

# McINTOSH • LALANI ENGINEERING LTD.

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March 25, 2008

AC Ltd.  
Box 607  
Okotoks, Alberta  
T1F 1A7

M•L 3862

Attention: Mr. Brian McCaughan

**Subject: Groundwater Well Data  
103 Acre Residential Development  
Lac St. Anne County, Alberta**

Pursuant to the request of Mr. Kim Catalano of the Catalano Development Group, McIntosh•Lalani Engineering Ltd. (M•L) has complied groundwater well data for the area surrounding the above noted site. The site is located within the N.W. ¼ of Section 15-55-3W5M, north of Mayfair Road.

Nine (9) water well drilling reports were found for water wells located on the surrounding quarter sections adjacent to the site. These reports were found on the Alberta Environment's Groundwater Information Systems website, [www.telusgeomatics.com/tgpub/ag\\_water/](http://www.telusgeomatics.com/tgpub/ag_water/). The water well drilling reports were found for the water wells with the following nine Well ID's, 0340991, 0490508, 0367080, 0447285, 0378811, 0360124, 0447336, 1130209 and 0490509. These water wells were extended to depths ranging from 35 to 304 feet below existing ground surface and encountered groundwater at depths ranging from 0 to 99 feet below existing ground surface. Groundwater was removed from these water wells at rates varying 1.0 to 11 gallons per minutes. The locations of these water wells can be found on the attached Figure No. 1 and a more detailed account of the ground water information within these wells can be found on the attached water well drilling reports.

We trust the enclosed meets with your present requirements. Should you have questions please contact our office.

Respectfully submitted,

**McIntosh•Lalani Engineering Ltd.**



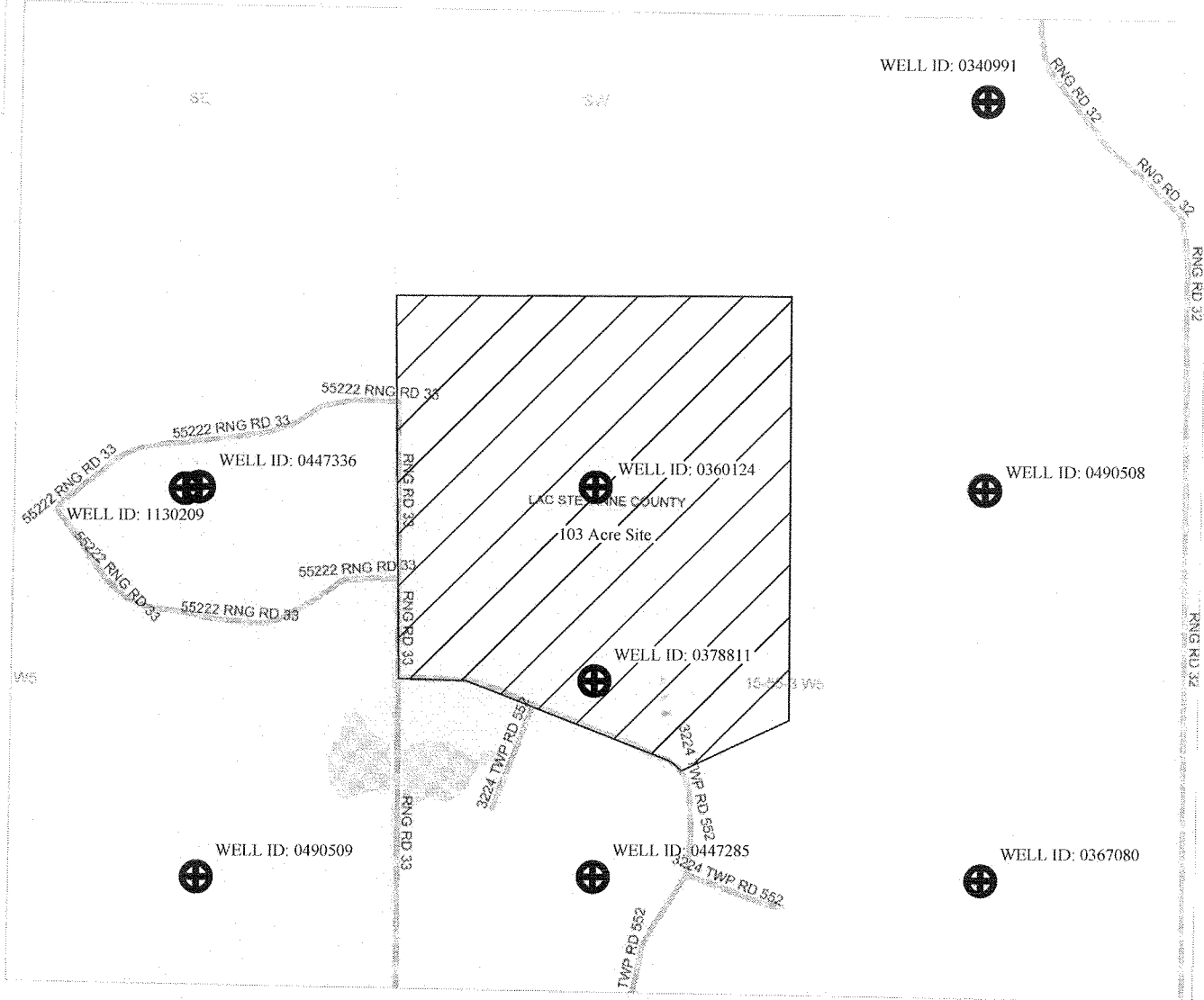
Nicholas R. Payne, E.I.T



Marty D. Ward, P.Eng.  
Senior Project Engineer

/clc

Isites




SCALE 1 : 15,262



N



Client: <p style="text-align: center;">AC LTD</p>	 <p style="text-align: center;">McIntosh - Lalani Engineering Ltd.</p>		
Project: 103 ACRE RESIDENTIAL DEVELOPMENT	Figure #: <p style="text-align: center;">FIGURE No. 1</p>	Job #: <p style="text-align: center;">ML-3862</p>	
Title: WATER WELL LOCATONS	Date: <p style="text-align: center;">MARCH 13, 2008</p>	Scale: <p style="text-align: center;">N.T.S.</p>	Drawn By: <p style="text-align: center;">NRP</p>



# Water Well Drilling Report

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

Well I.D.: 0340991  
 Map Verified: Map  
 Date Report Received: 2002/07/16  
 Measurements: Imperial

## 1. Contractor & Well Owner Information

Company Name: RODCO DRILLING  
 Mailing Address: BOX 5168  
 Well Owner's Name: MACDONALD, CAM  
 P.O. Box Number:  
 City:  
 Province:  
 Country:

Drilling Company Approval No.: 121074  
 City or Town: SPRUCE GROVE AB CA  
 Well Location Identifier:  
 Mailing Address:  
 Province:  
 Country:

## 2. Well Location

1/4 or Sec Twp Rge West of  
 LSD M  
 SE 22 055 03 5  
 Location in Quarter  
 0 FT from Boundary  
 0 FT from Boundary  
 Lot Block Plan  
 Well Elev: FT  
 How Obtain: Not Obtain

## 3. Drilling Information

Type of Work: Old Well-Abandoned  
 Reclaimed Well  
 Date Reclaimed:  
 Method of Drilling: Not Applicable  
 Flowing Well: No  
 Gas Present: No

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

Materials Used:  
 Rate: Gallons  
 Oil Present: No

## 6. Well Yield

Test Date (yyyy/mm/dd): 2002/02/27  
 Start Time: 11:00 AM  
 Test Method: Pump  
 Non pumping static level: 39 FT

## 4. Formation Log

Depth from ground level (feet)  
**Lithology Description**

## 5. Well Completion

Date Started (yyyy/mm/dd):  
 Date Completed (yyyy/mm/dd): 2002/01/25  
 Well Depth: 180 FT  
 Borehole Diameter: 0 Inches  
 Casing Type:  
 Size OD: 0 Inches  
 Wall Thickness: 0 Inches  
 Bottom at: 0 FT  
 Top: 0 FT Bottom: 0 FT  
 Liner Type:  
 Size OD: 0 Inches  
 Wall Thickness: 0 Inches  
 Perforations from: 0 FT to: 0 FT  
 Perforations Size: 0 Inches x 0 Inches  
 Perforations from: 0 FT to: 0 FT  
 Perforations Size: 0 Inches x 0 Inches  
 Perforations from: 0 FT to: 0 FT  
 Perforations Size: 0 Inches x 0 Inches  
 Perforated by:  
 Seal:  
 from: 0 FT to: 0 FT  
 Seal:  
 from: 0 FT to: 0 FT  
 Seal:  
 from: 0 FT to: 0 FT  
 Screen Type:  
 from: 0 FT to: 0 FT  
 Screen ID: 0 Inches  
 Slot Size: 0 Inches  
 Screen Type:  
 from: 0 FT to: 0 FT  
 Screen ID: 0 Inches  
 Slot Size: 0 Inches  
 Screen Installation Method:  
 Fittings  
 Top: Bottom:  
 Pack:  
 Grain Size: Amount:  
 Geophysical Log Taken:  
 Retained on Files:  
 Additional Test and/or Pump Data  
 Chemistries taken By Driller: No  
 Held: 0 Documents Held: 2  
 Pitless Adapter Type:  
 Drop Pipe Type:  
 Length: FT Diameter: Inches  
 Comments:  
 SEE WIN # 447404. DRILLER REPORTS DISTANCE FROM TOP OF CASING TO GROUND LEVEL: 1.5'. PUMP TEST ZARGON GAS & OIL CO.

Rate of water removal: 6 Gallons/Min  
 Depth of pump intake: 0 FT  
 Water level at end of pumping: 76.9 FT  
 Distance from top of casing to ground level:  
 Depth To water level (feet)  
 Elapsed Time  
 Drawdown Minutes:Sec Recovery  
 11.278 0:00 23.902  
 3.658 0:00 7.148  
 12.625 1:00 22.022  
 3.962 1:00 6.736  
 13.487 2:00 20.879  
 4.237 2:00 6.657  
 14.149 3:00 19.864  
 4.468 3:00 6.066  
 14.655 4:00 18.974  
 4.633 4:00 5.819  
 15.188 5:00 18.821  
 4.776 5:00 5.639  
 15.597 6:00 18.187  
 4.904 6:00 5.486  
 5.02 7:00 5.432  
 16.026 7:00 17.678  
 16.331 8:00 17.374  
 5.13 8:00 5.404  
 5.227 9:00 5.371  
 16.712 9:00 17.322  
 5.316 10:00 5.331  
 17.017 10:00 17.297  
 17.55 12:00 17.145  
 5.444 12:00 5.246  
 5.624 14:00 5.163

Total Drawdown: 38 FT  
 If water removal was less than 2 hr duration, reason why:

Recommended pumping rate: 0 Gallons/Min  
 Recommended pump intake: 0 FT

## 7. Contractor Certification

Driller's Name: UNKNOWN DRILLER  
 Certification No.: 5977Q  
 This well was constructed in accordance with the Water Well regulation of the Alberta Environmental Protection & Enhancement Act. All information in this report is true.  
 Signature Yr Mo Day

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



# Water Well Drilling Report

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

Well I.D.:	0490508
Map Verified:	Map
Date Report	1997/11/14
Received:	
Measurements:	Imperial

## 1. Contractor & Well Owner Information

Company Name: BLAKEMAN'S, NORM DRILLING LTD.	Drilling Company Approval No.:	
Mailing Address:	City or Town:	Postal Code:
Well Owner's Name: KASSIAN, DAVID	Well Location Identifier:	
P.O. Box Number:	Mailing Address: ONOWAY	Postal Code:
City:	Province:	Country:

## 2. Well Location

1/4 or Sec	Twp	Rge	West of
LSD			M
NE	15	055	03 5
Location in Quarter			
0 FT from		Boundary	
0 FT from		Boundary	
Lot	Block	Plan	
Well Elev:	How Obtain:		
FT	Not Obtain		

## 3. Drilling Information

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

## 6. Well Yield

Test Date (yyyy/mm/dd): 1997/10/20	Start Time: 11:00 AM
Test Method: Air	
Non pumping static level:	37 FT
Rate of water removal:	11 Gallons/Min
Depth of pump intake:	140 FT
Water level at end of pumping:	140 FT
Distance from top of casing to ground level:	
Depth To water level (feet)	
Elapsed Time	
Drawdown Minutes:	Sec Recovery
10:00	80
20:00	50
30:00	37
Total Drawdown: 0 FT	

## 4. Formation Log

Depth from ground level (feet)	Lithology Description
45	Clay
115	Sand
120	Shale
125	Sandstone
152	Gray Shale
160	Sandstone
170	Gray Shale
175	Sandstone
180	Coal

## 5. Well Completion

Date Started(yyyy/mm/dd): 1997/10/20	Date Completed (yyyy/mm/dd): 1997/10/20
Well Depth: 180 FT	Borehole Diameter: 0 Inches
Casing Type: Plastic	Liner Type:
Size OD: 5 Inches	Size OD: 0 Inches
Wall Thickness: 0.25 Inches	Wall Thickness: 0 Inches
Bottom at: 140 FT	Top: 0 FT Bottom: 0 FT
Perforations	
from: 0 FT to: 0 FT	Perforations Size: 0 Inches x 0 Inches
from: 0 FT to: 0 FT	0 Inches x 0 Inches
from: 0 FT to: 0 FT	0 Inches x 0 Inches
Perforated by:	
Seal: Bentonite Chips/Tablets	
from: 0 FT	to: 139 FT
Seal:	
from: 0 FT	to: 0 FT
Seal:	
from: 0 FT	to: 0 FT
Screen Type:	Screen ID: 0 Inches
from: 0 FT to: 0 FT	Slot Size: 0 Inches
Screen Type:	Screen ID: 0 Inches
from: 0 FT to: 0 FT	Slot Size: 0 Inches
Screen Installation Method:	
Fittings	
Top:	Bottom:
Pack:	
Grain Size:	Amount:
Geophysical Log Taken:	
Retained on Files:	
Additional Test and/or Pump Data	
Chemistries taken By Driller: No	
Held: 0	Documents Held: 1
Pitless Adapter Type:	
Drop Pipe Type:	
Length: FT	Diameter: Inches
Comments:	

If water removal was less than 2 hr duration, reason why:
Recommended pumping rate: 7 Gallons/Min
Recommended pump intake: 100 FT
Type Pump Installed
Pump Type: SUB
Pump Model:
H.P.:
Any further pump test information?

## 7. Contractor Certification

Driller's Name:	UNKNOWN DRILLER
Certification No.:	3230A
This well was constructed in accordance with the Water Well regulation of the Alberta Environmental Protection & Enhancement Act. All information in this report is true.	
Signature	Yr Mo Day



# Water Well Drilling Report

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

Well I.D.: 0367080  
 Map Verified: Map  
 Date Report: 1992/12/11  
 Received:  
 Measurements: Imperial

## 1. Contractor & Well Owner Information

Company Name: UNKNOWN DRILLER  
 Drilling Company Approval No.: 99999  
 Mailing Address: UNKNOWN  
 City or Town: UNKNOWN AB CA  
 Postal Code:  
 Well Owner's Name: BRELAND, TONNO  
 Well Location Identifier:  
 P.O. Box Number: 587  
 Mailing Address: ONOWAY  
 Postal Code: T0E 1V0  
 City:  
 Province:  
 Country:

## 2. Well Location

1/4 or Sec Twp Rge West of  
 LSD M  
 SE 15 055 03 5  
 Location in Quarter  
 0 FT from Boundary  
 0 FT from Boundary  
 Lot Block Plan  
 Well Elev: FT  
 How Obtain: Not Obtain

## 3. Drilling Information

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

## 6. Well Yield

Test Date (yyyy/mm/dd):  
 Start Time:  
 Test Method:  
 Non pumping static level: FT  
 Rate of water removal: Gallons/Min  
 Depth of pump intake: FT  
 Water level at end of pumping: FT  
 Distance from top of casing to ground level: Inches  
 Depth To water level (feet)  
 Elapsed Time  
 Drawdown Minutes:Sec Recovery

## 4. Formation Log

Depth from ground level (feet)  
 Lithology Description

## 5. Well Completion

Date Started(yyyy/mm/dd):  
 Date Completed(yyyy/mm/dd):  
 Well Depth: 35 FT  
 Borehole Diameter: 0 Inches  
 Casing Type:  
 Liner Type:  
 Size OD: 0 Inches  
 Size OD: 0 Inches  
 Wall Thickness: 0 Inches  
 Wall Thickness: 0 Inches  
 Bottom at: 0 FT  
 Top: 0 FT Bottom: 0 FT  
 Perforations from: 0 FT to: 0 FT  
 Perforations Size: 0 Inches x 0 Inches  
 from: 0 FT to: 0 FT  
 Perforations Size: 0 Inches x 0 Inches  
 from: 0 FT to: 0 FT  
 Perforations Size: 0 Inches x 0 Inches  
 Perforated by:  
 Seal: from: 0 FT to: 0 FT  
 Seal: from: 0 FT to: 0 FT  
 Seal: from: 0 FT to: 0 FT  
 Screen Type: from: 0 FT to: 0 FT  
 Screen ID: 0 Inches  
 Slot Size: 0 Inches  
 Screen Type: from: 0 FT to: 0 FT  
 Screen ID: 0 Inches  
 Slot Size: 0 Inches  
 Screen Installation Method:  
 Fittings Top: Bottom:  
 Pack: Grain Size: Amount:  
 Geophysical Log Taken:  
 Retained on Files:  
 Additional Test and/or Pump Data  
 Chemistries taken By Driller: No  
 Held: 1 Documents Held: 1  
 Pitless Adapter Type:  
 Drop Pipe Type:  
 Length: Diameter:  
 Comments:

Total Drawdown: FT  
 If water removal was less than 2 hr duration, reason why:  
 Recommended pumping rate: Gallons/Min  
 Recommended pump intake: FT  
 Type pump installed  
 Pump type:  
 Pump model:  
 H.P.:  
 Any further pumptest information?

## 7. Contractor Certification

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



# Water Well Drilling Report

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

Well I.D.: 0447285  
 Map Verified: Not Verified  
 Date Report  
 Received:  
 Measurements: Imperial

## 1. Contractor & Well Owner Information

Company Name: GROVE DRILLING LTD  
 Mailing Address: City or Town: Postal Code:  
 Well Owner's Name: NICKERSON, ROY  
 P.O. Box Number: Mailing Address: EDMONTON  
 City: Province: Country:

Drilling Company Approval No.:  
 Postal Code:  
 Postal Code:  
 Country:

## 2. Well Location

1/4 or Sec Twp Rge West of  
 LSD M  
 SW 15 055 03 5  
 Location in Quarter  
 0 FT from Boundary  
 0 FT from Boundary  
 Lot Block Plan  
 Well Elev: 2438 FT  
 How Obtain: Survey-Tra

## 3. Drilling Information

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

Proposed well use:  
 Other  
 Anticipated Water  
 Requirements/day  
 0 Gallons

## 6. Well Yield

Test Date (yyyy/mm/dd): 1977/10/10  
 Start Time: 11:00 AM  
 Test Method: Pump  
 Non pumping static level: 18 FT  
 Rate of water removal: 5 Gallons/Min  
 Depth of pump intake: 0 FT  
 Water level at end of pumping: FT  
 Distance from top of casing to ground level: Inches  
 Depth To water level (feet)  
 Elapsed Time  
 Drawdown Minutes: Sec Recovery  
 Total Drawdown: 0 FT  
 If water removal was less than 2 hr duration, reason why:  
 Recommended pumping rate: 0 Gallons/Min  
 Recommended pump intake: 60 FT  
 Type Pump Installed  
 Pump Type:  
 Pump Model:  
 H.P.:  
 Any further pumptest information?

## 4. Formation Log

Depth from ground level (feet)	Lithology Description
21	Clay & Rocks
50	Clay
56	Sand
66	Clay
78	Coarse Grained Sand & Gravel
85	Shale

## 5. Well Completion

Date Started (yyyy/mm/dd): 1977/10/10  
 Date Completed (yyyy/mm/dd): 1977/10/10  
 Well Depth: 85 FT  
 Borehole Diameter: 0 Inches  
 Casing Type: Steel  
 Liner Type:  
 Size OD: 4.5 Inches  
 Size OD: 0 Inches  
 Wall Thickness: 0.141 Inches  
 Wall Thickness: 0 Inches  
 Bottom at: 74 FT  
 Top: 0 FT Bottom: 0 FT  
 Perforations from: 0 FT to: 0 FT Perforations Size: 0 Inches x 0 Inches  
 from: 0 FT to: 0 FT 0 Inches x 0 Inches  
 from: 0 FT to: 0 FT 0 Inches x 0 Inches  
 Perforated by:  
 Seal: Driven  
 from: 0 FT to: 50 FT  
 Seal:  
 from: 0 FT to: 0 FT  
 Seal:  
 from: 0 FT to: 0 FT  
 Screen Type: Stainless Steel  
 Screen ID: 4 Inches  
 from: 74 FT to: 78 FT Slot Size: 0.01 Inches  
 Screen Type:  
 Screen ID: 0 Inches  
 from: 0 FT to: 0 FT Slot Size: 0 Inches  
 Screen Installation Method:  
 Fittings  
 Top: Coupler Bottom: Plug  
 Pack: Jet Sand  
 Grain Size: Amount: 0.25 Yards  
 Geophysical Log Taken:  
 Retained on Files:  
 Additional Test and/or Pump Data  
 Chemistries taken By Driller: Yes  
 Held: 0 Documents Held: 1  
 Pitless Adapter Type:  
 Drop Pipe Type:  
 Length: FT Diameter: Inches  
 Comments:  
 WATER IS HARD.

## 7. Contractor Certification

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



# Water Well Drilling Report

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

Well I.D.: 0378811  
 Map Verified: Not Verified  
 Date Report: 1995/07/31  
 Received:  
 Measurements: Imperial

<b>1. Contractor &amp; Well Owner Information</b>			<b>2. Well Location</b>		
Company Name: MAR-WAYNE WATER WELL DRILLING SERVICES LTD.		Drilling Company Approval No.: 118900	1/4 or Sec LSD WH 15 055 03 5	Twp 03	Rge 03
Mailing Address: BOX 4, SITE 5, RR 1		City or Town: CALAHOO AB CA	Westof M 5		
WellOwner's Name: DANIELS, VERA		Well Location Identifier:	Location in Quarter 0 FT from Boundary 0 FT from Boundary		
P.O. Box Number:	Mailing Address: GUNN	Postal Code: T0E 1V0	Lot 29	Block	Plan
City:	Province:	Country:	Well Elev: FT	How Obtain: Not Obtain	
<b>3. Drilling Information</b>			<b>6. Well Yield</b>		
Type of Work: New Well		Proposed well use: Domestic	Test Date (yyyy/mm/dd): 1995/06/16	Start Time: 11:00 AM	
Reclaimed Well		Anticipated Water Requirements/day 200 Gallons	Test Method: Air	Non pumping static level: 99 FT	
Date Reclaimed:	Materials Used:		Rate of water removal: 6 Gallons/Min	Depth of pump intake: 0 FT	
Method of Drilling: Rotary	Flowing Well: No	Rate: Gallons Oil Present: No	Water level at end of pumping: 112 FT	Distance from top of Inches casing to ground level: Depth To water level (feet) Elapsed Time	
<b>4. Formation Log</b>			<b>5. Well Completion</b>		
Depth from ground level (feet)	<b>Lithology Description</b>		Date Started(yyyy/mm/dd): 1995/06/15	Date Completed (yyyy/mm/dd): 1995/06/16	
20	Brown Clay		Well Depth: 204 FT	Borehole Diameter: 0 Inches	
72	Gray Clay		Casing Type: Plastic	Liner Type: Plastic	
92	Sand		Size OD: 6 Inches	Size OD: 4.5 Inches	
116	Clay & Rocks		Wall Thickness: 0.5 Inches	Wall Thickness: 0.25 Inches	
122	Green Shale		Bottom at: 120 FT	Top: 119 FT Bottom: 204 FT	
127	Gray Sandstone		Perforations	Perforations Size:	
130	Green Shale		from: 140 FT to: 200 FT	0.125 Inches x 12 Inches	
137	Gray Sandstone		from: 0 FT to: 0 FT	0 Inches x 0 Inches	
142	Gray Shale		from: 0 FT to: 0 FT	0 Inches x 0 Inches	
156	Gray Sandstone		Perforated by: Saw		
172	Green Shale		Seal: Shale Trap & Bentonite		
178	Shale		from: 0 FT to: 125 FT		
179	Coal		Seal:		
194	Shale		from: 0 FT to: 0 FT		
197	Coal		Seal:		
204	Brown Shale		from: 0 FT to: 0 FT		
			Screen Type:	Screen ID: 0 Inches	
			from: 0 FT to: 0 FT	Slot Size: 0 Inches	
			Screen Type:	Screen ID: 0 Inches	
			from: 0 FT to: 0 FT	Slot Size: 0 Inches	
			Screen Installation Method:		
			Fittings		
			Top:	Bottom:	
			Pack:		
			Grain Size:	Amount:	
			Geophysical Log Taken:		
			Retained on Files:		
			Additional Test and/or Pump Data		
			Chemistries taken By Driller: No		
			Held: 0 Documents Held: 1		
			Pitless Adapter Type:		
			Drop Pipe Type:		
			Length: FT	Diameter: Inches	
			Comments:		
			DRILLER REPORTS DISTANCE FROM TOP OF CASING TO GROUND LEVEL: 31 CM.		
			<b>7. Contractor Certification</b>		
			Driller's Name: UNKNOWN DRILLER		
			Certification No.: V3472		
			This well was constructed in accordance with the Water Well regulation of the Alberta Environmental Protection & Enhancement Act. All information in this report is true.		
			Signature	Yr Mo Day	
			Total Drawdown: 14 FT		
			If water removal was less than 2 hr duration, reason why:		
			Recommended pumping rate: 6 Gallons/Min		
			Recommended pump intake: 131 FT		
			Type Pump Installed		
			Pump Type:		
			Pump Model:		
			H.P.:		
			Any further pumptest information?		



# Water Well Drilling Report

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

Well I.D.: 0360124  
 Map Verified: Not Verified  
 Date Report: 1991/10/11  
 Received:  
 Measurements: Imperial

## 1. Contractor & Well Owner Information

Company Name: D&D WATER WELL DRILLING & SERVICING LTD.  
 Mailing Address: BOX 12, SITE 502, RR 5  
 Well Owner's Name: CHESSIE, LARRY  
 P.O. Box Number: 788  
 City:   
 Drilling Company Approval No.: 96030  
 City or Town: STONY PLAIN AB CA  
 Well Location Identifier:  
 Mailing Address: ONOWAY  
 Province:   
 Postal Code: T7Z 1X5  
 Postal Code: T0E 1V0  
 Country:

## 2. Well Location

1/4 or Sec Twp Rge West of  
 LSD M  
 NW 15 055 03 5  
 Location in Quarter  
 0 FT from Boundary  
 0 FT from Boundary  
 Lot Block Plan  
 Well Elev: FT  
 How Obtain: Not Obtain

## 3. Drilling Information

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

## 6. Well Yield

Test Date (yyyy/mm/dd): 1991/10/03  
 Start Time: 11:00 AM  
 Test Method: Air  
 Non pumping static level: 98 FT  
 Rate of water removal: 4 Gallons/Min  
 Depth of pump intake: 0 FT  
 Water level at end of pumping: 160 FT  
 Distance from top of casing to ground level:  
 Depth To water level (feet)  
 Elapsed Time  
 Drawdown Minutes:Sec Recovery  
 Total Drawdown: 62 FT  
 If water removal was less than 2 hr duration, reason why:  
 Recommended pumping rate: 0 Gallons/Min  
 Recommended pump intake: 0 FT  
 Type Pump Installed  
 Pump Type:  
 Pump Model:  
 H.P.:  
 Any further pump test information?

## 4. Formation Log

Depth from ground level (feet)	Lithology Description
24	Yellow Clay
62	Blue Clay
66	Silty Sand
107	Blue Clay
124	Green Shale
186	Gray Shale
193	Brown Shale & Coal
200	Gray Shale

## 5. Well Completion

Date Started (yyyy/mm/dd): 1991/10/01  
 Date Completed (yyyy/mm/dd): 1991/10/03  
 Well Depth: 200 FT  
 Borehole Diameter: 0 Inches  
 Casing Type: Plastic  
 Liner Type: Plastic  
 Size OD: 6 Inches  
 Size OD: 4.5 Inches  
 Wall Thickness: 0.37 Inches  
 Wall Thickness: 0.248 Inches  
 Bottom at: 121 FT  
 Top: 118 FT Bottom: 200 FT  
 Perforations from: 160 FT to: 200 FT  
 Perforations Size: 0.125 Inches x 10 Inches  
 from: 0 FT to: 0 FT  
 0 Inches x 0 Inches  
 from: 0 FT to: 0 FT  
 0 Inches x 0 Inches  
 Perforated by: Other  
 Seal: Shale Trap & Welded Ring  
 from: 0 FT to: 121 FT  
 Seal:  
 from: 0 FT to: 0 FT  
 Seal:  
 from: 0 FT to: 0 FT  
 Screen Type:  
 from: 0 FT to: 0 FT  
 Screen ID: 0 Inches  
 Slot Size: 0 Inches  
 Screen Type:  
 from: 0 FT to: 0 FT  
 Screen ID: 0 Inches  
 Slot Size: 0 Inches  
 Screen Installation Method:  
 Fittings  
 Top: Bottom:  
 Pack:  
 Grain Size: Amount: 0  
 Geophysical Log Taken: ELECTRIC and GAMMA  
 Retained on Files:  
 Additional Test and/or Pump Data  
 Chemistries taken By Driller: No  
 Held: 0 Documents Held: 1  
 Pitless Adapter Type:  
 Drop Pipe Type:  
 Length: FT Diameter: Inches  
 Comments:

## 7. Contractor Certification

Driller's Name: UNKNOWN DRILLER  
 Certification No.: VB4424  
 This well was constructed in accordance with the Water Well regulation of the Alberta Environmental Protection & Enhancement Act. All information in this report is true.  
 Signature Yr Mo Day





# Water Well Drilling Report

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

Well I.D.:	0447336
Map Verified:	Not Verified
Date Report	1979/01/15
Received:	
Measurements:	Imperial

## 1. Contractor & Well Owner Information

Company Name: GROVE DRILLING LTD	Drilling Company Approval No.:	
Mailing Address:	City or Town:	Postal Code:
WellOwner's Name: GISSELLE, KIRK	Well Location Identifier:	
P.O. Box Number:	Mailing Address: 11729 105 AVE, EDMONTON	Postal Code:
City:	Province:	Country:

## 2. Well Location

1/4 or Sec	Twp	Rge	Westof
LSD			M
NE	16	055	03 5
Location in Quarter			
0 FT from			Boundary
0 FT from			Boundary
Lot	Block	Plan	
Well Elev: 2400 FT	How Obtain: Estimated		

## 3. Drilling Information

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

## 6. Well Yield

Test Date (yyyy/mm/dd): 1978/09/01	Start Time: 11:00 AM
Test Method: Bailer	
Non pumping static level:	0 FT
Rate of water removal:	5 Gallons/Min
Depth of pump intake:	95 FT
Water level at end of pumping:	FT
Distance from top of casing to ground level:	
Depth To water level (feet) Elapsed Time	
Drawdown Minutes:Sec	Recovery
Total Drawdown: 0 FT	
If water removal was less than 2 hr duration, reason why:	
Recommended pumping rate: 0 Gallons/Min	
Recommended pump intake: 95 FT	
Type Pump Installed	
Pump Type:	
Pump Model:	
H.P.:	
Any further pumptest information?	

## 4. Formation Log

Depth from ground level (feet)	Lithology Description
21	Sandy Clay
24	Sandstone
37	Clay
41	Sand
74	Shale
98	Shale
129	Shale
134	Sandstone
142	Shale
155	Sandstone
157	Coal
245	Shale
260	Shale & Sandstone

## 5. Well Completion

Date Started(yyyy/mm/dd): 1978/09/01	Date Completed (yyyy/mm/dd): 1978/09/01
Well Depth: 260 FT	Borehole Diameter: 0 Inches
Casing Type: Steel	Liner Type:
Size OD: 4.5 Inches	Size OD: 0 Inches
Wall Thickness: 0.156 Inches	Wall Thickness: 0 Inches
Bottom at: 105 FT	Top: 0 FT Bottom: 0 FT
Perforations from: 0 FT to: 0 FT	Perforations Size: 0 Inches x 0 Inches
from: 0 FT to: 0 FT	0 Inches x 0 Inches
from: 0 FT to: 0 FT	0 Inches x 0 Inches
Perforated by:	
Seal: Driven from: 0 FT to: 105 FT	
Seal: from: 0 FT to: 0 FT	
Seal: from: 0 FT to: 0 FT	
Screen Type: from: 0 FT to: 0 FT	Screen ID: 0 Inches Slot Size: 0 Inches
Screen Type: from: 0 FT to: 0 FT	Screen ID: 0 Inches Slot Size: 0 Inches
Screen Installation Method:	
Fittings	
Top:	Bottom:
Pack:	
Grain Size:	Amount:
Geophysical Log Taken: Retained on Files:	
Additional Test and/or Pump Data	
Chemistries taken By Driller: No	
Held: 0	Documents Held: 1
Pitless Adapter Type:	
Drop Pipe Type:	
Length: FT	Diameter: Inches
Comments:	

## 7. Contractor Certification

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



# Water Well Drilling Report

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

Well I.D.: 1130209  
 Map Verified: Not Verified  
 Date Report: 2006/08/02  
 Received:  
 Measurements: Imperial

## 1. Contractor & Well Owner Information

Company Name: BIG IRON DRILLING LTD.  
 Mailing Address: 9803 47 AVE  
 Well Owner's Name: WEGNER, MIKE & TAMMY  
 P.O. Box Number: 202  
 City: GUNN  
 Province: AB

City or Town: EDMONTON AB CA  
 Well Location Identifier:  
 Mailing Address:  
 Postal Code: T0E 1A0  
 Country: CA

Drilling Company Approval No.: 99718  
 Postal Code: T6E 5M7

## 2. Well Location

1/4 or Sec Twp Rge Westof  
 LSD M  
 NE 16 055 03 5  
 Location in Quarter  
 FT from N Boundary  
 FT from E Boundary  
 Lot Block Plan  
 Well Elev: FT  
 How Obtain: Not Obtain

## 3. Drilling Information

Type of Work: New Well  
 Reclaimed Well  
 Date Reclaimed:  
 Method of Drilling: Rotary  
 Flowing Well: No  
 Gas Present: No

Proposed well use:  
 Domestic  
 Anticipated Water Requirements/day  
 Gallons

Materials Used: Unknown  
 Rate: Gallons  
 Oil Present: No

## 6. Well Yield

Test Date (yyyy/mm/dd): 2003/11/06  
 Start Time: 12:00 PM  
 Test Method: Pump  
 Non pumping static level: 60 FT  
 Rate of water removal: 1 Gallons/Min  
 Depth of pump intake: 170 FT  
 Water level at end of pumping: 72.8 FT  
 Distance from top of 16 Inches casing to ground level:  

Depth To water level (feet)	Elapsed Time	
Drawdown	Minutes	Sec Recovery
61.8	0:00	72.8
63	1:00	72
63.7	2:00	71.2
64.3	3:00	70.5
64.8	4:00	69.9
65.3	5:00	69.3
65.7	6:00	68.8
66.1	7:00	68.3
66.8	8:00	67.9
66.8	9:00	67.4
67.1	10:00	67.1
67.7	12:00	66.4
68.2	14:00	65.9
68.6	16:00	65.4
69.2	20:00	64.6
69.9	25:00	64
70.4	30:00	63.5
70.8	35:00	63.1
71.3	40:00	62.9
71.8	50:00	62.5
72.1	60:00	62.3
72.3	75:00	62
72.5	90:00	61.8
72.7	105:00	
72.8	120:00	

## 4. Formation Log

Depth from ground level (feet)	Lithology Description
93	Gravelly Silt
97	Gray Shale
118	Green Shale
135	Gray Shale
139	Sandstone
142	Coal
170	Gray Shale
174	Coal
200	Gray Shale

## 5. Well Completion

Date Started (yyyy/mm/dd): 2003/09/09  
 Date Completed (yyyy/mm/dd): 2003/09/09  
 Well Depth: 200 FT  
 Borehole Diameter: 5.125 Inches  
 Casing Type: Plastic  
 Liner Type: Plastic  
 Size OD: 6 Inches  
 Size OD: 4.5 Inches  
 Wall Thickness: 0.39 Inches  
 Wall Thickness: 0.214 Inches  
 Bottom at: 105 FT  
 Top: 80 FT Bottom: 200 FT  
 Perforations from: 140 FT to: 200 FT  
 Perforations Size: 0.125 Inches x 12 Inches  
 from: FT to: FT  
 from: FT to: FT  
 from: FT to: FT  
 Perforated by: Saw  
 Seal: Driven  
 from: FT to: 105 FT  
 Seal: Unknown  
 from: FT to: FT  
 Seal: Unknown  
 from: FT to: FT  
 Screen Type: Unknown  
 Screen ID: Inches  
 from: FT to: FT  
 Slot Size: Inches  
 Screen Type: Unknown  
 Screen ID: Inches  
 from: FT to: FT  
 Slot Size: Inches  
 Screen Installation Method: Unknown  
 Fittings  
 Top: Unknown Bottom: Unknown  
 Pack: Unknown  
 Grain Size: Amount: Unknown  
 Geophysical Log Taken:  
 Retained on Files:  
 Additional Test and/or Pump Data  
 Chemistries taken By Driller: No  
 Held: Documents Held:  
 Pitless Adapter Type:  
 Drop Pipe Type:  
 Length: FT Diameter: Inches  
 Comments:

Total Drawdown: 12.8 FT  
 If water removal was less than 2 hr duration, reason why:  
 Recommended pumping rate: 3 Gallons/Min

## 7. Contractor Certification

Driller's Name: DAVID LEES  
 Certification No.: 5545A  
 This well was constructed in accordance with the Water Well regulation of the Alberta Environmental Protection & Enhancement Act. All information in this report is true.  
 Signature Yr Mo Day

Recommended pump intake: 180 FT  
 Type Pump Installed  
 Pump Type:  
 Pump Model:  
 H.P.:  
 Any further pump test information?  
 No



# Water Well Drilling Report

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

Well I.D.: 0490509  
 Map Verified: Map  
 Date Report: 1997/11/14  
 Received:  
 Measurements: Imperial

## 1. Contractor & Well Owner Information

Company Name: BLAKEMAN'S, NORM DRILLING LTD.  
 Mailing Address: \_\_\_\_\_ City or Town: \_\_\_\_\_ Postal Code: \_\_\_\_\_  
 Well Owner's Name: CLARK, PETER  
 Well Location Identifier: \_\_\_\_\_  
 P.O. Box Number: \_\_\_\_\_ Mailing Address: GUNN Postal Code: \_\_\_\_\_  
 City: \_\_\_\_\_ Province: \_\_\_\_\_ Country: \_\_\_\_\_

Drilling Company Approval No.:

## 2. Well Location

1/4 or Sec Twp Rge West of  
 LSD M  
 SE 16 055 03 5  
 Location in Quarter  
 0 FT from Boundary  
 0 FT from Boundary  
 Lot Block Plan  
 Well Elev: FT How Obtain: Not Obtain

## 3. Drilling Information

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

## 6. Well Yield

Test Date (yyyy/mm/dd): 1996/05/14 Start Time: 11:00 AM  
 Test Method: Pump  
 Non pumping static level: 137 FT  
 Rate of water removal: 2 Gallons/Min  
 Depth of pump intake: 180 FT  
 Water level at end of pumping: 163 FT  
 Distance from top of casing to ground level:  
 Depth To water level (feet)  
 Elapsed Time  
 Drawdown Minutes:Sec Recovery  
 0:00 167  
 2:00 156  
 4:00 149  
 10:00 141  
 20:00 137  
 120:00 137  
 Total Drawdown: 26 FT  
 If water removal was less than 2 hr duration, reason why:

## 4. Formation Log

Depth from ground level (feet)	Lithology Description
21	Brown Clay & Rocks
83	Blue Clay
101	Gray Shale
122	Blue Sandstone
133	Gray Shale
137	Blue Sandstone
141	Gray Shale
143	Blue Sandstone
197	Gray Shale
201	Blue Sandstone
227	Gray Shale
231	Blue Sandstone
238	Gray Shale
241	Brown Shale
242	Coal
270	Gray Shale
273	Blue Sandstone
280	Gray Shale
282	Blue Sandstone
296	Gray Shale
302	Coal
304	Gray Shale

## 5. Well Completion

Date Started(yyyy/mm/dd): 1996/05/10 Date Completed (yyyy/mm/dd): 1996/05/14  
 Well Depth: 304 FT Borehole Diameter: 0 Inches  
 Casing Type: Plastic Liner Type:  
 Size OD: 5 Inches Size OD: 0 Inches  
 Wall Thickness: 0.25 Inches Wall Thickness: 0 Inches  
 Bottom at: 80 FT Top: 0 FT Bottom: 0 FT  
 Perforations Perforations Size:  
 from: 0 FT to: 0 FT 0 Inches x 0 Inches  
 from: 0 FT to: 0 FT 0 Inches x 0 Inches  
 from: 0 FT to: 0 FT 0 Inches x 0 Inches  
 Perforated by:  
 Seal: Bentonite Chips/Tablets  
 from: 0 FT to: 179 FT  
 Seal:  
 from: 0 FT to: 0 FT  
 Seal:  
 from: 0 FT to: 0 FT  
 Screen Type: Screen ID: 0 Inches  
 from: 0 FT to: 0 FT Slot Size: 0 Inches  
 Screen Type: Screen ID: 0 Inches  
 from: 0 FT to: 0 FT Slot Size: 0 Inches  
 Screen Installation Method:  
 Fittings  
 Top: Bottom:  
 Pack:  
 Grain Size: Amount:  
 Geophysical Log Taken:  
 Retained on Files:  
 Additional Test and/or Pump Data  
 Chemistries taken By Driller: No  
 Held: 0 Documents Held: 1  
 Pitless Adapter Type:  
 Drop Pipe Type:  
 Length: FT Diameter: Inches  
 Comments:

## 7. Contractor Certification

Driller's Name: UNKNOWN DRILLER  
 Certification No.: 3230A  
 This well was constructed in accordance with the Water Well regulation of the Alberta Environmental Protection & Enhancement Act. All information in this report is true.  
 Signature \_\_\_\_\_ Yr Mo Day

Recommended pumping rate: 2 Gallons/Min  
 Recommended pump intake: 180 FT  
 Type Pump Installed  
 Pump Type:  
 Pump Model:  
 H.P.:  
 Any further pump test information?