 260-286     |
| Sandstone, medium bluish gray, very fine to<br>fine (Fort Union)                         | 14              | 286-300     |

**Test Hole and Observation Well Record**

**Location:** 154-82-05ACD

**Use of well:** Observation

**Owner and number:** SWC 5215

**Principal aquifer:** Sundre

**Depth drilled (ft.):** 320

**Altitude of land surface (ft., msl):** 1596.6 (S)

**Screened interval (ft.):** 257-263

**Lithologic log from:** SWC

**Casing diameter:** 1.25"

**Comments:** Plugged, E, QW

**Date completed:** 10/10/68

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Topsoil  | 1                      | 0 - 1              |
| Clay, yellowish brown, silty, sandy, pebbly, cohesive, plastic, oxidized (till)  | 28                     | 1 - 29             |
| Clay, olive gray, silty, sandy, epbbly, cohesive, plastic (till)   | 9                      | 29 - 38            |
| Gravel, medium sand to medium gravel, angular to subrounded  | 20                     | 38 - 58            |
| Sand, fine sand to medium gravel, angular to subangular, oxidized  | 12                     | 58 - 70            |
| Gravel, fine to coarse, predominantly fine to medium, sandy, angular to subrounded, interbedded silty clay, oxidized       | 48                     | 70-118             |
| Clay, brownish to medium dark gray, very silty, sandy, slightly cohesive, plastic, laminated (fluvial)                     | 14                     | 118-132            |
| Sand, very fine to very coarse, predominantly fine to coarse, slightly gravelly, angular to rounded                        | 32                     | 132-164            |
| Clay, brownish to dark greenish gray, very silty, interbedded fine to medium sand, slightly cohesive and plastic (fluvial) | 24                     | 164-188            |
| Gravel, fine to coarse, predominantly medium to coarse, slightly sandy, angular to subrounded, interbedded clayey silt     | 119                    | 188-307            |
| Shale, brown to black (Fort Union)   | 13                     | 307-320            |

**Test Hole and Observation Well Record**

|  |   |
|--|---|
| <b>Location:</b> 154-82-06ADB <sub>1</sub> | <b>Use of well:</b> Observation                       |
| <b>Owner and number:</b> SWC 11362         | <b>Principal aquifer:</b> Sundre                      |
| <b>Depth drilled (ft.):</b> 520            | <b>Altitude of land surface (ft., msl):</b> 1709.7(S) |
| <b>Screened interval (ft.):</b> 439-454    | <b>Lithologic log from:</b> SWC                       |
| <b>Casing diameter:</b> 2" steel           | <b>Comments:</b> Sand packed, E                       |
| <b>Date completed:</b> 10/18/83            |   |

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil   | 1                      | 0 - 1              |
| Clay, yellowish brown, silty, sandy, brittle, crumbly, interbedded sand, oxidized (till)    | 62                     | 1 - 63             |
| Clay, olive gray, silty, sandy, pebbly, soft, plastic, interbedded sand and gravel (till)   | 26                     | 63 - 89            |
| Clay, olive gray, very silty, very sandy, tight, brittle, crumbly (till)                    | 18                     | 89-107             |
| Sand, fine to coarse, predominantly fine, subrounded  | 5                      | 107-112            |
| Clay, olive gray, silty, sandy, pebbly, tight, plastic, interbedded detrital lignite (till) | 86                     | 112-198            |
| Silt, to very fine sand, poor cuttings return, much detrital lignite                        | 9                      | 198-207            |
| Silt, olive gray to brownish gray, clayey   | 7                      | 207-214            |
| Clay, olive gray, slightly silty (lacustrine)   | 20                     | 214-234            |
| Silt, greenish gray, clayey, interbedded detrital lignite and sand                          | 74                     | 234-308            |
| Gravel, very coarse sand to fine gravel, predominantly fine gravel, subrounded to rounded   | 21                     | 308-329            |

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Silt, greenish gray, clayey, interbedded<br>very fine sand and detrital lignite                         | 28              | 329-357     |
| Sand, very coarse sand to fine gravel,<br>subangular to rounded, interbedded clay                       | 105             | 357-462     |
| Sand, interbedded clay  | 23              | 462-485     |
| Clay, olive gray, interbedded bluish fine<br>sandstone and carbonaceous clay<br>bentonitic (Fort Union) | 5               | 485-490     |
| Sandstone, poorly to well indurated,<br>interbedded clay  | 15              | 490-505     |
| Clay, whitish green, sandy, interbedded<br>very fine to fine sandstone                                  | 15              | 505-520     |

**Test Hole and Observation Well Record**

**Location:** 154-82-06ADB<sub>2</sub>      **Use of well:** Observation  
**Owner and number:** SWC 11363      **Principal aquifer:** Sundre  
**Depth drilled (ft.):** 340      **Altitude of land surface (ft., msl):** 1710.1(S)  
**Screened interval (ft.):** 315-327      **Lithologic log from:** SWC  
**Casing diameter:** 2" steel      **Comments:** Sand packed, E  
**Date completed:** 10/20/83

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| <b>Topsoil</b>   | 2                      | 0 - 2              |
| Clay, yellow brown, silty, friable,<br>interbedded sand, oxidized (till)   | 10                     | 2 - 12             |
| Clay, yellowish green, silty, slightly<br>pebbly, soft, plastic, oxidized (till)   | 30                     | 12 - 42            |
| Sand, very coarse sand to fine gravel,<br>predominantly very coarse sand,<br>angular to rounded, oxidized                    | 8                      | 42 - 50            |
| Clay, yellowish green, silty, slightly<br>pebbly, soft, plastic, oxidized (till)   | 11                     | 50 - 61            |
| Clay, olive gray, very silty, slightly sandy<br>and pebbly, soft, plastic (till)   | 26                     | 61 - 87            |
| Sand, fine sand to fine gravel, predominantly<br>coarse to very coarse sand, angular to<br>rounded, predominantly subrounded | 9                      | 87 - 96            |
| Clay, olive gray, very silty, slightly sandy<br>and pebbly, soft, plastic, (till)  | 11                     | 96-107             |
| Sand, fine to very coarse, predominantly fine,<br>rounded  | 11                     | 107-118            |
| Clay, silty, sandy, pebbly, tight, plastic,<br>interbedded sand and gravel (till)  | 55                     | 118-173            |
| Clay, olive gray, silty, tight, plastic (fluvial)  | 7                      | 173-180            |
| Clay, olive gray, silty, pebbly, interbedded<br>sand and gravel (till)   | 18                     | 180-198            |
| Silt, very clayey, much interbedded detrital<br>lignite  | 16                     | 198-214            |

154-82-06ADB<sub>2</sub>  
cont.

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Clay, olive gray, slightly silty, some interbedded silt  | 19              | 214-233     |
| Silt, olive gray, very clayey, interbedded detrital lignite  | 69              | 233-302     |
| Sand, fine sand to fine gravel, predominantly fine to medium sand, angular to rounded, predominantly rounded | 26              | 302-328     |
| Silt, olive gray, clayey   | 12              | 328-340     |

**Test Hole and Observation Well Record**

|   |   |
|---|---|
| <b>Location:</b> 154-82-06CCC           | <b>Use of well:</b> Observation                       |
| <b>Owner and number:</b> SWC 5216       | <b>Principal aquifer:</b> Sundre                      |
| <b>Depth drilled (ft.):</b> 320         | <b>Altitude of land surface (ft., msl):</b> 1736.6(S) |
| <b>Screened interval (ft.):</b> 277-283 | <b>Lithologic log from:</b> SWC                       |
| <b>Casing diameter:</b> 1.25"           | <b>Comments:</b> Plugged, E, QW                       |
| <b>Date completed:</b> 10/11/68         |   |

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil   | 1                      | 0 - 1              |
| Clay, yellowish brown, silty, sandy, pebbly, cohesive, plastic, oxidized (till)                 | 11                     | 1 - 12             |
| Sand, medium to very coarse, gravelly, angular to subrounded, oxidized                          | 8                      | 12 - 20            |
| Clay, yellowish brown, silty, slightly sandy, pebbly, cohesive, plastic, oxidized (till)        | 11                     | 20 - 31            |
| Clay, olive gray, silty, slightly sandy, pebbly, cohesive, plastic (till)                       | 103                    | 31-134             |
| Clay, olive gray, silty, pebbly, cohesive, slightly plastic, interbedded sand and gravel (till) | 86                     | 134-220            |
| Clay, medium dark gray to olive gray, very silty, cohesive, laminated (fluvial)                 | 40                     | 220-260            |
| Gravel, fine sand to coarse gravel, predominantly fine to medium gravel, angular to subrounded  | 29                     | 260-289            |
| Sandstone, bluish gray, very fine, indurated (Fort Union)                                       | 2                      | 289-291            |
| Siltstone, brownish gray, clayey, laminated   | 29                     | 291-320            |

**Test Hole and Observation Well Record**

**Location:** 154-82-07AAA

**Use of well:** Observation

**Owner and number:** SWC 5725

**Principal aquifer:** Sundre

**Depth drilled (ft.):** 342

**Altitude of land surface (ft., msl):** 1615.2 (S)

**Screened interval (ft.):** 187-193

**Lithologic log from:** SWC

**Casing diameter:** 1.25"

**Comments:** E, QW

**Date completed:** 10/22/68

**Lithologic Log**

**Unit description**

|   | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| <b>Topsoil</b>  | 1               | 0 - 1       |
| Clay, yellowish brown, silty, sandy, pebbly, cohesive, plastic, oxidized (till)                           | 17              | 1 - 18      |
| Sand, fine to coarse, angular to subrounded, oxidized   | 3               | 18 - 21     |
| Clay, olive gray, silty, sandy, cohesive, slightly plastic, interbedded sand (till)                       | 24              | 21 - 45     |
| Sand, very fine to coarse, predominantly fine to medium, subangular to subrounded, interbedded silty clay | 34              | 45 - 79     |
| Clay, olive gray, silty, slightly sandy, pebbly, cohesive, plastic (till)                                 | 10              | 79 - 89     |
| Sand, very fine to medium, angular to rounded   | 16              | 89-105      |
| Clay, olive gray, very silty, very cohesive laminated (fluvial)   | 31              | 105-136     |
| Sand, very fine to medium, angular to rounded   | 48              | 136-184     |
| Gravel, fine to coarse, slightly sandy, angular to subrounded   | 14              | 184-198     |
| Clay, olive gray, very silty, cohesive, slightly plastic, interbedded very fine to fine sand (fluvial)    | 140             | 198-338     |
| Sandstone, fine, indurated (Fort Union)   | 4               | 338-342     |

**Test Hole and Observation Well Record**

**Location:** 154-82-07DCC                   **Use of well:** Observation  
**Owner and number:** SWC 5222               **Principal aquifer:** Sundre?  
**Depth drilled (ft.):** 300                  **Altitude of land surface (ft., msl):** 1758.3(S)  
**Screened interval (ft.):** 257-263           **Lithologic log from:** SWC  
**Casing diameter:** 1.25"                      **Comments:** Destroyed, E, QW  
**Date completed:** 10/18/68

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Topsoil  | 1                      | 0 - 1              |
| Clay, yellowish brown, silty, sandy,<br>pebbly, interbedded sand and gravel,<br>cohesive, plastic, oxidized (till) | 29                     | 1 - 30             |
| Clay, olive gray, silty, slightly sandy,<br>pebbly, cohesive, plastic (till)                                       | 161                    | 30-191             |
| Gravel, fine to coarse, sandy, angular to<br>rounded   | 75                     | 191-266            |
| Sandstone, very fine, bedded, micaceous  | 34                     | 266-300            |

**Test Hole and Observation Well Record**

**Location:** 154-82-08CCC

**Use of well:** Test hole

**Owner and number:** SWC 5221

**Principal aquifer:**

**Depth drilled (ft.):** 360

**Altitude of land surface (ft., msl):** 1750(T)

**Screened interval (ft.):** None

**Lithologic log from:** SWC

**Casing diameter:** None

**Comments:** E

**Date completed:** 10/17/68

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil   | 1                      | 0 - 1              |
| Clay, yellowish brown, silty, sandy,<br>pebbly, cohesive, plastic, oxidized (till)    | 19                     | 1 - 20             |
| Clay, olive gray, silty, slightly sandy,<br>pebbly, cohesive, plastic (till)          | 18                     | 20 - 38            |
| Sand, fine to coarse, angular to rounded  | 5                      | 38 - 43            |
| Clay, olive gray, silty, slightly sandy,<br>pebbly, cohesive, slightly plastic (till) | 66                     | 43-109             |
| Gravel, fine sand to medium gravel, angular<br>to subangular                          | 21                     | 109-130            |
| Clay, olive gray, silty, slightly sandy,<br>pebbly, cohesive, plastic (till)          | 130                    | 130-260            |
| Gravel, very fine sand to coarse gravel,<br>angular to subrounded                     | 64                     | 260-324            |
| Sandstone, fine, clayey, interbedded siltstone<br>(Fort Union)                        | 36                     | 324-360            |

**Test Hole and Observation Well Record**

|   |   |
|---|---|
| <b>Location:</b> 154-82-08DCC           | <b>Use of well:</b> Observation                       |
| <b>Owner and number:</b> SWC 5223       | <b>Principal aquifer:</b> Sundre?                     |
| <b>Depth drilled (ft.):</b> 420         | <b>Altitude of land surface (ft., msl):</b> 1744.3(S) |
| <b>Screened interval (ft.):</b> 367-373 | <b>Lithologic log from:</b> SWC.                      |
| <b>Casing diameter:</b> 1.25"           | <b>Comments:</b> E                                    |
| <b>Date completed:</b> 10/21/68         |   |

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| <b>Topsoil</b>   | 1                      | 0 - 1              |
| Clay, yellowish brown, silty, sandy, pebbly, cohesive, plastic, oxidized (till)                        | 29                     | 1 - 30             |
| Clay, olive gray, silty, slightly sandy, pebbly, cohesive, plastic, interbedded sand and gravel (till) | 132                    | 30-162             |
| Gravel, fine to coarse, predominantly fine to medium, angular to subangular                            | 13                     | 162-175            |
| Clay, olive gray, silty, slightly sandy, pebbly, cohesive, plastic (till)                              | 95                     | 175-270            |
| Gravel, fine to medium, slightly sandy, angular to subangular, interbedded silty clay                  | 26                     | 270-296            |
| Clay, olive to dark greenish gray, very silty, cohesive, plastic (fluvial)                             | 24                     | 296-320            |
| Clay, olive gray, silty, sandy, pebbly, cohesive, slightly plastic (till)                              | 35                     | 320-355            |
| Gravel, fine sand to medium gravel, angular to subangular, interbedded silty clay                      | 22                     | 355-377            |
| Clay, olive gray, silty, slightly sandy, pebbly, cohesive, slightly plastic (till)                     | 13                     | 377-390            |
| Sandstone, very fine, indurated (Fort Union)   | 4                      | 390-394            |
| Siltstone, clayey  | 26                     | 394-420            |

**Test Hole and Observation Well Record**

**Location:** 154-82-09CBB

**Use of well:** Observation

**Owner and number:** SWC 11354

**Principal aquifer:** Sundre

**Depth drilled (ft.):** 480

**Altitude of land surface (ft., msl):** 1729.2(S)

**Screened interval (ft.):** 315-327

**Lithologic log from:** SWC

**Casing diameter:** 2" steel

**Comments:** E, QW

**Date completed:** 10/6/83

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil   | 1                      | 0 - 1              |
| Clay, yellow brown, silty, sandy, pebbly, oxidized (till)                     | 35                     | 1 - 36             |
| Clay, olive gray, silty, sandy, pebbly (till)                                 | 32                     | 36 - 68            |
| Sand, medium to coarse, subrounded to rounded                                 | 4                      | 68 - 72            |
| Clay, olive gray, silty, sandy, pebbly (till)                                 | 9                      | 72 - 81            |
| Sand, medium to very coarse, gravelly, subrounded to rounded                  | 2                      | 81 - 83            |
| Clay, olive gray, silty, sandy, pebbly (till)                                 | 5                      | 83 - 88            |
| Gravel, sandy   | 9                      | 88 - 97            |
| Clay, olive gray, silty, sandy, pebbly (till)                                 | 7                      | 97-104             |
| Clay, olive gray, silty, sandy, pebbly, interbedded sand and gravel (till)    | 5                      | 104-109            |
| Clay, olive gray, silty, sandy, pebbly, cobbley (till)                        | 51                     | 109-160            |
| Sand, interbedded silty clay, detrital lignite, gravel, subrounded to rounded | 25                     | 160-185            |
| Gravel, medium sand to pebble size gravel, subrounded to rounded              | 13                     | 185-198            |
| Clay, olive gray, silty, very sand, pebbly (till)                             | 50                     | 198-248            |
| Clay, olive gray, silty, plastic, laminated (lacustrine)                      | 27                     | 248-275            |

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Clay, brown, carbonaceous, interbedded detrital lignite                | 22              | 275-297     |
| Gravel, fine, angular to rounded, sandy                                | 35              | 297-332     |
| Gravel, interbedded clay   | 13              | 332-345     |
| Clay, olive gray to black, silty, carbonaceous, interbedded sandy clay | 43              | 345-388     |
| Clay, gray to black, very carbonaceous, silty, sandy                   | 49              | 388-437     |
| Clay, interbedded siltstone and dolomite (Fort Union)                  | 43              | 437-480     |

**Test Hole and Observation Well Record**

|   |  |
|---|--|
| <b>Location:</b> 154-82-09DDD           | <b>Use of well:</b> Observation                            |
| <b>Owner and number:</b> SWC 5403       | <b>Principal aquifer:</b> Sundre                           |
| <b>Depth drilled (ft.):</b> 300         | <b>Altitude of land surface (ft., msl):</b> 1722.0(S)      |
| <b>Screened interval (ft.):</b> 239-242 | <b>Lithologic log from:</b> SWC                            |
| <b>Casing diameter:</b> 1.25"           | <b>Comments:</b> E, water level too low,<br>would not pump |
| <b>Date completed:</b> 7/16/69          |  |

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| <b>Topsoil</b>  | 1                      | 0 - 1              |
| <b>Clay, yellowish, orange, silty, sandy, pebbly, cohesive, slightly plastic (till)</b> | 69                     | 1 - 70             |
| <b>Clay, olive gray, silty, sandy, pebbly, slightly cohesive (till)</b>                 | 23                     | 70 - 93            |
| <b>Gravel, medium to very coarse, angular to subrounded</b>                             | 4                      | 93 - 97            |
| <b>Clay, olive gray, silty, sandy, pebbly, interbedded sand</b>                         | 62                     | 97-159             |
| <b>Silt, clayey, interbedded detrital lignite and fine sand</b>                         | 68                     | 159-227            |
| <b>Gravel, fine to coarse, sandy, subangular to subrounded</b>                          | 25                     | 227-252            |
| <b>Sand, very fine, clayey, silty, interbedded mudstone (Fort Union)</b>                | 48                     | 252-300            |

**Test Hole and Observation Well Record**

**Location:** 154-82-10BBB

**Use of well:** Observation

**Owner and number:** SWC 3326

**Principal aquifer:** Sundre

**Depth drilled (ft.):** 170

**Altitude of land surface (ft., msl):** 1540.8(S)

**Screened interval (ft.):** Slotted  
from 100-120

**Lithologic log from:** SWC

**Casing diameter:** 1.25"

**Comments:** E, QW, destroyed

**Date completed:** 5/31/66

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Topsoil  | 1                      | 0 - 1              |
| Silt, brownish gray, sandy   | 4                      | 1 - 5              |
| Silt, yellowish gray, clayey, cohesive,<br>plastic   | 9                      | 5 - 14             |
| Clay, greenish gray, silty, cohesive,<br>plastic, interbedded fine to medium<br>sand                   | 19                     | 14 - 33            |
| Clay, dark greenish gray, cohesive, plastic,<br>interbedded silt and sand, fossiliferous,<br>laminated | 54                     | 33 - 87            |
| Gravel, coarse sand to fine gravel, becomes<br>coarser with depth                                      | 79                     | 87-156             |
| Sandstone, fine, interbedded lignite   | 14                     | 156-170            |

**Test Hole and Observation Well Record**

|   |   |
|---|---|
| <b>Location:</b> 154-82-10BBBB <sub>1</sub> | <b>Use of well:</b> Observation                       |
| <b>Owner and number:</b> SWC 5400           | <b>Principal aquifer:</b> Sundre                      |
| <b>Depth drilled (ft.):</b> 300             | <b>Altitude of land surface (ft., msl):</b> 1540.8(S) |
| <b>Screened interval (ft.):</b> 138-141     | <b>Lithologic log from:</b> SWC                       |
| <b>Casing diameter:</b> 1.25"               | <b>Comments:</b> E, QW, North well                    |
| <b>Date completed:</b> 7/14/69              |   |

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Sand, brownish yellow, clayey  | 21                     | 0 - 21             |
| Clay, yellowish brown to olive gray,<br>oxidized to 25', silty, cohesive,<br>plastic, interbedded sand | 74                     | 21 - 95            |
| Sand, fine to coarse, gravelly coarser<br>with depth   | 21                     | 95 -116            |
| Boulders   | 2                      | 116 -118           |
| Clay, dark olive gray, very cohesive,<br>plastic (lacustrine)  | 8                      | 118 -126           |
| Gravel, medium to coarse, sandy,<br>subangular to subrounded   | 35                     | 126 -161           |
| Silt, interbedded detrital lignite   | 43                     | 161 -204           |
| Gravel, very coarse, cobbley, bouldery,<br>angular to subangular                                       | 3                      | 204 -207           |
| Sand, medium to coarse, gravelly,<br>clayey, coarser, with depth                                       | 57                     | 207 -264           |
| Clay, dark brownish gray, silty (Fort Union)   | 36                     | 264 -300           |

**Test Hole and Observation Well Record**

|  |   |
|--|---|
| <b>Location:</b> 154-82-10BBB <sub>2</sub> | <b>Use of well:</b> Observation                       |
| <b>Owner and number:</b> 5523              | <b>Principal aquifer:</b> Sundre                      |
| <b>Depth drilled (ft.):</b> 220            | <b>Altitude of land surface (ft., msl):</b> 1541.0(S) |
| <b>Screened interval (ft.):</b> 206-212    | <b>Lithologic log from:</b> SWC                       |
| <b>Casing diameter:</b> 1.25"              | <b>Comments:</b> QW, South well                       |
| <b>Date completed:</b> 10/02/69            |   |

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| <b>Topsoil</b>   | 1                      | 0 - 1              |
| Clay, gray to black, very silty, slightly cohesive, very plastic (alluvium)                    | 3                      | 1 - 4              |
| Clay, yellowish brown, very silty, cohesive, very plastic, oxidized (alluvium)                 | 10                     | 4 - 14             |
| Clay, dark greenish gray, very silty, very cohesive, plastic, interbedded sand (alluvium)      | 72                     | 14 - 86            |
| Sand, fine to very coarse grain, silty, interbedded silty clay                                 | 14                     | 86-100             |
| Gravel, fine to coarse, slightly sandy, angular to subrounded                                  | 16                     | 100-116            |
| Clay, olive gray, very silty, cohesive, very plastic, laminated (alluvium)                     | 9                      | 116-125            |
| Sand, very fine to very coarse, gravelly, subangular to rounded                                | 10                     | 125-135            |
| Gravel, fine to coarse, sandy, angular to rounded  | 9                      | 135-144            |
| Clay, olive gray, very silty, cohesive plastic, interbedded sand, gravel, and detrital lignite | 30                     | 144-174            |
| Gravel, fine sand to coarse gravel, subangular to rounded, some interbedded clay               | 46                     | 174-220            |

**Test Hole and Observation Well Record**

Location: 154-82-10BCB                      Use of well: Observation  
Owner and number: SWC 5401                      Principal aquifer: Sundre  
Depth drilled (ft.): 340                      Altitude of land surface (ft., msl): 1561.6(S)  
Screened interval (ft.): 238-241              Lithologic log from: SWC  
Casing diameter: 1.25"                      Comments: E, QW  
Date completed: 7/15/69

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil  | 1               | 0 - 1       |
| Sand, fine to coarse, silty, very clayey, oxidized, interbedded clay                           | 33              | 1 - 34      |
| Silt, dark bluish gray, clayey, slightly cohesive  | 65              | 34 - 99     |
| Gravel, medium to very coarse, sandy, subangular to subrounded, some interbedded silt and clay | 220             | 99-319      |
| Clay, silty, interbedded sand (Fort Union)   | 21              | 319-340     |

**Test Hole and Observation Well Record**

|   |  |
|---|--|
| <b>Location:</b> 154-82-10CAC           | <b>Use of well:</b> Observation                    |
| <b>Owner and number:</b> SWC 11365      | <b>Principal aquifer:</b> Bedrock, Fort Union      |
| <b>Depth drilled (ft.):</b> 440         | <b>Altitude of land surface (ft., msl):</b> 1558.0 |
| <b>Screened interval (ft.):</b> 323-341 | <b>Lithologic log from:</b> SWC                    |
| <b>Casing diameter:</b> 2" steel        | <b>Comments:</b> E, QW, flowing well               |
| <b>Date completed:</b> 11/15/83         |  |

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil   | 4                      | 0 - 4              |
| Clay, yellowish brown, silty, very sandy, pebbly, oxidized (till)                                     | 11                     | 4 - 15             |
| Clay, yellowish brown, silty, very sandy, oxidized (till)   | 6                      | 15 - 21            |
| Clay, yellowish brown, silty, very sandy, plastic, oxidized (till)                                    | 10                     | 21 - 31            |
| Sand, medium to coarse, fine gravel, subrounded to rounded  | 3                      | 31 - 34            |
| Clay, yellowish brown to olive gray, very silty and sandy, interbedded shale gravel (till)            | 8                      | 34 - 46            |
| Clay, olive gray, silty, sandy, pebbly (till)   | 10                     | 46 - 56            |
| Clay, olive gray, very cohesive and plastic (lacustrine)  | 16                     | 56 - 72            |
| Detrital lignite  | 1                      | 72 - 73            |
| Clay, olive gray, very silty and sandy, friable, interbedded with detrital lignite and non-silty clay | 66                     | 73-139             |

cont.

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Sand, medium, subrounded to rounded                                 | 5               | 139-144     |
| Clay, olive gray, silty, sandy (Fort Union)                         | 51              | 144-195     |
| Clay, brown, brittle  | 42              | 195-237     |
| Clay, brownish to greenish, interbedded<br>sandy clay and siltstone | 4               | 237-241     |
| Clay, olive gray, very sandy  | 22              | 241-263     |
| Clay, greenish gray, sandy, interbedded,<br>very sandy clay         | 67              | 263-330     |
| Sandstone, greenish, very fine, interbedded<br>sandy clay           | 22              | 330-352     |
| Clay, brownish, interbedded sandstone                               | 88              | 352-440     |

**Test Hole and Observation Well Record**

**Location:** 154-82-10DAA

**Use of well:** Observation

**Owner and number:** SWC 5207

**Principal aquifer:** Sundre

**Depth drilled (ft.):** 130

**Altitude of land surface (ft., msl):** 1541.3(S)

**Screened interval (ft.):** 97-100

**Lithologic log from:** SWC

**Casing diameter:** 1.25"

**Comments:** E, QW, destroyed

**Date completed:** 9/27/68

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| <b>Topsoil</b>   | 1                      | 0 - 1              |
| <b>Clay, very silty, cohesive, plastic,<br/>oxidized (fluvial)</b>                                   | 19                     | 1 - 20             |
| <b>Sand, very fine to fine, silty, angular<br/>to subrounded, oxidized</b>                           | 7                      | 20 - 27            |
| <b>Clay, olive gray, very silty, cohesive, plastic,<br/>laminated, interbedded sand (fluvial)</b>    | 59                     | 27 - 86            |
| <b>Gravel, fine to coarse, predominantly coarse,<br/>sandy, clayey, silty, angular to subrounded</b> | 30                     | 86-116             |
| <b>Sandstone, fine, indurated (Fort Union)</b>   | 1½                     | 116-117½           |
| <b>Siltstone, clayey, indurated</b>  | 12½                    | 117½-130           |

**Test Hole and Observation Well Record**

**Location:** 154-82-11BCB

**Use of well:** Observation

**Owner and number:** SWC 5206

**Principal aquifer:** Sundre-Souris Valley

**Depth drilled (ft.):** 85

**Altitude of land surface (ft., msl):** 1538.7(S)

**Screened interval (ft.):** 66-69

**Lithologic log from:** SWC

**Casing diameter:** 1.25"

**Comments:** QW

**Date completed:** 9/26/68

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| <b>Topsoil</b>   | 1                      | 0 - 1              |
| <b>Clay, yellowish brown, very silty,<br/>cohesive, plastic, oxidized (fluvial)</b>                    | 14                     | 1 - 15             |
| <b>Clay, olive gray, very silty, slightly sandy,<br/>cohesive, plastic, laminated (fluvial)</b>        | 51                     | 15 - 66            |
| <b>Gravel, fine to coarse, slightly sandy,<br/>angular to subrounded, predominantly<br/>subangular</b> | 19                     | 66 - 85            |

**Test Hole and Observation Well Record**

|   |   |
|---|---|
| <b>Location:</b> 154-82-11DAA           | <b>Use of well:</b> Observation                       |
| <b>Owner and number:</b> SWC 5211       | <b>Principal aquifer:</b> Sundre                      |
| <b>Depth drilled (ft.):</b> 250         | <b>Altitude of land surface (ft., msl):</b> 1542.0(S) |
| <b>Screened interval (ft.):</b> 177-183 | <b>Lithologic log from:</b> SWC                       |
| <b>Casing diameter:</b> 1.25"           | <b>Comments:</b> E, QW, destroyed                     |
| <b>Date completed:</b> 10/2/68          |   |

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Topsoil  | 1                      | 0 - 1              |
| Clay, yellowish brown, very silty,<br>cohesive, plastic, interbedded<br>very fine to fine sand, oxidized (fluvial) | 11                     | 1 - 12             |
| Clay, olive gray, very silty, cohesive,<br>plastic, laminated, interbedded<br>very fine to fine sand (fluvial)     | 36                     | 12 - 48            |
| Gravel, medium sand to coarse gravel, predominantly<br>fine to medium gravel, angular to subrounded                | 35                     | 48 - 83            |
| Clay, very silty, slightly sandy, cohesive,<br>plastic (fluvial)   | 15                     | 83 - 98            |
| Gravel, very fine sand to coarse gravel,<br>angular to subrounded  | 98                     | 98-196             |
| Clay, olive gray, very silty, slightly sandy,<br>cohesive, plastic (fluvial)                                       | 7                      | 196-203            |
| Gravel, fine to coarse, slightly silty and<br>sandy, angular to subrounded   | 33                     | 203-236            |
| Sandstone, very fine to medium   | 2                      | 236-238            |
| Siltstone, clayey  | 12                     | 238-250            |

**Test Hole and Observation Well Record**

Location: 154-82-12DAA1                      Use of well: Observation  
 Owner and number: SWC 11530A                  Principal aquifer: Sundre  
 Depth drilled (ft.): 320                        Altitude of land surface (ft., msl): 1645.7(S)  
 Screened interval (ft.): 265-270                Lithologic log from: SWC  
 Casing diameter: 1.25"                         Comments: East well, E, QW, C  
 Date completed: 5/15/85

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil  | 2               | 0 - 2       |
| Clay, yellowish brown, silty, sandy, pebbly, oxidized (till)     | 40              | 2 - 42      |
| Clay, yellowish brown, very silty, sandy, oxidized               | 4               | 42 - 46     |
| Clay, yellowish brown, silty, sandy, pebbly, oxidized (till)     | 3               | 46 - 49     |
| Clay, olive gray, silty, sandy, pebbly (till)                    | 4               | 49 - 53     |
| Sand, fine to coarse, subrounded to rounded                      | 8               | 53 - 61     |
| Clay, olive gray, silty, sandy, pebbly (till)                    | 40              | 61-101      |
| Gravel, coarse sand to pebble size gravel, subrounded to rounded | 13              | 101-114     |
| Clay, olive gray, silty, sandy, pebbly (till)                    | 3               | 114-117     |
| Gravel, coarse sand to pebble size gravel, subrounded to rounded | 69              | 117-186     |
| Clay, olive gray, silty, sandy (till)                            | 15              | 186-201     |
| Gravel, coarse sand to pebbly size gravel, subrounded to rounded | 35              | 201-236     |
| Clay, olive gray (till)  | 8               | 236-244     |

154-82-12DAA<sub>1</sub>  
cont.

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Gravel  | 5               | 244-249     |
| Clay, olive gray, interbedded gravel<br>and detrital lignite (till)                       | 11              | 249-260     |
| Gravel, to pebble size, subrounded  | 31              | 260-291     |
| Clay, greenish black, silty, sandy,<br>carbonaceous, interbedded sandstone<br>and lignite | 28              | 291-320     |

**Test Hole and Observation Well Record**

Location: 154-82-12DAA<sub>2</sub> Use of well: Observation  
Owner and number: SWC 11530B Principal aquifer: Sundre  
Depth drilled (ft.): 220 Altitude of land surface (ft., msl): 1646.20(S)  
Screened interval (ft.): 210-215 Lithologic log from: SWC  
Casing diameter: 1.25" Comments: 15' west of 12DAA<sub>1</sub>. see 11530A,  
Date completed: 5/16/85 QW, C

**Lithologic Log**

| Unit description | Thickness (ft.) | Depth (ft.) |
|------------------|-----------------|-------------|
|------------------|-----------------|-------------|

**Test Hole and Observation Well Record**

**Location:** 154-82-12DAA<sub>3</sub>

**Use of well:** Observation

**Owner and number:** SWC 11530C

**Principal aquifer:** Sand and gravel, unnamed

**Depth drilled (ft.):** 170

**Altitude of land surface (ft., msl):** 1646.5(S)

**Screened interval (ft.):** 157-162

**Lithologic log from:** SWC

**Casing diameter:** 1.25"

**Comments:** 15' west of 12DAA<sub>2</sub>, see 11530A,  
QW, C

**Date completed:** 5/16/85

**Lithologic Log**

**Unit description**

**Thickness (ft.)   Depth (ft.)**

**Test Hole and Observation Well Record**

**Location:** 154-82-12DAA<sub>4</sub>

**Use of well:** Observation

**Owner and number:** SWC 11530D

**Principal aquifer:** glacial till

**Depth drilled (ft.):** 88

**Altitude of land surface (ft., msl):** 1646.8(S)

**Screened interval (ft.):** 80-85

**Lithologic log from:** SWC

**Casing diameter:** 2"

**Comments:** West well, see 11530A, QW, C

**Date completed:** 5/17/85

**Lithologic Log**

**Unit description**

**Thickness (ft.)      Depth (ft.)**

**Test Hole and Observation Well Record**

|                                      |   |
|--------------------------------------|---|
| <b>Location:</b> 154-82-16BBB        | <b>Use of well:</b> Test hole                       |
| <b>Owner and number:</b> SWC 5224    | <b>Principal aquifer:</b>                           |
| <b>Depth drilled (ft.):</b> 240      | <b>Altitude of land surface (ft., msl):</b> 1738(T) |
| <b>Screened interval (ft.):</b> None | <b>Lithologic log from:</b> SWC                     |
| <b>Casing diameter:</b> None         | <b>Comments:</b> E                                  |
| <b>Date completed:</b> 10/22/68      |   |

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
|  | 1                      | 0 - 1              |
| Topsoil  |                        |                    |
| Clay, yellowish brown, silty, sandy, pebbly, cohesive, oxidized (till)                           | 26                     | 1 - 27             |
| Clay, olive gray, silty, slightly sandy, pebbly, cohesive, plastic (till)                        | 11                     | 27 - 38            |
| Sand, medium to very coarse, gravelly, subangular to subrounded                                  | 8                      | 38 - 46            |
| Clay, olive gray, silty, slightly sandy, pebbly, interbedded sand, cohesive plastic (till)       | 44                     | 46 - 90            |
| Gravel, fine to medium, sandy, angular to subangular, interbedded silty clay                     | 10                     | 90-100             |
| Clay, olive gray, silty, pebbly, cohesive, slightly plastic, interbedded sand and laminated clay | 125                    | 100-225            |
| Siltstone, clayey, slightly sandy, indurated (Fort Union)  | 15                     | 225-240            |

**Test Hole and Observation Well Record**

|                                |  |
|--------------------------------|--|
| Location: 154-82-24ABA         | Use of well: Observation                     |
| Owner and number: SWC 2212     | Principal aquifer: Souris Valley             |
| Depth drilled (ft.): 115       | Altitude of land surface (ft., msl): 1535(T) |
| Screened interval (ft.): 30-32 | Lithologic log from: SWC                     |
| Casing diameter: 1.25"         | Comments: E, QW                              |
| Date completed: 11/6/63        |  |

**Lithologic Log**

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Topsoil   | 2               | 0 - 2       |
| Clay, medium dark gray, silty                           | 3               | 2 - 5       |
| Clay, medium gray, silty, cohesive,<br>plastic          | 5               | 5 - 10      |
| Clay, dusky yellow, silty, cohesive,<br>plastic         | 5               | 10 - 15     |
| Clay, dusky yellow to olive brown,<br>cohesive, plastic | 5               | 15 - 20     |
| Clay, olive gray, silty                                 | 10              | 20 - 30     |
| Sand, fine to coarse, gravelly, interbedded<br>clay     | 10              | 30 - 40     |
| Silt, olive gray, clayey, cohesive, interbedded<br>clay | 10              | 40 - 50     |
| Clay, olive gray, cohesive, plastic                     | 40              | 50 - 90     |
| Gravel  | 10              | 90-100      |
| Sand, fine, clayey, cohesive (Fort Union)               | 15              | 100-115     |
| Shale   |                 |             |

**Test Hole and Observation Well Record**

**Location:** 154-82-24BAA

**Use of well:** Observation

**Owner and number:** SWC 5404

**Principal aquifer:** Souris Valley

**Depth drilled (ft.):** 240

**Altitude of land surface (ft., msl):** 1540(T)

**Screened interval (ft.):** 25-28

**Lithologic log from:** SWC

**Casing diameter:** 1.25"

**Comments:** destroyed, E, QW

**Date completed:** 7/16/69

**Lithologic Log**

| <b>Unit description</b>                                     | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Sand, coarse, gravelly, oxidized                            | 16                     | 0 -16              |
| Clay, yellowish brown, silty, sandy                         | 5                      | 16 -21             |
| Gravel, sandy, subangular                                   | 26                     | 21 -47             |
| Clay, medium gray, silty, cohesive,<br>plastic (Fort Union) | 193                    | 47-240             |

**Test Hole and Observation Well Record**

**Location:** 154-83-02DAA

**Use of well:** Test hole

**Owner and number:** SWC 3219

**Principal aquifer:**

**Depth drilled (ft.):** 80

**Altitude of land surface (ft., msl):** 1700(T)

**Screened interval (ft.):** None

**Lithologic log from:** Pettyjohn, 1968

**Casing diameter:** None

**Comments:**

**Date completed:** 06/04/65

**Lithologic Log**

| <b>Unit description</b>                                 | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Road fill   | 5                      | 0 - 5              |
| Gravel, fine to coarse                                  | 5                      | 5 - 10             |
| Till, silty and sandy, olive-gray                       | 5                      | 10 - 15            |
| Sand, medium  | 5                      | 15 - 20            |
| Till, silty and sandy, olive-gray; abundance of pebbles | 40                     | 20 - 60            |
| Gravel, fine to medium, rusty                           | 3                      | 60 - 63            |
| Sandstone, fine, light greenish-gray                    | 17                     | 63 - 80            |

**Test Hole and Observation Well Record**

Location: 154-83-03AAA                      Use of well: Test hole  
Owner and number: SWC 5415                      Principal aquifer:  
Depth drilled (ft.): 140                      Altitude of land surface (ft., msl): 1772(T)  
Screened interval (ft.): None                      Lithologic log from: SWC  
Casing diameter: None                              Comments:  
Date completed: 07/20/69

**Lithologic Log**

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Clay, very silty, pale yellowish brown to dark yellowish brown, moderately plastic and cohesive, highly calcareous, numerous sand grains and pebbles of carbonates and shale (till) | 24              | 0 - 24      |
| Sand, fine to medium, well sorted, angular to subangular  | 4               | 24 - 28     |
| Clay, very silty, moderately plastic, very cohesive, noncalcareous, numerous sand grains through pebbles of carbonates and shale, much lignite, large pieces (2-3 cm) drills smooth | 107             | 28 -135     |
| Claystone, moderately silty, light olive gray to greenish gray, nonplastic, slightly plastic, noncalcareous, drills tight (bedrock, Fort Union)                                     | 5               | 135 -140    |

**Test Hole and Observation Well Record**

Location: 154-83-10DDD                      Use of well: Test hole  
Owner and number: SWC 5413                      Principal aquifer:  
Depth drilled (ft.): 180                      Altitude of land surface (ft., msl): 1799(T)  
Screened interval (ft.): None                      Lithologic log from: SWC  
Casing diameter: None                      Comments:  
Date completed: 07/20/69

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Clay, silty, some sand, pale yellowish-brown, oxidized, moderately plastic and cohesive, slightly calcareous, sand grains and pebbles of carbonates and shale, some lignite particles (till)   | 21              | 0 - 21      |
| Sand, coarse to very coarse, angular to subangular, moderately well sorted, yellowish brown stained  | 11              | 21 - 32     |
| Clay, silty, a little sand, olive gray to dark greenish-gray, slightly calcareous, moderately plastic and cohesive, numerous sand grains and pebbles of carbonates, shale; some lignite flakes and particles and igneous rocks, moderately hard, drills smooth (till?) | 119             | 32 -151     |
| Sandstone, clayey and silty, very fine to fine, light greenish-gray, noncalcareous, interbedded with brownish-gray claystone and siltstone which is noncalcareous; many lignite chips and carbonaceous material washing out in drilling fluid                          | 29              | 151 -180    |

**Test Hole and Observation Well Record**

**Location:** 154-83-11BBC                    **Use of well:** Test hole  
**Owner and number:** SWC 5414                **Principal aquifer:**  
**Depth drilled (ft.):** 160                  **Altitude of land surface (ft., msl):** 1769(T)  
**Screened interval (ft.):** None              **Lithologic log from:** SWC  
**Casing diameter:** None                      **Comments:**  
**Date completed:** 07/20/69

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Clay, silty, some sand and a few pebbles, dusky yellow to light olive brown, moderately cohesive and plastic, moderately to highly calcareous, numerous sand grains of limestone, shale and igneous rocks, some lignite (till) | 30                     | 0 - 30             |
| Clay, silty, some sand, olive gray to dark gray, moderately plastic and cohesive, slightly calcareous, numerous sand grains of limestone, dolostone, shale and some lignite, drills smooth and fairly fast                     | 100                    | 30 -130            |
| Claystone and siltstone, greenish gray to brownish gray, noncalcareous, fairly hard, interbedded with bluish-gray to greenish-gray sandstone (bedrock, Fort Union)   | 30                     | 130 -160           |

**Test Hole and Observation Well Record**

|                                      |   |
|--------------------------------------|---|
| <b>Location:</b> 154-83-12ADD        | <b>Use of well:</b> Test hole                       |
| <b>Owner and number:</b> SWC 5220    | <b>Principal aquifer:</b>                           |
| <b>Depth drilled (ft.):</b> 300      | <b>Altitude of land surface (ft., msl):</b> 1750(T) |
| <b>Screened interval (ft.):</b> None | <b>Lithologic log from:</b> SWC                     |
| <b>Casing diameter:</b> None         | <b>Comments:</b>                                    |
| <b>Date completed:</b> 10/16/68      |   |

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil, sandy, silty, clayey, brownish-black   | 1                      | 0 - 1              |
| Clay, silty, slightly to moderately sandy, occasional gravelly sand lenses, pebbly, moderate yellowish-brown to dark yellowish-brown, slightly to moderately cohesive, moderately plastic, oxidized to partially oxidized with depth (till)   | 39                     | 1 - 40             |
| Clay, silty, very slightly sandy, a few thin sand lenses, pebbly, olive gray to dark greenish-gray, cohesive, slightly plastic, lignitic, moderately calcareous (till)  | 57                     | 40 - 97            |
| Gravel, moderately sandy, fine to coarse, angular to subangular, fair sorting, predominantly limestone and dolostone, light colored granitics, some shale and lignite, caving moderately, washing out, taking small amount of water, oxidized | 6                      | 97 - 103           |
| Clay, silty, moderately sandy, a few pebbles and cobbles, olive gray, moderately cohesive, moderately plastic, calcareous, numerous carbonate, granitic, shale and lignite fragments in clay matrix (till)                                    | 37                     | 103 - 140          |
| Clay, silty, slightly sandy, numerous gravelly lenses, olive gray, moderately cohesive, moderately plastic, moderately calcareous, numerous limestone, dolostone, granitic, shale and lignite fragments (till)                                | 40                     | 140 - 180          |

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Clay, silty, moderately sandy, occasional pebbles and lignite chips, olive gray, moderately cohesive, moderately plastic, calcareous (till) | 60              | 180 -240    |
| Sandstone, slightly clayey, fine-grained, medium bluish-gray, slightly cemented, noncalcareous, micaceous (bedrock, Fort Union)             | 60              | 240 -300    |

**Test Hole and Observation Well Record**

**Location:** 154-83-12DAD

**Use of well:** Test hole

**Owner and number:** SWC 5218

**Principal aquifer:**

**Depth drilled (ft.):** 160

**Altitude of land surface (ft., msl):** 1653(T)

**Screened interval (ft.):** See comments **Lithologic log from:** SWC

**Casing diameter:** 1.25

**Comments:** Installed 100 feet of 1.25 inch pipe with 3 feet of screen. Flowing well, caving rapidly; abandoned well.

**Date completed:** 10/16/68

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil, silty, sandy, dark yellowish-brown   | 1                      | 0 - 1              |
| Gravel, clayey, slightly to moderately sandy, fine to medium, angular to subrounded, fair sorting, predominantly granitics and carbonates, oxidized, not taking water   | 7                      | 1 - 8              |
| Clay, silty, moderately sandy, occasional pebbles, olive gray, cohesive, slightly plastic, moderately calcareous, numerous limestone, dolostone, granitic and lignite fragments in clay matrix (till); a few thin sand lenses | 37                     | 8 - 45             |
| Clay, very silty, moderately sandy, olive gray, moderately cohesive, lignite and carbonate, moderately plastic, slightly calcareous, numerous fragments (till)  | 73                     | 45 - 118           |
| Sand, very fine to coarse grained (mostly fine to medium-grained), subangular to rounded, moderately well sorted, approximately 60-75% quartz, remainder mostly lignite and carbonates, taking some water, not caving         | 10                     | 118 - 128          |
| Clay, very silty, slightly to moderately sandy, olive gray, moderately cohesive, plastic, moderately calcareous, occasional lignite fragments (fluvial sediment)  | 14                     | 128 - 142          |

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Gravel, sandy (approximately 25-35% medium to very coarse-grained, angular to subrounded sand), fine to coarse (mostly fine to medium), angular rounded, fair sorting, approximately 25-35% chalcedony, quartzite and related siliceous rocks, 15-25% limestone and dolostone, 20-30% sandstone (light gray, fine-grained, lignitic, calcareous, cemented), some shale, light and dark colored granitics, lignite and scoria, rapidly losing water when circulating | 18              | 142 -160    |

**Test Hole and Observation Well Record**

|                               |  |
|-------------------------------|--|
| Location: 154-83-13AAA        | Use of well: Test hole                       |
| Owner and number: SWC 5219    | Principal aquifer:                           |
| Depth drilled (ft.): 200      | Altitude of land surface (ft., msl): 1773(T) |
| Screened interval (ft.): None | Lithologic log from: SWC                     |
| Casing diameter: None         | Comments: E                                  |
| Date completed: 10/16/68      |  |

**Lithologic Log**

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Topsoil, sandy, clayey, silty, brownish-black   | 1               | 0 - 1       |
| Clay, silty, slightly sandy, pebbly, moderate yellowish-brown to dark yellowish-brown, moderately cohesive, moderately plastic, calcareous, oxidized (till)   | 37              | 1 - 38      |
| Clay, silty, very slightly sandy, occasional lenses of sandy gravel, pebbly, olive gray, cohesive to moderately cohesive, slightly plastic, moderately calcareous, numerous carbonate, shale, granitic, and lignite fragments in clay matrix (till) | 111             | 38 - 149    |
| Cobbles, boulders and gravel, interbedded with silty, sandy clay (till), predominantly limestone, light-colored granitics, some shale and sandstone, rough drilling, not taking water, caving some  | 28              | 149 -177    |
| Sandstone, fine-grained, medium bluish-gray, interbedded with clayey, brownish-gray to brownish-black noncalcareous siltstone, (indurated), consolidated, slightly cemented, lignitic (bedrock, Fort Union)   | 23              | 177 -200    |

**Test Hole and Observation Well Record**

**Location:** 154-83-13BBB                    **Use of well:** Test hole  
**Owner and number:** SWC 5411                **Principal aquifer:**  
**Depth drilled (ft.):** 180                  **Altitude of land surface (ft., msl):** 1775(T)  
**Screened interval (ft.):** None              **Lithologic log from:** SWC  
**Casing diameter:** None                      **Comments:**  
**Date completed:** 07/19/69

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Clay, silty and sandy, pale yellowish brown, moderately plastic and cohesive, slightly calcareous, numerous sand grains of limestone, dolostone, and shale, some lignite   | 44                     | 0 - 44             |
| Clay, very silty, some sand, olive gray to dark greenish-gray, moderately plastic and cohesive, sand grains and pebbles of limestone, dolomite, and shale, some lignite, fewer pebbles after 90', drills smooth, interbedded with sand | 101                    | 44 - 145           |
| Sandstone, very fine to fine, light bluish gray, some clay, noncalcareous, fairly soft with a layer of very hard sandstone from 176-179 (bedrock, Fort Union)  | 35                     | 145 - 180          |

**Test Hole and Observation Well Record**

Location: 154-83-35ADD                      Use of well: Test hole  
Owner and number: SWC 3218                      Principal aquifer:  
Depth drilled (ft.): 460                      Altitude of land surface (ft., msl): 1780(T)  
Screened interval (ft.): None                      Lithologic log from: Pettyjohn, 1968  
Casing diameter: None                              Comments:  
Date completed: 06/03/65

**Lithologic Log**

| Unit description                                 | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Till, silty and sandy, yellow-brown; few pebbles | 20              | 0 - 20      |
| Till, silty and sandy, olive-gray, few pebbles   | 60              | 20 - 80     |
| Sand, medium                                     | 10              | 80 - 90     |
| Till, sandy, olive-gray; few pebbles             | 40              | 90 -130     |
| Sand, clayey, light-olive-gray                   | 20              | 130 -150    |
| Interbedded clay, silt, and sand                 | 100             | 150 -250    |
| Sand, clayey                                     | 40              | 250 -290    |
| Interbedded clay, silt, and sand, olive-gray     | 140             | 290 -430    |
| Shale, olive-gray to olive-black                 | 15              | 430 -445    |
| Sandstone, very fine, dark-greenish-gray         | 15              | 445 -460    |

Test Hole and Observation Well Record

|                               |   |
|-------------------------------|---|
| Location: 155-82-07AAA        | Use of well: Test hole                        |
| Owner and number: SWC 5408    | Principal aquifer: None                       |
| Depth drilled (ft.): 80       | Altitude of land surface (ft., msl): 1615 (T) |
| Screened interval (ft.): None | Lithologic log from: SWC                      |
| Casing diameter: None         | Comments:                                     |
| Date completed: 7/19/69       |   |

Lithologic Log

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Topsoil, black  | 1               | 0 - 1       |
| Clay, silty, moderately plastic and cohesive, moderately calcareous, moderate yellowish brown, numerous sand grains and pebbles of carbonates and igneous rocks (till)                                  | 4               | 1 - 5       |
| Gravel, fine to coarse, mostly medium to coarse, moderately well sorted, subangular, about 50-60% carbonates, remainder igneous rocks, shale; oxidized, iron stained                                    | 10              | 5 - 15      |
| Clay, silty, olive gray to dark greenish gray, moderately plastic and cohesive, sand grains and pebbles of limestone and dolostone, shale and igneous rocks, also some lignite (glacial till)           | 47              | 15 - 65     |
| Sandstone, fine, silty, moderately hard, light bluish gray, very slightly calcareous, mostly quartz, a few lignite grains; interbedded with claystone and siltstone; brownish gray, bedrock, Fort Union | 15              | 65 - 80     |

Test Hole and Observation Well Record

|                               |   |
|-------------------------------|---|
| Location: 155-82-07BAA        | Use of well: Test hole                        |
| Owner and number: SWC 5407    | Principal aquifer: None                       |
| Depth drilled (ft.): 100      | Altitude of land surface (ft., msl): 1629 (T) |
| Screened interval (ft.): None | Lithologic log from: SWC                      |
| Casing diameter: None         | Comments:                                     |
| Date completed: 7/19/69       |   |

Lithologic Log

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil, black   | 1               | 0 - 1       |
| Clay, silty, moderately plastic and cohesive, moderately to highly calcareous, numerous sand grains and pebbles of limestone, dolostone and igneous rocks, drills easy (till)  | 26              | 1 - 27      |
| Clay, very silty, very slightly plastic and cohesive, quite hard, olive gray to dark greenish gray, slightly calcareous, numerous sand grains, pebbles of limestone, dolostone, and igneous rocks; layer of medium to coarse sand 75 to 77 feet, some lignite (till) | 50              | 27 - 77     |
| Sandstone, very fine to fine, clayey and silty, noncalcareous, light bluish gray, interbedded with claystone and siltstone; lignite 88-92 feet (bedrock Fort Union)  | 23              | 77 - 100    |

Test Hole and Observation Well Record

Location: 155-82-07DDD

Use of well: Test hole

Owner and number: SWC 5406

Principal aquifer: None

Depth drilled (ft.): 100

Altitude of land surface (ft., msl): 1627 (T)

Screened interval (ft.): None

Lithologic log from: SWC

Casing diameter: None

Comments:

Date completed: 7/19/69

Lithologic Log

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Clay, silty, numerous sand grains and pebbles, pale yellowish brown to moderate yellowish brown, moderately plastic and cohesive, highly calcareous, sand and pebbles, mostly carbonates and granite; drills easy (till)             | 19              | 0 - 19      |
| Sand, medium to coarse, some fine, moderately well sorted, subangular to subrounded, mostly carbonates with shale and igneous rocks  | 3               | 19 - 22     |
| Clay, silty with numerous sand grains and pebbles of limestone and dolostone, shale and igneous rocks, olive gray, moderately cohesive and plastic, highly calcareous, drills easy (till)  | 46              | 22 - 68     |
| Mudstone and claystone, greenish gray, to dark greenish gray, hard, slightly plastic, moderately cohesive, interbedded with very fine to fine sand, clayey, bluish gray; all cuttings very slightly calcareous (bedrock, Fort Union) | 32              | 68 -100     |

Test Hole and Observation Well Record

Location: 154-82-08ABB

Use of well: Test hole

Owner and number: SWC 5409

Principal aquifer: None

Depth drilled (ft.): 140

Altitude of land surface (ft., msl): 1657 (T)

Screened interval (ft.): None

Lithologic log from: SWC

Casing diameter: None

Comments:

Date completed: 7/19/69

Lithologic Log

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Clay, silty, some fine sand, grayish orange, moderately plastic and cohesive, slightly to moderately calcareous, numerous pebbles and cobbles of carbonates, igneous rocks (till)                              | 19              | 0 - 19      |
| Clay, silty, olive gray, slightly plastic and cohesive, moderately calcareous, numerous pebbles or carbonates and igneous rocks, fairly hard; interbedded with sand layer up to 3 feet thick, medium to coarse | 19              | 19 - 38     |
| Sand, coarse, some medium sand and fine gravel, moderately well sorted, subangular to subrounded; 60-70% carbonates and quartz, remainder shale and black igneous rocks; interbedded clay layers 3-4" thick.   | 18              | 38 - 56     |
| Clay, very silty and sandy, olive gray, slightly plastic and moderately plastic, slightly calcareous sand grains and pebbles or carbonates and shale (till)  | 5               | 56 - 61     |
| Sand, coarse to very coarse, some fine to coarse gravel, moderately well sorted, composition as sand above   | 16              | 61 - 77     |
| Clay, very silty and sandy, till as above  | 35              | 77 -112     |
| Sandstone, fine, silty, light bluish gray, noncalcareous, interbedded with layers of dark gray siltstone and claystone (bedrock, Fort Union)   | 28              | 112 -140    |

Test Hole and Observation Well Record

|                               |   |
|-------------------------------|---|
| Location: 155-82-09CCC        | Use of well: Test hole                        |
| Owner and number: SWC 5410    | Principal aquifer: None                       |
| Depth drilled (ft.): 140      | Altitude of land surface (ft., msl): 1678 (T) |
| Screened interval (ft.): None | Lithologic log from: SWC                      |
| Casing diameter: None         | Comments:                                     |
| Date completed: 7/19/68       |   |

Lithologic Log

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Clay, silty to sandy, dusky yellow, moderately plastic and cohesive, highly calcareous, numerous sand grains and pebbles of carbonates and igneous rocks (till)  | 26              | 0 - 26      |
| Clay, silty and sandy, olive gray, moderately plastic and cohesive, moderately calcareous, sand grains and pebbles of carbonates and igneous rocks interbedded with sand layers up to 4 feet thick; intervals on drillers log. Coarse to very coarse, angular to subangular, 50-60% carbonates | 86              | 26 - 112    |
| Lignite  | 2               | 112 - 114   |
| Sandstone, light bluish gray, very fine to fine, interbedded with brownish gray claystone and siltstone, noncalcareous (bedrock, Fort Union)   | 26              | 114 - 140   |

**Test Hole and Observation Well Record**

|                                      |   |
|--------------------------------------|---|
| <b>Location:</b> 155-82-10DCD        | <b>Use of well:</b> Test hole                       |
| <b>Owner and number:</b> SWC 17-992  | <b>Principal aquifer:</b> None                      |
| <b>Depth drilled (ft.):</b> 63       | <b>Altitude of land surface (ft., msl):</b> 1590(T) |
| <b>Screened interval (ft.):</b> None | <b>Lithologic log from:</b> SWC                     |
| <b>Casing diameter:</b> None         | <b>Comments:</b>                                    |
| <b>Date completed:</b> 4/19/63       |   |

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil, silty, deep brown  | 1                      | 0 - 1              |
| Clay, silty to sandy with pebbles, dusky yellow to moderate olive brown, soft, loosely consolidated, fairly sticky, oxidized (till)                             | 11                     | 1 - 12             |
| Sand, fine to coarse, gray, moderately sorted, subangular to subrounded; mainly quartz with many 'orange specks' may be partially oxidized.                     | 2                      | 12 - 14            |
| Clay, silty with sand pebbles and cobbles, olive gray, cohesive, moderately soft, unoxidized (till)   | 6                      | 14 - 20            |
| Clayey till as above with numerous sandy to gravelly layers   | 18                     | 20 - 38            |
| Clay, silty, light gray to dusky brown, smooth except for sandy areas which are gritty, moderately soft, cohesive, plastic, noncalcareous (bedrock, Fort Union) | 3                      | 38 - 41            |
| Lignite, black, fissile   | 3                      | 41 - 44            |
| Sand, medium, clayey, grayish brown with a tint of red, moderately consolidated, well-sorted, noncalcareous   | 9                      | 44 - 53            |
| Sand, as above, but light greenish-gray   | 10                     | 53 - 63            |

**Test Hole and Observation Well Record**

|                                      |   |
|--------------------------------------|---|
| <b>Location:</b> 155-82-12AAA        | <b>Use of well:</b> Test hole                       |
| <b>Owner and number:</b> SWC 8-992   | <b>Principal aquifer:</b> None                      |
| <b>Depth drilled (ft.):</b> 47       | <b>Altitude of land surface (ft., msl):</b> 1575(T) |
| <b>Screened interval (ft.):</b> None | <b>Lithologic log from:</b> SWC                     |
| <b>Casing diameter:</b> None         | <b>Comments:</b>                                    |
| <b>Date completed:</b> 4/15/63       |   |

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil, sandy loam, dark brown   | 1                      | 0 - 1              |
| Clay, silty and sandy, poorly consolidated,<br>soft, oxidized, leached (till), contains<br>small lenses of gravel                                 | 17                     | 1 - 18             |
| Clay, silty, moderately olive brown to light<br>olive gray, tightly consolidated, cohesive,<br>calcareous, partially oxidized (till)              | 5                      | 18 - 23            |
| Clay, silty to sandy with pebbles, olive gray,<br>moderately soft, tight, plastic, cohesive,<br>calcareous, unoxidized (till)                     | 14                     | 23 - 37            |
| Sand, fine to medium, greenish gray, moderately<br>consolidated, well sorted, subangular to<br>subrounded, noncalcareous (bedrock, Fort<br>Union) | 5                      | 37 - 42            |
| Core  | 5                      | 42 - 47            |

Test Hole and Observation Well Record

|                               |  |
|-------------------------------|--|
| Location: 155-82-13CBC        | Use of well: Test hole                       |
| Owner and number: SWC 16-992  | Principal aquifer: None                      |
| Depth drilled (ft.): 84       | Altitude of land surface (ft., msl): 1603(T) |
| Screened interval (ft.): None | Lithologic log from: SWC                     |
| Casing diameter: None         | Comments:                                    |
| Date completed: 4/18/63       |  |

Lithologic Log

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil, silty loam, black; underlain by a couple inches of coarse sand  | 1               | 0 - 1       |
| Clay, sandy, moderately olive brown, moderately soft, cohesive, plastic, tight; calcareous, partially oxidized (till)  | 8               | 1 - 9       |
| Till, as above, olive gray, unoxidized, contains pebbles and lignite fragments, also sandy and gravelly zones  | 29              | 9 - 38      |
| Sand, medium, olive gray, well-sorted, subrounded, saturated; mainly quartz, but contains lignite, feldspar, limestone, scoria, and heavy minerals           | 2               | 38 - 40     |
| Clay, silty to sandy, olive gray, moderately soft, cohesive, plastic, tight; contains numerous pebbles and cobbles and several thin sand and gravel deposits | 11              | 40 - 61     |
| Sand, fine to medium, greenish gray, moderately consolidated, well-sorted, noncalcareous (bedrock, Fort Union)   | 23              | 61 - 84     |

**Test Hole and Observation Well Record**

|                                      |   |
|--------------------------------------|---|
| <b>Location:</b> 155-82-15 BBB       | <b>Use of well:</b> Test hole                       |
| <b>Owner and number:</b> SWC 1394    | <b>Principal aquifer:</b> None                      |
| <b>Depth drilled (ft.):</b> 94.5     | <b>Altitude of land surface (ft., msl):</b> 1641(T) |
| <b>Screened interval (ft.):</b> None | <b>Lithologic log from:</b> SWC                     |
| <b>Casing diameter:</b> None         | <b>Comments:</b>                                    |
| <b>Date completed:</b> 09/17/58      |   |

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Soil, black  | 3                      | 0 - 3              |
| Clay, yellow to light-brown, fine gravel<br>and some large pebbles, slightly<br>oxidized (weathered till?)         | 19                     | 3 - 22             |
| Till, clay, dark-gray, abundant angular<br>fine gravel, and coarse sand grains<br>with lignite and shale fragments | 10                     | 22 - 32            |
| Till, clay, gray, fine gravel becoming<br>more abundant at greater depth, shale<br>pebbles, and lignite fragments  | 53                     | 32 - 85            |
| Clay, sandy, gray (Fort Union)   | 9.5                    | 85 - 94.5          |

**Test Hole and Observation Well Record**

|                                      |   |
|--------------------------------------|---|
| <b>Location:</b> 155-82-19AAA        | <b>Use of well:</b> Test hole                       |
| <b>Owner and number:</b> SWC         | <b>Principal aquifer:</b> None                      |
| <b>Depth drilled (ft.):</b> 100      | <b>Altitude of land surface (ft., msl):</b> 1636(T) |
| <b>Screened interval (ft.):</b> None | <b>Lithologic log from:</b> LaRocque & Others 1963  |
| <b>Casing diameter:</b> None         | <b>Comments:</b>                                    |
| <b>Date completed:</b> 09/02/47      |   |

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Soil, and clay, sandy, yellow, with some gravel and fine sand                    | 14                     | 0 - 14             |
| Clay, sandy, brown, with some gravel   | 3                      | 14 - 17            |
| Clay, sandy, yellow, with some gravel  | 16                     | 17 - 33            |
| Clay, sandy, brown   | 4                      | 33 - 37            |
| Clay, sandy, gray, with some gravel  | 4                      | 37 - 41            |
| Clay, sandy, gray, with thin strips of gravel                                    | 2                      | 41 - 43            |
| Sand, fine, and gravel with thin strips of lignite fragments and gray sandy clay | 11                     | 43 - 54            |
| Clay, sandy, gray, with thin strips of fine sand and lignite fragments           | 5                      | 54 - 59            |
| Sand, fine   | 1                      | 59 - 60            |
| Clay, sandy, gray, with thin strips of lignite fragments                         | 2                      | 60 - 62            |
| Sand, fine   | 1                      | 62 - 63            |
| Clay, sandy, gray, with thin strips of lignite fragments                         | 11                     | 63 - 74            |
| Clay, sandy, gray, with strips of lignite  | 3                      | 74 - 77            |
| Sand, gray, compact  | 15                     | 77 - 92            |
| Lignite  | 3                      | 92 - 95            |
| Sand, compact, gray, with strips of lignite                                      | 5                      | 95 -100            |

**Test Hole and Observation Well Record**

Location: 155-82-19DBD                      Use of well: Observation well  
Owner and number: SWC 2216                      Principal aquifer: Souris Valley  
Depth drilled (ft.): 126                      Altitude of land surface (ft., msl): 1548(T)  
Screened interval (ft.): 98-108                Lithologic log from: Pettyjohn, 1965  
Casing diameter: 1.25"                         Comments: QW  
Date completed: 11/15/63

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Soil, black  | 1               | 0 - 1       |
| Clay, silty to sandy, yellow to olive-brown                                | 9               | 1 - 10      |
| Sand, medium to coarse; gravel, fine, clayey                               | 22              | 10 - 32     |
| Clay, sandy, dark-greenish-gray  | 7               | 32 - 39     |
| Clay, dark-greenish-gray; alternating with sand,<br>very fine to fine      | 33              | 39 - 72     |
| Gravel, fine to medium; sand, coarse; gastropod<br>and pelecypod fragments | 35              | 72 -107     |
| Sand, very fine, light-greenish-gray, clayey<br>(bedrock, Fort Union)      | 19              | 107 -126    |

**Test Hole and Observation Well Record**

|                               |  |
|-------------------------------|--|
| Location: 155-82-19DDA        | Use of well: Test hole                       |
| Owner and number: SWC 5180    | Principal aquifer: None                      |
| Depth drilled (ft.): 40       | Altitude of land surface (ft., msl): 1547(T) |
| Screened interval (ft.): None | Lithologic log from: SWC                     |
| Casing diameter: None         | Comments:                                    |
| Date completed: 09/09/68      |  |

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil, silty, clayey, slightly sandy,<br>brownish-black  | 1               | 0 - 1       |
| Clay, silty, moderately sandy, pebbly, dusky<br>yellow to moderate yellowish-brown,<br>moderately cohesive, moderately plastic,<br>oxidized (till)   | 3               | 1 - 4       |
| Clay, same as above only gravelly, moderate<br>yellowish-brown to dark yellowish-brown<br>(till)   | 6               | 4 - 10      |
| Clay, very silty, slightly sandy, dark yellowish<br>brown to brownish-black, laminated, slightly<br>to moderately cohesive, calcareous (fluvial<br>sediment)   | 5               | 10 - 15     |
| Siltstone, moderately clayey, light olive gray,<br>moderately indurated, noncalcareous, a few<br>thin lignite layers (bedrock, Fort Union)   | 5               | 15 - 20     |
| Sandstone, slightly clayey, moderately silty, dark<br>greenish-gray to medium bluish-gray<br>(oxidized to moderate yellowish-brown<br>upper 5'- 8' of section), consolidated,<br>not cemented, noncalcareous | 20              | 20 - 40     |

**Test Hole and Observation Well Record**

Location: 155-82-20CC1

Use of well: Test hole

Owner and number: City of Minot

Principal aquifer: None

Depth drilled (ft.): 128

Altitude of land surface (ft., msl): 1558(T)

Screened interval (ft.): None

Lithologic log from: Pettyjohn, 1965

Casing diameter: None

Comments:

Date completed: 1952

**Lithologic Log**

| Unit description                | Thickness (ft.) | Depth (ft.) |
|---------------------------------|-----------------|-------------|
| Rock and yellow clay            | 8               | 0 - 8       |
| Yellow clay                     | 7               | 8 - 15      |
| Blue clay (bedrock, Fort Union) | 19              | 15 - 34     |
| Sandy blue clay                 | 75              | 34-109      |
| Blue clay                       | 18              | 109-127     |
| Shale                           | 1               | 127-128     |

Test Hole and Observation Well Record

Location: 155-82-20CC<sub>2</sub>

Use of well: Test hole

Owner and number: City of Minot

Principal aquifer: None

Depth drilled (ft.): 220

Altitude of land surface (ft., msl): 1560(T)

Screened interval (ft.): None

Lithologic log from: Pettyjohn, 1965

Casing diameter: None

Comments:

Date completed: 1952

Lithologic Log

| Unit description           | Thickness (ft.) | Depth (ft.) |
|----------------------------|-----------------|-------------|
| Yellow clay and rock       | 8               | 0 - 8       |
| Coal (bedrock, Fort Union) | 2               | 8 - 10      |
| Blue clay                  | 31              | 10 - 41     |
| Sandy blue clay            | 73              | 41 - 114    |
| Blue clay                  | 32              | 114 - 146   |
| Shale                      | 74              | 146 - 220   |

**Test Hole and Observation Well Record**

**Location:** 155-82-20CC<sub>3</sub>

**Use of well:** Test hole

**Owner and number:** City of Minot

**Principal aquifer:** None

**Depth drilled (ft.):** 142

**Altitude of land surface (ft., msl):** 1549(T)

**Screened interval (ft.):** None

**Lithologic log from:** Pettyjohn, 1965

**Casing diameter:** None

**Comments:**

**Date completed:** 1952

**Lithologic Log**

| <b>Unit description</b>         | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---------------------------------|------------------------|--------------------|
| Black loam, sand and gravel     | 5                      | 0 - 5              |
| Blue clay (bedrock, Fort Union) | 2                      | 5 - 7              |
| Coal                            | 2                      | 7 - 9              |
| Blue clay                       | 29                     | 9 - 38             |
| Sandy blue clay                 | 59                     | 38 - 97            |
| Heavy blue clay                 | 42                     | 97 -139            |
| Shale                           | 3                      | 139 -142           |

Test Hole and Observation Well Record

Location: 155-82-22CCB

Use of well: Test hole

Owner and number: SWC 1393

Principal aquifer: None

Depth drilled (ft.): 105

Altitude of land surface (ft., msl): 1628(T)

Screened interval (ft.): None

Lithologic log from: Pettyjohn, 1968

Casing diameter: None

Comments:

Date completed: 09/17/58

Lithologic Log

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Soil, black   | 4               | 0 - 4       |
| Clay, yellowish-brown, coarse sand grains,<br>and fine gravel (weathered till ?)                                | 11              | 4 - 15      |
| Till, clay, gray, fine to medium gravel,<br>becomes sandier with depth, shale<br>pebbles, and lignite fragments | 49              | 15 - 64     |
| Sand, fine, silty, gray   | 9               | 64 - 73     |
| Till, clay, sandy, gray, fine gravel,<br>shale pebbles, lignite, and cobbles                                    | 15              | 73 - 88     |
| Clay, sandy, gray (bedrock, Fort Union)   | 17              | 88 -105     |

**Test Hole and Observation Well Record**

|                               |  |
|-------------------------------|--|
| Location: 155-82-22DDD        | Use of well: Test hole                       |
| Owner and number: SWC 18-992  | Principal aquifer: None                      |
| Depth drilled (ft.): 84       | Altitude of land surface (ft., msl): 1629(T) |
| Screened interval (ft.): None | Lithologic log from: SWC                     |
| Casing diameter: None         | Comments:                                    |
| Date completed: 4/19/63       |  |

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil, sandy loam, brownish black  | 1               | 0 - 1       |
| Marl, sandy, light gray, soft, very highly calcareous  | 2               | 1 - 3       |
| Sand, fine, light tan, well sorted, subrounded, slightly calcareous, mixed with clay   | 6               | 3 - 9       |
| Clay, sandy, moderately olive brown to medium gray, soft, fairly smooth, cohesive, calcareous  | 3               | 9 - 12      |
| Clay, silty to sandy with pebbles, olive gray, moderately soft, cohesive (till)  | 7               | 12 - 19     |
| Clay, sandy, olive gray, moderately soft, cohesive, plastic, tight. Contains pebbles and cobbles and several sandy to gravelly layers  | 35              | 19 - 54     |
| Gravel, fine to coarse with coarse sand, moderately sorted, subangular to subrounded, saturated. Predominantly quartz and limestone with lesser amounts of igneous and metamorphic rocks, lignite, shale and a piece of petrified wood | 7               | 54 - 61     |
| Clay, till as above the gravel   | 11              | 61 - 72     |
| Sand, medium, dusky brown, highly organic, noncalcareous; moderately consolidated (bedrock, Fort Union)  | 6               | 72 - 78     |
| Sand, fine to medium, greenish gray, well-sorted, moderately consolidated  | 6               | 78 - 84     |

Test Hole and Observation Well Record

Location: 155-82-25BDD1

Use of well: Test hole

Owner and number: SWC 5226

Principal aquifer:

Depth drilled (ft.): 500

Altitude of land surface (ft., msl): 1730(T)

Screened interval (ft.): None

Lithologic log from: SWC

Casing diameter: None

Comments:

Date completed: 10/23/68

Lithologic Log

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil, sandy, silty, clayey, brownish-black  | 1               | 0 - 1       |
| Clay, silty, slightly to moderately sandy, pebbly, moderate yellowish-brown to dark yellowish-brown, moderately cohesive, moderately plastic, oxidized (till)  | 27              | 1 - 28      |
| Sand, fine to very coarse-grained, angular to subrounded, fair sorting, oxidized to light brown color, predominantly quartz and carbonates, some lignite, not taking water, not caving   | 12              | 28 - 40     |
| Clay, silty, slightly sandy, pebbly, olive gray, cohesive, slightly to moderately plastic, calcareous, occasional thin sand lenses (till)  | 144             | 40 - 184    |
| Clay, silty, moderately sandy, occasional thin lenses of poorly sorted gravelly sand, pebbly, olive gray to medium dark gray, cohesive, slightly plastic, calcareous, numerous limestone, dolostone, shale and granitic fragments in clay matrix (till)  | 36              | 184 - 220   |
| Gravel, slightly to moderately sandy, interbedded throughout with silty clay lenses, fine to coarse (mostly fine to medium), angular to subrounded, poor to fair sorting, predominantly limestone and dolostone, some shale and light-colored granitics, small amount of lignite, not taking any water, not caving | 55              | 220 - 275   |

155-82-25BDD1  
cont.

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Clay, very silty, olive gray to brownish-gray with occasional light olive gray laminations, slightly to moderately cohesive, moderately plastic, calcareous, a few thin lenses of very fine to fine-grained sand, a few lignite chips (fluvial sediment) | 169             | 275 -444    |
| Clay, very silty, olive gray to medium dark gray, cohesive, moderately to very plastic, moderately calcareous, occasional light olive gray laminations and lignite chips (fluvial sediment)  | 44              | 444 -488    |
| Sandstone, very fine-grained, medium bluish-gray to light bluish-gray, slightly cemented, noncalcareous, interbedded with brownish-gray to medium dark gray clayey siltstone, moderately indurated, noncalcareous (bedrock, Fort Union)                  | 12              | 488 -500    |

Test Hole and Observation Well Record

|                                |  |
|--------------------------------|--|
| Location: 155-82-29BBB         | Use of well: Observation                       |
| Owner and number: SWC 2182     | Principal aquifer: Souris Valley               |
| Depth drilled (ft.): 100       | Altitude of land surface (ft., msl): 1544.3(S) |
| Screened interval (ft.): 90-93 | Lithologic log from: SWC                       |
| Casing diameter: 1.25 inch     | Comments: QW                                   |
| Date completed: 09/10/68       |  |

Lithologic Log

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil, clayey, slightly sandy, dark yellowish-brown  | 1               | 0 - 1       |
| Clay, very silty, slightly sandy, dusky-yellow to moderate yellowish-brown, moderately cohesive, moderately plastic, oxidized (fluvial sediment)   | 15              | 1 - 16      |
| Clay, very silty to moderately silty, interbedded with thin layers of very fine grained sand (to 28' bls), olive gray, a few light olive gray laminations, slightly to moderately cohesive, plastic, calcareous (fluvial sediment) | 30              | 16 - 46     |
| Sand, silty, interbedded with silty clay, very fine to medium-grained (mostly very fine to fine), angular to rounded, 70-80% quartz, remainder carbonates and lignite, taking very little water                                    | 12              | 46 - 58     |
| Clay, very silty, slightly sandy, olive gray with occasional light olive gray laminations, slightly to moderately cohesive, plastic, calcareous (fluvial sediment)   | 28              | 58 - 86     |
| Sand, gravelly, silty, slightly clayey, fine to very coarse-grained, angular to subrounded, poorly sorted, very poor sample return - not taking water  | 4               | 86 - 90     |
| Gravel and cobbles, silty, mostly limestone, dolostone, and light colored granitics, angular to subrounded, poorly sorted, not taking water  | 3               | 90 - 93     |
| Sandstone, silty, slightly clayey, medium bluish-gray, very fine-grained, subangular, lignitic, noncalcareous, consolidated, not cemented (Tongue River Formation)   | 7               | 93 -100     |

Test Hole and Observation Well Record

Location: 155-82-29BBC<sub>1</sub>

Use of well: Observation

Owner and number: SWC 2215

Principal aquifer: Souris Valley

Depth drilled (ft.): 126

Altitude of land surface (ft., msl): 1540(T)

Screened interval (ft.): 80-100

Lithologic log from: Pettyjohn, 1965

Casing diameter: 1.25"

Comments: QW, E

Date completed: 11/15/63

Lithologic Log

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Soil, black  | 2               | 0 - 2       |
| Clay, silty to sandy, light-olive-gray   | 8               | 2 - 10      |
| Clay, dark-greenish-gray; minor amount of thin sand layers; numerous pelecypods at 18 feet | 58              | 10 - 68     |
| Clay, silty and sandy, dark-greenish-gray; sand, fine to medium                            | 15              | 68 - 83     |
| Sand, medium to coarse; gravel, fine to medium; boulder pavement at 99-100 feet            | 17              | 83 -100     |
| Sand, fine, light-greenish-gray, clayey; shale, olive-gray (bedrock, Fort Union)           | 26              | 100 -126    |

Test Hole and Observation Well Record

|                                     |  |
|-------------------------------------|--|
| Location: 155-82-29BBC <sub>2</sub> | Use of well: Test hole                       |
| Owner and number: SWC 5183          | Principal aquifer:                           |
| Depth drilled (ft.): 120            | Altitude of land surface (ft., msl): 1545(T) |
| Screened interval (ft.): None       | Lithologic log from: SWC                     |
| Casing diameter: 1.25               | Comments: E                                  |
| Date completed: 09/10/68            |  |

Lithologic Log

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Topsoil, silty, clayey, sandy, dark brown   | 1               | 0 - 1       |
| Clay, very silty, moderately sandy, moderate yellowish-brown to dark yellowish-brown, slightly cohesive, plastic, samples washing out, oxidized (fluvial sediment)  | 12              | 1 - 13      |
| Sand, very silty, clayey, very fine to fine-grained, subangular, fair sorting, mostly quartz and carbonates, oxidized   | 5               | 13 - 18     |
| Clay, very silty, moderately to slightly sandy, olive gray with light olive gray laminations, slightly cohesive, plastic (fluvial sediment)   | 20              | 18 - 38     |
| Sand, silty, very fine to fine-grained, subangular to subrounded, fair to moderately sorted, mostly quartz (70-80%) remainder carbonates and lignite, not taking much water                                       | 8               | 38 - 46     |
| Silt, clayey, olive gray with occasional light olive gray laminations, moderately to slightly cohesive, plastic, calcareous (thinly interbedded with very fine-grained sand) (fluvial sediment)                   | 46              | 46 - 92     |
| Sand, interbedded with clayey silt, medium to very coarse-grained, angular to subrounded, fair sorting, mostly light-colored granitics, quartz and carbonates, not taking water, small amount of detrital lignite | 13              | 92 -105     |
| Boulder, dolostone, yellowish-gray  | 2               | 105 -107    |
| Sandstone, silty, medium bluish-gray, very fine-grained, subangular, consolidated, not cemented, mostly quartz, some lignite (bedrock, Fort Union)  | 13              | 107 -120    |

**Test Hole and Observation Well Record**

|                                  |  |
|----------------------------------|--|
| Location: 155-82-29BCB           | Use of well: Observation well                  |
| Owner and number: SWC 5181       | Principal aquifer: Souris Valley               |
| Depth drilled (ft.): 120         | Altitude of land surface (ft., msl): 1544.9(S) |
| Screened interval (ft.): 100-103 | Lithologic log from: SWC                       |
| Casing diameter: 1.25 inch       | Comments: E, QW                                |
| Date completed: 09/09/68         |  |

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil, silty, slightly sandy, dark yellowish-brown   | 1               | 0 - 1       |
| Clay, very silty, moderately sandy, dusky yellow to moderate yellowish-brown, slightly cohesive, plastic, oxidized (fluvial sediment)  | 15              | 1 - 16      |
| Silt, moderately clayey, slightly sandy, olive gray, slightly cohesive, plastic, very calcareous, samples washing out in drilling water (fluvial sediment)   | 38              | 16 - 54     |
| Sand, very fine to fine-grained, subangular to subrounded, well sorted, 75-85% quartz, remainder carbonates and lignite, no fluid loss   | 4               | 54 - 58     |
| Silt, very clayey, thinly interbedded with very fine-grained sand, olive gray to dark greenish-gray, slightly to moderately cohesive, plastic, calcareous, occasional light olive gray laminations, a few carbonaceous plant stems   | 20              | 58 - 78     |
| Sand, thinly interbedded with very silty clay, very fine to very coarse grained, angular to subrounded, fair sorting, 45-55% quartz, remainder mostly light-colored granitics and carbonates, small % lignite, shale and sandstone grains, taking small amount of drilling water | 25              | 78 -100     |

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Gravel, moderately sandy, fine to coarse, fair sorting, angular to subrounded, mostly light-colored granitics and carbonates (limestone and dolostone) with small % shale, lignite and sandstone, taking small amount of water, not caving | 3               | 100 -103    |
| Sandstone, silty, medium bluish-gray, very fine to medium grained, subangular, consolidated, not cemented, non-calcareous, lignitic (bedrock, Fort Union)  | 17              | 103 -120    |

**Test Hole and Observation Well Record**

|                                |  |
|--------------------------------|--|
| Location: 155-82-29CBC         | Use of well: Observation well                  |
| Owner and number: SWC 5179     | Principal aquifer: Souris Valley               |
| Depth drilled (ft.): 80        | Altitude of land surface (ft., msl): 1558.2(S) |
| Screened interval (ft.): 48-53 | Lithologic log from: SWC                       |
| Casing diameter: 1.25 inch     | Comments: E, QW                                |
| Date completed: 09/09/68       |  |

**Lithologic Log**

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Topsoil, sandy, silty, clayey, dark yellowish-brown   | 1               | 0 - 1       |
| Clay, silty, slightly sandy, pebbly, dusky-yellow to moderate yellowish-brown, slightly to moderately cohesive, moderately plastic, oxidized (till)   | 12              | 1 - 13      |
| Sand, gravelly (approximately 20-30% fine, angular to subrounded gravel), occasional thin clay layers, very fine to very coarse-grained (mostly medium to coarse grained), angular to subrounded, moderately well sorted, approximately 60-70% quartz, remainder limestone, dolostone and granitics, slightly lignitic, oxidized, taking water rapidly, caving some | 32              | 13 - 45     |
| Clay, silty, slightly sandy, pebbly, olive gray, moderately cohesive, plastic, calcareous (till)  | 5               | 45 - 50     |
| Gravel, very slightly sandy, fine to coarse (mostly fine to medium), angular to subrounded, fair sorting, mostly light-colored granitics and limestone and dolostone, some shale and sandstone, taking water and caving - mixed two bags drilling mud   | 3               | 50 - 53     |
| Clay, silty, pebbly, olive gray, moderately cohesive, moderately plastic, calcareous, numerous limestone, dolostone and shale fragments in clay matrix (till)   | 7               | 53 - 60     |
| Sandstone, slightly to moderately clayey, very fine to fine-grained, subangular to subrounded, consolidated, noncalcareous, oxidized to moderate brown, from 'to', slightly lignitic lower 5'- 6' of section medium bluish-gray in color (bedrock, Fort Union)  | 20              | 60 - 80     |

**Test Hole and Observation Well Record**

|                                  |  |
|----------------------------------|--|
| Location: 155-82-30CCD           | Use of well: Observation                       |
| Owner and number: SWC 11350      | Principal aquifer: Sundre                      |
| Depth drilled (ft.): 400         | Altitude of land surface (ft., msl): 1716.0(S) |
| Screened interval (ft.): 294-303 | Lithologic log from: SWC                       |
| Casing diameter: 2" steel        | Comments: E, QW, north of Chalet Motel         |
| Date completed: 9/29/83          |  |

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil  | 1               | 0 - 1       |
| Clay, yellow brown, silty, sandy, pebbly, oxidized (till)                        | 21              | 1 - 22      |
| Clay, olive gray, silty, sandy, pebbly, interbedded sand and gravel (till)       | 25              | 22 - 47     |
| Sand, subrounded to rounded, interbedded gravel                                  | 5               | 47 - 52     |
| Clay, olive gray, silty, sandy, pebbly (till)                                    | 5               | 52 - 57     |
| Sand, medium sand to pebble size gravel, subrounded to rounded, interbedded clay | 14              | 57 - 71     |
| Clay, olive gray, silty, sandy, pebbly, interbedded sand and detrital lignite    | 117             | 71-188      |
| Clay, olive gray, silty, sandy, interbedded detrital lignite (lacustrine)        | 2               | 188-190     |
| Clay, olive gray, silty, sandy, pebbly, interbedded fine sand                    | 31              | 190-221     |
| Sand, fine to medium angular to rounded  | 14              | 221-235     |
| Clay, olive gray, silty, sandy, pebbly   | 6               | 235-241     |
| Clay, very silty, sandy, interbedded detrital lignite                            | 15              | 241-256     |
| Sand, very fine to medium, subrounded to rounded                                 | 44              | 256-300     |
| Gravel, medium sand to pebble size gravel, subrounded to rounded                 | 7               | 300-307     |
| Clay, olive gray, silty, interbedded sandy clay, carbonaceous (Fort Union)       | 93              | 307-400     |

**Test Hole and Observation Well Record**

|                                      |  |
|--------------------------------------|--|
| <b>Location:</b> 155-82-30DCC        | <b>Use of well:</b> Test hole                        |
| <b>Owner and number:</b> SWC 11353   | <b>Principal aquifer:</b>                            |
| <b>Depth drilled (ft.):</b> 340      | <b>Altitude of land surface (ft., msl):</b> 1710 (T) |
| <b>Screened interval (ft.):</b> None | <b>Lithologic log from:</b> SWC                      |
| <b>Casing diameter:</b> None         | <b>Comments:</b> E                                   |
| <b>Date completed:</b> 10/4/83       |  |

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Topsoil  | 2                      | 0 - 2              |
| Clay, yellow brown, silty, sandy,<br>fill mixed with till                        | 20                     | 2 - 22             |
| Sand, very fine to fine, silty, oxidized   | 3                      | 22 - 25            |
| Clay, olive gray, silty, sandy, pebbly,<br>interbedded sand                      | 114                    | 25-139             |
| Sand, very fine to fine, subrounded to<br>rounded                                | 10                     | 139-149            |
| Gravel   | 2                      | 149-151            |
| Clay, olive gray, silty, sandy, cohesive,<br>plastic (fluvial)                   | 6                      | 151-157            |
| Clay, olive clay (lacustrine)  | 47                     | 157-204            |
| Clay, olive gray, silty, sandy, plastic,<br>interbedded detrital lignite         | 68                     | 204-272            |
| Sand, medium sand to fine gravel   | 2                      | 272-274            |
| Clay, brownish, interbedded detrital<br>lignite                                  | 10                     | 274-284            |
| Clay, grayish, brownish  | 5                      | 284-289            |
| Clay, whitish gray, silty, slightly sandy,<br>interbedded siltstone (Fort Union) | 51                     | 289-340            |

Test Hole and Observation Well Record

|                                |   |
|--------------------------------|---|
| Location: 155-82-31AAA         | Use of well: Observation well                               |
| Owner and number: SWC 5184     | Principal aquifer: Unnamed                                  |
| Depth drilled (ft.): 70        | Altitude of land surface (ft., msl): 1616(T)                |
| Screened interval (ft.): 37-40 | Lithologic log from: SWC                                    |
| Casing diameter: 1.25 inch     | Comments: E, would not pump, water level too low, destroyed |
| Date completed: 09/10/68       |   |

Lithologic Log

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil, silty, slightly sandy, clayey, brownish-black   | 1               | 0 - 1       |
| Clay, very silty, sandy, pebbly, dusky-yellow to moderate yellowish-brown, moderately cohesive, moderately plastic, oxidized (till)  | 1               | 1 - 2       |
| Gravel, sandy, fine to coarse, angular to subrounded, fair sorting, mostly light-colored granitics and carbonates, oxidized to light brown not taking much water   | 3               | 2 - 5       |
| Clay, silty, sandy, pebbly, moderate yellowish-brown, slightly to moderately cohesive, moderately plastic, oxidized (till)   | 9               | 5 - 14      |
| Sand, gravelly (approximately 25-35% fine to coarse, angular to subrounded gravel), fine to very coarse-grained, angular to subrounded, moderately well sorted, predominantly quartz and carbonates (60-70% approximately). Remainder mostly light-colored granitics, shale and sandstone, very small % detrital lignite, rapidly taking water, caving, oxidized throughout - lower 6' cobbles and gravel - mixed two mud. | 32              | 14 - 46     |
| Sandstone (occasional thin lignite bedding), silty, very slightly clayey, medium bluish-gray, very fine to fine-grained, subangular, consolidated, not cemented, noncalcareous (bedrock, Fort Union)   | 24              | 46 - 70     |

**Test Hole and Observation Well Record**

|                                      |   |
|--------------------------------------|---|
| <b>Location:</b> 155-82-31AAD        | <b>Use of well:</b> Test hole                       |
| <b>Owner and number:</b> SWC 5185    | <b>Principal aquifer:</b> None                      |
| <b>Depth drilled (ft.):</b> 140      | <b>Altitude of land surface (ft., msl):</b> 1635(T) |
| <b>Screened interval (ft.):</b> None | <b>Lithologic log from:</b> SWC                     |
| <b>Casing diameter:</b> None         | <b>Comments:</b>                                    |
| <b>Date completed:</b> 09/10/68      |   |

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil, silty, slightly sandy, clayey,<br>brownish-black   | 1                      | 0 - 1              |
| Clay, moderately sandy, silty, gravelly<br>upper 10' of section, moderate yellowish-<br>brown, cohesive, slightly to moderately<br>clastic, oxidized (till)   | 27                     | 1 - 28             |
| Clay, silty, pebbly, olive gray, cohesive to<br>moderately cohesive, moderately plastic,<br>numerous pebbles (till)   | 8                      | 28 - 36            |
| Sand, fine to medium-grained, angular,<br>subrounded, fair sorting (poor samples)   | 1                      | 36 - 37            |
| Clay, silty, pebbly, olive gray, moderately<br>cohesive, moderately plastic, calcareous<br>(till)   | 5                      | 37 - 42            |
| Sand, fine to very coarse-grained (mostly medium<br>to coarse), moderately well sorted,<br>subangular to rounded, 60-70% quartz,<br>remainder light-colored granitics, <2-5%<br>lignite - taking some water, not caving | 2                      | 42 - 44            |
| Clay, same as above, olive gray (till)  | 2                      | 44 - 46            |
| Sand, medium to coarse-grained, angular to<br>subrounded, moderately well sorted,<br>mostly quartz and granitics, taking<br>some water, not caving  | 1                      | 46 - 47            |
| Clay, sandy, silty, pebbly, olive gray, slightly<br>to moderately cohesive, slightly plastic<br>(till)  | 6                      | 47 - 53            |

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Sand, slightly gravelly, medium to very coarse-grained, subangular to rounded, well sorted, mostly quartz and light-colored (greenish-white to pinkish-white) granitics, some shale and carbonates, taking small amount of water not caving | 6               | 53 - 59     |
| Clay, silty, pebbly, occasional sand layers (fine to medium), olive gray, cohesive to moderately cohesive, moderately plastic, calcareous, limestone, dolostone, and granitic fragments in clay matrix (till)                               | 21              | 59 - 80     |
| Clay, silty, slightly sandy, pebbly, occasional cobbles, olive gray, moderately cohesive to cohesive, moderately plastic, calcareous, numerous limestone, dolostone, and shale fragments in clay matrix (till)                              | 31              | 80 -111     |
| Siltstone, brownish-gray to medium dark gray, slightly siliceous, noncalcareous, indurated, interbedded with medium bluish-gray to dark greenish-gray fine grained sandstone, occasional thin limestone laminae (bedrock, Fort Union)       | 29              | 111 -140    |

**Test Hole and Observation Well Record**

Location: 155-82-31ADD                      Use of well: Test hole  
Owner and number: SWC 11355                  Principal aquifer:  
Depth drilled (ft.): 240                      Altitude of land surface (ft., msl): 1700(T)  
Screened interval (ft.): None                Lithologic log from: SWC  
Casing diameter: None                         Comments:  
Date completed: 10/10/83

**Lithologic Log**

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Sand, very fine to coarse, silty,<br>rounded, interbedded clay, oxidized            | 12              | 0 - 12      |
| Clay, yellowish brown, silty, sandy, pebbly,<br>interbedded gravel, oxidized (till) | 34              | 12 - 46     |
| Clay, olive gray, silty, sandy, pebbly (till)                                       | 21              | 46 - 67     |
| Sand, fine to coarse, subrounded to rounded   | 9               | 67 - 76     |
| Clay, olive gray, silty, sandy, pebbly,<br>interbedded sand and gravel              | 7               | 76 - 83     |
| Clay, olive gray, silty, sandy, pebbly,<br>cohesive, plastic                        | 86              | 83 - 169    |
| Clay, olive gray, plastic (fluvial)   | 5               | 169 - 174   |
| Clay, gray to black, carbonaceous, bentonite  | 16              | 174 - 190   |
| Sandstone, very fine, interbedded siltstone<br>(Fort Union)                         | 50              | 190 - 240   |

**Test Hole and Observation Well Record**

|                                  |  |
|----------------------------------|--|
| Location: 155-82-31CAD           | Use of well: Observation                                 |
| Owner and number: SWC 11497      | Principal aquifer: Sundre                                |
| Depth drilled (ft.): 320         | Altitude of land surface (ft., msl): 1713.2(S)           |
| Screened interval (ft.): 273-282 | Lithologic log from: SWC                                 |
| Casing diameter: 2-inch steel    | Comments: E, QW, in pasture, southeast of<br>Huwe Moving |
| Date completed: 10/03/84         |  |

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil  | 1               | 0 - 1       |
| Clay, yellowish brown, iron stained, oxidized<br>silty sandy with pebbles (till)   | 43              | 1 - 44      |
| Clay, olive gray, silty, sandy with pebbles<br>(till) sand and gravel layers, 72-73,<br>96-100, 204-212, 216, 218, 235-236                                     | 194             | 44-238      |
| Sand, gravelly, 40% igneous and quartz, 10%<br>lignites, 25% carbonates, 25% shale,<br>well rounded to subrounded  | 8               | 238-246     |
| Till, olive gray, as above   | 3               | 246-249     |
| Sand, gravelly, 50% igneous and quartz,<br>10% lignites, 25% carbonates, 15%<br>shale, taking water, not caving,<br>60% medium to coarse sand, 40% fine gravel | 37              | 249-286     |
| Till, as above   | 5               | 286-291     |
| Clay, brownish to gray, greasy, some<br>bentonite, white to light gray<br>when dried, bedrock  | 29              | 291-320     |

**Test Hole and Observation Well Record**

**Location:** 155-82-31CDC

**Use of well:** Test hole

**Owner and number:** SWC 11358

**Principal aquifer:**

**Depth drilled (ft.):** 500

**Altitude of land surface (ft., msl):** 1715(T)

**Screened interval (ft.):** None

**Lithologic log from:** SWC

**Casing diameter:** None

**Comments:** E

**Date completed:** 10/12/83

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil   | 1                      | 0 - 1              |
| Clay, yellow brown, silty, brittle, friable, interbedded sand and gravel, oxidized (till) | 30                     | 1 - 31             |
| Sand, fine to coarse, predominantly fine, subrounded, oxidized                            | 5                      | 31 - 36            |
| Clay, yellow brown, silty, brittle, friable, oxidized (till)                              | 2                      | 36 - 38            |
| Clay, olive gray, very silty, slightly plastic, interbedded sand (till)                   | 50                     | 38 - 88            |
| Sand, very coarse sand to fine gravel, predominantly very coarse sand, subangular         | 3                      | 88 - 91            |
| Clay, olive gray, silty, sandy, pebbly, slightly cohesive and plastic (till)              | 63                     | 91-154             |
| Clay, brownish gray, slightly silty and sandy, very tight and plastic (lacustrine)        | 24                     | 154-178            |
| Silt, brownish gray, slightly clayey, interbedded detrital lignite and clay               | 97                     | 178-275            |
| Gravel, fine, angular, carbonates and detrital lignite                                    | 13                     | 275-288            |
| Silt, brownish gray, slightly clayey  | 5                      | 288-293            |
| Gravel, fine to coarse, angular to rounded, interbedded detrital lignite, silt, and clay  | 20                     | 293-313            |

155-82-31CDC  
cont.

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Clay, brownish gray, silty, interbedded silt                                       | 67              | 313-380     |
| Silt, brownish gray, slightly clayey, becomes coarser with depth to very fine sand | 90              | 380-470     |
| Sandstone, very fine to fine (Fort Union)  | 28              | 470-498     |
| Lignite  | 2               | 498-500     |

**Test Hole and Observation Well Record**

|   |   |
|---|---|
| <b>Location:</b> 155-82-31DCA           | <b>Use of well:</b> Observation                             |
| <b>Owner and number:</b> SWC 11357      | <b>Principal aquifer:</b> Sundre                            |
| <b>Depth drilled (ft.):</b> 420         | <b>Altitude of land surface (ft., msl):</b> 1711.0(S)       |
| <b>Screened interval (ft.):</b> 315-321 | <b>Lithologic log from:</b> SWC                             |
| <b>Casing diameter:</b> 2" steel        | <b>Comments:</b> E, QW, along fence, on hilltop,<br>no road |
| <b>Date completed:</b> 10/11/83         |   |

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| <b>Topsoil</b>  | 1                      | 0 - 1              |
| Clay, yellowish green-brown, very silty,<br>sandy, friable, interbedded sand<br>and gravel, oxidized (till) | 46                     | 1 - 47             |
| Clay, olive gray, very silty, plastic,<br>interbedded sand (till)   | 15                     | 47 - 62            |
| Sand, very fine, rounded  | 6                      | 62 - 68            |
| Clay, olive gray, very silty, plastic,<br>interbedded sand (till)   | 96                     | 68-164             |
| Silt, carbonaceous, interbedded clay,<br>detrital lignite and gravel  | 7                      | 164-171            |
| Clay, greenish gray, slightly sandy   | 13                     | 171-184            |
| Clay, olive gray, silty, pebbly, interbedded<br>fluvial silty clay (till)                                   | 21                     | 184-205            |
| Clay, olive gray to brown, silty, some interbedded<br>carbonaceous material and very fine sand              | 16                     | 205-221            |
| Sand, fine, very clayey, becomes coarse with<br>depth to medium sand  | 69                     | 221-290            |
| Sand, coarse to very coarse, subangular to<br>rounded, becomes coarser with depth<br>to coarse gravel       | 45                     | 290-335            |
| Clay, poor sample return, cobbly  | 42                     | 335-377            |
| Shale, dark gray to greenish gray, indurated<br>(Fort Union)  | 14                     | 377-391            |
| Sandstone, very fine, clayey  | 29                     | 391-420            |

**Test Hole and Observation Well Record**

**Location:** 155-82-31DDA

**Use of well:** Observation

**Owner and number:** SWC 11356

**Principal aquifer:** Shallow sand deposit in  
First Larsen Coulee

**Depth drilled (ft.):** 80

**Altitude of land surface (ft., msl):** 1583.7 (S)

**Screened interval (ft.):** 43-48

**Lithologic log from:** SWC

**Casing diameter:** 1.25"

**Comments:** E, QW

**Date completed:** 10/11/83

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| <b>Topsoil</b>  | 1                      | 0 - 1              |
| <b>Silt, greenish gray, clayey</b>  | 5                      | 1 - 6              |
| <b>Gravel, very coarse sand to pebble size<br/>gravel, predominantly gravel, angular<br/>to rounded, predominantly subangular</b> | 3                      | 6 - 9              |
| <b>Clay, olive gray, slightly silty, pebbly, slightly<br/>plastic, siltier with depth</b>   | 12                     | 9 - 21             |
| <b>Sand, fine, subrounded</b>   | 34                     | 21 - 55            |
| <b>Siltstone, brown to greenish gray, very<br/>clayey, carbonaceous, interbedded shale</b>  | 25                     | 55 - 80            |

Test Hole and Observation Well Record

|                               |  |
|-------------------------------|--|
| Location: 155-82-32ABA        | Use of well: Test hole                       |
| Owner and number: SWC 5521    | Principal aquifer: None                      |
| Depth drilled (ft.): 140      | Altitude of land surface (ft., msl): 1544(T) |
| Screened interval (ft.): None | Lithologic log from: SWC                     |
| Casing diameter: None         | Comments:                                    |
| Date completed: 10/01/69      |  |

Lithologic Log

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil, silty, clayey, sandy, grayish-black   | 1               | 0 - 1       |
| Clay, (a few thin fine-grained sand lenses)<br>very silty, dark yellowish-brown, moderately cohesive, very plastic, oxidized, stratified (alluvium)  | 2               | 1 - 18      |
| Clay, (a few thin fine-grained sand lenses and layers), very silty, olive gray to dark greenish-gray, moderately to slightly cohesive, very plastic, very calcareous, stratified (alluvium)  | 65              | 18 - 83     |
| Sand, very silty, slightly gravelly, interbedded throughout with lenses and layers of silty clay, fine to coarse-grained, poor to fair sorted, subangular to rounded, approximately 50-70% quartz, 10-20% carbonates, granitics and shale, <10% lignite, taking small amount of water, not caving in | 37              | 83 - 120    |
| Boulder, sandstone, hard   | 2               | 120 - 122   |
| Siltstone, clayey, sandy, brownish-gray to medium bluish-gray to light gray, bedded, noncalcareous, slightly to moderately indurated (bedrock, Fort Union)   | 18              | 122 - 140   |

**Test Hole and Observation Well Record**

**Location:** 155-82-33BCB                    **Use of well:** Test hole  
**Owner and number:** SWC 5520                **Principal aquifer:**  
**Depth drilled (ft.):** 140                  **Altitude of land surface (ft., msl):** 1545(T)  
**Screened interval (ft.):** None              **Lithologic log from:** SWC  
**Casing diameter:** None                      **Comments:**  
**Date completed:** 10/01/69

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Topsoil, silty, clayey, sandy, grayish-black   | 1                      | 0 - 1              |
| Clay, very silty, interbedded with thin sand (very fine-grained) lenses and layers, light brownish-gray to pale yellowish-brown slightly cohesive, plastic, stratified, oxidized (alluvium)  | 5                      | 1 - 6              |
| Clay, same as above, only dark greenish-gray, stratified (alluvium)  | 14                     | 6 - 20             |
| Clay, very silty, interbedded with thin lenses and layers of fine gravel (sandy) from 20-27' bds, medium gray to olive gray, slightly cohesive, very plastic, stratified, calcareous, lignitic (alluvium)  | 65                     | 20 - 85            |
| Sand, slightly gravelly (fine gravel), very silty, interbedded with silty clay, very fine to very coarse grained, subangular to rounded, fair sorting, approximately 50-60% quartz, remainder mostly carbonates and granitics, <15% lignite, no water loss | 29                     | 85 - 114           |
| Gravel, clayey, sandy, fine to coarse (some cobble-sized material), angular to rounded, poorly sorted, mostly granitics and carbonates, no water loss  | 2                      | 114 - 116          |
| Siltstone, clayey, sandy, medium bluish-gray to brownish-gray, bedded, moderately indurated, noncalcareous (bedrock, Fort Union)   | 24                     | 116 - 140          |

**Test Hole and Observation Well Record**

**Location:** 155-82-33CCD

**Use of well:** Observation well

**Owner and number:** SWC 5187

**Principal aquifer:** Souris Valley

**Depth drilled (ft.):** 120

**Altitude of land surface (ft., msl):** 1550.6(S)

**Screened interval (ft.):** 46-49

**Lithologic log from:** SWC

**Casing diameter:** 1.25 inch

**Comments:** E, QW

**Date completed:** 09/10/68

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Topsoil, silty, slightly sandy, clayey,<br>dark brown  | 1                      | 0 - 1              |
| Clay, silty, moderately sandy, pebbly, dusky-yellow to moderate yellowish-brown,<br>moderately cohesive, moderately plastic,<br>oxidized (till)  | 19                     | 1 - 20             |
| Sand, slightly gravelly (approximately 25-35%<br>fine, subangular gravel), fine to very<br>coarse-grained, angular to subrounded,<br>moderately well sorted, approximately<br>50-60% quartz, remainder mostly carbonates,<br>small amount of shale and lignite present,<br>taking some water, slightly oxidized,<br>not caving | 12                     | 20 - 32            |
| Silt, slightly clayey, medium dark gray, slightly<br>cohesive, plastic, calcareous, samples<br>washing out (fluvial sediment)  | 8                      | 32 - 40            |
| Sand, interbedded with very silty clay (olive gray),<br>very fine to coarse grained (mostly very fine<br>to medium), angular to subrounded, fair<br>sorting, mostly carbonates with small amount<br>of shale, not taking much water or caving  | 14                     | 42 - 56            |
| Clay, very silty, interbedded with fine to coarse-<br>grained sand, olive gray, slightly to<br>moderately cohesive, plastic, calcareous<br>(fluvial sediment)  | 14                     | 56 - 70            |

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Cobbles and gravel, silty, clayey, no water loss, mostly partially oxidized limestone and dolostone, some granitics, sandstone, and shale  | 2               | 70 - 72     |
| Sandstone, slightly silty, moderate yellowish-brown to medium bluish-gray, fine-grained, consolidated, noncalcareous (bedrock, Fort Union) | 48              | 72 - 120    |

**Test Hole and Observation Well Record**

|                                       |   |
|---------------------------------------|---|
| <b>Location:</b> 155-82-33CDD         | <b>Use of well:</b> Observation Well                  |
| <b>Owner and number:</b> SWC 5188     | <b>Principal aquifer:</b> Souris Valley               |
| <b>Depth drilled (ft.):</b> 140       | <b>Altitude of land surface (ft., msl):</b> 1547.3(S) |
| <b>Screened interval (ft.):</b> 47-52 | <b>Lithologic log from:</b> SWC                       |
| <b>Casing diameter:</b> 1.25 inch     | <b>Comments:</b> E, well destroyed                    |
| <b>Date completed:</b> 09/11/68       |   |

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Road fill, silty, clayey, pebbly, moderate yellowish brown   | 3                      | 0 - 3              |
| Clay, very silty, interbedded with very fine-grained sand, dusky yellow to moderate yellowish-brown, slightly cohesive, plastic, oxidized (fluvial sediment)   | 17                     | 3 - 20             |
| Clay, very silty, interbedded with very fine-grained sand, olive gray with occasional light olive gray laminations, slightly cohesive, plastic, silt washing out (fluvial sediment)  | 22                     | 20 - 42            |
| Sand, interbedded with clayey silt, fine to coarse-grained, angular to subrounded, fair sorting, mostly quartz, lignitic, not taking water   | 8                      | 42 - 50            |
| Gravel, slightly to moderately sandy, silty, fine to medium, angular to subrounded, moderately well sorted, mostly light-colored granitics and carbonates (limestone and dolostone) with some shale, lignite and sandstone, not taking water, not caving | 7                      | 50 - 57            |
| Clay, very silty, olive gray with occasional light olive gray laminations, slightly cohesive, plastic, calcareous, interbedded with thin lenses of very fine to fine-grained sand (fluvial sediment)   | 39                     | 57 - 96            |

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Gravel and cobbles, clayey, silty, mostly limestone, dolostone, and light-colored (pinkish-reddish) granite, not taking much water, caving some                 | 3               | 96 - 99     |
| Clay, very silty, a few thin sand lenses, some detrital lignite chips, olive gray, slightly to moderately cohesive, plastic, very calcareous (fluvial sediment) | 19              | 99 -118     |
| Sand, silty, clayey, fine to coarse-grained, angular to subangular, poorly sorted, mostly quartz with moderate amount of detrital lignite, not taking water     | 6               | 118 -124    |
| Siltstone, moderately clayey, medium gray to grayish-brown, interbedded, noncalcareous, moderately indurated, occasional thin lignite layers (Fort Union Group) | 16              | 124 -140    |

**Test Hole and Observation Well Record**

|                                      |   |
|--------------------------------------|---|
| <b>Location:</b> 155-82-33DBC        | <b>Use of well:</b> Test hole                       |
| <b>Owner and number:</b> SWC 5522    | <b>Principal aquifer:</b>                           |
| <b>Depth drilled (ft.):</b> 100      | <b>Altitude of land surface (ft., msl):</b> 1547(T) |
| <b>Screened interval (ft.):</b> None | <b>Lithologic log from:</b> SWC                     |
| <b>Casing diameter:</b> None         | <b>Comments:</b>                                    |
| <b>Date completed:</b> 10/01/69      |   |

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil, silty, sandy, clayey, grayish-black  | 1                      | 0 - 1              |
| Clay, very silty, dark yellowish-brown,<br>moderately cohesive, very plastic,<br>oxidized (alluvium)  | 15                     | 1 - 16             |
| Clay, very silty, dark greenish-gray to olive<br>gray, moderately cohesive, moderately<br>plastic, laminated (alluvium)   | 8                      | 16 - 24            |
| Sand, silty, a few thin silty clay lenses,<br>very fine to coarse-grained (mostly<br>fine to medium-grained), subangular to<br>rounded, moderately well sorted, approximately<br>60-70% quartz, remainder carbonates, granitics,<br>shale and lignite                     | 10                     | 24 - 34            |
| Clay, very silty, occasional thin sand lenses,<br>olive gray to medium dark gray,<br>moderately cohesive, moderately plastic,<br>stratified (alluvium)  | 34                     | 34 - 68            |
| Sand, slightly gravelly, silty, very fine to<br>very coarse-grained (mostly fine to medium-<br>grained), subangular to rounded, moderately<br>well sorted, approximately 50-60% quartz,<br>10-20% carbonates and granitics, remainder<br>shale and lignite, no water loss | 7                      | 68 - 75            |
| Clay, silty, moderately sandy, olive gray to<br>medium dark gray, cohesive, very plastic,<br>moderately calcareous, laminated (alluvium)  | 5                      | 75 - 80            |

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Cobbles, boulders and gravel, granitics,<br>sandstone, shale, limestone and<br>dolostone, taking a little water,<br>caving, very rough drilling | 14              | 80 - 94     |
| Siltstone, clayey, slightly sandy, brownish-gray to medium gray, moderately indurated, noncalcareous, bedded<br>(bedrock, Fort Union)           | 6               | 94 -100     |

**Test Hole and Observation Well Record**

**Location:** 155-82-33DCC

**Use of well:** Observation well

**Owner and number:** SWC 5189

**Principal aquifer:** Souris Valley

**Depth drilled (ft.):** 120

**Altitude of land surface (ft., msl):** 1544.6(S)

**Screened interval (ft.):** 117-120

**Lithologic log from:** SWC

**Casing diameter:** 1.25

**Comments:** E, QW, well destroyed

**Date completed:** 09/11/68

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Topsoil, sandy, silty, clayey, dark yellowish-brown  | 1                      | 0 - 1              |
| Gravel, slightly sandy, silty, clayey, fine to medium, angular to subangular, poorly sorted, oxidized  | 4                      | 1 - 5              |
| Clay, silty, slightly to moderately sandy, pebbly, moderate yellowish-brown, moderately cohesive, moderately plastic, oxidized (till)  | 13                     | 5 - 18             |
| Sand, fine to coarse-grained, subangular to subrounded, fair sorting, mostly quartz and carbonates, some lignite, not taking water   | 12                     | 18 - 30            |
| Clay, very silty, olive gray with occasional light olive gray laminations, slightly to moderately cohesive, plastic, interbedded with thin sand lenses (very fine to fine-grained), very calcareous (fluvial sediment)           | 20                     | 30 - 50            |
| Gravel, sandy (approximately 25-35% medium to very coarse-grained, angular to subrounded sand), fine to medium, angular to subangular, fair sorting, mostly light-colored granitics and carbonates, some shale, not taking water | 6                      | 50 - 56            |
| Clay, very silty, very calcareous, interbedded with thin sand (very fine to fine-grained) sand lenses, olive gray to medium dark gray, slightly cohesive, plastic, silt washing out in drilling mud (fluvial sediment)           | 38                     | 56 - 94            |

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Sand, very slightly gravelly, fine to very coarse-grained, subangular to subrounded, well sorted, mostly quartz and carbonates, taking small amount of drilling water, not caving  | 6               | 94 -100     |
| Gravel, sandy (approximately 30-40% medium to very coarse-grained angular to subrounded sand), fine to coarse (becomes more coarse with depth), angular to rounded, slightly to moderately oxidized, mostly subangular to subrounded, moderately well sorted, approximately 40-50% limestone and dolostone (yellowish-gray to grayish-orange), remainder mostly shale (grayish-black to medium dark gray), and light colored granite, less than 5% sandstone, lignite and other siliceous rocks, taking water rapidly, mixed two bags of bentonite, caving | 23              | 100 -123    |
| Sand, slightly silty, clayey, very fine to medium-grained, subangular to rounded (mostly subrounded), well sorted, 70-80% quartz, remainder carbonates and lignite, not taking much water  | 10              | 123 -133    |
| Gravel, sandy (approximately 20-30% medium to very coarse-grained, angular to subrounded sand), fine to coarse (becomes more coarse with depth), subangular to subrounded, mostly carbonates, remainder mostly light-colored granitics and shale, taking water, caving in  | 3               | 133 -136    |
| Sandstone, interbedded with clayey sandstone, slightly silty, clayey, medium bluish-gray, very fine to fine-grained, subangular, consolidated, non-calcareous (Tongue River Formation)   | 24              | 136 -160    |

**Test Hole and Observation Well Record**

|                                       |   |
|---------------------------------------|---|
| <b>Location:</b> 155-82-33DDD         | <b>Use of well:</b> Observation well                            |
| <b>Owner and number:</b> SWC 5191     | <b>Principal aquifer:</b> Souris Valley                         |
| <b>Depth drilled (ft.):</b> 160       | <b>Altitude of land surface (ft., msl):</b> 1592.9              |
| <b>Screened interval (ft.):</b> 57-60 | <b>Lithologic log from:</b> SWC                                 |
| <b>Casing diameter:</b> 1.25 inch     | <b>Comments:</b> E, would not pump, dry well,<br>well destroyed |
| <b>Date completed:</b> 09/12/68       |   |

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Topsoil, sandy, pebbly, moderate yellowish-brown   | 1                      | 0 - 1              |
| Gravel, sandy (approximately 35-45% medium to very coarse-grained, angular to subrounded sand), fine to coarse (mostly fine to medium), angular to subrounded, fair sorting, oxidized to light brown, mostly carbonates with some shale, light-colored granite and lignite, taking water rapidly, caving slightly  | 19                     | 1 - 20             |
| Clay, silty, moderately sandy, gravelly, olive gray, moderately cohesive, moderately plastic, calcareous, numerous limestone, dolostone, granitic, and shale fragments in clay matrix (till)   | 29                     | 20 - 49            |
| Gravel, interbedded with clayey silt, sandy (approximately 30-40% medium to very coarse-grained, angular to subrounded sand), fine to coarse (mostly fine to medium), angular to rounded, mostly subangular to subrounded, moderately well sorted, approximately 20-30% carbonates, 30-40% light-colored granitics and other siliceous rocks, remainder sandstone, siltstone, 1-5% detrital lignite, very small % free clear to milky quartz, taking water rapidly, caving | 31                     | 49 - 80            |

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Clay, very silty, interbedded with thin lenses of very fine to coarse lignitic sand, olive gray to medium dark gray, slightly to moderately cohesive, plastic, calcareous (fluvial sediment) | 46              | 80 -126     |
| Boulder, limestone   | 2               | 126 -128    |
| Sandstone, very fine-grained, silty, interbedded with siltstone, medium bluish-gray to brownish-gray, moderately indurated, noncalcareous (bedrock, Fort Union)                              | 32              | 128 -160    |

**Test Hole and Observation Well Record**

|                                       |   |
|---------------------------------------|---|
| <b>Location:</b> 155-82-34CDC         | <b>Use of well:</b> Observation well                  |
| <b>Owner and number:</b> SWC 5199     | <b>Principal aquifer:</b> Unnamed                     |
| <b>Depth drilled (ft.):</b> 120       | <b>Altitude of land surface (ft., msl):</b> 1611.4(S) |
| <b>Screened interval (ft.):</b> 86-89 | <b>Lithologic log from:</b> SWC                       |
| <b>Casing diameter:</b> 1.25 inch     | <b>Comments:</b> E                                    |
| <b>Date completed:</b> 09/18/68       |   |

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Topsoil, sandy, gravelly, dark yellowish-brown   | $\frac{1}{2}$          | 0 - $\frac{1}{2}$  |
| Sand, slightly silty, very fine to medium-grained, angular to subrounded, well sorted, oxidized to light brown, mostly quartz and carbonates   | $6\frac{1}{2}$         | $\frac{1}{2}$ - 7  |
| Clay, silty, very sandy (interbedded with lenses of very fine to medium-grained sand), dusky yellow to moderate yellowish-brown, slightly cohesive, plastic, silt washing out in mud               | 18                     | 7 - 25             |
| Gravel, sandy, silty, fine to medium, angular to subrounded, poorly sorted, mostly limestone, dolostone and shale with a few light-colored granitics, oxidized, taking some water, caving slightly | 7                      | 25 - 32            |
| Clay, silty, very slightly sandy, pebbly, olive gray, moderately cohesive, moderately plastic, calcareous, limestone, dolostone and shale fragments in clay matrix (till)                          | 14                     | 32 - 46            |
| Siltstone, slightly siliceous, medium bluish-gray, noncalcareous, moderately indurated   | 28                     | 46 - 74            |
| Gravel, silty, clayey, fine to coarse, angular to subrounded, poorly sorted, mostly oxidized carbonates and shale, not taking water, caving slightly   | 2                      | 74 - 76            |
| Boulder, shale, moderate brown, indurated, noncalcareous   | 2                      | 76 - 78            |
| Gravel, clayey, silty, fine to coarse, unsorted, angular to subangular, mostly detrital lignite and carbonates   | 4                      | 78 - 82            |

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Clay, silty, slightly sandy, pebbly, dark yellowish-brown, cohesive, slightly plastic, calcareous, partially oxidized (till)   | 3               | 82 - 85     |
| Gravel, not taking water, caving slightly, slightly sandy, silty, clayey, fine to coarse, angular to subangular, poorly sorted, mostly lignite, shale and light colored granitics          | 9               | 85 - 94     |
| Siltstone, moderately clayey, very slightly siliceous, medium gray to medium-bluish-gray, indurated, noncalcareous, slightly interbedded with fine-grained sandstone (bedrock, Fort Union) | 26              | 94 -120     |

**Test Hole and Observation Well Record**

|                                       |   |
|---------------------------------------|---|
| <b>Location:</b> 155-82-34CDD         | <b>Use of well:</b> Observation well                  |
| <b>Owner and number:</b> SWC 5197     | <b>Principal aquifer:</b> Unnamed                     |
| <b>Depth drilled (ft.):</b> 140       | <b>Altitude of land surface (ft., msl):</b> 1592.1(S) |
| <b>Screened interval (ft.):</b> 70-73 | <b>Lithologic log from:</b> SWC                       |
| <b>Casing diameter:</b> 1.25 inch     | <b>Comments:</b> Well destroyed                       |
| <b>Date completed:</b> 09/17/68       |   |

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil, sandy, pebbly, gravelly, dark yellowish-brown  | 1                      | 0 - 1              |
| Clay, very sandy, silty, pebbly, moderate yellowish-brown, moderately cohesive, moderately plastic, oxidized (till)   | 5                      | 1 - 6              |
| Sand, very fine to medium-grained, subangular to rounded, well sorted, mostly quartz, oxidized light brown, taking some water   | 9                      | 6 - 15             |
| Clay, dark yellowish-brown to olive gray, very silty, sandy, occasional pebbles, moderately cohesive, moderately plastic, oxidized (till)   | 9                      | 15 - 24            |
| Sand, slightly gravelly, very fine to very coarse-grained (mostly medium to very coarse-grained), subangular to subrounded, fair sorting, taking small amount of water  | 6                      | 24 - 30            |
| Siltstone, a few thin lignite laminae, medium-gray, interbedded with sandstone, medium-bluish gray, very fine to fine-grained, not cemented, consolidated, noncalcareous (Tongue River Formation), bedrock, black   | 28                     | 30 - 58            |
| Sand, gravelly (slightly to moderately gravelly; becomes more gravelly with depth, fine to medium, angular to subrounded gravel), very fine to very coarse (mostly medium to coarse) grained, angular to rounded, fair to well sorted, taking water rapidly lower 15 feet of section, mixed 1 bag bran, mostly quartz, carbonates, chalcedony, some light-colored granitics and lignite | 18                     | 58 - 76            |

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Silt, very sandy and interbedded occasionally with very fine-grained sand lenses, olive gray, slightly cohesive, plastic, very calcareous, washing out in drilling mud | 2               | 76 - 78     |
| Gravel, slightly sandy, silty, fine to coarse, angular to subrounded, fair to poorly sorted, mostly carbonates, light-colored granitics and shale                      | 2               | 78 - 80     |
| Clay, silty, pebbly, a few cobbles, dark yellowish-brown to dark greenish-gray, cohesive, slightly to moderately plastic, calcareous, partially oxidized (till)        | 20              | 80 -100     |
| Sandstone, medium bluish gray, very fine to fine-grained, cemented, indurated, slightly calcareous (bedrock, Fort Union)   | 3               | 100 -103    |
| Siltstone, slightly siliceous, medium bluish-gray, noncalcareous, moderately indurated, a few thin laminae and lignite   | 37              | 103 -140    |

**Test Hole and Observation Well Record**

Location: 155-83-1ACB                      Use of well: Test hole  
Owner and number: SWC No. 15                Principal aquifer:  
Depth drilled (ft.): 157                      Altitude of land surface (ft., msl): 1695(T)  
Screened interval (ft.): None                Lithologic log from: SWC  
Casing diameter: None                        Comments: Driller's log  
Date completed: 02/23/61

**Lithologic Log**

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Topsoil, black  | 1               | 0 - 1       |
| Clay, brownish, yellow, silty                               | 13              | 1 - 14      |
| Gravel, medium to coarse, sand layers                       | 7               | 14 - 21     |
| Clay, greenish gray, sandy, with coal fragments             | 11              | 21 - 32     |
| Clay, greenish sandy clay with sand layers                  | 52              | 32 - 84     |
| Gravel, coarse with some coal, not taking<br>much water     | 12              | 84 - 96     |
| Clay, gray, sandy, with coal layers (bedrock<br>Fort Union) | 35              | 96 -131     |
| Clay, gray, sandy with coal                                 | 16              | 131 -147    |
| Clay, grayish blue, sandy (bedrock)                         | 10              | 147 -157    |

**Test Hole and Observation Well Record**

**Location:** 155-83-01ACC

**Use of well:** Test hole

**Owner and number:** SWC No. 14

**Principal aquifer:**

**Depth drilled (ft.):** 126

**Altitude of land surface (ft., msl):** 1700(T)

**Screened interval (ft.):** None

**Lithologic log from:** SWC

**Casing diameter:** None

**Comments:** Driller's log.

**Date completed:** 02/23/61

**Lithologic Log**

| <b>Unit description</b>                                  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Topsoil, black   | 1                      | 0 - 1              |
| Clay, brown, silty                                       | 14                     | 1 - 15             |
| Gravel, medium coarse, with sand layers,<br>dirty gravel | 6                      | 15 - 21            |
| Clay, greenish gray, sandy                               | 11                     | 21 - 32            |
| Clay, greenish-gray, sandy with sandy layers             | 16                     | 32 - 48            |
| Gravel, medium coarse with sand layers                   | 6                      | 48 - 54            |
| Clay, yellowish-gray, sandy with coal                    | 11                     | 54 - 84            |
| Gravel, medium coarse with coal                          | 20                     | 84 -104            |
| Clay, gray sandy with coal                               | 6                      | 104 -110           |
| Gravel with sand layers                                  | 4                      | 110 -114           |
| Coal   | 2                      | 114 -116           |
| Clay, gray-blue, sandy, shale (bedrock,<br>Fort Union)   | 10                     | 116 -126           |

**Test Hole and Observation Well Record**

Location: 155-83-2ABD                      Use of well: Test hole  
Owner and number: SWC No. 25                Principal aquifer:  
Depth drilled (ft.): 84                      Altitude of land surface (ft., msl): 1730(T)  
Screened interval (ft.): None                Lithologic log from: SWC  
Casing diameter: None                        Comments: Drillers log  
Date completed: 03/07/61

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil, black   | 2               | 0 - 2       |
| Clay, brown, silty   | 13              | 2 - 15      |
| Gravel, fine to medium   | 6               | 15 - 21     |
| Clay, greenish brown, silty with coal fragments                    | 20              | 21 - 41     |
| Sand, fine to medium with coal rough drilling                      | 3               | 41 - 44     |
| Gravel, medium to coarse with a little coal                        | 5               | 44 - 49     |
| Clay, gray, silty, hard drilling                                   | 10              | 49 - 59     |
| Rock   | 3               | 59 - 62     |
| Clay, gray, silty with coal  | 12              | 62 - 74     |
| Clay, light bluish-gray sandy, hard drilling (bedrock, Fort Union) | 10              | 74 - 84     |

Test Hole and Observation Well Record

Location: 155-83-12DAA                      Use of well: Test hole  
Owner and number: SWC No. 17                Principal aquifer:  
Depth drilled (ft.): 94                      Altitude of land surface (ft., msl): 1672(T)  
Screened interval (ft.): none                Lithologic log from: SWC  
Casing diameter: None                        Comments: Driller's log  
Date completed: 02/27/61

Lithologic Log

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Topsoil, black  | 2               | 0 - 2       |
| Clay, yellow, sandy                                     | 9               | 2 - 11      |
| Clay, yellow, silty, with sand and coal                 | 11              | 11 - 22     |
| Clay, gray, silty with sand and coal                    | 29              | 22 - 51     |
| Sand, fine to medium, with clay and coal<br>fragments   | 10              | 51 - 61     |
| Gravel, fine to medium with sand layers,<br>some clay   | 7               | 61 - 68     |
| Clay, silty, gray, with coal                            | 21              | 68 - 89     |
| Clay, shale, light bluish gray (bedrock,<br>Fort Union) | 5               | 89 - 94     |

**Test Hole and Observation Well Record**

Location: 155-83-12DDD                      Use of well: Test hole  
Owner and number: SWC No. 19                 Principal aquifer:  
Depth drilled (ft.): 126                      Altitude of land surface (ft., msl): 1674(T)  
Screened interval (ft.): None                 Lithologic log from: SWC  
Casing diameter: None                          Comments: Driller's log  
Date completed: 02/28/61

**Lithologic Log**

| Unit description                              | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Topsoil, black                                | 2               | 0 - 2       |
| Clay, yellow, silty, sandy                    | 17              | 2 - 19      |
| Sand, fine, medium with coal                  | 9               | 19 - 28     |
| Clay, silty, greenish gray with coal          | 15              | 28 - 43     |
| Clay, gray, silty with coal and rocks         | 36              | 43 - 79     |
| Clay, yellow silty, with coal and rocks       | 6               | 79 - 85     |
| Clay, gray, silty, hard drilling              | 33              | 85 - 118    |
| Clay, light bluish gray (bedrock, Fort Union) | 8               | 118 - 126   |

Test Hole and Observation Well Record

Location: 155-83-14CCB

Use of well: Observation well

Owner and number: USGS A-2

Principal aquifer: Souris Valley

Depth drilled (ft.): 127

Altitude of land surface (ft., msl):

Screened interval (ft.):

Lithologic log from: Akin 1947

Casing diameter:

Comments: Well destroyed

Date completed: 1945

Lithologic Log

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Sand, silty, and yellow leached clay   | 10              | 0 - 10      |
| Sand, medium to coarse, brown; buff clay, limestone, limonite, and coal grains present | 20              | 10 - 30     |
| Sand, medium dark brown, with a few grains of coarse sand and fine gravel              | 5               | 30 - 35     |
| Sand, fine to medium, light brown and yellow; well-sorted                              | 20              | 35 - 55     |
| Sand, medium, silty, light brown   | 15              | 55 - 70     |
| Sand, fine to medium, light brown (Fort Union Formation?)                              | 38              | 70 -108     |
| Sandstone, yellow-gray, partly cemented with calcium carbonate                         | 19              | 108 -127    |

**Test Hole and Observation Well Record**

**Location:** 155-83-14CDD1

**Use of well:** City supply

**Owner and number:** Minot Production  
Well No. 3

**Principal aquifer:** Souris Valley

**Depth drilled (ft.):** 164

**Altitude of land surface (ft., msl):** 1548(T)

**Screened interval (ft.):** lower 28 feet **Lithologic log from:** Akin, 1947

**Casing diameter:** 12 inch

**Comments:** Gravel packed well. Outside casing  
20 inch. Inside casing 12 inch.  
Well screened lower 20 feet, gravel  
packed.

**Date completed:** 1931

**Lithologic Log**

| <b>Unit description</b>                                      | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Soil, sandy, brown   | 4                      | 0 - 4              |
| Sand, fine, silty, brown                                     | 12                     | 4 - 16             |
| Sand, fine, brown  | 4                      | 16 - 20            |
| Clay, dark olive drab  | 14                     | 20 - 34            |
| Clay, dark olive drab, sandy                                 | 12                     | 34 - 46            |
| Silt, sandy, brown, with interbedded dark<br>olive-drab clay | 20                     | 46 - 66            |
| Clay, sandy, dark olive drab                                 | 4                      | 66 - 70            |
| Silt, sandy, light greenish gray                             | 12                     | 70 - 82            |
| Clay, dark olive drab  | 4                      | 82 - 86            |
| Sand, medium, well-rounded, brown                            | 16                     | 86 -102            |
| Sand, fine, well-sorted, gray                                | 22                     | 102 -124           |
| Sand, fine to coarse   | 4                      | 124 -128           |
| Gravel and sand, dirty                                       | 2                      | 128 -130           |
| Gravel and sand  | 8                      | 130 -138           |
| Silt and sand, gray  | 2                      | 138 -140           |
| Gravel and sand  | 18                     | 140 -158           |
| Clay, brown  | 6                      | ~ 158 -164         |

Test Hole and Observation Well Record

Location: 155-83-14CDD2

Use of well: Test hole

Owner and number: City test #3

Principal aquifer:

Depth drilled (ft.): 161

Altitude of land surface (ft., msl): 1548(T)

Screened interval (ft.): None

Lithologic log from: Akin, 1947

Casing diameter: None

Comments:

Date completed: 1938

Lithologic Log

| Unit description      | Thickness (ft.) | Depth (ft.) |
|-----------------------|-----------------|-------------|
| Sand and clay, yellow | 24              | 0 - 24      |
| Clay, sandy, blue     | 34              | 24 - 58     |
| Sand, fine, dirty     | 75              | 58 -133     |
| Sand and gravel       | 11              | 133 -144    |
| Clay and gravel       | 2               | 144 -146    |
| Clay, gray            | 15              | 146 -161    |

Test Hole and Observation Well Record

Location: 155-83-14DCC                      Use of well: City supply well  
Owner and number: Minot Production              Principal aquifer: Souris Valley  
    Well No. 4  
Depth drilled (ft.): 160                      Altitude of land surface (ft., msl): 1548(T)  
Screened interval (ft.): 125-155              Lithologic log from: Akin, 1947  
Casing diameter: Outside, 30 inch              Comments: Gravel packed  
    Inside, 15 inch  
Date completed: 1939, renovated 09/04/58

Lithologic Log

| Unit description           | Thickness (ft.) | Depth (ft.) |
|----------------------------|-----------------|-------------|
| Clay, sandy, and loam      | 10              | 0 - 10      |
| Sand                       | 12              | 10 - 22     |
| Clay, blue, impervious     | 70              | 22 - 92     |
| Sand, fine                 | 33              | 92 - 125    |
| Sand, medium to coarse     | 11              | 125 - 136   |
| Gravel and sand            | 6               | 136 - 140   |
| Sand, gravel, and boulders | 15              | 140 - 155   |
| Gravel, hard-packed        | 3               | 155 - 158   |
| Gravel and clay            | 2               | 158 - 160   |

Test Hole and Observation Well Record

|                                  |   |
|----------------------------------|---|
| Location: 155-83-14DDDL          | Use of well: Observation well             |
| Owner and number: USGS T-1       | Principal aquifer: Souris Valley/Sundre?  |
| Depth drilled (ft.): 288         | Altitude of land surface (ft., msl): 1555 |
| Screened interval (ft.): ? - 134 | Lithologic log from: Akin, 1947           |
| Casing diameter: 2-inch          | Comments: See pumping test, Akin, 1947    |
| Date completed: 1945             |   |

Lithologic Log

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| No log  | 115             | 0 -115      |
| Sand, fine to medium, with some coarse gravel,<br>light brown                                   | 10              | 115 -125    |
| Sand, medium to coarse, brown, well-sorted  | 18              | 125 -143    |
| Clay, silty   | 16              | 143 -159    |
| Gravel, fine to coarse, and sand; contains<br>white indurated clay pebbles                      | 4               | 159 -163    |
| Sand, fine to medium, gray, well-sorted   | 35              | 163 -190    |
| Clay, gray, with coarse sand and gravel   | 11              | 190 -209    |
| Sand, fine to medium, light brown   | 2               | 209 -211    |
| Clay, bluish gray, gritty, contains some sand<br>and gravel; calcareous (Fort Union Formation?) | 37              | 211 -248    |
| Shale, blue-gray; contains few grains of coal<br>and medium sand; calcareous                    | 10              | 248 -258    |
| Sandstone, gray, partly cemented  | 30              | 258 -288    |

**Test Hole and Observation Well Record**

Location: 155-83-14DDD4                      Use of well: Test hole  
Owner and number: SWC 5412                      Principal aquifer:  
Depth drilled (ft.): 200                        Altitude of land surface (ft., msl): 1556(T)  
Screened interval (ft.): None                    Lithologic log from: SWC  
Casing diameter: None                              Comments:  
Date completed: 07/19/69

**Lithologic Log**

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Clay, silty, some fine to medium sand, dusky yellow, moderately plastic and cohesive, numerous carbonate pebbles, some shale and lignite (till)   | 24              | 0 - 24      |
| Clay, silty, some fine to coarse sand, very plastic and cohesive, olive gray, slightly calcareous, numerous sand grains and pebbles, carbonates and shale, some lignite and granitic rocks, interbedded with thin layers of sand (till) | 53              | 24 - 77     |
| Gravel, fine to medium, some coarse, sandy, moderately well sorted, angular to subangular, approximately 50% limestone and shale, remainder igneous and metamorphic rocks   | 7               | 77 - 84     |
| Clay, very silty, olive gray, very plastic and cohesive slightly to moderately calcareous   | 51              | 84 - 135    |
| Claystone and siltstone, grayish brown, moderately hard, noncalcareous, interbedded with fine bluish-gray clayey sand (poor sample return because of caving gravel)(bedrock, Fort Union)  | 65              | 135 - 200   |

**Test Hole and Observation Well Record**

**Location:** 155-83-22AA1

**Use of well:** Observation well

**Owner and number:** USGS A-1

**Principal aquifer:** Souris Valley

**Depth drilled (ft.):** 178

**Altitude of land surface (ft., msl):** 1555(T)

**Screened interval (ft.):** ? - 112

**Lithologic log from:** Akin, 1947

**Casing diameter:** 4-inch

**Comments:** Destroyed

**Date completed:** 1945

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Silt, yellowish brown   | 13                     | 0 - 13             |
| Sand, very fine, light brown, and silt  | 19                     | 13 - 32            |
| Sand, medium-dark brown, with silt, gravel, and coal  | 11                     | 32 - 43            |
| Sand, medium to coarse, light to dark brown; coarse grains poorly rounded; contains coal, limestone, limonite, and shale grains   | 9                      | 43 - 52            |
| Sand, fine to medium, light brown   | 13                     | 52 - 65            |
| Sand, very fine to medium; dark-colored grains give it a greenish brown cast; poorly rounded, well-sorted, well-washed; coal and limonite grains and flakes of mica present | 15                     | 65 - 80            |
| Sand and gravel, brown; coal pebbles up to 1 inch in diameter; many fragments of wood and lignite   | 4                      | 80 - 84            |
| Sand, fine to coarse, light brown; grains of shale and coal common; grains of limonite, limestone, and mica present   | 21                     | 84 -105            |
| Sand, fine to medium, light brown; some coarse grains of shale, coal, and igneous rocks; poorly rounded   | 7                      | 105 -112           |
| Clay, blue-gray, gritty, with coarse grains of sand (Fort Union Formation?)   | 18                     | 112 -130           |

155-83-22AAL  
cont.

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Clay, blue-gray, indurated, shows conchoidal fracture                     | 20              | 130 -150    |
| Clay, blue-gray, indurated, conchoidal fracture; contains coal laminae    | 10              | 150 -160    |
| Clay, blue-gray, indurated, conchoidal fracture; contains shell fragments | 18              | 160 -178    |

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Silt and clay, gray-blue, slightly calcareous; silt grains, angular, range .1 mm to .01 mm.; estimated 70% silt, 30% clay; no sand | 10              | 99 -109     |
| Silt and clay, gray-blue, slightly calcareous; some fine sand and mica flakes  | 70              | 109 -179    |
| Silt and clay, gray-blue, slightly calcareous; contains vegetable matter and mica flakes   | 10              | 179 -189    |
| Silt and clay, gray-blue, slightly calcareous, some sand   | 20              | 189 -209    |
| Silt and clay, gray-blue, slightly calcareous; contains a fresh-water gastropod  | 10              | 209 -219    |
| Silt and clay, gray-blue, slightly calcareous, some vegetable matter   | 35              | 219 -254    |
| Silt and clay, gray-blue, slightly calcareous, vegetable matter, iron-stained in part  | 35              | 254 -284    |
| Silt and clay, gray-blue, slightly calcareous, iron-stained; limestone boulder (caved from above?)                                 | 10              | 284 -294    |
| Silt, clay, gray-blue, slightly calcareous, some sand grains and mica flakes, iron-stained   | 49              | 294 -343    |
| Sand, no sample; artesian water  | 10              | 343 -353    |
| Struck artesian water in sand between 343 and 353 feet but no samples of the sand were obtained.                                   |                 |             |

**Test Hole and Observation Well Record**

|  |  |
|--|--|
| <b>Location:</b> 155-83-22ABA          | <b>Use of well:</b> Test hole, observation   |
| <b>Owner and number:</b> USGS B-1      | <b>Principal aquifer:</b> Sand   |
| <b>Depth drilled (ft.):</b> 353        | <b>Altitude of land surface (ft., msl):</b>  |
| <b>Screened interval (ft.):</b> ? - 93 | <b>Lithologic log from:</b> Akin, 1947   |
| <b>Casing diameter:</b> 2-inch         | <b>Comments:</b> Weak flow at 353 feet. Well plugged with cement to plug off flow. |
| <b>Date completed:</b> 1945            | Put in 93 feet of 2-inch pipe for observation well.                                |

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Silt, gray-brown, some fine sand and vegetable matter  | 4               | 0 - 4       |
| Sand, medium to coarse, clean, well-sorted and rounded, gray to light brown  | 5               | 4 - 9       |
| Sand, coarse, well-rounded and sorted, light brown, some coal grains   | 14              | 9 - 23      |
| Sand, medium to coarse, well-rounded and sorted light brown, some coal grains  | 6               | 23 - 29     |
| Sand, coarse, poorly rounded, brown; contains coal, mica, pyrite, green and black quartzite, and limestone                           | 3               | 29 - 32     |
| Sand, medium to coarse, well-rounded and sorted, medium brown; contains clear crystalline limestone, coal, and shale grains          | 17              | 32 - 49     |
| Sand, coarse, and fine angular gravel; contains shale, black quartzite, clear crystalline limestone, and limonite grains and pebbles | 10              | 49 - 59     |
| Sand, medium to coarse, fairly well rounded, light brown; in part coated and cemented with limestone                                 | 5               | 59 - 64     |
| Sand, coarse, light brown, angular to rounded  | 15              | 64 - 79     |
| Sand, fine to coarse, reddish brown, well rounded  | 6               | 79 - 85     |
| Sand, reddish brown, and gray-blue clay (Fort Union Formation?)  | 7               | 85 - 92     |
| Silt and clay, gray-blue; cavings (?) of sand and gravel   | 7               | 92 - 99     |

Test Hole and Observation Well Record

Location: 155-83-22ADD                      Use of well: Observation well  
Owner and number: USGS A-3                      Principal aquifer: Souris Valley  
Depth drilled (ft.): 128                      Altitude of land surface (ft., msl): 1560(T)  
Screened interval (ft.): ?-128                      Lithologic log from: Akin, 1947  
Casing diameter: 3-inch                      Comments: well destroyed?  
Date completed: 1945

Lithologic Log

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Clay, gray; contains some medium grains of quartz sand                   | 12              | 0 - 12      |
| Sand, fine to medium, buff; contains some (fresh water?) shell fragments | 11              | 12 - 23     |
| Clay, gray, with few grains coarse sand, calcareous                      | 6               | 23 - 29     |
| Clay, sand and gravel, calcareous; much wood 44 to 45 feet               | 40              | 29 - 69     |
| Sand, fine to medium, well-sorted  | 23              | 69 - 92     |
| Sand, medium to coarse, and fine gravel                                  | 36              | 92 -128     |

**Test Hole and Observation Well Record**

|                                 |  |
|---------------------------------|--|
| Location: 155-83-22DB           | Use of well: Observation well                |
| Owner and number: USGS B-3      | Principal aquifer: Souris Valley             |
| Depth drilled (ft.): 90         | Altitude of land surface (ft., msl): 1550(T) |
| Screened interval (ft.): ? - 83 | Lithologic log from: Akin, 1947              |
| Casing diameter: 2-inch         | Comments: well destroyed                     |
| Date completed: 1945            |  |

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Clay, gray, well-leached, with a few grains of sand  | 9               | 0 - 9       |
| Clay, gray, with a few sand grains; fine material is slightly calcareous   | 20              | 9 - 29      |
| Clay, gray, with a few grains of igneous rocks and coal  | 16              | 29 - 45     |
| Sand, medium, dominantly of igneous rocks with a few shale particles; well-sorted                                  | 11              | 45 - 56     |
| Sand, medium to coarse, and gravel; boulder chips abundant; some of gravel larger than $\frac{1}{4}$ -inch         | 10              | 56 - 66     |
| Sand, medium to coarse; abundant coal  | 2               | 66 - 68     |
| Sand and gravel with pieces of coal  | 10              | 68 - 78     |
| Sand, medium to coarse; coarse grains dominantly angular; small buff-colored grains of limestone and shale present | 12              | 78 - 90     |

Test Hole and Observation Well Record

Location: 155-83-23BAL                      Use of well: Test hole  
Owner and number: City test 8                Principal aquifer:  
Depth drilled (ft.): 135                      Altitude of land surface (ft., msl):  
Screened interval (ft.): None                Lithologic log from: Akin, 1947  
Casing diameter: None                        Comments:  
Date completed: 1915

Lithologic Log

| Unit description              | Thickness (ft.) | Depth (ft.) |
|-------------------------------|-----------------|-------------|
| No log                        | 108             | 0 -108      |
| Sand, fine to medium, clean   | 2               | 108 -110    |
| Sand, medium to coarse        | 2               | 110 -112    |
| Sand, coarse, and fine gravel | 3               | 112 -115    |
| Sand, medium to coarse        | 10              | 115 -125    |
| Sand, coarse, and fine gravel | 5               | 125 -130    |
| Sand and clay                 | 5               | 130 -135    |

**Test Hole and Observation Well Record**

Location: 155-83-23BA2                      Use of well: Test hole  
Owner and number: City test 1                Principal aquifer:  
Depth drilled (ft.): 154                      Altitude of land surface (ft., msl):  
Screened interval (ft.): None                Lithologic log from: Akin, 1947  
Casing diameter: None                         Comments:  
Date completed: 1938

**Lithologic Log**

| Unit description  | Thickness (ft.) | Depth (ft.) |
|-------------------|-----------------|-------------|
| Sand and clay     | 70              | 0 - 70      |
| Sand, fine, dirty | 48              | 70 -118     |
| Sand and gravel   | 2               | 118 -120    |
| Clay              | 34              | 120 -154    |

Test Hole and Observation Well Record

Location: 155-83-23BA3

Use of well: Test hole

Owner and number: City test No. 2

Principal aquifer:

Depth drilled (ft.): 155

Altitude of land surface (ft., msl): 1550(T)

Screened interval (ft.): None

Lithologic log from: Akin, 1947

Casing diameter: None

Comments:

Date completed: 1938

Lithologic Log

| Unit description        | Thickness (ft.) | Depth (ft.) |
|-------------------------|-----------------|-------------|
| Sand and clay           | 36              | 0 - 36      |
| Clay, blue              | 22              | 36 - 58     |
| Sand and clay           | 36              | 58 - 94     |
| Sand, fine, hard, brown | 4               | 94 - 98     |
| Sand, fine, hard, black | 6               | 98 -104     |
| Sand, fine, clean       | 14              | 104 -118    |
| Sand, fine, dirty       | 7               | 118 -125    |
| Sand and gravel         | 8               | 125 -132    |
| Clay, sand, and gravel  | 4               | 132 -136    |
| Clay, blue              | 19              | 136 -155    |

**Test Hole and Observation Well Record**

|   |   |
|---|---|
| Location: 155-83-23BAA1                     | Use of well: City supply well   |
| Owner and number: City supply well<br>No. 1 | Principal aquifer: Souris Valley  |
| Depth drilled (ft.): 138                    | Altitude of land surface (ft., msl): 1550(T)  |
| Screened interval (ft.): ?                  | Lithologic log from: Akin, 1947   |
| Casing diameter: ?                          | Comments: 40 feet of 9-inch screen. Reported to be pumped at 890 gpm with 7.5 feet of drawdown after 48 hours |
| Date completed: 1916                        |   |

**Lithologic Log**

| Unit description          | Thickness (ft.) | Depth (ft.) |
|---------------------------|-----------------|-------------|
| Clay, sand, and gravel    | 85              | 0 - 85      |
| Sand, coarse              | 13              | 85 - 98     |
| Gravel and sand           | 10              | 98 -108     |
| Sand, coarse, and lignite | 4               | 108 -112    |
| Sand, fine to coarse      | 6               | 112 -118    |
| Gravel                    | 4               | 118 -122    |
| Sand                      | 4               | 122 -126    |
| Gravel and clay           | 4               | 126 -130    |
| Sand, coarse              | 5               | 130 -135    |
| Clay, gravelly, and gumbo | 3               | 135 -138    |

Test Hole and Observation Well Record

Location: 155-83-23BAA2

Use of well: City supply well

Owner and number: City supply well  
No. 2

Principal aquifer: Souris Valley

Depth drilled (ft.): 132

Altitude of land surface (ft., msl): 1550(T)

Screened interval (ft.): ?

Lithologic log from: Akin, 1947

Casing diameter: ?

Comments: 40 feet of screen, in bottom of well. Well abandoned because of bad screen. In 1947, recorder installed

Date completed: 1918

Lithologic Log

| Unit description       | Thickness (ft.) | Depth (ft.) |
|------------------------|-----------------|-------------|
| Clay, sand, and gravel | 85              | 0 - 85      |
| Sand                   | 5               | 85 - 90     |
| Sand, coarse, and clay | 4               | 90 - 94     |
| Sand, coarse           | 4               | 94 - 98     |
| Sand and lignite       | 3               | 98 -101     |
| Sand and gravel        | 7               | 101 -108    |
| Gravel                 | 5               | 108 -113    |
| Sand, coarse           | 2               | 113 -115    |
| Sand and gravel        | 3               | 115 -118    |
| Sand, coarse           | 13              | 118 -131    |
| Clay and sand          | 1               | 131 -132    |

**Test Hole and Observation Well Record**

**Location:** 155-83-23BB                    **Use of well:** Test hole  
**Owner and number:** City test 10        **Principal aquifer:**  
**Depth drilled (ft.):** 126                **Altitude of land surface (ft., msl):**  
**Screened interval (ft.):** None            **Lithologic log from:** Akin, 1947  
**Casing diameter:** None                    **Comments:**  
**Date completed:** 1915

**Lithologic Log**

| <b>Unit description</b>    | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|----------------------------|------------------------|--------------------|
| No log                     | 0                      | 0 - 19             |
| Sand, fine                 | 8                      | 19 - 27            |
| Sand, very fine, yellow    | 8                      | 27 - 35            |
| Clay, gray, silt           | 47                     | 35 - 82            |
| Sand, fine to medium, gray | 14                     | 82 - 96            |
| Sand and gravel            | 4                      | 96 -100            |
| Sand, fine to medium       | 8                      | 100 -108           |
| Sand and gravel            | 10                     | 108 -118           |
| Sand, fine to medium       | 1                      | 118 -119           |
| Gravel, fine               | 2                      | 119 -121           |
| Sand, coarse, angular      | 5                      | 121 -126           |

Test Hole and Observation Well Record

Location: 155-83-23BC1

Use of well: Test hole

Owner and number: City test No. 3

Principal aquifer:

Depth drilled (ft.): 75

Altitude of land surface (ft., msl):

Screened interval (ft.): None

Lithologic log from: Akin, 1947

Casing diameter: None

Comments:

Date completed: 1915

Lithologic Log

| Unit description       | Thickness (ft.) | Depth (ft.) |
|------------------------|-----------------|-------------|
| No log                 | 7               | 0 - 7       |
| Sand, fine to medium   | 21              | 7 - 28      |
| Silt, sandy, yellow    | 2               | 28 - 30     |
| Silt, sandy, white     | 5               | 30 - 35     |
| Silt, gray             | 21              | 35 - 56     |
| Sand, fine, and clay   | 6               | 56 - 62     |
| Silt, sandy, dark gray | 13              | 62 - 75     |

**Test Hole and Observation Well Record**

**Location:** 155-83-23BC2                    **Use of well:** Test hole  
**Owner and number:** City test No. 4        **Principal aquifer:**  
**Depth drilled (ft.):** 43                    **Altitude of land surface (ft., msl):**  
**Screened interval (ft.):** None              **Lithologic log from:** Akin, 1947  
**Casing diameter:** None                      **Comments:**  
**Date completed:** 1915

**Lithologic Log**

| <b>Unit description</b> | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|-------------------------|------------------------|--------------------|
| No log                  | 13                     | 0 - 13             |
| Sand, fine              | 1                      | 13 - 14            |
| Sand, very fine, white  | 6                      | 14 - 20            |
| Sand, fine, gray        | 23                     | 20 - 43            |

Test Hole and Observation Well Record

Location: 155-83-23BC3

Use of well: Test hole

Owner and number: City test No. 6

Principal aquifer:

Depth drilled (ft.): 126

Altitude of land surface (ft., msl):

Screened interval (ft.): None

Lithologic log from: Akin, 1947

Casing diameter: None

Comments:

Date completed: 1915

Lithologic Log

| Unit description     | Thickness (ft.) | Depth (ft.) |
|----------------------|-----------------|-------------|
| No log               | 19              | 0 - 19      |
| Quicksand            | 1               | 19 - 20     |
| Sand, fine           | 15              | 20 - 35     |
| Sand, fine, and clay | 47              | 35 - 82     |
| Quicksand            | 16              | 82 - 98     |
| Sand, fine, and clay | 2               | 98 -100     |
| Sand, fine           | 7               | 100 -107    |
| Sand, fine, and clay | 10              | 107 -117    |
| Sand, coarse         | 1               | 117 -118    |
| Sand and clay        | 2               | 118 -120    |
| Sand, coarse         | 1               | 120 -121    |
| Sand, fine           | 5               | 121 -126    |

**Test Hole and Observation Well Record**

**Location:** 155-83-23BDAL

**Use of well:** Test hole

**Owner and number:** City test No. 12

**Principal aquifer:**

**Depth drilled (ft.):** 137

**Altitude of land surface (ft., msl):**

**Screened interval (ft.):** None

**Lithologic log from:** Akin, 1947

**Casing diameter:** None

**Comments:**

**Date completed:** 1915

**Lithologic Log**

| <b>Unit description</b>          | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|----------------------------------|------------------------|--------------------|
| No log                           | 84                     | 0 - 84             |
| Sand, fine to coarse, and gravel | 14                     | 84 - 98            |
| Sand, fine to coarse             | 4                      | 98 -102            |
| Sand, and gravel                 | 8                      | 102 -110           |
| Sand, medium to coarse           | 4                      | 110 -114           |
| Sand and gravel                  | 12                     | 114 -126           |
| Sand and gravel, clayey          | 2                      | 126 -128           |
| Sand and gravel                  | 1                      | 128 -129           |
| Sand and gravel, silty           | 2                      | 129 -131           |
| Sand and gravel                  | 1                      | 131 -132           |
| Shale or clay, black             | 1                      | 132 -133           |
| Clay, gray                       | 4                      | 133 -137           |

Test Hole and Observation Well Record

Location: 155-83-23BDA2

Use of well: Test hole

Owner and number: City test No. 7

Principal aquifer:

Depth drilled (ft.): 133

Altitude of land surface (ft., msl):

Screened interval (ft.): None

Lithologic log from: Akin, 1947

Casing diameter: None

Comments:

Date completed: 1915

Lithologic Log

| Unit description          | Thickness (ft.) | Depth (ft.) |
|---------------------------|-----------------|-------------|
| No log                    | 117             | 0 -117      |
| Sand, coarse, well-sorted | 10              | 117 -127    |
| Gravel and sand           | 6               | 127 -133    |

**Test Hole and Observation Well Record**

|                                    |                                      |
|------------------------------------|--------------------------------------|
| Location: 155-83-23BD              | Use of well: Test hole               |
| Owner and number: City test No. 11 | Principal aquifer:                   |
| Depth drilled (ft.): 148           | Altitude of land surface (ft., msl): |
| Screened interval (ft.): None      | Lithologic log from: Akin, 1947      |
| Casing diameter: None              | Comments:                            |
| Date completed: 1915               |                                      |

**Lithologic Log**

| Unit description          | Thickness (ft.) | Depth (ft.) |
|---------------------------|-----------------|-------------|
| No log                    | 90              | 0 - 90      |
| Quicksand and clay        | 3               | 90 - 93     |
| Clay                      | 3               | 93 - 96     |
| Sand, fine, clay and wood | 10              | 96 -106     |
| Sand, coarse              | 2               | 106 -108    |
| Sand, fine                | 2               | 108 -110    |
| Quicksand and clay        | 10              | 110 -120    |
| Sand, coarse              | 3               | 120 -123    |
| Clay with sand and gravel | 1               | 123 -124    |
| Quicksand with clay       | 1               | 124 -125    |
| Clay and sand             | 4               | 125 -129    |
| Clay and gravel           | 2               | 129 -131    |
| Clay, blue                | 3               | 131 -134    |
| Clay, sand, and gravel    | 7               | 134 -141    |
| Sand, fine                | 1               | 141 -142    |
| Clay                      | 2               | 142 -144    |
| Sand, fine, and lignite   | 1               | 144 -145    |
| Clay                      | 3               | 145 -148    |

**Test Hole and Observation Well Record**

**Location:** 155-83-23CBC

**Use of well:** Observation well

**Owner and number:** USGS A-4

**Principal aquifer:** Souris Valley

**Depth drilled (ft.):** 266

**Altitude of land surface (ft., msl):**

**Screened interval (ft.):** ? - 30

**Lithologic log from:** Akin, 1947

**Casing diameter:** 2-inch

**Comments:**

**Date completed:** 1945

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Clay, yellow-gray, well-leached  | 4                      | 0 - 4              |
| Clay, yellow-gray, with limestone and other sand grains, calcareous        | 15                     | 4 - 19             |
| Sand, fine to coarse, and fine gravel                                      | 26                     | 19 - 45            |
| Clay, gray, silty, calcareous  | 34                     | 45 - 79            |
| Clay, yellow-gray to brown, gritty. Sand grains and pebbles mostly angular | 20                     | 79 - 99            |
| Shale, blue-gray, noncalcareous  | 140                    | 99 - 239           |
| Sandstone, gray, loosely cemented  | 27                     | 239 - 266          |

**Test Hole and Observation Well Record**

Location: 155-83-24BA1                      Use of well: Industrial  
Owner and number: NSP well No. 1              Principal aquifer: Souris Valley  
Depth drilled (ft.): 102                      Altitude of land surface (ft., msl):  
Screened interval (ft.): ?                      Lithologic log from: Akin, 1947  
Casing diameter: ?                              Comments:  
Date completed: 1930

**Lithologic Log**

| Unit description | Thickness (ft.) | Depth (ft.) |
|------------------|-----------------|-------------|
| Fill             | 18              | 0 - 18      |
| Clay, blue       | 54              | 18 - 72     |
| Clay, sandy      | 10              | 72 - 82     |
| Sand and gravel  | 18              | 82 -100     |
| Clay, blue       | 2               | 100 -102    |

**Test Hole and Observation Well Record**

**Location:** 155-83-24BA2

**Use of well:** Industrial

**Owner and number:** NSP well No. 2

**Principal aquifer:** Souris Valley

**Depth drilled (ft.):** 111

**Altitude of land surface (ft., msl):**

**Screened interval (ft.): ?**

**Lithologic log from:** Akin, 1947

**Casing diameter:** ?

**Comments:**

**Date completed:** 1932

**Lithologic Log**

| <b>Unit description</b> | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|-------------------------|------------------------|--------------------|
| Fill                    | 5                      | 0 - 5              |
| Clay                    | 5                      | 5 - 10             |
| Clay, sandy             | 25                     | 10 - 35            |
| Clay, blue              | 35                     | 35 - 70            |
| Clay, sandy             | 13                     | 70 - 83            |
| Sand                    | 14                     | 83 - 97            |
| Sand and gravel         | 12                     | 97 -109            |
| Clay, sandy             | 2                      | 109 -111           |

**Test Hole and Observation Well Record**

|  |   |
|--|---|
| <b>Location:</b> 155-83-25AAB <sub>1</sub> | <b>Use of well:</b> Test hole                       |
| <b>Owner and number:</b> SWC 11364A        | <b>Principal aquifer:</b>                           |
| <b>Depth drilled (ft.):</b> 380            | <b>Altitude of land surface (ft., msl):</b> 1730(T) |
| <b>Screened interval (ft.):</b> None       | <b>Lithologic log from:</b> SWC                     |
| <b>Casing diameter:</b> None               | <b>Comments:</b>                                    |
| <b>Date completed:</b> 10/20/83            |   |

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Topsoil  | 1                      | 0 - 1              |
| Clay, yellow brown, silty, slightly pebbly, friable, interbedded sand, oxidized (till)                             | 38                     | 1 - 39             |
| Clay, olive gray, silty, pebbly, interbedded sand (till)   | 47                     | 39 - 86            |
| Gravel, very coarse sand to pebble size gravel, predominantly gravel, angular to rounded, predominantly subangular | 5                      | 86 - 91            |
| Clay, olive gray, silty, pebbly (till)   | 4                      | 91 - 95            |
| Gravel   | 1                      | 95 - 96            |
| Clay, olive gray, silty, pebbly (till)   | 2                      | 96 - 98            |
| Gravel   | 2                      | 98-100             |
| Clay, olive gray, very silty and sandy, brittle, interbedded sand and gravel (till)                                | 64                     | 100-164            |
| Silt, yellowish orange, clayey, oxidized   | 1                      | 164-165            |
| Sand, very fine, angular, slightly clayey, some cobbles  | 10                     | 165-175            |
| Silt, olive gray, clayey   | 12                     | 175-187            |
| Clay, olive gray, silty, very sandy, interbedded sand and gravel (till)  | 48                     | 187-235            |
| Silt, greenish gray, slightly clayey, carbonaceous, interbedded detrital lignite                                   | 92                     | 235-327            |

155-83-25AAB<sub>1</sub>  
cont.

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Gravel, very coarse sand to pebble gravel,<br>predominantly very coarse sand and<br>granule gravel, angular to rounded,<br>predominantly subrounded to rounded | 18              | 327-345     |
| Silt, brownish gray, interbedded light gray<br>silt and brown clay   | 35              | 345-380     |

**Test Hole and Observation Well Record**

Location: 155-83-25AAB<sub>2</sub>                      Use of well: Observation  
 Owner and number: SWC 11364B                      Principal aquifer: Sundre?  
 Depth drilled (ft.): 400                              Altitude of land surface (ft., msl): 1719.9 (S)  
 Screened interval (ft.): 336-345                      Lithologic log from: SWC.  
 Casing diameter: 2" steel                              Comments: E, QW  
 Date completed: 11/3/83

**Lithologic Log**

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Topsoil  | 1               | 0 - 1       |
| Clay, yellow brown, silty, sandy, pebbly,<br>oxidized (till)                   | 28              | 1 - 29      |
| Sand, fine to medium, oxidized   | 33              | 29 - 32     |
| Clay, yellow brown, silty, sandy, pebbly,<br>oxidized (till)                   | 6               | 32 - 38     |
| Clay, olive gray, silty, sandy, pebbly (till)                                  | 47              | 38 - 85     |
| Gravel, fine to medium, sandy  | 6               | 85 - 91     |
| Clay, olive gray, silty, sandy, pebbly (till)                                  | 73              | 91-164      |
| Clay, olive gray, silty, sandy, pebbly,<br>interbedded gray clay               | 44              | 164-208     |
| Clay, olive gray, silty, sandy, pebbly,<br>interbedded detrital lignite (till) | 27              | 208-235     |
| Clay, brown, silty, plastic, interbedded lignite                               | 89              | 235-324     |
| Sand, medium to coarse, gravelly, angular<br>to subrounded, interbedded clay   | 18              | 324-342     |
| Clay, olive gray, sandy (till)   | 58              | 342-400     |

Test Hole and Observation Well Record

Location: 155-83-25BDD2

Use of well: Test hole

Owner and number: SWC 5405

Principal aquifer:

Depth drilled (ft.): 267

Altitude of land surface (ft., msl): 1730(T)

Screened interval (ft.): 250-265

Lithologic log from: SWC

Casing diameter: 2 inch

Comments: Tried to complete 2-inch well but  
screen plugged, pulled casing and  
abandoned hole.

Date completed: 07/18/69

Lithologic Log

Unit description

Thickness (ft.) Depth (ft.)

See log for 155-83-25BDD1

**Test Hole and Observation Well Record**

**Location:** 155-83-36AAB                    **Use of well:** Observation  
**Owner and number:** SWC 11349                **Principal aquifer:** Sundre  
**Depth drilled (ft.):** 391                    **Altitude of land surface (ft., msl):** 1712.8(S)  
**Screened interval (ft.):** 315-327            **Lithologic log from:** SWC  
**Casing diameter:** 2" steel                    **Comments:** E, QW, south of 4 lane, south of  
**Date completed:** 9/28/83                      Northwest Equipment

**Lithologic Log**

| <b>Unit description</b>  | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|--|------------------------|--------------------|
| Topsoil  | 1                      | 0 - 1              |
| Clay, yellow brown, very silty, pebbly, interbedded detrital lignite and sand, oxidized (till)           | 17                     | 1 - 18             |
| Sand, fine to coarse, predominantly medium, subrounded, oxidized   | 5                      | 18 - 23            |
| Clay, yellow brown, very silty, pebbly, oxidized (till)  | 3                      | 23 - 26            |
| Clay, olive gray, silty, sandy, pebbly, interbedded fine sand (till)                                     | 61                     | 26 - 87            |
| Clay, interbedded sand and gravel (till)   | 4                      | 87 - 91            |
| Gravel, medium sand to fine gravel, predominantly fine gravel  | 11                     | 91-102             |
| Clay, olive gray, silty, sandy, pebbly (till)  | 69                     | 102-171            |
| Clay, olive gray, silty, sandy, slightly cohesive and plastic, interbedded detrital lignite (lacustrine) | 19                     | 171-190            |
| Detrital lignite, interbedded clay   | 26                     | 190-216            |
| Clay, olive gray, silty, sandy (lacustrine)  | 19                     | 216-235            |
| Clay, olive gray to black, carbonaceous, interbedded detrital lignite                                    | 5                      | 235-240            |
| Clay, olive gray, silty, sandy (lacustrine)  | 46                     | 240-286            |

155-83-36AAB

cont.

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Sand, very fine to medium, rounded,<br>interbedded lignite               | 35              | 286-321     |
| Gravel, coarse sand to pebble size gravel                                | 6               | 321-327     |
| Gravel, coarse sand to pebble gravel, interbedded<br>clay                | 19              | 327-346     |
| Gravel, coarse sand to pebble gravel                                     | 2               | 346-348     |
| Clay, olive gray, silty, slightly sandy,<br>interbedded detrital lignite | 8               | 348-356     |
| Clay, olive gray, interbedded sand (Fort Union)                          | 35              | 356-391     |

**Test Hole and Observation Well Record**

**Location:** 155-83-36ABB                    **Use of well:** Observation  
**Owner and number:** SWC 11348                **Principal aquifer:** Sundre  
**Depth drilled (ft.):** 420                    **Altitude of land surface (ft., msl):** 1714.20(S)  
**Screened interval (ft.):** 315-324            **Lithologic log from:** SWC  
**Casing diameter:** 2" steel                    **Comments:** E, QW, southeast of Dakota Surplus  
**Date completed:** 9/27/83

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Fill  | 2                      | 0 - 2              |
| Clay, yellow brown, silty, sandy, pebbly, oxidized (till)                                 | 16                     | 2 - 18             |
| Clay, olive gray, silty, sandy, pebbly, interbedded sand (till)                           | 122                    | 18-140             |
| Sand, medium to coarse, subrounded to rounded   | 5                      | 140-145            |
| Clay, olive gray, silty, sandy, pebbly, interbedded sand and gravel (till)                | 8                      | 145-153            |
| Gravel, coarse sand to pebble gravel, angular to subrounded                               | 8                      | 153-161            |
| Clay, olive gray, silty, sandy, cohesive, slightly plastic                                | 75                     | 161-236            |
| Clay, olive gray, very sandy  | 36                     | 236-272            |
| Sand, fine sand to fine gravel, predominantly fine and medium sand, subrounded to rounded | 32                     | 272-304            |
| Gravel, sandy, subrounded to rounded  | 42                     | 304-346            |
| Clay, olive gray, cohesive, plastic   | 26                     | 346-372            |
| Clay, brownish gray to black, fissile interbedded sand and lignite (Fort Union)           | 48                     | 372-420            |

**Test Hole and Observation Well Record**

|   |   |
|---|---|
| <b>Location:</b> 155-83-36ADD           | <b>Use of well:</b> Observation                       |
| <b>Owner and number:</b> SWC 11352      | <b>Principal aquifer:</b> Sundre                      |
| <b>Depth drilled (ft.):</b> 380         | <b>Altitude of land surface (ft., msl):</b> 1728.1(S) |
| <b>Screened interval (ft.):</b> 315-327 | <b>Lithologic log from:</b> SWC                       |
| <b>Casing diameter:</b> 2" steel        | <b>Comments:</b> E, QW, west of Huwe Moving           |
| <b>Date completed:</b> 10/5/83          |   |

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| <b>Topsoil</b>  | 1                      | 0 - 1              |
| <b>Clay, yellow brown, silty, sandy, pebbly, oxidized (till)</b>                                    | 43                     | 1 - 44             |
| <b>Clay, olive gray, silty, sandy, pebbly, interbedded fine to medium sand (till)</b>               | 222                    | 44-266             |
| <b>Sand, medium sand to fine gravel, predominantly medium to coarse sand, subrounded to rounded</b> | 22                     | 266-288            |
| <b>Clay, olive gray, silty</b>  | 3                      | 288-291            |
| <b>Sand, gravelly, interbedded silty clay</b>   | 10                     | 291-301            |
| <b>Detrital lignite, subrounded, interbedded fine and medium sand</b>                               | 5                      | 301-306            |
| <b>Sand, poor cuttings return</b>   | 17                     | 306-323            |
| <b>Sand, medium sand to pebble gravel, subrounded to rounded</b>                                    | 16                     | 323-339            |
| <b>Clay, olive gray, interbedded siltstone, brown clay (Fort Union)</b>                             | 41                     | 339-380            |

**Test Hole and Observation Well Record**

|                                      |   |
|--------------------------------------|---|
| <b>Location:</b> 155-83-36BAC        | <b>Use of well:</b> Test hole                       |
| <b>Owner and number:</b> SWC 11347   | <b>Principal aquifer:</b>                           |
| <b>Depth drilled (ft.):</b> 360      | <b>Altitude of land surface (ft., msl):</b> 1690(T) |
| <b>Screened interval (ft.):</b> None | <b>Lithologic log from:</b> SWC                     |
| <b>Casing diameter:</b> None         | <b>Comments:</b> E                                  |
| <b>Date completed:</b> 9/26/83       |   |

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil   | 1                      | 0 - 1              |
| Clay, yellow brown, very sandy (fill)   | 5                      | 1 - 6              |
| Clay, yellow brown, silty, very sandy, pebbly, cohesive, slightly plastic, oxidized (till)                    | 16                     | 6 - 22             |
| Gravel, sandy, rounded  | 5                      | 22 - 27            |
| Clay, olive gray, silty, very sandy, pebbly (till)  | 18                     | 27 - 45            |
| Gravel, sandy, subrounded to rounded  | 2                      | 45 - 47            |
| Clay, olive gray, silty, sandy, pebbly (till)   | 15                     | 47 - 62            |
| Gravel, granule to pebble size, angular to rounded  | 3                      | 62 - 65            |
| Sand, fine to very coarse, predominantly very coarse, angular to rounded, predominantly angular to subangular | 2                      | 65 - 67            |
| Clay, olive gray, silty, sandy, pebbly (till)   | 10                     | 67 - 77            |
| Silt, olive gray, clayey  | 3                      | 77 - 80            |
| Clay, olive gray, very silty, slightly sandy, pebbly, slightly brittle, interbedded sand and gravel           | 49                     | 80-129             |
| Clay, greenish gray, interbedded sand   | 2                      | 129-131            |
| Silt, olive gray, coarse - almost a very fine sand, slightly clayey (fluvial)                                 | 4                      | 131-135            |
| Clay, olive gray, sandy, slightly pebbly (till)   | 6                      | 135-141            |

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Clay, olive gray, sandy, slightly cohesive and plastic (fluvial)         | 13              | 141-154     |
| Clay, olive gray, silty, cohesive, plastic (fluvial)                     | 15              | 154-169     |
| Detrital lignite, interbedded silty clay                                 | 12              | 169-181     |
| Clay, olive gray, silty, plastic, interbedded detrital lignite and sand  | 17              | 181-198     |
| Clay, olive gray, silty, sandy, pebbly (till)                            | 5               | 198-203     |
| Gravel, sandy, interbedded clay  | 2               | 203-205     |
| Clay, olive gray, silty, cohesive, plastic, interbedded detrital lignite | 16              | 205-221     |
| Clay, olive gray, silty, sandy, pebbly, interbedded silty clay (till)    | 64              | 221-285     |
| Clay, olive gray, sandy, bentonitic                                      | 16              | 285-301     |
| Clay, olive gray, less sandy (fluvial)                                   | 30              | 301-331     |
| Sandstone, indurated   | 1               | 331-332     |
| Clay, whitish green, very sandy (Fort Union)                             | 28              | 332-360     |

**Test Hole and Observation Well Record**

**Location:** 155-83-36DCB

**Use of well:** Observation

**Owner and number:** SWC 11351

**Principal aquifer:** Sand and gravel, unnamed

**Depth drilled (ft.):** 340

**Altitude of land surface (ft., msl):** 1741.10(S)

**Screened interval (ft.):** 245-265

**Lithologic log from:** SWC

**Casing diameter:** 2" pvc

**Comments:** E, would not pump

**Date completed:** 10/4/83

**Lithologic Log**

| <b>Unit description</b>   | <b>Thickness (ft.)</b> | <b>Depth (ft.)</b> |
|---|------------------------|--------------------|
| Topsoil   | 1                      | 0 - 1              |
| Clay, yellow brown, silty, sandy, pebbly, oxidized (till)                   | 20                     | 1 - 21             |
| Sand, medium to coarse, subrounded to rounded, oxidized                     | 2                      | 21 - 23            |
| Clay, yellow brown, silty, sandy, interbedded sand, oxidized                | 4                      | 23 - 27            |
| Clay, olive gray, silty, sandy, pebbly, interbedded sand and gravel (till)  | 129                    | 27-156             |
| Detrital lignite, interbedded sand  | 8                      | 156-164            |
| Clay, olive gray, silty, sandy, pebbly, interbedded detrital lignite (till) | 27                     | 164-191            |
| Detrital lignite, interbedded sand  | 30                     | 191-221            |
| Sand, gravelly, interbedded detrital lignite                                | 24                     | 221-245            |
| Sand, medium sand to granule gravel   | 6                      | 245-251            |
| Clay, olive gray, silty, sandy, cohesive, plastic                           | 1                      | 251-252            |
| Sand, medium sand to pebble gravel, subrounded to rounded, interbedded clay | 15                     | 252-267            |
| Clay, brown, silty, sandy   | 8                      | 267-275            |
| Detrital lignite, interbedded clay  | 6                      | 275-281            |
| Sand, medium to coarse, interbedded detrital lignite                        | 7                      | 281-288            |
| Sand, interbedded clay, poor cuttings return                                | 8                      | 288-296            |
| Clay, olive gray to brownish, silty, sandy (Fort Union)                     | 44                     | 296-340            |

Test Hole and Observation Well Record

|                                  |  |
|----------------------------------|--|
| Location: 155-83-36DDD           | Use of well: Observation well                  |
| Owner and number: SWC 5217       | Principal aquifer: Sundre                      |
| Depth drilled (ft.): 440         | Altitude of land surface (ft., msl): 1732.0(S) |
| Screened interval (ft.): 197-203 | Lithologic log from: SWC                       |
| Casing diameter: 1.25 inch       | Comments: Well destroyed                       |
| Date completed: 10/15/68         |  |

Lithologic Log

| Unit description  | Thickness (ft.) | Depth (ft.) |
|---|-----------------|-------------|
| Topsoil, sandy, slightly silty, clayed, dark brown  | 1               | 0 - 1       |
| Clay, silty, sandy, pebbly, moderate yellowish-brown to dark yellowish-brown, moderately cohesive to cohesive, slightly to moderately plastic, moderately calcareous, oxidized, occasional carbonate, granitic, shale and lignite fragments in clay matrix (till)                         | 28              | 1 - 29      |
| Sand, fine to coarse-grained, angular to subrounded, moderately well sorted, 60-70% quartz, remainder mostly carbonates and granitics, some shale and lignite, oxidized throughout  | 11              | 29 - 40     |
| Clay, silty, slightly sandy, occasional pebbles, olive gray with a few dark yellowish-brown streaks (partially oxidized), cohesive, slightly to moderately plastic, moderately calcareous, numerous carbonate, light-colored granitics, shale and lignite fragments in clay matrix (till) | 51              | 40 - 91     |
| Gravel, poorly sorted, fine to coarse, angular to subangular, approximately 60-70% limestone and dolostone, remainder mostly light-colored granitics and shale, slightly oxidized   | 6               | 91 - 97     |
| Clay, moderately silty, very slightly sandy, occasional pebbles, olive gray, cohesive, moderately plastic, moderately calcareous, numerous limestone, dolostone, light-colored granitics, shale and lignite fragments (till)  | 4               | 97 -101     |

| Unit description   | Thickness (ft.) | Depth (ft.) |
|--|-----------------|-------------|
| Gravel, slightly sandy, clayey, fine to coarse, angular to subangular, poor to fair sorting, predominantly carbonates, some granitics, shale, sandstone, and lignite   | 7               | 101 -108    |
| Clay, silty, very slightly sandy, a few pebbles, olive gray, cohesive, slightly to moderately plastic, calcareous, numerous limestone, dolostone, shale, granitic and lignite fragments in clay matrix (till)  | 48              | 108 -156    |
| Gravel, slightly to moderately sandy, interbedded with olive gray clay lenses (till), poorly sorted, fine to coarse, angular to subrounded, approximately 40-60% carbonates, remainder mostly granitics, some shale and detrital lignite fragments - not taking water, not caving                      | 64              | 156 -220    |
| Clay, very silty, a few sandy laminations, olive gray to dark greenish gray with light olive gray to medium bluish-gray to brownish-black laminations, slightly to moderately indurated, cohesive, non-plastic to very slightly plastic, a few lignite chips, moderately calcareous (fluvial sediment) | 200             | 220 -420    |
| Siltstone, moderately clayey, brownish-gray to brownish-black (interbedded with very fine-grained medium bluish-gray to dark greenish-gray sandstone), indurated, noncalcareous, bedded (bedrock, Fort Union)  | 20              | 420 -440    |

Table 2. Water levels in selected wells and  
stage height of the Souris River at  
selected sites

Explanation

Depth to water, adjusted to feet (ft.) below or above (+) land surface

ft. - feet

LS Elev - land surface elevation

SI - screened interval

WL - water level

MSL - mean sea level

154-079-14CCC1

New Rockford aquifer

LS Elev (msl,ft)= 1538.80

SI (ft)= 236-242

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 05/26/78 | 51.30               | 1487.50          | 08/16/84 | 51.05               | 1487.75          |
| 06/20/78 | 51.55               | 1487.25          | 08/22/84 | 51.05               | 1487.75          |
| 07/06/78 | 51.44               | 1487.36          | 08/27/84 | 50.53               | 1488.27          |
| 08/08/78 | 51.50               | 1487.30          | 09/07/84 | 50.49               | 1488.31          |
| 09/13/78 | 51.42               | 1487.38          | 09/12/84 | 50.72               | 1488.08          |
| 10/03/78 | 51.49               | 1487.31          | 09/20/84 | 50.92               | 1487.88          |
| 11/27/78 | 51.69               | 1487.11          | 09/22/84 | 50.63               | 1488.17          |
|          |                     |                  | 09/28/84 | 51.38               | 1487.42          |
| 02/26/79 | 51.30               | 1487.50          | 10/03/84 | 50.83               | 1487.97          |
| 06/04/79 | 51.16               | 1487.64          | 10/10/84 | 50.88               | 1487.92          |
| 09/06/79 | 51.60               | 1487.20          | 10/24/84 | 50.86               | 1487.94          |
| 11/26/79 | 51.03               | 1487.77          | 11/07/84 | 50.57               | 1488.23          |
|          |                     |                  | 11/20/84 | 51.02               | 1487.78          |
| 03/03/80 | 51.39               | 1487.41          | 12/13/84 | 51.05               | 1487.75          |
| 06/02/80 | 51.49               | 1487.31          |          |                     |                  |
| 09/04/80 | 51.60               | 1487.20          | 01/09/85 | 51.22               | 1487.58          |
| 12/06/80 | 51.77               | 1487.03          | 02/12/85 | 50.82               | 1487.98          |
|          |                     |                  | 03/06/85 | 50.63               | 1488.17          |
| 06/02/81 | 50.77               | 1488.03          | 03/19/85 | 50.63               | 1488.17          |
| 08/26/81 | 51.88               | 1486.92          | 04/17/85 | 49.80               | 1489.00          |
| 09/01/81 | 51.66               | 1487.14          | 05/02/85 | 50.19               | 1488.61          |
|          |                     |                  | 05/14/85 | 50.88               | 1487.92          |
| 05/13/82 | 50.80               | 1488.00          | 06/06/85 | 50.89               | 1487.91          |
| 09/26/82 | 50.55               | 1488.25          | 06/20/85 | 50.11               | 1488.69          |
| 11/27/82 | 50.44               | 1488.36          | 07/01/85 | 50.44               | 1488.36          |
|          |                     |                  | 07/17/85 | 50.80               | 1488.00          |
| 03/29/83 | 51.22               | 1487.58          | 07/30/85 | 50.83               | 1487.97          |
| 07/13/83 | 50.96               | 1487.84          | 08/14/85 | 50.77               | 1488.03          |
| 09/27/83 | 50.80               | 1488.00          | 08/28/85 | 51.05               | 1487.75          |
| 11/30/83 | 51.33               | 1487.47          | 09/11/85 | 51.19               | 1487.61          |
|          |                     |                  | 09/25/85 | 51.22               | 1487.58          |
| 01/17/84 | 51.28               | 1487.52          | 10/23/85 | 50.41               | 1488.39          |
| 02/02/84 | 50.94               | 1487.86          | 11/21/85 | 51.21               | 1487.59          |
| 02/21/84 | 50.99               | 1487.81          | 12/30/85 | 51.27               | 1487.53          |
| 03/12/84 | 50.58               | 1488.22          |          |                     |                  |
| 03/24/84 | 50.77               | 1488.03          | 02/25/86 | 50.65               | 1488.15          |
| 04/03/84 | 51.11               | 1487.69          | 03/26/86 | 51.30               | 1487.50          |
| 04/18/84 | 50.97               | 1487.83          | 05/13/86 | 50.62               | 1488.18          |
| 05/08/84 | 51.25               | 1487.55          | 06/04/86 | 51.06               | 1487.74          |
| 05/29/84 | 51.05               | 1487.75          | 07/01/86 | 50.95               | 1487.85          |
| 06/15/84 | 51.07               | 1487.73          | 08/06/86 | 50.74               | 1488.06          |
| 06/26/84 | 50.77               | 1488.03          | 09/09/86 | 50.85               | 1487.95          |
| 07/10/84 | 50.88               | 1487.92          | 10/09/86 | 51.44               | 1487.36          |
| 07/27/84 | 51.02               | 1487.78          | 12/16/86 | 51.13               | 1487.67          |
| 08/09/84 | 50.99               | 1487.81          |          |                     |                  |

154-079-14CCC2

New Rockford aquifer

LS Elev (msl,ft) = 1539.10

SI (ft) = 124-130

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 06/20/78 | 50.80               | 1488.30          | 08/22/84 | 50.36               | 1488.74          |
| 07/06/78 | 50.69               | 1488.41          | 08/27/84 | 49.83               | 1489.27          |
| 08/06/78 | 50.88               | 1488.22          | 09/07/84 | 49.78               | 1489.32          |
| 09/13/78 | 50.66               | 1488.44          | 09/12/84 | 50.00               | 1489.10          |
| 10/03/78 | 50.74               | 1488.36          | 09/20/84 | 50.21               | 1488.89          |
| 11/29/78 | 50.89               | 1488.21          | 09/22/84 | 49.69               | 1489.41          |
|          |                     |                  | 09/28/84 | 50.66               | 1488.44          |
| 02/26/79 | 50.55               | 1488.55          | 10/03/84 | 50.13               | 1488.97          |
| 06/04/79 | 50.38               | 1488.72          | 10/10/84 | 50.16               | 1488.94          |
| 09/06/79 | 50.75               | 1488.35          | 10/24/84 | 50.14               | 1488.96          |
| 11/26/79 | 50.24               | 1488.86          | 11/07/84 | 49.83               | 1489.27          |
|          |                     |                  | 11/20/84 | 50.32               | 1488.78          |
| 03/03/80 | 51.58               | 1487.52          | 12/13/84 | 50.35               | 1488.75          |
| 06/02/80 | 50.53               | 1488.57          |          |                     |                  |
| 09/04/80 | 50.86               | 1488.24          | 01/09/85 | 50.02               | 1489.08          |
| 12/06/80 | 51.08               | 1488.02          | 02/12/85 | 49.63               | 1489.47          |
|          |                     |                  | 03/06/85 | 49.44               | 1489.66          |
| 06/02/81 | 51.47               | 1487.63          | 03/11/85 | 49.44               | 1489.66          |
| 08/26/81 | 51.13               | 1487.97          | 04/17/85 | 50.00               | 1489.10          |
| 09/01/81 | 50.88               | 1488.22          | 05/02/85 | 49.72               | 1489.38          |
|          |                     |                  | 05/14/85 | 49.67               | 1489.43          |
| 09/26/82 | 51.05               | 1488.05          | 06/06/85 | 49.75               | 1489.35          |
| 11/27/82 | 51.75               | 1487.35          | 06/20/85 | 49.77               | 1489.33          |
|          |                     |                  | 07/01/85 | 50.10               | 1489.00          |
| 03/29/83 | 50.55               | 1488.55          | 07/17/85 | 49.61               | 1489.49          |
| 07/13/83 | 50.22               | 1488.88          | 07/30/85 | 49.63               | 1489.47          |
| 09/27/83 | 50.03               | 1489.07          | 08/14/85 | 49.61               | 1489.49          |
| 11/30/83 | 50.60               | 1488.50          | 08/28/85 | 49.88               | 1489.22          |
|          |                     |                  | 09/11/85 | 49.91               | 1489.19          |
| 01/17/84 | 50.58               | 1488.52          | 09/25/85 | 49.96               | 1489.14          |
| 02/02/84 | 50.22               | 1488.88          | 10/23/85 | 49.22               | 1489.88          |
| 02/21/84 | 50.28               | 1488.82          | 11/21/85 | 50.03               | 1489.07          |
| 03/12/84 | 50.16               | 1488.94          | 12/30/85 | 50.05               | 1489.05          |
| 03/24/84 | 50.05               | 1489.05          |          |                     |                  |
| 04/03/84 | 50.38               | 1488.72          | 02/25/86 | 49.47               | 1489.63          |
| 04/18/84 | 50.24               | 1488.86          | 03/26/86 | 50.12               | 1488.98          |
| 05/08/84 | 50.52               | 1488.58          | 05/13/86 | 49.45               | 1489.65          |
| 05/29/84 | 50.33               | 1488.77          | 06/04/86 | 49.89               | 1489.21          |
| 06/15/84 | 50.33               | 1488.77          | 07/01/86 | 49.77               | 1489.33          |
| 06/26/84 | 50.05               | 1489.05          | 08/06/86 | 49.70               | 1489.40          |
| 07/10/84 | 50.16               | 1488.94          | 09/09/86 | 49.68               | 1489.42          |
| 07/27/84 | 50.30               | 1488.80          | 10/09/86 | 50.26               | 1488.84          |
| 08/09/84 | 50.32               | 1488.78          | 12/16/86 | 49.97               | 1489.13          |
| 08/16/84 | 50.35               | 1488.75          |          |                     |                  |

154-079-16CCC  
New Rockford aquifer

LS Elev (msl,ft) = 1550.00 SI (ft) = 180-186

| Date     | Depth to Water (ft) | ML Elev (msl,ft) | Date     | Depth to Water (ft) | ML Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/28/77 | 61.22               | 1488.78          | 01/17/84 | 61.28               | 1488.72          |
| 12/12/77 | 60.99               | 1489.01          | 02/02/84 | 60.82               | 1489.18          |
| 01/17/78 | 61.41               | 1488.59          | 02/21/84 | 60.83               | 1489.17          |
| 02/21/78 | 61.33               | 1488.67          | 03/12/84 | 60.83               | 1489.17          |
| 03/22/78 | 61.49               | 1488.51          | 03/24/84 | 60.67               | 1489.33          |
| 04/13/78 | 61.41               | 1488.59          | 04/03/84 | 61.08               | 1488.92          |
| 04/26/78 | 61.52               | 1488.48          | 04/18/84 | 60.91               | 1489.09          |
| 05/10/78 | 60.91               | 1489.09          | 04/22/84 | 60.89               | 1489.11          |
| 06/20/78 | 61.50               | 1488.50          | 05/08/84 | 61.19               | 1488.81          |
| 07/06/78 | 61.38               | 1488.62          | 05/26/84 | 60.94               | 1489.06          |
| 08/08/78 | 61.19               | 1488.81          | 05/29/84 | 61.00               | 1489.00          |
| 09/13/78 | 61.16               | 1488.84          | 06/15/84 | 61.00               | 1489.00          |
| 10/03/78 | 61.27               | 1488.73          | 06/26/84 | 60.74               | 1489.26          |
| 11/27/78 | 61.35               | 1488.65          | 07/10/84 | 60.82               | 1489.18          |
|          |                     |                  | 07/27/84 | 61.00               | 1489.00          |
| 01/09/79 | 61.60               | 1488.40          | 07/28/84 | 61.00               | 1489.00          |
| 01/29/79 | 61.50               | 1488.50          | 08/09/84 | 61.00               | 1489.00          |
| 02/26/79 | 61.08               | 1488.92          | 08/16/84 | 61.02               | 1488.98          |
| 03/27/79 | 61.10               | 1488.90          | 08/22/84 | 61.03               | 1488.97          |
| 05/16/79 | 60.94               | 1489.06          | 08/27/84 | 60.44               | 1489.56          |
| 06/04/79 | 61.16               | 1488.84          | 09/07/84 | 60.36               | 1489.64          |
| 07/05/79 | 61.50               | 1488.50          | 09/12/84 | 60.61               | 1489.39          |
| 08/01/79 | 60.99               | 1489.01          | 09/20/84 | 60.86               | 1489.14          |
| 09/06/79 | 61.50               | 1488.50          | 09/22/84 | 60.60               | 1489.40          |
| 10/02/79 | 60.96               | 1489.04          | 09/28/84 | 61.33               | 1488.67          |
| 11/05/79 | 61.83               | 1488.17          | 10/03/84 | 60.77               | 1489.23          |
| 11/26/79 | 60.85               | 1489.15          | 10/10/84 | 60.83               | 1489.17          |
|          |                     |                  | 10/21/84 | 60.86               | 1489.14          |
| 03/03/80 | 61.16               | 1488.84          | 10/24/84 | 60.78               | 1489.22          |
| 03/31/80 | 61.35               | 1488.65          | 11/07/84 | 60.44               | 1489.56          |
| 04/28/80 | 61.60               | 1488.40          | 11/20/84 | 61.00               | 1489.00          |
| 06/02/80 | 61.25               | 1488.75          | 12/13/84 | 60.96               | 1489.04          |
| 06/30/80 | 61.00               | 1489.00          |          |                     |                  |
| 08/04/80 | 60.63               | 1489.37          | 01/09/85 | 60.69               | 1489.31          |
| 09/04/80 | 61.38               | 1488.62          | 02/12/85 | 60.27               | 1489.73          |
| 11/01/80 | 60.60               | 1489.40          | 03/06/85 | 60.00               | 1490.00          |
| 12/06/80 | 61.61               | 1488.39          | 03/19/85 | 59.97               | 1490.03          |
|          |                     |                  | 04/17/85 | 59.94               | 1490.06          |
| 01/06/81 | 61.07               | 1488.93          | 05/02/85 | 60.38               | 1489.62          |
| 02/06/81 | 61.07               | 1488.93          | 05/14/85 | 60.27               | 1489.73          |
| 03/29/81 | 60.75               | 1489.25          | 06/06/85 | 60.33               | 1489.67          |
| 05/04/81 | 61.38               | 1488.62          | 06/20/85 | 60.33               | 1489.67          |
| 06/02/81 | 61.27               | 1488.73          | 07/01/85 | 60.60               | 1489.40          |
| 07/05/81 | 61.28               | 1488.72          | 07/17/85 | 60.25               | 1489.75          |
| 07/30/81 | 61.07               | 1488.93          | 07/30/85 | 60.60               | 1489.40          |
| 08/26/81 | 61.63               | 1488.37          | 08/14/85 | 60.19               | 1489.81          |
| 09/27/81 | 61.69               | 1488.31          | 08/28/85 | 60.50               | 1489.50          |
|          |                     |                  | 09/11/85 | 60.61               | 1489.39          |
| 05/13/82 | 61.69               | 1488.31          | 09/25/85 | 60.69               | 1489.31          |
| 08/23/82 | 61.30               | 1488.70          | 10/23/85 | 59.72               | 1490.28          |
| 09/26/82 | 61.11               | 1488.89          | 11/21/85 | 60.61               | 1489.39          |
| 10/25/82 | 61.13               | 1488.87          | 12/30/85 | 60.25               | 1489.75          |
| 11/27/82 | 61.02               | 1488.98          |          |                     |                  |
|          |                     |                  | 02/25/86 | 59.95               | 1490.05          |
| 03/29/83 | 61.21               | 1488.79          | 03/26/86 | 60.66               | 1489.34          |
| 05/03/83 | 61.11               | 1488.89          | 05/13/86 | 59.98               | 1490.02          |
| 06/01/83 | 60.94               | 1489.06          | 06/04/86 | 60.45               | 1489.55          |
| 07/13/83 | 60.94               | 1489.06          | 07/01/86 | 60.28               | 1489.72          |
| 08/30/83 | 61.13               | 1488.87          | 08/06/86 | 60.26               | 1489.74          |
| 09/27/83 | 60.71               | 1489.29          | 09/09/86 | 60.10               | 1489.90          |
| 10/24/83 | 61.35               | 1488.65          | 10/09/86 | 60.64               | 1489.36          |
| 11/30/83 | 61.24               | 1488.76          | 12/16/86 | 60.27               | 1489.73          |

154-079-20BBB

New Rockford aquifer

LS Elev (msl,ft)= 1587.90

SI (ft)= 218-223

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 05/15/85 | 98.03               | 1489.87          | 12/30/85 | 97.25               | 1490.65          |
| 06/06/85 | 97.67               | 1490.23          | 02/25/86 | 97.44               | 1490.46          |
| 06/20/85 | 97.69               | 1490.21          | 03/26/86 | 98.16               | 1489.74          |
| 07/01/85 | 98.17               | 1489.73          | 05/13/86 | 97.53               | 1490.37          |
| 07/17/85 | 97.80               | 1490.10          | 06/04/86 | 98.02               | 1489.88          |
| 07/30/85 | 98.16               | 1489.74          | 07/01/86 | 97.80               | 1490.10          |
| 08/14/85 | 97.72               | 1490.18          | 08/06/86 | 97.72               | 1490.18          |
| 08/28/85 | 98.05               | 1489.85          | 09/09/86 | 97.63               | 1490.27          |
| 09/11/85 | 98.11               | 1489.79          | 10/09/86 | 98.15               | 1489.75          |
| 09/25/85 | 98.47               | 1489.43          | 12/16/86 | 97.85               | 1490.05          |
| 10/23/85 | 97.19               | 1490.71          |          |                     |                  |
| 11/21/85 | 98.16               | 1489.74          |          |                     |                  |

154-079-29ABA

New Rockford Aquifer ?

LS Elev (Msl,ft)= 1564.20 SI (ft)= 102-108

| Date     | Depth to Water (ft) | Date     | Depth to Water (ft) | Date     | Depth to Water (ft) |
|----------|---------------------|----------|---------------------|----------|---------------------|
| 11/28/77 | 72.58               | 06/06/85 | 71.66               | 02/25/86 | 73.49               |
| 12/12/77 | 72.25               | 06/20/85 | 71.66               | 03/26/86 | 74.17               |
|          |                     | 07/01/85 | 72.05               | 05/13/86 | 73.64               |
| 04/13/78 | 72.46               | 07/17/85 | 73.11               | 06/04/86 | 74.06               |
| 05/10/78 | 71.94               | 07/30/85 | 74.16               | 07/01/86 | 73.83               |
| 06/10/78 | 72.44               | 08/14/85 | 73.75               | 08/06/86 | 73.70               |
| 08/08/78 | 72.50               | 08/28/85 | 74.05               | 09/09/86 | 73.73               |
| 09/13/78 | 72.22               | 09/11/85 | 74.16               | 10/09/86 | 74.29               |
| 10/03/78 | 72.35               | 09/25/85 | 74.22               | 12/16/86 | 73.89               |
|          |                     | 10/23/85 | 73.28               |          |                     |
| 05/08/85 | 71.61               | 11/21/85 | 74.17               |          |                     |
| 05/15/85 | 71.91               | 12/30/85 | 73.36               |          |                     |

154-079-30AAA

New Rockford aquifer

LS Elev (msl,ft)= 1577.10 SI (ft)= 198-203

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 05/08/85 | 86.57               | 1490.53          | 11/21/85 | 87.00               | 1490.10          |
| 05/15/85 | 86.91               | 1490.19          | 12/30/85 | 86.16               | 1490.94          |
| 06/06/85 | 86.57               | 1490.53          | 02/25/86 | 86.32               | 1490.78          |
| 06/20/85 | 86.55               | 1490.55          | 03/26/86 | 87.04               | 1490.06          |
| 07/01/85 | 87.14               | 1489.96          | 05/13/86 | 86.29               | 1490.81          |
| 07/17/85 | 86.72               | 1490.38          | 06/04/86 | 86.86               | 1490.24          |
| 07/30/85 | 87.03               | 1490.07          | 07/01/86 | 86.67               | 1490.43          |
| 08/14/85 | 86.61               | 1490.49          | 08/06/86 | 86.59               | 1490.51          |
| 08/28/85 | 86.91               | 1490.19          | 09/09/86 | 86.47               | 1490.63          |
| 09/11/85 | 86.94               | 1490.16          | 10/09/86 | 86.98               | 1490.12          |
| 09/25/85 | 86.77               | 1490.33          | 12/16/86 | 86.67               | 1490.43          |
| 10/23/85 | 86.13               | 1490.97          |          |                     |                  |

154-080-20888

Sundre aquifer

LS Elev (msl,ft)= 1601.20

SI (ft)= 157-163

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 03/31/70 | 76.80               | 1524.40          | 09/12/76 | 65.19               | 1536.01          |
| 01/07/71 | 68.42               | 1532.78          | 10/19/76 | 66.53               | 1534.67          |
| 03/08/71 | 68.50               | 1532.70          | 11/04/76 | 66.05               | 1535.15          |
| 05/13/71 | 67.85               | 1533.35          | 11/15/76 | 66.52               | 1534.68          |
| 06/07/71 | 67.91               | 1533.29          | 12/14/76 | 66.55               | 1534.65          |
| 08/02/71 | 68.00               | 1533.20          | 01/18/77 | 67.44               | 1533.76          |
| 09/13/71 | 67.80               | 1533.40          | 02/08/77 | 67.82               | 1533.38          |
| 10/04/71 | 67.96               | 1533.24          | 03/15/77 | 68.30               | 1532.90          |
| 11/03/71 | 67.99               | 1533.21          | 04/05/77 | 68.21               | 1532.99          |
| 12/01/71 | 68.19               | 1533.01          | 05/10/77 | 67.80               | 1533.40          |
|          |                     |                  | 06/22/77 | 67.94               | 1533.26          |
| 01/03/72 | 68.13               | 1533.07          | 07/11/77 | 68.25               | 1532.95          |
| 02/10/72 | 67.99               | 1533.21          | 08/05/77 | 69.55               | 1531.65          |
| 03/07/72 | 67.92               | 1533.28          | 09/22/77 | 70.99               | 1530.21          |
| 04/06/72 | 67.28               | 1533.92          | 10/04/77 | 71.27               | 1529.93          |
| 05/05/72 | 66.80               | 1534.40          | 11/10/77 | 71.75               | 1529.45          |
| 06/09/72 | 66.82               | 1534.38          | 12/12/77 | 71.96               | 1529.24          |
| 07/11/72 | 66.71               | 1534.49          |          |                     |                  |
| 08/07/72 | 67.08               | 1534.12          | 01/17/78 | 72.72               | 1528.48          |
| 09/05/72 | 67.25               | 1533.95          | 02/21/78 | 73.08               | 1528.12          |
| 10/02/72 | 67.36               | 1533.84          | 03/22/78 | 73.47               | 1527.73          |
| 11/08/72 | 67.44               | 1533.76          | 04/13/78 | 73.42               | 1527.78          |
| 12/06/72 | 67.69               | 1533.51          | 05/10/78 | 73.41               | 1527.79          |
|          |                     |                  | 06/20/78 | 74.17               | 1527.03          |
| 03/14/73 | 67.42               | 1533.78          | 07/06/78 | 74.32               | 1526.88          |
| 04/02/73 | 67.66               | 1533.54          | 09/13/78 | 74.47               | 1526.73          |
| 05/02/73 | 67.83               | 1533.37          | 10/03/78 | 73.36               | 1527.84          |
| 05/30/73 | 67.78               | 1533.42          | 11/27/78 | 75.39               | 1525.81          |
| 06/27/73 | 67.77               | 1533.43          |          |                     |                  |
| 08/01/73 | 68.05               | 1533.15          | 03/27/79 | 75.14               | 1526.06          |
| 08/29/73 | 67.82               | 1533.38          | 05/16/79 | 73.13               | 1528.07          |
| 09/26/73 | 67.89               | 1533.31          | 06/04/79 | 71.67               | 1529.53          |
| 10/31/73 | 67.67               | 1533.53          | 07/05/79 | 72.44               | 1528.76          |
| 12/05/73 | 68.05               | 1533.15          | 08/01/79 | 72.66               | 1528.54          |
|          |                     |                  | 09/06/79 | 74.11               | 1527.09          |
| 01/02/74 | 68.19               | 1533.01          | 10/02/79 | 74.69               | 1526.51          |
| 02/06/74 | 68.00               | 1533.20          | 11/05/79 | 75.72               | 1525.48          |
| 03/07/74 | 67.91               | 1533.29          | 11/26/79 | 75.47               | 1525.73          |
| 04/29/74 | 66.86               | 1534.34          | 12/26/79 | 75.32               | 1525.88          |
| 06/18/74 | 65.27               | 1535.93          |          |                     |                  |
| 08/13/74 | 66.41               | 1534.79          | 03/03/80 | 76.58               | 1524.62          |
| 09/16/74 | 66.80               | 1534.40          | 04/28/80 | 76.91               | 1524.29          |
| 10/15/74 | 67.02               | 1534.18          | 06/02/80 | 76.94               | 1524.26          |
| 11/06/74 | 67.13               | 1534.07          | 06/30/80 | 77.66               | 1523.54          |
| 12/02/74 | 67.42               | 1533.78          | 08/04/80 | 77.66               | 1523.54          |
|          |                     |                  | 09/04/80 | 78.02               | 1523.18          |
| 03/18/75 | 67.72               | 1533.48          | 11/01/80 | 78.08               | 1523.12          |
| 06/18/75 | 64.46               | 1536.74          | 12/06/80 | 78.30               | 1522.90          |
| 07/17/75 | 64.50               | 1536.70          |          |                     |                  |
| 08/14/75 | 65.44               | 1535.76          | 03/29/81 | 78.75               | 1522.45          |
| 08/19/75 | 65.61               | 1535.59          | 05/04/81 | 79.25               | 1521.95          |
| 09/09/75 | 65.91               | 1535.29          | 06/02/81 | 79.44               | 1521.76          |
| 10/15/75 | 65.96               | 1535.24          | 07/05/81 | 78.88               | 1522.32          |
| 11/09/75 | 65.94               | 1535.26          | 07/30/81 | 80.02               | 1521.18          |
| 12/15/75 | 66.00               | 1535.20          | 08/26/81 | 80.50               | 1520.70          |
|          |                     |                  | 09/27/81 | 80.88               | 1520.32          |
| 02/12/76 | 66.00               | 1535.20          |          |                     |                  |
| 03/16/76 | 66.16               | 1535.04          | 05/13/82 | 80.88               | 1520.32          |
| 04/15/76 | 64.66               | 1536.54          | 08/23/82 | 80.88               | 1520.32          |
| 05/20/76 | 62.77               | 1538.43          | 09/29/82 | 81.36               | 1519.84          |
| 06/22/76 | 63.77               | 1537.43          | 10/25/82 | 82.47               | 1518.73          |
| 07/08/76 | 63.99               | 1537.21          | 11/27/82 | 81.41               | 1519.79          |
| 08/10/76 | 64.38               | 1536.82          |          |                     |                  |

154-080-20888 (continued)  
Sundre aquifer

LS Elev (msl,ft)= 1601.20 SI (ft)= 157-163

| Date     | Depth to<br>Water (ft) | ML Elev<br>(msl,ft) | Date     | Depth to<br>Water (ft) | ML Elev<br>(msl,ft) |
|----------|------------------------|---------------------|----------|------------------------|---------------------|
| 03/29/83 | 81.92                  | 1519.28             | 11/07/84 | 83.77                  | 1517.43             |
| 05/03/83 | 81.22                  | 1519.98             | 11/20/84 | 83.86                  | 1517.34             |
| 05/31/83 | 81.82                  | 1519.38             | 12/08/84 | 83.11                  | 1518.09             |
| 07/12/83 | 81.35                  | 1519.85             | 12/13/84 | 83.19                  | 1518.01             |
| 08/30/83 | 82.55                  | 1518.65             | 01/09/85 | 83.32                  | 1517.88             |
| 09/27/83 | 82.86                  | 1518.34             | 02/12/85 | 83.02                  | 1518.18             |
| 10/24/83 | 83.33                  | 1517.87             | 03/06/85 | 82.94                  | 1518.26             |
| 11/30/83 | 83.38                  | 1517.82             | 03/19/85 | 82.94                  | 1518.26             |
| 03/24/84 | 82.91                  | 1518.29             | 04/17/85 | 82.72                  | 1518.48             |
| 04/03/84 | 83.11                  | 1518.09             | 05/02/85 | 82.88                  | 1518.32             |
| 04/18/84 | 82.91                  | 1518.29             | 05/14/85 | 82.66                  | 1518.54             |
| 04/22/84 | 82.88                  | 1518.32             | 06/06/85 | 82.72                  | 1518.48             |
| 05/08/84 | 82.99                  | 1518.21             | 06/20/85 | 82.72                  | 1518.48             |
| 05/26/84 | 82.69                  | 1518.51             | 07/01/85 | 83.41                  | 1517.79             |
| 05/29/84 | 82.83                  | 1518.37             | 07/17/85 | 83.52                  | 1517.68             |
| 06/15/84 | 82.83                  | 1518.37             | 07/30/85 | 84.03                  | 1517.17             |
| 06/26/84 | 82.77                  | 1518.43             | 08/14/85 | 84.07                  | 1517.13             |
| 07/10/84 | 83.03                  | 1518.17             | 08/28/85 | 84.46                  | 1516.74             |
| 07/27/84 | 83.69                  | 1517.51             | 09/11/85 | 84.38                  | 1516.82             |
| 07/28/84 | 83.66                  | 1517.54             | 09/25/85 | 84.44                  | 1516.76             |
| 08/09/84 | 83.38                  | 1517.82             | 10/23/85 | 83.63                  | 1517.57             |
| 08/16/84 | 84.13                  | 1517.07             | 11/21/85 | 83.36                  | 1517.84             |
| 08/22/84 | 84.05                  | 1517.15             | 12/30/85 | 82.41                  | 1518.79             |
| 08/27/84 | 84.17                  | 1517.03             | 02/25/86 | 82.27                  | 1518.93             |
| 09/07/84 | 84.03                  | 1517.17             | 03/26/86 | 82.50                  | 1518.70             |
| 09/12/84 | 84.47                  | 1516.73             | 05/13/86 | 82.16                  | 1519.04             |
| 09/20/84 | 84.67                  | 1516.53             | 06/04/86 | 82.49                  | 1518.71             |
| 09/22/84 | 84.36                  | 1516.84             | 07/01/86 | 83.17                  | 1518.03             |
| 09/28/84 | 84.94                  | 1516.26             | 08/06/86 | 83.07                  | 1518.13             |
| 10/03/84 | 84.52                  | 1516.68             | 09/09/86 | 84.38                  | 1516.82             |
| 10/10/84 | 84.58                  | 1516.62             | 10/09/86 | 85.02                  | 1516.18             |
| 10/21/84 | 84.25                  | 1516.95             | 12/16/86 | 84.22                  | 1516.98             |
| 10/24/84 | 84.25                  | 1516.95             |          |                        |                     |

154-080-23CCC  
Sundre aquifer

LS Elev (msl,ft) = 1600.50 SI (ft) = 177-183

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 01/07/71 | 67.89               | 1532.61          | 10/19/76 | 64.80               | 1535.70          |
| 02/09/71 | 67.77               | 1532.73          | 11/15/76 | 64.88               | 1535.62          |
| 03/08/71 | 67.83               | 1532.67          | 12/14/76 | 64.94               | 1535.56          |
| 05/13/71 | 67.38               | 1533.12          |          |                     |                  |
| 06/07/71 | 67.41               | 1533.09          | 01/18/77 | 65.55               | 1534.95          |
| 08/02/71 | 67.52               | 1532.98          | 02/08/77 | 65.88               | 1534.62          |
| 09/13/71 | 67.10               | 1533.40          | 03/15/77 | 66.30               | 1534.20          |
| 10/04/71 | 67.38               | 1533.12          | 04/05/77 | 66.38               | 1534.12          |
| 11/03/71 | 67.36               | 1533.14          | 05/10/77 | 66.16               | 1534.34          |
| 12/01/71 | 67.52               | 1532.98          | 06/22/77 | 66.30               | 1534.20          |
|          |                     |                  | 07/11/77 | 66.39               | 1534.11          |
| 01/04/72 | 67.38               | 1533.12          | 08/05/77 | 67.36               | 1533.14          |
| 02/10/72 | 67.16               | 1533.34          | 09/22/77 | 68.57               | 1531.93          |
| 03/07/72 | 67.10               | 1533.40          | 10/04/77 | 68.86               | 1531.64          |
| 04/06/72 | 66.50               | 1534.00          | 11/10/77 | 69.30               | 1531.20          |
| 05/05/72 | 66.41               | 1534.09          | 12/12/77 | 69.55               | 1530.95          |
| 06/09/72 | 66.13               | 1534.37          |          |                     |                  |
| 07/11/72 | 66.22               | 1534.28          | 01/17/78 | 70.24               | 1530.26          |
| 08/07/72 | 66.36               | 1534.14          | 02/21/78 | 70.63               | 1529.87          |
| 09/05/72 | 66.49               | 1534.01          | 03/22/78 | 71.00               | 1529.50          |
| 10/02/72 | 66.63               | 1533.87          | 04/13/78 | 71.10               | 1529.40          |
| 11/08/72 | 66.63               | 1533.87          | 05/10/78 | 71.10               | 1529.40          |
| 12/06/72 | 66.69               | 1533.81          | 06/20/78 | 71.77               | 1528.73          |
|          |                     |                  | 07/06/78 | 71.89               | 1528.61          |
| 03/14/73 | 66.58               | 1533.92          | 08/01/78 | 72.47               | 1528.03          |
| 04/04/73 | 66.86               | 1533.64          | 09/13/78 | 72.66               | 1527.84          |
| 05/04/73 | 66.82               | 1533.68          | 10/03/78 | 72.83               | 1527.67          |
| 05/30/73 | 66.88               | 1533.62          | 11/27/78 | 73.30               | 1527.20          |
| 06/27/73 | 66.88               | 1533.62          |          |                     |                  |
| 08/08/73 | 66.69               | 1533.81          | 01/05/79 | 73.47               | 1527.03          |
| 08/29/73 | 66.78               | 1533.72          | 01/29/79 | 73.63               | 1526.87          |
| 09/28/73 | 66.91               | 1533.59          | 02/26/79 | 73.47               | 1527.03          |
| 10/31/73 | 66.72               | 1533.78          | 03/27/79 | 73.44               | 1527.06          |
| 12/05/73 | 66.83               | 1533.67          | 05/16/79 | 72.38               | 1528.12          |
|          |                     |                  | 06/04/79 | 71.28               | 1529.22          |
| 01/02/74 | 67.05               | 1533.45          | 07/05/79 | 71.42               | 1529.08          |
| 01/30/74 | 66.80               | 1533.70          | 09/06/79 | 72.72               | 1527.78          |
| 03/07/74 | 66.92               | 1533.58          | 10/02/79 | 72.92               | 1527.58          |
| 03/18/74 | 66.91               | 1533.59          | 11/05/79 | 73.91               | 1526.59          |
| 04/29/74 | 66.27               | 1534.23          | 11/26/79 | 73.71               | 1526.79          |
| 06/20/74 | 64.96               | 1535.54          |          |                     |                  |
| 08/13/74 | 65.55               | 1534.95          | 03/03/80 | 74.75               | 1525.75          |
| 09/10/74 | 65.66               | 1534.84          | 03/31/80 | 74.97               | 1525.53          |
| 10/15/74 | 66.02               | 1534.48          | 04/28/80 | 76.80               | 1523.70          |
| 11/07/74 | 66.10               | 1534.40          | 07/07/80 | 75.36               | 1525.14          |
| 12/02/74 | 66.36               | 1534.14          | 07/30/80 | 75.71               | 1524.79          |
|          |                     |                  | 09/04/80 | 76.11               | 1524.39          |
| 03/12/75 | 66.52               | 1533.98          | 11/03/80 | 76.30               | 1524.20          |
| 07/17/75 | 64.10               | 1536.40          | 12/06/80 | 74.58               | 1525.92          |
| 08/14/75 | 64.64               | 1535.86          |          |                     |                  |
| 09/09/75 | 64.92               | 1535.58          | 03/29/81 | 76.99               | 1523.51          |
| 10/15/75 | 64.89               | 1535.61          | 05/04/81 | 77.42               | 1523.08          |
| 11/04/75 | 64.99               | 1535.51          | 06/02/81 | 77.52               | 1522.98          |
| 12/09/75 | 64.83               | 1535.67          | 07/05/81 | 77.86               | 1522.64          |
|          |                     |                  | 07/30/81 | 78.13               | 1522.37          |
| 01/15/76 | 64.82               | 1535.68          | 08/26/81 | 78.53               | 1521.97          |
| 02/12/76 | 64.83               | 1535.67          | 09/01/81 | 78.44               | 1522.06          |
| 03/16/76 | 65.03               | 1535.47          | 09/27/81 | 80.88               | 1519.62          |
| 04/13/76 | 64.27               | 1536.23          |          |                     |                  |
| 05/20/76 | 62.61               | 1537.89          | 05/13/82 | 79.55               | 1520.95          |
| 06/25/76 | 62.83               | 1537.67          | 08/23/82 | 79.19               | 1521.31          |
| 07/08/76 | 63.05               | 1537.45          | 09/29/82 | 79.47               | 1521.03          |
| 08/10/76 | 63.30               | 1537.20          | 10/25/82 | 79.72               | 1520.78          |
| 09/12/76 | 63.77               | 1536.73          | 11/27/82 | 79.60               | 1520.90          |

154-080-23CCC (continued)

Sundre aquifer

LS Elev (msl,ft)= 1600.50

SI (ft)= 177-183

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 03/29/83 | 80.02               | 1520.48          | 11/07/84 | 81.66               | 1518.84          |
| 05/03/83 | 79.63               | 1520.87          | 11/20/84 | 81.77               | 1518.73          |
| 05/31/83 | 79.32               | 1521.18          | 12/08/84 | 81.13               | 1519.37          |
| 07/12/83 | 79.52               | 1520.98          | 12/13/84 | 81.32               | 1519.18          |
| 08/30/83 | 80.42               | 1520.08          | 01/09/85 | 80.88               | 1519.62          |
| 09/27/83 | 80.61               | 1519.89          | 02/12/85 | 80.57               | 1519.93          |
| 10/24/83 | 81.03               | 1519.47          | 03/06/85 | 80.46               | 1520.04          |
| 11/30/83 | 81.13               | 1519.37          | 03/19/85 | 80.44               | 1520.06          |
| 03/24/84 | 81.00               | 1519.50          | 04/17/85 | 80.44               | 1520.06          |
| 04/03/84 | 81.19               | 1519.31          | 05/02/85 | 80.55               | 1519.95          |
| 04/18/84 | 81.02               | 1519.48          | 05/14/85 | 80.36               | 1520.14          |
| 04/22/84 | 81.02               | 1519.48          | 06/06/85 | 80.36               | 1520.14          |
| 05/08/84 | 81.00               | 1519.50          | 06/20/85 | 80.36               | 1520.14          |
| 05/26/84 | 80.82               | 1519.68          | 07/01/85 | 80.77               | 1519.73          |
| 05/29/84 | 80.92               | 1519.58          | 07/17/85 | 80.83               | 1519.67          |
| 06/15/84 | 81.11               | 1519.39          | 07/30/85 | 81.21               | 1519.29          |
| 06/26/84 | 80.80               | 1519.70          | 08/14/85 | 81.21               | 1519.29          |
| 07/10/84 | 80.96               | 1519.54          | 08/28/85 | 81.55               | 1518.95          |
| 07/27/84 | 81.38               | 1519.12          | 09/11/85 | 81.52               | 1518.98          |
| 07/28/84 | 81.33               | 1519.17          | 09/25/85 | 81.74               | 1518.76          |
| 08/09/84 | 81.28               | 1519.22          | 10/23/85 | 81.16               | 1519.34          |
| 08/16/84 | 81.66               | 1518.84          | 11/21/85 | 81.07               | 1519.43          |
| 08/21/84 | 81.72               | 1518.78          | 12/30/85 | 80.21               | 1520.29          |
| 08/27/84 | 81.67               | 1518.83          | 02/25/86 | 80.09               | 1520.41          |
| 09/07/84 | 81.47               | 1519.03          | 03/26/86 | 80.26               | 1520.24          |
| 09/12/84 | 81.94               | 1518.56          | 05/13/86 | 79.94               | 1520.56          |
| 09/20/84 | 82.16               | 1518.34          | 06/04/86 | 80.16               | 1520.34          |
| 09/22/84 | 81.75               | 1518.75          | 07/01/86 | 80.56               | 1519.94          |
| 09/28/84 | 82.41               | 1518.09          | 08/06/86 | 80.47               | 1520.03          |
| 10/03/84 | 82.13               | 1518.37          | 09/09/86 | 81.54               | 1518.96          |
| 10/10/84 | 82.16               | 1518.34          | 10/09/86 | 82.09               | 1518.41          |
| 10/21/84 | 81.91               | 1518.59          | 12/16/86 | 81.71               | 1518.79          |
| 10/24/84 | 81.99               | 1518.51          |          |                     |                  |

154-080-24DAA

Sundre aquifer

LS Elev (msl,ft)= 1591.00

SI (ft)= 268-274

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 07/13/78 | 61.50               | 1529.50          | 08/14/85 | 70.08               | 1520.92          |
| 07/14/78 | 61.97               | 1529.03          | 08/28/85 | 70.36               | 1520.64          |
| 07/24/78 | 61.96               | 1529.04          | 09/11/85 | 70.32               | 1520.68          |
| 08/08/78 | 62.19               | 1528.81          | 09/25/85 | 70.50               | 1520.50          |
| 09/13/78 | 62.49               | 1528.51          | 10/23/85 | 70.16               | 1520.84          |
| 10/03/78 | 62.69               | 1528.31          | 11/07/85 | 70.21               | 1520.79          |
|          |                     |                  | 11/21/85 | 70.13               | 1520.87          |
| 01/09/85 | 69.86               | 1521.14          | 12/30/85 | 69.35               | 1521.65          |
| 02/12/85 | 69.55               | 1521.45          | 02/25/86 | 69.25               | 1521.75          |
| 03/06/85 | 69.41               | 1521.59          | 03/26/86 | 69.43               | 1521.57          |
| 03/19/85 | 69.39               | 1521.61          | 05/13/86 | 69.05               | 1521.95          |
| 04/17/85 | 69.47               | 1521.53          | 06/04/86 | 69.23               | 1521.77          |
| 05/02/85 | 69.55               | 1521.45          | 07/01/86 | 69.50               | 1521.50          |
| 05/14/85 | 69.42               | 1521.58          | 08/06/86 | 69.43               | 1521.57          |
| 06/06/85 | 69.47               | 1521.53          | 09/09/86 | 70.34               | 1520.66          |
| 06/20/85 | 69.49               | 1521.51          | 10/09/86 | 70.87               | 1520.13          |
| 07/01/85 | 69.67               | 1521.33          | 12/16/86 | 70.67               | 1520.33          |
| 07/17/85 | 69.75               | 1521.25          |          |                     |                  |
| 07/30/85 | 70.07               | 1520.93          |          |                     |                  |

154-080-25AAAB  
New Rockford aquifer

LS Elev (msl,ft)= 1592.90 SI (ft)= 278-283

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 05/15/85 | 103.27              | 1489.63          | 11/21/85 | 103.36              | 1489.54          |
| 06/06/85 | 102.92              | 1489.98          | 02/25/86 | 102.67              | 1490.23          |
| 06/20/85 | 102.94              | 1489.96          | 03/26/86 | 103.39              | 1489.51          |
| 07/01/85 | 103.41              | 1489.49          | 05/13/86 | 102.73              | 1490.17          |
| 07/17/85 | 103.08              | 1489.82          | 06/04/86 | 103.21              | 1489.69          |
| 07/30/85 | 103.42              | 1489.48          | 07/01/86 | 103.06              | 1489.84          |
| 08/14/85 | 102.94              | 1489.96          | 08/06/86 | 102.97              | 1489.93          |
| 08/28/85 | 103.30              | 1489.60          | 09/09/86 | 102.82              | 1490.08          |
| 09/11/85 | 103.33              | 1489.57          | 10/09/86 | 103.32              | 1489.58          |
| 09/25/85 | 103.14              | 1489.76          | 12/16/86 | 103.01              | 1489.89          |
| 10/23/85 | 102.50              | 1490.40          |          |                     |                  |

154-081-088CC  
Sundre aquifer

LS Elev (msl,ft)= 1631.40 SI (ft)= 258-261

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 07/30/69 | 99.13               | 1532.27          | 01/04/84 | 117.66              | 1513.74          |
| 08/13/69 | 99.38               | 1532.02          | 01/17/84 | 117.69              | 1513.71          |
| 09/12/69 | 100.16              | 1531.24          | 02/02/84 | 117.11              | 1514.29          |
| 10/08/69 | 100.33              | 1531.07          | 02/21/84 | 117.21              | 1514.19          |
| 10/16/69 | 100.44              | 1530.96          | 03/12/84 | 117.08              | 1514.32          |
| 10/20/69 | 100.55              | 1530.85          | 04/03/84 | 116.88              | 1514.52          |
| 10/21/69 | 100.69              | 1530.71          | 04/18/84 | 116.55              | 1514.85          |
| 10/22/69 | 101.19              | 1530.21          | 05/08/84 | 116.28              | 1515.12          |
| 10/23/69 | 101.36              | 1530.04          | 05/29/84 | 116.46              | 1514.94          |
| 10/24/69 | 101.50              | 1529.90          | 06/15/84 | 116.38              | 1515.02          |
| 10/25/69 | 101.78              | 1529.62          | 06/26/84 | 116.80              | 1514.60          |
| 10/26/69 | 102.00              | 1529.40          | 07/10/84 | 117.58              | 1513.82          |
| 10/27/69 | 102.10              | 1529.30          | 07/27/84 | 119.07              | 1512.33          |
| 10/28/69 | 102.13              | 1529.27          | 08/09/84 | 118.58              | 1512.82          |
| 10/29/69 | 102.13              | 1529.27          | 08/16/84 | 120.13              | 1511.27          |
| 10/30/69 | 102.33              | 1529.07          | 08/21/84 | 120.33              | 1511.07          |
| 10/31/69 | 102.38              | 1529.02          | 08/27/84 | 120.33              | 1511.07          |
| 11/01/69 | 102.47              | 1528.93          | 09/07/84 | 119.97              | 1511.43          |
| 11/02/69 | 102.63              | 1528.77          | 09/12/84 | 119.78              | 1511.62          |
| 11/03/69 | 102.66              | 1528.74          | 09/20/84 | 119.66              | 1511.74          |
| 11/04/69 | 102.61              | 1528.79          | 09/28/84 | 119.44              | 1511.96          |
| 11/05/69 | 102.35              | 1529.05          | 10/03/84 | 119.02              | 1512.38          |
| 11/06/69 | 102.19              | 1529.21          | 10/10/84 | 118.86              | 1512.54          |
| 11/07/69 | 102.02              | 1529.38          | 10/24/84 | 117.63              | 1513.77          |
| 11/08/69 | 101.92              | 1529.48          | 11/07/84 | 117.41              | 1513.99          |
| 11/09/69 | 101.88              | 1529.52          | 11/20/84 | 117.00              | 1514.40          |
| 11/10/69 | 101.66              | 1529.74          | 12/13/84 | 115.47              | 1515.93          |
| 11/11/69 | 101.66              | 1529.74          |          |                     |                  |
| 11/12/69 | 101.60              | 1529.80          |          |                     |                  |
| 11/13/69 | 101.63              | 1529.77          | 01/09/85 | 116.22              | 1515.18          |
| 11/17/69 | 101.50              | 1529.90          | 02/12/85 | 116.28              | 1515.12          |
| 11/24/69 | 101.27              | 1530.13          | 03/06/85 | 116.25              | 1515.15          |
| 12/02/69 | 101.25              | 1530.15          | 03/19/85 | 116.13              | 1515.27          |
| 12/03/69 | 101.30              | 1530.10          | 04/16/85 | 116.11              | 1515.29          |
| 12/04/69 | 101.39              | 1530.01          | 05/02/85 | 115.96              | 1515.44          |
| 12/05/69 | 101.41              | 1529.99          | 05/14/85 | 115.97              | 1515.43          |
|          |                     |                  | 06/06/85 | 116.22              | 1515.18          |
| 06/08/70 | 96.19               | 1535.21          | 06/20/85 | 116.69              | 1514.71          |
| 07/24/70 | 98.33               | 1533.07          | 07/01/85 | 117.25              | 1514.15          |
| 08/27/70 | 99.42               | 1531.98          | 07/17/85 | 118.19              | 1513.21          |
| 09/25/70 | 99.88               | 1531.52          | 07/30/85 | 118.96              | 1512.44          |
|          |                     |                  | 08/14/85 | 118.77              | 1512.63          |
| 04/15/71 | 99.35               | 1532.05          | 08/28/85 | 118.94              | 1512.46          |
| 07/21/71 | 99.11               | 1532.29          | 09/11/85 | 118.78              | 1512.62          |
| 08/27/71 | 99.44               | 1531.96          | 09/25/85 | 118.58              | 1512.82          |
| 12/21/71 | 99.35               | 1532.05          | 10/23/85 | 116.00              | 1515.40          |
|          |                     |                  | 11/21/85 | 115.00              | 1516.40          |
| 06/07/73 | 99.46               | 1531.94          |          |                     |                  |
| 09/28/73 | 100.13              | 1531.27          | 02/25/86 | 114.80              | 1516.60          |
|          |                     |                  | 03/26/86 | 115.05              | 1516.35          |
| 07/01/74 | 96.86               | 1534.54          | 05/13/86 | 115.11              | 1516.29          |
|          |                     |                  | 06/04/86 | 115.92              | 1515.48          |
| 08/13/75 | 97.41               | 1533.99          | 07/01/86 | 117.92              | 1513.48          |
|          |                     |                  | 08/06/86 | 117.89              | 1513.51          |
| 08/30/83 | 117.86              | 1513.54          | 09/09/86 | 119.49              | 1511.91          |
| 11/21/83 | 117.71              | 1513.69          | 10/09/86 | 119.32              | 1512.08          |
| 12/08/83 | 117.85              | 1513.55          | 12/16/86 | 117.17              | 1514.23          |
| 12/14/83 | 117.91              | 1513.49          |          |                     |                  |

154-081-08CCC  
Sundre aquifer

LS Elev (msl,ft) = 1635.90 SI (ft) = 318-321

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 07/30/69 | 103.88              | 1532.02          | 12/14/83 | 122.50              | 1513.40          |
| 08/13/69 | 104.22              | 1531.68          | 01/04/84 | 122.28              | 1513.62          |
| 09/12/69 | 104.89              | 1531.01          | 01/17/84 | 122.22              | 1513.68          |
| 10/08/69 | 105.08              | 1530.82          | 02/02/84 | 121.75              | 1514.15          |
| 10/16/69 | 105.22              | 1530.68          | 02/21/84 | 121.82              | 1514.08          |
| 10/20/69 | 105.33              | 1530.57          | 03/12/84 | 121.55              | 1514.35          |
| 10/21/69 | 105.55              | 1530.35          | 04/03/84 | 121.49              | 1514.41          |
| 10/22/69 | 106.02              | 1529.88          | 04/18/84 | 121.13              | 1514.77          |
| 10/23/69 | 106.13              | 1529.77          | 05/08/84 | 121.02              | 1514.88          |
| 10/24/69 | 106.30              | 1529.60          | 05/29/84 | 121.17              | 1514.73          |
| 10/25/69 | 106.58              | 1529.32          | 06/15/84 | 121.07              | 1514.83          |
| 10/26/69 | 106.80              | 1529.10          | 06/26/84 | 121.38              | 1514.52          |
| 10/27/69 | 106.88              | 1529.02          | 07/10/84 | 122.38              | 1513.52          |
| 10/28/69 | 106.88              | 1529.02          | 07/27/84 | 124.05              | 1511.85          |
| 10/29/69 | 106.92              | 1528.98          | 08/09/84 | 123.78              | 1512.12          |
| 10/30/69 | 107.10              | 1528.80          | 08/16/84 | 124.97              | 1510.93          |
| 10/31/69 | 107.14              | 1528.76          | 08/21/84 | 125.10              | 1510.80          |
| 11/01/69 | 107.25              | 1528.65          | 08/27/84 | 124.77              | 1511.13          |
| 11/02/69 | 107.41              | 1528.49          | 09/07/84 | 124.42              | 1511.48          |
| 11/03/69 | 107.41              | 1528.49          | 09/12/84 | 124.30              | 1511.60          |
| 11/04/69 | 107.36              | 1528.54          | 09/20/84 | 124.24              | 1511.66          |
| 11/05/69 | 107.03              | 1528.87          | 09/28/84 | 123.99              | 1511.91          |
| 11/06/69 | 106.96              | 1528.94          | 10/03/84 | 123.52              | 1512.38          |
| 11/07/69 | 106.77              | 1529.13          | 10/10/84 | 123.42              | 1512.48          |
| 11/08/69 | 106.74              | 1529.16          | 10/24/84 | 122.44              | 1513.46          |
| 11/09/69 | 106.63              | 1529.27          | 11/07/84 | 122.17              | 1513.73          |
| 11/10/69 | 106.46              | 1529.44          | 11/20/84 | 121.32              | 1514.58          |
| 11/11/69 | 106.46              | 1529.44          | 12/13/84 | 120.30              | 1515.60          |
| 11/12/69 | 106.38              | 1529.52          |          |                     |                  |
| 11/13/69 | 106.44              | 1529.46          |          |                     |                  |
| 11/14/69 | 106.36              | 1529.54          | 01/09/85 | 120.50              | 1515.40          |
| 11/17/69 | 106.33              | 1529.57          | 02/12/85 | 120.97              | 1514.93          |
| 11/24/69 | 106.08              | 1529.82          | 03/06/85 | 120.92              | 1514.98          |
| 12/02/69 | 106.05              | 1529.85          | 03/19/85 | 120.85              | 1515.05          |
| 12/03/69 | 106.13              | 1529.77          | 04/16/85 | 120.66              | 1515.24          |
| 12/04/69 | 106.19              | 1529.71          | 05/02/85 | 120.50              | 1515.40          |
| 12/05/69 | 106.24              | 1529.66          | 05/14/85 | 120.52              | 1515.38          |
|          |                     |                  | 06/06/85 | 120.83              | 1515.07          |
| 06/08/70 | 101.03              | 1534.87          | 06/20/85 | 121.30              | 1514.60          |
| 07/24/70 | 103.19              | 1532.71          | 07/01/85 | 121.77              | 1514.13          |
| 08/27/70 | 104.30              | 1531.60          | 07/17/85 | 122.67              | 1513.23          |
| 09/25/70 | 104.75              | 1531.15          | 07/30/85 | 123.46              | 1512.44          |
|          |                     |                  | 08/14/85 | 123.32              | 1512.58          |
| 04/15/71 | 104.11              | 1531.79          | 08/28/85 | 123.47              | 1512.43          |
| 07/21/71 | 103.91              | 1531.99          | 09/11/85 | 123.25              | 1512.65          |
| 08/27/71 | 104.24              | 1531.66          | 09/25/85 | 122.97              | 1512.93          |
| 12/21/71 | 104.27              | 1531.63          | 10/23/85 | 120.83              | 1515.07          |
|          |                     |                  | 11/21/85 | 119.57              | 1516.33          |
| 06/07/73 | 104.19              | 1531.71          |          |                     |                  |
| 09/28/73 | 104.66              | 1531.24          | 02/25/86 | 119.47              | 1516.43          |
|          |                     |                  | 03/26/86 | 119.67              | 1516.23          |
| 07/01/74 | 101.32              | 1534.58          | 05/13/86 | 119.65              | 1516.25          |
|          |                     |                  | 06/04/86 | 120.40              | 1515.50          |
| 08/13/75 | 102.00              | 1533.90          | 07/01/86 | 122.40              | 1513.50          |
|          |                     |                  | 08/06/86 | 122.13              | 1513.77          |
| 08/30/83 | 122.30              | 1513.60          | 09/09/86 | 123.90              | 1512.00          |
| 11/21/83 | 122.21              | 1513.69          | 10/09/86 | 123.90              | 1512.00          |
| 12/08/83 | 122.19              | 1513.71          | 12/16/86 | 121.80              | 1514.10          |

154-081-13000

Sundre aquifer

LS Elev (msl,ft)= 1607.80

SI (ft)= 156-159

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 07/30/69 | 75.28               | 1532.52          | 08/30/83 | 90.33               | 1517.47          |
| 08/13/69 | 75.10               | 1532.70          | 12/08/83 | 91.02               | 1516.78          |
| 09/12/69 | 75.74               | 1532.06          | 12/14/83 | 91.02               | 1516.78          |
| 10/08/69 | 75.83               | 1531.97          |          |                     |                  |
| 10/16/69 | 76.00               | 1531.80          |          |                     |                  |
| 10/20/69 | 75.96               | 1531.84          | 01/04/84 | 90.97               | 1516.83          |
| 10/21/69 | 75.97               | 1531.83          | 01/17/84 | 91.13               | 1516.67          |
| 10/22/69 | 76.22               | 1531.58          | 02/02/84 | 90.71               | 1517.09          |
| 10/23/69 | 76.11               | 1531.69          | 02/21/84 | 90.72               | 1517.08          |
| 10/24/69 | 76.16               | 1531.64          | 03/12/84 | 90.69               | 1517.11          |
| 10/25/69 | 76.33               | 1531.47          | 04/03/84 | 90.75               | 1517.05          |
| 10/26/69 | 76.47               | 1531.33          | 04/18/84 | 90.52               | 1517.28          |
| 10/27/69 | 76.49               | 1531.31          | 05/08/84 | 90.52               | 1517.28          |
| 10/28/69 | 76.41               | 1531.39          | 05/29/84 | 90.36               | 1517.44          |
| 10/29/69 | 76.38               | 1531.42          | 06/15/84 | 90.28               | 1517.52          |
| 10/30/69 | 76.50               | 1531.30          | 06/26/84 | 90.33               | 1517.47          |
| 10/31/69 | 76.47               | 1531.33          | 07/10/84 | 90.63               | 1517.17          |
| 11/01/69 | 76.55               | 1531.25          | 07/27/84 | 91.35               | 1516.45          |
| 11/02/69 | 76.69               | 1531.11          | 08/09/84 | 90.38               | 1517.42          |
| 11/03/69 | 76.64               | 1531.16          | 08/16/84 | 92.22               | 1515.58          |
| 11/04/69 | 76.58               | 1531.22          | 08/21/84 | 91.97               | 1515.83          |
| 11/05/69 | 76.39               | 1531.41          | 08/27/84 | 91.86               | 1515.94          |
| 11/06/69 | 76.55               | 1531.25          | 09/07/84 | 91.55               | 1516.25          |
| 11/07/69 | 76.58               | 1531.22          | 09/12/84 | 92.17               | 1515.63          |
| 11/08/69 | 76.69               | 1531.11          | 09/20/84 | 92.38               | 1515.42          |
| 11/09/69 | 76.71               | 1531.09          | 09/28/84 | 92.66               | 1515.14          |
| 11/10/69 | 76.61               | 1531.19          | 10/03/84 | 92.22               | 1515.58          |
| 11/11/69 | 76.66               | 1531.14          | 10/10/84 | 92.22               | 1515.58          |
| 11/12/69 | 76.66               | 1531.14          | 10/24/84 | 91.86               | 1515.94          |
| 11/13/69 | 76.77               | 1531.03          | 11/07/84 | 91.32               | 1516.48          |
| 11/14/69 | 76.72               | 1531.08          | 11/20/84 | 91.38               | 1516.42          |
| 11/17/69 | 76.86               | 1530.94          | 12/13/84 | 90.71               | 1517.09          |
| 11/24/69 | 76.74               | 1531.06          |          |                     |                  |
| 12/04/69 | 76.75               | 1531.05          |          |                     |                  |
|          |                     |                  | 01/09/85 | 90.39               | 1517.41          |
|          |                     |                  | 02/12/85 | 90.16               | 1517.64          |
| 01/27/70 | 76.28               | 1531.52          | 03/06/85 | 90.00               | 1517.80          |
| 03/10/70 | 76.61               | 1531.19          | 03/19/85 | 89.88               | 1517.92          |
| 04/06/70 | 76.41               | 1531.39          | 04/17/85 | 89.91               | 1517.89          |
| 06/08/70 | 73.66               | 1534.14          | 05/02/85 | 90.10               | 1517.70          |
| 07/24/70 | 74.00               | 1533.80          | 05/14/85 | 89.89               | 1517.91          |
| 08/27/70 | 74.85               | 1532.95          | 06/06/85 | 89.92               | 1517.88          |
| 09/25/70 | 75.25               | 1532.55          | 06/20/85 | 89.92               | 1517.88          |
| 12/22/70 | 75.36               | 1532.44          | 07/01/85 | 90.57               | 1517.23          |
|          |                     |                  | 07/17/85 | 90.72               | 1517.08          |
| 04/15/71 | 75.10               | 1532.70          | 07/30/85 | 91.27               | 1516.53          |
| 07/21/71 | 74.96               | 1532.84          | 08/14/85 | 91.32               | 1516.48          |
| 08/27/71 | 74.99               | 1532.81          | 08/28/85 | 91.72               | 1516.08          |
| 12/21/71 | 75.08               | 1532.72          | 09/11/85 | 91.69               | 1516.11          |
|          |                     |                  | 09/25/85 | 91.75               | 1516.05          |
| 07/13/72 | 73.50               | 1534.30          | 10/23/85 | 90.91               | 1516.89          |
| 10/12/72 | 74.60               | 1533.20          | 11/21/85 | 90.63               | 1517.17          |
|          |                     |                  | 12/30/85 | 89.44               | 1518.36          |
| 06/07/73 | 74.69               | 1533.11          |          |                     |                  |
| 09/28/73 | 75.13               | 1532.67          | 02/25/86 | 89.29               | 1518.51          |
|          |                     |                  | 03/26/86 | 89.59               | 1518.21          |
| 07/01/74 | 72.35               | 1535.45          | 05/13/86 | 89.17               | 1518.63          |
|          |                     |                  | 06/04/86 | 89.58               | 1518.22          |
| 08/13/75 | 72.33               | 1535.47          | 07/01/86 | 90.35               | 1517.45          |
|          |                     |                  | 08/06/86 | 90.29               | 1517.51          |
| 10/21/76 | 73.66               | 1534.14          | 09/09/86 | 91.80               | 1516.00          |
|          |                     |                  | 10/09/86 | 92.29               | 1515.51          |
| 09/22/77 | 78.30               | 1529.50          | 12/16/86 | 91.33               | 1516.47          |

154-081-158AB1  
Sundre aquifer

LS Elev (msl,ft)= 1637.40 SI (ft)= 265-270

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 05/16/85 | 121.02              | 1516.38          | 02/25/86 | 119.89              | 1517.51          |
| 06/06/85 | 120.83              | 1516.57          | 03/26/86 | 120.41              | 1516.99          |
| 06/20/85 | 120.89              | 1516.51          | 05/13/86 | 119.92              | 1517.48          |
| 07/01/85 | 121.69              | 1515.71          | 06/04/86 | 120.61              | 1516.79          |
| 07/17/85 | 120.38              | 1517.02          | 07/01/86 | 121.67              | 1515.73          |
| 07/30/85 | 122.67              | 1514.73          | 07/09/86 | 121.97              | 1515.43          |
| 08/14/85 | 122.58              | 1514.82          | 08/06/86 | 121.81              | 1515.59          |
| 08/28/85 | 123.16              | 1514.24          | 09/09/86 | 122.97              | 1514.43          |
| 09/11/85 | 122.99              | 1514.41          | 10/09/86 | 123.69              | 1513.71          |
| 09/25/85 | 123.00              | 1514.40          | 12/16/86 | 122.41              | 1514.99          |
| 10/23/85 | 121.41              | 1515.99          |          |                     |                  |

154-081-158AB2  
Sundre aquifer

LS Elev (msl,ft)= 1637.80 SI (ft)= 190-195

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 06/06/85 | 121.19              | 1516.61          | 02/25/86 | 120.25              | 1517.55          |
| 06/20/85 | 121.22              | 1516.58          | 03/26/86 | 120.77              | 1517.03          |
| 07/01/85 | 122.05              | 1515.75          | 05/13/86 | 120.31              | 1517.49          |
| 07/17/85 | 121.97              | 1515.83          | 06/04/86 | 121.00              | 1516.80          |
| 07/30/85 | 123.05              | 1514.75          | 07/01/86 | 122.02              | 1515.78          |
| 08/14/85 | 123.02              | 1514.78          | 07/09/86 | 122.34              | 1515.46          |
| 08/28/85 | 123.47              | 1514.33          | 08/06/86 | 122.18              | 1515.62          |
| 09/11/85 | 123.28              | 1514.52          | 09/09/86 | 123.34              | 1514.46          |
| 09/25/85 | 123.36              | 1514.44          | 10/09/86 | 124.06              | 1513.74          |
| 10/23/85 | 121.80              | 1516.00          | 12/16/86 | 122.56              | 1515.24          |
| 11/21/85 | 121.28              | 1516.52          |          |                     |                  |

154-081-158AB3  
Sundre aquifer

LS Elev (msl,ft)= 1638.10 SI (ft)= 145-150

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 05/16/85 | 121.19              | 1516.91          | 11/21/85 | 121.75              | 1516.35          |
| 06/06/85 | 120.88              | 1517.22          | 02/25/86 | 120.54              | 1517.56          |
| 06/20/85 | 121.53              | 1516.57          | 03/26/86 | 121.06              | 1517.04          |
| 07/01/85 | 121.77              | 1516.33          | 05/13/86 | 120.59              | 1517.51          |
| 07/17/85 | 121.61              | 1516.49          | 06/04/86 | 121.30              | 1516.80          |
| 07/30/85 | 123.33              | 1514.77          | 07/01/86 | 122.33              | 1515.77          |
| 08/14/85 | 123.41              | 1514.69          | 08/06/86 | 122.17              | 1515.93          |
| 08/28/85 | 123.69              | 1514.41          | 09/09/86 | 123.64              | 1514.46          |
| 09/11/85 | 123.58              | 1514.52          | 10/09/86 | 124.65              | 1513.45          |
| 09/25/85 | 123.61              | 1514.49          | 12/16/86 | 122.85              | 1515.25          |
| 10/23/85 | 123.08              | 1515.02          |          |                     |                  |

154-081-158AB4

Till

LS Elev (msl,ft)= 1638.00

SI (ft)= 85-90

| Date     | Depth to<br>Water (ft) | WL Elev<br>(msl,ft) | Date     | Depth to<br>Water (ft) | WL Elev<br>(msl,ft) |
|----------|------------------------|---------------------|----------|------------------------|---------------------|
| 05/16/85 | 21.82                  | 1616.18             | 02/25/86 | 22.57                  | 1615.43             |
| 06/06/85 | 21.82                  | 1616.18             | 03/26/86 | 22.89                  | 1615.11             |
| 06/20/85 | 21.63                  | 1616.37             | 05/13/86 | 22.46                  | 1615.54             |
| 07/01/85 | 21.94                  | 1616.06             | 06/04/86 | 22.26                  | 1615.74             |
| 07/17/85 | 21.80                  | 1616.20             | 07/01/86 | 22.10                  | 1615.90             |
| 07/30/85 | 21.97                  | 1616.03             | 07/09/86 | 22.19                  | 1615.81             |
| 08/14/85 | 21.91                  | 1616.09             | 08/06/86 | 22.20                  | 1615.80             |
| 08/28/85 | 24.10                  | 1613.90             | 09/09/86 | 21.97                  | 1616.03             |
| 09/11/85 | 24.19                  | 1613.81             | 10/09/86 | 22.27                  | 1615.73             |
| 09/25/85 | 22.08                  | 1615.92             | 12/16/86 | 22.14                  | 1615.86             |
| 10/23/85 | 21.85                  | 1616.15             |          |                        |                     |
| 11/21/85 | 22.30                  | 1615.70             |          |                        |                     |

154-081-15888  
Sundre aquifer

LS Elev (msl,ft)= 1634.00 SI (ft)= 278-281

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 07/30/69 | 101.63              | 1532.37          | 12/14/83 | 119.03              | 1514.97          |
| 08/13/69 | 101.72              | 1532.28          | 01/04/84 | 118.94              | 1515.06          |
| 09/12/69 | 102.30              | 1531.70          | 01/17/84 | 119.00              | 1515.00          |
| 10/08/69 | 102.55              | 1531.45          | 02/02/84 | 118.55              | 1515.45          |
| 10/16/69 | 102.71              | 1531.29          | 02/21/84 | 118.61              | 1515.39          |
| 10/20/69 | 102.69              | 1531.31          | 03/12/84 | 118.38              | 1515.62          |
| 10/21/69 | 102.80              | 1531.20          | 04/03/84 | 118.47              | 1515.53          |
| 10/22/69 | 103.11              | 1530.89          | 04/18/84 | 118.17              | 1515.83          |
| 10/23/69 | 103.00              | 1531.00          | 05/08/84 | 118.25              | 1515.75          |
| 10/24/69 | 103.13              | 1530.87          | 05/29/84 | 118.03              | 1515.97          |
| 10/25/69 | 103.39              | 1530.61          | 06/15/84 | 117.99              | 1516.01          |
| 10/26/69 | 103.55              | 1530.45          | 06/26/84 | 118.13              | 1515.87          |
| 10/27/69 | 103.57              | 1530.43          | 07/10/84 | 118.64              | 1515.36          |
| 10/28/69 | 103.44              | 1530.56          | 07/27/84 | 119.61              | 1514.39          |
| 10/29/69 | 103.47              | 1530.53          | 08/09/84 | 120.00              | 1514.00          |
| 10/30/69 | 103.63              | 1530.37          | 08/16/84 | 120.47              | 1513.53          |
| 10/31/69 | 103.61              | 1530.39          | 08/22/84 | 120.36              | 1513.64          |
| 11/01/69 | 103.72              | 1530.28          | 08/27/84 | 120.30              | 1513.70          |
| 11/02/69 | 103.91              | 1530.09          | 09/07/84 | 120.13              | 1513.87          |
| 11/03/69 | 103.80              | 1530.20          | 09/12/84 | 120.44              | 1513.56          |
| 11/04/69 | 103.75              | 1530.25          | 09/20/84 | 120.60              | 1513.40          |
| 11/05/69 | 103.46              | 1530.54          | 09/28/84 | 120.75              | 1513.25          |
| 11/06/69 | 103.71              | 1530.29          | 10/03/84 | 120.24              | 1513.76          |
| 11/07/69 | 103.66              | 1530.34          | 10/10/84 | 120.13              | 1513.87          |
| 11/08/69 | 103.77              | 1530.23          | 10/24/84 | 119.61              | 1514.39          |
| 11/09/69 | 103.69              | 1530.31          | 11/07/84 | 118.33              | 1515.67          |
| 11/10/69 | 103.57              | 1530.43          | 11/20/84 | 118.91              | 1515.09          |
| 11/11/69 | 103.61              | 1530.39          | 12/13/84 | 118.19              | 1515.81          |
| 11/12/69 | 103.61              | 1530.39          |          |                     |                  |
| 11/13/69 | 103.75              | 1530.25          |          |                     |                  |
| 11/14/69 | 103.61              | 1530.39          | 01/09/85 | 117.94              | 1516.06          |
| 11/17/69 | 103.77              | 1530.23          | 02/12/85 | 117.69              | 1516.31          |
| 11/24/69 | 103.55              | 1530.45          | 03/06/85 | 117.60              | 1516.40          |
| 12/04/69 | 103.50              | 1530.50          | 03/19/85 | 117.47              | 1516.53          |
|          |                     |                  | 04/17/85 | 117.50              | 1516.50          |
| 01/27/70 | 102.88              | 1531.12          | 05/02/85 | 117.69              | 1516.31          |
| 06/08/70 | 99.55               | 1534.45          | 05/14/85 | 117.61              | 1516.39          |
| 07/24/70 | 100.67              | 1533.33          | 06/06/85 | 117.60              | 1516.40          |
| 08/27/70 | 101.63              | 1532.37          | 06/20/85 | 117.66              | 1516.34          |
| 09/25/70 | 101.22              | 1532.78          | 07/01/85 | 118.47              | 1515.53          |
| 12/22/70 | 102.13              | 1531.87          | 07/17/85 | 118.78              | 1515.22          |
|          |                     |                  | 07/30/85 | 119.49              | 1514.51          |
| 04/15/71 | 101.69              | 1532.31          | 08/14/85 | 119.44              | 1514.56          |
| 07/21/71 | 101.66              | 1532.34          | 08/28/85 | 119.88              | 1514.12          |
| 08/27/71 | 101.77              | 1532.23          | 09/11/85 | 119.67              | 1514.33          |
| 12/21/71 | 101.94              | 1532.06          | 09/25/85 | 119.77              | 1514.23          |
|          |                     |                  | 10/23/85 | 120.66              | 1513.34          |
| 06/07/73 | 101.57              | 1532.43          | 11/21/85 | 120.16              | 1513.84          |
| 09/28/73 | 102.10              | 1531.90          |          |                     |                  |
|          |                     |                  | 02/25/86 | 116.62              | 1517.38          |
| 07/01/74 | 98.33               | 1535.67          | 03/26/86 | 117.14              | 1516.86          |
|          |                     |                  | 05/13/86 | 116.65              | 1517.35          |
| 08/13/75 | 99.32               | 1534.68          | 06/04/86 | 117.39              | 1516.61          |
|          |                     |                  | 07/01/86 | 118.46              | 1515.54          |
| 09/22/77 | 106.33              | 1527.67          | 08/06/86 | 118.29              | 1515.71          |
|          |                     |                  | 09/09/86 | 119.73              | 1514.27          |
| 08/30/83 | 118.44              | 1515.56          | 10/09/86 | 120.43              | 1513.57          |
| 11/21/83 | 118.67              | 1515.33          | 12/16/86 | 118.86              | 1515.14          |
| 12/08/83 | 119.14              | 1514.86          |          |                     |                  |

154-082-01CCC  
Sundre aquifer

LS Elev (msl,ft)= 1624.00 SI (ft)= 297-303

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/14/68 | 95.44               | 1528.56          | 04/15/71 | 93.47               | 1530.53          |
| 11/22/68 | 95.44               | 1528.56          | 07/21/71 | 93.05               | 1530.95          |
| 11/27/68 | 95.49               | 1528.51          | 08/27/71 | 93.67               | 1530.33          |
| 12/07/68 | 95.69               | 1528.31          | 12/21/71 | 93.55               | 1530.45          |
| 12/11/68 | 95.55               | 1528.45          | 10/12/72 | 93.35               | 1530.65          |
| 12/16/68 | 95.63               | 1528.37          | 06/07/73 | 93.78               | 1530.22          |
| 12/19/68 | 95.63               | 1528.37          | 09/28/73 | 94.25               | 1529.75          |
| 12/20/68 | 95.94               | 1528.06          | 07/01/74 | 90.74               | 1533.26          |
| 01/04/69 | 95.75               | 1528.25          | 08/13/75 | 91.88               | 1532.12          |
| 03/05/69 | 95.72               | 1528.28          | 09/22/77 | 101.72              | 1522.28          |
| 04/08/69 | 94.53               | 1529.47          | 08/30/83 | 114.71              | 1509.29          |
| 05/07/69 | 87.30               | 1536.70          | 11/21/83 | 113.86              | 1510.14          |
| 05/15/69 | 89.32               | 1534.68          | 12/08/83 | 113.97              | 1510.03          |
| 05/27/69 | 90.05               | 1533.95          | 12/14/83 | 113.89              | 1510.11          |
| 06/11/69 | 92.55               | 1531.45          | 01/04/84 | 113.58              | 1510.42          |
| 07/16/69 | 92.71               | 1531.29          | 01/16/84 | 113.13              | 1510.87          |
| 07/29/69 | 93.25               | 1530.75          | 02/02/84 | 112.69              | 1511.31          |
| 08/12/69 | 93.74               | 1530.26          | 02/21/84 | 112.72              | 1511.28          |
| 09/09/69 | 94.52               | 1529.48          | 03/12/84 | 112.39              | 1511.61          |
| 09/25/69 | 94.60               | 1529.40          | 04/03/84 | 112.11              | 1511.89          |
| 10/08/69 | 94.60               | 1529.40          | 04/18/84 | 111.63              | 1512.37          |
| 10/16/69 | 94.69               | 1529.31          | 05/08/84 | 111.22              | 1512.78          |
| 10/19/69 | 94.99               | 1529.01          | 05/29/84 | 112.03              | 1511.97          |
| 10/20/69 | 94.96               | 1529.04          | 06/15/84 | 111.77              | 1512.23          |
| 10/21/69 | 95.67               | 1528.33          | 06/26/84 | 112.72              | 1511.28          |
| 10/22/69 | 96.33               | 1527.67          | 07/10/84 | 114.38              | 1509.62          |
| 10/23/69 | 96.63               | 1527.37          | 07/27/84 | 115.00              | 1509.00          |
| 10/24/69 | 96.94               | 1527.06          | 08/09/84 | 114.71              | 1509.29          |
| 10/25/69 | 97.24               | 1526.76          | 08/16/84 | 118.13              | 1505.87          |
| 10/26/69 | 97.47               | 1526.53          | 08/22/84 | 117.58              | 1506.42          |
| 10/27/69 | 97.67               | 1526.33          | 08/27/84 | 117.72              | 1506.28          |
| 10/28/69 | 97.75               | 1526.25          | 09/07/84 | 116.86              | 1507.14          |
| 10/29/69 | 97.85               | 1526.15          | 09/12/84 | 116.19              | 1507.81          |
| 10/30/69 | 98.02               | 1525.98          | 09/20/84 | 115.78              | 1508.22          |
| 10/31/69 | 98.17               | 1525.83          | 09/28/84 | 114.96              | 1509.04          |
| 11/01/69 | 98.28               | 1525.72          | 10/03/84 | 114.66              | 1509.34          |
| 11/02/69 | 98.39               | 1525.61          | 10/10/84 | 114.36              | 1509.64          |
| 11/03/69 | 98.47               | 1525.53          | 10/24/84 | 112.78              | 1511.22          |
| 11/04/69 | 98.52               | 1525.48          | 11/07/84 | 111.72              | 1512.28          |
| 11/05/69 | 97.71               | 1526.29          | 11/20/84 | 111.00              | 1513.00          |
| 11/06/69 | 97.27               | 1526.73          | 12/13/84 | 109.85              | 1514.15          |
| 11/07/69 | 96.83               | 1527.17          | 01/09/85 | 110.67              | 1513.33          |
| 11/08/69 | 96.72               | 1527.28          | 02/12/85 | 111.63              | 1512.37          |
| 11/09/69 | 96.53               | 1527.47          | 03/06/85 | 111.67              | 1512.33          |
| 11/10/69 | 96.33               | 1527.67          | 03/19/85 | 111.58              | 1512.42          |
| 11/11/69 | 96.25               | 1527.75          | 04/16/85 | 111.19              | 1512.81          |
| 11/12/69 | 96.08               | 1527.92          | 05/02/85 | 110.92              | 1513.08          |
| 11/13/69 | 96.03               | 1527.97          | 05/14/85 | 111.02              | 1512.98          |
| 11/17/69 | 95.80               | 1528.20          | 06/06/85 | 111.75              | 1512.25          |
| 11/25/69 | 95.60               | 1528.40          | 06/20/85 | 112.75              | 1511.25          |
| 12/02/69 | 95.44               | 1528.56          | 07/01/85 | 112.99              | 1511.01          |
| 12/03/69 | 95.88               | 1528.12          | 07/17/85 | 115.16              | 1508.84          |
| 12/04/69 | 96.13               | 1527.87          | 07/30/85 | 116.05              | 1507.95          |
| 12/05/69 | 96.38               | 1527.62          | 08/14/85 | 115.33              | 1508.67          |
| 01/27/70 | 94.97               | 1529.03          | 08/28/85 | 115.27              | 1508.73          |
| 03/10/70 | 95.11               | 1528.89          |          |                     |                  |
| 04/06/70 | 94.92               | 1529.08          |          |                     |                  |
| 06/09/70 | 89.00               | 1535.00          |          |                     |                  |
| 07/26/70 | 92.67               | 1531.33          |          |                     |                  |
| 08/27/70 | 94.00               | 1530.00          |          |                     |                  |
| 10/01/70 | 94.44               | 1529.56          |          |                     |                  |
| 12/22/70 | 94.19               | 1529.81          |          |                     |                  |

154-082-01CCC (continued)  
Sundre aquifer

LS Elev (msl,ft)= 1624.00 SI (ft)= 297-303

| Date     | Depth to<br>Water (ft) | ML Elev<br>(msl,ft) | Date     | Depth to<br>Water (ft) | ML Elev<br>(msl,ft) |
|----------|------------------------|---------------------|----------|------------------------|---------------------|
| 09/11/85 | 114.94                 | 1509.06             | 05/13/86 | 110.22                 | 1513.78             |
| 10/23/85 | 110.33                 | 1513.67             | 06/04/86 | 112.43                 | 1511.57             |
| 11/21/85 | 108.55                 | 1515.45             | 07/01/86 | 114.98                 | 1509.02             |
| 12/30/85 | 110.38                 | 1513.62             | 08/06/86 | 114.65                 | 1509.35             |
| 02/25/86 | 109.69                 | 1514.31             | 09/09/86 | 116.43                 | 1507.57             |
| 03/26/86 | 110.29                 | 1513.71             | 10/09/86 | 115.41                 | 1508.59             |
|          |                        |                     | 12/16/86 | 112.11                 | 1511.89             |

154-082-02CCB

Sundre aquifer

LS Elev (msl,ft)= 1539.60

SI (ft)= 97-100

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/14/68 | 11.61               | 1527.99          | 12/22/70 | 10.28               | 1529.32          |
| 11/22/68 | 11.39               | 1528.21          | 04/15/71 | 9.48                | 1530.12          |
| 11/27/68 | 11.42               | 1528.18          | 07/22/71 | 8.80                | 1530.80          |
| 12/07/68 | 11.57               | 1528.03          | 08/27/71 | 9.71                | 1529.89          |
| 12/11/68 | 11.46               | 1528.14          | 12/21/71 | 9.48                | 1530.12          |
| 12/16/68 | 11.52               | 1528.08          | 07/13/72 | 8.56                | 1531.04          |
| 12/19/68 | 11.59               | 1528.01          | 10/12/72 | 9.35                | 1530.25          |
| 12/20/68 | 12.00               | 1527.60          | 06/07/73 | 9.84                | 1529.76          |
| 12/21/68 | 11.90               | 1527.70          | 07/01/74 | 6.63                | 1532.97          |
| 12/27/68 | 11.61               | 1527.99          | 03/23/75 | 11.72               | 1527.88          |
| 01/04/69 | 11.60               | 1528.00          | 08/13/75 | 8.09                | 1531.51          |
| 02/06/69 | 11.56               | 1528.04          | 06/04/76 | 6.36                | 1533.24          |
| 05/27/69 | 5.19                | 1534.41          | 07/16/76 | 7.39                | 1532.21          |
| 06/11/69 | 8.39                | 1531.21          | 08/27/76 | 10.36               | 1529.24          |
| 06/27/69 | 9.23                | 1530.37          | 09/09/76 | 11.72               | 1527.88          |
| 07/16/69 | 9.17                | 1530.43          | 09/23/76 | 13.34               | 1526.26          |
| 07/29/69 | 8.98                | 1530.62          | 10/26/76 | 11.75               | 1527.85          |
| 08/12/69 | 9.72                | 1529.88          | 12/03/76 | 11.75               | 1527.85          |
| 09/09/69 | 10.47               | 1529.13          | 01/05/77 | 13.56               | 1526.04          |
| 09/25/69 | 10.60               | 1529.00          | 02/08/77 | 14.52               | 1525.08          |
| 10/08/69 | 10.51               | 1529.09          | 03/15/77 | 14.77               | 1524.83          |
| 10/16/69 | 10.57               | 1529.03          | 05/06/77 | 11.78               | 1527.82          |
| 10/19/69 | 10.93               | 1528.67          | 06/03/77 | 12.39               | 1527.21          |
| 10/20/69 | 10.89               | 1528.71          | 06/30/77 | 13.39               | 1526.21          |
| 10/21/69 | 12.07               | 1527.53          | 07/14/77 | 16.53               | 1523.07          |
| 10/22/69 | 12.60               | 1527.00          | 07/28/77 | 18.14               | 1521.46          |
| 10/23/69 | 13.02               | 1526.58          | 08/16/77 | 19.50               | 1520.10          |
| 10/24/69 | 13.32               | 1526.28          | 08/26/77 | 21.03               | 1518.57          |
| 10/25/69 | 13.64               | 1525.96          | 09/14/77 | 19.69               | 1519.91          |
| 10/26/69 | 13.92               | 1525.68          | 10/11/77 | 19.22               | 1520.38          |
| 10/27/69 | 14.10               | 1525.50          | 11/10/77 | 19.88               | 1519.72          |
| 10/28/69 | 14.30               | 1525.30          | 12/15/77 | 19.83               | 1519.77          |
| 10/29/69 | 14.43               | 1525.17          | 01/24/78 | 20.94               | 1518.66          |
| 10/30/69 | 14.64               | 1524.96          | 02/22/78 | 21.25               | 1518.35          |
| 10/31/69 | 14.80               | 1524.80          | 03/28/78 | 20.44               | 1519.16          |
| 11/01/69 | 14.93               | 1524.67          | 04/26/78 | 20.47               | 1519.13          |
| 11/02/69 | 15.05               | 1524.55          | 05/24/78 | 22.19               | 1517.41          |
| 11/03/69 | 15.14               | 1524.46          | 06/27/78 | 22.22               | 1517.38          |
| 11/04/69 | 15.18               | 1524.42          | 07/26/78 | 22.89               | 1516.71          |
| 11/05/69 | 14.06               | 1525.54          | 08/29/78 | 23.32               | 1516.28          |
| 11/06/69 | 13.50               | 1526.10          | 09/26/78 | 20.27               | 1519.33          |
| 11/07/69 | 13.03               | 1526.57          | 10/27/78 | 22.66               | 1516.94          |
| 11/08/69 | 12.86               | 1526.74          | 11/04/78 | 22.63               | 1516.97          |
| 11/09/69 | 12.63               | 1526.97          | 01/19/79 | 22.75               | 1516.85          |
| 11/10/69 | 12.42               | 1527.18          | 02/28/79 | 21.72               | 1517.88          |
| 11/11/69 | 12.30               | 1527.30          | 03/29/79 | 20.72               | 1518.88          |
| 11/12/69 | 12.14               | 1527.46          | 05/29/79 | 8.43                | 1531.17          |
| 11/13/69 | 12.02               | 1527.58          | 06/27/79 | 18.38               | 1521.22          |
| 11/14/69 | 11.96               | 1527.64          | 07/31/79 | 15.86               | 1523.74          |
| 11/17/69 | 11.73               | 1527.87          | 08/28/79 | 22.85               | 1516.75          |
| 11/25/69 | 11.48               | 1528.12          | 09/27/79 | 24.39               | 1515.21          |
| 12/02/69 | 11.35               | 1528.25          | 10/29/79 | 24.19               | 1515.41          |
| 12/03/69 | 12.22               | 1527.38          | 11/29/79 | 24.44               | 1515.16          |
| 12/04/69 | 12.53               | 1527.07          | 12/18/79 | 24.44               | 1515.16          |
| 12/05/69 | 12.73               | 1526.87          |          |                     |                  |
| 01/27/70 | 10.89               | 1528.71          |          |                     |                  |
| 03/10/70 | 10.98               | 1528.62          |          |                     |                  |
| 04/06/70 | 10.67               | 1528.93          |          |                     |                  |
| 06/09/70 | 3.89                | 1535.71          |          |                     |                  |
| 07/24/70 | 8.60                | 1531.00          |          |                     |                  |
| 08/27/70 | 10.09               | 1529.51          |          |                     |                  |
| 10/01/70 | 10.53               | 1529.07          |          |                     |                  |

154-082-02CCB (continued)  
Sundre aquifer

LS Elev (msl,ft)= 1539.60 SI (ft)= 97-100

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 01/29/80 | 24.49               | 1515.11          | 04/18/84 | 28.36               | 1511.24          |
| 02/28/80 | 24.05               | 1515.55          | 05/08/84 | 27.77               | 1511.83          |
| 03/25/80 | 23.75               | 1515.85          | 05/29/84 | 28.89               | 1510.71          |
| 04/28/80 | 25.38               | 1514.22          | 06/15/84 | 28.77               | 1510.83          |
| 05/28/80 | 27.16               | 1512.44          | 06/26/84 | 29.91               | 1509.69          |
| 06/27/80 | 27.83               | 1511.77          | 07/10/84 | 31.86               | 1507.74          |
| 07/29/80 | 24.57               | 1515.03          | 07/27/84 | 34.94               | 1504.66          |
| 08/28/80 | 25.22               | 1514.38          | 08/09/84 | 34.35               | 1505.25          |
| 09/26/80 | 25.52               | 1514.08          | 08/16/84 | 36.41               | 1503.19          |
| 10/29/80 | 24.67               | 1514.93          | 08/22/84 | 34.38               | 1505.22          |
| 11/25/80 | 25.36               | 1514.24          | 08/27/84 | 35.97               | 1503.63          |
| 12/29/80 | 26.00               | 1513.60          | 09/07/84 | 34.88               | 1504.72          |
|          |                     |                  | 09/12/84 | 33.94               | 1505.66          |
| 01/29/81 | 26.55               | 1513.05          | 09/20/84 | 33.25               | 1506.35          |
| 03/02/81 | 26.50               | 1513.10          | 09/27/84 | 32.19               | 1507.41          |
| 03/26/81 | 26.60               | 1513.00          | 10/03/84 | 31.85               | 1507.75          |
| 04/30/81 | 27.77               | 1511.83          | 10/10/84 | 31.44               | 1508.16          |
| 05/28/81 | 27.66               | 1511.94          | 10/23/84 | 29.58               | 1510.02          |
| 06/29/81 | 27.47               | 1512.13          | 11/07/84 | 28.25               | 1511.35          |
| 07/28/81 | 29.53               | 1510.07          | 11/20/84 | 27.28               | 1512.32          |
| 08/28/81 | 29.55               | 1510.05          | 12/13/84 | 25.99               | 1513.61          |
| 09/29/81 | 30.19               | 1509.41          |          |                     |                  |
| 10/28/81 | 30.28               | 1509.32          | 01/09/85 | 27.07               | 1512.53          |
| 11/27/81 | 30.52               | 1509.08          | 02/12/85 | 28.36               | 1511.24          |
| 12/30/81 | 30.97               | 1508.63          | 03/06/85 | 28.41               | 1511.19          |
|          |                     |                  | 03/19/85 | 28.30               | 1511.30          |
| 01/28/82 | 31.39               | 1508.21          | 04/16/85 | 27.88               | 1511.72          |
| 02/26/82 | 32.14               | 1507.46          | 05/02/85 | 27.58               | 1512.02          |
| 03/29/82 | 31.30               | 1508.30          | 05/14/85 | 27.61               | 1511.99          |
| 04/30/82 | 20.64               | 1518.96          | 06/06/85 | 28.69               | 1510.91          |
| 05/27/82 | 22.66               | 1516.94          | 06/20/85 | 29.88               | 1509.72          |
| 06/29/82 | 24.94               | 1514.66          | 07/01/85 | 30.11               | 1509.49          |
| 07/28/82 | 27.28               | 1512.32          | 07/17/85 | 38.72               | 1500.88          |
| 08/31/82 | 30.55               | 1509.05          | 07/29/85 | 33.71               | 1505.89          |
| 09/30/82 | 29.72               | 1509.88          | 08/14/85 | 32.99               | 1506.61          |
| 10/29/82 | 28.50               | 1511.10          | 08/27/85 | 32.78               | 1506.82          |
| 11/29/82 | 28.77               | 1510.83          | 09/11/85 | 32.19               | 1507.41          |
| 12/27/82 | 28.94               | 1510.66          | 09/24/85 | 31.77               | 1507.83          |
|          |                     |                  | 10/23/85 | 26.67               | 1512.93          |
| 01/28/83 | 29.13               | 1510.47          | 11/21/85 | 24.33               | 1515.27          |
| 03/31/83 | 29.22               | 1510.38          | 12/30/85 | 26.72               | 1512.88          |
| 04/29/83 | 24.30               | 1515.30          |          |                     |                  |
| 05/27/83 | 24.72               | 1514.88          | 02/25/86 | 25.87               | 1513.73          |
| 07/08/83 | 29.72               | 1509.88          | 03/26/86 | 26.85               | 1512.75          |
| 07/28/83 | 32.13               | 1507.47          | 05/13/86 | 26.86               | 1512.74          |
| 08/30/83 | 33.24               | 1506.36          | 06/04/86 | 29.49               | 1510.11          |
| 11/22/83 | 31.27               | 1508.33          | 07/01/86 | 32.74               | 1506.86          |
| 12/08/83 | 31.49               | 1508.11          | 08/06/86 | 32.21               | 1507.39          |
|          |                     |                  | 09/09/86 | 34.21               | 1505.39          |
| 03/12/84 | 29.28               | 1510.32          | 10/09/86 | 32.78               | 1506.82          |
| 04/03/84 | 28.92               | 1510.68          | 12/16/86 | 28.68               | 1510.92          |

154-082-02CCCB1

Sundre aquifer

LS Elev (msl,ft)= 1539.63

SI (ft)= 147-152

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 10/10/84 | 31.25               | 1508.38          | 08/14/85 | 32.82               | 1506.81          |
| 10/23/84 | 29.32               | 1510.31          | 08/27/85 | 32.72               | 1506.91          |
| 11/07/84 | 28.02               | 1511.61          | 09/11/85 | 32.00               | 1507.63          |
| 11/20/84 | 27.11               | 1512.52          | 09/25/85 | 31.66               | 1507.97          |
| 12/13/84 | 25.77               | 1513.86          | 10/23/85 | 26.30               | 1513.33          |
|          |                     |                  | 11/21/85 | 24.19               | 1515.44          |
| 01/09/85 | 27.08               | 1512.55          | 12/30/85 | 26.33               | 1513.30          |
| 02/12/85 | 28.28               | 1511.35          |          |                     |                  |
| 03/06/85 | 28.30               | 1511.33          | 02/25/86 | 25.70               | 1513.93          |
| 03/19/85 | 28.22               | 1511.41          | 03/26/86 | 26.78               | 1512.85          |
| 04/16/85 | 27.83               | 1511.80          | 05/13/86 | 26.81               | 1512.82          |
| 05/02/85 | 27.44               | 1512.19          | 06/04/86 | 29.61               | 1510.02          |
| 05/14/85 | 27.64               | 1511.99          | 06/18/86 | 31.42               | 1508.21          |
| 06/06/85 | 28.64               | 1510.99          | 07/01/86 | 32.64               | 1506.99          |
| 06/20/85 | 29.94               | 1509.69          | 08/06/86 | 31.82               | 1507.81          |
| 07/01/85 | 30.11               | 1509.52          | 09/09/86 | 34.20               | 1505.43          |
| 07/17/85 | 32.83               | 1506.80          | 10/09/86 | 33.11               | 1506.52          |
| 07/29/85 | 34.75               | 1504.88          | 12/16/86 | 28.51               | 1511.12          |

154-082-02CCCB2

Souris Valley Aquifer

LS Elev (msl,ft)= 1539.73

SI (ft)= 42-47

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 10/10/84 | 31.83               | 1507.90          | 08/14/85 | 33.38               | 1506.35          |
| 10/23/84 | 30.08               | 1509.65          | 08/27/85 | 33.11               | 1506.62          |
| 11/07/84 | 28.64               | 1511.09          | 09/11/85 | 32.58               | 1507.15          |
| 11/20/84 | 27.64               | 1512.09          | 09/25/85 | 32.17               | 1507.56          |
| 12/13/84 | 26.28               | 1513.45          | 10/23/85 | 27.07               | 1512.66          |
|          |                     |                  | 11/21/85 | 24.53               | 1515.20          |
| 01/09/85 | 27.24               | 1512.49          | 12/30/85 | 27.05               | 1512.68          |
| 02/12/85 | 28.57               | 1511.16          |          |                     |                  |
| 03/06/85 | 28.66               | 1511.07          | 02/25/86 | 26.09               | 1513.64          |
| 03/19/85 | 28.57               | 1511.16          | 03/26/86 | 27.00               | 1512.73          |
| 04/16/85 | 28.05               | 1511.68          | 05/13/86 | 26.88               | 1512.85          |
| 05/02/85 | 26.77               | 1512.96          | 06/04/86 | 29.44               | 1510.29          |
| 05/14/85 | 26.80               | 1512.93          | 07/01/86 | 32.92               | 1506.81          |
| 06/06/85 | 28.80               | 1510.93          | 08/06/86 | 32.72               | 1507.01          |
| 06/20/85 | 29.99               | 1509.74          | 09/09/86 | 34.46               | 1505.27          |
| 07/01/85 | 30.38               | 1509.35          | 10/09/86 | 32.53               | 1507.20          |
| 07/17/85 | 32.77               | 1506.96          | 12/16/86 | 28.98               | 1510.75          |
| 07/29/85 | 33.83               | 1505.90          |          |                     |                  |

154-082-03ACB  
Sundre aquifer

LS Elev (msl,ft)= 1554.90 SI (ft)= 208-214

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/14/68 | 26.69               | 1528.21          |          |                     |                  |
| 11/22/68 | 26.66               | 1528.24          | 04/16/71 | 24.64               | 1530.26          |
| 12/07/68 | 26.88               | 1528.02          | 07/22/71 | 24.07               | 1530.83          |
| 12/11/68 | 26.74               | 1528.16          | 08/27/71 | 24.80               | 1530.10          |
| 12/16/68 | 26.80               | 1528.10          | 12/21/71 | 24.61               | 1530.29          |
| 12/19/68 | 26.89               | 1528.01          |          |                     |                  |
| 12/20/68 | 27.47               | 1527.43          | 10/12/72 | 24.57               | 1530.33          |
| 12/21/68 | 27.39               | 1527.51          |          |                     |                  |
| 12/27/68 | 26.91               | 1527.99          | 06/07/73 | 25.00               | 1529.90          |
|          |                     |                  | 09/28/73 | 25.46               | 1529.44          |
| 01/04/69 | 26.89               | 1528.01          |          |                     |                  |
| 04/08/69 | 25.38               | 1529.52          | 07/01/74 | 21.97               | 1532.93          |
| 05/07/69 | 17.30               | 1537.60          |          |                     |                  |
| 05/15/69 | 18.83               | 1536.07          | 08/13/75 | 23.21               | 1531.69          |
| 05/27/69 | 20.80               | 1534.10          |          |                     |                  |
| 06/11/69 | 23.72               | 1531.18          | 03/19/76 | 19.86               | 1535.04          |
| 06/27/69 | 24.53               | 1530.37          | 06/03/76 | 18.42               | 1536.48          |
| 07/16/69 | 24.50               | 1530.40          | 07/16/76 | 19.44               | 1535.46          |
| 07/29/69 | 24.36               | 1530.54          | 08/27/76 | 23.91               | 1530.99          |
| 08/12/69 | 24.99               | 1529.91          | 09/09/76 | 26.13               | 1528.77          |
| 09/09/69 | 25.75               | 1529.15          | 09/23/76 | 25.78               | 1529.12          |
| 09/25/69 | 25.83               | 1529.07          | 10/25/76 | 23.58               | 1531.32          |
| 10/08/69 | 25.74               | 1529.16          | 12/03/76 | 23.69               | 1531.21          |
| 10/16/69 | 25.78               | 1529.12          |          |                     |                  |
| 10/19/69 | 26.25               | 1528.65          | 01/05/77 | 27.66               | 1527.24          |
| 10/20/69 | 26.14               | 1528.76          | 02/08/77 | 28.77               | 1526.13          |
| 10/21/69 | 28.32               | 1526.58          | 03/15/77 | 28.36               | 1526.54          |
| 10/22/69 | 29.13               | 1525.77          | 05/06/77 | 23.66               | 1531.24          |
| 10/23/69 | 29.63               | 1525.27          | 06/03/77 | 23.77               | 1531.13          |
| 10/24/69 | 29.97               | 1524.93          | 06/30/77 | 26.72               | 1528.18          |
| 10/25/69 | 30.30               | 1524.60          | 07/07/77 | 31.63               | 1523.27          |
| 10/26/69 | 30.58               | 1524.32          | 07/14/77 | 31.88               | 1523.02          |
| 10/27/69 | 30.77               | 1524.13          | 07/28/77 | 32.97               | 1521.93          |
| 10/28/69 | 30.94               | 1523.96          | 08/10/77 | 35.13               | 1519.77          |
| 10/29/69 | 31.08               | 1523.82          | 08/26/77 | 36.19               | 1518.71          |
| 10/30/69 | 31.27               | 1523.63          | 09/14/77 | 33.50               | 1521.40          |
| 10/31/69 | 31.44               | 1523.46          | 10/11/77 | 33.86               | 1521.04          |
| 11/01/69 | 31.55               | 1523.35          | 11/10/77 | 34.57               | 1520.33          |
| 11/02/69 | 31.66               | 1523.24          | 12/15/77 | 33.69               | 1521.21          |
| 11/03/69 | 31.75               | 1523.15          |          |                     |                  |
| 11/04/69 | 31.80               | 1523.10          | 01/24/78 | 35.57               | 1519.33          |
| 11/05/69 | 29.71               | 1525.19          | 03/28/78 | 35.88               | 1519.02          |
| 11/06/69 | 28.88               | 1526.02          | 04/26/78 | 35.80               | 1519.10          |
| 11/07/69 | 28.33               | 1526.57          | 05/24/78 | 39.64               | 1515.26          |
| 11/08/69 | 28.13               | 1526.77          | 06/27/78 | 37.47               | 1517.43          |
| 11/09/69 | 27.89               | 1527.01          | 07/26/78 | 41.44               | 1513.46          |
| 11/10/69 | 27.67               | 1527.23          | 08/29/78 | 37.91               | 1516.99          |
| 11/11/69 | 27.55               | 1527.35          | 09/26/78 | 33.14               | 1521.76          |
| 11/12/69 | 27.38               | 1527.52          | 10/27/78 | 37.22               | 1517.68          |
| 11/13/69 | 27.25               | 1527.65          | 11/04/78 | 37.10               | 1517.80          |
| 11/14/69 | 27.16               | 1527.74          |          |                     |                  |
| 11/17/69 | 27.00               | 1527.90          | 01/19/79 | 37.75               | 1517.15          |
| 11/25/69 | 26.75               | 1528.15          | 03/29/79 | 35.67               | 1519.23          |
| 12/02/69 | 26.52               | 1528.38          | 04/30/79 | 29.94               | 1524.96          |
| 12/03/69 | 28.08               | 1526.82          | 05/29/79 | 25.69               | 1529.21          |
| 12/04/69 | 28.58               | 1526.32          | 06/27/79 | 36.58               | 1518.32          |
| 12/05/69 | 28.86               | 1526.04          | 07/31/79 | 28.72               | 1526.18          |
|          |                     |                  | 08/28/79 | 37.47               | 1517.43          |
| 01/27/70 | 26.08               | 1528.82          | 09/27/79 | 40.86               | 1514.04          |
| 04/06/70 | 25.94               | 1528.96          | 10/29/79 | 39.10               | 1515.80          |
| 06/09/70 | 19.58               | 1535.32          | 11/29/79 | 40.38               | 1514.52          |
| 07/24/70 | 23.82               | 1531.08          | 12/18/79 | 40.14               | 1514.76          |
| 08/27/70 | 25.21               | 1529.69          |          |                     |                  |
| 10/01/70 | 25.60               | 1529.30          | 01/29/80 | 40.63               | 1514.27          |

154-082-03ACB (continued)  
Sundre aquifer

LS Elev (msl,ft)= 1554.90 SI (ft)= 208-214

| Date     | Depth to Water (ft) | ML Elev (msl,ft) | Date     | Depth to Water (ft) | ML Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 02/29/80 | 39.75               | 1515.15          | 03/12/84 | 48.25               | 1506.65          |
| 03/25/80 | 38.47               | 1516.43          | 04/03/84 | 48.35               | 1506.55          |
| 04/28/80 | 42.49               | 1512.41          | 04/18/84 | 48.16               | 1506.74          |
| 05/28/80 | 45.44               | 1509.46          | 05/08/84 | 47.08               | 1507.82          |
| 06/27/80 | 44.66               | 1510.24          | 05/29/84 | 48.86               | 1506.04          |
| 07/29/80 | 36.72               | 1518.18          | 06/15/84 | 48.77               | 1506.13          |
| 08/28/80 | 40.55               | 1514.35          | 06/26/84 | 50.19               | 1504.71          |
| 09/26/80 | 41.13               | 1513.77          | 07/10/84 | 54.30               | 1500.60          |
| 10/29/80 | 38.86               | 1516.04          | 07/27/84 | 58.17               | 1496.73          |
| 11/25/80 | 40.55               | 1514.35          | 08/09/84 | 57.99               | 1496.91          |
| 12/29/80 | 42.08               | 1512.82          | 08/16/84 | 58.38               | 1496.52          |
|          |                     |                  | 08/21/84 | 56.75               | 1498.15          |
| 01/29/81 | 40.91               | 1513.99          | 08/27/84 | 56.64               | 1498.26          |
| 02/24/81 | 42.07               | 1512.83          | 09/07/84 | 53.44               | 1501.46          |
| 03/26/81 | 42.69               | 1512.21          | 09/12/84 | 50.77               | 1504.13          |
| 04/30/81 | 42.50               | 1512.40          | 09/20/84 | 52.19               | 1502.71          |
| 05/28/81 | 42.92               | 1511.98          | 09/27/84 | 50.19               | 1504.71          |
| 06/30/81 | 42.94               | 1511.96          | 10/03/84 | 50.89               | 1504.01          |
| 07/28/81 | 46.94               | 1507.96          | 10/10/84 | 50.47               | 1504.43          |
| 08/28/81 | 44.38               | 1510.52          | 10/23/84 | 47.89               | 1507.01          |
| 09/29/81 | 45.55               | 1509.35          | 11/07/84 | 46.50               | 1508.40          |
| 10/28/81 | 46.71               | 1508.19          | 11/20/84 | 44.83               | 1510.07          |
| 11/27/81 | 47.27               | 1507.63          | 12/13/84 | 42.47               | 1512.43          |
| 12/30/81 | 47.96               | 1506.94          |          |                     |                  |
| 01/28/82 | 48.61               | 1506.29          | 01/09/85 | 46.50               | 1508.40          |
| 02/26/82 | 49.32               | 1505.58          | 02/12/85 | 47.05               | 1507.85          |
| 03/29/82 | 47.00               | 1507.90          | 03/06/85 | 48.08               | 1506.82          |
| 04/30/82 | 33.22               | 1521.68          | 03/19/85 | 48.07               | 1506.83          |
| 05/27/82 | 37.82               | 1517.08          | 04/16/85 | 47.05               | 1507.85          |
| 06/29/82 | 38.69               | 1516.21          | 05/02/85 | 46.52               | 1508.38          |
| 07/28/82 | 43.27               | 1511.63          | 05/14/85 | 46.72               | 1508.18          |
| 08/31/82 | 46.52               | 1508.38          | 06/06/85 | 48.36               | 1506.54          |
| 09/30/82 | 45.71               | 1509.19          | 06/20/85 | 51.10               | 1503.80          |
| 10/29/82 | 44.22               | 1510.68          | 07/01/85 | 50.13               | 1504.77          |
| 11/29/82 | 44.33               | 1510.57          | 07/17/85 | 55.44               | 1499.46          |
| 12/27/82 | 42.97               | 1511.93          | 07/29/85 | 56.36               | 1498.54          |
|          |                     |                  | 08/14/85 | 53.55               | 1501.35          |
|          |                     |                  | 08/27/85 | 54.17               | 1500.73          |
| 01/28/83 | 44.69               | 1510.21          | 09/11/85 | 52.50               | 1502.40          |
| 02/25/83 | 44.92               | 1509.98          | 09/24/85 | 52.27               | 1502.63          |
| 03/31/83 | 45.53               | 1509.37          | 10/23/85 | 42.44               | 1512.46          |
| 04/29/83 | 40.16               | 1514.74          | 11/21/85 | 40.32               | 1514.58          |
| 05/26/83 | 42.03               | 1512.87          | 12/30/85 | 46.35               | 1508.55          |
| 07/08/83 | 46.16               | 1508.74          |          |                     |                  |
| 07/28/83 | 50.55               | 1504.35          | 02/25/86 | 43.53               | 1511.37          |
| 08/30/83 | 49.80               | 1505.10          | 03/26/86 | 45.86               | 1509.04          |
| 11/22/83 | 50.05               | 1504.85          | 05/13/86 | 46.34               | 1508.56          |
| 12/08/83 | 51.38               | 1503.52          | 06/04/86 | 50.85               | 1504.05          |
| 12/14/83 | 50.05               | 1504.85          | 07/01/86 | 54.25               | 1500.65          |
|          |                     |                  | 08/06/86 | 50.62               | 1504.28          |
| 01/04/84 | 49.77               | 1505.13          | 09/09/86 | 55.47               | 1499.43          |
| 01/16/84 | 49.96               | 1504.94          | 10/09/86 | 51.97               | 1502.93          |
| 02/01/84 | 49.47               | 1505.43          | 12/16/86 | 47.17               | 1507.73          |
| 02/21/84 | 49.50               | 1505.40          |          |                     |                  |

154-082-03BCC  
Sundre aquifer

LS Elev (msl,ft)= 1542.60 SI (ft)= 217-223

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/20/68 | 14.82               | 1527.78          | 02/01/75 | 11.59               | 1531.01          |
| 11/27/68 | 14.82               | 1527.78          | 03/19/76 | 8.43                | 1534.17          |
| 12/03/68 | 14.85               | 1527.75          | 06/04/76 | 6.89                | 1535.71          |
| 12/05/68 | 14.88               | 1527.72          | 07/16/76 | 7.89                | 1534.71          |
| 12/07/68 | 15.02               | 1527.58          | 08/24/76 | 16.39               | 1526.21          |
| 12/11/68 | 14.88               | 1527.72          | 08/27/76 | 15.65               | 1526.95          |
| 12/13/68 | 15.02               | 1527.58          | 09/09/76 | 16.75               | 1525.85          |
| 12/16/68 | 14.93               | 1527.67          | 09/23/76 | 17.92               | 1524.68          |
| 12/19/68 | 15.03               | 1527.57          | 10/25/76 | 11.75               | 1530.85          |
| 12/20/68 | 15.73               | 1526.87          | 12/03/76 | 12.00               | 1530.60          |
| 12/27/68 | 15.02               | 1527.58          |          |                     |                  |
| 01/04/69 | 15.03               | 1527.57          |          |                     |                  |
| 03/12/69 | 15.00               | 1527.60          | 02/08/77 | 21.30               | 1521.30          |
| 04/08/69 | 13.75               | 1528.85          | 03/15/77 | 21.00               | 1521.60          |
| 05/28/69 | 9.43                | 1533.17          | 05/06/77 | 13.60               | 1529.00          |
| 06/11/69 | 11.84               | 1530.76          | 06/03/77 | 14.69               | 1527.91          |
| 06/27/69 | 12.64               | 1529.96          | 06/30/77 | 18.55               | 1524.05          |
| 07/16/69 | 12.67               | 1529.93          | 07/07/77 | 23.75               | 1518.85          |
| 07/17/69 | 12.67               | 1529.93          | 07/14/77 | 29.47               | 1513.13          |
| 07/30/69 | 12.69               | 1529.91          | 07/28/77 | 26.25               | 1516.35          |
| 08/13/69 | 13.19               | 1529.41          | 08/10/77 | 28.14               | 1514.46          |
| 09/09/69 | 13.96               | 1528.64          | 08/26/77 | 32.83               | 1509.77          |
| 09/26/69 | 14.02               | 1528.58          | 09/14/77 | 28.44               | 1514.16          |
| 10/08/69 | 13.93               | 1528.67          | 10/11/77 | 30.89               | 1511.71          |
| 10/16/69 | 14.07               | 1528.53          | 11/10/77 | 29.14               | 1513.46          |
| 10/20/69 | 14.47               | 1528.13          | 12/15/77 | 26.88               | 1515.72          |
| 10/21/69 | 16.82               | 1525.78          |          |                     |                  |
| 10/22/69 | 17.25               | 1525.35          | 01/24/78 | 28.41               | 1514.19          |
| 10/23/69 | 18.21               | 1524.39          | 02/22/78 | 31.17               | 1511.43          |
| 10/24/69 | 18.61               | 1523.99          | 03/28/78 | 29.25               | 1513.35          |
| 10/25/69 | 19.02               | 1523.58          | 04/26/78 | 29.14               | 1513.46          |
| 10/26/69 | 19.19               | 1523.41          | 05/24/78 | 34.10               | 1508.50          |
| 10/28/69 | 19.52               | 1523.08          | 06/27/78 | 32.00               | 1510.60          |
| 10/30/69 | 19.80               | 1522.80          | 07/26/78 | 38.00               | 1504.60          |
| 11/01/69 | 20.13               | 1522.47          | 08/29/78 | 34.74               | 1507.86          |
| 11/03/69 | 20.27               | 1522.33          | 09/26/78 | 27.00               | 1515.60          |
| 11/04/69 | 18.46               | 1524.14          | 10/27/78 | 31.50               | 1511.10          |
| 11/05/69 | 17.49               | 1525.11          | 12/04/78 | 29.66               | 1512.94          |
| 11/06/69 | 16.96               | 1525.64          |          |                     |                  |
| 11/07/69 | 16.52               | 1526.08          | 01/19/79 | 30.35               | 1512.25          |
| 11/08/69 | 16.33               | 1526.27          | 02/27/79 | 34.55               | 1508.05          |
| 11/10/69 | 15.85               | 1526.75          | 03/28/79 | 34.47               | 1508.13          |
| 11/12/69 | 15.60               | 1527.00          | 04/30/79 | 24.02               | 1518.58          |
| 11/13/69 | 15.48               | 1527.12          | 05/30/79 | 23.63               | 1518.97          |
| 11/14/69 | 15.36               | 1527.24          | 06/27/79 | 32.47               | 1510.13          |
| 11/25/69 | 14.97               | 1527.63          | 07/31/79 | 24.57               | 1518.03          |
| 12/02/69 | 14.81               | 1527.79          | 08/28/79 | 34.47               | 1508.13          |
|          |                     |                  | 09/27/79 | 38.30               | 1504.30          |
| 06/09/70 | 8.19                | 1534.41          | 10/31/79 | 34.47               | 1508.13          |
| 07/24/70 | 12.02               | 1530.58          | 11/29/79 | 34.67               | 1507.93          |
| 08/27/70 | 13.35               | 1529.25          | 12/27/79 | 31.58               | 1511.02          |
| 10/01/70 | 13.73               | 1528.87          |          |                     |                  |
| 04/15/71 | 12.81               | 1529.79          | 01/29/80 | 38.19               | 1504.41          |
| 07/22/71 | 12.38               | 1530.22          | 02/28/80 | 37.89               | 1504.71          |
| 08/27/71 | 13.06               | 1529.54          | 03/25/80 | 35.42               | 1507.18          |
| 12/21/71 | 12.80               | 1529.80          | 04/25/80 | 33.32               | 1509.28          |
|          |                     |                  | 05/25/80 | 42.66               | 1499.94          |
|          |                     |                  | 06/27/80 | 41.42               | 1501.18          |
| 10/12/72 | 12.76               | 1529.84          | 07/29/80 | 27.35               | 1515.25          |
|          |                     |                  | 08/28/80 | 36.55               | 1506.05          |
| 06/08/73 | 13.22               | 1529.38          | 09/26/80 | 36.75               | 1505.85          |
|          |                     |                  | 10/29/80 | 31.53               | 1511.07          |
| 07/08/74 | 11.15               | 1531.45          | 11/25/80 | 33.14               | 1509.46          |

154-082-03BCC (continued)

Sundre aquifer

LS Elev (msl,ft)= 1542.60

SI (ft)= 217-223

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 12/30/80 | 33.72               | 1508.88          | 06/26/84 | 40.64               | 1501.96          |
| 01/29/81 | 33.75               | 1508.85          | 07/10/84 | 46.24               | 1496.36          |
| 02/24/81 | 35.22               | 1507.38          | 07/27/84 | 49.58               | 1493.02          |
| 03/26/81 | 40.42               | 1502.18          | 08/09/84 | 50.53               | 1492.07          |
| 04/30/81 | 35.44               | 1507.16          | 08/16/84 | 52.41               | 1490.19          |
| 05/28/81 | 40.63               | 1501.97          | 08/21/84 | 46.46               | 1496.14          |
| 06/29/81 | 38.83               | 1503.77          | 08/27/84 | 46.64               | 1495.96          |
| 07/28/81 | 43.46               | 1499.14          | 09/07/84 | 44.53               | 1498.07          |
| 08/28/81 | 38.50               | 1504.10          | 09/12/84 | 38.53               | 1504.07          |
| 09/29/81 | 41.89               | 1500.71          | 09/20/84 | 43.50               | 1499.10          |
| 10/28/81 | 43.88               | 1498.72          | 09/27/84 | 43.58               | 1499.02          |
| 11/27/81 | 44.91               | 1497.69          | 10/03/84 | 44.41               | 1498.19          |
| 12/30/81 | 44.39               | 1498.21          | 10/10/84 | 43.19               | 1499.41          |
|          |                     |                  | 10/23/84 | 41.28               | 1501.32          |
|          |                     |                  | 11/08/84 | 39.13               | 1503.47          |
| 01/09/82 | 44.69               | 1497.91          | 11/20/84 | 37.00               | 1505.60          |
| 02/26/82 | 45.80               | 1496.80          | 12/13/84 | 31.50               | 1511.10          |
| 03/29/82 | 42.13               | 1500.47          |          |                     |                  |
| 04/30/82 | 24.35               | 1518.25          | 01/09/85 | 39.58               | 1503.02          |
| 05/27/82 | 35.19               | 1507.41          | 02/12/85 | 39.41               | 1503.19          |
| 06/29/82 | 32.63               | 1509.97          | 03/06/85 | 41.86               | 1500.74          |
| 07/28/82 | 36.36               | 1506.24          | 03/19/85 | 41.47               | 1501.13          |
| 08/31/82 | 39.39               | 1503.21          | 04/09/85 | 33.05               | 1509.55          |
| 09/30/82 | 39.10               | 1503.50          | 04/17/85 | 35.77               | 1506.83          |
| 10/29/82 | 36.92               | 1505.68          | 05/02/85 | 36.94               | 1505.66          |
| 11/29/82 | 38.08               | 1504.52          | 05/14/85 | 36.77               | 1505.83          |
| 12/27/82 | 36.89               | 1505.71          | 06/06/85 | 37.83               | 1504.77          |
|          |                     |                  | 06/20/85 | 42.11               | 1500.49          |
| 01/28/83 | 37.94               | 1504.66          | 07/01/85 | 39.66               | 1502.94          |
| 02/28/83 | 37.83               | 1504.77          | 07/17/85 | 49.61               | 1492.99          |
| 03/31/83 | 41.89               | 1500.71          | 07/29/85 | 50.03               | 1492.57          |
| 04/29/83 | 37.22               | 1505.38          | 08/14/85 | 46.96               | 1495.64          |
| 05/27/83 | 38.03               | 1504.57          | 08/27/85 | 47.52               | 1495.08          |
| 07/08/83 | 39.69               | 1502.91          | 09/11/85 | 46.36               | 1496.24          |
| 07/28/83 | 43.91               | 1498.69          | 09/24/85 | 46.08               | 1496.52          |
| 08/30/83 | 43.14               | 1499.46          | 10/23/85 | 30.25               | 1512.35          |
| 12/08/83 | 42.88               | 1499.72          | 11/21/85 | 28.80               | 1513.80          |
| 12/14/83 | 41.25               | 1501.35          | 12/30/85 | 38.91               | 1503.69          |
|          |                     |                  |          |                     |                  |
| 01/03/84 | 41.08               | 1501.52          | 02/25/86 | 32.97               | 1509.63          |
| 01/16/84 | 44.53               | 1498.07          | 03/26/86 | 39.18               | 1503.42          |
| 02/01/84 | 44.02               | 1498.58          | 05/14/86 | 38.74               | 1503.86          |
| 02/21/84 | 44.19               | 1498.41          | 06/04/86 | 44.04               | 1498.56          |
| 03/12/84 | 42.78               | 1499.82          | 07/01/86 | 48.68               | 1493.92          |
| 04/03/84 | 42.91               | 1499.69          | 08/06/86 | 42.73               | 1499.87          |
| 04/18/84 | 42.77               | 1499.83          | 09/09/86 | 46.69               | 1495.91          |
| 05/08/84 | 41.69               | 1500.91          | 10/09/86 | 42.79               | 1499.81          |
| 05/29/84 | 38.88               | 1503.72          | 12/16/86 | 39.63               | 1502.97          |
| 06/15/84 | 38.41               | 1504.19          |          |                     |                  |

154-082-03BCCA1

Sundre aquifer

LS Elev (msl,ft)= 1543.65 SI (ft)= 195-200

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 09/27/84 | 42.77               | 1500.88          | 07/29/85 | 49.72               | 1493.93          |
| 10/03/84 | 43.61               | 1500.04          | 08/14/85 | 46.60               | 1497.05          |
| 10/10/84 | 42.38               | 1501.27          | 08/27/85 | 46.97               | 1496.68          |
| 10/23/84 | 40.47               | 1503.18          | 09/11/85 | 45.97               | 1497.68          |
| 11/08/84 | 38.27               | 1505.38          | 09/24/85 | 43.86               | 1499.79          |
| 11/20/84 | 36.22               | 1507.43          | 10/23/85 | 31.02               | 1512.63          |
| 12/13/84 | 31.86               | 1511.79          | 11/21/85 | 29.13               | 1514.52          |
|          |                     |                  | 12/30/85 | 38.44               | 1505.21          |
| 01/09/85 | 38.80               | 1504.85          |          |                     |                  |
| 02/12/85 | 38.64               | 1505.01          | 02/25/86 | 33.28               | 1510.37          |
| 03/06/85 | 41.05               | 1502.60          | 03/26/86 | 38.41               | 1505.24          |
| 03/19/85 | 41.08               | 1502.57          | 05/14/86 | 38.03               | 1505.62          |
| 04/17/85 | 35.85               | 1507.80          | 06/04/86 | 43.42               | 1500.23          |
| 05/02/85 | 37.11               | 1506.54          | 07/01/86 | 48.00               | 1495.65          |
| 05/14/85 | 37.32               | 1506.33          | 08/06/86 | 42.05               | 1501.60          |
| 06/06/85 | 38.52               | 1505.13          | 09/09/86 | 46.94               | 1496.71          |
| 06/20/85 | 42.74               | 1500.91          | 10/09/86 | 43.10               | 1500.55          |
| 07/01/85 | 40.28               | 1503.37          | 12/16/86 | 39.54               | 1504.11          |
| 07/17/85 | 48.75               | 1494.90          |          |                     |                  |

154-082-03BCCA2

Sundre aquifer

LS Elev (msl,ft)= 1543.65 SI (ft)= 150-155

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 09/27/84 | 40.58               | 1503.07          | 07/29/85 | 47.60               | 1496.05          |
| 10/10/84 | 40.28               | 1503.37          | 08/14/85 | 44.30               | 1499.35          |
| 10/23/84 | 38.05               | 1505.60          | 08/27/85 | 44.77               | 1498.88          |
| 11/08/84 | 35.67               | 1507.98          | 09/11/85 | 43.60               | 1500.05          |
| 11/20/84 | 34.41               | 1509.24          | 09/24/85 | 43.30               | 1500.35          |
| 12/13/84 | 31.63               | 1512.02          | 10/23/85 | 30.99               | 1512.66          |
|          |                     |                  | 11/21/85 | 29.99               | 1513.66          |
| 01/09/85 | 36.88               | 1506.77          | 12/30/85 | 36.72               | 1506.93          |
| 02/12/85 | 36.83               | 1506.82          |          |                     |                  |
| 03/06/85 | 38.75               | 1504.90          | 02/25/86 | 33.14               | 1510.51          |
| 03/19/85 | 38.75               | 1504.90          | 03/26/86 | 36.44               | 1507.21          |
| 04/17/85 | 35.16               | 1508.49          | 05/14/86 | 36.16               | 1507.49          |
| 05/02/85 | 36.69               | 1506.96          | 06/04/86 | 41.55               | 1502.10          |
| 05/14/85 | 36.49               | 1507.16          | 07/01/86 | 45.96               | 1497.69          |
| 06/06/85 | 38.24               | 1505.41          | 08/06/86 | 40.45               | 1503.20          |
| 06/20/85 | 41.97               | 1501.68          | 09/09/86 | 46.27               | 1497.38          |
| 07/01/85 | 39.30               | 1504.35          | 10/09/86 | 42.62               | 1501.03          |
| 07/17/85 | 46.66               | 1496.99          | 12/16/86 | 37.39               | 1506.26          |

**154-082-03BCCA3**  
**Souris Valley aquifer**

**LS Elev (msl,ft)= 1543.90 SI (ft)= 23-28**

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 09/27/84 | 19.66               | 1524.24          | 07/29/85 | 19.78               | 1524.12          |
| 10/03/84 | 19.69               | 1524.21          | 08/14/85 | 19.83               | 1524.07          |
| 10/10/84 | 19.57               | 1524.33          | 08/27/85 | 19.86               | 1524.04          |
| 10/23/84 | 19.53               | 1524.37          | 09/11/85 | 19.94               | 1523.96          |
| 11/08/84 | 19.60               | 1524.30          | 09/24/85 | 19.97               | 1523.93          |
| 11/20/84 | 19.67               | 1524.23          | 10/23/85 | 19.88               | 1524.02          |
| 12/13/84 | 19.74               | 1524.16          | 11/21/85 | 19.91               | 1523.99          |
| 01/09/85 | 19.75               | 1524.15          | 12/30/85 | 19.69               | 1524.21          |
| 02/12/85 | 19.77               | 1524.13          | 02/25/86 | 19.81               | 1524.09          |
| 03/06/85 | 19.17               | 1524.73          | 03/26/86 | 19.12               | 1524.78          |
| 03/19/85 | 18.57               | 1525.33          | 05/14/86 | 19.31               | 1524.59          |
| 04/17/85 | 19.00               | 1524.90          | 06/04/86 | 19.47               | 1524.43          |
| 05/02/85 | 18.92               | 1524.98          | 07/01/86 | 19.68               | 1524.22          |
| 05/14/85 | 19.02               | 1524.88          | 08/06/86 | 19.95               | 1523.95          |
| 06/06/85 | 19.24               | 1524.66          | 09/09/86 | 20.04               | 1523.86          |
| 06/20/85 | 19.41               | 1524.49          | 10/09/86 | 20.07               | 1523.83          |
| 07/01/85 | 19.47               | 1524.43          | 12/16/86 | 20.07               | 1523.83          |
| 07/17/85 | 19.71               | 1524.19          |          |                     |                  |

**154-082-03BCD2**  
**Sundre aquifer**

**LS Elev (msl,ft)= 1545.54 SI (ft)= 230-235**

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 09/27/84 | 43.60               | 1501.94          | 07/29/85 | 50.25               | 1495.29          |
| 10/03/84 | 43.86               | 1501.68          | 08/14/85 | 47.30               | 1498.24          |
| 10/10/84 | 40.41               | 1505.13          | 08/27/85 | 47.91               | 1497.63          |
| 10/23/84 | 40.69               | 1504.85          | 09/11/85 | 45.89               | 1499.65          |
| 11/07/84 | 39.36               | 1506.18          | 09/24/85 | 45.69               | 1499.85          |
| 11/20/84 | 36.78               | 1508.76          | 10/23/85 | 33.02               | 1512.52          |
| 12/13/84 | 33.72               | 1511.82          | 11/21/85 | 30.96               | 1514.58          |
| 01/09/85 | 39.28               | 1506.26          | 12/30/85 | 38.88               | 1506.66          |
| 02/12/85 | 39.22               | 1506.32          | 02/25/86 | 35.00               | 1510.54          |
| 03/06/85 | 41.19               | 1504.35          | 03/26/86 | 38.84               | 1506.70          |
| 03/19/85 | 41.19               | 1504.35          | 05/13/86 | 39.48               | 1506.06          |
| 04/16/85 | 39.35               | 1506.19          | 06/04/86 | 44.21               | 1501.33          |
| 05/02/85 | 38.82               | 1506.72          | 07/01/86 | 48.30               | 1497.24          |
| 05/14/85 | 38.92               | 1506.62          | 08/06/86 | 43.71               | 1501.83          |
| 06/06/85 | 40.38               | 1505.16          | 09/09/86 | 48.35               | 1497.19          |
| 06/20/85 | 44.16               | 1501.38          | 10/09/86 | 44.43               | 1501.11          |
| 07/01/85 | 43.11               | 1502.43          | 12/16/86 | 39.46               | 1506.08          |
| 07/17/85 | 49.33               | 1496.21          |          |                     |                  |

154-082-03BCD3

Sundre aquifer

LS Elev (msl,ft)= 1545.64

SI (ft)= 109-114

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 10/03/84 | 37.13               | 1508.51          | 08/14/85 | 37.77               | 1507.87          |
| 10/10/84 | 36.71               | 1508.93          | 08/27/85 | 37.61               | 1508.03          |
| 10/23/84 | 35.36               | 1510.28          | 09/11/85 | 36.71               | 1508.93          |
| 11/07/84 | 33.97               | 1511.67          | 09/24/85 | 37.02               | 1508.62          |
| 11/20/84 | 32.96               | 1512.68          | 10/23/85 | 33.02               | 1512.62          |
| 12/13/84 | 31.60               | 1514.04          | 11/21/85 | 30.28               | 1515.36          |
|          |                     |                  | 12/30/85 | 32.05               | 1513.59          |
| 01/09/85 | 31.97               | 1513.67          |          |                     |                  |
| 02/12/85 | 33.08               | 1512.56          | 02/25/86 | 31.12               | 1514.52          |
| 03/06/85 | 33.38               | 1512.26          | 03/26/86 | 31.44               | 1514.20          |
| 03/19/85 | 33.17               | 1512.47          | 05/13/86 | 31.75               | 1513.89          |
| 04/16/85 | 32.80               | 1512.84          | 06/04/86 | 33.35               | 1512.29          |
| 05/02/85 | 32.44               | 1513.20          | 06/18/86 | 35.24               | 1510.40          |
| 05/14/85 | 26.74               | 1518.90          | 07/01/86 | 36.86               | 1508.78          |
| 06/06/85 | 33.39               | 1512.25          | 08/06/86 | 37.54               | 1508.10          |
| 06/20/85 | 34.27               | 1511.37          | 09/09/86 | 38.47               | 1507.17          |
| 07/01/85 | 34.78               | 1510.86          | 10/09/86 | 37.98               | 1507.66          |
| 07/17/85 | 36.60               | 1509.04          | 12/16/86 | 34.05               | 1511.59          |
| 07/29/85 | 37.30               | 1508.34          |          |                     |                  |

154-082-03BCD4

Souris Valley aquifer

LS Elev (msl,ft)= 1545.59

SI (ft)= 29-34

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 09/27/84 | 28.74               | 1516.85          | 07/29/85 | 28.75               | 1516.84          |
| 10/03/84 | 29.42               | 1516.17          | 08/14/85 | 28.94               | 1516.65          |
| 10/10/84 | 29.36               | 1516.23          | 08/27/85 | 29.05               | 1516.54          |
| 10/23/84 | 29.16               | 1516.43          | 09/11/85 | 29.14               | 1516.45          |
| 11/07/84 | 28.92               | 1516.67          | 09/24/85 | 29.19               | 1516.40          |
| 11/20/84 | 28.74               | 1516.85          | 10/23/85 | 28.77               | 1516.82          |
| 12/13/84 | 28.39               | 1517.20          | 11/21/85 | 28.28               | 1517.31          |
|          |                     |                  | 12/30/85 | 28.19               | 1517.40          |
| 01/09/85 | 28.35               | 1517.24          |          |                     |                  |
| 02/12/85 | 28.50               | 1517.09          | 02/25/86 | 28.10               | 1517.49          |
| 03/06/85 | 28.42               | 1517.17          | 03/26/86 | 27.69               | 1517.90          |
| 03/19/85 | 28.22               | 1517.37          | 05/13/86 | 27.96               | 1517.63          |
| 04/16/85 | 28.22               | 1517.37          | 06/04/86 | 27.95               | 1517.64          |
| 05/02/85 | 28.02               | 1517.57          | 07/01/86 | 28.36               | 1517.23          |
| 05/14/85 | 28.02               | 1517.57          | 08/06/86 | 28.90               | 1516.69          |
| 06/06/85 | 28.28               | 1517.31          | 09/09/86 | 29.03               | 1516.56          |
| 06/20/85 | 28.38               | 1517.21          | 10/09/86 | 29.31               | 1516.28          |
| 07/01/85 | 28.50               | 1517.09          | 12/16/86 | 28.78               | 1516.81          |
| 07/17/85 | 28.52               | 1517.07          |          |                     |                  |

154-082-03CAC1  
Souris Valley Aquifer

well not surveyed

SI (ft) = 81-84

| Date     | Depth to Water (ft) | Date           | Depth to Water (ft) |
|----------|---------------------|----------------|---------------------|
| 11/22/68 | 10.92               | 10/24/69       | 11.51               |
| 11/27/68 | 10.96               | 10/25/69       | 11.69               |
| 12/04/68 | 10.93               | 10/26/69       | 11.85               |
| 12/07/68 | 11.01               | 10/27/69       | 11.98               |
| 12/11/68 | 11.00               | 10/28/69       | 12.09               |
| 12/16/68 | 11.06               | 10/29/69       | 12.14               |
| 12/18/68 | 11.10               | 10/30/69       | 12.35               |
| 12/19/68 | 11.14               | 10/31/69       | 12.43               |
| 12/20/68 | 11.26               | 11/01/69       | 12.48               |
| 12/21/68 | 11.30               | 11/02/69       | 12.60               |
| 12/27/68 | 11.15               | 11/03/69       | 12.68               |
|          |                     | 11/04/69       | 12.65               |
| 01/04/69 | 11.14               | 11/05/69       | 12.02               |
| 02/06/69 | 11.10               | 11/06/69       | 11.65               |
| 03/12/69 | 11.07               | 11/07/69       | 11.39               |
| 04/08/69 | 9.13                | 11/08/69       | 11.28               |
| 05/28/69 | 5.32                | 11/09/69       | 11.18               |
| 06/11/69 | 7.60                | 11/10/69       | 11.05               |
| 06/27/69 | 8.47                | 11/11/69       | 10.94               |
| 07/16/69 | 8.50                | 11/12/69       | 10.85               |
| 07/30/69 | 8.51                | 11/13/69       | 10.73               |
| 08/13/69 | 9.14                | 11/14/69       | 10.68               |
| 09/09/69 | 9.88                | 11/17/69       | 10.63               |
| 09/26/69 | 9.93                | 11/24/69       | 10.44               |
| 10/08/69 | 9.82                | 12/02/69       | 10.31               |
| 10/16/69 | 9.80                | 12/03/69       | 10.80               |
| 10/19/69 | 10.07               | 12/04/69       | 10.97               |
| 10/20/69 | 10.06               | 12/05/69       | 11.10               |
| 10/21/69 | 10.56               |                |                     |
| 10/22/69 | 10.98               | 01/27/70       | 9.93                |
| 10/23/69 | 11.22               | 03/10/70       | 9.89                |
|          |                     | WELL DESTROYED |                     |

154-082-03CBAAL  
Sundre aquifer

LS Elev (msl,ft) = 1543.18

SI (ft) = 223-228

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 09/27/84 | 40.71               | 1502.47          | 07/29/85 | 47.72               | 1495.46          |
| 10/03/84 | 41.53               | 1501.65          | 08/14/85 | 44.75               | 1498.43          |
| 10/10/84 | 40.41               | 1502.77          | 08/27/85 | 44.63               | 1498.55          |
| 10/23/84 | 37.86               | 1505.32          | 09/11/85 | 43.38               | 1499.80          |
| 11/08/84 | 35.80               | 1507.38          | 09/24/85 | 43.08               | 1500.10          |
| 11/20/84 | 34.42               | 1508.76          | 10/23/85 | 30.61               | 1512.57          |
| 12/13/84 | 31.30               | 1511.88          | 11/21/85 | 28.52               | 1514.66          |
|          |                     |                  | 12/30/85 | 36.50               | 1506.68          |
| 01/09/85 | 36.69               | 1506.49          | 02/25/86 | 32.75               | 1510.43          |
| 02/12/85 | 36.74               | 1506.44          | 03/26/86 | 36.43               | 1506.75          |
| 03/06/85 | 38.44               | 1504.74          | 05/14/86 | 36.79               | 1506.39          |
| 03/19/85 | 38.46               | 1504.72          | 06/04/86 | 41.84               | 1501.34          |
| 04/17/85 | 34.91               | 1508.27          | 07/01/86 | 46.18               | 1497.00          |
| 05/02/85 | 36.42               | 1506.76          | 08/06/86 | 40.17               | 1503.01          |
| 05/14/85 | 36.55               | 1506.63          | 09/09/86 | 46.14               | 1497.04          |
| 06/06/85 | 38.10               | 1505.08          | 10/09/86 | 42.51               | 1500.67          |
| 06/20/85 | 41.80               | 1501.38          | 12/16/86 | 36.89               | 1506.29          |
| 07/01/85 | 39.11               | 1504.07          |          |                     |                  |
| 07/17/85 | 46.83               | 1496.35          |          |                     |                  |

154-082-03CBA2

Sundre Aquifer

LS Elev (msl,ft)= 1543.03

SI (ft)= 154-159

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 09/27/84 | 40.35               | 1502.68          | 07/29/85 | 47.36               | 1495.67          |
| 10/03/84 | 41.19               | 1501.84          | 08/14/85 | 44.41               | 1498.62          |
| 10/10/84 | 40.08               | 1502.95          | 08/27/85 | 44.32               | 1498.71          |
| 10/23/84 | 37.47               | 1505.56          | 09/11/85 | 42.89               | 1500.14          |
| 11/08/84 | 35.39               | 1507.64          | 09/24/85 | 42.69               | 1500.34          |
| 11/20/84 | 34.00               | 1509.03          | 10/23/85 | 30.42               | 1512.61          |
| 12/13/84 | 31.11               | 1511.92          | 11/21/85 | 28.33               | 1514.70          |
|          |                     |                  | 12/30/85 | 36.16               | 1506.87          |
| 01/09/85 | 36.35               | 1506.68          |          |                     |                  |
| 02/12/85 | 36.38               | 1506.65          | 02/25/86 | 32.58               | 1510.45          |
| 03/06/85 | 38.03               | 1505.00          | 03/26/86 | 36.09               | 1506.94          |
| 03/19/85 | 38.08               | 1504.95          | 05/14/86 | 36.27               | 1506.76          |
| 04/14/85 | 34.72               | 1508.31          | 06/04/86 | 41.35               | 1501.68          |
| 05/02/85 | 36.24               | 1506.79          | 07/01/86 | 45.70               | 1497.33          |
| 05/14/85 | 36.36               | 1506.67          | 08/06/86 | 39.69               | 1503.34          |
| 06/06/85 | 37.92               | 1505.11          | 09/09/86 | 45.80               | 1497.23          |
| 06/20/85 | 41.61               | 1501.42          | 10/09/86 | 42.07               | 1500.96          |
| 07/01/85 | 38.86               | 1504.17          | 12/16/86 | 36.41               | 1506.62          |
| 07/17/85 | 46.50               | 1496.53          |          |                     |                  |

154-082-03CBA3

Sundre aquifer

LS Elev (msl,ft)= 1543.23

SI (ft)= 94-99

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 09/27/84 | 36.25               | 1506.98          | 07/29/85 | 38.50               | 1504.73          |
| 10/03/84 | 36.10               | 1507.13          | 08/14/85 | 37.35               | 1505.88          |
| 10/10/84 | 35.41               | 1507.82          | 08/27/85 | 37.16               | 1506.07          |
| 10/23/84 | 33.55               | 1509.68          | 09/11/85 | 36.55               | 1506.68          |
| 11/08/84 | 32.02               | 1511.21          | 09/24/85 | 36.22               | 1507.01          |
| 11/20/84 | 31.08               | 1512.15          | 10/23/85 | 30.50               | 1512.73          |
| 12/13/84 | 29.58               | 1513.65          | 11/21/85 | 28.00               | 1515.23          |
|          |                     |                  | 12/30/85 | 31.19               | 1512.04          |
| 01/09/85 | 31.03               | 1512.20          |          |                     |                  |
| 02/12/85 | 32.19               | 1511.04          | 02/25/86 | 29.63               | 1513.60          |
| 03/06/85 | 32.47               | 1510.76          | 03/26/86 | 30.64               | 1512.59          |
| 03/19/85 | 32.72               | 1510.51          | 05/14/86 | 30.49               | 1512.74          |
| 04/17/85 | 31.44               | 1511.79          | 06/04/86 | 32.09               | 1511.14          |
| 05/02/85 | 31.46               | 1511.77          | 07/01/86 | 37.42               | 1505.81          |
| 05/14/85 | 31.77               | 1511.46          | 08/06/86 | 36.38               | 1506.85          |
| 06/06/85 | 32.97               | 1510.26          | 09/09/86 | 38.92               | 1504.31          |
| 06/20/85 | 34.41               | 1508.82          | 10/09/86 | 37.05               | 1506.18          |
| 07/01/85 | 34.13               | 1509.10          | 12/16/86 | 32.73               | 1510.50          |
| 07/17/85 | 37.52               | 1505.71          |          |                     |                  |

**154-082-03CBA4**  
**Souris Valley aquifer**

**LS Elev (msl,ft)= 1543.28**

**SI (ft)= 50-55**

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 09/28/84 | 27.50               | 1515.78          | 07/17/85 | 28.03               | 1515.25          |
| 10/03/84 | 27.33               | 1515.95          | 07/29/85 | 28.57               | 1514.71          |
| 10/10/84 | 27.11               | 1516.17          | 08/14/85 | 28.05               | 1515.23          |
| 10/23/84 | 26.07               | 1517.21          | 08/27/85 | 27.97               | 1515.31          |
| 11/08/84 | 25.39               | 1517.89          | 09/11/85 | 27.72               | 1515.56          |
| 11/20/84 | 24.92               | 1518.36          | 09/24/85 | 27.55               | 1515.73          |
| 12/13/84 | 24.25               | 1519.03          | 10/23/85 | 24.72               | 1518.56          |
|          |                     |                  | 11/21/85 | 23.50               | 1519.78          |
| 01/09/85 | 24.94               | 1518.34          | 12/30/85 | 24.97               | 1518.31          |
| 02/12/85 | 25.61               | 1517.67          |          |                     |                  |
| 03/06/85 | 25.58               | 1517.70          | 02/25/86 | 24.40               | 1518.88          |
| 03/19/85 | 25.30               | 1517.98          | 03/26/86 | 24.64               | 1518.64          |
| 04/17/85 | 25.00               | 1518.28          | 07/01/86 | 27.97               | 1515.31          |
| 05/02/85 | 24.85               | 1518.43          | 08/06/86 | 27.69               | 1515.59          |
| 05/14/85 | 24.97               | 1518.31          | 09/09/86 | 29.00               | 1514.28          |
| 06/06/85 | 25.55               | 1517.73          | 10/09/86 | 28.14               | 1515.14          |
| 06/20/85 | 26.30               | 1516.98          | 12/16/86 | 26.02               | 1517.26          |
| 07/01/85 | 26.38               | 1516.90          |          |                     |                  |

**154-082-03CBA5**  
**Souris Valley aquifer**

**LS Elev (msl,ft)= 1543.38**

**SI (ft)= 22-27**

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 09/28/84 | 19.19               | 1524.19          | 05/14/85 | 18.39               | 1524.99          |
| 10/03/84 | 19.25               | 1524.13          | 06/06/85 | 18.75               | 1524.63          |
| 10/10/84 | 19.05               | 1524.33          | 06/20/85 | 18.89               | 1524.49          |
| 10/23/84 | 18.97               | 1524.41          | 07/01/85 | 19.00               | 1524.38          |
| 11/08/84 | 19.19               | 1524.19          | 07/17/85 | 19.14               | 1524.24          |
| 11/20/84 | 19.28               | 1524.10          | 07/29/85 | 19.16               | 1524.22          |
| 12/13/84 | 19.33               | 1524.05          | 08/14/85 | 19.17               | 1524.21          |
|          |                     |                  | 08/27/85 | 19.14               | 1524.24          |
| 01/09/85 | 19.36               | 1524.02          | 09/11/85 | 19.27               | 1524.11          |
| 02/12/85 | 19.41               | 1523.97          | 09/24/85 | 19.24               | 1524.14          |
| 03/06/85 | 18.46               | 1524.92          | 10/23/85 | 19.17               | 1524.21          |
| 03/19/85 | 17.47               | 1525.91          | 11/21/85 | 19.22               | 1524.16          |
| 04/17/85 | 17.35               | 1526.03          | 12/30/85 | 18.89               | 1524.49          |
| 05/02/85 | 18.35               | 1525.03          | 02/25/86 | 19.15               | 1524.23          |
|          |                     |                  | 03/26/86 | 18.25               | 1525.13          |
|          |                     |                  | 05/14/86 | PLUGGED, DESTROYED  |                  |

**154-082-03CBA6 (Replacement well for 03CBA5)**

**Souris Valley Aquifer**

**LS Elev (msl,ft)=1543.40**

**SI (ft)= 22-27**

| Date     | Depth to Water (ft) | Date     | Depth to Water (ft) | Date     | Depth to Water (ft) |
|----------|---------------------|----------|---------------------|----------|---------------------|
| 07/01/86 | 19.18               | 08/06/86 | 19.23               | 10/09/86 | 19.37               |
| 07/09/86 | 19.26               | 09/09/86 | 19.33               | 12/16/86 | 19.43               |

154-082-03CBA1

Souris Valley-Sundre Aquifer

well not surveyed

SI (ft) = 96-99

| Date     | Depth to Water (ft) | Date           | Depth to Water (ft) |
|----------|---------------------|----------------|---------------------|
| 11/22/68 | 12.39               | 10/25/69       | 14.85               |
| 11/27/68 | 12.60               | 10/26/69       | 15.09               |
| 12/04/68 | 12.39               | 10/27/69       | 15.25               |
| 12/07/68 | 12.53               | 10/28/69       | 15.47               |
| 12/11/68 | 12.47               | 10/29/69       | 15.55               |
| 12/16/68 | 12.55               | 10/30/69       | 15.76               |
| 12/19/68 | 12.56               | 10/31/69       | 15.93               |
| 12/20/68 | 12.97               | 11/01/69       | 16.00               |
| 12/21/68 | 12.94               | 11/02/69       | 16.13               |
| 12/27/68 | 12.59               | 11/03/69       | 16.25               |
| 01/04/69 | 12.60               | 11/04/69       | 16.27               |
| 02/06/69 | 12.59               | 11/05/69       | 14.76               |
| 03/12/69 | 12.56               | 11/06/69       | 14.19               |
| 04/08/69 | 10.90               | 11/07/69       | 13.85               |
| 05/28/69 | 6.02                | 11/08/69       | 13.64               |
| 06/11/69 | 8.76                | 11/09/69       | 13.44               |
| 06/27/69 | 9.85                | 11/10/69       | 13.23               |
| 07/16/69 | 9.86                | 11/11/69       | 13.10               |
| 07/30/69 | 9.78                | 11/12/69       | 12.97               |
| 08/13/69 | 10.39               | 11/13/69       | 12.88               |
| 09/09/69 | 11.25               | 11/14/69       | 12.78               |
| 09/26/69 | 11.39               | 11/17/69       | 12.64               |
| 10/08/69 | 11.31               | 11/24/69       | 12.35               |
| 10/16/69 | 11.39               | 12/02/69       | 12.19               |
| 10/19/69 | 11.72               | 12/03/69       | 13.35               |
| 10/20/69 | 11.68               | 12/04/69       | 13.68               |
| 10/21/69 | 13.18               | 12/05/69       | 13.89               |
| 10/22/69 | 13.85               | 01/27/70       | 11.76               |
| 10/23/69 | 14.19               | 03/10/70       | 11.81               |
| 10/24/69 | 14.56               | WELL DESTROYED |                     |

154-082-03CBA2

Sundre aquifer

LS Elev (msl,ft)= 1543.30 SI (ft)= 231-237

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date           | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------------|---------------------|------------------|
| 11/22/68 | 14.75               | 1528.55          | 11/02/69       | 19.99               | 1523.31          |
| 11/27/68 | 14.80               | 1528.50          | 11/03/69       | 20.11               | 1523.19          |
| 12/04/68 | 14.77               | 1528.53          | 11/04/69       | 20.08               | 1523.22          |
| 12/07/68 | 14.97               | 1528.33          | 11/05/69       | 17.66               | 1525.64          |
| 12/11/68 | 14.82               | 1528.48          | 11/06/69       | 16.83               | 1526.47          |
| 12/16/68 | 14.89               | 1528.41          | 11/07/69       | 16.30               | 1527.00          |
| 12/19/68 | 14.97               | 1528.33          | 11/08/69       | 16.16               | 1527.14          |
| 12/20/68 | 15.57               | 1527.73          | 11/09/69       | 15.86               | 1527.44          |
| 12/21/68 | 15.50               | 1527.80          | 11/10/69       | 15.63               | 1527.67          |
| 12/27/68 | 14.97               | 1528.33          | 11/11/69       | 15.50               | 1527.80          |
|          |                     |                  | 11/12/69       | 15.35               | 1527.95          |
| 01/04/69 | 14.98               | 1528.32          | 11/13/69       | 15.25               | 1528.05          |
| 03/12/69 | 15.03               | 1528.27          | 11/14/69       | 15.13               | 1528.17          |
| 04/08/69 | 13.68               | 1529.62          | 11/17/69       | 14.96               | 1528.34          |
| 05/28/69 | 9.26                | 1534.04          | 11/24/69       | 14.69               | 1528.61          |
| 06/11/69 | 11.67               | 1531.63          | 12/02/69       | 14.59               | 1528.71          |
| 06/27/69 | 12.50               | 1530.80          | 12/03/69       | 16.47               | 1526.83          |
| 07/16/69 | 12.60               | 1530.70          | 12/04/69       | 16.92               | 1526.38          |
| 07/30/69 | 12.47               | 1530.83          | 12/05/69       | 17.27               | 1526.03          |
| 08/13/69 | 13.01               | 1530.29          |                |                     |                  |
| 09/09/69 | 13.71               | 1529.59          | 01/27/70       | 14.05               | 1529.25          |
| 09/26/69 | 13.84               | 1529.46          | 03/10/70       | 14.18               | 1529.12          |
| 10/08/69 | 13.75               | 1529.55          | 04/06/70       | 13.96               | 1529.34          |
| 10/16/69 | 13.81               | 1529.49          | 06/09/70       | 7.89                | 1535.41          |
| 10/19/69 | 14.26               | 1529.04          | 07/24/70       | 11.68               | 1531.62          |
| 10/20/69 | 14.18               | 1529.12          | 08/27/70       | 13.03               | 1530.27          |
| 10/21/69 | 16.55               | 1526.75          | 10/01/70       | 13.39               | 1529.91          |
| 10/22/69 | 17.50               | 1525.80          | 12/23/70       | 13.23               | 1530.07          |
| 10/23/69 | 17.96               | 1525.34          |                |                     |                  |
| 10/24/69 | 18.36               | 1524.94          | 04/15/71       | 12.47               | 1530.83          |
| 10/25/69 | 18.67               | 1524.63          | 08/27/71       | 12.68               | 1530.62          |
| 10/26/69 | 18.94               | 1524.36          | 12/21/71       | 12.38               | 1530.92          |
| 10/27/69 | 19.11               | 1524.19          |                |                     |                  |
| 10/28/69 | 19.27               | 1524.03          | 10/12/72       | 12.42               | 1530.88          |
| 10/29/69 | 19.44               | 1523.86          |                |                     |                  |
| 10/30/69 | 19.61               | 1523.69          | 06/08/73       | 12.89               | 1530.41          |
| 10/31/69 | 19.72               | 1523.58          |                |                     |                  |
| 11/01/69 | 19.86               | 1523.44          | 07/09/74       | 10.85               | 1532.45          |
|          |                     |                  | WELL DESTROYED |                     |                  |

154-082-03CBA3  
Sundre aquifer

LS Elev (msl,ft) = 1539.70

SI (ft) = 257-263

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/14/68 | 13.11               | 1526.59          | 12/21/71 | 9.10                | 1530.60          |
| 11/19/68 | 13.18               | 1526.52          |          |                     |                  |
| 11/20/68 | 13.10               | 1526.60          | 10/13/74 | 9.43                | 1530.27          |
| 11/22/68 | 13.06               | 1526.64          |          |                     |                  |
| 11/27/68 | 13.07               | 1526.63          | 07/16/76 | 6.22                | 1533.48          |
| 12/04/68 | 13.06               | 1526.64          | 08/27/76 | 14.38               | 1525.32          |
| 12/07/68 | 13.27               | 1526.43          | 09/09/76 | 15.43               | 1524.27          |
| 12/11/68 | 13.14               | 1526.56          | 09/23/76 | 16.85               | 1522.85          |
| 12/16/68 | 13.19               | 1526.51          | 10/25/76 | 10.17               | 1529.53          |
| 12/19/68 | 13.30               | 1526.40          | 12/03/76 | 10.39               | 1529.31          |
| 12/20/68 | 14.14               | 1525.56          |          |                     |                  |
| 12/21/68 | 13.84               | 1525.86          | 02/08/77 | 18.47               | 1521.23          |
| 12/27/68 | 13.28               | 1526.42          | 03/15/77 | 18.32               | 1521.38          |
|          |                     |                  | 05/06/77 | 10.44               | 1529.26          |
| 01/04/69 | 13.27               | 1526.43          | 06/03/77 | 10.93               | 1528.77          |
| 03/12/69 | 13.26               | 1526.44          | 06/30/77 | 15.60               | 1524.10          |
| 04/08/69 | 11.97               | 1527.73          | 07/14/77 | 21.44               | 1518.26          |
| 05/28/69 | 7.71                | 1531.99          | 07/28/77 | 23.21               | 1516.49          |
| 06/11/69 | 10.17               | 1529.53          | 08/10/77 | 25.63               | 1514.07          |
| 06/27/69 | 10.88               | 1528.82          | 08/26/77 | 26.10               | 1513.60          |
| 07/16/69 | 11.06               | 1528.64          | 09/14/77 | 24.85               | 1514.85          |
| 07/17/69 | 11.06               | 1528.64          | 10/11/77 | 24.66               | 1515.04          |
| 07/30/69 | 10.89               | 1528.81          | 11/10/77 | 25.49               | 1514.21          |
| 08/13/69 | 11.44               | 1528.26          | 12/15/77 | 24.32               | 1515.38          |
| 09/09/69 | 12.19               | 1527.51          |          |                     |                  |
| 09/26/69 | 12.30               | 1527.40          | 03/28/78 | 26.38               | 1513.32          |
| 10/08/69 | 12.18               | 1527.52          | 04/26/78 | 26.55               | 1513.15          |
| 10/16/69 | 12.27               | 1527.43          | 05/24/78 | 30.08               | 1509.62          |
| 10/20/69 | 12.68               | 1527.02          | 06/27/78 | 28.00               | 1511.70          |
| 10/21/69 | 15.21               | 1524.49          | 07/26/78 | 31.05               | 1508.65          |
| 10/22/69 | 16.22               | 1523.48          | 08/29/78 | 28.16               | 1511.54          |
| 10/23/69 | 16.64               | 1523.06          | 09/26/78 | 24.24               | 1515.46          |
| 10/24/69 | 17.02               | 1522.68          | 10/27/78 | 27.83               | 1511.87          |
| 10/25/69 | 17.44               | 1522.26          | 12/04/78 | 26.83               | 1512.87          |
| 10/26/69 | 17.61               | 1522.09          |          |                     |                  |
| 10/28/69 | 17.94               | 1521.76          | 01/19/79 | 27.44               | 1512.26          |
| 10/30/69 | 18.21               | 1521.49          | 04/30/79 | 21.50               | 1518.20          |
| 11/01/69 | 18.55               | 1521.15          | 06/27/79 | 26.77               | 1512.93          |
| 11/03/69 | 18.77               | 1520.93          | 07/31/79 | 16.83               | 1522.87          |
| 11/04/69 | 16.63               | 1523.07          | 08/28/79 | 28.28               | 1511.42          |
| 11/05/69 | 15.67               | 1524.03          | 09/27/79 | 31.19               | 1508.51          |
| 11/06/69 | 15.13               | 1524.57          | 10/31/79 | 28.49               | 1511.21          |
| 11/07/69 | 14.71               | 1524.99          | 11/29/79 | 30.27               | 1509.43          |
| 11/08/69 | 14.55               | 1525.15          | 12/27/79 | 28.61               | 1511.09          |
| 11/10/69 | 14.06               | 1525.64          |          |                     |                  |
| 11/12/69 | 13.81               | 1525.89          | 01/29/80 | 28.80               | 1510.90          |
| 11/13/69 | 13.71               | 1525.99          | 02/28/80 | 29.85               | 1509.85          |
| 11/14/69 | 13.60               | 1526.10          | 03/25/80 | 27.16               | 1512.54          |
| 11/24/69 | 13.14               | 1526.56          | 04/25/80 | 30.30               | 1509.40          |
| 12/02/69 | 13.02               | 1526.68          | 05/28/80 | 34.50               | 1505.20          |
| 12/03/69 | 15.13               | 1524.57          | 06/27/80 | 35.10               | 1504.60          |
| 12/04/69 | 14.31               | 1525.39          | 07/29/80 | 23.39               | 1516.31          |
| 12/05/69 | 15.02               | 1524.68          | 08/28/80 | 30.22               | 1509.48          |
|          |                     |                  | 09/26/80 | 30.72               | 1508.98          |
| 01/27/70 | 12.60               | 1527.10          | 10/29/80 | 28.69               | 1511.01          |
| 03/10/70 | 12.76               | 1526.94          | 11/25/80 | 30.19               | 1509.51          |
| 04/06/70 | 12.52               | 1527.18          | 12/30/80 | 30.55               | 1509.15          |
| 07/24/70 | 11.28               | 1528.42          |          |                     |                  |
| 08/27/70 | 11.63               | 1528.07          | 01/29/81 | 31.05               | 1508.65          |
| 10/01/70 | 11.98               | 1527.72          | 03/02/81 | 31.58               | 1508.12          |
|          |                     |                  | 03/26/81 | 32.64               | 1507.06          |
| 04/15/71 | 9.10                | 1530.60          | 04/30/81 | 32.05               | 1507.65          |
| 07/22/71 | 8.68                | 1531.02          | 05/28/81 | 32.66               | 1507.04          |
| 08/21/71 | 9.30                | 1530.40          | 06/29/81 | 32.49               | 1507.21          |

154-082-03CBA3 (continued)

Sundre aquifer

LS Elev (msl,ft)= 1539.70

SI (ft)= 257-263

| Date     | Depth to<br>Water (ft) | WL Elev<br>(msl,ft) | Date     | Depth to<br>Water (ft) | WL Elev<br>(msl,ft) |
|----------|------------------------|---------------------|----------|------------------------|---------------------|
| 07/28/81 | 36.91                  | 1502.79             | 08/27/84 | 43.17                  | 1496.53             |
| 08/28/81 | 34.66                  | 1505.04             | 09/07/84 | 39.85                  | 1499.85             |
| 09/29/81 | 35.50                  | 1504.20             | 09/12/84 | 34.52                  | 1505.18             |
| 10/28/81 | 37.17                  | 1502.53             | 09/20/84 | 37.69                  | 1502.01             |
| 11/27/81 | 37.66                  | 1502.04             | 09/27/84 | 36.83                  | 1502.87             |
| 12/30/81 | 38.07                  | 1501.63             | 10/03/84 | 37.60                  | 1502.10             |
|          |                        |                     | 10/10/84 | 36.27                  | 1503.43             |
| 01/28/82 | 38.39                  | 1501.31             | 10/23/84 | 32.94                  | 1506.76             |
| 02/26/82 | 39.33                  | 1500.37             | 11/08/84 | 31.00                  | 1508.70             |
| 03/29/82 | 36.52                  | 1503.18             | 11/20/84 | 29.61                  | 1510.09             |
| 04/30/82 | 20.25                  | 1519.45             | 12/13/84 | 27.69                  | 1512.01             |
| 05/27/82 | 27.39                  | 1512.31             |          |                        |                     |
| 06/29/82 | 29.64                  | 1510.06             | 01/09/85 | 32.38                  | 1507.32             |
| 07/28/82 | 33.33                  | 1506.37             | 02/12/85 | 32.13                  | 1507.57             |
| 08/31/82 | 36.10                  | 1503.60             | 03/06/85 | 33.66                  | 1506.04             |
| 09/30/82 | 35.30                  | 1504.40             | 03/19/85 | 33.72                  | 1505.98             |
| 10/29/82 | 33.83                  | 1505.87             | 04/17/85 | 32.38                  | 1507.32             |
| 11/29/82 | 34.03                  | 1505.67             | 05/02/85 | 33.50                  | 1506.20             |
| 12/27/82 | 32.97                  | 1506.73             | 05/14/85 | 33.57                  | 1506.13             |
|          |                        |                     | 06/06/85 | 34.99                  | 1504.71             |
| 01/28/83 | 34.52                  | 1505.18             | 06/20/85 | 38.44                  | 1501.26             |
| 02/28/83 | 34.58                  | 1505.12             | 07/01/85 | 36.16                  | 1503.54             |
| 03/31/83 | 35.39                  | 1504.31             | 07/17/85 | 43.13                  | 1496.57             |
| 04/29/83 | 30.74                  | 1508.96             | 07/29/85 | 44.25                  | 1495.45             |
| 05/27/83 | 31.33                  | 1508.37             | 08/14/85 | 40.94                  | 1498.76             |
| 07/08/83 | 37.02                  | 1502.68             | 08/27/85 | 41.72                  | 1497.98             |
| 07/28/83 | 40.97                  | 1498.73             | 09/11/85 | 38.77                  | 1500.93             |
| 08/30/83 | 40.33                  | 1499.37             | 09/24/85 | 38.58                  | 1501.12             |
| 11/22/83 | 38.66                  | 1501.04             | 10/23/85 | 26.77                  | 1512.93             |
|          |                        |                     | 11/21/85 | 25.14                  | 1514.56             |
| 03/12/84 | 34.92                  | 1504.78             | 12/30/85 | 32.24                  | 1507.46             |
| 04/03/84 | 35.03                  | 1504.67             |          |                        |                     |
| 04/18/84 | 34.88                  | 1504.82             | 02/25/86 | 29.24                  | 1510.46             |
| 05/08/84 | 33.83                  | 1505.87             | 03/26/86 | 32.33                  | 1507.37             |
| 05/29/84 | 35.75                  | 1503.95             | 05/14/86 | 32.04                  | 1507.66             |
| 06/15/84 | 35.69                  | 1504.01             | 06/04/86 | 37.92                  | 1501.78             |
| 06/26/84 | 37.80                  | 1501.90             | 07/01/86 | 42.60                  | 1497.10             |
| 07/10/84 | 42.30                  | 1497.40             | 08/06/86 | 35.70                  | 1504.00             |
| 07/27/84 | 46.38                  | 1493.32             | 09/09/86 | 42.74                  | 1496.96             |
| 08/09/84 | 44.60                  | 1495.10             | 10/09/86 | 38.04                  | 1501.66             |
| 08/16/84 | 46.36                  | 1493.34             | 12/16/86 | 32.06                  | 1507.64             |
| 08/21/84 | 43.19                  | 1496.51             |          |                        |                     |

154-082-03CBA4

Souris Valley-Sundre aquifer

LS Elev (msl,ft)= 1540.30

SI (ft)= 148-151

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 07/30/69 | 9.89                | 1530.41          | 09/23/76 | 23.72               | 1516.58          |
| 08/13/69 | 10.48               | 1529.82          | 10/28/76 | 18.25               | 1522.05          |
| 09/09/69 | 11.23               | 1529.07          | 12/03/76 | 18.44               | 1521.86          |
| 09/26/69 | 11.38               | 1528.92          |          |                     |                  |
| 10/08/69 | 11.22               | 1529.08          | 01/05/77 | 24.60               | 1515.70          |
| 10/16/69 | 11.30               | 1529.00          | 02/08/77 | 25.75               | 1514.55          |
| 10/19/69 | 11.75               | 1528.55          | 03/15/77 | 25.39               | 1514.91          |
| 10/20/69 | 11.65               | 1528.65          | 05/06/77 | 18.41               | 1521.89          |
| 10/21/69 | 14.25               | 1526.05          | 06/03/77 | 19.02               | 1521.28          |
| 10/22/69 | 15.18               | 1525.12          | 06/30/77 | 22.85               | 1517.45          |
| 10/23/69 | 15.64               | 1524.66          | 07/07/77 | 28.36               | 1511.94          |
| 10/24/69 | 16.03               | 1524.27          | 07/14/77 | 30.77               | 1509.53          |
| 10/25/69 | 16.39               | 1523.91          | 07/28/77 | 30.92               | 1509.38          |
| 10/26/69 | 16.63               | 1523.67          | 08/10/77 | 32.47               | 1507.83          |
| 10/27/69 | 16.80               | 1523.50          | 08/26/77 | 33.83               | 1506.47          |
| 10/28/69 | 16.94               | 1523.36          | 09/14/77 | 32.44               | 1507.86          |
| 10/29/69 | 17.10               | 1523.20          | 10/11/77 | 32.77               | 1507.53          |
| 10/30/69 | 17.28               | 1523.02          | 11/10/77 | 33.11               | 1507.19          |
| 10/31/69 | 17.41               | 1522.89          | 12/15/77 | 31.17               | 1509.13          |
| 11/01/69 | 17.55               | 1522.75          |          |                     |                  |
| 11/02/69 | 17.67               | 1522.63          | 01/24/78 | 32.92               | 1507.38          |
| 11/03/69 | 17.75               | 1522.55          | 02/22/78 | 35.19               | 1505.11          |
| 11/04/69 | 17.77               | 1522.53          | 03/28/78 | 33.99               | 1506.31          |
| 11/05/69 | 15.14               | 1525.16          | 04/26/78 | 33.32               | 1506.98          |
| 11/06/69 | 14.31               | 1525.99          | 05/24/78 | 37.94               | 1502.36          |
| 11/07/69 | 13.77               | 1526.53          | 06/27/78 | 35.88               | 1504.42          |
| 11/08/69 | 13.56               | 1526.74          | 07/26/78 | 39.82               | 1500.48          |
| 11/09/69 | 13.34               | 1526.96          | 08/29/78 | 36.50               | 1503.80          |
| 11/10/69 | 13.07               | 1527.23          | 09/26/78 | 31.97               | 1508.33          |
| 11/11/69 | 12.96               | 1527.34          | 10/27/78 | 35.36               | 1504.94          |
| 11/12/69 | 12.81               | 1527.49          | 12/04/78 | 33.97               | 1506.33          |
| 11/13/69 | 12.72               | 1527.58          |          |                     |                  |
| 11/14/69 | 12.61               | 1527.69          | 01/19/79 | 34.67               | 1505.63          |
| 11/17/69 | 12.44               | 1527.86          | 03/28/79 | 35.77               | 1504.53          |
| 11/24/69 | 12.18               | 1528.12          | 04/30/79 | 28.36               | 1511.94          |
| 12/02/69 | 12.09               | 1528.21          | 05/29/79 | 25.52               | 1514.78          |
| 12/03/69 | 14.18               | 1526.12          | 06/27/79 | 34.32               | 1505.98          |
| 12/04/69 | 14.60               | 1525.70          | 07/31/79 | 26.33               | 1513.97          |
| 12/05/69 | 14.97               | 1525.33          | 08/28/79 | 36.22               | 1504.08          |
|          |                     |                  | 09/27/79 | 39.55               | 1500.75          |
| 01/27/70 | 11.55               | 1528.75          | 10/31/79 | 35.91               | 1504.39          |
| 03/10/70 | 11.68               | 1528.62          | 11/29/79 | 37.83               | 1502.47          |
| 04/06/70 | 11.46               | 1528.84          | 12/27/79 | 35.80               | 1504.50          |
| 07/24/70 | 9.23                | 1531.07          |          |                     |                  |
| 08/27/70 | 10.57               | 1529.73          | 01/29/80 | 39.49               | 1500.81          |
| 10/01/70 | 10.97               | 1529.33          | 02/28/80 | 39.19               | 1501.11          |
|          |                     |                  | 03/25/80 | 36.66               | 1503.64          |
| 04/15/71 | 10.02               | 1530.28          | 04/25/80 | 37.63               | 1502.67          |
| 07/22/71 | 9.57                | 1530.73          | 05/25/80 | 43.94               | 1496.36          |
| 08/27/71 | 10.26               | 1530.04          | 06/27/80 | 43.24               | 1497.06          |
| 12/21/71 | 10.05               | 1530.25          | 07/29/80 | 31.44               | 1508.86          |
|          |                     |                  | 08/28/80 | 38.27               | 1502.03          |
| 10/12/72 | 9.98                | 1530.32          | 09/26/80 | 38.08               | 1502.22          |
|          |                     |                  | 10/29/80 | 35.88               | 1504.42          |
| 06/08/73 | 10.44               | 1529.86          | 11/25/80 | 37.39               | 1502.91          |
|          |                     |                  | 12/30/80 | 37.92               | 1502.38          |
| 07/09/74 | 8.39                | 1531.91          | 01/29/81 | 37.86               | 1502.44          |
| 12/13/74 | 14.47               | 1525.83          | 03/02/81 | 38.88               | 1501.42          |
|          |                     |                  | 03/26/81 | 41.61               | 1498.69          |
| 06/04/76 | 13.27               | 1527.03          | 04/30/81 | 39.30               | 1501.00          |
| 07/16/76 | 14.27               | 1526.03          | 05/28/81 | 41.80               | 1498.50          |
| 08/24/76 | 22.22               | 1518.08          | 06/29/81 | 39.69               | 1500.61          |
| 08/27/76 | 21.58               | 1518.72          | 07/28/81 | 45.27               | 1495.03          |
| 09/09/76 | 22.74               | 1517.56          |          |                     |                  |

154-082-03CBA4 (continued)  
Souris Valley-Sundre aquifer

LS Elev (msl,ft)= 1540.30 SI (ft)= 148-151

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 08/28/81 | 42.25               | 1498.05          | 08/16/84 | 54.11               | 1486.19          |
| 09/29/81 | 43.60               | 1496.70          | 08/21/84 | 50.96               | 1489.34          |
| 10/28/81 | 45.38               | 1494.92          | 08/27/84 | 51.78               | 1488.52          |
| 11/27/81 | 46.08               | 1494.22          | 09/07/84 | 47.08               | 1493.22          |
| 12/30/81 | 46.53               | 1493.77          | 09/12/84 | 42.38               | 1497.92          |
|          |                     |                  | 09/20/84 | 45.36               | 1494.94          |
| 01/28/82 | 46.32               | 1493.98          | 09/27/84 | 45.16               | 1495.14          |
| 02/26/82 | 47.41               | 1492.89          | 10/03/84 | 45.97               | 1494.33          |
| 03/29/82 | 43.30               | 1497.00          | 10/10/84 | 44.77               | 1495.53          |
| 04/30/82 | 28.25               | 1512.05          | 10/23/84 | 42.33               | 1497.97          |
| 05/27/82 | 36.02               | 1504.28          | 11/08/84 | 40.22               | 1500.08          |
| 06/29/82 | 36.67               | 1503.63          | 11/20/84 | 38.57               | 1501.73          |
| 07/28/82 | 40.86               | 1499.44          | 12/13/84 | 35.22               | 1505.08          |
| 08/31/82 | 44.28               | 1496.02          |          |                     |                  |
| 09/30/82 | 43.02               | 1497.28          | 01/09/85 | 41.05               | 1499.25          |
| 10/29/82 | 41.41               | 1498.89          | 02/12/85 | 40.94               | 1499.36          |
| 11/29/82 | 41.47               | 1498.83          | 03/06/85 | 42.99               | 1497.31          |
| 12/27/82 | 40.22               | 1500.08          | 03/19/85 | 43.00               | 1497.30          |
|          |                     |                  | 04/17/85 | 39.44               | 1500.86          |
| 01/28/83 | 42.14               | 1498.16          | 05/02/85 | 40.63               | 1499.67          |
| 02/28/83 | 42.61               | 1497.69          | 05/14/85 | 40.61               | 1499.69          |
| 03/31/83 | 43.52               | 1496.78          | 06/06/85 | 42.13               | 1498.17          |
| 04/29/83 | 38.83               | 1501.47          | 06/20/85 | 46.11               | 1494.19          |
| 07/08/83 | 43.75               | 1496.55          | 07/01/85 | 43.57               | 1496.73          |
| 07/28/83 | 47.92               | 1492.38          | 07/17/85 | 51.13               | 1489.17          |
| 08/30/83 | 47.11               | 1493.19          | 07/29/85 | 52.22               | 1488.08          |
| 11/22/83 | 45.96               | 1494.34          | 08/14/85 | 49.03               | 1491.27          |
| 12/08/83 | 46.61               | 1493.69          | 08/27/85 | 49.52               | 1490.78          |
| 12/14/83 | 44.91               | 1495.39          | 09/11/85 | 47.89               | 1492.41          |
|          |                     |                  | 09/24/85 | 46.96               | 1493.34          |
| 01/03/84 | 44.58               | 1495.72          | 10/23/85 | 34.55               | 1505.75          |
| 01/16/84 | 45.61               | 1494.69          | 11/21/85 | 32.46               | 1507.84          |
| 02/01/84 | 45.16               | 1495.14          | 12/30/85 | 40.83               | 1499.47          |
| 02/21/84 | 45.19               | 1495.11          |          |                     |                  |
| 03/12/84 | 43.91               | 1496.39          | 02/25/86 | 36.83               | 1503.47          |
| 04/03/84 | 43.97               | 1496.33          | 03/26/86 | 40.77               | 1499.53          |
| 04/18/84 | 43.88               | 1496.42          | 05/14/86 | 40.38               | 1499.92          |
| 05/08/84 | 42.74               | 1497.56          | 06/04/86 | 45.93               | 1494.37          |
| 05/29/84 | 42.86               | 1497.44          | 07/01/86 | 50.41               | 1489.89          |
| 06/15/84 | 42.63               | 1497.67          | 08/06/86 | 48.69               | 1491.61          |
| 06/26/84 | 44.82               | 1495.48          | 09/09/86 | 50.20               | 1490.10          |
| 07/10/84 | 49.78               | 1490.52          | 10/09/86 | 46.33               | 1493.97          |
| 07/27/84 | 53.82               | 1486.48          |          |                     |                  |
| 08/09/84 | 52.25               | 1488.05          | 12/16/86 | 41.09               | 1499.21          |

154-082-03CBCA1

Sundre aquifer

LS Elev (msl,ft)= 1546.18 SI (ft)= 242-247

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 09/27/84 | 43.47               | 1502.71          | 07/29/85 | 50.83               | 1495.35          |
| 10/03/84 | 44.27               | 1501.91          | 08/14/85 | 48.05               | 1498.13          |
| 10/10/84 | 42.91               | 1503.27          | 08/27/85 | 48.72               | 1497.46          |
| 10/23/84 | 39.47               | 1506.71          | 09/11/85 | 45.28               | 1500.90          |
| 11/08/84 | 37.57               | 1508.61          | 09/24/85 | 45.00               | 1501.18          |
| 11/20/84 | 36.19               | 1509.99          | 10/23/85 | 33.55               | 1512.63          |
| 12/13/84 | 34.58               | 1511.60          | 11/21/85 | 31.64               | 1514.54          |
|          |                     |                  | 12/30/85 | 38.78               | 1507.40          |
| 01/09/85 | 38.97               | 1507.21          |          |                     |                  |
| 02/12/85 | 38.80               | 1507.38          | 02/25/86 | 35.98               | 1510.20          |
| 03/06/85 | 40.11               | 1506.07          | 03/26/86 | 38.94               | 1507.24          |
| 03/19/85 | 40.17               | 1506.01          | 05/14/86 | 38.65               | 1507.53          |
| 04/17/85 | 39.64               | 1506.54          | 06/04/86 | 44.81               | 1501.37          |
| 05/02/85 | 40.72               | 1505.46          | 07/01/86 | 49.51               | 1496.67          |
| 05/14/85 | 40.74               | 1505.44          | 08/06/86 | 42.32               | 1503.86          |
| 06/06/85 | 42.16               | 1504.02          | 09/09/86 | 49.51               | 1496.67          |
| 06/20/85 | 45.46               | 1500.72          | 10/09/86 | 44.62               | 1501.56          |
| 07/01/85 | 43.25               | 1502.93          | 12/16/86 | 38.66               | 1507.52          |
| 07/17/85 | 50.11               | 1496.07          |          |                     |                  |

154-082-03CBCA2

Sundre aquifer

LS Elev (msl,ft)= 1546.30 SI (ft)= 175-180

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 09/27/84 | 43.47               | 1502.83          | 07/29/85 | 50.89               | 1495.41          |
| 10/03/84 | 44.22               | 1502.08          | 08/14/85 | 48.02               | 1498.28          |
| 10/10/84 | 42.88               | 1503.42          | 08/27/85 | 48.69               | 1497.61          |
| 10/23/84 | 39.47               | 1506.83          | 09/11/85 | 45.10               | 1501.20          |
| 11/08/84 | 37.57               | 1508.73          | 09/24/85 | 44.86               | 1501.44          |
| 11/20/84 | 36.25               | 1510.05          | 10/23/85 | 33.63               | 1512.67          |
| 12/13/84 | 34.46               | 1511.84          | 11/21/85 | 31.55               | 1514.75          |
|          |                     |                  | 12/30/85 | 38.67               | 1507.63          |
| 01/09/85 | 38.88               | 1507.42          |          |                     |                  |
| 02/12/85 | 38.88               | 1507.42          | 02/25/86 | 35.89               | 1510.41          |
| 03/06/85 | 40.08               | 1506.22          | 03/26/86 | 38.85               | 1507.45          |
| 03/19/85 | 40.11               | 1506.19          | 05/14/86 | 38.51               | 1507.79          |
| 04/17/85 | 39.71               | 1506.59          | 06/04/86 | 44.94               | 1501.36          |
| 05/02/85 | 40.86               | 1505.44          | 07/01/86 | 49.53               | 1496.77          |
| 05/14/85 | 40.92               | 1505.38          | 08/06/86 | 42.33               | 1503.97          |
| 06/06/85 | 42.30               | 1504.00          | 09/09/86 | 49.68               | 1496.62          |
| 06/20/85 | 45.58               | 1500.72          | 10/09/86 | 44.51               | 1501.79          |
| 07/01/85 | 43.33               | 1502.97          | 12/16/86 | 38.62               | 1507.68          |
| 07/17/85 | 50.05               | 1496.25          |          |                     |                  |

**154-082-03CBCA3**  
**Sundre aquifer**

**LS Elev (msl,ft)= 1546.10 SI (ft)= 105-110**

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 09/27/84 | 40.91               | 1505.19          | 07/29/85 | 46.19               | 1499.91          |
| 10/03/84 | 41.30               | 1504.80          | 08/14/85 | 43.66               | 1502.44          |
| 10/10/84 | 40.17               | 1505.93          | 08/27/85 | 43.97               | 1502.13          |
| 10/23/84 | 37.52               | 1508.58          | 09/11/85 | 41.99               | 1504.11          |
| 11/08/84 | 35.72               | 1510.38          | 09/24/85 | 41.02               | 1505.08          |
| 11/20/84 | 34.89               | 1511.21          | 10/23/85 | 33.17               | 1512.93          |
| 12/13/84 | 33.21               | 1512.89          | 11/21/85 | 31.10               | 1515.00          |
|          |                     |                  | 12/30/85 | 36.21               | 1509.89          |
| 01/09/85 | 36.39               | 1509.71          |          |                     |                  |
| 02/12/85 | 37.27               | 1508.83          | 02/25/86 | 34.06               | 1512.04          |
| 03/06/85 | 37.67               | 1508.43          | 03/26/86 | 36.22               | 1509.88          |
| 03/19/85 | 37.64               | 1508.46          | 05/14/86 | 36.05               | 1510.05          |
| 04/17/85 | 36.47               | 1509.63          | 06/04/86 | 41.04               | 1505.06          |
| 05/02/85 | 37.50               | 1508.60          | 07/01/86 | 44.45               | 1501.65          |
| 05/14/85 | 37.58               | 1508.52          | 08/06/86 | 40.66               | 1505.44          |
| 06/06/85 | 39.21               | 1506.89          | 09/09/86 | 45.65               | 1500.45          |
| 06/20/85 | 41.52               | 1504.58          | 10/09/86 | 41.80               | 1504.30          |
| 07/01/85 | 39.66               | 1506.44          | 12/16/86 | 36.93               | 1509.17          |
| 07/17/85 | 45.27               | 1500.83          |          |                     |                  |

**154-082-03CBCA4**  
**Souris Valley aquifer**

**LS Elev (msl,ft)= 1546.10 SI (ft)= 56-61**

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 09/27/84 | 28.91               | 1517.19          | 07/29/85 | 29.91               | 1516.19          |
| 10/03/84 | 28.63               | 1517.47          | 08/14/85 | 29.36               | 1516.74          |
| 10/10/84 | 28.50               | 1517.60          | 08/27/85 | 29.30               | 1516.80          |
| 10/23/84 | 27.63               | 1518.47          | 09/11/85 | 29.11               | 1516.99          |
| 11/08/84 | 27.08               | 1519.02          | 09/24/85 | 28.99               | 1517.11          |
| 11/20/84 | 26.69               | 1519.41          | 10/23/85 | 26.61               | 1519.49          |
| 12/13/84 | 26.16               | 1519.94          | 11/21/85 | 25.53               | 1520.57          |
|          |                     |                  | 12/30/85 | 26.82               | 1519.28          |
| 01/09/85 | 26.75               | 1519.35          |          |                     |                  |
| 02/12/85 | 27.33               | 1518.77          | 02/25/86 | 26.33               | 1519.77          |
| 03/06/85 | 27.25               | 1518.85          | 03/26/86 | 26.48               | 1519.62          |
| 03/19/85 | 27.02               | 1519.08          | 05/14/86 | 26.49               | 1519.61          |
| 04/17/85 | 26.71               | 1519.39          | 06/04/86 | 27.76               | 1518.34          |
| 05/02/85 | 26.60               | 1519.50          | 07/01/86 | 29.25               | 1516.85          |
| 05/14/85 | 26.69               | 1519.41          | 08/06/86 | 29.08               | 1517.02          |
| 06/06/85 | 27.16               | 1518.94          | 09/09/86 | 30.18               | 1515.92          |
| 06/20/85 | 27.80               | 1518.30          | 10/09/86 | 29.49               | 1516.61          |
| 07/01/85 | 27.89               | 1518.21          | 12/16/86 | 27.65               | 1518.45          |
| 07/17/85 | 29.33               | 1516.77          |          |                     |                  |

154-082-03CDBD1

Sundre aquifer

LS Elev (msl,ft)= 1541.97

SI (ft)= 105-110

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 09/27/84 | 35.89               | 1506.08          | 07/29/85 | 39.25               | 1502.72          |
| 10/03/84 | 35.83               | 1506.14          | 08/14/85 | 37.78               | 1504.19          |
| 10/10/84 | 35.11               | 1506.86          | 08/27/85 | 37.55               | 1504.42          |
| 10/23/84 | 32.58               | 1509.39          | 09/11/85 | 36.08               | 1505.89          |
| 11/08/84 | 31.16               | 1510.81          | 09/24/85 | 35.69               | 1506.28          |
| 11/20/84 | 30.13               | 1511.84          | 10/23/85 | 29.13               | 1512.84          |
| 12/13/84 | 28.69               | 1513.28          | 11/21/85 | 26.80               | 1515.17          |
|          |                     |                  | 12/30/85 | 30.49               | 1511.48          |
| 01/09/85 | 30.57               | 1511.40          |          |                     |                  |
| 02/12/85 | 32.05               | 1509.92          | 02/25/86 | 28.96               | 1513.01          |
| 03/06/85 | 32.02               | 1509.95          | 03/26/86 | 30.57               | 1511.40          |
| 03/19/85 | 31.86               | 1510.11          | 05/14/86 | 30.63               | 1511.34          |
| 04/17/85 | 31.57               | 1510.40          | 06/04/86 | 34.52               | 1507.45          |
| 05/02/85 | 31.61               | 1510.36          | 06/18/86 | 36.41               | 1505.56          |
| 05/14/85 | 31.94               | 1510.03          | 07/01/86 | 38.01               | 1503.96          |
| 06/06/85 | 33.19               | 1508.78          | 08/06/86 | 35.78               | 1506.19          |
| 06/20/85 | 34.91               | 1507.06          | 09/09/86 | 39.45               | 1502.52          |
| 07/01/85 | 34.35               | 1507.62          | 10/09/86 | 36.39               | 1505.58          |
| 07/17/85 | 38.33               | 1503.64          | 12/16/86 | 31.83               | 1510.14          |

154-082-03CDBD2

Souris Valley aquifer

LS Elev (msl,ft)= 1541.62

SI (ft)= 44-49

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 09/27/84 | 22.14               | 1519.48          | 07/29/85 | 22.85               | 1518.77          |
| 10/03/84 | 22.05               | 1519.57          | 08/14/85 | 22.64               | 1518.98          |
| 10/10/84 | 22.02               | 1519.60          | 08/27/85 | 22.88               | 1518.74          |
| 10/23/84 | 21.38               | 1520.24          | 09/11/85 | 22.52               | 1519.10          |
| 11/08/84 | 21.03               | 1520.59          | 09/24/85 | 22.30               | 1519.32          |
| 11/20/84 | 20.77               | 1520.85          | 10/23/85 | 21.02               | 1520.60          |
| 12/13/84 | 18.71               | 1522.91          | 11/21/85 | 20.52               | 1521.10          |
|          |                     |                  | 12/30/85 | 21.03               | 1520.59          |
| 01/09/85 | 20.72               | 1520.90          |          |                     |                  |
| 02/12/85 | 21.16               | 1520.46          | 02/25/86 | 20.78               | 1520.84          |
| 03/06/85 | 21.10               | 1520.52          | 03/26/86 | 20.72               | 1520.90          |
| 03/19/85 | 21.00               | 1520.62          | 05/14/86 | 20.55               | 1521.07          |
| 04/17/85 | 20.58               | 1521.04          | 06/04/86 | 21.31               | 1520.31          |
| 05/02/85 | 20.42               | 1521.20          | 07/01/86 | 22.56               | 1519.06          |
| 05/14/85 | 20.47               | 1521.15          | 08/06/86 | 22.69               | 1518.93          |
| 06/06/85 | 20.77               | 1520.85          | 09/09/86 | 23.48               | 1518.14          |
| 06/20/85 | 21.27               | 1520.35          | 10/09/86 | 23.07               | 1518.55          |
| 07/01/85 | 21.39               | 1520.23          | 12/16/86 | 21.98               | 1519.64          |
| 07/17/85 | 22.42               | 1519.20          |          |                     |                  |

154-082-03CDBD3

Souris Valley aquifer

LS Elev (msl,ft)= 1541.67

SI (ft)= 27-32

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 09/27/84 | 22.11               | 1519.56          | 07/17/85 | 22.44               | 1519.23          |
| 10/03/84 | 21.02               | 1520.65          | 07/29/85 | 22.86               | 1518.81          |
| 10/10/84 | 21.58               | 1520.09          | 08/14/85 | 22.63               | 1519.04          |
| 10/23/84 | 21.36               | 1520.31          | 08/27/85 | 22.91               | 1518.76          |
| 11/08/84 | 21.00               | 1520.67          | 09/11/85 | 22.55               | 1519.12          |
| 11/20/84 | 20.75               | 1520.92          | 09/24/85 | 22.63               | 1519.04          |
| 12/13/84 | 20.41               | 1521.26          | 10/23/85 | 21.02               | 1520.65          |
|          |                     |                  | 11/21/85 | 20.35               | 1521.32          |
| 01/09/85 | 20.71               | 1520.96          | 12/30/85 | 21.08               | 1520.59          |
| 02/12/85 | 21.14               | 1520.53          |          |                     |                  |
| 03/06/85 | 21.08               | 1520.59          | 02/25/86 | 20.81               | 1520.86          |
| 03/19/85 | 21.00               | 1520.67          | 03/26/86 | 20.74               | 1520.93          |
| 04/17/85 | 20.58               | 1521.09          | 05/14/86 | 20.58               | 1521.09          |
| 05/02/85 | 20.46               | 1521.21          | 06/04/86 | 21.35               | 1520.32          |
| 05/14/85 | 20.50               | 1521.17          | 07/01/86 | 22.58               | 1519.09          |
| 06/06/85 | 20.80               | 1520.87          | 08/06/86 | 22.71               | 1518.96          |
| 06/20/85 | 21.30               | 1520.37          | 09/09/86 | 23.49               | 1518.18          |
| 07/01/85 | 21.41               | 1520.26          |          |                     |                  |

154-082-03CDB1

Souris Valley-Sundre Aquifer

well not surveyed

SI (ft)= 75-80

| Date     | Depth to Water (ft) | Date     | Depth to Water (ft) |
|----------|---------------------|----------|---------------------|
| 11/20/68 | 14.17               | 10/25/69 | 17.66               |
| 11/22/68 | 14.13               | 10/26/69 | 17.88               |
| 11/26/68 | 14.18               | 10/27/69 | 18.05               |
| 11/27/68 | 14.18               | 10/28/69 | 18.28               |
| 12/03/68 | 14.14               | 10/29/69 | 18.39               |
| 12/07/68 | 14.22               | 10/30/69 | 18.69               |
| 12/10/68 | 14.27               | 10/31/69 | 18.77               |
| 12/11/68 | 14.19               | 11/01/69 | 18.72               |
| 12/16/68 | 14.31               | 11/02/69 | 18.83               |
| 12/17/68 | 14.50               | 11/03/69 | 19.13               |
| 12/19/68 | 14.34               | 11/04/69 | 19.86               |
| 12/20/68 | 15.07               | 11/05/69 | 16.82               |
|          |                     | 11/06/69 | 16.19               |
| 01/04/69 | 14.35               | 11/07/69 | 15.93               |
| 03/12/69 | 14.52               | 11/08/69 | 15.65               |
| 04/08/69 | 12.34               | 11/09/69 | 15.43               |
| 05/16/69 | 5.75                | 11/10/69 | 15.26               |
| 05/28/69 | 8.10                | 11/11/69 | 15.14               |
| 06/11/69 | 11.21               | 11/12/69 | 15.00               |
| 06/25/69 | 12.10               | 11/13/69 | 14.75               |
| 07/16/69 | 11.82               | 11/17/69 | 14.60               |
| 07/30/69 | 11.82               | 11/24/69 | 14.34               |
| 08/13/69 | 12.61               | 12/03/69 | 16.11               |
| 09/09/69 | 13.36               | 12/04/69 | 16.39               |
| 09/26/69 | 13.35               | 12/05/69 | 16.66               |
| 10/08/69 | 13.21               |          |                     |
| 10/16/69 | 13.31               | 01/27/70 | 13.61               |
| 10/19/69 | 13.65               | 03/10/70 | 13.72               |
| 10/20/69 | 13.64               | 04/06/70 | 13.32               |
| 10/21/69 | 15.76               | 06/09/70 | 6.52                |
| 10/22/69 | 16.42               | 07/24/70 | 11.43               |
| 10/24/69 | 17.36               | 10/01/70 | 13.47               |

WELL DESTROYED

154-082-03CDB2

Souris Valley-Sundre aquifer

LS Elev (msl,ft)= 1542.40

SI (ft)= 88-91

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/15/68 | 14.11               | 1528.29          | 01/27/70 | 13.60               | 1528.80          |
| 11/19/68 | 14.13               | 1528.27          | 03/10/70 | 13.69               | 1528.71          |
| 11/23/68 | 14.14               | 1528.26          | 04/06/70 | 13.35               | 1529.05          |
| 11/26/68 | 14.14               | 1528.26          | 06/09/70 | 6.56                | 1535.84          |
| 11/27/68 | 14.07               | 1528.33          | 07/24/70 | 11.42               | 1530.98          |
| 12/05/68 | 14.13               | 1528.27          | 08/27/70 | 12.94               | 1529.46          |
| 12/07/68 | 14.19               | 1528.21          | 10/01/70 | 13.35               | 1529.05          |
| 12/10/68 | 14.31               | 1528.09          | 10/15/70 | 12.32               | 1530.08          |
| 12/11/68 | 14.14               | 1528.26          |          |                     |                  |
| 12/13/68 | 14.22               | 1528.18          |          |                     |                  |
| 12/16/68 | 14.26               | 1528.14          | 07/22/71 | 11.53               | 1530.87          |
| 12/19/68 | 14.27               | 1528.13          | 08/27/71 | 12.48               | 1529.92          |
| 12/20/68 | 15.06               | 1527.34          | 12/21/71 | 12.27               | 1530.13          |
| 12/21/68 | 14.61               | 1527.79          |          |                     |                  |
| 12/27/68 | 14.30               | 1528.10          |          |                     |                  |
| 01/04/69 | 14.26               | 1528.14          | 03/19/76 | 9.50                | 1532.90          |
| 02/06/69 | 14.23               | 1528.17          | 06/04/76 | 8.69                | 1533.71          |
| 03/06/69 | 14.27               | 1528.13          | 07/16/76 | 9.64                | 1532.76          |
| 03/12/69 | 14.31               | 1528.09          | 08/24/76 | 13.22               | 1529.18          |
| 04/08/69 | 12.14               | 1530.26          | 08/27/76 | 12.60               | 1529.80          |
| 05/16/69 | 5.60                | 1536.80          | 08/30/76 | 12.34               | 1530.06          |
| 05/29/69 | 8.06                | 1534.34          | 09/02/76 | 12.47               | 1529.93          |
| 06/11/69 | 11.11               | 1531.29          | 09/07/76 | 12.57               | 1529.83          |
| 06/25/69 | 12.11               | 1530.29          | 09/09/76 | 14.48               | 1527.92          |
| 07/16/69 | 11.84               | 1530.56          | 09/10/76 | 14.77               | 1527.63          |
| 07/30/69 | 11.60               | 1530.80          | 09/13/76 | 13.69               | 1528.71          |
| 08/13/69 | 12.36               | 1530.04          | 09/14/76 | 14.22               | 1528.18          |
| 09/09/69 | 13.10               | 1529.30          | 09/15/76 | 15.27               | 1527.13          |
| 09/26/69 | 13.34               | 1529.06          | 09/16/76 | 14.77               | 1527.63          |
| 10/08/69 | 13.21               | 1529.19          | 09/17/76 | 15.69               | 1526.71          |
| 10/16/69 | 13.27               | 1529.13          | 09/20/76 | 14.56               | 1527.84          |
| 10/19/69 | 13.63               | 1528.77          | 09/21/76 | 15.64               | 1526.76          |
| 10/20/69 | 14.63               | 1527.77          | 09/22/76 | 16.05               | 1526.35          |
| 10/21/69 | 15.78               | 1526.62          | 09/23/76 | 15.89               | 1526.51          |
| 10/22/69 | 16.47               | 1525.93          | 09/24/76 | 16.32               | 1526.08          |
| 10/23/69 | 16.86               | 1525.54          | 09/27/76 | 15.06               | 1527.34          |
| 10/24/69 | 17.25               | 1525.15          | 09/29/76 | 16.00               | 1526.40          |
| 10/25/69 | 17.55               | 1524.85          | 10/01/76 | 16.52               | 1525.88          |
| 10/26/69 | 17.77               | 1524.63          | 10/04/76 | 15.03               | 1527.37          |
| 10/27/69 | 17.96               | 1524.44          | 10/06/76 | 16.21               | 1526.19          |
| 10/28/69 | 18.16               | 1524.24          | 10/08/76 | 16.30               | 1526.10          |
| 10/29/69 | 18.30               | 1524.10          | 10/23/76 | 14.05               | 1528.35          |
| 10/30/69 | 18.55               | 1523.85          | 12/03/76 | 14.06               | 1528.34          |
| 10/31/69 | 18.66               | 1523.74          | 01/05/77 | 16.80               | 1525.60          |
| 11/01/69 | 18.75               | 1523.65          | 02/08/77 | 18.38               | 1524.02          |
| 11/02/69 | 18.88               | 1523.52          | 03/15/77 | 18.52               | 1523.88          |
| 11/03/69 | 19.00               | 1523.40          | 05/06/77 | 14.52               | 1527.88          |
| 11/04/69 | 18.99               | 1523.41          | 06/03/77 | 14.64               | 1527.76          |
| 11/05/69 | 16.78               | 1525.62          | 06/30/77 | 16.30               | 1526.10          |
| 11/06/69 | 16.19               | 1526.21          | 07/07/77 | 19.86               | 1522.54          |
| 11/07/69 | 15.80               | 1526.60          | 07/14/77 | 19.66               | 1522.74          |
| 11/08/69 | 15.52               | 1526.88          | 07/28/77 | 22.08               | 1520.32          |
| 11/09/69 | 15.30               | 1527.10          | 08/08/77 | 23.33               | 1519.07          |
| 11/10/69 | 15.10               | 1527.30          | 08/26/77 | 24.47               | 1517.93          |
| 11/11/69 | 14.98               | 1527.42          | 09/14/77 | 23.25               | 1519.15          |
| 11/12/69 | 14.85               | 1527.55          | 10/11/77 | 23.25               | 1519.15          |
| 11/13/69 | 14.72               | 1527.68          | 11/10/77 | 23.99               | 1518.41          |
| 11/17/69 | 14.47               | 1527.93          | 12/15/77 | 24.00               | 1518.40          |
| 11/24/69 | 14.21               | 1528.19          | 01/24/78 | 25.11               | 1517.29          |
| 12/02/69 | 14.10               | 1528.30          | 02/22/78 | 25.52               | 1516.88          |
| 12/03/69 | 16.02               | 1526.38          | 03/28/78 | 24.30               | 1518.10          |
| 12/04/69 | 16.33               | 1526.07          | 04/26/78 | 24.47               | 1517.93          |
| 12/05/69 | 16.61               | 1525.79          | 05/24/78 | 26.39               | 1516.01          |

154-082-03CDB2 (CONTINUED)

Souris Valley-Sundre aquifer

LS Elev (msl,ft)= 1542.40

SI (ft)= 88-91

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 06/27/78 | 26.39               | 1516.01          | 08/30/83 | 37.28               | 1505.12          |
| 07/26/78 | 27.24               | 1515.16          | 11/22/83 | 35.80               | 1506.60          |
| 08/29/78 | 26.99               | 1515.41          | 12/08/83 | 35.91               | 1506.49          |
| 09/26/78 | 23.55               | 1518.85          | 12/14/83 | 35.52               | 1506.88          |
| 10/27/78 | 26.33               | 1516.07          |          |                     |                  |
| 12/04/78 | 26.41               | 1515.99          | 01/03/84 | 35.22               | 1507.18          |
| 01/19/79 | 26.67               | 1515.73          | 01/16/84 | 34.11               | 1508.29          |
| 02/27/79 | 25.27               | 1517.13          | 02/21/84 | 33.66               | 1508.74          |
| 03/28/79 | 24.02               | 1518.38          | 03/12/84 | 32.99               | 1509.41          |
| 04/30/79 | 21.24               | 1521.16          | 04/03/84 | 32.63               | 1509.77          |
| 05/30/79 | 11.93               | 1530.47          | 04/18/84 | 32.11               | 1510.29          |
| 06/27/79 | 23.08               | 1519.32          | 05/08/84 | 31.25               | 1511.15          |
| 07/31/79 | 18.05               | 1524.35          | 05/29/84 | 33.47               | 1508.93          |
| 09/27/79 | 28.67               | 1513.73          | 06/15/84 | 33.30               | 1509.10          |
| 10/31/79 | 27.72               | 1514.68          | 06/26/84 | 34.61               | 1507.79          |
| 12/27/79 | 28.00               | 1514.40          | 07/10/84 | 37.17               | 1505.23          |
|          |                     |                  | 07/27/84 | 40.97               | 1501.43          |
| 01/29/80 | 27.92               | 1514.48          | 08/09/84 | 41.00               | 1501.40          |
| 02/28/80 | 27.58               | 1514.82          | 08/16/84 | 41.91               | 1500.49          |
| 03/25/80 | 26.72               | 1515.68          | 08/21/84 | 41.58               | 1500.82          |
| 04/28/80 | 29.42               | 1512.98          | 08/27/84 | 40.96               | 1501.44          |
| 05/28/80 | 31.08               | 1511.32          | 09/07/84 | 39.13               | 1503.27          |
| 06/27/80 | 32.33               | 1510.07          | 09/12/84 | 37.22               | 1505.18          |
| 07/29/80 | 26.44               | 1515.96          | 09/20/84 | 37.22               | 1505.18          |
| 08/28/80 | 28.75               | 1513.65          | 09/27/84 | 35.86               | 1506.54          |
| 09/26/80 | 29.33               | 1513.07          | 10/03/84 | 35.75               | 1506.65          |
| 10/29/80 | 28.02               | 1514.38          | 10/10/84 | 35.05               | 1507.35          |
| 11/25/80 | 29.08               | 1513.32          | 10/23/84 | 32.61               | 1509.79          |
| 12/30/80 | 29.50               | 1512.90          | 11/08/84 | 31.22               | 1511.18          |
|          |                     |                  | 11/20/84 | 30.21               | 1512.19          |
| 01/29/81 | 30.07               | 1512.33          | 12/13/84 | 28.77               | 1513.63          |
| 02/24/81 | 30.16               | 1512.24          |          |                     |                  |
| 03/26/81 | 29.83               | 1512.57          | 01/09/85 | 30.58               | 1511.82          |
| 04/30/81 | 31.27               | 1511.13          | 02/12/85 | 32.02               | 1510.38          |
| 05/28/81 | 30.69               | 1511.71          | 03/06/85 | 31.97               | 1510.43          |
| 06/29/81 | 31.11               | 1511.29          | 03/19/85 | 31.80               | 1510.60          |
| 07/28/81 | 33.71               | 1508.69          | 04/17/85 | 31.41               | 1510.99          |
| 08/28/81 | 33.03               | 1509.37          | 05/02/85 | 31.38               | 1511.02          |
| 09/29/81 | 33.89               | 1508.51          | 05/14/85 | 31.72               | 1510.68          |
| 10/28/81 | 34.25               | 1508.15          | 06/06/85 | 33.00               | 1509.40          |
| 11/27/81 | 34.55               | 1507.85          | 06/20/85 | 34.63               | 1507.77          |
| 12/30/81 | 34.91               | 1507.49          | 07/01/85 | 34.21               | 1508.19          |
|          |                     |                  | 07/17/85 | 36.07               | 1506.33          |
| 01/28/82 | 35.36               | 1507.04          | 07/29/85 | 38.99               | 1503.41          |
| 02/26/82 | 36.25               | 1506.15          | 08/14/85 | 37.53               | 1504.87          |
| 03/29/82 | 34.74               | 1507.66          | 08/27/85 | 37.36               | 1505.04          |
| 04/30/82 | 21.36               | 1521.04          | 09/11/85 | 36.00               | 1506.40          |
| 05/27/82 | 25.66               | 1516.74          | 09/25/85 | 35.61               | 1506.79          |
| 06/29/82 | 28.25               | 1514.15          | 10/23/85 | 29.27               | 1513.13          |
| 07/28/82 | 31.13               | 1511.27          | 11/21/85 | 26.89               | 1515.51          |
| 08/31/82 | 34.19               | 1508.21          | 12/30/85 | 30.46               | 1511.94          |
| 09/30/82 | 33.30               | 1509.10          |          |                     |                  |
| 10/29/82 | 32.11               | 1510.29          | 02/25/86 | 28.97               | 1513.43          |
| 11/29/82 | 32.41               | 1509.99          | 03/26/86 | 30.43               | 1511.97          |
| 12/27/82 | 32.13               | 1510.27          | 05/14/86 | 30.47               | 1511.93          |
|          |                     |                  | 06/04/86 | 34.24               | 1508.16          |
| 01/28/83 | 32.80               | 1509.60          | 07/01/86 | 37.74               | 1504.66          |
| 02/28/83 | 32.75               | 1509.65          | 07/09/86 | 38.88               | 1503.52          |
| 03/31/83 | 32.86               | 1509.54          | 08/06/86 | 35.73               | 1506.67          |
| 04/29/83 | 27.32               | 1515.08          | 09/09/86 | 39.20               | 1503.20          |
| 05/27/83 | 28.00               | 1514.40          | 10/09/86 | 36.35               | 1506.05          |
| 07/08/83 | 33.63               | 1508.77          | 12/16/86 | 31.83               | 1510.57          |
| 07/28/83 | 36.69               | 1505.71          |          |                     |                  |

154-082-03CDC1  
Sundre aquifer

LS Elev (msl,ft) = 1539.70 SI (ft) = 231-237

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/22/68 | 11.21               | 1528.49          | 12/23/70 | 9.56                | 1530.14          |
| 11/27/68 | 11.22               | 1528.48          | 04/15/71 | 8.81                | 1530.89          |
| 12/04/68 | 11.25               | 1528.45          | 07/22/71 | 8.17                | 1531.53          |
| 12/07/68 | 11.40               | 1528.30          | 08/27/71 | 9.00                | 1530.70          |
| 12/11/68 | 11.43               | 1528.27          | 12/21/71 | 8.80                | 1530.90          |
| 12/16/68 | 11.36               | 1528.34          | 07/13/72 | 7.97                | 1531.73          |
| 12/19/68 | 11.46               | 1528.24          | 10/12/72 | 8.69                | 1531.01          |
| 12/20/68 | 13.52               | 1526.18          |          |                     |                  |
| 12/21/68 | 11.89               | 1527.81          |          |                     |                  |
| 01/04/69 | 11.46               | 1528.24          | 06/08/73 | 9.23                | 1530.47          |
| 02/06/69 | 11.39               | 1528.31          | 07/02/74 | 6.22                | 1533.48          |
| 03/06/69 | 11.43               | 1528.27          | 08/14/75 | 7.48                | 1532.22          |
| 03/12/69 | 11.44               | 1528.26          | 03/19/76 | 6.72                | 1532.98          |
| 04/08/69 | 9.69                | 1530.01          | 06/04/76 | 5.69                | 1534.01          |
| 05/28/69 | 5.48                | 1534.22          | 07/16/76 | 6.60                | 1533.10          |
| 06/11/69 | 8.35                | 1531.35          | 08/24/76 | 13.88               | 1525.82          |
| 06/25/69 | 9.18                | 1530.52          | 08/27/76 | 13.43               | 1526.27          |
| 07/16/69 | 9.06                | 1530.64          | 09/09/76 | 15.36               | 1524.34          |
| 07/30/69 | 8.84                | 1530.86          | 09/23/76 | 16.89               | 1522.81          |
| 08/13/69 | 9.55                | 1530.15          | 10/25/76 | 10.80               | 1528.90          |
| 09/09/69 | 10.34               | 1529.36          | 12/03/76 | 10.89               | 1528.81          |
| 09/25/69 | 10.40               | 1529.30          |          |                     |                  |
| 10/08/69 | 10.30               | 1529.40          |          |                     |                  |
| 10/16/69 | 10.39               | 1529.31          |          |                     |                  |
| 10/19/69 | 10.78               | 1528.92          |          |                     |                  |
| 10/20/69 | 10.71               | 1528.99          | 01/05/77 | 16.50               | 1523.20          |
| 10/21/69 | 17.13               | 1522.57          | 02/08/77 | 17.52               | 1522.18          |
| 10/22/69 | 17.92               | 1521.78          | 03/15/77 | 17.36               | 1522.34          |
| 10/23/69 | 18.33               | 1521.37          | 05/06/77 | 10.97               | 1528.73          |
| 10/24/69 | 18.77               | 1520.93          | 06/03/77 | 11.47               | 1528.23          |
| 10/25/69 | 19.27               | 1520.43          | 06/30/77 | 14.60               | 1525.10          |
| 10/26/69 | 19.27               | 1520.43          | 07/14/77 | 17.97               | 1521.73          |
| 10/27/69 | 19.44               | 1520.26          | 07/28/77 | 21.50               | 1518.20          |
| 10/28/69 | 19.64               | 1520.06          | 08/10/77 | 22.38               | 1517.32          |
| 10/29/69 | 19.77               | 1519.93          | 08/26/77 | 24.16               | 1515.54          |
| 10/30/69 | 20.05               | 1519.65          | 09/14/77 | 22.55               | 1517.15          |
| 10/31/69 | 20.14               | 1519.56          | 10/11/77 | 22.61               | 1517.09          |
| 11/01/69 | 20.22               | 1519.48          | 11/10/77 | 23.41               | 1516.29          |
| 11/02/69 | 20.35               | 1519.35          | 12/15/77 | 23.80               | 1515.90          |
| 11/03/69 | 20.46               | 1519.24          |          |                     |                  |
| 11/04/69 | 20.30               | 1519.40          | 01/24/78 | 24.92               | 1514.78          |
| 11/05/69 | 14.03               | 1525.67          | 02/22/78 | 25.07               | 1514.63          |
| 11/06/69 | 13.31               | 1526.39          | 03/28/78 | 23.97               | 1515.73          |
| 11/07/69 | 12.86               | 1526.84          | 04/26/78 | 24.14               | 1515.56          |
| 11/08/69 | 12.64               | 1527.06          | 05/24/78 | 26.19               | 1513.51          |
| 11/09/69 | 12.39               | 1527.31          | 06/27/78 | 25.38               | 1514.32          |
| 11/10/69 | 12.18               | 1527.52          | 07/26/78 | 27.30               | 1512.40          |
| 11/11/69 | 12.02               | 1527.68          | 08/29/78 | 26.53               | 1513.17          |
| 11/12/69 | 11.92               | 1527.78          | 09/26/78 | 22.36               | 1517.34          |
| 11/13/69 | 11.80               | 1527.90          | 10/27/78 | 25.91               | 1513.79          |
| 11/17/69 | 11.52               | 1528.18          | 12/04/78 | 25.67               | 1514.03          |
| 11/18/69 | 11.26               | 1528.44          |          |                     |                  |
| 12/03/69 | 17.39               | 1522.31          | 01/19/79 | 26.10               | 1513.60          |
| 12/04/69 | 17.78               | 1521.92          | 02/27/79 | 24.63               | 1515.07          |
| 12/05/69 | 18.10               | 1521.60          | 03/28/79 | 23.72               | 1515.98          |
|          |                     |                  | 06/27/79 | 23.55               | 1516.15          |
| 01/27/70 | 10.67               | 1529.03          | 07/31/79 | 15.57               | 1524.13          |
| 03/10/70 | 10.77               | 1528.93          | 08/28/79 | 27.00               | 1512.70          |
| 04/06/70 | 10.44               | 1529.26          | 09/27/79 | 28.33               | 1511.37          |
| 06/09/70 | 4.03                | 1535.67          | 10/31/79 | 26.94               | 1512.76          |
| 07/24/70 | 8.46                | 1531.24          | 11/29/79 | 28.16               | 1511.54          |
| 08/27/70 | 9.90                | 1529.80          | 12/27/79 | 27.24               | 1512.46          |
| 10/01/70 | 10.31               | 1529.39          |          |                     |                  |

154-082-03CDC1 (continued)  
Sundre aquifer

LS Elev (msl,ft)= 1539.70 SI (ft)= 231-237

| Date     | Depth to<br>Water (ft) | WL Elev<br>(msl,ft) | Date     | Depth to<br>Water (ft) | WL Elev<br>(msl,ft) |
|----------|------------------------|---------------------|----------|------------------------|---------------------|
| 01/29/80 | 27.30                  | 1512.40             | 02/21/84 | 32.67                  | 1507.03             |
| 02/28/80 | 27.05                  | 1512.65             | 03/12/84 | 31.46                  | 1508.24             |
| 03/25/80 | 25.69                  | 1514.01             | 04/03/84 | 31.66                  | 1508.04             |
| 04/28/80 | 29.44                  | 1510.26             | 04/18/84 | 31.27                  | 1508.43             |
| 05/28/80 | 31.08                  | 1508.62             | 05/08/84 | 30.42                  | 1509.28             |
| 06/27/80 | 33.30                  | 1506.40             | 05/29/84 | 33.10                  | 1506.60             |
| 07/29/80 | 23.85                  | 1515.85             | 06/15/84 | 32.94                  | 1506.76             |
| 08/28/80 | 28.47                  | 1511.23             | 06/26/84 | 34.38                  | 1505.32             |
| 09/26/80 | 29.14                  | 1510.56             | 07/10/84 | 37.41                  | 1502.29             |
| 10/29/80 | 27.61                  | 1512.09             | 07/27/84 | 42.02                  | 1497.68             |
| 11/25/80 | 28.83                  | 1510.87             | 08/09/84 | 41.16                  | 1498.54             |
| 12/30/80 | 29.25                  | 1510.45             | 08/16/84 | 42.47                  | 1497.23             |
|          |                        |                     | 08/21/84 | 40.72                  | 1498.98             |
| 01/29/81 | 29.61                  | 1510.09             | 08/27/84 | 40.30                  | 1499.40             |
| 02/24/81 | 29.96                  | 1509.74             | 09/07/84 | 38.02                  | 1501.68             |
| 03/24/81 | 28.97                  | 1510.73             | 09/12/84 | 34.11                  | 1505.59             |
| 04/30/81 | 30.91                  | 1508.79             | 09/20/84 | 36.07                  | 1503.63             |
| 05/28/81 | 30.22                  | 1509.48             | 09/27/84 | 34.61                  | 1505.09             |
| 06/29/81 | 30.97                  | 1508.73             | 10/03/84 | 34.75                  | 1504.95             |
| 07/28/81 | 33.96                  | 1505.74             | 10/10/84 | 33.88                  | 1505.82             |
| 08/28/81 | 32.77                  | 1506.93             | 10/23/84 | 30.33                  | 1509.37             |
| 09/29/81 | 33.63                  | 1506.07             | 11/08/84 | 28.77                  | 1510.93             |
| 10/28/81 | 34.35                  | 1505.35             | 11/20/84 | 27.64                  | 1512.06             |
| 11/27/81 | 34.64                  | 1505.06             | 12/13/84 | 26.19                  | 1513.51             |
| 12/30/81 | 35.30                  | 1504.40             |          |                        |                     |
|          |                        |                     | 01/09/85 | 28.77                  | 1510.93             |
| 01/28/82 | 35.25                  | 1504.45             | 02/12/85 | 30.72                  | 1508.98             |
| 02/26/82 | 36.32                  | 1503.38             | 03/06/85 | 30.19                  | 1509.51             |
| 03/29/82 | 34.57                  | 1505.13             | 03/19/85 | 30.21                  | 1509.49             |
| 04/30/82 | 19.77                  | 1519.93             | 04/17/85 | 30.55                  | 1509.15             |
| 05/27/82 | 25.50                  | 1514.20             | 05/02/85 | 31.07                  | 1508.63             |
| 06/29/82 | 28.36                  | 1511.34             | 05/14/85 | 31.25                  | 1508.45             |
| 07/28/82 | 31.14                  | 1508.56             | 06/06/85 | 32.60                  | 1507.10             |
| 08/31/82 | 34.11                  | 1505.59             | 06/20/85 | 34.69                  | 1505.01             |
| 09/30/82 | 33.22                  | 1506.48             | 07/01/85 | 33.41                  | 1506.29             |
| 10/29/82 | 31.92                  | 1507.78             | 07/17/85 | 37.36                  | 1502.34             |
| 11/29/82 | 32.21                  | 1507.49             | 07/29/85 | 39.28                  | 1500.42             |
| 12/27/82 | 31.63                  | 1508.07             | 08/14/85 | 37.35                  | 1502.35             |
|          |                        |                     | 08/27/85 | 37.11                  | 1502.59             |
| 01/28/83 | 32.58                  | 1507.12             | 09/11/85 | 34.38                  | 1505.32             |
| 02/28/83 | 32.58                  | 1507.12             | 09/24/85 | 34.11                  | 1505.59             |
| 03/31/83 | 33.17                  | 1506.53             | 10/23/85 | 26.27                  | 1513.43             |
| 04/29/83 | 27.75                  | 1511.95             | 11/21/85 | 24.05                  | 1515.65             |
| 05/22/83 | 28.55                  | 1511.15             | 12/30/85 | 28.69                  | 1511.01             |
| 07/08/83 | 34.16                  | 1505.54             |          |                        |                     |
| 07/28/83 | 37.38                  | 1502.32             | 02/25/86 | 26.77                  | 1512.93             |
| 08/30/83 | 37.83                  | 1501.87             | 03/26/86 | 29.60                  | 1510.10             |
| 11/17/83 | 35.60                  | 1504.10             | 05/14/86 | 29.67                  | 1510.03             |
| 12/08/83 | 35.61                  | 1504.09             | 06/04/86 | 34.31                  | 1505.39             |
| 12/14/83 | 34.85                  | 1504.85             | 07/01/86 | 37.83                  | 1501.87             |
|          |                        |                     | 08/06/86 | 34.24                  | 1505.46             |
| 01/03/84 | 34.38                  | 1505.32             | 09/09/86 | 38.96                  | 1500.74             |
| 01/16/84 | 33.30                  | 1506.40             | 10/09/86 | 34.38                  | 1505.32             |
| 02/01/84 | 32.61                  | 1507.09             | 12/16/86 | 29.53                  | 1510.17             |

154-082-03CDC2  
 Sundre aquifer

LS Elev (msl,ft) = 1538.90 SI (ft) = 217-223

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 12/03/68 | 10.43               | 1528.47          | 08/14/75 | 7.26                | 1531.64          |
| 12/04/68 | 10.43               | 1528.47          | 03/19/76 | 5.92                | 1532.98          |
| 12/07/68 | 10.59               | 1528.31          | 07/16/76 | 6.89                | 1532.01          |
| 12/11/68 | 10.59               | 1528.31          | 08/27/76 | 10.85               | 1528.05          |
| 12/16/68 | 10.56               | 1528.34          | 09/09/76 | 13.19               | 1525.71          |
| 12/17/68 | 11.15               | 1527.75          | 09/23/76 | 14.57               | 1524.33          |
| 12/19/68 | 10.64               | 1528.26          | 10/25/76 | 10.10               | 1528.80          |
| 12/20/68 | 12.22               | 1526.68          | 12/03/76 | 10.17               | 1528.73          |
| 12/21/68 | 11.06               | 1527.84          |          |                     |                  |
| 12/27/68 | 10.64               | 1528.26          |          |                     |                  |
|          |                     |                  | 02/08/77 | 15.35               | 1523.55          |
| 01/04/69 | 10.63               | 1528.27          | 03/15/77 | 15.42               | 1523.48          |
| 02/06/69 | 10.60               | 1528.30          | 05/06/77 | 9.89                | 1529.01          |
| 03/06/69 | 10.61               | 1528.29          | 06/03/77 | 10.77               | 1528.13          |
| 03/12/69 | 10.64               | 1528.26          | 06/30/77 | 13.02               | 1525.88          |
| 04/09/69 | 8.55                | 1530.35          | 07/14/77 | 16.50               | 1522.40          |
| 05/28/69 | 4.51                | 1534.39          | 07/28/77 | 19.19               | 1519.71          |
| 06/11/69 | 7.39                | 1531.51          | 08/10/77 | 20.30               | 1518.60          |
| 06/27/69 | 8.18                | 1530.72          | 08/26/77 | 21.72               | 1517.18          |
| 07/17/69 | 8.30                | 1530.60          | 09/14/77 | 20.24               | 1518.66          |
| 07/30/69 | 8.13                | 1530.77          | 10/11/77 | 20.25               | 1518.65          |
| 08/13/69 | 8.86                | 1530.04          | 11/10/77 | 21.05               | 1517.85          |
| 09/09/69 | 9.61                | 1529.29          | 12/15/77 | 21.36               | 1517.54          |
| 09/26/69 | 9.68                | 1529.22          |          |                     |                  |
| 10/08/69 | 9.59                | 1529.31          | 01/24/78 | 22.47               | 1516.43          |
| 10/16/69 | 9.68                | 1529.22          | 02/22/78 | 22.61               | 1516.29          |
| 10/20/69 | 10.06               | 1528.84          | 03/28/78 | 21.52               | 1517.38          |
| 10/21/69 | 14.47               | 1524.43          | 04/26/78 | 21.72               | 1517.18          |
| 10/22/69 | 15.22               | 1523.68          | 05/24/78 | 23.33               | 1515.57          |
| 10/23/69 | 15.63               | 1523.27          | 06/27/78 | 23.13               | 1515.77          |
| 10/24/69 | 15.97               | 1522.93          | 07/26/78 | 24.80               | 1514.10          |
| 10/25/69 | 16.38               | 1522.52          | 08/29/78 | 24.44               | 1514.46          |
| 10/26/69 | 16.52               | 1522.38          | 09/26/78 | 20.42               | 1518.48          |
| 10/28/69 | 16.91               | 1521.99          | 10/27/78 | 23.61               | 1515.29          |
| 10/30/69 | 17.16               | 1521.74          | 12/04/78 | 23.47               | 1515.43          |
| 11/01/69 | 17.52               | 1521.38          |          |                     |                  |
| 11/03/69 | 17.71               | 1521.19          | 01/19/79 | 23.82               | 1515.08          |
| 11/04/69 | 13.73               | 1525.17          | 02/28/79 | 23.47               | 1515.43          |
| 11/05/69 | 12.96               | 1525.94          | 03/29/79 | 21.38               | 1517.52          |
| 11/06/69 | 12.47               | 1526.43          | 06/27/79 | 20.83               | 1518.07          |
| 11/07/69 | 12.11               | 1526.79          | 07/31/79 | 14.39               | 1524.51          |
| 11/08/69 | 11.93               | 1526.97          | 08/28/79 | 24.10               | 1514.80          |
| 11/10/69 | 11.47               | 1527.43          | 09/27/79 | 25.75               | 1513.15          |
| 11/12/69 | 11.22               | 1527.68          | 10/31/79 | 24.52               | 1514.38          |
| 11/13/69 | 11.10               | 1527.80          | 11/29/79 | 25.66               | 1513.24          |
| 11/25/69 | 10.59               | 1528.31          | 12/27/79 | 24.86               | 1514.04          |
| 12/03/69 | 13.60               | 1525.30          |          |                     |                  |
| 12/04/69 | 14.97               | 1523.93          | 01/29/80 | 25.27               | 1513.63          |
| 12/05/69 | 15.23               | 1523.67          | 02/20/80 | 25.00               | 1513.90          |
|          |                     |                  | 03/28/80 | 23.94               | 1514.96          |
| 01/27/70 | 9.76                | 1529.14          | 04/28/80 | 26.91               | 1511.99          |
| 03/10/70 | 10.06               | 1528.84          | 05/27/80 | 28.60               | 1510.30          |
| 04/06/70 | 9.73                | 1529.17          | 06/12/80 | 27.80               | 1511.10          |
| 10/01/70 | 9.59                | 1529.31          | 06/19/80 | 27.83               | 1511.07          |
|          |                     |                  | 06/27/80 | 30.55               | 1508.35          |
| 04/15/71 | 8.59                | 1530.31          | 07/16/80 | 31.46               | 1507.44          |
| 07/22/71 | 7.90                | 1531.00          | 07/18/80 | 28.22               | 1510.68          |
| 08/27/71 | 8.80                | 1530.10          | 07/21/80 | 25.94               | 1512.96          |
| 12/21/71 | 8.56                | 1530.34          | 07/25/80 | 24.33               | 1514.57          |
|          |                     |                  | 07/29/80 | 23.03               | 1515.87          |
| 10/12/72 | 8.43                | 1530.47          | 08/01/80 | 22.33               | 1516.57          |
|          |                     |                  | 08/05/80 | 21.47               | 1517.43          |
| 07/09/74 | 6.96                | 1531.94          | 08/28/80 | 26.22               | 1512.68          |
|          |                     |                  | 09/26/80 | 26.83               | 1512.07          |

154-082-03CDC2 (continued)

Sundre aquifer

LS Elev (msl,ft)= 1538.90 SI (ft)= 217-223

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 10/29/80 | 25.41               | 1513.49          | 04/03/84 | 30.16               | 1508.74          |
| 11/25/80 | 26.55               | 1512.35          | 04/18/84 | 29.69               | 1509.21          |
| 12/29/80 | 26.96               | 1511.94          | 05/08/84 | 29.05               | 1509.85          |
|          |                     |                  | 05/29/84 | 31.22               | 1507.68          |
| 01/29/81 | 27.41               | 1511.49          | 06/15/84 | 31.16               | 1507.74          |
| 02/24/81 | 27.61               | 1511.29          | 06/26/84 | 32.38               | 1506.52          |
| 03/26/81 | 27.02               | 1511.88          | 07/10/84 | 34.13               | 1504.77          |
| 04/30/81 | 28.66               | 1510.24          | 07/27/84 | 39.42               | 1499.48          |
| 05/28/81 | 28.35               | 1510.55          | 08/09/84 | 38.91               | 1499.99          |
| 06/29/81 | 28.61               | 1510.29          | 08/16/84 | 40.05               | 1498.85          |
| 07/14/81 | 31.55               | 1507.35          | 08/22/84 | 40.14               | 1498.76          |
| 07/22/81 | 31.17               | 1507.73          | 08/27/84 | 38.49               | 1500.41          |
| 07/28/81 | 31.36               | 1507.54          | 09/07/84 | 36.47               | 1502.43          |
| 08/11/81 | 27.05               | 1511.85          | 09/12/84 | 33.75               | 1505.15          |
| 08/18/81 | 30.71               | 1508.19          | 09/20/84 | 34.49               | 1504.41          |
| 08/28/81 | 30.42               | 1508.48          | 09/27/84 | 33.50               | 1505.40          |
| 09/29/81 | 31.28               | 1507.62          | 10/03/84 | 33.44               | 1505.46          |
| 10/28/81 | 31.74               | 1507.16          | 10/10/84 | 32.71               | 1506.19          |
| 11/27/81 | 32.05               | 1506.85          | 10/23/84 | 29.60               | 1509.30          |
| 12/30/81 | 31.11               | 1507.79          | 11/08/84 | 28.10               | 1510.80          |
|          |                     |                  | 11/20/84 | 27.08               | 1511.82          |
| 01/28/82 | 32.74               | 1506.16          | 12/13/84 | 25.61               | 1513.29          |
| 02/26/82 | 33.11               | 1505.79          |          |                     |                  |
| 03/29/82 | 31.97               | 1506.93          | 01/09/85 | 27.83               | 1511.07          |
| 04/05/82 | 31.05               | 1507.85          | 02/12/85 | 29.61               | 1509.29          |
| 04/20/82 | 23.69               | 1515.21          | 03/06/85 | 29.22               | 1509.68          |
| 04/30/82 | 18.80               | 1520.10          | 03/19/85 | 29.16               | 1509.74          |
| 05/27/82 | 23.25               | 1515.65          | 04/17/85 | 28.66               | 1510.24          |
| 06/29/82 | 26.13               | 1512.77          | 05/02/85 | 28.77               | 1510.13          |
| 07/28/82 | 28.77               | 1510.13          | 05/14/85 | 29.38               | 1509.52          |
| 08/31/82 | 31.74               | 1507.16          | 06/06/85 | 30.72               | 1508.18          |
| 09/30/82 | 30.89               | 1508.01          | 06/20/85 | 32.57               | 1506.33          |
| 10/29/82 | 29.61               | 1509.29          | 07/01/85 | 31.46               | 1507.44          |
| 11/29/82 | 29.89               | 1509.01          | 07/17/85 | 36.11               | 1502.79          |
| 12/27/82 | 29.41               | 1509.49          | 07/29/85 | 37.05               | 1501.85          |
|          |                     |                  | 08/14/85 | 35.05               | 1503.85          |
| 01/28/83 | 30.22               | 1508.68          | 08/27/85 | 35.27               | 1503.63          |
| 02/28/83 | 30.24               | 1508.66          | 09/11/85 | 33.38               | 1505.52          |
| 03/31/83 | 30.72               | 1508.18          | 09/24/85 | 32.94               | 1505.96          |
| 04/29/83 | 25.27               | 1513.63          | 10/23/85 | 25.92               | 1512.98          |
| 05/26/83 | 26.17               | 1512.73          | 11/21/85 | 23.72               | 1515.18          |
| 07/08/83 | 31.28               | 1507.62          | 12/30/85 | 27.66               | 1511.24          |
| 07/28/83 | 34.69               | 1504.21          |          |                     |                  |
| 08/30/83 | 34.86               | 1504.04          | 02/25/86 | 26.04               | 1512.86          |
| 11/22/83 | 33.44               | 1505.46          | 03/26/86 | 27.89               | 1511.01          |
| 12/14/83 | 33.08               | 1505.82          | 05/14/86 | 28.14               | 1510.76          |
|          |                     |                  | 06/04/86 | 32.16               | 1506.74          |
| 01/03/84 | 32.88               | 1506.02          | 07/01/86 | 35.15               | 1503.75          |
| 01/16/84 | 31.63               | 1507.27          | 08/06/86 | 33.15               | 1505.75          |
| 02/01/84 | 31.22               | 1507.68          | 09/09/86 | 36.79               | 1502.11          |
| 02/21/84 | 31.25               | 1507.65          | 10/09/86 | 34.04               | 1504.86          |
| 03/12/84 | 30.53               | 1508.37          | 12/16/86 | 29.11               | 1509.79          |

154-082-03CDC5

Souris Valley aquifer

LS Elev (msl,ft)= 1542.00

SI (ft)= 38-44

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 05/18/81 | 17.77               | 1524.23          | 07/10/84 | 20.19               | 1521.81          |
| 05/28/81 | 17.77               | 1524.23          | 07/27/84 | 21.38               | 1520.62          |
| 06/29/81 | 17.94               | 1524.06          | 08/09/84 | 21.77               | 1520.23          |
| 07/28/81 | 18.75               | 1523.25          | 08/16/84 | 22.02               | 1519.98          |
| 08/28/81 | 19.13               | 1522.87          | 08/21/84 | 22.16               | 1519.84          |
| 09/29/81 | 19.60               | 1522.40          | 08/27/84 | 22.14               | 1519.86          |
| 10/28/81 | 19.74               | 1522.26          | 09/07/84 | 21.94               | 1520.06          |
| 11/27/81 | 19.88               | 1522.12          | 09/12/84 | 21.80               | 1520.20          |
| 12/30/81 | 20.03               | 1521.97          | 09/20/84 | 22.74               | 1519.26          |
|          |                     |                  | 09/27/84 | 21.50               | 1520.50          |
| 01/28/82 | 20.25               | 1521.75          | 10/03/84 | 21.46               | 1520.54          |
| 02/26/82 | 20.50               | 1521.50          | 10/10/84 | 21.42               | 1520.58          |
| 03/29/82 | 20.25               | 1521.75          | 10/23/84 | 20.96               | 1521.04          |
| 04/30/82 | 16.80               | 1525.20          | 11/08/84 | 20.66               | 1521.34          |
| 05/27/82 | 16.58               | 1525.42          | 11/20/84 | 20.47               | 1521.53          |
| 06/29/82 | 17.05               | 1524.95          | 12/13/84 | 20.14               | 1521.86          |
| 07/28/82 | 17.97               | 1524.03          |          |                     |                  |
| 08/31/82 | 19.53               | 1522.47          | 01/09/85 | 20.41               | 1521.59          |
| 09/30/82 | 19.63               | 1522.37          | 02/12/85 | 20.77               | 1521.23          |
| 10/29/82 | 19.19               | 1522.81          | 03/06/85 | 20.74               | 1521.26          |
| 11/29/82 | 19.22               | 1522.78          | 03/19/85 | 20.72               | 1521.28          |
| 12/27/82 | 19.35               | 1522.65          | 04/18/85 | 20.17               | 1521.83          |
|          |                     |                  | 05/02/85 | 20.05               | 1521.95          |
| 01/28/83 | 19.47               | 1522.53          | 05/14/85 | 20.07               | 1521.93          |
| 02/28/83 | 19.47               | 1522.53          | 06/06/85 | 20.28               | 1521.72          |
| 03/31/83 | 18.86               | 1523.14          | 06/20/85 | 20.72               | 1521.28          |
| 04/29/83 | 17.47               | 1524.53          | 07/01/85 | 20.88               | 1521.12          |
| 05/26/83 | 17.25               | 1524.75          | 07/17/85 | 21.77               | 1520.23          |
| 07/08/83 | 18.60               | 1523.40          | 07/29/85 | 22.10               | 1519.90          |
| 07/28/83 | 19.64               | 1522.36          | 08/14/85 | 22.05               | 1519.95          |
| 08/30/83 | 20.14               | 1521.86          | 08/27/85 | 22.03               | 1519.97          |
| 11/17/83 | 20.53               | 1521.47          | 09/11/85 | 22.02               | 1519.98          |
| 12/08/83 | 20.61               | 1521.39          | 09/24/85 | 21.96               | 1520.04          |
| 12/14/83 | 20.60               | 1521.40          | 10/23/85 | 20.85               | 1521.15          |
|          |                     |                  | 11/21/85 | 20.25               | 1521.75          |
| 01/03/84 | 19.99               | 1522.01          | 12/30/85 | 20.83               | 1521.17          |
| 01/16/84 | 20.42               | 1521.58          |          |                     |                  |
| 02/01/84 | 20.35               | 1521.65          | 02/25/86 | 20.64               | 1521.36          |
| 02/21/84 | 20.36               | 1521.64          | 03/26/86 | 20.49               | 1521.51          |
| 03/12/84 | 20.25               | 1521.75          | 05/14/86 | 20.27               | 1521.73          |
| 04/03/84 | 19.74               | 1522.26          | 06/04/86 | 20.87               | 1521.13          |
| 04/18/84 | 19.41               | 1522.59          | 07/01/86 | 21.97               | 1520.03          |
| 05/08/84 | 18.97               | 1523.03          | 08/06/86 | 22.22               | 1519.78          |
| 05/29/84 | 19.03               | 1522.97          | 09/09/86 | 22.93               | 1519.07          |
| 06/15/84 | 19.07               | 1522.93          | 10/09/86 | 22.64               | 1519.36          |
| 06/26/84 | 19.41               | 1522.59          | 12/16/86 | 21.78               | 1520.22          |

154-082-03CDC6  
Sundre aquifer

LS Elev (msl,ft)= 1541.20 SI (ft)= 258-261

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/17/83 | 37.52               | 1503.68          | 12/13/84 | 28.50               | 1512.70          |
| 12/08/83 | 37.66               | 1503.54          | 01/09/85 | 31.08               | 1510.12          |
| 12/14/83 | 36.75               | 1504.45          | 02/12/85 | 33.30               | 1507.90          |
| 01/03/84 | 36.50               | 1504.70          | 03/06/85 | 32.60               | 1508.60          |
| 01/16/84 | 35.58               | 1505.62          | 03/19/85 | 32.61               | 1508.59          |
| 02/01/84 | 34.88               | 1506.32          | 04/17/85 | 32.66               | 1508.54          |
| 02/21/84 | 35.00               | 1506.20          | 05/02/85 | 33.21               | 1507.99          |
| 03/12/84 | 34.28               | 1506.92          | 05/14/85 | 33.39               | 1507.81          |
| 04/03/84 | 34.16               | 1507.04          | 06/06/85 | 34.66               | 1506.54          |
| 04/18/84 | 33.89               | 1507.31          | 06/20/85 | 36.72               | 1504.48          |
| 05/08/84 | 32.94               | 1508.26          | 07/01/85 | 35.38               | 1505.82          |
| 05/25/84 | 34.27               | 1506.93          | 07/17/85 | 40.36               | 1500.84          |
| 05/29/84 | 35.30               | 1505.90          | 07/29/85 | 41.27               | 1499.93          |
| 06/15/84 | 35.16               | 1506.04          | 08/14/85 | 39.32               | 1501.88          |
| 06/26/84 | 36.55               | 1504.65          | 08/27/85 | 38.86               | 1502.34          |
| 07/10/84 | 39.60               | 1501.60          | 09/11/85 | 36.55               | 1504.65          |
| 07/27/84 | 44.44               | 1496.76          | 09/24/85 | 36.25               | 1504.95          |
| 08/09/84 | 43.25               | 1497.95          | 10/23/85 | 28.50               | 1512.70          |
| 08/16/84 | 44.78               | 1496.42          | 11/21/85 | 26.32               | 1514.88          |
| 08/21/84 | 42.89               | 1498.31          | 12/30/85 | 30.88               | 1510.32          |
| 08/27/84 | 42.47               | 1498.73          | 02/25/86 | 28.97               | 1512.23          |
| 09/07/84 | 40.13               | 1501.07          | 03/26/86 | 32.09               | 1509.11          |
| 09/12/84 | 36.63               | 1504.57          | 05/14/86 | 31.99               | 1509.21          |
| 09/20/84 | 38.24               | 1502.96          | 06/04/86 | 36.38               | 1504.82          |
| 09/27/84 | 37.19               | 1504.01          | 07/01/86 | 39.86               | 1501.34          |
| 10/03/84 | 37.33               | 1503.87          | 08/06/86 | 36.74               | 1504.46          |
| 10/10/84 | 36.41               | 1504.79          | 09/09/86 | 41.13               | 1500.07          |
| 10/23/84 | 32.63               | 1508.57          | 10/09/86 | 36.60               | 1504.60          |
| 11/08/84 | 31.10               | 1510.10          | 12/16/86 | 31.79               | 1509.41          |
| 11/20/84 | 29.99               | 1511.21          |          |                     |                  |

154-082-03CDC7  
 Sundre aquifer

LS Elev (msl,ft)= 1541.30 SI (ft)= 155-160

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/17/83 | 37.55               | 1503.75          |          |                     |                  |
| 12/08/83 | 37.72               | 1503.58          | 01/09/85 | 31.13               | 1510.17          |
| 12/14/83 | 36.91               | 1504.39          | 02/12/85 | 33.36               | 1507.94          |
|          |                     |                  | 03/06/85 | 32.61               | 1508.69          |
| 01/03/84 | 36.52               | 1504.78          | 03/19/85 | 32.63               | 1508.67          |
| 01/16/84 | 35.63               | 1505.67          | 04/17/85 | 32.80               | 1508.50          |
| 02/01/84 | 34.97               | 1506.33          | 05/02/85 | 33.36               | 1507.94          |
| 02/21/84 | 35.05               | 1506.25          | 05/14/85 | 33.80               | 1507.50          |
| 03/12/84 | 34.11               | 1507.19          | 06/06/85 | 34.88               | 1506.42          |
| 04/03/84 | 34.21               | 1507.09          | 06/20/85 | 36.96               | 1504.34          |
| 04/18/84 | 34.22               | 1507.08          | 07/01/85 | 35.58               | 1505.72          |
| 05/08/84 | 32.99               | 1508.31          | 07/17/85 | 40.61               | 1500.69          |
| 05/29/84 | 35.36               | 1505.94          | 07/29/85 | 41.50               | 1499.80          |
| 06/15/84 | 35.25               | 1506.05          | 08/14/85 | 39.57               | 1501.73          |
| 06/26/84 | 36.63               | 1504.67          | 08/27/85 | 39.11               | 1502.19          |
| 07/10/84 | 39.69               | 1501.61          | 09/11/85 | 36.74               | 1504.56          |
| 07/27/84 | 44.55               | 1496.75          | 09/24/85 | 36.42               | 1504.88          |
| 08/09/84 | 43.46               | 1497.84          | 10/23/85 | 28.66               | 1512.64          |
| 08/16/84 | 44.89               | 1496.41          | 11/21/85 | 26.46               | 1514.84          |
| 08/21/84 | 42.99               | 1498.31          | 12/30/85 | 31.03               | 1510.27          |
| 08/27/84 | 42.57               | 1498.73          |          |                     |                  |
| 09/07/84 | 40.21               | 1501.09          | 02/25/86 | 29.14               | 1512.16          |
| 09/12/84 | 37.61               | 1503.69          | 03/26/86 | 32.27               | 1509.03          |
| 09/20/84 | 38.33               | 1502.97          | 05/14/86 | 32.03               | 1509.27          |
| 09/27/84 | 37.27               | 1504.03          | 06/04/86 | 36.59               | 1504.71          |
| 10/03/84 | 37.41               | 1503.89          | 07/01/86 | 40.10               | 1501.20          |
| 10/10/84 | 36.47               | 1504.83          | 08/06/86 | 36.95               | 1504.35          |
| 10/23/84 | 32.69               | 1508.61          | 09/09/86 | 41.36               | 1499.94          |
| 11/08/84 | 31.13               | 1510.17          | 10/09/86 | 36.79               | 1504.51          |
| 11/20/84 | 30.02               | 1511.28          | 12/16/86 | 31.97               | 1509.33          |
| 12/13/84 | 28.55               | 1512.75          |          |                     |                  |

154-082-03CDC8

Sundre aquifer

LS Elev (msl,ft)= 1541.40

SI (ft)= 95-100

| Date     | Depth to<br>Water (ft) | WL Elev<br>(msl,ft) | Date     | Depth to<br>Water (ft) | WL Elev<br>(msl,ft) |
|----------|------------------------|---------------------|----------|------------------------|---------------------|
| 11/17/83 | 37.13                  | 1504.27             |          |                        |                     |
| 12/08/83 | 37.30                  | 1504.10             | 01/09/85 | 30.94                  | 1510.46             |
| 12/14/83 | 36.53                  | 1504.87             | 02/12/85 | 32.91                  | 1508.49             |
|          |                        |                     | 03/06/85 | 32.47                  | 1508.93             |
| 01/03/84 | 36.22                  | 1505.18             | 03/19/85 | 32.49                  | 1508.91             |
| 01/16/84 | 35.30                  | 1506.10             | 04/17/85 | 32.38                  | 1509.02             |
| 02/01/84 | 34.50                  | 1506.90             | 05/02/85 | 32.89                  | 1508.51             |
| 02/21/84 | 34.61                  | 1506.79             | 05/14/85 | 33.27                  | 1508.13             |
| 03/12/84 | 33.86                  | 1507.54             | 06/06/85 | 34.61                  | 1506.79             |
| 04/03/84 | 33.72                  | 1507.68             | 06/20/85 | 36.41                  | 1504.99             |
| 04/18/84 | 33.46                  | 1507.94             | 07/01/85 | 35.13                  | 1506.27             |
| 05/08/84 | 32.50                  | 1508.90             | 07/17/85 | 41.02                  | 1500.38             |
| 05/29/84 | 35.17                  | 1506.23             | 07/29/85 | 40.92                  | 1500.48             |
| 06/15/84 | 35.02                  | 1506.38             | 08/14/85 | 39.02                  | 1502.38             |
| 06/26/84 | 36.22                  | 1505.18             | 08/27/85 | 38.57                  | 1502.83             |
| 07/10/84 | 39.19                  | 1502.21             | 09/11/85 | 36.50                  | 1504.90             |
| 07/27/84 | 43.77                  | 1497.63             | 09/24/85 | 36.16                  | 1505.24             |
| 08/09/84 | 42.80                  | 1498.60             | 10/23/85 | 28.64                  | 1512.76             |
| 08/16/84 | 44.13                  | 1497.27             | 11/21/85 | 26.44                  | 1514.96             |
| 08/21/84 | 42.60                  | 1498.80             | 12/30/85 | 30.83                  | 1510.57             |
| 08/27/84 | 42.13                  | 1499.27             |          |                        |                     |
| 09/07/84 | 39.85                  | 1501.55             | 02/25/86 | 28.99                  | 1512.41             |
| 09/12/84 | 36.61                  | 1504.79             | 03/26/86 | 31.68                  | 1509.72             |
| 09/20/84 | 37.94                  | 1503.46             | 05/14/86 | 31.68                  | 1509.72             |
| 09/27/84 | 36.80                  | 1504.60             | 06/04/86 | 36.07                  | 1505.33             |
| 10/03/84 | 36.89                  | 1504.51             | 07/01/86 | 39.48                  | 1501.92             |
| 10/10/84 | 36.00                  | 1505.40             | 08/06/86 | 36.45                  | 1504.95             |
| 10/23/84 | 32.57                  | 1508.83             | 09/09/86 | 40.87                  | 1500.53             |
| 11/08/84 | 31.03                  | 1510.37             | 10/09/86 | 36.57                  | 1504.83             |
| 11/20/84 | 29.97                  | 1511.43             | 12/16/86 | 31.82                  | 1509.58             |
| 12/13/84 | 28.47                  | 1512.93             |          |                        |                     |

154-082-03DBB  
Sundre aquifer

LS Elev (msl,ft)= 1542.60 SI (ft)= 227-233

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/14/68 | 15.67               | 1526.93          | 07/01/74 | 9.69                | 1532.91          |
| 11/22/68 | 15.63               | 1526.97          | 10/13/74 | 12.67               | 1529.93          |
| 11/27/68 | 15.67               | 1526.93          | 08/13/75 | 11.10               | 1531.50          |
| 12/06/68 | 14.35               | 1528.25          | 06/04/76 | 8.60                | 1534.00          |
| 12/07/68 | 14.39               | 1528.21          | 07/16/76 | 9.55                | 1533.05          |
| 12/11/68 | 14.30               | 1528.30          | 08/27/76 | 14.17               | 1528.43          |
| 12/16/68 | 14.34               | 1528.26          | 09/09/76 | 16.19               | 1526.41          |
| 12/19/68 | 14.43               | 1528.17          | 09/23/76 | 16.97               | 1525.63          |
| 12/20/68 | 15.18               | 1527.42          | 10/25/76 | 13.72               | 1528.88          |
| 12/27/68 | 14.43               | 1528.17          | 12/03/76 | 13.82               | 1528.78          |
| 01/04/69 | 14.43               | 1528.17          | 01/05/77 | 17.85               | 1524.75          |
| 02/06/69 | 14.35               | 1528.25          | 02/08/77 | 18.88               | 1523.72          |
| 04/08/69 | 12.75               | 1529.85          | 03/15/77 | 18.58               | 1524.02          |
| 05/07/69 | 4.71                | 1537.89          | 05/06/77 | 13.81               | 1528.79          |
| 05/15/69 | 6.25                | 1536.35          | 06/03/77 | 14.43               | 1528.17          |
| 05/27/69 | 8.48                | 1534.12          | 06/30/77 | 16.80               | 1525.80          |
| 06/11/69 | 11.39               | 1531.21          | 07/07/77 | 21.47               | 1521.13          |
| 06/27/69 | 12.18               | 1530.42          | 07/14/77 | 21.28               | 1521.32          |
| 07/16/69 | 12.17               | 1530.43          | 07/28/77 | 22.83               | 1519.77          |
| 07/29/69 | 12.02               | 1530.58          | 08/10/77 | 24.97               | 1517.63          |
| 08/12/69 | 12.68               | 1529.92          | 08/26/77 | 25.80               | 1516.80          |
| 09/09/69 | 13.43               | 1529.17          | 09/14/77 | 23.60               | 1519.00          |
| 09/25/69 | 13.52               | 1529.08          | 10/11/77 | 23.80               | 1518.80          |
| 10/08/69 | 13.43               | 1529.17          | 11/10/77 | 24.53               | 1518.07          |
| 10/16/69 | 13.50               | 1529.10          | 12/15/77 | 23.85               | 1518.75          |
| 10/19/69 | 13.93               | 1528.67          |          |                     |                  |
| 10/20/69 | 13.90               | 1528.70          |          |                     |                  |
| 10/21/69 | 16.16               | 1526.44          |          |                     |                  |
| 10/22/69 | 17.00               | 1525.60          |          |                     |                  |
| 10/23/69 | 17.42               | 1525.18          | 01/24/78 | 25.60               | 1517.00          |
| 10/24/69 | 17.80               | 1524.80          | 02/22/78 | 26.75               | 1515.85          |
| 10/25/69 | 18.03               | 1524.57          | 03/25/78 | 25.61               | 1516.99          |
| 10/26/69 | 18.38               | 1524.22          | 04/26/78 | 25.61               | 1516.99          |
| 10/28/69 | 18.75               | 1523.85          | 05/25/78 | 28.86               | 1513.74          |
| 10/30/69 | 19.02               | 1523.58          | 06/27/78 | 27.17               | 1515.43          |
| 11/01/69 | 19.39               | 1523.21          | 07/26/78 | 30.33               | 1512.27          |
| 11/03/69 | 19.61               | 1522.99          | 08/29/78 | 27.67               | 1514.93          |
| 11/04/69 | 17.80               | 1524.80          | 09/26/78 | 23.33               | 1519.27          |
| 11/05/69 | 16.91               | 1525.69          | 10/27/78 | 27.11               | 1515.49          |
| 11/06/69 | 16.41               | 1526.19          | 12/04/78 | 27.10               | 1515.50          |
| 11/07/69 | 16.00               | 1526.60          |          |                     |                  |
| 11/08/69 | 15.81               | 1526.79          | 01/19/79 | 27.67               | 1514.93          |
| 11/10/69 | 15.32               | 1527.28          | 03/28/79 | 26.50               | 1516.10          |
| 11/12/69 | 15.06               | 1527.54          | 04/30/79 | 19.46               | 1523.14          |
| 11/14/69 | 14.86               | 1527.74          | 05/29/79 | 14.72               | 1527.88          |
| 11/25/69 | 14.39               | 1528.21          | 06/27/79 | 25.77               | 1516.83          |
| 12/02/69 | 14.23               | 1528.37          | 07/31/79 | 18.58               | 1524.02          |
|          |                     |                  | 08/28/79 | 27.36               | 1515.24          |
| 04/06/70 | 13.60               | 1529.00          | 09/27/79 | 30.25               | 1512.35          |
| 06/09/70 | 7.15                | 1535.45          | 10/29/79 | 29.38               | 1513.22          |
| 07/24/70 | 11.53               | 1531.07          | 11/29/79 | 30.10               | 1512.50          |
| 08/27/70 | 12.96               | 1529.64          | 12/18/79 | 30.00               | 1512.60          |
| 10/01/70 | 13.35               | 1529.25          |          |                     |                  |
|          |                     |                  | 01/29/80 | 29.97               | 1512.63          |
| 04/16/71 | 12.38               | 1530.22          | 02/27/80 | 29.61               | 1512.99          |
| 07/22/71 | 11.78               | 1530.82          | 03/25/80 | 28.11               | 1514.49          |
| 08/27/71 | 12.56               | 1530.04          | 04/28/80 | 31.86               | 1510.74          |
| 12/21/71 | 12.35               | 1530.25          | 05/27/80 | 34.38               | 1508.22          |
|          |                     |                  | 06/12/80 | 32.08               | 1510.52          |
| 10/12/72 | 12.22               | 1530.38          | 06/19/80 | 31.74               | 1510.86          |
|          |                     |                  | 06/27/80 | 34.30               | 1508.30          |
| 06/07/73 | 12.73               | 1529.87          | 07/16/80 | 35.39               | 1507.21          |
| 09/28/73 | 13.17               | 1529.43          | 07/18/80 | 32.08               | 1510.52          |

154-082-03088 (continued)

Sundre aquifer

LS Elev (msl,ft)= 1542.60 SI (ft)= 227-233

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 07/21/80 | 29.63               | 1512.97          | 04/29/83 | 29.71               | 1512.89          |
| 07/25/80 | 27.97               | 1514.63          | 05/26/83 | 31.33               | 1511.27          |
| 07/29/80 | 26.74               | 1515.86          | 07/08/83 | 35.61               | 1506.99          |
| 08/01/80 | 26.05               | 1516.55          | 10/03/84 | 38.00               | 1504.60          |
| 08/05/80 | 25.22               | 1517.38          | 10/10/84 | 37.57               | 1505.03          |
| 08/28/80 | 30.36               | 1512.24          | 10/23/84 | 34.86               | 1507.74          |
| 09/26/80 | 30.88               | 1511.72          | 11/07/84 | 33.52               | 1509.08          |
| 10/29/80 | 28.85               | 1513.75          | 11/20/84 | 31.99               | 1510.61          |
| 11/25/80 | 30.41               | 1512.19          | 12/13/84 | 31.99               | 1510.61          |
| 12/29/80 | 31.47               | 1511.13          | 01/09/85 | 33.28               | 1509.32          |
| 01/29/81 | 30.91               | 1511.69          | 02/12/85 | 34.10               | 1508.50          |
| 02/24/81 | 31.75               | 1510.85          | 03/06/85 | 34.78               | 1507.82          |
| 03/26/81 | 32.05               | 1510.55          | 03/19/85 | 34.72               | 1507.88          |
| 04/30/81 | 32.39               | 1510.21          | 04/16/85 | 34.35               | 1508.25          |
| 05/28/81 | 32.44               | 1510.16          | 05/02/85 | 33.80               | 1508.80          |
| 06/29/81 | 33.00               | 1509.60          | 05/14/85 | 34.02               | 1508.58          |
| 07/29/81 | 36.27               | 1506.33          | 06/06/85 | 35.49               | 1507.11          |
| 08/28/81 | 34.32               | 1508.28          | 06/20/85 | 37.94               | 1504.66          |
| 09/29/81 | 35.38               | 1507.22          | 07/01/85 | 37.25               | 1505.35          |
| 10/28/81 | 37.27               | 1505.33          | 07/17/85 | 41.99               | 1500.61          |
| 11/27/81 | 36.91               | 1505.69          | 07/29/85 | 42.91               | 1499.69          |
| 03/29/82 | 36.69               | 1505.91          | 08/14/85 | 40.61               | 1501.99          |
| 04/05/82 | 36.14               | 1506.46          | 08/27/85 | 40.97               | 1501.63          |
| 04/13/82 | 32.44               | 1510.16          | 09/11/85 | 39.11               | 1503.49          |
| 04/20/82 | 27.77               | 1514.83          | 09/24/85 | 38.83               | 1503.77          |
| 04/30/82 | 22.92               | 1519.68          | 10/23/85 | 30.00               | 1512.60          |
| 05/27/82 | 27.22               | 1515.38          | 11/21/85 | 27.89               | 1514.71          |
| 06/29/82 | 29.58               | 1513.02          | 12/30/85 | 33.21               | 1509.39          |
| 07/28/82 | 33.00               | 1509.60          | 02/25/86 | 30.77               | 1511.83          |
| 08/31/82 | 36.17               | 1506.43          | 03/26/86 | 32.89               | 1509.71          |
| 09/30/82 | 35.33               | 1507.27          | 05/13/86 | 33.25               | 1509.35          |
| 10/29/82 | 33.91               | 1508.69          | 06/04/86 | 37.67               | 1504.93          |
| 11/29/82 | 34.10               | 1508.50          | 07/01/86 | 41.10               | 1501.50          |
| 12/27/82 | 33.07               | 1509.53          | 08/06/86 | 37.73               | 1504.87          |
| 01/28/83 | 34.47               | 1508.13          | 09/09/86 | 42.35               | 1500.25          |
| 02/28/83 | 34.60               | 1508.00          | 10/09/86 | 38.86               | 1503.74          |
| 03/31/83 | 35.19               | 1507.41          | 12/16/86 | 34.11               | 1508.49          |

154-082-03DCD

Souris Valley-Sundre aquifer

LS Elev (msl,ft)= 1541.30

SI (ft)= 58-61

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 07/30/69 | 10.57               | 1530.73          | 06/04/76 | 7.73                | 1533.57          |
| 08/12/69 | 11.39               | 1529.91          | 07/16/76 | 8.61                | 1532.69          |
| 09/09/69 | 12.14               | 1529.16          | 08/27/76 | 12.39               | 1528.91          |
| 09/26/69 | 12.25               | 1529.05          | 09/09/76 | 13.73               | 1527.57          |
| 10/08/69 | 12.15               | 1529.15          | 09/23/76 | 15.14               | 1526.16          |
| 10/16/69 | 12.25               | 1529.05          | 10/25/76 | 12.89               | 1528.41          |
| 10/19/69 | 12.60               | 1528.70          | 12/03/76 | 12.89               | 1528.41          |
| 10/20/69 | 13.17               | 1528.13          |          |                     |                  |
| 10/21/69 | 14.42               | 1526.88          | 01/05/77 | 15.35               | 1525.95          |
| 10/22/69 | 15.06               | 1526.24          | 02/08/77 | 16.25               | 1525.05          |
| 10/23/69 | 15.52               | 1525.78          | 03/15/77 | 16.39               | 1524.91          |
| 10/24/69 | 15.84               | 1525.46          | 05/06/77 | 12.89               | 1528.41          |
| 10/25/69 | 16.14               | 1525.16          | 06/03/77 | 13.47               | 1527.83          |
| 10/26/69 | 16.36               | 1524.94          | 06/30/77 | 14.67               | 1526.63          |
| 10/27/69 | 16.55               | 1524.75          | 07/07/77 | 17.88               | 1523.42          |
| 10/28/69 | 16.75               | 1524.55          | 07/14/77 | 18.05               | 1523.25          |
| 10/29/69 | 16.88               | 1524.42          | 07/28/77 | 19.88               | 1521.42          |
| 10/30/69 | 17.10               | 1524.20          | 08/08/77 | 21.25               | 1520.05          |
| 10/31/69 | 17.25               | 1524.05          | 08/26/77 | 21.99               | 1519.31          |
| 11/01/69 | 17.36               | 1523.94          | 09/14/77 | 20.97               | 1520.33          |
| 11/02/69 | 17.46               | 1523.84          | 10/11/77 | 20.92               | 1520.38          |
| 11/03/69 | 17.58               | 1523.72          | 11/10/77 | 21.66               | 1519.64          |
| 11/04/69 | 17.58               | 1523.72          | 12/15/77 | 21.55               | 1519.75          |
| 11/05/69 | 15.75               | 1525.55          |          |                     |                  |
| 11/06/69 | 15.10               | 1526.20          | 01/24/78 | 22.71               | 1518.59          |
| 11/07/69 | 14.64               | 1526.66          | 02/22/78 | 23.11               | 1518.19          |
| 11/08/69 | 14.44               | 1526.86          | 03/28/78 | 22.05               | 1519.25          |
| 11/09/69 | 14.21               | 1527.09          | 04/26/78 | 22.19               | 1519.11          |
| 11/10/69 | 14.03               | 1527.27          | 05/25/78 | 23.75               | 1517.55          |
| 11/11/69 | 13.88               | 1527.42          | 06/27/78 | 23.85               | 1517.45          |
| 11/12/69 | 13.76               | 1527.54          | 07/26/78 | 24.83               | 1516.47          |
| 11/13/69 | 13.65               | 1527.65          | 08/29/78 | 24.88               | 1516.42          |
| 11/14/69 | 13.56               | 1527.74          | 09/26/78 | 21.63               | 1519.67          |
| 11/17/69 | 13.36               | 1527.94          | 10/27/78 | 24.36               | 1516.94          |
| 11/24/69 | 13.13               | 1528.17          | 12/04/78 | 24.32               | 1516.98          |
| 12/02/69 | 13.03               | 1528.27          |          |                     |                  |
| 12/03/69 | 14.60               | 1526.70          | 01/19/79 | 24.47               | 1516.83          |
| 12/04/69 | 14.92               | 1526.38          | 02/29/79 | 23.47               | 1517.83          |
| 12/05/69 | 15.19               | 1526.11          | 03/29/79 | 22.25               | 1519.05          |
| 01/27/70 | 12.52               | 1528.78          | 04/30/79 | 15.11               | 1526.19          |
| 03/10/70 | 12.64               | 1528.66          | 05/29/79 | 10.15               | 1531.15          |
| 04/06/70 | 12.27               | 1529.03          | 06/27/79 | 20.58               | 1520.72          |
| 06/09/70 | 5.56                | 1535.74          | 07/31/79 | 16.86               | 1524.44          |
| 07/24/70 | 10.32               | 1530.98          | 08/28/79 | 24.61               | 1516.69          |
| 08/27/70 | 11.89               | 1529.41          | 09/27/79 | 26.30               | 1515.00          |
| 10/01/70 | 12.30               | 1529.00          | 10/31/79 | 25.60               | 1515.70          |
| 12/23/70 | 12.02               | 1529.28          | 11/29/79 | 26.32               | 1514.98          |
| 04/15/71 | 11.23               | 1530.07          | 12/27/79 | 25.88               | 1515.42          |
| 07/22/71 | 10.50               | 1530.80          | 01/29/80 | 26.19               | 1515.11          |
| 08/27/71 | 11.43               | 1529.87          | 02/28/80 | 25.83               | 1515.47          |
| 12/21/71 | 11.18               | 1530.12          | 03/25/80 | 25.27               | 1516.03          |
| 10/12/72 | 11.06               | 1530.24          | 04/28/80 | 27.38               | 1513.92          |
| 06/08/73 | 11.63               | 1529.67          | 05/27/80 | 29.10               | 1512.20          |
| 07/02/74 | 8.55                | 1532.75          | 06/27/80 | 29.92               | 1511.38          |
| 10/13/74 | 11.52               | 1529.78          | 07/29/80 | 25.47               | 1515.83          |
| 08/14/75 | 9.97                | 1531.33          | 08/28/80 | 26.83               | 1514.47          |
| 03/19/76 | 8.38                | 1532.92          | 09/26/80 | 27.28               | 1514.02          |
|          |                     |                  | 10/29/80 | 26.17               | 1515.13          |
|          |                     |                  | 11/25/80 | 27.08               | 1514.22          |
|          |                     |                  | 12/29/80 | 27.63               | 1513.67          |
|          |                     |                  | 01/29/81 | 28.16               | 1513.14          |
|          |                     |                  | 03/02/81 | 28.33               | 1512.97          |

154-082-03DCD (continued)  
 Souris Valley-Sundre aquifer

LS Elev (msl,ft)= 1541.30 SI (ft)= 58-61

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 03/26/81 | 28.10               | 1513.20          | 07/10/84 | 34.83               | 1506.47          |
| 04/30/81 | 29.38               | 1511.92          | 07/27/84 | 38.33               | 1502.97          |
| 05/28/81 | 29.14               | 1512.16          | 08/09/84 | 38.78               | 1502.52          |
| 06/29/81 | 29.16               | 1512.14          | 08/16/84 | 39.55               | 1501.75          |
| 07/28/81 | 31.52               | 1509.78          | 08/21/84 | 39.58               | 1501.72          |
| 08/28/81 | 31.08               | 1510.22          | 08/27/84 | 38.83               | 1502.47          |
| 09/29/81 | 31.89               | 1509.41          | 09/07/84 | 37.41               | 1503.89          |
| 10/28/81 | 32.10               | 1509.20          | 09/12/84 | 36.13               | 1505.17          |
| 11/27/81 | 32.35               | 1508.95          | 09/20/84 | 35.61               | 1505.69          |
| 12/30/81 | 32.82               | 1508.48          | 09/27/84 | 34.44               | 1506.86          |
|          |                     |                  | 10/03/84 | 34.22               | 1507.08          |
| 01/28/82 | 33.19               | 1508.11          | 10/10/84 | 33.72               | 1507.58          |
| 02/26/82 | 34.02               | 1507.28          | 10/23/84 | 31.53               | 1509.77          |
| 03/31/82 | 32.83               | 1508.47          | 11/08/84 | 30.16               | 1511.14          |
| 04/30/82 | 21.83               | 1519.47          | 11/20/84 | 29.19               | 1512.11          |
| 05/27/82 | 24.10               | 1517.20          | 12/13/84 | 27.85               | 1513.45          |
| 06/29/82 | 26.41               | 1514.89          |          |                     |                  |
| 07/28/82 | 29.14               | 1512.16          | 01/09/85 | 29.30               | 1512.00          |
| 08/31/82 | 32.30               | 1509.00          | 02/12/85 | 30.71               | 1510.59          |
| 09/30/82 | 31.38               | 1509.92          | 03/06/85 | 30.66               | 1510.64          |
| 10/29/82 | 30.17               | 1511.13          | 03/19/85 | 30.53               | 1510.77          |
| 11/29/82 | 30.47               | 1510.83          | 04/17/85 | 29.96               | 1511.34          |
| 12/27/82 | 30.38               | 1510.92          | 05/02/85 | 29.75               | 1511.55          |
|          |                     |                  | 05/14/85 | 30.08               | 1511.22          |
| 01/28/83 | 30.83               | 1510.47          | 06/06/85 | 31.19               | 1510.11          |
| 02/28/83 | 30.78               | 1510.52          | 06/20/85 | 32.63               | 1508.67          |
| 03/31/83 | 30.89               | 1510.41          | 07/01/85 | 32.60               | 1508.70          |
| 04/29/83 | 25.64               | 1515.66          | 07/17/85 | 35.77               | 1505.53          |
| 05/27/83 | 26.28               | 1515.02          | 07/29/85 | 36.74               | 1504.56          |
| 07/08/83 | 31.50               | 1509.80          | 08/14/85 | 35.63               | 1505.67          |
| 07/28/83 | 34.33               | 1506.97          | 08/27/85 | 35.47               | 1505.83          |
| 08/30/83 | 35.16               | 1506.14          | 09/11/85 | 34.55               | 1506.75          |
| 11/22/83 | 33.83               | 1507.47          | 09/24/85 | 34.16               | 1507.14          |
| 12/08/83 | 33.88               | 1507.42          | 10/23/85 | 28.36               | 1512.94          |
| 12/14/83 | 33.69               | 1507.61          | 11/21/85 | 26.05               | 1515.25          |
|          |                     |                  | 12/30/85 | 29.16               | 1512.14          |
| 01/03/84 | 33.47               | 1507.83          |          |                     |                  |
| 01/16/84 | 32.55               | 1508.75          | 02/25/86 | 27.88               | 1513.42          |
| 02/01/84 | 32.05               | 1509.25          | 03/26/86 | 29.14               | 1512.16          |
| 02/21/84 | 32.11               | 1509.19          | 05/14/86 | 29.21               | 1512.09          |
| 03/12/84 | 31.55               | 1509.75          | 06/04/86 | 32.35               | 1508.95          |
| 04/03/84 | 31.17               | 1510.13          | 07/01/86 | 35.60               | 1505.70          |
| 04/18/84 | 30.63               | 1510.67          | 08/06/86 | 34.44               | 1506.86          |
| 05/08/84 | 29.94               | 1511.36          | 09/09/86 | 37.16               | 1504.14          |
| 05/29/84 | 31.52               | 1509.78          | 10/09/86 | 35.01               | 1506.29          |
| 06/15/84 | 31.47               | 1509.83          | 12/16/86 | 30.73               | 1510.57          |
| 06/26/84 | 32.55               | 1508.75          |          |                     |                  |

154-082-04AAD (Composite water level, dropped from well run 12/13/84)  
 Souris Valley-Sundre aquifer      LS Elev (msl,ft) = 1544.30      SI (ft) = 50-220

| Date     | Depth to Water (ft) | ML Elev (msl,ft) | Date     | Depth to Water (ft) | ML Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/14/68 | 15.07               | 1529.23          | 10/01/70 | 13.06               | 1531.24          |
| 11/22/68 | 15.09               | 1529.21          |          |                     |                  |
| 11/27/68 | 15.07               | 1529.23          | 04/15/71 | 12.96               | 1531.34          |
| 12/03/68 | 15.06               | 1529.24          | 07/22/71 | 12.78               | 1531.52          |
| 12/05/68 | 15.07               | 1529.23          | 08/27/71 | 13.19               | 1531.11          |
| 12/06/68 | 15.10               | 1529.20          | 12/21/71 | 12.89               | 1531.41          |
| 12/07/68 | 15.13               | 1529.17          |          |                     |                  |
| 12/11/68 | 15.07               | 1529.23          | 10/12/72 | 12.93               | 1531.37          |
| 12/16/68 | 15.10               | 1529.20          |          |                     |                  |
| 12/19/68 | 15.11               | 1529.19          | 06/07/73 | 13.72               | 1530.58          |
| 12/20/68 | 15.18               | 1529.12          |          |                     |                  |
| 12/21/68 | 15.21               | 1529.09          | 07/01/74 | 9.61                | 1534.69          |
| 12/27/68 | 15.14               | 1529.16          | 10/13/74 | 13.39               | 1530.91          |
|          |                     |                  |          |                     |                  |
| 01/04/69 | 15.15               | 1529.15          | 03/19/76 | 11.73               | 1532.57          |
| 02/06/69 | 15.23               | 1529.07          | 06/04/76 | 7.10                | 1537.20          |
| 03/05/69 | 15.28               | 1529.02          | 07/16/76 | 10.02               | 1534.28          |
| 03/12/69 | 15.27               | 1529.03          | 08/24/76 | 12.07               | 1532.23          |
| 04/08/69 | 13.63               | 1530.67          | 08/27/76 | 12.14               | 1532.16          |
| 04/09/69 | 13.39               | 1530.91          | 09/07/76 | 12.96               | 1531.34          |
| 04/17/69 | 12.17               | 1532.13          | 09/23/76 | 14.05               | 1530.25          |
| 05/06/69 | 5.34                | 1538.96          | 10/28/76 | 14.72               | 1529.58          |
| 05/07/69 | 5.39                | 1538.91          | 12/03/76 | 14.80               | 1529.50          |
| 05/15/69 | 5.94                | 1538.36          |          |                     |                  |
| 05/16/69 | 6.03                | 1538.27          | 01/05/77 | 15.39               | 1528.91          |
| 05/27/69 | 7.43                | 1536.87          | 02/08/77 | 16.19               | 1528.11          |
| 05/28/69 | 7.67                | 1536.63          | 03/15/77 | 16.63               | 1527.67          |
| 06/11/69 | 10.00               | 1534.30          | 05/06/77 | 15.80               | 1528.50          |
| 06/27/69 | 11.19               | 1533.11          | 06/03/77 | 15.85               | 1528.45          |
| 07/16/69 | 11.44               | 1532.86          | 06/30/77 | 16.00               | 1528.30          |
| 07/17/69 | 11.47               | 1532.83          | 07/07/77 | 16.72               | 1527.58          |
| 07/29/69 | 12.64               | 1531.66          | 07/14/77 | 17.19               | 1527.11          |
| 08/12/69 | 12.10               | 1532.20          | 07/28/77 | 18.00               | 1526.30          |
| 09/09/69 | 11.09               | 1533.21          | 08/10/77 | 18.69               | 1525.61          |
| 09/25/69 | 13.38               | 1530.92          | 08/26/77 | 19.30               | 1525.00          |
| 10/08/69 | 13.47               | 1530.83          | 09/14/77 | 19.50               | 1524.80          |
| 10/16/69 | 13.60               | 1530.70          | 10/11/77 | 19.58               | 1524.72          |
| 10/19/69 | 13.68               | 1530.62          | 11/10/77 | 19.88               | 1524.42          |
| 10/20/69 | 13.89               | 1530.41          | 12/15/77 | 20.02               | 1524.28          |
| 10/21/69 | 13.97               | 1530.33          |          |                     |                  |
| 10/22/69 | 14.25               | 1530.05          | 01/24/78 | 20.44               | 1523.86          |
| 10/23/69 | 14.28               | 1530.02          | 02/22/78 | 20.75               | 1523.55          |
| 10/24/69 | 14.48               | 1529.82          | 03/28/78 | 20.27               | 1524.03          |
| 10/25/69 | 14.57               | 1529.73          | 04/20/78 | 20.22               | 1524.08          |
| 10/26/69 | 14.80               | 1529.50          | 05/24/78 | 20.61               | 1523.69          |
| 10/28/69 | 14.94               | 1529.36          | 05/27/78 | 20.97               | 1523.33          |
| 10/30/69 | 15.07               | 1529.23          | 07/26/78 | 21.21               | 1523.09          |
| 11/01/69 | 15.27               | 1529.03          | 08/29/78 | 21.58               | 1522.72          |
| 11/03/69 | 15.43               | 1528.87          | 09/26/78 | 21.19               | 1523.11          |
| 11/04/69 | 15.23               | 1529.07          | 10/27/78 | 21.44               | 1522.86          |
| 11/05/69 | 15.10               | 1529.20          | 12/04/78 | 21.61               | 1522.69          |
| 11/06/69 | 15.06               | 1529.24          |          |                     |                  |
| 11/07/69 | 15.01               | 1529.29          | 01/19/79 | 21.69               | 1522.61          |
| 11/10/69 | 14.93               | 1529.37          | 02/28/79 | 21.32               | 1522.98          |
| 11/14/69 | 14.72               | 1529.58          | 03/28/79 | 21.07               | 1523.23          |
| 11/25/69 | 14.82               | 1529.48          | 04/30/79 | 15.76               | 1528.54          |
| 12/02/69 | 14.61               | 1529.69          | 05/29/79 | 11.47               | 1532.83          |
|          |                     |                  | 06/27/79 | 15.36               | 1528.94          |
| 01/27/70 | 14.57               | 1529.73          | 07/30/79 | 16.86               | 1527.44          |
| 03/10/70 | 14.55               | 1529.75          | 08/28/79 | 19.32               | 1524.98          |
| 04/06/70 | 14.31               | 1529.99          | 09/27/79 | 20.82               | 1523.48          |
| 06/08/70 | 7.13                | 1537.17          | 10/31/79 | 21.39               | 1522.91          |
| 07/24/70 | 10.39               | 1533.91          | 11/29/79 | 21.80               | 1522.50          |
| 08/27/70 | 12.19               | 1532.11          | 12/18/79 | 23.94               | 1520.36          |

154-082-04AAD (continued)  
 Souris Valley-Sundre aquifer

LS Elev (msl,ft) = 1544.30 SI (ft) = 50-220

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 01/29/80 | 22.47               | 1521.83          | 08/31/82 | 24.27               | 1520.03          |
| 02/27/80 | 22.44               | 1521.86          | 09/30/82 | 24.41               | 1519.89          |
| 03/25/80 | 22.63               | 1521.67          | 10/29/82 | 24.30               | 1520.00          |
| 04/28/80 | 22.88               | 1521.42          | 11/29/82 | 24.30               | 1520.00          |
| 05/27/80 | 23.60               | 1520.70          | 12/27/82 | 24.44               | 1519.86          |
| 06/12/80 | 23.49               | 1520.81          | 01/28/83 | 24.41               | 1519.89          |
| 06/19/80 | 23.50               | 1520.80          | 02/28/83 | 24.44               | 1519.86          |
| 06/27/80 | 23.86               | 1520.44          | 03/31/83 | 23.94               | 1520.36          |
| 07/16/80 | 24.22               | 1520.08          | 04/29/83 | 23.05               | 1521.25          |
| 07/18/80 | 24.02               | 1520.28          | 05/26/83 | 22.91               | 1521.39          |
| 07/21/80 | 23.83               | 1520.47          | 07/08/83 | 23.86               | 1520.44          |
| 07/25/80 | 23.69               | 1520.61          | 07/28/83 | 24.38               | 1519.92          |
| 07/29/80 | 23.52               | 1520.78          | 08/30/83 | 24.75               | 1519.55          |
| 08/01/80 | 23.42               | 1520.88          | 11/22/83 | 24.99               | 1519.31          |
| 08/05/80 | 23.89               | 1520.41          | 12/08/83 | 24.86               | 1519.44          |
| 08/28/80 | 23.50               | 1520.80          | 12/14/83 | 24.86               | 1519.44          |
| 09/26/80 | 23.64               | 1520.66          |          |                     |                  |
| 10/29/80 | 23.33               | 1520.97          | 01/04/84 | 24.05               | 1520.25          |
| 11/25/80 | 23.55               | 1520.75          | 01/16/84 | 24.97               | 1519.33          |
| 12/29/80 | 23.83               | 1520.47          | 02/01/84 | 24.91               | 1519.39          |
|          |                     |                  | 02/21/84 | 25.02               | 1519.28          |
| 01/29/81 | 23.86               | 1520.44          | 03/12/84 | 24.85               | 1519.45          |
| 02/24/81 | 23.77               | 1520.53          | 04/03/84 | 24.57               | 1519.73          |
| 03/26/81 | 23.91               | 1520.39          | 04/18/84 | 24.44               | 1519.86          |
| 04/30/81 | 24.08               | 1520.22          | 05/08/84 | 23.99               | 1520.31          |
| 05/28/81 | 24.27               | 1520.03          | 05/29/84 | 23.75               | 1520.55          |
| 06/29/81 | 24.22               | 1520.08          | 06/15/84 | 23.72               | 1520.58          |
| 07/28/81 | 24.75               | 1519.55          | 06/26/84 | 23.67               | 1520.63          |
| 08/28/81 | 24.72               | 1519.58          | 07/10/84 | 23.97               | 1520.33          |
| 09/29/81 | 25.00               | 1519.30          | 07/27/84 | 24.61               | 1519.69          |
| 10/28/81 | 25.16               | 1519.14          | 08/09/84 | 23.72               | 1520.58          |
| 11/27/81 | 25.33               | 1518.97          | 08/16/84 | 24.91               | 1519.39          |
| 12/31/81 | 25.52               | 1518.78          | 08/21/84 | 24.11               | 1520.19          |
|          |                     |                  | 08/27/84 | 30.50               | 1513.80          |
| 01/28/82 | 25.64               | 1518.66          | 09/07/84 | 28.91               | 1515.39          |
| 02/26/82 | 25.88               | 1518.42          | 09/12/84 | 27.75               | 1516.55          |
| 03/29/82 | 25.38               | 1518.92          | 09/20/84 | 28.41               | 1515.89          |
| 04/05/82 | 24.94               | 1519.36          | 09/27/84 | 27.52               | 1516.78          |
| 04/13/82 | 24.63               | 1519.67          | 10/03/84 | 27.94               | 1516.36          |
| 04/20/82 | 24.02               | 1520.28          | 10/10/84 | 27.83               | 1516.47          |
| 04/30/82 | 23.17               | 1521.13          | 10/23/84 | 26.86               | 1517.44          |
| 05/26/82 | 22.72               | 1521.58          | 11/07/84 | 26.27               | 1518.03          |
| 06/29/82 | 22.92               | 1521.38          | 11/20/84 | 25.63               | 1518.67          |
| 07/28/82 | 23.44               | 1520.86          | 12/13/84 | 24.83               | 1519.47          |

154-082-04AAD2 (Replacement well for 04AAD)

Sundre aquifer

LS Elev (msl,ft) = 1543.60

SI (ft) = 207-212

| Date     | Depth to<br>Water (ft) | WL Elev<br>(msl,ft) | Date     | Depth to<br>Water (ft) | WL Elev<br>(msl,ft) |
|----------|------------------------|---------------------|----------|------------------------|---------------------|
| 10/10/84 | 39.78                  | 1503.82             | 08/14/85 | 43.16                  | 1500.44             |
| 10/23/84 | 37.32                  | 1506.28             | 08/27/85 | 44.07                  | 1499.53             |
| 11/07/84 | 36.00                  | 1507.60             | 09/11/85 | 42.64                  | 1500.96             |
| 11/20/84 | 34.02                  | 1509.58             | 09/24/85 | 42.41                  | 1501.19             |
| 12/13/84 | 31.25                  | 1512.35             | 10/23/85 | 30.89                  | 1512.71             |
|          |                        |                     | 11/21/85 | 28.97                  | 1514.63             |
| 01/09/85 | 36.38                  | 1507.22             | 12/30/85 | 36.24                  | 1507.36             |
| 02/12/85 | 36.46                  | 1507.14             |          |                        |                     |
| 03/06/85 | 38.08                  | 1505.52             | 02/25/86 | 32.79                  | 1510.81             |
| 03/19/85 | 38.13                  | 1505.47             | 03/26/86 | 35.56                  | 1508.04             |
| 04/16/85 | 36.21                  | 1507.39             | 05/13/86 | 36.19                  | 1507.41             |
| 05/02/85 | 35.75                  | 1507.85             | 06/04/86 | 40.77                  | 1502.83             |
| 05/14/85 | 35.78                  | 1507.82             | 07/01/86 | 44.22                  | 1499.38             |
| 06/06/85 | 37.77                  | 1505.83             | 07/09/86 | 46.82                  | 1496.78             |
| 06/20/85 | 41.36                  | 1502.24             | 08/06/86 | 39.79                  | 1503.81             |
| 06/26/85 | 39.63                  | 1503.97             | 09/09/86 | 45.16                  | 1498.44             |
| 07/01/85 | 39.64                  | 1503.96             | 10/09/86 | 41.67                  | 1501.93             |
| 07/17/85 | 45.75                  | 1497.85             | 12/16/86 | 36.72                  | 1506.88             |
| 07/29/85 | 46.66                  | 1496.94             |          |                        |                     |

154-082-04ABA1  
Sundre aquifer

LS Elev (msl,ft) = 1541.00 SI (ft) = 80-100

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/14/68 | 12.57               | 1528.43          | 04/15/71 | 10.11               | 1530.89          |
| 11/22/68 | 12.56               | 1528.44          | 07/22/71 | 9.75                | 1531.25          |
| 11/27/68 | 12.60               | 1528.40          | 08/27/71 | 10.11               | 1530.89          |
| 12/07/68 | 12.77               | 1528.23          | 12/21/71 | 9.88                | 1531.12          |
| 12/11/68 | 12.63               | 1528.37          | 10/12/72 | 9.84                | 1531.16          |
| 12/16/68 | 12.71               | 1528.29          | 06/07/73 | 10.31               | 1530.69          |
| 12/19/68 | 12.80               | 1528.20          | 09/28/73 | 11.06               | 1529.94          |
| 12/20/68 | 13.31               | 1527.69          | 07/01/74 | 7.85                | 1533.15          |
| 12/21/68 | 13.48               | 1527.52          | 08/13/75 | 8.82                | 1532.18          |
| 12/27/68 | 12.78               | 1528.22          | 11/22/83 | 34.21               | 1506.79          |
| 01/04/69 | 12.80               | 1528.20          | 12/08/83 | 35.10               | 1505.90          |
| 02/06/69 | 12.75               | 1528.25          | 12/14/83 | 33.88               | 1507.12          |
| 03/05/69 | 12.80               | 1528.20          | 01/03/84 | 33.55               | 1507.45          |
| 03/12/69 | 12.78               | 1528.22          | 01/16/84 | 34.25               | 1506.75          |
| 04/08/69 | 11.59               | 1529.41          | 02/01/84 | 33.39               | 1507.61          |
| 05/27/69 | 6.75                | 1534.25          | 02/21/84 | 33.44               | 1507.56          |
| 06/11/69 | 9.17                | 1531.83          | 03/12/84 | 32.27               | 1508.73          |
| 06/25/69 | 10.22               | 1530.78          | 04/03/84 | 32.33               | 1508.67          |
| 07/16/69 | 10.03               | 1530.97          | 04/18/84 | 32.38               | 1508.62          |
| 07/28/69 | 10.18               | 1530.82          | 05/08/84 | 31.24               | 1509.76          |
| 08/12/69 | 10.65               | 1530.35          | 05/29/84 | 33.30               | 1507.70          |
| 09/09/69 | 11.36               | 1529.64          | 06/15/84 | 33.25               | 1507.75          |
| 09/25/69 | 11.47               | 1529.53          | 06/26/84 | 34.50               | 1506.50          |
| 10/08/69 | 11.39               | 1529.61          | 07/10/84 | 38.53               | 1502.47          |
| 10/16/69 | 11.47               | 1529.53          | 07/27/84 | 42.11               | 1498.89          |
| 10/19/69 | 11.94               | 1529.06          | 08/27/84 | 39.97               | 1501.03          |
| 10/20/69 | 9.85                | 1531.15          | 09/07/84 | 36.69               | 1504.31          |
| 10/21/69 | 13.42               | 1527.58          | 09/12/84 | 34.33               | 1506.67          |
| 10/22/69 | 14.31               | 1526.69          | 09/20/84 | 35.55               | 1505.45          |
| 10/23/69 | 14.77               | 1526.23          | 09/27/84 | 34.27               | 1506.73          |
| 10/24/69 | 15.10               | 1525.90          | 10/04/84 | 33.42               | 1507.58          |
| 10/25/69 | 15.43               | 1525.57          | 10/10/84 | 34.02               | 1506.98          |
| 10/26/69 | 15.69               | 1525.31          | 10/23/84 | 31.88               | 1509.12          |
| 10/27/69 | 15.86               | 1525.14          | 11/07/84 | 30.57               | 1510.43          |
| 10/28/69 | 16.02               | 1524.98          | 11/20/84 | 29.22               | 1511.78          |
| 10/29/69 | 16.13               | 1524.87          | 12/13/84 | 27.30               | 1513.70          |
| 10/30/69 | 16.30               | 1524.70          | 01/09/85 | 31.16               | 1509.84          |
| 10/31/69 | 16.44               | 1524.56          | 02/12/85 | 31.35               | 1509.65          |
| 11/01/69 | 16.55               | 1524.45          | 03/06/85 | 32.42               | 1508.58          |
| 11/02/69 | 16.67               | 1524.33          | 03/19/85 | 32.50               | 1508.50          |
| 11/03/69 | 16.75               | 1524.25          | 04/16/85 | 31.35               | 1509.65          |
| 11/04/69 | 16.83               | 1524.17          | 05/02/85 | 31.08               | 1509.92          |
| 11/05/69 | 15.19               | 1525.81          | 05/14/85 | 30.99               | 1510.01          |
| 11/06/69 | 14.39               | 1526.61          | 06/06/85 | 32.97               | 1508.03          |
| 11/07/69 | 13.96               | 1527.04          | 06/20/85 | 33.52               | 1507.48          |
| 11/08/69 | 13.77               | 1527.23          | 07/01/85 | 34.13               | 1506.87          |
| 11/09/69 | 13.56               | 1527.44          | 07/29/85 | 40.35               | 1500.65          |
| 11/10/69 | 13.31               | 1527.69          | 08/14/85 | 37.19               | 1503.81          |
| 11/11/69 | 13.18               | 1527.82          | 09/11/85 | 37.05               | 1503.95          |
| 11/12/69 | 13.05               | 1527.95          | 10/23/85 | 27.05               | 1513.95          |
| 11/13/69 | 12.85               | 1528.15          | 11/21/85 | 25.22               | 1515.78          |
| 11/17/69 | 12.69               | 1528.31          | 12/30/85 | 30.97               | 1510.03          |
| 11/24/69 | 12.46               | 1528.54          | 02/25/86 | 28.49               | 1512.51          |
| 12/04/69 | 12.92               | 1528.08          | 03/26/86 | 30.41               | 1510.59          |
| 01/27/70 | 11.72               | 1529.28          | 05/13/86 | 30.90               | 1510.10          |
| 03/10/70 | 11.84               | 1529.16          | 06/04/86 | 35.10               | 1505.90          |
| 04/06/70 | 11.65               | 1529.35          |          |                     |                  |
| 06/08/70 | 5.72                | 1535.28          |          |                     |                  |
| 07/24/70 | 9.31                | 1531.69          |          |                     |                  |
| 08/27/70 | 10.59               | 1530.41          |          |                     |                  |
| 10/01/70 | 10.96               | 1530.04          |          |                     |                  |

154-082-04ABA1 (continued)  
Sundre aquifer      LS Elev (msl,ft)= 1541.00      SI (ft)= 80-100

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 07/01/86 | 38.18               | 1502.82          | 10/09/86 | 36.30               | 1504.70          |
| 08/06/86 | 34.49               | 1506.51          | 12/16/86 | 31.42               | 1509.58          |
| 09/09/86 | 39.39               | 1501.61          |          |                     |                  |

154-082-04ABA2  
Sundre aquifer      LS Elev (msl,ft)= 1542.90      SI (ft)= 97-100

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft)      |
|----------|---------------------|------------------|----------|---------------------|-----------------------|
| 11/14/68 | 14.50               | 1528.40          | 10/31/69 | 18.41               | 1524.49               |
| 11/22/68 | 14.50               | 1528.40          | 11/01/69 | 18.53               | 1524.37               |
| 11/27/68 | 14.56               | 1528.34          | 11/02/69 | 18.66               | 1524.24               |
| 12/03/68 | 14.57               | 1528.33          | 11/03/69 | 18.75               | 1524.15               |
| 12/07/68 | 14.71               | 1528.19          | 11/04/69 | 18.78               | 1524.12               |
| 12/11/68 | 14.56               | 1528.34          | 11/05/69 | 17.17               | 1525.73               |
| 12/16/68 | 14.64               | 1528.26          | 11/06/69 | 16.38               | 1526.52               |
| 12/19/68 | 14.72               | 1528.18          | 11/07/69 | 15.86               | 1527.04               |
| 12/20/68 | 15.23               | 1527.67          | 11/08/69 | 15.64               | 1527.26               |
| 12/21/68 | 15.40               | 1527.50          | 11/09/69 | 15.43               | 1527.47               |
| 12/27/68 | 14.72               | 1528.18          | 11/10/69 | 15.17               | 1527.73               |
|          |                     |                  | 11/11/69 | 15.07               | 1527.83               |
| 01/04/69 | 14.73               | 1528.17          | 11/12/69 | 14.92               | 1527.98               |
| 02/06/69 | 14.67               | 1528.23          | 11/13/69 | 14.84               | 1528.06               |
| 03/05/69 | 14.72               | 1528.18          | 11/14/69 | 14.78               | 1528.12               |
| 03/12/69 | 14.69               | 1528.21          | 11/17/69 | 14.52               | 1528.38               |
| 04/08/69 | 13.53               | 1529.37          | 11/25/69 | 14.31               | 1528.59               |
| 05/07/69 | 6.35                | 1536.55          | 12/02/69 | 14.15               | 1528.75               |
| 05/15/69 | 7.34                | 1535.56          | 12/03/69 | 15.19               | 1527.71               |
| 05/27/69 | 8.89                | 1534.01          | 12/04/69 | 15.68               | 1527.22               |
| 06/11/69 | 11.00               | 1531.90          | 12/05/69 | 15.96               | 1526.94               |
| 06/25/69 | 12.17               | 1530.73          |          |                     |                       |
| 07/16/69 | 12.22               | 1530.68          | 01/27/70 | 13.69               | 1529.21               |
| 07/29/69 | 12.10               | 1530.80          | 03/10/70 | 13.80               | 1529.10               |
| 08/12/69 | 12.61               | 1530.29          | 04/06/70 | 13.65               | 1529.25               |
| 09/09/69 | 13.31               | 1529.59          | 06/08/70 | 7.76                | 1535.14               |
| 09/25/69 | 13.43               | 1529.47          | 07/24/70 | 11.36               | 1531.54               |
| 10/08/69 | 13.36               | 1529.54          | 08/27/70 | 12.67               | 1530.23               |
| 10/16/69 | 13.44               | 1529.46          | 10/01/70 | 13.00               | 1529.90               |
| 10/19/69 | 13.90               | 1529.00          |          |                     |                       |
| 10/20/69 | 13.81               | 1529.09          | 04/15/71 | 12.14               | 1530.76               |
| 10/21/69 | 15.39               | 1527.51          | 07/22/71 | 11.78               | 1531.12               |
| 10/22/69 | 16.28               | 1526.62          | 08/27/71 | 12.35               | 1530.55               |
| 10/23/69 | 16.75               | 1526.15          | 12/21/71 | 12.15               | 1530.75               |
| 10/24/69 | 17.08               | 1525.82          |          |                     |                       |
| 10/25/69 | 17.41               | 1525.49          | 10/12/72 | 12.14               | 1530.76               |
| 10/26/69 | 17.67               | 1525.23          |          |                     |                       |
| 10/27/69 | 17.85               | 1525.05          | 06/07/73 | 12.60               | 1530.30               |
| 10/28/69 | 18.00               | 1524.90          | 09/28/73 | 12.86               | 1530.04               |
| 10/29/69 | 18.11               | 1524.79          |          |                     |                       |
| 10/30/69 | 18.30               | 1524.60          | 09/01/74 | 9.76                | 1533.14               |
|          |                     |                  |          |                     | <b>WELL DESTROYED</b> |

154-082-04ACA1

Sundre aquifer

LS Elev (msl,ft)= 1543.00

SI (ft)= 206-212

| Date     | Depth to<br>Water (ft) | ML Elev<br>(msl,ft) | Date     | Depth to<br>Water (ft) | ML Elev<br>(msl,ft) |
|----------|------------------------|---------------------|----------|------------------------|---------------------|
| 11/14/68 | 17.63                  | 1525.37             | 10/24/69 | 17.86                  | 1525.14             |
| 11/20/68 | 14.63                  | 1528.37             | 10/25/69 | 18.07                  | 1524.93             |
| 11/22/68 | 14.60                  | 1528.40             | 10/26/69 | 18.44                  | 1524.56             |
| 12/04/68 | 14.61                  | 1528.39             | 10/28/69 | 18.75                  | 1524.25             |
| 12/07/68 | 14.85                  | 1528.15             | 10/30/69 | 19.03                  | 1523.97             |
| 12/11/68 | 14.68                  | 1528.32             | 11/01/69 | 19.36                  | 1523.64             |
| 12/16/68 | 14.73                  | 1528.27             | 11/03/69 | 19.55                  | 1523.45             |
| 12/19/68 | 14.82                  | 1528.18             | 11/04/69 | 18.13                  | 1524.87             |
| 12/20/68 | 15.27                  | 1527.73             | 11/05/69 | 17.14                  | 1525.86             |
| 12/21/68 | 15.31                  | 1527.69             | 11/06/69 | 16.80                  | 1526.20             |
| 12/27/68 | 14.81                  | 1528.19             | 11/13/69 | 15.13                  | 1527.87             |
|          |                        |                     | 11/14/69 | 15.09                  | 1527.91             |
| 01/04/69 | 14.81                  | 1528.19             | 11/17/69 | 14.89                  | 1528.11             |
| 02/06/69 | 14.71                  | 1528.29             | 11/25/69 | 14.61                  | 1528.39             |
| 04/08/69 | 13.61                  | 1529.39             | 12/02/69 | 14.44                  | 1528.56             |
| 05/07/69 | 6.53                   | 1536.47             | 12/03/69 | 15.80                  | 1527.20             |
| 05/15/69 | 7.56                   | 1535.44             | 12/04/69 | 16.30                  | 1526.70             |
| 05/27/69 | 9.18                   | 1533.82             | 12/05/69 | 16.58                  | 1526.42             |
| 06/11/69 | 11.39                  | 1531.61             |          |                        |                     |
| 06/27/69 | 12.42                  | 1530.58             | 01/27/70 | 13.94                  | 1529.06             |
| 07/16/69 | 12.52                  | 1530.48             | 03/10/70 | 14.09                  | 1528.91             |
| 07/29/69 | 12.48                  | 1530.52             | 04/06/70 | 13.89                  | 1529.11             |
| 08/12/69 | 12.93                  | 1530.07             | 06/09/70 | 8.03                   | 1534.97             |
| 09/09/69 | 13.69                  | 1529.31             | 07/24/70 | 11.72                  | 1531.28             |
| 09/25/69 | 13.75                  | 1529.25             | 08/27/70 | 13.01                  | 1529.99             |
| 10/08/69 | 13.68                  | 1529.32             | 10/01/70 | 13.38                  | 1529.62             |
| 10/16/69 | 13.75                  | 1529.25             |          |                        |                     |
| 10/19/69 | 14.21                  | 1528.79             | 04/15/71 | 12.34                  | 1530.66             |
| 10/20/69 | 14.14                  | 1528.86             | 07/22/71 | 11.96                  | 1531.04             |
| 10/21/69 | 16.05                  | 1526.95             | 08/27/71 | 12.56                  | 1530.44             |
| 10/22/69 | 17.03                  | 1525.97             | 12/21/71 | 12.34                  | 1530.66             |
| 10/23/69 | 17.47                  | 1525.53             |          |                        |                     |
|          |                        |                     |          |                        | WELL DESTROYED      |

154-082-04ACA2

Sundre aquifer

LS Elev (msl,ft)= 1542.30

SI (ft)= 102-105

| Date     | Depth to<br>Water (ft) | WL Elev<br>(msl,ft) | Date           | Depth to<br>Water (ft) | WL Elev<br>(msl,ft) |
|----------|------------------------|---------------------|----------------|------------------------|---------------------|
| 11/14/68 | 13.92                  | 1528.38             | 10/25/69       | 17.50                  | 1524.80             |
| 11/22/68 | 13.90                  | 1528.40             | 10/26/69       | 17.85                  | 1524.45             |
| 11/27/68 | 13.93                  | 1528.37             | 10/28/69       | 18.17                  | 1524.13             |
| 12/04/68 | 13.92                  | 1528.38             | 10/30/69       | 18.42                  | 1523.88             |
| 12/07/68 | 14.11                  | 1528.19             | 11/01/69       | 18.74                  | 1523.56             |
| 12/11/68 | 13.97                  | 1528.33             | 11/03/69       | 18.96                  | 1523.34             |
| 12/16/68 | 14.03                  | 1528.27             | 11/04/69       | 17.77                  | 1524.53             |
| 12/19/68 | 14.13                  | 1528.17             | 11/05/69       | 16.80                  | 1525.50             |
| 12/20/68 | 14.72                  | 1527.58             | 11/06/69       | 16.27                  | 1526.03             |
| 12/21/68 | 14.56                  | 1527.74             | 11/07/69       | 15.85                  | 1526.45             |
| 12/27/68 | 14.09                  | 1528.21             | 11/08/69       | 15.67                  | 1526.63             |
|          |                        |                     | 11/10/69       | 15.21                  | 1527.09             |
| 01/04/69 | 14.10                  | 1528.20             | 11/12/69       | 15.07                  | 1527.23             |
| 02/06/69 | 14.03                  | 1528.27             | 11/14/69       | 14.81                  | 1527.49             |
| 04/08/69 | 12.93                  | 1529.37             | 11/25/69       | 14.38                  | 1527.92             |
| 05/15/69 | 6.80                   | 1535.50             | 12/02/69       | 14.21                  | 1528.09             |
| 05/27/69 | 8.31                   | 1533.99             |                |                        |                     |
| 06/11/69 | 10.64                  | 1531.66             | 01/27/70       | 13.76                  | 1528.54             |
| 07/16/69 | 11.80                  | 1530.50             | 03/10/70       | 13.88                  | 1528.42             |
| 07/29/69 | 11.68                  | 1530.62             | 04/06/70       | 13.69                  | 1528.61             |
| 08/12/69 | 12.18                  | 1530.12             | 06/09/70       | 7.77                   | 1534.53             |
| 09/09/69 | 13.30                  | 1529.00             | 07/24/70       | 11.39                  | 1530.91             |
| 09/25/69 | 13.50                  | 1528.80             | 08/27/70       | 12.68                  | 1529.62             |
| 10/08/69 | 13.40                  | 1528.90             | 10/01/70       | 13.06                  | 1529.24             |
| 10/16/69 | 13.50                  | 1528.80             |                |                        |                     |
| 10/19/69 | 13.97                  | 1528.33             | 04/15/71       | 11.69                  | 1530.61             |
| 10/20/69 | 13.89                  | 1528.41             | 07/22/71       | 11.30                  | 1531.00             |
| 10/21/69 | 15.53                  | 1526.77             | 08/27/71       | 11.90                  | 1530.40             |
| 10/22/69 | 16.49                  | 1525.81             | 12/21/71       | 11.68                  | 1530.62             |
| 10/23/69 | 16.94                  | 1525.36             |                |                        |                     |
| 10/24/69 | 17.30                  | 1525.00             | 10/12/72       | 11.68                  | 1530.62             |
|          |                        |                     | WELL DESTROYED |                        |                     |

154-082-04CCC  
Sundre aquifer

LS Elev (msl,ft)= 1714.20 SI (ft)= 418-424

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/22/68 | 186.05              | 1528.15          | 11/03/69 | 190.17              | 1524.03          |
| 11/27/68 | 186.11              | 1528.09          | 11/04/69 | 190.25              | 1523.95          |
| 12/07/68 | 186.33              | 1527.87          | 11/05/69 | 188.88              | 1525.32          |
| 12/11/68 | 186.96              | 1527.24          | 11/06/69 | 187.60              | 1526.60          |
| 12/16/68 | 187.05              | 1527.15          | 11/07/69 | 187.60              | 1526.60          |
| 12/19/68 | 186.33              | 1527.87          | 11/08/69 | 187.33              | 1526.87          |
| 12/20/68 | 186.69              | 1527.51          | 11/09/69 | 187.13              | 1527.07          |
| 12/21/68 | 186.75              | 1527.45          | 11/10/69 | 188.63              | 1525.57          |
| 12/27/68 | 186.33              | 1527.87          | 11/11/69 | 188.50              | 1525.70          |
|          |                     |                  | 11/12/69 | 186.61              | 1527.59          |
| 01/04/69 | 186.33              | 1527.87          | 11/13/69 | 186.52              | 1527.68          |
| 02/06/69 | 186.22              | 1527.98          | 11/14/69 | 186.35              | 1527.85          |
| 04/09/69 | 185.14              | 1529.06          | 11/17/69 | 186.28              | 1527.92          |
| 05/07/69 | 178.67              | 1535.53          | 11/24/69 | 185.86              | 1528.34          |
| 05/28/69 | 180.91              | 1533.29          | 12/02/69 | 185.80              | 1528.40          |
| 06/11/69 | 183.02              | 1531.18          | 12/03/69 | 186.52              | 1527.68          |
| 06/27/69 | 183.64              | 1530.56          | 12/04/69 | 187.08              | 1527.12          |
| 07/16/69 | 183.91              | 1530.29          | 12/05/69 | 187.21              | 1526.99          |
| 07/30/69 | 183.72              | 1530.48          |          |                     |                  |
| 08/12/69 | 184.11              | 1530.09          | 01/27/70 | 185.16              | 1529.04          |
| 09/11/69 | 184.91              | 1529.29          | 03/10/70 | 185.30              | 1528.90          |
| 09/26/69 | 185.00              | 1529.20          | 04/06/70 | 185.16              | 1529.04          |
| 10/08/69 | 184.94              | 1529.26          | 06/08/70 | 179.50              | 1534.70          |
| 10/16/69 | 185.02              | 1529.18          | 07/24/70 | 182.89              | 1531.31          |
| 10/19/69 | 185.41              | 1528.79          | 08/27/70 | 184.17              | 1530.03          |
| 10/20/69 | 185.44              | 1528.76          | 10/01/70 | 184.53              | 1529.67          |
| 10/21/69 | 186.72              | 1527.48          | 12/22/70 | 184.36              | 1529.84          |
| 10/22/69 | 187.63              | 1526.57          |          |                     |                  |
| 10/23/69 | 188.05              | 1526.15          | 04/15/71 | 183.63              | 1530.57          |
| 10/24/69 | 188.39              | 1525.81          | 07/21/71 | 183.35              | 1530.85          |
| 10/25/69 | 188.77              | 1525.43          | 08/26/71 | 184.78              | 1529.42          |
| 10/26/69 | 189.07              | 1525.13          | 12/21/71 | 183.92              | 1530.28          |
| 10/27/69 | 189.19              | 1525.01          |          |                     |                  |
| 10/28/69 | 189.36              | 1524.84          | 06/07/73 | 183.97              | 1530.23          |
| 10/29/69 | 189.47              | 1524.73          |          |                     |                  |
| 10/30/69 | 189.69              | 1524.51          | 07/02/74 | 180.92              | 1533.28          |
| 10/31/69 | 189.80              | 1524.40          |          |                     |                  |
| 11/01/69 | 189.94              | 1524.26          | 08/13/75 | 179.85              | 1534.35          |
| 11/02/69 | 190.08              | 1524.12          |          |                     | PLUGGED          |

154-082-04DBB  
Sundre aquifer

LS Elev (msl,ft) = 1565.10 SI (ft) = 252-258

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/14/68 | 36.67               | 1528.43          | 06/08/70 | 30.05               | 1535.05          |
| 11/15/68 | 36.69               | 1528.41          | 07/24/70 | 33.64               | 1531.46          |
| 11/19/68 | 36.78               | 1528.32          | 08/27/70 | 34.94               | 1530.16          |
| 11/22/68 | 36.66               | 1528.44          | 10/01/70 | 35.30               | 1529.80          |
| 11/27/68 | 36.69               | 1528.41          | 12/22/70 | 35.22               | 1529.88          |
| 12/03/68 | 36.69               | 1528.41          |          |                     |                  |
| 12/04/68 | 36.69               | 1528.41          | 04/15/71 | 34.50               | 1530.60          |
| 12/07/68 | 36.94               | 1528.16          | 07/22/71 | 34.02               | 1531.08          |
| 12/10/68 | 36.80               | 1528.30          | 08/27/71 | 34.60               | 1530.50          |
| 12/11/68 | 36.72               | 1528.38          | 12/21/71 | 34.41               | 1530.69          |
| 12/13/68 | 36.89               | 1528.21          |          |                     |                  |
| 12/16/68 | 36.80               | 1528.30          | 07/12/72 | 33.19               | 1531.91          |
| 12/17/68 | 36.91               | 1528.19          | 10/12/72 | 34.41               | 1530.69          |
| 12/19/68 | 36.89               | 1528.21          |          |                     |                  |
| 12/20/68 | 37.38               | 1527.72          | 11/08/83 | 61.94               | 1503.16          |
| 12/21/68 | 37.38               | 1527.72          | 12/14/83 | 60.30               | 1504.80          |
| 12/27/68 | 36.88               | 1528.22          |          |                     |                  |
|          |                     |                  | 01/04/84 | 60.00               | 1505.10          |
| 01/04/69 | 36.88               | 1528.22          | 01/16/84 | 60.36               | 1504.74          |
| 02/06/69 | 36.80               | 1528.30          | 02/01/84 | 59.96               | 1505.14          |
| 03/08/69 | 36.88               | 1528.22          | 02/21/84 | 59.78               | 1505.32          |
| 04/09/69 | 35.52               | 1529.58          | 03/12/84 | 58.75               | 1506.35          |
| 04/13/69 | 34.19               | 1530.91          | 04/03/84 | 58.91               | 1506.19          |
| 04/14/69 | 34.08               | 1531.02          | 04/18/84 | 58.88               | 1506.22          |
| 04/17/69 | 33.91               | 1531.19          | 05/08/84 | 57.74               | 1507.36          |
| 05/06/69 | 28.66               | 1536.44          | 05/29/84 | 59.61               | 1505.49          |
| 05/07/69 | 28.69               | 1536.41          | 06/15/84 | 57.91               | 1507.19          |
| 05/15/69 | 29.67               | 1535.43          | 06/26/84 | 61.25               | 1503.85          |
| 05/27/69 | 31.19               | 1533.91          | 07/10/84 | 65.55               | 1499.55          |
| 05/28/69 | 31.38               | 1533.72          | 07/27/84 | 69.19               | 1495.91          |
| 06/11/69 | 33.66               | 1531.44          | 08/09/84 | 66.91               | 1498.19          |
| 07/02/69 | 34.61               | 1530.49          | 08/16/84 | 68.85               | 1496.25          |
| 07/29/69 | 34.42               | 1530.68          | 08/22/84 | 68.16               | 1496.94          |
| 08/12/69 | 34.89               | 1530.21          | 08/27/84 | 66.67               | 1498.43          |
| 09/09/69 | 35.66               | 1529.44          | 09/07/84 | 63.14               | 1501.96          |
| 09/26/69 | 35.69               | 1529.41          | 09/12/84 | 60.24               | 1504.86          |
| 10/08/69 | 35.63               | 1529.47          | 09/20/84 | 61.50               | 1503.60          |
| 10/16/69 | 35.74               | 1529.36          | 09/27/84 | 61.08               | 1504.02          |
| 10/19/69 | 36.17               | 1528.93          | 10/03/84 | 61.52               | 1503.58          |
| 10/20/69 | 36.07               | 1529.03          | 10/10/84 | 61.28               | 1503.82          |
| 10/21/69 | 37.97               | 1527.13          | 10/23/84 | 57.80               | 1507.30          |
| 10/22/69 | 39.00               | 1526.10          | 11/08/84 | 56.57               | 1508.53          |
| 10/23/69 | 39.47               | 1525.63          | 11/20/84 | 54.75               | 1510.35          |
| 10/24/69 | 39.83               | 1525.27          | 12/13/84 | 52.99               | 1512.11          |
| 10/25/69 | 40.05               | 1525.05          |          |                     |                  |
| 10/26/69 | 40.41               | 1524.69          | 01/09/85 | 57.24               | 1507.86          |
| 10/28/69 | 40.61               | 1524.49          | 02/12/85 | 57.05               | 1508.05          |
| 10/30/69 | 40.77               | 1524.33          | 03/06/85 | 58.36               | 1506.74          |
| 11/01/69 | 41.36               | 1523.74          | 03/19/85 | 58.41               | 1506.69          |
| 11/03/69 | 41.55               | 1523.55          | 04/10/85 | 57.77               | 1507.33          |
| 11/04/69 | 40.07               | 1525.03          | 05/02/85 | 56.83               | 1508.27          |
| 11/05/69 | 39.11               | 1525.99          | 05/14/85 | 57.24               | 1507.86          |
| 11/06/69 | 38.60               | 1526.50          | 06/06/85 | 59.10               | 1506.00          |
| 11/07/69 | 38.16               | 1526.94          | 06/20/85 | 61.99               | 1503.11          |
| 11/08/69 | 37.99               | 1527.11          | 07/01/85 | 59.08               | 1506.02          |
| 11/10/69 | 37.50               | 1527.60          | 07/17/85 | 66.36               | 1498.74          |
| 11/11/69 | 37.44               | 1527.66          | 07/29/85 | 67.25               | 1497.85          |
| 11/14/69 | 37.05               | 1528.05          | 08/14/85 | 64.00               | 1501.10          |
| 11/25/69 | 36.63               | 1528.47          | 08/27/85 | 63.61               | 1501.49          |
| 12/02/69 | 36.44               | 1528.66          | 09/11/85 | 63.28               | 1501.82          |
|          |                     |                  | 09/23/85 | 63.11               | 1501.99          |
| 01/27/70 | 35.91               | 1529.19          | 10/22/85 | 52.61               | 1512.49          |
| 03/10/70 | 36.08               | 1529.02          | 11/21/85 | 50.69               | 1514.41          |
| 04/06/70 | 35.91               | 1529.19          | 12/30/85 | 57.07               | 1508.03          |

154-082-04DBB (continued)

Sundre aquifer

LS Elev (msl,ft)= 1565.10 SI (ft)= 252-258

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 02/25/86 | 54.44               | 1510.66          | 07/01/86 | 65.59               | 1499.51          |
| 03/26/86 | 56.96               | 1508.14          | 08/06/86 | 60.47               | 1504.63          |
| 05/13/86 | 56.97               | 1508.13          | 09/09/86 | 66.10               | 1499.00          |
| 06/04/86 | 61.54               | 1503.56          | 10/08/86 | 62.84               | 1502.26          |
|          |                     |                  | 12/16/86 | 57.21               | 1507.89          |

154-082-04DBD

Sundre aquifer

LS Elev (msl,ft)= 1567.50 SI (ft)= 246-252

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/14/68 | 39.33               | 1528.17          | 10/22/69 | 41.55               | 1525.95          |
| 11/22/68 | 39.33               | 1528.17          | 10/23/69 | 42.08               | 1525.42          |
| 11/27/68 | 39.36               | 1528.14          | 10/24/69 | 42.47               | 1525.03          |
| 12/04/68 | 39.50               | 1528.00          | 10/25/69 | 42.69               | 1524.81          |
| 12/06/68 | 39.52               | 1527.98          | 10/26/69 | 43.07               | 1524.43          |
| 12/07/68 | 39.50               | 1528.00          | 10/28/69 | 43.33               | 1524.17          |
| 12/10/68 | 35.44               | 1532.06          | 10/30/69 | 43.69               | 1523.81          |
| 12/11/68 | 39.36               | 1528.14          | 11/01/69 | 43.94               | 1523.56          |
| 12/12/68 | 39.39               | 1528.11          | 11/03/69 | 44.16               | 1523.34          |
| 12/13/68 | 39.55               | 1527.95          | 11/04/69 | 42.55               | 1524.95          |
| 12/16/68 | 39.46               | 1528.04          | 11/05/69 | 41.58               | 1525.92          |
| 12/17/68 | 39.58               | 1527.92          | 11/06/69 | 41.24               | 1526.26          |
| 12/19/68 | 39.49               | 1528.01          | 11/13/69 | 39.66               | 1527.84          |
| 12/20/68 | 40.27               | 1527.23          | 11/14/69 | 39.53               | 1527.97          |
| 12/21/68 | 40.02               | 1527.48          | 11/17/69 | 39.44               | 1528.06          |
| 12/27/68 | 39.53               | 1527.97          | 11/24/69 | 39.08               | 1528.42          |
|          |                     |                  | 12/02/69 | 38.94               | 1528.56          |
| 01/04/69 | 39.52               | 1527.98          | 12/03/69 | 40.58               | 1526.92          |
| 01/06/69 | 39.44               | 1528.06          | 12/04/69 | 40.97               | 1526.53          |
| 05/07/69 | 31.19               | 1536.31          | 12/05/69 | 41.30               | 1526.20          |
| 05/15/69 | 32.22               | 1535.28          |          |                     |                  |
| 05/28/69 | 33.97               | 1533.53          | 01/27/70 | 38.44               | 1529.06          |
| 06/17/69 | 36.30               | 1531.20          | 03/10/70 | 38.58               | 1528.92          |
| 06/27/69 | 37.00               | 1530.50          | 04/06/70 | 38.38               | 1529.12          |
| 07/16/69 | 37.17               | 1530.33          | 06/08/70 | 32.50               | 1535.00          |
| 07/29/69 | 37.08               | 1530.42          | 07/24/70 | 36.17               | 1531.33          |
| 08/12/69 | 37.53               | 1529.97          | 08/27/70 | 37.47               | 1530.03          |
| 09/09/69 | 38.30               | 1529.20          | 10/01/70 | 37.83               | 1529.67          |
| 09/26/69 | 38.19               | 1529.31          | 12/22/70 | 37.39               | 1530.11          |
| 10/08/69 | 38.13               | 1529.37          |          |                     |                  |
| 10/16/69 | 38.24               | 1529.26          | 04/15/71 | 36.69               | 1530.81          |
| 10/19/69 | 38.66               | 1528.84          | 07/22/71 | 36.28               | 1531.22          |
| 10/20/69 | 38.60               | 1528.90          | 08/27/71 | 36.86               | 1530.64          |
| 10/21/69 | 40.60               | 1526.90          | 12/21/71 | 36.71               | 1530.79          |
|          |                     |                  | PLUGGED  |                     |                  |

154-082-05ACD  
 Sundre aquifer

LS Elev (msl,ft) = 1596.60 SI (ft) = 257-263

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/14/68 | 68.53               | 1528.07          | 11/13/69 | 69.02               | 1527.58          |
| 11/23/68 | 68.50               | 1528.10          | 11/14/69 | 68.91               | 1527.69          |
| 11/27/68 | 68.52               | 1528.08          | 11/17/69 | 68.78               | 1527.82          |
| 12/07/68 | 68.78               | 1527.82          | 11/24/69 | 68.47               | 1528.13          |
| 12/11/68 | 68.52               | 1528.08          | 12/02/69 | 68.33               | 1528.27          |
| 12/16/68 | 68.61               | 1527.99          | 12/03/69 | 68.94               | 1527.66          |
| 12/19/68 | 68.74               | 1527.86          | 12/04/69 | 69.36               | 1527.24          |
| 12/20/68 | 69.14               | 1527.46          | 12/05/69 | 69.66               | 1526.94          |
| 12/21/68 | 69.13               | 1527.47          |          |                     |                  |
| 12/27/68 | 68.72               | 1527.88          | 01/27/70 | 67.75               | 1528.85          |
| 01/04/69 | 68.72               | 1527.88          | 03/10/70 | 67.91               | 1528.69          |
| 02/06/69 | 68.66               | 1527.94          | 04/06/70 | 67.77               | 1528.83          |
| 03/05/69 | 68.69               | 1527.91          | 06/08/70 | 62.35               | 1534.25          |
| 03/12/69 | 68.72               | 1527.88          | 07/24/70 | 65.47               | 1531.13          |
| 04/09/69 | 67.77               | 1528.83          | 08/27/70 | 66.72               | 1529.88          |
| 05/07/69 | 61.66               | 1534.94          | 09/30/70 | 67.02               | 1529.58          |
| 05/28/69 | 63.58               | 1533.02          | 12/22/70 | 66.77               | 1529.83          |
| 06/11/69 | 65.58               | 1531.02          | 04/15/71 | 66.08               | 1530.52          |
| 06/27/69 | 66.24               | 1530.36          | 07/21/71 | 65.80               | 1530.80          |
| 07/16/69 | 66.55               | 1530.05          | 08/26/71 | 66.25               | 1530.35          |
| 09/11/69 | 67.53               | 1529.07          | 12/21/71 | 66.11               | 1530.49          |
| 09/26/69 | 67.58               | 1529.02          |          |                     |                  |
| 10/08/69 | 67.50               | 1529.10          | 07/12/72 | 64.91               | 1531.69          |
| 10/16/69 | 67.61               | 1528.99          | 10/12/72 | 66.13               | 1530.47          |
| 10/19/69 | 67.97               | 1528.63          |          |                     |                  |
| 10/20/69 | 67.91               | 1528.69          | 06/07/73 | 66.42               | 1530.18          |
| 10/21/69 | 69.10               | 1527.50          |          |                     |                  |
| 10/22/69 | 69.91               | 1526.69          | 07/01/74 | 63.69               | 1532.91          |
| 10/23/69 | 70.33               | 1526.27          | 10/13/74 | 66.39               | 1530.21          |
| 10/24/69 | 70.66               | 1525.94          |          |                     |                  |
| 10/25/69 | 71.02               | 1525.58          | 08/13/75 | 64.57               | 1532.03          |
| 10/26/69 | 71.30               | 1525.30          |          |                     |                  |
| 10/27/69 | 71.49               | 1525.11          | 03/19/76 | 64.14               | 1532.46          |
| 10/28/69 | 71.60               | 1525.00          | 06/04/76 | 62.10               | 1534.50          |
| 10/29/69 | 71.71               | 1524.89          | 07/16/76 | 63.19               | 1533.41          |
| 10/30/69 | 71.89               | 1524.71          | 08/27/76 | 67.39               | 1529.21          |
| 10/31/69 | 72.00               | 1524.60          | 09/09/76 | 68.67               | 1527.93          |
| 11/01/69 | 72.13               | 1524.47          | 09/23/76 | 69.83               | 1526.77          |
| 11/02/69 | 72.30               | 1524.30          | 10/21/76 | 67.02               | 1529.58          |
| 11/03/69 | 72.33               | 1524.27          | 10/23/76 | 66.89               | 1529.71          |
| 11/04/69 | 72.38               | 1524.22          | 12/03/76 | 67.02               | 1529.58          |
| 11/05/69 | 71.22               | 1525.38          |          |                     |                  |
| 11/06/69 | 70.47               | 1526.13          | 01/05/77 | 70.14               | 1526.46          |
| 11/07/69 | 70.10               | 1526.50          | 02/08/77 | 71.10               | 1525.50          |
| 11/08/69 | 69.78               | 1526.82          | 03/15/77 | 71.39               | 1525.21          |
| 11/09/69 | 69.57               | 1527.03          | 05/06/77 | 67.28               | 1529.32          |
| 11/10/69 | 69.30               | 1527.30          | 06/03/77 | 67.74               | 1528.86          |
| 11/11/69 | 69.22               | 1527.38          | 06/30/77 | 69.94               | 1526.66          |
| 11/12/69 | 69.10               | 1527.50          | 07/14/77 | 74.63               | 1521.97          |
|          |                     |                  | PLUGGED  |                     |                  |

154-082-06ADB1  
Sundre aquifer

LS Elev (msl,ft)= 1709.70 SI (ft)= 439-454

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/17/83 | 201.82              | 1507.88          | 12/13/84 | 200.33              | 1509.37          |
| 12/08/83 | 202.16              | 1507.54          | 01/09/85 | 199.66              | 1510.04          |
| 12/13/83 | 202.05              | 1507.65          | 03/06/85 | 200.41              | 1509.29          |
| 01/03/84 | 201.80              | 1507.90          | 03/19/85 | 200.16              | 1509.54          |
| 01/16/84 | 202.16              | 1507.54          | 04/16/85 | 199.92              | 1509.78          |
| 02/01/84 | 200.82              | 1508.88          | 05/02/85 | 200.07              | 1509.63          |
| 02/21/84 | 200.78              | 1508.92          | 05/14/85 | 200.08              | 1509.62          |
| 03/12/84 | 200.72              | 1508.98          | 06/06/85 | 200.89              | 1508.81          |
| 04/03/84 | 200.77              | 1508.93          | 06/20/85 | 202.08              | 1507.62          |
| 04/18/84 | 200.47              | 1509.23          | 07/01/85 | 202.10              | 1507.60          |
| 05/08/84 | 200.11              | 1509.59          | 07/17/85 | 202.14              | 1507.56          |
| 05/29/84 | 200.77              | 1508.93          | 07/29/85 | 204.69              | 1505.01          |
| 06/15/84 | 200.72              | 1508.98          | 08/14/85 | 204.16              | 1505.54          |
| 07/10/84 | 203.11              | 1506.59          | 08/27/85 | 204.05              | 1505.65          |
| 07/27/84 | 205.83              | 1503.87          | 10/22/85 | 198.63              | 1511.07          |
| 08/09/84 | 207.19              | 1502.51          |          |                     |                  |
| 08/16/84 | 206.96              | 1502.74          | 03/26/86 | 199.35              | 1510.35          |
| 08/22/84 | 206.80              | 1502.90          | 05/13/86 | 199.27              | 1510.43          |
| 08/27/84 | 206.16              | 1503.54          | 06/03/86 | 201.40              | 1508.30          |
| 09/07/84 | 205.52              | 1504.18          | 07/01/86 | 203.94              | 1505.76          |
| 09/11/84 | 204.33              | 1505.37          | 08/06/86 | 203.13              | 1506.57          |
| 09/20/84 | 204.11              | 1505.59          | 09/12/86 | 205.37              | 1504.33          |
| 09/28/84 | 204.16              | 1505.54          | 10/08/86 | 204.34              | 1505.36          |
| 10/10/84 | 204.19              | 1505.51          | 12/16/86 | 200.84              | 1508.86          |
| 11/08/84 | 200.33              | 1509.37          |          |                     |                  |

154-082-06ADB2  
Sundre aquifer

LS Elev (msl,ft)= 1710.10 SI (ft)= 315-327

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/17/83 | 202.17              | 1507.93          | 11/20/84 | 200.08              | 1510.02          |
| 12/08/83 | 202.58              | 1507.52          | 12/13/84 | 199.47              | 1510.63          |
| 12/13/83 | 202.50              | 1507.60          |          |                     |                  |
| 01/04/84 | 202.61              | 1507.49          | 01/09/85 | 200.02              | 1510.08          |
| 01/16/84 | 202.69              | 1507.41          | 03/06/85 | 200.85              | 1509.25          |
| 02/01/84 | 201.22              | 1508.88          | 03/19/85 | 200.74              | 1509.36          |
| 02/21/84 | 201.16              | 1508.94          | 04/16/85 | 200.38              | 1509.72          |
| 03/12/84 | 201.11              | 1508.99          | 05/02/85 | 200.47              | 1509.63          |
| 04/03/84 | 201.07              | 1509.03          | 05/14/85 | 200.49              | 1509.61          |
| 04/18/84 | 200.89              | 1509.21          | 06/06/85 | 201.52              | 1508.58          |
| 05/08/84 | 200.55              | 1509.55          | 06/20/85 | 202.69              | 1507.41          |
| 05/29/84 | 201.19              | 1508.91          | 07/01/85 | 202.64              | 1507.46          |
| 06/15/84 | 201.16              | 1508.94          | 07/17/85 | 202.71              | 1507.39          |
| 07/10/84 | 203.52              | 1506.58          | 07/29/85 | 205.72              | 1504.38          |
| 07/27/84 | 206.25              | 1503.85          | 08/14/85 | 204.55              | 1505.55          |
| 08/09/84 | 207.66              | 1502.44          | 08/27/85 | 204.44              | 1505.66          |
| 08/16/84 | 207.30              | 1502.80          | 10/22/85 | 199.08              | 1511.02          |
| 08/22/84 | 207.16              | 1502.94          |          |                     |                  |
| 08/27/84 | 206.53              | 1503.57          | 03/26/86 | 199.80              | 1510.30          |
| 09/07/84 | 206.44              | 1503.66          | 05/13/86 | 199.82              | 1510.28          |
| 09/11/84 | 204.69              | 1505.41          | 06/03/86 | 201.82              | 1508.28          |
| 09/20/84 | 204.57              | 1505.53          | 07/01/86 | 204.37              | 1505.73          |
| 09/28/84 | 204.61              | 1505.49          | 08/06/86 | 203.58              | 1506.52          |
| 10/10/84 | 204.75              | 1505.35          | 09/12/86 | 205.82              | 1504.28          |
| 11/08/84 | 200.80              | 1509.30          | 10/08/86 | 204.80              | 1505.30          |
|          |                     |                  | 12/16/86 | 201.19              | 1508.91          |

154-082-06CCC  
 Sundre Aquifer

LS Elev (msl,ft)= 1736.60 SI (ft)= 277-283

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/23/68 | 209.64              | 1526.96          | 11/01/69 | 210.67              | 1525.93          |
| 11/27/68 | 209.46              | 1527.14          | 11/02/69 | 210.89              | 1525.71          |
| 12/07/68 | 210.07              | 1526.53          | 11/03/69 | 210.77              | 1525.83          |
| 12/11/68 | 209.33              | 1527.27          | 11/04/69 | 210.83              | 1525.77          |
| 12/16/68 | 209.63              | 1526.97          | 11/05/69 | 210.55              | 1526.05          |
| 12/19/68 | 209.80              | 1526.80          | 11/06/69 | 210.69              | 1525.91          |
| 12/20/68 | 209.91              | 1526.69          | 11/07/69 | 210.60              | 1526.00          |
| 12/21/68 | 209.91              | 1526.69          | 11/08/69 | 210.58              | 1526.02          |
| 12/27/68 | 209.75              | 1526.85          | 11/09/69 | 210.47              | 1526.13          |
|          |                     |                  | 11/10/69 | 210.16              | 1526.44          |
| 01/04/69 | 209.55              | 1527.05          | 11/11/69 | 210.17              | 1526.43          |
| 02/06/69 | 209.67              | 1526.93          | 11/12/69 | 210.10              | 1526.50          |
| 04/09/69 | 209.60              | 1527.00          | 11/14/69 | 209.86              | 1526.74          |
| 05/07/69 | 206.03              | 1530.57          | 11/17/69 | 210.05              | 1526.55          |
| 05/15/69 | 205.80              | 1530.80          | 11/24/69 | 209.61              | 1526.99          |
| 05/28/69 | 205.80              | 1530.80          | 12/02/69 | 209.53              | 1527.07          |
| 06/11/69 | 206.55              | 1530.05          | 12/03/69 | 209.63              | 1526.97          |
| 06/27/69 | 207.27              | 1529.33          | 12/04/69 | 209.39              | 1527.21          |
| 07/16/69 | 207.88              | 1528.72          | 12/05/69 | 209.47              | 1526.13          |
| 07/29/69 | 207.60              | 1529.00          |          |                     |                  |
| 08/12/69 | 207.53              | 1529.07          | 01/27/70 | 208.57              | 1528.03          |
| 09/11/69 | 208.44              | 1528.16          | 03/10/70 | 208.94              | 1527.66          |
| 09/26/69 | 208.50              | 1528.10          | 04/06/70 | 208.61              | 1527.99          |
| 10/08/69 | 208.49              | 1528.11          | 06/08/70 | 204.63              | 1531.97          |
| 10/16/69 | 208.66              | 1527.94          | 07/24/70 | 206.44              | 1529.16          |
| 10/19/69 | 208.61              | 1527.99          | 08/27/70 | 207.55              | 1529.05          |
| 10/20/69 | 208.83              | 1527.77          | 09/30/70 | 207.71              | 1528.89          |
| 10/21/69 | 208.89              | 1527.71          | 12/22/70 | 207.80              | 1528.80          |
| 10/22/69 | 209.33              | 1527.27          |          |                     |                  |
| 10/23/69 | 209.22              | 1527.38          | 04/15/71 | 207.05              | 1529.55          |
| 10/24/69 | 209.50              | 1527.10          | 07/21/71 | 207.30              | 1529.30          |
| 10/25/69 | 209.92              | 1526.68          | 08/26/71 | 207.38              | 1529.22          |
| 10/26/69 | 210.16              | 1526.44          | 12/21/71 | 207.63              | 1528.97          |
| 10/27/69 | 210.17              | 1526.43          |          |                     |                  |
| 10/28/69 | 210.08              | 1526.52          | 06/06/73 | 207.44              | 1529.16          |
| 10/29/69 | 210.21              | 1526.39          |          |                     |                  |
| 10/30/69 | 210.47              | 1526.13          | 07/01/74 | 204.07              | 1532.53          |
| 10/31/69 | 210.47              | 1526.13          |          |                     |                  |
|          |                     |                  |          |                     | PLUGGED          |

154-082-07AAA  
Sundre aquifer

LS Elev (msl,ft) = 1615.20 SI (ft) = 187-193

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/23/68 | 87.72               | 1527.48          | 09/30/70 | 85.97               | 1529.23          |
| 11/27/68 | 87.64               | 1527.56          | 12/22/70 | 85.89               | 1529.31          |
| 12/11/68 | 87.63               | 1527.57          |          |                     |                  |
| 12/16/68 | 87.80               | 1527.40          | 04/15/71 | 85.24               | 1529.96          |
| 12/19/68 | 87.92               | 1527.28          | 07/21/71 | 85.14               | 1530.06          |
| 12/20/68 | 88.11               | 1527.09          | 08/26/71 | 85.47               | 1529.73          |
| 12/21/68 | 88.24               | 1526.96          | 12/21/71 | 85.44               | 1529.76          |
| 12/27/68 | 87.89               | 1527.31          |          |                     |                  |
| 01/04/69 | 87.83               | 1527.37          | 07/13/72 | 84.02               | 1531.18          |
| 01/06/69 | 87.77               | 1527.43          | 10/12/72 | 85.61               | 1529.59          |
| 03/12/69 | 87.88               | 1527.32          |          |                     |                  |
| 04/09/69 | 87.35               | 1527.85          | 06/06/73 | 85.61               | 1529.59          |
| 05/07/69 | 82.27               | 1532.93          | 07/01/74 | 82.97               | 1532.23          |
| 05/15/69 | 82.55               | 1532.65          |          |                     |                  |
| 05/28/69 | 83.16               | 1532.04          | 08/13/75 | 83.77               | 1531.43          |
| 06/11/69 | 84.69               | 1530.51          |          |                     |                  |
| 06/27/69 | 85.36               | 1529.84          | 10/21/76 | 86.39               | 1528.81          |
| 07/16/69 | 85.75               | 1529.45          |          |                     |                  |
| 07/29/69 | 85.63               | 1529.57          | 09/22/77 | 95.19               | 1520.01          |
| 08/12/69 | 85.78               | 1529.42          | 10/11/77 | 95.22               | 1519.98          |
| 09/11/69 | 86.61               | 1528.59          | 11/10/77 | 95.66               | 1519.54          |
| 09/26/69 | 86.69               | 1528.51          | 12/15/77 | 95.41               | 1519.79          |
| 10/08/69 | 86.66               | 1528.54          |          |                     |                  |
| 10/16/69 | 86.77               | 1528.43          | 01/24/78 | 96.44               | 1518.76          |
| 10/19/69 | 87.00               | 1528.20          | 02/22/78 | 96.72               | 1518.48          |
| 10/20/69 | 87.05               | 1528.15          | 03/28/78 | 97.27               | 1517.93          |
| 10/21/69 | 87.39               | 1527.81          | 04/26/78 | 96.75               | 1518.45          |
| 10/22/69 | 88.13               | 1527.07          | 05/23/78 | 98.69               | 1516.51          |
| 10/23/69 | 88.33               | 1526.87          | 06/27/78 | 99.16               | 1516.04          |
| 10/24/69 | 88.61               | 1526.59          | 07/26/78 | 100.14              | 1515.06          |
| 10/25/69 | 89.00               | 1526.20          | 08/29/78 | 100.42              | 1514.78          |
| 10/26/69 | 89.30               | 1525.90          | 09/26/78 | 96.86               | 1518.34          |
| 10/27/69 | 89.44               | 1525.76          | 10/27/78 | 99.22               | 1515.98          |
| 10/28/69 | 89.49               | 1525.71          | 12/04/78 | 98.52               | 1516.68          |
| 10/29/69 | 89.58               | 1525.62          |          |                     |                  |
| 10/30/69 | 89.80               | 1525.40          | 01/17/79 | 98.75               | 1516.45          |
| 10/31/69 | 89.86               | 1525.34          | 02/28/79 | 98.60               | 1516.60          |
| 11/01/69 | 90.03               | 1525.17          | 03/29/79 | 97.72               | 1517.48          |
| 11/02/69 | 90.22               | 1524.98          | 04/30/79 | 94.99               | 1520.21          |
| 11/03/69 | 90.22               | 1524.98          | 05/30/79 | 90.74               | 1524.46          |
| 11/04/69 | 90.24               | 1524.96          | 06/27/79 | 96.50               | 1518.70          |
| 11/05/69 | 89.80               | 1525.40          | 07/31/79 | 93.24               | 1521.96          |
| 11/06/69 | 89.38               | 1525.82          | 08/28/79 | 99.46               | 1515.74          |
| 11/07/69 | 89.10               | 1526.10          | 09/27/79 | 100.13              | 1515.07          |
| 11/08/69 | 88.88               | 1526.32          | 10/31/79 | 100.50              | 1514.70          |
| 11/09/69 | 88.74               | 1526.46          | 11/29/79 | 100.83              | 1514.37          |
| 11/10/69 | 88.44               | 1526.76          | 12/18/79 | 100.52              | 1514.68          |
| 11/11/69 | 88.35               | 1526.85          |          |                     |                  |
| 11/12/69 | 88.30               | 1526.90          | 01/29/80 | 100.75              | 1514.45          |
| 11/13/69 | 88.32               | 1526.88          | 02/27/80 | 100.28              | 1514.92          |
| 11/17/69 | 88.08               | 1527.12          | 03/29/80 | 100.05              | 1515.15          |
| 11/24/69 | 87.66               | 1527.54          | 04/25/80 | 101.24              | 1513.96          |
| 12/02/69 | 87.53               | 1527.67          | 05/28/80 | 103.96              | 1511.24          |
| 12/03/69 | 87.69               | 1527.51          | 06/27/80 | 104.47              | 1510.73          |
| 12/04/69 | 87.86               | 1527.34          | 07/29/80 | 100.58              | 1514.62          |
| 12/05/69 | 88.07               | 1527.13          | 08/28/80 | 101.91              | 1513.29          |
|          |                     |                  | 09/26/80 | 101.83              | 1513.37          |
| 01/27/70 | 86.82               | 1528.38          | 10/29/80 | 101.08              | 1514.12          |
| 03/10/70 | 87.05               | 1528.15          | 11/25/80 | 101.72              | 1513.48          |
| 04/06/70 | 86.83               | 1528.37          | 12/29/80 | 102.42              | 1512.78          |
| 06/08/70 | 81.99               | 1533.21          |          |                     |                  |
| 07/24/70 | 84.52               | 1530.68          | 01/29/81 | 102.55              | 1512.65          |
| 08/27/70 | 85.75               | 1529.45          | 03/02/81 | 102.63              | 1512.57          |

154-082-07AAA (continued)  
Sundre aquifer

LS Elev (msl,ft)= 1615.20 SI (ft)= 187-193

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 03/26/81 | 102.69              | 1512.51          | 06/26/84 | 107.83              | 1507.37          |
| 04/30/81 | 103.97              | 1511.23          | 07/10/84 | 109.80              | 1505.40          |
| 05/28/81 | 104.14              | 1511.06          | 07/27/84 | 112.83              | 1502.37          |
| 06/29/81 | 103.85              | 1511.35          | 08/09/84 | 114.05              | 1501.15          |
| 07/28/81 | 105.99              | 1509.21          | 08/16/84 | 113.72              | 1501.48          |
| 08/28/81 | 105.72              | 1509.48          | 08/22/84 | 113.66              | 1501.54          |
| 09/29/81 | 106.47              | 1508.73          | 08/27/84 | 112.80              | 1502.40          |
| 10/28/81 | 106.30              | 1508.90          | 09/07/84 | 111.55              | 1503.65          |
| 11/27/81 | 106.69              | 1508.51          | 09/11/84 | 110.61              | 1504.59          |
| 12/30/81 | 107.03              | 1508.17          | 09/20/84 | 110.41              | 1504.79          |
|          |                     |                  | 09/27/84 | 109.38              | 1505.82          |
| 01/08/82 | 107.16              | 1508.04          | 10/04/84 | 109.17              | 1506.03          |
| 02/26/82 | 108.35              | 1506.85          | 10/10/84 | 109.19              | 1506.01          |
| 03/29/82 | 107.14              | 1508.06          | 10/23/84 | 107.53              | 1507.67          |
| 04/30/82 | 100.30              | 1514.90          | 11/08/84 | 106.02              | 1509.18          |
| 05/27/82 | 101.25              | 1513.95          | 11/20/84 | 105.30              | 1509.90          |
| 06/29/82 | 102.86              | 1512.34          | 12/13/84 | 103.88              | 1511.32          |
| 07/28/82 | 104.22              | 1510.98          |          |                     |                  |
| 08/31/82 | 106.86              | 1508.34          | 01/09/85 | 105.44              | 1509.76          |
| 09/30/82 | 106.44              | 1508.76          | 02/12/85 | 106.05              | 1509.15          |
| 10/29/82 | 104.94              | 1510.26          | 03/06/85 | 106.41              | 1508.79          |
| 11/29/82 | 105.03              | 1510.17          | 03/19/85 | 106.60              | 1508.60          |
| 12/27/82 | 105.39              | 1509.81          | 04/16/85 | 105.88              | 1509.32          |
|          |                     |                  | 05/02/85 | 105.99              | 1509.21          |
| 01/28/83 | 105.25              | 1509.95          | 05/14/85 | 105.97              | 1509.23          |
| 02/28/83 | 105.57              | 1509.63          | 06/06/85 | 106.69              | 1508.51          |
| 03/31/83 | 105.75              | 1509.45          | 06/20/85 | 107.83              | 1507.37          |
| 04/29/83 | 103.42              | 1511.78          | 07/01/85 | 108.05              | 1507.15          |
| 05/27/83 | 103.67              | 1511.53          | 07/17/85 | 110.82              | 1504.38          |
| 07/08/83 | 107.13              | 1508.07          | 07/29/85 | 111.85              | 1503.35          |
| 07/28/83 | 109.27              | 1505.93          | 08/14/85 | 110.53              | 1504.67          |
| 08/30/83 | 110.00              | 1505.20          | 08/27/85 | 110.72              | 1504.48          |
| 09/02/83 | 110.77              | 1504.43          | 09/11/85 | 110.30              | 1504.90          |
| 11/22/83 | 108.61              | 1506.59          | 09/23/85 | 110.16              | 1505.04          |
| 12/08/83 | 108.63              | 1506.57          | 10/22/85 | 104.24              | 1510.96          |
| 12/14/83 | 108.50              | 1506.70          | 11/21/85 | 102.47              | 1512.73          |
|          |                     |                  | 12/30/85 | 105.11              | 1510.09          |
| 01/03/84 | 107.63              | 1507.57          |          |                     |                  |
| 01/16/84 | 107.74              | 1507.46          | 02/25/86 | 103.87              | 1511.33          |
| 02/01/84 | 107.03              | 1508.17          | 03/26/86 | 105.16              | 1510.04          |
| 02/21/84 | 107.00              | 1508.20          | 05/13/86 | 105.37              | 1509.83          |
| 03/12/84 | 106.92              | 1508.28          | 06/03/86 | 107.72              | 1507.48          |
| 04/03/84 | 106.83              | 1508.37          | 07/01/86 | 110.50              | 1504.70          |
| 04/18/84 | 106.55              | 1508.65          | 08/06/86 | 109.42              | 1505.78          |
| 05/08/84 | 106.27              | 1508.93          | 09/09/86 | 111.81              | 1503.39          |
| 05/29/84 | 107.00              | 1508.20          | 10/08/86 | 110.75              | 1504.45          |
| 06/15/84 | 106.97              | 1508.23          | 12/16/86 | 106.67              | 1508.53          |

154-082-07DCC

Sundre aquifer

LS Elev (msl,ft)= 1758.30

SI (ft)= 257-263

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date                  | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|-----------------------|---------------------|------------------|
| 11/22/68 | 96.08               | 1662.22          | 10/30/69              | 96.13               | 1662.17          |
| 11/27/68 | 96.13               | 1662.17          | 11/02/69              | 96.13               | 1662.17          |
| 12/07/68 | 96.19               | 1662.11          | 11/03/69              | 96.08               | 1662.22          |
| 12/11/68 | 96.05               | 1662.25          | 11/04/69              | 96.19               | 1662.11          |
| 12/16/68 | 96.05               | 1662.25          | 11/05/69              | 96.08               | 1662.22          |
| 12/20/68 | 96.11               | 1662.19          | 11/07/69              | 96.10               | 1662.20          |
| 12/21/68 | 96.11               | 1662.19          | 11/08/69              | 96.08               | 1662.22          |
|          |                     |                  | 11/09/69              | 96.13               | 1662.17          |
| 05/07/69 | 95.86               | 1662.44          | 11/10/69              | 96.10               | 1662.20          |
| 05/28/69 | 95.91               | 1662.39          | 11/11/69              | 96.08               | 1662.22          |
| 06/11/69 | 94.89               | 1663.41          | 11/12/69              | 96.08               | 1662.22          |
| 06/27/69 | 95.75               | 1662.55          | 11/13/69              | 96.13               | 1662.17          |
| 07/16/69 | 95.88               | 1662.42          | 11/17/69              | 96.14               | 1662.16          |
| 07/30/69 | 95.89               | 1662.41          | 11/24/69              | 96.10               | 1662.20          |
| 08/12/69 | 95.92               | 1662.38          | 12/04/69              | 96.11               | 1662.19          |
| 09/11/69 | 96.14               | 1662.16          |                       |                     |                  |
| 10/16/69 | 96.08               | 1662.22          | 06/08/70              | 95.63               | 1662.67          |
| 10/20/69 | 96.08               | 1662.22          | 10/01/70              | 95.86               | 1662.44          |
| 10/21/69 | 96.13               | 1662.17          |                       |                     |                  |
| 10/22/69 | 96.16               | 1662.14          | 07/21/71              | 96.17               | 1662.13          |
|          |                     |                  | <b>WELL DESTROYED</b> |                     |                  |

154-082-08DCC

Sundre aquifer

LS Elev (msl,ft)= 1744.30

SI (ft)= 367-373

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/22/68 | 180.80              | 1563.50          | 10/22/69 | 180.80              | 1563.50          |
| 11/27/68 | 180.83              | 1563.47          | 10/30/69 | 180.83              | 1563.47          |
| 12/07/68 | 180.74              | 1563.56          | 11/03/69 | 180.94              | 1563.36          |
| 12/11/68 | 180.83              | 1563.47          | 11/04/69 | 180.99              | 1563.31          |
| 12/16/68 | 180.89              | 1563.41          | 11/05/69 | 180.97              | 1563.33          |
| 12/20/68 | 180.94              | 1563.36          | 11/07/69 | 180.97              | 1563.33          |
| 12/21/68 | 180.97              | 1563.33          | 11/08/69 | 180.97              | 1563.33          |
|          |                     |                  | 11/09/69 | 180.97              | 1563.33          |
| 01/04/69 | 181.11              | 1563.19          | 11/10/69 | 180.97              | 1563.33          |
| 04/09/69 | 181.08              | 1563.22          | 11/11/69 | 180.99              | 1563.31          |
| 05/07/69 | 180.80              | 1563.50          | 11/12/69 | 180.99              | 1563.31          |
| 05/28/69 | 180.96              | 1563.34          | 11/13/69 | 180.97              | 1563.33          |
| 06/11/69 | 180.89              | 1563.41          | 11/17/69 | 180.97              | 1563.33          |
| 06/27/69 | 180.44              | 1563.86          | 11/24/69 | 180.89              | 1563.41          |
| 07/16/69 | 180.64              | 1563.66          | 12/04/69 | 181.03              | 1563.27          |
| 07/30/69 | 180.66              | 1563.64          |          |                     |                  |
| 08/12/69 | 180.69              | 1563.61          | 04/06/70 | 181.02              | 1563.28          |
| 09/11/69 | 180.83              | 1563.47          | 06/08/70 | 180.53              | 1563.77          |
| 10/16/69 | 180.80              | 1563.50          | 10/01/70 | 180.33              | 1563.97          |
| 10/20/69 | 180.77              | 1563.53          |          |                     |                  |
| 10/21/69 | 180.91              | 1563.39          | 04/15/71 | 180.74              | 1563.56          |

154-082-09CBB  
Sundre aquifer

LS Elev (msl,ft)= 1729.20 SI (ft)= 315-327

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 12/08/83 | 223.69              | 1505.51          | 01/09/85 | 219.67              | 1509.53          |
| 12/14/83 | 223.02              | 1506.18          | 02/12/85 | 220.50              | 1508.70          |
|          |                     |                  | 03/06/85 | 220.86              | 1508.34          |
| 01/03/84 | 222.00              | 1507.20          | 03/19/85 | 220.75              | 1508.45          |
| 01/16/84 | 222.19              | 1507.01          | 04/16/85 | 220.21              | 1508.99          |
| 02/01/84 | 221.61              | 1507.59          | 05/02/85 | 220.00              | 1509.20          |
| 02/21/84 | 221.46              | 1507.74          | 05/14/85 | 219.97              | 1509.23          |
| 03/12/84 | 221.22              | 1507.98          | 06/06/85 | 221.05              | 1508.15          |
| 04/03/84 | 220.88              | 1508.32          | 06/20/85 | 222.19              | 1507.01          |
| 04/18/84 | 220.77              | 1508.43          | 07/01/85 | 222.10              | 1507.10          |
| 05/08/84 | 220.00              | 1509.20          | 07/17/85 | 223.10              | 1506.10          |
| 05/29/84 | 222.08              | 1507.12          | 07/29/85 | 225.05              | 1504.15          |
| 06/15/84 | 222.13              | 1507.07          | 08/14/85 | 224.39              | 1504.81          |
| 06/26/84 | 223.16              | 1506.04          | 08/27/85 | 224.35              | 1504.85          |
| 07/10/84 | 225.82              | 1503.38          | 09/11/85 | 224.19              | 1505.01          |
| 07/27/84 | 229.63              | 1499.57          | 09/23/85 | 224.05              | 1505.15          |
| 08/09/84 | 230.19              | 1499.01          | 10/22/85 | 217.30              | 1511.90          |
| 08/16/84 | 230.00              | 1499.20          |          |                     |                  |
| 08/22/84 | 230.13              | 1499.07          | 02/25/86 | 217.69              | 1511.51          |
| 08/27/84 | 228.69              | 1500.51          | 03/26/86 | 219.35              | 1509.85          |
| 09/07/84 | 228.19              | 1501.01          | 05/13/86 | 219.47              | 1509.73          |
| 09/11/84 | 227.82              | 1501.38          | 06/04/86 | 223.35              | 1505.85          |
| 09/20/84 | 225.35              | 1503.85          | 07/01/86 | 226.25              | 1502.95          |
| 09/28/84 | 224.52              | 1504.68          | 08/06/86 | 223.61              | 1505.59          |
| 10/10/84 | 224.42              | 1504.78          | 09/12/86 | 227.59              | 1501.61          |
| 11/20/84 | 218.69              | 1510.51          | 10/08/86 | 225.18              | 1504.02          |
| 12/13/84 | 217.30              | 1511.90          | 12/16/86 | 220.55              | 1508.65          |

154-082-09000

Sundre aquifer

LS Elev (msl,ft) = 1722.00

SI (ft) = 239-242

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 07/17/69 | 191.88              | 1530.12          | 04/18/84 | 189.16              | 1532.84          |
| 09/12/69 | 191.52              | 1530.48          | 05/29/84 | 191.28              | 1530.72          |
| 10/08/69 | 191.25              | 1530.75          | 06/15/84 | 190.97              | 1531.03          |
| 10/19/69 | 191.22              | 1530.78          | 07/10/84 | 191.74              | 1530.26          |
| 10/20/69 | 191.28              | 1530.72          | 07/27/84 | 190.75              | 1531.25          |
| 10/21/69 | 191.35              | 1530.65          | 08/09/84 | 190.58              | 1531.42          |
| 10/24/69 | 191.30              | 1530.70          | 08/16/84 | 190.77              | 1531.23          |
| 10/25/69 | 191.33              | 1530.67          | 08/22/84 | 190.58              | 1531.42          |
| 10/27/69 | 191.33              | 1530.67          | 08/27/84 | 191.30              | 1530.70          |
| 10/29/69 | 191.35              | 1530.65          | 09/07/84 | 191.08              | 1530.92          |
| 10/30/69 | 191.33              | 1530.67          | 09/12/84 | 191.58              | 1530.42          |
| 11/01/69 | 191.38              | 1530.62          | 09/20/84 | 191.66              | 1530.34          |
| 11/03/69 | 191.38              | 1530.62          | 09/28/84 | 191.85              | 1530.15          |
| 11/04/69 | 191.39              | 1530.61          | 10/03/84 | 193.22              | 1528.78          |
| 11/05/69 | 191.44              | 1530.56          | 10/10/84 | 193.38              | 1528.62          |
| 11/07/69 | 191.41              | 1530.59          | 10/24/84 | 192.42              | 1529.58          |
| 11/09/69 | 191.41              | 1530.59          | 11/08/84 | 192.17              | 1529.83          |
| 11/11/69 | 191.41              | 1530.59          | 11/20/84 | 192.19              | 1529.81          |
| 11/12/69 | 191.41              | 1530.59          | 12/13/84 | 192.99              | 1529.01          |
| 11/13/69 | 191.39              | 1530.61          |          |                     |                  |
| 11/17/69 | 191.36              | 1530.64          | 01/09/85 | 192.86              | 1529.14          |
| 11/25/69 | 191.36              | 1530.64          | 02/12/85 | 193.33              | 1528.67          |
| 12/04/69 | 191.44              | 1530.56          | 03/06/85 | 193.72              | 1528.28          |
|          |                     |                  | 03/19/85 | 193.74              | 1528.26          |
| 06/09/70 | 191.02              | 1530.98          | 04/16/85 | 194.27              | 1527.73          |
| 10/01/70 | 190.41              | 1531.59          | 05/02/85 | 194.47              | 1527.53          |
|          |                     |                  | 05/14/85 | 194.41              | 1527.59          |
| 04/15/71 | 190.05              | 1531.95          | 06/06/85 | 194.57              | 1527.43          |
| 07/21/71 | 189.69              | 1532.31          | 06/20/85 | 194.99              | 1527.01          |
| 08/27/71 | 188.66              | 1533.34          | 07/01/85 | 195.02              | 1526.98          |
| 12/21/71 | 187.94              | 1534.06          | 07/17/85 | 195.03              | 1526.97          |
|          |                     |                  | 07/30/85 | 195.05              | 1526.95          |
| 06/07/73 | 182.14              | 1539.86          | 08/14/85 | 195.08              | 1526.92          |
|          |                     |                  | 08/28/85 | 195.16              | 1526.84          |
| 09/02/83 | 185.02              | 1536.98          | 09/11/85 | 195.22              | 1526.78          |
|          |                     |                  | 09/25/85 | 195.47              | 1526.53          |

154-082-108881  
Sundre aquifer

LS Elev (msl,ft)= 1540.80 SI (ft)= 138-141

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 07/29/69 | 9.93                | 1530.87          | 02/08/77 | 17.46               | 1523.34          |
| 08/12/69 | 10.50               | 1530.30          | 03/15/77 | 17.36               | 1523.44          |
| 09/09/69 | 10.26               | 1530.54          | 05/06/77 | 11.69               | 1529.11          |
| 09/26/69 | 11.34               | 1529.46          | 06/03/77 | 12.28               | 1528.52          |
| 10/08/69 | 11.27               | 1529.53          | 06/30/77 | 14.73               | 1526.07          |
| 10/16/69 | 11.35               | 1529.45          | 07/07/77 | 19.74               | 1521.06          |
| 10/19/69 | 11.78               | 1529.02          | 07/14/77 | 19.19               | 1521.61          |
| 10/20/69 | 11.71               | 1529.09          | 07/28/77 | 21.52               | 1519.28          |
| 10/21/69 | 14.80               | 1526.00          | 08/10/77 | 22.72               | 1518.08          |
| 10/22/69 | 15.59               | 1525.21          | 08/26/77 | 23.60               | 1517.20          |
| 10/23/69 | 16.02               | 1524.78          | 09/14/77 | 22.42               | 1518.38          |
| 10/24/69 | 16.38               | 1524.42          | 10/11/77 | 22.39               | 1518.41          |
| 10/25/69 | 16.58               | 1524.22          | 11/10/77 | 23.38               | 1517.42          |
| 10/26/69 | 16.94               | 1523.86          | 12/15/77 | 23.13               | 1517.67          |
| 10/28/69 | 17.27               | 1523.53          |          |                     |                  |
| 10/30/69 | 17.55               | 1523.25          | 01/24/78 | 24.41               | 1516.39          |
| 11/01/69 | 17.89               | 1522.91          | 02/22/78 | 25.19               | 1515.61          |
| 11/03/69 | 18.08               | 1522.72          | 03/28/78 | 24.35               | 1516.45          |
| 11/04/69 | 15.64               | 1525.16          | 04/26/78 | 24.50               | 1516.30          |
| 11/05/69 | 14.72               | 1526.08          | 05/24/78 | 27.19               | 1513.61          |
| 11/06/69 | 14.38               | 1526.42          | 06/27/78 | 26.19               | 1514.61          |
| 11/13/69 | 12.76               | 1528.04          | 07/26/78 | 28.44               | 1512.36          |
| 11/14/69 | 12.67               | 1528.13          | 08/29/78 | 26.53               | 1514.27          |
| 11/17/69 | 12.47               | 1528.33          | 09/26/78 | 22.50               | 1518.30          |
| 11/24/69 | 12.22               | 1528.58          | 10/27/78 | 26.02               | 1514.78          |
| 12/02/69 | 12.15               | 1528.65          | 12/04/78 | 25.83               | 1514.97          |
| 12/03/69 | 14.56               | 1526.24          |          |                     |                  |
| 12/04/69 | 15.03               | 1525.77          | 01/19/79 | 26.36               | 1514.44          |
| 12/05/69 | 15.30               | 1525.50          | 02/27/79 | 25.47               | 1515.33          |
|          |                     |                  | 03/29/79 | 23.82               | 1516.98          |
| 01/27/70 | 11.56               | 1529.24          | 04/30/79 | 18.94               | 1521.86          |
| 03/10/70 | 11.69               | 1529.11          | 05/29/79 | 13.52               | 1527.28          |
| 04/06/70 | 11.46               | 1529.34          | 06/27/79 | 24.58               | 1516.22          |
| 06/08/70 | 5.31                | 1535.49          | 07/30/79 | 16.66               | 1524.14          |
| 07/24/70 | 9.38                | 1531.42          | 08/28/79 | 26.41               | 1514.39          |
| 08/27/70 | 10.72               | 1530.08          | 09/27/79 | 28.66               | 1512.14          |
| 10/01/70 | 11.10               | 1529.70          | 10/29/79 | 28.05               | 1512.75          |
| 12/23/70 | 11.09               | 1529.71          | 11/29/79 | 28.52               | 1512.28          |
|          |                     |                  | 12/27/79 | 27.25               | 1513.55          |
| 04/15/71 | 10.31               | 1530.49          |          |                     |                  |
| 07/22/71 | 9.82                | 1530.98          | 01/29/80 | 27.92               | 1512.88          |
| 08/27/71 | 10.52               | 1530.28          | 02/28/80 | 27.53               | 1513.27          |
| 12/21/71 | 10.34               | 1530.46          | 03/25/80 | 26.25               | 1514.55          |
|          |                     |                  | 04/25/80 | 29.02               | 1511.78          |
| 07/12/72 | 9.13                | 1531.67          | 05/28/80 | 32.02               | 1508.78          |
| 10/12/72 | 10.23               | 1530.57          | 06/27/80 | 33.16               | 1507.64          |
|          |                     |                  | 07/29/80 | 24.74               | 1516.06          |
| 06/08/73 | 10.72               | 1530.08          | 08/28/80 | 28.46               | 1512.34          |
|          |                     |                  | 09/26/80 | 29.33               | 1511.47          |
| 07/02/74 | 7.85                | 1532.95          | 10/29/80 | 27.61               | 1513.19          |
| 10/13/74 | 10.64               | 1530.16          | 11/25/80 | 29.02               | 1511.78          |
|          |                     |                  | 12/29/80 | 29.27               | 1511.53          |
| 08/14/75 | 8.93                | 1531.87          |          |                     |                  |
|          |                     |                  | 01/29/81 | 29.60               | 1511.20          |
| 06/04/76 | 6.50                | 1534.30          | 02/24/81 | 30.25               | 1510.55          |
| 07/16/76 | 7.50                | 1533.30          | 03/26/81 | 29.55               | 1511.25          |
| 08/24/76 | 13.85               | 1526.95          | 04/30/81 | 30.99               | 1509.81          |
| 08/27/76 | 12.93               | 1527.87          | 05/28/81 | 30.64               | 1510.16          |
| 09/09/76 | 15.13               | 1525.67          | 06/29/81 | 31.19               | 1509.61          |
| 09/23/76 | 16.00               | 1524.80          | 07/28/81 | 34.32               | 1506.48          |
| 10/25/76 | 11.56               | 1529.24          | 08/28/81 | 32.78               | 1508.02          |
| 12/03/76 | 11.72               | 1529.08          | 09/29/81 | 33.69               | 1507.11          |
|          |                     |                  | 10/29/81 | 34.38               | 1506.42          |
| 01/05/77 | 16.41               | 1524.39          | 11/29/81 | 34.72               | 1506.08          |

154-082-108881 (continued)

Sundre aquifer

LS Elev (msl,ft)= 1540.80

SI (ft)= 138-141

| Date     | Depth to<br>Water (ft) | WL Elev<br>(msl,ft) | Date     | Depth to<br>Water (ft) | WL Elev<br>(msl,ft) |
|----------|------------------------|---------------------|----------|------------------------|---------------------|
| 12/30/81 | 35.63                  | 1505.17             | 08/27/84 | 41.30                  | 1499.50             |
| 01/28/82 | 35.27                  | 1505.53             | 09/07/84 | 38.52                  | 1502.28             |
| 02/26/82 | 36.41                  | 1504.39             | 09/12/84 | 35.69                  | 1505.11             |
| 03/29/82 | 34.39                  | 1506.41             | 09/20/84 | 36.77                  | 1504.03             |
| 04/30/82 | 21.55                  | 1519.25             | 09/27/84 | 35.80                  | 1505.00             |
| 05/27/82 | 25.94                  | 1514.86             | 10/03/84 | 35.88                  | 1504.92             |
| 06/29/82 | 28.75                  | 1512.05             | 10/10/84 | 34.88                  | 1505.92             |
| 07/28/82 | 31.77                  | 1509.03             | 10/23/84 | 31.89                  | 1508.91             |
| 08/31/82 | 34.36                  | 1506.44             | 11/08/84 | 30.60                  | 1510.20             |
| 09/30/82 | 33.58                  | 1507.22             | 11/20/84 | 29.35                  | 1511.45             |
| 10/29/82 | 32.19                  | 1508.61             | 12/13/84 | 27.75                  | 1513.05             |
| 11/29/82 | 32.47                  | 1508.33             | 01/09/85 | 30.61                  | 1510.19             |
| 12/27/82 | 31.53                  | 1509.27             | 02/12/85 | 32.00                  | 1508.80             |
|          |                        |                     | 03/06/85 | 31.96                  | 1508.84             |
| 01/28/83 | 32.77                  | 1508.03             | 03/19/85 | 31.91                  | 1508.89             |
| 02/28/83 | 32.89                  | 1507.91             | 04/16/85 | 32.58                  | 1508.22             |
| 04/29/83 | 28.38                  | 1512.42             | 05/02/85 | 31.80                  | 1509.00             |
| 05/27/83 | 29.25                  | 1511.55             | 05/14/85 | 32.11                  | 1508.69             |
| 07/08/83 | 34.35                  | 1506.45             | 06/06/85 | 33.77                  | 1507.03             |
| 07/28/83 | 38.30                  | 1502.50             | 06/20/85 | 35.91                  | 1504.89             |
| 08/30/83 | 37.85                  | 1502.95             | 07/01/85 | 33.99                  | 1506.81             |
| 11/22/83 | 36.41                  | 1504.39             | 07/17/85 | 39.67                  | 1501.13             |
| 12/08/83 | 36.27                  | 1504.53             | 07/29/85 | 40.60                  | 1500.20             |
| 12/14/83 | 35.25                  | 1505.55             | 08/14/85 | 38.19                  | 1502.61             |
|          |                        |                     | 08/27/85 | 38.66                  | 1502.14             |
| 01/03/84 | 34.77                  | 1506.03             | 09/11/85 | 36.19                  | 1504.61             |
| 01/16/84 | 34.14                  | 1506.66             | 09/23/85 | 35.92                  | 1504.88             |
| 02/01/84 | 33.66                  | 1507.14             | 10/23/85 | 27.83                  | 1512.97             |
| 02/21/84 | 33.72                  | 1507.08             | 11/21/85 | 25.85                  | 1514.95             |
| 03/12/84 | 32.85                  | 1507.95             | 12/30/85 | 30.47                  | 1510.33             |
| 04/03/84 | 32.66                  | 1508.14             |          |                        |                     |
| 04/18/84 | 32.52                  | 1508.28             | 02/25/86 | 28.47                  | 1512.33             |
| 05/08/84 | 31.50                  | 1509.30             | 03/26/86 | 30.90                  | 1509.90             |
| 05/29/84 | 34.32                  | 1506.48             | 05/13/86 | 30.98                  | 1509.82             |
| 06/15/84 | 34.08                  | 1506.72             | 06/04/86 | 35.59                  | 1505.21             |
| 06/26/84 | 35.50                  | 1505.30             | 07/01/86 | 38.98                  | 1501.82             |
| 07/10/84 | 38.75                  | 1502.05             | 08/06/86 | 35.46                  | 1505.34             |
| 07/27/84 | 43.02                  | 1497.78             | 09/09/86 | 40.27                  | 1500.53             |
| 08/09/84 | 41.58                  | 1499.22             | 10/09/86 | 36.15                  | 1504.65             |
| 08/16/84 | 43.07                  | 1497.73             | 12/16/86 | 31.27                  | 1509.53             |
| 08/21/84 | 41.83                  | 1498.97             |          |                        |                     |

154-082-10B882

Sundre aquifer

LS Elev (msl,ft)= 1541.00

SI (ft)= 206-212

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 10/08/69 | 11.31               | 1529.69          | 03/15/77 | 17.42               | 1523.58          |
| 10/16/69 | 11.39               | 1529.61          | 05/06/77 | 11.77               | 1529.23          |
| 10/19/69 | 11.84               | 1529.16          | 06/03/77 | 12.35               | 1528.65          |
| 10/20/69 | 11.77               | 1529.23          | 06/30/77 | 14.85               | 1526.15          |
| 10/21/69 | 14.65               | 1526.35          | 07/07/77 | 19.83               | 1521.17          |
| 10/22/69 | 15.57               | 1525.43          | 07/14/77 | 19.28               | 1521.72          |
| 10/23/69 | 15.98               | 1525.02          | 07/28/77 | 21.75               | 1519.25          |
| 10/24/69 | 16.38               | 1524.62          | 08/10/77 | 22.89               | 1518.11          |
| 10/25/69 | 16.58               | 1524.42          | 08/26/77 | 24.50               | 1516.50          |
| 10/26/69 | 16.96               | 1524.04          | 09/14/77 | 22.52               | 1518.48          |
| 10/28/69 | 17.28               | 1523.72          | 10/11/77 | 22.60               | 1518.40          |
| 10/30/69 | 17.55               | 1523.45          | 11/10/77 | 23.46               | 1517.54          |
| 11/01/69 | 17.91               | 1523.09          | 12/15/77 | 23.25               | 1517.75          |
| 11/03/69 | 18.11               | 1522.89          |          |                     |                  |
| 11/04/69 | 15.69               | 1525.31          | 01/24/78 | 24.52               | 1516.48          |
| 11/05/69 | 14.77               | 1526.23          | 02/22/78 | 25.24               | 1515.76          |
| 11/06/69 | 14.26               | 1526.74          | 03/28/78 | 24.44               | 1516.56          |
| 11/08/69 | 13.65               | 1527.35          | 04/26/78 | 24.55               | 1516.45          |
| 11/10/69 | 13.15               | 1527.85          | 05/24/78 | 27.30               | 1513.70          |
| 11/11/69 | 13.10               | 1527.90          | 06/27/78 | 26.19               | 1514.81          |
| 11/13/69 | 12.81               | 1528.19          | 07/26/78 | 28.53               | 1512.47          |
| 11/14/69 | 12.72               | 1528.28          | 08/29/78 | 26.69               | 1514.31          |
| 11/25/69 | 12.32               | 1528.68          | 09/26/78 | 22.55               | 1518.45          |
| 12/02/69 | 12.18               | 1528.82          | 10/27/78 | 26.14               | 1514.86          |
| 12/03/69 | 14.55               | 1526.45          | 12/04/78 | 25.92               | 1515.08          |
| 12/04/69 | 15.01               | 1525.99          |          |                     |                  |
| 12/05/69 | 15.43               | 1525.57          | 01/19/79 | 25.86               | 1515.14          |
|          |                     |                  | 02/27/79 | 25.57               | 1515.43          |
| 01/27/70 | 11.72               | 1529.28          | 03/29/79 | 25.94               | 1515.06          |
| 03/10/70 | 11.85               | 1529.15          | 04/30/79 | 19.05               | 1521.95          |
| 04/06/70 | 11.61               | 1529.39          | 05/29/79 | 13.68               | 1527.32          |
| 06/08/70 | 5.48                | 1535.52          | 06/27/79 | 24.72               | 1516.28          |
| 07/24/70 | 9.50                | 1531.50          | 07/31/79 | 16.75               | 1524.25          |
| 08/27/70 | 10.85               | 1530.15          | 08/28/79 | 26.49               | 1514.51          |
| 10/01/70 | 11.25               | 1529.75          | 09/27/79 | 28.78               | 1512.22          |
| 12/23/70 | 11.06               | 1529.94          | 10/29/79 | 28.08               | 1512.92          |
|          |                     |                  | 11/29/79 | 28.57               | 1512.43          |
| 04/15/71 | 10.30               | 1530.70          | 12/27/79 | 27.32               | 1513.68          |
| 07/22/71 | 9.72                | 1531.28          |          |                     |                  |
| 08/27/71 | 10.40               | 1530.60          | 01/29/80 | 27.99               | 1513.01          |
| 12/21/71 | 10.19               | 1530.81          | 02/27/80 | 27.57               | 1513.43          |
|          |                     |                  | 03/25/80 | 26.32               | 1514.68          |
| 07/12/72 | 9.02                | 1531.98          | 04/25/80 | 29.05               | 1511.95          |
| 10/12/72 | 10.13               | 1530.87          | 05/28/80 | 32.22               | 1508.78          |
|          |                     |                  | 06/27/80 | 33.32               | 1507.68          |
| 06/08/73 | 10.64               | 1530.36          | 07/29/80 | 24.89               | 1516.11          |
|          |                     |                  | 08/28/80 | 28.63               | 1512.37          |
| 07/02/74 | 7.72                | 1533.28          | 09/26/80 | 29.47               | 1511.53          |
| 10/13/74 | 10.72               | 1530.28          | 10/29/80 | 27.77               | 1513.23          |
|          |                     |                  | 11/25/80 | 29.17               | 1511.83          |
| 08/14/75 | 8.82                | 1532.18          | 12/29/80 | 29.47               | 1511.53          |
|          |                     |                  |          |                     |                  |
| 03/19/76 | 7.98                | 1533.02          | 01/29/81 | 29.75               | 1511.25          |
| 06/04/76 | 6.56                | 1534.44          | 02/24/81 | 30.41               | 1510.59          |
| 07/16/76 | 7.56                | 1533.44          | 03/26/81 | 29.69               | 1511.31          |
| 08/24/76 | 13.89               | 1527.11          | 04/30/81 | 31.14               | 1509.86          |
| 08/27/76 | 13.89               | 1527.11          | 05/28/81 | 30.83               | 1510.17          |
| 09/09/76 | 15.18               | 1525.82          | 06/29/81 | 31.33               | 1509.67          |
| 09/23/76 | 16.10               | 1524.90          | 07/28/81 | 34.47               | 1506.53          |
| 10/25/76 | 11.60               | 1529.40          | 08/28/81 | 32.97               | 1508.03          |
| 12/03/76 | 11.80               | 1529.20          | 09/29/81 | 33.86               | 1507.14          |
|          |                     |                  | 10/28/81 | 34.53               | 1506.47          |
| 01/05/77 | 16.46               | 1524.54          | 11/27/81 | 34.88               | 1506.12          |
| 02/08/77 | 17.49               | 1523.51          | 12/30/81 | 35.80               | 1505.20          |

154-082-108882 (continued)

Sundre aquifer

LS Elev (msl,ft)= 1541.00

SI (ft)= 206-212

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 01/28/82 | 35.44               | 1505.56          | 08/27/84 | 41.36               | 1499.64          |
| 02/26/82 | 36.63               | 1504.37          | 09/07/84 | 38.60               | 1502.40          |
| 03/27/82 | 34.55               | 1506.45          | 09/12/84 | 35.77               | 1505.23          |
| 04/30/82 | 21.78               | 1519.22          | 09/20/84 | 37.80               | 1503.20          |
| 05/27/82 | 26.19               | 1514.81          | 10/27/84 | 36.83               | 1504.17          |
| 06/29/82 | 28.91               | 1512.09          | 10/03/84 | 35.92               | 1505.08          |
| 07/28/82 | 31.91               | 1509.09          | 10/10/84 | 34.94               | 1506.06          |
| 08/31/82 | 34.55               | 1506.45          | 10/23/84 | 31.94               | 1509.06          |
| 09/30/82 | 33.77               | 1507.23          | 11/08/84 | 30.66               | 1510.34          |
| 10/29/82 | 32.36               | 1508.64          | 11/20/84 | 29.41               | 1511.59          |
| 11/29/82 | 32.64               | 1508.36          | 12/13/84 | 27.82               | 1513.18          |
| 12/27/82 | 31.75               | 1509.25          | 01/09/85 | 30.67               | 1510.33          |
| 01/28/83 | 32.94               | 1508.06          | 02/12/85 | 32.07               | 1508.93          |
| 02/28/83 | 33.07               | 1507.93          | 03/06/85 | 32.05               | 1508.95          |
| 04/29/83 | 28.38               | 1512.62          | 03/19/85 | 32.02               | 1508.98          |
| 05/27/83 | 29.22               | 1511.78          | 04/16/85 | 32.64               | 1508.36          |
| 07/08/83 | 34.58               | 1506.42          | 05/02/85 | 31.91               | 1509.09          |
| 07/28/83 | 38.53               | 1502.47          | 05/14/85 | 32.19               | 1508.81          |
| 08/30/83 | 38.08               | 1502.92          | 06/06/85 | 33.64               | 1507.36          |
| 11/22/83 | 37.41               | 1503.59          | 06/20/85 | 35.96               | 1505.04          |
| 12/08/83 | 36.27               | 1504.73          | 07/01/85 | 34.11               | 1506.89          |
| 12/14/83 | 35.28               | 1505.72          | 07/17/85 | 39.74               | 1501.26          |
| 01/03/84 | 34.94               | 1506.06          | 07/29/85 | 40.67               | 1500.33          |
| 01/16/84 | 34.14               | 1506.86          | 08/14/85 | 38.24               | 1502.76          |
| 02/01/84 | 33.64               | 1507.36          | 08/27/85 | 38.71               | 1502.29          |
| 02/21/84 | 33.75               | 1507.25          | 09/11/85 | 36.27               | 1504.73          |
| 03/12/84 | 32.88               | 1508.12          | 09/23/85 | 36.02               | 1504.98          |
| 04/03/84 | 32.53               | 1508.47          | 10/23/85 | 27.92               | 1513.08          |
| 04/18/84 | 32.38               | 1508.62          | 11/21/85 | 25.94               | 1515.06          |
| 05/08/84 | 31.41               | 1509.59          | 12/30/85 | 30.55               | 1510.45          |
| 05/29/84 | 34.19               | 1506.81          | 02/25/86 | 28.56               | 1512.44          |
| 06/15/84 | 34.07               | 1506.93          | 05/13/86 | 31.25               | 1509.75          |
| 06/26/84 | 35.36               | 1505.64          | 06/04/86 | 35.68               | 1505.32          |
| 07/10/84 | 38.61               | 1502.39          | 07/01/86 | 39.06               | 1501.94          |
| 07/27/84 | 42.94               | 1498.06          | 08/06/86 | 35.55               | 1505.45          |
| 08/09/84 | 41.42               | 1499.58          | 09/09/86 | 40.32               | 1500.68          |
| 08/16/84 | 42.91               | 1498.09          | 10/09/86 | 36.23               | 1504.77          |
| 08/21/84 | 41.91               | 1499.09          | 12/16/86 | 31.33               | 1509.67          |

154-082-10BCB  
Sundre aquifer

LS Elev (msl,ft)= 1561.60 SI (ft)= 238-241

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 07/16/69 | 31.33               | 1530.27          | 02/21/84 | 53.75               | 1507.85          |
| 07/17/69 | 31.69               | 1529.91          | 03/12/84 | 53.07               | 1508.53          |
| 07/29/69 | 31.08               | 1530.52          | 04/03/84 | 52.86               | 1508.74          |
| 08/12/69 | 31.63               | 1529.97          | 04/18/84 | 52.64               | 1508.96          |
| 09/09/69 | 32.38               | 1529.22          | 05/08/84 | 51.77               | 1509.83          |
| 09/26/69 | 32.50               | 1529.10          | 05/29/84 | 54.17               | 1507.43          |
| 10/08/69 | 32.38               | 1529.22          | 06/15/84 | 54.13               | 1507.47          |
| 10/16/69 | 32.47               | 1529.13          | 06/26/84 | 55.17               | 1506.43          |
| 10/19/69 | 32.91               | 1528.69          | 07/10/84 | 58.16               | 1503.44          |
| 10/20/69 | 32.86               | 1528.74          | 07/27/84 | 62.10               | 1499.50          |
| 10/21/69 | 34.99               | 1526.61          | 08/09/84 | 60.74               | 1500.86          |
| 10/22/69 | 35.91               | 1525.69          | 08/16/84 | 62.17               | 1499.43          |
| 10/23/69 | 36.36               | 1525.24          | 08/22/84 | 62.03               | 1499.57          |
| 10/24/69 | 36.75               | 1524.85          | 08/27/84 | 61.00               | 1500.60          |
| 10/25/69 | 36.96               | 1524.64          | 09/07/84 | 58.52               | 1503.08          |
| 10/26/69 | 37.32               | 1524.28          | 09/12/84 | 56.83               | 1504.77          |
| 10/28/69 | 37.86               | 1523.74          | 09/20/84 | 57.02               | 1504.58          |
| 10/30/69 | 37.92               | 1523.68          | 09/27/84 | 55.88               | 1505.72          |
| 11/01/69 | 38.27               | 1523.33          | 10/03/84 | 55.96               | 1505.64          |
| 11/03/69 | 38.47               | 1523.13          | 10/10/84 | 55.91               | 1505.69          |
| 11/04/69 | 36.82               | 1524.78          | 10/23/84 | 52.69               | 1508.91          |
| 11/05/69 | 35.89               | 1525.71          | 11/08/84 | 51.39               | 1510.21          |
| 11/06/69 | 35.75               | 1525.85          | 11/20/84 | 50.36               | 1511.24          |
| 11/07/69 | 34.94               | 1526.66          | 12/13/84 | 48.77               | 1512.83          |
| 11/08/69 | 34.75               | 1526.85          |          |                     |                  |
| 11/10/69 | 34.27               | 1527.33          | 01/09/85 | 51.30               | 1510.30          |
| 11/12/69 | 34.02               | 1527.58          | 02/12/85 | 52.52               | 1509.08          |
| 11/13/69 | 33.91               | 1527.69          | 03/06/85 | 52.63               | 1508.97          |
| 11/14/69 | 33.80               | 1527.80          | 03/19/85 | 52.57               | 1509.03          |
| 11/25/69 | 33.38               | 1528.22          | 04/16/85 | 52.42               | 1509.18          |
| 12/02/69 | 33.19               | 1528.41          | 05/02/85 | 51.78               | 1509.82          |
|          |                     |                  | 05/14/85 | 52.00               | 1509.60          |
| 01/27/70 | 32.67               | 1528.93          | 06/06/85 | 53.74               | 1507.86          |
| 03/10/70 | 32.80               | 1528.80          | 06/20/85 | 55.57               | 1506.03          |
| 04/06/70 | 32.58               | 1529.02          | 07/01/85 | 54.38               | 1507.22          |
| 06/08/70 | 26.50               | 1535.10          | 07/17/85 | 59.19               | 1502.41          |
| 07/24/70 | 30.44               | 1531.16          | 07/29/85 | 60.11               | 1501.49          |
| 08/27/70 | 31.77               | 1529.83          | 08/14/85 | 57.75               | 1503.85          |
| 10/01/70 | 32.16               | 1529.44          | 08/27/85 | 57.55               | 1504.05          |
| 12/22/70 | 31.97               | 1529.63          | 09/11/85 | 56.67               | 1504.93          |
|          |                     |                  | 09/23/85 | 56.42               | 1505.18          |
| 04/15/71 | 31.22               | 1530.38          | 10/23/85 | 49.03               | 1512.57          |
| 07/22/71 | 30.77               | 1530.83          | 11/21/85 | 47.00               | 1514.60          |
| 08/27/71 | 31.44               | 1530.16          | 12/30/85 | 51.17               | 1510.43          |
| 12/21/71 | 31.24               | 1530.36          |          |                     |                  |
|          |                     |                  | 02/25/86 | 45.39               | 1516.21          |
| 07/12/72 | 30.02               | 1531.58          | 03/26/86 | 51.25               | 1510.35          |
| 10/12/72 | 31.22               | 1530.38          | 05/13/86 | 51.40               | 1510.20          |
|          |                     |                  | 06/04/86 | 55.43               | 1506.17          |
| 06/08/73 | 31.64               | 1529.96          | 07/01/86 | 58.47               | 1503.13          |
|          |                     |                  | 08/06/86 | 55.95               | 1505.65          |
| 11/22/83 | 56.52               | 1505.08          | 09/09/86 | 59.94               | 1501.66          |
| 01/16/84 | 54.30               | 1507.30          | 10/08/86 | 56.85               | 1504.75          |
| 02/01/84 | 53.72               | 1507.88          | 12/16/86 | 52.17               | 1509.43          |

**154-082-10CAC (Flowing well)**  
**Fort Union aquifer**

LS Elev (msl,ft)= 1558.00 SI (ft)= 323-341

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 05/25/84 | +24.25              |                  | 09/27/84 | +24.00              |                  |
| 05/29/84 | +24.75              |                  | 12/13/84 | +22.50              |                  |
| 06/15/84 | +25.00              |                  |          |                     |                  |
| 06/26/84 | +20.50              |                  |          |                     |                  |
| 07/10/84 | +18.50              |                  | 03/27/86 | +27.00              |                  |
| 07/27/84 | +22.39              |                  | 05/13/86 | +26.25              |                  |
| 08/09/84 | +21.50              |                  | 06/04/86 | +28.00              |                  |
| 08/16/84 | +21.60              |                  | 07/01/86 | +26.50              |                  |
| 08/22/84 | +21.30              |                  | 08/06/86 | +26.49              |                  |
| 08/27/84 | +23.00              |                  | 09/12/86 | +26.00              |                  |
| 09/07/84 | +22.50              |                  | 10/08/86 | +26.00              |                  |
| 09/20/84 | +23.50              |                  | 12/16/86 | +28.50              |                  |

**154-082-10DAA**  
**Sundre aquifer**

LS Elev (msl,ft)= 1541.30 SI (ft)= 97-100

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft)      |
|----------|---------------------|------------------|----------|---------------------|-----------------------|
| 11/27/68 | 13.11               | 1528.19          | 11/08/69 | 14.23               | 1527.07               |
| 12/07/68 | 13.18               | 1528.12          | 11/09/69 | 14.05               | 1527.25               |
| 12/11/68 | 13.06               | 1528.24          | 11/10/69 | 13.85               | 1527.45               |
| 12/16/68 | 13.10               | 1528.20          | 11/11/69 | 13.71               | 1527.59               |
| 12/19/68 | 13.35               | 1527.95          | 11/12/69 | 13.59               | 1527.71               |
| 12/20/68 | 13.64               | 1527.66          | 11/13/69 | 13.50               | 1527.80               |
| 12/21/68 | 13.52               | 1527.78          | 11/17/69 | 13.25               | 1528.05               |
| 12/27/68 | 13.19               | 1528.11          | 11/24/69 | 13.01               | 1528.29               |
|          |                     |                  | 12/02/69 | 12.89               | 1528.41               |
| 01/04/69 | 13.19               | 1528.11          | 12/03/69 | 13.82               | 1527.48               |
| 05/28/69 | 7.43                | 1533.87          | 12/04/69 | 14.14               | 1527.16               |
| 06/11/69 | 10.06               | 1531.24          | 12/05/69 | 14.39               | 1526.91               |
| 07/16/69 | 8.80                | 1532.50          |          |                     |                       |
| 07/30/69 | 10.63               | 1530.67          | 06/09/70 | 6.07                | 1535.23               |
| 08/12/69 | 11.27               | 1530.03          | 10/01/70 | 12.01               | 1529.29               |
| 09/11/69 | 12.03               | 1529.27          |          |                     |                       |
| 09/26/69 | 12.11               | 1529.19          | 04/15/71 | 11.10               | 1530.20               |
| 10/08/69 | 12.03               | 1529.27          | 07/22/71 | 10.53               | 1530.77               |
| 10/16/69 | 12.14               | 1529.16          | 08/27/71 | 11.30               | 1530.00               |
| 10/19/69 | 12.50               | 1528.80          |          |                     |                       |
| 10/20/69 | 12.48               | 1528.82          | 06/09/76 | 7.30                | 1534.00               |
| 10/21/69 | 13.64               | 1527.66          | 07/16/76 | 8.28                | 1533.02               |
| 10/22/69 | 14.36               | 1526.94          | 08/27/76 | 11.26               | 1530.04               |
| 10/23/69 | 14.78               | 1526.52          | 09/09/76 | 12.68               | 1528.62               |
| 10/24/69 | 15.09               | 1526.21          | 09/23/76 | 14.11               | 1527.19               |
| 10/25/69 | 15.39               | 1525.91          | 10/25/76 | 12.34               | 1528.96               |
| 10/26/69 | 15.60               | 1525.70          | 12/03/76 | 12.39               | 1528.91               |
| 10/27/69 | 15.78               | 1525.52          |          |                     |                       |
| 10/28/69 | 15.94               | 1525.36          | 03/15/77 | 15.52               | 1525.78               |
| 10/29/69 | 16.08               | 1525.22          | 05/06/77 | 12.47               | 1528.83               |
| 10/30/69 | 16.25               | 1525.05          | 06/03/77 | 13.10               | 1528.20               |
| 10/31/69 | 16.41               | 1524.89          | 06/30/77 | 14.30               | 1527.00               |
| 11/01/69 | 16.50               | 1524.80          | 07/14/77 | 17.36               | 1523.94               |
| 11/02/69 | 16.61               | 1524.69          | 07/25/77 | 18.91               | 1522.39               |
| 11/03/69 | 16.72               | 1524.58          | 08/10/77 | 20.25               | 1521.05               |
| 11/04/69 | 16.69               | 1524.61          | 08/26/77 | 20.75               | 1520.55               |
| 11/05/69 | 15.47               | 1525.83          | 09/14/77 | 20.00               | 1521.30               |
| 11/06/69 | 14.86               | 1526.44          | 10/11/77 | 19.99               | 1521.31               |
| 11/07/69 | 14.43               | 1526.87          |          |                     |                       |
|          |                     |                  |          |                     | <b>WELL DESTROYED</b> |

154-082-11BCB

Souris Valley-Sundre aquifer

LS Elev (msl,ft)= 1538.70

SI (ft)= 66-69

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/27/68 | 10.48               | 1528.22          | 07/22/71 | 8.01                | 1530.69          |
| 12/07/68 | 10.64               | 1528.06          | 08/27/71 | 8.85                | 1529.85          |
| 12/11/68 | 10.53               | 1528.17          | 12/21/71 | 8.69                | 1530.01          |
| 12/16/68 | 10.60               | 1528.10          | 10/12/72 | 8.51                | 1530.19          |
| 12/19/68 | 10.92               | 1527.78          | 06/08/73 | 9.06                | 1529.64          |
| 12/20/68 | 11.19               | 1527.51          | 07/02/74 | 5.98                | 1532.72          |
| 12/21/68 | 10.98               | 1527.72          | 08/14/75 | 7.36                | 1531.34          |
| 12/27/68 | 10.68               | 1528.02          | 03/19/76 | 6.02                | 1532.68          |
| 01/04/69 | 10.68               | 1528.02          | 06/04/76 | 4.97                | 1533.73          |
| 03/06/69 | 10.67               | 1528.03          | 07/16/76 | 5.93                | 1532.77          |
| 04/09/69 | 8.53                | 1530.17          | 08/27/76 | 9.06                | 1529.64          |
| 05/28/69 | 4.69                | 1534.01          | 09/09/76 | 10.53               | 1528.17          |
| 06/11/69 | 7.59                | 1531.11          | 09/23/76 | 11.94               | 1526.76          |
| 07/16/69 | 8.30                | 1530.40          | 10/25/76 | 10.10               | 1528.60          |
| 07/30/69 | 8.00                | 1530.70          | 12/03/76 | 10.14               | 1528.56          |
| 08/12/69 | 8.78                | 1529.92          | 01/05/77 | 11.59               | 1527.11          |
| 09/11/69 | 9.56                | 1529.14          | 02/08/77 | 13.14               | 1525.56          |
| 09/26/69 | 9.60                | 1529.10          | 03/15/77 | 13.36               | 1525.34          |
| 10/08/69 | 9.56                | 1529.14          | 05/06/77 | 10.17               | 1528.53          |
| 10/16/69 | 9.60                | 1529.10          | 06/03/77 | 10.81               | 1527.89          |
| 10/19/69 | 9.96                | 1528.74          | 06/30/77 | 11.85               | 1526.85          |
| 10/20/69 | 10.06               | 1528.64          | 07/07/77 | 14.78               | 1523.92          |
| 10/21/69 | 11.28               | 1527.42          | 07/14/77 | 15.10               | 1523.60          |
| 10/22/69 | 12.00               | 1526.70          | 07/25/77 | 16.75               | 1521.95          |
| 10/23/69 | 12.42               | 1526.28          | 08/10/77 | 18.05               | 1520.65          |
| 10/24/69 | 12.71               | 1525.99          | 08/26/77 | 18.63               | 1520.07          |
| 10/25/69 | 13.02               | 1525.68          | 09/14/77 | 17.83               | 1520.87          |
| 10/26/69 | 13.23               | 1525.47          | 10/11/77 | 17.83               | 1520.87          |
| 10/27/69 | 13.42               | 1525.28          | 11/10/77 | 18.47               | 1520.23          |
| 10/28/69 | 13.60               | 1525.10          | 12/15/77 | 18.38               | 1520.32          |
| 10/29/69 | 13.72               | 1524.98          | 03/28/78 | 19.00               | 1519.70          |
| 10/30/69 | 13.97               | 1524.73          | 04/26/78 | 19.08               | 1519.62          |
| 10/31/69 | 14.06               | 1524.64          | 05/24/78 | 20.86               | 1517.84          |
| 11/01/69 | 14.15               | 1524.55          | 06/27/78 | 20.69               | 1518.01          |
| 11/02/69 | 14.28               | 1524.42          | 07/26/78 | 21.60               | 1517.10          |
| 11/03/69 | 14.39               | 1524.31          | 08/29/78 | 21.74               | 1516.96          |
| 11/04/69 | 14.38               | 1524.32          | 09/26/78 | 18.69               | 1520.01          |
| 11/05/69 | 12.97               | 1525.73          | 10/27/78 | 21.25               | 1517.45          |
| 11/06/69 | 12.35               | 1526.35          | 12/04/78 | 21.17               | 1517.53          |
| 11/07/69 | 11.94               | 1526.76          | 01/19/79 | 21.35               | 1517.35          |
| 11/08/69 | 11.75               | 1526.95          | 04/30/79 | 12.64               | 1526.06          |
| 11/09/69 | 11.53               | 1527.17          | 05/29/79 | 7.64                | 1531.06          |
| 11/10/69 | 11.31               | 1527.39          | 06/27/79 | 17.30               | 1521.40          |
| 11/11/69 | 11.22               | 1527.48          | 07/31/79 | 14.25               | 1524.45          |
| 11/12/69 | 11.07               | 1527.63          | 08/28/79 | 21.28               | 1517.42          |
| 11/13/69 | 10.96               | 1527.74          | 09/27/79 | 22.92               | 1515.78          |
| 11/14/69 | 10.90               | 1527.80          | 10/31/79 | 22.38               | 1516.32          |
| 11/17/69 | 10.75               | 1527.95          | 11/29/79 | 23.05               | 1515.65          |
| 11/24/69 | 10.48               | 1528.22          | 12/18/79 | 23.02               | 1515.68          |
| 12/02/69 | 10.39               | 1528.31          | 01/29/80 | 22.99               | 1515.71          |
| 12/03/69 | 11.52               | 1527.18          | 02/28/80 | 22.69               | 1516.01          |
| 12/04/69 | 11.85               | 1526.85          | 03/25/80 | 22.22               | 1516.48          |
| 12/05/69 | 12.10               | 1526.60          | 04/28/80 | 24.08               | 1514.62          |
| 01/27/70 | 9.89                | 1528.81          | 05/27/80 | 25.69               | 1513.01          |
| 03/10/70 | 10.00               | 1528.70          | 06/12/80 | 24.85               | 1513.85          |
| 06/09/70 | 3.18                | 1535.52          |          |                     |                  |
| 07/24/70 | 7.64                | 1531.06          |          |                     |                  |
| 08/27/70 | 9.14                | 1529.56          |          |                     |                  |
| 10/01/70 | 9.59                | 1529.11          |          |                     |                  |
| 12/23/70 | 9.40                | 1529.30          |          |                     |                  |
| 04/15/71 | 8.68                | 1530.02          |          |                     |                  |

154-082-11BCB (continued)  
 Souris Valley-Sundre aquifer

LS Elev (msl,ft)= 1538.70

SI (ft)= 66-69

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 06/19/80 | 25.00               | 1513.70          | 01/03/84 | 29.88               | 1508.82          |
| 06/27/80 | 26.47               | 1512.23          | 01/16/84 | 29.38               | 1509.32          |
| 07/16/80 | 28.21               | 1510.49          | 02/01/84 | 28.88               | 1509.82          |
| 07/18/80 | 27.25               | 1511.45          | 02/21/84 | 28.91               | 1509.79          |
| 07/21/80 | 25.38               | 1513.32          | 03/12/84 | 28.44               | 1510.26          |
| 07/25/80 | 23.85               | 1514.85          | 04/03/84 | 28.11               | 1510.59          |
| 07/29/80 | 22.38               | 1516.32          | 04/18/84 | 27.58               | 1511.12          |
| 08/01/80 | 21.97               | 1516.73          | 05/08/84 | 26.99               | 1511.71          |
| 08/05/80 | 21.11               | 1517.59          | 05/29/84 | 28.30               | 1510.40          |
| 08/28/80 | 23.72               | 1514.98          | 06/15/84 | 28.22               | 1510.48          |
| 09/26/80 | 24.13               | 1514.57          | 06/26/84 | 29.22               | 1509.48          |
| 10/29/80 | 23.10               | 1515.60          | 07/10/84 | 31.27               | 1507.43          |
| 11/25/80 | 23.94               | 1514.76          | 07/27/84 | 34.44               | 1504.26          |
| 12/29/80 | 24.49               | 1514.21          | 08/09/84 | 34.91               | 1503.79          |
|          |                     |                  | 08/16/84 | 35.63               | 1503.07          |
| 01/29/81 | 25.00               | 1513.70          | 08/21/84 | 35.71               | 1502.99          |
| 02/24/81 | 24.97               | 1513.73          | 08/27/84 | 35.10               | 1503.60          |
| 03/26/81 | 24.97               | 1513.73          | 09/07/84 | 33.83               | 1504.87          |
| 04/30/81 | 26.14               | 1512.56          | 09/12/84 | 32.78               | 1505.92          |
| 05/28/81 | 25.99               | 1512.71          | 09/20/84 | 32.27               | 1506.43          |
| 06/29/81 | 25.97               | 1512.73          | 09/27/84 | 31.25               | 1507.45          |
| 07/28/81 | 28.13               | 1510.57          | 10/03/84 | 30.97               | 1507.73          |
| 08/11/81 | 25.66               | 1513.04          | 10/10/84 | 30.55               | 1508.15          |
| 08/18/81 | 27.72               | 1510.98          | 10/23/84 | 28.61               | 1510.09          |
| 08/28/81 | 27.80               | 1510.90          | 11/08/84 | 27.28               | 1511.42          |
| 09/29/81 | 28.55               | 1510.15          | 11/20/84 | 26.41               | 1512.29          |
| 10/28/81 | 28.72               | 1509.98          | 12/13/84 | 25.10               | 1513.60          |
| 11/27/81 | 28.97               | 1509.73          |          |                     |                  |
| 12/30/81 | 29.41               | 1509.29          | 01/09/85 | 26.36               | 1512.34          |
|          |                     |                  | 02/12/85 | 27.61               | 1511.09          |
| 01/28/82 | 29.77               | 1508.93          | 03/06/85 | 27.61               | 1511.09          |
| 02/26/82 | 30.60               | 1508.10          | 03/19/85 | 27.52               | 1511.18          |
| 03/29/82 | 29.49               | 1509.21          | 04/17/85 | 26.88               | 1511.82          |
| 04/05/82 | 28.50               | 1510.20          | 05/02/85 | 26.71               | 1511.99          |
| 04/13/82 | 27.64               | 1511.06          | 05/14/85 | 26.97               | 1511.73          |
| 04/20/82 | 23.77               | 1514.93          | 06/06/85 | 27.97               | 1510.73          |
| 04/30/82 | 18.88               | 1519.82          | 06/20/85 | 29.24               | 1509.46          |
| 05/27/82 | 21.30               | 1517.40          | 07/01/85 | 29.25               | 1509.45          |
| 06/30/82 | 23.38               | 1515.32          | 07/17/85 | 32.22               | 1506.48          |
| 07/28/82 | 26.02               | 1512.68          | 07/29/85 | 33.05               | 1505.65          |
| 08/31/82 | 28.94               | 1509.76          | 08/14/85 | 32.13               | 1506.57          |
| 09/30/82 | 28.10               | 1510.60          | 08/27/85 | 32.02               | 1506.68          |
| 10/29/82 | 26.94               | 1511.76          | 09/11/85 | 31.28               | 1507.42          |
| 11/29/82 | 27.24               | 1511.46          | 09/24/85 | 30.67               | 1508.03          |
| 12/27/82 | 27.25               | 1511.45          | 10/23/85 | 25.63               | 1513.07          |
|          |                     |                  | 11/21/85 | 23.44               | 1515.26          |
| 01/28/83 | 27.61               | 1511.09          | 12/30/85 | 26.16               | 1512.54          |
| 02/28/83 | 27.60               | 1511.10          |          |                     |                  |
| 03/31/83 | 27.66               | 1511.04          | 02/25/86 | 24.99               | 1513.71          |
| 04/29/83 | 22.88               | 1515.82          | 03/26/86 | 26.10               | 1512.60          |
| 05/27/83 | 23.36               | 1515.34          | 05/14/86 | 26.11               | 1512.59          |
| 07/08/83 | 28.17               | 1510.53          | 06/04/86 | 28.89               | 1509.81          |
| 07/28/83 | 30.69               | 1508.01          | 07/01/86 | 30.95               | 1507.75          |
| 08/30/83 | 31.63               | 1507.07          | 08/06/86 | 31.14               | 1507.56          |
| 12/08/83 | 30.50               | 1508.20          | 09/09/86 | 33.46               | 1505.24          |
| 12/14/83 | 30.36               | 1508.34          | 10/09/86 | 31.73               | 1506.97          |
|          |                     |                  | 12/16/86 | 27.79               | 1510.91          |

**154-082-11DAA**  
**Sundre aquifer**

**LS Elev (msl,ft)= 1542.00 SI (ft)= 177-183**

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft)      |
|----------|---------------------|------------------|----------|---------------------|-----------------------|
| 11/14/68 | 13.64               | 1528.36          | 11/01/69 | 16.38               | 1525.62               |
| 11/22/68 | 13.59               | 1528.41          | 11/03/69 | 16.53               | 1525.47               |
| 11/27/68 | 13.64               | 1528.36          | 11/04/69 | 16.05               | 1525.95               |
| 12/11/68 | 13.68               | 1528.32          | 11/05/69 | 15.57               | 1526.43               |
| 12/16/68 | 13.77               | 1528.23          | 11/06/69 | 15.18               | 1526.82               |
| 12/19/68 | 13.84               | 1528.16          | 11/07/69 | 14.89               | 1527.11               |
| 12/20/68 | 14.10               | 1527.90          | 11/08/69 | 14.76               | 1527.24               |
| 12/21/68 | 14.14               | 1527.86          | 11/10/69 | 14.36               | 1527.64               |
|          |                     |                  | 11/12/69 | 14.27               | 1527.73               |
| 01/04/69 | 13.85               | 1528.15          | 11/14/69 | 14.02               | 1527.98               |
| 04/08/69 | 12.57               | 1529.43          | 11/17/69 | 13.89               | 1528.11               |
| 05/07/69 | 5.60                | 1536.40          | 11/25/69 | 13.72               | 1528.28               |
| 05/15/69 | 6.82                | 1535.18          | 12/02/69 | 13.57               | 1528.43               |
| 05/27/69 | 8.25                | 1533.75          | 12/03/69 | 14.01               | 1527.99               |
| 06/11/69 | 10.61               | 1531.39          | 12/04/69 | 14.27               | 1527.73               |
| 07/16/69 | 11.50               | 1530.50          | 12/05/69 | 14.47               | 1527.53               |
| 07/29/69 | 11.39               | 1530.61          |          |                     |                       |
| 08/12/69 | 11.86               | 1530.14          | 01/27/70 | 13.09               | 1528.91               |
| 09/09/69 | 12.67               | 1529.33          | 03/10/70 | 13.23               | 1528.77               |
| 09/25/69 | 12.72               | 1529.28          | 04/06/70 | 13.02               | 1528.98               |
| 10/08/69 | 12.69               | 1529.31          | 06/09/70 | 7.18                | 1534.82               |
| 10/16/69 | 12.78               | 1529.22          | 07/24/70 | 10.77               | 1531.23               |
| 10/19/69 | 13.07               | 1528.93          | 08/27/70 | 12.06               | 1529.94               |
| 10/20/69 | 13.10               | 1528.90          | 10/01/70 | 12.51               | 1529.49               |
| 10/21/69 | 13.78               | 1528.22          |          |                     |                       |
| 10/22/69 | 14.43               | 1527.57          | 04/15/71 | 11.18               | 1530.82               |
| 10/23/69 | 14.72               | 1527.28          | 07/22/71 | 10.72               | 1531.28               |
| 10/24/69 | 15.03               | 1526.97          | 08/27/71 | 11.38               | 1530.62               |
| 10/25/69 | 15.22               | 1526.78          | 12/21/71 | 11.22               | 1530.78               |
| 10/26/69 | 15.56               | 1526.44          |          |                     |                       |
| 10/28/69 | 15.81               | 1526.19          | 10/12/72 | 11.02               | 1530.98               |
| 10/30/69 | 16.05               | 1525.95          |          |                     |                       |
|          |                     |                  |          |                     | <b>WELL DESTROYED</b> |

**154-082-12DAA1**  
**Sundre aquifer**

**LS Elev (msl,ft)= 1645.70 SI (ft)= 265-270**

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 05/15/85 | 131.38              | 1514.32          | 12/30/85 | 130.99              | 1514.71          |
| 06/06/85 | 132.17              | 1513.53          |          |                     |                  |
| 06/20/85 | 132.92              | 1512.78          | 02/25/86 | 130.28              | 1515.42          |
| 07/01/85 | 133.32              | 1512.38          | 03/26/86 | 130.96              | 1514.74          |
| 07/17/85 | 134.88              | 1510.82          | 05/13/86 | 130.89              | 1514.81          |
| 07/30/85 | 135.86              | 1509.84          | 06/04/86 | 132.62              | 1513.08          |
| 08/14/85 | 135.33              | 1510.37          | 07/01/86 | 134.80              | 1510.90          |
| 08/28/85 | 135.44              | 1510.26          | 07/09/86 | 135.41              | 1510.29          |
| 09/11/85 | 135.19              | 1510.51          | 08/06/86 | 135.25              | 1510.45          |
| 09/25/85 | 134.88              | 1510.82          | 09/09/86 | 136.24              | 1509.46          |
| 10/23/85 | 131.30              | 1514.40          | 10/09/86 | 135.63              | 1510.07          |
| 11/25/85 | 129.80              | 1515.90          | 12/16/86 | 132.79              | 1512.91          |

**154-082-12DAA2**  
**Sundre aquifer**

**LS Elev (msl,ft)= 1646.20 SI (ft)= 210-215**

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 06/06/85 | 132.64              | 1513.56          | 02/25/86 | 130.73              | 1515.47          |
| 06/20/85 | 133.41              | 1512.79          | 03/26/86 | 131.44              | 1514.76          |
| 07/01/85 | 133.75              | 1512.45          | 05/13/86 | 131.34              | 1514.86          |
| 07/17/85 | 135.42              | 1510.78          | 06/04/86 | 133.09              | 1513.11          |
| 07/30/85 | 136.36              | 1509.84          | 07/01/86 | 135.27              | 1510.93          |
| 08/14/85 | 135.82              | 1510.38          | 07/09/86 | 135.90              | 1510.30          |
| 08/28/85 | 135.92              | 1510.28          | 08/06/86 | 135.69              | 1510.51          |
| 09/11/85 | 135.69              | 1510.51          | 09/09/86 | 136.72              | 1509.48          |
| 09/25/85 | 135.36              | 1510.84          | 10/09/86 | 136.12              | 1510.08          |
| 10/23/85 | 131.77              | 1514.43          | 12/16/86 | 133.28              | 1512.92          |
| 11/21/85 | 130.27              | 1515.93          |          |                     |                  |
| 12/30/85 | 131.47              | 1514.73          |          |                     |                  |

**154-082-12DAA3**  
**Sundre aquifer**

**LS Elev (msl,ft)= 1646.50 SI (ft)= 157-162**

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 06/06/85 | 78.13               | 1568.37          | 02/25/86 | 78.35               | 1568.15          |
| 06/20/85 | 77.91               | 1568.59          | 03/26/86 | 78.84               | 1567.66          |
| 07/01/85 | 78.25               | 1568.25          | 05/13/86 | 78.39               | 1568.11          |
| 07/17/85 | 77.92               | 1568.58          | 06/04/86 | 78.50               | 1568.00          |
| 07/30/85 | 77.27               | 1569.23          | 07/01/86 | 78.31               | 1568.19          |
| 08/14/85 | 78.11               | 1568.39          | 07/09/86 | 78.22               | 1568.28          |
| 08/28/85 | 78.33               | 1568.17          | 08/06/86 | 78.15               | 1568.35          |
| 09/11/85 | 77.88               | 1568.62          | 09/09/86 | 77.89               | 1568.61          |
| 09/25/85 | 78.27               | 1568.23          | 10/09/86 | 78.45               | 1568.05          |
| 10/23/85 | 77.99               | 1568.51          | 12/16/86 | 78.36               | 1568.14          |
| 11/21/85 | 78.28               | 1568.22          |          |                     |                  |
| 12/30/85 | 78.05               | 1568.45          |          |                     |                  |

**154-082-12DAA4**  
**Till**

**LS Elev (msl,ft)= 1646.80 SI (ft)= 80-85**

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 05/24/85 | 49.10               | 1597.70          | 12/30/85 | 45.08               | 1601.72          |
| 06/06/85 | 46.13               | 1600.67          | 02/25/86 | 45.64               | 1601.16          |
| 06/20/85 | 44.86               | 1601.94          | 03/26/86 | 45.98               | 1600.82          |
| 07/01/85 | 45.97               | 1600.83          | 05/13/86 | 45.79               | 1601.01          |
| 07/17/85 | 44.89               | 1601.91          | 06/04/86 | 45.67               | 1601.13          |
| 07/30/85 | 44.75               | 1602.05          | 07/01/86 | 45.25               | 1601.55          |
| 08/14/85 | 44.72               | 1602.08          | 07/09/86 | 45.18               | 1601.62          |
| 08/28/85 | 44.86               | 1601.94          | 08/06/86 | 45.08               | 1601.72          |
| 09/11/85 | 45.14               | 1601.66          | 09/09/86 | 44.99               | 1601.81          |
| 09/25/85 | 44.92               | 1601.88          | 10/09/86 | 45.10               | 1601.70          |
| 10/23/85 | 44.91               | 1601.89          | 12/16/86 | 45.39               | 1601.41          |
| 11/21/85 | 45.25               | 1601.55          |          |                     |                  |

154-082-24ABA

Souris Valley aquifer

well not surveyed

SI (ft) = 30-32

| Date     | Depth to Water (ft) | Date     | Depth to Water (ft) | Date     | Depth to Water (ft) |
|----------|---------------------|----------|---------------------|----------|---------------------|
| 11/27/68 | 11.56               | 11/13/69 | 9.60                | 06/26/84 | 11.97               |
| 12/07/68 | 11.68               | 11/17/69 | 9.60                | 11/08/84 | 19.72               |
| 12/11/68 | 11.60               | 11/24/69 | 9.60                | 11/20/84 | 13.64               |
| 12/16/68 | 11.63               | 12/04/69 | 9.63                | 12/13/84 | 13.67               |
| 12/20/68 | 11.65               |          |                     |          |                     |
| 12/21/68 | 11.64               | 01/27/70 | 9.38                | 01/09/85 | 13.68               |
| 12/27/68 | 11.63               | 03/10/70 | 9.96                | 02/12/85 | 13.75               |
|          |                     | 04/06/70 | 9.52                | 03/06/85 | 12.97               |
| 01/04/69 | 11.59               |          |                     | 03/19/85 | 12.93               |
| 06/11/69 | 5.39                | 04/15/71 | 8.78                | 04/16/85 | 12.06               |
| 06/27/69 | 5.92                | 07/22/71 | 9.06                | 05/02/85 | 12.02               |
| 07/30/69 | 5.97                | 08/27/71 | 10.10               | 05/14/85 | 12.06               |
| 08/13/69 | 7.30                | 12/21/71 | 10.10               | 06/06/85 | 12.60               |
| 09/12/69 | 8.47                |          |                     | 07/30/85 | 13.39               |
| 10/08/69 | 8.39                | 10/12/72 | 9.67                | 08/14/85 | 13.51               |
| 10/20/69 | 9.03                |          |                     | 08/28/85 | 13.50               |
| 10/21/69 | 9.02                | 06/07/73 | 9.94                | 09/11/85 | 13.51               |
| 10/22/69 | 9.22                | 09/28/73 | 11.43               | 09/25/85 | 13.68               |
| 10/23/69 | 9.14                |          |                     | 10/23/85 | 13.38               |
| 10/24/69 | 9.68                | 07/01/74 | 5.53                | 11/21/85 | 13.39               |
| 10/25/69 | 9.22                |          |                     | 12/30/85 | 13.39               |
| 10/26/69 | 9.30                | 08/13/75 | 6.35                |          |                     |
| 10/27/69 | 9.30                |          |                     | 02/25/86 | 13.26               |
| 10/28/69 | 9.30                | 11/22/83 | 13.32               | 03/26/86 | 11.87               |
| 10/29/69 | 9.34                | 12/14/83 | 13.30               | 05/13/86 | 11.43               |
| 10/30/69 | 9.40                |          |                     | 06/04/86 | 12.17               |
| 10/31/69 | 9.47                | 01/04/84 | 13.28               | 07/01/86 | 12.77               |
| 11/01/69 | 9.47                | 01/17/84 | 13.42               | 08/06/86 | 12.82               |
| 11/02/69 | 9.56                | 02/02/84 | 13.14               | 09/09/86 | 13.66               |
| 11/03/69 | 9.53                | 02/21/84 | 13.15               | 10/08/86 | 13.70               |
| 11/07/69 | 9.60                | 03/12/84 | 12.93               | 12/16/86 | 13.55               |
| 11/08/69 | 9.61                | 04/03/84 | 12.02               |          |                     |
| 11/09/69 | 9.60                | 04/18/84 | 11.72               |          |                     |
| 11/10/69 | 9.61                | 05/08/84 | 10.77               |          |                     |
| 11/11/69 | 9.63                | 05/29/84 | 11.52               |          |                     |
| 11/12/69 | 9.56                | 06/15/84 | 11.47               |          |                     |

154-082-24ABA2R

Souris River stage, elev of south guardrail of Bell Bridge = 1542.70

| Date     | Depth to Water (ft) | Date     | Depth to Water (ft) | Date     | Depth to Water (ft) |
|----------|---------------------|----------|---------------------|----------|---------------------|
| 04/18/85 | 22.05               | 08/28/85 | 23.00               | 06/04/86 | 23.92               |
| 05/14/85 | 21.83               | 09/25/85 | 23.30               | 07/01/86 | 23.08               |
| 06/06/85 | 22.89               | 10/23/85 | 22.97               | 08/06/86 | 23.49               |
| 06/20/85 | 23.30               | 11/07/85 | 23.89               | 09/09/86 | 23.42               |
| 07/17/85 | 24.11               |          |                     | 10/08/86 | 23.98               |
| 07/30/85 | 23.50               | 03/26/86 | 22.42               |          |                     |
| 08/14/85 | 23.63               | 05/13/86 | 22.36               |          |                     |

154-082-24BAA

Souris Valley Aquifer

well not surveyed

SI (ft) = 25-28

| Date     | Depth to Water (ft) | Date           | Depth to Water (ft) |
|----------|---------------------|----------------|---------------------|
| 07/30/69 | 6.90                | 11/14/69       | 8.61                |
| 08/13/69 | 7.31                | 11/17/69       | 8.73                |
| 09/12/69 | 7.94                | 11/24/69       | 8.81                |
| 10/08/69 | 8.30                | 12/04/69       | 8.86                |
| 10/20/69 | 8.47                |                |                     |
| 10/21/69 | 8.52                | 01/27/70       | 9.31                |
| 10/22/69 | 8.55                | 03/10/70       | 9.67                |
| 10/23/69 | 8.50                | 06/08/70       | 5.72                |
| 10/24/69 | 8.57                | 07/24/70       | 6.89                |
| 10/25/69 | 8.59                | 08/27/70       | 7.72                |
| 10/26/69 | 8.59                | 10/01/70       | 8.27                |
| 10/27/69 | 8.59                | 12/22/70       | 9.10                |
| 10/28/69 | 8.56                |                |                     |
| 10/29/69 | 8.36                | 04/15/71       | 9.38                |
| 10/30/69 | 8.51                | 07/22/71       | 9.77                |
| 10/31/69 | 8.51                | 08/27/71       | 10.27               |
| 11/01/69 | 8.52                | 12/21/71       | 10.46               |
| 11/02/69 | 8.55                |                |                     |
| 11/03/69 | 8.52                | 10/12/72       | 10.27               |
| 11/07/69 | 8.59                |                |                     |
| 11/08/69 | 8.64                | 06/07/73       | 11.23               |
| 11/09/69 | 8.61                | 09/28/73       | 11.89               |
| 11/10/69 | 8.64                |                |                     |
| 11/11/69 | 8.65                | 07/02/74       | 7.00                |
| 11/12/69 | 8.67                |                |                     |
| 11/13/69 | 8.65                | 08/13/75       | 6.15                |
|          |                     | WELL DESTROYED |                     |

155-082-29888

Souris Valley aquifer

LS Elev (msl,ft) = 1544.30

SI (ft) = 90-93

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date                  | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|-----------------------|---------------------|------------------|
| 11/14/68 | 25.58               | 1518.72          | 11/07/69              | 21.89               | 1522.41          |
| 11/27/68 | 25.75               | 1518.55          | 11/08/69              | 21.89               | 1522.41          |
| 12/07/68 | 25.83               | 1518.47          | 11/09/69              | 21.94               | 1522.36          |
| 12/11/68 | 25.74               | 1518.56          | 11/10/69              | 21.89               | 1522.41          |
| 12/16/68 | 25.86               | 1518.44          | 11/11/69              | 21.88               | 1522.42          |
| 12/20/68 | 25.88               | 1518.42          | 11/12/69              | 21.82               | 1522.48          |
|          |                     |                  | 11/13/69              | 21.88               | 1522.42          |
| 01/04/69 | 25.80               | 1518.50          | 11/17/69              | 21.74               | 1522.56          |
| 03/05/69 | 26.05               | 1518.25          | 11/25/69              | 21.69               | 1522.61          |
| 04/09/69 | 25.17               | 1519.13          | 12/04/69              | 21.60               | 1522.70          |
| 05/27/69 | 20.46               | 1523.84          |                       |                     |                  |
| 06/11/69 | 20.80               | 1523.50          | 03/10/70              | 21.03               | 1523.27          |
| 06/27/69 | 20.78               | 1523.52          | 06/09/70              | 18.83               | 1525.47          |
| 07/16/69 | 20.88               | 1523.42          | 07/24/70              | 19.13               | 1525.17          |
| 07/30/69 | 21.13               | 1523.17          | 09/03/70              | 21.25               | 1523.05          |
| 08/12/69 | 22.00               | 1522.30          | 10/01/70              | 20.58               | 1523.72          |
| 09/11/69 | 22.42               | 1521.88          | 12/23/70              | 19.66               | 1524.64          |
| 10/22/69 | 21.63               | 1522.67          |                       |                     |                  |
| 10/25/69 | 21.64               | 1522.66          | 04/15/71              | 19.30               | 1525.00          |
| 10/26/69 | 21.67               | 1522.63          | 07/22/71              | 19.63               | 1524.67          |
| 10/30/69 | 21.72               | 1522.58          | 08/27/71              | 20.22               | 1524.08          |
| 11/01/69 | 21.78               | 1522.52          | 12/21/71              | 18.63               | 1525.67          |
| 11/02/69 | 21.85               | 1522.45          |                       |                     |                  |
| 11/03/69 | 21.83               | 1522.47          | 10/12/72              | 21.05               | 1523.25          |
| 11/04/69 | 21.89               | 1522.41          |                       |                     |                  |
| 11/05/69 | 21.89               | 1522.41          | 06/07/73              | 20.66               | 1523.64          |
| 11/06/69 | 21.89               | 1522.41          | COULD NOT LOCATE 1984 |                     |                  |

155-082-2988C

Souris Valley Aquifer

LS Elev (msl,ft) = 1543.30

SI (ft) = 80-100

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/14/68 | 21.55               |                  | 11/10/69 | 18.52               |                  |
| 11/27/68 | 21.72               |                  | 11/11/69 | 18.47               |                  |
| 12/07/68 | 21.82               |                  | 11/12/69 | 17.91               |                  |
| 12/11/68 | 21.72               |                  | 11/13/69 | 17.92               |                  |
| 12/16/68 | 21.86               |                  | 11/17/69 | 18.41               |                  |
|          |                     |                  | 11/25/69 | 18.33               |                  |
| 01/04/69 | 21.78               |                  | 12/04/69 | 18.19               |                  |
| 03/05/69 | 22.00               |                  |          |                     |                  |
| 04/09/69 | 21.24               |                  | 03/10/70 | 17.11               |                  |
| 09/11/69 | 19.02               |                  |          |                     |                  |
| 10/22/69 | 17.69               |                  | 04/15/71 | 15.31               |                  |
| 10/25/69 | 17.75               |                  | 07/22/71 | 15.67               |                  |
| 10/30/69 | 17.85               |                  | 08/27/71 | 16.19               |                  |
| 11/01/69 | 18.00               |                  |          |                     |                  |
| 11/02/69 | 17.97               |                  | 10/12/72 | 17.11               |                  |
| 11/03/69 | 17.97               |                  |          |                     |                  |
| 11/04/69 | 17.97               |                  | 06/07/73 | 16.69               |                  |
| 11/05/69 | 18.02               |                  | 09/28/73 | 20.78               |                  |
| 11/06/69 | 17.99               |                  |          |                     |                  |
| 11/07/69 | 18.60               |                  | 07/02/74 | 17.47               |                  |
| 11/08/69 | 18.58               |                  |          |                     |                  |
| 11/09/69 | 18.55               |                  | 08/14/75 | 15.10               |                  |
|          |                     |                  | PLUGGED  |                     |                  |

**155-082-29BCB**  
**Souris Valley aquifer**

**LS Elev (msl,ft)= 1544.90 SI (ft)= 100-103**

| Date     | Depth to Water (ft) | ML Elev (msl,ft) | Date     | Depth to Water (ft) | ML Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/14/68 | 25.61               | 1519.29          | 08/14/75 | 18.63               | 1526.27          |
| 11/27/68 | 25.77               | 1519.13          | 01/16/84 | 26.77               | 1518.13          |
| 12/07/68 | 25.85               | 1519.05          | 02/01/84 | 26.97               | 1517.93          |
| 12/11/68 | 25.75               | 1519.15          | 02/21/84 | 26.86               | 1518.04          |
| 12/16/68 | 25.94               | 1518.96          | 03/12/84 | 26.83               | 1518.07          |
| 12/19/68 | 25.89               | 1519.01          | 04/03/84 | 27.08               | 1517.82          |
| 12/20/68 | 25.94               | 1518.96          | 04/18/84 | 27.69               | 1517.21          |
| 12/27/68 | 25.83               | 1519.07          | 05/08/84 | 26.85               | 1518.05          |
| 01/04/69 | 25.85               | 1519.05          | 05/29/84 | 28.75               | 1516.15          |
| 05/27/69 | 20.72               | 1524.18          | 06/15/84 | 28.77               | 1516.13          |
| 06/11/69 | 21.08               | 1523.82          | 06/26/84 | 28.57               | 1516.33          |
| 06/27/69 | 21.13               | 1523.77          | 07/10/84 | 30.75               | 1514.15          |
| 07/16/69 | 21.19               | 1523.71          | 07/27/84 | 32.27               | 1512.63          |
| 07/30/69 | 21.39               | 1523.51          | 08/09/84 | 33.28               | 1511.62          |
| 08/12/69 | 22.25               | 1522.65          | 08/16/84 | 33.30               | 1511.60          |
| 09/11/69 | 22.58               | 1522.32          | 08/22/84 | 33.33               | 1511.57          |
| 10/20/69 | 21.85               | 1523.05          | 08/27/84 | 32.77               | 1512.13          |
| 10/21/69 | 21.85               | 1523.05          | 09/07/84 | 32.86               | 1512.04          |
| 10/22/69 | 21.88               | 1523.02          | 09/11/84 | 30.94               | 1513.96          |
| 10/24/69 | 21.91               | 1522.99          | 09/20/84 | 30.42               | 1514.48          |
| 10/25/69 | 21.97               | 1522.93          | 09/27/84 | 29.02               | 1515.88          |
| 10/26/69 | 22.00               | 1522.90          | 10/03/84 | 28.96               | 1515.94          |
| 10/30/69 | 22.08               | 1522.82          | 10/10/84 | 28.99               | 1515.91          |
| 11/01/69 | 22.16               | 1522.74          | 10/23/84 | 28.13               | 1516.77          |
| 11/02/69 | 22.19               | 1522.71          | 11/08/84 | 28.08               | 1516.82          |
| 11/03/69 | 22.19               | 1522.71          | 11/20/84 | 26.88               | 1518.02          |
| 11/04/69 | 22.24               | 1522.66          | 12/13/84 | 26.75               | 1518.15          |
| 11/05/69 | 22.24               | 1522.66          | 01/09/85 | 27.05               | 1517.85          |
| 11/06/69 | 22.25               | 1522.65          | 02/12/85 | 26.82               | 1518.08          |
| 11/07/69 | 22.25               | 1522.65          | 03/06/85 | 27.36               | 1517.54          |
| 11/08/69 | 22.27               | 1522.63          | 03/19/85 | 27.38               | 1517.52          |
| 11/09/69 | 22.27               | 1522.63          | 04/16/85 | 27.25               | 1517.65          |
| 11/10/69 | 22.21               | 1522.69          | 05/02/85 | 27.13               | 1517.77          |
| 11/11/69 | 22.19               | 1522.71          | 05/14/85 | 28.97               | 1515.93          |
| 11/12/69 | 22.11               | 1522.79          | 06/06/85 | 29.00               | 1515.90          |
| 11/13/69 | 22.11               | 1522.79          | 06/20/85 | 30.02               | 1514.88          |
| 11/17/69 | 22.02               | 1522.88          | 07/01/85 | 30.83               | 1514.07          |
| 11/25/69 | 21.97               | 1522.93          | 07/17/85 | 31.33               | 1513.57          |
| 12/04/69 | 21.86               | 1523.04          | 07/29/85 | 31.50               | 1513.40          |
| 06/09/70 | 18.94               | 1525.96          | 08/14/85 | 31.83               | 1513.07          |
| 07/24/70 | 19.25               | 1525.65          | 08/27/85 | 31.85               | 1513.05          |
| 09/03/70 | 21.35               | 1523.55          | 09/12/85 | 31.91               | 1512.99          |
| 10/01/70 | 20.72               | 1524.18          | 09/23/85 | 31.88               | 1513.02          |
| 12/23/70 | 20.77               | 1524.13          | 10/22/85 | 26.94               | 1517.96          |
| 04/15/71 | 19.41               | 1525.49          | 11/21/85 | 27.08               | 1517.82          |
| 07/22/71 | 19.67               | 1525.23          | 02/25/86 | 27.14               | 1517.76          |
| 08/27/71 | 20.19               | 1524.71          | 03/26/86 | 27.12               | 1517.78          |
| 12/21/71 | 18.72               | 1526.18          | 05/13/86 | 25.94               | 1518.96          |
| 10/12/72 | 21.11               | 1523.79          | 06/03/86 | 29.45               | 1515.45          |
| 07/02/74 | 20.94               | 1523.96          | 07/01/86 | 30.16               | 1514.74          |
| 06/07/73 | 20.74               | 1524.16          | 08/06/86 | 30.31               | 1514.59          |
| 09/28/73 | 15.63               | 1529.27          | 09/09/86 | 30.29               | 1514.61          |
|          |                     |                  | 10/08/86 | 27.85               | 1517.05          |
|          |                     |                  | 12/16/86 | 27.10               | 1517.80          |

155-082-29CBC

Souris Valley aquifer

LS Elev (msl,ft)= 1558.20

SI (ft)= 48-53

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/14/68 | 17.64               | 1540.56          | 11/10/69 | 15.22               | 1542.98          |
| 11/27/68 | 17.77               | 1540.43          | 11/11/69 | 15.21               | 1542.99          |
| 12/07/68 | 17.94               | 1540.26          | 11/12/69 | 15.18               | 1543.02          |
| 12/11/68 | 17.92               | 1540.28          | 11/13/69 | 15.21               | 1542.99          |
| 12/16/68 | 18.00               | 1540.20          | 11/17/69 | 15.31               | 1542.89          |
| 12/19/68 | 18.05               | 1540.15          | 11/25/69 | 15.39               | 1542.81          |
| 12/20/68 | 18.07               | 1540.13          | 12/04/69 | 15.46               | 1542.74          |
| 12/27/68 | 18.11               | 1540.09          | 03/10/70 | 16.32               | 1541.88          |
| 01/04/69 | 18.19               | 1540.01          | 06/09/70 | 10.53               | 1547.67          |
| 03/05/69 | 18.85               | 1539.35          | 07/24/70 | 12.02               | 1546.18          |
| 03/12/69 | 18.91               | 1539.29          | 09/03/70 | 10.97               | 1547.23          |
| 04/09/69 | 16.80               | 1541.40          | 10/01/70 | 11.60               | 1546.60          |
| 05/07/69 | 14.11               | 1544.09          | 12/23/70 | 13.46               | 1544.74          |
| 05/27/69 | 13.57               | 1544.63          | 04/15/71 | 13.18               | 1545.02          |
| 06/11/69 | 13.67               | 1544.53          | 07/22/71 | 12.26               | 1545.94          |
| 06/27/69 | 13.59               | 1544.61          | 08/27/71 | 13.31               | 1544.89          |
| 07/16/69 | 12.71               | 1545.49          | 12/21/71 | 12.23               | 1545.97          |
| 07/30/69 | 12.86               | 1545.34          | 10/12/72 | 13.69               | 1544.51          |
| 08/12/69 | 13.25               | 1544.95          | 06/07/73 | 14.43               | 1543.77          |
| 09/11/69 | 14.25               | 1543.95          | 07/02/74 | 11.19               | 1547.01          |
| 10/22/69 | 14.97               | 1543.23          | 08/14/75 | 10.90               | 1547.30          |
| 10/25/69 | 15.02               | 1543.18          | 01/16/84 | 13.56               | 1544.64          |
| 11/01/69 | 15.07               | 1543.13          | 02/01/84 | 13.68               | 1544.52          |
| 11/02/69 | 15.10               | 1543.10          | 02/21/84 | 13.56               | 1544.64          |
| 11/03/69 | 15.09               | 1543.11          | PLUGGED  |                     |                  |
| 11/04/69 | 15.10               | 1543.10          |          |                     |                  |
| 11/05/69 | 15.07               | 1543.13          |          |                     |                  |
| 11/06/69 | 15.14               | 1543.06          |          |                     |                  |
| 11/07/69 | 15.14               | 1543.06          |          |                     |                  |
| 11/08/69 | 15.17               | 1543.03          |          |                     |                  |
| 11/09/69 | 15.15               | 1543.05          |          |                     |                  |

**155-082-30CCD**  
**Sundre aquifer**

**LS Elev (msl,ft)= 1716.00 SI (ft)= 294-303**

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/17/83 | 200.47              | 1515.53          | 01/09/85 | 202.52              | 1513.48          |
| 12/08/83 | 201.08              | 1514.92          | 02/12/85 | 202.47              | 1513.53          |
| 12/13/83 | 200.91              | 1515.09          | 03/06/85 | 202.08              | 1513.92          |
|          |                     |                  | 03/19/85 | 202.25              | 1513.75          |
| 01/03/84 | 200.78              | 1515.22          | 04/10/85 | 202.38              | 1513.62          |
| 01/16/84 | 201.21              | 1514.79          | 05/02/85 | 202.47              | 1513.53          |
| 02/01/84 | 200.69              | 1515.31          | 05/14/85 | 202.35              | 1513.65          |
| 02/21/84 | 200.83              | 1515.17          | 06/06/85 | 202.50              | 1513.50          |
| 03/12/84 | 201.21              | 1514.79          | 06/20/85 | 202.61              | 1513.39          |
| 04/03/84 | 201.55              | 1514.45          | 07/01/85 | 202.50              | 1513.50          |
| 04/18/84 | 201.38              | 1514.62          | 07/17/85 | 202.63              | 1513.37          |
| 05/08/84 | 201.52              | 1514.48          | 07/29/85 | 202.10              | 1513.90          |
| 05/29/84 | 201.72              | 1514.28          | 08/14/85 | 201.75              | 1514.25          |
| 06/15/84 | 201.58              | 1514.42          | 08/27/85 | 201.69              | 1514.31          |
| 06/26/84 | 201.52              | 1514.48          | 09/12/85 | 201.91              | 1514.09          |
| 07/10/84 | 201.50              | 1514.50          | 09/23/85 | 201.80              | 1514.20          |
| 07/27/84 | 201.92              | 1514.08          | 10/22/85 | 202.11              | 1513.89          |
| 08/09/84 | 201.82              | 1514.18          | 11/21/85 | 202.99              | 1513.01          |
| 08/16/84 | 201.83              | 1514.17          |          |                     |                  |
| 08/22/84 | 201.88              | 1514.12          | 02/25/86 | 202.48              | 1513.52          |
| 08/27/84 | 201.72              | 1514.28          | 03/26/86 | 203.11              | 1512.89          |
| 09/07/84 | 201.78              | 1514.22          | 05/13/86 | 202.25              | 1513.75          |
| 09/11/84 | 201.80              | 1514.20          | 06/03/86 | 202.69              | 1513.31          |
| 09/20/84 | 202.11              | 1513.89          | 07/01/86 | 202.99              | 1513.01          |
| 09/28/84 | 202.82              | 1513.18          | 08/06/86 | 202.94              | 1513.06          |
| 10/10/84 | 202.80              | 1513.20          | 09/12/86 | 203.23              | 1512.77          |
| 11/20/84 | 202.33              | 1513.67          | 10/08/86 | 203.62              | 1512.38          |
| 12/13/84 | 202.44              | 1513.56          | 12/16/86 | 203.35              | 1512.65          |

**155-082-31CAD**  
**Sundre aquifer**

**LS Elev (msl,ft)= 1713.20 SI (ft)= 273-282**

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 10/10/84 | 209.86              | 1503.34          | 07/29/85 | 205.88              | 1507.32          |
| 11/16/84 | 203.64              | 1509.56          | 08/14/85 | 206.00              | 1507.20          |
| 11/20/84 | 203.69              | 1509.51          | 08/27/85 | 205.86              | 1507.34          |
| 12/13/84 | 203.41              | 1509.79          | 10/22/85 | 202.94              | 1510.26          |
|          |                     |                  |          |                     |                  |
| 01/09/85 | 202.88              | 1510.32          | 03/27/86 | 202.51              | 1510.69          |
| 03/06/85 | 202.96              | 1510.24          | 05/13/86 | 202.55              | 1510.65          |
| 03/19/85 | 202.91              | 1510.29          | 06/03/86 | 203.05              | 1510.15          |
| 04/16/85 | 203.02              | 1510.18          | 07/01/86 | 204.77              | 1508.43          |
| 05/02/85 | 203.02              | 1510.18          | 08/06/86 | 204.14              | 1509.06          |
| 06/06/85 | 204.05              | 1509.15          | 09/12/86 | 206.20              | 1507.00          |
| 06/20/85 | 204.44              | 1508.76          | 10/08/86 | 207.25              | 1505.95          |
| 07/01/85 | 204.44              | 1508.76          | 12/16/86 | 204.09              | 1509.11          |
| 07/17/85 | 204.50              | 1508.70          |          |                     |                  |

**155-082-31DCA**  
**Sundre aquifer**

**LS Elev (msl,ft)= 1711.00 SI (ft)= 315-321**

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/17/83 | 202.72              | 1508.28          | 01/09/85 | 201.02              | 1509.98          |
| 12/08/83 | 203.13              | 1507.87          | 03/06/85 | 201.72              | 1509.28          |
| 12/13/83 | 203.11              | 1507.89          | 03/19/85 | 201.85              | 1509.15          |
| 01/04/84 | 202.82              | 1508.18          | 04/16/85 | 201.36              | 1509.64          |
| 01/16/84 | 203.10              | 1507.90          | 05/02/85 | 201.41              | 1509.59          |
| 02/01/84 | 202.11              | 1508.89          | 06/06/85 | 202.08              | 1508.92          |
| 02/21/84 | 201.99              | 1509.01          | 06/20/85 | 203.19              | 1507.81          |
| 05/29/84 | 201.97              | 1509.03          | 07/01/85 | 203.17              | 1507.83          |
| 06/15/84 | 201.96              | 1509.04          | 07/29/85 | 205.19              | 1505.81          |
| 07/10/84 | 203.83              | 1507.17          | 08/14/85 | 205.30              | 1505.70          |
| 07/27/84 | 206.22              | 1504.78          | 08/27/85 | 205.38              | 1505.62          |
| 08/09/84 | 206.72              | 1504.28          | 10/22/85 | 200.36              | 1510.64          |
| 08/16/84 | 207.44              | 1503.56          | 03/26/86 | 200.76              | 1510.24          |
| 08/22/84 | 207.27              | 1503.73          | 05/13/86 | 200.39              | 1510.61          |
| 08/27/84 | 206.86              | 1504.14          | 06/03/86 | 202.28              | 1508.72          |
| 09/07/84 | 206.80              | 1504.20          | 07/01/86 | 204.70              | 1506.30          |
| 09/11/84 | 205.60              | 1505.40          | 08/06/86 | 203.95              | 1507.05          |
| 09/20/84 | 205.75              | 1505.25          | 09/10/86 | 206.12              | 1504.88          |
| 09/28/84 | 204.63              | 1506.37          | 10/08/86 | 205.28              | 1505.72          |
| 10/10/84 | 204.72              | 1506.28          | 12/16/86 | 202.15              | 1508.85          |
| 11/20/84 | 201.22              | 1509.78          |          |                     |                  |
| 12/13/84 | 199.97              | 1511.03          |          |                     |                  |

**155-082-31DDA**  
**First Larson Coulee (Shallow sand)**

**LS Elev (msl,ft)= 1583.70 SI (ft)= 43-48**

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 12/08/83 | 7.21                | 1576.49          | 01/09/85 | 7.43                | 1576.27          |
| 12/14/83 | 7.21                | 1576.49          | 02/12/85 | 7.60                | 1576.10          |
| 01/03/84 | 7.22                | 1576.48          | 03/06/85 | 6.72                | 1576.98          |
| 01/16/84 | 7.31                | 1576.39          | 03/19/85 | 6.73                | 1576.97          |
| 02/01/84 | 7.27                | 1576.43          | 04/16/85 | 6.42                | 1577.28          |
| 02/21/84 | 7.18                | 1576.52          | 05/02/85 | 6.50                | 1577.20          |
| 03/12/84 | 6.81                | 1576.89          | 05/14/85 | 6.31                | 1577.39          |
| 04/03/84 | 6.51                | 1577.19          | 06/06/85 | 6.31                | 1577.39          |
| 04/18/84 | 6.07                | 1577.63          | 06/20/85 | 6.35                | 1577.35          |
| 05/08/84 | 5.32                | 1578.38          | 07/01/85 | 6.59                | 1577.11          |
| 05/29/84 | 6.09                | 1577.61          | 07/17/85 | 7.02                | 1576.68          |
| 06/15/84 | 6.05                | 1577.65          | 07/29/85 | 7.21                | 1576.49          |
| 06/26/84 | 6.35                | 1577.35          | 08/14/85 | 7.56                | 1576.14          |
| 07/10/84 | 6.59                | 1577.11          | 08/27/85 | 7.68                | 1576.02          |
| 07/27/84 | 6.97                | 1576.73          | 09/12/85 | 7.72                | 1575.98          |
| 08/09/84 | 7.02                | 1576.68          | 09/23/85 | 8.05                | 1575.65          |
| 08/16/84 | 7.05                | 1576.65          | 10/22/85 | 6.82                | 1576.88          |
| 08/22/84 | 7.09                | 1576.61          | 11/21/85 | 6.97                | 1576.73          |
| 08/27/84 | 7.48                | 1576.22          | 12/30/85 | 6.60                | 1577.10          |
| 09/07/84 | 7.59                | 1576.11          | 02/25/86 | 6.67                | 1577.03          |
| 09/12/84 | 7.71                | 1575.99          | 03/26/86 | 6.40                | 1577.30          |
| 09/20/84 | 7.77                | 1575.93          | 05/13/86 | 6.16                | 1577.54          |
| 09/28/84 | 7.81                | 1575.89          | 06/03/86 | 6.59                | 1577.11          |
| 10/04/84 | 7.85                | 1575.85          | 07/01/86 | 6.95                | 1576.75          |
| 10/10/84 | 7.86                | 1575.84          | 08/06/86 | 7.01                | 1576.69          |
| 10/23/84 | 7.30                | 1576.40          | 09/09/86 | 7.60                | 1576.10          |
| 11/08/84 | 7.25                | 1576.45          | 10/08/86 | 7.35                | 1576.35          |
| 11/20/84 | 7.32                | 1576.38          | 12/16/86 | 7.15                | 1576.55          |
| 12/13/84 | 7.31                | 1576.39          |          |                     |                  |

155-082-33CCD

Souris Valley aquifer

LS Elev (msl,ft)= 1550.60

SI (ft)= 46-49

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/14/68 | 17.88               | 1532.72          | 04/06/70 | 16.02               | 1534.58          |
| 11/22/68 | 17.91               | 1532.69          | 06/09/70 | 12.26               | 1538.34          |
| 11/27/68 | 17.89               | 1532.71          | 07/24/70 | 12.89               | 1537.71          |
| 12/07/68 | 17.99               | 1532.61          | 08/27/70 | 13.01               | 1537.59          |
| 12/11/68 | 17.88               | 1532.72          | 10/01/70 | 13.44               | 1537.16          |
| 12/16/68 | 17.94               | 1532.66          | 12/22/70 | 14.15               | 1536.45          |
| 12/17/68 | 17.97               | 1532.63          |          |                     |                  |
| 12/19/68 | 17.97               | 1532.63          | 04/16/71 | 13.82               | 1536.78          |
| 12/20/68 | 18.00               | 1532.60          | 07/22/71 | 13.56               | 1537.04          |
| 12/21/68 | 18.00               | 1532.60          | 08/26/71 | 13.97               | 1536.63          |
| 12/27/68 | 18.00               | 1532.60          | 12/21/71 | 13.68               | 1536.92          |
| 01/04/69 | 18.00               | 1532.60          | 10/12/72 | 13.90               | 1536.70          |
| 02/06/69 | 18.16               | 1532.44          |          |                     |                  |
| 03/05/69 | 18.25               | 1532.35          | 06/07/73 | 14.22               | 1536.38          |
| 03/12/69 | 18.28               | 1532.32          | 09/28/73 | 14.35               | 1536.25          |
| 04/08/69 | 17.50               | 1533.10          |          |                     |                  |
| 05/07/69 | 14.48               | 1536.12          | 07/01/74 | 12.14               | 1538.46          |
| 05/15/69 | 14.35               | 1536.25          | 10/13/74 | 15.10               | 1535.50          |
| 05/27/69 | 14.39               | 1536.21          |          |                     |                  |
| 06/11/69 | 14.64               | 1535.96          | 08/13/75 | 11.00               | 1539.60          |
| 06/25/69 | 14.72               | 1535.88          |          |                     |                  |
| 07/16/69 | 14.27               | 1536.33          | 03/19/76 | 12.56               | 1538.04          |
| 07/29/69 | 14.43               | 1536.17          | 06/04/76 | 7.22                | 1543.38          |
| 08/12/69 | 14.53               | 1536.07          |          |                     |                  |
| 09/09/69 | 15.03               | 1535.57          | 02/08/77 | 13.10               | 1537.50          |
| 09/26/69 | 15.14               | 1535.46          | 03/15/77 | 13.53               | 1537.07          |
| 10/08/69 | 15.22               | 1535.38          | 05/06/77 | 13.38               | 1537.22          |
| 10/16/69 | 15.31               | 1535.29          | 06/03/77 | 13.42               | 1537.18          |
| 10/19/69 | 15.32               | 1535.28          | 06/30/77 | 13.50               | 1537.10          |
| 10/20/69 | 15.35               | 1535.25          | 07/14/77 | 14.22               | 1536.38          |
| 10/21/69 | 15.39               | 1535.21          | 07/28/77 | 14.72               | 1535.88          |
| 10/22/69 | 15.50               | 1535.10          | 08/26/77 | 15.42               | 1535.18          |
| 10/23/69 | 15.47               | 1535.13          | 09/14/77 | 15.68               | 1534.92          |
| 10/24/69 | 15.53               | 1535.07          | 10/11/77 | 15.85               | 1534.75          |
| 10/25/69 | 15.61               | 1534.99          | 11/10/77 | 16.36               | 1534.24          |
| 10/26/69 | 15.65               | 1534.95          | 12/15/77 | 16.82               | 1533.78          |
| 10/27/69 | 15.65               | 1534.95          |          |                     |                  |
| 10/28/69 | 15.64               | 1534.96          | 01/24/78 | 17.41               | 1533.19          |
| 10/29/69 | 15.67               | 1534.93          | 02/22/78 | 17.96               | 1532.64          |
| 10/30/69 | 15.72               | 1534.88          | 03/28/78 | 17.49               | 1533.11          |
| 10/31/69 | 15.72               | 1534.88          | 04/26/78 | 17.38               | 1533.22          |
| 11/01/69 | 15.77               | 1534.83          | 05/28/78 | 17.69               | 1532.91          |
| 11/02/69 | 15.81               | 1534.79          | 06/27/78 | 18.05               | 1532.55          |
| 11/03/69 | 15.77               | 1534.83          | 07/26/78 | 18.24               | 1532.36          |
| 11/04/69 | 15.78               | 1534.82          | 08/29/78 | 18.91               | 1531.69          |
| 11/05/69 | 15.73               | 1534.87          | 09/26/78 | 18.66               | 1531.94          |
| 11/06/69 | 15.77               | 1534.83          | 10/27/78 | 19.30               | 1531.30          |
| 11/07/69 | 15.73               | 1534.87          | 12/04/78 | 19.63               | 1530.97          |
| 11/08/69 | 15.77               | 1534.83          |          |                     |                  |
| 11/09/69 | 15.72               | 1534.88          | 01/19/79 | 20.00               | 1530.60          |
| 11/10/69 | 15.68               | 1534.92          | 02/28/79 | 20.36               | 1530.24          |
| 11/11/69 | 15.71               | 1534.89          | 03/28/79 | 20.36               | 1530.24          |
| 11/12/69 | 15.69               | 1534.91          | 04/30/79 | 17.00               | 1533.60          |
| 11/13/69 | 15.71               | 1534.89          | 05/30/79 | 15.48               | 1535.12          |
| 11/17/69 | 15.77               | 1534.83          | 06/27/79 | 16.33               | 1534.27          |
| 11/24/69 | 15.75               | 1534.85          | 07/31/79 | 16.27               | 1534.33          |
| 12/02/69 | 15.80               | 1534.80          | 08/28/79 | 17.61               | 1532.99          |
| 12/03/69 | 15.82               | 1534.78          | 09/27/79 | 18.52               | 1532.08          |
| 12/04/69 | 15.80               | 1534.80          | 10/31/79 | 18.97               | 1531.63          |
| 12/05/69 | 15.80               | 1534.80          | 11/29/79 | 19.41               | 1531.19          |
| 01/27/70 | 16.00               | 1534.60          | 12/18/79 | 19.63               | 1530.97          |
| 03/10/70 | 16.30               | 1534.30          | 01/20/80 | 20.27               | 1530.33          |

155-082-33CCD (continued)  
 Souris Valley aquifer

LS Elev (msl,ft)= 1550.60

SI (ft)= 46-49

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 02/27/80 | 20.55               | 1530.05          | 07/28/83 | 26.22               | 1524.38          |
| 04/25/80 | 20.89               | 1529.71          | 08/30/83 | 25.03               | 1525.57          |
| 05/27/80 | 21.80               | 1528.80          |          |                     |                  |
| 06/12/80 | 21.75               | 1528.85          | 01/16/84 | 26.94               | 1523.66          |
| 06/19/80 | 21.78               | 1528.82          | 02/01/84 | 26.00               | 1524.60          |
| 06/27/80 | 22.50               | 1528.10          | 02/21/84 | 26.05               | 1524.55          |
| 07/16/80 | 22.63               | 1527.97          | 03/12/84 | 26.11               | 1524.49          |
| 07/18/80 | 22.47               | 1528.13          | 04/03/84 | 25.97               | 1524.63          |
| 07/21/80 | 22.19               | 1528.41          | 04/18/84 | 25.63               | 1524.97          |
| 07/25/80 | 22.08               | 1528.52          | 05/08/84 | 24.86               | 1525.74          |
| 07/27/80 | 22.16               | 1528.44          | 05/29/84 | 24.33               | 1526.27          |
| 07/29/80 | 22.07               | 1528.53          | 06/15/84 | 24.19               | 1526.41          |
| 08/01/80 | 22.07               | 1528.53          | 06/26/84 | 24.13               | 1526.47          |
| 08/05/80 | 21.96               | 1528.64          | 07/10/84 | 24.58               | 1526.02          |
| 08/28/80 | 22.39               | 1528.21          | 07/27/84 | 25.35               | 1525.25          |
| 09/26/80 | 22.38               | 1528.22          | 08/09/84 | 25.38               | 1525.22          |
| 10/29/80 | 22.33               | 1528.27          | 08/16/84 | 25.77               | 1524.83          |
| 11/25/80 | 22.52               | 1528.08          | 08/22/84 | 25.72               | 1524.88          |
| 12/29/80 | 22.86               | 1527.74          | 08/27/84 | 25.86               | 1524.74          |
|          |                     |                  | 09/07/84 | 25.88               | 1524.72          |
| 01/29/81 | 23.10               | 1527.50          | 09/12/84 | 25.66               | 1524.94          |
| 02/24/81 | 23.25               | 1527.35          | 09/20/84 | 25.77               | 1524.83          |
| 03/26/81 | 23.24               | 1527.36          | 09/27/84 | 25.61               | 1524.99          |
| 04/30/81 | 23.61               | 1526.99          | 10/03/84 | 25.71               | 1524.89          |
| 05/28/81 | 23.88               | 1526.72          | 10/10/84 | 25.75               | 1524.85          |
| 06/29/81 | 23.91               | 1526.69          | 10/23/84 | 25.55               | 1525.05          |
| 07/14/81 | 24.16               | 1526.44          | 11/07/84 | 25.38               | 1525.22          |
| 07/22/81 | 24.27               | 1526.33          | 11/20/84 | 25.38               | 1525.22          |
| 07/28/81 | 24.38               | 1526.22          | 12/13/84 | 25.33               | 1525.27          |
| 08/11/81 | 24.13               | 1526.47          |          |                     |                  |
| 08/18/81 | 24.05               | 1526.55          | 01/09/85 | 25.64               | 1524.96          |
| 08/28/81 | 24.61               | 1525.99          | 02/12/85 | 25.94               | 1524.66          |
| 09/29/81 | 24.94               | 1525.66          | 03/06/85 | 26.10               | 1524.50          |
| 10/28/81 | 25.17               | 1525.43          | 03/19/85 | 26.16               | 1524.44          |
| 11/27/81 | 25.47               | 1525.13          | 04/16/85 | 25.42               | 1525.18          |
| 12/30/81 | 25.75               | 1524.85          | 05/02/85 | 25.13               | 1525.47          |
|          |                     |                  | 05/14/85 | 24.97               | 1525.63          |
| 01/08/82 | 26.02               | 1524.58          | 06/06/85 | 24.94               | 1525.66          |
| 02/26/82 | 26.38               | 1524.22          | 06/20/85 | 24.88               | 1525.72          |
| 03/29/82 | 26.19               | 1524.41          | 07/01/85 | 24.80               | 1525.80          |
| 04/05/82 | 25.83               | 1524.77          | 07/17/85 | 25.46               | 1525.14          |
| 04/13/82 | 25.63               | 1524.97          | 07/29/85 | 25.52               | 1525.08          |
| 04/20/82 | 25.03               | 1525.57          | 08/14/85 | 25.58               | 1525.02          |
| 04/30/82 | 24.55               | 1526.05          | 09/11/85 | 25.80               | 1524.80          |
| 05/27/82 | 24.16               | 1526.44          | 09/24/85 | 25.78               | 1524.82          |
| 06/29/82 | 23.88               | 1526.72          | 10/23/85 | 24.75               | 1525.85          |
| 07/28/82 | 23.69               | 1526.91          | 11/21/85 | 24.47               | 1526.13          |
| 08/31/82 | 24.52               | 1526.08          | 12/30/85 | 24.47               | 1526.13          |
| 09/30/82 | 24.75               | 1525.85          |          |                     |                  |
| 10/29/82 | 24.27               | 1526.33          | 02/25/86 | 25.27               | 1525.33          |
| 11/29/82 | 24.22               | 1526.38          | 03/26/86 | 25.13               | 1525.47          |
| 12/27/82 | 24.49               | 1526.11          | 05/13/86 | 24.03               | 1526.57          |
|          |                     |                  | 06/04/86 | 24.18               | 1526.42          |
| 01/28/83 | 24.74               | 1525.86          | 07/01/86 | 24.79               | 1525.81          |
| 02/28/83 | 25.02               | 1525.58          | 08/06/86 | 24.74               | 1525.86          |
| 03/31/83 | 24.88               | 1525.72          | 09/09/86 | 25.54               | 1525.06          |
| 04/29/83 | 24.03               | 1526.57          | 10/09/86 | 25.66               | 1524.94          |
| 05/27/83 | 24.10               | 1526.50          | 12/16/86 | 25.72               | 1524.88          |
| 07/08/83 | 24.30               | 1526.30          |          |                     |                  |

**155-082-33DDCR**

**Souris River (elev top of south guardrail of Saugstad Bridge =1551.18)**

| Date     | Depth to<br>Water (ft) | WL Elev<br>(msl,ft) | Date     | Depth to<br>Water (ft) | WL Elev<br>(msl,ft) |
|----------|------------------------|---------------------|----------|------------------------|---------------------|
| 04/12/84 | 23.19                  | 1527.99             | 04/18/85 | 23.58                  | 1527.60             |
| 04/18/84 | 23.80                  | 1527.38             | 05/14/85 | 23.33                  | 1527.85             |
| 05/08/84 | 22.83                  | 1528.35             | 06/06/85 | 23.69                  | 1527.49             |
| 05/29/84 | 24.17                  | 1527.01             | 06/20/85 | 24.00                  | 1527.18             |
| 06/15/84 | 24.05                  | 1527.13             | 07/01/85 | 23.99                  | 1527.19             |
| 06/26/84 | 24.13                  | 1527.05             | 07/17/85 | 25.07                  | 1526.11             |
| 07/10/84 | 25.36                  | 1525.82             | 07/29/85 | 23.94                  | 1527.24             |
| 07/27/84 | 25.78                  | 1525.40             | 08/14/85 | 24.07                  | 1527.11             |
| 08/09/84 | 23.60                  | 1527.58             | 08/27/85 | 23.89                  | 1527.29             |
| 08/16/84 | 23.80                  | 1527.38             | 09/11/85 | 24.07                  | 1527.11             |
| 08/21/84 | 23.50                  | 1527.68             | 09/24/85 | 23.97                  | 1527.21             |
| 08/27/84 | 24.25                  | 1526.93             | 10/23/85 | 24.02                  | 1527.16             |
| 09/07/84 | 24.39                  | 1526.79             |          |                        |                     |
| 09/12/84 | 24.00                  | 1527.18             | 03/26/86 | 23.76                  | 1527.42             |
| 09/20/84 | 23.88                  | 1527.30             | 05/13/86 | 23.74                  | 1527.44             |
| 09/27/84 | 23.94                  | 1527.24             | 06/04/86 | 24.27                  | 1526.91             |
| 10/03/84 | 24.13                  | 1527.05             | 07/01/86 | 23.85                  | 1527.33             |
| 10/10/84 | 23.61                  | 1527.57             | 08/06/86 | 23.98                  | 1527.20             |
| 10/23/84 | 23.27                  | 1527.91             | 09/09/86 | 24.03                  | 1527.15             |
|          |                        |                     | 10/08/86 | 23.92                  | 1527.26             |

155-082-34CDC  
Unnamed aquifer

LS Elev (msl,ft)= 1611.40

SI (ft)= 86-89

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/14/68 | 80.38               | 1531.02          | 12/22/70 | 78.05               | 1533.35          |
| 11/22/68 | 80.21               | 1531.19          | 04/15/71 | 77.86               | 1533.54          |
| 11/27/68 | 80.22               | 1531.18          | 07/22/71 | 78.00               | 1533.40          |
| 12/07/68 | 81.02               | 1530.38          | 08/27/71 | 78.05               | 1533.35          |
| 12/11/68 | 80.08               | 1531.32          | 12/21/71 | 77.63               | 1533.77          |
| 12/16/68 | 80.35               | 1531.05          | 07/13/72 | 76.02               | 1535.38          |
| 12/19/68 | 80.61               | 1530.79          | 10/12/72 | 77.88               | 1533.52          |
| 12/20/68 | 80.69               | 1530.71          | 06/07/73 | 77.50               | 1533.90          |
| 12/21/68 | 80.63               | 1530.77          | 09/28/73 | 79.00               | 1532.40          |
| 12/27/68 | 80.50               | 1530.90          | 07/01/74 | 73.63               | 1537.77          |
| 01/04/69 | 80.19               | 1531.21          | 08/13/75 | 73.85               | 1537.55          |
| 02/06/69 | 80.52               | 1530.88          | 10/21/76 | 75.47               | 1535.93          |
| 03/05/69 | 80.33               | 1531.07          | 01/16/84 | 87.27               | 1524.13          |
| 04/08/69 | 80.57               | 1530.83          | 02/01/84 | 86.88               | 1524.52          |
| 05/07/69 | 75.38               | 1536.02          | 02/21/84 | 87.50               | 1523.90          |
| 05/15/69 | 73.88               | 1537.52          | 03/12/84 | 87.57               | 1523.83          |
| 05/27/69 | 73.36               | 1538.04          | 04/03/84 | 87.00               | 1524.40          |
| 06/11/69 | 74.35               | 1537.05          | 04/18/84 | 87.03               | 1524.37          |
| 06/25/69 | 74.67               | 1536.73          | 05/08/84 | 87.03               | 1524.37          |
| 07/16/69 | 76.89               | 1534.51          | 05/29/84 | 87.03               | 1524.37          |
| 07/29/69 | 77.02               | 1534.38          | 06/15/84 | 87.02               | 1524.38          |
| 08/12/69 | 77.00               | 1534.40          | 06/26/84 | 86.72               | 1524.68          |
| 09/09/69 | 78.22               | 1533.18          | 07/10/84 | 86.99               | 1524.41          |
| 09/25/69 | 78.35               | 1533.05          | 07/27/84 | 87.14               | 1524.26          |
| 10/08/69 | 78.66               | 1532.74          | 08/09/84 | 87.28               | 1524.12          |
| 10/16/69 | 78.83               | 1532.57          | 08/16/84 | 86.32               | 1525.08          |
| 10/19/69 | 78.63               | 1532.77          | 08/21/84 | 86.28               | 1525.12          |
| 10/20/69 | 78.85               | 1532.55          | 08/27/84 | 86.30               | 1525.10          |
| 10/21/69 | 78.91               | 1532.49          | 09/07/84 | 86.28               | 1525.12          |
| 10/22/69 | 79.25               | 1532.15          | 09/12/84 | 86.53               | 1524.87          |
| 10/23/69 | 78.89               | 1532.51          | 09/20/84 | 86.72               | 1524.68          |
| 10/24/69 | 79.02               | 1532.38          | 09/27/84 | 86.94               | 1524.46          |
| 10/25/69 | 79.25               | 1532.15          | 10/03/84 | 86.69               | 1524.71          |
| 10/26/69 | 79.30               | 1532.10          | 10/10/84 | 86.72               | 1524.68          |
| 10/27/69 | 79.17               | 1532.23          | 10/23/84 | 87.02               | 1524.38          |
| 10/28/69 | 78.89               | 1532.51          | 11/07/84 | 86.67               | 1524.73          |
| 10/29/69 | 78.92               | 1532.48          | 11/20/84 | 87.00               | 1524.40          |
| 10/30/69 | 79.11               | 1532.29          | 12/13/84 | 87.35               | 1524.05          |
| 10/31/69 | 79.00               | 1532.40          | 01/09/85 | 87.07               | 1524.33          |
| 11/01/69 | 79.13               | 1532.27          | 02/12/85 | 86.89               | 1524.51          |
| 11/02/69 | 79.30               | 1532.10          | 03/06/85 | 86.74               | 1524.66          |
| 11/03/69 | 79.07               | 1532.33          | 03/19/85 | 86.83               | 1524.57          |
| 11/04/69 | 79.00               | 1532.40          | 04/16/85 | 86.97               | 1524.43          |
| 11/05/69 | 78.75               | 1532.65          | 05/02/85 | 86.96               | 1524.44          |
| 11/06/69 | 79.13               | 1532.27          | 05/14/85 | 86.92               | 1524.48          |
| 11/07/69 | 79.16               | 1532.24          | 06/06/85 | 86.94               | 1524.46          |
| 11/08/69 | 79.28               | 1532.12          | 06/20/85 | 87.07               | 1524.33          |
| 11/09/69 | 79.44               | 1531.96          | 07/01/85 | 87.08               | 1524.32          |
| 11/10/69 | 79.17               | 1532.23          | 07/17/85 | 89.22               | 1522.18          |
| 11/11/69 | 79.47               | 1531.93          | 07/29/85 | 89.24               | 1522.16          |
| 11/12/69 | 79.39               | 1532.01          | 08/14/85 | 89.38               | 1522.02          |
| 11/13/69 | 79.63               | 1531.77          | 09/11/85 | 89.52               | 1521.88          |
| 11/17/69 | 79.91               | 1531.49          | 09/24/85 | 89.63               | 1521.77          |
| 11/25/69 | 80.00               | 1531.40          | 10/23/85 | 87.41               | 1523.99          |
| 12/04/69 | 79.66               | 1531.74          | 11/21/85 | 87.07               | 1524.33          |
| 01/27/70 | 79.69               | 1531.71          | 12/30/85 | 87.08               | 1524.32          |
| 03/10/70 | 80.08               | 1531.32          |          |                     |                  |
| 04/06/70 | 79.72               | 1531.68          |          |                     |                  |
| 06/08/70 | 73.39               | 1538.01          |          |                     |                  |
| 07/24/70 | 74.32               | 1537.08          |          |                     |                  |
| 08/27/70 | 75.89               | 1535.51          |          |                     |                  |
| 10/01/70 | 77.14               | 1534.26          |          |                     |                  |

**155-082-34CDC (continued)**

**Unnamed aquifer**

**LS Elev (msl,ft)= 1611.40**

**SI (ft)= 86-89**

| Date     | Depth to<br>Water (ft) | WL Elev<br>(msl,ft) | Date     | Depth to<br>Water (ft) | WL Elev<br>(msl,ft) |
|----------|------------------------|---------------------|----------|------------------------|---------------------|
| 02/25/86 | 86.69                  | 1524.71             | 07/01/86 | 86.52                  | 1524.88             |
| 03/26/86 | 87.25                  | 1524.15             | 08/06/86 | 86.54                  | 1524.86             |
| 05/13/86 | 86.62                  | 1524.78             | 09/09/86 | 86.55                  | 1524.85             |
| 06/04/86 | 86.85                  | 1524.55             | 10/09/86 | 87.26                  | 1524.14             |
|          |                        |                     | 12/16/86 | 87.11                  | 1524.29             |

**155-083-04AAA**

**Sundre Aquifer ?**

**well not surveyed**

**SI (ft)= 400-420**

| Date     | Depth to<br>Water (ft) | Date     | Depth to<br>Water (ft) |
|----------|------------------------|----------|------------------------|
| 01/17/84 | 233.25                 | 02/12/85 | 235.58                 |
| 02/02/84 | 233.64                 | 03/06/85 | 234.41                 |
| 02/21/84 | 233.69                 | 03/19/85 | 234.41                 |
| 03/12/84 | 233.78                 | 04/17/85 | 234.69                 |
| 04/03/84 | 233.96                 | 05/02/85 | 234.64                 |
| 04/18/84 | 234.02                 | 05/14/85 | 234.74                 |
| 05/08/84 | 233.97                 | 06/06/85 | 234.80                 |
| 05/29/84 | 233.80                 | 06/20/85 | 234.97                 |
| 06/15/84 | 233.82                 | 07/01/85 | 235.19                 |
| 06/26/84 | 234.03                 | 07/30/85 | 235.28                 |
| 07/10/84 | 234.22                 | 08/14/85 | 235.50                 |
| 07/27/84 | 234.69                 | 08/28/85 | 235.77                 |
| 08/09/84 | 234.77                 | 09/11/85 | 235.80                 |
| 08/27/84 | 235.25                 | 09/25/85 | 235.99                 |
| 09/07/84 | 235.16                 | 10/22/85 | 234.57                 |
| 09/11/84 | 235.08                 | 11/21/85 | 234.42                 |
| 09/20/84 | 235.33                 | 12/30/85 | 234.44                 |
| 09/28/84 | 235.50                 |          |                        |
| 10/04/84 | 235.27                 | 02/25/86 | 235.34                 |
| 10/10/84 | 235.28                 | 03/26/86 | 235.72                 |
| 10/24/84 | 234.61                 | 06/03/86 | 234.32                 |
| 11/08/84 | 235.11                 | 07/01/86 | 234.59                 |
| 11/20/84 | 235.05                 | 08/06/86 | 234.62                 |
| 12/13/84 | 235.08                 | 10/08/86 | 234.79                 |
| 01/09/85 | 235.02                 | 12/16/86 | 234.19                 |

**155-083-25AAB2**

**Sundre Aquifer**

**LS Elev (msl,ft)= 1719.90**

**SI (ft)= 336-345**

| Date     | Depth to<br>Water (ft) | WL Elev<br>(msl,ft) | Date     | Depth to<br>Water (ft) | WL Elev<br>(msl,ft) |
|----------|------------------------|---------------------|----------|------------------------|---------------------|
| 12/08/83 | 198.19                 | 1521.71             | 01/03/84 | 198.77                 | 1521.13             |
| 12/13/83 | 198.91                 | 1520.99             | 01/16/84 | 199.02                 | 1520.88             |

155-083-25AAB2  
Sundre aquifer

LS Elev (msl,ft)= 1719.90 SI (ft)= 336-345

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 01/16/84 | 199.02              | 1520.88          | 03/06/85 | 199.92              | 1519.98          |
| 02/01/84 | 198.61              | 1521.29          | 03/19/85 | 200.19              | 1519.71          |
| 02/21/84 | 198.77              | 1521.13          | 04/16/85 | 200.24              | 1519.66          |
| 03/12/84 | 199.16              | 1520.74          | 05/02/85 | 200.38              | 1519.52          |
| 04/03/84 | 199.52              | 1520.38          | 05/14/85 | 200.16              | 1519.74          |
| 04/18/84 | 199.27              | 1520.63          | 06/06/85 | 200.30              | 1519.60          |
| 05/08/84 | 199.60              | 1520.30          | 06/20/85 | 200.39              | 1519.51          |
| 05/29/84 | 199.58              | 1520.32          | 07/01/85 | 200.50              | 1519.40          |
| 06/15/84 | 199.52              | 1520.38          | 07/17/85 | 200.33              | 1519.57          |
| 06/26/84 | 199.47              | 1520.43          | 07/29/85 | 200.25              | 1519.65          |
| 07/10/84 | 199.55              | 1520.35          | 08/14/85 | 199.91              | 1519.99          |
| 07/27/84 | 199.66              | 1520.24          | 08/27/85 | 199.80              | 1520.10          |
| 08/09/84 | 199.58              | 1520.32          | 09/12/85 | 199.75              | 1520.15          |
| 08/16/84 | 199.61              | 1520.29          | 09/23/85 | 199.69              | 1520.21          |
| 08/22/84 | 199.64              | 1520.26          | 10/22/85 | 199.86              | 1520.04          |
| 08/27/84 | 199.30              | 1520.60          | 11/21/85 | 200.89              | 1519.01          |
| 09/07/84 | 199.32              | 1520.58          |          |                     |                  |
| 09/11/84 | 199.44              | 1520.46          | 02/25/86 | 200.47              | 1519.43          |
| 09/20/84 | 199.82              | 1520.08          | 03/26/86 | 201.11              | 1518.79          |
| 09/28/84 | 200.38              | 1519.52          | 05/13/86 | 200.69              | 1519.21          |
| 10/04/84 | 201.38              | 1518.52          | 06/03/86 | 200.82              | 1519.08          |
| 10/10/84 | 201.39              | 1518.51          | 07/01/86 | 201.00              | 1518.90          |
| 11/20/84 | 200.11              | 1519.79          | 08/06/86 | 201.02              | 1518.88          |
| 12/13/84 | 200.08              | 1519.82          | 09/10/86 | 201.12              | 1518.78          |
|          |                     |                  | 10/08/86 | 201.51              | 1518.39          |
| 01/09/85 | 200.33              | 1519.57          | 12/16/86 | 201.19              | 1518.71          |
| 02/12/85 | 200.24              | 1519.66          |          |                     |                  |

155-083-36AAB  
Sundre aquifer

LS Elev (msl,ft)= 1712.80 SI (ft)= 315-327

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 11/17/83 | 197.08              | 1515.72          | 01/09/85 | 199.19              | 1513.61          |
| 12/08/83 | 197.69              | 1515.11          | 02/12/85 | 199.17              | 1513.63          |
| 12/13/83 | 197.50              | 1515.30          | 03/06/85 | 198.80              | 1514.00          |
|          |                     |                  | 03/19/85 | 198.80              | 1514.00          |
| 01/03/84 | 197.44              | 1515.36          | 04/16/85 | 199.11              | 1513.69          |
| 01/16/84 | 197.80              | 1515.00          | 05/02/85 | 199.19              | 1513.61          |
| 02/01/84 | 197.30              | 1515.50          | 05/14/85 | 199.00              | 1513.80          |
| 02/21/84 | 197.47              | 1515.33          | 06/06/85 | 199.50              | 1513.30          |
| 03/12/84 | 197.94              | 1514.86          | 06/20/85 | 199.30              | 1513.50          |
| 04/03/84 | 198.22              | 1514.58          | 07/01/85 | 199.30              | 1513.50          |
| 04/18/84 | 197.97              | 1514.83          | 07/17/85 | 199.52              | 1513.28          |
| 05/08/84 | 198.41              | 1514.39          | 07/29/85 | 198.80              | 1514.00          |
| 05/29/84 | 198.36              | 1514.44          | 08/14/85 | 198.30              | 1514.50          |
| 06/15/84 | 198.28              | 1514.52          | 08/27/85 | 198.17              | 1514.63          |
| 06/26/84 | 198.10              | 1514.70          | 09/12/85 | 198.41              | 1514.39          |
| 07/10/84 | 198.22              | 1514.58          | 09/23/85 | 198.30              | 1514.50          |
| 07/27/84 | 198.52              | 1514.28          | 10/22/85 | 198.80              | 1514.00          |
| 08/09/84 | 198.38              | 1514.42          | 11/21/85 | 199.71              | 1513.09          |
| 08/16/84 | 198.39              | 1514.41          |          |                     |                  |
| 08/22/84 | 198.42              | 1514.38          | 02/25/86 | 199.21              | 1513.59          |
| 08/27/84 | 198.27              | 1514.53          | 03/26/86 | 199.77              | 1513.03          |
| 09/07/84 | 198.33              | 1514.47          | 05/13/86 | 199.42              | 1513.38          |
| 09/11/84 | 198.50              | 1514.30          | 06/03/86 | 199.44              | 1513.36          |
| 09/20/84 | 198.80              | 1514.00          | 07/01/86 | 199.65              | 1513.15          |
| 09/28/84 | 199.16              | 1513.64          | 08/06/86 | 199.47              | 1513.33          |
| 10/10/84 | 199.22              | 1513.58          | 09/12/86 | 199.88              | 1512.92          |
| 11/20/84 | 199.08              | 1513.72          | 10/08/86 | 200.24              | 1512.56          |
| 12/13/84 | 199.00              | 1513.80          | 12/16/86 | 199.96              | 1512.84          |

155-083-36ABB

Sundre aquifer

LS Elev (msl,ft)= 1714.20 SI (ft)= 315-324

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 12/08/83 | 198.91              | 1515.29          | 01/09/85 | 200.61              | 1513.59          |
| 12/13/83 | 198.86              | 1515.34          | 02/12/85 | 200.47              | 1513.73          |
| 01/03/84 | 198.72              | 1515.48          | 03/06/85 | 200.11              | 1514.09          |
| 01/16/84 | 199.03              | 1515.17          | 03/19/85 | 200.10              | 1514.10          |
| 02/01/84 | 198.52              | 1515.68          | 04/16/85 | 200.44              | 1513.76          |
| 02/21/84 | 198.66              | 1515.54          | 05/02/85 | 200.52              | 1513.68          |
| 03/12/84 | 199.27              | 1514.93          | 05/14/85 | 200.33              | 1513.87          |
| 04/03/84 | 199.52              | 1514.68          | 06/06/85 | 200.39              | 1513.81          |
| 04/18/84 | 199.35              | 1514.85          | 06/20/85 | 200.55              | 1513.65          |
| 05/08/84 | 199.69              | 1514.51          | 07/01/85 | 200.50              | 1513.70          |
| 05/29/84 | 199.63              | 1514.57          | 07/17/85 | 200.53              | 1513.67          |
| 06/15/84 | 199.41              | 1514.79          | 07/29/85 | 200.00              | 1514.20          |
| 06/26/84 | 199.39              | 1514.81          | 08/14/85 | 199.55              | 1514.65          |
| 07/10/84 | 199.50              | 1514.70          | 08/27/85 | 199.38              | 1514.82          |
| 07/27/84 | 199.80              | 1514.40          | 09/12/85 | 199.55              | 1514.65          |
| 08/09/84 | 199.64              | 1514.56          | 09/23/85 | 199.41              | 1514.79          |
| 08/16/84 | 199.69              | 1514.51          | 10/22/85 | 200.08              | 1514.12          |
| 08/22/84 | 199.72              | 1514.48          | 11/21/85 | 201.08              | 1513.12          |
| 08/27/84 | 199.47              | 1514.73          | 02/25/86 | 200.55              | 1513.65          |
| 09/07/84 | 199.52              | 1514.68          | 03/26/86 | 201.11              | 1513.09          |
| 09/11/84 | 199.71              | 1514.49          | 05/13/86 | 199.97              | 1514.23          |
| 09/20/84 | 200.00              | 1514.20          | 06/03/86 | 200.72              | 1513.48          |
| 09/28/84 | 200.38              | 1513.82          | 07/01/86 | 200.89              | 1513.31          |
| 10/10/84 | 200.49              | 1513.71          | 08/06/86 | 200.73              | 1513.47          |
| 11/20/84 | 200.36              | 1513.84          | 09/12/86 | 201.12              | 1513.08          |
| 12/13/84 | 200.32              | 1513.88          | 10/08/86 | 201.50              | 1512.70          |
|          |                     |                  | 12/16/86 | 201.26              | 1512.94          |

155-083-36ADD

Sundre aquifer

LS Elev (msl,ft)= 1728.10 SI (ft)= 315-327

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 12/08/83 | 213.41              | 1514.69          | 09/20/84 | 214.53              | 1513.57          |
| 12/13/83 | 213.11              | 1514.99          | 09/28/84 | 215.08              | 1513.02          |
| 01/03/84 | 213.02              | 1515.08          | 10/04/84 | 217.02              | 1511.08          |
| 01/16/84 | 213.41              | 1514.69          | 10/10/84 | 215.21              | 1512.89          |
| 02/01/84 | 212.89              | 1515.21          | 07/29/85 | 214.74              | 1513.36          |
| 02/21/84 | 213.11              | 1514.99          | 08/14/85 | 214.63              | 1513.47          |
| 03/12/84 | 213.47              | 1514.63          | 08/27/85 | 214.00              | 1514.10          |
| 04/03/84 | 213.80              | 1514.30          | 09/11/85 | 214.41              | 1513.69          |
| 04/18/84 | 213.80              | 1514.30          | 09/23/85 | 214.30              | 1513.80          |
| 05/08/84 | 214.08              | 1514.02          | 10/22/85 | 214.35              | 1513.75          |
| 05/29/84 | 213.99              | 1514.11          | 02/25/86 | 214.72              | 1513.38          |
| 06/15/84 | 213.96              | 1514.14          | 03/26/86 | 215.25              | 1512.85          |
| 06/26/84 | 214.30              | 1513.80          | 05/13/86 | 214.69              | 1513.41          |
| 07/10/84 | 213.97              | 1514.13          | 06/03/86 | 214.91              | 1513.19          |
| 07/27/84 | 214.22              | 1513.88          | 07/01/86 | 215.10              | 1513.00          |
| 08/09/84 | 214.14              | 1513.96          | 08/06/86 | 214.75              | 1513.35          |
| 08/16/84 | 214.11              | 1513.99          | 09/12/86 | 215.38              | 1512.72          |
| 08/22/84 | 214.21              | 1513.89          | 10/08/86 | 215.73              | 1512.37          |
| 08/27/84 | 213.94              | 1514.16          | 12/16/86 | 215.48              | 1512.62          |
| 09/07/84 | 214.07              | 1514.03          |          |                     |                  |
| 09/11/84 | 214.11              | 1513.99          |          |                     |                  |

155-083-36DCB

Unnamed

LS Elev (msl,ft) = 1741.10

SI (ft) = 245-265

| Date     | Depth to Water (ft) | WL Elev (msl,ft) | Date     | Depth to Water (ft) | WL Elev (msl,ft) |
|----------|---------------------|------------------|----------|---------------------|------------------|
| 12/08/83 | 226.55              | 1514.55          | 12/13/84 | 227.91              | 1513.19          |
| 12/13/83 | 226.47              | 1514.63          | 01/09/85 | 228.11              | 1512.99          |
| 01/03/84 | 226.33              | 1514.77          | 02/12/85 | 227.96              | 1513.14          |
| 01/16/84 | 226.58              | 1514.52          | 03/06/85 | 227.67              | 1513.43          |
| 02/01/84 | 226.08              | 1515.02          | 03/19/85 | 227.80              | 1513.30          |
| 02/21/84 | 225.94              | 1515.16          | 04/16/85 | 227.91              | 1513.19          |
| 03/12/84 | 226.63              | 1514.47          | 05/02/85 | 228.02              | 1513.08          |
| 04/02/84 | 227.02              | 1514.08          | 05/14/85 | 227.85              | 1513.25          |
| 04/17/84 | 226.86              | 1514.24          | 06/06/85 | 227.78              | 1513.32          |
| 05/08/84 | 227.13              | 1513.97          | 06/20/85 | 227.75              | 1513.35          |
| 05/29/84 | 227.13              | 1513.97          | 07/01/85 | 228.16              | 1512.94          |
| 06/15/84 | 226.94              | 1514.16          | 08/14/85 | 227.94              | 1513.16          |
| 06/26/84 | 226.82              | 1514.28          | 08/27/85 | 227.91              | 1513.19          |
| 07/10/84 | 226.91              | 1514.19          | 09/12/85 | 227.89              | 1513.21          |
| 07/27/84 | 227.38              | 1513.72          | 09/23/85 | 227.88              | 1513.22          |
| 08/09/84 | 227.25              | 1513.85          | 10/22/85 | 227.55              | 1513.55          |
| 08/16/84 | 227.36              | 1513.74          |          |                     |                  |
| 08/22/84 | 227.35              | 1513.75          | 02/25/86 | 228.00              | 1513.10          |
| 08/27/84 | 227.05              | 1514.05          | 03/26/86 | 228.50              | 1512.60          |
| 09/07/84 | 227.02              | 1514.08          | 05/13/86 | 227.98              | 1513.12          |
| 09/11/84 | 227.36              | 1513.74          | 06/03/86 | 228.18              | 1512.92          |
| 09/20/84 | 227.63              | 1513.47          | 07/01/86 | 228.34              | 1512.76          |
| 09/28/84 | 228.11              | 1512.99          | 08/06/86 | 228.21              | 1512.89          |
| 10/04/84 | 227.52              | 1513.58          | 09/12/86 | 228.65              | 1512.45          |
| 10/10/84 | 227.55              | 1513.55          | 10/08/86 | 229.04              | 1512.06          |
| 10/23/84 | 227.94              | 1513.16          | 12/16/86 | 228.79              | 1512.31          |
| 11/08/84 | 227.30              | 1513.80          | 12/16/86 | 228.79              | 1512.31          |
| 11/20/84 | 228.02              | 1513.08          |          |                     |                  |

Table 3. List of observation wells monitored  
for the North Dakota State Water Commission  
by the U. S. Geological Survey

| <u>Location</u> | <u>Aquifer</u>          | <u>Period<br/>of<br/>Record</u> | <u>Observation<br/>Frequency</u> | <u>County</u> |
|-----------------|-------------------------|---------------------------------|----------------------------------|---------------|
| 154-82-03CDC3   | Sundre                  | 1968-                           | R                                | Ward          |
| 154-82-04AAD    | Sundre/Souris<br>Valley | 1963-                           | A                                | Ward          |
| 154-82-04ABA    | Souris Valley           | 1963-                           | Q                                | Ward          |
| 154-82-24ABA    | Souris Valley           | 1964-                           | Q                                | Ward          |
| 154-79-14CCC1   | New Rockford            | 1978-                           | Q                                | McHenry       |
| 154-79-14CCC2   | New Rockford            | 1978-                           | Q                                | McHenry       |
| 154-79-16CCC    | New Rockford            | 1977-                           | M                                | McHenry       |
| 154-79-24DDD    | New Rockford            | 1977-                           | M                                | McHenry       |
| 154-80-20BBB    | Sundre                  | 1971                            | M                                | McHenry       |
| 154-80-23CCC    | Sundre                  | 1971-                           | M                                | McHenry       |

Table 4. Low flow discharge measurements of the Souris River

| <u>Location</u> | <u>Site #</u> | <u>Discharge (ft<sup>3</sup>/sec)</u> | <u>Discharge (ft<sup>3</sup>/sec)</u> | <u>Comments</u>   |
|-----------------|---------------|---------------------------------------|---------------------------------------|---|
|                 |               | <u>10/30/85</u>                       | <u>11/13/85*</u>                      |   |
| 155-82-33BAC    | 1             | 92.82                                 | 24.53                                 |   |
| 154-82-04AAD    | 2A            | 91.93                                 | 21.96                                 |   |
| 154-82-04AAC    | 2B            | 7.55                                  | 4.63                                  | Oxbow tributary,<br>measured flow<br>through culvert  |
| 154-82-03DBC    | 3A            | 95.51                                 | 26.79                                 |   |
| 154-82-03DBC    | 3B            | 2.54                                  | 0                                     | Oxbow tributary   |
| 154-82-02CCD    | 4             | 105.92                                | 27.44                                 | Downstream of<br>wastewater discharge,<br>no wastewater<br>discharge during<br>either measurement |

\*Had to chip ice to measure flow

Table 5. Discharge measurements, Minot city wells,  
Sundre well field (from Patch, 1985)

| Test # | Wells Pumping | Number of Minutes | Range of Discharge GPM | Most Reasonable Discharge Rate | Discharge PSI at Start of Test   | Discharge PSI at End of Test     | Afterbay Gauge Height at Start of Test | Afterbay Gauge Height at End of Test | Production Well Static Water Level | Production Well Water Level at End of Test |
|--------|---------------|-------------------|------------------------|--------------------------------|----------------------------------|----------------------------------|--|--------------------------------------|------------------------------------|--|
| 1      | E             | 5                 | 720-760                | 750                            | 41.5                             | 42.25                            | 2.08                                   | 2.98                                 | ?                                  | ?  |
| 2      | D             | 6                 | 2710-2790              | 2760                           | 48                               | 49.25                            | 2.98                                   | 7.09                                 | 35.6                               | 59.33                                      |
| 3      | A             | 11                | 575-600                | 580                            | 43.25                            | 43.25                            | 2.95                                   | 4.56                                 | 40'*                               | 47.5'*                                     |
| 4      | B             | 9                 | 625-650                | 645                            | 42.75                            | 42.5                             | 4.42                                   | 5.85                                 | ?                                  | ?  |
| 5      | C             | 7                 | 795-825                | 815                            | 43.75                            | 43.75                            | 5.82                                   | 7.23                                 | ?                                  | 43.0'*                                     |
| 6      | ACDE          | 8                 | 4880-5010              | 4900                           | A - 41.75<br>D - 51.0            | A - 42.5<br>D - 51.5             | 2.00                                   | 6.60                                 | A - ?<br>D - 35.76'                | A - 43.25**<br>D - 58.12***                |
| 7      | ACDE          | 3.5               | 4805-5010              | 4900                           | A - 42.0<br>D - 51.5<br>E - 46.0 | A - 43.5<br>D - 52.0<br>E - 47.5 | 3.40                                   | 7.65                                 | A - 40'*<br>D - ?                  | A - ?<br>D - ?                             |
| 8      | AD            | 4.5               | 3255-3325              | 3300                           | A - 41.5<br>D - 49.0             | A - 42.5<br>D - 50.5             | 3.70                                   | 7.40                                 | A - 41'*<br>D - 35.94'             | A - 47.5*<br>D - 58.33***                  |
| 9      | CD            | 4.5               | 3510-3660              | 3570                           | C - 45.0<br>D - 50.0             | C - 46.0<br>D - 51.0             | 3.60                                   | 7.60                                 | D - 36.70                          | D - 58.36***                               |
| 10     | A             | 12                | 560-600                | 575                            | 40.5                             | 41.0                             | 4.60                                   | 6.37                                 | 42'*                               | 48'*                                       |

\*Measured through air line (reading subtracted from 90', the presumed depth of the air line intake)

\*\*Measurement taken two minutes after pump start up

\*\*\*Measurement taken one minute after pump start up

Table 6. Chemical analyses of ground water  
and surface water from the study area

Explanation of abbreviations, codes, and units:

|                      |  |
|----------------------|--|
| Location             | - Township, range, section, and quarter(s) identifier  |
| Well Depth           | - Depth of the bottom of the lowest screen; 'S' indicates a surface water sample, and the number (if any) indicates the depth below the surface of the water at which the sample was taken |
| Date Sampled         | - Date the sample was gathered in the field  |
| SiO <sub>2</sub>     | - Dissolved silica in milligrams per liter   |
| Fe                   | - Dissolved iron in milligrams per liter   |
| Mn                   | - Dissolved manganese in milligrams per liter  |
| Ca                   | - Dissolved calcium in milligrams per liter  |
| Mg                   | - Dissolved magnesium in milligrams per liter  |
| Na                   | - Dissolved sodium in milligrams per liter   |
| K                    | - Dissolved potassium in milligrams per liter  |
| HCO <sub>3</sub>     | - Dissolved bicarbonate in milligrams per liter  |
| CO <sub>3</sub>      | - Dissolved carbonate in milligrams per liter  |
| SO <sub>4</sub>      | - Dissolved sulfate in milligrams per liter  |
| Cl                   | - Dissolved chloride in milligrams per liter   |
| F                    | - Dissolved fluoride in milligrams per liter   |
| NO <sub>3</sub>      | - Dissolved nitrate in milligrams per liter  |
| B                    | - Dissolved boron in milligrams per liter  |
| TDS                  | - Total dissolved solids (residue) in milligrams per liter   |
| Hardness:            |  |
| as CaCO <sub>3</sub> | - As calcium carbonate (CaCO <sub>3</sub> ) hardness in milligrams per liter   |
| as NCH               | - As noncarbonate hardness in milligrams per liter   |
| % Na                 | - Percent sodium of total cations (milliequivalents per liter)   |
| SAR                  | - Sodium adsorption ratio  |
| Spec Cond            | - Field measurement of specific conductance in micromhos per centimeter corrected to 25 degrees centigrade   |
| Temp                 | - Field measurement of water temperature in degrees centigrade   |
| pH                   | - Field measurement of pH  |

Table 6. Chemical analyses of ground water and surface water from the study area

| Location       | Well Depth (ft) | Date Sampled | (milligrams per liter) |      |      |     |     |     |      |                  |                 |                 |     |     |                 |      | Hardness as CaCO <sub>3</sub> | % NCH | Na   | SAR  | Spec Cond (μmho) | Temp (°C) | pH   |     |
|----------------|-----------------|--------------|------------------------|------|------|-----|-----|-----|------|------------------|-----------------|-----------------|-----|-----|-----------------|------|-------------------------------|-------|------|------|------------------|-----------|------|-----|
|                |                 |              | SiO <sub>2</sub>       | Fe   | Mn   | Ca  | Mg  | Na  | K    | HCO <sub>3</sub> | CO <sub>3</sub> | SO <sub>4</sub> | Cl  | F   | NO <sub>3</sub> | B    |                               |       |      |      |                  |           |      |     |
| 154-079-14CCC1 | 242             | 05-30-78     | 26                     | 4.0  | 0.24 | 220 | 39  | 440 | 10   | 533              |                 | 1100            | 39  | 0.1 | 1               |      | 2120                          | 710   | 270  | 57   | 7.2              | 2700      | 9.5  | 7.7 |
| 154-079-14CCC1 | 242             | 07-13-78     | 20                     | 2.7  | 0.28 | 210 | 67  | 440 | 11   | 716              |                 | 1100            | 38  | 0.2 | 1               | 0.49 | 2340                          | 800   | 212  | 54   | 6.8              | 2700      | 8.0  | 7.6 |
| 154-079-14CCC1 | 242             | 08-31-83     | 26                     | 1.6  | 0.24 | 200 | 67  | 410 | 14   | 547              |                 | 1200            | 40  | 0.2 | 1               | 0.27 | 2130                          | 780   | 330  | 53   | 6.4              | 3000      | 8.0  | 7.6 |
| 154-079-14CCC2 | 130             | 05-30-78     | 26                     | 2.5  | 0.15 | 190 | 23  | 220 | 9    | 472              |                 | 610             | 16  | 0.1 | 1               | 0.2  | 1320                          | 570   | 180  | 45   | 4.0              | 1700      | 8.0  | 7.7 |
| 154-079-14CCC2 | 130             | 07-13-78     | 19                     | 2.2  | 0.17 | 200 | 56  | 220 | 9    | 660              |                 | 630             | 17  | 0.2 | 1               |      | 1500                          | 730   | 190  | 39   | 3.5              | 2000      | 9.5  | 7.6 |
| 154-079-16CCC  | 186             | 04-27-78     | 24                     | 7.5  | 0.2  | 270 | 79  | 280 | 13   | 639              |                 | 980             | 18  | 0.1 | 3               |      | 2000                          | 1000  | 480  | 37   | 3.8              | 2400      | 8.5  | 7.5 |
| 154-079-16CCC  | 186             | 08-21-84     | 26                     | 3.4  | 0.26 | 270 | 85  | 290 | 14   | 729              |                 | 990             | 16  | 0.1 | 1               | 0.31 | 2050                          | 1000  | 430  | 38   | 4.0              | 2950      | 8.0  |     |
| 154-079-16CCC  | 186             | 07-01-85     | 25                     | 1.4  | 0.23 | 270 | 85  | 280 | 15   | 486              |                 | 980             | 20  | 0.1 |                 | 0.22 | 1870                          | 1000  | 630  | 37   | 3.8              | 2900      | 8.0  |     |
| 154-079-16CCC  | 186             | 09-25-85     | 24                     | 3.5  | 0.23 | 270 | 87  | 290 | 13   | 735              |                 | 960             | 16  | 0.2 | 1               | 0.32 | 2030                          | 1000  | 430  | 38   | 4.0              | 2950      | 7.0  |     |
| 154-079-20BBB  | 223             | 06-18-85     | 24                     | 1.2  | 0.35 | 230 | 70  | 360 | 11   | 670              |                 | 980             | 13  | 0.1 | 1               | 0.21 | 2050                          | 860   | 310  | 47   | 5.3              |           |      |     |
| 154-079-20BBB  | 223             | 07-01-85     | 26                     | 0.79 | 0.33 | 230 | 68  | 360 | 14   | 485              |                 | 1000            | 20  | 0.1 | 1               | 0.38 | 1880                          | 850   | 460  | 47   | 5.4              | 2950      | 8.0  |     |
| 154-079-20BBB  | 223             | 09-25-85     | 24                     | 3.9  | 0.33 | 230 | 69  | 370 | 13   | 752              |                 | 950             | 13  | 0.2 | 1               | 0.49 | 2050                          | 860   | 240  | 48   | 5.5              | 2950      | 7.0  |     |
| 154-079-24DDO  | 04-26-78        | 25           | 0.53                   | 0.14 | 130  | 40  | 470 | 10  | 724  |                  | 640             | 150             | 0.1 | 3   | 0.54            | 1770 | 490                           | 67    | 9.2  | 2800 | 9.0              | 8.3       |      |     |
| 154-079-30AAA  | 203             | 06-18-85     | 23                     | 0.13 | 0.17 | 190 | 68  | 320 | 11   | 727              |                 | 710             | 11  | 0.1 | 1               | 0.27 | 1640                          | 750   | 160  | 48   | 5.1              |           |      |     |
| 154-079-30AAC  | 07-09-75        | 7            | 0.67                   | 0.02 | 5    | 2   | 550 | 2   | 1130 | 8                | 190             | 83              | 0.5 | 3   | 1.8             | 1500 | 19                            | 98    | 55.0 | 2300 | 8.0              | 8.2       |      |     |
| 154-079-36CAC  | 07-09-75        | 19           | 2.5                    | 0.06 | 74   | 26  | 630 | 6   | 858  |                  | 2               | 690             | 0.4 | 1   | 2.2             |      | 1890                          | 290   | 82   | 16.0 | 3500             | 7.5       | 7.7  |     |
| 154-080-20BBB  | 163             | 09-28-70     | 24                     | 7.3  | 0.04 | 133 | 63  | 348 | 11   | 563              |                 | 805             | 62  | 0.3 | 5               | 0.14 | 1700                          | 593   | 131  | 56   | 6.2              | 2675      | 8.5  |     |
| 154-080-20BBB  | 163             | 08-19-75     | 16                     | 5.2  | 0.16 | 160 | 73  | 330 | 12   | 682              |                 | 760             | 71  | 0.1 | 1               | 0.12 | 1830                          | 700   | 140  | 50   | 5.4              | 2500      | 8.5  |     |
| 154-080-20BBB  | 163             | 08-21-84     | 26                     | 0.56 | 0.19 | 240 | 71  | 350 | 16   | 784              |                 | 790             | 62  | 0.2 | 1               | 0.26 | 1870                          | 890   | 250  | 46   | 5.1              | 2900      | 8.0  |     |
| 154-080-20BBB  | 163             | 03-21-85     | 24                     | 1.0  | 0.16 | 220 | 72  | 330 | 16   | 473              |                 | 800             | 62  | 0.1 | 8               | 0.2  | 1630                          | 850   | 460  | 45   | 4.9              | 2700      | 7.0  |     |
| 154-080-20BBB  | 163             | 06-27-85     | 24                     | 0.77 | 0.19 | 220 | 73  | 350 | 15   | 702              |                 | 760             | 56  | 0.2 | 5               | 0.13 | 1820                          | 850   | 270  | 47   | 5.2              | 2550      | 7.0  |     |
| 154-080-20BBB  | 163             | 09-25-85     | 25                     | 0.56 | 0.15 | 220 | 70  | 340 | 15   | 788              |                 | 810             | 60  | 0.2 |                 | 0.23 | 1930                          | 860   | 190  | 46   | 5.1              | 2800      | 7.0  |     |
| 154-080-23CCC  | 183             | 09-29-70     | 23                     | 9.3  | 0.02 | 106 | 51  | 333 | 10   | 560              |                 | 683             | 42  | 0.3 | 3               | 0.05 | 1510                          | 475   | 16   | 60   | 6.6              | 2325      | 8.5  |     |
| 154-080-23CCC  | 183             | 08-14-75     | 11                     | 4.5  | 0.16 | 210 | 96  | 240 | 10   | 655              |                 | 830             | 25  | 0.2 | 1               | 0.16 | 1860                          | 920   | 380  | 36   | 3.4              | 2300      | 7.5  | 7.8 |
| 154-080-23CCC  | 183             | 08-21-84     | 26                     | 1.7  | 0.11 | 180 | 53  | 330 | 14   | 737              |                 | 650             | 40  | 0.2 | 1               | 0.27 | 1580                          | 670   | 63   | 51   | 5.5              | 2300      | 7.5  |     |
| 154-080-23CCC  | 183             | 03-21-85     | 24                     | 0.92 | 0.09 | 170 | 53  | 330 | 13   | 475              |                 | 640             | 43  | 0.1 | 1               | 0.22 | 1330                          | 640   | 250  | 52   | 5.7              | 2425      | 7.0  |     |
| 154-080-23CCC  | 183             | 06-27-85     | 23                     | 1.9  | 0.1  | 170 | 55  | 330 | 11   | 730              |                 | 620             | 38  | 0.2 |                 | 0.17 | 1610                          | 650   | 52   | 52   | 5.6              | 2450      | 7.0  |     |
| 154-080-23CCC  | 183             | 09-25-85     | 24                     | 0.78 | 0.1  | 170 | 52  | 310 | 13   | 753              |                 | 640             | 40  | 0.2 |                 | 0.13 | 1640                          | 660   | 21   | 75   | 5.3              | 2500      | 7.0  |     |
| 154-080-24DAA  | 274             | 07-14-78     | 20                     | 4.6  | 0.22 | 250 | 89  | 150 | 10   | 584              |                 | 790             | 4   | 0.1 | 1               | 0.39 | 1730                          | 990   | 510  | 25   | 2.1              | 1900      | 9.0  | 7.8 |
| 154-080-24DAA  | 274             | 03-21-85     | 25                     | 1.6  | 0.23 | 260 | 96  | 150 | 11   | 328              |                 | 790             | 10  | 0.1 | 9               | 0.58 | 1480                          | 1040  | 780  | 24   | 2.0              | 2250      | 7.0  |     |
| 154-080-24DAA  | 274             | 07-01-85     | 28                     | 0.3  | 0.22 | 250 | 92  | 160 | 12   | 404              |                 | 820             | 9   | 0.1 | 1               | 0.36 | 1570                          | 1000  | 670  | 25   | 2.2              | 2750      | 8.0  |     |
| 154-080-24DAA  | 274             | 09-25-85     | 23                     | 0.4  | 0.22 | 240 | 95  | 150 | 110  | 584              |                 | 810             | 5   | 0.2 |                 | 0.51 | 1710                          | 990   | 510  | 25   | 2.1              | 2250      | 7.0  |     |
| 154-080-25AAB  | 283             | 06-18-85     | 25                     | 0.06 | 0.19 | 240 | 83  | 270 | 12   | 656              |                 | 840             | 10  | 0.1 | 1               | 0.16 | 1770                          | 940   | 400  | 38   | 3.8              |           |      |     |
| 154-080-25AAB  | 283             | 07-01-85     | 28                     | 0.38 | 0.16 | 240 | 81  | 280 | 15   | 488              |                 | 880             | 15  | 0.1 | 1               | 0.3  | 1690                          | 930   | 530  | 39   | 4.0              | 2800      | 8.0  |     |
| 154-080-25AAB  | 283             | 09-25-85     | 25                     | 1.7  | 0.15 | 240 | 83  | 280 | 14   | 716              |                 | 840             | 11  | 0.2 | 1               | 0.4  | 1850                          | 940   | 350  | 39   | 4.0              | 2350      | 8.0  |     |
| 154-080-30AAA  | 07-01-85        | 28           | 1.2                    | 0.12 | 190  | 67  | 310 | 14  | 565  |                  | 730             | 16              | 0.1 | 1   | 0.48            | 1520 | 750                           | 290   | 47   | 4.9  | 2900             | 8.0       |      |     |
| 154-080-30AAA  | 09-25-85        | 25           | 2.7                    | 0.13 | 190  | 68  | 310 | 13  | 801  |                  | 730             | 11              | 0.2 |     | 0.33            | 1790 | 750                           | 97    | 47   | 4.9  | 2500             | 7.0       |      |     |
| 154-081-08CCC  | 321             | 07-21-69     | 27                     | 1.1  | 0.07 | 198 | 68  | 403 | 9    | 627              |                 | 1100            | 24  | 0.2 | 3               | 0.22 | 2110                          | 774   | 259  | 53   | 6.3              | 3000      | 7.8  |     |
| 154-081-13DDD  | 159             | 07-23-69     | 24                     | 4.1  | 0.02 | 168 | 68  | 335 | 12   | 753              |                 | 762             | 49  | 0.2 |                 |      | 1600                          | 700   | 83   | 50   | 5.5              | 2850      | 8.9  |     |
| 154-081-13DDD  | 159             | 11-21-83     | 24                     | 0.07 | 0.42 | 200 | 66  | 320 | 15   | 768              |                 | 730             | 50  | 0.3 | 1               | 0.13 | 1780                          | 770   | 140  | 47   | 5.0              | 2700      | 8.0  |     |
| 154-081-13DDD  | 159             | 08-21-84     | 28                     | 1.6  | 0.46 | 220 | 70  | 330 | 16   | 850              |                 | 740             | 52  | 0.2 | 1               | 0.2  | 1850                          | 840   | 140  | 46   | 5.0              | 2600      | 8.0  |     |
| 154-081-13DDD  | 159             | 03-21-85     | 24                     | 0.65 | 0.43 | 220 | 70  | 320 | 14   | 909              |                 | 720             | 50  | 0.3 | 1               | 0.09 | 1910                          | 840   | 92   | 45   | 4.8              | 2610      | 7.0  |     |
| 154-081-13DDD  | 159             | 07-01-85     | 24                     | 0.2  | 0.39 | 200 | 69  | 310 | 15   | 649              |                 | 740             | 49  | 0.2 | 1               | 0.21 | 1710                          | 780   | 250  | 46   | 5.6              | 2650      | 8.0  |     |
| 154-081-13DDD  | 159             | 09-25-85     | 24                     | 0.53 | 0.42 | 210 | 69  | 330 | 15   | 817              |                 | 720             | 50  | 0.2 | 1               | 0.19 | 1810                          | 810   | 140  | 46   | 5.0              | 2300      | 7.0  |     |
| 154-081-15BAB1 | 270             | 05-15-85     | 26                     | 0.12 | 0.38 | 250 | 83  | 310 | 13   | 622              |                 | 930             | 45  | 0.2 | 1               | 0.13 | 2000                          | 970   | 460  | 41   | 4.3              | 2300      | 7.0  |     |
| 154-081-15BAB1 | 270             | 05-24-85     | 26                     | 2.4  | 0.35 | 230 | 80  | 310 | 12   | 725              |                 | 910             | 43  | 0.2 | 1               | 0.13 | 1990                          | 900   | 310  | 42   | 4.5              | 2800      | 10.0 |     |
| 154-081-15BAB1 | 270             | 05-24-85     | 27                     | 0.68 | 0.37 | 250 | 83  | 330 | 13   | 609              |                 | 970             | 45  | 0.2 | 1               | 0.13 | 1940                          | 970   | 470  | 42   | 4.6              | 2600      | 8.0  |     |
| 154-081-15BAB1 | 270             | 06-27-85     | 24                     | 2.5  | 0.45 | 240 | 83  | 320 | 15   | 696              |                 | 940             | 45  | 0.2 | 6               | 0.23 | 2020                          | 940   | 370  | 42   | 4.5              | 2600      | 8.0  |     |
| 154-081-15BAB1 | 270             | 07-30-85     | 25                     | 1.8  | 0.34 | 240 | 83  | 320 | 14   | 744              |                 | 960             | 43  | 0.2 | 1               | 0.22 | 2120                          | 940   | 330  | 42   | 4.5              | 2600      | 8.0  |     |
| 154-081-15BAB1 | 270             | 08-28-85     | 24                     | 2.2  | 0.37 | 240 | 80  | 310 | 13   | 745              |                 | 950             | 53  | 0.2 | 1               | 0.43 | 2060                          | 930   | 320  | 42   | 4.4              | 2590      | 8.0  |     |

| Location        | Well Depth (ft) | Date Sampled | (milligrams per liter) |      |      |      |     |     |     |                  |                 |                 |      |     |                 |      |      | Hardness as CaCO <sub>3</sub> | % NCH | Na  | SAR  | Spec Cond (umho) | Temp (°C) | pH  |
|-----------------|-----------------|--------------|------------------------|------|------|------|-----|-----|-----|------------------|-----------------|-----------------|------|-----|-----------------|------|------|-------------------------------|-------|-----|------|------------------|-----------|-----|
|                 |                 |              | SiO <sub>2</sub>       | Fe   | Mn   | Ca   | Mg  | Na  | K   | HCO <sub>3</sub> | CO <sub>3</sub> | SO <sub>4</sub> | Cl   | F   | NO <sub>3</sub> | B    | TDS  |                               |       |     |      |                  |           |     |
| 154-081-15BAB1  | 270             | 09-25-85     | 26                     | 1.9  | 0.34 | 250  | 82  | 310 | 14  | 725              |                 | 920             | 47   | 0.2 | 7               | 0.19 | 2150 | 960                           | 370   | 41  | 4.3  | 2800             | 8.0       |     |
| 154-081-15BAB2  | 195             | 05-24-85     | 25                     | 0.36 | 0.31 | 250  | 78  | 120 | 12  | 485              |                 | 690             | 11   | 0.1 | 1               | 0.1  | 1470 | 950                           | 550   | 21  | 1.7  | 2100             | 9.0       |     |
| 154-081-15BAB2  | 195             | 05-24-85     | 26                     | 1.4  | 0.31 | 260  | 78  | 120 | 12  | 480              |                 | 720             | 11   | 0.2 | 1               | 0.09 | 1480 | 970                           | 580   | 21  | 1.7  | 2100             | 8.0       |     |
| 154-081-15BAB2  | 195             | 06-27-85     | 24                     | 0.99 | 0.39 | 260  | 80  | 110 | 13  | 510              |                 | 710             | 11   | 0.2 | 4               | 0.12 | 1520 | 980                           | 560   | 19  | 1.5  | 2100             | 8.0       |     |
| 154-081-15BAB2  | 195             | 07-30-85     | 24                     | 0.84 | 0.32 | 250  | 78  | 140 | 12  | 565              |                 | 710             | 12   | 0.2 | 1               | 0.18 | 1590 | 950                           | 480   | 24  | 2.0  | 2000             | 8.0       |     |
| 154-081-15BAB2  | 195             | 08-28-85     | 25                     | 0.97 | 0.33 | 250  | 80  | 110 | 12  | 565              |                 | 750             | 13   | 0.2 | 1               | 0.3  | 1610 | 950                           | 490   | 20  | 1.6  | 1940             | 8.0       |     |
| 154-081-15BAB2  | 195             | 09-25-85     | 24                     | 1.2  | 0.35 | 240  | 76  | 100 | 13  | 556              |                 | 720             | 14   | 0.2 | 1               | 0.3  | 1610 | 910                           | 460   | 19  | 1.4  | 1950             | 8.0       |     |
| 154-081-15BAB3  | 150             | 05-24-85     | 20                     | 0.03 | 0.11 | 130  | 33  | 51  | 12  | 310              |                 | 260             | 4    | 0.4 | 1               | 0.05 | 698  | 460                           | 210   | 19  | 1.0  | 1120             | 9.0       |     |
| 154-081-15BAB3  | 150             | 06-27-85     | 16                     | 0.06 | 0.12 | 62   | 30  | 47  | 12  | 255              |                 | 260             | 5    | 0.4 | 5               | 0.09 | 581  | 550                           | 140   | 23  | 1.1  | 900              | 8.0       |     |
| 154-081-15BAB3  | 150             | 07-30-85     | 14                     | 0.07 | 0.26 | 100  | 35  | 53  | 12  | 308              |                 | 280             | 3    | 0.3 | 1               | 0.13 | 672  | 390                           | 140   | 22  | 1.2  | 1060             | 8.0       |     |
| 154-081-15BAB3  | 150             | 08-28-85     | 15                     | 0.3  | 0.5  | 130  | 44  | 61  | 12  | 384              |                 | 330             | 4    | 0.3 | 1               | 0.21 | 801  | 510                           | 190   | 20  | 1.2  | 1130             | 8.0       |     |
| 154-081-15BAB3  | 150             | 09-25-85     | 17                     | 0.51 | 0.58 | 140  | 43  | 66  | 12  | 350              |                 | 370             | 5    | 0.2 | 1               | 0.2  | 894  | 530                           | 240   | 21  | 1.5  | 1280             | 8.0       |     |
| 154-081-15BAB4  | 90              | 05-24-85     | 24                     | 1.3  | 0.51 | 200  | 66  | 62  | 15  | 462              |                 | 520             | 5    | 0.1 | 1               | 0.08 | 1150 | 770                           | 390   | 15  | 1.0  | 1750             | 8.0       |     |
| 154-081-15BAB4  | 90              | 06-27-85     | 23                     | 0.01 | 0.72 | 210  | 68  | 65  | 17  | 389              |                 | 530             | 4    | 0.2 | 4               | 0.11 | 1150 | 800                           | 480   | 15  | 1.0  | 1600             | 7.0       |     |
| 154-081-15BAB4  | 90              | 07-30-85     | 24                     | 0.5  | 0.44 | 210  | 68  | 62  | 12  | 476              |                 | 550             | 5    | 0.2 | 1               | 0.13 | 1220 | 800                           | 410   | 14  | 1.0  | 1600             | 8.0       |     |
| 154-081-15BAB4  | 90              | 08-28-85     | 24                     | 2.7  | 0.42 | 210  | 67  | 60  | 12  | 477              |                 | 570             | 6    | 0.2 | 1               | 0.22 | 1210 | 800                           | 410   | 14  | 0.9  | 1525             | 8.0       |     |
| 154-081-15BAB4  | 90              | 09-25-85     | 24                     | 2.6  | 0.4  | 210  | 69  | 60  | 12  | 467              |                 | 530             | 6    | 0.3 | 1               | 0.2  | 1240 | 810                           | 450   | 14  | 0.9  | 1800             | 7.0       |     |
| 154-081-15BBB   | 281             | 07-22-69     | 26                     | 3.3  | 0.02 | 212  | 77  | 324 | 11  | 588              |                 | 1020            | 44   | 0.1 | 0               | 0.07 | 1930 | 847                           | 364   | 45  | 4.8  | 2800             | 8.9       |     |
| 154-081-15BBB   | 281             | 11-21-83     | 25                     | 0.12 | 0.27 | 230  | 78  | 310 | 15  | 584              |                 | 1000            | 47   | 0.2 | 1               | 0.19 | 2020 | 900                           | 420   | 42  | 4.5  | 2800             | 8.0       |     |
| 154-081-15BBB   | 281             | 08-21-84     | 25                     | 0.12 | 0.27 | 260  | 85  | 320 | 16  | 642              |                 | 980             | 48   | 0.2 | 1               | 0.3  | 2050 | 1000                          | 470   | 41  | 4.4  | 3000             | 8.0       |     |
| W<br>UT<br>CT   | 154-081-15BBB   | 281          | 03-21-85               | 24   | 0.06 | 0.26 | 250 | 85  | 310 | 14               | 652             |                 | 1000 | 47  | 0.2             | 1    | 0.14 | 2090                          | 970   | 440 | 40   | 4.3              | 2880      | 7.0 |
| 154-081-15BBB   | 281             | 06-27-85     | 23                     | 0.03 | 0.29 | 240  | 85  | 330 | 15  | 552              |                 | 990             | 45   | 0.1 | 9               | 0.23 | 2060 | 950                           | 500   | 43  | 4.7  | 2800             | 8.0       |     |
| 154-081-15BBB   | 281             | 09-25-85     | 23                     | 0.03 | 0.24 | 230  | 81  | 310 | 15  | 606              |                 | 920             | 44   | 0.1 | 0               | 0.35 | 2010 | 910                           | 410   | 42  | 4.5  | 1900             | 8.0       |     |
| 154-082-01CCC   | 303             | 10-04-68     | 25                     | 2.3  | 0.02 | 194  | 58  | 337 | 10  | 626              |                 | 883             | 68   | 0.2 | 1               | 0.35 | 1860 | 725                           | 212   | 50  | 5.4  | 2400             | 7.2       |     |
| 154-082-01CCC   | 303             | 11-22-83     | 27                     | 1.3  | 0.15 | 210  | 65  | 350 | 13  | 667              |                 | 910             | 72   | 0.2 | 1               | 0.28 | 2010 | 790                           | 250   | 49  | 5.4  | 2525             | 8.9       |     |
| 154-082-01CCC   | 303             | 08-21-84     | 27                     | 0.42 | 0.16 | 230  | 69  | 350 | 14  | 654              |                 | 890             | 73   | 0.2 | 1               | 0.37 | 1960 | 860                           | 320   | 47  | 5.2  | 3000             | 8.0       |     |
| 154-082-01CCC   | 303             | 03-21-85     | 25                     | 0.22 | 0.15 | 220  | 68  | 340 | 12  | 721              |                 | 850             | 72   | 0.3 | 1               | 0.14 | 2050 | 830                           | 240   | 47  | 5.1  | 2660             | 7.0       |     |
| 154-082-01CCC   | 303             | 06-27-85     | 25                     | 1.8  | 0.17 | 220  | 70  | 360 | 13  | 638              |                 | 850             | 67   | 0.2 | 7               | 0.24 | 1830 | 840                           | 310   | 48  | 5.4  | 2450             | 7.0       |     |
| 154-082-01CCC   | 303             | 09-25-85     | 25                     | 0.88 | 0.15 | 220  | 68  | 350 | 12  | 668              |                 | 890             | 71   | 0.2 | 1               | 0.16 | 1990 | 830                           | 280   | 47  | 5.3  | 2650             | 8.0       |     |
| 154-082-02CCB   | 100             | 10-01-68     | 27                     | 1.4  | 0.09 | 80   | 15  | 253 | 8   | 610              |                 | 303             | 6    | 0.2 | 0               | 0.29 | 987  | 260                           | 67    | 6.8 | 1300 | 8.3              |           |     |
| 154-082-02CCB   | 100             | 12-04-69     | 24                     | 2.0  | 0.16 | 82   | 16  | 244 | 6   | 597              |                 | 300             | 6    | 0.3 | 1               | 0.25 | 925  | 270                           | 66    | 6.5 |      |                  |           |     |
| 154-082-02CCB   | 100             | 05-27-83     | 25                     | 1.3  | 0.4  | 67   | 17  | 250 | 8   | 589              |                 | 270             | 5    | 0.2 | 1               | 0.23 | 924  | 240                           | 69    | 7.0 | 1460 | 12.0             |           |     |
| 154-082-02CCB   | 100             | 08-17-83     | 27                     | 1.5  | 0.3  | 71   | 16  | 240 | 10  | 594              |                 | 290             | 7    | 0.3 | 1               | 0.18 | 953  | 240                           | 67    | 6.7 | 1650 | 12.0             |           |     |
| 154-082-02CCB   | 100             | 11-22-83     | 25                     | 1.6  | 0.29 | 73   | 16  | 250 | 9   | 593              |                 | 290             | 7    | 0.2 | 1               | 0.19 | 968  | 250                           | 68    | 6.9 | 1320 | 7.0              |           |     |
| 154-082-02CCB   | 100             | 08-21-84     | 27                     | 1.3  | 0.25 | 71   | 16  | 240 | 10  | 603              |                 | 290             | 6    | 0.3 | 0               | 0.29 | 960  | 240                           | 67    | 6.7 | 1600 | 8.0              |           |     |
| 154-082-02CCB   | 100             | 03-20-85     | 23                     | 1.7  | 0.23 | 71   | 16  | 240 | 8   | 606              |                 | 280             | 6    | 0.3 | 1               | 0.11 | 958  | 240                           | 67    | 6.7 | 1550 | 8.0              |           |     |
| 154-082-02CCB   | 100             | 04-24-85     | 14                     | 1.9  | 0.21 | 72   | 16  | 250 | 9   | 602              |                 | 290             | 6    | 0.3 | 1               | 0.12 | 951  | 250                           | 68    | 6.9 | 1480 | 8.0              |           |     |
| 154-082-02CCB   | 100             | 06-27-85     | 24                     | 0.59 | 0.22 | 70   | 16  | 250 | 9   | 586              |                 | 280             | 5    | 0.3 | 4               | 0.19 | 930  | 240                           | 68    | 7.0 | 1480 | 8.0              |           |     |
| 154-082-02CCB   | 100             | 09-24-85     | 21                     | 1.6  | 0.22 | 71   | 17  | 240 | 9   | 603              |                 | 280             | 6    | 0.2 | 1               | 0.27 | 926  | 250                           | 67    | 6.6 | 1460 | 8.0              |           |     |
| 154-082-02CCCB1 | 152             | 10-09-84     | 23                     | 1.2  | 0.24 | 140  | 46  | 390 | 9   | 723              |                 | 700             | 52   | 0.5 | 1               | 0.31 | 1690 | 540                           | 61    | 7.3 | 2700 | 8.0              |           |     |
| 154-082-02CCCB1 | 152             | 03-20-85     | 25                     | 0.95 | 0.27 | 140  | 45  | 370 | 10  | 708              |                 | 720             | 52   | 0.5 | 1               | 0.13 | 1750 | 540                           | 60    | 6.9 | 2500 | 8.0              |           |     |
| 154-082-02CCCB1 | 152             | 04-24-85     | 15                     | 0.95 | 0.23 | 140  | 45  | 380 | 11  | 707              |                 | 720             | 51   | 0.4 | 1               | 0.24 | 1700 | 540                           | 60    | 7.1 | 2375 | 8.0              |           |     |
| 154-082-02CCCB1 | 152             | 05-24-85     | 28                     | 0.03 | 0.23 | 140  | 48  | 380 | 9   | 717              |                 | 710             | 48   | 0.4 | 1               | 0.11 | 1700 | 550                           | 60    | 7.0 | 2150 | 9.0              |           |     |
| 154-082-02CCCB1 | 152             | 06-27-85     | 25                     | 0.84 | 0.27 | 140  | 45  | 390 | 11  | 710              |                 | 700             | 48   | 0.5 | 10              | 0.21 | 1720 | 540                           | 61    | 7.3 | 2400 | 8.0              |           |     |
| 154-082-02CCCB1 | 152             | 07-29-85     | 24                     | 0.07 | 0.24 | 140  | 45  | 380 | 11  | 685              |                 | 660             | 45   | 0.4 | 1               | 0.21 | 1590 | 540                           | 60    | 7.1 | 2500 | 9.0              |           |     |
| 154-082-02CCCB1 | 152             | 08-28-85     | 24                     | 0.79 | 0.25 | 140  | 45  | 370 | 10  | 712              |                 | 690             | 49   | 0.4 | 1               | 0.39 | 1740 | 540                           | 60    | 6.9 | 2260 | 8.0              |           |     |
| 154-082-02CCCB1 | 152             | 09-25-85     | 22                     | 0.14 | 0.24 | 140  | 48  | 380 | 11  | 728              |                 | 690             | 47   | 0.4 | 1               | 0.28 | 1650 | 550                           | 60    | 7.0 | 1950 | 7.0              |           |     |
| 154-082-02CCCB2 | 47              | 10-09-84     | 18                     | 0.06 | 0.57 | 81   | 26  | 94  | 6   | 556              |                 | 170             | 18   | 0.3 | 1               | 0.18 | 563  | 310                           | 18    | 39  | 2.3  | 990              | 9.0       |     |
| 154-082-02CCCB2 | 47              | 03-20-85     | 22                     | 0.13 | 0.79 | 92   | 29  | 78  | 6   | 395              |                 | 190             | 18   | 0.3 | 1               | 0.08 | 652  | 350                           | 26    | 32  | 1.8  | 1100             | 7.0       |     |

| Location        | Well Depth (ft) | Date Sampled | (milligrams per liter) |      |      |     |    |     |    |                  |                 |                 |    |     |                 | Hardness as CaCO <sub>3</sub> | NCH | %   | SAR | Spec Cond (umho) | Temp (°C) | pH   |     |
|-----------------|-----------------|--------------|------------------------|------|------|-----|----|-----|----|------------------|-----------------|-----------------|----|-----|-----------------|-------------------------------|-----|-----|-----|------------------|-----------|------|-----|
|                 |                 |              | SiO <sub>2</sub>       | Fe   | Mn   | Ca  | Mg | Na  | K  | HCO <sub>3</sub> | CO <sub>3</sub> | SO <sub>4</sub> | Cl | F   | NO <sub>3</sub> | B                             |     |     |     |                  |           |      |     |
| 154-082-02CCCB2 | 47              | 04-24-85     | 14                     | 0.03 | 0.76 | 97  | 30 | 81  | 6  | 368              |                 | 200             | 17 | 0.2 | 1               | 0.12                          | 629 | 370 | 64  | 32               | 1.8       | 990  | 7.0 |
| 154-082-02CCCB2 | 47              | 05-24-85     | 24                     | 0.02 | 0.8  | 100 | 31 | 79  | 5  | 393              |                 | 200             | 16 | 0.2 | 1               | 0.07                          | 641 | 380 | 55  | 31               | 1.8       | 990  | 9.0 |
| 154-082-02CCCB2 | 47              | 06-27-85     | 21                     | 0.04 | 0.8  | 97  | 30 | 82  | 6  | 384              |                 | 200             | 15 | 0.3 | 3               | 0.13                          | 655 | 370 | 51  | 32               | 1.9       | 1050 | 8.0 |
| 154-082-02CCCB2 | 47              | 07-29-85     | 22                     | 0.01 | 0.74 | 96  | 30 | 80  | 6  | 392              |                 | 180             | 14 | 0.2 | 1               | 0.15                          | 604 | 360 | 42  | 32               | 1.8       | 1060 | 9.0 |
| 154-082-02CCCB2 | 47              | 08-28-85     | 21                     | 0.07 | 0.71 | 90  | 28 | 81  | 6  | 392              |                 | 170             | 18 | 0.2 | 1               | 0.25                          | 621 | 340 | 19  | 34               | 1.9       | 920  | 8.0 |
| 154-082-02CCCB2 | 47              | 09-25-85     | 18                     | 0.01 | 0.65 | 92  | 29 | 82  | 6  | 395              |                 | 180             | 15 | 0.2 | 1               | 0.19                          | 625 | 350 | 26  | 33               | 1.9       | 980  | 7.0 |
| 154-082-03ACB   | 214             | 09-20-68     | 29                     | 2.2  | 0.17 | 63  | 17 | 220 | 5  | 582              |                 | 174             | 48 | 0.5 | 0.2             |                               | 861 | 226 | 67  | 6.4              | 1200      | 8.9  |     |
| 154-082-03ACB   | 214             | 11-22-83     | 27                     | 0.04 | 0.14 | 58  | 21 | 230 | 8  | 574              |                 | 160             | 62 | 0.5 | 1               | 0.18                          | 858 | 230 | 67  | 6.6              | 1360      | 9.0  |     |
| 154-082-03ACB   | 214             | 08-21-84     | 29                     | 1.5  | 0.16 | 60  | 21 | 230 | 9  | 606              |                 | 160             | 69 | 0.5 | 1               | 0.23                          | 867 | 240 | 67  | 6.5              | 1420      | 9.0  |     |
| 154-082-03ACB   | 214             | 03-20-85     | 25                     | 0.35 | 0.16 | 61  | 21 | 220 | 7  | 594              |                 | 160             | 67 | 0.5 | 1               | 0.1                           | 876 | 240 | 66  | 6.2              | 1390      | 8.0  |     |
| 154-082-03ACB   | 214             | 06-26-85     | 26                     | 0.05 | 0.14 | 61  | 21 | 230 | 8  | 593              |                 | 150             | 64 | 0.4 | 1               | 0.17                          | 824 | 240 | 67  | 6.5              | 1360      | 9.0  |     |
| 154-082-03ACB   | 214             | 09-24-85     | 22                     | 1.3  | 0.15 | 59  | 21 | 220 | 8  | 607              |                 | 150             | 67 | 0.4 | 1               | 0.12                          | 430 | 230 | 66  | 6.3              | 1350      | 8.0  |     |
| 154-082-03ACC   | S               | 10-02-68     | 3                      | 0.16 | 0.01 | 62  | 26 | 117 | 13 | 361              |                 | 193             | 34 | 0.3 | 0.2             |                               | 627 | 261 | 48  | 3.1              |           | 11.1 |     |
| 154-082-03BCB   | 202             | 06-69        | 20                     | 0.4  | 0.29 | 158 | 60 | 90  | 8  | 601              |                 | 255             | 50 | 0.1 | 1               | 0.47                          | 943 | 641 | 148 | 23               | 1.5       | 3.3  |     |
| 154-082-03BCC   | 223             | 10-09-68     | 26                     | 1.8  | 0.16 | 77  | 20 | 153 | 5  | 479              |                 | 212             | 7  | 0.4 | 1               | 0.2                           | 728 | 274 | 54  | 4.0              | 1050      | 8.3  |     |
| 154-082-03BCC   | 223             | 11-22-83     | 26                     | 0.63 | 0.22 | 85  | 26 | 190 | 8  | 582              |                 | 170             | 65 | 0.4 | 1               | 0.15                          | 853 | 320 | 56  | 4.6              | 1390      | 8.0  |     |
| 154-082-03BCC   | 223             | 08-21-84     | 27                     | 0.99 | 0.19 | 73  | 21 | 190 | 8  | 540              |                 | 190             | 34 | 0.4 | 0.22            |                               | 797 | 270 | 60  | 5.0              | 1360      | 8.0  |     |
| 154-082-03BCC   | 223             | 03-20-85     | 24                     | 1.4  | 0.24 | 100 | 28 | 200 | 7  | 545              |                 | 350             | 24 | 0.4 | 1               | 0.08                          | 990 | 360 | 54  | 4.6              | 1500      | 8.0  |     |
| 154-082-03BCC   | 223             | 06-26-85     | 25                     | 0.33 | 0.18 | 78  | 23 | 190 | 8  | 541              |                 | 180             | 37 | 0.3 | 8               | 0.15                          | 792 | 290 | 58  | 4.8              | 1360      | 8.0  |     |
| 154-082-03BCC   | 223             | 09-24-85     | 25                     | 0.9  | 0.18 | 70  | 21 | 190 | 7  | 531              |                 | 200             | 31 | 0.4 | 0.19            |                               | 807 | 260 | 60  | 5.1              | 1240      | 8.5  |     |
| 154-082-03BCCA1 | 200             | 10-09-84     | 24                     | 0.08 | 0.21 | 60  | 21 | 220 | 7  | 592              |                 | 150             | 56 | 0.5 | 1               | 0.24                          | 817 | 240 | 66  | 6.2              | 1400      | 8.0  |     |
| 154-082-03BCCA1 | 200             | 03-20-85     | 24                     | 0.07 | 0.2  | 60  | 20 | 210 | 7  | 586              |                 | 160             | 56 | 0.5 | 1               | 0.1                           | 823 | 230 | 66  | 6.0              | 1360      | 7.0  |     |
| 154-082-03BCCA1 | 200             | 04-24-85     | 15                     | 0.05 | 0.18 | 61  | 20 | 220 | 7  | 581              |                 | 160             | 60 | 0.5 | 1               | 0.13                          | 793 | 230 | 66  | 6.3              | 1275      | 8.0  |     |
| 154-082-03BCCA1 | 200             | 05-23-85     | 29                     | 0.07 | 0.19 | 60  | 20 | 230 | 6  | 580              |                 | 160             | 55 | 0.5 | 1               | 0.09                          | 828 | 230 | 68  | 6.6              | 1290      | 8.0  |     |
| 154-082-03BCCA1 | 200             | 06-26-85     | 25                     | 1.1  | 0.2  | 58  | 19 | 230 | 7  | 576              |                 | 150             | 52 | 0.4 | 9               | 0.17                          | 818 | 220 | 68  | 6.7              | 1360      | 8.0  |     |
| 154-082-03BCCA1 | 200             | 07-29-85     | 26                     | 1.2  | 0.19 | 59  | 20 | 230 | 7  | 588              |                 | 150             | 69 | 0.4 | 1               | 0.18                          | 847 | 230 | 68  | 6.6              | 1390      | 8.0  |     |
| 154-082-03BCCA1 | 200             | 08-27-85     | 26                     | 1.6  | 0.16 | 54  | 18 | 220 | 7  | 574              |                 | 150             | 49 | 0.4 | 0.26            |                               | 817 | 210 | 69  | 6.6              | 1320      | 8.0  |     |
| 154-082-03BCCA1 | 200             | 09-24-85     | 25                     | 1.5  | 0.17 | 60  | 20 | 230 | 7  | 586              |                 | 150             | 55 | 0.4 | 0.21            |                               | 824 | 230 | 67  | 6.6              | 1460      | 7.0  |     |
| 154-082-03BCCA2 | 155             | 10-04-84     | 23                     | 0.52 | 0.13 | 50  | 17 | 190 | 5  | 542              |                 | 140             | 31 | 0.4 | 1               | 0.18                          | 709 | 200 | 67  | 5.8              | 1240      | 8.0  |     |
| 154-082-03BCCA2 | 155             | 03-20-85     | 23                     | 1.7  | 0.15 | 51  | 17 | 190 | 6  | 544              |                 | 140             | 29 | 0.5 | 1               | 0.09                          | 719 | 200 | 67  | 5.8              | 1030      | 7.0  |     |
| 154-082-03BCCA2 | 155             | 04-24-85     | 15                     | 1.2  | 0.13 | 51  | 17 | 200 | 6  | 547              |                 | 140             | 30 | 0.4 | 1               | 0.13                          | 705 | 200 | 68  | 6.1              | 1130      | 7.0  |     |
| 154-082-03BCCA2 | 155             | 05-23-85     | 28                     | 2.2  | 0.15 | 52  | 17 | 200 | 5  | 538              |                 | 140             | 29 | 0.5 | 0.09            |                               | 730 | 200 | 68  | 6.1              | 1170      | 8.0  |     |
| 154-082-03BCCA2 | 155             | 06-26-85     | 25                     | 1.8  | 0.13 | 50  | 17 | 200 | 6  | 538              |                 | 140             | 27 | 0.4 | 7               | 0.16                          | 719 | 200 | 68  | 6.1              | 1250      | 7.0  |     |
| 154-082-03BCCA2 | 155             | 07-29-85     | 25                     | 1.8  | 0.14 | 52  | 17 | 200 | 6  | 537              |                 | 130             | 27 | 0.4 | 1               | 0.16                          | 727 | 200 | 68  | 6.1              | 1220      | 8.0  |     |
| 154-082-03BCCA2 | 155             | 08-27-85     | 26                     | 2.0  | 0.11 | 47  | 17 | 180 | 6  | 536              |                 | 140             | 28 | 0.4 | 0.27            |                               | 727 | 190 | 67  | 5.7              | 1150      | 8.0  |     |
| 154-082-03BCCA2 | 155             | 09-24-85     | 23                     | 1.3  | 0.15 | 51  | 17 | 200 | 6  | 537              |                 | 150             | 22 | 0.2 | 0.14            |                               | 708 | 200 | 68  | 6.1              | 1140      | 7.0  |     |
| 154-082-03BCCA3 | 28              | 03-21-85     | 16                     | 1.1  | 0.88 | 120 | 43 | 91  | 7  | 509              |                 | 220             | 26 | 0.2 | 1               | 0.19                          | 781 | 480 | 60  | 29               | 1.8       | 1160 | 6.0 |
| 154-082-03BCCA3 | 28              | 04-24-85     | 10                     | 2.6  | 0.88 | 130 | 42 | 88  | 7  | 509              |                 | 220             | 27 | 0.2 | 1               | 0.19                          | 773 | 500 | 80  | 27               | 1.7       | 1170 | 7.0 |
| 154-082-03BCCA3 | 28              | 05-23-85     | 19                     | 5.3  | 0.96 | 120 | 40 | 85  | 6  | 497              |                 | 210             | 25 | 0.2 | 1               | 0.16                          | 749 | 460 | 57  | 28               | 1.7       | 1240 | 8.0 |
| 154-082-03BCCA3 | 28              | 06-26-85     | 18                     | 5.1  | 1.0  | 130 | 42 | 89  | 7  | 498              |                 | 220             | 27 | 0.2 | 0.3             |                               | 765 | 500 | 89  | 28               | 1.7       | 1310 | 7.0 |
| 154-082-03BCCA3 | 28              | 07-29-85     | 18                     | 5.6  | 1.0  | 120 | 39 | 85  | 7  | 498              |                 | 230             | 28 | 0.2 | 1               | 0.28                          | 761 | 460 | 52  | 28               | 1.7       | 1260 | 7.0 |
| 154-082-03BCCA3 | 28              | 08-27-85     | 18                     | 6.4  | 0.95 | 120 | 41 | 83  | 7  | 481              |                 | 230             | 31 | 0.2 | 1               | 0.54                          | 771 | 470 | 74  | 27               | 1.7       | 1210 | 7.0 |
| 154-082-03BCCA3 | 28              | 09-24-85     | 17                     | 5.8  | 0.93 | 120 | 40 | 89  | 7  | 474              |                 | 210             | 21 | 0.2 | 0.38            |                               | 726 | 460 | 76  | 29               | 1.8       | 1180 | 6.0 |
| 154-082-03BCC1  | 230             | 02-25-75     | 20                     | 2.1  | 0.24 | 72  | 22 | 170 | 5  | 512              |                 | 210             | 16 | 0.5 | 1               | 0.55                          | 765 | 270 | 57  | 4.5              |           |      |     |
| 154-082-03BCC1  | 230             | 02-26-75     | 10                     | 2.2  | 0.24 | 71  | 22 | 170 | 5  | 509              |                 | 210             | 16 | 0.5 | 1               | 0.43                          | 753 | 270 | 57  | 4.5              |           |      |     |
| 154-082-03BCC1  | 230             | 09-27-78     | 25                     | 1.1  | 0.22 | 72  | 15 | 190 | 5  | 524              |                 | 190             | 26 | 0.4 | 4               | 0.29                          | 736 | 240 | 63  | 5.3              |           |      |     |
| 154-082-03BCC1  | 230             | 08-03-79     | 28                     | 2.0  | 0.22 | 72  | 19 | 190 | 5  | 542              |                 | 190             | 30 | 0.5 | 1               | 0.3                           | 786 | 260 | 61  | 5.1              |           |      |     |
| 154-082-03BCC1  | 230             | 05-01-80     | 17                     | 1.6  | 0.19 | 71  | 20 | 190 | 4  | 552              |                 | 190             | 29 | 0.4 | 1               |                               | 838 | 260 | 61  | 5.1              | 1260      | 12.0 |     |
| 154-082-03BCC1  | 230             | 08-12-80     | 28                     | 1.9  | 0.23 | 69  | 21 | 190 | 4  | 546              |                 | 190             | 30 | 0.5 | 4               | 0.12                          | 816 | 260 | 61  | 5.1              | 1550      | 9.0  |     |
| 154-082-03BCC1  | 230             | 08-21-81     | 29                     | 2.4  | 0.21 | 73  | 17 | 230 | 7  | 611              |                 | 180             | 55 | 0.4 | 1               | 0.09                          | 851 | 250 | 66  | 6.3              | 1460      | 7.0  |     |

| Location       | Well Depth (ft) | Date Sampled | (milligrams per liter) |      |      |    |    |     |    |                  |                 |                 |    |     |                 |      | Hardness as CaCO <sub>3</sub> | % Na | SAR | Spec Cond (umho) | Temp (°C) | pH   |
|----------------|-----------------|--------------|------------------------|------|------|----|----|-----|----|------------------|-----------------|-----------------|----|-----|-----------------|------|-------------------------------|------|-----|------------------|-----------|------|
|                |                 |              | SiO <sub>2</sub>       | Fe   | Mn   | Ca | Mg | Na  | K  | HCO <sub>3</sub> | CO <sub>3</sub> | SO <sub>4</sub> | Cl | F   | NO <sub>3</sub> | B    |                               |      |     |                  |           |      |
| 154-082-03BCC1 | 230             | 12-29-81     | 26                     | 2.1  | 0.2  | 72 | 22 | 200 | 8  | 533              |                 | 190             | 45 | 0.4 | 1               | 0.13 | 794                           | 270  | 61  | 5.3              | 1260      | 8.0  |
| 154-082-03BCC1 | 230             | 05-27-82     | 24                     | 2.2  | 0.23 | 77 | 20 | 190 | 5  | 538              |                 | 180             | 30 | 0.4 | 1               | 0.12 | 809                           | 270  | 60  | 5.0              | 1280      | 9.0  |
| 154-082-03BCC1 | 230             | 08-26-82     | 27                     | 2.1  | 0.21 | 69 | 20 | 190 | 8  | 541              |                 | 190             | 34 | 0.5 | 3               | 0.18 | 812                           | 250  | 61  | 5.2              | 1120      | 15.0 |
| 154-082-03BCC1 | 230             | 02-17-83     | 26                     | 1.3  | 0.22 | 65 | 20 | 230 | 8  | 582              |                 | 170             | 57 | 0.4 |                 | 0.15 | 847                           | 240  | 66  | 6.5              | 1360      | 9.0  |
| 154-082-03BCC1 | 230             | 05-26-83     | 26                     | 1.9  | 0.21 | 68 | 21 | 190 | 13 | 531              |                 | 190             | 44 | 0.3 |                 | 0.16 | 793                           | 260  | 60  | 5.1              | 1360      | 9.0  |
| 154-082-03BCC1 | 230             | 08-18-83     | 26                     | 2.0  | 0.2  | 68 | 20 | 240 | 8  | 594              |                 | 180             | 61 | 0.6 | 6               | 0.19 | 875                           | 250  | 67  | 6.6              | 1550      | 12.0 |
| 154-082-03BCC1 | 230             | 11-23-83     | 25                     | 1.9  | 0.18 | 66 | 20 | 230 | 9  | 593              |                 | 210             | 63 | 0.5 |                 | 0.17 | 872                           | 250  | 66  | 6.5              | 1490      | 8.0  |
| 154-082-03BCC1 | 230             | 02-28-84     | 27                     | 2.0  | 0.21 | 71 | 20 | 200 | 8  | 548              |                 | 190             | 36 | 0.4 |                 | 0.17 | 789                           | 260  | 62  | 5.4              | 1330      | 9.0  |
| 154-082-03BCC1 | 230             | 04-12-84     | 24                     | 1.8  | 0.2  | 74 | 21 | 190 | 7  | 542              |                 | 200             | 32 | 0.4 | 4               | 0.19 | 833                           | 270  | 60  | 5.0              | 1300      | 8.0  |
| 154-082-03BCC1 | 230             | 05-22-84     | 28                     | 1.9  | 0.22 | 75 | 21 | 210 | 8  | 571              |                 | 210             | 41 | 0.4 |                 | 0.17 | 847                           | 270  | 62  | 5.6              | 1380      | 9.0  |
| 154-082-03BCC1 | 230             | 08-16-84     | 27                     | 1.5  | 0.2  | 73 | 20 | 200 | 8  | 546              |                 | 200             | 34 | 0.4 | 1               | 0.2  | 812                           | 260  | 61  | 5.4              | 1390      | 10.0 |
| 154-082-03BCC1 | 230             | 08-31-84     | 28                     | 1.4  | 0.21 | 72 | 21 | 190 | 8  | 538              |                 | 200             | 33 | 0.4 | 1               | 0.21 | 780                           | 270  | 60  | 5.0              | 1370      | 8.0  |
| 154-082-03BCC1 | 230             | 09-12-84     | 27                     | 1.9  | 0.21 | 71 | 20 | 180 | 7  | 540              |                 | 190             | 33 | 0.4 | 1               | 0.2  | 784                           | 260  | 59  | 4.9              | 1320      | 8.0  |
| 154-082-03BCC1 | 230             | 09-20-84     | 26                     | 1.9  | 0.2  | 73 | 20 | 190 | 8  | 543              |                 | 190             | 34 | 0.5 | 1               | 0.21 | 795                           | 260  | 60  | 5.1              | 1340      | 8.0  |
| 154-082-03BCC1 | 230             | 09-27-84     | 24                     | 1.8  | 0.21 | 71 | 21 | 190 | 6  | 542              |                 | 190             | 34 | 0.4 | 1               | 0.19 | 789                           | 260  | 60  | 5.1              | 1350      | 8.0  |
| 154-082-03BCC1 | 230             | 10-03-84     | 24                     | 1.8  | 0.21 | 73 | 21 | 190 | 6  | 541              |                 | 190             | 32 | 0.4 | 1               | 0.19 | 784                           | 270  | 60  | 5.0              | 1360      | 8.0  |
| 154-082-03BCC1 | 230             | 10-11-84     | 25                     | 1.7  | 0.21 | 73 | 21 | 190 | 6  | 541              |                 | 200             | 33 | 0.5 | 1               | 0.2  | 809                           | 270  | 60  | 5.0              | 1320      | 8.0  |
| 154-082-03BCC1 | 230             | 10-24-84     | 28                     | 2.0  | 0.2  | 74 | 21 | 200 | 6  | 546              |                 | 200             | 31 | 0.4 | 1               | 0.15 | 798                           | 270  | 61  | 5.3              | 1300      | 8.0  |
| 154-082-03BCC1 | 230             | 11-08-84     | 29                     | 1.8  | 0.19 | 75 | 21 | 190 | 6  | 539              |                 | 210             | 32 | 0.4 | 1               | 0.15 | 820                           | 270  | 60  | 5.0              | 1180      | 8.0  |
| 154-082-03BCC1 | 230             | 11-20-84     | 29                     | 1.6  | 0.21 | 74 | 21 | 200 | 8  | 533              |                 | 210             | 29 | 0.5 | 1               | 0.15 | 832                           | 270  | 61  | 5.3              | 1195      | 8.0  |
| 154-082-03BCC1 | 230             | 01-09-85     | 27                     | 1.7  | 0.24 | 76 | 22 | 190 | 7  | 534              |                 | 210             | 33 | 0.4 | 1               | 0.09 | 841                           | 280  | 59  | 4.9              | 1260      | 8.0  |
| 154-082-03BCC1 | 230             | 02-12-85     | 27                     | 1.7  | 0.22 | 77 | 23 | 190 | 7  | 533              |                 | 220             | 29 | 0.5 | 1               | 0.1  | 828                           | 290  | 58  | 4.8              | 1240      | 8.0  |
| 154-082-03BCC1 | 230             | 03-06-85     | 27                     | 1.7  | 0.23 | 76 | 23 | 180 | 7  | 538              |                 | 220             | 31 | 0.5 | 1               | 0.12 | 870                           | 280  | 57  | 4.7              | 1290      | 8.0  |
| 154-082-03BCC1 | 230             | 03-21-85     | 25                     | 1.7  | 0.24 | 78 | 22 | 190 | 7  | 541              |                 | 220             | 31 | 0.5 | 1               | 0.08 | 864                           | 290  | 40  | 4.8              | 1300      | 8.0  |
| 154-082-03BCC1 | 230             | 04-18-85     | 20                     | 2.0  | 0.21 | 78 | 22 | 200 | 7  | 548              |                 | 210             | 41 | 0.5 | 1               | 0.09 | 862                           | 290  | 60  | 5.1              | 1380      | 8.0  |
| 154-082-03BCC1 | 230             | 05-15-85     | 27                     | 1.7  | 0.2  | 74 | 21 | 220 | 6  | 581              |                 | 190             | 49 | 0.4 |                 | 0.09 | 860                           | 270  | 63  | 5.8              | 1240      | 8.0  |
| 154-082-03BCC1 | 230             | 07-02-85     | 22                     | 1.9  | 0.22 | 71 | 21 | 200 | 8  | 548              |                 | 180             | 51 | 0.4 | 5               | 0.22 | 835                           | 260  | 61  | 5.4              | 1260      | 8.0  |
| 154-082-03BCC1 | 230             | 07-29-85     | 26                     | 1.9  | 0.22 | 75 | 22 | 190 | 7  | 541              |                 | 200             | 31 | 0.4 | 1               | 0.14 | 801                           | 280  | 59  | 4.9              | 1340      | 8.0  |
| 154-082-03BCC1 | 230             | 08-27-85     | 26                     | 1.7  | 0.2  | 73 | 21 | 190 | 7  | 534              |                 | 190             | 31 | 0.4 | 1               | 0.25 | 836                           | 270  | 60  | 5.0              | 1410      | 9.0  |
| 154-082-03BCC1 | 230             | 09-24-85     | 25                     | 1.8  | 0.2  | 78 | 22 | 190 | 7  | 545              |                 | 210             | 35 | 0.4 |                 | 0.21 | 853                           | 290  | 58  | 4.8              | 1360      | 8.0  |
| 154-082-03BCC1 | 230             | 11-21-85     | 32                     | 1.9  | 0.2  | 72 | 21 | 200 | 7  | 563              |                 | 190             | 44 | 0.4 | 1               | 0.2  | 843                           | 270  | 61  | 5.3              | 1220      | 5.0  |
| 154-082-03BCC1 | 230             | 12-30-85     | 27                     | 1.5  | 0.22 | 77 | 22 | 200 | 7  | 557              |                 | 220             | 39 | 0.4 | 1               | 0.2  | 861                           | 280  | 60  | 5.2              | 1060      | 7.0  |
| 154-082-03BCC1 | 230             | 02-26-86     | 29                     | 2.0  | 0.24 | 79 | 22 | 200 | 7  | 564              |                 | 220             | 38 | 0.4 | 1               | 0.2  | 908                           | 290  | 59  | 5.1              | 1350      | 8.0  |
| 154-082-03BCC1 | 230             | 03-27-86     | 29                     | 1.9  | 0.26 | 82 | 23 | 200 | 6  | 544              |                 | 230             | 33 | 0.4 | 1               | 0.2  | 849                           | 300  | 59  | 5.0              | 1370      | 8.0  |
| 154-082-03BCC1 | 230             | 06-04-86     | 28                     | 1.9  | 0.22 | 81 | 23 | 190 | 6  | 543              |                 | 230             | 32 | 0.4 |                 | 0.24 | 868                           | 300  | 58  | 4.8              |           |      |
| 154-082-03BCC1 | 230             | 07-23-86     | 28                     | 2.0  | 0.22 | 78 | 22 | 190 | 7  | 540              |                 | 220             | 31 | 0.3 | 5               | 0.15 | 832                           | 290  | 58  | 4.8              | 1400      | 9.0  |
| 154-082-03BCC1 | 230             | 09-09-86     | 29                     | 1.8  | 0.2  | 73 | 21 | 210 | 8  | 588              |                 | 170             | 53 | 0.4 | 4               | 0.26 | 868                           | 270  | 62  | 5.6              | 1390      | 8.0  |
| 154-082-03BCC1 | 230             | 12-16-86     | 26                     | 1.7  | 0.22 | 76 | 22 | 200 | 6  | 561              |                 | 220             | 37 | 0.4 | 1               | 0.25 | 868                           | 280  | 60  | 5.2              | 1400      | 10.0 |
| 154-082-03BCD2 | 235             | 03-20-84     | 24                     | 0.92 | 0.18 | 69 | 21 | 200 | 7  | 569              |                 | 180             | 48 | 0.5 | 0.1             |      | 846                           | 260  | 62  | 5.4              | 1410      | 8.0  |
| 154-082-03BCD2 | 235             | 10-10-84     | 24                     | 0.58 | 0.18 | 69 | 21 | 220 | 6  | 600              |                 | 180             | 56 | 0.5 | 1               | 0.23 | 874                           | 260  | 64  | 5.9              | 1460      | 9.0  |
| 154-082-03BCD2 | 235             | 03-20-85     | 24                     | 0.92 | 0.18 | 69 | 21 | 200 | 7  | 569              |                 | 180             | 48 | 0.5 | 0.1             |      | 846                           | 260  | 62  | 5.4              | 1410      | 8.0  |
| 154-082-03BCD2 | 235             | 04-24-85     | 14                     | 0.96 | 0.18 | 72 | 22 | 200 | 7  | 581              |                 | 180             | 49 | 0.4 | 1               | 0.14 | 829                           | 270  | 61  | 5.3              | 1280      | 8.0  |
| 154-082-03BCD2 | 235             | 05-23-85     | 28                     | 2.0  | 0.2  | 73 | 22 | 210 | 6  | 578              |                 | 170             | 49 | 0.4 |                 | 0.08 | 831                           | 270  | 62  | 5.6              | 1420      | 9.0  |
| 154-082-03BCD2 | 235             | 06-26-85     | 25                     | 1.6  | 0.17 | 72 | 22 | 210 | 8  | 581              |                 | 180             | 49 | 0.3 | 7               | 0.17 | 822                           | 270  | 62  | 5.6              | 1400      | 9.0  |
| 154-082-03BCD2 | 235             | 07-29-85     | 26                     | 1.9  | 0.2  | 72 | 22 | 210 | 8  | 593              |                 | 170             | 52 | 0.4 | 1               | 0.16 | 853                           | 270  | 62  | 5.6              | 1300      | 9.0  |
| 154-082-03BCD2 | 235             | 08-27-85     | 27                     | 1.7  | 0.17 | 70 | 22 | 210 | 7  | 582              |                 | 180             | 54 | 0.4 | 1               | 0.28 | 852                           | 270  | 63  | 5.6              | 1470      | 9.0  |
| 154-082-03BCD2 | 235             | 09-24-85     | 26                     | 2.0  | 0.19 | 77 | 23 | 210 | 7  | 579              |                 | 180             | 53 | 0.5 | 4               | 0.23 | 871                           | 290  | 61  | 5.4              | 1410      | 8.0  |
| 154-082-03BCD3 | 114             | 10-10-84     | 24                     | 0.49 | 0.24 | 61 | 20 | 180 | 5  | 643              |                 | 98              | 12 | 0.5 | 1               | 0.2  | 719                           | 230  | 62  | 5.2              | 1220      | 8.0  |
| 154-082-03BCD3 | 114             | 03-20-85     | 22                     | 0.19 | 0.25 | 58 | 19 | 180 | 6  | 624              |                 | 94              | 10 | 0.5 |                 | 0.09 | 705                           | 220  | 63  | 5.3              | 1220      | 7.0  |
| 154-082-03BCD3 | 114             | 04-24-85     | 13                     | 0.24 | 0.23 | 59 | 19 | 180 | 6  | 625              |                 | 93              | 15 | 0.5 | 1               | 0.1  | 694                           | 230  | 63  | 5.2              | 1075      | 7.0  |

| Location        | Well Depth (ft) | Date Sampled | (milligrams per liter) |      |      |     |     |     |     |                  |                 |                 |     |     |                 |      | Hardness as CaCO <sub>3</sub> | % NCH | Na  | SAR  | Spec Cond (umho) | Temp (°C) | pH  |
|-----------------|-----------------|--------------|------------------------|------|------|-----|-----|-----|-----|------------------|-----------------|-----------------|-----|-----|-----------------|------|-------------------------------|-------|-----|------|------------------|-----------|-----|
|                 |                 |              | SiO <sub>2</sub>       | Fe   | Mn   | Ca  | Mg  | Na  | K   | HCO <sub>3</sub> | CO <sub>3</sub> | SO <sub>4</sub> | C1  | F   | NO <sub>3</sub> | B    |                               |       |     |      |                  |           |     |
| 154-082-03BCD3  | 114             | 05-23-85     | 25                     | 1.9  | 0.26 | 59  | 19  | 180 | 5   | 619              |                 | 86              | 8   | 0.6 | 5               | 0.08 | 674                           | 230   | 63  | 5.2  | 1200             | 8.0       |     |
| 154-082-03BCD3  | 114             | 06-26-85     | 24                     | 1.7  | 0.23 | 59  | 19  | 180 | 6   | 615              |                 | 92              | 9   | 0.4 | 8               | 0.15 | 690                           | 230   | 63  | 5.2  | 1150             | 8.0       |     |
| 154-082-03BCD3  | 114             | 07-29-85     | 24                     | 1.8  | 0.25 | 57  | 19  | 180 | 6   | 615              |                 | 91              | 10  | 0.5 | 1               | 0.15 | 674                           | 220   | 63  | 5.3  | 1100             | 8.0       |     |
| 154-082-03BCD3  | 114             | 08-27-85     | 24                     | 1.7  | 0.23 | 53  | 19  | 180 | 6   | 608              |                 | 93              | 8   | 0.5 | 2               | 0.26 | 690                           | 210   | 64  | 5.4  | 1220             | 8.0       |     |
| 154-082-03BCD3  | 114             | 09-24-85     | 24                     | 1.8  | 0.24 | 59  | 19  | 180 | 6   | 609              |                 | 95              | 9   | 0.5 | 6               | 0.24 | 724                           | 230   | 63  | 5.2  | 1000             | 8.0       |     |
| 154-082-03BCD4  | 34              | 04-24-85     | 15                     | 4.6  | 1.7  | 150 | 43  | 120 | 15  | 617              |                 | 280             | 31  | 0.3 | 1               | 0.14 | 982                           | 550   | 46  | 31   | 2.2              | 1440      | 7.0 |
| 154-082-03BCD4  | 34              | 05-23-85     | 25                     | 12.0 | 1.5  | 150 | 43  | 95  | 9   | 597              |                 | 230             | 25  | 0.2 | 1               | 0.13 | 875                           | 550   | 63  | 27   | 1.8              | 1480      | 8.0 |
| 154-082-03BCD4  | 34              | 06-26-85     | 24                     | 14.0 | 1.6  | 150 | 44  | 92  | 8   | 547              |                 | 260             | 26  | 0.2 | 1               | 0.22 | 892                           | 560   | 110 | 26   | 1.7              | 1480      | 8.0 |
| 154-082-03BCD4  | 34              | 07-29-85     | 24                     | 6.1  | 1.7  | 160 | 47  | 93  | 8   | 540              |                 | 290             | 25  | 0.2 | 4               | 0.33 | 909                           | 590   | 150 | 25   | 1.7              | 1360      | 8.0 |
| 154-082-03BCD4  | 34              | 08-27-85     | 24                     | 15.0 | 1.7  | 140 | 46  | 94  | 8   | 575              |                 | 300             | 30  | 0.2 | 1               | 0.34 | 943                           | 540   | 68  | 27   | 1.8              | 1560      | 8.0 |
| 154-082-03BCD4  | 34              | 09-24-85     | 22                     | 15.0 | 1.8  | 170 | 51  | 98  | 8   | 587              |                 | 320             | 28  | 0.3 | 1               | 0.27 | 1020                          | 630   | 150 | 25   | 1.7              | 1490      | 7.0 |
| 154-082-03CAA   | S               | 03-06-69     | 22                     | 2.3  | 2.72 | 107 | 25  | 96  | 5   | 522              |                 | 114             | 18  | 0.3 | 1               | 0.35 | 618                           | 370   | 36  | 2.2  |                  |           | 1.1 |
| 154-082-03CAC   | 11-15-68        | 23           | 3.7                    | 0.98 | 82   | 28  | 124 | 9   | 428 |                  | 175             | 40              | 0.4 | 1   | 0.35            | 701  | 319                           | 45    | 3.0 |      |                  |           |     |
| 154-082-03CAC   | 10-23-84        | 26           | 0.71                   | 0.27 | 63   | 18  | 130 | 5   | 490 |                  | 110             | 9               | 0.3 | 1   | 0.19            | 590  | 230                           | 54    | 3.7 | 1040 | 8.0              |           |     |
| 154-082-03CBA   | 02-06-69        | 20           | 0.38                   | 0.65 | 100  | 27  | 124 | 6   | 464 |                  | 183             | 48              | 0.3 | 3   | 0.47            | 736  | 362                           | 42    | 2.8 |      |                  | 3.3       |     |
| 154-082-03CBAA1 | 228             | 10-04-84     | 23                     | 0.26 | 0.38 | 84  | 22  | 190 | 7   | 519              |                 | 260             | 18  | 0.3 | 1               | 0.15 | 844                           | 300   | 57  | 4.8  | 1380             | 9.0       |     |
| 154-082-03CBAA1 | 228             | 03-20-85     | 25                     | 0.77 | 0.42 | 89  | 23  | 190 | 7   | 525              |                 | 290             | 18  | 0.4 | 1               | 0.06 | 890                           | 320   | 56  | 4.6  | 1220             | 7.0       |     |
| 154-082-03CBAA1 | 228             | 04-23-85     | 28                     | 0.7  | 0.36 | 85  | 23  | 190 | 7   | 514              |                 | 270             | 17  | 0.3 | 1               | 0.08 | 905                           | 310   | 57  | 4.7  | 1310             | 8.0       |     |
| 154-082-03CBAA1 | 228             | 05-23-85     | 28                     | 2.1  | 0.44 | 98  | 26  | 200 | 7   | 525              |                 | 300             | 30  | 0.3 | 0               | 0.07 | 932                           | 350   | 55  | 4.6  | 1480             | 10.0      |     |
| 154-082-03CBAA1 | 228             | 06-26-85     | 26                     | 1.7  | 0.45 | 100 | 27  | 200 | 8   | 542              |                 | 320             | 21  | 0.3 | 5               | 0.1  | 958                           | 360   | 54  | 4.6  | 1550             | 8.0       |     |
| 154-082-03CBAA1 | 228             | 07-29-85     | 28                     | 1.7  | 0.44 | 100 | 26  | 200 | 7   | 499              |                 | 300             | 17  | 0.3 | 2               | 0.18 | 911                           | 360   | 54  | 4.6  | 1490             | 9.0       |     |
| 154-082-03CBAA1 | 228             | 08-27-85     | 25                     | 1.6  | 0.4  | 91  | 24  | 190 | 7   | 525              |                 | 310             | 18  | 0.3 | 1               | 0.19 | 923                           | 330   | 55  | 4.5  | 1550             | 9.0       |     |
| 154-082-03CBAA1 | 228             | 09-24-85     | 23                     | 1.6  | 0.4  | 89  | 23  | 190 | 8   | 532              |                 | 270             | 16  | 0.3 | 1               | 0.18 | 845                           | 320   | 56  | 4.6  | 1200             | 8.0       |     |
| 154-082-03CBAA2 | 159             | 10-04-84     | 23                     | 1.3  | 0.22 | 100 | 26  | 91  | 6   | 472              |                 | 160             | 8   | 0.3 | 1               | 0.19 | 641                           | 360   | 35  | 2.1  | 1080             | 8.0       |     |
| 154-082-03CBAA2 | 159             | 03-20-85     | 23                     | 2.4  | 0.24 | 100 | 26  | 90  | 6   | 472              |                 | 160             | 6   | 0.4 | 1               | 0.08 | 637                           | 360   | 35  | 2.1  | 1000             | 7.0       |     |
| 154-082-03CBAA2 | 159             | 04-23-85     | 26                     | 2.5  | 0.21 | 98  | 26  | 90  | 7   | 474              |                 | 150             | 7   | 0.3 | 1               | 0.09 | 671                           | 350   | 35  | 2.1  | 1010             | 7.0       |     |
| 154-082-03CBAA2 | 159             | 05-23-85     | 27                     | 3.5  | 0.23 | 100 | 27  | 92  | 6   | 468              |                 | 160             | 7   | 0.3 | 0               | 0.08 | 639                           | 360   | 35  | 2.1  | 1120             | 8.0       |     |
| 154-082-03CBAA2 | 159             | 06-24-85     | 25                     | 2.8  | 0.22 | 100 | 26  | 90  | 7   | 468              |                 | 160             | 8   | 0.3 | 6               | 0.13 | 634                           | 360   | 35  | 2.1  | 1000             | 8.0       |     |
| 154-082-03CBAA2 | 159             | 07-29-85     | 28                     | 3.2  | 0.23 | 100 | 27  | 89  | 7   | 464              |                 | 160             | 6   | 0.3 | 1               | 0.13 | 628                           | 360   | 34  | 2.0  | 1100             | 8.0       |     |
| 154-082-03CBAA2 | 159             | 08-27-85     | 24                     | 2.9  | 0.22 | 94  | 26  | 85  | 6   | 467              |                 | 160             | 6   | 0.3 | 1               | 0.24 | 637                           | 340   | 35  | 2.0  | 1110             | 8.0       |     |
| 154-082-03CBAA2 | 159             | 09-24-85     | 22                     | 3.1  | 0.22 | 100 | 27  | 89  | 7   | 474              |                 | 160             | 7   | 0.3 | 1               | 0.23 | 619                           | 360   | 34  | 2.0  | 990              | 8.0       |     |
| 154-082-03CBAA3 | 99              | 10-04-84     | 22                     | 0.15 | 0.1  | 51  | 18  | 170 | 5   | 566              |                 | 98              | 11  | 0.4 | 1               | 0.2  | 661                           | 200   | 64  | 5.2  | 1100             | 9.0       |     |
| 154-082-03CBAA3 | 99              | 03-20-85     | 24                     | 0.18 | 0.07 | 52  | 19  | 170 | 5   | 602              |                 | 89              | 8   | 0.4 | 1               | 0.07 | 652                           | 210   | 63  | 5.1  | 1080             | 7.0       |     |
| 154-082-03CBAA3 | 99              | 04-23-85     | 26                     | 0.17 | 0.07 | 53  | 20  | 170 | 6   | 581              |                 | 89              | 9   | 0.3 | 1               | 0.09 | 687                           | 210   | 63  | 5.1  | 1050             | 7.0       |     |
| 154-082-03CBAA3 | 99              | 05-23-85     | 25                     | 0.22 | 0.06 | 55  | 20  | 180 | 5   | 585              |                 | 82              | 8   | 0.3 | 8               | 0.08 | 626                           | 220   | 63  | 5.3  | 1120             | 9.0       |     |
| 154-082-03CBAA3 | 99              | 06-26-85     | 25                     | 1.7  | 0.07 | 53  | 20  | 170 | 5   | 579              |                 | 87              | 6   | 0.4 | 9               | 0.12 | 631                           | 210   | 63  | 5.1  | 1040             | 8.0       |     |
| 154-082-03CBAA3 | 99              | 07-29-85     | 28                     | 2.1  | 0.07 | 54  | 20  | 170 | 6   | 586              |                 | 91              | 7   | 0.3 | 1               | 0.13 | 636                           | 220   | 62  | 5.0  | 1080             | 9.0       |     |
| 154-082-03CBAA3 | 99              | 08-27-85     | 23                     | 1.8  | 0.06 | 51  | 19  | 160 | 5   | 580              |                 | 88              | 5   | 0.3 | 1               | 0.23 | 651                           | 210   | 62  | 4.8  | 1140             | 8.0       |     |
| 154-082-03CBAA3 | 99              | 09-24-85     | 22                     | 2.0  | 0.07 | 53  | 20  | 170 | 6   | 600              |                 | 90              | 5   | 0.3 | 1               | 0.21 | 631                           | 210   | 63  | 5.1  | 990              | 8.0       |     |
| 154-082-03CBAA4 | 55              | 10-04-84     | 27                     | 1.1  | 0.32 | 85  | 30  | 140 | 6   | 699              |                 | 41              | 16  | 0.4 | 1               | 0.24 | 688                           | 340   | 47  | 3.3  | 1160             | 9.0       |     |
| 154-082-03CBAA4 | 55              | 03-20-85     | 27                     | 1.7  | 0.31 | 84  | 30  | 130 | 6   | 706              |                 | 40              | 14  | 0.4 | 1               | 0.08 | 671                           | 330   | 45  | 3.1  | 1060             | 7.0       |     |
| 154-082-03CBAA4 | 55              | 04-23-85     | 29                     | 1.8  | 0.28 | 83  | 30  | 130 | 7   | 708              |                 | 42              | 14  | 0.3 | 1               | 0.14 | 708                           | 330   | 45  | 3.1  | 1090             | 8.0       |     |
| 154-082-03CBAA4 | 55              | 05-23-85     | 29                     | 4.2  | 0.31 | 84  | 29  | 140 | 6   | 689              |                 | 30              | 13  | 0.3 | 1               | 0.11 | 652                           | 330   | 48  | 3.4  | 1180             | 8.0       |     |
| 154-082-03CBAA4 | 55              | 06-24-85     | 28                     | 3.9  | 0.3  | 85  | 30  | 130 | 7   | 675              |                 | 38              | 13  | 0.4 | 12              | 0.16 | 665                           | 340   | 45  | 3.1  | 1120             | 8.0       |     |
| 154-082-03CBAA4 | 55              | 07-29-85     | 28                     | 0.72 | 0.3  | 85  | 30  | 130 | 7   | 681              |                 | 41              | 14  | 0.3 | 1               | 0.17 | 657                           | 340   | 45  | 3.1  | 1160             | 8.0       |     |
| 154-082-03CBAA4 | 55              | 08-27-85     | 26                     | 3.3  | 0.29 | 83  | 30  | 130 | 6   | 678              |                 | 46              | 14  | 0.3 | 2               | 0.32 | 678                           | 330   | 46  | 3.1  | 1200             | 8.0       |     |
| 154-082-03CBAA4 | 55              | 09-24-85     | 25                     | 1.4  | 0.3  | 84  | 31  | 130 | 7   | 700              |                 | 46              | 14  | 0.3 | 1               | 0.3  | 652                           | 340   | 45  | 3.0  | 1040             | 8.0       |     |
| 154-082-03CBAA5 | 27              | 03-25-85     | 12                     | 0.22 | 0.25 | 96  | 37  | 110 | 8   | 418              |                 | 240             | 23  | 0.3 | 1               | 1.1  | 743                           | 390   | 49  | 37   | 2.4              | 1000      | 7.0 |
| 154-082-03CBAA5 | 27              | 04-23-85     | 17                     | 0.52 | 0.33 | 91  | 37  | 110 | 7   | 406              |                 | 250             | 24  | 0.3 | 1               | 1.2  | 765                           | 380   | 47  | 38   | 2.5              | 1110      | 7.0 |
| 154-082-03CBAA5 | 27              | 05-23-85     | 14                     | 0.16 | 0.36 | 88  | 34  | 99  | 6   | 412              |                 | 230             | 23  | 0.2 | 1.1             | 0.9  | 699                           | 360   | 22  | 37   | 2.3              | 1200      | 8.0 |

| Location       | Well Depth (ft) | Date Sampled | (milligrams per liter) |      |      |     |    |     |   |                  |                 |                 |     |   |                 |      |     |                               |       | Spec Cond (umho) | Temp (°C) | pH  |
|----------------|-----------------|--------------|------------------------|------|------|-----|----|-----|---|------------------|-----------------|-----------------|-----|---|-----------------|------|-----|-------------------------------|-------|------------------|-----------|-----|
|                |                 |              | SiO <sub>2</sub>       | Fe   | Mn   | Ca  | Mg | Na  | K | HCO <sub>3</sub> | CO <sub>3</sub> | SO <sub>4</sub> | Cl  | F | NO <sub>3</sub> | B    | TDS | Hardness as CaCO <sub>3</sub> | % NCH | Na               | SAR       |     |
| 154-082-03CBA5 | 27              | 06-26-85     | 13                     | 0.21 | 0.4  | 97  | 38 | 110 | 7 | 411              | 250             | 23              | 0.3 | 1 | 2.2             | 741  | 400 | 62                            | 37    | 2.4              | 1160      | 7.0 |
| 154-082-03CBA5 | 27              | 07-29-85     | 14                     | 0.51 | 0.36 | 93  | 36 | 100 | 7 | 410              | 230             | 23              | 0.3 | 1 | 3.4             | 721  | 380 | 44                            | 36    | 2.2              | 1160      | 8.0 |
| 154-082-03CBA5 | 27              | 08-27-85     | 13                     | 0.5  | 0.33 | 82  | 33 | 98  | 7 | 390              | 220             | 24              | 0.2 | 1 | 1.8             | 659  | 340 | 21                            | 38    | 2.3              | 1110      | 8.0 |
| 154-082-03CBA5 | 27              | 09-24-85     | 12                     | 0.11 | 0.31 | 75  | 31 | 92  | 7 | 397              | 190             | 23              | 0.3 | 1 | 3.0             | 621  | 310 | 38                            | 2.3   | 1020             | 7.0       |     |
| 154-082-03CBA1 | 99              | 08-27-65     | 18                     | 0.96 |      | 85  | 26 | 174 |   | 600              | 134             | 40              | 0.4 | 9 |                 | 740  | 318 | 54                            | 4.2   |                  |           | 8.9 |
| 154-082-03CBA1 | 99              | 11-27-68     | 28                     | 5.6  | 0.28 | 94  | 28 | 116 | 5 | 574              | 98              | 13              | 0.3 | 2 | 0.31            | 663  | 349 | 42                            | 2.7   |                  |           |     |
| 154-082-03CBA2 | 237             | 09-26-68     | 28                     | 1.9  | 0.17 | 75  | 18 | 189 | 5 | 517              | 234             | 10              | 0.4 |   | 0.24            | 816  | 255 | 61                            | 5.1   | 1120             | 8.3       |     |
| 154-082-03CBA2 | 237             | 09-03-82     | 25                     | 0.1  | 0.2  | 68  | 21 | 190 | 8 | 521              | 180             | 43              | 0.5 | 1 | 0.2             | 801  | 260 | 61                            | 5.1   | 1220             | 12.0      |     |
| 154-082-03CBA3 | 263             | 10-09-68     | 28                     | 1.4  | 0.2  | 73  | 19 | 252 | 4 | 610              | 239             | 47              | 0.4 |   | 0.24            | 941  | 257 | 59                            | 2.8   | 1400             | 7.8       |     |
| 154-082-03CBA3 | 263             | 05-27-83     | 24                     | 1.5  | 0.26 | 44  | 14 | 250 | 6 | 564              | 190             | 36              | 0.4 |   | 0.29            | 811  | 170 | 76                            | 8.3   | 1320             | 11.0      |     |
| 154-082-03CBA3 | 263             | 08-17-83     | 27                     | 0.7  | 0.28 | 51  | 16 | 220 | 8 | 520              | 250             | 17              | 0.4 |   | 0.28            | 844  | 190 | 70                            | 6.9   | 1525             | 12.0      |     |
| 154-082-03CBA3 | 263             | 11-22-83     | 26                     | 1.1  | 0.31 | 67  | 21 | 220 | 8 | 520              | 270             | 19              | 0.4 |   | 0.25            | 872  | 250 | 65                            | 6.1   | 1430             | 8.0       |     |
| 154-082-03CBA3 | 263             | 08-17-84     | 26                     | 1.1  | 0.36 | 78  | 24 | 240 | 8 | 543              | 360             | 26              | 0.3 | 1 | 0.34            | 1010 | 290 | 63                            | 6.1   | 1700             | 8.0       |     |
| 154-082-03CBA3 | 263             | 03-20-85     | 23                     | 1.7  | 0.34 | 74  | 24 | 240 | 6 | 567              | 330             | 30              | 0.4 | 1 | 0.13            | 1010 | 280 | 64                            | 6.2   | 975              | 8.0       |     |
| 154-082-03CBA3 | 263             | 06-26-85     | 25                     | 0.96 | 0.37 | 80  | 27 | 270 | 7 | 586              | 360             | 28              | 0.3 | 6 | 0.23            | 1040 | 310 | 65                            | 6.7   | 1650             | 9.0       |     |
| 154-082-03CBA3 | 263             | 09-24-85     | 24                     | 0.77 | 0.38 | 89  | 30 | 290 | 8 | 608              | 430             | 34              | 0.5 |   | 0.33            | 1220 | 350 | 64                            | 6.7   | 1850             | 8.0       |     |
| 154-082-03CBA4 | 151             | 12-05-69     | 25                     | 3.4  | 0.03 | 110 | 26 | 76  | 4 | 475              | 132             | 5               | 0.4 | 1 |                 | 607  | 380 | 30                            | 1.7   |                  |           |     |
| 154-082-03CBA4 | 151             | 05-27-83     | 26                     | 0.77 | 0.27 | 79  | 23 | 180 | 6 | 507              | 260             | 16              | 0.3 | 1 | 0.13            | 804  | 290 | 57                            | 4.6   | 1260             | 12.0      |     |
| 154-082-03CBA4 | 151             | 08-17-83     | 28                     | 0.97 | 0.25 | 75  | 21 | 170 | 7 | 522              | 200             | 26              | 0.4 | 1 | 0.11            | 739  | 270 | 57                            | 4.5   | 1380             | 12.0      |     |
| 154-082-03CBA4 | 151             | 11-22-83     | 21                     | 1.2  | 0.24 | 77  | 22 | 190 | 7 | 549              | 190             | 36              | 0.3 | 3 | 0.14            | 801  | 280 | 59                            | 4.9   | 1340             | 8.0       |     |
| 154-082-03CBA4 | 151             | 08-17-84     | 27                     | 1.1  | 0.37 | 100 | 27 | 200 | 9 | 546              | 360             | 24              | 0.3 | 1 | 0.17            | 998  | 360 | 54                            | 4.6   | 1600             | 8.0       |     |
| 154-082-03CBA4 | 151             | 03-20-85     | 24                     | 1.7  | 0.35 | 98  | 27 | 200 | 7 | 529              | 330             | 24              | 0.4 | 1 | 0.08            | 968  | 360 | 54                            | 4.6   | 950              | 8.0       |     |
| 154-082-03CBA4 | 151             | 06-26-85     | 26                     | 0.97 | 0.38 | 110 | 31 | 220 | 8 | 548              | 380             | 26              | 0.3 | 6 | 0.13            | 1040 | 400 | 54                            | 4.8   | 1550             | 9.0       |     |
| 154-082-03CBA4 | 151             | 09-26-85     | 25                     | 0.66 | 0.34 | 98  | 28 | 210 | 8 | 546              | 340             | 40              | 0.3 | 1 | 0.22            | 977  | 360 | 55                            | 4.8   | 1440             | 8.0       |     |
| 154-082-03CBB  | 243             | 10-05-74     | 19                     | 8.4  | 0.68 | 88  | 22 | 140 | 5 | 490              | 200             | 11              | 0.5 | 1 | 0.04            | 750  | 310 | 49                            | 3.5   |                  |           |     |
| 154-082-03CBB  | 243             | 10-06-74     | 19                     | 2.6  | 0.34 | 85  | 24 | 140 | 5 | 490              | 210             | 11              | 0.5 | 1 |                 | 750  | 310 | 49                            | 3.5   |                  |           |     |
| 154-082-03CBB  | 243             | 09-27-78     | 25                     | 0.55 | 0.3  | 85  | 19 | 150 | 5 | 498              | 190             | 18              | 0.3 | 1 | 0.13            | 659  | 290 | 52                            | 3.8   |                  |           |     |
| 154-082-03CBB  | 243             | 08-03-79     | 28                     | 3.6  | 0.24 | 90  | 18 | 150 | 5 | 513              | 180             | 20              | 0.4 | 1 | 0.4             | 727  | 300 | 52                            | 3.8   |                  |           |     |
| 154-082-03CBB  | 243             | 05-01-80     | 26                     | 1.5  | 0.23 | 85  | 21 | 160 | 4 | 536              | 190             | 24              | 0.4 | 1 | 0.06            | 811  | 300 | 53                            | 4.0   | 1200             | 12.0      |     |
| 154-082-03CBB  | 243             | 08-12-80     | 29                     | 2.1  | 0.31 | 82  | 21 | 160 | 4 | 524              | 190             | 26              | 0.5 | 3 | 0.06            | 781  | 290 | 54                            | 4.1   | 1340             | 9.0       |     |
| 154-082-03CBB  | 243             | 08-21-81     | 28                     | 2.5  | 0.27 | 83  | 23 | 170 | 7 | 546              | 180             | 26              | 0.3 | 1 |                 | 704  | 300 | 55                            | 4.3   | 1240             |           |     |
| 154-082-03CBB  | 243             | 12-29-81     | 25                     | 2.2  | 0.25 | 80  | 24 | 170 | 7 | 510              | 180             | 39              | 0.3 | 4 | 0.1             | 728  | 300 | 55                            | 4.3   | 1200             | 8.0       |     |
| 154-082-03CBB  | 243             | 05-27-82     | 23                     | 2.3  | 0.26 | 84  | 22 | 160 | 4 | 515              | 180             | 22              | 0.4 | 1 | 0.15            | 741  | 300 | 53                            | 4.0   | 1180             | 9.0       |     |
| 154-082-03CBB  | 243             | 08-26-82     | 27                     | 2.3  | 0.28 | 77  | 22 | 160 | 8 | 503              | 180             | 23              | 0.4 |   | 0.18            | 755  | 280 | 54                            | 4.2   | 980              | 15.0      |     |
| 154-082-03CBB  | 243             | 11-16-82     | 27                     | 2.3  | 0.28 | 76  | 21 | 160 | 7 | 509              | 180             | 23              | 0.4 | 1 | 0.35            | 739  | 280 | 55                            | 4.2   | 1200             | 9.0       |     |
| 154-082-03CBB  | 243             | 02-17-83     | 27                     | 1.9  | 0.26 | 78  | 21 | 170 | 7 | 510              | 180             | 25              | 0.4 | 4 | 0.13            | 727  | 280 | 56                            | 4.4   | 1160             | 9.0       |     |
| 154-082-03CBB  | 243             | 05-26-83     | 25                     | 2.4  | 0.27 | 78  | 23 | 140 | 7 | 497              | 180             | 29              | 0.3 | 4 | 0.16            | 715  | 290 | 51                            | 3.6   | 1220             | 9.0       |     |
| 154-082-03CBB  | 243             | 08-18-83     | 27                     | 2.1  | 0.27 | 80  | 21 | 160 | 7 | 519              | 190             | 30              | 0.3 | 4 | 0.11            | 761  | 290 | 54                            | 4.1   | 1380             | 10.0      |     |
| 154-082-03CBB  | 243             | 11-23-83     | 26                     | 2.0  | 0.26 | 82  | 22 | 170 | 8 | 513              | 180             | 29              | 0.4 |   | 0.14            | 748  | 300 | 55                            | 4.3   | 1250             | 8.0       |     |
| 154-082-03CBB  | 243             | 02-28-84     | 27                     | 2.3  | 0.25 | 80  | 22 | 150 | 7 | 513              | 180             | 24              | 0.4 |   | 0.16            | 724  | 290 | 52                            | 3.8   | 920              | 9.0       |     |
| 154-082-03CBB  | 243             | 04-12-84     | 23                     | 2.0  | 0.25 | 82  | 22 | 160 | 7 | 512              | 180             | 22              | 0.3 |   | 0.21            | 716  | 300 | 53                            | 4.0   | 1170             | 9.0       |     |
| 154-082-03CBB  | 243             | 05-22-84     | 28                     | 2.1  | 0.26 | 82  | 21 | 160 | 7 | 510              | 190             | 20              | 0.4 |   | 0.2             | 737  | 290 | 54                            | 4.1   | 1200             | 9.0       |     |
| 154-082-03CBB  | 243             | 08-16-84     | 27                     | 1.8  | 0.25 | 82  | 21 | 160 | 8 | 513              | 200             | 22              | 0.4 | 1 | 0.22            | 749  | 290 | 54                            | 4.1   | 1290             | 9.0       |     |
| 154-082-03CBB  | 243             | 08-31-84     | 28                     | 1.6  | 0.25 | 80  | 22 | 160 | 7 | 512              | 190             | 23              | 0.4 | 1 | 0.24            | 719  | 290 | 54                            | 4.1   | 1260             | 8.0       |     |
| 154-082-03CBB  | 243             | 09-12-84     | 25                     | 2.2  | 0.26 | 79  | 21 | 150 | 7 | 511              | 180             | 25              | 0.4 | 1 | 0.2             | 713  | 280 | 53                            | 3.9   | 1220             | 8.0       |     |
| 154-082-03CBB  | 243             | 09-20-84     | 25                     | 2.2  | 0.25 | 79  | 21 | 160 | 7 | 520              | 180             | 24              | 0.4 | 1 | 0.22            | 723  | 280 | 54                            | 4.2   | 1240             | 8.0       |     |
| 154-082-03CBB  | 243             | 09-27-84     | 23                     | 2.0  | 0.25 | 78  | 21 | 160 | 6 | 516              | 180             | 23              | 0.3 | 1 | 0.19            | 726  | 280 | 55                            | 4.2   | 1240             | 8.0       |     |
| 154-082-03CBB  | 243             | 10-03-84     | 23                     | 2.1  | 0.25 | 81  | 21 | 160 | 6 | 520              | 180             | 23              | 0.4 | 1 | 0.2             | 722  | 290 | 54                            | 4.1   | 1230             | 8.0       |     |
| 154-082-03CBB  | 243             | 10-11-84     | 25                     | 2.0  | 0.25 | 80  | 21 | 160 | 5 | 513              | 180             | 24              | 0.4 | 1 | 0.21            | 769  | 290 | 54                            | 4.1   | 1220             | 8.0       |     |
| 154-082-03CBB  | 243             | 10-24-84     | 28                     | 2.1  | 0.25 | 82  | 22 | 160 | 6 | 518              | 190             | 23              | 0.3 | 1 | 0.17            | 750  | 300 | 54                            | 4.0   | 1200             | 8.0       |     |

| Location      | Well Depth (ft) | Date Sampled | (milligrams per liter) |     |      |      |    |     |     |                  |                 |                 |     |     |                 |      |      | Hardness as CaCO <sub>3</sub> | % Na | Spec Cond (umho) | Temp (°C) | pH   |      |
|---------------|-----------------|--------------|------------------------|-----|------|------|----|-----|-----|------------------|-----------------|-----------------|-----|-----|-----------------|------|------|-------------------------------|------|------------------|-----------|------|------|
|               |                 |              | SiO <sub>2</sub>       | Fe  | Mn   | Ca   | Mg | Na  | K   | HCO <sub>3</sub> | CO <sub>3</sub> | SO <sub>4</sub> | Cl  | F   | NO <sub>3</sub> | B    | TDS  | NCH                           |      |                  |           |      |      |
| 154-082-03CBB | 243             | 11-08-84     | 28                     | 2.0 | 0.24 | 84   | 22 | 160 | 6   | 525              |                 | 190             | 25  | 0.3 | 1               | 0.15 | 777  | 300                           | 53   | 4.0              | 1120      | 8.0  |      |
| 154-082-03CBB | 243             | 11-20-84     | 29                     | 2.0 | 0.26 | 84   | 23 | 160 | 8   | 519              |                 | 190             | 24  | 0.4 | 1               | 0.15 | 773  | 300                           | 53   | 4.0              | 1190      | 8.0  |      |
| 154-082-03CBB | 243             | 01-09-85     | 26                     | 2.2 | 0.28 | 83   | 22 | 170 | 65  | 531              |                 | 210             | 28  | 0.4 | 1               | 0.1  | 808  | 300                           | 55   | 4.3              | 1210      | 8.0  |      |
| 154-082-03CBB | 243             | 02-12-85     | 27                     | 1.7 | 0.25 | 79   | 22 | 160 | 6   | 516              |                 | 200             | 23  | 0.2 |                 | 0.11 | 766  | 290                           | 54   | 4.1              | 1210      | 8.0  |      |
| 154-082-03CBB | 243             | 03-06-85     | 26                     | 1.9 | 0.26 | 77   | 22 | 160 | 6   | 519              |                 | 190             | 23  | 0.5 | 1               | 0.12 | 791  | 280                           | 55   | 4.2              | 1175      | 8.0  |      |
| 154-082-03CBB | 243             | 03-21-85     | 25                     | 1.8 | 0.26 | 80   | 21 | 170 | 6   | 531              |                 | 190             | 24  | 0.4 | 1               | 0.09 | 780  | 290                           | 56   | 4.3              | 1200      | 8.0  |      |
| 154-082-03CBB | 243             | 04-18-85     | 20                     | 2.0 | 0.23 | 78   | 21 | 160 | 7   | 527              |                 | 200             | 24  | 0.4 | 1               | 0.09 | 774  | 280                           | 55   | 4.2              | 1200      | 8.0  |      |
| 154-082-03CBB | 243             | 05-15-85     | 28                     | 1.9 | 0.25 | 83   | 22 | 170 | 5   | 512              |                 | 190             | 22  | 0.4 |                 | 0.08 | 785  | 300                           | 55   | 4.3              | 1160      | 8.0  |      |
| 154-082-03CBB | 243             | 06-26-85     | 28                     | 2.0 | 0.25 | 85   | 23 | 170 | 6   | 522              |                 | 200             | 24  | 0.3 | 1               | 0.1  | 830  | 310                           | 54   | 4.2              | 1220      | 8.0  |      |
| 154-082-03CBB | 243             | 07-30-85     | 26                     | 1.8 | 0.25 | 81   | 22 | 160 | 7   | 511              |                 | 200             | 17  | 0.3 | 1               | 0.17 | 737  | 290                           | 54   | 4.1              | 1280      | 8.0  |      |
| 154-082-03CBB | 243             | 08-28-85     | 25                     | 1.7 | 0.25 | 82   | 22 | 160 | 6   | 511              |                 | 230             | 14  | 0.3 | 1               | 0.29 | 756  | 300                           | 53   | 4.0              | 1180      | 9.0  |      |
| 154-082-03CBB | 243             | 09-24-85     | 25                     | 1.8 | 0.24 | 80   | 22 | 170 | 7   | 516              |                 | 190             | 33  | 0.4 |                 | 0.23 | 788  | 290                           | 55   | 4.3              | 1240      | 8.0  |      |
| 154-082-03CBB | 243             | 11-21-85     | 31                     | 2.1 | 0.24 | 82   | 23 | 170 | 7   | 522              |                 | 210             | 26  | 0.3 | 2               | 0.2  | 807  | 300                           | 55   | 4.3              | 870       | 5.0  |      |
| 154-082-03CBB | 243             | 12-30-85     | 26                     | 1.6 | 0.23 | 80   | 22 | 170 | 6   | 525              |                 | 200             | 30  | 0.4 | 1               | 0.24 | 781  | 290                           | 55   | 4.3              | 1100      | 7.0  |      |
| 154-082-03CBB | 243             | 02-26-86     | 28                     | 2.1 | 0.26 | 76   | 21 | 170 | 7   | 503              |                 | 200             | 21  | 0.4 | 1               | 0.19 | 813  | 280                           | 57   | 4.4              | 1150      | 8.0  |      |
| 154-082-03CBB | 243             | 03-27-86     | 29                     | 2.1 | 0.28 | 81   | 22 | 160 | 5   | 514              |                 | 200             | 21  | 0.4 |                 | 0.18 | 761  | 290                           | 54   | 4.1              | 1220      | 8.0  |      |
| 154-082-03CBB | 243             | 06-04-86     | 28                     | 2.0 | 0.24 | 78   | 21 | 160 | 5   | 514              |                 | 190             | 20  | 0.3 |                 | 0.27 | 757  | 280                           | 55   | 4.2              |           |      |      |
| 154-082-03CBB | 243             | 07-23-86     | 28                     | 2.3 | 0.24 | 79   | 21 | 150 | 7   | 501              |                 | 190             | 14  | 0.3 | 4               | 0.16 | 726  | 280                           | 53   | 3.9              | 1280      | 9.0  |      |
| 154-082-03CBB | 243             | 09-09-86     | 28                     | 2.0 | 0.24 | 81   | 21 | 170 | 7   | 519              |                 | 210             | 23  | 0.3 | 2               | 0.27 | 802  | 290                           | 55   | 4.3              | 1250      | 8.0  |      |
| 154-082-03CBB | 243             | 12-16-86     | 25                     | 2.1 | 0.23 | 79   | 22 | 160 | 6   | 516              |                 | 200             | 19  | 0.4 | 1               | 0.23 | 768  | 290                           | 54   | 4.1              | 1290      | 9.0  |      |
| 360           | 154-082-03CBC   | 297          | 03-23-75               | 9   | 1.7  | 0.3  | 78 | 23  | 210 | 5                | 537             |                 | 230 | 61  | 0.4             | 1    | 0.31 | 878                           | 290  | 61               | 5.4       |      |      |
|               | 154-082-03CBC   | 297          | 03-24-75               | 12  | 1.3  | 0.28 | 79 | 25  | 210 | 4                | 536             |                 | 230 | 66  | 0.5             | 1    | 0.31 | 879                           | 300  | 60               | 5.3       |      |      |
|               | 154-082-03CBC   | 297          | 09-27-78               | 24  | 0.38 | 0.32 | 87 | 20  | 180 | 4                | 517             |                 | 210 | 44  | 0.3             | 1    | 0.26 | 803                           | 300  | 56               | 4.5       |      |      |
|               | 154-082-03CBC   | 297          | 08-03-79               | 29  | 1.5  | 0.4  | 90 | 30  | 170 | 4                | 525             |                 | 210 | 53  | 0.3             | 1    | 0.4  | 748                           | 350  | 51               | 3.9       |      |      |
|               | 154-082-03CBC   | 297          | 05-01-80               | 27  | 1.4  | 0.28 | 85 | 21  | 160 | 4                | 512             |                 | 190 | 35  | 0.3             | 1    | 0.16 | 774                           | 300  | 53               | 4.0       | 1220 | 13.0 |
| 154-082-03CBC | 297             | 08-12-80     | 30                     | 1.5 | 0.39 | 83   | 25 | 160 | 4   | 511              |                 | 200             | 42  | 0.4 |                 | 0.15 | 777  | 310                           | 53   | 4.0              | 1380      | 9.0  |      |
| 154-082-03CBC | 297             | 08-21-81     | 30                     | 1.9 | 0.37 | 89   | 24 | 200 | 6   | 555              |                 | 220             | 62  | 0.2 | 1               | 0.09 | 855  | 320                           | 57   | 4.9              | 1460      | 7.0  |      |
| 154-082-03CBC | 297             | 12-29-81     | 26                     | 1.6 | 0.33 | 82   | 30 | 180 | 7   | 499              |                 | 210             | 54  | 0.3 | 1               | 0.1  | 772  | 350                           | 54   | 4.3              | 1280      | 8.0  |      |
| 154-082-03CBC | 297             | 05-27-82     | 24                     | 1.7 | 0.34 | 87   | 24 | 160 | 4   | 499              |                 | 190             | 32  | 0.3 | 1               | 0.13 | 737  | 320                           | 52   | 3.9              | 1200      | 9.0  |      |
| 154-082-03CBC | 297             | 08-26-82     | 27                     | 1.7 | 0.35 | 81   | 26 | 180 | 7   | 518              |                 | 220             | 51  | 0.3 | 1               | 0.21 | 833  | 310                           | 55   | 4.4              | 1140      | 15.0 |      |
| 154-082-03CBC | 297             | 11-16-82     | 28                     | 1.8 | 0.34 | 82   | 26 | 190 | 6   | 523              |                 | 210             | 57  | 0.3 | 1               | 0.19 | 836  | 310                           | 56   | 4.7              | 1360      | 10.0 |      |
| 154-082-03CBC | 297             | 02-17-83     | 27                     | 1.4 | 0.3  | 78   | 25 | 200 | 7   | 520              |                 | 220             | 64  | 0.3 | 1               | 0.17 | 833  | 300                           | 59   | 5.0              | 1380      | 10.0 |      |
| 154-082-03CBC | 297             | 05-26-83     | 26                     | 1.5 | 0.35 | 83   | 26 | 160 | 6   | 504              |                 | 220             | 42  | 0.2 | 1               | 0.17 | 802  | 310                           | 52   | 4.0              | 1320      | 10.0 |      |
| 154-082-03CBC | 297             | 08-18-83     | 28                     | 1.4 | 0.33 | 84   | 24 | 150 | 6   | 492              |                 | 210             | 30  | 0.3 | 1               | 0.12 | 763  | 310                           | 51   | 3.7              | 1380      | 11.0 |      |
| 154-082-03CBC | 297             | 11-23-83     | 27                     | 1.4 | 0.33 | 82   | 25 | 160 | 7   | 490              |                 | 180             | 31  | 0.3 | 1               | 0.16 | 779  | 310                           | 52   | 4.0              | 1280      | 8.0  |      |
| 154-082-03CBC | 297             | 02-28-84     | 27                     | 1.8 | 0.35 | 92   | 28 | 140 | 7   | 506              |                 | 200             | 38  | 0.3 | 1               | 0.14 | 768  | 340                           | 46   | 3.3              | 1240      | 9.0  |      |
| 154-082-03CBC | 297             | 04-12-84     | 25                     | 1.8 | 0.37 | 110  | 32 | 150 | 6   | 522              |                 | 240             | 45  | 0.3 | 1               | 0.21 | 872  | 410                           | 44   | 3.2              | 1320      | 10.0 |      |
| 154-082-03CBC | 297             | 05-22-84     | 28                     | 1.6 | 0.32 | 87   | 25 | 160 | 6   | 468              |                 | 200             | 45  | 0.3 |                 | 0.21 | 785  | 320                           | 51   | 3.9              | 1280      | 9.0  |      |
| 154-082-03CBC | 297             | 08-16-84     | 27                     | 1.3 | 0.34 | 91   | 26 | 150 | 7   | 501              |                 | 210             | 39  | 0.3 | 1               | 0.2  | 786  | 330                           | 49   | 3.6              | 1320      | 9.0  |      |
| 154-082-03CBC | 297             | 08-31-84     | 28                     | 1.1 | 0.34 | 89   | 27 | 180 | 7   | 514              |                 | 220             | 54  | 0.3 | 1               | 0.25 | 827  | 350                           | 53   | 4.3              | 1430      | 8.0  |      |
| 154-082-03CBC | 297             | 09-12-84     | 27                     | 1.6 | 0.32 | 85   | 25 | 190 | 7   | 526              |                 | 220             | 64  | 0.3 | 1               | 0.27 | 833  | 320                           | 56   | 4.6              | 1400      | 9.0  |      |
| 154-082-03CBC | 297             | 09-20-84     | 26                     | 1.5 | 0.32 | 87   | 26 | 190 | 7   | 523              |                 | 220             | 58  | 0.3 | 1               | 0.24 | 848  | 320                           | 55   | 4.6              | 1420      | 8.0  |      |
| 154-082-03CBC | 297             | 09-27-84     | 24                     | 1.5 | 0.31 | 86   | 26 | 190 | 6   | 521              |                 | 220             | 59  | 0.2 | 1               | 0.25 | 836  | 320                           | 56   | 4.6              | 1440      | 8.0  |      |
| 154-082-03CBC | 297             | 10-03-84     | 24                     | 1.5 | 0.33 | 95   | 28 | 150 | 5   | 500              |                 | 210             | 40  | 0.3 | 1               | 0.2  | 804  | 350                           | 48   | 3.5              | 1300      | 9.0  |      |
| 154-082-03CBC | 297             | 10-11-84     | 25                     | 1.5 | 0.34 | 92   | 27 | 160 | 5   | 497              |                 | 220             | 43  | 0.3 | 1               | 0.19 | 805  | 340                           | 50   | 3.8              | 1280      | 9.0  |      |
| 154-082-03CBC | 297             | 10-24-84     | 28                     | 1.8 | 0.31 | 89   | 27 | 160 | 5   | 504              |                 | 200             | 43  | 0.3 | 1               | 0.15 | 781  | 330                           | 51   | 3.8              | 1280      | 8.0  |      |
| 154-082-03CBC | 297             | 11-08-84     | 28                     | 1.8 | 0.28 | 89   | 26 | 160 | 5   | 506              |                 | 210             | 44  | 0.2 | 1               | 0.15 | 797  | 330                           | 51   | 3.8              | 1200      | 8.0  |      |
| 154-082-03CBC | 297             | 11-20-84     | 27                     | 2.1 | 0.32 | 90   | 28 | 130 | 7   | 488              |                 | 170             | 31  | 0.3 | 1               | 0.12 | 713  | 340                           | 45   | 3.1              | 995       | 8.0  |      |
| 154-082-03CBC | 297             | 01-09-85     | 28                     | 1.7 | 0.37 | 97   | 29 | 150 | 6   | 511              |                 | 230             | 41  | 0.3 | 1               | 0.09 | 832  | 360                           | 47   | 3.4              | 1270      | 8.0  |      |
| 154-082-03CBC | 297             | 02-12-85     | 28                     | 2.4 | 0.47 | 140  | 42 | 150 | 6   | 554              |                 | 290             | 75  | 0.2 | 1               | 0.11 | 1010 | 520                           | 68   | 38               | 2.9       | 1460 | 8.0  |

| Location        | Well Depth (ft) | Date Sampled | (milligrams per liter) |      |      |     |    |     |   |                  |                 |                 |     |      |                 |      | Hardness as CaCO <sub>3</sub> | % Na | SAR  | Spec Cond (umho) | Temp (°C) | pH  |
|-----------------|-----------------|--------------|------------------------|------|------|-----|----|-----|---|------------------|-----------------|-----------------|-----|------|-----------------|------|-------------------------------|------|------|------------------|-----------|-----|
|                 |                 |              | SiO <sub>2</sub>       | Fe   | Mn   | Ca  | Mg | Na  | K | HCO <sub>3</sub> | CO <sub>3</sub> | SO <sub>4</sub> | Cl  | F    | NO <sub>3</sub> | B    | TDS                           | NCH  |      |                  |           |     |
| 154-082-03CBC   | 297             | 03-06-85     | 27                     | 2.5  | 0.48 | 140 | 41 | 170 | 7 | 561              | 330             | 66              | 0.3 | 1    | 0.13            | 1040 | 520                           | 59   | 41   | 3.2              | 1550      | 8.0 |
| 154-082-03CBC   | 297             | 03-21-85     | 26                     | 2.4  | 0.47 | 140 | 42 | 160 | 7 | 572              | 320             | 69              | 0.3 | 1    | 0.09            | 1060 | 520                           | 53   | 40   | 3.1              | 1600      | 8.0 |
| 154-082-03CBC   | 297             | 04-18-85     | 21                     | 1.9  | 0.54 | 100 | 50 | 160 | 7 | 534              | 220             | 53              | 0.3 | 1    | 0.1             | 859  | 370                           | 48   | 3.6  | 1340             | 8.0       |     |
| 154-082-03CBC   | 297             | 05-15-85     | 27                     | 1.6  | 0.51 | 89  | 27 | 170 | 5 | 515              | 190             | 47              | 0.3 | 1    | 0.09            | 818  | 330                           | 52   | 4.1  | 1200             | 8.0       |     |
| 154-082-03CBC   | 297             | 07-02-85     | 22                     | 1.7  | 0.3  | 82  | 25 | 180 | 7 | 506              | 230             | 54              | 0.3 | 1    | 0.23            | 828  | 310                           | 55   | 4.4  | 1200             | 8.0       |     |
| 154-082-03CBC   | 297             | 07-29-85     | 27                     | 1.5  | 0.35 | 92  | 28 | 150 | 6 | 505              | 200             | 41              | 0.3 | 1    | 0.15            | 769  | 340                           | 48   | 3.5  | 1220             | 8.0       |     |
| 154-082-03CBC   | 297             | 08-27-85     | 27                     | 1.4  | 0.33 | 92  | 29 | 150 | 6 | 497              | 220             | 40              | 0.2 | 1    | 0.24            | 793  | 350                           | 48   | 3.5  | 1290             | 8.0       |     |
| 154-082-03CBC   | 297             | 09-24-85     | 26                     | 1.5  | 0.52 | 93  | 28 | 150 | 6 | 499              | 190             | 41              | 0.3 |      | 0.21            | 768  | 350                           | 48   | 3.5  | 1220             | 8.0       |     |
| 154-082-03CBC   | 297             | 11-21-85     | 31                     | 1.8  | 0.34 | 98  | 29 | 150 | 6 | 509              | 220             | 40              | 0.3 | 1    | 0.2             | 834  | 360                           | 47   | 3.4  |                  | 6.0       |     |
| 154-082-03CBC   | 297             | 12-30-85     | 27                     | 1.6  | 0.58 | 110 | 33 | 160 | 6 | 536              | 280             | 49              | 0.5 | 1    | 0.22            | 926  | 410                           | 45   | 3.4  | 1270             | 7.0       |     |
| 154-082-03CBC   | 297             | 02-26-86     | 29                     | 1.8  | 0.41 | 110 | 33 | 180 | 7 | 544              | 310             | 48              | 0.3 | 1    | 0.21            | 1020 | 410                           | 48   | 3.9  | 1460             | 8.0       |     |
| 154-082-03CBC   | 297             | 03-27-86     | 30                     | 1.9  | 0.43 | 120 | 33 | 190 | 6 | 547              | 320             | 51              | 0.3 |      | 0.19            | 1000 | 440                           | 48   | 3.9  | 1650             | 8.0       |     |
| 154-082-03CBC   | 297             | 06-04-86     | 29                     | 1.5  | 0.32 | 92  | 27 | 170 | 5 | 515              | 220             | 49              | 0.2 | 1    | 0.27            | 838  | 340                           | 52   | 4.0  |                  |           |     |
| 154-082-03CBC   | 297             | 07-23-86     | 29                     | 1.7  | 0.33 | 93  | 27 | 160 | 6 | 505              | 220             | 39              | 0.2 |      | 0.14            | 796  | 340                           | 50   | 3.8  | 1360             | 9.0       |     |
| 154-082-03CBC   | 297             | 09-09-86     | 28                     | 1.7  | 0.32 | 93  | 28 | 170 | 7 | 518              | 210             | 55              | 0.2 |      | 0.32            | 849  | 350                           | 51   | 3.9  | 1360             | 8.0       |     |
| 154-082-03CBC   | 297             | 12-16-86     | 25                     | 2.8  | 0.44 | 130 | 39 | 160 | 6 | 549              | 290             | 59              | 0.2 | 1    | 0.24            | 998  | 490                           | 35   | 41   | 3.1              | 1490      | 9.0 |
| 154-082-03CBCA1 | 247             | 10-09-84     | 23                     | 0.3  | 0.63 | 87  | 24 | 160 | 5 | 493              | 200             | 14              | 0.3 | 1    | 0.12            | 759  | 320                           | 52   | 3.9  | 1240             | 9.0       |     |
| 154-082-03CBCA1 | 247             | 03-20-85     | 24                     | 0.48 | 0.72 | 110 | 29 | 180 | 6 | 517              | 320             | 23              | 0.3 | 1    | 0.06            | 946  | 390                           | 49   | 4.0  | 850              | 8.0       |     |
| 154-082-03CBCA1 | 247             | 04-24-85     | 27                     | 0.12 | 0.73 | 100 | 28 | 180 | 7 | 511              | 310             | 21              | 0.3 | 1    | 0.07            | 961  | 360                           | 51   | 4.1  | 1250             | 8.0       |     |
| 154-082-03CBCA1 | 247             | 05-23-85     | 27                     | 0.47 | 0.65 | 100 | 27 | 190 | 6 | 514              | 320             | 21              | 0.2 | 1    | 0.06            | 933  | 360                           | 53   | 4.4  | 1060             | 8.0       |     |
| 154-082-03CBCA1 | 247             | 05-23-85     | 27                     | 0.76 | 0.63 | 100 | 27 | 190 | 6 | 526              | 320             | 21              | 0.3 |      | 0.06            | 930  | 360                           | 53   | 4.4  | 1460             | 9.0       |     |
| 154-082-03CBCA1 | 247             | 06-26-85     | 26                     | 0.51 | 0.61 | 97  | 26 | 190 | 7 | 517              | 290             | 19              | 0.3 | 4    | 0.1             | 887  | 350                           | 54   | 4.4  | 1460             | 8.0       |     |
| 154-082-03CBCA1 | 247             | 07-29-85     | 26                     | 0.65 | 0.61 | 92  | 24 | 180 | 7 | 514              | 280             | 18              | 0.3 | 1    | 0.11            | 851  | 350                           | 54   | 4.3  | 1420             | 9.0       |     |
| 154-082-03CBCA1 | 247             | 08-27-85     | 24                     | 0.48 | 0.57 | 87  | 25 | 180 | 6 | 512              | 280             | 17              | 0.3 | 1    | 0.18            | 854  | 320                           | 54   | 4.4  | 1370             | 9.0       |     |
| 154-082-03CBCA1 | 247             | 09-24-85     | 23                     | 0.5  | 0.61 | 81  | 25 | 180 | 7 | 530              | 280             | 19              | 0.3 | 1    | 0.24            | 854  | 310                           | 55   | 4.4  | 1400             | 8.0       |     |
| 154-082-03CBCA2 | 180             | 10-09-84     | 23                     | 0.4  | 0.53 | 86  | 22 | 110 | 6 | 495              | 140             | 9               | 0.3 | 1    | 0.13            | 620  | 310                           | 43   | 2.7  | 1100             | 9.0       |     |
| 154-082-03CBCA2 | 180             | 03-20-85     | 24                     | 1.2  | 0.55 | 86  | 22 | 110 | 6 | 479              | 160             | 7               | 0.4 | 1    | 0.06            | 666  | 310                           | 43   | 2.7  | 750              | 8.0       |     |
| 154-082-03CBCA2 | 180             | 04-24-85     | 14                     | 0.55 | 0.55 | 89  | 23 | 120 | 7 | 486              | 160             | 6               | 0.3 | 1    | 0.07            | 630  | 320                           | 45   | 2.9  | 950              | 8.0       |     |
| 154-082-03CBCA2 | 180             | 05-23-85     | 27                     | 1.4  | 0.53 | 90  | 23 | 120 | 6 | 480              | 150             | 5               | 0.3 | 1    | 0.06            | 634  | 320                           | 44   | 2.9  | 1460             | 8.0       |     |
| 154-082-03CBCA2 | 180             | 05-23-85     | 27                     | 2.0  | 0.54 | 90  | 23 | 120 | 6 | 479              | 160             | 5               | 0.3 | 1    | 0.05            | 652  | 320                           | 44   | 2.9  | 1060             | 9.0       |     |
| 154-082-03CBCA2 | 180             | 06-26-85     | 25                     | 1.5  | 0.54 | 87  | 22 | 110 | 6 | 487              | 150             | 5               | 0.4 | 5    | 0.08            | 616  | 310                           | 43   | 2.7  | 1060             | 8.0       |     |
| 154-082-03CBCA2 | 180             | 07-29-85     | 26                     | 1.8  | 0.56 | 86  | 22 | 120 | 7 | 487              | 150             | 6               | 0.3 | 1    | 0.1             | 621  | 310                           | 45   | 3.0  | 1120             | 8.0       |     |
| 154-082-03CBCA2 | 180             | 08-27-85     | 24                     | 1.3  | 0.51 | 86  | 22 | 110 | 6 | 489              | 150             | 6               | 0.3 | 1    | 0.18            | 639  | 310                           | 43   | 2.7  | 1030             | 9.0       |     |
| 154-082-03CBCA2 | 180             | 09-24-85     | 22                     | 1.8  | 0.53 | 97  | 22 | 110 | 6 | 495              | 150             | 7               | 0.3 | 1    | 0.13            | 638  | 330                           | 41   | 2.6  | 1080             | 8.0       |     |
| 154-082-03CBCA3 | 110             | 10-09-84     | 24                     | 0.46 | 0.06 | 42  | 15 | 170 | 4 | 512              | 99              | 13              | 0.3 | 1    | 0.19            | 597  | 170                           | 68   | 5.7  | 1060             | 8.0       |     |
| 154-082-03CBCA3 | 110             | 03-20-85     | 24                     | 0.59 | 0.06 | 42  | 15 | 160 | 4 | 483              | 120             | 8               | 0.3 | 1    | 0.08            | 621  | 170                           | 67   | 5.3  | 1000             | 7.0       |     |
| 154-082-03CBCA3 | 110             | 04-24-85     | 15                     | 1.5  | 0.06 | 43  | 15 | 160 | 5 | 478              | 120             | 10              | 0.3 | 1    | 0.08            | 593  | 170                           | 67   | 5.3  | 900              | 8.0       |     |
| 154-082-03CBCA3 | 110             | 05-23-85     | 27                     | 1.6  | 0.05 | 42  | 15 | 160 | 4 | 463              | 120             | 8               | 0.2 |      | 0.07            | 593  | 170                           | 67   | 5.3  | 1040             | 8.0       |     |
| 154-082-03CBCA3 | 110             | 05-23-85     | 28                     | 1.2  | 0.06 | 42  | 15 | 160 | 4 | 460              | 120             | 7               | 0.2 | 6    | 0.07            | 599  | 170                           | 67   | 5.3  | 1000             | 9.0       |     |
| 154-082-03CBCA3 | 110             | 06-26-85     | 25                     | 1.4  | 0.06 | 43  | 15 | 160 | 4 | 471              | 120             | 7               | 0.3 | 7    | 0.1             | 595  | 170                           | 67   | 5.3  | 1020             | 8.0       |     |
| 154-082-03CBCA3 | 110             | 07-29-85     | 26                     | 1.6  | 0.06 | 43  | 15 | 160 | 5 | 475              | 120             | 7               | 0.3 | 1    | 0.11            | 589  | 170                           | 67   | 5.3  | 1020             | 8.0       |     |
| 154-082-03CBCA3 | 110             | 08-27-85     | 26                     | 1.4  | 0.06 | 43  | 15 | 160 | 4 | 469              | 120             | 7               | 0.3 |      | 0.22            | 611  | 170                           | 67   | 5.3  | 970              | 9.0       |     |
| 154-082-03CBCA3 | 110             | 09-24-85     | 22                     | 1.6  | 0.05 | 47  | 15 | 160 | 5 | 485              | 120             | 8               | 0.3 | 1    | 0.18            | 610  | 180                           | 65   | 5.2  | 1020             | 8.0       |     |
| 154-082-03CBCA4 | 61              | 10-09-84     | 26                     | 2.4  | 0.44 | 90  | 59 | 72  | 6 | 622              | 91              | 27              | 0.3 | 1    | 0.38            | 663  | 470                           | 25   | 1.4  | 1190             | 8.0       |     |
| 154-082-03CBCA4 | 61              | 03-20-85     | 26                     | 3.0  | 0.44 | 87  | 58 | 72  | 6 | 588              | 100             | 23              | 0.3 | 0.15 | 680             | 460  | 25                            | 1.5  | 1100 | 7.0              |           |     |
| 154-082-03CBCA4 | 61              | 04-24-85     | 15                     | 1.5  | 0.4  | 89  | 58 | 77  | 7 | 623              | 100             | 24              | 0.3 | 1    | 0.17            | 669  | 460                           | 26   | 1.6  | 1045             | 7.0       |     |
| 154-082-03CBCA4 | 61              | 05-23-85     | 29                     | 3.0  | 0.44 | 90  | 60 | 75  | 6 | 615              | 110             | 23              | 0.2 | 1    | 0.15            | 667  | 470                           | 25   | 1.5  | 1180             | 7.0       |     |
| 154-082-03CBCA4 | 61              | 05-23-85     | 30                     | 5.9  | 0.46 | 91  | 61 | 75  | 6 | 584              | 100             | 22              | 0.2 | 1    | 0.15            | 668  | 480                           | 25   | 1.5  | 1180             | 8.0       |     |
| 154-082-03CBCA4 | 61              | 06-26-85     | 28                     | 4.7  | 0.45 | 91  | 60 | 76  | 6 | 594              | 100             | 23              | 0.3 | 18   | 0.24            | 674  | 470                           | 26   | 1.5  | 1190             | 8.0       |     |
| 154-082-03CBCA4 | 61              | 07-29-85     | 28                     | 5.7  | 0.47 | 89  | 60 | 75  | 7 | 590              | 100             | 23              | 0.3 | 1    | 0.26            | 671  | 470                           | 25   | 1.5  | 1280             | 8.0       |     |

| Location        | Well Depth (ft) | Date Sampled | (milligrams per liter) |      |      |      |     |     |     |                  |                 |                 |     |     |                 |      | Hardness as CaCO <sub>3</sub> | % Na | SAR | Spec Cond (umho) | Temp (°C) | pH   |      |      |
|-----------------|-----------------|--------------|------------------------|------|------|------|-----|-----|-----|------------------|-----------------|-----------------|-----|-----|-----------------|------|-------------------------------|------|-----|------------------|-----------|------|------|------|
|                 |                 |              | SiO <sub>2</sub>       | Fe   | Mn   | Ca   | Mg  | Na  | K   | HCO <sub>3</sub> | CO <sub>3</sub> | SO <sub>4</sub> | Cl  | F   | NO <sub>3</sub> | B    | TDS                           | NCH  |     |                  |           |      |      |      |
| 154-082-03CBCA4 | 61              | 08-27-85     | 29                     | 0.77 | 0.43 | 89   | 61  | 74  | 7   | 594              |                 | 100             | 27  | 0.3 | 0.47            | 285  | 470                           | 25   | 1.5 | 1110             | 9.0       |      |      |      |
| 154-082-03CCA   | 61              | 09-24-85     | 23                     | 6.6  | 0.44 | 99   | 60  | 76  | 7   | 636              |                 | 100             | 22  | 0.2 | 1               | 0.37 | 693                           | 490  | 25  | 1.5              | 1190      | 7.0  |      |      |
| 154-082-03CCA   | 280             | 06-08-75     | 20                     | 2.2  | 0.26 | 98   | 28  | 160 | 5   | 507              |                 | 230             | 53  | 0.3 | 1               | 0.04 | 814                           | 360  | 49  | 3.7              |           |      |      |      |
| 154-082-03CCA   | 280             | 06-09-75     | 20                     | 2.0  | 0.24 | 100  | 32  | 170 | 5   | 521              |                 | 250             | 60  | 0.3 | 1               | 0.28 | 869                           | 380  | 49  | 3.8              |           |      |      |      |
| 154-082-03CCA   | 280             | 09-27-78     | 25                     | 0.36 | 0.42 | 120  | 27  | 190 | 5   | 552              |                 | 320             | 47  | 0.2 | 1               | 0.23 | 984                           | 410  | 50  | 4.1              |           |      |      |      |
| 154-082-03CCA   | 280             | 08-03-79     | 28                     | 1.7  | 0.5  | 120  | 32  | 190 | 5   | 560              |                 | 330             | 53  | 0.3 | 1               | 0.33 | 1060                          | 430  | 49  | 4.0              |           |      |      |      |
| 154-082-03CCA   | 280             | 05-01-80     | 26                     | 2.3  | 0.48 | 140  | 36  | 210 | 5   | 588              |                 | 410             | 55  | 0.3 | 1               |      | 1230                          | 500  | 18  | 4.1              | 1750      | 12.0 |      |      |
| 154-082-03CCA   | 280             | 08-12-80     | 29                     | 2.1  | 0.56 | 120  | 36  | 200 | 4   | 568              |                 | 350             | 56  | 0.4 | 1               | 0.03 | 1090                          | 450  | 49  | 4.1              | 2050      | 9.0  |      |      |
| 154-082-03CCA   | 280             | 08-21-81     | 29                     | 2.4  | 0.48 | 120  | 34  | 210 | 7   | 589              |                 | 350             | 54  | 0.2 | 1               | 0.05 | 1020                          | 440  | 50  | 4.3              | 1700      |      |      |      |
| 154-082-03CCA   | 280             | 12-28-81     | 25                     | 2.3  | 0.49 | 130  | 40  | 210 | 8   | 554              |                 | 370             | 68  | 0.2 | 1               | 0.07 | 1050                          | 490  | 36  | 4.1              | 1600      | 7.0  |      |      |
| 154-082-03CCA   | 280             | 05-27-82     | 25                     | 3.2  | 0.62 | 170  | 47  | 240 | 6   | 581              |                 | 560             | 54  | 0.3 | 1               | 0.11 | 1380                          | 620  | 140 | 46               | 2000      | 9.0  |      |      |
| 154-082-03CCA   | 280             | 08-26-82     | 26                     | 2.2  | 0.47 | 120  | 34  | 190 | 8   | 550              |                 | 350             | 49  | 0.4 | 1               | 0.21 | 1070                          | 440  | 48  | 3.9              | 1360      | 15.0 |      |      |
| 154-082-03CCA   | 280             | 11-16-82     | 28                     | 2.3  | 0.48 | 120  | 34  | 200 | 8   | 549              |                 | 340             | 51  | 0.3 | 1               | 0.15 | 1000                          | 440  | 49  | 4.1              | 1525      | 9.0  |      |      |
| 154-082-03CCA   | 280             | 02-17-83     | 28                     | 1.6  | 0.47 | 120  | 34  | 200 | 8   | 545              |                 | 350             | 51  | 0.3 | 1               | 0.16 | 1050                          | 440  | 49  | 4.1              | 1550      | 10.0 |      |      |
| 154-082-03CCA   | 280             | 05-26-83     | 26                     | 2.1  | 0.48 | 130  | 37  | 200 | 8   | 558              |                 | 390             | 52  | 0.3 | 1               | 0.17 | 1120                          | 480  | 19  | 4.0              | 1800      | 9.0  |      |      |
| 154-082-03CCA   | 280             | 08-18-83     | 27                     | 2.1  | 0.49 | 130  | 37  | 190 | 8   | 558              |                 | 380             | 52  | 0.3 | 1               | 0.13 | 1090                          | 480  | 19  | 46               | 3.8       | 1850 | 11.0 |      |
| 154-082-03CCA   | 280             | 11-23-83     | 27                     | 2.0  | 0.47 | 130  | 37  | 200 | 8   | 556              |                 | 380             | 56  | 0.4 | 1               | 0.14 | 1090                          | 480  | 21  | 47               | 4.0       | 1700 | 8.0  |      |
| 154-082-03CCA   | 280             | 02-28-84     | 27                     | 3.4  | 0.68 | 180  | 50  | 230 | 10  | 567              |                 | 600             | 57  | 0.3 | 1               | 0.18 | 1440                          | 660  | 190 | 43               | 3.9       | 1650 | 9.0  |      |
| 154-082-03CCA   | 280             | 04-12-84     | 24                     | 3.1  | 0.59 | 180  | 48  | 230 | 9   | 603              |                 | 560             | 53  | 0.2 | 1               | 0.2  | 1420                          | 650  | 150 | 43               | 3.9       | 2025 | 9.0  |      |
| 154-082-03CCA   | 280             | 05-22-84     | 28                     | 2.3  | 0.52 | 150  | 40  | 210 | 9   | 587              |                 | 420             | 57  | 0.3 | 1               | 0.19 | 1180                          | 540  | 58  | 45               | 3.9       | 1800 | 9.0  |      |
| 362             | 154-082-03CCA   | 280          | 08-16-84               | 28   | 1.6  | 0.47 | 130 | 36  | 190 | 9                | 565             |                 | 360 | 52  | 0.3             | 1    | 0.22                          | 1080 | 470 | 7                | 46        | 3.8  | 1750 | 10.0 |
|                 | 154-082-03CCA   | 280          | 08-31-84               | 28   | 1.4  | 0.47 | 130 | 37  | 190 | 8                | 558             |                 | 350 | 52  | 0.3             | 1    | 0.22                          | 1050 | 480 | 19               | 46        | 3.8  | 1750 | 8.0  |
|                 | 154-082-03CCA   | 280          | 09-12-84               | 26   | 2.2  | 0.48 | 130 | 36  | 190 | 8                | 564             |                 | 350 | 53  | 0.3             | 1    | 0.24                          | 1070 | 470 | 11               | 46        | 3.8  | 1650 | 9.0  |
|                 | 154-082-03CCA   | 280          | 09-20-84               | 26   | 2.2  | 0.47 | 130 | 36  | 200 | 8                | 565             |                 | 360 | 51  | 0.3             | 1    | 0.23                          | 1060 | 470 | 10               | 47        | 4.0  | 1700 | 9.0  |
|                 | 154-082-03CCA   | 280          | 09-27-84               | 24   | 2.1  | 0.43 | 130 | 36  | 190 | 7                | 562             |                 | 350 | 51  | 0.2             | 1    | 0.2                           | 1060 | 470 | 12               | 46        | 3.8  | 1750 | 8.0  |
| 154-082-03CCA   | 280             | 10-03-84     | 24                     | 2.3  | 0.45 | 140  | 39  | 210 | 7   | 573              |                 | 400             | 54  | 0.3 | 1               | 0.2  | 1140                          | 510  | 41  | 47               | 4.1       | 1800 | 8.0  |      |
| 154-082-03CCA   | 280             | 10-11-84     | 24                     | 2.6  | 0.53 | 160  | 43  | 210 | 7   | 588              |                 | 500             | 54  | 0.3 | 1               | 0.2  | 1300                          | 580  | 94  | 44               | 3.8       | 2000 | 8.0  |      |
| 154-082-03CCA   | 280             | 10-24-84     | 28                     | 3.3  | 0.56 | 180  | 47  | 230 | 7   | 607              |                 | 540             | 55  | 0.2 | 1               | 0.14 | 1370                          | 640  | 150 | 43               | 4.0       | 2000 | 8.0  |      |
| 154-082-03CCA   | 280             | 11-20-84     | 30                     | 2.6  | 0.59 | 180  | 48  | 240 | 10  | 613              |                 | 580             | 56  | 0.3 | 1               | 0.14 | 1440                          | 650  | 140 | 44               | 4.1       | 1980 | 8.0  |      |
| 154-082-03CCA   | 280             | 01-09-85     | 27                     | 3.1  | 0.64 | 180  | 48  | 240 | 9   | 621              |                 | 600             | 57  | 0.3 | 1               | 0.09 | 1460                          | 650  | 140 | 44               | 4.1       | 2045 | 8.0  |      |
| 154-082-03CCA   | 280             | 02-12-85     | 27                     | 2.7  | 0.56 | 180  | 50  | 230 | 8   | 607              |                 | 590             | 57  | 0.2 | 1               | 0.11 | 1420                          | 660  | 160 | 43               | 3.9       | 2080 | 8.0  |      |
| 154-082-03CCA   | 280             | 03-06-85     | 26                     | 3.1  | 0.64 | 170  | 48  | 240 | 8   | 614              |                 | 550             | 57  | 0.3 | 1               | 0.13 | 1430                          | 620  | 120 | 45               | 4.2       | 1990 | 8.0  |      |
| 154-082-03CCA   | 280             | 03-21-85     | 24                     | 2.9  | 0.57 | 170  | 45  | 220 | 8   | 621              |                 | 520             | 56  | 0.3 | 1               | 0.07 | 1350                          | 610  | 100 | 44               | 3.9       | 1925 | 8.0  |      |
| 154-082-03CCA   | 280             | 04-18-85     | 21                     | 2.6  | 0.46 | 150  | 40  | 210 | 8   | 588              |                 | 440             | 57  | 0.3 | 1               | 0.08 | 1220                          | 540  | 57  | 45               | 3.9       | 1800 | 8.0  |      |
| 154-082-03CCA   | 280             | 05-15-85     | 28                     | 2.3  | 0.47 | 140  | 40  | 200 | 7   | 566              |                 | 400             | 55  | 0.2 | 1               | 0.08 | 1160                          | 510  | 50  | 45               | 3.9       | 1550 | 8.0  |      |
| 154-082-03CCA   | 280             | 06-26-85     | 27                     | 2.3  | 0.45 | 140  | 38  | 200 | 7   | 565              |                 | 380             | 52  | 0.2 | 1               | 0.11 | 1150                          | 510  | 43  | 46               | 3.9       | 1675 | 8.0  |      |
| 154-082-03CCA   | 280             | 07-29-85     | 26                     | 2.2  | 0.49 | 140  | 38  | 200 | 8   | 572              |                 | 370             | 51  | 0.3 | 1               | 0.15 | 1100                          | 510  | 37  | 46               | 3.9       | 1700 | 8.0  |      |
| 154-082-03CCA   | 280             | 08-27-85     | 27                     | 2.1  | 0.46 | 130  | 40  | 200 | 7   | 568              |                 | 400             | 52  | 0.3 | 1               | 0.28 | 1150                          | 490  | 24  | 47               | 3.9       | 1875 | 8.0  |      |
| 154-082-03CCA   | 280             | 09-25-85     | 25                     | 2.8  | 0.6  | 190  | 51  | 240 | 9   | 616              |                 | 580             | 51  | 0.2 | 1               | 0.19 | 1480                          | 680  | 180 | 43               | 4.0       | 2150 | 8.0  |      |
| 154-082-03CCA   | 280             | 11-21-85     | 31                     | 3.3  | 0.59 | 190  | 52  | 250 | 9   | 614              |                 | 640             | 53  | 0.2 | 1               | 0.19 | 1540                          | 690  | 190 | 44               | 4.2       | 2050 | 6.0  |      |
| 154-082-03CCA   | 280             | 12-30-85     | 27                     | 2.7  | 0.62 | 190  | 52  | 240 | 9   | 628              |                 | 650             | 56  | 0.3 | 1               | 0.2  | 1530                          | 690  | 170 | 43               | 4.0       | 1950 | 7.0  |      |
| 154-082-03CCA   | 280             | 02-26-86     | 29                     | 3.1  | 0.66 | 190  | 51  | 250 | 10  | 634              |                 | 640             | 55  | 0.3 | 1               | 0.17 | 1610                          | 680  | 160 | 44               | 4.2       | 2140 | 8.0  |      |
| 154-082-03CCA   | 280             | 03-27-86     | 29                     | 3.3  | 0.71 | 190  | 53  | 250 | 8   | 636              |                 | 640             | 55  | 0.3 | 1               | 0.15 | 1500                          | 690  | 170 | 44               | 4.2       | 2200 | 8.0  |      |
| 154-082-03CCA   | 280             | 06-04-86     | 28                     | 2.5  | 0.5  | 160  | 42  | 210 | 7   | 581              |                 | 470             | 54  | 0.2 | 1               | 0.26 | 1260                          | 570  | 96  | 44               | 3.8       | 8.0  |      |      |
| 154-082-03CCA   | 280             | 07-23-86     | 28                     | 2.4  | 0.48 | 150  | 40  | 200 | 8   | 573              |                 | 410             | 52  | 0.2 | 1               | 0.16 | 1160                          | 540  | 70  | 44               | 3.7       | 1850 | 9.0  |      |
| 154-082-03CCA   | 280             | 09-09-86     | 28                     | 2.1  | 0.45 | 130  | 37  | 200 | 9   | 566              |                 | 390             | 51  | 0.2 | 1               | 0.28 | 1150                          | 480  | 13  | 67               | 4.0       | 1720 | 8.0  |      |
| 154-082-03CCA   | 280             | 12-16-86     | 24                     | 3.4  | 0.6  | 190  | 53  | 240 | 8   | 623              |                 | 650             | 49  | 0.2 | 1               | 0.28 | 1510                          | 690  | 180 | 43               | 4.0       | 2050 | 9.0  |      |
| 154-082-03CCC   | S               | 08-16-84     | 1                      | 0.09 | 0.08 | 50   | 18  | 83  | 19  | 228              | 20              | 34              | 110 | 0.2 | 1               | 0.11 | 481                           | 200  | 45  | 2.5              | 880       | 25.0 |      |      |
| 154-082-03CCC   | S               | 09-12-84     | 3                      | 0.03 | 0.02 | 39   | 18  | 110 | 20  | 77               | 57              | 34              | 140 | 0.2 | 1               | 0.07 | 446                           | 170  | 14  | 55               | 3.7       | 890  | 15.0 |      |
| 154-082-03CCD   |                 | 09-07-74     | 17                     | 2.3  | 0.28 | 89   | 19  | 220 | 6   | 570              |                 | 200             | 96  | 0.2 | 1               | 0.2  | 950                           | 300  | 61  | 5.5              |           | 8.0  |      |      |

| Location        | Well Depth (ft) | Date Sampled | (milligrams per liter) |      |      |     |    |     |    |                  |                 |                 |    |     |                 |      | Hardness as CaCO <sub>3</sub> | % Na | Spec Cond (umho) | Temp (°C) | pH   |
|-----------------|-----------------|--------------|------------------------|------|------|-----|----|-----|----|------------------|-----------------|-----------------|----|-----|-----------------|------|-------------------------------|------|------------------|-----------|------|
|                 |                 |              | SiO <sub>2</sub>       | Fe   | Mn   | Ca  | Mg | Na  | K  | HCO <sub>3</sub> | CO <sub>3</sub> | SO <sub>4</sub> | Cl | F   | NO <sub>3</sub> | B    |                               |      |                  |           |      |
| 154-082-03CCD   | 256             | 09-08-74     | 19                     | 1.6  | 0.28 | 90  | 23 | 210 | 6  | 560              |                 | 200             | 78 | 0.4 | 3               | 0.35 | 959                           | 320  | 58               | 5.1       | 8.0  |
| 154-082-03CCD   | 256             | 09-27-78     | 25                     | 0.41 | 0.44 | 190 | 52 | 280 | 8  | 633              |                 | 670             | 74 | 0.2 | 1               | 0.23 | 1580                          | 690  | 170              | 47        | 4.6  |
| 154-082-03CCD   | 256             | 08-03-79     | 28                     | 3.6  | 0.46 | 220 | 61 | 340 | 9  | 693              |                 | 850             | 71 | 0.2 | 1               | 0.53 | 1960                          | 800  | 230              | 48        | 5.2  |
| 154-082-03CCD   | 256             | 05-01-80     | 25                     | 3.6  | 0.31 | 210 | 45 | 310 | 8  | 671              |                 | 690             | 83 | 0.2 | 1               |      | 1710                          | 710  | 160              | 48        | 5.1  |
| 154-082-03CCD   | 256             | 08-12-80     | 29                     | 3.1  | 0.49 | 220 | 63 | 350 | 9  | 664              |                 | 910             | 61 | 0.3 | 1               | 0.27 | 1990                          | 810  | 270              | 48        | 5.4  |
| 154-082-03CCD   | 256             | 08-21-81     | 29                     | 4.0  | 0.44 | 230 | 55 | 450 | 12 | 766              |                 | 1000            | 55 | 0.2 | 1               | 0.09 | 2160                          | 800  | 170              | 55        | 6.9  |
| 154-082-03CCD   | 256             | 12-29-81     | 25                     | 3.2  | 0.37 | 210 | 62 | 440 | 14 | 720              |                 | 1000            | 68 | 0.2 | 1               | 0.1  | 2190                          | 780  | 190              | 55        | 6.9  |
| 154-082-03CCD   | 256             | 05-27-82     | 24                     | 3.6  | 0.46 | 220 | 61 | 340 | 9  | 697              |                 | 890             | 70 | 0.2 | 1               | 0.19 | 1970                          | 800  | 230              | 48        | 5.2  |
| 154-082-03CCD   | 256             | 08-26-82     | 27                     | 3.4  | 0.47 | 210 | 61 | 320 | 13 | 684              |                 | 840             | 71 | 0.3 | 4               | 0.28 | 1960                          | 780  | 210              | 47        | 5.0  |
| 154-082-03CCD   | 256             | 11-16-82     | 27                     | 2.4  | 0.44 | 200 | 59 | 390 | 13 | 710              |                 | 960             | 49 | 0.3 | 1               | 0.22 | 2090                          | 740  | 160              | 53        | 6.2  |
| 154-082-03CCD   | 256             | 02-17-83     | 27                     | 1.5  | 0.43 | 190 | 57 | 390 | 12 | 696              |                 | 950             | 49 | 0.2 | 1               | 0.23 | 1960                          | 710  | 140              | 54        | 6.4  |
| 154-082-03CCD   | 256             | 05-26-83     | 26                     | 2.7  | 0.37 | 220 | 62 | 380 | 11 | 713              |                 | 990             | 50 | 0.2 | 1               | 0.25 | 2050                          | 800  | 220              | 50        | 5.9  |
| 154-082-03CCD   | 256             | 08-18-83     | 27                     | 3.3  | 0.41 | 210 | 62 | 350 | 12 | 702              |                 | 920             | 62 | 0.2 | 1               | 0.19 | 2010                          | 780  | 200              | 49        | 5.5  |
| 154-082-03CCD   | 256             | 11-23-83     | 26                     | 2.4  | 0.38 | 210 | 60 | 370 | 13 | 704              |                 | 950             | 52 | 0.3 | 1               | 0.14 | 2090                          | 770  | 190              | 51        | 5.8  |
| 154-082-03CCD   | 256             | 02-28-84     | 26                     | 3.7  | 0.43 | 240 | 64 | 320 | 13 | 706              |                 | 890             | 66 | 0.3 | 1               | 0.31 | 1890                          | 860  | 280              | 44        | 4.7  |
| 154-082-03CCD   | 256             | 04-12-84     | 24                     | 3.4  | 0.43 | 230 | 62 | 310 | 12 | 704              |                 | 820             | 67 | 0.2 | 1               | 0.27 | 1930                          | 830  | 250              | 44        | 4.7  |
| 154-082-03CCD   | 256             | 05-22-84     | 28                     | 3.3  | 0.44 | 260 | 67 | 350 | 13 | 725              |                 | 1000            | 50 | 0.2 | 1               | 0.21 | 2150                          | 920  | 330              | 45        | 5.0  |
| 154-082-03CCD   | 256             | 08-16-84     | 27                     | 1.9  | 0.42 | 230 | 60 | 330 | 13 | 721              |                 | 890             | 63 | 0.2 | 1               | 0.26 | 1940                          | 820  | 230              | 46        | 5.0  |
| 154-082-03CCD   | 256             | 08-31-84     | 28                     | 1.7  | 0.41 | 250 | 68 | 360 | 13 | 716              |                 | 1000            | 48 | 0.2 | 1               | 0.27 | 2100                          | 900  | 320              | 46        | 5.2  |
| 154-082-03CCD   | 256             | 09-12-84     | 26                     | 2.8  | 0.39 | 240 | 64 | 350 | 13 | 712              |                 | 990             | 49 | 0.2 | 1               | 0.27 | 2120                          | 860  | 280              | 46        | 5.2  |
| 154-082-03CCD   | 256             | 09-20-84     | 25                     | 2.9  | 0.38 | 240 | 63 | 370 | 13 | 720              |                 | 990             | 48 | 0.2 | 1               | 0.26 | 2070                          | 860  | 270              | 48        | 5.5  |
| 154-082-03CCD   | 256             | 09-27-84     | 24                     | 2.7  | 0.35 | 250 | 65 | 370 | 12 | 720              |                 | 1000            | 47 | 0.2 | 1               | 0.25 | 2140                          | 890  | 300              | 47        | 5.4  |
| 154-082-03CCD   | 256             | 10-03-84     | 24                     | 3.3  | 0.38 | 240 | 63 | 330 | 11 | 717              |                 | 900             | 60 | 0.2 | 1               | 0.23 | 1950                          | 860  | 270              | 45        | 4.9  |
| 154-082-03CCD   | 256             | 10-11-84     | 25                     | 3.1  | 0.41 | 240 | 63 | 330 | 11 | 711              |                 | 890             | 61 | 0.2 | 1               | 0.28 | 1990                          | 860  | 280              | 45        | 4.9  |
| 154-082-03CCD   | 256             | 10-24-84     | 28                     | 2.0  | 0.34 | 210 | 58 | 310 | 10 | 678              |                 | 820             | 51 | 0.2 | 1               | 0.2  | 1830                          | 760  | 210              | 47        | 4.9  |
| 154-082-03CCD   | 256             | 11-08-84     | 28                     | 2.4  | 0.36 | 230 | 65 | 360 | 11 | 702              |                 | 930             | 50 | 0.2 | 1               | 0.17 | 2050                          | 840  | 270              | 48        | 5.4  |
| 154-082-03CCD   | 256             | 11-20-84     | 26                     | 0.53 | 0.31 | 180 | 49 | 290 | 11 | 651              |                 | 690             | 44 | 0.3 | 1               | 0.17 | 1620                          | 650  | 120              | 49        | 5.0  |
| 154-082-03CCD   | 256             | 01-09-85     | 26                     | 1.7  | 0.42 | 220 | 62 | 340 | 11 | 688              |                 | 910             | 45 | 0.3 | 1               | 0.1  | 1930                          | 800  | 240              | 47        | 5.2  |
| 154-082-03CCD   | 256             | 02-12-85     | 27                     | 2.8  | 0.4  | 230 | 65 | 320 | 11 | 707              |                 | 920             | 58 | 0.2 | 4               | 0.13 | 1990                          | 840  | 260              | 45        | 4.8  |
| 154-082-03CCD   | 256             | 03-06-85     | 26                     | 3.2  | 0.44 | 230 | 63 | 330 | 11 | 714              |                 | 880             | 59 | 0.3 | 1               | 0.15 | 1970                          | 830  | 250              | 46        | 5.0  |
| 154-082-03CCD   | 256             | 03-21-85     | 24                     | 2.9  | 0.4  | 240 | 63 | 350 | 11 | 717              |                 | 880             | 59 | 0.3 | 1               | 0.1  | 1950                          | 860  | 270              | 45        | 4.9  |
| 154-082-03CCD   | 256             | 04-18-85     | 21                     | 2.7  | 0.34 | 250 | 65 | 360 | 13 | 723              |                 | 990             | 46 | 0.3 | 1               | 0.06 | 2130                          | 890  | 300              | 46        | 5.3  |
| 154-082-03CCD   | 256             | 05-15-85     | 28                     | 2.9  | 0.38 | 250 | 68 | 360 | 11 | 723              |                 | 1000            | 46 | 0.2 | 1               | 0.09 | 2150                          | 900  | 310              | 46        | 5.2  |
| 154-082-03CCD   | 256             | 07-02-85     | 25                     | 2.3  | 0.36 | 230 | 61 | 330 | 12 | 625              |                 | 930             | 53 | 0.2 | 4               | 0.28 | 2020                          | 830  | 310              | 46        | 5.0  |
| 154-082-03CCD   | 256             | 07-30-85     | 27                     | 2.4  | 0.38 | 230 | 63 | 370 | 12 | 712              |                 | 960             | 47 | 0.2 | 1               | 0.17 | 2080                          | 830  | 250              | 49        | 5.6  |
| 154-082-03CCD   | 256             | 08-28-85     | 26                     | 1.8  | 0.37 | 230 | 60 | 350 | 11 | 707              |                 | 940             | 47 | 0.2 | 1               | 0.33 | 1990                          | 820  | 240              | 48        | 5.3  |
| 154-082-03CCD   | 256             | 09-25-85     | 25                     | 2.3  | 0.35 | 240 | 63 | 360 | 13 | 716              |                 | 880             | 46 | 0.2 | 1               | 0.28 | 2070                          | 860  | 270              | 47        | 5.3  |
| 154-082-03CCD   | 256             | 11-21-85     | 31                     | 1.8  | 0.3  | 200 | 55 | 300 | 10 | 659              |                 | 770             | 44 | 0.2 | 1               | 0.26 | 1730                          | 730  | 190              | 47        | 4.8  |
| 154-082-03CCD   | 256             | 12-30-85     | 28                     | 1.7  | 0.41 | 230 | 61 | 350 | 12 | 698              |                 | 960             | 50 | 0.2 | 1               | 0.26 | 2050                          | 860  | 270              | 47        | 5.3  |
| 154-082-03CCD   | 256             | 02-26-86     | 28                     | 2.0  | 0.43 | 220 | 58 | 330 | 12 | 703              |                 | 890             | 48 | 0.2 | 1               | 0.23 | 1970                          | 790  | 210              | 47        | 5.1  |
| 154-082-03CCD   | 256             | 03-27-86     | 29                     | 3.2  | 0.44 | 240 | 64 | 340 | 10 | 713              |                 | 930             | 54 | 0.3 | 0.22            |      | 1990                          | 860  | 280              | 46        | 5.0  |
| 154-082-03CCD   | 256             | 06-04-86     | 28                     | 2.8  | 0.38 | 240 | 64 | 360 | 11 | 715              |                 | 990             | 47 | 0.2 | 0.27            |      | 2130                          | 860  | 280              | 47        | 5.3  |
| 154-082-03CCD   | 256             | 07-23-86     | 29                     | 2.5  | 0.39 | 240 | 63 | 360 | 13 | 713              |                 | 960             | 45 | 0.2 | 1               | 0.12 | 2050                          | 860  | 270              | 47        | 5.3  |
| 154-082-03CCD   | 256             | 09-09-86     | 28                     | 2.8  | 0.38 | 230 | 62 | 340 | 13 | 716              |                 | 940             | 51 | 0.2 | 1               | 0.34 | 2070                          | 830  | 240              | 47        | 5.1  |
| 154-082-03CCD   | 256             | 12-16-86     | 24                     | 1.8  | 0.32 | 210 | 58 | 330 | 9  | 677              |                 | 860             | 44 | 0.2 | 1               | 0.27 | 1880                          | 760  | 210              | 48        | 5.2  |
| 154-082-03CDBD1 | 110             | 03-19-85     | 22                     | 1.2  | 0.62 | 120 | 31 | 92  | 6  | 433              |                 | 240             | 22 | 0.4 | 1               | 0.08 | 756                           | 430  | 72               | 31        | 1.9  |
| 154-082-03CDBD1 | 110             | 04-23-85     | 26                     | 1.1  | 0.56 | 120 | 31 | 98  | 7  | 446              |                 | 240             | 24 | 0.3 | 1               | 0.08 | 793                           | 430  | 62               | 33        | 2.1  |
| 154-082-03CDBD1 | 110             | 05-23-85     | 26                     | 2.7  | 0.61 | 120 | 32 | 95  | 6  | 436              |                 | 240             | 23 | 0.3 | 1               | 0.08 | 763                           | 430  | 74               | 32        | 2.0  |
| 154-082-03CDBD1 | 110             | 06-26-85     | 25                     | 1.2  | 0.59 | 120 | 33 | 91  | 7  | 442              |                 | 230             | 22 | 0.3 | 4               | 0.13 | 732                           | 440  | 73               | 31        | 1.9  |
| 154-082-03CDBD1 | 110             | 07-29-85     | 25                     | 2.7  | 0.62 | 130 | 33 | 92  | 6  | 448              |                 | 240             | 22 | 0.3 | 1               | 0.15 | 729                           | 460  | 93               | 30        | 1.9  |
|                 |                 |              |                        |      |      |     |    |     |    |                  |                 |                 |    |     |                 |      |                               |      |                  | 1260      | 10.0 |

| Location        | Well Depth (ft) | Date Sampled | (milligrams per liter) |      |      |     |    |     |    |                  |                 |                 |     |     |                 |      | Hardness as CaCO <sub>3</sub> | % NCH | % Na | SAR | Spec Cond (umho) | Temp (°C) | pH   |  |
|-----------------|-----------------|--------------|------------------------|------|------|-----|----|-----|----|------------------|-----------------|-----------------|-----|-----|-----------------|------|-------------------------------|-------|------|-----|------------------|-----------|------|--|
|                 |                 |              | SiO <sub>2</sub>       | Fe   | Mn   | Ca  | Mg | Na  | K  | HCO <sub>3</sub> | CO <sub>3</sub> | SO <sub>4</sub> | Cl  | F   | NO <sub>3</sub> | B    |                               |       |      |     |                  |           |      |  |
| 154-082-03CDBD1 | 110             | 08-27-85     | 24                     | 2.7  | 0.62 | 130 | 34 | 96  | 6  | 465              |                 | 260             | 26  | 0.3 | 1               | 0.25 | 799                           | 460   | 84   | 31  | 1.9              | 1340      | 8.0  |  |
| 154-082-03CDBD1 | 110             | 09-24-85     | 24                     | 2.8  | 0.61 | 130 | 34 | 94  | 7  | 466              |                 | 250             | 23  | 0.3 | 1               | 0.16 | 781                           | 470   | 83   | 30  | 1.9              | 1140      | 8.0  |  |
| 154-082-03CDBD2 | 49              | 03-20-85     | 25                     | 5.6  | 0.42 | 120 | 65 | 120 | 7  | 651              |                 | 250             | 42  | 0.3 | 1               | 0.14 | 961                           | 570   | 34   | 31  | 2.2              | 1250      | 8.0  |  |
| 154-082-03CDBD2 | 49              | 04-23-85     | 28                     | 8.9  | 0.39 | 130 | 64 | 130 | 7  | 670              |                 | 270             | 41  | 0.3 |                 | 0.15 | 1030                          | 590   | 39   | 32  | 2.3              | 1525      | 8.0  |  |
| 154-082-03CDBD2 | 49              | 05-23-85     | 29                     | 8.3  | 0.43 | 150 | 65 | 120 | 6  | 632              |                 | 260             | 40  | 0.2 | 16              | 0.12 | 994                           | 590   | 74   | 30  | 2.2              | 1400      | 10.0 |  |
| 154-082-03CDBD2 | 49              | 06-26-85     | 27                     | 4.4  | 0.42 | 130 | 66 | 120 | 7  | 630              |                 | 260             | 37  | 0.3 | 19              | 0.21 | 970                           | 600   | 80   | 30  | 2.1              | 1550      | 9.0  |  |
| 154-082-03CDBD2 | 49              | 07-29-85     | 28                     | 8.1  | 0.44 | 130 | 66 | 120 | 7  | 639              |                 | 260             | 39  | 0.3 |                 | 0.24 | 961                           | 600   | 73   | 30  | 2.1              | 1650      | 9.0  |  |
| 154-082-03CDBD2 | 49              | 08-27-85     | 27                     | 3.7  | 0.43 | 130 | 65 | 120 | 7  | 641              |                 | 270             | 44  | 0.3 | 1               | 0.4  | 1010                          | 590   | 67   | 30  | 2.1              | 1640      | 9.0  |  |
| 154-082-03CDBD2 | 49              | 09-24-85     | 27                     | 3.0  | 0.41 | 130 | 66 | 130 | 7  | 633              |                 | 260             | 42  | 0.3 |                 | 0.32 | 941                           | 600   | 77   | 32  | 2.3              | 1340      | 8.0  |  |
| 154-082-03CDBD3 | 32              | 03-25-85     | 17                     | 0.03 | 0.47 | 140 | 54 | 130 | 11 | 580              |                 | 320             | 32  | 0.3 | 1               | 0.36 | 980                           | 570   | 96   | 32  | 2.4              | 1000      | 8.0  |  |
| 154-082-03CDBD3 | 32              | 04-23-85     | 23                     | 3.0  | 0.78 | 140 | 52 | 110 | 8  | 604              |                 | 270             | 33  | 0.2 | 1               | 0.21 | 976                           | 560   | 69   | 29  | 2.0              | 1390      | 9.0  |  |
| 154-082-03CDBD3 | 32              | 05-23-85     | 25                     | 3.0  | 0.73 | 140 | 51 | 100 | 8  | 612              |                 | 220             | 33  | 0.2 | 1               | 0.22 | 875                           | 560   | 58   | 28  | 1.8              | 1260      | 10.0 |  |
| 154-082-03CDBD3 | 32              | 06-26-85     | 26                     | 3.5  | 0.75 | 140 | 51 | 100 | 8  | 615              |                 | 240             | 33  | 0.2 |                 | 0.24 | 932                           | 560   | 56   | 28  | 1.8              | 1360      | 9.0  |  |
| 154-082-03CDBD3 | 32              | 07-29-85     | 26                     | 5.2  | 0.86 | 140 | 54 | 110 | 8  | 632              |                 | 240             | 30  | 0.3 |                 | 0.4  | 895                           | 570   | 54   | 29  | 2.0              | 1500      | 9.0  |  |
| 154-082-03CDBD3 | 32              | 08-27-85     | 25                     | 6.7  | 0.98 | 160 | 57 | 120 | 8  | 649              |                 | 300             | 30  | 0.3 |                 | 0.81 | 1030                          | 630   | 100  | 29  | 2.1              | 1640      | 8.0  |  |
| 154-082-03CDBD3 | 32              | 09-24-85     | 25                     | 7.8  | 1.0  | 160 | 58 | 120 | 9  | 659              |                 | 300             | 33  | 0.3 | 1               | 0.65 | 990                           | 640   | 98   | 29  | 2.1              | 1380      | 8.0  |  |
| 154-082-03CDB1  | 80              | 10-11-65     | 29                     | 3.3  |      | 80  | 26 | 147 | 6  | 482              |                 | 174             | 37  | 0.5 |                 | 0.19 | 738                           | 308   | 50   | 36  | 8.9              |           |      |  |
| 154-082-03CDB1  | 80              | 10-12-65     |                        |      |      | 67  | 27 | 145 |    | 447              |                 |                 | 38  |     |                 |      | 685                           | 280   |      | 38  |                  | 8.9       |      |  |
| 154-082-03CDB1  | 80              | 10-14-65     | 28                     | 3.5  |      | 98  | 25 | 144 | 6  | 525              |                 | 170             | 41  | 0.4 |                 | 0.18 | 783                           | 347   | 47   | 34  |                  | 8.9       |      |  |
| 154-082-03CDB1  | 80              | 08-02-71     | 23                     |      | 0.02 | 104 | 36 | 91  | 8  | 575              |                 | 122             | 20  | 0.2 | 6               | 0.13 | 681                           | 409   | 32   | 2.0 | 640              | 7.0       |      |  |
| 154-082-03CDB1  | 80              | 10-10-84     | 24                     | 1.2  | 0.55 | 110 | 28 | 92  | 6  | 405              |                 | 220             | 24  | 0.3 | 1               | 0.18 | 702                           | 390   | 58   | 34  | 2.0              | 1090      | 9.0  |  |
| 154-082-03CDB2  | 91              | 08-26-65     | 17                     | 1.5  |      | 96  | 26 | 88  | 7  | 480              |                 | 135             | 11  | 0.3 | 5               | 0.14 | 621                           | 348   | 35   | 21  |                  | 10.0      |      |  |
| 154-082-03CDB2  | 91              | 05-01-80     | 26                     | 1.3  | 0.19 | 86  | 21 | 110 | 4  | 436              |                 | 170             | 15  | 0.3 | 1               |      | 630                           | 300   | 44   | 2.8 | 1000             | 18.0      |      |  |
| 154-082-03CDB2  | 91              | 08-21-81     | 30                     | 4.2  | 0.25 | 96  | 27 | 120 | 6  | 499              |                 | 180             | 22  | 0.3 | 1               |      | 662                           | 350   | 42   | 2.8 | 1220             | 7.0       |      |  |
| 154-082-03CDB2  | 91              | 08-26-82     | 26                     | 3.1  | 0.23 | 92  | 30 | 100 | 7  | 475              |                 | 170             | 21  | 0.4 |                 | 0.21 | 685                           | 350   | 38   | 2.3 | 980              | 15.0      |      |  |
| 154-082-03CDB2  | 91              | 05-26-83     | 25                     | 2.9  | 0.19 | 87  | 27 | 95  | 6  | 421              |                 | 170             | 20  | 0.3 | 1               | 0.17 | 623                           | 350   | 38   | 2.3 | 1100             | 14.0      |      |  |
| 154-082-03CDB2  | 91              | 08-18-83     | 27                     | 2.4  | 0.25 | 100 | 31 | 97  | 7  | 459              |                 | 190             | 23  | 0.3 | 1               | 0.17 | 652                           | 380   | 1    | 35  | 2.2              | 1260      | 11.0 |  |
| 154-082-03CDB2  | 91              | 11-22-83     | 26                     | 1.8  | 0.2  | 92  | 28 | 98  | 6  | 432              |                 | 170             | 20  | 0.3 | 1               | 0.17 | 677                           | 340   | 38   | 2.3 | 1100             | 9.0       |      |  |
| 154-082-03CDB2  | 91              | 08-16-84     | 27                     | 1.8  | 0.18 | 88  | 26 | 91  | 7  | 431              |                 | 160             | 18  | 0.4 | 1               | 0.23 | 614                           | 330   | 37   | 2.2 | 1060             | 9.0       |      |  |
| 154-082-03CDB2  | 91              | 10-10-84     | 26                     | 3.7  | 0.42 | 130 | 62 | 120 | 6  | 647              |                 | 250             | 40  | 0.3 | 1               | 0.3  | 953                           | 580   | 50   | 31  | 2.2              | 1500      | 9.0  |  |
| 154-082-03CDB2  | 91              | 03-19-85     | 22                     | 2.2  | 0.22 | 93  | 30 | 100 | 6  | 450              |                 | 150             | 22  | 0.4 | 1               | 0.1  | 637                           | 360   | 57   | 2.3 | 1000             | 8.0       |      |  |
| 154-082-03CDB2  | 91              | 06-26-85     | 25                     | 2.4  | 0.18 | 96  | 28 | 98  | 6  | 457              |                 | 150             | 19  | 0.3 | 7               | 0.16 | 641                           | 350   | 37   | 2.3 | 1040             | 8.0       |      |  |
| 154-082-03CDB2  | 91              | 09-24-85     | 23                     | 2.9  | 0.22 | 93  | 30 | 93  | 7  | 488              |                 | 160             | 19  | 0.3 | 1               | 0.3  | 658                           | 360   | 36   | 2.1 | 1000             | 8.0       |      |  |
| 154-082-03CDC1  | 237             | 09-26-68     | 27                     | 0.52 | 0.22 | 87  | 17 | 287 | 8  | 618              |                 | 239             | 120 | 0.3 | 1               | 0.34 | 1090                          | 289   | 68   | 7.3 | 1500             | 7.5       |      |  |
| 154-082-03CDC1  | 237             | 12-03-68     | 27                     | 0.84 | 0.21 | 75  | 20 | 288 | 7  | 585              |                 | 234             | 120 | 0.3 | 1               | 0.16 | 1060                          | 269   | 69   | 7.6 |                  |           |      |  |
| 154-082-03CDC1  | 237             | 12-05-69     | 25                     | 1.9  | 0.06 | 100 | 28 | 260 | 5  | 550              |                 | 302             | 122 | 0.3 | 1               |      | 1070                          | 365   | 60   | 5.9 |                  |           |      |  |
| 154-082-03CDC1  | 237             | 05-01-80     | 26                     | 0.62 | 0.55 | 210 | 57 | 440 | 9  | 731              |                 | 1000            | 53  | 0.2 | 1               | 0.29 | 2230                          | 760   | 160  | 55  | 7.0              | 3000      | 14.0 |  |
| 154-082-03CDC1  | 237             | 08-12-80     | 28                     | 1.1  | 0.68 | 200 | 22 | 440 | 9  | 580              |                 | 1000            | 56  | 0.2 | 1               | 0.31 | 2120                          | 590   | 110  | 61  | 7.9              | 3800      | 9.0  |  |
| 154-082-03CDC1  | 237             | 08-21-81     | 29                     | 3.5  | 0.68 | 230 | 57 | 460 | 12 | 782              |                 | 1100            | 53  | 0.2 | 1               | 0.05 | 2170                          | 810   | 170  | 55  | 7.0              | 3000      | 7.0  |  |
| 154-082-03CDC1  | 237             | 08-26-82     | 28                     | 6.1  | 0.37 | 110 | 66 | 150 | 8  | 702              |                 | 230             | 46  | 0.4 | 1               | 0.37 | 962                           | 550   | 37   | 2.8 | 1380             | 14.0      |      |  |
| 154-082-03CDC1  | 237             | 05-26-83     | 26                     | 2.6  | 0.64 | 230 | 68 | 400 | 13 | 730              |                 | 1000            | 67  | 0.2 | 1               | 0.28 | 2190                          | 850   | 260  | 50  | 6.0              | 2900      | 13.0 |  |
| 154-082-03CDC1  | 237             | 08-18-83     | 25                     | 2.9  | 0.62 | 220 | 68 | 380 | 13 | 630              |                 | 1000            | 68  | 0.3 | 1               | 0.28 | 2100                          | 850   | 310  | 49  | 5.7              | 3500      | 10.0 |  |
| 154-082-03CDC1  | 237             | 10-28-83     | 28                     | 1.4  | 0.61 | 220 | 66 | 380 | 13 | 611              |                 | 1000            | 71  | 0.2 | 1               | 0.25 | 2130                          | 820   | 320  | 50  | 5.8              | 2900      | 9.0  |  |
| 154-082-03CDC1  | 237             | 08-16-84     | 27                     | 1.7  | 0.6  | 250 | 70 | 400 | 14 | 752              |                 | 1000            | 73  | 0.2 | 1               | 0.33 | 2250                          | 910   | 300  | 48  | 5.8              | 3200      | 9.0  |  |
| 154-082-03CDC1  | 237             | 03-19-85     | 25                     | 2.9  | 0.54 | 240 | 68 | 400 | 11 | 771              |                 | 1000            | 69  | 0.2 | 1               | 0.13 | 2220                          | 880   | 250  | 49  | 5.9              | 3150      | 8.0  |  |
| 154-082-03CDC1  | 237             | 04-23-85     | 27                     | 1.5  | 0.47 | 240 | 67 | 400 | 13 | 699              |                 | 980             | 68  | 0.2 | 1               | 0.17 | 2270                          | 880   | 300  | 49  | 5.9              | 2860      | 8.0  |  |
| 154-082-03CDC1  | 237             | 05-23-85     | 27                     | 0.76 | 0.52 | 240 | 68 | 410 | 11 | 690              |                 | 1000            | 65  | 0.2 | 5               | 0.15 | 2190                          | 880   | 310  | 50  | 6.0              | 2600      | 10.0 |  |
| 154-082-03CDC1  | 237             | 06-25-85     | 27                     | 2.2  | 0.52 | 240 | 68 | 400 | 11 | 742              |                 | 990             | 68  | 0.2 | 1               | 0.13 | 2200                          | 880   | 270  | 49  | 5.9              | 2700      | 9.0  |  |
| 154-082-03CDC1  | 237             | 09-24-85     | 25                     | 2.0  | 0.47 | 240 | 67 | 390 | 13 | 710              |                 | 980             | 61  | 0.2 |                 | 0.36 | 2110                          | 880   | 293  | 49  | 5.7              | 2200      | 8.0  |  |
| 154-082-03CDC2  | 223             | 11-27-68     | 26                     | 2.3  | 0.07 | 150 | 34 | 283 | 8  | 604              |                 | 158             | 324 | 0.2 | 1               | 0.23 | 1260                          | 513   | 18   | 54  | 5.4              |           | 7.8  |  |

| Location       | Well Depth<br>(ft) | Date Sampled | (milligrams per liter) |      |      |     |    |     |    |                  |                 |                 |     |     |                 |      |      | Hardness as<br>CaCO <sub>3</sub> | % NCH | Na  | SAR | Spec Cond<br>(umho) | Temp<br>(°C) | pH |
|----------------|--------------------|--------------|------------------------|------|------|-----|----|-----|----|------------------|-----------------|-----------------|-----|-----|-----------------|------|------|----------------------------------|-------|-----|-----|---------------------|--------------|----|
|                |                    |              | SiO <sub>2</sub>       | Fe   | Mn   | Ca  | Mg | Na  | K  | HCO <sub>3</sub> | CO <sub>3</sub> | SO <sub>4</sub> | Cl  | F   | NO <sub>3</sub> | B    | TDS  |                                  |       |     |     |                     |              |    |
| 154-082-03CDC2 | 223                | 12-05-69     | 19                     | 4.4  | 0.02 | 164 | 39 | 240 | 14 | 611              |                 | 186             | 297 | 0.2 | 1               |      | 1230 | 570                              | 69    | 47  | 4.4 |                     |              |    |
| 154-082-03CDC2 | 223                | 05-01-80     | 23                     | 5.5  | 0.34 | 240 | 66 | 350 | 10 | 712              |                 | 1000            | 52  | 0.2 | 1               | 0.1  | 2300 | 870                              | 290   | 46  | 5.1 | 2900                | 12.0         |    |
| 154-082-03CDC2 | 223                | 09-03-82     | 4                      | 31.0 | 0.3  | 120 | 56 | 310 | 12 | 165              |                 | 950             | 73  | 0.2 | 1               | 0.12 | 1610 | 530                              | 400   | 55  | 5.9 | 2150                | 13.0         |    |
| 154-082-03CDC2 | 223                | 05-26-83     | 4                      | 14.0 | 0.19 | 110 | 62 | 350 | 13 | 315              |                 | 920             | 62  | 0.1 | 1               | 0.17 | 1640 | 530                              | 270   | 58  | 6.6 | 2350                | 14.0         |    |
| 154-082-03CDC2 | 223                | 11-22-83     | 24                     | 0.1  | 0.24 | 210 | 63 | 360 | 14 | 581              |                 | 940             | 48  | 0.2 | 1               | 0.14 | 1930 | 780                              | 310   | 49  | 5.6 | 2625                | 8.0          |    |
| 154-082-03CDC2 | 223                | 08-22-84     | 24                     | 0.08 | 0.27 | 240 | 64 | 370 | 15 | 667              |                 | 970             | 56  | 0.2 | 1               | 0.25 | 2100 | 860                              | 330   | 48  | 5.5 | 2300                | 9.0          |    |
| 154-082-03CDC2 | 223                | 03-20-85     | 18                     | 0.03 | 0.23 | 210 | 65 | 360 | 12 | 556              |                 | 1000            | 47  | 0.2 | 1               | 0.11 | 1970 | 790                              | 340   | 49  | 5.6 | 2780                | 7.0          |    |
| 154-082-03CDC2 | 223                | 06-26-85     | 16                     | 0.02 | 0.2  | 200 | 65 | 370 | 13 | 508              |                 | 970             | 47  | 0.2 | 8               | 0.17 | 1850 | 770                              | 350   | 51  | 5.8 | 2600                | 9.0          |    |
| 154-082-03CDC2 | 223                | 09-24-85     | 10                     | 0.05 | 0.2  | 170 | 62 | 360 | 13 | 394              |                 | 1000            | 45  | 0.2 | 1               | 0.22 | 1860 | 680                              | 360   | 53  | 6.0 | 2550                | 8.0          |    |
| 154-082-03CDC3 | 220                | 12-19-68     | 28                     | 0.52 |      | 106 | 24 | 179 | 6  | 544              |                 | 220             | 51  | 0.3 | 1               | 0.27 | 865  | 365                              | 51    | 4.1 |     |                     | 7.8          |    |
| 154-082-03CDC3 | 220                | 12-19-68     | 28                     | 0.78 | 0.33 | 109 | 22 | 179 | 6  | 546              |                 | 222             | 53  | 0.3 | 1               | 0.27 | 871  | 364                              | 51    | 4.1 |     |                     |              |    |
| 154-082-03CDC3 | 220                | 12-19-68     | 28                     | 0.52 | 0.33 | 106 | 24 | 179 | 6  | 544              |                 | 220             | 51  | 0.3 | 1               | 0.27 | 865  | 365                              | 51    | 4.1 |     |                     | 7.8          |    |
| 154-082-03CDC3 | 220                | 12-20-68     | 28                     | 0.56 |      | 112 | 21 | 179 | 6  | 548              |                 | 213             | 56  | 0.3 |                 | 0.27 | 874  | 365                              | 51    | 4.1 |     |                     |              |    |
| 154-082-03CDC3 | 220                | 12-20-68     | 28                     | 0.56 | 0.33 | 112 | 21 | 179 | 6  | 548              |                 | 213             | 56  | 0.3 |                 | 0.27 | 874  | 365                              | 51    | 4.1 |     |                     |              |    |
| 154-082-03CDC3 | 220                | 12-20-68     | 28                     | 0.92 | 0.33 | 112 | 20 | 179 | 6  | 546              |                 | 216             | 59  | 0.2 |                 | 0.31 | 870  | 362                              | 51    | 4.1 |     |                     |              |    |
| 154-082-03CDC3 | 220                | 07-17-69     | 26                     |      |      | 107 | 25 | 173 | 7  | 537              |                 | 209             | 64  | 0.3 | 1               | 0.15 | 861  | 372                              | 50    | 3.9 |     |                     | 9.4          |    |
| 154-082-03CDC3 | 220                | 07-17-69     | 26                     |      | 0.22 | 107 | 25 | 173 | 7  | 537              |                 | 209             | 64  | 0.3 | 1               | 0.15 | 861  | 372                              | 50    | 3.9 |     | 1400                | 9.4          |    |
| 154-082-03CDC3 | 220                | 07-17-69     | 27                     | 0.4  | 0.02 | 106 | 23 | 171 | 7  | 539              |                 | 211             | 63  | 0.3 | 1               | 0.22 | 858  | 360                              | 50    | 3.9 |     |                     | 8.9          |    |
| 154-082-03CDC3 | 220                | 09-17-69     | 28                     | 0.05 |      | 121 | 9  | 171 | 6  | 498              |                 | 211             | 69  | 0.4 | 1               | 0.15 | 833  | 338                              | 52    | 4.0 |     |                     | 8.9          |    |
| 154-082-03CDC3 | 220                | 09-17-69     | 28                     | 0.05 | 0.05 | 121 | 9  | 171 | 6  | 498              |                 | 211             | 69  | 0.4 | 1               | 0.15 | 833  | 338                              | 52    | 4.0 |     |                     |              |    |
| 154-082-03CDC3 | 220                | 09-17-69     | 28                     | 0.06 | 0.04 | 121 | 8  | 169 | 6  | 491              |                 | 212             | 71  | 0.4 | 1               | 0.07 | 819  | 335                              | 52    | 4.0 |     |                     | 8.9          |    |
| 154-082-03CDC3 | 220                | 10-20-69     | 28                     | 0.9  | 0.29 | 146 | 2  | 173 | 6  | 543              |                 | 209             | 75  | 0.4 | 1               | 0.15 | 865  | 373                              | 50    | 3.9 |     |                     |              |    |
| 154-082-03CDC3 | 220                | 10-21-69     | 29                     |      | 0.01 | 60  | 24 | 181 | 6  | 584              |                 | 218             | 74  | 0.2 | 1               | 0.14 | 749  | 250                              | 60    | 5.0 |     |                     |              |    |
| 154-082-03CDC3 | 220                | 10-22-69     | 29                     | 0.07 | 0.02 | 68  | 23 | 182 | 6  | 399              |                 | 224             | 75  | 0.3 |                 | 0.26 | 782  | 265                              | 59    | 4.9 |     | 1400                | 7.8          |    |
| 154-082-03CDC3 | 220                | 10-23-69     | 28                     | 0.32 | 0.36 | 116 | 26 | 173 | 6  | 542              |                 | 226             | 78  | 0.4 | 1               | 0.22 | 882  | 398                              | 48    | 3.8 |     |                     | 7.8          |    |
| 154-082-03CDC3 | 220                | 10-25-69     | 29                     |      | 0.01 | 72  | 24 | 185 | 6  | 402              |                 | 230             | 82  | 0.3 | 1               | 0.11 | 787  | 280                              | 58    | 4.8 |     | 1410                | 8.3          |    |
| 154-082-03CDC3 | 220                | 10-28-69     | 28                     | 0.62 | 0.29 | 126 | 24 | 174 | 6  | 542              |                 | 230             | 86  | 0.4 | 1               | 0.07 | 928  | 415                              | 47    | 3.7 |     | 1430                | 7.2          |    |
| 154-082-03CDC3 | 220                | 10-30-69     | 28                     | 0.18 | 0.29 | 128 | 23 | 174 | 6  | 544              |                 | 235             | 89  | 0.4 | 1               | 0.07 | 933  | 415                              | 47    | 3.7 |     | 1420                | 8.3          |    |
| 154-082-03CDC3 | 220                | 11-04-69     | 28                     | 2.3  | 0.29 | 136 | 22 | 175 | 6  | 546              |                 | 245             | 90  | 0.4 | 1               | 0.19 | 939  | 429                              | 47    | 3.7 |     | 1470                | 8.3          |    |
| 154-082-03CDC3 | 220                | 08-27-80     | 6                      | 0.01 | 0.04 | 24  | 22 | 150 | 4  | 370              |                 | 72              | 39  | 0.3 | 1               | 0.21 | 491  | 150                              | 65    | 4.6 |     | 790                 | 8.0          |    |
| 154-082-03CDC3 | 220                | 06-06-85     | 12                     | 19.0 | 0.32 | 170 | 72 | 280 | 14 | 381              |                 | 760             | 83  | 0.1 | 1               | 0.2  | 1530 | 720                              | 410   | 45  | 3.7 | 2500                | 6.3          |    |
| 154-082-03CDC5 | 44                 | 08-21-81     | 28                     | 2.7  | 0.3  | 200 | 51 | 410 | 13 | 734              |                 | 870             | 48  | 0.2 | 1               |      | 1910 | 710                              | 110   | 55  | 6.7 | 2700                | 7.0          |    |
| 154-082-03CDC5 | 44                 | 05-26-83     | 27                     | 4.8  | 0.35 | 110 | 68 | 140 | 8  | 718              |                 | 260             | 44  | 0.3 | 1               | 0.28 | 1020 | 550                              | 35    | 2.6 |     | 1550                | 12.0         |    |
| 154-082-03CDC5 | 44                 | 08-18-83     | 27                     | 4.4  | 0.37 | 120 | 68 | 140 | 7  | 687              |                 | 260             | 44  | 0.4 | 18              | 0.29 | 1006 | 580                              | 16    | 34  | 2.5 | 1800                | 10.0         |    |
| 154-082-03CDC5 | 44                 | 10-26-83     | 29                     | 1.8  | 0.34 | 120 | 66 | 140 | 7  | 679              |                 | 250             | 40  | 0.3 | 22              | 0.21 | 1030 | 570                              | 15    | 34  | 2.5 | 1510                | 8.5          |    |
| 154-082-03CDC5 | 44                 | 08-16-84     | 31                     | 3.5  | 0.38 | 120 | 69 | 150 | 8  | 750              |                 | 260             | 48  | 0.3 |                 | 0.39 | 1060 | 580                              | 35    | 2.7 |     | 1800                | 8.0          |    |
| 154-082-03CDC5 | 44                 | 03-19-85     | 26                     | 5.5  | 0.35 | 120 | 70 | 140 | 7  | 748              |                 | 260             | 45  | 0.4 | 1               | 0.16 | 1020 | 590                              | 34    | 2.5 |     | 1550                | 7.0          |    |
| 154-082-03CDC5 | 44                 | 04-23-85     | 28                     | 4.5  | 0.34 | 130 | 70 | 160 | 8  | 740              |                 | 260             | 47  | 0.3 |                 | 0.18 | 1100 | 610                              | 6     | 36  | 2.8 | 1590                | 7.0          |    |
| 154-082-03CDC5 | 44                 | 05-23-85     | 27                     | 13.0 | 0.42 | 130 | 68 | 150 | 6  | 719              |                 | 260             | 48  | 0.3 | 1               | 0.17 | 1070 | 600                              | 15    | 35  | 2.7 | 1650                | 8.0          |    |
| 154-082-03CDC5 | 44                 | 06-25-85     | 29                     | 2.6  | 0.37 | 130 | 69 | 150 | 6  | 719              |                 | 250             | 49  | 0.3 |                 | 0.17 | 1060 | 610                              | 20    | 35  | 2.6 | 1725                | 8.0          |    |
| 154-082-03CDC5 | 44                 | 07-29-85     | 27                     | 4.1  | 0.37 | 130 | 71 | 140 | 7  | 728              |                 | 260             | 47  | 0.3 | 1               | 0.28 | 1080 | 620                              | 20    | 33  | 2.5 | 1700                | 8.0          |    |
| 154-082-03CDC5 | 44                 | 08-27-85     | 26                     | 6.9  | 0.37 | 130 | 70 | 150 | 7  | 721              |                 | 270             | 49  | 0.3 | 1               | 0.49 | 1080 | 610                              | 22    | 34  | 2.6 | 1810                | 8.0          |    |
| 154-082-03CDC5 | 44                 | 09-24-85     | 26                     | 3.6  | 0.34 | 120 | 69 | 150 | 8  | 707              |                 | 250             | 41  | 0.3 |                 | 0.33 | 1000 | 580                              | 4     | 36  | 2.7 | 1480                | 6.0          |    |
| 154-082-03CDC6 | 261                | 10-26-83     | 27                     | 1.7  | 0.47 | 210 | 62 | 410 | 14 | 693              |                 | 990             | 74  | 0.2 | 1               | 0.28 | 2120 | 780                              | 210   | 53  | 6.4 | 3000                | 9.5          |    |
| 154-082-03CDC6 | 261                | 08-16-84     | 28                     | 1.5  | 0.46 | 220 | 63 | 420 | 14 | 758              |                 | 990             | 75  | 0.2 | 1               | 0.4  | 2180 | 810                              | 190   | 53  | 6.4 | 3250                | 9.0          |    |
| 154-082-03CDC6 | 261                | 03-20-85     | 26                     | 2.3  | 0.43 | 220 | 60 | 410 | 11 | 767              |                 | 990             | 75  | 0.2 | 1               | 0.17 | 2150 | 800                              | 170   | 52  | 6.3 | 2500                | 7.0          |    |
| 154-082-03CDC6 | 261                | 04-23-85     | 27                     | 1.4  | 0.37 | 220 | 61 | 430 | 12 | 715              |                 | 980             | 73  | 0.2 | 1               | 0.26 | 2240 | 800                              | 210   | 53  | 6.6 | 2780                | 8.0          |    |
| 154-082-03CDC6 | 261                | 05-23-85     | 28                     | 1.6  | 0.42 | 220 | 63 | 430 | 10 | 744              |                 | 980             | 74  | 0.2 | 1               | 0.18 | 2180 | 810                              | 200   | 53  | 6.6 | 2700                | 9.0          |    |
| 154-082-03CDC6 | 261                | 06-25-85     | 27                     | 0.86 | 0.42 | 220 | 63 | 420 | 11 | 743              |                 | 950             | 78  | 0.2 | 1               | 0.19 | 2150 | 810                              | 200   | 53  | 6.4 | 2800                | 8.0          |    |
| 154-082-03CDC6 | 261                | 07-29-85     | 25                     | 2.4  | 0.43 | 220 | 63 | 430 | 12 | 751              |                 | 930             | 79  | 0.2 | 1               | 0.28 | 2170 | 810                              | 190   | 53  | 6.6 | 2800                | 9.0          |    |

| Location       | Well Depth (ft) | Date Sampled | (milligrams per liter) |      |      |     |     |     |     |                  |                 |                 |     |     |                 |      |      | Hardness as CaCO <sub>3</sub> | % NCH | % Na | SAR  | Spec Cond (micro) | Temp (°C) | pH  |
|----------------|-----------------|--------------|------------------------|------|------|-----|-----|-----|-----|------------------|-----------------|-----------------|-----|-----|-----------------|------|------|-------------------------------|-------|------|------|-------------------|-----------|-----|
|                |                 |              | SiO <sub>2</sub>       | Fe   | Mn   | Ca  | Mg  | Na  | K   | HCO <sub>3</sub> | CO <sub>3</sub> | SO <sub>4</sub> | C1  | F   | NO <sub>3</sub> | B    | TDS  |                               |       |      |      |                   |           |     |
| 154-082-03CDC6 | 261             | 08-27-85     | 25                     | 2.6  | 0.42 | 220 | 60  | 410 | 11  | 751              |                 | 1000            | 77  | 0.2 | 1               | 0.57 | 2190 | 800                           | 180   | 52   | 6.3  | 3175              | 8.0       |     |
| 154-082-03CDC6 | 261             | 09-24-85     | 25                     | 2.8  | 0.42 | 210 | 60  | 420 | 12  | 744              |                 | 920             | 67  | 0.2 | 1               | 0.36 | 2050 | 770                           | 160   | 54   | 6.6  | 2000              | 7.0       |     |
| 154-082-03CDC7 | 160             | 10-26-83     | 26                     | 3.9  | 0.89 | 220 | 62  | 150 | 10  | 599              |                 | 420             | 130 | 0.2 | 1               | 0.1  | 1360 | 800                           | 310   | 29   | 2.3  | 2000              | 8.5       |     |
| 154-082-03CDC7 | 160             | 08-16-84     | 27                     | 2.3  | 0.99 | 270 | 70  | 150 | 11  | 664              |                 | 660             | 53  | 0.2 | 1               | 0.16 | 1620 | 960                           | 420   | 25   | 2.1  | 2400              | 8.0       |     |
| 154-082-03CDC7 | 160             | 03-19-85     | 25                     | 4.0  | 0.92 | 280 | 73  | 150 | 9   | 678              |                 | 670             | 50  | 0.3 | 1               | 0.08 | 1630 | 1000                          | 440   | 24   | 2.1  | 2350              | 7.0       |     |
| 154-082-03CDC7 | 160             | 04-23-85     | 26                     | 3.0  | 0.84 | 280 | 73  | 140 | 10  | 650              |                 | 650             | 49  | 0.2 | 1               | 0.09 | 1700 | 1000                          | 470   | 23   | 1.9  | 2050              | 8.0       |     |
| 154-082-03CDC7 | 160             | 05-23-85     | 26                     | 5.2  | 0.95 | 280 | 73  | 140 | 9   | 672              |                 | 680             | 50  | 0.2 | 1               | 0.09 | 1660 | 1000                          | 450   | 23   | 1.9  | 2250              | 9.0       |     |
| 154-082-03CDC7 | 160             | 06-25-85     | 26                     | 5.0  | 0.94 | 280 | 74  | 140 | 9   | 683              |                 | 660             | 48  | 0.2 | 1               | 0.08 | 1690 | 1000                          | 440   | 23   | 1.9  | 2300              | 8.0       |     |
| 154-082-03CDC7 | 160             | 07-29-85     | 24                     | 3.6  | 0.92 | 270 | 73  | 140 | 9   | 679              |                 | 600             | 59  | 0.2 | 1               | 0.11 | 1620 | 970                           | 420   | 24   | 2.0  | 2150              | 9.0       |     |
| 154-082-03CDC7 | 160             | 08-27-85     | 24                     | 3.8  | 0.9  | 270 | 70  | 130 | 9   | 674              |                 | 660             | 57  | 0.2 | 1               | 0.23 | 1670 | 960                           | 410   | 23   | 1.8  | 2325              | 8.0       |     |
| 154-082-03CDC7 | 160             | 09-24-85     | 24                     | 4.3  | 0.89 | 270 | 70  | 140 | 10  | 677              |                 | 650             | 45  | 0.2 | 1               | 0.2  | 1590 | 960                           | 410   | 24   | 2.0  | 1850              | 7.0       |     |
| 154-082-03CDC8 | 100             | 10-26-83     | 26                     | 6.1  | 0.23 | 180 | 52  | 150 | 8   | 604              |                 | 400             | 56  | 0.3 | 1               | 0.12 | 1160 | 660                           | 170   | 30   | 2.2  | 1530              | 8.5       |     |
| 154-082-03CDC8 | 100             | 08-16-84     | 28                     | 3.2  | 0.19 | 150 | 42  | 160 | 9   | 624              |                 | 380             | 35  | 0.3 | 1               | 0.15 | 1110 | 550                           | 36    | 38   | 3.0  | 1800              | 8.0       |     |
| 154-082-03CDC8 | 100             | 03-19-85     | 27                     | 3.9  | 0.17 | 150 | 40  | 170 | 7   | 600              |                 | 370             | 31  | 0.3 | 1               | 0.07 | 1090 | 540                           | 48    | 40   | 3.2  | 1750              | 7.0       |     |
| 154-082-03CDC8 | 100             | 04-23-85     | 26                     | 5.0  | 0.17 | 150 | 40  | 160 | 8   | 601              |                 | 340             | 31  | 0.3 | 1               | 0.08 | 1110 | 540                           | 47    | 39   | 3.0  | 1610              | 7.0       |     |
| 154-082-03CDC8 | 100             | 05-23-85     | 29                     | 5.3  | 0.18 | 150 | 37  | 160 | 7   | 599              |                 | 360             | 30  | 0.3 | 1               | 0.06 | 1120 | 530                           | 36    | 39   | 3.0  | 1625              | 9.0       |     |
| 154-082-03CDC8 | 100             | 06-25-85     | 27                     | 5.6  | 0.17 | 150 | 39  | 170 | 7   | 606              |                 | 360             | 29  | 0.2 | 0               | 0.07 | 1080 | 540                           | 39    | 40   | 3.2  | 1700              | 8.0       |     |
| 154-082-03CDC8 | 100             | 07-29-85     | 26                     | 3.0  | 0.17 | 150 | 39  | 170 | 8   | 610              |                 | 350             | 30  | 0.3 | 1               | 0.13 | 1090 | 540                           | 35    | 40   | 3.2  | 1700              | 8.0       |     |
| 154-082-03CDC8 | 100             | 08-27-85     | 25                     | 4.5  | 0.18 | 150 | 40  | 170 | 8   | 607              |                 | 360             | 30  | 0.3 | 1               | 0.22 | 1080 | 540                           | 42    | 40   | 3.2  | 1725              | 8.0       |     |
| 154-082-03CDC8 | 100             | 09-24-85     | 25                     | 5.0  | 0.15 | 150 | 39  | 170 | 8   | 597              |                 | 340             | 23  | 0.3 | 0               | 0.16 | 1020 | 540                           | 46    | 40   | 3.2  | 1420              | 7.0       |     |
| 154-082-03DBB  | 233             | 09-24-68     | 28                     | 1.1  | 0.19 | 80  | 20  | 171 | 5   | 505              |                 | 229             | 8   | 0.4 | 0               | 0.15 | 805  | 284                           | 56    | 4.4  | 1000 |                   |           |     |
| 154-082-03DBB  | 233             | 10-09-84     | 23                     | 1.4  | 0.25 | 82  | 24  | 190 | 6   | 530              |                 | 190             | 51  | 0.4 | 1               | 0.2  | 842  | 300                           | 57    | 4.8  | 1420 | 9.0               |           |     |
| 154-082-03DBB  | 233             | 03-20-85     | 23                     | 0.55 | 0.24 | 79  | 23  | 180 | 7   | 531              |                 | 220             | 45  | 0.4 | 1               | 0.07 | 841  | 290                           | 57    | 4.6  | 1310 | 8.0               |           |     |
| 154-082-03DBB  | 233             | 06-26-85     | 25                     | 0.09 | 0.24 | 88  | 25  | 200 | 8   | 522              |                 | 230             | 47  | 0.3 | 0               | 0.13 | 842  | 320                           | 57    | 4.9  | 1580 | 8.0               |           |     |
| 154-082-03DCD  | 233             | 09-24-85     | 24                     | 1.3  | 0.26 | 93  | 27  | 200 | 8   | 517              |                 | 260             | 45  | 0.3 | 1               | 0.17 | 901  | 340                           | 55    | 4.7  | 1550 | 8.0               |           |     |
| 154-082-03DBC  | 05-26-83        | 25           | 0.93                   | 0.38 | 86   | 26  | 110 | 7   | 378 |                  | 220             | 23              | 0.3 | 1   | 0.23            | 688  | 320  | 12                            | 42    | 2.7  | 1100 | 13.0              |           |     |
| 154-082-03DBC1 | 05-26-83        | 25           | 4.8                    | 0.32 | 120  | 40  | 150 | 8   | 517 |                  | 360             | 25              | 0.4 | 0   | 0.2             | 970  | 460  | 41                            | 41    | 3.0  | 1500 | 14.0              |           |     |
| 154-082-03DBC1 | 08-21-84        | 29           | 2.7                    | 0.31 | 130  | 41  | 150 | 9   | 570 |                  | 330             | 17              | 0.3 | 1   | 0.22            | 973  | 490  | 26                            | 39    | 2.9  | 1340 | 9.0               |           |     |
| 154-082-03DBD  | S 03-06-69      | 23           | 2.9                    | 4.88 | 109  | 27  | 110 | 5   | 521 |                  | 149             | 26              | 0.3 | 2   | 0.1             | 676  | 385  | 38                            | 2.4   |      |      |                   |           |     |
| 154-082-03DCD  | 61              | 07-15-69     | 26                     | 1.8  | 0.02 | 104 | 37  | 246 | 10  | 654              |                 | 262             | 120 | 0.1 | 3               |      | 1020 | 413                           | 56    | 5.3  | 1850 | 8.9               |           |     |
| 154-082-03DCD  | 61              | 05-01-80     | 24                     | 1.6  | 0.26 | 170 | 57  | 360 | 10  | 712              |                 | 800             | 59  | 0.3 | 1               | 0.1  | 1880 | 660                           | 76    | 54   | 6.1  | 2700              | 12.0      |     |
| 154-082-03DCD  | 61              | 09-03-82     | 23                     | 2.3  | 0.25 | 160 | 54  | 330 | 14  | 699              |                 | 700             | 50  | 0.3 | 0               | 0.19 | 1650 | 620                           | 48    | 53   | 5.8  | 2250              | 12.0      |     |
| 154-082-03DCD  | 61              | 05-26-83     | 26                     | 2.9  | 0.23 | 160 | 54  | 320 | 11  | 679              |                 | 690             | 45  | 0.3 | 1               | 0.25 | 1580 | 620                           | 65    | 52   | 5.6  | 2300              | 12.0      |     |
| 154-082-03DCD  | 61              | 08-17-83     | 27                     | 1.3  | 0.21 | 140 | 46  | 280 | 12  | 515              |                 | 580             | 42  | 0.3 | 1               | 0.17 | 1400 | 540                           | 120   | 52   | 5.2  | 2400              | 12.0      |     |
| 154-082-03DCD  | 61              | 11-22-83     | 26                     | 2.6  | 0.25 | 150 | 52  | 300 | 13  | 672              |                 | 710             | 44  | 0.3 | 1               | 0.21 | 1640 | 590                           | 38    | 52   | 5.4  | 2350              | 8.0       |     |
| 154-082-03DCD  | 61              | 08-17-84     | 26                     | 1.3  | 0.26 | 200 | 60  | 330 | 14  | 709              |                 | 810             | 43  | 0.3 | 1               | 0.27 | 1820 | 750                           | 170   | 48   | 5.2  | 2800              | 8.0       |     |
| 154-082-03DCD  | 61              | 03-20-85     | 23                     | 4.2  | 0.26 | 200 | 65  | 310 | 12  | 721              |                 | 850             | 42  | 0.3 | 1               | 0.12 | 1870 | 770                           | 180   | 46   | 4.9  | 1600              | 7.5       |     |
| 154-082-03DCD  | 61              | 06-26-85     | 25                     | 2.1  | 0.25 | 200 | 65  | 330 | 13  | 697              |                 | 800             | 45  | 0.2 | 1               | 0.22 | 1780 | 770                           | 200   | 48   | 5.2  | 2450              | 8.0       |     |
| 154-082-03DCD  | 61              | 09-24-85     | 24                     | 2.8  | 0.24 | 200 | 65  | 320 | 13  | 702              |                 | 810             | 35  | 0.2 | 0               | 0.28 | 1770 | 770                           | 190   | 47   | 5.0  | 2450              | 7.0       |     |
| 154-082-03DDD  | S -68           | 4            | 0.18                   | 0.02 | 64   | 29  | 132 | 13  | 377 |                  | 225             | 39              | 0.3 | 0   | 0.24            | 696  | 278  | 49                            | 3.4   |      |      | 15.3              |           |     |
| 154-082-04AAD  | 220             | 11-15-63     | 22                     | 0.35 |      | 109 | 28  | 137 | 10  | 569              |                 | 195             | 17  | 0.5 | 2               |      | 800  | 388                           | 43    | 3.0  |      |                   | 5.8       |     |
| 154-082-04AAD  | 220             | 09-16-68     | 27                     | 5.4  | 0.18 | 152 | 28  | 77  | 5   | 590              |                 | 196             | 5   | 0.2 | 0               | 0.2  | 792  | 496                           | 12    | 25   | 1.5  |                   |           | 7.8 |
| 154-082-04AAD  | 220             | 12-05-69     | 25                     | 3.8  | 0.02 | 128 | 35  | 72  | 5   | 502              |                 | 186             | 2   | 0.3 | 0               | 0.2  | 656  | 462                           | 50    | 25   | 1.5  |                   |           |     |
| 154-082-04AAD  | 220             | 08-03-71     | 25                     | 2.7  | 0.02 | 88  | 41  | 79  | 6   | 420              |                 | 222             | 4   | 0.2 | 3               | 0.18 | 670  | 389                           | 45    | 30   | 1.7  | 990               | 8.0       |     |
| 154-082-04AAD  | 220             | 08-22-79     | 20                     | 3.6  | 0.14 | 110 | 35  | 57  | 4   | 514              |                 | 120             | 0.2 | 1   | 0.37            | 614  | 420  | 23                            | 1.2   | 925  | 8.0  |                   |           |     |
| 154-082-04AAD  | 220             | 11-22-83     | 24                     | 0.12 | 0.12 | 130 | 40  | 46  | 6   | 519              |                 | 150             | 3   | 0.2 | 1               | 0.12 | 663  | 490                           | 64    | 17   | 0.9  | 1130              | 8.0       |     |
| 154-082-04AAD  | 220             | 08-17-84     | 27                     | 0.85 | 0.14 | 130 | 39  | 57  | 7   | 564              |                 | 160             | 4   | 0.3 | 1               | 0.18 | 705  | 490                           | 23    | 20   | 1.1  | 1160              | 9.0       |     |
| 154-082-04AAD2 | 212             | 10-09-84     | 23                     | 0.6  | 0.12 | 59  | 21  | 230 | 6   | 665              |                 | 160             | 29  | 0.5 | 1               | 0.35 | 853  | 230                           | 67    | 6.6  | 1440 | 9.0               |           |     |
| 154-082-04AAD2 | 212             | 03-20-85     | 23                     | 0.18 | 0.15 | 60  | 22  | 220 | 6   | 668              |                 | 160             | 30  | 0.5 | 1               | 0.13 | 855  | 240                           | 66    | 6.2  | 1370 | 8.0               |           |     |
| 154-082-04AAD2 | 212             | 06-26-85     | 25                     | 2.1  | 0.14 | 63  | 22  | 220 | 7   | 651              |                 | 160             | 31  | 0.4 | 9               | 0.26 | 831  | 250                           | 65    | 6.1  | 1380 | 9.0               |           |     |

| Location        | Well Depth<br>(ft) | Date Sampled | (milligrams per liter) |      |      |     |     |     |     |                  |                 |                 |     |     |                 |      |      |                                  | Spec Cond<br>(umho) | Temp<br>(°C) | pH   |      |      |
|-----------------|--------------------|--------------|------------------------|------|------|-----|-----|-----|-----|------------------|-----------------|-----------------|-----|-----|-----------------|------|------|----------------------------------|---------------------|--------------|------|------|------|
|                 |                    |              | SiO <sub>2</sub>       | Fe   | Mn   | Ca  | Mg  | Na  | K   | HCO <sub>3</sub> | CO <sub>3</sub> | SO <sub>4</sub> | Cl  | F   | NO <sub>3</sub> | B    | TDS  | Hardness as<br>CaCO <sub>3</sub> | %<br>NCH            | Na           | SAR  |      |      |
| 154-082-04AAD2  | 212                | 09-24-85     | 24                     | 0.3  | 0.14 | 58  | 24  | 220 | 7   | 653              | 10              | 160             | 37  | 0.5 | 1               | 0.36 | 880  | 240                              | 66                  | 6.2          | 1450 | 8.0  |      |
| 154-082-04ABA1  | 100                | 11-14-63     | 23                     | 0.28 |      | 48  | 19  | 165 | 10  | 451              | 10              | 165             | 14  | 0.3 | 3               |      | 674  | 200                              | 63                  | 5.1          |      | 8.3  |      |
| 154-082-04ABA2  | 100                | 09-12-68     | 28                     | 3.1  | 0.03 | 49  | 18  | 170 | 3   | 498              |                 | 152             | 10  | 0.2 |                 | 0.15 | 792  | 195                              | 65                  | 5.3          |      | 8.3  |      |
| 154-082-04ABA2  | 100                | 08-03-71     | 23                     | 0.17 | 0.02 | 64  | 28  | 143 | 4   | 446              |                 | 198             | 7   | 0.2 | 5               | 0.04 | 684  | 276                              | 53                  | 3.7          | 900  | 8.0  |      |
| 154-082-04ABB   | 09-17-68           | 27           | 2.6                    | 0.47 | 64   | 18  | 156 | 3   | 484 |                  | 174             | 7               | 0.2 |     |                 |      | 680  | 253                              | 59                  | 4.4          | 1000 | 8.3  |      |
| 154-082-04ACA1  | 212                | 09-13-68     | 27                     | 2.5  | 0.09 | 64  | 17  | 229 | 4   | 584              |                 | 195             | 52  | 0.4 | 3               | 0.15 | 880  | 229                              | 68                  | 6.6          | 1150 | 7.8  |      |
| 154-082-04ACA1  | 212                | 12-04-69     | 24                     | 5.1  | 0.17 | 68  | 24  | 222 | 5   | 613              |                 | 169             | 59  | 0.5 | 3               |      | 850  | 270                              | 64                  | 5.9          |      |      |      |
| 154-082-04ACAA2 | 105                | 09-13-68     | 27                     | 2.0  | 0.06 | 61  | 14  | 157 | 3   | 486              |                 | 158             | 7   | 0.3 |                 |      | 664  | 210                              | 61                  | 4.7          | 875  | 7.2  |      |
| 154-082-04CCC   | 424                | 10-11-68     | 23                     | 8.6  | 0.2  | 176 | 43  | 266 | 10  | 650              |                 | 631             | 59  | 0.3 |                 | 0.54 | 1470 | 618                              | 101                 | 48           | 4.7  | 2000 | 7.8  |
| 154-082-04DBB   | 258                | 09-16-68     | 27                     | 0.76 | 0.24 | 90  | 21  | 136 | 4   | 461              |                 | 220             | 5   | 0.2 |                 |      | 723  | 312                              | 48                  | 3.3          | 1050 |      |      |
| 154-082-04DBB   | 258                | 12-14-83     | 28                     | 1.8  | 0.27 | 110 | 31  | 99  | 5   | 451              |                 | 230             | 8   | 0.3 | 1               | 0.08 | 739  | 400                              | 33                  | 35           | 2.1  | 1100 | 8.0  |
| 154-082-04DBB   | 258                | 08-17-84     | 26                     | 1.2  | 0.29 | 110 | 32  | 92  | 6   | 458              |                 | 240             | 10  | 0.2 | 1               | 0.09 | 735  | 410                              | 31                  | 33           | 2.0  | 1260 | 8.0  |
| 154-082-04DBB   | 258                | 03-19-85     | 21                     | 1.0  | 0.25 | 120 | 35  | 89  | 5   | 426              |                 | 250             | 7   | 0.3 | 1               | 0.04 | 731  | 440                              | 95                  | 30           | 1.8  | 1140 | 7.0  |
| 154-082-04DBB   | 258                | 06-25-85     | 26                     | 0.11 | 0.26 | 120 | 34  | 93  | 4   | 455              |                 | 220             | 8   | 0.2 | 1               | 0.05 | 750  | 440                              | 67                  | 31           | 1.9  | 1120 | 8.0  |
| 154-082-04DBB   | 258                | 09-23-85     | 23                     | 1.4  | 0.26 | 120 | 34  | 92  | 5   | 457              |                 | 240             | 12  | 0.2 | 1               | 0.12 | 719  | 440                              | 65                  | 31           | 1.9  | 1100 | 8.0  |
| 154-082-04DBD   | 252                | 09-18-68     | 28                     | 0.76 | 0.18 | 72  | 12  | 160 | 4   | 485              |                 | 157             | 21  | 0.2 |                 | 0.34 | 710  | 250                              | 60                  | 4.6          | 980  | 7.8  |      |
| 154-082-04DBD   | 252                | 12-04-69     | 25                     | 1.2  | 0.28 | 78  | 22  | 131 | 4   | 481              |                 | 149             | 18  | 0.4 |                 |      | 615  | 284                              | 50                  | 3.4          |      |      |      |
| 154-082-04DDA   | 02-06-69           | 25           | 5.8                    | 0.29 | 134  | 21  | 57  | 3   | 466 |                  | 145             | 7               | 0.2 | 3   | 0.19            | 611  | 420  | 38                               | 23                  | 1.2          |      | 8.9  |      |
| 154-082-05ACA   | 10-01-70           | 19           | 0.76                   | 0.07 | 117  | 37  | 88  | 4   | 393 |                  | 227             | 41              | 0.5 | 4   |                 | 758  | 446  | 124                              | 30                  | 1.8          |      |      |      |
| 154-082-05ACA1  | 06-25-70           | 24           | 0.06                   | 0.98 | 110  | 21  | 60  | 3   | 410 |                  | 134             | 15              | 0.2 |     | 0.18            | 560  | 360  | 24                               | 26                  | 1.4          | 860  | 10.0 |      |
| 154-082-05ACA2  | 06-26-70           | 25           | 3.0                    | 0.16 | 107  | 30  | 178 | 4   | 484 |                  | 352             | 8               | 0.4 |     | 0.06            | 950  | 389  | 50                               | 3.9                 |              | 9.4  |      |      |
| 154-082-05ACB   | 07-07-70           | 23           | 0.35                   |      | 106  | 33  | 249 | 5   | 574 |                  | 456             | 17              | 0.2 |     | 0.15            | 1210 | 401  | 57                               | 5.4                 | 2000         |      |      |      |
| 154-082-05ACD   | 263                | 10-15-68     | 26                     | 0.84 | 0.2  | 88  | 23  | 230 | 5   | 537              |                 | 334             | 33  | 0.2 |                 | 0.04 | 982  | 316                              | 61                  | 5.6          | 1375 | 7.8  |      |
| 154-082-06ADB1  | 454                | 11-22-83     | 26                     | 0.03 | 0.06 | 45  | 13  | 440 | 9   | 709              |                 | 49              | 390 | 0.5 | 1               | 0.57 | 1280 | 170                              | 84                  | 15.0         | 2425 | 7.0  |      |
| 154-082-06ADB2  | 327                | 11-07-83     | 24                     | 0.03 | 0.19 | 71  | 19  | 390 | 10  | 675              |                 | 81              | 380 | 0.3 | 1               | 0.51 | 1350 | 260                              | 76                  | 11.0         | 2300 | 8.5  |      |
| 154-082-06ADB2  | 327                | 11-22-83     | 26                     | 0.04 | 0.09 | 72  | 17  | 390 | 11  | 657              |                 | 81              | 370 | 0.2 | 1               | 0.61 | 1540 | 250                              | 76                  | 11.0         | 2350 | 7.0  |      |
| 154-082-06CCC   | 283                | 10-16-68     | 26                     | 0.96 | 0.01 | 99  | 36  | 557 | 10  | 1020             |                 | 521             | 178 | 0.3 | 1               | 0.19 | 1880 | 395                              | 74                  | 12.0         | 2600 | 8.5  |      |
| 154-082-07      | -64                |              | 0.9                    |      |      |     |     |     |     |                  | 475             | 96              |     | 48  |                 |      |      |                                  |                     |              |      |      |      |
| 154-082-07AAA   | 193                | 10-23-68     | 26                     | 1.3  | 0.05 | 104 | 29  | 340 | 9   | 689              |                 | 142             | 304 | 0.2 |                 | 0.35 | 1500 | 379                              | 66                  | 7.6          |      | 8.6  |      |
| 154-082-07AAA   | 193                | 12-04-69     | 24                     | 1.8  | 0.02 | 102 | 23  | 329 | 8   | 646              |                 | 128             | 314 | 0.4 | 2               |      | 1190 | 350                              | 67                  | 7.6          |      |      |      |
| 154-082-07AAA   | 193                | 11-22-83     | 27                     | 0.74 | 0.09 | 120 | 34  | 350 | 12  | 699              |                 | 310             | 180 | 0.2 | 1               | 0.4  | 1540 | 440                              | 61                  | 6.8          | 2300 | 8.0  |      |
| 154-082-07AAA   | 193                | 08-17-84     | 27                     | 0.71 | 0.1  | 130 | 34  | 320 | 12  | 752              |                 | 340             | 170 | 0.3 | 1               | 0.3  | 1380 | 460                              | 59                  | 6.5          | 2150 | 9.0  |      |
| 154-082-07AAA   | 193                | 03-19-85     | 21                     | 0.88 | 0.08 | 130 | 36  | 320 | 11  | 679              |                 | 350             | 170 | 0.3 |                 | 0.25 | 1330 | 470                              | 59                  | 6.4          | 1400 | 9.0  |      |
| 154-082-07AAA   | 193                | 06-25-85     | 26                     | 0.04 | 0.09 | 130 | 36  | 330 | 9   | 729              |                 | 290             | 170 | 0.2 | 1               | 0.27 | 1370 | 470                              | 60                  | 6.6          | 2325 |      |      |
| 154-082-07AAA   | 193                | 09-23-85     | 23                     | 1.3  | 0.11 | 140 | 38  | 330 | 11  | 779              |                 | 340             | 170 | 0.2 | 1               | 0.37 | 1400 | 510                              | 58                  | 6.4          | 2200 | 8.0  |      |
| 154-082-07DCC   | 263                | 10-21-68     | 26                     | 1.7  | 0.16 | 72  | 23  | 606 | 7   | 1100             |                 | 97              | 425 | 0.3 | 1               | 0.19 | 1850 | 275                              | 82                  | 16.0         | 2750 | 8.3  |      |
| 154-082-09CBB   | 327                | 11-22-83     | 23                     | 0.04 | 0.2  | 100 | 31  | 320 | 12  | 609              |                 | 250             | 200 | 0.3 | 1               | 0.24 | 1190 | 380                              | 64                  | 7.1          | 2150 | 8.0  |      |
| 154-082-10ABA   | 08-27-84           | 32           | 3.6                    | 0.84 | 140  | 42  | 170 | 10  | 747 |                  | 230             | 17              | 0.3 | 1   | 0.3             |      | 990  | 520                              | 41                  | 3.2          | 1525 | 13.0 |      |
| 154-082-10BBB   | 08-12-80           | 27           | 1.3                    | 0.27 | 93   | 31  | 120 | 5   | 503 |                  | 190             | 19              | 0.4 | 1   | 0.18            | 736  | 360  | 42                               | 2.7                 | 1400         | 9.0  |      |      |
| 154-082-10BBB1  | 141                | 07-15-69     | 25                     | 4.1  | 0.16 | 122 | 30  | 50  | 5   | 460              |                 | 154             | 8   | 0.2 |                 | 0.04 | 624  | 429                              | 52                  | 20           | 1.1  | 8.3  |      |
| 154-082-10BBB1  | 141                | 05-01-80     | 24                     | 0.93 | 0.26 | 120 | 15  | 120 | 5   | 506              |                 | 190             | 17  | 0.3 | 1               | 0.1  | 736  | 360                              | 42                  | 2.7          | 1150 | 16.0 |      |
| 154-082-10BBB1  | 141                | 08-21-81     | 26                     | 1.0  | 0.18 | 95  | 27  | 140 | 8   | 530              |                 | 200             | 16  | 0.2 | 1               |      | 724  | 350                              | 46                  | 3.2          | 1200 | 7.0  |      |
| 154-082-10BBB1  | 141                | 09-03-82     | 21                     | 2.6  | 0.16 | 83  | 31  | 130 | 9   | 477              |                 | 180             | 18  | 0.3 | 1               | 0.24 | 713  | 330                              | 45                  | 3.1          | 1040 | 13.0 |      |
| 154-082-10BBB1  | 141                | 05-27-83     | 24                     | 0.47 | 0.14 | 91  | 34  | 130 | 8   | 492              |                 | 220             | 19  | 0.2 | 1               | 0.22 | 751  | 370                              | 43                  | 2.9          | 1200 | 12.0 |      |
| 154-082-10BBB1  | 141                | 08-17-83     | 25                     | 0.19 | 0.16 | 94  | 32  | 120 | 8   | 598              |                 | 210             | 17  | 0.2 | 1               | 0.19 | 716  | 370                              | 40                  | 41           | 2.7  | 1340 | 12.0 |
| 154-082-10BBB1  | 141                | 11-22-83     | 26                     | 0.14 | 0.16 | 99  | 33  | 130 | 9   | 461              |                 | 230             | 17  | 0.3 | 1               | 0.19 | 762  | 380                              | 5                   | 42           | 2.9  | 1400 | 7.0  |
| 154-082-10BBB1  | 141                | 08-17-84     | 27                     | 0.05 | 0.15 | 100 | 34  | 130 | 10  | 489              |                 | 240             | 19  | 0.3 | 1               | 0.24 | 803  | 390                              | 41                  | 2.9          | 1370 | 9.0  |      |
| 154-082-10BBB1  | 141                | 03-20-85     | 21                     | 0.07 | 0.15 | 93  | 35  | 140 | 8   | 507              |                 | 250             | 20  | 0.3 | 1               | 0.12 | 808  | 380                              | 44                  | 3.1          | 1160 | 7.0  |      |
| 154-082-10BBB1  | 141                | 06-25-85     | 26                     | 2.9  | 0.16 | 110 | 36  | 140 | 8   | 531              |                 | 250             | 23  | 0.3 | 1               | 0.14 | 894  | 420                              | 41                  | 3.0          | 1390 | 8.0  |      |
| 154-082-10BBB1  | 141                | 09-23-85     | 21                     | 0.1  | 0.15 | 100 | 36  | 140 | 9   | 517              |                 | 250             | 27  | 0.3 | 1               | 0.35 | 836  | 400                              | 43                  | 3.0          | 1250 | 8.0  |      |

| Location       | Well Depth (ft) | Date Sampled | (milligrams per liter) |      |      |     |     |     |     |                  |                 |                 |     |      |                 |      | Hardness as CaCO <sub>3</sub> | % Na | SAR | Spec Cond (umho) | Temp (°C) | pH   |      |
|----------------|-----------------|--------------|------------------------|------|------|-----|-----|-----|-----|------------------|-----------------|-----------------|-----|------|-----------------|------|-------------------------------|------|-----|------------------|-----------|------|------|
|                |                 |              | SiO <sub>2</sub>       | Fe   | Mn   | Ca  | Mg  | Na  | K   | HCO <sub>3</sub> | CO <sub>3</sub> | SO <sub>4</sub> | Cl  | F    | NO <sub>3</sub> | B    |                               |      |     |                  |           |      |      |
| 154-082-10BBB2 | 212             | 10-02-69     | 27                     | 0.09 | 0.01 | 112 | 9   | 183 | 7   | 503              |                 | 238             | 45  | 0.4  | 0.11            | 823  | 315                           | 55   | 4.5 |                  | 7.8       |      |      |
| 154-082-10BBB2 | 212             | 12-05-69     | 25                     | 0.06 | 0.05 | 98  | 23  | 173 | 7   | 542              |                 | 239             | 41  | 0.4  |                 | 827  | 340                           | 52   | 4.1 |                  |           |      |      |
| 154-082-10BBB2 | 212             | 05-01-80     | 26                     | 0.33 | 0.17 | 130 | 21  | 270 | 7   | 639              |                 | 220             | 180 | 0.2  | 1               | 0.19 | 1180                          | 410  | 58  | 5.8              | 2200      | 10.0 |      |
| 154-082-10BBB2 | 212             | 08-12-80     | 28                     | 0.04 | 0.2  | 110 | 11  | 260 | 7   | 558              |                 | 190             | 180 | 0.3  | 1               | 0.21 | 1080                          | 320  | 63  | 6.3              | 2500      | 9.0  |      |
| 154-082-10BBB2 | 212             | 08-26-82     | 26                     | 0.91 | 0.14 | 110 | 32  | 280 | 11  | 628              |                 | 180             | 240 | 0.3  | 1               | 0.3  | 1160                          | 410  | 59  | 6.0              | 1800      | 15.0 |      |
| 154-082-10BBB2 | 212             | 05-27-83     | 24                     | 1.4  | 0.21 | 110 | 30  | 300 | 10  | 647              |                 | 190             | 230 | 0.2  | 1               | 0.26 | 1160                          | 400  | 61  | 6.5              | 2000      | 12.0 |      |
| 154-082-10BBB2 | 212             | 08-17-83     | 27                     | 0.33 | 0.16 | 110 | 30  | 290 | 11  | 610              |                 | 200             | 220 | 0.2  | 1               | 0.22 | 1150                          | 400  | 60  | 6.3              | 2250      | 13.0 |      |
| 154-082-10BBB2 | 212             | 11-22-83     | 26                     | 0.98 | 0.14 | 110 | 31  | 290 | 11  | 625              |                 | 200             | 220 | 0.2  | 1               | 0.23 | 1180                          | 400  | 60  | 6.3              | 2100      | 8.0  |      |
| 154-082-10BBB2 | 212             | 08-17-84     | 28                     | 0.76 | 0.16 | 110 | 31  | 300 | 12  | 639              |                 | 220             | 230 | 0.2  | 1               | 0.3  | 1240                          | 400  | 61  | 6.5              | 2150      | 10.0 |      |
| 154-082-10BBB2 | 212             | 03-20-85     | 23                     | 0.49 | 0.13 | 110 | 28  | 290 | 10  | 641              |                 | 230             | 210 | 0.3  | 1               | 0.13 | 1190                          | 390  | 61  | 6.4              | 2050      | 7.0  |      |
| 154-082-10BBB2 | 212             | 06-25-85     | 26                     | 0.77 | 0.15 | 110 | 30  | 290 | 9   | 659              |                 | 220             | 210 | 0.2  | 1               | 0.14 | 1250                          | 400  | 61  | 6.3              | 2225      | 8.0  |      |
| 154-082-10BCA  | 212             | 09-23-85     | 23                     | 0.19 | 0.13 | 110 | 28  | 320 | 10  | 665              |                 | 240             | 210 | 0.3  | 1               | 0.4  | 1230                          | 390  | 63  | 7.0              | 1250      | 8.0  |      |
| 154-082-10BCA  | 02-06-69        | 25           | 0.56                   | 1.1  | 173  | 47  | 118 | 9   | 528 |                  | 381             | 35              | 0.2 | 1    | 0.23            | 1050 | 624                           | 191  | 29  | 2.1              |           |      |      |
| 154-082-10BCA  | 08-27-84        | 27           | 0.58                   | 0.23 | 130  | 42  | 200 | 11  | 566 |                  | 440             | 28              | 0.3 | 0.2  |                 | 1170 | 500                           | 33   | 46  | 3.9              | 1520      | 12.0 |      |
| 154-082-10BCB  | 241             | 07-16-69     | 26                     | 0.74 | 0.03 | 128 | 50  | 369 | 10  | 825              |                 | 460             | 134 | 0.3  | 1               | 0.19 | 1510                          | 525  | 60  | 7.0              | 2550      | 8.9  |      |
| 154-082-10BCB  | 241             | 08-12-80     | 29                     | 0.03 | 0.17 | 150 | 26  | 360 | 10  | 783              |                 | 440             | 140 | 0.3  | 1               | 0.12 | 1510                          | 480  | 61  | 7.1              | 3000      | 8.0  |      |
| 154-082-10BCB  | 241             | 08-21-81     | 28                     | 1.5  | 0.14 | 150 | 50  | 400 | 12  | 987              |                 | 420             | 160 | 0.3  | 1               | 0.14 | 1610                          | 580  | 59  | 7.2              | 2400      | 7.0  |      |
| 154-082-10BCB  | 241             | 09-03-82     | 24                     | 1.2  | 0.13 | 140 | 51  | 370 | 15  | 893              |                 | 410             | 140 | 0.3  | 1               | 0.2  | 1510                          | 560  | 58  | 6.8              | 2250      | 13.0 |      |
| 154-082-10BCB  | 241             | 05-27-83     | 25                     | 0.52 | 0.12 | 140 | 50  | 360 | 12  | 845              |                 | 430             | 130 | 0.3  | 1               | 0.29 | 1480                          | 560  | 58  | 6.6              | 2450      | 11.0 |      |
| 154-082-10BCB  | 241             | 08-17-83     | 27                     | 0.32 | 0.14 | 140 | 50  | 350 | 14  | 806              |                 | 430             | 130 | 0.3  | 1               | 0.15 | 1420                          | 560  | 57  | 6.4              | 2800      | 12.0 |      |
| 154-082-10BCB  | 241             | 11-22-83     | 27                     | 0.99 | 0.12 | 140 | 49  | 350 | 14  | 818              |                 | 430             | 130 | 0.3  | 1               | 0.09 | 1540                          | 550  | 57  | 6.5              | 2375      | 9.0  |      |
| 154-082-10BCB  | 241             | 08-17-84     | 28                     | 0.75 | 0.11 | 140 | 48  | 350 | 14  | 901              |                 | 400             | 150 | 0.3  | 1               | 0.28 | 1600                          | 550  | 57  | 6.5              | 2600      | 9.0  |      |
| 154-082-10BCB  | 241             | 03-19-85     | 22                     | 0.8  | 0.1  | 140 | 48  | 360 | 12  | 793              |                 | 370             | 160 | 0.3  | 1               | 0.14 | 1510                          | 550  | 58  | 6.7              | 1800      | 8.0  |      |
| 154-082-10BCB  | 241             | 06-25-85     | 28                     | 1.9  | 0.12 | 140 | 50  | 360 | 11  | 881              |                 | 350             | 180 | 0.3  | 1               | 0.13 | 1580                          | 560  | 58  | 6.6              | 2350      | 9.0  |      |
| 154-082-10BCB  | 241             | 09-23-85     | 24                     | 0.2  | 0.08 | 140 | 48  | 370 | 15  | 882              |                 | 340             | 190 | 0.3  | 1               | 0.21 | 1490                          | 550  | 59  | 6.8              | 2400      | 8.0  |      |
| 154-082-10CAC  | 341             | -83          | 8                      | 0.26 | 0.01 | 8   | 2   | 800 | 5   | 1030             | 18              | 12              | 730 | 0.6  | 1               | 1.9  | 1950                          | 28   | 98  | 66.0             | 3900      | 9.0  |      |
| 154-082-10CAC  | 341             | 08-17-84     | 9                      | 0.26 | 0.01 | 8   | 2   | 810 | 5   | 1090             |                 | 7               | 710 | 0.6  | 1               | 3.5  | 2150                          | 27   | 98  | 68.0             | 3900      | 14.0 |      |
| 154-082-10CAC  | 341             | 06-25-85     | 9                      | 0.14 | 0.01 | 10  | 3   | 780 | 3   | 1040             | 24              | 9               | 650 | 0.5  | 1               | 1.0  | 2070                          | 36   | 98  | 57.0             | 3600      | 8.0  |      |
| 154-082-10DAA  | 100             | 09-30-68     | 26                     | 2.1  | 0.07 | 96  | 24  | 135 | 9   | 557              |                 | 175             | 10  | 0.3  | 0.15            |      | 755                           | 339  | 46  | 3.2              | 1050      | 7.2  |      |
| 154-082-11ADD  | S               | 10-16-69     | 12                     | 1.2  | 0.08 | 58  | 33  | 318 | 21  | 580              |                 | 413             | 193 | 1.5  | 1               | 0.64 | 1250                          | 280  | 69  | 8.8              |           |      |      |
| 154-082-11BCB  | 69              | 09-30-68     | 26                     | 3.8  | 0.28 | 131 | 37  | 195 | 9   | 691              |                 | 281             | 53  | 0.3  | 0.2             |      | 1090                          | 481  | 46  | 3.9              | 1450      | 7.8  |      |
| 154-082-11BCB  | 69              | 05-01-80     | 25                     | 0.29 | 0.31 | 120 | 32  | 190 | 7   | 697              |                 | 230             | 42  | 0.3  | 1               | 0.13 | 979                           | 430  | 49  | 4.0              | 1775      | 10.0 |      |
| 154-082-11BCB  | 69              | 03-20-85     | 21                     | 2.3  | 0.28 | 110 | 38  | 200 | 10  | 729              |                 | 180             | 47  | 0.4  | 4               | 0.11 | 929                           | 430  | 50  | 4.2              | 1480      | 7.0  |      |
| 154-082-11BCB  | 69              | 06-26-85     | 25                     | 1.0  | 0.29 | 110 | 38  | 200 | 10  | 745              |                 | 180             | 47  | 0.3  | 1               | 0.2  | 936                           | 430  | 49  | 4.2              | 1500      | 8.0  |      |
| 154-082-11BCB  | 69              | 09-24-85     | 21                     | 1.5  | 0.28 | 120 | 36  | 190 | 10  | 748              |                 | 180             | 47  | 0.3  | 1               | 0.27 | 944                           | 450  | 47  | 3.9              | 1460      | 7.0  |      |
| 154-082-11DAA  | 183             | 10-09-68     | 27                     | 3.8  | 0.47 | 290 | 72  | 286 | 10  | 705              |                 | 1040            | 32  | 0.3  | 1               | 0.34 | 2160                          | 1020 | 442 | 38               | 3.9       | 2500 | 8.6  |
| 154-082-11DAB  | S               | 02-06-69     | 25                     | 1.8  | 155  | 35  | 211 | 8   | 623 |                  | 365             | 52              | 0.3 | 0.35 |                 | 1160 | 531                           | 20   | 46  | 4.0              |           | 1.1  |      |
| 154-082-11DAB  | S               | 03-06-69     | 24                     | 0.92 | 0.75 | 144 | 39  | 210 | 8   | 608              |                 | 387             | 50  | 0.2  | 4               | 0.16 | 1140                          | 520  | 21  | 46               | 4.0       |      |      |
| 154-082-11DAD  | S               | 10-02-68     | 16                     | 0.74 | 0.03 | 66  | 17  | 293 | 22  | 441              |                 | 264             | 185 | 2.1  | 38              | 0.68 | 1080                          | 235  | 71  | 8.3              |           | 11.1 |      |
| 154-082-12DAA1 | 270             | 05-24-85     | 28                     | 2.2  | 0.33 | 270 | 93  | 280 | 11  | 727              |                 | 1000            | 42  | 0.2  | 1               | 0.1  | 2230                          | 1100 | 460 | 36               | 3.7       | 2600 | 10.0 |
| 154-082-12DAA1 | 270             | 06-27-85     | 24                     | 1.8  | 0.46 | 270 | 95  | 290 | 13  | 687              |                 | 1000            | 40  | 0.2  | 0.28            |      | 2200                          | 1100 | 500 | 37               | 3.8       | 2500 | 8.0  |
| 154-082-12DAA1 | 270             | 07-30-85     | 25                     | 1.9  | 0.34 | 280 | 98  | 290 | 13  | 731              |                 | 990             | 40  | 0.2  | 1               | 0.26 | 2230                          | 1100 | 500 | 36               | 3.8       | 2450 | 8.0  |
| 154-082-12DAA1 | 270             | 08-28-85     | 25                     | 2.0  | 0.33 | 280 | 95  | 280 | 12  | 728              |                 | 1100            | 41  | 0.2  | 1               | 0.41 | 2240                          | 1100 | 490 | 36               | 3.7       | 2600 | 8.0  |
| 154-082-12DAA1 | 270             | 09-25-85     | 22                     | 2.4  | 0.34 | 290 | 98  | 290 | 13  | 737              |                 | 1000            | 41  | 0.2  | 1               | 0.37 | 2150                          | 1100 | 520 | 36               | 3.8       | 2500 | 8.0  |
| 154-082-12DAA2 | 215             | 05-24-85     | 26                     | 2.0  | 0.15 | 250 | 83  | 250 | 12  | 661              |                 | 870             | 20  | 0.2  | 1               | 0.09 | 1900                          | 970  | 420 | 36               | 3.5       | 2650 | 10.0 |
| 154-082-12DAA2 | 215             | 06-27-85     | 25                     | 2.3  | 0.19 | 250 | 85  | 250 | 13  | 645              |                 | 900             | 20  | 0.2  | 0.19            |      | 1900                          | 970  | 450 | 35               | 3.5       | 2700 | 8.0  |
| 154-082-12DAA2 | 215             | 07-30-85     | 25                     | 2.4  | 0.16 | 260 | 85  | 250 | 13  | 702              |                 | 870             | 20  | 0.2  | 1               | 0.21 | 2000                          | 1000 | 420 | 35               | 3.4       | 2400 | 8.0  |
| 154-082-12DAA2 | 215             | 08-28-85     | 25                     | 2.4  | 0.15 | 280 | 85  | 240 | 12  | 689              |                 | 930             | 21  | 0.2  | 1               | 0.34 | 1950                          | 1100 | 480 | 33               | 3.1       | 2325 | 8.0  |
| 154-082-12DAA2 | 215             | 09-25-85     | 22                     | 3.0  | 0.16 | 270 | 85  | 250 | 13  | 712              |                 | 900             | 19  | 0.2  | 1               | 0.25 | 1900                          | 1000 | 440 | 34               | 3.4       | 2400 | 7.0  |

| Location       | Well Depth (ft) | Date Sampled | (milligrams per liter) |      |      |     |     |     |     |                  |                 |                 |     |      |                 |      | Hardness as CaCO <sub>3</sub> | % NCH | Spec Cond (umho) | Temp (°C) | pH   |     |
|----------------|-----------------|--------------|------------------------|------|------|-----|-----|-----|-----|------------------|-----------------|-----------------|-----|------|-----------------|------|-------------------------------|-------|------------------|-----------|------|-----|
|                |                 |              | SiO <sub>2</sub>       | Fe   | Mn   | Ca  | Mg  | Na  | K   | HCO <sub>3</sub> | CO <sub>3</sub> | SO <sub>4</sub> | Cl  | F    | NO <sub>3</sub> | B    |                               |       |                  |           |      |     |
| 154-082-12DAA3 | 162             | 05-24-85     | 26                     | 1.5  | 0.49 | 170 | 52  | 29  | 8   | 459              | 310             | 5               | 0.2 | 1    | 0.03            | 866  | 660                           | 260   | 9                | 0.5       | 1300 | 9.0 |
| 154-082-12DAA3 | 162             | 06-27-85     | 24                     | 0.97 | 0.5  | 170 | 51  | 29  | 7   | 436              | 300             | 8               | 0.2 | 3    | 0.06            | 823  | 630                           | 260   | 9                | 0.5       | 1140 | 8.0 |
| 154-082-12DAA3 | 162             | 07-30-85     | 25                     | 1.8  | 0.42 | 170 | 51  | 29  | 6   | 472              | 300             | 4               | 0.2 | 1    | 0.07            | 844  | 630                           | 250   | 9                | 0.5       | 1240 | 8.0 |
| 154-082-12DAA3 | 162             | 08-28-85     | 25                     | 2.2  | 0.41 | 160 | 51  | 30  | 6   | 472              | 310             | 4               | 0.2 | 1    | 0.11            | 849  | 610                           | 220   | 10               | 0.5       | 1160 | 8.0 |
| 154-082-12DAA3 | 162             | 09-25-85     | 22                     | 2.3  | 0.4  | 180 | 52  | 29  | 6   | 475              | 300             | 4               | 0.2 | 1    | 0.11            | 839  | 660                           | 270   | 9                | 0.5       | 1280 | 7.0 |
| 154-082-12DAA4 | 85              | 05-24-85     | 22                     | 0.05 | 0.29 | 210 | 64  | 43  | 120 | 369              | 680             | 4               | 0.1 | 1    | 0.05            | 1340 | 790                           | 480   | 9                | 0.7       | 1900 | 9.0 |
| 154-082-12DAA4 | 85              | 06-27-85     | 19                     | 0.13 | 1.0  | 190 | 60  | 42  | 62  | 400              | 580             | 3               | 0.1 | 0    | 0.09            | 1170 | 720                           | 390   | 10               | 0.7       | 1700 | 8.0 |
| 154-082-12DAA4 | 85              | 07-30-85     | 25                     | 0.18 | 1.0  | 190 | 59  | 40  | 38  | 354              | 480             | 1               | 0.1 | 3    | 0.21            | 1060 | 720                           | 430   | 10               | 0.6       | 1550 | 8.0 |
| 154-082-12DAA4 | 85              | 08-28-85     | 23                     | 0.05 | 0.88 | 170 | 55  | 37  | 28  | 462              | 320             | 3               | 0.2 | 1    | 0.18            | 991  | 650                           | 270   | 11               | 0.5       | 1320 | 8.0 |
| 154-082-12DAA4 | 85              | 09-25-85     | 22                     | 0.11 | 0.79 | 170 | 53  | 37  | 28  | 471              | 380             | 2               | 0.1 | 1    | 0.17            | 926  | 640                           | 260   | 11               | 0.6       | 1290 | 7.0 |
| 154-082-24ABA  | 32              | 07-02-71     | 30                     | 0.56 | 0.04 | 50  | 23  | 625 | 5   | 1190             | 192             | 287             | 0.3 | 14   | 0.87            | 1800 | 221                           | 86    | 18.0             | 2490      |      |     |
| 154-082-24ABA  | 32              | 08-22-79     | 14                     | 0.51 | 0.62 | 110 | 62  | 43  | 9   | 368              | 330             | 5               | 0.2 | 5    |                 | 813  | 530                           | 230   | 15               | 0.8       | 1070 | 8.0 |
| 154-082-24BAA  | 28              | 07-17-69     | 19                     |      | 0.1  | 67  | 37  | 38  | 8   | 298              | 136             | 14              | 0.2 | 6    |                 | 403  | 319                           | 20    | 0.9              | 760       | 10.6 |     |
| 154-083-18AAA  |                 | 06-11-65     |                        |      | 3.7  |     |     |     |     | 1550             | 136             | 60              | 186 | 5    |                 | 2000 | 59                            | 98    | 57.0             |           |      |     |
| 155-082-19DBD  | 11-19-63        | 21           | 0.76                   |      | 55   | 14  | 261 | 12  | 645 | 7                | 153             | 79              | 0.5 | 3    |                 | 949  | 196                           |       |                  |           |      |     |
| 155-082-19DBD  | 08-05-71        | 17           | 0.55                   | 0.05 | 68   | 29  | 142 | 5   | 619 |                  | 39              | 33              | 0.2 | 8    | 0.4             | 638  | 289                           | 51    | 3.6              | 800       | 8.3  |     |
| 155-082-19DBD  | 06-06-85        | 22           | 0.83                   | 0.25 | 81   | 30  | 220 | 7   | 711 | 7                | 38              | 61              | 0.3 | 8    | 0.23            | 788  | 330                           | 59    | 5.3              | 1480      | 7.0  |     |
| 155-082-20DC   | 12-06-63        | 11           | 0.53                   |      | 11   | 6   | 540 | 13  | 895 | 17               | 421             | 35              | 0.5 | 2    | 0.38            | 1540 | 50                            | 95    | 33.0             |           |      |     |
| 155-082-29BCB  | 103             | 11-15-63     | 22                     | 1.1  |      | 57  | 31  | 237 | 14  | 583              | 145             | 140             | 0.4 | 2    |                 | 990  | 268                           | 64    | 6.3              |           |      |     |
| 155-082-29BCB  | 103             | 09-10-68     | 25                     | 1.3  | 0.02 | 81  | 24  | 254 | 6   | 682              | 219             | 50              | 0.3 | 2    | 0.19            | 996  | 302                           | 64    | 6.4              |           | 7.8  |     |
| 155-082-29BCB  | 103             | 07-02-71     | 24                     | 1.0  | 0.03 | 90  | 36  | 223 | 6   | 598              | 180             | 124             | 0.4 | 6    | 0.42            | 1020 | 374                           | 56    | 5.0              | 1400      | 7.0  |     |
| 155-082-29CBC  | 53              | 09-10-68     | 19                     | 0.13 | 0.02 | 124 | 69  | 120 | 4   | 475              | 290             | 88              | 0.2 | 44   | 0.31            | 1010 | 592                           | 204   | 30               | 2.1       |      |     |
| 155-082-29DB   | S               | 10-02-68     | 3                      | 0.18 | 0.08 | 50  | 25  | 118 | 13  | 331              | 163             | 45              | 0.3 | 1    | 0.29            | 578  | 226                           | 51    | 3.4              |           |      |     |
| 155-082-30CCD  | 303             | 10-20-83     | 29                     | 0.03 | 0.24 | 180 | 54  | 180 | 11  | 597              | 420             | 69              | 0.3 | 1    | 0.16            | 1170 | 670                           | 180   | 36               | 3.0       | 1750 |     |
| 155-082-30DCC  |                 | 08-20-65     | 17                     | 5.2  |      | 155 | 56  | 162 | 11  | 692              | 285             | 87              | 0.4 | 1    | 0.18            | 1040 | 615                           | 48    | 36               | 2.8       |      |     |
| 155-082-31CAD  | 282             | 11-16-84     | 28                     | 0.11 | 0.08 | 130 | 36  | 330 | 10  | 732              | 330             | 170             | 0.2 | 1    | 0.42            | 1410 | 470                           | 60    | 6.6              | 2300      | 12.2 |     |
| 155-082-31DCA  | 321             | 10-26-83     | 27                     | 0.03 | 0.13 | 80  | 23  | 340 | 9   | 576              | 160             | 270             | 0.2 | 1    | 0.42            | 1130 | 290                           | 71    | 8.7              | 2100      | 10.0 |     |
| 155-082-31DCA  | 321             | 11-16-84     | 27                     | 0.13 | 0.07 | 130 | 36  | 340 | 10  | 731              | 330             | 170             | 0.2 | 1    | 0.42            | 1390 | 470                           | 60    | 6.8              | 2200      | 10.0 |     |
| 155-082-31DDA  | 48              | 10-18-83     | 28                     | 3.2  | 1.3  | 120 | 47  | 180 | 7   | 530              | 430             | 14              | 0.3 | 1    | 0.07            | 1070 | 490                           | 59    | 44               | 3.5       | 1500 | 9.0 |
| 155-082-33CCD  | 49              | 09-11-68     | 22                     | 0.1  | 0.18 | 111 | 30  | 282 | 6   | 583              | 489             | 18              | 0.1 | 3    | 0.12            | 1240 | 400                           | 60    | 6.1              |           |      |     |
| 155-082-33CDA  | 07-07-70        | 19           | 0.05                   | 0.51 | 117  | 40  | 215 | 3   | 566 | 457              | 6               | 9               |     |      | 1130            | 459  | 50                            | 4.4   | 1625             | 10.0      |      |     |
| 155-082-33DBC  | 07-07-70        | 15           | 0.42                   | 0.54 | 105  | 32  | 138 | 6   | 450 | 302              | 14              | 0.2             | 3   | 0.12 | 894             | 396  | 27                            | 43    | 3.0              | 1250      | 10.0 |     |
| 155-082-33DCC  | 09-12-68        | 25           | 0.5                    | 0.02 | 53   | 14  | 216 | 4   | 555 | 152              | 25              | 0.3             | 1   | 0.19 | 765             | 188  | 71                            | 6.8   | 1100             | 7.2       |      |     |
| 155-082-33DDCR | S               | 10-02-68     | 1                      | 0.42 | 0.03 | 58  | 25  | 134 | 14  | 357              | 189             | 47              | 0.2 |      | 0.24            | 645  | 248                           | 52    | 3.7              |           |      |     |
| 155-082-33DDCR | S               | 08-16-84     | 5                      | 0.03 | 0.04 | 47  | 26  | 76  | 14  | 308              | 130             | 20              | 0.3 | 1    | 0.39            | 524  | 220                           | 41    | 2.2              | 770       | 25.0 |     |
| 155-082-33DDCR | S               | 09-12-84     | 4                      | 0.04 | 0.04 | 52  | 30  | 85  | 14  | 322              | 140             | 31              | 0.3 | 1    | 0.38            | 521  | 250                           | 41    | 2.3              | 900       | 15.0 |     |
| 155-082-33DDCR | S               | 06-26-85     | 6                      | 0.01 | 0.09 | 57  | 38  | 130 | 15  | 377              | 250             | 25              | 0.2 | 1    | 0.21            | 712  | 300                           | 47    | 3.3              | 1280      | 12.0 |     |
| 155-082-33DDCR | S               | 08-27-85     | 1                      | 0.02 | 0.03 | 47  | 31  | 98  | 13  | 332              | 170             | 24              | 0.2 | 1    | 0.39            | 563  | 250                           | 45    | 2.7              | 930       | 21.0 |     |
| 155-082-33DDCR | S               | 09-24-85     | 3                      | 0.02 | 0.06 | 48  | 34  | 97  | 14  | 347              | 160             | 24              | 0.3 | 0.34 | 594             | 260  | 43                            | 2.6   | 875              | 11.0      |      |     |
| 155-083-01CCC  |                 | 08-27-65     | 16                     | 0.08 |      | 488 | 151 | 421 |     | 380              | 2300            | 32              | 0.4 | 5    | 0.42            | 3430 | 1840                          | 1530  | 33               | 4.3       |      |     |
| 155-083-01CCC  |                 | 08-21-79     | 26                     | 0.1  | 6.6  | 430 | 220 | 310 | 14  | 484              | 2200            | 38              | 0.2 | 5    | 0.07            | 3360 | 2000                          | 1600  | 25               | 3.0       | 3500 | 7.0 |
| 155-083-14ADD  |                 | -58          |                        |      |      | 278 | 290 | 75  | 10  | 224              | 40              | 482             |     | 0.2  | 0.1             | 1019 | 568                           |       |                  |           |      |     |
| 155-083-14CDA  | 12-06-63        | 21           | 0.3                    |      | 78   | 27  | 259 | 14  | 687 |                  | 110             | 146             | 0.4 | 1    |                 | 1010 | 304                           | 64    | 6.4              |           |      |     |
| 155-083-14CDA  | 02-11-69        | 26           | 1.5                    | 0.58 | 118  | 35  | 330 | 9   | 817 |                  | 140             | 240             | 0.3 | 3    | 0.19            | 1280 | 440                           | 61    | 6.8              |           |      |     |
| 155-083-14DBA1 | 05-15-64        | 21           | 0.32                   |      | 168  | 60  | 309 | 14  | 797 |                  | 381             | 219             | 0.6 | 1    | 0.18            | 1750 | 665                           | 120   | 50               | 5.2       |      |     |
| 155-083-14DCA  | 12-11-63        | 22           | 1.2                    |      | 93   | 87  | 305 | 12  | 747 |                  | 181             | 338             | 0.5 | 5    |                 | 1460 | 590                           | 52    | 5.5              |           |      |     |
| 155-083-14DCA  | 02-11-69        | 28           | 1.4                    | 0.28 | 134  | 38  | 383 | 10  | 835 |                  | 261             | 280             | 0.3 |      | 0.19            | 1490 | 493                           | 62    | 7.5              |           |      |     |
| 155-083-14DDD2 | -64             | 21           | 0.25                   |      | 102  | 32  | 218 | 13  | 589 |                  | 72              | 232             | 0.2 |      |                 | 1010 | 388                           | 54    | 4.8              |           |      |     |
| 155-083-14DDD2 | 02-07-69        | 26           | 2.1                    | 0.37 | 120  | 33  | 241 | 8   | 629 |                  | 170             | 191             | 0.3 | 1    | 0.19            | 1100 | 435                           | 54    | 5.0              |           |      |     |

| Location       | Well Depth (ft) | Date Sampled | (milligrams per liter) |      |      |     |     |     |     |                  |                 |                 |      |      |                 |      |     | Spec Cond (umho)              | Temp (°C) | pH              |      |      |     |
|----------------|-----------------|--------------|------------------------|------|------|-----|-----|-----|-----|------------------|-----------------|-----------------|------|------|-----------------|------|-----|-------------------------------|-----------|-----------------|------|------|-----|
|                |                 |              | SiO <sub>2</sub>       | Fe   | Mn   | Ca  | Mg  | Na  | K   | HCO <sub>3</sub> | CO <sub>3</sub> | SO <sub>4</sub> | C1   | F    | NO <sub>3</sub> | B    | TDS | Hardness as CaCO <sub>3</sub> | % NCH     | NH <sub>4</sub> | SAR  |      |     |
| 155-083-14DDD2 |                 | 06-09-70     | 29                     | 0.42 | 115  | 34  | 233 | 6   | 627 | 190              | 171             | 0.1             | 1    | 0.19 | 1100            | 428  | 54  | 4.9                           |           | 8.9             |      |      |     |
| 155-083-14DDD2 |                 | 07-25-72     | 26                     | 0.49 | 111  | 43  | 236 | 7   | 627 | 167              | 188             | 0.3             | 2    | 0.14 | 1100            | 453  | 53  | 4.8                           |           | 9.4             |      |      |     |
| 155-083-14DDD2 |                 | 07-23-86     | 26                     | 2.9  | 0.39 | 110 | 42  | 180 | 9   | 593              | 250             | 70              | 0.3  | 3    | 0.17            | 969  | 450 | 46                            | 3.7       | 1800            | 9.0  |      |     |
| 155-083-14DDD3 | -64             | 22           | 0.25                   |      | 124  | 16  | 250 | 13  | 634 | 225              | 137             | 0.3             | 2    |      | 1070            | 376  | 58  | 5.6                           |           | 8.3             |      |      |     |
| 155-083-14DDD3 |                 | 02-11-69     | 26                     | 1.9  | 0.02 | 108 | 28  | 264 | 8   | 651              | 122             | 222             | 0.3  | 3    | 0.19            | 1070 | 386 | 59                            | 5.8       |                 | 8.9  |      |     |
| 155-083-14DDD3 |                 | 06-09-70     | 28                     | 0.34 | 100  | 27  | 260 | 6   | 645 | 136              | 185             | 0.2             | 1    | 0.15 | 1070            | 361  | 61  | 6.0                           |           | 9.4             |      |      |     |
| 155-083-14DDD3 |                 | 07-23-86     | 28                     | 3.0  | 0.38 | 110 | 42  | 180 | 8   | 609              | 240             | 82              | 0.3  | 4    | 0.19            | 990  | 450 | 46                            | 3.7       | 1750            | 9.0  |      |     |
| 155-083-17DBB  | S 09-15-69      | 11           | 0.01                   | 62   | 20   | 127 | 16  | 343 | 215 | 12               | 0.1             |                 |      |      |                 | 617  | 235 | 52                            | 3.6       |                 |      |      |     |
| 155-083-17DBB  | S 10-13-69      | 6            | 0.01                   | 62   | 21   | 102 | 15  | 316 | 193 | 11               | 0.1             | 1               | 0.26 |      | 603             | 240  | 46  | 2.9                           |           |                 |      |      |     |
| 155-083-17DBB  | S 11-17-69      | 2            | 0.01                   | 61   | 24   | 92  | 14  | 314 | 172 | 10               | 0.1             | 1               |      |      | 540             | 250  | 43  | 2.5                           |           | 1.0             |      |      |     |
| 155-083-17DBB  | S 12-29-69      | 2            | 0.16                   | 0.03 | 55   | 23  | 64  | 13  | 285 | 123              | 10              | 0.1             |      | 0.15 | 451             | 230  | 36  | 1.8                           |           | 0.6             |      |      |     |
| 155-083-17DBB  | S 01-09-70      | 3            | 0.05                   | 0.02 | 59   | 33  | 87  | 13  | 332 | 192              | 19              |                 | 1    | 0.05 | 576             | 285  | 13  | 39                            | 2.2       |                 |      |      |     |
| 155-083-17DBB  | S 01-12-70      | 3            | 0.2                    | 0.02 | 54   | 29  | 61  | 13  | 291 | 127              | 13              | 0.2             | 1    | 0.04 | 465             | 255  | 16  | 33                            | 1.7       |                 |      |      |     |
| 155-083-17DBB  | S 02-12-70      | 6            | 0.1                    | 0.01 | 58   | 26  | 62  | 13  | 298 | 126              | 11              |                 | 1    | 0.07 | 469             | 250  | 6   | 34                            | 1.7       |                 |      |      |     |
| 155-083-17DBB  | S 03-09-70      | 6            | 0.12                   | 0.02 | 63   | 27  | 69  | 13  | 314 | 139              | 16              | 0.1             | 2    | 0.07 | 458             | 270  | 12  | 34                            | 1.8       |                 |      |      |     |
| 155-083-17DBB  | S 04-06-70      | 4            | 0.88                   | 0.01 | 47   | 18  | 72  | 11  | 247 | 144              | 14              | 0.1             | 2    | 0.22 | 463             | 193  | 43  | 2.3                           |           |                 |      |      |     |
| 155-083-17DBB  | S 05-13-70      | 6            | 0.42                   | 0.01 | 47   | 21  | 46  | 10  | 214 | 119              | 13              | 0.1             | 8    | 0.26 | 358             | 204  | 29  | 32                            | 1.4       |                 |      |      |     |
| 155-083-17DBB  | S 06-25-70      | 2            | 1.2                    | 0.05 | 45   | 21  | 58  | 11  | 218 | 137              | 10              | 0.4             |      | 0.09 | 410             | 198  | 20  | 37                            | 1.8       | 21.5            |      |      |     |
| 155-083-17DBB  | S 07-06-70      | 5            | 1.0                    | 0.08 | 49   | 22  | 71  | 11  | 242 | 168              | 11              | 0.2             |      | 0.39 | 447             | 215  | 17  | 40                            | 2.1       |                 |      |      |     |
| 155-083-17DBB  | S 08-04-70      | 10           | 4.5                    | 0.22 | 63   | 27  | 104 | 13  | 312 | 221              | 14              | 0.1             | 4    |      | 653             | 269  | 13  | 44                            | 2.8       | 21.0            |      |      |     |
| 155-083-17DBB  | S 08-31-70      | 9            | 0.12                   | 0.05 | 82   | 37  | 150 | 13  | 430 | 293              | 26              | 0.2             | 1    | 0.09 | 830             | 359  | 6   | 47                            | 3.4       |                 |      |      |     |
| 155-083-17DBB  | S 09-30-70      | 6            | 0.01                   | 50   | 28   | 73  | 12  | 278 | 137 | 23               | 0.2             | 2               | 0.05 | 476  | 242             | 14   | 38  | 2.0                           | 14.0      |                 |      |      |     |
| 155-083-17DBB  | S 11-05-70      | 6            | 0.03                   | 0.01 | 54   | 33  | 83  | 12  | 317 | 181              | 18              | 0.5             | 2    | 0.13 | 540             | 270  | 10  | 39                            | 2.2       |                 |      |      |     |
| 155-083-17DBB  | S 01-04-71      | 3            | 0.01                   | 60   | 34   | 87  | 13  | 323 | 191 | 18               | 0.1             | 1               | 0.14 | 561  | 291             | 26   | 38  | 2.2                           |           |                 |      |      |     |
| 155-083-17DBB  | S 02-11-71      | 3            | 0.01                   | 61   | 34   | 86  | 14  | 329 | 183 | 18               | 0.6             | 1               | 0.35 | 571  | 293             | 23   | 38  | 2.2                           | 0.0       |                 |      |      |     |
| 155-083-17DBB  | S 03-11-71      | 5            | 0.12                   | 0.01 | 54   | 29  | 76  | 14  | 298 | 159              | 16              | 0.7             | 1    | 0.1  | 501             | 256  | 12  | 38                            | 2.1       |                 |      |      |     |
| 155-083-17DBB  | S 04-13-71      | 6            | 0.01                   | 42   | 21   | 66  | 10  | 201 | 158 | 12               | 0.6             | 3               | 0.14 | 429  | 191             | 27   | 41  | 2.1                           | 6.0       |                 |      |      |     |
| 155-083-17DBB  | S 05-11-71      | 3            | 0.14                   | 48   | 28   | 68  | 11  | 271 | 142 | 16               |                 | 2               | 0.1  | 478  | 237             | 15   | 37  | 1.9                           |           |                 |      |      |     |
| 155-083-17DBB  | S 06-01-71      | 5            | 0.28                   | 55   | 32   | 80  | 11  | 307 | 179 | 25               | 0.2             |                 | 0.14 | 554  | 269             | 17   | 38  | 2.1                           |           |                 |      |      |     |
| 155-083-17DBB  | S 07-08-71      | 5            | 0.76                   | 0.03 | 41   | 22  | 57  | 9   | 202 | 138              | 12              | 0.4             | 1    |      | 360             | 194  | 29  | 38                            | 1.8       |                 |      |      |     |
| 155-083-17DBB  | S 08-04-71      | 6            | 0.06                   | 42   | 27   | 67  | 11  | 247 | 147 | 16               | 0.4             | 1               | 1.1  | 420  | 214             | 12   | 39  | 2.0                           | 19.5      |                 |      |      |     |
| 155-083-17DBB  | S 09-10-71      | 14           | 0.02                   | 50   | 37   | 102 | 12  | 312 | 201 | 21               | 0.5             | 3               | 1.1  | 552  | 276             | 20   | 43  | 2.7                           | 17.0      |                 |      |      |     |
| 155-083-17DBB  | S 07-12-72      | 8            | 0.14                   | 45   | 24   | 59  | 11  | 239 | 135 | 9                | 0.1             | 3               | 0.36 | 424  | 210             | 36   | 1.8 | 670                           | 20.0      |                 |      |      |     |
| 155-083-17DBB  | S 05-11-73      | 4            | 0.08                   | 41   | 90   | 74  | 207 | 11  | 436 | 569              | 33              | 0.2             | 1    | 0.03 | 1200            | 533  | 175 | 45                            | 3.9       | 1670            | 12.0 |      |     |
| 155-083-17DBB  | S 07-05-73      | 15           | 0.3                    | 0.47 | 76   | 46  | 87  | 11  | 291 | 320              | 18              | 0.2             | 2    | 0.09 | 738             | 380  | 140 | 32                            | 1.9       | 1030            | 20.5 |      |     |
| 155-083-17DBB  | S 05-16-74      | 4            | 0.16                   | 0.01 | 37   | 19  | 42  | 9   | 158 | 130              | 8               | 0.1             | 1    | 0.13 | 525             | 170  | 41  | 34                            | 1.4       | 10.0            |      |      |     |
| 155-083-17DBB  | S 08-09-74      | 10           | 0.37                   | 0.2  | 47   | 25  | 62  | 10  | 260 | 140              | 12              | 0.6             | 1    | 0.12 | 455             | 220  | 7   | 37                            | 1.8       | 710             | 21.5 |      |     |
| 155-083-17DBB  | S 04-22-75      | 4            | 0.23                   | 0.2  | 38   | 21  | 35  | 10  | 139 | 130              | 20              | 0.1             | 12   |      | 348             | 180  | 66  | 28                            | 1.1       | 520             | 2.0  | 7.6  |     |
| 155-083-17DBB  | S 08-07-75      | 10           | 0.17                   | 0.2  | 68   | 41  | 120 | 13  | 376 | 280              | 25              | 0.1             | 5    | 0.28 | 770             | 340  | 32  | 42                            | 2.8       | 1120            | 22.0 | 8.1  |     |
| 155-083-17DBB  | S 04-07-76      | 8            | 0.08                   | 0.06 | 41   | 24  | 55  | 7   | 165 | 160              | 12              | 0.1             | 3    | 0.08 | 412             | 200  | 65  | 36                            | 1.7       | 575             | 6.0  | 7.8  |     |
| 155-083-17DBB  | S 07-08-76      | 3            | 0.08                   |      | 43   | 22  | 43  | 8   | 222 | 2                | 110             | 7               | 0.1  | 3    | 0.08            | 353  | 200 | 15                            | 31        | 1.3             | 545  | 23.0 | 8.7 |
| 155-083-17DBB  | S 04-06-77      | 7            | 0.04                   | 0.16 | 68   | 39  | 95  | 6   | 319 | 260              | 20              | 0.1             | 1    | 0.21 | 640             | 330  | 68  | 38                            | 2.3       | 950             | 4.0  | 8.5  |     |
| 155-083-17DBB  | S 09-09-77      | 6            | 0.06                   | 0.48 | 71   | 52  | 140 | 15  | 412 | 10               | 300             | 49              | 0.1  | 2    | 0.19            | 879  | 390 | 36                            | 43        | 3.1             | 1260 | 15.0 | 8.2 |
| 155-083-17DBB  | S 04-06-78      | 10           | 0.06                   | 0.48 | 49   | 29  | 63  | 9   | 223 | 170              | 15              | 0.1             | 2    | 0.27 | 473             | 240  | 58  | 35                            | 1.8       | 710             | 3.5  | 8.1  |     |
| 155-083-17DBB  | S 09-22-78      | 9            | 0.02                   | 0.24 | 45   | 41  | 99  | 11  | 286 | 33               | 190             | 25              | 0.2  | 5    | 0.06            | 597  | 280 | 42                            | 2.6       | 870             | 11.0 | 8.1  |     |
| 155-083-17DBB  | S 05-01-79      | 6            | 0.08                   | 0.1  | 38   | 21  | 59  | 9   | 179 | 150              | 10              | 0.1             | 3    | 0.24 | 404             | 180  | 34  | 40                            | 1.9       | 610             | 4.5  | 8.1  |     |
| 155-083-17DBB  | S 10-05-79      | 19           | 0.1                    | 70   | 45   | 120 | 16  | 395 | 300 | 18               | 0.2             | 2               | 0.26 | 833  | 360             | 36   | 41  | 2.7                           | 1130      | 10.5            | 8.4  |      |     |
| 155-083-17DBB  | S 06-03-80      | 14           | 0.01                   | 0.91 | 74   | 45  | 140 | 11  | 409 | 310              | 29              | 0.2             | 1    | 0.03 | 854             | 370  | 35  | 44                            | 3.2       | 1200            | 18.5 | 8.1  |     |
| 155-083-17DBB  | S 03-30-81      | 4            | 0.02                   | 0.11 | 43   | 25  | 66  | 5   | 232 | 130              | 18              | 0.1             | 1    | 0.06 | 381             | 210  | 20  | 40                            | 2.0       | 640             | 8.0  | 8.4  |     |
| 155-083-17DBB  | S 09-04-81      | 1            | 0.01                   | 0.08 | 50   | 40  | 150 | 17  | 389 | 230              | 44              | 0.2             | 1    | 0.73 | 744             | 290  | 51  | 3.8                           | 1050      | 15.5            | 8.6  |      |     |

| Location       | Well Depth (ft) | Date Sampled | (milligrams per liter) |      |     |    |     |     |      |                  |                 |                 |     |      |                 |      |     |                               |       | Spec Cond (umho) | Temp (°C) | pH   |      |
|----------------|-----------------|--------------|------------------------|------|-----|----|-----|-----|------|------------------|-----------------|-----------------|-----|------|-----------------|------|-----|-------------------------------|-------|------------------|-----------|------|------|
|                |                 |              | SiO <sub>2</sub>       | Fe   | Mn  | Ca | Mg  | Na  | K    | HCO <sub>3</sub> | CO <sub>3</sub> | SO <sub>4</sub> | Cl  | F    | NO <sub>3</sub> | B    | TDS | Hardness as CaCO <sub>3</sub> | % NCH | Na               | SAR       |      |      |
| 155-083-17DBB  | S 04-03-84      | 10           | 0.09                   | 0.16 | 39  | 17 | 44  | 12  | 194  |                  | 94              | 10              | 0.2 | 1    | 0.21            | 340  | 170 | 9                             | 34    | 1.5              | 520       | 4.0  | 7.9  |
| 155-083-17DBB  | S 08-23-84      | 4            | 0.02                   | 0.37 | 49  | 27 | 76  | 14  | 312  |                  | 120             | 18              | 0.2 | 1    | 0.26            | 489  | 230 |                               | 40    | 2.2              | 750       | 21.5 | 8.0  |
| 155-083-17DBB  | S 03-19-85      | 7            | 0.18                   | 0.05 | 23  | 10 | 19  | 10  | 106  |                  | 53              | 6               | 0.1 | 2    | 0.03            | 158  | 100 | 12                            | 27    | 0.8              | 275       |      | 8.0  |
| 155-083-17DBB  | S 09-05-85      | 3            | 0.03                   | 0.1  | 47  | 31 | 93  | 14  | 318  | 2                | 150             | 25              | 0.2 | 1    | 0.23            | 528  | 250 |                               | 44    | 2.6              | 850       | 18.0 | 8.0  |
| 155-083-17DBB  | S 04-07-86      | 8            | 0.04                   | 0.13 | 45  | 24 | 75  | 11  | 250  |                  | 150             | 16              | 0.2 | 1    | 0.19            | 482  | 210 | 6                             | 42    | 2.3              | 720       | 9.5  | 8.0  |
| 155-083-17DBB  | S 08-26-86      | 6            | 0.01                   | 0.06 | 47  | 29 | 85  | 13  | 288  |                  | 160             | 22              | 0.2 | 1    | 0.35            | 531  | 240 | 1                             | 42    | 2.4              | 805       | 18.5 | 7.9  |
| 155-083-20C    | 07-08-66        | 2.1          |                        |      |     |    |     |     | 1620 |                  | 2               | 480             |     |      |                 | 2150 | 40  |                               | 98    | 62.0             |           |      |      |
| 155-083-20D    | 07-11-66        | 0.93         |                        |      |     |    |     |     | 512  |                  | 365             | 26              |     |      |                 | 968  | 530 | 111                           | 37    | 2.7              |           |      |      |
| 155-083-21DAA2 | 12-11-63        | 10           | 2.3                    |      | 13  | 3  | 345 |     | 698  | 38               | 35              | 92              | 0.9 |      |                 | 961  | 44  |                               | 24    | 23.0             |           | 8.3  |      |
| 155-083-22ABC  | 12-11-63        | 19           | 0.5                    |      | 58  | 54 | 67  | 6   | 473  |                  | 96              | 24              | 0.3 |      |                 | 603  | 370 |                               | 28    | 1.5              |           |      | 8.9  |
| 155-083-22ABC  | 09-20-68        | 22           | 0.66                   | 0.77 | 91  | 22 | 131 | 5   | 480  |                  | 185             | 30              | 0.1 |      | 0.24            | 733  | 320 |                               | 47    | 5.2              |           |      | 9.4  |
| 155-083-22ABC  | 02-07-69        | 22           | 0.43                   | 0.85 | 102 | 26 | 132 | 5   | 493  |                  | 190             | 31              | 0.1 | 1    | 0.29            | 752  | 362 |                               | 44    | 3.0              |           |      | 8.9  |
| 155-083-22ABC  | 06-09-70        | 24           | 0.68                   | 0.73 | 98  | 31 | 126 | 5   | 506  |                  | 198             | 25              | 0.3 | 1    |                 | 764  | 371 |                               | 42    | 2.8              |           |      | 10.0 |
| 155-083-22ABC  | 07-23-86        | 23           | 0.35                   | 1.3  | 140 | 54 | 86  | 8   | 498  |                  | 270             | 61              | 0.1 | 5    | 0.07            | 912  | 570 | 160                           | 24    | 1.6              | 1500      | 9.0  |      |
| 155-083-22ACC1 | 12-06-63        | 19           | 0.6                    |      | 38  | 26 | 315 | 9   | 878  |                  | 44              | 97              | 0.5 | 1    |                 | 1000 | 202 |                               | 76    | 9.6              |           |      | 8.3  |
| 155-083-22ACC1 | 09-20-68        | 22           | 3.1                    | 0.23 | 58  | 16 | 262 | 4   | 675  |                  | 170             | 54              | 0.3 |      | 0.49            | 939  | 211 |                               | 73    | 7.8              |           |      | 8.9  |
| 155-083-22ACC1 | 02-10-69        | 21           | 1.8                    | 0.05 | 55  | 18 | 296 | 4   | 721  |                  | 157             | 66              | 0.3 | 1    | 0.47            | 959  | 209 |                               | 75    | 8.9              |           |      | 8.3  |
| 155-083-22ACC1 | 06-26-70        | 22           | 0.24                   | 0.27 | 85  | 34 | 238 | 4   | 656  |                  | 244             | 51              | 0.5 |      | 0.63            | 1010 | 354 |                               | 59    | 5.5              |           |      | 8.9  |
| 155-083-22ACC1 | 07-24-70        | 21           | 2.2                    | 0.36 | 81  | 31 | 219 | 5   | 612  |                  | 240             | 46              | 0.4 | 6    | 0.6             | 899  | 332 |                               | 59    | 5.2              |           |      | 10.0 |
| 155-083-22ACC1 | 07-25-72        | 24           | 1.5                    | 0.12 | 70  | 32 | 179 | 5   | 551  |                  | 163             | 37              | 0.3 | 3    | 0.32            | 810  | 305 |                               | 56    | 4.5              |           |      | 9.4  |
| 155-083-22ACC1 | 05-27-82        | 19           | 3.9                    | 0.54 | 75  | 30 | 220 | 5   | 694  |                  | 130             | 61              | 0.3 | 1    | 0.26            | 893  | 310 |                               | 60    | 5.4              | 880       | 10.0 |      |
| 155-083-22ACC1 | 07-23-86        | 22           | 3.1                    | 0.5  | 66  | 29 | 230 | 8   | 697  |                  | 130             | 68              | 0.3 | 4    | 0.47            | 892  | 280 |                               | 63    | 6.0              | 1550      | 9.0  |      |
| 155-083-22ADA2 | -64             | 21           | 0.48                   |      | 52  | 34 | 188 | 11  | 581  |                  | 165             | 29              | 0.4 | 1    |                 | 793  | 270 |                               | 59    | 5.0              |           |      | 8.3  |
| 155-083-22ADA2 | 02-12-69        | 24           | 0.76                   | 0.53 | 83  | 27 | 268 | 6   | 772  |                  | 165             | 69              | 0.2 | 3    | 0.27            | 1030 | 320 |                               | 64    | 6.5              |           |      | 8.9  |
| 155-083-22ADA2 | 06-26-70        | 24           | 0.82                   |      | 101 | 45 | 249 | 5   | 766  |                  | 231             | 60              | 0.5 |      | 0.27            | 1090 | 438 |                               | 55    | 5.2              |           |      | 8.9  |
| 155-083-22ADA2 | 05-27-82        | 23           | 3.3                    | 1.4  | 130 | 48 | 130 | 4   | 616  |                  | 220             | 43              | 0.2 | 1    | 0.13            | 909  | 520 | 17                            | 35    | 2.5              | 1420      | 10.0 |      |
| 155-083-22ADA2 | 07-23-86        | 27           | 2.5                    | 1.1  | 120 | 50 | 140 | 7   | 668  |                  | 140             | 110             | 0.2 | 1    | 0.1             | 917  | 510 |                               | 37    | 2.7              | 1650      | 9.0  |      |
| 155-083-22ADC  | 12-11-63        | 18           | 0.94                   |      | 39  | 30 | 265 | 5   | 712  |                  | 74              | 102             | 0.5 |      |                 | 1000 | 220 |                               | 72    | 7.8              |           |      | 7.8  |
| 155-083-22ADC  | 09-20-68        | 22           | 2.3                    | 0.17 | 42  | 19 | 347 | 4   | 882  |                  | 76              | 108             | 0.4 |      | 0.59            | 1070 | 185 |                               | 60    | 11.0             |           |      | 8.9  |
| 155-083-22ADC  | 02-07-69        | 23           | 2.3                    | 0.2  | 56  | 28 | 300 | 4   | 804  |                  | 126             | 86              | 0.4 | 1    | 0.43            | 1020 | 255 |                               | 72    | 8.2              |           |      | 8.3  |
| 155-083-22ADC  | 07-25-72        | 16           | 2.5                    | 0.1  | 62  | 35 | 296 | 5   | 762  |                  | 173             | 78              | 0.4 | 2    | 0.25            | 1080 | 299 |                               | 68    | 7.4              |           |      | 8.9  |
| 155-083-22ADC  | 07-23-86        | 25           | 1.9                    | 0.28 | 42  | 20 | 350 | 6   | 801  |                  | 160             | 72              | 0.4 | 4    | 0.57            | 1070 | 190 |                               | 79    | 10.0             | 1850      | 9.0  |      |
| 155-083-22BCD1 | 12-06-63        | 19           | 0.67                   |      | 72  | 28 | 153 | 10  | 616  |                  | 85              | 49              | 0.3 | 1    |                 | 720  | 296 |                               | 52    | 3.9              |           |      | 8.3  |
| 155-083-22BCD1 | -66             | 15           | 0.35                   |      | 73  | 26 | 123 | 13  | 435  |                  | 177             | 23              | 0.3 |      | 0.18            | 661  | 289 |                               | 47    | 3.1              |           |      | 10.0 |
| 155-083-22BCD1 | 09-20-68        | 15           | 1.1                    | 0.66 | 78  | 23 | 112 | 11  | 375  |                  | 200             | 30              | 0.2 | 0.1  |                 | 672  | 289 |                               | 45    | 2.9              |           |      | 12.2 |
| 155-083-22BCD1 | 12-20-68        | 17           | 0.14                   | 0.58 | 94  | 31 | 126 | 13  | 466  |                  | 205             | 29              | 0.2 |      | 0.31            | 734  | 364 |                               | 42    | 2.9              |           |      | 13.3 |
| 155-083-22BCD1 | 02-10-69        | 18           | 0.05                   | 0.63 | 88  | 32 | 126 | 13  | 460  |                  | 206             | 31              | 0.2 |      | 0.12            | 751  | 351 |                               | 43    | 2.9              |           |      | 14.4 |
| 155-083-22BCD1 | 12-23-70        | 14           | 0.58                   | 0.66 | 78  | 35 | 81  | 9   | 375  |                  | 165             | 21              | 0.6 | 1    | 0.11            | 593  | 340 | 32                            | 33    | 1.9              |           |      | 11.7 |
| 155-083-22BCD1 | 08-04-71        | 14           | 0.38                   | 0.52 | 81  | 40 | 77  | 8   | 387  |                  | 176             | 19              | 0.1 | 1    | 0.13            | 608  | 368 | 51                            | 31    | 1.7              | 750       | 7.0  |      |
| 155-083-22BCD  | 12-11-63        | 16           | 1.5                    |      | 78  | 39 | 205 | 15  | 751  | 19               | 26              | 112             | 0.3 | 2    |                 | 1010 | 354 |                               | 54    | 4.7              |           |      | 7.8  |
| 155-083-22BCD  | 09-20-68        | 20           | 4.6                    | 0.43 | 77  | 23 | 165 | 8   | 513  |                  | 201             | 35              | 0.2 |      | 0.29            | 788  | 288 |                               | 55    | 4.2              |           |      | 10.0 |
| 155-083-22BCD  | 02-07-69        | 20           | 4.2                    | 0.45 | 80  | 29 | 188 | 9   | 577  |                  | 180             | 46              | 0.3 | 1    | 0.43            | 830  | 319 |                               | 55    | 4.6              |           |      | 10.0 |
| 155-083-22BCD  | 07-24-70        | 17           | 2.0                    | 0.41 | 79  | 30 | 149 | 6   | 491  |                  | 217             | 29              | 0.3 | 1    | 0.51            | 723  | 320 |                               | 50    | 3.6              |           |      | 7.8  |
| 155-083-22BCD  | 07-23-86        | 21           | 4.5                    | 0.53 | 67  | 27 | 240 | 9   | 714  |                  | 130             | 64              | 0.2 | 2    | 0.45            | 899  | 280 |                               | 64    | 6.2              | 1550      | 9.0  |      |
| 155-083-22CB   | S 08-04-71      | 5            | 0.03                   | 43   | 27  | 65 | 11  | 238 |      | 152              | 15              | 0.1             | 1   | 0.09 | 442             | 219  | 24  | 38                            | 1.9   |                  |           | 22.0 |      |
| 155-083-22CBB  | 08-04-71        | 16           | 0.02                   | 68   | 32  | 93 | 7   | 356 |      | 188              | 31              | 0.1             | 1   | 0.27 | 604             | 303  | 11  | 39                            | 2.3   | 910              | 7.0       |      |      |
| 155-083-23BAA3 | 12-11-63        | 21           | 0.5                    |      | 63  | 48 | 100 | 8   | 498  |                  | 129             | 32              | 0.2 | 1    |                 | 698  | 356 |                               | 37    | 2.3              |           |      | 8.3  |
| 155-083-23BAA3 | 02-07-69        | 25           | 3.0                    | 0.29 | 78  | 17 | 250 | 4   | 750  |                  | 62              | 91              | 0.4 | 1    | 0.29            | 900  | 266 |                               | 67    | 6.7              |           |      | 8.3  |
| 155-083-23BAA3 | 07-25-72        | 24           | 0.16                   | 0.32 | 98  | 38 | 258 | 6   | 714  |                  | 111             | 168             | 0.3 | 3    | 0.04            | 1090 | 400 |                               | 58    | 5.6              |           |      | 8.3  |
| 155-083-23BAB1 | 12-06-63        | 21           | 1.0                    |      | 66  | 26 | 235 | 16  | 717  |                  | 96              | 81              | 0.5 | 1    |                 | 881  | 272 |                               | 64    | 6.2              |           |      | 7.2  |

| Location       | Well Depth (ft) | Date Sampled | (milligrams per liter) |      |      |      |     |     |     |                  |                 |                 |     |     |                 |      | Hardness as CaCO <sub>3</sub> | % Na | SAR | Spec Cond (umho) | Temp (°C) | pH           |          |
|----------------|-----------------|--------------|------------------------|------|------|------|-----|-----|-----|------------------|-----------------|-----------------|-----|-----|-----------------|------|-------------------------------|------|-----|------------------|-----------|--------------|----------|
|                |                 |              | SiO <sub>2</sub>       | Fe   | Mn   | Ca   | Mg  | Na  | K   | HCO <sub>3</sub> | CO <sub>3</sub> | SO <sub>4</sub> | C1  | F   | NO <sub>3</sub> | B    | TDS                           | NCH  |     |                  |           |              |          |
| 155-083-23BAB1 |                 | 02-12-69     | 25                     | 2.1  | 0.08 | 83   | 28  | 141 | 4   | 569              |                 | 114             | 32  | 0.2 | 1               | 0.16 | 712                           | 324  | 48  | 3.4              |           | 7.8          |          |
| 155-083-23BAB1 |                 | 08-27-70     | 26                     | 0.02 | 72   | 22   | 184 | 4   | 640 |                  | 91              | 48              | 0.1 | 1   | 0.08            | 745  | 269                           | 59   | 4.9 |                  | 8.3       |              |          |
| 155-083-23BAB1 |                 | 07-23-86     | 27                     | 2.5  | 0.44 | 120  | 43  | 340 | 11  | 787              |                 | 200             | 260 | 0.3 | 3               | 0.1  | 1430                          | 480  | 60  | 6.7              | 2600      | 9.0          |          |
| 155-083-23BAB2 |                 | 05-13-64     | 21                     | 0.38 |      | 84   | 29  | 115 | 4   | 470              | 7               | 130             | 40  | 0.5 |                 |      | 665                           | 328  | 43  | 2.8              |           |              |          |
| 155-083-23BAB3 |                 | 05-13-64     | 13                     | 0.13 |      | 112  | 28  | 107 | 7   | 495              |                 | 179             | 33  | 0.4 |                 |      | 739                           | 396  | 36  | 2.3              |           | 8.9          |          |
| 155-083-23BBA1 |                 | 05-12-64     | 15                     | 0.94 |      | 35   | 13  | 235 | 8   | 510              | 16              | 179             | 36  | 0.7 |                 | 0.38 | 787                           | 142  | 77  | 8.6              |           | 10.0         |          |
| 155-083-23BBA3 |                 | 05-22-64     | 10                     | 3.6  |      | 50   | 16  | 164 | 12  | 410              |                 | 172             | 38  | 0.4 | 2               |      | 701                           | 192  | 63  | 5.1              |           |              |          |
| 155-083-23BBA4 |                 | 05-22-64     | 19                     | 1.7  |      | 103  | 34  | 83  | 9   | 401              | 7               | 190             | 29  | 0.5 | 20              |      | 696                           | 396  | 56  | 31               | 1.8       |              |          |
| 155-083-23BBA5 |                 | 05-22-64     | 20                     | 1.0  |      | 93   | 34  | 122 | 7   | 478              |                 | 186             | 43  | 0.1 | 2               | 1.1  | 805                           | 370  | 41  | 2.8              |           |              |          |
| 155-083-23BBA6 |                 | 05-14-64     | 15                     | 1.3  |      | 80   | 25  | 121 | 13  | 525              |                 | 92              | 30  | 0.5 | 30              | 0.7  | 685                           | 304  | 45  | 3.0              |           | 10.0         |          |
| 155-083-23BBA7 |                 | 06-19-64     | 16                     | 0.85 |      | 40   | 14  | 204 | 6   | 527              | 10              | 115             | 23  | 0.6 | 5               |      | 725                           | 156  | 73  | 7.1              |           |              |          |
| 155-083-23BBA8 |                 | 06-19-64     | 21                     | 0.66 |      | 104  | 43  | 73  | 8   | 492              |                 | 153             | 25  | 0.6 | 2               |      | 699                           | 435  | 32  | 26               | 1.5       |              |          |
| 155-083-23BBB  | S               | 05-18-64     | 3                      | 0.33 |      | 66   | 29  | 152 | 17  | 431              | 9               | 214             | 31  | 0.4 | 5               | 0.75 | 766                           | 284  | 52  | 3.9              |           | 20.6         |          |
| 155-083-23BBB  | S               | 05-18-64     | 17                     | 0.24 |      | 127  | 54  | 87  | 17  | 543              |                 | 259             | 27  | 0.3 | 8               |      | 876                           | 540  | 95  | 25               | 1.6       | 25.0         |          |
| 155-083-23BBB  | S               | 05-18-64     | 8                      | 0.25 |      | 46   | 21  | 62  | 15  | 267              |                 | 72              | 20  | 0.5 | 50              |      | 455                           | 204  | 38  | 1.9              |           | 25.0         |          |
| 155-083-23BBB3 |                 | 05-12-64     | 15                     | 0.97 |      | 56   | 16  | 135 | 9   | 421              |                 | 130             | 23  | 0.5 | 1               | 0.15 | 619                           | 204  | 58  | 4.1              |           | 7.8          |          |
| 155-083-23BBB3 | S               | 05-18-64     | 8                      | 0.25 |      | 46   | 21  | 62  | 15  | 267              |                 | 72              | 20  | 0.5 | 50              |      | 455                           | 204  | 38  | 1.9              |           | 25.0         |          |
| 155-083-23BBB3 |                 | 08-04-71     | 10                     | 0.27 |      | 40   | 20  | 36  | 11  | 218              |                 | 68              | 11  | 0.1 | 1               | 0.18 | 309                           | 181  | 3   | 29               | 1.2       | 500 7.0      |          |
| 155-083-23BBB3 |                 | 06-06-85     | 21                     | 0.07 | 0.59 | 130  | 57  | 190 | 7   | 507              |                 | 180             | 160 | 0.1 | 1               | 0.08 | 858                           | 560  | 140 | 42               | 3.5       | 1720 7.4 7.8 |          |
| 155-083-23BBB4 |                 | 05-12-64     | 20                     | 0.55 |      | 74   | 26  | 131 | 6   | 480              |                 | 74              | 55  | 0.5 |                 | 0.43 | 633                           | 290  | 49  | 3.3              |           | 8.9          |          |
| 155-083-23BBC5 |                 | 05-13-64     | 15                     | 0.43 |      | 56   | 18  | 112 | 9   | 428              |                 | 86              | 21  | 0.5 | 1               |      | 547                           | 212  | 52  | 3.3              |           |              |          |
| 155-083-23BBC7 |                 | 05-22-64     | 19                     | 0.93 |      | 71   | 23  | 135 | 6   | 533              |                 | 90              | 33  | 0.4 | 3               | 0.8  | 674                           | 272  | 51  | 3.6              |           |              |          |
| 155-083-23BBC1 |                 | 05-22-64     | 20                     | 0.72 |      | 86   | 19  | 85  | 6   | 456              |                 | 81              | 20  | 0.5 | 3               | 0.75 | 567                           | 292  | 38  | 2.2              |           |              |          |
| 155-083-23BBC2 |                 | 05-22-64     | 14                     | 1.0  |      | 57   | 29  | 112 | 15  | 398              |                 | 143             | 34  | 0.2 | 2               |      | 657                           | 260  | 47  | 3.0              |           |              |          |
| 155-083-23BBC3 |                 | 05-22-64     | 16                     | 0.47 |      | 77   | 32  | 89  | 7   | 577              |                 | 23              | 21  | 0.3 | 1               | 0.85 | 573                           | 324  | 37  | 2.2              |           |              |          |
| 155-083-23BBC5 |                 | 06-15-64     | 17                     | 0.62 |      | 35   | 13  | 251 | 5   | 661              |                 | 22              | 79  | 0.5 | 1               |      | 776                           | 140  | 80  | 9.2              |           |              |          |
| 155-083-23BBBD |                 | -63          | 21                     | 0.57 |      | 67   | 30  | 152 | 11  | 573              |                 | 128             | 29  | 0.2 | 1               |      | 720                           | 290  | 52  | 3.9              |           | 7.8          |          |
| 155-083-23BBBD |                 | 02-07-69     | 26                     | 4.6  | 0.74 | 112  | 28  | 159 | 5   | 655              |                 | 117             | 48  | 0.2 | 1               | 0.21 | 819                           | 394  | 46  | 3.5              |           |              |          |
| 155-083-23BBBD |                 | 08-27-70     | 27                     | 1.9  | 0.02 | 82   | 29  | 138 | 5   | 564              |                 | 131             | 37  | 0.1 | 1               | 0.08 | 709                           | 325  | 48  | 3.3              |           | 8.3          |          |
| 155-083-23BBBD |                 | 05-27-82     | 24                     | 5.1  | 0.74 | 120  | 44  | 170 | 5   | 693              |                 | 130             | 110 | 0.2 | 1               | 0.09 | 935                           | 480  | 43  | 3.4              | 1550      | 10.0         |          |
| 155-083-23BBBD |                 | 07-23-86     | 27                     | 3.8  | 0.62 | 120  | 46  | 220 | 8   | 755              |                 | 160             | 130 | 0.2 | 2               | 0.11 | 1070                          | 490  | 49  | 4.3              | 1900      | 9.0          |          |
| 155-083-23CC   | S               | 10-02-68     | 5                      | 0.18 | 0.08 | 56   | 29  | 135 | 13  | 373              |                 | 232             | 29  | 0.3 | 0.2             |      | 690                           | 260  | 52  | 3.6              |           |              |          |
| 155-083-25AAB2 | 345             | 11-17-83     | 26                     | 0.1  | 0.16 | 250  | 95  | 220 | 13  | 659              |                 | 760             | 61  | 0.3 | 1               | 0.19 | 1740                          | 1000 | 470 | 32               | 3.0       | 2500 9.5     |          |
| 155-083-25AAB2 | 345             | 10-10-84     | 22                     | 0.04 | 0.18 | 270  | 93  | 220 | 11  | 720              |                 | 750             | 60  | 0.3 | 1               | 0.34 | 1740                          | 1100 | 470 | 31               | 2.9       | 2600 9.0     |          |
| 155-083-35ADA  |                 | 08-20-65     | 18                     | 0.8  |      | 193  | 71  | 298 | 11  | 941              |                 | 620             | 13  | 0.4 | 3               | 0.25 | 1730                          | 775  | 4   | 4.6              |           | 16.1         |          |
| 155-083-36AAB  |                 | 327          | 10-14-83               | 31   | 0.05 | 0.17 | 230 | 70  | 200 | 13               | 730             |                 | 480 | 72  | 0.2             | 1    | 0.14                          | 1370 | 860 | 260              | 33        | 3.0          | 2100 9.5 |
| 155-083-36AAB  |                 | 327          | 10-03-84               | 19   | 0.03 | 0.09 | 170 | 70  | 200 | 12               | 611             |                 | 440 | 70  | 0.1             | 1    | 0.18                          | 1200 | 710 | 210              | 37        | 3.3          | 2250 9.0 |
| 155-083-36ABB  |                 | 324          | 11-21-83               | 27   | 0.06 | 0.15 | 190 | 62  | 220 | 13               | 700             |                 | 430 | 69  | 0.2             | 1    | 0.16                          | 1300 | 730 | 160              | 39        | 3.5          | 2175 8.0 |
| 155-083-36ABB  |                 | 324          | 10-09-84               | 24   | 0.11 | 0.14 | 200 | 65  | 210 | 11               | 765             |                 | 440 | 68  | 0.2             | 1    | 0.2                           | 1370 | 770 | 140              | 37        | 3.3          | 2250 9.0 |
| 155-083-36ADD  |                 | 327          | 11-18-83               | 24   | 0.1  | 0.23 | 210 | 71  | 200 | 14               | 674             |                 | 490 | 65  | 0.2             |      | 0.11                          | 1330 | 820 | 260              | 34        | 3.0          | 2150 8.0 |

Table 7 -- Dissolved chemical constituents in water -- their effects upon usability and recommended concentration limits for domestic and municipal water supplies in North Dakota.

| Constituent or Parameter                                       | Effects of dissolved constituents on water use  | Suggested limits for drinking water in North Dakota <sup>1</sup>     | U.S. Public Health Service recommended limits for drinking water <sup>2</sup> | Constituent or Parameter       | Effects of dissolved constituents on water use  | Suggested limits for drinking water in North Dakota <sup>1</sup>                             | U.S. Public Health Service recommended limits for drinking water <sup>2</sup>  |
|--|---|--|---|--------------------------------|---|--|--|
| Silica ( $\text{SiO}_2$ )                                      | No physiological significance   |  |   | Chloride (Cl)                  | Over 250 mg/l may impart a salty taste, greatly excessive concentrations may be physiologically harmful. Humans and animals may adapt to higher concentrations. |  | 250 mg/l   |
| Iron (Fe)  | Concentrations over 0.1 mg/l will cause staining of fixtures. Over 0.5 mg/l may impart taste and colors to food and drink.                                | 0.3 mg/l   |   | Fluoride (F)                   | Fluoride helps prevent tooth decay within specified limits. Higher concentrations cause mottled teeth.  | Limits of 0.9 mg/l to 1.5 mg/l   | Recommended limits depend on average of daily temperatures. Limits range from 0.6 mg/l at 32°C. to 1.7 mg/l at 10°C. |
| Manganese (Mn)   | Produces black staining when present in amounts exceeding 0.05 mg/l   | 0.05 mg/l  |   | Nitrate ( $\text{NO}_3$ )      | Over 45 mg/l can be toxic to infants. Larger concentrations can be tolerated by adults. More than 200 mg/l may have a deleterious effect on livestock health    |  | 45 mg/l  |
| Calcium(Ca) and Magnesium (Mg)                                 | Calcium and magnesium are the primary causes of hardness. High concentrations may have a laxative effect on persons not accustomed to this type of water. |  |   | Boron (B)                      | No physiological significance. Greater than 2.0 mg/l may be detrimental to many plants  |  |  |
| Sodium (Na)  | No physiological significance except for people on salt-free diets. Does have an effect on the irrigation usage of water.                                 |  |   | Total dissolved solids         | Persons may become accustomed to water containing 2,000 mg/l or more dissolved solids.  | 0-500 mg/l - low<br>500-1400 mg/l average<br>1400-2500 mg/l high<br>over 2500 mg/l very high | 500 mg/l   |
| Potassium (K)  | Small amounts of potassium are essential to plant and animal nutrition.   |  |   | Hardness (as $\text{CaCO}_3$ ) | Increases soap consumption, but can be removed by a water-softening system.   | 0-200 mg/l - low<br>200-300 mg/l average<br>300-450 mg/l high<br>over 450 mg/l very high     |  |
| Bicarbonate ( $\text{HCO}_3$ ) and Carbonate ( $\text{CO}_3$ ) | No definite significance, but high bicarbonate content will impart a flat taste to water.   |  |   | pH                             | Should be between 6.0 and 9.0 for domestic consumption  |  |  |
| Sulfate ( $\text{SO}_4$ )                                      | Combines with Calcium to form scale. More than 500 mg/l tastes bitter and may be a laxative   | 0-300 mg/l - low<br>300-700 mg/l - high<br>over 700 mg/l - very high | 250 mg/l  | Specific Conductance           | An electrical indication of total dissolved solids measured in micromhos per Centimeter at 25°C. Used primarily for irrigation analyses.                        |  |  |
| Percent Sodium and Sodium Adsorption Ratio (SAR)               | Indicate the sodium hazard of irrigation water.   |  |   |                                |   |  |  |

1. Schmid, R. W., 1965, Water Quality Explanation: North Dakota State Water Commission, unpublished report, File No. 989.

2. U.S. Public Health Service, 1962, Public Health Service Drinking Water Standards: U.S. Public Health Service, Pub. No. 956, 61 p.