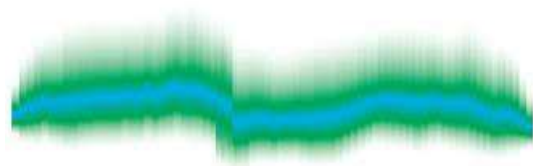


APPENDIX G

ERIS Database Search



Bifrost

Environmental and Remediation Services Inc.



DATABASE REPORT

Project Property: 1273927 Alberta Ltd.
SE-3-33-1W5M
Olds AB

Project No: 2023061

Report Type: Quote - Custom-Build Your Own Report

Order No: 23111700859

Requested by: Bifröst Environmental and Remediation
Services Inc.

Date Completed: November 22, 2023

Environmental Risk Information Services

A division of Glacier Media Inc.

1.866.517.5204 | info@erisinfo.com | erisinfo.com

Table of Contents

Table of Contents.....	2
Executive Summary.....	3
Executive Summary: Report Summary.....	4
Executive Summary: Site Report Summary - Project Property.....	7
Executive Summary: Site Report Summary - Surrounding Properties.....	8
Executive Summary: Summary By Data Source.....	9
Map.....	11
Aerial.....	12
Topographic Map.....	13
Detail Report.....	14
Unplottable Summary.....	32
Unplottable Report.....	33
Appendix: Database Descriptions.....	34
Definitions.....	43

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Executive Summary

Property Information:

Project Property: 1273927 Alberta Ltd.
SE-3-33-1W5M Olds AB

Project No: 2023061

Order Information:

Order No: 23111700859
Date Requested: November 17, 2023
Requested by: Bifröst Environmental and Remediation Services Inc.
Report Type: Quote - Custom-Build Your Own Report

Historical/Products:

ERIS Xplorer [ERIS Xplorer](#)
Physical Setting Report (PSR) *Physical Setting Report (PSR)*

Executive Summary: Report Summary

Database	Name	Searched	Project Property	Boundary to 0.30km	Total
AERW	Well Licenses	Y	2	0	2
AGR	Agriculture and Fisheries - Certificates of Approval	Y	0	0	0
AOGW	Alberta Oil and Gas Wells	Y	0	0	0
AUTH	Authorizations	Y	0	0	0
AUWR	Automobile Wrecking & Supplies	Y	0	0	0
CAWD	Waste Management Facilities - Certificates of Approval	Y	0	0	0
CBL	Commercial Activity Risk - City of Calgary Business Licenses	Y	0	0	0
CDRY	Dry Cleaning Facilities	Y	0	0	0
CFO	Confined Feeding Operations	Y	0	0	0
CHEM	Chemical Processing Operations - Certificates of Approval	Y	0	0	0
CHM	Chemical Register	Y	0	0	0
CMPS	Compost Facilities	Y	0	0	0
CNG	Compressed Natural Gas Stations	Y	0	0	0
CONV	Compliance and Convictions	Y	0	0	0
CTNK	Fuel Sales and Storage	Y	0	0	0
DRWD	Approved Oilfield Waste Management Facilities	Y	0	0	0
EAS	Enforcement Action Summary	Y	0	0	0
EBL	Commercial Activity Risk - City of Edmonton Business Licenses	Y	0	0	0
ECMP	Environmental Compliance Prosecutions	Y	0	0	0
EEM	Environmental Effects Monitoring	Y	0	0	0
EHS	ERIS Historical Searches	Y	0	0	0
EIIS	Environmental Issues Inventory System	Y	0	0	0
EPST	Alberta Environment & Parks Storage Tanks	Y	0	0	0
EPWN	Environment Protection & Enhancement Act and Water Act Public Notices	Y	0	0	0
ESAR	Environmental Site Assessment Repository	Y	1	0	1
ETNK	Edmonton Vehicle Fueling Stations	Y	0	0	0
FAC	Facility List	Y	0	0	0
FCON	Federal Convictions	Y	0	0	0
FCS	Contaminated Sites on Federal Land	Y	0	0	0
FIS	AER Incidents & Spills	Y	0	0	0
FOOD	Food Processing Operations - Certificates of Approval	Y	0	0	0
FRST	Federal Identification Registry for Storage Tank Systems (FIRSTS)	Y	0	0	0
FST	Fuel Storage Tanks	Y	0	0	0
GEN	Waste Generators Summary	Y	0	0	0
GHG	Greenhouse Gas Emissions from Large Facilities	Y	0	0	0

Database	Name	Searched	Project Property	Boundary to 0.30km	Total
GPP	Gas Processing Plants	Y	0	0	0
HELP	Alberta Environment's H.E.L.P. (Help End Landfill Pollution) Program Database	Y	0	0	0
HORW	Horizontal Wells	Y	0	0	0
IAFT	Indian & Northern Affairs Fuel Tanks	Y	0	0	0
LDS	Identification and Verification of Active and Inactive Land Disposal Sites	Y	0	0	0
LDSI	Land Disposal Sites on Indian Reserves	Y	0	0	0
LNDF	Landfill Registrations	Y	0	0	0
LUM	Lumber Related Operations - Certificates of Approval	Y	0	0	0
MINE	Canadian Mine Locations	Y	0	0	0
MMB	Metals, Minerals and Building Materials Operations - Certificates of Approval	Y	0	0	0
MNR	Mineral Occurrences	Y	0	0	0
NATE	National Analysis of Trends in Emergencies System (NATES)	Y	0	0	0
NCST	PTMAA Non-Compliant Storage Tanks	Y	0	0	0
NDFT	National Defense & Canadian Forces Fuel Tanks	Y	0	0	0
NDSP	National Defense & Canadian Forces Spills	Y	0	0	0
NDWD	National Defence & Canadian Forces Waste Disposal Sites	Y	0	0	0
NEBI	National Energy Board Pipeline Incidents	Y	0	0	0
NEBP	National Energy Board Wells	Y	0	0	0
NEES	National Environmental Emergencies System (NEES)	Y	0	0	0
NPCB	National PCB Inventory	Y	0	0	0
NPR2	National Pollutant Release Inventory 1993-2020	Y	0	0	0
NPRI	National Pollutant Release Inventory - Historic	Y	0	0	0
OAM	Operating and Abandoned Mines	Y	0	0	0
OGF	Oil and Gas Facilities - ST102 & ST50	Y	0	0	0
OGWW	Oil and Gas Wells	Y	0	0	0
ORD	Enforcement Orders	Y	0	0	0
ORP	Alberta Orphan Wells	Y	0	0	0
PAP	Canadian Pulp and Paper	Y	0	0	0
PCFT	Parks Canada Fuel Storage Tanks	Y	0	0	0
PCG	Petrochemical, Coal and Gas Operations - Certificates of Approval	Y	0	0	0
PES	Pesticide Register	Y	0	0	0
PFCH	NPRI Reporters - PFAS Substances	Y	0	0	0
PFHA	Potential PFAS Handlers from NPRI	Y	0	0	0
PITS	Conglomerate and Waste Management Facilities	Y	0	0	0
PSP	Alberta Private Sewage Disposal Permits	Y	1	2	3
PTAP	PTMAA Approved (Open) Permits	Y	0	0	0
REC	Hazardous Waste Receivers Summary	Y	0	0	0
RECY	Alberta Recyclers	Y	0	0	0
RST	Retail Fuel Storage Tanks	Y	0	0	0

<i>Database</i>	<i>Name</i>	<i>Searched</i>	<i>Project Property</i>	<i>Boundary to 0.30km</i>	<i>Total</i>
SCT	Scott's Manufacturing Directory	Y	0	0	0
SPEC	Special Operation Classifications - Certificates of Approval	Y	0	0	0
WDS	Inventory of Waste Disposal Sites	Y	0	0	0
WSTE	Wastewater Operations	Y	0	0	0
WWIS	Alberta Water Well Information Database	Y	2	2	4
Total:			6	4	10

Executive Summary: Site Report Summary - Project Property

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev diff (m)	Page Number
<u>1</u>	AERW	MARATHON CDN-SUP OLDS 7-3-33-1	AB <i>Unique Well ID:</i> 00/07-03-033-01W5/0	NW/0.0	0.00	<u>14</u>
<u>1</u>	AERW	Repsol Oil & Gas Canada Inc. (0039)	AB	NW/0.0	0.00	<u>14</u>
<u>2</u>	WWIS		AB <i>Well ID:</i> 416138	WNW/0.0	0.00	<u>15</u>
<u>2</u>	WWIS		AB <i>Well ID:</i> 416139	WNW/0.0	0.00	<u>17</u>
<u>3</u>	ESAR	Reclamation	7-3-33-1-5 AB	WNW/0.0	0.00	<u>21</u>
<u>4</u>	PSP		[Q:NE S:3 T: 33 R:1 M:W5] MOUNTAIN VIEW COUNTY AB	ESE/0.0	0.00	<u>21</u>

Executive Summary: Site Report Summary - Surrounding Properties

Map Key	DB	Company/Site Name	Address	Dir/Dist (m)	Elev Diff (m)	Page Number
5	WWIS		AB Well ID: 409796	SSE/219.4	-2.00	21
6	WWIS		AB Well ID: 12043714	ENE/266.6	-1.00	28
7	PSP		NW Quarter of Section: 2 Township: 33 Range: 1 West of: 5 Mountain View , County AB	E/267.0	-3.00	31
7	PSP		NW Quarter of Section: 2 Township: 33 Range: 1 West of: 5 Mountain View , County AB	E/267.0	-3.00	31

Executive Summary: Summary By Data Source

AERW - Well Licenses

A search of the AERW database, dated Aug 31, 2023 has found that there are 2 AERW site(s) within approximately 0.30 kilometers of the project property.

<u>Site</u>	<u>Address</u>	<u>Distance (m)</u>	<u>Map Key</u>
MARATHON CDN-SUP OLDS 7-3-33-1	AB <i>Unique Well ID: 00/07-03-033-01W5/0</i>	0.0	<u>1</u>
Repsol Oil & Gas Canada Inc.(0039)	AB	0.0	<u>1</u>

ESAR - Environmental Site Assessment Repository

A search of the ESAR database, dated 1960-Jul 2023 has found that there are 1 ESAR site(s) within approximately 0.30 kilometers of the project property.

<u>Site</u>	<u>Address</u>	<u>Distance (m)</u>	<u>Map Key</u>
Reclamation	7-3-33-1-5 AB	0.0	<u>3</u>

PSP - Alberta Private Sewage Disposal Permits

A search of the PSP database, dated 2003-2013 has found that there are 3 PSP site(s) within approximately 0.30 kilometers of the project property.

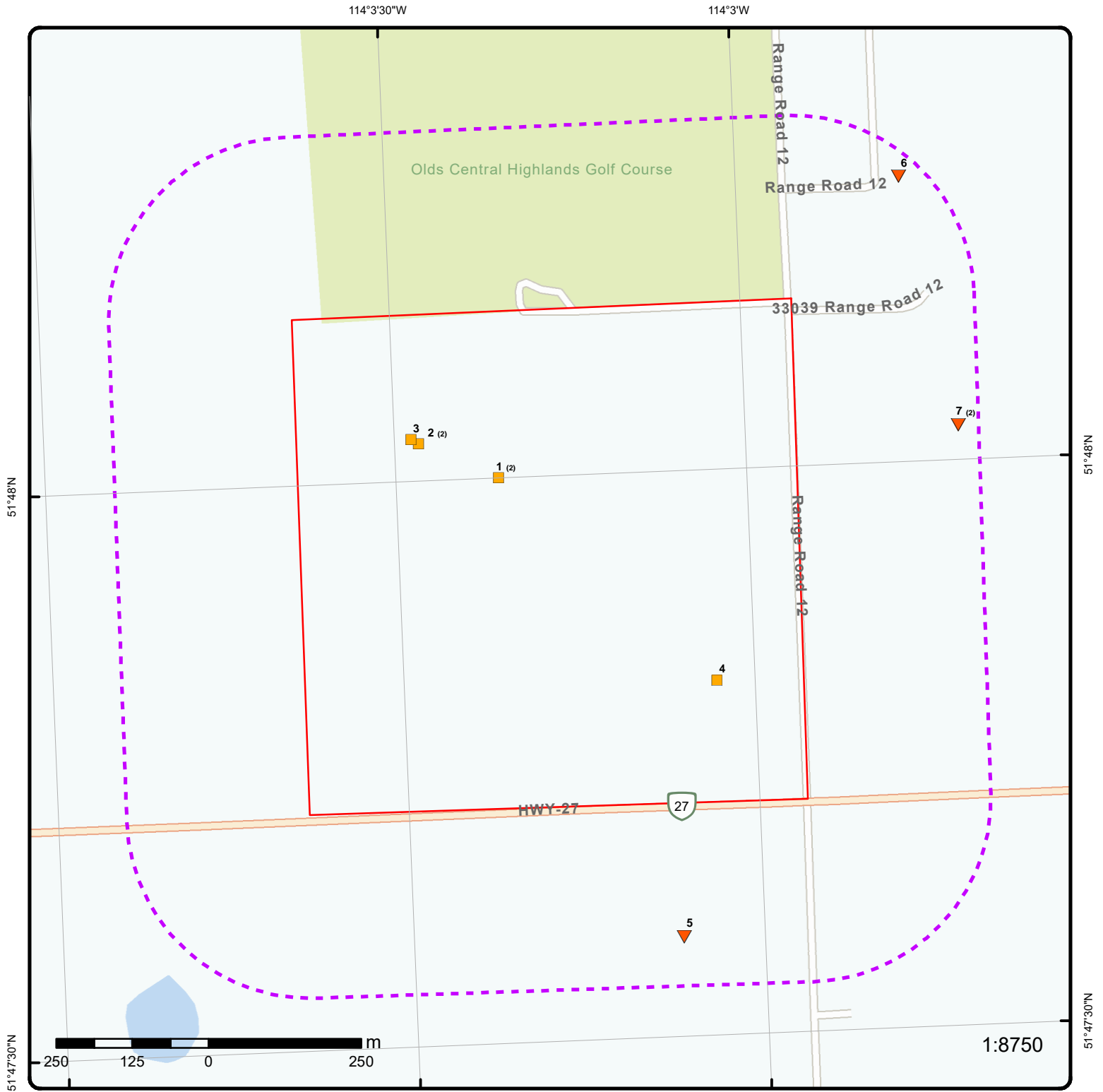
<u>Site</u>	<u>Address</u>	<u>Distance (m)</u>	<u>Map Key</u>
	[Q:NE S:3 T: 33 R:1 M:W5] MOUNTAIN VIEW COUNTY AB	0.0	<u>4</u>
	NW Quarter of Section: 2 Township: 33 Range: 1 West of: 5 Mountain View , County AB	267.0	<u>7</u>
	NW Quarter of Section: 2 Township: 33 Range: 1 West of: 5 Mountain View , County AB	267.0	<u>7</u>

<u>Site</u>	<u>Address</u>	<u>Distance (m)</u>	<u>Map Key</u>
-------------	----------------	---------------------	----------------

WWIS - Alberta Water Well Information Database

A search of the WWIS database, dated 1880-Aug 31, 2023 has found that there are 4 WWIS site(s) within approximately 0.30 kilometers of the project property.

<u>Site</u>	<u>Address</u>	<u>Distance (m)</u>	<u>Map Key</u>
	AB <i>Well ID:</i> 416138	0.0	<u>2</u>
	AB <i>Well ID:</i> 416139	0.0	<u>2</u>
	AB <i>Well ID:</i> 409796	219.4	<u>5</u>
	AB <i>Well ID:</i> 12043714	266.6	<u>6</u>



Map: 0.3 Kilometer Radius

Order Number: 23111700859

Address: SE-3-33-1W5M, Olds, AB

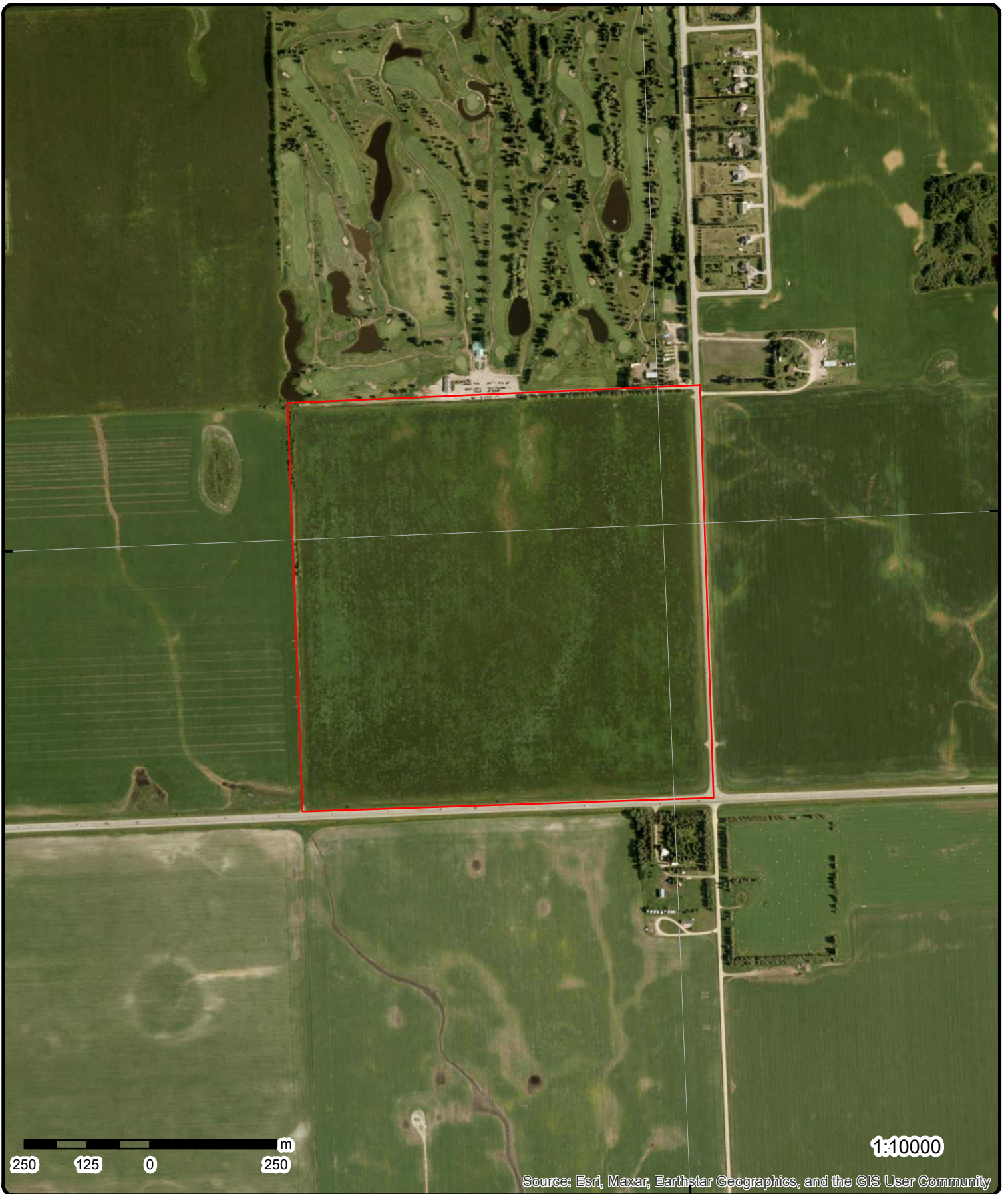


Project Property	Freeways; Highways	Beach	Shopping & Sports Area
Buffer Outline	Traffic Circle; Ramp	Airport	University/College
Eris Sites with Higher Elevation	Major Arterial; Minor Arterial	Industrial Area	Cemetery; Golf Course
Eris Sites with Same Elevation	Local Road	Military Base	Parkt (National)
Eris Sites with Lower Elevation	Service Road; Traffic Circle; Ramp	Aircraft Roads	Park (City/County)
Eris Sites with Unknown Elevation	Rail	Native Reservation	
		Hospital	

114°3'W

51°48'N

51°48'N



Aerial Year: 2022

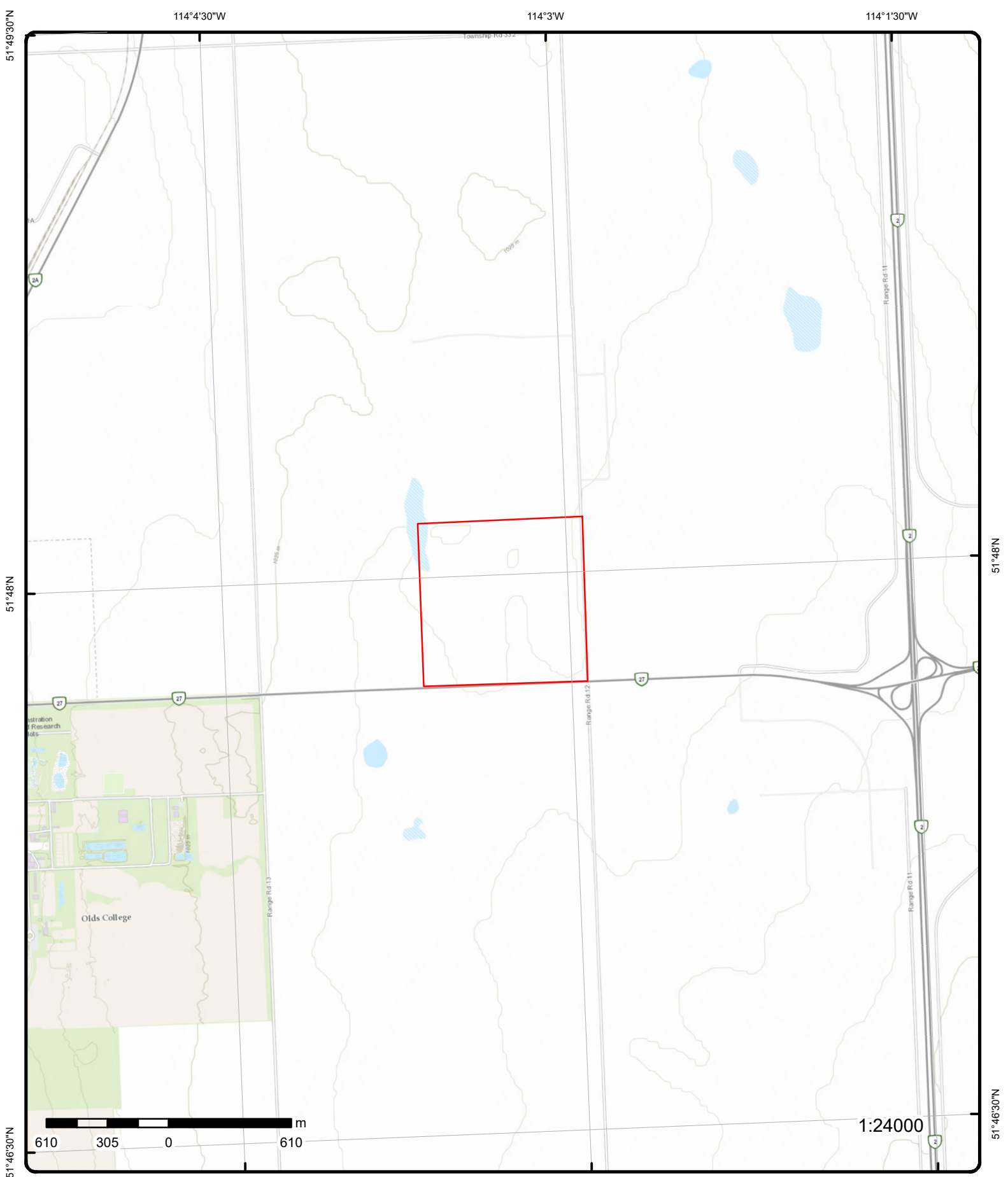
Order Number: 23111700859

Address: SE-3-33-1W5M, Olds, AB



Source: ESRI World Imagery

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Topographic Map

Address: SE-3-33-1W5M, AB

Source: ESRI World Topographic Map

Order Number: 23111700859



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Detail Report

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
1	1 of 2	NW/0.0	1,020.0 / 0.00	MARATHON CDN-SUP OLDS 7-3-33-1	AERW
AB					
Unique Well ID:		00/07-03-033-01W5/0		Agent:	
Well Status:		0002000000		Operator:	
Keylist:		0335010307000		Field:	
License No:		0072245		Pool:	
Licence Status:		RecCertified		OS Area:	
Licence Date:		1978-10-03		OS Dep:	
Stat Date:		1979-01-05		Max True Vert Depth:	
Well Fluid:		N/A		Ground Elevation:	
Well Mode:		ABD		Surf Loc:	
Well Type:		N/A		EDCT:	
Well Structure:		N/A		Rating Ev:	
Scheme Type:				Op Surv Prov:	
Scheme Subt:				FD Date:	
Bttm/Surface Hole:		Bottom Holes		Total Dep:	
Fluid Short Desc:		Not Applicable		KBE:	
Mode Short Desc:		ABANDONED		Latitude:	
Type Short Desc:		Not Applicable		Longitude:	
Update:					
Structure Short Description:		Not Applicable			
Licensee:		Repsol Oil & Gas Canada Inc.			
<u>Kelly Bushing Elevation Detail</u>					
<u>(s) (KBE)</u>					
KBE:		1025.8			

1	2 of 2	NW/0.0	1,020.0 / 0.00	Repsol Oil & Gas Canada Inc.(0039)	AERW
AB					
Unique Well ID:			Agent:		
Well Status:			Operator:		
Keylist:			Field:		
License No: 0072245			Pool:		
Licence Status: RecCertified			OS Area:		
Licence Date: 31 Dec 1998			OS Dep:		
Stat Date:			Max True Vert Depth:		
Well Fluid:			Ground Elevation: 1018.8		
Well Mode:			Surf Loc: 07-03-033-01W5		
Well Type:			EDCT: BWL		
Well Structure:			Rating Ev: J		
Scheme Type:			Op Surv Prov:		
Scheme Subt:			FD Date:		
Bttm/Surface Hole: Surface Holes			Total Dep:		
Fluid Short Desc:			KBE:		
Mode Short Desc:			Latitude: 51.8		
Type Short Desc:			Longitude: -114.056		
Update:					
Structure Short Description:					
Licensee:					

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
<u>Kelly Bushing Elevation Detail (s) (KBE)</u>					
KBE:		1025.8			
<u>2</u>	1 of 2	WNW/0.0	1,020.0 / 0.00	AB	WWIS
Well ID:	416138			Elevation Source:	Estimated
Driller ID:	24254			Method of Drilling:	
Licence No:				GPS Obtained:	Not Verified
GIC Well ID:	416138			Boundary From:	
GOA Well Tag No:				Distance North:	
Elevation (ft):	3340.00000000			Distance South:	
Depth (ft):				Distance East:	
Date Completed:				Distance West:	
Proposed Use:				Additional Desc:	
Lot:				Validated?:	TRUE
Block:				Submitted?:	TRUE
Plan:				Location Locked?:	TRUE
Type of Work:				Longitude:	-114.05786400
Flowing Well:				Latitude:	51.80054300
Date Started:				LSD:	7
Water Req Per Day:				Section:	3
Gas Present:				Township:	33
Oil Present:				Range:	1
Flow Rate:				Meridian:	5
Drilling Company:				DLS Coordinates:	7-3-33-1-5
Owner Mailing Address:					
Driller Mailing Address:					
<u>Well Reports</u>					
Well Report ID:	416138			Annular Seal Mat:	Formation Packer
Well Owner ID:	10685845			Annular Seal from:	0.00
Driller ID:	2533726			Annular Seal to:	120.00
Drill Company ID:	24254			Annular Seal Amt:	
Drill Instance ID:	8335154			Annular Seal Units:	
Drill Comp Well ID:				Drilling Method:	Rotary
Existing Well ID:				Drilling Start Dt:	1978/11/13
Date Received:	1978/12/11			Drilling End Dt:	1978/11/13
Type of Work:	New Well			Pack Type:	
Plug Date:				Pack Grain Size:	
Plug Material Type:				Pack Amount:	
Plug Mat Amount:				Pack Units:	
Plugged Units:				Loc Verify Method:	Not Verified
Well Use:	Industrial			Dist Casing Ground:	
Other Well Use:				Artesian Flow?:	FALSE
Total Depth Drill:	142.00			Artesian Flow Rate:	
Finish Well Depth:				Gas Depth:	
Casing Material:	Steel			Encounter Gas?:	FALSE
Casing OD:	4.50			Flow Ctrl Install?:	FALSE
Casing Thickness:	0.00			Recommended Rate:	0.00
Casing Bottom:	142.00			Recom Intake Depth:	0.00
Liner Material:				Pump Installed?:	TRUE
Liner OD:	0.00			Pump Install Depth:	
Liner Thickness:	0.00			Pump Model:	
Liner Top:	0.00			Pump Horsepower:	3
Liner Bottom:	0.00			Well Disinfected?:	FALSE
Perforation by:				Other Log:	
Screen Material:				Divert Water Src:	
Screen Size OD:	0.00			Divert Water Amt:	

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
Screen Attachment:				Diversion Dt/Time:	
Screen Top Fitting:				Is Submitted?:	TRUE
Screen Bot Fitting:				Is Validated?:	TRUE
Encounter Saline Water?:	FALSE				
Saline Water Depth:					
Potability Sample Taken?:	FALSE				
Potable Sample Sent to AENV?:	FALSE				
Approval Holder Sign Date:					
Drilling Report Given to Owner:	FALSE				
Model Output Rating:					
Remedial Action:					
Flow Control Description:					
Pump Type Installed:	SUB				
Created by:					
Submitted by:					
Additional Comments:	DRILLER STATES WATER IS SOFT.				
<u>Well Owners</u>					
Well Owner ID:	10685845				
Owner Name:	CANADIAN SUPERIOR				
PO Box:					
Address:					
City:					
Postal Code:					
Province:					
Country:					
<u>Drillers</u>					
Driller ID:	2533726				
Last Name:	DRILLER				
Middle Initial:	NA				
First Name:	UNKNOWN				
Journeyman No:	1				
Is Active?:	TRUE				
<u>Drilling Companies</u>					
Starting Well ID:	2059200				
Ending Well ID:	2059299				
Last Well ID Used:	2059205				
Company Name:	ALL RITE DRILLING LTD.				
Street Address:	7819 - 50 AVENUE				
City:	RED DEER				
Province:	AB				
Country:	AB				
Postal Code:					
E-Mail:	gwinfo@gov.ab.ca				
Is Active?:	TRUE				
<u>Geophysical Logs</u>					
Geophysical Log ID:	5921481				
Log Type:	Gamma				
Log Taken?:	FALSE				
Sent to AENV?:	FALSE				
<u>Geophysical Logs</u>					
Geophysical Log ID:	5518406				
Log Type:	Electric				

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
Log Taken?:		FALSE			
Sent to AENV?:		FALSE			
<u>Boreholes</u>					
Borehole ID:		621294			
Diameter:		0.000000			
From:		0.000000			
To:		142.000000			
<u>Lithologies</u>					
Depth:		80.000000			
Water Bearing:		FALSE			
Colour:					
Description:					
Material:		Clay			
<u>Lithologies</u>					
Depth:		135.000000			
Water Bearing:		FALSE			
Colour:					
Description:					
Material:		Coal			
<u>Lithologies</u>					
Depth:		130.000000			
Water Bearing:		FALSE			
Colour:					
Description:					
Material:		Shale			
<u>Lithologies</u>					
Depth:		142.000000			
Water Bearing:		FALSE			
Colour:					
Description:					
Material:		Shale			
<u>Pump Tests</u>					
Pump Test ID:		10348602			
Test Date:		1978/11/13			
Start Time:		1900/01/12			
Taken from Top of Casing:		FALSE			
Static Water Level:		90.00			
End Water Level:					
Water Removal Type:		Pump			
Water Removal Rate:		20.00			
Removal Depth from:		0.00			
Reason for Short Test:					
2	2 of 2	WNW/0.0	1,020.0 / 0.00	AB	WWIS
Well ID:		416139		Elevation Source: Estimated	
Driller ID:		24254		Method of Drilling:	

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
Licence No:				GPS Obtained:	Not Verified
GIC Well ID:	416139			Boundary From:	
GOA Well Tag No:				Distance North:	
Elevation (ft):	3335.00000000			Distance South:	
Depth (ft):				Distance East:	
Date Completed:				Distance West:	
Proposed Use:				Additional Desc:	
Lot:				Validated?:	TRUE
Block:				Submitted?:	TRUE
Plan:				Location Locked?:	TRUE
Type of Work:				Longitude:	-114.05786400
Flowing Well:				Latitude:	51.80054300
Date Started:				LSD:	7
Water Req Per Day:				Section:	3
Gas Present:				Township:	33
Oil Present:				Range:	1
Flow Rate:				Meridian:	5
Drilling Company:				DLS Coordinates:	7-3-33-1-5
Owner Mailing Address:					
Driller Mailing Address:					

Well Reports

Well Report ID:	416139	Annular Seal Mat:	Formation Packer
Well Owner ID:	10685846	Annular Seal from:	0.00
Driller ID:	2533726	Annular Seal to:	120.00
Drill Company ID:	24254	Annular Seal Amt:	
Drill Instance ID:	8335154	Annular Seal Units:	
Drill Comp Well ID:		Drilling Method:	Rotary
Existing Well ID:		Drilling Start Dt:	1978/11/14
Date Received:	1978/12/11	Drilling End Dt:	1978/11/14
Type of Work:	New Well-Decommissioned	Pack Type:	
Plug Date:	1978/12/14	Pack Grain Size:	
Plug Material Type:	Cement	Pack Amount:	
Plug Mat Amount:		Pack Units:	
Plugged Units:		Loc Verify Method:	Not Verified
Well Use:	Industrial	Dist Casing Ground:	
Other Well Use:		Artesian Flow?:	FALSE
Total Depth Drill:	142.00	Artesian Flow Rate:	
Finish Well Depth:		Gas Depth:	
Casing Material:		Encounter Gas?:	FALSE
Casing OD:	0.00	Flow Ctrl Install?:	FALSE
Casing Thickness:	0.00	Recommended Rate:	0.00
Casing Bottom:	0.00	Recom Intake Depth:	0.00
Liner Material:	Steel	Pump Installed?:	TRUE
Liner OD:	4.50	Pump Install Depth:	
Liner Thickness:	0.00	Pump Model:	
Liner Top:	0.00	Pump Horsepower:	3
Liner Bottom:	142.00	Well Disinfected?:	FALSE
Perforation by:	Torch	Other Log:	
Screen Material:		Divert Water Src:	
Screen Size OD:	0.00	Divert Water Amt:	
Screen Attachment:		Diversion Dt/Time:	
Screen Top Fitting:		Is Submitted?:	TRUE
Screen Bot Fitting:		Is Validated?:	TRUE
Encounter Saline Water?:	FALSE		
Saline Water Depth:			
Potability Sample Taken?:	FALSE		
Potable Sample Sent to AENV?:	FALSE		
Approval Holder Sign Date:			
Drilling Report Given to Owner:	FALSE		
Model Output Rating:			
Remedial Action:			
Flow Control Description:			
Pump Type Installed:	SUB		

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
<hr/>					
Created by:					
Submitted by:					
Additional Comments:		DRILLER STATES WATER IS SOFT.			
<u>Well Owners</u>					
Well Owner ID:		10685846			
Owner Name:		CANADIAN SUPERIOR			
PO Box:					
Address:					
City:					
Postal Code:					
Province:					
Country:					
<u>Drillers</u>					
Driller ID:		2533726			
Last Name:		DRILLER			
Middle Initial:		NA			
First Name:		UNKNOWN			
Journeyman No:		1			
Is Active?:		TRUE			
<u>Drilling Companies</u>					
Starting Well ID:		2059200			
Ending Well ID:		2059299			
Last Well ID Used:		2059205			
Company Name:		ALL RITE DRILLING LTD.			
Street Address:		7819 - 50 AVENUE			
City:		RED DEER			
Province:		AB			
Country:		AB			
Postal Code:					
E-Mail:		gwinfo@gov.ab.ca			
Is Active?:		TRUE			
<u>Perforations</u>					
Perforation ID:		4190363			
From:		120.000000			
To:		140.000000			
Diameter:		0.000000			
Interval:		0.000000			
<u>Geophysical Logs</u>					
Geophysical Log ID:		5921482			
Log Type:		Gamma			
Log Taken?:		FALSE			
Sent to AENV?:		FALSE			
<u>Geophysical Logs</u>					
Geophysical Log ID:		5518407			
Log Type:		Electric			
Log Taken?:		FALSE			
Sent to AENV?:		FALSE			

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
<u>Boreholes</u>					
Borehole ID:		621295			
Diameter:		0.000000			
From:		0.000000			
To:		142.000000			
<u>Lithologies</u>					
Depth:		65.000000			
Water Bearing:		FALSE			
Colour:					
Description:					
Material:		Clay			
<u>Lithologies</u>					
Depth:		80.000000			
Water Bearing:		FALSE			
Colour:					
Description:					
Material:		Siltstone			
<u>Lithologies</u>					
Depth:		138.000000			
Water Bearing:		FALSE			
Colour:					
Description:					
Material:		Sandstone			
<u>Lithologies</u>					
Depth:		132.000000			
Water Bearing:		FALSE			
Colour:					
Description:					
Material:		Shale			
<u>Lithologies</u>					
Depth:		118.000000			
Water Bearing:		FALSE			
Colour:					
Description:					
Material:		Siltstone			
<u>Lithologies</u>					
Depth:		142.000000			
Water Bearing:		FALSE			
Colour:					
Description:					
Material:		Siltstone			
<u>Lithologies</u>					
Depth:		110.000000			
Water Bearing:		FALSE			
Colour:					

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
Description:					
Material:		Shale			
<u>Pump Tests</u>					
Pump Test ID:		10348603			
Test Date:		1978/11/14			
Start Time:		1900/01/12			
Taken from Top of Casing:		FALSE			
Static Water Level:		80.00			
End Water Level:					
Water Removal Type:		Pump			
Water Removal Rate:		20.00			
Removal Depth from:		0.00			
Reason for Short Test:					
<u>3</u>	1 of 1	WNW/0.0	1,020.0 / 0.00	Reclamation 7-3-33-1-5 AB	ESAR
ESA ID:	2305545			10tm Point Coord:	64926,5736985
ESRD File:	00122969			Extracted Dnld Dt:	2022-Jun-21
File Classification:	REC				
Name:	Reclamation				
Operation Name:	Reclamation				
Map Link:	https://www.esar.alberta.ca/esarmap.aspx?esaid=2305545				
ESAR Link:	http://www.esar.alberta.ca/esarmain.aspx?esaid=00122969				
LLD:	5;1;33;3;SE;7				
LINC:					
A10tm Point Coordinates:	64926,5736985				
<u>Document Detail</u>					
Doc Desc:	Reclamation Certificate Documentation - MPCL CDN-SUP OLDS 7-3-33-1 WELL AND ACCESS ROAD				
Doc Date:	8/31/1979				
<u>Document Detail</u>					
Doc Desc:	Reclamation Application Documentation - MPCL CDN-SUP OLDS 7-3-33-1 WELL AND ACCESS ROAD				
Doc Date:	5/31/1979				
<u>4</u>	1 of 1	ESE/0.0	1,020.0 / 0.00	[Q:NE S:3 T: 33 R:1 M:W5] MOUNTAIN VIEW COUNTY AB	PSP
Permit NO:	226IJD-08-S0081			DLS Coordinates:	NE-3-33-1-W5
Issue Date:	10/31/2008			Municipality:	MOUNTAIN VIEW COUNTY
Description:					
<u>5</u>	1 of 1	SSE/219.4	1,018.0 / -2.00	AB	WWIS
Well ID:	409796			Elevation Source:	Estimated
Driller ID:	24288			Method of Drilling:	
Licence No:				GPS Obtained:	Map
GIC Well ID:	409796			Boundary From:	
GOA Well Tag No:				Distance North:	
Elevation (ft):	3350.00000000			Distance South:	
Depth (ft):				Distance East:	
Date Completed:				Distance West:	
Proposed Use:				Additional Desc:	

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
Lot: Block: Plan: Type of Work: Flowing Well: Date Started: Water Req Per Day: Gas Present: Oil Present: Flow Rate: Drilling Company: Owner Mailing Address: Driller Mailing Address:				Validated?: TRUE Submitted?: TRUE Location Locked?: TRUE Longitude: -114.05203000 Latitude: 51.79313300 LSD: 16 Section: 34 Township: 32 Range: 1 Meridian: 5 DLS Coordinates: 16-34-32-1-5	
<u>Chemical Analysis</u>					
Chem Analysis ID: Well Report ID: Sample No: Sample Date: Analysis Date: Laboratory: Water Level: Aquifer: Remarks:		2086207 409796 1809 1979/02/26 AE 90.000000			
<u>Analysis Items</u>					
Element Name: Element Symbol: Decimal Places: Value:		Sulphate SO4 4 1174.707820			
<u>Analysis Items</u>					
Element Name: Element Symbol: Decimal Places: Value:		Total Hardness TH 4 419.000000			
<u>Analysis Items</u>					
Element Name: Element Symbol: Decimal Places: Value:		total Kjeldahl nitrogen TKN 4 0.000000			
<u>Analysis Items</u>					
Element Name: Element Symbol: Decimal Places: Value:		Calcium CA 4 100.999596			
<u>Analysis Items</u>					
Element Name: Element Symbol: Decimal Places: Value:		Potassium K 4 5.116000			

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
<u>Analysis Items</u>					
Element Name:		Hydroxide			
Element Symbol:		OH			
Decimal Places:		4			
Value:		0.000000			
<u>Analysis Items</u>					
Element Name:		Electrical Conductivity			
Element Symbol:		EC			
Decimal Places:		0			
Value:		2980.000000			
<u>Analysis Items</u>					
Element Name:		Magnesium			
Element Symbol:		MG			
Decimal Places:		4			
Value:		40.033152			
<u>Analysis Items</u>					
Element Name:		Sodium			
Element Symbol:		NA			
Decimal Places:		4			
Value:		545.001100			
<u>Analysis Items</u>					
Element Name:		Nitrite			
Element Symbol:		NO2			
Decimal Places:		4			
Value:		-0.050400			
<u>Analysis Items</u>					
Element Name:		Total Alkalinity			
Element Symbol:		TA			
Decimal Places:		4			
Value:		398.000000			
<u>Analysis Items</u>					
Element Name:		Nitrate plus Nitrite			
Element Symbol:		NO2_NO3_N			
Decimal Places:		4			
Value:		0.459200			
<u>Analysis Items</u>					
Element Name:		Total Phosphorus			
Element Symbol:		TP			
Decimal Places:		4			
Value:		0.000000			
<u>Analysis Items</u>					

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB	
<hr/>						
Element Name:		Ion Balance				
Element Symbol:		IONBAL				
Decimal Places:		4				
Value:		0.990000				
 <u>Analysis Items</u>						
Element Name:		Silica				
Element Symbol:		SIO2				
Decimal Places:		4				
Value:		6.400000				
 <u>Analysis Items</u>						
Element Name:		Chloride				
Element Symbol:		CL				
Decimal Places:		4				
Value:		4.004400				
 <u>Analysis Items</u>						
Element Name:		Iron				
Element Symbol:		FE				
Decimal Places:		4				
Value:		0.160000				
 <u>Analysis Items</u>						
Element Name:		Total Dissolved Solids				
Element Symbol:		TDS				
Decimal Places:		0				
Value:		2109.000000				
 <u>Analysis Items</u>						
Element Name:		Fluoride				
Element Symbol:		F				
Decimal Places:		4				
Value:		0.420000				
 <u>Analysis Items</u>						
Element Name:		pH				
Element Symbol:		PH				
Decimal Places:		2				
Value:		8.100000				
 <u>Analysis Items</u>						
Element Name:		Bicarbonate				
Element Symbol:		HCO3				
Decimal Places:		4				
Value:		485.046853				
 <u>Well Reports</u>						
Well Report ID:		409796		Annular Seal Mat:		Driven
Well Owner ID:		10688327		Annular Seal from:		0.00
Driller ID:		2533726		Annular Seal to:		39.00

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
Drill Company ID:	24288			Annular Seal Amt:	
Drill Instance ID:	8335238			Annular Seal Units:	
Drill Comp Well ID:				Drilling Method:	Combination
Existing Well ID:				Drilling Start Dt:	
Date Received:	1979/06/12			Drilling End Dt:	1978/12/12
Type of Work:	New Well			Pack Type:	
Plug Date:				Pack Grain Size:	
Plug Material Type:				Pack Amount:	
Plug Mat Amount:				Pack Units:	
Plugged Units:				Loc Verify Method:	Map
Well Use:	Domestic & Stock			Dist Casing Ground:	
Other Well Use:				Artesian Flow?:	FALSE
Total Depth Drill:	135.00			Artesian Flow Rate:	
Finish Well Depth:				Gas Depth:	
Casing Material:	Steel			Encounter Gas?:	FALSE
Casing OD:	5.56			Flow Ctrl Install?:	FALSE
Casing Thickness:	0.19			Recommended Rate:	0.00
Casing Bottom:	39.00			Recom Intake Depth:	125.00
Liner Material:	Steel			Pump Installed?:	FALSE
Liner OD:	4.56			Pump Install Depth:	
Liner Thickness:	0.14			Pump Model:	
Liner Top:	0.00			Pump Horsepower:	
Liner Bottom:	135.00			Well Disinfected?:	FALSE
Perforation by:	Torch			Other Log:	
Screen Material:				Divert Water Src:	
Screen Size OD:	0.00			Divert Water Amt:	
Screen Attachment:				Diversion Dt/Time:	
Screen Top Fitting:				Is Submitted?:	TRUE
Screen Bot Fitting:				Is Validated?:	TRUE
Encounter Saline Water?:	FALSE				
Saline Water Depth:					
Potability Sample Taken?:	FALSE				
Potable Sample Sent to AENV?:	FALSE				
Approval Holder Sign Date:					
Drilling Report Given to Owner:	FALSE				
Model Output Rating:					
Remedial Action:					
Flow Control Description:					
Pump Type Installed:					
Created by:					
Submitted by:					
Additional Comments:					

Well Owners

Well Owner ID: 10688327
Owner Name: ALEXANDER, R.M./ JOYCE K.
PO Box: 699
Address: OLDS
City:
Postal Code: T0M 1P0
Province:
Country:

Drillers

Driller ID: 2533726
Last Name: DRILLER
Middle Initial: NA
First Name: UNKNOWN
Journeyman No: 1
Is Active?: TRUE

<i>Map Key</i>	<i>Number of Records</i>	<i>Direction/ Distance (m)</i>	<i>Elev/Diff (m)</i>	<i>Site</i>	<i>DB</i>
<u>Drilling Companies</u>					
Starting Well ID:		1245000			
Ending Well ID:		1249999			
Last Well ID Used:		1245342			
Company Name:		DOERING DRILLING LTD.			
Street Address:		BOX 4028			
City:		OLDS			
Province:		AB			
Country:		CA			
Postal Code:		T4H 1P6			
E-Mail:		GWINFO@GOV.AB.CA			
Is Active?:		FALSE			
<u>Perforations</u>					
Perforation ID:		4192466			
From:		95.000000			
To:		135.000000			
Diameter:		0.125000			
Interval:		6.000000			
<u>Geophysical Logs</u>					
Geophysical Log ID:		5927450			
Log Type:		Gamma			
Log Taken?:		FALSE			
Sent to AENV?:		FALSE			
<u>Geophysical Logs</u>					
Geophysical Log ID:		5524375			
Log Type:		Electric			
Log Taken?:		FALSE			
Sent to AENV?:		FALSE			
<u>Boreholes</u>					
Borehole ID:		626354			
Diameter:		0.000000			
From:		0.000000			
To:		135.000000			
<u>Lithologies</u>					
Depth:		76.000000			
Water Bearing:		FALSE			
Colour:		Gray			
Description:					
Material:		Till & Rocks			
<u>Lithologies</u>					
Depth:		116.000000			
Water Bearing:		FALSE			
Colour:					
Description:		Fine Grained			
Material:		Sandstone			
<u>Lithologies</u>					

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
Depth: Water Bearing: Colour: Description: Material:		96.000000 FALSE Fine Grained Sandstone			
<u>Lithologies</u>					
Depth: Water Bearing: Colour: Description: Material:		109.000000 FALSE Black Carbonaceous Shale			
<u>Lithologies</u>					
Depth: Water Bearing: Colour: Description: Material:		20.000000 FALSE Brown Till			
<u>Lithologies</u>					
Depth: Water Bearing: Colour: Description: Material:		104.000000 FALSE Coal			
<u>Lithologies</u>					
Depth: Water Bearing: Colour: Description: Material:		135.000000 FALSE Shale & Sandstone			
<u>Lithologies</u>					
Depth: Water Bearing: Colour: Description: Material:		31.000000 FALSE Gray Sandy Till			
<u>Lithologies</u>					
Depth: Water Bearing: Colour: Description: Material:		89.000000 FALSE Gray Shale			
<u>Lithologies</u>					
Depth: Water Bearing: Colour:		102.000000 FALSE Gray			

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
Description:					
Material:		Shale			
<u>Pump Tests</u>					
Pump Test ID:		10350290			
Test Date:		1978/12/12			
Start Time:		1900/01/12			
Taken from Top of Casing:		FALSE			
Static Water Level:		0.00			
End Water Level:					
Water Removal Type:		Bailer			
Water Removal Rate:		15.00			
Removal Depth from:		0.00			
Reason for Short Test:					
6	1 of 1	ENE/266.6	1,019.0 / -1.00	AB	WWIS
Well ID:	12043714			Elevation Source:	Hand held autonomous GPS 20-30m
Driller ID:	11547437			Method of Drilling:	
Licence No:				GPS Obtained:	Hand held autonomous GPS 20-30m
GIC Well ID:	2086519			Boundary From:	
GOA Well Tag No:	A6592			Distance North:	
Elevation (ft):	3355.00000000			Distance South:	
Depth (ft):				Distance East:	
Date Completed:				Distance West:	
Proposed Use:				Additional Desc:	SOUTH TEST WELL
Lot:				Validated?:	FALSE
Block:				Submitted?:	FALSE
Plan:				Location Locked?:	FALSE
Type of Work:				Longitude:	-114.04621000
Flowing Well:				Latitude:	51.80420000
Date Started:				LSD:	12
Water Req Per Day:				Section:	2
Gas Present:				Township:	33
Oil Present:				Range:	1
Flow Rate:				Meridian:	5
Drilling Company:				DLS Coordinates:	12-2-33-1-5
Owner Mailing Address:					
Driller Mailing Address:					
<u>Well Reports</u>					
Well Report ID:	12046392			Annular Seal Mat:	Bentonite Chips
Well Owner ID:	12047789			Annular Seal from:	0.00
Driller ID:	11385995			Annular Seal to:	58.00
Drill Company ID:	11547437			Annular Seal Amt:	450.00
Drill Instance ID:				Annular Seal Units:	Pounds
Drill Comp Well ID:				Drilling Method:	Rotary - Air
Existing Well ID:				Drilling Start Dt:	2021/11/08
Date Received:	2021/11/12			Drilling End Dt:	2021/11/08
Type of Work:	New Well			Pack Type:	
Plug Date:				Pack Grain Size:	
Plug Material Type:				Pack Amount:	
Plug Mat Amount:				Pack Units:	
Plugged Units:				Loc Verify Method:	
Well Use:	Domestic			Dist Casing Ground:	24.00
Other Well Use:				Artesian Flow?:	FALSE
Total Depth Drill:	200.00			Artesian Flow Rate:	
Finish Well Depth:	200.00			Gas Depth:	
Casing Material:	Plastic			Encounter Gas?:	FALSE
Casing OD:	6.00			Flow Ctrl Install?:	FALSE

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
Casing Thickness:	0.39			Recommended Rate:	15.00
Casing Bottom:	58.00			Recom Intake Depth:	60.00
Liner Material:	Plastic			Pump Installed?:	FALSE
Liner OD:	4.50			Pump Install Depth:	
Liner Thickness:	0.23			Pump Model:	
Liner Top:	40.00			Pump Horsepower:	
Liner Bottom:	100.00			Well Disinfected?:	TRUE
Perforation by:	Drill			Other Log:	
Screen Material:				Divert Water Src:	SHOP
Screen Size OD:				Divert Water Amt:	2000.00
Screen Attachment:				Diversion Dt/Time:	2021/11/08 08:00:00
Screen Top Fitting:				Is Submitted?:	TRUE
Screen Bot Fitting:				Is Validated?:	TRUE
Encounter Saline Water?:	FALSE				
Saline Water Depth:					
Potability Sample Taken?:	FALSE				
Potable Sample Sent to AENV?:	FALSE				
Approval Holder Sign Date:	2021/11/08				
Drilling Report Given to Owner:	TRUE				
Model Output Rating:					
Remedial Action:					
Flow Control Description:					
Pump Type Installed:					
Created by:	1D8AF305-485A-40A3-84B0-9303E2D782E5				
Submitted by:	1D8AF305-485A-40A3-84B0-9303E2D782E5				
Additional Comments:	6 HOUR PUMP TEST RESULTS SUBMITTED TO KEN HUGO - ENGINEER. WELL BACK FILLED FROM 200' TO 100' WITH 1000 LBS MED BENTONITE CHIPS				

Drillers

Driller ID: 11385995
Last Name: PEARSON
Middle Initial:
First Name: RILEY
Journeyman No: 83061A
Is Active?: TRUE

Drilling Companies

Starting Well ID: 9871000
Ending Well ID: 9875999
Last Well ID Used: 2086663
Company Name: BLACK DOG DRILLING & ENV SERV. LTD.
Street Address: BOX 9137
City: SYLVAN LAKE
Province: AB
Country:
Postal Code: T4S 1S8
E-Mail: INFO@BLACKDOGDRILLING.COM
Is Active?: TRUE

Perforations

Perforation ID: 4294102
From: 80.000000
To: 90.000000
Diameter: 0.500000
Interval: 12.000000

Boreholes

Borehole ID: 853520

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
Diameter:		5.000000			
From:		58.000000			
To:		200.000000			
<u>Boreholes</u>					
Borehole ID:		853519			
Diameter:		8.750000			
From:		0.000000			
To:		58.000000			
<u>Other Seals</u>					
Other Seal ID:		36218			
Other Seal Type:		Drive Shoe			
From:					
To:					
At:		58.000000			
<u>Lithologies</u>					
Depth:		48.000000			
Water Bearing:		FALSE			
Colour:		Gray			
Description:					
Material:		Clay & Rocks			
<u>Lithologies</u>					
Depth:		200.000000			
Water Bearing:		FALSE			
Colour:		Gray			
Description:					
Material:		Shale			
<u>Lithologies</u>					
Depth:		72.000000			
Water Bearing:		FALSE			
Colour:		Gray			
Description:					
Material:		Shale			
<u>Lithologies</u>					
Depth:		106.000000			
Water Bearing:		FALSE			
Colour:		Gray			
Description:					
Material:		Shale			
<u>Lithologies</u>					
Depth:		112.000000			
Water Bearing:		FALSE			
Colour:		Gray			
Description:					
Material:		Sandstone			

Map Key	Number of Records	Direction/ Distance (m)	Elev/Diff (m)	Site	DB
<u>Lithologies</u>					
Depth:		157.000000			
Water Bearing:		FALSE			
Colour:		Gray			
Description:					
Material:		Sandstone			
<u>Lithologies</u>					
Depth:		90.000000			
Water Bearing:		TRUE			
Colour:		Gray			
Description:					
Material:		Sandstone			
<u>Lithologies</u>					
Depth:		150.000000			
Water Bearing:		FALSE			
Colour:		Gray			
Description:					
Material:		Shale			
<u>Pump Tests</u>					
Pump Test ID:		16033598			
Test Date:		2021/11/08			
Start Time:		1980/01/01 11:00:00			
Taken from Top of Casing:		TRUE			
Static Water Level:		7.50			
End Water Level:					
Water Removal Type:		Air			
Water Removal Rate:		40.00			
Removal Depth from:		200.00			
Reason for Short Test:		PUMP TEST RESULTS SUBMITTED TO KEN HUGO, ENGINEER			
7	1 of 2	E/267.0	1,017.0 / -3.00	NW Quarter of Section: 2 Township: 33 Range: 1 West of: 5 Mountain View , County AB	PSP
Permit NO:	226IJD-03-S0021			DLS Coordinates:	NW-02-33-01-W5
Issue Date:	2003/07/14			Municipality:	Mountain View , County
Description:					
7	2 of 2	E/267.0	1,017.0 / -3.00	NW Quarter of Section: 2 Township: 33 Range: 1 West of: 5 Mountain View , County AB	PSP
Permit NO:	226IJD-05-S0047			DLS Coordinates:	NW-02-33-01-W5
Issue Date:	2005/11/28			Municipality:	Mountain View , County
Description:					

Unplottable Summary

Total: 0 Unplottable sites

DB	Company Name/Site Name	Address	City	Postal
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Unplottable Report

No unplottable records were found that may be relevant for the search criteria.

Appendix: Database Descriptions

*Environmental Risk Information Services (ERIS) can search the following databases. The extent of historical information varies with each database and current information is determined by what is publicly available to ERIS at the time of update. **Note:** Databases denoted with " * " indicates that the database will no longer be updated. See the individual database description for more information.*

Well Licenses:

Provincial [AERW](#)

Locations of Well Licenses made available by the Alberta Energy Regulator (AER) as ST37. Includes Active, Suspended, Abandoned, Drilled and Cased Oil, Gas, Crude Bitumen well licenses, as well as Observation, Injection, Disposal, and Undefined well licences.

Government Publication Date: Aug 31, 2023

Agriculture and Fisheries - Certificates of Approval:

Provincial [AGR](#)

This database contains approvals for processes pertaining to drying of alfalfa/forage/peat, feedlots, fish farms and feed/seed mills. Please note that, as per the source of this database, some of the geographic information may pertain to a head office or mailing address and not necessarily the site of operations to which the certificate applies. Some geographic coordinates have been provided in ATS (Alberta Township Survey system) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the quarter section only.

Government Publication Date: 1993-2012

Alberta Oil and Gas Wells:

Provincial [AOGW](#)

The Alberta Energy Utilities Board - now the Alberta Energy Regulator (AER) - maintained a database of oil and gas wells drilled in the province of Alberta. The database contains information on well name, licensee name, license number, location, status, total well depth and date of final drilling. Please note that this database will not be updated, information on wells drilled after September 2003 can be found in the Oil and Gas Wells (OGW) database under the 'Private Source Database' section.

Government Publication Date: 1883-Sept 2003*

Authorizations:

Provincial [AUTH](#)

Locations associated with Water Act and Environmental Protection and Enhancement Act (EPEA) documents issued by Alberta Environment and Parks (AEP). Includes approvals, licences, registrations, authorizations, permits, and certificates. This list is made available by the Alberta Environment and Parks (AEP).

Government Publication Date: Jul 2023

Automobile Wrecking & Supplies:

Private [AUWR](#)

This database provides an inventory of known locations that are involved in the scrap metal, automobile wrecking/recycling, and automobile parts & supplies industry. Information is provided on the company name, location and business type.

Government Publication Date: 1999-Oct 31, 2023

Waste Management Facilities - Certificates of Approval:

Provincial [CAWD](#)

This database contains approvals for processes pertaining to waste management facilities (hazardous waste manifesting, waste disposal/incineration/open burning/processing/storage/treatment). Please note that, as per the source of this database, some of the geographic information may pertain to a head office or mailing address and not necessarily the site of operations to which the certificate applies. Some geographic coordinates have been provided in ATS (Alberta Township Survey system) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the quarter section only.

Government Publication Date: 1993 - Jan 2020

Commercial Activity Risk - City of Calgary Business Licenses:

Provincial [CBL](#)

List of locations with Business Licences for the follow commercial activities: apartment building with 4 or more stories, auto-body shop, fabric cleaning, manufacturing, motor vehicle dealerships and service/repair, and salvage yard/auto wrecking. Data made available by the City of Calgary.

Government Publication Date: Sep 30, 2023

Dry Cleaning Facilities:

Federal [CDRY](#)

List of dry cleaning facilities made available by Environment and Climate Change Canada. Environment and Climate Change Canada's Tetrachloroethylene (Use in Dry Cleaning and Reporting Requirements) Regulations (SOR/2003-79) are intended to reduce releases of tetrachloroethylene to the environment from dry cleaning facilities.

Government Publication Date: Jan 2004-Dec 2021

Confined Feeding Operations:

Provincial

CFO

In 1991, the Natural Resources Conservation Board (NRCB) was created to review applications for approval of major natural resource development projects in Alberta. In January 2002, the NRCB was given the responsibility to regulate the Confined Feeding Operation industry. The Agricultural Operation Practices Act defines a confined feeding operation to be: "an activity on land that is fenced or enclosed or within buildings where livestock are confined for the purpose of growing, sustaining, finishing or breeding by means other than grazing, but does not include seasonal feeding and bedding sites." Under the AOPA regulations, all new or expanding confined feeding operations (CFOs) or manure storage facilities are required to make an application for Approval, Registration or Authorization to the NRCB before construction or expansion commences. Geographic coordinates were provided in DLS (Dominion Land Survey) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the Quarter section only.

Government Publication Date: 2002-Sep 2023**Chemical Processing Operations - Certificates of Approval:**

Provincial

CHEM

This database contains approvals for processes pertaining to the manufacturing and use of chemical products and pesticides. Please note that, as per the source of this database, some of the geographic information may pertain to a head office or mailing address and not necessarily the site of operations to which the certificate applies. Some geographic coordinates have been provided in ATS (Alberta Township Survey system) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the quarter section only.

Government Publication Date: 1993-2012**Chemical Register:**

Private

CHM

This database includes a listing of locations of facilities within the Province or Territory that either manufacture and/or distributes chemicals.

Government Publication Date: 1999-Oct 31, 2023**Compost Facilities:**

Provincial

CMPS

A list of compost facility registrations made available by Alberta Environment and Parks (AEP). Composting facilities operating under a registration are required to follow the requirements in the Code of Practice for Compost Facilities, which outlines the minimum requirements for the design, construction, operation, and reclamation of compost facilities that accept up to 20,000 tonnes of feedstock per year.

Government Publication Date: Dec 31, 2019**Compressed Natural Gas Stations:**

Private

CNG

Canada has a network of public access compressed natural gas (CNG) refuelling stations. These stations dispense natural gas in compressed form at 3,000 pounds per square inch (psi), the pressure which is allowed within the current Canadian codes and standards. The majority of natural gas refuelling is located at existing retail gasoline that have a separate refuelling island for natural gas. This list of stations is made available by the Canadian Natural Gas Vehicle Alliance.

Government Publication Date: Dec 2012 -Aug 2023**Compliance and Convictions:**

Provincial

CONV

This listing of enforcement actions under the Alberta Environment and Protected Areas' current legislation is maintained by the Government of Alberta. Please note that, as per the source of this database, some of the geographic information may pertain to a head office or mailing address and not necessarily the site of operations to which the certificate applies. Unfortunately, from state of the data, the location that the address pertains to cannot be confirmed.

Government Publication Date: 1993-Dec 2022**Fuel Sales and Storage:**

Provincial

CTNK

List of locations with Business Licences for fuel sales and storage. Data made available by the City of Calgary.

Government Publication Date: Sep 30, 2023**Approved Oilfield Waste Management Facilities:**

Provincial

DRWD

A list of approved first and third party oilfield waste management facilities. First-party receivers can only accept upstream oilfield waste generated by one oil and gas company, but can come from various sites. Third-party receivers can accept upstream oilfield waste from various sites and various generators. This data is made available by the Alberta Energy Regulator (AER).

Government Publication Date: Sep 2023**Enforcement Action Summary:**

Provincial

EAS

This database maintained by the Alberta Energy Regulator (AER) - formerly the Energy Resources Conservation Board (ERCB) - summarizes high risk enforcement action 1, high risk enforcement action 2 (persistent noncompliance), high risk enforcement action 3 (failure to comply or demonstrated disregard), low risk enforcement action - global REFER and legislative/regulatory enforcement action. Fields will include licensee/company name, non-compliance event, date of enforcement, location, etc.

Government Publication Date: 2007-Aug 2023

Commercial Activity Risk - City of Edmonton Business Licenses:

Provincial

[EBL](#)

List of locations with Business Licenses for the follow commercial activities: cannabis processing or cultivation, construction vehicle and equipment sales/rentals, livestock operation, general industrial, and vehicle repair. Data made available by the City of Edmonton.

Government Publication Date: Feb 28, 2023

Environmental Compliance Prosecutions:

Provincial

[ECMP](#)

A list of concluded prosecutions made under environmental legislation. Listing made available by the Government of Alberta. This is not a complete and comprehensive list of environmental compliance outcomes: in Alberta, enforcement tools include warning letters, violation tickets, administrative penalties and orders, in addition to prosecutions.

Government Publication Date: Sep 30, 2023

Environmental Effects Monitoring:

Federal

[EEM](#)

The Environmental Effects Monitoring program assesses the effects of effluent from industrial or other sources on fish, fish habitat and human usage of fisheries resources. Since 1992, pulp and paper mills have been required to conduct EEM studies under the Pulp and Paper Effluent Regulations. This database provides information on the mill name, geographical location and sub-lethal toxicity data.

Government Publication Date: 1992-2007*

ERIS Historical Searches:

Private

[EHS](#)

ERIS has compiled a database of all environmental risk reports completed since March 1999. Available fields for this database include: site location, date of report, type of report, and search radius. As per all other databases, the ERIS database can be referenced on both the map and "Statistical Profile" page.

Government Publication Date: 1999-Sep 30, 2023

Environmental Issues Inventory System:

Federal

[EIS](#)

The Environmental Issues Inventory System was developed through the implementation of the Environmental Issues and Remediation Plan. This plan was established to determine the location and severity of contaminated sites on inhabited First Nation reserves, and where necessary, to remediate those that posed a risk to health and safety; and to prevent future environmental problems. The EIS provides information on the reserve under investigation, inventory number, name of site, environmental issue, site action (Remediation, Site Assessment), and date investigation completed.

Government Publication Date: 1992-2001*

Alberta Environment & Parks Storage Tanks:

Provincial

[EPST](#)

List of storage tanks under the purview of Alberta Environment and Parks.

Government Publication Date: Jul 31, 2016

Environment Protection & Enhancement Act and Water Act Public Notices:

Provincial

[EPWN](#)

A list of Public Notices of Applications, Decisions, and Revisions pertaining to applications made to Alberta Environment and Parks under the Water Act (WA) and Alberta Environment Protection and Enhancement Act (EPEA). Dominion Land Survey (DLS) locations provided by the source are subject to accuracy limitations inherent to the DLS system.

Government Publication Date: Sep 30, 2022

Environmental Site Assessment Repository:

Provincial

[ESAR](#)

Environmental site assessments determine the quality of soil and groundwater of a site, particularly at retail gas stations and other commercial and industrial sites. A site assessment does not necessarily mean a site is, or ever was, contaminated. Alberta's Environmental Site Assessment Repository (ESAR) is an online, searchable database that provides scientific and technical information about assessed and/or reclaimed sites throughout Alberta. Search Alberta's ESAR using meridian, range, township, and section values at <http://www.esar.alberta.ca/esarmain.aspx> to gain access to reclamation certificates and/or associated files (applications, reports).

Government Publication Date: 1960-Jul 2023

Edmonton Vehicle Fueling Stations:

Provincial

[ETNK](#)

A list of sites that have a City of Edmonton business license for Vehicle Fueling Stations. Listing made available by the City of Edmonton.

Government Publication Date: Feb 28, 2023

Facility List:

Provincial

[FAC](#)

This database contains a complete list of new, active and suspended facilities in Alberta including batteries, gas plants, meter stations, and other facilities. Information provided includes: facility id, facility name, operator name, sub type description, location, facility I license no, and operational status; now includes EDCT (Energy Development Category Type) type and description. Made available by the Alberta Energy Regulator (AER) - formerly the Energy Resources Conservation Board (ERCB).

Government Publication Date: Up to Aug 31, 2023

Federal Convictions:

Federal

FCON

Environment Canada maintains a database referred to as the "Environmental Registry" that details prosecutions under the Canadian Environmental Protection Act (CEPA) and the Fisheries Act (FA). Information is provided on the company name, location, charge date, offence and penalty.

Government Publication Date: 1988-Jun 2007*

Contaminated Sites on Federal Land:

Federal

FCS

The Federal Contaminated Sites Inventory includes information on known federal contaminated sites under the custodianship of departments, agencies and consolidated Crown corporations as well as those that are being or have been investigated to determine whether they have contamination arising from past use that could pose a risk to human health or the environment. The inventory also includes non-federal contaminated sites for which the Government of Canada has accepted some or all financial responsibility. It does not include sites where contamination has been caused by, and which are under the control of, enterprise Crown corporations, private individuals, firms or other levels of government. Includes fire training sites and sites at which Per- and Polyfluoroalkyl Substances (PFAS) are a concern.

Government Publication Date: Jun 2000-Jun 2023

AER Incidents & Spills:

Provincial

FIS

Received from the Alberta Energy Regulator (AER) - formerly the ERCB (Energy Resources Conservation Board) and EUB (Energy Utilities Board) - this database, which used to be called EISL (Environmental Information System Listing), contains reported environmental incidents beginning in 1975. Descriptions include noise infractions, air quality emissions, oil spills and failures for pipelines, wells, plants, and batteries. Some geographic coordinates have been provided in ATS (Alberta Township Survey system) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the quarter section only.

Government Publication Date: 1975 - Sep 2023

Food Processing Operations - Certificates of Approval:

Provincial

FOOD

This database contains approvals for processes pertaining to the manufacturing of food products. Please note that, as per the source of this database, some of the geographic information may pertain to a head office or mailing address and not necessarily the site of operations to which the certificate applies. Some geographic coordinates have been provided in ATS (Alberta Township Survey system) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the quarter section only.

Government Publication Date: 1993-2012

Federal Identification Registry for Storage Tank Systems (FIRSTS):

Federal

FRST

A list of federally regulated Storage tanks from the Federal Identification Registry for Storage Tank Systems (FIRSTS). FIRSTS is Environment and Climate Change Canada's database of storage tank systems subject to the Storage Tank for Petroleum Products and Allied Petroleum Products Regulations. The main objective of the Regulations is to prevent soil and groundwater contamination from storage tank systems located on federal and aboriginal lands. Storage tank systems that do not have a valid identification number displayed in a readily visible location on or near the storage tank system may be refused product delivery.

Government Publication Date: Oct 31, 2021

Fuel Storage Tanks:

Provincial

FST

List tank sites in unaccredited areas of the Province. Includes active tank sites, sites with tanks temporarily out of service, and sites at which tanks have been removed from the ground. Information in this database was collected according to Alberta Regulation AR 291/95 Storage Tank System Management and to AR 52/98 Fire Code which was formerly the Alberta Fire Code Regulation, 1992 (AR 204/92). The Petroleum Tank Management Association of Alberta (PTMAA) regulated Storage Tanks in unaccredited areas of Alberta from 1994 until June 2020, at which point the Safety Codes Council assumed responsibility for services related to storage tank management.

Government Publication Date: 1985-Sep 2023

Waste Generators Summary:

Provincial

GEN

Under Alberta's Waste Control Regulation, Alta. Reg. 192/96, a generator is a person who consigns hazardous waste for storage, transport, treatment or disposal. As of 2007, Alberta Environment no longer provides detailed information on each waste generator, such as approval number, class, and class description.

Government Publication Date: 1993-Aug 2018

Greenhouse Gas Emissions from Large Facilities:

Federal

GHG

List of greenhouse gas emissions from large facilities made available by Environment Canada. Greenhouse gas emissions in kilotonnes of carbon dioxide equivalents (kt CO2 eq).

Government Publication Date: 2013-Dec 2020

Gas Processing Plants:

Provincial

GPP

The Alberta Energy Regulator (AER) - formerly the ERCB (Energy Resources Conservation Board) - has an inventory of all Gas Processing Plants in Alberta, with information such as location, names of plant, facility type, operator name, facility license, design capacities, etc.

Government Publication Date: Oct 2016-Aug 31, 2022

Alberta Environment's H.E.L.P. (Help End Landfill Pollution) Program Database:

Provincial

[HELP](#)

The H.E.L.P. Data Tracking and Management Control System was created to provide tracking and management capabilities of industrial landfills in Alberta for the Department of Environment. Detailed information including company name, location, type of landfill, priority, score, status, use and much more is included in this database.

Government Publication Date: June 1988*

Horizontal Wells:

Provincial

[HORW](#)

A horizontal well is created by drilling the lower part of the wellbore parallel to the zone of interest. These wells must be drilled directionally at an angle exceeding 80 degrees. Horizontal drilling can help increase resource recovery while minimizing surface impacts. While horizontal drilling has been used for decades, technological improvements have made it possible to combine horizontal drilling with hydraulic fracturing to help coax oil and natural gas out of tight rock. Today, more than half of western Canada's wells are being drilled horizontally. Horizontal well list includes: well location, licence number, well name, licensee name, final drilling date, total depth, and true vertical depth. List is made available by the Alberta Energy Regulator (AER) - formerly the Energy Resources Conservation Board (ERCB).

Government Publication Date: Mar 2015-Aug 31, 2023

Indian & Northern Affairs Fuel Tanks:

Federal

[IAFT](#)

The Department of Indian & Northern Affairs Canada (INAC) maintains an inventory of aboveground & underground fuel storage tanks located on both federal and crown land. Our inventory provides information on the reserve name, location, facility type, site/facility name, tank type, material & ID number, tank contents & capacity, and date of tank installation.

Government Publication Date: 1950-Aug 2003*

Identification and Verification of Active and Inactive Land Disposal Sites:

Provincial

[LDS](#)

In late 1981, Environment Canada and Alberta Environment initiated a project to identify and verify land disposal sites in the province of Alberta. A point scoring system was used to classify the sites into potential priority 1, priority 2 or priority 3 groups on the basis of the type of waste received at the sites and the site environment. Sites that, according to available information, may pose a hazard to public health and safety or the environment are classified as potential priority 1 sites.

Government Publication Date: Oct 1982*

Land Disposal Sites on Indian Reserves:

Provincial

[LDSI](#)

In late 1981, Environment Canada and Alberta Environment initiated a project to identify and verify land disposal sites in the province of Alberta. This database specifically identifies land disposal sites on Indian Reserves. Information on each site is limited to: location, band, size and general comments.

Government Publication Date: Oct 1982*

Landfill Registrations:

Provincial

[LNDF](#)

A list of landfill registrations made available by Alberta Environment and Parks (AEP). Landfills operating under a registration are required to follow the requirements in the Code of Practice for Landfills, which outlines the minimum requirements for the construction, operation and reclamation of landfills that accept 10,000 tonnes or less per year of non-hazardous and inert waste.

Government Publication Date: Mar 31, 2020

Lumber Related Operations - Certificates of Approval:

Provincial

[LUM](#)

This database contains approvals for processes pertaining to the manufacturing of wood products, pulp and paper including the associated water treatment processes. Please note that, as per the source of this database, some of the geographic information may pertain to a head office or mailing address and not necessarily the site of operations to which the certificate applies. Some geographic coordinates have been provided in ATS (Alberta Township Survey system) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the quarter section only.

Government Publication Date: 1993-2012

Canadian Mine Locations:

Private

[MINE](#)

This information is collected from the Canadian & American Mines Handbook. The Mines database is a national database that provides over 290 listings on mines (listed as public companies) dealing primarily with precious metals and hard rocks. Listed are mines that are currently in operation, closed, suspended, or are still being developed (advanced projects). Their locations are provided as geographic coordinates (x, y and/or longitude, latitude). As of 2002, data pertaining to Canadian smelters and refineries has been appended to this database.

Government Publication Date: 1998-2009*

Metals, Minerals and Building Materials Operations - Certificates of Approval:

Provincial

[MMB](#)

This database contains approvals for processes pertaining to the manufacturing of building materials, metals, and mineral products. Please note that, as per the source of this database, some of the geographic information may pertain to a head office or mailing address and not necessarily the site of operations to which the certificate applies. Some geographic coordinates have been provided in ATS (Alberta Township Survey system) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the quarter section only.

Government Publication Date: 1993-2012

Mineral Occurrences:

Provincial

MNR

The AMDO (Alberta Mineral Deposits and Occurrences) application was created by the Minerals and Coal Geoscience Section of the Alberta Geological Survey as a database for mineral deposits in Alberta in the early 1990s. This is a one time inventory and will not be updated.

Government Publication Date: 1993-2003*

National Analysis of Trends in Emergencies System (NATES):

Federal

NATE

In 1974 Environment Canada established the National Analysis of Trends in Emergencies System (NATES) database, for the voluntary reporting of significant spill incidents. The data was to be used to assist in directing the work of the emergencies program. NATES ran from 1974 to 1994. Extensive information is available within this database including company names, place where the spill occurred, date of spill, cause, reason and source of spill, damage incurred, and amount, concentration, and volume of materials released.

Government Publication Date: 1974-1994*

PTMAA Non-Compliant Storage Tanks:

Provincial

NCST

The Alberta Fire Code requires that storage tanks be registered. Tanks may not be registered because they do not meet minimum equipment standards or the owners have not made the annual registration application or paid the necessary registration fees. Some tank owners have installed tanks without a permit. This source contains information on facilities which have tanks that have ceased to be registered or have never been registered. It is maintained and updated by the Petroleum Tank Management Association of Alberta (PTMAA).

Government Publication Date: Sep 2016-May 31, 2020

National Defense & Canadian Forces Fuel Tanks:

Federal

NDFT

The Department of National Defense and the Canadian Forces maintains an inventory of all aboveground & underground fuel storage tanks located on DND lands. Our inventory provides information on the base name, location, tank type & capacity, tank contents, tank class, date of tank installation, date tank last used, and status of tank as of May 2001. This database will no longer be updated due to the new National Security protocols which have prohibited any release of this database.

Government Publication Date: Up to May 2001*

National Defense & Canadian Forces Spills:

Federal

NDSP

The Department of National Defense and the Canadian Forces maintains an inventory of spills to land and water. All spill sites have been classified under the "Transportation of Dangerous Goods Act - 1992". Our inventory provides information on the facility name, location, spill ID #, spill date, type of spill, as well as the quantity of substance spilled & recovered.

Government Publication Date: Mar 1999-Oct 2022

National Defence & Canadian Forces Waste Disposal Sites:

Federal

NDWD

The Department of National Defence and the Canadian Forces maintains an inventory of waste disposal sites located on DND lands. Where available, our inventory provides information on the base name, location, type of waste received, area of site, depth of site, year site opened/closed and status.

Government Publication Date: 2001-Apr 2007*

National Energy Board Pipeline Incidents:

Federal

NEBI

Locations of pipeline incidents from 2008 to present, made available by the Canada Energy Regulator (CER) - previously the National Energy Board (NEB). Includes incidents reported under the Onshore Pipeline Regulations and the Processing Plant Regulations related to pipelines under federal jurisdiction, does not include incident data related to pipelines under provincial or territorial jurisdiction.

Government Publication Date: 2008-Jun 30, 2021

National Energy Board Wells:

Federal

NEBP

The NEBW database contains information on onshore & offshore oil and gas wells that are outside provincial jurisdiction(s) and are thereby regulated by the National Energy Board. Data is provided regarding the operator, well name, well ID No./UWI, status, classification, well depth, spud and release date.

Government Publication Date: 1920-Feb 2003*

National Environmental Emergencies System (NEES):

Federal

NEES

In 2000, the Emergencies program implemented NEES, a reporting system for spills of hazardous substances. For the most part, this system only captured data from the Atlantic Provinces, some from Quebec and Ontario and a portion from British Columbia. Data for Alberta, Saskatchewan, Manitoba and the Territories was not captured. However, NEES is also a repository for previous Environment Canada spill datasets. NEES is composed of the historic datasets 'or Trends' which dates from approximately 1974 to present. NEES Trends is a compilation of historic databases, which were merged and includes data from NATES (National Analysis of Trends in Emergencies System), ARTS (Atlantic Regional Trends System), and NEES. In 2001, the Emergencies Program determined that variations in reporting regimes and requirements between federal and provincial agencies made national spill reporting and trend analysis difficult to achieve. As a consequence, the department has focused efforts on capturing data on spills of substances which fall under its legislative authority only (CEPA and FA). As such, the NEES database will be decommissioned in December 2004.

Government Publication Date: 1974-2003*

National PCB Inventory:

Federal

[NPCB](#)

Environment Canada's National PCB inventory includes information on in-use PCB containing equipment in Canada including federal, provincial and private facilities. Federal out-of-service PCB containing equipment and PCB waste owned by the federal government or by federally regulated industries such as airlines, railway companies, broadcasting companies, telephone and telecommunications companies, pipeline companies, etc. are also listed. Although it is not Environment Canada's mandate to collect data on non-federal PCB waste, the National PCB inventory includes some information on provincial and private PCB waste and storage sites. Some addresses provided may be Head Office addresses and are not necessarily the location of where the waste is being used or stored.

Government Publication Date: 1988-2008*

National Pollutant Release Inventory 1993-2020:

Federal

[NPR2](#)

The National Pollutant Release Inventory (NPRI) is Canada's public inventory of pollutant releases (to air, water and land), disposals, and transfers for recycling. The inventory, managed by Environment and Climate Change Canada, tracks over 300 substances. Under the authority of the Canadian Environmental Protection Act (CEPA), owners or operators of facilities that meet published reporting requirements are required to report to the NPRI.

Government Publication Date: Sep 2020

National Pollutant Release Inventory - Historic:

Federal

[NPRI](#)

Environment Canada has defined the National Pollutant Release Inventory ("NPRI") as a federal government initiative designed to collect comprehensive national data regarding releases to air, water, or land, and waste transfers for recycling for more than 300 listed substances. This data holds historic records; current records are found in NPR2.

Government Publication Date: 1993-May 2017

Operating and Abandoned Mines:

Provincial

[OAM](#)

This data is based on the 2001 edition (revised in 2003), published by the Alberta Energy and Utilities Board (EUB) now the Alberta Energy Regulator (AER). It was a one time inventory of Operating and Abandoned Coal Mines in Alberta. In 1905, Alberta began to catalogue coal mines by assigning a unique number to each operation. This database will provide information on location, mine #, mine name, mine company, life span, amount of coal produced, depth, thickness and other important information concerning the mine.

Government Publication Date: 2001, 2003*

Oil and Gas Facilities - ST102 & ST50:

Provincial

[OGF](#)

This list of batteries, gas plants, meter stations, and other facilities in the province of Alberta, made available as Reports ST102 (Parts A and B) and ST50 (A and B), is provided by the Alberta Energy Regulator (AER).

Government Publication Date: Jul 31, 2023

Oil and Gas Wells:

Private

[OGWW](#)

The Nickle's Energy Group (publisher of the Daily Oil Bulletin) collects information on drilling activity including operator and well statistics. The well information database includes name, location, class, status and depth. The main Nickle's database is updated on a daily basis, however, this database is updated on a monthly basis. More information is available at www.nickles.com.

Government Publication Date: 1988-Aug 31, 2023

Enforcement Orders:

Provincial

[ORD](#)

List of enforcement orders issued by Alberta Environment and Parks (AEP). Alberta Environment and Parks encourages compliance with environmental legislation. When individuals, companies, or municipalities fail to comply with legislation, the department has several options to ensure compliance. This listing, made available by the Alberta Government, includes Compliance Orders, Enforcement Orders, Environmental Protection Orders, Orders to Vacate, and Water Management Orders.

Government Publication Date: Jul 31, 2023

Alberta Orphan Wells:

Provincial

[ORP](#)

The Orphan Well Association (OWA) maintains lists of properties designated as orphan by the Alberta Energy Regulator (AER). Includes the location, well ID, licensee name and license number of orphan wells, sites, and facilities that have been identified for the purpose of abandonment, suspension, decommission, and reclamation. Legacy wells under long term care and custody are excluded. Please note that the OWA Orphan List also includes properties with production information from the AER. The OWA makes no representation, warranties, or guarantees, expressed or implied, for the fitness of the data with respect to its use.

Government Publication Date: Jan 2007-Aug 31, 2021

Canadian Pulp and Paper:

Private

[PAP](#)

This information is part of the Pulp and Paper Canada Directory. The Directory provides a comprehensive listing of the locations of pulp and paper mills and the products that they produce.

Government Publication Date: 1999, 2002, 2004, 2005, 2009-2014

Parks Canada Fuel Storage Tanks:

Federal

PCFT

Canadian Heritage maintains an inventory of known fuel storage tanks operated by Parks Canada, in both National Parks and at National Historic Sites. The database details information on site name, location, tank install/removal date, capacity, fuel type, facility type, tank design and owner/operator.

Government Publication Date: 1920-Jan 2005*

Petrochemical, Coal and Gas Operations - Certificates of Approval:

Provincial

PCG

This database contains approvals for processes pertaining to petroleum, coal, and oil and gas processing. Please note that, as per the source of this database, some of the geographic information may pertain to a head office or mailing address and not necessarily the site of operations to which the certificate applies. Some geographic coordinates have been provided in ATS (Alberta Township Survey system) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the quarter section only.

Government Publication Date: 1993-2012

Pesticide Register:

Provincial

PES

This is a list of Registered Pesticide Vendors in Alberta (retail and wholesale). The pesticide vendor list is comprised of vendors who have both audited AWSA pesticide storage facilities as part of their operation, and those vendors that do not have an audited AWSA pesticide storage facilities. Non-audited retail and wholesale vendors may be selling products that are not covered by the AWSA program, or may be utilizing external AWSA pesticide warehouses. Registration numbers and expiry dates are identified for each operation. If a registration number is not present, the operation's vendor registration is in the process of renewal.

Government Publication Date: 1998-Aug 2015

NPRI Reporters - PFAS Substances:

Federal

PFCH

The National Pollutant Release Inventory (NPRI) is Canada's public inventory of releases, disposals, and transfers, tracking over 320 pollutants. Per- and polyfluoroalkyl substances (PFAS) are a group of over 4,700 human-made substances for which adverse environmental and health effects have been observed. This listing of PFAS substance reporters includes those NPRI facilities that reported substances that are found in either: a) the Comprehensive Global Database of PFASs compiled by the Organisation for Economic Co-operation and Development (OECD), b) the US Environmental Protection Agency (US EPA) Master List of PFAS Substances, c) the US EPA list of PFAS chemicals without explicit structures, or d) the US EPA list of PFAS structures (encompassing the largest set of structures having sufficient levels of fluorination to potentially impart PFAS-type properties).

Government Publication Date: Sep 2020

Potential PFAS Handlers from NPRI:

Federal

PFHA

The National Pollutant Release Inventory (NPRI) is Canada's public inventory of releases, disposals, and transfers, tracking over 320 pollutants. Per- and polyfluoroalkyl substances (PFAS) are a group of over 4,700 human-made substances for which adverse environmental and health effects have been observed. This list of potential PFAS handlers includes those NPRI facilities that reported business activity (NAICS code) included in the US Environmental Protection Agency (US EPA) list of Potential PFAS-Handling Industry Sectors, further described as operating in industry sectors where literature reviews indicate that PFAS may be handled and/or released. Inclusion of a facility in this listing does not indicate that PFAS are being manufactured, processed, used, or released by the facility - these are facilities that potentially handle PFAS based on their industrial profile.

Government Publication Date: Sep 2020

Conglomerate and Waste Management Facilities:

Provincial

PITS

This database contains approvals for processes pertaining to the use of gravel pits, sand pits, and clay pits. Please note that, as per the source of this database, some of the geographic information may pertain to a head office or mailing address and not necessarily the site of operations to which the certificate applies. Some geographic coordinates have been provided in ATS (Alberta Township Survey system) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the quarter section only.

Government Publication Date: 1993-2012

Alberta Private Sewage Disposal Permits:

Provincial

PSP

These permits are private sewage disposal permits that have been issued to owners and contractors. They would include various types of installations including holding tanks, septic tanks, packaged treatment plants, sand filters, fields, mounds, lagoons and open discharges. In 2003 Alberta Municipal Affairs started collecting information and issuing permits using an electronic permitting system. These records include all private sewage disposal permits within the jurisdiction of Alberta Municipal Affairs.

Government Publication Date: 2003-2013

PTMAA Approved (Open) Permits:

Provincial

PTAP

The Petroleum Tank Management Association of Alberta maintains a list of open permits it has issued within its jurisdiction. Prior to installing, removing, or altering tanks, storage tanks owners must receive approval in the form of a permit from the Authority Having Jurisdiction (in this case, PTMAA).

Government Publication Date: Apr 2016-Apr 30, 2020

Hazardous Waste Receivers Summary:

Provincial

[REC](#)

A waste receiving location is any site or facility to which waste is transferred through a waste carrier. A receiver of regulated waste is required to register the waste receiving facility. This database represents receivers of regulated wastes under Alberta's Waste Control Regulation, Alta. Reg. 192/96. As of 2007, Alberta Environment no longer provides detailed information on each waste receiver, such as approval number, class, and class description.

Government Publication Date: 1993-Aug 2018

Alberta Recyclers:

Provincial

[RECY](#)

List of Alberta Recyclers under the following recycling programs: electronics processors, paint processors, tire processors, and used oil processors. Listing made available by the Alberta Recycling Management Authority (ARMA).

Government Publication Date: Jul 2023

Retail Fuel Storage Tanks:

Private

[RST](#)

This database includes an inventory of retail fuel outlet locations (including marinas) that have on their property gasoline, oil, waste oil, natural gas and / or propane storage tanks.

Government Publication Date: 1999-Oct 31, 2023

Scott's Manufacturing Directory:

Private

[SCT](#)

Scott's Directories is a data bank containing information on over 200,000 manufacturers across Canada. Even though Scott's listings are voluntary, it is the most comprehensive database of Canadian manufacturers available. Information concerning a company's address, plant size, and main products are included in this database.

Government Publication Date: 1992-Mar 2011*

Special Operation Classifications - Certificates of Approval:

Provincial

[SPEC](#)

This database contains approvals for processes pertaining to classifications listed as special operations (i.e. locations owned/operated by municipalities, operations that involve the presence of pesticides). Please note that, as per the source of this database, some of the geographic information may pertain to a head office or mailing address and not necessarily the site of operations to which the certificate applies. Some geographic coordinates have been provided in ATS (Alberta Township Survey system) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the quarter section only.

Government Publication Date: 1993-2012

Inventory of Waste Disposal Sites:

Private

[WDS](#)

This one time inventory is a compilation of information collected from each region and pertains to active, regulated waste disposal sites within the province of Alberta. In the past, waste disposal sites were registered with both regional and health offices. That process was dissolved and regional landfills were developed. There is no central source of this information. Some geographic coordinates have been provided in ATS (Alberta Township Survey system) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the quarter section only.

Government Publication Date: 1998*

Wastewater Operations:

Provincial

[WSTE](#)

This database contains approvals for processes pertaining to wastewater treatment systems. Please note that, as per the source of this database, some of the geographic information may pertain to a head office or mailing address and not necessarily the site of operations to which the certificate applies. Some geographic coordinates have been provided in ATS (Alberta Township Survey system) format but do not contain offsets that are necessary to pinpoint a specific location. Therefore, locations will be accurate to the quarter section only.

Government Publication Date: 1993-2012

Alberta Water Well Information Database:

Provincial

[WWIS](#)

List of wells in the Alberta Water Well Information Database made available by Alberta Environment and Parks, containing approximately 500,000 records with nearly 5,000 drilling reports added annually. Some geographic coordinates have been provided in ATS (Alberta Township Survey system) format but do not contain offsets that are necessary to pinpoint a specific location; some locations will be accurate to the quarter section only. The Province of Alberta advises that the data may not be fully checked, and disclaims all responsibility for its accuracy. This data was previously collected from the Groundwater Information Center of the Natural Resource Service.

Government Publication Date: 1880-Aug 31, 2023

Definitions

Database Descriptions: This section provides a detailed explanation for each database including: source, information available, time coverage, and acronyms used. They are listed in alphabetic order.

Detail Report: This is the section of the report which provides the most detail for each individual record. Records are summarized by location, starting with the project property followed by records in closest proximity.

Distance: The distance value is the distance between plotted points, not necessarily the distance between the sites' boundaries. All values are an approximation.

Direction: The direction value is the compass direction of the site in respect to the project property and/or center point of the report.

Elevation: The elevation value is taken from the location at which the records for the site address have been plotted. All values are an approximation. Source: Google Elevation API.

Executive Summary: This portion of the report is divided into 3 sections:

'Report Summary'- Displays a chart indicating how many records fall on the project property and, within the report search radii.

'Site Report Summary'-Project Property'- This section lists all the records which fall on the project property. For more details, see the 'Detail Report' section.

'Site Report Summary-Surrounding Properties'- This section summarizes all records on adjacent properties, listing them in order of proximity from the project property. For more details, see the 'Detail Report' section.

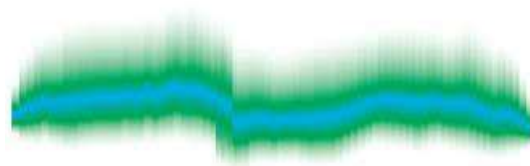
Map Key: The map key number is assigned according to closest proximity from the project property. Map Key numbers always start at #1. The project property will always have a map key of '1' if records are available. If there is a number in brackets beside the main number, this will indicate the number of records on that specific property. If there is no number in brackets, there is only one record for that property.

The symbol and colour used indicates 'elevation': the red inverted triangle will dictate 'ERIS Sites with Lower Elevation', the yellow triangle will dictate 'ERIS Sites with Higher Elevation' and the orange square will dictate 'ERIS Sites with Same Elevation.'

Unplottables: These are records that could not be mapped due to various reasons, including limited geographic information. These records may or may not be in your study area, and are included as reference.

APPENDIX H

AEP Approvals

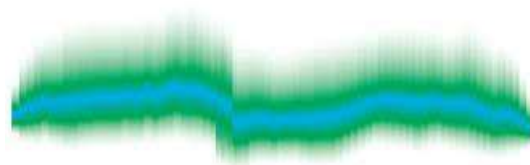


Bifrost

Environmental and Remediation Services Inc.

APPENDIX H₁

Alberta EPA – Approval Notices Reclamation




Bifrost

Environmental and Remediation Services Inc.


[Authorization Viewer](#)
[Traditional Agriculture Registration Viewer](#)
[Public Notices Viewer](#)
[Help](#)

Authorization Viewer - Search Results

 For Water Act approvals, amendments and Code of Practice notifications issued by the Alberta Energy Regulator during or after 2018, please refer to the following link [OneStop Application Query Tool \(aer.ca\)](#).

The Search Used the Following Values:

Legal Land Location: SE 03-033-01-W5
Act / Document Type: Water Act, EPEA
Show Inactive Authorizations: Yes

The resulting Authorizations based on the search criteria will be displayed below. A  will appear next to the Authorization when documentation is available for viewing or downloading. Please click [Viewer Help](#) if you encounter problems viewing the Authorization document.

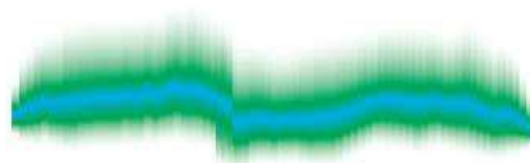
2 Result(s)

	Document 00122969-00-00 MPCL CDN-SUP OLDS 7-3-33-1 WELL AND ACCESS ROAD is held by Repsol Oil & Gas Canada Inc., under the provisions of the <i>Environmental Protection & Enhancement Act</i> . This Reclamation Certificate is currently issued as of May. 31, 1979 and does not expire.
	Document 00223038-00-00 LONEPINE WEST TORRINGTON GATHERING SYSTEM PIPELINE PROJECT is held by Paramount Resources (ACL) Ltd., under the provisions of the <i>Environmental Protection & Enhancement Act</i> . This Approval is currently expired and renewable.

Clear & Return

APPENDIX H2

Alberta EPA – Approval Notices Pipeline




Bifrost

Environmental and Remediation Services Inc.

[Authorization Viewer](#)
[Traditional Agriculture Registration Viewer](#)
[Public Notices Viewer](#)
[Help](#)

Authorization Viewer - Search Results

 For Water Act approvals, amendments and Code of Practice notifications issued by the Alberta Energy Regulator during or after 2018, please refer to the following link [OneStop Application Query Tool \(aer.ca\)](#).

The Search Used the Following Values:

Legal Land Location: SE 03-033-01-W5
Act / Document Type: Water Act, EPEA
Show Inactive Authorizations: Yes

The resulting Authorizations based on the search criteria will be displayed below. A  will appear next to the Authorization when documentation is available for viewing or downloading. Please click [Viewer Help](#) if you encounter problems viewing the Authorization document.

2 Result(s)

	Document 00122969-00-00 MPCL CDN-SUP OLDS 7-3-33-1 WELL AND ACCESS ROAD is held by Repsol Oil & Gas Canada Inc., under the provisions of the <i>Environmental Protection & Enhancement Act</i> . This Reclamation Certificate is currently issued as of May, 31, 1979 and does not expire.
	Document 00223038-00-00 LONEPINE WEST TORRINGTON GATHERING SYSTEM PIPELINE PROJECT is held by Paramount Resources (ACL) Ltd., under the provisions of the <i>Environmental Protection & Enhancement Act</i> . This Approval is currently expired and renewable.

[Clear & Return](#)

APPROVAL
PROVINCE OF ALBERTA
ENVIRONMENTAL PROTECTION AND ENHANCEMENT ACT
R.S.A. 2000, c.E-12, as amended

APPLICATION NO. 001-223038

APPROVAL NO. 223038-00-00

EFFECTIVE DATE. January 17, 2006

EXPIRY DATE. January 16, 2011

APPROVAL HOLDER. Apache Canada Ltd.

Pursuant to Division 2, Part 2, of the Environmental Protection and Enhancement Act, R.S.A. 2000, c.E-12, as amended, approval is granted subject to the attached terms and conditions for the following activity:

the construction and reclamation of a pipeline being the Lonepine / Torrington Gas Gathering System Pipeline Project.

Designated Director under the Act
David L. Ardell, P. Eng.

Date signed
January 17, 2006

PART 1: DEFINITIONS

- 1.1 All definitions from the **Act** and the **regulations** apply except where expressly defined in this approval.
- 1.2 In all PARTS of this approval:
- (a) "**Act**" means the Environmental Protection and Enhancement Act, R.S.A. 2000, c.E-12, as amended;
 - (b) "**application**" means the written submissions to the **Director** in respect of application number 001-223038 and any subsequent amendments of approval number 223038-00-00;
 - (c) "**Director**" means an employee of the Government of Alberta designated as a Director under the Act;
 - (d) "**domestic wastewater**" means any water or materials produced by the collection and containment of sanitary sewage and effluent;
 - (e) "**grab sample**" means an individual sample collected in less than 30 minutes and which is representative of the substance sampled;
 - (f) "**industrial wastewater**" means the water and water-carried wastes produced by any industrial process for construction or reclamation carried on, within or immediately adjacent to the **pipeline alignment**, including captured surface runoff from adjacent undisturbed areas or any water that accumulates in the pipe trench, but does not include **domestic wastewater**.
 - (g) "**Inspector**" means an employee of the Government of Alberta designated as an Inspector or an Investigator under the Act;
 - (h) "**overstrip**" means a soil handling procedure where **topsoil** and **upper subsoil** are removed together.
 - (i) "**pipeline alignment**" means the approved route and all surface disturbances resulting from the construction or reclamation of the pipeline;
 - (j) "**problem soils**" means a soil map unit where there is a significant difference in soil quality between the **upper subsoil** and the **spoil**;
 - (k) "**regulations**" means the regulations issued pursuant to the **Act**, as amended;
 - (l) "**spoil**" means any material below the **topsoil** and **upper subsoil** layers removed during excavation of the trench;
 - (m) "**three-lift**" means a soil handling procedure for **problem soils** where the **topsoil**, **upper subsoil** and **spoil** are individually salvaged, stored and replaced in three separate layers;

- (n) **"topsoil"** means the uppermost layer of soil that:
 - (i) is normally referred to as the plough layer in agricultural soils;
 - (ii) is typically darker in colour than the **upper subsoil** layer; and
 - (iii) consists of the **A** horizons as defined in *The System of Soil Classification for Canada, Second Edition, 1987*;
- (o) **"two-lift"** means a soil handling procedure where the **topsoil** is salvaged, stored and replaced separately from the **upper subsoil** and **spoil** which are salvaged, stored and replaced together; and
- (p) **"upper subsoil"** means, in **problem soils**, the layer of soil directly below the **topsoil** layer that:
 - (i) contains roots or the root zone;
 - (ii) is typically lighter in colour than the **topsoil** layer;
 - (iii) consists of the **B** horizons as defined in *The System of Soil Classification for Canada, Second Edition, 1987*; and
 - (iv) extends no more than 50 centimetres below the **topsoil** layer;
- (q) **"waste"** means any solid or liquid material or product or combination of them, but does not include hazardous waste that is intended to be disposed of, or that is intended to be stored and then disposed of.

PART 2: GENERAL

2.1 General

- 2.1.1 The approval holder shall immediately report by telephone any contravention of the terms and conditions of this approval to the Director at 1-780-422-4505.
- 2.1.2 Any conflict between the **application** or any document and the terms and conditions of this approval shall be resolved in favour of the approval.
- 2.1.3 The terms and conditions of this approval do not affect any rights or obligations created under any other approval issued by Alberta Environment.
- 2.1.4 The mention of trade names, commercial products or named technologies in this approval does not constitute an endorsement or recommendation by Her Majesty the Queen in Right of Alberta, her employees and agents, and the **Director** for general use.
- 2.1.5 The terms and conditions of this approval are severable. If any term or condition of this approval or the application of any term or condition is held invalid, the application of such term or condition to other circumstances and the remainder of this approval shall not be affected thereby.
- 2.1.6 The approval holder shall notify the **Director** in writing within 30 days of all changes in the corporate status of the approval holder.
- 2.1.7 If the approval holder monitors for any substance or parameters which are the subject of operational limits as set out in this approval more frequently than is required and using

procedures authorized in this approval, then the approval holder shall provide the results of such monitoring as an addendum to the reports required by this approval.

- 2.1.8 All abbreviations used in this approval follow those given in *Standard Methods for the Examination of Water and Wastewater* published jointly by the American Public Health Association, the American Water Works Association, and the Water Environment Federation, as amended, or as otherwise specified in this approval.
- 2.1.9 Where the approval holder contracts for the provision of services during construction and reclamation of the pipeline, the approval holder shall ensure that:
- (a) contractors and sub-contractors are provided with a copy of the approval terms and conditions that are pertinent to the service provided by the contractor or sub-contractor;
 - (b) contractors and sub-contractors are provided with a copy of the section of the environmental protection plan pertinent to the service provided by the contractor or sub-contractor; and
 - (c) contractors and sub-contractors authorize a person or persons to halt a construction or reclamation activity in circumstances where, in the judgement of that person or persons, the construction or reclamation activity is not being conducted in accordance with the approval terms and conditions or sections of the environmental protection plan.
- 2.1.10 At least seven days prior to the commencement of construction, the approval holder shall notify the regional **Inspector** of commencement of construction.

2.2 Record Keeping

- 2.2.1 The approval holder shall record and retain all the following information for a minimum of five years:
- (a) the names and addresses of all persons who discover any contravention of the **Act**, the **regulations** or this approval;
 - (b) the names and addresses of all persons who take any remedial action arising from the contravention of the **Act**, the **regulations** or this approval; and
 - (c) a detailed description of any remedial measures taken in respect of a contravention of the **Act**, the **regulations** or this approval.
- 2.2.2 The approval holder shall record and retain all of the following information in respect of any sampling for a minimum of five years:
- (a) the place, date and time of sampling;
 - (b) the dates the analyses were performed
 - (c) the analytical techniques, methods or procedures used in the analyses;
 - (d) the names of the persons who collected and analyzed each sample; and

- (e) the results of the analyses.

2.3 Analytical Requirements

2.3.1 Collection and analysis of samples shall be conducted in the following manner, unless otherwise specified in writing by the **Director**:

- (a) for **industrial wastewater**, groundwater, waterworks and **domestic wastewater** parameters:
 - (i) *Standard Methods for the Examination of Water and Wastewater*, American Public Health Association, American Water Works Association, Water Environment Federation, as amended, or
 - (ii) *Methods Manual for Chemical Analysis of Water and Wastes*, Alberta Environmental Centre, as amended.

PART 3: CONSTRUCTION

3.1 Land Conservation

Soil Conservation

3.1.1 The approval holder shall salvage soil materials from the **pipeline alignment** using one or more of the following soil handling procedures:

- (a) a **two-lift** soil handling procedure with **topsoil** salvage depths and widths as described in the **application**; or
- (b) a **three-lift** soil handling procedure with **topsoil** and **upper subsoil** salvage depths and widths as described in the **application**; or
- (c) an **overstrip** soil handling procedure with combined **topsoil** and **upper subsoil** salvage depths and widths as described in the **application**; or
- (d) any other soil handling procedures with **topsoil** or **upper subsoil** salvage depths and widths as described in the **application**; or
- (e) any other soil handling procedures with **topsoil** or **upper subsoil** salvage depths and widths as directed in writing by an **Inspector**.

Suspension of Soil Handling

3.1.2 The approval holder shall immediately suspend the salvage or replacement of any **topsoil** and **upper subsoil** when:

- (a) wet or frozen field conditions would result in the degradation or loss of **topsoil** or **upper subsoil**; or
- (b) wind velocity creates the potential for loss of **topsoil** or **upper subsoil**; or

- (c) any other field condition or pipeline construction method could result in the degradation or loss of **topsoil** or **upper subsoil**; or
 - (d) an **Inspector** provides written direction to do so.
- 3.1.3 The approval holder shall only recommence the salvage or replacement of **topsoil** or **upper subsoil** when the conditions specified in 3.1.2 no longer exist or when directed in writing by an **Inspector**.

Stockpiling Soil Material

- 3.1.4 The approval holder shall, when using an **overstrip** soil handling procedure, stockpile all salvaged **topsoil** admixed with **upper subsoil** separately from **spoil**.
- 3.1.5 The approval holder shall, when using **two-lift** soil handling procedures, stockpile separately all salvaged **topsoil** and **spoil**.
- 3.1.6 The approval holder shall, when using **three-lift** soil handling procedures, stockpile separately all salvaged **topsoil**, **upper subsoil** and **spoil**.
- 3.1.7 The approval holder shall stockpile salvaged **topsoil**, **upper subsoil** and **spoil** on the **pipeline alignment** at the locations described in the **application** or at any alternative locations when directed in writing by an **Inspector**.
- 3.1.8 The approval holder shall stockpile salvaged **topsoil**, **upper subsoil** and **spoil** as follows:
- (a) all stockpiles shall be separated from each other as described in the **application**;
 - (b) all stockpile foundations shall be stable; and
 - (c) all stockpiles shall be stabilized to prevent wind and water erosion.

Frozen or Unfrozen Soil Conditions

- 3.1.9 The approval holder shall only use the appropriate soil handling procedures for frozen or unfrozen ground conditions, as described in the **application**, unless otherwise authorized in writing by the **Director**.

Problem Soils

- 3.1.10 The approval holder shall determine the appropriate soil handling procedures for any **problem soils** encountered along the **pipeline alignment** that were not described in the **application** by:
- (a) consulting the *Guidelines For Alternative Soil Handling Procedures During Pipeline Construction*, Alberta Pipeline Environmental Steering committee, June 1996; and
 - (b) obtaining written direction from an **Inspector** before changing any soil handling procedures described in the **application**.

Erosion Control

3.1.11 The approval holder shall use all necessary erosion control measures to prevent the loss of **topsoil** and **upper subsoil** during construction and reclamation.

Water Crossings

3.1.12 The approval holder shall ensure that the flow of water, if present in a watercourse, is maintained during the construction and reclamation of any water crossing.

3.1.13 The approval holder shall, unless otherwise authorized in writing by the **Inspector**, maintain an undisturbed buffer strip of at least thirty metres from:

- (a) the top of the bank of the watercourse or waterbody; or
- (b) the watercourse or waterbody edge if the banks are poorly defined.

3.1.14 The approval holder shall, when using any open-cut water crossing procedure, stockpile all salvaged **topsoil**, **upper subsoil** or **spoil** at least three metres from:

- (a) the watercourse top of bank; or
- (b) the watercourse edge if the drainage channel is poorly defined.

3.1.15 The approval holder shall, when making any open-cut water crossing, ensure that all stockpiled **spoil** is contained by using berms or a similar isolation technique.

3.1.16 The approval holder shall not clear, grub or excavate within an undisturbed buffer strip except when directed in writing by an **Inspector**.

3.1.17 The approval holder shall use existing water crossings for equipment and vehicles, unless otherwise directed in writing by an **Inspector**.

3.1.18 The approval holder shall not allow any equipment or vehicles to enter a watercourse before a temporary water crossing is in place.

3.1.19 The approval holder shall follow the *Code of Practice for Pipelines and Telecommunication Lines Crossing a Waterbody* and the *Code of Practice for Watercourse Crossings*, Alberta Environment, May 2000 as amended.

3.1.20 The approval holder shall obtain a Temporary Diversion Licence as required pursuant to the *Water Act* for any activity requiring the diversion of water.

3.2 Waste Management

3.2.1 The approval holder shall ensure that all **waste** is disposed of in an approved waste management facility during construction or stored safely on the **pipeline alignment** and removed for disposal to an approved waste management facility.

3.2.2 The approval holder shall not bury any **waste** within or adjacent to the **pipeline alignment**.

3.3 Domestic Wastewater

- 3.3.1 The approval holder shall collect, contain and remove all **domestic wastewater** for disposal using:
- (a) portable **domestic wastewater** facilities; or
 - (b) an approved municipal **domestic wastewater** system; or
 - (c) any other manner authorized in writing by the **Director**.

3.4 Industrial Wastewater

- 3.4.1 The approval holder shall only discharge **industrial wastewater** directly to a water body or watercourse or onto adjacent undisturbed land in accordance with this approval.
- 3.4.2 The approval holder shall use energy dissipaters or other erosion control methods when discharging **industrial wastewater** onto adjacent undisturbed land.
- 3.4.3 The approval holder shall not exceed the limits described in TABLE 3-1 when discharging or releasing any **industrial wastewater** directly to a water body or a watercourse, or indirectly by release or discharge onto undisturbed land that will reach a water body or watercourse.
- 3.4.4 The approval holder shall monitor all discharges or releases of **industrial wastewater** to a water body or a watercourse as described in TABLE 3-1.
- 3.4.5 The approval holder shall control the discharge or release of any **industrial wastewater** from the **pipeline alignment** to the surrounding watershed in such a manner that the discharge or release does not result in the erosion or flooding of:
- (a) adjacent undisturbed land;
 - (b) the bed and banks of a receiving watercourse;
 - (c) the shoreline of a receiving water body; and
 - (d) the discharge water channel.
- 3.4.6 The approval holder shall construct any temporary bulk fuel storage or transfer area, within or adjacent to the pipeline alignment, in accordance with the *Guidelines for Secondary Containment for Above Ground Storage Tanks*, Alberta Environmental Protection, 1997, as amended.

TABLE 3-1 Limits and Monitoring - Industrial Wastewater

Parameter	Limits (maximum daily)	Sample Type	Frequency	Sample Location
Total Suspended Solids	50 mg/L	Grab	Prior to discharge and weekly	release point
pH	6.0 - 9.5 pH units	Grab	Prior to discharge and weekly	release point
Oil or other substances	no visible sheen	Visual Observation	Daily	release point
Floating Solids	None – except in trace amounts	Visual Observation	Daily	release point
Visible Foam	None – except in trace amounts	Visual Observation	Daily	release point

Hydrostatic Test Water

3.4.7 The approval holder shall follow the *Code of Practice for the Release of Hydrostatic Test Water from Hydrostatic Testing of Liquid Petroleum and Natural Gas Pipelines*, Alberta Environmental Protection, September 1996 as amended.

PART 4: RECLAMATION

4.1 General

- 4.1.1 The approval holder shall make every effort to progressively reclaim the **pipeline alignment** when pipeline construction is completed, unless the timing of clean-up and reclamation has been scheduled in the **application** to accommodate frozen or unfrozen ground conditions.
- 4.1.2 The approval holder shall dismantle and remove all works, buildings, structures, facilities, equipment, apparatus or machinery used during construction or reclamation that will not be used for the operation of the pipeline.
- 4.1.3 The approval holder shall reclaim all constructed access roads for the **pipeline alignment** that are not remaining as surface improvements or as a designated property access.
- 4.1.4 The approval holder shall place rollback for access management and erosion control as specified in the **application** or as directed in writing by an **Inspector**.

4.2 Landscape

- 4.2.1 The approval holder shall contour the **pipeline alignment** so that it is comparable with pre-disturbance conditions and the adjacent undisturbed land unless otherwise directed in writing by an **Inspector**.
- 4.2.2 The approval holder shall establish drainage on the **pipeline alignment** that is compatible with existing drainage on the adjacent undisturbed land.

4.3 Soil Reconstruction and Compaction

- 4.3.1 The approval holder shall replace all salvaged soil materials from the **pipeline alignment** as follows, unless otherwise authorized in writing by the **Inspector**:
- (a) all **spoil** shall be replaced in the trench and contoured over the trench;
 - (b) all **upper subsoil** shall be spread evenly over the replaced **spoil**; and
 - (c) all **topsoil** shall be spread evenly and contoured over the replaced **upper subsoil** or **spoil**.
- 4.3.2 The approval holder shall alleviate compaction in all replaced **upper subsoil** or **spoil** before **topsoil** replacement. Compacted **upper subsoil** or **spoil** shall be mechanically broken, fractured or shattered to the depth of compaction or 30 centimetres, whichever depth is greater.
- 4.3.3 The approval holder shall alleviate any compaction in replaced **topsoil**. Depth of cultivation or other mechanical treatments shall be controlled to avoid **topsoil** mixing with **upper subsoil** or **spoil**.

4.4 Water Crossings

- 4.4.1 The approval holder shall ensure that the profile of any watercourse crossed by the **pipeline alignment** is restored to profiles similar to pre-disturbance conditions.
- 4.4.2 The approval holder shall ensure that the water crossing approaches for the **pipeline alignment** and the banks of all watercourses open-cut with trenches are contoured comparable with adjacent undisturbed land.
- 4.4.3 The approval holder shall ensure that any constructed pipeline water crossings on watercourses identified in the **application** as having high erosion potential are properly armoured and stabilized or otherwise protected from erosion.

4.5 Final Reclamation

- 4.5.1 The approval holder shall ensure that the size and density of coarse fragments (i.e. gravel, rock or stones) within the reclaimed soil profile and on the contoured surface of the **pipeline alignment** are comparable with the adjacent undisturbed land.
- 4.5.2 The approval holder shall revegetate and stabilize the contoured surface of the **pipeline alignment** with a suitable seed mixture and fertilizer. Other forms of revegetation that are not described in the application shall only be applied when directed in writing by an **Inspector**.
- 4.5.3 The approval holder shall revegetate and stabilize the contoured surface of the **pipeline alignment** crossing any native prairie areas using a certified seed mixture containing only native species. Other forms of revegetation that are not described in the **application**, shall be applied only when directed in writing by an **Inspector** or the landowner.

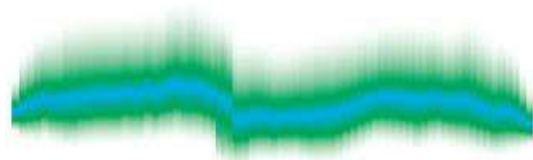
- 4.5.4 The approval holder shall maintain a weed control program until new vegetation on the **pipeline alignment** is re-established and is self-sustaining.
- 4.5.5 The approval holder shall submit a Post-Construction Reclamation Assessment Plan, for authorization by the **Inspector**, on or before April 28, 2006, unless otherwise authorized in writing by the **Inspector**.
- 4.5.6 The Post-Construction Reclamation Assessment Plan described in 4.5.5 shall include, but not be limited to, a description of the assessment timing and the methods to be used to assess reclamation and determine whether equivalent capability has been restored on the **pipeline alignment**, as well as the schedule for the submission of a Post-Construction Reclamation Assessment Report.
- 4.5.7 The approval holder shall implement the Post Construction Reclamation Assessment Plan as authorized in 4.5.5, unless otherwise authorized in writing by the **Inspector**.

January 17, 2006
DATED: _____

DESIGNATED DIRECTOR UNDER THE ACT
DAVID L. ARDELL, P. ENG.

APPENDIX II

AEP Historical Environmental Enforcement Search



Bifrost

Environmental and Remediation Services Inc.

Search enforcements

All search fields are optional.

Accountable Party

1273927 Alberta

Action

All

From (mm/dd/yyyy)

yyyy-mm-dd

To (mm/dd/yyyy)

yyyy-mm-dd

Search enforcements

[Clear filter](#)

Search Results

We found 0 matches using the following search criteria:

Accountable Party: "1273927 Alberta"

Action: All

Date range: Not specified

Search completed on 1/5/2024

Legend: Act codes and names

Act code	Act name
----------	----------

Action: All

Date range: Not specified

Search completed on 1/5/2024

Expand all



Collapse all



Marathon Canada Limited



Action Description: Administrative Penalty

Act Name:

AEPEA 213(e)

Issue/Decision Date (M/D/Y): 8/14/2000

Summary: The company failed to file the Annual Air Emissions Summary and Evaluation report by 15 March 2000 for the Badger gas plant. Penalty paid 10 October 2000.

Penalty: \$1,000.00

Municipality/Legal Land Description:

Vulcan County

5-17-17-W4

Marathon Canada Limited



Action Description: Administrative Penalty

Act Name:

AEPEA 213(e)

Issue/Decision Date (M/D/Y): 2/18/1999

Summary: Company failed to submit the 1997 annual process wastewater report within the timeframe specified in the approval to operate the Twining sour gas plant; paid 01-MAR-1999.

Penalty: \$1,500.00

Municipality/Legal Land Description:

Kneehill County

33-30-24-W4

Marathon Canada Limited



Action Description: Administrative Penalty

Act Name:

Action Description: Administrative Penalty

Issue/Decision Date (M/D/Y): 2/18/1999

Penalty: \$1,500.00

Municipality/Legal Land Description:

Kneehill County

33-30-24-W4

Act Name:

AEPEA 213(e)

Summary: Company failed to submit the 1997 annual process wastewater report within the timeframe specified in the approval to operate the Twining sour gas plant; paid 01-MAR-1999.

Marathon Canada Limited



Action Description: Administrative Penalty

Issue/Decision Date (M/D/Y): 2/18/1999

Penalty: \$9,500.00

Municipality/Legal Land Description:

Vulcan County

5-17-17-W4

Act Name:

AEPEA 213(e)

Summary: Company failed to submit several 1997 and 1998 monthly air emission reports, the 1997 annual air emissions summary, and the 1997 annual wastewater and runoff summary reports within the timeframe specified in the approval to operate the Badger sour gas plant; paid 01-MAR-1999.

All search fields are optional.

Accountable Party

Marathon

Action

All

From (mm/dd/yyyy)

yyyy-mm-dd

To (mm/dd/yyyy)

yyyy-mm-dd

Search enforcements

[Clear filter](#)

Search Results

We found 3 matches using the following search criteria:

Accountable Party: "Marathon"

Action: All

Date range: Not specified

Search completed on 1/5/2024

Expand all

Collapse all

Marathon Canada Limited

Action Description: Administrative Penalty

Issue/Decision Date (M/D/Y): 8/14/2000

Penalty: \$1,000.00

Municipality/Legal Land Description:

Vulcan County

5-17-17-W4

Act Name:

AEPEA 213(e)

Summary: The company failed to file the Annual Air Emissions Summary and Evaluation report by 15 March 2000 for the Badger gas plant. Penalty paid 10 October 2000.

All search fields are optional.

Accountable Party

Marathon

Action

All

From (mm/dd/yyyy)

yyyy-mm-dd

To (mm/dd/yyyy)

yyyy-mm-dd

Search enforcements

Clear filter

Search Results

We found 3 matches using the following search criteria:
Accountable Party: "Marathon"
Action: All
Date range: Not specified

Search completed on 1/5/2024

Expand all	Collapse all
Marathon Canada Limited	
Marathon Canada Limited	
Marathon Canada Limited	

All search fields are optional.

Accountable Party

Neufield

Action

All



From (mm/dd/yyyy)

yyyy-mm-dd



To (mm/dd/yyyy)

yyyy-mm-dd



Search enforcements

[Clear filter](#)

Search Results

We found 0 matches using the following search criteria:

Accountable Party: "Neufield"

Action: All

Date range: Not specified

Search completed on 1/5/2024

Legend: Act codes and names

Act code	Act name
ACA	Agricultural Chemicals Act
AEPEA, AEPEA(R)	Environmental Protection and Enhancement
BCA	Beverage Container Act
CAA	Clean Air Act

Search enforcements

All search fields are optional.

Accountable Party

Olds Golf

Action

All

From (mm/dd/yyyy)

yyyy-mm-dd

To (mm/dd/yyyy)

yyyy-mm-dd

Search enforcements

[Clear filter](#)

Search Results

We found 0 matches using the following search criteria:

Accountable Party: "Olds Golf"

Action: All

Date range: Not specified

Search completed on 1/5/2024

Search Results

We found 1 matches using the following search criteria:

Accountable Party: "Repsol"

Action: All

Date range: Not specified

Search completed on 1/5/2024

Expand all +

Collapse all -

Repsol Oil & Gas Canada Inc. ^

Action Description: Compliance Order

Issue/Decision Date (M/D/Y): 11/24/2022

Municipality/Legal Land Description:

Calgary

Act Name:

EMCRA 133/2019; 12(1)

EMCRA 133/2019; 15(1)

EMCRA 133/2019; 15(4)

Summary: The Party is the holder of Approval no. 277-03-00 for the Edson Gas Plant [the "Site"]. The Site had direct emissions of 100,000 tonnes expressed on a CO2e basis, or more in 2016 or a subsequent year, which means the Site is subject to the Technology Innovation and Emissions Reduction Regulation. An unverified compliance report indicated that the Site's total regulated emissions for 2021 was 189,289 tonnes, expressed on a CO2e basis, which exceeded the Site's allowable emissions for 2021 by 75,454 tonnes of CO2e, which is referred to as the true-up obligation. The Party shall submit a verified compliance report and demonstrate that the Net Emissions do not exceed the Allowable Emissions for 2021 by December 02, 2022; meet the total true-up obligation based on the verified compliance report, and; shall not use an emission offset or emission performance credit to meet the true up obligation, unless the emission offset or emission performance credit was held by them on or before June 30, 2022. Order complied with, file closed.

All search fields are optional.

Accountable Party

Repsol

Action

All

From (mm/dd/yyyy)

yyyy-mm-dd

To (mm/dd/yyyy)

yyyy-mm-dd

Search enforcements

Clear filter

Search Results

We found 1 matches using the following search criteria:

Accountable Party: "Repsol"

Action: All

Date range: Not specified

Search completed on 1/5/2024

Expand all

+

Collapse all

-

<u>Repsol Oil & Gas Canada Inc.</u>		^
Action Description: Compliance Order	Act Name:	
Issue/Decision Date (M/D/Y): 11/24/2022	EMCRA 133/2019; 12(1)	
Municipality/Legal Land Description:	EMCRA 133/2019; 15(1)	
Calgary	EMCRA 133/2019; 15(4)	
	Summary: The Party is the holder of Approval no. 277-03-00 for the Edson Gas Plant [the "Site"]. The Site had direct emissions of 100,000 tonnes expressed on a CO2e basis, or more in 2016 or a subsequent year, which means the Site is subject to the Technology Innovation and Emissions Reduction Regulation. An unverified compliance report	

Search Results

We found 2 matches using the following search criteria:

Accountable Party: "Richardson Bros"

Action: All

Date range: Not specified

Search completed on 1/5/2024

Expand all +

Collapse all -

Richardson Bros (Olds) Limited ^

Action Description: Administrative Penalty

Issue/Decision Date (M/D/Y): 5/12/2020

Penalty: \$4,500.00

Municipality/Legal Land Description:

Vulcan County

SE-9-14-20-W4

Act Name:

PLA 20(1)

Summary: The Party entered onto and occupied public land for the purposes of excavating and stockpiling rock, without authorization. Penalty paid October 28, 2020.

Richardson Bros (Olds) Limited v

Search Results

We found 2 matches using the following search criteria:

Accountable Party: "Richardson Bros"

Action: All

Date range: Not specified

Search completed on 1/5/2024

Expand all



Collapse all



Richardson Bros (Olds) Limited



Action Description: Administrative Penalty

Act Name:

PLA 20(1)

Issue/Decision Date (M/D/Y): 5/12/2020

Summary: The Party entered onto and occupied public land for the purposes of excavating and stockpiling rock, without authorization. Penalty paid October 28, 2020.

Penalty: \$4,500.00

Municipality/Legal Land Description:

Vulcan County

SE-9-14-20-W4

Richardson Bros (Olds) Limited



Action Description: Warning Letter

Act Name:

AEPEA(R) 61

Issue/Decision Date (M/D/Y): 1/13/2020

Summary: The Party conducted an unauthorized activity, the operation of a gravel pit without a valid registration. Compliance has since been achieved through the issuance of Registration No. 409406-00-00 under the Code of Practice for Pits.

Municipality/Legal Land Description:

Red Deer County

E-5-36-28-W4

Search Results

We found 2 matches using the following search criteria:

Accountable Party: "Richardson Bros"

Action: All

Date range: Not specified

Search completed on 1/5/2024

Expand all	+	Collapse all	—
Richardson Bros (Olds) Limited			▼
Richardson Bros (Olds) Limited			▼

Legend: Act codes and names

Act code	Act name
ACA	Agricultural Chemicals Act
AEPEA, AEPEA(R)	Environmental Protection and Enhancement
BCA	Beverage Container Act
CAA	Clean Air Act