

10.0 SCHEDULE TWO - Phase 1 Environmental Site Assessment

☐ Phase 1 ESA not required and NOT submitted with this application

As of June 1, 2011 all Phase 1 ESA information must be entered on the Schedule Two form.
Please check off the appropriate boxes indicating which documents are attached.

- ☒ List of available aerial photographs from Air Photo Distribution
- ☒ Aerial or satellite photographs
- ☒ Site Visit Photos
- ☒ Construction and Operation Sketches
- ☒ AER Professional Declaration Form* – This must be signed for work completed after January 1, 2008.

* This form must be signed for work completed after January 1, 2008. The AER will refuse any reclamation certificate applications that do not strictly adhere ESRD's professional declaration requirements, outlined in Fact Sheet (R&R/10-01).

10.0 PHASE 1 ENVIRONMENTAL SITE ASSESSMENT

10.1 Previously Refused Applications and Cancelled Certificates

Has this site been previously refused or certified and the certificate cancelled?	No
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10.2 Drilling Information

Add	Well name or UWI	Spud Date:	Final Drill Date:	Well Depth: (metres)
Delete				

10.2.1 Re-entry of a Well or Site Re-drilled

Is this site a re-entry?	No
Is the site re-drilled?	No

10.2.2 Drilling Waste Disposal Information

Add Mud	Drilling Mud Type	Volume (m ³)	Disposal Method
Delete	Gel chemical		
Add Row	Sump Type	Sump location, if remote	Disposal Location(s)
Delete	None		

Drilling Waste Compliance Option(s) used and attached to Schedule 3.

- ☐ Option 1
☐ Option 2
☐ Option 3

Has this site been used for drilling waste disposal more than once?	No
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Provide details and location(s):

10.3 Production, Storage, and Environmental Information

10.3.1 Current and/or Historical Information

Describe all historical and/or current infrastructure associated with the location (For example: tanks, pipeline, process skids, access roads etc.)

Access road, flare stack, pipeline risers, above-ground pipe, production building

10.3.2 Flare Pits

Were there any associated flare pits during drilling or production?	No
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10.3.3 Storage Tanks

Were there any storage tanks associated with the site?	Yes
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If "Yes", list number, location, and capacity of the storage tanks

Add Row	Type of Tank	Content	Location(s)	Capacity (m ³)
Delete	Below ground tank	Unknown	2 pipe stems northwest of well centre - potential buried tank	Unknown

Were any other underground structure, such as pipelines, removed?	N/A
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10.3.4 Fluid Disposal

How was fluid at producing wells, disposal wells, and/or battery sites shipped to/from the location?

- ☐ N/A
 ☒ Piped from the site
 ☐ Trucked from the site
☐ Piped to the site
 ☐ Trucked to the site
 ☐ Disposed of on site

10.3.5 Other Facilities or Infrastructure

Describe any other waste storage, handling, chemical storage, buried pits, landfills, etc
None known

10.3.6 Spills and Releases

Have there been any Spills/Releases/Complaints associated with the site? No

10.3.7 Previous Environmental Site Assessments

List any previous ESA's conducted? ☒ None or unknown

10.4 Phase 1 Environmental Site Assessment Site Visit

Date:	May 12, 2018	Assessor(s)	Mark Przybylski	
Surrounding land use	N: Agricultural	S: Agricultural	E: Agricultural	W: Agricultural
Topography:	Gently undulating			
Vegetation:	Foxtail barley, fescue			
Provide the proximity of receptors to the site. Fill in distances (m) for all that are within 300 metres of the site boundary.				
Residence: >1km	Water well: >1km	Surface waterbody (e.g., dugout, stream river): 408m (dugout)		
Were equipment or tanks present, or were there visual signs of former facilities?				Yes
What was observed? Production building, above-ground pipe, pipeline risers, 2 pipe stems, potentially indicating an underground tank, pilings				
Were there visual signs of open or potentially buried earthen pits?				No
What was observed?				
Was there evidence of past spills (include cumulative releases, well centre impacts, salt tolerant vegetation, etc.)?				No
What was observed?				
Was any adjacent land affected by operations on the site?				No
What was observed?				
Was any vegetation stress apparent?				No
Details (location, evidence):				
Does the site visit information conflict with specific file or the imagery review Information?				No
If YES, explain				

Wellsite Reclamation Certificate Application Form
2010 Reclamation Criteria for Wellsites and Associated Facilities

Add	Photo Id:	Year	Scale:	Evidence of former infrastructure or areas of potential concern
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10.5 Aerial and Satellite Imagery Review

Aerial or satellite photographs of the site are required. Scales such as 1:5000 or 1:7500 should be used to show detail.

Producing wells and batteries: one pre-disturbance; one post-disturbance; one photograph for every 2 to 3 year interval while the site was active.

Dry and abandoned wells: one photograph of the active site, if available, is required. If active site photographs are not available, photographs of the pre and post disturbance are required.

Sites with above ground facilities and/or spills: photos of the site before, during (if available), and after the spill cleanup or facility removal are required

Review Date: 20-May-2018

Reviewed by: Darrys Carol

Add	Photo Id:	Year	Scale:	Evidence of former infrastructure or areas of potential concern
Delete	AS 1347-092	1974	1:8,100	This is a pre-construction photo. The future lease location lies within a cultivated field. There are no visible signs of existing infrastructure or contamination concerns on the site.
Delete	AS 2002-008	1979	1:3,330	The lease is accessed from the west. A dark spot at well centre is likely a wellhead. Details are obscure, but there appears to be a structure or disturbance in the northwest lease corner.
Delete	AS 2867-148	1983	1:3,330	Production facilities are present, primarily north of well centre. These appear to include at least three above-ground tanks. There are also some structures visible west of well centre. There appears to be a flare pit in the southeast lease corner.
Delete	AS 3748-004	1988	1:3,330	Resolution is very poor in this photo. The majority of the lease appears white, suggesting gravel. There appear to be facilities remaining in the north portion of the lease; however, details are obscure.

10.6 Interviews - Phase 1 Environmental Site Assessment

Provide details of Interviewee's Comments. Request information on previous complaints, former facilities, presence and details of spills, pits, waste storage/handling, and vegetation control, etc

Private Land: Have you performed a site visit in the presence of the landowner/occupant?

Public Land: Have you performed a site visit in the presence of the occupant?

Date of site visit(s)

Landowner Interviewed:

Joe Walter

Date

08-May-2018

Interviewed By:

Mark Przybylski

Mr. Walter was informed of the Phase 1 Environmental Site Assessment. He stated he is concerned that nothing grows on the site. He added that it is a hazard site with old buildings and a flare onsite.

Occupant Interview:

Date

Interviewed By:

10.6 Interviews - Phase 1 Environmental Site Assessment

Operator Interview:	Position:	Date	Interviewed By:
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Additional Notes/Comments/Information

The subject lease was drilled in 1978. The drilling waste from that event has not been assessed at the client's request. The well produced gas from 1981 to 1989 and the site has had numerous production facilities, above-ground tanks, and possibly a flare pit. Two pipe stems were observed during the site visit that may indicate the presence of an underground tank. No surface staining was observed.

Given the era this well was drilled, there is a moderate likelihood that the drilling waste was mix-bury-covered onsite and that it fails to meet current ADWDA criteria. Additionally, inspection of the buried tank suggests there is potential for impacts due to leaking. A drilling waste disposal assessment is recommended to determine the likelihood of contamination in a potential buried sump. In addition, a Phase 2 Environmental Site Assessment is recommended to determine potential impacts from production activities and a potential buried tank.

10.7 Conclusions and Recommendations

10.7.1 Did the Phase 1 ESA indicate that a Phase 2 ESA is required to evaluate the site for contamination?

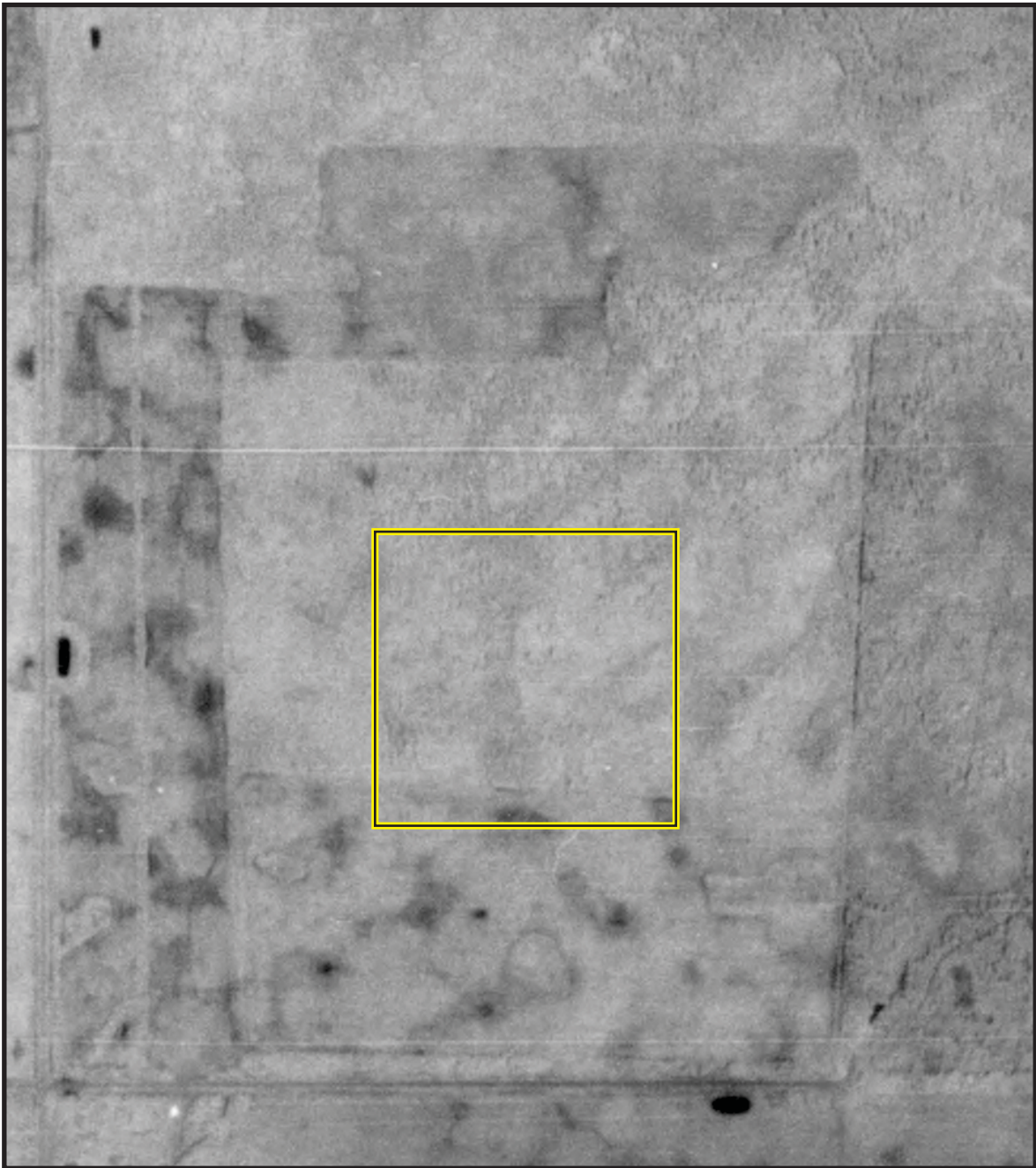
☒ Yes ☐ No further investigation required

If YES, attach Phase 2 ESA report (see Schedule 4)

APRS Search Results

Legal Description (Sec. Twp. Rge. Meridian): 6 - 30 - 81 - 12 - 6

Project No.	Sub. ID	Coverage (Partial/Complete)	Date	Scale (1:)	Emulsion	Comments
06-082Tr	4	C	2006-00-00	30000	B/W Pan-80	Roll:Trsg-0602; 1,814ppi - photogrammetric
01-312	55	C	2001-00-00	30000	B/W Agfa-80	Rolls:AS-5194,5195,5196
98-167Tr 84D	2	C	1998-00-00	60000	B/W	Roll:Trsg-9804
97-159	3	C	1997-09-01	30000	AGFA 200	Rolls:AS-4891,4892
95-158Tr 84D	9	C	1995-05-00	40000	B/W	Roll: Trs-9501
89-120A	7	C	1989-00-00	30000	B/W 2405	
88-209 84D	1	C	1988-08-02	40000	B/W Agfa-150	
84-102 W6	1	C	1984-00-00	60000	B/W Pan-2405	
84-006	16	C	1984-00-00	30000	B/W 2405	
F83-009	1	C	1983-09-22	30000	B/W Pan-2405	Roll:AS-2867; into B.C.
80-122	1	C	1980-05-04	60000	B/W PAN-2405	
79-032	42	C	1979-00-00	15000	B/W IR-2424	
79-032 84D	5	C	1979-00-00	15000	B/W IR-2424	
74-050	1	C	1974-08-04	50000	B/W IR-2424	
71-089	51	C	1971-06-12	31680	B/W Pan-2405	
70-322 84D	1	C	1970-00-00	80000	B/W Pan-2405	Roll:AS-1113
52-84D	1	C	1952-00-00	15840	B/W Pan-2405	
49-84D	2	C	1950-00-00	40000	B/W Super XX.	Years - 1950,1951



Scale 1:8,100



SHARP
Environmental ⁽²⁰⁰⁰⁾ LTD.

Knowledge Energy Inc.
Aerial Photograph Enlargement
06-30-081-12W6

Date: August 4, 1974

Aerial: AS1347-092



Scale 1:3,330

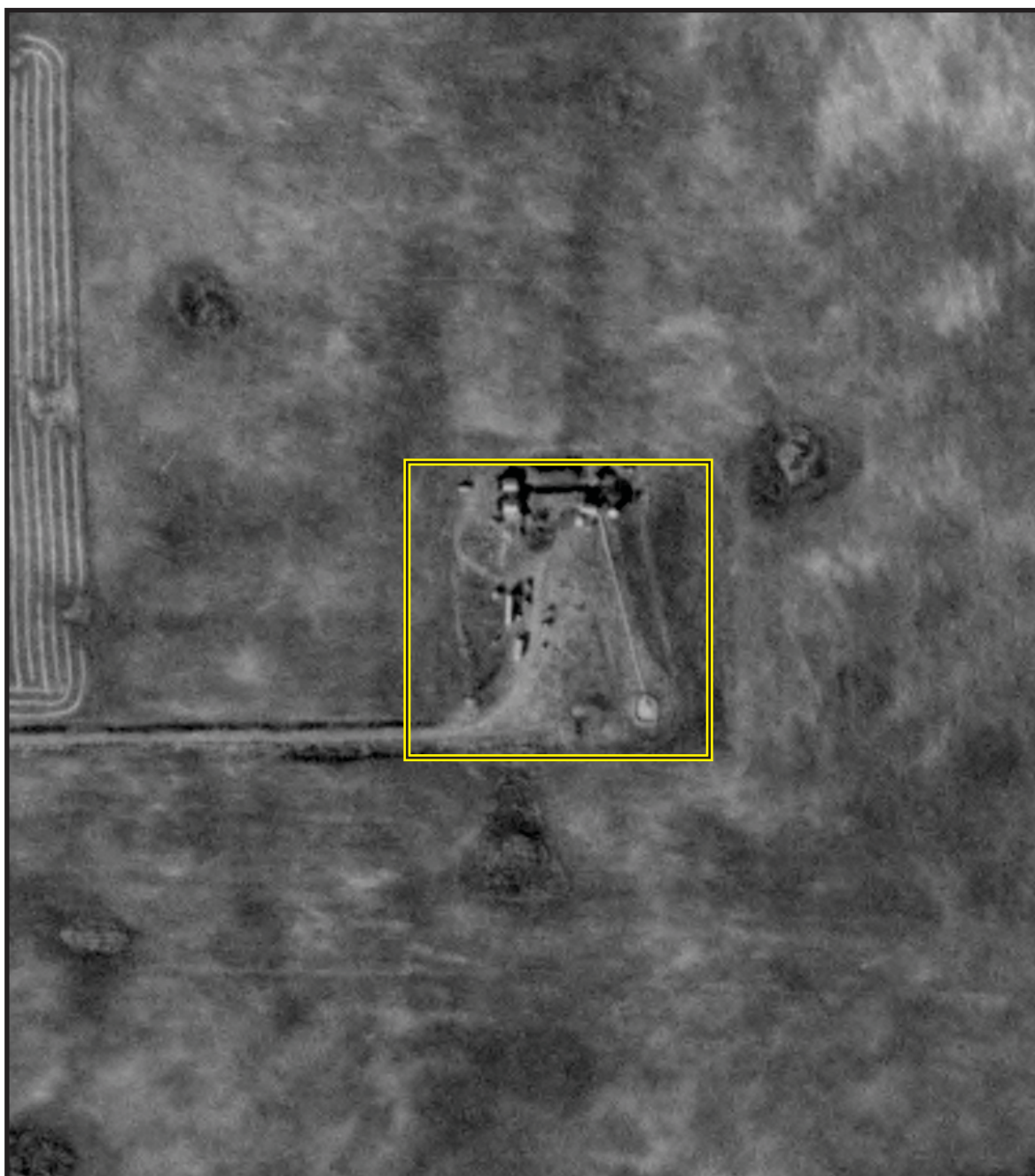


SHARP
Environmental ⁽²⁰⁰⁰⁾ LTD.

Knowledge Energy Inc.
Aerial Photograph Enlargement
06-30-081-12W6

Date: July 18, 1979

Aerial: AS2002-008



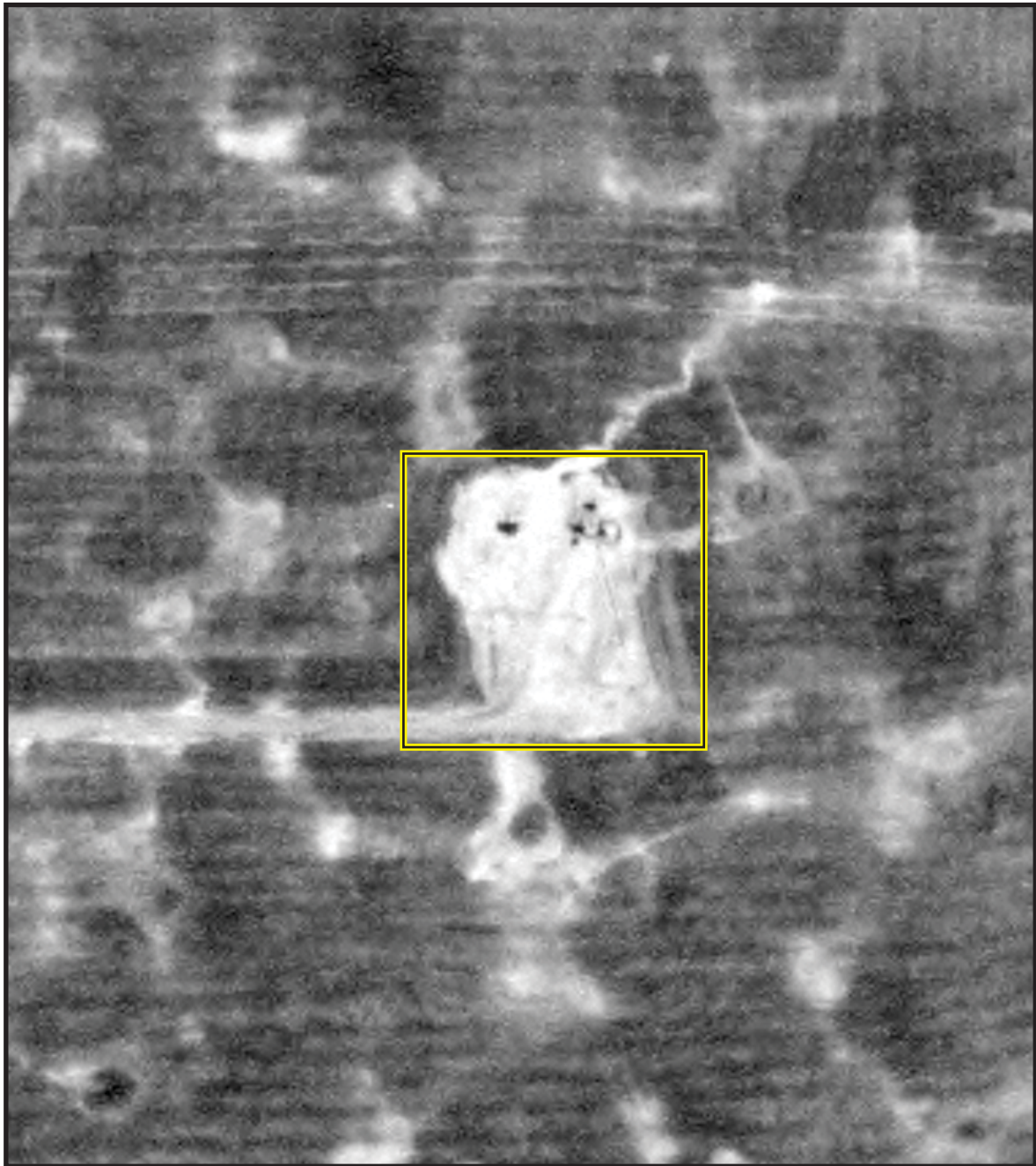
Scale 1:3,330



SHARP
Environmental ⁽²⁰⁰⁰⁾ LTD.

Knowledge Energy Inc.
Aerial Photograph Enlargement
06-30-081-12W6

Date: September 22, 1983 Aerial: AS2867-148



Scale 1:3,330

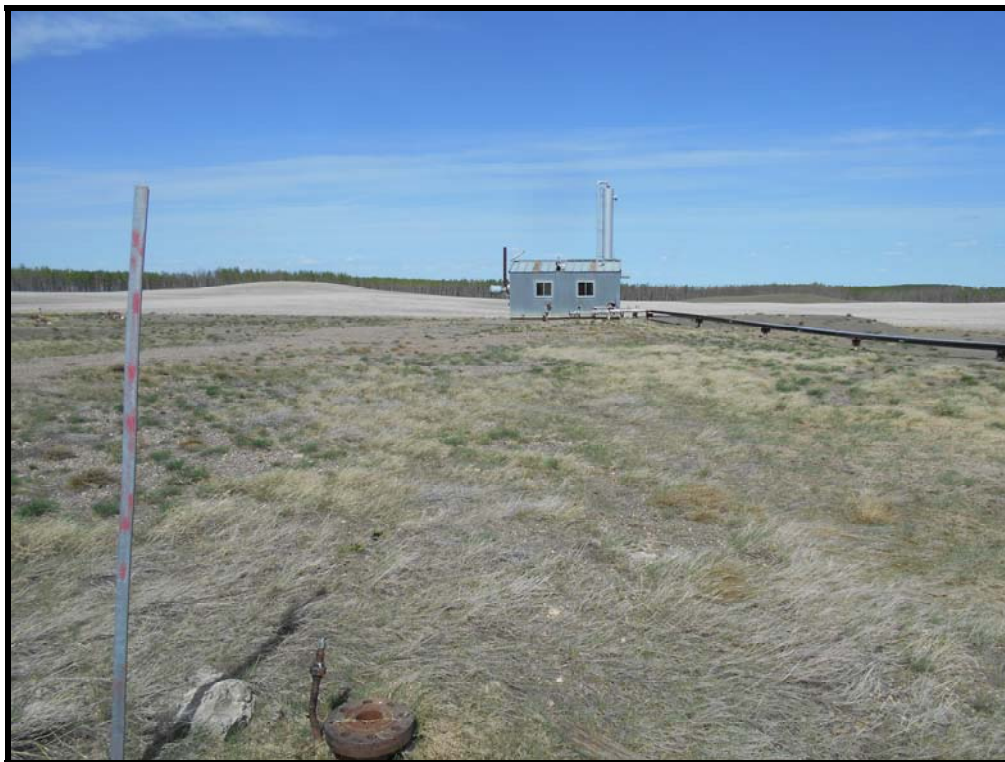


SHARP
Environmental ⁽²⁰⁰⁰⁾ LTD.

Knowledge Energy Inc.
Aerial Photograph Enlargement
06-30-081-12W6

Date: August 2, 1988

Aerial: AS3748-004



Looking north from well centre



Looking east from well centre



Looking south from well centre



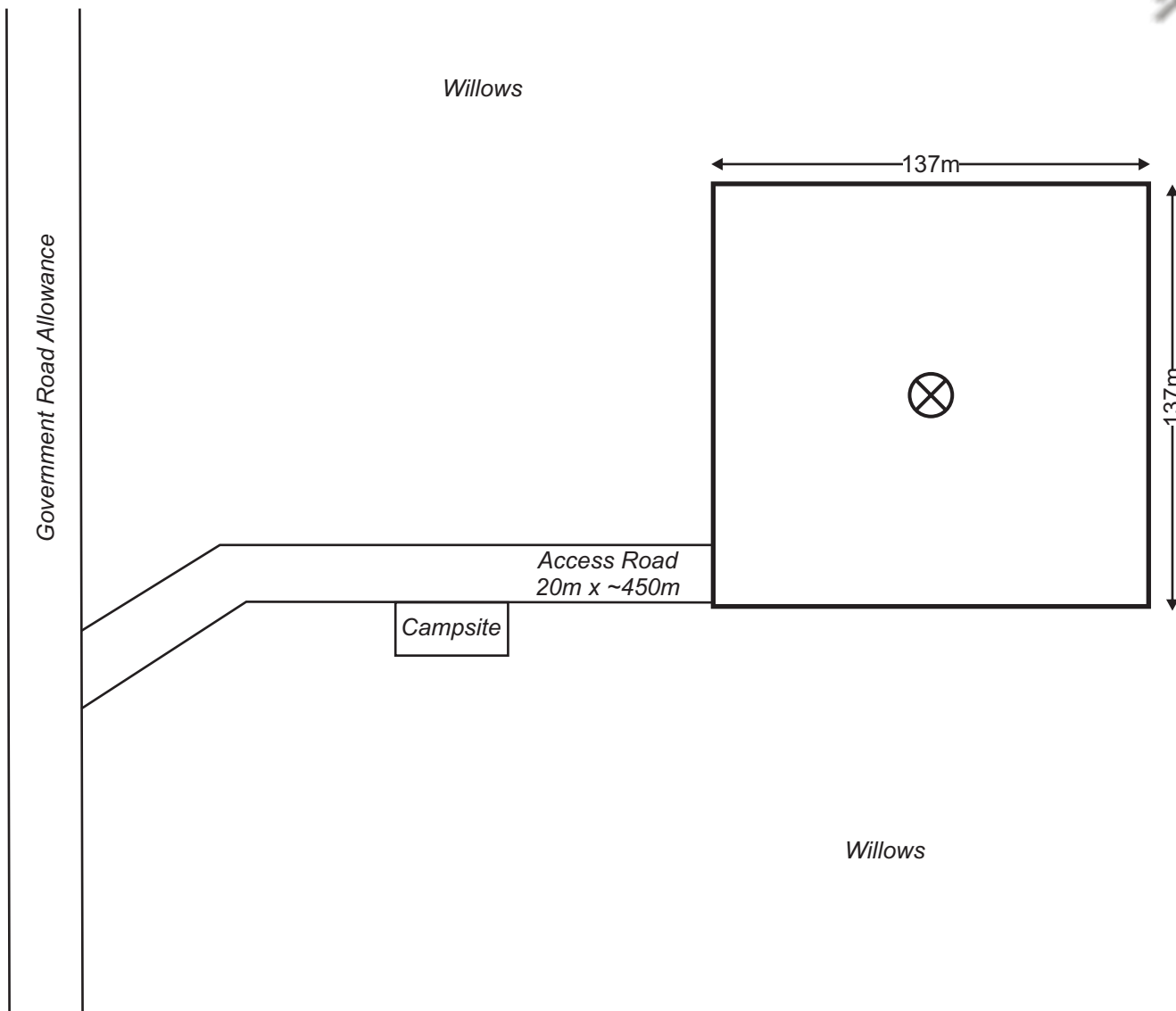
Looking west from well centre



Pipe stems northwest of well centre – potential underground tank



Production shack and risers north of well centre

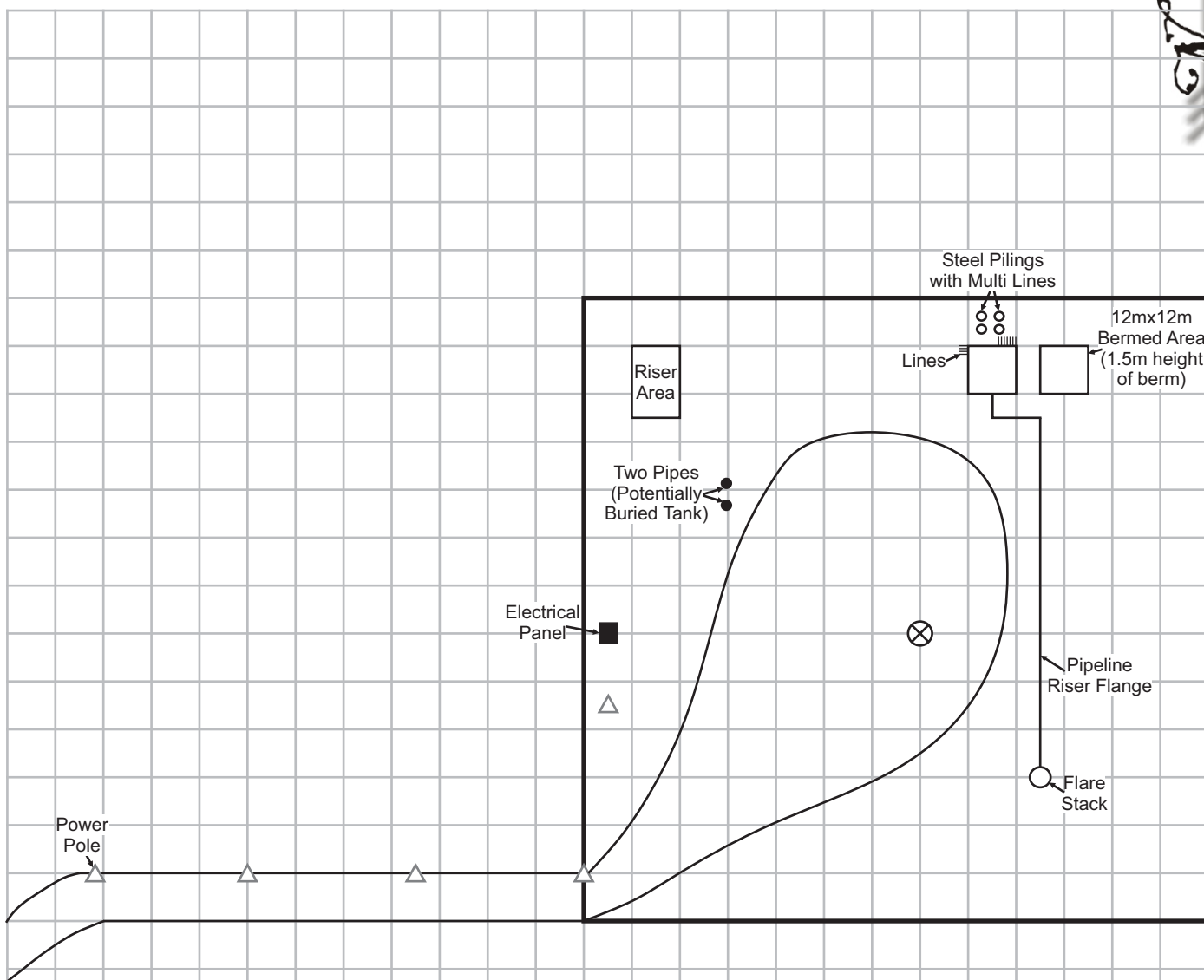


Not To Scale



SHARP
Environmental⁽²⁰⁰⁰⁾ LTD.

Knowledge Energy Inc.
06-30-081-12W6
Construction Sketch
May 9, 2018



- Foxtail barley throughout the site.
- No surface soil staining. No soils crusting.
- Cropland on perimeter of site.
- Gravel throughout the site on the surface (mainly work area).

A yellow recycling symbol consisting of three arrows forming a triangle. In the center of the symbol is a black silhouette of a tree and two birds, one perched on a branch and one in flight.

SHARP
Environmental (2000) LTD.

Knowledge Energy Inc.
06-30-081-12W6
Site Sketch
May 12, 2018

Professional Declaration for Reclamation Certificate Applications

Submit one Declaration for each report

- 1 This Declaration is made in conjunction with an application for a reclamation certificate (the "Application") made by
Knowledge Energy Inc. (Applicant)
for the following land(s): 06-30-081-12W6 (insert legal description).
- 2 I am a practicing professional member [Registration/member number] 1405
of the Alberta Institute of Agrologists
which is a regulated professional organization (the "Professional Organization"). I have a minimum of five years verifiable experience in remediation or reclamation relevant to the Competencies Table contained in the Competencies for Remediation and Reclamation Advisory Committee's Recommendations Report (ESRD 2006).
- 3 As a member of the Professional Organization, I have the ability to sign off on work required for reclamation certificate applications as defined by the Alberta Energy Regulator and am authorized by the Applicant to prepare and submit the attached report or document, (the "Professional Report") listed below.
- 4 To the best of my knowledge and the best of my professional ability, recognizing the standard of care expected of a reasonable professional doing this work, it is my professional opinion that all the information contained in the Professional Report is accurate and complete, and contains all the relevant information for the purposes of this Application.
- 5 The results reported in the Professional Report are consistent with all current and applicable Provincial policy, criteria, standards and guidelines for the remediation or reclamation.
- 6 The Professional Report, including all attachments, data and supplemental information, were prepared by me, or under my direct supervision, or was prepared by a third party(ies) and has been reviewed and accepted by me; and was prepared in accordance with an appropriate quality assurance/quality control system that ensured qualified personnel properly gathered and evaluated all the information contained in and underlying the Professional Reports. All the information submitted is, to the best of my knowledge, true, accurate and complete.
- 7 I carry, or my employer: SHARP Environmental (2000) Ltd.
(insert legal name of employer)
carries professional liability insurance (errors and omissions). This insurance will be maintained for the specified liability period, subject to insurance availability.

- 8 I am aware that it is an offence under section 227 of the Environmental Protection and Enhancement Act to provide false, misleading or inaccurate information and that there are significant fines for committing these offences, including the possibility of imprisonment. See below for the relevant sections.

Report Title: Schedule 2 - Phase 1 Environmental Site Assessment

Date: May 23, 2018

Name: Jeff Biegel, P.Ag.

Signature: 

Note: If you wish to sign the form with an electronic signature you are bound with the same force as though you had a fixed signature on paper.

Registration/Member number: 1405

Section 227 of the Environmental Protection and Enhancement Act

Offences s. 227 A person who

- (a) knowingly provides false or misleading information pursuant to a requirement under this Act to provide information,
- (b) provides false or misleading information pursuant to a requirement under this Act to provide information

is guilty of an offence.

Penalties s. 228(1) A person who commits an offence referred to in section 60, 87, 108(1), 109(1) or 227(a), (d), (f) or (h) is liable to

- (a) in the case of an individual, to a fine or not more than \$100 000 or to imprisonment for a period of not more than 2 years or to both fine and imprisonment, or
- (b) in the case of a corporation, to a fine of not more than \$1 000 000.

(2) A person who commits an offence referred to in section 61, 67, 75, 76, 79, 88, 108(2), 109(2) 110(1) or (2), 111, 112, 137, 148, 149, 155, 157, 163, 169, 170, 173, 176, 188, 191, 192, 209, 227(b), (c), (e), (g), or (i) or 251 is liable.

- (a) in the case of an individual, to a fine or not more than \$50 000, or
- (b) in the case of a corporation, to a fine of not more than \$500 000.