BY-LAW NUMBER 2005/48

BY-LAW NO. 2005/48 is a by-law of the County of Wetaskiwin No. 10 in the Province of Alberta, to authorize the adoption of an Area Structure Plan for the purpose of providing a framework for subsequent subdivision and development of the area known as Doug & Bev Schneider in NW 19-46-27-W4M in accordance with Section 633 of the Municipal Government Act, Chapter M-26.1, Revised Statutes of Alberta 2000, and amendments thereto.

WHEREAS: at the requirements of County Council, an Area Structure Plan has been prepared for Doug & Bev Schneider in NW 19-46-27-W4M.

AND WHEREAS: the proposed Area Structure Plan has been widely circulated and discussed within the County pursuant to Section 230, 606(1), and 633(1) of the Municipal Government Act, 2000, Chapter M-26.1, and amendments thereto.

NOW THEREFORE: The Council of the County of Wetaskiwin No. 10, hereby enacts that the document attached to this By-law as "Appendix A", together with accompanying maps, be adopted as the "Doug & Bev Schneider" Area Structure Plan in the NW 19-46-27-W4M, subject to the following conditions and amendments:

- 1. That the proposed design include a road widening;
- That a 6 metre Public Utility Lot be added between two lots providing access directly from the end of the cul-de-sac to the ravine for the purpose of a drainage swale and fire fighting access;
- That the field approach off of the Highway be removed;
- 4. That the lot design be done to provide seven instead of eight lots and to incorporate the two abandoned wells along the sides of rather than the center of a lot;
- 5. That 30 metre road widening be incorporated into the design;
- 6. That lot boundaries be 6 metres back from the edge of the ravine;
- 7. That all reserves be deferred to the remainder of the quarter and taken at a later time.
- 8. That the applicant satisfy Section 23 of the water act, providing a well pump test verifying the adequacy of water supply for the proposed lots.
- 9. That Twp Road 464 be built to County Standards by the developer.

This by-law comes into effect once the above amendments are received.

READ: A First time this 11 day of August, A.D., 2005.

READ: A Second time this 11 day of August, A.D., 2005.

READ: A Third time and finally passed this 11 day of August, A.D., 2005.

REEVE

SECRETARY-TREASURER

Area Structure Plan

NW 19-46-27-4

Submitted by Doug & Bev Schneider, landowners

Introduction

The subject property is located east of secondary road 780 and adjoins the Wicked Witch Golf Course on the South East corner. The quarter section has a treed ravine that causes a natural division that requires two approaches for access. The building site on the south portion of the quarter section amounting to 3.58 acres has been subdivided. The north portion of the quarter section, which is the subject of this area structure plan, amounts to 15.97 ha.(38.5 ac.). A copy of the current title is attached

Map 1 is a Location Map showing subject lands.

Municipal Jurisdiction

The subject land is under the jurisdiction of the County of Wetaskiwin. The land directly west of secondary road 780 is part of the Four Nations Reserve.

Physical Features

The subject land is relatively flat and is comprised of 20 acres that is an abandoned gravel pit. The Assessment rating for the entire quarter section provided by the County of Wetaskiwin is as follows:

```
68.00 acres – 49.4%
42.00 acres – 44.4%
20.00 acres - 9.0% (abandoned gravel pit) – subject land
22.42 acres – 5.5% (bush)
```

The ravine is deep and wide and is wet during rainy times and crosses the land diagonally creating a natural subdivision. There is no access across this ravine and two approaches off of secondary road 780 are currently necessary for access.

Present Land Uses

The land is currently leased on a yearly basis for grazing, however, the poor soil quality on the subject land (rated 37) does not supply sufficient pasture to sustain cattle for a season.

Constraints and Opportunities to Subdivision

The County of Wetaskiwin's standards for the preparation of area structure plans require the developer to identify any conflicting land uses.

Confined feeding operations: There are no CFOs within two kilometers of the subject land.

Airfields: There are no airports anywhere near the subject land; the closest airport is Wetaskiwin, 35 km east.

Sour gas facilities: Alberta Energy and Utilities Board has confirmed there are no sour gas wells in the requested area: NW 19-46-27-W4

There are two existing gas pipelines that will require compliance as to set backs when several of the lots are developed.

There is an existing efficient road system in place.

The proposed subdivision is in close proximity to Pigeon Lake and local golf courses.

There is a natural area and ravine that is accessible to future residents.

Increased values will substantially increase tax revenues.

Boundaries of Adjacent Municipalities and Referral

The subject land is not adjacent to any other municipality and would not be included in the Intermunicipal Development Plan between the County of Wetaskiwin and the Summer Villages of Crystal Springs, Norris Beach, Poplar Bay and Grandview.

The subject land is however, adjacent to the Four Nations Reserve and secondary highway 780.

Correspondence with Alberta Transportation indicates that the department is not in favour of multi-lot subdivisions that utilize direct highway access. As per the **Tentative Plan for Proposed Subdivision**, there would not be direct highway access from the subdivision. Access would be via a keyhole turnaround onto an undeveloped government road allowance. The current direct access to SR 780 will be eliminated under the proposed plan.

Road Standards

Roads will be built to rural standards with gravel surfaces. Approaches and culverts will also conform to rural standards and ditches will remove storm water. Post development flow is not anticipated to exceed pre-development flows.

- Township Road 464 to be build to County Standards by the developer
- 30 metre road widening be incorporated into the design

Water Supply

The Water Act requires that, if a subdivision will result in there being more than six lots on a quarter section, and the resulting lots will depend on groundwater, the subdivision must not be approved until it is proved that there is sufficient groundwater to supply the new lots without depleting the supply to existing uses in the area (Water Act, section 23, and Water Regulations, AR 204/98, section 9).

A report has been prepared by AMEC Earth & Environmental to demonstrate that there is sufficient water for the lots proposed under this ASP. Copy attached.

• The developer will satisfy Section 23 of the water act, providing a well pump test verifying the adequacy of water supply for the proposed lots.

Fire Protection

Fire service if ever required comes from Ma-Me-O Beach and subsequently from the new emergency services building under construction west of the Village on Highway 13. Because the subject lands are cleared, any risk of fire damages to buildings is minimal.

 A 6 metre Public Utility Lot be added between two lots providing access directly from the end of the cul-de-sac to the ravine for the purpose of a drainage swale and fire fighting access.

Sewer Service

Lots proposed will be large enough (over 1,850 m2) to comply with the Alberta Private Sewage Systems Standard of Practice for on-site sewage disposal.

Municipal Reserves

Municipal Reserve exceeds allocation as per the Municipal Government Act.

Total land in proposed lots 15.97 ha 10% as per MGA 1.6 ha Municipal Reserve as per plan 1.77 ha

 All reserves to be deferred to the remainder of the quarter and taken at a later time.

Tentative Plan of Subdivision

Tentative Plan prepared by Olsen Surveys Ltd., Lacombe, Alberta is included. The tentative plan provides for 8 parcels with a key hole access road. The proposed subdivision is surrounded by Municipal Reserve on all boundaries except facing north which is Government Road Allowance.

- The lot design to be done to provide seven instead of eight lots and to incorporate the two abandoned wells along the sides of rather than the center of a lot.
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- All reserves to be deferred to the remainder of the quarter and taken at a later time.

Zoning

At present the entire property is zoned Agricultural under the County of Wetaskiwin's Bylaw 95/54.

The proposed subdivision will require Country Residential zoning

Public Input Plan

Public hearing process as defined under the Municipal Government Act.

Proposed

AREA STRUCTURE PLAN

NW 19-46-27-4

Submitted by:

Doug and Bev Schneider, Landowners

Replaced Bept 14,2005

Table of Contents

- Proposed Area Structure Plan
- Maps
 - Location Map
 - O Tentative Plan prepared by Olsen Surveys Ltd.
- Certificate of Title
- Letter from Alberta Transportation
- E-mail re: Sour gas wells
- AMEC Earth & Environment Preliminary Groundwater Potential Study

Proposed

Area Structure Plan

NW 19-46-27-4

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The proposed subdivision will require Country Residential zoning

Public Input Plan

Public hearing process as defined under the Municipal Government Act.



09 December 2004 CW1901.101

Mrs. Beverly Schneider 256 Grandview RR1 Westerose, Alberta T0C 2V0 Fax # (780) 586-2037

Dear Mrs. Schneider:

Re: Prelimi

Preliminary Groundwater Potential Study, Residential Subdivision

NW 1/4-19-46-27 W4M, East of Wetaskiwin, Alberta

1.0 INTRODUCTION

AMEC Earth & Environmental, a division of AMEC Americas Limited, (AMEC) is pleased to present the results of a groundwater potential study for NW1/2-19-46-27 W4M, the site of a proposed rural-residential subdivision (the Site). AMEC was retained by Mrs. Beverly Schneider (the Client) to complete the study. The Site location is shown in Figure 1.

Hydrogeological information for the Site and surroundings was assembled and reviewed to complete this study. Information sources included the Alberta Environment (AENV) water well record database and relevant published geology and hydrogeology maps and reports.

2.0 INVESTIGATION GUIDELINES

This study was completed in general accordance with the 1998 AENV publication *Draft Environmental Guidelines for the Review of Subdivisions in Alberta* and in particular with Chapter 2 - *Guidelines for the Evaluation of Groundwater Supply For Unserviced Residential Subdivisions*. These guidelines are recommended for use where the water supply will be provided by privately owned domestic water wells. As stated in the guidelines, the principle of sustainable development should guide the utilization of groundwater resources. Specifically, the guidelines state that "groundwater resources vary across the province and even local differences can be extreme. The threat of groundwater shortages and contamination grows with the density of wells and their collective demand on the local groundwater resources." In addition, consideration was given to the *Groundwater Evaluation Guideline* (AENV, 2003).

Relevant to the proposed development at NW1/4 19-46-27 W4M, the *Water Act* specifies that the diversion of 1250 m³/year per household (household use as defined in the *Water Act*) should not interfere with any household users, licensees or traditional agriculture users who exist when the subdivision is approved. Therefore, the objective of this study is to render a professional opinion, based on a review of readily available information, whether aquifers underlying the development site should be able to sustain production to provide water for 8 new residential lots, with consideration for the one existing residence within the same quarter section. Therefore diversion of 11,250 m³/year (approximately 0.36 L/s or 4.7 Imperial gallons per minute [Igpm]) of water from these aquifers must be sustainable. AMEC's opinion is based on the assumption that

AMEC Earth & Environmental, a division of AMEC Americas Limited 221 – 18 Street SE Caigary, Alberta CANADA T2E 6J5 Tei: +1 (403) 248-4331 Fax: +1 (403) 248-1590 www.amec.com



users anticipated to reside at the site will use 1250 m³/year obtained on a reasonably continuous basis.

3.0 GEOLOGY

The surficial geology in the area consists mainly of glacial till, lacustrine clays, as well as some sands and gravels deposited in preglacial channels (Le Breton, 1971). Geological data from water well completion records show that these deposits generally range between 10 and 30 m thick (AENV Water Well Database). The underlying bedrock consists of bentonitic sandstone and siltstone of the Paskapoo Formation (Le Breton, 1971). Well completion records also show that individual sandstone, siltstone and shale units within the bedrock are interbedded in places, and variable in thickness and extent. The location map and trace of the hydrogeological cross-section are shown on Figure 1, while Figure 2 shows the hydrogeological cross-section based on water well records from the area.

4.0 HYDROGEOLOGY

4.1 Water Well Database

There are no well records in the AENV database for the quarter section in which the site is located, NW¼ 19-46-27 W4M. However, from discussion with the Client we are aware that there is an existing house with a well in the southwest corner of the quarter section.

The AENV database lists 101 well records with in the section the site is located and the adjoining sections (Sections 17, 18, 19, 20, 29 and 30 of 46-27-W4M, and sections 13, 24 and 25 of 46-28-W4M). This study area exceeds the 1.6 km (1 mile) study area stipulated in the *Groundwater Evaluation Guideline* (AENV, 2003). Some existing water wells are not in the database and it is possible that only a subset of the records listed in the database represent water wells currently in operation. A summary of all well records from the search area is presented in tabular format in Appendix A. Copies of selected driller's reports and water chemistry analysis results are included in Appendix B.

4.2 Aguifer Depth and Well Yield

The exploitable water-bearing units in the study area are sand and gravel layers deposited in preglacial channels, and sandstone units within the Paskapoo Formation. The Site and surrounding area are mapped by Le Breton (1971) as having probable well yields (estimated from quantitative information) of 0.4 to 1.9 L/s (5 to 25 lgpm) per single well. Of the 80 driller's logs from the study area that reported test pumping rates, most presented rates within the range of 0.4 to 1.1 L/s (5 to 15 lgpm), with 0.8 L/s (10 lgpm) being the most commonly reported. Three were less than 0.4 L/s, and 13 test yields were at 1.4 L/s (18 lgpm) or greater. It has to be noted, however, that pump tests reported by drillers are usually of short duration (1 to 2 hours) and therefore provide only a crude indication of aquifer performance. The test yields are often limited by capabilities of the equipment that is available to the drillers and by the objectives of the drilling programs as well.



The closest well to the site is Well 0132822, located in 04-30-46-27-W4M. The well is completed to a depth of 73 m, is cased to 24 m btoc (80 ft) to top of bedrock, and the static water level in the well is recorded at 27.5 m btoc (90 ft). The well was tested at a pumping rate of 3.0 L/s (40 lgpm). The observed drawdown was 12 m (40 ft), which is to within 0.6 m (2 ft) of the pump intake. Although this well was tested a rate significantly higher than the rate required to supply the proposed subdivision, the well effectively drew down to the pump intake during the test. It can be concluded that the aquifer in the vicinity of Well 132822 cannot sustain a pumping rate of 3.0 L/s (40 lgpm), but no information on the aquifers response to lower pumping rates can be inferred.

The next closest well, Well 0075154, located in NE½ 24-46-28-W4M was tested at 0.8 L/s (10 Igpm), but also drew down to the pump intake during testing and therefore provides little useful information.

More rigorous pump test data are available for wells completed in SE¼ and SW¼ of 13-46-27-W4M, however, these wells are a distance of over 2 km from the proposed subdivision. Well 0286758 (SE¼ of 13-46-27-W4M) was pumped at 0.9 L/s (12 lgal/min). The observed drawdown was 2.4 m (8 ft), which was reached within 4 minutes and the well recovered within 1 minute. Well 0213380 (SW¼ of 13-46-27-W4M) was pumped at 0.6 L/s (8 lgal/min) with an observed drawdown of 1.5 m (5 ft). Both these pump tests indicate that a withdrawl of 0.36 L/s (4.7 lgpm) would likely be sustainable without affecting the existing users in the area local to SE¼ and SW¼ of 13-46-27-W4M, however as mention previously these wells are more than 2 km from the proposed subdivision.

4.3 Well Completion Depth and Static Water Level

With the exception of four deep industrial exploratory holes, the wells in the study area were completed at depths up to 90 m, the majority of which were within the range of 30 m to 50 m deep, and were completed in sandstone units in bedrock. Recorded static water levels in the wells were all below ground level at the time of measurement. Static water levels ranged from approximately 2 m to 35 m below top of casing (btoc), equal to an approximate elevation range of 835 to 870 masl. The level of nearby Pigeon Lake is in the middle of this range at approximately 850 masl, so the overall relationship between the lake and groundwater flow in the area is unclear.

4.4 Groundwater Quality

In the region, total dissolved solid (TDS) concentrations were mapped at between 500 and 1000 mg/L (Le Breton, 1971). Nine available groundwater chemical analyses from Sections surrounding the proposed development site reveal that local groundwater has TDS values ranging from 578 to 1233 mg/L. These water chemistry analyses are included with corresponding drilling reports in Appendix B.

Groundwater chemistry in the area surrounding the Site is generally mapped as being of sodium bicarbonate type (Le Breton, 1971). Chemistry reports provided with driller's logs confirm this, and indicate that sulphate is also present in relatively high concentrations (up to 300 mg/L).

Of the eight wells in the search area with chemistry data available, there were several with parameters at concentrations that exceeded aesthetic objectives outlined in the Guidelines for



Canadian Drinking Water Quality (GCDWQ; Health Canada, 2003). They can be summarized as follows:

- TDS concentrations exceeded the GCDWQ aesthetic objective (500 mg/L) in all eight wells, with the highest being 1233 mg/L.
- The iron concentration in one of the wells measured 0.38 mg/L in one analysis, and 0.47 mg/L in a second, exceeding the GCDWQ's aesthetic objective of 0.3 mg/L.
- Values for pH ranged from 8.6 to 8.9 in three wells, exceeding the GCDWQ's aesthetic objective range of 6.5 to 8.5.
- Sodium concentrations in seven of the eight wells were in excess of the aesthetic objective
 of 200 mg/L, and may be a concern for individuals on sodium-reduced diets. The highest of
 these was 460 mg/L.
- Hardness values are generally low and are below 80 mg/L in seven of eight wells. Hardness
 is not subject to a federal guideline, however, values between 80 and 100 mg/L are
 considered to be within an ideal range, while concentrations between 200 mg/L and 500
 mg/L are said to be poor (very hard), but tolerated (Health Canada, 2003). Soft water was
 reported in several of the other non-sampled wells throughout the area as well.

5.0 PREVIOUS LAND USE

The client has indicated to AMEC that the area of the proposed subdivision was previously a gravel pit. No information other than this personal communication was provided to or referenced by AMEC. Wells in the area are generally completed in bedrock so the existence of an abandoned or reclaimed gravel pit on the site is not expected to affect the availability of a groundwater supply. However, if the eight proposed lots are to be serviced by septic systems there may be a concern regarding communication between the septic system and the groundwater supply, if the overburden is primarily gravel. When the future groundwater supply wells and septic systems are installed adequate protection of the water supply from surface and septic contamination should be confirmed.

Consideration should also be given to the two oil and gas pipeline right of ways on the Site. The Client should determine the required setbacks of domestic wells from the right of ways to confirm that a domestic water supply well can be completed on each lot. The approximate locations of the right of ways are shown on the site plan in Figure 1.

6.0 DISCUSSION AND CONCLUSIONS

There is sufficient information available from published reports and from the AENV Water Well Database to assess the groundwater supply potential at the regional scale. However, the site-specific information, in terms of water supply potential, is relatively scarce, as all the pump test information publicly available within 1.6 km (1 mile) of the study area are for tests where the water level was drawn down to the pump intake or drawdown information was not provided.

According to hydrogeological maps of the region long-term well yields range between 0.4 and 1.9 L/s (5 to 25 lgpm). Therefore, it is likely local aquifers can provide the desired supply of 0.36 L/s (4.7 lgpm) for nine residential lots, including the 8 proposed lots at the Site as well as



existing house on quarter section, without creating adverse effects on regional groundwater levels and water quality. However no reliable pumptest data in the vicinity of the proposed subdivision is publicly available in order to confirm the regional information or assess the local long-term groundwater supply potential.

Groundwater quality in the study area, as determined from regional mapping and analyses of samples from nearby wells, is variable. The GCDWQ are not met for some aesthetic-related parameters (including TDS, iron, pH, sodium and hardness) in a portion of wells that have been sampled and analyzed for a limited number of parameters. These are all merely aesthetic concerns, and do not represent a major obstacle to the use of local groundwater for drinking water supply. However, some level of water treatment may be desirable, depending on the actual groundwater quality in any given well.

As the Site may have previously been a gravel pit, it is likely the bedrock in the area is overlain by highly permeable gravel. When the wells are installed the surface geology should be logged to confirm that the water supply is adequately protected from surface contamination. The Client should determine the required setbacks of domestic wells from the two pipeline right of ways on the Site to confirm that a domestic water supply well can be completed on each lot.

7.0 RECOMMENDATIONS

Based on the review of available regional groundwater information, it is AMEC's opinion that it is likely local aquifers can provide the desired supply of 0.36 L/s (4.7 lgpm) for nine residential lots, including the 8 proposed lots at the Site as well as existing house on quarter section, without creating adverse effects on regional groundwater levels and water quality.

However, there is no available pumptest data for the site or for the quarter section in which the site is located. Also, no reliable pumptest data with 1.6 km (1 mile) of the proposed subdivision is publicly available in order to confirm the regional information or assess the local long-term groundwater supply potential.

To be fully confident local aquifers can provide the desired supply of 0.36 L/s (4.7 Igpm) without adversely impacting existing users a Phase 2 Groundwater Supply Study including a pumptest within the proposed sub-division would be required. A Phase 2 Groundwater Supply Study would likely include:

- Installing a groundwater well within the limits of the proposed sub-division. This well could
 be located to serve as a water supply for one of the lots and some of the costs of the well
 installation could be recovered when the lot is sold.
- Carrying out an aquifer pumping test. For the test, the pumping well will need to be pumped
 at a rate of approximately 0.4 L/s (5 Igpm) to emulate the demand for the 8 proposed lots at
 the site as well as the existing house in the quarter section.
- According to GroundwaterEvaluation Guideline (AENV, 2003) requirements the well will need to be pumped for 24-hours and the recovery monitored for an additional 24-hours (or until 90% recovery) and no observation wells are required.



- Sampling and analyzing water from the pumping and observation wells (if available) during the test.
- Interpretation and analysis of the collected test data to further evaluate local aquifer conditions and probable long-term well yields for the site.
- A field verified survey a groundwater users with 1.6 km (1 mile) of the Site.

AMEC can provide a cost estimate for these additional investigations upon request.

7.0 CLOSURE

Should you have any questions regarding this letter or any other aspect of this project please do not hesitate to contact David Parsons (403 207-7694) or Bernadette Lyons David (403 569-6514).

This report has been prepared for the exclusive use of Beverly Schneider and authorized users for specific application to this project Site. The groundwater potential study was conducted in accordance with the proposed work scope prepared for this Site and amendments, and generally accepted assessment practices. No other warranty, expressed or implied, is made. The general limitations of this report are specified in Appendix C.

Yours truly,

AMEC Earth & Environmental

David Parsons, M.Sc.

Junior Hydrogeologis

Bernadette Lyone David, M.Sc.E., P.Eng. Geological and Water Resources Engineer

APEGGA Permit No. P 4546

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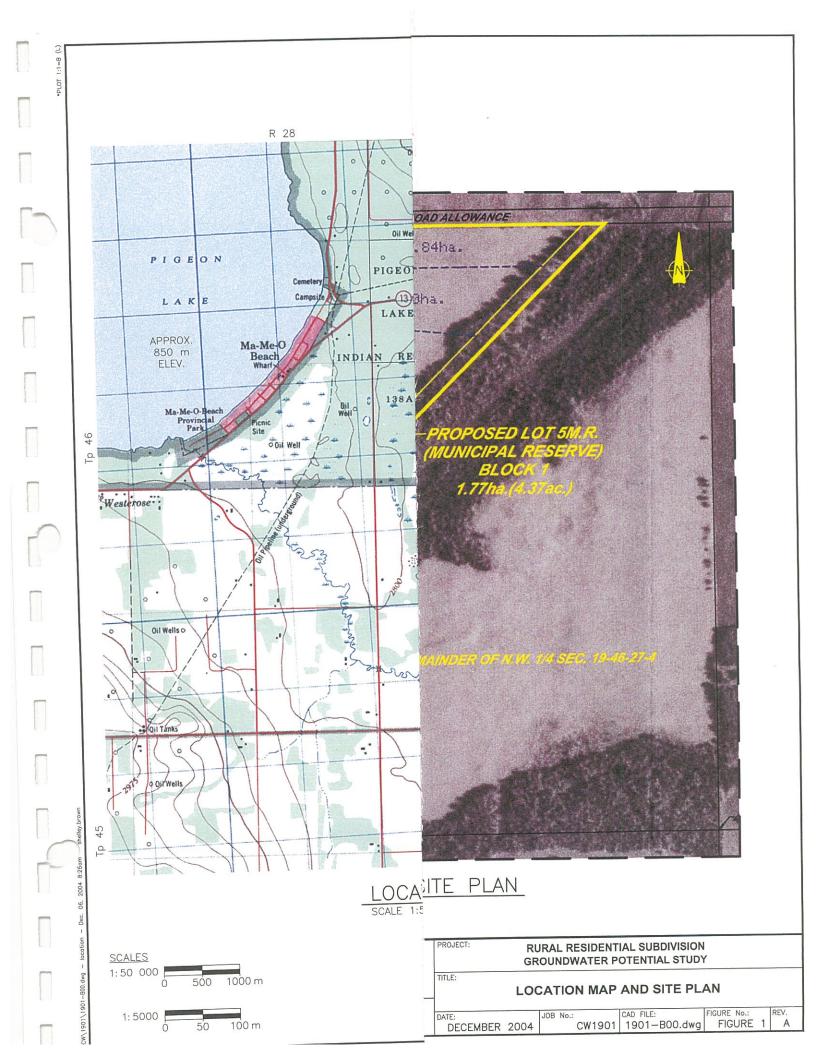
Andrzej Slawinski, Ph.D., P.Geol.

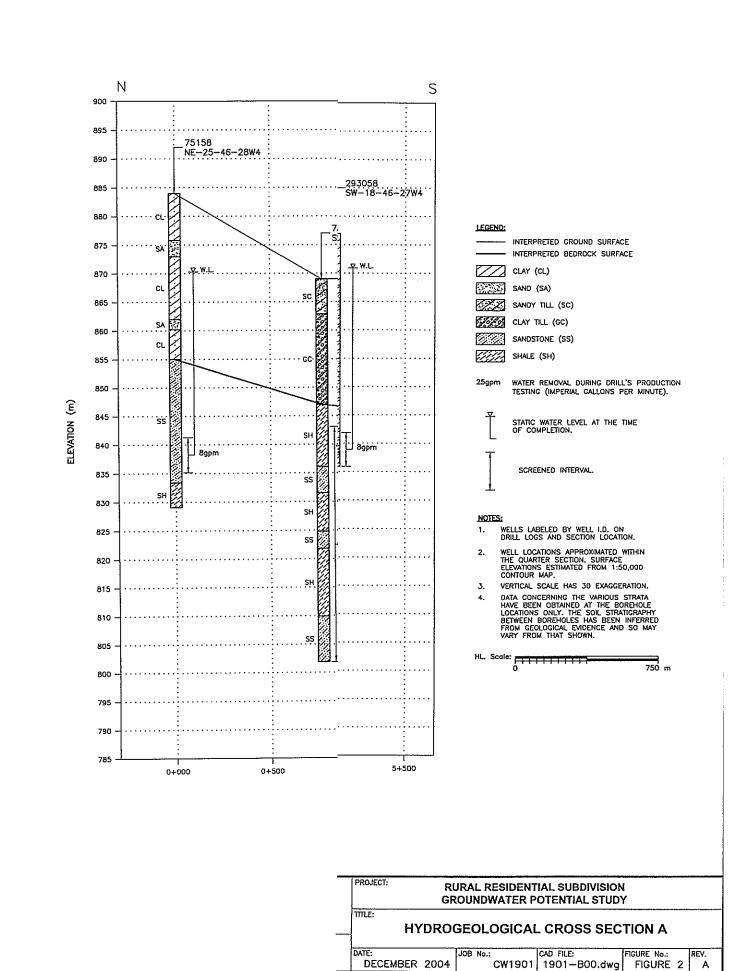
Principal Hydrogeologist



8.0 REFERENCES

- Alberta Environment, Water Well Database (including Driller's Reports and Chemical Analysis Reports).
- Alberta Environment, 1998. Environmental Guidelines for the Review of Subdivisions in Alberta.
- Alberta Environment, 2003. *Groundwater Evaluation Guideline* (Information required when submitting an application under the *Water Act*). February 2003.
- Health Canada, 2003. Summary of Guidelines for Canadian Drinking Water Quality. April 2003.
- Le Breton, E.G.1971. *Hydrogeology of the Red Deer Area, Alberta*. Alberta Research Council, Report 71-1. 14p. map.
- Province of Alberta, 1996. Water Act. Statutes of Alberta, Chapter W-3.5 with amendments.





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APPENDIX A

Water Well Database - Summary Table



DaTerra Projects Ltd. - Water Well Summary Report

Client: AMEC Earth & Environmental

Name: David Parsons Client Project ID: CW1901

Search Definition: SECTION 19, TOWNSHIP 046, RANGE 27, W4M

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| 28557 | SSW | 24 | (D) | 두 28 | eM. | Proposed Use Domestic | | 回 | ហ្វ័ N | <u> </u> | Y | Ϋ́ | 9/3/1996 | Level (ft) 91 | 25 | Owner CAMERON BUFFALO SCHOOL(SAMSON |
| 23805 16896 | 4 SW | 24 24 | 46 | 28 | 4 | Domestic Domestic | 200 180 | | Ň N | | Ϋ́Υ | Ϋ́Υ | 1/27/1994 8/26/1992 | 47 50 | | MOONIAS, DELIA (IR) NEEPOSE, GLENDA/SAMSON BAND |
| 7514 | SW SW | 24 24 | 46 | 28 | 4 | Domeslic Domeslic | 60 200 | | N N | Y | Ÿ | Ϋ́ | 11/1/1978 | 37 | 12 | LIGHTNING, PHILLIP WILLIAMS, PERCY |
| 7514 | 4 SW 3 SW | 24 | 46 | 28 | 4 | Domestic Domestic & Stock | 116 135 | Ñ | N N | | Ϋ́Υ | Ϋ́Υ | 5/10/1979 10/21/1986 | 20 45 | 10 | WALKER, J. YELLOWBIRD, ALBERT |
| 7514 | 2 SW | 24 24 24 | 46 | 28 | 4 | Domestic | 260 140 | N | N N | ļ | Ý Ÿ | Ϋ́ | 5/7/1987 7/13/1992 | 45 40 | 10 | LIGHTNING, PHILIP SAMSON I.R. |
| 16896 16895 | 3 SE | 24 | 46 | 28 | 4 | Domestic Unknown | 140 | N | N | | Υ | Y | 8/27/1992 11/1/1989 | 40 50 | 12 | LITTLECHILD, GARY/ERMINSKIN IR BULL, LOUIS |
| 15192 7514 | 1 SE | 24 24 | 46 | 28 | 4 | Domestic Domestic | 280 | N | N N | | Y Y Y | Y | 1/20/1988 6/12/1987 | 70 80 | 30 | ROWAN, GARY SADDLEBACK, DALE |
| 7514 7513 | 9 SE | 24 24 | 46 | 28 | 4 | Domestic Domestic | 300 250 | Ñ | N N | | Υ | Ÿ | 5/1/1987 | 50 | 10 | SADDLEBACK, IDA RABBIT, BERT |
| 7513 7513 | | 24 | 46 | 28 | 4 | Domeslic Domeslic | 140 150 | Ñ | N N | | Y Y | Y Y | 8/1/1979 6/1/1978 | 24 20 | 12 | GREEN, SAM |
| 7513 7513 | | 24 24 | | | Z | Domestic Domestic | 115 151 | N | N N | | Ϋ́Υ | Y | 9/22/1962 10/20/1962 | 15 65 | 6 | LIGHTNING, JOE BOYSES, JOE |
| 7515 | WN 0 | 24 24 | 46 | 28 | 4 | Domeslic Dewatering | 260 260 | N | N N | | Υ Υ | Y | 1/26/1988 12/18/1987 | 31 | 10 | ROWAN, CASEY NEPOOSE, GLENN |
| 7514 | 8 NW 7 NW | 24 24 | 46 | 28 | 4 | Domestic Domestic | 220 160 | | N N | | Y Y | Y Y | 2/4/1986 2/1/1979 | 28 | 18 | BUFFALO, STELLA BUFFALO, STELLA |
| 28676 | | 24 | 46 | 28 | 4 | Domestic Domestic | 130 220 | Ñ | N N | | Ϋ́ | Ϋ́Υ | 10/21/1996 2/9/1986 | | 10 | ROAN, ELIZABETH/SAMSON ROWAN, MARY |
| 7515 | 3 NE 2 NE | 24 | 40 | 28 | 3 4 | Domestic Domestic | 160 180 | N | N | | Ϋ́Υ | Υ IY | 10/1/1978 | | | NEPOOSE, CECIL ROAN, FRANCIS |
| 7515 | 1 NE | 24 | 46 | 28 | 4 | Domestic Domestic | 240 220 | N | N N | ļ | Ϋ́Υ | Y Y | 7/29/1983 12/13/1985 | 87 | | BULL, LOUIS GREEN, FRANCIS |
| 7515 | 6 SE 5 SE | 25 25 | 46 | 28 | 3 4 | Domestic | 220 | N | N N | | Ϋ́Υ | Ý | 12/17/1985 11/2/1987 | 103 | 8 | SIMON, ALLEN LOUIS BULL BAND |
| | 9 NË | 25 25 | 46 | 28 | 3 4 | Domestic Domestic | BO | Ñ | Ň | ļ | Ϋ́Υ | Ŷ | 7/6/1963 3/26/1983 | 33 | 6 | DEPT, OF INDIAN AFFAIRS BROWN, ANTHONY |
| 7515 | 8 NE 7 1: | | 40 | 28 | 3 | Domestic Domestic | 180 130 | N | N | - | Υ | ÍΥ | 9/18/1979 | 48 | 15 | BROWN, STUNRT ROAN, HARRY |
| 7521 | 5 SW 9 SW | 13 | 46 | 28 | 3 | Domestic Domestic | 160 240 | Ň | N | | Ϋ́Υ | Y Y | 9/14/1990 12/8/1986 | 37 | 8 | ROANE, VIOLET YELLOWBIRD, MARY |
| 7521 | 8 SW 7 SW | 13 | 3 40 | 28 | 3 | Domestic Domestic | | N | N N | | Ϋ́Υ | Y | 10/1/1978 1/28/1984 | 65 | (| ZADKO, LEDUE |
| 28676 28675 | 0 SE 9 SE | 13 | | 28 28 | | Domestic Domestic | 135 | N | | _ | Y Y | Ϋ́Υ | 9/25/1996 9/26/1996 | 22.9 | 12 | JOHNSON, LEAVERT LOWEN, LADDIE |
| 28675 21335 | | 13 | | | | Domeslic Domeslic | | Ň | N | | Υ Υ | Y | 9/23/1996 6/1/1992 | 20 | | MONTGOMERY, IRENE BALL TYPE PUMP AND WATER WELL |
| 15320 | 4 SE 4 SE | 13 | 3 40 | 20 | | 1 Domestic 1 Domestic | 120 125 | | N | | Y | Υ Y | 9/17/1990 3/3/1987 | 20 | 10 | ODANYLUK, JIM PAYFETT, HAROLD |
| 752 | 3 SE 12 SE | 1 | 3 40 | 2 | 3 | 1 Domestic 1 Domestic | | N | N N | | Ϋ́Υ | ΙΥ ΙΥ | 10/19/1977 | 36 | | GREEN, STANLEY SÖÖSAY, BERTHA |
| 2888 | 2 NW | 1 | 3 4 | 28 | B . | Domestic Domestic | 130 | | Ñ Ñ | | Ÿ | Y | 2/27/1996 12/19/1989 | C | 12 | COWARD, GARY |
| 752 | 3 NW | 13 | 3 4 | 3 21 | В | 4 Domestic 4 Domestic | | N | N | , | Υ Υ | Υ Υ | 6/22/1989 6/28/1989 | 35 | | PETERS, H. BALLHORN, BILL |
| 752 | 1 NW | 1 | 3 4 | 3 2 | B . | 1 Domestic 1 Domestic | 153 | | N | - | Y | Y Y | 12/3/1982 10/13/197 | 50 | 10 | JOHNSON, ROBERT DEBROUN, JERRY |
| 2875 | 20 NW 20 NE | 1 | 3 4 | 5 2 | 8 . | 4 Domestic | 130 | N | N | | Ý | ŢŢ. | 6/2/199 | | Later American Mary 111 | JOHNSON, BERNICE (SAMSON MAINT JOHNSON, JANET |
| | 25 NE 24 NE | | 3 4 3 4 | | | 4 Domestic 4 Domestic | | N | N. | 1 | Y | Y | 8/5/1982 | 7 | 1 | JOHNSON, JANET |

PURPOSE OF REPORT

The purpose of this report is to gather data which will be used as the basis for further assessment, if necessary. As supporting documentation, this report must be included in its entirety as an appendix to any document which refers to this assessment or discusses the data contained in this report. The data contained in this report applies only to the legal land location(s) and purpose specified on the cover of this report.

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Appendix B

Water Well Drilling Reports Water Well Chemistry Analyses

| | Water | Well Drilling | Report | | Well I.D.: 0132774 Map Verified: Not Verified |
|--|------------------|---|---|----------|--|
| The data co | intained in this | report is supplied by the [| Oriller. The province discla | ims | Date Report 1986/08/05 |
| Alberta Environment | 1 | responsibility for its accura | асу. | | Received: Measurements: Imperial |
| 1. Contractor & Well Owner | r Informati | on | · · · · · · · · · · · · · · · · · · · | | 2. Well Location |
| Company Name: | | | Drilling Company Approv | /al No.: | 1/4 or Sec Twp Rge Westof LSD M |
| UNKNOWN DRILLER Mailing Address: | City or Tow | n: | 99999 Postal Code: | | LSD M SE 19 046 27 4 |
| UNKNOWN | UNKNOWN | I AB CA | | | Location in Quarter 0 FT from Boundary |
| WellOwner's Name: JESENOVEC, JOSEPH | Well Location | on Identifier: | | | 0 FT from Boundary 0 FT from Boundary |
| P.O. Box Number: | Mailing Add | iress: GWOOD DR SW, | Postal Code: | | Lot Block Plan |
| | CALGARY | GWOOD DR 3W, | T2W 0K5 | | Well Elev: How Obtain: |
| City: | Province: | | Country: | | FT Not Obtain 6. Well Yield |
| 3. Drilling Information | | | | | Test Date Start Time: |
| Type of Work: Chemistry | | | Proposed wel | l use: | (yyyy/mm/dd): |
| Reclaimed Well Date Reclaimed(yyyy/mm/dd): | Materi | als Used: | Domestic Anticipated W | /ater | Test Method: |
| Method of Drilling: Drilled | | | Requirements 0 Gallons | s/day | Non pumping FT static level: |
| Flowing Well: No Gas Present: No | | Gallons esent: No | o Ganons | | Rate of water Gallons/Min |
| 4. Formation Log | | 5. Well Completion | 1 | , | removal: Depth of FT |
| Depth from | | Date Started(yyyy/mm/d | d): Date Completed (yyyy/mm/dd): | | pump intake: |
| from ground Lithology Desc | cription | · | (ууултатисо). | | Water level at FT end of |
| level (feet) | • | Well Depth: 60 FT | Borehole Diameter: 0 Liner Type: |) Inches | pumping: |
| (1861) | | Casing Type: Size OD: 0 Inches | Size OD: 0 Inches | | Distance from Inches top of casing |
| | | Wall Thickness: 0 Inches | s Wall Thickness: 0 Inc | ches | to ground |
| | | Bottom at: 0 FT | Top: 0 FT Botto | m: 0 FT | level: Depth To water level (feet) |
| | | Perforations | Perforations Size: | *** | Elapsed Time Drawdown Minutes:Sec Recovery |
| | | from: 0 FT to: 0 FT from: 0 FT to: 0 FT | 0 Inches x 0 Inches 0 Inches x 0 Inches | | Drawdown Williates. Sec Trecovery |
| | | from: 0 FT to: 0 FT | 0 Inches x 0 Inches | | |
| | | Perforated by: Seal: | | | Total Drawdown: FT |
| | | from: 0 FT Seal: | to: 0 FT | | If water removal was less than 2 hr duration, reason why: |
| | | from: 0 FT Seal: | to: 0 FT | | |
| | | from: 0 FT Screen Type: | to: 0 FT Screen ID: 0 Inches | | Recommended pumping rate: |
| | | from: 0 FT to: 0 FT | Slot Size: 0 Inches | | Gallons/Min |
| | | Screen Type: from: 0 FT to: 0 FT | Screen ID: 0 Inches Slot Size: 0 Inches | | Recommended pump intake: FT Type pump installed |
| | | Screen Installation Meth | | | Pump type: |
| | | Fittings | Bottom: | | Pump model: H.P.: |
| | | Top: Pack: | | | Any further pumptest information? |
| | | Grain Size: Geophysical Log Taken: | Amount: | | |
| | | Retained on Files: | | | |
| | | Additional Test and/or Proceedings of the Chemistries taken By Dr | | | |
| | | <u>Held</u> : 1 | Documents Held: 1 | | |
| | | Pitless Adapter Type: Drop Pipe Type: | | | |
| | | Length: | Diameter: | | |
| | | Comments: | | | |
| | | | | | |
| | | | | | |
| · . | | | 104 14 | | |
| | | 7. Contractor Certi Driller's Name: | ification UNKNOWN DRILLE | R | |
| | | Certification No.: | | | |
| | | | ed in accordance with the Noterta Environmental Prote | | |
| , | | Enhancement Act. All inf | formation in this report is t | rue. | |
| 1 | | Signature | Yr M | lo Day | |

| A | Motor | Wall Drilling | Dono | 4 | Well I.D.: Map Verified: | 0132775 Map |
|---|-------------------------------|--|-------------------------|---|-----------------------------|------------------------|
| O. | The data contained in this | Well Drilling | Leho | II L | Date Report | • |
| Alberta | rne data contamed in this i | report is supplied by the D esponsibility for its accura | onitiet. The pr icv. | Ovince disclaims | Received: | 1979/12/12 |
| Environment | | | | | Measurements: | <u>Imperial</u> |
| | <u> Nell Owner Informatio</u> | | | | 2. Well Location | **** |
| Company Name: FRASER, RON | | | Drilling Com | pany Approval No.: | 1/4 or Sec Tw | p Rge Westof M |
| Mailing Address: | City or Towr | 1: | Postal Code |): | SW 19 04 | |
| | | | | *** | Location in Quarter | |
| WellOwner's Name: LAVANGE, G. | Well Locatio | n Identifier: | | | 0 FT from 0 FT from | . Boundary Boundary |
| P.O. Box Number: | Mailing Add | ress: | Postal Code | · · · · · · · · · · · · · · · · · · · | Lot Block | Plan |
| , | MA-ME-O B | EACH | | | | |
| City: | Province: | | Country: | | | |
| 3. Drilling Inform | ation | | | | | |
| Type of Work: New Wo | ell | | F | | Test Date | Start Time: |
| Reclaimed Well | | | Į. | omestic & Stock | (yyyy/mm/dd): | 44.00.414 |
| Date Reclaimed(yyyy/t | mm/dd): Materia | als Used: | | | | 11:00 AM |
| Method of Drilling: Rot Flowing Well: No | Rate: 0 | Ballons | | | Non pumping | 32 FT |
| Gas Present: No | | | | | static level: | 40 |
| 4. Formation Log | | 5. Well Completion | | | * * * | 10 Gallons/Міл |
| Depth from | | Materials Used: Proposed well use: Domestic & Stock Anticipated Water Requirements/day O Gallons O Gallons O Gallons Date Started(yyyy/mm/dd): More Date Completed (yyyy/mm/dd): More Date Completed (yyyy/mm/dd): More Date Completed (yyyy/mm/dd): More Date Of Date Completed (yyyy/mm/dd): More Date Of Date Of Date Of Depth of More Date Of Date O | 40 FT | | | |
| prom Jaround Litho | ology Description | 1979/10/28 | | | | |
| ievel | rogy Boodinguoi. | | Borehole | e Diameter: 0 Inches | | FI |
| (feet) | | | | | 1 | |
| 45 Clay 58 Soft Shale | | 4 | | | | of Inches |
| 65 Shale | | THE THICKNESS, O HICHES | | | | |
| 74 Sandy Shal | e | Bottom at: 63 FT | Тор: 0 F | T Bottom: 0 FT | | er level (feet) |
| | | Perforations | Perforati | ons Size: | • | |
| | | | | | | • |
| | • | | | | If water removal wa | as less than 2 hr |
| | | | - 1110,100 | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | duration, reason wi | hy: |
| | | | 4 0 57 | | | |
| | | | to: U F I | | | |
| | | | to: 0 FT | | | mping rate: 0 |
| | | | to 0 FT | | | mp intake: 50 FT |
| | | | | D: 0 Inches | Type Pump Installe | |
| | | from: 0 FT to: 0 FT | | . O IIICHES | | |
| | | | | D. U IIICHES | H.P.: | |
| | | | | e, o mones | Any further pumpte | st information? |
| | | Fittings | | | | |
| | | Top: Pack: | Bottom: | | | |
| | | Grain Size: | Amount: | | | |
| | | Geophysical Log Taken: | | | | |
| | | Retained on Files: Additional Test and/or Pu | ımn Data | · · · | | |
| | | Chemistries taken By Dril | | | | |
| | | Held: 0 | | nts Held: 1 | | |
| | | Pitless Adapter Type: Drop Pipe Type: | | | | |
| | | Length: FT | Diamete | r: Inches | | |
| | | Comments: | | | | |
| | | DRILLER REPORTS SO | FIWAIER | | | |
| | | | | : | | |
| | | | | | | |
| | | | | | | |
| | | 7. Contractor Certi | | | | |
| | | Driller's Name: Certification No.: | UNKNO | WN DRILLER | | |
| | | Cerification No.: This well was constructed | d in accordar | ice with the Water | | |
| | | Well regulation of the Alb | | | | |
| | | Enhancement Act. All info Signature | ormation in ti | nis report is true. Yr Mo Day | | |

| A Water I | Well Drilling | Renor | | Well I.D.: Map Verified: | 0132777 Map |
|--|--|---------------------------------------|--|--|-------------------------|
| The data contained in this r | anort is supplied by the Di | riller. The prov | ince disclaims | Date Report | 1984/12/06 |
| Alberta re | esponsibility for its accurac | гист. тио ргот су. | 1 | Received: Measurements: | Imperial |
| Environment | - | · | | 2. Well Location | |
| 1. Contractor & Well Owner Information | n | Duilling Comp | any Approval No.: | 1/4 or Sec Twp | |
| Company Name: FRASER, RON | l | Dilling Compa | Ally Apploval No | LSD | M |
| Mailing Address: City or Town | | Postal Code: | | SW 19 046 Location in Quarter | |
| WellOwner's Name: Well Locatio | n Identifier: | | | 0 FT from 0 FT from | Boundary Boundary |
| P.O. Box Number: Mailing Addi MA-ME-O B | 000. | Postal Code: | | Lot Block | Plan |
| City: Province: | | Country: | | FT N | ow Obtain: ot Obtain |
| 3. Drilling Information Type of Work: New Well | | | | 6. Well Yield Test Date | Start Time: |
| Type of Work: New Well | | | | (yyyy/mm/dd): | Start Time. |
| Reclaimed Well Date Reclaimed(yyyy/mm/dd): Materia | als Used: | An | ticipated Water | 1984/08/21 | 11:00 AM |
| Method of Drilling: Rotary | | | | Test Method: Bailer Non pumping | 7 FT |
| Flowing Well: No Rate: (| Ballons sent: No | 0 (| | static level: | |
| Cas i receile ite | 5. Well Completion | | | Rate of water | 10 Gallons/Min |
| 4. Formation Log Depth | | Date Com | pleted | removal: Depth of | 40 FT |
| from | Date Started(yyyy/mm/dd | ¹⁾⁻ (yyyy/mm/ 1984/08/2 | /dd): | pump intake: | |
| ground Lithology Description | 1984/08/21 Well Depth: 85 FT | | Diameter: 0 Inches | Water level at end of | 40 FT |
| (feet) | Casing Type: Galvanized | Liner Type | a, | pumping: | |
| 54 Clay | Steel | Size OD: | ·· | Distance from top o | f Inches |
| 72 Blue Shale 75 Sandy Shale | Size OD: 4.5 Inches Wall Thickness: 0 Inches | | kness: 0 Inches | casing to ground level: | |
| 85 Shale | Bottom at: 56 FT | Top: 0 FT | | Depth To wate | r level (feet) |
| | Perforations | Perforatio | | Elapsed | |
| | from: 0 FT to: 0 FT | 0 Inches | c 0 Inches | Drawdown Minutes Total Drawdown: 33 | |
| | from: 0 FT to: 0 FT | | c 0 Inches c 0 Inches | If water removal wa | s less than 2 hr |
| | from: 0 FT to: 0 FT Perforated by: | U IIICHES / | (O IIIGNES | duration, reason wh | ıy: |
| | Seal: Driven | | | } | ŀ |
| | from: 0 FT Seal: | to: 56 FT | | | |
| | from: 0 FT Seal: | to: 0 FT | | Recommended pur Gallons/Min | |
| · | from: 0 FT | to: 0 FT | | Recommended pur Type Pump Installe | |
| | Screen Type: | Screen ID Slot Size: |): 0 Inches | Pump Type: | • |
| | from: 0 FT to: 0 FT Screen Type: | | O Inches | Pump Model: | |
| <u> </u> | from: 0 FT to: 0 FT | Slot Size: | | H.P.: Any further pumple | st information? |
| | Screen Installation Metho | od: | | - | |
| | Fittings Top: | Bottom: | | | |
| | Pack: | | | | |
| | Grain Size: Geophysical Log Taken: | Amount: | | 1 | |
| | Retained on Files: | | | _ | |
| | Additional Test and/or P | ump Data | | | |
| | Chemistries taken By Dr Held: 0 | iller: No Documer | nts Held: 1 | | |
| | Pitless Adapter Type: | | | 1 | |
| } | Drop Pipe Type: | Diameler | · Inchae | | |
| | Length: FT Comments: | Diameter | , mones | 1 | |
| | DRILLER REPORTS ME | ED-HARD WA | TER | | į |
| | | | | | |
| | | | | - | |
| | | :#:!: | | 4 | |
| | 7. Contractor Cert Driller's Name: | | VN DRILLER | - | |
| | Certification No.: | | | | |
| | This well was constructed | ed in accordan | ce with the Water | | |
| | Well regulation of the Al Enhancement Act, All in | oerta ⊏nvironi formation in th | nentar Frotection & nis report is true. | İ | |
| 1 | Signature | | Yr Mo Day | у | |

| A | Water | Well Drilling | Renc | ort | Map Verified: | Map |
|---|---|--|--|---|---|------------------|
| 7 | The data contained in this re | enartic principal by the Dr | iller. The n | rovince disclaims | Date Report | 1990/02/13 |
| Alberta | The data contained in this for | eport is supplied by the Di esponsibility for its accurac | о т.ло р У. | | | Imperial |
| Environment | | | - | | | |
| 1, Contractor & | Well Owner Informatio | n | | | 1 | |
| Company Name: | | ··. | Orilling Cor | npany Approval No.: | | M M |
| FRASER, RON | City or Town | | Postal Cod | e: | SW 19 046 | 27 4 |
| Mailing Address: | City of Town | | | | | Boundary |
| WellOwner's Name: | Well Location | n Identifier: | | | | Boundary |
| STEWART, BOB | | | Dootal Cod | 0: | | Plan |
| P.O. Box Number: | Mailing Addr MAMEO BE | C55. | Postai Cou | е. | | |
| City: | Province: | AOH | Country: | | 1,1011 =10.1 | |
| City. | .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | | | | | ot Obtain |
| 3. Drilling Inforn | nation | | | | | Start Time |
| Type of Work: New V | Vell | | | | | Start Time. |
| Reclaimed Well | | als Used: | | | 1989/10/27 | 11:00 AM |
| Date Reclaimed(yyyy Method of Drilling: Ro | | als Oseu. | | Requirements/day | | |
| Flowing Well: No | Rate: (| Gallons | | 0 Gallons | | 48 11 |
| Gas Present: | Oil Pre | sent: | | I | Map Verified: Ma Date Report Received: Measurements: Im 2. Well Location If your Sec Twp R LSD SW 19 046 Location in Quarter OFT from OFT from OFT from OFT from OFT Mot Of 6. Well Yield Test Date State (yyyy/mm/dd): 1989/10/27 11 Test Method: Bailer Non pumping 48 static level: Rate of water 8 removal: Gai Depth of 60 pump intake: Water level at 51 end of pumping: Distance from top of Incasing to ground level: Test Date State (yyyy/mm/dd): 1989/10/27 11 Test Method: Bailer Non pumping 48 static level: Gai Depth of 60 pump intake: Water removal: Gai Depth of 60 pumping: Distance from top of Incasing to ground level: Telapsed Tim Drawdown Minutes: Se Total Drawdown: 3 FT If water removal was led duration, reason why: Recommended pumpin Gallons/Min Recommended pumpin Gallons/Min Recommended pumpin Type Pump Installed Pump Type: Pump Model: H.P.: Any further pumptest in | 8 |
| 4. Formation Lo | ig | 5. Well Completion | | | removal: | Gallons/Min |
| Depth | | Date Started(yyyy/mm/dd | Drilling Company Approval No.: Postal Code: 60 FT | | |
| from | ology Decariation | 1989/10/27 | · (yyyy) | | | 51 ET |
| ground Lith level | ology Description | Well Depth: 75 FT | | | | V, 1 ' |
| (feet) | | Casing Type: Galvanized | Liner 7 | ype: | pumping: | |
| 40 Clay | | Steel Steel | | | Distance from top o | f Inches |
| 63 Blue Shal | | | | | | i |
| 75 Sandy Sh | ale | Inches | | | Depth To wate | r level (feet) |
| | | Bottom at: 60 FT | Тор: 0 | | Elapsed | Time |
| | | Perforations | | | Drawdown Minute | s:Sec Recovery |
| | | from: 0 FT to: 0 FT | | | If water removal wa | s less than 2 hr |
| 1 | | from: 0 FT to: 0 FT | 0 Inch | es x 0 Inches | | |
| | | Perforated by: | | | 4 | |
| 1 | | Seal: Driven | to: 0 E | т | | |
| | | Seal: | ισ. σ τ | 1 | Recommended pur | mping rate: 8 |
| 1 | | from: 0 FT | to: 0 F | T | Gallons/Min | |
| | | Seal: | ior O E | - T | Recommended pur | np intake: U F I |
| 1 | | from: 0 FT | | | | ;u |
| | | | Slot S | ize: 0 Inches | | |
| | | Screen Type: | | | H.P.: | Unformation? |
| | | from: 0 FT to: 0 FT | | ize: U inches | Any further pumpte | st momation: |
| | | Screen Installation Meth Filtings | ou. | | 7 | • |
| | | Top: | Bolton | n: | _ | |
| | | Pack: | | | 1 | |
| | | Grain Size: | | nt: 0 | -{ | |
| | | Retained on Files: | • | | | |
| | | Additional Test and/or P | ump Data | | | |
| | | Chemistries taken By Di | riller: No | monto Hold: 1 | | |
| 1 | | Held: 0 | Docui | ments meto: 1 | | |
| | | | | | | |
| | | Length: FT | Diam | eter: Inches | | |
| | | Comments: | | | | |
| | | | | | | |
| 1 | | | | | | |
| | | | | | | |
| | | | | = | | |
| | | 7. Contractor Cert | tification | ì | | |
| | | Driller's Name: | UNK | NOWN DRILLER | | |
| | | Cortification No.: | 3432 | dance with the Main- | | |
| | | This well was construct Well regulation of the A | ed in accor | cance with the yvater roomenial Protection | _{&} 1 | |
| | | Enhancement Act. All in | nformation | in this report is true. |] | |
| 1 | | Signature | | Yr Mo D | ay l | |

| Water | Well Drilling | Report | Well I.D.: 0075226 Map Verified: Not Verified |
|--|---|---|--|
| The data contained in this | report is supplied by the Di esponsibility for its accurac | riller. The province disclaims | Date Report 1972/06/29 Received: Imperial |
| Environment | | | 2. Well Location |
| 1. Contractor & Well Owner Information | on | B. W. Company Approved No.: | 1/4 or Sec Twp Rge Weston |
| Company Name: STARKEY DRILLING | | Drilling Company Approval No.: | LSD M 01 13 046 28 4 |
| Mailing Address: City or Tow | | Postal Code: | Location in Quarter 0 FT from Boundary |
| WellOwner's Name: Well Location BAILEY, G. | on Identifier: | | 0 FT from Boundary |
| P.O. Box Number: Mailing Add CALGARY | ress: | Postal Code: | Lot Block Plan Well Elev: How Obtain: |
| City: Province: | | Country: | FT Not Obtain |
| 3. Drilling Information | | Proposed well use: | 6. Well Yield Test Date Start Time: |
| Type of Work: New Well Reclaimed Well | | Domestic | (yyyy/mm/dd): 1972/05/12 11:00 AM |
| Date Reclaimed(yyyy/mm/dd): Maler | ials Used: | Anticipated Water Requirements/day | Test Method: Bailer & Pump |
| Method of Drilling: Drilled | Gallons | 0 Gallons | Non pumping 26 FT |
| ITILIWING AVEIL IND | esent: No | | static level: Rate of water 5 |
| 4. Formation Log | 5. Well Completion | 1 | removal: Gallons/Min |
| Depth | Date Started(yyyy/mm/do | Data Completed | Depth of 0 FT |
| from | 1972/05/12 | 1972/05/12 | pump intake: Water level at FT |
| ground Lithology Description level | Well Depth: 120 FT | Borehole Diameter: 0 Inche | end of |
| (feet) | Casing Type: Unknown | Liner Type: | pumping: |
| 85 Blue Clay | Size OD: 0 Inches Wall Thickness: 0 Inches | Size OD: 0 Inches Wall Thickness: 0 Inches | Distance from top of Inches casing to ground |
| 100 Shale 120 Sand | | | level: |
| 120 Cana | Bottom at: 93 FT | Top: 0 FT Bottom: 0 F | Depth To water level (feet) Elapsed Time |
| | Perforations | Perforations Size: 0 Inches x 0 Inches | Drawdown Minules:Sec Recovery |
| | from: 0 FT to: 0 FT from: 0 FT to: 0 FT | 0 Inches x 0 Inches | Total Drawdown: 0 FT If water removal was less than 2 hr |
| | from: 0 FT to: 0 FT | 0 Inches x 0 Inches | duration, reason why: |
| | Perforated by: | | |
| | Seal: Driven from: 0 FT Seal: | to: 0 FT | i de marios roto: O |
| | from: 0 FT Seal: | to: 0 FT | Recommended pumping rate: 0 Gallons/Min |
| | from: 0 FT | to: 0 FT | Recommended pump intake: 0 FT Type Pump Installed |
| | Screen Type: | Screen ID: 0 Inches Slot Size: 0 Inches | Pump Type: |
| | from: 0 FT to: 0 FT Screen Type: | Screen ID: 0 Inches | Pump Model: |
| | from: 0 FT to: 0 FT | Slot Size: 0 Inches | H.P.: Any further pumptest information? |
| | Screen Installation Meth | nod: | - Any turner parispose internal |
| | Fittings Top: | Boltom: | |
| | Pack: | Amount | |
| | Grain Size: Geophysical Log Taken | Amount: | |
| | Retained on Files: | | |
| | Additional Test and/or F Chemistries taken By D | ?ump Data iriller: Yes | |
| | Held: 0 | Documents Held: 1 | |
| | Pilless Adapter Type: | | |
| | Drop Pipe Type: Length: FT | Diameter: Inches | |
| | Comments: | | |
| | DRILLER REPORTS W | /ATER SOFT & CLEAR. | |
| | | | |
| | 7. Contractor Cer | tification | |
| | Driller's Name: Certification No.: | UNKNOWN DRILLER | |
| | This well was construct | ted in accordance with the Water | & |
| | Enhancement Act. All i Signature | nformation in this report is true. Yr Mo C | pay |

Water Well Drilling Report
The data contained in this report is supplied by the Driller. The province disclaims

Well I.D.: Map Verified: Date Report 0287590 Not Verified 1997/08/13

| Alberta | report is supplied by the Dri esponsibility for its accurac | ller. The p y. | province disclaims | Received: Measurements: | 1997/08/13 Imperial |
|--|--|----------------------|---------------------------------------|----------------------------------|-------------------------|
| S. CHARGERIE | | | | | |
| 1. Contractor & Well Owner Informati | <u>on</u> | helling C- | mpany Approval No.: | 2. Well Locatio | |
| Company Name: SCHMIDT DRILLING LTD. | | 7111ing Co 119156 | пірапу Арргочаї №.: | LSD | M |
| Mailing Address: City or Tow | n: F | ostal Cod | fe: | NE 13 046 | |
| RR 2, SITE 16, BOX 16 PONOKA A | | 4J 1R2 | | Location in Quarter 0 FT from | Boundary |
| WellOwner's Name: Well Location JOHNSON, BERNICE (SAMSON | on Identifier: | | | 0 FT from | Boundary |
| MAINT | | | | Lot Block | Plan |
| P.O. Box Number: Mailing Add | | ostal Cod | ie: | | 01.0 |
| 159 HOBBEMA City Province: | | 0C-1N0 | | | ow Oblain: ot Obtain |
| City: Province: | · | Country: | | 6. Well Yield | ot obtain |
| 3. Drilling Information | | * | | Test Date | Start Time: |
| Type of Work: New Well | | | Proposed well use: | (yyyy/mm/dd): | |
| Reclaimed Well | | | Domestic | 1997/06/02 Test Method: Air | 11:00 AM |
| | als Used: | | Anticipated Water Requirements/day | Non pumping | 11.4 FT |
| Method of Drilling: Rotary Flowing Well: No Rate: | Gallons | | 500 Gallons | static level: | |
| | esent: No | | | Rate of water | 25 |
| 4. Formation Log | 5. Well Completion | | | removal: Depth of | Gallons/Min 130 FT |
| Depth | Date Started(yyyy/mm/dd) | Date C | ompleted | pump intake: | |
| from Lithology Description | 1997/06/02 | ` (yyyy/r 1997/0 | nm/dd): 16/02 | Water level at | FT |
| ground Lithology Description | Well Depth: 130 FT | | ole Diameter: 0 Inches | end of | |
| (feet) | Casing Type: Steel | | ype: Plastic | pumping: Distance from top o | f Inches |
| 16 Clay | Size OD: 5.56 Inches | | D: 4.5 Inches | casing to ground | |
| 53 Gray Till & Clay | Wall Thickness: 0.188 | Wall T Inches | hickness: 0.237 | level: | |
| 95 Gray Shale 125 Gray Sandstone | Inches | Top: 7 | | Depth To wate Elapsed | |
| 130 Gray Shale | Bottom at: 80 FT | 130 F | <u> </u> | Drawdown Minutes | |
| | Perforations | | ations Size: | Total Drawdown: 0 | FT |
| | from: 110 FT to: 130 FT from: 0 FT to: 0 FT | | iches x 12 Inches es x 0 Inches | If water removal wa | |
| | from: 0 FT to: 0 FT | | es x 0 Inches | duration, reason wh | ıy: |
| | Perforated by: Saw | | |] | |
| | Seal: Bentonite Chips/Teb | | FT | | |
| | from: 0 FT Seal: | to: 80 | ۲۱ | Recommended pun Gallons/Min | nping rate: 10 |
| | from: 0 FT | to: 0 F | Т | Recommended pun | np intake: 30 FT |
| | Seal: | | _ | Type Pump Installe | |
| | from: 0 FT | to: 0 F | T n ID: 0 Inches | Pump Type: | |
| | Screen Type: from: 0 FT to: 0 FT | | בפ: O Inches ze: O Inches | Pump Model: .H.P.: | |
| 1 | Screen Type: | | D: 0 Inches | Any further pumpte: | st information? |
| | from: 0 FT to: 0 FT | | ze: 0 Inches | 1 | |
| | Screen Installation Method | <u>j:</u> | | -[| |
| | Fittings Top: | Botton | 1: | 1 | |
| | Pack: | _ 51.51 | | 1 | |
| | Grain Size: | Amou | nt: . | -} | |
| | Geophysical Log Taken: Retained on Files: | | | ŀ | |
| | Additional Test and/or Pur | no Data | | 1 | |
| | Chemistries taken By Drill | er: No | | 1 | |
| | Held: 0 | Docun | nents Held: 1 | - | |
| | Pilless Adapler Type: Drop Pipe Type: | | | | |
| | Length: FT | Diame | ter: Inches | | |
| | Comments: | | | 1 | |
| | DRILLER REPORTS DIS | | ROM TOP OF | 1 | |
| | CASING TO GROUND LE | VEL.Z. | | | |
| | | | | | |
| 1 | | | | | |
| | 7. Contractor Certif | ication | | 1 | |
| 1 | Driller's Name: | | OWN DRILLER | 1 | |
| | Certification No.: | VA490 | 06 | | |
| 1 | This well was constructed | in accord | ance with the Water | | |
| | Well regulation of the Albe | | | | |
| | Enhancement Act. All info Signature | rmation ir | i this report is true. Yr Mo Day | A | |
| | prignature | | is IVIO Day | 1 | |

| A 10/-41 | Mall Dailling D | ~ m < | ~ wf | 1 | | 007522 | ¹ |
|--|----------------------------------|---|--|--|-----------------|----------------|------------------|
| water | wen brining K | eho | JI L | , , | | • | <u> </u> |
| The data contained in this r | eport is supplied by the Driller | . The p | province disclaims | | | 1982/12 | 2/15 |
| Fournment re | esponsibility for its accuracy. | | | | | <u>Imperia</u> | <u> </u> |
| | | | | 2 Well | LLocation | <u> </u> | |
| | Deill Deill | ina Col | mnany Annroval No · | | | | Westof |
| | Dim | ing coi | inpany rippieral ries. | LSD | , | ~ | М |
| | : Pos | tal Cod | le: | ИW | 13 046 | 28 | 4 |
| Malling Address. | · | | | | | _ | |
| 1101101010101 | n Identifier: | | | | | | undary undary |
| JOHNSON, ROBERT | | | <u> </u> | | | Plan | unuary |
| | ess: Pos | tai Coc | ie: | LUI | DIOCK | 1 1011 | - |
| | Cor | intry. | | Well Ele | v: Ho | w Obtair | 1: |
| City: Province: | 350 | | | FT | No | t Obtain | |
| 2 Drilling Information | | | | 6. Wel | l Yield | | |
| INN DRILLING LTD. Illing Address: City or Town: Postal City or Town: Po | | Proposed well use: | | | Slart Ti | me: | |
| | | | Domestic | | | | 1 |
| | ils Used: | | | | | 11:00 A | M [|
| Method of Drilling: Cable Tool | | | | | | 50 ET | |
| Flowing Well: No Rate: C | | | Proposed well use: Domestic Anticipated Water Requirements/day 0 Gallons Proposed well use: Domestic Anticipated Water Requirements/day 10 Gallons Proposed well use: Domestic Anticipated Water Requirements/day 10 Gallons Proposed well use: Domestic Anticipated Water Requirements/day 10 Gallons Proposed well use: Domestic Anticipated Water Requirements/day 10 Gallons Proposed well use: Domestic Anticipated Water Requirements/day 10 Gallons Proposed well use: Domestic Anticipated Water Requirements/day 10 Gallons Proposed well use: Domestic Anticipated Water Requirements/day 10 Gallons Proposed well use: Domestic Anticipated Water Requirements/day 10 Gallons Proposed well use: Domestic Anticipated Water Requirements/day 10 Gallons Proposed well use: Domestic Anticipated Water Requirements/day 10 Gallons Proposed well use: Domestic Anticipated Water Requirements/day 10 Gallons Proposed well use: Domestic Anticipated Water Requirements/day 10 Gallons Proposed well use: Domestic Anticipated Water Requirements/day 10 Gallons Proposed well use: Domestic Anticipated Water Requirements/day 10 Gallons Proposed well use: Domestic Anticipated Water Requirements/day 10 Gallons Proposed well use: Domestic Anticipated Water Requirements/day 10 Gallons Proposed well use: Domestic Anticipated Water Requirements/day 10 Gallons Proposed well use: Domestic Anticipated Water Requirements/day 10 Gallons Proposed well use: Domestic Anticipated Water Requirements/day 10 Gallons Proposed well use: Domestic Anticipated Water Requirements/day 10 Gallons Proposed well use: Domestic Anticipated Water Requirements/day 10 Gallons Proposed well use: Domestic Anticipated Water Requirements/day 10 Gallons Proposed well use: Domestic Anticipated Water Requirements/day 10 Gallons Proposed well use: Domestic Anticipated Water Requirements/day 10 Gallons Proposed well use: Domestic Anticipated Water Requirements/day 10 Gallons Proposed well use: Domestic Anticipated Water Requirements/day 10 Gallons Proposed well use: Dome | | | 3011 | į |
| Gas Present: No Oil Pre | | | | | | 10 | |
| 4. Formation Log | 5. Well Completion | Report ler. The province disclaims learning left to a content of the part | Gallons | /Min | | | |
| Deplh | | | | Depth of | f | 75 FT | |
| from | | Postal Code: Postal Code: | | | | | |
| · · · · · · · · · · · · · · · · · · · | | | | | evel at | 50 FT | İ |
| level (feet) | | | | | | | |
| | | | | | | Inches | |
| | 184 U TILI-I 0 400 | NA/-II T | histores O Inches | | | 11101100 | - |
| 110 Sandy Till & Rocks | Inches | | | level: | • | | |
| 120 Green Shale | Bottom at: 118 FT | | FT Boltom: 153 | Der | | | et) |
| 125 Gray Shale | | | | | Elapsed | Time | j |
| | | | | | | | covery |
| | | | | | | | n 2 hr |
| 153 Hard Sandstone | | | | | | | 1112111 |
| | | | | udianon | 1, 1003011 1111 | ,. | - 1 |
| | | | | 1 | | | |
| | from: 0 FT | to: 118 | 3 FT | | | | |
| | 1 | | - | | | iping rate | :: 10 |
| | | to: U F | 1 | Gallons/ | /Min | n intoleo | 100 |
| | | to: 0 F | т | | nenaea puii | р шаке. | . 100 |
| | | | | | ımn İnstaller | | |
| | | Slot Si | ize: 0 Inches | | | • | |
| | | | | 1 | I' | | |
| | | Slot S | ize: 0 Inches | H.P.: | | | |
| | | | | Any furt | her pumptes | it informa | auon? |
| | | Polton | 0. | | | | |
| | | BULLOI | | 1 | | | |
| | | Amou | nt: | | | | |
| | | | | 1 | | | |
| | Retained on Files: | | | 4 | | | |
| | | | | 1 | | | |
| 1 | | | | 1 | | | |
| | | Docur | nents meiu. I | 1 | | | |
| | | | | | | | |
| | | Diame | eter: Inches | 1 | | | |
| | Comments: | | | 1 | | | |
| | | | | | | | |
| | | | | 1 | | | |
| | | | | } | | | |
| | | | | 1 | | | |
| | | | | J | • | | |
| | 7. Contractor Certific | ation | | 1 | | | |
| | Driller's Name: | UNKN | IOWN DRILLER | 1 | | | |
| 1 | Certification No.: | 628 | | 1 | | | |
| 1 | This well was constructed in | accord | dance with the Water | 1 | | | |
| | Well regulation of the Albert | a Envir | onmental Protection & | Į. | | | |
| | Enhancement Act. All inform | nation i | n this report is true. Yr Mo Da | J. | | | |
| 1 | Signature | | TI WO Da | ــــــــــــــــــــــــــــــــــــــ | | | |

| The data contained in this | Well Drilling F report is supplied by the Drille responsibility for its accuracy. | er. The province disclaims | Well I.D.: 0075223 Map Verified: Not Verified Date Report 1989/08/03 Received: Imperial |
|---------------------------------------|---|---|---|
| Environment | | | 2. Well Location |
| I. Contractor & Well Owner Informati | OII Dr | illing Company Approval No.: | 1/4 or Sec Twp Rge Westo |
| Company Name: WARNKE DRILLING LTD. | 11 | 9799 | LSD M |
| Mailing Address: City or Tow | | stal Code: | NW 13 046 28 4 |
| RR 3 WETASKIN | VIN AB CA T9 | A 1X1 | Location in Quarter 0 FT from Boundar |
| WellOwner's Name: Well Locali | on Identifier: | j | 0 FT from Boundar |
| PETERS, H. | (Do | ostal Code: | Lot Block Plan |
| P.O. Box Number: Mailing Ad | ow DR., WETASKIWIN | istal Code. | |
| - 1 | Cr | ountry: | Well Elev: How Oblain: |
| City: Province: | | | FT Not Obtain |
| 3. Drilling Information | | | 6. Well Yield |
| Type of Work: New Well | | Proposed well use: | Test Date Start Time: |
| Reclaimed Well | | | (yyyy/mm/dd): 1989/06/22 11:00 AM |
| oate Reclaimed(yyyy/mm/dd): Mate | rials Used: | Anticipated Water Requirements/day | Test Method: Pump |
| Aethod of Drilling: Drilled | | 0 Gallons | Non pumping 35 FT |
| LOTTING TON TO | Gallons | o Gallons | static level: |
| 283 (1636)16. 110 | resent: No | • | Rate of water 10 |
| I. Formation Log | 5. Well Completion | Data Completed | removal: Gallons/Min |
| Depth | Date Started(yyyy/mm/dd): | Date Completed (yyyy/mm/dd): | Depth of 70 FT |
| rom | 1989/06/22 | (yyyy/mm/dd). 1989/06/22 | pump intake: Water level at 35 FT |
| ground Lithology Description | Well Depth: 150 FT | Borehole Diameter: 0 Inches | 111010110101 |
| evel | Casing Type: Steel | Liner Type: | end of pumping: |
| feet) 18 Brown Clay | Size OD: 4.5 Inches | Size OD: 0 Inches | Distance from top of Inches |
| 35 Blue Clay & Rocks | Wall Thickness: 0.156 | Wall Thickness: 0 Inches | casing to ground |
| 120 Green Shale | Inches | Wall Thickness, o littles | level: |
| 130 Gray Shale | Bottom at: 103 FT | Top: 0 FT Boltom: 0 FT | Depth To water level (feet) |
| 140 Sandstone | Perforations | Perforations Size: | Elapsed Time |
| 150 Gray Shale | —from: 0 FT to: 0 FT | 0 Inches x 0 Inches | Drawdown Minutes:Sec Recover |
| | from: 0 FT to: 0 FT | 0 Inches x 0 Inches | If water removal was less than 2 h |
| | from: 0 FT to: 0 FT | 0 Inches x 0 Inches | duration, reason why: |
| | Perforated by: | | |
| | Seal: Driven | to: 103 FT | 1 |
| | from: 100 FT | (O: 103 F) | |
| | Seal: from: 0 FT | to: 0 FT | Recommended pumping rate: 8 Gallons/Min |
| | Seal: | | Recommended pump intake: 90 F |
| | from: 0 FT | to: 0 FT | Type Pump Installed |
| | Screen Type: | Screen ID: 0 Inches | Pump Type: SUB |
| | from: 0 FT to: 0 FT | Stot Size: 0 Inches Screen ID: 0 Inches | - Pump Model: |
| | Screen Type: from: 0 FT | Slot Size: 0 Inches | H.P.: .5 |
| | Screen Installation Method | | Any further pumptest information |
| | Fittings | | 1 |
| | Top: | Bottom: | _ |
| | Pack: | | 1 |
| | Grain Size: | Amount: | - |
| | Geophysical Log Taken; | | |
| | Retained on Files: Additional Test and/or Pur | nn Data | -1 |
| | Chemistries taken By Drill | er: No | |
| | Held: 0 | Documents Held: 1 | _] |
| | Pilless Adapler Type: | | |
| | Drop Pipe Type: | Dr d Imphae | |
| | Length: 80 FT | Diameter: 1 Inches | |
| | Comments: | | |
| | 1 | | |
| | | | |
| | 1 | | |
| | | | 1 |
| | | i Class | - |
| | 7. Contractor Certif | Ication | - |
| | Driller's Name: | UNKNOWN DRILLER 3503 | |
| | Certification No.: | in accordance with the Water | l |
| | Well regulation of the Albe | erta Environmental Protection & | ፄ [|
| | Enhancement Act. All info | rmation in this report is true. | |
| | Signature | Yr Mo Da | avl |

| A Water | r Well Drilling | Report | Well I.D.: 0288822 Map Verified: Not Verified |
|---|--|--|--|
| The data contained in th | is report is supplied by the E | Oriller. The province disclaims | Date Report 1998/03/30 Received: |
| Environment | responsibility for its accura | acy. | Measurements: <u>Imperial</u> |
| 1. Contractor & Well Owner Informa | tion | 0.10 | 2. Well Location 1/4 or Sec Twp Rge Westo |
| Company Name: BAR-K WATER WELL DRILLING LTD. | | Drilling Company Approval No.: | 1/4 or Sec Twp Rge Westo LSD M |
| Mailing Address: City or To | wn: | Postal Code: | NW 13 046 28 4 Location in Quarter |
| COWARD, GARY | tion Identifier: | | 0 FT from Boundar 0 FT from Boundar |
| | ddress: //E-O BEACH, PIGEON | Postal Code: | Lot Block Plan 814 Well Elev: How Obtain: |
| LAKE City: Province: | | Country: | FT Not Obtain 6. Well Yield |
| 3. Drilling Information | | | Test Date Start Time: |
| Type of Work: New Well | | Proposed well use: | (yyyy/mm/dd): 1998/02/27 1:20 PM |
| Reclaimed Well | erials Used: | Domestic Anticipated Water | 1998/02/27 1:20 PM Test Method: Air |
| Date Reclaimed(yyyy/mm/dd): Mat Method of Drilling: Rotary | ellais Oseu. | Requirements/day | Non pumping 21.5 FT |
| Flowing Well: No Rate | e: Gallons | 250 Gallons | static level: Rate of water 8.5 |
| 04011000111110 | Present: No | t . | removal: Gallons/Min |
| 4. Formation Log Depth | 5. Well Completion | Date Completed | Depth of 50 FT |
| from | Date Started(yyyy/mm/d | (yyyy/mm/dd): | pump intake: Water level at 26 FT |
| ground Lithology Description | 1998/02/24 Well Depth: 130 FT | 1998/02/27 Borehole Diameter: 0 Inche | end of |
| level (feet) | Casing Type: Plastic | Liner Type: Plastic | pumping: Distance from top of Inches |
| 24 Sand | Size OD: 6 Inches | Size OD: 4.5 Inches | casing to ground |
| 84 Sandy Clay & Rocks | Wall Thickness: 0.432 | Wall Thickness: 0.237 | level: |
| 92 Shale 101 Soft Sand & Sandstone | Inches | Top: 100 FT Bollom: | Depth To water level (feet) Elapsed Time |
| 103 Gray Hard Sandstone | Boltom at: 103 FT | 130 FT | ■ Drawdown Minutes:Sec Recovery |
| 116 Sandstone | Perforations | Perforations Size: 0.02 Inches x 3 Inches | 1:00 23.42 |
| 117 Hard Sandslone | from: 120 FT to: 130 FT from: 0 FT to: 0 FT | 0.02 inches x 3 inches 0 Inches x 0 Inches | 2:00 21.67 26.75 120:00 |
| 130 Sandslone | from: 0 FT to: 0 FT | 0 Inches x 0 Inches | Total Drawdown: 5 FT |
| | Perforated by: Machine | | if water removal was less than 2 hr |
| | Seal: Cement/Grout from: 55 FT | to: 103 FT | duration, reason why: |
| | Seal: | | |
| | (rom: 0 FT Seal: | to: 0 FT | |
| | from: 0 FT | to: 0 FT | Recommended pumping rate: 8 Gallons/Min |
| | Screen Type: | Screen ID: 0 Inches | Recommended pump intake: 40 F |
| | from: 0 FT to: 0 FT Screen Type: | Slot Size: 0 Inches Screen ID: 0 Inches | Type Pump Installed |
| | from: 0 FT to: 0 FT | Slot Size: 0 Inches | Pump Type: —Pump Model: |
| | Screen Installation Meth | hod: | _H,Р.: |
| | Fittings Top: | Bottom: | Any further pumplest information? |
| | Pack: | | -1 |
| | Grain Size: | Amount: | |
| | Geophysical Log Taken Retained on Files: | i. | |
| | Additional Test and/or F | Pump Dala | 7 |
| | Chemistries taken By D Held: 0 | riller: No Documents Held: 1 | |
| | Pitless Adapter Type: | Doodilletto (10)d. 1 | 1 |
| | Drop Pipe Type: | Discontant Inches | |
| | Length: FT Comments: | Diameter: Inches | - |
| | DRILLER REPORTS D | ISTANCE FROM TOP OF LEVEL: 15". | |
| | | | |
| | 7. Contractor Cer | tification | |
| | Driller's Name: | UNKNOWN DRILLER | |
| | Certification No.: | VA2732 ted in accordance with the Water | |
| | Well regulation of the A | led in accordance with the Water Alberta Environmental Protection of Information in this report is true. | \$ |
| | Signature | Yr Mo Da | ау |

| The data contain | ned in this re | Vell Drilling | riller. The p |)rt rovince disclaims | Well I.D.; Map Verified: Date Report Received: | 0075213 Not Verified |
|--|---------------------|---|-----------------------|---------------------------------|---|-------------------------|
| Alberta Environment | res | ponsibility for its accura | icy. | <u> </u> | Measurements: | <u>Imperial</u> |
| 1. Contractor & Well Owner In | ıformatior | 1 | | | 2. Well Location | 1 |
| Company Name: ELK POINT DRILLING CORP. | | | Drilling Cor 99238 | mpany Approval No.: | 1/4 or Sec Twp LSD | Rge Westof M |
| Mailing Address: C | City or Town: | | Postal Cod | e; | SE 13 046 | 28 4 |
| 11 F3106 DANCE DOAD 364 S | SPRUCE GR CANADA | OVE ALBERTA | T7X 3G5 | | Location in Quarter 0 FT from | Boundary |
| | Vell Location | ldentifier: | | | 0 FT from | Boundary |
| GREEN, STANLEY | Mailing Addre | | Postal Cod | e, | Lot Block | Plan |
| | IOBBEMA | 55. | | · | | ow Obtain: |
| City: F | Province: | | Country: | | 2800 FT Es | timated |
| 3. Drilling Information | | | | | Test Date | Start Time: |
| Type of Work: New Well | | | | Proposed well use: | (yyyy/mm/dd): 1977/10/19 | 11:00 AM |
| Reclaimed Well | Material | e Head: | | Domestic Anticipated Water | Test Method: Pump | (1.00 AW |
| Date Reclaimed(yyyy/mm/dd): Method of Drilling: Drilled | Marcher | 3 03cu. | | Requirements/day | Non pumping | 44 FT |
| Flowing Well: No | Rate: G | allons | | 0 Gallons | static level: Rate of water | 7 |
| Gas Present: No | Oil Pres | ent: No 5. Well Completion | | • | removal: | Gallons/Min |
| 4. Formation Log Depth | | | ی. Date C | ompleted | Depth of pump intake: | 70 FT |
| from | 1 | Date Started(yyyy/mm/d | а): (уууу/п | nm/dd): | Water level at | 44 FT |
| ground Lithology Descrip | | 1977/10/19 Well Depth: 190 FT | 1977/1 | 0/19 le Diameter: 0 Inches | end of | |
| level (feet) | | Casing Type: Steel | Liner T | ype: | pumping: Distance from top of | Inches |
| 1 Topsoil | | Size OD: 5.56 Inches | | D: 0 Inches | casing to ground | |
| 21 Oxidized Till 52 Gray Till | | Wall Thickness: 0 Inches | s Wall I | nickness: 0 Inches | level: Depth To water | lovel (feel) |
| 88 Green Shale | | 3ottom at: 103 FT | Top: 0 | FT Bottom: 0 FT | Elapsed | Time |
| 98 Hard Sandstone | | Perforations | Perfora | ations Size: | Drawdown Minutes | |
| 140 Fractured Shale 160 Clayey Sandstone | | from: 0 FT to: 0 FT | | es x 0 Inches | Total Drawdown: 16 If water removal was | |
| 180 Sandstone | | from: 0 FT to: 0 FT from: 0 FT to: 0 FT | | es x 0 Inches es x 0 Inches | duration, reason wh | |
| 190 Green Shale | | Perforated by: | | | | |
| | | Seal: | to: 0 F | т | | |
| | | from: 0 FT Seal: | 10.01 | • | Recommended pun Gallons/Min | nping rale: 6 |
| | | from: 0 FT | to: 0 F | T | Recommended pun | p intake: 70 FT |
| | | Seal: ſrom: 0 FT | to: 0 F | | Type Pump Installe | d |
| | | Screen Type: | | D: 0 Inches | Pump Type: SUB Pump Model: JACU | IZZI |
| | | from: 0 FT to: 0 FT Screen Type: | | ze: 0 Inches n ID: 0 Inches | H.P.: .5 | |
| | | from: 0 FT to: 0 FT | Slot Si | ze: 0 Inches | Any further pumpte: | st information? |
| | | Screen Installation Meth | nod: | | - | |
| | | Fittings Top: | Botton | n: , | | |
| | | Pack: | | | | |
| | | Grain Size: Geophysical Log Taken | Amou | 11: | -{ | |
| | | Retained on Files: | | | _ | |
| | | Additional Test and/or F | Pump Data | | 1 | |
| | | Chemistries taken By D Held: 0 | Docur | nents Held: 1 | | |
| | | Pitless Adapter Type: | | | | |
| | | Drop Pipe Type: Length: 70 FT | Diame | ler: 1 Inches | | |
| | | Comments: | | | | |
| | | | | | | |
| | | | | | 1 | |
| | | | | | | |
| | | | | | _ | |
| · · | | 7. Contractor Cer | tification | 0.000.000.000 | 4 | |
| | | Driller's Name: Certification No.: | UNKN | OWN DRILLER | | |
| | | This well was construct | ed in accord | fance with the Water | | |
| 1 | | Well regulation of the A Enhancement Act. All ir | lberta Envir | onmental Protection 8 | ' | |
| | | Signature | nomation i | Yr Mo Da | | d1 |

| ort | Mall Drilling D | one | ort | Well I.D.: Map Verified: | 0153264 Not Verified |
|------------------------------|--|--|--|--|---|
| water | Mell numing 2 | 'ehr | JI L | Date Report | 1990/11/07 |
| The data contained in this r | eport is supplied by the Drille | r. The p | rovince discialitis | Received: | |
| re | esponsibility for its accuracy. | | | | <u>Imperial</u> |
| Mall Owner Informatic | <u></u> | | | 2. Well Location | 1 |
| Well Owner intormatic | Dril | ling Co | npany Approval No.: | | Rge West M |
| ו דרס | | | | | 28 4 |
| City or Town | 1. | | le: | | |
| | 111710 07. | 1 1X 1 | | 0 FT from | Bounda |
| Well Location | n Identifier: | | | 0 FT from | Bounda |
| Mailing Add | ross: Pos | stal Coo | e: | Lot Block | Plan |
| 1219-HINT | 1000. | | | | Obtain |
| | ARY | | | 1,,00, 0,00 | ot Obtain |
| Province: | Co | unlry: | | Map Verified: Date Report Received: Measurements: 2. Well Location D.: 1/4 or Sec Twp LSD SE 13 046 Location in Quarter 0 FT from 0 FT from Lot Block Well Elev: How FT Not 6. Well Yield Test Date (yyyy/mm/dd): 1990/09/17 Test Method: Pump Non pumping static level: Rate of water removal: Depth of pump intake: Water level at end of pumping: Distance from top of casing to ground level: Depth To water Elapsed T Drawdown Minutes: Total Drawdown: 0 F If water removal was duration, reason why Recommended pum Gallons/Min Recommended pum Type Pump installed Pump Type: Pump Model: H P: | ot Obtain |
| | | | | | Start Time: |
| nation | | | In | (www.lmm/dd). | Start Time. |
| Vell | | | | 1990/09/17 | 11:00 AM |
| | () 11 = - J. | | | | |
| 111111111111111111 | als Used: | | Requirements/day | | 20 FT |
| otary | Gallons | | 0 Gallons | | 40 |
| • | | | 1 | | 10 Gallons/Міг |
| | | | | Map Verified: No Date Report 19 Received: Measurements: Im 2. Well Location D.: 1/4 or Sec Twp ELSD SE 13 046 Location in Quarter 0 FT from 0 FT from 0 FT from 0 FT from Lot Block Well Elev: How 0 FT Not C 6. Well Yield Test Date (yyyy/mm/dd): 1990/09/17 17 Test Method: Pump Non pumping 26 static level: Rate of water 16 removal: GDepth of 76 pump intake: Water level at 2 end of pumping: Distance from top of Ir casing to ground level: Depth To water level at 2 end of pumping: Distance from top of Ir casing to ground level: Depth To water level: STotal Drawdown: 0 FT if water removal was leduration, reason why: Recommended pumping Gallons/Min Recommended pumping Pype Pump Installed Pump Type: Pump Model: H.P.: Any further pumplest if the case of the case | 70 FT |
| ıy | | Date 0 | Completed | | , , , , |
| | | (yyyy/ | mm/dd): | | 20 FT |
| ology Description | 1990/09/17 | | | . 1 | |
| | Well Depth: 120 FT | Boreh | ole Diameter: U inches | | f 11 |
| | | Liner | Type: | Distance from top o | Inches |
| | | Size (| Dr. 0 Inches | | |
| | Wall Thickness: 0.156 | | | Denth To water | r level (feet) |
| | | i i | | Flansed | Time |
| le & Sandstone | Bottom at: 102 FT | Top: (| | Drawdown Minute: | s:Sec Recove |
| le & Gandatorio | Perforations | Perfo | rations Size: | Total Drawdown: 0 | FT |
| | from: 0 FT to: 0 FT | 0 Inch | nes X U Inches | If water removal wa | s jess than Z |
| | from: 0 FT to: 0 F1 | | | duration, reason wi | ıy. |
| | | Uniter | ICS X O MIGHIGO | | |
| | Soal: Driven | | | | |
| • | from: 0 FT | to: 10 | 2 FT | | nping rate: 10 |
| | Seal: | | | Gallons/Min | |
| | from: 0 FT | to: 0 | FT | Recommended pur | np intake: U r |
| | | to: 0 | ⊑ 7" | | 90 |
| | Francis Type: | | | Pump Nodel: | |
| | from: 0.FT to: 0.FT | | | lH P. | |
| | | | | Any further pumple | est information |
| | from: 0 FT to: 0 FT | | Size: 0 Inches | _ ` | |
| | Screen Installation Method | <u>: </u> | | | |
| | Filtings | Della | nta. | | |
| | | סטווט | 711. | | |
| | | Amo | unt: 0 | _ | |
| | Geophysical Log Taken: | | | 1 | |
| | Retained on Files: | | | 4 | |
| | Additional Test and/or Pur | np Dala | 1 | 1 | |
| | Chemistries taken By Drill | er: No | | 1 | |
| | Held: 0 | DOC | imento neiu, i | _ | |
| | | | | | |
| | Length: FT | Dian | neter: Inches | _ | |
| | Comments: | | | | |
| | | | | Į. | |
| | | | | 1 | |
| | | | | 1 | |
| | | | | 1 | |
| | | | | | |
| | | | | | |
| | 7. Contractor Certif | icatio | n | _ | |
| | 7. Contractor Certif | UNI | (NOWN DRILLER | _ | |
| | Driller's Name: | UNI 350 | (NOWN DRILLER 3 | | |
| | Driller's Name: Certification No.: | UNI 350 Lin acco | (NOWN DRILLER 3 ordance with the Water | r & | |
| | Driller's Name: | UNI 350 I in acco erta Env | (NOWN DRILL⊨R 3 ordance with the Water vironmental Protection | r & | |
| | The data contained in this recovered by the data contained in this recovered by the data contained in this recovered by the data contained by the data con | The data contained in this report is supplied by the Drille responsibility for its accuracy. Well Owner Information LTD. Dril 115 City or Town: Pos WETASKIWIN AB CA T9/ Well Location Identifier: Mailing Address: Pos 1219-HUNTERQUAY HILL NW.,CALGARY Province: Co mation Vell //mm/dd): Materials Used: otary Rate: Gallons Oil Present: Oil Present: Og 5. Well Completion Date Started(yyyy/mm/dd): 1990/09/17 Well Depth: 120 FT Casing Type: Galvanized Steel Size OD: 4.5 Inches ale Inches ale Inches ale Bottom at: 102 FT Perforated by: Seal: Driven from: 0 FT to: 0 FT from: 0 FT to: 0 FT From: 0 FT to: 0 FT From: 0 FT to: 0 FT Screen Type: from: 0 FT Screen Type: from: 0 FT Screen Type: from: 0 FT Screen Type: from: 0 FT Screen Type: from: 0 FT Screen Installation Method Fittings Top: Pack: Grain Size: Geophysical Log Taken: Retained on Files: Additional Test and/or Pur Chemistries taken By Drill Held: 0 Pitless Adapter Type: Oro Pipe Type: Oro Pipe Type: Type: Oro Pipe Type | The data contained in this report is supplied by the Driller. The presponsibility for its accuracy. Well Owner Information LTD. Drilling Conting Con | Drilling Company Approval No.: 119799 | The data contained in this resport is supplied by the Driller. The province discretions responsibility for its accuracy. Well Owner Information LTD. Drilling Company Approval No.: 1/4 or \$5c Tvp 119799 City or Town: Postal Code: 1.5D SE 13 .048 WETASKIWIN AB CA T9A 1X1 Well Location Identifier: 0 FT from 0 FT from 0 FT from 1 Proposed well use: 0 FT from 0 FT from 1 Proposed well use: 0 FT from 1 Proposed well use: 0 FT from 1 Proposed well use: 0 FT from 1 Proposed well use: 0 FT from 1 Proposed well use: 0 Proposed well u |

| Water | Well Drilling | Report | N | Date Report 1007 | 758 Verified 7/05/05 |
|---|---|--|------------|--|----------------------------|
| The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy. | | | | Received: 1997/03/03 Measurements: Imperial | |
| Contractor & Well Owner Information | on | | 2 | . Well Location | |
| Company Name: | Drilling Company Appro | | ., | e Westof | |
| WARNKE DRILLING LTD. | | 119799 | | LSD SE 13 046 28 | M 3 4 |
| Mailing Address: City or Town: | | Postal Code: T9A 1X1 | | ocation in Quarter | , <u> </u> |
| | 19A 1A1 | | 0 FT from | Boundary | |
| WellOwner's Name: Well Location Identifier: MONTGOMERY, IRENE | | | | 0 FT from | Boundary |
| P.O. Box Number: Mailing Address: | | Postal Code: | | | an 114CL |
| 5420 50 A | VE, WETASKIWIN | ETASKIWIN T9A 0T2 Country: | | Vell Elev: How Ob | |
| City: Province: | | Country. | | FT Not Obtain | |
| 3. Drilling Information | | | | 6. Well Yield | t Time: |
| Type of Work: New Well | | Proposed we Domestic | | rest Date Star yyyy/mm/dd): | i i ii iie. |
| Reclaimed Well | | Anticipated \ | Nater 1 | 1996/09/24 11:0 | 00 AM |
| Date Reclaimed(yyyy/mm/dd): Materials Used: | | Requiremen | ts/day T | Test Method: Pump | · · |
| Method of Drilling: Rotary Flowing Well: No Rate: Gallons 400 Gallons | | | | Non pumping 22.9 static level: | 3 F 1 |
| | resent: No | | | Rate of water 12 | |
| 4. Formation Log | 5. Well Completion | <u>n</u> | | emoval: Gall | ons/Min |
| Depth | Date Started(yyyy/mm/c | id): Date Completed (yyyy/mm/dd): | Ē | Depth of 70 F | - T |
| from | 1996/09/20 | 1996/09/23 | <u> </u> | oump intake: Nater level at 31 F | - T |
| ground Lithology Description | Well Depth: 135 FT | Borehole Diameter: | O inches i | Water level at 31 F and of | • |
| (feet) | Casing Type: Plastic | Liner Type: Plastic | | oumping: | |
| 25 Sand | Size OD: 6 Inches | Size OD: 4 Inches | | Distance from top of Inch | nes |
| 94 Blue Clay | | hes Wall Thickness: 0.2 | 1~ | casing to ground | |
| 105 Gray Shale 115 Green Shale | | | ollom: | evel: Depth To water level | (feel) |
| 115 Green Shale 135 Sandy Shale & Sandstone | Bollom at: 105 FT | ¹ 135 FT | | Elapsed Time | |
| 100 Odinay Share at Santasters | Perforations | Perforations Size: | | Drawdown Minutes:Sec | Recovery |
| | from: 115 FT to: 135 FT | 0.02 Inches x 0.01 0 Inches x 0 Inches | | 22.966 0:00 29.527 1:00 | 31.496 22.966 |
| | from: 0 FT to: 0 FT from: 0 FT to: 0 FT | 0 Inches x 0 Inches | | 30.511 2:00 | 22.500 |
| | Perforated by: Machine | | | 31.496 4:00 | |
| | Seal: Bentonite Chips/Tablets | | į | 31.496 5:00 | |
| | from: 20 FT | to: 105 FT | 1 | 31,496 10:00 | <u></u> |
| | Seal: from: 0 FT | to: 0 FT | Ļ | 31.496 20:00 31.496 30:00 | |
| | Seal: | | ł | 31.496 40:00 | |
| | from: 0 FT | to: 0 FT | | 31.496 60:00 | |
| | Screen Type: from: 0 FT to: 0 FT | Screen ID: 0 Inche Slot Size: 0 Inches | s [| 120:00 | 22.966 |
| | Screen Type: | Screen ID: 0 Inche | _ [| Total Drawdown: 0 FT | |
| | from: 0 FT to: 0 FT | Slot Size: 0 Inches | | If water removal was less | s than 2 hr |
| | Screen Installation Met | hod: | | duration, reason why: | |
| | Fitlings | Boltom: | | | |
| | Top: Pack: | Bollom: | | | 1:: 40 |
| | Grain Size: | Amount: | | Recommended pumping Gallons/Min | rate: 12 |
| | Geophysical Log Taker | n: | | Recommended pump int | ake: 70 F7 |
| | Retained on Files: | Duma Data | | Type Pump Installed | · |
| | Chemistries taken By F | Additional Test and/or Pump Data Chemistries taken By Driller: No | | Pump Type: | |
| | Held: 0 | Documents Held: | 1 | Pump Model: H.P.: | |
| | Pilless Adapler Type: | | | Any further pumptest information? | |
| | Drop Pipe Type: | | | hand received the college of the college | |
| | Length: FT Comments: | Diameter, inches | | | |
| | DRILLER REPORTS DISTANCE FROM TOP OF CASING TO GROUND LEVEL: 18". | |)F | | |
| | 5,15,10 ,0 5,10 5,10 | | | | |
| | 7. Contractor Certification | | | | |
| | Driller's Name: UNKNOWN DRILLER | | LER | 1 | |
| 1 | Certification No : 3503 | | | | |
| | This well was constructed in accordance with the Water | | ne Water | | |
| | Well regulation of the Alberta Environmental Protection 8 Enhancement Act. All information in this report is true. | | is true. | | |
| | Signature | Yr_ | Mo Day | , | |
| | 13 | | n- | port 1 Pump Test 1 | I nage1 |

| A Wate | r Well Drillir | na Repo | ort | Well I.D.: Map Verified: | 0286760 Not Verified |
|--|---|-----------------------------|---|---------------------------------------|----------------------------|
| The data contained in the | nis report is supplied by the | ne Driller. The p | province disclaims | Date Report Received: | 1997/05/05 |
| Alberta Environment | responsibility for its acc | curacy. | | Measurements: | <u>Imperial</u> |
| . Contractor & Well Owner Information | ation | | | 2. Well Location | on |
| ompany Name: | | | mpany Approval No.: | 1/4 or Sec Tw | p Rge Westo M |
| ARNKE DRILLING LTD. | | 119799 Postal Co | do: | LSD SE 13 04 | |
| ailing Address: City or T R 3 WETAS | own: KIWIN AB CA | T9A 1X1 | ue. | Location in Quarte | |
| /ellOwner's Name: Well Loc | ation Identifier: | | | 0 FT from 0 FT from | Boundar Boundar |
| O Box Number: Mailing | Address: | Postal Co | de: | Lot Block | Plan |
| .O. Box Number: Mailing a 5013 51 | ST, WETASKIWIN | | | S5,N6 4 Well Elev: | 2414CL How Obtain: |
| ity: Province | : | Country: | | Trion Lion | Not Obtain. |
| The state of the s | | | | 6. Well Yield | |
| . Drilling Information ype of Work: New Well | | | Proposed well use: | Test Date | Start Time: |
| eclaimed Well | | | Domestic | (yyyy/mm/dd): 1996/09/25 | 11:00 AM |
| ate Accidifica())))) | terials Used: | | Anticipated Water Requirements/day | Test Method: Pum | р |
| lethod of Drilling; Rotary lowing Well: No Ra | te: Gallons | | 400 Gallons | Non pumping | 28.5 FT |
| | Present: No | | 1 | static level: Rate of water | 12 |
| . Formation Log | 5. Well Comple | tion | Completed | removal: | Gallons/Min |
| ep(h | Date Started(yyyy/m | ım/dd): Date (| Completed mm/dd): | Depth of pump intake: | 70 FT |
| round Lithology Description | 1996/09/24 | 1996/ | 09/25 | - Water level at | 32 FT |
| evel | Well Depth: 135 FT | | ole Diameter: 0 Inches Type: Plastic | end of | |
| feet) 5 Sand | Casing Type: Plastic | Size | OD: 4 Inches | pumping: Distancé from top | of Inches |
| 5 Sand 9 Blue Clay | Wall Thickness: 0.5 | Vall Wall | Thickness: 0.237 | casing to ground | 01 11101100 |
| 10 Gray Shale | vvail Thickness: 0.5 | JIIICHE | | level: | |
| 20 Green Shale | Bottom at: 110 FT | 135 F | | Depth to war | ter level (feet) d Time |
| 35 Sandy Shale & Sandstone | Perforations | Perfo | rations Size: | Drawdown Minut | es:Sec Recover |
| | from: 110 FT to: 135 | | nches x 0.01 Inches nes x 0 Inches | | :00 32.546 :00 28.543 |
| | from: 0 FT to: 0 FT from: 0 FT to: 0 FT | | nes x 0 Inches | | :00 |
| | Perforated by: Mach | | | 9.92 3 | :00 |
| | Seal: Bentonile Chi | ps/Tablets In: 11 | n et | | 0:00 28.543 |
| | from: 20 FT Seal: | ιο. ι | O IT I | Total Drawdown: If water removal v | u Fi vas less than 2 h |
| | from: 0 FT | to: 0 | FT | duration, reason | |
| | Seal: from: 0 FT | to: 0 | FT | | |
| | Screen Type: | Scre | en ID: 0 Inches | | |
| | from: 0 FT to: 0 F | T Slot S | Size: 0 Inches en ID: 0 Inches | Recommended p | umping rate: 12 |
| | Screen Type: from: 0 FT to: 0 F | | Size: 0 Inches | Gallons/Min Recommended p | ump intake: 70 F |
| | Screen Installation | Method: | | Type Pump Insta | |
| | Fittings | Potte | | Pump Type: | |
| | Top: Pack: | Botto | ин. | Pump Model: H.P.: | |
| | Grain Size: | Amo | unt: | Any further pump | test information |
| | Geophysical Log T | aken: | | | |
| | Retained on Files: Additional Test and | l/or Pump Data | | 7 | |
| | Chemistries taken | Bv Driller: No | | | |
| | lHeld: 0 | Docu | ıments Held: 1 | - | |
| | Pitless Adapter Ty Drop Pipe Type: | | | | |
| | Length; FT | Dian | neter: Inches | _ | |
| | Comments: DRILLER REPOR CASING TO GRO | TS DISTANCE UND LEVEL: 1 | FROM TOP OF 8". | | |
| | | | | | |
| | 7. Contractor | Certificatio | n | | |
| | Driller's Name: | UNF | NOWN DRILLER | | |
| | Certification No.: | 350: accept of teaching | 3 ordance with the Water | | |
| | Molt regulation of | the Alberta Env | ronmental Protection | & | |
| | Enhancement Act | . All information | in this report is true. Yr Mo D | 1 | |
| | Signature | | I WO L | Report 1 Pump | Test 1 page |

| The data contained in this | Well Drilling report is supplied by the Dril responsibility for its accuracy | ler. The province disclaims | Well I.D.: Map Verified: Date Report Received: | 0075218 Not Verified 1979/01/11 |
|---|--|---|---|---------------------------------------|
| Environment | responsibility for its accuracy | · | Measurements: | <u>Imperial</u> |
| 1. Contractor & Well Owner Informati | on | | 2. Well Location | |
| Company Name: ELGIN EXPLORATION COMPANY LIMITED | D | rilling Company Approval No. | LSD Sec TW | M M |
| Mailing Address: City or Tow | vn: P | ostal Code: | SW 13 046 | |
| | | | Location in Quarter 0 FT from | Boundary |
| WellOwner's Name: Well Locati YELLOWBIRD, MARY | ion Identifier: | | 0 FT from | Boundary |
| P.O. Box Number: Mailing Ad | ai ooo. | ostal Code: | Lot Block | Plan |
| HOBBEMA City: Province: | | Country: | 110110010 | low Obtain: |
| City: Province: | | · · · · · · · · · · · · · · · · · · · | | stimated |
| 3. Drilling Information | | D | 6. Well Yield Test Date | Start Time: |
| Type of Work: New Well | | Proposed well use: Domestic | (yyyy/mm/dd): | |
| Reclaimed Well Date Reclaimed(yyyy/mm/dd): Mate | rials Used: | Anticipated Water | 1978/10/01 Test Method: Air | 11:00 AM |
| Method of Drilling: Drilled | A | Requirements/day 0 Gallons | Non pumping | 57 FT |
| | : Gallons resent: No | 000000 | static level: | |
| 4. Formation Log | 5. Well Completion | | Rate of water removal: | 47 Gallons/Min |
| Depth | Date Started(yyyy/mm/dd) | Date Completed | Depth of | 100 FT |
| from ground Lithology Description | 1978/10/01 | ; (yyyy/mm/dd); 1978/10/01 | pump intake: Water level at | 57 FT |
| ground Lithology Description level | Well Depth: 140 FT | Borehole Diameter: 0 Inche | end of | 57 F1 |
| (feel) | Casing Type: Steel | Liner Type: Steel Size OD: 4.5 Inches | pumping: | |
| 85 Sandy Clay & Rocks 140 Shale & Sandstone Ledges | Size OD: 5.56 Inches | Wall Thickness: 0.156 | Distance from top of casing to ground | of Inches |
| 140 Griale & Carlosterie Ecogos | Wall Thickness: 0 Inches | Inches | level: | |
| | Bottom at: 90 FT | Top: 12 FT Bottom: | Depth To wate | |
| | Perforations | Perforations Size: | Drawdown Minule | s:Sec Recovery |
| | from: 0 FT to: 0 FT | 0 Inches x 0 Inches 0 Inches x 0 Inches | Total Drawdown: 4 | |
| | from: 0 FT to: 0 FT from: 0 FT to: 0 FT | 0 Inches x 0 Inches | If water removal waduration, reason w | |
| | Perforated by: | | | • |
| | Seal: Drive Shoe from: 85 FT | to: 120 FT | | |
| | Seal: | | Recommended pu | mping rate: 0 |
| | from: 0 FT Seal: | to: 0 FT | Gallons/Min Recommended pu | mp intako: 77 E |
| | from: 0 FT | to: 0 FT | Type Pump Installe | ed |
| | Screen Type: | Screen ID: 0 Inches Slot Size: 0 Inches | Pump Type: SUB | |
| | from: 0 FT to: 0 FT Screen Type: | Screen ID: 0 Inches | Pump Model: H.P.: .5 | |
| | from: 0 FT to: 0 FT | Slot Size: 0 Inches | Any further pumpte | est information? |
| | Screen Installation Methor Fittings | d: | | |
| | Top: | Bollom: | | |
| | Pack: | Amount: | | |
| | Grain Size: Geophysical Log Taken: | Amount | | |
| | Retained on Files: | D-1- | 4 | |
| | Additional Test and/or Pu Chemistries laken By Drill | mp ⊔ata ler: No | | |
| | Held: 0 | Documents Held: 1 | | |
| | Pitless Adapter Type: Drop Pipe Type: | | | |
| | Length: 66 FT | Diameter: 1 Inches | _ | |
| | Comments: | | | |
| · | | | | |
| | | | | |
| | 7. Contractor Certif | | | |
| | Driller's Name: Certification No.: | UNKNOWN DRILLER 108 | | |
| | This well was constructed | in accordance with the Water | r_ | |
| | Well regulation of the Alb | erta Environmental Protection ormation in this report is true. | & | |
| | Signature | Yr Mo L |)ay | |

| The data contained in this | Well Drilling | Driller. The province o | Well I.D.: 0153265 Map Verified: Not Verifie Well I.D.: 0153265 Map Verified: Not Verifie Well I.D.: 11990/11/0 Received: 1990/11/0 |
|---|--|--------------------------------|---|
| Alberta Environment | responsibility for its accura | acy. | Measurements: Imperial |
| 1. Contractor & Well Owner Informat | ion | | 2. Well Location |
| Company Name: | | Drilling Company Ap | |
| SIMON'S DRILLING & PLUMBING INC. Mailing Address: City or Tox | wn: | Postal Code: | LSD SW 13 046 28 Location in Quarter |
| Treate trialities. | ion Identifier: | | 0 FT from Boun 0 FT from Boun |
| ROAN, HARRY P.O. Box Number: Mailing Administration MAMEO B | | Postal Code: | Lot Block Plan |
| City: Province: | | Country: | Well Elev: How Obtain: FT Not Obtain |
| 3. Drilling Information | | | 6. Well Yield |
| Type of Work: New Well | | | d well use: Test Date Start Time |
| Reclaimed Well | t t ttand. | Domesti | (yyyy/mm/dd): ed Waler 1990/09/14 11:00 AM |
| Date (toolanied()))) | rials Used: | | ments/day Test Method: Air |
| Method of Drilling: Rotary Flowing Well: No Rate | : Gallons | 0 Gallon | Non pumping 70 FT |
| | resent: | <u> </u> | static level: |
| 4. Formation Log | 5. Well Completio | n | Rate of water 10 removal; Gallons/M |
| Depth | Date Started(yyyy/mm/d | da). Date Completed | Depth of 0 FT |
| from | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | ¹⁰): (yyyy/mm/dd): | pump intake: |
| ground Lithology Description | 1990/09/12 | 1990/09/14 Borehole Diame | Water level at 0 FT |
| level | Well Depth: 160 FT Casing Type: Steel | Liner Type: Ste | enu oi |
| (feet) 30 Sand & Gravel | Size OD: 5.56 Inches | Size OD: 4.5 Inc | |
| 40 Clay & Rocks | Wall Thickness: 0.188 | Wall Thickness: | |
| 90 Sandstone | Inches | Inches | level: |
| 128 Shale | Bottom at: 100 FT | Top: 98 FT | Bottom: Depth To water level (feet) |
| 134 Sandstone | | l160 FT Perforations Siz | Elapsed Time Drawdown Minutes:Sec Reco |
| 140 Shale | Perforations from: 140 FT to: 160 FT | | |
| 160 Sandstone | from: 0 FT to: 0 FT | 0 Inches x 0 Inc | 1000 0100 |
| | from: 0 FT to: 0 FT | 0 Inches x 0 Inc | |
| | Perforated by: Machine | | |
| | Seal: Driven | to: 100 FT | |
| | from: 0 FT Seal: | 10. 100 1 1 | Recommended pumping rate: 1 |
| | from: 0 FT | to: 0 FT | Gallons/Min |
| | Seal: | | Recommended pump intake: 1 |
| | from: 0 FT | to: 0 FT Screen ID: 0 Inc | FT 2hos |
| | Screen Type: from: 0 FT to: 0 FT | Slot Size: 0 Incl | |
| | Screen Type: | Screen ID: 0 Inc | |
| | from: 0 FT to: 0 FT | Slot Size: 0 Incl | nesH.P.: |
| | Screen Installation Met | hod: | Any further pumptest information |
| | Fittings | Bollom: | |
| | Top: Pack: | LORIOIII. | |
| | Grain Size: | Amount: 0 | |
| | Geophysical Log Taker | າ: | |
| | Retained on Files: | Dump Data | |
| | Additional Test and/or I Chemistries taken By D | | |
| | Held: 0 | Documents Hel | d: 1 |
| | Pitless Adapter Type: | | |
| | Drop Pipe Type: | | |
| | Length: FT Comments: | Diameter: Inche | 75 |
| | Comments. | | |
| | | • | |
| | | | |
| 1 | | | 1 |
| | | | |
| | 7. Contractor Cer | tification | |
| | Driller's Name: | UNKNOWN DE | RILLER |
| | Certification No.: | VA2925 | ļ |
| | This well was construct | ted in accordance wit | n the Water Protection & |
| | Well regulation of the A Enhancement Act. All i | nformation in this ren | ort is true. |
| | Figure income true vice | | Yr Mo Day |

| ê | The data contained in this re | Well Drilling F aport is supplied by the Drille sponsibility for its accuracy. | er. The province disclaims | Well I.D.: 0132764 Map Verified: Not Verified Date Report Received: Measurements: Imperial |
|-----------------|--|---|--|--|
| I. Conti | ractor & Well Owner Informatio | n | No. A No. | 2. Well Location 1/4 or Sec Twp Rge Westof |
| Company | Name: | Dil | illing Company Approval No.: | LSD M |
| | TER WATER WELL DRILLING (1981) LT | Po | stal Code: | 02 17 046 27 4 |
| Mailing Ac | | | | Location in Quarter 0 FT from Boundary |
| VellOwne | er's Name: Well Location | ı Identifier: | | 0 FT from Boundary |
| EXACO | EXPL CAN LTD Mailing Addr | ess: Po | ostal Code: | Lot Block Plan |
| P.O. Box | BONNIE GLI | EN | | Well Elev: How Obtain: |
| City: | Province: | Co | ountry: | 2910 FT Estimated |
| | | <u>·</u> | | 6. Well Yield |
| Type of W | ng Information /ork: Dry Hole-Abandoned d Well laimed(yyyy/mm/dd): 1971/08/05 Maleria | ıls Used: Unknown | Proposed well use: Industrial Anticipated Water | Test Date Start Time: (yyyy/mm/dd): Test Method: |
| Method of | f Drilling: Cable Tool | | Requirements/day 0 Gallons | Non pumping FT |
| Flowing V | Vell: No Rate: C | Sallons sent: No | Gallons | static level: |
| Gas Pres | em. 140 | 5. Well Completion | | Rate of water Gallons/Min |
| | nation Log | | Date Completed | removal: Depth of FT |
| Depth from | | Date Started(yyyy/mm/dd): | (yyyy/mm/dd): 1971/08/05 | pump intake: |
| ground | Lithology Description | Well Depth: 620 FT | Borehole Diameter: 0 Inches | Water level at FT |
| level (feet) | | Casing Type: | Liner Type: | pumping: |
| 18 | Brown Clay | Size OD: 0 Inches | Size OD: 0 Inches | Distance from Inches |
| 28 | Gray Shale | Wall Thickness: 0 Inches | Wall Thickness: 0 Inches | lop of casing |
| 35 | Light Gray Shale | Bottom at: 0 FT | Top: 0 FT Bollom: 0 F | |
| 36 46 | Gray Sandslone Gray Shale | | Perforations Size: | Depth To water level (feet) |
| 50 | Dark Gray Shale | Perforations from: 0 FT to: 0 FT | 0 Inches x 0 Inches | Elapsed Time Drawdown Minutes:Sec Recovery |
| 73 | Dark Gray Water Bearing Sand & Shale | from: 0 FT to: 0 FT | 0 Inches x 0 Inches | Diawdown Mindles.cco (1000) of |
| 75 | Green Shale & Coal | from: 0 FT to: 0 FT | 0 Inches x 0 Inches | |
| 81 95 | Gray Shale Gray Sandstone | Perforated by: Seal: | | |
| 100 | Green Shale | from: 0 FT | to: 0 FT | Total Drawdown: FT If water removal was less than 2 hr |
| 116 | Gray Shale | Seal: | to: 0 FT | duration, reason why: |
| 120 125 | Dark Gray Shale Brownish Gray Shale | from: 0 FT Seal: | 10.011 | 1 |
| 170 | Gray Shale | from: 0 FT | to: 0 FT | |
| 180 | Bentonitic Sandstone | Screen Type: from: 0 FT to: 0 FT | Screen ID: 0 Inches Slot Size: 0 Inches | Recommended pumping rate: |
| 187 | Green Shale | Screen Type: | Screen ID: 0 Inches | Gallons/Min Recommended pump intake: FT |
| 189 195 | Hard Sandstone Gray Sandstone | from: 0 FT to: 0 FT | Slot Size: 0 Inches | Type pump installed |
| 210 | Gray Shale | Screen Installation Method | | Pump type: |
| 216 | Sandy Shale | Fittings Top: | Bottom: | Pump model: |
| 240 | Greenish Gray Shale Dark Gray Sandy Shale | Pack: | | Any further pumplest information? |
| 247 271 | Bentonitic Sandstone | Grain Size: | Amount: | - |
| 280 | Gray Shale | Geophysical Log Taken: Retained on Files: | | |
| 293 | Benlonitic Sandstone | -Additional Test and/or Pur | mp Dala | |
| 300 | Gray Shale Green Shale | Chemistries taken By Drill | er: No Documents Held: 2 | 1 |
| 342 346 | Bentonitic Sandstone | −Held: 0 −Pilless Adapter Type: | DOCUMENTO FIGUR 2 | 1 |
| 353 | Dark Gray Shale | Drop Pipe Type: | | |
| 364 | Green Shale Gray Sandstone & Shale Strg's | Length: | Diameter: | - |
| 370 385 | Bentonitic Sandstone | Comments: | | |
| 515 | Dark Gray Shale | | | |
| 525 | Coal | _ | | 1 |
| 540 | Shale & Coal | | | |
| 551 555 | Coal Gray Shale | | | |
| 568 | Gray Sandy Shale | 7. Contractor Certif | INVANOUN DOLLED | |
| 572 | Gray Sandstone | Most regulation of the Albert | UNKNOWN DRILLER I in accordance with the Water erta Environmental Protection ormation in this report is true. | . & |
| | | Signature | Yr Mo E | Papart 1 page1 page2 |

| The data contained in this r | Well Drilling R eport is supplied by the Drille sponsibility for its accuracy. | Report r. The province disclaims | Well I.D.: Map Verified: Date Report Received: Measurements: | 0233496 Map Imperial |
|---|---|---|--|----------------------------|
| Environment | | | 2. Well Location | المجببية تتسمطنا بتسرفتني |
| 1. Contractor & Well Owner Information | n Dell | ling Company Approval No.: | | |
| Company Name: | Dill | ing Company Approva | LSD | М |
| DOUBLE H DRLG Mailing Address: City or Town | : Pos | stal Code: | 09 17 046 Location in Quarter | 27 4 |
| Materia / toda oco. | | | 0 FT from | Boundary |
| WellOwner's Name: Well Locatio | n Identifier: | | 0 FT from | Boundary |
| VAN IMMERZEEL, PETER P.O. Box Number: Mailing Add | ess: Pos | stal Code: | Lot Block | Plan |
| P.O. Box Number. FALUN | | | Well Elev: Ho | ow Obtain: |
| City: Province: | Col | untry: | | stimated |
| | | | 6. Well Yield | |
| 3. Drilling Information | <u>, ",,, "</u> | Proposed well use: | Test Date | Slart Time: |
| Type of Work: New Well Reclaimed Well | | Stock | (yyyy/mm/dd): 1977/04/06 | 11:00 AM |
| Date Reclaimed(yyyy/mm/dd): Materi | als Used: | Anticipated Water Requirements/day | Test Method: Bailer | |
| Method of Drilling: Rotary | Sallana | 0 Gallons | Non pumping | 96 FT |
| | Gallons sent: No | | static level: Rate of water | 3 |
| Gas Present. No | 5. Well Completion | | Rate of water removal: | Gallons/Min |
| 4. Formation Log Depth | Date Started(yyyy/mm/dd): | Date Completed | Depth of | OFT |
| from | | (yyyy/mm/dd): 1977/04/06 | pump intake: | |
| ground Lithology Description | 1977/04/05 Well Depth: 177 FT | Borehole Diameter: 0 Inche | Water level at | FT |
| level | Casing Type: Galvanized | | end of pumping: | |
| (feet) 16 Clay | Steel | Liner Type: | Distance from top o | f Inches |
| 39 Sandy Clay | Size OD: 4.5 Inches | Size OD: 0 Inches Wall Thickness: 0 Inches | casing to ground | |
| 63 Sandy Gravel | Wall Thickness: 0 Inches | | level: T Depth To wate | r level (feet) |
| 92 Sandy Clay | Bollom at: 152 FT | | Elapsed | Time |
| 101 Shale 103 Sandy Shale | Perforations | Perforations Size: 0 Inches x 0 Inches | Drawdown Minute | s:Sec Recovery |
| 123 Shale | from: 0 FT to: 0 FT from: 0 FT to: 0 FT | 0 Inches x 0 Inches | Total Drawdown: 0 If water removal wa | r I s less than 2 hr |
| 128 Sandy Shale | from: 0 FT to: 0 FT | 0 Inches x 0 Inches | duration, reason wi | |
| 131 Sandstone | Perforated by: | | - | - |
| 148 Shale 151 Sandy Shale | Seal: Unknown from: 0 FT | to: 152 FT | · [| |
| 151 Sandy Shale 163 Shale | Seal: | | Recommended pur | mping rate: 0 |
| 167 Sandy Shale | from: 0 FT | to: 0 FT | Gallons/Min | |
| 174 Shale | Seal: from: 0 FT | to: 0 FT | Recommended pur | mp intake: 0 F1 |
| 177 Sandy Shale | Screen Type: | Screen ID: 0 Inches | Type Pump Installe Pump Type: | eo |
| | from: 0 FT to: 0 FT | Slot Size: 0 Inches | Pump Model: | |
| | Screen Type: | Screen ID: 0 Inches Slot Size: 0 Inches | H.P.: | . Linta and allow 2 |
| | from: 0 FT to: 0 FT Screen Installation Method | | Any further pumpte | est information: |
| | Fitlings | · | - [| |
| | Тор: | Botlom: | _ | |
| | Pack: | Amount: | | • |
| | Grain Size: Geophysical Log Taken: | Amount | | |
| | Retained on Files: | | | |
| | Additional Test and/or Pun | np Dala | | |
| 1 | Chemistries taken By Drille Held: 1 | Documents Held: 2 | j | |
| | Pitless Adapter Type: | | | |
| | Drop Pipe Type: | Diamateu Inghas | | |
| | Length: FT | Diameter: Inches | _ | |
| | Comments: CHEM ORIGINALLY IN N | E-17-45-27-4. | | |
| | | | | |
| | 7. Contractor Certif | ication | | |
| | Driller's Name: | UNKNOWN DRILLER | | |

Driller's Name: UNKNOWN DRILLER
Certification No.:
This well was constructed in accordance with the Water
Well regulation of the Alberta Environmental Protection &
Enhancement Act. All information in this report is true.

Signature

Yr Mo

| Mater \ | Well Drilling R | Report | Well I.D.: 0132767 Map Verified: Map |
|--|---|--|---|
| The data contained in this fi | eport is supplied by the Drille | r. The province disclaims | Date Report 1979/12/12 Received: |
| Alberta re Environment | sponsibility for its accuracy. | | Measurements: <u>Imperial</u> |
| I. Contractor & Well Owner Information | n | | 2. Well Location 1/4 or Sec Twp Rge Westol |
| Company Name: | Dril | lling Company Approval No.: | 1/4 or Sec Twp Rge Westol LSD M |
| RASER, RON Mailing Address: City or Town | Pos | stal Code: | NW 17 046 27 4 |
| | | | Location in Quarter 0 FT from Boundary |
| WellOwner's Name: Well Locatio | n Identifier: | · | 0 FT from Boundary |
| WOLLIN, D. P.O. Box Number: Mailing Addr | ess: Po | stal Code: | Lot Block Plan |
| FALUN | Co | untry: | Well Elev: How Obtain: |
| City: Province: | | | 2875 FT Estimated |
| 3. Drilling Information | | [5] and a second well work | 6. Well Yield Test Date Start Time: |
| Type of Work: New Well | | Proposed well use: Domestic | (yyyy/mm/dd): |
| Reclaimed Well Date Reclaimed(yyyy/mm/dd): Materia | als Used: | Anticipated Water | 1979/06/08 11:00 AM Test Method: Unknown |
| Method of Drilling: Rotary | | Requirements/day 0 Gallons | Non pumping 107 FT |
| | Gallons sent: No | | static level: |
| 4. Formation Log | 5. Well Completion | | Rate of water 10 removal: Gallons/Min |
| Depth | Date Started(yyyy/mm/dd): | Date Completed (yyyy/mm/dd): | Depth of 0 FT |
| from | 1979/06/08 | 1979/06/08 | pump intake: |
| ground Lithology Description level | Well Depth: 230 FT | Borehole Diameter: 0 Inches | end of |
| (feel) | Casing Type: Galvanized Steel | Liner Type: | pumping: Distance from top of Inches |
| 20 Sandy Clay 28 Sand | Size OD: 4.5 Inches | Size OD: 0 Inches | casing to ground |
| 114 Sandy Clay | Wall Thickness: 0 Inches | Wall Thickness: 0 Inches | level: |
| 140 Shale | Boltom at: 165 FT | Top: 0 FT Bottom: 0 F1 | Depth To water level (feet) Elapsed Time |
| 155 Sandstone 188 Shale | Perforations | Perforations Size: | Drawdown Minutes:Sec Recovery |
| 188 Shale 210 Sandy Shale | from: 0 FT to: 0 FT from: 0 FT to: 0 FT | 0 Inches x 0 Inches 0 Inches x 0 Inches | Total Drawdown: 0 FT |
| 212 Sandslone | from: 0 FT to: 0 FT | 0 Inches x 0 Inches | If water removal was less than 2 hr duration, reason why: |
| 230 Sandy Shale | Perforated by: | | - Cason why. |
| | Seal: Driven from: 0 FT | to: 165 FT | |
| | Seal: | (6. 100 1 1 | Recommended pumping rate: 0 |
| | from: 0 FT | to: 0 FT | Gallons/Min |
| | Seal: from: 0 FT | to: 0 FT | Recommended pump intake: 150 |
| | Screen Type: | Screen ID: 0 Inches | Type Pump Installed |
| | from: 0 FT to: 0 FT | Slot Size: 0 Inches Screen ID: 0 Inches | Pump Type: |
| | Screen Type: from: 0 FT to: 0 FT | Slot Size: 0 Inches | Pump Model: |
| | Screen Installation Method | | Any further pumptest information? |
| | Fittings | Botlom: | |
| | Top: Pack: | Bottoin. | - |
| | Grain Size: | Amount: | |
| | Geophysical Log Taken: Retained on Files: | | |
| | Additional Test and/or Pun | np Dala | |
| | Chemistries taken By Drille | er: No | |
| | Held: 0 Pilless Adapter Type: | Documents Held: 1 | - |
| | Drop Pipe Type: | • | |
| | Length: FT | Diameter: Inches | |
| | Comments: | • | 1 |
| | | | |
| | | | |
| | | | İ |
| | | | - |
| | 7. Contractor Certifi | ication UNKNOWN DRILLER | - |
| | Driller's Name: Certification No.: | | 1 |
| | This well was constructed | in accordance with the Water | , |
| | Well regulation of the Albertaneous Act. All info | erta Environmental Protection | α J |

| A | \/L\ | A/_II D!!!! | Dans | n rf | Well I.D.: | :d. | 02351 | |
|---|-----------------------|--|-----------------------------|---|------------------------|-------------------------|--------------------|--------------------|
| V | vater ' | Well Drilling | кер | JIL | Map Verif Date Rep | | Not Ve | |
| The data conta | ined in this r | eport is supplied by the D | riller. The p | province disclaims | Received: | | 1994/0 | 3/02 |
| Alberta Environment | re | esponsibility for its accura- | cy. | | Measurer | | Imperi | a <u>l</u> |
| 1. Contractor & Well Owner I | nformatic | ın | | | 2. Well | Location |) | |
| Company Name: | mormatic | ' B I | Drillina Co | mpany Approval No.: | | ec Twp | | Westof |
| FRASER, RON | | | | , , , | LSD | | | M |
| Mailing Address: | Cily or Town | : | Postal Cod | ie: | Location in | | 27 | 4 |
| WellOwner's Name: JANSEN, R. | Well Location | n Idenlifier: | | | | om | В | oundary oundary |
| P.O. Box Number: | Mailing Addr FALUN | | Postal Cod | de: | Lot | Block | Plan | |
| | Province: | | Country: | - | Well Elev: FT | No | w Obta t Obtair | |
| 3. Drilling Information | | | | | 6. Well | | | |
| Type of Work: New Well | | | | Proposed well use: | Test Date | | Slart T | ıme: |
| Reclaimed Well | | .t. the ende | | Domestic & Stock Anticipated Water | (yyyy/mm/ 1993/10/3 | | 11:00 | ам |
| Date Reclaimed(yyyy/mm/dd): | Materia | ıls Used: | | Requirements/day | Test Meth | | | |
| Method of Drilling: Rotary Flowing Well: No | Rale: 0 | Sallons | | 200 Gallons | Non pump | ing | 78 FT | |
| Gas Present: No | | sent: No | ~ | <u> </u> | static leve | | 2 | |
| 4. Formation Log | | 5. Well Completion | 1 | | Rate of ware | ацег | Gallon | ıs/Min |
| Depth | | Date Started(yyyy/mm/do | n. Date C | Completed | Depth of | | 118 F | |
| from | 4.1 · - | 1 """ | (уууул | nm/dd): | pump inta | | | |
| ground Lithology Descri | ption | 1993/10/29 Well Depth: 135 FT | 1993/1 Boreh | ole Diameter: 0 Inches | Water leve | | 115 F | т |
| level (feet) | | Casing Type: Galvanized | 1 | | end of | | | |
| | | Steel | Linei | | pumping: Distance f | rom top of | Inches | - |
| | | Size OD: 4.5 Inches | Size C | D: 0 Inches | casing to | | | |
| | | Wall Thickness: 0.156 | Wall T | hickness: 0 Inches | level: | | | |
| | | Inches Bottom at: 120 FT | Top: 0 | FT Boltom: 0 FT | Depti | To water | | eel) |
| | | Perforations | | ations Size: | Drawdou | Elapsed T n Minutes: | | ecoverv |
| İ | | from: 0 FT to: 0 FT | 0 Inch | es x 0 inches | 115 | 90:00 | | |
| | | from: 0 FT to: 0 FT | | es x 0 Inches | 115 | 105:0 | 0 | |
| | | from: 0 FT to: 0 FT | U Inch | es x 0 inches | 115 | 120:0 | | |
| İ | | Perforated by: Seal: Driven | | | Total Drav | wdown: 37 moval was | Iona # | on 2 br |
| | | from: 0 FT Seal: | to: 120 | FT | | moval was reason why | | id ∠ F |
| | | from: 0 FT Seal: | to: 0 F | | | | | |
| | | from: 0 FT | to: 0 F | | | ended pum | ping rat | le: 2 |
| İ | | Screen Type: from: 0 FT to: 0 FT | | n ID: 0 Inches ize: 0 Inches | Gallons/M | | | |
| | | from: 0 FT to: 0 FT Screen Type: | | n ID: 0 Inches | Recomme FT | ended pum | p intaké | e: 178 |
| | | from: 0 FT to: 0 FT | | ize: 0 Inches | | np Installed | | |
| | | Screen Installation Metho | od: | | Pump Typ | e: SUB | | |
| | | Fittings | Bottor | n· | Pump Mo | del: | | |
| | | Top: Pack: | 60(10) | | H.P.: .5 | er pumples | t inform | ation? |
| | | Grain Size: | Amou | nt: | , any londie | z. pamptos | , | |
| | | Geophysical Log Taken: Retained on Files: | | | | | | |
| | | Additional Test and/or Pr | | | | | | |
| | | Chemistries taken By Dr | | mania librid. 4 | | | | |
| | | Held: 0 Pitless Adapter Type: | Docur | nents Held: 1 | 1 | | | |
| 1 | | Drop Pipe Type: | | | 1 | | | |
| | | Length: 112 FT | Diame | eter: 1 Inches | 1 | | | |
| | | Comments: | | | 1 | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | 7. Contractor Cert | ification | | 1 | | | |
| | | Driller's Name: | UNKN | IOWN DRILLER | | | | |
| | | Certification No.: | 3432 | danaa wiih iha lat-l | | | | |
| | | This well was constructe Well regulation of the All | eu in accord heria Envir | uance with the water onmental Protection & | 1 | | | |
| | | Enhancement Act. All in | formation i | n this report is true. | | | | |
| | | Signature | | Yr Mo Day | 4 | | | |



| WELL NAME: WATT, LLOYD | WELL ID No:0132761 |
|---|--|
| LOCATION: LSD SE SEC 17 TWP 046 RG 27 M 4 | SAMPLE No: 7178-W |
| WELL DEPTH: 150 | WATER LEVEL: -9 |
| AQUIFER: | LABORATORY: VG |
| SAMPLING DATE: TIME: 0 | PRINT DATE: 11/26/2004 |
| SAMPLING DATE: HME: 0 | THE BITTER OF THE BOTTER OF TH |

| SAMPLING DATE: TIME: 0 | | TAME DATE: 1020,2001 | |
|--|--|--|--|
| FIELD: BICARBONATE CHLORIDE DISSOLVED OXYGEN IRON PH S2 TOTAL ALKALINITY | MG/L -9 -9 -9 -9 -9 | FIELD: CARBONATE CONDUCTIVITY EH MANGANESE SULPHATE TEMPERATURE°C TOTAL HARDNESS | MG/L -9 -9 -9 -9 -9 |
| LABORATORY: Analysis Date: 7. COD DIC ION BALANCE SAR TOTAL ALKALINITY TDS DOC | /23/1982 -9 -9 0.98 -9 495 587 -9 | CONDUCTIVITY FLUORIDE PH SIO2 TC TN | 972 0.11 8.3 8.8 -9 -9 |
| AMMONIUM-N CALCIUM CHLORIDE NITRATE-N PHOSPHATE SODIUM NO ₂ + NO ₃ | -9 18.962 1.0011* -9 -9 212.0002 0.0144* | BICARBONATE CARBONATE MAGNESIUM NITRITE-N POTASSIUM SULPHATE TOTAL HARDNESS | 603.8024 -9 6.004608 0.0504* 1.71825 49.968 |
| ALUMINUM BARIUM CADMIUM COBALT IRON MANGANESE MOLYBDENUM SELENIUM VANADIUM | -9 -9 -9 -9 0.38 -9 -9 -9 | ARSENIC BERYLIUM CHROMIUM COPPER LEAD MERCURY NICKEL STRONTIUM ZINC | -9 -9 -9 -9 -9 -9 -9 |
| HYDROCARBONS PHENOLICS | -9 -9 | PESTICIDES OTHER 3 | -9 0 |

Remarks: SAMPLED FROM TAP.

Temperature reported in Degree Centigrade. Conductivity reported in microsiemens/cm, pH in pH units. Alkalinity and Hardness expressed as Calcium Carbonate. FE, VA, PB, AL, AG expressed as extractable. FE in field measurements and all remaining metals expressed as total.

SAR - Sodium Adsorption Ratio EH - Oxidation-Reduction Potential COD - Chemical Oxygen Demand DIC - Dissolved Inorganic Carbon TN - Total Particulate Nitrogen DOC - Dissolved Organic Carbon Total Particulate Carbon TC TDS - Total Dissolved Solids

NOTE: This data may not be fully checked.

The Province disclaims all responsibility for its accuracy

⁻⁹ indicates that no analysis was done for this parameter

^{*}Indicates concentrations less than.

| Environment | data contained in this r | Well Drilling F report is supplied by the Drille esponsibility for its accuracy. | er, The province of | sclaims | Well I.D.: Map Verified: Date Report Received: Measurements: 2, Well Locatio | 0132762 Map 1984/12/06 Imperial |
|-------------------------------------|--------------------------|--|--------------------------------------|---------------|---|--|
| I. Contractor & Well | Owner Information | on | illing Company Ap | | 1/4 or Sec Tw | |
| Company Name: | | Dr | illing Company Ap | pioval ivo | LSD | M |
| FRASER, RON | City or Towr | . Po | stal Code: | | SE 17 04 | |
| Mailing Address: | • | | | | Location in Quarter 0 FT from | r Bounda |
| WellOwner's Name: | Well Location | on Identifier: | | | 0 FT from | Bounda |
| WOLLIN, DALE | | Dr. | ostal Code: | | Lot Block | Plan |
| P.O. Box Number: | Mailing Add FALUN | ress: | | | | low Obtain: |
| | Province: | Co | ountry: | | | Not Oblain |
| Cily: | | | | | 6. Well Yield | |
| 3. Drilling Information | on | | | | Test Date | Start Time: |
| Type of Work: New Well | | | Proposed Stock | well use: | (yyyy/mm/dd): | |
| Reclaimed Well | | tala l lood: | Anticipate | ed Water | 1984/11/16 | 11:00 AM |
| Date Reclaimed(yyyy/mm/ | /dd): Mater | ials Used: | Requiren | nents/day | Test Method: Baile | er 20 FT |
| Method of Drilling: Rolary | Rale | Gallons | 0 Gallons | \$ | Non pumping static level: | 20 F I |
| Flowing Well: No Gas Present: No | | esent: No | | | Rale of water | 10 |
| 4. Formation Log | | 5. Well Completion | | | removal: | Gallons/Mi |
| Depth | | Date Started(yyyy/mm/dd): | Date Completed | | Depth of | 22 FT |
| from | | · | (yyyy/mm/dd): 1984/11/16 | | pump intake: | 22 FT |
| ground Litholog | gy Description | 1984/11/15 Well Depth: 140 FT | Borehole Diame | ler: 0 Inches | Water level at end of | 2211 |
| level | | Casing Type: Steel | Liner Type: | | oumning: | |
| (feet) 60 Clay | <u> </u> | Size OD: 4.5 Inches | Size OD: 0 Inch | es | Distance from top | of Inches |
| 60 Clay 62 Sandstone | | Wall Thickness: 0 Inches | Wall Thickness: | 0 Inches | casing to ground | |
| 108 Shale | | TO WAR AND ET | Top: 0 FT | Bollom: 0 FT | level: | ter level (feet) |
| 109 Coal | | Bottom at: 105 FT | | | Flanse | ed Time |
| 115 Shale | | Perforations | Perforations Siz | e: | Drawdown Minu | tes:Sec Recov |
| 140 Sandy Shale | | from: 0 FT to: 0 FT | 0 Inches x 0 Inc 0 Inches x 0 Inc | :nes :hes | Total Drawdown: | 2 FT |
| 1 | | from: 0 FT to: 0 FT from: 0 FT to: 0 FT | 0 Inches x 0 Inc | | If water removal v | was iess inan z |
| | | Perforated by: | | | -louration, reason | winy. |
| | | Seal: Driven | | | | |
| | | from: 0 FT | to: 0 FT | | | |
| | | Seal: | to: 0 FT | | Recommended p | umping rate: I |
| | | from: 0 FT Seal: | (0.011 | | Gallons/Min Recommended p | nump intake: 40 |
| | | from: 0 FT | to: 0 FT | | Type Pump Insta | illed |
| | | Screen Type: | Screen ID: 0 In | ches | Pump Type: | |
| | | from: 0 FT to: 0 FT | Slot Size: 0 Inc | ches | Pump Model: | |
| | | Screen Type: from: 0 FT | Stot Size: 0 Inc | | H.P.: —Any further pum | ntest informatio |
| | | Screen Installation Metho | | | Alty tuttilei point | proof information |
| | | Fittings | | , | | |
| | | Тор: | Bottom: | | ᅴ | |
| 1 | | Pack: | Amount: | | | |
| | | Grain Size: Geophysical Log Taken: | | | -1 | |
| | | Retained on Files: | | | _ | |
| | | Additional Test and/or Pt | ımp Data | | | |
| | | Chemistries taken By Dri | iller: No | atale 1 | 1 | |
| 1 | | Held: 0 | Documents He | eid: 1 | | |

UNKNOWN DRILLER Driller's Name:

DRILLER REPORTS MED-HARD WATER

7. Contractor Certification

Pilless Adapter Type: Drop Pipe Type: Length: FT

Comments:

Certification No.:
This well was constructed in accordance with the Water Well regulation of the Alberta Environmental Protection & Enhancement Act. All information in this report is true. Signature Yr Mo

Diameter: Inches



Well I.D.: Map Verified: Date Report Received: 0151918 Мар 1990/01/02

| The data co | ntained in this r | esponsibility for its accuracy. | ,, ,,,,, _p ,, | | Received: Measurements: | <u>Imperial</u> |
|--|--------------------------|--|--------------------------|--------------------------------|---------------------------------------|---------------------------|
| Environment | | | | | 2. Well Location | on |
| . Contractor & Well Owne | r Informatic | n Dri | illing Com | pany Approval No.: | 1/4 or Sec Tw | p Rge Westof |
| Company Name: VARNKE DRILLING LTD. | | 119 | 9799 stal Code | | LSD SE 17 04 | 6 27 4 |
| Mailing Address: | City or Town WETASKIW | I- | A 1X1 | • | Location in Quarte 0 FT from | r Boundary |
| RR 3 VellOwner's Name: | Well Locatio | n Identifier: | | | 0 FT from | Boundary |
| VATT, LLOYD 2.O. Box Number: | Mailing Add | C33. | stal Code | | Lot Block | Plan |
| | RR 1, WETA | ASKIWIN Co | ountry: | | AACH PIOAT | How Obtain: Not Obtain |
| City: | 107111007 | | | | FT 6. Well Yield | NOE OBTAIN |
| . Drilling Information | | | Ti- | Proposed well use: | Test Date | Start Time: |
| vpe of Work: New Well | | | l | Domestic | (yyyy/mm/dd): | 11:00 AM |
| Reclaimed Well Date Reclaimed(yyyy/mm/dd): | Maleri | als Used: | | Anticipated Water | 1989/12/22 Test Method: Pun | |
| Method of Drilling: Rotary | | | | Requirements/day D Gallons | Non pumping | 20 FT |
| lowing Well: No | | Gallons | ſ | J Gallons | static level: | |
| Sas Present: | Oil Pre | 5. Well Completion | | | Rate of water | 10 Gallons/Min |
| l. Formation Log | | | Date Co | ompleted | removal: Depth of | 70 FT |
|)epth | | Date Started(yyyy/mm/dd): | (yyyy/m | m/dd): | Depth of pump intake: | |
| rom pround Lithology Des | cription | 1989/12/20 | 1989/12 | 2/22 | - Water level at | 50 FT |
| _{round Lithology Des} evel | | Well Depth: 95 FT | | le Diameter: 0 Inches | end of | |
| feet) | | Casing Type: Steel | Liner T | ype: D: 0 Inches | pumping: | -f Inches |
| 5 Brown Clay | <u></u> | Size OD: 4.5 Inches | | | Distance from top casing to ground | or inches |
| 5 Blue Clay | | Wall Thickness: 0.156 | Wall Th | ickness: 0 Inches | _level: | |
| 5 Gray Shale | | | Top: 0 | FT Bollom: 0 FT | T Depth To wa | ter level (feet) |
| Green Shale Sandy Shale & Sandsto | nne | Boltom at: 80 FT | | tions Size: | - Elapse | ed Time |
| 5 Sandy Shale & Sandsto | 3110 | Perforations from: 0 FT to: 0 FT | | es x 0 Inches | Drawdown Minu | tes:Sec Recovery |
| | | from: 0 FT to: 0 FT | | s x 0 Inches | Total Drawdown: | was less than 2 hr |
| | | from: 0 FT to: 0 FT | | s x 0 Inches | duration, reason | why: |
| | | Perforated by: | | | - 0.012(1011), 1000011 | ···· , |
| | | Seal: Driven | | . | İ | |
| | | from: 80 FT | to: 0 F | i | | |
| | | Seal: from: 0 FT | to: 0 F | Ť | Recommended p | oumping rate: 0 |
| | | Seal: | | | Becommended r | ump inlake: 0 FT |
| | | from: 0 FT | to: 0 F | <u>T</u> | Type Pump Insta | lled |
| | | Screen Type: | | 1 ID: 0 Inches | Pump Type: | |
| | | from: 0 FT to: 0 FT | | ze: 0 Inches n ID: 0 Inches | Pump Model: | |
| | | Screen Type: from: 0 FT to: 0 FT | | ze: 0 Inches | H.P.: | ptest information? |
| | | Screen Installation Method | | 2010 | Any further purit | yest monnador: |
| | | Filtings | | | | |
| | | Top: | Botlon | n: | [| |
| ` | | Pack: | A | -t. 0 | 1 | |
| | | Grain Size: | Amou | in. V | - | |
| : | | Geophysical Log Taken: Retained on Files: | | | | |
| | | Additional Test and/or Pur | mp Dala | <u></u> | | |
| | | Chemistries taken By Drill | ler: No | | 1 | |
| | | Held: 1 | Docur | nents Held: 2 | { | |
| | | Pitless Adapter Type: | | | 1 | |
| | | Drop Pipe Type: Length: FT | Diame | eter: Inches | | |
| | | Comments: | 0101111 | | | |
| | | Comments. | | | i | |
| | | | | | | |
| 1 | | | | | | |
| | | | | | | |
| | | | | | | |
| | | 7. Contractor Certi | fication | l | _ | |
| | | Driller's Name: | UNK | NOWN DRILLER | | |
| | | Certification No.: | 3503 | dense with the Weter | . | |
| | | This well was constructed Well regulation of the Alb | d in accor | connental Protection | `& | |
| 1 | | Well regulation of the Alb Enhancement Act. All inf | ormation | in this report is true. | | |
| | | Signature | UII (ICKOII | YF MO L | Day | |
| 1 | | Olyriaiure | | | Report 1 Pump | Test 1 page1 |

| Vater Well Report | 10/-11 Daillia | - Donort | Well I.D.: 0160598 Map Verified: Not Verified |
|--|---|--|--|
| Water | · Well Drilling | g Report | The same of the sa |
| The data contained in thi | s report is supplied by the | Driller. The province disclaims | Received: 1991/08/19 |
| Alberta Environment | responsibility for its accu | racy. | Measurements: <u>Imperial</u> |
| | lion | | 2. Well Location |
| . Contractor & Well Owner Informat | иоп | Drilling Company Approval I | No.: 1/4 or Sec Twp Rge Westo |
| ompany Name: NKNOWN DRILLER | | 99999 | LSD M |
| ailing Address: City or To | wn: | Postal Code: | SE 17 046 27 4 Location in Quarter |
| NKNOWN UNKNOW | | | 0 FT from Boundar |
| CHOWING S RAINC. | tion Identifier: | | 0 FT from Boundar |
| RITTAIN, BONNIE/KERRY O Box Number: Mailing Additional Mailing M | ddreee: | Postal Code: | Lot Block Plan |
| O. Box Number: Mailing Ad FALUN | diess. | TOC 1H0 | |
| ity: Province: | | Country: | Well Elev: How Obtain: FT Not Obtain |
| | | | 6. Well Yield |
| . Drilling Information | | | OL-4 Times |
| vpe of Work: Chemistry | | Proposed well us Domestic | (yyyy/mm/dd): |
| eclaimed Well | -vi-to Unade | Anticipaled Water | |
| ate i teorgii i cut i i i i i i i i i i i i i i i i i i i | erials Used: | Requirements/da | ay Test Method: |
| ethod of Drilling: Not Applicable owing Well: No Rate | e: Gallons | 0 Gallons | Non pumping FT |
| | resent: | | static level: Rate of water Gallons/Min |
| . Formation Log | 5. Well Completi | on | removal: |
| Pepth | Date Started(yyyy/mm | (dd). Date Completed | Depth of FT |
| rom | Date Statted(yyyynin | (yyyy/mm/dd): | pump intake: |
| round Lithology Description | Well Depth: 150 FT | Borehole Diameter: 0 In | Water level at FT |
| evel | Casing Type: | Liner Type: | end of pumping: |
| (eet) | Size OD: 0 Inches | Size OD: 0 Inches | Distance from Inches |
| | Wall Thickness: 0 Incl | nes Wall Thickness: 0 Inche | es top of casing |
| | | Top: 0 FT Bottom: | to ground |
| | Bollom at: 0 FT | Top: 0 FT Bottom: | Depth To water level (feet) |
| | Perforations | Perforations Size: | Elapsed Time |
| | from: 0 FT to: 0 FT | 0 Inches x 0 Inches | Drawdown Minutes:Sec Recover |
| | from: 0 FT to: 0 FT | 0 Inches x 0 Inches | |
| | from: 0 FT to: 0 FT | 0 Inches x 0 Inches | |
| | Perforated by: Seal: | | |
| | from: 0 FT | lo: 0 FT | Total Drawdown: FT If water removal was less than 2 h |
| | Seal: | | duration, reason why: |
| | from: 0 FT | to: 0 FT | duration, reason with |
| • | Seal: from: 0 FT | to: 0 FT | |
| | Screen Type: | Screen ID: 0 Inches | |
| | from: 0 FT to: 0 FT | Slot Size: 0 Inches | Recommended pumping rate: Gallons/Min |
| | Screen Type: | Screen ID: 0 Inches | Recommended pump intake: FT |
| | from: 0 FT to: 0 FT | | Type pump installed |
| | Screen Installation M | ethod: | Pump type: |
| | Fillings Top: | Bollom: | Pump model: |
| | Pack: | | H.P.: Any further pumptest information |
| | Grain Size: | Amount: 0 | |
| | Geophysical Log Tak | en: | |
| | Retained on Files: | r Dump Data | |
| | Additional Test and/o Chemistries taken By | n Fump Data Driller: No | |
| | Held: 1 | Documents Held: 1 | |
| | Pilless Adapter Type | | 1 |
| | Drop Pipe Type: | | |
| | Length: | Diameler: | |
| | Comments: | | i · |
| | | | |
| | | | • |
| | | | |
| | | | |
| | 7. Contractor C | ertification | 1 |
| | Driller's Name: | UNKNOWN DRILLER | |
| | Certification No.: | | |
| | This well was constr | ucted in accordance with the W | /ater |
| | Well regulation of the | a Alberta Environmental Protect Il information in this report is tr | He. |
| | Enhancement Act. A Signature | Yr Mo | Dayl |
| | ວເຖາເສເທາຮ | 11 111 | Report 1 |

| À \\\\ | Mall Drilling | Rono | \rf | Well I.D.: Map Verified: | 0132765 Map |
|---|---|----------------------------------|--|--|--|
| vvater \ | Well Drilling | Ligh 0 | 71 L | Date Report | мар |
| The data contained in this n | eport is supplied by the Dri | iller. The pr | rovince disclaims | Received: | <u>,</u> |
| Alberta re Environment | esponsibility for its accuracy | ·y , | | Measurements: | <u>Imperial</u> |
| 1. Contractor & Well Owner Informatio | n | | | 2. Well Location | n |
| Company Name: | D | Orilling Com | npany Approval No.: | 1/4 or Sec Twp | • |
| DOUBLE H DRLG | | | | LSD SW 17 046 | M 27 4 |
| Mailing Address: City or Town | : F | Postal Code | 5. | Location in Quarter | _· 7 |
| WellOwner's Name: Well Location | ı İdentifier: | | | 0 FT from | Boundary |
| SEIDL, ART | | | | 0 FT from | Boundary Plan |
| P.O. Box Number: Mailing Addr | ess: F | Postal Code | e: | Lot Block | r lall |
| FALUN Province: | | Country: | | 11108 2001 | ow Obtain: |
| City: Province: | (| | | 2980 FT Es | stimated |
| 3. Drilling Information | | | | 6. Well Yield | |
| Type of Work: New Well | | | Proposed well use: | Test Date | Start Time: |
| Reclaimed Well | In I locale | | Slock Anticipated Water | (yyyy/mm/dd): 1976/05/18 | 11:00 AM |
| Date Reclaimed(yyyy/mm/dd): Materia | als Used: | | Anticipated Water Requirements/day | Test Method: Bailer | |
| Method of Drilling: Rotary Flowing Well: No Rate: 0 | Rallons | | 0 Gallons | Non pumping | 84 FT |
| Gas Present: No Oil Pre | sent: No | | | static level: | 4 |
| CB3 1 1000110.110 | 5. Well Completion | | | Rate of water removal: | 4 Gallons/Min |
| Depth | Date Started(yyyy/mm/dd) | , Dale Co | ompleted | Depth of | 90 FT |
| from . | Date Started(yyyy/fiifi/dd/ 1976/05/13 | ^{/-} (yyyy/m 1976/05 | | pump inlake: | —————————————————————————————————————— |
| ground Lithology Description | 1976/05/13 Well Depth: 110 FT | | 5/18 le Diameter: 0 Inches | Water level at | FT |
| level (feet) | Casing Type: Galvanized | | | pumping: | |
| 30 Clay & Rocks | Steel | Liner | | Distance from top of | f Inches |
| 40 Sand | Size OD: 4.5 Inches | | D: 0 Inches | casing to ground | |
| 50 Shattered Shale | Wall Thickness: 0 Inches | | nickness: 0 Inches | level: Depth To water | r level (feet) |
| 55 Sandstone 80 Shale | Bottom at: 84 FT | Top: 0 1 | | Elapsed | Time |
| 80 Shale 90 Sandstone | Perforations | | itions Size: es x 0 Inches | Drawdown Minutes | s:Sec Recovery |
| 105 Brown Shale | from: 0 FT to: 0 FT from: 0 FT to: 0 FT | | es x 0 inches es x 0 inches | Total Drawdown: 0 | FT |
| 110 Sandy Shale & Sandstone | from: 0 FT to: 0 FT | | es x 0 inches | If water removal wa duration, reason wh | |
| | Perforated by: | | | - Languager, reason Wi | y* |
| | Seal: | fn. 0 | Ť | 1 | |
| | from: 0 FT Seal: | to: 0 FT | | Possess 1 | nning rate: 0 |
| | from: 0 FT | to: 0 FT | Г | Recommended pun Gallons/Min | |
| | Seal: | 1 | E | Recommended pun | np intake: 100 |
| | from: 0 FT Screen Type: | to: 0 FT Screen | T 1D: 0 Inches | - I FT | |
| 1 | Screen Type: from: 0 FT to: 0 FT | Slot Siz | ze: 0 Inches | Type Pump Installe | O |
| | Screen Type: | Screen | ID: 0 Inches | Pump Type: Pump Model: | |
| 1 | from: 0 FT to: 0 FT | | ze: 0 Inches | -H.P.: | |
| | Screen Installation Metho | <i>.</i> | | Any further pumpte | st information? |
| 1 | Fittings Top: | Bottom | 1: | _ | |
| | Pack: | | | 1 | |
| | Grain Size: | Amoun | ıc | - | |
| | Geophysical Log Taken: Relained on Files: | | | _ | |
| | Additional Test and/or Pu | ımp Data | | | |
| 1 | Chemistries taken By Dril | iller: No | ionia II-II-A | 1 | |
| | Held: 0 | Docum | nents Held: 1 | - | |
| | Pilless Adapter Type: Drop Pipe Type: | | | 1 | |
| | Length: FT | Diame | ter: Inches | 4 | |
| | Comments: | | | 1 | |
| | DRILLER REPORTS SO | ı⊢ı WATE! | n. | | |
| | | | | 1 | |
| 1 | | | | | |
|] | | | | _ | |
| 1 | 7. Contractor Certi | fication | | 7 | |
| 1 | Driller's Name: | UNKN | IOWN DRILLER | | |
| 1 | Certification No.: | | | 1 | |
| 1 | This well was constructed | d in accord | nance with the Water | . 1 | |
| 1 | Well regulation of the Alb Enhancement Act. All info | oena Enviro formation in | ormenial Protection & 1 this report is true | - | |
| Ī | Signature | | Yr Mo Da | эу | |
| 1 | | | | | |



WELL NAME: SEIDL, ART LOCATION: LSD SW SEC 17 TWP 046 RG 27 M 4 WELL DEPTH: 105

AQUIFER:

SAMPLING DATE: 9/19/1979 TIME: 0

WELL ID No:0132766 SAMPLE No: 10989-W WATER LEVEL: -9 LABORATORY: AE PRINT DATE: 11/26/2004

| SAMPLING DATE: 9/19/1979 TIME | E: O | PRINT DATE. THEOREGOT | |
|---|--|--|--|
| FIELD: BICARBONATE CHLORIDE DISSOLVED OXYGEN IRON PH S2 TOTAL ALKALINITY | MG/L -9 -9 -9 -9 -9 | FIELD: CARBONATE CONDUCTIVITY EH MANGANESE SULPHATE TEMPERATURE°C TOTAL HARDNESS | MG/L -9 -9 -9 -9 -9 |
| LABORATORY: Analysis Date: 10 COD DIC ION BALANCE SAR TOTAL ALKALINITY TDS DOC | 0/10/1979 -9 -9 0.96 -9 479 578 -9 | CONDUCTIVITY FLUORIDE PH SIO2 TC TN | 952 0.1 8.1 11.7 -9 -9 |
| AMMONIUM-N CALCIUM CHLORIDE NITRATE-N PHOSPHATE SODIUM NO ₂ + NO ₃ | -9 33.932 1.0011* -9 -9 172.9991 0.0144* | BICARBONATE CARBONATE MAGNESIUM NITRITE-N POTASSIUM SULPHATE TOTAL HARDNESS | 583.8066 -9 1.000768* 0.0504* 66.676 65.9568 146 |
| ALUMINUM BARIUM CADMIUM COBALT IRON MANGANESE MOLYBDENUM SELENIUM VANADIUM | -9 -9 -9 -9 0.08 -9 -9 | ARSENIC BERYLIUM CHROMIUM COPPER LEAD MERCURY NICKEL STRONTIUM ZINC | -9 -9 -9 -9 -9 -9 -9 -9 |
| HYDROCARBONS PHENOLICS | -9 -9 | PESTICIDES OTHER 3 | -9 0 |

Remarks: SAMPLED FROM TAP.

Temperature reported in Degree Centigrade. Conductivity reported in microsiemens/cm, pH in pH units. Alkalinity and Hardness expressed as Calcium Carbonate. FE, VA, PB, AL, AG expressed as extractable. FE in field measurements and all remaining metals expressed as total.

EH - Oxidation-Reduction Potential DIC - Dissolved Inorganic Carbon DOC - Dissolved Organic Carbon

TDS - Total Dissolved Solids

NOTE: This data may not be fully checked. The Province disclaims all responsibility for its accuracy SAR - Sodium Adsorption Ratio COD - Chemical Oxygen Demand - Total Particulate Nitrogen

- Total Particulate Carbon

Report 1

⁻⁹ indicates that no analysis was done for this parameter

| A | , | Matan | Wall Drilling | Don | ort | Well I.D.: | 0151862 Man |
|---------------|------------------------------|----------------|--|--|--------------------------------|------------------------------|------------------|
| | | vvater | Well Drilling | Keh | OIL | Map Verified: Date Report | Мар |
| | The data con | tained in this | report is supplied by the D | riller. The | province disclaims | Received: | 1990/07/03 |
| Env | Alberta Fronment | r | esponsibility for its accura | icy. | | Measurements: | <u>Imperial</u> |
| | | Informatio | | ······································ | | 2. Well Locati | on |
| | ractor & Well Owner | morman |)!! | Drilling Co | ompany Approval No.: | 1/4 or Sec Tv | |
| Company | Name: /ATER WELL DRILLING | | | Drining Ct | without white set is a | LSD | M |
| Mailing A | | City or Town | <u> </u> | Postal Co | de: | NE 18 04 | 6 27 4 |
| ividinig / t | 33,030. | O.L., 0, 10 | | | | Location in Quarte | Г |
| WellOwne | er's Name: | Well Location | n Identifier: | | | 0 FT from | Boundary |
| KLEIN, H | | | | | | 0 FT from | Boundary |
| P.O. Box | Number: | Mailing Add | | Postal Co | de: | Lot Block | Plan |
| | | RR 1, FALU | N | | | Well Elev: | How Obtain: |
| City: | | Province: | | Country: | | | Not Obtain |
| | | | | | | 6. Well Yield | Not Cotain |
| | ng Information | | | | | Test Date | Start Time: |
| | /ork: New Well | | | | Proposed well use: Domestic | (yyyy/mm/dd): | Statt Fille. |
| Reclaime | | Matori | als Used: | | Anticipated Water | 1990/06/12 | 11:00 AM |
| | laimed(yyyy/mm/dd): | Materi | ais Oseu. | | Requirements/day | Test Method: Baile | |
| Flowing V | f Drilling: Rotary | Rate: I | Gallons | | 0 Gallons | Non pumping | 18 FT |
| Gas Pres | | Oil Pre | | | | static level: | |
| | | -11119 | 5. Well Completion | <u> </u> | | Rate of water | 12 |
| | nation Log | | | Date (| Completed | removal: | Gallons/Min |
| Depth from | | | Date Started(yyyy/mm/do | | mm/dd): | Depth of | 55 FT |
| ground | Lithology Desc | rintion | 1990/06/11 | 1990/ | | pump intake: | 0.52 |
| level | Little of the second | | Well Depth: 135 FT | | ole Diameter: 0 Inches | Water level at end of | OFT |
| (feet) | | | Casing Type: Plastic | Liner | | ena oi pumping: | |
| 20 | Clayey Gravel | | Size OD: 5 Inches | | DD: 0 Inches | Distance from top | of Inches |
| 45 | Coarse Grained Sand | | Wall Thickness: 0.5 Inch | | hickness: 0 Inches | casing to ground | OI IIIOIICS |
| 70 | Blue Sand | | | | | level: | |
| 120 | Gray Sand | | Bottom at: 120 FT | Тор: С | FT Boltom: 0 FT | Depth To wat | er level (feet) |
| 122 | Sandstone | | Perforations | Perfor | alions Size: | Elapse | |
| 135 | Water Bearing Sand | | from: 0 FT to: 0 FT | | es x 0 Inches | | es:Sec Recovery |
| | | | from: 0 FT to: 0 FT | | es x 0 Inches | Total Drawdown: (| |
| | | | from: 0 FT to: 0 FT | | es x 0 Inches | If water removal w | |
| | | | Perforated by: | | | duration, reason w | /ny: |
| | | | Seal: Driven | | | | |
| | | | from: 120 FT | to: 0 F | T | | |
| | | | Seal: | | · - - | Recommended pu | ımping rate: 0 |
| | | | from: 0 FT | to: 0 F | • } | Gallons/Min | |
| | | | Seal: from: 0 FT | to: 0 F | T | Recommended pu | ımp intake: 100 |
| ļ | | | Screen Type: | | n ID: 0 Inches | FT | |
| 1 | | | from: 0 FT to: 0 FT | | ize: 0 Inches | Type Pump Install | ed |
| | | | Screen Type: | | n ID: 0 Inches | Pump Type: SUB | |
| | | | from: 0 FT to: 0 FT | Slot S | ize: 0 Inches | Pump Model: | - |
| | | | Screen Installation Meth | od: | | H.P.: Any further pumpt | est information? |
| | | | Fittings | | | Any further pumpt | COL MIIOTIMABOTT |
| | | | Тор: | Bottor | n: | 4 | |
| | | | Pack: | Α | -4.0 | 1 | |
| | | | Grain Size: | Amou | nt: U | -{ | |
| ŀ | | | Geophysical Log Taken: Retained on Files: | | | 1 | |
| | | | Additional Test and/or P | umn Dala | | 1 | |
| | | | Chemistries taken By Dr | | | 1 | |
| | | | Held: 0 | | nents Held: 1 | | |
| | | | Pitless Adapter Type: | | | 1 | |
|] | | | Drop Pipe Type: | | | | |
| 1 | | | Length: FT | Diame | eter: Inches | 1 | |
| | | | Comments: | | | 1 | |
| | | | | | | 1 | |
| I | | | 1 | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | 7. Contractor Cert | ification | | | |
| 1 | | | Driller's Name: | UNKN | IOWN DRILLER | 1 | |
| 1 | • | | Certification No.: | 627 | | ļ | |
| | | | This well was constructe | d in accord | dance with the Water | | |
| | | | Well regulation of the All | perta Envir | onmental Protection & | 1 | |
| | | | Enhancement Act. All in | rormation i | | J | |
| 1 | | | Signature | | Yr Mo Day | ′I | |

| Water Well Report Water | Well Drilling | Report oriller. The province disclaims | Well I.D.: 0156115 Map Verified: Not Verified Date Report 1990/01/10 Received: |
|--|--|--|--|
| Alberta The data contained in this Environment | esponsibility for its accura | icy. | Measurements: <u>Imperial</u> |
| 1. Contractor & Well Owner Information | on | | 2. Well Location |
| Company Name: | | Drilling Company Approval No 99999 | LSD M |
| UNKNOWN DRILLER | n: | Postal Code: | NW 18 046 27 4 Location in Quarter |
| UNKNOWN UNKNOWN | AB CA | | 0 FT from Boundary |
| WellOwner's Name: Well Location | on Identifier: | | 0 FT from Boundary |
| MEYER, WAYNE P.O. Box Number: Mailing Add | lress: | Postal Code: T9A 1W8 | Lot Block Plan |
| RR1 WETA | SKIWIN | Country: | Well Elev: How Obtain: |
| City: Province: | | | FT Not Obtain 6. Well Yield |
| 3. Drilling Information | | Proposed well use | · Test Dale Start Time: |
| Type of Work: Chemistry | | Domestic | (yyyy/mm/dd): |
| Reclaimed Well Date Reclaimed(yyyy/mm/dd): Mater | ials Used: | Anticipated Water Requirements/day | |
| Method of Drilling: Not Applicable | | 0 Gallons | Non pumping FT |
| Flowing Well: No Rate: | Gallons esent: | | static level: Rate of water Gallons/Min |
| Gas Present. | 5. Well Completio | n | removal: |
| 4. Formation Log Depth | Date Started(yyyy/mm/d | Date Completed | Depth of FT |
| (com | Date Otanteo(f))) // // // | ^{dd):} (yyyy/mm/dd): | pump intake: Water level at FT |
| ground Lithology Description | Well Depth: 0 FT | Borehole Diameter: 0 Inc | thes end of |
| level (feet) | Casing Type: | Liner Type: | pumping: |
| (1000) | Size OD: 0 Inches | Size OD: 0 Inches Wall Thickness: 0 Inches | Distance from Inches top of casing |
| | Wall Thickness: 0 Inche | | to around |
| | Bollom at: 0 FT | Top: 0 FT Bottom: 0 | Depth To water level (feet) |
| | Perforations | Perforations Size: | Flansed Time |
| | from: 0 FT to: 0 FT | 0 Inches x 0 Inches 0 Inches x 0 Inches | Drawdown Minutes:Sec Recovery |
| | from: 0 FT to: 0 FT from: 0 FT to: 0 FT | 0 Inches x 0 Inches | |
| | Perforated by: | | |
| | Seal: | to: 0 FT | Total Drawdown: FT |
| | from: 0 FT Seal: | to. or i | if water removal was less than 2 h duration, reason why: |
| | from: 0 FT | to: 0 FT | duration, reason why. |
| | Seal: from: 0 FT | to: 0 FT | |
| | Screen Type: | Screen ID: 0 Inches | Recommended pumping rate: |
| | from: 0 FT to: 0 FT | Slot Size: 0 Inches Screen ID: 0 Inches | Gallens/Min |
| | Screen Type: from: 0 FT to: 0 FT | Stot Size: 0 Inches | Recommended pump intake: FT |
| | Screen Installation Me | | Type pump installed Pump type: |
| | Fittings | | Pump model: |
| | Top: Pack: | Bottom: | H.P.: Any further pumptest information? |
| | Grain Size: | Amount: 0 | Mily idition partiplication |
| | Geophysical Log Take | en: | |
| | Retained on Files: Additional Test and/or | r Pump Data | |
| · · | Chemistries taken By | Driller: No | |
| | Held: 1 Pitless Adapler Type: | Documents Held: 1 | |
| | Drop Pipe Type: | | |
| 1 | Length: | Diameter: | |
| | Comments: | | |
| | | | |
| | | | |
| | 7. Contractor Co | ertification UNKNOWN DRILLER | |
| , | Driller's Name: Certification No.: | | |
| | retainment was constru | ucted in accordance with the W | /aler |
| | katell enquiption of the | e Alberta Environmental Protet Ill information in this report is tr | ue. |
| 1 | Signature | Yr Mo | Day Report |

| Vater Well Report | | | | Well I.D.: 0132771 |
|---|---|--|--|--|
| <u>A</u> : | Water | Well Drilling F | Report | Map Verified: Map Date Report 4093/07/07 |
| The da | to contained in this | report is supplied by the Drille | er. The province disclaims | s Date Report 1983/07/07 Received: |
| Alberta | r | esponsibility for its accuracy. | | Measurements: Imperial |
| Environment | was Information | 011 | | 2. Well Location |
| . Contractor & Well O ompany Name: | wher intollian | L/II | lling Company Approval | No.: 1/4 or Sec Twp Rge Westof |
| NKNOWN DRILLER | | | 999 stal Code: | SW 18 046 27 4 |
| ailing Address: | City or Tow UNKNOWN | 14. | stal Code. | Location in Quarter |
| NKNOWN ellOwner's Name: | Well I ocali | on Identifier: | | 0 FT from Boundar 0 FT from Boundar |
| NOW, JOHN B. | | | stal Code: | Lot Block Plan |
| O. Box Number: | Mailing Add RR1, WET | 11622. | istal Code: IA 1W8 | |
| 4 | Province: | | ountry: | Well Elev: How Obtain: FT Not Obtain |
| ty: | 11011100 | | | FT Not Obtain 6. Well Yield |
| . Drilling Information | | | Proposed well u | 01 1 71 |
| ype of Work: Chemistry | | | Domestic | (yyyy/mm/dd): |
| eclaimed Well | v Maler | rials Used: | Anticipated Wat | |
| ate Reclaimed(yyyy/mm/dd lethod of Drilling: Drilled |): | | Requirements/d 0 Gallons | lay Test Method: Non pumping FT |
| lowing Well: No | | Gallons | o Gallons | static level: |
| as Present: No | Oíl Pi | resent: No | | Rate of water Gallons/Min |
| . Formation Log | | 5. Well Completion | Date Completed | removal: Depth of FT |
| epth | | Date Started(yyyy/mm/dd): | (yyyy/mm/dd): | pump intake: |
| rom Iround Lithology | Description | | | Water level at FT |
| evel | = ===================================== | Well Depth: 100 FT | Borehole Diameter: 0 I Liner Type: | |
| feet) | | Casing Type: Size OD: 0 Inches | Size OD: 0 Inches | pumping: Distance from Inches |
| | | Wall Thickness: 0 Inches | Wall Thickness: 0 Inch | nes top of casing |
| | | | Top: 0 FT Bottom | lo ground |
| | | Boltom at: 0 FT | Top: 0 FT Boltom | n: U F I level: Depth To water level (feet) |
| | | Perforations | Perforations Size: | Elapsed Time |
| | | from: 0 FT to: 0 FT | 0 Inches x 0 Inches 0 Inches x 0 Inches | Drawdown Minutes:Sec Recover |
| | | from: 0 FT to: 0 FT from: 0 FT to: 0 FT | 0 Inches x 0 Inches | |
| | | Perforated by: | | |
| | | Seal: | | Total Drawdown: FT |
| | | from: 0 FT | to: 0 FT | If water removal was less than 2 i |
| | | Seal: from: 0 FT | to: 0 FT | duration, reason why: |
| | | Seal: | L. O.ET | İ |
| | | from: 0 FT | to: 0 FT Screen ID: 0 Inches | |
| | | Screen Type: from: 0 FT to: 0 FT | Slot Size: 0 Inches | Recommended pumping rate: Gallons/Min |
| | | Screen Type: | Screen ID: 0 Inches | Recommended pump intake: F1 |
| | | from: 0 FT to: 0 FT | Slot Size: 0 Inches | Type pump installed |
| | | Screen Installation Metho | 0: | Pump type: |
| | | Fittings Top: | Bollom: | Pump model: |
| | | Pack: | | Any further pumplest information |
| | | Grain Size: | Amount: | |
| | | Geophysical Log Taken: Retained on Files: | | |
| | | Additional Test and/or Pu | mp Dala | |
| | | Chemistries taken By Dril | ler: No Documents Held: 1 | |
| | | <u>Held</u> : 1 Pitless Adapter Type: | Documents Held. 1 | |
| | | Drop Pipe Type: | | |
| | | Length: | Diameter: | |
| | | Comments: | | |
| | | | | |
| 1 | | | | |
| | | | | |
| | | | | |
| | | 7. Contractor Certi | fication | |
| | | Driller's Name: | UNKNOWN DRILLE | :R |
| | | Certification No.: | d in accordance with the | Water |
| | | Well regulation of the All | peria Environmental Prot | ection a l |
| | | Enhancement Act. All in | formation in this report is | uue. |
| l | | Signalure | Yr f | Mo Day Report |

| â. |
|------------------------|
| 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.: 0132772
Map Verified: Map
Date Report 1984/12/06
Received: Imperial

Measurements: Well Location 1. Contractor & Well Owner Information Westol Sec Twp Rge 1/4 or Drilling Company Approval No.: Company Name: LSD М FRASER, RON SW 18 046 Postal Code: City or Town: Mailing Address: ocation in Quarter Boundary 0 FT from WellOwner's Name: Well Location Identifier: Boundary 0 FT from RADKE, B. Block Plan Postal Code: .ot Mailing Address: P.O. Box Number: FALUÑ How Obtain: Well Elev: Country: Province: City: Not Obtain 6. Well Yield 3. Drilling Information Test Date Start Time: Proposed well use: Type of Work: New Well (yyyy/mm/dd): Domestic Reclaimed Well 1984/06/28 11:00 AM Anticipated Water Materials Used: Date Reclaimed(yyyy/mm/dd): Test Method: Bailer Requirements/day Method of Drilling: Rotary Non pumping . 39 FT 0 Gallons Rate: Gallons Flowing Well: No static level: Oil Present: No Gas Present: No Rate of water 5. Well Completion 4. Formation Log Gallons/Min removal: Date Completed 51 FT Depth of Deplh Dale Started(yyyy/mm/dd): (yyyy/mm/dd): pump intake: from 1984/06/28 1984/06/27 **Lithology Description** Water level at 51 FT ground Borehole Diameter: 0 Inches Well Depth; 105 FT level end of Casing Type: Galvanized (feet) pumping: Liner Type: Steel Distance from top of Inches 40 Clay Size OD: 4.5 Inches Size OD: 0 Inches casing lo ground Sandstone 43 Wall Thickness: 0 Inches Wall Thickness: 0 Inches Fractured Shale level: 72 Depth To water level (feet) Bottom: 0 F1 Blue Shale Top: 0 FT 90 Bottom at: 80 FT Elapsed Time Sandy Shale 105 Perforations Size: Perforations Drawdown Minutes:Sec Recovery from: 0 FT to: 0 FT 0 Inches x 0 Inches Total Drawdown: 12 FT 0 Inches x 0 Inches from: 0 FT to: 0 FT If water removal was less than 2 hr 0 Inches x 0 Inches from: 0 FT to: 0 FT duration, reason why: Perforated by: Seal: Driven to: 80 FT from: 0 FT Seal: Recommended pumping rate: 8 to: 0 FT from: 0 FT Gallons/Min Seal: Recommended pump intake: 60 FT from: 0 FT to: 0 FT Type Pump Installed Screen ID: 0 Inches Screen Type: Pump Type: to: 0 FT Slot Size: 0 Inches from: 0 FT Pump Model: Screen ID: 0 Inches Screen Type: _to: 0 FT Slot Size: 0 Inches from: 0 FT Any further pumptest information? Screen Installation Method: Fillings Bollom: Top: Pack: Amount: Grain Size: Geophysical Log Taken: Retained on Files: Additional Test and/or Pump Data Chemistries taken By Driller: No Documents Held: 1 Held: 0 Pitless Adapter Type: Drop Pipe Type: _ength: FT Diameter: Inches Comments: DRILLER REPORTS SOFT WATER 7. Contractor Certification UNKNOWN DRILLER Driller's Name: Certification No.: This well was constructed in accordance with the Water Well regulation of the Alberta Environmental Protection & Enhancement Act. All information in this report is true. Yr Mo Signature

| 1 | Water Well Re |
|---|------------------------|
| | Alberta Environment |
| Ì | 1. Contractor |
| İ | Company Name: |
| | VINO'S WATER W |
| | Mailing Address: |
| | |

Well I.D.: Map Verified: Date Report Received: 0258867 Not Verified 1995/09/18

| The data contained in this | report is supplied by the office esponsibility for its accuracy. | 51. 11.0 p. 0 1 | | Received: Measurements: | <u>Imperial</u> |
|---|--|------------------------------------|---------------------------------------|--------------------------------|----------------------|
| Environment | • | | | 2. Well Locat | ion |
| 1. Contractor & Well Owner Informati | on | | | | wp Rge Westof |
| Company Name: | Dr | illing Company i | approvar no | LSD | M |
| VINO'S WATER WELL DRILLING Mailing Address: City or Tow | n: Po | stal Code: | | 10 20 0 Location in Quart | , , , |
| Mahing / Garass. | | | | Location in Quart | S Boundary |
| MellOMiter 2 Hanner | on Identifier: | | | 1500 FT from | E Boundary |
| KRAUSE, ROGER | Jenool Pr | stal Code: | | Lot Block | R Plan |
| P.O. Box Number: Mailing Add RR1, WET | | A 1W8 | | MACH Flore | How Obtain: |
| City: Province: | Co | ountry: | | Well Elev: FT | Not Obtain |
| Ony. | | | | 6. Well Yield | |
| 3. Drilling Information | <u> </u> | Propos | ed well use: | Test Date | Start Time: |
| Type of Work: New Well | | Domes | stic & Stock | (yyyy/mm/dd): | 44.00.414 |
| Reclaimed Well | rials Used: | Anticip | ated Water | 1995/08/30 Test Method: Ba | 11:00 AM |
| Date Reclaimed(yyyy/mm/dd): Mate Method of Drilling: Rotary | 30000 | | ements/day | Non pumping | 85 FT |
| Clauring Molt: No Rate | Gallons | 1000 (| Gallons | static level: | |
| Gas Present: No Oil P | resent: No | | | Rate of water | 10 |
| 4. Formation Log | 5. Well Completion | | | removal: | Gallons/Min |
| Depth | Date Started(yyyy/mm/dd): | Date Complet (yyyy/mm/dd) | eu · | Depth of | 0 FT |
| from | 1995/08/27 | 1995/08/30 | | pump intake: Water level at | 85 FT |
| ground Lithology Description | Well Depth: 170 FT | | meter: 0 Inches | end of | ~ 3 |
| level | Casing Type: Plastic | Liner Type: | | pumping: | |
| (feet) 25 Sand & Gravel | Size OD: 5 Inches | Size OD: 0 In | ches | Distance from to | op of Inches |
| 80 Blue Gray Sand | Wall Thickness: 0.5 Inches | Wall Thickne | ss: 0 Inches | casing to ground | d [|
| 100 Fine Grained Sand | D. W 125 FT | Top: 0 FT | Boltom: 0 FT | level: | vater level (feet) |
| 135 Blue Shale | Bottom at: 135 FT | l ' | | Elap | sed Time |
| 155 Gray Shale | Perforations | Perforations | Size: | Drawdown Min | nutes:Sec Recovery |
| 160 Sandstone Sand | from: 0 FT to: 0 FT | 0 Inches x 0 0 Inches x 0 | Inches Inches | Total Drawdowr | n: 85 FT |
| 170 Water Bearing Sand | from: 0 FT to: 0 FT from: 0 FT to: 0 FT | 0 Inches x 0 | Inches | If water remova | l was less than 2 hr |
| | Perforated by: | 0 1110/104 11 | | duration, reasor | n wity. |
| | Seal: Driven | | | 7 | |
| | from: 0 FT | to: 135 FT | | 1 | |
| | Seal: | O FT | | Recommended | pumping rate: 0 |
| | from: 0 FT | to: 0 FT | | Gallons/Min | Laboration 120 |
| | Seal: from: 0 FT | to: 0 FT | | | l pump intake: 120 |
| | Screen Type: | Screen ID: 0 | Inches | Type Pump Ins | stalled |
| | from: 0 FT to: 0 FT | Slot Size: 0 | Inches | Pump Type: | |
| | Screen Type: | Screen ID: 0 Slot Size: 0 | | Pump Model: | |
| | from: 0 FT to: 0 FT Screen Installation Metho | | mones | H.P.: | mptest information? |
| | | u | | Any lutitlet put | inplest information. |
| | Fittings Top: | Bollom: | | _ | |
| | Pack: | | | | |
| | Grain Size: | Amount: | | | |
| | Geophysical Log Taken: | | | | |
| | Retained on Files: Additional Test and/or Pt | ımı Dala | | 7 | |
| | Chemistries taken By Dri | ller: No | | | |
| | Held: 0 | Documents | Held: 1 | _ | |
| | Pitless Adapter Type: | | | | |
| | Drop Pipe Type: | Diameter: l | nches | 1 | |
| | Length: FT Comments: | | | | |
| | DRILLER REPORTS PU | IMPED WELL F | OR 24 HRS NO |) | |
| | DRAW DOWN. | | | Į. | |
| | | | |] | |
| | | | | | |
| | | | | 4 | |
| | 7. Contractor Cert | ification | | _1 | |
| | Driller's Name: | UNKNOWI | V DRILLER | 1 | |
| | Cartification No : | VC7989 | with the Mate | , | |
| | This well was constructed Well regulation of the Al | ed in accordance | e with the vvater ental Protection | & 1 | |
| 1 | Well regulation of the All Enhancement Act. All in | ບອດສ ⊏ດທາບການ formation in this | report is true. | l l | |
| | Signature | | | Эау | |
| | Orginature | | ĺ | Report 1 Pum | np Test 1 page1 |



| WELL NAME: ZIELKE, BRIAN |
|---|
| LOCATION: LSD NE SEC 20 TWP 046 RG 27 M 4 |
| |

WELL DEPTH: 200

AQUIFER:

WELL ID No:0132782 SAMPLE No: 12395-W WATER LEVEL: -9 LABORATORY: AE PRINT DATE: 11/26/2004

| SAMPLING DATE: TIME: 0 | | PRINT DATE: 11/26/2004 | |
|--|---|--|--|
| FIELD: BICARBONATE CHLORIDE DISSOLVED OXYGEN IRON PH S2 TOTAL ALKALINITY | MG/L. -9 -9 -9 -9 -9 -9 | FIELD: CARBONATE CONDUCTIVITY EH MANGANESE SULPHATE TEMPERATURE°C TOTAL HARDNESS | MG/L -9 -9 -9 -9 -9 |
| LABORATORY: Analysis Date: 1 COD DIC ION BALANCE SAR TOTAL ALKALINITY TDS DOC | 11/22/1977 -9 -9 0.99 -9 444 869 -9 | CONDUCTIVITY FLUORIDE PH SIO2 TC TN | 1380 0.87 8.4 8.7 -9 |
| AMMONIUM-N CALCIUM CHLORIDE NITRATE-N PHOSPHATE SODIUM NO ₂ + NO ₃ | -9 14.97 6.01015 -9 -9 307.9999 0.0284* | BICARBONATE CARBONATE MAGNESIUM NITRITE-N POTASSIUM SULPHATE TOTAL HARDNESS | 539.8256 5.001* 3.002304 0.0994* 1.71825 267.8304 |
| ALUMINUM BARIUM CADMIUM COBALT IRON MANGANESE MOLYBDENUM SELENIUM VANADIUM | -9 -9 -9 0.05* -9 -9 | ARSENIC BERYLIUM CHROMIUM COPPER LEAD MERCURY NICKEL STRONTIUM ZINC | -9 -9 -9 -9 -9 -9 -9 |
| HYDROCARBONS PHENOLICS | -9 -9 | PESTICIDES OTHER 3 | -9 0 |

Remarks: SAMPLED FROM TAP.

Temperature reported in Degree Centigrade. Conductivity reported in microsiemens/cm, pH in pH units. Alkalinity and Hardness expressed as Calcium Carbonate. FE, VA, PB, AL, AG expressed as extractable. FE in field measurements and all remaining metals expressed as total.

SAR - Sodium Adsorption Ratio

COD - Chemical Oxygen Demand

- Total Particulate Nitrogen

EH - Oxidation-Reduction Potential DIC - Dissolved Inorganic Carbon DOC - Dissolved Organic Carbon TDS - Total Dissolved Solids

- Total Particulate Carbon

NOTE: This data may not be fully checked.

The Province disclaims all responsibility for its accuracy

⁻⁹ indicates that no analysis was done for this parameter

^{*}Indicates concentrations less than.

Water Well Drilling Report

The data contained in this report is supplied by the Driller. The province disclaims

Well I.D.: Map Verified: Date Report Received:

0132779 Мар

| The data contra | ained in this re | eport is supplied by the Driller esponsibility for its accuracy. | r. The pro | JAILICE GISCIGINIS | Received: Measurements: | Imper <u>ial</u> |
|---|------------------|---|------------------|--|----------------------------------|--------------------|
| Environment | | • | | | 2. Well Location | |
| I. Contractor & Well Owner | Informatio | n | | pany Approval No.: | 1/4 or Sec Tw | |
| Company Name: | | ייוום | iing Com 1799 | party Approval Ito | LSD | M |
| WARNKE DRILLING LTD. | City or Town | | tal Code | | NW 20 046 Location in Quarter | |
| Mailing Address: RR 3 | WETASKIWI | N AB CA 19A | 4 1X1 | | Location in Quarter 0 FT from | Boundary |
| WellOwner's Name: | Well Location | n Identifier: | | | 0 FT from | Boundary |
| HARDEN, D.J. | Mailing Addr | Pos | stal Code |): | Lot Block | Plan |
| P.O. Box Number: | RR1, FALUN | · | | | Well Elev: | low Obtain: |
| City: | Province: | Cor | untry: | | | Not Oblain |
| | | <u> </u> | | | 6. Well Yield | |
| 3. Drilling Information | | | | Jeansond well like. | Test Date | Start Time: |
| Type of Work: New Well | | | li li | Domestic | (yyyy/mm/dd): | 11:00 AM |
| Reclaimed Well Date Reclaimed(yyyy/mm/dd): | Materia | als Used: | | Anticipated Water | 1972/11/10 Test Method: Unkr | |
| Method of Drilling: Rotary | | | | Requirements/day 0 Gallons | Non pumping | 77 FT |
| Flowing Well: No | | Gallons | | o Ganono | static level: | |
| Gas Present: No | Oil Pre | sent: No 5. Well Completion | | | Rate of water | 5 Gallons/Min |
| 4. Formation Log | | | | ompleted | removal: Depth of | 94 FT |
| Depth | | Date Started(yyyy/mm/dd): | (γγγγ/π | ım/dd): | pump intake: | |
| from Lithology Desc | ription | | 1972/1 | 1/10 le Diameter: 0 Inches | Water level at | 94 FT |
| level | • | Well Depth: 140 FT | | | 0110 01 | |
| (feet) | | Casing Type: Galvanized Steel | Liner T | ype: | pumping: Distance from top | of inches |
| 30 Clay 100 Sandy Clay & Sand | | Size OD: 4.5 Inches | Size O | D: 0 Inches | casing to ground | |
| 100 Sandy Clay & Sand 122 Gray Shale | | Wall Thickness: 0 Inches | | nickness: 0 Inches | level: | ler level (feet) |
| 140 Sandrock | | Bottom at: 118 FT | Top: 0 | | -l Flanse | d Time |
| | | Perforations | Perfora | ations Size: | Drawdown Minut | es:Sec Recovery |
| | | from: 0 FT to: 0 FT | 0 Inche | es x 0 Inches es x 0 Inches | Total Drawdown: | 17 FT |
| | | from: 0 FT to: 0 FT from: 0 FT to: 0 FT | | es x 0 Inches | If water removal v | vas iess man z m |
| | | Perforated by: | | | - Uulalion, reason (| |
| | | Seal: Driven | | . | 1 | |
| | | from: 0 FT | to: 0 F | 1 | Recommended p | umping rate: N |
| | • | Seal: from: 0 FT | to: 0 F | Т | Recommended p | unping rate. |
| | | Seal: | | *** | Recommended p | ump inlake: 0 FT |
| | | from: 0 FT | to: 0 F | n ID: 0 Inches | Type Pump Insta | lled |
| | • | Screen Type: from: 0 FT | Slot S | ize: 0 inches | Pump Type: Pump Model: | |
| | | Screen Type: | Scree | n ID: 0 Inches | ир: | |
| | | from: 0 FT to: 0 FT | | ize: 0 Inches | Any further pump | itest information? |
| | | Screen Installation Method | <u>1:</u> | | ┪ | |
| | | Fittings Top: | Boltor | n: | | |
| | | Pack: | | | | |
| | | Grain Size: | Amou | <u>nt:</u> | | |
| | | Geophysical Log Taken: | | | | |
| | | Retained on Files: Additional Test and/or Pur | mp Data | <u> </u> | | |
| | | Chemistries taken By Drill | ler: No | 4 11 14 4 | | |
| | | Held: 0 | Docu | ments Held: 1 | - | |
| | | Pitless Adapter Type: Drop Pipe Type: | | | | |
| | | Length: FT | Diam | eter: Inches | _ | |
| | | Comments: | | - D | | |
| | | DRILLER REPORTS SO | FLVVAIE | Er X | | |
| | | | | | | |
| | | | | | Ì | |
| | | | | | | |
| | | 7. Contractor Certi | fication | 1 | | |
| | | Driller's Name: | UNK | NOWN DRILLER | | |
| | | Cartification No. | | and the state of t | | |
| | | This well was constructed Well regulation of the Alb | d in acco | rdance with the wate ironmental Protection | | |
| | | Well regulation of the Alb Enhancement Act. All info | ormation | in this tebort is true. | | |
| 1 | | Signature | | YF MID L | Day | Task 4 mages |
| | | | | | Report 1 Pump | rest i page i |



Well I.D.: Map Verified: Date Report

0132781 Мар 1986/02/28

Received: Measurements: Imperial

| Alberta Environment | responsibility for its accura | acy. | Measurements: <u>Imperial</u> |
|--|--|---|--|
| I. Contractor & Well Owner Informa | lion | | 2. Well Location |
| Company Name: | EIOTI | Drilling Company Approval | No.: 1/4 or Sec Twp Rge Westof |
| NKNOWN DRILLER | | 99999 | LSD M NW 20 046 27 4 |
| ailing Address: City or To | wn: | Postal Code: | Location in Quarter |
| NKNOWN UNKNOW | tion Identifier: | | 0 FT from Boundary |
| ADDEN DIANE | | | 0 FT from Boundary |
| O. Box Number: Mailing A | ddress: | Postal Code: | Lot Block Plan |
| RR1, FAL | | T0C 1H0 Country: | Well Elev: How Obtain: |
| ity: Province: | | Country. | FT Not Obtain |
| D. Illian Information | | | 6. Well Yield |
| . Drilling Information ype of Work: Chemistry | | Proposed well u | ise: Test Date Start Time: |
| eclaimed Well | | Domestic Anticipated Wat | (yyyy/mm/dd): |
| ate Reclaimed(yyyy/mm/dd): Mat | erials Used: | Requirements/d | lay Test Method: |
| lethod of Drilling: Unknown | e: Gallons | 0 Gallons | Non pumping FT |
| | Present: No | | static level: Rate of water Gallons/Min |
| . Formation Log | 5. Well Completio | n | removal: |
| Depth | Date Started(yyyy/mm/ | Date Completed | Depth of FT |
| om | 54.0 5.4.104()))),,,,,,, | dd): (yyyy/mm/dd): | pump intake: Water level at FT |
| round Lithology Description | Well Depth: 30 FT | Borehole Diameter: 0 I | nches end of |
| evel feet) | Casing Type: | Liner Type: | pumping: |
| | Size OD: 0 Inches | Size OD: 0 Inches es Wall Thickness: 0 Inch | Distance from Inches |
| | Wall Thickness: 0 Inch | | to ground |
| | Bottom at: 0 FT | Top: 0 FT Botlom | 1: UFI level: |
| | | Perforations Size: | Depth To water level (feet) |
| | Perforations from: 0 FT to: 0 FT | 0 Inches x 0 Inches | Elapsed Time Drawdown Minutes:Sec Recovery |
| | from: 0 FT to: 0 FT | 0 Inches x 0 Inches | Diamgowit Mittales.See (1999) |
| | from: 0 FT to: 0 FT | 0 Inches x 0 Inches | |
| | Perforated by: | | |
| | Seal: from: 0 FT | to: 0 FT | Total Drawdown: FT If water removal was less than 2 h |
| | Seal: | | duration, reason why: |
| | from: 0 FT | to: 0 FT | datation, re- |
| | Seal: from: 0 FT | to: 0 FT | |
| | Screen Type: | Screen ID: 0 Inches | Recommended pumping rate: |
| | from: 0 FT to: 0 FT | Slot Size: 0 Inches Screen ID: 0 Inches | Gallons/Min |
| | Screen Type: from: 0 FT to: 0 FT | Stot Size: 0 Inches | Recommended pump intake: FT |
| | Screen Installation Me | | Type pump installed |
| | Fittings | | Pump type: Pump model: |
| | Тор: | Bollom: | ——-HP.: |
| | Pack: Grain Size: | Amount: | Any further pumplest information? |
| | Geophysical Log Take | | |
| | Retained on Files: | | |
| | Additional Test and/or Chemistries taken By | · Pump Dala Driller: No | |
| | Held: 1 | Documents Held: 1 | |
| | Pitless Adapter Type: | | |
| | Drop Pipe Type: | Diameter: | |
| | Length: Comments: | Diameter. | |
| | Comments. | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | 7. Contractor Ce | ertification | - |
| | Driller's Name: | UNKNOWN DRILLE | 7 |
| | Certification No.: This well was constru | cted in accordance with the | Water |
| | Most regulation of the | Alberta Environmental Prote | ection & [|
| | Enhancement Act. Al | l information in this report is t | true. 10 Day |
| | Signature | FT IV | Report 1 |

Water Well Report 0154425 Well I.D.: Water Well Drilling Report Мар Map Verified: Date Report The data contained in this report is supplied by the Driller. The province disclaims 1991/01/25 Received: responsibility for its accuracy. Alberta **Imperial** Measurements: Environment 2. Well Location 1. Contractor & Well Owner Information Rge Westof Drilling Company Approval No.: 1/4 or Sec Company Name: M LSD FRASER, RON 046 27 20 SE Postal Code: City or Town: Mailing Address: ocation in Quarter Boundary 0 FT from Well Location Identifier: Boundary WellOwner's Name: 0 FT from PEZDERIC, KIRK/LORNE Plan Block _ot Postal Code: Mailing Address: P.O. Box Number: **TOC 1H0** GENERAL DELIVERY, FALUN How Obtain: Well Elev: Country: Province: Not Oblain City: 6. Well Yield 3. Drilling Information Start Time: Fest Date Proposed well use: Type of Work: New Well (yyyy/mm/dd): Domestic & Stock Reclaimed Well 1990/09/25 11:00 AM Anticipated Water Materials Used: Date Reclaimed(yyyy/mm/dd): Test Method: Bailer Requirements/day Method of Drilling: Rotary Non pumping 89 FT 0 Gallons Rate: Gallons Flowing Well: No static level: Oil Present: Gas Present: Rate of water 5. Well Completion Gallons/Min emoval: 4. Formation Log Date Completed 120 FT Depth of Depth Date Started(yyyy/mm/dd): (yyyy/mm/dd): pump intake: from 1990/09/25 Water level at 90 FT 1990/09/24 Lithology Description ground Borehole Diameter: 0 Inches Well Depth: 150 FT end of level Casing Type: Galvanized pumping: Lîner Type: (feet) Distance from top of Inches Clay & Gravel 18 Size OD: 0 Inches Size OD: 4.5 Inches casing to ground Sandy Clay 20 Wall Thickness: 0.156 level: Clay Wall Thickness: 0 Inches 86 Depth To water level (feet) nches Shale 90 Bottom: 0 FT Elapsed Time Bottom at: 132 FT Top: 0 FT Clay 94 Drawdown Minutes:Sec Recovery Perforations Size: Perforations Soft Shale 111 0 Inches x 0 Inches Total Drawdown: 1 FT from: 0 FT to: 0 FT Hard Shale 113 If water removal was less than 2 hr 0 Inches x 0 Inches from: 0 FT to: 0 FT Clay 132 0 Inches x 0 Inches duration, reason why: from: 0 FT to: 0 FT Hard Shale 140 Perforated by: 150 Sandy Shale Seal: Driven to: 132 FT from: 0 FT Recommended pumping rate: 7 Seal: to: 0 FT Gallons/Min from: 0 FT Recommended pump intake: 0 FT Seal: from: 0 FT Type Pump Installed to: 0 FT Screen ID: 0 Inches Screen Type: Pump Type: Slot Size: 0 Inches to: 0 FT Pump Model: from: 0 FT Screen ID: 0 Inches Screen Type: Any further pumptest information? Slot Size: 0 Inches from: 0 FT to: 0 FT Screen Installation Method: Bottom: Top: Pack: Amount: 0 Grain Size: Geophysical Log Taken: Retained on Files: Additional Test and/or Pump Data Chemistries taken By Driller: No Documents Held: 1 Held: 0 Pilless Adapler Type: Drop Pipe Type: Diameter: Inches Length: FT

Comments:

Driller's Name:

Signalure

Certification No.:

7. Contractor Certification

UNKNOWN DRILLER

Y٢ Mo

3432

This well was constructed in accordance with the Water Well regulation of the Alberta Environmental Protection & Enhancement Act. All information in this report is true.

Report 1 Pump Test 1 page1



Well I.D.: Map Verified: Date Report 0075152 Not Verified 1980/12/31 Received: Measurements: Imperial

| Alberta Environment | re | sponsibility for its accuracy. | | | | Measurer | nenls: | <u>Imperia</u> | 3 |
|--|---|---|--------------------|-------------------------|------------------------------------|-----------------------|-------------------------|----------------|----------|
| 1. Contractor & Well Owner In | formatio | n | | | | 2. Well | Location | 1 | |
| | IUIIIIaliu | Dr | illing Cor | npany A | pproval No.: | 1/4 or S | Sec Twp | Rge | Westof |
| Company Name: FLINN DRILLING LTD. | | | - | | | LSD | 04 046 | 28 | M 4 |
| Mailing Address: C | ity or Town: | : Po | stal Cod | e: | | | 24 046 n Quarter | 20 | |
| | | | , | | | 0 FT fr | | В | oundary |
| AAGIIOANIIGI 2 Marino: | ell Location |) ideniilier: | | | | OFT fr | rom | | oundary |
| ROAN, FRANCIS P.O. Box Number: M | lailing Addr | ess: Po | stal Cod | e: | | Lot | Block | Plan | |
| | | HOBBEMA | | | | Well Elev: | . He | w Obta | in: |
| City: P | rovince: | Co | ountry: | | | 2885 FT | | timated | |
| | | | | | | 6. Well | Yield | | |
| 3. Drilling Information | | | | Propose | ed well use: | Test Date | ! | Start T | ime: |
| Type of Work: New Well | | | | Domest | | (yyyy/mm | /dd): | | |
| Reclaimed Well Date Reclaimed(yyyy/mm/dd): | Materia | ils Used: | | | ted Water | 1980/11/1 | li Lada Dumb | 11:00 | AM |
| Method of Drilling: Rotary | | | | Require 0 Gallor | ments/day | Non pum | nod: Pump | 94 FT | |
| Flowing Well: No | Rate: G | | | U Ganoi | 15 | static leve | | | |
| Gas Present: No | | sent: No | · | • | | Rate of w | | 10 | |
| 4. Formation Log | | 5. Well Completion | Dala | omplete | d | removal: | | Gallor | |
| Depth | | Date Started(yyyy/mm/dd): | (vvvv/r | nm/dd): | u | Depth of pump into | oke- | 125 F | 1 |
| from ground Lithology Descrip | tion | 1980/11/11 | 1980/1 | 1/11 | | Water lev | | 94 FT | |
| level | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | Well Depth: 180 FT | | | eter: 0 Inches | end of | 0, 41 | | |
| (feet) | | Casing Type: Steel | Liner | Type: Ste | el | oumping: | | | |
| 51 Sandy Till | | Size OD: 5.56 Inches | Size C | D: 4.5 li hicknes: | nches | Distance | from top of | Inche | 5 |
| 68 Gray Shale | | Wall Thickness: 0.188 Inches | inches | | ,, _V . 100 | casing to level: | ground | | |
| 97 Blue Shale 104 Gray Shale | | | Top: 0 | | Bollom: 180 | Dep | lh To water | level (f | eel) |
| 104 Gray Shale 111 Green Shale | | Bottom at: 59 FT | FT | | | | Elapsed | Time | |
| 117 Brown Shale | | Perforations | Perfor | ations S | ize: : 18 Inches | Drawdo | wn Minutes | S:Sec K | ecovery |
| 139 Gray Shale | | from: 140 FT to: 170 FT from: 0 FT to: 0 FT | 0,125 0 Inch | es x 0 lr | ches | I otal Dra | wdown: 31 emoval wa | s less il | nan 2 hr |
| 142 Gray Sandstone | | from: 0 FT to: 0 FT | | es x 0 lr | | | reason wh | | |
| 159 Blue Shale | | Perforated by: Torch | | | | | | - | |
| 162 Blue Sandstone 180 Gray Shale | | Seal: Driven | | | | 1 | | | |
| 180 Glay Shale | | from: 0 FT | to: 59 | 1-1 | | Docomo | ended pun | nning ra | le: 0 |
| | | Seal: from: 0 FT | to: 0 F | Ŧ | | Gallons/I | Min | | |
| | | Seal: | | | | Recomm | ended pur | np intak | e: 135 |
| | | from: 0 FT | to: 0 F | | | _FT | | | |
| | | Screen Type: from: 0 FT to: 0 FT | Scree | n ID: 0 I lize: 0 In | ncnes ches | Type Pu | mp installe /pe: SUB | a | |
| | | from: 0 FT to: 0 FT Screen Type: | Scree | n ID: 0 I | nches | Pump M | | | |
| | | from: 0 FT to: 0 FT | Slot S | Size: 0 In | ches | HP 33 | } | | |
| | | Screen Installation Method | d: | | | _Any furth | ner pumpte | st inforr | nation? |
| | | Fittings | 0-46 | | | | | | |
| · | | Top: Pack: | Botto | 111. | | - | | | |
| 1 | | Grain Size: | Amou | ınt: | | _] | | | |
| 1 | | Geophysical Log Taken: | | | | | | | |
| | | Retained on Files: | | | | 4 | | | |
| | | Additional Test and/or Pu Chemistries taken By Dril | mp Dala Ier: No | | | | | | |
| | | Held: 0 | Docu | ments H | eld: 1 | _ | | | |
| | | Pitless Adapter Type: | | | | | | | |
| | | Drop Pipe Type: | . | -1 | ahaa | 1 | | | |
| | | Length: 126 FT | Diam | eler: 1 li | iches | - | | | |
| | | Comments: | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| 1 | | | | | | | | | |
| | | 7. Contractor Certi | ficatio | า | | | | | |
| | | Driller's Name: | UNK | NOWN | ORILLER | 1 | | | |
| | | Cortification No : | 67 | | 181 ـ عاد كان | | | | |
| | | This well was constructed Well regulation of the Alb | in acco | rdance v | vith the water tal Protection : | ۹ ا | | | |
| | | Well regulation of the Alb Enhancement Act. All info | ormation | in this re | eport is true. | i | | | |
| | | Signature | | | Yr Mo D | ау | | | |
| | | 1 - 3 | | | | aport 1 | Pump T | act 1 | nace1 |

| The data contained in this | Well Drilling report is supplied by the Dr responsibility for its accurac | iller. The province disclaims | Well I.D.: 0075154 Map Verified: Not Verified Date Report 1986/09/05 Received: Imperial |
|---|---|---|---|
| Environment | ion | | 2. Well Location |
| 1. Contractor & Well Owner Informat | [01] | Drilling Company Approval No. | .: 1/4 or Sec Twp Rge Westof |
| Company Name: JIM'S DRILLING | | 149180 | LSD W |
| Mailing Address: City or Tov | VI (, | Postal Code: | NE 24 046 28 4 Location in Quarter |
| RR 1 MILLET AL | <i>y</i> 0.11 | TOC 1Z0 | 0 FT from Boundary |
| Well-Owner's Harrie. | ion Identifier: | | 0 FT from Boundary |
| ROWAN, MARY RO Box Number: Mailing Ad | drace: | Postal Code: | Lot Block Plan |
| P.O. Box Number: Mailing Ad HOBBEMA | | | Well Fley: How Obtain: |
| City: Province: | | Country: | Well Elev: How Obtain: FT Not Obtain |
| | | | 6. Well Yield |
| 3. Drilling Information | | D-seed well use: | O(Times) |
| Type of Work: New Well | | Proposed well use: Domestic | (yyyy/mm/dd): |
| Reclaimed Well | rials Used: | Anticipated Water | 1986/02/09 11:00 AM |
| Jale Neclanied(yyy) | nais osca. | Requirements/day | Test Method: Air |
| Method of Drilling: Rotary Flowing Well: No Rate | : Gallons | 0 Gallons | Non pumping 80 FT static level: |
| | resent: No | | Rate of water 10 |
| 4. Formation Log | 5. Well Completion | | removal: Gallons/Min |
| Depth | Date Started(yyyy/mm/do | Date Completed | Depth of 100 FT |
| from | 1986/02/05 | (yyyy/mm/dd): 1986/02/09 | pump intake: Water level at 80 FT |
| ground Lithology Description | 1986/02/05 Well Depth: 220 FT | Borehole Diameter: 0 Inch | Water level at 80 FT |
| evel | Casing Type: Steel | Liner Type: Plastic | — pumping: |
| (feet) 15 Sand | Size OD: 5.5 Inches | Size OD: 4.5 Inches | Distance from top of Inches |
| 45 Clay & Rocks | Wall Thickness: 0.188 | Wall Thickness: 0 Inches | casing to ground |
| 62 Sand | Inches | i | level: Depth To water level (feet) |
| 105 Blue Clay | Bollom at: 140 FT | Top: 130 FT Bottom: 220 FT | Elapsed Time |
| 130 Soft Shale | Perforations | Perforations Size: | Drawdown Minutes:Sec Recovery |
| 150 Hard Shale 158 Hard Sandstone | from: 130 FT to: 220 FT | 0 Inches x 0 Inches | Total Drawdown: 20 FT |
| 158 Hard Sandstone 180 Hard Shale | from: 0 FT to: 0 FT | 0 Inches x 0 Inches | If water removal was less than 2 hr |
| 190 Hard Sandstone | from: 0 FT to: 0 FT | 0 Inches x 0 Inches | duration, reason why: |
| 205 Hard Shale | Perforated by: Machine Seal: Driven | | |
| 209 Hard Sandstone | from: 0 FT | to: 140 FT | |
| 220 Hard Shale | Seal: | | Recommended pumping rate: 10 |
| , | from: 0 FT | to: 0 FT | Gallons/Min Recommended pump intake: 130 |
| | Seal: from: 0 FT | to: 0 FT | FT FT |
| | Screen Type: | Screen ID: 0 Inches | Type Pump Installed |
| • | from: 0 FT to: 0 FT | Slot Size: 0 Inches | Pump Type: SUB |
| | Screen Type: | Screen ID: 0 Inches Slot Size: 0 Inches | Pump Model: H.P.: .5 |
| | from: 0 FT to: 0 FT Screen Installation Meth | | Any further pumptest information? |
| | Fittings | | , |
| | Top: | Bottom: | |
| | Pack: | A | |
| | Grain Size: | Amount: | |
| | Geophysical Log Taken Retained on Files: | • | · |
| | Additional Test and/or P | ump Dala | |
| | Chemistries taken By D | riller: No | |
| | Held: 0 | Documents Held: 1 | |
| | Pitless Adapter Type: | | |
| | Drop Pipe Type: Length: 120 FT | Diameter: 1 Inches | |
| | Comments: | | |
| | | | |
| | | | |
| 1 | | | 1 |
| | | | |
| | | A. P. C. T. | |
| | 7. Contractor Cer | titication | |
| 1 | Driller's Name: | UNKNOWN DRILLER VA3475 | |
| | Certification No.: | ed in accordance with the Wat | ter |
| 1 | Well regulation of the A | lberta Environmental Protectio | on & I |
| | Enhancement Act. All is | nformation in this report is true | ·. [|
| 1 | Signature | Yr Mo | Report 1 Pump Test 1 page1 |

| The data contained in this | Well Drilling F report is supplied by the Drille responsibility for its accuracy. | er. The province disclaims | Well I.D.: Map Verified: Date Report Received: Measurements: | 0075148 Not Verified 1986/09/05 Imperial |
|--|---|--|--|---|
| Environment | | | 2. Well Location | n |
| 1. Contractor & Well Owner Informati | on Dri | illing Company Approval No.: | 1/4 or Sec Twi | Rge Westof |
| Company Name: JIM'S DRILLING | | 9180 | LSD | M A |
| Mailing Address: City or Tow | 11. | stal Code: | NW 24 046 Location in Quarter | |
| DR 1 MILLET AB | CA TO | C 1Z0 | OFT from | Boundary |
| 16110 tritor o tracinor | on Identifier: | | 0 FT from | Boundary |
| BUFFALO, STELLA O Box Number: Mailing Add | tross: Po | stal Code: | Lot Block | Plan |
| O.O. Box Number: Mailing Add MAMEO B | EACH | | NAT-11 Ciano h | low Obtain: |
| City: Province: | Co | ountry: | | lot Obtain |
| | | | 6. Well Yield | |
| 3. Drilling Information | | Proposed well use: | Test Date | Start Time: |
| ype of Work: New Well | | Domestic | (yyyy/mm/dd): | |
| Reclaimed Well Date Reclaimed(yyyy/mm/dd): Mater | ials Used: | Anticipated Water | 1986/02/04 Test Method: Air | 11:00 AM |
| fethod of Drilling: Rotary | | Requirements/day 0 Gallons | Non pumping | 60 FT |
| lowing Well: No Rate: | Gallons | O Ganons | static level: | |
| Sas Flesent. No | esent: No | | Rate of water | 10 |
| 1. Formation Log | 5. Well Completion | Date Completed | removal: | Gallons/Min 100 FT |
| Depth | Date Started(yyyy/mm/dd): | (yyyy/mm/dd): | Depth of pump intake: | 10011 |
| rom ground Lithology Description | 1986/01/30 | 1986/02/04 | Water level at | 60 FT |
| evel | Well Depth: 220 FT | Borehole Diameter: 0 Inches | неми от | |
| feet) | Casing Type: Steel | Liner Type: Plastic Size OD: 4.5 Inches | pumping: Distance from top | of Inches |
| 15 Clay & Rocks | Size OD: 5.56 Inches Wall Thickness: 0.188 | | casing to ground | DI MICHES |
| 28 Sand 45 Clay & Rocks | Inches | Wall Thickness: 0 Inches | level: | |
| 30 Gravel | Boltom at: 140 FT | Top: 130 FT Bottom: | Depth To wat | er level (feel) |
| 100 Soft Shale | | l220 FT Perforations Size: | Elapse Drawdown Minule | jime se:Sec Recovery |
| 140 Hard Shale | Perforations from: 130 FT to: 220 FT | 0 Inches x 0 Inches | Total Drawdown: 4 | 10 FT |
| 143 Hard Sandstone | from: 0 FT to: 0 FT | 0 Inches x 0 Inches | If water removal w | as less than 2 hi |
| 180 Hard Shale 185 Hard Sandstone | from: 0 FT to: 0 FT | 0 Inches x 0 Inches | duration, reason w | hy: |
| 200 Soft Sandslone | Perforated by: Machine | | - | |
| 205 Hard Shale | Seal: Driven from: 0 FT | to: 140 FT | | |
| 215 Soft Sandstone | Seal: | 6.116.1 | Recommended pu | mping rate: 10 |
| 220 Hard Shale | from: 0 FT | to: 0 FT | Gallons/Min | 1.1.1 |
| | Seal: | to: 0 FT | Recommended pu | imp intake: 120 |
| | from: 0 FT Screen Type: | Screen ID: 0 Inches | Type Pump Install | ed |
| | from: 0 FT to: 0 FT | Slot Size: 0 Inches | _Pump Type: SUB | |
| | Screen Type: | Screen ID: 0 Inches | Pump Model: | |
| | from: 0 FT to: 0 FT | Slot Size: 0 Inches | H.P.: .5 Any further pumpi | est information? |
| | Screen Installation Method Fittings | J | Tany later or paring | |
| | Top: | Bottom: | _ | |
| | Pack: | | | |
| | Grain Size: | Amount: | | |
| | Geophysical Log Taken: Retained on Files: | | | |
| | Additional Test and/or Pur | mp Data | | |
| | Chemistries taken By Drill | er: No | | |
| | Held: 0 | Documents Held: 1 | | |
| | Pitless Adapter Type: Drop Pipe Type: | | | |
| | Length: 110 FT | Diameter: 1 Inches | _ | |
| | Comments: | | ŀ | |
| | | | Į. | |
| | | | | |
| | | | | |
| | | | 1 | |
| | 7 Contractor Contil | fication | 7 | |
| | 7. Contractor Certif Driller's Name: | UNKNOWN DRILLER | ┪ | |
| | Cortification No. | VA3475 | | |
| | This well was constructed | t in accordance with the Water | | |
| | Well regulation of the Alb | erta Environmental Protection | « | |
| | | ormation in this report is true. Yr Mo D | ay | |
| | Well regulation of the Alb | erta Environmental Protection ormation in this report is true. Yr Mo D | & | Test 1 pag |

| The data contained in this i | Well Drilling | riller. The province disclaims | Well I.D.: 0075135 Map Verified: Not Verified Date Report Received: |
|---|--|---|---|
| Alberta re Environment | esponsibility for its accura | cy. | Measurements: <u>Imperial</u> |
| 1. Contractor & Well Owner Information | on | B W O A 1 N | 2. Well Location 1/4 or Sec Twp Rge Westof |
| Company Name: | | Drilling Company Approval No.: | LSD M |
| FIVELAND N Mailing Address: City or Town | 1: | Postal Code: | SE 24 046 28 4 Location in Quarter |
| WellOwner's Name: Well Location | n Identifier: | | 0 FT from Boundary 0 FT from Boundary |
| BOYSES, JOE P.O. Box Number: Mailing Add | ress: | Postal Code: | Lot Block Plan |
| HOBBEMA City: Province: | | Country: | Well Elev: How Obtain: 2800 FT Estimated |
| 3. Drilling Information | | | 6. Well Yield Test Date Start Time: |
| Type of Work: New Well Reclaimed Well | -la l la ade | Proposed well use: Domestic Anticipated Water | Test Date Start Time: (yyyy/mm/dd): 1962/10/20 11:00 AM |
| Date Reclaimed(yyyy/mm/dd): Materi Method of Drilling: Drilled | als Used: | Requirements/day | Test Method: Pump |
| Flowing Well: No Rate: | Gallons esent: No | 0 Gallons | static level: |
| Gas Present: No Oil Pre 4. Formation Log | 5. Well Completion | າ | Rate of water 6 removal: Gallons/Min |
| Depth | Date Started(yyyy/mm/d | Date Completed | Depth of 65 FT |
| from ground Lithology Description | 1962/10/20 | 1962/10/20 | pump intake: Water level at 65 FT |
| level | Well Depth: 151 FT | Borehole Diameter: 0 Inche | end of |
| (feet) 8 Clay | Casing Type: Steel Size OD: 2 Inches | Size OD: 0 Inches | pumping: Dislance from top of Inches |
| 26 Yellow Sand | Wall Thickness: 0 Inches | s Wall Thickness: 0 Inches | casing to ground |
| 94 Gray Clay & Sand 135 Shale | Bottom at: 110 FT | Top: 0 FT Bollom: 0 F | Debti to Mater level (1991) |
| 151 Sand | Perforations | Perforations Size: | Elapsed Time Drawdown Minutes:Sec Recovery |
| | from: 0 FT to: 0 FT | 0 Inches x 0 Inches 0 Inches x 0 Inches | Total Drawdown: 0 FT |
| | from: 0 FT to: 0 FT from: 0 FT to: 0 FT | 0 inches x 0 Inches | If water removal was less than 2 hr duration, reason why: |
| | Perforated by: | | - Curation, rousest trips |
| | Seal: Driven from: 0 FT | to: 0 FT | |
| | Seal: from: 0 FT | to: 0 FT | Recommended pumping rate: 0 Gallons/Min |
| | Seal: [rom: 0 FT | to: 0 FT | Recommended pump intake: 100 |
| | Screen Type: | Screen ID: 0 Inches | Type Pump Installed |
| | from: 0 FT to: 0 FT Screen Type: | Slot Size: 0 Inches Screen ID: 0 Inches | Pump Type: HAND Pump Model: CYLINDER |
| | from: 0 FT to: 0 FT | Slot Size: 0 Inches | −H.P.: |
| | Screen Installation Meth Filtings | 100: | Any further pumptest information? |
| 1 | Top: | Bottom: | 4 |
| | Pack: Grain Size: | Amount: | _ |
| | Geophysical Log Taken Retained on Files: | : | |
| | Additional Test and/or F | oump Data | |
| | Chemistries taken By D Held: 0 | riller: Yes Documents Held: 1 | |
| | Pitless Adapter Type: | | |
| | Drop Pipe Type: Length: FT | Diameter: 1.81 Inches | |
| | Comments: | VATER SOFT & CLEAR. | |
| | | | |
| | 7. Contractor Cer | tification | |
| | Driller's Name: Certification No.: This well was construct | UNKNOWN DRILLER · ted in accordance with the Water | |
| | Well regulation of the A Enhancement Act. All i Signature | Niberta Environmental Protection nformation in this report is true. Yr Mo D | |

| A Water | Well Drilling | Report | Well I.D.: 0075137 Map Verified: Not Verified |
|--|---|--|--|
| The data contained in this | report is supplied by the D | riller. The province disclaims | Date Report 1979/01/11 Received: |
| Alberta Environment | esponsibility for its accura | cy. | Measurements: Imperial |
| 1. Contractor & Well Owner Information | on | | 2. Well Location |
| Company Name: | | Drilling Company Approval No | o.: 1/4 or Sec Twp Rge Westof |
| ELGIN EXPLORATION COMPANY LIMITED | | Postal Code: | SE 24 046 28 4 |
| Mailing Address: City or Tow | | , ostal 0000. | Location in Quarter |
| TO THIS E THAT IS | on Identifier: | | 0 FT from Boundary 0 FT from Boundary |
| GREEN, SAM P.O. Box Number: Mailing Add | ress: | Postal Code: | Lot Block Plan |
| PIGEON LI | | Couples | Well Elev: How Obtain: |
| City: Province: | | Country: | 2815 FT Estimated |
| 3. Drilling Information | | ` . | 6. Well Yield |
| Type of Work: New Well | | Proposed well use | : Test Date Start Time: (yyyy/mm/dd): |
| Reclaimed Well | ials Used: | Domestic Anticipated Water | 1978/06/01 11:00 AM |
| Method of Drilling: Rotary | | Requirements/day | |
| Flowing Well: No Rate: | Gallons | 0 Gallons | static level: |
| Gas 1630m. 110 | 5. Well Completion | <u> </u> | Rate of water 12 removal: Gallons/Min |
| 4. Formation Log Depth | | Date Completed | Depth of 140 FT |
| from | Date Started(yyyy/mm/d | ^{d):} (yyyy/mm/dd): 1978/06/01 | pump intake: |
| ground Lithology Description | 1978/06/01 Well Depth: 150 FT | Borehole Diameter: 0 Incl | Water level at 20 FT end of |
| level (feet) | Casing Type: Steel | Liner Type: Steel | pumping: |
| 50 Clay & Rocks | Size OD: 5.56 Inches | Size OD: 4.5 Inches Wall Thickness: 0.188 | Distance from top of Inches |
| 150 Shale & Sandstone | Wall Thickness: 0.188 Inches | Inches | casing to ground evel: |
| | Bottom at: 55 FT | Top: 24 FT Bottom: 150 FT | Depth To water level (feet) Elapsed Time |
| | Perforations | Perforations Size: | Drawdown Minutes:Sec Recovery |
| | from: 70 FT to: 90 FT from: 110 FT to: 150 FT | 0 Inches x 0 Inches 0 Inches x 0 Inches | Total Drawdown: 120 FT If water removal was less than 2 hr |
| | from: 0 FT to: 0 FT | 0 Inches x 0 Inches | duration, reason why: |
| | Perforated by: Torch | | |
| | Seal: Driven from: 0 FT | to: 55 FT | |
| | Seal: | O F. | Recommended pumping rate: 0 |
| | from: 0 FT Seal: | to: 0 FT | Gallons/Min Recommended pump intake: 87 FT |
| | from: 0 FT | to: 0 FT | Type Pump Installed |
| | Screen Type: | Screen ID: 0 Inches Slot Size: 0 Inches | Pump Type: SUB |
| | from: 0 FT to: 0 FT Screen Type: | Screen ID: 0 Inches | Pump Model: H.P.: .5 |
| | from: 0 FT to: 0 FT | Slot Size: 0 Inches | Any further pumplest information? |
| | Screen Installation Meth | nod: | |
| | Fitlings Top: | Bollom: | |
| | Pack: | A | |
| | Grain Size: Geophysical Log Taker | Amount: | |
| | Retained on Files: | | |
| | Additional Test and/or F | Pump Data | |
| | Chemistries taken By D Held: 0 | Documents Held: 1 | |
| | Pitless Adapter Type: | | |
| | Drop Pipe Type: | Diameter: 1 Inches | |
| | Length: 75 FT Comments: | Digitiotors (titorioo | |
| | | | |
| | | | |
| | 7. Contractor Cer | tification | |
| | Driller's Name: | UNKNOWN DRILLER | |
| | Certification No. | 2412977 ted in accordance with the Wa | ter |
| | Well regulation of the A | Alberta Environmental Protection | on & [|
| | Enhancement Act. All i | information in this report is true | e. |

| Vater Well Report | | | Well I.D.: | 0075140 |
|---|---|--|--------------------------------------|------------------|
| A Water | Well Drilling F | Renort | Map Verified: | Not Verified |
| VValet | report is supplied by the Drille | or The province disclaims | Date Report | 1987/10/23 |
| The data contained in this | report is supplied by the Drille esponsibility for its accuracy. | at the province discionne | Received: | Imperial |
| Environment | esponsibility for the decersory. | | Measurements: | |
| . Contractor & Well Owner Informati | on | | 2. Well Locatio | <u>n</u> |
| Company Name: | ווע | illing Company Approval No.: | 1/4 or Sec Twp | Rge Westo |
| M'S DRILLING | | 9180 | LSD SE 24 046 | |
| lailing Address: City or Tow | ··· | stal Code: C 1Z0 | Location in Quarter | |
| R 1 MILLET AB | on Idenlifier: | 0 120 | 0 FT from | Boundar |
| renowner a marric. | on identifier. | | 0 FT from | Boundar |
| ADDLEBACK, DALE O. Box Number: Mailing Add | iress: Po | stal Code: | Lot Block | Plan |
| MAMEO BI | EACH | | Well Elev: H | low Obtain: |
| ity: Province: | Co | ountry: | 111011 | lot Obtain |
| | | | 6. Well Yield | |
| . Drilling Information | | Proposed well use: | Test Date | Start Time: |
| ype of Work: New Well | | Domestic | (yyyy/mm/dd): | |
| eclaimed Well | ials Used: | Anticipaled Water | 1987/06/12 | 11:00 AM |
| C(0 1 10 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 | lais Osca. | Requirements/day | Test Method: Air | SA ET |
| lethod of Drilling: Rotary lowing Well: No Rate: | Gallons | 0 Gallons | Non pumping | 80 FT |
| | esent: No | | static level: Rate of water | 10 |
| . Formation Log | 5. Well Completion | | removal: | Gallons/Min |
| eplh | Date Started(yyyy/mm/dd): | Date Completed , | Depth of | 150 FT |
| nm | """ | (yyyy/mm/dd): | pump intake: | |
| round Lithology Description | 1987/06/09 | 1987/06/12 Borehole Diameter: 0 Inches | Water level at | 80 FT |
| evel | Well Depth: 300 FT Casing Type: Steel | Liner Type: Plastic | -1ena oi | |
| feet) O Sand & Coal | Size OD: 5.56 Inches | Size OD: 4.5 Inches | pumping: Distance from top of | of Inches |
| 0 Sand & Coal 5 Sand & Sandstone | Wall Thickness: 0.244 | Wall Thickness: 0 Inches | casing to ground | JI 11101100 |
| 0 Sand | Inches | <u> </u> | level: | |
| 5 Sandstone | Bottom at: 180 FT | Top: 175 FT Boltom: | Depth To water | er level (feet) |
| 50 Shale | | 1300 FT | Elapsed | Time |
| 53 Sandstone | Perforations | Perforations Size: 0 Inches x 0 Inches | Drawdown Minute Total Drawdown: 7 | |
| 60 Shale | from: 175 FT to: 300 FT | 0 Inches x 0 Inches | If water removal wa | as less than 2 h |
| 65 Sandstone | from: 0 FT to: 0 FT | 0 Inches x 0 Inches | duration, reason w | |
| 184 Shale | Perforated by: | | | • |
| 190 Sandstone 255 Shale | Seal: Driven | | | |
| 255 Shale 300 Sandstone | from: 0 FT | to: 180 FT | Recommended pu | moing rate: 10 |
| 500 Sandstone | Seal: | to: 0 FT | Gallons/Min | mping rate. To |
| | from: 0 FT Seal: | 10.011 | Recommended pu | mp intake: 160 |
| | from: 0 FT | to: 0 FT | _i FT | |
| | Screen Type: | Screen ID: 0 Inches | Type Pump Install | ed |
| | from: 0 FT to: 0 FT | Slot Size: 0 Inches | _ Pump Type: SUB | |
| | Screen Type: | Screen ID: 0 Inches Slot Size: 0 Inches | Pump Model: H.P.: .5 | |
| | from: 0 FT to: 0 FT Screen Installation Method | | Any further pumpt | est information? |
| | Fittings | | T, | |
| | Top: | Bottom: | _ | |
| | Pack: | | | |
| | Grain Size: | Amount: | \dashv | |
| | Geophysical Log Taken: | | | |
| | Retained on Files: Additional Test and/or Pun | nn Dala | _ | |
| | Chemistries taken By Drille | er: No | | |
| | Held: 0 | Documents Held: 1 | _ | |
| | Pitless Adapter Type: | | | |
| | Drop Pipe Type: | est control difficult | | |
| | Length: 150 FT | Diameter: 1 Inches | \dashv | |
| · | Comments: | | - [| |
| | 1 | | 1 | |
| | | | 1 | |
| | | | | |
| | | | 1 | |
| | | iti | | |
| 1 | 7. Contractor Certif | IONION DOLLED | -1 | |
| <u> </u> | Driller's Name: | UNKNOWN DRILLER VA2925 | 1 | |
| | Certification No.: This well was constructed | in accordance with the Water | | |
| | Well regulation of the Albe | erta Environmental Protection | & | |
| 1 | Enhancement Act. All info | rmation in this report is true. | 1 | |
| | Signature | Yr Mo D | ayl | |

Well I.D.: Map Verified: Date Report 0168953 Not Verified 1992/10/09 Received:

| Alberta Environment | responsibility for its accuracy. | | | Measurements: <u>Imperial</u> | | |
|--|----------------------------------|---|-----------------------|------------------------------------|-----------------------------|---|
| 1. Contractor & Well Owner | Informatio | חר | | | 2. Well Locati | on |
| 1. Contractor & Well Owner Company Name: | momant | / t : | Drilling Cor | npany Approval No.: | 1/4 or Sec Tv | vp Rge Weslof |
| SCHMIDT DRILLING LTD. | | | 119156 | | LSD SE 24 04 | M 16 28 4 |
| Mailing Address: | City or Town | I. | Postal Cod T4J 1R2 | e: | Location in Quarte | |
| RR 2, SITE 16, BOX 16 | Well Locatio | BERTA CANADA | 140 1112 | | 0 FT from | Boundary |
| WellOwner's Name: LITTLECHILD, GARY/ERMINSKIN | Well Locatio | n identinor. | | | 0 FT from | Boundary |
| IR | | | | | Lot Block | Plan |
| P.O. Box Number: | Mailing Add | ress: | Postal Cod T0C 1N0 | e: | Well Elev: | How Oblain: |
| Ott. | HOBBEMA Province: | | Country: | | FT | Not Obtain |
| City: | 1 101111001 | | | | 6. Well Yield | |
| 3. Drilling Information | | | | | Test Date | Start Time: |
| Type of Work: New Well | | | | Proposed well use: | (yyyy/mm/dd): 1992/08/27 | 11:00 AM |
| Reclaimed Well | Malani | ala l land: | | Unknown Anticipated Water | Test Method: Air_ | |
| Date Reclaimed(yyyy/mm/dd): | мацеп | als Used: | | Requirements/day | Non pumping | 40 FT |
| Method of Drilling: Rotary Flowing Well: No | Rate: (| Gallons | | 0 Gallons | static level: | 12 |
| Gas Present: No | Oil Pre | esent: No | | <u> </u> | Rate of water removal: | Gallons/Min |
| 4. Formation Log | | 5. Well Completion | n | | Depth of | 140 FT |
| Depth | | Date Started(yyyy/mm/d | ld): Date C | ompleted | pump intake: | |
| from | dudla. | 1992/08/27 | 1992/0 | nm/dd): 18/27 | Water level at | 140 FT |
| ground Lithology Desci | iption | Well Depth: 140 FT | | ole Diameter: 0 Inches | end of pumping: | ļ |
| (feet) | | Casing Type: Steel | | ype: Plastic | Distance from top | of Inches |
| 18 Brown Till & Clay | | Size OD: 5.56 Inches | | D: 4.5 Inches | casing to ground | |
| 85 Till & Clay | | Wall Thickness: 0.188 | i i | hickness: 0.237 | level: | |
| 89 Green Shale | | Inches | Inches | 00 FT Bottom: | Depth To wa | ter level (feel) ed Time |
| 103 Gray Sandstone | | Bottom at: 103 FT | 140 F | | Drawdown Minu | tes:Sec Recovery |
| 140 Gray Shale | | Perforations | Perfora | ations Size: | Total Drawdown: | 100 FT |
| | | from: 100 FT to: 140 FT | | iches x 7 Inches | | was less than 2 hr |
| | | from: 0 FT to: 0 FT | | es x 0 Inches es x 0 Inches | duration, reason | why: |
| | | from: 0 FT to: 0 FT Perforated by: Saw | UINCI | es x o mones | 1 | |
| <u> </u> | | Seal: Driven | | | 7 | |
| | | from: 0 FT | to: 103 | FT | Recommended p | umping rate: 10 |
| | | Seal: | to: 0 E | т | Gallons/Min | ump intake: 100 |
| | | from: 0 FT Seal: | to: 0 F | 1 | Recommended p | итр паке. 100 |
| | | from: 0 FT | to: 0 F | | Type Pump Insta | lled |
| | | Screen Type: | | n ID: 0 Inches | Pump Type: SUE | 3 |
| | | from: 0 FT to: 0 FT | | ize: 0 Inches | Pump Model: | |
| | | Screen Type: from: 0 FT to: 0 FT | | n ID: 0 Inches ize: 0 Inches | H.P.: | otest information? |
| | | Screen Installation Met | | IZC. C TITOTICS | | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
| | | Fittings | | | | |
| | | Top: | Bottor | n: | | |
| | | Pack: | Amou | nl | | |
| | | Grain Size: Geophysical Log Taker | | 116 | , | |
| | | Retained on Files: | | 144) | _ | |
| | | Additional Test and/or | Pump Dala | | | |
| | | Chemistries taken By D | oriller: No | ments Held:·1 | | |
| | | Held: 0 Pitless Adapter Type: | Docui | nerits meiuti | - | |
| 1 | | Drop Pipe Type: | | | | |
| | | Length: FT | Diam | eter: Inches | _ | |
| | | Comments: | | | | |
| | | | | | | |
| | | | | | 1 | |
| | | | | | 1 | |
| | | 1 | | | 1 | |
| | | 7. Contractor Cer | rtification | | 7 | |
| | | Driller's Name: | TIME | NOWN DRILLER | - | |
| | | Certification No.: | VB32 | 87 | | |
| | | This well was constitut | ted in accor | dance with the Water | | |
| 1 | | Well regulation of the A | Alberta Envi | ronmental Protection | ă | |
| | | Enhancement Act. All | ınlormation | in this report is true. Yr Mo D | av | |
| | | Signature | | (1 1410 10 | -71 | |

| water Well Report | | | Well I.D.: | 0075142 |
|---|--|--|-----------------------------------|-------------------|
| A Water | Well Drilling | Report | Map Verified: | Not Verified |
| The data contained in this | report is supplied by the Di | riller. The province disclaims | Date Report Received: | 1987/06/04 |
| Alberta | responsibility for its accurac | by. | Measurements: | <u>Imperial</u> |
| Environment | | | 2. Well Location | າກ |
| 1. Contractor & Well Owner Informati | <u>on</u> | Drilling Company Approval No.: | | |
| Company Name: | | 149180 | LSD | М |
| JIM'S DRILLING Mailing Address: Cily or Tow | | Postal Code: | SW 24 04 | |
| RR 1 MILLET AE | CA | T0C 1Z0 | Location in Quarter | Boundary |
| WellOwner's Name: Well Locati | on Identifier: | | 0 FT from 0 FT from | Boundary |
| LIGHTNING, PHILIP | 1 | Postal Code: | Lot Block | Plan |
| P.O. Box Number: Mailing Add MAMEO B | ,, 000. | r ostar code. | | |
| City: Province: | | Country: | 111011 21011 | low Obtain: |
| Oity. | | | | Not Oblain |
| 3. Drilling Information | | - | 6. Well Yield | Start Time: |
| Type of Work: New Well | | Proposed well use: | Test Date (yyyy/mm/dd): | Start Time: |
| Reclaimed Well | | Domestic Anticipated Water | (yyyy/min/dd). 1987/05/07 | 11:00 AM |
| Date (Colairica())))irinica) | ials Used: | Requirements/day | Test Method: Air | |
| Method of Drilling: Rotary | Gallons | 0 Gallons | Non pumping | 45 FT |
| | esent: No | | static level: | 40 |
| 4. Formation Log | 5. Well Completion | | Rate of water | 10 Gallons/Min |
| | | Date Completed | removal: Depth of | 85 FT |
| Depth from | Date Started(yyyy/mm/do | ^{a):} (yyyy/mm/dd): | pump intake: | / - |
| ground Lithology Description | 1987/05/03 | 1987/05/07 | - Water level at | 45 FT |
| level | Well Depth: 260 FT | Borehole Diameter: 0 Inche | end of | |
| (feet) | Casing Type: Steel Size OD: 5.56 Inches | Liner Type: Plastic Size OD: 0 Inches | pumping: Distance from top | of Inches |
| 97 Clay & Sand 130 Sandstone | Wall Thickness: 0.244 | | casing to ground | OI MICHES |
| 130 Sandstone 145 Shale | Inches | Wall Thickness: 0 Inches | level: | |
| 155 Sandstone | Bottom at: 150 FT | Top: 140 FT Bottom: | Depth To wat | |
| 165 Shale | | l260 FT | Elapse | d Time |
| 180 Sandslone | Perforations | Perforations Size: 0 Inches x 0 Inches | Drawdown Minut Total Drawdown: | |
| 242 Shale | from: 150 FT to: 260 FT | 0 Inches x 0 Inches | If water removal w | as less than 2 hr |
| 260 Sandstone | from: 0 FT to: 0 FT | 0 Inches x 0 Inches | duration, reason v | |
| | Perforated by: Machine | | | • |
| | Seal: Driven | | | |
| 1 | from: 0 FT | to: 150 FT | Recommended pu | moing rate: 10 |
| | Seal: from: 0 FT | to: 0 FT | Gallons/Min | imping rate. 10 |
| | Seal: | ••• | Recommended po | ımp intake: 130 |
| | from: 0 FT | to: 0 FT | FT | |
| | Screen Type: | Screen ID: 0 Inches | Type Pump Instal | led |
| | from: 0 FT to: 0 FT | Slot Size: 0 Inches Screen ID: 0 Inches | Pump Type: SUB | |
| | Screen Type: from: 0 FT lo: 0 FT | Slot Size: 0 Inches | H.P. 5 | |
| 1 | Screen Installation Meth | | Any further pump | lest information? |
| | Fittings | | | |
| | Top: | Bottom: | | |
| | Pack: | Amount: | | |
| | Grain Size: Geophysical Log Taken | | | |
| Ţ | Retained on Files: | • | | |
| | Additional Test and/or F | | | |
| | Chemistries taken By D | riller: No | | |
| | Held: 0 | Documents Held: 1 | | |
| | Pitless Adapter Type: Drop Pipe Type: | | | |
| | Length: 120 FT | Diameter: 1 Inches | | |
| | Comments: | | | |
| | | | 1 | |
| | | | 1 | |
| | | | | |
| | | | | |
| 1 | | | | |
| | 7. Contractor Cer | tification | | |
| | Driller's Name: | UNKNOWN DRILLER VA2925 | | |
| 1 | Certification No.: | vA2925 ed in accordance with the Wate | ır | |
| 1 | Well regulation of the A | Iberta Environmental Protection | . & | |
| | Enhancement Act. All in | nformation in this report is true. | 1 | |
| | Signature | Yr Mo l | Day | |

| | port | | | Well I.D.: | 0075145 |
|--|---|--|--|--------------------------------------|-------------------|
| \triangle | Water | Well Drilling F | Report | Map Verified: | Not Verified |
| <i>(</i> | The data contained in this re | opart is supplied by the Drill | er The province disclaims | Date Report | 1979/01/11 |
| Alberta | The data contained in this re | eport is supplied by the bridge esponsibility for its accuracy. | et. The province dissisting | Received: | |
| Environment | 16 | apoliability for its accuracy. | | Measurements: | <u>Imperial</u> |
| Contractor & | Well Owner Informatio | n | | 2. Well Location | |
| Company Name: | | Dr | illing Company Approval No.: | 1/4 or Sec Twp | Rge Westol |
| LGIN EXPLORATI | ON COMPANY LIMITED | ` | | LSD SW 24 046 | |
| Mailing Address: | Cily or Town | ; PC | ostal Code: | Location in Quarter | |
| VellOwner's Name: | Well Location | n Identifier: | | 0 FT from | Boundary |
| WILLIAMS, PERCY | ***** | | | 0 FT from | Boundary Plan |
| O. Box Number: | Mailing Addr | Ç55. | ostal Code: | Lot Block | Man |
| | PIGEON LK | | ountry: | Well Elev: Ho | ow Oblain: |
| City: | Province: | | Juliu y. | 2800 FT Es | stimated |
| n Duillian Infor | - ofice | | | 6. Well Yield | |
| Drilling Infor Type of Work: New | | | Proposed well use: | Test Date | Start Time: |
| Reclaimed Well | vven | | Domestic | (yyyy/mm/dd): | 11:00 AM |
| Date Reclaimed(yy) | () / 11 / 11 / 14 / 17 / 17 / 17 / 17 / 17 | als Used: | Anticipated Water | 1978/11/01 Test Method: Air | 11.00 MM |
| Method of Drilling: F | Rotary | N-11 | Requirements/day 0 Gallons | Non pumping | 37 FT |
| Flowing Well: No | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, | Sallons sent: No | | static level: | |
| Gas Present: No | | 5. Well Completion | | Rate of water | 12 Gallons/Min |
| 4. Formation L | og | | Date Completed | removal: Depth of | 100 FT |
| Depth from | | Date Started(yyyy/mm/dd): | (yyyy/mm/dd): | pump intake: | 10011 |
| ground Lit | hology Description | 1978/11/01 | 1978/11/01 | Water level at | 37 FT |
| level | • | Well Depth: 200 FT | Borehole Diameter: 0 Inches | end of | |
| (feet) | | Casing Type: Steel Size OD: 5.56 Inches | Liner Type: Size OD: 0 Inches | pumping: Distance from top o | f Inches |
| 73 Clay & F 77 Sand | COCKS | Wall Thickness; 0.188 | | casing to ground | Hiches |
| 98 Clay & F | Rocks | Inches | Wall Thickness: 0 Inches | _level: | |
| | Sandstone | Bottom at: 103 FT | Top: 0 FT Bottom: 0 F | T Depth To wate | r level (feel) |
| | | Perforations | Perforations Size: | Elapsed Drawdown Minute | I Ime |
| | | from: 0 FT to: 0 FT | 0 Inches x 0 Inches | Total Drawdown: 67 | |
| | | from: 0 FT to: 0 FT | 0 Inches x 0 Inches 0 Inches x 0 Inches | If water removal wa | s less than 2 hr |
| | | from: 0 FT to: 0 FT Perforated by: | O Inches X O Inches | duration, reason wh | ıy: |
| | | Seal: Driven | | 1 | |
| | | from: 0 FT | to: 98 FT | | |
| | | Seal: | . 0.57 | Recommended pur | nping rate: 4 |
| | | from: 0 FT Seal: | to: 0 FT | Gallons/Min | |
| | | from: 0 FT | to: 0 FT | Recommended pur | np intake: 98 F |
| | | Screen Type: | Screen ID: 0 Inches | Type Pump Installe Pump Type: SUB | iu |
| | | from: 0 FT to: 0 FT | Slot Size: 0 Inches | Pump Model: | |
| | | Screen Type: | Screen ID: 0 Inches Slot Size: 0 Inches | H.P.: .5 | |
| | | from: 0 FT to: 0 FT Screen Installation Method | The state of the s | Any further pumpte | st information? |
| | | Filtings | | 7 | |
| 1 | | Top: | Boltom: | _ | |
| | | Pack: | A | | |
| | | Grain Size: Geophysical Log Taken: | Amount: | - | |
| | | Retained on Files: | | | |
| | | Additional Test and/or Pur | np Data | | |
| | | Chemistries taken By Drille | er: No Documents Held: 1 | 1 | |
| | | Held: 0 Pitless Adapter Type: | Documents rield. 1 | 7 | |
| | | Drop Pipe Type: | | | |
| | | Length: 88 FT | Diameter: 1 Inches | _ | |
| | | Comments: | | İ | |
| | | | | | |
| | | | | | |
| | | i . | | ı | |
| | | | | | |
| | | | | | |
| | | 7 Contractor Cortis | ication | _ | |
| | | 7. Contractor Certif | ication UNKNOWN DRILLER | | |



WELL NAME: LIGHTNING, PHILLIP LOCATION: LSD SW SEC 24 TWP 046 RG 28 M 4 WELL DEPTH: 60

AQUIFER:

SAMPLING DATE: 2/20/1978 TIME: 0

WELL ID No:0075146 SAMPLE No: 2039 WATER LEVEL: -9 LABORATORY: AE PRINT DATE: 11/27/2004

| SAMPLING DATE: 2/20/1978 TIME: 0 | | FRINT DATE. THEHEOUT | |
|--|--|--|--|
| FIELD: BICARBONATE CHLORIDE DISSOLVED OXYGEN IRON PH S2 TOTAL ALKALINITY | MG/L -9 -9 -9 -9 -9 | FIELD: CARBONATE CONDUCTIVITY EH MANGANESE SULPHATE TEMPERATURE°C TOTAL HARDNESS | MG/L -9 -9 -9 -9 -9 |
| LABORATORY: Analysis Date: 3/9/1978 COD DIC ION BALANCE SAR TOTAL ALKALINITY TDS DOC | -9 -9 1.01 -9 734 1233 -9 | CONDUCTIVITY FLUORIDE PH SIO2 TC TN | 1884 0.31 8.5 9.4 -9 |
| AMMONIUM-N CALCIUM CHLORIDE NITRATE-N PHOSPHATE SODIUM NO ₂ + NO ₃ | -9 3.992 3.0033 -9 -9 460 0.1144 | BICARBONATE CARBONATE MAGNESIUM NITRITE-N POTASSIUM SULPHATE TOTAL HARDNESS | 864.7177 15 2.001536 0.2996 1.3114 299.8128 |
| ALUMINUM BARIUM CADMIUM COBALT IRON MANGANESE MOLYBDENUM SELENIUM VANADIUM | -9 -9 -9 0.05 -9 -9 -9 | ARSENIC BERYLIUM CHROMIUM COPPER LEAD MERCURY NICKEL STRONTIUM ZINC | -9 -9 -9 -9 -9 -9 |
| HYDROCARBONS PHENOLICS | -9 -9 | PESTICIDES OTHER 3 | -9 0 |

Remarks: WELL SAMPLE.

-9 indicates that no analysis was done for this parameter

*Indicates concentrations less than.

Temperature reported in Degree Centigrade. Conductivity reported in microsiemens/cm, pH in pH units. Alkalinity and Hardness expressed as Calcium Carbonate. FE, VA, PB, AL, AG expressed as extractable. FE in field measurements and all remaining metals expressed as total.

EH - Oxidation-Reduction Potential DIC - Dissolved Inorganic Carbon DOC - Dissolved Organic Carbon TDS - Total Dissolved Solids

NOTE: This data may not be fully checked.

The Province disclaims all responsibility for its accuracy

SAR - Sodium Adsorption Ratio COD - Chemical Oxygen Demand TN - Total Particulate Nitrogen - Total Particulate Carbon TC

| The data contained in this r | Well Drilling eport is supplied by the Dril esponsibility for its accuracy | ller. The prov | t vince disclaims | Well I.D.: Map Verified: Date Report Received: Measurements: | 0285575 Not Verified 1996/10/15 Imperial |
|--|--|---------------------------------|--|--|---|
| 1. Contractor & Well Owner Information | <u> </u> | | | 2. Well Location | 7 |
| Company Name: |)(t | rilling Comp | any Approval No.: | 1/4 or Sec Twp | |
| SCHMIDT DRILLING LTD. | | 19156 | S. () ((pp. 5 (-) / (-) | LSD | M |
| Mailing Address: City or Town | : . P | ostal Code: | | SW 24 046 | 28 4 |
| RR 2, SITE 16, BOX 16 PONOKA A | | 4J 1R2 | | Location in Quarter | Doundon |
| WellOwner's Name: Well Location | n Identifier: | | | 0 FT from 0 FT from | Boundary Boundary |
| CAMERON BUFFALO SCHOOL | | | | Lot Block | Plan |
| (SAMSON P.O. Box Number: Mailing Add | ose. b | Postal Code: | | | |
| HOBBEMA | | OC 1N0 | | | ow Obtain: |
| City: Province: | C | Country: | | | ot Obtain |
| | | | | 6. Well Yield | |
| 3. Drilling Information | | | | Test Date | Start Time: |
| Type of Work: New Well | | | oposed well use: | (yyyy/mm/dd): | 11:00 AM |
| Reclaimed Well | | | mestic | 1996/09/03 Test Method: Air | 11.00 AW |
| Bate (100:00::100)))) | als Used: | | iticipated Water equirements/day | Non pumping | 91 FT |
| Method of Drilling: Rotary | Gallons | | 0 Gallons | static level: | |
| I is it is a second of | sent: No | ļ | | Rate of water | 25 |
| 4. Formation Log | 5. Well Completion | | | removal: | Gallons/Min |
| Depth | | Dale Com | pleted | Depth of | 140 FT |
| from | Date Started(yyyy/mm/dd): | : (yyyy/mm | /dd): | pump intake: Water level at | FT |
| ground Lithology Description | 1996/09/03 | 1996/09/0 | | end of | • • |
| level | Well Depth; 140 FT | | Diameter: 0 Inches | pumping: | |
| (feet) | Casing Type: Steel | Liner Typ | e; Plastic 4.5 Inches | Distance from top of | Inches |
| 20 Brown Clay | Size OD: 5.56 Inches Wall Thickness: 0.188 | | 4.5 inches kness: 0.237 | casing to ground | |
| 112 Gray Shale 119 Sandstone | Inches | Inches | NI 1655. V.201 | level: Depth To water | level (feet) |
| 140 Gray Sandstone | | Top: 100 | FT Bollom: | Elapsed | |
| | Boltom at: 115 FT | 1140 FT | | Drawdown Minutes | |
| | Perforations | Perforatio | | Total Drawdown: 0 l | |
| | from: 120 FT to: 140 FT | | es x 12 Inches x 0 Inches | If water removal was | |
| | from: 0 FT to: 0 FT from: 0 FT to: 0 FT | | x 0 Inches | duration, reason wh | у: |
| | Perforated by: Machine | 0 11.0 | | 1 | |
| | Seal: Bentonite Chips/Tab | olets | | | |
| | from: 0 FT | to: 115 F | r | Recommended pur | ping rate: 15 |
| | Seal: | to: 0 FT | | Gallons/Min | - 1-1-les 400 |
| | from: 0 FT Seal: | 10.011 | | Recommended pum | ip intake: 120 |
| | from: 0 FT | to: 0 FT | | Type Pump Installed | 1 |
| | Screen Type: | |): 0 Inches | Pump Type: SUB | - |
| | from: 0 FT to: 0 FT | Slot Size: | | Pump Model: | |
| | Screen Type: | | 0: 0 Inches : 0 Inches | H.P.: .75 Any further pumptes | t information? |
| | from: 0 FT to: 0 FT Screen Installation Method | | . 0 11101103 | TAITY TUTTIFIE PUTTIPLES | ot innormation? |
| | Fittings | | | 1 | |
| | Top: | Bollom: | | _ | |
| | Pack: | | | | |
| | Grain Size: | Amount: | | 4 | |
| | Geophysical Log Taken: Retained on Files: | | | | |
| | Additional Test and/or Pur | mp Data | | 1 | |
| | Chemistries taken By Drill | ler: No | | | |
| | Held: 0 | Documer | ıts Held: 1 | , | |
| | Pitless Adapter Type: | | | | |
| | Drop Pipe Type: | Diameter | · Inches | | |
| · I | Length: FT Comments: | Diameter | . 11,01100 | 1 | |
| | DRILLER REPORTS DIS | TANCE FRO | M TOP OF | | |
| | CASING TO GROUND LE | | | | |
| | | | | | |
| | | | | | |
| | | | | _ | |
| | 7. Contractor Certif | ication | |] | |
| | Driller's Name: | UNKNOV | VN DRILLER | | |
| | Certification No.: | 14177A | | | |
| | This well was constructed Well regulation of the Albe | ı ın accordan | ce with the Water nental Protection & | | |
| | Enhancement Act. All info | erra Environi ormation in th | is report is true. | | |
| | Signature | | Yr Mo Day | / | |
| | 1-3 | | | | |



Well I.D.: Map Verified: Date Report 0075150 Not Verified 1988/02/10 Received: Imperial

| Alberta Environment | Measurements: Imperial | | |
|---|--|---|---|
| 1. Contractor & Well Owner Inform | nation | | 2. Well Location |
| Company Name: JIM'S DRILLING | | Drilling Company Approval No 149180 | LSD M |
| Mailing Address: City or | | Postal Code: T0C 1Z0 | NW 24 046 28 4 Location in Quarter |
| | T AB CA ocation Identifier: | 100 120 | 0 FT from Boundary |
| ROWAN, CASEY | | | 0 FT from Boundary Lot Block Plan |
| | Address: O BEACH | Postal Code: | |
| City: Province | ce: | Country: | FT Not Obtain |
| 3. Drilling Information | | | 6. Well Yield Test Date Start Time: |
| Type of Work: New Well | | Proposed well use: Domestic | Test Date Start Time: (yyyy/mm/dd): |
| Reclaimed Well Date Reclaimed(yyyy/mm/dd): N | faterials Used: | Anticipated Water | 1988/01/26 11:00 AM |
| Method of Drilling: Rotary | | Requirements/day 0 Gallons | Test Method: Air Non pumping 50 FT |
| Flowing Well: No | tate: Gallons oil Present: No | O Gallons | static level: |
| Gas Present: No C | 5. Well Completion | n | Rate of water 30 removal: Gallons/Min |
| Depth | Date Started(yyyy/mm/d | Date Completed | Depth of 100 FT |
| from | ***** | ^(yyyy/mm/dd) : 1988/01/26 | pump intake: |
| ground Lithology Description level | Well Depth: 260 FT | Borehole Diameter: 0 Inch | Water level at 50 FT end of |
| (feet) | Casing Type: Stainless | Liner Type: Plastic | pumping: |
| 60 Sand & Rocks 80 Sandstone | Size OD: 5.56 Inches Wall Thickness: 0.188 | Size OD: 4.5 Inches | Distance from top of Inches casing to ground |
| 80 Sandstone 95 Shale | Inches | Wall Thickness: 0 Inches | level: |
| 135 Sandstone | Bottom at: 160 FT | Top: 150 FT Bollom: 260 FT | Departo materiore (1944) |
| 165 Shale | Perforations | Perforations Size: | Elapsed Time Drawdown Minutes:Sec Recovery |
| 220 Sandstone 245 Shale | from: 150 FT to: 260 FT | 0 Inches x 0 Inches | Total Drawdown: 50 FT |
| 260 Sandstone | from: 0 FT to: 0 FT from: 0 FT to: 0 FT | 0 Inches x 0 Inches 0 Inches x 0 Inches | If water removal was less than 2 hr duration, reason why: |
| | Perforated by: Machine | | duration, reason why. |
| | Seal: Driven | | |
| | from: 0 FT Seal: | to: 160 FT | Recommended pumping rate: 30 |
| | from: 0 FT | to: 0 FT | Gallons/Min |
| | Seal: | to: 0 FT | Recommended pump intake: 100 |
| | from: 0 FT Screen Type: | Screen ID: 0 Inches | Type Pump Installed |
| | from: 0 FT to: 0 FT | Slot Size: 0 Inches | Pump Type: SUB |
| | Screen Type: from: 0 FT | Screen ID: 0 Inches Slot Size: 0 Inches | Pump Model: H.P.: .5 |
| | Screen Installation Met | | Any further pumptest information? |
| | Fittings | | |
| | Top: Pack: | Bollom: | |
| | Grain Size: | Amount: | |
| | Geophysical Log Taker | n: | |
| | Retained on Files: Additional Test and/or F | Pump Data | ······································ |
| | Chemistries taken By D | Oriller: No | |
| | Held: 0 Pilless Adapter Type: | Documents Held: 1 | |
| | Drop Pipe Type: | | |
| | Length: 100 FT | Diameter: 1 Inches | - |
| | Comments: | | |
| | | | |
| 1 | | | |
| | | | 1 |
| | 7. Contractor Cer | tification | |
| | Driller's Name: | UNKNOWN DRILLER | |
| | Certification No.: | VA2925 | 1 |
| | This well was construc | ted in accordance with the Wat Alberta Environmental Protectio | er n & |
| | Enhancement Act. All i | information in this report is true. | |
| | Signature | Yr Mo | Day |
| | | | Report 1 Pump Test 1 page1 |

| * | | _ | | Well I.D.: | 0151921 | |
|--|--|------------------------------|----------------------------------|--------------------------------------|---------------------------|--|
| Water | Well Drilling | Repo | ort | Map Verified: | Not Verified | |
| The data contained in this | report is supplied by the D | riller. The p | rovince disclaims | Date Report Received: | 1990/01/24 | |
| Alberta Environment | esponsibility for its accura- | cy. | | Measurements: | <u>Imperial</u> | |
| 1. Contractor & Well Owner Informati | on | | | 2. Well Location | n | |
| Company Name: | | | npany Approval No.: | 1/4 or Sec Tw | | |
| SCHMIDT DRILLING LTD. | | 119156 Postal Cod | 0. | LSD SE 24 046 | M 6 28 4 | |
| Mailing Address: Cily or Tow RR 2, SITE 16, BOX 16 PONOKA A | | T4J 1R2 | e. | Location in Quarter | | |
| | on Identifier: | | | 0 FT from | Boundary | |
| BULL, LOUIS | | Postal Cod | | 0 FT from Lot Block | Boundary Plan | |
| P.O. Box Number: Mailing Add HORREMA | ress: MAMEO BEACH | Postal Coo | e. | | | |
| City: Province: | | Country: | | | low Obtain: lot Obtain | |
| 3. Drilling Information | | | | 6. Well Yield | | |
| Type of Work: New Well | | | Proposed well use: | Test Date | Start Time: | |
| Reclaimed Well | ·-1- 114- | | Domestic Anticipated Water | (yyyy/mm/dd): 1989/11/01 | 11:00 AM | |
| W.L. | als Used: | | Requirements/day | Test Method: Air | | |
| Method of Drilling: Rotary Flowing Well: No Rate: | Gallons | | 0 Gallons | Non pumping | 50 FT | |
| Gas Present: Oil Pr | | | l | static level: Rate of water | 100 | |
| 4. Formation Log | 5. Well Completion | | | removal: | Gallons/Min | |
| Depth | Date Started(yyyy/mm/do | | | Depth of | 100 FT | |
| from ground Lithology Description | 1989/11/01 | 1989/1 | | pump intake: | 0 FT | |
| level | Well Depth: 200 FT | Boreho | le Diameter: 0 Inches | Water level at end of | טרו | |
| (feet) | Casing Type: Steel | | ype: Plastic | pumping: | | |
| 40 Brown Fine Grained Sand | Size OD: 5.56 Inches | | D: 4 Inches nickness: 0.237 | Distance from top o | of Inches | |
| 98 Brown Clayey Till 138 Green Shale | Wall Thickness: 0.188 Inches | Inches | | casing to ground level: | | |
| 200 Gray Fine Grained Sandstone | Bottom at: 103 FT | Top: 1 | 00 FT Bollom: | Depth To wate | er level (feet) | |
| | | ¹ 200 F1 | | Elapsed Time | | |
| | Perforations from: 140 FT to: 200 FT | | ations Size: ches x 12 Inches | Drawdown Minute Total Drawdown: 0 | | |
| | from: 0 FT to: 0 FT | | es x 0 Inches | If water removal wa | | |
| | from: 0 FT to: 0 FT | | es x 0 Inches | duration, reason w | | |
| | Perforated by: Other | | | İ | | |
| | Seal: Driven | to: 0 F | т | | | |
| | from: 103 FT Seal: | 10.01 | ı | Recommended pu | mping rate: 10 | |
| | from: 0 FT | lo: 0 F | Τ | Gallons/Min | | |
| | Seal: | In. 0 F | т | Recommended pu | mp intake: 0 FT | |
| | from: 0 FT Screen Type: | to: 0 F | ID: 0 Inches | Type Pump Installe | ed | |
| | from: 0 FT to: 0 FT | | ze: 0 Inches | Pump Type: Pump Model: | | |
| | Screen Type: | | ı ID: 0 Inches | H.P. | | |
| | from: 0 FT to: 0 FT | | ze: 0 Inches | Any further pumpte | est information? | |
| | Screen Installation Methor Fittings | ua: | | -[| | |
| | Top: | Botton | 1: | <u> </u> | | |
| 1 | Pack: | | | [| | |
| | Grain Size: | Amour | nt: 0 | 4 | | |
| , | Geophysical Log Taken: Retained on Files: | | | | | |
| · | Additional Test and/or Pr | ump Data | | 1 | | |
| | Chemistries taken By Dr | iller: No | | | | |
| | Held: 0 Pitless Adapter Type: | Docun | nents Held: 1 | - | | |
| | Drop Pipe Type: | | | | | |
| | Length: FT | Diame | ter: Inches | 1 | | |
| | Comments: | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | } | | |
| | | | | | | |
| | 7. Contractor Cert | ification | | 1 | | |
| | Driller's Name: | UNKN | OWN DRILLER | 1 | | |
| | Certification No.: | VB328 | 37 | | | |
| | This well was constructe Well regulation of the All | d in accord | lance with the Water | | | |
| | Enhancement Act. All in | oerta ⊏⊓viri formation in | n this report is true. | | | |
| | Signature | | Yr Mo Day | | | |
| <u></u> | 1 . 2 | | | port 1 Pump T | oct 1 page1 | |

| Alberta The data con | tained in this | Well Drilling report is supplied by the E | Driller. The p | O rt province disclaims | Well I.D.: Map Verified: Date Report Received: | . 0168969 Not Verified 1992/10/09 |
|--|---------------------------|--|-----------------------|---|---|---|
| Environment | | • | ж. | | Measurements: 2. Well Location | Imperial |
| 1. Contractor & Well Owner Company Name: | mormane | on | Drilling Co | mpany Approval No.: | 1/4 or Sec Tw | |
| SCHMIDT DRILLING LTD. | | | 119156 | | LSD | _ M |
| Mailing Address: | City or Town | | Postal Coo | de: | SW 24 046 Location in Quarter | |
| RR 2, SITE 16, BOX 16 WellOwner's Name: | Well Location | LBERTA CANADA | T4J 1R2 | | 0 FT from | Boundary |
| NEEPOSE, GLENDA/SAMSON | YYON LOCAN | or identifici. | | | 0 FT from | Boundary |
| BAND | | | D1-1 C | 1 | Lot Block | Plan |
| P.O. Box Number: | Mailing Add MA-ME-O, I | | Postal Cod T0C 1N0 | ie: | Well Elev: | low Obtain: |
| City: | Province: | TOODLING | Country: | | | lot Obtain |
| | | | | | 6. Well Yield | |
| 3. Drilling Information | | | | lb | Test Date (yyyy/mm/dd): | Start Time: |
| Type of Work: New Well Reclaimed Well | | | | Proposed well use: Domestic | (yyyy/mm/dd). 1992/08/26 | 11:00 AM |
| Date Reclaimed(yyyy/mm/dd): | Materi | als Used: | | Anticipated Water | Test Method: Air | |
| Method of Drilling: Rotary | | | | Requirements/day | Non pumping | 50 FT |
| Flowing Well: No | | Gallons esent: No | | 0 Gallons | static level: Rate of water | 15 |
| Gas Present: No 4. Formation Log | Oll P16 | 5. Well Completion | <u> </u> | | removal: | Gallons/Min |
| Depth | | | Date C | Completed | Depth of pump intake: | 180 FT |
| from | | Date Started(yyyy/mm/d | (yyyyı | nm/dd): | Water level at | 50 FT |
| ground Lithology Desc | ription | 1992/08/26 Well Depth: 180 FT | 1992/0 | 08/26 ble Diameter: 0 Inches | end of | - · · · |
| level (feet) | | Casing Type: Steel | | Type: Plastic | pumping: | £ 1b |
| 10 Sand | | Size OD: 5.56 Inches | | D: 4.5 Inches | Distance from top of casing to ground | or inches |
| 18 Brown Clay | | Wall Thickness: 0.188 | | hickness: 0.237 | level: | |
| 106 Till & Clay | | Inches | Inches | 20 FT Bottom: | Depth To water | |
| 125 Gray Shale 132 Gray Clay | | Bottom at: 134 FT | 180 F | | Elapsed Drawdown Minute | |
| 141 Gray Shale | | Perforations | | ations Size: | Total Drawdown: 1 | 30 FT |
| 180 Gray Sandslone | | from: 140 FT to: 180 FT from: 0 FT to: 0 FT | | nches x 7 Inches es x 0 Inches | If water removal wa | |
| | | from: 0 FT to: 0 FT | | es x 0 Inches | duration, reason w | ny: |
| İ | | Perforated by: Saw | | |] | |
| | | Seal: Driven | to: 134 | LET | | ito: 10 |
| | | from: 0 FT Seal: | 10: 13: | + [1 | Recommended pur Gallons/Min | mping rate: 10 |
| | | from: 0 FT | (o: 0 F | Т | Recommended pur | mp intake: 120 |
| | | Seal: | to: 0 F | т | FT | |
| | | from: 0 FT Screen Type: | | n ID: 0 Inches | Type Pump Installe | ed |
| | | from: 0 FT to: 0 FT | Slot S | ize: 0 Inches | Pump Type: Pump Model: | |
| | | Screen Type: | | n ID: 0 Inches | H.P.: | |
| | | from: 0 FT to: 0 FT Screen Installation Meth | | ize: 0 Inches | Any further pumpte | est information? |
| | | Fittings | .~~. | | 1 | |
| | | Top: | Bottor | <u>n; </u> | - | |
| | | Pack: Grain Size: | Amou | nl: | | |
| | | Geophysical Log Taken | | | 1 | |
| 1 | | Retained on Files: | | | - | |
| | | Additional Test and/or P Chemistries taken By D | | | | |
| | | Held: 0 | | nents Held: 1 | | |
| | | Pitless Adapter Type: | | | 1 | |
| | | Drop Pipe Type: | D! | ten laabaa | | |
| | | Length: FT Comments: | Diame | eter: Inches | -[| |
| | | Commond. | | | | |
| | | | | | | |
| | | | | | 1 | |
| | | | | | | |
| | | 7 Contractor Cont | Hifiontion | | 1 | |
| | | 7. Contractor Cert Driller's Name: | | IOWN DRILLER | - | • |
| | | Certification No.: | VA87 | 25 | 1 | |
| | | This well was constructed | ed in accord | dance with the Water | 1 | |
| | | Well regulation of the Al Enhancement Act. All in | iberta Envir | onmental Protection & n this report is true | | |
| E | | Fillipricerient vor vin it | auoni | Yr Mo Da | . 1 | |

| Water Well Rep | ort | | | | | |
|---------------------------------------|----------------------|--|----------------|------------------------------|------------------------------|-------------------------------|
| A | 167-4- | Marit Position of C | D | | Well I.D.: | 0075157 |
| | water | Well Drilling F | керо | rt | Map Verified: Date Report | Not Verified |
| The data contained in thi | | report is supplied by the Drill- responsibility for its accuracy. | Received: | 1979/11/14 | | |
| Environment | | responsibility for its accuracy. | | | Measurements: | <u>Imperial</u> |
| 1. Contractor & | Well Owner Informati | on | | | 2. Well Loca | |
| Company Name: | //OF | Dr | rilling Com | pany Approval No.: | 1/4 or Sec LSD | Twp Rge Westo M |
| ALBERTA WW SER\ Mailing Address: | City or Tow | n: Po | ostal Code | | 13 25 | 046 28 4 |
| | · | | | | Location in Qua 0 FT from | rter Boundary |
| WellOwner's Name: BROWN, STUNRT | Well Locati | on Identifier: | | | 0 FT from | Boundary |
| P.O. Box Number: | Mailing Add | fress: Po | ostal Code | | Lot Bloc | ck Plan |
| 0.1 | HOBBEMA | | ountry: | | Well Elev: | How Obtain: |
| City: | Province: | O | ourny. | | 2850 FT | Estimated |
| 3. Drilling Inform | nation | | | | 6. Well Yield | |
| Type of Work: New V | Vell | | | roposed well use: | Test Date (yyyy/mm/dd): | Start Time: |
| Reclaimed Well Date Reclaimed(yyyy | /mm/dd): Maier | ials Used: | | omestic Inticipated Water | 1979/09/18 | 11:00 AM |
| Method of Drilling: Ca | | 10.3 0000. | F | Requirements/day | Test Method: Pu | |
| Flowing Well: No | | Gallons | 0 | Gallons | Non pumping static level: | 48 FT |
| Gas Present: No | | esent: No 5. Well Completion | | | Rate of water | 15 |
| 4. Formation Lo Depth | 9 | | Date Co | mpleted | removal: | Gallons/Min 56 FT |
| from | | Date Started(yyyy/mm/dd): | (yyyy/mr | n/dd): | Depth of pump intake: | 50 F I |
| | ology Description | 1979/09/13 Well Depth: 130 FT | 1979/09/ | /18 • Diameter: 0 Inches | Water level at | 48 FT |
| level (feel) | | | | pe: Galvanized | end of pumping: | |
| 38 Clay | | Casing Type: Steel | Steel | | Distance from to | op of Inches |
| 130 Blue Shale | 9 | Size OD: 5.56 Inches Wall Thickness: 0.188 | | : 4.5 Inches | casing to ground | b |
| | | Inches | | ckness: 0.25 Inches | Depth To v | vater level (feet) |
| | | Bottom at: 51 FT | Пор: 0 F FT | T Boltom: 130 | Elap | sed Time |
| | | Perforations | | ions Size: | Drawdown Min | nutes:Sec Recovery n: 8 FT |
| | | from: 100 FT to: 130 FT | | x 0 Inches | | I was less than 2 hr |
| | | from: 0 FT to: 0 FT from: 0 FT to: 0 FT | | x 0 Inches x 0 Inches | duration, reasor | ւ why: |
| | | Perforated by: Torch | 0 11101100 | . X 0 1170/100 | <u>j</u> | |
| | | Seal: Driven | | _ | | |
| | | from: 0 FT Seal: | to: 49 F | • | Recommended Gallons/Min | pumping rate: 8 |
| | | from: 0 FT | to: 0 FT | | Recommended | pump intake: 95 FT |
| | | Seal: from: 0 FT | to: 0 FT | | Type Pump Inst | alled |
| | | Screen Type: | | D: 0 Inches | Pump Type: Pump Model: | |
| | | from: 0 FT to: 0 FT | | e: 0 Inches | _H.P.: | |
| | | Screen Type: from: 0 FT to: 0 FT | | D: 0 Inches e: 0 Inches | Any further pur | nplest information? |
| | | Screen Installation Method: | | | | |
| | | Fittings | Bottom: | | | |
| | | Top: Pack: | DULIOITI. | | 4 | |
| | | Grain Size: | Amount | | _ | |
| | | Geophysical Log Taken: Retained on Files: | | | | |
| | | Additional Test and/or Pum | np Data | | 1 | |
| | | Chemistries taken By Drille | er: Yes | | | |
| | | Held: 0 Pilless Adapter Type: | Docume | ents Held: 1 | 1 | |
| | | Drop Pipe Type: | | | | |
| • | | Length: FT | Diamele | er: Inches | | |
| | | Comments: DRILLER REPORTS WAT | ER SOFT. | | | |
| | | J. (1222) (1742) | | | | |
| | | | | | | |
| | | | | | | |
| | | 7. Contractor Certific | ication | | - | |
| 1 | | p, contractor certific | valiui | | _1 | |

7. CONTRACTOR GERMANDER

Driller's Name: UNKNOWN DRILLER

Certification No.:
This well was constructed in accordance with the Water
Well regulation of the Alberta Environmental Protection &
Enhancement Act. All information in this report is true.

Signature Yr Mo Day

| A | Water | Well Drilling | Pane | art | Well I.D.: Map Verifie | d, | 0075159 Not Verified |
|---|----------------|--|--------------|--------------------------------|-----------------------------|------------------------|---------------------------------------|
| <i>a</i> | vvalei | wen binnig | Nept | JI L vanimas disalaima | Date Repor | | NOT VEHICL |
| The data contained in this report is supplied by the Driller. The province disclaims responsibility for its accuracy. | | | | Received: | | | |
| Environment | T- | cohomonium no us accora | ∪y. | | Measureme | ents: | <u>Imperial</u> |
| 1. Contractor & Well Ow | ner Informatio | on | | | 2. Well Lo | ocation | 1 |
| Company Name: | | | Drilling Co | mpany Approval No.: | 1/4 or Sec | | Rge Westof |
| FIVELAND N | • | | | | LSD | 0.40 | M |
| Mailing Address: | City or Towr |): | Postal Cod | le: | NE 25 Location in 9 | | 28 4 |
| | Well Locatio | - Id66 | | | 0 FT from | | Boundary |
| WellOwner's Name: INDIAN AFFAIRS CAN#PASTU | | n wenuner. | | | 0 FT from | | Boundary |
| P.O. Box Number: | Mailing Add | ress: | Postal Cod | e: | Lot | Block | Plan |
| | - | | | | VA (= 11 (= 1 = 1 = 1 = 1 | Lla | ow Obtain: |
| City: | Province: | | Country: | | Well Elev: 2900 FT | | timated |
| | | | | | 6. Well Y | | |
| 3. Drilling Information | | | | Proposed well use: | Test Date | icia | Start Time: |
| Type of Work: New Well Reclaimed Well | | | | Domestic | (yyyy/mm/do | d): | |
| Date Reclaimed(yyyy/mm/dd): | Materia | als Used: | | Anticipated Water | 1963/07/06 | | 11:00 AM |
| Method of Drilling: Drilled | | | | Requirements/day | Test Method | | 33 FT |
| Flowing Well: No | | Gallons | | 0 Gallons | Non pumpin static level: | ıg | 33 F I |
| Gas Present: No | Oil Pre | sent: No | | l | Rate of water | er | 6 |
| 4. Formation Log | | 5. Well Completion | | alata-l | removal: | | Gallons/Min |
| Depth | | Date Started(yyyy/mm/do | | ompleted nm/dd): | Depth of | | 0 FT |
| from ground Lithology D | escription | 1963/07/06 | 1963/0 | | pump intake | | 22 CT |
| ground Lithology D level | cacription | Well Depth: 80 FT | | le Diameter: 0 Inches | Water level end of | at | 33 FT |
| (feet) | | Casing Type: Steel | Liner T | | pumping: | | |
| 6 Clay 22 Clay & Sand | | Size OD: 2 Inches | | D: 0 Inches | Distance fro | | Inches |
| 22 Clay & Sand | | Wall Thickness: 0 Inches | Wall T | nickness: 0 Inches | casing to gr | ound | |
| 23 Gravel | | Bottom at: 53 FT | Top: 0 | FT Boltom: 0 FT | level: | Talvotor | lovel (feel) |
| 25 Clay 49 Brown Sandstone | | | ' | | | i o water Elapsed " | level (feel) Time |
| 80 Water Bearing Sands | stone | Perforations | | ations Size: es x 0 Inches | | | :Sec Recovery |
| | | from: 0 FT to: 0 FT from: 0 FT to: 0 FT | | es x 0 inches es x 0 inches | Total Drawd | lown: 0 F | =T |
| | | from: 0 FT to: 0 FT | | es x 0 Inches | 2 | | less than 2 hr |
| | | Perforated by: | | | duration, re | ason why | y: |
| | | Seal: Driven | | | • | | |
| | | from: 0 FT | (o: 0 F | I | | | |
| | | Seal: from: 0 FT | to: 0 F | T | | | ping rale: 0 |
| | | Seal: | 10.01 | | Gallons/Min | dod sees | n Intako, En ET |
| | | from: 0 FT | lo: 0 F | | Type Pump | | าp intake: 50 FT เ |
| 1 | | Screen Type: | | D: 0 Inches | Pump Type | | , |
| | | from: 0 FT to: 0 FT | | ze: 0 Inches n ID: 0 Inches | Pump Mode | el: CYLIN | IDER |
| | | Screen Type: from: 0 FT to: 0 FT | | ze: 0 Inches | H.P.: | | |
| | | Screen Installation Metho | | | Any further | pumptes | st information? |
| | | Fittings | | | 1 | | |
| | | Тор: | Botton | າ: | -[| | |
| | | Pack: | Ama: | at. | | | |
| | | Grain Size: Geophysical Log Taken: | Amour | 11. | 1 | | |
| | | Retained on Files: | | | | | |
| | | Additional Test and/or Pr | ump Data | |] | | |
| | | Chemistries taken By Dr | iller: Yes | | | | |
| 1 | | Held: 0 | Docun | nents Held: 1 | -{ | | |
| | | Pilless Adapter Type: Drop Pipe Type: | | | | | |
| | | Length: FT | Diame | ter: 1.81 Inches | _ | | |
| | | Comments: | | | 1 | | |
| 1 | | DRILLER REPORTS WA | ATER MED | HARD & CLEAR. | | | |
| 1 | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | - | | |
| | | 7. Contractor Cert | | | - | | |
| | | Driller's Name: | UNKN | OWN DRILLER | 1 | | |
| | | Certification No.: This well was constructe | d in accord | lance with the Water | | | |
| | | Well regulation of the All | berta Envire | onmental Protection & | | | |
| | | Enhancement Act. All in | formation in | n this report is true. | } | | |
| | | Signalure | | Yr Mo Day | у | | · · · · · · · · · · · · · · · · · · · |

| The data contained in this | Well Drilling | Driller. The provit | on disolaims | Well I.D.: Map Verified: Date Report Received: | 0075155 Not Verified 1987/01/05 |
|--|---|----------------------------|---|---|---------------------------------------|
| Alberta I | esponsibility for its accura | acy. | | Measurements: | <u>Imperial</u> |
| 1. Contractor & Well Owner Informati | on | | | 2. Well Location | n |
| Company Name: | <u> </u> | Drilling Compar | y Approval No.: | 1/4 or Sec Twp | Rge Westof M |
| CLEAR WATER DRILLING LTD. | | 5 110-1 | | LSD SE 25 046 | 28 4 |
| Mailing Address: City or Tow | n: | Postal Code: | | Location in Quarter | |
| Wall Location | on Idenlifier: | | | 0 FT from | Boundary |
| WellOwner's Name: Well Location SIMON, ALLEN | on racianor. | | | 0 FT from | Boundary Plan |
| P.O. Box Number: Mailing Add | | Postal Code: | | Lot Block | Plan |
| MAMEO BE | EACH | Country: | | Well Elev: He | ow Obtain: |
| City: Province: | | Country. | | | ot Obtain |
| | | | | 6. Well Yield | |
| 3. Drilling Information Type of Work: New Well | | Pro | osed well use: | Test Date | Start Time: |
| Reclaimed Well | | | | (yyyy/mm/dd): | 11:00 AM |
| Date Reclaimed(yyyy/mm/dd): Mater | ials Used: | Anti | cipated Water uirements/day | 1985/12/17 Test Method: Pump | 11.00 AW |
| Method of Drilling: Drilled | | | allons | Non pumping | 103 FT |
| i louning from the | Gallons esent: No | ال ال | , | static level: | |
| Odo i resent. No | 5. Well Completio | n | | Rate of water | 8 Gallons/Min |
| 4. Formation Log | | Date Comr | leted | removal: Depth of | Gallons/Min 118 FT |
| Depth Irom | Date Started(yyyy/mm/d | ^{aa):} (yyyy/mm/c | d): | Depin oi pump inlake: | 1.011 |
| ground Lithology Description | 1985/12/17 | 1985/12/17 | in malan Olinahan | Water level at | 103 FT |
| level | Well Depth: 220 FT | | iameter: 0 Inches | end of | |
| (feet) | Casing Type; Steel Size OD: 5.56 Inches | Liner Type Size OD: 0 | | pumping: Distance from top o | f Inches |
| 80 Clay & Boulders 87 Blue Shale | Wall Thickness: 0.188 | | | casing to ground | i iliciies |
| 94 Sandstone | Inches | Wall I nicki | ness: 0 Inches | level: | |
| 136 Blue Shale & Rocks | Botlom at: 142 FT | Top: 0 FT | Bottom: 0 FT | Depth To wate | |
| 148 Gray Hard Shale | Perforations | Perforation | s Size: | Elapsed Drawdown Minute | Ilme Sec Recovery |
| 154 Blue Shale & Rocks | from: 0 FT to: 0 FT | 0 Inches x | 0 Inches | Total Drawdown: 15 | FT |
| 160 Blue Hard Shale & Rocks 176 Mixed Shale | - from: 0 FT to: 0 FT | 0 Inches x 0 Inches x | | if water removal wa | s less than 2 hr |
| 180 Gray Sandslone | from: 0 FT to: 0 FT Perforated by: | U mules x | U IIICHES | duration, reason wh | ıy: |
| 218 Sandstone & Shale Ledges | Seal: Formation Seal | | | 1 | |
| 220 Gray Sandstone | from: 0 FT | to: 0 FT | | | |
| | Seal: | I 0 ET | | Recommended pur | nping rate: 8 |
| | from: 0 FT Seal: | lo: 0 FT | | Gallons/Min | |
| | from: 0 FT | to: 0 FT | | Recommended pur | np intake: 140 |
| | Screen Type: | Screen ID: | | Type Pump Installe | d |
| | from: 0 FT to: 0 FT | Slot Size: | | Pump Type: SUB | _ |
| | Screen Type: from: 0 FT to: 0 FT | Screen ID: Slot Size: | | Pump Model: | |
| | Screen Installation Mel | | | H.P.: .5 Any further pumpte | et information? |
| | Fittings | | | many restrict bouthte | |
| | Top: | Bottom: | | 4 | |
| | Pack: | Amount: | | | |
| 1 | Grain Size: Geophysical Log Take | | | 1 | |
| | Retained on Files: | | | 1 | |
| | Additional Test and/or | Pump Data | | | |
| | Chemistries taken By I | Driller: No Document | e Hald: 1 | | |
| | Held: 0 Pitless Adapter Type: | Document | 3 1 16IU. I | 1 | |
| | Drop Pipe Type: | | | | |
| | Length: 140 FT | Diameter: | 1 Inches | - | |
| | Comments: | | | 1 | |
| | | | | | |
| | | | | 1 | |
| | | • | | 1 | |
| | | | | 1 | |
| | 7. Contractor Ce | rtification | | 1 | |
| | Driller's Name: | UNKNOW | N DRILLER | 7 | |
| | Certification No.: | 3809 | | | |
| | This well was construc | cted in accordance | e with the Water | 1 | |
| | Well regulation of the Enhancement Act. All | Alberta Environm | iental Protection & s report is true | | |
| | Enhancement Act. All Signature | anomation in th | Yr Mo Da | yl | |
| | (Digitatoro | | P. | eport 1 Pump T | est 1 page1 |



Well I.D.: Map Verified: Date Report

0132819 Field

Received: Imperial

| Alberta Environment | 16 | esponsibility for its accuracy | Measurements: <u>Imperial</u> | | |
|---|--------------|--|---|--|---|
| 1. Contractor & Well Owner | Informatio | าก | | | 2. Well Location |
| Company Name: UNKNOWN DRILLER | 11101111111 | Di | rilling Cor 9999 | прапу Approval No.: | 1/4 or Sec Twp Rge Westof LSD M |
| Mailing Address: | City or Town | : Po | ostal Cod | e: | 04 29 046 27 4 |
| UNKNOWN | UNKNOWN | | | | Location in Quarter 0 FT from Boundary |
| WellOwner's Name: CALIF STANDARD CO #STH 46- | Well Locatio | n Identifier: | | | 0 FT from Boundary Lot Block Plan |
| 335E P.O. Box Number: | Mailing Addr | ess: P | ostal Cod | e: | Well Elev; How Obtain: |
| City: | Province: | С | ountry: | | 2842.6 FT Survey-Tra 6. Well Yield |
| | | | | | Test Dale Start Time: |
| 3. Drilling Information Type of Work: Structure Test Hole | | | | Proposed well use: | (yyyy/mm/dd): |
| Reclaimed Well | | | | industrial | |
| Date Reclaimed(yyyy/mm/dd): | Materia | als Used: | | Anticipated Water Requirements/day | Test Method: Non pumping FT |
| Method of Drilling: Drilled | | - U | | Requirements/day | static level: |
| Flowing Well: No | | Gallons sent: No | | | Rate of water Gallons/Min |
| Gas Present: No | Cirric | 5. Well Completion | | | removal: |
| 4. Formation Log | | | Date C | ompleted | Depth of FT pump intake: |
| Depth from | | Date Started(yyyy/mm/dd): | (yyyy/r | nm/dd): | Water level at FT |
| ground Lithology Desc | ription | | 1953/0 | | end of |
| levei | | Well Depth: 650 FT | Boreho Liner T | ole Diameter: 0 Inches | Touriprig. |
| (feet) | | Casing Type: Size OD: 0 Inches | | D: 0 Inches | Distance from Inches top of casing |
| | | Wall Thickness: 0 Inches | | hickness: 0 Inches | lop of casing to ground |
| | | Bottom at: 0 FT | Top: 0 | FT Bottom: 0 FT | level: Depth To water level (feet) |
| | | Perforations | Perfor | ations Size: | Elapsed Time |
| 1 | | from: 0 FT to: 0 FT | | es x 0 Inches | Drawdown Minutes:Sec Recovery |
| | | from: 0 FT to: 0 FT | 0 Inch | es x 0 Inches | |
| | | from: 0 FT to: 0 FT | 0 Inch | es x 0 Inches | |
| | | Perforated by: | | | Total Drawdown: FT |
| | | Seal: from: 0 FT | to: 0 F | τ | If water removal was less than 2 hr duration, reason why: |
| | | Seal: from: 0 FT Seal: | to: 0 F | Т | |
| | | from: 0 FT | to: 0 F | Τ | |
| | | Screen Type: | | n ID: 0 Inches | Recommended pumping rate: Gallons/Min |
| | | from: 0 FT to: 0 FT | | ize: 0 Inches | Recommended pump intake: FT |
| | | Screen Type: from: 0 FT to: 0 FT | | n ID: 0 Inches ize: 0 Inches | Type pump installed |
| | | Screen Installation Method | | ize. o mono | Pump type: |
| | | Fittings | | | Pump model: |
| | | Top: Pack: | Botlor | m: | H.P.: Any further pumptest information? |
| | | Grain Size: | Amou | | _ |
| | | Geophysical Log Taken: E | LECTRI | C | ĺ |
| | | Retained on Files: ELECT | 'RIC yes | | - |
| İ | | Additional Test and/or Pur Chemistries taken By Drill | mp Data | | |
| | | Held: 0 | Docur | ments Held: 1 | |
| 1 | | Pitless Adapter Type: | | | |
| 1 | | Drop Pipe Type: | 5 : | . 1 a m. | |
| | | Length: | Diamo | eter: | ┥ |
| | | Comments: | | • | |
| | | | | | |
| | | | | | |
| | | 7. Contractor Certif | ication | |] |
| | | Driller's Name: | UNKI | OWN DRILLER | |
| | | Certification No.: | <u> </u> | dance with the Water | |
| | | This well was constructed Well regulation of the Alb | ı ın accor ertə Envi | oance with the water ronmental Protection & | <u> </u> |
| | | Enhancement Act. All info | rmation i | in this report is true. | 1 |
| | | Signature | | Yr Mo Da | ny |
| | | | | | m |

| The data contained in this | Well Drilling R report is supplied by the Drille responsibility for its accuracy. | Report r. The province disclaims | Well I.D.: 0132820 Map Verified: Map Date Report Received: Measurements: Imperial |
|--|---|--|---|
| Environment | | | 2. Well Location |
| 1. Contractor & Well Owner Information Company Name: | on Dril | ling Company Approval No. | |
| FRASER, RON | | | LSD M |
| Mailing Address: City or Tow | n: Pos | ital Code: | NE 29 046 27 4 Location in Quarter |
| WellOwner's Name: Well Location | on Idenlifier: | | 0 FT from Boundary |
| WOLLIN, D.W. | | | 0 FT from Boundary |
| P.O. Box Number: Mailing Add | ress: Pos | stal Code: | Lot Block Plan |
| FALUN City: Province: | Coi | untry: | Well Elev: How Obtain: |
| ony. | | | 2835 FT Estimated |
| 3. Drilling Information | | | 6. Well Yield |
| Type of Work: New Well | | Proposed well use: Stock | Test Date Start Time: (yyyy/mm/dd): |
| Reclaimed Well Date Reclaimed(yyyy/mm/dd): Mater | als Used: | Anticipated Water | 1975/09/22 11:00 AM |
| Method of Drilling: Rotary | | Requirements/day | Test Method: Bailer & Pump |
| Flowing Well: No Rate: | Gallons | 0 Gallons | Non pumping 33 FT static level: |
| 000.1000.101 | esent: No | | Rate of water 12 |
| 4. Formation Log | 5. Well Completion | Date Completed | removal: Gallons/Min |
| Depth from | Date Started(yyyy/mm/dd): | (yyyy/mm/dd): | Depth of 36 FT pump intake: |
| ground Lithology Description | 1975/09/22 | 1975/09/22 Borehole Diameter: 0 Inche | Mater level at FT |
| level (feet) | Well Depth: 104 FT Casing Type: Steel | Liner Type: | -leug or |
| 5 Clay | Size OD: 4.5 Inches | Size OD: 0 Inches | pumping: Distance from top of Inches |
| 46 Sand & Sandstone | Wall Thickness: 0.25 Inches | Wall Thickness: 0 Inches | casing to ground |
| 100 Shale 104 Sand & Shale | Bottom at: 49 FT | Top: 0 FT Bottom: 0 F | Depth to water lever (reet) |
| | Perforations | Perforations Size: | Elapsed Time Drawdown Minutes:Sec Recovery |
| | from: 0 FT to: 0 FT from: 0 FT to: 0 FT | 0 Inches x 0 Inches 0 Inches x 0 Inches | Total Drawdown: 0 FT |
| | from: 0 FT to: 0 FT | 0 Inches x 0 Inches | if water removal was less than 2 hr |
| | Perforated by: | | duration, reason why: |
| | Seal: Driven from: 0 FT | to: 49 FT | |
| | Seal: | 10. 4311 | Recommended pumping rate: 0 |
| | from: 0 FT | lo: 0 FT | Gallons/Min |
| | Seal: from: 0 FT | to: 0 FT | Recommended pump intake: 0 FT |
| | Screen Type: | Screen ID: 0 Inches | Type Pump Installed Pump Type: |
| | from: 0 FT to: 0 FT | Slot Size: 0 Inches | Pump Model: |
| | Screen Type: from: 0 FT to: 0 FT | Screen ID: 0 Inches Slot Size: 0 Inches | H.P.: |
| | Screen Installation Method: | | Any further pumptest information? |
| | Fittings | D. II. | |
| | Top: Pack: | Bottom: | |
| • | Grain Size: | Amount: | |
| | Geophysical Log Taken: | | |
| | Retained on Files: Additional Test and/or Pump | n Dala | |
| | Chemistries taken By Driller | : No | Ì. |
| | Held: 0 | Documents Held: 1 | |
| | Pilless Adapter Type: Drop Pipe Type: | | |
| | Length: FT | Diameter: Inches | |
| | Comments: | LADO MATED | |
| | DRILLER REPORTS MED- | HARD WATER | |
| | | -1- | |
| | 7. Contractor Certific | | ᅴ |
| | Driller's Name: Certification No.: | UNKNOWN DRILLER | |

This well was constructed in accordance with the Water

| The data contained in this | Well Drilling report is supplied by the D esponsibility for its accura | riller. The pro | ovince disclaims | Well I.D.: Map Verified: Date Report Received: Measurements: | 0132822 Not Verified 1986/03/17 Imperial |
|---|--|--------------------------|--------------------------------|--|---|
| 1. Contractor & Well Owner Information | on | | | 2. Well Locatio | n . |
| Company Name: | | | pany Approval No.: | 1/4 or Sec Twp LSD | Rge Westof M |
| ALKEN BASIN DRILLING LTD. | | 38394 Postal Code | | 04 30 046 | |
| Mailing Address: City or Tow | n: AB CANADA | TOC 0J0 | , | Location in Quarter | |
| | on Idenlifier: | 10000 | | 0 FT from | Boundary |
| ORBIT OIL & GAS | | | | 0 FT from | Boundary Plan |
| P.O. Box Number: Mailing Add | ress: | Postal Code | • | Lot Block Well Elev: H | ow Oblain: |
| City: Province: | | Country: | | FT N | ot Obtain |
| 3. Drilling Information | | | | 6. Well Yield Test Date | Start Time: |
| Type of Work: New Well | | | roposed well use: ndustrial | (yyyy/mm/dd): | Otare Timo. |
| Reclaimed Well | als Used: | | Inticipated Water | 1986/03/01 | 11:00 AM |
| | 1015 0360. | | Requirements/day | Test Method: Pump | |
| Method of Drilling: Rotary Flowing Well: No Rate: | Gallons | | Gallons | Non pumping | 90 FT |
| | esent: No | | | static level: Rate of water | 40 |
| 4. Formation Log | 5. Well Completion | | | removal: | Gallons/Min |
| Depth | Date Started(yyyy/mm/d | Date Co | mpleted | Depth of | 132 FT |
| from | | ld): (yyyy/mi 1986/03 | TI/dd): /01 | pump intake: | |
| ground Lithology Description | 1986/03/01 | | o Diameler: 0 Inches | Water level at | 130 FT |
| level | Well Depth: 240 FT Casing Type: Steel | | pe: Steel | end of pumping: | |
| (feet) 50 Clay & Coal | Size OD: 5.5 Inches | |): 4.5 Inches | Distance from top o | f Inches |
| 60 Sand & Coal | Wall Thickness: 0.244 | Wall Thi | ckness: 0.156 | casing to ground | ., |
| 80 Clay | Inches | Inches | | level: | |
| 120 Water Bearing Shale | Bottom at: 80 FT | Top: 0 F | T Bollom: 130 | Depth To wate | |
| 190 Sandstone | | FT | ions Size: | Elapsed Drawdown Minule | ilme s:Sec Recovery |
| 200 Shale | Perforations from: 0 FT to: 0 FT | | x 0 Inches | Total Drawdown: 4 | 0 FT |
| 220 Sandstone | from: 0 FT to: 0 FT | | s x 0 Inches | If water removal wa | s less than 2 hr |
| 240 Shale | from: 0 FT to: 0 FT | | s x 0 Inches | duration, reason wi | |
| | Perforated by: Not Appli | icable | | | |
| | Seal: Driven | to: 80 F | τ | | |
| | from: 0 FT Seal: | (0.001 | 1 | Recommended pur | mping rate: 40 |
| | from: 0 FT | to: 0 FT | | Gallons/Min | |
| 1 | Seal: | | | Recommended pur | mp intake: 130 |
| | from: 0 FT | lo: 0 FT | ID: 0 Inches | <u> </u> | |
| | Screen Type: from: 0 FT to: 0 FT | | e: 0 Inches | Type Pump Installe Pump Type: SUB | 2 0 |
| | Screen Type: | | ID: 0 Inches | Pump Model: | |
| | from: 0 FT to: 0 FT | | e: 0 Inches | H.P.: 3 | |
| | Screen Installation Met | hod: | <u> </u> | Any further pumpte | est information? |
| | Fillings | Dallare | • | 1 | |
| | Top: | Botlom | | 1 | |
| | Pack: Grain Size: | Amoun | t: | | |
| | Geophysical Log Taker | n; | | | |
| | Retained on Files: | | | 4 | |
| | Additional Test and/or I | | | | |
| | Chemistries taken By C Held: 0 | Alliet: IAO | ents Held: 1 | | |
| | Pitless Adapter Type: | Doodiii | | | |
| | Drop Pipe Type: GALV | • | | | |
| | Length: 130 FT | Diamel | er: 1.25 Inches | 4 | |
| | Comments: | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | 7. Contractor Cer | tification | | 7 | |
| | Driller's Name: | UNKN | OWN DRILLER | | |
| , | Certification No : | VA479 | 0 | 1 | |
| | This well was construct | ted in accord | ance with the Water | .] | |
| 1 | Well regulation of the A | Alberta Enviro | nmental Protection 8 | × | |
| | Enhancement Act. All i | miotmation in | this report is true. Yr Mo Da | ıv | |
| | Signature | | D. | eport 1 Pump T | est 1 nage1 |

Appendix C Limitations

LIMITATIONS

- The work performed in this report was carried out in accordance with the Standard Terms of Conditions made part of our contract. The conclusions presented herein are based solely upon the scope of services and time and budgetary limitations described in our contract.
- 2. The report has been prepared in accordance with generally accepted environmental study and/or engineering practices. No other warranties, either expressed or implied, are made as to the professional services provided under the terms of our contract and included in this report.
- 3. The services performed and outlined in this report were based, in part, upon visual observations of the site and attendant structures. Our opinion cannot be extended to portions of the site that were unavailable for direct observation, reasonably beyond the control of AMEC Earth & Environmental.
- 4. Our observations relating to the condition of environmental media at the site are described in this report. It should be noted that compounds or materials other than those described could be present in the site environment.
- 5. The conclusions of this report are based in part, on the information provided by others. The possibility remains that unexpected environmental conditions may be encountered at the site in locations not specifically investigated. Should such an event occur, AMEC Earth & Environmental must be notified in order that we may determine if modifications to our conclusions are necessary.