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## Well Inspection Report

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### Instructions

- Complete all pages.
- Sign and submit electronically within 30 days of the well inspection to [orogo@gov.nt.ca](mailto:orogo@gov.nt.ca).
- If you wish to submit a hard copy, please use the courier address at [www.orogo.gov.nt.ca/contact-us](http://www.orogo.gov.nt.ca/contact-us).
- Refer to the [Well Suspension and Abandonment Guidelines and Interpretation Notes](#) (May 2022) for details on well inspection requirements.
- Report in metric units.

#### Required attachments:

- Photos of wellhead and well site (*Include descriptions*)  
# of photos attached: [Click or tap here to enter text.](#)
- Wellhead schematic
- Wellbore schematic

---

### Well Information

Well name: Obsidian Et Al North Liard C-31A

4 digit WID: [Click or tap here to enter text.](#)

OROGO risk level: Choose an item.

Wellhead?  Yes  No

Pressure rating of all wellhead components: 35 MPa

Pumpjack?  Yes  No

Operator: Obsidian Energy

Well status: Suspended

Coordinates (*In decimal degrees; verified onsite*)

Datum:  NAD 27  NAD 83  Unknown

Lat: 60° 30' 0"

Long: 123° 36' 36"

Completed in H<sub>2</sub>S zone? No

Estimated % of H<sub>2</sub>S: N/A or

Measured % of H<sub>2</sub>S: N/A

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### Inspection Date and Contact Information

Date of inspection: 2022-08-12

Date of previous inspection: 2022-06-22

Inspection conducted by:

Name: Mike Tanton

Company: Vertex Professional Services

Phone: 403 512 1225

Email: [miketanton16@gmail.com](mailto:miketanton16@gmail.com)

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### Environmental or Safety Concerns

(Report all incidents as required under section 75 of the Oil and Gas Drilling and Production Regulations)

Environmental or safety concerns?  Yes  No

If yes, provide details: [Click or tap here to enter text.](#)

## Inspection Results

### Site

Well site accessible for inspection and monitoring?  Yes  No

Equipment or debris on site?  Yes  No

Additional clean up required?  Yes  No

Provide details of all site accessibility concerns: Access via helicopter.

Brush cleared 25 m around wellhead?  Yes  No

Wind indicator present and functional?  Yes  No

### Wellhead

Wellhead accessible for inspection and monitoring?  Yes  No

Valves chained and locked?  Yes  No

Valves operate freely?  Yes  No

Pressure test well head seal assembly?  Yes  No

*(If yes, provide details in comments section with supporting documentation)*

Surface casing vent open, operable and accessible in all seasons?  Yes  No

Pumpjack secure?  Yes  No  N/A

Visible marker or fence in place?  Yes  No  
4-digit Well ID, operator and contact information up to date?  Yes  No

Date of previous well head seal assembly pressure test: [Click or tap to enter a date.](#)

### Surface Casing Vent Flow (SCVF) / Gas Migration (GM) testing

Evidence of SCVF?  Yes  No

SCVF test conducted?  Yes  No

*(If yes, provide details in comments section with supporting documentation)*

Signs of GM?  Yes  No

GM test conducted?  Yes  No

*(If yes, provide details in comments section with supporting documentation)*

Gas samples taken?  Yes  No  
*(If yes, provide details in comments section identifying location and anticipated date of submission of analysis to OROGO)*

### Shut-in pressures

Production casing pressure (kPa):  
13,383

Intermediate casing pressure (kPa):  
[Click or tap here to enter text.](#)

Production tubing pressures (kPa):  
13,383

Any other readings taken:  
[Click or tap here to enter text.](#)

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## Comments

- Details of:  SCVF/ GM testing (*Include source: SCV, wellbore or soil vapour*)  
 Shut-in pressures (*Include equipment used, results, any changes from previous inspections and previous inspection dates*)  
 Seal assembly testing (*Include maximum pressure tested and duration of test*)  
 Other comments

Performed a 15 minute bubble test on the observing no bubbles throughout the duration of the bubble test (In-active). Using a digital dead weight observed a SITP of 13,383 kPa and a SICP of 13,383 kPa. Completed gas migration testing from the wellhead out, in 1 meter increments, for a total of 10 meters in each direction.

Additional supporting documentation attached?  Yes  No

If yes, list attached documentation: Gas migrations testing sheet and surface casing vent flow form.

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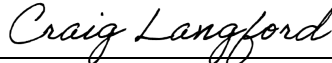
I certify based on personal knowledge of well inspection operations undertaken at the above named well that the above information is accurate.

Responsible Officer:

Date: 2022-10-19

Name: Craig Langford  
Title: Asset Retirement Advisor  
Operator: Obsidian Energy Ltd

Signature:

  
\_\_\_\_\_



**OBSIDIAN ENERGY  
INSPECTION REPORT AUGUST 2022  
OBSIDIAN ET AL NORTH LIARD C-31A  
WID: 1907**

Prepared by:

\_\_\_\_\_  
Clive Mountford, P. Eng.  
Vertex Professional Services

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## **1. Obsidian Et Al North Liard C-31A Inspection Summary**

- 1) The suspended well inspection was completed on August 17, 2019
- 2) Results were:
  - a. Vent Flow Test: Negative
  - b. Gas Migration Test: Negative
  - c. Wellhead Seals Test: 14 MPa for 10 minutes – Good Test
  - d. Shut in Casing Pressure: 13,383KPa
  - e. Shut in Tubing Pressure: 13,383 KPa
  - f. Lock and chain installed
- 3) No issues with well to report.

## 2. Obsidian Et Al North Liard C-31A Well Information

<b>Elevations:</b>	<b>KB:</b> 488.0 m	<b>KB – GL:</b> 6.7 m
	<b>GL:</b> 481.3 m	
	<b>PBTD:</b> 2255.0 mKB MD	
	<b>TD:</b> 2641.0 mKB MD	
<b>Surface Casing:</b>	339.7 mm, 101 kg/m, K-55 landed at 711.0 mKB MD 444.5 mm hole size 105 Tonne 0:1:0 Class “G” + 0.5% CFR + 0.3% LTR (11 m <sup>3</sup> cement returns)	
<b>Production Casing:</b>	244.5 mm, 79.50 kg/m, L-80, LT&C landed at 2630.0 mKB MD 311 mm hole size 20 Tonne 0:1:0 Class “G” +0.75% CFR = 0.4% CFL-1 + 0.25 LTR followed by 30.0 Tonne Thermal 40 + 1.0% CFR + 0.35% CFL-H + 0.15% HTR-2 with 6L FA – 1/m <sup>3</sup> tailed with 53.0 Tonne Thermal 40 + 0.7% CFR + 0.7% CFL-2 + 0.2% LTR-2 (calculated cement top 1100.0 mKB)	
<b>Tubing:</b>	60.3 mm, 6.99 kg/m, J-55, EUE tubing landed at 1769.26 mKB	
<b>Perforations:</b>	<b>1697.0 – 1703.0 - Exshaw</b> <b>1730.0 – 1736.0 - Exshaw</b> <b>1762.0 – 1768.0 – Exshaw</b> <b>1967.0 – 1973.0 – Fort Simpson</b>	
<b>Wellhead:</b>	346 mm Wood Group 35 MPa casing bowl c/w Wood Group 35 MPa flowing top section	
<b>Base of Groundwater Protection:</b>	600 mKB	

**Table 1 – Tubular Data**

	<b>Surface Casing</b>	<b>Production Casing</b>		<b>Tubing</b>
Size OD [mm]	339.7	177.8		60.3
Size ID [mm]	317.9	161.7		50.67
Weight [kg/m]	101.2	34.23		6.99
Grade	K-55	L-80		J-55
Drift [mm]	313.9	158.52		48.29
Capacity [m <sup>3</sup> /m]	0.0781	0.020538		0.002017
Annular Capacity [m <sup>3</sup> /m]				
Collapse [MPa]	10.62	26.41		55.85
Burst [MPa]	21.3	43.71		53.09
Tension [1000 daN]	436.4	241.3		31.9

### **3. OBSIDIAN ET AL NORTH LIARD C-31A WELL SCHEMATIC**



## **4. OROGO Inspection Form**

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Inspection conducted by:

Name: Mike Tanton

Company: Vertex Professional Services

Phone: 403 512 1225

Email: [miketanton16@gmail.com](mailto:miketanton16@gmail.com)

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Date of previous well head seal assembly pressure test: [Click or tap to enter a date.](#)

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SCVF test conducted?  Yes  No

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Additional supporting documentation attached?  Yes  No

If yes, list attached documentation: Gas migrations testing sheet and surface casing vent flow form.

---

I certify based on personal knowledge of well inspection operations undertaken at the above named well that the above information is accurate.

Responsible Officer:

Date: Click or tap to enter a date.

Name: Click or tap here to enter text.

Signature:

Title: Click or tap here to enter text.

Operator: Click or tap here to enter text.

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## **5. Surface Casing Vent Flow Test Report**

# Surface Casing Vent Flow/ Gas Migration Data Sheet

You must complete a separate form for each well and submit the form to the appropriate AER Area Office. The Well Abandonment Guide comes with a pad of additional data sheets: more copies are available from AER Information Services.

The licensee certifies that the information on this sheet is correct and that the vent flow or gas migration repair will be done according to regulatory requirements or as directed by the AER.

Day / Month / Year

YOUR FILE NUMBER

## 1. GENERAL INFORMATION AND CERTIFICATION

LICENSEE	COMPANY NAME	LICENSEE CODE
AGENT	N/A <input type="checkbox"/>	AGENT CODE
CONSULTANT	N/A <input type="checkbox"/>	CONSULTANT CODE
CONTACT PERSON	LAST NAME	FIRST NAME
TELEPHONE	BUSINESS	FAX
		EMAIL

## 2. WELL TEST INFORMATION

LICENSE NO.:	UNIQUE IDENTIFIER:	DATE TESTED
LE	LSD	SEC
	TWP	RGE
		M
		Day / Month / Year

## 3. SURFACE CASING VENT FLOW TEST DATA

3.1 Vent flow Exist YES  NO  3.2 Test Type (e.g., bubble test, other): \_\_\_\_\_  
If YES, complete the rest of this section.

3.3 Type of Flow: Gas  Oil  Salt Water  Other (please specify): \_\_\_\_\_  
The flow is: Sweet  Sour

3.4 Casing Information:  
Surface Casing Depth: \_\_\_\_\_ m Size: \_\_\_\_\_ mm Grade: \_\_\_\_\_ Weight: \_\_\_\_\_ kg/m<sup>3</sup>  
Production Casing Depth: \_\_\_\_\_ m Size: \_\_\_\_\_ mm Grade: \_\_\_\_\_ Weight: \_\_\_\_\_ kg/m<sup>3</sup>

3.5 Cementing Details:  
Cement Top \_\_\_\_\_ m Logged: YES  NO  Estimated (from logs, tour reports) YES  NO   
Describe cementing detail (e.g., type, blend, specifications):  
\_\_\_\_\_

3.6 Vent Flow Data:  
Leak-off Pressure Gradient \_\_\_\_\_ kPa/m Flow Rate: \_\_\_\_\_ m<sup>3</sup>/d (if flow not measured, fill in TSM, [too small to measure])  
Stabilized Build-up Pressure \_\_\_\_\_ kPa/m Duration: \_\_\_\_\_ hrs.  
Source of Flow \_\_\_\_\_ m (depth)  
Determined by (log type, etc.) \_\_\_\_\_

3.6 Groundwater Information:  
Depth of Usable Water Aquifers \_\_\_\_\_ m Nearest Water Well \_\_\_\_\_ km

**Tested by** \_\_\_\_\_  
PLEASE PRINT NAME SIGNATURE

ADAPTED FROM ALBERTA ENERGY AND UTILITIES BOARD

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## **6. Gas Migration Test Report**

**General Information and Certification**

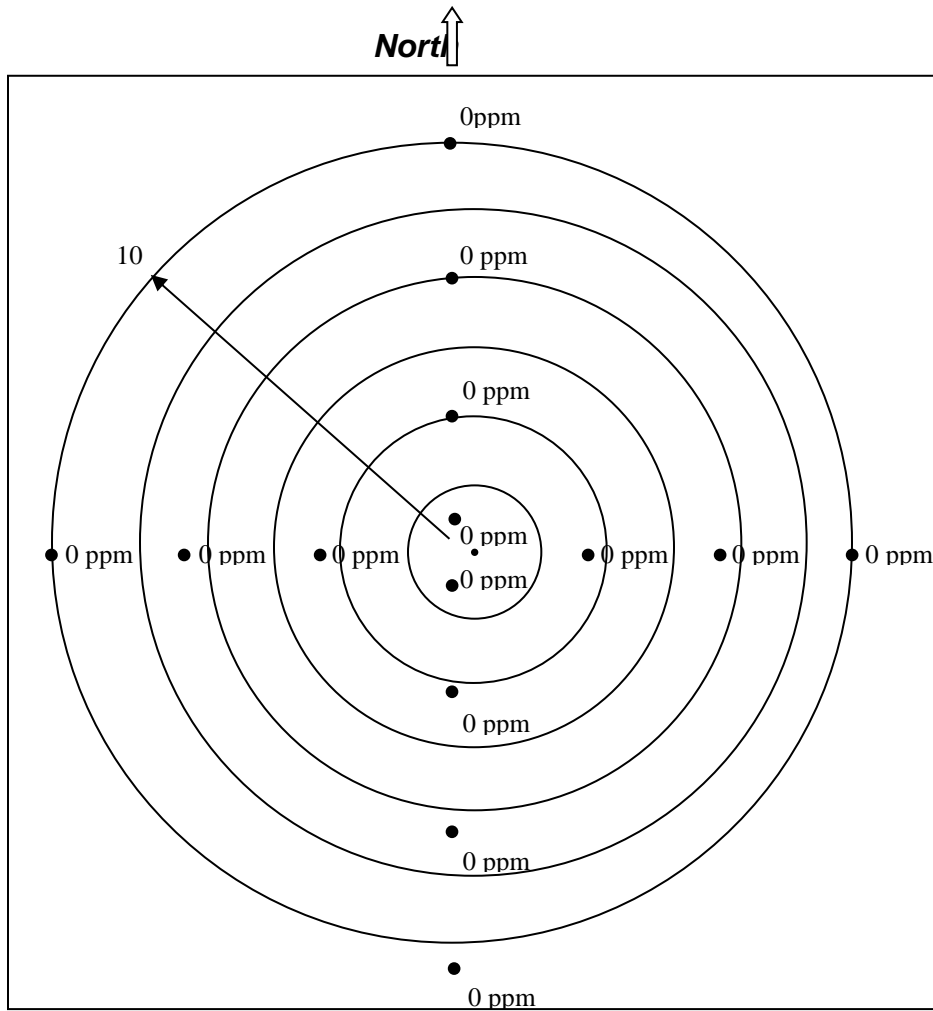
Licensee: **Obsidian Energy**  
Agent: Vertex Professional Services  
Consultant: Mike Tanton  
Contact Person: Clive Mountford  
Phone Number: (403) 999 5606  
Fax Number:

**Well Test Information**

License Number:  Unique Identifier:  Date Tested:

**Soil Gas Survey Data**

The center dot in the diagram represents the wellbore / casing. NOTE: samples were taken EVERY METER OUTWARDS to 10 m.



## **7. Daily Reports**



THE BARLON ENGINEERING GROUP LTD.  
DAILY RECORD - CONTINUED

WELL Obsidian Et Al North Liard C-31A UWI C-31A DATE 12-Aug-22 DAY NO. 3

ADDITIONAL REMARKS:

**Conducted a soil gas survey around the wellhead after the trees were cleared off location. Had 0 ppm readings in a 10 m circle around the wellhead. No gas readings were recorded on gas detector.**

**Shut in and secured wellhead valves with a chain and a combination masterlock with a "2019" combination.**

**Loaded tools in the helicopter and cleaned up garbage and debris from location.**

## **8. Pictures**



Flyover Pictures



Wellhead Pictures



Pictures Facing In From all 4 Sides of Lease