

**APPENDIX J**

**Phase I Environmental Site Assessment**



# Phase I Environmental Site Assessment

Proposed Development near Strathmore, Alberta  
Portions of Sections 05, 08, 09, and 17 of 024-26 W4M  
Agricultural Properties

Trace Project No. 100-1533-01  
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## Executive Summary

2151836 Alberta Inc. care of B&A Planning Group retained Trace Associates Inc. (Trace) to conduct a Phase I environmental site assessment (ESA) for agricultural properties located within portions of Sections 05, 08, 09, and 17 of 026-24 W4M, near Strathmore, Alberta, collectively hereinafter referred to as “the Site.” The objective of conducting the Phase I ESA was to identify actual and potential sources of soil and/or groundwater contamination that may be present at the Site.

### Discussion and Conclusions

Based on the information collected during this study, Trace has identified the following potential sources of contamination from on-site sources:

- Nineteen active oil and gas wellsites are located on the Site. The wells produce gas, water, and/or crude oil / bitumen. The potential for soil and/or groundwater impacts exists; however, the operator, Ember Resources Inc. (Ember), has the legal obligation to address any environmental concerns during the operation, abandonment, and post-abandonment of the wellsite and associated facilities. Ember will be required to obtain Reclamation Certificates for site closure, which will include an evaluation and assessment of the potential environmental risks associated with the oil and gas activities. This environmental reporting should be reviewed by an environmental professional. No further immediate environmental investigation as part of this assessment is warranted at this time.
- With any homestead or agricultural property, the potential for fueling above-ground storage tanks (ASTs), pits, burn pits, or buried debris exists. Although there were no obvious indications of pits or buried debris identified as part of the aerial photograph review and site visits, the potential remains. The risk to adversely impact soil and groundwater is generally low to moderate, and no further immediate environmental investigation pertaining to these areas is warranted at this time.

Trace did not identify actual or potential sources of contamination from off-site sources which would warrant further investigation at the Site at this time.

It is important to note that Trace personnel were unable to visually assess the entire Site, nor conduct interviews with select landowners/occupants, as access to portions of the Site was not authorized and communications with landowners/occupants was restricted. Trace did not request to or gain access to the buildings on the Site.

### Recommendations

Based on the assessment findings and conclusions, Trace recommends consideration of the following actions:

- Conduct a full site inspection and landowner/ operator interviews prior to redevelopment.
- Following initiation of abandonment activities by the oil and gas operator, contract a qualified environmental professional to conduct a review of the wellsite Reclamation Certificate documentation prior to landowner signoff and subsequent submission to the regulator.
- Due to the buildings' dates of construction (prior to 1950 through to 1988), consider the presence of hazardous building materials prior to any major renovations or demolition of any building on the Site.
- Decommission the water wells, septic tanks, and septic fields in accordance with applicable acts, regulations, and guidelines when no longer in use.
- If buried debris, stained soils, or soils of unknown quality are encountered during redevelopment, contract a qualified environmental professional.
- If fueling tanks (ASTs, underground storage tanks, etc.) are encountered, contract a qualified environmental professional to assess the potential environmental risk.

*This Executive Summary is subject to the same general limitations as contained in the report and must be read in conjunction with the entire report.*

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## **APPENDICES**

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# 1.0 Introduction

## 1.1 Purpose and Authorization

2151836 Alberta Inc. care of B&A Planning Group (B&A) retained Trace Associates Inc. (Trace) to conduct a Phase I environmental site assessment (ESA) for agricultural properties located within portions of Sections 05, 08, 09, and 17 of 026-24 W4M, near Strathmore, Alberta, collectively hereinafter referred to as “the Site.” B&A provided written authorization to proceed with the project on August 8, 2019. The objective of conducting the Phase I ESA was to identify actual and potential sources of soil and/or groundwater contamination that may be present at the Site. B&A requested that the Phase I ESA be conducted as part of their environmental due diligence associated with redevelopment of the Site.

## 1.2 Standards and Methods

Trace conducted the project in general accordance with the following documents:

- The Canadian Standards Association (CSA) Phase I ESA Standard Z768-01 (CSA, 2001)
- Trace’s Environmental Report – General Conditions (Appendix A)

As per CSA standards, there were no enhancements (e.g., risk evaluations, recommendations regarding remedial measures) to the Phase I ESA. Trace personnel were unable to visually assess the entire Site or conduct interviews with select landowners/occupants, as access to portions of the Site was not authorized, and communications with landowners/occupants was restricted. Trace did not request to gain access to the buildings on the Site.

## 1.3 Scope of Work

The scope of work for this project included the following specific tasks:

- Review historical environmental reports related to the Site.
- Review available historical information for the Site and the immediate surrounding properties/areas, including aerial photographs, property listing directories (i.e., Henderson Business Directories [HBDs] and/or Telus Numerical Directories [TNDs]), and fire insurance plan (FIP) maps for previous land use.
- Investigate and collect relevant environmental information pertaining to the Site from Wheatland County, the Alberta Environment and Parks (AEP) Online Water Well Database, the AEP Approval Viewer, the Alberta Energy Regulator (AER), and the Petroleum Tank Management Association of Alberta (PTMAA).
- Review available environmental reporting for the surrounding area from the Alberta Environmental Site Assessment Repository (ESAR) database.
- Conduct a site visit and personnel interview.
- Review current land title information for the Site.
- Prepare a Phase I ESA report.



## 1.4 Qualifications of the Personnel

Ms. Nicole Koloff, B.A., B.Ed., obtained the regulatory and historical information, and prepared the report. Ms. Koloff is a Project Consultant and an Associate with Trace, and her primary areas of experience include conducting background research for sites across Alberta, and preparing technical documents, including Phase I and II ESAs; soil sampling reports; groundwater monitoring reports; Indian Oil and Gas Canada audits; and proposals within the real estate and development and oil and gas sectors.

Mr. Nick Swanlund, B.Sc., is the Project Manager. At Trace, Nick is the Team Lead, Real Estate and Development and an Associate, and is responsible for technical advisory, mentorship, client liaison, and successful project execution in this market sector. Nick's primary areas of experience include: ESAs, contaminated sites management, hazardous building materials surveys, regulatory and municipal liaising, wetland assessments, and hydrogeological investigations related to land development, mining, and oil and gas activities. Nick's project experience extends throughout the Western Prairies for both private sector and government clientele.

Mr. Michael Lupart, B.Sc., P.Ag., P.Biol., conducted a senior review of the report. Michael is the Division Manager, Calgary and a Partner with Trace, and has over 14 years of experience conducting ESAs, groundwater monitoring, spill response, and remediation activities related to land development and upstream oil and gas activities. At Trace, Michael leads the Calgary office and directs work as the Principal-in-Charge for the Real Estate and Development Team. He is responsible for senior technical oversight, client liaison, and successful project execution within the real estate, government, oil and gas, and industrial sectors. Michael's expertise and passion reside in managing and conducting technically challenging projects with expedited turnaround times or unique stakeholder considerations.

## 2.0 Site Characterization

Trace personnel conducted site visits on August 26 through 30, 2019. Trace personnel were unable to visually assess the entire Site, as access to portions of the Site was not authorized. Photographs captured during the site inspection are included in Appendix B.

### 2.1 Site Description

The Site is comprised of Section 05-024-26 W4M, S $\frac{1}{2}$ -08-024-26 W4M, N $\frac{1}{2}$ -09-024-26 W4M, and S $\frac{1}{2}$ -17-024-26 W4M, located near Strathmore, Alberta. The Site is comprised of three separate segments which are rectangular (two) and roughly rectangular (one) in shape, with a total area of approximately 6,067,000 square metres or 606.7 hectares. The Site and majority of the surrounding areas are zoned as AG (Agricultural General) and/or C-R (Country Residential); the surrounding areas in the north portion of Section 08 are zoned as IG (Industrial General) and C-R; the surrounding areas in the north portion of Section 09 and the west portion of Section 10 are zoned as IG. The northern portion of the Site (Segment 1) is bordered to the south by Highway 1 / Trans-Canada Highway, to the west by Range Road 265, and to the east by Range Road 264. The east portion of the Site (Segment 2) is bordered to the west by Range Road 265, and to the east by Range Road 264. The southern (and largest) portion of the Site (Segment 3) is bordered to the west by Range Road 265, to the east by Range Road 264, and to the south by Range Road 240. A site plan including surrounding land use is presented as Figure 1.

### **2.1.1 Topography and Surface Water**

The Site topography is primarily undulating, with surface drainage directed to numerous wetlands / low, wet areas across the Site. A detailed surface hydrology and wetland information analysis is discussed in a Biophysical Inventory Assessment submitted by Trace under a separate cover.

## **2.2 Infrastructure and Site Feature Details**

The following sections outline the infrastructure and site feature details identified during the site visit, records review, and file information/reporting review.

- The Site comprises of a mix of agricultural/residential land use (homesteads). Two of the five homesteads on the Site and associated infrastructure are situated on Segment 1; there are no structures situated on Segment 2; three of the five homesteads and associated infrastructure are situated on Segment 3.
- Based on aerial and satellite imagery, the homesteads were constructed between prior to 1950 through to 1988.

### **2.2.1 Sewage Disposal and Wastewater**

There is no sewage or storm sewer infrastructure at the Site.

With any agricultural homestead, the potential for septic tanks and septic fields exists. It would be prudent to have the septic tanks and septic fields decommissioned in accordance with applicable acts, regulations, and guidelines when no longer in use.

### **2.2.2 Pits and Lagoons**

With any farmstead or agricultural property, the potential for pits or buried debris exists. Although there were no obvious indications of pits or buried debris present at the Site during the site visit, the potential remains. If buried debris, stained soils, or soils of unknown quality are encountered during development, contract a qualified environmental professional.

### **2.2.3 Sumps and Drains**

No sumps or drains (e.g., stormwater sewer or collection basins) of environmental interest were observed during the site visit.

### **2.2.4 Watercourses, Ditches, or Standing Water**

Wetlands are present throughout the Site. A detailed surface hydrology and wetland information analysis is discussed in a Biophysical Inventory Assessment submitted by Trace under a separate cover.

### **2.2.5 Potable Water Supply**

No municipal potable water infrastructure is present at the Site. According to the AEP Online Water Well Database, nine domestic/stock use water wells are present on the Site. It would be prudent to have the domestic water wells decommissioned in accordance with applicable acts, regulations, and guidelines when no longer in use.

## **2.2.6 Wells**

Wells, including water wells and oil and gas wells, were observed or reported to be present at the Site. The water wells are discussed in Section 5.3, and the oil and gas wells are discussed in Section 5.7.2.

## **2.2.7 Special Attention Items**

Special attention items include building materials such as: polychlorinated biphenyls (PCBs); asbestos-containing materials (ACMs); lead; ozone-depleting substances (ODS); and urea foam formaldehyde insulation (UFFI).

Based on the buildings' dates of construction (prior to 1950 through to 1988) and the potential presence of air conditioning or refrigeration units at the Site, the following Sections (2.2.7.1–2.2.7.5) outline special attention building items identified that require further discussion or investigation at the Site.

### **2.2.7.1 Polychlorinated Biphenyls**

The Canadian Environmental Protection Act (CEPA) (<http://laws-lois.justice.gc.ca/eng/acts/C-15.31/index.html>) has restricted the use of, and controlled the phasing out of, PCBs in Canada. Additionally, the storage and disposal of PCBs is regulated. The CEPA prohibited the use of PCBs in electrical equipment installed after July 1, 1980. PCBs are commonly found in light ballasts, electrical transformers (pole or ground mounted), and other various types of electrical equipment (e.g., rectifiers) dating back to the early 1980s or earlier.

Based on the buildings' dates of construction (prior to 1950 through to 1988), the presence of PCB-containing light ballasts and/or electrical equipment is possible within all homestead location areas (Figure1).

### **2.2.7.2 Asbestos-Containing Materials**

Construction materials (i.e., ceiling or floor tiles, drywall, wall insulation, and other insulation for boiler/piping and/or ducts) used prior to the early 1980s were known to potentially contain asbestos. Asbestos is considered a health hazard if it is friable, airborne, and humans are exposed to it. There was no obvious asbestos observed at the time of the site reconnaissance.

Based on the buildings' date of construction (prior to 1950 through to 1988), the presence of friable ACMs is possible, and therefore should be taken into consideration for all structures/buildings within the homestead location areas (Figure 1). Intrusive investigation and sampling of possible construction materials was not within the scope of this Phase I ESA. No reporting relating to asbestos abatements was provided to Trace personnel for review.

### **2.2.7.3 Lead**

Lead can be associated with paints, plumbing solder, pipes, and other products, such as wall shielding in x-ray rooms. Lead-based paint was withdrawn from production in the Canadian market in the late 1970s, but remained in circulation into the early 1980s. If present, lead-based paint is likely concealed beneath multiple layers of paint applied over years of renovations. Lead-based paint and plumbing equipment are not a direct health risk when concealed (sealed behind layers of non-lead-based paint) and/or in good condition.

There are no x-ray rooms with lead shielding at the Site. Based on the buildings' dates of construction (prior to 1950 through to 1988), the presence of lead-based paint and plumbing equipment is possible within all homestead location areas (Figure 1).

#### **2.2.7.4 Ozone-Depleting Substances**

In December 1998, The Government of Canada enacted the Ozone-Depleting Substances (ODS) Regulations, which govern the use, handling, and release of ODS (<http://laws-lois.justice.gc.ca/eng/regulations/SOR-99-7/index.html>). ODS may include, although are not limited to, chlorofluorocarbons, halons, carbon tetrachloride, and methyl bromide. ODS are usually associated with operations such as fire extinguishing systems, foam manufacturing, fumigant and pesticide application, prescription metered dose inhalers, refrigeration and air conditioning units, and solvent cleaning/degreasing facilities.

Air conditioning or refrigeration units may be present at the Site; however, based on the quantity of ODS commonly stored in these systems, no further environmental investigation is warranted.

#### **2.2.7.5 Urea Formaldehyde Foam Insulation**

Insulation materials used during the 1970s and 1980s were known to possibly contain UFFI. UFFI was banned in 1980 under the Federal Hazardous Products Act (<http://laws-lois.justice.gc.ca/eng/acts/H-3/>).

Based on the buildings' dates of construction (prior to 1950 through to 1988), the presence of UFFI is possible for all structures/buildings within the homestead location areas (Figure 1). Intrusive investigation of wall cavities and associated sampling was not within the scope of this Phase I ESA.

#### **2.2.8 Other Special Attention Items**

Other special attention items include: methane generation; mould; noise; electric and magnetic fields; vibration; and radon. There were no other special attention items identified that require further discussion.

#### **2.2.9 Hazardous Materials, Storage Tanks, and Chemical Containers**

Trace observed numerous above-ground storage tanks (ASTs), primarily on the westernmost homestead in Segment 1 and the southernmost homestead in Segment 3.

The ASTs appeared to be greater than 100,000 litres in capacity, and likely contain farming products (e.g., wheat, beans, canola, etc.) or fertilizers. It would be prudent to confirm the contents of the ASTs prior to future redevelopment. No obvious diesel or gasoline ASTs were noted during the site inspection.

Trace personnel were unable to visually assess the entire Site, as access to portions of the Site was not authorized.

#### **2.2.10 Staining and Stained Materials**

Staining was not observed on site during the site visit; however, Trace personnel were unable to visually assess the entire Site as access to portions of the Site was not authorized.

### **2.2.11 Odours**

There were no obvious strong, pungent, or noxious odours identified during the site visit; however, Trace personnel were unable to visually assess the entire Site as access to portions of the Site was not authorized.

### **2.2.12 Stressed Vegetation**

There were no indications of obviously-stressed vegetation at the Site; however, Trace personnel were unable to visually assess the entire Site as access to portions of the Site was not authorized.

### **2.2.13 Fill Areas**

If present, the main concern with fill material is the unknown origin, and therefore unknown physical and chemical quality. Best management practices for fill material management include sampling and testing fill material prior to use on a new site. With developed sites, the potential for fill material placement with an unknown chemical and physical quality exists.

This study did not identify obvious indications of uncontrolled fill material placement on site.

### **2.2.14 Hydraulic Elevators/Hoists**

There are no hydraulic elevators or hoists at the Site.

## **2.3 Off-site Observations**

Trace observed the grounds of neighbouring properties and associated structures (from the Site and publicly-accessible areas) for signs of actual or potential sources of contamination. There were no adjacent properties (within 100 m) identified that were interpreted by Trace to present an actual or potential source of contamination to the Site which would warrant further investigation.

# **3.0 Interview**

Trace personnel were unable to conduct interviews with select landowners/occupants, as communications with landowners/occupants was restricted.

# **4.0 Records Review**

The following sections include a review of the land title records and historical aerial photographs.

## **4.1 Land Title Records**

Trace personnel reviewed the current land title for the property. A list of associated utility rights-of-way (RoWs), caveats, etc. is provided below. Copies of the current land titles are included in Appendix C.

- Caveat: Wheatland County (RE: roadway) (x2)
- Caveat: Ember Resources Inc. (Ember) (RE: surface lease or mines and minerals lease interest) (x18)
- Caveat: Darrin Kelly (RE: lease interest)

- Utility RoW: Ember (x16)
- Utility RoW: Canadian Western Natural Gas Company Limited (x3)

The caveats to Ember and the utility RoWs to Canadian Western Natural Gas Company Limited likely relate to oil and gas infrastructure further discussed in Section 5.7. No environmental investigation is recommended related to the remaining instruments.

## 4.2 Aerial Photographs

Aerial photographs provide visual evidence of site occupancy, operational activities, and general site details. As well, aerial photographs capture a view of the Site and the surrounding areas at a given time. Trace personnel reviewed aerial photographs of the Site for the years 1950, 1962, 1977, 1988, 2000, 2010, and 2019 obtained from the AEP Aerial Photo Record System (<https://securexnet.env.gov.ab.ca/aprs/inquiry.jsp>) and Google Earth™ ([www.google.com/earth](http://www.google.com/earth)). Note that the aerial photographs cover the Site and surrounding areas, with the exception of the 1988 photograph, which does not cover the two southernmost quarter sections of Segment 3. The aerial photograph review and discussion are limited to developments of environmental interest.

### 1950 and 1962

- The Site and surrounding areas are located on agricultural land.
- One homestead is visible on Segment 1, and two homesteads are visible on Segment 3.
- Numerous wetlands are visible across and surrounding the Site.
- All roads currently bordering the Site are visible.

### 1977

- The homestead on Segment 1 has expanded, and suspected farming operations are visible.
- Several ASTs are visible on the homesteads in Segment 1 (southwest portion) and Segment 3 (southeast portion).
- The surrounding areas appear generally similar to the 1962 photograph.

### 1988, 2000, 2010, and 2019

- A second homestead is visible on Segment 1, and a third homestead is visible on Segment 3.
- A suspected wellsite pad is visible in the southwest portion of Segment 2 (2000).
- Additional suspected wellsites are visible throughout Segment 3 (2010).
- The surrounding areas appear generally similar to the 1977 photograph.

## 5.0 Regulatory Inquiries

Trace personnel contacted Wheatland County, the PTMAA, and the AER; and searched the AEP Online Water Well Database, AEP Approval Viewer, and Alberta ESAR database to obtain environmental information with respect to the Site and surrounding area. Responses from the regulatory agencies are presented in Appendix D.

## 5.1 Wheatland County

Trace personnel requested that Wheatland County conduct a file search for available environmental information pertaining to the Site. The response from Wheatland County did not indicate any issues of potential environmental concern at this time.

## 5.2 Petroleum Tank Management Association of Alberta

The PTMAA requires that all underground storage tanks (USTs) be registered; however, only ASTs with a capacity greater than 2,500 litres are required to be registered. The database is based on a limited survey conducted in 1992 and voluntary information submitted, and is therefore not considered a comprehensive inventory of storage tanks in Alberta. Trace personnel contacted the PTMAA regarding registered petroleum storage tanks (PSTs) at the Site. The PTMAA response indicated that no PSTs are listed for the Site.

## 5.3 Alberta Environment and Parks – Online Water Well Database

The AEP Online Water Well Database (<http://groundwater.alberta.ca/WaterWells/d/>) has nine records of water wells on the Site. The water wells were drilled to depths of between 24 and 46 m for domestic and/or stock use. The wells were drilled between 1969 and 1998 (drill completion dates were not available for four wells). Trace personnel did not observe water wells on site during the site visit.

## 5.4 Alberta Environment and Parks – Online Approval Viewer

The AEP Online Approval Viewer (<https://avw.alberta.ca/ApprovalViewer.aspx>) allows the public to view approvals, licences, registrations, and permits issued under the Water Act and under the Environmental Protection and Enhancement Act.

There were no approvals (active or inactive) listed for Lot 1, Block 1, Plan 0111837 (Segment 3); Lot 1, Plan 9010966 (Segment 3); NE $\frac{1}{4}$  and NW $\frac{1}{4}$ -09-024-26 W4M; and SE $\frac{1}{4}$  and SW $\frac{1}{4}$ -17-024-26 W4M. There were two approvals issued for Section 05-024-26 W4M related to pipeline and/or telecommunication lines crossing a waterbody from Encana Corporation, and three approvals issued for Section 09-024-26 W4M related to the Cheadle and/or Wheatland Industrial Parks. These approvals are not interpreted to be of potential environmental concern.

## 5.5 Alberta Environmental Site Assessment Repository Database

The Alberta ESAR database (<http://www.esar.alberta.ca/>) allows the public to perform an online search for ESAs relating to sites throughout Alberta. Trace personnel reviewed the available reports and communications provided through the Alberta ESAR database for properties located within approximately 100 m of the Site. The results summarized below are limited to those that indicate the presence of potential or actual contamination relative to the Site.

### **100/08-07-024-26 W4M/0 wellsite, lease boundary approximately 60 m west of the Site (Segment 3)**

- A Reclamation Certificate (No. 10865) was issued for the well on August 7, 1992. Given the drilling date (1991), there is potential that historical oil and gas activities have impacted soil and/or groundwater conditions in the area; however, based on distance to the Site (approximately 60 m), Trace interprets this wellsite to pose a low risk to the soil and/or groundwater quality at the Site at this time.

## 5.6 Alberta Government – Spatial Information System Website

The Alberta Government Spatial Information System (SPIN) website (<https://alta.registries.gov.ab.ca/spinii/logon.aspx>) is an internet data delivery system that provides online delivery of land titles, registered plans, and survey control monuments. The SPIN website indicates historical and/or current land use for some areas of Alberta. The following RoWs were identified on the Site:

- Pipeline RoW No. 101 3610 (Segment 2)
- Pipeline RoW No. 091 4877 (Segments 2 and 3)
- Pipeline RoW No. 101 4602 (Segment 3)
- Pipeline RoW No. 091 3993 (Segment 3)
- Pipeline RoW No. 071 5062 (Segment 3)

Oil and gas-related pipelines on the Site are discussed below in Section 5.7.1.

## 5.7 Alberta Energy Regulator – Oil and Gas-Related Facilities, Spills, and Complaints

The AER maintains information on oil and gas wells, registered pipelines, and oil and gas facilities. The AER information was accessed through the Abacus Datagraphics Ltd. database ([www.abacusdatagraphics.com](http://www.abacusdatagraphics.com)), which is a web-based oilfield mapping program that uses current information to graphically display the location of oilfield and related facilities, and/or spills and complaints within Alberta. The following oil and gas-related wells, pipelines, facilities, spills, or complaints occurred on the Site:

### 5.7.1 Pipelines

Seventeen high-pressure natural gas pipelines operated by Ember are situated on the Site. No reporting related to pipeline spills or leaks was available for review, and based on the contents of the pipelines (natural gas), no further environmental investigation is warranted at this time.

### 5.7.2 Wellsites

Nineteen wellsites (with associated wellhead, pipeline riser, and high-pressure pipelines) are situated on the Site (Segments 2 and 3), and are described as follows:

#### Segment 2

- The 100/13-10-024-26 W4M/0 wellsite (EMBER ENTICE 13-10-24-26) was drilled on November 21, 2010, to a depth of 1,159 m. The status of the well is listed as “CBMOT FLOW,” indicating that the well is completed in coal and another lithology (e.g., sand, gravel, etc.). As of July 2019, the well produced 1,555.4 cubic metres (m<sup>3</sup>) of gas and 40.1 m<sup>3</sup> of water. The wellsite is licensed to Ember.
- The 100/15-09-024-26 W4M/0 wellsite (EMBER ENTICE 15-9-24-26) was drilled on January 27, 2006, to a depth of 1,052 m. The status of the well is listed as “CBMOT FLOW.” As of July 2019, the well produced 3,166.7 m<sup>3</sup> of gas and 4.7 m<sup>3</sup> of water. The wellsite is licensed to Ember.
- The 100/04-09-024-26 W4M/2 wellsite (EMBER ENTICE 4-9-24-26) was drilled on February 19, 2010, to a depth of 1,149 m. The status of the well is listed as “COMM” (commingled), indicating that the well is completed in two or more pools. The well did not produce. The wellsite is licensed to Ember.



- The 100/12-09-024-26 W4M/0 wellsite (EMBER ENTICE 12-9-24-26) was drilled on June 22, 2000, to a depth of 1,100 m. The status of the well is listed as “CBMOT FLOW.” As of July 2019, the well produced 5,484.0 m<sup>3</sup> of gas. The wellsite is licensed to Ember.
- The 100/03-17-024-26 W4M/0 wellsite (EMBER ENTICE 3-17-24-26) was drilled on January 5, 2007, to a depth of 1,970 m. The status of the well is listed as “CBMOT FLOW.” As of July 2019, the well produced 3,350.9 m<sup>3</sup> of gas. The wellsite is licensed to Ember.

### Segment 3

- The 100/05-08-024-26 W4M/2 wellsite (EMBER ENTICE 5-8-24-26) was drilled on January 30, 2010, to a depth of 1,032 m. The status of the well is listed as “CBMOT FLOW.” As of July 2019, the well produced 977.7 m<sup>3</sup> of gas. The wellsite is licensed to Ember.
- The 100/12-08-024-26 W4M/3 wellsite (EMBER ENTICE 12-8-24-26) was drilled on October 10, 2007, to a depth of 1,411 m. The status of the well is listed as “CBMOT FLOW.” As of July 2019, the well produced 2,206.6 m<sup>3</sup> of gas and 13.0 m<sup>3</sup> of water. The wellsite is licensed to Ember.
- The 100/07-08-024-26 W4M/0 wellsite (EMBER ENTICE 7-8-24-26) was drilled on October 9, 2007, to a depth of 1,065 m. The status of the well is listed as “CBMOT FLOW.” As of July 2019, the well produced 2,820.9 m<sup>3</sup> of gas and 4.6 m<sup>3</sup> of water. The wellsite is licensed to Ember.
- The 100/10-07-024-26 W4M/0 wellsite (EMBER ENTICE 10-7-24-26) was drilled on January 9, 2007, to a depth of 1,462 m. The status of the well is listed as “CBMOT FLOW.” As of July 2019, the well produced 1,978.4 m<sup>3</sup> of gas. The wellsite is licensed to Ember.
- The 100/04-08-024-26 W4M/4 wellsite (EMBER ENTICE 04-8-24-26) was drilled on October 11, 2006, to a depth of 806 m. The status of the well is listed as “CBMOT FLOW.” As of July 2019, the well produced 1,240.9 m<sup>3</sup> of gas and 13.0 m<sup>3</sup> of water. The wellsite is licensed to Ember.
- The 100/01-08-024-26 W4M/3 wellsite (EMBER ENTICE 1-8-24-26) was drilled on October 23, 2007, to a depth of 812 m. The status of the well is listed as “CBMOT FLOW.” As of July 2019, the well produced 2,412.9 m<sup>3</sup> of gas. The wellsite is licensed to Ember.
- The 100/14-05-024-26 W4M/4 wellsite (EMBER ENTICE 14-5-24-26) was drilled on October 7, 2006, to a depth of 807 m. The status of the well is listed as “CBMOT FLOW.” As of July 2019, the well produced 1,903.5 m<sup>3</sup> of gas and 12.2 m<sup>3</sup> of water. The wellsite is licensed to Ember.
- The 100/15-05-024-26 W4M/2 wellsite (EMBER ENTICE 15-5-24-26) was drilled on March 11, 2006, to a depth of 1,064 m. The status of the well is listed as “CBMOT FLOW.” As of July 2019, the well produced 2,422.3 m<sup>3</sup> of gas. The wellsite is licensed to Ember.
- The 100/16-05-024-26 W4M/2 wellsite (EMBER ENTICE 16-5-24-26) was drilled on November 30, 1999, to a depth of 1,110 m. The status of the well is listed as “CBMOT FLOW.” As of July 2019, the well produced 1,610.4 m<sup>3</sup> of gas and 6.6 m<sup>3</sup> of water. The wellsite is licensed to Ember.
- The 100/11-05-024-26 W4M/2 wellsite (EMBER ENTICE 11-5-24-26) was drilled on January 31, 2010, to a depth of 1,061 m. The status of the well is listed as “CBMOT FLOW.” As of July 2019, the well produced 4,695.4 m<sup>3</sup> of gas. The wellsite is licensed to Ember.
- The 100/05-05-024-26 W4M/0 wellsite (EMBER ENTICE 5-5-24-26) was drilled on March 3, 2006, to a depth of 805 m. The status of the well is listed as “CBMOT FLOW.” As of July 2019, the well produced 3,558.4 m<sup>3</sup> of gas. The wellsite is licensed to Ember.
- The 102/05-05-024-26 W4M/2 wellsite (EMBER 102 ENTICE 5-5-24-26) was drilled on January 30, 2010, to a depth of 1,038 m. The status of the well is listed as “CBMOT FLOW.” As of July 2019, the well produced 749.8 m<sup>3</sup> of gas. The wellsite is licensed to Ember.

- The 100/07-05-024-26 W4M/2 wellsite (EMBER ENTICE 7-5-24-26) was drilled on January 27, 2010, to a depth of 1,020 m. The status of the well is listed as “CBMOT FLOW.” As of July 2019, the well produced 2,021.2 m<sup>3</sup> of gas. The wellsite is licensed to Ember.
- The 100/01-05-024-26 W4M/3 wellsite (EMBER ENTICE 1-5-24-26) was drilled on March 3, 2006, to a depth of 805 m. The status of the well is listed as “COMM” (commingled). As of July 2019, the well produced 0.1 m<sup>3</sup> of gas. The wellsite is licensed to Ember.

The potential for soil and/or groundwater impacts resulting from wellsite operations exists; however, the operator, Ember, has the legal obligation to address any environmental concerns resulting from current or historical oil and gas-related activities upon abandonment of the facilities. As the wellsites are currently active, Ember will be required to obtain Reclamation Certificates for site closure, which will include an evaluation and assessment of the potential environmental risks associated with the oil and gas activities. This environmental reporting should be reviewed by an environmental professional. No further immediate environmental investigation as part of this assessment is warranted at this time.

There were no reported spills or “facilities” on or near the Site identified through the AER.

## 5.8 Business Directories

There were no HBDs or TNDs for the Site and surrounding area available for review at the Calgary Central Public Library.

## 5.9 Fire Insurance Plans

Due to the rural nature of the Site, there are no FIPs for the Site and surrounding area available for review.

# 6.0 Previous Environmental Reporting and Documents

There were no previous environmental reports provided to Trace from the client.

# 7.0 Discussion and Conclusions

Based on the information collected during this study, Trace has identified the following potential sources of contamination from on-site sources:

- Nineteen active oil and gas wellsites are located on the Site. The wells produce gas, water, and/or crude oil / bitumen. The potential for soil and/or groundwater impacts exists; however, the operator, Ember, has the legal obligation to address any environmental concerns during the operation, abandonment, and post-abandonment of the wellsite and associated facilities. Ember will be required to obtain Reclamation Certificates for site closure, which will include an evaluation and assessment of the potential environmental risks associated with the oil and gas activities. This environmental reporting should be reviewed by an environmental professional. No further immediate environmental investigation as part of this assessment is warranted at this time.
- With any homestead or agricultural property, the potential for fueling ASTs, pits, burn pits, or buried debris exists. Although there were no obvious indications of pits or buried debris identified as part of the aerial photograph review and site visits, the potential remains. The risk to adversely impact soil and groundwater

is generally low to moderate, and no further immediate environmental investigation pertaining to these areas is warranted at this time.

Trace did not identify actual or potential sources of contamination from off-site sources which would warrant further investigation at the Site at this time.

It is important to note that Trace personnel were unable to visually assess the entire Site, nor conduct interviews with select landowners/occupants, as access to portions of the Site was not authorized, and communications with landowners/occupants was restricted. Trace did not request to or gain access to the buildings on the Site.

## 8.0 Recommendations

Based on the assessment findings and conclusions, Trace recommends consideration of the following actions:

- Conduct a full site inspection and landowner/operator interviews prior to redevelopment.
- Following initiation of abandonment activities by the oil and gas operator, contract a qualified environmental professional to conduct a review of the wellsite Reclamation Certificate documentation prior to landowner signoff and subsequent submission to the regulator.
- Due to the buildings' dates of construction (prior to 1950 through to 1988), consider the presence of hazardous building materials prior to any major renovations or demolition of any building on the Site.
- Decommission the water wells, septic tanks, and septic fields in accordance with applicable acts, regulations, and guidelines when no longer in use.
- If buried debris, stained soils, or soils of unknown quality are encountered during redevelopment, contract a qualified environmental professional.
- If fueling tanks (ASTs, USTs, etc.) are encountered, contract a qualified environmental professional to assess the potential environmental risk.

## 9.0 Limitations of Liability

This report is based solely on the conditions which existed on site at the time of Trace's investigation. The client, and any other parties using this report with the express written consent of the client and Trace, acknowledges that conditions affecting the environmental assessment of the Site can vary with time, and that the conclusions and any recommendations set out in this report are time sensitive.

The client, and any other party using this report with the express written consent of the client and Trace, also acknowledges that the conclusions and recommendations set out in this report are based on limited observations and testing on the Site, and that conditions may vary across the Site which, in turn, could affect the conclusions and recommendations made.

The client acknowledges that Trace is neither qualified to, nor is it making, any recommendations with respect to the purchase, sale, investment, or development of the Site, the decisions on which are the sole responsibility of the client.

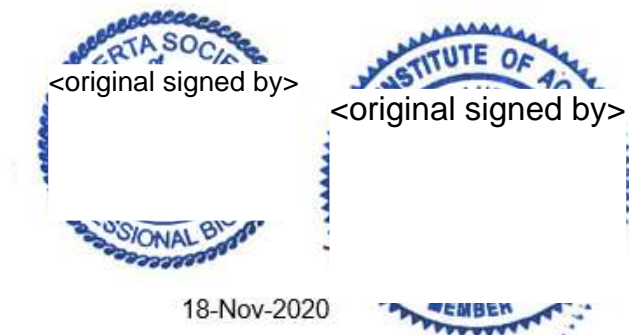
## 10.0 Closure and Quality Management

We trust that this meets your present requirements. Should you have any questions or comments, please contact Mr. Nick Swanlund (D 587.779.2898 or E nswanlund@traceassociates.ca) at our Calgary office.

Respectfully submitted,

**Trace Associates Inc.**

<original signed by>



18-Nov-2020

**Prepared by:**

Nicole J. Koloff, B.A., B.Ed.  
Project Consultant  
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E nkoloff@traceassociates.ca

**Reviewed by:**

Michael J.J. Lupart, B.Sc., P.Ag., P.Biol.  
Division Manager, Calgary  
D 403.860.4180  
E mlupart@traceassociates.ca

NK/nk

## 11.0 References

CSA (Canadian Standards Association). (2001, November). Phase I Environmental Site Assessment, Reaffirmed 2016 (Update No. 1, CAN/CSA-Z768-01, April 2003). Toronto, ON.

## FIGURES



## APPENDIX A

**Trace Associates Inc. Environmental Report –  
General Conditions**



---

# Environmental Report – General Conditions

## 1.0 Use of Report

This report pertains to a specific site, a specific development, and a specific scope of work. It is not applicable to any other sites, nor should it be relied upon for types of development other than those to which it refers. Any variation from the site or proposed development would necessitate a supplementary assessment.

This report and the assessments and recommendations contained in it are intended for the sole use of Trace Associates Inc.'s (Trace's) client. Trace does not accept any responsibility for the accuracy of any of the data, the analysis, or the recommendations contained or referenced in the report when the report is used or relied upon by any party other than Trace's client (hereunder referred to as the "Client") or an approved agent of the Client. Any unauthorized use of or reliance on the report is at the sole risk of the user.

This report is subject to copyright and shall not be reproduced either wholly or in part without the prior, written permission of Trace. The Client agrees that it shall use the report for its own internal purposes and it shall not provide the report to another party other than an approved agent.

## 2.0 Limitation of Report

This report is based solely on the conditions that existed on site at the time of Trace's investigation. The Client, and any other parties using this report with the express written consent of the Client and Trace, acknowledge that conditions affecting the environmental assessment of the site can vary with time and that the conclusions and recommendations set out in this report are time sensitive.

The Client, and any other party using this report with the express written consent of the Client and Trace, also acknowledge that the conclusions and recommendations set out in this report are based on limited observations and testing on the subject site and that conditions may vary across the site which, in turn, could affect the conclusions and recommendations made.

The Client acknowledges that Trace is neither qualified to, nor is it making, any recommendations with respect to the purchase, sale, investment or development of the site, the decisions on which are the sole responsibility of the Client.

## 3.0 Information Provided to Trace by Others

During the performance of the work and the preparation of this report, Trace may have relied on information provided by persons other than the Client. While Trace endeavours to verify the accuracy of such information when instructed to do so by the Client, Trace accepts no responsibility for the accuracy or the reliability of such information that may affect the report.

## 4.0 Limitation of Liability

The Client recognizes that property containing contaminants and hazardous wastes creates a high risk of claims brought by third parties arising from the presence of those materials. In consideration of these risks, and in consideration of Trace providing the services requested, the Client agrees that Trace's liability shall be limited as follows:

- (1) With respect to any claims brought against Trace by the Client for damages of any kind whatsoever, including without limitation, incidental, consequential, exemplary or punitive, for any reason whatsoever arising out of the provision or failure to provide services hereunder the amount of such claim and the extent of Trace's liability shall be limited to the amount of fees paid by the Client to Trace under this Agreement.
- (2) With respect to claims brought by third parties arising out of the presence of contaminants or hazardous wastes on the subject site, the Client agrees to indemnify, defend, and hold harmless Trace from and against any and all claim or claims, action or actions, demands, damages, penalties, fines, losses, costs and expenses of every nature and kind whatsoever, including solicitor-client costs, arising or alleged to arise either in whole or part out of services provided by Trace.

## 5.0 Job Site Safety

Trace is only responsible for the activities of its employees on the job site and is not responsible for the safety or supervision of any other persons whatsoever. The presence of Trace personnel on the job site shall not be construed in any way to relieve the Client or any other persons on site from their responsibility for job site safety.

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## **6.0 Disclosure of Information by Client**

The Client agrees to fully cooperate with Trace with respect to the provision of all available information on the past, present, and proposed conditions on the site, including historical information respecting the use of the site. The Client acknowledges that in order for Trace to properly provide the service, Trace requires and shall rely upon the full disclosure and accuracy of any and all such information.

## **7.0 Standard of Care**

Services performed by Trace for this report have been conducted in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practicing under similar conditions in the jurisdiction in which the services are provided. Engineering and scientific judgment have been applied in developing the conclusions and/or recommendations provided in this report. No warranty or guarantee, express or implied, is made concerning the test results, comments, recommendations, or any other portion of this report.

## **8.0 Emergency Procedures**

The Client undertakes to inform Trace of all hazardous conditions, or possible hazardous conditions that are known to it. The Client recognizes that the activities of Trace may uncover previously unknown hazardous materials or conditions and that such discovery may result in the necessity to undertake emergency procedures to protect Trace employees, other persons, and the environment. These procedures may involve additional costs outside of any budgets previously agreed upon. The Client agrees to pay Trace for any expenses incurred as a result of such discoveries and to compensate Trace through payment of additional fees and expenses for time spent by Trace to deal with the consequences of such discoveries.

## **9.0 Notification of Authorities**

The Client acknowledges that in certain instances the discovery of hazardous substances or conditions and materials may require that regulatory agencies and other persons be informed and the Client agrees that notification to such bodies or persons, as required, may be done by Trace in its reasonably exercised discretion.

## **10.0 Ownership of Instruments of Service**

The Client acknowledges that all reports, plans, and data generated by Trace during the performance of the work and other documents prepared by Trace are considered its professional work product and shall remain the copyright property of Trace.

## **11.0 Alternate Report Format**

Where Trace submits both electronic file and hard copy versions of reports, drawings and other documents and deliverables (collectively termed "Trace's instruments of professional service"), the Client agrees that only the signed and stamped versions shall be considered final and legally binding. Trace shall keep the original electronic documents for record and working purposes, and, in the event of a dispute or discrepancies, Trace's electronic copy shall govern.

The Client agrees that both electronic file and hard copy versions of Trace's instruments of professional service shall not, under any circumstances, no matter who owns or uses them, be altered by any party except Trace. The Client warrants that Trace's instruments of professional service will be used only and exactly as submitted by Trace and for the purpose for which such instruments of professional service were intended.

The Client recognizes and agrees that electronic files submitted by Trace have been prepared and submitted using specific software and hardware systems. Trace makes no representation about the compatibility of these files with the Client's current or future software and hardware systems.

## **12.0 Governing Law**

The validity, construction and performance of this Agreement shall be governed by the laws in effect in the Province of Alberta.

## APPENDIX B

### Site Photographs



Photo 1: View from the northwest portion of SE¼-17-024-26 W4M, facing south (August 26, 2019).



Photo 2: View from the northeast portion of SW¼-17-024-26 W4M, facing south (August 30, 2019).



Photo 3: View from the northwest portion of NW¼-09-024-26 W4M, facing south (August 29, 2019).



Photo 4: View from the east portion of NE¼-09-024-26 W4M, facing west (August 30, 2019).



Photo 5: View from the northwest portion of SW¼-09-024-26 W4M, facing east (August 27, 2019).



Photo 6: View from the southwest portion of SE¼-09-024-26 W4M, facing north (August 27, 2019).



Photo 7: View from the north portion of NW¼-05-024-26 W4M, facing south (August 27, 2019).



Photo 8: View from the north portion of NE¼-05-024-26 W4M, facing south (August 27, 2019).



Photo 9: View from the northwest portion of SW¼-05-024-26 W4M, facing south (August 28, 2019).



Photo 10: View from the north portion of SE¼-05-024-26 W4M, facing south (August 28, 2019).

## APPENDIX C

### Current Land Title Records



LAND TITLE CERTIFICATE

S  
LINC                      SHORT LEGAL                      TITLE NUMBER  
0028 909 802            0111837;1;1                      081 404 474

LEGAL DESCRIPTION

DESCRIPTIVE PLAN 0111837  
BLOCK 1  
LOT 1  
EXCEPTING THEREOUT ALL MINES AND MINERALS  
AREA: 2.024 HECTARES (5 ACRES) MORE OR LESS

ATS REFERENCE: 4;26;24;8;SE  
ESTATE: FEE SIMPLE

MUNICIPALITY: WHEATLAND COUNTY

REFERENCE NUMBER: 011 214 939

---

REGISTERED OWNER(S)					
REGISTRATION	DATE (DMY)	DOCUMENT	TYPE	VALUE	CONSIDERATION
081 404 474	29/10/2008	TRANSFER OF LAND		\$625,000	CASH & MORTGAGE

---

OWNERS

DANIELLE DUROCHER

AND

SCOTT DUROCHER

BOTH OF:

BOX 36, RR#2

STRATHMORE

ALBERTA T1P 1K5

AS JOINT TENANTS

---

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION	DATE (D/M/Y)	PARTICULARS
NUMBER		
293CR	.	RESTRICTIVE COVENANT

---



-----  
ENCUMBRANCES, LIENS & INTERESTS

PAGE 2

# 081 404 474

REGISTRATION

NUMBER      DATE (D/M/Y)      PARTICULARS

-----

011 191 959      10/07/2001 CAVEAT  
RE : ROADWAY  
CAVEATOR - WHEATLAND COUNTY.  
HWY #1 RR#1  
STRATHMORE  
ALBERTA T1P1J6

081 404 475      29/10/2008 MORTGAGE  
MORTGAGEE - CIBC MORTGAGES INC.  
C/O FIRSTLINE MORTGAGES  
700 33 YONGE ST  
TORONTO  
ONTARIO M5E1G4  
ORIGINAL PRINCIPAL AMOUNT: \$446,250

TOTAL INSTRUMENTS: 003

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN  
ACCURATE REPRODUCTION OF THE CERTIFICATE OF  
TITLE REPRESENTED HEREIN THIS 24 DAY OF  
SEPTEMBER, 2019 AT 01:59 P.M.

ORDER NUMBER:    38066481

CUSTOMER FILE NUMBER:



\*END OF CERTIFICATE\*

-----  
THIS ELECTRONICALLY TRANSMITTED LAND TITLES PRODUCT IS INTENDED  
FOR THE SOLE USE OF THE ORIGINAL PURCHASER, AND NONE OTHER,  
SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

THE ABOVE PROVISIONS DO NOT PROHIBIT THE ORIGINAL PURCHASER FROM  
INCLUDING THIS UNMODIFIED PRODUCT IN ANY REPORT, OPINION,  
APPRAISAL OR OTHER ADVICE PREPARED BY THE ORIGINAL PURCHASER AS  
PART OF THE ORIGINAL PURCHASER APPLYING PROFESSIONAL, CONSULTING  
OR TECHNICAL EXPERTISE FOR THE BENEFIT OF CLIENT(S).



LAND TITLE CERTIFICATE

S  
LINC                      SHORT LEGAL                      TITLE NUMBER  
0021 777 909            4;26;24;5;SE                      191 001 492

LEGAL DESCRIPTION  
MERIDIAN 4 RANGE 26 TOWNSHIP 24  
SECTION 5  
QUARTER SOUTH EAST  
EXCEPTING THEREOUT ALL MINES AND MINERALS  
AND THE RIGHT TO WORK THE SAME  
AREA: 64.7 HECTARES (160 ACRES) MORE OR LESS

ESTATE: FEE SIMPLE

MUNICIPALITY: WHEATLAND COUNTY

REFERENCE NUMBER: 131 141 890

---

REGISTERED OWNER(S)				
REGISTRATION	DATE (DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
191 001 492	03/01/2019	TRANSFER OF LAND	\$1,760,000	\$1,760,000

---

OWNERS

2151898 ALBERTA INC.  
OF 400, 444-7 AVE SW  
CALGARY  
ALBERTA T2P 0X8

---

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION NUMBER	DATE (D/M/Y)	PARTICULARS
831 042 238	09/03/1983	UTILITY RIGHT OF WAY GRANTEE - CANADIAN WESTERN NATURAL GAS COMPANY LIMITED.
041 166 639	11/05/2004	UTILITY RIGHT OF WAY GRANTEE - EMBER RESOURCES INC. PO BOX 20083, BOW VALLEY RPO CALGARY

-----  
ENCUMBRANCES, LIENS & INTERESTS

PAGE 2

# 191 001 492

## REGISTRATION

NUMBER      DATE (D/M/Y)      PARTICULARS  
-----

ALBERTA T2P4H3

(DATA UPDATED BY: TRANSFER OF UTILITY RIGHT  
OF WAY 151152404)

061 066 894      14/02/2006 CAVEAT

RE : SURFACE LEASE UNDER 20 ACRES  
CAVEATOR - EMBER RESOURCES INC.  
PO BOX 20083, BOW VALLEY RPO  
CALGARY

ALBERTA T2P4H3

(DATA UPDATED BY: CHANGE OF ADDRESS 131109940)  
(DATA UPDATED BY: TRANSFER OF CAVEAT  
151030881)

061 218 804      02/06/2006 UTILITY RIGHT OF WAY

GRANTEE - EMBER RESOURCES INC.

(DATA UPDATED BY: TRANSFER OF UTILITY RIGHT  
OF WAY 151192911)

091 017 934      20/01/2009 CAVEAT

RE : LEASE INTEREST UNDER 20 ACRES  
CAVEATOR - EMBER RESOURCES INC.  
PO BOX 20083, BOW VALLEY RPO  
CALGARY

ALBERTA T2P4H3

(DATA UPDATED BY: CHANGE OF ADDRESS 131158048)  
(DATA UPDATED BY: TRANSFER OF CAVEAT  
151030946)

091 174 826      22/06/2009 UTILITY RIGHT OF WAY

GRANTEE - EMBER RESOURCES INC.

PO BOX 20083, BOW VALLEY RPO  
CALGARY

ALBERTA T2P4H3

(DATA UPDATED BY: TRANSFER OF UTILITY RIGHT  
OF WAY 151189229)

TOTAL INSTRUMENTS: 006

( CONTINUED )

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN  
ACCURATE REPRODUCTION OF THE CERTIFICATE OF  
TITLE REPRESENTED HEREIN THIS 24 DAY OF  
SEPTEMBER, 2019 AT 02:03 P.M.

ORDER NUMBER: 38066559

CUSTOMER FILE NUMBER:



\*END OF CERTIFICATE\*

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SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

THE ABOVE PROVISIONS DO NOT PROHIBIT THE ORIGINAL PURCHASER FROM  
INCLUDING THIS UNMODIFIED PRODUCT IN ANY REPORT, OPINION,  
APPRAISAL OR OTHER ADVICE PREPARED BY THE ORIGINAL PURCHASER AS  
PART OF THE ORIGINAL PURCHASER APPLYING PROFESSIONAL, CONSULTING  
OR TECHNICAL EXPERTISE FOR THE BENEFIT OF CLIENT(S).



LAND TITLE CERTIFICATE

S  
LINC                                      SHORT LEGAL                                      TITLE NUMBER  
0013 787 866                              4;26;24;5;NE                                      191 011 791

LEGAL DESCRIPTION

MERIDIAN 4    RANGE 26    TOWNSHIP 24  
SECTION 5  
QUARTER NE  
CONTAINING 64.7 HECTARES ( 160 ACRES) MORE OR LESS  
EXCEPTING THEREOUT:

	HECTARES	(ACRES)	MORE OR LESS
A) PLAN 9010966    DESCRIPTIVE	2.08	(5.14 )	
EXCEPTING THEREOUT ALL MINES AND MINERALS AND THE RIGHT TO WORK THE SAME			

ESTATE: FEE SIMPLE

MUNICIPALITY: WHEATLAND COUNTY

REFERENCE NUMBER: 011 114 510

---

REGISTERED OWNER(S)					
REGISTRATION	DATE (DMY)	DOCUMENT	TYPE	VALUE	CONSIDERATION
191 011 791	17/01/2019	TRANSFER OF LAND			SEE INSTRUMENT

OWNERS

2151836 ALBERTA INC.  
OF 400, 444-7 AVE SW  
CALGARY  
ALBERTA T2P 0X8

---

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION	NUMBER	DATE (D/M/Y)	PARTICULARS
8277CQ	.		RESTRICTIVE COVENANT
981 349 386		06/11/1998	UTILITY RIGHT OF WAY GRANTEE - CANADIAN WESTERN NATURAL GAS COMPANY

-----  
ENCUMBRANCES, LIENS & INTERESTS

PAGE 2  
# 191 011 791

REGISTRATION

NUMBER	DATE (D/M/Y)	PARTICULARS
		LIMITED.
991 329 603	09/11/1999	CAVEAT RE : SURFACE LEASE UNDER 20 ACRES CAVEATOR - EMBER RESOURCES INC. PO BOX 20083, BOW VALLEY RPO CALGARY ALBERTA T2P4H3 (DATA UPDATED BY: CHANGE OF NAME 051232808) (DATA UPDATED BY: CHANGE OF ADDRESS 131090464) (DATA UPDATED BY: TRANSFER OF CAVEAT 151030781)
041 166 631	11/05/2004	UTILITY RIGHT OF WAY GRANTEE - EMBER RESOURCES INC. PO BOX 20083, BOW VALLEY RPO CALGARY ALBERTA T2P4H3 (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 151152403)
061 062 813	10/02/2006	CAVEAT RE : SURFACE LEASE UNDER 20 ACRES CAVEATOR - EMBER RESOURCES INC. PO BOX 20083, BOW VALLEY RPO CALGARY ALBERTA T2P4H3 (DATA UPDATED BY: CHANGE OF ADDRESS 131109938) (DATA UPDATED BY: TRANSFER OF CAVEAT 151030882)
061 218 561	02/06/2006	UTILITY RIGHT OF WAY GRANTEE - EMBER RESOURCES INC. (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 151192911)
071 176 791	14/04/2007	CAVEAT RE : SURFACE LEASE UNDER 20 ACRES CAVEATOR - EMBER RESOURCES INC. PO BOX 20083, BOW VALLEY RPO CALGARY ALBERTA T2P4H3 (DATA UPDATED BY: CHANGE OF ADDRESS 131112239) (DATA UPDATED BY: TRANSFER OF CAVEAT 151030746)

TOTAL INSTRUMENTS: 007

( CONTINUED )

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN  
ACCURATE REPRODUCTION OF THE CERTIFICATE OF  
TITLE REPRESENTED HEREIN THIS 24 DAY OF  
SEPTEMBER, 2019 AT 01:59 P.M.

ORDER NUMBER: 38066481

CUSTOMER FILE NUMBER:



\*END OF CERTIFICATE\*

---

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FOR THE SOLE USE OF THE ORIGINAL PURCHASER, AND NONE OTHER,  
SUBJECT TO WHAT IS SET OUT IN THE PARAGRAPH BELOW.

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APPRAISAL OR OTHER ADVICE PREPARED BY THE ORIGINAL PURCHASER AS  
PART OF THE ORIGINAL PURCHASER APPLYING PROFESSIONAL, CONSULTING  
OR TECHNICAL EXPERTISE FOR THE BENEFIT OF CLIENT(S).



LAND TITLE CERTIFICATE

S  
LINC                      SHORT LEGAL                      TITLE NUMBER  
0012 901 294            4;26;24;8;SW                      191 011 969

LEGAL DESCRIPTION  
MERIDIAN 4 RANGE 26 TOWNSHIP 24  
SECTION 8  
QUARTER SOUTH WEST  
EXCEPTING THEREOUT ALL MINES AND MINERALS  
AREA: 64.7 HECTARES (160 ACRES) MORE OR LESS

ESTATE: FEE SIMPLE

MUNICIPALITY: WHEATLAND COUNTY

REFERENCE NUMBER: 131 096 424 +1

---

REGISTERED OWNER(S)					
REGISTRATION	DATE (DMY)	DOCUMENT	TYPE	VALUE	CONSIDERATION
191 011 969	17/01/2019	TRANSFER OF LAND			SEE INSTRUMENT

---

OWNERS

2151836 ALBERTA INC.  
OF 400, 444-7 AVE SW  
CALGARY  
ALBERTA T2P 0X8

---

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION	DATE (D/M/Y)	PARTICULARS
550CN	.	RESTRICTIVE COVENANT "COVENANTS AND CONDITIONS"
061 119 302	23/03/2006	CAVEAT RE : SURFACE LEASE UNDER 20 ACRES CAVEATOR - EMBER RESOURCES INC. PO BOX 20083, BOW VALLEY RPO CALGARY ALBERTA T2P4H3



-----  
ENCUMBRANCES, LIENS & INTERESTS

PAGE 2

# 191 011 969

REGISTRATION

NUMBER      DATE (D/M/Y)      PARTICULARS

-----

(DATA UPDATED BY: CHANGE OF ADDRESS 131110104)

(DATA UPDATED BY: TRANSFER OF CAVEAT  
151030881)

061 218 801      02/06/2006      UTILITY RIGHT OF WAY

GRANTEE - EMBER RESOURCES INC.

(DATA UPDATED BY: TRANSFER OF UTILITY RIGHT  
OF WAY 151192937)

091 017 690      20/01/2009      CAVEAT

RE : LEASE INTEREST UNDER 20 ACRES

CAVEATOR - EMBER RESOURCES INC.

PO BOX 20083, BOW VALLEY RPO

CALGARY

ALBERTA T2P4H3

(DATA UPDATED BY: CHANGE OF ADDRESS 131158047)

(DATA UPDATED BY: TRANSFER OF CAVEAT  
151034471)

091 174 833      22/06/2009      UTILITY RIGHT OF WAY

GRANTEE - EMBER RESOURCES INC.

PO BOX 20083, BOW VALLEY RPO

CALGARY

ALBERTA T2P4H3

(DATA UPDATED BY: TRANSFER OF UTILITY RIGHT

OF WAY 151189310)

TOTAL INSTRUMENTS: 005

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN  
ACCURATE REPRODUCTION OF THE CERTIFICATE OF  
TITLE REPRESENTED HEREIN THIS 24 DAY OF  
SEPTEMBER, 2019 AT 01:59 P.M.

ORDER NUMBER:      38066481

CUSTOMER FILE NUMBER:



\*END OF CERTIFICATE\*

( CONTINUED )

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LAND TITLE CERTIFICATE

S  
LINC                      SHORT LEGAL                      TITLE NUMBER  
0028 909 794            4;26;24;8;SE                      191 012 005

LEGAL DESCRIPTION

MERIDIAN 4    RANGE 26    TOWNSHIP 24  
SECTION 8  
QUARTER SOUTH EAST  
CONTAINING 64.7 HECTARES ( 160 ACRES) MORE OR LESS  
EXCEPTING THEREOUT:

PLAN	NUMBER	HECTARES	ACRES	MORE OR LESS
DESCRIPTIVE	0111837	2.024	5.00	

EXCEPTING THEREOUT ALL MINES AND MINERALS  
AND THE RIGHT TO WORK THE SAME

ESTATE: FEE SIMPLE

MUNICIPALITY: WHEATLAND COUNTY

REFERENCE NUMBER: 071 006 787

---

REGISTERED OWNER(S)					
REGISTRATION	DATE (DMY)	DOCUMENT	TYPE	VALUE	CONSIDERATION
191 012 005	17/01/2019	TRANSFER OF LAND		\$1,988,429	\$1,988,429

---

OWNERS

2151836 ALBERTA INC.  
OF 400, 444-7 AVE SW  
CALGARY  
ALBERTA T2P 0X8

---

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION		
NUMBER	DATE (D/M/Y)	PARTICULARS
293CR	.	RESTRICTIVE COVENANT
011 191 959	10/07/2001	CAVEAT RE : ROADWAY

ENCUMBRANCES, LIENS & INTERESTS

PAGE 2  
# 191 012 005

REGISTRATION

NUMBER DATE (D/M/Y) PARTICULARS

CAVEATOR - WHEATLAND COUNTY.  
HWY #1 RR#1  
STRATHMORE  
ALBERTA T1P1J6

071 131 592 19/03/2007 UTILITY RIGHT OF WAY  
GRANTEE - EMBER RESOURCES INC.  
(DATA UPDATED BY: TRANSFER OF UTILITY RIGHT  
OF WAY 151192937)

071 142 185 23/03/2007 CAVEAT  
RE : LEASE INTEREST UNDER 20 ACRES  
CAVEATOR - EMBER RESOURCES INC.  
PO BOX 20083, BOW VALLEY RPO  
CALGARY  
ALBERTA T2P4H3  
(DATA UPDATED BY: CHANGE OF ADDRESS 131104180)  
(DATA UPDATED BY: TRANSFER OF CAVEAT  
151030881)

071 144 416 26/03/2007 CAVEAT  
RE : LEASE INTEREST UNDER 20 ACRES  
CAVEATOR - EMBER RESOURCES INC.  
PO BOX 20083, BOW VALLEY RPO  
CALGARY  
ALBERTA T2P4H3  
(DATA UPDATED BY: CHANGE OF ADDRESS 131104226)  
(DATA UPDATED BY: TRANSFER OF CAVEAT  
151030882)

TOTAL INSTRUMENTS: 005

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN  
ACCURATE REPRODUCTION OF THE CERTIFICATE OF  
TITLE REPRESENTED HEREIN THIS 24 DAY OF  
SEPTEMBER, 2019 AT 01:59 P.M.

ORDER NUMBER: 38066481

CUSTOMER FILE NUMBER:



\*END OF CERTIFICATE\*

( CONTINUED )

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LAND TITLE CERTIFICATE

S	LINC	SHORT LEGAL	TITLE NUMBER
	0021 809 728	4;26;24;9;NW	191 012 150
	0021 809 736	4;26;24;9;NE	

LEGAL DESCRIPTION

FIRST

MERIDIAN 4 RANGE 26 TOWNSHIP 24  
SECTION 9  
THE SOUTH HALF OF THE NORTH WEST QUARTER AND  
THE SOUTH HALF OF LEGAL SUBDIVISIONS 13 AND 14  
CONTAINING 48.6 HECTARES (120 ACRES) MORE OR LESS  
EXCEPTING THEREOUT ALL MINES AND MINERALS  
AND THE RIGHT TO WORK THE SAME

SECOND

MERIDIAN 4 RANGE 26 TOWNSHIP 24  
SECTION 9  
THE SOUTH HALF OF THE NORTH EAST QUARTER AND  
THE SOUTH HALF OF LEGAL SUBDIVISION 15  
CONTAINING 40.5 HECTARES (100 ACRES) MORE OR LESS  
EXCEPTING THEREOUT ALL MINES AND MINERALS  
AND THE RIGHT TO WORK THE SAME

ESTATE: FEE SIMPLE

MUNICIPALITY: WHEATLAND COUNTY

REFERENCE NUMBER: 131 096 424

REGISTERED OWNER(S)				
REGISTRATION	DATE (DMY)	DOCUMENT TYPE	VALUE	CONSIDERATION
191 012 150	17/01/2019	TRANSFER OF LAND	\$2,420,000	\$2,420,000

OWNERS

2151836 ALBERTA INC.  
OF 400, 444-7 AVE SW  
CALGARY  
ALBERTA T2P 0X8

-----  
ENCUMBRANCES, LIENS & INTERESTS

PAGE 2

# 191 012 150

## REGISTRATION

NUMBER	DATE (D/M/Y)	PARTICULARS
6570CE .	28/03/1919	RESTRICTIVE COVENANT AFFECTED LAND: 4;26;24;9;NW
6571CE .	28/03/1919	RESTRICTIVE COVENANT AFFECTED LAND: 4;26;24;9;NE
001 166 909	21/06/2000	CAVEAT RE : SURFACE LEASE UNDER 20 ACRES CAVEATOR - EMBER RESOURCES INC. BOX 20083 RPO BOW VALLEY CALGARY ALBERTA T2P4H3 AGENT - SEAL. AFFECTED LAND: 4;26;24;9;NW (DATA UPDATED BY: CHANGE OF NAME 051193652) (DATA UPDATED BY: CHANGE OF ADDRESS 131164988) (DATA UPDATED BY: TRANSFER OF CAVEAT 151030692)
051 464 826	07/12/2005	CAVEAT RE : SURFACE LEASE UNDER 20 ACRES CAVEATOR - EMBER RESOURCES INC. PO BOX 20083, BOW VALLEY RPO CALGARY ALBERTA T2P4H3 AFFECTED LAND: 4;26;24;9;NE (DATA UPDATED BY: CHANGE OF ADDRESS 131105435) (DATA UPDATED BY: TRANSFER OF CAVEAT 151030679)
061 218 804	02/06/2006	UTILITY RIGHT OF WAY GRANTEE - EMBER RESOURCES INC. (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 151192911)
091 200 100	14/07/2009	UTILITY RIGHT OF WAY GRANTEE - EMBER RESOURCES INC. PO BOX 20083, BOW VALLEY RPO CALGARY ALBERTA T2P4H3 AFFECTED LAND: 4;26;24;9;NW (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 151189326)

TOTAL INSTRUMENTS: 006

( CONTINUED )

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN  
ACCURATE REPRODUCTION OF THE CERTIFICATE OF  
TITLE REPRESENTED HEREIN THIS 24 DAY OF  
SEPTEMBER, 2019 AT 01:59 P.M.

ORDER NUMBER: 38066481

CUSTOMER FILE NUMBER:



\*END OF CERTIFICATE\*

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OR TECHNICAL EXPERTISE FOR THE BENEFIT OF CLIENT(S).





LAND TITLE CERTIFICATE

S  
LINC                                      SHORT LEGAL                                      TITLE NUMBER  
0021 843 701                              4;26;24;17;SE                                      191 013 000

LEGAL DESCRIPTION

MERIDIAN 4 RANGE 26 TOWNSHIP 24  
SECTION 17  
QUARTER SOUTH EAST  
CONTAINING 64.7 HECTARES (160 ACRES) MORE OR LESS  
EXCEPTING:

FIRST:

THE NORTHERLY 88.5 METRES OF THE EASTERLY 137.2 METRES  
CONTAINING 1.21 HECTARES MORE OR LESS

SECONDLY:

PLAN	NUMBER	HECTARES (MORE OR LESS)	ACRES
NO. 1 HIGHWAY	7511039	1.70	4.20
ROAD	8711533	0.348	0.860

EXCEPTING THEREOUT ALL MINES AND MINERALS

ESTATE: FEE SIMPLE

MUNICIPALITY: WHEATLAND COUNTY

REFERENCE NUMBER: 161 279 011

-----  
REGISTERED OWNER(S)  
REGISTRATION      DATE(DMY)      DOCUMENT TYPE      VALUE      CONSIDERATION  
-----  
191 013 000      18/01/2019      TRANSFER OF LAND      \$1,575,000      \$1,575,000

OWNERS

2159564 ALBERTA INC.  
OF 400, 444 7 AVENUE SW  
CALGARY  
ALBERTA T2P 0X8





REGISTRATION

NUMBER      DATE (D/M/Y)      PARTICULARS

-----

RE : LEASE INTEREST  
CAVEATOR - DARRIN KELLY  
ATTN: PHILLIP MEYERS  
MEYERS DAVIS LLP  
200, 1518-7 ST SW  
CALGARY  
ALBERTA T2R1A7  
AGENT - PHILLIP MEYERS

TOTAL INSTRUMENTS: 002

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN  
ACCURATE REPRODUCTION OF THE CERTIFICATE OF  
TITLE REPRESENTED HEREIN THIS 24 DAY OF  
SEPTEMBER, 2019 AT 01:59 P.M.

ORDER NUMBER:    38066481

CUSTOMER FILE NUMBER:



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LAND TITLE CERTIFICATE

M

LINC	SHORT LEGAL	TITLE NUMBER
0024 457 533	4;26;24;8;NW	141 180 457 +13
0024 457 541	4;26;24;8;NE	
0012 901 294	4;26;24;8;SW	
0021 778 014	4;26;24;8;SE	

LEGAL DESCRIPTION

FIRST

ALL MINES AND MINERALS, AND THE RIGHT TO WORK THE SAME  
WITHIN, UPON OR UNDER:  
MERIDIAN 4 RANGE 26 TOWNSHIP 24  
SECTION 8  
QUARTER NORTH WEST  
AREA: 64.7 HECTARES (160 ACRES) MORE OR LESS

SECOND

ALL MINES AND MINERALS, AND THE RIGHT TO WORK THE SAME  
WITHIN, UPON OR UNDER:  
MERIDIAN 4 RANGE 26 TOWNSHIP 24  
SECTION 8  
QUARTER NORTH EAST  
AREA: 64.7 HECTARES (160 ACRES) MORE OR LESS

THIRD

ALL MINES AND MINERALS, AND THE RIGHT TO WORK THE SAME  
WITHIN, UPON OR UNDER:  
MERIDIAN 4 RANGE 26 TOWNSHIP 24  
SECTION 8  
QUARTER SOUTH WEST  
AREA: 64.7 HECTARES (160 ACRES) MORE OR LESS

FOURTH

ALL MINES AND MINERALS WITHIN, UPON OR UNDER:  
MERIDIAN 4 RANGE 26 TOWNSHIP 24  
SECTION 8  
QUARTER SOUTH EAST  
AND THE RIGHT TO WORK THE SAME

( CONTINUED )

AREA: 64.7 HECTARES (160 ACRES) MORE OR LESS

ESTATE: FEE SIMPLE

MUNICIPALITY: WHEATLAND COUNTY

REFERENCE NUMBER: 751 126 173

---

REGISTERED OWNER(S)					
REGISTRATION	DATE (DMY)	DOCUMENT	TYPE	VALUE	CONSIDERATION
141 180 457	16/07/2014	ORDER			SEE INSTRUMENT

---

OWNERS

PRAIRIESKY ROYALTY LTD.  
OF PO BOX 780, STATION M  
CALGARY  
ALBERTA T2P 2J6

---

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION	DATE (D/M/Y)	PARTICULARS
161 120 316	24/05/2016	CAVEAT RE : MINES AND MINERALS LEASE INTEREST CAVEATOR - EMBER RESOURCES INC. BOX 20083 RPO BOW VALLEY CALGARY ALBERTA T2P4H3

TOTAL INSTRUMENTS: 001

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SEPTEMBER, 2019 AT 01:59 P.M.

ORDER NUMBER: 38066481

CUSTOMER FILE NUMBER:



\*END OF CERTIFICATE\*

( CONTINUED )

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LAND TITLE CERTIFICATE

M

LINC	SHORT LEGAL	TITLE NUMBER
0012 883 971	4;26;24;5;NW	141 187 197 +1
0012 883 989	4;26;24;5;NE	
0021 777 891	4;26;24;5;SW	
0021 777 909	4;26;24;5;SE	

LEGAL DESCRIPTION

FIRST

ALL MINES AND MINERALS WITHIN, UPON OR UNDER:  
MERIDIAN 4 RANGE 26 TOWNSHIP 24  
SECTION 5  
QUARTER NORTH WEST  
AND THE RIGHT TO WORK THE SAME  
AREA: 64.7 HECTARES (160 ACRES) MORE OR LESS

SECOND

ALL MINES AND MINERALS WITHIN, UPON OR UNDER:  
MERIDIAN 4 RANGE 26 TOWNSHIP 24  
SECTION 5  
QUARTER NORTH EAST  
AND THE RIGHT TO WORK THE SAME  
AREA: 64.7 HECTARES (160 ACRES) MORE OR LESS

THIRD

ALL MINES AND MINERALS WITHIN, UPON OR UNDER:  
MERIDIAN 4 RANGE 26 TOWNSHIP 24  
SECTION 5  
QUARTER SOUTH WEST  
AND THE RIGHT TO WORK THE SAME  
AREA: 64.7 HECTARES (160 ACRES) MORE OR LESS

FOURTH

ALL MINES AND MINERALS WITHIN, UPON OR UNDER:  
MERIDIAN 4 RANGE 26 TOWNSHIP 24  
SECTION 5  
QUARTER SOUTH EAST  
AND THE RIGHT TO WORK THE SAME

( CONTINUED )



AREA: 64.7 HECTARES (160 ACRES) MORE OR LESS

ESTATE: FEE SIMPLE

MUNICIPALITY: WHEATLAND COUNTY

REFERENCE NUMBER: 761 142 788

---

REGISTERED OWNER(S)					
REGISTRATION	DATE (DMY)	DOCUMENT	TYPE	VALUE	CONSIDERATION
141 187 197	22/07/2014	ORDER			SEE INSTRUMENT

---

OWNERS

PRAIRIESKY ROYALTY LTD.  
OF PO BOX 780, STATION M  
CALGARY  
ALBERTA T2P 2J6

---

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION	DATE (D/M/Y)	PARTICULARS
161 120 316	24/05/2016	CAVEAT RE : MINES AND MINERALS LEASE INTEREST CAVEATOR - EMBER RESOURCES INC. BOX 20083 RPO BOW VALLEY CALGARY ALBERTA T2P4H3

TOTAL INSTRUMENTS: 001

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ACCURATE REPRODUCTION OF THE CERTIFICATE OF  
TITLE REPRESENTED HEREIN THIS 24 DAY OF  
SEPTEMBER, 2019 AT 01:59 P.M.

ORDER NUMBER: 38066481

CUSTOMER FILE NUMBER:



\*END OF CERTIFICATE\*

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LAND TITLE CERTIFICATE

M

LINC	SHORT LEGAL	TITLE NUMBER
0012 883 971	4;26;24;5;NW	141 187 197 +1
0012 883 989	4;26;24;5;NE	
0021 777 891	4;26;24;5;SW	
0021 777 909	4;26;24;5;SE	

LEGAL DESCRIPTION

FIRST

ALL MINES AND MINERALS WITHIN, UPON OR UNDER:  
MERIDIAN 4 RANGE 26 TOWNSHIP 24  
SECTION 5  
QUARTER NORTH WEST  
AND THE RIGHT TO WORK THE SAME  
AREA: 64.7 HECTARES (160 ACRES) MORE OR LESS

SECOND

ALL MINES AND MINERALS WITHIN, UPON OR UNDER:  
MERIDIAN 4 RANGE 26 TOWNSHIP 24  
SECTION 5  
QUARTER NORTH EAST  
AND THE RIGHT TO WORK THE SAME  
AREA: 64.7 HECTARES (160 ACRES) MORE OR LESS

THIRD

ALL MINES AND MINERALS WITHIN, UPON OR UNDER:  
MERIDIAN 4 RANGE 26 TOWNSHIP 24  
SECTION 5  
QUARTER SOUTH WEST  
AND THE RIGHT TO WORK THE SAME  
AREA: 64.7 HECTARES (160 ACRES) MORE OR LESS

FOURTH

ALL MINES AND MINERALS WITHIN, UPON OR UNDER:  
MERIDIAN 4 RANGE 26 TOWNSHIP 24  
SECTION 5  
QUARTER SOUTH EAST  
AND THE RIGHT TO WORK THE SAME

( CONTINUED )

AREA: 64.7 HECTARES (160 ACRES) MORE OR LESS

ESTATE: FEE SIMPLE

MUNICIPALITY: WHEATLAND COUNTY

REFERENCE NUMBER: 761 142 788

---

REGISTERED OWNER(S)					
REGISTRATION	DATE (DMY)	DOCUMENT	TYPE	VALUE	CONSIDERATION
141 187 197	22/07/2014	ORDER			SEE INSTRUMENT

---

OWNERS

PRAIRIESKY ROYALTY LTD.  
OF PO BOX 780, STATION M  
CALGARY  
ALBERTA T2P 2J6

---

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION	DATE (D/M/Y)	PARTICULARS
161 120 316	24/05/2016	CAVEAT RE : MINES AND MINERALS LEASE INTEREST CAVEATOR - EMBER RESOURCES INC. BOX 20083 RPO BOW VALLEY CALGARY ALBERTA T2P4H3

TOTAL INSTRUMENTS: 001

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN  
ACCURATE REPRODUCTION OF THE CERTIFICATE OF  
TITLE REPRESENTED HEREIN THIS 24 DAY OF  
SEPTEMBER, 2019 AT 02:03 P.M.

ORDER NUMBER: 38066559

CUSTOMER FILE NUMBER:



\*END OF CERTIFICATE\*

( CONTINUED )

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-----  
ENCUMBRANCES, LIENS & INTERESTS

PAGE 2

# 191 011 791 +1

## REGISTRATION

NUMBER	DATE (D/M/Y)	PARTICULARS
061 062 862	10/02/2006	CAVEAT RE : SURFACE LEASE UNDER 20 ACRES CAVEATOR - EMBER RESOURCES INC. PO BOX 20083, BOW VALLEY RPO CALGARY ALBERTA T2P4H3 (DATA UPDATED BY: CHANGE OF ADDRESS 131109938) (DATA UPDATED BY: TRANSFER OF CAVEAT 151030881)
061 218 565	02/06/2006	UTILITY RIGHT OF WAY GRANTEE - EMBER RESOURCES INC. (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 151192910)
091 017 958	20/01/2009	CAVEAT RE : LEASE INTEREST UNDER 20 ACRES CAVEATOR - EMBER RESOURCES INC. PO BOX 20083, BOW VALLEY RPO CALGARY ALBERTA T2P4H3 (DATA UPDATED BY: CHANGE OF ADDRESS 131158048) (DATA UPDATED BY: TRANSFER OF CAVEAT 151030745)
091 174 816	22/06/2009	UTILITY RIGHT OF WAY GRANTEE - EMBER RESOURCES INC. PO BOX 20083, BOW VALLEY RPO CALGARY ALBERTA T2P4H3 (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 151189205)
091 174 821	22/06/2009	UTILITY RIGHT OF WAY GRANTEE - EMBER RESOURCES INC. PO BOX 20083, BOW VALLEY RPO CALGARY ALBERTA T2P4H3 (DATA UPDATED BY: TRANSFER OF UTILITY RIGHT OF WAY 151189229)

TOTAL INSTRUMENTS: 006

( CONTINUED )

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN  
ACCURATE REPRODUCTION OF THE CERTIFICATE OF  
TITLE REPRESENTED HEREIN THIS 24 DAY OF  
SEPTEMBER, 2019 AT 02:03 P.M.

ORDER NUMBER: 38066559

CUSTOMER FILE NUMBER:



\*END OF CERTIFICATE\*

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APPRAISAL OR OTHER ADVICE PREPARED BY THE ORIGINAL PURCHASER AS  
PART OF THE ORIGINAL PURCHASER APPLYING PROFESSIONAL, CONSULTING  
OR TECHNICAL EXPERTISE FOR THE BENEFIT OF CLIENT(S).





LAND TITLE CERTIFICATE

S  
LINC                                      SHORT LEGAL                                      TITLE NUMBER  
0012 883 971                              4;26;24;5;NW                                      191 011 969 +1

LEGAL DESCRIPTION  
MERIDIAN 4 RANGE 26 TOWNSHIP 24  
SECTION 5  
QUARTER NORTH WEST  
EXCEPTING THEREOUT ALL MINES AND MINERALS  
AND THE RIGHT TO WORK THE SAME  
AREA: 64.7 HECTARES (160 ACRES) MORE OR LESS

ESTATE: FEE SIMPLE

MUNICIPALITY: WHEATLAND COUNTY

REFERENCE NUMBER: 131 121 894

---

REGISTERED OWNER(S)					
REGISTRATION	DATE (DMY)	DOCUMENT	TYPE	VALUE	CONSIDERATION
191 011 969	17/01/2019	TRANSFER OF LAND			SEE INSTRUMENT

OWNERS  
2151836 ALBERTA INC.  
OF 400, 444-7 AVE SW  
CALGARY  
ALBERTA T2P 0X8

---

ENCUMBRANCES, LIENS & INTERESTS

REGISTRATION	DATE (D/M/Y)	PARTICULARS
NUMBER		
8277CQ	.	RESTRICTIVE COVENANT
061 119 309	23/03/2006	CAVEAT RE : SURFACE LEASE UNDER 20 ACRES CAVEATOR - EMBER RESOURCES INC. PO BOX 20083, BOW VALLEY RPO CALGARY ALBERTA T2P4H3

-----  
ENCUMBRANCES, LIENS & INTERESTS

PAGE 2

# 191 011 969 +1

## REGISTRATION

NUMBER      DATE (D/M/Y)      PARTICULARS  
-----

(DATA UPDATED BY: CHANGE OF ADDRESS 131110104)

(DATA UPDATED BY: TRANSFER OF CAVEAT  
151030881)

061 218 801      02/06/2006 UTILITY RIGHT OF WAY  
GRANTEE - EMBER RESOURCES INC.  
(DATA UPDATED BY: TRANSFER OF UTILITY RIGHT  
OF WAY 151192937)

071 176 905      14/04/2007 CAVEAT  
RE : SURFACE LEASE UNDER 20 ACRES  
CAVEATOR - EMBER RESOURCES INC.  
PO BOX 20083, BOW VALLEY RPO  
CALGARY  
ALBERTA T2P4H3  
(DATA UPDATED BY: CHANGE OF ADDRESS 131112240)  
(DATA UPDATED BY: TRANSFER OF CAVEAT  
151030746)

091 017 964      20/01/2009 CAVEAT  
RE : LEASE INTEREST UNDER 20 ACRES  
CAVEATOR - EMBER RESOURCES INC.  
PO BOX 20083, BOW VALLEY RPO  
CALGARY  
ALBERTA T2P4H3  
(DATA UPDATED BY: CHANGE OF ADDRESS 131158048)  
(DATA UPDATED BY: TRANSFER OF CAVEAT  
151030914)

091 174 820      22/06/2009 UTILITY RIGHT OF WAY  
GRANTEE - EMBER RESOURCES INC.  
PO BOX 20083, BOW VALLEY RPO  
CALGARY  
ALBERTA T2P4H3  
(DATA UPDATED BY: TRANSFER OF UTILITY RIGHT  
OF WAY 151189229)

TOTAL INSTRUMENTS: 006

( CONTINUED )

THE REGISTRAR OF TITLES CERTIFIES THIS TO BE AN  
ACCURATE REPRODUCTION OF THE CERTIFICATE OF  
TITLE REPRESENTED HEREIN THIS 24 DAY OF  
SEPTEMBER, 2019 AT 01:59 P.M.

ORDER NUMBER: 38066481

CUSTOMER FILE NUMBER:



\*END OF CERTIFICATE\*

---

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## APPENDIX D

### Regulatory Inquiry Information



**WHEATLAND COUNTY**

**Where There's Room to Grow**

October 8, 2019

Trace Associates Inc.  
Lincoln Park Centre  
Suite 300, 37 Richard Way SW  
Calgary, AB T3E 7M8

Dear Sir/Madam:

Re: File Search Request: S1/2-17-024-26 W4M; S1/2-08-024-26 W4M; N1/2-09-024-26 W4M; and Section 05-024-26 W4M.

---

Trace Associates Inc. submitted a file search request to Wheatland County staff for the above mentioned parcels for the purpose of identifying the following:

- Presence of current or historical landfills;
- Environmental reports;
- Presence of current or historical above-ground or underground storage tanks (possibly need to contact Fire Department); and
- Bylaw infractions.

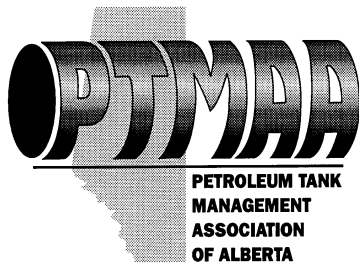
At this time staff have no records of any landfills (current or historic), environmental reports or above-ground or underground storage tanks on file (current or historic) on the specified parcels.

The search did reveal that there was a violation of the Land Use Bylaw in relation to signage, but that has since been resolved.

Please contact the undersigned if you have any questions related to this search.

Sincerely,

Diane Bodie  
Wheatland County



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

September 24, 2019

Nicole J. Koloff  
Trace Associates Inc.  
300, 37 Richard Way SW  
Calgary AB  
T3E 7M8

Dear Nicole J. Koloff:

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 properties with the legal land description:

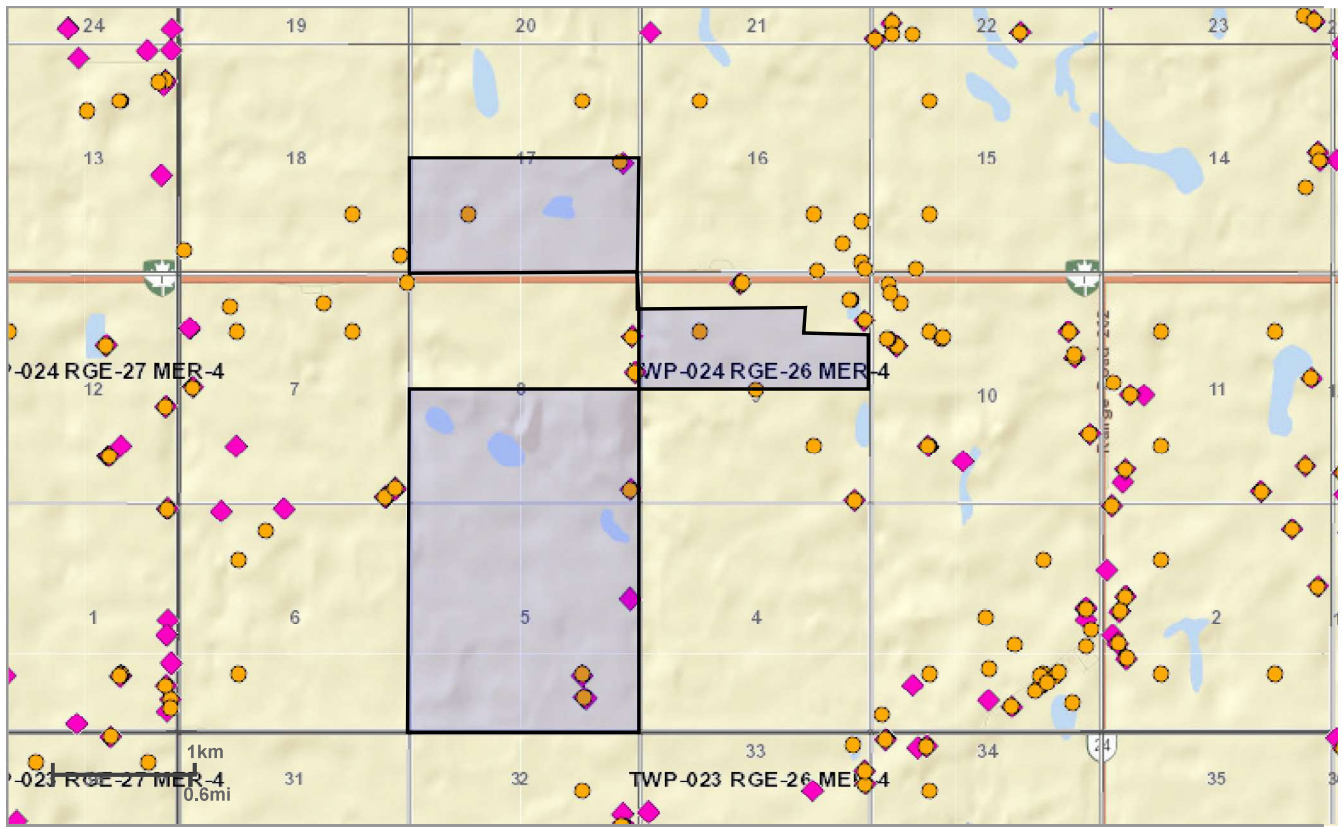
S1/2 17-024-26-W4  
S1/2 08-024-26-W4  
N1/2 09-024-26-W4  
Section 05-024-26-W4

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,

<original signed by>

PTMAA



### Alberta Water Well Information Database Map

**Projection**

Web Mercator (Auxillary Sphere)

**Datum**

WGS 84

**Date**

2019-09-25 4:16:21 PM

**Legend**

● Groundwater Drilling Report

◆ Baseline Water Well Report

<http://groundwater.alberta.ca/WaterWells/d/>

Information as depicted is subject to change, therefore the Government of Alberta assumes no responsibility for discrepancies at time of use.

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# Reconnaissance Report

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## Groundwater Wells

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

GIC Well ID	LSD	SEC	TWP	RGE	M	DRILLING COMPANY	DATE COMPLETED	DEPTH (m)	TYPE OF WORK	USE	CHM	LT	PT	WELL OWNER	STATIC LEVEL (m)	TEST RATE (L/min)	SC_DIA (cm)
<a href="#">112283</a>	SW	17	24	26	4	M&M DRILLING CO. LTD.	1969-09-17	46.02	New Well	Domestic & Stock	1	18		JACKSON, BOB	30.48	68.19	12.70
<a href="#">112284</a>	SW	17	24	26	4	UNKNOWN DRILLER		45.72	Chemistry	Domestic	1			RANDALL, LOUISE	6.10		0.00
<a href="#">169778</a>	8	17	24	26	4	M&M DRILLING CO. LTD.	1992-10-21	36.58	New Well	Domestic		15		WOLSTENHOLME, NORM	13.72	68.19	0.00
<a href="#">169778</a>	8	17	24	26	4	M&M DRILLING CO. LTD.	1992-10-21	36.58	New Well	Domestic		15		WOLSTENHOLME, NORM	13.72	227.30	0.00

## Baseline Water Well Tests

Please click the water Test ID to generate the Baseline Water Well Test Report.

Test ID	GIC Well ID	LSD	QTR	SEC	TWP	RGE	M	Resource Company	Testing Date	Water Quality	Pump Test	Gas	Isotopes
<a href="#">2002245</a>	<a href="#">169778</a>	8		17	24	26	4	Ember Resources Inc.	2017-03-16	Yes	Yes	-	-





# Water Well Drilling Report

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GIC Well ID 112256  
GoA Well Tag No.  
Drilling Company Well ID  
Date Report Received 1987/03/20

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

Well Identification and Location										Measurement in Metric	
<b>Owner Name</b> DOROSH, FRED		<b>Address</b> P.O. BOX 1517 STRATHMORE			<b>Town</b>		<b>Province</b>		<b>Country</b>		<b>Postal Code</b> T0J 3H0
<b>Location</b>	<b>1/4 or LSD</b> NW	<b>SEC</b> 9	<b>TWP</b> 24	<b>RGE</b> 26	<b>W of MER</b> 4	<b>Lot</b>	<b>Block</b>	<b>Plan</b>	<b>Additional Description</b>		
<b>Measured from Boundary of</b>					<b>GPS Coordinates in Decimal Degrees (NAD 83)</b>						
_____ m from _____					Latitude <u>51.034143</u> Longitude <u>-113.580435</u>					Elevation _____ m	
_____ m from _____					How Location Obtained					How Elevation Obtained	
					Map					Not Obtained	

Drilling Information	
<b>Method of Drilling</b> Unknown	<b>Type of Work</b> Chemistry
<b>Proposed Well Use</b> Domestic	

Formation Log			Measurement in Metric
Depth from ground level (m)	Water Bearing	Lithology Description	

Yield Test Summary			Measurement in Metric
<b>Recommended Pump Rate</b>		L/min	
<b>Test Date</b>	<b>Water Removal Rate (L/min)</b>	<b>Static Water Level (m)</b>	

Well Completion				Measurement in Metric
<b>Total Depth Drilled</b>	<b>Finished Well Depth</b>	<b>Start Date</b>	<b>End Date</b>	
24.38 m				
<b>Borehole</b>				
<b>Diameter (cm)</b>	<b>From (m)</b>	<b>To (m)</b>		
0.00	0.00	24.38		
<b>Surface Casing (if applicable)</b>		<b>Well Casing/Liner</b>		
Size OD : _____ cm		Size OD : _____ cm		
Wall Thickness : _____ cm		Wall Thickness : _____ cm		
Bottom at : _____ m		Top at : _____ m		
		Bottom at : _____ m		
<b>Perforations</b>				
From (m)	To (m)	Diameter or Slot Width (cm)	Slot Length (cm)	Hole or Slot Interval (cm)
Perforated by _____				
<b>Annular Seal</b>				
Placed from _____ 0.00 m to _____ 0.00 m				
Amount _____				
Other Seals				
Type				At (m)
<b>Screen Type</b>				
Size OD : _____ 0.00 cm				
From (m)		To (m)		Slot Size (cm)
Attachment _____				
Top Fittings _____		Bottom Fittings _____		
<b>Pack</b>				
Type _____		Grain Size _____		
Amount _____				

Contractor Certification	
<b>Name of Journeyman responsible for drilling/construction of well</b> UNKNOWN NA DRILLER	<b>Certification No</b> 1
<b>Company Name</b> UNKNOWN DRILLER	<b>Copy of Well report provided to owner</b> <b>Date approval holder signed</b>



# Water Well Drilling Report

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GIC Well ID 112256  
GoA Well Tag No.  
Drilling Company Well ID  
Date Report Received 1987/03/20

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

Well Identification and Location										Measurement in Metric		
<b>Owner Name</b> DOROSH, FRED		<b>Address</b> P.O. BOX 1517 STRATHMORE			<b>Town</b>		<b>Province</b>		<b>Country</b>		<b>Postal Code</b> T0J 3H0	
<b>Location</b>	<b>1/4 or LSD</b> NW	<b>SEC</b> 9	<b>TWP</b> 24	<b>RGE</b> 26	<b>W of MER</b> 4	<b>Lot</b>	<b>Block</b>	<b>Plan</b>	<b>Additional Description</b>			
<b>Measured from Boundary of</b>					<b>GPS Coordinates in Decimal Degrees (NAD 83)</b>							
_____ m from _____					Latitude <u>51.034143</u>		Longitude <u>-113.580435</u>		Elevation _____ m			
_____ m from _____					How Location Obtained					How Elevation Obtained		
					Map					Not Obtained		

Additional Information										Measurement in Metric	
Distance From Top of Casing to Ground Level _____ cm											
Is Artesian Flow _____					Is Flow Control Installed _____						
Rate _____ L/min					Describe _____						
Recommended Pump Rate _____ L/min					Pump Installed _____		Depth _____ m				
Recommended Pump Intake Depth (From TOC) _____ m					Type _____		Make _____		H.P. _____		
										Model (Output Rating) _____	
Did you Encounter Saline Water (>4000 ppm TDS) _____					Depth _____ m		Well Disinfected Upon Completion _____				
Gas _____					Depth _____ m		Geophysical Log Taken _____				
										Submitted to ESRD _____	
Additional Comments on Well _____										Sample Collected for Potability _____	
										Submitted to ESRD <u>Yes</u>	

Yield Test			Taken From Ground Level	Measurement in Metric
Test Date _____	Start Time _____	Static Water Level _____ m		
<b>Method of Water Removal</b>				
Type _____				
Removal Rate _____ L/min				
Depth Withdrawn From _____ m				
If water removal period was < 2 hours, explain why _____				

Water Diverted for Drilling		
Water Source _____	Amount Taken _____ L	Diversion Date & Time _____

Contractor Certification	
Name of Journeyman responsible for drilling/construction of well UNKNOWN NA DRILLER	Certification No 1
Company Name UNKNOWN DRILLER	Copy of Well report provided to owner Date approval holder signed



# Reconnaissance Report

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## Groundwater Wells

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

GIC Well ID	LSD	SEC	TWP	RGE	M	DRILLING COMPANY	DATE COMPLETED	DEPTH (m)	TYPE OF WORK	USE	CHM	LT	PT	WELL OWNER	STATIC LEVEL (m)	TEST RATE (L/min)	SC_DIA (cm)
<a href="#">112240</a>	SE	5	24	26	4	UNKNOWN DRILLER		45.72	Chemistry	Domestic	1			TORGRIMSON, C.			0.00
<a href="#">112241</a>	SE	5	24	26	4	UNKNOWN DRILLER		45.72	Chemistry	Domestic	1			BISHOP, D.			0.00
<a href="#">112242</a>	1	5	24	26	4	M&M DRILLING CO. LTD.	1988-11-14	36.58	New Well	Stock		9		TORGRIMSON, RAYMOND	6.71	181.84	0.00
<a href="#">290029</a>	SE	8	24	26	4	M&M DRILLING CO. LTD.	1998-09-23	30.48	New Well	Domestic		4	12	TORGRIMSON, KEVIN	11.67	71.37	0.00

## Baseline Water Well Tests

Please click the water Test ID to generate the Baseline Water Well Test Report.

Test ID	GIC Well ID	LSD	QTR	SEC	TWP	RGE	M	Resource Company	Testing Date	Water Quality	Pump Test	Gas	Isotopes
<a href="#">1078542</a>			SE	5	24	26	4	Encana Corporation	2006-08-30	Yes	Yes	-	-
<a href="#">1163167</a>			NE	5	24	26	4	Encana Corporation	2006-09-05	Yes	Yes	-	-
<a href="#">1198743</a>	<a href="#">112242</a>		SE	5	24	26	4	Encana Corporation	2008-08-19	Yes	Yes	-	-
<a href="#">1203171</a>	<a href="#">290029</a>		SE	8	24	26	4	Encana Corporation	2009-05-01	Yes	Yes	Yes	-
<a href="#">1213829</a>			NE	5	24	26	4	Encana Corporation	2009-10-13	Yes	Yes	-	-
<a href="#">1216621</a>	<a href="#">112242</a>		SE	5	24	26	4	Encana Corporation	2010-08-04	Yes	Yes	Yes	Yes

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Search Results**

<b>The Search Used the Following Values:</b>	
Legal Land Location:	NE 09-024-26-W4
Act / Document Type:	Water Act, EPEA
Show Inactive Authorizations:	Yes

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

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Search Results**

<b>The Search Used the Following Values:</b>	
Legal Land Location:	NW 09-024-26-W4
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Show Inactive Authorizations:	Yes

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<b>The Search Used the Following Values:</b>	
Area Parcel:	Plan: 9010966 Lot: 1
Act / Document Type:	Water Act, EPEA
Show Inactive Authorizations: Yes	

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<b>The Search Used the Following Values:</b>	
Area Parcel:	Plan: 0111837 Block: 1 Lot: 1
Act / Document Type:	Water Act, EPEA
Show Inactive Authorizations: Yes	

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<b>The Search Used the Following Values:</b>	
Legal Land Location:	SE 17-024-26-W4
Act / Document Type:	Water Act, EPEA
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Search Results**

<b>The Search Used the Following Values:</b>	
Legal Land Location:	05-024-26-W4
Act / Document Type:	Water Act, EPEA
Show Inactive Authorizations:	Yes

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2 Result(s)

	Notice 00263421-00-00 under the provisions of the <i>Water Act</i> , Code of Practice for <i>Pipelines and Telecommunication Lines Crossing a Water Body</i> at 5 5-24-26-W4 * affecting the Wetland - Non Peatlands was received from ENCANA CORPORATION on Sep. 18, 2009. * Additional locations and water bodies, including the queried location, are associated with this notice.
	Notice 00263421-00-00 under the provisions of the <i>Water Act</i> , Code of Practice for <i>Pipelines and Telecommunication Lines Crossing a Water Body</i> at 5 5-24-26-W4 * affecting the Wetland - Non Peatlands was received from ENCANA CORPORATION on Sep. 18, 2009. * Additional locations and water bodies, including the queried location, are associated with this notice.

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**Authorization Viewer -  
Search Results**

<b>The Search Used the Following Values:</b>
Legal Land Location:           08-024-26-W4
Act / Document Type:         Water Act, EPEA
Show Inactive Authorizations: Yes

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

4 Result(s)

	Document 00250012-00-00 CHEADLE/FILLING/WHEATLAND INDUSTRIAL PARK INC. - F00250012 is held by Wheatland Industrial Park Inc., under the provisions of the <i>Water Act</i> . This Approval is currently expired.
	Document 00250012-00-01 CHEADLE/FILLING/WHEATLAND INDUSTRIAL PARK INC. - F00250012 is held by Wheatland Industrial Park Inc., under the provisions of the <i>Water Act</i> . This Approval is currently expired.
	Notice 00263421-00-00 under the provisions of the <i>Water Act</i> , Code of Practice for <i>Pipelines and Telecommunication Lines Crossing a Water Body</i> at 5 5-24-26-W4 * affecting the Wetland - Non Peatlands was received from ENCANA CORPORATION on Sep. 18, 2009. * Additional locations and water bodies, including the queried location, are associated with this notice.
	Document 00333600-00-00 WHEATLAND INDUSTRIAL PARK STORM DRAINAGE SYSTEM, PHASE 1 is held by Wheatland Industrial Park Inc., under the provisions of the <i>Environmental Protection &amp; Enhancement Act</i> . This Registration is currently issued as of Jul. 31, 2013 and does not expire.

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<a href="#">Authorization Viewer</a>	<a href="#">Traditional Agriculture Registration Viewer</a>	<a href="#">Public Notices Viewer</a>	<a href="#">Help</a>
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**Authorization Viewer -  
Search Results**

<b>The Search Used the Following Values:</b>	
Legal Land Location:	SW 17-024-26-W4
Act / Document Type:	Water Act, EPEA
Show Inactive Authorizations:	Yes

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

0 Result(s)

Clear & Return

Comments regarding the Authorization Viewer page may be directed to the Regulatory Approvals Centre [RAC.Environment@gov.ab.ca](mailto:RAC.Environment@gov.ab.ca).





- [Search Form](#)
- [Map Search](#)

A designated location identifies a site where Alberta Environment and Parks has received scientific or technical information for that site and does not imply anything regarding the current state or condition of the site. Please refer to the studies and reports to determine the condition of the site.

ATS

Meridian W -	4
Range	26
Township	24
Section	17
[Quarter]	SE

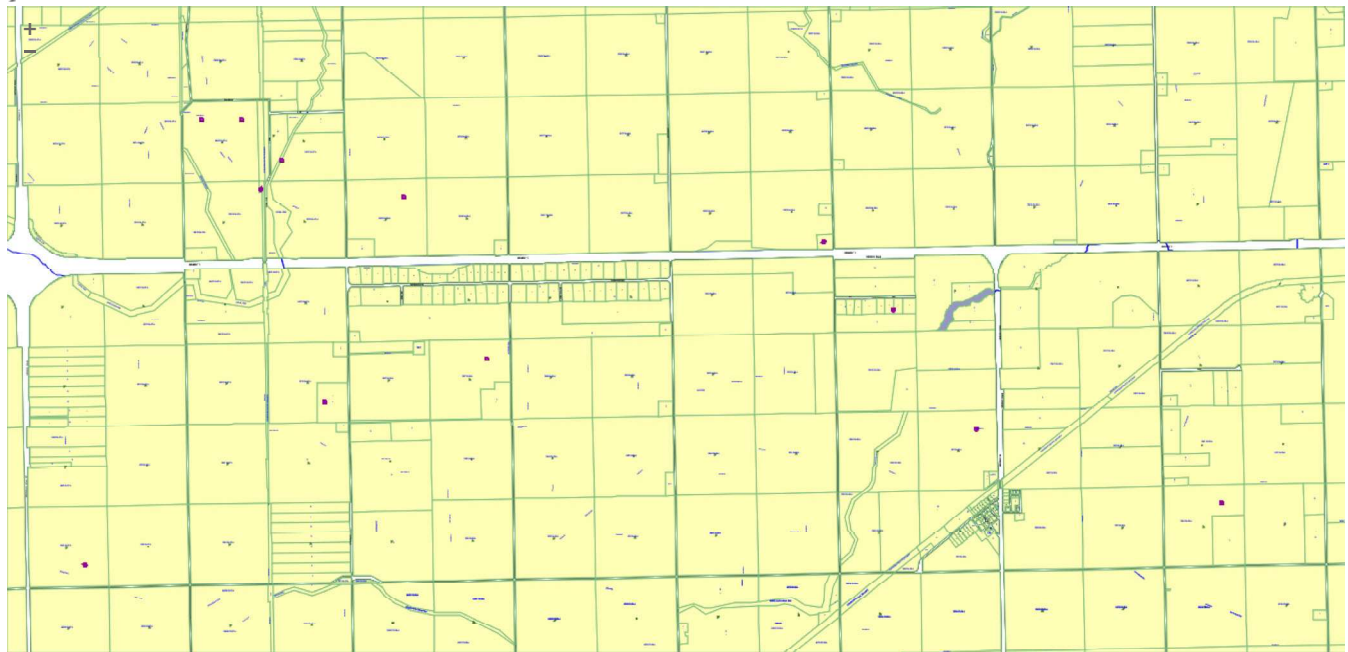
**PBL**

**Address**

**Place Name**

**Coordinate**

**Help with Map**



The ESA marker represents an approximate location of a site where the Government of Alberta has received scientific and/or technical information. The marker is an arbitrary, 40 meter diameter circle centered on the property for which this information is attached. For locations or other site information, see the document results table.  
 Spatial Search provided by the Alberta Land Titles [SPIN 2 System](#)

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## Environmental Site Assessment Repository (ESAR)

- [Search Form](#)
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### ATS Search

► SHOW HELP

W  -  -  -  -  ] -  ]

Format: MER-RGE-TWP-SEC-[QTR]-[LSD]  
 [ ] denotes that the quarter section and legal subdivision are optional.

### PBL Search

► SHOW HELP

Plan:  Block:  Lot:

Format: Plan - [Block] - [Lot]  
 [ ] denotes that the Block and/or Lot are optional.

#### Note:

An ESA document does not necessarily mean the site is, or ever was, contaminated. Please refer to the studies and reports to determine the condition of the site.

**Place Name, Street Address, and Coordinate Searches** are available on the map page

-A marker identified as ESA is the location of a site where Alberta Environment and Parks has received scientific and/or technical information

-A marker identified as REC is the location of a site where Alberta Environment and Parks has received an application for a reclamation certificate.

Comments and questions can be directed to:  
 ESAR-Support@gov.ab.ca

### Search Results

1 Result(s)

Name	Address	<a href="#">View Map</a>	<a href="#">View Docs</a>
Reclamation	8-7-24-26-4		

### Document Results

2 Result(s)

Select	Name	Description	File Type	FileSize (MB)	Date
<input type="checkbox"/>	Reclamation Documentation - PCP ARDENODE 8-7-24-26 WELL	Reclamation Certificate	pdf	0.10	7/28/1992
<input type="checkbox"/>	Reclamation Documentation - PCP ARDENODE 8-7-24-26 WELL	Reclamation Application	pdf	0.39	7/3/1992

### Document Delivery

Download  Email

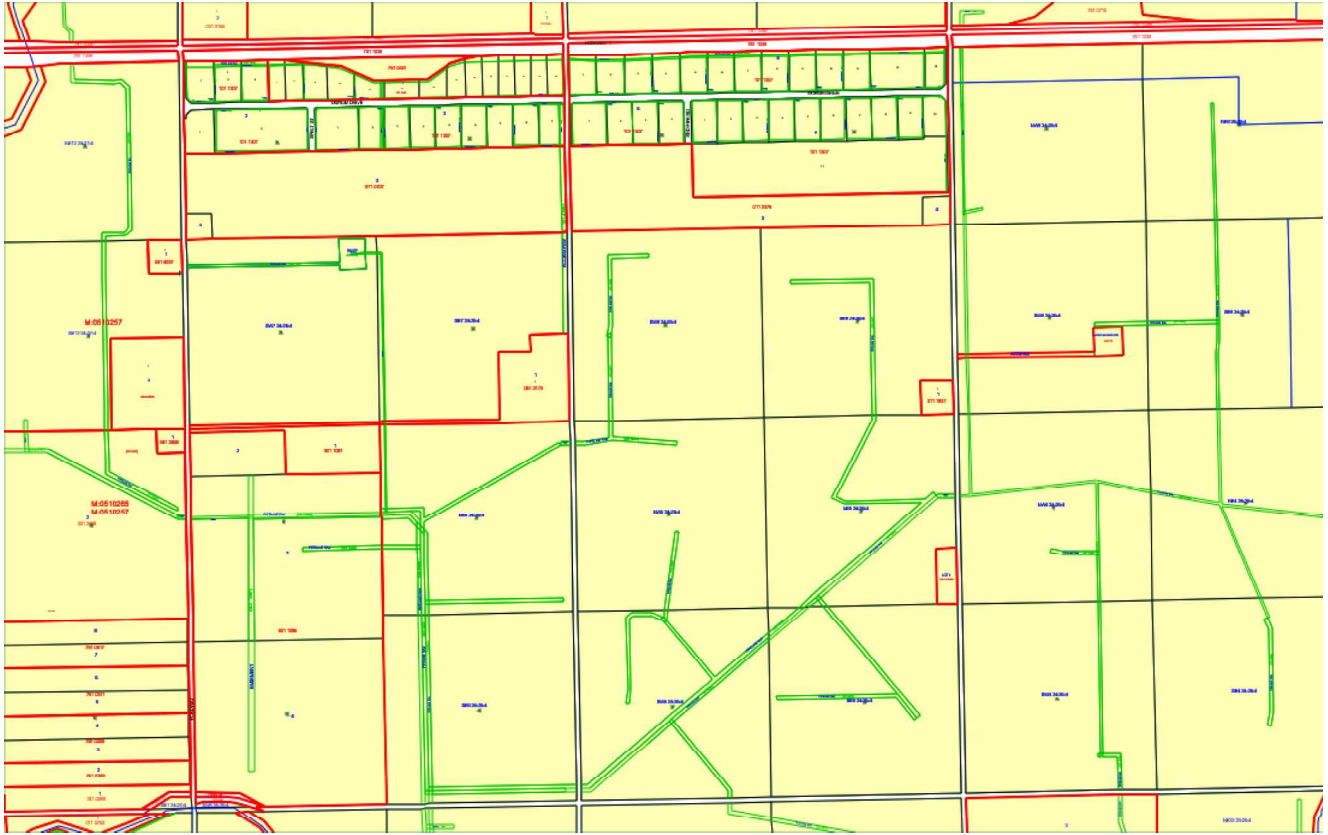
Deliver Selected Documents



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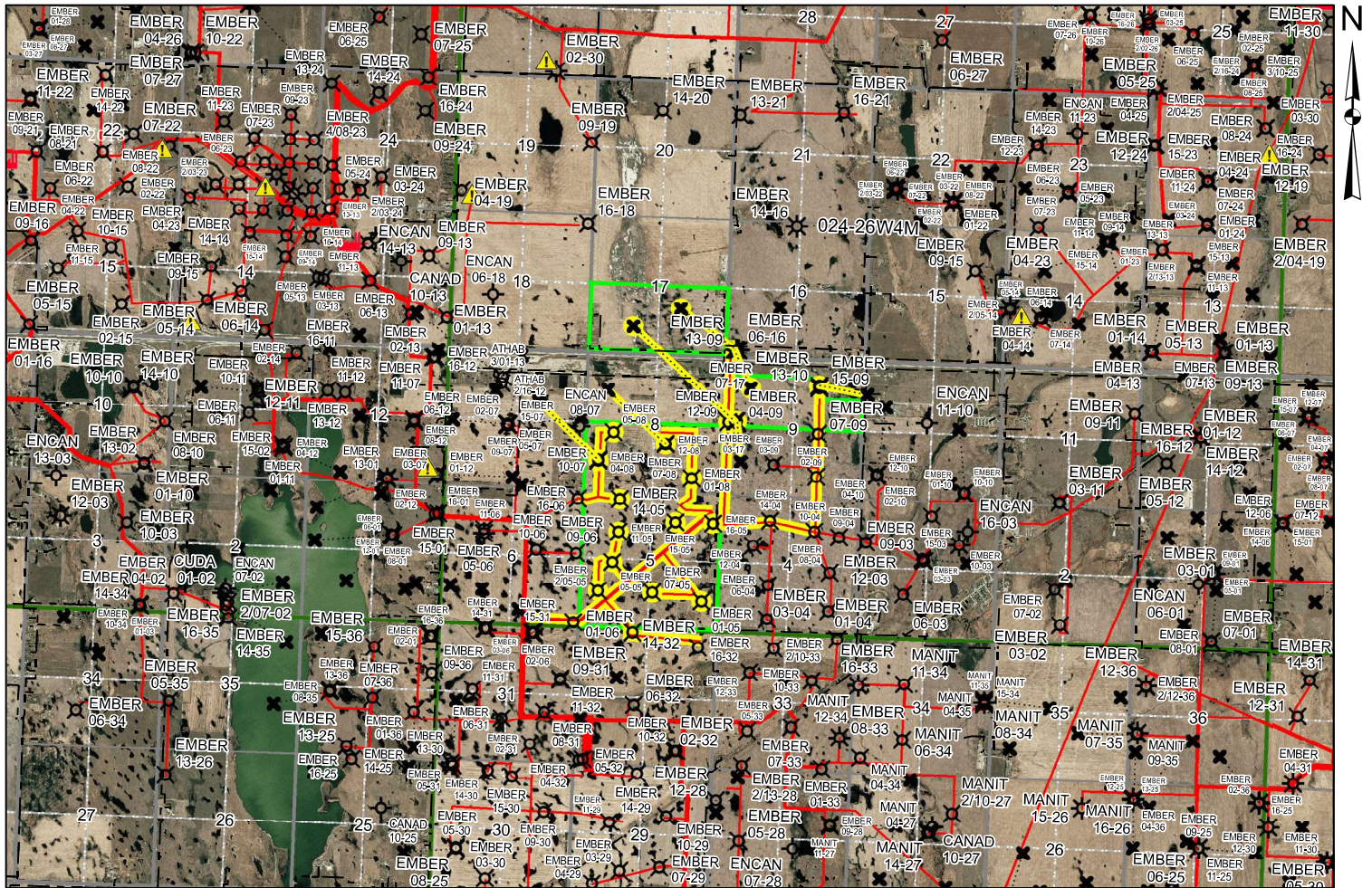
© 1995 - 2017 Government of Alberta [Copyright and Disclaimer](#)





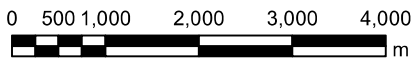


# On-Site Oil and Gas-Related Facilities, Spills, and Complaints



WELLS		
	Miscellaneous Wellhead	AB Environment Water Well
	Water Wellhead	User Water Well
	Well Downhole Location	Monitor Well
	Newly Licenced Well	
	Newly Spudded Well	

PIPELINES		
	Water Pipeline	Foreign Pipeline (When Filtering by Company)
	LVP/HVP Pipeline	Gas Cu-up Pipeline (Low Pressure)



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	FIELD
57239 - 1	EMBER RESOURCES INC.	MAY 11 2005	16-5-24-26W4 WE	1-6-24-26W4 PL	2.04	O	NG	0	141.3	19.35	P	3408	7.3	1750	B	U	50		ENTICE
57359 - 29	EMBER RESOURCES INC.	MAY 30 2007	16-5-24-26W4 PL	2-6-24-26W4 PL	2.73	O	NG	0	273.1	37.41	P	3408	7.3	1750	B	U	50		ENTICE
57359 - 30	EMBER RESOURCES INC.	MAY 30 2007	16-32-23-26W4 WE	4-5-24-26W4 PL	1.31	O	NG	0	141.3	19.35	P	3408	7.3	1750	B	U	50		ENTICE
57359 - 31	EMBER RESOURCES INC.	MAY 30 2007	5-5-24-26W4 WE	6-5-24-26W4 PL	0.34	O	NG	0	141.3	19.35	P	3408	7.3	1750	B	U	50		ENTICE
57359 - 32	EMBER RESOURCES INC.	MAY 30 2007	1-5-24-26W4 WE	10-5-24-26W4 PL	0.68	O	NG	0	141.3	19.35	P	3408	7.3	1750	B	U	50		ENTICE
57359 - 33	EMBER RESOURCES INC.	MAY 30 2007	15-5-24-26W4 WE	16-5-24-26W4 PL	0.39	O	NG	0	141.3	19.35	P	3408	7.3	1750	B	U	50		ENTICE
57359 - 53	EMBER RESOURCES INC.	AUG 31 2007	4-8-24-26W4 WE	13-5-24-26W4 PL	0.45	O	NG	0	141.3	19.35	P	3408	7.3	1750	B	U	50		ENTICE
57359 - 54	EMBER RESOURCES INC.	AUG 31 2007	14-5-24-26W4 WE	16-6-24-26W4 PL	0.56	O	NG	0	141.3	19.35	P	3408	7.3	1750	B	U	50		ENTICE
57359 - 80	EMBER RESOURCES INC.	NOV 30 2007	12-9-24-26W4 WE	13-4-24-26W4 PL	1.3	O	NG	0	141.3	19.35	P	3408	7.3	1750	B	U	50		ENTICE
57359 - 81	EMBER RESOURCES INC.	NOV 30 2007	10-4-24-26W4 WE	16-5-24-26W4 PL	1.2	O	NG	0	273.1	37.41	P	3408	7.3	1750	B	U	50		ENTICE
57359 - 85	EMBER RESOURCES INC.	JAN 3 2008	15-9-24-26W4 WE	10-4-24-26W4 PL	1.71	O	NG	0	141.3	19.35	P	3408	7.3	1750	B	U	50		ENTICE
57359 - 106	EMBER RESOURCES INC.	APR 9 2008	7-8-24-26W4 WE	15-5-24-26W4 PL	1.3	O	NG	0	141.3	19.35	P	3408	7.3	1750	B	U	50		ENTICE
57359 - 130	EMBER RESOURCES INC.	AUG 27 2010	5-5-24-26W4 WE	5-5-24-26W4 PL	0.52	O	NG	0	141.3	19.36	P	3608	7.3	1750	B	U	50		ENTICE
57359 - 131	EMBER RESOURCES INC.	AUG 27 2010	11-5-24-26W4 WE	5-5-24-26W4 PL	0.38	O	NG	0	141.3	19.36	P	3608	7.3	1750	B	U	50		ENTICE
57359 - 132	EMBER RESOURCES INC.	AUG 27 2010	7-5-24-26W4 WE	1-5-24-26W4 PL	0.63	O	NG	0	141.3	19.36	P	3608	7.3	1750	B	U	50		ENTICE
57359 - 133	EMBER RESOURCES INC.	AUG 27 2010	5-8-24-26W4 WE	4-8-24-26W4 PL	0.49	O	NG	0	141.3	19.36	P	3608	7.3	1750	B	U	50		ENTICE
57359 - 137	EMBER RESOURCES INC.	OCT 1 2010	4-16-24-26W4 WE	12-9-24-26W4 PL	0.96	O	NG	0	141.3	19.36	P	3608	7.3	1750	B	U	50		ENTICE

AER Pipeline Data Current to: September 06, 2019

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AER Well Report

WELL ID	LICENSE #	LICENSE DATE	WELL NAME	LICENSEE	SURFACE LOCATION	LICENSE STATUS	SPUD DATE	FINAL DRILL DATE	WELL STATUS	ABANDON DATE	SURFACE LATITUDE	SURFACE LONGITUDE	DOWNHOLE LATITUDE	DOWNHOLE LONGITUDE	H2S (%)
100 / 01-05-024-26 W4 / 3	0352831	FEB 27 2006	EMBER ENTICE 1-5-24-26	EMBER RESOURCES INC.	01-05-024-26W4M	Issued	MAR 3 2006	MAR 4 2006	COMM		51,011846	-113,589122	51,011846	-113,589122	
100 / 05-05-024-26 W4 / 0	0352679	FEB 23 2006	EMBER ENTICE 5-5-24-26	EMBER RESOURCES INC.	05-05-024-26W4M	Issued	MAR 3 2006	MAR 4 2006	CBMOT FLOW		51,015698	-113,604346	51,015698	-113,604346	
102 / 05-05-024-26 W4 / 2	0414284	NOV 20 2009	EMBER 102 ENTICE 5-5-24-26	EMBER RESOURCES INC.	05-05-024-26W4M	Issued	JAN 30 2010	FEB 17 2010	CBMOT FLOW		51,012593	-113,606604	51,012593	-113,606604	
100 / 07-05-024-26 W4 / 2	0415153	DEC 3 2009	EMBER ENTICE 7-5-24-26	EMBER RESOURCES INC.	07-05-024-26W4M	Issued	JAN 27 2010	FEB 21 2010	CBMOT FLOW		51,012597	-113,597474	51,012597	-113,597474	
100 / 11-05-024-26 W4 / 2	0413618	NOV 2 2009	EMBER ENTICE 11-5-24-26	EMBER RESOURCES INC.	11-05-024-26W4M	Issued	JAN 31 2010	FEB 19 2010	CBMOT FLOW		51,018938	-113,603471	51,018938	-113,603471	
100 / 14-05-024-26 W4 / 4	0354626	MAR 22 2006	EMBER ENTICE 14-5-24-26	EMBER RESOURCES INC.	14-05-024-26W4M	Issued	OCT 7 2006	OCT 14 2006	CBMOT FLOW		51,022379	-113,603464	51,022379	-113,603464	
100 / 15-05-024-26 W4 / 2	0352625	FEB 23 2006	EMBER ENTICE 15-5-24-26	EMBER RESOURCES INC.	15-05-024-26W4M	Issued	MAR 11 2006	MAR 13 2006	CBMOT FLOW		51,020150	-113,593969	51,020150	-113,593969	
100 / 16-05-024-26 W4 / 2	0228960	NOV 21 1999	EMBER ENTICE 16-5-24-26	EMBER RESOURCES INC.	16-05-024-26W4M	Issued	NOV 30 1999	DEC 2 1999	CBMOT FLOW		51,020151	-113,587657	51,020151	-113,587657	
100 / 10-07-024-26 W4 / 0	0359985	JUL 10 2006	EMBER ENTICE 10-7-24-26	EMBER RESOURCES INC.	04-08-024-26W4M	Issued	JAN 9 2007	JAN 11 2007	CBMOT FLOW		51,026503	-113,607299	51,032489	-113,617630	
100 / 01-08-024-26 W4 / 3	0376789	MAY 1 2007	EMBER ENTICE 1-8-24-26	EMBER RESOURCES INC.	01-08-024-26W4M	Issued	OCT 23 2007	OCT 24 2007	CBMOT FLOW		51,024839	-113,591504	51,024839	-113,591504	
100 / 04-08-024-26 W4 / 4	0359984	JUL 10 2006	EMBER ENTICE 4-8-24-26	EMBER RESOURCES INC.	04-08-024-26W4M	Amended	OCT 11 2006	OCT 15 2006	CBMOT FLOW		51,026358	-113,607299	51,026358	-113,607299	
100 / 05-08-024-26 W4 / 2	0415083	DEC 2 2009	EMBER ENTICE 5-8-24-26	EMBER RESOURCES INC.	05-08-024-26W4M	Issued	JAN 30 2010	FEB 15 2010	CBMOT FLOW		51,029515	-113,604947	51,029515	-113,604947	
100 / 07-08-024-26 W4 / 0	0377062	MAY 10 2007	EMBER ENTICE 7-8-24-26	EMBER RESOURCES INC.	07-08-024-26W4M	Issued	OCT 9 2007	OCT 10 2007	CBMOT FLOW		51,028371	-113,596097	51,028371	-113,596097	
100 / 12-08-024-26 W4 / 3	0377060	MAY 10 2007	EMBER ENTICE 12-8-24-26	EMBER RESOURCES INC.	07-08-024-26W4M	Issued	OCT 10 2007	OCT 11 2007	CBMOT FLOW		51,028443	-113,596097	51,033972	-113,606171	
100 / 04-09-024-26 W4 / 2	0415152	DEC 3 2009	EMBER ENTICE 4-9-24-26	EMBER RESOURCES INC.	12-09-024-26W4M	Issued	FEB 19 2010	FEB 21 2010	COMM		51,031099	-113,584232	51,026811	-113,583427	
100 / 12-09-024-26 W4 / 0	0238737	JUN 20 2000	EMBER ENTICE 12-9-24-26	EMBER RESOURCES INC.	12-09-024-26W4M	Issued	JUN 22 2000	JUN 27 2000	CBMOT FLOW		51,030976	-113,585696	51,030976	-113,585696	
100 / 13-09-024-26 W4 / 3	0413690	NOV 5 2009	EMBER ENTICE 13-9-24-26	EMBER RESOURCES INC.	04-16-024-26W4M	Issued	DEC 28 2009	DEC 30 2009	CBMOT FLOW		51,038622	-113,585099	51,034664	-113,582140	
100 / 15-09-024-26 W4 / 0	0341450	OCT 28 2005	EMBER ENTICE 15-9-24-26	EMBER RESOURCES INC.	15-09-024-26W4M	Issued	JAN 27 2006	FEB 5 2006	CBMOT FLOW		51,034915	-113,570602	51,034915	-113,570602	
100 / 13-10-024-26 W4 / 0	0418837	FEB 24 2010	EMBER ENTICE 13-10-24-26	EMBER RESOURCES INC.	15-09-024-26W4M	Amended	NOV 21 2010	NOV 22 2010	CBMOT FLOW		51,035139	-113,570585	51,034359	-113,562523	
100 / 03-17-024-26 W4 / 0	0354549	MAR 22 2006	EMBER ENTICE 3-17-24-26	EMBER RESOURCES INC.	12-09-024-26W4M	Amended	JAN 5 2007	JAN 7 2007	CBMOT FLOW		51,031106	-113,584598	51,040761	-113,602234	
100 / 07-17-024-26 W4 / 0	0413692	NOV 5 2009	EMBER ENTICE 7-17-24-26	EMBER RESOURCES INC.	04-16-024-26W4M	Issued	DEC 31 2009	JAN 2 2010	GAS FLOW		51,038622	-113,584743	51,042865	-113,594359	

Government Well Data Current to: September 04, 2019