

Well Operations Report



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Well Operations Report

Obsidian et al Fort Liard K-32

ACW-2019-007-OBS-K-32-WID1860

Prepared By: Clive Mountford, P. Eng.
March 22, 2022

Reviewed and Submitted by
Craig Langford

Craig Langford

April 25, 2022

Well Operations Report

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Well Operations Report

1. OROGO Change of Well Status Form

CHANGE OF WELL STATUS

This form must be filed with the Office of the Regulator of Oil and Gas Operations within 30 days of a change in well status.

INSTRUCTIONS:

Send one electronic copy of this form by email to orogo@gov.nt.ca. If you wish to communicate with OROGO in hard copy, please do so using the courier address found at www.orogo.gov.nt.ca.

WELL INFORMATION

Well Name	Obsidian et al Fort Liard K-32	Operator	Obsidian Energy Ltd.
Well Identifier (WID)	1860	Unique Well Identifier (30xx...)	300/K-32-6010-12315/00

STATUS INFORMATION


Effective Date: 22-02-2022

Well Type:	Producer
If other, specify:	
Well Mode:	Abandoned
If other, specify:	
Other:	
If other, specify:	

Fluid Production: (choose all applicable)

Not applicable	-	Steam	-
Crude Oil	-	Air	-
Gas	-	Carbon Dioxide	-
Water	-	Nitrogen	-
Brine	-	Liquefied Petroleum Gas	-
Acid Gas	-	Bitumen	-
Solvent	-	Other	-

"I certify that the information provided on this form is true and correct"

Name	Steve Sterling	Phone	(403) 539-6454 Ext
Title	Manager - Environment	E-Mail	steve.sterling@obsidianenergy.com
Operator	Obsidian Energy Ltd		
Signature		Date	March 22/22
	Responsible Officer of Company		

Well Operations Report

2. Summary of Daily Operations



VERTEX PROFESSIONAL SERVICES OPERATIONS SUMMARY

Operator	Obsidian Energy	Operation	Abandonment
Well Name	Obsidian Et Al Fort Laird K-32	Licence	1860
Unique ID (UWI)	300/K-32-60-10-123-15/0	AFE / Job #	22AB0030
Objective	Abandon well as per ORGO regulations	AFE Amount (\$)	

Government Reporting Details	Operation	Interval Top (mKB)	Interval Base (mKB)	Shots Per Metre	Cement Amount	Cement Unit	Log/Tag
Date:							
Date:							
Date:							
Date:							
Date:							
Date:							
Date:							
Date:							
Date:							
Date:							
Date:							
Date:							

Day 1 Date: January 15, 2022 Daily Cost: \$ 8,058 Cumulative: \$ 8,058 Supervisor: Dusty Schneider	Wellbore cut and cap completed
Day 2 Date: January 26, 2022 Daily Cost: \$ 10,991 Cumulative: \$ 19,049 Supervisor: Dusty Schneider	Cut away 6 mm cap on top of 177.8 mm x 34.23 kg/m production casing. Bevel and level cut. Support, level and weld 177.8 mm - 34.23 kg/m x 4.0 m peice of casing. Break apart Stream Flo casing head (CCP-CH113X958SOWSS, S/N: 76334-17) from tubing head (CTCM-TH113x75SSO, S/N 78597-08). Strip casing head over top of the 177.8 mm x 34.23 kg/m casing. Land casing in casing primary head slips. No tension on slips. Installed tubing head on casing head. Release welder. Back fill around well centre. Place matting at well centre. Secure all outlets on wellhead. Release track hoe and swamper from site. End of operations for day.
Day 3 Date: January 27, 2022 Daily Cost: \$ 28,121 Cumulative: \$ 47,170 Supervisor: Dusty Schneider	Wait on wireline unit to complete
Day 4 Date: February 10, 2022 Daily Cost: \$ 23,597 Cumulative: \$ 70,767 Supervisor: David Buts	Rig in picker and wireline unit.
Day 5 Date: February 22, 2022 Daily Cost: \$ 8,345 Cumulative: \$ 79,112 Supervisor: David Butts	Swabbed wellbore down to 600
Day 6 Date: Daily Cost: Cumulative: Supervisor:	Cut and capped the wellbore 2.15 meters below ground level.
Day 7 Date: Daily Cost: Cumulative: Supervisor:	
Day 8 Date: Daily Cost: Cumulative: Supervisor:	
Day 9 Date: Daily Cost: Cumulative: Supervisor:	

Well Operations Report

3. Daily Reports Of Well Operations



Daily Construction

Report For: 1/15/2022
Report #: 2
Project Estimate: \$
Cum. Cost to Date: \$44,185
Daily Cost: \$4,900
AFE:

Site Name: FORT LIARD K-32-60-10-123-15

Business Unit: CENTRAL & OTHER COU

Project Details

Project Type: Abandonment

Project Scope of Work: Construct access in to Obsidian well K-32, Perform cut and cap on their behalf. Bill costs to Obsidan per agreement.

Project Phase: Cut & Cap

General Job Information

Surface Location (LSD) K-32-60-10-123-15	Field Strike Name FORT LIARD	Type Environmental Clean-up	Sub Type Clean-up	Operator PARAMOUNT RESOURCES LTD.
Project Status In Progress	Project Start Date 1/15/2022	Estimated Completion Date 1/31/2022	Field Package Status Supervisor Received	
Rig Ready - Yes or No?	Cost Center Number	Surveyed W/Cs	Conductors Set	Number of Wells on Pad 1

Wells Related to Job

Well Name	API/UWI	License #
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Daily Operations

Construction Field Supervisor and Phone Number Rocky Arndt 780-876-1721	Daily Cost 4,900	Safety Incident Occurrence (Yes/No?) No
Temperature and Weather -17 am light snow -17 pm some light snow	Road Condition Snow Covered	Head Count 3
	Man Hours - Daily 30.00	Man Hours - Cumulative 60.00

Daily Summary

Review daily scope.
Covid Requirements - Social Distance Always Potential Hazards and Mitigation
Radio Channel Ladd 1
- safety meeting with crew
-slips and trips
-proper ppe

Welder on site and did up safe work permit with him and went over scope of work. Welder completed the cut and cap.

Next Planned Activity

finish back fill of well center and fill in test hole

Daily Cost Breakdown

Code 1 INTANGIBLE WELL ABANDONMENT	Major 9231	Minor 247	Amount (Cost) 3,500.00	Vendor BEAVER ENTERPRIZES LIMITED PARTNERSHIP	Field Ticket # XXX
Code 1 INTANGIBLE WELL ABANDONMENT	Major 9231	Minor 247	Amount (Cost) 1,400.00	Vendor D.ROCK OILFIELD CONSULTING & CONTRACTING	Field Ticket # 0000

Equipment Used

Type	Make	Model	Quantity	Vendor	Operated Hours (hr)
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Vendor	Ticket #	Code 1	Major	Minor	Gross Field Cost
BEAVER ENTERPRIZES LIMITED PARTNERSHIP	XXX	INTANGIBLE WELL ABANDONMENT	9231	247	3,500
D.ROCK OILFIELD CONSULTING & CONTRACTING	0000	INTANGIBLE WELL ABANDONMENT	9231	247	1,400



VERTEX PROFESSIONAL SERVICES DAILY RECORD

Abandonment

WELL: Obsidian Et Al Fort Laird K-32 DATE OF OPERATIONS: 24-Jan-22

UWI: 300/K-32-60-10-123-15/0 AFE / JOB NO.: 22AB0030

OBJECTIVE: Abandon wellbore as per OROGO regulations DAY NO.: 1

FORMATION: _____ PERFORATIONS: _____

FORMATION: _____ PERFORATIONS: _____

FORMATION: _____ PERFORATIONS: _____

FORMATION: _____ PERFORATIONS: _____

DESCRIPTION OF OPERATIONS CONDUCTED

0900 hr: Held safety and operational meeting. Reviewed job scope and hazards, Discussed Ground Disturbance requirements. Talked about operations and procedures. Review Covid 19 protocols.

0930 hrs: Dig and step slope bellhole to cut of 177.8 mm Casing top at 2.5 m. Exposed 177.8 mm K-32 casing cap.

1100 hrs; Swept work area and bell for LEL and H2S. None detected.

1130 hrs: Cut away 6 mm cap ontop of 177.8 mm x 34.23 kg/m production casing. Bevel and level cut. Support, level and weld 177.8 mm - 34.23 kg/m x 4.0 m peice of casing. Break apart Stream Flo casing head (CCP-CH113X958SOWSS, S/N: 76334-17) from tubing head (CTCM-TH113x75SSO, S/N 78597-08). Strip casing head over top of the 177.8 mm x 34.23 kg/m casing. Land casing in casing primary head slips. No tension on slips. Installed 34.5 MPa tubing head on casing head. Release welder.

15:00 hrs: Back fill around well centre. Place matting at well centre. Secure all outlets on wellhead.

1730 hrs: Release track hoe and swamper from site.

1800 hrs: End of operations for day.

COST SUMMARY

Description	Code	Amount
Location		7563
Service Rig		
Coiled Tubing		
Cementing		
Stimulation		
Snubbing		
Fishing		
Boiler / Steamer		
Safety		
Production Testing		
Wellhead Equipment		
Service Trucks		
Fluids & Materials		
Wireline / Slickline		
Equipment Rental		
Downhole Equipment		
Artificial Lift		
Supervision & Engineering		495
Misc Services		
Safety Tracking	Today	Cumulative
Workers Oriented	3	3
Contractor Hours Worked	38	38
Supervisor Hours Worked	6	6
Kilometers Driven	600	600

OPERATION PLANNED FOR: 25-Jan-22

Wait for wireline operations to obtain wellbore fluid samples.

CONTRACTOR: <u>Beaver ent</u>	RIG NO: <u>n/a</u>	WEATHER: <u>partly cloudy</u>	TEMP °C HI / LO: <u>-5 / -20</u>
FORMATION		DAILY COST:	\$ <u>8,058</u>
FLUID TYPE:	<u>Fresh H₂O</u> <u>Produced H₂O</u> <u>Produced oil</u>	PREVIOUS COST:	
FLUID PUMPED TODAY (m³):		TOTAL COST TO DATE:	\$ <u>8,058</u>
CUMMULATIVE FLUID PUMPED (m³)		AFE ESTIMATE:	\$ <u>-</u>
NON REC. ANNULAR FLUID (m³):		WELLSITE SUPERVISOR	REPORT TAKEN BY
FLUID RECOVERED TODAY (m³):		<u>Dusty Schneider</u>	<u>Clive Mountford</u>
FLUID LEFT TO RECOVER (m³):		<u>780-897-5737</u>	<u>cmountford@vertex.ca</u>



VERTEX PROFESSIONAL SERVICES DAILY RECORD

Abandonment

WELL: Obsidian Et Al Fort Laird K-32 DATE OF OPERATIONS: 26-Jan-22

UWI: 300/K-32-60-10-123-15/0 AFE / JOB NO.: 22AB0030

OBJECTIVE: Abandon wellbore as per OROGO regulations DAY NO.: 2

FORMATION: _____ PERFORATIONS: n/a

FORMATION: _____ PERFORATIONS: _____

FORMATION: _____ PERFORATIONS: _____

FORMATION: _____ PERFORATIONS: _____

DESCRIPTION OF OPERATIONS CONDUCTED

☐ Blowout Drill Conducted

09:30 hrs. Held site sfety and oeprational meeting with all personal. Discuss job scope and potential hazards. Reviewed ERP plan and muster points. Swept site. No signs LEL or H2S.

10:00 hrs. Wait on wireline unit to complete operations at Mount Coty 2K-02 location. Wait for approval of operations from OROGO.

12:00 hrs. Release picker and enviromentalist back to Ft Nelson. Wireline issues at Mount Coty 2K-02. Wireline unable to travel and work on Obsidian K-32 today.

1530 hrs. Obtained approval from OROGO for operaitons.

16:00 hrs. End of report for day.

COST SUMMARY

Description	Code	Amount
Location		4500
Service Rig		
Coiled Tubing		
Cementing		
Stimulation		
Snubbing		
Fishing		
Boiler / Steamer		
Safety		
Production Testing		
Wellhead Equipment		
Service Trucks		5996
Fluids & Materials		
Wireline / Slickline		
Equipment Rental		
Downhole Equipment		
Artificial Lift		
Supervision & Engineering		495
Misc Services		
Safety Tracking	Today	Cumulative
Workers Oriented	3	6
Contractor Hours Worked	24	62
Supervisor Hours Worked	6	12
Kilometers Driven	800	1400

OPERATION PLANNED FOR: 27-Jan-22

Wireline obtain 3 x 1 litre fluid samples at surface, 150 mKB, 300 mKB, 500 mKB, 1000 mKB, 1500 mKB.
Perform RBL from PBTD to surface.

CONTRACTOR: Beaver ent

RIG NO: n/a

WEATHER: Cloudy

TEMP °C HI / LO: 2 / -9

FORMATION

FLUID TYPE:

FLUID PUMPED TODAY (m³):

CUMMULATIVE FLUID PUMPED (m³)

NON REC. ANNULAR FLUID (m³):

FLUID RECOVERED TODAY (m³):

FLUID LEFT TO RECOVER (m³):

Fresh H ₂ O	Produced H ₂ O	Produced oil

DAILY COST: \$ 10,991

PREVIOUS COST: \$ 8,058

TOTAL COST TO DATE: \$ 19,049

AFE ESTIMATE: \$ -

WELLSITE SUPERVISOR

REPORT TAKEN BY

Dusty Schneider

Clive Mountford

780-897-5737

cmountford@vertex.ca



VERTEX PROFESSIONAL SERVICES DAILY RECORD

Abandonment

WELL: Obsidian Et Al Fort Laird K-32 DATE OF OPERATIONS: 27-Jan-22

UWI: 300/K-32-60-10-123-15/0 AFE / JOB NO.: 22AB0030

OBJECTIVE: Abandon wellbore as per OROGO regulations DAY NO.: 3

FORMATION: _____ PERFORATIONS: n/a

FORMATION: _____ PERFORATIONS: _____

FORMATION: _____ PERFORATIONS: _____

FORMATION: _____ PERFORATIONS: _____

DESCRIPTION OF OPERATIONS CONDUCTED

09:30 hrs. Held safety and operational meeting. Reviewed job scope and hazards. Discussed contractor JSA and procedures for operations. Review Muster Pts and ERP. Swept site for LEL and H2S

10:00 hrs. Spot and rig in combo wireline unit and picker. Tied 0.125" SS line rope socket. Inspected packoff head. Remove 34.5 MPa Upper Wellhead assembly. Install wireline adapter head and spool. Wipe wellhead adapter flange and tool string clean of hydrocarbons and salt. People working with sampler required to wear rubber gloves.

11:00 hrs. Run Hydrostatic Bailer and obtain 3 x 1 litre samples from 22.4 mKB, (2) 150 mKB, 300 mKB, 500 mKB, 1000 mKB, 1500 mKB. Had to re-run sample at 150 mKB. Unable to aquire 3 litres of fluid on first run. Give all samples to Vertex enviro rep for transport to lab. Rig down slickline equipment.

12:30 hrs. Rig down slickline equipment. Makeup and run in wireline tools to perform CCL/RBL/GR log. Log from 1658 mKB to surface. Send log to Calgary to interpret cement bond and correlate on depth. Rig down wireline equipment.

17:00 hrs. Install 34.5 MPa Upper Wellhead assembly. Release picker and wireline unit. Clean and secure site. Travel wireline unit to camp.

17:30 hrs. Shut down

COST SUMMARY

Description	Code	Amount
Location		5200
Service Rig		
Coiled Tubing		
Cementing		
Stimulation		
Snubbing		
Fishing		
Boiler / Steamer		
Safety		
Production Testing		
Wellhead Equipment		
Service Trucks		5720
Fluids & Materials		
Wireline / Slickline		16706
Equipment Rental		
Downhole Equipment		
Artificial Lift		
Supervision & Engineering		495
Misc Services		
Safety Tracking	Today	Cumulative
Workers Oriented	4	10
Contractor Hours Worked	44	106
Supervisor Hours Worked	8	20
Kilometers Driven	900	2300

OPERATION PLANNED FOR: 28-Jan-22

Await lab results of fluids to determine next operation.

CONTRACTOR: <u>Beaver ent</u>	RIG NO: <u>n/a</u>	WEATHER: <u>Cloudy</u>	TEMP °C HI / LO: <u>-10/-14</u>
FORMATION		DAILY COST:	\$ <u>28,121</u>
FLUID TYPE:	<u>Fresh H₂O</u> <u>Produced H₂O</u> <u>Produced oil</u>	PREVIOUS COST:	\$ <u>19,049</u>
FLUID PUMPED TODAY (m³):		TOTAL COST TO DATE:	\$ <u>47,170</u>
CUMMULATIVE FLUID PUMPED (m³)		AFE ESTIMATE:	\$ <u>-</u>
NON REC. ANNULAR FLUID (m³):		WELLSITE SUPERVISOR	REPORT TAKEN BY
FLUID RECOVERED TODAY (m³):		<u>Dusty Schneider</u>	<u>Clive Mountford</u>
FLUID LEFT TO RECOVER (m³):		<u>780-897-5737</u>	<u>cmountford@vertex.ca</u>

V3.02

**VERTEX PROFESSIONAL SERVICES
DAILY RECORD - CONTINUED**

WELL Obsidian Et Al Fort Laird K-32 UWI 300/K-32-60-10-123-15/0 DATE 10-Feb-22 DAY NO. 4

ADDITIONAL REMARKS:

13:00 - Began swabbing the wellbore to replace the previously tested fresh water with new clean fresh water as per OROGO requirement.

Swabbed the wellbore dry down to a depth of 610 mKB pulling a total of 16 swabs while recovering a total of 12.23 m³ of fresh water. Swabbed the fluid from the wellbore returning directly to a sealed tank truck. Fluid removed from the wellbore will be hauled and disposed of at Secure Energy disposal site.

NOTE: The 16th swab that was pulled was dry and was pulled from 610 mKB.

17:15 - Rigged out swabbing equipment. Top filled the wellbore with 12.1 m³ clean fresh water from a clean service only tank truck. Fluid level was left approximately 5 meters from surface to prevent freezing.

Rigged out the wireline unit and all support equipment.

Moved all equipment off of location.

**VERTEX PROFESSIONAL SERVICES
DAILY RECORD - CONTINUED**

WELL Obsidian Et Al Fort Laird K-32 UWI 300/K-32-60-10-123-15/0 DATE 22-Feb-22 DAY NO. 5

ADDITIONAL REMARKS:

Excavated a bellhole 5 meters square by 2.5 meters deep for proper sloping locating the previously cut and capped wellhead. Dug access/egress ramps on either side of the bellhole.

09:15 - Removed the 21 MPa flowing style wellhead. Cut down the 339 mm conductor barrel to allow access to the casing strings at the required cutting depth. Cut windows into the 244.5 mm surface casing to allow access to the 177.8 mm production casing string. Cut off the 177.8 mm production casing and then cut off the remainder 244.5 mm surface casing 2.15 meters below ground level.

Pulled the wellhead and casing stumps from the bellhole and laid them onto the ground.

Installed and fillet welded the 177.8 mm casing and 244.5 mm surface casing cap containing the identification for the wellbore. Backed filled in the bellhole caused by the cut and cap procedure and track packed it via the track hoe.

Dug a 1 meter deep by 30 centimeter diameter hole and installed the wellbore tombstone sign. Filled the hole with concrete and ensured the sign was straight. Leveled out the area via the track hoe.

Used the track hoe to knock down and spread out the snow banks that had been made from plowing out the access to the lease area.

11:00 - Rigged out cut and cap equipment.

11:30 - Moved off of location releasing services to home bases.

15:30 - Shut down for the night.

Well Operations Report

4. Wellbore Schematic

WELLBORE PROFILE

Orphan Well Association on behalf of Obsidian Energy LTD.

CDN Forest et al Fort Llard K-32



UWI:	300K326010123150	Licence:		DATE:	February 22, 2022
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ELEVATIONS (meters)

TMD	1695.00	KB ELEV	484.50	KB TO SCF	
TVD	1695.00	GL ELEV	480.10	KB TO THF	
PBTD	1689.00	KB - GL	4.40	Well Status	Cut & Capped

CASING DESCRIPTION & GRADE	OD (mm)	WEIGHT (kg/m)	TOP LOCATION	LANDED DEPTH (m)
Surface casing; J-55, LT&C (8 m³ cement returns to surface)	244.5	53.6	Surface	487.50
Production casing; L-80, LT&C (5 m³ cement returns to surface)	177.8	34.2	Surface	1695.00

[illegible]

DOWNHOLE DESCRIPTION FROM BOTTOM UP (Tubing String)

[illegible]

WEIGHT OF TUBING STRING (daN)		TOTAL STRING LENGTH	
TENSION/COMPRESSION (+/- daN)		STRETCH/SLACKOFF (+/- m)	
LANDED STRING WEIGHT (daN)	-	TUBING BOTTOM (mKB)	

DOWNHOLE DESCRIPTION FROM BOTTOM UP (Rod String)

[illegible]

POLISH ROD STICK-UP (m)		TOTAL ROD STRING LENGTH	
PUMP DESCRIPTION		PUMPJACK DESCRIPTION	

WELLHEAD DESCRIPTION

[illegible]

REMARKS

Surface casing cement: 29.4 m³ 0:1:0 class G + 1% CaCl₂
 Production casing cement: 22.3 m³ 1:1:6 + .75% CFR, followed by 11.4 m³ 0:1:0 G + .4% CFL-3 + .2% LTR.
 5 m³ cement returns.

Well status changes:

Prepared by: JS / CM

Wellbore cut off 2.15 meters below ground level

311 mm
open-hole

Surface casing:

487.5 mKB

BGWP:

600.0 mKB

222 mm
open-hole

PBTD:

1689 mKB

TD:

1695 mKB

Well Operations Report

5. Other Pertinent Information

A. Completion fluid properties

– Fresh potable water

B. Operations Completion Date (Rig Release Date)

- February 22, 2022