GROUNDWATER EVALUATION, SKYY COUNTRY R.V. PARK WITHIN NE-34-39-2-W5M

Prepared by:
Stantec Consulting Ltd.
600, 4808 Ross St.
Red Deer, AB T4N 1X5

Project: 113928105

May, 2008

GROUNDWATER EVALUATION, SKYY COUNTRY R.V. PARK WITHIN NE-34-39-2-W5M

Executive Summary

Skyy Country RV Park has applied to Alberta Environment for an average diversion of 417 cubic metres per day for the tourist season of May 15 to September 15 of each year, or about 120 days per year, for a total of 40,649 cubic metres per year of groundwater from their new wells for the purpose of municipal water supply. It is intended to supply this water to 667 lots for recreational vehicles located within NE-34-39-2-W.5, a short distance north of Sunbreaker Cove on Sylvan Lake. The West Well was used as a production well and the East Well was used as an observation well during the initial test. Further testing used the East Well for pumping and the West Well for observation.

An aquifer test was conducted consisting of 72 hours pumping at 425.7 cubic metres per day, followed by 32.7 hours of recovery, measuring the time-drawdown effects in the production well and an observation well 42.61 m distant. At that time, recovery was complete to over 90 percent. Both wells were completed in the same sandstone aquifer, and the test has shown that the aquifer has a transmissive capacity of at least 239 m^2 /day. It appeared that the well is completed in a fractured unconfined or partially confined aquifer, which responds slightly to changes in barometric pressure. There was almost no response to the testing in the observation well.

The Moell method for estimating long-term sustainable yield shows that the two wells are theoretically capable of pumping about 248.8 cubic metres per day, above the average daily application amount of 111.4 cubic metres per day.

The East Well was then pumped for 29.3 hours at 200 cubic metres per day, using the West Well as an observation well. Again, the observation well had almost no response to the pumping. There is virtually no hydraulic connection between the two wells despite the small distance between them.

The interference caused by this diversion, if it were to be continuous for 20 years and without recharge, would be less than 0.4 m at the wells of the nearest other well-owners. Considering the amount of available head in neighbouring wells completed in the same hydrostratigraphic zone, this interference may be ignored.

Water samples were analyzed for routine parameters and bacterial parameters. All routine chemical parameters are within the Canadian Drinking Water Guideline, with the single exception of excessive selenium in the East Well. All other parameters meet the Guideline. The quality of water was very similar in both wells.

GROUNDWATER EVALUATION, SKYY COUNTRY R.V. PARK WITHIN NE-34-39-2-W5M
Executive Summary
May, 2008

The aquifer completed and tested at this location is confined by about 12 m of confining clay and shale. The hydrogeological context of the well and its behaviour during the aquifer test indicate that the groundwater in this aquifer is not under the influence of surface water.

The evaluation shows that there is adequate recharge to meet the needs of this subdivision, and that the supply well will not induce infiltration from the lake. It is therefore recommended that Alberta Environment approve the application for the new license to divert 40,649 cubic metres per year, combined production from both wells, with each well providing approximately half the total production. It is also recommended that monthly water production and monthly dynamic water levels be recorded in both wells and submitted on an annual basis to Environment as data for their long-term purposes of ensuring good management practices within the Sylvan Lake watershed.

Groundwater Evaluation, SKYY COUNTRY R.V. PARK WITHIN NE-34-39-2-W5M

TABLE OF CONTENTS

GROUNDWATER EVALUATION, SKYY COUNTRY R.V. PARK WITHIN NE-34-39-2-W5M
Table of Contents
May, 2008

FIGURES

TABLES

APPENDICES

1.0 Introduction

1.1 BACKGROUND INFORMATION

Skyy Country R.V. Park is in the process of developing most of the quarter section SE-29-39-2-W5 as a rural residential subdivision (Figure 1), with 667 R.V. lots and associated recreational activities. The subdivision will be serviced from a common groundwater supply. Accordingly, Alken Basin Drilling Ltd. was retained to drill a production well and an observation well in order to evaluate the availability of groundwater within the proposed subdivision area. This report has been prepared therefore in support of an application to divert 62,550 cubic metres of water per year, or 171.37 cubic metres per day average. This is the volume of water required according to Alberta Environment guidelines for the proposed number of recreational residential lots within the subdivision. It is expected that most water production would occur during the May 1 to September 30 tourist season of about 150 days.

Figure 2 shows the details of the proposed subdivision showing the layout of individual lots and locations of both the Production Well and the Observation Well.

1.2 GEOMORPHIC AND GEOLOGIC SETTING

The geological materials at the land surface are composed of Pleistocene till deposits. These are an uncemented mixture of blue and brown clay, silt, sand and gravel with some boulders. These deposits are generally less than 10 m thick, and are draped over the underlying bedrock strata. This area is characterized by numerous flutes and drumlins aligned in a parallel manner from northeast to southwest (Shetsen, 1990). The Pleistocene materials thin somewhat in higher topographic areas.

Below the till is the Paleocene Paskapoo Formation, which consists of grey to greenish grey thick-bedded calcareous cherty sandstone, grey and green siltstone and mudstone, minor conglomerate, thin limestone, coal and tuff beds. The formation was deposited in a non-marine environment (Hamilton, et al, 1999).

The Paskapoo Formation has been subdivided by geologists into several members. In this area, the uppermost or Dalehurst Member is present just below the till. The Dalehurst Member consists of interbedded sandstone, siltstone, mudstone, shale and coal. The sandstones are medium to fine-grained, light grey (salt and pepper appearance) to yellow-brown, predominantly massive or planar bedded with minor planar cross-bedding and wavy-disturbed bedding. Carbonaceous (coaly) laminae are common, siderite staining is common, and plant fragments and rooting are rare. The siltstones, mudstones and shales are light grey to black or olive-green, with few primary sedimentary structures, except for minor planar or wavy-disturbed laminations. Plant fragments are abundant. There are at least five coal seams in this member ranging from 1.3 to 6.1 m in thickness. The strata are almost flat-lying, dipping westward at about 4 m per km.

V:\1139\active\113928105-skye_country_rv_condos\05a-Drawings_Prelim_Design\xref\EastWest_Wells_SkyyCountry.dwg
2008-05-01 09:52AM By: tlabelle

April, 2008
113928105

ORIGINAL SHEET - ANSI A

Stantec Consulting Ltd.
600, 4808 Ross Street
Red Deer AB Canada
T4N 1X5
Tel. 403.341.3320
Fax. 403.342.0969
www.stantec.com

Client/Project
SKYY COUNTRY
GROUNDWATER EVALUATION

Figure No.
1.0

Title
REGIONAL SITE PLAN

V:\1139\active\113928105-skye_country_rv_condos\05a-Drawings_Prelim_Design\xref\EastWest_Wells_SkyyCountry.dwg
2008-04-30 06:12PM By: tlabelle

April, 2008
113928105

ORIGINAL SHEET - ANSI A

Stantec Consulting Ltd.
600, 4808 Ross Street
Red Deer AB Canada
T4N 1X5
Tel. 403.341.3320
Fax. 403.342.0969
www.stantec.com

Client/Project
SKYY COUNTRY
PROPOSED R.V PARK
AND RECREATIONAL FACILITY

Figure No.
2.0

Title
DETAILS OF
SUBDIVISION PLAN

A regional groundwater study was carried out by Orest Tokarsky, Alberta Research Council, in 1970 of the Rocky Mountain House mapsheet, at a scale of 1:250,000. It reported that this area could produce 25 to 100 gallons per minute (160 to 650 cubic metres per day) of water from a single properly designed well.

He also suggested that the water would be predominantly of the sodium bicarbonate facies and that iron content might be slightly above the Canadian Drinking Water Guideline. Fluoride content should be within acceptable limits.

The more recent groundwater evaluation carried out for Lacombe County in 2001 with 31 years of additional data indicates that individual wells would yield between 100 and 300 cubic metres per day, and that the water would be mainly of a sodium bicarbonate type. Total dissolved solids range from under 400 to 600 mg/L, sulphate mainly between 10 and 50 mg/L, and chloride under 10 mg/L. The depth to the base of groundwater protection is considered to be about 350 m depth. This is the depth at which groundwater attains a total dissolved solids level of 4000 mg/L, and is hence considered unfit for human consumption.

1.3 WELL COMPLETION DETAILS

Both the Pumping Well and the adjacent Observation Well were drilled on March 8, 2008 by Alken Basin Drilling Ltd., Bentley, Alberta. At the time of report preparation, the two well records had not yet been submitted to Alberta Environment. Figure 3 shows the details of the construction of the Production well and Figure 4 the construction of the Observation well, located 42.61 m to the east.

Table 1 shows the coordinates of the two wells used in the test.

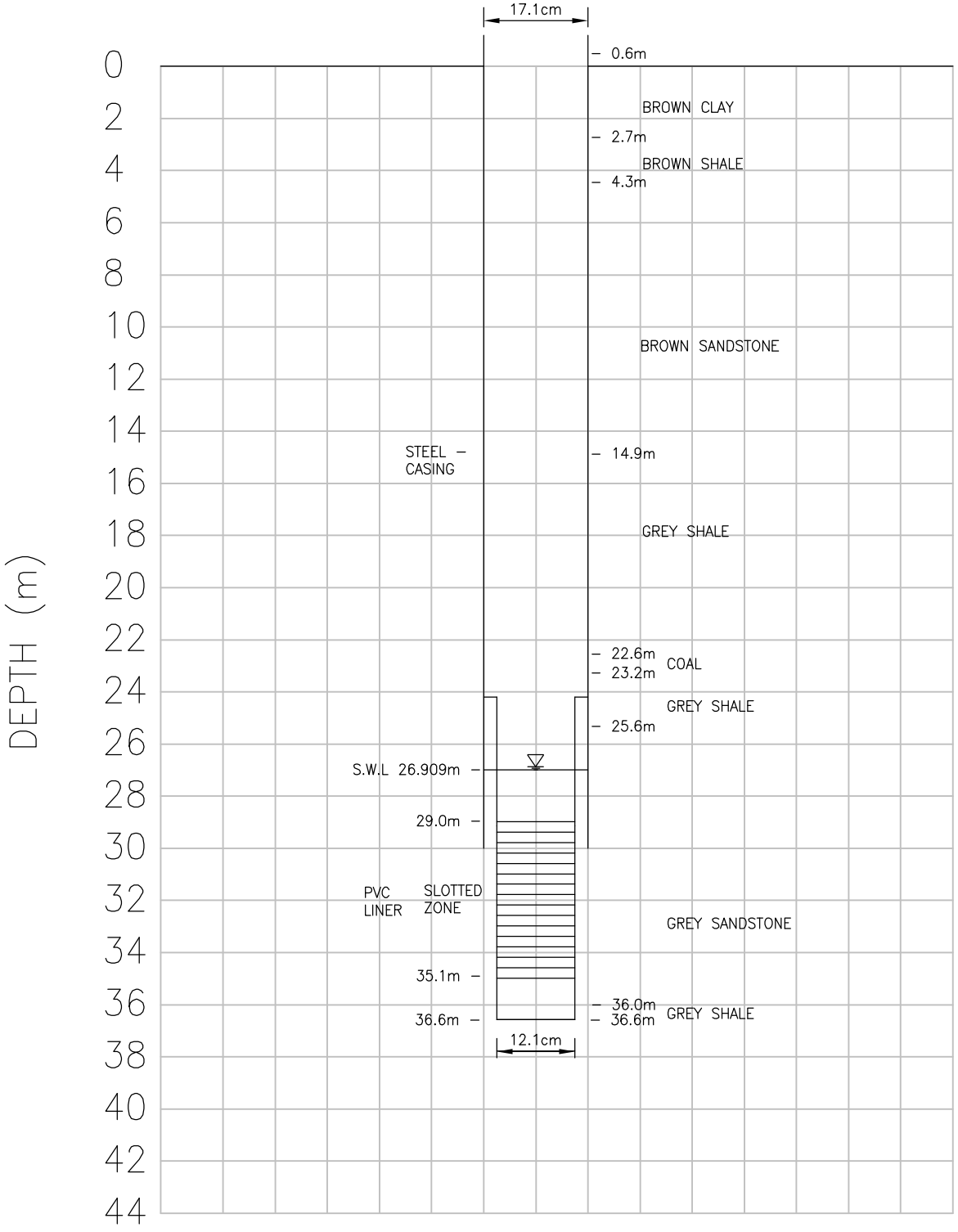
Table 1
Coordinates of Water Wells

Well	Northing	Easting	Casing stickup (m)	S.W.L., March 29, 2008 (m)	Casing Elevation, msl.
West Well	5810415.282	689853.286	0.6	26.909	973.5
East Well	5810404.410	689812.088	0.6	37.652	985.4

Figure 5 is an east-west profile through the pumping wells used in the aquifer test, as well as other wells to the west and east.

1.4 FIELD VERIFIED SURVEY

Stantec Consulting Ltd. prepared a questionnaire to be used for a field verified survey, and carried out a survey of all owners who could be contacted within a 1 km radius of the well. Because the area is largely used for summer cottages, many well-owners were not at home and



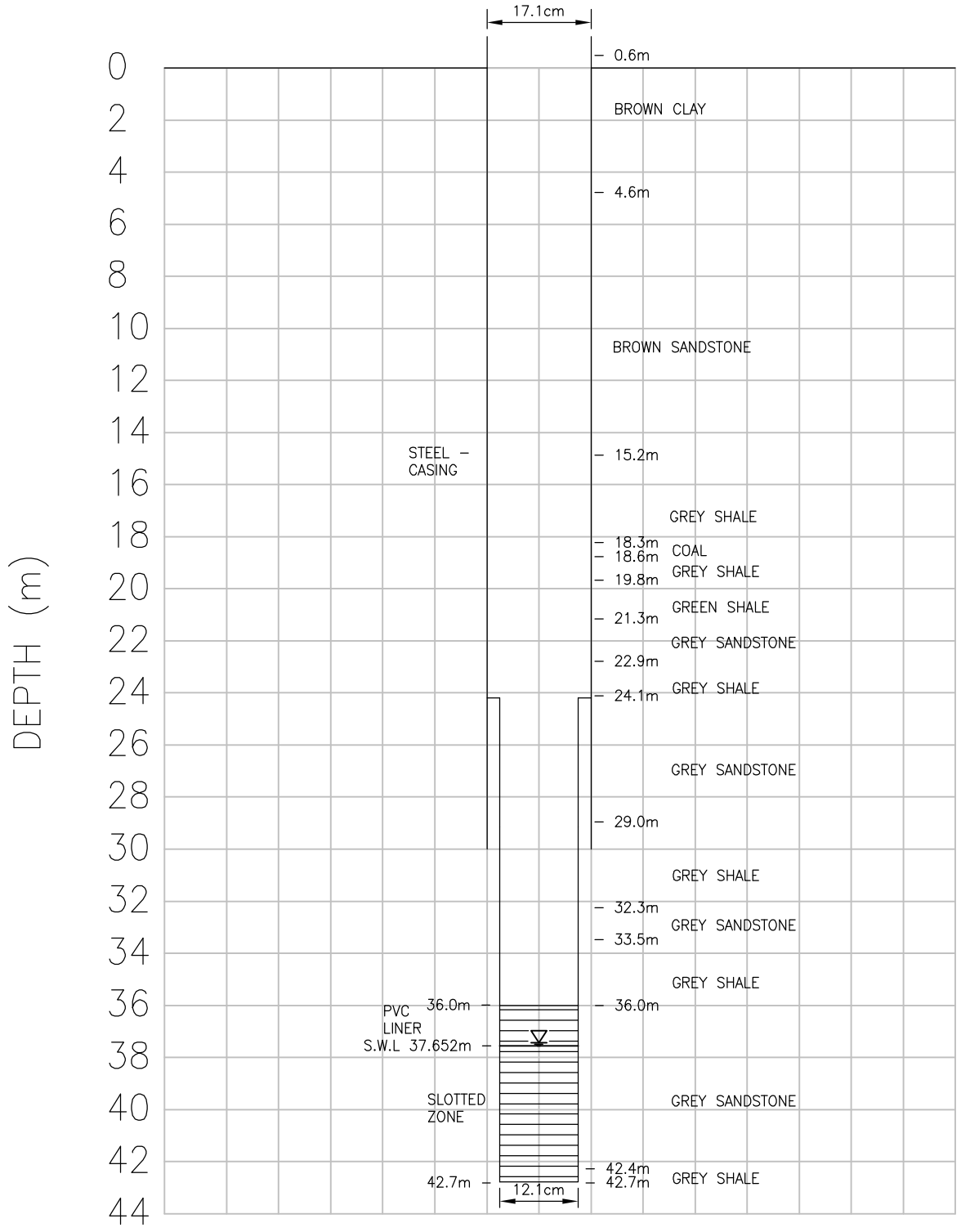
V:\1139\active\113928105-skye_country_rv_condos\05a-Drawings_Prelim_Design\xref\EastWest_Wells_SkyyCountry.dwg
2008-04-30 02:40PM By: tlabelle

April, 2008
113928105

Stantec Consulting Ltd.
600, 4808 Ross Street
Red Deer AB Canada
T4N 1X5
Tel. 403.341.3320
Fax. 403.342.0969
www.stantec.com

Project
SCHEMATIC OF WEST WELL

Figure No.
3



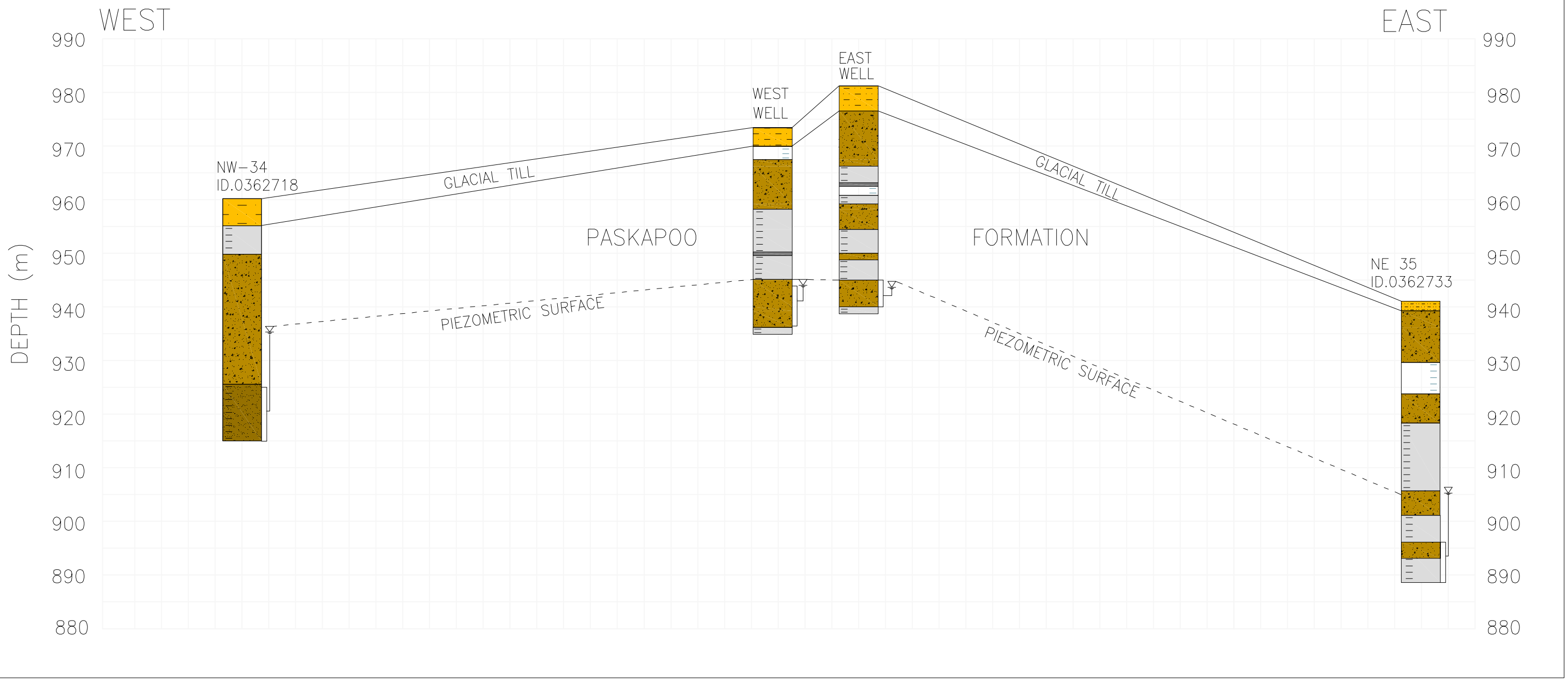
V:\1139\active\113928105-skye_country_rv_condos\05a-Drawings_Prelim_Design\xref\EastWest_Wells_SkyyCountry.dwg
2008-04-30 02:51PM By: tlabelle

April, 2008
113928105

Stantec Consulting Ltd.
600, 4808 Ross Street
Red Deer AB Canada
T4N 1X5
Tel. 403.341.3320
Fax. 403.342.0969
www.stantec.com

Project
SCHEMATIC OF EAST WELL

Figure No.
4



C:\Documents and Settings\tlabelle\My Documents\GRANTS\AutoCADFiles\Skyy_Country_wells_APR29–08.dwg
2008–05–01 10:12AM By: tlabelle

April, 2008
113928105

ORIGINAL SHEET – LEGAL

Stantec Consulting Ltd.
600, 4808 Ross Street
Red Deer AB Canada
T4N 1X5
Tel. 403.341.3320
Fax. 403.342.0969
www.stantec.com

Legend

- CLAY TILL
- GREY SHALE
- SANDSTONE
- SANDSTONE & SHALE
- COAL
- COLOURED SHALE

Project

SKYY COUNTRY

Figure No.

5.0

Title

EAST-WEST HYDROGEOLOGIC PROFILE
PROFILE

could not be contacted. Nevertheless, Table 2 summarizes the information available on the wells which could be identified based on information from their owners.

Figure 6 shows the locations of the wells identified as existing in the immediate vicinity (within a 1 km radius), based on information in the Alberta Environment database, as well as showing the location of the hydrogeologic profile shown in Figure 5.

1.5 EXISTING LICENSED DIVERSIONS

Table 3 is a summary of all licensed and registered groundwater diversions within the section in which the pumping well is located, as well as in all the other sections around it. Traditional Agricultural Registrations (TAR's) are diversions which were not licensed at the time of drilling, because there was no requirement to do so at that time. However it became possible later on to register them up to a cutoff date in 1999, with their priority of use dating from the year of first use. This was done by means of a simple application only, and protects older traditional users of water for stockwatering and pesticide applications, by means of a grandfathering clause.

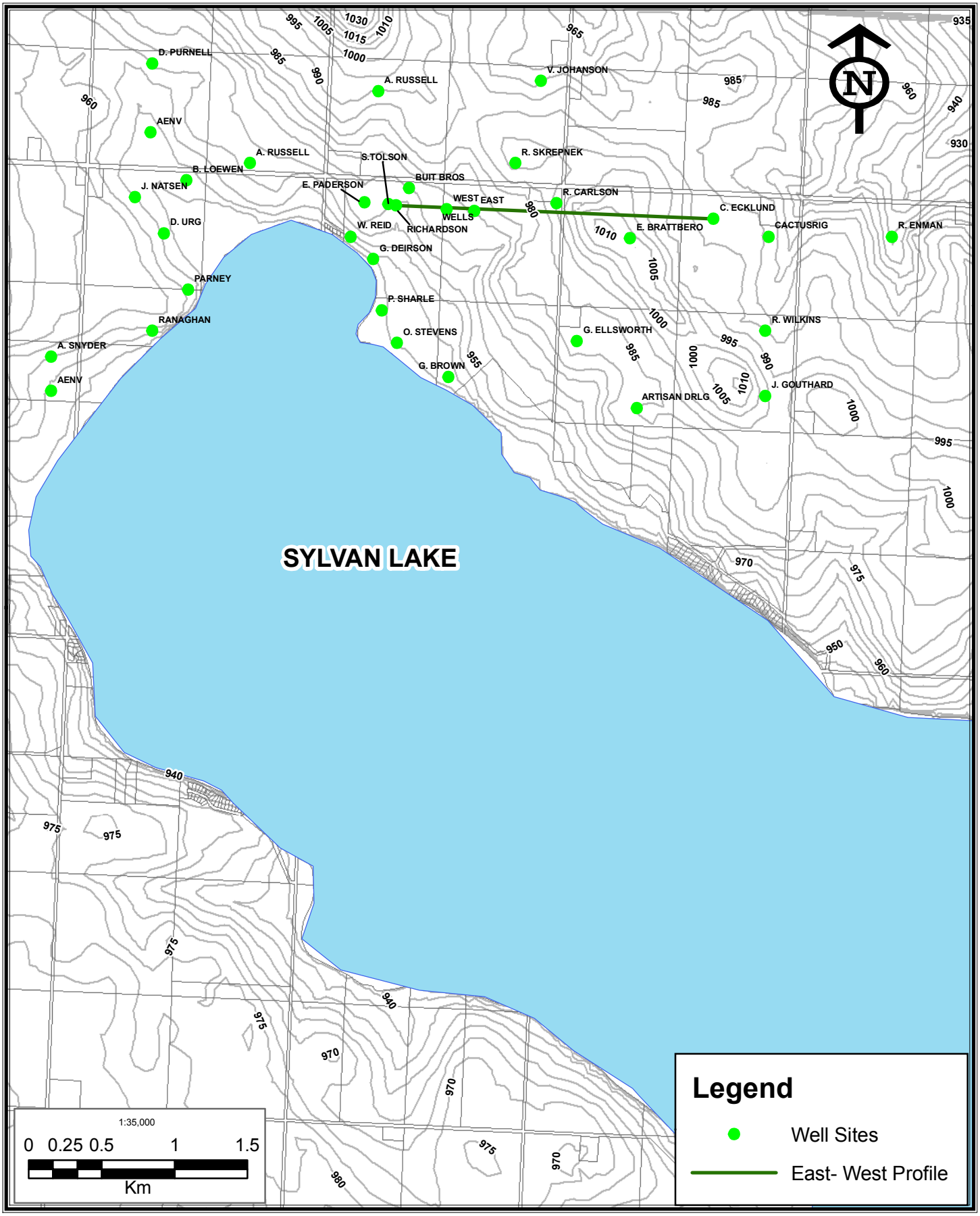
A license, on the other hand, is obtained through a formal technical study such as this one, which must be prepared by a qualified groundwater specialist who is a member of the Association of Professional Engineers, Geologists and Geophysicists of Alberta. This study must show that the desired amount of water is available for a minimum of 20 years, and that the diversion of this water will not harm any other water well owners in the immediate area. In the future, If the license holder no longer uses or needs his allocation, the license may be cancelled, so that the water will become available to other applicants.

The authorized diversion shown in Table 3 is not necessarily the amount being diverted, but rather the maximum amount that the owner may divert in a year. Generally the actual diversion is lower than the authorized volume, although it normally varies from one year to the next.

Table 2

Field Verified Water Well Survey

Name	Location	GPS Location	Year Drilled	Total Depth (m)	Use
Nicole Jahner	NE-34-39-2 W.5	11U0690800 UTM5809844			Domestic
D. & A Hunt, R. Morse, H. Weselley	NE-34-39-2 W.5	11U0690770 UTM5809859			Domestic, Livestock (~30)
Brian Russell	SW-4-40-2 W.5	11U0688289 UTM5810055	1980	300'	Domestic
Brian Russell	SW-4-40-2 W.5	11U0688289 UTM5810055	1970		Livestock
Brian Russell	SE-4-40-2 W.5	11U0688881 UTM5809990	~1940		Domestic
Brian Russell	SE-4-40-2 W.5	11U0688881 UTM5809990			Livestock
Ralph Nores	SW-3-40-2 W.5	11U0689351 UTM5810009	~1982	130'	Domestic
Randy Scerpnek	SE-3-40-2 W.5	11U0690599 UTM5810144		280'	Domestic



Stantec Consulting Ltd.
600, 4808 Ross Street
Red Deer AB Canada
T4N 1X5
Tel. 403.341.3320
Fax. 403.342.0969
www.stantec.com

Location of Wells
Near Skyy Country Subdivision

Figure No.
6.0

Location of Wells

113928105

V:\1139\active\113928105-skye_country_rv_condos\05a-Drawings_Prelim_Design\ArcView

Table 3
Licenses and Registrations near Skyy Country RV Park

Location	Owner	Approval ID	Interim License #	Type	Quantity (m^3/year)	Effective Date	Expiry Date	Aquifer Interval (m)
SE-10-40-2-W.5	Herbert Anderson	00167931-00-00	00167961 00 00	REG	535	14-Mar-02		61 - ?
SE-1-40-2-W.5	Frederick Brink	00167997-00-00	00167997 00 00	REG	2751	15-Mar-02		? - 18.3
NW-10-40-2-W.5	Paul & Irene Christensen	00170501-00-00	00170501 00 00	REG	165	20-Mar-02		? - 27.4
SE-9-40-2-W.5	Carlyle Farms Ltd	00175140-00-00	00175140 00 00	REG	740	28-Feb-06		? - 53
NE-11-40-2-W.5	Lloyd Anderson	00177149-00-00	00177149 00 00	REG	44	14-Mar-02		? - 27.4
NE-11-40-2-W.5	Lloyd Anderson	00177149-00-00	00177149 00 00	REG	1025	14-Mar-02		? - 27.4
SE-2-40-2-W.5	Barbara Anderson	00178614-00-00	00178614 00 00	REG	200	15-Mar-02		? - ?
NW-2-40-2-W.5	Dennis Freeman	00184061-00-00	00184061 00 00	STOCK	797	26-Aug-03	25-Aug-28	48.7 - 61
NW-2-40-2-W.5	Dennis Freeman	00184061-00-00	00184061 00 00	STOCK	797	26-Aug-03	25-Aug-28	57.9 - 70.1
NW-4-40-2-W.5	Dell Purnell	00190732-00-00	00190732 00 00	STOCK	1145	30-Jan-03	31-Jan-28	21 - 38
SW-33-39-2-W.5	1087646 Alberta Ltd	00206640-00-00	00206640 00 00	SUBDIV	35856	16-Nov-05	15-Nov-30	28.9 - 38.1
NW-3-40-2-W.5	Steven & Heather Goacher	00207642-00-00	00207642 00 00	STOCK	353	15-Feb-06	14-Feb-31	61 - 67.1
SE-32-39-2-W.5	F00227091	00227091-00-00	00227091 00 00	SUBDIV	41168	26-Sep-06	25-Sep-31	27.4 - 36.6
SE-32-39-2-W.5	F00227091	00227091-00-00	00227091 00 00	SUBDIV	41168	26-Sep-06	25-Sep-31	27.4 - 36.6
Total					**126744**			

2.0 Aquifer Analysis – Pumping Well

2.1 TESTING PROCEDURES

The well drilling contractor, Alken Basin Drilling Ltd., supplied its own electric generator and submersible pump for the test, which took place on March 29 to April 3, 2008. The discharge from the West Well was set at 425.7 cubic metres per day for the purpose of the aquifer test, with levels being measured in both wells. Water levels were recorded by Alken Basin using dataloggers during the time-drawdown period of the test of 82.1 hours pumping and the recovery period of 48.3 hours. Discharge from the well was verified several times during the test by means of checking the time to fill a 20 litre container.

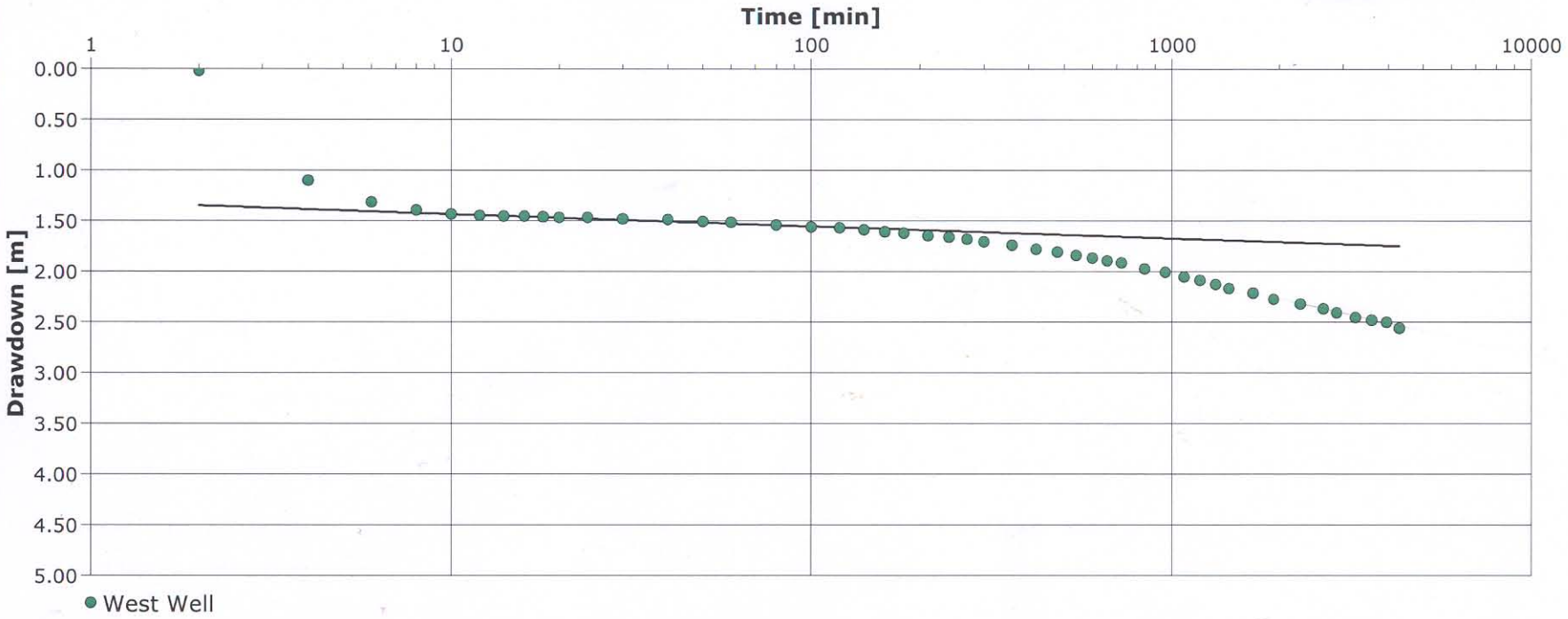
It was found that there was very little hydraulic connection between the two wells, so another test was performed, this time pumping the East Well and using the West Well as the observation well. The East Well was pumped at 200 m3/day for 29.3 hours with 35.2 hours of recovery. Again, there was seen to be very little hydraulic connection between the two wells. The maximum drawdown in the observation well was just 4.1 cm. Most fluctuations in level appeared to be barometric, rather than due to pumping of the other well.

All the time-drawdown and time-recovery data for both the pumping and observation wells were analyzed using AquiferTest Pro 4.0, a software program developed by Waterloo Hydrogeologic (2005). This software enables the specialist to select the most appropriate aquifer analytical method and to adapt the software to confined, leaky or unconfined aquifers and to calculate the transmissive capacity, storativity (when there is an observation well) and hydraulic conductivity. These parameters are the basis for predicting the future behavior of the aquifer under different conditions and times.

Figures 7 to 20 show the time-drawdown and time-recovery plots and calculations of transmissive capacity during the testing, beginning March 29 and ending April 3, 2008. For the pumping well, the Papadopoulos-Cooper analysis was generally used, which takes into account the displacement of the volume of water within the borehole, and is recommended by Waterloo Hydrogeologic for pumping wells. As a test proceeds, the differences disappear between the Papadopulos-Cooper and the Theis-Jacob procedures. For purposes of comparison, the tests was also analyzed using the Theis and Theis-Jacob procedures, which are normally used only for observation well data or for the data during long tests when the well bore effects tend to disappear. At the end of 72 hours of pumping, the total drawdown in the West pumping well was 2.581 m. There was very little drawdown in the well due to its excellent hydraulic characteristics. The time-drawdown and time-recovery data from the East Well were also analyzed using the Theis-Jacob procedure. However the observation well responded to pumping only after 1000 minutes, and total drawdown was only 0.13 m. Drawdown continued during the recovery portion of the test.

Stantec Consulting 600 - 4808 Ross Street Red Deer, AB T4N 1X5 Tel.(403) 341-3320	**Pumping Test Analysis Report**
	Project: Skyy Country and RV Park
	Number: 113928105
	Client: Frank Wilson

Location: Lsd.15-34-39-2-W.5	Pumping Test: Test of Production Well	Pumping well: West Well
Test conducted by: Alken Basin Drilling Ltd.		Test date: 3/28/2008
Analysis performed by: Grant Nielsen	Pumping Well	Date: 4/3/2008
Aquifer Thickness: 6.10 m	Discharge: variable, average rate 425.6 [m³/d]	



Calculation after Papadopulos & Cooper

Observation well	Transmissivity [m²/d]	K [m/d]	Well-bore storage coeffic	Radial distance to PW [m]
West Well	6.55×10^{2}	1.07×10^{2}	2.09×10^{-9}	0.07

Figure 7. Time-drawdown curve, West Well, Papadopulos-Cooper analysis, First Limb

Stantec Consulting
600 - 4808 Ross Street
Red Deer, AB T4N 1X5
Tel.(403) 341-3320

Pumping Test Analysis Report

Project: Skyy Country and RV Park

Number: 113928105

Client: Frank Wilson

Location: Lsd.15-34-39-2-W.5	Pumping Test: Test of Production Well	Pumping well: West Well
Test conducted by: Alken Basin Drilling Ltd.		Test date: 3/28/2008
Analysis performed by: Grant Nielsen	West Well - Pumping	Date: 4/3/2008
Aquifer Thickness: 6.10 m	Discharge: variable, average rate 425.6 [m³/d]	

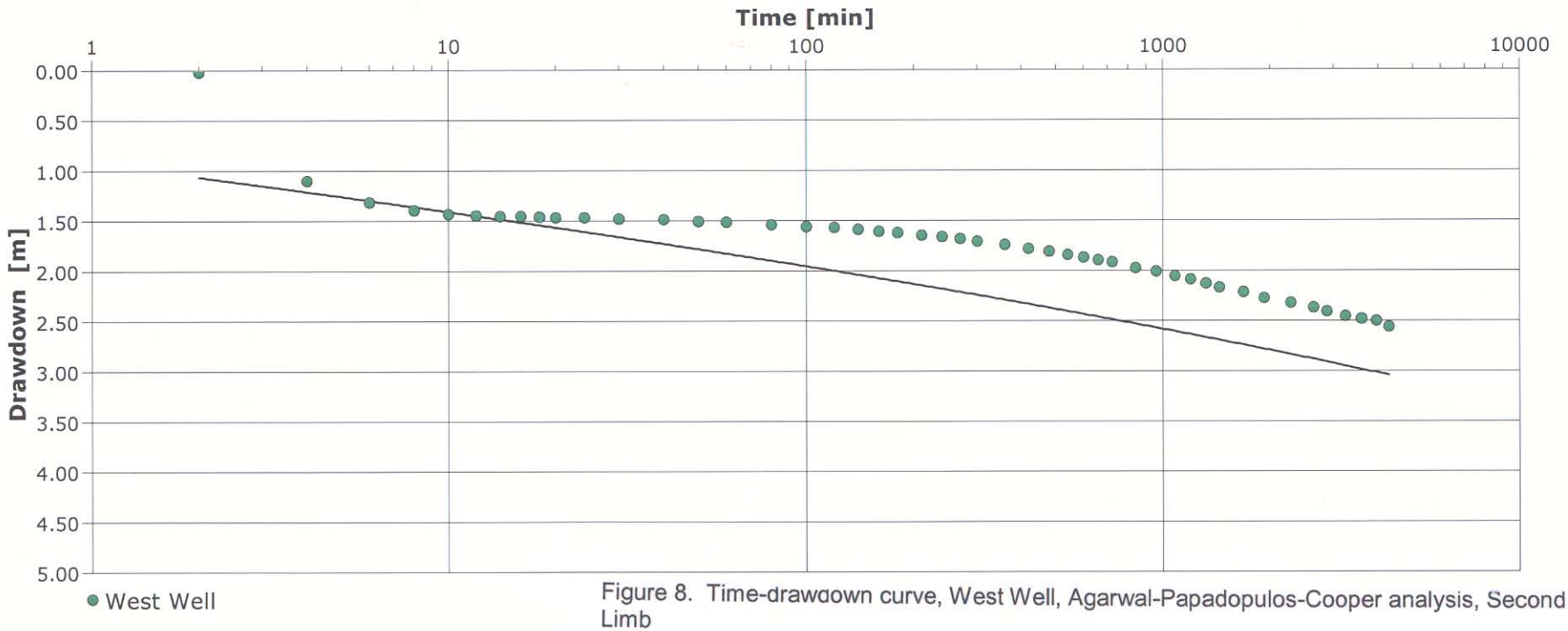


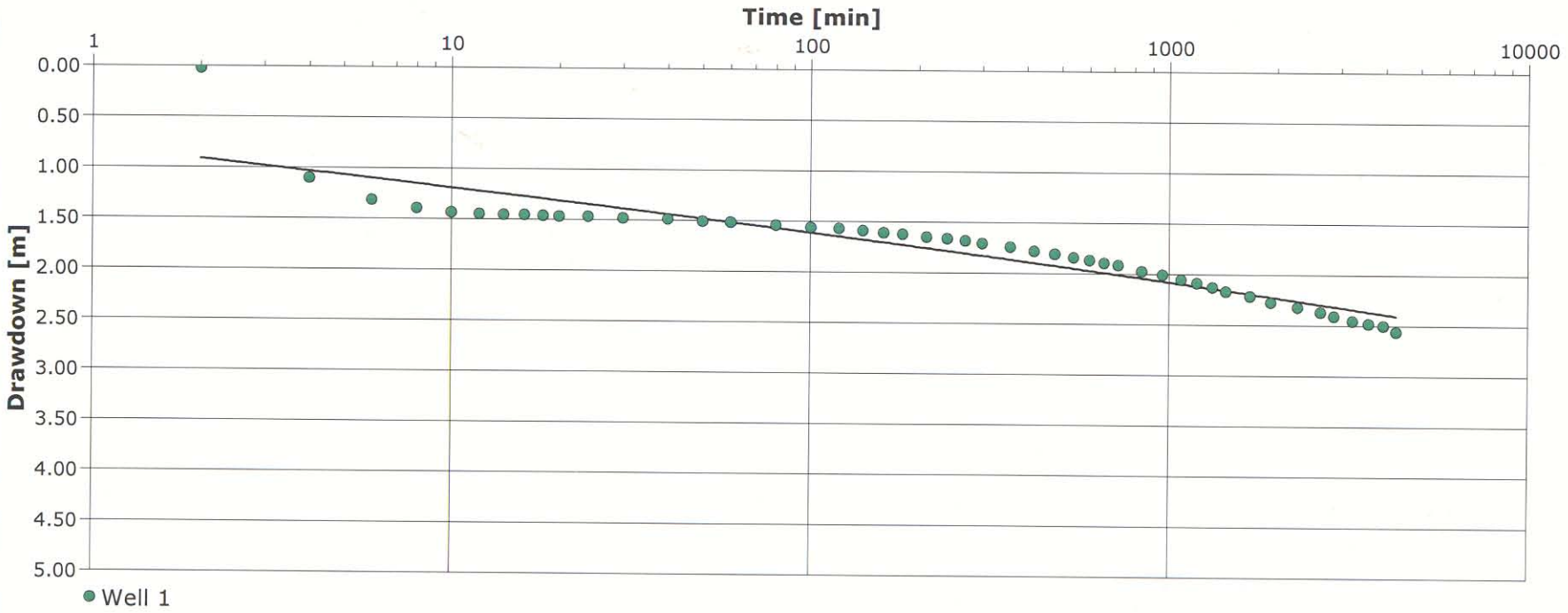
Figure 8. Time-drawdown curve, West Well, Agarwal-Papadopulos-Cooper analysis, Second Limb

Calculation after Theis with Jacob Correction

Observation well	Transmissivity [m²/d]	K [m/d]	Storage coefficient	Radial distance to PW [m]
West Well	1.98×10^{2}	3.24×10^{1}	5.00×10^{-1}	0.07

Stantec Consulting 600 - 4808 Ross Street Red Deer, AB T4N 1X5 Tel.(403) 341-3320	**Pumping Test Analysis Report**
	Project: Skyy Country and RV Park
	Number: 113928105
	Client: Frank Wilson

Location: Lsd.15-34-39-2-W.5	Pumping Test: Test of Production Well	Pumping well: Well 1
Test conducted by: Alken Basin Drilling Ltd.		Test date: 3/28/2008
Analysis performed by: Grant Nielsen	Pumping of Production Well	Date: 4/3/2008
Aquifer Thickness: 6.10 m	Discharge: variable, average rate 425.6 [m³/d]	



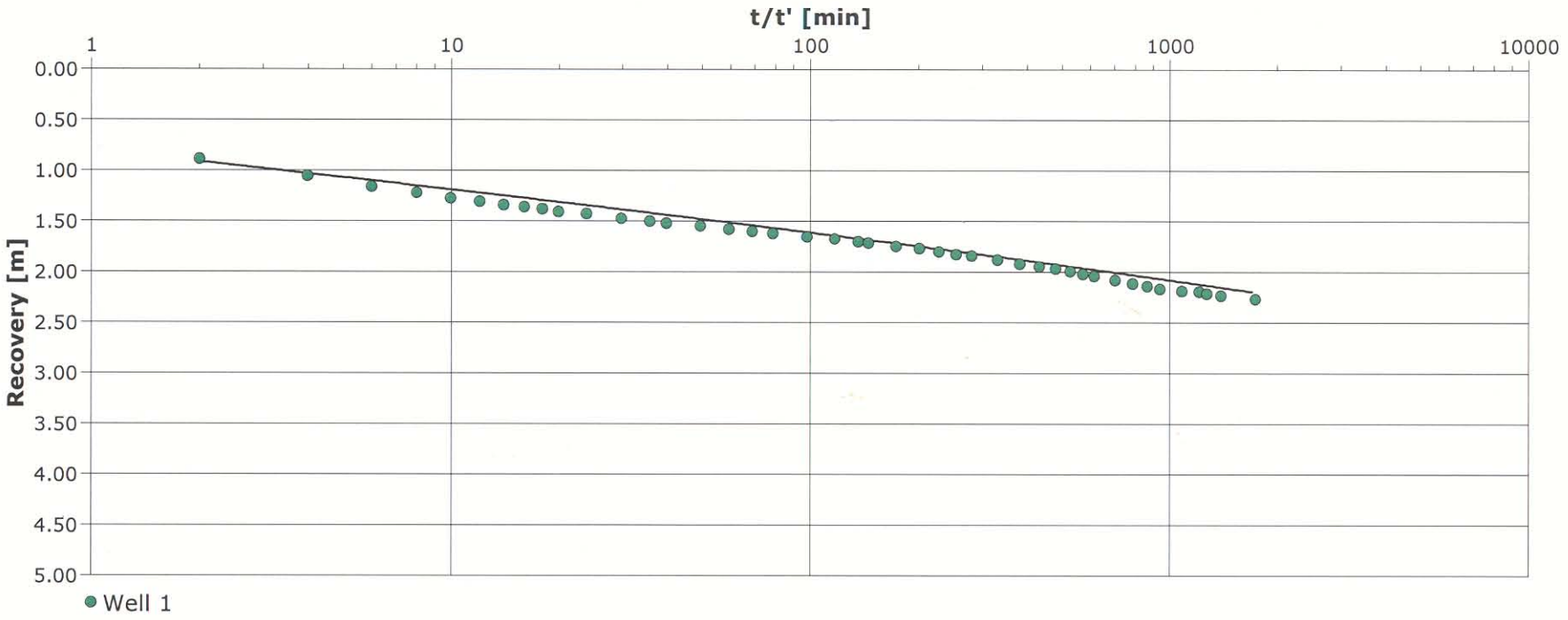
Calculation after Theis with Jacob Correction

Observation well	Transmissivity [m²/d]	K [m/d]	Storage coefficient	Radial distance to PW [m]
Well 1	2.39×10^{2}	3.92×10^{1}	4.54×10^{-1}	0.07

Figure 9. Time-drawdown curve, West Well, Theis-Jacob analysis

Stantec Consulting 600 - 4808 Ross Street Red Deer, AB T4N 1X5 Tel.(403) 341-3320	**Pumping Test Analysis Report**
	Project: Skyy Country and RV Park
	Number: 113928105
	Client: Frank Wilson

Location: Lsd.15-34-39-2-W.5	Pumping Test: Test of Production Well	Pumping well: Well 1
Test conducted by: Alken Basin Drilling Ltd.		Test date: 3/28/2008
Analysis performed by: Grant Nielsen	Recovery of Production Well	Date: 4/3/2008
Aquifer Thickness: 6.10 m	Discharge: variable, average rate 425.6 [m³/d]	



Calculation after AGARWAL + Theis with Jacob Correction

Observation well	Transmissivity [m²/d]	K [m/d]	Storage coefficient	Radial distance to PW [m]	
Well 1	2.39×10^{2}	3.92×10^{1}	4.54×10^{-1}	0.07	

Figure 10. Time-recovery curve, West Well, Agarwal-Theis-Jacob analysis

Stantec Consulting
600 - 4808 Ross Street
Red Deer, AB T4N 1X5
Tel.(403) 341-3320

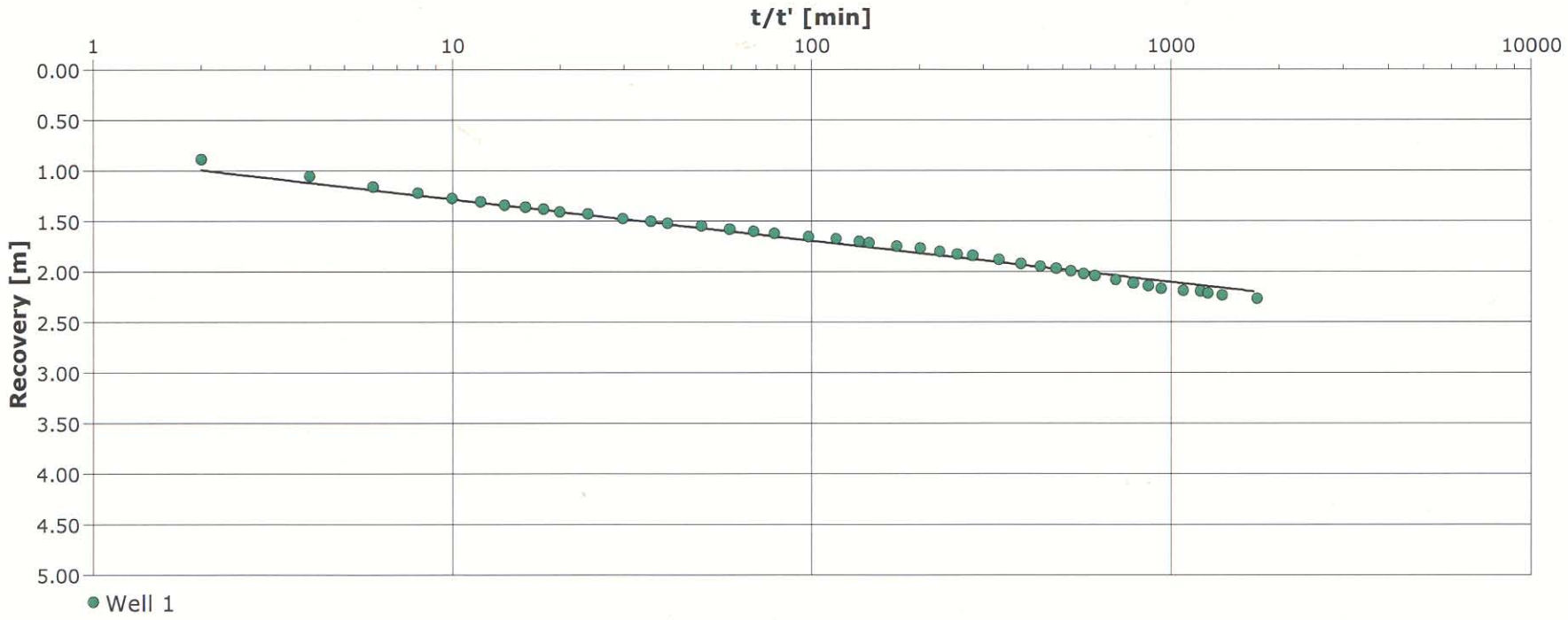
Pumping Test Analysis Report

Project: Skyy Country and RV Park

Number: 113928105

Client: Frank Wilson

Location: Lsd.15-34-39-2-W.5	Pumping Test: Test of Production Well	Pumping well: Well 1
Test conducted by: Alken Basin Drilling Ltd.		Test date: 3/28/2008
Analysis performed by: Grant Nielsen	Recovery of Production Well	Date: 4/3/2008
Aquifer Thickness: 6.10 m	Discharge: variable, average rate 425.6 [m³/d]	



Calculation after AGARWAL + Papadopulos & Cooper

Observation well	Transmissivity [m²/d]	K [m/d]	Well-bore storage coeffic	Radial distance to PW [m]
Well 1	1.91×10^{2}	3.13×10^{1}	5.00×10^{-1}	0.07

Figure 11. Time-recovery curve, West Well, Agarwal + Papadopulos-Cooper analysis

Stantec Consulting
600 - 4808 Ross Street
Red Deer, AB T4N 1X5
Tel.(403) 341-3320

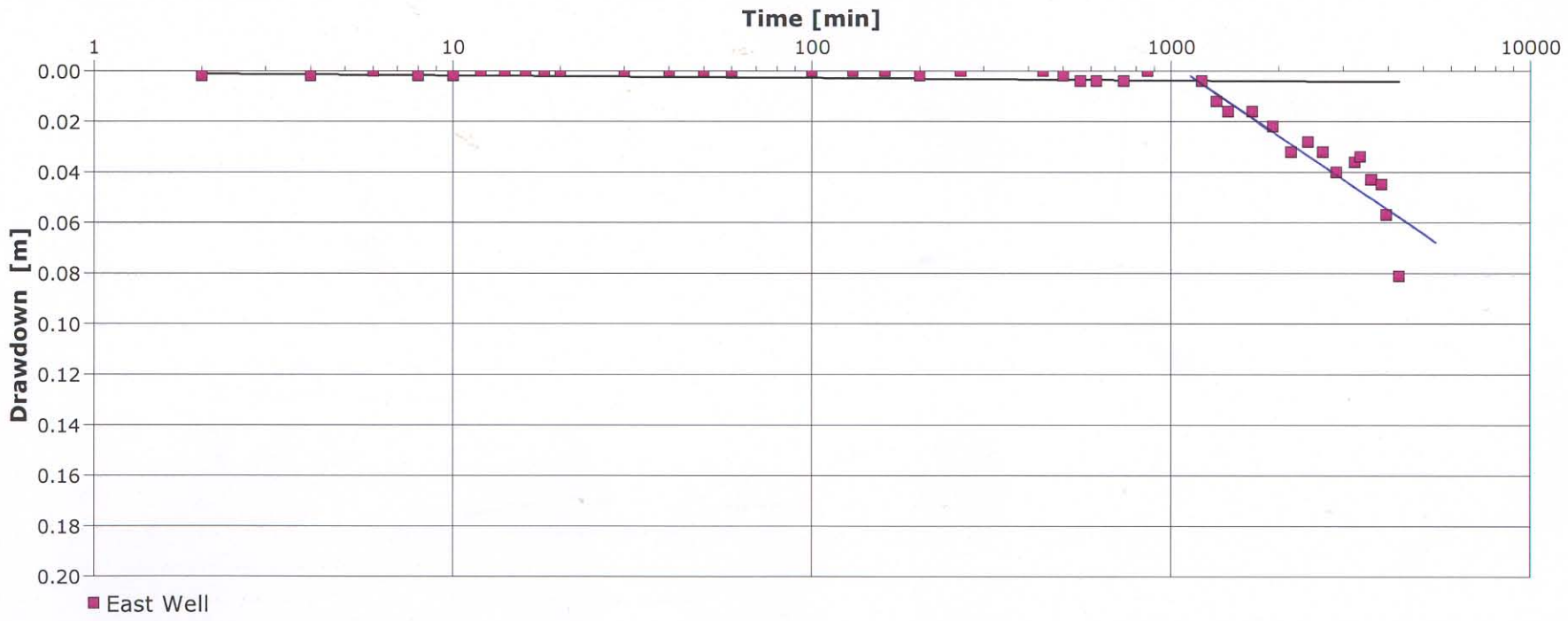
Pumping Test Analysis Report

Project: Skyy Country and RV Park

Number: 113928105

Client: Frank Wilson

Location: Lsd.15-34-39-2-W.5	Pumping Test: Test of Production Well	Pumping well: West Well
Test conducted by: Alken Basin Drilling Ltd.		Test date: 3/28/2008
Analysis performed by: Grant Nielsen	West Well - Pumping	Date: 4/3/2008
Aquifer Thickness: 6.10 m	Discharge: variable, average rate 425.6 [m³/d]	



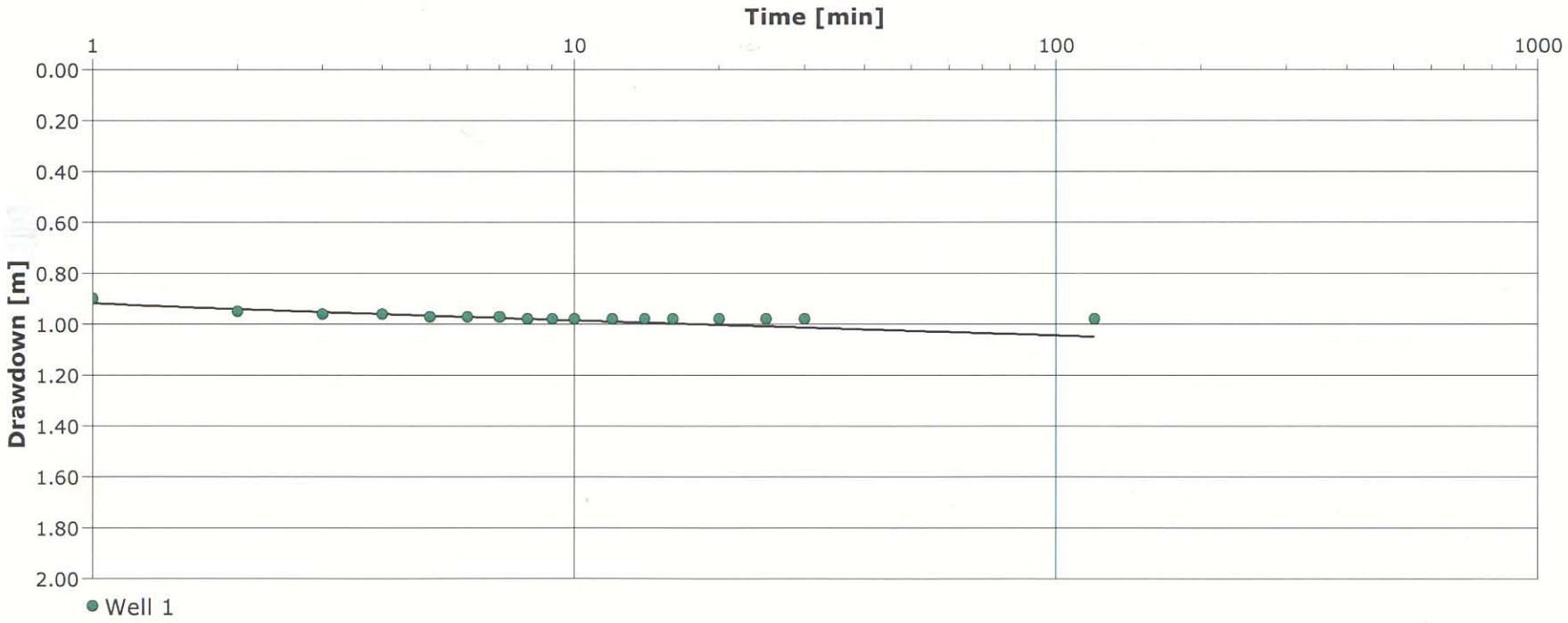
Calculation after Theis with Jacob Correction

Observation well	Transmissivity [m²/d]	K [m/d]	Storage coefficient	Radial distance to PW [m]
East Well	7.88×10^{4}	1.29×10^{4}	8.61×10^{-3}	42.61

Figure 12. Time-drawdown curve, East Well, Theis-Jacob analysis

Stantec Consulting 600 - 4808 Ross Street Red Deer, AB T4N 1X5 Tel.(403) 341-3320	**Pumping Test Analysis Report** Project: Skyy Country RV Park Number: 113928105 Client: Frank Wilson

Location: Lsd.15-34-39-2-W.5	Pumping Test: Preliminary Test-Observation Well	Pumping well: Well 1
Test conducted by: Alken Basin Drilling Ltd.		Test date: 3/8/2008
Analysis performed by: Grant Nielsen	Short test	Date: 4/8/2008
Aquifer Thickness: 6.40 m	Discharge: variable, average rate 208.26 [m³/d]	



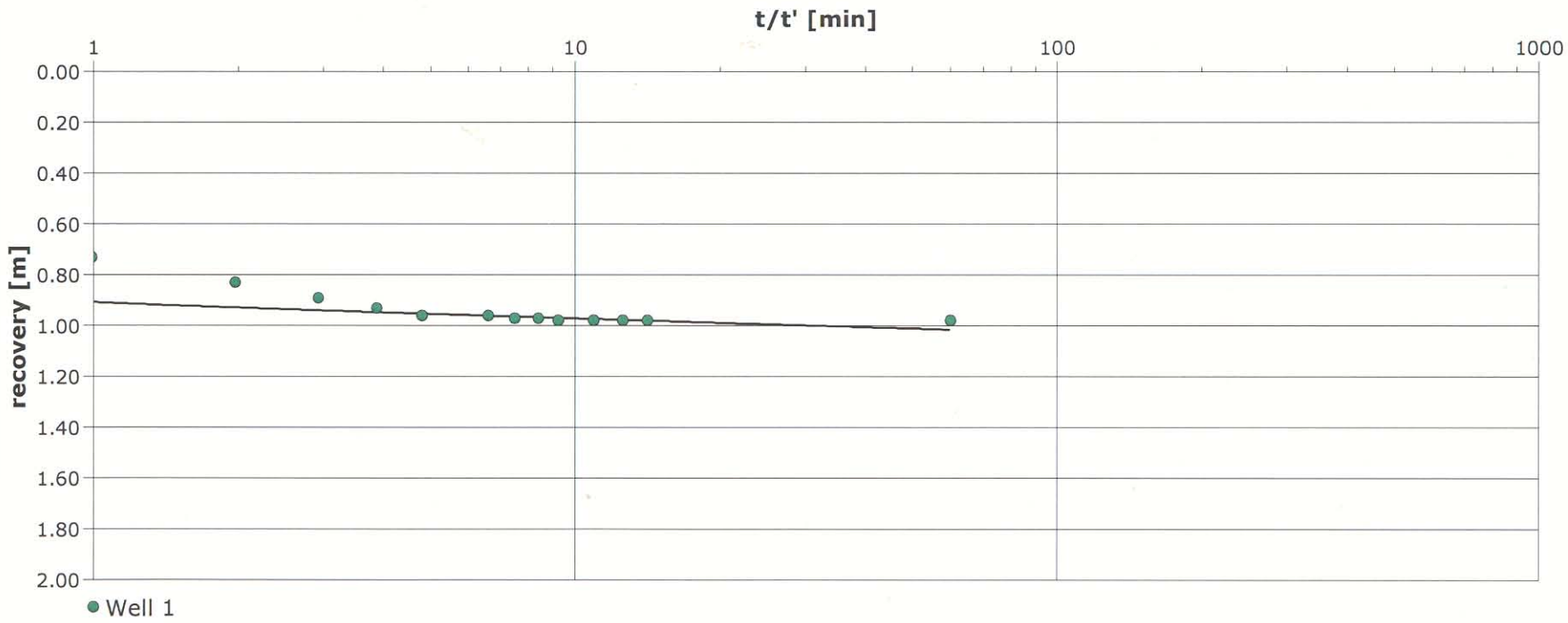
Calculation after Papadopulos & Cooper

Observation well	Transmissivity [m²/d]	K [m/d]	Well-bore storage coeffic	Radial distance to PW [m]
Well 1	6.55×10^{2}	1.02×10^{2}	2.95×10^{-14}	0.06

Figure 13. Time-drawdown curve, East Well, Papadopulos-Cooper analysis

Stantec Consulting 600 - 4808 Ross Street Red Deer, AB T4N 1X5 Tel.(403) 341-3320	**Pumping Test Analysis Report**
	Project: Skyy Country RV Park
	Number: 113928105
	Client: Frank Wilson

Location: Lsd.15-34-39-2-W.5	Pumping Test: Preliminary Test-Observation Well	Pumping well: Well 1
Test conducted by: Alken Basin Drilling Ltd.		Test date: 3/8/2008
Analysis performed by: Grant Nielsen	Short test	Date: 4/8/2008
Aquifer Thickness: 6.40 m	Discharge: variable, average rate 208.26 [m³/d]	



Calculation after AGARWAL + Papadopulos & Cooper

Observation well	Transmissivity [m²/d]	K [m/d]	Well-bore storage coeffic	Radial distance to PW [m]
Well 1	6.88×10^{2}	1.08×10^{2}	1.07×10^{-14}	0.06

Figure 14. Time-recovery curve, East Well, Agarwal-Papadopulos-Cooper analysis

Stantec Consulting
600 - 4808 Ross Street
Red Deer, AB T4N 1X5
Tel.(403) 341-3320

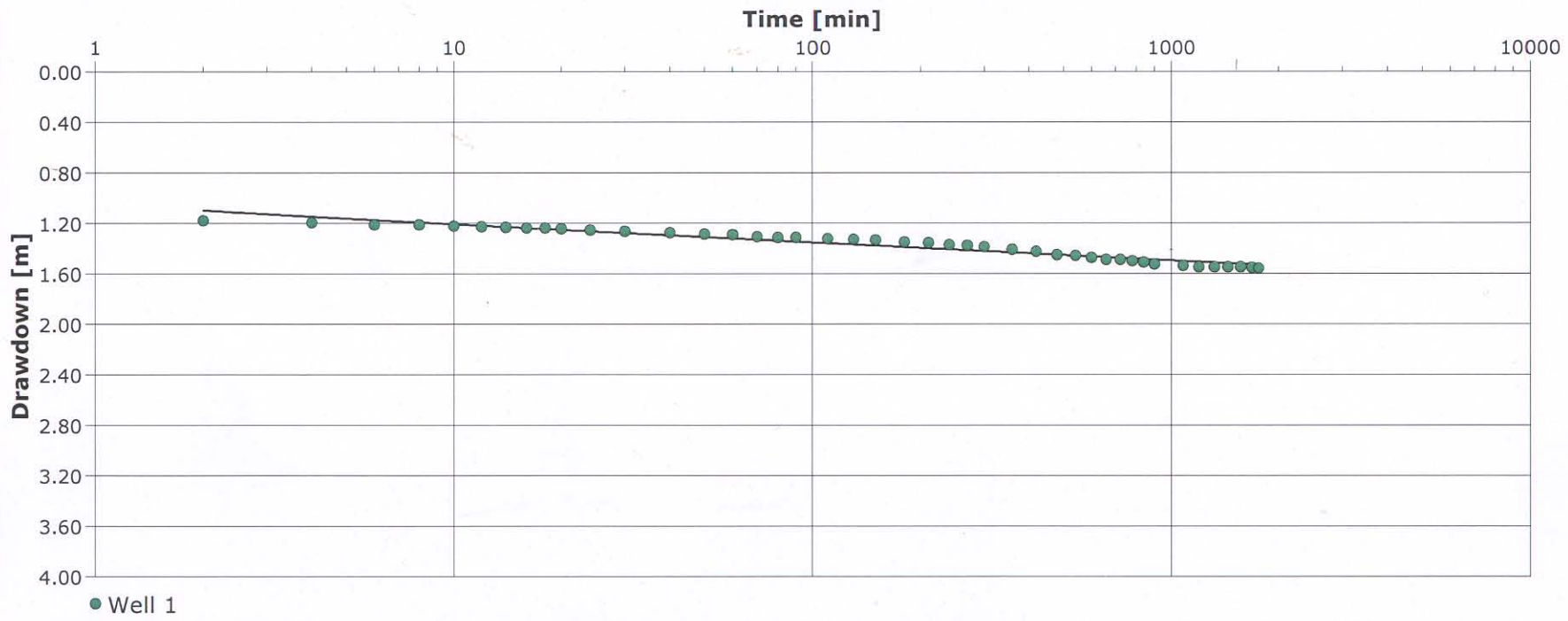
Pumping Test Analysis Report

Project: Skyy Country RV Park

Number: 113928105

Client: Frank Wilson

Location: Lsd. 15-34-39-2-W.5	Pumping Test: Test of East Well	Pumping well: Well 1
Test conducted by: Alken Basin Drilling Ltd.		Test date: 4/11/2008
Analysis performed by: Grant Nielsen	Test of East Well	Date: 4/14/2008
Aquifer Thickness: 6.70 m	Discharge: variable, average rate 199.59 [m³/d]	



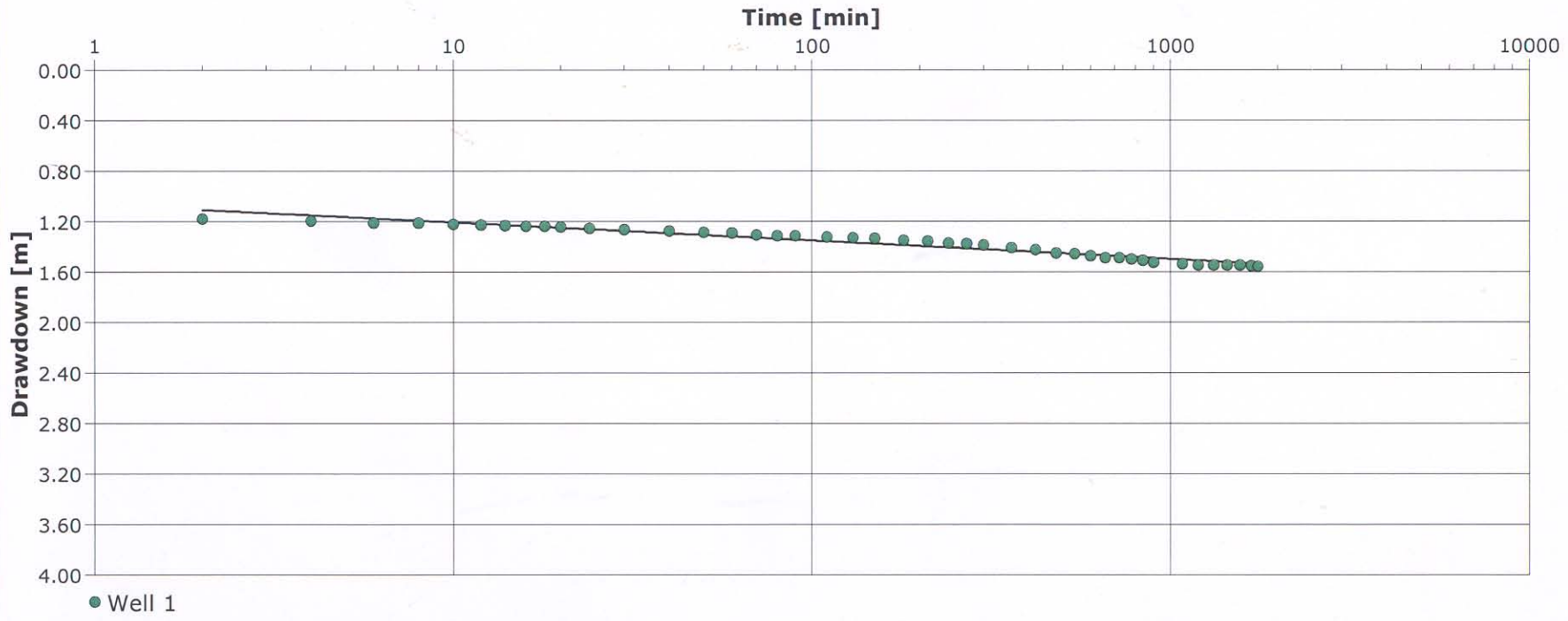
Calculation after Papadopulos & Cooper

Observation well	Transmissivity [m²/d]	K [m/d]	Well-bore storage coeffic	Radial distance to PW [m]
Well 1	2.57×10^{2}	3.83×10^{1}	3.15×10^{-6}	0.06

Figure 15. Time-drawdown curve, East Well, Papadopulos-Cooper analysis

Stantec Consulting 600 - 4808 Ross Street Red Deer, AB T4N 1X5 Tel.(403) 341-3320	**Pumping Test Analysis Report**
	Project: Skyy Country RV Park
	Number: 113928105
	Client: Frank Wilson

Location: Lsd. 15-34-39-2-W.5	Pumping Test: Test of East Well	Pumping well: Well 1
Test conducted by: Alken Basin Drilling Ltd.		Test date: 4/11/2008
Analysis performed by: Grant Nielsen	Test of East Well	Date: 4/14/2008
Aquifer Thickness: 6.70 m	Discharge: variable, average rate 199.59 [m³/d]	



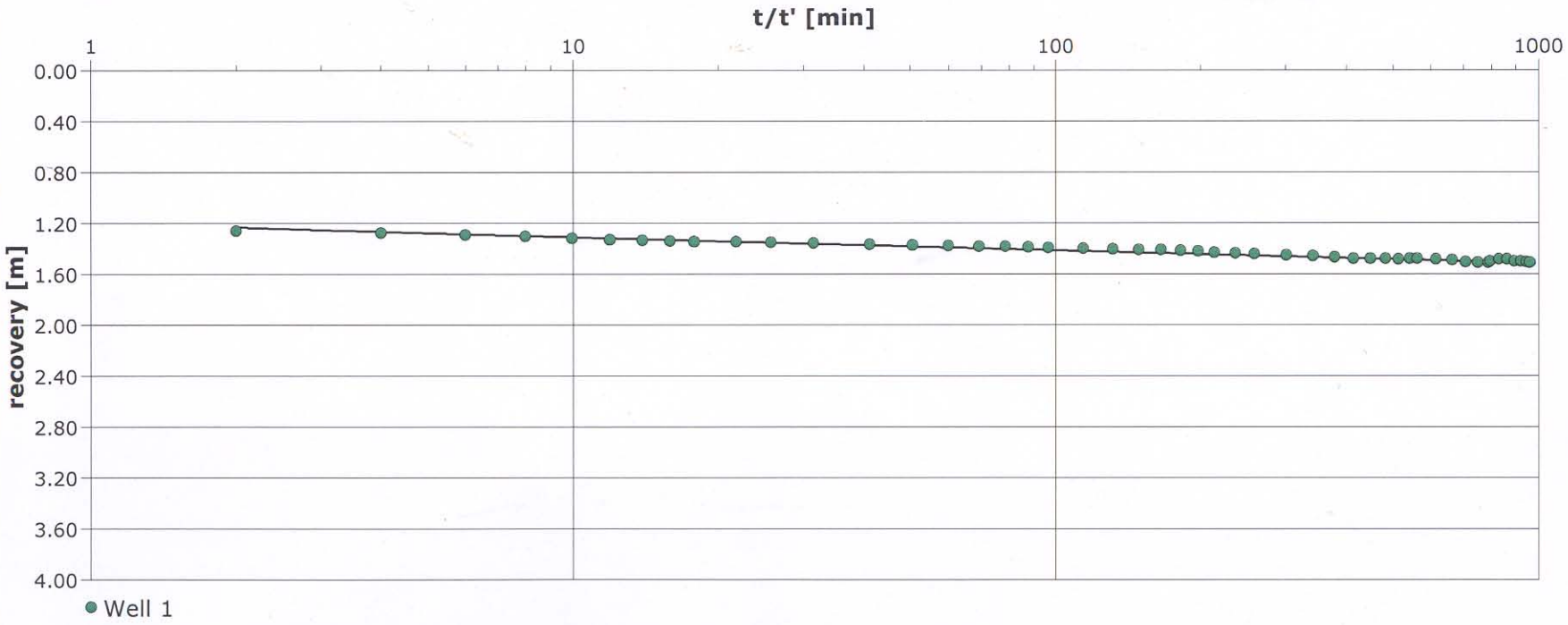
Calculation after Theis with Jacob Correction

Observation well	Transmissivity [m²/d]	K [m/d]	Storage coefficient	Radial distance to PW [m]
Well 1	3.15×10^{2}	4.70×10^{1}	4.23×10^{-7}	0.06

Figure 16. Time-recovery curve, East Well, Agarwal+Theis-Jacob analysis

Stantec Consulting 600 - 4808 Ross Street Red Deer, AB T4N 1X5 Tel.(403) 341-3320	**Pumping Test Analysis Report**
	Project: Skyy Country RV Park
	Number: 113928105
	Client: Frank Wilson

Location: Lsd. 15-34-39-2-W.5	Pumping Test: Test of East Well	Pumping well: Well 1
Test conducted by: Alken Basin Drilling Ltd.		Test date: 4/11/2008
Analysis performed by: Grant Nielsen	Recovery of East Well (Pumping)	Date: 4/14/2008
Aquifer Thickness: 6.70 m	Discharge: variable, average rate 199.59 [m³/d]	



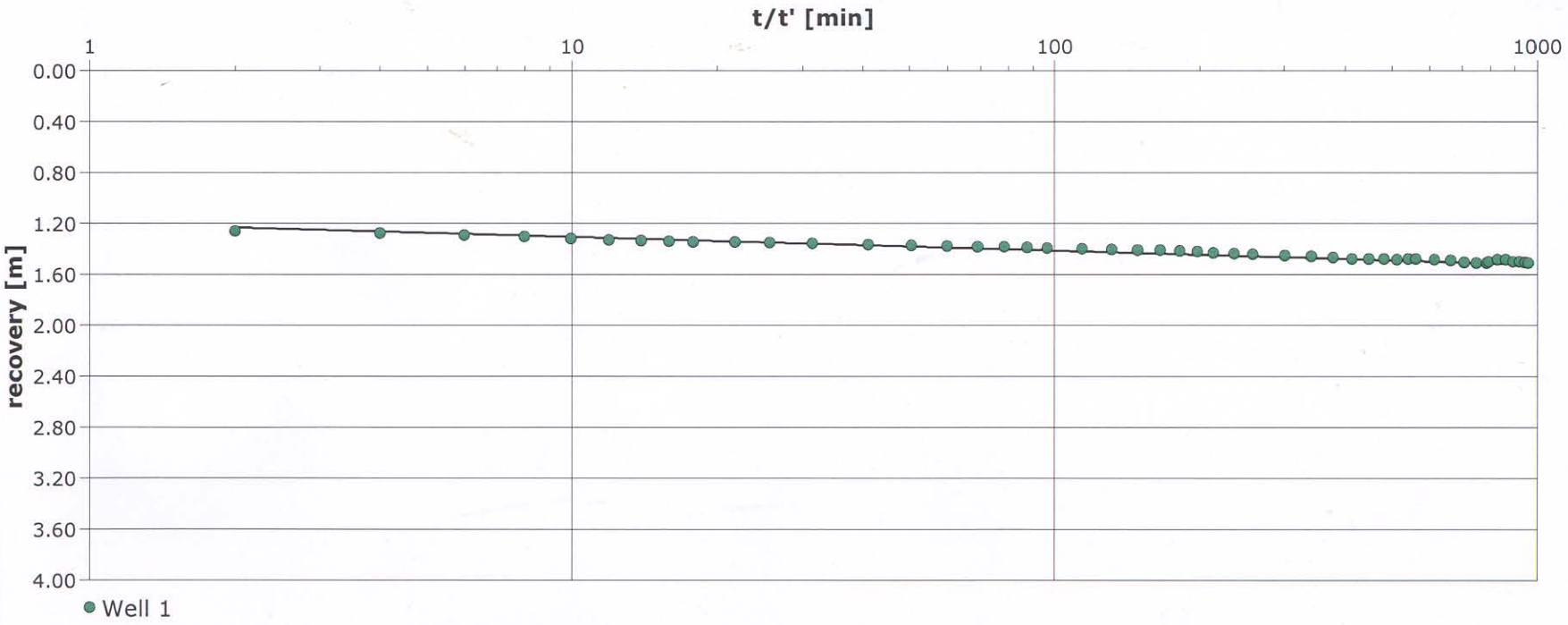
Calculation after AGARWAL + Papadopulos & Cooper

Observation well	Transmissivity [m²/d]	K [m/d]	Well-bore storage coeffic	Radial distance to PW [m]
Well 1	3.62×10^{2}	5.41×10^{1}	1.40×10^{-10}	0.06

Figure 17. Time-Recovery curve, East Well, Agarwal + Papadopulos-Cooper Analysis

Stantec Consulting 600 - 4808 Ross Street Red Deer, AB T4N 1X5 Tel.(403) 341-3320	**Pumping Test Analysis Report**
	Project: Skyy Country RV Park
	Number: 113928105
	Client: Frank Wilson

Location: Lsd. 15-34-39-2-W.5	Pumping Test: Test of East Well	Pumping well: Well 1
Test conducted by: Alken Basin Drilling Ltd.		Test date: 4/11/2008
Analysis performed by: Grant Nielsen	Recovery of East Well (Pumping)	Date: 4/14/2008
Aquifer Thickness: 6.70 m	Discharge: variable, average rate 199.59 [m³/d]	



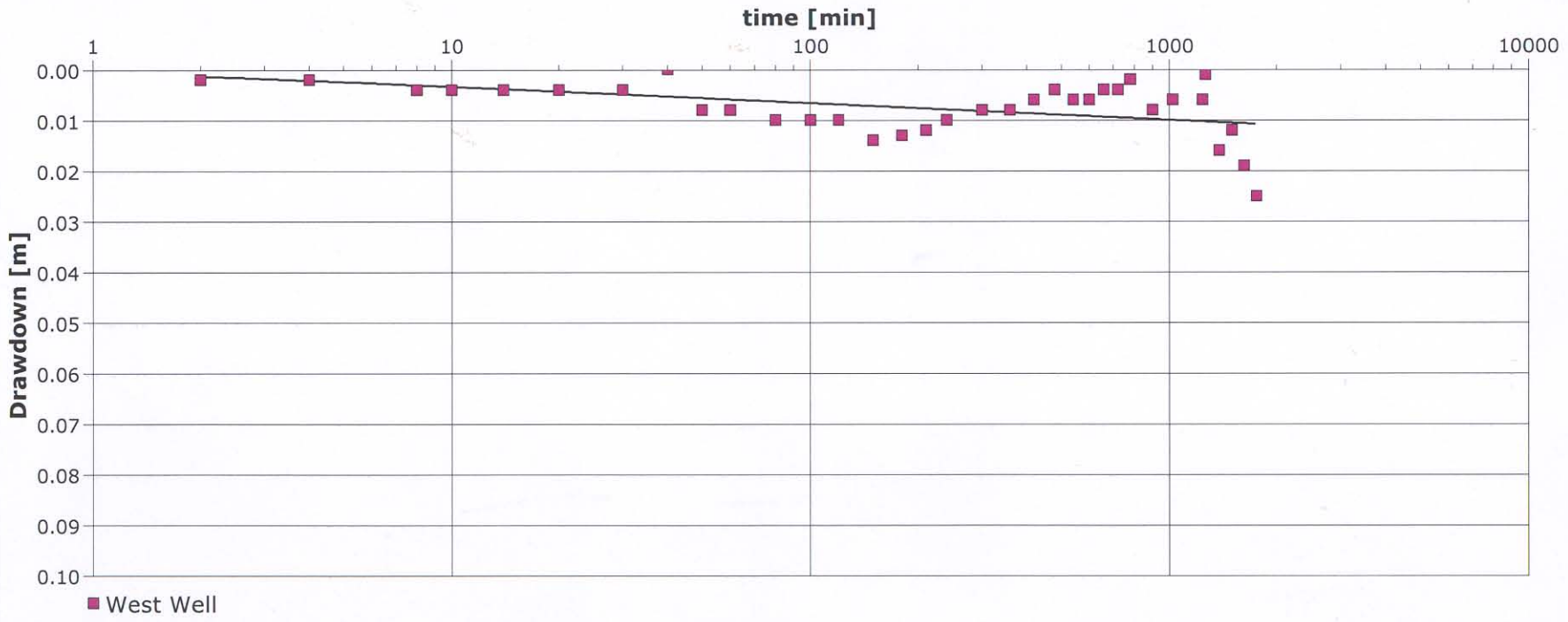
Calculation after AGARWAL + Theis with Jacob Correction

Observation well	Transmissivity [m²/d]	K [m/d]	Storage coefficient	Radial distance to PW [m]
Well 1	4.26×10^{2}	6.36×10^{1}	3.12×10^{-11}	0.06

Figure 18. Time-Recovery curve, East Well, Agarwal + Theis-Jacob analysis

Stantec Consulting 600 - 4808 Ross Street Red Deer, AB T4N 1X5 Tel.(403) 341-3320	**Pumping Test Analysis Report** Project: Skyy Country RV Park Number: 113928105 Client: Frank Wilson

Location: Lsd. 15-34-39-2-W.5	Pumping Test: Test of East Well	Pumping well: East Well
Test conducted by: Alken Basin Drilling Ltd.		Test date: 4/11/2008
Analysis performed by: Grant Nielsen	Test of East Well	Date: 4/14/2008
Aquifer Thickness: 6.70 m	Discharge: variable, average rate 199.59 [m³/d]	



Calculation after Theis

Observation well	Transmissivity [m²/d]	K [m/d]	Storage coefficient	Radial distance to PW [m]	
West Well	1.09×10^{4}	1.63×10^{3}	9.92×10^{-3}	42.61	

Figure 19. Time-Drawdown curve, East Well, Agarwal + Theis analysis

Stantec Consulting
600 - 4808 Ross Street
Red Deer, AB T4N 1X5
Tel.(403) 341-3320

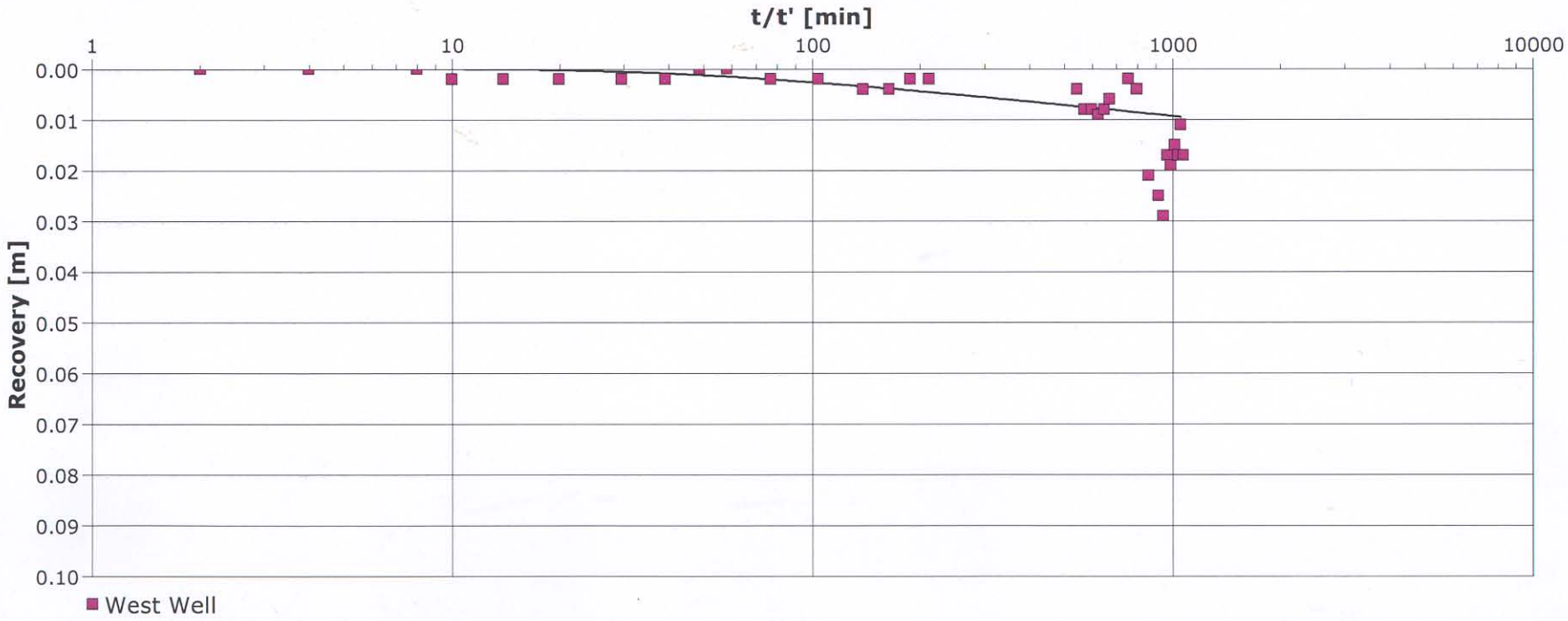
Pumping Test Analysis Report

Project: Skyy Country RV Park

Number: 113928105

Client: Frank Wilson

Location: Lsd. 15-34-39-2-W.5	Pumping Test: Test of East Well	Pumping well: East Well
Test conducted by: Alken Basin Drilling Ltd.		Test date: 4/11/2008
Analysis performed by: Grant Nielsen	Recovery of East Well	Date: 4/14/2008
Aquifer Thickness: 6.70 m	Discharge: variable, average rate 199.59 [m³/d]	



Calculation after AGARWAL + Theis

Observation well	Transmissivity [m²/d]	K [m/d]	Storage coefficient	Radial distance to PW [m]
West Well	4.79×10^{3}	7.15×10^{2}	2.54×10^{-1}	42.61

Figure 20. Time-Recovery curve, East Well, Agarwal + Theis analysis

The capacity of the well was severely limited by the deep nonpumping water level and small available head.

The same procedures were then followed, but using the East Well for Pumping and the West Well for observation purposes.

2.2 AQUIFER PARAMETERS

The aquifer parameters were calculated for both the pumping and recovery portions of the test for the pumping well, whether the West or the East Well. Results from the Observation Well were not considered valid or useful for interpreting well behaviour. Table 4 summarizes the results of the testing. In selecting the parameters to be used for the further evaluation of aquifer behaviour, those values considered to be unrepresentative or invalid were discarded, and only valid parameters were used.

Table 4

Aquifer Parameters

Well	Test	Analysis	Test Length(hrs)	Discharge m3/day	Transmissivity m2/day	Spec. Cap. m3/day/m
West	Pumping-1st Limb	Papadopulos-Cooper	82.1	425.7	655	166.3
West	Pumping-2nd limb	Theis-Jacob	82.1	425.7	198	166.3
West	Recovery	Papadopulos-Cooper	48.3	-	191	-
West	Recovery	Theis-Jacob	48.3	-	239	-
West	Obs Well-Pumping	Theis	29.3	-	10900	-
West	Obs Well-Recovery	Theis	45.3	-	4790	-
East	Pumping	Papadopulos-Cooper	2	200	655	212.6
East	Recovery	Papadopulos-Cooper	2	200	688	
East	Pumping	Papadopulos-Cooper	29.3	200	257	128.5
East	Pumping	Theis-Jacob	29.3	200	315	128.5
East	Recovery	Theis-Jacob	35.2	-	362	-
East	Recovery	Theis-Jacob	35.2	-	426	
		Values Used - West Well			**209**	**166.3**
		Values Used - East Well			**311**	**128.5**

A conservative transmissive capacity of 209 m^2 /day was selected for the West Well, and 311 m^2 /day for the East Well. Storativity is assumed to be 0.0005 for all further calculations, as the lack of response of the observation wells made it impossible to obtain a valid storativity value. The East Well is in an unconfined condition, as the water level before pumping was within the aquifer. In this case, therefore, the storativity may be greater than 0.0005.

The specific capacity of a well is given by the productive capacity of a well divided by its drawdown. In the case of the West Well, the discharge during the test was 425.7 m^3 /day, and the maximum drawdown after 72 hours pumping was 2.561 m. Thus the specific capacity of the well is 425.7/2.561 = 166.3 cubic metres per day per metre of drawdown. That is, for each metre of drawdown during pumping, the well is capable theoretically of producing 166.2 cubic metres of water per day. The specific capacity of the East Well was calculated in the same manner, that is 200/1.56 = 128.5 cubic metres per day per metre of drawdown.

These two wells will be used on a seasonal basis for recreational purposes. For purposes of the analysis which follows, it is assumed that the facility will be open to the public from May 15 to September 15 of each year, that is, 4 full months. It is also assumed that water demand will be just 50 % of full demand during the period May 15 to June 15, and from September 1 to September 15, as most families will still have children in school. The facility is assumed to be 100 % occupied from June 15 to September 1.

Thus water demand will be 667 units X 2.5 persons per family X 0.25 m^3 /person/day = 416.9 m^3 /day for 75 days and 416.9/2 = 208.45 m^3 /day for 45 days each season. Therefore the total annual demand would be 40,649 m^3. This would be produced during 120 days, but the average daily production over a full year period would be 111.4 m^3.

The theoretical long-term safe yield of the production well may be calculated by two main methods, the Farvolden Method and the Moell Method, based upon results of the aquifer testing.

The Farvolden Method is expressed as follows:

$Q_{20} = (0.68)(T)(H_A)(0.7)$, in which

Q_{20} = calculated safe yield for 20 years continuous pumping, in m^3 /day

T = transmissive capacity, in m^2 /day

H_A = available head, the difference between nonpumping water level and the top of the completion interval of the well, in m.

0.7 = a safety factor, to compensate for unknown limiting factors

The Farvolden Method is suitable when there is little or no well loss in the initial minutes of the test, but in most cases, the well loss is appreciable and must be taken into account. For this reason the Moell Method is usually preferable. It provides a more conservative and more

realistic result. Only calculations based on the Moell Method will be used in this report for that reason, for both of the Wells.

The Moell Method is expressed as follows:

$$Q_{20} = \frac{(Q)(H_A)(0.7)}{s_{100} + 5\Delta s}$$, in which

Q_{20} = calculated safe yield for 20 years continuous pumping, in m^3/day
Q = pumping rate used during the aquifer test, in m^3/day
H_A = available head, the difference between nonpumping water level and the top of the completion interval of the well, in m.
0.7 = a safety factor to compensate for unknown limiting factors
s_{100} = the observed drawdown after 100 minutes pumping, in m
Δs = the drawdown per log cycle, in m.

The 20 year sustainable yield of the West Well, as calculated by the Moell Method is as follows:

$$Q_{20} = \frac{(425.7)(2.09)(0.7)}{1.6 + (5)(0.8)}$$

$= 111.2\ m^3$/day.

The sustainable yield of the East Well is given by:

$$Q_{20} = \frac{(200)(2)(0.7)}{1.3 + 5(0.15)}$$

$= 136.6\ m^3$/day

Ignoring the very minor level of interference between the wells (which can be included within the safety factor of 0.7), the total available sustainable yield of the two wells is the sum of the two calculations above, or 247.8 m^3/day. Although this will result in exceeding the sustainable yield of the two wells during several months, the annual sustainable yield of 247.8 m^3/day is almost twice the daily water demand of 111.4 m^3/day, when averaged over the entire year. The wells will be in recovery (and recharge) mode during eight months of each year. This is a similar situation to wells used for irrigation of agricultural land and of golf courses.

2.3 INTERPRETATION OF AQUIFER TEST RESULTS

Both the pumping and the recovery portions of the test of the West Well show that the transmissive capacity of the aquifer at this location is about 209 m^2/day. The Papadopulos-Cooper analysis indicates a lower transmissive capacity, but the observation well results indicate that the transmissivity of the area is greater than this analysis would indicate. Moreover, the long-term behaviour of an aquifer (such as a 72 hour test) is better described using the Theis-Jacob analysis.

The AquiferTest Pro program calculates storativity also, but when calculated from the pumping well measurements, the result is meaningless, as an accurate measurement of the distance between the point of production and the point of measurement is needed.

The West Well has a very deep non-pumping water level, and the available head is only 2.09 m. Indeed, the test drew the water level in the pumping well down slightly into the completion zone. This cannot be permitted during normal operation of the well, and the analysis has taken this situation into consideration. It should be noted that the water level in the East Well is below the top of the aquifer without pumping and hence is unconfined. An arbitrary available head of 2.0 m has been assumed for this well.

3.0 Impact Assessment to Sylvan Lake

3.1 LOCAL IMPACT

In order to calculate the degree of interference at different distances from the pumping wells and at different times, the following parameters have been used, as derived from the aquifer test. Since both wells will be pumped, and both tap the same aquifer, the local impact is calculated as the sum of the impact of the two wells pumping together, as though they were one single well. At distances greater than about 100 m, it would be impossible to separate the impacts of the two wells. The inhomogeneities of the aquifer, as noted in the previous sections, will modify the real-life results to some extent, of course.

Combined pumping rate = 111.4 cubic metres per day
Transmissive capacity = 250 m^2/day (average of two wells)
Storativity, assumed = 0.0005 (dimensionless)

The impact, or interference, at different times and distances from the pumping well is calculated from two basic equations:

$$U = r^2 S/4Tt, \text{ or } 7.98 \text{ E-}9*r^2$$

$$S = QW(u)/4\pi T, \text{ or } 0.0703\ W(u)$$

Since the calculations using these formulae are somewhat laborious for each time and/or distance increment, the computer program ***WELLz*** was used. It is based on the same mathematical processes described above and accomplishes the same results much more rapidly. Table 5 shows the known drilled wells of the area, with their available head.

The calculations of interference shown in Table 6 are based on the assumption that the wells will pump without stopping for 20 years, and that there will be no recharge to the aquifers during that time. Obviously, both assumptions are incorrect, as there will certainly be interruptions of the pumping time, especially outside the vacation season, and there will also be some recharge to the aquifer from infiltration of snowmelt and rainfall. This item will be discussed in detail further below. Thus the table shows only a “worst case scenario” of what might happen. In reality, because of the recharge, the aquifer will exhibit even less drawdown and interference than these calculations would indicate. This recharge effect has been quantified and will be discussed later in this report.

In addition, the maximum interference indicated below would take place only in wells which are completed in the same aquifer interval. Wells which are completed in shallower or deeper zones would probably show little or no interference.

Table 5
Water Wells Drilled near Skyy Country RV Park

Location	Owner	Driller	Year	AENV ID	Total Depth (m)	Completion Zone (m)	NPWL (m) Non Pumping Static Level	Available Head (m)	Reported Discharge (m^3/day)
NE-26-39-02-W.5	D. Alfke	Flinn Drilling Ltd	1975	362605	16.8		8.5		130.9
SE-26-39-02-W.5	M.A. Putnam	Forrester	1967	362543	50.3	37.2 - 50.3	12.2	25.0	130.9
SE-26-39-02-W.5	Rod Depaiva	Forrester	1974	362544	41.2		10.7		196.4
SE-26-39-02-W.5	Dale Simmons	Alken Basin Drilling	1995	418029	48.8	42.7 - 48.8	15.2	27.4	58.9
SE-26-39-02-W.5	John Thompson	Alberta Eagle Drilling	1997	469634	33.5	24.4 - 33.5	12.8	11.6	654.6
SE-26-39-02-W.5	Don Jepson	Alken Basin Drilling	1997	469635	36.6		15.2		392.8
SW-26-39-02-W.5	Rick Laye	Alken Basin Drilling	1991	356224	42.7	36.6 - 42.7	21.3	15.2	98.2
SE-26-39-02-W.5	Ron Wuetherick	Alken Basin Drilling	1996	468805	36.6	30.5 - 36.6	26.8	3.7	163.7
01-25-39-02-W.5	Alta Env #2620E	AB Env Protection	1990	352967	40.5		36.9		
01-25-39-02-W.5	Alta Env #2619E	AB Env Protection	1990	352968	66.8		36.6		
01-25-39-02-W.5	Alta Env #2621E	AB Env Protection	1990	352969	4.9	1.2 - 4.9			
08-25-39-02-W.5	C & T Res	Alberta Eagle Drilling	1984	362540	73.2		47.2		261.8
NE-25-39-02-W.5	Merlyn Wilson	Alken Basin Drilling	1994	396645	79.3	54.9 - 79.3	54.9	0.0	163.7
NW-25-39-02-W.5	Rob Scott	Alberta Eagle Drilling	1990	351682	64.0	57.9 - 64.0	50.3	7.6	130.9
SE-25-39-02-W.5	Doug Culshaw	Morrill's Water Well Drilling	1992	365585	70.1	54.9 - 70.1	44.8	10.1	130.9
13-36-39-02-W.5	Domex/Cactus 4#RIG	Alken Basin Drilling	1995	418320	103.6	30.5 - 48.8	38.1	0.0	98.2
13-36-39-02-W.5	Domex/Cactus 4#RIG	Alken Basin Drilling	1995	418321	61.0	30.5 - 54.9	24.4	6.1	98.2
NE-36-39-02-W.5	Randy Ehman	Alken Basin Drilling	1990	350289	48.8	36.6 - 42.7	25.9	10.7	130.9
NE-36-39-02-W.5	D. Damron	Erickson & Kangas		362742	36.6		27.4		52.4
SW-36-39-02-W.5	Jerry Gouthro	Forrester	1970	362735	73.2	32.9 - 72.5	57.9	0.0	98.2
SW-36-39-02-W.5	Dale Meyers	Forrester	1978	362736	73.2	55.2 - 73.2	54.3	0.9	78.6
SW-36-39-02-W.5	J. Albers	Nelson Drilling & Plumbing	1945	362737	59.7		39.6		
SW-36-39-02-W.5	Julius Albers	Alken Basin Drilling	1998	491530	85.3	42.7 - 48.8	42.7	0.0	42.6
NE-36-39-02-W.5	K. Olson	Erickson Ernfred	1935	362741	45.7		30.5		
NW-36-39-02-W.5	Rod Wilkens	Alken Basin Drilling	1989	362739	54.9	42.7 - 48.8	24.4	18.3	130.9
SW-36-39-02-W.5	Bonnie Hetherington	Alken Basin Drilling	1995	380541	73.2	54.9 - 73.2	54.9	0.0	196.4
03-35-39-02-W.5	Dominion Expl	Alken Basin Drilling	1995	406357	67.1	36.6 - 54.9	45.7	0.0	229.1
NE-35-39-02-W.5	C. Ecklund	Erickson & Kangas	1963	362733	53.3		37.2		39.3
NW-35-39-02-W.5	Elmer Brattberg	Forrester	1974	362728	64.0	29.3 - 64.0	38.1	0.0	137.5
NW-35-39-02-W.5	Elmer Brattberg	Forrester	1980	362729	61.0	35.7 - 61.0	42.7	0.0	130.9
NW-35-39-02-W.5	H. Brattberg	Erickson Ernfred	1932	362731	65.5		50.3		

Table 5
Water Wells Drilled near Skyy Country RV Park

SW-35-39-02-W.5	Glen Elsworth	Erickson Ernfred	1959	362727	61.0		48.8		39.3
NE-35-39-02-W.5	Dave Millar	All Rite Drilling Ltd	1986	362734	56.7	51.2 - 54.3	25.9	25.3	39.3
NW-35-39-02-W.5	Elmer Brattberg	Forrester	1980	362730	71.6	46.0 - 71.6	50.3	0.0	130.9
NW-34-39-02-W.5	Jack Richarson	Lawson. ME Water Wells	1970	362715	18.3		5.8		130.9
NW-34-39-02-W.5	Garry Weinman	Richmond WW Drlg	1976	362716	25.9		14.9		327.3
NW-34-39-02-W.5	Gordon Pierson	Richmond WW Drlg	1976	362717	38.1		9.1		26.2
NW-34-39-02-W.5	Wilf Reid	Alberta Eagle Drilling	1981	362718	45.7		23.5		65.5
NW-34-39-02-W.5	Dennis Goutheau	Erickson & Kangas	1963	362720	24.4		10.7		65.5
NE-34-39-02-W.5	Peter Carlson	Star Drlg Co	1978	362722	77.7		45.7		65.5
NE-34-39-02-W.5	Peter Carlson	Sylvan Lake Drlg	1979	362723	77.7		45.7		45.8
NE-34-39-02-W.5	H. Carlson	Erickson Ernfred	1934	362724	65.8		21.3		
SW-34-39-02-W.5	Oliva Stevens	Nelson Drilling & Plumbing	1971	362709	36.6		3.7		65.5
SW-34-39-02-W.5	B. Shapke	Nelson Drilling & Plumbing	1971	362711	36.6		0.9		65.5
SW-34-39-02-W.5	Mccook	Brown Jim	1972	362712	39.6		21.3		78.6
SW-34-39-02-W.5	Glen Brown	Brown Jim	1969	362713	45.7		15.2		78.6
SW-34-39-02-W.5	Gord Grudgefield	Alberta Eagle Drilling	1992	365978	36.6	32.3 - 36.6	23.8	8.5	170.2
SW-34-39-02-W.5	Ken Tumbach	Alberta Eagle Drilling	1992	366507	36.6	32.0 - 36.6	23.8	8.2	196.4
SW-34-39-02-W.5	Elmer Haack	Alberta Eagle Drilling	1997	467432	30.5	26.2 - 30.5	12.5	13.7	327.3
SW-34-39-02-W.5	R. Hicks	Big Quill Drilling Ltd	1981	362710	36.6		8.2		196.4
SW-34-39-02-W.5	John Van Bukel	Hansen Drlg	1976	362714	18.6	15.2 - 18.3	7.3	7.9	196.4
11-33-39-02-W.5	W. Mottus	Kingsep Robert	1962	362671	19.2		8.2		196.4
NE-33-39-02-W.5	Alf Loewen	Nelson Drilling & Plumbing	1970	362676	57.9		49.4		65.5
NE-33-39-02-W.5	Susan Tolson	Richmond WW Drlg	1976	362678	42.7		18.3		45.8
NW-33-39-02-W.5	Dean Urg	Forrester	1979	362668	38.1		18.3		65.5
NW-33-39-02-W.5	Wally Mottus	Magnum Drlg	1984	362669	18.3	12.2 - 18.3	7.6	4.6	13.1
NW-33-39-02-W.5	Alex Sabados	Alken Basin Drilling	1995	406356	19.2	10.4 - 19.2	8.2	2.1	261.8
SW-33-39-02-W.5	Ranaghan	Nelson Drilling & Plumbing	1970	362665	57.9		23.8		65.5
SW-33-39-02-W.5	Parney	Nelson Drilling & Plumbing	1971	362666	36.6		8.2		65.5
SW-33-39-02-W.5	Richard Degroat	Alken Basin Drilling	2002	341885	24.4	16.8 - 24.4	9.6	7.2	491.0
NE-33-39-02-W.5	Dick Buttynen	Medicine Valley Water Wells	1985	355186	36.6		12.8		91.6
01-32-39-02-W.5	Alta Env #2604E	AB Env Protection	1990	352619	33.5		8.5		
01-32-39-02-W.5	Alta Env #2605E	AB Env Protection	1990	352623	19.2		8.8		
01-32-39-02-W.5	Alta Env #2606E	AB Env Protection	1990	352624	6.4		3.7		19.6
01-32-39-02-W.5	Alta Env #2603E	AB Env Protection	1990	352626	48.5				
01-32-39-02-W.5	Alta Env #2623E	AB Env Protection	1990	352966	32.9		9.5		130.9
SE-32-39-02-W.5	Alice Snyder	German R E	1962	362661	36.6				

Table 5
Water Wells Drilled near Skyy Country RV Park

SE-32-39-02-W.5	Alex Strong	German R E	1962	362662	33.5		4.3		26.2
01-32-39-02-W.5	Alta Env #2607E	AB Env Protection	1990	352625	3.1	0.6 - 3.1	2.7	0.0	
SE-32-39-02-W.5	Ron Shoettler	Alberta Eagle Drilling	1990	350623	36.6	27.41 - 36.6	14.5	13.0	183.3
SW-12-40-02-W.5	Dennis Krompocker	Richmond WW Drlg	1973	437992	36.6		23.8		58.9
SW-12-40-02-W.5	Dennis Krompocker	Medicine Valley Water Wells	1989	437993	24.4	12.5 - 24.4	16.8	0.0	130.9
11-10-40-02-W.5	Founder Oil & Gas	Tall Pine Drilling Ltd	1999	496127	42.7	36.6 - 42.7	18.3	18.3	392.8
10-40-02-W.5	Holmes Bros	Nelson Drilling & Plumbing	1966	437983	30.5		16.5		65.5
NE-10-40-02-W.5	David Anderson	Alken Basin Drilling	1994	399203	61.0	42.7 - 61.0	15.2	27.4	58.9
NE-10-40-02-W.5	Hans Skjansberg	Johanson Victor	1955	437981	18.3		4.9		45.8
NE-10-40-02-W.5	Harold Anderson	Nelson Drilling & Plumbing		437982	39.6		5.5		32.7
SE-09-40-02-W.5	Carlyle Cattle Co Ltd	Alken Basin Drilling	1993	369396	53.3	35.1 - 53.3	15.2	19.8	65.5
03-04-40-02-W.5	Alan Russell	Alberta Eagle Drilling	1981	437642	22.9		10.4		52.4
05-04-40-02-W.5	Alta Env #2624E	AB Env Protection	1990	353902	24.1				
08-04-40-02-W.5	A. Russell/Gardiner Oil	Alken Basin Drilling	1995	406258	61.0	36.6 - 61.0	29.0	7.6	327.3
NW-04-40-02-W.5	Allan Russell	Alken Basin Drilling	1990	350292	85.3	67.1 - 85.3	59.4	7.6	52.4
NW-04-40-02-W.5	Del. C. Purnell	Forrester	1974	437650	38.1	21.0 - 38.1	6.1	14.9	255.3
SE-04-40-02-W.5	D.H. Russell	Erickson Drilling	1941	478912	35.7		18.3		
01-04-40-02-W.5	Allan Russell	Moores WW Drlg	1969	478913	38.1	21.3 - 38.1	18.9	2.4	196.4
SE-03-40-02-W.5	Alan Russell	Alken Basin Drilling	1988	437631	73.2	61.0 - 73.2	51.8	9.1	130.9
SW-03-40-02-W.5	Buit Bros.	Lousana Water Wells	1977	437633	48.8	41.2 - 48.8	41.8	0.0	91.6
NW-03-40-02-W.5	Sunrise Lazy S Farm	Alken Basin Drilling	2002	341907	73.2	61.0 - 67.1	46.0	14.9	327.3
NE-03-40-02-W.5	V. Johanson	Nelson Drilling & Plumbing	1943	438638	68.6		42.7		
NE-02-40-02-W.5	Orvil Anderson	Alken Basin Drilling	1988	437628	48.8	30.5 - 48.8	30.5	0.0	98.2
NW-02-40-02-W.5	Dennis Freeman	Alken Basin Drilling	1995	416228	70.1	57.9 - 70.1	42.7	15.2	130.9
SE-02-40-02-W.5	O. Solberg	Erickson Ernfred	1950	437620	62.5				
SW-02-40-02-W.5	Laverne Anderson	Nelson Drilling & Plumbing	1964	437621	73.2		19.8		65.5
NW-02-40-02-W.5	Larry Haarstad	Alken Basin Drilling	1988	437626	61.0	48.8 - 61.0	50.3	0.0	98.2
07-01-40-02-W.5	Domex/Cactus 14	Alken Basin Drilling	1995	418035	54.9	24.4 - 36.6	25.9	0.0	229.1
NE-01-40-02-W.5	Andrew Holman	Nelson Drilling & Plumbing	1971	437616	45.7		31.4		65.5
SE-01-40-02-W.5	Andrew Holman	Three Star Drlg	1974	478909	32.0		9.8		39.3
NW-01-40-02-W.5	J.G. Smith	Medicine Valley Water Wells	2000	496975	19.8	14.0 - 19.8	7.6	6.5	91.6
08-01-40-02-W.5	A. Holmen	Ken's Water Service	1979	437603	30.5	21.3 - 27.4	12.2	9.2	65.5
SE-01-40-02-W.5	Don Stephenson	Alken Basin Drilling	1996	466353	48.8	36.6 - 48.8	22.6	14.0	78.6

Table 6
Interference caused by pumping of Skyy Country Wells

Distance(m)	1 Year	2 Years	5 Years	10 Years	20 Years
100	0.38	0.40	0.43	0.46	0.48
200	0.33	0.35	0.38	0.41	0.43
500	0.26	0.29	0.32	0.34	0.37
750	0.23	0.26	0.29	0.32	0.34

The aquifers of Alberta are known to be generally discontinuous, lenticular, anisotropic and heterogeneous in their configuration. This gives rise to a number of concerns that must be considered in the calculation of long-term pumping rates and the design of water systems. Among these concerns are the following;

- Transmissive capacity is not constant everywhere in an aquifer, nor in time. The hydrogeologic cross-section (Figure 5) shows the extent to which unit thickness and hence transmissive capacity may vary, even in short distances (although part of the variability may result from differences in driller interpretation). Even within the same lithostratigraphic unit, there are significant variations in thickness, permeability, degree of fracturing, variation in cementation, etc. All these factors contribute to create a wide range of transmissive capacity.

- Because of the lenticular nature of most aquifers in Alberta, even neighbouring wells are often completed in different and distinct water-bearing strata. Therefore one cannot necessarily assume that adjacent wells are connected hydraulically to each other.

- Nor is it likely, as the above analysis assumes, that a well will be pumped on a continuous basis over its lifetime. There are always periods of lower or no pumping during well maintenance, or when the owner is absent. In this case, the wells will not be pumped, or very little, outside the summer season.

- The basic assumptions behind the Theis analytical procedures for calculating transmissive capacity are that the aquifer is horizontal, of infinite extent, homogeneous and isotropic, and that the wellbore is of infinitesimal diameter. In reality, none of these assumptions is strictly true. The variations from the ideal can usually be recognized however and corrections made.

The impact of the pumping on the closest well-owners whose wells are or could be completed in the same hydrostratigraphic interval, after twenty years or 7 log cycles of time of pumping from the new proposed diversion would be as shown in Table 6.

It may be seen from the above table that the interference in all cases would be a small fraction of the available head, virtually impossible to measure. This analysis assumes that pumping of the Skyy Country Subdivision well will be continuous for 20 years. With no recharge and constant pumping, the maximum impact on any other existing user would be about 30 to 40 cm after 20 years. However, this analysis ignores 20 years of recharge, which will no doubt eliminate any impact whatsoever. More will be said about this in a later section.

3.2 IMPACT ON LAKE LEVEL

Alberta Environment has recognized that Sylvan Lake is maintained largely by flow from springs and diffuse groundwater discharge. For this reason, Environment is concerned with any activity which might modify the natural groundwater flow. It is considered undesirable that pumping increase to the point at which the cones of depression of the wells would extend to the lakeshore, and thus begin to divert water from the lake to the water supply wells.

Alberta Environment maintained a network of 20 observation wells around the west end of Sylvan Lake for varying periods of 5.25 to 12.8 years. Several of these observation wells were located less than 1 km immediately west of the proposed Skyy Country Subdivision. None are still in use at present, as all measurements terminated in late 1997. Several were located in the ditch beside Range Road 2-4, and have been destroyed because of widening of this road. In work done in a previous study, the hydrographs of these observation wells were analyzed by Stantec Consulting Ltd. to determine their long-term behavior and to estimate the recharge in this area. Each rise in water level in each hydrograph was assumed to represent a recharge event. Since measurements were taken only monthly, there are likely additional minor recharge events which are not evident in this analysis. The individual hydrographs are located in Appendix F, and a summary of results is shown in Table 8 below.

There has been considerable concern expressed by those who live near and who use the lake for recreation that the continued development of groundwater resources is impacting discharge to the lake. This reduction of discharge into Sylvan Lake could cause the level to drop and thus would also contribute to deterioration of lake water quality.

The level at which there is surface discharge from the lake is 936.66 m. A few scattered measurements of water levels of Sylvan Lake began starting in 1918 and continued until 1930. One single level was read in each of 1939 and 1940. Systematic readings began again in 1956 and continue to the present, with several readings daily during the season when the lake is not frozen, ie, about May 1 to November 30 of each year.

In an unpublished document prepared by Stantec Consulting Ltd., it was shown that in 68 years of records (updated through 2007), there were 40 years with at least some discharge from the lake, and 29 years with no discharge. Years 2004 to 2006 had no discharge. However, 2007 experienced levels above the discharge outlet during almost the entire ice-free season, ie, from about May 1 until freeze-up in late October. This was a year with almost no beach exposed because of high water. As 2007 has been the year of maximum subdivision development and groundwater use to date, it is evident that there no harm has been done to lake levels due to groundwater production around the lake. In addition, the six months of discharge from the lake would certainly flush out accumulated water from previous years and lake water quality would reflect to a large degree the quality of the surface water and groundwater entering into the lake during 2007.

Table 7
Groundwater Recharge – Sylvan Lake Area

Well Location*	Well Ref. No.	Years of Record	Total well depth (m)	Confined/ Unconfined Aquifer	Annual Recharge (mm)	Trend of Hydrograph
1-32-39-2	2623E	12.8	32.9	C	3.0	Down
1-32-39-2	2604E	12	33.8	C	2.5	Up
1-32-39-2	2605E	13	19.2	C	1.9	Level
1-32-39-2	2606E	13	6.4	C	4.7	Level
1-19-39-2	2609E	7	25.9	C	3.4	Up
1-19-39-2	2610E	7	11.6	C	2.4	Level
1-19-39-2	2611E	7	6.4	U	15.4	Level
14-9-39-2	2613E	7	30.0	C	4.4	Up
13-26-39-2	2616E	7	42.3	C	2.2	Up
13-26-39-2	2617E	7	24.0	C	3.0	Up
13-26-39-2	2618E	7	5.7	U	11.2	Level
1-25-39-2	2619E	7	51.2	C	3.2	Up
1-25-39-2	2620E	7	40.5	C	2.5	Up
1-25-39-2	2621E	5.25	5.0	U	2.9	Level?
15-9-39-1	2622E	7	36.3	C	2.2	Up
8-10-39-2	2693E	5.25	0.7 ?	U	3.1	Up
8-10-39-2	2694E	5.25	0.64?	C	5.2	Down
9-1-39-2	2696E	5.25	0.68?	C	4.7	Up
9-1-39-2	2697E	5.25	0.63?	C	7.6	Level
9-1-39-2	2698E	5.25	0.54?	U	7.0	Level
Average recharge, Confined					**3.5**	
Average recharge, Unconfined					**9.1**	
Average, all aquifers					**4.62**	

*All locations are West of 5th Meridian.

A trend indicated as “Level” does not mean that there is no change in the water level in this hydrograph. It means rather that the long-term trend over the life of the record is approximately level, with no evident long-term downward or upward trend. It may be seen that there are only

two hydrographs with a downward trend, and the other 18 were either level or gradually rising. This suggests that due to the amount of recharge in the immediate area, there is no immediate danger of over-exploiting the aquifers adjacent to Sylvan Lake.

AXYS Environmental Consulting, quoted in the Stantec Consulting Ltd. report, calculated average annual recharge at about 4.75 mm/year in low-lying areas, increasing to as much as 50 mm in upland areas (Stantec Consulting Ltd., 2006, p. 4.4), where there is little till cover on the Paskapoo Formation bedrock. Without groundwater pumping, they estimated total groundwater recharge at 15,727 cubic metres/day or 5,740,355 m^3 /year within the drainage basin of Sylvan Lake.

If there were any infiltration of lake water to the wells during this testing program, it would be evident in the time-drawdown curves as a recharge boundary. There was no evidence of any recharge boundary in the test, which was carried out at about 2.5 times the long-term design pumping rate when the subdivision will be fully developed.

The nonpumping water level in the West Well was at 946.6 m at the time of the test, which was about 10 m higher than approximate lake level of 936.7 m. Pumping will reduce the piezometric surface in the well to about 945.5 m, which is still over 8 m above lake level. The nonpumping level in the East Well was 947.7 m, about 11 m above lake level. In conclusion, it may be seen that the aquifer is capable of meeting the needs of this subdivision without exceeding the natural recharge rate of the area, and without inducing recharge of lake water into the wells.

4.0 Groundwater Geochemistry

The Lacombe County regional groundwater assessment (2003) indicates that groundwater in this area is of the sodium-bicarbonate type to sodium-sulphate type. It states that chlorides are very low and that fluoride is often excessively high.

Shortly before terminating the aquifer test of 72 hours pumping of the West Well on April 1, 2008, samples of the water were taken for routine analysis and bacteriological analysis. In the same way, samples were taken from the East Well at the end of pumping on April 12, 2008. The samples were refrigerated and sent to WSH Labs (1992) Ltd, Calgary. The results are shown below in Table 8, and the original documents from the laboratory are included in Appendix D.

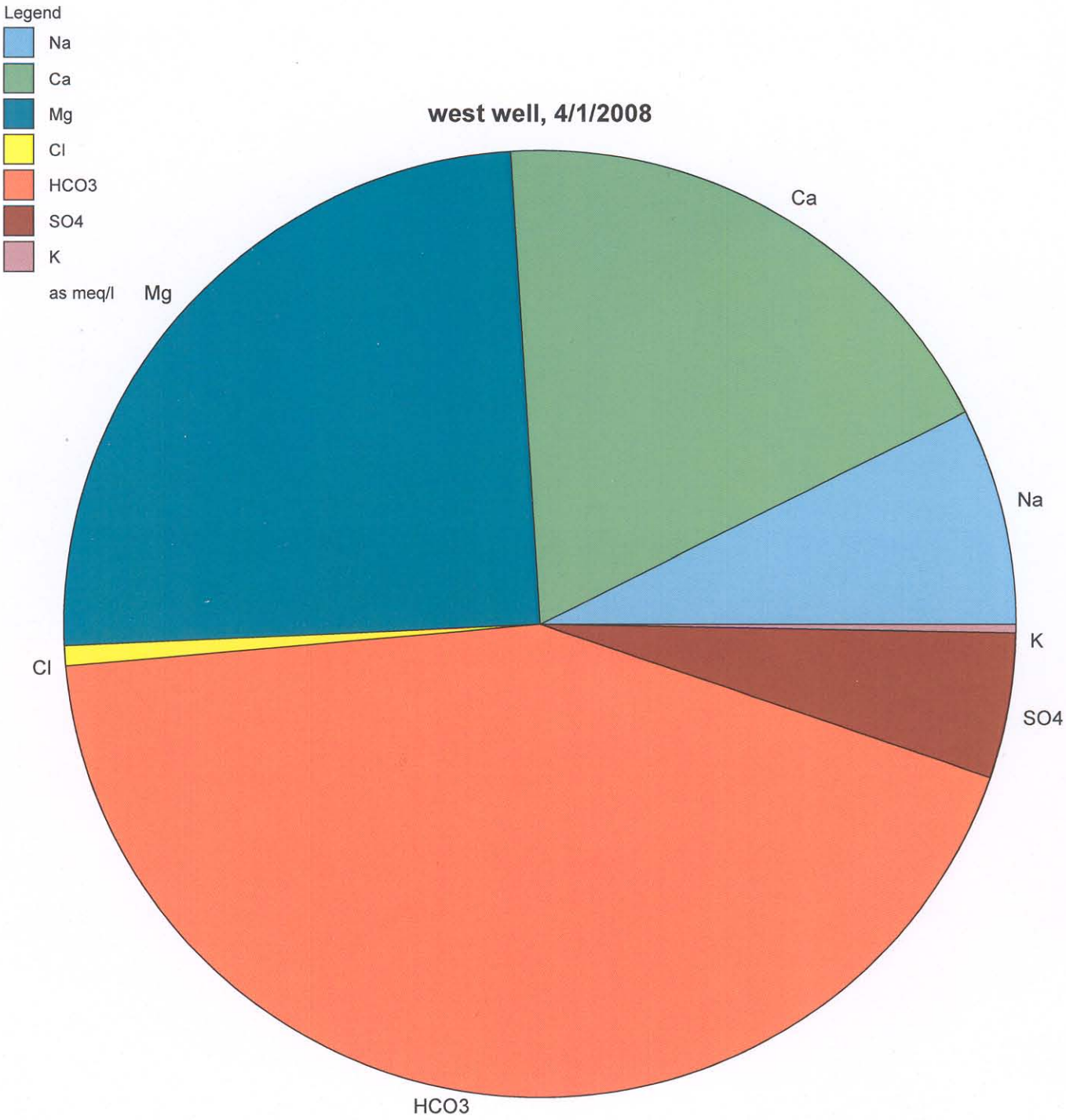
Table 8
Groundwater Geochemistry

Parameter	Units	West Well	East Well
Date		4/2/2008	4/16/2008
Calcium	mg/L	65.6	68.4
Iron	mg/L	<0.03	0.28
Magnesium	mg/L	52.9	60
Manganese	mg/L	<0.01	0.04
Potassium	mg/L	1.9	1.9
Sodium	mg/L	30	21
Bicarbonates	mg/L	466	473
Bromides	mg/L	<0.1	<0.1
Carbonates	mg/L	0	0
Chlorides	mg/L	4.3	14.9
Fluorides	mg/L	0.06	0.09
Nitrates as N	mg/L	0.1	0.1
Nitrites as N	mg/L	<0.02	<0.02
NO3+NO2	mg/L	0.1	0.1
Sulfates	mg/L	42	27
Electrical Conductivity	µS/cm	723	737
pH	pH units	8.11	8.13
Hardness	mg/L	382	418
Total alkalinity	mg/L	382	388
P-alkalinity	mg/L	0	0
Hydroxide	mg/L	0	0
Total dissolved solids	mg/L	426	426
Total coliforms	CFU/100 mL	0	0
E-coli	CFU/100 mL	0	0
Sum of Cations	-	8.97	9.3
Sum of Anions	-	8.65	8.75

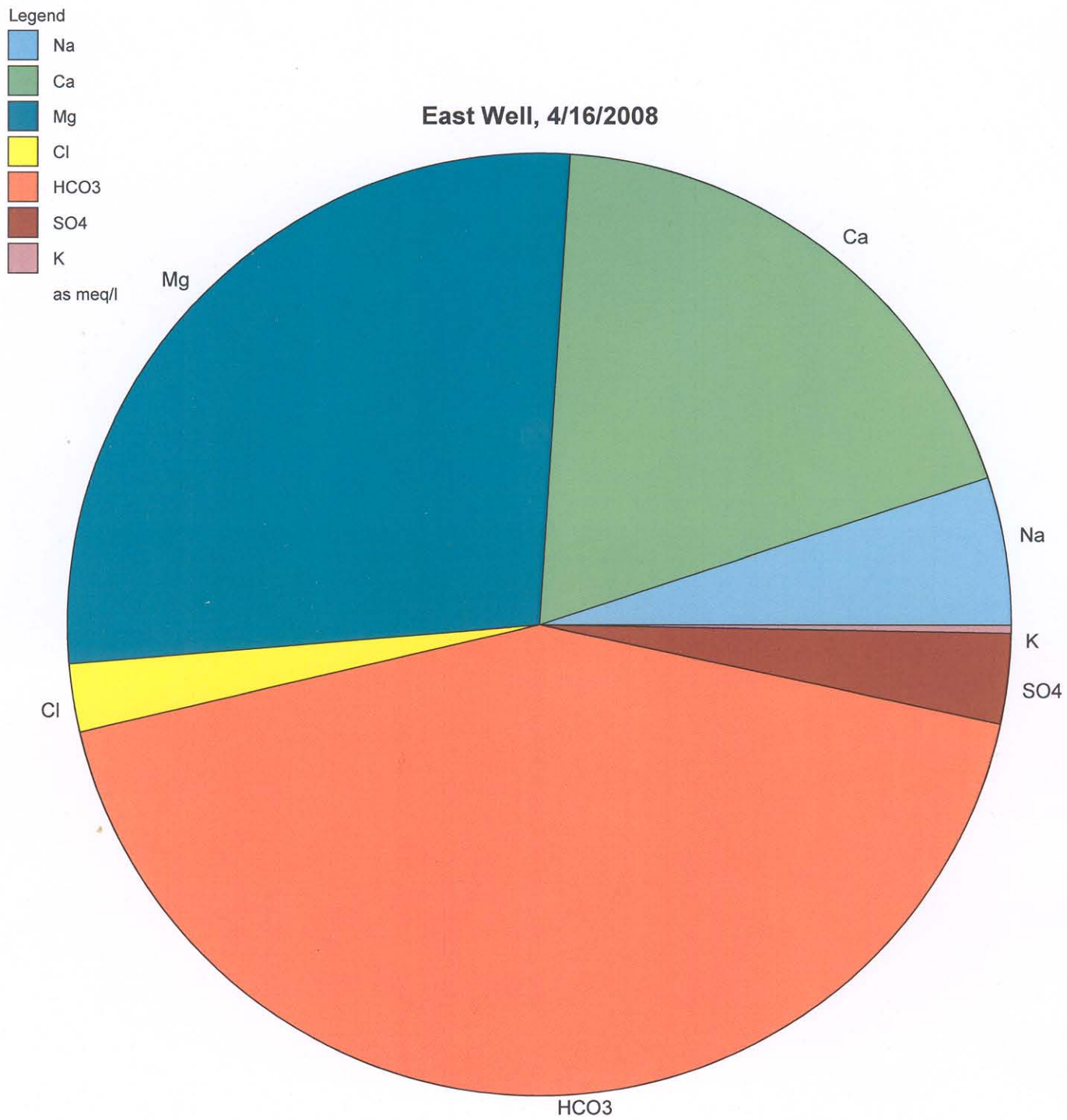
Ion balance	-	1.04	1.06
TDS/EC ratio	-	0.59	0.58
SAR	-	0.67	0.45
Saturation Index	-	1.1	1.1
Beryllium	µg/L	<0.05	<0.05
Boron	µg/L	52.5	243
Aluminum	µg/L	1.5	3.3
Phosphorus	µg/L	4.9	4.9
Titanium	µg/L	<0.2	<0.2
Vanadium	µg/L	0.2	<0.08
Chromium	µg/L	<0.1	<0.1
Cobalt	µg/L	<0.1	0.5
Nickel	µg/L	0.3	1.7
Copper	µg/L	<0.08	1.4
Zinc	µg/L	6.4	5.6
Arsenic	µg/L	0.04	0.4
Selenium	µg/L	<0.04	**17.2**
Strontium	µg/L	628	881
Zirconium	µg/L	0.01	0.1
Molybdenum	µg/L	3.6	6.8
Silver	µg/L	<0.04	<0.04
Cadmium	µg/L	<0.05	<0.05
Tin	µg/L	<0.02	<0.02
Antimony	µg/L	<0.3	0.8
Tellurium	µg/L	<0.07	<0.07
Barium	µg/L	67.8	84.8
Tungsten	µg/L	<0.04	<0.04
Mercury	µg/L	<0.05	<0.05
Thallium	µg/L	<0.03	<0.03
Lead	µg/L	<0.1	<0.1
Thorium	µg/L	<0.03	<0.03
Uranium	µg/L	3.4	6.2
Temperature	deg. C.	5.86	5.48

As predicted in the Lacombe County groundwater report, the water is a sodium-bicarbonate type, and the two wells have very similar water, as would be expected. Figures 21 and 22 are pie diagrams which show graphically that calcium and magnesium and bicarbonate are the predominant ions, and that all others are minor in comparison. The chemistry of the water indicates that it is typical of a groundwater recharge area.

None of the parameters exceed the Canadian Drinking Water Quality Guideline. A shock chlorination and routine chlorination of the well during operation will protect the well from bacterial contamination. No E.coli bacteria were present. The water meets all chemical guidelines for human use, with only the minimal statutory chlorination required. No chemical parameters in the routine analysis exceeded the Canadian Drinking Water Quality Guidelines. The water is considered very hard, with a hardness of 382 to 418 mg/L.



DESCRIPTION: Figure 21. Pie diagram of groundwater chemistry, West Well		
Stantec	PROJECT: Skyy Country RV Park	PROJECT NO: 113928105
	CLIENT: Frank Wilson	DATE: April 28, 2008



DESCRIPTION: Figure 22. Pie diagram of groundwater chemistry, East Well

Stantec	PROJECT: Skyy Country RV Park	PROJECT NO: 113928105
	CLIENT: Frank Wilson	DATE: April 28, 2008

5.0 Conclusions

- The two wells which were tested were completed in a consolidated sandstone aquifer of the Paskapoo Formation.

- The aquifer is confined and its level responds in minor part to fluctuations in barometric pressure. The aquifer appears to be fractured, based on the low nonpumping level and high but variable transmissive capacity.

- This West Well and the aquifer were tested at a constant rate of 425.7 cubic metres per day for seventy-two hours, followed by another seventy-two hours of recovery, using the East Well as an observation well. The East Well was tested at 200 cubic metres per day for 29.3 hours followed by 35.2 hours of recovery, using the West Well as an observation well.

- The aquifer test rate of 425.7 m^3 /day was almost 2.5 times the pumping rate to be needed with full development of the subdivision.

- A barrier boundary was evident in the West Well after 300 minutes of testing. A barrier boundary was also evident in the East Well, which was used for observation, but total drawdown in the East Well was just 13 cm after 72 hours pumping.

- The aquifer has a transmissive capacity at this location of about 209 m^2 /day, a storativity of 0.0005 was assumed, and a specific capacity of 166.3 m^3 /day/m in the West Well. Specific capacity of the East Well is 128.5 m^3 /day/m.

- The West Well is shown to be capable theoretically of producing a discharge of about 112.2 cubic metres per day by the Moell calculation. The East Well has a theoretical sustainable yield of 136.6 cubic metres per day, using the same calculation.

- The combined average annual discharge of 111.4 cubic metres per day will not create undue interference to the neighbours' wells, less than 0.40 metre in the closest well constructed within the same hydrostratigraphic zone, ignoring recharge which would serve to reduce the interference.

- At full production rate, the cone of depression will remain about 8 m above lake level, and thus there will be no infiltration of lake water to the well.

- The water has no parameters which exceed the Canadian Drinking Water Guideline.

- The water is very hard, with total hardness of 382 to 418 mg/L.

- No coliforms or fecal coliforms were present, but the water should be chlorinated on a routine basis as a public health precaution.

- There is sufficient recharge to meet the requirements for the Skyy Country Subdivision, and this production will not induce infiltration from Sylvan Lake.

- The County of Lacombe and Alberta Environment are considering the feasibility of water and waste water pipelines around Sylvan Lake. If they are constructed, the diversion evaluated in this report will no longer be necessary, and the groundwater diversion license could be cancelled at that time.

6.0 Recommendations

- It is recommended to license this well for an annual diversion of 40,649 cubic metres to service the proposed 667 RV lots within the subdivision, the supply to be produced from the two wells jointly.
- The production can be apportioned roughly half to each of the two wells.
- It is recommended that the maximum daily discharge rate should not exceed 425.7 cubic metres per day, which was the discharge during the test.
- It is recommended that the owner measure and record the dynamic water level monthly in both the West Well, and in the East well.
- It is recommended that an inline cumulative water meter be installed at or near the wellhead of each well, and that cumulative discharge be recorded each month for each well. This should be done preferably at the same time as the water level readings.
- It is recommended that an annual summary of monthly water levels and water production be sent to Alberta Environment shortly after the end of each calendar year.
- The well water should be chlorinated on a continuous basis starting at the time when the park opens to the public.
- Because of the very low water levels in the two wells, it is recommended that an annual review of production and water levels be carried out by a professional hydrogeologist at the end of each of the first two years to ensure that aquifer performance is as expected. At that time, it will be possible to readjust the apportionment of the production if necessary between the two wells.

7.0 References

Alberta Environment, 2003, Groundwater Evaluation Guideline; Government guideline for licensing requirements, revised Feb., 2003.

Alberta Environment, 2006, Standards and Guidelines for Municipal Waterworks, Wastewater and Storm Drainage Systems; Drinking Water Branch, Environmental Policy Branch, Environmental Assurance Division, Jan., 2006.

Demchuk, Thomas D. and Hills, L.V., 1991, A Re-examination of the Paskapoo Formation in the Central Alberta Plains: the designation of three new members; Bul. Can. Pet. Geology, vol. 39, No. 3, Sept, 1991, pp. 270-282.

Nielsen, Grant L., 2007, Review of water levels of Sylvan Lake; unpublished report, Stantec Consulting Ltd.

Hamilton, W. N., Price, M.C., and Langenberg, C.W. (compilers), 1999, Geological Map of Alberta; Geological Survey of Alberta, Alberta Energy and Utilities Board, Map 236, Edmonton.

Health Canada, 2004, Summary of Guidelines or Canadian Drinking Water quality; prepared by the federal-provincial-territorial committee on drinking water, Ottawa.

PFRA, 2001, Regional Groundwater Assessment, Lacombe County; January, 2001

Shetsen, I., 1990, Quaternary Geology, Central Alberta; Alberta Geological Survey, Alberta Energy and Utilities Board, Edmonton.

Stantec Consulting Ltd., 2006, Sylvan Lake Regional Partnership Initiative, Regional Water/Wastewater Feasibility Study; Project 112871543, March, 2006, Red Deer.

Tokarsky, Orest, 1970, Hydrogeology of the Rocky Mountain House Map Sheet, Alberta; Alberta Research Council, Edmonton

Waterloo Hydrogeologic, 2005, AquiferTest Pro 4.0; Waterloo, Ontario.

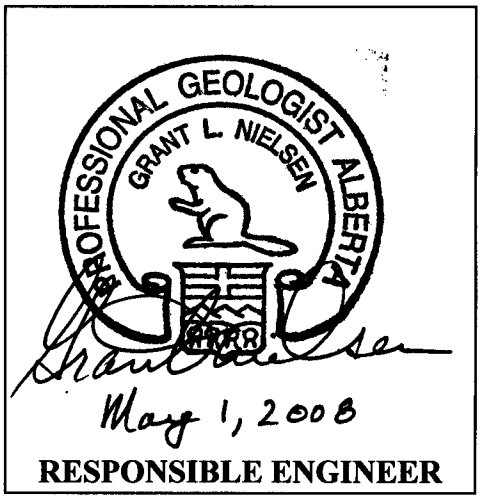
Waterloo Hydrogeologic, 2006, AquaChem v. 5.1, User's Manual; Waterloo, Ontario

8.0 Corporate Authorization

This document entitled **"Groundwater Evaluation, Skyy Country R.V. Park, NE-34-39-2-W5M"** was prepared by Stantec Consulting Ltd. for Frank Layton. The material in it reflects Stantec Consulting Ltd.'s best judgment in light of the information available to it at the time of preparation. Any use which a third party makes of this report, or reliance on or decisions made based on it, are the responsibilities of such third parties. Stantec Consulting Ltd. accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report.

PERMIT TO PRACTICE
STANTEC CONSULTING LTD.
Signature
Date 1/08
PERMIT NUMBER: P 0258
The Association of Professional Engineers, Geologists and Geophysicists of Alberta

CORPORATE AUTHORIZATION



RESPONSIBLE ENGINEER

APPENDIX A

Water Well Drilling Report

Alberta ENVIRONMENT

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy. All information on this report will be retained in a public database.

Well I.D.
Map verified
Date report received:

1 Contractor & Well Owner Information

Company Name: ALKEN BASIN DRILLING LTD. Approval No.: 966
Mailing Address: Box 47 City or Town: BENTLEY Postal Code: T0C-0J0
Well Owner's Name: FRANK WILSON Well Owner has a copy of this report: ☐ Yes ☐ No
Mailing Address: #8 - 10 street City or Town: SYLVAN LAKE Postal Code: T4S-2P3

2 Well Location

1/4 or LSD	Sec	Twp	Rge	West of Meridian
NE	34	39	2	W5

Location of Quarter: ☐ m/ft from ☐ N ☐ S Boundary
☐ m/ft from ☐ E ☐ W
Lot Block Plan

3 Drilling Information

Type of Work: ☐ Testhole ☑ New Well ☐ Reconstructed ☐ Deepened ☐ Decommissioned
Well ID (if applicable): Date Completed: Yr Mo Day
Casing or liner removed (specify): Amount Used
Plugging Material: ☐ Cement Amount Used ☐ High Solids Bentonite ☐ Hydrated Bentonite
Method of Drilling: ☐ Auger ☐ Boring ☐ Cable tool ☑ Rotary ☐ Combination ☐ Backhoe ☐ Other:

Proposed well use:
☐ Household (up to 1250 m³ per year with a residence on the property)
☑ Other
Specify: CAMPGROUND

4 Formation Log

Depth from ground level (☐ metres ☐ feet)	Lithology Description	
0-9	clay brn	2.7
9-14	SH brn	4.3
14-49	SS brn	14.9
49-74	SH grey	22.6
74-76	COAL	23.2
76-84	SH grey	25.6
84-118	SS grey	36.0
118-120	SH grey	36.6

Grouted with 12 Sack / Bentonite Grout

5 Well Completion

Date Started: 08 03 26 Date Completed: 08 03 26
Are measurements in metric or imperial?

Casing Details:

	Surface Seal	Casing	Liner/Inner Casing
Diameter of borehole	17.1	6 3/4	5"
Casing type		STEEL	PVC
Size OD		5 9/16	4 1/2
Wall thickness		.258	.237
Bottom at	30.0	95'	120'
Top at	0	2'	80'
Annular Sealant	☐ Cement ☐ Bentonite From: To:	☐ Cement ☑ Bentonite ☑ Driven ☐ Shale Trap From: 0 To: 95	☐ Cement ☐ Bentonite ☐ Driven ☐ Shale Trap From: To:

Production Interval Details:

Perforations: from: 95' to: 115'
from: 28.0 to: 35.1
Perforation size: 3/8 x 3/8
Perforated by: ☐ Saw ☐ Torch ☐ Machine ☑ Other: Drill
Screen type: Size OD:
Intervals: from: to: slot size:
from: to: slot size:
Installation: ☐ Attached to casing ☐ Telescoped
Fittings: Top ☐ Packer ☐ Coupler Bottom ☐ Wash-down ☐ Bail ☐ Plug
Pack: ☐ Artificial/Mechanical ☐ Natural
Grain size: Amount:

6 Well Yield (West well)

Test Date: Yr Mo Day 08 03 26 Start Time:
Test method: ☑ Pump ☐ Bailer ☑ Air
Are measurements in metric or imperial?
Non pumping static water level: 27.30m
Rate of water removal: 70 g.p.m
Depth of pump intake if pump tested: ~~100~~ 33m
Depth bailed or air tested from: 43m
Water level at end of water removal period: 28.59m
Distance from top of casing to ground level: 0.61m
Measurements taken from: Casing

Depth to water level Pumping	Elapsed Time minutes	Recovery
27.30	0	28.59
~~28.20~~	2	27.46
~~28.35~~	3	27.38
~~28.40~~	4	27.35
~~28.46~~	5	27.33
28.50	6	27.33
28.52	7	27.32
28.54	8	27.32
28.55	9	27.31
28.56	10	27.31
28.57	12	27.30
28.58	14	27.30
28.59	16	27.30
28.59	20	
28.59	25	
28.59	30	
28.59	35	
	40	
	50	
	60	
	75	
	90	
	105	
28.59	120	27.30

If water removal was less than 2 hr. duration, reason why:
Recommended pumping rate: 10 g.p.m
Recommended pump intake: 105 ft.
Pump installed ☐ Yes Depth:
Type: Model: H.P:

Water Used to Drill Well:
Location of Water Source: Shop
Water Diversion Date: Yr Mo Day 08 03 25 Time: 5:00 am/pm
Amount Water Taken: 1200 Litres/Imp. Gallons

GPS Co-ordinates (Decimal Degrees):
Latitude: 52°12.803 Longitude: 114°24.395 Elevation: 3194
Level of GPS Accuracy:
☐ Diff. Corr. Hand Held 5-10m ☐ Surveyed GPS < 1m
☑ Hand Held Auto 20-30m

Geophysical Log taken: ☐ Electric ☐ Gamma
Did you encounter: ☐ Mineralized water more than 4000 ppm TDS ☐ Gas At what depth:

Remedial action taken:

Additional Comments:

7 Contractor Certification

Driller's Name: Kris Schindel
Certification No.: 40628A
This well was constructed in accordance with the *Water (Ministerial) Regulation* of the *Water Act*. All information in this report is true.
Signature Yr Mo Day 08 03 26

White copy: Alberta Environment Yellow copy: Well Owner Pink copy: Contractor

Alberta ENVIRONMENT — Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy. All information on this report will be retained in a public database.

Well I.D.
Map verified
Date report received:

1 Contractor & Well Owner Information

Company Name: ALKEN BASIN DRILLING LTD. Approval No.: 966
Mailing Address: Box 47 City or Town: BENTLEY Postal Code: T0C-0J0
Well Owner's Name: FRANK. WILSON Well Owner has a copy of this report: ☐ Yes ☐ No
Mailing Address: #8 - 10 Street City or Town: Sylvan lake. Postal Code: T4S - 2P3.

2 Well Location

1/4 or LSD	Sec	Twp	Rge	West of Meridian
NE	34	39	2	W5

Location in Quarters — Boundary: ☐ m/ft from ☐ N ☐ S; ☐ m/ft from ☐ E ☐ W
Lot — Block — Plan

3 Drilling Information

Type of Work: ☐ Testhole ☑ New Well ☐ Reconstructed ☐ Deepened ☐ Decommissioned
Well ID (If applicable): Date Completed: Yr Mo Day
Casing or liner removed (specify):
Plugging Material: ☐ Cement Amount used: ☐ High Solids Bentonite Amount used: ☐ Hydrated Bentonite Amount used:
Method of Drilling: ☐ Auger ☐ Boring ☐ Cable tool ☑ Rotary ☐ Combination ☐ Backhoe ☐ Other:
Proposed well use: ☐ Household (up to 1250 m³ per year with a residence on the property) ☑ Other Specify: CAMPGROUND

4 Formation Log

Depth from ground level — Lithology Description — ☐ metres ☑ feet

Depth from ground level	Lithology Description	
0 - 15	clay brn	4.6
15 - 50	SS brn	15.2
50 - 60	SH gry	18.3
60 - 61	coal.	18.6
61 - 65	SH gry	19.8
65 - 70	SH grn	21.3
70 - 75	SS gry	22.9
75 - 79	SH gry	24.1
79 - 95	SS gry	29.0
95 - 106	SH gry	32.3
106 - 110	SS gry	33.5
110 - 118	SH gry	36.0
118 - 139	SS gry	42.4
139 - 140	SH gry	42.7
	Grouted w/ 12 sacks. Bentonite grout.	

5 Well Completion

Date Started: Yr 08 Mo 03 Day 27 Date Completed: Yr 08 Mo 03 Day 27
Are measurements in metric or imperial?

Casing Details:

	Surface Seal	Casing	Liner/Inner Casing
Diameter of borehole	17	6 3/4	12 / 5"
Casing type		STEEL	PVC
Size OD		5 9/16	4 1/2
Wall thickness		.258	.237
Bottom at	36.0	118.	140' / 42.7
Top at	0	2'	160' / 48.8
Annular Sealant	☐ Cement ☐ Bentonite From: To:	☐ Cement ☑ Bentonite ☑ Driven ☐ Shale Trap From: 0 To: 118.	☐ Cement ☐ Bentonite ☐ Driven ☐ Shale Trap From: To:

Production Interval Details:

Perforations: from: 118 to: 140. from: 36.0 to: 42.7
Perforation size: 3/8 x 3/8
Perforated by: ☐ Saw ☐ Torch ☐ Machine ☑ Other: DRILL
Screen type: Size OD:
Intervals: from: to: slot size: from: to: slot size:
Installation: ☐ Attached to casing ☐ Telescoped
Fittings: Top ☐ Packer ☑ Coupler Bottom ☐ Wash-down ☐ Bail ☐ Plug
Pack: ☐ Artificial/Mechanical ☐ Natural Grain size: Amount:

6 Well Yield EAST WELL.

Test Date: Yr 08 Mo 03 Day 27 Start Time:
Test method: ☑ Pump ☐ Bailer ☑ Air
Are measurements in metric or imperial?
Non pumping static water level: 38m
Rate of water removal: 32 gpm
Depth of pump intake if pump tested: 40m
Depth bailed or air tested from: 43m
Water level at end of water removal period: 38.98 m
Distance from top of casing to ground level: 0.61 m
Measurements taken from: Casing.

Depth to water level	Elapsed Time (minutes)	Recovery
Pumping		
38	0	38.98
38.9	1	38.25
38.95	2	38.15
38.96	3	38.09
38.96	4	38.05
38.97	5	38.03
38.97	6	38.02
38.97	7	38.02
38.98	8	38.01
38.98	9	38.01
38.98	10	38.00
38.98	12	38
38.98	14	38
38.98	16	38
38.98	20	
38.98	25	
38.98	30	
	35	
	40	
	50	
	60	
	75	
	90	
	105	
38.98	120	38

If water removal was less than 2 hr. duration, reason why:
Recommended pumping rate: 10 gpm
Recommended pump intake: 130 ft.
Pump installed ☐ Yes Depth:
Type: Model: H.P:

Water Used to Drill Well:
Location of Water Source: previous well.
Water Diversion Date: Yr 08 Mo 03 Day 26 Time: 5:00 am/pm
Amount Water Taken: 660 Litres/Imp. gallons

GPS Co-ordinates (Decimal Degrees): Latitude: 114° 11.93 Longitude: 52° 24.392 Elevation: 3233'
Level of GPS Accuracy:
☐ Diff. Corr. Hand Held 5-10m ☐ Surveyed GPS <1m ☑ Hand Held Auto 20-30m

Geophysical Log taken: ☐ Electric ☐ Gamma
Did you encounter: ☐ Mineralized water more than 4000 ppm TDS ☐ Gas At what depth:
Remedial action taken:
Additional Comments:

7 Contractor Certification

Driller's Name: Kris Schindel
Certification No.: 40628A
This well was constructed in accordance with the *Water (Ministerial) Regulation* of the *Water Act*. All information in this report is true.
Signature: Kris Schindel Date: Yr 08 Mo 03 Day 27

APPENDIX B

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0352619
Map Verified:	Not Verified
Date Report Received:	1990/11/09
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALBERTA ENVIRONMENTAL PROTECTION/TECHNICAL SERVICES DIVISION		Drilling Company Approval No.: 9984567
Mailing Address: 9820 - 106 STREET	City or Town: EDMONTON AB CA	Postal Code: T5K 2J6
WellOwner's Name: ALTA ENV #2604E	Well Location Identifier:	
P.O. Box Number:	Mailing Address: SYLVAN LAKE	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
01	32	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: M
How Obtain: Not Obtain

3. Drilling Information

Type of Work: Piezometer Reclaimed Well
Proposed well use: Observation
Date Reclaimed: Materials Used:
Anticipated Water Requirements/day 0 Liters
Method of Drilling: Rotary
Flowing Well: No Rate: Liters
Gas Present: No Oil Present: No

4. Formation Log

Depth from ground level (meters)	Lithology Description
0.3	Topsoil
0.91	Brown Sandy Clay
1.52	Sand
3.05	Brown Silty Clay
4.27	Brown Sandy Clay
7.01	Gray Sandstone
9.14	Brown Siltstone
9.75	Gray Sandstone
10.67	Brown Sandstone
11.89	Gray Siltstone
14.33	Gray Shale
15.24	Brown Shale
17.68	Gray Shale
33.53	Gray Sandstone

5. Well Completion

Date Started(yyyy/mm/dd): 1990/10/12	Date Completed (yyyy/mm/dd): 1990/10/12
Well Depth: 33.53 M	Borehole Diameter: 0 CM
Casing Type: Plastic	Liner Type:
Size OD: 5.08 CM	Size OD: 0 CM
Wall Thickness: 0.39 CM	Wall Thickness: 0 CM
Bottom at: 0 M	Top: 0 M Bottom: 0 M
Perforations from: 0 M to: 0 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0 CM x 0 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by:	
Seal: Bentonite Chips/Tablets from: 0 M	to: 31.09 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: Plastic from: 32.61 M to: 33.53 M	Screen ID: 5.08 CM Slot Size: 0.06 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method: Attached To Riser	
Fittings Top: Coupler	Bottom: Plug
Pack: Artificial Grain Size: 12.20	Amount: 100 Pounds
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: Yes Held: 0	Documents Held: 3
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments: 2604E. Approx 15' W of roadway & approx 25' E of N-S fence line. Well finish: Slotted PVC. Slug test done.	

6. Well Yield

Test Date (yyyy/mm/dd): 1990/10/15	Start Time: 11:00 AM
Test Method: Air	
Non pumping static level:	8.53 M
Rate of water removal:	0 Liters/Min
Depth of pump intake:	0 M
Water level at end of pumping:	8.53 M
Distance from top of casing to ground level:	CM

Depth To water level (meters)	Elapsed Time Drawdown Minutes:Sec	Recovery
8.58	0:00	0
7.84	0:50	0
7.95	1:00	0
8.03	1:50	0
8.12	2:00	0
8.17	2:50	0
8.24	3:00	0
8.28	3:50	0
8.33	4:00	0
8.36	4:50	0
8.39	5:00	0
8.42	5:50	0
8.45	6:00	0
8.46	6:50	0
8.48	7:00	0
8.49	7:50	0
8.52	8:00	0
8.52	8:50	0
8.53	9:00	0
8.54	9:50	0
8.54	10:00	0
8.55	10:50	0
8.56	11:00	0
8.56	11:50	0
8.57	12:00	0

Total Drawdown: 0 M
If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min
Recommended pump intake: 0 M
Type Pump Installed
Pump Type:

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0352623
Map Verified:	Not Verified
Date Report Received:	1990/11/09
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALBERTA ENVIRONMENTAL PROTECTION/TECHNICAL SERVICES DIVISION		Drilling Company Approval No.: 9984567
Mailing Address: 9820 - 106 STREET	City or Town: EDMONTON AB CA	Postal Code: T5K 2J6
WellOwner's Name: ALTA ENV #2605E	Well Location Identifier:	
P.O. Box Number:	Mailing Address: SYLVAN LAKE	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
01	32	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: M
How Obtain: Not Obtain

3. Drilling Information

Type of Work: Piezometer
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No Rate: Liters
Gas Present: Oil Present:

Proposed well use: Observation
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
0.3	Topsoil
0.91	Brown Sandy Clay
1.52	Sand
3.05	Brown Silty Clay
4.27	Brown Sandy Clay
7.01	Gray Sandstone
9.14	Brown Siltstone
9.75	Gray Sandstone
10.67	Brown Sandstone
11.89	Gray Siltstone
14.33	Gray Shale
15.24	Brown Shale
17.68	Gray Shale
19.2	Gray Sandstone

5. Well Completion

Date Started(yyyy/mm/dd): 1990/10/12	Date Completed (yyyy/mm/dd): 1990/10/12
Well Depth: 19.2 M	Borehole Diameter: 0 CM
Casing Type: Plastic	Liner Type:
Size OD: 5.08 CM	Size OD: 0 CM
Wall Thickness: 0.39 CM	Wall Thickness: 0 CM
Bottom at: 0 M	Top: 0 M Bottom: 0 M
Perforations	Perforations Size:
from: 0 M to: 0 M	0 CM x 0 CM
from: 0 M to: 0 M	0 CM x 0 CM
from: 0 M to: 0 M	0 CM x 0 CM
Perforated by:	
Seal: Bentonite Chips/Tablets	
from: 0 M	to: 15.85 M
Seal:	
from: 0 M	to: 0 M
Seal:	
from: 0 M	to: 0 M
Screen Type: Plastic	Screen ID: 5.08 CM
from: 18.29 M to: 19.2 M	Slot Size: 0.06 CM
Screen Type:	Screen ID: 0 CM
from: 0 M to: 0 M	Slot Size: 0 CM
Screen Installation Method: Attached To Riser	
Fittings	
Top: Coupler	Bottom: Plug
Pack: Artificial	
Grain Size: 12-20	Amount: 100 Pounds
Geophysical Log Taken:	
Retained on Files:	
Additional Test and/or Pump Data	
Chemistries taken By Driller: Yes	
Held: 0	Documents Held: 2
Pitless Adapter Type:	
Drop Pipe Type:	
Length: M	Diameter: CM

Comments:
Located approx 15' W of roadway & approx 25' E of N-S fence line. Located in ditch. Well Finish: Slotted PVC. Slug test done.

6. Well Yield

Test Date (yyyy/mm/dd): 1990/10/15
Start Time: 11:00 AM
Test Method: Air

Non pumping static level: 8.84 M

Rate of water removal: 0 Liters/Min

Depth of pump intake: 0 M

Water level at end of pumping: 8.84 M

Distance from top of CM casing to ground level:

Depth To water level (meters)	Elapsed Time Drawdown Minutes:Sec	Recovery
8.84	0:00	0
8.15	0:30	0
8.29	1:00	0
8.41	1:30	0
8.5	2:00	0
8.58	2:30	0
8.63	3:00	0
8.68	3:30	0
8.72	4:00	0
8.75	4:30	0
8.77	5:00	0
8.79	5:30	0
8.8	6:00	0
8.81	6:30	0
8.82	7:00	0
8.82	7:30	0
8.83	8:00	0
8.83	8:30	0
8.83	9:00	0
8.83	9:30	0
8.84	10:00	0

Total Drawdown: 0 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.: VA3321

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0352624
Map Verified:	Not Verified
Date Report Received:	1990/11/09
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALBERTA ENVIRONMENTAL PROTECTION/TECHNICAL SERVICES DIVISION		Drilling Company Approval No.: 9984567
Mailing Address: 9820 - 106 STREET	City or Town: EDMONTON AB CA	Postal Code: T5K 2J6
WellOwner's Name: ALTA ENV #2606E	Well Location Identifier:	
P.O. Box Number:	Mailing Address: SYLVAN LAKE	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
01	32	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary
Lot Block Plan

Well Elev: M
How Obtain: Not Obtain

3. Drilling Information

Type of Work: Piezometer
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No Rate: Liters
Gas Present: Oil Present:
Proposed well use: Observation
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
0.3	Topsoil
0.91	Brown Clay
1.52	Sand
3.05	Brown Silty Clay
4.27	Brown Sandy Clay
6.4	Gray Sandstone

5. Well Completion

Date Started(yyyy/mm/dd): 1990/10/12	Date Completed (yyyy/mm/dd): 1990/10/12
Well Depth: 6.4 M	Borehole Diameter: 0 CM
Casing Type: Plastic	Liner Type:
Size OD: 12.7 CM	Size OD: 0 CM
Wall Thickness: 0.39 CM	Wall Thickness: 0 CM
Bottom at: 0 M	Top: 0 M Bottom: 0 M
Perforations from: 0 M to: 0 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0 CM x 0 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by:	
Seal: Bentonite Chips/Tablets from: 0 M	to: 4.27 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: Plastic from: 5.49 M to: 6.4 M	Screen ID: 5.08 CM Slot Size: 0.06 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method: Attached To Riser	
Fittings Top: Coupler	Bottom: Plug
Pack: Artificial Grain Size: 12-20	Amount: 150 Pounds
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: Yes Held: 0	Documents Held: 2
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM

Comments:
Located 15' W of roadway & approx 25'E of N-S fence line. Piezometer situated in ditch. Well Finish: Slotted PVC. Slug test done.

6. Well Yield

Test Date (yyyy/mm/dd): 1990/10/12
Start Time: 11:00 AM
Test Method: Air
Non pumping static level: 3.66 M
Rate of water removal: 13.64 Liters/Min
Depth of pump intake: 5.49 M
Water level at end of pumping: 0 M
Distance from top of CM casing to ground level:
Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0 M
If water removal was less than 2 hr duration, reason why:
Recommended pumping rate: 0 Liters/Min
Recommended pump intake: 0 M
Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information? Yes

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.: VA3321

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0352626
Map Verified:	Not Verified
Date Report Received:	1990/11/09
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALBERTA ENVIRONMENTAL PROTECTION/TECHNICAL SERVICES DIVISION		Drilling Company Approval No.: 9984567
Mailing Address: 9820 - 106 STREET	City or Town: EDMONTON AB CA	Postal Code: T5K 2J6
WellOwner's Name: ALTA ENV #2603E	Well Location Identifier:	
P.O. Box Number:	Mailing Address: SYLVAN LAKE	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
01	32	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: M
How Obtain: Not Obtain

3. Drilling Information

Type of Work: Test Hole-Abandoned Reclaimed Well
Proposed well use:
Date Reclaimed: Materials Used: Bentonite Product
Anticipated Water Requirements/day 0 Liters
Method of Drilling: Rotary
Flowing Well: No Rate: Liters
Gas Present: Oil Present:

4. Formation Log

Depth from ground level (meters)	Lithology Description
0.3	Topsoil
0.91	Brown Sandy Clay
1.52	Sand
3.05	Brown Silty Clay
4.27	Brown Sandy Clay
6.1	Brown Sandstone
6.71	Gray Sandstone
7.01	Brown Sandstone
9.14	Brown Siltstone
9.75	Gray Sandstone
10.67	Brown Sandstone
11.89	Gray Siltstone
14.33	Gray Shale
15.24	Brown Shale
17.68	Gray Shale
22.25	Gray Sandstone
22.86	Gray Sandstone Stringers
27.13	Gray Sandstone
27.43	Gray Sandstone
33.53	Gray Sandstone
37.49	Green Shale
38.71	Gray Shale
39.01	Gray Sandstone
46.33	Gray Shale
48.46	Gray Shale

5. Well Completion

Date Started(yyyy/mm/dd): 1990/10/11	Date Completed (yyyy/mm/dd): 1990/10/11
Well Depth: 48.46 M	Borehole Diameter: 0 CM
Casing Type:	Liner Type:
Size OD: 0 CM	Size OD: 0 CM
Wall Thickness: 0 CM	Wall Thickness: 0 CM
Bottom at: 0 M	Top: 0 M Bottom: 0 M
Perforations	Perforations Size:
from: 0 M to: 0 M	0 CM x 0 CM
from: 0 M to: 0 M	0 CM x 0 CM
from: 0 M to: 0 M	0 CM x 0 CM
Perforated by:	
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount: 0
Geophysical Log Taken: ELECTRIC and GAMMA Retained on Files: ELECTRIC yes and GAMMA yes	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 0	Documents Held: 6
Pitless Adapter Type: Drop Pipe Type: Length:	Diameter:
Comments:	

6. Well Yield

Test Date (yyyy/mm/dd):
Start Time:
Test Method:
Non pumping static level: M
Rate of water removal: Liters/Min
Depth of pump intake: M
Water level at end of pumping: M
Distance from top of casing to ground level: CM

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery

Total Drawdown: M
If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: Liters/Min
Recommended pump intake: M
Type pump installed
Pump type:
Pump model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name:	UNKNOWN DRILLER
Certification No.:	VA3321

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0352966
Map Verified:	Not Verified
Date Report Received:	1990/11/29
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALBERTA ENVIRONMENTAL PROTECTION/TECHNICAL SERVICES DIVISION		Drilling Company Approval No.: 9984567
Mailing Address: 9820 - 106 STREET	City or Town: EDMONTON AB CA	Postal Code: T5K 2J6
WellOwner's Name: ALTA ENV #2623E	Well Location Identifier:	
P.O. Box Number:	Mailing Address: SYLVAN LAKE	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
01	32	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary
Lot Block Plan

Well Elev: M
How Obtain: Not Obtain

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No Rate: Liters
Gas Present: Oil Present:
Proposed well use: Observation
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
0.3	Topsoil
0.91	Brown Sandy Clay
1.52	Sand
3.05	Brown Silty Clay
4.27	Brown Sandy Clay
7.01	Gray Sandstone
9.14	Brown Siltstone
9.75	Gray Sandstone Stringers
10.67	Brown Sandstone
11.89	Gray Siltstone
14.33	Gray Shale
15.24	Brown Shale
17.68	Gray Shale
32.92	Gray Sandstone

5. Well Completion

Date Started(yyyy/mm/dd): 1990/11/07	Date Completed (yyyy/mm/dd): 1990/11/09
Well Depth: 32.92 M	Borehole Diameter: 0 CM
Casing Type: Steel	Liner Type: Steel
Size OD: 14.12 CM	Size OD: 11.43 CM
Wall Thickness: 0.48 CM	Wall Thickness: 0.4 CM
Bottom at: 27.13 M	Top: 24.38 M Bottom: 31.39 M
Perforations from: 0 M to: 0 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0 CM x 0 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by:	
Seal: Bentonite Chips/Tablets from: 0 M	to: 27.13 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: Stainless Steel from: 31.39 M to: 32.92 M	Screen ID: 10.16 CM Slot Size: 0.18 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method: Attached To Casing	
Fittings Top: Neoprene (Figure K)	Bottom: Bail
Pack: Natural Grain Size:	Amount: 0
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments: Well approx 15'W of N-S road way & approx 20'E of N-S fence line.	

6. Well Yield

Test Date (yyyy/mm/dd): 1990/11/09	Start Time: 11:00 AM
Test Method: Air	
Non pumping static level:	9.45 M
Rate of water removal:	90.92 Liters/Min
Depth of pump intake:	30.48 M
Water level at end of pumping:	0 M
Distance from top of CM casing to ground level:	

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 90.92 Liters/Min
Recommended pump intake: 0 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362664
Map Verified:	Not Verified
Date Report Received:	
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: UNKNOWN DRILLER		Drilling Company Approval No.: 99999
Mailing Address: UNKNOWN	City or Town: UNKNOWN AB CA	Postal Code:
WellOwner's Name: NATSEN, J.	Well Location Identifier:	
P.O. Box Number:	Mailing Address: ECKVILLE	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
NE	32	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 953.11 M
How Obtain: Estimated

3. Drilling Information

Type of Work: Federal Well Survey
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Hand Dug
Flowing Well: No Rate: Liters
Gas Present: Oil Present:

Proposed well use: Domestic & Stock
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
9.14	Blue Clay

5. Well Completion

Date Started(yyyy/mm/dd):
Date Completed (yyyy/mm/dd):

Well Depth: 9.14 M
Borehole Diameter: 0 CM

Casing Type:	Liner Type:
Size OD: 0 CM	Size OD: 0 CM
Wall Thickness: 0 CM	Wall Thickness: 0 CM
Bottom at: 0 M	Top: 0 M Bottom: 0 M

Perforations
from: 0 M to: 0 M
from: 0 M to: 0 M
from: 0 M to: 0 M
Perforations Size:
0 CM x 0 CM
0 CM x 0 CM
0 CM x 0 CM

Perforated by:

Seal:
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M

Screen Type:	Screen ID: 0 CM
from: 0 M to: 0 M	Slot Size: 0 CM
Screen Type:	Screen ID: 0 CM
from: 0 M to: 0 M	Slot Size: 0 CM

Screen Installation Method:

Fittings
Top: Bottom:

Pack:
Grain Size: Amount: 0

Geophysical Log Taken:
Retained on Files:

Additional Test and/or Pump Data
Chemistries taken By Driller: No
Held: 0 Documents Held: 1

Pitless Adapter Type:
Drop Pipe Type:
Length: M Diameter: CM

Comments:
PASKAPOO FORMATION.

6. Well Yield

Test Date (yyyy/mm/dd):
Start Time: 11:00 AM
Test Method: Bailer

Non pumping static level: 4.57 M
Rate of water removal: 0 Liters/Min
Depth of pump intake: 0 M
Water level at end of pumping: 0 M
Distance from top of casing to ground level: CM

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min
Recommended pump intake: 0 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

Alberta Environment

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.: 0362661
Map Verified: Not Verified
Date Report Received:
Measurements: Metric

1. Contractor & Well Owner Information

Company Name: GERMAN R E
Drilling Company Approval No.:
Mailing Address:
City or Town:
Postal Code:
WellOwner's Name: SNYDER, ALICE
Well Location Identifier:
P.O. Box Number:
Mailing Address: SYLVAN LAKE
Postal Code:
City:
Province:
Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
SE	32	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary
Lot Block Plan
Well Elev: 960.12 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed:
Materials Used:
Method of Drilling: Drilled
Flowing Well: No
Gas Present:
Rate: Liters
Oil Present:
Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
25.6	Clay
36.58	Shale

5. Well Completion

Date Started(yyyy/mm/dd):
Date Completed (yyyy/mm/dd): 1962/01/01
Well Depth: 36.58 M
Borehole Diameter: 0 CM
Casing Type: Unknown
Liner Type:
Size OD: 5.08 CM
Size OD: 0 CM
Wall Thickness: 0 CM
Wall Thickness: 0 CM
Bottom at: 29.26 M
Top: 0 M Bottom: 0 M
Perforations
from: 0 M to: 0 M
from: 0 M to: 0 M
from: 0 M to: 0 M
Perforations Size:
0 CM x 0 CM
0 CM x 0 CM
0 CM x 0 CM
Perforated by:
Seal: Driven
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M
Screen Type:
from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM
Screen Type:
from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM
Screen Installation Method:
Fittings
Top:
Bottom:
Pack:
Grain Size:
Amount: 0
Geophysical Log Taken:
Retained on Files:
Additional Test and/or Pump Data
Chemistries taken By Driller: No
Held: 0
Documents Held: 1
Pitless Adapter Type:
Drop Pipe Type:
Length:
Diameter:
Comments:

6. Well Yield

Test Date (yyyy/mm/dd):
Start Time:
Test Method:
Non pumping static level: M
Rate of water removal: Liters/Min
Depth of pump intake: M
Water level at end of pumping: M
Distance from top of casing to ground level: CM
Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: M
If water removal was less than 2 hr duration, reason why:
Recommended pumping rate: Liters/Min
Recommended pump intake: M
Type pump installed
Pump type:
Pump model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Alberta Environment

Well I.D.:	0362662
Map Verified:	Not Verified
Date Report Received:	
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: GERMAN R E		Drilling Company Approval No.:
Mailing Address:	City or Town:	Postal Code:
WellOwner's Name: STRONG, ALEX	Well Location Identifier:	
P.O. Box Number:	Mailing Address: SYLVAN LAKE	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
SE	32	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 960.12 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Drilled
Flowing Well: No Rate: Liters
Gas Present: Oil Present:

Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

6. Well Yield

Test Date (yyyy/mm/dd): 1962/08/15	Start Time: 11:00 AM
Test Method: Pump	
Non pumping static level:	4.27 M
Rate of water removal:	18.18 Liters/Min
Depth of pump intake:	0 M
Water level at end of pumping:	0 M

Distance from top of CM casing to ground level:

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 2.44 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

4. Formation Log

Depth from ground level (meters)	Lithology Description
18.29	Clay
33.53	Shale

5. Well Completion

Date Started(yyyy/mm/dd):	Date Completed (yyyy/mm/dd): 1962/08/15
Well Depth: 33.53 M	Borehole Diameter: 0 CM
Casing Type: Unknown	Liner Type:
Size OD: 5.08 CM	Size OD: 0 CM
Wall Thickness: 0 CM	Wall Thickness: 0 CM
Bottom at: 21.34 M	Top: 0 M Bottom: 0 M
Perforations	Perforations Size:
from: 0 M to: 0 M	0 CM x 0 CM
from: 0 M to: 0 M	0 CM x 0 CM
from: 0 M to: 0 M	0 CM x 0 CM
Perforated by:	
Seal: Driven from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount: 0
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments:	

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Alberta Environment

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0352625
Map Verified:	Not Verified
Date Report Received:	1990/11/09
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALBERTA ENVIRONMENTAL PROTECTION/TECHNICAL SERVICES DIVISION		Drilling Company Approval No.: 9984567
Mailing Address: 9820 - 106 STREET	City or Town: EDMONTON AB CA	Postal Code: T5K 2J6
WellOwner's Name: ALTA ENV #2607E	Well Location Identifier:	
P.O. Box Number:	Mailing Address: SYLVAN LAKE	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
01	32	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary
Lot Block Plan

Well Elev: M
How Obtain: Not Obtain

3. Drilling Information

Type of Work: Piezometer
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No Rate: Liters
Gas Present: Oil Present:
Proposed well use: Observation
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
0.3	Topsoil
0.91	Brown Sandy Clay
1.52	Sand
3.05	Brown Silty Clay

5. Well Completion

Date Started(yyyy/mm/dd): 1990/10/12	Date Completed (yyyy/mm/dd): 1990/10/12
Well Depth: 3.05 M	Borehole Diameter: 0 CM
Casing Type:	Liner Type: Plastic
Size OD: 0 CM	Size OD: 5.08 CM
Wall Thickness: 0 CM	Wall Thickness: 0.39 CM
Bottom at: 0 M	Top: 0 M Bottom: 3.05 M
Perforations from: 0.61 M to: 3.05 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0 CM x 0 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by:	
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Artificial Grain Size: 12-20	Amount: 130 Pounds
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: Yes Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments: Located approx 15' W of roadway & approx 25' E of N-S fence line in ditch.	

6. Well Yield

Test Date (yyyy/mm/dd): 1990/10/12	Start Time: 11:00 AM
Test Method: Air	
Non pumping static level:	2.74 M
Rate of water removal:	0 Liters/Min
Depth of pump intake:	3.05 M
Water level at end of pumping:	0 M
Distance from top of casing to ground level:	CM

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min
Recommended pump intake: 0 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name:	UNKNOWN DRILLER
Certification No.:	VA3321

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0350623
Map Verified:	Not Verified
Date Report Received:	1990/05/18
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALBERTA EAGLE DRILLING LTD.		Drilling Company Approval No.: 117793
Mailing Address: BOX 9036	City or Town: SYLVAN LAKE AB CA	Postal Code: T4S 1S6
WellOwner's Name: SHOETTLER, RON	Well Location Identifier:	
P.O. Box Number:	Mailing Address: 6 MCLEVIN CRESCENT	Postal Code:
City: RED DEER	Province: AB	Country: CA

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
SE	32	039	02	5

Location in Quarter
0 M from S Boundary
0 M from W Boundary

Lot Block Plan

Well Elev: M | How Obtain: Not Obtain

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used: Unknown
Method of Drilling: Rotary
Flowing Well: No Rate: Liters
Gas Present: Yes Oil Present: No

Proposed well use: Stock
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
6.4	Brown Sandy Clay
16.46	Brown Sandstone
23.47	Gray Shale
36.27	Gray Sandstone
36.58	Gray Silty Shale

5. Well Completion

Date Started(yyyy/mm/dd): 1990/02/28	Date Completed (yyyy/mm/dd): 1990/02/28
Well Depth: 36.58 M	Borehole Diameter: 0 CM
Casing Type: Plastic	Liner Type: Plastic
Size OD: 13.97 CM	Size OD: 11.43 CM
Wall Thickness: 0.64 CM	Wall Thickness: 0.54 CM
Bottom at: 23.47 M	Top: 22.86 M Bottom: 36.58 M
Perforations from: 27.43 M to: 36.58 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0 CM x 0 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by:	
Seal: Bentonite Chips/Tablets from: 0 M	to: 23.47 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount: 0
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 0	Documents Held: 2
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM

Comments:
Soft WATER, low iron, 8.8 ph, H2S ODORS.

6. Well Yield

Test Date (yyyy/mm/dd): 1990/02/28 Start Time: 0:00 AM
Test Method: Pump & Air
Non pumping static level: 14.48 M
Rate of water removal: 127.29 Liters/Min
Depth of pump intake: 0 M
Water level at end of pumping: 32 M
Distance from top of CM casing to ground level:

Depth To water level (meters)	Elapsed Time Drawdown Minutes:Sec	Recovery
14.47	0:00	16
15.05	1:00	15.45
15.1	2:00	15.4
15.14	3:00	15.36
15.18	4:00	15.33
15.22	5:00	15.31
15.24	6:00	15.29
15.26	7:00	15.26
15.29	8:00	15.25
15.31	9:00	15.23
15.33	10:00	15.21
15.36	12:00	15.19
15.4	14:00	15.16
15.43	16:00	15.14
15.45	18:00	15.12
15.48	20:00	15.1
15.53	25:00	15.05
15.58	30:00	15.02
15.62	35:00	14.99
15.35	40:00	14.97
15.41	50:00	14.92
15.79	60:00	14.89
15.86	75:00	14.84
15.91	90:00	14.81
15.96	105:00	14.78

Total Drawdown: 1.22 M
If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min
Recommended pump intake: 0 M
Type Pump Installed
Pump Type:

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.: VA7724
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.: 0362671
Map Verified: Map
Date Report Received:
Measurements: Metric

1. Contractor & Well Owner Information

Company Name: KINGSEP ROBERT
Drilling Company Approval No.:
Mailing Address:
City or Town:
Postal Code:
WellOwner's Name: MOTTUS, W
Well Location Identifier:
P.O. Box Number:
Mailing Address: ROCKY MTN HOUSE
Postal Code:
City:
Province:
Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
11	33	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary
Lot Block Plan
Well Elev: 960.12 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed:
Materials Used:
Method of Drilling: Cable Tool
Flowing Well: No
Rate: Liters
Gas Present:
Oil Present:
Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
3.05	Clay
6.1	Brown Shale
9.75	Blue Shale
19.2	Brown Sandstone

5. Well Completion

Date Started(yyyy/mm/dd):
Date Completed (yyyy/mm/dd): 1962/05/01
Well Depth: 19.2 M
Borehole Diameter: 0 CM
Casing Type: Unknown
Liner Type:
Size OD: 12.7 CM
Size OD: 0 CM
Wall Thickness: 0 CM
Wall Thickness: 0 CM
Bottom at: 10.97 M
Top: 0 M Bottom: 0 M
Perforations
from: 0 M to: 0 M
from: 0 M to: 0 M
from: 0 M to: 0 M
Perforations Size:
0 CM x 0 CM
0 CM x 0 CM
0 CM x 0 CM
Perforated by:
Seal: Driven
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M
Screen Type:
from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM
Screen Type:
from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM
Screen Installation Method:
Fittings
Top:
Bottom:
Pack:
Grain Size:
Amount: 0
Geophysical Log Taken:
Retained on Files:
Additional Test and/or Pump Data
Chemistries taken By Driller: Yes
Held: 0
Documents Held: 1
Pitless Adapter Type:
Drop Pipe Type:
Length: M
Diameter: CM
Comments:
MEDIUM HARD WATER.

6. Well Yield

Test Date (yyyy/mm/dd): 1962/05/02
Start Time: 11:00 AM
Test Method: Unknown
Non pumping static level: 8.23 M
Rate of water removal: 136.38 Liters/Min
Depth of pump intake: 0 M
Water level at end of pumping: 0 M
Distance from top of casing to ground level: CM
Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 1.52 M
If water removal was less than 2 hr duration, reason why:
Recommended pumping rate: 0 Liters/Min
Recommended pump intake: 0 M
Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Alberta Environment

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.: 0362676
Map Verified: Not Verified
Date Report Received:
Measurements: Metric

1. Contractor & Well Owner Information

Company Name: NELSON DRILLING & PLUMBING
Drilling Company Approval No.:
Mailing Address:
City or Town:
Postal Code:
WellOwner's Name: LOEWEN, ALF
Well Location Identifier:
P.O. Box Number:
Mailing Address: RED DEER
Postal Code:
City:
Province:
Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
NE	33	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary
Lot Block Plan
Well Elev: 960.12 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed:
Materials Used:
Method of Drilling: Rotary
Flowing Well: No
Gas Present:
Rate: Liters
Oil Present:
Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
7.32	Brown Clay
8.53	Sandstone Stringers
25.6	Brown See Comments Shale
26.82	Hard Sandstone Stringers
32	Blue Shale
38.1	Blue Soft Shale
56.39	Blue Water Bearing Shale
57.91	Blue Shale

5. Well Completion

Date Started(yyyy/mm/dd):
Date Completed (yyyy/mm/dd): 1970/07/01
Well Depth: 57.91 M
Borehole Diameter: 0 CM
Casing Type: Galvanized Steel
Liner Type:
Size OD: 5.08 CM
Size OD: 0 CM
Wall Thickness: 0 CM
Wall Thickness: 0 CM
Bottom at: 53.34 M
Top: 0 M Bottom: 0 M
Perforations
from: 0 M to: 0 M
from: 0 M to: 0 M
from: 0 M to: 0 M
Perforations Size:
0 CM x 0 CM
0 CM x 0 CM
0 CM x 0 CM
Perforated by:
Seal: Driven
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M
Screen Type:
from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM
Screen Type:
from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM
Screen Installation Method:
Fittings
Top:
Bottom:
Pack:
Grain Size:
Amount: 0
Geophysical Log Taken:
Retained on Files:
Additional Test and/or Pump Data
Chemistries taken By Driller: Yes
Held: 0
Documents Held: 1
Pitless Adapter Type:
Drop Pipe Type:
Length: M
Diameter: CM
Comments:
25' 85' 125' 160' DRY SEAM. SOFT WATER.

6. Well Yield

Test Date (yyyy/mm/dd): 1970/07/01
Start Time: 11:00 AM
Test Method: Pump
Non pumping static level: 49.38 M
Rate of water removal: 45.46 Liters/Min
Depth of pump intake: 0 M
Water level at end of pumping: 49.38 M
Distance from top of CM casing to ground level:
Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0 M
If water removal was less than 2 hr duration, reason why:
Recommended pumping rate: 0 Liters/Min
Recommended pump intake: 53.34 M
Type Pump Installed
Pump Type: SUB
Pump Model: MYERS
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362677
Map Verified:	Not Verified
Date Report Received:	
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: UNKNOWN DRILLER		Drilling Company Approval No.: 99999
Mailing Address: UNKNOWN	City or Town: UNKNOWN AB CA	Postal Code:
WellOwner's Name: PADERSON, E.	Well Location Identifier:	
P.O. Box Number:	Mailing Address: ECKVILLE	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
NE	33	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 960.12 M
How Obtain: Estimated

3. Drilling Information

Type of Work: Federal Well Survey
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Drilled
Flowing Well: No
Gas Present:
Rate: Liters
Oil Present:

Proposed well use: Domestic & Stock
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description

5. Well Completion

Date Started(yyyy/mm/dd):
Date Completed (yyyy/mm/dd):

Well Depth: 26.21 M
Borehole Diameter: 0 CM

Casing Type: Galvanized Steel
Liner Type:

Size OD: 15.24 CM
Size OD: 0 CM

Wall Thickness: 0 CM
Wall Thickness: 0 CM

Bottom at: 0 M
Top: 0 M Bottom: 0 M

Perforations
from: 0 M to: 0 M
from: 0 M to: 0 M
from: 0 M to: 0 M
Perforations Size:
0 CM x 0 CM
0 CM x 0 CM
0 CM x 0 CM

Perforated by:

Seal:
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M

Screen Type:
from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM

Screen Type:
from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM

Screen Installation Method:

Fittings
Top: Bottom:

Pack:
Grain Size: Amount: 0

Geophysical Log Taken:
Retained on Files:

Additional Test and/or Pump Data
Chemistries taken By Driller: No
Held: 0
Documents Held: 1

Pitless Adapter Type:
Drop Pipe Type:
Length: M
Diameter: CM

Comments:

6. Well Yield

Test Date (yyyy/mm/dd):
Start Time: 11:00 AM

Test Method: Unknown

Non pumping static level: 9.14 M

Rate of water removal: 0 Liters/Min

Depth of pump intake: 0 M

Water level at end of pumping: 0 M

Distance from top of CM casing to ground level:

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type: SP
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362678
Map Verified:	Not Verified
Date Report Received:	1976/05/28
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: RICHMOND WW DRLG		Drilling Company Approval No.:
Mailing Address:	City or Town:	Postal Code:
WellOwner's Name: TOLSON, SUSAN	Well Location Identifier:	
P.O. Box Number: 286	Mailing Address: ECKVILLE	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
NE	33	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 949.45 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No
Gas Present: Rate: Liters Oil Present:

Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
12.19	Sandy Clay & Rocks
21.34	Brown Shale
25.91	Black Shale
42.67	Gray Shale & Sandstone

5. Well Completion

Date Started(yyyy/mm/dd): 1976/05/12	Date Completed (yyyy/mm/dd): 1976/05/13
Well Depth: 42.67 M	Borehole Diameter: 0 CM
Casing Type: Galvanized Steel	Liner Type:
Size OD: 11.43 CM	Size OD: 0 CM
Wall Thickness: 0.36 CM	Wall Thickness: 0 CM
Bottom at: 39.62 M	Top: 0 M Bottom: 0 M
Perforations from: 0 M to: 0 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0 CM x 0 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by:	
Seal: Driven from: 0 M	to: 39.62 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount: 0
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 1	Documents Held: 2
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments:	

6. Well Yield

Test Date (yyyy/mm/dd): 1976/05/13	Start Time: 11:00 AM
Test Method: Pump	
Non pumping static level:	18.29 M
Rate of water removal:	31.82 Liters/Min
Depth of pump intake:	27.43 M
Water level at end of pumping:	27.43 M
Distance from top of CM casing to ground level:	

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362668
Map Verified:	Not Verified
Date Report Received:	1979/06/12
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: FORRESTER WATER WELL DRILLING (1981) LTD.		Drilling Company Approval No.: 2318
Mailing Address: RR 1	City or Town: RED DEER AB CA	Postal Code:
WellOwner's Name: URG, DEAN	Well Location Identifier:	
P.O. Box Number:	Mailing Address: RR2, RED DEER	Postal Code: T4N 5E2
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
NW	33	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary
Lot Block Plan

Well Elev: 944.88 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Cable Tool
Flowing Well: No
Gas Present: Rate: Liters
Oil Present:
Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

6. Well Yield

Test Date (yyyy/mm/dd): 1979/03/01	Start Time: 11:00 AM
Test Method: Bailer	
Non pumping static level:	18.29 M
Rate of water removal:	45.46 Liters/Min
Depth of pump intake:	30.48 M
Water level at end of pumping:	38.1 M
Distance from top of casing to ground level:	CM

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 19.81 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min
Recommended pump intake: 0 M
Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

4. Formation Log

Depth from ground level (meters)	Lithology Description
0.3	Topsoil
8.84	Light Brown Sandy Clay
10.06	Light Brown Hard Clay
11.58	Brown Soft Sandstone
12.5	Gray Soft Shale & Coal
13.11	Gray Shale
13.72	Gray Hard Sandstone
15.24	Blue Shale
19.2	Blue Bentonitic Sandstone
19.81	Blue Gray Hard Sandstone
21.95	Blue Sticky Shale
26.52	Blue Gray Sandy Shale
28.35	Blue Gray Hard Shale
31.7	Dark Gray Sticky Shale
35.05	Dark Gray Water Bearing Sandstone
37.8	Bluish Green Water Bearing Sandstone
38.1	Greenish Gray Sandy Shale

5. Well Completion

Date Started(yyyy/mm/dd): 1979/02/26	Date Completed (yyyy/mm/dd): 1979/03/01
Well Depth: 38.1 M	Borehole Diameter: 0 CM
Casing Type: Steel	Liner Type:
Size OD: 13.97 CM	Size OD: 0 CM
Wall Thickness: 0.66 CM	Wall Thickness: 0 CM
Bottom at: 32 M	Top: 0 M Bottom: 0 M
Perforations from: 0 M to: 0 M	Perforations Size: 0 CM x 0 CM
from: 0 M to: 0 M	0 CM x 0 CM
from: 0 M to: 0 M	0 CM x 0 CM
Perforated by:	
Seal: Driven from: 0 M	to: 32 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount: 0
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: Yes Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments: MEDIUM HARD WATER.	

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

Alberta Environment

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362669
Map Verified:	Map
Date Report Received:	1984/10/02
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: MAGNUM DRLG		Drilling Company Approval No.:
Mailing Address:	City or Town:	Postal Code:
WellOwner's Name: MOTTUS, WALLY	Well Location Identifier:	
P.O. Box Number: 215	Mailing Address: ECKVILLE	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
NW	33	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 960.12 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No
Gas Present: No
Rate: Liters
Oil Present: No
Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
4.57	Brown Sand
9.14	Brown Clay & Sand
18.29	Blue Sandstone

5. Well Completion

Date Started(yyyy/mm/dd): 1984/07/31
Date Completed (yyyy/mm/dd): 1984/07/31
Well Depth: 18.29 M
Borehole Diameter: 0 CM
Casing Type: Steel
Liner Type: Steel
Size OD: 11.43 CM
Size OD: 7.62 CM
Wall Thickness: 0.4 CM
Wall Thickness: 0 CM
Bottom at: 10.67 M
Top: 9.14 M Bottom: 18.29 M
Perforations from: 12.19 M to: 18.29 M
Perforations Size: 2.54 CM x 30.48 CM
from: 0 M to: 0 M
0 CM x 0 CM
from: 0 M to: 0 M
0 CM x 0 CM
Perforated by: Torch
Seal: Driven from: 0 M to: 10.36 M
Seal: from: 0 M to: 0 M
Seal: from: 0 M to: 0 M
Screen Type: from: 0 M to: 0 M
Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M
Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:
Fittings Top: Bottom:
Pack: Grain Size: Amount: 0
Geophysical Log Taken:
Retained on Files:
Additional Test and/or Pump Data
Chemistries taken By Driller: No
Held: 0
Documents Held: 1
Pitless Adapter Type:
Drop Pipe Type:
Length: 7.92 M
Diameter: 2.54 CM
Comments:

6. Well Yield

Test Date (yyyy/mm/dd): 1984/07/31
Start Time: 11:00 AM
Test Method: Bailer
Non pumping static level: 7.62 M
Rate of water removal: 9.09 Liters/Min
Depth of pump intake: 10.36 M
Water level at end of pumping: 9.14 M
Distance from top of CM casing to ground level:
Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 1.52 M
If water removal was less than 2 hr duration, reason why:
Recommended pumping rate: 13.64 Liters/Min
Recommended pump intake: 10.36 M
Type Pump Installed
Pump Type: SUB
Pump Model:
H.P.: .5
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0406356
Map Verified:	Not Verified
Date Report Received:	1995/06/26
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALKEN BASIN DRILLING LTD.		Drilling Company Approval No.: 38394
Mailing Address: BOX 47	City or Town: BENTLEY AB CANADA	Postal Code: T0C 0J0
WellOwner's Name: SABADOS, ALEX	Well Location Identifier:	
P.O. Box Number:	Mailing Address: 42 MALIBU RD SW, CALGARY	Postal Code: T2V 1W8
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
NW	33	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: M | How Obtain: Not Obtain

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No
Gas Present: No
Rate: Liters
Oil Present: No

Proposed well use: Domestic
Anticipated Water Requirements/day 1591.1 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
3.05	Brown Clay & Rocks
7.62	Brown Sandstone
11.58	Gray Shale
17.98	Brown Sandstone
19.2	Gray Sandstone

5. Well Completion

Date Started(yyyy/mm/dd): 1995/06/08	Date Completed (yyyy/mm/dd): 1995/06/08
Well Depth: 19.2 M	Borehole Diameter: 0 CM
Casing Type: Steel	Liner Type: Plastic
Size OD: 13.97 CM	Size OD: 11.43 CM
Wall Thickness: 0.62 CM	Wall Thickness: 0.6 CM
Bottom at: 10.36 M	Top: 7.01 M Bottom: 19.2 M
Perforations from: 10.36 M to: 19.2 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0.95 CM x 0.95 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by: Hand Drill	
Seal: Drive Shoe from: 0 M	to: 10.36 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount:
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM

Comments:
DRILLER REPORTS DISTANCE FROM TOP OF CASING TO GROUND LEVEL: 2'.

6. Well Yield

Test Date (yyyy/mm/dd): 1995/06/08	Start Time: 11:00 AM
Test Method: Air	
Non pumping static level:	8.23 M
Rate of water removal:	181.84 Liters/Min
Depth of pump intake:	19.2 M
Water level at end of pumping:	19.2 M
Distance from top of casing to ground level:	CM

Depth To water level (meters) Elapsed Time Drawdown Minutes:Sec	Recovery
2:00	19.2
3:00	14.63
4:00	10.97
5:00	8.23
7:00	8.23
12:00	8.23
30:00	8.23
60:00	8.23
120:00	8.23

Total Drawdown: 10.97 M
If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 45.46 Liters/Min
Recommended pump intake: 13.72 M
Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.: 5881AD
This well was constructed in accordance with the Water

Water Well Drilling Report

Alberta Environment

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362665
Map Verified:	Not Verified
Date Report Received:	
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: NELSON DRILLING & PLUMBING		Drilling Company Approval No.:
Mailing Address:	City or Town:	Postal Code:
WellOwner's Name: RANAGHAN	Well Location Identifier:	
P.O. Box Number:	Mailing Address: CABIN N SIDE OF SYLVAN LAKE, CALGARY	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
SW	33	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 944.88 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No Rate: Liters
Gas Present: Oil Present:

Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
6.1	Brown Sandy Clay
17.98	Brown Shale
18.29	Sandstone Stringers
20.12	Brown Shale
20.42	Sandstone Stringers
25.91	Brown Hard Shale
28.96	Brown Shale
42.67	Water Bearing Shale & Sandstone
57.91	Blue Shale & Sandstone Ledges

5. Well Completion

Date Started(yyyy/mm/dd): Date Completed (yyyy/mm/dd): 1970/08/01

Well Depth: 57.91 M Borehole Diameter: 0 CM

Casing Type: Galvanized Steel Liner Type:

Size OD: 5.08 CM Size OD: 0 CM

Wall Thickness: 0 CM Wall Thickness: 0 CM

Bottom at: 30.48 M Top: 0 M Bottom: 0 M

Perforations
from: 0 M to: 0 M
from: 0 M to: 0 M
from: 0 M to: 0 M

Perforations Size:
0 CM x 0 CM
0 CM x 0 CM
0 CM x 0 CM

Perforated by:

Seal: Driven
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M

Screen Type: Screen ID: 0 CM
from: 0 M to: 0 M Slot Size: 0 CM

Screen Type: Screen ID: 0 CM
from: 0 M to: 0 M Slot Size: 0 CM

Screen Installation Method:

Fittings
Top: Bottom:

Pack:
Grain Size: Amount: 0

Geophysical Log Taken:
Retained on Files:

Additional Test and/or Pump Data
Chemistries taken By Driller: Yes
Held: 0 Documents Held: 1

Pitless Adapter Type:
Drop Pipe Type:
Length: M Diameter: CM

Comments:
SOFT WATER.

6. Well Yield

Test Date (yyyy/mm/dd):	Start Time:
1970/08/01	11:00 AM

Test Method: Pump

Non pumping static level:	23.77 M
Rate of water removal:	45.46 Liters/Min
Depth of pump intake:	0 M
Water level at end of pumping:	23.77 M

Distance from top of CM casing to ground level:

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 30.48 M

Type Pump Installed
Pump Type: HAND PUMP
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362666
Map Verified:	Not Verified
Date Report Received:	1971/10/25
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: NELSON DRILLING & PLUMBING		Drilling Company Approval No.:
Mailing Address:	City or Town:	Postal Code:
WellOwner's Name: PARNEY	Well Location Identifier:	
P.O. Box Number:	Mailing Address: COTTAGE @ N END OF SYLVAN LAKE, CALGARY	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
SW	33	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 944.88 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No Rate: Liters
Gas Present: Oil Present:

Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

6. Well Yield

Test Date (yyyy/mm/dd): 1971/08/01	Start Time: 11:00 AM
Test Method: Bailer	
Non pumping static level:	8.23 M
Rate of water removal:	45.46 Liters/Min
Depth of pump intake:	0 M
Water level at end of pumping:	0 M

Distance from top of CM casing to ground level:

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 15.24 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

4. Formation Log

Depth from ground level (meters)	Lithology Description
5.18	Brown Clay
12.19	Brown Shale
32	Blue Shale
32.31	Sandstone Stringers
34.14	Water Bearing Shale
36.58	Blue Shale

5. Well Completion

Date Started(yyyy/mm/dd):	Date Completed (yyyy/mm/dd): 1971/08/01
Well Depth: 36.58 M	Borehole Diameter: 0 CM
Casing Type: Galvanized Steel	Liner Type:
Size OD: 5.08 CM	Size OD: 0 CM
Wall Thickness: 0 CM	Wall Thickness: 0 CM
Bottom at: 30.78 M	Top: 0 M Bottom: 0 M
Perforations from: 0 M to: 0 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0 CM x 0 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by:	
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount: 0
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: Yes Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM

Comments:
SOFT WATER.

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0341885
Map Verified:	Not Verified
Date Report Received:	2002/11/29
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALKEN BASIN DRILLING LTD.		Drilling Company Approval No.: 38394
Mailing Address: BOX 47	City or Town: BENTLEY AB CANADA	Postal Code: T0C 0J0
WellOwner's Name: DEGROAT, RICHARD	Well Location Identifier:	
P.O. Box Number:	Mailing Address: 300 509 8 AVE SW, CALGARY	Postal Code: T2P 1G1
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
SW	33	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: M
How Obtain: Not Obtain

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No
Gas Present: No
Rate: Liters
Oil Present: No
Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
5.49	Brown Sandy Clay
9.14	Brown Sandstone
16.15	Brownish Gray Sandstone Stringers
24.38	Gray Coarse Grained Sandstone

5. Well Completion

Date Started(yyyy/mm/dd): 2002/11/13	Date Completed (yyyy/mm/dd): 2002/11/13
Well Depth: 24.38 M	Borehole Diameter: 0 CM
Casing Type: Steel	Liner Type: Plastic
Size OD: 14.12 CM	Size OD: 11.43 CM
Wall Thickness: 0.66 CM	Wall Thickness: 0.54 CM
Bottom at: 12.5 M	Top: 6.1 M Bottom: 24.38 M
Perforations from: 16.76 M to: 24.38 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0.95 CM x 0.95 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by: Hand Drill	
Seal: Driven & Bentonite from: 0 M	to: 16.76 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount:
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments:	

6. Well Yield

Test Date (yyyy/mm/dd): 2002/11/13	Start Time: 11:00 AM
Test Method: Pump	
Non pumping static level:	9.6 M
Rate of water removal:	340.95 Liters/Min
Depth of pump intake:	19.81 M
Water level at end of pumping:	11.28 M
Distance from top of casing to ground level:	CM

Depth To water level (meters) Elapsed Time

Drawdown	Minutes:Sec	Recovery
9.61	0:00	11.39
11.26	1:00	9.63
11.31	2:00	9.61
11.34	3:00	9.61
11.38	4:00	9.61
11.39	5:00	9.61
11.39	120:00	9.61

Total Drawdown: 1.52 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 68.19 Liters/Min

Recommended pump intake: 18.29 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.: 40628A
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0355186
Map Verified:	Map
Date Report Received:	1985/06/14
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: MEDICINE VALLEY WATER WELLS		Drilling Company Approval No.: 119346
Mailing Address: RR 3	City or Town: ECKVILLE AB CA	Postal Code: T0M 0X0
WellOwner's Name: BUTTYNEN, DICK	Well Location Identifier:	
P.O. Box Number:	Mailing Address: 5312 105 AVE, EDMONTON	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
NE	33	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 960.12 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Cable Tool
Flowing Well: No Rate: Liters
Gas Present: Oil Present:

Proposed well use: Domestic & Stock
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
4.27	Brown Clay
9.14	Brown Shale
13.11	Gray Shale Stringers
18.29	Brown Sandy Shale
27.43	Gray Sandstone
32.92	Blue Gray Shale
33.83	Gray Sandstone
36.58	Gray Shale

5. Well Completion

Date Started(yyyy/mm/dd): 1982/05/10	Date Completed (yyyy/mm/dd): 1982/05/12
Well Depth: 36.58 M	Borehole Diameter: 0 CM
Casing Type: Steel	Liner Type:
Size OD: 13.97 CM	Size OD: 0 CM
Wall Thickness: 0.62 CM	Wall Thickness: 0 CM
Bottom at: 29.57 M	Top: 0 M Bottom: 0 M
Perforations from: 0 M to: 0 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0 CM x 0 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by:	
Seal: Driven from: 0 M	to: 29.57 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount: 0
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments: Originally @ SW-33-39-2-W5.	

6. Well Yield

Test Date (yyyy/mm/dd): 1982/05/12 Test Method: Bailer	Start Time: 11:00 AM
Non pumping static level:	12.8 M
Rate of water removal:	63.64 Liters/Min
Depth of pump intake:	0 M
Water level at end of pumping:	36.58 M
Distance from top of CM casing to ground level:	

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 23.77 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Alberta Environment

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362715
Map Verified:	Not Verified
Date Report Received:	1970/11/05
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: LAWSON, M.E. WATER WELLS		Drilling Company Approval No.:
Mailing Address:	City or Town:	Postal Code:
WellOwner's Name: RICHARSON, JACK	Well Location Identifier:	
P.O. Box Number:	Mailing Address: NORTH END SYLVAN LAKE, OLDS	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
NW	34	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 960.12 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No
Gas Present: Rate: Liters
Oil Present:

Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
5.18	Sandy Clay
6.1	Sand
15.24	Clay & Boulders
18.29	Sandstone

5. Well Completion

Date Started(yyyy/mm/dd):
Date Completed (yyyy/mm/dd): 1970/08/18

Well Depth: 18.29 M
Borehole Diameter: 0 CM

Casing Type: Steel
Liner Type:

Size OD: 12.7 CM
Size OD: 0 CM

Wall Thickness: 0 CM
Wall Thickness: 0 CM

Bottom at: 15.54 M
Top: 0 M Bottom: 0 M

Perforations
from: 0 M to: 0 M
from: 0 M to: 0 M
from: 0 M to: 0 M
Perforations Size:
0 CM x 0 CM
0 CM x 0 CM
0 CM x 0 CM

Perforated by:

Seal:
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M

Screen Type:
from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM

Screen Type:
from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM

Screen Installation Method:

Fittings
Top: Bottom:

Pack:
Grain Size: Amount: 0

Geophysical Log Taken:
Retained on Files:

Additional Test and/or Pump Data
Chemistries taken By Driller: No
Held: 0 Documents Held: 1

Pitless Adapter Type:
Drop Pipe Type:
Length: M Diameter: CM

Comments:

6. Well Yield

Test Date (yyyy/mm/dd): 1970/08/18
Start Time: 11:00 AM
Test Method: Pump

Non pumping static level: 5.79 M

Rate of water removal: 90.92 Liters/Min

Depth of pump intake: 0 M

Water level at end of pumping: 0 M

Distance from top of CM casing to ground level:

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 6.4 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362716
Map Verified:	Not Verified
Date Report Received:	1976/09/03
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: RICHMOND WW DRLG		Drilling Company Approval No.:
Mailing Address:	City or Town:	Postal Code:
WellOwner's Name: WEINMAN, GARRY	Well Location Identifier:	
P.O. Box Number:	Mailing Address: 1312 CRAIG RD SW, CALGARY	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
NW	34	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 975.36 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No
Gas Present: Rate: Liters
Oil Present:

Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
8.53	Brown Shale
20.73	Brown Sandstone
25.91	Gray Sandstone

5. Well Completion

Date Started(yyyy/mm/dd): 1976/08/12	Date Completed (yyyy/mm/dd): 1976/08/13
Well Depth: 25.91 M	Borehole Diameter: 0 CM
Casing Type: Galvanized Steel	Liner Type:
Size OD: 11.43 CM	Size OD: 0 CM
Wall Thickness: 0.36 CM	Wall Thickness: 0 CM
Bottom at: 21.64 M	Top: 0 M Bottom: 0 M
Perforations from: 0 M to: 0 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0 CM x 0 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by:	
Seal: Driven from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount: 0
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: Yes Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM

Comments:
MEDIUM HARD WATER.

6. Well Yield

Test Date (yyyy/mm/dd): 1976/08/13	Start Time: 11:00 AM
Test Method: Pump	
Non pumping static level:	14.94 M
Rate of water removal:	227.3 Liters/Min
Depth of pump intake:	19.81 M
Water level at end of pumping:	19.81 M
Distance from top of CM casing to ground level:	

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Alberta Environment

Well I.D.:	0362717
Map Verified:	Not Verified
Date Report Received:	
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: RICHMOND WW DRLG		Drilling Company Approval No.:
Mailing Address:	City or Town:	Postal Code:
WellOwner's Name: PIERSON, GORDON	Well Location Identifier:	
P.O. Box Number:	Mailing Address: 12 VARNA PLACE NW, CALGARY	Postal Code: T3A 0E8
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
NW	34	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 969.26 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No
Gas Present: Rate: Liters Oil Present:
Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
10.67	Clay & Rocks
25.91	Brown Sandstone
38.1	Gray Shale & Sandstone

5. Well Completion

Date Started(yyyy/mm/dd): 1976/07/14
Date Completed (yyyy/mm/dd): 1976/07/15
Well Depth: 38.1 M
Borehole Diameter: 0 CM
Casing Type: Galvanized Steel
Liner Type:
Size OD: 11.43 CM
Size OD: 0 CM
Wall Thickness: 0.36 CM
Wall Thickness: 0 CM
Bottom at: 31.09 M
Top: 0 M Bottom: 0 M

Perforations
from: 0 M to: 0 M
from: 0 M to: 0 M
from: 0 M to: 0 M
Perforations Size:
0 CM x 0 CM
0 CM x 0 CM
0 CM x 0 CM

Perforated by:
Seal: Driven
from: 0 M to: 31.09 M
Seal:
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M

Screen Type:
from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM
Screen Type:
from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM

Screen Installation Method:
Fittings
Top: Bottom:
Pack:
Grain Size: Amount: 0
Geophysical Log Taken:
Retained on Files:
Additional Test and/or Pump Data
Chemistries taken By Driller: Yes
Held: 0 Documents Held: 1
Pitless Adapter Type:
Drop Pipe Type:
Length: M Diameter: CM
Comments:
SOFT WATER.

6. Well Yield

Test Date (yyyy/mm/dd): 1976/07/15
Start Time: 11:00 AM
Test Method: Pump
Non pumping static level: 9.14 M
Rate of water removal: 18.18 Liters/Min
Depth of pump intake: 18.29 M
Water level at end of pumping: 0 M
Distance from top of CM casing to ground level:
Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0 M
If water removal was less than 2 hr duration, reason why:
Recommended pumping rate: 0 Liters/Min
Recommended pump intake: 0 M
Type Pump Installed
Pump Type: HAND PUMP
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362718
Map Verified:	Not Verified
Date Report Received:	1981/05/20
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALBERTA EAGLE DRILLING LTD.		Drilling Company Approval No.: 117793
Mailing Address: BOX 9036	City or Town: SYLVAN LAKE AB CA	Postal Code: T4S 1S6
WellOwner's Name: REID, WILF	Well Location Identifier:	
P.O. Box Number:	Mailing Address: 23 BAINES CRES, RED DEER	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
NW	34	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 969.26 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No Rate: Liters
Gas Present: Oil Present:
Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
3.66	Clay
9.14	Shale
33.53	Brown Sandstone
45.72	Shale & Sandstone Ledges

5. Well Completion

Date Started(yyyy/mm/dd): 1981/04/28	Date Completed (yyyy/mm/dd): 1981/04/30
Well Depth: 45.72 M	Borehole Diameter: 0 CM
Casing Type: Galvanized Steel	Liner Type:
Size OD: 11.43 CM	Size OD: 0 CM
Wall Thickness: 0.36 CM	Wall Thickness: 0 CM
Bottom at: 37.19 M	Top: 0 M Bottom: 0 M
Perforations from: 0 M to: 0 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0 CM x 0 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by:	
Seal: Driven from: 0 M	to: 37.19 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount: 0
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: Yes Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments: MEDIUM HARD WATER.	

6. Well Yield

Test Date (yyyy/mm/dd): 1981/04/30	Start Time: 11:00 AM
Test Method: Pump	
Non pumping static level:	23.47 M
Rate of water removal:	45.46 Liters/Min
Depth of pump intake:	30.48 M
Water level at end of pumping:	27.43 M
Distance from top of casing to ground level:	CM

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 3.96 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 45.46 Liters/Min

Recommended pump intake: 30.48 M

Type Pump Installed
Pump Type: SUB
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

Alberta Environment

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.: 0362720
Map Verified: Not Verified
Date Report Received:
Measurements: Metric

1. Contractor & Well Owner Information

Company Name: ERICKSON & KANGAS
Drilling Company Approval No.: NONE
Mailing Address: UNKNOWN
City or Town:
Postal Code:
WellOwner's Name: GOUTHEAU, DENNIS
Well Location Identifier:
P.O. Box Number:
Mailing Address: SYLVAN LAKE
Postal Code:
City:
Province:
Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
NW	34	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary
Lot Block Plan
Well Elev: 960.12 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed:
Materials Used:
Method of Drilling: Cable Tool
Flowing Well: No
Rate: Liters
Gas Present:
Oil Present:
Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

6. Well Yield

Test Date (yyyy/mm/dd): 1963/06/27
Start Time: 11:00 AM
Test Method: Unknown
Non pumping static level: 10.67 M
Rate of water removal: 45.46 Liters/Min
Depth of pump intake: 0 M
Water level at end of pumping: 0 M
Distance from top of casing to ground level: CM
Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0.61 M
If water removal was less than 2 hr duration, reason why:
Recommended pumping rate: 0 Liters/Min
Recommended pump intake: 13.41 M
Type Pump Installed
Pump Type: HAND
Pump Model:
H.P.:
Any further pumptest information?

4. Formation Log

Depth from ground level (meters)	Lithology Description
3.05	Clay
12.19	Sandstone
21.95	Blue Shale
24.38	Sandstone

5. Well Completion

Date Started(yyyy/mm/dd):
Date Completed (yyyy/mm/dd): 1963/06/27
Well Depth: 24.38 M
Borehole Diameter: 0 CM
Casing Type: Unknown
Liner Type:
Size OD: 11.43 CM
Size OD: 0 CM
Wall Thickness: 0 CM
Wall Thickness: 0 CM
Bottom at: 17.37 M
Top: 0 M Bottom: 0 M
Perforations
from: 0 M to: 0 M
from: 0 M to: 0 M
from: 0 M to: 0 M
Perforations Size:
0 CM x 0 CM
0 CM x 0 CM
0 CM x 0 CM
Perforated by:
Seal: Loose
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M
Screen Type:
from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM
Screen Type:
from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM
Screen Installation Method:
Fittings
Top:
Bottom:
Pack:
Grain Size:
Amount: 0
Geophysical Log Taken:
Retained on Files:
Additional Test and/or Pump Data
Chemistries taken By Driller: Yes
Held: 0
Documents Held: 1
Pitless Adapter Type:
Drop Pipe Type:
Length: M
Diameter: CM
Comments:
SOFT WATER.

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

Alberta Environment

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362722
Map Verified:	Map
Date Report Received:	
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: STAR DRLG CO		Drilling Company Approval No.:
Mailing Address:	City or Town:	Postal Code:
WellOwner's Name: CARLSON, PETER	Well Location Identifier:	
P.O. Box Number: 451	Mailing Address: BENTLEY	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
NE	34	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 993.65 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No
Gas Present: Rate: Liters
Oil Present:

Proposed well use: Stock
Anticipated Water Requirements/day 4546 Liters

6. Well Yield

Test Date (yyyy/mm/dd):	Start Time:
1978/03/13	11:00 AM

Test Method: Pump

Non pumping static level:	45.72 M
Rate of water removal:	45.46 Liters/Min
Depth of pump intake:	0 M
Water level at end of pumping:	54.86 M

Distance from top of CM casing to ground level:

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 9.14 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 45.46 Liters/Min

Recommended pump intake: 60.96 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

4. Formation Log

Depth from ground level (meters)	Lithology Description
9.14	Clay
45.72	Shattered Shale
77.72	Hard Shale Stringers

5. Well Completion

Date Started(yyyy/mm/dd):	Date Completed (yyyy/mm/dd):
1978/03/09	1978/03/13
Well Depth: 77.72 M	Borehole Diameter: 0 CM
Casing Type: Steel	Liner Type:
Size OD: 11.43 CM	Size OD: 0 CM
Wall Thickness: 0.36 CM	Wall Thickness: 0 CM
Bottom at: 65.53 M	Top: 0 M Bottom: 0 M

Perforations	Perforations Size:
from: 0 M to: 0 M	0 CM x 0 CM
from: 0 M to: 0 M	0 CM x 0 CM
from: 0 M to: 0 M	0 CM x 0 CM

Perforated by:

Seal: Driven
from: 0 M to: 1.22 M
Seal:
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M

Screen Type:	Screen ID: 0 CM
from: 0 M to: 0 M	Slot Size: 0 CM
Screen Type:	Screen ID: 0 CM
from: 0 M to: 0 M	Slot Size: 0 CM

Screen Installation Method:

Fittings
Top: Bottom:

Pack:
Grain Size: Amount: 0

Geophysical Log Taken:
Retained on Files:

Additional Test and/or Pump Data
Chemistries taken By Driller: Yes
Held: 0 Documents Held: 1

Pitless Adapter Type:
Drop Pipe Type:
Length: M Diameter: CM

Comments:
MEDIUM HARD.

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362723
Map Verified:	Map
Date Report Received:	1979/10/09
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: SYLVAN LAKE DRLG		Drilling Company Approval No.:
Mailing Address:	City or Town:	Postal Code:
WellOwner's Name: CARLSON, PETER	Well Location Identifier:	
P.O. Box Number: 451	Mailing Address: BENTLEY	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
NE	34	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 990.6 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No
Gas Present: Rate: Liters Oil Present:
Proposed well use: Stock
Anticipated Water Requirements/day 1818.4 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
4.57	Clay & Rocks
77.72	Shale & Sandstone

5. Well Completion

Date Started(yyyy/mm/dd): 1979/08/28
Date Completed (yyyy/mm/dd): 1979/08/29
Well Depth: 77.72 M
Borehole Diameter: 0 CM
Casing Type: Steel
Liner Type:
Size OD: 11.43 CM
Size OD: 0 CM
Wall Thickness: 0.36 CM
Wall Thickness: 0 CM
Bottom at: 69.8 M
Top: 0 M Bottom: 0 M
Perforations
from: 0 M to: 0 M
from: 0 M to: 0 M
from: 0 M to: 0 M
Perforations Size:
0 CM x 0 CM
0 CM x 0 CM
0 CM x 0 CM
Perforated by:
Seal: Driven
from: 0 M to: 0.91 M
Seal:
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M
Screen Type:
from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM
Screen Type:
from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM
Screen Installation Method:
Fittings
Top: Bottom:
Pack:
Grain Size: Amount: 0
Geophysical Log Taken:
Retained on Files:
Additional Test and/or Pump Data
Chemistries taken By Driller: No
Held: 1 Documents Held: 3
Pitless Adapter Type:
Drop Pipe Type:
Length: M Diameter: CM
Comments:

6. Well Yield

Test Date (yyyy/mm/dd): 1979/08/29
Start Time: 11:00 AM
Test Method: Pump
Non pumping static level: 45.72 M
Rate of water removal: 31.82 Liters/Min
Depth of pump intake: 0 M
Water level at end of pumping: 67.06 M
Distance from top of CM casing to ground level:
Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 21.34 M
If water removal was less than 2 hr duration, reason why:
Recommended pumping rate: 0 Liters/Min
Recommended pump intake: 0 M
Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362724
Map Verified:	Map
Date Report Received:	
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ERICKSON ERNFRED		Drilling Company Approval No.:
Mailing Address:	City or Town:	Postal Code:
WellOwner's Name: CARLSON, H.	Well Location Identifier:	
P.O. Box Number:	Mailing Address: BENTLEY	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
NE	34	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 994.87 M
How Obtain: Estimated

3. Drilling Information

Type of Work: Federal Well Survey
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Drilled
Flowing Well: No Rate: Liters
Gas Present: Oil Present:

Proposed well use: Domestic & Stock
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description

5. Well Completion

Date Started(yyyy/mm/dd):	Date Completed (yyyy/mm/dd): 1934/01/01
Well Depth: 65.84 M	Borehole Diameter: 0 CM
Casing Type: Unknown	Liner Type:
Size OD: 5.08 CM	Size OD: 0 CM
Wall Thickness: 0 CM	Wall Thickness: 0 CM
Bottom at: 0 M	Top: 0 M Bottom: 0 M
Perforations from: 0 M to: 0 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0 CM x 0 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by:	
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount: 0
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments: PASKAPOO FORMATION.	

6. Well Yield

Test Date (yyyy/mm/dd): 1934/01/01	Start Time: 11:00 AM
Test Method: Unknown	
Non pumping static level:	21.34 M
Rate of water removal:	0 Liters/Min
Depth of pump intake:	0 M
Water level at end of pumping:	0 M
Distance from top of casing to ground level:	CM

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type: SP M
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362709
Map Verified:	Not Verified
Date Report Received:	1971/10/25
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: NELSON DRILLING & PLUMBING
Drilling Company Approval No.:
Mailing Address:
City or Town:
Postal Code:
WellOwner's Name: STEVENS, OLIVA
Well Location Identifier:
P.O. Box Number:
Mailing Address: CALGARY
Postal Code:
City:
Province:
Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
SW	34	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary
Lot Block Plan
Well Elev: 944.88 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed:
Materials Used:
Method of Drilling: Rotary
Flowing Well: No
Rate: Liters
Gas Present:
Oil Present:
Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
7.62	Brown Clay
17.37	Blue Clay
33.22	Water Bearing Shale
36.58	Blue Shale

5. Well Completion

Date Started(yyyy/mm/dd):
Date Completed (yyyy/mm/dd): 1971/08/01
Well Depth: 36.58 M
Borehole Diameter: 0 CM
Casing Type: Galvanized Steel
Liner Type:
Size OD: 5.08 CM
Size OD: 0 CM
Wall Thickness: 0 CM
Wall Thickness: 0 CM
Bottom at: 27.43 M
Top: 0 M Bottom: 0 M
Perforations from: 0 M to: 0 M
from: 0 M to: 0 M
from: 0 M to: 0 M
Perforations Size: 0 CM x 0 CM
0 CM x 0 CM
0 CM x 0 CM
Perforated by:
Seal: Driven from: 0 M to: 0 M
Seal: from: 0 M to: 0 M
Seal: from: 0 M to: 0 M
Screen Type: from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM
Screen Installation Method:
Fittings Top: Bottom:
Pack: Grain Size: Amount: 0
Geophysical Log Taken:
Retained on Files:
Additional Test and/or Pump Data
Chemistries taken By Driller: Yes
Held: 0
Documents Held: 1
Pitless Adapter Type:
Drop Pipe Type:
Length: M
Diameter: CM
Comments:
COTTAGE @ MANOR INVESTMENTS NORTH SIDE OF SYLVAN LAKE. SOFT WATER.

6. Well Yield

Test Date (yyyy/mm/dd): 1971/08/01
Start Time: 11:00 AM
Test Method: Pump
Non pumping static level: 3.66 M
Rate of water removal: 45.46 Liters/Min
Depth of pump intake: 0 M
Water level at end of pumping: 0 M
Distance from top of CM casing to ground level:
Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 3.96 M
If water removal was less than 2 hr duration, reason why:
Recommended pumping rate: 0 Liters/Min
Recommended pump intake: 0 M
Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

Alberta Environment

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362711
Map Verified:	Not Verified
Date Report Received:	1971/08/24
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: NELSON DRILLING & PLUMBING		Drilling Company Approval No.:
Mailing Address:	City or Town:	Postal Code:
WellOwner's Name: SHAPKE, B.	Well Location Identifier:	
P.O. Box Number:	Mailing Address: CALGARY	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
SW	34	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 944.88 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed:
Materials Used:
Method of Drilling: Rotary
Flowing Well: No
Rate: Liters
Gas Present:
Oil Present:
Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
3.05	Brown Clay & Sand
17.07	Blue Clay
22.86	Sandstone Stringers
27.43	Blue Soft Shale
32.92	Water Bearing Shale
36.58	Blue Shale

5. Well Completion

Date Started(yyyy/mm/dd):
Date Completed (yyyy/mm/dd): 1971/07/01
Well Depth: 36.58 M
Borehole Diameter: 0 CM
Casing Type: Galvanized Steel
Liner Type:
Size OD: 5.08 CM
Size OD: 0 CM
Wall Thickness: 0 CM
Wall Thickness: 0 CM
Bottom at: 30.18 M
Top: 0 M Bottom: 0 M
Perforations
from: 0 M to: 0 M
from: 0 M to: 0 M
from: 0 M to: 0 M
Perforations Size:
0 CM x 0 CM
0 CM x 0 CM
0 CM x 0 CM
Perforated by:
Seal: Driven
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M
Screen Type:
from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM
Screen Type:
from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM
Screen installation Method:
Fittings
Top:
Bottom:
Pack:
Grain Size:
Amount: 0
Geophysical Log Taken:
Retained on Files:
Additional Test and/or Pump Data
Chemistries taken By Driller: Yes
Held: 0
Documents Held: 1
Pitless Adapter Type:
Drop Pipe Type:
Length: M
Diameter: CM
Comments:
MANOR INVESTMENTS NORTH SIDE OF SYLVAN LAKE. SOFT WATER.

6. Well Yield

Test Date (yyyy/mm/dd): 1971/07/01
Start Time: 11:00 AM
Test Method: Pump
Non pumping static level: 0.91 M
Rate of water removal: 45.46 Liters/Min
Depth of pump intake: 0 M
Water level at end of pumping: 0 M
Distance from top of CM casing to ground level:
Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0.91 M
If water removal was less than 2 hr duration, reason why:
Recommended pumping rate: 0 Liters/Min
Recommended pump intake: 0 M
Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362712
Map Verified:	Not Verified
Date Report Received:	1972/09/18
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: BROWN JIM		Drilling Company Approval No.:
Mailing Address:	City or Town:	Postal Code:
WellOwner's Name: MCCOOK	Well Location Identifier:	
P.O. Box Number:	Mailing Address: 23 35 N.Y. SYLVAN LAKE NORTH SIDE	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
SW	34	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 944.88 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed:
Materials Used:
Method of Drilling: Rotary
Flowing Well: No
Rate: Liters
Gas Present:
Oil Present:
Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
15.24	Clay & Rocks
18.29	Shale
21.34	Blue Lost Circulation Shale
39.62	Lost Circulation Shale & Sandstone

5. Well Completion

Date Started(yyyy/mm/dd):
Date Completed (yyyy/mm/dd): 1972/06/12
Well Depth: 39.62 M
Borehole Diameter: 0 CM
Casing Type: Steel
Liner Type:
Size OD: 11.43 CM
Size OD: 0 CM
Wall Thickness: 0 CM
Wall Thickness: 0 CM
Bottom at: 19.2 M
Top: 0 M Bottom: 0 M

Perforations
from: 0 M to: 0 M
from: 0 M to: 0 M
from: 0 M to: 0 M
Perforations Size:
0 CM x 0 CM
0 CM x 0 CM
0 CM x 0 CM

Perforated by:
Seal: Driven
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M
Screen Type:
from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM
Screen Type:
from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM
Screen Installation Method:
Fittings
Top:
Bottom:
Pack:
Grain Size:
Amount: 0
Geophysical Log Taken:
Retained on Files:
Additional Test and/or Pump Data
Chemistries taken By Driller: Yes
Held: 0
Documents Held: 1
Pitless Adapter Type:
Drop Pipe Type:
Length: M
Diameter: CM
Comments:
SOFT WATER.

6. Well Yield

Test Date (yyyy/mm/dd): 1972/06/12
Start Time: 11:00 AM
Test Method: Pump
Non pumping static level: 21.34 M
Rate of water removal: 54.55 Liters/Min
Depth of pump intake: 0 M
Water level at end of pumping: 0 M
Distance from top of CM casing to ground level:
Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0 M
If water removal was less than 2 hr duration, reason why:
Recommended pumping rate: 0 Liters/Min
Recommended pump intake: 25.91 M
Type Pump Installed
Pump Type: SUB
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362713
Map Verified:	Not Verified
Date Report Received:	
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: BROWN JIM		Drilling Company Approval No.:
Mailing Address:	City or Town:	Postal Code:
WellOwner's Name: BROWN, GLEN	Well Location Identifier:	
P.O. Box Number:	Mailing Address: LAKE COTTAGE, N.S. OF SYLVAN LAKE	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
SW	34	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot	Block	Plan
21		

Well Elev:	How Obtain:
944.88 M	Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Unknown
Flowing Well: No Rate: Liters
Gas Present: Oil Present:

Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
15.24	Clay & Sand
25.91	Clay & Rocks
33.53	Shale
42.67	Sandstone Stringers
45.72	Shale

5. Well Completion

Date Started(yyyy/mm/dd):	Date Completed (yyyy/mm/dd): 1969/08/04
Well Depth: 45.72 M	Borehole Diameter: 0 CM
Casing Type: Unknown	Liner Type:
Size OD: 13.97 CM	Size OD: 0 CM
Wall Thickness: 0 CM	Wall Thickness: 0 CM
Bottom at: 28.04 M	Top: 0 M Bottom: 0 M
Perforations	Perforations Size:
from: 0 M to: 0 M	0 CM x 0 CM
from: 0 M to: 0 M	0 CM x 0 CM
from: 0 M to: 0 M	0 CM x 0 CM
Perforated by:	
Seal: Driven from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount: 0
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: Yes Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM

Comments:
SOFT WATER.

6. Well Yield

Test Date (yyyy/mm/dd): 1969/08/04	Start Time: 11:00 AM
Test Method: Bailer	
Non pumping static level:	15.24 M
Rate of water removal:	54.55 Liters/Min
Depth of pump intake:	0 M
Water level at end of pumping:	0 M

Distance from top of CM casing to ground level:

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name:	UNKNOWN DRILLER
Certification No.:	

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0365978
Map Verified:	Not Verified
Date Report Received:	1992/09/21
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALBERTA EAGLE DRILLING LTD.		Drilling Company Approval No.: 117793
Mailing Address: BOX 9036	City or Town: SYLVAN LAKE AB CA	Postal Code: T4S 1S6
WellOwner's Name: GRUDGEFIELD, GORD	Well Location Identifier:	
P.O. Box Number:	Mailing Address: 169 WOODFORD DR SW, CALGARY	Postal Code: T2W 4C2
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
SW	34	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot	Block	Plan
16	8	

Well Elev: M — How Obtain: Not Obtain

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Combination
Flowing Well: No Rate: Liters
Gas Present: No Oil Present: No

Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
2.74	Brown Till & Clay
3.35	Brown Shale
7.32	Brown Sandstone
11.89	Brown Shale
15.24	Brown Fine Grained Sandstone
16.76	Brown Shale
17.98	Brown Sandstone
20.12	Brownish Gray Shale
25.91	Brownish Gray Sandstone
28.65	Gray Silty Shale
36.58	Brownish Gray Sandstone

5. Well Completion

Date Started(yyyy/mm/dd): 1992/07/20	Date Completed (yyyy/mm/dd): 1992/07/20
Well Depth: 36.58 M	Borehole Diameter: 0 CM
Casing Type: Plastic	Liner Type: Plastic
Size OD: 14.12 CM	Size OD: 11.43 CM
Wall Thickness: 0.67 CM	Wall Thickness: 0.54 CM
Bottom at: 32.31 M	Top: 30.48 M Bottom: 36.58 M
Perforations from: 32.31 M to: 36.58 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 1.59 CM x 0 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by: Machine	
Seal: Driven & Bentonite from: 27.43 M	to: 31.7 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount:
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: Yes Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments: DRILLER REPORT 18 GR HARD.	

6. Well Yield

Test Date (yyyy/mm/dd): 1992/07/20	Start Time: 11:00 AM
Test Method: Air	
Non pumping static level:	23.77 M
Rate of water removal:	118.2 Liters/Min
Depth of pump intake:	36.58 M
Water level at end of pumping:	36.58 M
Distance from top of CM casing to ground level:	

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 12.8 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type: SUB
Pump Model: 10S05-9
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name:	UNKNOWN DRILLER
Certification No.:	VA7724

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0366507
Map Verified:	Not Verified
Date Report Received:	1992/11/02
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALBERTA EAGLE DRILLING LTD.		Drilling Company Approval No.: 117793
Mailing Address: BOX 9036	City or Town: SYLVAN LAKE AB CA	Postal Code: T4S 1S6
WellOwner's Name: TUMBACH, KEN	Well Location Identifier:	
P.O. Box Number:	Mailing Address: 129 SUNNYVALE CRES, CALGARY	Postal Code: T2X 2S3
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
SW	34	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: M
How Obtain: Not Obtain

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Combination
Flowing Well: No
Gas Present: No
Rate: Liters
Oil Present: No

Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
6.4	Brown Till & Clay
7.62	Brown Shale
15.24	Brown Sandstone
15.85	Gray Shale
16.15	Coal
18.29	Brown Shale
24.08	Brown Sandstone
26.82	Brownish Gray Shale
36.58	Brownish Gray Sandstone

5. Well Completion

Date Started(yyyy/mm/dd): 1992/08/17	Date Completed (yyyy/mm/dd): 1992/08/17
Well Depth: 36.58 M	Borehole Diameter: 0 CM
Casing Type: Plastic	Liner Type: Plastic
Size OD: 14.12 CM	Size OD: 11.43 CM
Wall Thickness: 0.95 CM	Wall Thickness: 0.54 CM
Bottom at: 31.7 M	Top: 30.48 M Bottom: 36.58 M
Perforations from: 32 M to: 36.58 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 1.59 CM x 0 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by: Machine	
Seal: Driven & Bentonite from: 27.43 M	to: 31.09 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount:
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: Yes Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM

Comments:
DRILLER REPORT 15 GR HARD 7.7 PH LOW IRON.

6. Well Yield

Test Date (yyyy/mm/dd): 1992/08/17 Test Method: Air	Start Time: 11:00 AM
Non pumping static level:	23.77 M
Rate of water removal:	136.38 Liters/Min
Depth of pump intake:	36.58 M
Water level at end of pumping:	36.58 M

Distance from top of CM casing to ground level:

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 12.8 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 45.46 Liters/Min

Recommended pump intake: 30.48 M

Type Pump Installed
Pump Type: SUB
Pump Model: 10S05-9
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name:	UNKNOWN DRILLER
Certification No.:	VA7724

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0467432
Map Verified:	Not Verified
Date Report Received:	1997/04/11
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALBERTA EAGLE DRILLING LTD.		Drilling Company Approval No.: 117793
Mailing Address: BOX 9036	City or Town: SYLVAN LAKE AB CA	Postal Code: T4S 1S6
WellOwner's Name: HAACK, ELMER	Well Location Identifier:	
P.O. Box Number:	Mailing Address: 15113 42 AVE, EDMONTON	Postal Code: T6H 5P6
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
SW	34	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot	Block	Plan
21	9	8922703

Well Elev: M — How Obtain: Not Obtain

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: — Materials Used:
Method of Drilling: Combination
Flowing Well: No — Rate: Liters
Gas Present: No — Oil Present: No

Proposed well use: Domestic
Anticipated Water Requirements/day 1363.8 Liters

6. Well Yield

Test Date (yyyy/mm/dd): 1996/05/29	Start Time: 12:00 PM
Test Method: Air	
Non pumping static level:	12.5 M
Rate of water removal:	227.3 Liters/Min
Depth of pump intake:	30.48 M
Water level at end of pumping:	M

Distance from top of CM casing to ground level:

Depth To water level (meters)
Elapsed Time Drawdown Minutes:Sec | Recovery

Drawdown	Recovery
1:00	12.8
2:00	12.77
3:00	12.71
4:00	12.7
5:00	12.69
6:00	12.68
7:00	12.68
8:00	12.67
10:00	12.66
120:00	12.6

Total Drawdown: 0 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 45.46 Liters/Min

Recommended pump intake: 24.38 M

Type Pump Installed
Pump Type: SUB
Pump Model:
H.P.:
Any further pumptest information?

4. Formation Log

Depth from ground level (meters)	Lithology Description
2.44	Fill
6.71	Brown Till
14.94	Gray Till
15.54	Gray Sandstone
23.77	Brown Sandstone
30.48	Gray Water Bearing Sandstone

5. Well Completion

Date Started(yyyy/mm/dd): 1996/05/29	Date Completed (yyyy/mm/dd): 1996/05/29
Well Depth: 30.48 M	Borehole Diameter: 0 CM
Casing Type: Plastic	Liner Type: Plastic
Size OD: 14.12 CM	Size OD: 11.43 CM
Wall Thickness: 1.06 CM	Wall Thickness: 0.59 CM
Bottom at: 26.21 M	Top: 24.38 M Bottom: 30.48 M
Perforations from: 26.21 M to: 30.48 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 1.59 CM x 10.16 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by: Hand Drill	
Seal: Driven & Bentonite from: 12.19 M	to: 26.21 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount:
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM

Comments:
DRILLER REPORTS DISTANCE FROM TOP OF CASING TO GROUND LEVEL: .5 M.

7. Contractor Certification

Driller's Name:	UNKNOWN DRILLER
Certification No.:	11184A

This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362710
Map Verified:	Not Verified
Date Report Received:	1981/07/21
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: BIG QUILL DRILLING LTD.		Drilling Company Approval No.:
Mailing Address:	City or Town:	Postal Code:
WellOwner's Name: HICKS, R	Well Location Identifier:	
P.O. Box Number:	Mailing Address: 6315 DALMARNOCK CRES NW, CALGARY	Postal Code: T3A 1H3
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
SW	34	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 944.88 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No Rate: Liters
Gas Present: Oil Present:

Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
9.45	Brown Clay & Rocks
23.77	Brown Water Bearing Sandstone
32.31	Gray Medium Grained Sandstone
35.05	Gray Shale
36.58	Light Blue Shale

5. Well Completion

Date Started(yyyy/mm/dd): 1981/06/05	Date Completed (yyyy/mm/dd): 1981/06/05
Well Depth: 36.58 M	Borehole Diameter: 0 CM
Casing Type: Galvanized Steel	Liner Type:
Size OD: 11.43 CM	Size OD: 0 CM
Wall Thickness: 0.36 CM	Wall Thickness: 0 CM
Bottom at: 27.74 M	Top: 0 M Bottom: 0 M
Perforations from: 0 M to: 0 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0 CM x 0 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by:	
Seal: Driven from: 0 M	to: 27.43 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount: 0
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 1	Documents Held: 2
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments:	

6. Well Yield

Test Date (yyyy/mm/dd): 1981/06/05 Test Method: Air	Start Time: 11:00 AM
Non pumping static level:	8.23 M
Rate of water removal:	136.38 Liters/Min
Depth of pump intake:	0 M
Water level at end of pumping:	36.58 M
Distance from top of casing to ground level:	CM

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362714
Map Verified:	Not Verified
Date Report Received:	1976/09/08
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: HANSEN DRLG		Drilling Company Approval No.:
Mailing Address:	City or Town:	Postal Code:
WellOwner's Name: VAN BUKEL, JOHN	Well Location Identifier:	
P.O. Box Number:	Mailing Address: SYLVAN LAKE	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
SW	34	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 950.98 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Cable Tool
Flowing Well: No Rate: Liters
Gas Present: Oil Present:

Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
8.23	Brown Clay
13.11	Gray Clay
18.59	Sandstone

5. Well Completion

Date Started(yyyy/mm/dd): 1976/08/05	Date Completed (yyyy/mm/dd): 1976/08/05
Well Depth: 18.59 M	Borehole Diameter: 0 CM
Casing Type: Steel	Liner Type: Steel
Size OD: 14.12 CM	Size OD: 11.43 CM
Wall Thickness: 0.4 CM	Wall Thickness: 0 CM
Bottom at: 14.63 M	Top: 0 M Bottom: 18.59 M
Perforations from: 15.24 M to: 18.29 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0.08 CM x 30.48 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by: Torch	
Seal: Driven from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount: 0
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: Yes Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM

Comments:
SOFT WATER.

6. Well Yield

Test Date (yyyy/mm/dd): 1976/08/05	Start Time: 11:00 AM
Test Method: Bailer	
Non pumping static level:	7.32 M
Rate of water removal:	136.38 Liters/Min
Depth of pump intake:	0 M
Water level at end of pumping:	13.72 M

Distance from top of CM casing to ground level:

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0406357
Map Verified:	Not Verified
Date Report Received:	1995/06/19
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALKEN BASIN DRILLING LTD.		Drilling Company Approval No.: 38394
Mailing Address: BOX 47	City or Town: BENTLEY AB CANADA	Postal Code: T0C 0J0
WellOwner's Name: DOMINION EXPL/ARTISAN 16#RIG	Well Location Identifier:	
P.O. Box Number:	Mailing Address: 1250 255 5 AVE SW, CALGARY	Postal Code: T2P 3G6
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
03	35	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary
Lot Block Plan

Well Elev: M
How Obtain: Not Obtain

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: 1995/06/26
Materials Used: Unknown
Method of Drilling: Rotary
Flowing Well: No
Rate: Liters
Gas Present: No
Oil Present: No

Proposed well use: Industrial
Anticipated Water Requirements/day 36368 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
5.49	Brown Clay & Rocks
7.62	Brown Sandstone
10.06	Brown Shale
12.8	Gray Sandstone
16.76	Brown Sandstone
20.73	Gray Shale
22.86	Brown Sandstone
38.4	Gray Shale
41.15	Gray Sandstone
46.33	Gray Shale
51.21	Gray Sandstone
53.34	Gray Shale
55.78	Gray Sandstone
67.06	Gray Sandstone

5. Well Completion

Date Started(yyyy/mm/dd): 1995/06/08	Date Completed (yyyy/mm/dd): 1995/06/08
Well Depth: 67.06 M	Borehole Diameter: 0 CM
Casing Type:	Liner Type: Steel
Size OD: 0 CM	Size OD: 11.43 CM
Wall Thickness: 0 CM	Wall Thickness: 0.4 CM
Bottom at: 0 M	Top: 0 M Bottom: 54.86 M

Perforations	Perforations Size:
from: 36.58 M to: 54.86 M	0.95 CM x 0.95 CM
from: 0 M to: 0 M	0 CM x 0 CM
from: 0 M to: 0 M	0 CM x 0 CM

Perforated by: Hand Drill

Seal: Shale Trap from: 0 M	to: 3.05 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM

Screen Installation Method:

Fittings Top:	Bottom:
Pack: Grain Size:	Amount:

Geophysical Log Taken:
Retained on Files:
Additional Test and/or Pump Data
Chemistries taken By Driller: No
Held: 0
Documents Held: 3
Pitless Adapter Type:
Drop Pipe Type:
Length: M
Diameter: CM
Comments:
DRILLER REPORTS DISTANCE FROM TOP OF CASING TO GROUND LEVEL: 2'.

6. Well Yield

Test Date (yyyy/mm/dd): 1995/06/08	Start Time: 11:00 AM
Test Method: Air	
Non pumping static level:	45.72 M
Rate of water removal:	159.11 Liters/Min
Depth of pump intake:	67.06 M
Water level at end of pumping:	67.06 M
Distance from top of casing to ground level:	CM

Depth To water level (meters) Elapsed Time Drawdown Minutes:Sec	Recovery
3:00	67.06
4:00	60.35
5:00	54.56
6:00	50.29
7:00	47.24
8:00	45.72
10:00	45.72
30:00	45.72
50:00	45.72
120:00	45.72

Total Drawdown: 0 M
If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 122.74 Liters/Min
Recommended pump intake: 51.82 M
Type Pump Installed
Pump Type: SUB
Pump Model: GRUNDFOS
H.P.: 3
Any further pumptest information?

7. Contractor Certification

Driller's Name:	UNKNOWN DRILLER
Certification No.:	5881AD

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362733
Map Verified:	Map
Date Report Received:	
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ERICKSON & KANGAS		Drilling Company Approval No.: NONE
Mailing Address: UNKNOWN	City or Town:	Postal Code:
WellOwner's Name: ECKLUND, C	Well Location Identifier:	
P.O. Box Number:	Mailing Address: BENTLEY	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
NE	35	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 1005.84 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Cable Tool
Flowing Well: No Rate: Liters
Gas Present: Oil Present:

Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
1.83	Clay
12.19	Sandstone
18.29	Blue Clay
24.38	Sandstone
36.58	Shale
39.62	Hard Rocks
45.72	Shale
47.24	Hard Rocks
53.34	Shale

5. Well Completion

Date Started(yyyy/mm/dd):	Date Completed (yyyy/mm/dd): 1963/03/15
Well Depth: 53.34 M	Borehole Diameter: 0 CM
Casing Type: Unknown	Liner Type:
Size OD: 10.16 CM	Size OD: 0 CM
Wall Thickness: 0 CM	Wall Thickness: 0 CM
Bottom at: 46.33 M	Top: 0 M Bottom: 0 M
Perforations from: 0 M to: 0 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0 CM x 0 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by:	
Seal: Driven from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount: 0
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: Yes Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments: SOFT WATER.	

6. Well Yield

Test Date (yyyy/mm/dd): 1963/03/15	Start Time: 11:00 AM
Test Method: Unknown	
Non pumping static level:	37.19 M
Rate of water removal:	27.28 Liters/Min
Depth of pump intake:	0 M
Water level at end of pumping:	0 M
Distance from top of casing to ground level:	CM

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0.3 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 50.29 M

Type Pump Installed
Pump Type: SUB
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362728
Map Verified:	Map
Date Report Received:	1975/01/03
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: FORRESTER WATER WELL DRILLING (1981) LTD.		Drilling Company Approval No.: 2318
Mailing Address: RR 1	City or Town: RED DEER AB CA	Postal Code:
WellOwner's Name: BRATTBERG, ELMER	Well Location Identifier:	
P.O. Box Number: 300	Mailing Address: BENTLEY	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
NW	35	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 990.6 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Cable Tool
Flowing Well: No
Gas Present: Rate: Liters
Oil Present:

Proposed well use: Domestic & Stock
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
12.19	Brown Sandy Clay
18.29	Gray Conglomerate
21.95	Brown Sandstone
24.38	Gray Sandstone
26.82	Gray Hard Sandstone
38.1	Gray Sandy Shale
41.76	Gray Hard Sandstone
43.28	Dark Gray Water Bearing Shale & Sandstone Ledges
48.46	Light Gray Bentonitic Shale
53.95	Water Bearing Coal
64.01	Light Gray Bentonitic Shale

5. Well Completion

Date Started(yyyy/mm/dd): 1974/10/31	Date Completed (yyyy/mm/dd): 1974/11/05
Well Depth: 64.01 M	Borehole Diameter: 0 CM
Casing Type: Steel	Liner Type: Steel
Size OD: 17.78 CM	Size OD: 14.12 CM
Wall Thickness: 0.59 CM	Wall Thickness: 0.79 CM
Bottom at: 29.26 M	Top: 0 M Bottom: 64.01 M
Perforations from: 29.26 M to: 64.01 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0.95 CM x 15.24 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by: Torch	
Seal: Driven from: 0 M	to: 29.26 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount: 0
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: Yes Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments: SOFT WATER.	

6. Well Yield

Test Date (yyyy/mm/dd): 1974/11/05	Start Time: 11:00 AM
Test Method: Bailer	
Non pumping static level:	38.1 M
Rate of water removal:	95.47 Liters/Min
Depth of pump intake:	0 M
Water level at end of pumping:	50.29 M
Distance from top of casing to ground level:	CM

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min
Recommended pump intake: 0 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

Alberta Environment

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362729
Map Verified:	Map
Date Report Received:	1980/09/03
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: FORRESTER WATER WELL DRILLING (1981) LTD.		Drilling Company Approval No.: 2318
Mailing Address: RR 1	City or Town: RED DEER AB CA	Postal Code:
WellOwner's Name: BRATTBERG, ELMER	Well Location Identifier:	
P.O. Box Number: 300	Mailing Address: BENTLEY	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
NW	35	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 1005.84 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Cable Tool
Flowing Well: No
Gas Present: Rate: Liters Oil Present:

Proposed well use: Stock
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
0.3	Topsoil
1.52	Yellow Sandy Clay
5.49	Yellow Soft Sandstone
6.1	Yellow Hard Sandstone
10.36	Gray Sandy Clay
15.24	Brownish Gray Sandstone
18.59	Light Brown Coarse Grained Sandstone
20.12	Gray Hard Sandstone
20.42	Gray Fine Grained Sandstone
21.03	Gray Hard Sandstone
23.47	Dark Gray Soft Sandstone
25.6	Gray Sticky Shale
29.26	Blue Sandy Shale
30.78	Gray Water Bearing Sandstone
31.7	Blue Gray Sandy Shale
35.36	Blue Gray Coarse Grained Sandstone
38.71	Gray Sticky Shale
44.5	Blue Sandy Shale
45.72	Gray Carbonaceous Shale
48.77	Blue Shale
51.21	Gray Water Bearing Sandstone
54.56	Blue Gray Water Bearing Shale & Sandstone Ledges
56.69	Blue Gray Water Bearing Sandstone
60.96	Blue Sandy Shale & Sandstone Ledges

5. Well Completion

Date Started(yyyy/mm/dd): 1980/06/09	Date Completed (yyyy/mm/dd): 1980/06/12
Well Depth: 60.96 M	Borehole Diameter: 0 CM
Casing Type: Steel	Liner Type: Steel
Size OD: 17.78 CM	Size OD: 14.12 CM
Wall Thickness: 0.59 CM	Wall Thickness: 0.79 CM
Bottom at: 32.31 M	Top: 0 M Bottom: 60.96 M
Perforations from: 35.66 M to: 60.96 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0.95 CM x 15.24 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by: Torch	
Seal: Driven from: 0 M	to: 32.31 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount: 0
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 1	Documents Held: 2
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments:	

6. Well Yield

Test Date (yyyy/mm/dd): 1980/06/12	Start Time: 11:00 AM
Test Method: Bailer	
Non pumping static level:	42.67 M
Rate of water removal:	90.92 Liters/Min
Depth of pump intake:	57.91 M
Water level at end of pumping:	51.82 M
Distance from top of CM casing to ground level:	

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 9.14 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Alberta Environment

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362731
Map Verified:	Map
Date Report Received:	
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ERICKSON ERNFRED		Drilling Company Approval No.:
Mailing Address:	City or Town:	Postal Code:
WellOwner's Name: BRATTBERG, H.	Well Location Identifier:	
P.O. Box Number:	Mailing Address: BENTLEY	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
NW	35	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 996.39 M
How Obtain: Estimated

3. Drilling Information

Type of Work: Federal Well Survey
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Drilled
Flowing Well: No
Gas Present: Rate: Liters
Oil Present:

Proposed well use: Domestic & Stock
Anticipated Water Requirements/day 0 Liters

6. Well Yield

Test Date (yyyy/mm/dd): 1932/01/01
Start Time: 11:00 AM
Test Method: Unknown

Non pumping static level: 50.29 M

Rate of water removal: 0 Liters/Min

Depth of pump intake: 0 M

Water level at end of pumping: 0 M

Distance from top of casing to ground level: CM

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type: SP E
Pump Model:
H.P.:
Any further pumptest information?

4. Formation Log

Depth from ground level (meters)	Lithology Description

5. Well Completion

Date Started(yyyy/mm/dd):	Date Completed (yyyy/mm/dd): 1932/01/01
Well Depth: 65.53 M	Borehole Diameter: 0 CM
Casing Type: Galvanized Steel	Liner Type:
Size OD: 5.08 CM	Size OD: 0 CM
Wall Thickness: 0 CM	Wall Thickness: 0 CM
Bottom at: 0 M	Top: 0 M Bottom: 0 M
Perforations from: 0 M to: 0 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0 CM x 0 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by:	
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount: 0
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments: PASKAPOO FORMATION.	

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362727
Map Verified:	Map
Date Report Received:	
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ERICKSON ERNFRED		Drilling Company Approval No.:
Mailing Address:	City or Town:	Postal Code:
WellOwner's Name: ELSWORTH, GLEN	Well Location Identifier:	
P.O. Box Number:	Mailing Address: BENTLEY	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
SW	35	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 984.5 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Jet
Flowing Well: No
Gas Present: Rate: Liters Oil Present:

Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
30.48	Clay
33.53	Water Bearing Shale
42.67	Sandstone
54.86	Water Bearing Shale
60.96	Sandstone

5. Well Completion

Date Started(yyyy/mm/dd): Date Completed (yyyy/mm/dd): 1959/08/01

Well Depth: 60.96 M Borehole Diameter: 0 CM

Casing Type: Unknown Liner Type:

Size OD: 0 CM Size OD: 0 CM

Wall Thickness: 0 CM Wall Thickness: 0 CM

Bottom at: 57.91 M Top: 0 M Bottom: 0 M

Perforations Perforations Size:
from: 0 M to: 0 M 0 CM x 0 CM
from: 0 M to: 0 M 0 CM x 0 CM
from: 0 M to: 0 M 0 CM x 0 CM

Perforated by:

Seal: Driven
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M

Screen Type: Screen ID: 0 CM
from: 0 M to: 0 M Slot Size: 0 CM

Screen Type: Screen ID: 0 CM
from: 0 M to: 0 M Slot Size: 0 CM

Screen Installation Method:

Fittings
Top: Bottom:

Pack:
Grain Size: Amount: 0

Geophysical Log Taken:
Retained on Files:

Additional Test and/or Pump Data
Chemistries taken By Driller: Yes
Held: 0 Documents Held: 1

Pitless Adapter Type:
Drop Pipe Type:
Length: M Diameter: CM

Comments:
SOFT WATER.

6. Well Yield

Test Date (yyyy/mm/dd): 1959/08/01
Start Time: 11:00 AM
Test Method: Unknown

Non pumping static level: 48.77 M

Rate of water removal: 27.28 Liters/Min

Depth of pump intake: 0 M

Water level at end of pumping: 0 M

Distance from top of CM casing to ground level:

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type: SUB
Pump Model: B.T. 22C0
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

Alberta Environment

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362734
Map Verified:	Not Verified
Date Report Received:	1987/03/17
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALL RITE DRILLING LTD.		Drilling Company Approval No.: 56478
Mailing Address: 7819 - 50 AVENUE	City or Town: RED DEER AB AB	Postal Code:
WellOwner's Name: MILLAR, DAVE	Well Location Identifier:	
P.O. Box Number:	Mailing Address: RR1 BENTLEY	Postal Code: T0L 0J0
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
NE	35	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 1005.84 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No Rate: Liters
Gas Present: Oil Present:

Proposed well use: Stock
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
3.66	Clay
4.27	Sandy Clay
4.88	Brown Sandstone
12.8	Shale
14.63	Sandstone
43.28	Shale & Siltstone
51.82	Siltstone & Sandstone
53.64	Water Bearing Sandstone
56.69	Shale

5. Well Completion

Date Started(yyyy/mm/dd): 1986/05/29	Date Completed (yyyy/mm/dd): 1986/05/30
Well Depth: 56.69 M	Borehole Diameter: 0 CM
Casing Type: Steel	Liner Type: Steel
Size OD: 11.43 CM	Size OD: 11.43 CM
Wall Thickness: 0.48 CM	Wall Thickness: 0.48 CM
Bottom at: 56.69 M	Top: 0 M Bottom: 56.69 M
Perforations from: 51.21 M to: 54.25 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0.95 CM x 0.95 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by: Torch	
Seal: Shale Trap from: 0 M	to: 44.5 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount: 0
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments:	

6. Well Yield

Test Date (yyyy/mm/dd): 1986/05/30	Start Time: 11:00 AM
Test Method: Air	
Non pumping static level:	25.91 M
Rate of water removal:	27.28 Liters/Min
Depth of pump intake:	0 M
Water level at end of pumping:	54.86 M
Distance from top of CM casing to ground level:	

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 28.96 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 22.73 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.: VA0201
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362730
Map Verified:	Map
Date Report Received:	1980/09/03
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: FORRESTER WATER WELL DRILLING (1981) LTD.		Drilling Company Approval No.: 2318
Mailing Address: RR 1	City or Town: RED DEER AB CA	Postal Code:
WellOwner's Name: BRATTBERG, ELMER	Well Location Identifier:	
P.O. Box Number: 300	Mailing Address: BENTLEY	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
NW	35	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 1005.84 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Cable Tool
Flowing Well: No Rate: Liters
Gas Present: Oil Present:

Proposed well use: Domestic & Stock
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
1.22	Dark Brown Sandy Clay
2.44	Light Brown Sandy Clay
4.27	Dark Gray Sticky Clay
6.1	Brownish Gray Clay & Shale
8.53	See Comments Clay & Silt
10.97	Yellow Sticky Clay
13.72	Brown Clay & Shale
15.24	Blue Gray Shale
16.46	Blue Shale
19.2	Clay & Shale
21.03	Brown Soft Sandstone
21.34	Gray Hard Sandstone
22.25	Gray Sandy Shale
23.77	Gray Hard Sandstone
27.74	Gray Sandy Shale & Sandstone
29.57	Gray Sticky Shale
32	Blue Shale
39.32	Gray Sandy Shale
47.24	Gray Sandstone
55.17	Gray Shale & Sandstone Ledges
58.52	Dark Gray Sandstone
61.87	Gray Hard Sandstone
64.31	Black Silty Shale
67.36	Gray Sticky Shale
68.88	Carbonaceous Shale
69.19	Blue Gray Sandy Shale
71.63	Gray Hard Sandstone

5. Well Completion

Date Started(yyyy/mm/dd): 1980/05/21	Date Completed (yyyy/mm/dd): 1980/06/09
Well Depth: 71.63 M	Borehole Diameter: 0 CM
Casing Type: Steel	Liner Type: Steel
Size OD: 17.78 CM	Size OD: 14.12 CM
Wall Thickness: 0.59 CM	Wall Thickness: 0.79 CM
Bottom at: 36.88 M	Top: 0 M Bottom: 71.63 M
Perforations from: 46.02 M to: 71.63 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0.95 CM x 15.24 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by: Torch	
Seal: Driven from: 0 M	to: 36.88 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount: 0
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: Yes Held: 0	Documents Held: 2
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM

Comments:
28'- GRAVEL & COAL CONG. SOFT WATER.

6. Well Yield

Test Date (yyyy/mm/dd): 1980/06/09	Start Time: 11:00 AM
Test Method: Bailer	
Non pumping static level:	50.29 M
Rate of water removal:	90.92 Liters/Min
Depth of pump intake:	68.58 M
Water level at end of pumping:	56.39 M

Distance from top of CM casing to ground level:

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 6.1 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0418320
Map Verified:	Not Verified
Date Report Received:	1995/11/22
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALKEN BASIN DRILLING LTD.		Drilling Company Approval No.: 38394
Mailing Address: BOX 47	City or Town: BENTLEY AB CANADA	Postal Code: T0C 0J0
WellOwner's Name: DOMEX/CACTUS 4#RIG	Well Location Identifier:	
P.O. Box Number:	Mailing Address: C/O PAJECK ENG 1660 717 7AVE SW, CALGARY	Postal Code: T2P 0Z3
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
13	36	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: M
How Obtain: Not Obtain

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No Rate: Liters
Gas Present: No Oil Present: No

Proposed well use: Industrial
Anticipated Water Requirements/day 45460 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
3.05	Till & Clay
11.89	Brown Sandstone
17.37	Gray Shale
29.26	Brown Sandstone Stringers
35.05	Gray Shale
39.62	Gray Sandstone
49.07	Gray Shale
56.39	Gray Sandstone
62.79	Gray Shale
66.75	Gray Sandstone
87.48	Gray Shale
93.57	Gray Sandstone
96.93	Gray Shale
99.06	Gray Sandstone
103.63	Gray Shale

5. Well Completion

Date Started(yyyy/mm/dd): 1995/10/26	Date Completed (yyyy/mm/dd): 1995/10/26
Well Depth: 103.63 M	Borehole Diameter: 0 CM
Casing Type:	Liner Type: Steel
Size OD: 0 CM	Size OD: 11.43 CM
Wall Thickness: 0 CM	Wall Thickness: 0.4 CM
Bottom at: 0 M	Top: 0.91 M Bottom: 48.77 M
Perforations from: 30.48 M to: 48.77 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0.95 CM x 0.95 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by: Hand Drill	
Seal: Rubber Seal from: 0 M	to: 7.01 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount:
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments: DRILLER REPORTS DISTANCE FROM TOP OF CASING TO GROUND LEVEL: 3'.	

6. Well Yield

Test Date (yyyy/mm/dd): 1995/10/26	Start Time: 11:00 AM
Test Method: Pump	
Non pumping static level:	38.1 M
Rate of water removal:	68.19 Liters/Min
Depth of pump intake:	45.72 M
Water level at end of pumping:	45.72 M
Distance from top of CM casing to ground level:	

Depth To water level (meters)	Elapsed Time Drawdown Minutes:Sec	Recovery
38.1	0:00	45.72
39.62	1:00	44.2
41.15	2:00	42.67
42.67	3:00	41.15
44.2	4:00	39.62
45.72	5:00	39.01
	10:00	38.1
45.72	120:00	38.1

Total Drawdown: 7.62 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 68.19 Liters/Min

Recommended pump intake: 45.72 M

Type Pump Installed
Pump Type: SUB
Pump Model: GOULDS 10EJ
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name:	UNKNOWN DRILLER
Certification No.:	12389Q

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0418321
Map Verified:	Not Verified
Date Report Received:	1995/11/22
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALKEN BASIN DRILLING LTD.		Drilling Company Approval No.: 38394
Mailing Address: BOX 47	City or Town: BENTLEY AB CANADA	Postal Code: T0C 0J0
WellOwner's Name: DOMEX/CACTUS 14#RIG SHACK	Well Location Identifier:	
P.O. Box Number:	Mailing Address: C/O PAJECK ENG 1660 717 7AVE SW, CALGARY	Postal Code: T2P 0Z3
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
13	36	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: M
How Obtain: Not Obtain

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No Rate: Liters
Gas Present: No Oil Present: No

Proposed well use: Industrial
Anticipated Water Requirements/day 22730 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
0.91	Clay
10.67	Brown Sandstone
17.07	Gray Shale
26.52	Brownish Gray Sandstone Stringers
35.05	Gray Shale
39.62	Gray Sandstone
49.07	Gray Shale
58.52	Gray Sandstone
60.96	Gray Siltstone

5. Well Completion

Date Started(yyyy/mm/dd): 1995/10/27	Date Completed (yyyy/mm/dd): 1995/10/27
Well Depth: 60.96 M	Borehole Diameter: 0 CM
Casing Type:	Liner Type: Steel
Size OD: 0 CM	Size OD: 11.43 CM
Wall Thickness: 0 CM	Wall Thickness: 0.4 CM
Bottom at: 0 M	Top: 0.91 M Bottom: 54.86 M
Perforations from: 30.48 M to: 54.86 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0.95 CM x 0.95 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by: Other	
Seal: Rubber Seal from: 0 M	to: 6.71 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount:
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments: DRILLER REPORTS DISTANCE FROM TOP OF CASING TO GROUND LEVEL: 3'.	

6. Well Yield

Test Date (yyyy/mm/dd): 1995/10/27 Test Method: Air	Start Time: 11:00 AM
Non pumping static level:	24.38 M
Rate of water removal:	68.19 Liters/Min
Depth of pump intake:	60.96 M
Water level at end of pumping:	60.96 M

Distance from top of CM casing to ground level:

Depth To water level (meters)
Elapsed Time Drawdown Minutes:Sec | Recovery

Elapsed Time	Recovery
0:00	60.96
2:00	42.67
4:00	32
5:00	28.96
6:00	27.74
7:00	27.13
8:00	26.82
9:00	26.52
10:00	26.52
12:00	26.21
20:00	24.38
120:00	24.38

Total Drawdown: 36.58 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 68.19 Liters/Min

Recommended pump intake: 51.82 M

Type Pump Installed
Pump Type: SUB
Pump Model: GOULD 10EJ
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name:	UNKNOWN DRILLER
Certification No.:	12389Q

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0350289
Map Verified:	Not Verified
Date Report Received:	1990/03/29
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALKEN BASIN DRILLING LTD.		Drilling Company Approval No.: 38394
Mailing Address: BOX 47	City or Town: BENTLEY AB CANADA	Postal Code: T0C 0J0
WellOwner's Name: EHMAN, RANDY	Well Location Identifier:	
P.O. Box Number:	Mailing Address: RR1, BENTLEY	Postal Code: T0C 0J0
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
NE	36	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: M
How Obtain: Not Obtain

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No Rate: Liters
Gas Present: Oil Present:
Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
1.52	Clay
15.24	Brown Sandstone
21.95	Gray Shale
25.3	Gray Sandstone
28.65	Gray Fractured Shale
32.92	Gray Shale
34.14	Gray Sandstone
40.23	Gray Shale
43.59	Gray Sandstone
48.77	Gray Shale

5. Well Completion

Date Started(yyyy/mm/dd): 1990/03/05	Date Completed (yyyy/mm/dd): 1990/03/05
Well Depth: 48.77 M	Borehole Diameter: 0 CM
Casing Type: Steel	Liner Type: Plastic
Size OD: 13.97 CM	Size OD: 11.43 CM
Wall Thickness: 0.62 CM	Wall Thickness: 0.59 CM
Bottom at: 39.01 M	Top: 30.48 M Bottom: 48.77 M
Perforations from: 36.58 M to: 42.67 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0.95 CM x 0 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by: Machine	
Seal: Driven from: 0 M	to: 39.01 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount: 0
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 1	Documents Held: 2
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments:	

6. Well Yield

Test Date (yyyy/mm/dd): 1990/03/05	Start Time: 11:00 AM
Test Method: Air	
Non pumping static level:	25.91 M
Rate of water removal:	90.92 Liters/Min
Depth of pump intake:	0 M
Water level at end of pumping:	48.77 M
Distance from top of CM casing to ground level:	

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 22.86 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 39.62 M

Type Pump installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name:	UNKNOWN DRILLER
Certification No.:	VC6418

This well was constructed in accordance with the Water

Alberta Environment

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362742
Map Verified:	Map
Date Report Received:	
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ERICKSON & KANGAS		Drilling Company Approval No.: NONE
Mailing Address: UNKNOWN	City or Town:	Postal Code:
WellOwner's Name: DAMRON, D.	Well Location Identifier:	
P.O. Box Number:	Mailing Address: BENTLEY	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
NE	36	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 975.36 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:

Method of Drilling: Cable Tool

Flowing Well: No
Gas Present: Rate: Liters
Oil Present:

Proposed well use: Domestic & Stock
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
1.83	Clay
12.19	Sandstone
18.29	Blue Clay
22.86	Sandstone
30.48	Blue Clay
36.58	Shale

5. Well Completion

Date Started(yyyy/mm/dd): Date Completed (yyyy/mm/dd):

Well Depth: 36.58 M
Borehole Diameter: 0 CM

Casing Type: Unknown
Liner Type:

Size OD: 11.43 CM
Size OD: 0 CM

Wall Thickness: 0 CM
Wall Thickness: 0 CM

Bottom at: 32.92 M
Top: 0 M Bottom: 0 M

Perforations
from: 0 M to: 0 M
from: 0 M to: 0 M
from: 0 M to: 0 M

Perforations Size:
0 CM x 0 CM
0 CM x 0 CM
0 CM x 0 CM

Perforated by:

Seal: Driven
from: 0 M to: 0 M

Seal:
from: 0 M to: 0 M

Seal:
from: 0 M to: 0 M

Screen Type:
from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM

Screen Type:
from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM

Screen Installation Method:

Fittings
Top: Bottom:

Pack:
Grain Size: Amount: 0

Geophysical Log Taken:
Retained on Files:

Additional Test and/or Pump Data
Chemistries taken By Driller: Yes
Held: 0 Documents Held: 1

Pitless Adapter Type:
Drop Pipe Type:
Length: M Diameter: CM

Comments:
MEDIUM HARD WATER.

6. Well Yield

Test Date (yyyy/mm/dd): Start Time: 11:00 AM

Test Method: Unknown

Non pumping static level: 27.43 M

Rate of water removal: 36.37 Liters/Min

Depth of pump intake: 0 M

Water level at end of pumping: 0 M

Distance from top of CM casing to ground level:

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 1.22 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 35.05 M

Type Pump Installed
Pump Type: HAND
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

Alberta Environment

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362735
Map Verified:	Not Verified
Date Report Received:	
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: FORRESTER WATER WELL DRILLING (1981) LTD.		Drilling Company Approval No.: 2318
Mailing Address: RR 1	City or Town: RED DEER AB CA	Postal Code:
WellOwner's Name: GOUTHRO, JERRY	Well Location Identifier:	
P.O. Box Number:	Mailing Address: RR1 BENTLEY	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
SW	36	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 990.6 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:

Method of Drilling: Cable Tool

Flowing Well: No
Gas Present: Rate: Liters
Oil Present:

Proposed well use: Domestic & Stock
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
2.44	Brown Clay
12.19	Brown Sandy Shale
23.77	Brownish Gray Sandy Shale
30.18	Gray Shale
30.78	Gray Hard Sandstone
38.4	Gray Shale
39.62	Green Water Bearing Shale
49.38	Dark Gray Shale
49.99	Gray Hard Sandstone
52.43	Gray Bentonitic Sandstone
59.13	Blue Gray Sandy Shale
65.53	Blue Sandy Shale
67.06	Blue Water Bearing Sandstone
70.41	Gray Soft Sandstone
71.93	Water Bearing Sandstone
73.15	Blue Sandy Shale

5. Well Completion

Date Started(yyyy/mm/dd):	Date Completed (yyyy/mm/dd): 1970/10/14
Well Depth: 73.15 M	Borehole Diameter: 0 CM
Casing Type:	Liner Type: Unknown
Size OD: 0 CM	Size OD: 11.43 CM
Wall Thickness: 0 CM	Wall Thickness: 1.27 CM
Bottom at: 0 M	Top: 0 M Bottom: 72.54 M

Perforations	Perforations Size:
from: 32.92 M to: 72.54 M	0 CM x 0 CM
from: 0 M to: 0 M	0 CM x 0 CM
from: 0 M to: 0 M	0 CM x 0 CM

Perforated by: Unknown

Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M

Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM

Screen Installation Method:

Fittings
Top: Bottom:

Pack:
Grain Size: Amount: 0

Geophysical Log Taken:
Retained on Files:

Additional Test and/or Pump Data
Chemistries taken By Driller: Yes
Held: 0 Documents Held: 1

Pitless Adapter Type:
Drop Pipe Type:
Length: M Diameter: CM

Comments:
MEDIUM HARD WATER.

6. Well Yield

Test Date (yyyy/mm/dd): 1970/10/14	Start Time: 11:00 AM
Test Method: Bailer	
Non pumping static level:	57.91 M
Rate of water removal:	68.19 Liters/Min
Depth of pump intake:	0 M
Water level at end of pumping:	0 M

Distance from top of CM casing to ground level:

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 60.96 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362736
Map Verified:	Not Verified
Date Report Received:	
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: FORRESTER WATER WELL DRILLING (1981) LTD.		Drilling Company Approval No.: 2318
Mailing Address: RR 1	City or Town: RED DEER AB CA	Postal Code:
WellOwner's Name: MEYERS, DALE	Well Location Identifier:	
P.O. Box Number: 34	Mailing Address: ECKVILLE	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
SW	36	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 975.36 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Cable Tool
Flowing Well: No Rate: Liters
Gas Present: Oil Present:
Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
5.49	Brown Clay
6.1	Hard Sandstone Stringers
9.75	Brown Soft Sandstone
15.24	Blue Shale
17.68	Brown Soft Sandstone
22.56	Dark Gray Shale
23.77	Green Shale
24.69	Brown Shale
31.39	Dark Gray Shale
35.66	Blue Silty Shale
39.62	Gray Sandy Shale
41.76	Blue Sandy Shale
43.28	Gray Hard Sandstone
51.82	Gray Silty Shale
53.95	Brown Sandstone
57.61	Gray Sandstone
58.83	Gray Bentonitic Sandstone
71.02	Gray Water Bearing Sandstone
73.15	Dark Gray Shale

5. Well Completion

Date Started(yyyy/mm/dd): 1978/07/06	Date Completed (yyyy/mm/dd): 1978/07/11
Well Depth: 73.15 M	Borehole Diameter: 0 CM
Casing Type: Steel	Liner Type: Steel
Size OD: 13.97 CM	Size OD: 11.43 CM
Wall Thickness: 0.48 CM	Wall Thickness: 0.64 CM
Bottom at: 58.22 M	Top: 0 M Bottom: 73.15 M
Perforations from: 55.17 M to: 73.15 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0.64 CM x 20.32 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by: Torch	
Seal: Driven from: 0 M	to: 58.22 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount: 0
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: Yes Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments: MEDIUM HARD WATER.	

6. Well Yield

Test Date (yyyy/mm/dd): 1978/07/11	Start Time: 11:00 AM
Test Method: Bailer	
Non pumping static level:	54.25 M
Rate of water removal:	54.55 Liters/Min
Depth of pump intake:	60.96 M
Water level at end of pumping:	59.44 M
Distance from top of casing to ground level:	CM

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 5.18 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 36.37 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362737
Map Verified:	Map
Date Report Received:	
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: NELSON DRILLING & PLUMBING		Drilling Company Approval No.:
Mailing Address:	City or Town:	Postal Code:
WellOwner's Name: ALBERS, J.	Well Location Identifier:	
P.O. Box Number:	Mailing Address: BENTLEY	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
SW	36	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 989.99 M
How Obtain: Estimated

3. Drilling Information

Type of Work: Federal Well Survey
Reclaimed Well
Date Reclaimed: Materials Used:

Method of Drilling: Drilled

Flowing Well: No
Gas Present:
Rate: Liters
Oil Present:

Proposed well use: Domestic & Stock
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description

5. Well Completion

Date Started(yyyy/mm/dd):	Date Completed (yyyy/mm/dd): 1945/01/01
Well Depth: 59.74 M	Borehole Diameter: 0 CM
Casing Type: Steel	Liner Type:
Size OD: 5.08 CM	Size OD: 0 CM
Wall Thickness: 0 CM	Wall Thickness: 0 CM
Bottom at: 0 M	Top: 0 M Bottom: 0 M
Perforations	Perforations Size:
from: 0 M to: 0 M	0 CM x 0 CM
from: 0 M to: 0 M	0 CM x 0 CM
from: 0 M to: 0 M	0 CM x 0 CM
Perforated by:	
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount: 0
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments: PASKAPOO FORMATION.	

6. Well Yield

Test Date (yyyy/mm/dd): 1945/01/01	Start Time: 11:00 AM
Test Method: Unknown	
Non pumping static level:	39.62 M
Rate of water removal:	0 Liters/Min
Depth of pump intake:	0 M
Water level at end of pumping:	0 M
Distance from top of casing to ground level:	CM

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type:
Pump Model: PRESSURE E
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0491530
Map Verified:	Map
Date Report Received:	1998/09/09
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALKEN BASIN DRILLING LTD.		Drilling Company Approval No.: 38394
Mailing Address: BOX 47	City or Town: BENTLEY AB CANADA	Postal Code: T0C 0J0
WellOwner's Name: ALBERS, JULIUS	Well Location Identifier:	
P.O. Box Number:	Mailing Address: RR1, BENTLEY	Postal Code: T0C 0J0
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
SW	36	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: M
How Obtain: Not Obtain

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed:
Materials Used:
Method of Drilling: Rotary
Flowing Well: No
Gas Present: No
Rate: Liters
Oil Present: No
Proposed well use: Domestic
Anticipated Water Requirements/day 1591.1 Liters

6. Well Yield

Test Date (yyyy/mm/dd): 1998/08/25	Start Time: 11:00 AM
Test Method: Air	
Non pumping static level:	42.67 M
Rate of water removal:	29.55 Liters/Min
Depth of pump intake:	76.2 M
Water level at end of pumping:	M
Distance from top of casing to ground level:	CM

Depth To water level (meters)
Elapsed Time Drawdown Minutes:Sec Recovery

2:00	77.42
3:00	73.46
4:00	69.49
5:00	65.53
6:00	61.57
7:00	57.61
8:00	53.64
9:00	49.99
10:00	46.63
12:00	42.67
20:00	42.67
60:00	42.67
120:00	42.67

Total Drawdown: 0 M
If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 27.28 Liters/Min
Recommended pump intake: 76.2 M
Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

4. Formation Log

Depth from ground level (meters)	Lithology Description
2.44	Brown Clay
5.18	Brown Sandstone
11.58	Gray Shale
12.19	Brown Sandstone
13.72	Gray Sandstone
15.24	Gray Shale
21.34	Gray Sandstone
24.38	Green Shale
28.04	Gray Shale
28.96	Gray Sandstone
33.53	Green Shale
35.36	Gray Sandstone
41.15	Green Shale
42.06	Gray Sandstone
45.72	Gray Shale
46.33	Gray Sandstone
54.25	Gray Shale
56.08	Gray Sandstone
57.91	Gray Shale
60.35	Gray Sandstone
61.57	Green Shale
64.01	Gray Shale
65.23	Gray Sandstone
67.06	Gray Shale
73.15	Gray Shale & Sandstone Ledges
78.94	Gray Sandstone
79.25	Green Shale
79.86	Gray Sandstone
85.34	Gray Shale

5. Well Completion

Date Started(yyyy/mm/dd): 1998/08/25	Date Completed (yyyy/mm/dd): 1998/08/25
Well Depth: 85.34 M	Borehole Diameter: 0 CM
Casing Type: Steel	Liner Type: Plastic
Size OD: 13.97 CM	Size OD: 11.43 CM
Wall Thickness: 0.62 CM	Wall Thickness: 0.6 CM
Bottom at: 14.02 M	Top: 12.19 M Bottom: 85.34 M

Perforations	Perforations Size:
from: 42.67 M to: 48.77 M	0.95 CM x 0.95 CM
from: 54.86 M to: 79.25 M	0 CM x 0 CM
from: 0 M to: 0 M	0 CM x 0 CM

Perforated by: Hand Drill
Seal: Drive Shoe from: 0 M to: 14.02 M
Seal: from: 0 M to: 0 M
Seal: from: 0 M to: 0 M
Screen Type: Screen ID: 0 CM
from: 0 M to: 0 M Slot Size: 0 CM
Screen Type: Screen ID: 0 CM
from: 0 M to: 0 M Slot Size: 0 CM
Screen Installation Method:
Fittings
Top: Bottom:
Pack:
Grain Size: Amount:
Geophysical Log Taken:
Retained on Files:
Additional Test and/or Pump Data
Chemistries taken By Driller: No
Held: 0 Documents Held: 1
Pitless Adapter Type:
Drop Pipe Type:
Length: M Diameter: CM

Comments:
DRILLER REPORTS DISTANCE FROM TOP OF CASING TO GROUND LEVEL: 2'.

7. Contractor Certification

Driller's Name:	UNKNOWN DRILLER
Certification No.:	12389Q

This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362741
Map Verified:	Map
Date Report Received:	
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ERICKSON ERNFRED		Drilling Company Approval No.:
Mailing Address:	City or Town:	Postal Code:
WellOwner's Name: OLSON, K	Well Location Identifier:	
P.O. Box Number:	Mailing Address: BENTLEY	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
NE	36	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 967.13 M
How Obtain: Estimated

3. Drilling Information

Type of Work: Federal Well Survey
Reclaimed Well
Date Reclaimed: Materials Used:

Method of Drilling: Drilled

Flowing Well: No
Gas Present:
Rate: Liters
Oil Present:

Proposed well use: Domestic & Stock
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description

5. Well Completion

Date Started(yyyy/mm/dd):	Date Completed (yyyy/mm/dd): 1935/01/01
Well Depth: 45.72 M	Borehole Diameter: 0 CM
Casing Type: Unknown	Liner Type:
Size OD: 7.62 CM	Size OD: 0 CM
Wall Thickness: 0 CM	Wall Thickness: 0 CM
Bottom at: 0 M	Top: 0 M Bottom: 0 M
Perforations from: 0 M to: 0 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0 CM x 0 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by:	
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount: 0
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments: PASKAPOO FORMATION.	

6. Well Yield

Test Date (yyyy/mm/dd): 1935/01/01	Start Time: 11:00 AM
Test Method: Unknown	
Non pumping static level:	30.48 M
Rate of water removal:	0 Liters/Min
Depth of pump intake:	0 M
Water level at end of pumping:	0 M
Distance from top of casing to ground level:	CM

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type: FP M
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0362739
Map Verified:	Not Verified
Date Report Received:	1989/06/23
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALKEN BASIN DRILLING LTD.		Drilling Company Approval No.: 38394
Mailing Address: BOX 47	City or Town: BENTLEY AB CANADA	Postal Code: T0C 0J0
WellOwner's Name: WILKENS, ROD	Well Location Identifier:	
P.O. Box Number: 470	Mailing Address: BENTLEY	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
NW	36	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 975.36 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No
Gas Present: Rate: Liters
Oil Present:
Proposed well use: Stock
Anticipated Water Requirements/day 2273 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
2.44	Clay
3.66	Brown Soft Shale
15.24	Brown Sandstone
21.34	Greenish Gray Shale
24.38	Brown See Comments Sandstone
29.87	Gray Shale
36.58	Gray Sandstone
40.54	Gray Shale
42.67	Light Gray Sandstone
44.2	Shale
44.5	Sandstone
45.72	Shale
48.77	Gray Sandstone
54.86	Green Shale & Sandstone

5. Well Completion

Date Started(yyyy/mm/dd): 1989/05/16	Date Completed (yyyy/mm/dd): 1989/05/16
Well Depth: 54.86 M	Borehole Diameter: 0 CM
Casing Type: Steel	Liner Type: Plastic
Size OD: 13.97 CM	Size OD: 11.43 CM
Wall Thickness: 0.62 CM	Wall Thickness: 0.6 CM
Bottom at: 40.23 M	Top: 36.58 M Bottom: 54.86 M
Perforations from: 42.67 M to: 48.77 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0.95 CM x 0.95 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by: Machine	
Seal: Drive Shoe from: 0 M	to: 40.23 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount: 0
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments: 80'- 2 GPM.	

6. Well Yield

Test Date (yyyy/mm/dd): 1989/05/16	Start Time: 11:00 AM
Test Method: Air	
Non pumping static level:	24.38 M
Rate of water removal:	90.92 Liters/Min
Depth of pump intake:	39.62 M
Water level at end of pumping:	54.86 M
Distance from top of casing to ground level:	CM

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 30.48 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 40.23 M

Type Pump Installed
Pump Type: SUB
Pump Model: WEBTROL
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name:	UNKNOWN DRILLER
Certification No.:	VA4790

This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0380541
Map Verified:	Not Verified
Date Report Received:	1995/11/29
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALKEN BASIN DRILLING LTD.		Drilling Company Approval No.: 38394
Mailing Address: BOX 47	City or Town: BENTLEY AB CANADA	Postal Code: T0C 0J0
WellOwner's Name: HETHERINGTON, BONNIE	Well Location Identifier:	
P.O. Box Number:	Mailing Address: RR1, BENTLEY	Postal Code: T0C 0J0
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
SW	36	039	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: M
How Obtain: Not Obtain

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No Rate: Liters
Gas Present: No Oil Present: No

Proposed well use: Domestic
Anticipated Water Requirements/day 1591.1 Liters

6. Well Yield

Test Date (yyyy/mm/dd): 1995/11/17	Start Time: 11:00 AM
Test Method: Air	
Non pumping static level:	54.86 M
Rate of water removal:	136.38 Liters/Min
Depth of pump intake:	73.15 M
Water level at end of pumping:	73.15 M

Distance from top of CM casing to ground level:

Depth To water level (meters) Elapsed Time Drawdown Minutes:Sec	Recovery
2:00	64.01
3:00	58.52
4:00	54.86

Total Drawdown: 0 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 136.38 Liters/Min

Recommended pump intake: 64.01 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

4. Formation Log

Depth from ground level (meters)	Lithology Description
5.18	Brown Clay
6.4	Gray Shale
10.06	Brown Sandstone
12.5	Gray Shale
17.98	Brown Shale
24.99	Gray Shale
27.13	Gray Sandstone
36.88	Green Shale
38.71	Gray Sandstone
40.54	Green Shale
45.72	Gray Shale
47.85	Green Shale
53.34	Gray Shale
66.75	Gray Sandstone
70.1	Black Shale
73.15	Gray Shale

5. Well Completion

Date Started(yyyy/mm/dd): 1995/11/17	Date Completed (yyyy/mm/dd): 1995/11/17
Well Depth: 73.15 M	Borehole Diameter: 0 CM
Casing Type: Steel	Liner Type: Plastic
Size OD: 13.97 CM	Size OD: 11.43 CM
Wall Thickness: 0.62 CM	Wall Thickness: 0.4 CM
Bottom at: 35.05 M	Top: 30.48 M Bottom: 73.15 M
Perforations from: 54.86 M to: 73.15 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0.95 CM x 0.95 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by: Hand Drill	
Seal: Driven & Shale Trap from: 0 M	to: 48.77 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount:
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM

Comments:
DRILLER REPORTS DISTANCE FROM TOP OF CASING TO GROUND LEVEL: 2'.

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.: 12389Q
This well was constructed in accordance with the Water

Water Well Drilling Report

Alberta Environment

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0437631
Map Verified:	Map
Date Report Received:	1988/10/19
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALKEN BASIN DRILLING LTD.		Drilling Company Approval No.: 38394
Mailing Address: BOX 47	City or Town: BENTLEY AB CANADA	Postal Code: T0C 0J0
WellOwner's Name: SCREPNEK, RANDY	Well Location Identifier:	
P.O. Box Number:	Mailing Address: RR1, BENTLEY	Postal Code: T0C 0J0
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
SE	03	040	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: M
How Obtain: Not Obtain

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No Rate: Liters
Gas Present: No Oil Present: No

Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

6. Well Yield

Test Date (yyyy/mm/dd): 1988/10/15	Start Time: 11:00 AM
Test Method: Air	
Non pumping static level:	51.82 M
Rate of water removal:	90.92 Liters/Min
Depth of pump intake:	73.15 M
Water level at end of pumping:	73.15 M

Distance from top of CM casing to ground level:

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 21.34 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 68.19 Liters/Min

Recommended pump intake: 67.06 M

Type Pump Installed
Pump Type: GOULD
Pump Model: 13 EM
H.P.: 1.5
Any further pumptest information?

4. Formation Log

Depth from ground level (meters)	Lithology Description
3.05	Clay
9.14	Shale
16.76	Sandstone
18.9	Lost Circulation
21.95	Shale
73.15	Interbedded Shale & Sandstone

5. Well Completion

Date Started(yyyy/mm/dd): 1988/08/15	Date Completed (yyyy/mm/dd): 1988/08/16
Well Depth: 73.15 M	Borehole Diameter: 0 CM
Casing Type: Steel	Liner Type: Plastic
Size OD: 13.97 CM	Size OD: 11.43 CM
Wall Thickness: 0.62 CM	Wall Thickness: 0.6 CM
Bottom at: 60.96 M	Top: 48.77 M Bottom: 73.15 M
Perforations from: 60.96 M to: 73.15 M	Perforations Size: 0.95 CM x 0.95 CM
from: 0 M to: 0 M	0 CM x 0 CM
from: 0 M to: 0 M	0 CM x 0 CM

Perforated by: Machine

Seal: Drive Shoe from: 0 M to: 60.96 M
Seal: from: 0 M to: 0 M
Seal: from: 0 M to: 0 M

Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM

Screen Installation Method:

Fittings
Top: Bottom:

Pack:
Grain Size: Amount:

Geophysical Log Taken:
Retained on Files:

Additional Test and/or Pump Data
Chemistries taken By Driller: No
Held: 1 Documents Held: 2

Pitless Adapter Type: 230V
Drop Pipe Type: GALV
Length: 64.01 M Diameter: 2.54 CM

Comments:

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.: VA4790
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0437633
Map Verified:	Map
Date Report Received:	
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: LOUSANA WATER WELLS (1987) LTD.		Drilling Company Approval No.: 118963
Mailing Address: BOX 88	City or Town: LOUSANA AB CA	Postal Code: T0M 1KO
WellOwner's Name: BUIT BROS.	Well Location Identifier:	
P.O. Box Number:	Mailing Address: SYLVAN LAKE	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
SW	03	040	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 968.35 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No
Gas Present: No
Rate: Liters
Oil Present: No
Proposed well use: Domestic & Stock
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
0.91	Brown Clay
3.66	Brown Fractured Shale
6.71	Brown Sandstone
7.01	Hard Sandstone
17.07	Brown Sandstone
18.59	Brown Shale
23.77	Brown Sandstone
24.69	Hard Sandstone
25.6	Brown Sandstone
26.52	Hard Sandstone
33.22	Brown Sandstone
35.05	Gray Shale
35.97	Gray Sandy Shale
36.58	Gray Shale & Coal
39.32	Gray Sandstone
39.62	Shale & Coal
40.23	Gray Shale
48.77	Gray Sandstone

5. Well Completion

Date Started(yyyy/mm/dd):
Date Completed (yyyy/mm/dd): 1977/06/08
Well Depth: 48.77 M
Borehole Diameter: 0 CM
Casing Type: Steel
Liner Type: Steel
Size OD: 14.12 CM
Size OD: 11.43 CM
Wall Thickness: 0.48 CM
Wall Thickness: 0.64 CM
Bottom at: 33.83 M
Top: 0 M Bottom: 48.77 M
Perforations
from: 41.15 M to: 48.77 M
from: 0 M to: 0 M
from: 0 M to: 0 M
Perforations Size:
0 CM x 0 CM
0 CM x 0 CM
0 CM x 0 CM
Perforated by: Torch
Seal: Driven
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M
Screen Type:
from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM
Screen Type:
from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM
Screen Installation Method:
Fittings
Top: Bottom:
Pack:
Grain Size: Amount:
Geophysical Log Taken:
Retained on Files:
Additional Test and/or Pump Data
Chemistries taken By Driller: Yes
Held: 0
Documents Held: 1
Pitless Adapter Type:
Drop Pipe Type:
Length: M
Diameter: CM
Comments:
DRILLER REPORTS HARD WATER.

6. Well Yield

Test Date (yyyy/mm/dd): 1988/06/08
Start Time: 11:00 AM
Test Method: Bailer
Non pumping static level: 41.76 M
Rate of water removal: 63.64 Liters/Min
Depth of pump intake: 42.06 M
Water level at end of pumping: 42.06 M
Distance from top of CM casing to ground level:
Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0.3 M
If water removal was less than 2 hr duration, reason why:
Recommended pumping rate: 0 Liters/Min
Recommended pump intake: 45.72 M
Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0341907
Map Verified:	Not Verified
Date Report Received:	2002/09/05
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALKEN BASIN DRILLING LTD.		Drilling Company Approval No.: 38394
Mailing Address: BOX 47	City or Town: BENTLEY AB CANADA	Postal Code: T0C 0J0
WellOwner's Name: SUNRISE LAZY S FARM	Well Location Identifier:	
P.O. Box Number: 22	Mailing Address: RR1 SITE 1, BENTLEY	Postal Code: T0C 0J0
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
NW	03	040	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: M
How Obtain: Not Obtain

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed:
Materials Used:
Method of Drilling: Rotary
Flowing Well: No
Gas Present: No
Rate: Liters
Oil Present: No
Proposed well use: Stock
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
4.27	Brown Clay
5.79	Brown Shale
7.32	Gray Shale
41.15	Brown Sandstone
50.29	Gray Shale
53.34	Gray Fine Grained Sandstone
64.01	Gray Shale
68.58	Gray Sandstone
73.15	Gray Shale

5. Well Completion

Date Started(yyyy/mm/dd): 2002/08/23	Date Completed (yyyy/mm/dd): 2002/08/23
Well Depth: 73.15 M	Borehole Diameter: 0 CM
Casing Type: Steel	Liner Type: Plastic
Size OD: 14.12 CM	Size OD: 11.43 CM
Wall Thickness: 0.65 CM	Wall Thickness: 0.54 CM
Bottom at: 31.39 M	Top: 24.38 M Bottom: 73.15 M
Perforations from: 60.96 M to: 67.06 M	Perforations Size: 1.27 CM x 1.27 CM
from: 0 M to: 0 M	0 CM x 0 CM
from: 0 M to: 0 M	0 CM x 0 CM
Perforated by: Hand Drill	
Seal: Drive Shoe from: 0 M	to: 31.39 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount:
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments:	

6. Well Yield

Test Date (yyyy/mm/dd): 2002/08/23	Start Time: 11:00 AM
Test Method: Air	
Non pumping static level:	46.02 M
Rate of water removal:	227.3 Liters/Min
Depth of pump intake:	73.15 M
Water level at end of pumping:	73.15 M
Distance from top of CM casing to ground level:	

Depth To water level (meters)

Elapsed Time Drawdown Minutes:	Sec Recovery
1:00	57.91
2:00	51.82
3:00	48.77
4:00	47.24
5:00	46.63
6:00	46.33
7:00	46.02

Total Drawdown: 14.94 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 36.37 Liters/Min

Recommended pump intake: 64.01 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name:	UNKNOWN DRILLER
Certification No.:	VA3129

This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0437638
Map Verified:	Map
Date Report Received:	
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: NELSON DRILLING & PLUMBING		Drilling Company Approval No.:
Mailing Address:	City or Town:	Postal Code:
WellOwner's Name: JOHANSON, V.	Well Location Identifier:	
P.O. Box Number:	Mailing Address: BENTLEY	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
NE	03	040	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: M
How Obtain: Not Obtain

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed:
Materials Used:
Method of Drilling: Jet
Flowing Well: No
Gas Present: No
Rate: Liters
Oil Present: No
Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description

5. Well Completion

Date Started(yyyy/mm/dd):	Date Completed (yyyy/mm/dd): 1943/11/30
Well Depth: 68.58 M	Borehole Diameter: 0 CM
Casing Type: Galvanized Steel	Liner Type:
Size OD: 5.08 CM	Size OD: 0 CM
Wall Thickness: 0 CM	Wall Thickness: 0 CM
Bottom at: 47.24 M	Top: 0 M Bottom: 0 M
Perforations from: 0 M to: 0 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0 CM x 0 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by:	
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount:
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: Yes Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: 47.24 M	Diameter: CM

Comments:
DRILLER REPORTS SOFT WATER. PUMP IS 480 MAROY (?) HCECK & 4 LEATHER PLUNGER, 3/8 PUMP ROD. WELL JETTED & PUMP TESTED, BUT LITTLE INFO. LITH: BROWN CLAY OVER BLUE SHALE & SST LEDGES. WATER @ 225', ROSE TO 140'.

6. Well Yield

Test Date (yyyy/mm/dd): 1943/11/30	Start Time: , 11:00 AM
Test Method: Pump	
Non pumping static level:	42.67 M
Rate of water removal:	Liters/Min
Depth of pump intake:	47.24 M
Water level at end of pumping:	M
Distance from top of casing to ground level:	CM

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type: HAND PUMP
Pump Model:
H.P.:
Any further pumptest information? Yes

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0437642
Map Verified:	Map
Date Report Received:	1981/09/28
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALBERTA EAGLE DRILLING LTD.		Drilling Company Approval No.: 117793
Mailing Address: BOX 9036	City or Town: SYLVAN LAKE AB CA	Postal Code: T4S 1S6
WellOwner's Name: RUSSELL, ALAN	Well Location Identifier:	
P.O. Box Number: 305	Mailing Address: ECKVILLE	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
03	04	040	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 967.74 M
How Obtain: Estimated

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No
Gas Present: No
Rate: Liters
Oil Present: No
Proposed well use: Domestic & Stock
Anticipated Water Requirements/day 2273 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
7.01	Clay & Rocks
13.72	Shale
15.85	Brown Sandstone
18.9	Shale
22.25	Sandstone
22.86	Shale

5. Well Completion

Date Started(yyyy/mm/dd): 1981/09/15
Date Completed (yyyy/mm/dd): 1981/09/15
Well Depth: 22.86 M
Borehole Diameter: 0 CM
Casing Type: Galvanized Steel
Liner Type:
Size OD: 11.43 CM
Size OD: 0 CM
Wall Thickness: 0.36 CM
Wall Thickness: 0 CM
Bottom at: 19.2 M
Top: 0 M Bottom: 0 M
Perforations
from: 0 M to: 0 M
from: 0 M to: 0 M
from: 0 M to: 0 M
Perforations Size:
0 CM x 0 CM
0 CM x 0 CM
0 CM x 0 CM
Perforated by:
Seal: Driven
from: 0 M to: 19.2 M
Seal:
from: 0 M to: 0 M
Seal:
from: 0 M to: 0 M
Screen Type:
from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM
Screen Type:
from: 0 M to: 0 M
Screen ID: 0 CM
Slot Size: 0 CM
Screen Installation Method:
Fittings
Top: Bottom:
Pack:
Grain Size: Amount:
Geophysical Log Taken:
Retained on Files:
Additional Test and/or Pump Data
Chemistries taken By Driller: Yes
Held: 0 Documents Held: 1
Pitless Adapter Type:
Drop Pipe Type:
Length: M Diameter: CM
Comments:
DRILLER REPORTS MED HARD WATER.

6. Well Yield

Test Date (yyyy/mm/dd): 1981/09/15
Start Time: 11:00 AM
Test Method: Pump
Non pumping static level: 10.36 M
Rate of water removal: 36.37 Liters/Min
Depth of pump intake: 16.76 M
Water level at end of pumping: 16.76 M
Distance from top of CM casing to ground level:
Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 6.4 M
If water removal was less than 2 hr duration, reason why:
Recommended pumping rate: 36.37 Liters/Min
Recommended pump intake: 16.76 M
Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0353902
Map Verified:	Not Verified
Date Report Received:	1990/12/20
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALBERTA ENVIRONMENTAL PROTECTION/TECHNICAL SERVICES DIVISION		Drilling Company Approval No.: 9984567
Mailing Address: 9820 - 106 STREET	City or Town: EDMONTON AB CA	Postal Code: T5K 2J6
WellOwner's Name: ALTA ENV #2624E	Well Location Identifier:	
P.O. Box Number:	Mailing Address: SYLVAN LAKE	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
05	04	040	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: M
How Obtain: Not Obtain

3. Drilling Information

Type of Work: Test Hole-Abandoned Reclaimed Well
Date Reclaimed: 1990/11/10
Materials Used: Cement
Method of Drilling: Rotary
Flowing Well: Yes
Rate: 68.19 Liters
Gas Present: No
Oil Present: No
Proposed well use: Unknown
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
0.3	Topsoil
3.35	Tan Sandy Clay
14.33	Gray Sandy Clay
17.07	Gray Sandstone
19.81	Gray Shale
22.86	Gray Shale
23.16	Gray Hard Sandstone Stringers
24.08	Gray Shale

5. Well Completion

Date Started(yyyy/mm/dd): 1990/11/09	Date Completed (yyyy/mm/dd): 1990/11/10
Well Depth: 24.08 M	Borehole Diameter: 0 CM
Casing Type:	Liner Type:
Size OD: 0 CM	Size OD: 0 CM
Wall Thickness: 0 CM	Wall Thickness: 0 CM
Bottom at: 0 M	Top: 0 M Bottom: 0 M
Perforations	Perforations Size:
from: 0 M to: 0 M	0 CM x 0 CM
from: 0 M to: 0 M	0 CM x 0 CM
from: 0 M to: 0 M	0 CM x 0 CM
Perforated by:	
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount: 0
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 0	Documents Held: 2
Pitless Adapter Type: Drop Pipe Type: Length:	Diameter:
Comments: WELL SEALED FULL LENGTH.	

6. Well Yield

Test Date (yyyy/mm/dd):
Start Time:
Test Method:
Non pumping static level: M
Rate of water removal: Liters/Min
Depth of pump intake: M
Water level at end of pumping: M
Distance from top of casing to ground level: CM
Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: M
If water removal was less than 2 hr duration, reason why:
Recommended pumping rate: Liters/Min
Recommended pump intake: M
Type pump installed
Pump type:
Pump model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.: VA3321

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0406258
Map Verified:	Not Verified
Date Report Received:	1995/06/19
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALKEN BASIN DRILLING LTD.		Drilling Company Approval No.: 38394
Mailing Address: BOX 47	City or Town: BENTLEY AB CANADA	Postal Code: T0C 0J0
WellOwner's Name: RUSSELL, A./GARDINER OIL & GAS	Well Location Identifier:	
P.O. Box Number:	Mailing Address: 1600 333 7 AVE SW, CALGARY	Postal Code: T2P 2Z1
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
08	04	040	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: M
How Obtain: Not Obtain

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:

Method of Drilling: Rotary

Flowing Well: No
Gas Present: No
Rate: Liters
Oil Present: No

Proposed well use: Industrial
Anticipated Water Requirements/day 27276 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
4.57	Brown Clay
9.75	Brown Sandstone
17.07	Gray Fractured Sandstone
19.81	Brown Sandstone
20.73	Gray Sandstone
24.38	Brown Sandstone
29.57	Gray Shale
36.88	Gray Siltstone
37.8	Green Shale
42.67	Gray Siltstone
43.59	Gray Shale
45.72	Gray Sandstone
48.46	Gray Shale
60.96	Gray Sandstone

5. Well Completion

Date Started(yyyy/mm/dd): 1995/06/12	Date Completed (yyyy/mm/dd): 1995/06/12
Well Depth: 60.96 M	Borehole Diameter: 0 CM
Casing Type: Steel	Liner Type: Steel
Size OD: 13.97 CM	Size OD: 11.43 CM
Wall Thickness: 0.62 CM	Wall Thickness: 0.4 CM
Bottom at: 7.62 M	Top: 0 M Bottom: 60.96 M
Perforations from: 36.58 M to: 60.96 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0.95 CM x 0.95 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by: Hand Drill	
Seal: Drive Shoe from: 0 M	to: 7.62 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount:
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 0	Documents Held: 3
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments: DRILLER REPORTS DISTANCE FROM TOP OF CASING TO GROUND LEVEL: 3'. TRANSFER OF OWNERSHIP JUNE 28,1995	

6. Well Yield

Test Date (yyyy/mm/dd): 1995/06/12	Start Time: 11:00 AM
Test Method: Air	
Non pumping static level:	28.96 M
Rate of water removal:	227.3 Liters/Min
Depth of pump intake:	60.96 M
Water level at end of pumping:	60.96 M
Distance from top of CM casing to ground level:	

Depth To water level (meters)
Elapsed Time Drawdown Minutes:Sec Recovery

2:00	45.72
3:00	38.1
4:00	32.92
5:00	28.96

Total Drawdown: 0 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 227.3 Liters/Min

Recommended pump intake: 48.46 M

Type Pump Installed
Pump Type: SUB
Pump Model: GRUNDFOS
H.P.: 3
Any further pumptest information?

7. Contractor Certification

Driller's Name:	UNKNOWN DRILLER
Certification No.:	12389Q

Water Well Drilling Report

Alberta Environment

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0350292
Map Verified:	Not Verified
Date Report Received:	1990/04/10
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ALKEN BASIN DRILLING LTD.		Drilling Company Approval No.: 38394
Mailing Address: BOX 47	City or Town: BENTLEY AB CANADA	Postal Code: T0C 0J0
WellOwner's Name: RUSSEL, ALLAN	Well Location Identifier:	
P.O. Box Number: 305	Mailing Address: ECKVILLE	Postal Code: T0M 0X0
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
NW	04	040	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: M
How Obtain: Not Obtain

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Rotary
Flowing Well: No
Gas Present: No
Rate: Liters
Oil Present: No
Proposed well use: Stock
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description
3.05	Clay
38.1	Shale
40.23	Brown Sandstone
60.96	Gray Sandstone
65.53	Shale
68.58	Sandstone
76.2	Shale
80.77	Gray Sandstone
81.99	Shale
83.52	Gray Sandstone
85.34	Shale

5. Well Completion

Date Started(yyyy/mm/dd): 1990/03/23	Date Completed (yyyy/mm/dd): 1990/03/24
Well Depth: 85.34 M	Borehole Diameter: 0 CM
Casing Type: Steel	Liner Type: Plastic
Size OD: 13.97 CM	Size OD: 11.43 CM
Wall Thickness: 0.62 CM	Wall Thickness: 0.63 CM
Bottom at: 44.2 M	Top: 36.58 M Bottom: 85.34 M
Perforations from: 67.06 M to: 85.34 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0.95 CM x 0.95 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by: Machine	
Seal: Driven from: 0 M	to: 44.2 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount: 0
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments:	

6. Well Yield

Test Date (yyyy/mm/dd): 1990/03/24 Test Method: Air	Start Time: 11:00 AM
Non pumping static level:	59.44 M
Rate of water removal:	36.37 Liters/Min
Depth of pump intake:	0 M
Water level at end of pumping:	85.34 M
Distance from top of CM casing to ground level:	

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 25.91 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 27.28 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name:	UNKNOWN DRILLER
Certification No.:	VC0355

This well was constructed in accordance with the Water

Water Well Drilling Report

Alberta Environment

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0437650
Map Verified:	Map
Date Report Received:	1974/08/20
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: FORRESTER WATER WELL DRILLING (1981) LTD.		Drilling Company Approval No.: 2318
Mailing Address: RR 1	City or Town: RED DEER AB CA	Postal Code:
WellOwner's Name: PURNELL, DEL. C.	Well Location Identifier:	
P.O. Box Number: 239	Mailing Address: ECKVILLE	Postal Code: T0M 0X0
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof
NW	04	040	02	5 M

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: M
How Obtain: Not Obtain

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Cable Tool
Flowing Well: No Rate: Liters
Gas Present: No Oil Present: No

Proposed well use: Domestic & Stock
Anticipated Water Requirements/day 0 Liters

6. Well Yield

Test Date (yyyy/mm/dd): 1974/05/27	Start Time: 11:00 AM
Test Method: Bailer	
Non pumping static level:	6.1 M
Rate of water removal:	177.29 Liters/Min
Depth of pump intake:	19.81 M
Water level at end of pumping:	M

Distance from top of CM casing to ground level:

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

4. Formation Log

Depth from ground level (meters)	Lithology Description
7.92	Yellow Sandy Clay & Rocks
14.94	Gray Soft Shale
17.68	Brown Soft Sandstone
20.42	Blue Sandy Shale
24.08	Gray Shale & Sandy Stringers
26.82	Blue Gray Shale
28.65	Gray Sandy Shale
29.87	Gray Hard Sandstone
38.1	Gray Shale & Sandy Stringers

5. Well Completion

Date Started(yyyy/mm/dd): 1974/05/27	Date Completed (yyyy/mm/dd): 1974/05/29
Well Depth: 38.1 M	Borehole Diameter: 0 CM
Casing Type: Steel	Liner Type: Steel
Size OD: 17.78 CM	Size OD: 14.12 CM
Wall Thickness: 0.59 CM	Wall Thickness: 0.8 CM
Bottom at: 24.69 M	Top: 0 M Bottom: 38.1 M
Perforations from: 21.03 M to: 38.1 M	Perforations Size: 0.64 CM x 15.24 CM
from: 0 M to: 0 M	0 CM x 0 CM
from: 0 M to: 0 M	0 CM x 0 CM

Perforated by: Torch

Seal: Driven from: 0 M	to: 24.69 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM

Screen Installation Method:

Fittings Top:	Bottom:
Pack: Grain Size:	Amount:

Geophysical Log Taken:
Retained on Files:

Additional Test and/or Pump Data
Chemistries taken By Driller: Yes

Held: 2	Documents Held: 3
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM

Comments:
DRILLER REPORTS SOFT WATER. WATER BEARING @ : 49-58', 94-125'. LINER INSIDE CASING FROM 69-81', SEAL @ 81'

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Alberta Environment

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0478911
Map Verified:	Not Verified
Date Report Received:	1969/10/23
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: UNKNOWN DRILLER		Drilling Company Approval No.: 99999
Mailing Address: UNKNOWN	City or Town: UNKNOWN AB CA	Postal Code:
WellOwner's Name: RUSSELL, ALLAN	Well Location Identifier:	
P.O. Box Number: 305	Mailing Address: ECKVILLE	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	West of M
SE	04	040	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: M
How Obtain: Not Obtain

3. Drilling Information

Type of Work: Chemistry
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Unknown
Flowing Well:
Gas Present: No
Rate: Liters
Oil Present: No
Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description

5. Well Completion

Date Started(yyyy/mm/dd):	Date Completed (yyyy/mm/dd):
Well Depth: 36.58 M	Borehole Diameter: 0 CM
Casing Type:	Liner Type:
Size OD: 0 CM	Size OD: 0 CM
Wall Thickness: 0 CM	Wall Thickness: 0 CM
Bottom at: 0 M	Top: 0 M Bottom: 0 M
Perforations from: 0 M to: 0 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0 CM x 0 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by:	
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount:
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 1	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments:	

6. Well Yield

Test Date (yyyy/mm/dd): 1969/10/23	Start Time: 11:00 AM
Test Method:	
Non pumping static level:	18.29 M
Rate of water removal:	Liters/Min
Depth of pump intake:	0 M
Water level at end of pumping:	M
Distance from top of casing to ground level:	CM

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

Alberta Environment

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0478912
Map Verified:	Field
Date Report Received:	1950/07/04
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: ERICKSON DRILLING		Drilling Company Approval No.:
Mailing Address:	City or Town:	Postal Code:
WellOwner's Name: RUSSELL, D.H.	Well Location Identifier:	
P.O. Box Number:	Mailing Address: ECKVILLE	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
SE	04	040	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: 961.95 M
How Obtain: Survey-Air

3. Drilling Information

Type of Work: Federal Well Survey
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Drilled
Flowing Well: Rate: Liters
Gas Present: No Oil Present: No

Proposed well use: Domestic & Stock
Anticipated Water Requirements/day 0 Liters

4. Formation Log

Depth from ground level (meters)	Lithology Description

5. Well Completion

Date Started(yyyy/mm/dd):	Date Completed (yyyy/mm/dd): 1941/01/01
Well Depth: 35.66 M	Borehole Diameter: 0 CM
Casing Type: Galvanized Steel	Liner Type:
Size OD: 5.08 CM	Size OD: 0 CM
Wall Thickness: 0 CM	Wall Thickness: 0 CM
Bottom at: 0 M	Top: 0 M Bottom: 0 M
Perforations from: 0 M to: 0 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0 CM x 0 CM 0 CM x 0 CM 0 CM x 0 CM
Perforated by:	
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Installation Method:	
Fittings Top:	Bottom:
Pack: Grain Size:	Amount:
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data Chemistries taken By Driller: No Held: 0	Documents Held: 1
Pitless Adapter Type: Drop Pipe Type: Length: M	Diameter: CM
Comments: SURVEY REPORTS WATER IS CLEAR AND SOFT	

6. Well Yield

Test Date (yyyy/mm/dd): 1950/07/04	Start Time: 11:00 AM
Test Method:	
Non pumping static level:	18.29 M
Rate of water removal:	Liters/Min
Depth of pump intake:	0 M
Water level at end of pumping:	M
Distance from top of casing to ground level:	CM

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 0 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

Water Well Drilling Report

Alberta Environment

The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy.

Well I.D.:	0478913
Map Verified:	Not Verified
Date Report Received:	1969/06/09
Measurements:	Metric

1. Contractor & Well Owner Information

Company Name: MOORES WW DRLG		Drilling Company Approval No.:
Mailing Address:	City or Town:	Postal Code:
WellOwner's Name: RUSSELL, ALLAN	Well Location Identifier:	
P.O. Box Number: 305	Mailing Address: ECKVILLE	Postal Code:
City:	Province:	Country:

2. Well Location

1/4 or LSD	Sec	Twp	Rge	Westof M
01	04	040	02	5

Location in Quarter
0 M from Boundary
0 M from Boundary

Lot Block Plan

Well Elev: M
How Obtain: Not Obtain

3. Drilling Information

Type of Work: New Well
Reclaimed Well
Date Reclaimed: Materials Used:
Method of Drilling: Cable Tool
Flowing Well: Rate: Liters
Gas Present: No Oil Present: No
Proposed well use: Domestic
Anticipated Water Requirements/day 0 Liters

6. Well Yield

Test Date (yyyy/mm/dd): 1969/05/01	Start Time: 11:00 AM
Test Method: Pump	
Non pumping static level:	18.9 M
Rate of water removal:	136.38 Liters/Min
Depth of pump intake:	0 M
Water level at end of pumping:	23.47 M

Distance from top of CM casing to ground level:

Depth To water level (meters)
Elapsed Time
Drawdown Minutes:Sec Recovery
Total Drawdown: 4.57 M

If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Liters/Min

Recommended pump intake: 0 M

Type Pump Installed
Pump Type:
Pump Model:
H.P.:
Any further pumptest information?

4. Formation Log

Depth from ground level (meters)	Lithology Description
13.72	Light Brown Sand & Gravel
15.24	Gray Shale
20.42	Gray Soft Sandstone
25.6	Shale
25.91	Water Bearing Coal
30.18	Shale
30.78	Hard Rocks
34.44	Shale
34.75	Gray Hard Rocks
38.1	Shale

5. Well Completion

Date Started(yyyy/mm/dd):	Date Completed (yyyy/mm/dd): 1969/05/01
Well Depth: 38.1 M	Borehole Diameter: 0 CM
Casing Type: Steel	Liner Type: Steel
Size OD: 16.84 CM	Size OD: 14.12 CM
Wall Thickness: 0 CM	Wall Thickness: 0 CM
Bottom at: 21.34 M	Top: 0 M Bottom: 38.1 M
Perforations from: 21.34 M to: 38.1 M from: 0 M to: 0 M from: 0 M to: 0 M	Perforations Size: 0 CM x 0 CM 0 CM x 0 CM 0 CM x 0 CM

Perforated by:

Seal: Driven from: 0 M	to: 21.34 M
Seal: from: 0 M	to: 0 M
Seal: from: 0 M	to: 0 M
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM
Screen Type: from: 0 M to: 0 M	Screen ID: 0 CM Slot Size: 0 CM

Screen Installation Method:

Fittings Top:	Bottom:
Pack: Grain Size:	Amount:

Geophysical Log Taken:
Retained on Files:

Additional Test and/or Pump Data
Chemistries taken By Driller: Yes

Held: 1	Documents Held: 2

Pitless Adapter Type:
Drop Pipe Type:

Length: M	Diameter: CM

Comments:
DRILLER REPORTS WATER IS MEDIUM HARD

7. Contractor Certification

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water

APPENDIX C

Stantec Consulting
600 - 4808 Ross Street
Red Deer, AB T4N 1X5
Tel.(403) 341-3320

Pumping Test - Water Level Data

Project: Skyy Country and RV Park

Number: 113928105

Client: Frank Wilson

Location: Lsd.15-34-39-2-W.5	Pumping Test: Test of Production Well	Pumping well: Well 1
Test conducted by: Alken Basin Drilling Ltd.	Test date: 3/28/2008	Discharge rate: 425.7 [m³/d]
Observation well: Well 1	Static water level [m]: 26.91	Radial distance to PW [m]: -

West Well

	Time [min]	Water Level [m]	Drawdown [m]
1	2	26.932	0.023
2	4	28.01	1.101
3	6	28.225	1.316
4	8	28.303	1.394
5	10	28.342	1.433
6	12	28.355	1.446
7	14	28.365	1.456
8	16	28.363	1.454
9	18	28.371	1.462
10	20	28.374	1.465
11	24	28.378	1.469
12	30	28.392	1.483
13	40	28.397	1.488
14	50	28.413	1.504
15	60	28.421	1.512
16	80	28.446	1.537
17	100	28.469	1.56
18	120	28.476	1.567
19	140	28.498	1.589
20	160	28.515	1.606
21	180	28.532	1.623
22	210	28.555	1.646
23	240	28.571	1.662
24	270	28.592	1.683
25	300	28.615	1.706
26	360	28.652	1.743
27	420	28.688	1.779
28	480	28.719	1.81
29	540	28.75	1.841
30	600	28.773	1.864
31	660	28.804	1.895
32	720	28.821	1.912
33	840	28.881	1.972
34	960	28.919	2.01
35	1080	28.961	2.052
36	1200	28.996	2.087
37	1320	29.035	2.126
38	1440	29.075	2.166
39	1680	29.121	2.212
40	1920	29.181	2.272
41	2280	29.231	2.322
42	2640	29.277	2.368
43	2880	29.318	2.409
44	3240	29.362	2.453
45	3600	29.391	2.482
46	3960	29.41	2.501

Stantec Consulting
600 - 4808 Ross Street
Red Deer, AB T4N 1X5
Tel.(403) 341-3320

Pumping Test - Water Level Data

Project: Skyy Country and RV Park

Number: 113928105

Client: Frank Wilson

	Time [min]	Water Level [m]	Drawdown [m]
47	4298	29.47	2.561
48	4300	28.586	1.677
49	4302	28.417	1.508
50	4304	28.312	1.403
51	4306	28.247	1.338
52	4308	28.198	1.289
53	4310	28.162	1.253
54	4312	28.131	1.222
55	4314	28.11	1.201
56	4316	28.089	1.18
57	4318	28.064	1.155
58	4322	28.04	1.131
59	4328	27.998	1.089
60	4334	27.97	1.061
61	4338	27.953	1.044
62	4348	27.922	1.013
63	4358	27.892	0.983
64	4368	27.87	0.961
65	4378	27.852	0.943
66	4398	27.819	0.91
67	4418	27.794	0.885
68	4438	27.772	0.863
69	4448	27.756	0.847
70	4478	27.723	0.814
71	4508	27.70	0.791
72	4538	27.669	0.76
73	4568	27.644	0.735
74	4598	27.628	0.719
75	4658	27.588	0.679
76	4718	27.553	0.644
77	4778	27.522	0.613
78	4838	27.501	0.592
79	4898	27.474	0.565
80	4958	27.453	0.544
81	5018	27.429	0.52
82	5138	27.391	0.482
83	5258	27.354	0.445
84	5378	27.331	0.422
85	5498	27.302	0.393
86	5738	27.285	0.376
87	5978	27.277	0.368
88	6098	27.258	0.349
89	6338	27.237	0.328
90	7198	27.204	0.295

Stantec Consulting
600 - 4808 Ross Street
Red Deer, AB T4N 1X5
Tel.(403) 341-3320

Pumping Test - Water Level Data

Project: Skyy Country and RV Park

Number: 113928105

Client: Frank Wilson

Location: Lsd.15-34-39-2-W.5	Pumping Test: Test of Production Well	Pumping well: Well 1
Test conducted by: Aiken Basin Drilling Ltd.	Test date: 3/28/2008	Discharge: variable, average rate 425.6 [m³/d]
Observation well: Well 2	Static water level [m]: 37.65	Radial distance to PW [m]: 60

	Time [min]	Water Level [m]	Drawdown [m]
1	2	37.654	0.002
2	4	37.654	0.002
3	6	37.652	0.00
4	8	37.654	0.002
5	10	37.654	0.002
6	12	37.652	0.00
7	14	37.652	0.00
8	16	37.652	0.00
9	18	37.652	0.00
10	20	37.652	0.00
11	30	37.652	0.00
12	40	37.652	0.00
13	50	37.652	0.00
14	60	37.652	0.00
15	80	37.65	-0.002
16	100	37.652	0.00
17	130	37.652	0.00
18	160	37.652	0.00
19	200	37.654	0.002
20	260	37.652	0.00
21	320	37.65	-0.002
22	380	37.65	-0.002
23	440	37.652	0.00
24	500	37.654	0.002
25	560	37.656	0.004
26	620	37.656	0.004
27	740	37.656	0.004
28	860	37.652	0.00
29	980	37.65	-0.002
30	1100	37.65	-0.002
31	1220	37.656	0.004
32	1340	37.664	0.012
33	1440	37.668	0.016
34	1680	37.668	0.016
35	1920	37.674	0.022
36	2160	37.684	0.032
37	2400	37.68	0.028
38	2640	37.684	0.032
39	2880	37.692	0.04
40	3240	37.688	0.036
41	3360	37.686	0.034
42	3600	37.695	0.043
43	3840	37.697	0.045
44	3960	37.709	0.057
45	4298	37.733	0.081
46	4300	37.731	0.079

Stantec Consulting
600 - 4808 Ross Street
Red Deer, AB T4N 1X5
Tel.(403) 341-3320

Pumping Test - Water Level Data

Project: Skyy Country and RV Park

Number: 113928105

Client: Frank Wilson

	Time [min]	Water Level [m]	Drawdown [m]
47	4302	37.733	0.081
48	4304	37.733	0.081
49	4306	37.733	0.081
50	4308	37.733	0.081
51	4310	37.733	0.081
52	4312	37.733	0.081
53	4314	37.733	0.081
54	4316	37.733	0.081
55	4318	37.735	0.083
56	4328	37.735	0.083
57	4338	37.733	0.081
58	4348	37.735	0.083
59	4358	37.735	0.083
60	4368	37.735	0.083
61	4378	37.735	0.083
62	4408	37.737	0.085
63	4438	37.737	0.085
64	4448	37.737	0.085
65	4478	37.735	0.083
66	4508	37.733	0.081
67	4538	37.733	0.081
68	4598	37.731	0.079
69	4658	37.735	0.083
70	4718	37.737	0.085
71	4778	37.739	0.087
72	4838	37.741	0.089
73	4898	37.745	0.093
74	4958	37.747	0.095
75	5078	37.743	0.091
76	5198	37.739	0.087
77	5318	37.739	0.087
78	5438	37.741	0.089
79	5558	37.747	0.095
80	5678	37.762	0.11
81	5798	37.768	0.116
82	6038	37.776	0.124
83	6278	37.782	0.13
84	6284	37.782	0.13

Stantec Consulting
600 - 4808 Ross Street
Red Deer, AB T4N 1X5
Tel.(403) 341-3320

Pumping Test - Water Level Data

Project: Skyy Country RV Park

Number: 113928105

Client: Frank Wilson

Location: Lsd. 15-34-39-2-W.5	Pumping Test: Test of East Well	Pumping well: Well 1
Test conducted by: Alken Basin Drilling Ltd.	Test date: 4/11/2008	Discharge: variable, average rate 199.59 [m³/d]
Observation well: Well 1	Static water level [m]: 37.91	Radial distance to PW [m]: -

East

	Time [min]	Water Level [m]	Drawdown [m]
1	2	39.088	1.177
2	4	39.107	1.196
3	6	39.121	1.21
4	8	39.121	1.21
5	10	39.131	1.22
6	12	39.137	1.226
7	14	39.143	1.232
8	16	39.151	1.24
9	18	39.151	1.24
10	20	39.156	1.245
11	24	39.166	1.255
12	30	39.176	1.265
13	40	39.186	1.275
14	50	39.196	1.285
15	60	39.204	1.293
16	70	39.217	1.306
17	80	39.223	1.312
18	90	39.225	1.314
19	110	39.235	1.324
20	130	39.237	1.326
21	150	39.245	1.334
22	180	39.259	1.348
23	210	39.265	1.354
24	240	39.28	1.369
25	270	39.288	1.377
26	300	39.30	1.389
27	360	39.32	1.409
28	420	39.337	1.426
29	480	39.361	1.45
30	540	39.369	1.458
31	600	39.381	1.47
32	660	39.40	1.489
33	720	39.40	1.489
34	780	39.408	1.497
35	840	39.418	1.507
36	900	39.434	1.523
37	1080	39.449	1.538
38	1200	39.459	1.548
39	1320	39.459	1.548
40	1440	39.457	1.546
41	1560	39.459	1.548
42	1680	39.461	1.55
43	1758	39.467	1.556
44	1760	38.208	0.297
45	1762	38.19	0.279
46	1764	38.176	0.265

Stantec Consulting
600 - 4808 Ross Street
Red Deer, AB T4N 1X5
Tel.(403) 341-3320

Pumping Test - Water Level Data

Project: Skyy Country RV Park

Number: 113928105

Client: Frank Wilson

	Time [min]	Water Level [m]	Drawdown [m]
47	1766	38.164	0.253
48	1768	38.15	0.239
49	1770	38.14	0.229
50	1772	38.133	0.222
51	1774	38.13	0.219
52	1776	38.125	0.214
53	1780	38.122	0.211
54	1784	38.118	0.207
55	1790	38.112	0.201
56	1800	38.104	0.193
57	1810	38.096	0.185
58	1820	38.092	0.181
59	1830	38.087	0.176
60	1840	38.083	0.172
61	1850	38.079	0.168
62	1860	38.075	0.164
63	1880	38.068	0.157
64	1900	38.066	0.155
65	1920	38.059	0.148
66	1940	38.057	0.146
67	1960	38.051	0.14
68	1980	38.046	0.135
69	2000	38.04	0.129
70	2030	38.032	0.121
71	2060	38.027	0.116
72	2120	38.017	0.106
73	2181	38.009	0.098
74	2240	38.00	0.089
75	2300	37.992	0.081
76	2360	37.99	0.079
77	2420	37.988	0.077
78	2480	37.986	0.075
79	2540	37.988	0.077
80	2580	37.988	0.077
81	2700	37.986	0.075
82	2820	37.978	0.067
83	2940	37.965	0.054
84	3060	37.957	0.046
85	3180	37.959	0.048
86	3200	37.967	0.056
87	3320	37.982	0.071
88	3440	37.986	0.075
89	3560	37.969	0.058
90	3680	37.967	0.056
91	3800	37.961	0.05
92	3868	37.957	0.046

Stantec Consulting
600 - 4808 Ross Street
Red Deer, AB T4N 1X5
Tel.(403) 341-3320

Pumping Test - Water Level Data

Project: Skyy Country RV Park

Number: 113928105

Client: Frank Wilson

Location: Lsd. 15-34-39-2-W.5	Pumping Test: Test of East Well	Pumping well: East Well
Test conducted by: Alken Basin Drilling Ltd.	Test date: 4/11/2008	Discharge: variable, average rate 199.59 [m³/d]
Observation well: West Well	Static water level [m]: 0.00	Radial distance to PW [m]: 42.61

	Time [min]	Water Level [m]	Drawdown [m]
1	2	0.002	0.002
2	4	0.002	0.002
3	6	-0.004	-0.004
4	8	0.004	0.004
5	10	0.004	0.004
6	14	0.004	0.004
7	20	0.004	0.004
8	30	0.004	0.004
9	40	0.00	0.00
10	50	0.008	0.008
11	60	0.008	0.008
12	80	0.01	0.01
13	100	0.01	0.01
14	120	0.01	0.01
15	150	0.014	0.014
16	180	0.013	0.013
17	210	0.012	0.012
18	240	0.01	0.01
19	300	0.008	0.008
20	360	0.008	0.008
21	420	0.006	0.006
22	480	0.004	0.004
23	540	0.006	0.006
24	600	0.006	0.006
25	660	0.004	0.004
26	720	0.004	0.004
27	780	0.002	0.002
28	900	0.008	0.008
29	1020	0.006	0.006
30	1240	0.006	0.006
31	1260	0.001	0.001
32	1380	0.016	0.016
33	1500	0.012	0.012
34	1620	0.019	0.019
35	1758	0.025	0.025
36	1760	0.025	0.025
37	1762	0.025	0.025
38	1764	0.042	0.042
39	1766	0.025	0.025
40	1768	0.023	0.023
41	1772	0.023	0.023
42	1778	0.023	0.023
43	1788	0.023	0.023
44	1798	0.023	0.023
45	1808	0.025	0.025
46	1818	0.025	0.025

Stantec Consulting
600 - 4808 Ross Street
Red Deer, AB T4N 1X5
Tel.(403) 341-3320

Pumping Test - Water Level Data

Project: Skyy Country RV Park

Number: 113928105

Client: Frank Wilson

	Time [min]	Water Level [m]	Drawdown [m]
47	1838	0.023	0.023
48	1868	0.023	0.023
49	1888	0.041	0.041
50	1908	0.021	0.021
51	1938	0.021	0.021
52	1968	0.023	0.023
53	1998	0.023	0.023
54	2058	0.031	0.031
55	2118	0.029	0.029
56	2178	0.031	0.031
57	2238	0.031	0.031
58	2298	0.031	0.031
59	2358	0.029	0.029
60	2418	0.027	0.027
61	2478	0.035	0.035
62	2538	0.021	0.021
63	2598	0.017	0.017
64	2658	0.017	0.017
65	2718	0.016	0.016
66	2778	0.017	0.017
67	2838	0.019	0.019
68	2958	0.027	0.027
69	3078	0.023	0.023
70	3198	0.021	0.021
71	3418	0.004	0.004
72	3638	0.00	0.00
73	3758	-0.004	-0.004
74	3878	0.008	0.008
75	3998	0.006	0.006
76	4118	0.01	0.01
77	4238	0.008	0.008
78	4358	0.014	0.014
79	4478	0.008	0.008

APPENDIX D

WSH Labs (1992) LTD.
3851B - 21 Street N.E.
Calgary, Alberta
Canada T2E6T5
Ph: (403) 250-9164
Fax: (403) 291-4597
Website: www.wshlabs.com

lken Basin Drilling
ox 47
entley, AB T0C 0J0

Phone: (403) 748-4340
Fax: (403) 748-2880
Email:

Lab Number: 60009
PO Number:

ttention:		**Sampled By:**	Wade Balon
lient ID:	Frank Wilson	**Date Sampled:**	4/1/2008
ocation:	New West Well	**Date Received:**	4/2/2008
Legal:	NE-34-39-2-W5	**Date Reported:**	4/9/2008

nalyte	Units	Result	Canadian Drinking Water Guideline Maximum
alcium	mg/L	65.6	No Guideline
on	mg/L	< 0.03	0.3
lagnesium	mg/L	52.9	No Guideline
langanese	mg/L	< 0.01	0.05
otassium	mg/L	1.9	No Guideline
odium	mg/L	30	200
icarbonates	mg/L	466	No Guideline
romides	mg/L	< 0.1	No Guideline
arbonates	mg/L	0	No Guideline
hlorides	mg/L	4.3	250
luorides	mg/L	0.08	1.5
itrates as N	mg/L	0.1	10
itrites as N	mg/L	< 0.02	1
O_3 + NO_2 as N	mg/L	0.1	No Guideline
ulfates	mg/L	42	500

arameter	Units	Result	Canadian Drinking Water Guideline Maximum
lectrical Conductivity	µS/cm	723	No Guideline
-I	pH	8.11	6.5 - 8.5
ardness (as $CaCO_3$)	mg/L	382	No Guideline
otal Alkalinity (as $CaCO_3$)	mg/L	382	No Guideline
-Alkalinity (as $CaCO_3$)	mg/L	0	No Guideline
ydroxide (as $CaCO_3$)	mg/L	0	No Guideline
otal Dissolved Solids	mg/L	426	500
ulfides as S	mg/L	-	0.05
urbidity	NTU	-	1
otal Organic Carbon	mg/L	-	No Guideline
otal Kjeldahl Nitrogen	mg/L	-	No Guideline
mmonia Nitrogen	mg/L	-	No Guideline
otal Phosphorus as P	mg/L	-	No Guideline
henol	mg/L	-	No Guideline

icrobiology	Units	Result	Canadian Drinking Water Guideline Maximum
otal Coliform	CFU/100 mL	0	Zero
scherichia Coliform	CFU/100 mL	0	Zero
ecal Coliform	CFU/100 mL	-	Zero

Sum of Cations	8.97	TDS / EC Ratio	0.59
Sum of Anions	8.65	SAR	0.67
Ion Balance	1.04	Saturation Index	1.1

WSH Labs (1992) LTD.
3851B - 21 Street N.E.
Calgary, Alberta
Canada T2E6T5
Ph: (403) 250-9164
Fax: (403) 291-4597
Website: www.wshlabs.com

lken Basin Drilling		**Phone:**	(403) 748-4340	**Lab Number:**	60009
ox 47		**Fax:**	(403) 748-2880		
entley, AB T0C 0J0		**Email:**		**PO Number:**	

ttention:		**Sampled By:**	Wade Balon
lient ID:	Frank Wilson	**Date Sampled:**	4/1/2008
ocation:	New West Well	**Date Received:**	4/2/2008
Legal:	NE-34-39-2-W5	**Date Reported:**	4/9/2008

race Metals	Units	Result	Canadian Drinking Water Guideline Maximum
eryllium	µg/L	< 0.05	No Guideline
oron	µg/L	52.6	5000
uminum	µg/L	1.5	100
hosphorus	µg/L	4.9	No Guideline
tanium	µg/L	< 0.2	No Guideline
anadium	µg/L	0.2	No Guideline
hromium	µg/L	< 0.1	50
obalt	µg/L	< 0.1	No Guideline
ckel	µg/L	0.3	No Guideline
opper	µg/L	< 0.08	1000
nc	µg/L	6.4	5000
senic	µg/L	0.04	10
elenium	µg/L	< 0.04	10
rontium	µg/L	628	No Guideline
rconium	µg/L	0.01	No Guideline
olybdenum	µg/L	3.6	No Guideline
lver	µg/L	< 0.04	No Guideline
admium	µg/L	< 0.05	5
n	µg/L	< 0.02	No Guideline
ntimony	µg/L	< 0.3	6
llerium	µg/L	< 0.07	No Guideline
rium	µg/L	67.8	1000
ngsten	µg/L	< 0.04	No Guideline
ercury	µg/L	< 0.05	1
allium	µg/L	< 0.03	No Guideline
ad	µg/L	< 0.1	10
orium	µg/L	< 0.03	No Guideline
anium	µg/L	3.4	20

Certified By: _____

redited by CAEAL to ISO/IEC 17025 for soecific tests.
R = Sodium Adsorption Ratio. TNTC = Too Numerous To Count (>200 colonies). < denotes less than detection limit
results above are related only to the items analyzed. Total Dissolved Solids is determined by calculation.

WSHLabs (1992) LTD.
3851B - 21 Street N.E.
Calgary, Alberta
Canada T2E6T5
Ph: (403) 250-9164
Fax: (403) 291-4597
Website: www.wshlabs.com

Alken Basin Drilling
Box 47
Bentley, AB T0C 0J0

Phone: (403) 748-4340
Fax: (403) 748-2880
Email:

Lab Number: 60096
PO Number:

Attention:		Sampled By:	John
Client ID:	Frank Wilson	Date Sampled:	4/16/2008
Location:	East Well	Date Received:	4/17/2008
Legal:	NE-34-39-2-W5	Date Reported:	4/24/2008

Analyte	Units	Result	Canadian Drinking Water Guideline Maximum
Calcium	mg/L	68.4	No Guideline
Iron	mg/L	0.28	0.3
Magnesium	mg/L	60.0	No Guideline
Manganese	mg/L	0.04	0.05
Potassium	mg/L	1.9	No Guideline
Sodium	mg/L	21	200
Bicarbonates	mg/L	473	No Guideline
Bromides	mg/L	< 0.1	No Guideline
Carbonates	mg/L	0	No Guideline
Chlorides	mg/L	14.9	250
Fluorides	mg/L	0.09	1.5
Nitrates as N	mg/L	0.1	10
Nitrites as N	mg/L	< 0.02	1
$NO_3 + NO_2$ as N	mg/L	0.1	No Guideline
Sulfates	mg/L	27	500

Parameter	Units	Result	Canadian Drinking Water Guideline Maximum
Electrical Conductivity	µS/cm	737	No Guideline
pH	pH	8.13	6.5 - 8.5
Hardness (as $CaCO_3$)	mg/L	418	No Guideline
Total Alkalinity (as $CaCO_3$)	mg/L	388	No Guideline
P-Alkalinity (as $CaCO_3$)	mg/L	0	No Guideline
Hydroxide (as $CaCO_3$)	mg/L	0	No Guideline
Total Dissolved Solids	mg/L	426	500
Sulfides as S	mg/L	-	0.05
Turbidity	NTU	-	1
Total Organic Carbon	mg/L	-	No Guideline
Total Kjeldahl Nitrogen	mg/L	-	No Guideline
Ammonia Nitrogen	mg/L	-	No Guideline
Total Phosphorus as P	mg/L	-	No Guideline
Phenol	mg/L	-	No Guideline

Microbiology	Units	Result	Canadian Drinking Water Guideline Maximum
Total Coliform	CFU/100 mL	0	Zero
Escherichia Coliform	CFU/100 mL	0	Zero
Fecal Coliform	CFU/100 mL	-	Zero

Sum of Cations	9.30	TDS / EC Ratio	0.58
Sum of Anions	8.75	SAR	0.45
Ion Balance	1.06	Saturation Index	1.1

WSH Labs (1992) LTD.
3851B - 21 Street N.E.
Calgary, Alberta
Canada T2E6T5
Ph: (403) 250-9164
Fax: (403) 291-4597
Website: www.wshlabs.com

lken Basin Drilling
ox 47
entley, AB T0C 0J0

Phone: (403) 748-4340
Fax: (403) 748-2880
Email:

Lab Number: 60096
PO Number:

ttention:		**Sampled By:**	John
Client ID:	Frank Wilson	**Date Sampled:**	4/16/2008
.ocation:	East Well	**Date Received:**	4/17/2008
Legal:	NE-34-39-2-W5	**Date Reported:**	4/24/2008

race Metals	Units	Result	Canadian Drinking Water Guideline Maximum
eryllium	µg/L	< 0.05	No Guideline
oron	µg/L	243	5000
luminum	µg/L	3.3	100
hosphorus	µg/L	4.9	No Guideline
itanium	µg/L	< 0.2	No Guideline
anadium	µg/L	< 0.08	No Guideline
hromium	µg/L	< 0.1	50
obalt	µg/L	0.5	No Guideline
ickel	µg/L	1.7	No Guideline
opper	µg/L	1.4	1000
inc	µg/L	5.6	5000
rsenic	µg/L	0.4	10
elenium	µg/L	17.2	10
trontium	µg/L	881	No Guideline
irconium	µg/L	0.1	No Guideline
olybdenum	µg/L	6.8	No Guideline
ilver	µg/L	< 0.04	No Guideline
admium	µg/L	< 0.05	5
in	µg/L	< 0.02	No Guideline
ntimony	µg/L	0.8	6
ellerium	µg/L	< 0.07	No Guideline
arium	µg/L	84.8	1000
ungsten	µg/L	< 0.04	No Guideline
lercury	µg/L	< 0.05	1
hallium	µg/L	< 0.03	No Guideline
ead	µg/L	< 0.1	10
horium	µg/L	< 0.03	No Guideline
ranium	µg/L	6.2	20

Certified By: _____

ccredited by CAEAL to ISO/IEC 17025 for specific tests.
AR = Sodium Adsorption Ratio, TNTC = Too Numerous To Count (>200 colonies), < denotes less than detection limit
ie results above are related only to the items analyzed. Total Dissolved Solids is determined by calculation.

APPENDIX F

WATER WELL QUESTIONNAIRE

Project Name Skyy Country Project No. 113928105

Date _____ 200 , Time _____

Owner's Name Nicole Jahner Phone 403-748-4180

Owner's Address RR1 Site 1 Box 16 Bentley T0C 0J0

Location, Legal: Lsd NE S 34 Twp 39 R 2 W. 5

Location, GPS: 11U 0690800 UTM 5809844 Elev. _____

Well location: Pit ✓, Inside building ____, Near Dugout ____, Near barn ____

Other N of house

Total depth ____ Casing Diam. 82" Casing Material Steel. Height above gnd 06

Casing wall thickness _____ Completion zone _____ to _____

Depth to water, measured _____ Reported _____

Driller _____ Year drilled _____

Pump depth _____. Pump make _____, HP _____

Intake depth of pump _____ Height csg. above ground _____

Water quality: Hard ___, Med. ✓, Soft ___, Rusty ___, Black, ___ Smell, ____ Other ____

Elect. Conductivity _____ pH _____ Temperature ____ ^{0} C. Water treated? _____

Taste: Good. Appearance Clear Gas present? ____ Supply

Use of well: Domestic ✓, Livestock (how many) _____, Industrial (type) _____,
Dairy _____, Poultry _____, Commercial _____ Other _____

Seasonal use? Yes ___ No ✓. Increase in use in last 5 years? _____

Other (specify) _____. Estimated annual production _____

Any dugouts or springs on property? No

WATER WELL QUESTIONNAIRE

Project Name Skyy Country Project No. 113928105

Date _____ 200 , Time _____

Owner's Name Doug's Andrea Hunt, Reg Morse, Horst Weseliey Phone 748-419-6666 (Doug) 27 Orion Cr, St. Albert T8N 6G6

Owner's Address Site 1 RR 1 Box 30 Bentley Tocatso

Location, Legal: Lsd NE S 34 Twp 39 R 2 W. 5

Location, GPS: 11U 0690770 UTM 5809859 Elev. _____

Well location: Pit ✓, Inside building ____, Near Dugout ____, Near barn ____

Other on Tanner Property

Total depth _____ Casing Diam 5 1/2" Casing Material Steel Height above gnd ϕ

Casing wall thickness _____ Completion zone _____ to _____

Depth to water, measured _____ Reported _____

Driller Arcan ~~Well Ser~~ Basin Year drilled _____

Pump depth _____ . Pump make _____, HP _____

Intake depth of pump _____ Height csg. above ground _____

Water quality: Hard ___, Med. ___, Soft ✓, Rusty ___, Black, ___ Smell, Sulphur Other ____

Elect. Conductivity _____ pH _____ Temperature ____ ^{0} C. Water treated? _____

Taste: Sulphur Appearance Clear Gas present? ____ Supply

Use of well: Domestic ✓, Livestock (how many) ~30, Industrial (type) _____,
Dairy _____, Poultry _____, Commercial _____ Other _____

Seasonal use? Yes ___ No ✓. Increase in use in last 5 years? _____

Other (specify) _____. Estimated annual production _____

Any dugouts or springs on property? No

WATER WELL QUESTIONNAIRE

Project Name Skyy Country Project No. 113928105

Date _____ 200 , Time _____

Owner's Name Brian Russell Phone 748-2013

Owner's Address Box 305 Eckville

Location, Legal: Lsd SW S 4 Twp 40 R 2 W.5

Location, GPS: 11U 0688289 UTM 5810055 Elev. _____

Well location: Pit ✓, Inside building ____, Near Dugout ____, Near barn ____

Other E of house, ~

Total depth 30' Casing Diam. ____ Casing Material steel Height above gnd ~~0~~

Casing wall thickness _____ Completion zone _____ to _____

Depth to water, measured _____ Reported _____

Driller Aiken Basin Year drilled 1980.

Pump depth ~~N/A~~ 90-100' Pump make submersible, HP _____

Intake depth of pump _____ Height csg. above ground _____

Water quality: Hard ___, Med. ✓, Soft ✓, Rusty ___, Black, ___ Smell, ✓ Other ____

Elect. Conductivity _____ pH _____ Temperature ____ ^{0} C. Water treated? _____

Taste: No good Appearance Color sometimes Gas present? ____ Supply

Use of well: Domestic ✓, Livestock (how many) _____, Industrial (type) _____,
Dairy _____, Poultry _____, Commercial _____ Other _____

Seasonal use? Yes ___ No ✓. Increase in use in last 5 years? _____

Other (specify) _____. Estimated annual production _____

Any dugouts or springs on property? lots of springs

2nd Well.
- SW of house
- Livestock
- Casing 4' abg.
- early 1970's
- 85-90' to water

WATER WELL QUESTIONNAIRE

Project Name Skyy Country Project No. 113928105

Date _____ 200 , Time _____

Owner's Name Brian Russell Phone 748-2013

Owner's Address Box 305 Eckville.

Location, Legal: Lsd SE S 4 Twp 40 R 2 W. 5

Location, GPS: 11U 0688881 UTM 5809990 Elev. _____

Well location: Pit ____, Inside building ✓, Near Dugout ____, Near barn ____

Other _____

Total depth _____ Casing Diam. ____ Casing Material Steel Height above gnd Ø

Casing wall thickness _____ Completion zone _____ to _____

Depth to water, measured _____ Reported _____

Driller _____ Year drilled ~1940.

Pump depth _____ . Pump make _____, HP _____

Intake depth of pump _____ Height csg. above ground _____

Water quality: Hard ___, Med. ___, Soft ✓, Rusty ___, Black, ___ Smell, ____ Other ____

Elect. Conductivity _____ pH _____ Temperature ____ ^{0} C. Water treated? _____

Taste: Good Appearance Clear Gas present? ____ Supply

Use of well: Domestic ✓, Livestock (how many) _____, Industrial (type) _____,
Dairy _____, Poultry _____, Commercial _____ Other _____

Seasonal use? Yes ___ No ✓. Increase in use in last 5 years? _____

Other (specify) _____. Estimated annual production _____

Any dugouts or springs on property? Dugout east of house.

Well #2
- located behind shed
- a livestock

WATER WELL QUESTIONNAIRE

Project Name Skyy Country Project No. 113928105

Date _____ 200 , Time _____

Owner's Name Ralph Nores Phone 748-2222

Owner's Address Box 1 Site 1 RR1 Bentley

Location, Legal: Lsd SW S 3 Twp 40 R 2 W. 5

Location, GPS: 11 U 0689351 UTM 5810009 Elev. 986.6

Well location: Pit ____, Inside building ____, Near Dugout ____, Near barn ____

Other N of house

Total depth ____ Casing Diam. 4½" Casing Material Steel Height above gnd 8"

Casing wall thickness _____ Completion zone _____ to _____

Depth to water, measured _____ Reported 130'

Driller Cliff Richmond Year drilled ~1982

Pump depth _____ . Pump make _____, HP _____

Intake depth of pump _____ Height csg. above ground _____

Water quality: Hard ___, Med. ✓, Soft ___, Rusty ___, Black, ___ Smell, ____ Other ____

Elect. Conductivity _____ pH _____ Temperature ____ ^{0} C. Water treated? _____

Taste: Good Appearance Clear Gas present? ____ Supply

Use of well: Domestic ✓, Livestock (how many) _____, Industrial (type) _____,
Dairy _____, Poultry _____, Commercial _____ Other _____

Seasonal use? Yes ___ No ✓. Increase in use in last 5 years? _____

Other (specify) _____. Estimated annual production _____

Any dugouts or springs on property? ND

WATER WELL QUESTIONNAIRE

Project Name Skyy Country Project No. 113928105

Date________________ 200 , Time______

Owner's Name Randy Scerpnek Phone 748-2491

Owner's Address RR1 Box 177 Bentley T0C 0J0

Location, Legal: Lsd SE S 3 Twp 40 R 2 W. 5

Location, GPS: ~~[illegible]~~ 114 0690599 5810144 Elev. ~~94~~

Well location: Pit____, Inside building____, Near Dugout____, Near barn____

Other NW of house.

Total depth 280' Casing Diam. 6½" Casing Material Steel Height above gnd 29"

Casing wall thickness_________ Completion zone ______ to _______

Depth to water, measured ~~190~~ Reported 190'

Driller Alkan Basin Year drilled________________

Pump depth_________. Pump make____________________, HP________

Intake depth of pump_________Height csg. above ground_______

Water quality: Hard___, Med. ✓, Soft___, Rusty___, Black, ___Smell,____ Other____

Elect. Conductivity_______ pH_____ Temperature____ ^{0} C. Water treated?__________

Taste: Good Appearance Clear Gas present?____ Supply

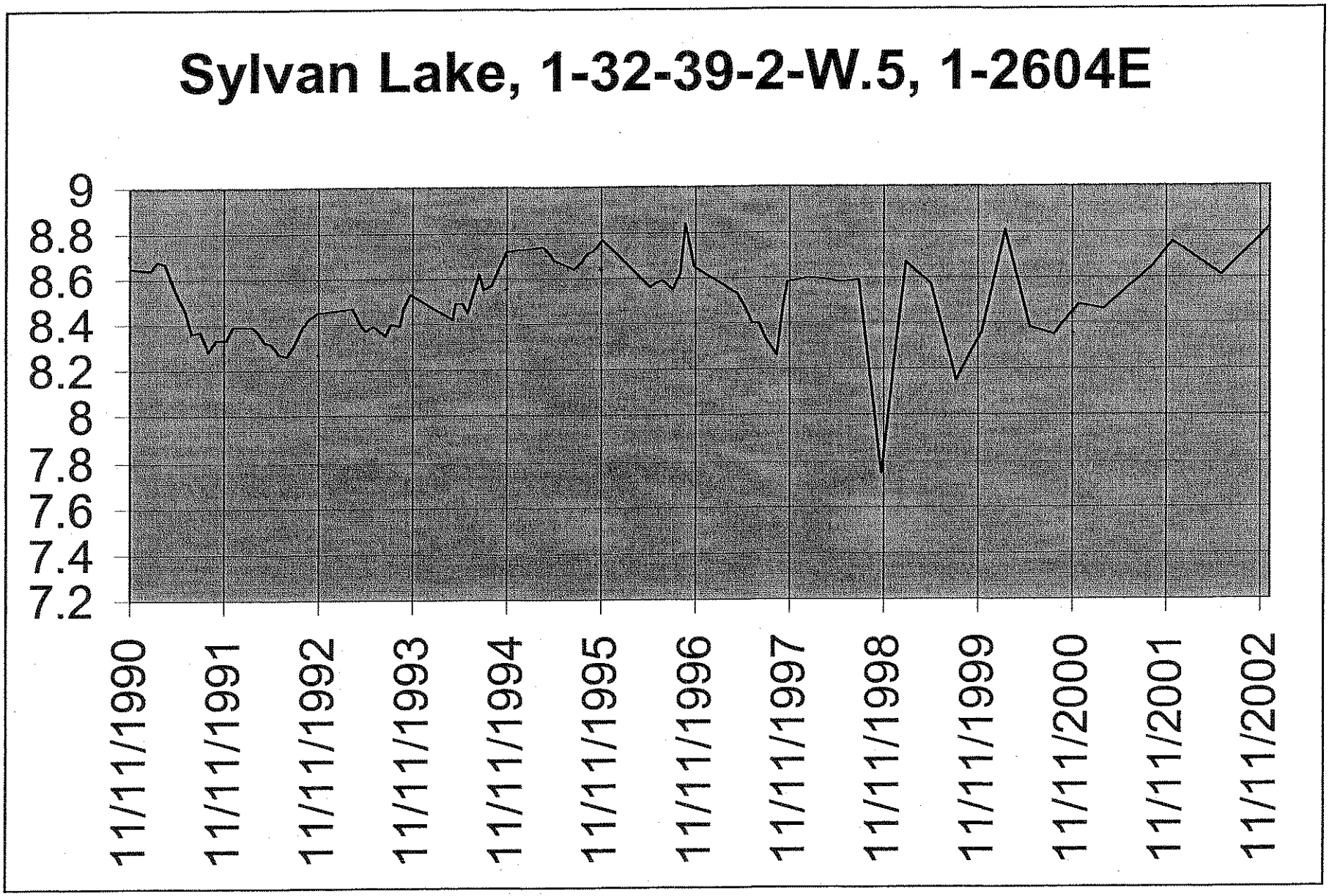
Use of well: Domestic ✓, Livestock (how many)_____, Industrial (type)__________,
Dairy________, Poultry________, Commercial__________ Other______________

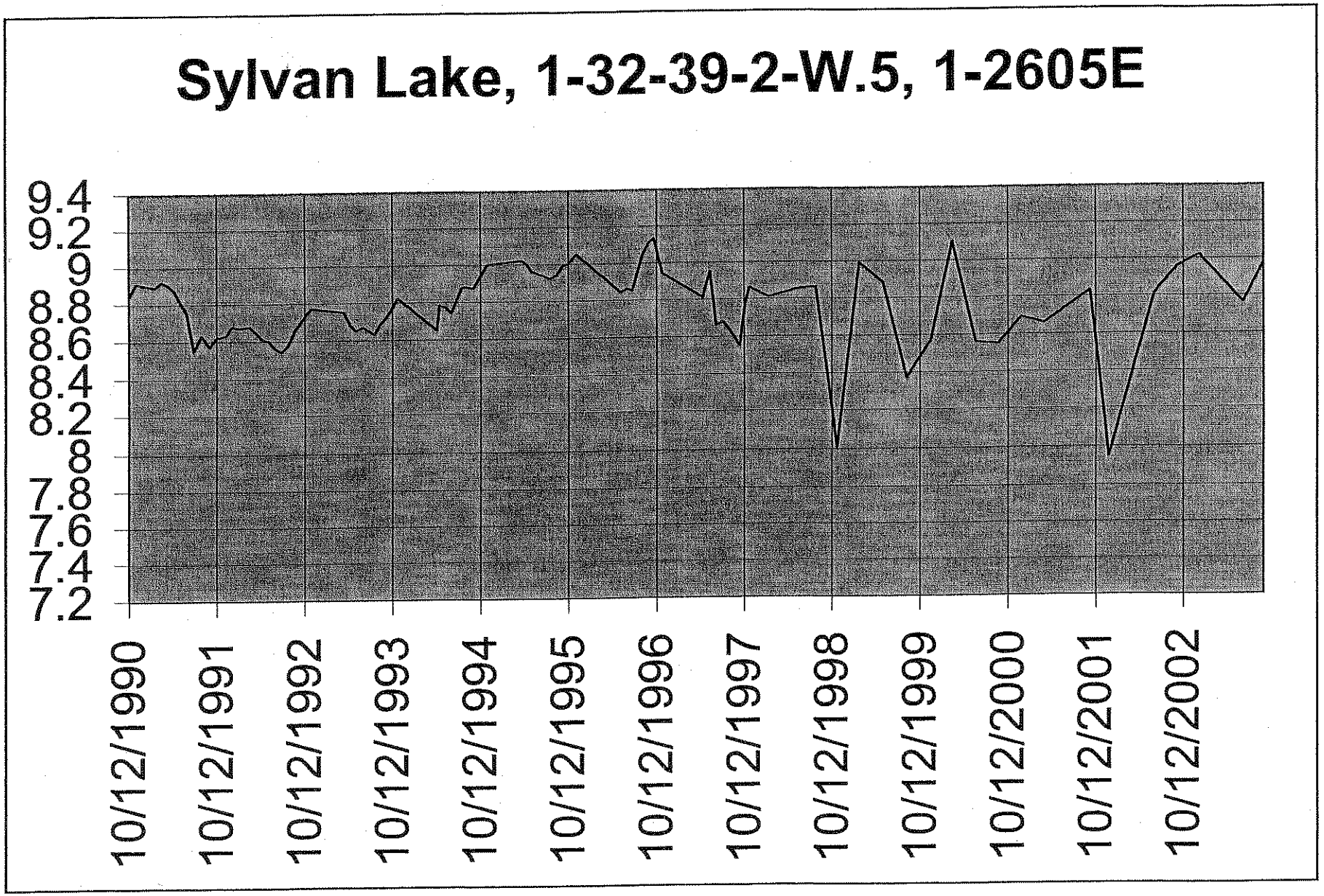
Seasonal use? Yes___No ✓. Increase in use in last 5 years?______________

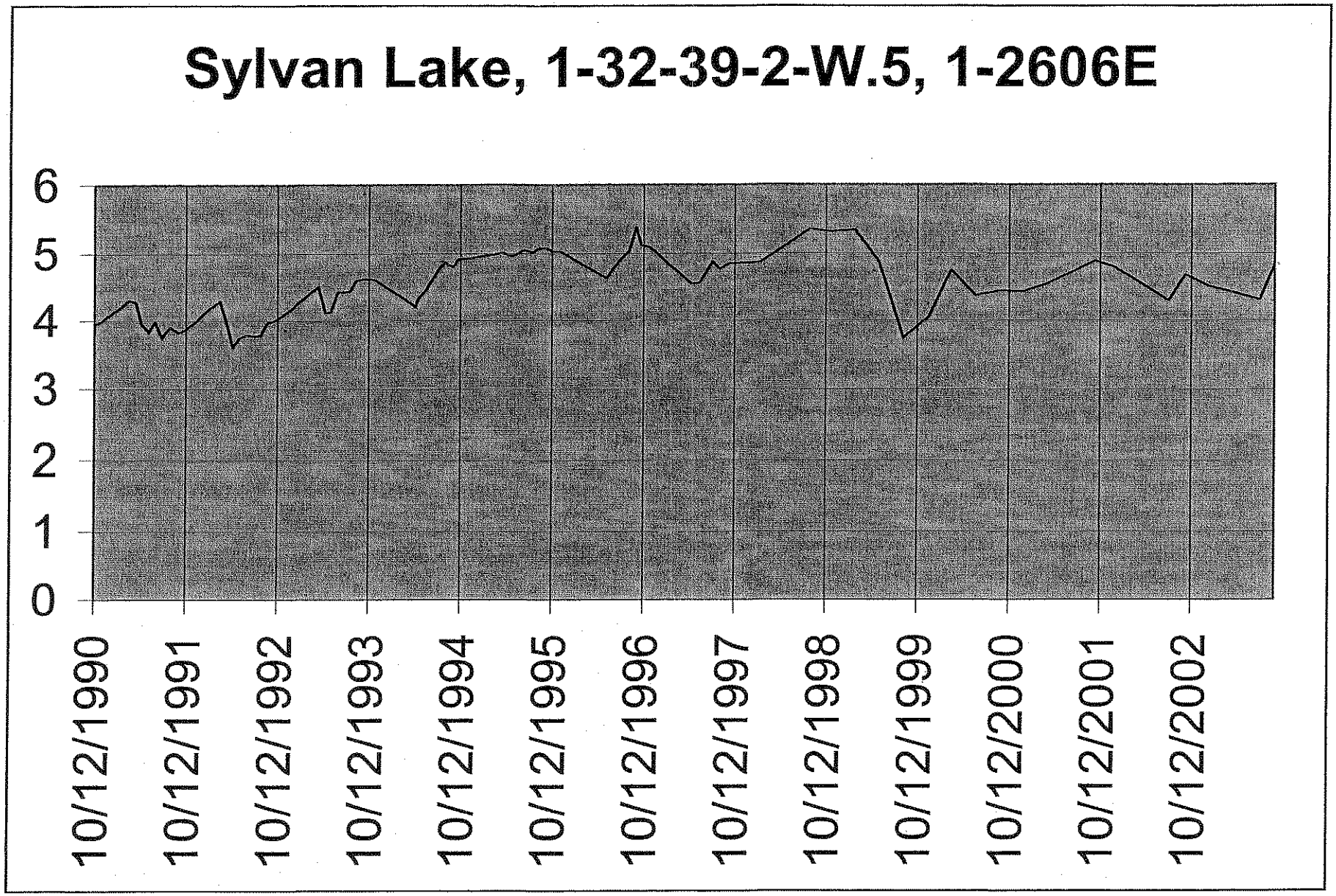
Other (specify)______________________. Estimated annual production__________

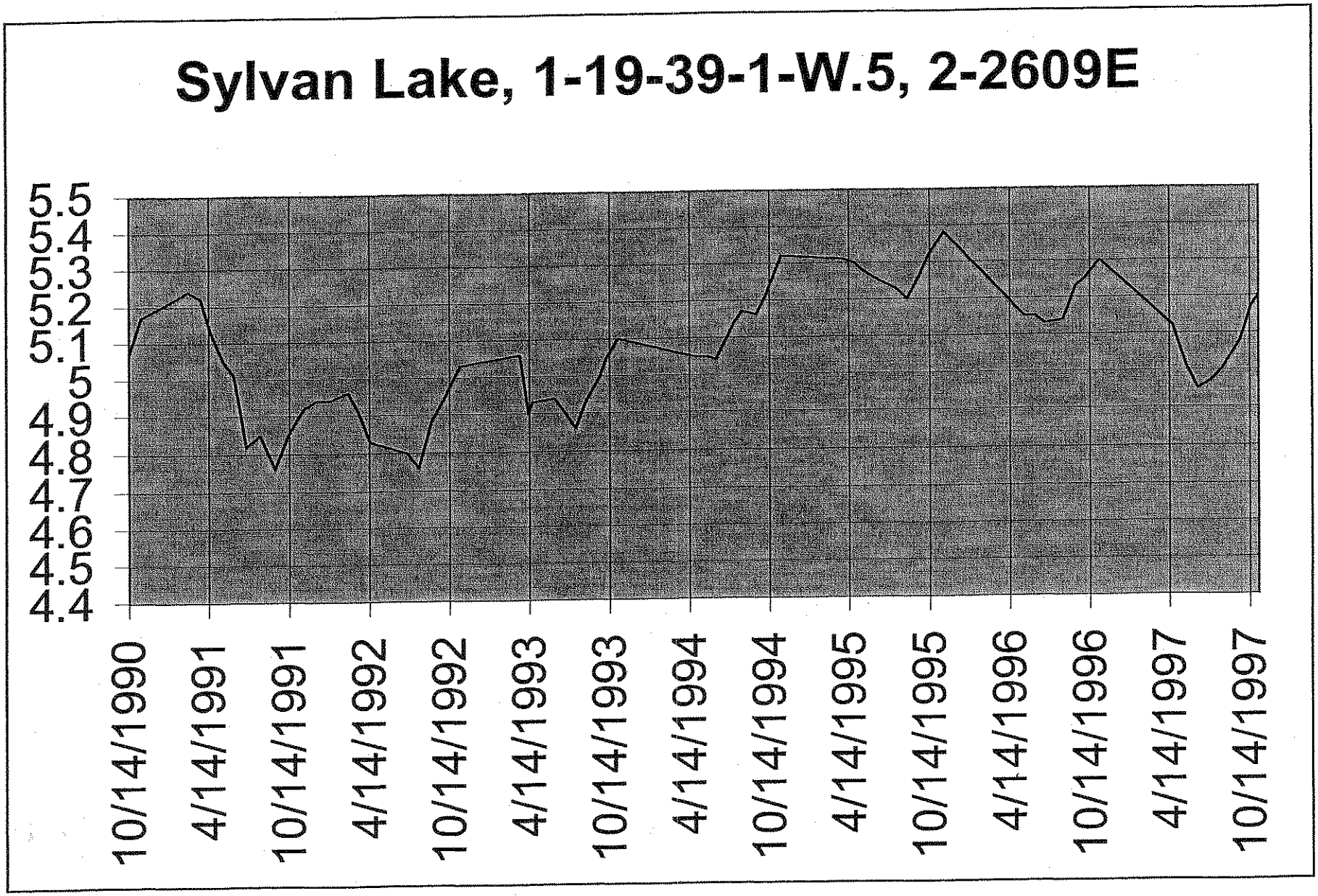
Any dugouts or springs on property? No

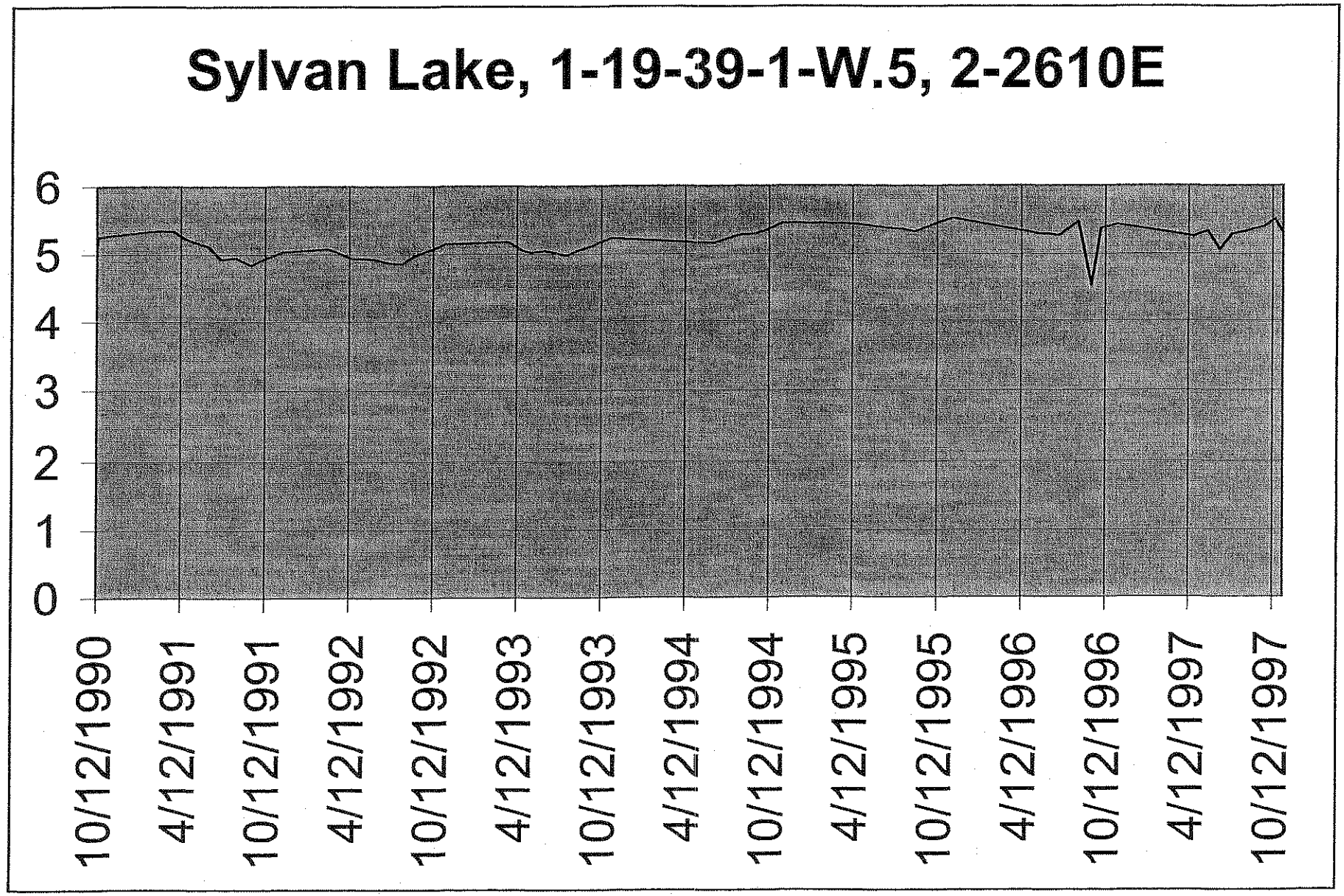
APPENDIX E

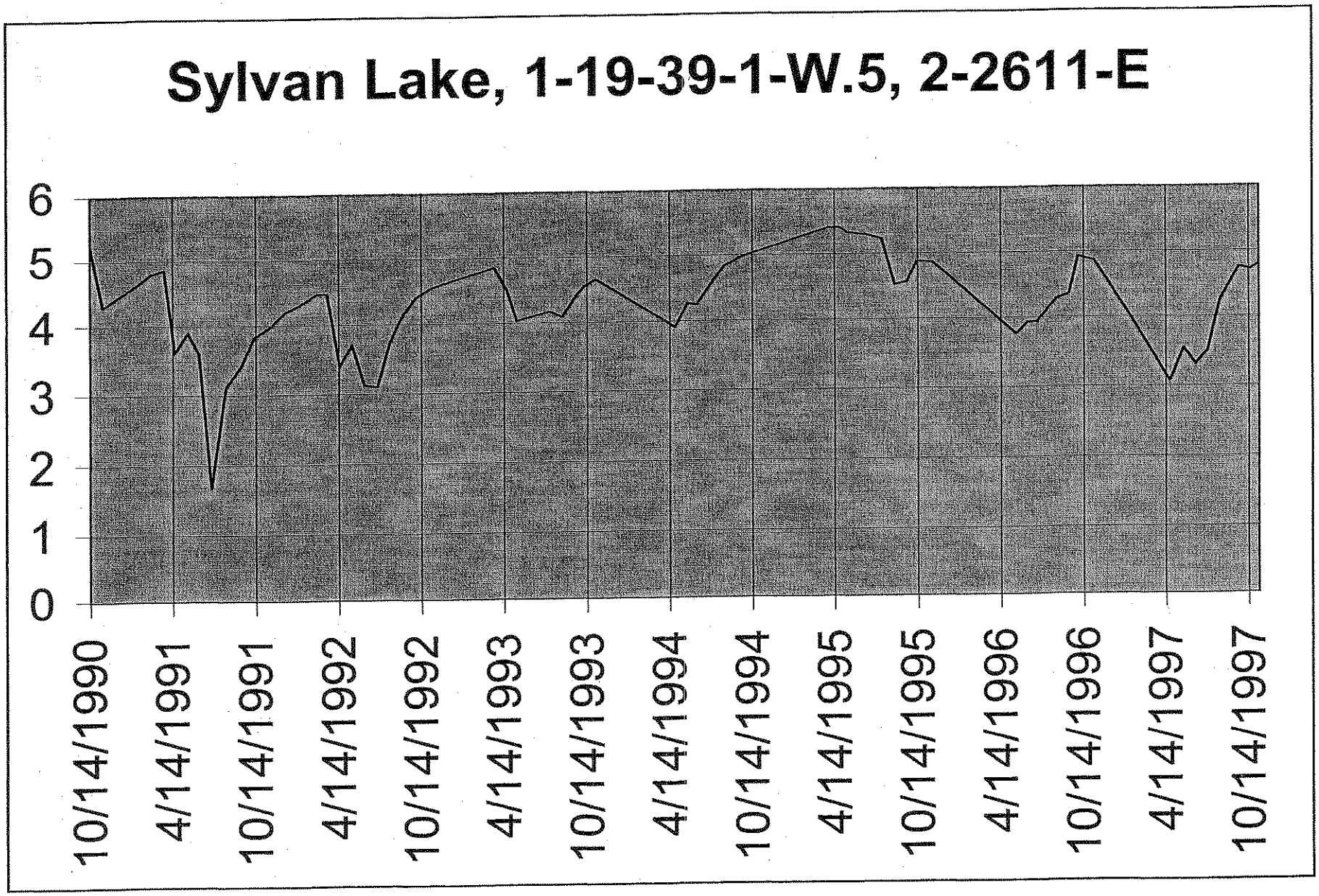

Sylvan Lake, 1-32-39-2-W.5, 1-2604E
9
8.8
8.6
8.4
8.2
8
7.8
7.6
7.4
7.2
11/11/1990
11/11/1991
11/11/1992
11/11/1993
11/11/1994
11/11/1995
11/11/1996
11/11/1997
11/11/1998
11/11/1999
11/11/2000
11/11/2001
11/11/2002

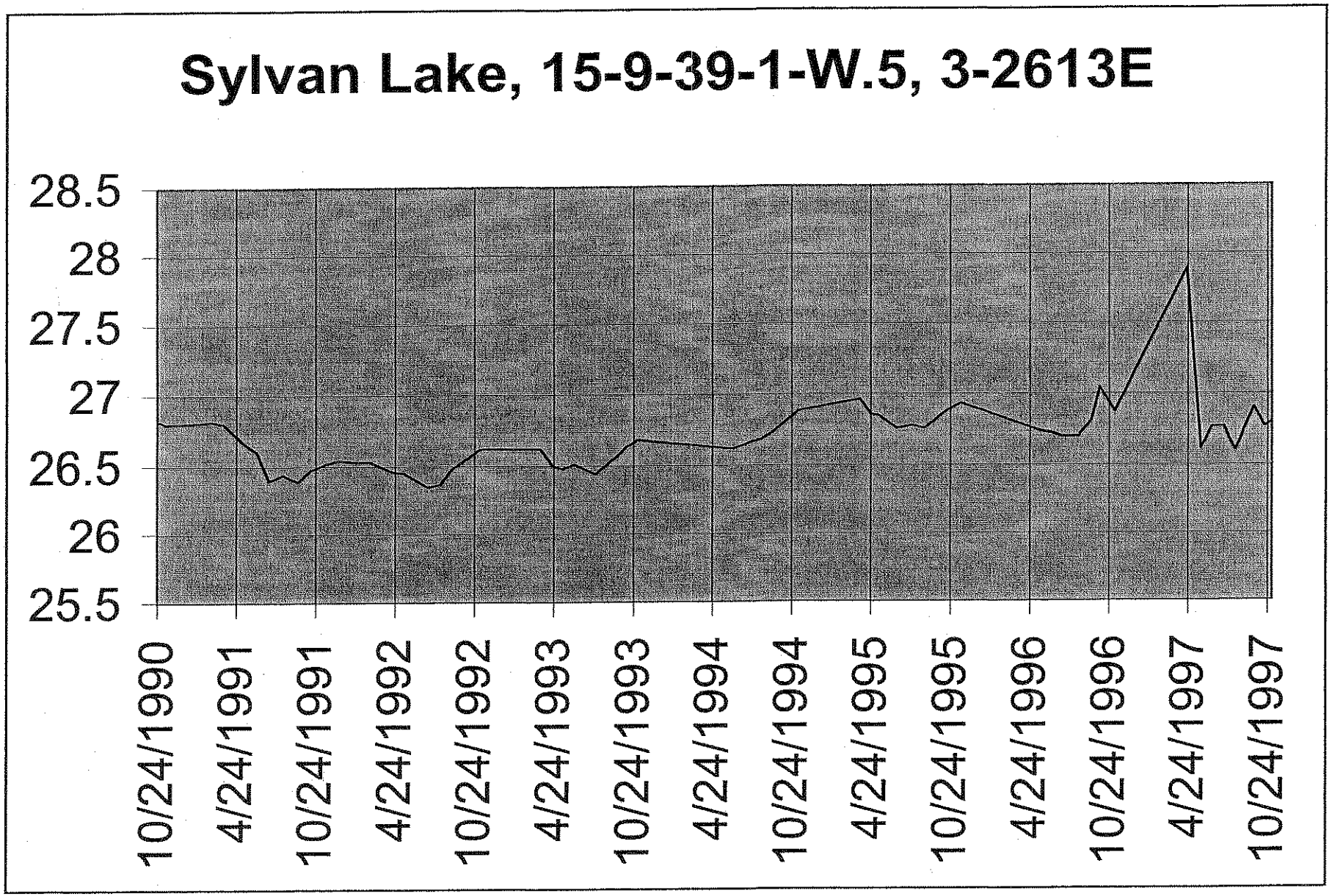

Sylvan Lake, 1-32-39-2-W.5, 1-2605E
9.4
9.2
9
8.8
8.6
8.4
8.2
8
7.8
7.6
7.4
7.2
10/12/1990
10/12/1991
10/12/1992
10/12/1993
10/12/1994
10/12/1995
10/12/1996
10/12/1997
10/12/1998
10/12/1999
10/12/2000
10/12/2001
10/12/2002

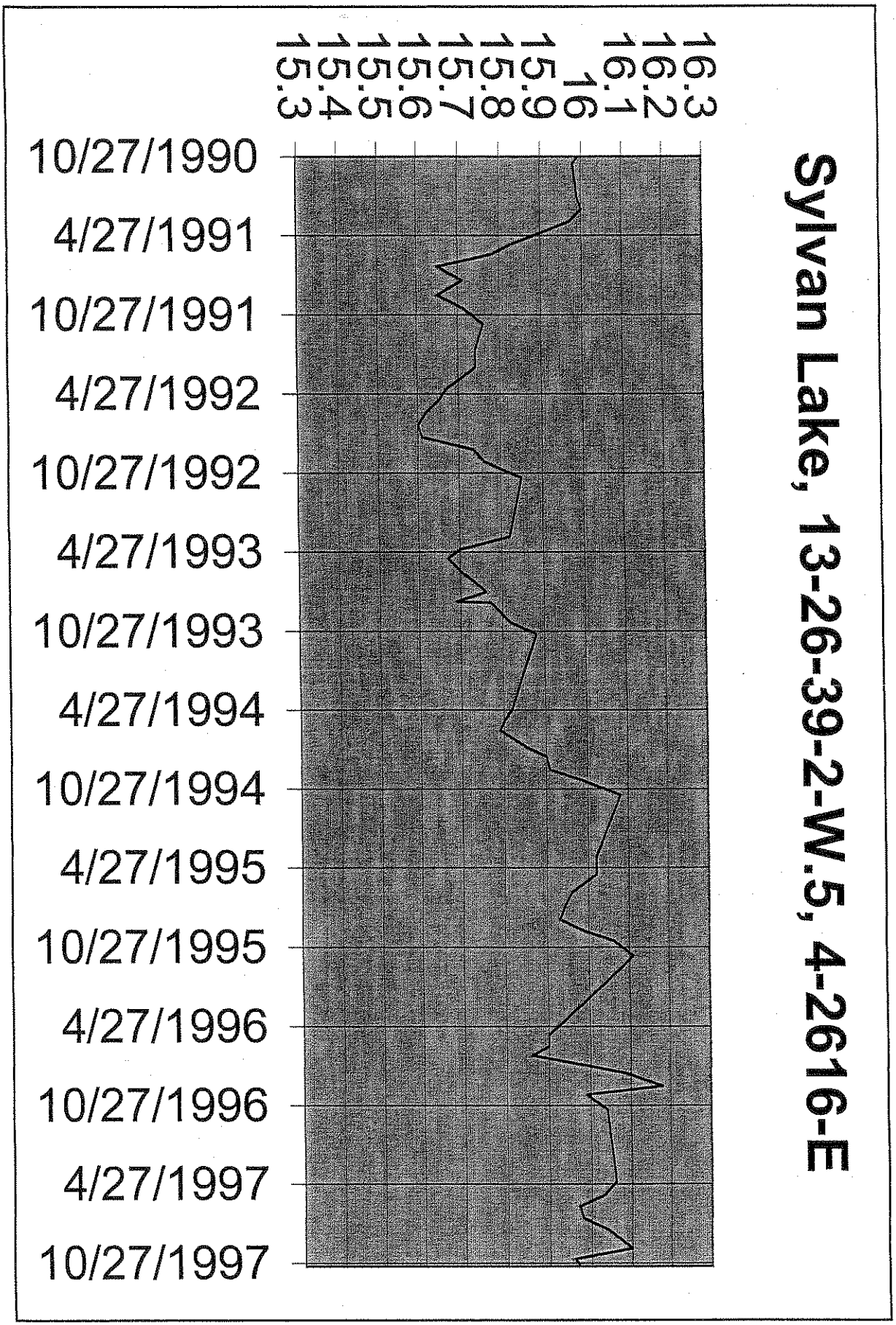

Sylvan Lake, 1-32-39-2-W.5, 1-2606E
6
5
4
3
2
1
0
10/12/1990
10/12/1991
10/12/1992
10/12/1993
10/12/1994
10/12/1995
10/12/1996
10/12/1997
10/12/1998
10/12/1999
10/12/2000
10/12/2001
10/12/2002

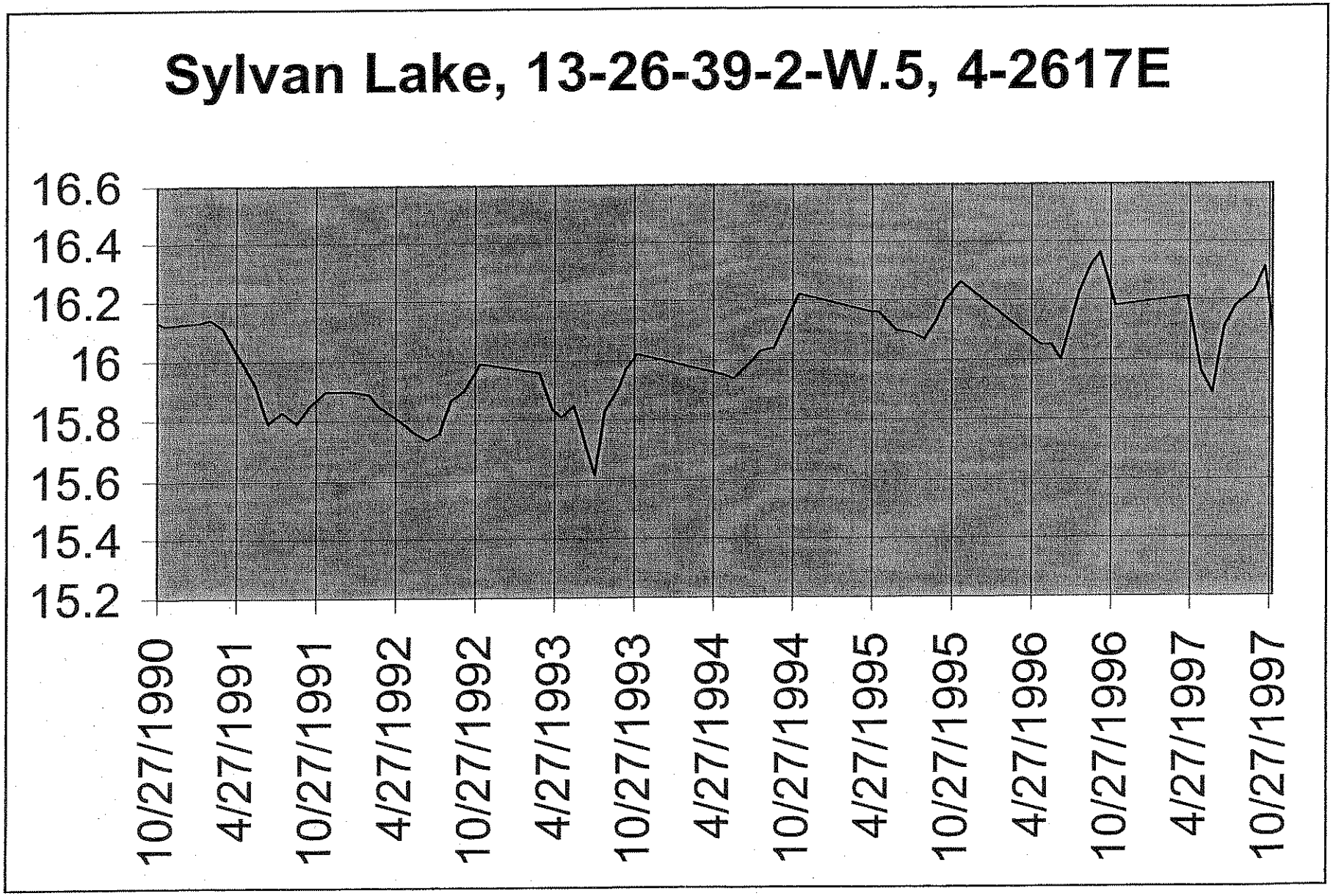

Sylvan Lake, 1-19-39-1-W.5, 2-2609E
5.5
5.4
5.3
5.2
5.1
5
4.9
4.8
4.7
4.6
4.5
4.4
10/14/1990
4/14/1991
10/14/1991
4/14/1992
10/14/1992
4/14/1993
10/14/1993
4/14/1994
10/14/1994
4/14/1995
10/14/1995
4/14/1996
10/14/1996
4/14/1997
10/14/1997

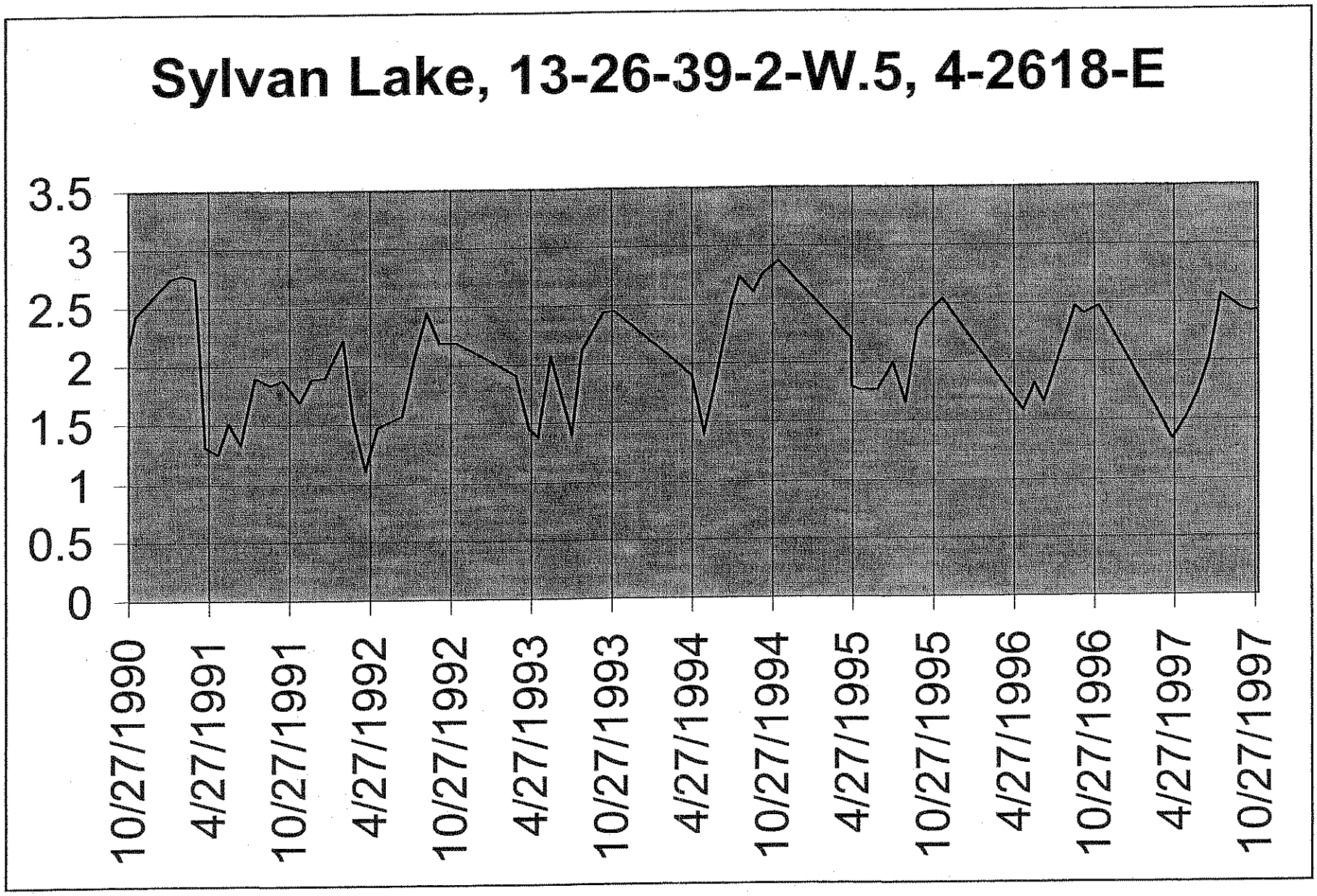

Sylvan Lake, 1-19-39-1-W.5, 2-2610E
6
5
4
3
2
1
0
10/12/1990
4/12/1991
10/12/1991
4/12/1992
10/12/1992
4/12/1993
10/12/1993
4/12/1994
10/12/1994
4/12/1995
10/12/1995
4/12/1996
10/12/1996
4/12/1997
10/12/1997


Sylvan Lake, 1-19-39-1-W.5, 2-2611-E
6
5
4
3
2
1
0
10/14/1990
4/14/1991
10/14/1991
4/14/1992
10/14/1992
4/14/1993
10/14/1993
4/14/1994
10/14/1994
4/14/1995
10/14/1995
4/14/1996
10/14/1996
4/14/1997
10/14/1997

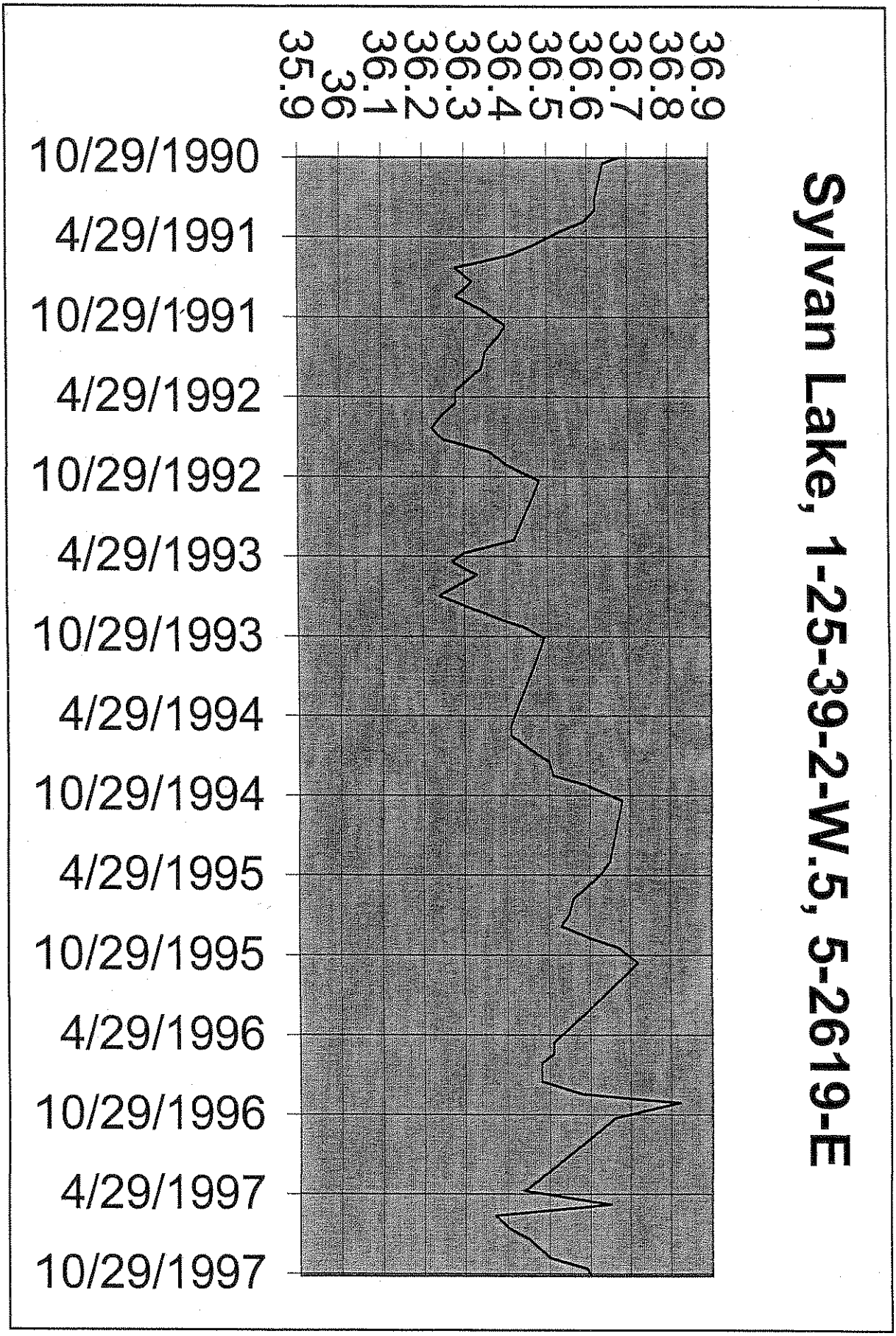

Sylvan Lake, 15-9-39-1-W.5, 3-2613E
28.5
28
27.5
27
26.5
26
25.5
10/24/1990
4/24/1991
10/24/1991
4/24/1992
10/24/1992
4/24/1993
10/24/1993
4/24/1994
10/24/1994
4/24/1995
10/24/1995
4/24/1996
10/24/1996
4/24/1997
10/24/1997

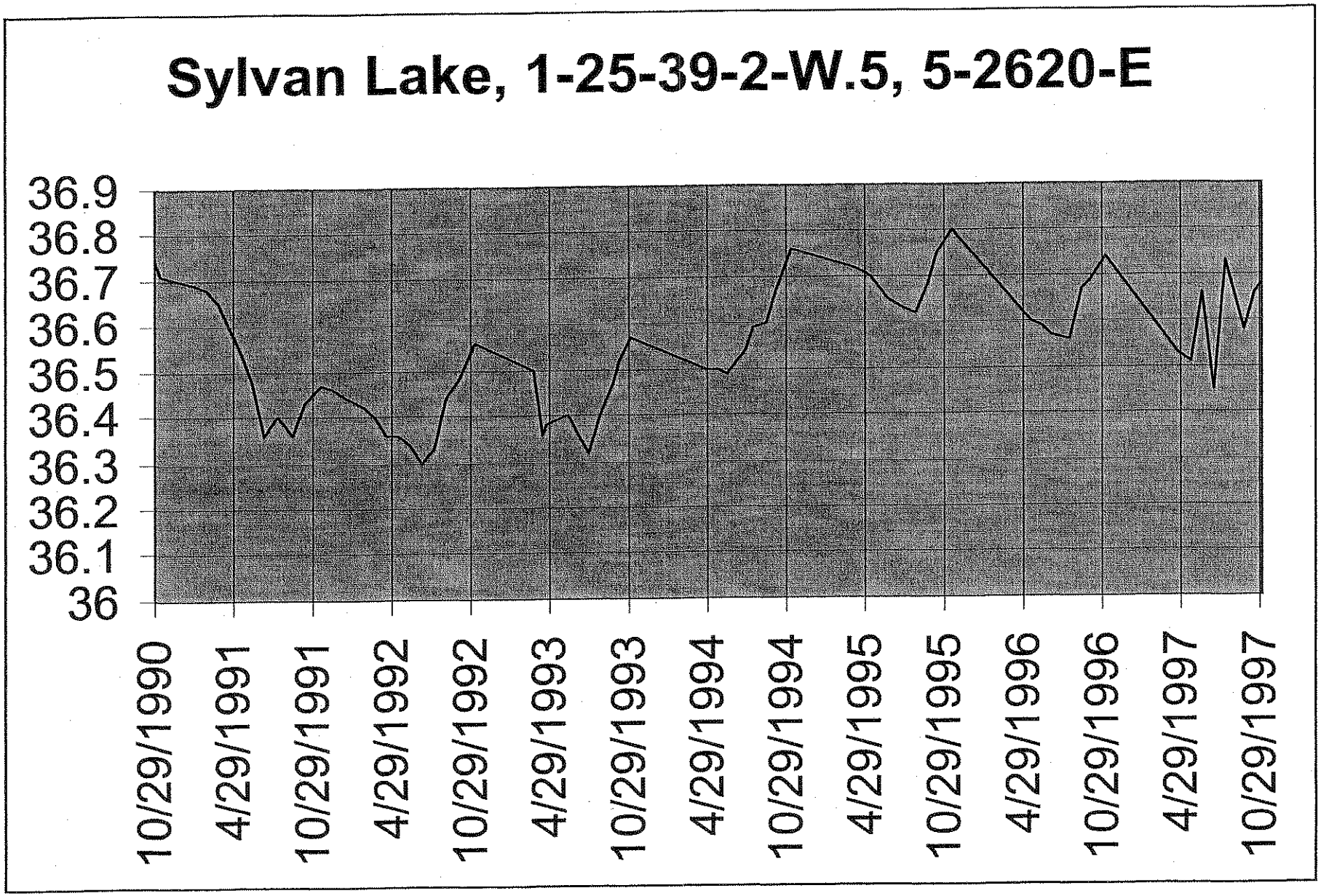

Sylvan Lake, 13-26-39-2-W.5, 4-2616-E
15.3
15.4
15.5
15.6
15.7
15.8
15.9
16
16.1
16.2
16.3
10/27/1990
4/27/1991
10/27/1991
4/27/1992
10/27/1992
4/27/1993
10/27/1993
4/27/1994
10/27/1994
4/27/1995
10/27/1995
4/27/1996
10/27/1996
4/27/1997
10/27/1997

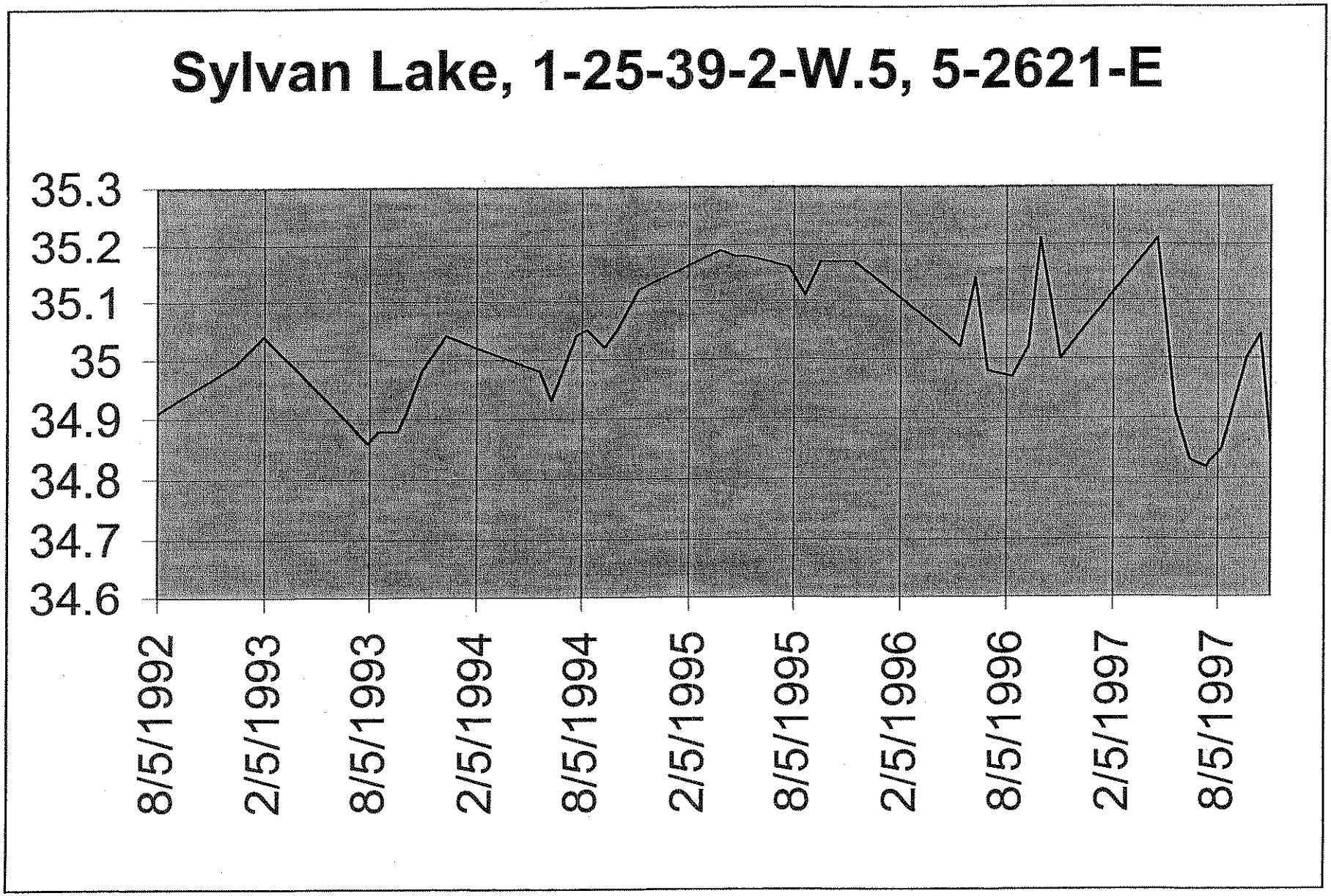

Sylvan Lake, 13-26-39-2-W.5, 4-2617E
16.6
16.4
16.2
16
15.8
15.6
15.4
15.2
10/27/1990
4/27/1991
10/27/1991
4/27/1992
10/27/1992
4/27/1993
10/27/1993
4/27/1994
10/27/1994
4/27/1995
10/27/1995
4/27/1996
10/27/1996
4/27/1997
10/27/1997

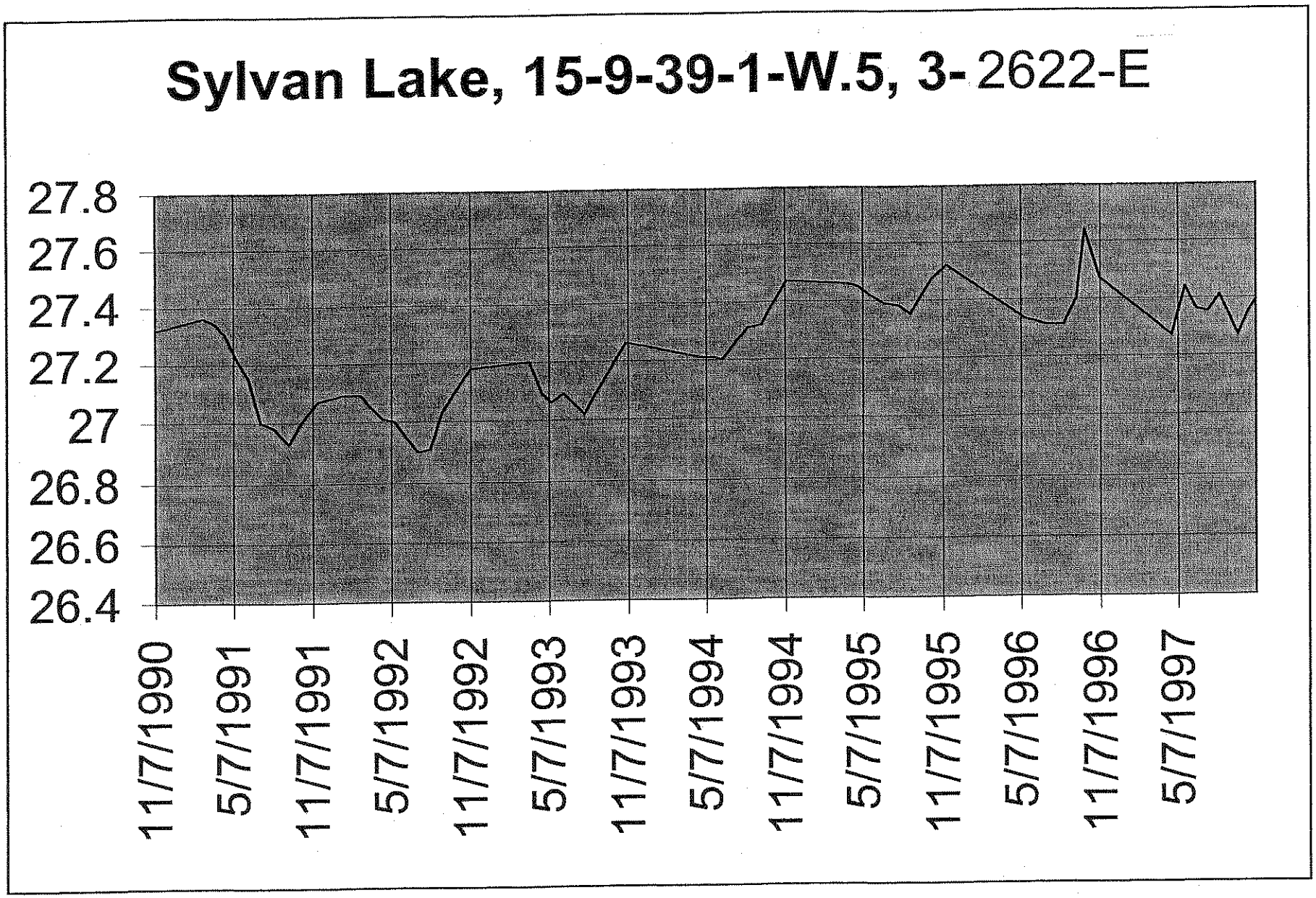

Sylvan Lake, 13-26-39-2-W.5, 4-2618-E
3.5
3
2.5
2
1.5
1
0.5
0
10/27/1990
4/27/1991
10/27/1991
4/27/1992
10/27/1992
4/27/1993
10/27/1993
4/27/1994
10/27/1994
4/27/1995
10/27/1995
4/27/1996
10/27/1996
4/27/1997
10/27/1997

Sylvan Lake, 1-25-39-2-W.5, 5-2619-E




Sylvan Lake, 1-25-39-2-W.5, 5-2620-E
36.9
36.8
36.7
36.6
36.5
36.4
36.3
36.2
36.1
36
10/29/1990
4/29/1991
10/29/1991
4/29/1992
10/29/1992
4/29/1993
10/29/1993
4/29/1994
10/29/1994
4/29/1995
10/29/1995
4/29/1996
10/29/1996
4/29/1997
10/29/1997

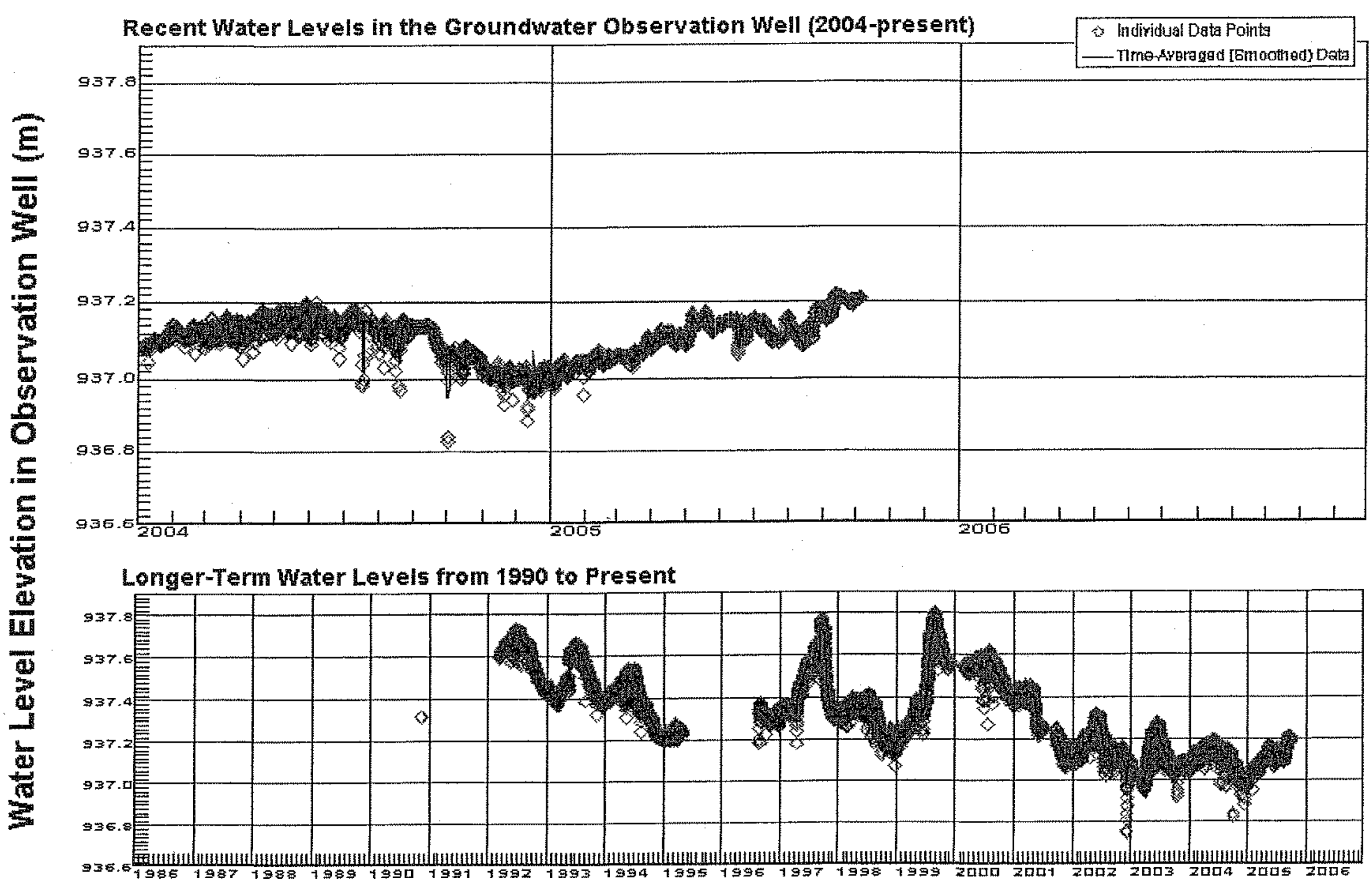

Sylvan Lake, 1-25-39-2-W.5, 5-2621-E
35.3
35.2
35.1
35
34.9
34.8
34.7
34.6
8/5/1992
2/5/1993
8/5/1993
2/5/1994
8/5/1994
2/5/1995
8/5/1995
2/5/1996
8/5/1996
2/5/1997
8/5/1997

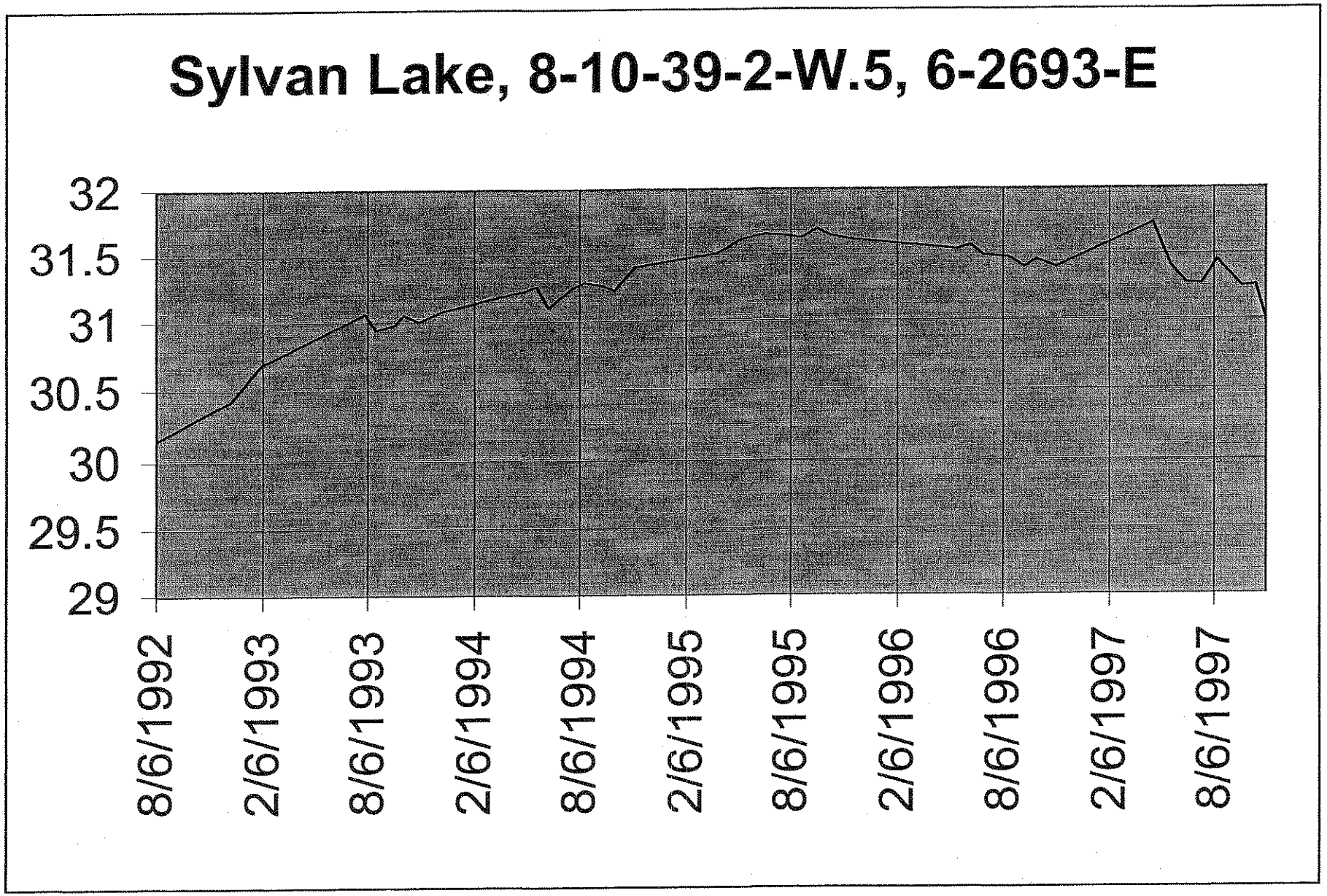

Sylvan Lake, 15-9-39-1-W.5, 3- 2622-E
27.8
27.6
27.4
27.2
27
26.8
26.6
26.4
11/7/1990
5/7/1991
11/7/1991
5/7/1992
11/7/1992
5/7/1993
11/7/1993
5/7/1994
11/7/1994
5/7/1995
11/7/1995
5/7/1996
11/7/1996
5/7/1997

Sylvan Lake 2623E (Obs.Well #391)

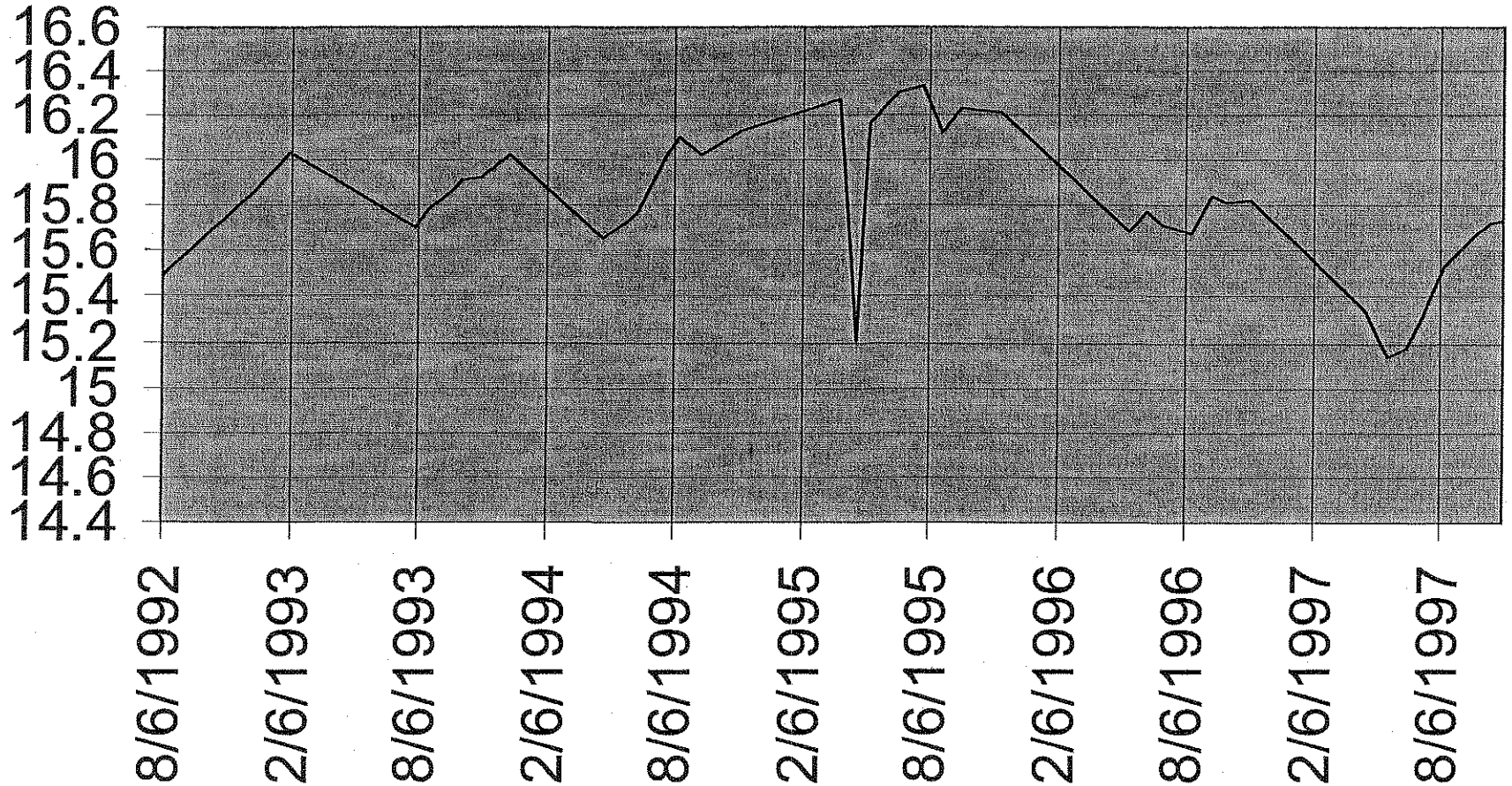
Lat: 52° 23' 38.6" N Long: 114° 14' 37.5" W Formation: Bedrock Aquifer: Paskapoo Depth Class: Intermediate

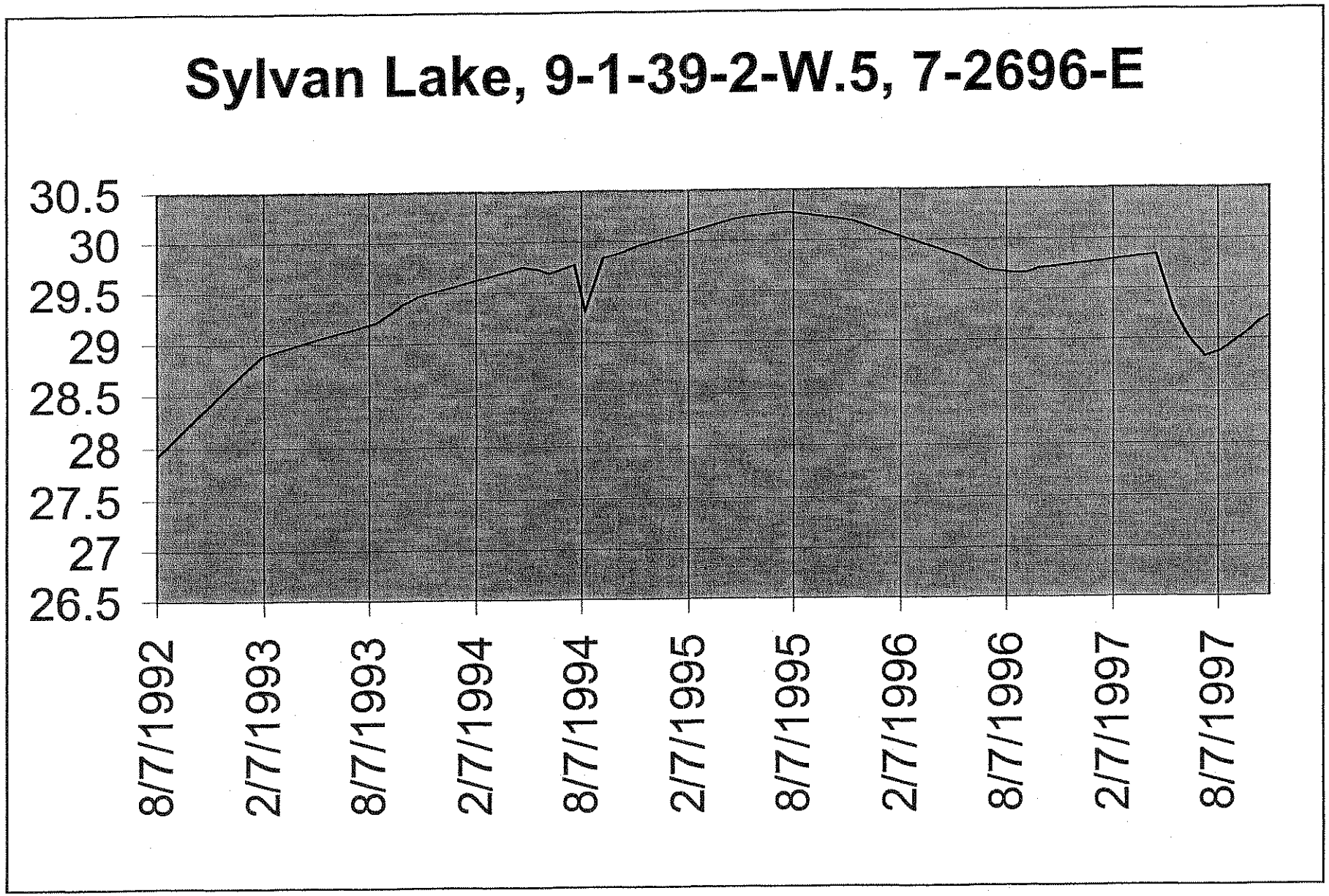
Alberta Environment

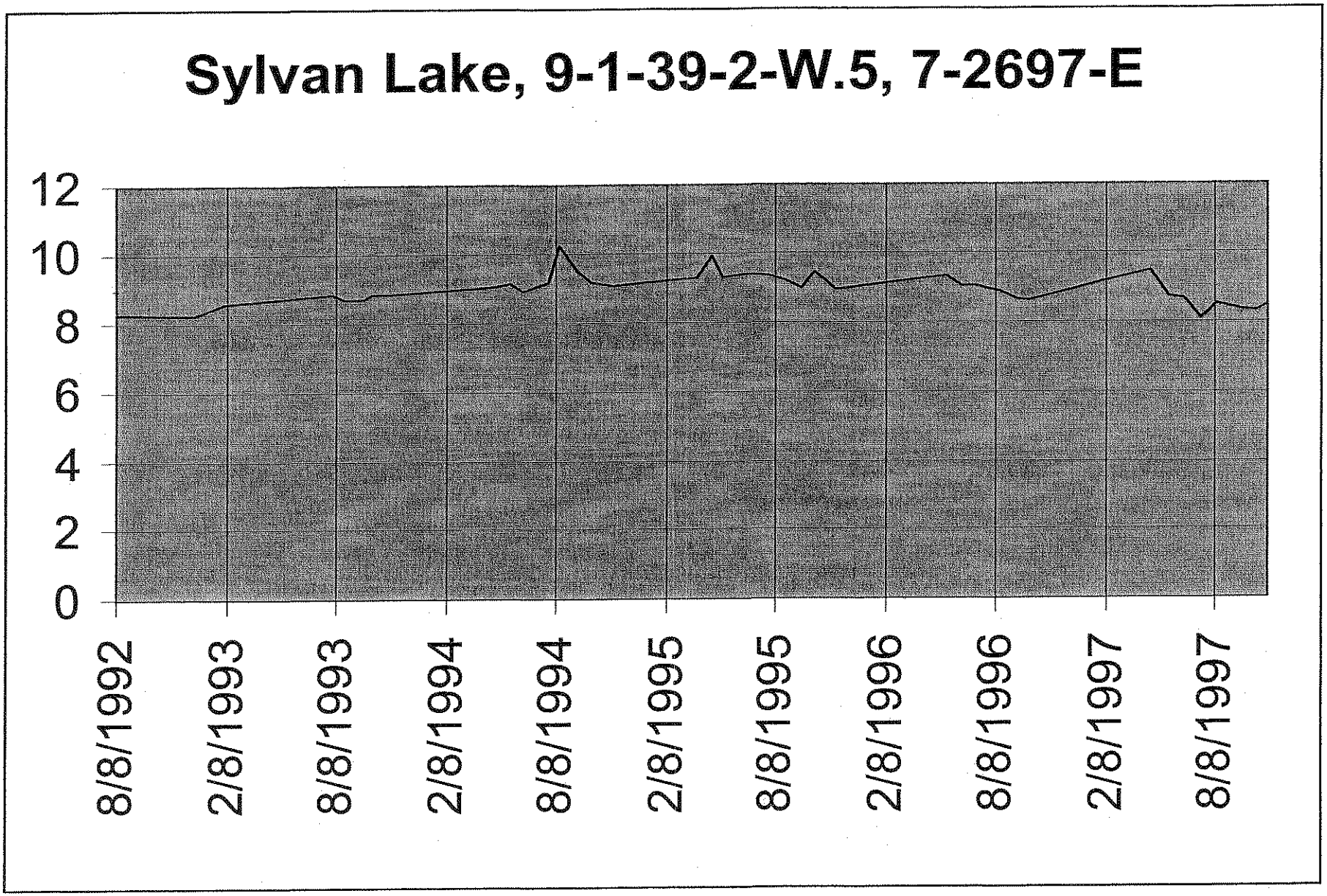


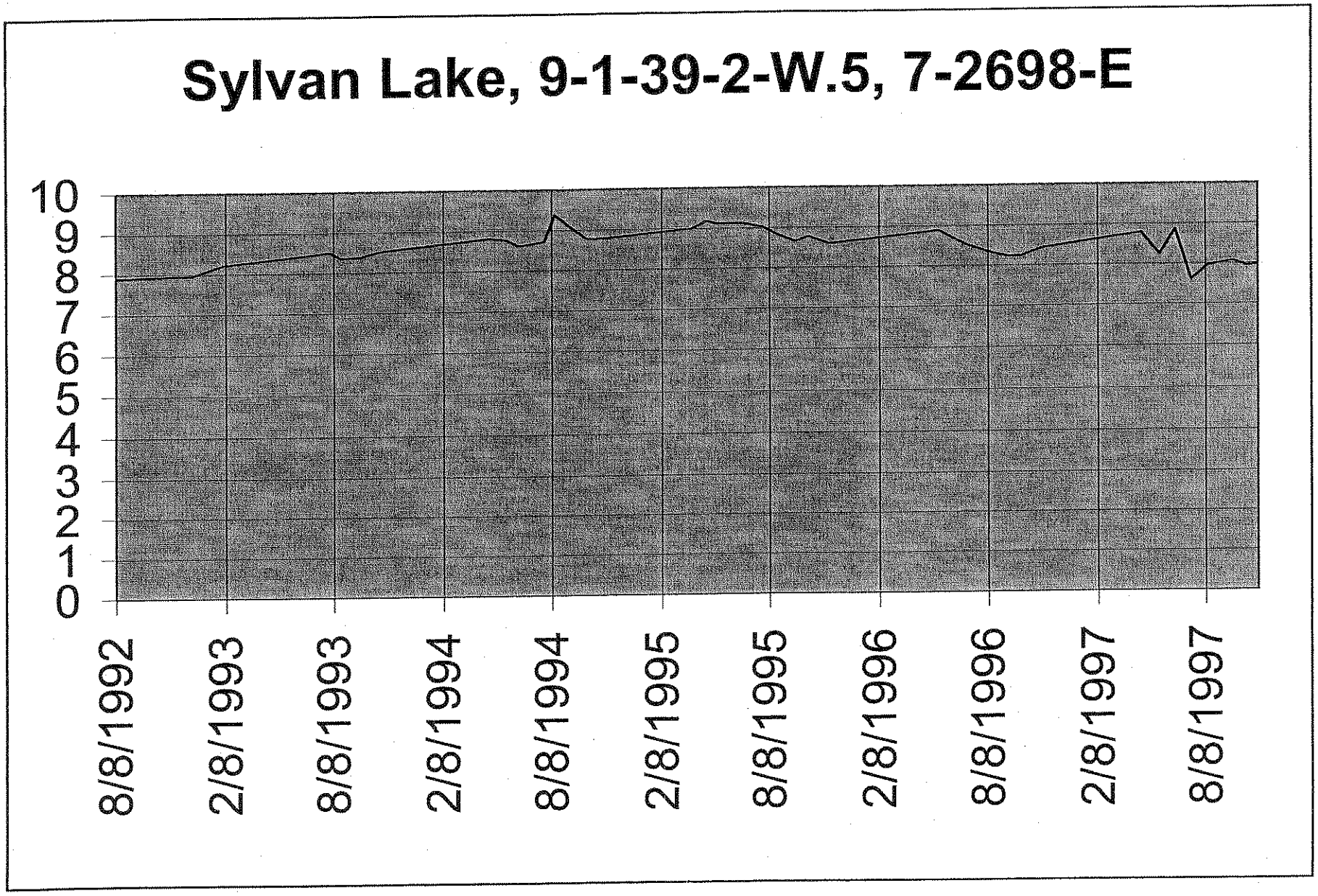

Sylvan Lake, 8-10-39-2-W.5, 6-2693-E
32
31.5
31
30.5
30
29.5
29
8/6/1992
2/6/1993
8/6/1993
2/6/1994
8/6/1994
2/6/1995
8/6/1995
2/6/1996
8/6/1996
2/6/1997
8/6/1997

Sylvan Lake, 8-10-39-2-W.5, 6-2694-E




Sylvan Lake, 9-1-39-2-W.5, 7-2696-E
30.5
30
29.5
29
28.5
28
27.5
27
26.5
8/7/1992
2/7/1993
8/7/1993
2/7/1994
8/7/1994
2/7/1995
8/7/1995
2/7/1996
8/7/1996
2/7/1997
8/7/1997


Sylvan Lake, 9-1-39-2-W.5, 7-2697-E
12
10
8
6
4
2
0
8/8/1992
2/8/1993
8/8/1993
2/8/1994
8/8/1994
2/8/1995
8/8/1995
2/8/1996
8/8/1996
2/8/1997
8/8/1997


Sylvan Lake, 9-1-39-2-W.5, 7-2698-E
10
9
8
7
6
5
4
3
2
1
0
8/8/1992
2/8/1993
8/8/1993
2/8/1994
8/8/1994
2/8/1995
8/8/1995
2/8/1996
8/8/1996
2/8/1997
8/8/1997