Geotechnical, Environmental and Materials Engineering

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PHASE 1 ENVIRONMENTAL SITE ASSESSMENT
LOT 1, BLOCK 1, PLAN 102 4120

WITHIN SW 1/4 5-70-6-W6M
MUNICIPAL DISTRICT OF GREENVIEW NO. 16, ALBERTA

PREPARED FOR

HIGHGROVE HOLDINGS INC.

GROVEDALE, ALBERTA

PREPARED BY

PARKLAND GEOTECHNICAL LTD.

GRANDE PRAIRIE, ALBERTA

ParklandGEO

PROJECT No.: GP3760

DATE: FEBRUARY 28, 2018

EXECUTIVE SUMMARY

Parkland Geotechnical Ltd. (ParklandGEO) was commissioned by Mr. Aron Friesen, President of Highgrove Holdings Inc., to conduct a Phase 1 Environmental Site Assessment (ESA) on Lot 1, Block 1, Plan 102 4120, located in the Municipal District of Greenview No.16 near Grovedale, Alberta. The Phase 1 ESA was required prior to the sale of the Property.

Based on the available information gathered during the Phase 1 ESA, the following conclusions have been made:

- At the time of the assessment, a building, fire suppression pond and yard was observed on the northeast corner of the Property. The west and south sides of the Property were forested, natural and undeveloped lands. High Level Chippers had tenanted the northeast corner of the Site since the building was constructed in 2012 for storage of heavy equipment, tools and parts. Maintenance and washing of heavy equipment was conducted within the building. The potential environmental risk from the current and historical uses of the Property is considered to be low to moderate.

- The adjacent properties in all directions were residential, forested and agricultural lands. Grazing pastures were observed to the north and east. The potential environmental risk from surrounding lands is considered to be low.

- A stockpile of debris, which included metal items, was observed near the center of the yard. It is recommended that all debris be removed from the Property and disposed of properly. If any staining is observed once the debris is removed that extends beyond 300 mm, soil sampling is recommended.

- A small dark surficial stain was observed on the grassed area beneath the UN#1863 (fuel, aviation, turbine engine) tank located near the northeast corner of the Property. It is recommended that the stained soil be removed and disposed of properly. If staining extends beyond 300 mm, soil sampling is recommended. It is also recommended that a drip tray or secondary containment unit be installed beneath the tank. The tank should also be registered with the PTMAA.

- The following potential environmental issues were not found to be of concern on the Subject Property: air emissions, air quality, asbestos, chemical use and storage, drains and sumps, fill, freons, halons, hazardous materials storage and wastes, heating and cooling systems, landfills and dumps, lead, liquid effluents and site runoff, mercury, methane, oil and gas facilities, pesticides and herbicides, pits and lagoons, polychlorinated biphenyls, radioactive materials and equipment, radon, solid wastes and sewage disposal, underground storage tanks, unidentified substances, urea formaldehyde foam insulation, utilities, roads, parking facilities, right-of-ways, standing water and wells.

Based on the current, historical and surrounding land uses, ParklandGEO considers the level of environmental risk associated with the Property to be low to moderate. It is recommended that the stained soil beneath the UN#1863 tank be removed. If staining extends beyond 300 mm, soil sampling is recommended. It is also recommended that the tank be registered with the PTMAA and that the stockpile of debris be removed from the Site.

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1.0 INTRODUCTION

1.1 PROJECT BACKGROUND

Parkland Geotechnical Ltd. (ParklandGEO) was commissioned by Mr. Aron Friesen, President of Highgrove Holdings Inc., to conduct a Phase 1 Environmental Site Assessment (ESA) on Lot 1, Block 1, Plan 102 4120, located in the Municipal District of Greenview No.16 near Grovedale, Alberta. The Phase 1 ESA was required prior to the sale of the Property.

The Property is referred to in this report as the “Property”, “Subject Property” or “Site” and is depicted on Figures 1 and 2. The Property in relation to surrounding lots is shown on Figure 3.

1.2 QUALIFICATIONS

The historical searches, drafting, site inspection and report were completed by Ms. Tannis Gardiner, C.E.T. Ms. Gardiner has a diploma in Biological Sciences Technology Environmental Sciences from the Northern Alberta Institute of Technology and has over three years experience in environmental consulting. During her time with ParklandGEO, she has completed over 65 Phase 1 investigations.

Senior review was provided by Ms. Monique Tenszen, P.Eng. Ms. Tenszen has a B.Sc. in Environmental Engineering from the University of Alberta and over thirteen years of consulting experience, during which time she has completed and reviewed over 300 Phase 1 investigations.

2.0 SITE ASSESSMENT PROCESS

2.1 OBJECTIVES AND SCOPE OF WORK

The primary objectives of this Phase 1 ESA were to identify environmental issues associated with the Property and to determine whether any issues identified during the assessment require an intrusive site investigation and, if so, the nature of such work. The scope of work for this assessment was outlined in Proposal PRO-GP18-028 dated February 13, 2018 and included:

- conducting a historical review of the Property and surrounding properties;
- interviewing and/or contacting local, municipal agencies, and other parties familiar with the Property;
- conducting a site inspection of the Property to identify potential environmental concerns; and
- preparing a report summarizing the methodology and findings of this study.

Authorization to proceed with this assessment was provided by Mr. Aron Friesen, President of Highgrove Holdings Inc., on February 14, 2018 via a signed agreement for professional services.

2.2 METHODOLOGY

The scope of work was conducted in accordance with ParklandGEO's standard environmental site assessment procedures which reflect CSA requirements[1] and Alberta Environment and Parks (Alberta Environment) guidelines[2]. Available historical information regarding the Property was reviewed to determine present and past land use and incidents or operations which could be associated with environmental concerns on the Property. Individual tasks included:

- reviewing time lapse aerial photography of the Property and surrounding region to record land use, development, and historical site occupancy;
- obtaining current and historical land titles from Alberta Registries to determine past site owners and review registered right-of-ways attached to the Property;
- searching the Canada National Pollutant Release Inventory (NPRI) compiled and maintained by Environment and Climate Change Canada to obtain information on significant pollutant releases to the Property or adjacent properties;

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1 *Phase 1 Environmental Site Assessment (CSA Z768-01).* Canadian Standards Association (CSA). 2003. Ottawa, Canada.

2 *Alberta Environmental Site Assessment Standard.* Alberta Environment and Parks. March 1, 2016. Edmonton, Alberta.

- searching the Alberta Environment Site Assessment Repository (ESAR), an online database of environmental assessment reports and reclamation certificates;
- contacting the Municipal District of Greenview No. 16 to obtain information on historical land-use (landfills, waste sites, nuisance grounds, waste discharges), bylaw investigations, zoning, tickets, prosecutions, reports of any other environmental issues, and current zoning information;
- contacting the Petroleum Tank Management Association of Alberta (PTMAA) to determine if any historical or current underground storage tanks are located on or in the vicinity of the Property;
- contacting the Alberta Energy Regulator (AER) for information on oil and gas facilities, spills and releases, or any environmental occurrences related to the Property and adjacent lands within a 1 km radius;
- contacting the Environmental Law Centre (ELC) for information about enforcement actions against owners, current and past Property occupants, along with neighboring companies;
- conducting a search of the Alberta Environment Provincial Groundwater Well Information Database for groundwater wells in the vicinity of the Property;
- contacting the current property owners for historical and current information;
- reviewing any previous environmental and/or geotechnical assessments conducted on the Property;
- conducting an inspection of the Property and adjacent lands noting any environmental concerns; and
- preparing a report summarizing the findings and making recommendations regarding the Property.

3.0 PROPERTY DESCRIPTION

3.1 LOCATION, SITE OCCUPANCY AND DEVELOPMENT DETAILS

Legal Description:	Lot 1, Block 1, Plan 102 4120 Within SW 1/4 5-70-6-W6M
Municipal Address:	N/A Municipal District of Greenview No. 16 (Near Grovedale, Alberta)
Current Owner:	Highgrove Holdings Inc.
Recent Occupants:	High Level Chippers Ltd.
Water Supply:	Well
Sewer Service:	Septic
Current Zoning:	Agriculture
Property Size:	Approximately 71.12 acres

3.2 PHYSICAL DESCRIPTION

The Property was located northwest of the Highway 666 and Range Road 64A intersection east in the Municipal District of Greenview No.16, Alberta. At the time of the assessment, a building and chainlink fenced yard was observed on the northeast corner of the Property. The west and south sides of the Property were forested, natural and undeveloped lands. High Level Chippers had tenanted the northeast corner of the Site since the building was constructed in 2012.

The adjacent properties in all directions were residential, forested and agricultural lands. Grazing pastures were observed to the north and east. The potential environmental risk from surrounding lands is considered to be low.

3.3 TOPOGRAPHY AND DRAINAGE

The Property was relatively flat. Mr. Friesen, President of Highgrove Holdings Inc., stated that there was a seasonal creek that runs through the natural land on the southern side of the Property that was wet part of the year. No signs of overland drainage were observed on the Property at the time of the assessment, however, the inspection was limited due to snow coverage. A fire suppression pond was located near the northeast corner of the Property as per government requirements.

The closest permanent water body was an unnamed lake located approximately 2.4 km southeast of the Subject Property. Wapiti River was located approximately 2.8 km north.

3.4 REGIONAL GEOLOGY AND GROUNDWATER

A search of groundwater wells was conducted in the Alberta Environment Provincial Groundwater Well Information Database. The search indicated that there was one well located on the Property and four wells located on the quarter section as summarized in the table below:

Location	Completion Date dd/mm/yyyy	Well ID	Total Depth (m)	Static Water Level (m)	Owner	Use
SW 1/4 5-70-6-W6M	15/10/2010	1375267	50.29	27.90	High Level Chippers	Other
Lot 3, Block 1, Plan 1124095 (5-5-70-6-W6M)	20/05/2014	9646158	67.06	28.14	Kenny & Sandy Long	Domestic
6-5-70-6-W6M	21/05/2014	9646159	67.06	27.69	Ralph Friesen	
4-5-70-6-W6M	22/06/2015	9646250	67.06	27.74	John Kreiser	
	28/06/2015	9646260	67.06	27.74		

The soil lithology was generally described as alternating layers of sand and clay underlain by alternating layers of sandstone and shale. The depth to groundwater ranged from 27.69 to 28.14 m, however, deep groundwater conditions or shallow perched groundwater conditions may be found in this area.

Groundwater elevations will fluctuate on a seasonal basis and will be highest after periods of heavy, prolonged precipitation or snow-melt. Groundwater infiltration may be slowed and perch conditions may be present during periods of higher precipitation.

4.0 HISTORICAL REVIEW

4.1 PREVIOUS REPORTS AND INVESTIGATIONS ON THE PROPERTY

Mr. Aron Friesen, President of Highgrove Holdings Inc. was not aware of any historical environmental assessments on the Property.

A search with Alberta Environment Environmental Site Assessment Repository (ESAR) did not identify any records on the Property.

4.2 PREVIOUS REPORTS AND INVESTIGATIONS ON ADJACENT PROPERTIES

There were no records available through ESAR within a 300 m radius of the Subject Property.

4.2.1 Quarter Section (SW 1/4 5-70-6-W6M)

ParklandGEO has not conducted any environmental assessments on the quarter section.

4.3 HISTORICAL OWNERSHIP AND TENANCY

A review of the current and historical ownership records for the Property is summarized below:

Location	From dd/mm/yyyy	To dd/mm/yyyy	Title #	Owner
Lot 1, Block 1, Plan 102 4120	15/06/2011	Current	112 179 043	Highgrove Holdings Inc.
	15/07/2010	15/06/2011	102 247 332	High Level Chippers Ltd.
	06/07/2010	15/07/2010	102 232 992	Frederick Warren Mcausland
SW 1/4 5-70-6-W6M	28/07/2005	06/07/2010	052 310 169 +1	
	28/07/2005	28/07/2005	052 310 167 +1	Robert M Lewis
	06/07/1956	28/07/2005	13X159	William Mathew Winters

Highgrove Holdings Inc. has owned the Property since June 2011. The Property was owned by High Level Chippers Ltd. from July 2010 to June 2011. Prior to July 2010, the Property was privately owned. At the time of the assessment, the northeast corner of the Property was tenanted by High Level Chippers Ltd. who had tenanted the Site since the building was constructed in 2012 and the south side of the Property was natural forested land. Prior to the building construction, the north side of the Property was agricultural land and the southern side was natural forested land. The current and historical landowners and tenants posed a low to moderate potential environmental risk to the Property.

4.4 HISTORICAL AIR PHOTO REVIEW

Aerial photographs were reviewed for the years 1961, 1985, 1995, 2001 and 2015. The aerial photographs were obtained from Alberta Environment and Abadata 2.0. The aerial photographs are included in Figures 4 to 8

Figure	4	• The Property and surrounding sites were natural forested lands. • A seasonal creek was visible on the southern side of the Property.
Year	1961	
Roll	0810	
Photo #	084	
Figure	5	• The north and east sides of the Property were agricultural land, the southwest corner of the Property remained forested land. • Surrounding lands to the north, northwest and north east were cleared. • Ponds and residences were developed to the south.
Year	1985	
Roll	3212	
Photo #	142-ep	
Figure	6	• The Property and surrounding lands were relatively unchanged.
Year	1995	
Roll	4652	
Photo #	025-ep	
Figure	7	• Tree stands on the northern side of the Property and adjacent land to the north were cleared.
Year	2001	
Roll	5196	
Photo #	145-ep	
Figure	8	• A building, yard and pond were visible on the northeast corner of the Property. • Forested lands and the seasonal creek remained on the southwest corner of the Property. • A roadway and residences were visible to the north.
Year	2015	
Abadata 2.0		

5.0 CORRESPONDENCE AND INTERVIEWS

5.1 SUMMARY OF INTERVIEWS

Interviewee	Comments
Mr. Aron Friesen, Owner of Highgrove Holdings Inc. Interviewed on February 16, 2018.	• Not aware of any previous environmental assessment on the Property. • The northern side of the Property was historically agricultural land. • High Level Chippers Ltd. has tenanted the Property since the building was constructed in 2012. • In-floor and radiant heaters were used to heat the building. Ceiling fans were used to cool the shop. • The water damage in the office bathroom was caused from condensation from the hot water tank located on the loft. • The pond was used for fire suppression as per government requirements. • The southern side of the Property was undeveloped and forested lands. • A seasonal creek was present on the southern side of the Property. • The UN#1863 (Fuel, aviation, turbine engine) tank was used to fuel helicopters in the summer and was installed approximately 3 years ago. • The northeast corner of the Property has been primarily used to store heavy equipment. • Equipment maintenance and washing was conducted in the building. • Empty storage tanks were stored on site. • The cube storage containers were a herbicide used to stunt aspen tree growth to allow spruce to grow after logging and replanting activities and were spread by helicopter during the summer. • Underground powerlines, natural gas lines, a water well, and septic holding tank serviced the Site. • The sumps were connected to the septic system and the holding tank was empty via vacuum truck on an as needed basis. • Was not aware of a septic field or mound on the Property. • An incinerator was occasionally used on Site to burn wooden items. • Historically has hand picked Scentless Chamomile on Site. • Not aware of any stains or spills on the Property with the exception of the small surficial stain under the tank. • Not aware of any pesticide or herbicide use on the Property. • The site had not been used to store sand or salt. • Not aware of any environmental concerns with the Property or adjacent lands with the exception on the small stain visible beneath the AST.

5.2 REGULATORY SEARCHES

Correspondence with Federal, Provincial and Municipal regulatory agencies is presented in Appendix A, and is summarized below.

5.2.1 Federal

The National Pollutant Release Inventory (NPRI), compiled and maintained by Environment and Climate Change Canada and updated up to September 14, 2017, was searched for significant releases for the Property. No facilities were registered or releases reported on the Property or within a 300 m radius.

5.2.2 Provincial

The online Environmental Site Assessment Repository (ESAR), compiled and maintained by Alberta Environment, was searched for routinely available scientific/technical information for the Property and adjacent properties. No records were held by ESAR for the Property or within a 300 m radius.

The ESAR was searched for records of Wellsite Reclamation certificates applied for or issued for the Property or quarter section. There were no reclamation certificates registered with ESAR for the Property or quarter section.

The Environmental Law Centre (ELC) was contacted regarding the following owners and tenants: Highgrove Holdings Inc., William Mathew Winters, Frederick Warren Mcausland, High Level Chippers Ltd. and Robert M Lewis. There were no results on file related to the Subject Property held with the ELC for any of the owners or recent tenant.

An inquiry was made to the Petroleum Tank Management Association of Alberta (PTMAA) to determine if any petroleum storage tanks are presently or have historically been located on the Property. There were no records held with the PTMAA for the Property.

A request was made to the Alberta Energy Regulatory (AER) and a search was conducted through the Abacus Datagraphics website to determine if there have been any upstream gas or oil wells, pipelines, licenced facilities, landfills, complaints, spills, incidents or waste disposal sites on the Property or adjacent properties. There were no records held with the AER for the Property. Four pipelines were registered within a 1 km radius of the Property, as summarized in the following table:

Location/ Surface Location	Distance & Direction	Type of Facility	Status	Licensee	License/ Facility ID	Potential Risk
16-29-69-6-W6 RS to 16-32-69-6-W6 PL	899 m - SE	Natural Gas Pipeline	Operating	ATCO Gas and Pipelines Ltd.	21082-7	Low
16-32-69-W6 PL to 16-32-69-6-W6 MS	856 m - SE				21082-9	Low
16-32-69-6-W6 PL to 16-32-69-6-W6 PL	884 m - SE				21082-10	Low
11-6-70-6-W6 BE to 6-32-69-6-W6M BE	386 m - W		Discontinued	Progress Energy Canada Ltd.	29914-6	Low

A search was conducted of Alberta Environment approvals, licences, registrations and permits issued under the Water Act and AEPEA (Alberta Environmental Protection and Enhancement Act) for the Property. There were no active or inactive listings on file for the Subject Property or quarter section.

A search of groundwater wells was conducted in the Alberta Environment Provincial Groundwater Well Information Database. The search indicated that there was one well located on the Property and four wells located on the quarter section. Refer to Section 3.4 for details.

Alberta Health Services (AHS) was contacted regarding any landfills, waste sites, nuisance grounds, or environmental incidents on the Property or surrounding lands. There were no records on file with AHS for the Property or surrounding lands.

5.2.3 Municipal and Local

A search was conducted with the Municipal District of Greenview No.16 regarding landfills, fires, waste sites, nuisance grounds, or environmental incidents for the Property or surrounding lots. The Property was zoned as agricultural. Three bylaw infractions regarding non-compliance with a development permit and unsightly Property were listed. There were no records of current or historical landfills within a 1 km radius. No emergency responses, fire rescue service, or underground storage tank installation records were listed for the Property. No environmental reports for the Property or surrounding lands were registered with the Municipal District of Greenview.

5.2.4 Other

Fire insurance plans, inspection reports and site plans within a 250 m radius were requested through Opta EnviroScan (Opta). There were no records on file with Opta for the Property or surrounding lands.

6.0 SITE INSPECTION RESULTS

A visual inspection of the Property was conducted on February 16, 2018 by Ms. Tannis Gardiner of ParklandGEO to assess for environmental concerns on the Property. Site photographs are included in Appendix A.

6.1 SITE APPEARANCE

At the time of the assessment, a chainlink fenced yard, building and fire suppression pond were observed in the northeast corner of the Property. The southwest corner of the Property was forested land. The remainder of the Property appeared to have been cleared and was undeveloped. Inspection of the Property was limited due to snow. Compressed gas cylinders were stored along the west side of the building. A small piece of equipment with a UN#1202 (diesel) placard, an excavator, a quad and trailer were stored along the south side of the building. A tank labeled UN#1202 was observed on a trailer along the north side of the building. A pile of tires was stored along the north side of the yard. A transformer that appeared to be in good condition was visible on a hydro pole north of the Property. A cabin, camper, camping equipment, utility box and water well were observed near the northwest corner of the yard. Vehicles, trailers, equipment and small empty tanks labeled UN#1202 were observed along the west side of the yard. Trailers, equipment, a pile of debris and empty water tanks were observed in the center of the yard. Trailers, vehicles, cube storage containers and equipment were stored along the east side of the yard. A small dark surficial stain beneath a large tank labeled UN#1863 (fuel, aviation, turbine engine), an Alliance Disposal Dumpster and a fire suppression pond were observed near the northwest corner of the Property (Photographs 1 to 25).

6.2 BUILDING INFORMATION

Office space and a shop were observed in the building located on the northeast side of the Property. Water damage was observed on the ceiling in the office bathroom. A hot water tank, cleaning chemicals (spray nine, hand soap, degreaser), tools, parts and equipment were observed on the loft. Vehicles, tools, parts and equipment were stored throughout the shop. Jerry cans of gasoline, compressed gas cylinders, welding equipment and pails of hydraulic oil were stored in the shop. Maintenance chemicals, which included heavy duty engine oil, radiator wash, synthetic engine oil, transmission fluid, antifreeze and spray paints were stored on a work bench shelf. A dry drain and sump system was observed within the shop (Photographs 26 to 37).

6.3 ADJACENT LAND USE

The Subject Property was surrounded by the following properties at the time of the assessment:

Direction from Property	Current Property Tenant/Owner	Potential Risk
North	Residences, grazing pastures and forested lands	Low
Northeast	Grazing pastures and forested lands	Low
East	Grazing pastures and forested lands	Low
Southeast	Forested lands	Low
South	Residential and forested lands	Low
Southwest	Forested lands	Low
West	Forested lands	Low
Northwest	Residences, forested and agricultural lands	Low

The adjacent properties in all directions were residential, agricultural and forested lands. Grazing pastures were observed to the north and east. The potential environmental risk from surrounding lands was considered to be low (Photographs 38 to 42).

No high risk properties such as landfills, chemical plants or heavy manufacturing plants were located within 500 m of the Property.

7.0 ENVIRONMENTAL ISSUES

Information regarding significant environmental issues is summarized below.

7.1 AIR EMISSIONS OR AIR QUALITY

No signs of air emissions or air quality were observed on the Property at the time of the assessment. A small area of water damage was observed on the ceiling in the main floor bathroom (Photograph 27). Mr. Friesen stated that the water damage was caused by condensation from the hot water tank located directly above the bathroom.

7.2 ASBESTOS CONTAINING MATERIALS (ACMs)

There were no sources of asbestos containing materials observed on the Property at the time of the assessment. Given the age of the building, no asbestos containing materials would be suspected on the Property.

7.3 CHEMICAL USING ACTIVITY AND CHEMICAL STORAGE

Cleaning chemicals, such as Spray Nine, hand soap and degreaser, were stored within the building. Vehicle maintenance chemicals, such as , Jerry cans of gasoline, hydraulic oil, heavy duty engine oil, radiator wash, synthetic engine oil, transmission fluid, antifreeze and spray paints were stored on a work bench shelf within the building (Photographs 29 to 36). The potential environmental risk to the Property from the chemicals stored and used within the building is considered to be low.

Compressed gas cylinders were observed in the yard along the west side of the building and within the building (Photographs 6 and 33). Cube storage containers were stored along the eastern side of the yard. Mr. Friesen stated that the contents were a herbicide used to stunt aspen tree growth to allow spruce to grow after logging and replanting activities and were spread by helicopter during the summer. The potential environmental risk to the Property from the cube storage containers is considered to be low.

7.4 DRAINS AND SUMPS

A dry drain and sump were observed within the building. The sump appeared to be in good condition (Photograph 37). Mr. Friesen stated that the drain and sump were connected to the septic tank which was emptied on an as needed basis.

7.5 FILL AND STOCKPILES

No fill was observed on the Property, however, several piles of snow were present across the Site and a stockpile of debris was observed in the center of the yard (Photographs 19 and 20). It is recommended that the pile of debris be removed from the Site. If any staining that extends beyond 300 mm is observed once the debris is removed, soil sampling is recommended.

7.6 FREONS AND HALONS

No sources of freons, which are used in some commercial freezers and air conditioning units, were observed on the Property.

No sources of halons, which are used in some types of fire extinguishers, were observed on the Property.

7.7 HAZARDOUS MATERIALS USE AND STORAGE

No hazardous materials were observed on the Property during the assessment.

7.8 HAZARDOUS WASTES

No hazardous wastes were stored on the Property during the assessment.

7.9 HEATING AND COOLING SYSTEMS

In-floor and radiant heaters were used to heat the building. Ceiling fans were used to cool the shop.

7.10 LANDFILLS AND DUMPS

There were no landfills or dumps observed on the Property at the time of the assessment.

7.11 LEAD

There were no sources of lead containing materials noted on the Property at the time of the assessment. Given the age of the remaining buildings, none would be suspected.

7.12 LIQUID EFFLUENTS AND SITE RUNOFF

The Property appeared to be relatively flat and no liquid effluents or site runoff were observed on the Property at the time of the assessment, however, the inspection was limited due to snow coverage. Mr. Friesen stated that a seasonal creek was present across the southern side of the Site. A fire suppression pond had been installed on the northeast corner of the Property as per government requirements.

7.13 MECHANICAL EQUIPMENT

Large pieces of heavy equipment were stored throughout the yard at the time of the assessment (Photographs 17 and 18).

7.14 MERCURY

No sources of mercury were observed on the Property at the time of the assessment.

7.15 METHANE

Methane gas is produced when organic matter decays in an oxygen deficient environment, such as wetland areas, landfills or nuisance grounds. Methane is of concern as it is highly explosive in confined spaces. Methane can enter a building through cracks in the foundation or sumps. As the Property was not located within a wetland area and no evidence of historical domestic waste landfills or dumps on the Property were found, concentrations of methane gas are not considered to be a concern.

7.16 OIL AND GAS FACILITIES

There were no upstream oil and gas facilities located on the Property (Refer to Section 5.2.2).

7.17 PESTICIDES AND HERBICIDES

No signs of pesticide or herbicide use was observed during the assessment, however, the inspection was limited due to snow coverage. Mr. Friesen stated that cube storage containers were stored on the Site that contained a herbicide used to stunt the growth of aspen to allow spruce trees to grow after logging and replanting activities. The potential environmental risk to the Subject Property is considered to be low.

7.18 PITS AND LAGOONS

A pond was observed near the northeast corner of the yard (Photograph 25). Mr. Friesen stated that the pond was installed as per government requirements for fire supression.

7.19 POLYCHLORINATED BIPHENYLS (PCBs)

A transformer was observed on a hydro pole north of the Subject Property. The transformer appeared to be in good condition and no signs of damage or leaks were observed (Photograph 11). Contamination resulting from the transformer would be the responsibility if the utility owner.

7.20 RADIOACTIVE MATERIALS AND EQUIPMENT

There were no radioactive materials or equipment observed on the Property during the assessment.

7.21 RADON

Historically, large portions of Canada were not considered to have a significant risk of radon exposure, however in June 2007, Health Canada decided to lower the action level for radon from 800 Bq/m^3 to 200 Bq/m^3 based on international standards and newer scientific research. This is reflected in recent changes to the National Building Code. Radon is a gas formed by the breakdown of uranium, a natural radioactive material found in all soil and rock. Long-term exposure to radon is the 2nd leading cause of lung cancer after smoking. Health Canada found that: approximately 7% of homes have high levels of radon; radon levels vary significantly across the country; and that there are no areas of the country that are 'radon free,' but there are areas of the country where high levels of indoor radon are more prevalent.

For most of the year, the air pressure inside a building is lower than the pressure in the soil surrounding the foundation. This difference in pressure draws air and other gases contained in the soil, including radon, into the interior. Gas containing radon can enter a building through any opening where the foundation, basement or floor slab contacts the soil. These openings will be present even in newer, well-built structures. Potential entry routes for radon include cracked foundations or slabs, areas with exposed soil or rocks, openings for utility lines or the gap between the floor slab and wall, sumps, etc.

Materials used to construct a building - stone, bricks, cement/concrete, or granite, for example - are not a significant source of radon. Natural materials taken from the ground, like granite or concrete aggregate, can contain some uranium and may have higher levels of radiation or radon, but in the vast majority of cases these levels are not significant.

Workplace exposure to radon is addressed by guidelines for naturally occurring radioactive materials (NORM). Details are given in the Canadian Guidelines for Management of Naturally Occurring Radioactive Materials (Prepared by the Canadian NORM Working Group of the Federal Provincial Territorial Radiation Protection Committee. Revised 2011).

Incidentally Exposed Workers are employees whose regular duties do not include exposure to NORM sources of radiation. They are considered as members of the public who work in an occupational exposure environment and, as such, the annual effective dose limit for these workers

is 1 mSv. The sievert (Sv) is the unit of Effective Dose of radiation, and accounts for the total effect of different types of radiation on different parts of the body.

Radon released from soil beneath a building gives rise to an average indoor background concentration of about 45 Bq/m^3, but much higher values are possible in some areas. This concentration is variable with time; therefore long-term assessment measurements are recommended. As radon concentration can vary considerably, Health Canada is recommending that all workplaces be assessed for potential elevated levels. The derived working limit (DWL) for radon is 200 Bq/m^3. Where the annual average concentration of radon gas is expected to be above 200 Bq/m^3, measurements should be made to estimate the average annual radon gas concentration.

For the Subject Property, the general interior ventilation was considered good, with no below grade spaces and limited potential migration pathways for radon gas to enter the structure. The potential incremental risk from radon exposure to the building occupants is considered low. As per Health Canada's recommendation, a long-term test to measure the interior radon concentration is recommended as part of a standard health and safety program, but this is not essential for the assessment of the environmental risk associated with this Property.

7.22 SOLID WASTE AND SEWAGE DISPOSAL

An Alliance Disposal dumpster was observed in the northwestern side of the yard (Photograph 22). Mr. Friesen stated that a septic holding tank was used on the Property.

7.23 STAINS AND SPILLS

A small dark surficial stain was observed on the grassed area beneath the UN#1863 (fuel, aviation, turbine engine) tank located near the northeast corner of the Property (Photographs 23 and 24). It is recommended that the stained soil be removed and disposed of properly. If staining extends beyond 300 mm, soil sampling is recommended. It is also recommended that a drip tray or secondary containment unit be installed beneath the tank.

No other stains or spills were observed on the Property at the time of the assessment, however, the inspection was limited due to snow coverage.

7.24 UNDERGROUND (USTs) AND ABOVEGROUND STORAGE TANKS (ASTs)

A UN#1863 (Fuel, aviation, turbine engine) tank observed near the northeast side of the Property was used to fuel helicopters in the summer and was installed approximately 3 years ago (Photographs 23 and 24). Empty small storage tanks labeled UN#1202 (diesel fuel) were stored throughout the Site (Photograph 15). The Property was serviced by an underground septic tank system. Mr. Friesen was not aware of any other aboveground or underground storage tanks on the Property. The potential environmental risk to the Property from the ASTs and septic UST was

considered to be low to moderate. It is recommended that the UN#1863 tank be registered with the PTMAA.

7.25 UNIDENTIFIED SUBSTANCES

No unidentified substances were noted on the Property during the assessment.

7.26 UREA FORMALDEHYDE FOAM INSULATION (UFFI)

There were no sources of UFFI observed during the inspection.

7.27 UTILITIES, ROADS, PARKING FACILITIES AND RIGHT-OF-WAYS

The Property was located northwest of the Highway 666 and Range Road 64A intersection east in the Municipal District of Greenview No.16, Alberta. The Site was accessed from the South along an unnamed roadway. The utility right-of-ways and zoning regulations registered on the Property are summarized in the following table:

Location	Caveator	Date (dd/mm/yyyy)	Registration #
Lot 1, Block 1, Plan 102 4120	Alberta Power Limited	04/03/1977	772 038 082
	Municipal District of Greenview No.16	06/04/2010	102 232 993
	Agriculture Financial Services	15/06/2011	112 179 044
	ATCO Gas and Pipelines Ltd.	24/08/2011	112 264 531
		12/08/2014	142 256 147
	Municipal District of Greenview No.16	31/08/2016	162 239 911
		06/04/2017	172 085 878

7.28 VEGETATION

There was no vegetation observed on the Property at the time of the assessment, however, the inspection was limited due to snow coverage. Mr. Friesen stated that Scentless Chamomile, which is classified as a noxious weed, has been hand picked on Site historically.

7.29 WATERCOURSES, DITCHES AND STANDING WATER

The Property was relatively flat. No standing water was observed on the Property at the time of the assessment, however, the inspection was limited due to snow coverage. Mr. Friesen stated that a seasonal creek was present across the southern side of the Site. A pond had been installed on the northeast corner of the Property as per government requirements for fire suppression (Photograph 25).

7.30 WELLS

A search of groundwater wells was conducted in the Alberta Environment Provincial Groundwater Well Information Database. The search indicated that there was on well located on the Property (Photograph 12) and four wells located on the quarter section. Refer to Section 3.4 for details.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the available information gathered during the Phase 1 ESA, the following conclusions have been made:

- At the time of the assessment, a building, fire suppression pond and yard was observed on the northeast corner of the Property. The west and south sides of the Property were forested, natural and undeveloped lands. High Level Chippers had tenanted the northeast corner of the Site since the building was constructed in 2012 for storage of heavy equipment, tools and parts. Maintenance and washing of heavy equipment was conducted within the building. The potential environmental risk from the current and historical uses of the Property is considered to be low to moderate.

- The adjacent properties in all directions were residential, forested and agricultural lands. Grazing pastures were observed to the north and east. The potential environmental risk from surrounding lands is considered to be low.

- A stockpile of debris, which included metal items, was observed near the center of the yard. It is recommended that all debris be removed from the Property and disposed of properly. If any staining is observed once the debris is removed that extends beyond 300 mm, soil sampling is recommended.

- A small dark surficial stain was observed on the grassed area beneath the UN#1863 (fuel, aviation, turbine engine) tank located near the northeast corner of the Property. It is recommended that the stained soil be removed and disposed of properly. If staining extends beyond 300 mm, soil sampling is recommended. It is also recommended that a drip tray or secondary containment unit be installed beneath the tank. The tank should also be registered with the PTMAA.

- The following potential environmental issues were not found to be of concern on the Subject Property: air emissions, air quality, asbestos, chemical use and storage, drains and sumps, fill, freons, halons, hazardous materials storage and wastes, heating and cooling systems, landfills and dumps, lead, liquid effluents and site runoff, mercury, methane, oil and gas facilities, pesticides and herbicides, pits and lagoons, polychlorinated biphenyls, radioactive materials and equipment, radon, solid wastes and sewage disposal, underground storage tanks, unidentified substances, urea formaldehyde foam insulation, utilities, roads, parking facilities, right-of-ways, standing water and wells.

Based on the current, historical and surrounding land uses, ParklandGEO considers the level of environmental risk associated with the Property to be low to moderate. It is recommended that the stained soil beneath the UN#1863 tank be removed. If staining extends beyond 300 mm, soil sampling is recommended. It is also recommended that the tank be registered with the PTMAA and that the stockpile of debris be removed from the Site.

9.0 LIMITATIONS AND CLOSURE

The American Society for Testing and Materials Standard of Practice notes that no environmental site assessment can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. Performance of a standardized environmental site assessment protocol is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with the subject property, given reasonable limits of time and cost.

This report has been prepared for the exclusive use of the **Highgrove Holdings Inc.,** and their approved agents. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. PARKLAND GEOTECHNICAL LTD., and The ParklandGEO Consulting Group accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report. No other warranty, expressed or implied, is made.

We trust that this report meets with your current requirements. If there are any questions, please contact the undersigned at 780-539-5102.

Respectfully Submitted,

PARKLAND GEOTECHNICAL LTD.
APEGA Permit to Practice No. P - 9516

Tannis Gardiner
Environmental Technician

February 28, 2018

Reviewed by:
Monique Tenszen, P. Eng.
Principal Geo-Environmental Engineer

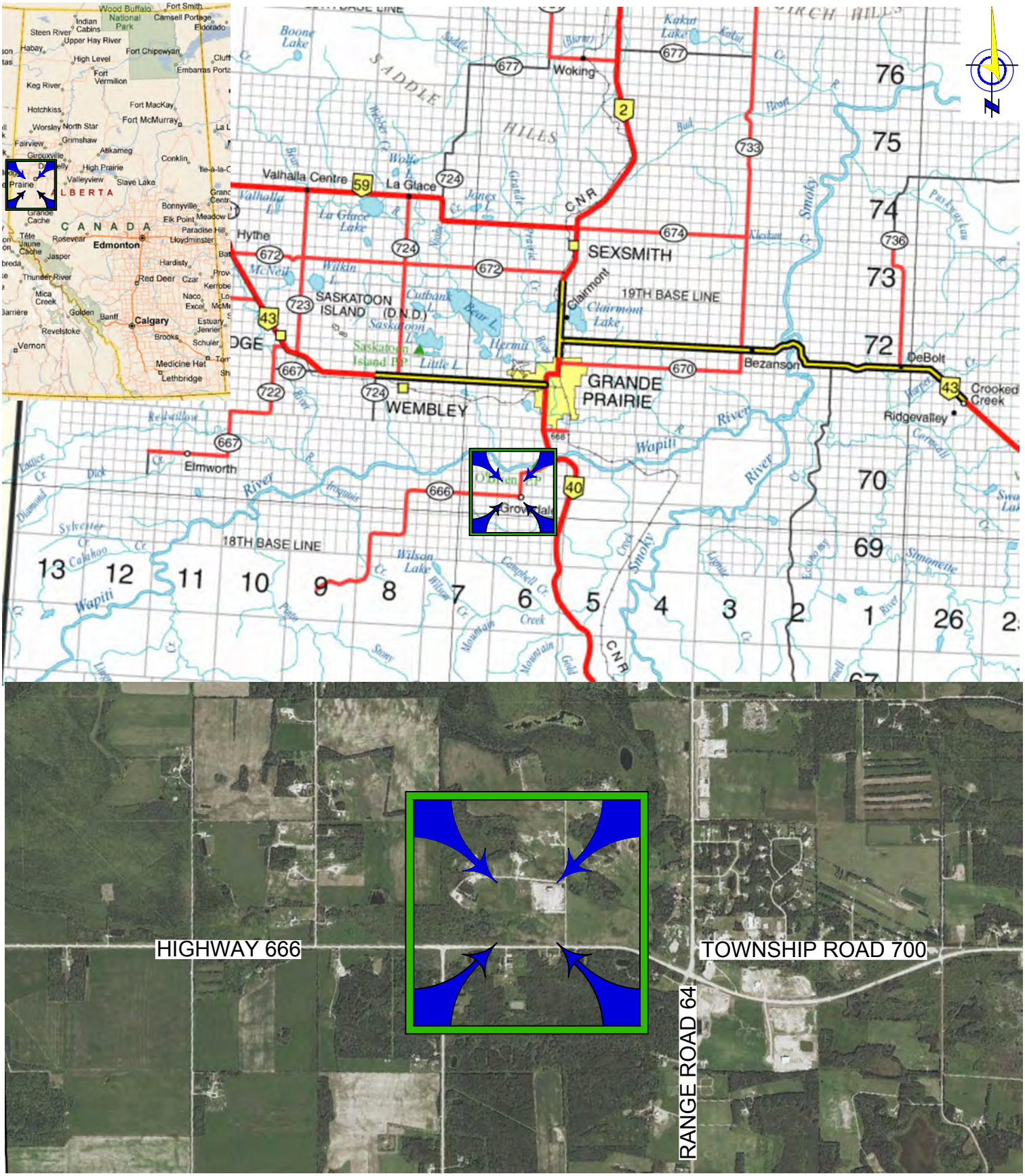
FIGURES

FIGURE 1: AREA PLAN

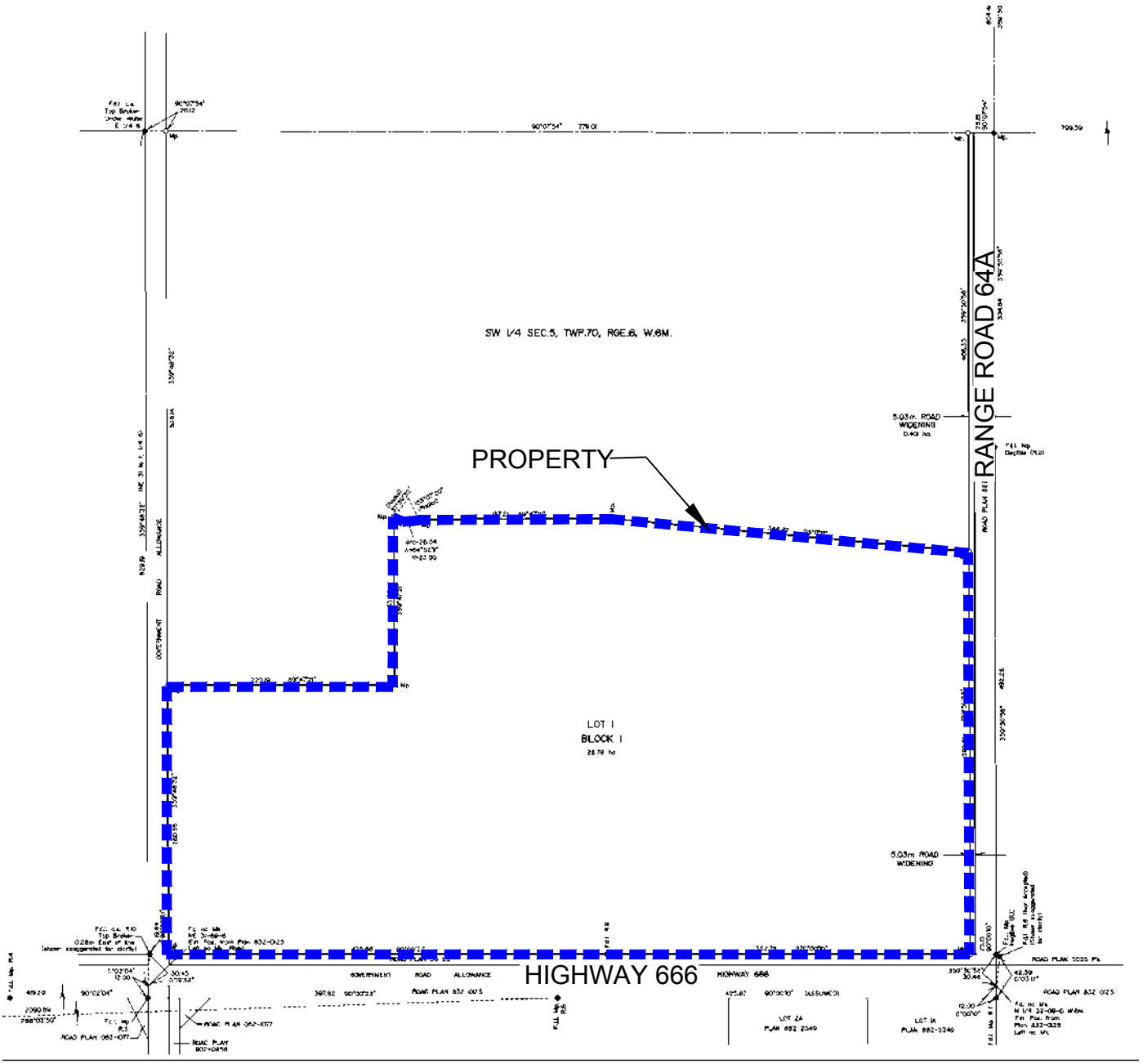
FIGURE 2: SITE PLAN

FIGURE 3: REGIONAL PLAN

FIGURES 4 TO 8: AERIAL PHOTOGRAPHS

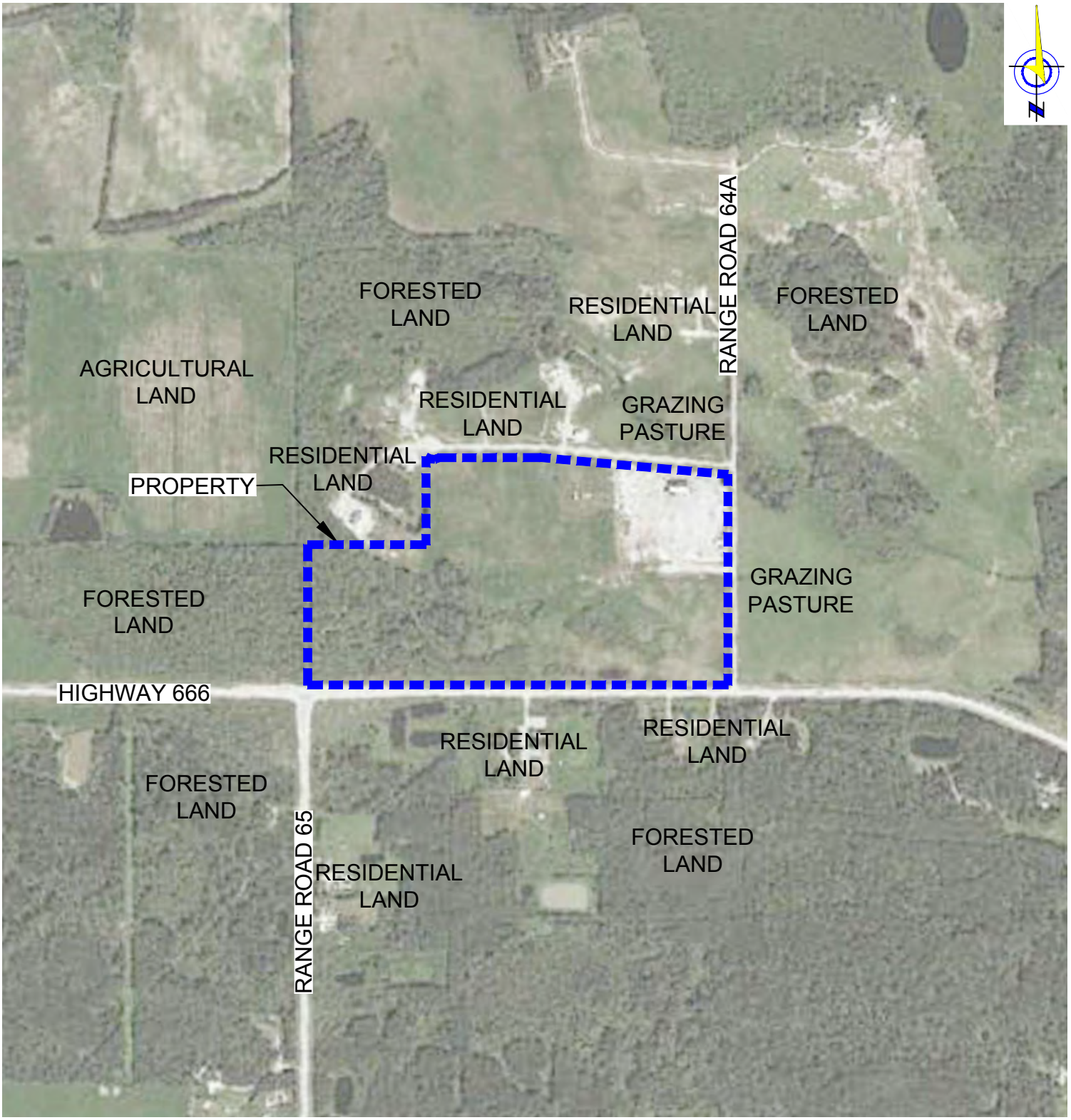


ParklandGEO	CLIENT: HIGHGROVE HOLDINGS INC.	AREA PLAN		
		PHASE 1 ENVIRONMENTAL SITE ASSESSMENT LOT 1, BLOCK 1, PLAN 102 4120; NEAR GROVEDALE, AB		
		DRAWN: TG	CHK'D.: MT	REV #: 0	DATE: FEBRUARY 2018
		SCALE: NTS	JOB NO. GP3760	DRAWING NO. FIGURE 1	



NOTES:
1. SURVEY PLAN OBTAINED FROM THE GOVERNMENT OF ALBERTA SPATIAL INFORMATION SYSTEM DATED JULY 6, 2010.

ParklandGEO	CLIENT: HIGHGROVE HOLDINGS INC.	SITE PLAN			
		PHASE 1 ENVIRONMENTAL SITE ASSESSMENT LOT 1, BLOCK 1, PLAN 102 4120; NEAR GROVEDALE, AB			
		DRAWN: TG	CHK'D.: MT	REV #: 0	DATE: FEBRUARY 2018
		SCALE: NTS	JOB NO. GP3760		DRAWING NO. FIGURE 2



NOTES:
AERIAL PHOTOGRAPH OBTAINED FROM ABADATA 2.0. DATED 2015.

SCALE (metres)

-200 -100 0 100 200 400

ParklandGEO

CLIENT:

HIGHGROVE HOLDINGS INC.

REGIONAL PLAN

PHASE 1 ENVIRONMENTAL SITE ASSESSMENT
LOT 1, BLOCK 1, PLAN 102 4120; NEAR GROVEDALE, AB

DRAWN:	CHK'D.:	REV #:	DATE:
TG	MT	0	FEBRUARY 2018

SCALE:	JOB NO.	DRAWING NO.
1:10,000	GP3760	FIGURE 3

NOTE:
AERIAL PHOTOGRAPH OBTAINED FROM ALBERTA ENVIRONMENT. DATED MAY 17, 1961.

SCALE (metres)

-200 -100 0 100 200 400

ParklandGEO

CLIENT:

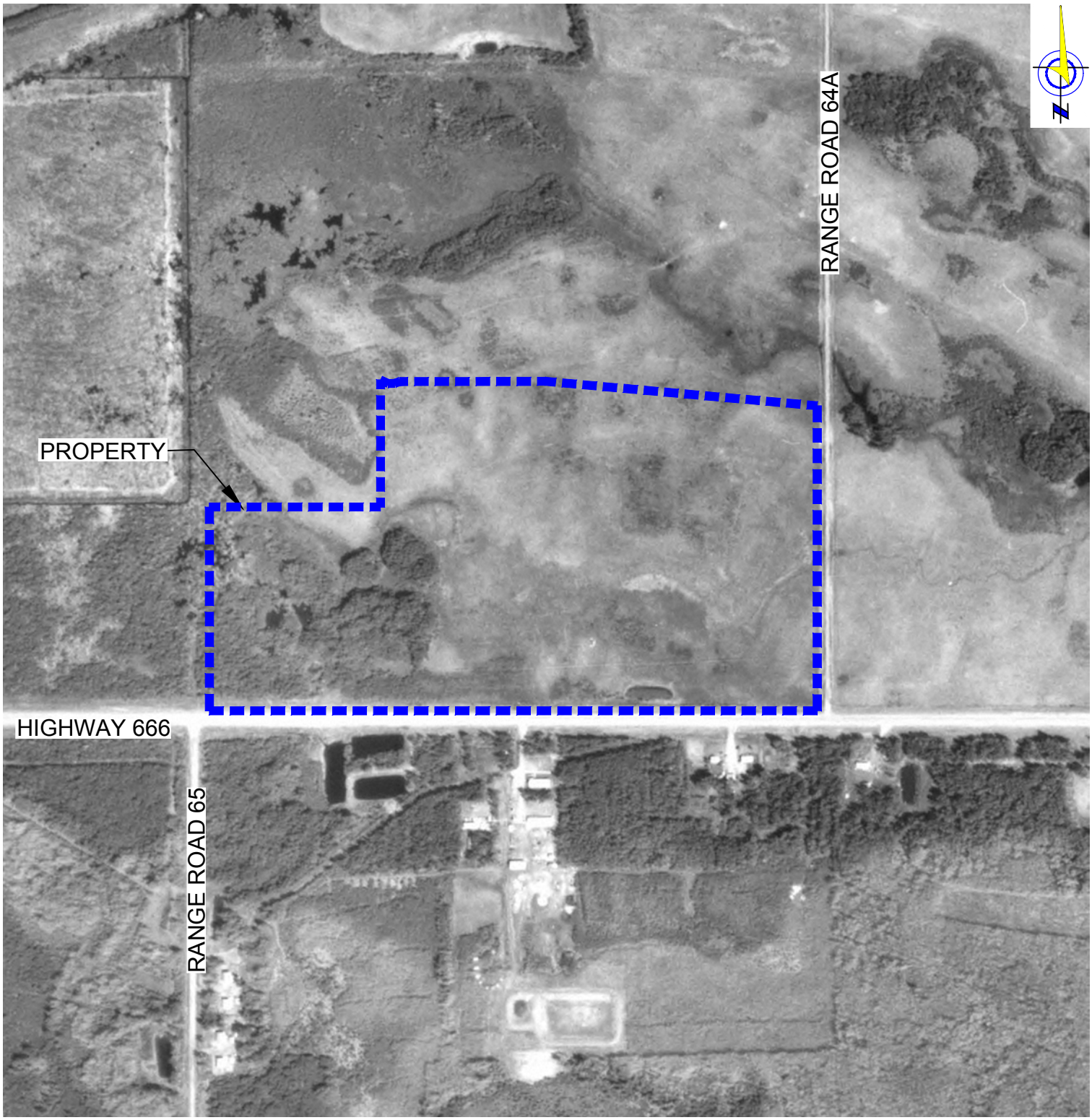
HIGHGROVE HOLDINGS INC.

1961 AERIAL PHOTOGRAPH

PHASE 1 ENVIRONMENTAL SITE ASSESSMENT
LOT 1, BLOCK 1, PLAN 102 4120; NEAR GROVEDALE, AB

DRAWN:	CHK'D.:	REV #:	DATE:
TG	MT	0	FEBRUARY 2018

SCALE:	JOB NO.	DRAWING NO.
1:7000	GP3760	FIGURE 4



SCALE (metres)

-200 -100 0 100 200 400

NOTE:
AERIAL PHOTOGRAPH OBTAINED FROM ALBERTA ENVIRONMENT. DATED JUNE 25, 1985.

ParklandGEO

CLIENT:

HIGHGROVE HOLDINGS INC.

1985 AERIAL PHOTOGRAPH

PHASE 1 ENVIRONMENTAL SITE ASSESSMENT
LOT 1, BLOCK 1, PLAN 102 4120; NEAR GROVEDALE, AB

DRAWN:	CHK'D.:	REV #:	DATE:
TG	MT	0	FEBRUARY 2018

SCALE:	JOB NO.	DRAWING NO.
1:7000	GP3760	FIGURE 5

NOTE:
AERIAL PHOTOGRAPH OBTAINED FROM ALBERTA ENVIRONMENT. DATED SEPTEMBER 13, 1995.

SCALE (metres)

-200 -100 0 100 200 400

ParklandGEO

CLIENT:

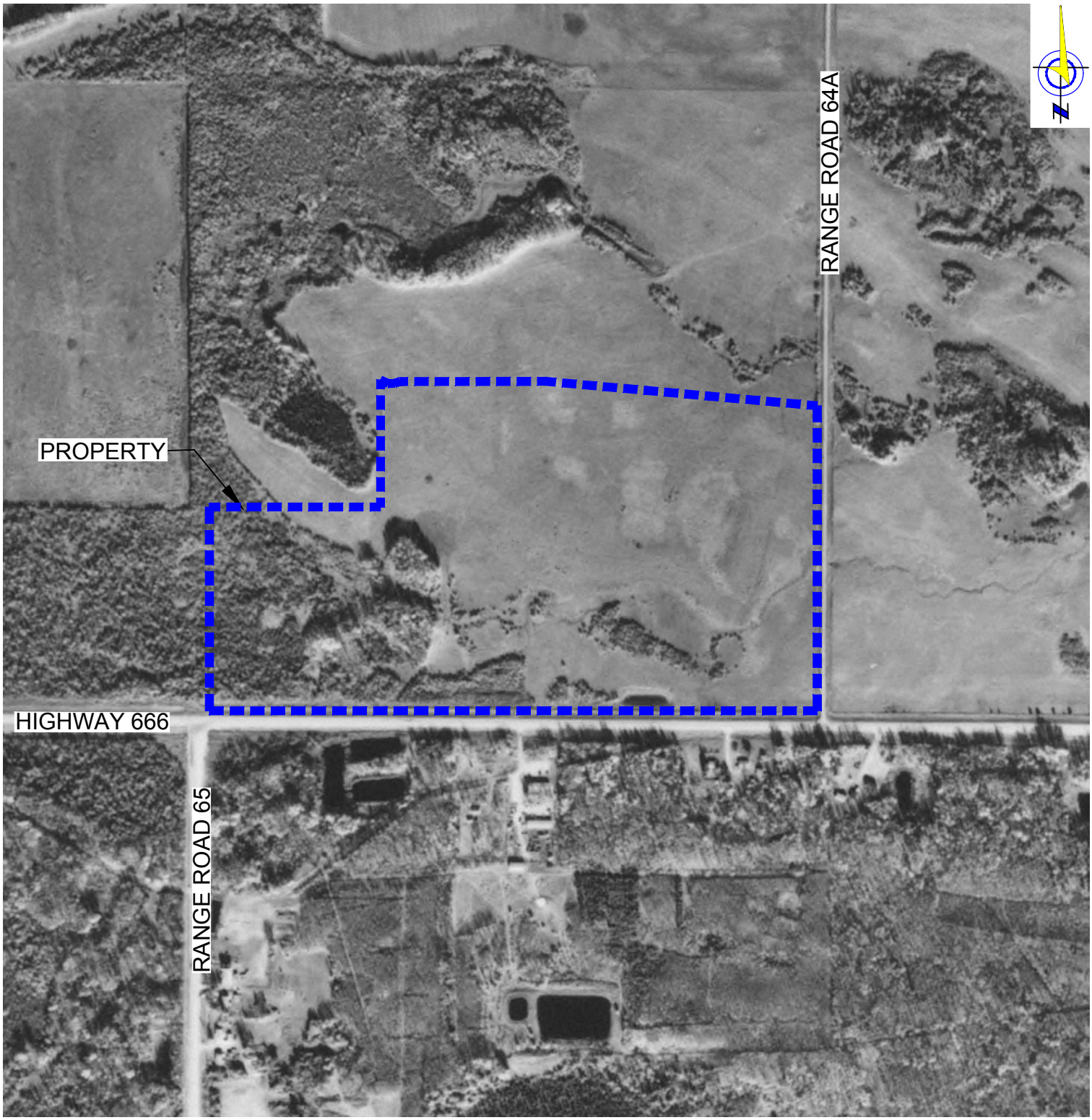
HIGHGROVE HOLDINGS INC.

1995 AERIAL PHOTOGRAPH

PHASE 1 ENVIRONMENTAL SITE ASSESSMENT
LOT 1, BLOCK 1, PLAN 102 4120; NEAR GROVEDALE, AB

DRAWN:	CHK'D.:	REV #:	DATE:
TG	MT	0	FEBRUARY 2018

SCALE:	JOB NO.	DRAWING NO.
1:7000	GP3760	FIGURE 6



NOTE:
AERIAL PHOTOGRAPH OBTAINED FROM ALBERTA ENVIRONMENT. DATED OCTOBER 3, 2001.

SCALE (metres)

-200 -100 0 100 200 400

ParklandGEO

CLIENT:

HIGHGROVE HOLDINGS INC.

2001 AERIAL PHOTOGRAPH

PHASE 1 ENVIRONMENTAL SITE ASSESSMENT
LOT 1, BLOCK 1, PLAN 102 4120; NEAR GROVEDALE, AB

DRAWN:	CHK'D.:	REV #:	DATE:
TG	MT	0	FEBRUARY 2018

SCALE:	JOB NO.	DRAWING NO.
1:7000	GP3760	FIGURE 7

NOTE:
AERIAL PHOTOGRAPH OBTAINED FROM
ABADATA 2.0. DATED 2015.

SCALE (metres)

-200 -100 0 100 200 400

ParklandGEO

CLIENT:

HIGHGROVE
HOLDINGS INC.

2015 AERIAL PHOTOGRAPH

PHASE 1 ENVIRONMENTAL SITE ASSESSMENT
LOT 1, BLOCK 1, PLAN 102 4120; NEAR GROVEDALE, AB

DRAWN:	CHK'D.:	REV #:	DATE:
TG	MT	0	FEBRUARY 2018

SCALE:	JOB NO.	DRAWING NO.
1:7000	GP3760	FIGURE 8

APPENDIX A

SITE PHOTOGRAPHS
(TAKEN FEBRUARY 16, 2018)

Photograph 1: West-facing view of the south side of the Property.

Photograph 2: South-facing view of the center of the Property.

Photograph 3: Northwest-facing view of the southwest corner of the Property.

Photograph 4: Southwest-facing view of the south side of the Property.

Photograph 5: North-facing view of the building.

Photograph 6: Compressed gas cylinders observed near the west side of the building.

Photograph 7: Items stored along the south side of the building.

Photograph 8: Northeast-facing view of the south side of the building.

Photograph 9: Equipment stored near the north side of the building.

Photograph 10: Tires stored along the north side of the yard.

Photograph 11: Transformer observed north of the Property.

Photograph 12: Water well and items stored near the northwest corner of the yard.

Photograph 13: East-facing view of the yard.

Photograph 14: Items stored along the west side of the yard.

Photograph 15: Empty UN#1202 tanks stored along the western side of the yard.

.

Photograph 16: Items observed along the west side of the yard.

Photograph 17: Equipment stored along the western side of the yard.

Photograph 18: Equipment and items observed near the center of the yard.

Photograph 19: Stockpile of debris observed near the center of the yard.

Photograph 20: Debris observed near the center of the yard.

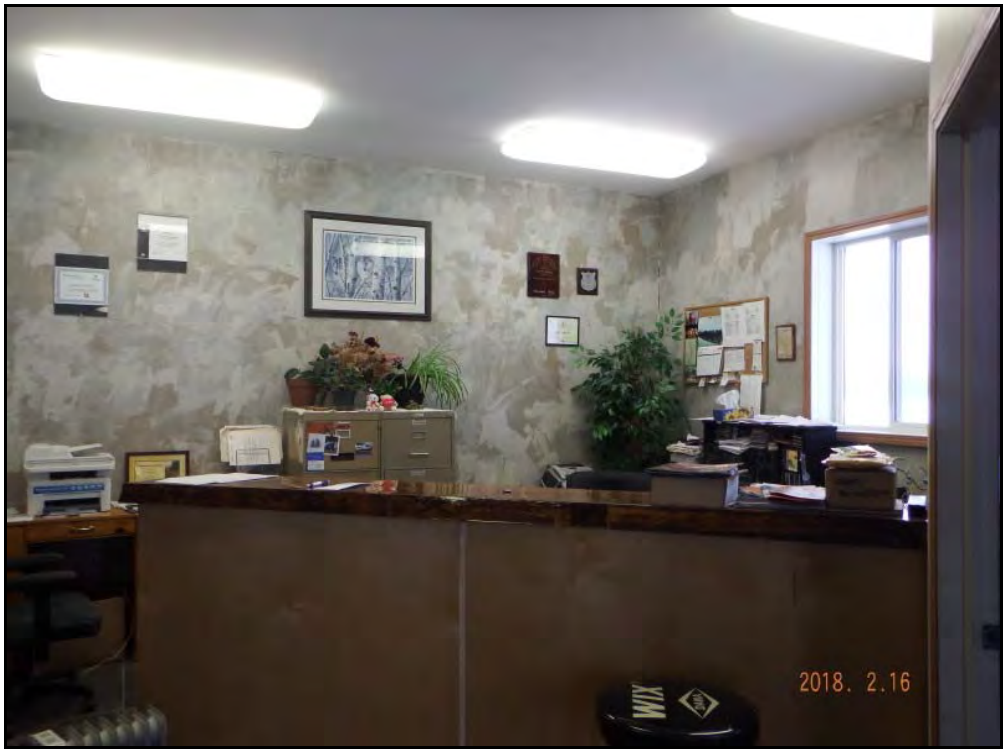
Photograph 21: Southeast-facing view of the eastern side of the yard.

Photograph 22: Alliance Disposal dumpster located on the northeastern side of the yard.

Photograph 23: UN#1863 (fuel, aviation, turbine engine) tank observed on the northeastern side of the yard.

Photograph 24: Staining observed beneath the UN#1863 tank.

Photograph 25: Fire suppression pond located in the northeast corner of the yard.



Photograph 26: Reception area observed within the building.

Photograph 27: Water damage observed in the main floor bathroom.

Photograph 28: View of the loft observed within the shop.

Photograph 29: Storage area observed on the loft.

Photograph 30: Hot water tank and cleaning products observed on the loft.

Photograph 31: East-facing view of the shop.

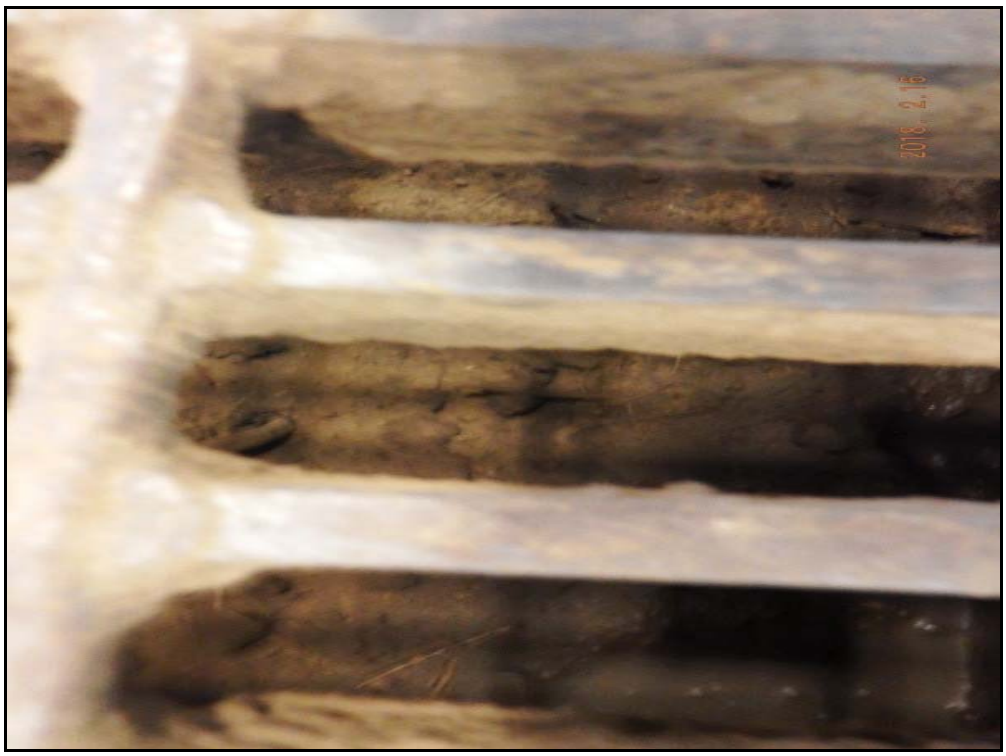
Photograph 32: View of gasoline Jerry cans stored within the shop.

Photograph 33: Compressed air cylinder stored within the shop.

Photograph 34: View of items, which included pallets of hydraulic oil, observed within the shop.

Photograph 35: Maintenance chemicals observed within the shop.

Photograph 36: Drain and items observed within the shop.



Photograph 37: View of dry drain system observed within the shop.

Photograph 38: Northwest-facing view of the residences observed north of the Subject Property.

Photograph 39: Grazing pasture observed north of the Subject Property.

Photograph 40: Grazing pastures observed east of the Subject Property.

Photograph 41: Residences observed south of the Subject Property.

Photograph 42: Forested land observed southwest of the Subject Property.

APPENDIX B

SEARCHES AND REGULATORY CORRESPONDENCE

Parkland Geotechnical Ltd.
#101, 15810 - 102 Street
Grande Prairie, AB, T8X 0K7
www.parklandgeo.com
T: 780 539 5102
F: 780 539 5106

February 14, 2018

To Whom It May Concern,

Re: Phase 1 Environmental Site Assessment
Lot 1, Block 1, Plan 102 4120
Part of the SW 1/4 5-70-6-W6M
Municipal District of Greenview No.16 (Near Grovedale, Alberta)
Landowner Approval to Release Information

ParklandGEO has been retained to conduct a Phase 1 Environmental Site Assessment on the aforementioned properties.

This letter grants permission to release all requested information to ParklandGEO for the purposes of this environmental assessment.

Yours truly,

Signature

Arnea Friesen
Name (please print)

President
Title

High Grove Holdings Inc
Company (must match current land title, if applicable)

Feb 14, 2018
Date

LAND TITLE CERTIFICATE

S

LINC	SHORT LEGAL	TITLE NUMBER
0034 379 727	1024120;1;1	112 179 043

LEGAL DESCRIPTION
PLAN 1024120
BLOCK 1
LOT 1
EXCEPTING THEREOUT ALL MINES AND MINERALS
AREA: 28.78 HECTARES (71.12 ACRES) MORE OR LESS

ESTATE: FEE SIMPLE
ATS REFERENCE: 6;6;70;5;SW

MUNICIPALITY: MUNICIPAL DISTRICT OF GREENVIEW NO. 16

REFERENCE NUMBER: 102 247 332

REGISTERED OWNER(S)

REGISTRATION	DATE(DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
112 179 043	15/06/2011	TRANSFER OF LAND	$700,000	$10

OWNERS

HIGHGROVE HOLDINGS INC.
OF BOX 238
GROVEDALE
ALBERTA T0H 1X0
(DATA UPDATED BY: CHANGE OF ADDRESS 142038988)

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
772 038 082	04/03/1977	CAVEAT RE : EASEMENT CAVEATOR - ALBERTA POWER LIMITED.
102 232 993	06/07/2010	CAVEAT RE : DEVELOPMENT AGREEMENT PURSUANT TO MUNICIPAL GOVERNMENT ACT CAVEATOR - MUNICIPAL DISTRICT OF GREENVIEW NO. 16.

(CONTINUED)

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
		BOX 1079 VALLEYVIEW ALBERTA T0H3N0 AGENT - JIM SQUIRE
112 179 044	15/06/2011	MORTGAGE MORTGAGEE - AGRICULTURE FINANCIAL SERVICES CORPORATION. 4910 52 ST, BOX 5000 STN. MAIN CAMROSE ALBERTA T4V4E8 ORIGINAL PRINCIPAL AMOUNT: $600,000
112 264 531	24/08/2011	CAVEAT RE : RIGHT OF WAY AGREEMENT CAVEATOR - ATCO GAS AND PIPELINES LTD. 10035-105 ST EDMONTON ALBERTA T5J2V6
112 386 699	30/11/2011	AMENDING AGREEMENT AMOUNT: $675,000 AFFECTS INSTRUMENT: 112179044
142 256 147	12/08/2014	CAVEAT RE : UTILITY RIGHT OF WAY CAVEATOR - ATCO GAS AND PIPELINES LTD. 10035-105 ST EDMONTON ALBERTA T5J2V6
162 239 911	31/08/2016	CAVEAT RE : ORDER PURSUANT TO MUNICIPAL GOVERNMENT ACT CAVEATOR - MUNICIPAL DISTRICT OF GREENVIEW NO. 16. BOX 1079 VALLEYVIEW ALBERTA T0H3N0
172 085 878	06/04/2017	TAX NOTIFICATION BY - MUNICIPAL DISTRICT OF GREENVIEW NO. 16. BOX 1079 VALLEYVIEW, ALBERTA T0H3N0

TOTAL INSTRUMENTS: 008

(CONTINUED)

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN ACCURATE REPRODUCTION OF THE CERTIFICATE OF TITLE REPRESENTED HEREIN THIS 14 DAY OF FEBRUARY, 2018 AT 01:09 P.M.

ORDER NUMBER: 34557432

CUSTOMER FILE NUMBER:

END OF CERTIFICATE

Petroleum Tank Management
Association of Alberta
Suite 980, 10303 Jasper Avenue
Edmonton, Alberta T5J 3N6
PH: (780)425-8265 or 1-866-222-8265
FAX: (780)425-4722

February 14, 2018

Tannis Gardiner
Parkland Geotechnical Ltd
101, 15810 - 102 Street
Grande Prairie AB
T8X 0K7

Dear Tannis Gardiner:

As per your request, the PTMAA has checked the registration of active tank sites and inventory of abandoned tank sites and there are no records for the property with the legal land description:

Plan 1024120, Block 1, Lot 1, Greenview
SW 5-70-6-W6

Please note that both databases are not complete. The main limitation of these databases is that they only include information reported through registration or a survey of abandoned sites completed in 1992 and should not be considered as a comprehensive inventory of all past or present storage tank sites. The PTMAA **cannot** guarantee that tanks do not or have not existed at this location. Information in the databases is based on information supplied by the owner and the PTMAA cannot guarantee its accuracy. Information on storage tanks or on past or present contaminant investigations may be filed with the local Fire Department or Alberta Environment.

Yours truly,

Connie Jacobsen
PTMAA

AbaData AER Pipeline Report

AER LIC/LINE #	COMPANY NAME	LICENSE DATE	FROM LOCATION	TO LOCATION	LGTH (kms)	STS	SUB	H2S (mol/ kmol)	OD (mm)	WT (mm)	MAT	TYPE	GRD	MOP (kpa)	JNT	INTL COAT	STRESS LEVEL (%)	ENV
21082 - 7	ATCO GAS AND PIPELINES LTD.	MAY 31 2002	16-29-69-6W6 RS	16-32-69-6W6 PL	1.61	O	NG	0	60.3	2.77	S	Z245.3	2901	8270	W	U	31	
21082 - 9	ATCO GAS AND PIPELINES LTD.		16-32-69-6W6 PL	16-32-69-6W6 MS	0.02	O	NG	0	60.3	2.77	S	Z245.3	2901	8270	W	U	31	
21082 - 10	ATCO GAS AND PIPELINES LTD.	AUG 4 2010	16-32-69-6W6 PL	16-32-69-6W6 PL	0.07	O	NG	0	60.3	3.18	S	Z245.1	3592	8270	W	U	22	
29914 - 6	PROGRESS ENERGY CANADA LTD.	JAN 16 2004	11-6-70-6W6 BE	6-32-69-6W6 BE	3.66	D	NG	0.3	114.3	3.96	S	Z245.1	3592	0	W	U	0	

FIELD
ELMWORTH
ELMWORTH
ELMWORTH
ELMWORTH

ENVIRONMENTAL LAW CENTRE
#410, 10115 - 100A Street, Edmonton, AB T5J 2W2
Phone: (780) 424-5099 Fax: (780) 424-5133
Internet: www.elc.ab.ca E-Mail: elc@elc.ab.ca

February 15, 2018 Our File: 118107

Ms. Tannis Gardiner
Parkland GEO
#101, 15810 - 102nd Street
Grande Prairie, AB T8X 0K7

Dear Ms. Gardiner:

RE: Search Requested - HIGHGROVE HOLDINGS INC.

In response to your request of February 14, 2018, we have searched the Environmental Enforcement Historical Search Service database for an exact match with respect to the above request, and can advise that as of today's date, there have been NO enforcement actions issued by Alberta Environment and Parks (AEP) pursuant to the Alberta "Environmental Protection and Enhancement Act" ("EPEA") and its predecessor legislation, the "Hazardous Chemicals Act", "Agricultural Chemicals Act", "Clean Water Act" and "Clean Air Act" to 1971, and/or pursuant to the "Water Act" from 1999 onwards.

This search is limited to the following enforcement actions under EPEA and its predecessor legislation: Tickets, Prosecutions, Administrative Penalties, Warnings, Enforcement Orders, Enforcement Orders Concerning Waste, Environmental Protection Orders, Emergency Environmental Protection Orders, Emission Control Orders, Chemical Control Orders, Water Quality Control Orders and Stop Orders. This search is limited to the following enforcement actions under the Water Act: Prosecutions, Administrative Penalties, Water Management Orders, Warnings and Enforcement Orders. It does not include Clean Up Orders issued under the Litter Act or Environmental Protection Orders respecting unsightly property issued under EPEA; this information may be available from the local municipality.

Enforcement actions are entered in the database following: (1) the decision date, for prosecutions; (2) the date an administrative penalty was paid or due (30 days after issuance), whichever is sooner; and (3) the date the document was issued for all other enforcement actions.

These search results are based on information provided by AEP. AEP advises that they try to provide the best information possible. However, AEP advises that it cannot guarantee that the information provided is complete or accurate and that any person relying on these search results does so at their own risk. More information may be gained by referring to original enforcement documents. Alberta Energy Regulator (AER) enforcement actions are not included (see the AER Public Compliance dashboard database).

Copies of orders are available from the Environmental Law Centre. Any other enforcement information may be available directly from Alberta Environment.

Yours sincerely,

Cindy Dewing
Enforcement Search Service
Encl.

ENVIRONMENTAL LAW CENTRE
#410, 10115 - 100A Street, Edmonton, AB T5J 2W2
Phone: (780) 424-5099 Fax: (780) 424-5133
Internet: www.elc.ab.ca E-Mail: elc@elc.ab.ca

February 15, 2018 Our File: 118108

Ms. Tannis Gardiner
Parkland GEO
#101, 15810 - 102nd Street
Grande Prairie, AB T8X 0K7

Dear Ms. Gardiner:

RE: Search Requested - WILLIAM MATHEW WINTERS

In response to your request of February 14, 2018, we have searched the Environmental Enforcement Historical Search Service database for an exact match with respect to the above request, and can advise that as of today's date, there have been NO enforcement actions issued by Alberta Environment and Parks (AEP) pursuant to the Alberta "Environmental Protection and Enhancement Act" ("EPEA") and its predecessor legislation, the "Hazardous Chemicals Act", "Agricultural Chemicals Act", "Clean Water Act" and "Clean Air Act" to 1971, and/or pursuant to the "Water Act" from 1999 onwards.

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Enforcement actions are entered in the database following: (1) the decision date, for prosecutions; (2) the date an administrative penalty was paid or due (30 days after issuance), whichever is sooner; and (3) the date the document was issued for all other enforcement actions.

These search results are based on information provided by AEP. AEP advises that they try to provide the best information possible. However, AEP advises that it cannot guarantee that the information provided is complete or accurate and that any person relying on these search results does so at their own risk. More information may be gained by referring to original enforcement documents. Alberta Energy Regulator (AER) enforcement actions are not included (see the AER Public Compliance dashboard database).

Copies of orders are available from the Environmental Law Centre. Any other enforcement information may be available directly from Alberta Environment.

Yours sincerely,

Cindy Dewing
Enforcement Search Service
Encl.

ENVIRONMENTAL LAW CENTRE
#410, 10115 - 100A Street, Edmonton, AB T5J 2W2
Phone: (780) 424-5099 Fax: (780) 424-5133
Internet: www.elc.ab.ca E-Mail: elc@elc.ab.ca

February 15, 2018 Our File: 118109

Ms. Tannis Gardiner
Parkland GEO
#101, 15810 - 102nd Street
Grande Prairie, AB T8X 0K7

Dear Ms. Gardiner:

RE: Search Requested - FREDERICK WARREN MCAUSLAND

In response to your request of February 14, 2018, we have searched the Environmental Enforcement Historical Search Service database for an exact match with respect to the above request, and can advise that as of today's date, there have been NO enforcement actions issued by Alberta Environment and Parks (AEP) pursuant to the Alberta "Environmental Protection and Enhancement Act" ("EPEA") and its predecessor legislation, the "Hazardous Chemicals Act", "Agricultural Chemicals Act", "Clean Water Act" and "Clean Air Act" to 1971, and/or pursuant to the "Water Act" from 1999 onwards.

This search is limited to the following enforcement actions under EPEA and its predecessor legislation: Tickets, Prosecutions, Administrative Penalties, Warnings, Enforcement Orders, Enforcement Orders Concerning Waste, Environmental Protection Orders, Emergency Environmental Protection Orders, Emission Control Orders, Chemical Control Orders, Water Quality Control Orders and Stop Orders. This search is limited to the following enforcement actions under the Water Act: Prosecutions, Administrative Penalties, Water Management Orders, Warnings and Enforcement Orders. It does not include Clean Up Orders issued under the Litter Act or Environmental Protection Orders respecting unsightly property issued under EPEA; this information may be available from the local municipality.

Enforcement actions are entered in the database following: (1) the decision date, for prosecutions; (2) the date an administrative penalty was paid or due (30 days after issuance), whichever is sooner; and (3) the date the document was issued for all other enforcement actions.

These search results are based on information provided by AEP. AEP advises that they try to provide the best information possible. However, AEP advises that it cannot guarantee that the information provided is complete or accurate and that any person relying on these search results does so at their own risk. More information may be gained by referring to original enforcement documents. Alberta Energy Regulator (AER) enforcement actions are not included (see the AER Public Compliance dashboard database).

Copies of orders are available from the Environmental Law Centre. Any other enforcement information may be available directly from Alberta Environment.

Yours sincerely,

Cindy Dewing
Enforcement Search Service
Encl.

ENVIRONMENTAL LAW CENTRE
#410, 10115 - 100A Street, Edmonton, AB T5J 2W2
Phone: (780) 424-5099 Fax: (780) 424-5133
Internet: www.elc.ab.ca E-Mail: elc@elc.ab.ca

February 15, 2018 Our File: 118110

Ms. Tannis Gardiner
Parkland GEO
#101, 15810 - 102nd Street
Grande Prairie, AB T8X 0K7

Dear Ms. Gardiner:

RE: Search Requested - HIGH LEVEL CHIPPERS LTD.

In response to your request of February 14, 2018, we have searched the Environmental Enforcement Historical Search Service database for an exact match with respect to the above request, and can advise that as of today's date, the enforcement actions listed in the attached report have been issued by Alberta Environment and Parks (AEP) pursuant to the Alberta "Environmental Protection and Enhancement Act" ("EPEA") and its predecessor legislation, the "Hazardous Chemicals Act", "Agricultural Chemicals Act", "Clean Water Act" and "Clean Air Act" to 1971, and/or pursuant to the "Water Act" from 1999 onwards. The attached report may also contain records which are not an exact match to your search request but may be related to the subject of your search.

This search is limited to the following enforcement actions under EPEA and its predecessor legislation: Tickets, Prosecutions, Administrative Penalties, Warnings, Enforcement Orders, Enforcement Orders Concerning Waste, Environmental Protection Orders, Emergency Environmental Protection Orders, Emission Control Orders, Chemical Control Orders, Water Quality Control Orders and Stop Orders. This search is limited to the following enforcement actions under the Water Act: Prosecutions, Administrative Penalties, Water Management Orders, Warnings and Enforcement Orders. It does not include Clean Up Orders issued under the Litter Act or Environmental Protection Orders respecting unsightly property issued under EPEA; this information may be available from the local municipality.

Enforcement actions are entered in the database following: (1) the decision date, for prosecutions; (2) the date an administrative penalty was paid or due (30 days after issuance), whichever is sooner; and (3) the date the document was issued for all other enforcement actions.

These search results are based on information provided by AEP. AEP advises that they try to provide the best information possible. However, AEP advises that it cannot guarantee that the information provided is complete or accurate and that any person relying on these search results does so at their own risk. More information may be gained by referring to original enforcement documents. Alberta Energy Regulator (AER) enforcement actions are not included (see the AER Public Compliance dashboard database).

Copies of orders are available from the Environmental Law Centre. Any other enforcement information may be available directly from Alberta Environment.

Yours sincerely,

Cindy Dewing
Enforcement Search Service
Encl.

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Internet: www.elc.ab.ca E-Mail: elc@elc.ab.ca

Environmental Enforcement Historical Search Service

Accountable Party	Action	Decision Date/ Penalty	Municipality/s Legal Description/s	Act/s & Section/s	Comments/Disposition
High Level Chippers Ltd.	Warning Letter	09-May-2006	MD of MacKenzie NW-9-116-22-W5	AEPEA(R) 61	The Company burned prohibited debris, residual diesel fuel in order to clean up a fuel spill, without an approval.

Acts:

ACA:	Agriculture Chemicals Act	CAA:	Clean Air Act	HCA:	Hazardous Chemicals Act
AEPEA:	Environmental Protection Enhancement Act(S.A.1992)	CC:	Criminal Code (Canada)	LA:	Litter Act
AEPEA(R)	Environmental Protection & Enhancement Act(R.S.A.2000)	CWA:	Clean Water Act	TDGCA:	Transportation of Dangerous Goods Control Act
BCA:	Beverage Container Act	DEA:	Dept. of Environment Act		
		FFA:	Fisheries Act (Canada)	WA:	Water Act

ENVIRONMENTAL LAW CENTRE
#410, 10115 - 100A Street, Edmonton, AB T5J 2W2
Phone: (780) 424-5099 Fax: (780) 424-5133
Internet: www.elc.ab.ca E-Mail: elc@elc.ab.ca

February 15, 2018

Our File: 118111

Ms. Tannis Gardiner
Parkland GEO
#101, 15810 - 102nd Street
Grande Prairie, AB T8X 0K7

Dear Ms. Gardiner:

RE: Search Requested - ROBERT M LEWIS

In response to your request of February 14, 2018, we have searched the Environmental Enforcement Historical Search Service database for an exact match with respect to the above request, and can advise that as of today's date, there have been NO enforcement actions issued by Alberta Environment and Parks (AEP) pursuant to the Alberta "Environmental Protection and Enhancement Act" ("EPEA") and its predecessor legislation, the "Hazardous Chemicals Act", "Agricultural Chemicals Act", "Clean Water Act" and "Clean Air Act" to 1971, and/or pursuant to the "Water Act" from 1999 onwards.

This search is limited to the following enforcement actions under EPEA and its predecessor legislation: Tickets, Prosecutions, Administrative Penalties, Warnings, Enforcement Orders, Enforcement Orders Concerning Waste, Environmental Protection Orders, Emergency Environmental Protection Orders, Emission Control Orders, Chemical Control Orders, Water Quality Control Orders and Stop Orders. This search is limited to the following enforcement actions under the Water Act: Prosecutions, Administrative Penalties, Water Management Orders, Warnings and Enforcement Orders. It does not include Clean Up Orders issued under the Litter Act or Environmental Protection Orders respecting unsightly property issued under EPEA; this information may be available from the local municipality.

Enforcement actions are entered in the database following: (1) the decision date, for prosecutions; (2) the date an administrative penalty was paid or due (30 days after issuance), whichever is sooner; and (3) the date the document was issued for all other enforcement actions.

These search results are based on information provided by AEP. AEP advises that they try to provide the best information possible. However, AEP advises that it cannot guarantee that the information provided is complete or accurate and that any person relying on these search results does so at their own risk. More information may be gained by referring to original enforcement documents. Alberta Energy Regulator (AER) enforcement actions are not included (see the AER Public Compliance dashboard database).

Copies of orders are available from the Environmental Law Centre. Any other enforcement information may be available directly from Alberta Environment.

Yours sincerely,

Cindy Dewing
Enforcement Search Service
Encl.

Reconnaissance Report

View in Metric

Export to Excel

Groundwater Wells

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

Well ID	LSD	SEC	TWP	RGE	M	DRILLING COMPANY	DATE COMPLETED	DEPTH (ft)	TYPE OF WORK	USE	CHM	LT	PT	WELL OWNER	STATIC LEVEL (ft)	TEST RATE (igpm)	SC_DIAM (in)
1375267	SW	5	70	6	6	HOPPER WATER WELL DRILLING LTD.	2010-10-15	165.00	New Well	Other		7	26	HIGH LEVEL CHIPPERS	91.53	9.99	5.56
9646158	5	5	70	6	6	WALT'S WATERWELL DRILLING	2014-05-20	220.00	New Well	Domestic		15	15	LONG, KENNY & SANDY	92.32	17.07	5.56
9646159	6	5	70	6	6	WALT'S WATERWELL DRILLING	2014-05-21	220.00	New Well	Domestic		19	16	FRIESEN, RALPH	90.84	6.39	5.56
9646250	4	5	70	6	6	WALT'S WATERWELL DRILLING	2015-06-22	220.00	New Well	Domestic		19	20	KREISER, JOHN	91.01	5.03	5.56
9646260	4	5	70	6	6	WALT'S WATERWELL DRILLING	2015-06-28	220.00	New Well	Domestic		18	20	KREISER, JOHN	91.01	22.79	5.56

Water Well Drilling Report

View in Imperial | Export to Excel

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

GOWN ID

GIC Well ID 1375267
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2010/11/02

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
HIGH LEVEL CHIPPERS	P.O. BOX 3339	HIGH LEVEL	ALBERTA	CANADA	T0H 1Z0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	5	70	6	6	1	1	1024120	SOUTH HALF OF QUARTER

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 55.028783 Longitude -118.884070
How Location Obtained
Not Verified

Elevation m
How Elevation Obtained
Not Obtained

Drilling Information

Method of Drilling
Rotary - Air

Proposed Well Use
Other

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
29.87		Sand
30.48		Gravel
33.22		Clay
41.45		Shale
42.06		Gray Sandstone
45.11		Gray Shale
50.29		Gray Sandstone

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 45.46 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
2010/10/15	45.42	27.90

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
50.29 m	50.29 m	2010/10/14	2010/10/15

Borehole

Diameter (cm)	From (m)	To (m)
21.59	0.00	33.83
12.70	33.83	50.29

Surface Casing (if applicable)
Plastic
Size OD : 14.12 cm
Wall Thickness : 0.478 cm
Bottom at : 34.14 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.544 cm
Top at : 13.72 m
Bottom at : 50.29 m

Perforations

From (m)	To (m)	Diameter or Slot Width (cm)	Slot Length (cm)	Hole or Slot Interval(cm)
44.20	50.29	0.051		11.43

Perforated by Machine

Annular Seal Bentonite Chips/Tablets
Placed from 0.00 m to 9.14 m
Amount 55.00 Pounds

Other Seals

Type	At (m)
Drive Shoe	34.14

Screen Type
Size OD : cm

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

Attachment
Top Fittings Bottom Fittings

Pack
Type Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
CORY B GILLIS

Certification No
83060A

Company Name
HOPPER WATER WELL DRILLING LTD.

Copy of Well report provided to owner
Yes

Date approval holder signed
2010/10/15

Water Well Drilling Report

View in Imperial | Export to Excel

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

GOWN ID

GIC Well ID 1375267
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2010/11/02

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
HIGH LEVEL CHIPPERS	P.O. BOX 3339	HIGH LEVEL	ALBERTA	CANADA	T0H 1Z0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	SW	5	70	6	6	1	1	1024120	SOUTH HALF OF QUARTER

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 55.028783 Longitude -118.884070
How Location Obtained
Not Verified

Elevation m
How Elevation Obtained
Not Obtained

Additional Information

Measurement in Metric

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

Recommended Pump Rate 45.46 L/min
Recommended Pump Intake Depth (From TOC) 42.67 m
Pump Installed Yes
Type Submersible
Depth 42.67 m
Make Grundfos
H.P. 0.75
Model (Output Rating) 7S07-15

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

Sample Collected for Potability
Submitted to ESRD

Additional Comments on Well

Yield Test

Taken From Top of Casing
Measurement in Metric

Test Date	Start Time	Static Water Level
2010/10/15	10:00 AM	27.90 m

Method of Water Removal

Type Air
Removal Rate 45.42 L/min
Depth Withdrawn From 49.29 m

If water removal period was < 2 hours, explain why

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
27.90	0:00	49.39
	1:00	42.25
	2:00	37.82
	3:00	34.75
	4:00	32.44
	5:00	30.66
	6:00	29.50
	7:00	28.84
	8:00	28.49
	9:00	28.34
	10:00	28.28
	12:00	28.23
	14:00	28.19
	16:00	28.15
	18:00	28.13
	20:00	28.09
	25:00	28.06
	30:00	28.05
	35:00	28.04
	40:00	28.04
	50:00	28.03
	60:00	28.02
	75:00	28.02
	90:00	28.01
	105:00	28.00
	120:00	28.00

Water Diverted for Drilling

Water Source	Amount Taken		Diversion Date & Time
CITY OF GRANDE PRAIRIE BULK STATION	4546.09	L	2010/10/14 7:00 AM

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
CORY B GILLIS

Certification No
83060A

Company Name
HOPPER WATER WELL DRILLING LTD.

Copy of Well report provided to owner
Yes

Date approval holder signed
2010/10/15

Water Well Drilling Report

View in Imperial | Export to Excel

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

GOWN ID

GIC Well ID 9646158
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2015/02/06

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
LONG, KENNY & SANDY	7116 99 A ST	GRANDE PRAIRIE	ALBERTA	CANADA	T8V 5T6

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	5	5	70	6	6	3	1	1124095	

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 55.029617 Longitude -118.887583
How Location Obtained
Differential corrected handheld GPS 5-10m

Elevation 678.48 m
How Elevation Obtained
Differential corrected handheld GPS 5-10m

Drilling Information

Method of Drilling
Combination

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
1.22		Brown Sand
4.27		Gray Clay
9.45		Gray Sand
17.98		Gray Clay
36.27		Gray Till
37.19		Tan Shale
43.28		Gray Shale
49.38		Dark Gray Shale
51.82		Gray Sandstone
53.04		Brown Shale
55.47		Gray Shale
56.39	Yes	Gray Sandstone
57.00		Gray Shale
59.44	Yes	Gray Sandstone
67.06		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 45.46 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
2014/05/20	77.60	28.14

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
67.06 m	67.06 m	2014/05/19	2014/05/20

Borehole

Diameter (cm)	From (m)	To (m)
20.00	0.00	41.15
13.02	41.15	67.06

Surface Casing (if applicable)
Steel
Size OD : 14.13 cm
Wall Thickness : 0.478 cm
Bottom at : 41.45 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.544 cm
Top at : 29.87 m
Bottom at : 67.06 m

Perforations

From (m)	To (m)	Diameter or Slot Width (cm)	Slot Length (cm)	Hole or Slot Interval(cm)
54.86	60.96	0.318	30.48	

Perforated by Saw

Annular Seal Bentonite Slurry
Placed from 0.00 m to 41.15 m
Amount 120.00 Gallons

Other Seals

Type	At (m)
Formation Packer	48.77

Screen Type
Size OD : cm

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

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
WALTER OSMACHENKO

Certification No
5491Q

Company Name
WALT'S WATERWELL DRILLING

Copy of Well report provided to owner
Yes

Date approval holder signed
2014/05/20

Water Well Drilling Report

View in Imperial | Export to Excel

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

GOWN ID

GIC Well ID 9646158
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2015/02/06

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
LONG, KENNY & SANDY	7116 99 A ST	GRANDE PRAIRIE	ALBERTA	CANADA	T8V 5T6

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	5	5	70	6	6	3	1	1124095	

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 55.029617 Longitude -118.887583
How Location Obtained
Differential corrected handheld GPS 5-10m

Elevation 678.48 m
How Elevation Obtained
Differential corrected handheld GPS 5-10m

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level 81.00 cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 45.46 L/min
Recommended Pump Intake Depth (From TOC) 51.82 m
Pump Installed Yes
Type
Depth 51.82 m
Make GRUNDFOS
H.P. 0.75
Model (Output Rating) 3 INCH 10 SQE 07 240

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

Additional Comments on Well
METHOD OF DRILLING COMBINATION OF ROTARY AIR AND ROTARY MUD;

Yield Test

Taken From Ground Level
Depth to water level
Measurement in Metric

Test Date	Start Time	Static Water Level
2014/05/20	11:30 AM	28.14 m

Method of Water Removal
Type Air
Removal Rate 77.60 L/min
Depth Withdrawn From 60.96 m

If water removal period was < 2 hours, explain why

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
28.14	0:00	62.70
	1:00	56.12
	2:00	50.91
	3:00	46.41
	4:00	42.62
	5:00	39.39
	6:00	36.72
	7:00	34.47
	8:00	32.67
	9:00	31.32
	10:00	30.22
	12:00	28.88
	14:00	28.41
	16:00	28.27
	18:00	28.23

Water Diverted for Drilling

Water Source	Amount Taken		Diversion Date & Time
CITY OF GRANDE PRAIRIE	4546.09	L	2014/05/19 9:30 AM

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
WALTER OSMACHENKO

Certification No
5491Q

Company Name
WALT'S WATERWELL DRILLING

Copy of Well report provided to owner
Yes

Date approval holder signed
2014/05/20

Water Well Drilling Report

View in Imperial | Export to Excel

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

GOWN ID

GIC Well ID 9646159
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2015/02/06

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
FRIESEN, RALPH	P.O. BOX 78	GROVEDALE	ALBERTA	CANADA	T0H 1X0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	6	5	70	6	6				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 55.031667 Longitude -118.879250
How Location Obtained
Differential corrected handheld GPS 5-10m

Elevation 703.17 m
How Elevation Obtained
Differential corrected handheld GPS 5-10m

Drilling Information

Method of Drilling
Combination

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
0.61		Brown Till
3.66		Brown Sand
5.49		Brown Till
7.92		Brown Sand
9.75		Brown Clay
11.28		Brown Clay
13.72		Brown Sand
15.85		Brown Clay
32.61		Gray Till
37.49		Gray Sandstone
38.71		Gray Shale
39.32		Gray Sandstone
43.89		Dark Gray Shale
47.55		Gray Sandstone
52.43		Gray Shale
54.56	Yes	Gray Sandstone
65.23		Dark Gray Shale
66.75		Gray Sandstone
67.06		Brownish Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 25.00 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
2014/05/21	29.05	27.69

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
67.06 m	67.06 m	2014/05/20	2014/05/21

Borehole

Diameter (cm)	From (m)	To (m)
20.00	0.00	35.36
13.02	35.36	67.06

Surface Casing (if applicable)
Steel
Size OD : 14.13 cm
Wall Thickness : 0.478 cm
Bottom at : 35.66 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.544 cm
Top at : 30.48 m
Bottom at : 67.06 m

Perforations

From (m)	To (m)	Diameter or Slot Width (cm)	Slot Length (cm)	Hole or Slot Interval(cm)
48.77	54.86	0.318	30.48	

Perforated by Saw

Annular Seal Bentonite Slurry
Placed from 0.00 m to 35.36 m
Amount 100.00 Gallons

Other Seals

Type	At (m)
Formation Packer	48.77

Screen Type
Size OD : cm

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

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
WALTER OSMACHENKO

Certification No
5491Q

Company Name
WALT'S WATERWELL DRILLING

Copy of Well report provided to owner
Yes

Date approval holder signed
2014/05/21

Water Well Drilling Report

View in Imperial | Export to Excel

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

GOWN ID

GIC Well ID 9646159
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2015/02/06

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
FRIESEN, RALPH	P.O. BOX 78	GROVEDALE	ALBERTA	CANADA	T0H 1X0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	6	5	70	6	6				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 55.031667 Longitude -118.879250
How Location Obtained
Differential corrected handheld GPS 5-10m

Elevation 703.17 m
How Elevation Obtained
Differential corrected handheld GPS 5-10m

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level 68.00 cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 25.00 L/min
Recommended Pump Intake Depth (From TOC) 48.77 m
Pump Installed Yes
Type
Depth 48.77 m
Make GRUNDFOS
H.P. 0.75
Model (Output Rating) 3 INCH 5 SQE 07 270

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

Additional Comments on Well
METHOD OF DRILLING COMBINATION OF ROTARY AIR AND ROTARY MUD;

Yield Test

Taken From Ground Level
Depth to water level

Measurement in Metric

Test Date 2014/05/21
Start Time 1:30 PM
Static Water Level 27.69 m

Method of Water Removal
Type Air
Removal Rate 29.05 L/min
Depth Withdrawn From 67.05 m

If water removal period was < 2 hours, explain why

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
27.69	0:00	64.70
	1:00	61.49
	2:00	58.67
	3:00	56.43
	4:00	53.18
	5:00	50.54
	6:00	48.07
	7:00	45.63
	8:00	43.40
	9:00	41.27
	10:00	38.93
	12:00	36.17
	14:00	32.95
	16:00	31.10
	18:00	30.23
	20:00	29.50

Water Diverted for Drilling

Water Source	Amount Taken		Diversion Date & Time
CITY OF GRANDE PRAIRIE	5000.70	L	2014/05/20 9:30 AM

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
WALTER OSMACHENKO

Certification No
5491Q

Company Name
WALT'S WATERWELL DRILLING

Copy of Well report provided to owner
Yes

Date approval holder signed
2014/05/21

Water Well Drilling Report

View in Imperial | Export to Excel

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

GOWN ID

GIC Well ID 9646250
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2016/02/22

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
KREISER, JOHN	P.O. BOX 247	GROVEDALE	ALBERTA	CANADA	T0H 1X0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	4	5	70	6	6				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 55.028317 Longitude -118.888550
How Location Obtained
Differential corrected handheld GPS 5-10m

Elevation 666.29 m
How Elevation Obtained
Differential corrected handheld GPS 5-10m

Drilling Information

Method of Drilling
Combination

Type of Work
New Well

Proposed Well Use
Domestic

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
1.52		Brown Sand
3.35		Gray Clay
4.88		Gray Sand
6.40		Gray Clay
7.62		Tan Sand
25.30		Gray Clay
33.53		Gray Rocky Till
37.49		Gray Till
39.93		Tan Sandstone
41.45		Gray Shale
42.37		Gray Sandstone
44.20		Gray Shale
49.99	Yes	Gray Sandstone
53.64		Gray Shale
55.47		Gray Sandstone
56.08		Gray Shale & Sandstone
60.35	Yes	Gray Sandstone
61.57		Gray Shale
67.06		Dark Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 22.73 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
2015/06/22	22.87	27.74

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
67.06 m	67.06 m	2015/06/19	2015/06/22

Borehole

Diameter (cm)	From (m)	To (m)
20.00	0.00	41.15
13.02	41.15	67.06

Surface Casing (if applicable)
Steel
Size OD : 14.13 cm
Wall Thickness : 0.478 cm
Bottom at : 41.45 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.544 cm
Top at : 29.87 m
Bottom at : 67.06 m

Perforations

From (m)	To (m)	Diameter or Slot Width (cm)	Slot Length (cm)	Hole or Slot Interval(cm)
48.77	60.96	0.318	30.48	

Perforated by Saw

Annular Seal Bentonite Slurry
Placed from 0.00 m to 41.15 m
Amount 120.00 Gallons

Other Seals

Type	At (m)

Screen Type
Size OD : cm

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

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
WALTER OSMACHENKO

Certification No
5491Q

Company Name
WALT'S WATERWELL DRILLING

Copy of Well report provided to owner
Yes

Date approval holder signed
2015/06/22

Water Well Drilling Report

View in Imperial | Export to Excel

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

GOWN ID

GIC Well ID 9646250
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2016/02/22

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
KREISER, JOHN	P.O. BOX 247	GROVEDALE	ALBERTA	CANADA	T0H 1X0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	4	5	70	6	6				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 55.028317 Longitude -118.888550
How Location Obtained
Differential corrected handheld GPS 5-10m

Elevation 666.29 m
How Elevation Obtained
Differential corrected handheld GPS 5-10m

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level 78.00 cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 22.73 L/min
Recommended Pump Intake Depth (From TOC) 57.91 m
Pump Installed Yes
Type Submersible
Depth 57.91 m
Make GRUNDFOS 3"
H.P. 0.75
Model (Output Rating) 5SQE07270

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

Additional Comments on Well
PACKER INSTALLED AT 170'

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
2015/06/22	1:30 PM	27.74 m

Method of Water Removal
Type Air
Removal Rate 22.87 L/min
Depth Withdrawn From 67.05 m

If water removal period was < 2 hours, explain why

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
	0:00	57.81
	1:00	55.60
	2:00	53.66
	3:00	51.70
	4:00	49.84
	5:00	47.98
	6:00	46.20
	7:00	44.67
	8:00	43.20
	9:00	41.84
	10:00	40.56
	12:00	38.23
	14:00	36.30
	16:00	34.65
	18:00	33.32
	20:00	32.24
	25:00	30.30
	30:00	29.30
	35:00	28.75
	40:00	28.51

Water Diverted for Drilling

Water Source	Amount Taken		Diversion Date & Time
GRANDE PRAIRIE	5455.31	L	2015/06/19 3:30 PM

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
WALTER OSMACHENKO

Certification No
5491Q

Company Name
WALT'S WATERWELL DRILLING

Copy of Well report provided to owner
Yes

Date approval holder signed
2015/06/22

Water Well Drilling Report

View in Imperial | Export to Excel

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

GOWN ID

GIC Well ID 9646260
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2016/02/22

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
KREISER, JOHN	P.O. BOX 247	GROVEDALE	ALBERTA	CANADA	T0H 1X0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	4	5	70	6	6				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 55.028317 Longitude -118.888550
How Location Obtained
Differential corrected handheld GPS 5-10m

Elevation 666.29 m
How Elevation Obtained
Differential corrected handheld GPS 5-10m

Drilling Information

Method of Drilling
Combination

Proposed Well Use
Domestic

Type of Work
New Well

Formation Log

Measurement in Metric

Depth from ground level (m)	Water Bearing	Lithology Description
1.52		Brown Sand
3.35		Gray Clay
4.88		Gray Sand
6.40		Gray Clay
7.62		Tan Sand
25.30		Gray Clay
33.53		Gray Rocky Till
37.49		Gray Till
39.93		Tan Sandstone
42.37		Gray Sandstone
44.20		Gray Shale
49.99		Gray Sandstone
53.64		Gray Shale
55.47	Yes	Gray Sandstone
60.35	Yes	Gray Sandstone
61.57		Gray Shale
64.01		Dark Gray Shale
67.06		Gray Shale

Yield Test Summary

Measurement in Metric

Recommended Pump Rate 22.73 L/min

Test Date	Water Removal Rate (L/min)	Static Water Level (m)
2015/06/28	103.61	27.74

Well Completion

Measurement in Metric

Total Depth Drilled	Finished Well Depth	Start Date	End Date
67.06 m	67.06 m	2015/06/19	2015/06/28

Borehole

Diameter (cm)	From (m)	To (m)
20.00	0.00	41.15
13.02	41.15	67.06

Surface Casing (if applicable)
Steel
Size OD : 14.13 cm
Wall Thickness : 0.478 cm
Bottom at : 41.45 m

Well Casing/Liner
Plastic
Size OD : 11.43 cm
Wall Thickness : 0.544 cm
Top at : 30.48 m
Bottom at : 67.06 m

Perforations

From (m)	To (m)	Diameter or Slot Width (cm)	Slot Length (cm)	Hole or Slot Interval(cm)
51.82	64.01	0.318	30.48	

Perforated by Saw

Annular Seal Bentonite Slurry
Placed from 0.00 m to 41.15 m
Amount 120.00 Gallons

Other Seals

Type	At (m)

Screen Type
Size OD : cm

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

Attachment
Top Fittings
Bottom Fittings

Pack
Type
Grain Size
Amount

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
WALTER OSMACHENKO

Certification No
5491Q

Company Name
WALT'S WATERWELL DRILLING

Copy of Well report provided to owner
Yes

Date approval holder signed
2015/06/28

Water Well Drilling Report

View in Imperial | Export to Excel

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

GOWN ID

GIC Well ID 9646260
GoA Well Tag No.
Drilling Company Well ID
Date Report Received 2016/02/22

Well Identification and Location

Measurement in Metric

Owner Name	Address	Town	Province	Country	Postal Code
KREISER, JOHN	P.O. BOX 247	GROVEDALE	ALBERTA	CANADA	T0H 1X0

Location	1/4 or LSD	SEC	TWP	RGE	W of MER	Lot	Block	Plan	Additional Description
	4	5	70	6	6				

Measured from Boundary of
m from
m from

GPS Coordinates in Decimal Degrees (NAD 83)
Latitude 55.028317 Longitude -118.888550
How Location Obtained
Differential corrected handheld GPS 5-10m

Elevation 666.29 m
How Elevation Obtained
Differential corrected handheld GPS 5-10m

Additional Information

Measurement in Metric

Distance From Top of Casing to Ground Level 78.00 cm
Is Artesian Flow
Rate L/min
Is Flow Control Installed
Describe

Recommended Pump Rate 22.73 L/min
Recommended Pump Intake Depth (From TOC) 57.91 m
Pump Installed Yes
Type Submersible
Depth 57.91 m
Make GRUNDFOS 3"
H.P. 0.75
Model (Output Rating) 5SQE07

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

Additional Comments on Well
PACKER INSTALLED AT 170'.

Yield Test

Taken From Ground Level
Measurement in Metric

Test Date	Start Time	Static Water Level
2015/06/28	1:00 AM	27.74 m

Method of Water Removal
Type Air
Removal Rate 103.61 L/min
Depth Withdrawn From 20.43 m

If water removal period was < 2 hours, explain why

Depth to water level

Drawdown (m)	Elapsed Time Minutes:Sec	Recovery (m)
	0:00	57.81
	1:00	55.60
	2:00	53.66
	3:00	51.70
	4:00	49.84
	5:00	47.98
	6:00	46.20
	7:00	44.67
	8:00	43.20
	9:00	41.84
	10:00	40.56
	12:00	38.23
	14:00	36.30
	16:00	34.65
	18:00	33.32
	20:00	32.24
	25:00	30.30
	30:00	29.30
	35:00	28.75
	40:00	28.51

Water Diverted for Drilling

Water Source	Amount Taken		Diversion Date & Time
CITYOF GRANDE PRAIRIE	5000.70	L	2015/06/19 9:30 AM

Contractor Certification

Name of Journeyman responsible for drilling/construction of well
WALTER OSMACHENKO

Certification No
5491Q

Company Name
WALT'S WATERWELL DRILLING

Copy of Well report provided to owner
Yes

Date approval holder signed
2015/06/28

Environmental Public Health
7 Hospital Street
Fort McMurray, AB T9H 1P2
T: 780-791-6078 F: 780-714-5620
AHS.NZ.EPH.RecordSearch@albertahealthservices.ca

February 16, 2018

Parkland Geotechnical Ltd.
#4, 10902 – 92 Avenue
Grande Prairie, AB
T8V 6B5

Re: Your request for records search

On February 14, 2018 our office received your request for information regarding the following property:

Municipal: N/A
Legal: Lot 1, Block 1, Plan 1024120
LSD: SW Sec. 5 Twp. 70 Rng. 6 West. 6

We have conducted a search for records created in accordance with public health legislation, including records relating to hazardous waste sites, abandoned landfills and contamination sources constituting a public health nuisance.

No records responsive to your request have been located. It should also be noted that the fact that records do not exist does not necessarily mean that the property complies with all applicable legislation.

Please be advised that records relevant to your search may be held by other agencies, such as Alberta Environment and Sustainable Resource Development, Alberta Energy and Utilities Board, local governments, and others. You should contact these agencies directly for further information.

The invoice in the amount of $50.00 owing for this service will be sent to you by Alberta Health Services Accounts Receivable. Please issue payment to the address noted on this invoice when it is received.

Sincerely,

Per:
Jeff Lowry
Public Health Inspector/Executive Officer
Alberta Health Services – North Zone

From: Lindsey Lemieux
To: Tannis Gardiner
Subject: RE: GP3760 - Environmental File Search Request
Date: February-23-18 3:39:19 PM
Attachments: image001.jpg

In follow-up to your request of February 14, 2018 we offer the following information from research of our records:

- The property is currently zoned Agriculture in accordance with our Land Use Bylaw
- Bylaw infractions relating to the property:
    - July, 2016 - Unsightly Property
    - February, 2016 - Non-compliance with development permit D10-012
    - August, 2012 – Unsightly Property
- We have no record of current and historical landfills within 1 km of the property
- We do not have any Emergency Response/Fire Rescue Services records for this quarter, or any documentation evidencing installation or removal of underground storage tanks.
- We do not have any environmental reports on file for this quarter, or immediately adjacent quarters

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From: Tannis Gardiner [mailto:Tannis.Gardiner@parklandgeo.com]
Sent: February-14-18 2:23 PM
To: Lindsey Lemieux <Lindsey.Lemieux@MDGreenview.ab.ca>
Subject: GP3760 - Environmental File Search Request

Good afternoon Lindsey,

I am working on a Phase 1 Environmental Site Assessment and require some information from the MD of Greenview. I have attached the landowner approval agreement.

The Property I need searched is as follows:
Lot 1, Block 1, Plan 1024120
Within the SW1/4-5-70-6-W6M
Municipal District of Greenview No.16 (Near Grovedale, Alberta)

The information/searches I am look for are as follows (if available):

- Zoning information for property
- Records pertaining to:
    - Site contamination, spills, releases, contaminant migration ect.
    - Bylaw infractions relating to the property
    - Existence or history of existence of underground or aboveground storage tanks on property
    - Known current and historical landfills within 1 km of the property
    - Other: any environmentally related incidents, clean up orders, fires ect.
    - Property land use:
        - Current property land use

- Current adjacent land use
- Historical property land use
- Historical adjacent property land use

Please let me know if you have any questions or concerns.

Thank you,

Tannis Gardiner, C.E.T.
Geo-Environmental Technologist
Parkland Geotechnical Ltd.

#101, 15810 – 102 Street
Grande Prairie, AB, T8X 0K7
Tel: (780) 539 – 5102 ext. 31
Cell: (780) 512 - 5400
Fax: (780) 539 – 5106

cid:image001.jpg@01CE9E68.626AD900

LIMITATIONS

GENERAL TERMS, CONDITIONS
AND LIMITATIONS

The use of this attached report is subject to the following general terms and conditions.

1. STANDARD OF CARE - In the performance of professional services, ParklandGEO used the degree of care and skill ordinarily exercised under similar circumstances by reputable members of its profession practicing in the same or similar localities. No other warranty expressed or implied is made in any manner.

2. INTERPRETATION OF THE REPORT - The CLIENT recognizes that subsurface conditions will vary from those encountered at the location where borings, surveys, or explorations are made and that the data, interpretations and recommendation of ParklandGEO are based solely on the information available to him. Classification and identification of soils, rocks, geological units, contaminated materials and contaminant quantities will be based on commonly accepted practices in geotechnical or environmental consulting practice in this area. ParklandGEO will not be responsible for the interpretation by others of the information developed.

3. SITE INFORMATION - The CLIENT has agreed to provide all information with respect to the past, present and proposed conditions and use of the Site, whether specifically requested or not. The CLIENT acknowledged that in order for ParklandGEO to properly advise and assist the CLIENT, ParklandGEO has relied on full disclosure by the CLIENT of all matters pertinent to the Site investigation.

4. COMPLETE REPORT - The Report is of a summary nature and is not intended to stand alone without reference to the instructions given to ParklandGEO by the CLIENT, communications between ParklandGEO and the CLIENT, and to any other reports, writings or documents prepared by ParklandGEO for the CLIENT relative to the specific Site, all of which constitute the Report. The word "Report" shall refer to any and all of the documents referred to herein. In order to properly understand the suggestions, recommendations and opinions expressed by ParklandGEO, reference must be made to the whole of the Report. ParklandGEO cannot be responsible for use of any part or portions of the report without reference to the whole report. The CLIENT has agreed that "This report has been prepared for the exclusive use of the named CLIENT. Any use which a third party makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such third parties. ParklandGEO accepts no responsibility for damages, if any, suffered by any third party as a result of decisions made or actions based on this report."

   The CLIENT has agreed that in the event that any such report is released to a third party, the above disclaimer shall not be obliterated or altered in any manner. The CLIENT further agrees that all such reports shall be used solely for the purposes of the CLIENT and shall not be released or used by others without the prior written permission of ParklandGEO.

5. LIMITATIONS ON SCOPE OF INVESTIGATION AND WARRANTY DISCLAIMER
   There is no warranty, expressed or implied, by ParklandGEO that:
   a) the investigation uncovered all potential geo-hazards, contaminants or environmental liabilities on the Site; or
   b) the Site is entirely free of all geo-hazards or contaminants as a result of any investigation or cleanup work undertaken on the Site, since it is not possible, even with exhaustive sampling, testing and analysis, to document all potential geo-hazards or contaminants on the Site.

   The CLIENT acknowledged that:
   a) the investigation findings are based solely on the information generated as a result of the specific scope of the investigation authorized by the CLIENT;
   b) unless specifically stated in the agreed Scope of Work, the investigation will not, nor is it intended to assess or detect potential contaminants or environmental liabilities on the Site;
   c) any assessment regarding geological conditions on the Site is based on the interpretation of conditions determined at specific sampling locations and depths and that conditions may vary between sampling locations, hence there can be no assurance that undetected geological conditions, including soils or groundwater are not located on the Site;
   d) any assessment is also dependent on and limited by the accuracy of the analytical data generated by the sample analyses;
   e) any assessment is also limited by the scientific possibility of determining the presence of unsuitable geological conditions for which scientific analyses have been conducted; and
   f) the laboratory testing program and analytical parameters selected are limited to those outlined in the CLIENT's authorized scope of investigation; and
   g) there are risks associated with the discovery of hazardous materials in and upon the lands and premises which may inadvertently discovered as part of the investigation. The CLIENT acknowledges that it may have a responsibility in law to inform the owner of any affected property of the existence or suspected existence of hazardous materials and in some cases the discovery of hazardous conditions and materials will require that certain regulatory bodies be informed. The CLIENT further acknowledges that any such discovery may result in the fair market value of the lands and premises and of any other lands and premises adjacent thereto to be adversely affected in a material respect.

6. COST ESTIMATES - Estimates of remediation or construction costs can only be based on the specific information generated and the technical limitations of the investigation authorized by the CLIENT. Accordingly, estimated costs for construction or remediation are based on the known site conditions, which can vary as new information is discovered during construction. As some construction activities are an iterative exercise, ParklandGEO shall therefore not be liable for the accuracy of any estimates of remediation or construction costs provided.

7. LIMITATION OF LIABILITY - The CLIENT has agreed that to the fullest extent permitted by the law ParklandGEO's total liability to CLIENT for any and all injuries, claims, losses, expenses or damages whatsoever arising out of or in anyway relating to the Project is contractually limited, as outlined in ParklandGEO's standard Consulting Services Agreement. Further, the CLIENT has agreed that to the fullest extent permitted by law ParklandGEO is not liable to the CLIENT for any special, indirect or consequential damages whatsoever, regardless of cause.

8. INDEMNIFICATION - To the fullest extent permitted by law, the CLIENT has agreed to defend, indemnify and hold ParklandGEO, its directors, officers, employees, agents and subcontractors, harmless from and against any and all claims, defence costs, including legal fees on a full indemnity basis, damages, and other liabilities arising out of or in any way related to ParklandGEO's work, reports or recommendations.