New Water Act Diversion Licence (254779-00-00) Annual Water Volume Increase

Prepared for:
1510060 Alberta Ltd. o/a Lincoln Utility Corp.
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Prepared by:
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August 2015
112849238

Sign-off Sheet

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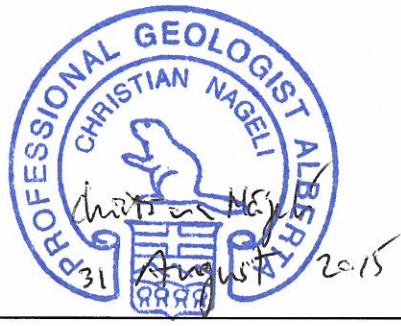

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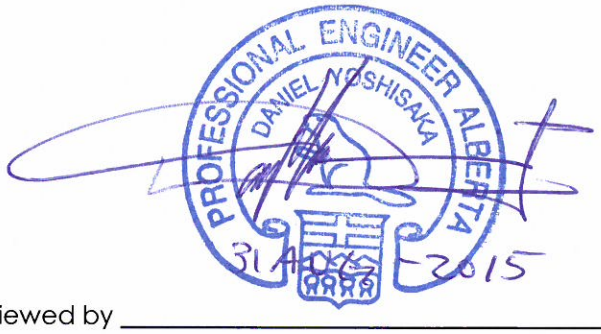
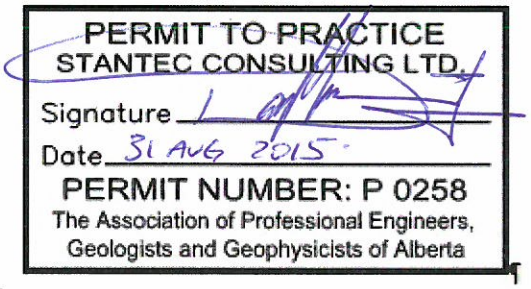
Christian Nägeli, M.Sc., P.Geol.
Senior Hydrogeologist





Reviewed by _____
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Dan Yoshisaka, M.Sc., P.Eng.
Principal, Senior Hydrogeologist

Stantec

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APPENDICES

Executive Summary

The findings of this water supply evaluation is that the Q_{20}, estimated from re-analysis of the 2009 pumping test data (applying the modified Moell method) show a significantly larger Q_{20} for production well 1065774 than what was previously estimated in Stantec (2009). The Q_{20} derived from the recent pumping test re-analyses is 403.3 m^3/day for production well 1065774 (compared to 154.5 m^3/day previously estimated in 2009). Transmissivity values are also higher (66 m^2/day at Well 1065774) than were estimated in 2009 (28.7 m^2/day at Well 1065774).

Pumping test data and interpretation indicate that the aquifer should be able to sustain production from Well 1065774 pumping at the sought after rate of 100 m^3/d (36,500 m^3/year). This conservative interpretation indicates that the aquifer is moderately transmissive and that there is additional aquifer potential if needed for Well 1065774.

During the field verified well survey, no previously existing water wells were noted to be within 100 m of the production well. At this distance, residual drawdown is estimated to be 1.39 m following 20 year of groundwater production. Given the available head in the aquifer, this degree of drawdown is anticipated to be manageable given the current land uses in the area.

Fluoride concentrations were below the reportable detection limit for the observation well 1065732 sample and duplicate sample and at the reportable detection limit (0.05 mg/L) for the production well 1065774 sample.

1.0 INTRODUCTION

Stantec Consulting Ltd. (Stantec) was retained by 1510060 Alberta Ltd. o/a Lincoln Utility Corp. (LUC) to conduct a desktop and field-verified well survey, collect groundwater samples, and prepare a new Water Supply Assessment Report for a production well located at SE 22-041-28-W4M, Plan 0924731, Block 1, Lot 3, on the southeast side of Gull Lake, Alberta. The production well is identified in the Alberta Water Well Information Database (AWWID) as Well ID 1065774 and is completed at a depth of 18.3 m below ground surface. The production well is the point of diversion for Water Act licence No. 00254779-00-00, which allocates 14,000 m^3/year of groundwater for uses as stated in the license. The driller's report for this production well and the associated observation well (Well ID 1065732) are presented in Appendix A for reference.

The report presented herein is intended to serve as an addendum to the original Water Supply Assessment Report (Stantec, 2009) which was completed for the same production well. At that time, the Water Act application sought authorization for a groundwater diversion of 14,000 m^3/year. The 405 recreational and 74 residential lots (located at the adjacent Lincoln Ranch Development) currently planned will need approximately 36,500 m^3/year of groundwater for recreational and domestic purposes. As such, LUC is now seeking authorization for an additional 22,500 m^3/year and a new Water Act diversion license is required for this incremental amount. This report is intended to evaluate the capacity for this well to sustainably produce the additional 22,500 m^3/year of groundwater that is sought.

2.0 OBJECTIVE AND SCOPE OF WORK

In order to support the new groundwater diversion license application for the production well, the following requirements of Alberta Environment and Parks (AEP) as outlined in the *Guide to Groundwater Authorization* (Information Required when Submitting an Application under the Water Act; AENV, 2011), must be addressed:

- Carry out a minimum 48 hour pumping test for the production well and monitor water quality throughout the tests. The pumping test completed in 2009 was conducted at a pumping rate of 261.8 m^3/hour and fulfills this requirement, so no additional pumping test was required;
- Water Quality Analyses following AENV (2011); and,
- Preparation of a Water Supply Evaluation report.

Stantec contacted AEP to clarify the requirements for a new *Water Act* licence for the previously existing production well, in consideration of previous hydrogeologic evaluation conducted in 2009 (Stantec, 2009). Based on this discussion, AEP indicated that the following tasks should be completed to support the additional license application:

- Conduct a desktop review and a field verified well survey within a 2 km radius of the production well and reassess the volume of groundwater allocated per year via licenses and registrations in order to assess current demands on the aquifer. Compare to the data obtained in 2009.
- Collect groundwater samples from the 2009 wells (ID 1065774 and 1065732) to assess fluoride concentrations. A groundwater sample from well 1065732 was submitted to AGAT laboratory for routine analysis parameters in accordance with the requirements of licence No. 00254779-00-00. LUC provided recent analytical results for well 1065774.

In 2011, AENV (now AEP) implemented the Modified Moell formula to evaluate the potential long-term yield (Q_{20}), with theoretical drawdown in the pumping well calculated after 100 minutes and 20 years of pumping. This was not the standard analytical technique applied when the Stantec (2009) report was submitted. A new pumping test evaluation with drawdown and recovery data collected in 2009 has been performed using analytical techniques applicable within the current guideline.

This report summarizes the results of the desktop and field verified well survey, the analytical results for both 2009 production and observation wells, and the reinterpretation of the 2009 pumping test.

3.0 FELD PROGRAM

3.1 WELL LOCATIONS

The locations of the production (Well ID 1065774) and observation (Well ID 1065732) wells were determined by Stantec during the execution of the field verified well survey with a handheld GPS unit. Table 1 presents the Northing and Easting coordinates (UTM Zone 12, NAD83 datum) of the wells. Figure 1 presents the locations of the wells.

Table 1 Surveyed Well Coordinates

Well Name	UTM Zone 12 NAD 83	
	Northing (m)	Easting (m)
1065774	5,825,446	300,503
1065732	5,825,437	300,518
Note: Well coordinates obtained with handeld GPS.		

3.2 DESKTOP AND FIELD VERIFIED SURVEY OF REGISTERED WELLS

An online query of the AWWID conducted in June 2015 indicated that there were 89 registered water wells purported to be within 2 km of production well 1065774 and its respective observation well 1065732 (Appendix B, Table B-1). Based on this query, Stantec prepared a preliminary map of purported well locations and initiated a field verified well survey between June 29 and July 2, 2015. Over the course of the field verified well survey, additional wells which were identified in the field, but for which Well ID's could not be reconciled with the AWWID were added to the purported list to bring the total count to 118. All 118 wells included in the field survey are plotted in Figure 1. This mapping shows the wells by colour coded categories, including:

- Well has a reconciled ID and GPS surveyed location
- Well has a reconciled ID but the precise location is not known (only approximate)
- Well does not have a reconciled ID but has a GPS surveyed location
- Well does not have a reconciled ID but the approximate location is known
- Could not confirm location or status
- Structural test Hole
- Confirmed Decommissioned well

Over the course of the field verified well survey, well locations were refined (where possible) using a handheld GPS unit. This allowed for repositioning of wells from the centroid of LSD's or

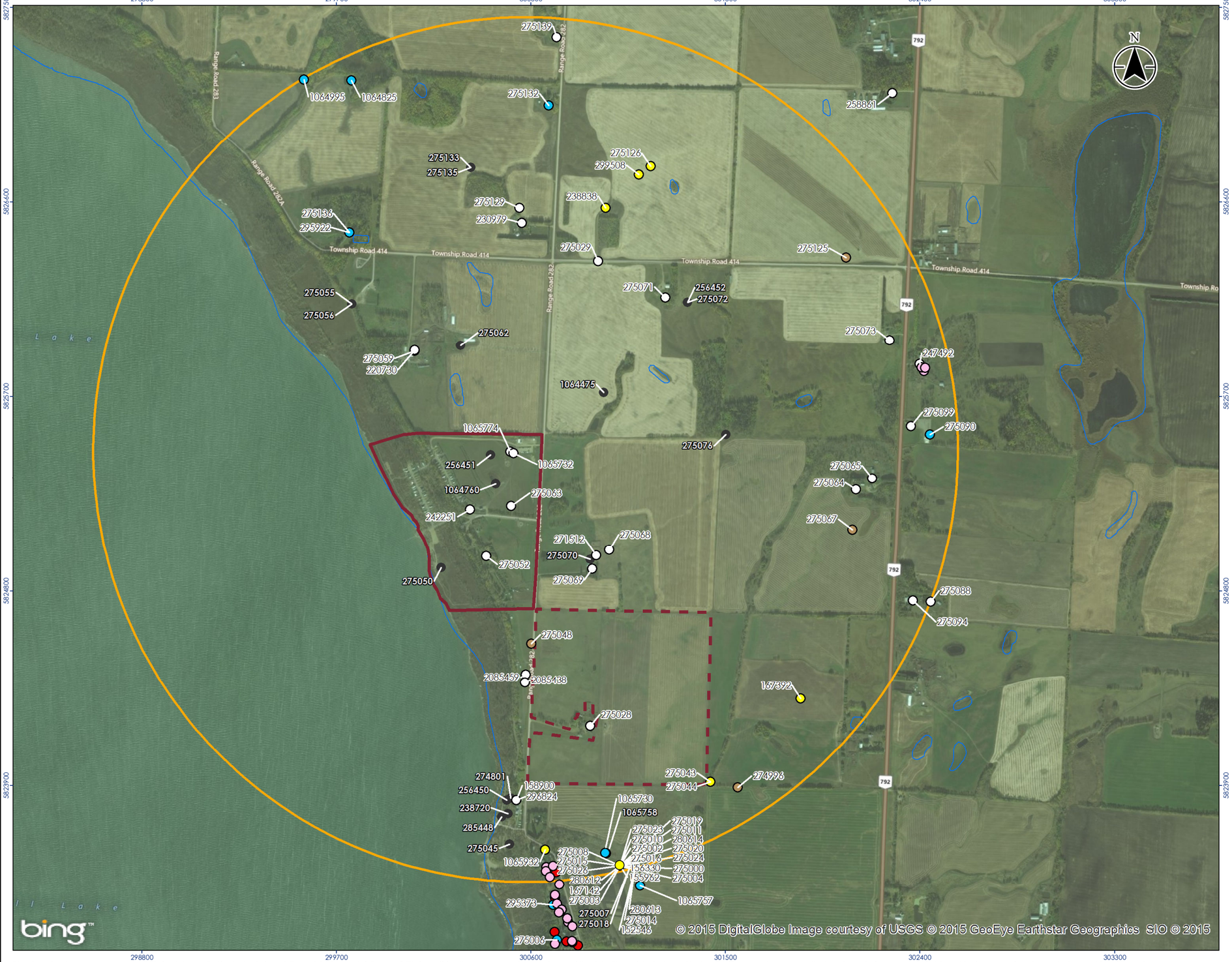
quarter sections (as reported in the AWWID) in the final mapping product presented as Figure 1. Based on this repositioning of wells by improved GPS measurements, some of the wells which were purported to be within 2 km of the production well were confirmed to be outside of the 2 km radius. Conversely, additional wells purported to be outside of the 2 km radius were confirmed to be inside of the 2 km radius. By the end of the field survey, Stantec had determined that 97 of the 118 purported wells are suspected to be within the 2 km radius, while the remaining 21 purported wells were outside of the 2 km radius. Of the 97 wells that were suspected to be within the 2 km radius:

- 36 were confirmed to be in use (including one duplicate record for a re-completed well);
- 35 were confirmed to be test holes, abandoned wells, or are not longer in use; and
- 26 could not be found, or the landowner was not available for interview by Stantec.

A summary of the water well records, current owner, depths of completion, static water levels, and current use, is provided in Appendix B (where the information was available). Five water well records are associated with the project site.

In 2009, a desktop well survey completed by Stantec indicated the purported presence of 66 wells within a 2 km radius of the production well. Based on the field verified well survey, there are now 97 wells suspected to be within the 2 km radius, representing approximately 31 additional well records. The exact number of additional wells is difficult to determine due to the number of wells that cannot be reconciled with the AWWID.

Based upon the field verified well survey completed in the vicinity of production well 1065774, there are no other wells records within a 100 m radius of the production well (the nearest third party owned well is situated 625 metres from the production well). The proposed pumping rate and anticipated drawdown based on pumping test analysis (see Section 4) indicates that there is little possibility for negative interference effects to manage or monitor as a result of increased pumping from the production well.



Stantec

- Well has a reconciled ID and GPS surveyed location
- Well has a reconciled ID but the precise location is not known (only approximate)
- Well does not have a reconciled ID but has a GPS surveyed location
- Well does not have a reconciled ID but the approximate location is known
- Could not confirm location or status
- Structural test hole
- Confirmed decommissioned well
- Project Site (1510060 Alberta Ltd.)
- Project Site (Lincoln Ranch)
- Area with 2km radius
- Waterbody

Label Example:

275125 Well ID

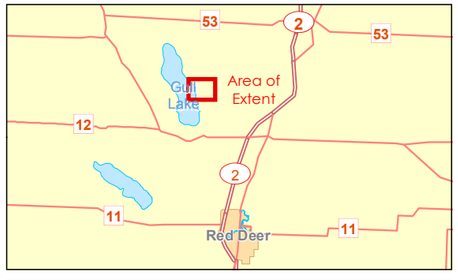
~~275072~~ Decommissioned Well ID

0 450 900 metres

1:18,000 (At original document size of 11x17)

Notes

1. Coordinate System: NAD 1983 UTM Zone 12N
2. Base features: Geogratis, ©Department of Natural Resources Canada, All rights reserved.
3. Imagery: Microsoft Bing product screen shot(s) reprinted with permission from Microsoft Corporation



Project Location

SE 22-041-28-W4M
Gull Lake, Alberta

112849238
Prepared by JC on 2015-06-26
Review by MK on 2015-07-09

Client/Project

1510060 Alberta Ltd. c/o Lincoln Utility Corporation
New Water Act Diversion Licence

Figure No.

1

Title

Results of Field Verified Well Survey

4.0 ANALYSIS AND DISCUSSION

Data from the constant rate pumping test conducted on April 20th, 2009 were re-analyzed to derive estimates of the aquifer's hydraulic parameters. Pumping test parameters are summarized in Table 2 below for the production well (ID 1065774) and observation well (ID 1065732). Water level data are shown in graphical format in Appendix C. Various time-drawdown and drawdown-distance curves of both pumping and recovery periods were analyzed to estimate the hydraulic parameters. Cooper & Jacob, Theis recovery, Barker (confined and fractured aquifer), and Moench (leaky aquifer) solutions were used to estimate the aquifer parameters at the production well (Appendix C).

Table 2 Summary of Pumping Test Parameters

Well ID	Well Type	Distance from Production Well	Water Level Before Pumping (BTOC)	Drawdown at the End of Pumping Period (48 Hours)	Water Level after 48 hours Recovery (BTOC)	Residual Drawdown	Residual Drawdown as % of the Total Drawdown After 48 Hours Recovery
		(m)	(m)	(m)	(m)	(m)	%
1065774	Production	--	3.86	5.97	4.14	0.28	4.7
1065732	Observation	18	3.62	4.74	3.88	0.26	5.5

A summary of the estimated hydrogeologic parameters calculated from all pumping and recovery test data is presented in Table 3. Calculated transmissivities ranged from 19.99 to 228.12 m^2/day at the production well as derived from various analytical solutions. Analytical calculations following Cooper & Jacob, Theis recovery, Barker (confined and fractured aquifer) indicate an average value of 126.29 m^2/day at the production well (Table 3). A sensitivity analysis conducted for the 20 years forward solution with the Moench (leaky aquifer) solution suggested an average transmissivity value of 66 m^2/day. This value lies between lower values of 26 m^2/day for the initial portions of the pumping test and higher values of 228 m^2/day for conditions observed in the final portion of the pumping test. The average hydraulic conductivity of 21.7 m/day is typical for medium to fine sand deposits (Domenico and Schwartz, 1990) corresponding in this case to poorly cemented or weathered sandstone. The aquifer shows confined conditions prior to pumping, transitioning to leaky conditions as the pumping progresses over time. This analysis considered the aquifer to be interbedded sandstone with low permeability shale units, confined by overlying shale units and clay till deposits.

It should be noted that over the course of the 48 hour tests, limited recharge boundaries were observed 1,500 minutes after the start of the pumping test (Figures C-1, C-2, C-3, C-5, and C-6. The calculated ratio of storativity during pumping (S) to storativity during recovery (S') from

residual drawdown data are higher than 1 (1.56; Table 3 and Figure C-4 in Appendix C), suggesting the extent of the aquifer may be influenced by one or more recharge boundaries (Midwest Geoscience Group, 2013). Recharge conditions may be induced by vertical flow from alternating sandstones and shale deposits, as the production well 1065774 is screened only across one 3.04 m thick sandstone unit.

Several analytical solutions including one or two hypothetical recharge boundaries corresponding to the lake shore to the southwest (located at 580 m from well 1065774) and another boundary 500 to the northeast were evaluated, but did not result in better fit between the theoretical curves and observed water level response. The same result was found for a sensitivity analysis conducted using the Moench analytical solution for leaky aquifer conditions.

Q_{20} POTENTIAL LONG-TERM YIELD

Following the analytical methods recommended in the AENV guidelines (2011), potential long-term safe yield (Q_{20}) were calculated by applying the Modified Moell method (Maathuis and van der Kamp) for confined aquifers. Aquifer parameters used to calculate the long term safe yields were based upon values derived from the aquifer pumping tests as were summarized in Table 3. The parameters used to calculate the Q_{20} are shown in Table 5 along with the calculated long term safe yields as determined through use of the Modified Moell method.

Two separate sensitivity analysis were conducted applying the Barker fractured aquifer and Moench leaky aquifer solutions for 20 years of continuous pumping. Measured and theoretical drawdown values for both solutions are summarized in Table 4 for 100 minutes, 1,440 minutes, 2,880 minutes, and 20 years. Simulated drawdowns using the Barker analytical solution achieve a better fit for the early time period (until 1,440 minutes), while simulated drawdowns using the Moench analytical solution achieve better fit for latter time periods (1,440 t0 2,880 minutes). The Barker solution overestimates drawdown after 20 years of continuous pumping (21.09 m) which may not be realistic as it doesn't consider recharge conditions observed in the final part of the pumping test. As such, the Moench solution was selected as more representative of long-term pumping conditions and the theoretical drawdown values derived from this forward calculation were used to calculate the Q_{20}.

TABLE 3. SUMMARY OF ESTIMATED HYDROGEOLOGICAL PARAMETERS FOR A 48-HOUR PUMPING TEST CONDUCTED AT WELL 1065774

Well	Analytical Method	Software Used for Pumping Test Data Evaluation	Average Transmissivity (T) m^2/d	Average Hydraulic Conductivity m/d	Average Storage Coefficient	S/S'	Comments S = Storativity during pumping S' = Storativity during recovery
Well 1065774 Pumping Test							
Well 1065774	Cooper-Jacob (Confined Aquifer Solution)	Aqtesolv Pro	26.82	8.8			Curve slope decreases after aprox. 1500 minutes
Well 1065732 Obs	Cooper-Jacob (Confined Aquifer Solution)	Aqtesolv Pro	27.59	9.1	5.84E-04		Curve slope decreases after aprox. 1500 minutes
Well 1065774/1065732	Theis Recovery	Aqtesolv Pro	19.99	6.6		1.56	
Well 1065774/1065732	Barker (Confined Aquifer Solution)	Aqtesolv Pro	227.09	74.7	8.34E-05		
Well 1065774/1065732	Barker (fractured Aquifer Solution)	Aqtesolv Pro	228.12	75.0	3.29E-06		
Well 1065774/1065732	Barker (fractured Aquifer Solution; composite plot)	Aqtesolv Pro	228.12	75.0	3.29E-06		
Well 1065774/1065732	Moench (Leaky Aquifer Solution, 20 Years Forward Solution)	Aqtesolv Pro	66.00	21.7	1.55E-05		
Well 1065774/1065732	Radial Distance Displacement Zero After 20 Years Continuous Pumping	Aqtesolv Pro	66.00	21.7	1.55E-05		Radial Distance aprox. 560 m
	Values Used for Q20 Calculation Well 1065774		**66.00**	21.7	**1.55E-05**		Obtained from sensitivity analysis

Notes: Values highlighed in yellow were taken as reference for Q_{20} calculations. Lower Storage Coefficient values are shown for illustrative purposes and were not taken into account for Q_{20} calculations and they were deemed to be non-representative of long term conditions.

Table 4 Comparison of Measured and Theoretical Drawdowns at Well 1065774

				Measured and Theoretical (th) Drawdown (m) at Specific Time Intervals						
Well Name	**Analytical Solution**	**Transmissivity**	**Storage Coefficient**	**100 minutes**	**100 min th**	**1440 minutes**	**1440 min th**	**2880 minutes**	**2880 min th**	**20 Years**
		m^2/d		m	m	m	m	m	m	m
Well 1065774	Barker (Fractured Aquifer)	112.5	3.66E-05	3.45	3.58	5.51	5.50	5.97	6.14	**21.09**
Well 1065774	Moench (Leaky Aquifer)	66	1.55E-05	3.45	5.08	5.51	5.87	5.97	5.97	**6.11**

The parameters used to calculate the Q_{20} are shown in Table 5 along with the calculated long term safe yields as determined through use of the Modified Moell method.

Table 5 Parameters for Q_{20} Evaluation

Well Name	**Average Transmissivity**	**Average Storage Coefficient**	**H_a**	**Pumping Rate**	**$S_{100\ min}$**	**S_{20yrs} Theor**	**$S_{100\ min}$ Theor**	**Q_{20} Modified Moell Method**
	m^2/d		m	m^3/d	m	m	m	m^3/d
Well 1065774	66	1.54E-05	9.86	261.8	3.45	6.11	5.08	**403.34**

Notes:
H_a Available head (distance between the non-pumping water level and the top of the aquifer)
S Drawdown
Q_{20} Long term safe yield

Based upon the value calculated in Table 5, the potential long term yield for the aquifer is approximately 403 m^3/d in the vicinity of Well 1065774. Thus it appears that the aquifer should be able to sustain production from Well 1065774 at the target rate of 100 m^3/d (36,500 m^3/year). This interpretation indicates that the aquifer is moderately transmissive and that there may be additional aquifer potential if needed at Well 1065774.

Theoretical drawdown calculations following 20 years of constant pumping at this rate (a conservative assumption) suggest that sufficient head would be available in the aquifer for Well 1065774. The drawdown would be 6.11 m for Well 1065774 (Figure C-10, Appendix C). This drawdown leaves available head above the top of the aquifer in which the well is installed.

This interpretation is based on data observed during a 48-hour test that may be not long enough to extrapolate drawdown values after 20 years of continuous pumping.

POTENTIAL IMPACT ON THE AQUIFER AND OTHER USERS

The long term effects of pumping of the aquifer based on the analysis described above were calculated at various distances after 20 years of sustained pumping (Table 6). Calculated drawdowns after 20 years continuous pumping show measurable drawdown at 1, 10, 100, and 100 m distance from Well 1065774, dissipating to negligible drawdown at a theoretical distance of 560 m (Figure C-12, Appendix C). Leaky aquifer response as a result of vertical recharge may potentially result in smaller drawdowns over time from at well, as this response was observed during latter time periods during the pump testing.

Table 6 Predicted Drawdown at Various Distances after 20 Years of Continuous Pumping

Distance (m) from Production Well 1065774	Drawdown (m)
1	4.38
10	2.90
100	1.39
560	Negligible

5.0 GROUNDWATER ANALYTICAL RESULTS

On June 30, 2015 Stantec collected a groundwater sample and duplicate sample from observation well 1065732 and submitted them for laboratory analysis. A groundwater sample from production well 1065774 was previously collected by the Operator on behalf of LUC on May 28, 2015 and was subsequently analyzed at their laboratory for routine potability parameters. Results from this sample were forwarded to Stantec for inclusion in this report.

Samples collected by Stantec for laboratory analysis were collected in laboratory supplied containers and were filtered and/or preserved as required. Samples were kept in coolers with ice to regulate temperature and delivered to AGAT Laboratories in Edmonton. Groundwater samples were submitted for analyses including major ions, fluoride, and nutrients, (Appendix D).

Results of the groundwater quality analysis are presented in Table 7. Copies of the laboratory analytical reports are provided in Appendix D for reference. Groundwater quality data were compared to the *Guidelines for Canadian Drinking Water Quality* (Health Canada, 2012) (GCDWQ) and to the Alberta Tier 1 Groundwater Remediation Guidelines values for potable use (AENV 2014). A summary of the analytical results is presented in the following sections.

5.1 MAJOR IONS

The groundwater is considered fresh with a relatively low degree of mineralization. Total dissolved solids (TDS) concentrations for observation well 1065732 were reported as 341 and 330 mg/L for the sample and its duplicate, respectively. Similarly, a TDS concentration of 365 mg/L was reported for production well 1065774.

Figure 2 presents a piper plot of the groundwater major ion chemistries. The three samples sets plot in nearly identical positions within the calcium-magnesium-bicarbonate facies. This type of water chemistry is indicative of shallow water that did not have significant contact with till material, which are generally high in sulphate. Sodium concentrations were relatively low at 21.6 and 22.5 mg/L in the sample and duplicate from observation well 1065732, respectively. Sodium concentration at production well 1065774 was also similar, at 28.3 mg/L. Calcium concentrations were 60.5 and 63.1 mg/L for observation well 1065732 sample its duplicate, respectively. Similarly, calcium concentration at observation well 1065774 was 71.7 mg/L. Sulphate concentrations were 7 and 8 mg/L in the observation well 1065732 sample and duplicate, respectively, and 20 mg/L in the production well 1065774 sample. Chloride concentrations were 1.0 mg/L in both the observation well 1065732 sample and duplicate, and 8.73 mg/L in the production well 1065774 sample. Fluoride concentrations were below the reportable detection limit for the observation well 1065732 sample and duplicate sample and at the reportable detection limit (0.05 mg/L) for the production well 1065774 sample.

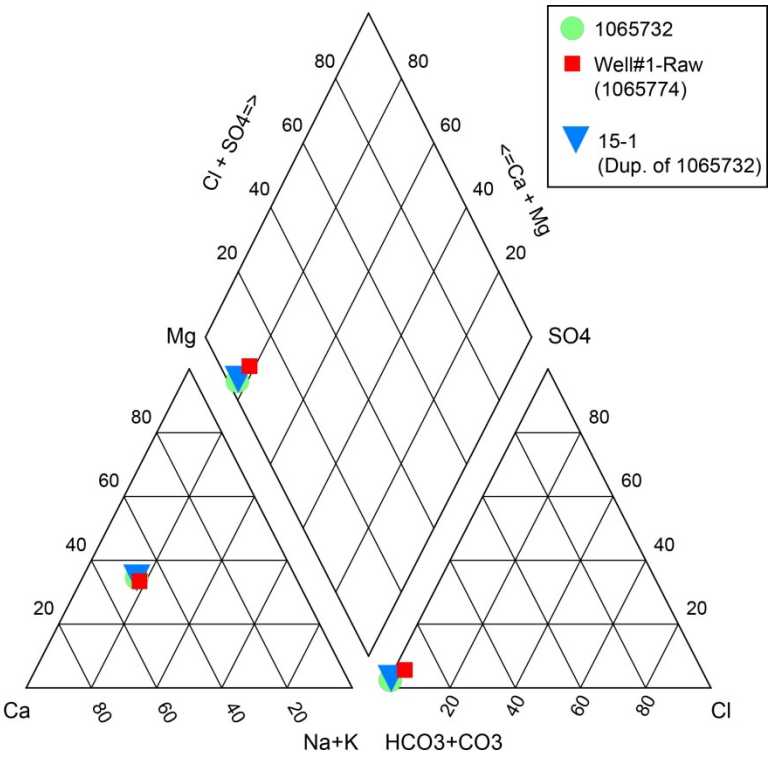


Figure 2 Piper Diagram of Major Cations and Anions

Analytical results for major ion concentrations (Table 7) met the GCDWQ requirements for all parameters analyzed in both the production and observation well.

5.2 METALS

Table 7 presents dissolved metals concentrations for the sample and duplicate collected from observation well 1065732 and from the sample collected from production well 1065774. In general, metals concentrations were within expected ranges and do not indicate any unusual or unexpected concentrations that may be attributable to the presence of anthropogenic contaminants.

Iron and manganese are commonly observed to have elevated concentrations in Alberta that are reflective of background conditions. Iron concentrations were below reportable detection (0.1 mg/L) limit for the observation well 1065732 sample and duplicate. Iron concentration was 0.08 mg/L for the production well 1065774 sample. All iron concentrations were below the aesthetic objective of 0.3 mg/L.

Manganese concentrations were above the aesthetic objective of 0.05 mg/L in the observation well samples with concentrations of 0.085 and 0.083 mg/L for the sample and duplicate,

respectively. Manganese was not tested for the sample collected from production well 1065774.

5.3 QUALITY ASSURANCE/QUALITY CONTROL RESULTS

Sample QA/QC documentation was reviewed including; chain of custody, sample temperatures, certificate of analysis, hold times. No issues for follow up were noted for the laboratory submissions. The laboratory QA/QC data including; lab duplicate relative percent difference (RPD), lab spike, matrix spike, method blank and surrogate recovery data were reviewed and were generally found to be within acceptable criteria. Laboratory QA/QC procedures and analysis are included with the analytical results in Appendix D.

A duplicate sample was collected as part of the QA/QC program to measure the precision or reproducibility of the analytical data between samples. Duplicate samples were collected from the production well near the end of the pumping period. The relative percent difference (RPD) between the sample and duplicate results was calculated for each sample or, when the parameter result was within five times the detection limit, the Absolute Difference (AD) between the sample and duplicate was calculated. An RPD of 20% or less, or an AD less than or equal to the laboratory-reporting limit, is generally considered acceptable for duplicate groundwater samples (Zeiner, 1994). No parameter exceeded the RPD criteria of 20% and thus the results of the analysis are deemed to be generally reproducible.

Standard Methods (2005) indicates an ion balance of 100% ±10% as a typically acceptable criterion for water with an anion sum less than 800 meq/L. Values outside the commonly acceptable limits may arise for a number of reasons (e.g. analytical interference, unknown constituents, or reporting errors). Ion balance values were 101% and 113% in the observation well 1065732 sample and its duplicate sample. The ion balance was 99.8% in the production well 1065774 sample (Table 7).

Table 7 - Water Analytical results: Indicator Parameters
1510060 Alberta Ltd. - Gull Lake Alberta

Parameter	Units	AESRD 2014[1]	WELL#1-RAW (1065774)	1065732	15-1 (Duplicate)	QA/QC	
			28-May-15	30-Jun-15	30-Jun-15	RPD/AD	Method
Routine							
pH	pH Units	6.5-8.5	8.38	7.86	7.91	1%	RPD
p - Alkalinity (as CaCO3)	mg/L	NG	NT	<5	<5	NC	NA
T - Alkalinity (as CaCO3)	mg/L	NG	337.00	298	275	8%	RPD
Bicarbonate	mg/L	NG	399.00	363	336	8%	RPD
Carbonate	mg/L	NG	6.00	<5	<5	NC	NA
Hydroxide	mg/L	NG	<5	<5	<5	NC	NA
Electrical Conductivity	uS/cm	NG	662.00	569	564	1%	RPD
Fluoride	mg/L	1.5	0.05	<0.05	<0.05	NC	RPD
Chloride	mg/L	120	8.73	1	1	0	AD
Nitrite	mg/L	NG	NT	<0.05	<0.05	NC	NA
Nitrite-N	mg/L	0.06	<0.010	<0.02	<0.02	NC	NA
Nitrate	mg/L	NG	NT	<0.5	<0.5	NC	NA
Nitrate-N	mg/L	3.0	<0.020	<0.02	<0.02	NC	NA
Nitrate+Nitrite - Nitrogen	mg/L	NG	<0.022	<0.02	<0.02	NC	NA
Sulphate	mg/L	429	20.00	7	8	13%	RPD
Dissolved Calcium	mg/L	NG	71.70	60.5	63.1	4%	RPD
Dissolved Magnesium	mg/L	NG	30.00	25.9	27.0	4%	RPD
Dissolved Sodium	mg/L	200	28.30	21.6	22.5	4%	RPD
Dissolved Potassium	mg/L	NG	3.93	3.6	3.8	5%	RPD
Dissolved Iron	mg/L	0.3	**0.08**	<0.1	<0.1	NC	NA
Dissolved Manganese	mg/L	0.05	NT	***0.085***	***0.083***	2%	RPD
Calculated TDS	mg/L	500	365.00	341	330	3%	RPD
Hardness	mg CaCO3/L	NG	303.00	258	269	4%	RPD
Ion Balance	%	NG	99.80	101	113	11%	RPD

Notes:

NA-Not Applicable

NG - No guideline established

NC - Not calculated

RPD - Relative Percent Difference

AD - Absolute Difference (used when concentrations are less than 5 times the RDL)

NT-Parameter was not tested for.

0.08-Total iron not dissolved. Notice that the total does not exceed the guideline for dissolved.

Bold **-** Exceeds applicable guideline

1 - Alberta Environment and Sustainable Resource Development (2014) *Tier 1 Soil and Groundwater Guidelines* within a residential area.

6.0 SUMMARY AND CONCLUSIONS

The findings of this water supply evaluation is that the Q_{20}, estimated from re-analysis of the 2009 pumping test data (applying the modified Moell method) show a significantly larger Q_{20} for production well 1065774 than what was previously estimated in Stantec (2009). The Q_{20} derived from the recent pumping test re-analyses is 403.3 m^3/day for production well 1065774 (compared to 154.5 m^3/day previously estimated in 2009). Transmissivity values are also higher (66 m^2/day at Well 1065774) than were estimated in 2009 (28.7 m^2/day at Well 1065774).

Pumping test data and interpretation indicate that the aquifer should be able to sustain production from Well 1065774 pumping at the sought after rate of 100 m^3/d (36,500 m^3/year). This conservative interpretation indicates that the aquifer is moderately transmissive and that there is additional aquifer potential if needed for Well 1065774.

During the field verified well survey, no previously existing water wells were noted to be within 100 m of the production well. At this distance, residual drawdown is estimated to be 1.39 m following 20 year of groundwater production. Given the available head in the aquifer, this degree of drawdown is anticipated to be manageable given the current land uses in the area.

Fluoride concentrations were below the reportable detection limit for the observation well 1065732 sample and duplicate sample and at the reportable detection limit (0.05 mg/L) for the production well 1065774 sample.

7.0 REFERENCES

Domenico, P.A. and Schwartz, F.W. 1990. *Physical and Chemical Hydrogeology*, John Wiley & Sons, New York, 824 p.

Midwest Geoscience Group. 2013. *Advanced Aquifer Testing Techniques Featuring Aqtesolv™*. Calgary, Alberta, June 19-23, 2013.

Standard Methods. 2005. *Standard Methods for the Examination of Water and Wastewater*. American Public Health Association. 2005.

Stantec Consulting Ltd. 2009. Degraff resort Water Well Diversion License Application Report, SE 22-41-28 W4M, Lacombe County, Alberta. May 2009.

Zeiner, S.T. 1994. *Realistic Criteria for the Evaluation of Field Duplicate Field Results.* Proceedings of Superfund XV, November 29-December 1, 1994. Sheraton Washington Hotel, Washington, D.C.

Appendix A
Drillers Reports

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 1065774
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2009/05/05

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
FRASER, GLEN	7891 - 50 AVE.	RED DEER	ALBERTA	CA	T4P 2S4

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	8	22	41	28	4				NORTH OF EXISTING WELLS

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.542600 Longitude -113.940970
How Location Obtained
Differential corrected handheld GPS 5-10m

Elevation 912.57 m
How Elevation Obtained
Differential corrected handheld GPS 5-10m

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Other

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
6.10		Brown Clay & Sand
13.72		Gray Clay & Rocks
16.76		Gray Sandstone
18.29		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
2009/04/15	181.84	4.58

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
18.29 m	18.29 m	2009/04/15	2009/04/15

Borehole

Diameter (cm)	From (m)	To (m)
15.88	0.00	13.72
12.70	13.72	18.29

Surface Casing (if applicable)
Steel
Size OD : 14.12 cm
Wall Thickness : 0.655 cm
Bottom at : 13.72 m

Well Casing/Liner
Other
Size OD : 11.43 cm
Wall Thickness : 0.602 cm
Top at : 12.19 m
Bottom at : 18.29 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
13.72	16.76	0.953		0.00

Perforated by Drill

Annular Seal Cement/Grout
Placed from 0.00 m to 13.72 m
Amount

Other Seals

Type	At (m)
Driven	13.72

Screen Type
Size OD : cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type Unknown
Grain Size
Amount Unknown

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
KRIS SCHINDEL

Certification No
40628A

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Yes

Date approval holder signed
2009/04/15

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 1065774
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2009/05/05

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
FRASER, GLEN	7891 - 50 AVE.	RED DEER	ALBERTA	CA	T4P 2S4

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	8	22	41	28	4				NORTH OF EXISTING WELLS

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.542600 Longitude -113.940970
How Location Obtained
Differential corrected handheld GPS 5-10m

Elevation 912.57 m
How Elevation Obtained
Differential corrected handheld GPS 5-10m

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level 100.00 cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) 13.72 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Top of Casing
Measurement in Metric

Test Date	Start Time	Static Water Level
2009/04/15	12:00 AM	4.58 m

Method of Water Removal

Type Pump
Removal Rate 181.84 L/min
Depth Withdrawn From 18.40 m

If water removal period was < 2 hours, explain why

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
4.58	0:00	7.92
5.98	1:00	6.35
6.25	2:00	6.18
6.34	3:00	6.08
6.42	4:00	6.02
6.49	5:00	5.96
6.55	6:00	5.91
6.59	7:00	5.88
6.64	8:00	5.85
6.67	9:00	5.82
6.70	10:00	5.79
6.75	12:00	5.75
6.80	14:00	5.70
6.84	16:00	5.67
6.93	20:00	5.63
7.01	25:00	5.53
7.09	30:00	5.49
7.16	35:00	5.44
7.22	40:00	5.40
7.35	50:00	5.34
7.44	60:00	5.28
7.58	75:00	5.19
7.70	90:00	5.10
7.80	105:00	5.01
7.92	120:00	4.92

Water Diverted for Drilling

Water Source	Amount Taken		Diversion Date & Time
SHOP	5455.31	L	2009/04/15 7:00 AM

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
KRIS SCHINDEL

Certification No
40628A

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Yes

Date approval holder signed
2009/04/15

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 1065732
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2009/05/15

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
FRASER, GLEN (DEGRAFF SUB.)	7891-50 AVE.	RED DEER	ALBERTA	CA	T4P 2S4

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	8	22	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.542520 Longitude -113.940960
How Location Obtained
Hand held autonomous GPS 20-30m

Elevation m
How Elevation Obtained
Hand held autonomous GPS 20-30m

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Other

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
1.22		Clay
3.35		Sand
6.10		Brown Clay
13.41		Gray Clay
16.15		Gray Sandstone
18.29		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
2009/03/19	181.84	5.72

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
18.29 m	18.29 m	2009/03/19	2009/03/19

Borehole

Diameter (cm)	From (m)	To (m)
12.70	0.00	18.29

Surface Casing (if applicable)
Steel
Size OD : 14.12 cm
Wall Thickness : 0.650 cm
Bottom at : 13.41 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.602 cm
Top at : 12.19 m
Bottom at : 18.29 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
13.41	16.46	0.953		30.48

Perforated by Drill

Annular Seal Cement/Grout
Placed from 0.00 m to 13.41 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings Bottom Fittings

Pack
Type Unknown Grain Size
Amount Unknown

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
RILEY PEARSON

Certification No
83061A

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Yes

Date approval holder signed
2009/03/19

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 1065732
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2009/05/15

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
FRASER, GLEN (DEGRAFF SUB.)	7891-50 AVE.	RED DEER	ALBERTA	CA	T4P 2S4

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	8	22	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.542520 Longitude -113.940960
How Location Obtained
Hand held autonomous GPS 20-30m

Elevation m
How Elevation Obtained
Hand held autonomous GPS 20-30m

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level 50.01 cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) 12.19 m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Top of Casing
Measurement in Metric

Test Date	Start Time	Static Water Level
2009/03/19	11:00 AM	5.72 m

Method of Water Removal

Type Pump
Removal Rate 181.84 L/min
Depth Withdrawn From 12.00 m

If water removal period was < 2 hours, explain why

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
5.72	0:00	8.15
7.00	1:00	6.79
7.18	2:00	6.62
7.29	3:00	6.50
7.35	4:00	6.43
7.39	5:00	6.37
7.44	6:00	6.34
7.46	7:00	6.29
7.49	8:00	6.26
7.51	9:00	6.23
7.52	10:00	6.20
7.57	12:00	6.15
7.59	14:00	6.12
7.61	16:00	6.00
7.66	20:00	5.92
7.70	25:00	5.84
7.73	30:00	5.77
7.77	35:00	5.74
7.80	40:00	5.72
7.86	50:00	
7.91	60:00	
7.98	75:00	
8.04	90:00	
8.10	105:00	
8.15	120:00	

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
RILEY PEARSON

Certification No
83061A

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Yes

Date approval holder signed
2009/03/19

Appendix B
Field Verified Well Survey

TABLE B-1

Reconnaissance Report

View in Imperial

Export to Excel

Groundwater Wells

Please click the water Well ID to generate the Water Well Drilling Report.

Well ID	LSD	SEC	TWP	RGE	M	DRILLING COMPANY	DATE COMPLETED	DEPTH (m)	TYPE OF WORK	USE	CHM	LT	PT	WELL OWNER	STATIC LEVEL (m)	TEST RATE (L/min)	SC_DIAM (m)
152546	SW	14	041	28	4	FORRESTER WATER WELL DRILLING (1981) LTD.	1990-08-08	44.20	New Well	Domestic		15		VANDERMEULEN, TED	10.06	18.18	14.12
155962	SW	14	041	28	4	UNKNOWN DRILLER		36.58	Chemistry	Domestic				SCHEIT, HELGE			0.00
156330	SW	14	041	28	4	FEHR DRILLING	1990-07-16	42.06	New Well	Domestic		15		MCDONALD, DALE	24.38	13.64	16.81
158900	8	15	41	28	4	J.C. DRILLING	1991-06-12	44.20	New Well	Domestic		10		LACOMBE FISH & GAME	9.75	45.46	16.81
167142	SW	14	041	28	4	FORRESTER WATER WELL DRILLING (1981) LTD.	1992-06-08	47.24	New Well	Domestic		18		WANDLEN, RAY	13.11	22.73	14.12
167392	NE	14	041	28	4	UNKNOWN DRILLER		30.48	Chemistry	Domestic				SCOTT, WENDY			0.00
220730	14	22	41	28	4	ALKEN BASIN DRILLING LTD.	1993-09-23	24.38	New Well	Industrial		5		NORTHSTAR RES/BRELCO 14E	4.57	227.30	13.97
230979	01	27	041	28	4	J.C. DRILLING	1993-09-13	20.12	New Well	Domestic & Stock		5		HALBERG, NEIL	7.62	45.46	16.81
238720	8	15	41	28	4	ALKEN BASIN DRILLING LTD.	1994-03-02	36.58	New Well	Domestic		5	4	OWENS, FRED	10.67	136.38	13.97
238838	04	26	041	28	4	ALKEN BASIN DRILLING LTD.	1994-06-07	36.58	New Well	Industrial		10	3	PAN CAN OIL/SEDCO 95#RIG WELL	25.91	181.84	0.00
242251	08	22	041	28	4	INGLIS WATER WELL DRILLING	1994-09-23	53.34	New Well	Domestic & Stock		17	25	DEGRAFF RESORT	6.40	90.92	13.97
247492	09	23	041	28	4	J.C. DRILLING	1994-10-24	44.20	New Well	Domestic		9	24	KEN RAY HLDG	8.35	68.19	16.81
256450	8	15	41	28	4	ALKEN BASIN DRILLING LTD.	1994-08-15	24.38	New Well	Industrial		3	3	NORTHSTAR RES/KENTING 31#RIG	3.05	409.15	13.97
256451	8	22	41	28	4	ALKEN BASIN DRILLING LTD.	1994-08-15	24.38	New Well	Industrial		3	3	NORTHSTAR RES/KENTING 31E	3.05	454.61	13.97
256452	14	23	041	28	4	ALKEN BASIN DRILLING LTD.	1994-06-11	18.29	New Well	Industrial		5	4	RUSTUM PETRO 93/SIMMONS 25#RIG	9.14	295.50	0.00
258861	NW	23	041	28	4	ALKEN BASIN DRILLING LTD.	1995-08-21	43.59	New Well	Domestic & Stock		6	7	STEWART, DEAN	17.37	181.84	13.97
271512	SW	23	041	28	4	BROWN JIM	1969-09-08	39.62	New Well	Stock		5		KOSTER, ANDREW	0.00	54.55	13.64
274801	8	15	41	28	4	ALBERTA EAGLE DRILLING LTD.	1985-08-29	27.43	New Well	Domestic		6		WHITMER, L.	11.28	136.38	11.43
274996	07	14	041	28	4	UNKNOWN DRILLER	1953-10-06	280.42	Structure Test Hole	Industrial				CALIF STD CO#390			0.00
275000	SW	14	041	28	4	SCHMIDT DRILLING LTD.	1973-10-04	30.48	New Well	Domestic		3		BRUINS PLUMBING	11.58	68.19	13.34

Reconnaissance Report

View in Imperial

Export to Excel

Well ID	LSD	SEC	TWP	RGE	M	DRILLING COMPANY	DATE COMPLETED	DEPTH (m)	TYPE OF WORK	USE	CHM	LT	PT	WELL OWNER	STATIC LEVEL (m)	TEST RATE (L/min)	SC_DIAM (m)
275002	SW	14	041	28	4	SCHMIDT DRILLING LTD.	1971-07-01	32.00	New Well	Municipal		3		LACOMBE, COUNTY OF	9.45	54.55	13.34
275003	SW	14	041	28	4	AL'S WATER WELLS LTD	1972-08-28	21.95	New Well	Domestic		2		BRUINS, R.C.	7.32	45.46	12.70
275004	SW	14	041	28	4	AL'S WATER WELLS LTD	1972-05-16	20.12	New Well	Industrial		3		BC PLUMBING	6.71	45.46	12.70
275006	SW	14	041	28	4	UNKNOWN DRILLER		32.61	Chemistry	Domestic	2			FREEMAN, JEAN			0.00
275007	SW	14	041	28	4	RICHMOND WW DRLG	1978-06-20	27.43	New Well	Domestic		3		SCARLETT, RALPH	7.62	15.91	11.43
275008	SW	14	041	28	4	SCHMIDT DRILLING LTD.	1980-03-18	42.67	New Well	Domestic		4		HODGSON, RON	9.14	36.37	13.97
275010	SW	14	041	28	4	UNKNOWN DRILLER		27.43	Federal Well Survey	Unknown				WILSON, A.			0.00
275011	SW	14	041	28	4	SCHMIDT DRILLING LTD.	1980-09-15	24.38	New Well	Domestic		3		BRUINS PLUMBING	5.49	31.82	13.97
275014	SW	14	041	28	4	SCHMIDT DRILLING LTD.	1980-10-02	24.38	New Well	Domestic		4		OTTO, W.	4.27	45.46	13.97
275015	SW	14	041	28	4	SCHMIDT DRILLING LTD.	1980-09-13	25.91	New Well	Domestic		3		MERRICK, D.	4.88	45.46	13.97
275016	SW	14	041	28	4	SCHMIDT DRILLING LTD.	1982-07-12	32.00	New Well	Domestic		3		SKAVBERG, ERIC	9.45	90.92	11.43
275018	SW	14	041	28	4	UNKNOWN DRILLER		18.29	Chemistry	Municipal	1			LACOMBE FISH & GAME ASSOC			0.00
275019	SW	14	041	28	4	UNKNOWN DRILLER		0.00	Chemistry	Unknown				BIRK, ROBERT			0.00
275020	SW	14	041	28	4	JRBT DRILLING LTD.	1984-08-16	41.15	New Well	Domestic		5		CURZON, JACK	12.19	59.10	14.12
275023	SW	14	041	28	4	UNKNOWN DRILLER		30.48	Chemistry	Unknown	1			WILSON, DAN			0.00
275024	SW	14	041	28	4	UNKNOWN DRILLER		30.48	Chemistry	Domestic	1			SAFEWAY CREDIT UNION			0.00
275026	SW	14	041	28	4	UNKNOWN DRILLER		54.86	Chemistry	Domestic				NIEVIADONY, LES			0.00
275028	NW	14	041	28	4	BROWN JIM	1967-06-28	39.62	New Well	Domestic		5		KAMLAH, W.H.	6.10	54.55	13.97
275029	NW	14	041	28	4	UNKNOWN DRILLER		25.91	Federal Well Survey	Unknown				WILSON, A.			0.00
275043	00	14	041	28	4	UNKNOWN DRILLER		32.61	Chemistry	Domestic				ETHIER, R.			0.00

Reconnaissance Report

View in Imperial

Export to Excel

Well ID	LSD	SEC	TWP	RGE	M	DRILLING COMPANY	DATE COMPLETED	DEPTH (m)	TYPE OF WORK	USE	CHM	LT	PT	WELL OWNER	STATIC LEVEL (m)	TEST RATE (L/min)	SC_DIAM (m)
275044	00	14	041	28	4	UNKNOWN DRILLER		33.53	Chemistry	Domestic				HIGHBERG, DAVE			0.00
275045	8	15	41	28	4	FLINN DRILLING LTD.	1985-05-09	44.20	Deepened	Domestic		5		LACOMBE FISH & GAME ASSOC	10.06	68.19	13.97
275048	16	15	041	28	4	UNKNOWN DRILLER	1952-12-14	271.27	Structure Test Hole	Industrial				CALIF STD CO#W-420			0.00
275050	SE	22	041	28	4	ALBERTA WW SERVICE	1978-04-05	35.05	New Well	Unknown	2	7		DEGRAFF, JIM	8.53	68.19	14.12
275052	SE	22	041	28	4	ALKEN BASIN DRILLING LTD.	1989-04-28	54.86	New Well	Domestic		10		DEGRAFF, MARGETE	7.62	113.65	13.97
275055	14	22	41	28	4	UNKNOWN DRILLER		21.34	Chemistry	Domestic	2			STEWART, W.W.			0.00
275056	14	22	41	28	4	FORRESTER WATER WELL DRILLING (1981) LTD.	1985-01-15	34.14	New Well	Domestic & Stock		14		STEWART, W.W.	4.57	127.29	17.78
275059	NE	22	41	28	4	CHIPMUNK HOLDING LTD	1960-06-12	27.43	New Well	Domestic		7	3	BEFUX, PETER	3.66	45.46	11.43
275059	NE	22	41	28	4	CHIPMUNK HOLDING LTD	1960-06-12	27.43	New Well	Domestic		7	2	BEFUX, PETER	3.66	31.82	11.43
275062	NE	22	041	28	4	UNKNOWN DRILLER		27.43	Federal Well Survey	Unknown				JUNEL			0.00
275063	NE	22	041	28	4	UNKNOWN DRILLER		34.14	Chemistry	Domestic	1			STEWART, W.W.			0.00
275064	SE	23	041	28	4	AL'S WATER WELLS LTD	1977-08-10	30.48	New Well	Stock		9		WILSON, MARTIN	4.88	54.55	14.12
275065	SE	23	041	28	4	ALKEN BASIN DRILLING LTD.	1988-11-03	30.48	New Well	Domestic & Stock		7		WILSON, MARTIN	4.57	181.84	13.97
275067	01	23	041	28	4	UNKNOWN DRILLER		281.03	Structure Test Hole	Industrial				CALIF STD CO#E400			0.00
275068	SW	23	041	28	4	CHIPMUNK HOLDING LTD	1960-06-21	30.48	New Well	Domestic & Stock		7	2	GUSTAFSON, W.R.	4.88	38.64	12.70
275069	SW	23	041	28	4	UNKNOWN DRILLER		0.00	Chemistry	Domestic				HARTLEY, RON			0.00
275070	04	23	041	28	4	UNKNOWN DRILLER	1925-01-01	29.26	Federal Well Survey	Unknown				GUSTAFSON	4.27		5.08
275071	NW	23	041	28	4	UNKNOWN DRILLER		19.81	Chemistry	Domestic	1			STEWART, S.			0.00
275072	14	23	041	28	4	UNKNOWN DRILLER		24.38	Federal Well Survey	Unknown				KAMLAH, H.			0.00
275073	09	23	041	28	4	UNKNOWN DRILLER		4.57	Federal Well Survey	Unknown				CARTER, C.M.			0.00

Reconnaissance Report

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Well ID	LSD	SEC	TWP	RGE	M	DRILLING COMPANY	DATE COMPLETED	DEPTH (m)	TYPE OF WORK	USE	CHM	LT	PT	WELL OWNER	STATIC LEVEL (m)	TEST RATE (L/min)	SC_DIAM (m)
275076	SE	23	041	28	4	BROWN JIM	1970-02-01	24.38	New Well-Abandoned	Domestic		4		FISH & GAME#1			0.00
275125	01	26	041	28	4	UNKNOWN DRILLER	1952-12-13	300.23	Structure Test Hole	Industrial				CALIF STD CO#E-400			0.00
275126	SW	26	041	28	4	UNKNOWN DRILLER		30.48	Chemistry	Domestic	1			FERGUSON, D.			0.00
275129	SE	27	041	28	4	DOOL WW	1976-09-12	18.29	New Well	Stock		4		HALBERG, NIEL	7.01	45.46	10.16
275132	SE	27	041	28	4	SCHMIDT DRILLING LTD.	1978-09-26	36.58	New Well	Domestic & Stock	1	6		HALBERG, VICTOR	26.21	68.19	13.97
275133	SE	27	041	28	4	UNKNOWN DRILLER		1.83	Federal Well Survey	Unknown				SHYLLING			0.00
275135	SE	27	041	28	4	UNKNOWN DRILLER		21.64	Federal Well Survey	Unknown				HALBERG			0.00
275136	SW	27	041	28	4	SCHMIDT DRILLING LTD.	1978-09-25	17.37	New Well	Domestic & Stock	1	3		HALBERG, LEONARD	3.05	204.57	13.97
280612	SW	14	041	28	4	UNKNOWN DRILLER	1972-08-01	33.53	Chemistry	Domestic	1			SMITH, RAYMOND	11.58		0.00
280613	SW	14	041	28	4	FRASER, JACK	1983-08-18	27.43	New Well	Domestic		5		MACLEOD, ALLAN	7.62	45.46	14.12
280614	SW	14	041	28	4	FRASER, JACK	1983-08-11	28.96	New Well	Domestic		5		BLENCOWE, EVAN	9.14	68.19	14.12
285448	8	15	41	28	4	CLIFF'S DRILLING	1996-07-21	40.54	New Well	Domestic		10	6	BEATON, THRISH	11.28	136.38	14.12
295373	SW	14	041	28	4	J.C. DRILLING	2000-10-17	39.62	New Well	Domestic		6	21	GILL, RANDY	11.09	45.46	16.81
295922	SW	27	041	28	4	ALKEN BASIN DRILLING LTD.	2001-04-24	36.58	New Well	Domestic		14	6	HALBERG, LEN	10.06	227.30	13.97
296824	SW	14	041	28	4	ALKEN BASIN DRILLING LTD.	2001-05-27	67.06	New Well	Domestic		18	13	SCARLET, RALPH	14.02	45.46	13.97
299508	SW	26	041	28	4	ALKEN BASIN DRILLING LTD.	2002-03-23	30.48	New Well	Stock		5	19	GUSTAFSSON, SUE	3.05	136.38	13.97
1064475	12	23	041	28	4	ALKEN BASIN DRILLING LTD.	2004-08-06	30.48	New Well	Industrial		6	9	MURPHY OIL / P.D. 403	5.79	227.30	14.13
1064760	08	22	41	28	4	ALKEN BASIN DRILLING LTD.	2007-04-30	60.96	New Well	Municipal		9		DEGRAFF RESORT	16.76	136.38	14.13
1064825	6	27	41	28	4	ALKEN BASIN DRILLING LTD.	2006-10-25	30.48	New Well	Domestic		8	25	HALBERG, SANDY	11.58	181.84	14.13
1064995	SW	27	41	28	4	ALKEN BASIN DRILLING LTD.	2007-06-20	36.58	New Well	Domestic		17	25	HALBERG, CATHERYN	9.14	227.30	14.13

Reconnaissance Report

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Well ID	LSD	SEC	TWP	RGE	M	DRILLING COMPANY	DATE COMPLETED	DEPTH (m)	TYPE OF WORK	USE	CHM	LT	PT	WELL OWNER	STATIC LEVEL (m)	TEST RATE (L/min)	SC_DIAM (m)
1065730	4	14	41	28	4	ALKEN BASIN DRILLING LTD.	2009-02-06	24.38	New Well	Observation		8	25	WILSON BEACH ESTATES C/O KIRK	7.50	27.28	14.12
1065732	8	22	41	28	4	ALKEN BASIN DRILLING LTD.	2009-03-19	18.29	New Well	Other		6	25	FRASER, GLEN (DEGRAFF SUB.)	5.72	181.84	14.12
1065757	3	14	41	28	4	ALKEN BASIN DRILLING LTD.	2009-01-28	67.06	New Well	Other		18	25	WILSON BEACH ESTATES (C/O KIRK MILLER)	18.40	136.34	14.12
1065758	5	14	41	28	4	ALKEN BASIN DRILLING LTD.	2009-01-30	79.25	New Well	Other		19	25	WILSON BEACH ESTATES (C/O KIRK MILLER)	18.80	13.64	14.12
1065774	8	22	41	28	4	ALKEN BASIN DRILLING LTD.	2009-04-15	18.29	New Well	Other		4	25	FRASER, GLEN	4.58	181.84	14.12
1065932	5	14	41	28	4	ALKEN BASIN DRILLING LTD.	2009-03-26	54.86	New Well	Domestic		14	19	YOST, JOANNE	4.57	90.92	14.12
2085438	16	15	41	28	4	BLACK DOG DRILLING & ENV SERV. LTD.	2012-10-21	60.96	New Well	Domestic		8	12	GIBBS, TIM	13.11	22.73	15.24
2085438	16	15	41	28	4	BLACK DOG DRILLING & ENV SERV. LTD.	2013-11-13	60.96	Reconstructed	Domestic		8	11	GIBBS, TIM	13.11	22.73	15.24
2085459	13	14	41	28	4	BLACK DOG DRILLING & ENV SERV. LTD.	2012-10-19	76.20	New Well	Domestic		10	10	GIBBS, TIM	9.14	22.73	15.24

TABLE B-2

TABLE B-2. Field Verified Well Survey - Wells within 2 Km of SE 22-41-28 W4M

Information Downloaded from AWWID (Alberta Environment and Parks)												Results of Field Verified Well Survey									
												UTM NAD83 Zone 12									
Well ID	Legal Land Description	Easting	Northing	Elevation (mASL)	Owner	Date of Completion	Well Use	Completion Method	Well Description	Depth (m)	Water Level (m)	Current Owner	Were owners or a knowledgeable person contacted? (Y/N)	Location	Easting	Northing	Well Type	Well Use	Non-Pumping Water Level (mBGS)	Contact Date	Comments
275004	SW-14-41-28-W4	301010.060	5823529.820		BC PLUMBING	1972-05-16	Industrial		New Well	20.12	6.71		N								Do not know the location of this well.
275019	SW-14-41-28-W4	301010.060	5823529.820		BIRK, ROBERT		Unknown		Chemistry	0			N								Do not know the location or status of this well.
280614	SW-14-41-28-W4	301010.060	5823529.820		BLENCOWE, EVAN	1983-08-11	Domestic		New Well	28.96	9.14		N								Do not know the location or status of this well.
275000	SW-14-41-28-W4	301010.060	5823529.820		BRUINS PLUMBING	1973-10-04	Domestic		New Well	30.48	11.58		N								The owner of Bruins plumbing knows nothing about these wells. Do not know where they are located.
275011	SW-14-41-28-W4	301010.060	5823529.820	914	BRUINS PLUMBING	1980-09-15	Domestic		New Well	24.38	5.49		N								The owner of Bruins plumbing knows nothing about these wells. Do not
275003	SW-14-41-28-W4	301010.060	5823529.820		BRUINS, R.C.	1972-08-28	Domestic		New Well	21.95	7.32		N								know where they are located.
274996	07-14-41-28-W4	301555.670	5823890.810	912	CALIF STD CO#390	1953-10-06	Industrial		Structure Test Hole	280.42			N								Do not know the location of this well.
275020	SW-14-41-28-W4	301010.060	5823529.820		CURZON, JACK	1984-08-16	Domestic		New Well	41.15	12.19		N								No well. Structure test hole.
275043	00-14-41-28-W4	301428.490	5823915.570		ETHIER, R.		Domestic		Chemistry	32.61			N								Do not know the location or status of this well.
275044	SW-14-41-28-W4	301428.490	5823915.570		HIGHBERG, DAVE		Domestic		Chemistry	33.53			N								Do not know the location or status of this well.
275008	SW-14-41-28-W4	301010.060	5823529.820		HODGSON, RON	1980-03-18	Domestic		New Well	42.67	9.14		N								Do not know the location or status of this well.
275028	NW-14-41-28-W4	301042.560	5824333.880	911	KAMLAH, W.H.	1967-06-28	Domestic		New Well	39.62	6.1	GISH, CHAD	Y	NW-14-41-28-W4	300873.9	5824176.6	Pit well	Stock		30-Jun-15	Used for about 25 head in the winter.
275018	SW-14-41-28-W4	301010.060	5823529.820		LACOMBE FISH & GAME ASSOC		Municipal		Chemistry	18.29			Y								Likely decommissioned. The Lacombe fish and game campsite manager did
275002	SW-14-41-28-W4	301010.060	5823529.820		LACOMBE, COUNTY OF	1971-07-01	Municipal		New Well	32	9.45		N								not know anything about it.
280613	SW-14-41-28-W4	301010.060	5823529.820		MACLEOD, ALLAN	1983-08-18	Domestic		New Well	27.43	7.62		N								Do not know the location or status of this well.
156330	SW-14-41-28-W4	301010.060	5823529.820		MCDONALD, DALE	1990-07-16	Domestic		New Well	42.06	24.38		N								Do not know the location or status of this well.
275015	SW-14-41-28-W4	301010.060	5823529.820		MERRICK, D.	1980-09-13	Domestic		New Well	25.91	4.88		N								Do not know the location or status of this well.
275026	SW-14-41-28-W4	301010.060	5823529.820		NIEVIADONY, LES		Domestic		Chemistry	54.86			N								Do not know the location or status of this well.
275014	SW-14-41-28-W4	301010.060	5823529.820		OTTO, W.	1980-10-02	Domestic		New Well	24.38	4.27		N								Do not know the location or status of this well.
275024	SW-14-41-28-W4	301010.060	5823529.820		SAFEWAY CREDIT UNION		Domestic		Chemistry	30.48			N								Do not know the location or status of this well.
296824	SW-14-41-28-W4	301010.060	5823529.820		SCARLET, RALPH	2001-05-27	Domestic	steel with plastic liner	New Well	67.06	14.02	SCARLET, RALPH	Y	SW-14-41-28-W4	300530.1	5823832.6	4.5 inch steel	Domestic		2-Jul-15	No shortage. 10 igpm/min. Used by 1 person.
275007	SW-14-41-28-W4	301010.060	5823529.820		SCARLETT, RALPH	1978-06-20	Domestic	Galvanized steel	New Well	27.43	7.62		Y								Decommissioned
155962	SW-14-41-28-W4	301010.060	5823529.820		SCHEIT, HELGE		Domestic		Chemistry	36.58			N								Do not know the location or status of this well.
167392	NE-14-41-28-W4	301846.920	5824301.230		SCOTT, WENDY		Domestic		Chemistry	30.48			N								Do not know the location or status of this well.
275016	SW-14-41-28-W4	301010.060	5823529.820		SKAVBERG, ERIC	1982-07-12	Domestic		New Well	32	9.45		N								Do not know the location or status of this well.
280612	SW-14-41-28-W4	301010.060	5823529.820		SMITH, RAYMOND	1972-08-01	Domestic		Chemistry	33.53	11.58		N								Do not know the location or status of this well.
152546	SW-14-41-28-W4	301010.060	5823529.820		VANDERMEULEN, TED	1990-08-08	Domestic		New Well	44.2	10.06		N								Do not know the location or status of this well.
167142	SW-14-41-28-W4	301010.060	5823529.820		WANDLEN, RAY	1992-06-08	Domestic		New Well	47.24	13.11		N								Kirk Miller said that one of the wells was dry and is no longer present. This is likely the well.
1065758	5-14-41-28-W4	300945.86	5823586.45	902.2	WILSON BEACH ESTATES (C/O KIRK MILLER)	2009-01-30	Other		New Well	79.25	18.8	WILSON BEACH ESTATES	Y								Kirk Miller said that there is one observation well present on the property.
1065730	4-14-41-28-W4	300943.24	5823588.79	909.8	WILSON BEACH ESTATES C/O KIRK	2009-02-06	Observation	Steel with plastic liner	New Well	24.38	7.5	WILSON BEACH ESTATES	Y								This is likely it.
275010	SW-14-41-28-W4	301010.060	5823529.820		WILSON, A.		Unknown		Federal Well Survey	27.43			N								Do not know the location or status of this well.
275029	NW-14-41-28-W4	301042.560	5824333.880		WILSON, A.		Unknown		Federal Well Survey	25.91		GISH, CHAD	Y	NW-14-41-28-W4	300909.3	5826326.9	Pit well	Domestic		30-Jun-15	Four people in the house.
275023	SW-14-41-28-W4	301010.060	5823529.820		WILSON, DAN		Unknown		Chemistry	30.48			N								Do not know the location or status of this well.
1065932	5-14-41-28-W4				YOST, JOANNE	2009-03-26	Domestic		New Well	54.86	4.57		N								Do not know the location or status of this well.
2085459	NW-14-41-28-W4	300572.000	5824411.000	899	GIBBS, TIM	2012-10-19	Domestic	Plastic	New Well	76.2	9.14	GIBBS, TIM	Y	NE-15-41-28-W4	300575.5	5824412.8	4.5 inch steel	Not used			Talked to the owner. Coordinates are of the wells.
285448	8-15-41-28-W4	300463.47	5823754.68		BEATON, THRISH	1996-07-21	Domestic		New Well	40.54	11.28		N								Campground managers do not know about this well likely
275048	16-15-41-28-W4	300600.16	5824556.5	912	CALIF STD CO#W-420	1952-12-14	Industrial		Structure Test Hole	271.27			N								decommissioned.
2085438	16-15-41-28-W4	300558.42	5824380.77	898.6	GIBBS, TIM	2012-10-21	Domestic	Plastic	New Well	60.96	13.11	GIBBS, TIM	Y	16-15-41-28-W4	300570.6	5824377.1	4.5 inch steel	Before reconstruction			Structure test hole This is the original well
2085438	16-15-41-28-W4	300558.42	5824380.77		GIBBS, TIM	2013-11-13	Domestic		Reconstructed	60.96	13.11	Gibbs, Tim	Y	16-15-41-28-W4	300570.6	5824377.1	4.5 inch steel	Not Used			This is the re-completed well
158900	8-15-41-28-W4	300515.42	5823664.35		LACOMBE FISH & GAME	1991-06-12	Domestic	4.5 inch steel.	New Well	44.2	9.75	LACOMBE FISH & GAME	Y	SE-15-41-28-W4	300530.1	5823832.6	4.5 inch steel	Campground and Domestic		2-Jul-15	From July to August 96 camp sites and a bathroom and shower house. There is a residence for 2 people year round. This is the most recent well.
275045	8-15-41-28-W4	300500.15	5823627.99		LACOMBE FISH & GAME ASSOC	1985-05-09	Domestic	Steel with plastic liner	Deepened	44.2	10.06	LACOMBE FISH & GAME	Y							2-Jul-15	This is most likely the one in use. Owners of campsite know nothing about. Likely decommissioned.
256450	8-15-41-28-W4	300487.18	5823831.46		NORTHSTAR RES/KENTING 31#RIG	1994-08-15	Industrial	Steel 4.5 inch liner and 5.5 inch surface casing.	New Well	24.38	3.05	LACOMBE FISH & GAME	Y							2-Jul-15	Owners of campsite know nothing about. Likely decommissioned.
238720	8-15-41-28-W4	300491.97	5823769		OWENS, FRED	1994-03-02	Domestic		New Well	36.58	10.67		N								Likely decommissioned. The managers of the campground did not know of any other wells.
274801	8-15-41-28-W4	300504.66	5823840.32		WHITMER, L.	1985-08-29	Domestic	.5 inch galvanized stee	New Well	27.43	11.28		N								Likely decommissioned. The managers of the campground did not know of any other wells.
275059	NE-22-41-28-W4	300272.33	5825935.51		BEFUX, PETER	1960-06-12	Domestic		New Well	27.43	3.66	STEWART, S.	Y	14-22-41-28-W4	300061.7	5825910.4	Pit well	Stock		30-Jun-15	Used for 350 head in the winter.
242251	8-22-41-28-W4	300337.29	5825133.48		DEGRAFF RESORT	1994-09-23	Domestic & Stock	Steel with plastic liner	New Well	53.34	6.4	FRASER, GLEN	Y	SE-22-41-28-W4	300316.6	5825175.7	4.5 inch steel	Domestic	7.88	29-Jun-15	Used for shower house, bathrooms and laundry. Used by three to four people in the winter. In the summer it is used sparingly but most people use their trailers. This may not be a static water level.
1064760	8-22-41-28-W4	300436.13	5825295.4	981.5	DEGRAFF RESORT	2007-04-30	Municipal	Steel with plastic liner	New Well	60.96	16.76		N							29-Jun-15	Decommissioned. Not present.
275050	SE-22-41-28-W4	300239.55	5825131.46	914.4	DEGRAFF, JIM	1978-04-05	Unknown		New Well	35.05	8.53	FRASER, GLEN	Y	SE-22-41-28-W4	300184.1	5824907.4	Pit well	Not used		29-Jun-15	Decommissioned. Looked to be partially backfilled with dirt.
275052	SE-22-41-28-W4	300239.55	5825131.46		DEGRAFF, MARGETE	1989-04-28	Domestic	Steel with plastic liner	New Well	54.86	7.62	FRASER, GLEN	Y	SE-22-41-28-W4	300391.3	5824961.2	4.5 inch steel	Not used		29-Jun-15	Talked to one of the guys that worked at the campground and knew about the wells and he said this one was not in use.
1065774	8-22-41-28-W4	300573.7	5825454.97	912.6	FRASER, GLEN	2009-04-15	Other		New Well	18.29	4.58	FRASER, GLEN	Y	SE-22-41-28-W4	300502.6	5825445.9	4.5 inch steel	Domestic		30-Jun-15	Drinking water for a campground. Eighty people in the summer and about four in the winter.

TABLE B-2

Information Downloaded from AWWID (Alberta Environment and Parks)												Results of Field Verified Well Survey									
												UTM NAD83 Zone 12									
Well ID	Legal Land Description	Easting	Northing	Elevation (mASL)	Owner	Date of Completion	Well Use	Completion Method	Well Description	Depth (m)	Water Level (m)	Current Owner	Were owners or a knowledgeable person contacted? (Y/N)	Location	Easting	Northing	Well Type	Well Use	Non-Pumping Water Level (mBGS)	Contact Date	Comments
1065732	8-22-41-28-W4	300574.01	5825446.04		FRASER, GLEN (DEGRAFF SUB.)	2009-03-19	Other	Steel with plastic liner	New Well	18.29	5.72	FRASER, GLEN	Y	SE-22-41-28-W4	300518.3	5825437.1	4.5 inch steel	Not used	3.2	30-Jun-15	Not used because water has high fluoride.
275062	NE-22-41-28-W4	300272.33	5825935.51		JUNEL		Unknown		Federal Well Survey	27.43		STEWART, S.	N							30-Jun-15	Decommissioned. Nothing was known about this well.
220730	14-22-41-28-W4	299724.24	5826182.58		NORTHSTAR RES/BRELCO 14E	1993-09-23	Industrial		New Well	24.38	4.57	GOODWIN, MARIE	N	14-22-41-28-W4	300060.5	5825912.6	4.5 inch steel	Not used.		30-Jun-15	Kept the well after the oil company was finished with it. . Talked to Scott Stewart who is the son of the owner.
256451	8-22-41-28-W4	300411.85	5825431.05		NORTHSTAR RES/KENTING 31E	1994-08-15	Industrial	Steel	New Well	24.38	3.05		N								Decommissioned. Not present.
275055	14-22-41-28-W4	299770.71	5826127		STEWART, W.W.		Domestic		Chemistry	21.34		GOODWIN, MARIE	N							30-Jun-15	Decommissioned. Nothing was known about this well. Talked to owners son Scott Stewart.
275056	14-22-41-28-W4	299770.71	5826127		STEWART, W.W.	1985-01-15	Domestic & Stock		New Well	34.14	4.57	GOODWIN, MARIE	N	14-22-41-28-W4						29-Jun-15	Decommissioned. Nothing was known about this well. Talked to owners son Scott Stewart.
275063	NE-22-41-28-W4	300272.33	5825935.51		STEWART, W.W.		Domestic		Chemistry	34.14		STEWART, S.	Y	14-22-41-28-W4	300506.8	5825192	4.5 inch steel	Domestic		29-Jun-15	Four people in the house. Domestic use only. No problems.
275067	01-23-41-28-W4	302086.53	5825083.09		CALIF STD CO#E400		Industrial		Structure Test Hole	281.03			Y								Structure test hole
275073	09-23-41-28-W4	302111.5	5825700.12	929.6	CARTER, C.M.		Unknown		Federal Well Survey	4.57		VISCHER	Y	09-23-41-28-W4	302258.4	5825960.1	4.5 inch steel.	Not used		29-Jun-15	Not used
275076	SE-23-41-28-W4	301500.14	5825523.53		FISH & GAME#1	1970-02-01	Domestic		New Well-Abandoned	24.38			Y								Abandoned.
275070	04-23-41-28-W4	300872.5	5824944.92	917.4	GUSTAFSON	1925-01-01	Unknown		Federal Well Survey	29.26	4.27	RIEITSMA, JOHN	N	SW-23-41-28-W4						30-Jun-15	Likely Decommissioned. Dianne Stewart the daughter of the property owners did not mention it.
275068	SW-23-41-28-W4	301081.71	5825137.78		GUSTAFSON, W.R.	1960-06-21	Domestic & Stock		New Well	30.48	4.88	RIEITSMA, JOHN	N	SW-23-41-28-W4	300960	5824989		Not used		30-Jun-15	Nobody was home but I talked to Dianne Stewart and her parents rent this land out. Coordinates based off of 2007 survey.
275069	SW-23-41-28-W4	301081.71	5825137.78		HARTLEY, RON		Domestic		Chemistry	0		RIEITSMA, JOHN	N	SW-23-41-28-W4	300882	5824901		Domestic		30-Jun-15	Nobody was home but I talked to Dianne Stewart and her parents rent this land out. Coordinates based off of 2007 survey. There was also a large pool in the yard.
275072	14-23-41-28-W4	301323.44	5826134.71		KAMLAH, H.		Unknown		Federal Well Survey	24.38			N							29-Jun-15	Decommissioned. Owners of property said that there were no other wells than those mentioned.
247492	09-23-41-28-W4	302194.87	5825800.44		KEN RAY HLDG	1994-10-24	Domestic		New Well	44.2	8.35	VISCHER	Y	09-23-41-28-W4	302397.7	5825849.5	4.5 inch steel.	Domestic		29-Jun-15	They are taking part in a type of sewage treatment trail. There water gets tested regularly.
271512	SW-23-41-28-W4	301081.71	5825137.78	937.2	KOSTER, ANDREW	1969-09-08	Stock	Steel	New Well	39.62	0	RIEITSMA, JOHN	N	SW-23-41-28-W4	300900	5824964		Stock		30-Jun-15	Nobody was home but I talked to Dianne Stewart and her parents rent this land out. Coordinates based off of 2007 survey. There was also a large pool in the yard.
1064475	12-23-41-28-W4	300934.79	5825717.59		MURPHY OIL / P.D. 403	2004-08-06	Industrial		New Well	30.48	5.79		N							29-Jun-15	Decommissioned. Owners of property said that there were no other wells than those mentioned.
256452	14-23-41-28-W4	301323.44	5826134.71		RUSTUM PETRO 93/SIMMONS 25#RIG	1994-06-11	Industrial		New Well	18.29	9.14		N							29-Jun-15	Decommissioned. Owners of property said that there were no other wells than those mentioned.
275071	NW-23-41-28-W4	301114.21	5825941.96		STEWART, S.		Domestic		Chemistry	19.81		STEWART, DEAN	Y	NW-23-41-28-W4	301219.7	5826156.9		Stock		29-Jun-15	Occasionally use for 50 beef cattle when the dugout goes dry.
275064	SE-23-41-28-W4	301886	5825105.14		WILSON, MARTIN	1977-08-10	Stock		New Well	30.48	4.88	WILSON, ANNE AND CHRIS	Y	SE-23-41-28-W4	302101.6	5825269	4.5 inch steel.	Not used		29-Jun-15	Not in use. Historically used for stock.
275065	SE-23-41-28-W4	301886	5825105.14		WILSON, MARTIN	1988-11-03	Domestic & Stock	Steel with plastic liner	New Well	30.48	4.57	WILSON, ANNE AND CHRIS	Y	SE-23-41-28-W4	302178.1	5825320.6	4.5 inch steel.	Domestic	4.40m	29-Jun-15	This well had been used during the day. Not static.
275094	SW-24-41-28-W4	302715.77	5825007.11	281.5	DECK, J.	1968-11-18	Domestic	Steel with plastic liner	New Well	27.43	5.79	RIDEOUT, BONY	Y	SW-24-41-28-W4	302364.8	5824754.9	4.5 inch steel.	Domestic & Stock		2-Jul-15	Two people and 2 horses.
275090	SW-24-41-28-W4	302715.77	5825007.11		LINCOLN HALL SOCIETY	1984-08-30	Domestic	Steel	New Well	25.91	2.44	LINCON HALL SOCIETY	Y	NW-24-41-28-W4	302444	5825523		Domestic		2-Jul-15	Did not see the well. Phoned the managers of the property. Got approximate coordinates off of google earth.
275099	NW-24-41-28-W4	302538.9	5825618.35		COMMUNITY HALL	1935-08-06	Domestic		New Well	27.43		LINCON HALL SOCIETY	Y	NW-24-41-28-W4		5825562	Metal pump	Not Used		29-Jun-15	Old Well
275125	01-26-41-28-W4	302056.64	5826342.54		CALIF STD CO#E-400	1952-12-13	Industrial		Structure Test Hole	300.23			N								Structure test hole
275126	SW-26-41-28-W4	301153.66	5826764.78		FERGUSON, D.		Domestic		Chemistry	30.48		UNKNOWN	N	SW-26-41-28-W4				Not Used		2-Jul-15	Could not see any wells from the road. No houses on the quarter section.
299508	SW-26-41-28-W4	301098.71	5826725.58		GUSTAFSSON, SUE	2002-03-23	Stock	Steel with plastic liner	New Well	30.48	3.05	UNKNOWN	N	SW-26-41-28-W4				Not used		2-Jul-15	Could not see any wells from the road. No houses on the quarter section.
238838	04-26-41-28-W4	300944.45	5826571.92		PAN CAN OIL/SEDCO 95#RIG WELL	1994-06-07	Industrial	Steel.	New Well	36.58	25.91	UNKNOWN	N	SW-26-41-28-W4				Not Used		2-Jul-15	Could not see any wells from the road. No houses on the quarter section.
275135	SE-27-41-28-W4	300321.14	5826757.95		HALBERG		Unknown		Federal Well Survey	21.64			N								Decommissioned. Owners of property said that there were no other wells than those mentioned.
1064995	SW-27-41-28-W4	299810.57	5827045.48		HALBERG, CATHERYN	2007-06-20	Domestic		New Well	36.58	9.14	HALBERG, CATHERYN	N	SW-27-41-28-W4	299548	5827165		Domestic		29-Jun-15	Talked to neighbor Dianne Stewart. Coordinates are of house.
295922	SW-27-41-28-W4	299810.57	5827045.48		HALBERG, LEN	2001-04-24	Domestic	Steel with plastic liner	New Well	36.58	10.06	MR. HALBERG	N	SW-27-41-28-W4	299759	5826458		Domestic		29-Jun-15	Owned by Lenard Halbergs Son. Talked to neighbor Dianne Stewart. Coordinates are of house.
275136	SW-27-41-28-W4	299810.57	5827045.48		HALBERG, LEONARD	1978-09-25	Domestic & Stock	Steel with plastic liner	New Well	17.37	3.05	MR. HALBERG	N	SW-27-41-28-W4	299759	5826458				29-Jun-15	Owned by Lenard Halbergs Son. Talked to neighbor Dianne Stewart. Coordinates are of house. Older and possibly decommissioned.
230979	01-27-41-28-W4	300616.73	5826373.65		HALBERG, NEIL	1993-09-13	Domestic & Stock	Steel with plastic liner	New Well	20.12	7.62	MEYER, BEN	Y	01-27-41-28-W4	300557.2	5826501.7		Domestic		29-Jun-15	Nine people in two houses use water. Both are rental properties.
275129	SE-27-41-28-W4	300321.14	5826757.95		HALBERG, NIEL	1976-09-12	Stock		New Well	18.29	7.01	MEYER, BEN	Y	SE-27-41-28-W4	300545	5826572		Stock		30-Jun-15	About one hundred cattle for three to four months of the year. Coordinates are from the 2007 survey.
1064825	06-27-41-28-W4	299810.57	5827045.48		HALBERG, SANDY	2006-10-25	Domestic	Steel with plastic liner	New Well	30.48	11.58	HALBERG, SANDY	N	06-27-41-28-W4	299769	5827161		Domestic & Stock		29-Jun-15	Talked to neighbor Dianne Stewart. Coordinates are of house.
275132	SE-27-41-28-W4	300321.14	5826757.95		HALBERG, VICTOR	1978-09-26	Domestic & Stock		New Well	36.58	26.21	HALBERG, VICTOR	Y	SE-27-41-28-W4	300681.7	5827045		Domestic		29-Jun-15	Two people and they may board one horse during the summer. Well is in the basement. Coordinates are from beside the house.
275133	SE-27-41-28-W4	300321.14	5826757.95		SHYLLING		Unknown		Federal Well Survey	1.83			N							29-Jun-15	Decommissioned. Owners of property said that there were no other wells other than those mentioned.
275139	NE-27-41-28-W4	300546.77	5827352.87	945.2	MCCASHY, D.		UNKNOWN		Federal Well Survey	30.48		GILLARD, ROY	Y	NE-27-41-28-W4	300717.7	5827362.5		Domestic & agricultural		29-Jun-15	Two people depend on the water supply and they occasionally fill the sprayer. This may not be the correct record but it is the only record on the
Unknown												WIEBOS	Y	NW-24-42-28-W4	302416.6	5825816.1	Pit well.	Domestic & Stock		29-Jun-15	Usually 2 people and 60 head of cattle. No record.
Unknown												WIEBOS	Y	NW-24-42-28-W4	302405.6	5825833.3	Metal hand pump	Not Used		29-Jun-15	No record.
Unknown												WIEBOS	Y	NW-24-42-28-W4	302421.7	5825830.8		Not Used.		29-Jun-15	No record. Well was under a rock in the garden and not visible.
Unknown													N	SW-14-42-28-W4	300530.1	5823832.6		Domestic		2-Jul-15	No well record match. No well seen. Coordinates are of the house.
Unknown													N	SW-14-42-28-W4	300716.1	5823498.4		Domestic		2-Jul-15	No well record match. No well seen. Coordinates are of the driveway.
Unknown												LOWE, RON	Y	SW-14-42-28-W4	300670.6	5823523.1		Domestic		2-Jul-15	No well record match. Talked to the neighbor. Took coordinates of a well with a poorly secured lid. Three to five people six weekend a year.
Unknown												STALL	Y	SW-14-42-28-W4	300668.7	5823503.8	4.5 inch steel	Domestic		2-Jul-15	No well record match. Took coordinates of the well and talked to the renter. Three people live here year round.
Unknown												DOL	Y	SW-14-42-28-W4	300701.1	5823528.8	4.5 inch steel	Domestic		2-Jul-15	No well record match. Owner showed me where the well was. There are three people living here year round.
Unknown												YZERMANS	N	SW-14-42-28-W4	300686.5	5823476.1	Pit well	Domestic		2-Jul-15	No well record match. Says Yzerman`s Cabin on the sign. Probably seasonal. Coordinates are of the well.

TABLE B-2

Information Downloaded from AWWID (Alberta Environment and Parks)												Results of Field Verified Well Survey									
												UTM NAD83 Zone 12									
Well ID	**Legal Land Description**	**Easting**	**Northing**	**Elevation (mASL)**	**Owner**	**Date of Completion**	**Well Use**	**Completion Method**	**Well Description**	**Depth (m)**	**Water Level (m)**	**Current Owner**	**Were owners or a knowledgeable person contacted? (Y/N)**	**Location**	**Easting**	**Northing**	**Well Type**	**Well Use**	**Non-Pumping Water Level (mBGS)**	**Contact Date**	**Comments**
WELLS OUTSIDE THE 2 KM RADIUS																					
258861	NW-23-41-28-W4	301114.21	5825941.96		STEWART, DEAN	1995-08-21	Domestic & Stock		New Well	43.59	17.37	STEWART, DEAN	Y	NW-23-41-28-W4	302269.8	5827102.6	4.5 inch steel	Domestic		29-Jun-15	Three people reside in the house.
275088	SW-24-41-28-W4	302715.77	5825007.11	281.4	JOHNSON, JALMER	1962-06-11	Domestic		Chemistry	18.29		RIDEOUT, BONY	Y	SW-24-41-28-W4	302448.2	5824749.6	4.5 inch steel.	Trees and Pool		2-Jul-15	No shortages. Used Seasonally.
275006	SW-14-41-28-W4	301010.060	5823529.820	908	FREEMAN, JEAN		Domestic		Chemistry	32.61		FREEMAN, JEAN	Y	SW-14-41-28-W4	300719.2	5823185.4		Domestic		2-Jul-15	Were not home. Coordinates are from the house.
295373	SW-14-41-28-W4	301010.060	5823529.820		GILL, RANDY	2000-10-17	Domestic	Steel with plastic liner	New Well	39.62	11.09	GILL, RANDY	N	SW-14-41-28-W4	300700.8	5823346.9		Domestic		2-Jul-15	Were not there. Talked to the neighbor Lori Hellof. Did not locate well. Coordinates are of the driveway.
1065757	3-14-41-28-W4	301103.48	5823436.36	905.6	WILSON BEACH ESTATES (C/O KIRK MILLER)	2009-01-28	Other		New Well	67.06	18.4	WILSON BEACH ESTATES	Y	3-14-41-28-W4				Commercial		15-Jul-15	This is the commercial well for the subdivision under license number 00268021-00-00.
Unknown													N	SW-14-42-28-W4	300762.6	5823178.3				2-Jul-15	No well recorded match. Coordinates are of a small shed near the house.
Unknown													N	SW-14-42-28-W4	300710.7	5823167.5	Pit well.	Domestic		2-Jul-15	No well record match. Coordinates are of a well. Looks seasonal.
Unknown													N	SW-14-42-28-W4	300719.1	5823353.1	PVC	Domestic		2-Jul-15	No well record match. Coordinates are of a well. Looks seasonal.
Unknown													N	SW-14-42-28-W4	300742	5823325	4.5 inch steel	Domestic		2-Jul-15	No well record match. Coordinates are of well. Looks seasonal.
Unknown													N	SW-14-42-28-W4	300788.6	5823179.7	4.5 inch steel	Domestic		2-Jul-15	No well record match. Coordinates are of well. Could be year round.
Unknown												HANDLE	N	SW-14-42-28-W4	300708.3	5823222.3	Pit well.	Domestic		2-Jul-15	No well record match. Sign says the Handles. There is possibly a covered pit well to the north of the house.
Unknown													N	SW-14-42-28-W4	300815.6	5823159.9		Domestic		2-Jul-15	No well record match. No well seen. Coordinates are of the house.
Unknown													N	SW-14-42-28-W4	300709.5	5823379.3		Domestic		2-Jul-15	No well record match. No well seen. Coordinates are of the house.
Unknown												EVANATION	Y	SW-14-42-28-W4	300769.7	5823267.9	4.5 inch steel	Domestic		2-Jul-15	No well record match. Took coordinates of the well. Two people live here year round.
Unknown												DUKE, GREG	N	SW-14-42-28-W4	300732.7	5823315		Domestic		2-Jul-15	No well record match. Could not find the well. Talked to the neighbor about who owns it.
Unknown												SCHELLEMBERG	Y	SW-14-42-28-W4	300766.4	5823285.7	PCV	Domestic		2-Jul-15	No well record match. Took coordinates of the well and talked to the son that lives there. Five people reside here year round.
Unknown												HELLOFS	Y	SW-14-42-28-W4	300710.8	5823392.7	4.5 inch steel	Domestic		2-Jul-15	No well record match. Talked to Lori Hellof and she showed me the well. There are four people living here year round.
Unknown												KERR	Y	SW-14-42-28-W4	300731.1	5823441.9	4.5 inch steel	Domestic		2-Jul-15	No well record match. Owner showed me where the well was. There are two people living here year round.
Unknown												THIEM	Y	SW-14-42-28-W4	300790.4	5823248.3	4.5 inch steel	Domestic		2-Jul-15	No well record match. Owner showed me where the well was. There are two people living here year round.
Unknown												FOOTE	Y	SW-14-42-28-W4	300728.1	5823312.9		Domestic		2-Jul-15	No well record match. Talked to a visitor. Coordinates are of the well.
Unknown													N	SW-14-42-28-W4	300791.5	5823175.6		Domestic		2-Jul-15	No well record match. Seasonal set up. Took coordinates of a wooden box in the back yard.

Stantec Consulting Ltd.
10160 - 112 Street
Edmonton AB T5K 2L6
Tel: (780) 917-7000
Fax: (780) 917-7330

June 26, 2015
File: 112849238

Dear Resident,

Reference: 1510060 Alberta Ltd. (former de Graff0 – Gull Lake Water Well Licence Increase Field Verified Survey

Stantec Consulting Ltd. is conducting a field verified well survey in the area of a proposed groundwater licensing increase project for 1510060 Alberta Ltd. SE 22-041-28-W4M, Plan 0924731, Block 1, Lot 3. The well survey is required to support a groundwater diversion increase approval from Alberta Environment and Parks (AEP) for a resort (former de Graff and Lincoln Ranch). The purpose of the survey is to collect information on existing groundwater wells and water use in the area surrounding the project to identify any potential conflicts that may exist between the proposed groundwater pumping and existing users.

The survey of groundwater users involves the collection of information about the well owner, water well completion and construction, and how the water from the well is used. GPS coordinate information for water well locations will also be collected to obtain horizontal coordinates and vertical elevations. A copy of the survey form outlining the information to be collected has been attached for reference.

Participation in this survey is voluntary. Should you wish to participate or if you have any questions or require additional information regarding the well survey, please contact Shay Cairns (Stantec) 587-357-3551.

We look forward to your participation in this survey.

Regards,

STANTEC CONSULTING LTD.

Christian Nägeli, M.Sc., P.Geol.
Senior Hydrogeologist
Phone: (780) 917-8191
Fax: (780) 917-7249
Christian.Nageli@stantec.com

Attachment: Field Verified Well Survey Form

nc v:\1102\active\112849238\field_program\field verified well survey\let_ww-survey_de_graff_20150626.docx

Water Well Survey

Stantec Well ID:_____

BACKGROUND INFORMATION
Water Well Drilling Record No.:
Map Reference Number:
Legal Location:
Owner:
Owner's Address:
City:
Postal Code:
Phone:
Previous Owner:
Person Met:
Visited By:
Date/Time

WELL DETAILS		
Date Drilled (mm/dd/yyyy):		
Driller's Name:		
GPS Co-ordinates (UTM NAD83):	Northing:	Easting:
Well Depth (mBGL):		
Water Level (mBTOC):		
Pump Depth (mBTOC):		
Completion Type:		
Last Serviced (mm/dd/yyyy):		
Comments:		

WELL PURPOSE
Type of Usage:
Estimated Amount of Usage:
Springs or Dugouts:
Number of People Depending on Supply:
Number of Stock Depending on Supply:
Comments:

Water Well Survey

Stantec Well ID:_____

WATER TREATMENT SYSTEM
Iron filter:
Type of sewage treatment:
Water softener:
Chlorination:
Comments:

SAMPLES
Have you sent any groundwater samples to the Regional Health Authority for analysis? If so, when?
Comments:

MISCELLANEOUS
Springs or dugouts
Type of sewage treatment:

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 152546
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1990/08/23

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
VANDERMEULEN, TED	WILSONS BEACH RR 3, LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4	020			

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained
Map

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Cable Tool

Type of Work
New Well

Proposed Well Use
Domestic

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
0.30		Topsoil
5.49		Brown Sandy Clay
7.92		Gray Clayey Sand
8.84		Gray Clayey Sand & Gravel
18.90		Gray Clayey Shale
21.95		Blue Stoney Shale
24.69		Gray Shale & Sandstone
25.60		Gray Fractured Shale
27.74		Gray Bentonitic Shale
29.87		Gray Fractured Shale
32.31		Gray Shale
33.22		Gray Sandstone
35.36		Gray Sandy Sandstone
37.49		Gray Bentonitic Sandstone
44.20		Gray Sandstone

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 18.18 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1990/08/08	18.18	10.06

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
44.20 m		1990/08/03	1990/08/08

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	44.20

Surface Casing (if applicable)
Steel
Size OD : 14.12 cm
Wall Thickness : 0.620 cm
Bottom at : 32.31 m

Well Casing/Liner
Steel
Size OD : 11.43 cm
Wall Thickness : 0.396 cm
Top at : 30.78 m
Bottom at : 44.20 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
31.09	44.20	0.953		30.48

Perforated by Torch

Annular Seal Cement/Grout
Placed from 32.31 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount 0.00

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
FORRESTER WATER WELL DRILLING (1981) LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 152546
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1990/08/23

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
VANDERMEULEN, TED	WILSONS BEACH RR 3, LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4	020			

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 18.18 L/min
Recommended Pump Intake Depth (From TOC) 0.00 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1990/08/08	12:00 AM	10.06 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal

Type Bailer
Removal Rate 18.18 L/min
Depth Withdrawn From 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
FORRESTER WATER WELL DRILLING (1981) LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GOWN ID

GIC Well ID 155962
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1990/01/19

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
SCHEIT, HELGE	RR3 LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained
Not Verified

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Not Applicable

Proposed Well Use
Domestic

Type of Work
Chemistry

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
36.58 m			

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	36.58

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount 0.00

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

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GIC Well ID 155962
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1990/01/19

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
SCHEIT, HELGE	RR3 LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Not Verified

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal

Type
Removal Rate L/min
Depth Withdrawn From m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

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GOWN ID

GIC Well ID 156330
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1990/08/02

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
MCDONALD, DALE	5304-101 AVE., EDMONTON				T6A 0G8

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Not Verified

Elevation m
How Elevation Obtained: Not Obtained

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
3.35		Sand
6.71		Clay
7.32		Sandstone
13.72		Clay
15.54		Shale
16.15		Boulders
17.98		Shale
18.90		Sandstone
21.34		Shale
22.25		Sandstone
23.77		Shale
34.75		Silt
35.36		Coal
38.10		Silt
42.06		Gravel

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 13.64 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1990/07/16	13.64	24.38

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
42.06 m		1990/07/14	1990/07/16

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	42.06

Surface Casing (if applicable)
Plastic
Size OD : 16.81 cm
Wall Thickness : 0.953 cm
Bottom at : 30.48 m

Well Casing/Liner
Plastic
Size OD : 12.70 cm
Wall Thickness : 0.475 cm
Top at : 24.99 m
Bottom at : 42.06 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
38.40	42.06	0.000		0.00

Perforated by Saw

Annular Seal Shale Trap
Placed from 0.00 m to 30.48 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings Bottom Fittings

Pack
Type Grain Size
Amount 0.00

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
FEHR DRILLING

Copy of Well report provided to owner Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 156330
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1990/08/02

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
MCDONALD, DALE	5304-101 AVE., EDMONTON				T6A 0G8

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Not Verified

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 13.64 L/min
Recommended Pump Intake Depth (From TOC) 25.30 m
Pump Installed Yes
Type SUB
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1990/07/16	12:00 AM	24.38 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal

Type Air
Removal Rate 13.64 L/min
Depth Withdrawn From 25.30 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
FEHR DRILLING

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

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View in Imperial | Export to Excel

GIC Well ID 158900
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1991/09/24

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
LACOMBE FISH & GAME	P.O. BOX 1573 LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	8	15	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.526502 Longitude -113.940753
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Drilling Information

Method of Drilling
Cable Tool

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
5.49		Gray Sand
8.84		Sandy Gravel
29.26		Gray Shale
30.18		Green Shale
31.70		Gray Shale
32.31		Gray Sandstone
34.14		Gray Shale
35.36		Green Shale
42.98		Gray Shale
44.20		Gray Sandstone

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 45.46 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1991/06/12	45.46	9.75

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
44.20 m		1991/06/10	1991/06/12

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	44.20

Surface Casing (if applicable)
Steel
Size OD : 16.81 cm
Wall Thickness : 0.478 cm
Bottom at : 18.29 m

Well Casing/Liner
Steel
Size OD : 11.43 cm
Wall Thickness : 0.396 cm
Top at : 13.72 m
Bottom at : 44.20 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
18.29	44.20	0.318		60.96

Perforated by Torch

Annular Seal Driven
Placed from 0.00 m to 18.29 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount 0.00

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
J.C. DRILLING

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

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GOWN ID

GIC Well ID 158900
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1991/09/24

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
LACOMBE FISH & GAME	P.O. BOX 1573 LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	8	15	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.526502 Longitude -113.940753
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 45.46 L/min
Recommended Pump Intake Depth (From TOC) 36.58 m
Pump Installed Yes
Type SUB
Depth m
Make 1/2 HP
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1991/06/12	12:00 AM	9.75 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal

Type Bailer
Removal Rate 45.46 L/min
Depth Withdrawn From 36.58 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
J.C. DRILLING

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

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GOWN ID

GIC Well ID 167142
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1992/07/27

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
WANDLEN, RAY	P.O. BOX 218 (WILSON'S BEACH), BLACKFALDS				T0M 0J0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4	23			

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Drilling Information

Method of Drilling
Cable Tool

Type of Work
New Well

Proposed Well Use
Domestic

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
0.61		Topsoil
1.22		Brown Firm Clay
2.13		Brown Caving Clay
4.27		Brown Sandy Clay & Sandstone
7.32		Brown Clay & Gravel
11.89		Gray Clayey Sand & Gravel
14.63		Brown Firm Clay & Sand
15.85		Gray Sticky Shale & Gravel
17.68		Gray Soft Clay
20.12		Brown Sandy Clay & Sandstone
21.64		Gray Sandy Clay & Shale
23.47		Blue Bentonitic Shale
25.60		Gray Bentonitic Sandstone
31.39		Blue Gray Bentonitic Shale
32.61		Gray Hard Sandstone
35.97		Blue Bentonitic Shale
38.40	Yes	Gray Water Bearing Sandstone
47.24	Yes	Gray Water Bearing Shale & Sandstone Ledges

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 22.73 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1992/06/08	22.73	13.11

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
47.24 m		1992/06/03	1992/06/08

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	47.24

Surface Casing (if applicable)
Steel
Size OD : 14.12 cm
Wall Thickness : 0.620 cm
Bottom at : 31.39 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.602 cm
Top at : 28.96 m
Bottom at : 47.24 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
28.96	47.24	0.953		20.32

Perforated by: Saw

Annular Seal Driven & Bentonite
Placed from 30.18 m to 31.39 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
FORRESTER WATER WELL DRILLING (1981) LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 167142
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1992/07/27

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
WANDLEN, RAY	P.O. BOX 218 (WILSON'S BEACH), BLACKFALDS				T0M 0J0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4	23			

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 22.73 L/min
Recommended Pump Intake Depth (From TOC) 44.20 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1992/06/08	12:00 AM	13.11 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal

Type Bailer
Removal Rate 22.73 L/min
Depth Withdrawn From 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
FORRESTER WATER WELL DRILLING (1981) LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

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GOWN ID

GIC Well ID 167392
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1986/12/08

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
SCOTT, WENDY	RR3 LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	NE	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.532706 Longitude -113.921532
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Drilling Information

Method of Drilling
Unknown

Proposed Well Use
Domestic

Type of Work
Chemistry

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
30.48 m			

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	30.48

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

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GIC Well ID 167392
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1986/12/08

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
SCOTT, WENDY	RR3 LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	NE	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.532706 Longitude -113.921532
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal
Type
Removal Rate L/min
Depth Withdrawn From m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 220730
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1993/10/12

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
NORTHSTAR RES/BRELCO 14E	300, 535-7TH AVE SW, CALGARY				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	14	22	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.548821 Longitude -113.953918
How Location Obtained
Map

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Industrial

Type of Work
New Well

Plugged 1993/10/16
Plugged with Cement
Amount

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
8.23		Sandy Till & Clay
11.89		Gray Shale
19.81		Gray Sandstone
21.34		Gray Shale
24.38		Gray Sandstone

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 227.30 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1993/09/23	227.30	4.57

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
24.38 m		1993/09/23	1993/09/23

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	24.38

Surface Casing (if applicable)
Steel
Size OD : 13.97 cm
Wall Thickness : 0.620 cm
Bottom at : 9.75 m

Well Casing/Liner
Steel
Size OD : 11.43 cm
Wall Thickness : 0.396 cm
Top at : 0.00 m
Bottom at : 18.29 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
6.10	18.29	0.953		0.95

Perforated by Machine

Annular Seal Drive Shoe
Placed from 0.00 m to 9.75 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 220730
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1993/10/12

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
NORTHSTAR RES/BRELCO 14E	300, 535-7TH AVE SW, CALGARY				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	14	22	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.548821 Longitude -113.953918
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 227.30 L/min
Recommended Pump Intake Depth (From TOC) 13.72 m
Pump Installed Yes
Depth m
Type
Make GRUNDFOS
H.P. 3
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1993/09/23	12:00 AM	4.57 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal

Type Pump
Removal Rate 227.30 L/min
Depth Withdrawn From 13.72 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GOWN ID

GIC Well ID 230979
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1993/10/20

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
HALBERG, NEIL	RR3, LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	01	27	041	28	4				

Measured from Boundary of
30.48 m from South
91.44 m from East

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.550864 Longitude -113.940888
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Drilling Information

Method of Drilling
Cable Tool

Proposed Well Use
Domestic & Stock

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
14.63		Yellow Sand
16.76		Gray Shale
17.37		Yellow Sandstone
19.20		Green Shale
20.12		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 45.46 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1993/09/13	45.46	7.62

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
20.12 m		1993/09/13	1993/09/13

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	20.12

Surface Casing (if applicable)
Steel
Size OD : 16.81 cm
Wall Thickness : 0.762 cm
Bottom at : 15.24 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.602 cm
Top at : 14.02 m
Bottom at : 20.12 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
15.24	20.12	0.318		30.48

Perforated by: Saw

Annular Seal Driven
Placed from 0.00 m to 15.24 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
J.C. DRILLING

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 230979
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1993/10/20

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
HALBERG, NEIL	RR3, LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	01	27	041	28	4				

Measured from Boundary of
30.48 m from South
91.44 m from East

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.550864 Longitude -113.940888
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 45.46 L/min
Recommended Pump Intake Depth (From TOC) 15.24 m
Pump Installed Yes Depth m
Type SUB Make H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS) Depth m
Gas Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1993/09/13	12:00 AM	7.62 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal

Type Bailer
Removal Rate 45.46 L/min
Depth Withdrawn From 20.12 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
J.C. DRILLING

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 238720
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1994/03/22

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
OWENS, FRED	P.O. BOX 2902 LACOMBE			CANADA	T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	8	15	41	28	4	38	5	N1314P	

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.527433 Longitude -113.941161
How Location Obtained
Lat/Long calculated to centre of lot

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
11.28		Clay
22.25		Sandy Clay
33.53		Shale
35.05		Sandstone
36.58		Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 45.46 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1994/03/02	136.38	10.67

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
36.58 m		1994/03/02	1994/03/02

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	36.58

Surface Casing (if applicable)
Steel
Size OD : 13.97 cm
Wall Thickness : 0.620 cm
Bottom at : 28.96 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.602 cm
Top at : 24.38 m
Bottom at : 36.58 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
24.38	36.58	0.953		0.95

Perforated by Hand Drill

Annular Seal Driven
Placed from 0.00 m to 28.96 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 238720
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1994/03/22

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
OWENS, FRED	P.O. BOX 2902 LACOMBE			CANADA	T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	8	15	41	28	4	38	5	N1314P	

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.527433 Longitude -113.941161
How Location Obtained
Lat/Long calculated to centre of lot

Elevation m
How Elevation Obtained
Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 45.46 L/min
Recommended Pump Intake Depth (From TOC) 30.48 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

GIC CHANGED LOCATION ON 2012-12-06 FROM SE 10 TO AGREE WITH LAND TITLES.

Yield Test

Taken From Ground Level
Depth to water level

Measurement in Metric

Test Date	Start Time	Static Water Level
1994/03/02	12:00 AM	10.67 m

Method of Water Removal

Type Air
Removal Rate 136.38 L/min
Depth Withdrawn From 36.58 m

If water removal period was < 2 hours, explain why

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
	0:00	36.58
	1:00	18.29
	2:00	10.67
	120:00	10.67

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 238838
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1994/06/15

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
PAN CAN OIL/SEDCO 95#RIG WELL	P.O. BOX 2850 CALGARY				T2P 2S5

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	04	26	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.552764 Longitude -113.936180
How Location Obtained: Not Verified

Elevation m
How Elevation Obtained: Not Obtained

Drilling Information

Method of Drilling: Rotary

Proposed Well Use: Industrial

Type of Work: New Well

Plugged 1994/06/23
Plugged with Unknown
Amount

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
0.91		Gray Shale
4.57		Brown Sandstone
12.50		Gray Shale
19.20		Brown Sandstone
20.42		Gray Sandstone
21.95		Gray Shale
22.56		Coal
26.52		Gray Shale
30.78		Gray Sandstone
36.58		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 168.21 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1994/06/07	181.84	25.91

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
36.58 m		1994/06/07	1994/06/07

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	36.58

Surface Casing (if applicable)
Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner
Steel
Size OD : 11.43 cm
Wall Thickness : 0.396 cm
Top at : 0.00 m
Bottom at : 30.48 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
18.29	30.48	0.953		0.95

Perforated by: Hand Drill

Annular Seal: Drive Shoe
Placed from 0.00 m to 6.10 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well: UNKNOWN NA DRILLER
Certification No: 1
Company Name: ALKEN BASIN DRILLING LTD.
Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 238838
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1994/06/15

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
PAN CAN OIL/SEDCO 95#RIG WELL	P.O. BOX 2850 CALGARY				T2P 2S5

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	04	26	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.552764 Longitude -113.936180
How Location Obtained
Not Verified

Elevation m
How Elevation Obtained
Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 168.21 L/min
Recommended Pump Intake Depth (From TOC) 28.96 m
Pump Installed Yes Depth m
Type SUB Make GOULD H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS) Depth m
Gas Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1994/06/07	12:00 AM	25.91 m

Method of Water Removal
Type Air
Removal Rate 181.84 L/min
Depth Withdrawn From 36.58 m

If water removal period was < 2 hours, explain why

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
	3:00	28.96
	4:00	25.91
	120:00	25.91

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 242251
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1994/10/28

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
DEGRAFF RESORT	RR3, LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	08	22	041	28	4				

Measured from Boundary of
396.24 m from North
304.80 m from East

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.539627 Longitude -113.944258
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Drilling Information

Method of Drilling
Cable Tool

Proposed Well Use
Domestic & Stock

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
0.91		Topsoil
1.83		Sand
4.57		Sandy Clay
13.72		Clay & Boulders
18.29		Sandstone
24.38		Shale
25.91		Sandstone
26.52		Shale
27.43		Hard Sandstone
28.96		Sandstone
30.48		Shale
32.92		Sandstone
36.27		Shale
36.58		Coal
38.10		Shale
48.77	Yes	Water Bearing Sandstone
53.34		Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 68.19 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1994/09/22	90.92	6.40

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
53.34 m		1994/09/21	1994/09/23

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	53.34

Surface Casing (if applicable)
Steel
Size OD : 13.97 cm
Wall Thickness : 0.620 cm
Bottom at : 26.82 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.602 cm
Top at : 22.86 m
Bottom at : 53.34 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
36.58	48.77	0.318		30.48

Perforated by: Saw

Annular Seal Driven
Placed from 0.00 m to 26.82 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
INGLIS WATER WELL DRILLING

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 242251
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1994/10/28

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
DEGRAFF RESORT	RR3, LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	08	22	041	28	4				

Measured from Boundary of
396.24 m from North
304.80 m from East

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.539627 Longitude -113.944258
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 68.19 L/min
Recommended Pump Intake Depth (From TOC) 48.77 m
Pump Installed Yes
Type SUB
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

DRILLER REPORTS DISTANCE FROM TOP OF CASING TO GROUND LEVEL: 18".

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1994/09/22	12:00 AM	6.40 m

Method of Water Removal

Type Bailer
Removal Rate 90.92 L/min
Depth Withdrawn From 0.00 m

If water removal period was < 2 hours, explain why

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
	0:00	36.58
	1:00	28.41
	2:00	26.73
	3:00	23.35
	4:00	20.73
	5:00	18.35
	6:00	16.52
	7:00	15.06
	8:00	14.14
	9:00	13.17
	10:00	12.41
	12:00	11.31
	14:00	10.79
	16:00	10.24
	20:00	9.66
	25:00	9.36
	30:00	9.20
	35:00	9.08
	40:00	8.96
	50:00	8.87
	60:00	8.78
	75:00	8.69
	90:00	8.60
	105:00	8.53
	120:00	8.50

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
INGLIS WATER WELL DRILLING

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 247492
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1995/01/23

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
KEN RAY HLDG	BLACKFALDS				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	09	23	041	28	4				

Measured from Boundary of
304.80 m from South
121.92 m from East

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.546293 Longitude -113.917302
How Location Obtained
Not Verified

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Cable Tool

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
8.84		Till
9.75		Blue Shale
17.07		Gray Shale
17.98		Green Shale
29.57		Gray Shale
30.78		Gray Sandstone
32.31		Gray Shale
37.80		Gray Sandstone
44.20		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 45.46 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1994/10/24	68.19	8.35

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
44.20 m		1994/10/21	1994/10/24

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	44.20

Surface Casing (if applicable)
Steel
Size OD : 16.81 cm
Wall Thickness : 0.556 cm
Bottom at : 10.36 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.602 cm
Top at : 6.10 m
Bottom at : 44.20 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
24.38	44.20	0.318		30.48

Perforated by Saw

Annular Seal Driven
Placed from 0.00 m to 10.36 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings Bottom Fittings

Pack
Type Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
J.C. DRILLING

Copy of Well report provided to owner Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 247492
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1995/01/23

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
KEN RAY HLDG	BLACKFALDS				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	09	23	041	28	4				

Measured from Boundary of
304.80 m from South
121.92 m from East

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.546293 Longitude -113.917302
How Location Obtained: Not Verified

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 45.46 L/min
Recommended Pump Intake Depth (From TOC) 24.38 m
Pump Installed Yes
Type SUB
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

DRILLER REPORTS DISTANCE FROM TOP OF CASING TO GROUND LEVEL: 30".

Yield Test

Taken From Ground Level
Depth to water level

Measurement in Metric

Test Date	Start Time	Static Water Level
1994/10/24	12:00 AM	8.35 m

Method of Water Removal

Type Bailer
Removal Rate 68.19 L/min
Depth Withdrawn From 24.38 m

If water removal period was < 2 hours, explain why

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
	0:00	11.35
	1:00	10.06
	2:00	9.63
	3:00	9.47
	4:00	9.32
	5:00	9.22
	6:00	9.15
	7:00	9.07
	8:00	9.04
	9:00	9.02
	10:00	8.99
	12:00	8.94
	14:00	8.92
	16:00	8.86
	20:00	8.76
	25:00	8.71
	30:00	8.69
	35:00	8.66
	40:00	8.63
	50:00	8.59
	60:00	8.56
	75:00	8.46
	90:00	8.43
	105:00	8.41

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
J.C. DRILLING

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 256450
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1994/08/22

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
NORTHSTAR RES/KENTING 31#RIG	309 535 7 AVE SW, CALGARY			CANADA	T2P 0Y4

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	8	15	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.527992 Longitude -113.941269
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Industrial

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
7.62		Sandy Till & Clay
11.28		Shale
24.38		Sandstone

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 295.50 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1994/09/15	409.15	3.05

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
24.38 m		1994/08/15	1994/08/15

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	24.38

Surface Casing (if applicable)
Steel
Size OD : 13.97 cm
Wall Thickness : 0.620 cm
Bottom at : 9.45 m

Well Casing/Liner
Steel
Size OD : 11.43 cm
Wall Thickness : 0.396 cm
Top at : 0.00 m
Bottom at : 18.29 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
6.10	18.29	0.953		0.95

Perforated by: Hand Drill

Annular Seal Driven
Placed from 0.00 m to 9.45 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 256450
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1994/08/22

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
NORTHSTAR RES/KENTING 31#RIG	309 535 7 AVE SW, CALGARY			CANADA	T2P 0Y4

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	8	15	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.527992 Longitude -113.941269
How Location Obtained
Map

Elevation m
How Elevation Obtained
Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level 91.44 cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 295.50 L/min
Recommended Pump Intake Depth (From TOC) 12.19 m
Pump Installed Yes
Type SUB
Depth m
Make GRUNDFOS
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

GIC CHANGED LOCATION ON 2012-12-07 FROM SEC 16 TO AGREE WITH MAP.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1994/09/15	12:00 AM	3.05 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
	0:00	24.38
	3:00	3.05
	120:00	3.05

Method of Water Removal

Type Air
Removal Rate 409.15 L/min
Depth Withdrawn From 24.38 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 256451
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1994/08/22

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
NORTHSTAR RES/KENTING 31E	300 535 7 AVE SW, CALGARY				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	8	22	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.542326 Longitude -113.943339
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Drilling Information

Method of Drilling
Auger

Proposed Well Use
Industrial

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
7.62		Sandy Till & Clay
11.28		Shale
24.38		Sandstone

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 159.11 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1994/09/15	454.61	3.05

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
24.38 m		1994/08/15	1994/08/15

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	24.38

Surface Casing (if applicable)
Steel
Size OD : 13.97 cm
Wall Thickness : 0.620 cm
Bottom at : 9.14 m

Well Casing/Liner
Steel
Size OD : 11.43 cm
Wall Thickness : 0.396 cm
Top at : 0.00 m
Bottom at : 18.29 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
6.10	18.29	0.953		0.95

Perforated by: Hand Drill

Annular Seal Driven
Placed from 0.00 m to 9.14 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 256451
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1994/08/22

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
NORTHSTAR RES/KENTING 31E	300 535 7 AVE SW, CALGARY				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	8	22	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.542326 Longitude -113.943339
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level 91.44 cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 159.11 L/min
Recommended Pump Intake Depth (From TOC) 12.19 m
Pump Installed Yes
Type
Depth 0.02 m
Make GOULD 25 EJ
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

GIC CHANGED LOCATION ON 2013-08-29 FROM LSD 08 SEC 21 TO AGREE WITH MAP. DEPTH PUMP INSTALLED @ IS UNKNOWN, NOT 0.05'.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1994/09/15	12:00 AM	3.05 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
	0:00	24.38
	3:00	3.05
	120:00	3.05

Method of Water Removal

Type Air
Removal Rate 454.61 L/min
Depth Withdrawn From 24.38 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 256452
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1994/07/05

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
RUSTUM PETRO 93/SIMMONS 25#RIG	1002 DOME TOWER, CALGARY				T2P 2Z2

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	14	23	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.548977 Longitude -113.930336
How Location Obtained: Not Verified

Elevation m
How Elevation Obtained: Not Obtained

Drilling Information

Method of Drilling: Rotary

Proposed Well Use: Industrial

Type of Work: New Well

Plugged 1994/07/18
Plugged with Unknown
Amount

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
5.79		Clay & Rocks
10.97		Gray Shale
13.11		Brownish Gray Sandstone
15.54		Gray Sandstone
18.29		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 272.77 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1994/06/11	295.50	9.14

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
18.29 m		1994/06/11	1994/06/11

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	18.29

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Steel
Size OD : 11.43 cm
Wall Thickness : 0.396 cm
Top at : 0.00 m
Bottom at : 18.29 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
6.10	18.29	0.953		0.95

Perforated by: Hand Drill

Annular Seal: Shale Trap & Welded Ring
Placed from 0.00 m to 6.10 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well: UNKNOWN NA DRILLER

Certification No: 1

Company Name: ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 256452
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1994/07/05

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
RUSTUM PETRO 93/SIMMONS 25#RIG	1002 DOME TOWER, CALGARY				T2P 2Z2

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	14	23	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.548977 Longitude -113.930336
How Location Obtained: Not Verified

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 272.77 L/min
Recommended Pump Intake Depth (From TOC) 15.24 m
Pump Installed Yes Depth m
Type SUB Make GRUNDFOS H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS) Depth m
Gas Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability Submitted to ESRD

Additional Comments on Well

DRILLER REPORTS DISTANCE FROM TOP OF CASING TO GROUND LEVEL: 3.5'.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1994/06/11	12:00 AM	9.14 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
	2:00	12.19
	3:00	10.67
	4:00	9.14
	120:00	9.14

Method of Water Removal

Type Air
Removal Rate 295.50 L/min
Depth Withdrawn From 18.29 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 258861
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1995/08/31

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
STEWART, DEAN	RR3, LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	NW	23	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.547170 Longitude -113.933302
How Location Obtained
Not Verified

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Domestic & Stock

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
5.49		Clay
10.06		Gray Shale
10.97		Gray Sandstone
31.39		Gray Shale
37.49		Gray Siltstone
43.59		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 90.92 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1995/08/21	181.84	17.37

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
43.59 m		1995/08/21	1995/08/21

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	43.59

Surface Casing (if applicable)
Steel
Size OD : 13.97 cm
Wall Thickness : 0.620 cm
Bottom at : 30.78 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.602 cm
Top at : 24.38 m
Bottom at : 42.67 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
30.48	42.67	0.953		0.95

Perforated by Hand Drill

Annular Seal Driven
Placed from 0.00 m to 30.78 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 258861
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1995/08/31

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
STEWART, DEAN	RR3, LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	NW	23	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.547170 Longitude -113.933302
How Location Obtained: Not Verified

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 90.92 L/min
Recommended Pump Intake Depth (From TOC) 35.05 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

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

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1995/08/21	12:00 AM	17.37 m

Method of Water Removal

Type Air
Removal Rate 181.84 L/min
Depth Withdrawn From 42.67 m

If water removal period was < 2 hours, explain why

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
	0:00	42.67
	2:00	30.48
	3:00	25.30
	4:00	18.59
	5:00	17.37
	25:00	17.37
	120:00	17.37

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 271512
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
KOSTER, ANDREW	RR3, LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	23	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.539938 Longitude -113.933299
How Location Obtained: Map

Elevation 937.26 m
How Elevation Obtained: Estimated

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Stock

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
19.81		Sandy Clay & Rocks
21.64		Shale
27.43		Shale
33.53	Yes	Water Bearing Sand
39.62		Shale & Sandstone

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 0.00 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1969/09/08	54.55	0.00

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
39.62 m			1969/09/08

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	39.62

Surface Casing (if applicable)
Steel
Size OD : 13.64 cm
Wall Thickness : 0.000 cm
Bottom at : 21.64 m

Well Casing/Liner
Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal Driven
Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
BROWN JIM

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 271512
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
KOSTER, ANDREW	RR3, LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	23	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.539938 Longitude -113.933299
How Location Obtained: Map

Elevation 937.26 m
How Elevation Obtained: Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 0.00 L/min
Recommended Pump Intake Depth (From TOC) 0.00 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well
ORIGINALLY NO LSD

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1969/09/08	12:00 AM	0.00 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal

Type Bailer
Removal Rate 54.55 L/min
Depth Withdrawn From 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
BROWN JIM

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 274801
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1985/09/12

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
WHITMER, L.	116 WOODSTOCK RD SW, CAL			CANADA	

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	8	15	41	28	4	39	5	N1314P	

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.528078 Longitude -113.941017
How Location Obtained
Lat/Long calculated to centre of lot

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
9.14		Brown Sandy Clay & Gravel
22.25		Gray Clay & Rocks
24.38		Gray Shale
24.69		Gray Sandstone
25.91		Gray Shale
27.43		Gray Sandstone

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 31.82 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1985/08/29	136.38	11.28

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
27.43 m		1985/08/29	1985/08/29

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	27.43

Surface Casing (if applicable)
Galvanized Steel
Size OD : 11.43 cm
Wall Thickness : 0.358 cm
Bottom at : 24.38 m

Well Casing/Liner
Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal Driven
Placed from 0.00 m to 24.38 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALBERTA EAGLE DRILLING LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 274801
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1985/09/12

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
WHITMER, L.	116 WOODSTOCK RD SW, CAL			CANADA	

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	8	15	41	28	4	39	5	N1314P	

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.528078 Longitude -113.941017
How Location Obtained
Lat/Long calculated to centre of lot

Elevation m
How Elevation Obtained
Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 31.82 L/min
Recommended Pump Intake Depth (From TOC) 27.43 m
Pump Installed Yes
Type SUB
Depth m
Make
H.P. 1/3
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

GIC CHANGED LOCATION ON 2012-12-06 FROM SE10 TO AGREE WITH LAND TITLES.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1985/08/29	12:00 AM	11.28 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal

Type Air
Removal Rate 136.38 L/min
Depth Withdrawn From 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALBERTA EAGLE DRILLING LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 274996
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
CALIF STD CO#390					

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	07	14	041	28	4				

Measured from Boundary of
19.51 m from North
128.02 m from West

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.528915 Longitude -113.925575
How Location Obtained
Not Verified

Elevation 912.27 m
How Elevation Obtained
Survey-Air

Drilling Information

Method of Drilling
Drilled

Proposed Well Use
Industrial

Type of Work
Structure Test Hole

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
280.42 m			1953/10/06

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	280.42

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 274996
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
CALIF STD CO#390					

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	07	14	041	28	4				

Measured from Boundary of
19.51 m from North
128.02 m from West

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.528915 Longitude -113.925575
How Location Obtained: Not Verified

Elevation 912.27 m
How Elevation Obtained: Survey-Air

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level: cm
Is Artesian Flow:
Rate: L/min
Is Flow Control Installed:
Describe:

Recommended Pump Rate: L/min
Recommended Pump Intake Depth (From TOC): m
Pump Installed:
Depth: m
Type:
Make:
H.P.:
Model (Output Rating):

Did you Encounter Saline Water (>4000 ppm TDS):
Depth: m
Well Disinfected Upon Completion:
Gas:
Depth: m
Geophysical Log Taken: Electric
Submitted to ESRD: Electric

Sample Collected for Potability:
Submitted to ESRD:

Additional Comments on Well

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal

Type:
Removal Rate: L/min
Depth Withdrawn From: m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 275000
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1973/11/09

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
BRUINS PLUMBING	6790-52 AVE, RED DEER				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Not Verified

Elevation m
How Elevation Obtained: Not Obtained

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
20.42		Clay & Rocks
27.43		Gray Shale
30.48		Gray Sandstone

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 0.00 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1973/10/04	68.19	11.58

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
30.48 m			1973/10/04

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	30.48

Surface Casing (if applicable)
Steel
Size OD : 13.34 cm
Wall Thickness : 0.000 cm
Bottom at : 23.77 m

Well Casing/Liner
Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal Driven
Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
SCHMIDT DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275000
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1973/11/09

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
BRUINS PLUMBING	6790-52 AVE, RED DEER				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Not Verified

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 0.00 L/min
Recommended Pump Intake Depth (From TOC) 18.29 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well
DRILLER REPORTS SOFT WATER.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1973/10/04	12:00 AM	11.58 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal
Type Pump
Removal Rate 68.19 L/min
Depth Withdrawn From 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
SCHMIDT DRILLING LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GOWN ID

GIC Well ID 275002
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1971/09/15

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
LACOMBE, COUNTY OF	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained
Map

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Municipal

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
6.10		Sand
21.64		Clay & Rocks
32.00		Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 0.00 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1971/07/01	54.55	9.45

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
32.00 m			1971/07/01

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	32.00

Surface Casing (if applicable)
Steel
Size OD : 13.34 cm
Wall Thickness : 0.000 cm
Bottom at : 27.43 m

Well Casing/Liner
Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal Driven
Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
SCHMIDT DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275002
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1971/09/15

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
LACOMBE, COUNTY OF	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391

How Location Obtained: Map

Elevation m

How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm

Is Artesian Flow

Rate L/min

Is Flow Control Installed

Describe

Recommended Pump Rate 0.00 L/min

Recommended Pump Intake Depth (From TOC) 21.34 m

Pump Installed Yes Depth m

Type HAND Make H.P.

Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS) Depth m

Gas Depth m

Well Disinfected Upon Completion

Geophysical Log Taken

Submitted to ESRD

Sample Collected for Potability Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Ground Level

Measurement in Metric

Test Date	Start Time	Static Water Level
1971/07/01	12:00 AM	9.45 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal

Type Pump

Removal Rate 54.55 L/min

Depth Withdrawn From 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
SCHMIDT DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GOWN ID

GIC Well ID 275003
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1972/11/14

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
BRUINS, R.C.	RED DEER				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained
Map

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Unknown

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
12.80		Sand
21.95		Blue Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 0.00 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1972/08/28	45.46	7.32

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
21.95 m			1972/08/28

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	21.95

Surface Casing (if applicable)
Steel
Size OD : 12.70 cm
Wall Thickness : 0.000 cm
Bottom at : 12.80 m

Well Casing/Liner
Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal Driven
Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
AL'S WATER WELLS LTD

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275003
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1972/11/14

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
BRUINS, R.C.	RED DEER				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 0.00 L/min
Recommended Pump Intake Depth (From TOC) 0.00 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well
DRILLER REPORTS SOFT WATER.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1972/08/28	12:00 AM	7.32 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal

Type Pump
Removal Rate 45.46 L/min
Depth Withdrawn From 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
AL'S WATER WELLS LTD

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 275004
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
BC PLUMBING	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained
Map

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Unknown

Proposed Well Use
Industrial

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
0.61		Topsoil
15.24		Clay & Sand
20.12		Blue Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 0.00 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1972/05/16	45.46	6.71

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
20.12 m			1972/05/16

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	20.12

Surface Casing (if applicable)
Steel
Size OD : 12.70 cm
Wall Thickness : 0.000 cm
Bottom at : 15.24 m

Well Casing/Liner
Plastic
Size OD : 10.80 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by Unknown

Annular Seal Driven
Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
AL'S WATER WELLS LTD

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275004
GoA Well Tag No.
Drilling Company Well ID
Date Report Received
GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
BC PLUMBING	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 0.00 L/min
Recommended Pump Intake Depth (From TOC) 0.00 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well
DRILLER REPORTS MEDIUM HARD WATER.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1972/05/16	12:00 AM	6.71 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal
Type Pump
Removal Rate 45.46 L/min
Depth Withdrawn From 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
AL'S WATER WELLS LTD

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275006
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1977/05/30

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
FREEMAN, JEAN	P.O. BOX 1000 DIDSBURY				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391

How Location Obtained
Map

Elevation 908.30 m

How Elevation Obtained
Estimated

Drilling Information

Method of Drilling
Unknown

Proposed Well Use
Domestic

Type of Work
Chemistry

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
32.61 m			

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	32.61

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275006
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1977/05/30

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
FREEMAN, JEAN	P.O. BOX 1000 DIDSBURY				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Map

Elevation 908.30 m
How Elevation Obtained: Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability
Submitted to ESRD Yes

Additional Comments on Well

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal
Type
Removal Rate L/min
Depth Withdrawn From m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275007
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
SCARLETT, RALPH	BENTLEY				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Not Verified

Elevation 906.78 m
How Elevation Obtained: Estimated

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
12.19		Sandy Clay & Gravel
21.34		Shattered Shale
27.43		Shale & Sandstone

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 18.18 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1978/06/20	15.91	7.62

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
27.43 m		1978/06/20	1978/06/20

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	27.43

Surface Casing (if applicable)
Galvanized Steel
Size OD : 11.43 cm
Wall Thickness : 0.358 cm
Bottom at : 22.25 m

Well Casing/Liner
Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal Driven
Placed from 0.00 m to 22.25 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
RICHMOND WW DRLG

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275007
GoA Well Tag No.
Drilling Company Well ID
Date Report Received
GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
SCARLETT, RALPH	BENTLEY				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Not Verified

Elevation 906.78 m
How Elevation Obtained: Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level: cm
Is Artesian Flow:
Rate: L/min
Is Flow Control Installed:
Describe:

Recommended Pump Rate: 18.18 L/min
Recommended Pump Intake Depth (From TOC): 20.73 m
Pump Installed: Yes
Type: SUB
Depth: m
Make:
H.P.: 1/3
Model (Output Rating):

Did you Encounter Saline Water (>4000 ppm TDS):
Depth: m
Gas:
Depth: m
Well Disinfected Upon Completion:
Geophysical Log Taken:
Submitted to ESRD:

Sample Collected for Potability:
Submitted to ESRD:

Additional Comments on Well
DRILLER REPORTS SOFT WATER.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1978/06/20	12:00 AM	7.62 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal
Type: Pump
Removal Rate: 15.91 L/min
Depth Withdrawn From: 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
RICHMOND WW DRLG

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275008
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1980/05/02

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
HODGSON, RON	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4	3	A	5600MC	

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained
Map

Elevation 906.78 m
How Elevation Obtained
Estimated

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
12.50		Clay
30.48		Shale
31.09		Sandstone
42.67		Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 0.00 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1980/03/18	36.37	9.14

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
42.67 m		1980/03/18	1980/03/18

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	42.67

Surface Casing (if applicable)
Steel
Size OD : 13.97 cm
Wall Thickness : 0.396 cm
Bottom at : 13.72 m

Well Casing/Liner
Steel
Size OD : 11.43 cm
Wall Thickness : 0.318 cm
Top at : 0.00 m
Bottom at : 30.48 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
24.38	30.48	0.635		20.32

Perforated by Torch

Annular Seal Driven
Placed from 0.00 m to 13.72 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount 0.00

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
SCHMIDT DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275008
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1980/05/02

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
HODGSON, RON	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4	3	A	5600MC	

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Map

Elevation 906.78 m
How Elevation Obtained: Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level: cm
Is Artesian Flow:
Rate: L/min
Is Flow Control Installed:
Describe:

Recommended Pump Rate: 0.00 L/min
Recommended Pump Intake Depth (From TOC): 18.29 m
Pump Installed:
Depth: m
Type:
Make:
H.P.:
Model (Output Rating):

Did you Encounter Saline Water (>4000 ppm TDS):
Depth: m
Gas:
Depth: m
Well Disinfected Upon Completion:
Geophysical Log Taken:
Submitted to ESRD:
Sample Collected for Potability:
Submitted to ESRD:

Additional Comments on Well
DRILLER REPORTS SOFT WATER.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1980/03/18	12:00 AM	9.14 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal
Type: Air
Removal Rate: 36.37 L/min
Depth Withdrawn From: 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
SCHMIDT DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 275010
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1935/08/06

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
WILSON, A.	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained
Field

Elevation 914.40 m
How Elevation Obtained
Estimated

Drilling Information

Method of Drilling
Drilled

Proposed Well Use
Unknown

Type of Work
Federal Well Survey

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
27.43 m			

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	27.43

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275010
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1935/08/06

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
WILSON, A.	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Field

Elevation 914.40 m
How Elevation Obtained: Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level: cm
Is Artesian Flow:
Rate: L/min
Is Flow Control Installed:
Describe:

Recommended Pump Rate: L/min
Recommended Pump Intake Depth (From TOC): m
Pump Installed:
Type:
Depth: m
Make:
H.P.:
Model (Output Rating):

Did you Encounter Saline Water (>4000 ppm TDS):
Depth: m
Gas:
Depth: m
Well Disinfected Upon Completion:
Geophysical Log Taken:
Submitted to ESRD:
Sample Collected for Potability:
Submitted to ESRD:

Additional Comments on Well
OWNER REPORTS SOFT WATER.

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal
Type:
Removal Rate: L/min
Depth Withdrawn From: m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275011
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1980/09/29

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
BRUINS PLUMBING	RED DEER				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Not Verified

Elevation 914.40 m
How Elevation Obtained: Estimated

Drilling Information

Method of Drilling: Rotary

Proposed Well Use: Domestic

Type of Work: New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
9.45		Clay
11.28		Gray Clay
24.38		Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 0.00 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1980/09/15	31.82	5.49

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
24.38 m		1980/09/15	1980/09/15

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	24.38

Surface Casing (if applicable)
Steel
Size OD : 13.97 cm
Wall Thickness : 0.478 cm
Bottom at : 14.94 m

Well Casing/Liner
Steel
Size OD : 11.43 cm
Wall Thickness : 0.318 cm
Top at : 0.00 m
Bottom at : 24.38 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
21.34	24.38	0.635		20.32

Perforated by: Torch

Annular Seal: Driven
Placed from 0.00 m to 14.94 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well: UNKNOWN NA DRILLER
Certification No: 1
Company Name: SCHMIDT DRILLING LTD.
Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275011
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1980/09/29

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
BRUINS PLUMBING	RED DEER				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Not Verified

Elevation 914.40 m
How Elevation Obtained: Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level: cm
Is Artesian Flow:
Rate: L/min
Is Flow Control Installed:
Describe:

Recommended Pump Rate: 0.00 L/min
Recommended Pump Intake Depth (From TOC): 16.76 m
Pump Installed: Yes
Type: SUB
Depth: m
Make:
H.P.: 1/2
Model (Output Rating):

Did you Encounter Saline Water (>4000 ppm TDS):
Depth: m
Gas:
Depth: m
Well Disinfected Upon Completion:
Geophysical Log Taken:
Submitted to ESRD:

Sample Collected for Potability:
Submitted to ESRD:

Additional Comments on Well
DRILLER REPORTS SOFT WATER.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1980/09/15	12:00 AM	5.49 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal

Type: Air
Removal Rate: 31.82 L/min
Depth Withdrawn From: 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
SCHMIDT DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GOWN ID

GIC Well ID 275014
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1980/10/27

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
OTTO, W.	EDMONTON				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Map

Elevation 914.40 m
How Elevation Obtained: Estimated

Drilling Information

Method of Drilling: Rotary

Proposed Well Use: Domestic

Type of Work: New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
11.89		Clay
17.07		Shale
21.64		Sandstone
24.38		Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 0.00 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1980/10/02	45.46	4.27

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
24.38 m		1980/10/01	1980/10/02

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	24.38

Surface Casing (if applicable)
Steel
Size OD : 13.97 cm
Wall Thickness : 0.478 cm
Bottom at : 14.33 m

Well Casing/Liner
Steel
Size OD : 11.43 cm
Wall Thickness : 0.318 cm
Top at : 0.00 m
Bottom at : 24.38 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
21.34	24.38	0.635		20.32

Perforated by: Torch

Annular Seal: Driven
Placed from 0.00 m to 14.33 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well: UNKNOWN NA DRILLER
Certification No: 1
Company Name: SCHMIDT DRILLING LTD.
Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275014
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1980/10/27

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
OTTO, W.	EDMONTON				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Map

Elevation 914.40 m
How Elevation Obtained: Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 0.00 L/min
Recommended Pump Intake Depth (From TOC) 12.19 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well
DRILLER REPORTS SOFTW ATER.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1980/10/02	12:00 AM	4.27 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal
Type Air
Removal Rate 45.46 L/min
Depth Withdrawn From 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
SCHMIDT DRILLING LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 275015
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1980/10/27

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
MERRICK, D.	EDMONTON				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Map

Elevation 914.40 m
How Elevation Obtained: Estimated

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
4.57		Sand
11.58		Clay
25.91		Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 0.00 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1980/09/13	45.46	4.88

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
25.91 m		1980/09/13	1980/09/13

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	25.91

Surface Casing (if applicable)
Steel
Size OD : 13.97 cm
Wall Thickness : 0.478 cm
Bottom at : 14.33 m

Well Casing/Liner
Steel
Size OD : 11.43 cm
Wall Thickness : 0.318 cm
Top at : 0.00 m
Bottom at : 25.91 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
21.34	25.91	0.635		25.40

Perforated by: Torch

Annular Seal Driven
Placed from 0.00 m to 14.33 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
SCHMIDT DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

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GOWN ID

GIC Well ID 275015
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1980/10/27

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
MERRICK, D.	EDMONTON				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391

How Location Obtained
Map

Elevation 914.40 m

How Elevation Obtained
Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 0.00 L/min
Recommended Pump Intake Depth (From TOC) 11.58 m
Pump Installed Yes
Type JET
Depth m
Make
H.P. 1/2
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well
DRILLER REPORTS SOFT WATER.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1980/09/13	12:00 AM	4.88 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal

Type Pump
Removal Rate 45.46 L/min
Depth Withdrawn From 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
SCHMIDT DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

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View in Imperial | Export to Excel

GIC Well ID 275016
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1982/07/28

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
SKAVBERG, ERIC	CALGARY				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained
Map

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
20.42		Clay
27.74		Shale
32.00		Sandstone

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 0.00 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1982/07/12	90.92	9.45

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
32.00 m		1982/07/12	1982/07/12

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	32.00

Surface Casing (if applicable)
Steel
Size OD : 11.43 cm
Wall Thickness : 0.396 cm
Bottom at : 24.38 m

Well Casing/Liner
Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal Driven
Placed from 0.00 m to 24.38 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
SCHMIDT DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

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GOWN ID

GIC Well ID 275016
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1982/07/28

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
SKAVBERG, ERIC	CALGARY				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 0.00 L/min
Recommended Pump Intake Depth (From TOC) 24.38 m
Pump Installed Yes
Type JET
Depth m
Make
H.P. 1/2
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well
DRILLER REPORTS SOFT WATER.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1982/07/12	12:00 AM	9.45 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal
Type Air
Removal Rate 90.92 L/min
Depth Withdrawn From 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
SCHMIDT DRILLING LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275018
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1982/06/11

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
LACOMBE FISH & GAME ASSOC	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained
Map

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Unknown

Proposed Well Use
Municipal

Type of Work
Chemistry

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
18.29 m			

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	18.29

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275018
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1982/06/11

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
LACOMBE FISH & GAME ASSOC	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability
Submitted to ESRD Yes

Additional Comments on Well

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal
Type
Removal Rate L/min
Depth Withdrawn From m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275019
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1984/07/13

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
BIRK, ROBERT	RR3, LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained
Map

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Unknown

Proposed Well Use
Unknown

Type of Work
Chemistry

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
0.00 m			

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	0.00

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275019
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1984/07/13

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
BIRK, ROBERT	RR3, LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
_____ m from
_____ m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Map

Elevation _____ m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level _____ cm
Is Artesian Flow _____
Rate _____ L/min
Is Flow Control Installed _____
Describe _____

Recommended Pump Rate _____ L/min
Recommended Pump Intake Depth (From TOC) _____ m
Pump Installed _____ Depth _____ m
Type _____ Make _____ H.P. _____
Model (Output Rating) _____

Did you Encounter Saline Water (>4000 ppm TDS) _____ Depth _____ m
Gas _____ Depth _____ m
Well Disinfected Upon Completion _____
Geophysical Log Taken _____
Submitted to ESRD

Sample Collected for Potability _____ Submitted to ESRD _____

Additional Comments on Well

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal

Type _____
Removal Rate _____ L/min
Depth Withdrawn From _____ m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GOWN ID

GIC Well ID 275020
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1984/08/27

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
CURZON, JACK	4216-12 ST NE, CAL				T2E 6K9

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4	24			

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained
Map

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
6.10		Sand
21.34		Clay
30.48		Gray Shale
36.58		Green Shale
41.15		Sandstone

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 0.00 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1984/08/16	59.10	12.19

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
41.15 m		1984/08/16	1984/08/16

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	41.15

Surface Casing (if applicable)
Steel
Size OD : 14.12 cm
Wall Thickness : 0.478 cm
Bottom at : 24.38 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.318 cm
Top at : 22.86 m
Bottom at : 41.15 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
28.96	41.15	0.635		20.32

Perforated by Machine

Annular Seal Driven
Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
JRBT DRILLING LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275020
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1984/08/27

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
CURZON, JACK	4216-12 ST NE, CAL				T2E 6K9

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4	24			

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 0.00 L/min
Recommended Pump Intake Depth (From TOC) 21.34 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

DRILLER REPORTS MEDIUM HARD WATER.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1984/08/16	12:00 AM	12.19 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal

Type Air
Removal Rate 59.10 L/min
Depth Withdrawn From 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
JRBT DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275023
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1985/05/06

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
WILSON, DAN	RR3, LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained
Map

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Unknown

Proposed Well Use
Unknown

Type of Work
Chemistry

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
30.48 m			

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	30.48

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275023
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1985/05/06

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
WILSON, DAN	RR3, LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability
Submitted to ESRD Yes

Additional Comments on Well

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal

Type
Removal Rate L/min
Depth Withdrawn From m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275024
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1981/07/16

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
SAFEWAY CREDIT UNION	16011-116 AVE, EDM				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained
Map

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Unknown

Proposed Well Use
Domestic

Type of Work
Chemistry

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
30.48 m			

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	30.48

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275024
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1981/07/16

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
SAFEWAY CREDIT UNION	16011-116 AVE, EDM				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability
Submitted to ESRD Yes

Additional Comments on Well

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal

Type
Removal Rate L/min
Depth Withdrawn From m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 275026
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1987/04/14

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
NIEVIADONY, LES	P.O. BOX 253 LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4	9	A	5600MC	

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391

How Location Obtained
Map

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Unknown

Proposed Well Use
Domestic

Type of Work
Chemistry

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
54.86 m			

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	54.86

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275026
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1987/04/14

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
NIEVIADONY, LES	P.O. BOX 253 LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4	9	A	5600MC	

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal

Type
Removal Rate L/min
Depth Withdrawn From m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GOWN ID

GIC Well ID 275028
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
KAMLAH, W.H.	RR3, LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	NW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.532706 Longitude -113.933394
How Location Obtained: Map

Elevation 910.74 m
How Elevation Obtained: Estimated

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
12.19		Clay
14.33		Shale
27.43		Shale & Sandstone
33.53	Yes	Water Bearing Sandstone
39.62		Shale & Sandstone

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 0.00 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1967/06/28	54.55	6.10

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
39.62 m			1967/06/28

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	39.62

Surface Casing (if applicable)
Unknown
Size OD : 13.97 cm
Wall Thickness : 0.000 cm
Bottom at : 14.33 m

Well Casing/Liner
Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal
Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
BROWN JIM

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275028
GoA Well Tag No.
Drilling Company Well ID
Date Report Received
GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
KAMLAH, W.H.	RR3, LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	NW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.532706 Longitude -113.933394
How Location Obtained: Map

Elevation 910.74 m
How Elevation Obtained: Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level: cm
Is Artesian Flow:
Rate: L/min
Is Flow Control Installed:
Describe:

Recommended Pump Rate: 0.00 L/min
Recommended Pump Intake Depth (From TOC): 0.00 m
Pump Installed:
Depth: m
Type:
Make:
H.P.:
Model (Output Rating):

Did you Encounter Saline Water (>4000 ppm TDS):
Depth: m
Gas:
Depth: m
Well Disinfected Upon Completion:
Geophysical Log Taken:
Submitted to ESRD:

Sample Collected for Potability:
Submitted to ESRD:

Additional Comments on Well
DRILLER REPORTS MEDIUM HARD WATER.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1967/06/28	12:00 AM	6.10 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal
Type: Bailer
Removal Rate: 54.55 L/min
Depth Withdrawn From: 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
BROWN JIM

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 275029
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1935/08/06

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
WILSON, A.	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	NW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.532706 Longitude -113.933394
How Location Obtained
Not Verified

Elevation 914.40 m
How Elevation Obtained
Estimated

Drilling Information

Method of Drilling
Unknown

Proposed Well Use
Unknown

Type of Work
Federal Well Survey

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
25.91 m			

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	25.91

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275029
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1935/08/06

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
WILSON, A.	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	NW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.532706 Longitude -113.933394

How Location Obtained
Not Verified

Elevation 914.40 m

How Elevation Obtained
Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well
OWNER REPORTS SOFT WATER.

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal

Type
Removal Rate L/min
Depth Withdrawn From m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275043
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1987/06/22

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
ETHIER, R.	RR3, LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	00	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.529091 Longitude -113.927462
How Location Obtained
Not Verified

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Unknown

Proposed Well Use
Domestic

Type of Work
Chemistry

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
32.61 m			

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	32.61

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275043
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1987/06/22

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
ETHIER, R.	RR3, LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	00	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.529091 Longitude -113.927462
How Location Obtained: Not Verified

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal
Type
Removal Rate L/min
Depth Withdrawn From m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275044
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1987/06/22

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
HIGHBERG, DAVE	RR3, LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	00	14	041	28	4	28			

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.529091 Longitude -113.927462
How Location Obtained
Not Verified

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Unknown

Proposed Well Use
Domestic

Type of Work
Chemistry

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
33.53 m			

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	33.53

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275044
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1987/06/22

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
HIGHBERG, DAVE	RR3, LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	00	14	041	28	4	28			

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.529091 Longitude -113.927462
How Location Obtained: Not Verified

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal

Type
Removal Rate L/min
Depth Withdrawn From m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GOWN ID

GIC Well ID 275045
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1985/08/20

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
LACOMBE FISH & GAME ASSOC	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	8	15	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.526170 Longitude -113.940956
How Location Obtained
Map

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Cable Tool

Proposed Well Use
Domestic

Type of Work
Deepened

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
21.34		Old Well
30.18		Gray Shale
30.78		Gray Sandstone
43.28		Blue Gray Shale
44.20		Gray Sandstone

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1985/05/09	68.19	10.06

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
44.20 m		1985/05/07	1985/05/09

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	44.20

Surface Casing (if applicable)
Steel
Size OD : 13.97 cm
Wall Thickness : 0.620 cm
Bottom at : 22.86 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.318 cm
Top at : 0.00 m
Bottom at : 44.20 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
28.96	44.20	0.318		45.72

Perforated by Machine

Annular Seal Driven
Placed from 0.00 m to 22.86 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
FLINN DRILLING LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275045
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1985/08/20

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
LACOMBE FISH & GAME ASSOC	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	8	15	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.526170 Longitude -113.940956
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) 19.20 m
Pump Installed Yes
Type
Depth 0.02 m
Make HAND
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

DEPTH PUMP SET @ IS UNKNOWN, NOT 0.05'.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1985/05/09	12:00 AM	10.06 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal

Type Bailer
Removal Rate 68.19 L/min
Depth Withdrawn From 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
FLINN DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275048
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
CALIF STD CO#W-420					

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	16	15	041	28	4				

Measured from Boundary of
158.50 m from North
3.66 m from East

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.534543 Longitude -113.940041
How Location Obtained
Not Verified

Elevation 911.96 m
How Elevation Obtained
Survey-Air

Drilling Information

Method of Drilling
Drilled

Proposed Well Use
Industrial

Type of Work
Structure Test Hole

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
271.27 m			1952/12/14

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	271.27

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275048
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
CALIF STD CO#W-420					

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	16	15	041	28	4				

Measured from Boundary of
158.50 m from North
3.66 m from East

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.534543 Longitude -113.940041
How Location Obtained: Not Verified

Elevation 911.96 m
How Elevation Obtained: Survey-Air

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level ____ cm
Is Artesian Flow ____ Is Flow Control Installed ____
Rate ____ L/min Describe ____

Recommended Pump Rate ____ L/min Pump Installed ____ Depth ____ m
Recommended Pump Intake Depth (From TOC) ____ m Type ____ Make ____ H.P. ____
Model (Output Rating) ____

Did you Encounter Saline Water (>4000 ppm TDS) ____ Depth ____ m Well Disinfected Upon Completion ____
Gas ____ Depth ____ m Geophysical Log Taken Electric
Submitted to ESRD Electric

Sample Collected for Potability ____ Submitted to ESRD ____

Additional Comments on Well

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal
Type ____
Removal Rate ____ L/min
Depth Withdrawn From ____ m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275050
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
DEGRAFF, JIM	BENTLEY				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SE	22	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.539573 Longitude -113.945696
How Location Obtained
Map

Elevation 914.40 m
How Elevation Obtained
Estimated

Drilling Information

Method of Drilling
Cable Tool

Proposed Well Use
Unknown

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
0.30		Blue Topsoil
8.53		Sandy Clay
9.14		Gravel
15.85		Till
19.20		Shale
20.12		Sandstone
35.05		Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 0.00 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1978/04/05	68.19	8.53

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
35.05 m		1978/04/03	1978/04/05

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	35.05

Surface Casing (if applicable)
Steel
Size OD : 14.12 cm
Wall Thickness : 0.478 cm
Bottom at : 20.12 m

Well Casing/Liner
Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal Driven
Placed from 0.00 m to 19.51 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALBERTA WW SERVICE

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

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GIC Well ID 275050
GoA Well Tag No.
Drilling Company Well ID
Date Report Received
GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
DEGRAFF, JIM	BENTLEY				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SE	22	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.539573 Longitude -113.945696
How Location Obtained: Map

Elevation 914.40 m
How Elevation Obtained: Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 0.00 L/min
Recommended Pump Intake Depth (From TOC) 18.29 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD Yes

Additional Comments on Well
DRILLER REPORTS SOFT WATER.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1978/04/05	12:00 AM	8.53 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal
Type Bailer
Removal Rate 68.19 L/min
Depth Withdrawn From 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALBERTA WW SERVICE

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275052
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1989/05/19

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
DEGRAFF, MARGETE	GULL LK				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SE	22	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.539573 Longitude -113.945696
How Location Obtained
Map

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
14.94		Till & Clay
15.54		Hard Sandstone
20.73		Shale
22.25		Sandstone
29.26		Shale
36.88		Sandstone
43.59		Shale
52.12		Sandstone
53.64		Shale
54.86		Sandstone

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 113.65 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1989/04/28	113.65	7.62

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
54.86 m		1989/04/28	1989/04/28

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	54.86

Surface Casing (if applicable)
Steel
Size OD : 13.97 cm
Wall Thickness : 0.620 cm
Bottom at : 24.99 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.396 cm
Top at : 24.38 m
Bottom at : 54.86 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
42.67	54.86	0.953		0.00

Perforated by Machine

Annular Seal Drive Shoe
Placed from 0.00 m to 24.99 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275052
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1989/05/19

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
DEGRAFF, MARGETE	GULL LK				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SE	22	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.539573 Longitude -113.945696
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 113.65 L/min
Recommended Pump Intake Depth (From TOC) 0.00 m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1989/04/28	12:00 AM	7.62 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal

Type Air
Removal Rate 113.65 L/min
Depth Withdrawn From 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275055
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1981/08/07

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
STEWART, W.W.	RR3, LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	14	22	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.548339 Longitude -113.953207
How Location Obtained
Map

Elevation 905.87 m
How Elevation Obtained
Estimated

Drilling Information

Method of Drilling
Unknown

Proposed Well Use
Domestic

Type of Work
Chemistry

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
21.34 m			

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	21.34

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275055
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1981/08/07

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
STEWART, W.W.	RR3, LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	14	22	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.548339 Longitude -113.953207

How Location Obtained
Map

Elevation 905.87 m

How Elevation Obtained
Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability
Submitted to ESRD Yes

Additional Comments on Well

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal

Type
Removal Rate L/min
Depth Withdrawn From m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GOWN ID

GIC Well ID 275056
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1985/03/15

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
STEWART, W.W.	RR3, LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	14	22	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.548339 Longitude -113.953200
How Location Obtained
Map

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Cable Tool

Proposed Well Use
Domestic & Stock

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
0.61		Topsoil
1.83		Brown Soft Clay
2.44		Yellow Sandy Clay
4.57		Brown Clay & Sand
10.36		Brown Sandy Clay
11.89		Gray Clay & Sand
14.02		Gray Shale & Gravel
15.54		Blue Caving Shale
17.98		Gray Silty Shale
20.73		Gray Shale & Sandy Stringers
22.56		Blue Gray Shale & Sandy Stringers
27.13		Blue Hard Shale
28.65		Gray Bentonitic Shale & Sandy Stringers
34.14		Gray Shale & Sandy Stringers

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 0.00 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1985/01/15	127.29	4.57

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
34.14 m		1985/01/14	1985/01/15

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	34.14

Surface Casing (if applicable)
Steel
Size OD : 17.78 cm
Wall Thickness : 0.805 cm
Bottom at : 17.68 m

Well Casing/Liner
Steel
Size OD : 14.12 cm
Wall Thickness : 0.396 cm
Top at : 15.24 m
Bottom at : 34.14 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
17.68	34.14	0.953		15.24

Perforated by Torch

Annular Seal Driven
Placed from 0.00 m to 17.68 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings Bottom Fittings

Pack
Type Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
FORRESTER WATER WELL DRILLING (1981) LTD.

Copy of Well report provided to owner Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275056
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1985/03/15

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
STEWART, W.W.	RR3, LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	14	22	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.548339 Longitude -113.953200
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 0.00 L/min
Recommended Pump Intake Depth (From TOC) 0.00 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well
DRILLER REPORTS MEDIUM HARD WATER.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1985/01/15	12:00 AM	4.57 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal
Type Bailer
Removal Rate 127.29 L/min
Depth Withdrawn From 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
FORRESTER WATER WELL DRILLING (1981) LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 275059
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
BEFUX, PETER	LACOMBE			CANADA	

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	NE	22	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.546804 Longitude -113.945697

How Location Obtained
Map

Elevation 908.30 m

How Elevation Obtained
Estimated

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
3.66		Sandy Clay
8.23		Brown Clay & Boulders
10.67		Blue Clay & Boulders
16.46		Blue Shale & Sandstone
17.37		Gray Shale
22.86		Gray Shale
27.43		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 0.00 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1960/06/12	45.46	3.66
1960/06/12	31.82	3.66

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
27.43 m			1960/06/12

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	27.43

Surface Casing (if applicable)
Unknown
Size OD : 11.43 cm
Wall Thickness : 0.000 cm
Bottom at : 14.02 m

Well Casing/Liner
Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal Driven
Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
CHIPMUNK HOLDING LTD

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

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GIC Well ID 275059
GoA Well Tag No.
Drilling Company Well ID
Date Report Received
GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
BEFUX, PETER	LACOMBE			CANADA	

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	NE	22	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.546804 Longitude -113.945697
How Location Obtained: Map

Elevation 908.30 m
How Elevation Obtained: Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level: cm
Is Artesian Flow:
Rate: L/min
Is Flow Control Installed:
Describe:

Recommended Pump Rate: 0.00 L/min
Recommended Pump Intake Depth (From TOC): 0.00 m
Pump Installed:
Depth: m
Type:
Make:
H.P.:
Model (Output Rating):

Did you Encounter Saline Water (>4000 ppm TDS):
Depth: m
Gas: Yes
Depth: m
Well Disinfected Upon Completion:
Geophysical Log Taken:
Submitted to ESRD:
Sample Collected for Potability:
Submitted to ESRD:

Additional Comments on Well
DRILLER REPORTS SOFT WATER.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1960/06/12	12:00 AM	3.66 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
3.66	0:00	4.57
	10:00	3.66
4.57	20:00	

Method of Water Removal
Type: Bailer
Removal Rate: 45.46 L/min
Depth Withdrawn From: 0.00 m

If water removal period was < 2 hours, explain why

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1960/06/12	12:00 AM	3.66 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
3.66	0:00	5.18
5.18	20:00	3.66

Method of Water Removal
Type: Bailer
Removal Rate: 31.82 L/min
Depth Withdrawn From: 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
CHIPMUNK HOLDING LTD

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

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GIC Well ID 275059
GoA Well Tag No.
Drilling Company Well ID
Date Report Received
GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
BEFUX, PETER	LACOMBE			CANADA	

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	NE	22	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.546804 Longitude -113.945697
How Location Obtained: Map

Elevation 908.30 m
How Elevation Obtained: Estimated

Drilling Information

Method of Drilling: Rotary

Proposed Well Use: Domestic

Type of Work: New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
3.66		Sandy Clay
8.23		Brown Clay & Boulders
10.67		Blue Clay & Boulders
16.46		Blue Shale & Sandstone
17.37		Gray Shale
22.86		Gray Shale
27.43		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 0.00 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1960/06/12	45.46	3.66
1960/06/12	31.82	3.66

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
27.43 m			1960/06/12

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	27.43

Surface Casing (if applicable)
Unknown
Size OD : 11.43 cm
Wall Thickness : 0.000 cm
Bottom at : 14.02 m

Well Casing/Liner
Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal Driven
Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well: UNKNOWN NA DRILLER
Certification No: 1
Company Name: CHIPMUNK HOLDING LTD
Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275059
GoA Well Tag No.
Drilling Company Well ID
Date Report Received
GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
BEFUX, PETER	LACOMBE			CANADA	

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	NE	22	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.546804 Longitude -113.945697
How Location Obtained: Map

Elevation 908.30 m
How Elevation Obtained: Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level: cm
Is Artesian Flow:
Rate: L/min
Is Flow Control Installed:
Describe:

Recommended Pump Rate: 0.00 L/min
Recommended Pump Intake Depth (From TOC): 0.00 m
Pump Installed:
Depth: m
Type:
Make:
H.P.:
Model (Output Rating):

Did you Encounter Saline Water (>4000 ppm TDS):
Depth: m
Gas: Yes
Depth: m
Well Disinfected Upon Completion:
Geophysical Log Taken:
Submitted to ESRD:
Sample Collected for Potability:
Submitted to ESRD:

Additional Comments on Well
DRILLER REPORTS SOFT WATER.

Yield Test

Taken From Ground Level
Depth to water level
Measurement in Metric

Test Date	Start Time	Static Water Level
1960/06/12	12:00 AM	3.66 m

Method of Water Removal
Type: Bailer
Removal Rate: 45.46 L/min
Depth Withdrawn From: 0.00 m

If water removal period was < 2 hours, explain why

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
3.66	0:00	4.57
	10:00	3.66
4.57	20:00	

Yield Test

Taken From Ground Level
Depth to water level
Measurement in Metric

Test Date	Start Time	Static Water Level
1960/06/12	12:00 AM	3.66 m

Method of Water Removal
Type: Bailer
Removal Rate: 31.82 L/min
Depth Withdrawn From: 0.00 m

If water removal period was < 2 hours, explain why

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
3.66	0:00	5.18
5.18	20:00	3.66

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
CHIPMUNK HOLDING LTD

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275062
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1935/08/06

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
JUNEL	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	NE	22	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.546804 Longitude -113.945697
How Location Obtained
Not Verified

Elevation 914.40 m
How Elevation Obtained
Estimated

Drilling Information

Method of Drilling
Drilled

Proposed Well Use
Unknown

Type of Work
Federal Well Survey

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
27.43 m			

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	27.43

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275062
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1935/08/06

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
JUNEL	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	NE	22	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.546804 Longitude -113.945697

How Location Obtained
Not Verified

Elevation 914.40 m

How Elevation Obtained
Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal

Type
Removal Rate L/min
Depth Withdrawn From m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275063
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1985/10/24

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
STEWART, W.W.	RR3, LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	NE	22	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.546804 Longitude -113.945697

How Location Obtained
Map

Elevation m

How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Unknown

Proposed Well Use
Domestic

Type of Work
Chemistry

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
34.14 m			

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	34.14

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275063
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1985/10/24

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
STEWART, W.W.	RR3, LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	NE	22	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.546804 Longitude -113.945697
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability
Submitted to ESRD Yes

Additional Comments on Well

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal

Type
Removal Rate L/min
Depth Withdrawn From m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275064
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
WILSON, MARTIN					

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SE	23	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.539938 Longitude -113.921436
How Location Obtained: Map

Elevation 923.54 m
How Elevation Obtained: Estimated

Drilling Information

Method of Drilling
Cable Tool

Type of Work
New Well

Proposed Well Use
Stock

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
5.49		Clay
6.40		Hard Sandstone
12.50		Shale
13.72		Hard Sandstone
14.63		Sandstone
18.59		Shale
19.81		Sandstone
22.86		Shale
30.48		Shale & Sandstone Ledges

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 0.00 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1977/08/10	54.55	4.88

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
30.48 m		1977/08/09	1977/08/10

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	30.48

Surface Casing (if applicable)
Steel
Size OD : 14.12 cm
Wall Thickness : 0.478 cm
Bottom at : 14.94 m

Well Casing/Liner
Plastic
Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 30.48 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
14.33	30.48	0.000		0.00

Perforated by: Machine

Annular Seal Driven
Placed from 0.00 m to 14.33 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
AL'S WATER WELLS LTD

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275064
GoA Well Tag No.
Drilling Company Well ID
Date Report Received
GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
WILSON, MARTIN					

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SE	23	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.539938 Longitude -113.921436
How Location Obtained: Map

Elevation 923.54 m
How Elevation Obtained: Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 0.00 L/min
Recommended Pump Intake Depth (From TOC) 15.24 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1977/08/10	12:00 AM	4.88 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal

Type Bailer
Removal Rate 54.55 L/min
Depth Withdrawn From 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
AL'S WATER WELLS LTD

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275065
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1988/12/19

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
WILSON, MARTIN	RR3, LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SE	23	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.539938 Longitude -113.921436
How Location Obtained
Map

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Domestic & Stock

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
6.10		Clay
9.75		Sandstone
14.63		Shale
23.77		Sandstone
24.08		Shale
27.43		Sandstone
30.48		Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 181.84 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1988/11/03	181.84	4.57

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
30.48 m		1988/11/02	1988/11/03

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	30.48

Surface Casing (if applicable)
Steel
Size OD : 13.97 cm
Wall Thickness : 0.620 cm
Bottom at : 10.97 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.396 cm
Top at : 6.10 m
Bottom at : 30.48 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
12.19	30.48	0.953		0.00

Perforated by Machine

Annular Seal Driven
Placed from 0.00 m to 10.97 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275065
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1988/12/19

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
WILSON, MARTIN	RR3, LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SE	23	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.539938 Longitude -113.921436
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 181.84 L/min
Recommended Pump Intake Depth (From TOC) 0.00 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1988/11/03	12:00 AM	4.57 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal

Type Air
Removal Rate 181.84 L/min
Depth Withdrawn From 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 275067
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1952/11/22

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
CALIF STD CO#E400					

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	01	23	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.538130 Longitude -113.918470
How Location Obtained: Not Verified

Elevation 924.15 m
How Elevation Obtained: Survey-Air

Drilling Information

Method of Drilling
Drilled

Proposed Well Use
Industrial

Type of Work
Structure Test Hole

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
281.03 m			

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	281.03

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275067
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1952/11/22

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
CALIF STD CO#E400					

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	01	23	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.538130 Longitude -113.918470
How Location Obtained: Not Verified

Elevation 924.15 m
How Elevation Obtained: Survey-Air

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken Electric
Submitted to ESRD Electric

Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal

Type
Removal Rate L/min
Depth Withdrawn From m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 275068
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1960/12/28

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
GUSTAFSON, W.R.	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	23	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.539938 Longitude -113.933299
How Location Obtained: Map

Elevation 914.40 m
How Elevation Obtained: Estimated

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Domestic & Stock

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
5.49		Sandy Clay & Boulders
15.85		Blue Clay & Boulders
19.20		Blue Shale
26.21		Gray Sandy Shale
26.52		Hard Sandstone
28.96		Green Shale
30.48		Gray Shale & Sandstone

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 0.00 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1960/06/21	38.64	4.88

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
30.48 m			1960/06/21

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	30.48

Surface Casing (if applicable)
Unknown
Size OD : 12.70 cm
Wall Thickness : 0.000 cm
Bottom at : 19.51 m

Well Casing/Liner
Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal Driven
Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
CHIPMUNK HOLDING LTD

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275068
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1960/12/28

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
GUSTAFSON, W.R.	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	23	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.539938 Longitude -113.933299
How Location Obtained
Map

Elevation 914.40 m
How Elevation Obtained
Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 0.00 L/min
Recommended Pump Intake Depth (From TOC) 0.00 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well
DRILLER REPORTS SOFT WATER.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1960/06/21	12:00 AM	4.88 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
4.88	0:00	11.58
11.58	30:00	4.88

Method of Water Removal
Type Bailer
Removal Rate 38.64 L/min
Depth Withdrawn From 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
CHIPMUNK HOLDING LTD

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 275069
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1989/09/26

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
HARTLEY, RON	RR3, LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	23	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.539938 Longitude -113.933299
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Drilling Information

Method of Drilling
Unknown

Proposed Well Use
Domestic

Type of Work
Chemistry

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
0.00 m			

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	0.00

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275069
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1989/09/26

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
HARTLEY, RON	RR3, LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	23	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.539938 Longitude -113.933299
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal

Type
Removal Rate L/min
Depth Withdrawn From m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 275070
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1935/08/06

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
GUSTAFSON	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	04	23	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.538130 Longitude -113.936264
How Location Obtained
Field

Elevation 917.45 m
How Elevation Obtained
Survey-Air

Drilling Information

Method of Drilling
Drilled

Proposed Well Use
Unknown

Type of Work
Federal Well Survey

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 0.00 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1925/01/01		4.27

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
29.26 m			1925/01/01

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	29.26

Surface Casing (if applicable)
Unknown
Size OD : 5.08 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner
Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal
Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275070
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1935/08/06

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
GUSTAFSON	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	04	23	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.538130 Longitude -113.936264

How Location Obtained
Field

Elevation 917.45 m

How Elevation Obtained
Survey-Air

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 0.00 L/min
Recommended Pump Intake Depth (From TOC) 0.00 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well
OWNER REPORTS SOFT WATER.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1925/01/01	12:00 AM	4.27 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal
Type
Removal Rate L/min
Depth Withdrawn From 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 275071
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1985/10/24

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
STEWART, S.	RR3, LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	NW	23	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.547170 Longitude -113.933302
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Drilling Information

Method of Drilling
Unknown

Proposed Well Use
Domestic

Type of Work
Chemistry

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
19.81 m			

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	19.81

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275071
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1985/10/24

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
STEWART, S.	RR3, LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	NW	23	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.547170 Longitude -113.933302
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability
Submitted to ESRD Yes

Additional Comments on Well

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal

Type
Removal Rate L/min
Depth Withdrawn From m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 275072
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1935/08/06

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
KAMLAH, H.	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	14	23	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.548977 Longitude -113.930336
How Location Obtained: Not Verified

Elevation 929.64 m
How Elevation Obtained: Estimated

Drilling Information

Method of Drilling
Drilled

Proposed Well Use
Unknown

Type of Work
Federal Well Survey

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
24.38 m			

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	24.38

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275072
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1935/08/06

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
KAMLAH, H.	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	14	23	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.548977 Longitude -113.930336
How Location Obtained: Not Verified

Elevation 929.64 m
How Elevation Obtained: Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well
OWNER REPORTS HARD WATER.

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal
Type
Removal Rate L/min
Depth Withdrawn From m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 275073
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1935/08/05

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
CARTER, C.M.	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	09	23	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.545362 Longitude -113.918470
How Location Obtained
Field

Elevation 929.64 m
How Elevation Obtained
Estimated

Drilling Information

Method of Drilling
Hand Dug

Proposed Well Use
Unknown

Type of Work
Federal Well Survey

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
4.57 m			

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	4.57

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275073
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1935/08/05

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
CARTER, C.M.	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	09	23	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.545362 Longitude -113.918470
How Location Obtained: Field

Elevation 929.64 m
How Elevation Obtained: Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well
HARD WATER.

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal
Type
Removal Rate L/min
Depth Withdrawn From m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275076
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
FISH & GAME#1		RIMBEY	AB	CA	

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SE	23	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.543554 Longitude -113.927368
How Location Obtained
Not Verified

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Domestic

Type of Work
New Well-Abandoned

Plugged 1970/02/01
Plugged with Cement
Amount

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
2.44		Clay
3.66		Sandstone
6.10		Yellow Shale
24.38		Yellow Shale & Sandstone

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
24.38 m			1970/02/01

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	24.38

Surface Casing (if applicable)
Unknown
Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner
Unknown
Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by Unknown

Annular Seal Unknown
Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type Unknown
Grain Size
Amount Unknown

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
BROWN JIM

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275076
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
FISH & GAME#1		RIMBEY	AB	CA	

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SE	23	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.543554 Longitude -113.927368
How Location Obtained: Not Verified

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

30FT OF 5.5" CASING PULLED.
NO LOCATION GIVEN IN SECTION SO SE USED

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal

Type
Removal Rate L/min
Depth Withdrawn From m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
BROWN JIM

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275088
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1962/06/11

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
JOHNSON, JALMER	RR3, LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	24	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.539359 Longitude -113.909159
How Location Obtained: Map

Elevation 923.24 m
How Elevation Obtained: Estimated

Drilling Information

Method of Drilling
Unknown

Proposed Well Use
Domestic

Type of Work
Chemistry

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
18.29 m			

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	18.29

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275088
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1962/06/11

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
JOHNSON, JALMER	RR3, LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	24	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.539359 Longitude -113.909159
How Location Obtained: Map

Elevation 923.24 m
How Elevation Obtained: Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability
Submitted to ESRD Yes

Additional Comments on Well

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal

Type
Removal Rate L/min
Depth Withdrawn From m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275090
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1984/08/30

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
LINCOLN HALL SOCIETY	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	24	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.539359 Longitude -113.909159
How Location Obtained
Not Verified

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Cable Tool

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
2.74		See Comments
7.01		Clay
7.32		Rocks
17.37		Shale
18.29		Sandstone
25.91		Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 45.46 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1984/06/01	45.46	2.44

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
25.91 m		1984/06/01	1984/06/01

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	25.91

Surface Casing (if applicable)
Steel
Size OD : 14.12 cm
Wall Thickness : 0.478 cm
Bottom at : 7.32 m

Well Casing/Liner
Steel
Size OD : 11.43 cm
Wall Thickness : 0.635 cm
Top at : 6.71 m
Bottom at : 25.91 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
18.29	25.91	0.000		0.00

Perforated by Torch

Annular Seal Driven
Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings Bottom Fittings

Pack
Type Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALBERTA WW SERVICE

Copy of Well report provided to owner Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275090
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1984/08/30

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
LINCOLN HALL SOCIETY	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	24	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.539359 Longitude -113.909159
How Location Obtained: Not Verified

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 45.46 L/min
Recommended Pump Intake Depth (From TOC) 18.29 m
Pump Installed Yes
Type HAND
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

DRILLER REPORTS MEDIUM HARD WATER. 0'-9' OLD PIT.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1984/06/01	12:00 AM	2.44 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal

Type Pump
Removal Rate 45.46 L/min
Depth Withdrawn From 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALBERTA WW SERVICE

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275099
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1935/08/06

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
COMMUNITY HALL	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	12	24	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.544783 Longitude -113.912127
How Location Obtained
Field

Elevation 929.64 m
How Elevation Obtained
Estimated

Drilling Information

Method of Drilling
Drilled

Proposed Well Use
Municipal

Type of Work
Federal Well Survey

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
27.43 m			

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	27.43

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275099
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1935/08/06

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
COMMUNITY HALL	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	12	24	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.544783 Longitude -113.912127
How Location Obtained: Field

Elevation 929.64 m
How Elevation Obtained: Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well
OWNER REPORTS SOFT WATER.

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal
Type
Removal Rate L/min
Depth Withdrawn From m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275125
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
CALIF STD CO#E-400					

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	01	26	041	28	4				

Measured from Boundary of
17.07 m from South
288.04 m from East

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.551110 Longitude -113.919661
How Location Obtained
Not Verified

Elevation 940.31 m
How Elevation Obtained
Survey-Air

Drilling Information

Method of Drilling
Drilled

Proposed Well Use
Industrial

Type of Work
Structure Test Hole

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
300.23 m			1952/12/13

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	300.23

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275125
GoA Well Tag No.
Drilling Company Well ID
Date Report Received
GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
CALIF STD CO#E-400					

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	01	26	041	28	4				

Measured from Boundary of
17.07 m from South
288.04 m from East

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.551110 Longitude -113.919661
How Location Obtained: Not Verified

Elevation 940.31 m
How Elevation Obtained: Survey-Air

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level: cm
Is Artesian Flow:
Rate: L/min
Is Flow Control Installed:
Describe:

Recommended Pump Rate: L/min
Recommended Pump Intake Depth (From TOC): m
Pump Installed:
Type:
Depth: m
Make:
H.P.:
Model (Output Rating):

Did you Encounter Saline Water (>4000 ppm TDS):
Depth: m
Gas:
Depth: m
Well Disinfected Upon Completion:
Geophysical Log Taken: Electric
Submitted to ESRD: Electric
Sample Collected for Potability:
Submitted to ESRD:

Additional Comments on Well

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal

Type:
Removal Rate: L/min
Depth Withdrawn From: m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275126
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1982/03/18

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
FERGUSON, D.	P.O. BOX 252 LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	26	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.554572 Longitude -113.933214
How Location Obtained
Not Verified

Elevation 952.50 m
How Elevation Obtained
Estimated

Drilling Information

Method of Drilling
Unknown

Proposed Well Use
Domestic

Type of Work
Chemistry

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
30.48 m			

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	30.48

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275126
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1982/03/18

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
FERGUSON, D.	P.O. BOX 252 LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	26	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.554572 Longitude -113.933214
How Location Obtained: Not Verified

Elevation 952.50 m
How Elevation Obtained: Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability
Submitted to ESRD Yes

Additional Comments on Well

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal

Type
Removal Rate L/min
Depth Withdrawn From m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275129
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
HALBERG, NIEL	RR3, LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SE	27	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.554206 Longitude -113.945473
How Location Obtained: Map

Elevation 929.64 m
How Elevation Obtained: Estimated

Drilling Information

Method of Drilling
Cable Tool

Proposed Well Use
Stock

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
10.67		Light Gray Clay
14.94		Light Blue Clay
15.85	Yes	Blue Water Bearing Sandstone
18.29		Blue Clay

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 0.00 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1976/09/12	45.46	7.01

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
18.29 m		1976/09/09	1976/09/12

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	18.29

Surface Casing (if applicable)
Steel
Size OD : 10.16 cm
Wall Thickness : 0.475 cm
Bottom at : 18.29 m

Well Casing/Liner
Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal Driven
Placed from 0.00 m to 14.02 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
DOOL WW

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275129
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
HALBERG, NIEL	RR3, LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SE	27	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.554206 Longitude -113.945473
How Location Obtained: Map

Elevation 929.64 m
How Elevation Obtained: Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level: cm
Is Artesian Flow:
Rate: L/min
Is Flow Control Installed:
Describe:

Recommended Pump Rate: 0.00 L/min
Recommended Pump Intake Depth (From TOC): 12.19 m
Pump Installed:
Depth: m
Type:
Make:
H.P.:
Model (Output Rating):

Did you Encounter Saline Water (>4000 ppm TDS):
Depth: m
Gas:
Depth: m
Well Disinfected Upon Completion:
Geophysical Log Taken:
Submitted to ESRD:

Sample Collected for Potability:
Submitted to ESRD:

Additional Comments on Well
DRILLER REPORTS MEDIUM HARD WATER.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1976/09/12	12:00 AM	7.01 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal
Type: Bailer
Removal Rate: 45.46 L/min
Depth Withdrawn From: 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
DOOL WW

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 275132
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1979/01/05

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
HALBERG, VICTOR	RR3, LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SE	27	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.554206 Longitude -113.945473

How Location Obtained
Map

Elevation 905.26 m

How Elevation Obtained
Estimated

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Domestic & Stock

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
6.10		Clay
24.38		Shale
25.30		Sandstone
25.91		Coal
27.74		Shale
36.58		Sandstone

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 0.00 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1978/09/26	68.19	26.21

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
36.58 m		1978/09/26	1978/09/26

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	36.58

Surface Casing (if applicable)
Steel
Size OD : 13.97 cm
Wall Thickness : 0.396 cm
Bottom at : 6.40 m

Well Casing/Liner
Steel
Size OD : 11.43 cm
Wall Thickness : 0.318 cm
Top at : 0.00 m
Bottom at : 36.58 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
30.48	36.58	0.000		0.00

Perforated by Torch

Annular Seal Driven
Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
SCHMIDT DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275132
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1979/01/05

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
HALBERG, VICTOR	RR3, LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SE	27	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.554206 Longitude -113.945473
How Location Obtained: Map

Elevation 905.26 m
How Elevation Obtained: Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level: cm
Is Artesian Flow:
Rate: L/min
Is Flow Control Installed:
Describe:

Recommended Pump Rate: 0.00 L/min
Recommended Pump Intake Depth (From TOC): 35.05 m
Pump Installed:
Depth: m
Type:
Make:
H.P.:
Model (Output Rating):

Did you Encounter Saline Water (>4000 ppm TDS):
Depth: m
Gas:
Depth: m
Well Disinfected Upon Completion:
Geophysical Log Taken:
Submitted to ESRD:
Sample Collected for Potability:
Submitted to ESRD: Yes

Additional Comments on Well
DRILLER REPORTS MEDIUM HARD WATER.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1978/09/26	12:00 AM	26.21 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal

Type: Air
Removal Rate: 68.19 L/min
Depth Withdrawn From: 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
SCHMIDT DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 275133
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1935/08/06

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
SHYLLING	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SE	27	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.554206 Longitude -113.945473
How Location Obtained: Not Verified

Elevation 914.40 m
How Elevation Obtained: Estimated

Drilling Information

Method of Drilling
Hand Dug

Proposed Well Use
Unknown

Type of Work
Federal Well Survey

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
1.83 m			

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	1.83

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

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GIC Well ID 275133
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1935/08/06

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
SHYLLING	LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SE	27	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.554206 Longitude -113.945473
How Location Obtained: Not Verified

Elevation 914.40 m
How Elevation Obtained: Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well
OWNER REPORTS HARD WATER.

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal
Type
Removal Rate L/min
Depth Withdrawn From m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 275135
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1935/01/01

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
HALBERG					

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SE	27	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.554206 Longitude -113.945473
How Location Obtained
Not Verified

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Drilled

Proposed Well Use
Unknown

Type of Work
Federal Well Survey

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
21.64 m			

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	21.64

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275135
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1935/01/01

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
HALBERG					

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SE	27	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.554206 Longitude -113.945473

How Location Obtained
Not Verified

Elevation m

How Elevation Obtained
Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well
OWNER REPORTS HARD WATER.

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal

Type
Removal Rate L/min
Depth Withdrawn From m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

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View in Imperial | Export to Excel

GIC Well ID 275136
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1979/01/05

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
HALBERG, LEONARD	RR3, LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	27	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.554206 Longitude -113.957340
How Location Obtained: Map

Elevation 905.26 m
How Elevation Obtained: Estimated

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Domestic & Stock

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
6.40		Clay
10.97		Shale
17.37		Sandstone

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 0.00 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1978/09/25	204.57	3.05

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
17.37 m		1978/09/25	1978/09/25

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	17.37

Surface Casing (if applicable)
Steel
Size OD : 13.97 cm
Wall Thickness : 0.396 cm
Bottom at : 11.28 m

Well Casing/Liner
Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal Driven
Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
SCHMIDT DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

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GIC Well ID 275136
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1979/01/05

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
HALBERG, LEONARD	RR3, LACOMBE				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	27	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.554206 Longitude -113.957340
How Location Obtained: Map

Elevation 905.26 m
How Elevation Obtained: Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level: cm
Is Artesian Flow:
Rate: L/min
Is Flow Control Installed:
Describe:

Recommended Pump Rate: 0.00 L/min
Recommended Pump Intake Depth (From TOC): 6.10 m
Pump Installed:
Depth: m
Type:
Make:
H.P.:
Model (Output Rating):

Did you Encounter Saline Water (>4000 ppm TDS):
Depth: m
Gas:
Depth: m
Well Disinfected Upon Completion:
Geophysical Log Taken:
Submitted to ESRD:

Sample Collected for Potability:
Submitted to ESRD: Yes

Additional Comments on Well

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1978/09/25	12:00 AM	3.05 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal

Type: Air
Removal Rate: 204.57 L/min
Depth Withdrawn From: 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
SCHMIDT DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 275139
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1935/08/06

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
MACCASHY, D.					

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	09	27	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.559630 Longitude -113.942507
How Location Obtained
Not Verified

Elevation 917.45 m
How Elevation Obtained
Estimated

Drilling Information

Method of Drilling
Drilled

Proposed Well Use
Unknown

Type of Work
Federal Well Survey

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
30.48 m			

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	30.48

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 275139
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1935/08/06

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
MACCASHY, D.					

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	09	27	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.559630 Longitude -113.942507

How Location Obtained: Not Verified

Elevation 917.45 m

How Elevation Obtained: Estimated

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level: cm
Is Artesian Flow:
Rate: L/min
Is Flow Control Installed:
Describe:

Recommended Pump Rate: L/min
Recommended Pump Intake Depth (From TOC): m
Pump Installed:
Type:
Depth: m
Make:
H.P.:
Model (Output Rating):

Did you Encounter Saline Water (>4000 ppm TDS):
Depth: m
Gas:
Depth: m
Well Disinfected Upon Completion:
Geophysical Log Taken:
Submitted to ESRD:
Sample Collected for Potability:
Submitted to ESRD:

Additional Comments on Well
OWNER REPORTS HARD WATER.

Yield Test

Taken From Ground Level | Measurement in Metric

Test Date	Start Time	Static Water Level
		m

Method of Water Removal

Type:
Removal Rate: L/min
Depth Withdrawn From: m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GOWN ID

GIC Well ID 280612
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1974/06/26

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
SMITH, RAYMOND	(WILSON BEACH)3665 41 AVE, RED DEER				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Drilling Information

Method of Drilling
Drilled

Proposed Well Use
Domestic

Type of Work
Chemistry

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 0.00 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1974/06/23		11.58

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
33.53 m			1972/08/01

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	33.53

Surface Casing (if applicable)

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Bottom at : 0.00 m

Well Casing/Liner

Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal

Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type

Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack

Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 280612
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1974/06/26

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
SMITH, RAYMOND	(WILSON BEACH)3665 41 AVE, RED DEER				

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained
Map

Elevation m
How Elevation Obtained
Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 0.00 L/min
Recommended Pump Intake Depth (From TOC) 0.00 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD Yes

Additional Comments on Well
ORIGINAL LSD SE

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1974/06/23	12:00 AM	11.58 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal
Type
Removal Rate L/min
Depth Withdrawn From 0.00 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
UNKNOWN DRILLER

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GOWN ID

GIC Well ID 280613
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1983/09/20

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
MACLEOD, ALLAN	P.O. BOX 1959 (WILSON BEACH), CLARESHOLM				T0L 0T0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Drilling Information

Method of Drilling
Cable Tool

Type of Work
New Well

Proposed Well Use
Domestic

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
1.22		Black Topsoil
13.41		Medium Grained Sand
18.90		Brown Clay & Gravel
24.99		Blue Clay & Gravel
27.43		Blue Fine Grained Sandstone

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 0.00 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1983/08/18	45.46	7.62

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
27.43 m		1983/08/16	1983/08/18

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	27.43

Surface Casing (if applicable)
Steel
Size OD : 14.12 cm
Wall Thickness : 0.000 cm
Bottom at : 25.60 m

Well Casing/Liner
Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal Driven
Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
FRASER, JACK

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 280613
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1983/09/20

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
MACLEOD, ALLAN	P.O. BOX 1959 (WILSON BEACH), CLARESHOLM				T0L 0T0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained
Map

Elevation m
How Elevation Obtained
Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 0.00 L/min
Recommended Pump Intake Depth (From TOC) 22.86 m
Pump Installed Yes
Type
Depth m
Make GOULD 7EHOS
H.P. .5
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well
ORIGINALLY IN SE-10-41-28-4

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1983/08/18	12:00 AM	7.62 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal

Type Pump
Removal Rate 45.46 L/min
Depth Withdrawn From 22.86 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
FRASER, JACK

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 280614
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1983/09/20

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
BLENCOWE, EVAN	(WILSON BEACH)2112 CHICOUTIMI NW,CALGARY				T2L 0V7

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained
Map

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Cable Tool

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
0.61		Black Sandy Topsoil
11.58		Medium Grained Sand
21.03		Brown Clay & Gravel
27.43		Blue Clay & Rocks
28.96		Blue Fine Grained Sandstone

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 0.00 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1983/08/11	68.19	9.14

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
28.96 m		1983/08/09	1983/08/11

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	28.96

Surface Casing (if applicable)
Steel
Size OD : 14.12 cm
Wall Thickness : 0.000 cm
Bottom at : 28.04 m

Well Casing/Liner
Size OD : 0.00 cm
Wall Thickness : 0.000 cm
Top at : 0.00 m
Bottom at : 0.00 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)

Perforated by

Annular Seal Driven
Placed from 0.00 m to 0.00 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
FRASER, JACK

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

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GOWN ID

GIC Well ID 280614
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1983/09/20

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
BLENCOWE, EVAN	(WILSON BEACH)2112 CHICOUTIMI NW,CALGARY				T2L 0V7

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained
Map

Elevation m
How Elevation Obtained
Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 0.00 L/min
Recommended Pump Intake Depth (From TOC) 25.91 m
Pump Installed Yes
Type
Depth m
Make GOULD 7EHO5
H.P. .5
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well
ORIGINALLY IN SE-10-41-28-4

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1983/08/11	12:00 AM	9.14 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal

Type Pump
Removal Rate 68.19 L/min
Depth Withdrawn From 25.91 m

If water removal period was < 2 hours, explain why

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
FRASER, JACK

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

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GOWN ID

GIC Well ID 285448
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1996/08/08

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
BEATON, THRISH	203 PIPER DR, RED DEER			CANADA	

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	8	15	41	28	4	35	5	N1314P	

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.527294 Longitude -113.941572

How Location Obtained
Map

Elevation m

How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
7.62		Brown Till
13.72		Blue Shale
22.86		Blue Till
28.96		Blue Shale
32.00		Gray Shale
32.61		Gray Shale
34.44		Sandstone
35.97		Gray Shale
38.10		Green Shale
40.54		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 68.19 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
1996/07/21	136.38	11.28

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
40.54 m		1996/07/20	1996/07/21

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	40.54

Surface Casing (if applicable)
Plastic
Size OD : 14.12 cm
Wall Thickness : 0.953 cm
Bottom at : 30.48 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.602 cm
Top at : 30.18 m
Bottom at : 40.54 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
32.00	40.54	0.635		25.40

Perforated by Saw

Annular Seal Driven & Bentonite
Placed from 0.00 m to 30.48 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
CLIFF'S DRILLING

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 285448
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 1996/08/08

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
BEATON, THRISH	203 PIPER DR, RED DEER			CANADA	

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	8	15	41	28	4	35	5	N1314P	

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.527294 Longitude -113.941572
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level 30.48 cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 68.19 L/min
Recommended Pump Intake Depth (From TOC) 21.34 m
Pump Installed Yes
Type SUB
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

GIC CHANGED LOCATION ON 2012-12-13 FROM SE 10 AND ADDED PLAN # TO AGREE WITH MAP.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
1996/07/21	12:00 AM	11.28 m

Method of Water Removal
Type Air
Removal Rate 136.38 L/min
Depth Withdrawn From 40.54 m

If water removal period was < 2 hours, explain why

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
	2:00	22.10
	3:00	17.47
	4:00	14.78
	5:00	13.36
	6:00	12.75
	7:00	12.73

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
CLIFF'S DRILLING

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 295373
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2000/12/18

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
GILL, RANDY	249 SCHUBERT PLACE NW, CALGARY				T3L 1W6

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4	15	A	5600MC	

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Not Verified

Elevation m
How Elevation Obtained: Not Obtained

Drilling Information

Method of Drilling
Cable Tool

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
9.14		Yellow Sand
15.24		Till
16.76		Green Shale
30.78		Gray Shale
35.97		Green Shale
39.62		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 45.46 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
2000/10/17	45.46	11.09

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
39.62 m		2000/10/16	2000/10/17

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	39.62

Surface Casing (if applicable)
Steel
Size OD : 16.81 cm
Wall Thickness : 0.478 cm
Bottom at : 19.51 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.602 cm
Top at : 15.24 m
Bottom at : 39.62 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
27.43	39.62	0.318		20.32

Perforated by Saw

Annular Seal Driven
Placed from 0.00 m to 19.51 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings Bottom Fittings

Pack
Type Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
J.C. DRILLING

Copy of Well report provided to owner Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 295373
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2000/12/18

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
GILL, RANDY	249 SCHUBERT PLACE NW, CALGARY				T3L 1W6

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4	15	A	5600MC	

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained
Not Verified

Elevation m
How Elevation Obtained
Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 45.46 L/min
Recommended Pump Intake Depth (From TOC) 33.53 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

DRILLER REPORTS DISTANCE FROM TOP OF CASING TO GROUND LEVEL: 3'.

Yield Test

Taken From Ground Level
Depth to water level

Measurement in Metric

Test Date	Start Time	Static Water Level
2000/10/17	12:00 AM	11.09 m

Method of Water Removal

Type Bailer
Removal Rate 45.46 L/min
Depth Withdrawn From 39.62 m

If water removal period was < 2 hours, explain why

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
	0:00	36.59
	1:00	33.67
	2:00	30.77
	3:00	27.87
	4:00	25.20
	5:00	22.38
	6:00	19.67
	7:00	17.21
	8:00	15.36
	9:00	14.12
	10:00	12.80
	12:00	12.50
	14:00	12.49
	16:00	12.19
	20:00	11.88
	25:00	11.65
	30:00	11.57
	35:00	11.45
	40:00	11.41
	50:00	11.26
	60:00	11.23

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
J.C. DRILLING

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

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GOWN ID

GIC Well ID 295922
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2001/05/03

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
HALBERG, LEN	P.O. BOX 2 SITE 3 RR3, LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	27	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.554206 Longitude -113.957340
How Location Obtained
Map

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
7.62		Brown Clay
10.06		Gray Clay
13.72		Brown Fractured Shale
15.24		Gray Fractured Shale
16.76		Gray Sandstone
17.37		Greenish Gray Shale
18.90		Gray Sandstone
23.47		Gray Hard Shale
24.99		Gray Sandstone
26.52		Gray Shale
27.43		Gray Sandstone
29.57		Gray Hard Shale
33.53		Greenish Gray Shale
36.58		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 36.37 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
2001/04/24	227.30	10.06

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
36.58 m		2001/04/24	2001/04/24

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	36.58

Surface Casing (if applicable)
Steel
Size OD : 13.97 cm
Wall Thickness : 0.620 cm
Bottom at : 19.81 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.544 cm
Top at : 18.29 m
Bottom at : 36.58 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
21.34	30.48	1.270		1.27

Perforated by Hand Drill

Annular Seal Drive Shoe
Placed from 0.00 m to 19.81 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

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GOWN ID

GIC Well ID 295922
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2001/05/03

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
HALBERG, LEN	P.O. BOX 2 SITE 3 RR3, LACOMBE				T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	27	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.554206 Longitude -113.957340
How Location Obtained: Map

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 36.37 L/min
Recommended Pump Intake Depth (From TOC) 24.38 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

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

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date 2001/04/24
Start Time 12:00 AM
Static Water Level 10.06 m

Method of Water Removal

Type Air
Removal Rate 227.30 L/min
Depth Withdrawn From 36.58 m

If water removal period was < 2 hours, explain why

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
	1:00	21.34
	2:00	15.24
	3:00	12.19
	4:00	10.67
	5:00	10.36
	6:00	10.06

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

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View in Imperial | Export to Excel

GOWN ID

GIC Well ID 296824
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2001/06/12

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
SCARLET, RALPH	P.O. BOX 147 BENTLEY				T0C 0J0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained: Not Verified

Elevation m
How Elevation Obtained: Not Obtained

Drilling Information

Method of Drilling: Rotary

Proposed Well Use: Domestic

Type of Work: New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
1.83		Brown Clay
8.23		Sandy Clay
11.28		Gray Shale
12.80		Gray Sandstone
14.02		Gray Shale
17.37		Gray Sandstone
19.81		Gray Shale
24.99		Gray Sandstone
29.57		Gray Shale
34.75		Gray Sandstone
35.05		Gray Shale
38.10		Gray Sandstone
42.06		Gray Shale
46.33		Gray Sandstone
56.39		Gray Shale
59.74		Gray Sandstone
65.53		Gray Shale
67.06		Gray Sandstone

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 45.46 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
2001/05/27	45.46	14.02

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
67.06 m		2001/05/27	2001/05/27

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	67.06

Surface Casing (if applicable): Steel
Size OD : 13.97 cm
Wall Thickness : 0.620 cm
Bottom at : 28.65 m

Well Casing/Liner: Plastic
Size OD : 11.43 cm
Wall Thickness : 0.602 cm
Top at : 24.38 m
Bottom at : 67.06 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
54.86	67.06	0.953		0.95

Perforated by: Hand Drill

Annular Seal: Drive Shoe
Placed from 0.00 m to 28.65 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well: UNKNOWN NA DRILLER
Certification No: 1
Company Name: ALKEN BASIN DRILLING LTD.
Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

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GOWN ID

GIC Well ID 296824
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2001/06/12

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
SCARLET, RALPH	P.O. BOX 147 BENTLEY				T0C 0J0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	14	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525475 Longitude -113.933391
How Location Obtained
Not Verified

Elevation m
How Elevation Obtained
Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 45.46 L/min
Recommended Pump Intake Depth (From TOC) 51.82 m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

DRILLER REPORTS DISTANCE FROM TOP OF CASING TO GROUND LEVEL: 2'. TEST WITH DRILL PIPE IN HOLE. DRILLING WATER TAKEN FROM SHOP WELL.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
2001/05/27	12:00 AM	14.02 m

Method of Water Removal

Type Air
Removal Rate 45.46 L/min
Depth Withdrawn From 51.82 m

If water removal period was < 2 hours, explain why

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
	1:00	67.06
	2:00	60.96
	3:00	54.86
	4:00	48.77
	5:00	42.67
	6:00	36.58
	7:00	30.48
	8:00	24.38
	9:00	21.34
	10:00	18.29
	12:00	15.24
	14:00	14.02
	120:00	14.02

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 299508
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2002/05/02

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
GUSTAFSSON, SUE	RR3, LACOMBE		AB	CA	T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	26	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.554200 Longitude -113.934000
How Location Obtained
Phone

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Stock

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
5.18		Sand & Rocks
14.63		Clay & Rocks
22.56		Gray Shale
28.35		Gray Sandstone
30.48		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 113.65 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
2002/03/23	136.38	3.05

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
30.48 m		2002/03/23	2002/03/23

Borehole

Diameter (cm)	From (m)	To (m)
0.00	0.00	30.48

Surface Casing (if applicable)
Steel
Size OD : 13.97 cm
Wall Thickness : 0.620 cm
Bottom at : 18.29 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.478 cm
Top at : 12.19 m
Bottom at : 30.48 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
22.86	30.48	0.953		0.95

Perforated by Hand Drill

Annular Seal Drive Shoe
Placed from 0.00 m to 18.29 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : 0.00 cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type Unknown
Grain Size
Amount Unknown

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 299508
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2002/05/02

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
GUSTAFSSON, SUE	RR3, LACOMBE		AB	CA	T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	26	041	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.554200 Longitude -113.934000
How Location Obtained: Phone

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level 91.44 cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 113.65 L/min
Recommended Pump Intake Depth (From TOC) 27.43 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

OWNER REPORTS LOCATION IS SW, NOT SE. LOCATION CHANGED MAY 12, 2005.

Yield Test

Taken From Ground Level
Depth to water level

Measurement in Metric

Test Date	Start Time	Static Water Level
2002/03/23	12:00 AM	3.05 m

Method of Water Removal

Type Air
Removal Rate 136.38 L/min
Depth Withdrawn From 0.00 m

If water removal period was < 2 hours, explain why

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
	0:00	30.48
	1:00	21.64
	2:00	13.41
	3:00	8.84
	4:00	6.10
	5:00	5.49
	6:00	5.18
	7:00	4.88
	8:00	4.57
	9:00	4.57
	10:00	4.27
	12:00	3.96
	14:00	3.66
	16:00	3.35
	20:00	3.05
	25:00	3.05
	30:00	3.05
	60:00	3.05
	120:00	3.05

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
UNKNOWN NA DRILLER

Certification No
1

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 1064475
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
MURPHY OIL / P.D. 403	P.O. BOX 2721 STATION M	CALGARY	AB	CA	T2P 3Y3

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	12	23	041	28	4				RIG

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.545090 Longitude -113.935810
How Location Obtained: Not Verified

Elevation m
How Elevation Obtained: Not Obtained

Drilling Information

Method of Drilling: Rotary

Proposed Well Use: Industrial

Type of Work: New Well

Plugged 2004/08/31
Plugged with Bentonite Product
Amount

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
9.14		Brown Clay & Boulders
16.46		Gray Clay
21.34	Yes	Gray Water Bearing Sandstone
24.99		Gray Shale
25.60		Gray Sandstone
30.48		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 227.30 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
2004/08/06	227.30	5.79

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
30.48 m		2004/08/06	2004/08/06

Borehole

Diameter (cm)	From (m)	To (m)
12.70	0.00	30.48

Surface Casing (if applicable)
Steel
Size OD : 14.13 cm
Wall Thickness : 0.650 cm
Bottom at : 18.29 m

Well Casing/Liner
Steel
Size OD : 11.43 cm
Wall Thickness : 0.396 cm
Top at : 0.00 m
Bottom at : 24.38 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
18.29	24.38	0.953		0.95

Perforated by Torch

Annular Seal Driven
Placed from 0.00 m to 18.29 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type Unknown
Grain Size
Amount Unknown

Contractor Certification

Name of Journeyman responsible for drilling/construction of well: KELLY UNTINEN
Certification No: 12389Q
Company Name: ALKEN BASIN DRILLING LTD.
Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 1064475
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
MURPHY OIL / P.D. 403	P.O. BOX 2721 STATION M	CALGARY	AB	CA	T2P 3Y3

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	12	23	041	28	4				RIG

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.545090 Longitude -113.935810
How Location Obtained: Not Verified

Elevation m
How Elevation Obtained: Not Obtained

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level 91.44 cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 227.30 L/min
Recommended Pump Intake Depth (From TOC) 21.34 m
Pump Installed Yes Depth m
Type SUB @ 70' Make GRUNDFOS H.P. 3
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS) Depth m
Gas Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well
DRILL PIPE IN THE HOLE

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
2004/08/06	12:00 AM	5.79 m

Method of Water Removal
Type Air
Removal Rate 227.30 L/min
Depth Withdrawn From 30.48 m

If water removal period was < 2 hours, explain why

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
	1:00	9.14
	2:00	7.32
	3:00	6.71
	4:00	6.40
	5:00	6.10
	6:00	5.79
	10:00	5.79
	30:00	5.79
	120:00	5.79

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
KELLY UNTINEN

Certification No
12389Q

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 1064760
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
DEGRAFF RESORT	7891 - 50TH AVE	RED DEER	ALBERTA	CA	T4P 2S4

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	08	22	41	28	4				DEGRAFF

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.541117 Longitude -113.942900
How Location Obtained
Hand held autonomous GPS 20-30m

Elevation 981.46 m
How Elevation Obtained
Hand held autonomous GPS 20-30m

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Municipal

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
2.74		Brown Sand
5.18		Brown Clay
14.02		Gray Clay & Rocks
27.43		Gray See Comments Sandstone
30.18		Gray Shale
32.00		Gray See Comments Sandstone
45.72		Gray Shale
57.91		Gray See Comments Sandstone
60.96		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 68.19 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
2007/04/30	136.38	16.76

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
60.96 m		2007/04/30	2007/04/30

Borehole

Diameter (cm)	From (m)	To (m)
20.00	0.00	60.96

Surface Casing (if applicable)
Steel
Size OD : 14.13 cm
Wall Thickness : 0.655 cm
Bottom at : 44.50 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.602 cm
Top at : 36.58 m
Bottom at : 60.96 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
45.72	57.91	1.270		1.27

Perforated by Hand Drill

Annular Seal Driven & Bentonite
Placed from 0.00 m to 44.50 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type Unknown
Grain Size
Amount Unknown

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
LEONARD BLAIR

Certification No
VA3129

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 1064760
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
DEGRAFF RESORT	7891 - 50TH AVE	RED DEER	ALBERTA	CA	T4P 2S4

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	08	22	41	28	4				DEGRAFF

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.541117 Longitude -113.942900
How Location Obtained
Hand held autonomous GPS 20-30m

Elevation 981.46 m
How Elevation Obtained
Hand held autonomous GPS 20-30m

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level 60.96 cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 68.19 L/min
Recommended Pump Intake Depth (From TOC) 45.72 m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

LINER BOREHOLE DIAMETER 5 INCHES. LITHOLOGY: 46-90 FT 17 GH, 99-105 FT 6 GH, 150-190 FT 2 GH. PRESSURE GROUT AROUND SURFACE CASING, TOPPED UP WITH BENTONITE CHIPS. 12 SACKS GROUT, 10 SACKS BENTONITE CHIPS. PUMP TEST TO FOLLOW, CONTACT STEVE FOLEY AT WATER LINE RESOURCE (403) 243-5611. DRILL PIPE IN HOLE WHEN AIR TESTED. 1200 GALLONS OF WATER TO DRILL WELL TAKEN FROM SHOP WELL AT 7:00 A.M. ON APRIL 30, 2007.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
2007/04/30	12:00 AM	16.76 m

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)

Method of Water Removal

Type Air
Removal Rate 136.38 L/min
Depth Withdrawn From 60.96 m

If water removal period was < 2 hours, explain why
RECOMMENDED PUMPING RATE - 15 - 20 GPM

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
LEONARD BLAIR

Certification No
VA3129

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 1064825
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
HALBERG, SANDY	BOX 2 SITE 3 RR 3	LACOMBE	ALBERTA	CA	T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	6	27	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.556600 Longitude -113.953167
How Location Obtained
Hand held autonomous GPS 20-30m

Elevation 919.58 m
How Elevation Obtained
Hand held autonomous GPS 20-30m

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
10.06		Brown Clay
10.67		Gray Shale
13.72		Gray Sandstone
15.24		Gray Shale
18.90		Gray Sandstone
19.81		Gray Shale
28.35		Gray Sandstone
30.48		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 45.46 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
2006/10/25	181.84	11.58

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
30.48 m		2006/10/25	2006/10/25

Borehole

Diameter (cm)	From (m)	To (m)
15.56	0.00	30.48

Surface Casing (if applicable)
Steel
Size OD : 14.13 cm
Wall Thickness : 0.655 cm
Bottom at : 20.73 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.602 cm
Top at : 18.29 m
Bottom at : 30.48 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
20.73	24.38	0.953		0.95

Perforated by Hand Drill

Annular Seal Driven & Bentonite
Placed from 0.00 m to 20.73 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type Unknown
Grain Size
Amount Unknown

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
KRIS SCHINDEL

Certification No
40628A

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

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GOWN ID

GIC Well ID 1064825
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
HALBERG, SANDY	BOX 2 SITE 3 RR 3	LACOMBE	ALBERTA	CA	T0C 1S0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	6	27	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.556600 Longitude -113.953167
How Location Obtained
Hand held autonomous GPS 20-30m

Elevation 919.58 m
How Elevation Obtained
Hand held autonomous GPS 20-30m

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level 60.96 cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 45.46 L/min
Recommended Pump Intake Depth (From TOC) 19.81 m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

WATER USED TO DRILL THE WELL = 1300 GALLONS OF WATER FROM SHOP, BOREHOLE DIAMETER 6.125" & 5", AIR TESTED WITH DRILL PIPE IN HOLE.

Yield Test

Taken From Ground Level
Depth to water level

Measurement in Metric

Test Date	Start Time	Static Water Level
2006/10/25	12:00 AM	11.58 m

Method of Water Removal

Type Pump & Air
Removal Rate 181.84 L/min
Depth Withdrawn From 30.48 m

If water removal period was < 2 hours, explain why

MEASUREMENTS FROM TOP OF CASING, DRILL PIPE IN HOLE,

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
11.58	0:00	30.48
	1:00	17.37
	2:00	14.63
	3:00	13.11
	4:00	12.19
	5:00	11.89
	6:00	11.89
	7:00	11.58
	8:00	11.58
	9:00	11.58
	10:00	11.58
	12:00	11.58
	14:00	11.58
	16:00	11.58
	20:00	11.58
	25:00	11.58
	30:00	11.58
	35:00	11.58
	40:00	11.58
	50:00	11.58
	60:00	11.58
	75:00	11.58
	90:00	11.58
	105:00	11.58
30.48	120:00	11.58

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
KRIS SCHINDEL

Certification No
40628A

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 1064995
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
HALBERG, CATHERYN	P.O. BOX 2201 WEST PARK	RED DEER	ALBERTA	CA	T4N 6X4

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	27	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.554186 Longitude -113.957435
How Location Obtained
Not Verified

Elevation 927.20 m
How Elevation Obtained
Hand held autonomous GPS 20-30m

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
4.57		Sand & Gravel
12.50		Gray Clay & Rocks
14.63		Gray Soft Sandstone
15.24		Gray Shale
17.07		Gray Soft Shale
19.51		Gray Sandstone
21.03		Gray Shale
21.64		Gray Sandstone
22.25		Gray Shale
22.86		Gray Sandstone
23.77		Gray Shale
24.69		Gray Hard Sandstone
27.74		Gray Shale
31.09		Gray Sandstone
32.00		Gray Shale
32.92		Gray Hard Shale
36.58		Light Blue Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 45.46 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
2007/06/20	227.30	9.14

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
36.58 m		2007/06/20	2007/06/20

Borehole

Diameter (cm)	From (m)	To (m)
15.88	0.00	36.58

Surface Casing (if applicable)
Steel
Size OD : 14.13 cm
Wall Thickness : 0.655 cm
Bottom at : 20.73 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.602 cm
Top at : 12.19 m
Bottom at : 36.58 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
24.38	30.48	0.953		0.95

Perforated by Hand Drill

Annular Seal Driven & Bentonite
Placed from 0.00 m to 20.73 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type Unknown
Grain Size
Amount Unknown

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
HANK DETKAVICH

Certification No
5881AD

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GIC Well ID 1064995
GoA Well Tag No.
Drilling Company Well ID
Date Report Received

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
HALBERG, CATHERYN	P.O. BOX 2201 WEST PARK	RED DEER	ALBERTA	CA	T4N 6X4

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	27	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.554186 Longitude -113.957435
How Location Obtained
Not Verified

Elevation 927.20 m
How Elevation Obtained
Hand held autonomous GPS 20-30m

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level 121.92 cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 45.46 L/min
Recommended Pump Intake Depth (From TOC) 24.38 m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

BOREHOLE DIAMETER 6.25" & 5", CASING FROM +2' TO 68', WATER USED TO DRILL THE WELL FROM SHOP 2007/06/19 7:00 AM 600 GALLONS,

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
2007/06/20	12:00 AM	9.14 m

Method of Water Removal

Type Air
Removal Rate 227.30 L/min
Depth Withdrawn From 36.58 m

If water removal period was < 2 hours, explain why

MEASUREMENTS FROM TOP OF CASING, DRILL PIPE IN HOLE,

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
9.14	0:00	36.58
	1:00	29.57
	2:00	26.52
	3:00	21.03
	4:00	16.76
	5:00	13.11
	6:00	11.28
	7:00	10.36
	8:00	9.14
	9:00	9.14
	10:00	9.14
	12:00	9.14
	14:00	9.14
	16:00	9.14
	20:00	9.14
	25:00	9.14
	30:00	9.14
	35:00	9.14
	40:00	9.14
	50:00	9.14
	60:00	9.14
	75:00	9.14
	90:00	9.14
	105:00	9.14
36.58	120:00	9.14

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
HANK DETKAVICH

Certification No
5881AD

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 1065730
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2009/03/19

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
WILSON BEACH ESTATES C/O KIRK	442 POST ST. STE. 801	SAN FRANSISCO	CALIFORNIA	USA	94102

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	4	14	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525980 Longitude -113.934410
How Location Obtained
Hand held autonomous GPS 20-30m

Elevation 909.83 m
How Elevation Obtained
Hand held autonomous GPS 20-30m

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Observation

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
3.05		Clay
4.57		Sand
6.10		Clay
7.62		Gray Shale
9.14		Gray Sandstone
16.15		Gray Shale
23.16		Gray Sandstone
24.38		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 27.28 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
2009/02/06	27.28	7.50

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
24.38 m	24.38 m	2009/02/06	2009/02/06

Borehole

Diameter (cm)	From (m)	To (m)
20.02	0.00	15.24
12.70	15.24	24.38

Surface Casing (if applicable)
Steel
Size OD : 14.12 cm
Wall Thickness : 0.650 cm
Bottom at : 15.24 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.602 cm
Top at : 6.10 m
Bottom at : 24.38 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
16.76	21.34	0.953		0.00

Perforated by Drill

Annular Seal Cement/Grout
Placed from 0.00 m to 15.24 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings Bottom Fittings

Pack
Type Unknown Grain Size
Amount Unknown

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
RILEY PEARSON

Certification No
83061A

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Yes

Date approval holder signed
2009/02/06

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 1065730
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2009/03/19

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
WILSON BEACH ESTATES C/O KIRK	442 POST ST. STE. 801	SAN FRANSISCO	CALIFORNIA	USA	94102

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	4	14	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525980 Longitude -113.934410
How Location Obtained
Hand held autonomous GPS 20-30m

Elevation 909.83 m
How Elevation Obtained
Hand held autonomous GPS 20-30m

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level 100.84 cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 27.28 L/min
Recommended Pump Intake Depth (From TOC) 18.29 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

WELL OWNER: KIRK HILLER. LITH: 2 GRAINS HARD, TRACE IRON, 7 GPM.

Yield Test

Taken From Top of Casing
Depth to water level

Measurement in Metric

Test Date	Start Time	Static Water Level
2009/02/06	12:00 PM	7.50 m

Method of Water Removal

Type Pump
Removal Rate 27.28 L/min
Depth Withdrawn From 24.38 m

If water removal period was < 2 hours, explain why

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
7.50	0:00	10.66
9.62	1:00	8.90
9.80	2:00	8.50
9.95	3:00	8.32
10.05	4:00	8.20
10.14	5:00	8.15
10.20	6:00	8.07
10.28	7:00	8.03
10.32	8:00	7.99
10.35	9:00	7.96
10.38	10:00	7.89
10.44	12:00	7.83
10.50	14:00	7.78
10.51	16:00	7.74
10.55	20:00	7.70
10.60	25:00	7.65
10.62	30:00	7.60
10.64	35:00	7.56
10.64	40:00	7.51
10.64	50:00	7.50
10.64	60:00	
10.64	75:00	
10.65	90:00	
10.65	105:00	
10.66	120:00	

Water Diverted for Drilling

Water Source	Amount Taken		Diversion Date & Time
SHOP	2273.05	L	2009/02/06 7:00 AM

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
RILEY PEARSON

Certification No
83061A

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Yes

Date approval holder signed
2009/02/06

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 1065732
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2009/05/15

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
FRASER, GLEN (DEGRAFF SUB.)	7891-50 AVE.	RED DEER	ALBERTA	CA	T4P 2S4

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	8	22	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.542520 Longitude -113.940960
How Location Obtained
Hand held autonomous GPS 20-30m

Elevation m
How Elevation Obtained
Hand held autonomous GPS 20-30m

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Other

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
1.22		Clay
3.35		Sand
6.10		Brown Clay
13.41		Gray Clay
16.15		Gray Sandstone
18.29		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
2009/03/19	181.84	5.72

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
18.29 m	18.29 m	2009/03/19	2009/03/19

Borehole

Diameter (cm)	From (m)	To (m)
12.70	0.00	18.29

Surface Casing (if applicable)
Steel
Size OD : 14.12 cm
Wall Thickness : 0.650 cm
Bottom at : 13.41 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.602 cm
Top at : 12.19 m
Bottom at : 18.29 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
13.41	16.46	0.953		30.48

Perforated by Drill

Annular Seal Cement/Grout
Placed from 0.00 m to 13.41 m
Amount

Other Seals

Type	At (m)

Screen Type
Size OD : cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings Bottom Fittings

Pack
Type Unknown Grain Size
Amount Unknown

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
RILEY PEARSON

Certification No
83061A

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Yes

Date approval holder signed
2009/03/19

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 1065732
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2009/05/15

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
FRASER, GLEN (DEGRAFF SUB.)	7891-50 AVE.	RED DEER	ALBERTA	CA	T4P 2S4

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	8	22	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.542520 Longitude -113.940960
How Location Obtained
Hand held autonomous GPS 20-30m

Elevation m
How Elevation Obtained
Hand held autonomous GPS 20-30m

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level 50.01 cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) 12.19 m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Top of Casing
Depth to water level

Measurement in Metric

Test Date	Start Time	Static Water Level
2009/03/19	11:00 AM	5.72 m

Method of Water Removal

Type Pump
Removal Rate 181.84 L/min
Depth Withdrawn From 12.00 m

If water removal period was < 2 hours, explain why

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
5.72	0:00	8.15
7.00	1:00	6.79
7.18	2:00	6.62
7.29	3:00	6.50
7.35	4:00	6.43
7.39	5:00	6.37
7.44	6:00	6.34
7.46	7:00	6.29
7.49	8:00	6.26
7.51	9:00	6.23
7.52	10:00	6.20
7.57	12:00	6.15
7.59	14:00	6.12
7.61	16:00	6.00
7.66	20:00	5.92
7.70	25:00	5.84
7.73	30:00	5.77
7.77	35:00	5.74
7.80	40:00	5.72
7.86	50:00	
7.91	60:00	
7.98	75:00	
8.04	90:00	
8.10	105:00	
8.15	120:00	

Water Diverted for Drilling

Water Source	Amount Taken	Diversion Date & Time
	L	

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
RILEY PEARSON

Certification No
83061A

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Yes

Date approval holder signed
2009/03/19

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 1065757
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2009/03/19

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
WILSON BEACH ESTATES (C/O KIRK MILLER)	442 POST STREET STE. 801	SAN FRANCISCO	CALIFORNIA	USA	94102

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	3	14	41	28	4				EAST WELL IN FIELD

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.524670 Longitude -113.931960
How Location Obtained
Differential corrected handheld GPS 5-10m

Elevation 905.56 m
How Elevation Obtained
Differential corrected handheld GPS 5-10m

Drilling Information

Method of Drilling
Rotary

Type of Work
New Well

Proposed Well Use
Other

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
1.22		Brown Clay
1.83		Brown Sand
3.66		Brown Clay
4.57		Sand & Gravel
7.62		Brown Clay
12.80		Gray Clay
16.76		Gray Shale
19.20		Gray Sandstone
22.86		Gray Shale
25.60		Gray Sandstone
35.05		Gray Shale
38.10		Gray Sandstone
43.89		Gray Shale
44.20		Coal
47.24		Gray Sandstone
50.60		Gray Shale
60.96	Yes	Gray Water Bearing Sandstone
67.06		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 68.19 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
2009/01/29	136.34	18.40

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
67.06 m		2009/01/28	2009/01/28

Borehole

Diameter (cm)	From (m)	To (m)
15.88	0.00	49.38
12.70	49.38	67.06

Surface Casing (if applicable)
Steel
Size OD : 14.12 cm
Wall Thickness : 0.655 cm
Bottom at : 49.38 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.602 cm
Top at : 42.67 m
Bottom at : 67.06 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
50.60	60.96	0.953		0.00

Perforated by Drill

Annular Seal Bentonite Chips/Tablets
Placed from 0.00 m to 49.38 m
Amount

Other Seals

Type	At (m)
Driven	49.38
Shale Trap	50.60

Screen Type
Size OD : cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type Unknown
Grain Size
Amount Unknown

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
KRIS SCHINDEL

Certification No
40628A

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed
2009/01/29

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 1065757
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2009/03/19

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
WILSON BEACH ESTATES (C/O KIRK MILLER)	442 POST STREET STE. 801	SAN FRANCISCO	CALIFORNIA	USA	94102

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	3	14	41	28	4				EAST WELL IN FIELD

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.524670 Longitude -113.931960
How Location Obtained
Differential corrected handheld GPS 5-10m

Elevation 905.56 m
How Elevation Obtained
Differential corrected handheld GPS 5-10m

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level 75.01 cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 68.19 L/min
Recommended Pump Intake Depth (From TOC) 50.29 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion Yes
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well
CASING WAS GROUTED IN.

Yield Test

Taken From Ground Level
Depth to water level

Measurement in Metric

Test Date	Start Time	Static Water Level
2009/01/29	12:00 AM	18.40 m

Method of Water Removal

Type Pump & Air
Removal Rate 136.34 L/min
Depth Withdrawn From 55.00 m

If water removal period was < 2 hours, explain why
MEASUREMENTS TAKEN FROM RIG TABLE.

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
18.40	0:00	46.35
28.00	1:00	36.11
33.02	2:00	32.20
36.00	3:00	30.10
38.50	4:00	27.90
39.90	5:00	26.14
41.00	6:00	26.20
41.81	7:00	25.76
42.30	8:00	24.94
43.08	9:00	24.50
42.21	10:00	24.01
43.71	12:00	23.57
44.05	14:00	23.09
44.42	16:00	22.65
44.84	20:00	22.10
45.21	25:00	21.24
45.41	30:00	21.35
45.56	35:00	21.02
45.67	40:00	20.80
45.84	50:00	20.45
45.99	60:00	20.20
46.25	75:00	19.94
46.32	90:00	19.70
46.35	105:00	19.45
46.35	120:00	19.21

Water Diverted for Drilling

Water Source	Amount Taken		Diversion Date & Time
SHOP	5455.31	L	2009/01/28 7:00 AM

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
KRIS SCHINDEL

Certification No
40628A

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed
2009/01/29

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 1065758
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2009/03/19

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
WILSON BEACH ESTATES (C/O KIRK MILLER)	442 POST ST. STE. 801	SAN FRANCISCO	ALBERTA	CA	94102

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	5	14	41	28	4				WEST WELL IN YARD

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525960 Longitude -113.934370
How Location Obtained
Differential corrected handheld GPS 5-10m

Elevation 902.21 m
How Elevation Obtained
Differential corrected handheld GPS 5-10m

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Other

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
5.49		Sand & Gravel
12.19		Gray Clay
15.85		Gray Shale
23.77	Yes	Gray Water Bearing Sandstone
28.65		Gray Shale
32.92		Gray Fine Grained Sandstone
33.53		Gray Siltstone
39.62		Gray Shale
41.45		Gray Siltstone
47.24		Gray Sandstone
49.07		Gray Shale
52.43		Gray Sandstone
54.86		Gray Shale
56.39		Gray Hard Siltstone
57.91		Gray Shale
60.96	Yes	Gray Water Bearing Sandstone
66.45		Gray Shale
76.20		Gray Sandstone
79.25		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 13.64 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
2009/01/30	13.64	18.80

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
79.25 m	79.25 m	2009/01/29	2009/01/30

Borehole

Diameter (cm)	From (m)	To (m)
17.15	0.00	57.30
12.70	57.30	79.25

Surface Casing (if applicable)
Steel
Size OD : 14.12 cm
Wall Thickness : 0.655 cm
Bottom at : 57.30 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.602 cm
Top at : 53.34 m
Bottom at : 65.53 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
57.91	60.96	0.953		0.00

Perforated by Drill

Annular Seal Bentonite Chips/Tablets
Placed from 0.00 m to 57.30 m
Amount

Other Seals

Type	At (m)
Driven	57.30

Screen Type
Size OD : cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type Unknown
Grain Size
Amount Unknown

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
KRIS SCHINDEL

Certification No
40628A

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed
2009/01/30

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 1065758
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2009/03/19

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
WILSON BEACH ESTATES (C/O KIRK MILLER)	442 POST ST. STE. 801	SAN FRANCISCO	ALBERTA	CA	94102

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	5	14	41	28	4				WEST WELL IN YARD

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.525960 Longitude -113.934370
How Location Obtained
Differential corrected handheld GPS 5-10m

Elevation 902.21 m
How Elevation Obtained
Differential corrected handheld GPS 5-10m

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level 75.01 cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 13.64 L/min
Recommended Pump Intake Depth (From TOC) 59.44 m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion Yes
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

LITH: 52'-78' WATER BEARING=10 GPM. WELL WAS BACK FILLED WITH HOLE PLUG FROM 260'-215'. SURFACE WAS GROUTED IN.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date 2009/01/30
Start Time 12:00 AM
Static Water Level 18.80 m

Method of Water Removal

Type Pump
Removal Rate 13.64 L/min
Depth Withdrawn From 62.00 m

If water removal period was < 2 hours, explain why

MEASUREMENTS TAKEN FROM RIG TABLE. PUMPING @ 15 GPM TO TOP OF PERFS THEN START RECOVERY.

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
18.80	0:00	58.00
22.82	1:00	54.00
27.21	2:00	51.10
31.00	3:00	50.07
33.71	4:00	49.08
37.25	5:00	48.24
40.40	6:00	47.22
42.90	7:00	46.42
45.79	8:00	45.55
48.30	9:00	44.78
50.81	10:00	44.09
55.30	12:00	42.67
58.00	14:00	41.16
	16:00	39.89
	20:00	37.43
	25:00	34.40
	30:00	32.41
	35:00	30.42
	40:00	28.82
	50:00	26.61
	60:00	23.42
	75:00	22.10
	90:00	20.27
	105:00	19.39
	120:00	18.80

Water Diverted for Drilling

Water Source	Amount Taken		Diversion Date & Time
PREVIOUS WELL	5455.31	L	2009/01/29 10:00 AM

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
KRIS SCHINDEL

Certification No
40628A

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner

Date approval holder signed
2009/01/30

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 1065774
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2009/05/05

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
FRASER, GLEN	7891 - 50 AVE.	RED DEER	ALBERTA	CA	T4P 2S4

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	8	22	41	28	4				NORTH OF EXISTING WELLS

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.542600 Longitude -113.940970
How Location Obtained
Differential corrected handheld GPS 5-10m

Elevation 912.57 m
How Elevation Obtained
Differential corrected handheld GPS 5-10m

Drilling Information

Method of Drilling
Rotary

Proposed Well Use
Other

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
6.10		Brown Clay & Sand
13.72		Gray Clay & Rocks
16.76		Gray Sandstone
18.29		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
2009/04/15	181.84	4.58

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
18.29 m	18.29 m	2009/04/15	2009/04/15

Borehole

Diameter (cm)	From (m)	To (m)
15.88	0.00	13.72
12.70	13.72	18.29

Surface Casing (if applicable)
Steel
Size OD : 14.12 cm
Wall Thickness : 0.655 cm
Bottom at : 13.72 m

Well Casing/Liner
Other
Size OD : 11.43 cm
Wall Thickness : 0.602 cm
Top at : 12.19 m
Bottom at : 18.29 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
13.72	16.76	0.953		0.00

Perforated by Drill

Annular Seal Cement/Grout
Placed from 0.00 m to 13.72 m
Amount

Other Seals

Type	At (m)
Driven	13.72

Screen Type
Size OD : cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type Unknown
Grain Size
Amount Unknown

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
KRIS SCHINDEL

Certification No
40628A

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Yes

Date approval holder signed
2009/04/15

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 1065774
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2009/05/05

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
FRASER, GLEN	7891 - 50 AVE.	RED DEER	ALBERTA	CA	T4P 2S4

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	8	22	41	28	4				NORTH OF EXISTING WELLS

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.542600 Longitude -113.940970
How Location Obtained
Differential corrected handheld GPS 5-10m

Elevation 912.57 m
How Elevation Obtained
Differential corrected handheld GPS 5-10m

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level 100.00 cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate L/min
Recommended Pump Intake Depth (From TOC) 13.72 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Top of Casing
Measurement in Metric

Test Date	Start Time	Static Water Level
2009/04/15	12:00 AM	4.58 m

Method of Water Removal

Type Pump
Removal Rate 181.84 L/min
Depth Withdrawn From 18.40 m

If water removal period was < 2 hours, explain why

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
4.58	0:00	7.92
5.98	1:00	6.35
6.25	2:00	6.18
6.34	3:00	6.08
6.42	4:00	6.02
6.49	5:00	5.96
6.55	6:00	5.91
6.59	7:00	5.88
6.64	8:00	5.85
6.67	9:00	5.82
6.70	10:00	5.79
6.75	12:00	5.75
6.80	14:00	5.70
6.84	16:00	5.67
6.93	20:00	5.63
7.01	25:00	5.53
7.09	30:00	5.49
7.16	35:00	5.44
7.22	40:00	5.40
7.35	50:00	5.34
7.44	60:00	5.28
7.58	75:00	5.19
7.70	90:00	5.10
7.80	105:00	5.01
7.92	120:00	4.92

Water Diverted for Drilling

Water Source	Amount Taken		Diversion Date & Time
SHOP	5455.31	L	2009/04/15 7:00 AM

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
KRIS SCHINDEL

Certification No
40628A

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Yes

Date approval holder signed
2009/04/15

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 1065932
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2009/10/15

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
YOST, JOANNE	29 ORILLIA PARK	RED DEER	ALBERTA	CANADA	T4N 5A6

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	5	14	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.526010 Longitude -113.938510
How Location Obtained
Differential corrected handheld GPS 5-10m

Elevation 897.94 m
How Elevation Obtained
Differential corrected handheld GPS 5-10m

Drilling Information

Method of Drilling
Rotary - Air

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
1.52		Brown Clay
3.05		Sand & Gravel
5.49		Gray Clay
12.80		Gray Shale
15.24		Gray Sandstone
16.46		Gray Shale
18.59		Gray Sandstone
24.38		Gray Shale
32.00		Gray Sandstone
38.10		Gray Shale
39.62		Gray Sandstone
42.67		Gray Shale
49.07		Gray Sandstone
54.86		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 45.46 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
2009/03/26	90.92	4.57

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
54.86 m	54.86 m	2009/03/26	2009/03/26

Borehole

Diameter (cm)	From (m)	To (m)
15.88	0.00	11.58
12.70	11.58	54.86

Surface Casing (if applicable)
Steel
Size OD : 14.12 cm
Wall Thickness : 0.655 cm
Bottom at : 11.58 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.602 cm
Top at : 6.10 m
Bottom at : 54.86 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
24.38	32.00	0.953		30.48
42.67	48.77	0.953		30.48

Perforated by Drill

Annular Seal Bentonite Chips/Tablets
Placed from 0.00 m to 11.58 m
Amount

Other Seals

Type	At (m)
Driven	11.58
Shale Trap	24.38

Screen Type
Size OD : cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings Bottom Fittings

Pack
Type Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
KRIS SCHINDEL

Certification No
40628A

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Yes

Date approval holder signed
2009/03/26

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 1065932
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2009/10/15

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
YOST, JOANNE	29 ORILLIA PARK	RED DEER	ALBERTA	CANADA	T4N 5A6

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	5	14	41	28	4				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.526010 Longitude -113.938510
How Location Obtained
Differential corrected handheld GPS 5-10m

Elevation 897.94 m
How Elevation Obtained
Differential corrected handheld GPS 5-10m

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level 60.96 cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 45.46 L/min
Recommended Pump Intake Depth (From TOC) 42.67 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Top of Casing
Measurement in Metric

Test Date	Start Time	Static Water Level
2009/03/26	11:00 AM	4.57 m

Method of Water Removal

Type Pump and Air
Removal Rate 90.92 L/min
Depth Withdrawn From 54.86 m

If water removal period was < 2 hours, explain why
AIR TEST DRILL PIPE IN HOLE.

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
4.57	0:00	54.86
	1:00	46.33
	2:00	39.62
	3:00	34.14
	4:00	29.87
	5:00	24.99
	6:00	21.64
	7:00	19.51
	8:00	17.07
	9:00	14.63
	10:00	11.89
	12:00	8.23
	14:00	7.01
	16:00	6.10
	20:00	5.18
	25:00	4.57
	30:00	4.57
	35:00	4.57
	120:00	4.57

Water Diverted for Drilling

Water Source	Amount Taken		Diversion Date & Time
SHOP	5455.31	L	2009/03/26 8:00 AM

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
KRIS SCHINDEL

Certification No
40628A

Company Name
ALKEN BASIN DRILLING LTD.

Copy of Well report provided to owner
Yes

Date approval holder signed
2009/03/26

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 2085438
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2012/12/05

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
GIBBS, TIM	612 HUNTERSTON BAY NW	CALGARY	ALBERTA	CANADA	T2K 4N1

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	16	15	41	28	4				SOUTH WELL - EAGLES NEST

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.532950 Longitude -113.940550
How Location Obtained
Hand held autonomous GPS 20-30m

Elevation 898.55 m
How Elevation Obtained
Hand held autonomous GPS 20-30m

Drilling Information

Method of Drilling
Rotary - Air

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
5.79		Brown Sand
16.15		Gray Sandy Clay
26.82	Yes	Gray Sandstone
28.96		Gray Shale
38.10		Gray Sandstone
41.45		Gray Shale
56.08	Yes	Gray Sandstone
60.96		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 22.73 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
2012/10/21	22.73	13.11

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
60.96 m	60.96 m	2012/10/21	2012/10/21

Borehole

Diameter (cm)	From (m)	To (m)
22.23	0.00	29.87
12.70	29.87	60.96

Surface Casing (if applicable)
Plastic
Size OD : 15.24 cm
Wall Thickness : 0.991 cm
Bottom at : 29.87 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.544 cm
Top at : 24.38 m
Bottom at : 60.96 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
48.77	54.86	1.270		30.48

Perforated by Drill

Annular Seal Bentonite Chips/Tablets
Placed from 0.00 m to 29.87 m
Amount 600.00 Pounds

Other Seals

Type	At (m)
Drive Shoe	29.87

Screen Type
Size OD : cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
LEONARD BLAIR

Certification No
VA3129

Company Name
BLACK DOG DRILLING & ENV SERV. LTD.

Copy of Well report provided to owner
Yes

Date approval holder signed
2012/10/21

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 2085438
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2012/12/05

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
GIBBS, TIM	612 HUNTERSTON BAY NW	CALGARY	ALBERTA	CANADA	T2K 4N1

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	16	15	41	28	4				SOUTH WELL - EAGLES NEST

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.532950 Longitude -113.940550
How Location Obtained
Hand held autonomous GPS 20-30m

Elevation 898.55 m
How Elevation Obtained
Hand held autonomous GPS 20-30m

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level 60.96 cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 22.73 L/min
Recommended Pump Intake Depth (From TOC) 48.77 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion Yes
Geophysical Log Taken
Submitted to ESRD

Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Top of Casing
Measurement in Metric

Test Date	Start Time	Static Water Level
2012/10/21	2:00 PM	13.11 m

Method of Water Removal

Type Air
Removal Rate 22.73 L/min
Depth Withdrawn From 60.96 m

If water removal period was < 2 hours, explain why

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
13.11	0:00	60.96
	1:00	55.78
	2:00	45.72
	3:00	39.32
	4:00	30.78
	5:00	25.30
	6:00	20.42
	7:00	13.11
	10:00	13.11
	20:00	13.11
	60:00	13.11
	120:00	13.11

Water Diverted for Drilling

Water Source	Amount Taken		Diversion Date & Time
SHOP	9092.18	L	2012/10/19 6:00 AM

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
LEONARD BLAIR

Certification No
VA3129

Company Name
BLACK DOG DRILLING & ENV SERV. LTD.

Copy of Well report provided to owner
Yes

Date approval holder signed
2012/10/21

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 2085459
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2013/04/29

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
GIBBS, TIM	512 HUNTERSTON BAY NW	CALGARY	ALBERTA	CANADA	T2K 4N1

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	13	14	41	28	4				NORTH WELL - EAGLES NEST

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.533230 Longitude -113.940360
How Location Obtained
Hand held autonomous GPS 20-30m

Elevation 898.55 m
How Elevation Obtained
Hand held autonomous GPS 20-30m

Drilling Information

Method of Drilling
Rotary - Air

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
6.10		Brown Sand
15.54		Gray Clay
20.12	Yes	Gray Sandstone
27.43		Gray Shale
37.49		Gray Sandstone
39.62		Gray Shale
55.47	Yes	Gray Sandstone
62.79		Gray Shale
70.41		Gray Sandstone
76.20		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 22.73 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
2012/10/19	22.73	9.14

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
76.20 m	76.20 m	2012/10/19	2012/10/19

Borehole

Diameter (cm)	From (m)	To (m)
22.23	0.00	23.77
12.70	23.77	76.20

Surface Casing (if applicable)
Plastic
Size OD : 15.24 cm
Wall Thickness : 0.991 cm
Bottom at : 23.77 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.544 cm
Top at : 21.34 m
Bottom at : 76.20 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
45.72	51.82	1.270	30.48	

Perforated by Drill

Annular Seal Bentonite Chips/Tablets
Placed from 0.00 m to 23.77 m
Amount 600.00 Pounds

Other Seals

Type	At (m)
Drive Shoe	23.77

Screen Type
Size OD : cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
LEONARD BLAIR

Certification No
VA3129

Company Name
BLACK DOG DRILLING & ENV SERV. LTD.

Copy of Well report provided to owner
Yes

Date approval holder signed
2012/10/19

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 2085459
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2013/04/29

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
GIBBS, TIM	512 HUNTERSTON BAY NW	CALGARY	ALBERTA	CANADA	T2K 4N1

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	13	14	41	28	4				NORTH WELL - EAGLES NEST

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.533230 Longitude -113.940360
How Location Obtained
Hand held autonomous GPS 20-30m

Elevation 898.55 m
How Elevation Obtained
Hand held autonomous GPS 20-30m

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level 60.96 cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 22.73 L/min
Recommended Pump Intake Depth (From TOC) 45.72 m
Pump Installed
Depth m
Type
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion Yes
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Top of Casing
Measurement in Metric

Test Date	Start Time	Static Water Level
2012/10/19	1:00 PM	9.14 m

Method of Water Removal

Type AIR
Removal Rate 22.73 L/min
Depth Withdrawn From 76.20 m

If water removal period was < 2 hours, explain why

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
	0:00	76.20
	1:00	57.91
	2:00	47.85
	3:00	37.49
	4:00	26.82
	5:00	18.29
	6:00	9.14
	10:00	9.14
	20:00	9.14
	120:00	9.14

Water Diverted for Drilling

Water Source	Amount Taken		Diversion Date & Time
SHOP	9092.18	L	2012/10/19 6:00 AM

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
LEONARD BLAIR

Certification No
VA3129

Company Name
BLACK DOG DRILLING & ENV SERV. LTD.

Copy of Well report provided to owner
Yes

Date approval holder signed
2012/10/19

Water Well Drilling Report

View in Imperial | Export to Excel

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

GOWN ID

GIC Well ID 2085438
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2014/07/10

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
GIBBS, TIM	612 HUNTERSTON BAY NW	CALGARY	ALBERTA	CANADA	T2K 4N1

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	16	15	41	28	4				SOUTH WELL - EAGLES NEST

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.532950 Longitude -113.940550
How Location Obtained
Hand held autonomous GPS 20-30m

Elevation 898.55 m
How Elevation Obtained
Hand held autonomous GPS 20-30m

Drilling Information

Method of Drilling
Rotary - Air

Proposed Well Use
Domestic

Type of Work
Reconstructed

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
5.79		Brown Sand
16.15		Gray Sandy Clay
26.82	Yes	Gray Sandstone
28.96		Gray Shale
38.10		Gray Sandstone
41.45		Gray Shale
56.08	Yes	Gray Sandstone
60.96		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 22.73 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
2013/11/13	22.73	13.11

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
60.96 m	60.96 m	2013/11/13	2013/11/13

Borehole

Diameter (cm)	From (m)	To (m)
22.23	0.00	39.62
12.70	39.62	60.96

Surface Casing (if applicable)
Plastic
Size OD : 15.24 cm
Wall Thickness : 0.991 cm
Bottom at : 39.62 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.544 cm
Top at : 24.38 m
Bottom at : 60.96 m

Perforations

From (m)	To (m)	Diameter or Slot Width(cm)	Slot Length(cm)	Hole or Slot Interval(cm)
48.77	54.86	1.270	30.48	

Perforated by Drill

Annular Seal Bentonite Chips/Tablets
Placed from 0.30 m to 39.62 m
Amount 900.00 Pounds

Other Seals

Type	At (m)
Drive Shoe	39.62

Screen Type
Size OD : cm

From (m)	To (m)	Slot Size (cm)

Attachment
Top Fittings Bottom Fittings

Pack
Type Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
LEONARD BLAIR

Certification No
VA3129

Company Name
BLACK DOG DRILLING & ENV SERV. LTD.

Copy of Well report provided to owner
Yes

Date approval holder signed
2013/11/13

Water Well Drilling Report

The driller supplies the data contained in this report. The Province disclaims responsibility for its accuracy. The information on this report will be retained in a public database.

View in Imperial | Export to Excel

GIC Well ID 2085438
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2014/07/10

GOWN ID

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
GIBBS, TIM	612 HUNTERSTON BAY NW	CALGARY	ALBERTA	CANADA	T2K 4N1

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	16	15	41	28	4				SOUTH WELL - EAGLES NEST

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 52.532950 Longitude -113.940550
How Location Obtained
Hand held autonomous GPS 20-30m

Elevation 898.55 m
How Elevation Obtained
Hand held autonomous GPS 20-30m

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level 60.96 cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 22.73 L/min
Recommended Pump Intake Depth (From TOC) 48.77 m
Pump Installed
Type
Depth m
Make
H.P.
Model (Output Rating)

Did you Encounter Saline Water (>4000 ppm TDS)
Depth m
Gas
Depth m
Well Disinfected Upon Completion Yes
Geophysical Log Taken
Submitted to ESRD
Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

LINER PULLED OUT OF HOLE. SURFACE CASING PULLING AND HOME REAMED TO 130FT. SURFACE CASING INSTALLED AND SEALED HOLE. CLEANED OUT AND LINER INSTALLED

Yield Test

Taken From Top of Casing
Measurement in Metric

Test Date	Start Time	Static Water Level
2013/11/13	3:00 PM	13.11 m

Method of Water Removal

Type AIR
Removal Rate 22.73 L/min
Depth Withdrawn From 60.96 m

If water removal period was < 2 hours, explain why

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
	0:00	60.96
	1:00	55.78
	2:00	45.72
	3:00	39.32
	4:00	30.78
	5:00	25.30
	6:00	20.42
	7:00	13.11
	10:00	13.11
	60:00	13.11
	120:00	13.11

Water Diverted for Drilling

Water Source	Amount Taken		Diversion Date & Time
SHOP	4546.09	L	2013/11/13 6:00 AM

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
LEONARD BLAIR

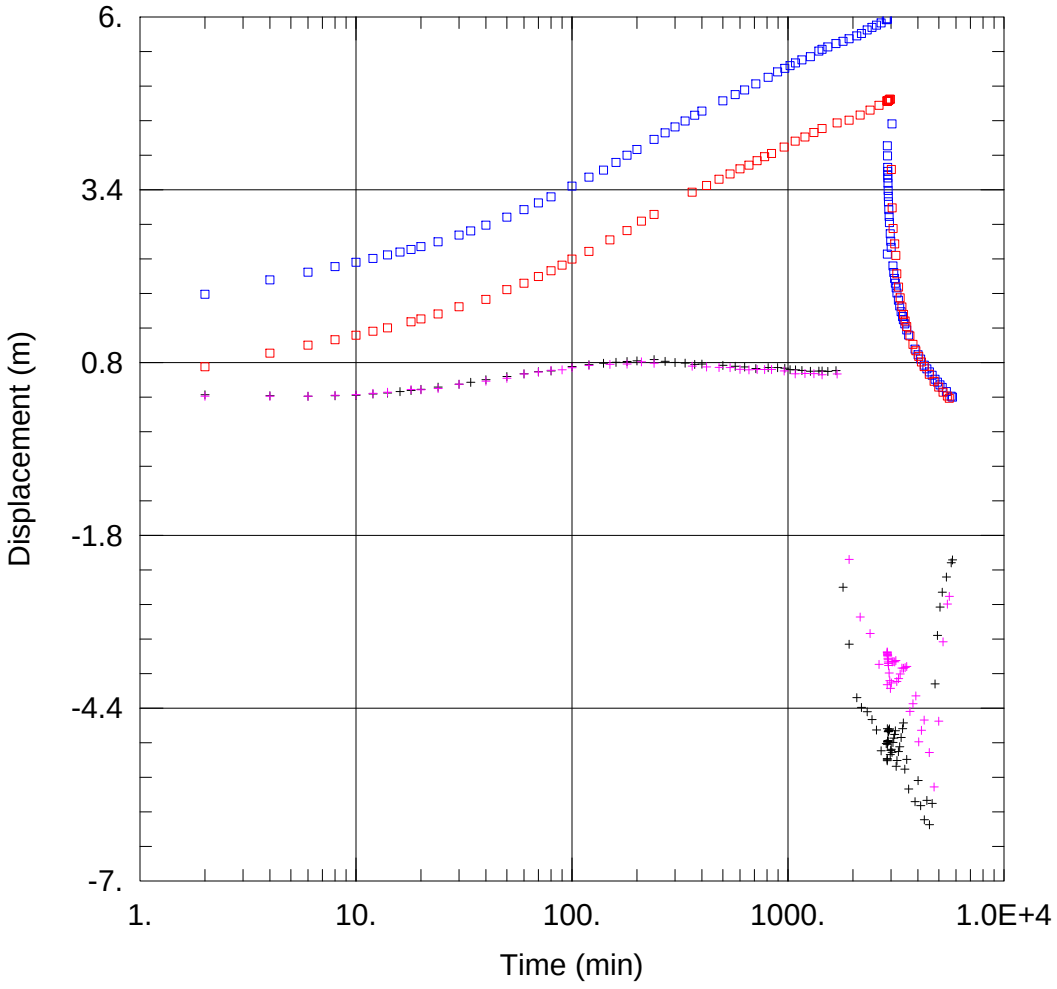
Certification No
VA3129

Company Name
BLACK DOG DRILLING & ENV SERV. LTD.

Copy of Well report provided to owner
Yes

Date approval holder signed
2013/11/13

Appendix C
Pumping Test Analysis



CONSTANT RATE PUMPING TEST (Derivatives)

Data Set: V:\1102\active\112849238\analysis\Pumping Test\anl_1065774_pumping_test.aqt
Date: 07/21/15 Time: 17:29:19

PROJECT INFORMATION

Company: Stantec Consulting Ltd.
Client: 1510060 Alberta Ltd.
Project: 112849238
Location: SE 22-041-28-W4M
Test Well: 1065774
Test Date: Apr 20 2009

AQUIFER DATA

Saturated Thickness: 3.04 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

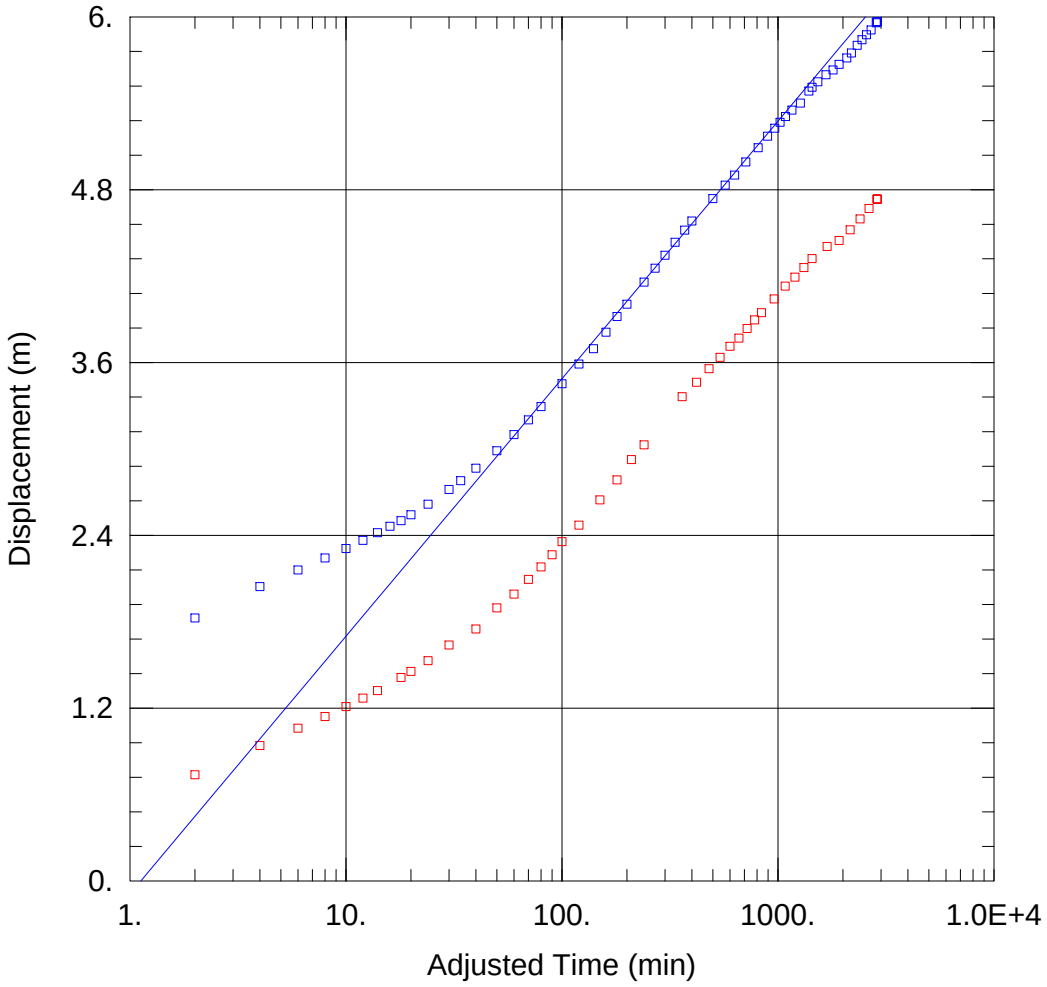
Pumping Wells

Well Name	X (m)	Y (m)
1065774	300502.6	5825445.9

Observation Wells

Well Name	X (m)	Y (m)
▫ 1065774	300502.6	5825445.9
▫ 1065732	300518.3	5825437.1

Fig. C-1



CONSTANT RATE PUMPING TEST

Data Set: V:\1102\active\112849238\analysis\Pumping Test\anl_1065774_pumping_test.aqt
Date: 07/21/15 Time: 17:43:06

PROJECT INFORMATION

Company: Stantec Consulting Ltd.
Client: 1510060 Alberta Ltd.
Project: 112849238
Location: SE 22-041-28-W4M
Test Well: 1065774
Test Date: Apr 20 2009

AQUIFER DATA

Saturated Thickness: 3.04 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

Well Name	X (m)	Y (m)
1065774	300502.6	5825445.9

Observation Wells

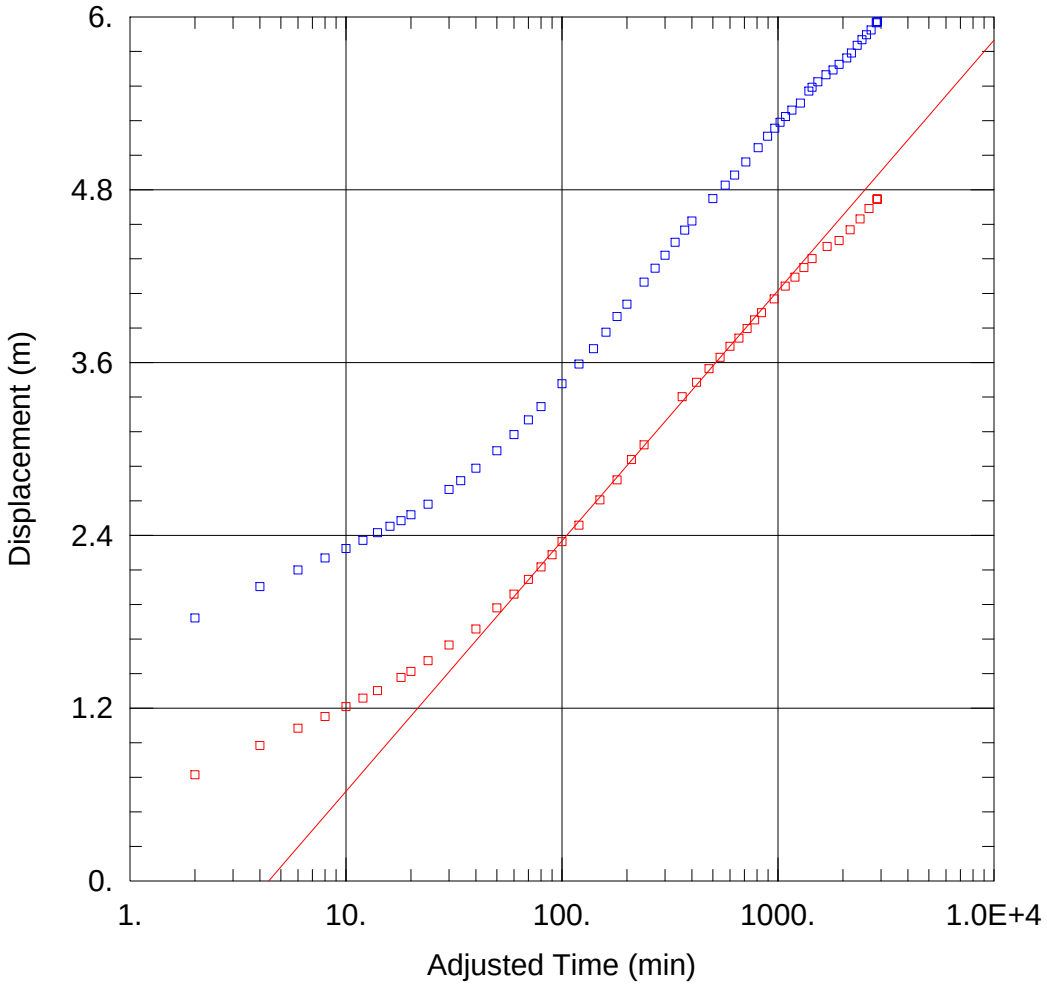
Well Name	X (m)	Y (m)
1065774	300502.6	5825445.9
1065732	300518.3	5825437.1

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 26.82 m^2/day S = 11.65

Fig. C-2



CONSTANT RATE PUMPING TEST

Data Set: V:\1102\active\112849238\analysis\Pumping Test\anl_1065774_pumping_test.aqt
Date: 07/21/15 Time: 17:46:51

PROJECT INFORMATION

Company: Stantec Consulting Ltd.
Client: 1510060 Alberta Ltd.
Project: 112849238
Location: SE 22-041-28-W4M
Test Well: 1065774
Test Date: Apr 20 2009

AQUIFER DATA

Saturated Thickness: 3.04 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

Well Name	X (m)	Y (m)
1065774	300502.6	5825445.9

Observation Wells

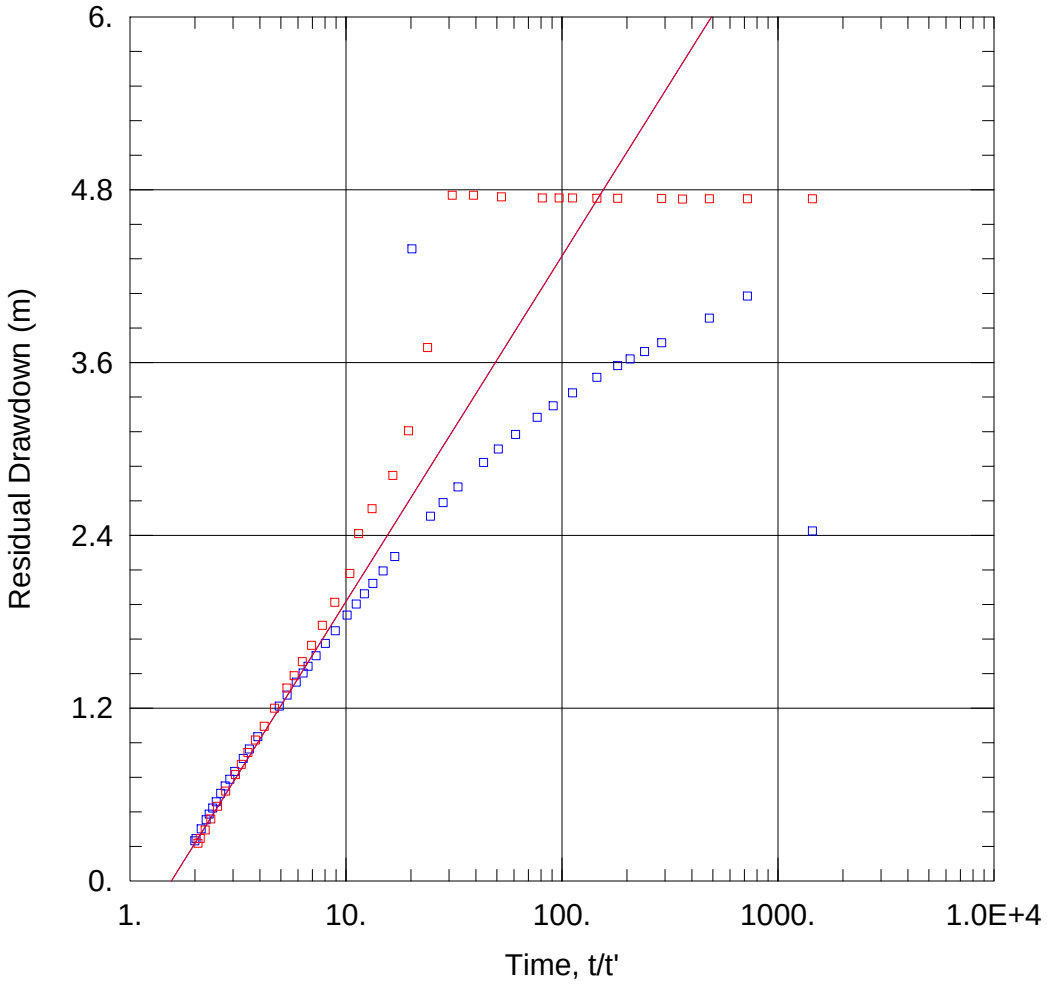
Well Name	X (m)	Y (m)
1065774	300502.6	5825445.9
1065732	300518.3	5825437.1

SOLUTION

Aquifer Model: Confined Solution Method: Cooper-Jacob

T = 27.59 m^2/day S = 0.0005836

Fig. C-3



CONSTANT RATE PUMPING TEST

Data Set: V:\1102\active\112849238\analysis\Pumping Test\anl_1065774_pumping_test.aqt
Date: 07/22/15 Time: 15:45:29

PROJECT INFORMATION

Company: Stantec Consulting Ltd.
Client: 1510060 Alberta Ltd.
Project: 112849238
Location: SE 22-041-28-W4M
Test Well: 1065774
Test Date: Apr 20 2009

AQUIFER DATA

Saturated Thickness: 3.04 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

Well Name	X (m)	Y (m)
1065774	300502.6	5825445.9

Observation Wells

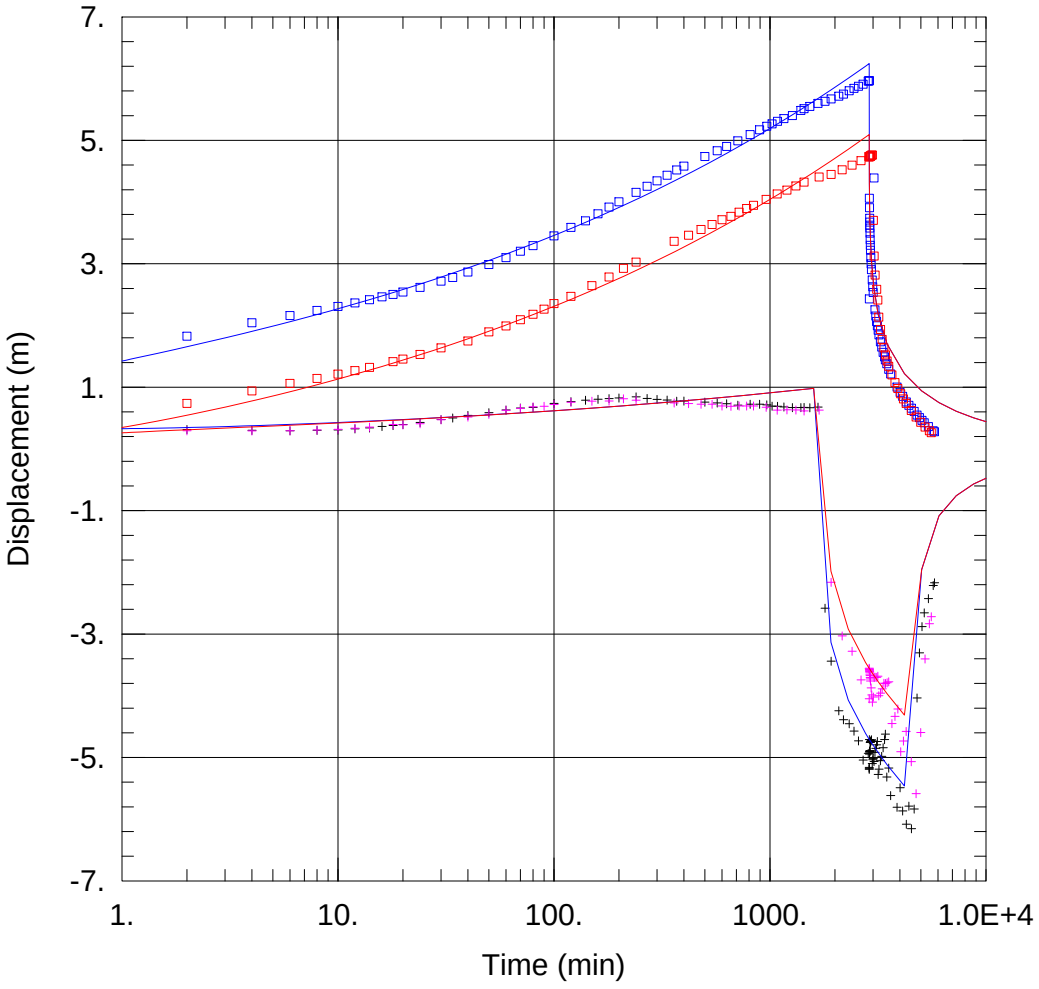
Well Name	X (m)	Y (m)
1065774	300502.6	5825445.9
1065732	300518.3	5825437.1

SOLUTION

Aquifer Model: Confined Solution Method: Theis (Recovery)

T = 19.99 m^2/day S/S' = 1.557

Fig. C-4



CONSTANT RATE PUMPING TEST

Data Set: V:\1102\active\112849238\analysis\Pumping Test\anl_1065774_pumping_test.aqt
Date: 07/27/15 Time: 15:04:41

PROJECT INFORMATION

Company: Stantec Consulting Ltd.
Client: 1510060 Alberta Ltd.
Project: 112849238
Location: SE 22-041-28-W4M
Test Well: 1065774
Test Date: Apr 20 2009

AQUIFER DATA

Saturated Thickness: 3.04 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

Well Name	X (m)	Y (m)
1065774	300502.6	5825445.9

Observation Wells

Well Name	X (m)	Y (m)
▫ 1065774	300502.6	5825445.9
▫ 1065732	300518.3	5825437.1

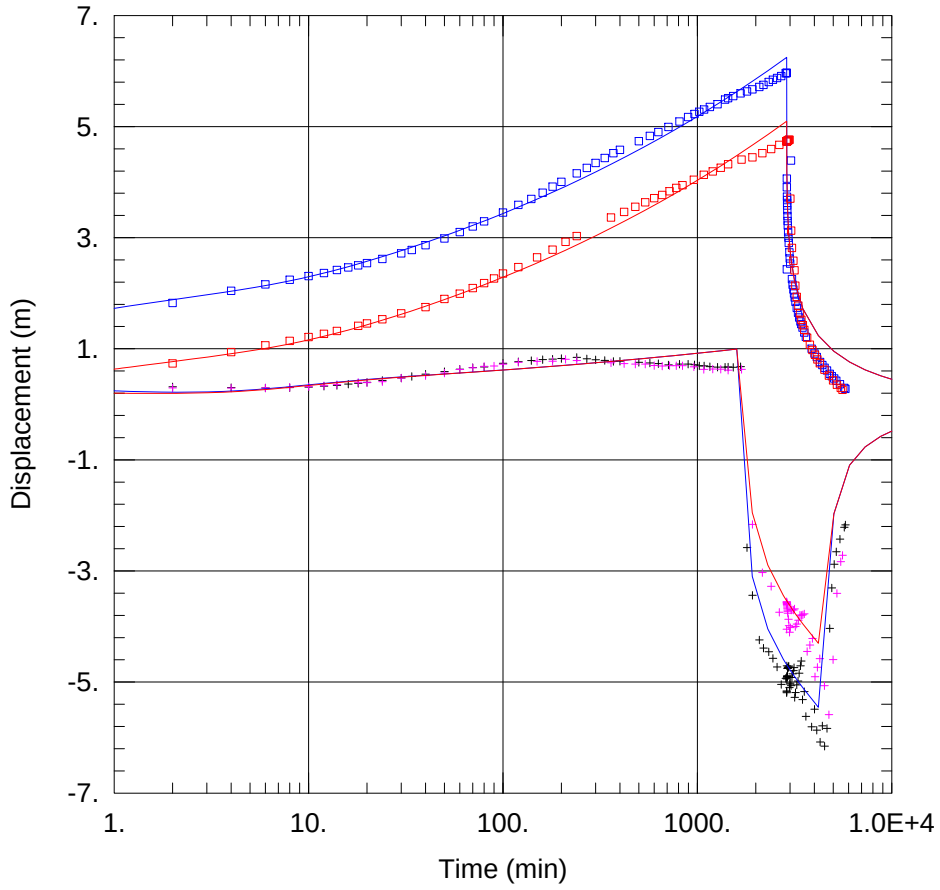
SOLUTION

Aquifer Model: Confined
Solution Method: Barker with derivatives

K = 74.7 m/day
n = 1.664
Sw = -0.075
r(c) = 0.064 m

Ss = 8.34E-5
b = 3.04 m
r(w) = 0.0635 m

Fig. C-5



CONSTANT RATE PUMPING TEST

Data Set: V:\1102\active\112849238\analysis\Pumping Test\anl_1065774_pumping_test.aqt
Date: 07/22/15 Time: 17:07:18

PROJECT INFORMATION

Company: Stantec Consulting Ltd.
Client: 1510060 Alberta Ltd.
Project: 112849238
Location: SE 22-041-28-W4M
Test Well: 1065774
Test Date: Apr 20 2009

AQUIFER DATA

Saturated Thickness: 3.04 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

Well Name	X (m)	Y (m)
1065774	300502.6	5825445.9

Observation Wells

Well Name	X (m)	Y (m)
▫ 1065774	300502.6	5825445.9
▫ 1065732	300518.3	5825437.1

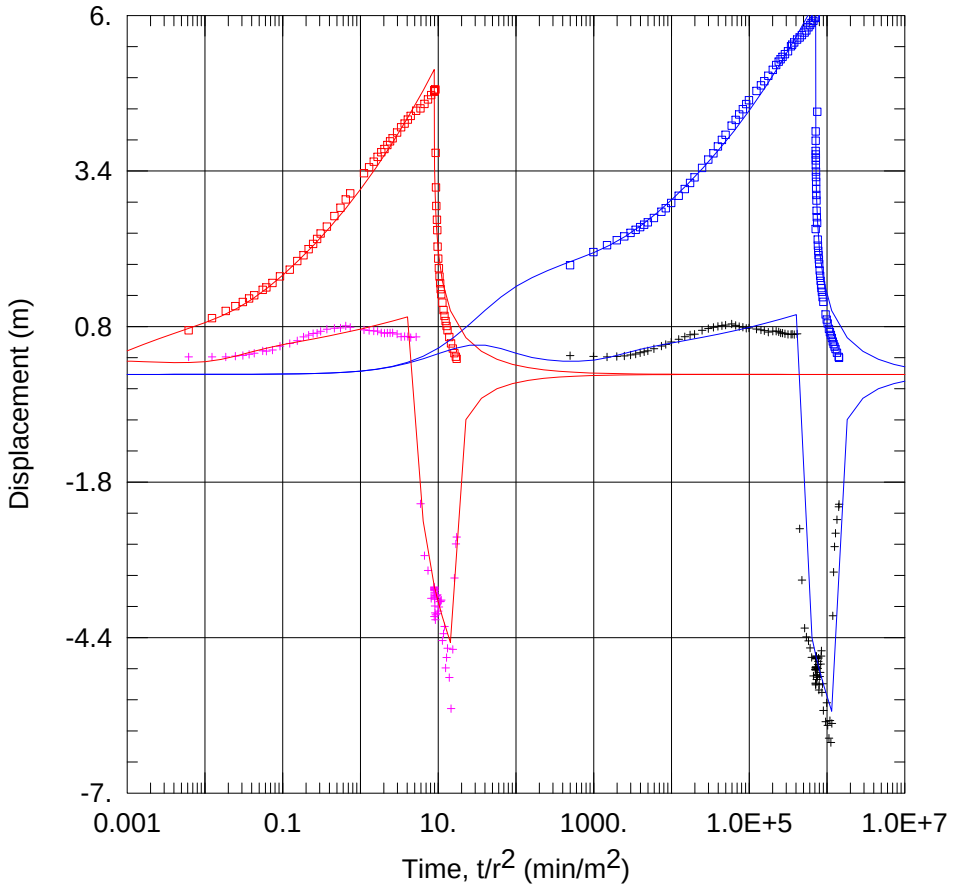
SOLUTION

Aquifer Model: Fractured Solution Method: Barker with derivatives

K = 75.04 m/day
K' = 0.002864 m/day
n = 1.659
Sf = 0.
r(w) = 0.0635 m

Ss = 3.289E-6
Ss' = 9.055E-5 m^{-1}
b = 3.04 m
Sw = -0.075
r(c) = 0.064 m

Fig. C-6



CONSTANT RATE PUMPING TEST

Data Set: V:\1102\active\112849238\analysis\Pumping Test\anl_1065774_pumping_test.aqt
Date: 07/22/15 Time: 17:11:28

PROJECT INFORMATION

Company: Stantec Consulting Ltd.
Client: 1510060 Alberta Ltd.
Project: 112849238
Location: SE 22-041-28-W4M
Test Well: 1065774
Test Date: Apr 20 2009

AQUIFER DATA

Saturated Thickness: 3.04 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

Well Name	X (m)	Y (m)
1065774	300502.6	5825445.9

Observation Wells

Well Name	X (m)	Y (m)
▫ 1065774	300502.6	5825445.9
▫ 1065732	300518.3	5825437.1

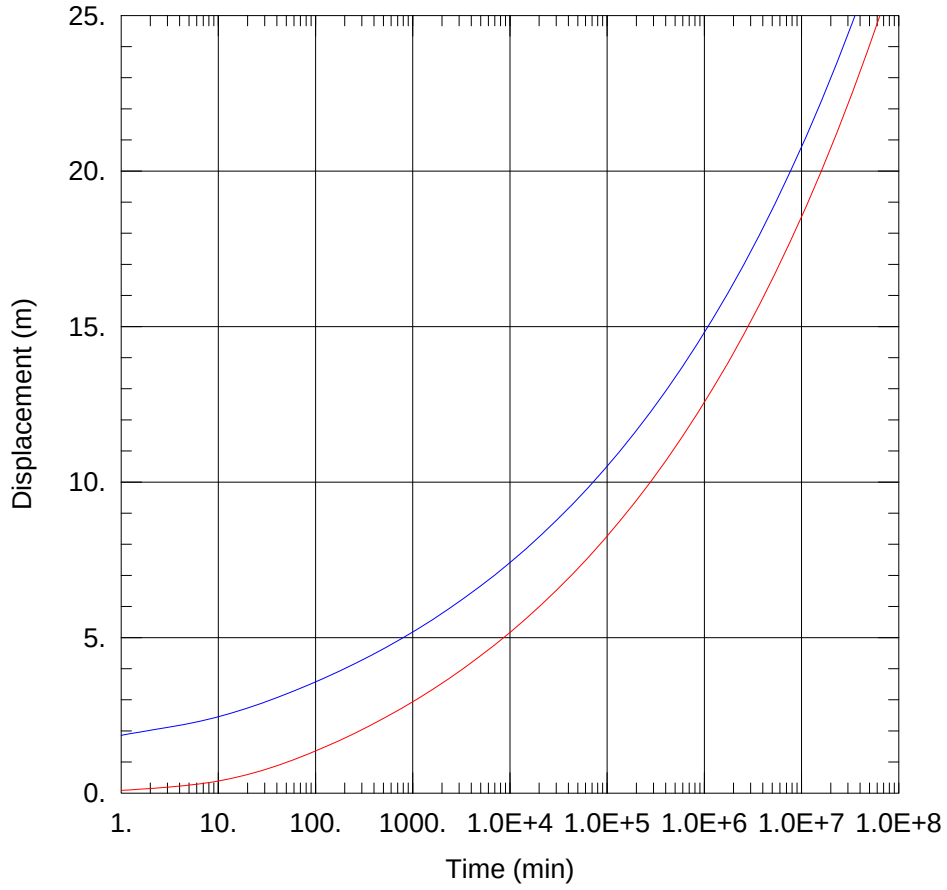
SOLUTION

Aquifer Model: Fractured
Solution Method: Barker composite plot

K = 75.04 m/day
K' = 0.002864 m/day
n = 1.659
Sf = 0.
r(w) = 0.0635 m

Ss = 3.289E-6
Ss' = 9.055E-5 m^{-1}
b = 3.04 m
Sw = -0.075
r(c) = 0.064 m

Fig. C-7



20 YEARS FORWARD SOLUTION

Data Set: V:\1102\active\112849238\analysis\Pumping Test\anl_1065774_20_years_forward.aqt
Date: 07/23/15 Time: 13:16:57

PROJECT INFORMATION

Company: Stantec Consulting Ltd.
Client: 1510060 Alberta Ltd.
Project: 112849238
Location: SE 22-041-28-W4M
Test Well: 1065774
Test Date: Apr 20 2009

AQUIFER DATA

Saturated Thickness: 3.04 m Anisotropy Ratio (Kz/Kr): 1.

WELL DATA

Pumping Wells

Well Name	X (m)	Y (m)
1065774	300502.6	5825445.9

Observation Wells

Well Name	X (m)	Y (m)
▫ 1065774	300502.6	5825445.9
▫ 1065732	300518.3	5825437.1

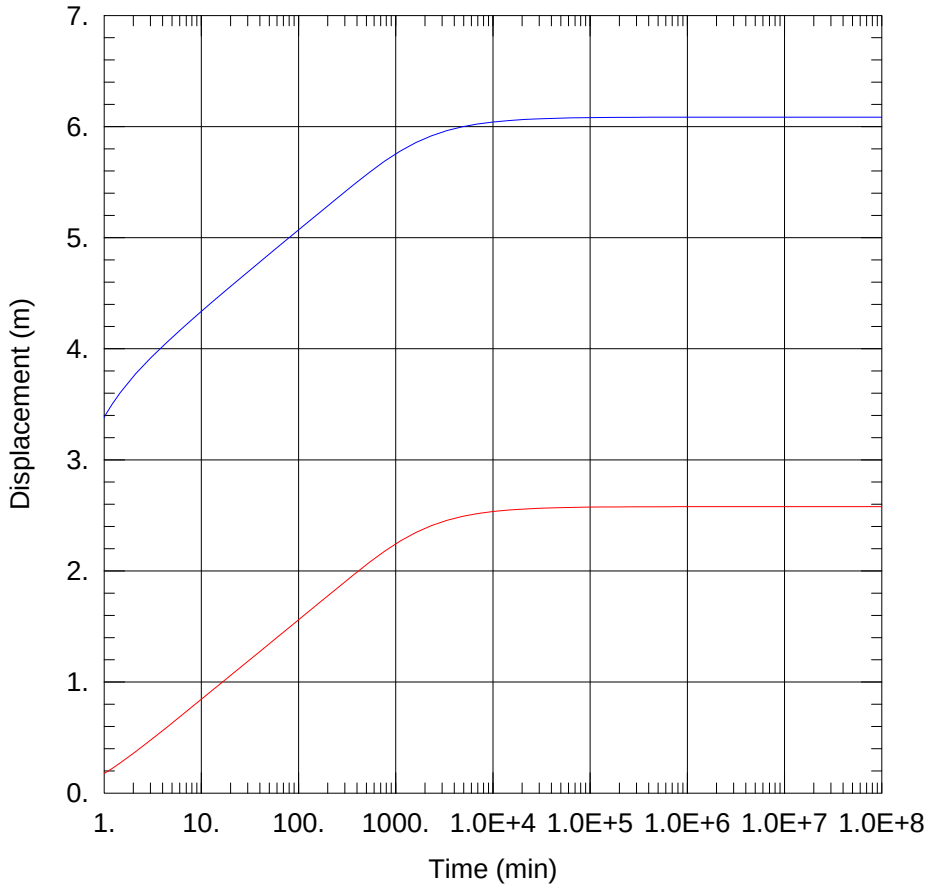
SOLUTION

Aquifer Model: Fractured Solution Method: Barker

K = 37. m/day
K' = 0.02873 m/day
n = 1.715
Sf = 0.
r(w) = 0.0635 m

Ss = 3.667E-5
Ss' = 0.001 m^{-1}
b = 3.04 m
Sw = 0.
r(c) = 0.064 m

Fig. C-8



20 YEARS FORWARD SOLUTION

Data Set: V:\1102\active\112849238\analysis\Pumping Test\anl_1065774_20_years_forward.aqt
Date: 07/28/15 Time: 16:46:54

PROJECT INFORMATION

Company: Stantec Consulting Ltd.
Client: 1510060 Alberta Ltd.
Project: 112849238
Location: SE 22-041-28-W4M
Test Well: 1065774
Test Date: Apr 20 2009

AQUIFER DATA

Saturated Thickness: 3.04 m
Aquitard Thickness (b'): 1. m
Anisotropy Ratio (Kz/Kr): 1.
Aquitard Thickness (b"): 1. m

WELL DATA

Pumping Wells

Well Name	X (m)	Y (m)
1065774	300502.6	5825445.9

Observation Wells

Well Name	X (m)	Y (m)
▫ 1065774	300502.6	5825445.9
▫ 1065732	300518.3	5825437.1

SOLUTION

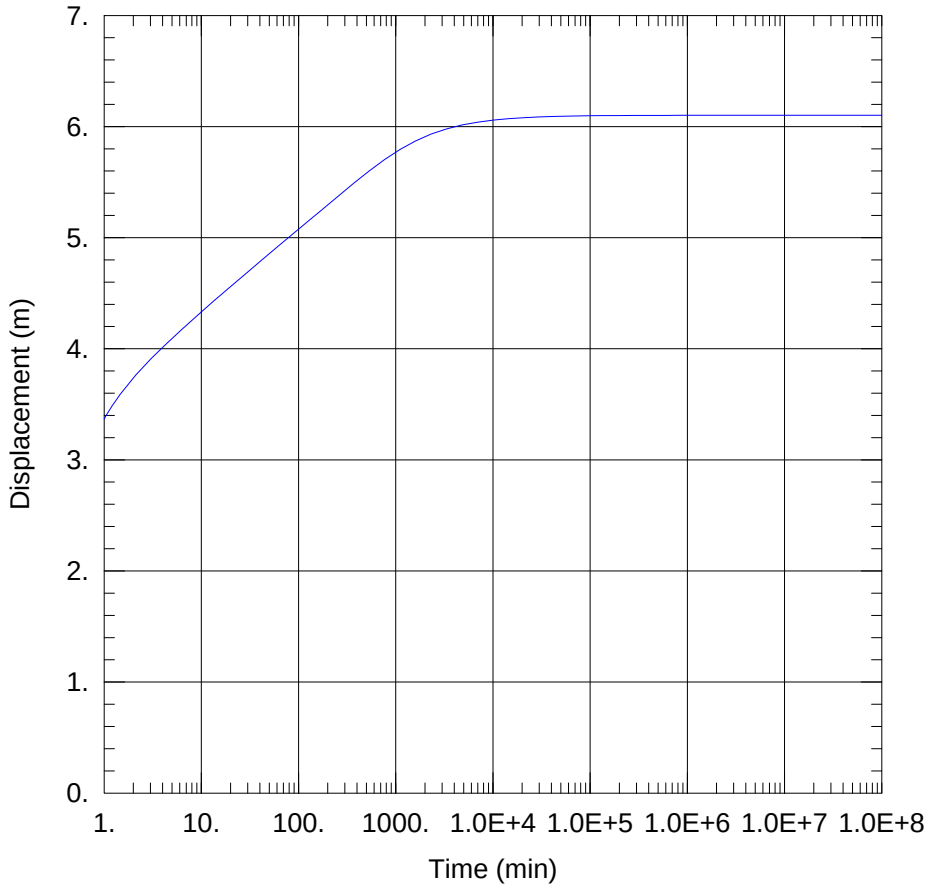
Aquifer Model: Leaky
Solution Method: Moench (Case 2)

T = 67. m^2/day
1/B' = 1.575 m^{-1}
1/B" = 0. m^{-1}
Sw = 0.
r(c) = 0.064 m

S = 1.256E-5
ß'/r = 1.575 m^{-1}
ß"/r = 0. m^{-1}
r(w) = 0.0635 m

West recharge boundary

Fig. C-9



20 YEARS FORWARD SOLUTION

Data Set: V:\1102\active\112849238\analysis\Pumping Test\anl_1065774_20_years_forward.aqt
Date: 07/28/15 Time: 17:03:14

PROJECT INFORMATION

Company: Stantec Consulting Ltd.
Client: 1510060 Alberta Ltd.
Project: 112849238
Location: SE 22-041-28-W4M
Test Well: 1065774
Test Date: Apr 20 2009

AQUIFER DATA

Saturated Thickness: 3.04 m
Aquitard Thickness (b'): 1. m
Anisotropy Ratio (Kz/Kr): 1.
Aquitard Thickness (b''): 1. m

WELL DATA

Pumping Wells

Well Name	X (m)	Y (m)
1065774	300502.6	5825445.9

Observation Wells

Well Name	X (m)	Y (m)
▫ 1065774	300502.6	5825445.9

SOLUTION

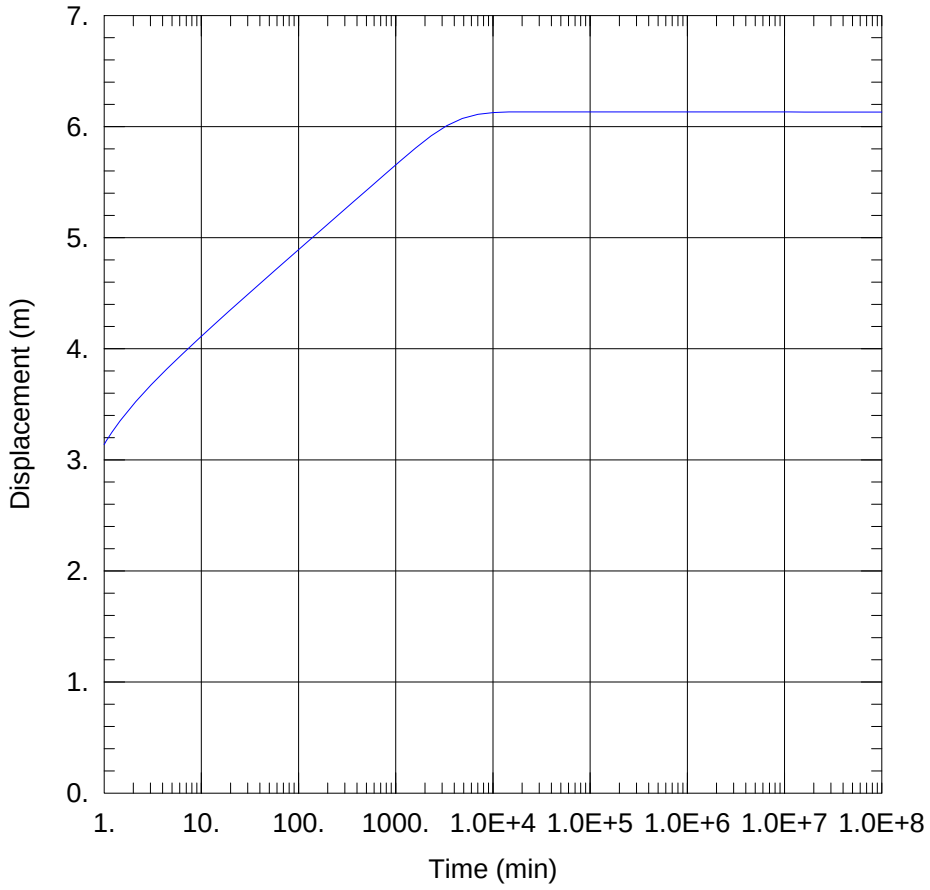
Aquifer Model: Leaky
Solution Method: Moench (Case 2)

T = 66. m^2/day
1/B' = 1.575 m^{-1}
1/B'' = 0. m^{-1}
Sw = 0.
r(c) = 0.064 m

S = 1.545E-5
ß'/r = 1.575 m^{-1}
ß''/r = 0. m^{-1}
r(w) = 0.0635 m

East recharge boundary

Fig. C-10



20 YEARS FORWARD SOLUTION

Data Set: V:\1102\active\112849238\analysis\Pumping Test\anl_1065774_20_years_forward.aqt
Date: 07/28/15 Time: 16:56:30

PROJECT INFORMATION

Company: Stantec Consulting Ltd.
Client: 1510060 Alberta Ltd.
Project: 112849238
Location: SE 22-041-28-W4M
Test Well: 1065774
Test Date: Apr 20 2009

AQUIFER DATA

Saturated Thickness: 3.04 m
Aquitard Thickness (b'): 1. m
Anisotropy Ratio (Kz/Kr): 1.
Aquitard Thickness (b''): 1. m

WELL DATA

Pumping Wells

Well Name	X (m)	Y (m)
1065774	300502.6	5825445.9

Observation Wells

Well Name	X (m)	Y (m)
▫ 1065774	300502.6	5825445.9

SOLUTION

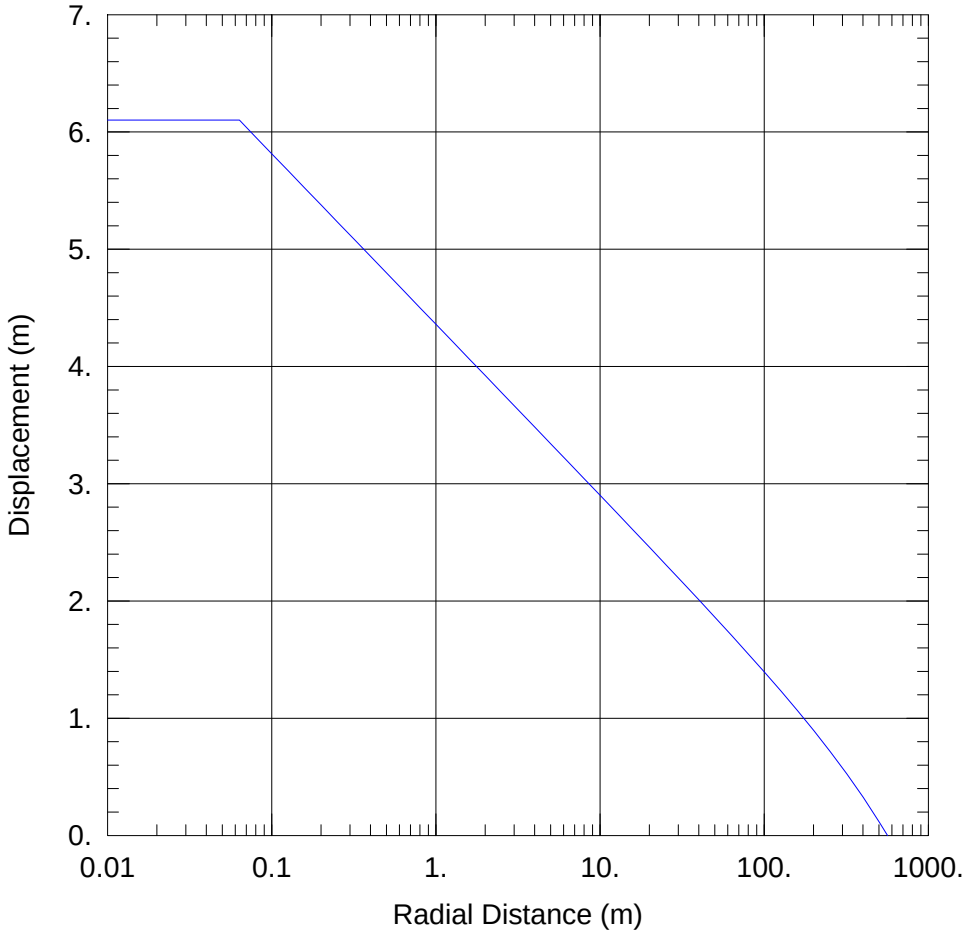
Aquifer Model: Leaky
Solution Method: Moench (Case 2)

T = 63. m^2/day
1/B' = 1.575 m^{-1}
1/B'' = 0. m^{-1}
Sw = 0.
r(c) = 0.064 m

S = 5.358E-5
ß'/r = 1.575 m^{-1}
ß''/r = 0. m^{-1}
r(w) = 0.0635 m

West and East recharge boundaries

Fig. C-11



20 YEARS FORWARD SOLUTION

Data Set: V:\1102\active\112849238\analysis\Pumping Test\anl_1065774_20_years_forward.aqt
Date: 08/24/15 Time: 11:34:26

PROJECT INFORMATION

Company: Stantec Consulting Ltd.
Client: 1510060 Alberta Ltd.
Project: 112849238
Location: SE 22-041-28-W4M
Test Well: 1065774
Test Date: Apr 20 2009

AQUIFER DATA

Saturated Thickness: 3.04 m
Aquitard Thickness (b'): 1. m
Anisotropy Ratio (Kz/Kr): 1.
Aquitard Thickness (b''): 1. m

WELL DATA

Pumping Wells

Well Name	X (m)	Y (m)
1065774	300502.6	5825445.9

Observation Wells

Well Name	X (m)	Y (m)
▫ 1065774	300502.6	5825445.9

SOLUTION

Aquifer Model: Leaky
Solution Method: Moench (Case 2)

T = 66. m^2/day
1/B' = 1.575 m^{-1}
1/B'' = 0. m^{-1}
Sw = 0.
r(c) = 0.064 m

S = 1.545E-5
ß'/r = 1.575 m^{-1}
ß''/r = 0. m^{-1}
r(w) = 0.0635 m

East recharge boundary

Fig. C-12

Appendix D
Lab Results

AGAT Laboratories

6310 ROPER ROAD
EDMONTON, ALBERTA
CANADA T6B 3P9
TEL (780)395-2525
FAX (780)462-2490
http://www.agatlabs.com

CLIENT NAME: STANTEC CONSULTING LTD
3821A - 98 STREET
EDMONTON, AB T6E5V4
(780) 440-0682

ATTENTION TO: Christian Nageli

PROJECT: 112849238

AGAT WORK ORDER: 15E991063

WATER ANALYSIS REVIEWED BY: Jarrod Roberts, Operations Manager

DATE REPORTED: Jul 08, 2015

PAGES (INCLUDING COVER): 7

VERSION*: 1

Should you require any information regarding this analysis please contact your client services representative at (780) 395-2525

*NOTES

All samples will be disposed of within 30 days following analysis. Please contact the lab if you require additional sample storage time.

AGAT Laboratories

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FAX (780)462-2490
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 15E991063

PROJECT: 112849238

CLIENT NAME: STANTEC CONSULTING LTD

ATTENTION TO: Christian Nageli

SAMPLING SITE:

SAMPLED BY:

Routine Chemistry Water Analysis

DATE RECEIVED: 2015-06-30

DATE REPORTED: 2015-07-08

		SAMPLE DESCRIPTION:		1065732	15-1
		SAMPLE TYPE:		Water	Water
		DATE SAMPLED:		6/30/2015	6/30/2015
Parameter	Unit	G / S	RDL	6701192	6701195
pH	pH Units	6.5-8.5	NA	7.86	7.91
p - Alkalinity (as CaCO3)	mg/L		5	<5	<5
T - Alkalinity (as CaCO3)	mg/L		5	298	275
Bicarbonate	mg/L		5	363	336
Carbonate	mg/L		5	<5	<5
Hydroxide	mg/L		5	<5	<5
Electrical Conductivity	uS/cm		1	569	564
Fluoride	mg/L	1.5	0.05	<0.05	<0.05
Chloride	mg/L	250	1	1	1
Nitrite	mg/L	3	0.05	<0.05	<0.05
Nitrite-N	mg/L	1	0.02	<0.02	<0.02
Nitrate	mg/L	45	0.5	<0.5	<0.5
Nitrate-N	mg/L	10	0.02	<0.02	<0.02
Nitrate+Nitrite - Nitrogen	mg/L		0.02	<0.02	<0.02
Sulfate	mg/L	500	1	7	8
Dissolved Calcium	mg/L		0.3	60.5	63.1
Dissolved Magnesium	mg/L		0.2	25.9	27.0
Dissolved Sodium	mg/L	200	0.6	21.6	22.5
Dissolved Potassium	mg/L		0.6	3.6	3.8
Dissolved Iron	mg/L	0.3	0.1	<0.1	<0.1
Dissolved Manganese	mg/L	0.05	0.005	**0.085**	**0.083**
Calculated TDS	mg/L		0.6	341	330
Sodium Adsorption Ratio	N/A			0.585	0.597
Hardness	mg CaCO3/L		1	258	269
Ion Balance	%		1	101	113

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard: Refers to CCME (D Water)

6701192-6701195 < - Values refer to Report Detection Limits.
pH has been analyzed past the recommended holding time of 15 minutes from sampling (field measurement ideal if more accurate data required)
Nitrate and Nitrite: The regulatory hold time for the analysis of nitrate and/or nitrite in water is 48 hours in Alberta and 72 hours in British Columbia.

Certified By:

AGAT Laboratories

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CANADA T6B 3P9
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FAX (780)462-2490
http://www.agatlabs.com

Certificate of Analysis

AGAT WORK ORDER: 15E991063

PROJECT: 112849238

CLIENT NAME: STANTEC CONSULTING LTD

ATTENTION TO: Christian Nageli

SAMPLING SITE:

SAMPLED BY:

Water Analysis - TDS

DATE RECEIVED: 2015-06-30

DATE REPORTED: 2015-07-08

		SAMPLE DESCRIPTION:		**1065732**	**15-1**
		SAMPLE TYPE:		**Water**	**Water**
		DATE SAMPLED:		**6/30/2015**	**6/30/2015**
Parameter	**Unit**	**G / S**	**RDL**	**6701192**	**6701195**
Total Dissolved Solids	mg/L		5	295	285

Comments: RDL - Reported Detection Limit; G / S - Guideline / Standard

6701192-6701195 pH: Analyzed past the regulatory hold time of 15 minutes.

Certified By:

AGAT Laboratories

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EDMONTON, ALBERTA
CANADA T6B 3P9
TEL (780)395-2525
FAX (780)462-2490
http://www.agatlabs.com

Quality Assurance

CLIENT NAME: STANTEC CONSULTING LTD

AGAT WORK ORDER: 15E991063

PROJECT: 112849238

ATTENTION TO: Christian Nageli

SAMPLING SITE:

SAMPLED BY:

Water Analysis

RPT Date: Jul 08, 2015			DUPLICATE				REFERENCE MATERIAL			METHOD BLANK SPIKE			MATRIX SPIKE		
PARAMETER	Batch	Sample Id	Dup #1	Dup #2	RPD	Method Blank	Measured Value	Acceptable Limits		Recovery	Acceptable Limits		Recovery	Acceptable Limits	
								Lower	Upper		Lower	Upper		Lower	Upper
Routine Chemistry Water Analysis															
pH	976	6701192	7.86	7.88	0.3%		99%	90%	110%	NA			NA		
p - Alkalinity (as CaCO3)	976	6701192	<5	<5	0.0%	< 5	NA			NA			NA		
T - Alkalinity (as CaCO3)	976	6701192	298	274	8.5%	< 5	88%	80%	120%	NA			NA		
Bicarbonate	976	6701192	363	334	8.5%	< 5	NA			NA			NA		
Carbonate	976	6701192	<5	<5	0.0%	< 5	NA			NA			NA		
Hydroxide	976	6701192	<5	<5	0.0%	< 5	NA			NA			NA		
Electrical Conductivity	976	6701192	569	563	1.2%	< 1	104%	80%	120%	NA			NA		
Fluoride	188	6687946	<0.05	<0.05	NA	< 0.05	98%	80%	120%	80%	80%	120%	89%	80%	120%
Chloride	188	6687946	264	281	6.2%	< 1	90%	80%	120%	94%	80%	120%	96%	80%	120%
Nitrite	188	6687946	<0.05	<0.05	NA	< 0.05	96%	80%	120%	87%	80%	120%	107%	80%	120%
Nitrate	188	6687946	<0.5	<0.5	NA	< 0.5	93%	80%	120%	86%	80%	120%	97%	80%	120%
Sulfate	188	6687946	4	4	0.0%	< 1	91%	80%	120%	94%	80%	120%	98%	80%	120%
Dissolved Calcium	185	6708609	89.5	89.7	0.3%	< 0.3	100%	80%	120%				102%	80%	120%
Dissolved Magnesium	185	6708609	29.0	29.0	0.0%	< 0.2	97%	80%	120%				98%	80%	120%
Dissolved Sodium	185	6708609	9.0	9.0	0.1%	< 0.6	93%	80%	120%				94%	80%	120%
Dissolved Potassium	185	6708609	3.3	3.2	0.8%	< 0.6	93%	80%	120%				96%	80%	120%
Dissolved Iron	185	6708609	0.5	0.5	0.0%	< 0.1	102%	80%	120%				101%	80%	120%
Dissolved Manganese	185	6708609	1.97	1.98	0.5%	< 0.005	100%	80%	120%				105%	80%	120%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Water Analysis - TDS

Total Dissolved Solids	186	6701192	295	275	7.0%	< 5	102%	80%	120%

Comments: If the RPD value is NA, the results of the duplicates are under 5X the RDL and will not be calculated.

Certified By:

AGAT Laboratories

6310 ROPER ROAD
EDMONTON, ALBERTA
CANADA T6B 3P9
TEL (780)395-2525
FAX (780)462-2490
http://www.agatlabs.com

Method Summary

CLIENT NAME: STANTEC CONSULTING LTD

AGAT WORK ORDER: 15E991063

PROJECT: 112849238

ATTENTION TO: Christian Nageli

SAMPLING SITE:

SAMPLED BY:

PARAMETER	AGAT S.O.P	LITERATURE REFERENCE	ANALYTICAL TECHNIQUE
Water Analysis			
pH	INOR-171-6205	SM 4500 H+	PH METER
p - Alkalinity (as CaCO3)	INOR-171-6205	SM 2320 B	TITRATION
T - Alkalinity (as CaCO3)	INOR-171-6205	SM 2320 B	TITRATION
Bicarbonate	INOR-171-6205	SM 2320 B	PC TITRATE
Carbonate	INOR-171-6205	SM 2320 B	PC TITRATE
Hydroxide	INOR-171-6205	SM 2320 B	TITRATION
Electrical Conductivity	INOR-171-6205	SM 2510 B	CONDUCTIVITY METER
Fluoride	INST 0150	SM 4110 B	ION CHROMATOGRAPH
Chloride	INOR-171-6200	SM 4110 B	ION CHROMATOGRAPH
Nitrite	INST 0150	SM 4110 B	ION CHROMATOGRAPH
Nitrite-N	INST 0150	SM 4110 B	ION CHROMATOGRAPH
Nitrate	INOR-171-6200	SM 4110 B	ION CHROMATOGRAPH
Nitrate-N	INST 0150	SM 4110 B	ION CHROMATOGRAPH
Nitrate+Nitrite - Nitrogen	INOR-171-6200	SM 4110 B	ION CHROMATOGRAPH
Sulfate	INOR-171-6200	SM 4110 B	ION CHROMATOGRAPH
Dissolved Calcium	INOR-171-6201	SM 3120 B	ICP/OES
Dissolved Magnesium	INST 0140	SM 3120 B	ICP/OES
Dissolved Sodium	INOR-171-6201	SM 3120 B	ICP/OES
Dissolved Potassium	INST 0140	SM 3120 B	ICP/OES
Dissolved Iron	INOR-171-6201	SM 3120 B	ICP/OES
Dissolved Manganese	INOR-171-6201	SM 3120 B	ICP/OES
Calculated TDS		SM 1030E	CALCULATION
Sodium Adsorption Ratio		CARTER & GREGORICH 2007	ICP/OES
Hardness		SM 3120 B	ICP/OES
Ion Balance		SM 1030E	CALCULATION
Total Dissolved Solids	INOR-171-6104	SM 2540 C	GRAVIMETRIC

AGAT Laboratories
6310 Roper Road
Edmonton, Alberta T6B 3P9
P: 780.395-2525. • F: 780-462-2490
webearth.agatlabs.com

Chain of Custody Record

Laboratory Use Only
Arrival Temperature: 5.4°C
AGAT Job Number: 15E991063

Date and Time: '15 JUN 30 17:50

Report Information
Company: Stantec
Contact: Christian Nageli
Address: 10160-112 St Edmonton AB T5K 2L6
Phone: (780) 233-4206 Fax:
LSD:
Client Project #: 112849238

Report Information
1. Name: Christian Nageli
Email: Christian.Nageli@Stantec.com
2. Name: Shayanne Cairns
Email: Shayanne.Cairns@Stantec.com
3. Name:
Email:

Report Format
☐ Single Sample per Page
☑ Multiple Samples per Page

Turnaround Time Required (TAT)
Regular TAT ☑ 5 to 7 business days
Rush TAT ☐ Less than 24 hours ☐ 24 to 48 hours ☐ 48 to 72 hours
Date Required:
RUSH TAT REQUEST — UPON SELECTING A RUSH TAT, THE CLIENT ACCEPTS THAT A RUSH SURCHARGE WILL BE ADDED TO THE INVOICE. SEE BACK FOR SURCHARGE.

Invoice To Same Yes ☑ / No ☐
Company: Stantec Competitive
Contact: rate
Address:
Phone: Fax:
PO/AFE#:

Requirements *(Selection may impact detection limits)*
☐ CCME: ☐ Agricultural ☐ Industrial ☐ Residential/Park ☐ Commercial ☑ Drinking Water ☐ FWAL
☑ AB Tier 1: ☐ Agricultural ☐ Industrial ☐ Residential/Park ☐ Commercial ☐ Natural Area ☐ AB Surface Water
☐ BC CSR: ☐ AW ☐ IW ☐ LW ☐ DW
☐ Other: ☐ D50 (Drilling) ☐ SPIGEC

LABORATORY USE (LAB ID #)	SAMPLE IDENTIFICATION	SAMPLE MATRIX	DATE/TIME SAMPLED	COMMENTS - SITE SAMPLE INFO. SAMPLE CONTAINMENT	# OF CONTAINERS	Detailed Soil Salinity (Saturated Paste)	CCME BTEX/F1-F4	Soil Metals ☐ HWS-B ☐ Cr^6 ☐ Hg	Water Metals ☐ Dissolved ☐ Total ☐ Hg ☐ Cr^6	Routine Water Potability	AB Class 2 Landfill	BC Landfill	D50 Detailed Soil Salinity (As Received)	Microtox	BTEXS/VPH/EPH ☐ LEPH/HEPH ☐	TDS	Hardness, Alkalinity, pH, Na, Ca, Mg, K, CO_3, HCO_3	SO_4	Chloride, Nitrate, Iron	Fluoride	HOLD FOR 60 DAYS	PRESERVED (Y/N)	CONTAMINATED (HAZARDOUS)
6701192	1065732	GW	June 30, 2015 9:15		2											✓	✓	✓	✓	✓	✓		
195	IS-1	GW	↓ 9:45		2											✓	✓	✓	✓	✓	✓		

Samples Relinquished By (Print Name and Sign):	Date/Time	Samples Received By (Print Name and Sign):	Date/Time
Shayanne Cairns	June 30, 2015 17:55	By deliverer	6/30/2015
	Date/Time	Samples Received By (Print Name and Sign):	Date/Time 5:30 pm
	Date/Time	Samples Received By (Print Name and Sign):	Date/Time

Pink Copy - Client
Yellow Copy - AGAT
White Copy - AGAT

Page 1 of 1
N°: AB 003940

Document ID: DIC-50-1507-003

Date Revised: October 24th, 201

AGAT Laboratories

SAMPLE INTEGRITY RECEIPT FORM

RECEIVING BASICS - Shipping

Company/Consultant: Stantec

Courier: Drop off Prepaid ☐ Collect ☐

Waybill #: N/A

Branch: EDM ☑ GP ☐ FN ☐ FM ☐ RD ☐ VAN ☐ LYD ☐ FSJ ☐ EST ☐ Other: _____

Custody Seal Intact: Yes ☐ No ☐ NA ☑

TAT: <24hr ☐ 24-48hr ☐ 48-72hr ☐ Reg ☑ Other _____

Cooler Quantity: 1

TIME SENSITIVE ISSUES - Shipping

Earliest Date Sampled: 5/30/2015 ALREADY EXCEEDED? Yes ☐ No ☑

MIBI/Time Sensitive Test*: _____ Expiry: _____

Hydrocarbon Test: _____ Expiry: _____

Are samples received more than **5 days** after sampling: Yes ☐ No ☑

**Residual Chlorine, DO, Turbidity, BOD, Nitrate/Nitrite, Microtox*

Temperature (to be recorded from bottles/jars only)

N/A – Only Soil Bags Received

(1) (Bottle/Jar) 5.4 + 5.4 + 5.4 = 5.4 °C (2)(Bottle/Jar) ___ + ___ + ___ = ___ °C

(3) (Bottle/Jar) ___ + ___ + ___ = ___ °C (4) (Bottle/Jar) ___ + ___ + ___ = ___ °C

(5) (Bottle/Jar) ___ + ___ + ___ = ___ °C (6) (Bottle/Jar) ___ + ___ + ___ = ___ °C

(If more than 6 coolers are received use another sheet of paper and attach)

SAMPLE INTEGRITY - Shipping

Hazardous Samples: Why Hazardous: _____

Precaution taken: _____

Legal Samples: Yes ☐ No ☑

International Samples: Yes ☐ No ☑ Tape Sealed: Yes ☐ No ☑

Coolant used: Icepack ☐ Bagged Ice ☐ Free Ice ☐ Free Water ☑ None ☐

LOGISTICS USE ONLY

Workorder No: 15E991063

Samples Damaged: Yes ☐ No ☑ If YES why?

No Bubble Wrap ☐ Frozen ☐ Courier ☐

Other: _____

Correct Sample Requirements for Testing

Correct Bottles: Yes ☑ No ☐ Correct Amount: Yes ☑ No ☐

Correct Labels: Yes ☑ No ☐

If NO to any of the above, explain why: _____

Visible Sediment in Waters : Yes ☐ No ☐

Additional Integrity Issues or concerns:

_____

_____

_____

Account Project Manager: _____ have they been notified of the above issues: Yes ☐ No ☐

Whom spoken to: _____ Date/Time: _____

CPM Initial_____

AQUATECH CANADIAN WATER SERVICES
ATTN: BRIAN MILLS
PO BOX 5113
LACOMBE AB T4L 1A0

Date Received: 29-MAY-15
Report Date: 18-JUN-15 17:02 (MT)
Version: FINAL

Client Phone: 403-254-3188

Certificate of Analysis

Lab Work Order #: **L1618652**
Project P.O. #: NOT SUBMITTED
Job Reference: DE GRAFF'S-GROUP 3,23 & THMS
C of C Numbers:
Legal Site Desc:

Minnie Estigoy, Chem. Eng. Tech. DIPL
Account Manager

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1618652-1 DISTRIBUTION SAMPLE							
Sampled By: CC on 28-MAY-15 @ 13:15							
Matrix: WATER							
BTEX, F1 (C6-C10) and F2 (>C10-C16)							
BTEX and F1 (C6-C10)							
Benzene	<0.00050		0.00050	mg/L		29-MAY-15	R3198056
Toluene	<0.00050		0.00050	mg/L		29-MAY-15	R3198056
Ethylbenzene	<0.00050		0.00050	mg/L		29-MAY-15	R3198056
o-Xylene	<0.00050		0.00050	mg/L		29-MAY-15	R3198056
m+p-Xylene	<0.00050		0.00050	mg/L		29-MAY-15	R3198056
F1(C6-C10)	<0.10		0.10	mg/L		29-MAY-15	R3198056
F1-BTEX	<0.10		0.10	mg/L		29-MAY-15	R3198056
Xylenes	<0.00071		0.00071	mg/L		29-MAY-15	R3198056
Surrogate: 1,4-Difluorobenzene (SS)	99.0		70-130	%		29-MAY-15	R3198056
Surrogate: 4-Bromofluorobenzene (SS)	84.0		70-130	%		29-MAY-15	R3198056
Surrogate: 3,4-Dichlorotoluene (SS)	101.5		70-130	%		29-MAY-15	R3198056
F2 (>C10-C16)							
F2 (C10-C16)	<0.25		0.25	mg/L	01-JUN-15	01-JUN-15	R3199710
Surrogate: 2-Bromobenzotrifluoride	87.2		65-135	%	01-JUN-15	01-JUN-15	R3199710
Chloramines							
Chlorine, Free							
Chlorine, Free	1.20		0.20	mg/L		29-MAY-15	R3199623
Chlorine, Total							
Chlorine, Total	1.26		0.20	mg/L		29-MAY-15	R3199627
Total Chlorine minus Free Chlorine							
Chloramines	<0.20		0.20	mg/L		29-MAY-15	R3199653
Hardness							
Dissolved Metals in Water by CRC ICPMS							
Calcium (Ca)-Dissolved	67.8		0.50	mg/L		04-JUN-15	R3201216
Magnesium (Mg)-Dissolved	27.9		0.10	mg/L		04-JUN-15	R3201216
Hardness (from Dissolved Ca and Mg)							
Hardness (as CaCO3)	284		1.3	mg/L		05-JUN-15	
Total Metals - CCME							
Hardness (from Total Ca and Mg)							
Hardness (as CaCO3)	295			mg/L		05-JUN-15	
Total Mercury in Water by CVAAS							
Mercury (Hg)-Total	<0.0000050		0.0000050	mg/L		06-JUN-15	R3201353
Total Metals in Water by CRC ICPMS							
Aluminum (Al)-Total	<0.0030		0.0030	mg/L		05-JUN-15	R3202372
Antimony (Sb)-Total	<0.00010		0.00010	mg/L		05-JUN-15	R3202372
Arsenic (As)-Total	0.00074		0.00010	mg/L		05-JUN-15	R3202372
Barium (Ba)-Total	0.102		0.000050	mg/L		05-JUN-15	R3202372
Beryllium (Be)-Total	<0.00010		0.00010	mg/L		05-JUN-15	R3202372
Boron (B)-Total	0.081		0.010	mg/L		05-JUN-15	R3202372
Cadmium (Cd)-Total	<0.0000050		0.0000050	mg/L		05-JUN-15	R3202372
Calcium (Ca)-Total	69.9		0.050	mg/L		05-JUN-15	R3202372
Chromium (Cr)-Total	<0.00010		0.00010	mg/L		05-JUN-15	R3202372
Cobalt (Co)-Total	<0.00010		0.00010	mg/L		05-JUN-15	R3202372
Copper (Cu)-Total	0.00806		0.00050	mg/L		05-JUN-15	R3202372
Iron (Fe)-Total	0.080		0.010	mg/L		05-JUN-15	R3202372
Lead (Pb)-Total	0.000215		0.000050	mg/L		05-JUN-15	R3202372
Lithium (Li)-Total	0.0396		0.0010	mg/L		05-JUN-15	R3202372
Magnesium (Mg)-Total	29.3		0.0050	mg/L		05-JUN-15	R3202372
Manganese (Mn)-Total	0.0159		0.00010	mg/L		05-JUN-15	R3202372
Molybdenum (Mo)-Total	0.00173		0.000050	mg/L		05-JUN-15	R3202372
Nickel (Ni)-Total	<0.00050		0.00050	mg/L		05-JUN-15	R3202372

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1618652-1 DISTRIBUTION SAMPLE							
Sampled By: CC on 28-MAY-15 @ 13:15							
Matrix: WATER							
Total Metals in Water by CRC ICPMS							
Potassium (K)-Total	4.03		0.050	mg/L		05-JUN-15	R3202372
Selenium (Se)-Total	<0.000050		0.000050	mg/L		05-JUN-15	R3202372
Silver (Ag)-Total	<0.000010		0.000010	mg/L		05-JUN-15	R3202372
Sodium (Na)-Total	29.8		0.050	mg/L		05-JUN-15	R3202372
Thallium (Tl)-Total	0.000038		0.000010	mg/L		05-JUN-15	R3202372
Tin (Sn)-Total	<0.00010		0.00010	mg/L		05-JUN-15	R3202372
Titanium (Ti)-Total	<0.00030		0.00030	mg/L		05-JUN-15	R3202372
Uranium (U)-Total	0.000297		0.000010	mg/L		05-JUN-15	R3202372
Vanadium (V)-Total	<0.00050		0.00050	mg/L		05-JUN-15	R3202372
Zinc (Zn)-Total	0.0298		0.0030	mg/L		05-JUN-15	R3202372
Miscellaneous Parameters							
Ammonia, Total (as N)	<0.050		0.050	mg/L		04-JUN-15	R3201217
Chloride (Cl)	8.73		0.50	mg/L		29-MAY-15	R3198408
Color, True	<2.0		2.0	C.U.		29-MAY-15	R3199621
Cyanide, Total	<0.020	DLA	0.020	mg/L		04-JUN-15	R3202444
Fluoride (F)	0.047		0.020	mg/L		29-MAY-15	R3198408
Nitrate (as N)	<0.020		0.020	mg/L		29-MAY-15	R3198408
Nitrite (as N)	<0.010		0.010	mg/L		29-MAY-15	R3198408
Sulfate (SO4)	20.1		0.30	mg/L		29-MAY-15	R3198408
Sulphide (as S)	<0.0015		0.0015	mg/L		05-JUN-15	R3202500
Temperature	25.0		1.0	Degree C		30-MAY-15	R3198536
Total Dissolved Solids	384		10	mg/L		02-JUN-15	R3200607
Total Haloacetic Acids 5	0.0112		0.0054	mg/L		12-JUN-15	
Total Organic Carbon	3.3		1.0	mg/L		03-JUN-15	R3200536
Turbidity	0.19		0.10	NTU		29-MAY-15	R3199643
pH	8.32		0.10	pH		30-MAY-15	R3198536
Trihalomethanes							
Chloroform	0.0220		0.0010	mg/L	31-MAY-15	31-MAY-15	R3189458
Bromodichloromethane	0.0038		0.0010	mg/L	31-MAY-15	31-MAY-15	R3189458
Dibromochloromethane	<0.0010		0.0010	mg/L	31-MAY-15	31-MAY-15	R3189458
Bromoform	<0.0050		0.0050	mg/L	31-MAY-15	31-MAY-15	R3189458
Surrogate: 1,2-Dichloroethane d4	107.6		70-130	%	31-MAY-15	31-MAY-15	R3189458
Surrogate: Toluene d8	95.0		70-130	%	31-MAY-15	31-MAY-15	R3189458
Surrogate: 4-Bromofluorobenzene	97.1		70-130	%	31-MAY-15	31-MAY-15	R3189458
Total THMs	0.0258		0.0050	mg/L	31-MAY-15	31-MAY-15	R3189458
Haloacetic Acids							
Monobromoacetic Acid	<0.0010		0.0010	mg/L		10-JUN-15	R3204806
Monochloroacetic Acid	<0.0050		0.0050	mg/L		10-JUN-15	R3204806
Bromochloroacetic Acid	0.0013		0.0010	mg/L		10-JUN-15	R3204806
Dibromoacetic Acid	<0.0010		0.0010	mg/L		10-JUN-15	R3204806
Dichloroacetic Acid	0.0051		0.0010	mg/L		10-JUN-15	R3204806
Trichloroacetic Acid	0.0061		0.0010	mg/L		10-JUN-15	R3204806
Surrogate: 2,3-Dibromopropionic Acid (SS)	109.9		50-130	%		10-JUN-15	R3204806
L1618652-2 WELL#1-RAW							
Sampled By: CC on 28-MAY-15 @ 13:00							
Matrix: WATER							
Routine Water Analysis							
Chloride in Water by IC							
Chloride (Cl)	8.47		0.50	mg/L		29-MAY-15	R3198408

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

ALS ENVIRONMENTAL ANALYTICAL REPORT

Sample Details/Parameters	Result	Qualifier*	D.L.	Units	Extracted	Analyzed	Batch
L1618652-2 WELL#1-RAW							
Sampled By: CC on 28-MAY-15 @ 13:00							
Matrix: WATER							
Dissolved Metals in Water by CRC ICPMS							
Calcium (Ca)-Dissolved	71.7		0.50	mg/L		02-JUN-15	R3199648
Magnesium (Mg)-Dissolved	30.0		0.10	mg/L		02-JUN-15	R3199648
Potassium (K)-Dissolved	3.93		0.50	mg/L		02-JUN-15	R3199648
Sodium (Na)-Dissolved	28.3		1.0	mg/L		02-JUN-15	R3199648
Fluoride in Water by IC							
Fluoride (F)	0.047		0.020	mg/L		29-MAY-15	R3198408
Ion Balance Calculation							
Ion Balance	99.8			%		03-JUN-15	
TDS (Calculated)	365			mg/L		03-JUN-15	
Hardness (as CaCO3)	303			mg/L		03-JUN-15	
Nitrate in Water by IC							
Nitrate (as N)	<0.020		0.020	mg/L		29-MAY-15	R3198408
Nitrate+Nitrite							
Nitrate and Nitrite (as N)	<0.022		0.022	mg/L		03-JUN-15	
Nitrite in Water by IC							
Nitrite (as N)	<0.010		0.010	mg/L		29-MAY-15	R3198408
Sulfate in Water by IC							
Sulfate (SO4)	20.0		0.30	mg/L		29-MAY-15	R3198408
pH, Conductivity and Total Alkalinity							
pH	8.38		0.10	pH		30-MAY-15	R3198536
Conductivity (EC)	662		0.20	uS/cm		30-MAY-15	R3198536
Bicarbonate (HCO3)	399		5.0	mg/L		30-MAY-15	R3198536
Carbonate (CO3)	6.0		5.0	mg/L		30-MAY-15	R3198536
Hydroxide (OH)	<5.0		5.0	mg/L		30-MAY-15	R3198536
Alkalinity, Total (as CaCO3)	337		2.0	mg/L		30-MAY-15	R3198536

* Refer to Referenced Information for Qualifiers (if any) and Methodology.

Reference Information

Sample Parameter Qualifier Key:

Qualifier	Description
DLA	Detection Limit adjusted for required dilution
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
BROMATE-KL	Water	Bromate analysis in water	EPA 300.1 - Ion Chromatography
BTX,F1-ED	Water	BTEX and F1 (C6-C10)	EPA 5021/8015&8260 GC-MS & FID
C-TOT-ORG-ED	Water	Total Organic Carbon	APHA 5310 B-Instrumental

This method is applicable to the analysis of ground water, wastewater, and surface water samples. The form detected depends upon sample pretreatment: Unfiltered sample = TC, 0.45um filtered = TDC. Samples are injected into a combustion tube containing an oxidation catalyst. The carrier gas containing the combustion product from the combustion tube flows through an inorganic carbon reactor vessel and is then sent through a halogen scrubber into a sample cell set in a non-dispersive infrared gas analyzer (NDIR) where carbon dioxide is detected. For total inorganic carbon and dissolved inorganic carbon, the sample is injected into an IC reactor vessel where only the IC component is decomposed to become carbon dioxide.

The peak area generated by the NDIR indicates the TC/TDC or TIC/DIC as applicable. The total organic carbon content of the sample is calculated by subtracting the TIC from the TC.
TOC = TC-TIC, DOC = TDC-DIC, Particulate = Total - Dissolved.

CHLORAMINES-CALC-ED	Water	Total Chlorine minus Free Chlorine	APHA 4500 CL G-COLORIMETRY
CHLORATE-KL	Water	Chlorate analysis in water	EPA 300.1 - Ion Chromatography
CHLORITE-KL	Water	Chlorite analysis in water	EPA 300.1 - Ion Chromatography
CL-IC-N-ED	Water	Chloride in Water by IC	EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

CL2-FREE-ED	Water	Chlorine, Free	APHA 4500 Cl G-Colorimetry
CL2-TOT-ED	Water	Chlorine, Total	APHA 4500 Cl G-Colorimetry
CN-TOT-WT	Water	Cyanide, Total	APHA 4500CN C E-STRONG ACID DIST COLORIM

Total cyanide is determined by the combination of UV digestion and distillation. Cyanide is converted to cyanogen chloride by reacting with chloramine-T, the cyanogen chloride then reacts with a combination of barbituric acid and isonicotinic acid to form a highly colored complex.

When using this method, high levels of thiocyanate in samples can cause false positives at ~1-2% of the thiocyanate concentration. For samples with detectable cyanide analyzed by this method, ALS recommends analysis for thiocyanate to check for this potential interference

COL-TRU-ED	Water	Color, True	APHA 2120

True Colour is measured using a colorimeter by comparison to platinum-cobalt standards using the single wavelength method (450 - 465 nm) after filtration of sample through a 0.45 um filter. Colour measurements can be highly pH dependent, and apply to the pH of the sample as received (at time of testing), without pH adjustment. Concurrent measurement of sample pH is recommended.

ETL-HARDNESS-DIS-ED	Water	Hardness (from Dissolved Ca and Mg)	APHA 2340 B-Calculation
ETL-HARDNESS-TOT-ED	Water	Hardness (from Total Ca and Mg)	APHA 2340 B-Calculation
F-IC-N-ED	Water	Fluoride in Water by IC	EPA 300.1 (mod)

Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.

F2-ED	Water	F2 (>C10-C16)	EPA 3510/CCME PHC CWS-GC-FID
HAA-WP	Water	Haloacetic Acids	EPA 552 (modified)

HAA concentration is determined using liquid-liquid extraction, capillary column, GC/electron capture techniques.

HAA5-SUM-CALC-WP	Water	Total Haloacetic Acids 5 (HAA5)	CALCULATION

Total Haloacetic Acids 5 (HAA5) represents the sum of monobromoacetic acid, monochloroacetic acid, dibromoacetic acid, dichloroacetic acid and trichloroacetic acid. For the purpose of calculation, results less than the detection limit (DL) are treated as zero.

HG-T-CVAA-ED	Water	Total Mercury in Water by CVAAS	EPA 1631E (mod)

Water samples undergo a cold-oxidation using bromine monochloride prior to reduction with stannous chloride, and analyzed by CVAAS.

IONBALANCE-ED	Water	Ion Balance Calculation	APHA 1030E
MET-D-CCMS-ED	Water	Dissolved Metals in Water by CRC ICPMS	APHA 3030B/6020A (mod)

Water samples are filtered (0.45 um), preserved with nitric acid, and analyzed by CRC ICPMS.

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**
Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.			
MET-T-CCMS-ED	Water	Total Metals in Water by CRC ICPMS	EPA 200.2/6020A (mod)
Water samples are digested with nitric and hydrochloric acids, and analyzed by CRC ICPMS.			
Method Limitation (re: Sulfur): Sulfide and volatile sulfur species may not be recovered by this method.			
NH3-CFA-ED	Water	Ammonia in Water by Colour	APHA 4500 NH3-NITROGEN (AMMONIA)
This analysis is carried out using procedures adapted from APHA Method 4500 NH3 "NITROGEN (AMMONIA)". Ammonia is determined using the automated phenate colourimetric method.			
NO2+NO3-CALC-ED	Water	Nitrate+Nitrite	CALCULATION
NO2-IC-N-ED	Water	Nitrite in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
NO3-IC-N-ED	Water	Nitrate in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
PH-ED	Water	pH	APHA 4500 H-Electrode
All samples analyzed by this method for pH will have exceeded the 15 minute recommended hold time from time of sampling (field analysis is recommended for pH where highly accurate results are needed)			
PH/EC/ALK-ED	Water	pH, Conductivity and Total Alkalinity	APHA 4500-H, 2510, 2320
All samples analyzed by this method for pH will have exceeded the 15 minute recommended hold time from time of sampling (field analysis is recommended for pH where highly accurate results are needed)			
SO4-IC-N-ED	Water	Sulfate in Water by IC	EPA 300.1 (mod)
Inorganic anions are analyzed by Ion Chromatography with conductivity and/or UV detection.			
SOLIDS-TDS-ED	Water	Total Dissolved Solids	APHA 2540 C
Gravimetric determination of solids in waters by filtration and evaporating filtrate to dryness at 180 degrees Celsius.			
SULPHIDE-ED	Water	Sulphide	APHA 4500 -S E-Auto-Colorimetry
A continuous flow manifold adds HCl to the sample which converts sulphide to a gas, then the sulphide is separated from the flow using a gas dialysis membrane. A Colorimetric reaction produces a methylene blue compound which is measured at 660 nm. This follows the Standard Methods procedure 4500 S-E			
TEMP-ED	Water	Temperature	APHA 2550-Thermometer
THM-ED	Water	Trihalomethanes	SW 846 8260-GC/MS
TURBIDITY-ED	Water	Turbidity	APHA 2130 B-Nephelometer

** ALS test methods may incorporate modifications from specified reference methods to improve performance.

The last two letters of the above test code(s) indicate the laboratory that performed analytical analysis for that test. Refer to the list below:

Laboratory Definition Code	Laboratory Location
ED	ALS ENVIRONMENTAL - EDMONTON, ALBERTA, CANADA
WP	ALS ENVIRONMENTAL - WINNIPEG, MANITOBA, CANADA
WT	ALS ENVIRONMENTAL - WATERLOO, ONTARIO, CANADA
KL	ALS ENVIRONMENTAL - KELSO, WASHINGTON, USA

Chain of Custody Numbers:

Reference Information

Test Method References:

ALS Test Code	Matrix	Test Description	Method Reference**

GLOSSARY OF REPORT TERMS

Surrogates are compounds that are similar in behaviour to target analyte(s), but that do not normally occur in environmental samples. For applicable tests, surrogates are added to samples prior to analysis as a check on recovery. In reports that display the D.L. column, laboratory objectives for surrogates are listed there.
mg/kg - milligrams per kilogram based on dry weight of sample
mg/kg wwt - milligrams per kilogram based on wet weight of sample
mg/kg lwt - milligrams per kilogram based on lipid-adjusted weight
mg/L - unit of concentration based on volume, parts per million.
< - Less than.
D.L. - The reporting limit.
N/A - Result not available. Refer to qualifier code and definition for explanation.

Test results reported relate only to the samples as received by the laboratory.
UNLESS OTHERWISE STATED, ALL SAMPLES WERE RECEIVED IN ACCEPTABLE CONDITION.
Analytical results in unsigned test reports with the DRAFT watermark are subject to change, pending final QC review.

Quality Control Report

Workorder: L1618652 Report Date: 18-JUN-15

Client: AQUATECH CANADIAN WATER SERVICES
PO BOX 5113
LACOMBE AB T4L 1A0

Contact: BRIAN MILLS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
BTX,F1-ED	Water							
Batch R3198056								
WG2097610-6 DUP		**WG2097610-5**						
Benzene		<0.00050	<0.00050	RPD-NA	mg/L	N/A	30	29-MAY-15
Toluene		<0.00050	<0.00050	RPD-NA	mg/L	N/A	30	29-MAY-15
Ethylbenzene		<0.00050	<0.00050	RPD-NA	mg/L	N/A	30	29-MAY-15
o-Xylene		<0.00050	<0.00050	RPD-NA	mg/L	N/A	24	29-MAY-15
m+p-Xylene		<0.00050	<0.00050	RPD-NA	mg/L	N/A	24	29-MAY-15
F1(C6-C10)		<0.10	<0.10	RPD-NA	mg/L	N/A	30	29-MAY-15
WG2097610-2 LCS								
Benzene			75.7		%		70-130	29-MAY-15
Toluene			77.0		%		70-130	29-MAY-15
Ethylbenzene			73.3		%		70-130	29-MAY-15
o-Xylene			74.3		%		70-130	29-MAY-15
m+p-Xylene			82.0		%		70-130	29-MAY-15
WG2097610-3 LCS								
F1(C6-C10)			81.5		%		70-130	29-MAY-15
WG2097610-1 MB								
Benzene			<0.00050		mg/L		0.0005	29-MAY-15
Toluene			<0.00050		mg/L		0.0005	29-MAY-15
Ethylbenzene			<0.00050		mg/L		0.0005	29-MAY-15
o-Xylene			<0.00050		mg/L		0.0005	29-MAY-15
m+p-Xylene			<0.00050		mg/L		0.0005	29-MAY-15
F1(C6-C10)			<0.10		mg/L		0.1	29-MAY-15
Surrogate: 1,4-Difluorobenzene (SS)			100.0		%		70-130	29-MAY-15
Surrogate: 4-Bromofluorobenzene (SS)			85.0		%		70-130	29-MAY-15
Surrogate: 3,4-Dichlorotoluene (SS)			86.5		%		70-130	29-MAY-15
C-TOT-ORG-ED	Water							
Batch R3200536								
WG2100402-3 DUP		**L1618652-1**						
Total Organic Carbon		3.3	2.7		mg/L	19	20	03-JUN-15
WG2100402-8 DUP		**L1620384-30**						
Total Organic Carbon		12.2	12.1		mg/L	0.8	20	03-JUN-15
WG2100402-2 LCS								
Total Organic Carbon			91.8		%		80-120	03-JUN-15
WG2100402-6 LCS								
Total Organic Carbon			95.2		%		70-130	03-JUN-15
WG2100402-1 MB								

Quality Control Report

Client: AQUATECH CANADIAN WATER SERVICES
PO BOX 5113
LACOMBE AB T4L 1A0
Contact: BRIAN MILLS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
C-TOT-ORG-ED	Water							
Batch R3200536								
WG2100402-1 MB								
Total Organic Carbon			<1.0		mg/L		1	03-JUN-15
WG2100402-5 MB								
Total Organic Carbon			<1.0		mg/L		1	03-JUN-15
WG2100402-4 MS		**L1618652-1**						
Total Organic Carbon			91.6		%		70-130	03-JUN-15
WG2100402-7 MS		**L1620384-30**						
Total Organic Carbon			N/A	MS-B	%		-	03-JUN-15
CHLORAMINES-CALC-ED	Water							
Batch R3199653								
WG2097720-1 DUP		**L1618652-1**						
Chloramines		<0.20	0.21	RPD-NA	mg/L	N/A	25	29-MAY-15
CL-IC-N-ED	Water							
Batch R3198408								
WG2097559-3 DUP		**L1618375-20**						
Chloride (Cl)		34.1	34.7		mg/L	1.7	20	29-MAY-15
WG2097559-5 DUP		**L1618704-1**						
Chloride (Cl)		<0.50	0.86	RPD-NA	mg/L	N/A	20	29-MAY-15
WG2097559-7 DUP		**L1618590-3**						
Chloride (Cl)		9.87	9.85		mg/L	0.1	20	29-MAY-15
WG2097559-11 LCS								
Chloride (Cl)			104.7		%		90-110	29-MAY-15
WG2097559-13 LCS								
Chloride (Cl)			104.8		%		90-110	29-MAY-15
WG2097559-15 LCS								
Chloride (Cl)			105.0		%		90-110	29-MAY-15
WG2097559-2 LCS								
Chloride (Cl)			104.5		%		90-110	29-MAY-15
WG2097559-9 LCS								
Chloride (Cl)			104.5		%		90-110	29-MAY-15
WG2097559-1 MB								
Chloride (Cl)			<0.50		mg/L		0.5	30-MAY-15
WG2097559-10 MB								
Chloride (Cl)			<0.50		mg/L		0.5	29-MAY-15
WG2097559-12 MB								
Chloride (Cl)			<0.50		mg/L		0.5	29-MAY-15
WG2097559-14 MB								

Quality Control Report

Client: AQUATECH CANADIAN WATER SERVICES
PO BOX 5113
LACOMBE AB T4L 1A0

Contact: BRIAN MILLS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
CL-IC-N-ED	Water							
Batch R3198408								
WG2097559-14 MB Chloride (Cl)			<0.50		mg/L		0.5	29-MAY-15
WG2097559-16 MB Chloride (Cl)			<0.50		mg/L		0.5	29-MAY-15
WG2097559-4 MS Chloride (Cl)		**L1618375-20**	97.0		%		75-125	29-MAY-15
WG2097559-6 MS Chloride (Cl)		**L1618704-1**	102.2		%		75-125	29-MAY-15
WG2097559-8 MS Chloride (Cl)		**L1618590-3**	101.9		%		75-125	29-MAY-15
CL2-FREE-ED	Water							
Batch R3199623								
WG2097656-2 DUP Chlorine, Free		**L1618652-1** 1.20	1.11		mg/L	7.5	26	29-MAY-15
WG2097656-1 LCS Chlorine, Free			89.0		%		75-125	29-MAY-15
CL2-TOT-ED	Water							
Batch R3199627								
WG2097677-2 DUP Chlorine, Total		**L1618652-1** 1.26	1.22		mg/L	3.8	10	29-MAY-15
WG2097677-1 LCS Chlorine, Total			98.0		%		75-125	29-MAY-15
CN-TOT-WT	Water							
Batch R3202444								
WG2101635-3 DUP Cyanide, Total		**L1618652-1** <0.020	<0.020	RPD-NA	mg/L	N/A	20	04-JUN-15
WG2101635-2 LCS Cyanide, Total			85.5		%		80-120	04-JUN-15
WG2101635-1 MB Cyanide, Total			<0.0020		mg/L		0.002	04-JUN-15
WG2101635-4 MS Cyanide, Total		**L1618652-1**	71.35		%		70-130	04-JUN-15
COL-TRU-ED	Water							
Batch R3199621								
WG2097550-3 DUP Color, True		**L1617656-2** 79.5	80.4		C.U.	1.1	20	29-MAY-15
WG2097550-2 LCS								

ALS Environmental

Quality Control Report

Workorder: L1618652 Report Date: 18-JUN-15

Client: AQUATECH CANADIAN WATER SERVICES
PO BOX 5113
LACOMBE AB T4L 1A0
Contact: BRIAN MILLS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
COL-TRU-ED	Water							
Batch R3199621								
WG2097550-2 LCS								
Color, True			96.5		%		85-115	29-MAY-15
WG2097550-1 MB								
Color, True			<2.0		C.U.		2	29-MAY-15
F-IC-N-ED	Water							
Batch R3198408								
WG2097559-3 DUP		**L1618375-20**						
Fluoride (F)		0.171	0.180		mg/L	5.5	20	29-MAY-15
WG2097559-5 DUP		**L1618704-1**						
Fluoride (F)		0.712	0.790		mg/L	10	20	29-MAY-15
WG2097559-7 DUP		**L1618590-3**						
Fluoride (F)		0.123	0.121		mg/L	1.5	20	29-MAY-15
WG2097559-11 LCS								
Fluoride (F)			105.8		%		90-110	29-MAY-15
WG2097559-13 LCS								
Fluoride (F)			106.3		%		90-110	29-MAY-15
WG2097559-15 LCS								
Fluoride (F)			107.1		%		90-110	29-MAY-15
WG2097559-2 LCS								
Fluoride (F)			103.2		%		90-110	29-MAY-15
WG2097559-9 LCS								
Fluoride (F)			105.6		%		90-110	29-MAY-15
WG2097559-1 MB								
Fluoride (F)			<0.020		mg/L		0.02	30-MAY-15
WG2097559-10 MB								
Fluoride (F)			<0.020		mg/L		0.02	29-MAY-15
WG2097559-12 MB								
Fluoride (F)			<0.020		mg/L		0.02	29-MAY-15
WG2097559-14 MB								
Fluoride (F)			<0.020		mg/L		0.02	29-MAY-15
WG2097559-16 MB								
Fluoride (F)			<0.020		mg/L		0.02	29-MAY-15
WG2097559-4 MS		**L1618375-20**						
Fluoride (F)			87.8		%		75-125	29-MAY-15
WG2097559-6 MS		**L1618704-1**						
Fluoride (F)			90.3		%		75-125	29-MAY-15
WG2097559-8 MS		**L1618590-3**						
Fluoride (F)			94.0		%		75-125	29-MAY-15

Quality Control Report

Client: AQUATECH CANADIAN WATER SERVICES
PO BOX 5113
LACOMBE AB T4L 1A0
Contact: BRIAN MILLS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
F2-ED	Water							
Batch R3199710								
WG2098376-2 LCS								
F2 (C10-C16)			105.9		%		70-130	01-JUN-15
WG2098376-4 LCS								
F2 (C10-C16)			116.5		%		70-130	01-JUN-15
WG2098376-1 MB								
F2 (C10-C16)			<0.25		mg/L		0.25	01-JUN-15
Surrogate: 2-Bromobenzotrifluoride			99.2		%		65-135	01-JUN-15
WG2098376-3 MB								
F2 (C10-C16)			<0.25		mg/L		0.25	01-JUN-15
Surrogate: 2-Bromobenzotrifluoride			103.5		%		65-135	01-JUN-15
HAA-WP	Water							
Batch R3204806								
WG2104447-3 DUP		**L1617920-3**						
Monobromoacetic Acid		<0.0010	<0.0010	RPD-NA	mg/L	N/A	40	10-JUN-15
Monochloroacetic Acid		<0.0050	<0.0050	RPD-NA	mg/L	N/A	40	10-JUN-15
Bromochloroacetic Acid		0.0031	0.0030		mg/L	2.4	40	10-JUN-15
Dibromoacetic Acid		<0.0010	<0.0010	RPD-NA	mg/L	N/A	40	10-JUN-15
Dichloroacetic Acid		0.0082	0.0082		mg/L	0.7	40	10-JUN-15
Trichloroacetic Acid		0.0093	0.0092		mg/L	0.6	40	10-JUN-15
WG2104447-2 LCS								
Monobromoacetic Acid			99.95		%		50-130	10-JUN-15
Monochloroacetic Acid			93.8		%		50-130	10-JUN-15
Bromochloroacetic Acid			99.8		%		50-130	10-JUN-15
Dibromoacetic Acid			89.6		%		50-130	10-JUN-15
Dichloroacetic Acid			95.2		%		50-130	10-JUN-15
Trichloroacetic Acid			97.1		%		50-130	10-JUN-15
WG2104447-1 MB								
Monobromoacetic Acid			<0.0010		mg/L		0.001	10-JUN-15
Monochloroacetic Acid			<0.0050		mg/L		0.005	10-JUN-15
Bromochloroacetic Acid			<0.0010		mg/L		0.001	10-JUN-15
Dibromoacetic Acid			<0.0010		mg/L		0.001	10-JUN-15
Dichloroacetic Acid			<0.0010		mg/L		0.001	10-JUN-15
Trichloroacetic Acid			<0.0010		mg/L		0.001	10-JUN-15
Surrogate: 2,3-Dibromopropionic Acid (SS			108.0		%		50-130	10-JUN-15
WG2104447-4 MS		**L1618005-1**						
Monobromoacetic Acid			91.7		%		50-150	10-JUN-15

Client: AQUATECH CANADIAN WATER SERVICES
PO BOX 5113
LACOMBE AB T4L 1A0
Contact: BRIAN MILLS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
HAA-WP	Water							
Batch R3204806								
WG2104447-4 MS		**L1618005-1**						
Monochloroacetic Acid			89.5		%		50-150	10-JUN-15
Bromochloroacetic Acid			106.4		%		50-150	10-JUN-15
Dibromoacetic Acid			92.8		%		50-150	10-JUN-15
Dichloroacetic Acid			N/A	MS-B	%		-	10-JUN-15
Trichloroacetic Acid			115.8		%		50-150	10-JUN-15
HG-T-CVAA-ED	Water							
Batch R3201353								
WG2101173-3 DUP		**L1616080-2**						
Mercury (Hg)-Total		0.0000195	0.0000154	J	mg/L	0.0000041	0.00001	06-JUN-15
WG2101173-7 DUP		**L1618704-1**						
Mercury (Hg)-Total		0.0000130	0.0000087	J	mg/L	0.0000043	0.00001	06-JUN-15
WG2101173-2 LCS								
Mercury (Hg)-Total			108.0		%		80-120	04-JUN-15
WG2101173-6 LCS								
Mercury (Hg)-Total			106.0		%		80-120	06-JUN-15
WG2101173-1 MB								
Mercury (Hg)-Total			<0.000005(		mg/L		0.000005	04-JUN-15
WG2101173-5 MB								
Mercury (Hg)-Total			<0.000005(		mg/L		0.000005	06-JUN-15
WG2101173-4 MS		**L1616080-2**						
Mercury (Hg)-Total			98.5		%		70-130	06-JUN-15
WG2101173-8 MS		**L1618704-1**						
Mercury (Hg)-Total			92.0		%		70-130	06-JUN-15
MET-D-CCMS-ED	Water							
Batch R3199648								
WG2099227-11 CRM		**ED-HIGH-WATRM**						
Calcium (Ca)-Dissolved			95.7		%		80-120	02-JUN-15
Magnesium (Mg)-Dissolved			98.7		%		80-120	02-JUN-15
Potassium (K)-Dissolved			100.4		%		80-120	02-JUN-15
Sodium (Na)-Dissolved			99.8		%		80-120	02-JUN-15
WG2099227-14 CRM		**ED-HIGH-WATRM**						
Calcium (Ca)-Dissolved			95.2		%		80-120	02-JUN-15
Magnesium (Mg)-Dissolved			100.0		%		80-120	02-JUN-15
Potassium (K)-Dissolved			101.0		%		80-120	02-JUN-15
Sodium (Na)-Dissolved			102.2		%		80-120	02-JUN-15
WG2099227-17 CRM		**ED-HIGH-WATRM**						

Client: AQUATECH CANADIAN WATER SERVICES
PO BOX 5113
LACOMBE AB T4L 1A0

Contact: BRIAN MILLS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-ED	Water							
Batch R3199648								
WG2099227-17 CRM		**ED-HIGH-WATRM**						
Calcium (Ca)-Dissolved			95.7		%		80-120	02-JUN-15
Magnesium (Mg)-Dissolved			98.7		%		80-120	02-JUN-15
Potassium (K)-Dissolved			100.4		%		80-120	02-JUN-15
Sodium (Na)-Dissolved			99.8		%		80-120	02-JUN-15
WG2099227-2 CRM		**ED-HIGH-WATRM**						
Calcium (Ca)-Dissolved			98.6		%		80-120	02-JUN-15
Magnesium (Mg)-Dissolved			102.0		%		80-120	02-JUN-15
Potassium (K)-Dissolved			100.5		%		80-120	02-JUN-15
Sodium (Na)-Dissolved			98.9		%		80-120	02-JUN-15
WG2099227-20 CRM		**ED-HIGH-WATRM**						
Calcium (Ca)-Dissolved			95.2		%		80-120	02-JUN-15
Magnesium (Mg)-Dissolved			100.0		%		80-120	02-JUN-15
Potassium (K)-Dissolved			101.0		%		80-120	02-JUN-15
Sodium (Na)-Dissolved			102.2		%		80-120	02-JUN-15
WG2099227-5 CRM		**ED-HIGH-WATRM**						
Calcium (Ca)-Dissolved			98.0		%		80-120	02-JUN-15
Magnesium (Mg)-Dissolved			103.3		%		80-120	02-JUN-15
Potassium (K)-Dissolved			101.2		%		80-120	02-JUN-15
Sodium (Na)-Dissolved			101.4		%		80-120	02-JUN-15
WG2099227-8 CRM		**ED-HIGH-WATRM**						
Calcium (Ca)-Dissolved			95.8		%		80-120	02-JUN-15
Magnesium (Mg)-Dissolved			100.8		%		80-120	02-JUN-15
Potassium (K)-Dissolved			102.3		%		80-120	02-JUN-15
Sodium (Na)-Dissolved			105.8		%		80-120	02-JUN-15
WG2099227-12 DUP		**L1617953-9**						
Calcium (Ca)-Dissolved		120	119		mg/L	0.8	20	02-JUN-15
Magnesium (Mg)-Dissolved		33.0	34.2		mg/L	3.6	20	02-JUN-15
Potassium (K)-Dissolved		5.73	5.79		mg/L	1.1	20	02-JUN-15
Sodium (Na)-Dissolved		95.3	98.3		mg/L	3.1	20	02-JUN-15
WG2099227-15 DUP		**L1618475-1**						
Calcium (Ca)-Dissolved		179	184		mg/L	2.4	20	02-JUN-15
Magnesium (Mg)-Dissolved		34.5	35.6		mg/L	3.4	20	02-JUN-15
Potassium (K)-Dissolved		11.6	11.6		mg/L	0.0	20	02-JUN-15
Sodium (Na)-Dissolved		43.2	43.7		mg/L	1.1	20	02-JUN-15
WG2099227-18 DUP		**L1618475-7**						

Quality Control Report

Client: AQUATECH CANADIAN WATER SERVICES
PO BOX 5113
LACOMBE AB T4L 1A0
Contact: BRIAN MILLS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-ED	Water							
Batch R3199648								
WG2099227-18 DUP		**L1618475-7**						
Calcium (Ca)-Dissolved		114	116		mg/L	2.0	20	02-JUN-15
Magnesium (Mg)-Dissolved		21.4	21.0		mg/L	1.8	20	02-JUN-15
Potassium (K)-Dissolved		0.79	0.78		mg/L	1.9	20	02-JUN-15
Sodium (Na)-Dissolved		11.4	11.6		mg/L	1.4	20	02-JUN-15
WG2099227-21 DUP		**L1618375-20**						
Calcium (Ca)-Dissolved		104	107		mg/L	2.8	20	02-JUN-15
Magnesium (Mg)-Dissolved		33.3	33.4		mg/L	0.1	20	02-JUN-15
Potassium (K)-Dissolved		1.23	1.23		mg/L	0.0	20	02-JUN-15
Sodium (Na)-Dissolved		6.7	6.9		mg/L	2.3	20	02-JUN-15
WG2099227-3 DUP		**L1619656-10**						
Calcium (Ca)-Dissolved		56.0	58.1		mg/L	3.8	20	02-JUN-15
Magnesium (Mg)-Dissolved		18.6	18.5		mg/L	0.6	20	02-JUN-15
Potassium (K)-Dissolved		10.5	10.8		mg/L	3.1	20	02-JUN-15
Sodium (Na)-Dissolved		13.2	13.6		mg/L	3.1	20	02-JUN-15
WG2099227-9 DUP		**L1617831-1**						
Calcium (Ca)-Dissolved		48.1	47.7		mg/L	0.9	20	02-JUN-15
Magnesium (Mg)-Dissolved		14.1	14.1		mg/L	0.1	20	02-JUN-15
Potassium (K)-Dissolved		3.05	3.02		mg/L	0.7	20	02-JUN-15
Sodium (Na)-Dissolved		13.4	13.4		mg/L	0.0	20	02-JUN-15
WG2099227-1 MB								
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	02-JUN-15
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	02-JUN-15
Potassium (K)-Dissolved			<0.050		mg/L		0.05	02-JUN-15
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	02-JUN-15
WG2099227-10 MB								
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	02-JUN-15
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	02-JUN-15
Potassium (K)-Dissolved			<0.050		mg/L		0.05	02-JUN-15
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	02-JUN-15
WG2099227-13 MB								
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	02-JUN-15
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	02-JUN-15
Potassium (K)-Dissolved			<0.050		mg/L		0.05	02-JUN-15
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	02-JUN-15

Quality Control Report

Workorder: L1618652 Report Date: 18-JUN-15

Client: AQUATECH CANADIAN WATER SERVICES
PO BOX 5113
LACOMBE AB T4L 1A0
Contact: BRIAN MILLS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-ED	Water							
Batch R3199648								
WG2099227-16 MB								
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	02-JUN-15
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	02-JUN-15
Potassium (K)-Dissolved			<0.050		mg/L		0.05	02-JUN-15
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	02-JUN-15
WG2099227-19 MB								
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	02-JUN-15
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	02-JUN-15
Potassium (K)-Dissolved			<0.050		mg/L		0.05	02-JUN-15
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	02-JUN-15
WG2099227-4 MB								
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	02-JUN-15
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	02-JUN-15
Potassium (K)-Dissolved			<0.050		mg/L		0.05	02-JUN-15
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	02-JUN-15
WG2099227-7 MB								
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	02-JUN-15
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	02-JUN-15
Potassium (K)-Dissolved			<0.050		mg/L		0.05	02-JUN-15
Sodium (Na)-Dissolved			<0.050		mg/L		0.05	02-JUN-15
Batch R3201216								
WG2101054-11 CRM		**ED-HIGH-WATRM**						
Calcium (Ca)-Dissolved			91.0		%		80-120	04-JUN-15
Magnesium (Mg)-Dissolved			97.9		%		80-120	04-JUN-15
WG2101054-14 CRM		**ED-HIGH-WATRM**						
Calcium (Ca)-Dissolved			91.1		%		80-120	04-JUN-15
Magnesium (Mg)-Dissolved			99.7		%		80-120	04-JUN-15
WG2101054-2 CRM		**ED-HIGH-WATRM**						
Calcium (Ca)-Dissolved			97.3		%		80-120	04-JUN-15
Magnesium (Mg)-Dissolved			92.4		%		80-120	04-JUN-15
WG2101054-5 CRM		**ED-HIGH-WATRM**						
Calcium (Ca)-Dissolved			90.8		%		80-120	04-JUN-15
Magnesium (Mg)-Dissolved			96.9		%		80-120	04-JUN-15
WG2101054-8 CRM		**ED-HIGH-WATRM**						
Calcium (Ca)-Dissolved			97.0		%		80-120	04-JUN-15
Magnesium (Mg)-Dissolved			93.8		%		80-120	04-JUN-15

Client: AQUATECH CANADIAN WATER SERVICES
PO BOX 5113
LACOMBE AB T4L 1A0
Contact: BRIAN MILLS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-D-CCMS-ED	Water							
Batch R3201216								
WG2101054-12 DUP		**L1618375-2**						
Calcium (Ca)-Dissolved		57.9	56.7		mg/L	2.1	20	04-JUN-15
Magnesium (Mg)-Dissolved		30.5	31.4		mg/L	2.9	20	04-JUN-15
WG2101054-15 DUP		**L1618100-16**						
Calcium (Ca)-Dissolved		16.7	17.1		mg/L	2.3	20	04-JUN-15
Magnesium (Mg)-Dissolved		4.66	4.37		mg/L	6.5	20	04-JUN-15
WG2101054-3 DUP		**L1621305-11**						
Calcium (Ca)-Dissolved		67.5	64.2		mg/L	5.1	20	04-JUN-15
Magnesium (Mg)-Dissolved		17.5	17.0		mg/L	2.9	20	04-JUN-15
WG2101054-9 DUP		**L1619298-17**						
Calcium (Ca)-Dissolved		11.1	11.1		mg/L	0.7	20	04-JUN-15
Magnesium (Mg)-Dissolved		1.04	1.05		mg/L	1.6	20	04-JUN-15
WG2101054-1 MB								
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	04-JUN-15
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	04-JUN-15
WG2101054-10 MB								
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	04-JUN-15
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	04-JUN-15
WG2101054-13 MB								
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	04-JUN-15
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	04-JUN-15
WG2101054-4 MB								
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	04-JUN-15
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	04-JUN-15
WG2101054-7 MB								
Calcium (Ca)-Dissolved			<0.050		mg/L		0.05	04-JUN-15
Magnesium (Mg)-Dissolved			<0.0050		mg/L		0.005	04-JUN-15
MET-T-CCMS-ED	Water							
Batch R3202372								
WG2102019-2 DUP		**L1621303-1**						
Aluminum (Al)-Total		<0.0030	<0.0030	RPD-NA	mg/L	N/A	20	06-JUN-15
Antimony (Sb)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	06-JUN-15
Arsenic (As)-Total		0.00024	0.00024		mg/L	2.5	20	06-JUN-15
Barium (Ba)-Total		0.0271	0.0286		mg/L	5.5	20	06-JUN-15
Beryllium (Be)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	06-JUN-15
Boron (B)-Total		0.319	0.329		mg/L	3.1	20	06-JUN-15

Quality Control Report

Client: AQUATECH CANADIAN WATER SERVICES
PO BOX 5113
LACOMBE AB T4L 1A0
Contact: BRIAN MILLS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-ED	Water							
Batch R3202372								
WG2102019-2 DUP		**L1621303-1**						
Cadmium (Cd)-Total		<0.0000050	<0.000005C	RPD-NA	mg/L	N/A	20	06-JUN-15
Calcium (Ca)-Total		112	115		mg/L	2.7	20	06-JUN-15
Chromium (Cr)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	06-JUN-15
Cobalt (Co)-Total		0.00015	0.00016		mg/L	3.2	20	06-JUN-15
Copper (Cu)-Total		0.00333	0.00338		mg/L	1.5	20	06-JUN-15
Iron (Fe)-Total		<0.010	<0.010	RPD-NA	mg/L	N/A	20	06-JUN-15
Lead (Pb)-Total		0.000241	0.000237		mg/L	1.6	20	06-JUN-15
Lithium (Li)-Total		0.193	0.193		mg/L	0.0	20	06-JUN-15
Magnesium (Mg)-Total		43.1	43.9		mg/L	2.0	20	06-JUN-15
Manganese (Mn)-Total		0.0282	0.0281		mg/L	0.4	20	06-JUN-15
Molybdenum (Mo)-Total		0.000423	0.000422		mg/L	0.1	20	06-JUN-15
Nickel (Ni)-Total		0.00083	0.00079		mg/L	4.7	20	06-JUN-15
Potassium (K)-Total		2.16	2.17		mg/L	0.5	20	06-JUN-15
Selenium (Se)-Total		0.00104	0.00108		mg/L	3.2	20	06-JUN-15
Silver (Ag)-Total		<0.000010	<0.000010	RPD-NA	mg/L	N/A	20	06-JUN-15
Sodium (Na)-Total		517	529		mg/L	2.3	20	06-JUN-15
Thallium (Tl)-Total		0.000016	0.000016		mg/L	3.8	20	06-JUN-15
Tin (Sn)-Total		<0.00010	<0.00010	RPD-NA	mg/L	N/A	20	06-JUN-15
Titanium (Ti)-Total		<0.00030	<0.00030	RPD-NA	mg/L	N/A	20	06-JUN-15
Uranium (U)-Total		0.0128	0.0128		mg/L	0.1	20	06-JUN-15
Vanadium (V)-Total		<0.00050	<0.00050	RPD-NA	mg/L	N/A	20	06-JUN-15
Zinc (Zn)-Total		1.54	1.56		mg/L	1.6	20	06-JUN-15
WG2102019-1 MB								
Aluminum (Al)-Total			<0.0030		mg/L		0.003	05-JUN-15
Antimony (Sb)-Total			<0.00010		mg/L		0.0001	05-JUN-15
Arsenic (As)-Total			<0.00010		mg/L		0.0001	05-JUN-15
Barium (Ba)-Total			<0.000050		mg/L		0.00005	05-JUN-15
Beryllium (Be)-Total			<0.00010		mg/L		0.0001	05-JUN-15
Boron (B)-Total			<0.010		mg/L		0.01	05-JUN-15
Cadmium (Cd)-Total			<0.000005C		mg/L		0.000005	05-JUN-15
Calcium (Ca)-Total			<0.050		mg/L		0.05	05-JUN-15
Chromium (Cr)-Total			<0.00010		mg/L		0.0001	05-JUN-15
Cobalt (Co)-Total			<0.00010		mg/L		0.0001	05-JUN-15

Quality Control Report

Client: AQUATECH CANADIAN WATER SERVICES
PO BOX 5113
LACOMBE AB T4L 1A0
Contact: BRIAN MILLS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
MET-T-CCMS-ED	Water							
Batch R3202372								
WG2102019-1 MB								
Copper (Cu)-Total			<0.00050		mg/L		0.0005	05-JUN-15
Iron (Fe)-Total			<0.010		mg/L		0.01	05-JUN-15
Lead (Pb)-Total			<0.000050		mg/L		0.00005	05-JUN-15
Lithium (Li)-Total			<0.0010		mg/L		0.001	05-JUN-15
Magnesium (Mg)-Total			<0.0050		mg/L		0.005	05-JUN-15
Manganese (Mn)-Total			<0.00010		mg/L		0.0001	05-JUN-15
Molybdenum (Mo)-Total			<0.000050		mg/L		0.00005	05-JUN-15
Nickel (Ni)-Total			<0.00050		mg/L		0.0005	05-JUN-15
Potassium (K)-Total			<0.050		mg/L		0.05	05-JUN-15
Selenium (Se)-Total			<0.000050		mg/L		0.00005	05-JUN-15
Silver (Ag)-Total			<0.000010		mg/L		0.00001	05-JUN-15
Sodium (Na)-Total			<0.050		mg/L		0.05	05-JUN-15
Thallium (Tl)-Total			<0.000010		mg/L		0.00001	05-JUN-15
Tin (Sn)-Total			<0.00010		mg/L		0.0001	05-JUN-15
Titanium (Ti)-Total			<0.00030		mg/L		0.0003	05-JUN-15
Uranium (U)-Total			<0.000010		mg/L		0.00001	05-JUN-15
Vanadium (V)-Total			<0.00050		mg/L		0.0005	05-JUN-15
Zinc (Zn)-Total			<0.0030		mg/L		0.003	05-JUN-15
NH3-CFA-ED	Water							
Batch R3201217								
WG2100979-5 DUP		**L1618269-1**						
Ammonia, Total (as N)		<0.050	<0.050	RPD-NA	mg/L	N/A	20	04-JUN-15
WG2100979-9 DUP		**L1621401-1**						
Ammonia, Total (as N)		2.73	2.74		mg/L	0.4	20	04-JUN-15
WG2100979-2 LCS								
Ammonia, Total (as N)			99.2		%		85-115	04-JUN-15
WG2100979-7 LCS								
Ammonia, Total (as N)			97.9		%		85-115	04-JUN-15
WG2100979-1 MB								
Ammonia, Total (as N)			<0.050		mg/L		0.05	04-JUN-15
WG2100979-6 MB								
Ammonia, Total (as N)			<0.050		mg/L		0.05	04-JUN-15
WG2100979-3 MS		**L1618348-2**						
Ammonia, Total (as N)			96.0		%		75-125	04-JUN-15
WG2100979-4 MS		**L1618378-6**						

Client: AQUATECH CANADIAN WATER SERVICES
PO BOX 5113
LACOMBE AB T4L 1A0
Contact: BRIAN MILLS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NH3-CFA-ED	Water							
Batch R3201217								
WG2100979-4 MS Ammonia, Total (as N)		**L1618378-6**	105.5		%		75-125	04-JUN-15
NO2-IC-N-ED	Water							
Batch R3198408								
WG2097559-3 DUP Nitrite (as N)		**L1618375-20** <0.010	<0.010	RPD-NA	mg/L	N/A	20	29-MAY-15
WG2097559-5 DUP Nitrite (as N)		**L1618704-1** <0.010	<0.010	RPD-NA	mg/L	N/A	20	29-MAY-15
WG2097559-7 DUP Nitrite (as N)		**L1618590-3** <0.010	<0.010	RPD-NA	mg/L	N/A	20	29-MAY-15
WG2097559-11 LCS Nitrite (as N)			99.3		%		90-110	29-MAY-15
WG2097559-13 LCS Nitrite (as N)			99.6		%		90-110	29-MAY-15
WG2097559-15 LCS Nitrite (as N)			99.9		%		90-110	29-MAY-15
WG2097559-2 LCS Nitrite (as N)			100.7		%		90-110	29-MAY-15
WG2097559-9 LCS Nitrite (as N)			99.2		%		90-110	29-MAY-15
WG2097559-1 MB Nitrite (as N)			<0.010		mg/L		0.01	30-MAY-15
WG2097559-10 MB Nitrite (as N)			<0.010		mg/L		0.01	29-MAY-15
WG2097559-12 MB Nitrite (as N)			<0.010		mg/L		0.01	29-MAY-15
WG2097559-14 MB Nitrite (as N)			<0.010		mg/L		0.01	29-MAY-15
WG2097559-16 MB Nitrite (as N)			<0.010		mg/L		0.01	29-MAY-15
WG2097559-4 MS Nitrite (as N)		**L1618375-20**	99.1		%		75-125	29-MAY-15
WG2097559-6 MS Nitrite (as N)		**L1618704-1**	95.4		%		75-125	29-MAY-15
WG2097559-8 MS Nitrite (as N)		**L1618590-3**	78.0		%		75-125	29-MAY-15
NO3-IC-N-ED	Water							

Quality Control Report

Client: AQUATECH CANADIAN WATER SERVICES
PO BOX 5113
LACOMBE AB T4L 1A0
Contact: BRIAN MILLS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
NO3-IC-N-ED	Water							
Batch R3198408								
WG2097559-3 DUP Nitrate (as N)		**L1618375-20** 0.038	0.042		mg/L	12	20	29-MAY-15
WG2097559-5 DUP Nitrate (as N)		**L1618704-1** <0.020	0.036	RPD-NA	mg/L	N/A	20	29-MAY-15
WG2097559-7 DUP Nitrate (as N)		**L1618590-3** <0.020	<0.020	RPD-NA	mg/L	N/A	20	29-MAY-15
WG2097559-11 LCS Nitrate (as N)			102.0		%		90-110	29-MAY-15
WG2097559-13 LCS Nitrate (as N)			102.7		%		90-110	29-MAY-15
WG2097559-15 LCS Nitrate (as N)			103.1		%		90-110	29-MAY-15
WG2097559-2 LCS Nitrate (as N)			98.9		%		90-110	29-MAY-15
WG2097559-9 LCS Nitrate (as N)			103.2		%		90-110	29-MAY-15
WG2097559-1 MB Nitrate (as N)			<0.020		mg/L		0.02	30-MAY-15
WG2097559-10 MB Nitrate (as N)			<0.020		mg/L		0.02	29-MAY-15
WG2097559-12 MB Nitrate (as N)			<0.020		mg/L		0.02	29-MAY-15
WG2097559-14 MB Nitrate (as N)			<0.020		mg/L		0.02	29-MAY-15
WG2097559-16 MB Nitrate (as N)			<0.020		mg/L		0.02	29-MAY-15
WG2097559-4 MS Nitrate (as N)		**L1618375-20**	95.0		%		75-125	29-MAY-15
WG2097559-6 MS Nitrate (as N)		**L1618704-1**	95.1		%		75-125	29-MAY-15
WG2097559-8 MS Nitrate (as N)		**L1618590-3**	99.6		%		75-125	29-MAY-15
PH-ED	Water							
Batch R3198536								
WG2097913-13 LCS pH			6.02		pH		5.9-6.1	30-MAY-15
WG2097913-18 LCS pH			6.01		pH		5.9-6.1	30-MAY-15

Quality Control Report

Client: AQUATECH CANADIAN WATER SERVICES
PO BOX 5113
LACOMBE AB T4L 1A0
Contact: BRIAN MILLS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH-ED	Water							
Batch R3198536								
WG2097913-23 LCS								
pH			6.01		pH		5.9-6.1	30-MAY-15
WG2097913-28 LCS								
pH			6.02		pH		5.9-6.1	31-MAY-15
WG2097913-3 LCS								
pH			6.02		pH		5.9-6.1	30-MAY-15
WG2097913-33 LCS								
pH			6.02		pH		5.9-6.1	31-MAY-15
PH/EC/ALK-ED	Water							
Batch R3198536								
WG2097913-10 DUP		**L1618375-21**						
pH		8.15	8.14	J	pH	0.00	0.3	31-MAY-15
Conductivity (EC)		2380	2380		uS/cm	0.0	10	31-MAY-15
Bicarbonate (HCO3)		495	496		mg/L	0.1	25	31-MAY-15
Carbonate (CO3)		<5.0	<5.0	RPD-NA	mg/L	N/A	25	31-MAY-15
Hydroxide (OH)		<5.0	<5.0	RPD-NA	mg/L	N/A	25	31-MAY-15
Alkalinity, Total (as CaCO3)		406	407		mg/L	0.1	20	31-MAY-15
WG2097913-6 DUP		**L1618590-2**						
pH		8.39	8.39	J	pH	0.00	0.3	30-MAY-15
Conductivity (EC)		875	872		uS/cm	0.3	10	30-MAY-15
Bicarbonate (HCO3)		492	491		mg/L	0.2	25	30-MAY-15
Carbonate (CO3)		5.9	5.4		mg/L	8.3	25	30-MAY-15
Hydroxide (OH)		<5.0	<5.0	RPD-NA	mg/L	N/A	25	30-MAY-15
Alkalinity, Total (as CaCO3)		413	411		mg/L	0.4	20	30-MAY-15
WG2097913-7 DUP		**L1618269-9**						
pH		8.28	8.29	J	pH	0.01	0.3	30-MAY-15
Conductivity (EC)		422	423		uS/cm	0.2	10	30-MAY-15
Bicarbonate (HCO3)		160	161		mg/L	0.4	25	30-MAY-15
Carbonate (CO3)		<5.0	<5.0	RPD-NA	mg/L	N/A	25	30-MAY-15
Hydroxide (OH)		<5.0	<5.0	RPD-NA	mg/L	N/A	25	30-MAY-15
Alkalinity, Total (as CaCO3)		131	132		mg/L	0.4	20	30-MAY-15
WG2097913-8 DUP		**L1618767-1**						
pH		7.54	7.48	J	pH	0.06	0.3	30-MAY-15
Conductivity (EC)		23800	23800		uS/cm	0.0	10	30-MAY-15
Bicarbonate (HCO3)		2200	2190		mg/L	0.2	25	30-MAY-15

Quality Control Report

Client: AQUATECH CANADIAN WATER SERVICES
PO BOX 5113
LACOMBE AB T4L 1A0
Contact: BRIAN MILLS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH/EC/ALK-ED	Water							
Batch R3198536								
WG2097913-8 DUP		**L1618767-1**						
Carbonate (CO3)		<5.0	<5.0	RPD-NA	mg/L	N/A	25	30-MAY-15
Hydroxide (OH)		<5.0	<5.0	RPD-NA	mg/L	N/A	25	30-MAY-15
Alkalinity, Total (as CaCO3)		1800	1800		mg/L	0.2	20	30-MAY-15
WG2097913-9 DUP		**L1619151-9**						
pH		7.44	7.45	J	pH	0.01	0.3	31-MAY-15
Conductivity (EC)		6450	6460		uS/cm	0.2	10	31-MAY-15
Bicarbonate (HCO3)		414	410		mg/L	0.9	25	31-MAY-15
Carbonate (CO3)		<5.0	<5.0	RPD-NA	mg/L	N/A	25	31-MAY-15
Hydroxide (OH)		<5.0	<5.0	RPD-NA	mg/L	N/A	25	31-MAY-15
Alkalinity, Total (as CaCO3)		339	336		mg/L	0.9	20	31-MAY-15
WG2097913-12 LCS								
Conductivity (EC)			95.3		%		90-110	30-MAY-15
WG2097913-13 LCS								
pH			6.02		pH		5.9-6.1	30-MAY-15
WG2097913-14 LCS								
Alkalinity, Total (as CaCO3)			97.0		%		85-115	30-MAY-15
WG2097913-15 LCS								
Conductivity (EC)			91.6		%		90-110	30-MAY-15
WG2097913-17 LCS								
Conductivity (EC)			98.9		%		90-110	30-MAY-15
WG2097913-18 LCS								
pH			6.01		pH		5.9-6.1	30-MAY-15
WG2097913-19 LCS								
Alkalinity, Total (as CaCO3)			98.7		%		85-115	30-MAY-15
WG2097913-2 LCS								
Conductivity (EC)			97.4		%		90-110	30-MAY-15
WG2097913-20 LCS								
Conductivity (EC)			98.4		%		90-110	30-MAY-15
WG2097913-22 LCS								
Conductivity (EC)			98.7		%		90-110	30-MAY-15
WG2097913-23 LCS								
pH			6.01		pH		5.9-6.1	30-MAY-15
WG2097913-24 LCS								
Alkalinity, Total (as CaCO3)			96.9		%		85-115	30-MAY-15
WG2097913-25 LCS								
Conductivity (EC)			97.7		%		90-110	30-MAY-15

ALS Environmental

Quality Control Report

Workorder: L1618652 Report Date: 18-JUN-15

Client: AQUATECH CANADIAN WATER SERVICES
PO BOX 5113
LACOMBE AB T4L 1A0

Contact: BRIAN MILLS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH/EC/ALK-ED	Water							
Batch R3198536								
WG2097913-27 LCS								
Conductivity (EC)			97.6		%		90-110	31-MAY-15
WG2097913-28 LCS								
pH			6.02		pH		5.9-6.1	31-MAY-15
WG2097913-29 LCS								
Alkalinity, Total (as CaCO3)			97.2		%		85-115	31-MAY-15
WG2097913-3 LCS								
pH			6.02		pH		5.9-6.1	30-MAY-15
WG2097913-30 LCS								
Conductivity (EC)			96.8		%		90-110	31-MAY-15
WG2097913-32 LCS								
Conductivity (EC)			97.2		%		90-110	31-MAY-15
WG2097913-33 LCS								
pH			6.02		pH		5.9-6.1	31-MAY-15
WG2097913-34 LCS								
Alkalinity, Total (as CaCO3)			97.6		%		85-115	31-MAY-15
WG2097913-35 LCS								
Conductivity (EC)			96.6		%		90-110	31-MAY-15
WG2097913-4 LCS								
Alkalinity, Total (as CaCO3)			96.0		%		85-115	30-MAY-15
WG2097913-5 LCS								
Conductivity (EC)			94.3		%		90-110	30-MAY-15
WG2097913-1 MB								
Bicarbonate (HCO3)			<5.0		mg/L		5	30-MAY-15
Carbonate (CO3)			<5.0		mg/L		5	30-MAY-15
Hydroxide (OH)			<5.0		mg/L		5	30-MAY-15
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	30-MAY-15
WG2097913-11 MB								
Bicarbonate (HCO3)			<5.0		mg/L		5	30-MAY-15
Carbonate (CO3)			<5.0		mg/L		5	30-MAY-15
Hydroxide (OH)			<5.0		mg/L		5	30-MAY-15
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	30-MAY-15
WG2097913-16 MB								
Bicarbonate (HCO3)			<5.0		mg/L		5	30-MAY-15
Carbonate (CO3)			<5.0		mg/L		5	30-MAY-15
Hydroxide (OH)			<5.0		mg/L		5	30-MAY-15
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	30-MAY-15

Quality Control Report

Client: AQUATECH CANADIAN WATER SERVICES
PO BOX 5113
LACOMBE AB T4L 1A0
Contact: BRIAN MILLS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
PH/EC/ALK-ED	Water							
Batch R3198536								
WG2097913-21 MB								
Bicarbonate (HCO3)			<5.0		mg/L		5	30-MAY-15
Carbonate (CO3)			<5.0		mg/L		5	30-MAY-15
Hydroxide (OH)			<5.0		mg/L		5	30-MAY-15
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	30-MAY-15
WG2097913-26 MB								
Bicarbonate (HCO3)			<5.0		mg/L		5	31-MAY-15
Carbonate (CO3)			<5.0		mg/L		5	31-MAY-15
Hydroxide (OH)			<5.0		mg/L		5	31-MAY-15
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	31-MAY-15
WG2097913-31 MB								
Bicarbonate (HCO3)			<5.0		mg/L		5	31-MAY-15
Carbonate (CO3)			<5.0		mg/L		5	31-MAY-15
Hydroxide (OH)			<5.0		mg/L		5	31-MAY-15
Alkalinity, Total (as CaCO3)			<2.0		mg/L		2	31-MAY-15
SO4-IC-N-ED	Water							
Batch R3198408								
WG2097559-3 DUP		**L1618375-20**						
Sulfate (SO4)		88.8	89.5		mg/L	0.8	20	29-MAY-15
WG2097559-5 DUP		**L1618704-1**						
Sulfate (SO4)		81.3	81.9		mg/L	0.8	20	29-MAY-15
WG2097559-7 DUP		**L1618590-3**						
Sulfate (SO4)		55.1	54.9		mg/L	0.4	20	29-MAY-15
WG2097559-11 LCS								
Sulfate (SO4)			102.9		%		90-110	29-MAY-15
WG2097559-13 LCS								
Sulfate (SO4)			102.5		%		90-110	29-MAY-15
WG2097559-15 LCS								
Sulfate (SO4)			102.5		%		90-110	29-MAY-15
WG2097559-2 LCS								
Sulfate (SO4)			102.0		%		90-110	29-MAY-15
WG2097559-9 LCS								
Sulfate (SO4)			102.4		%		90-110	29-MAY-15
WG2097559-1 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	30-MAY-15
WG2097559-10 MB								
Sulfate (SO4)			<0.30		mg/L		0.3	29-MAY-15

Quality Control Report

Client: AQUATECH CANADIAN WATER SERVICES
PO BOX 5113
LACOMBE AB T4L 1A0
Contact: BRIAN MILLS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SO4-IC-N-ED	Water							
Batch R3198408								
WG2097559-12 MB Sulfate (SO4)			<0.30		mg/L		0.3	29-MAY-15
WG2097559-14 MB Sulfate (SO4)			<0.30		mg/L		0.3	29-MAY-15
WG2097559-16 MB Sulfate (SO4)			<0.30		mg/L		0.3	29-MAY-15
WG2097559-4 MS Sulfate (SO4)		**L1618375-20**	88.4		%		75-125	29-MAY-15
WG2097559-6 MS Sulfate (SO4)		**L1618704-1**	92.4		%		75-125	29-MAY-15
WG2097559-8 MS Sulfate (SO4)		**L1618590-3**	93.7		%		75-125	29-MAY-15
SOLIDS-TDS-ED	Water							
Batch R3200607								
WG2099225-3 DUP Total Dissolved Solids		**L1617862-3** 87	85		mg/L	2.3	20	02-JUN-15
WG2099225-6 DUP Total Dissolved Solids		**L1618510-2** 246	241		mg/L	2.1	20	02-JUN-15
WG2099225-2 LCS Total Dissolved Solids			100.5		%		85-115	02-JUN-15
WG2099225-5 LCS Total Dissolved Solids			100.8		%		85-115	02-JUN-15
WG2099225-1 MB Total Dissolved Solids			<10		mg/L		10	02-JUN-15
WG2099225-4 MB Total Dissolved Solids			<10		mg/L		10	02-JUN-15
SULPHIDE-ED	Water							
Batch R3202500								
WG2102487-4 DUP Sulphide (as S)		**L1618609-2** 0.0164	0.0164		mg/L	0.0	20	05-JUN-15
WG2102487-7 DUP Sulphide (as S)		**L1618652-1** <0.0015	<0.0015	RPD-NA	mg/L	N/A	20	05-JUN-15
WG2102487-2 LCS Sulphide (as S)			95.6		%		75-125	05-JUN-15
WG2102487-3 LCS Sulphide (as S)			96.8		%		75-125	05-JUN-15
WG2102487-1 MB Sulphide (as S)			<0.0015		mg/L		0.0015	05-JUN-15

Quality Control Report

Client: AQUATECH CANADIAN WATER SERVICES
PO BOX 5113
LACOMBE AB T4L 1A0
Contact: BRIAN MILLS

Test	Matrix	Reference	Result	Qualifier	Units	RPD	Limit	Analyzed
SULPHIDE-ED	Water							
Batch R3202500								
WG2102487-5 MS Sulphide (as S)		**L1617858-3**	107.0		%		65-135	05-JUN-15
WG2102487-6 MS Sulphide (as S)		**L1617646-3**	104.6		%		65-135	05-JUN-15
THM-ED	Water							
Batch R3189458								
WG2098277-3 DUP Chloroform		**L1618478-1** 0.137	0.126		mg/L	8.7	30	31-MAY-15
Bromodichloromethane		0.0056	0.0059		mg/L	5.2	30	31-MAY-15
Dibromochloromethane		<0.0010	<0.0010	RPD-NA	mg/L	N/A	30	31-MAY-15
Bromoform		<0.0050	<0.0050	RPD-NA	mg/L	N/A	30	31-MAY-15
WG2098277-2 LCS Chloroform			113.0		%		70-130	31-MAY-15
Bromodichloromethane			96.2		%		70-130	31-MAY-15
Dibromochloromethane			89.0		%		70-130	31-MAY-15
Bromoform			86.4		%		70-130	31-MAY-15
WG2098277-1 MB Chloroform			<0.0010		mg/L		0.001	31-MAY-15
Bromodichloromethane			<0.0010		mg/L		0.001	31-MAY-15
Dibromochloromethane			<0.0010		mg/L		0.001	31-MAY-15
Bromoform			<0.0050		mg/L		0.005	31-MAY-15
TURBIDITY-ED	Water							
Batch R3199643								
WG2097551-3 DUP Turbidity		**L1618525-1** 1.26	1.25		NTU	0.8	15	29-MAY-15
WG2097551-6 DUP Turbidity		**L1617831-6** 21.7	21.4		NTU	1.4	15	29-MAY-15
WG2097551-2 LCS Turbidity			100.0		%		70-130	29-MAY-15
WG2097551-5 LCS Turbidity			100.0		%		70-130	29-MAY-15
WG2097551-1 MB Turbidity			<0.10		NTU		0.1	29-MAY-15
WG2097551-4 MB Turbidity			<0.10		NTU		0.1	29-MAY-15

Quality Control Report

Workorder: L1618652 Report Date: 18-JUN-15

Client: AQUATECH CANADIAN WATER SERVICES
PO BOX 5113
LACOMBE AB T4L 1A0
Contact: BRIAN MILLS

Legend:

Limit	ALS Control Limit (Data Quality Objectives)
DUP	Duplicate
RPD	Relative Percent Difference
N/A	Not Available
LCS	Laboratory Control Sample
SRM	Standard Reference Material
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ADE	Average Desorption Efficiency
MB	Method Blank
IRM	Internal Reference Material
CRM	Certified Reference Material
CCV	Continuing Calibration Verification
CVS	Calibration Verification Standard
LCSD	Laboratory Control Sample Duplicate

Sample Parameter Qualifier Definitions:

Qualifier	Description
DLA	Detection Limit adjusted for required dilution
J	Duplicate results and limits are expressed in terms of absolute difference.
MS-B	Matrix Spike recovery could not be accurately calculated due to high analyte background in sample.
RPD-NA	Relative Percent Difference Not Available due to result(s) being less than detection limit.

Quality Control Report

Workorder: L1618652 Report Date: 18-JUN-15

Client: AQUATECH CANADIAN WATER SERVICES
PO BOX 5113
LACOMBE AB T4L 1A0
Contact: BRIAN MILLS

Hold Time Exceedances:

ALS Product Description	Sample ID	Sampling Date	Date Processed	Rec. HT	Actual HT	Units	Qualifier
Physical Tests							
pH	1	28-MAY-15 13:15	30-MAY-15 23:02	0.25	58	hours	EHTR-FM
Anions and Nutrients							
Chlorite analysis in water	1	28-MAY-15 13:15	18-JUN-15 11:00	14	21	days	EHT
Inorganic Parameters							
Chlorine, Free	1	28-MAY-15 13:15	29-MAY-15 10:15	0.25	21	hours	EHTR-FM
Chlorine, Total	1	28-MAY-15 13:15	29-MAY-15 10:19	0.25	21	hours	EHTR-FM

Legend & Qualifier Definitions:

EHTR-FM: Exceeded ALS recommended hold time prior to sample receipt. Field Measurement recommended.
EHTR: Exceeded ALS recommended hold time prior to sample receipt.
EHTL: Exceeded ALS recommended hold time prior to analysis. Sample was received less than 24 hours prior to expiry.
EHT: Exceeded ALS recommended hold time prior to analysis.
Rec. HT: ALS recommended hold time (see units).

Notes*:
Where actual sampling date is not provided to ALS, the date (& time) of receipt is used for calculation purposes.
Where actual sampling time is not provided to ALS, the earlier of 12 noon on the sampling date or the time (& date) of receipt is used for calculation purposes. Samples for L1618652 were received on 29-MAY-15 11:21.

ALS recommended hold times may vary by province. They are assigned to meet known provincial and/or federal government requirements. In the absence of regulatory hold times, ALS establishes recommendations based on guidelines published by the US EPA, APHA Standard Methods, or Environment Canada (where available). For more information, please contact ALS.

The ALS Quality Control Report is provided to ALS clients upon request. ALS includes comprehensive QC checks with every analysis to ensure our high standards of quality are met. Each QC result has a known or expected target value, which is compared against pre-determined data quality objectives to provide confidence in the accuracy of associated test results.

Please note that this report may contain QC results from anonymous Sample Duplicates and Matrix Spikes that do not originate from this Work Order.

ALS Environmental
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Kelso, WA 98626
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June 16, 2015

Analytical Report for Service Request No: K1506052

Minnie Estigoy
ALS Environmental - Canada
9936 67 Ave
Edmonton, AB T6E 0P5

RE: Edmonton AB / L1618652

Dear Minnie,

Enclosed are the results of the sample(s) submitted to our laboratory June 04, 2015
For your reference, these analyses have been assigned our service request number **K1506052.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3275. You may also contact me via email at Chris.Leaf@ALSGlobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Chris Leaf
Project Manager

ALS Environmental
ALS Group USA, Corp
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Table of Contents

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L14-50
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wisconsin DNR	http://dnr.wi.gov/	998386840
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577- 7222 Fax (360)636- 1068
www.alsglobal.com

ALS Environmental

KL1506052

Subcontract Request Form

Subcontract To:

ALS ENVIRONMENTAL - KELSO, WASHINGTON, USA
1317 S. 13TH AVE
KELSO,WA 98626

NOTES: Please reference on final report and invoice: PO# *L1618652*
ALS requires QC data to be provided with your final results.

Please see enclosed 1 sample(s) in 1 Container(s)

SAMPLE NUMBER	ANALYTICAL REQUIRED	DATE SAMPLED / DUE DATE	Priority Flag
L1618652-1 DISTRIBUTION SAMPLE		5/28/2015	
	Bromate analysis in water (BROMATE-KL 1)	6/19/2015	
	Chlorate analysis in water (CHLORATE-KL 1)	6/19/2015	
	Chlorite analysis in water (CHLORITE-KL 1)	6/19/2015	

Subcontract Info Contact: Rani Mangru (780) 413-5242
Analysis and reporting info contact: Minnie Estigoy
9936 67 AVE
EDMONTON,AB T6E 0P5
Phone: (780) 413-5242 Email: Minnie.Estigoy@alsglobal.com

Please email confirmation of receipt to: Minnie.Estigoy@alsglobal.com

Shipped By: _____ Date Shipped: _____
Received By: [signature] Date Received: 6/4/15 0930
Verified By: _____ Date Verified: _____
Temperature: _____

Sample Integrity Issues: _____

PC CL

Cooler Receipt and Preservation Form

Client / Project: ALS/Canada Service Request *K15* 060052

Received: 6/4/15 Opened: 6/4/15 By: KD Unloaded: 6/4/15 By: KD

1. Samples were received via? *Mail* (*Fed Ex*) *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other*_____ *NA*
3. Were custody seals on coolers? NA Y (N) If yes, how many and where?_____

   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID (NA)	Tracking Number NA	Filed
3.6	3.5	—	—	-.1	316		773750120860	

4. Packing material: *Inserts* (*Baggies*) *Bubble Wrap* (*Gel Packs*) *Wet Ice* *Dry Ice* *Sleeves* _____ 10 Pcs
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA (Y) N
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was Cl2/Res negative? (NA) Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: COC not signed

*Page*____ *of*____

General Chemistry

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577- 7222 Fax (360)636- 1068
www.alsglobal.com

Analytical Report

Client:	ALS Environmental - Canada	**Service Request:**	K1506052
Project:	Edmonton AB/L1618652	**Date Collected:**	05/28/15
Sample Matrix:	Water	**Date Received:**	06/4/15
Analysis Method:	300.1	**Units:**	ug/L
Prep Method:	None	**Basis:**	NA

Bromate

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
L1618652-1	K1506052-001	ND U	5.0	1	06/06/15 17:32	
Method Blank	K1506052-MB	ND U	5.0	1	06/06/15 14:33	

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - Canada	**Service Request:**	K1506052
Project:	Edmonton AB/L1618652	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	06/6/15
		Date Extracted:	NA

Duplicate Matrix Spike Summary
Bromate

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1506045-001	**Basis:**	NA
Analysis Method:	300.1		
Prep Method:	None		

		Matrix Spike K1506045-001MS			Duplicate Matrix Spike K1506045-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Bromate	ND U	41	40	103	43	40	109	75-125	5	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - Canada	**Service Request:**	K1506052
Project:	Edmonton AB/L1618652	**Date Analyzed:**	06/06/15
Sample Matrix:	Water	**Date Extracted:**	NA

Lab Control Sample Summary
Bromate

Analysis Method:	300.1	**Units:**	ug/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	448015

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1506052-LCS	19.5	25	78	75-125

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - Canada	**Service Request:**	K1506052
Project	Edmonton AB/L1618652	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	06/06/15

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1506045-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K1506045-001DUP Result	Average	RPD	RPD Limit
Bromate	300.1	5.0	ND U	ND U	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Analytical Report

Client:	ALS Environmental - Canada	**Service Request:**	K1506052
Project:	Edmonton AB/L1618652	**Date Collected:**	05/28/15
Sample Matrix:	Water	**Date Received:**	06/4/15
Analysis Method:	300.1	**Units:**	ug/L
Prep Method:	None	**Basis:**	NA

Chlorite

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
L1618652-1	K1506052-001	ND U	10	1	06/06/15 17:32	
Method Blank	K1506052-MB	ND U	10	1	06/06/15 14:33	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - Canada	**Service Request:**	K1506052
Project	Edmonton AB/L1618652	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	06/06/15

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1506045-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K1506045-001DUP Result	Average	RPD	RPD Limit
Chlorite	300.1	10	ND U	ND U	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	ALS Environmental - Canada	**Service Request:**	K1506052
Project:	Edmonton AB/L1618652	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	06/6/15
		Date Extracted:	NA

Duplicate Matrix Spike Summary
Chlorite

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1506045-001	**Basis:**	NA
Analysis Method:	300.1		
Prep Method:	None		

		Matrix Spike K1506045-001MS			Duplicate Matrix Spike K1506045-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Chlorite	ND U	365	396	92	387	396	98	75-125	6	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - Canada	**Service Request:**	K1506052
Project:	Edmonton AB/L1618652	**Date Analyzed:**	06/06/15
Sample Matrix:	Water	**Date Extracted:**	NA

Lab Control Sample Summary
Chlorite

Analysis Method:	300.1	**Units:**	ug/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	448015

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1506052-LCS	471	491	96	75-125

Analytical Report

Client:	ALS Environmental - Canada	**Service Request:**	K1506052
Project:	Edmonton AB/L1618652	**Date Collected:**	05/28/15
Sample Matrix:	Water	**Date Received:**	06/4/15
Analysis Method:	300.1	**Units:**	ug/L
Prep Method:	None	**Basis:**	NA

Chlorate

Sample Name	Lab Code	Result	MRL	Dil.	Date Analyzed	Q
L1618652-1	K1506052-001	**273**	10	1	06/06/15 17:32	
Method Blank	K1506052-MB	ND U	10	1	06/06/15 14:33	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - Canada	**Service Request:**	K1506052
Project	Edmonton AB/L1618652	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Analyzed:	06/06/15

Replicate Sample Summary

General Chemistry Parameters

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1506045-001	**Basis:**	NA

Analyte Name	Analysis Method	MRL	Sample Result	Duplicate Sample K1506045-001DUP Result	Average	RPD	RPD Limit
Chlorate	300.1	10	281	276	278	2	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - Canada	**Service Request:**	K1506052
Project:	Edmonton AB/L1618652	**Date Collected:**	N/A
Sample Matrix:	Water	**Date Received:**	N/A
		Date Analyzed:	06/6/15
		Date Extracted:	NA

Duplicate Matrix Spike Summary
Chlorate

Sample Name:	Batch QC	**Units:**	ug/L
Lab Code:	K1506045-001	**Basis:**	NA
Analysis Method:	300.1		
Prep Method:	None		

		Matrix Spike K1506045-001MS			Duplicate Matrix Spike K1506045-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Chlorate	281	669	400	97	705	400	106	75-125	5	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

ALS Group USA, Corp.
dba ALS Environmental

QA/QC Report

Client:	ALS Environmental - Canada	**Service Request:**	K1506052
Project:	Edmonton AB/L1618652	**Date Analyzed:**	06/06/15
Sample Matrix:	Water	**Date Extracted:**	NA

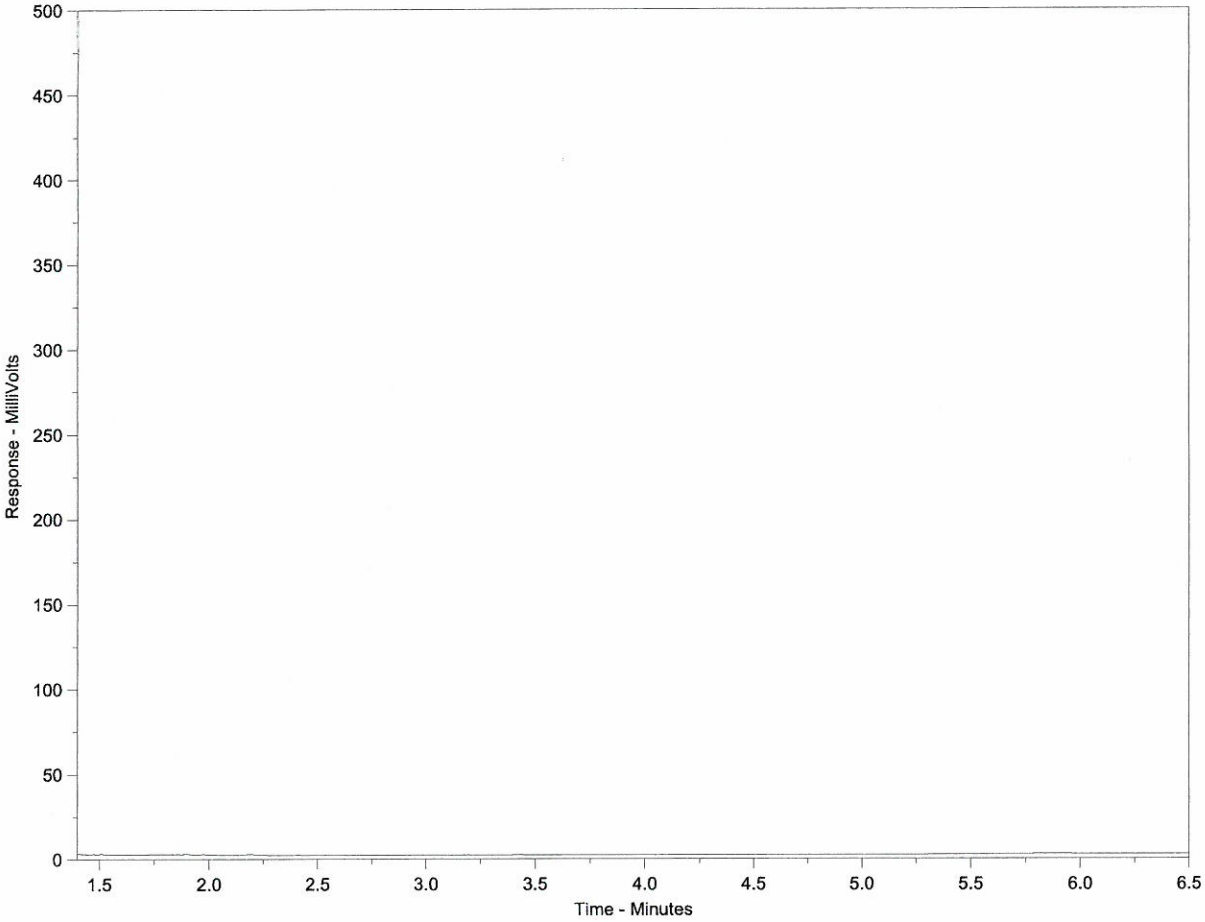
Lab Control Sample Summary
Chlorate

Analysis Method:	300.1	**Units:**	ug/L
Prep Method:	None	**Basis:**	NA
		Analysis Lot:	448015

Sample Name	Lab Code	Result	Spike Amount	% Rec	% Rec Limits
Lab Control Sample	K1506052-LCS	80.1	86	93	85-115

Hydrocarbon Distribution Report

ALS Sample ID: L1618652-1
Client ID: DISTRIBUTION SAMPLE



F2		F3	F4	F4
nC10	nC16		nC34	nC50
174°C	287°C		481°C	575°C
346°F	549°F		898°F	1067°F
← Gasoline →			← Motor Oils/ Lube Oils/ Grease →	
← Diesel/ Jet Fuels →				

The Canada Wide Standard Hydrocarbon Distribution Report is intended to assist you in characterizing hydrocarbon products that may be present in your sample. The scale at the bottom of the chromatogram indicates the approximate retention times of common petroleum products as well as a number of specified n-alkane hydrocarbon marker compounds. Comparison of this report with those of reference standards may also assist in characterizing hydrocarbons present in the sample.

Peak heights in this report are a function of the sample concentration, the sample amount extracted, the sample dilution factor, and the scale at left.

Note:
This chromatogram was produced with a high temperature GC method that is specific to the Canada-Wide Standard method. Note that retention times and distribution profiles from reports produced using different GC programs will differ.

ALS Laboratory Group
ANALYTICAL CHEMISTRY & TESTING SERVICES

Environmental Division

Chain of Custody / Analytical Request Form

Canada Toll Free: 1 800 668 9878
www.alsglobal.com

COC # _____

Page ___ of ___

Report to:	
Company:	Aquatech Canadian Water Services Inc
Contact:	Brian Mills
Address:	Box 37, Site 2, RR#2, Rimbey, T0C 2J0
Phone:	587-876-0076 Fax:
Invoice To:	Same as Report ? ○Yes ◉No
Company:	Aquatech Canadian Water Services Inc
Contact:	Rod Schlachter
Address:	Box 41, Site 9, RR#1, Cochrane, AB T4C1A1
Phone:	403-932-4507 Fax: 403-932-4554
Lab Work Order # (lab use only)	L1618652

Report Format / Distribution	
☑Standard ☐Other	
☐PDF ☐Excel ☐Digital	
Email 1:	bmills@aquatech-canadian.com
Email 2:	jtricker@aquatech-canadian.com
Client / Project Information:	
Job #:	De Graff's - Group 3,23 & THMs
PO / AFE:	
Legal Site Description:	
Quote #:	
ALS Contact:	Minnie
Sampler:	C Chalmers

Service Requested: (rush - subject to availability)

◉Regular (Default)
○Priority (2-3 Business Days) - 50% Surcharge
○Emergency (1 Business Day) - 100% Surcharge
○For Emergency < 1 Day, ASAP or Weekend - Contact ALS

Analysis Request

Please indicate below Filtered, Preserved or both (F, P, F/P)

Sample #	Sample Identification (This description will appear on the report)	Date (dd-mmm-yy)	Time (hh:mm)	Sample Type	THMs	Group 23	Group 3	Number of Containers
	Distribution Sample	28-May-15	11:15	Water	X		X	
	Well #1 - Raw	28-May-15	10	Water		X		

L1618652-COFC

Special Instructions / Regulations / Hazardous Details

Failure to complete all portions of this form may delay analysis. Please fill in this form LEGIBLY.
By the use of this form the user acknowledges and agrees with the Terms and Conditions as specified on the back page of the white - report copy.

SHIPMENT RELEASE (client use)		SHIPMENT RECEPTION (lab use only)				SHIPMENT VERIFICATION (lab use only)		
Released by:	Date & Time:	Received by:	Date:	Time:	Temperature:	Verified by:	Date & Time:	Observations: Yes / No ? If Yes attach SIF
	2:32 pm 17 May 15	RM	5/29/15	11:21	6.7			

REFER TO BACK PAGE FOR ALS LOCATIONS AND SAMPLING INFORMATION

WHITE - REPORT COPY, PINK - FILE COPY, YELLOW - CLIENT COPY

GENF 18.00 Front