

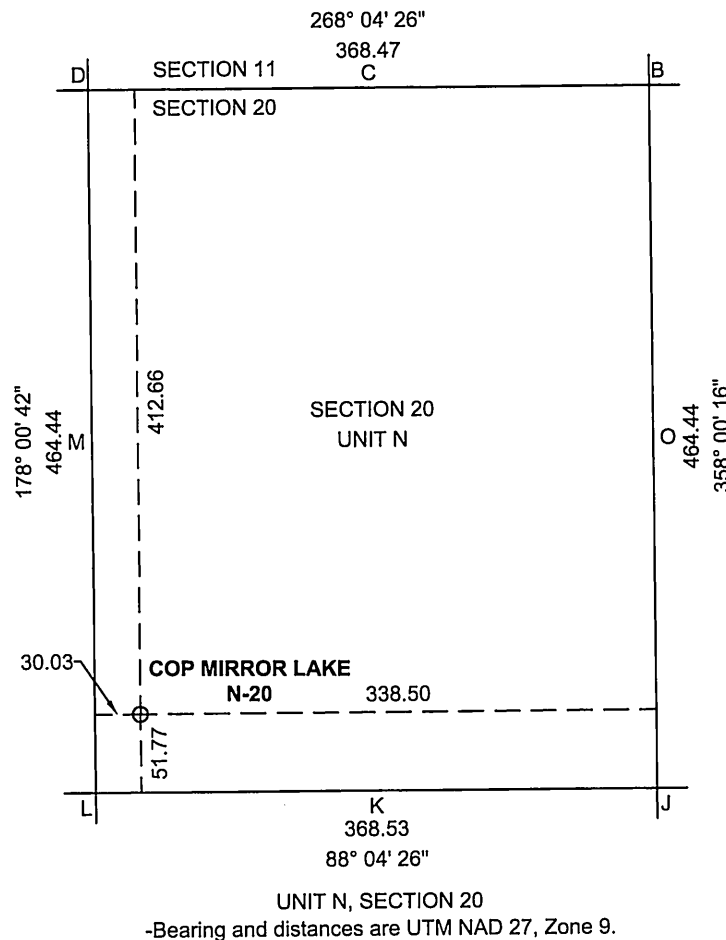
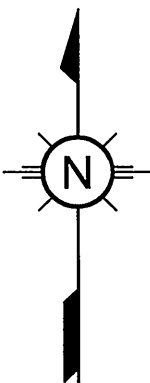
# COPRC Mirror Lake N-20

## APPENDICES

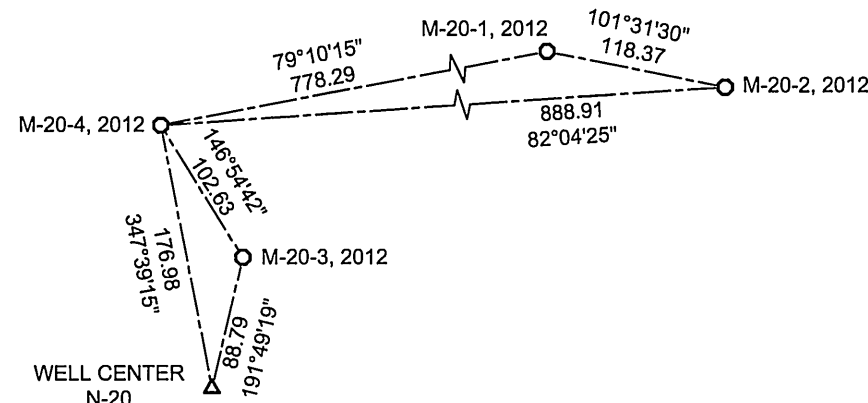
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## **Appendix 1      Legal Survey Plan**

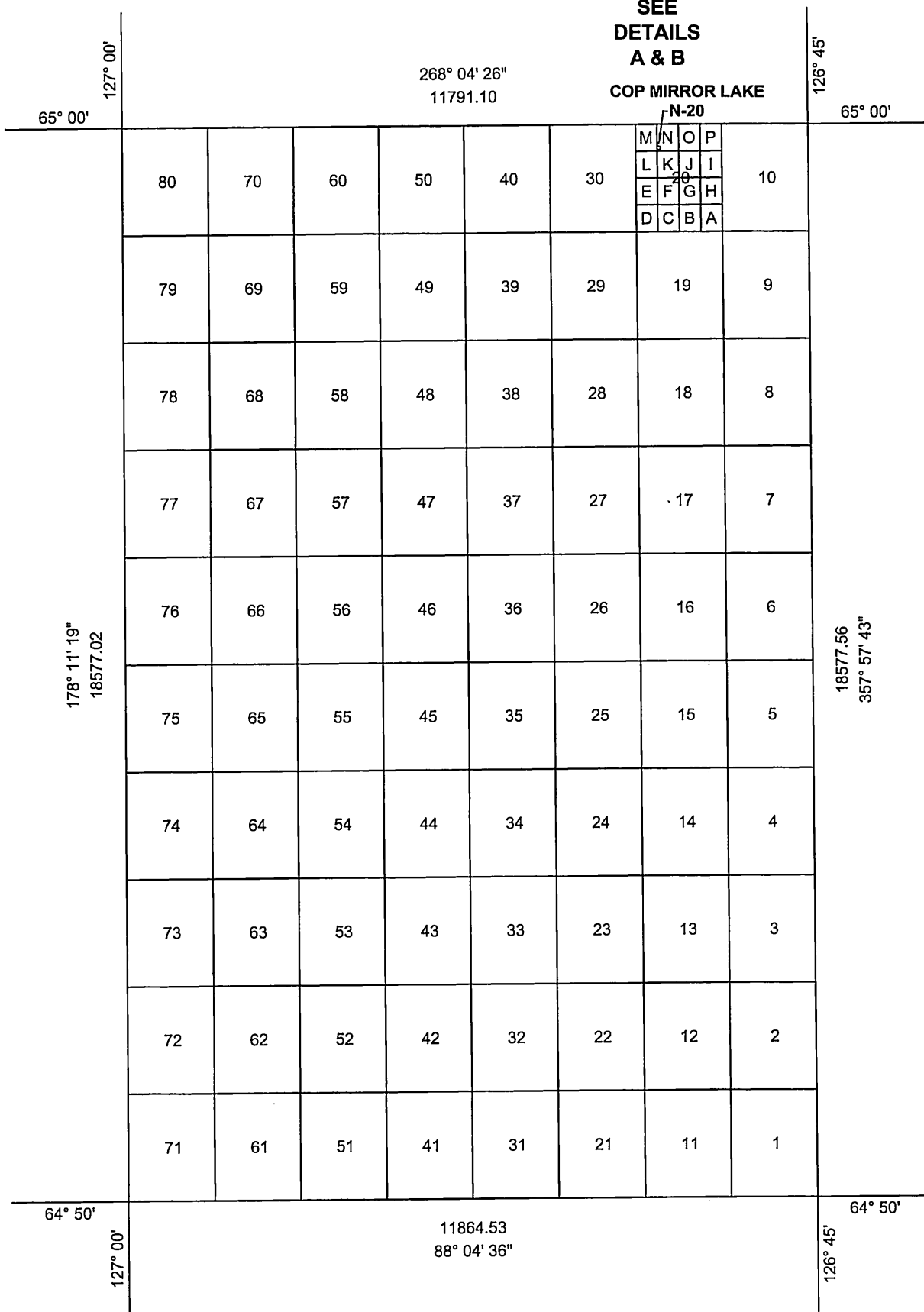
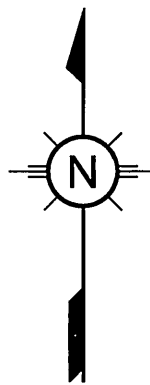


DETAIL A: SURFACE UNIT  
SCALE 1 : 5000



DETAIL B: G.P.S SURVEY  
SCALE 1:5000

-BEARINGS ARE UTM NAD27, ZONE 9.  
-DISTANCES ARE REDUCED TO THE HORIZONTAL  
AT GENERAL GROUND LEVEL.



-Bearing and distances are UTM NAD 27, Zone 9.

GRID AREA 65° 00', 126° 45'  
SCALE 1 : 100 000

TABLE OF CO-ORDINATES						
STATION	U.T.M. ZONE 9, C.M. 129 (NAD83)		U.T.M. ZONE 9, C.M. 129 (NAD27)		GEOGRAPHIC CO-ORDINATES (NAD27)	
	NORTHING	EASTING	NORTHING	EASTING	LATITUDE	LONGITUDE
SURVEYED CO-ORDINATES - Derived Using NRCAN PPP Website and Local Static Observations						
CLS 77 M-20-1, 2012	7210167.75	604191.67	7209970.63	604282.20		
CLS 77 M-20-2, 2012	7210144.12	604307.62	7209946.99	604398.16		
CLS 77 M-20-3, 2012	7209935.56	603483.47	7209738.49	603574.03		
CLS 77 M-20-4, 2012	7210021.52	603427.46	7209824.45	603518.02		
GRID AREA						
N.E.			7210149.71	606089.37	65°00'	126°45'
N.W.			7209753.42	594304.93	65°00'	127°00'
S.E.			7191583.91	606750.03	64°50'	126°45'
S.W.			7191185.69	594892.18	64°50'	127°00'
N-20 N.E.			7210075.41	603879.79	65°00'00.11"	126°47'48.75"
N-20 N.W.			7210063.02	603511.52	65°00'00.13"	126°48'16.87"
N-20 S.E.			7209611.25	603895.96	64°59'45.11"	126°47'48.75"
N-20 S.W.			7209598.87	603527.64	64°59'45.13"	126°48'16.87"
WELL CENTRE						
N-20	7209848.69	603465.29	7209651.62	603555.85	64°59'46.80"	126°48'14.58"

101891

Date: June 11, 2013

PLAN AND FIELD NOTES  
OF SURVEY OF  
**EXPLORATORY WELL**  
**COPRC MIRROR LAKE N-20**  
**IN UNIT N, SECTION 20**  
**GRID AREA 65° 00', 126° 45'**  
**EXPLORATION LICENCE 470**

NORTHWEST TERRITORIES  
CANADA OIL AND GAS LAND REGULATIONS

100 50 0 100 200 metres  
SCALE 1 : 5000

SURVEYED FOR  
**CONOCOPHILLIPS CANADA RESOURCES CORPORATION**  
BY: R. ROBINSON, C.L.S.  
2013

-NAD 83 UTM COORDINATES ARE COMPUTED FOR ZONE 9, CENTRAL MERIDIAN 129°W.  
-BEARINGS WERE DERIVED FROM GPS OBSERVATIONS.  
-DISTANCES ARE EXPRESSED IN METRES AND DECIMALS THEREOF.  
-DISTANCES SHOWN IN G.P.S. TRAVERSE ARE MEASURED DISTANCES  
REDUCED TO THE HORIZONTAL AT GENERAL GROUND LEVEL UNLESS SHOWN OTHERWISE.  
-FOR THE COMPUTATION OF COORDINATES MEASURED DISTANCES HAVE BEEN  
REDUCED TO THE UTM PLANE BY MULTIPLYING THEM BY AN AVERAGE COMBINED  
SCALE FACTOR OF 0.999682.  
-NAD 83 UTM COORDINATES ARE CONVERTED TO NAD 27 USING NATIONAL TRANSFORMATION  
VERSION 2.

-DISTANCES SHOWN ON GRID AREA SUBDIVISIONS ARE UTM PLANE.

C.L.S. 77 TYPE MONUMENTS FOUND. .... ●  
C.L.S. 77 TYPE MONUMENTS PLACED. .... ○  
TEMPORARY TRAVERSE POINTS SHOWN THUS (SPIKE 10") ..... △

REFER TO FB 39744 CLSR FOR THE SURVEY REPORT PERTAINING TO THIS SURVEY.

GROUND ELEVATION AT WELL CENTRE IS **281.30 metres**.  
ELEVATIONS WERE DERIVED FROM GPS OBSERVATIONS.

THIS SURVEY WAS EXECUTED DURING THE PERIOD  
JULY 17th, 2012 TO JULY 20th, 2012 BY RON ROBINSON, C.L.S.

CONOCOPHILLIPS CANADA RESOURCES CORPORATION

(SIGNATURE, TITLE) *Drilling Team head Exploration & New Ventures*

(SIGNATURE) *John R.*

WITNESS  
*Ron Robinson*  
DATE **MAY 28, 2013**

Certified Correct and completed on the  
4<sup>th</sup> day of **April** 2013

*R. Robinson*  
RON ROBINSON C.L.S.  
**APRIL 4**<sup>th</sup>, 2013



## **Appendix 2     Daily Activity and Cost Summary**



# Daily Activity and Cost Summary

## COPRC MIRROR LAKE N-20 65-00 126-45

<b>Job Category</b> ABANDONMENT	<b>Primary Job Type</b> ABANDONMENT P&A	<b>Secondary Job Type</b> SURFACE CASING VENT	<b>Actual Start Date</b> 1/16/2016 14:00	<b>End Date</b> 3/2/2016 18:00
<b>AFE / RFE / Maint.#</b> 10385949;10385945	<b>Total Job AFE Amount (Cost)</b> 2,256,350.00	<b>AFE+Supp Amt (Cost)</b> 2,256,350.00	<b>Total Field Estimate (Cost)</b> 1,565,387.17	<b>AFE-Field Estimate (Cost)</b> 690,962.83

**Objective**

Abandon Cut and Cap

<b>Contractor</b> Rigless	<b>Rig Name/No</b>	<b>Rig Type</b> RIGLESS
<b>Contractor</b> C&J Energy Services	<b>Rig Name/No</b> 217	<b>Rig Type</b> SERVICE RIG

**DAILY ACTIVITY & COST SUMMARY**

Report No.	Start Date	Daily Cost Total (Cost)	Cum Cost (Cost)	Last 24hr Sum
1	1/16/2016 14:00	8,405.00	8,405.00	Perform SCVF test and install Roke vent nanny.
2	1/27/2016 10:30	31,503.51	39,908.51	Move and rig up Ensign test package and equipment. Obtain Surface casing GChem gas sample. Spot and rig in Lonkar slickline.
3	1/28/2016 07:30	29,361.60	69,270.11	SICP = 0KPa, dead. Slickline operations, RIH with 152.8mm Gauge ring to top of WR @ 1970.3mKB. RIH and pull WR @ 1970.3mKB and WR @ 1986.2mKB. Layed down Lubicator and called well.
4	1/29/2016 09:00	20,518.98	89,789.09	SICP = Slight vac RIH with 152.8mm gauge ring to 2085mKB, all clear. POOH, rig down equipment. Install valve on Master valve, capped and secured well. Fluid level at approx. 30m. Continue setting up secondary Containment.
5	1/30/2016 07:30	7,509.00	97,298.09	SICP = Slight Vac Rigged up secondary Containment on lease. Put extra parts in SeaCan for next containment and organized rolls for better access.
6	2/6/2016 07:30	43,139.50	140,437.59	MORU service rig and support equipment.
7	2/7/2016 07:30	38,519.50	178,957.09	Spotted rest of Service rig equipment and finished rigging up. Function tested BOPs, and stump tested Blind Rams, Pipe Rams, Safety Valve and ring Groove to 1.4MPa and 34.5MPa, all tests Passed. Tested Annular to 1.4MPa dn 7MPa for 10mins, test also good, all tests charted and graph attached in wellview.
8	2/8/2016 07:30	42,988.32	221,945.41	GR/CCL logged wellbore, Perforated intervals from 2068-2070mKB and 2015-2017mKB Twice. Once with Normal guns then Reverse guns. Got feed rates of 620L/min @ 10MPa, 400L/min @ 9.5MPa, 200L/min @ 8.6MPa, 100L/min @ 6.8MPa and 42L/min @ 6MPa
9	2/9/2016 07:30	19,393.00	241,338.41	RIH with 60.3mm tbg, end of tbg @ 2100mKB.
10	2/10/2016 12:00	16,658.00	257,996.41	MORO schlumberger cement crew for cement job in AM. Rigged in Flameless heaters on lines and Pre-Fabs on work floor.
11	2/11/2016 08:30	127,425.24	385,421.65	Performed Cement job on open intervals. Pumped 3.24m³ in interval leaving 2.72m³ in casing. Left 15.7MPa pressure on Casing overnight.
12	2/12/2016 07:30	23,694.50	409,116.15	SITP = 12.3MPa, SICP = 12.3MPa Bleed off pressure then pressured up to 14MPa, test passed. RIH and solid tagged @ 1947.5mKB with 1800daN. POOH. RIH with mud motor and mill. Re-Tagged @ 1947.3mKB, solid tag with 1800daN. Pulled up 5 joints for night.
13	2/13/2016 07:30	42,078.60	451,194.75	RIH and tagged cement top @ 1947mKB. Rigged in drilling equipment, drilled down to 1956.5mKB. Circulated wellbore clean and POOH RIH w/Scraper c/w Tri cone bit on bottom. Tagged cement top @ 1956.5mKB, circulated wellbore over to potable fresh water TDS<4000 mg/L..
14	2/14/2016 07:30	52,641.18	503,835.93	Pull out of hole with bit and scraper. Wireline Perforate Interval 1938.0 - 1940.0 mKB ( Regular and Reverse phased). Get breakdown /feed at 17.5MPa. Set cement retainer top @ 1933.0mKB and pressure test to 21MPa.
15	2/15/2016 07:30	41,847.84	545,683.77	Run in hole 60.3mm tubing and snap latch stinger. Sting into retainer and pressure test. Perform 2.0m³ acid squeeze through retainer.
16	2/16/2016 07:30	122,302.54	667,986.31	Latch into retainer and pressure test. Perform 5.8m³ SqueezeCRETE cement retainer squeeze. Final squeeze pressure 12,776kPa. Backwash tubing and pull 25 joints of tubing.
17	2/17/2016 07:30	48,899.96	716,886.27	Pull out of hole remainder of 60.3mm tubing. Perforate Imperial sands interval 1906.0-1908.0mKB. Get breakdown/feedrate at 29MPa. Wireline set PCR cement retainer, top @ 1901.0 mKB. Pressure test retainer to 30 MPa. Made up Stinger & RIH on 60.3mm J-55 EUE TBG, Spaced Out, P Tested Annulus to 21 MPa, P Tested TBG to 7 MPa, Opened Retainer, Pressured up TBG to 10 MPa, SITP Bled to 9.5 MPa in 5 mins, Bled TBG Pressure to Zero, Drained up.

# Daily Activity and Cost Summary

## COPRC MIRROR LAKE N-20 65-00 126-45

### DAILY ACTIVITY & COST SUMMARY

Report No.	Start Date	Daily Cost Total (Cost)	Cum Cost (Cost)	Last 24hr Sum
18	2/18/2016 06:00	57,473.94	774,360.21	Perform 2m <sup>3</sup> synthetic acid squeeze. Pull out of hole with snap latch stinger. Crew Change; Made up & RIH with Positive J Latch Stinger on 60.3mm TBG, Spaced out TBG, Installed Master Valve & TBG Swivel, Stung into Cement Retainer @ 1,901 mKB, Function Tested J Latch Stinger, Pulled into Neutral, Pressure Tested TBG + Annulus (All Good), Drained Pump & Lines, Heated TBG Stump + BOPs through the Night.
19	2/19/2016 06:00	124,601.39	898,961.60	Perform retainer cement squeeze on Imperial Sand interval 1906 - 1908.0mKB. Final squeeze pressure- 18,500kPa, 4.7m <sup>3</sup> slurry under retainer. Pull out of hole 60.3mm tubing. Crew Change; Filled Hole with Potable Fresh Water, Installed Wireline Flange above Rig's BOP Stack, Fired Boiler + Heated BOPs & Water.
20	2/20/2016 06:00	76,932.18	975,893.78	Perform CCL/GR/VDL/CBL from retainer set @ 1901.0mKB to surface. Once with well static and again with 10,000kPa applied. Dump bail 8.75 lineal meters of cement on top of retainer. Crew Change; POH Bailer, Perforated Twice from 1,623.0 - 1,625 mKB, POH, Established a Feedrate of 0.30 m <sup>3</sup> /min @ 18,000 kPa, RIH & Set Retainer ce @ 1,615.0 mKB, P Tested above Retainer to 21,000 kPa, RIH with Stinger on 60.3mm TBG, Spaced out, Function Tested Retainer, P Tested TBG + Annulus, Established Feedrate through Retainer, Shut in Well, Heated TBG Stump + BOPs.
21	2/21/2016 06:00	36,576.50	1,012,470.28	Perform feed rate through cement retainer. Awaiting cement job. Crew Change: Continue to Fire Boiler & Jet Heater to Heat TBG Stump, Fresh Water & BOPs, Installed Schlumberger Thread Half & Hamer Valve off TBG Swivel, Organized Lease & Equipment. Wellhead Secured.
22	2/22/2016 06:00	143,365.01	1,155,835.29	Perform retainer cement squeeze on Imperial Sand interval 1623.0-1625.0mKB as per program. Final squeeze pressure-11,577kPa. POH 60.3mm tubing. Installed Wireline Flange. Crew Change: Rig in E-Line, Perforated Twice from 1,170.5 - 1,173.5 mKB, POH, Take Feedrate of 0.35 m <sup>3</sup> /min @ 18,000 kPa, RIH & Set Retainer ce @ 1,160.0 mKB, P Tested above Retainer to 21,000 kPa, RO&R E-Line, RIH with J Latch Stinger on 60.3mm TBG, Spaced out, Function Tested Retainer, P Tested TBG + Annulus, Established Feedrate through Retainer, Shut in Well, Heated TBG Stump, Water Tanks + BOPs.
23	2/23/2016 06:00	35,958.50	1,191,793.79	Perform acid squeeze and feed rate through retainer on Imperial sand interval 1170.5 - 1173.5mKB, Crew Change: Fired Boiler + Jet Heater to Heat Water Tanks, TBG Stump, SCV + BOPs.
24	2/24/2016 06:00	111,719.43	1,303,513.22	Perform retainer cement squeeze on Imperial Sand interval 1170.5-1173.5mKB as per program; Final squeeze pressure-12,800kPa. POH 60.3mm tubing. Crew Change: Oragnize Lease, Fire Boiler + Jet Heater; Heat Water, SCV + BOP Stack, Wellhead Secured.
25	2/25/2016 06:00	41,602.30	1,345,115.52	Waiting on perforating guns and bridge plugs to be transported to Norman Wells. Spot and rig in Wireline for morning operations.
26	2/26/2016 07:30	43,811.61	1,388,927.13	Performed pressure volume test with pressure truck. Rigged in E-Line, RIH with 3 perf guns, Shot interval from 873mKB - 874mKB with reverse gun, normal gun and UZI gun. POOH. RIH with Temp log tool and record temp at perfs, 32.24°C at perfs. RIH with 144mm gauge ring past perfs, no issue.
27	2/27/2016 07:30	40,947.91	1,429,875.04	SICP = Slight Vac RIH and set PBP @ 874.5mKB to top. 874.7Mkb to CE. POOH. Mix 11 pails of resin cement (150L) dumped in bailer and RIH. POOH with clean bailer. Filled hole with water and start squeeze with pressure truck. Max volume to squeeze is 90L.
28	2/28/2016 07:30	30,131.03	1,460,006.07	Pressure tested perfs to 7MPa for 10mins, test good. Rigged in E-Line and RIH with 144m Gauge rig to bottom of perfs @ 874mKB. POOH RIH with PBP and set 9m above perfs @ 864mKB CE. Pressure tested PBP to 7MPa for 10Mins, test good. RIH with 175L of G cement for a cap of 8.7m on plug, Cement top @ 855.1mKB. POOH. Removed BOPs and installed 73mm Tbg bull plugged hanger in wellhead. Installed Master valve on wellhead and pressure tested gasket to 21MPa with Methonal, test good. Performed another 10min bubble test on SCV, No flow detected, test passed.
29	2/29/2016 07:30	28,578.50	1,488,584.57	Rig out service rig equipment. Clean tanks and pick up around lease. Move fluids as needed to move Boilers and tanks to town. Performed another 10min bubble test on SCV with NO flow detected. Test Passed. Clean out Back of rig tank.
30	3/1/2016 07:30	30,102.50	1,518,687.07	Finish cleaning cement out of rig tank, completed rig out of service rig equipment. Performed 10min SCV bubble test, NO flow detected. Test passed. Broke down SCV and checked nothing is frozen or blocked, all clear. Dumped 2 liters of enviromentally friendly anti-freeze down SCV elbow, all clear. Removed Vent Nanny from SCV. Heat still on wellhead.

# Daily Activity and Cost Summary

## COPRC MIRROR LAKE N-20 65-00 126-45

### DAILY ACTIVITY & COST SUMMARY

Report No.	Start Date	Daily Cost Total (Cost)	Cum Cost (Cost)	Last 24hr Sum
31	3/2/2016 07:30	19,452.50	1,538,139.57	Moved equipment off lease back to CPC yard Norman Wells. Excavated around wellhead for cut and cap purposes. Performed SCV 10min bubble test, NO flow detected, test passed. Broke down SCV to ensure there isnt any blockages. Cut and Capped, well.
32	3/3/2016 07:30	15,497.00	1,553,636.57	MIRU Cascde steamer and Clean Harbors semi vac, HRN track hoe. Hydro vaced/Steamed the mouse hole csg jt, rat hole csg jt. TOTC (Mac Watson) and he removed the mouse hole csg jt, could not pull the rat hole csg jt, cut it off 2 m below ground level. removed the cement from the cellar and filled in the mouse hole, rat hole and the cellar area.
33	3/9/2016 07:30	11,750.60	1,565,387.17	Loaded wellsite shack, generator and sewer tank. All equipment off location Performed walk around to ensure no garbage or equipment is left. Lease clean.

## **Appendix 3     Daily Reports**

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 1  
Report Date: 1/16/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079	

Job Information			
Job Category	Primary Job Type	Secondary Job Type	Total Field Estimate (Cost)
ABANDONMENT	ABANDONMENT P&A	SURFACE CASING VENT	1,565,387.17

<b>Objective</b> Abandon Cut and Cap					
Actual Start Date 1/16/2016 14:00	End Date 3/2/2016 18:00	Abandon Date (C&C) 3/2/2016 18:00	Responsible Grp 1 coved	Responsible Grp 2 lborbel	Responsible Grp 3 Chris Tucker
AFE / RFE / Maint.# 10385949	Total AFE Amount (Cost) 1,310,000.00	Total AFE + Supp Amount (Cost) 1,310,000.00	Total Field Estimate (Cost) 1,565,147.17	AFE-Field Estimate (Cost) -255,147.17	
AFE / RFE / Maint.# 10385945	Total AFE Amount (Cost) 946,350.00	Total AFE + Supp Amount (Cost) 946,350.00	Total Field Estimate (Cost)	AFE-Field Estimate (Cost) 946,350.00	

<b>Daily Operations</b>					
Report Start Date 1/16/2016 14:00	Report End Date 1/17/2016 14:00	Daily Cost Total (Cost) 8,405.00	Cumulative Cost (Cost) 8,405.00	Personnel Regular Hours (hr) 16.00	
<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Michael Short, 403-348-7127					Rig Rigless, <rigno>
Tubing Pressure (kPa)	Casing Pressure (kPa) 0	Weather clear	Temperature (°C) -25	Lease Condition partially cleared	

<b>Last 24hr Summary</b> Perform SCVF test and install Roke vent nanny.					
<b>24hr Forecast</b> No operations on well. Vent nanny installed and monitoring surface casing vent leak.					

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
14:00	15:00	1.00	WELLPR	LOSU	P		Meet with Roke field hand on O-06 site. Load SCVF test equipment from site.
15:00	16:00	1.00	WELLPR	LOSU	P		Travel to location. Road rough, construction still in process of building road.
16:00	18:00	2.00	WELLPR	LOSU	P		Arrive at location. Lease partially cleared. Fence/locks/wellhead not tampered with. Dig out snow from around gate to be able to open. Clear path for vent nanny piping. Perform SCVF test via 10 min bubble test 3/8" hose in 1" water. Test failed. After 1min 30 seconds had bubbles (too many to count). Had bubbles for 4 seconds (too many to count) then stop for 2 seconds and repeat. SICP- slight vac.  Install Roke vent nanny onto surface casing. Ran tubing through gate opening so fencing can be removed at later date. Upload data to ensure transmitting (good). Flag off are between fence and solar panel to ensure lines do not get drove over. Lock and secure fence and well.

<b>Report Fluids Summary</b>					
Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)

<b>Daily Costs</b>			
BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	***VENDOR NOT LISTED***	Q300	2,700.00
Surface Completion Equipment Rental	***VENDOR NOT LISTED***	Q300	4,070.00
Wellsite Supervision & Engineering	MKH SHORT CONSULTING LTD	T130	1,620.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00

<b>Cumulative Job Flared Gas By Zone</b>	
Zone	Volume Gas Total (E3m³)

<b>Perforations</b>					
Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 1  
Report Date: 1/16/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Perforations					
Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 2  
Report Date: 1/27/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079	

Job Information			
Job Category	Primary Job Type	Secondary Job Type	Total Field Estimate (Cost)
ABANDONMENT	ABANDONMENT P&A	SURFACE CASING VENT	1,565,387.17

<b>Objective</b> Abandon Cut and Cap					
Actual Start Date 1/16/2016 14:00	End Date 3/2/2016 18:00	Abandon Date (C&C) 3/2/2016 18:00	Responsible Grp 1 coved	Responsible Grp 2 lborbel	Responsible Grp 3 Chris Tucker
AFE / RFE / Maint.# 10385949	Total AFE Amount (Cost) 1,310,000.00	Total AFE + Supp Amount (Cost) 1,310,000.00	Total Field Estimate (Cost) 1,565,147.17	AFE-Field Estimate (Cost) -255,147.17	
AFE / RFE / Maint.# 10385945	Total AFE Amount (Cost) 946,350.00	Total AFE + Supp Amount (Cost) 946,350.00	Total Field Estimate (Cost)	AFE-Field Estimate (Cost) 946,350.00	

Daily Operations				
Report Start Date 1/27/2016 10:30	Report End Date 1/27/2016 18:30	Daily Cost Total (Cost) 31,503.51	Cumulative Cost (Cost) 39,908.51	Personnel Regular Hours (hr) 130.00
Daily Contacts WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Michael Short, 403-348-7127				Rig Rigless, <rigno>
Tubing Pressure (kPa)	Casing Pressure (kPa) 0	Weather clear	Temperature (°C) -19	Lease Condition good

**Last 24hr Summary**  
Move and rig up Ensign test package and equipment. Obtain Surface casing GChem gas sample. Spot and rig in Lonkar slickline.

**24hr Forecast**  
Perform gauge ring run. Pull WR plugs.

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
10:30	11:00	0.50	WELLPR	SFTY	P		Held pre-job safety and operations meeting with all services. Review CPC PJHA discuss Moving equipment hazards/ Rigging up hazards/ using spotters/ pinch and crush points/ hammering/wrenching/ heavy lifting/slips, trips, falls/ working around sloped cellar/ lease conditions/cold weather operations/ trapped pressure Review transportation plan / muster areas/ medic location with all workers. All workers safety certificates checked and valid.
11:00	13:00	2.00	WELLPR	RURD	P		Perform daily walk around inspections and checks. Inspect all equipment and wellhead for leaks. None found. Wellhead was tarped in prior night and heat applied over night.  Spot and rig in single tier work platform for slickline operations.  Spot Ensign P-tank/ flare stack/ and office trailers. Begin rigging in equipment.
13:00	16:00	3.00	WELLPR	RURD	P		Lonkar slickline arrived on location. Review CPC PJHA with Lonkar workers. Spot equipment/ begin building lubricator. Rig in slickline equipment for morning operations.
16:00	16:30	0.50	WELLPR	LOSU	P		15:50pm Capture GCHEM gas sample from surface casing vent. Cylinder SN-447 Shut in surface casing pressure =580kPa Shut in production casing pressure=0kPa
16:30	18:30	2.00	WELLPR	DHEQ	P		Fill and pressure test production casing to 14,000kPa for 10 min. Test was good. 2.25m³ to fill. Bleed off pressure.
18:30	19:00	0.50	WELLPR	SISW	P		Shut in secure well for night. Tarp in well and continue to heat well.

<b>Report Fluids Summary</b>					
Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	2.50	0.00	2.50	0.00	2.50

<b>Daily Costs</b>			
BU Desc	Vendor	Activity Code	Amount (Cost)
Completion Fluids & Other Chem	CANOL OILFIELD SERVICES INC	G300	1,900.00
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	5,280.00
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	3,038.00
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	2,510.00
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	1,720.00
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	1,500.00
Surface Completion Equipment Rental	CORNERSTONE OILFIELD SERVICES LTD	Q300	202.13
Surface Completion Equipment Rental	CORNERSTONE OILFIELD SERVICES LTD	Q300	1,050.00
Welltesting (Eqpmt,Srvcs,PTA,Gov't Subs)	ENSIGN TESTING SERVICES INC	M220	2,755.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 2  
Report Date: 1/27/2016  
Final Job Status: ABANDONED  
Final Report? Yes

### Daily Costs

BU Desc	Vendor	Activity Code	Amount (Cost)
Completion Fluids & Other Chem	IMPERIAL OIL PRODUCTS & CHEMICALS DIVISION	G300	1,126.08
Slickline Services	LONKAR SERVICES A/D/O SCHLUMBERGER CANAD...	U200	4,352.50
Wellsite Supervision & Engineering	MKH SHORT CONSULTING LTD	T130	1,620.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	705.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	944.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	125.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Trucking/Hauling/ Hot Shot Services	SRP NORTH VENTURES LTD	P100	220.80
Wellsite Supervision & Engineering	TECTONIC ENERGY CONSULTING INC	T130	1,620.00

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m <sup>3</sup> )
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### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed



# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 3  
Report Date: 1/28/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA		State/Province N.W.T.		Region / Division WCBU		District NEW VENTURES		Field Name Mirror Lake		Field Code	
Surface Legal Location N20 65-00 126-45				API / UWI 300/N20 65-00 126-45/0				License No. EL 470 WID 2079			
<b>Job Information</b>											
Job Category ABANDONMENT			Primary Job Type ABANDONMENT P&A			Secondary Job Type SURFACE CASING VENT			Total Field Estimate (Cost) 1,565,387.17		
<b>Objective</b> Abandon Cut and Cap											
Actual Start Date 1/16/2016 14:00		End Date 3/2/2016 18:00		Abandon Date (C&C) 3/2/2016 18:00		Responsible Grp 1 coved		Responsible Grp 2 lborbel		Responsible Grp 3 Chris Tucker	
AFE / RFE / Maint.# 10385949		Total AFE Amount (Cost) 1,310,000.00		Total AFE + Supp Amount (Cost) 1,310,000.00		Total Field Estimate (Cost) 1,565,147.17		AFE-Field Estimate (Cost) -255,147.17			
AFE / RFE / Maint.# 10385945		Total AFE Amount (Cost) 946,350.00		Total AFE + Supp Amount (Cost) 946,350.00		Total Field Estimate (Cost)		AFE-Field Estimate (Cost) 946,350.00			
<b>Daily Operations</b>											
Report Start Date 1/28/2016 07:30		Report End Date 1/28/2016 20:00		Daily Cost Total (Cost) 29,361.60		Cumulative Cost (Cost) 69,270.11		Personnel Regular Hours (hr) 126.00			
<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Chris Tucker, 780-882-9501										<b>Rig</b> Rigless, <rigno>	
Tubing Pressure (kPa)		Casing Pressure (kPa)		Weather Clear		Temperature (°C) -14		Lease Condition good			
<b>Last 24hr Summary</b> SICP = 0KPa, dead. Slickline operations, RIH with 152.8mm Gauge ring to top of WR @ 1970.3mKB. RIH and pull WR @ 1970.3mKB and WR @ 1986.2mKB. Layed down Lubicator and called well.											
<b>24hr Forecast</b> RIH with 152.8MM gauge ring to 2070.0mKB. Rig out slickline, testers and support equipment.											
Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation				
07:30	08:00	0.50	WELLPR	SFTY	P		Held PJHA # 28012016 meeting all personal on location. Talked about possible hazards and ways they will be avoided. Discussed today's operations and procedures and about past incidents we have had in the oil industry.				
08:00	08:30	0.50	WELLPR	SFTY	P		Performed Daily walk around equipment, looked for any fuel leaks or containment spills, all good. Swept lease with gas monitor with no LELs detected.				
08:30	12:30	4.00	WELLPR	SLKL	P		SICP = 0KPa, dead. Spot Steamer, picker and tank truck. Removed wellhead cap and valve, Bolts very tight and corroded. Installed DSA 10k X 5k crossover on 7 1/16 master valve. Installed Slickline adapter on DSA. Tarped in lubricator with steam hose and tarps to prevent freezing problem. Picked up lubricator and installed Wireline BOPs and 1 section of Lubicator below BOPs to swallow 7in WR. Pressure tested Lubicator to 14MPa, test good. Ready to RIH with Gauge ring.				
12:30	16:00	3.50	WELLPR	SLKL	P		Pulling first WR, Slickline Operations as follows: 1. RIH with 152.8mm gauge ring to top of WR at 1970.3mKB. POOH 2. RIH with WR retrieving tools. Latch on to WR at 13:57hrs and let sit for 30mins. No change in pressure at wellhead. Dead. 3. Unset WR with 3 spangs up and 1 jar fire. Let rubbers relax for 10mins. POOH Slow POOH with WR, over pulling approx 1000lbs on the way out. WR looks in great shape, slightly swollen rubbers but nothing missing or scared. WR loaded into Schlumberger tool hands truck.				
16:00	18:00	2.00	WELLPR	SLKL	P		Pulling second WR, Slickline Operations as follows: 1. RIH with WR retrieving tools. Latch on to WR at 16:30hrs and let sit for 30mins. Well is static with no change. Dead. 2. Unset WR with 4 spangs up and 4 jar fires. Let rubbers relax for 10mins. POOH WR pulled free to 1834mKB and hung up. Jarred several times then come free. Slow POOH with WR, over pulling approx 1600lbs, hung up several times on the way out. Max speed pulling is 11-18m/min. WR 2 of the rubbers are torn but no big pieces missing. WR loaded into Schlumberger tool hands truck.				
18:00	19:00	1.00	WELLPR	SISW	P		Lay down Lubicator and wrap up line for night. Picked up tools and equipment. SDFN				

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 3  
Report Date: 1/28/2016  
Final Job Status: ABANDONED  
Final Report? Yes

### Report Fluids Summary

Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	0.00	0.00	0.00	0.00	2.50

### Daily Costs

BU Desc	Vendor	Activity Code	Amount (Cost)
Pressure Truck/Hot Oiler	CANOL OILFIELD SERVICES INC	S990	4,484.00
Pressure Truck/Hot Oiler	CANOL OILFIELD SERVICES INC	S990	5,280.00
Pressure Truck/Hot Oiler	CANOL OILFIELD SERVICES INC	S990	1,900.00
Pressure Truck/Hot Oiler	CANOL OILFIELD SERVICES INC	S990	352.00
Surface Completion Equipment Rental	CORNERSTONE OILFIELD SERVICES LTD	Q300	175.00
Welltesting (Eqpmt,Srvcs,PTA,Gov't Subs)	ENSIGN TESTING SERVICES INC	M220	2,755.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00
Slickline Services	LONKAR SERVICES A/D/O SCHLUMBERGER CANAD...	U200	7,927.50
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	705.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,233.10
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	125.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Downhole Completion Equipment	SCHLUMBERGER CANADA LIMITED	C100	1,785.00
Wellsite Supervision & Engineering	TECTONIC ENERGY CONSULTING INC	T130	1,620.00

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m³)

### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 4  
Report Date: 1/29/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079	

Job Information			
Job Category	Primary Job Type	Secondary Job Type	Total Field Estimate (Cost)
ABANDONMENT	ABANDONMENT P&A	SURFACE CASING VENT	1,565,387.17

<b>Objective</b> Abandon Cut and Cap					
Actual Start Date 1/16/2016 14:00	End Date 3/2/2016 18:00	Abandon Date (C&C) 3/2/2016 18:00	Responsible Grp 1 coved	Responsible Grp 2 lborbel	Responsible Grp 3 Chris Tucker
AFE / RFE / Maint.# 10385949	Total AFE Amount (Cost) 1,310,000.00	Total AFE + Supp Amount (Cost) 1,310,000.00	Total Field Estimate (Cost) 1,565,147.17	AFE-Field Estimate (Cost) -255,147.17	
AFE / RFE / Maint.# 10385945	Total AFE Amount (Cost) 946,350.00	Total AFE + Supp Amount (Cost) 946,350.00	Total Field Estimate (Cost)	AFE-Field Estimate (Cost) 946,350.00	

<b>Daily Operations</b>					
Report Start Date 1/29/2016 09:00	Report End Date 1/29/2016 18:00	Daily Cost Total (Cost) 20,518.98	Cumulative Cost (Cost) 89,789.09	Personnel Regular Hours (hr) 80.00	
<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Chris Tucker, 780-882-9501					Rig Rigless, <rigno>
Tubing Pressure (kPa)	Casing Pressure (kPa)	Weather Clear	Temperature (°C) -11	Lease Condition good	

**Last 24hr Summary**  
SICP = Slight vac

RIH with 152.8mm gauge ring to 2085mKB, all clear. POOH, rig down equipment. Install valve on Master valve, capped and secured well.  
Fluid level at approx. 30m.  
Continue setting up secondary Containment.

**24hr Forecast**  
Well shut in and secured, ready to perforate.

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
09:00	09:30	0.50	WELLPR	SFTY	P		Held PJHA # 29012016 meeting all personal on location. Talked about possible hazards and ways they will be avoided. Discussed today's operations and procedures and about past incidents we have had in the oil industry.
09:30	10:00	0.50	WELLPR	SFTY	P		Performed Daily walk around equipment, looked for any fuel leaks or containment spills, all good. Swept lease with gas monitor with no LELs detected.
10:00	12:00	2.00	WELLPR	SLKL	P		SICP = Slight Vac.  Rig up slickline equipment on 10K Master valve. Pressure test to 14MPa with N2, test good. Bleed off pressure. RIH with 152.8mm gauge ring to 2085mKB, all clear. POOH
12:00	16:00	4.00	WELLPR	RURD	P		Lay down slickline and rig out. Rigged out Test equipment and hauled Flare Stack to E-76. Rigged out steamer and sent to E-76 lease to heat water. Rigged out work floor and move to side of location so pad can be completed being frozen in. Checked all valves on wellhead, injected methonal in valves and on top of master to winterize wellhead. All equipment except work floor moving to P-20 in AM. Work Floor staying on lease. Capped wellhead and secured.

<b>Report Fluids Summary</b>					
Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	0.00	0.00	0.00	0.00	2.50

<b>Daily Costs</b>			
BU Desc	Vendor	Activity Code	Amount (Cost)
Pressure Truck/Hot Oilier	CANOL OILFIELD SERVICES INC	S990	3,908.00
Pressure Truck/Hot Oilier	CANOL OILFIELD SERVICES INC	S990	958.00
Pressure Truck/Hot Oilier	CANOL OILFIELD SERVICES INC	S990	2,820.00
Surface Completion Equipment Rental	CORNERSTONE OILFIELD SERVICES LTD	Q300	175.00
Welltesting (Eqpmt,Srvcs,PTA,Gov't Subs)	ENSIGN TESTING SERVICES INC	M220	2,755.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00
Slickline Services	LONKAR SERVICES A/D/O SCHLUMBERGER CANAD...	U200	3,652.50
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,045.48
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 4  
Report Date: 1/29/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Daily Costs			
BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	125.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	705.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Wellsite Supervision & Engineering	TECTONIC ENERGY CONSULTING INC	T130	1,620.00
Maintain Road & Location	WILLOWLAKE ENVIRONMENTAL LTD	D230	1,920.00

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m³)
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### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 5  
Report Date: 1/30/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079	

Job Information			
Job Category	Primary Job Type	Secondary Job Type	Total Field Estimate (Cost)
ABANDONMENT	ABANDONMENT P&A	SURFACE CASING VENT	1,565,387.17

<b>Objective</b> Abandon Cut and Cap					
Actual Start Date 1/16/2016 14:00	End Date 3/2/2016 18:00	Abandon Date (C&C) 3/2/2016 18:00	Responsible Grp 1 coved	Responsible Grp 2 lborbel	Responsible Grp 3 Chris Tucker
AFE / RFE / Maint.# 10385949	Total AFE Amount (Cost) 1,310,000.00	Total AFE + Supp Amount (Cost) 1,310,000.00	Total Field Estimate (Cost) 1,565,147.17	AFE-Field Estimate (Cost) -255,147.17	
AFE / RFE / Maint.# 10385945	Total AFE Amount (Cost) 946,350.00	Total AFE + Supp Amount (Cost) 946,350.00	Total Field Estimate (Cost)	AFE-Field Estimate (Cost) 946,350.00	

<b>Daily Operations</b>					
Report Start Date 1/30/2016 07:30	Report End Date 1/30/2016 13:00	Daily Cost Total (Cost) 7,509.00	Cumulative Cost (Cost) 97,298.09	Personnel Regular Hours (hr) 38.00	
<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Chris Tucker, 780-882-9501					Rig
Tubing Pressure (kPa)	Casing Pressure (kPa)	Weather Clear	Temperature (°C) -16	Lease Condition good	

<b>Last 24hr Summary</b> SICP = Slight Vac Rigged up secondary Containment on lease. Put extra parts in SeaCan for next containment and organized rolls for better access.					
<b>24hr Forecast</b> Ready to Perforate.					

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
07:30	08:00	0.50	WELLPR	SFTY	P		Held PJHA # 30012016 meeting all personal on location. Talked about possible hazards and ways they will be avoided. Discussed today's operations and procedures and about past incidents we have had in the oil industry.
08:00	08:30	0.50	WELLPR	SFTY	P		Performed Daily walk around equipment, looked for any fuel leaks or containment spills, all good. Swept lease with gas monitor with no LELs detected.
08:30	14:30	6.00	WELLPR	RURD	P		Finished setting up secondary containment for 400's and cement bin. Organized SeaCan for better access to rolls of liner. Put extra containment parts in SeaCan and cut scrap pieces up and stored in back of seacan. Moved Testers equipment to E-76 and rentals to P-20.  Note: Workfloor still on N-20 on side of lease.

<b>Report Fluids Summary</b>					
Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	0.00	0.00	0.00	0.00	2.50

<b>Daily Costs</b>			
BU Desc	Vendor	Activity Code	Amount (Cost)
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	516.00
Surface Completion Equipment Rental	CORNERSTONE OILFIELD SERVICES LTD	Q300	175.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	350.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	330.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Wellsite Supervision & Engineering	S C T OILFIELD CONSULTING LTD	T130	2,128.00
Wellsite Supervision & Engineering	TECTONIC ENERGY CONSULTING INC	T130	1,620.00
Maintain Road & Location	WILLOWLAKE ENVIRONMENTAL LTD	D230	1,990.00

<b>Cumulative Job Flared Gas By Zone</b>	
Zone	Volume Gas Total (E3m³)

<b>Perforations</b>					
Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 5  
 Report Date: 1/30/2016  
 Final Job Status: ABANDONED  
 Final Report? Yes

Perforations					
Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed



# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 6  
Report Date: 2/6/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079	

Job Information			
Job Category	Primary Job Type	Secondary Job Type	Total Field Estimate (Cost)
ABANDONMENT	ABANDONMENT P&A	SURFACE CASING VENT	1,565,387.17

<b>Objective</b> Abandon Cut and Cap					
Actual Start Date 1/16/2016 14:00	End Date 3/2/2016 18:00	Abandon Date (C&C) 3/2/2016 18:00	Responsible Grp 1 coved	Responsible Grp 2 lborbel	Responsible Grp 3 Chris Tucker
AFE / RFE / Maint.# 10385949	Total AFE Amount (Cost) 1,310,000.00	Total AFE + Supp Amount (Cost) 1,310,000.00	Total Field Estimate (Cost) 1,565,147.17	AFE-Field Estimate (Cost) -255,147.17	
AFE / RFE / Maint.# 10385945	Total AFE Amount (Cost) 946,350.00	Total AFE + Supp Amount (Cost) 946,350.00	Total Field Estimate (Cost)	AFE-Field Estimate (Cost) 946,350.00	

<b>Daily Operations</b>					
Report Start Date 2/6/2016 07:30	Report End Date 2/6/2016 18:00	Daily Cost Total (Cost) 43,139.50	Cumulative Cost (Cost) 140,437.59	Personnel Regular Hours (hr) 182.00	
<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Chris Tucker, 780-882-9501					Rig C&J Energy Services, 217
Tubing Pressure (kPa)	Casing Pressure (kPa)	Weather Clear	Temperature (°C) -24	Lease Condition good	

**Last 24hr Summary**  
MORU service rig and support equipment.

**24hr Forecast**  
Finish service rig rig up. Function test and pressure test BOP's, Strip off Master valve, install BOP's, rig floor, and rest of support equipment.

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
07:30	08:00	0.50	WELLPR	SFTY	P		Held PJHA # 02062016 meeting all personal on location. Talked about possible hazards and ways they will be avoided. Discussed today's operations and procedures and about past incidents we have had in the oil industry.
08:00	08:30	0.50	WELLPR	SFTY	P		Performed Daily walk around equipment, looked for any fuel leaks or containment spills, all good. Swept lease with gas monitor with no LELs detected.
08:30	16:30	8.00	WELLPR	MOB	P		SICP = Slight Vac Move Service rig from E-76 to location. Spot rig at wellhead, place beam and stand rig. Spot 2 boilers and rig in, filled with water and fired up. Spot 400bbl tanks, 1 inside containment. Spot 4 light towers and flameless heater, tarped in wellhead and heated with flameless heat overnight.
16:30	17:30	1.00	WELLPR	SISW	P		Capped and secured well for night. SDFN

<b>Report Fluids Summary</b>					
Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	49.00	0.00			2.50

<b>Daily Costs</b>			
BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	BP PUMP LTD	Q300	240.00
Service Rig	C&J ENERGY PRODUCTION SERVICES CANADA LTD	E120	12,769.00
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	4,490.00
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	2,290.00
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	1,950.00
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	1,572.00
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	2,620.00
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	2,620.00
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	4,797.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	40.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	60.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	1,050.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	325.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 6  
Report Date: 2/6/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Daily Costs			
BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	125.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	705.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	992.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,544.50
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Wellsite Supervision & Engineering	TECTONIC ENERGY CONSULTING INC	T130	1,620.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	1,500.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m <sup>3</sup> )
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### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed



# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 7  
Report Date: 2/7/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079	

Job Information			
Job Category	Primary Job Type	Secondary Job Type	Total Field Estimate (Cost)
ABANDONMENT	ABANDONMENT P&A	SURFACE CASING VENT	1,565,387.17

<b>Objective</b> Abandon Cut and Cap					
Actual Start Date 1/16/2016 14:00	End Date 3/2/2016 18:00	Abandon Date (C&C) 3/2/2016 18:00	Responsible Grp 1 coved	Responsible Grp 2 lborbel	Responsible Grp 3 Chris Tucker
AFE / RFE / Maint.# 10385949	Total AFE Amount (Cost) 1,310,000.00	Total AFE + Supp Amount (Cost) 1,310,000.00	Total Field Estimate (Cost) 1,565,147.17	AFE-Field Estimate (Cost) -255,147.17	
AFE / RFE / Maint.# 10385945	Total AFE Amount (Cost) 946,350.00	Total AFE + Supp Amount (Cost) 946,350.00	Total Field Estimate (Cost)	AFE-Field Estimate (Cost) 946,350.00	

<b>Daily Operations</b>					
Report Start Date 2/7/2016 07:30	Report End Date 2/7/2016 18:00	Daily Cost Total (Cost) 38,519.50	Cumulative Cost (Cost) 178,957.09	Personnel Regular Hours (hr) 132.00	

<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Chris Tucker, 780-882-9501					Rig C&J Energy Services, 217
Tubing Pressure (kPa)	Casing Pressure (kPa)	Weather Clear	Temperature (°C) -22	Lease Condition good	

**Last 24hr Summary**  
Spotted rest of Service rig equipment and finished rigging up.  
Function tested BOPs, and stump tested Blind Rams, Pipe Rams, Safety Valve and ring Groove to 1.4MPa and 34.5MPa, all tests Passed.  
Tested Annular to 1.4MPa and 7MPa for 10mins, test also good, all tests charted and graph attached in wellview.

**24hr Forecast**  
Rig up E-Line in AM to RIH and perforate intervals 2068-2070mKB and 2015-2017mKB. Get feed rate and Start RIH with TBG.

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
07:30	08:00	0.50	WELLPR	SFTY	P		Held PJHA # 02072016 meeting all personal on location. Talked about possible hazards and ways they will be avoided. Discussed today's operations and procedures and about past incidents we have had in the oil industry.
08:00	08:30	0.50	WELLPR	SFTY	P		Performed Daily walk around equipment, looked for any fuel leaks or containment spills, all good. Swept lease with gas monitor with no LELs detected.
08:30	12:00	3.50	WELLPR	MOB	P		SICP = Slight Vac Spotted 2 cement bins in containment and stood 2 x 400bbl tanks for fresh water only outside containment. Spotted Garbage bin and enviro bin on location. Rig in Pump lines and accumulator lines. Perform CAODC inspection on service rig. Check accumulator pressures and re-charge rates. Function Test BOP's blind rams, Pipe Rams and Annular on stump.
12:00	15:30	3.50	WELLPR	BOPE	P		Stump Pressure test BOP's as follows:  Blind Rams to 1.4MPa and 34.5MPa for 10mins, test passed. Pipe Rams to 1.4MPa and 34.5MPa for 10mins, test passed. Annular to 1.4MPa and 7MPa for 10mins, test passed. Safety valve to 1.4MPa and 34.5MPa for 10min, test passed. All tested charted and graphs attached in wellview.
15:30	18:00	2.50	WELLPR	BOPE	P		Installed Tbg hanger on 10' pup joint with safety Valve on top through 7 1/16 master valve. (Tbg hanger is 70.3mm, 60.3 mm crossover used) Stripped off Master valve over Tbg pup Joint and Safety Valve. Stripped on BOP's over Tbg pup Joint and Safety Valve. Tightened down 5K x 10K flange with hammer wrenches. Pressure tested Ring Groove to 1.4MPa and 34.5MPa for 10mins. Test good. Rigged in Rig Floor, Handrails and tarps. Spotted catwalk, Pipe racks, and Tbg on racks. 225 Jts on location, 40 joints from 0-06 Lease.
18:00	19:00	1.00	WELLPR	SISW	P		Drained all surface equipment, capped and secured wellhead. Flameless heater on BOP's and wellhead overnight. SDFN.

<b>Report Fluids Summary</b>					
Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	0.00	0.00	0.00	0.00	2.50

<b>Daily Costs</b>			
BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	BP PUMP LTD	Q300	40.00
Service Rig	C&J ENERGY PRODUCTION SERVICES CANADA LTD	E120	13,265.50

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 7  
Report Date: 2/7/2016  
Final Job Status: ABANDONED  
Final Report? Yes

### Daily Costs

BU Desc	Vendor	Activity Code	Amount (Cost)
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	2,066.00
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	5,400.00
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	3,080.00
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	2,470.00
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	2,900.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	40.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	60.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00
Completion Fluids & Other Chem	IMPERIAL OIL PRODUCTS & CHEMICALS DIVISION	G300	1,084.00
Completion Fluids & Other Chem	IMPERIAL OIL PRODUCTS & CHEMICALS DIVISION	G300	1,901.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	325.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	125.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	705.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	350.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	558.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Completion Fluids & Other Chem	SRP NORTH VENTURES LTD	G300	216.80
Completion Fluids & Other Chem	SRP NORTH VENTURES LTD	G300	308.20
Wellsite Supervision & Engineering	TECTONIC ENERGY CONSULTING INC	T130	1,620.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m³)
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### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 8  
Report Date: 2/8/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079	

Job Information			
Job Category	Primary Job Type	Secondary Job Type	Total Field Estimate (Cost)
ABANDONMENT	ABANDONMENT P&A	SURFACE CASING VENT	1,565,387.17

<b>Objective</b> Abandon Cut and Cap					
Actual Start Date 1/16/2016 14:00	End Date 3/2/2016 18:00	Abandon Date (C&C) 3/2/2016 18:00	Responsible Grp 1 coved	Responsible Grp 2 lborbel	Responsible Grp 3 Chris Tucker
AFE / RFE / Maint.# 10385949	Total AFE Amount (Cost) 1,310,000.00	Total AFE + Supp Amount (Cost) 1,310,000.00	Total Field Estimate (Cost) 1,565,147.17	AFE-Field Estimate (Cost) -255,147.17	
AFE / RFE / Maint.# 10385945	Total AFE Amount (Cost) 946,350.00	Total AFE + Supp Amount (Cost) 946,350.00	Total Field Estimate (Cost)	AFE-Field Estimate (Cost) 946,350.00	

<b>Daily Operations</b>					
Report Start Date 2/8/2016 07:30	Report End Date 2/8/2016 18:00	Daily Cost Total (Cost) 42,988.32	Cumulative Cost (Cost) 221,945.41	Personnel Regular Hours (hr) 118.00	

<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Chris Tucker, 780-882-9501					Rig C&J Energy Services, 217
Tubing Pressure (kPa)	Casing Pressure (kPa)	Weather Sunny	Temperature (°C) -26	Lease Condition good	

**Last 24hr Summary**  
GR/CCL logged wellbore, Perforated intervals from 2068-2070mKB and 2015-2017mKB Twice. Once with Normal guns then Reverse guns. Got feed rates of 620L/min @ 10MPa, 400L/min @ 9.5MPa, 200L/min @ 8.6MPa, 100L/min @ 6.8MPa and 42L/min @ 6MPa

**24hr Forecast**  
RIH with 60.3mm Tbg to 2100mKB, 30m below lower interval. Great ready for cement job on Wed. Feb. 10th.

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
07:30	08:00	0.50	WELLPR	SFTY	P		Held PJHA # 02082016 meeting all personal on location. Talked about possible hazards and ways they will be avoided. Discussed today's operations and procedures and about past incidents we have had in the oil industry.
08:00	08:30	0.50	WELLPR	SFTY	P		Performed Daily walk around equipment, looked for any fuel leaks or containment spills, all good. Swept lease with gas monitor with no LELs detected.
08:30	17:00	8.50	WELLPR	ELOG	P		SICP = Slight Vac. Rigged up E-line, Pressure tested Lubicator to 21MPa for 10mins, test good. E-Line runs as follows:  1. RIH with GR/CCL log. Checked against Cement bond log dated March 27th, 2013. Log on depth. POOH.  2. RIH with two 127mm x 2meter guns, normal 50° phasing, logged on depth, Checked against GR/CCL log. Shot interval 2068mKB-2070mKB and 2015-2017mKB. POOH No change in well, fluid level looks to be at about 20M down. Gun carrier looks in good shape with minimal swelling. All shots fired center shot.  3. RIH with two 127mm x 2meter guns, this time with reverse 50° phasing. Logged on depth and shot intervals 2068-2070mKB and 2015-2017mKB again. POOH Still no change in wellbore, Fluid level seems to be the same spot. Gun carrier looks in good shape with minimal swelling. All shots fired center shot.  Rig down Lubicator and e-line equipment.
17:00	18:00	1.00	WELLPR	ELOG	P		Pumped down Casing to establish a feed rate. Filled casing with 500L and started to pressure up. Pumped 1m³ and began feed rate measurements as follows with rig pump:  620L/min @ 10MPa 400L/min @ 9.5MPa 200L/min @ 8.6MPa 100L/min @ 6.8MPa 42L/min @ 6.0MPa
18:00	19:30	1.50	WELLPR	ELOG	P		Shut down Pump and drained all surface equipment for night. Capped and secure well. SDFN

<b>Report Fluids Summary</b>					
Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	11.50	0.00	4.00	0.00	6.50

<b>Daily Costs</b>			
BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	BP PUMP LTD	Q300	40.00

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 8  
Report Date: 2/8/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Daily Costs			
BU Desc	Vendor	Activity Code	Amount (Cost)
Service Rig	C&J ENERGY PRODUCTION SERVICES CANADA LTD	E120	12,966.50
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	1,146.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	40.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	60.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00
Electric Line Servs on Drilling Ops.	LONKAR SERVICES A/D/O SCHLUMBERGER CANAD...	K100	19,254.82
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	325.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	125.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	705.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,475.50
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,476.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,749.50
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Wellsite Supervision & Engineering	TECTONIC ENERGY CONSULTING INC	T130	1,620.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00

Cumulative Job Flared Gas By Zone	
Zone	Volume Gas Total (E3m <sup>3</sup> )

Perforations					
Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 9  
Report Date: 2/9/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079	

<b>Job Information</b>			
Job Category ABANDONMENT	Primary Job Type ABANDONMENT P&A	Secondary Job Type SURFACE CASING VENT	Total Field Estimate (Cost) 1,565,387.17

<b>Objective</b> Abandon Cut and Cap					
Actual Start Date 1/16/2016 14:00	End Date 3/2/2016 18:00	Abandon Date (C&C) 3/2/2016 18:00	Responsible Grp 1 coved	Responsible Grp 2 lborbel	Responsible Grp 3 Chris Tucker
AFE / RFE / Maint.# 10385949	Total AFE Amount (Cost) 1,310,000.00	Total AFE + Supp Amount (Cost) 1,310,000.00	Total Field Estimate (Cost) 1,565,147.17	AFE-Field Estimate (Cost) -255,147.17	
AFE / RFE / Maint.# 10385945	Total AFE Amount (Cost) 946,350.00	Total AFE + Supp Amount (Cost) 946,350.00	Total Field Estimate (Cost)	AFE-Field Estimate (Cost) 946,350.00	

<b>Daily Operations</b>					
Report Start Date 2/9/2016 07:30	Report End Date 2/9/2016 18:00	Daily Cost Total (Cost) 19,393.00	Cumulative Cost (Cost) 241,338.41	Personnel Regular Hours (hr) 102.00	
<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Chris Tucker, 780-882-9501					Rig C&J Energy Services, 217
Tubing Pressure (kPa)	Casing Pressure (kPa) 2,400	Weather Overcast	Temperature (°C) -25	Lease Condition good	

**Last 24hr Summary**  
RIH with 60.3mm tbg, end of tbg @ 2100mKB.

**24hr Forecast**  
Perform cement job on open intervals, 300m balance cement plug from 1800-2100mKB.

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
07:30	08:00	0.50	WELLPR	SFTY	P		Held PJHA # 02092016 meeting all personal on location. Talked about possible hazards and ways they will be avoided. Discussed todays operations and procedures and about past incidents we have had in the oil industry.
08:00	08:30	0.50	WELLPR	SFTY	P		Performed Daily walk around equipment, looked for any fuel leaks or containment spills, all good. Swept lease with gas monitor with no LELs detected.
08:30	13:30	5.00	WELLPR	TRIP	P		SICP = 2400KPa Put steam down line to rig tank. Bleed off pressure to rig tank, fluid filled line but didnt make it to the tank. Sucked back on pump line and RIH with Tbg. adding steam to line so it dont freeze. RIH w/60.3mm Tbg drifting off catwalk as follows: 1 x 9.63m Tbg jt. 1 x 0.38m 'X' profile 47.68mm 218 Tbg Jts to surface. Pulled 5 Stands (10) joints to lower fluid level. Tarpped in stump with flameless heater. Ready for cement job in AM. Tbg bottom will be at 2100mKB.
13:30	14:30	1.00	WELLPR	SISW	P		Capped and secured well. Drained pump and all surface equipment. SDFN

<b>Report Fluids Summary</b>					
Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	11.50	0.00			6.50

<b>Daily Costs</b>			
BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	BP PUMP LTD	Q300	40.00
Service Rig	C&J ENERGY PRODUCTION SERVICES CANADA LTD	E120	10,908.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	40.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	60.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	325.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00



# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 9  
Report Date: 2/9/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Daily Costs			
BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	125.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,205.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,476.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,589.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Wellsite Supervision & Engineering	TECTONIC ENERGY CONSULTING INC	T130	1,620.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m <sup>3</sup> )
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### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 10  
Report Date: 2/10/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079	

Job Information			
Job Category	Primary Job Type	Secondary Job Type	Total Field Estimate (Cost)
ABANDONMENT	ABANDONMENT P&A	SURFACE CASING VENT	1,565,387.17

<b>Objective</b> Abandon Cut and Cap					
Actual Start Date 1/16/2016 14:00	End Date 3/2/2016 18:00	Abandon Date (C&C) 3/2/2016 18:00	Responsible Grp 1 coved	Responsible Grp 2 lborbel	Responsible Grp 3 Chris Tucker
AFE / RFE / Maint.# 10385949	Total AFE Amount (Cost) 1,310,000.00	Total AFE + Supp Amount (Cost) 1,310,000.00	Total Field Estimate (Cost) 1,565,147.17	AFE-Field Estimate (Cost) -255,147.17	
AFE / RFE / Maint.# 10385945	Total AFE Amount (Cost) 946,350.00	Total AFE + Supp Amount (Cost) 946,350.00	Total Field Estimate (Cost)	AFE-Field Estimate (Cost) 946,350.00	

<b>Daily Operations</b>					
Report Start Date 2/10/2016 12:00	Report End Date 2/10/2016 19:00	Daily Cost Total (Cost) 16,658.00	Cumulative Cost (Cost) 257,996.41	Personnel Regular Hours (hr) 102.00	
<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Chris Tucker, 780-882-9501					Rig C&J Energy Services, 217
Tubing Pressure (kPa)	Casing Pressure (kPa) 0	Weather Overcast	Temperature (°C) -15	Lease Condition good	

<b>Last 24hr Summary</b> MORO schlumberger cement crew for cement job in AM. Rigged in Flameless heaters on lines and Pre-Fabs on work floor.					
<b>24hr Forecast</b> Perform cement job on open intervals, 300m balance cement plug from 1800-2100mKB.					

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
12:00	12:30	0.50	WELLPR	SFTY	P		Held PJHA # 02102016 meeting all personal on location. Talked about possible hazards and ways they will be avoided. Discussed today's operations and procedures and about past incidents we have had in the oil industry.
12:30	13:00	0.50	WELLPR	SFTY	P		Performed Daily walk around equipment, looked for any fuel leaks or containment spills, all good. Swept lease with gas monitor with no LELs detected.
13:00	16:00	3.00	WELLPR	MOB	P		SICP = Dead 12:05hrs Cement crew showed up on location, late due to waiting on Lab results on cement and time involved with getting cement blend ready in town (4hrs) Held PJHA meeting with crew on spotting equipment, rigging in and getting ready for cement job tomorrow. Spotted cement equipment and rigged in as much as possible. Run cement hose through heater hose to avoid freezing lines. Talked over numbers with Cement supervisor and reviewed cement program. Ready to start cement job in AM.

<b>Report Fluids Summary</b>					
Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	0.00	0.00	0.00	0.00	6.50

<b>Daily Costs</b>			
BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	BP PUMP LTD	Q300	40.00
Service Rig	C&J ENERGY PRODUCTION SERVICES CANADA LTD	E120	10,298.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	40.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	60.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	325.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	325.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,205.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	615.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	125.00

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 10  
Report Date: 2/10/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Daily Costs			
BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Wellsite Supervision & Engineering	TECTONIC ENERGY CONSULTING INC	T130	1,620.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m³)
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### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed



# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 11  
Report Date: 2/11/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079	

Job Information			
Job Category	Primary Job Type	Secondary Job Type	Total Field Estimate (Cost)
ABANDONMENT	ABANDONMENT P&A	SURFACE CASING VENT	1,565,387.17

<b>Objective</b> Abandon Cut and Cap					
Actual Start Date 1/16/2016 14:00	End Date 3/2/2016 18:00	Abandon Date (C&C) 3/2/2016 18:00	Responsible Grp 1 coved	Responsible Grp 2 lborbel	Responsible Grp 3 Chris Tucker
AFE / RFE / Maint.# 10385949	Total AFE Amount (Cost) 1,310,000.00	Total AFE + Supp Amount (Cost) 1,310,000.00	Total Field Estimate (Cost) 1,565,147.17	AFE-Field Estimate (Cost) -255,147.17	
AFE / RFE / Maint.# 10385945	Total AFE Amount (Cost) 946,350.00	Total AFE + Supp Amount (Cost) 946,350.00	Total Field Estimate (Cost)	AFE-Field Estimate (Cost) 946,350.00	

<b>Daily Operations</b>					
Report Start Date 2/11/2016 08:30	Report End Date 2/11/2016 19:00	Daily Cost Total (Cost) 127,425.24	Cumulative Cost (Cost) 385,421.65	Personnel Regular Hours (hr) 102.00	

<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Chris Tucker, 780-882-9501					Rig C&J Energy Services, 217
Tubing Pressure (kPa) 0	Casing Pressure (kPa) 0	Weather Snowing	Temperature (°C) -17	Lease Condition good	

**Last 24hr Summary**  
Performed Cement job on open intervals. Pumped 3.24m³ in interval leaving 2.72m³ in casing.  
Left 15.7MPa pressure on Casing overnight.

**24hr Forecast**  
Tag cement top, POOH w/Tbg , RIH with scrapper and possible mud motor, drill out if needed.

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
08:30	09:00	0.50	WELLPR	SFTY	P		Held PJHA # 02112016 meeting all personal on location. Talked about possible hazards and ways they will be avoided. Discussed todays operations and procedures and about past incidents we have had in the oil industry.
09:00	09:30	0.50	WELLPR	SFTY	P		Performed Daily walk around equipment, looked for any fuel leaks or containment spills, all good. Swept lease with gas monitor with no LELs detected.
09:30	11:30	2.00	WELLPR	MOB	P		SICP = neutral, SITP = neutral Spotted and rigged in cement crew. Loaded 25°C town water on tank truck to feed cement crew. RIH with Tbg to 2100mKB to spot cement. Top joint froze off when RIH, switched out joint with one off the racks. Rig Cement crew into Tbg.
11:30	14:30	3.00	WELLPR	CMNT	P		Pressure tested cement lines to 35MPa, test good. Pump 5m³ of 25°C water down Tbg returning to the rig tank, Shut in for feed rate. Shut in Csg and Establish feed rate of 250L/min @ 13.4MPa and 200L/min @ 13.7MPa. Lost 1m³ during feed rate.  11:38hrs Start Mixing cement, SLB Batch mix 6.0 m³ 1680.0 kg/m³ SqueezeCRETE as per program. 13:05hrs Finished mixing cement, start spotting cement from 1800-2100mKB (300m plug) 13:40hrs Finsihed spotting cement 14:28hrs Finished POOH with Tbg to 1694mKB, (42jts) start backwash down Csg returning to rig tank. 48jts total on pipe racks 14:41hrs Finish Backwash, circulated 5m³, seen some grey water at bottoms up but no cement in returns, returns clean. Circulated 1.5 Tbg volumes during backwash @ 500L/min 14:50hrs Start cement squeeze

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 11  
 Report Date: 2/11/2016  
 Final Job Status: ABANDONED  
 Final Report? Yes

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
14:30	16:30	2.00	WELLPR	CMNT	P		<p>Pumped 600L to a pressure of 17.9MPa before getting a break down.            Squeezed away 3.24m³ at a final rate of 8L/min @ 18.7MPa            Shut down and monitored for 15mins            Final SITP @ 15.8MPa.</p> <p>14:50hrs Start cement squeeze            Squeeze away 930 L @ 100 lpm - 17900 kPa            Decrease rate to 75 lpm for 1198 L @ 15900 kPa            Decreased rate to 50 lpm for 515 L @ 20000 kPa            Decreased rate to 44 lpm for 325 L @ 20100 kPa            Decrease rate to 22 lpm for 107 L @ 19500 kPa            Decrease rate to 11 lpm for 52 L @ 17800 kPa.            Decrease rate to 8 lpm for 114 L @ 18300 kPa.</p> <p>Shut down and monitored for 15mins            Final SITP @ 15.8MPa.</p> <p>- Total of 3.24m³ cement squeezed away into Perforations.            - Well was shut in over night with 15.7MPa.            - Estimated Cement top @ 1963 mKB (calculated) with cement plug from 1963 mKB - 2100 mKB (137m)</p>
16:30	17:30	1.00	WELLPR	SISW	P		<p>Capped and secured well for night.            Tarped in stump and used flameless heater to prevent Tbg from freezing.</p>

### Report Fluids Summary

Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	11.00	0.00	2.00	0.00	8.50

### Daily Costs

BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	BP PUMP LTD	Q300	40.00
Service Rig	C&J ENERGY PRODUCTION SERVICES CANADA LTD	E120	12,631.00
Completion Fluids & Other Chem	CANOL OILFIELD SERVICES INC	G300	1,900.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	40.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	60.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00
Completion Fluids & Other Chem	HRN CONTRACTING LTD	G300	2,165.00
Completion Fluids & Other Chem	IMPERIAL OIL PRODUCTS & CHEMICALS DIVISION	G300	5,006.00
Completion Fluids & Other Chem	IMPERIAL OIL PRODUCTS & CHEMICALS DIVISION	G300	1,029.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	325.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	325.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,205.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,660.50
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	870.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	125.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,693.70
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Cementing Services & Materials	SCHLUMBERGER CANADA LIMITED	J200	90,603.24
Cementing Services & Materials	SCHLUMBERGER CANADA LIMITED	J200	2,915.00
Completion Fluids & Other Chem	SRP NORTH VENTURES LTD	G300	205.80
Completion Fluids & Other Chem	SRP NORTH VENTURES LTD	G300	1,001.00
Wellsite Supervision & Engineering	TECTONIC ENERGY CONSULTING INC	T130	1,620.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 11  
 Report Date: 2/11/2016  
 Final Job Status: ABANDONED  
 Final Report? Yes

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m <sup>3</sup> )
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### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 12  
Report Date: 2/12/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code		
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079			
<b>Job Information</b>							
Job Category ABANDONMENT		Primary Job Type ABANDONMENT P&A		Secondary Job Type SURFACE CASING VENT			
				Total Field Estimate (Cost) 1,565,387.17			
<b>Objective</b> Abandon Cut and Cap							
Actual Start Date 1/16/2016 14:00		End Date 3/2/2016 18:00		Abandon Date (C&C) 3/2/2016 18:00			
		Responsible Grp 1 coved		Responsible Grp 2 lborbel			
				Responsible Grp 3 Chris Tucker			
AFE / RFE / Maint.# 10385949		Total AFE Amount (Cost) 1,310,000.00		Total AFE + Supp Amount (Cost) 1,310,000.00			
				Total Field Estimate (Cost) 1,565,147.17			
AFE / RFE / Maint.# 10385945		Total AFE Amount (Cost) 946,350.00		Total AFE + Supp Amount (Cost) 946,350.00			
				Total Field Estimate (Cost) 946,350.00			
<b>Daily Operations</b>							
Report Start Date 2/12/2016 07:30		Report End Date 2/12/2016 19:00		Daily Cost Total (Cost) 23,694.50			
				Cumulative Cost (Cost) 409,116.15			
				Personnel Regular Hours (hr) 134.00			
<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Chris Tucker, 780-882-9501							
Tubing Pressure (kPa) 12,300		Casing Pressure (kPa) 12,300		Weather Clear			
				Temperature (°C) -18			
				Lease Condition good			
<b>Last 24hr Summary</b> SITP = 12.3MPa, SICP = 12.3MPa Bleed off pressure then pressured up to 14MPa, test passed. RIH and solid tagged @ 1947.5mKB with 1800daN. POOH. RIH with mud motor and mill. Re-Tagged @ 1947.3mKB, solid tag with 1800daN. Pulled up 5 joints for night.							
<b>24hr Forecast</b> Start drilling down to 1963mKB, 30m above perfs. Leaving Cement top 23m below 1940 (bottom of next perfs)							
Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
07:30	08:30	1.00	WELLPR	SFTY	P		Held PJHA # 02122016 meeting all personal on location. Talked about possible hazards and ways they will be avoided. Discussed today's operations and procedures and about past incidents we have had in the oil industry.  Note: OROGO office and regulators at 0730hrs safety meeting on location for visit, should personal around location and informed them of operations and procedures that are followed.  Note: Crew change today for C&J energy services.
08:30	09:00	0.50	WELLPR	SFTY	P		Performed Daily walk around equipment, looked for any fuel leaks or containment spills, all good. Swept lease with gas monitor with no LELs detected.
09:00	11:00	2.00	WELLPR	OTHR	P		SITP = 12.3MPa, SICP = 12.3MPa Blew lines down with Steam, opened well to rig tank to bleed off pressure. Opening time @ 09:05hrs. Started pumping down Csg to pressure test cement to 14MPa @ 09:09hrs Pressured up to 14MPa at 09:14hrs, had to bump pressure once. Bleed off pressure @ 09:34hrs, 14MPa pressure test good for 10mins. Pass.
11:00	14:00	3.00	WELLPR	TRIP	P		RIH slow with Tbg, Tagged cement top @ 1947.5mKB. Set 1800daN on cement top for a solid tag. Checked numbers of Tbg on racks. 225 on location, tagged on 203, 22 on the racks. POOH with Tbg to derrick. Held BOP drill, everyone @ muster point 1 in 1.42mins. Good drill.

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 12  
Report Date: 2/12/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
14:00	15:00	1.00	WELLPR	TRIP	P		Put together BHA as follows:  0.16m - 155mm OD - Bearclaw 0.22m - Crossover 0.18m - Crossover 0.24m - Float Sub 4.31m - CoilTOOLS High Performance Motor7:8 Lobe 3.0 stage, Flow Range 303-636LPM, Rev per Litre- .48, Speed No Load- 144-303RPM, No Load pressure 1333kpa, Max Differential Pressure-4826kpa, Torque (@Max differential)- 990ftlbs 0.20m - Crossover 0.88m - Motorhead Rugged, Hydraulic Disconnect, 1 1/8" Activation Ball, 4 Steel Pins - 27.8, Dual Acting Circulating Sub, 1" Activation Ball, 5 Steel Pins, With Ball - 16 MPa, Without Ball - 35 MPa 0.19m - Crossover 1.25m - Tbg pup joint 0.30m - 'X' nipple 1 joint up from motorhead.  Total BHA = 7.93meters.
15:00	18:00	3.00	WELLPR	TRIP	P		RIH with BHA and tagged Cement top @ 1947.3mKB. Set 1800daN on cement for solid tag. Confirmed joint numbers. 225 on location tagged on joint 202, 23jts on the racks. POOH with 5 Joints to drop fluid level.SDFN
18:00	19:00	1.00	WELLPR	SISW	P		Capped and secured well. Drained all surface equipment, SDFN

### Report Fluids Summary

Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	0.00	0.00	0.00	0.00	8.50

### Daily Costs

BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	BP PUMP LTD	Q300	40.00
Service Rig	C&J ENERGY PRODUCTION SERVICES CANADA LTD	E120	15,149.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	40.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	60.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	325.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	325.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,205.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,660.50
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	125.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,050.00
Downhole Rentals	PBN ENERGY SERVICES LTD	Q100	90.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Wellsite Supervision & Engineering	TECTONIC ENERGY CONSULTING INC	T130	1,620.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m³)

### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 12  
 Report Date: 2/12/2016  
 Final Job Status: ABANDONED  
 Final Report? Yes

Perforations					
Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 13  
Report Date: 2/13/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA		State/Province N.W.T.		Region / Division WCBU		District NEW VENTURES		Field Name Mirror Lake		Field Code	
Surface Legal Location N20 65-00 126-45				API / UWI 300/N20 65-00 126-45/0				License No. EL 470 WID 2079			
<b>Job Information</b>											
Job Category ABANDONMENT			Primary Job Type ABANDONMENT P&A			Secondary Job Type SURFACE CASING VENT			Total Field Estimate (Cost) 1,565,387.17		
<b>Objective</b> Abandon Cut and Cap											
Actual Start Date 1/16/2016 14:00		End Date 3/2/2016 18:00		Abandon Date (C&C) 3/2/2016 18:00		Responsible Grp 1 coved		Responsible Grp 2 lborbel		Responsible Grp 3 Chris Tucker	
AFE / RFE / Maint.# 10385949		Total AFE Amount (Cost) 1,310,000.00		Total AFE + Supp Amount (Cost) 1,310,000.00		Total Field Estimate (Cost) 1,565,147.17		AFE-Field Estimate (Cost) -255,147.17			
AFE / RFE / Maint.# 10385945		Total AFE Amount (Cost) 946,350.00		Total AFE + Supp Amount (Cost) 946,350.00		Total Field Estimate (Cost)		AFE-Field Estimate (Cost) 946,350.00			
<b>Daily Operations</b>											
Report Start Date 2/13/2016 07:30		Report End Date 2/13/2016 19:00		Daily Cost Total (Cost) 42,078.60		Cumulative Cost (Cost) 451,194.75		Personnel Regular Hours (hr) 157.00			
<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Chris Tucker, 780-882-9501										<b>Rig</b> C&J Energy Services, 217	
Tubing Pressure (kPa) 0		Casing Pressure (kPa) 0		Weather Sunny		Temperature (°C) -15		Lease Condition good			
<b>Last 24hr Summary</b> RIH and tagged cement top @ 1947mKB. Rigged in drilling equipment, drilled down to 1956.5mKB. Circulated wellbore clean and POOH RIH w/Scraper c/w Tri cone bit on bottom. Tagged cement top @ 1956.5mKB, circulated wellbore over to potable fresh water TDS<4000 mg/L..											
<b>24hr Forecast</b> POOH w/Tbg. Rig in E-Line to perforate interval 1938-1940mKB, Establish Feed rate.											
Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation				
07:30	08:00	0.50	WELLPR	SFTY	P		Held PJHA # 02132016 meeting all personal on location. Talked about possible hazards and ways they will be avoided. Discussed today's operations and procedures and about past incidents we have had in the oil industry.				
08:00	08:30	0.50	WELLPR	SFTY	P		Performed Daily walk around equipment, looked for any fuel leaks or containment spills, all good. Swept lease with gas monitor with no LELs detected.				
08:30	10:00	1.50	WELLPR	DRLG	P		SITP = Neutral, SICP = Neutral Rigged in drilling equipment, anti-torq head/circulating head, Packoff head and stand pipe. RIH with Tbg and tagged cement top @ 1947mKB with 1800daN of weight. Start drilling operations.				
10:00	12:00	2.00	WELLPR	CIRC	P		Drilled down to 1956.7mKB, cement drilled real good, taking 2000daN string weight and steady drilling off. Circulated 15m³ first then dropped circ-sub ball (1in) and pumped water behind to set. Setted ball, pressured up to 16.4MPa and circ-sub opened. Circulate wellbore clean with Csg volume (33.5m³) plus 10m³, (43.5m³ total) good clean returns at rig tank. Pressures tested wellbore to 14MPa, test good Removed circulating equipment and packoff head, installed wear plate.				
12:00	17:00	5.00	WELLPR	TRIP	P		POOH with Tbg and BHA ( Mud Motor w/ Bearclaw) standing in the derrick. RIH with Tbg and Tbg scraper w/ tri cone mill on bottom. BHA as follows:  155mm x 0.13m Tri Cone Bit 168mm x 1.02m Scraper 111mm x 0.31m FS2187 Crossover 95.1mm x 0.46m H4005 Crossover 77.8mm x 0.30m Reg/Reg Crossover 79mm x 0.15m Pac/Reg Crossover 77.1mm x 0.19m 60.3mm/Pac Crossover 1.25m x 60.3mm Tbg Pup Jt.  Total BHA length is 3.72m				
17:00	18:30	1.50	WELLPR	CIRC	P		Tagged cement top @ 1956.7mKB. Picked up 1 meter and circulated wellbore over to potable fresh water TDS<4000 mg/L ( 40m³ circulated) Fresh water in returns at rig tank. Pulled 5 joints to catwalk.				
18:30	19:30	1.00	WELLPR	SISW	P		Drained all surface equipment. Capped and secured well for night. SDFN				



# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 13  
Report Date: 2/13/2016  
Final Job Status: ABANDONED  
Final Report? Yes

### Report Fluids Summary

Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	22.70	65.00			8.50

### Daily Costs

BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	BP PUMP LTD	Q300	40.00
Service Rig	C&J ENERGY PRODUCTION SERVICES CANADA LTD	E120	13,136.50
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	606.00
Completion Fluids & Other Chem	CANOL OILFIELD SERVICES INC	G300	1,900.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	40.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	60.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00
Wellsite Supervision & Engineering	MKH SHORT CONSULTING LTD	T130	1,620.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	325.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	325.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	125.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,425.70
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,226.90
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,205.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,291.50
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Downhole Completion Equipment	SCHLUMBERGER CANADA LIMITED	C100	15,112.00
Wellsite Supervision & Engineering	TECTONIC ENERGY CONSULTING INC	T130	1,620.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m³)
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### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed



# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 14  
Report Date: 2/14/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code		
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079			
<b>Job Information</b>							
Job Category ABANDONMENT		Primary Job Type ABANDONMENT P&A		Secondary Job Type SURFACE CASING VENT			
				Total Field Estimate (Cost) 1,565,387.17			
<b>Objective</b> Abandon Cut and Cap							
Actual Start Date 1/16/2016 14:00		End Date 3/2/2016 18:00		Abandon Date (C&C) 3/2/2016 18:00			
		Responsible Grp 1 coved		Responsible Grp 2 Iborbel			
				Responsible Grp 3 Chris Tucker			
AFE / RFE / Maint.# 10385949		Total AFE Amount (Cost) 1,310,000.00		Total AFE + Supp Amount (Cost) 1,310,000.00			
				Total Field Estimate (Cost) 1,565,147.17			
AFE / RFE / Maint.# 10385945		Total AFE Amount (Cost) 946,350.00		Total AFE + Supp Amount (Cost) 946,350.00			
				Total Field Estimate (Cost) 946,350.00			
<b>Daily Operations</b>							
Report Start Date 2/14/2016 07:30		Report End Date 2/14/2016 19:30		Daily Cost Total (Cost) 52,641.18			
				Cumulative Cost (Cost) 503,835.93			
				Personnel Regular Hours (hr) 192.00			
<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Chris Tucker, 780-882-9501; WS Supervisor, Michael Short, 403-348-7127							
Tubing Pressure (kPa) 0		Casing Pressure (kPa) 0		Weather overcast/snow			
				Temperature (°C) -18			
				Lease Condition good			
<b>Last 24hr Summary</b> Pull out of hole with bit and scraper. Wireline Perforate Interval 1938.0 - 1940.0 mKB ( Regular and Reverse phased). Get breakdown /feed at 17.5MPa. Set cement retainer top @ 1933.0mKB and pressure test to 21MPa.							
<b>24hr Forecast</b> Run in hole with snap latch stinger. Perform 2m³ acid squeeze.							
Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
07:30	08:00	0.50	WELLPR	SFTY	P		Held pre-job safety and operations meeting with all services. Review CPC PJHA, tripping tubing hazards/ rig in wireline hazards/ slippery lease conditions and use of traction control/ overhead loads/ explosives/ hammering/wrenching/trapped pressure/ ice plugs/cold weather operations/ pinch points on floor. Review transportation plan and muster areas with all workers. All workers safety certificates checked.
08:00	08:30	0.50	WELLPR	TRIP	P		Perform daily walk around inspections and checks. Inspect all equipment for leaks/spills, none found. Sweep for LEL's, no LEL's  Check well pressures SICP- 0 SITP-0 Surface casing- vent nanny installed.  Warm equipment and install kill line to BOP's.
08:30	10:30	2.00	WELLPR	TRIP	P		Pull out of hole and stand 196 joints of 60.3mm tubing. Lay down 1 joint and BHA ( pup joint/ scraper/tri-cone bit) Inspect scraper and bit, all equipment recovered and in good condition.
10:30	11:15	0.75	WELLPR	ELOG	P		Spot and rig up Lonkar Wireline. Install wireline 7" Bop's c/w 7 1/16"-5K Flange, torque down flange. Rig in sheaves, pick up Lubricator. Lubricator wrapped with steam line and tarped to avoid freezing.
11:15	11:45	0.50	WELLPR	SFTY	P		Review CPC PJHA. Discuss perforating operations and hazards. Overhead loads/explosives/purge and pressure testing/high pressure lines. Switch vent meter to perf mode
11:45	14:15	2.50	CEMENT	ELOG	P		Make up tandem - 2m guns. Gun # 1- 127mm, Owen SDP-4500-411NT3 39gm HMX charges at 50° reverse phasing and 17.5 spm perforating gun, Gun # 2- 127mm, Owen SDP-4500-411NT3 39gm HMX charges at 50° phasing and 17.5 spm perforating gun, Pick up gun string and stab on lubricator, fill and pressure test lubricator to 1.4 + 14 mPa.  Run in the hole down to 1948.0mKB with no issues. Log up and correlate to Schlumberger cased hole cement bond log dated March 27 ,2013, Run back in hole, pull up into position and Perforate Interval 1938.0 - 1940.0 mKB (13:14). Reverse Phasing. Fluid level @ 90mKB  Pull short correlation log, run back in hole, pull up into position with gun # 2 (regular phasing). Perforate interval 1938.0-1940.0mKB (13:22) POOH. Inspect guns once at surface, all shots fired and in correct orientation.

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 14  
Report Date: 2/14/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
14:15	15:00	0.75	CEMENT	CIRC	P		Pre-heat, Fill and pressure test pump line to 1.4 and 30MPa.  Fill casing and pressure up to get a breakdown. (1.7m³ to fill hole)  Pressured up to 17.5MPa and started to feed. Pumping at 150L/min, pumped 0.3m³. Shut down pump ISIP- 15MPa 10min ISIP - 12MPa  Bleed off pressure to rig tank and prepare to run cement retainer.
15:00	17:30	2.50	CEMENT	ELOG	P		Make up 69.0 MPa - 177.8mm PCR cement retainer on setting tool. Measure all tools. Pick up tools, stab on lubricator and run in the hole with cement retainer. Log onto depth using Schlumberger cased hole cement bond log dated March 27 ,2013 Set cement retainer Top @ 1933.0 mKB (16:40Hrs) Pull out of the hole with setting tool.  Pressure test cement retainer to 21.0 mPa for 10min with 0 leak off - good test. Bleed off applied pressure, drain and blow out pump lines. Rig out and lay down 7" lubricator on catwalk. Remove wireline bop's and flange. Rig out sheaves,
17:30	18:00	0.50	CEMENT	SISW	P		Shut in and secure well for night. Drain and winterize equipment.

### Report Fluids Summary

Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	33.70	0.00	2.00	0.00	10.50

### Daily Costs

BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	BP PUMP LTD	Q300	40.00
Service Rig	C&J ENERGY PRODUCTION SERVICES CANADA LTD	E120	13,076.50
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	40.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	60.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00
Electric Line Servs on Drilling Ops.	LONKAR SERVICES A/D/O SCHLUMBERGER CANAD...	K100	12,159.28
Wellsite Supervision & Engineering	MKH SHORT CONSULTING LTD	T130	1,620.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	325.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	325.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	125.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,205.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,576.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	3,381.40
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Downhole Completion Equipment	SCHLUMBERGER CANADA LIMITED	C100	11,493.00
Downhole Completion Equipment	SCHLUMBERGER CANADA LIMITED	C100	3,575.00
Wellsite Supervision & Engineering	TECTONIC ENERGY CONSULTING INC	T130	1,620.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m³)
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### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 14  
 Report Date: 2/14/2016  
 Final Job Status: ABANDONED  
 Final Report? Yes

Perforations					
Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
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2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 15  
Report Date: 2/15/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079	

Job Information			
Job Category	Primary Job Type	Secondary Job Type	Total Field Estimate (Cost)
ABANDONMENT	ABANDONMENT P&A	SURFACE CASING VENT	1,565,387.17

<b>Objective</b> Abandon Cut and Cap					
Actual Start Date 1/16/2016 14:00	End Date 3/2/2016 18:00	Abandon Date (C&C) 3/2/2016 18:00	Responsible Grp 1 coved	Responsible Grp 2 lborbel	Responsible Grp 3 Chris Tucker
AFE / RFE / Maint.# 10385949	Total AFE Amount (Cost) 1,310,000.00	Total AFE + Supp Amount (Cost) 1,310,000.00	Total Field Estimate (Cost) 1,565,147.17	AFE-Field Estimate (Cost) -255,147.17	
AFE / RFE / Maint.# 10385945	Total AFE Amount (Cost) 946,350.00	Total AFE + Supp Amount (Cost) 946,350.00	Total Field Estimate (Cost)	AFE-Field Estimate (Cost) 946,350.00	

<b>Daily Operations</b>					
Report Start Date 2/15/2016 07:30	Report End Date 2/15/2016 19:30	Daily Cost Total (Cost) 41,847.84	Cumulative Cost (Cost) 545,683.77	Personnel Regular Hours (hr) 203.00	
<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Michael Short, 403-348-7127					Rig C&J Energy Services, 217
Tubing Pressure (kPa)	Casing Pressure (kPa) 0	Weather partly cloudy	Temperature (°C) -19	Lease Condition good	

**Last 24hr Summary**  
Run in hole 60.3mm tubing and snap latch stinger. Sting into retainer and pressure test. Perform 2.0m³ acid squeeze through retainer.

**24hr Forecast**  
Perform cement job and pull out of hole 60.3mm tubing.

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
07:30	08:00	0.50	CEMENT	SFTY	P		Held pre-job safety and operations meeting with all services. Review CPC PJHA, tripping tubing hazards/ slippery lease conditions and use of traction control/ overhead loads/ hammering/wrenching/trapped pressure/ ice plugs/cold weather operations/ pinch points on floor/ pressure testing/ high pressure lines. Review transportation plan and muster areas with all workers. All workers safety certificates checked.
08:00	11:30	3.50	CEMENT	TRIP	P		<p>Perform daily walk around inspections and checks. Inspect all equipment for leaks/spills. Found 1 light tower was leaking some oil. All oil was captured in drip tray under unit. Shut down light tower, talk with rental company. Switched out light tower, take other tower to back to shop to repair and clean. Sweep for LEL's, no LEL's</p> <p>Check well pressures: SICP- 0 Surface casing- vent nanny installed. Vent meter stainless line frozen. Shut in valve on surface casing. Remove stainless line and thaw. Run line through flameless heater hose and install tarp around vent meter box to keep warm. 10:30am lines thawed. Upload vent meter and ensure reading (good)</p> <p>Warm equipment and install kill line to BOP's.</p> <p>Run in hole with 60.3mm tubing and snap latch stinger assembly. Tag top of retainer at 1933.22mKB (pipe tally) Wireline set depth top @ 1933.0mKB ( -0.22m CORRECTION).</p> <p>Space out tubing, tubing string as follows:</p> <p>1- Snap latch stinger 1- Joint of 60.3mm 6.99kg/m J-55 tubing 1- X- profile nipple 199- Joints of 60.3mm 6.99kg/m J-55 tubing 1- 3.09m pup joint 1- 1.25m pup joint 1- Joint of 60.3mm 6.99kg/m J-55 tubing</p> <p>08:30- SLB on location. Reviewed CPC PJHA discussed spotting and rigging in equipment. SLB begin rigging in equipment. Run treating line through flameless heater line to avoid freezing.</p>

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 15  
Report Date: 2/15/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
11:30	12:00	0.50	CEMENT	RURD	P		<p>Sting into retainer and set 9000daN compression. Pressure test annulus to 21MPa, good test.</p> <p>Rig on SLB treating line and apply heat using flameless heater.</p> <p>Tank truck load warm potable water containing &lt;4000mg/L TDS for mixing acid and performing acid squeeze.</p>
12:00	12:30	0.50	CEMENT	SFTY	P		Review CPC PJHA. Discuss acid squeeze hazards/ chemicals/high pressure lines/ ice plugs/ hammering and wrenching.
12:30	17:00	4.50	CEMENT	STIM	P		<p>SLB pumper take on 2m<sup>3</sup> synthetic acid and complete mixing, push back to tank truck</p> <p>SLB pumper take on potable water prime and heat pump.</p> <p>Push warm water through line to warm.</p> <p>12:40 Shut in hamer and pressure test treating line to 1.4 and 30MPa. Test not holding. Attempt second test with same results. Determined hamer valve was leaking. Change out hamer valve and re-test to 30MPa, test good.</p> <p>13:20- while stung into retainer perform quick feed rate test to ensure able to pump acid. 50L/min @ 13,600kPa</p> <p>13:30- Pull into neutral position to test tubing. Pressure test was not holding, tool was not in neutral, still stung in. Pull to neutral and re-test to 10MPa, test good.</p> <p>13:55- bleed off pressure and sting out of retainer.</p> <p>14:00- Circulation to tank, Begin to circulate down 2.0m<sup>3</sup> synthetic acid, holding back pressure while pumping followed by 1.65m<sup>3</sup> potable water.</p> <p>Stop pumps, shut in casing side and sting into retainer, set 9000daN compression.</p> <p>Perform 2.0m<sup>3</sup> Acid Squeeze on perforations 1938.0 - 1940.0mKB as follows:</p> <p>14:21- Begin squeezing. 50L/min @ 13,500kPa until acid at perfs</p> <p>14:30- Acid at perfs, drop rate to 25L/min @ 12,000kPa</p> <p>0.5m<sup>3</sup> acid squeezed into perfs 25L/min @ 11,900kPa</p> <p>1.0m<sup>3</sup> acid squeezed into perfs 25L/min @ 12,176kPa</p> <p>15:12- let acid soak for 30min</p> <p>ISIP- 12,000kPa / 10min - 11,766kPa</p> <p>15:42- Start pressure 11,500kPa continue to squeeze remaining 1m<sup>3</sup> acid, 280L/min @ 15.3MPa</p> <p>Over Displace acid with 10m<sup>3</sup> potable water, perform feed rate while displacing as follows:</p> <p>25L/min @ 13,470kPa</p> <p>50L/min @ 13,470kPa</p> <p>100L/min @ 13,780kPa</p> <p>150L/min @ 14,200kPa</p> <p>200L/min @ 14,800kPa</p> <p>250L/min @ 15,450kPa</p> <p>300L/min @ 16,550kPa</p> <p>ISIP-14,500kPa</p> <p>10min ISIP-13,755kPa</p>
17:00	18:00	1.00	CEMENT	RURD	P		<p>Pull into neutral and bleed off pressure. Rig off SLB treating line. Drain and winterize SLB equipment.</p> <p>Pull out of hole 10 joints/ land and secure tubing hanger for night.</p>
18:00	18:30	0.50	CEMENT	SISW	P		<p>Shut in and secure well for night. Drain and winterize equipment.</p> <p>Boiler hand on location to supply heat to equipment and water tanks.</p>

### Report Fluids Summary

Fluid	To lease (m <sup>3</sup> )	From lease (m <sup>3</sup> )	To well (m <sup>3</sup> )	From well (m <sup>3</sup> )	Left to recover (m <sup>3</sup> )
FRESH WATER	34.60	0.00	15.00	5.40	20.10

### Daily Costs

BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	BP PUMP LTD	Q300	40.00
Service Rig	C&J ENERGY PRODUCTION SERVICES CANADA LTD	E120	13,076.50
Completion Fluids & Other Chem	CANOL OILFIELD SERVICES INC	G300	2,290.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	40.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	60.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00
Completion Fluids & Other Chem	HRN CONTRACTING LTD	G300	1,975.00
Wellsite Supervision & Engineering	MKH SHORT CONSULTING LTD	T130	1,620.00

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 15  
Report Date: 2/15/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Daily Costs			
BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	325.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	325.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	125.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,638.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,205.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	3,382.50
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Downhole Completion Equipment	SCHLUMBERGER CANADA LIMITED	C100	1,735.00
Cementing Services & Materials	SCHLUMBERGER CANADA LIMITED	J200	7,455.84
Cementing Services & Materials	SCHLUMBERGER CANADA LIMITED	J200	2,915.00
Wellsite Supervision & Engineering	TECTONIC ENERGY CONSULTING INC	T130	1,620.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m³)
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### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed



# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 16  
Report Date: 2/16/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079	

Job Information			
Job Category	Primary Job Type	Secondary Job Type	Total Field Estimate (Cost)
ABANDONMENT	ABANDONMENT P&A	SURFACE CASING VENT	1,565,387.17

<b>Objective</b> Abandon Cut and Cap					
Actual Start Date 1/16/2016 14:00	End Date 3/2/2016 18:00	Abandon Date (C&C) 3/2/2016 18:00	Responsible Grp 1 coved	Responsible Grp 2 lborbel	Responsible Grp 3 Chris Tucker
AFE / RFE / Maint.# 10385949	Total AFE Amount (Cost) 1,310,000.00	Total AFE + Supp Amount (Cost) 1,310,000.00	Total Field Estimate (Cost) 1,565,147.17	AFE-Field Estimate (Cost) -255,147.17	
AFE / RFE / Maint.# 10385945	Total AFE Amount (Cost) 946,350.00	Total AFE + Supp Amount (Cost) 946,350.00	Total Field Estimate (Cost)	AFE-Field Estimate (Cost) 946,350.00	

<b>Daily Operations</b>					
Report Start Date 2/16/2016 07:30	Report End Date 2/16/2016 19:30	Daily Cost Total (Cost) 122,302.54	Cumulative Cost (Cost) 667,986.31	Personnel Regular Hours (hr) 189.00	

<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Michael Short, 403-348-7127					Rig C&J Energy Services, 217
Tubing Pressure (kPa) 0	Casing Pressure (kPa) 0	Weather overcast	Temperature (°C) -20	Lease Condition good	

**Last 24hr Summary**  
Latch into retainer and pressure test. Perform 5.8m³ SqueezeCRETE cement retainer squeeze. Final squeeze pressure 12,776kPa. Backwash tubing and pull 25 joints of tubing.

**24hr Forecast**  
Pull out of hole 60.3mm tubing. Perforate next squeeze interval. Get a breakdown/feed rate. Wireline set cement retainer.

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
07:30	08:00	0.50	CEMENT	CMNT	P		Held pre-job safety and operations meeting with all services. Review CPC PJHA, tripping tubing hazards/ slippery lease conditions and use of traction control/ overhead loads/ hammering/wrenching/trapped pressure/ ice plugs/cold weather operations/ pinch points on floor/ pressure testing/ high pressure lines. Review transportation plan and muster areas with all workers. All workers safety certificates checked.
08:00	10:00	2.00	CEMENT	TRIP	P		Perform daily walk around inspections and checks. Inspect all equipment for leaks/spills. None found. Sweep for LEL's, no LEL's  Check well pressures: SICP- 0 SITP -0 Surface casing- vent nanny installed.  Pull tubing hanger, RIH 9 joints of 60.3mm tubing, 3.09m pup, 1.25m pup, 1 joint of 60.3mm tubing.  Sting into retainer. set 9,000daN. Pressure test annulus to 21MPa, test good. Pull to neutral and pressure test to 10MPa (test good) Rig off rig circulating equipment.  09:45 SLB cementers arrived on location. Review CPC PJHA, discuss rig in Cementing equipment/ hammering and wrenching/ overhead loads/tag lines.
10:00	11:00	1.00	CEMENT	RURD	P		Spot and rig in SLB batch mixer and treating line. Line ran through flameless heater hose to avoid freezing during cementing operations. Sting into retainer from neutral position, set 11,000daN. Discuss job procedure and volumes with SLB supervisor.
11:00	11:30	0.50	CEMENT	SFTY	P		Review CPC PJHA, discuss cementing hazards/ PPE required/ high pressure lines/chemicals/ ice plugs/spills and leaks/ moving tubing/ backwashing/ vac truck grounding/bonding



# Daily Morning Report

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Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
11:30	17:15	5.75	CEMENT	CMNT	P		<p>Transfer 25°C potable water containing &lt;4000mg/L TDS to SLB C&amp;A unit. Prime pump and push fluid through line to warm. Shut in at hamer valve and pressure test treating line to 30MPa. (good test)</p> <p>12:20- Begin pumping 8m³ 25°C potable water containing &lt;4000mg/L TDS to cool well prior to cementing. 300L/min@16.7MPa.</p> <p>12:54pm- Begin mixing 6m³ slurry(5.8m³ actual) SqueezeCRETE cement. 1Hour and 20min to mix cement. Had some issues with line packing off with dry cement. Checked density with pressurized mud scale-1660kg/m³,1669kg/m³ on NRD on mixer.</p> <p>14:14hrs-Begin pumping squeezeCRETE cement as follows: Note densometer on C&amp;A unit reading 1616kg/m³ but slurry was checked against other densometer and by mud scale as above.</p> <p>4.0m³ slurry,200L/min@1,500kPa starting pressure</p> <p>14:33hrs- End of 200L/min stage pressure at 6750kPa</p> <p>100L cement under retainer</p> <p>14:34hrs-Slow rate to100L/min, pump 2.0m³ slurry@3780kPa starting pressure</p> <p>14:50hrs- End of 100L/min stage pressure at 4255kPa</p> <p>2.1m³ under retainer</p> <p>NOTE: At end of 50L/min stage tank volume pumped and volume pumped on computer out by 300L.Use tank volume pumped reading rather than computer readings for remainder of job.</p> <p>14:51hrs- Slow rate to 50L/min, pump 1.2m³ (Adjusted to tank volume pumped) water @ 3402kPa starting pressure</p> <p>15:20hrs- end of 50L/min stage pressure at 6211kPa</p> <p>3.3m³ under retainer</p> <p>15:21hrs- Slow rate to 20L/min pump lost prime at start of stage, re-circulate pump and catch prime, rate leveled out at 30L/min. Discuss with Louis Borbley, continue at this rate. Pump 2.15m³ water at 30L/min starting pressure @ 5450kPa</p> <p>16:17hrs- 4.1m³ under retainer 30L/min @8550kPa</p> <p>16:33hrs- 4.6m³ under retainer 30L/min @10,093kPa</p> <p>16:50hrs- 5.1m³ under retainer 30L/min @11,608kPa</p> <p>16:58hrs- 5.25m³ under retainer 30L/min @12,461kPa</p> <p>16:59- slow rate to 10L/min, had issues getting steady rate. Got rate to18L/min. Pumped 0.15m³</p> <p>17:10- Final Squeeze pressure 12,776kPa. 5.4m³ slurry under retainer.</p>
17:15	18:00	0.75	CEMENT	CIRC	P		<p>Sting out of retainer. (1000daN overpull to pull out of retainer) Tubing on vaccum, indicating cement dropping out of tubing. (400L of slurry remained in tubing) Rig off SLB treating line. Pull 1 joint of tubing. End of tubing @ 1923mKB. (tubing pulled dry)</p> <p>Rig on circulating equipment and backwash tubing until clean. Returned 150L of slurry back to rig tank.</p> <p>Rig off circulating equipment.</p>
18:00	19:00	1.00	CEMENT	TRIP	P		<p>Pull and lay down 4 joints of 60.3mm tubing. Stand 20 joints of tubing and land tubing hanger. Shut in and secure well for night.</p> <p>Drain and winterize equipment.</p>

### Report Fluids Summary

Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	26.00	0.00	14.50	0.00	34.60

### Daily Costs

BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	BP PUMP LTD	Q300	40.00
Service Rig	C&J ENERGY PRODUCTION SERVICES CANADA LTD	E120	14,209.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	40.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	60.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00
Completion Fluids & Other Chem	HRN CONTRACTING LTD	G300	1,900.00
Completion Fluids & Other Chem	IMPERIAL OIL PRODUCTS & CHEMICALS DIVISION	G300	21.60
Completion Fluids & Other Chem	IMPERIAL OIL PRODUCTS & CHEMICALS DIVISION	G300	5,350.00
Wellsite Supervision & Engineering	MKH SHORT CONSULTING LTD	T130	1,620.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	325.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	325.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 16  
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Final Report? Yes

Daily Costs			
BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	125.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,638.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,205.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Cementing Services & Materials	SCHLUMBERGER CANADA LIMITED	J200	89,108.74
Downhole Completion Equipment	SCHLUMBERGER CANADA LIMITED	C100	1,460.00
Completion Fluids & Other Chem	SRP NORTH VENTURES LTD	G300	3.60
Completion Fluids & Other Chem	SRP NORTH VENTURES LTD	G300	891.60
Downhole Rentals	STRAD OILFIELD RENTALS	Q100	340.00
Wellsite Supervision & Engineering	TECTONIC ENERGY CONSULTING INC	T130	1,620.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m³)
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### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed

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Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079	

Job Information			
Job Category	Primary Job Type	Secondary Job Type	Total Field Estimate (Cost)
ABANDONMENT	ABANDONMENT P&A	SURFACE CASING VENT	1,565,387.17

<b>Objective</b> Abandon Cut and Cap					
Actual Start Date 1/16/2016 14:00	End Date 3/2/2016 18:00	Abandon Date (C&C) 3/2/2016 18:00	Responsible Grp 1 coved	Responsible Grp 2 lborbel	Responsible Grp 3 Chris Tucker
AFE / RFE / Maint.# 10385949	Total AFE Amount (Cost) 1,310,000.00	Total AFE + Supp Amount (Cost) 1,310,000.00	Total Field Estimate (Cost) 1,565,147.17	AFE-Field Estimate (Cost) -255,147.17	
AFE / RFE / Maint.# 10385945	Total AFE Amount (Cost) 946,350.00	Total AFE + Supp Amount (Cost) 946,350.00	Total Field Estimate (Cost)	AFE-Field Estimate (Cost) 946,350.00	

<b>Daily Operations</b>					
Report Start Date 2/17/2016 07:30	Report End Date 2/18/2016 06:00	Daily Cost Total (Cost) 48,899.96	Cumulative Cost (Cost) 716,886.27	Personnel Regular Hours (hr) 225.00	

<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Michael Short, 403-348-7127; WS Supervisor, Marty Dushanek, 403-358-8911					Rig C&J Energy Services, 217
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Tubing Pressure (kPa) 0	Casing Pressure (kPa) 0	Weather clear	Temperature (°C) -38	Lease Condition good	
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**Last 24hr Summary**  
Pull out of hole remainder of 60.3mm tubing. Perforate Imperial sands interval 1906.0-1908.0mKB. Get breakdown/feedrate at 29MPa. Wireline set PCR cement retainer, top @ 1901.0 mKB. Pressure test retainer to 30 MPa. Made up Stinger & RIH on 60.3mm J-55 EUE TBG, Spaced Out, P Tested Annulus to 21 MPa, P Tested TBG to 7 MPa, Opened Retainer, Pressured up TBG to 10 MPa, SITP Bled to 9.5 MPa in 5 mins, Bled TBG Pressure to Zero, Drained up.

**24hr Forecast**  
Perform 2 m³ synthetic acid squeeze

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
07:30	08:00	0.50	CEMENT	SFTY	P		Held pre-job safety and operations meeting with all services. Review CPC PJHA, tripping tubing hazards/ slippery lease conditions and use of traction control/ overhead loads/ hammering/wrenching/cold weather operations/ pinch points on floor/ pressure testing/ high pressure lines/ overhead loads/tag lines. Review transportation plan and muster areas with all workers. All workers safety certificates checked.
08:00	10:30	2.50	CEMENT	TRIP	P		Perform daily walk around inspections and checks. Inspect all equipment for leaks/spills. None found. Sweep for LEL's, no LEL's  Check well pressures: SICP- 0 SITP -0 Surface casing- vent nanny installed.  Pull tubing hanger, Pull out of hole and stand remainder of 60.3mm tubing (176 joints), nipple and stinger assembly. Inspect stinger assembly. All slips and seals in place.  Wireline on location to spot and prep equipment for perforating.
10:30	11:00	0.50	CEMENT	SFTY	P		Review CPC PJHA, discuss wireline operations and hazards/ rotating equipment/ high pressure lines/ overhead loads/ lifting lube operations/ snags/ pinch points./ explosives
11:00	12:00	1.00	CEMENT	ELOG	P		Spot and rig up Lonkar Wireline. Install wireline 7" Bop's c/w 7 1/16"-5K Flange, torque down flange. Rig in sheaves, pick up Lubricator. Lubricator wrapped with steam line and tarped to avoid freezing.

# Daily Morning Report

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Report #: 17  
Report Date: 2/17/2016  
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Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
12:00	14:00	2.00	CEMENT	ELOG	P		<p>Make up tandem - 2m guns. Gun # 1- 127mm, Owen SDP-4500-411NT3 39gm HMX charges at 50° reverse phasing and 17.5 spm perforating gun, Gun # 2- 127mm, Owen SDP-4500-411NT3 39gm HMX charges at 50° regular phasing and 17.5 spm perforating gun, Pick up gun string and stab on lubricator, fill and pressure test lubricator to 1.4 + 14 mPa.</p> <p>NOTE: Short joint (11.08m) located top @ 1162.8mKB</p> <p>Run in the hole down to 1913.0mKB with no issues. Log up and correlate to Schlumberger cased hole cement bond log dated March 27 ,2013, Run back in hole, pull up into position and Perforate Imperial Sand Interval 1906.0 - 1908.0 mKB (12:50Hrs). Reverse Phasing. Fluid level @ 100mKB</p> <p>Pull short correlation log, run back in hole, pull up into position with gun # 2 (regular phasing). Perforate interval 1906.0-1908.0mKB (13:07Hrs) POOH. Inspect guns once at surface, all shots fired and in correct orientation.</p>
14:00	14:45	0.75	CEMENT	CIRC	P		<p>Pre-heat, Fill and pressure test pump line to 1.4 and 30MPa.</p> <p>Fill casing and pressure up to get a breakdown. (2.0m³ to fill hole)</p> <p>Pressured up to 29.0MPa to get break and feed. Pumping at 150L/min, pumped 1m³ feeding at 27.0MPa-28.0MPa Shut down pump ISIP- 27.0MPa 10min ISIP - 18.0MPa</p> <p>Report Break and feed rate to superintendent.</p> <p>Bleed off pressure to rig tank and prepare to run cement retainer.</p>
14:45	18:30	3.75	CEMENT	ELOG	P		<p>Make up 69.0 MPa - 177.8mm PCR cement retainer on setting tool. Measure all tools. Pick up tools, stab on lubricator and run in the hole with cement retainer. Log onto depth using Schlumberger cased hole cement bond log dated March 27 ,2013 Set cement retainer Top @ 1901.0mKB (16:54Hrs) Pull out of the hole with setting tool.</p> <p>Pressure test cement retainer to 30.0 MPa for 10min with 0 leak off - good test. Bleed off applied pressure, drain and blow out pump lines. Rig out and lay down 7" lubricator on catwalk. Remove wireline bop's and flange. Rig out sheaves,</p>
18:30	19:15	0.75	CEMENT	OTHR	P		<p>Prep to Run in hole Snap latch stinger and 60.3mm tubing. Transfer fluid from rig tank into dirty 400bbl tank to make room for acid job.</p> <p>19:00-new night shift crew on location. Cross over with day shift.</p>
19:15	19:45	0.50	RPEQPT	SFTY	P		<p>Held PJHA Meeting with All Night Shift Personnel. (8 Total) Discussed Days Objectives, Procedures &amp; Potential Hazards, Discussed Cold Temperatures, First Night Shift, Footing, LSR's 1, 3, 4 &amp; 8, RIH with Stinger on 60.3mm TBG, Spacing out TBG String, Ice Plugs, Pressure Testing = Stand Clear + Manage Your Red Zone, Hammering = Stand Clear + Watch Swing Paths, Steam/Boiler Safety, TBG Drift, Good Communication, Proper Lighting = Adjust Light Towers if Necessary, Zero Spillage = Take Extra Time + Utilize Drip Trays, Extreme Cold = Don't Overdo it, Take Extra Breaks + Lookout for Each Other, LSR # 3: Fall Arrest, LSR # 4: Overhead Equipment + LSR # 8: Safe Driving. Reviewed Transportation Plan, Emergency Phone Numbers + MTV. &gt; All Hands had 2016 Conoco Orientation + Valid Oilfield Tickets. &lt;</p>
19:45	20:45	1.00	RPEQPT	SFTY	P		<p>Held Cross-Over Meeting with Day Crew. Performed Daily Walk Around Lease Inspection. Rigged in Pump Line c/w Steam for Steel Displacement. Made up Stinger.</p>
20:45	00:45	4.00	RPEQPT	TRIP	P		<p>RIH with Snap Latch Stinger on 198 Jts of 60.3mm TBG. Tagged Retainer. Spaced out TBG String. (Buried a 1.25m Pup) &lt;&gt; Extra Time Taken due to Extreme Cold.</p>

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Final Report? Yes

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
00:45	02:45	2.00	CEMENT	DHEQ	P		<ul style="list-style-type: none"> <li>- Pulled TBG into Neutral Position in Retainer.</li> <li>&gt; Pressure Tested Annulus to 21 MPa. Pressure Test Held 100% for 10 mins.</li> <li>- Lowered TBG + Rigged Pump Line into TBG.</li> <li>- Pulled TBG into Neutral Position in Retainer.</li> <li>&gt; Attempted to P Test TBG to 10 MPa, But Hydraulic'd TBG out of the Retainer.</li> <li>&gt; Pressure Tested TBG to 7 MPa. Pressure Test Held 100% for 10 mins.</li> <li>- Lowered TBG + Opened Retainer.</li> <li>&gt; Pressured TBG to 10.0 MPa. Stopped Pump.</li> <li>&gt; SITP Bled to down to 9.5 MPa in 5 mins. Slowly Bled TBG to Zero.</li> </ul>
02:45	06:00	3.25	CEMENT	SISW	P		Drained Pump & Lines. Tarped in & Heated TBG Stump + BOPs. > Rig Crew Slipped & Cut Drill Line.

### Report Fluids Summary

Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	22.90	0.00	2.50	1.50	35.60

### Daily Costs

BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	BP PUMP LTD	Q300	40.00
Service Rig	C&J ENERGY PRODUCTION SERVICES CANADA LTD	E120	17,959.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	40.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	60.00
Wellsite Supervision & Engineering	FOCUS WELLSITE SUPERVISION LTD	T130	1,620.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00
Electric Line Servs on Drilling Ops.	LONKAR SERVICES A/D/O SCHLUMBERGER CANAD...	K100	13,836.44
Trucking/Hauling/ Hot Shot Services	MACKAY EXPEDITING & LOGISTICS	P100	393.75
Wellsite Supervision & Engineering	MKH SHORT CONSULTING LTD	T130	1,620.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	125.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,764.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,205.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	2,331.77
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Downhole Completion Equipment	SCHLUMBERGER CANADA LIMITED	C100	3,850.00
Wellsite Supervision & Engineering	TECTONIC ENERGY CONSULTING INC	T130	1,620.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m³)
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### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 17  
 Report Date: 2/17/2016  
 Final Job Status: ABANDONED  
 Final Report? Yes

Perforations					
Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed



# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 18  
Report Date: 2/18/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code		
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079			
<b>Job Information</b>							
Job Category ABANDONMENT		Primary Job Type ABANDONMENT P&A		Secondary Job Type SURFACE CASING VENT			
					Total Field Estimate (Cost) 1,565,387.17		
<b>Objective</b> Abandon Cut and Cap							
Actual Start Date 1/16/2016 14:00		End Date 3/2/2016 18:00		Abandon Date (C&C) 3/2/2016 18:00			
		Responsible Grp 1 coved		Responsible Grp 2 lborbel			
				Responsible Grp 3 Chris Tucker			
AFE / RFE / Maint.# 10385949		Total AFE Amount (Cost) 1,310,000.00		Total AFE + Supp Amount (Cost) 1,310,000.00			
				Total Field Estimate (Cost) 1,565,147.17			
AFE / RFE / Maint.# 10385945		Total AFE Amount (Cost) 946,350.00		Total AFE + Supp Amount (Cost) 946,350.00			
				Total Field Estimate (Cost) 946,350.00			
<b>Daily Operations</b>							
Report Start Date 2/18/2016 06:00		Report End Date 2/19/2016 06:00		Daily Cost Total (Cost) 57,473.94			
				Cumulative Cost (Cost) 774,360.21			
					Personnel Regular Hours (hr) 287.00		
<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Michael Short, 403-348-7127; WS Supervisor, Marty Dushanek, 403-358-8911							
Tubing Pressure (kPa) 0		Casing Pressure (kPa) 0		Weather clear			
				Temperature (°C) -38			
				Lease Condition good			
<b>Last 24hr Summary</b> Perform 2m <sup>3</sup> synthetic acid squeeze. Pull out of hole with snap latch stinger. Crew Change; Made up & RIH with Positive J Latch Stinger on 60.3mm TBG, Spaced out TBG, Installed Master Valve & TBG Swivel, Stung into Cement Retainer @ 1,901 mKB, Function Tested J Latch Stinger, Pulled into Neutral, Pressure Tested TBG + Annulus (All Good), Drained Pump & Lines, Heated TBG Stump + BOPs through the Night.							
<b>24hr Forecast</b> Perform cement squeeze on Imperial sand interval 1906.0-1908.0mKB							
Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
06:00	07:30	1.50	CEMENT	SISW	P		Tarped in & Heated TBG Stump + BOPs.  <> CREW CHANGE. <>
07:30	08:00	0.50	CEMENT	SFTY	P		Held pre-job safety and operations meeting with all services. Review CPC PJHA, Acid squeeze hazards/ slippery lease conditions and use of traction control/ overhead loads/ hammering/wrenching/cold weather operations/ pinch points on floor/ pressure testing/ high pressure lines/ overhead loads/tag lines. Review transportation plan and muster areas with all workers. All workers safety certificates checked.
08:00	10:15	2.25	CEMENT	RURD	P		Perform daily walk around inspections and checks. Inspect all equipment for leaks/spills. None found. Sweep for LEL's, no LEL's  Check well pressures: SICP- 0 SITP -0 Surface casing- vent nanny installed.  NOTE: Vent meter not uploading information. Check vent meter, found fuse blown on perf mode switch. Contact Roke to find out what issues may be and if any spare parts were brought to Norman Wells. Another electrical box on O-6 location in crate. Changed out fuse and new fuse blew right away. Heated electrical panel with flameless heater. Installed another fuse and uploaded. Information uploaded, then did not update again. Checked fuse and fuse blown again. Roke service hand will be up to fix tomorrow afternoon.  Spot and rig in SLB C&A pumping unit and tank truck. Treating line ran through flameless heater hose to keep warm. Tank truck loaded with 1m <sup>3</sup> raw synthetic acid. Take on 1m <sup>3</sup> warm municipal water to mix acid. ( 2m <sup>3</sup> total blended acid) Load with 15m <sup>3</sup> warm municipal water to feed SLB for acid squeeze.  Discuss job scope and pumping volumes with supervisor.
10:15	10:45	0.50	CEMENT	SFTY	P		Review CPC PJHA. Discuss acid squeeze hazards/ chemicals/high pressure lines/ ice plugs/ hammering and wrenching.



# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 18  
Report Date: 2/18/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
10:45	15:00	4.25	CEMENT	STIM	P		<p>Perform 2.0m³ synthetic acid squeeze on Imperial Sand interval 1906.0 - 1908.0 mKB as follows:</p> <p>SLB C&amp;A unit take on 2m³ synthetic acid to finish mixing and push back to tank truck. Push fluid through lines to heat. Shut in and pressure test treating line to 33MPa ( good test) Pump through retainer to ensure feed rate. 25L/min @ 23MPa</p> <p>Pull to neutral and bleed down pressure. Sting out and prepare to spot acid.</p> <p>11:45hrs Establish good circulation to rig tank with water. Begin circulating down 2.1m³ synthetic acid followed by 1.4m³ fresh potable water. Hold 2500kPa back pressure while circulating down acid.</p> <p>With Acid 300L from bottom of tubing, shut down pump and shut in casing.</p> <p>12:15hrs -Sting into retainer, set 10,000daN</p> <p>12:17hrs- Begin acid squeeze pumping 25L/min @ 23MPa Once acid at perfs, pressure began to slowly decrease. 13:09-With 1m³ acid squeezed into perfs, 25L/min @ 14.9MPa Let acid soak for 30 min. After 30min soak pressure at 13.6MPa 13:42- Continue to squeeze remainder of acid into perforations- up to 300L/min @ 19.4MPa Over displace acid by 10m³ fresh municipal water containing &lt;4000mg/L TDS Perform feed rate while over displacing acid as follows:</p> <p>25L/min @ 14,600kPa 50L/min @ 14,825kPa 100L/min @ 15,600kPa 150L/min @ 16,400kPa 200L/min @ 17,100kPa 250L/min @ 17,800kPa 300L/min @ 18,500kPa</p> <p>ISIP-14,600kPa 10 min ISIP- 14,200kPa</p>
15:00	16:00	1.00	CEMENT	STIM	P		<p>Pull into neutral and bleed off pressure.</p> <p>Sting out of retainer</p> <p>Rig off SLB treating iron and suck out with vac truck.</p> <p>Crew change rig crew on location. Have cross over with replacement crew and review CPC PJHA. Discuss pulling out of hole and standing tubing hazards.</p>
16:00	18:30	2.50	CEMENT	TRIP	P		Pull out of hole and stand 60.3mm tubing and snap latch stinger. Inspect stinger, looked ok.
18:30	19:15	0.75	CEMENT	TRIP	P		Prep to run in hole with J-latch stinger assembly.
19:15	19:45	0.50	RPEQPT	SFTY	P		<p>Held PJHA Meeting with All Night Shift Personnel. (8 Total)</p> <p>Discussed Days Objectives, Procedures &amp; Potential Hazards,</p> <p>Discussed Cold Temperatures, Footing, LSR's 1, 3, 4 &amp; 8,</p> <p>RIH with Stinger on 60.3mm TBG, Spacing out TBG String, Ice Plugs,</p> <p>Pressure Testing = Stand Clear + Manage Your Red Zone,</p> <p>Hammering = Stand Clear + Watch Swing Paths, StingerJ Latch Operation,</p> <p>Steam/Boiler Safety, TBG Drift, Good Communication,</p> <p>Proper Lighting = Adjust Light Towers if Necessary,</p> <p>Zero Spillage = Take Extra Time + Utilize Drip Trays,</p> <p>Extreme Cold = Don't Overdo it, Take Extra Breaks + Lookout for Each Other,</p> <p>LSR # 3: Fall Arrest, LSR # 4: Overhead Equipment + LSR # 8: Safe Driving.</p> <p>Reviewed Transportation Plan, Emergency Phone Numbers, EMT + MTV.</p> <p>&gt; All Hands had 2016 Conoco Orientation + Valid Oilfield Tickets. &lt;</p>
19:45	20:45	1.00	RPEQPT	SFTY	P		<p>Held Cross-Over Meeting with Day Crew.</p> <p>Performed Daily Walk Around Lease Inspection.</p>
20:45	22:45	2.00	RPEQPT	TRIP	P		<p>Made up + RIH with Positive J Latch Stinger on 198 Jts of 60.3mm TBG.</p> <p>Tagged Cement Retainer @ 1,901 mKB.</p> <p>Spaced out TBG String. (Buried a 0.65m Pup Jt)</p> <p>&lt;&gt; Extra Time Taken due to Extreme Cold.</p>

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 18  
Report Date: 2/18/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
22:45	02:00	3.25	CEMENT	DHEQ	P		<> Installed Master Valve + TBG Swivel on the TBG. Stung into Cement Retainer. Applied 1/4 Turn to the Left. <> Pull Tested 5,000 daN into J Latch. Set down 1,000 daN below String Weight, Applied 1/4 turn to the Right. <> Pulled J Latch Stinger out of the Retainer. Stung back into Retainer, Applied 1/4 Turn to the Left. <> Pulled 1,000 daN Over String Weight. (Neutral Position in Retainer) > Pressure Tested Annulus to 21.0 MPa. > Pressure Tested TBG to 14 MPa. <> BOTH PRESSURE TESTS HELD 100% FOR 10 MINS. <> Closed Master Valve, Lowered TBG, Stung in & Opened Retainer. - Removed & Drained TBG Swivel. Poured Methanol above Master Valve. - Re-Installed TBG Swivel.
02:00	06:00	4.00	CEMENT	SISW	P		Drained Pump & Lines. Tarped in & Fired up Jet Heater to Heat TBG Stump + BOPs through the Night.

### Report Fluids Summary

Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	23.50	0.00	17.00	5.00	47.60

### Daily Costs

BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	BP PUMP LTD	Q300	40.00
Service Rig	C&J ENERGY PRODUCTION SERVICES CANADA LTD	E120	25,014.00
Completion Fluids & Other Chem	CANOL OILFIELD SERVICES INC	G300	2,290.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	40.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	60.00
Wellsite Supervision & Engineering	FOCUS WELLSITE SUPERVISION LTD	T130	1,620.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00
Completion Fluids & Other Chem	HRN CONTRACTING LTD	G300	2,090.00
Completion Fluids & Other Chem	IMPERIAL OIL PRODUCTS & CHEMICALS DIVISION	G300	2,151.60
Completion Fluids & Other Chem	IMPERIAL OIL PRODUCTS & CHEMICALS DIVISION	G300	1,599.60
Completion Fluids & Other Chem	IMPERIAL OIL PRODUCTS & CHEMICALS DIVISION	G300	259.20
Trucking/Hauling/ Hot Shot Services	MACKAY EXPEDITING & LOGISTICS	P100	1,312.50
Wellsite Supervision & Engineering	MKH SHORT CONSULTING LTD	T130	1,620.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	125.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	2,643.80
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	2,457.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,205.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Cementing Services & Materials	SCHLUMBERGER CANADA LIMITED	J200	6,762.84
Downhole Completion Equipment	SCHLUMBERGER CANADA LIMITED	C100	1,460.00
Completion Fluids & Other Chem	SRP NORTH VENTURES LTD	G300	358.60
Completion Fluids & Other Chem	SRP NORTH VENTURES LTD	G300	266.60
Completion Fluids & Other Chem	SRP NORTH VENTURES LTD	G300	43.20
Wellsite Supervision & Engineering	TECTONIC ENERGY CONSULTING INC	T130	1,620.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 18  
 Report Date: 2/18/2016  
 Final Job Status: ABANDONED  
 Final Report? Yes

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m <sup>3</sup> )
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### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 19  
Report Date: 2/19/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079	
<b>Job Information</b>					
Job Category ABANDONMENT		Primary Job Type ABANDONMENT P&A		Secondary Job Type SURFACE CASING VENT	
				Total Field Estimate (Cost) 1,565,387.17	
<b>Objective</b> Abandon Cut and Cap					
Actual Start Date 1/16/2016 14:00		End Date 3/2/2016 18:00		Abandon Date (C&C) 3/2/2016 18:00	
		Responsible Grp 1 coved		Responsible Grp 2 lborbel	
				Responsible Grp 3 Chris Tucker	
AFE / RFE / Maint.# 10385949		Total AFE Amount (Cost) 1,310,000.00		Total AFE + Supp Amount (Cost) 1,310,000.00	
				Total Field Estimate (Cost) 1,565,147.17	
AFE / RFE / Maint.# 10385945		Total AFE Amount (Cost) 946,350.00		Total AFE + Supp Amount (Cost) 946,350.00	
				Total Field Estimate (Cost) 946,350.00	
<b>Daily Operations</b>					
Report Start Date 2/19/2016 06:00		Report End Date 2/20/2016 06:00		Daily Cost Total (Cost) 124,601.39	
				Cumulative Cost (Cost) 898,961.60	
				Personnel Regular Hours (hr) 285.00	
<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Michael Short, 403-348-7127; WS Supervisor, Marty Dushanek, 403-358-8911					
Tubing Pressure (kPa) 0		Casing Pressure (kPa) 0		Weather Clear	
				Temperature (°C) -38	
				Lease Condition good	
<b>Last 24hr Summary</b> Perform retainer cement squeeze on Imperial Sand interval 1906 - 1908.0mKB. Final squeeze pressure- 18,500kPa, 4.7m³ slurry under retainer. Pull out of hole 60.3mm tubing. Crew Change; Filled Hole with Potable Fresh Water, Installed Wireline Flange above Rig's BOP Stack, Fired Boiler + Heated BOPs & Water.					
<b>24hr Forecast</b> Perform RBL/VDL/GR/CCL log from cement retainer (1901mKB) to surface. Static and pressure pass.					
Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X
06:00	07:30	1.50	CEMENT	SISW	P
07:30	08:00	0.50	CEMENT	SFTY	P
08:00	10:15	2.25	CEMENT	RURD	P
Trbl Code					
Operation					
Tarpd in & Heated TBG Stump + BOPs. <> CREW CHANGE. <>					
Held pre-job safety and operations meeting with all services. Review CPC PJHA, Cement squeeze hazards/ chemicals/ slippery lease conditions and use of traction control/ overhead loads/ hammering/wrenching/cold weather operations. -35°C discuss work and break times. use buddy system/ pinch points on floor/ pressure testing/ high pressure lines/ overhead loads/tag lines. Review transportation plan and muster areas with all workers. All workers safety certificates checked.					
Perform daily walk around inspections and checks. Inspect all equipment for leaks/spills. None found. Sweep for LEL's, no LEL's					
Check well pressures: SICP- 0 SITP -0 Surface casing- vent nanny installed. Not uploading at this time. Roke will be on site to repair today.					
Spot and rig in SLB batch mixer and tank truck. Install treating line to tubing swivel. Treating line ran through flameless heater hose to keep warm.					
Discuss job scope and pumping volumes with supervisor.					

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 19  
Report Date: 2/19/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
10:15	15:45	5.50	CEMENT	CMNT	P		<p>Perform 3.9m³ squeezeCRETE and 1.0m³ G and Gas Block retainer squeeze on Imperial Sand interval 1906.0-1908.0mKB as follows:</p> <p>Prime pump and heat lines with warm fluid. (24°C clean potable water containing &lt;4000mg/L TDS) Shut in and pressure test treating line to 32MPa (good test).</p> <p>Pump 4m³ potable water to cool wellbore. Test slow rates while pumping. Able to achieve stable 12L/min rate in low range.</p> <p>Shut down pump.</p> <p>11:22hrs- Begin mixing chemicals for 4m³ squeezeCRETE slurry. (actual 3.9m³) 12:35hrs- Slurry mixed, check density with pressurized scale - 1690kg/m³</p> <p>12:39hrs- Begin pumping 3.9m³ squeezeCRETE slurry 200L/min @16,400kPa 12:58hrs- End of 200L/min stage pressure at 4349kPa 100L cement under retainer</p> <p>12:59- Start mixing 1.0m³ G &amp; gas block cement 1890kg/m³ 13:10- Done mixing cement</p> <p>13:10hrs-Begin pumping 1.0m³ G and gas block. Start pressure 3,600kPa 13:20hrs- End of 100L/min stage pressure at 6,800kPa 1.1m³ under retainer</p> <p>13:20hrs- Start pumping water, Slow rate to 50L/min, pump 0.6m³ water @ 6,800kPa starting pressure 13:30hrs- End of 50L/min stage pressure at 7726kPa 1.7m³ under retainer</p> <p>13:30hrs- Slow rate to 30L/min, Pump 2.0m³ water at 30L/min starting pressure @ 6700kPa 14:00hrs- 2.7m³ under retainer 30L/min @11,260kPa 14:33hrs- End of 30L/min stage pressure at14,291kPa 3.7m³ under retainer</p> <p>14:33hrs- Slow rate to 13L/min. Pump 1.0m³ water at 13L/min starting pressure 12,800kPa 15:08hrs- 4.2m³ under retainer 12L/min @ 17,200kPa 15:41hrs- Final Squeeze pressure 18,500kPa. 4.7m³ slurry under retainer.</p>
15:45	16:45	1.00	CEMENT	CIRC	P		<p>Sting out of retainer. J-latch stinger. Pick up to neutral, set down 1000daN, turn tubing to right/pull up and sting out.</p> <p>Rig off SLB treating iron. Rig on circulating equipment to backwash.</p> <p>Back wash with tubing bottom at top of retainer until clean. No cement on retainer.</p> <p>Returned 150-200L of slurry, capture with vac truck and offload into cement bin.</p> <p>Rig off circulating equipment.</p>
16:45	19:30	2.75	CEMENT	TRIP	P		<p>Pull out of hole and lay down 32 joints of 60.3mm tubing. Stand 166 joints of 60.3mm tubing in derrick.</p> <p>Inspect J-latch stinger, all parts in place and in good condition. SLB take back to shop to re-dress tool.</p> <p>NOTE: Pins were Sheared on J Latch Stinger; New J Latch Stinger to be Flown up A.S.A.P.</p>
19:30	20:00	0.50	RPEQPT	SFTY	P		<p>Held PJHA Meeting with All Night Shift Personnel. (7 Total) Discussed Days Objectives, Procedures &amp; Potential Hazards, Discussed Cold Temperatures, Footing, LSR's 1, 3, 4 &amp; 8, Pre-Heat Pump Line, Filling the Hole with Potable Water from Clean Tank, Hammering = Stand Clear + Watch Swing Paths, Steam/Boiler Safety, Good Communication, Proper Lighting, Zero Spillage = Take Extra Time + Utilize Drip Trays, Installing Wireline Flange c/w E-Line BOPs above 178mm BOP Stack, Extreme Cold = Don't Overdo it, Take Extra Breaks + Lookout for Each Other, LSR # 3: Fall Arrest, LSR # 4: Overhead Equipment + LSR # 8: Safe Driving. Reviewed Transportation Plan, Emergency Phone Numbers, EMT + MTV. &gt; All Hands had 2016 Conoco Orientation + Valid Oilfield Tickets. &lt;</p>
20:00	20:15	0.25	RPEQPT	SFTY	P		<p>Held Cross-Over Meeting with Day Crew. Performed Daily Walk Around Lease Inspection.</p>
20:15	23:00	2.75	RPEQPT	ELOG	P		<ul style="list-style-type: none"> <li>- Filled CSG with 1.50 m³ of Potable Fresh Water.</li> <li>- Installed Wireline Flange c/w E-Line BOPs above Rig's 178mm BOP Stack.</li> <li>- Repaired Tank Gauge on 63 m³ Potable Water Tank.</li> </ul>

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 19  
Report Date: 2/19/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
23:00	06:00	7.00	CEMENT	SISW	P		Drained Pump & Lines. Tarped in & Heated Wireline BOPs + Rig's BOP Stack. Fired Boiler and Continued to Heat Water Tanks + BOPs through the Night.

### Report Fluids Summary

Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	0.00	28.00	12.10	0.00	59.70

### Daily Costs

BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	BP PUMP LTD	Q300	40.00
Service Rig	C&J ENERGY PRODUCTION SERVICES CANADA LTD	E120	23,391.50
Completion Fluids & Other Chem	CANOL OILFIELD SERVICES INC	G300	2,290.00
Completion Fluids & Other Chem	CANOL OILFIELD SERVICES INC	G300	1,800.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	40.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	60.00
Wellsite Supervision & Engineering	FOCUS WELLSITE SUPERVISION LTD	T130	1,620.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00
Completion Fluids & Other Chem	HRN CONTRACTING LTD	G300	2,165.00
Trucking/Hauling/ Hot Shot Services	MACKAY EXPEDITING & LOGISTICS	P100	787.50
Wellsite Supervision & Engineering	MKH SHORT CONSULTING LTD	T130	1,620.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	125.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,205.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,764.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Cementing Services & Materials	SCHLUMBERGER CANADA LIMITED	J200	82,338.39
Downhole Completion Equipment	SCHLUMBERGER CANADA LIMITED	C100	1,735.00
Completion Fluids & Other Chem	TERVITA CORP	G300	1,200.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m³)

### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed



# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 19  
Report Date: 2/19/2016  
Final Job Status: ABANDONED  
Final Report? Yes

### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed



# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 20  
Report Date: 2/20/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA		State/Province N.W.T.		Region / Division WCBU		District NEW VENTURES		Field Name Mirror Lake		Field Code	
Surface Legal Location N20 65-00 126-45				API / UWI 300/N20 65-00 126-45/0				License No. EL 470 WID 2079			
<b>Job Information</b>											
Job Category ABANDONMENT			Primary Job Type ABANDONMENT P&A			Secondary Job Type SURFACE CASING VENT			Total Field Estimate (Cost) 1,565,387.17		
<b>Objective</b> Abandon Cut and Cap											
Actual Start Date 1/16/2016 14:00		End Date 3/2/2016 18:00		Abandon Date (C&C) 3/2/2016 18:00		Responsible Grp 1 coved		Responsible Grp 2 lborbel		Responsible Grp 3 Chris Tucker	
AFE / RFE / Maint.# 10385949		Total AFE Amount (Cost) 1,310,000.00		Total AFE + Supp Amount (Cost) 1,310,000.00		Total Field Estimate (Cost) 1,565,147.17		AFE-Field Estimate (Cost) -255,147.17			
AFE / RFE / Maint.# 10385945		Total AFE Amount (Cost) 946,350.00		Total AFE + Supp Amount (Cost) 946,350.00		Total Field Estimate (Cost)		AFE-Field Estimate (Cost) 946,350.00			
<b>Daily Operations</b>											
Report Start Date 2/20/2016 06:00		Report End Date 2/21/2016 06:00		Daily Cost Total (Cost) 76,932.18		Cumulative Cost (Cost) 975,893.78		Personnel Regular Hours (hr) 283.00			
<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Michael Short, 403-348-7127; WS Supervisor, Marty Dushanek, 403-358-8911										<b>Rig</b> C&J Energy Services, 217	
Tubing Pressure (kPa)		Casing Pressure (kPa) 0		Weather Clear		Temperature (°C) -38		Lease Condition good			
<b>Last 24hr Summary</b> Perform CCL/GR/VDL/CBL from retainer set @ 1901.0mKB to surface. Once with well static and again with 10,000kPa applied. Dump bail 8.75 lineal meters of cement on top of retainer. Crew Change; POH Bailer, Perforated Twice from 1,623.0 - 1,625 mKB, POH, Established a Feedrate of 0.30 m³/min @ 18,000 kPa, RIH & Set Retainer ce @ 1,615.0 mKB, P Tested above Retainer to 21,000 kPa, RIH with Stinger on 60.3mm TBG, Spaced out, Function Tested Retainer, P Tested TBG + Annulus, Established Feedrate through Retainer, Shut in Well, Heated TBG Stump + BOPs.											
<b>24hr Forecast</b> Confer with Calgary; Perform Retainer Cement Squeeze.											
Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation				
06:00	07:30	1.50	RPEQPT	SISW	P		Continued to Fire Boiler and Heat BOPs & Fresh Water. <> CREW CHANGE. <>				
07:30	08:00	0.50	RPEQPT	SFTY	P		Held pre-job safety and operations meeting with all services. Review CPC PJHA, Discuss wireline hazards/ pressure pass hazards/ hoisting and laying down lube/ slippery lease conditions and use of traction control/ overhead loads/ hammering/wrenching/cold weather operations. -35°C discuss work and break times. use buddy system/ pinch points on floor/ pressure testing/ high pressure lines/ overhead loads/tag lines. Review transportation plan and muster areas with all workers. All workers safety certificates checked.				
08:00	10:00	2.00	RPEQPT	ELOG	P		Complete rig in Lonkar wireline. Function test 7" bops. Rig in sheaves, pick up Lubricator. Lubricator wrapped with steam line and tarped to avoid freezing. Make up wireline tools for CCL/GR/VDL/RBL. Pick tools into lube and install onto bops. Pressure test Lube/bops/flange to 1.4 and 14MPa (test good)  09:40 - Remove stainless line from vent meter and perform SCVF test via 10 min bubble test. After 1min I had too many bubbles to count. Check stainless line running from SCV to meter box and it was clear and warm. 10:00 vent meter was hooked back up and manually uploaded.				
10:00	17:00	7.00	RPEQPT	ELOG	P		Run in hole to top of retainer set @ 1901.0mKB. Perform CCL/GR/VDL/RBL from 1900.0mKB to surface. ( Well Static) Correlate to the Schlumberger cased hole Cement Bond Log dated March 27, 2013.  Run in hole to top of retainer set @ 1901.0mKB. Perform CCL/GR/VDL/RBL from 1900.0mKB to surface. (10,000kPa applied to wellbore) Correlate to the Schlumberger cased hole Cement Bond Log dated March 27, 2013. Pressure applied at 14:00hrs  Send results to Louis Borbely.				
17:00	19:30	2.50	CEMENT	ELOG	P		Make up 127mm cement bailer. Mix up 175L of oilwell class G cement with 2.2kg of retarder. Will be 8.75 lineal meters of cement on retainer. Run in hole and dump bail cement on top of retainer set top at 1901.0mKB. Cement top at 1892.25mKB  Start out of hole and prepare to perforate Imperial Sand interval 1623.0-1625.0mKB				
19:30	19:45	0.25	RPEQPT	SFTY	P		Held PJHA Meeting with Night Crew. (10 Total) Got Everyone Signed in + Discussed Laying down Cement Bailer.				
19:45	20:00	0.25	RPEQPT	SFTY	P		Held Cross-Over Meeting with Day Crew. Performed Daily Walk Around Lease Inspection.				

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 20  
Report Date: 2/20/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
20:00	20:45	0.75	RPEQPT	ELOG	P		POH & Laid down Cement Bailer.
20:45	21:15	0.50	RPEQPT	SFTY	P		Held PJHA Meeting with All Night Shift Personnel. (10 Total) Discussed Days Objectives, Procedures & Potential Hazards, Discussed Cold Temperatures, Footing, LSR's 1, 3, 4 & 8, E-Line Ops: Making up Perf Gun, Perforating + Setting Retainer, Pre-Heat Pump Line, P Testing, Sucking Back Displacement, Establishing Feedrate, Function Testing Retainer, Hammering = Stand Clear + Watch Swing Paths, Steam/Boiler Safety, Good Communication, Proper Lighting, Zero Spillage = Take Extra Time + Utilize Drip Trays, Rigging out E-Line, Removing Wireline Flange, Windchill, Extreme Cold = Don't Overdo it, Take Extra Breaks + Lookout for Each Other, LSR # 3: Fall Arrest, LSR # 4: Overhead Equipment + LSR # 8: Safe Driving. Reviewed Transportation Plan, Emergency Phone Numbers, EMT + MTV. > All Hands had 2016 Conoco Orientation + Valid Oilfield Tickets. <
21:15	23:00	1.75	CEMENT	ELOG	P		Made up & RIH with Tandem 127mm x 2 meter Owen Reverse Phased Perf Guns, Loaded with 39 gram SDP-4500-411NT3 Charges @ 50 degree Phasing @ 17.5 spm. Pressure Tested Wireline Lubricator Low 1,400 kPa + High 14,000 kPa. (All Good) Correlated on Depth to Schlumberger's CBL Log Dated March 27, 2013. Perforated Twice @ 1,623.0 -1,625.0 mKB (2.0 meters) POH & Laid Down Perf Guns. All Shots had Fired 100%.
23:00	00:00	1.00	CEMENT	CIRC	P		Pre-Heated Pump Line. Established a Feedrate into Squeeze Perfs @ 0.30 m³/min @ 18,000 kPa. Pumped a Total of 1.5 m³ of Fresh Water. Bled CSG Pressure to Zero. Rec'd 1.20 m³ Fresh Water to Rig Tank.
00:00	01:45	1.75	RPEQPT	ELOG	P		Made up & RIH with Schlumberger's 178mm Cement Retainer on Wireline. Correlated on Depth to Schlumberger's CBL Log Dated March 27, 2013. Set Cement Retainer ce @ 1,615 mKB. (Top of Retainer @ 1,614.80 mKB) POH & Laid Down Running Tools.
01:45	02:45	1.00	CEMENT	CIRC	P		Pre-Heated Pump Line. Pressure Tested above Cement Retainer to 21,000 kPa. Pressure Test Held 100% for 10 mins. RO&R Schlumberger Wireline.
02:45	04:45	2.00	RPEQPT	TRIP	P		RIH with Snap Latch Stinger on 168 Jts of 60.3mm TBG. Tagged Retainer. Spaced out TBG String. (Buried a 0.65m Pup) Installed 73mm Master Valve + TBG Swivel.
04:45	06:00	1.25	CEMENT	DHEQ	P		> Stung into Retainer; Pulled TBG into Neutral. > Pressure Tested Annulus to 21,000 kPa. Pressure Test Held 100% for 10 mins. > Pressure Tested TBG to 10,000 kPa. Pressure Test Held 100% for 10 mins. > Lowered TBG + Opened Retainer. <> Pumped a Total of 3.0 m³ Potable Fresh Water through the Retainer. - Kept Pump Rate Steady at 0.40 m³/min. - Pump Pressure Started Out at 18,500 kPa and decreased to a Stable 15,500 kPa. <> Shut down Pump: ISIP = 11,000 kPa. 5 min: SITP = 10,100 kPa.

### Report Fluids Summary

Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	30.00	0.00	8.00	2.50	65.20

### Daily Costs

BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	BP PUMP LTD	Q300	40.00
Service Rig	C&J ENERGY PRODUCTION SERVICES CANADA LTD	E120	23,099.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	40.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	60.00
Wellsite Supervision & Engineering	FOCUS WELLSITE SUPERVISION LTD	T130	1,620.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00
Completion Fluids & Other Chem	IMPERIAL OIL PRODUCTS & CHEMICALS DIVISION	G300	3,447.60
Trucking/Hauling/ Hot Shot Services	MACKAY EXPEDITING & LOGISTICS	P100	787.50
Wellsite Supervision & Engineering	MKH SHORT CONSULTING LTD	T130	1,620.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 20  
Report Date: 2/20/2016  
Final Job Status: ABANDONED  
Final Report? Yes

### Daily Costs

BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	125.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	2,815.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,205.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,638.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Surface Completion Equipment Rental	ROKE TECHNOLOGIES LTD	Q300	3,600.00
Electric Line Servs on Drilling Ops.	SCHLUMBERGER CANADA LIMITED	K100	30,265.48
Downhole Completion Equipment	SCHLUMBERGER CANADA LIMITED	C100	3,575.00
Completion Fluids & Other Chem	SRP NORTH VENTURES LTD	G300	574.60
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m <sup>3</sup> )
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### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 21  
Report Date: 2/21/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code		
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079			
<b>Job Information</b>							
Job Category ABANDONMENT		Primary Job Type ABANDONMENT P&A		Secondary Job Type SURFACE CASING VENT			
				Total Field Estimate (Cost) 1,565,387.17			
<b>Objective</b> Abandon Cut and Cap							
Actual Start Date 1/16/2016 14:00		End Date 3/2/2016 18:00		Abandon Date (C&C) 3/2/2016 18:00			
		Responsible Grp 1 coved		Responsible Grp 2 lborbel			
				Responsible Grp 3 Chris Tucker			
AFE / RFE / Maint.# 10385949		Total AFE Amount (Cost) 1,310,000.00		Total AFE + Supp Amount (Cost) 1,310,000.00			
				Total Field Estimate (Cost) 1,565,147.17			
AFE / RFE / Maint.# 10385945		Total AFE Amount (Cost) 946,350.00		Total AFE + Supp Amount (Cost) 946,350.00			
				Total Field Estimate (Cost) 946,350.00			
<b>Daily Operations</b>							
Report Start Date 2/21/2016 06:00		Report End Date 2/22/2016 06:00		Daily Cost Total (Cost) 36,576.50			
				Cumulative Cost (Cost) 1,012,470.28			
				Personnel Regular Hours (hr) 242.00			
<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Michael Short, 403-348-7127; WS Supervisor, Marty Dushanek, 403-358-8911							
Tubing Pressure (kPa) 6,000		Casing Pressure (kPa) 0		Weather Clear			
				Temperature (°C) -30			
				Lease Condition good			
<b>Last 24hr Summary</b> Perform feed rate through cement retainer. Awaiting cement job. Crew Change: Continue to Fire Boiler & Jet Heater to Heat TBG Stump, Fresh Water & BOPs, Installed Schlumberger Thread Half & Hamer Valve off TBG Swivel, Organized Lease & Equipment. Wellhead Secured.							
<b>24hr Forecast</b> Perform retainer cement squeeze on Imperial Sand interval 1623.0-1625.0mKB							
Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
06:00	07:30	1.50	CEMENT	SISW	P		Drained Pump Line. Tarped in & Heated TBG Stump. Continued to Fire the Boiler and Heat Water Tanks + BOPs.
07:30	08:00	0.50	CEMENT	SFTY	P		Held pre-job safety and operations meeting with all services. Review CPC PJHA, Discuss pumping hazards/ pressure testing/ slippery lease conditions and use of traction control/ overhead loads/ hammering/wrenching/cold weather operations. -25°C discuss work and break times. use buddy system/ pinch points on floor/ high pressure lines/ overhead loads/tag lines. Review transportation plan and muster areas with all workers. All workers safety certificates checked.
08:00	09:30	1.50	CEMENT	RURD	P		Perform daily walk around inspections and checks. Inspect all equipment for leaks/spills. None found. Sweep for LEL's, no LEL's  Check well pressures: SICP- 0 SITP -6000kPa ( stung into retainer) Surface casing- vent meter installed.  Spot and rig in Canol 5K pressure truck. Tarp and heat pump with flameless heater prior to pumping. Rig in 1" treating line to tubing for feed rate.  Tank truck load 10m³ 28°C fresh potable water containing <4000mg/L TDS to feed pressure truck.  NOTE: Tank truck was pre-loaded with 1m³ raw synthetic acid in anticipation for acid job. ( Had to load from SLB early morning due to SLB performing cement job on another location today) Pressure truck will offload raw acid back into tote at SLB shop after feed rate completed.
09:30	10:30	1.00	CEMENT	CIRC	T	Non-rig Surface Eqp	Attempt to push water through pressure truck treating lines to warm. Not able to pump due to priming issues, possibly frozen valves in pump. Continued to heat pump with flameless heater and troubleshoot issues.

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 21  
Report Date: 2/21/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
10:30	13:30	3.00	CEMENT	CIRC	P		<p>Fill and warm pressure truck treating line. Pressure test line to 1.4 and 25MPa , test good.</p> <p>Pump 1m<sup>3</sup> down tubing to steady rates and warm all equipment. Slow rate and record feed rates as follows: Lowest rate pressure truck could achieve was 37L/min.</p> <p>37L/min @ 9,500kPa 50L/min @ 10,200kPa 75L/min @ 10,600kPa 100L/min @ 11,100kPa 150L/min @ 11,600kPa 200L/min @ 12,300kPa 250L/min @ 13,200kPa 300L/min @ 14,300kPa</p> <p>ISIP- 10,500kPa 10min ISIP -9,500kPa</p> <p>Send results to Louis Borbely</p> <p>Drain and winterize pressure truck. Purge line and plumbing of water for offloading acid at SLB shop.</p>
13:30	19:30	6.00	CEMENT	SVRG	P		<p>Rig crew tidy and organize lease and equipment. Transfer dirty fluid from rig tank into 400bbl tank. Install tarps under pipe racks to capture fluids when laying down tubing.</p> <p>Tarp in and heat tubing stump to avoid freezing.</p> <p>Held man down drill. Unconscious worker treated as spinal injury scenerio. Alarm sounded over radio, all workers met at muster area 1. Performed head count (8men) 2 workers went in for resucue with 1 back up. IW was collar dragged to muster area for assessment. Discussed that 2 workers if able to go in as back up. Someone to call medic to location as soon as possible via road radio LADD2. (medic on C-11 location - 500m away)</p>
19:30	19:45	0.25	RPEQPT	SFTY	P		<p>Held PJHA Meeting with All Night Shift Personnel. (7 Total) Discussed Days Objectives, Procedures &amp; Potential Hazards, Discussed Cold Temperatures, Footing, LSR's 1, 3, 4 &amp; 8, Continuing to Fire Boiler + Jet Heater to Heat TBG Stump, BOPs + Water, Hammering = Stand Clear + Watch Swing Paths, Steam/Boiler Safety, Good Communication, Proper Lighting, Cold Weather, Zero Spillage = Take Extra Time + Utilize Drip Trays, Proper Grounds, LSR # 3: Fall Arrest, LSR # 4: Overhead Equipment + LSR # 8: Safe Driving. Reviewed Transportation Plan, Emergency Phone Numbers, EMT + MTV. &gt; All Hands had 2016 Conoco Orientation + Valid Oilfield Tickets. &lt;</p>
19:45	20:00	0.25	RPEQPT	SFTY	P		<p>Held Cross-Over Meeting with Day Crew. Performed Daily Walk Around Lease Inspection.</p>
20:00	06:00	10.00	CEMENT	SISW	P		<p>Fired Boiler and Continued to Heat Water Tanks, TBG Stump + BOPs through the Night. Installed Schlumberger's Swedge + Hamer Valve off the TBG Swivel. &gt; Dug out Ground Cables + Tidied up Location.</p> <p>Held H2S Man Down Drill with Night Crew. Sounded Alarm, Met at Muster Area 1, Head Count of 7, Donned Air Pacs (Muster Area 2 was downwind of release), Performed Rescue of Injured Worker using the Two Man Carry. Revived Victim with Assistance of our on-site EMT, Made Mock Emergency Calls to Norman Wells After Hours Hospital Number. Secured Victim for Transport with MTV. Driller was to drive MTV.</p> <p>&gt; Held Post-Man Down Drill Meeting with all Hands. &gt; Discussed what we did well and where we could improve.</p>

### Report Fluids Summary

Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	18.00	0.00	10.00	0.00	75.20



# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 21  
Report Date: 2/21/2016  
Final Job Status: ABANDONED  
Final Report? Yes

### Daily Costs

BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	BP PUMP LTD	Q300	40.00
Service Rig	C&J ENERGY PRODUCTION SERVICES CANADA LTD	E120	23,084.00
Pressure Truck/Hot Oiler	CANOL OILFIELD SERVICES INC	S990	2,355.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	40.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	60.00
Wellsite Supervision & Engineering	FOCUS WELLSITE SUPERVISION LTD	T130	1,620.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00
Trucking/Hauling/ Hot Shot Services	MACKAY EXPEDITING & LOGISTICS	P100	787.50
Wellsite Supervision & Engineering	MKH SHORT CONSULTING LTD	T130	1,620.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	125.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,645.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,205.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,575.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m <sup>3</sup> )
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### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 22  
Report Date: 2/22/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079	

Job Information			
Job Category	Primary Job Type	Secondary Job Type	Total Field Estimate (Cost)
ABANDONMENT	ABANDONMENT P&A	SURFACE CASING VENT	1,565,387.17

<b>Objective</b> Abandon Cut and Cap					
Actual Start Date 1/16/2016 14:00	End Date 3/2/2016 18:00	Abandon Date (C&C) 3/2/2016 18:00	Responsible Grp 1 coved	Responsible Grp 2 lborbel	Responsible Grp 3 Chris Tucker
AFE / RFE / Maint.# 10385949	Total AFE Amount (Cost) 1,310,000.00	Total AFE + Supp Amount (Cost) 1,310,000.00	Total Field Estimate (Cost) 1,565,147.17	AFE-Field Estimate (Cost) -255,147.17	
AFE / RFE / Maint.# 10385945	Total AFE Amount (Cost) 946,350.00	Total AFE + Supp Amount (Cost) 946,350.00	Total Field Estimate (Cost)	AFE-Field Estimate (Cost) 946,350.00	

<b>Daily Operations</b>					
Report Start Date 2/22/2016 06:00	Report End Date 2/23/2016 06:00	Daily Cost Total (Cost) 143,365.01	Cumulative Cost (Cost) 1,155,835.29	Personnel Regular Hours (hr) 321.00	

<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Michael Short, 403-348-7127; WS Supervisor, Marty Dushanek, 403-358-8911					Rig C&J Energy Services, 217
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Tubing Pressure (kPa) 8,500	Casing Pressure (kPa) 0	Weather Clear	Temperature (°C) -30	Lease Condition good	
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**Last 24hr Summary**  
Perform retainer cement squeeze on Imperial Sand interval 1623.0-1625.0mKB as per program. Final squeeze pressure-11,577kPa. POH 60.3mm tubing. Installed Wireline Flange. Crew Change: Rig in E-Line, Perforated Twice from 1,170.5 - 1,173.5 mKB, POH, Take Feedrate of 0.35 m³/min @ 18,000 kPa, RIH & Set Retainer ce @ 1,160.0 mKB, P Tested above Retainer to 21,000 kPa, RO&R E-Line, RIH with J Latch Stinger on 60.3mm TBG, Spaced out, Function Tested Retainer, P Tested TBG + Annulus, Established Feedrate through Retainer, Shut in Well, Heated TBG Stump, Water Tanks + BOPs.

**24hr Forecast**  
Confer with Calgary on possible Acid squeeze on Imperial sand interval 1170.5 - 1173.5mKB

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
06:00	07:30	1.50	RPEQPT	SISW	P		Cont'd to Fire Boiler & Jet Heater to Heat TBG Stump, BOPs & Fresh Water. CREW CHANGE.
07:30	08:00	0.50	CEMENT	SFTY	P		Held pre-job safety and operations meeting with all services. Review CPC PJHA, Discuss cementing hazards/ pressure testing/ chemicals/ slippery lease conditions and use of traction control/ overhead loads/ hammering/wrenching/cold weather operations. -25°C discuss work and break times. use buddy system/ pinch points / high pressure lines/ overhead loads/tag lines/working at heights. Review transportation plan and muster areas with all workers. All workers safety certificates checked.
08:00	09:30	1.50	CEMENT	RURD	P		Perform daily walk around inspections and checks. Inspect all equipment for leaks/spills. None found. Sweep for LEL's, no LEL's  Check well pressures: SICP- 0 SITP -8500kPa ( stung into retainer) Surface casing- vent meter installed.  Spot and rig in SLB C&A pumper, batch mixers and tank truck. Install treating line onto tubing swivel. Treating line ran through flameless heater hose to keep warm. Tarp in and heat block and manifold on pumping unit.  Discuss job scope and pumping volumes with supervisor.



# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 22  
 Report Date: 2/22/2016  
 Final Job Status: ABANDONED  
 Final Report? Yes

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
09:30	15:45	6.25	CEMENT	CMNT	P		<p>Perform 3.2m<sup>3</sup> squeezeCRETE and 1.0m<sup>3</sup> G and Gas Block retainer squeeze on Imperial Sand interval 1623.0-1625.0mKB as follows:</p> <p>09:30 Prime pump and heat lines with warm fluid. (24°C clean potable water containing &lt;4000mg/L TDS)          Shut in and pressure test treating line to 33MPa. Line was freezing off at transducer and not reading accurate pressures. Re-adjusted flameless heater hose to apply heat to section of plumbing. Re- test to 33MPa, test was good.</p> <p>10:30- Pump 3.5m<sup>3</sup> potable water 100L/min to cool wellbore. Test slow rate while pumping. Able to achieve stable 12L/min @ 8600kPa in low range.</p> <p>Shut down pump.</p> <p>11:10hrs- Begin mixing chemicals for 3m<sup>3</sup> squeezeCRETE slurry. (actual 3.2m<sup>3</sup>)          11:55hrs- Slurry mixed, check density with pressurized scale - 1670kg/m<sup>3</sup></p> <p>11:57hrs- Begin pumping 3.2m<sup>3</sup> squeezeCRETE slurry 75L/min @ 11,200kPa          12:42hrs- End of 75L/min stage pressure at 530kPa</p> <p>12:42- Start mixing 1.0m<sup>3</sup> G &amp; gas block cement 1920kg/m<sup>3</sup>          12:50- Done mixing cement</p> <p>12:50hrs-Begin pumping 1.0m<sup>3</sup> G and gas block at 30L/min Start pressure 499kPa Triplex pump not engaged feeding with C-pump          13:16hrs- End of 50L/min stage pressure at 1730kPa          0.94m<sup>3</sup> under retainer</p> <p>13:16hrs- Start pumping water, Slow rate to 28L/min, pump 1.5m<sup>3</sup> water @ 850kPa starting pressure          14:11hrs- End of 28L/min stage pressure at 7500kPa          2.44m<sup>3</sup> under retainer</p> <p>14:11hrs- Slow rate to 18L/min, Pump 0.5m<sup>3</sup> water at 18L/min starting pressure @ 7474kPa          14:38hrs-End of 18L/min stage pressure at 10,000kPa          2.94m<sup>3</sup> under retainer</p> <p>14:38hrs- Slow rate to 12-15L/min, Pump 1.0m<sup>3</sup> water at 12-15L/min starting pressure @ 10,000kPa          15:46hrs-End of 12-15L/min stage pressure at 11,577kPa          3.94m<sup>3</sup> under retainer</p> <p>NOTE: attempted to get rate lower than 12-15L/min but not able to achieve a stable rate. Max pressure seen during slow rate 12,400kPa</p> <p>260L slurry left in tubing. 13 lineal meters of cement left on top of retainer. Estimated cement top @ 1601.8mKB</p>
15:45	16:45	1.00	CEMENT	CMNT	P		<p>Sting out of retainer (snap latch stinger), no issues. Tubing went on vac. Rig off SLB treating iron. Pull and lay down 20 joints slowly. Tubing pulling dry indicating cement falling out of tubing. Rig on circulating equipment to backwash tubing. End of tubing at 1423.83mKB. Backwash tubing until clean. No cement in returns.          Rig off circulating equipment.</p>
16:45	18:15	1.50	CEMENT	TRIP	P		<p>Continue to pull out of hole 60.3mm tubing and snap latch stinger. Layed down a total of 48 joints. Stood 120 joints in derrick for next interval.          Inspect snap latch stinger. All parts recovered and in good condition.</p>
18:15	19:30	1.25	CEMENT	RURD	P		<p>Rig in Lonkar wireline. Install wireline function tested 7" Bop's c/w 7 1/16"-5K Flange, torque down flange.          Rig in sheaves. Lubricator wrapped with steam line and tarped to avoid freezing.          CREW CHANGE.</p>

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 22  
Report Date: 2/22/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
19:30	20:00	0.50	RPEQPT	SFTY	P		Held PJHA Meeting with All Night Shift Personnel. (10 Total) Discussed Days Objectives, Procedures & Potential Hazards, Discussed Cold Temperatures, Footing, LSR's 1, 3, 4 & 8, E-Line Ops, Picking up Lub, Making up Perf Gun, P Testing Lub, Perforating (2 Gun Runs), Feedrate down CSG + Setting Retainer, Pre-Heat Pump Line, P Testing Retainer, Removing Wireline Flange, Rigging out E-Line, Sucking Back Displacement, RIH TBG & J Latch Stinger, Function Testing Retainer, P Testing TBG + CSG, Establishing Feedrate through the Retainer, Other Hazards; Hammering = Stand Clear + Watch Swing Paths, Steam/Boiler Safety, Good Communication, Proper Lighting, Zero Spillage = Take Extra Time + Utilize Drip Trays, LSR # 3: Fall Arrest, LSR # 4: Overhead Equipment + LSR # 8: Safe Driving + Road Radios. Reviewed Transportation Plan, Emergency Phone Numbers, EMT + MTV. > All Hands had 2016 Conoco Orientation + Valid Oilfield Tickets. <
20:00	20:15	0.25	RPEQPT	SFTY	P		Held Cross-Over Meeting with Day Crew. Performed Daily Walk Around Lease Inspection.
20:15	23:00	2.75	CEMENT	ELOG	P		Picked up Wireline Lubricator. Made up & RIH 2 x 127mm x 3 meter Owen Reverse Phased Perf Guns, Loaded with 39 gram SDP-4500-411NT3 Charges @ 50 degree Phasing @ 17.5 spm. Pressure Tested Wireline Lubricator Low 1,400 kPa + High 14,000 kPa. (All Good) Correlated on Depth to Schlumberger's CBL Log Dated March 27, 2013. Perforated Twice from 1,170.5 to 1,173.5 mKB (3.0 meters) POH & Laid Down Perf Guns. All Shots had Fired 100% on Both Guns.
23:00	23:45	0.75	CEMENT	CIRC	P		Pre-Heated Pump Line. Established a Feedrate into Squeeze Perfs @ 0.35 m³/min @ 18,000 kPa. Pumped a Total of 2.0 m³ of Fresh Water. Bled CSG Pressure to Zero. Rec'd 1.70 m³ Fresh Water to Rig Tank.
23:45	01:45	2.00	RPEQPT	ELOG	P		Made up & RIH with Schlumberger's 178mm Cement Retainer on Wireline. Correlated on Depth to Schlumberger's CBL Log Dated March 27, 2013. Set Cement Retainer ce @ 1,160.0 mKB. (Top of Retainer @ 1,159.80 mKB) POH & Laid Down Running Tools.
01:45	02:03	0.30	CEMENT	CIRC	P		Pre-Heated Pump Line. Pressure Tested above Cement Retainer to 21,000 kPa. Pressure Test Held 100% for 10 mins. RO&R Schlumberger Wireline.
02:03	03:39	1.60	RPEQPT	TRIP	P		RIH with J Latch Stinger on 120 Jts of 60.3mm TBG. Tagged Retainer. Spaced out TBG String. (Buried 3.10m + 1.25m Pup Jts) Installed 73mm Master Valve + TBG Swivel.
03:39	04:39	1.00	CEMENT	DHEQ	P		Stung into Cement Retainer. Applied 1/4 Turn to the Left. <> Pull Tested 4,000 daN into J Latch. Set down 1,000 daN below String Weight, Applied 1/4 turn to the Right. <> Pulled J Latch Stinger out of the Retainer. Stung back into Retainer, Applied 1/4 Turn to the Left. <> Pulled 1,000 daN Over String Weight. (Neutral Position in Retainer) > Pressure Tested Annulus to 21.0 MPa. > Pressure Tested TBG to 14 MPa. <> BOTH PRESSURE TESTS HELD 100% FOR 10 MINS. <> Lowered TBG, Stung in & Opened Retainer.  <> Pumped a Total of 3.0 m³ Potable Fresh Water through the Retainer. - Kept Pump Rate Steady at 0.35 m³/min. - Pump Pressure was Steady @ 19,500 kPa. - Decreased Pump Rate to 0.085 m³/min. (Slowest we could Pump) - Pumped for 10 mins. Pump Pressure was steady @ 15,000 kPa. <> Shut down Pump: ISIP = 15,000 kPa. 5 min: SITP = 13,000 kPa.
04:39	06:00	1.35	CEMENT	SISW	P		Shut in Master Valve. Drained Pump Line. Tarped in & Heated TBG Stump. Continued to Fire Boiler & Jet Heater to Heat Water Tanks, SCV, TBG Stump + BOPs.  (Jet Heater heating the SCV Broke down. Rigged in the Other Jet Heater to the SCV)

### Report Fluids Summary

Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	20.00	0.00	14.00	0.00	89.20

### Daily Costs

BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	BP PUMP LTD	Q300	40.00
Service Rig	C&J ENERGY PRODUCTION SERVICES CANADA LTD	E120	23,374.00
Completion Fluids & Other Chem	CANOL OILFIELD SERVICES INC	G300	2,095.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	40.00

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 22  
Report Date: 2/22/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Daily Costs			
BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	60.00
Wellsite Supervision & Engineering	FOCUS WELLSITE SUPERVISION LTD	T130	1,620.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00
Completion Fluids & Other Chem	HRN CONTRACTING LTD	G300	2,520.00
Trucking/Hauling/ Hot Shot Services	MACKAY EXPEDITING & LOGISTICS	P100	787.50
Wellsite Supervision & Engineering	MKH SHORT CONSULTING LTD	T130	1,620.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	125.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,055.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,638.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,510.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Cementing Services & Materials	SCHLUMBERGER CANADA LIMITED	J200	78,113.51
Electric Line Servs on Drilling Ops.	SCHLUMBERGER CANADA LIMITED	K100	21,645.00
Downhole Completion Equipment	SCHLUMBERGER CANADA LIMITED	C100	4,702.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m³)
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### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 23  
Report Date: 2/23/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA		State/Province N.W.T.		Region / Division WCBU		District NEW VENTURES		Field Name Mirror Lake		Field Code	
Surface Legal Location N20 65-00 126-45				API / UWI 300/N20 65-00 126-45/0				License No. EL 470 WID 2079			
<b>Job Information</b>											
Job Category ABANDONMENT			Primary Job Type ABANDONMENT P&A			Secondary Job Type SURFACE CASING VENT			Total Field Estimate (Cost) 1,565,387.17		
<b>Objective</b> Abandon Cut and Cap											
Actual Start Date 1/16/2016 14:00		End Date 3/2/2016 18:00		Abandon Date (C&C) 3/2/2016 18:00		Responsible Grp 1 coved		Responsible Grp 2 lborbel		Responsible Grp 3 Chris Tucker	
AFE / RFE / Maint.# 10385949		Total AFE Amount (Cost) 1,310,000.00		Total AFE + Supp Amount (Cost) 1,310,000.00		Total Field Estimate (Cost) 1,565,147.17		AFE-Field Estimate (Cost) -255,147.17			
AFE / RFE / Maint.# 10385945		Total AFE Amount (Cost) 946,350.00		Total AFE + Supp Amount (Cost) 946,350.00		Total Field Estimate (Cost)		AFE-Field Estimate (Cost) 946,350.00			
<b>Daily Operations</b>											
Report Start Date 2/23/2016 06:00		Report End Date 2/24/2016 06:00		Daily Cost Total (Cost) 35,958.50		Cumulative Cost (Cost) 1,191,793.79		Personnel Regular Hours (hr) 263.00			
<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Michael Short, 403-348-7127; WS Supervisor, Marty Dushanek, 403-358-8911										<b>Rig</b> C&J Energy Services, 217	
Tubing Pressure (kPa) 12,000		Casing Pressure (kPa) 0		Weather Clear		Temperature (°C) -30		Lease Condition good			
<b>Last 24hr Summary</b> Perform acid squeeze and feed rate through retainer on Imperial sand interval 1170.5 - 1173.5mKB, Crew Change: Fired Boiler + Jet Heater to Heat Water Tanks, TBG Stump, SCV + BOPs.											
<b>24hr Forecast</b> Perform cement squeeze through retainer on Imperial sand interval 1170.5 - 1173.5mKB											
Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation				
06:00	07:30	1.50	RPEQPT	SISW	P		Continued to Fire Boiler & Jet Heater to Heat TBG Stump, SCV, BOPs & Fresh Water. >> CREW CHANGE. <<				
07:30	08:00	0.50	CEMENT	SFTY	P		Held pre-job safety and operations meeting with all services. Review CPC PJHA, Discuss acid squeeze hazards/ pressure testing/ chemicals/ slippery lease conditions and use of traction control/ overhead loads/ hammering/wrenching/ pinch points / high pressure lines/ overhead loads/tag lines/working at heights. Review transportation plan and muster areas with all workers. All workers safety certificates checked.				
08:00	11:30	3.50	CEMENT	WAIT	T	Non-rig Surface Eqp	Wait for pressure truck with acid to arrive. Had a miscommunication with how much acid to load. Pressure truck loaded 0.5m³ too much synthetic acid in town. Got in contact with operator when en route to go back and offload 0.5m³ then travel to location.  Transfer fluids on site to make room in rig tank for cementing. Rig crew perform maintenance and clean up lease.				
11:30	12:00	0.50	CEMENT	SFTY	P		Pressure truck arrived at location. Held pre-job safety and operations meeting with all services. Review CPC PJHA, discuss acid squeeze hazards/high pressure lines/ chemicals/ proper PPE/ high pressure lines.				

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 23  
Report Date: 2/23/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
12:00	15:00	3.00	CEMENT	CIRC	P		<p>Spot and rig in pressure truck to tubing swivel. Take on 0.5m<sup>3</sup> fresh water and blend up synthetic acid. (1m<sup>3</sup> acid)</p> <p>Perform acid squeeze on interval 1170.5 - 1173.5mKB as follows:</p> <p>Fill and warm pressure truck treating line. Pressure test line to 1.4 and 28MPa , test good.</p> <p>Pump 0.2m<sup>3</sup> water down tubing to make sure acid would feed prior to filling line. Pump 1.0m<sup>3</sup> synthetic acid followed by 1.54m<sup>3</sup> water. Slow rate to 37L/min and pump 0.5m<sup>3</sup> water @ 12,500kPa. (0.5m<sup>3</sup> acid into perforations) Let acid soak for 30min. Pressure at 11,000kPa after soak. Finish pumping remainder of acid into perforations and over displace by 10m<sup>3</sup>. Perform feed rate while over displacing acid.</p> <p>Slow rate and record feed rates as follows: Lowest rate pressure truck could achieve was 37L/min.</p> <p>37L/min @ 12,400kPa 50L/min @ 12,400kPa 75L/min @ 12,600kPa 100L/min @ 13,000kPa 150L/min @ 13,600kPa 200L/min @ 14,800kPa 250L/min @ 16,000kPa 300L/min @ 17,600kPa</p> <p>ISIP- 12,500kPa 10min ISIP -12,000kPa</p> <p>Send results to Louis Borbely</p> <p>Winterize and rig out pressure truck.</p>
15:00	17:00	2.00	CEMENT	SFTY	P		Frank Barlow and Derrick Cove on location. Held safety meeting with rig crew. Discuss CPC Life Saving Rules.
17:00	19:30	2.50	CEMENT	SVRG	P		Rig crew perform maintenance. Heat wellhead and vent meter. Clean up lease and equipment.
19:30	19:45	0.25	RPEQPT	SFTY	P		Held PJHA Meeting with All Night Shift Personnel. (7 Total) Discussed Days Objectives, Procedures & Potential Hazards, Discussed Footing, Proper Lighting, LSR's 1, 3, 4 & 8, Continuing to Fire Boiler + Jet Heater to Heat TBG Stump, SCV, BOPs + Water, Hammering = Stand Clear + Watch Swing Paths, Steam/Boiler Safety, Good Communication, Zero Spillage = Take Extra Time + Utilize Drip Trays, LSR # 3: Fall Arrest, LSR # 4: Overhead Equipment + LSR # 8: Safe Driving. Reviewed Transportation Plan, Emergency Phone Numbers, EMT + MTV. > All Hands had 2016 Conoco Orientation + Valid Oilfield Tickets. <
19:45	20:00	0.25	RPEQPT	SFTY	P		Held Cross-Over Meeting with Day Crew. Performed Daily Walk Around Lease Inspection.
20:00	06:00	10.00	CEMENT	SISW	P		Fired Boiler and Continued to Heat Water Tanks, TBG Stump, SCV + BOPs through the Night. Organized Lease and Rigged out some Non-Essential Equipment.

### Report Fluids Summary

Fluid	To lease (m <sup>3</sup> )	From lease (m <sup>3</sup> )	To well (m <sup>3</sup> )	From well (m <sup>3</sup> )	Left to recover (m <sup>3</sup> )
FRESH WATER	15.00	0.00	12.50	0.00	101.70

### Daily Costs

BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	BP PUMP LTD	Q300	40.00
Service Rig	C&J ENERGY PRODUCTION SERVICES CANADA LTD	E120	22,804.00
Pressure Truck/Hot Oilier	CANOL OILFIELD SERVICES INC	S990	2,355.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	40.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	60.00
Wellsite Supervision & Engineering	FOCUS WELLSITE SUPERVISION LTD	T130	1,620.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00
Trucking/Hauling/ Hot Shot Services	MACKAY EXPEDITING & LOGISTICS	P100	787.50
Wellsite Supervision & Engineering	MKH SHORT CONSULTING LTD	T130	1,620.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 23  
Report Date: 2/23/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Daily Costs			
BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	125.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,055.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	882.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	2,150.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m³)
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### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed



# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 24  
Report Date: 2/24/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079	

Job Information			
Job Category	Primary Job Type	Secondary Job Type	Total Field Estimate (Cost)
ABANDONMENT	ABANDONMENT P&A	SURFACE CASING VENT	1,565,387.17

<b>Objective</b> Abandon Cut and Cap					
Actual Start Date 1/16/2016 14:00	End Date 3/2/2016 18:00	Abandon Date (C&C) 3/2/2016 18:00	Responsible Grp 1 coved	Responsible Grp 2 lborbel	Responsible Grp 3 Chris Tucker
AFE / RFE / Maint.# 10385949	Total AFE Amount (Cost) 1,310,000.00	Total AFE + Supp Amount (Cost) 1,310,000.00	Total Field Estimate (Cost) 1,565,147.17	AFE-Field Estimate (Cost) -255,147.17	
AFE / RFE / Maint.# 10385945	Total AFE Amount (Cost) 946,350.00	Total AFE + Supp Amount (Cost) 946,350.00	Total Field Estimate (Cost)	AFE-Field Estimate (Cost) 946,350.00	

<b>Daily Operations</b>					
Report Start Date 2/24/2016 06:00	Report End Date 2/25/2016 06:00	Daily Cost Total (Cost) 111,719.43	Cumulative Cost (Cost) 1,303,513.22	Personnel Regular Hours (hr) 297.00	

<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Michael Short, 403-348-7127; WS Supervisor, Marty Dushanek, 403-358-8911					Rig C&J Energy Services, 217
Tubing Pressure (kPa) 9,600	Casing Pressure (kPa) 0	Weather Partly Cloudy	Temperature (°C) -21	Lease Condition good	

**Last 24hr Summary**  
Perform retainer cement squeeze on Imperial Sand interval 1170.5-1173.5mKB as per program; Final squeeze pressure-12,800kPa. POH 60.3mm tubing. Crew Change: Oragnize Lease, Fire Boiler + Jet Heater; Heat Water, SCV + BOP Stack, Wellhead Secured.

**24hr Forecast**  
Wait on Wireline Tools.

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
06:00	07:30	1.50	RPEQPT	SISW	P		Continued to Fire Boiler & Jet Heater to Heat TBG Stump, SCV, BOPs & Fresh Water. >> CREW CHANGE. <<
07:30	08:00	0.50	CEMENT	SFTY	P		Held pre-job safety and operations meeting with all services. Review CPC PJHA, Discuss cement squeeze hazards/ pressure testing/ chemicals/ slippery lease conditions and use of traction control/ hammering/wrenching/ pinch points / high pressure lines/ overhead loads/tag lines/working at heights.( using ladder to remove treating hose. Review transportation plan and muster areas with all workers. All workers safety certificates checked.
08:00	09:30	1.50	CEMENT	RURD	P		Perform daily walk around inspections and checks. Inspect all equipment for leaks/spills. None found. Sweep for LEL's, no LEL's  Check well pressures: SICP- 0 SITP -9600kPa ( stung into retainer) Surface casing- vent meter installed.  Spot and rig in SLB C&A pumper, batch mixers and tank truck. Install treating line onto tubing swivel. Treating line ran through flameless heater hose to keep warm. Tarp in and heat block and manifold on pumping unit.  Discuss job scope and pumping volumes with supervisor.



# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 24  
Report Date: 2/24/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
09:30	15:00	5.50	CEMENT	CMNT	P		<p>Perform 3.24m<sup>3</sup> squeezeCRETE and 0.92m<sup>3</sup> G, no gas block retainer squeeze on Imperial Sand interval 1170.5-1173.5mKB as follows:</p> <p>09:45 Prime pump and heat lines with warm fluid. (24°C clean potable water containing &lt;4000mg/L TDS) Shut in and pressure test treating line to 31MPa.</p> <p>10:10- Pump 2.5m<sup>3</sup> potable water 100L/min to cool wellbore. Test slow rate while pumping. Able to achieve stable 10-12L/min @ 11,400kPa in low range.</p> <p>Shut down pump.</p> <p>10:45hrs- Begin mixing chemicals for 3.2m<sup>3</sup> squeezeCRETE slurry. (actual 3.24m<sup>3</sup>) (11:00hrs started mixing powder) 11:25hrs- Slurry mixed, check density with pressurized scale - 1680kg/m<sup>3</sup></p> <p>11:26hrs- Begin pumping 2.34m<sup>3</sup> squeezeCRETE slurry 75L/min @ 11,700kPa 11:59hrs- End of 75L/min stage pressure at 6100kPa</p> <p>11:59hrs- Slow rate to 50L/min, Begin pumping 0.9m<sup>3</sup> squeezeCRETE slurry 50L/min @ 5580kPa 12:17hrs- End of 50L/min stage pressure at 5990kPa 0.9m<sup>3</sup> under retainer</p> <p>12:18hrs- Start mixing 1.0m<sup>3</sup> G cement 1900kg/m<sup>3</sup> (actual 0.92m<sup>3</sup>) 12:25hrs- Done mixing cement</p> <p>12:25hrs-Begin pumping 0.9m<sup>3</sup> G at 30L/min Start pressure 5230kPa 12:57hrs- End of 30L/min stage pressure at 5400kPa 1.82m<sup>3</sup> under retainer</p> <p>12:57hrs- Start pumping water, Slow rate to 20L/min, pump 1.1m<sup>3</sup> water @ 5550kPa starting pressure 13:43hrs- End of 20L/min stage pressure at 8600kPa 2.92m<sup>3</sup> under retainer</p> <p>13:43hrs- Slow rate to 10-15L/min, Pump 1.0m<sup>3</sup> water at 10-15L/min starting pressure @ 8350kPa 15:00hrs-End of 10-15L/min stage pressure at 12,800kPa 3.92m<sup>3</sup> under retainer</p> <p>NOTE: Last 150L of squeeze, shut down 2 times for 3 min each time.</p> <p>Final squeeze pressure 12,800 kPa / 3.92m<sup>3</sup> slurry under retainer</p> <p>240L slurry left in tubing. 12 lineal meters of cement left on top of retainer. Estimated cement top @ 1147.80mKB</p>
15:00	16:00	1.00	CEMENT	CIRC	P		<p>Sting out of retainer- J-latch stinger, no issues. Tubing went on vac. Rig off SLB treating iron. Pull and lay down 10 joints slowly. Tubing pulling dry indicating cement falling out of tubing. Rig on circulating equipment to backwash tubing. End of tubing at 1058.mKB. Backwash tubing until clean. No cement in returns. Rig off circulating equipment.</p>
16:00	17:30	1.50	CEMENT	TRIP	P		<p>Continue to pull out of hole and lay down a total of 70 joints of 60.3mm tubing. Stand 50 joints of 60.3mm tubing for later use.</p>
17:30	19:30	2.00	CEMENT	OTHR	P		<p>Vac truck and steamer on location. Review CPC PJHA, discuss vac truck and steamer hazards/ high pressure wash gun/ noise levels/ working over open hatch on rig tank/ no entry into tank</p> <p>Vac truck clean out cement from rig tank from above. Not able to clean very well. Still ~2.0m<sup>3</sup> of harder cement in bottom of tank that will have to be cleaned at later date. Top up vac truck with water out of cement bins and send to disposal.</p>
19:30	19:45	0.25	RPEQPT	SFTY	P		<p>Held PJHA Meeting with All Night Shift Personnel. (7 Total) Discussed Days Objectives, Procedures &amp; Potential Hazards, Discussed Footing, Proper Lighting, LSR's 1, 3, 4 &amp; 8, Continuing to Fire Boiler + Jet Heater to Heat, SCV, BOPs + Water, Hammering = Stand Clear + Watch Swing Paths, Steam/Boiler Safety, Good Communication, Zero Spillage = Take Extra Time + Utilize Drip Trays, LSR # 3: Fall Arrest, LSR # 4: Overhead Equipment + LSR # 8: Safe Driving. Reviewed Transportation Plan, Emergency Phone Numbers, EMT + MTV. &gt; All Hands had 2016 Conoco Orientation + Valid Oilfield Tickets. &lt;</p>

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 24  
Report Date: 2/24/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
19:45	20:00	0.25	RPEQPT	SFTY	P		Held Cross-Over Meeting with Day Crew. Performed Daily Walk Around Lease Inspection.
20:00	06:00	10.00	CEMENT	SISW	P		Fired Boiler + Jet Heater and Continued to Heat Water Tanks, SCV & BOPs through the Night.

### Report Fluids Summary

Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	0.00	11.00	8.00	0.00	109.70

### Daily Costs

BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	BP PUMP LTD	Q300	40.00
Service Rig	C&J ENERGY PRODUCTION SERVICES CANADA LTD	E120	22,804.00
Completion Fluids & Other Chem	CANOL OILFIELD SERVICES INC	G300	2,290.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	40.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	60.00
Wellsite Supervision & Engineering	FOCUS WELLSITE SUPERVISION LTD	T130	1,620.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00
Completion Fluids & Other Chem	HRN CONTRACTING LTD	G300	2,200.00
Completion Fluids & Other Chem	HRN CONTRACTING LTD	G300	4,000.00
Trucking/Hauling/ Hot Shot Services	MACKAY EXPEDITING & LOGISTICS	P100	787.50
Wellsite Supervision & Engineering	MKH SHORT CONSULTING LTD	T130	1,620.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	125.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,055.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,008.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Cementing Services & Materials	SCHLUMBERGER CANADA LIMITED	J200	64,189.93
Downhole Completion Equipment	SCHLUMBERGER CANADA LIMITED	C100	1,960.00
Completion Fluids & Other Chem	TERVITA CORP	G300	5,500.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m³)

### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed



# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 24  
Report Date: 2/24/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Perforations					
Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 25  
Report Date: 2/25/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code		
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079			
<b>Job Information</b>							
Job Category ABANDONMENT		Primary Job Type ABANDONMENT P&A		Secondary Job Type SURFACE CASING VENT			
				Total Field Estimate (Cost) 1,565,387.17			
<b>Objective</b> Abandon Cut and Cap							
Actual Start Date 1/16/2016 14:00		End Date 3/2/2016 18:00		Abandon Date (C&C) 3/2/2016 18:00			
		Responsible Grp 1 coved		Responsible Grp 2 lborbel			
				Responsible Grp 3 Chris Tucker			
AFE / RFE / Maint.# 10385949		Total AFE Amount (Cost) 1,310,000.00		Total AFE + Supp Amount (Cost) 1,310,000.00			
				Total Field Estimate (Cost) 1,565,147.17			
AFE / RFE / Maint.# 10385945		Total AFE Amount (Cost) 946,350.00		Total AFE + Supp Amount (Cost) 946,350.00			
				Total Field Estimate (Cost) 946,350.00			
<b>Daily Operations</b>							
Report Start Date 2/25/2016 06:00		Report End Date 2/26/2016 06:00		Daily Cost Total (Cost) 41,602.30			
				Cumulative Cost (Cost) 1,345,115.52			
				Personnel Regular Hours (hr) 134.00			
<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Michael Short, 403-348-7127							
Tubing Pressure (kPa)		Casing Pressure (kPa) 0		Weather Cloudy			
				Temperature (°C) -16			
				Lease Condition good			
<b>Last 24hr Summary</b> Waiting on perforating guns and bridge plugs to be transported to Norman Wells. Spot and rig in Wireline for morning operations.							
<b>24hr Forecast</b> Equipment to arrive in morning. Pending on arrival of equipment perforate interval 873.0 - 874.0mKB							
Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
06:00	07:30	1.50	RPEQPT	SISW	P		Continued to Fire Boiler & Jet Heater to Heat TBG Stump, SCV, BOPs & Fresh Water. >> CREW CHANGE. <<
07:30	08:00	0.50	CEMENT	SFTY	P		Held pre-job safety and operations meeting with all services. Review CPC PJHA, Discuss slippery lease conditions and use of traction control/ hammering/wrenching/ pinch points / high pressure lines/ LOTO for maintenance on equipment. Review transportation plan and muster areas with all workers. All workers safety certificates checked.
08:00	14:30	6.50	CEMENT	WAIT	P		Waiting on perforating guns and bridge plugs to be transported to Norman Wells.  Rig crew perform maintenance on equipment and clean lease while waiting. Continue to heat water and supply heat to equipment on location.  Rig crew went down to E76 well to prep wellhead for cut and cap.
14:30	15:00	0.50	CEMENT	SFTY	P		Wireline arrived on location. Held pre-job safety and operations meeting with services. Review CPC PJHA, discuss rig in wireline hazards, lifting operations/overhead loads/ tag lines/ hammering and wrenching/using winch line and snatch blocks.
15:00	17:00	2.00	CEMENT	RURD	P		Rig in Lonkar wireline. Install wireline function tested 7" Bop's c/w 7 1/16"-5K Flange, torque down flange. Rig in sheaves. Wrap lubricator with steam line and tarp to avoid freezing.
17:00	19:30	2.50	CEMENT	OTHR	P		Rig manager on location to run boiler.
19:30	06:00	10.50	CEMENT	OTHR	P		Boiler hand on location to run boiler, supply heat to equipment.
<b>Report Fluids Summary</b>							
Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)		
FRESH WATER	0.00	13.00			109.70		
<b>Daily Costs</b>							
BU Desc	Vendor		Activity Code	Amount (Cost)			
Surface Completion Equipment Rental	BP PUMP LTD		Q300	40.00			
Service Rig	C&J ENERGY PRODUCTION SERVICES CANADA LTD		E120	17,049.00			
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD		Q300	40.00			
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD		Q300	60.00			
Wellsite Supervision & Engineering	FOCUS WELLSITE SUPERVISION LTD		T130	1,620.00			
Surface Completion Equipment Rental	HRN CONTRACTING LTD		Q300	175.00			
Completion Fluids & Other Chem	HRN CONTRACTING LTD		G300	4,000.00			
Completion Fluids & Other Chem	IMPERIAL OIL PRODUCTS & CHEMICALS DIVISION		G300	5,198.40			
Trucking/Hauling/ Hot Shot Services	MACKAY EXPEDITING & LOGISTICS		P100	787.50			
Wellsite Supervision & Engineering	MKH SHORT CONSULTING LTD		T130	1,620.00			
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD		Q300	200.00			
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD		Q300	200.00			
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD		Q300	75.00			

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 25  
Report Date: 2/25/2016  
Final Job Status: ABANDONED  
Final Report? Yes

### Daily Costs

BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	125.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,205.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,071.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Completion Fluids & Other Chem	SRP NORTH VENTURES LTD	G300	866.40
Completion Fluids & Other Chem	TERVITA CORP	G300	5,500.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m³)
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### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 26  
Report Date: 2/26/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079	

Job Information			
Job Category	Primary Job Type	Secondary Job Type	Total Field Estimate (Cost)
ABANDONMENT	ABANDONMENT P&A	SURFACE CASING VENT	1,565,387.17

<b>Objective</b> Abandon Cut and Cap					
Actual Start Date 1/16/2016 14:00	End Date 3/2/2016 18:00	Abandon Date (C&C) 3/2/2016 18:00	Responsible Grp 1 coved	Responsible Grp 2 lborbel	Responsible Grp 3 Chris Tucker
AFE / RFE / Maint.# 10385949	Total AFE Amount (Cost) 1,310,000.00	Total AFE + Supp Amount (Cost) 1,310,000.00	Total Field Estimate (Cost) 1,565,147.17	AFE-Field Estimate (Cost) -255,147.17	
AFE / RFE / Maint.# 10385945	Total AFE Amount (Cost) 946,350.00	Total AFE + Supp Amount (Cost) 946,350.00	Total Field Estimate (Cost)	AFE-Field Estimate (Cost) 946,350.00	

<b>Daily Operations</b>					
Report Start Date 2/26/2016 07:30	Report End Date 2/26/2016 18:00	Daily Cost Total (Cost) 43,811.61	Cumulative Cost (Cost) 1,388,927.13	Personnel Regular Hours (hr) 120.00	
<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Chris Tucker, 780-882-9501					Rig C&J Energy Services, 217
Tubing Pressure (kPa)	Casing Pressure (kPa) 0	Weather Cloudy	Temperature (°C) -14	Lease Condition good	

**Last 24hr Summary**  
Performed pressure volume test with pressure truck. Rigged in E-Line, RIH with 3 perf guns, Shot interval from 873mKB - 874mKB with reverse gun, normal gun and UZI gun. POOH. RIH with Temp log tool and record temp at perfs, 32.24°C at perfs. RIH with 144mm gauge ring past perfs, no issue.

**24hr Forecast**  
Set PBP 0.5m below perfs at 874.5mKB, dump 175L (equal to 8.7m) of Resin Cement on plug, pressure up as per program and let sit with pressure on well over night.

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
07:30	08:00	0.50	WELLPR	SFTY	P		Held PJHA # 02262016 meeting all personal on location. Talked about possible hazards and ways they will be avoided. Discussed today's operations and procedures and about past incidents we have had in the oil industry.
08:00	08:30	0.50	WELLPR	SFTY	P		Performed Daily walk around equipment, looked for any fuel leaks or containment spills, all good. Swept lease with gas monitor with no LELs detected.
08:30	10:30	2.00	WELLPR	ELOG	P		<p>Rigged in Pressure truck to Csg, Filled wellbore with 1.1m³ of potable water TDS&lt;4000 mg/l, with rams open to make sure there was no trapped air. Got water above rams then closed rams. Performed pressure truck test to see the volumes needed to pressure up to 7MPa and 14MPa with water in prep for pressure truck work tomorrow. Volumes and pressures as follows:</p> <p>All pumping operation performed @ 36L/min, with full wellbore of fluid down to cement top @ 1147.8mKB.</p> <p>Test #1 Pumped 95L to pressure up to 7MPa, pumped another 182L to pressure up to 14MPa. Then Bleed off to 0KPa, Open and closed Rams to confirm to trapped pressure.</p> <p>Test #2 Pumped 92L to pressure up to 7MPa, pumped another 179L to pressure up to 14MPa. Then Bleed off to 0KPa again.</p> <p>Test #3 Pumped 90L to pressure up to 7MPa, pumped another 179L to pressure up to 14MPa. Then Bleed off to 0KPa again.</p> <p>Open and closed Rams to confirm to trapped pressure or air.</p> <p>Test #4 Pumped 90L to pressure up to 7MPa, pumped another 180L to pressure up to 14MPa. Then Bleed off to 0KPa again.</p> <p>Open and closed Rams to confirm to trapped pressure or air.</p> <p>Test #5 Pumped 91L to pressure up to 7MPa, pumped another 182L to pressure up to 14MPa. Then Bleed off to 0KPa again.</p> <p>Cement top @ 1147.8m and new cement top will be @ 864.8m to start. Total 283m which is equal to 24.6%.</p> <p>Avg. 7MPa test is 91.6L and Avg 14MPa test is 180.4L</p> <p>91.6L - 24.6% = 69L to pressure up 864.8m to 7MPa 180.4L - 24.6% = 136L to pressure up 864.8m to 14MPa</p>



# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 26  
Report Date: 2/26/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
10:30	16:30	6.00	CEMENT	ELOG	P		<p>Rigged up E-Line and RIH with perfs guns to shot interval from 873-874mKB. Using switches to fire all 3 on one run.</p> <p>1. RIH with 3 guns, got to 255m and CCL stopped working, performed all diagnostics but couldnt get CCL to work, disarmed guns to POOH and found that there was also a error in the guns, so miss fire was imminent.</p> <p>Stopped at 100meters and held PJHA meeting with all personal on laying down guns and hazards involved with task.</p> <p>Switched out CCL and checked gun, found that a wire was pinched in the last gun and grounding out on carrier, fixed wire and checked guns at surface again. Ready to RIH.</p> <p>2. RIH with 3 switch guns to perforate from 873-874mKB. Logged on depth and corralated to GR/CCL and Cement Bond logs. Found short Csg joint at 850mKB.</p> <p>Pulled into postion and shot Reverse phasing gun, logged up freely. Run back down and shot Normal Phasing gun, logged up freely for 2 collars and run back own again to shot UZI. Pulled into position and shot UZI gun from 873mKB - 873.9mKB, logged up freely for 3 Csg collars. POOH.</p> <p>Checked gun carriages and all shots center fired and in good condition.</p> <p>3. RIH with Temp log tool and logged Temp strip from 880mKB to 850mKB, Temp at the perfs is 32.24°C. POOH.</p> <p>4. RIH with 144mm gauge ring (checked on location) past the perfs (PBP 139mm) made 3 passes through the perfs with no issues. POOH</p> <p>Note: No change in wellbore on any of the runs. Netural.</p>
16:30	18:30	2.00	CEMENT	SISW	P		<p>Layed down Lubicator and sheeves, rigged out E-Line truck and sent to run nights on another well.</p> <p>Drained all surface equipment, capped and secured well.</p> <p>SDFN</p>

### Report Fluids Summary

Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	0.00	63.00			109.70

### Daily Costs

BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	BP PUMP LTD	Q300	40.00
Service Rig	C&J ENERGY PRODUCTION SERVICES CANADA LTD	E120	12,869.50
Pressure Truck/Hot Oiler	CANOL OILFIELD SERVICES INC	S990	2,150.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	40.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	60.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00
Wellsite Supervision & Engineering	MKH SHORT CONSULTING LTD	T130	1,620.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	125.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,205.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,638.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Electric Line Servs on Drilling Ops.	SCHLUMBERGER CANADA LIMITED	K100	20,024.11
Wellsite Supervision & Engineering	TECTONIC ENERGY CONSULTING INC	T130	1,620.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00



# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 26  
 Report Date: 2/26/2016  
 Final Job Status: ABANDONED  
 Final Report? Yes

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m <sup>3</sup> )
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### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 27  
Report Date: 2/27/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079	

Job Information			
Job Category	Primary Job Type	Secondary Job Type	Total Field Estimate (Cost)
ABANDONMENT	ABANDONMENT P&A	SURFACE CASING VENT	1,565,387.17

<b>Objective</b> Abandon Cut and Cap					
Actual Start Date 1/16/2016 14:00	End Date 3/2/2016 18:00	Abandon Date (C&C) 3/2/2016 18:00	Responsible Grp 1 coved	Responsible Grp 2 lborbel	Responsible Grp 3 Chris Tucker
AFE / RFE / Maint.# 10385949	Total AFE Amount (Cost) 1,310,000.00	Total AFE + Supp Amount (Cost) 1,310,000.00	Total Field Estimate (Cost) 1,565,147.17	AFE-Field Estimate (Cost) -255,147.17	
AFE / RFE / Maint.# 10385945	Total AFE Amount (Cost) 946,350.00	Total AFE + Supp Amount (Cost) 946,350.00	Total Field Estimate (Cost)	AFE-Field Estimate (Cost) 946,350.00	

<b>Daily Operations</b>					
Report Start Date 2/27/2016 07:30	Report End Date 2/27/2016 18:00	Daily Cost Total (Cost) 40,947.91	Cumulative Cost (Cost) 1,429,875.04	Personnel Regular Hours (hr) 130.00	
<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Chris Tucker, 780-882-9501					<b>Rig</b> C&J Energy Services, 217
Tubing Pressure (kPa)	Casing Pressure (kPa) 0	Weather Sunny	Temperature (°C) -15	Lease Condition good	

**Last 24hr Summary**  
SICP = Slight Vac  
RIH and set PBP @ 874.5mKB to top. 874.7Mkb to CE. POOH. Mix 11 pails of resin cement (150L) dumped in bailer and RIH. POOH with clean bailer. Filled hole with water and start squeeze with pressure truck. Max volume to squeeze is 90L.

**24hr Forecast**  
Pressure test Csg to 7MPa, will be ready to RIH with gauge ring and drilling equipment if needed. Possible set PBP above Resin cement and dump bail G cement or Resin cement again.

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
07:30	08:00	0.50	WELLPR	SFTY	P		Held PJHA # 02272016 meeting all personal on location. Talked about possible hazards and ways they will be avoided. Discussed today's operations and procedures and about past incidents we have had in the oil industry.
08:00	08:30	0.50	WELLPR	SFTY	P		Performed Daily walk around equipment, looked for any fuel leaks or containment spills, all good. Swept lease with gas monitor with no LELs detected.
08:30	12:00	3.50	CEMENT	ELOG	P		<p>SICP = Slight Vac Rigged in E-line and pressure truck. Pressure tested pumping equipment and e-line to 21MPa, tests good, no leaks. E-Line operations as follows:</p> <p>1. RIH with PBP to set 0.5m below perfs @ 873-874mKB, logged on depth with GR/CCL log. Short joint @ 850mKB. Set PBP @ 874.7mKB CE, 874.5mKB top of plug. Pulled up free and clear, POOH.</p> <p>Mixed up 150L of Resin Cement as per directions for mixing. Started mixing @ 12:08hrs. Filled bail with Cement,</p> <p>2. RIH and dump bailed resin cement on PBP @ 12:57hrs. Lost 250LBs on pull weight. POOH. Stood bailer in Rig Derrick, filled BOP's with water to above rams, shut rams and ready to begin squeeze.</p>

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 27  
Report Date: 2/27/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
12:00	16:30	4.50	CEMENT	OTHR	P		<p>Squeezed as per following:</p> <p>Start pumping @ 13:18hrs. 70mins since mixing. Took 82L to get to 7MPa. 13L more then expected. Shut down pump for 10mins and pressure looked solid. Total 80 mins since mixing. Started to increase pressure to 14MPa as follows: Pumped 91L total to 8MPa, Pressure held for 10mins, 90mins since mixing Pumped 100L total to 9MPa, Pressure held for 10mins, 100mins since mixing Pumped 106L total to 10MPa, pressure held for 10mins. 110 mins since mixing Pumped 115L total to 11MPa, Pressure held for 10mins, 120mins since mixing. Pumped 129L total to 12MPa, Pressure held for 10mins, 130mins since mixing. Pumped 136L total to 13MPa, Pressure held for 10mins, 130mins since mixing. Pumped 146L total to 14MPa, pressure seems to be bleeding off slowly, Let sit for 15mins and pressure still dropping slowly. down to 10MPa. Let sit for another 15mins, pressure dropped to 8MPa. Pumped another 15L for a total of 161L pumped pressured up to 9MPa. Waited another 15mins, pressure down to 7MPa, pumped another 10L, pressured up to 8MPa. Total 171L pumped. 160mins since mixing. Waited 15mins and pressure at 6.8MPa, pumped 10L and pressured up to 7.2MPa. Total pumped 181L, 170mins since mixing. Waited 20mins and pressure at 6.5MPa, pumped 10L and pressured up to 7.3MPa, Total Pumped 191L, 180mins since mixing. Waited 20mins and pressure at 6.2MPa, pumped 10L and pressured up to 7MPa, Total Pumped 201L, 190mins since mixing. Waited 20mins and pressure at 6.2MPa, pumped 10L and pressured up to 7.0MPa, Total Pumped 211L, 190mins since mixing. Waited 20mins and pressure at 6.6MPa, pumped 10L and pressured up to 7.3MPa, Total Pumped 221L, 200mins since mixing.</p> <p>Reached max we can squeeze at 85L over what it was calcaulted it would take to pressure up to 14MPa which was 136L Shut in well and capped for night with 7.3MPa left on wellbore.</p>
16:30	17:30	1.00	RPEQPT	SISW	P		<p>Rigged out pressure truck and support equipment. Capped and secured well for night with 7.3MPa on well. Drained all surface equipment.</p> <p>Note: @ 17:30hrs pressure on Csg was at 4.3MPa.</p> <p>Vent nanny was checked to see if it was frozen. Broke off line on both ends and blew threw them with no restriction. Gauge case is tarped in and warm along with stainless steel line.</p>

### Report Fluids Summary

Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	0.00	0.00	0.00	0.00	109.70

### Daily Costs

BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	BP PUMP LTD	Q300	40.00
Service Rig	C&J ENERGY PRODUCTION SERVICES CANADA LTD	E120	11,259.00
Pressure Truck/Hot Oilier	CANOL OILFIELD SERVICES INC	S990	2,560.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	40.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	60.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,205.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	945.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Electric Line Servs on Drilling Ops.	SCHLUMBERGER CANADA LIMITED	K100	20,998.91
Wellsite Supervision & Engineering	TECTONIC ENERGY CONSULTING INC	T130	1,620.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 27  
Report Date: 2/27/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Daily Costs			
BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m³)
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### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 28  
Report Date: 2/28/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079	

Job Information			
Job Category	Primary Job Type	Secondary Job Type	Total Field Estimate (Cost)
ABANDONMENT	ABANDONMENT P&A	SURFACE CASING VENT	1,565,387.17

<b>Objective</b> Abandon Cut and Cap					
Actual Start Date 1/16/2016 14:00	End Date 3/2/2016 18:00	Abandon Date (C&C) 3/2/2016 18:00	Responsible Grp 1 coved	Responsible Grp 2 lborbel	Responsible Grp 3 Chris Tucker
AFE / RFE / Maint.# 10385949	Total AFE Amount (Cost) 1,310,000.00	Total AFE + Supp Amount (Cost) 1,310,000.00	Total Field Estimate (Cost) 1,565,147.17	AFE-Field Estimate (Cost) -255,147.17	
AFE / RFE / Maint.# 10385945	Total AFE Amount (Cost) 946,350.00	Total AFE + Supp Amount (Cost) 946,350.00	Total Field Estimate (Cost)	AFE-Field Estimate (Cost) 946,350.00	

Daily Operations				
Report Start Date 2/28/2016 07:30	Report End Date 2/28/2016 18:00	Daily Cost Total (Cost) 30,131.03	Cumulative Cost (Cost) 1,460,006.07	Personnel Regular Hours (hr) 130.00
Daily Contacts WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Chris Tucker, 780-882-9501				Rig C&J Energy Services, 217
Tubing Pressure (kPa)	Casing Pressure (kPa) 2,400	Weather Sunny	Temperature (°C) -16	Lease Condition good

**Last 24hr Summary**  
Pressure tested perfs to 7MPa for 10mins, test good. Rigged in E-Line and RIH with 144m Gauge rig to bottom of perfs @ 874mKB. POOH RIH with PBP and set 9m above perfs @ 864mKB CE. Pressure tested PBP to 7MPa for 10Mins, test good. RIH with 175L of G cement for a cap of 8.7m on plug. Cement top @ 855.1mKB. POOH. Removed BOPs and installed 73mm Tbg bull plugged hanger in wellhead. Installed Master valve on wellhead and pressure tested gasket to 21MPa with Methonal, test good.  
Performed another 10min bubble test on SCV, No flow detected, test passed.

**24hr Forecast**  
Continue with rig out operations of service rig. Send rig to town and spot in CPC yard for loading on wheeler possibly Friday. Send out equipment to be returned to home bases when possible too.

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
07:30	08:00	0.50	WELLPR	SFTY	P		Held PJHA # 02282016 meeting all personal on location. Talked about possible hazards and ways they will be avoided. Discussed todays operations and procedures and about past incidents we have had in the oil industry.
08:00	08:30	0.50	WELLPR	SFTY	P		Performed Daily walk around equipment, looked for any fuel leaks or containment spills, all good. Swept lease with gas monitor with no LELs detected.
08:30	10:30	2.00	RPEQPT	ELOG	P		SICP = 2400KPa Bleed off pressure to rig tank, pressured up on Csg to 7MPa for 10mins, test good, no bleed off. Rigged up E-Line to RIH with 144mm Gauge ring to tag cement top. Performed a 10min bubble test on SCV with NO flow detected, test passed.
10:30	14:30	4.00	RPEQPT	ELOG	P		1. RIH with 144mm gauge ring to 874mKB and tagged cement, cement top at bottom of perfs. Confirmed numbers and POOH. Checked junk basket when out of hole and there was some cement residue in basket but very little.  2. RIH with Perment Bridge Plug to 864mKB, logged on depth with GR/CCL log. Confirmed on depth, set plug at 864mKB CE. (Top @ 863.8mKB, Bottom @ 864.3mKB). POOH freely.  Pressure tested when out of hole to 7MPa for 10mins, test good with no bleed down. Mix up 175L of class G cement @ 1680kg/m in tub. Filled bailer, ready to RIH.  3. RIH with cement bailer to top of plug, hit down and seen a 230lbs drop in weight. POOH. Weights acting like cement is gone. Checked bailer when out of hole and its empty/clean. Layed down bailer and start rigging out E-Line equipment.

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 28  
Report Date: 2/28/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
14:30	18:30	4.00	RPCOMP	BOPE	P		Rigged out E-Line equipment and released E-Line crew from lease. RIH with 50 Jts of bull plugged Tbg - 482m to displace water while sucking back with rig pump. (1.35m³ displaced) POOH Lay down Tbg to catwalk. 225 jts on pipe racks. Fluid level down 67.81m from surface. Rigged out tongs and rig floor/tarps. Removed BOP's and installed 73mm bull plugged Tbg hanger in wellhead. Rubbers are good on Tbg hanger. Installed master valve top section on wellhead with new BX-156 ring gasket, pressure tested ring to 21MPa, test good. Removed some methonal from valve with barrel pump. Performed another 10min bubble test on SCV with no flow detected. test passed. Re-Installed Roke vent nanny with heat on lines. Continued rigging out equipment.
18:30	19:30	1.00	RPCOMP	SISW	P		Capped and secured well. Drained all surface equipment and SDFN. Performed another SCV bubble test with NO flow detected. Test passed.  Note; Top of perfs @ 873mKB Resin Cement top @ 874mKB, Bottom of perfs. PBP set @ 864mKB Center Element, (9m above perfs) Top @ 863.8mKB, Bottom @ 864.3mKB Class "G" 1680kg/m cement top @ 855.1mKB. Wellbore filled with Potable water TDS<4000mg/L Water level in well @ 67.81m below surface. Both Bubble tests passed.

### Report Fluids Summary

Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	0.00	5.00			109.70

### Daily Costs

BU Desc	Vendor	Activity Code	Amount (Cost)
Service Rig	C&J ENERGY PRODUCTION SERVICES CANADA LTD	E120	13,024.00
Pressure Truck/Hot Oiler	CANOL OILFIELD SERVICES INC	S990	2,150.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	40.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	60.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,205.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,890.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Electric Line Servs on Drilling Ops.	SCHLUMBERGER CANADA LIMITED	K100	7,922.03
Wellsite Supervision & Engineering	TECTONIC ENERGY CONSULTING INC	T130	1,620.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m³)

### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 28  
 Report Date: 2/28/2016  
 Final Job Status: ABANDONED  
 Final Report? Yes

Perforations					
Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed



# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 29  
Report Date: 2/29/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079	

Job Information			
Job Category	Primary Job Type	Secondary Job Type	Total Field Estimate (Cost)
ABANDONMENT	ABANDONMENT P&A	SURFACE CASING VENT	1,565,387.17

<b>Objective</b> Abandon Cut and Cap					
Actual Start Date 1/16/2016 14:00	End Date 3/2/2016 18:00	Abandon Date (C&C) 3/2/2016 18:00	Responsible Grp 1 coved	Responsible Grp 2 lborbel	Responsible Grp 3 Chris Tucker
AFE / RFE / Maint.# 10385949	Total AFE Amount (Cost) 1,310,000.00	Total AFE + Supp Amount (Cost) 1,310,000.00	Total Field Estimate (Cost) 1,565,147.17	AFE-Field Estimate (Cost) -255,147.17	
AFE / RFE / Maint.# 10385945	Total AFE Amount (Cost) 946,350.00	Total AFE + Supp Amount (Cost) 946,350.00	Total Field Estimate (Cost)	AFE-Field Estimate (Cost) 946,350.00	

<b>Daily Operations</b>					
Report Start Date 2/29/2016 07:30	Report End Date 2/29/2016 19:00	Daily Cost Total (Cost) 28,578.50	Cumulative Cost (Cost) 1,488,584.57	Personnel Regular Hours (hr) 124.00	
<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Chris Tucker, 780-882-9501					<b>Rig</b> C&J Energy Services, 217
Tubing Pressure (kPa)	Casing Pressure (kPa)	Weather Overcast	Temperature (°C) -20	Lease Condition good	

**Last 24hr Summary**  
Rig out service rig equipment. Clean tanks and pick up around lease. Move fluids as needed to move Boilers and tanks to town. Performed another 10min bubble test on SCV with NO flow detected. Test Passed.  
Clean out Back of rig tank.

**24hr Forecast**  
Finish cleaning rig tank and rigging out service rig equipment. Vent nanny monitoring well.

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
07:30	08:00	0.50	WELLPR	SFTY	P		Held PJHA # 02292016 meeting all personal on location. Talked about possible hazards and ways they will be avoided. Discussed today's operations and procedures and about past incidents we have had in the oil industry.
08:00	08:30	0.50	WELLPR	SFTY	P		Performed Daily walk around equipment, looked for any fuel leaks or containment spills, all good. Swept lease with gas monitor with no LELs detected.
08:30	15:00	6.50	RPCOMP	DMOB	P		Rig out service rig equipment. Loaded out fluids from tanks and rig tank. Layed derrick over and prepared blocks and some line so it is easier to remove derrick in CPC yard on Friday. Cleaned up around lease. Performed another 10min SCVF bubble test with NO flow detected, test passed. Moved rig to town and plugged in in CPC yard to light Tower, ready to remove derrick and send back to Sylvan Lake when trucks arrive.
15:00	19:00	4.00	RPCOMP	DMOB	P		Vac Truck and steamer arrived on location at 1500hrs. Held PJHA meeting on confined space entry for rig tank cleaning. Printed off CPC COP on confined space entry and filled out paper work. C&J Confined Space entry also discussed and completed. Started work on cleaning rig tank. Cement in tank was hard, estimate 2m³ of cement. Taking long time to clean, Finished loading Vac truck with dirty water and sent to disposal. Will finish cleaning tank in AM with a new empty Vac truck.  Note; Top of perfs @ 873mKB Resin Cement top @ 874mKB, Bottom of perfs. PBP set @ 864mKB CE, (9m above perfs) Top @ 863.8mKB, Bottom @ 864.3mKB Class "G" 1680kg/m cement top @ 855.1mKB. Wellbore filled with Potable water TDS<4000mg/L Water level in well @ 67.81m below surface. Both Bubble tests passed.

<b>Report Fluids Summary</b>					
Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	0.00	21.00			109.70

<b>Daily Costs</b>			
BU Desc	Vendor	Activity Code	Amount (Cost)
Service Rig	C&J ENERGY PRODUCTION SERVICES CANADA LTD	E120	12,621.50
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	40.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	60.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00
Completion Fluids & Other Chem	HRN CONTRACTING LTD	G300	1,500.00

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 29  
Report Date: 2/29/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Daily Costs			
BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,205.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,512.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Wellsite Supervision & Engineering	TECTONIC ENERGY CONSULTING INC	T130	1,620.00
Completion Fluids & Other Chem	TERVITA CORP	G300	8,000.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00

Cumulative Job Flared Gas By Zone	
Zone	Volume Gas Total (E3m³)

Perforations					
Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 30  
Report Date: 3/1/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079	

Job Information			
Job Category	Primary Job Type	Secondary Job Type	Total Field Estimate (Cost)
ABANDONMENT	ABANDONMENT P&A	SURFACE CASING VENT	1,565,387.17

<b>Objective</b> Abandon Cut and Cap					
Actual Start Date 1/16/2016 14:00	End Date 3/2/2016 18:00	Abandon Date (C&C) 3/2/2016 18:00	Responsible Grp 1 coved	Responsible Grp 2 lborbel	Responsible Grp 3 Chris Tucker
AFE / RFE / Maint.# 10385949	Total AFE Amount (Cost) 1,310,000.00	Total AFE + Supp Amount (Cost) 1,310,000.00	Total Field Estimate (Cost) 1,565,147.17	AFE-Field Estimate (Cost) -255,147.17	
AFE / RFE / Maint.# 10385945	Total AFE Amount (Cost) 946,350.00	Total AFE + Supp Amount (Cost) 946,350.00	Total Field Estimate (Cost)	AFE-Field Estimate (Cost) 946,350.00	

<b>Daily Operations</b>					
Report Start Date 3/1/2016 07:30	Report End Date 3/1/2016 18:00	Daily Cost Total (Cost) 30,102.50	Cumulative Cost (Cost) 1,518,687.07	Personnel Regular Hours (hr) 124.00	
<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Chris Tucker, 780-882-9501					<b>Rig</b> C&J Energy Services, 217
Tubing Pressure (kPa)	Casing Pressure (kPa)	Weather Sunny	Temperature (°C) -15	Lease Condition good	

**Last 24hr Summary**  
Finish cleaning cement out of rig tank, completed rig out of service rig equipment.  
Performed 10min SCV bubble test, NO flow detected. Test passed. Broke down SCV and checked nothing is frozen or blocked, all clear.  
Dumped 2 liters of environmentally friendly anti-freeze down SCV elbow, all clear.  
Removed Vent Nanny from SCV. Heat still on wellhead.

**24hr Forecast**  
Haul out equipment to CPC yard. Ready for cut and cap operations.

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
07:30	08:00	0.50	WELLPR	SFTY	P		Held PJHA # 03012016 meeting all personal on location. Talked about possible hazards and ways they will be avoided. Discussed today's operations and procedures and about past incidents we have had in the oil industry. Covered confined space entry forms with all personal and reviewed CPC COP on Confined Space.
08:00	08:30	0.50	WELLPR	SFTY	P		Performed Daily walk around equipment, looked for any fuel leaks or containment spills, all good. Swept lease with gas monitor with no LELs detected.
08:30	14:30	6.00	RPCOMP	DMOB	P		Performed another bubble test on SCV with NO flow detected for 10mins, test passed. Broke down SCV and checked nothing is frozen or blocked, all clear. Dumped 2 liters of environmentally friendly anti-freeze down SCV elbow, all clear. Removed vent nanny from SCV. Rigged in Steamer and Semi-vac truck to clean remaining cement and water from rig tank. Put tarps on wellhead and continue heating with flameless heater. Washed rig tank with steamer and ready for transport back to home base. Loaded out 2 boilers (1 dropped off on O-06 lease) Loaded out Recycle bin to CPC yard in Norman Wells. Loaded TBG and sent to O-06 lease. Hauled out all fluid off location and sent to disposal.

<b>Report Fluids Summary</b>					
Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	0.00	0.00	0.00	0.00	109.70

<b>Daily Costs</b>			
BU Desc	Vendor	Activity Code	Amount (Cost)
Service Rig	C&J ENERGY PRODUCTION SERVICES CANADA LTD	E120	12,621.50
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	1,095.00
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	434.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	40.00
Surface Completion Equipment Rental	CENTRAL MACKENZIE ENVIRONMENTAL LTD	Q300	60.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00
Completion Fluids & Other Chem	HRN CONTRACTING LTD	G300	1,500.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	70.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 30  
Report Date: 3/1/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Daily Costs			
BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	1,205.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,512.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Wellsite Supervision & Engineering	TECTONIC ENERGY CONSULTING INC	T130	1,620.00
Completion Fluids & Other Chem	TERVITA CORP	G300	8,000.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m³)
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### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 31  
Report Date: 3/2/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079	
<b>Job Information</b>					
Job Category ABANDONMENT		Primary Job Type ABANDONMENT P&A		Secondary Job Type SURFACE CASING VENT	
					Total Field Estimate (Cost) 1,565,387.17
<b>Objective</b> Abandon Cut and Cap					
Actual Start Date 1/16/2016 14:00		End Date 3/2/2016 18:00		Abandon Date (C&C) 3/2/2016 18:00	
		Responsible Grp 1 coved		Responsible Grp 2 lborbel	
				Responsible Grp 3 Chris Tucker	
AFE / RFE / Maint.# 10385949		Total AFE Amount (Cost) 1,310,000.00		Total AFE + Supp Amount (Cost) 1,310,000.00	
				Total Field Estimate (Cost) 1,565,147.17	
				AFE-Field Estimate (Cost) -255,147.17	
AFE / RFE / Maint.# 10385945		Total AFE Amount (Cost) 946,350.00		Total AFE + Supp Amount (Cost) 946,350.00	
				Total Field Estimate (Cost) 946,350.00	
				AFE-Field Estimate (Cost) 946,350.00	
<b>Daily Operations</b>					
Report Start Date 3/2/2016 07:30		Report End Date 3/2/2016 18:00		Daily Cost Total (Cost) 19,452.50	
				Cumulative Cost (Cost) 1,538,139.57	
				Personnel Regular Hours (hr) 136.00	
<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; Abandonment Engineer, Louis Borbely, 403-650-3939; WS Supervisor, Chris Tucker, 780-882-9501					
Tubing Pressure (kPa)		Casing Pressure (kPa)		Weather Overcast	
				Temperature (°C) -15	
				Lease Condition good	
<b>Last 24hr Summary</b> Moved equipment off lease back to CPC yard Norman Wells. Excavated around wellhead for cut and cap purposes. Performed SCV 10min bubble test, NO flow detected, test passed. Broke down SCV to ensure there isnt any blockages. Cut and Capped, well.					
<b>24hr Forecast</b> Finish moving equipment, turn over to Construction					
Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X
07:30	08:00	0.50	WELLPR	SFTY	P
Operation Held PJHA # 03022016 meeting all personal on location. Talked about possible hazards and ways they will be avoided. Discussed todays operations and procedures and about past incidents we have had in the oil industry. Covered confined space entry forms with all personal and reviewed CPC COP on Confined Space.					
08:00	08:30	0.50	WELLPR	SFTY	P
Operation Performed Daily walk around equipment, looked for any fuel leaks or containment spills, all good. Swept lease with gas monitor with no LELs detected.					
08:30	14:00	5.50	RPCOMP	DMOB	P
Operation Moved service rig equipment to town. Positioned equipment left on location for easy loading for tomorrow. Moved most rentals alos to CPC yard in Norman Wells. Performed a 10min SCV flow bubble test with NO flow detected. Test passed. Broke down SCV to make sure there isnt any blockages in lines, and there wasnt any. Ready to start Cut and Cap operations with WSS Mike Flett.					
14:00	14:30	0.50	RPCOMP	SFTY	P
Operation Held a PJHA # 03022016 with NuWave Industries, HRN track hoe operator on cutting and capping the well. Discussed removing the wellhead components, spotting/rigging up, NuWave's Ultra High Pressure Jet Cutter Procedure, cold weather and the associated hazards. Reviewed the site ERP and Injured Worker Transportation Plan with crew members. Crew members safety tickets and orientations checked and valid.					
14:30	16:30	2.00	RPCOMP	RTWH	P
Operation Spotted NuWave truck. Set casing cutting tool for 2.59 meters which places the vented cap at 1.5 meters below ground level. Rigged in cutting tool and performend the cut. Rigged out cutting tool. Pulled the csg flange and csg out and conductor barrel of the cellar with the track hoe. There may have been a few small pieces of cement that had fell down in to the production csg when the assembly was pulled from the cellar. Welded the UWI and date on the vented casing camp w/centrilizer and installed it in the 114.3 mm production casing. Cleaned up all tools and equipment. Released contractors. See Cut & Cap pictures in Attachments. Cut off pipe segment measurements:  Production casing: 2.43 meters Surface: 1.90 meters Conductor: 1.67 meters  The wellhead assembly will sent to Stream Flo in Edmonton, AB. SDFN.					

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 31  
Report Date: 3/2/2016  
Final Job Status: ABANDONED  
Final Report? Yes

### Report Fluids Summary

Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	25.00	41.20			109.70

### Daily Costs

BU Desc	Vendor	Activity Code	Amount (Cost)
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	2,465.00
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	2,200.00
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	1,950.00
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	1,447.50
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	2,130.00
Surface Completion Equipment Rental	HRN CONTRACTING LTD	Q300	175.00
Completion Fluids & Other Chem	HRN CONTRACTING LTD	G300	2,650.00
Pressure Truck/Hot Oiler	NUWAVE INDUSTRIES INC	S990	3,140.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	200.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	185.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	PBN ENERGY SERVICES LTD	Q300	75.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Wellsite Supervision & Engineering	TECTONIC ENERGY CONSULTING INC	T130	1,620.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00

### Cumulative Job Flared Gas By Zone

Zone	Volume Gas Total (E3m³)

### Perforations

Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed



# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 32  
Report Date: 3/3/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079	

Job Information			
Job Category	Primary Job Type	Secondary Job Type	Total Field Estimate (Cost)
ABANDONMENT	ABANDONMENT P&A	SURFACE CASING VENT	1,565,387.17

<b>Objective</b> Abandon Cut and Cap					
Actual Start Date 1/16/2016 14:00	End Date 3/2/2016 18:00	Abandon Date (C&C) 3/2/2016 18:00	Responsible Grp 1 coved	Responsible Grp 2 lborbel	Responsible Grp 3 Chris Tucker
AFE / RFE / Maint.# 10385949	Total AFE Amount (Cost) 1,310,000.00	Total AFE + Supp Amount (Cost) 1,310,000.00	Total Field Estimate (Cost) 1,565,147.17	AFE-Field Estimate (Cost) -255,147.17	
AFE / RFE / Maint.# 10385945	Total AFE Amount (Cost) 946,350.00	Total AFE + Supp Amount (Cost) 946,350.00	Total Field Estimate (Cost)	AFE-Field Estimate (Cost) 946,350.00	

<b>Daily Operations</b>					
Report Start Date 3/3/2016 07:30	Report End Date 3/3/2016 17:30	Daily Cost Total (Cost) 15,497.00	Cumulative Cost (Cost) 1,553,636.57	Personnel Regular Hours (hr) 60.00	
<b>Daily Contacts</b> WS Superintendent, Derrick Cove, 780-831-1314; WS Supervisor, Mike Flett, 780-933-4595; Abandonment Engineer, Louis Borbely, 403-650-3939					Rig C&J Energy Services, 217
Tubing Pressure (kPa)	Casing Pressure (kPa)	Weather Overcast	Temperature (°C) -20	Lease Condition Icy/Snow covered	

**Last 24hr Summary**  
MIRU Cascade steamer and Clean Harbors semi vac, HRN track hoe. Hydro vaced/Steamed the mouse hole csg jt, rat hole csg jt. TOTC (Mac Watson) and he removed the mouse hole csg jt, could not pull the rat hole csg jt, cut it off 2 m below ground level. removed the cement from the cellar and filled in the mouse hole, rat hole and the cellar area.

**24hr Forecast**  
Ready for reclamation TOTC (Mac Watson 780-865-6368).

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
07:30	08:00	0.50	RPCOMP	SFTY	P		Held a PJHA # 03032016 with Cascade steamer crew, Clean Harbors vac crew, HRN track hoe operator. Discussed Hydro vac/steaming operations, Filling the mouse hole csg jt and rat hole csg jt with hot water and removing the mouse hole csg jt and the rat hole csg, heavy lifting, cold weather, Reviewed transportation plan/medic location, lease conditions, muster area and the associated hazards. Reviewed the Site ERP and Injured Worker Transportation Plan with crew members. Safety tickets, orientations checked and valid.
08:00	17:30	9.50	RPCOMP	RTWH	P		Spotted the vac truck and the steamer unit. Cleared the mouse hole csg jt and rat hole of ice, filled with 150°C water and heated with a 1" steam hose. Rigged out the steamer and vac truck. Turned over to (Mac Watson 780-865-6368) with construction, They spotted the track hoe, hooked up the rated sling. Pulled and removed the jt of csg from the mouse hole and put it off to the side of the lease. Worked at pulling the rat hole csg jt, but could not pull out the rat hole csg jt, cut it off 2 m below ground level. They removed the cement from the cellar area, hauled in fill and filled in the rat hole, mouse hole and the cellar area. SDFN.

<b>Report Fluids Summary</b>					
Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	0.00	0.00	0.00	0.00	109.70

<b>Daily Costs</b>			
BU Desc	Vendor	Activity Code	Amount (Cost)
Surface Completion Equipment Rental	BP PUMP LTD	Q300	240.00
Completion Fluids & Other Chem	BP PUMP LTD	G300	600.00
Pressure Truck/Hot Oiler	CANOL OILFIELD SERVICES INC	S990	3,708.00
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	1,100.00
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	434.00
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	4,290.00
Trucking/Hauling/ Hot Shot Services	CANOL OILFIELD SERVICES INC	P100	2,640.00
Wellsite Supervision & Engineering	MJ'S WELLSITE SUPERVISION LTD	T130	1,620.00
Surface Completion Equipment Rental	RIGSAT COMMUNICATIONS INC	Q300	15.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	450.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	350.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	50.00

<b>Cumulative Job Flared Gas By Zone</b>	
Zone	Volume Gas Total (E3m³)



# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 32  
Report Date: 3/3/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Perforations					
Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 33  
Report Date: 3/9/2016  
Final Job Status: ABANDONED  
Final Report? Yes

Country CANADA	State/Province N.W.T.	Region / Division WCBU	District NEW VENTURES	Field Name Mirror Lake	Field Code
Surface Legal Location N20 65-00 126-45		API / UWI 300/N20 65-00 126-45/0		License No. EL 470 WID 2079	

Job Information			
Job Category	Primary Job Type	Secondary Job Type	Total Field Estimate (Cost)
ABANDONMENT	ABANDONMENT P&A	SURFACE CASING VENT	1,565,387.17

<b>Objective</b> Abandon Cut and Cap					
Actual Start Date 1/16/2016 14:00	End Date 3/2/2016 18:00	Abandon Date (C&C) 3/2/2016 18:00	Responsible Grp 1 coved	Responsible Grp 2 lborbel	Responsible Grp 3 Chris Tucker
AFE / RFE / Maint.# 10385949	Total AFE Amount (Cost) 1,310,000.00	Total AFE + Supp Amount (Cost) 1,310,000.00	Total Field Estimate (Cost) 1,565,147.17	AFE-Field Estimate (Cost) -255,147.17	
AFE / RFE / Maint.# 10385945	Total AFE Amount (Cost) 946,350.00	Total AFE + Supp Amount (Cost) 946,350.00	Total Field Estimate (Cost)	AFE-Field Estimate (Cost) 946,350.00	

<b>Daily Operations</b>					
Report Start Date 3/9/2016 07:30	Report End Date 3/9/2016 12:00	Daily Cost Total (Cost) 11,750.60	Cumulative Cost (Cost) 1,565,387.17	Personnel Regular Hours (hr) 24.00	
<b>Daily Contacts</b>					Rig C&J Energy Services, 217
Tubing Pressure (kPa)	Casing Pressure (kPa)	Weather Overcast	Temperature (°C) -15	Lease Condition Icy/Snow covered	

**Last 24hr Summary**  
Loaded wellsite shack, generator and sewer tank. All equipment off location  
Performed walk around to ensure no garbage or equipment is left. Lease clean.

**24hr Forecast**  
Lease ready for construction to finish work on lease and pull road out. Final report.

Start Time	End Time	Dur (hr)	Op Code	Activity Code	Time P-T-X	Trbl Code	Operation
07:30	08:00	0.50	RPCOMP	SFTY	P		Held a PJHA # 03092016 with Cascade steamer crew, PBN vac crew. Discussed vac truck/steaming operations, Reviewed transportation plan/medic location, lease conditions, muster area and the associated hazards. Reviewed the Site ERP and Injured Worker Transportation Plan with crew members. Safety tickets, orientations checked and valid.
08:00	12:00	4.00	RPCOMP	RTWH	P		Spotted the vac truck and the steamer unit. Heated frozen sewer tank and vacuumed out with PBN vac truck. Trumpter worker rigged out Wellsite shack for moving to town. Loaded Wellsite shack, generator and sewer tank on winch tractor and bed truck. Sent to Norman Wells. Performed walk around lease to ensure no equipment or garbage is left on lease, all clear. Lease ready for construction to finish what is needed. Final Report.

<b>Report Fluids Summary</b>					
Fluid	To lease (m³)	From lease (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	0.00	0.00	0.00	0.00	109.70

<b>Daily Costs</b>			
BU Desc	Vendor	Activity Code	Amount (Cost)
Pressure Truck/Hot Oilier	CANOL OILFIELD SERVICES INC	S990	2,300.00
Completion Fluids & Other Chem	PBN ENERGY SERVICES LTD	G300	1,480.60
Wellsite Supervision & Engineering	TECTONIC ENERGY CONSULTING INC	T130	1,620.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	2,700.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	2,100.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	300.00
Completion Fluids & Other Chem	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	G300	750.00
Completion Fluids & Other Chem	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	G300	300.00
Surface Completion Equipment Rental	TRUMPETER CAMP COMPANY PARTNERSHIP LTD	Q300	200.00

<b>Cumulative Job Flared Gas By Zone</b>	
Zone	Volume Gas Total (E3m³)

<b>Perforations</b>					
Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
3/27/2013	Basal Lower Canol, Original Hole	2,059.00	2,060.00	20.0	Squeezed
3/28/2013	Middle Lower Canol, Original Hole	2,023.00	2,024.00	20.0	Squeezed
3/28/2013	Upper Lower Canol, Original Hole	1,993.00	1,994.00	20.0	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,068.00	2,070.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed
2/8/2016	Basal Lower Canol, Original Hole	2,015.00	2,017.00	17.5	Squeezed

# Daily Morning Report

## COPRC MIRROR LAKE N-20 65-00 126-45

Report #: 33  
 Report Date: 3/9/2016  
 Final Job Status: ABANDONED  
 Final Report? Yes

Perforations					
Date	Zone	Top (mKB)	Btm (mKB)	Shot Dens (shots/m)	Current Status
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/14/2016	Upper Lower Canol, Original Hole	1,938.00	1,940.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/17/2016	Imperial , Original Hole	1,906.00	1,908.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/20/2016	Imperial , Original Hole	1,623.00	1,625.00	17.5	Squeezed
2/22/2016	Imperial , Original Hole	1,170.50	1,173.50	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	874.00	17.5	Squeezed
2/26/2016	Basal Lower Canol, Original Hole	873.00	873.90	108.0	Squeezed

## **Appendix 4     Fluid Summary**

# Fluids Summary

## COPRC MIRROR LAKE N-20 65-00 126-45

### LEASE FLUID NOTE

1) If FRESH WATER has been selected as your FLUID TYPE please make sure the SOURCE library pick list is populated with one of the following (Mandatory)

- CREEK
- DUGOUT
- LAKE
- MUNICIPAL
- RIVER

2) Continue to populate the NOTE section with additional SOURCE location details

### LEASE FLUIDS

Start Date	Fluid	To Lease (m³)	Source	From Lease (m³)	Dest	Manifest Number	Permit Number / TDL	Vendor	Note
1/27/2016	FRESH WATER	2.50	E-76 65-10 126-45					CANOL OILFIELD...	Water brought over in steamer
2/6/2016	FRESH WATER	21.00	E-76 65-00 126-45		Tank Farm			CANOL OILFIELD...	
2/6/2016	FRESH WATER	16.50	E-76 65-00 126-45		Boiler			CANOL OILFIELD...	
2/6/2016	FRESH WATER	11.50	MUNICIPAL		400bbl tank	5255		PBN ENERGY SE...	
2/8/2016	FRESH WATER	11.50	MUNICIPAL		Tank Farm	5256		PBN ENERGY SE...	
2/9/2016	FRESH WATER	11.50	MUNICIPAL		Tank Farm	5258		PBN ENERGY SE...	
2/11/2016	FRESH WATER	11.00	MUNICIPAL		Tank Farm	5260		PBN ENERGY SE...	
2/13/2016	FRESH WATER		WELL	65.00	P-20 65-00 126-45			CANOL OILFIELD...	
2/13/2016	FRESH WATER	11.60	MUNICIPAL		Tank Farm	5265		PBN ENERGY SE...	
2/13/2016	FRESH WATER	11.10	MUNICIPAL		Tank Farm	5264		PBN ENERGY SE...	
2/14/2016	FRESH WATER	33.70	MUNICIPAL		400BBL tank	5268		PBN ENERGY SE...	fresh potable water containing <4000mg/L TDS
2/15/2016	FRESH WATER	27.60	MUNICIPAL		400BBL tank	5269		PBN ENERGY SE...	fresh potable water containing <4000mg/L TDS
2/15/2016	FRESH WATER	6.00	MUNICIPAL		Boiler	5269		PBN ENERGY SE...	fresh potable water containing <4000mg/L TDS
2/15/2016	FRESH WATER	1.00	SLB		WELL			SCHLUMBERGER...	raw synthetic acid
2/16/2016	FRESH WATER	26.00	P-20 65-00 126-45		400bbl tank			CANOL OILFIELD...	26m³ transferd to location into slop tank awaiting di...
2/17/2016	FRESH WATER	22.90	MUNICIPAL		400bbl	5270		PBN ENERGY SE...	fresh potable water containing <4000mg/L TDS
2/18/2016	FRESH WATER	22.50	MUNICIPAL		400bbl	5272		PBN ENERGY SE...	fresh potable water containing <4000mg/L TDS
2/18/2016	FRESH WATER	1.00	schlumberger		well			SCHLUMBERGER...	raw synthetic acid
2/19/2016	FRESH WATER		400bbl	28.00	Disposal Tervita Mil...	09065	BL31818-1	CANOL OILFIELD...	Transfer fluid to Tervita Mile103 for disposal
2/20/2016	FRESH WATER	30.00	MUNICIPAL		400bbl	5053		PBN ENERGY SE...	fresh potable water containing <4000mg/L TDS
2/21/2016	FRESH WATER		400bbl		Boiler			PBN ENERGY SE...	transfer 6m³ potable water from 400bbl into boiler
2/21/2016	FRESH WATER	18.00	C-11 65-10 126-45		400bbl			PBN ENERGY SE...	Transfer 18m³ dirty water from C-11 65-10 126-45...
2/22/2016	FRESH WATER	15.00	MUNICIPAL		400bbl	5056		PBN ENERGY SE...	fresh potable water containing <4000mg/L TDS
2/22/2016	FRESH WATER	5.00	C-11 65-10 126-45		400bbl			PBN ENERGY SE...	Lease transfer fresh potable water containing <400...
2/23/2016	FRESH WATER	15.00	MUNICIPAL		400bbl	5058		PBN ENERGY SE...	fresh potable water containing <4000mg/L TDS
2/24/2016	FRESH WATER				ENVIRONMENT	N/A			Water Used by Boiler
2/24/2016	FRESH WATER		rig tank/ cement...	11.00	DISPOSAL Tervita...	538733	BL31820-7	HRN CONTRACTI...	25m³ total ( 11m³ from N20) material from hydrova...
2/25/2016	FRESH WATER		400bbl/ cement...	13.00	DISPOSAL Tervita...	BOL540072	BL31819-9	HRN CONTRACTI...	25m³ total ( 13m³ from N20) material from hydrova...
2/26/2016	FRESH WATER			35.00	DISPOSAL	BL31822-3/...		CLEAN HARBORS...	Silver Berry Tervita 16-7-88-20w6
2/26/2016	FRESH WATER			28.00	DISPOSAL	BL31821-5/...		CLEAN HARBORS...	Silver Berry Tervita 16-7-88-20w6

# Fluids Summary

## COPRC MIRROR LAKE N-20 65-00 126-45

### LEASE FLUID NOTE

- 1) If FRESH WATER has been selected as your FLUID TYPE please make sure the SOURCE library pick list is populated with one of the following (Mandatory)
  - CREEK
  - DUGOUT
  - LAKE
  - MUNICIPAL
  - RIVER
- 2) Continue to populate the NOTE section with additional SOURCE location details

### LEASE FLUIDS

Start Date	Fluid	To Lease (m³)	Source	From Lease (m³)	Dest	Manifest Number	Permit Number / TDL	Vendor	Note
2/28/2016	FRESH WATER		400bbl	5.00	P-20 65-00 126-45			CANOL OILFIELD...	Hauled to P-20 65-00 126-45 for heating in 400bbl
2/29/2016	FRESH WATER			21.00	DISPOSAL	BL31823-1/...		CANOL OILFIELD...	waste water and cement to Tervita
3/2/2016	FRESH WATER			21.00	DISPOSAL	BL31825-6/...		CANOL OILFIELD...	Sent to Tervita Mile 103
3/2/2016	FRESH WATER			20.20	O-06 65-10 127-0	BL 31795-1...		CANOL OILFIELD...	Sent to O-06 well for storage in 400bbl Tank
3/2/2016	FRESH WATER	14.00	MUNICIPAL					HRN CONTRACTI...	2 days Water truck to fill liners (Mouse/Rat)
3/2/2016	FRESH WATER	11.00	MUNICIPAL			3208		CANOL OILFIELD...	2 days Steamer water to thaw liners

### WELL FLUIDS

Start Date	Fluid	To (m³)	From (m³)	Dens (kg/m³)	Non-recov (m³)	Zone	Note
1/27/2016	FRESH WATER	2.50		1,000.00		Upper Lower Canol, Original...	fresh water to fill and presure test casing.
2/8/2016	FRESH WATER	4.00				Upper Lower Canol, Original...	
2/11/2016	FRESH WATER	2.00				Upper Lower Canol, Original...	
2/14/2016	FRESH WATER	2.00		1,000.00		Upper Lower Canol, Original...	Fill and breakdown- fresh water containing <4000mg/L TDS
2/15/2016	FRESH WATER	1.00		1,072.00		Upper Lower Canol, Original...	used to blend 2m³ synthetic acid for squeeze
2/15/2016	FRESH WATER	14.00		1,000.00		Upper Lower Canol, Original...	fresh potable water containing <4000mg/L TDS squeeze and over displace...
2/15/2016	FRESH WATER		3.70	1,000.00		Upper Lower Canol, Original...	recovered while spotting acid
2/15/2016	FRESH WATER		1.70	1,000.00		Upper Lower Canol, Original...	pipe displacement running in hole
2/16/2016	FRESH WATER	3.00		1,660.00		Upper Lower Canol, Original...	water used to mix 5.8m³ squeezeCRETE cement
2/16/2016	FRESH WATER	8.00		1,000.00		Upper Lower Canol, Original...	fresh potable water containing <4000mg/L TDS cool well prior to cementing
2/16/2016	FRESH WATER	3.50		1,000.00		Upper Lower Canol, Original...	fresh potable water containing <4000mg/L TDS squeeze cement
2/17/2016	FRESH WATER	2.50		1,000.00		Imperial , Original Hole	fresh potable water containing <4000mg/L TDS fill hole and feedrate
2/17/2016	FRESH WATER		1.50	1,000.00		Imperial , Original Hole	Steel Displacement
2/18/2016	FRESH WATER	15.00		1,000.00		Imperial , Original Hole	fresh potable water containing <4000mg/L TDS used for acid squeeze
2/18/2016	FRESH WATER	2.00		1,060.00		Imperial , Original Hole	2m³ synthetic acid for squeeze
2/18/2016	FRESH WATER		5.00	1,000.00		Imperial , Original Hole	Recovered while circulating down acid and breaking circulation
2/19/2016	FRESH WATER	4.00		1,000.00		Imperial , Original Hole	fresh potable water containing <4000mg/L TDS cool well prior to cementing
2/19/2016	FRESH WATER	3.60		1,000.00		Imperial , Original Hole	fresh potable water containing <4000mg/L TDS squeeze cement
2/19/2016	FRESH WATER	3.00		1,000.00		Imperial , Original Hole	fresh potable water containing <4000mg/L TDS to mix cement
2/19/2016	FRESH WATER	1.50		1,000.00		Imperial , Original Hole	Hole Fill
2/20/2016	FRESH WATER	1.50		1,000.00		Imperial , Original Hole	Water Pumped down CSG for Feedrate and pressure test
2/20/2016	FRESH WATER		1.20	1,000.00		Imperial , Original Hole	Water Recovered Bleeding off pressure after feedrate



# Fluids Summary

## COPRC MIRROR LAKE N-20 65-00 126-45

### LEASE FLUID NOTE

- 1) If FRESH WATER has been selected as your FLUID TYPE please make sure the SOURCE library pick list is populated with one of the following (Mandatory)
  - CREEK
  - DUGOUT
  - LAKE
  - MUNICIPAL
  - RIVER
- 2) Continue to populate the NOTE section with additional SOURCE location details

WELL FLUIDS							
Start Date	Fluid	To (m³)	From (m³)	Dens (kg/m³)	Non-recov (m³)	Zone	Note
2/20/2016	FRESH WATER		1.30	1,000.00		Imperial , Original Hole	TBG Steel Displacement
2/20/2016	FRESH WATER	4.00		1,000.00		Imperial , Original Hole	Water Pumped through Retainer for Feedrate
2/20/2016	FRESH WATER	2.50		1,000.00		Imperial , Original Hole	fresh potable water containing <4000mg/L TDS fill hole and perform pressur...
2/21/2016	FRESH WATER	10.00		1,000.00		Imperial , Original Hole	fresh potable water containing <4000mg/L TDS for feed rate
2/22/2016	FRESH WATER	3.00				Imperial , Original Hole	used to mix 4.2m³ slurry (1.0 G and 3.2 squeezecrete)
2/22/2016	FRESH WATER	3.50				Imperial , Original Hole	fresh potable water containing <4000mg/L TDS cool well and pressure test
2/22/2016	FRESH WATER	3.00				Imperial , Original Hole	fresh potable water containing <4000mg/L TDS used to squeeze
2/22/2016	FRESH WATER	4.50				Imperial , Original Hole	fresh potable water containing <4000mg/L TDS used for feed rate
2/23/2016	FRESH WATER	0.50				Imperial , Original Hole	fresh potable water containing <4000mg/L TDS used to blend acid
2/23/2016	FRESH WATER	12.00		1,000.00		Imperial , Original Hole	fresh potable water containing <4000mg/L TDS used for feed rate
2/24/2016	FRESH WATER	3.00				Imperial , Original Hole	fresh potable water containing <4000mg/L TDS used to mix cement 4.16m³
2/24/2016	FRESH WATER	5.00				Imperial , Original Hole	fresh potable water containing <4000mg/L TDS used to cool well and sque...

### JOB FLUID SUMMARY

Fluid	To lease (m³)	From lease (m³)	Lease Bal (m³)	To well (m³)	From well (m³)	Left to recover (m³)
FRESH WATER	356.90	247.20	0.00	124.10	14.40	109.70

## **Appendix 5     SCVF Test Summary**

# COPRC MIRROR LAKE N-20 65-00 126-45

## Well Header

Legal WellName COPRC MIRROR LAKE N-20 65-00 126-45	API / UWI 300/N20 65-00 126-45/0	Operator CONOCOPHILLIPS	License No. EL 470 WID 2079
---	-------------------------------------	----------------------------	--------------------------------

## SCVF TESTS

Typ	Date	Operator	Detection	Com
SCVF	3/26/2013 16:00	Myles Hahn	No	Performed a ten minute SCVF test. Zero bubbles (no flow) detected in ten minutes. Good test.
SCVF	3/30/2013 08:00	Doug Smith	No	Performed a 10 min bubble test on the SCV. Completed with 0 bubbles and No flow for 10 min.
SCVF	7/31/2013 14:15	Myles Hahn	Yes	Performed a 10 minute SCVF test. After 5 minutes bubbles were seen. SCVL would bubble for 4 seconds (too many to count) and then stop for 6 seconds in a repeating cycle. Re-tested with the same results. SCVF test failed.
SCVF	2/26/2014 08:00	Don Williams	Yes	Feb 26/14 Installed on SCV adaptor and added 1 inch of enviromentally friendly fluid. (after 2 min seen continuous bubbles. To many to count)
SCVF	1/16/2016 16:00	Mike Short	Yes	Performed SCVF test via 10 min bubble test. 3/8" hose in 1" water. After 1min 30 seconds had bubbles. Too many to count. Test failed. Have bubbles for 4 seconds with too many to count then stop for 2 seconds then bubbles for 4 seconds.
SCVF	2/28/2016 12:08	Chris Tucker	No	Performed 10min bubble test on SCV with NO flow detected, test passed.Broke down SCV and checked nothing is frozen or blocked, all clear. Dumped 1 liters of enviromentally friendly anti-freeze down SCV elbow, all clear.
SCVF	2/28/2016 18:15	Chris Tucker	No	Performed 10min bubble test on SCV with NO flow detected, test passed. Broke down SCV and checked nothing is frozen or blocked, all clear. Dumped 1 liter of enviromentally friendly anti-freeze down SCV elbow, all clear.
SCVF	2/29/2016 09:00	Chris Tucker	No	Performed 10min bubble test on SCV with NO flow detected, test passed. Broke down SCV and checked nothing is frozen or blocked, all clear. Dumped 1 liter of enviromentally friendly anti-freeze down SCV elbow, all clear.
SCVF	3/1/2016 08:45	Chris Tucker	No	Performed 10min bubble test on SCV with NO flow detected, test passed. Broke down SCV and checked nothing is frozen or blocked, all clear. Dumped 2 liters of enviromentally friendly anti-freeze down SCV elbow, all clear.

## **Appendix 6      Final Wellbore Schematic**

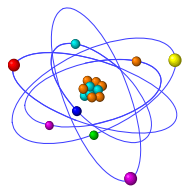
Report Printed: 3/10/2016

VERTICAL - Original Hole, 3/9/2016 12:00:00 PM			OTHER IN HOLE			
MD (mKB)	Incl (°)	Vertical schematic (actual)	Run Date	Description	Top Depth (mKB)	Bottom Depth (mKB)
( )	( )		2/16/2016	Cement Plug	1,933.60	1,940.00
WELL CONFIG: VERTICAL			OD (mm)	ID (mm)	Make	Model
5.2	0.2		159.0			
25.2	0.2		Comment 1680kg/m SqueezeCrete			
67.8	0.2		Run Date	Description	Top Depth (mKB)	Bottom Depth (mKB)
110.0	0.2		2/17/2016	Cement Retainer	1,901.00	1,901.60
200.0	0.2		OD (mm)	ID (mm)	Make	Model
601.0	1.7		144.5		Smith Tools	PCR
855.1	0.3		Comment Smith 7" PCR Cement Retainer			
863.8	0.6		Run Date	Description	Top Depth (mKB)	Bottom Depth (mKB)
864.3	0.7	2/19/2016	Cement Plug	1,901.60	1,908.00	
873.0	1.1		OD (mm)	ID (mm)	Make	Model
873.9	1.1		159.0		squeezeCRETE/ G with gas block	
874.0	1.1		Comment 3.9m³ squeezecrete and 0.8m³ G&gas block			
874.5	1.1		Run Date	Description	Top Depth (mKB)	Bottom Depth (mKB)
874.9	1.1	2/20/2016	Cement Plug	1,892.25	1,901.00	
1,147.8	1.4		OD (mm)	ID (mm)	Make	Model
1,159.8	1.3		159.0		Oilwell	Class G
1,160.4	1.3		Comment dump bail 8.75 lineal meters of class G cement on top of retainer			
1,170.5	1.2		Run Date	Description	Top Depth (mKB)	Bottom Depth (mKB)
1,173.5	1.3	2/21/2016	Cement Retainer	1,614.80	1,615.40	
1,601.8	0.5		OD (mm)	ID (mm)	Make	Model
1,614.8	0.6		144.5		Smith Tools	PCR
1,615.4	0.6		Comment Smith 7" PCR Cement Retainer			
1,623.0	0.8		Run Date	Description	Top Depth (mKB)	Bottom Depth (mKB)
1,625.0	0.8	2/22/2016	Cement Plug	1,615.40	1,625.00	
1,892.2	2.6		OD (mm)	ID (mm)	Make	Model
1,901.0	2.7		159.0		squeezeCRETE/ G with gas block	
1,901.6	2.7		Comment 3.2m³ squeezecrete and 1.0m³ G&gas block			
1,906.0	2.7		Run Date	Description	Top Depth (mKB)	Bottom Depth (mKB)
1,908.0	2.8	2/22/2016	Cement Plug	1,601.80	1,614.80	
1,923.0	2.9		OD (mm)	ID (mm)	Make	Model
1,933.0	3.1		159.0		G and gas block	
1,933.8	3.1		Comment 0.26m³ slurry left on top of retainer. 13m			
1,938.0	3.2		Run Date	Description	Top Depth (mKB)	Bottom Depth (mKB)
1,940.0	3.2	2/23/2016	Cement Retainer	1,159.80	1,160.40	
1,956.5	3.5		OD (mm)	ID (mm)	Make	Model
1,993.0	4.1		144.5		Smith Tools	PCR
1,994.0	4.1		Comment Smith 7" PCR Cement Retainer			
2,015.0	4.5		Run Date	Description	Top Depth (mKB)	Bottom Depth (mKB)
2,017.0	4.5	2/24/2016	Cement Plug	1,160.40	1,173.50	
2,023.0	4.6		OD (mm)	ID (mm)	Make	Model
2,024.0	4.7		159.0		squeezecrete and G cement	
2,059.0	5.3		Comment 3.24m³ squeezecrete and 0.9m³ G			
2,060.0	5.3		Run Date	Description	Top Depth (mKB)	Bottom Depth (mKB)
2,068.0	5.5	2/24/2016	Cement Plug	1,147.80	1,159.80	
2,070.0	5.6		OD (mm)	ID (mm)	Make	Model
2,100.0	6.2		159.0		class G	
2,127.0	6.5		Comment class G cement left on top of retainer			
2,146.0	6.5					



VERTICAL - Original Hole, 3/9/2016 12:00:00 PM			OTHER IN HOLE			
MD (mKB)	Incl (°)	Vertical schematic (actual)	Run Date	Description	Top Depth (mKB)	Bottom Depth (mKB)
5.2	0.2		2/27/2016	Bridge Plug - Permanent	874.50	874.90
25.2	0.2		OD (mm)	ID (mm)	Make	Model
67.8	0.2		159.0		SLB /Smith	PBP
110.0	0.2		Comment			
200.0	0.2		Perment Bridge Plug			
601.0	1.7		Run Date	Description	Top Depth (mKB)	Bottom Depth (mKB)
855.1	0.3		2/27/2016	Cement Plug	874.00	874.50
863.8	0.6		OD (mm)	ID (mm)	Make	Model
864.3	0.7		159.0			
873.0	1.1		Comment			
873.9	1.1		Resin bond Cement			
874.0	1.1		Run Date	Description	Top Depth (mKB)	Bottom Depth (mKB)
874.5	1.1		2/28/2016	Bridge Plug - Permanent	863.80	864.30
874.9	1.1		OD (mm)	ID (mm)	Make	Model
1147.8	1.4		159.0			
1159.8	1.3		Comment			
1160.4	1.3		Perment Bridge Plug			
1170.5	1.2		Run Date	Description	Top Depth (mKB)	Bottom Depth (mKB)
1173.5	1.3		2/28/2016	Cement Plug	855.10	863.80
1501.8	0.5		OD (mm)	ID (mm)	Make	Model
1514.8	0.6		159.0			
1515.4	0.6		Comment			
1523.0	0.8		class G cement left on top of retainer			
1525.0	0.8		Run Date	Description	Top Depth (mKB)	Bottom Depth (mKB)
1892.2	2.6		2/28/2016	Barrier - Fluid	67.81	855.10
1901.0	2.7		OD (mm)	ID (mm)	Make	Model
1901.6	2.7		159.0			
1906.0	2.7		Comment			
1908.0	2.8		Potable Water TDS<4000mg/L			
1923.0	2.9					
1933.0	3.1					
1933.8	3.1					
1938.0	3.2					
1940.0	3.2					
1956.5	3.5					
1993.0	4.1					
1994.0	4.1					
2015.0	4.5					
2017.0	4.5					
2023.0	4.6					
2024.0	4.7					
2059.0	5.3					
2060.0	5.3					
2068.0	5.5					
2070.0	5.6					
2100.0	6.2					
2127.0	6.5					
2146.0	6.5					

## **Appendix 7     G-Chem SCVF Analysis**

**GCHEM**

Bay 1; 4810-62 Avenue  
Lloydminster, AB T9V 2E9  
Tel: (780) 871-4668  
Fax: (780) 808-8883  
e-mail: info@gchem.ca

## Source determination of fugitive gases using ENERGY Forensics

Test Date: January 27, 2016

**Company** ConocoPhillips Canada  
**Well Name** Mirror Lake N-20 65-00 126-45

### Well Status Summary

SCV	Test performed by CPC personnel	
	Isolated CB %LEL/*H <sub>2</sub> S (ppm v/v)	N/A
	10-min. Bubble-Test (>1bub/10min)	N/A
	CB Flow Rate (m <sup>3</sup> /day)	N/A
	24 Hr. Shut-in Pressure (kPa)	N/A
	**Stabilized Build-Up Time (hrs)	N/A
	**Stabilized Build-Up Pressure (kPa)	N/A
SCVF	Surface Casing Vent	
SCVF	Positive Combustible Gas Flow in Surface Casing Vent	
%LEL	Lower Explosive Limit (5% - 15% Explosive Gases in Air)	

Soils:	Test performed by CPC personnel	
	# Soil Sites Tested	N/A
	# Soil Sites > 0 %LEL	N/A
	# Soil Sites = 0 %LEL	N/A
	MAX %LEL	N/A
	Gas Classification	N/A
	%H <sub>2</sub> S*	N/A
*	%H <sub>2</sub> S from Gas-Tech 402 %LEL Field Meter	
**	SCV Data Logger (Refer to Fig 4 if measured)	
nm	not measured at clients request	

Table 1: Interpreted Source of Migrating Gases (measured depth from kelly bushing of the well)

Sample Point	Geologic Formation	Depth Range	Source Depth
SCV	Mid Devonian-Givetian Lower Canol Fm.	1968m to 2074m	1968m to 2074m

### Sampling and Testing Comments

- 1) Natural gas samples from the surface casing vent were collected by ConocoPhillips personnel and forwarded to GCHEM Ltd. for analysis, characterization, classification, and geologic source determination.

### Source Identification Comments

January 27, 2016

- 1) Natural gas in the surface casing vent is chemically and isotopically similar to natural gas originating from the Lower Canol Formation (Mid-Devonian Givetian).

September 11, 2013

- 1) The chemical and isotope compositions of natural gases in the surface casing vent were compared to the chemical and isotope compositions of natural gases exolved from drilling fluid at Loon Creek O-06 65-10 127-00 while the well was being drilled (see ConocoPhillips Exolved Drilling Fluid Gas Isotope Logging and Isotech Labs analytical Loon Creek O-06 65-10 127-00).
- 2) The light alkane gas compositions of the surface vent natural gas do not match any exolved gas compositions.
- 3) Natural gases from the surface casing vent are offset (heavier) compared to the control obtained at Loon Creek. This indicates that natural gases in the Mirror Lake region have a different generation/migration/reservoir history and are isotopically distinct.
- 4) The isotope compositions of the migrating gases becomes lighter (more negative) with time. This may be the result of natural gas from different geologic sources migrating to surface or the result of sampling procedures.
- 5) The 9:00, 10:00 and 16:15 samples may originate from the Mid Devonian Hume Formation (2093m and below).
- 6) The 17:00 sample is significantly lighter (more negative) and may originate from the Mid Devonian Imperial and/or Upper Canol Formations (1172m to 1966m).
- 7) With the samples collected to date it cannot be determined if stabilized representative fugitive natural gas samples have been collected.

### Recommendations

- 1) If geochemical control were established in the immediate area a more concise migrating gas source interval may be provided.
- 2) From a gas migration perspective the well will require down-hole repair to prevent leaking natural gas from migrating to surface prior to abandonment.



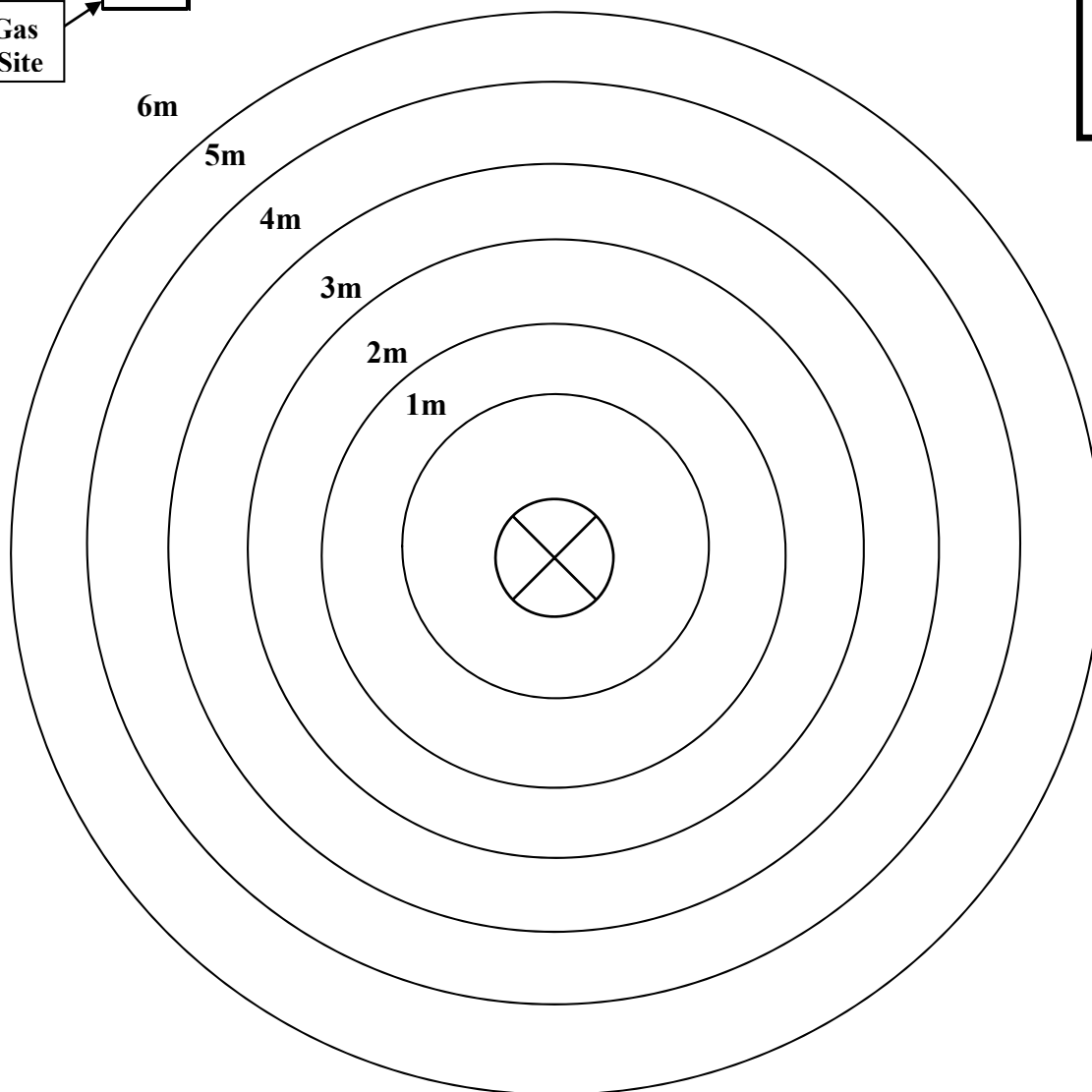
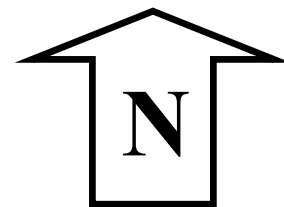
**Well site photographs**

No photos are available.



Well Test Information					
Licence No.:	470	Unique Identifier:	ConocoPhillips Canada Mirror Lake N-20 65-00 126-45	Date Tested:	January 27, 2016

% LEL	100%
Soil-Gas Test-Site	1

**Surface Gas Migration Test (SGMT-AGM)****Soil Testing-Well Site Comments**

Testing performed by ConocoPhillips Canada personnel.



# Surface Casing Vent Flow/Gas Migration Data Sheet

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

Day	Month	Year	Your File Number

## 1 GENERAL INFORMATION AND CERTIFICATION

LICENSEE	ConocoPhillips Canada		Licensee Code
AGENT	N/A	<input checked="" type="checkbox"/>	Agent Code
CONSULTANT	N/A		Consultant Code
CONTACT PERSON	Brad Johnston		
TELEPHONE	Business	(780) 871-4668	Fax (780) 808-8883

## 2 WELL TEST INFORMATION

LICENCE	UNIQUE	ConocoPhillips Canada	DATE
NUMBER	470	IDENTIFIER	Mirror Lake N-20 65-00 126-45
		TESTED	Jan. 27, 2016

## 3 SURFACE CASING VENT FLOW TEST DATA

**3.1 Vent Flow Exists** Yes ☐ No ☐ Testing performed by CPC personnel

If yes Complete the rest of this section

Serious ☐ Non-Serious ☐

**3.2 Test Type (e.g., bubble test, others):** \_\_\_\_\_

**3.3 Type of Flow:** Gas ☐ Oil ☐ Salt Water ☐ Others (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 Tops \_\_\_\_\_ m Logged Yes ☐ No ☐ Estimated (from logs, tour books)

Describe cementing details (e.g., types, blends, 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 TSTM, (too small to measure))
Stabilized Build-up Pressure: _____ kPa	Duration: _____ Hrs	
Source of Flow: _____ 1969m to 2074m m (depth)		
Determined by (log type, Carbon Isotope, etc)	Energy Forensics	

**3.7 Ground Water Information:**

Depth of Usable Water Aquifers: \_\_\_\_\_ m

Nearest Water Well: \_\_\_\_\_ km

**Tested By:** \_\_\_\_\_ ConocoPhillips Canada Personnel

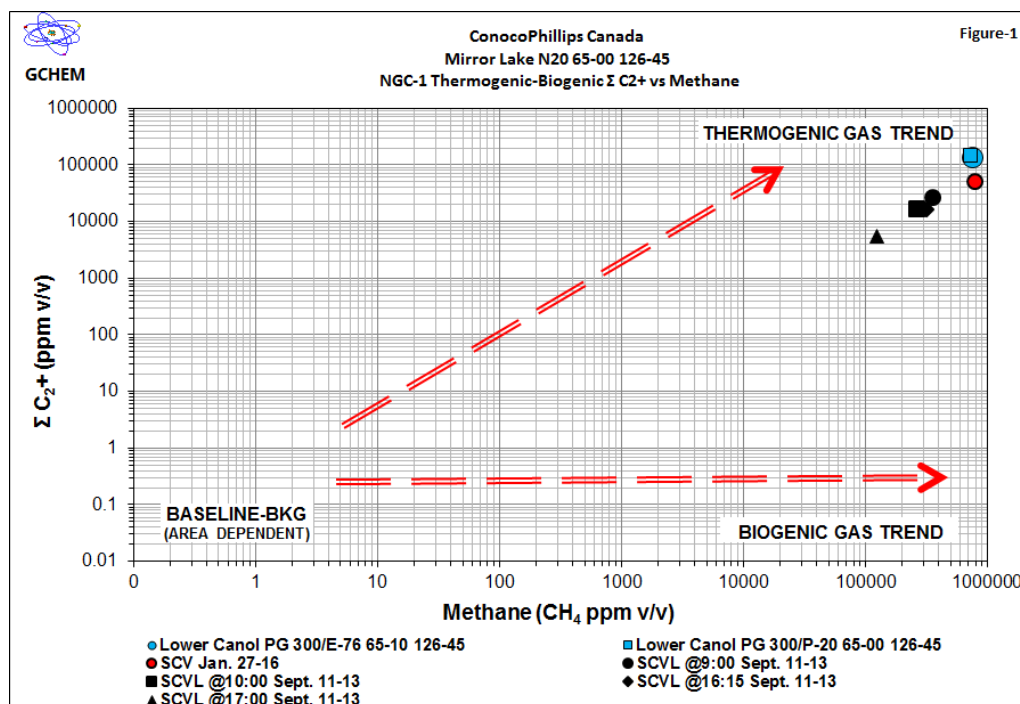
Please Print Name

Signature





## Natural Gas Characterization NGC-1 &amp; NGC-2



**FIGURE-1: NGC-1  $\Sigma C_2+$  vs Methane.** Combustible gases detected in soils and SCV's at a wellhead may result from several origins. Natural gases indicative of SCVF or AGM are thermogenic in origin (natural gas in deep reservoirs), contain high methane and  $C_2+$  contents and plot in the Upper RH Quadrant.

Low natural gas levels in background, off lease areas are naturally present in soils, vary from region to region and plot in the Lower LH Quadrant (BASELINE).

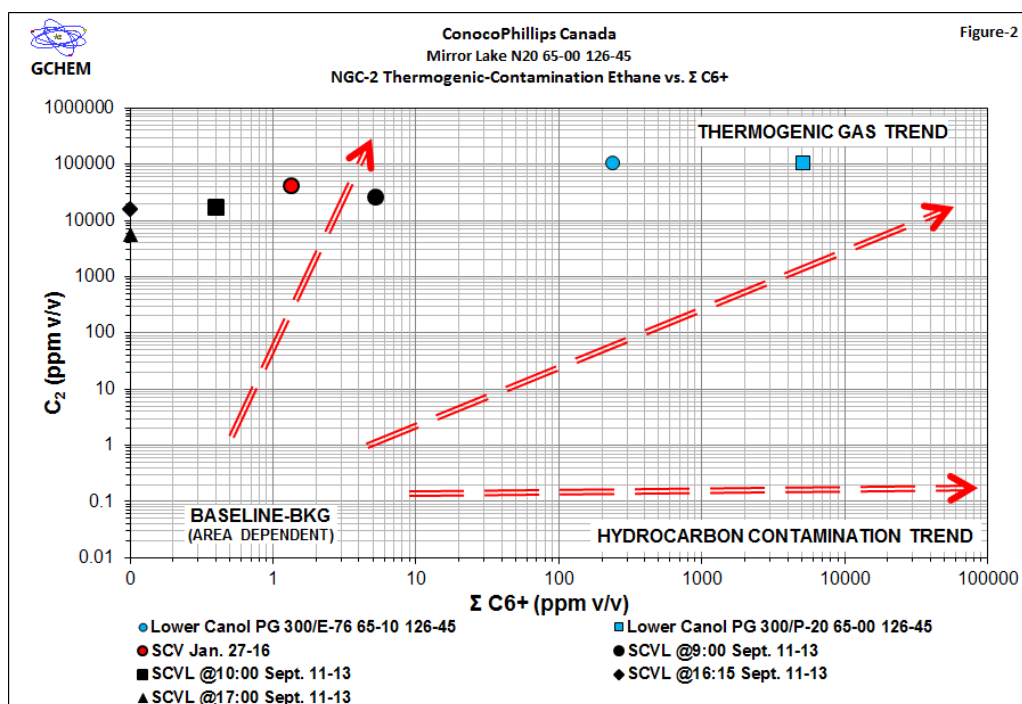
Biogenic gases (swamp-gas) are produced by bacteria, are comprised of predominantly methane and plot in Lower RH Quadrant.

Samples plotting in the Lower LH and RH do not contain SCVF or AGM and would not require down-hole remediation.

**FIGURE-2:  $C_2$  vs.  $\Sigma C_6+$ :**  $C_6+$  gases are relatively large molecules that do not readily or easily migrate in large quantities from depth upwards thru subsurface fractures or micro-fractures to surface.

Contamination by oil spills, fuels, and solvents is indicated by soil vapour samples that have high contents of  $C_6+$  compounds and plot in the Lower RH Quadrant.

Samples plotting in the Lower LH and RH Quadrants of Fig-1 and Fig-2 do not contain evidence of either SCVF or AGM and would not require down-hole repair operations.

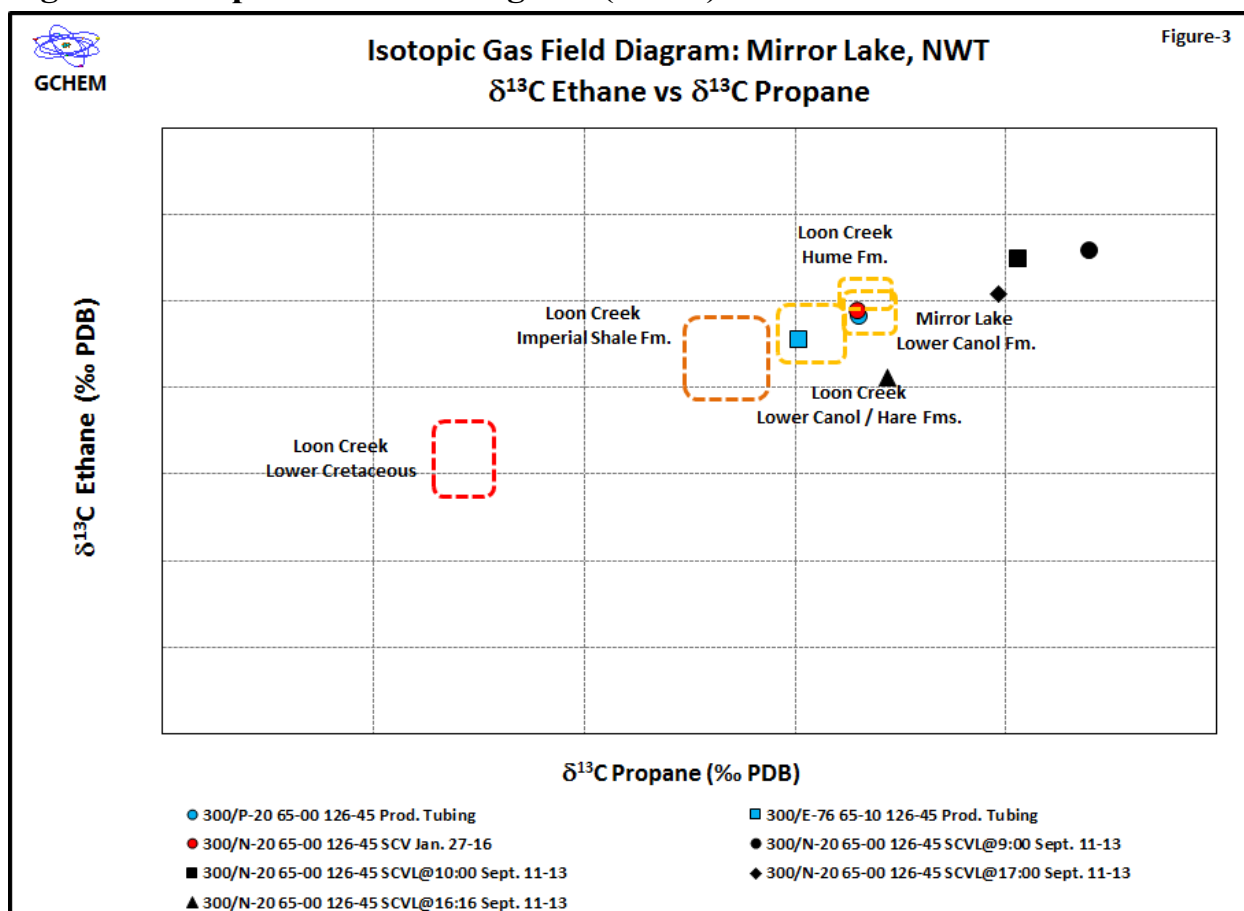


## Gas Characterization Diagram Comments

- 1) Light alkane gas levels in the surface casing vent are elevated compared to expected baseline values.





**Figure-3 Isotopic Gas Field Diagram (IGFD)**

Once gases have been identified as related to SCVF or AGM the geological source may be identified. As molecular and carbon isotope compositions change systematically with increased depth, discrete geological intervals are shown to have unique isotopic characteristics. Thermogenic gases collected at surface in soils or SCV's may be compared to this template of subsurface gas compositions (Natural Gas Isotope Logs –NGILs) and their geologic source is identified. Best results are achieved when NGILs, for correlation, are established in the immediate area.

### Isotopic Gas Field Diagram (IGFD) Comments

**January 27, 2016**

- 1) Natural gas in the surface casing vent is chemically and isotopically similar to natural gas originating from the Lower Canol Formation (Mid-Devonian Givetian).

**September 11, 2013**

- 1) Natural gases from the surface casing vent are offset (heavier) compared to the control obtained at Loon Creek. This indicates that natural gases in the Mirror Lake region have a different generation/migration/reservoir history and are isotopically distinct.
- 2) The isotope compositions of the migrating gases becomes lighter (more negative) with time. This may be the result of natural gas from different geologic sources migrating to surface or the result of sampling procedures.
- 3) The 9:00, 10:00 and 16:15 samples may originate from the Mid Devonian Hume Formation (2093m and below).
- 4) The 17:00 sample is significantly lighter (more negative) and may originate from the Mid Devonian Imperial and/or Upper Canol Formations (1172m to 1966m).
- 5) With the samples collected to date it cannot be determined if stabilized representative fugitive natural gas samples have been collected.





**TABLE-1 Analytical Results  
(normalized 'as-received')**

Gas Component	SCV Jan. 27-16 (ppm v/v)	SCVL @9:00 Sept. 11-13 (ppm v/v)	SCVL @10:00 Sept. 11-13 (ppm v/v)	SCVL @16:15 Sept. 11-13 (ppm v/v)	SCVL @17:00 Sept. 11-13 (ppm v/v)
Hydrogen	1885	4088	9643	39573	20313
Helium	62.21	19.28	10.76	83.74	60.94
Nitrogen	115451	486876	566798	500623	675172
Oxygen	33080	120995	137709	124995	174688
Carbon Dioxide	130.9	375.6	240.5	434.9	373.2
Methane	797829	361992	268903	317730	123823
Ethane	40845	25230	16441	16317	5498
Ethene	<0.01	1.63	2.07	1.18	<0.01
Propane	7226	404.0	249.4	240.8	70.68
Propene	0.11	0.73	0.46	<0.01	0.09
iso-Butane	1198	1.44	0.77	0.62	0.38
n-Butane	1603	1.05	0.50	0.34	0.18
iso-Pentane	416.5	5.36	0.38	0.33	0.08
n-Pentane	271.0	5.15	0.39	0.25	0.07
C <sub>6</sub> +	1.36	5.24	0.40	0.28	0.07

C1/ΣC2+	16.06	14.12	16.11	19.19	22.23
C2/ΣC3+	4.63	62.29	65.79	67.67	77.60
C2+	49674	25635	16691	16558	5569
Vol % Lt. Alk.	84.94	38.76	28.56	33.43	12.94
Vol % Lt. Alk. CH4	93.93	93.38	94.15	95.05	95.70
Vol % Lt. Alk. C2+	6.07	6.62	5.85	4.95	4.30

#### Stable Carbon Isotope Compositions (‰ PDB)

δ <sup>13</sup> C CH4	-44.79	-23.97	-37.20	-21.46	-54.30
δ <sup>13</sup> C C2H6	-30.67	-27.16	-27.59	-29.64	-34.44
δ <sup>13</sup> C C2H4	nd	nd	nd	nd	nd
δ <sup>13</sup> C C3H8	-28.50	-23.01	-24.69	-25.17	-27.82
δ <sup>13</sup> C C3H6	nd	nd	nd	nd	nd
δ <sup>13</sup> C i-C4H10	-30.74	nd	nd	nd	nd
δ <sup>13</sup> C n-C4H10	-28.08	nd	nd	nd	nd
δ <sup>13</sup> C i-C5H12	-28.26	nd	nd	nd	nd
δ <sup>13</sup> C n-C5H12	-27.67	nd	nd	nd	nd
δ <sup>13</sup> C CO2	nd	nd	nd	nd	-14.34

#### Hydrogen Isotopic Compositions (‰ V-SMOW)

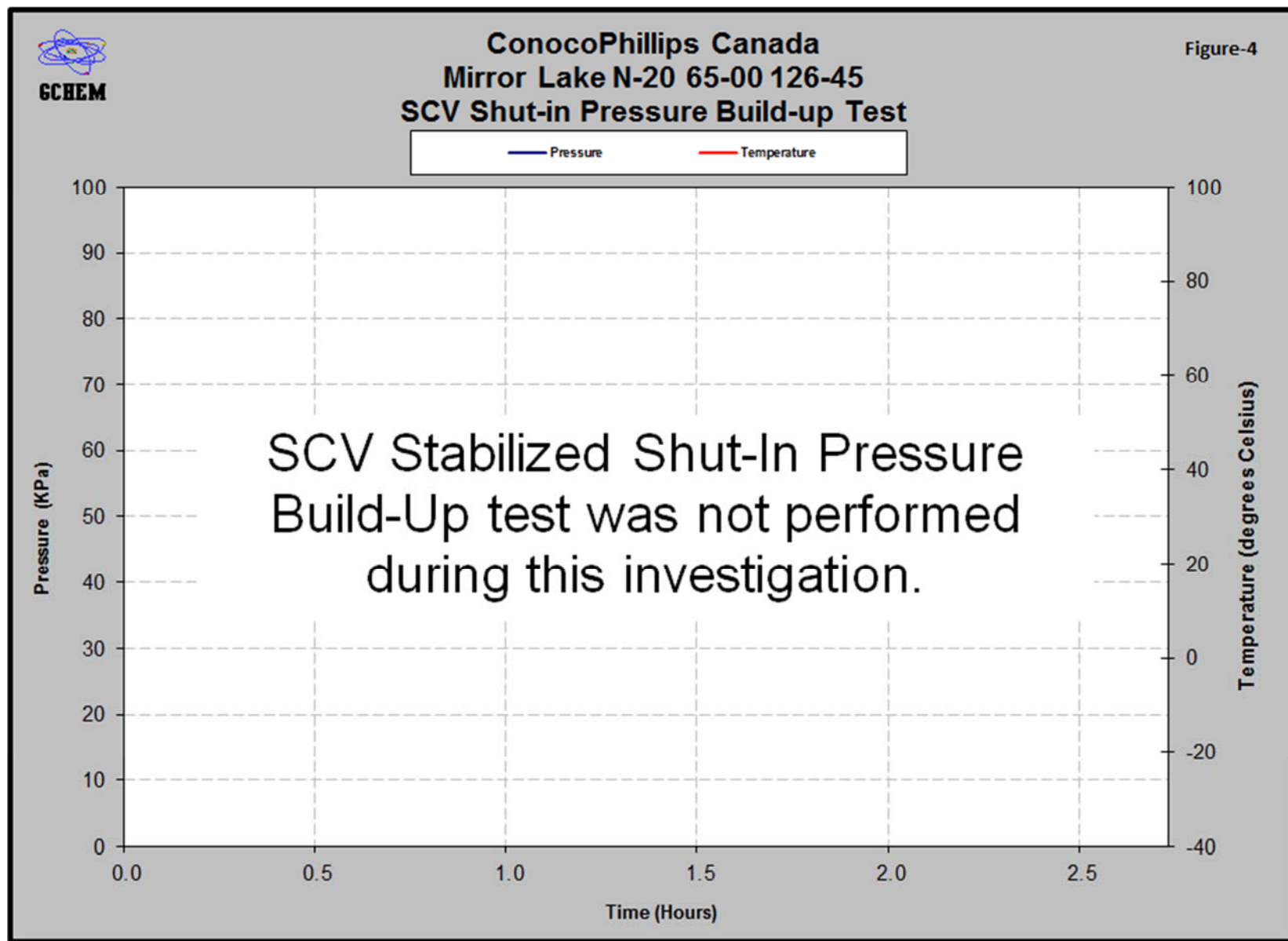
δD CH4	nm	nm	nm	nm	nm
δD C2H6	nm	nm	nm	nm	nm
δD C3H8	nm	nm	nm	nm	nm
δD i-C4H10	nm	nm	nm	nm	nm
δD n-C4H10	nm	nm	nm	nm	nm

14C Concentration (pMC)	nm	nm	nm	nm	nm
-------------------------	----	----	----	----	----





Figure-4 GCHEM SCV Pressure Data-Logger: Shut-in Pressure Build-up



## **Appendix 8     SCVF Evaluation**

# 2015-2016 Canol EL-470 N-20 SCVF REPORT

Prepared by : Louis Borbely, P. Tech. (Eng.) Alberta



## N-20 SCVF Well History Drilling Data

- Drilling spud date, Feb 25, 2013.
- Drilling Rig Release date, March 25, 2013.
- TD = 2146m KB. Vertical well.
- Drilled with Invert. Very little washout on open hole logs.
- Primary cement job on 177.8mm production casing.
  - 5.0m<sup>3</sup> of Mudpush Spacer 1300 kg/m<sup>3</sup>.
  - 30.6m<sup>3</sup> Lead Hi Lite 1400 kg/m<sup>3</sup>.
  - 11.5m<sup>3</sup> Tail Class G 1900 kg/m<sup>3</sup>.
  - Total loss of returns while displacing the last 10m<sup>3</sup> prior to bumping the plug.
  - Schlumberger cementing report indicates seeing cement returns.
- CPC collected Mudgas isotube samples while drilling for analyses.

## N-20 SCVF Well History Completion Data

- Completion operations from March 26, 2013 to March 30, 2013.
- Cased hole log ran March 27, 2013, Schlumberger Cement Bond Log.
- Perforated three intervals in the Lower Canol and conducted DFIT to determine reservoir parameters. Intervals were 2059.0-2060.0m KB, 2023.0-2024.0m KB and 1993.0-1994.0m KB. Each interval was suspended by setting two retrievable bridge plugs above each set of perforations with pressure recorders installed beneath the bottom WRBP in each set. These plugs would be pulled next winter season when the horizontal wells would be drilled.
- March 26, 2013 Bubble test on SCV passed.
- March 30, 2013 Bubble test on SCV passed.
- July 31, 2013 during summer inspection operation, bubble test failed.
- Roke Ventnanny was installed September 10, 2013 and recorded flow data until Feb 8, 2014. G-Chem samples were once again taken September 10 and 11, 2013. Analysis indicates that these samples are isotopically distinct from the O-06 Lower Canol SCVF gases. This is not a surprise. It should be noted that samples taken at different time showed changing isotope compositions. One of the samples was significantly lighter (more negative) and possibly originated from the Imperial and or Upper Canol intervals.



# N-20 September 11, 2013 G-Chem Data



**GCHEM**

Bay 1, 4801-45 Avenue  
Lloydminster, AB T9V 2E9  
Tel: (780) 875-4668  
Fax: (780) 868-8883  
e-mail: info@gchem.ca

Source determination of fugitive  
gases using ENERGY Forensics

Test Date: September 11, 2013

Company **ConocoPhillips Canada Mirror**  
Well Name **Lake N-20 65-00 126-45**

## Well Status Summary

SCV	Test performed by CPC personnel	Soils	Test performed by CPC personnel
	Isolated CB NL/L/H/S (ppm v/v)		# Soil Sites Tested
	75-min. Bubble Test (m/min)		# Soil Sites > 0 % NL
	28 Flow Rate (m/day)		# Soil Sites = 0 % NL
	24 Hr. Shut-in Pressure (kPa)		MAX NL/L
	Stabilized Build-Up Time (hrs)		Gas Classification
	Stabilized Build-Up Pressure (kPa)		% H <sub>2</sub>
SCV	Isolated CB NL/L/H/S (ppm v/v)		# Soil Sites Tested
SCV	75-min. Bubble Test (m/min)		# Soil Sites > 0 % NL
SCV	28 Flow Rate (m/day)		# Soil Sites = 0 % NL
SCV	24 Hr. Shut-in Pressure (kPa)		MAX NL/L
SCV	Stabilized Build-Up Time (hrs)		Gas Classification
SCV	Stabilized Build-Up Pressure (kPa)		% H <sub>2</sub>

Table 1: Interpreted Source of Migrating Gases (measured depth from Kelly bushing of the well)

Sample Point	Geologic Formation	Depth Range	Source Depth	Confidence
				(1 to 5; 1=High)
		See below		

## Sampling and Testing Comments

- 1) Natural gas samples from the surface casing vent were collected by ConocoPhillips personnel and forwarded to GCHEM Ltd. for analysis, characterization, classification, and geologic source determination.

## Source Identification Comments

- 1) The chemical and isotope compositions of natural gases in the surface casing vent were compared to the chemical and isotope compositions of natural gases evolved from drilling fluid at Loon Creek O-04 63-10 127-00 while the well was being drilled (see ConocoPhillips Evolved Drilling Fluid Gas Isotope Logging and Isotech Labs analytical Loon Creek O-04 63-10 127-00).
- 2) The light alkane gas compositions of the surface vent natural gas do not match any evolved gas compositions.
- 3) Natural gases from the surface casing vent are offset (heavier) compared to the control obtained at Loon Creek. This indicates that natural gases in the Mirror Lake region have a different generation/migration/reservoir history and are isotopically distinct.
- 4) The isotope compositions of the migrating gases becomes lighter (more negative) with time. This may be the result of natural gas from different geologic sources migrating to surface or the result of sampling procedures.
- 5) The 9:00, 10:00 and 16:15 samples may originate from the Mid Devonian Hume Formation (2095m and below).
- 6) The 17:00 sample is significantly lighter (more negative) and may originate from the Mid Devonian Imperial and/or Upper Canal Formations (1172m to 1966m).
- 7) With the samples collected to date it cannot be determined if stabilized representative fugitive natural gas samples have been collected.

## Recommendations

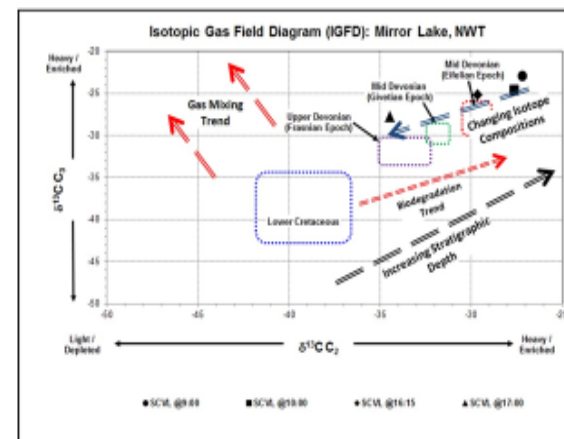
- 1) If geochemical control was established in the immediate area a more concise migrating gas source interval may be provided.
- 2) From a gas migration perspective the well will require down-hole repair to prevent leaking natural gas from migrating to surface prior to abandonment.



ConocoPhillips Canada Mirror Lake N-20 65-00 126-45

Energy Forensics

Figure-3 Isotopic Gas Field Diagram (IGFD)



Once gases have been identified as related to SCV or AGM the geological source may be identified. As molecular and carbon isotope compositions change systematically with increased depth, discrete geological intervals are shown to have unique isotopic characteristics. Thermogenic gases collected at surface in soils or SCV's may be compared to this template of subsurface gas compositions (Natural Gas Isotope Logs -NGILs) and their geologic source is identified. Best results are achieved when NGILs, for correlation, are established in the immediate area.

## Isotopic Gas Field Diagram (IGFD) Comments

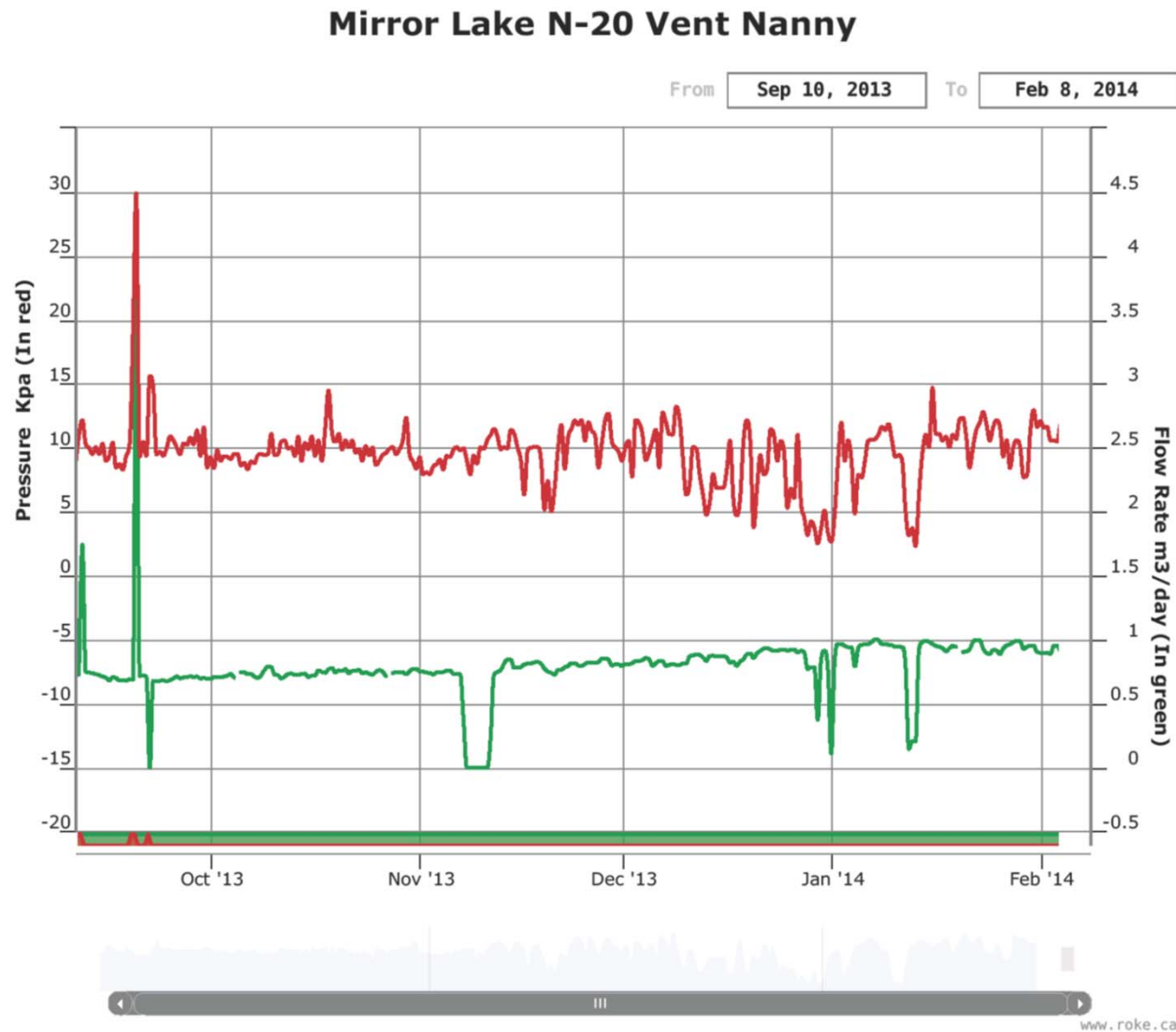
- 1) Natural gases from the surface casing vent are offset (heavier) compared to the control obtained at Loon Creek. This indicates that natural gases in the Mirror Lake region have a different generation/migration/reservoir history and are isotopically distinct.
- 2) The isotope compositions of the migrating gases becomes lighter (more negative) with time. This may be the result of natural gas from different geologic sources migrating to surface or the result of sampling procedures.
- 3) The 9:00, 10:00 and 16:15 samples may originate from the Mid Devonian Hume Formation (2095m and below).
- 4) The 17:00 sample is significantly lighter (more negative) and may originate from the Mid Devonian Imperial and/or Upper Canal Formations (1172m to 1966m).
- 5) With the samples collected to date it cannot be determined if stabilized representative fugitive natural gas samples have been collected.



GCHEM Ltd. Bay #1, 4811-42nd Ave. Lloydminster, AB T9V 2E9 Tel: 780-875-4668 e: info@gchem.ca

Page 2

# N-20 Roke Ventnanny Flow Data 2013 and 2014



## N-20 Geophone Noise Logging (Q1 2014)

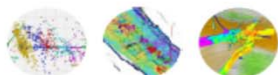
- As was the case with O-06, the plan with N-20 was to use geophone noise logging in conjunction with the micro seismic operation being conducted while hydraulic fracturing operations were occurring at the P-20 horizontal location.
- March 4, 2014 the geophone array was ran for vent flow identification when running in the hole from 599 to 1949m KB. Hydraulic Frack operations were then conducted on the horizontal P-20 well and the geophones used for micro seismic monitoring.
- March 11, 2014 vent flow identification log was again conducted when pulling the geophone array logs from 1949 to 599m KB. Planning was then started for SCVF remediation for winter 2016 operations.
- July 16, 2015 the well was bubble tested during a summer inspection and failed.

# N-20 Geophone Array Logging Timeline

## Chronology

- 5 days and frac operations between data points.

4-Mar-14	DAY1
15:10	CASING VENT IDENTIFICATION STATION #1 (599-929M)
15:30	CASING VENT IDENTIFICATION STATION #2 (614-944M)
16:00	CASING VENT IDENTIFICATION STATION #4 (974-1304M)
16:10	CASING VENT IDENTIFICATION STATION #3 (959-1289M)
16:25	CASING VENT IDENTIFICATION STATION #6 (1334-1664M)
16:47	CASING VENT IDENTIFICATION STATION #5 (1319-1649M)
17:11	CASING VENT IDENTIFICATION STATION #8 (1634-1964M)
17:25	CASING VENT IDENTIFICATION STATION #7 (1619-1949M)
17:35	TOOL ANCHORED AT FRAC MONITORING STATION (1919.6-1589.6M)
	DAY 2-6
	FRAC OPERATIONS
11-Mar-14	DAY7
9:00	RIG UP CRANE/SHEAVES
9:15	START CASING VENT IDENTIFICATION STATIONS
9:20	CASING VENT IDENTIFICATION STATION #8
9:40	CASING VENT IDENTIFICATION STATION #7
10:00	CASING VENT IDENTIFICATION STATION #6
10:10	CASING VENT IDENTIFICATION STATION #5
10:15	CASING VENT IDENTIFICATION STATION #5H1
10:25	CASING VENT IDENTIFICATION STATION #5H2
10:35	CASING VENT IDENTIFICATION STATION #5H3
10:40	CASING VENT IDENTIFICATION STATION #5H4
10:55	CASING VENT IDENTIFICATION STATION #5H5
11:15	CASING VENT IDENTIFICATION STATION #4
11:25	CASING VENT IDENTIFICATION STATION #3
11:55	CASING VENT IDENTIFICATION STATION #2
12:05	CASING VENT IDENTIFICATION STATION #1



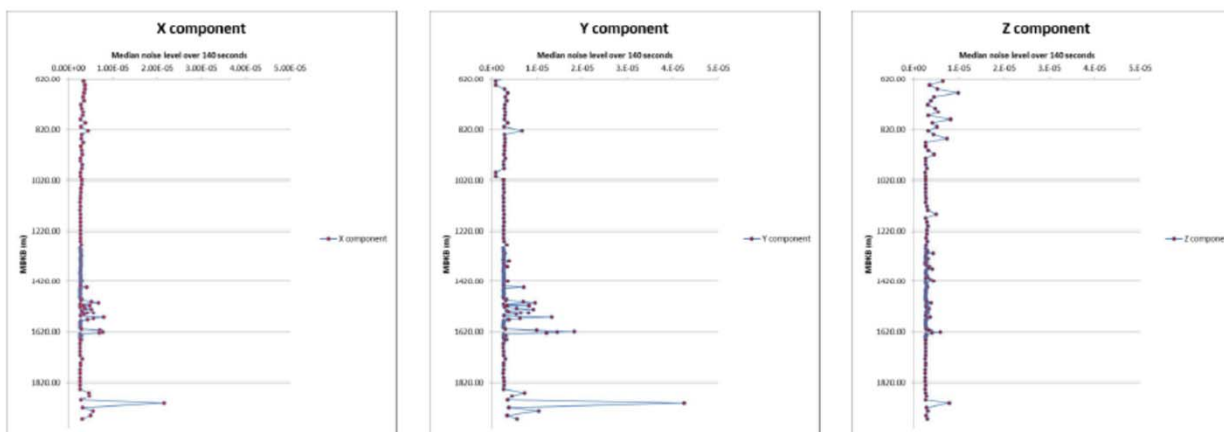
Microseismic Services  
Image-Interpret-Integrate

**Schlumberger**

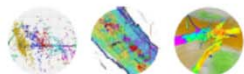
# N-20 Geophone Noise Log Summary of X, Y and Z Components

Noise log data showing noise near Lower Canol and in the Imperial Formation

## 3C Noise measurement



Combined rig up and rig down



Microseismic Services  
Image-Interpret-Integrate

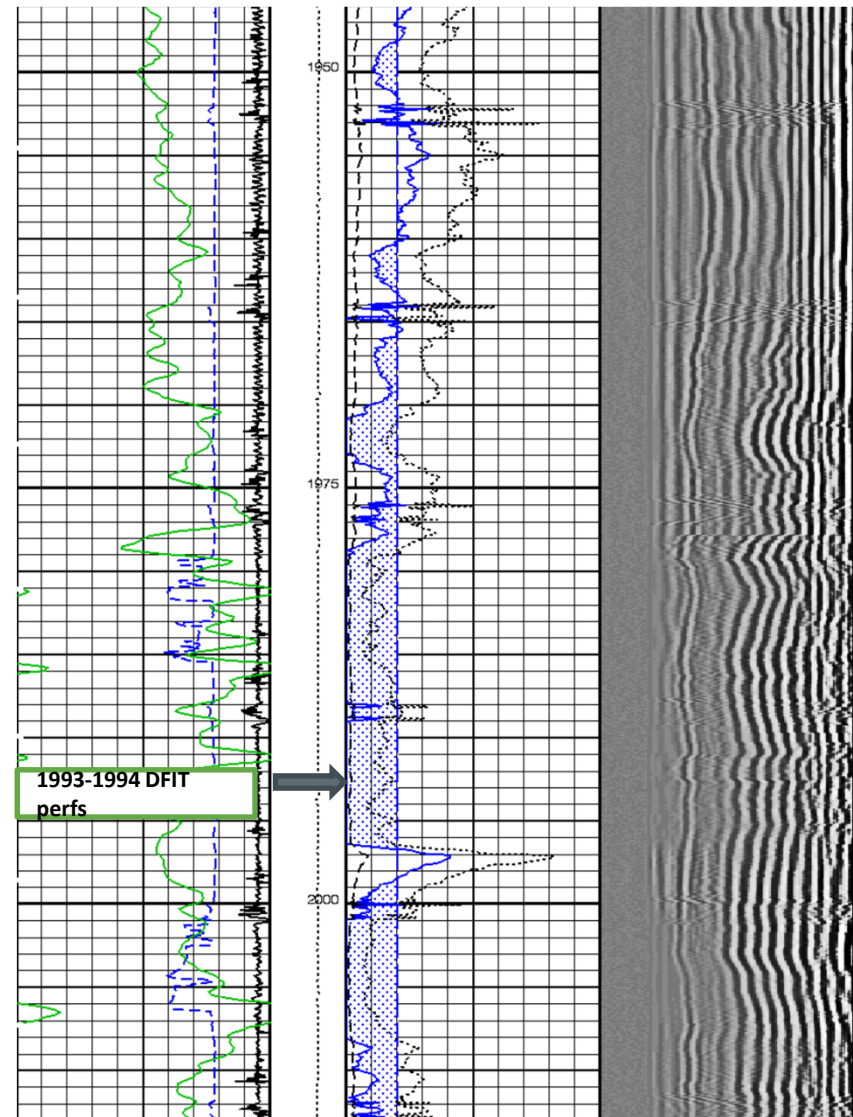
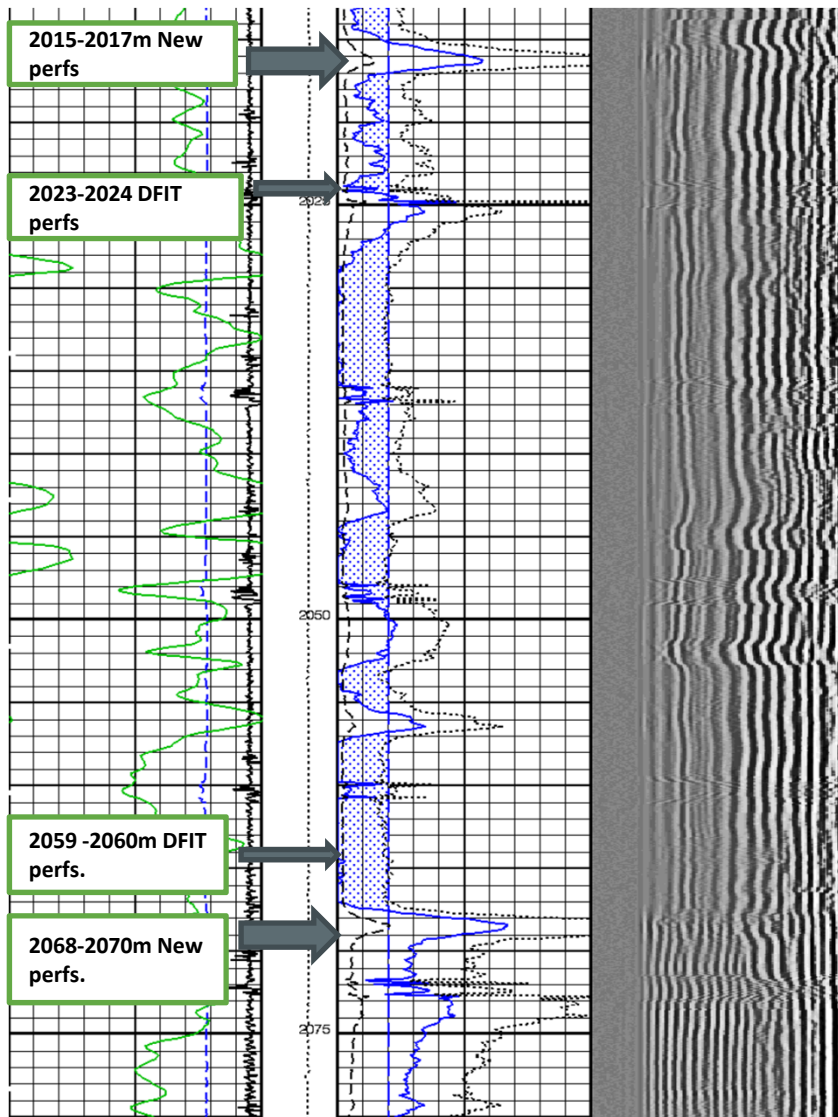
**Schlumberger**

## N-20 SCVF Programmed Intervals Picked Prior to Q1-2016 Operations Start.

- Interval #1 Lower Canol Perforate additional intervals from 2068.0-2070.0 and 2015.0-2017.0m KB. Existing intervals from 2059.0-2060.0, 2023.0-2024.0 and 1993-1994.0m KB. Lower Canol picked because it is a G-Chem source and CPC isotube analyses indicated the same. Noise log run to just above the Lower Canol with noise anomalies near bottom.
- Interval #2. Upper Canol from 1938.0-1940.0m KB. Also a potential G-Chem source. Increase in total gas from the drilling strip log.
- Interval #3. Imperial Sand from 1906.0-1908.0m KB. Large noise anomaly. Area of poor bond. Potential G-Chem source. Increase in total gas while drilling based on strip log.
- Interval #4. 1623.0-1625.0m KB and 1542.0-1544.0m KB. The original program called for these two intervals as optional intervals if required. Based on noise anomalies and possible gas shows.

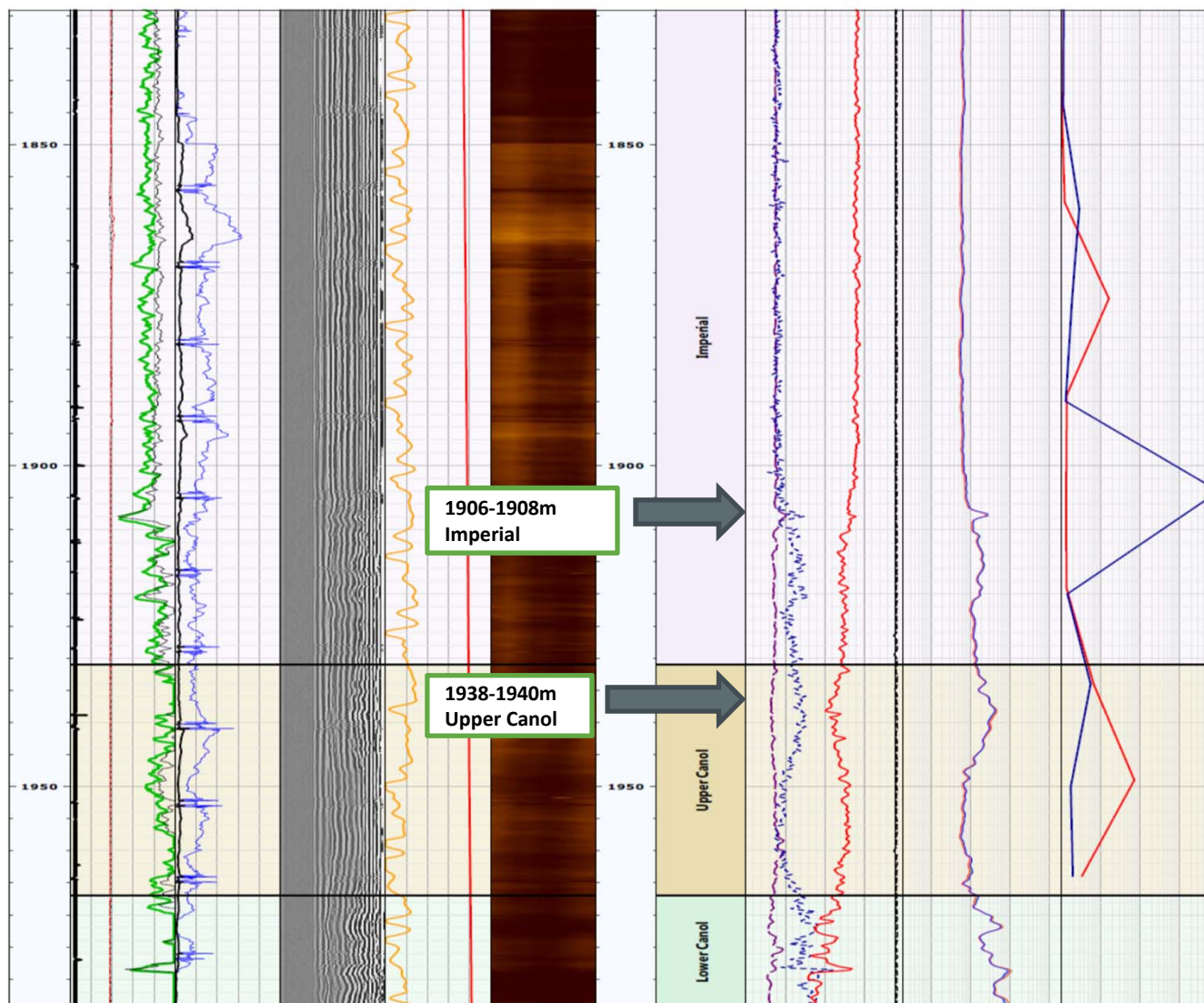


# N-20 Lower Canol Perforations Shown on CBL run on March 27, 2013

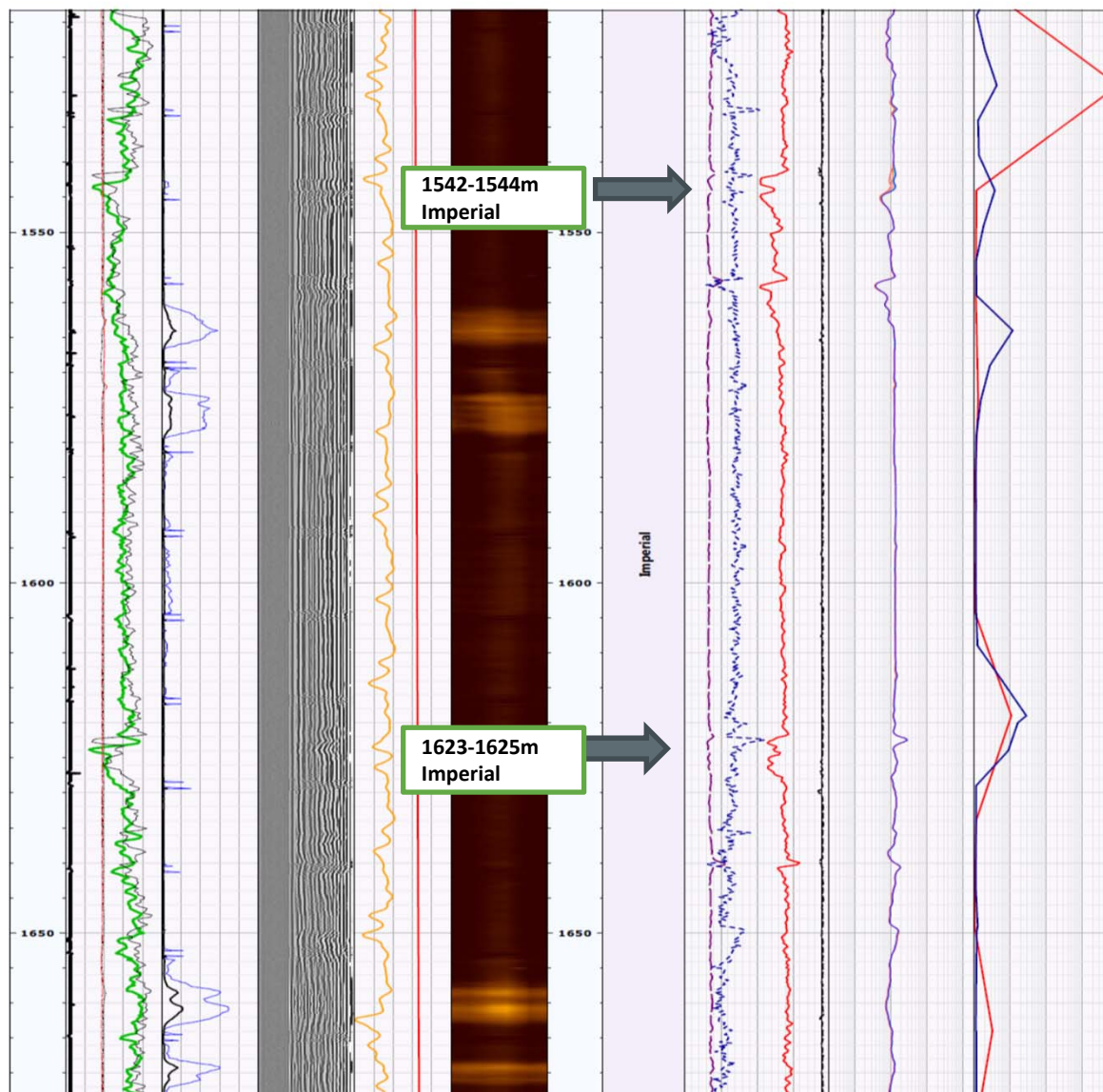




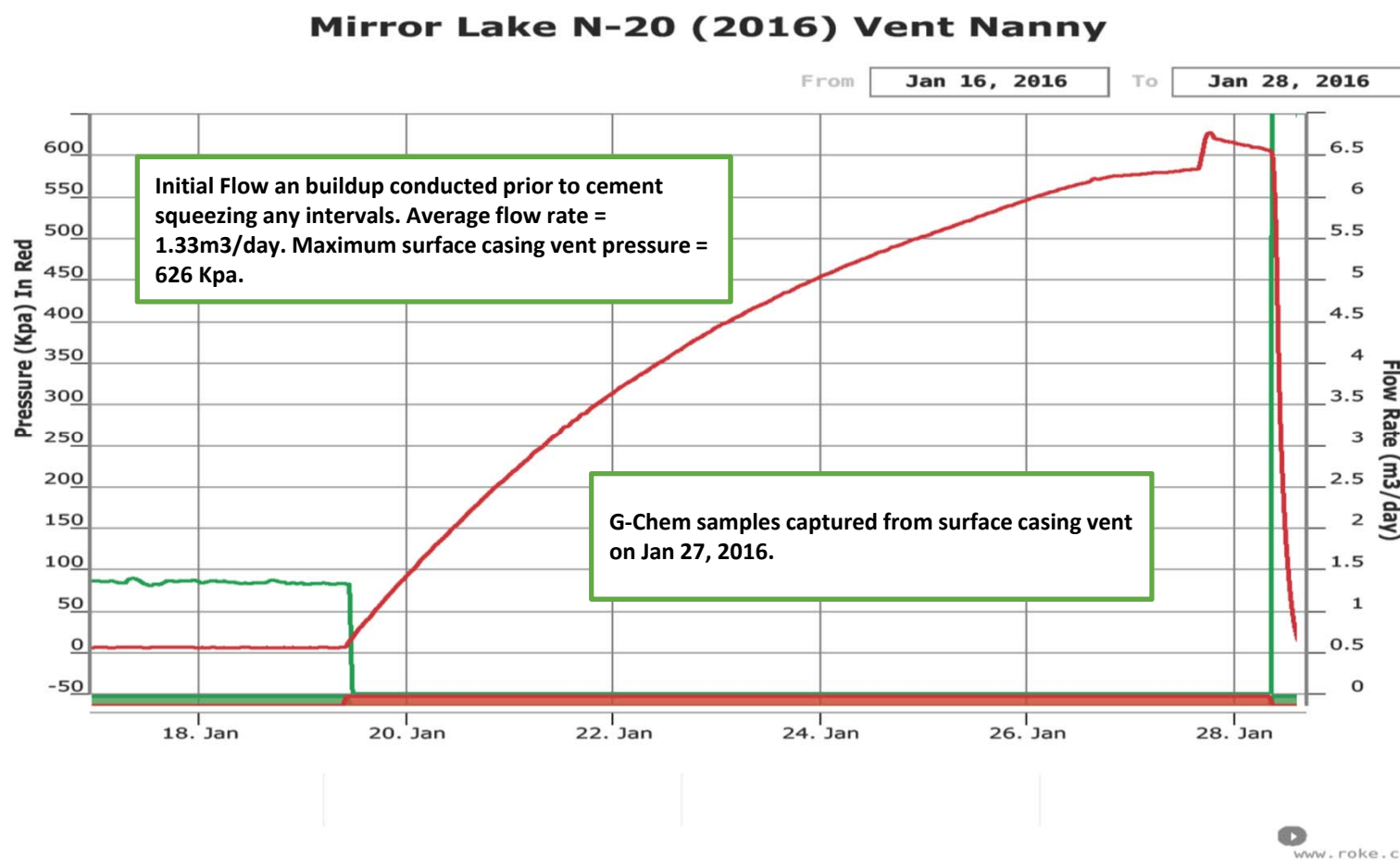
# N-20 Geophone Noise Log/RBL/Open Hole Porosity Composite Log



# N-20 Geophone Noise Log/RBL/Open Hole Porosity Composite Log



# N-20 Flow & Buildup Conducted Prior to Rig Work 2016





# JAN 27, 2016 G-CHEM RESULTS.



**GCHEM**

Bay 1, 4810-62 Avenue  
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Tel: (780) 871-4668  
Fax: (780) 808-8883  
e-mail: info@gchem.ca

Source determination of fugitive  
gases using ENERGY Forensics

Test Date: January 27, 2016

**Company** ConocoPhillips Canada  
**Well Name** Mirror Lake N-20 65-00 126-45

## Well Status Summary

SCV	Test performed by CPC personnel	Soils	Test performed by CPC personnel
	Isolated CB %LEL/H <sub>2</sub> S (ppm v/v)		# Soil Sites Tested
	10-min. Bubble-Test (>10min)		# Soil Sites > 0 %LEL
	CB Flow Rate (m <sup>3</sup> /day)		# Soil Sites = 0 %LEL
	24 Hr. Shut-In Pressure (kPa)		MAX %LEL
	**Stabilized Build-Up Time (hrs)		Gas Classification
	**Stabilized Build-Up Pressure (kPa)		% H <sub>2</sub> S
SCVF	Surface Casing Vent		% H <sub>2</sub> S from Gas-Tech 402 %LEL Field Meter
SCVF	Positive Combustible Gas Flow in Surface Casing Vent		SCV Data Logger (Refer to Fig 4 if measured)
%LEL	Lower Explosive Limit (5% - 15% Explosive Gases in Air)	nm	not measured at client's request

Table 1: Interpreted Source of Migrating Gases (measured depth from kelly bushing of the well)

Sample Point	Geologic Formation	Depth Range	Source Depth
SCV	Mid Devonian-Givetian Lower Canol Fm.	1968m to 2074m	1968m to 2074m

## Sampling and Testing Comments

- Natural gas samples from the surface casing vent were collected by ConocoPhillips personnel and forwarded to GCHEM Ltd. for analysis, characterization, classification, and geologic source determination.

## Source Identification Comments

January 27, 2016

- Natural gas in the surface casing vent is chemically and isotopically similar to natural gas originating from the Lower Canol Formation (Mid-Devonian Givetian).

September 11, 2013

- The chemical and isotope compositions of natural gases in the surface casing vent were compared to the chemical and isotope compositions of natural gases evolved from drilling fluid at Loon Creek O-06 65-10 127-00 while the well was being drilled (see ConocoPhillips Evolved Drilling Fluid Gas Isotope Logging and Isotech Labs analytical Loon Creek O-06 65-10 127-00).
- The light alkane gas compositions of the surface vent natural gas do not match any evolved gas compositions.
- Natural gases from the surface casing vent are offset (heavier) compared to the control obtained at Loon Creek. This indicates that natural gases in the Mirror Lake region have a different generation/migration/reservoir history and are isotopically distinct.
- The isotope compositions of the migrating gases becomes lighter (more negative) with time. This may be the result of natural gas from different geologic sources migrating to surface or the result of sampling procedures.
- The 9:00, 10:00 and 16:15 samples may originate from the Mid Devonian Hume Formation (2093m and below).
- The 17:00 sample is significantly lighter (more negative) and may originate from the Mid Devonian Imperial and/or Upper Canol Formations (1172m to 1966m).
- With the samples collected to date it cannot be determined if stabilized representative fugitive natural gas samples have been collected.

## Recommendations

- If geochemical control were established in the immediate area a more concise migrating gas source interval may be provided.
- From a gas migration perspective the well will require down-hole repair to prevent leaking natural gas from migrating to surface prior to abandonment.

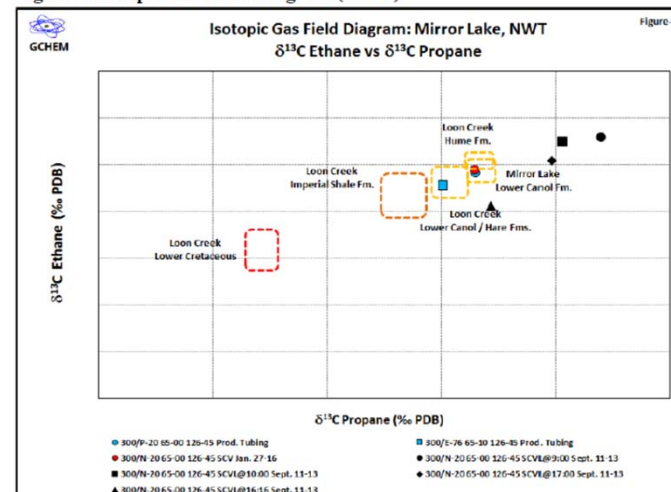


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ConocoPhillips Mirror Lake N-20 65-00 126-45

Energy Forensics

Figure-3 Isotopic Gas Field Diagram (IGFD)



Once gases have been identified as related to SCVF or AGM the geological source may be identified. As molecular and carbon isotope compositions change systematically with increased depth, discrete geological intervals are shown to have unique isotopic characteristics. Thermogenic gases collected at surface in soils or SCV's may be compared to this template of subsurface gas compositions (Natural Gas Isotope Logs -NGILs) and their geologic source is identified. Best results are achieved when NGILs, for correlation, are established in the immediate area.

## Isotopic Gas Field Diagram (IGFD) Comments

January 27, 2016

- Natural gas in the surface casing vent is chemically and isotopically similar to natural gas originating from the Lower Canol Formation (Mid-Devonian Givetian).

September 11, 2013

- Natural gases from the surface casing vent are offset (heavier) compared to the control obtained at Loon Creek. This indicates that natural gases in the Mirror Lake region have a different generation/migration/reservoir history and are isotopically distinct.
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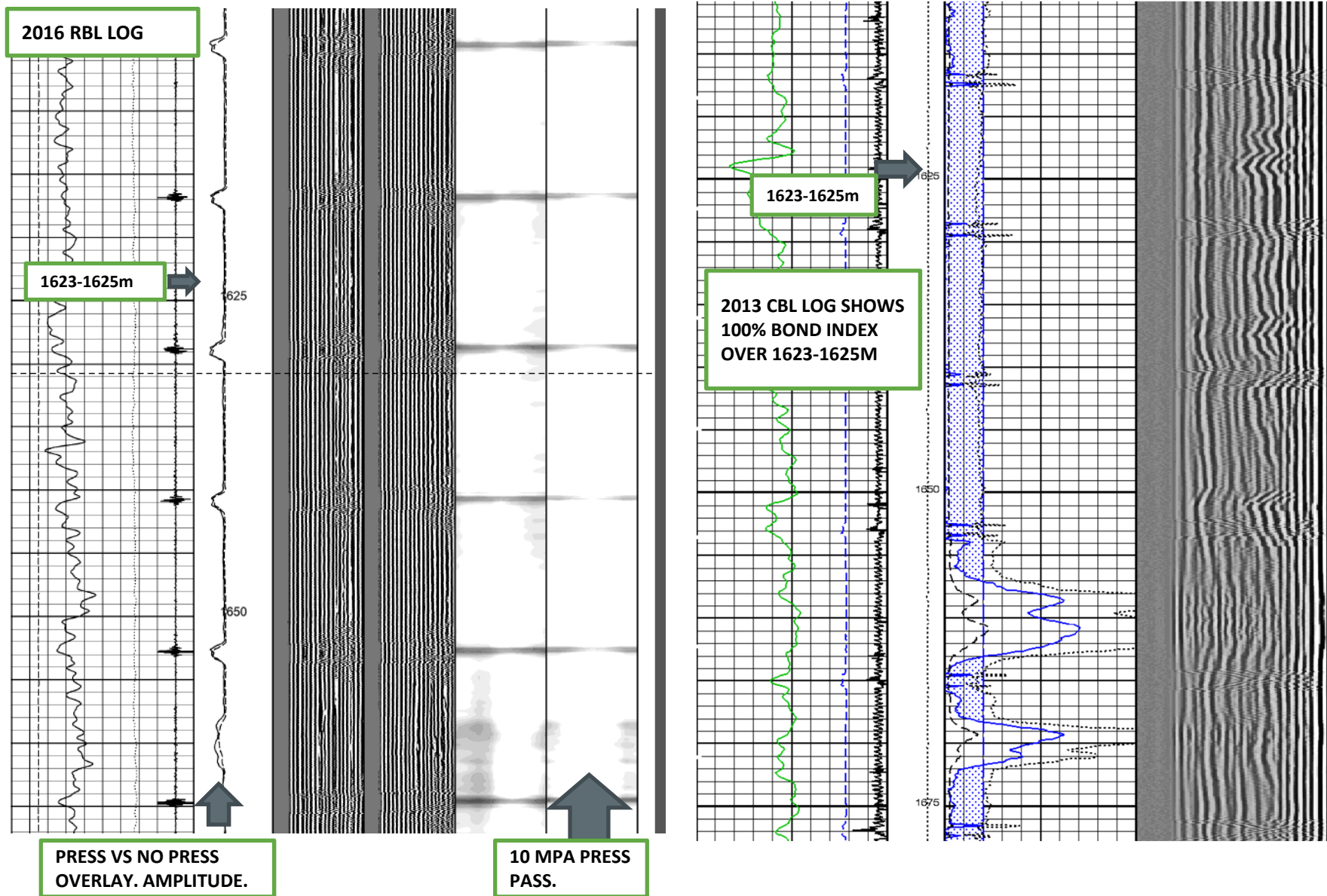
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Page 6

## N-20 SCVF Cementing Operations Summary First 4 Intervals

- Interval#1 Lower Canol perforations. 2068.0-2070.0, 2059.0-2060.0, 2023.0-2024.0, 2015.0-2017.0, and 1993.0-1994.0m KB. Feb 11, 2016 balanced a 6.0m<sup>3</sup> SqueezeCrete cement plug from 2100 to 1800m KB. Squeezed 3.24m<sup>3</sup> of SqueezeCrete into perforations. Final pressure 18,300 Kpa at 8 L/min.
- Interval #2 Upper Canol perforations. 1938.0-1940.0m KB. Feb 16, 2016. Cement retainer squeeze. 5.4m<sup>3</sup> squeezed into perforations. Final squeeze pressure 12,776 Kpa at 18 L/min.
- Interval #3. Imperial Sand. Perforations 1906.0-1908.0m KB. Feb 19, 2016. Cement retainer squeeze. 1.0m<sup>3</sup> G with Gasblok and 3.7m<sup>3</sup> of SqueezeCrete squeezed into perforation. Final squeeze pressure 18,500 Kpa at 12 L/min. Note: it was decided after this cement squeezed to run a RBL Cement bond log to compare to the original CBL log run in 2013 and to look for a micro annulus effect. A zero pressure and 10 Mpa pressure passes were conducted.
- Interval #4. Imperial Sand. Perforations 1623.0-1625.0m KB. Note: the original program called for the perforations at 1542.0-1544.0m KB also and to balance a cement plug. A revised program was applied for to conduct a cement retainer squeeze on 1623.0-1625.0m KB only. Feb 22, 2016. Cement retainer squeeze. 1.0m<sup>3</sup> G with gasblok and 2.94m<sup>3</sup> SqueezeCrete into perforations. Final squeeze pressure 12,400 Kpa at 12 L/min.

## N-20. RBL FEB 2016 LOG & 2013 CBL. MICRO ANNULUS EXAMPLE.

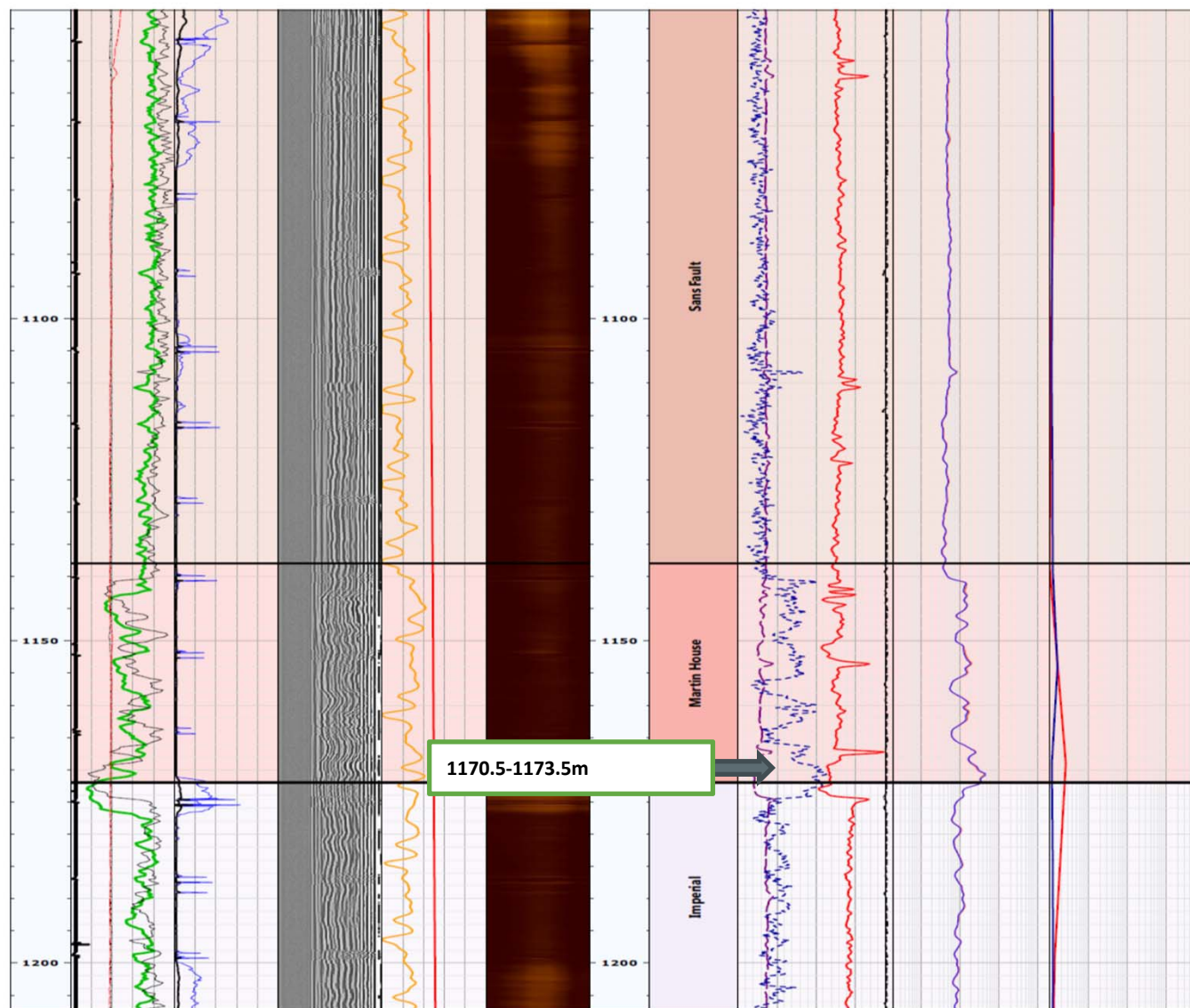


## N-20 Program Revision Additional Intervals. Q1 2016.

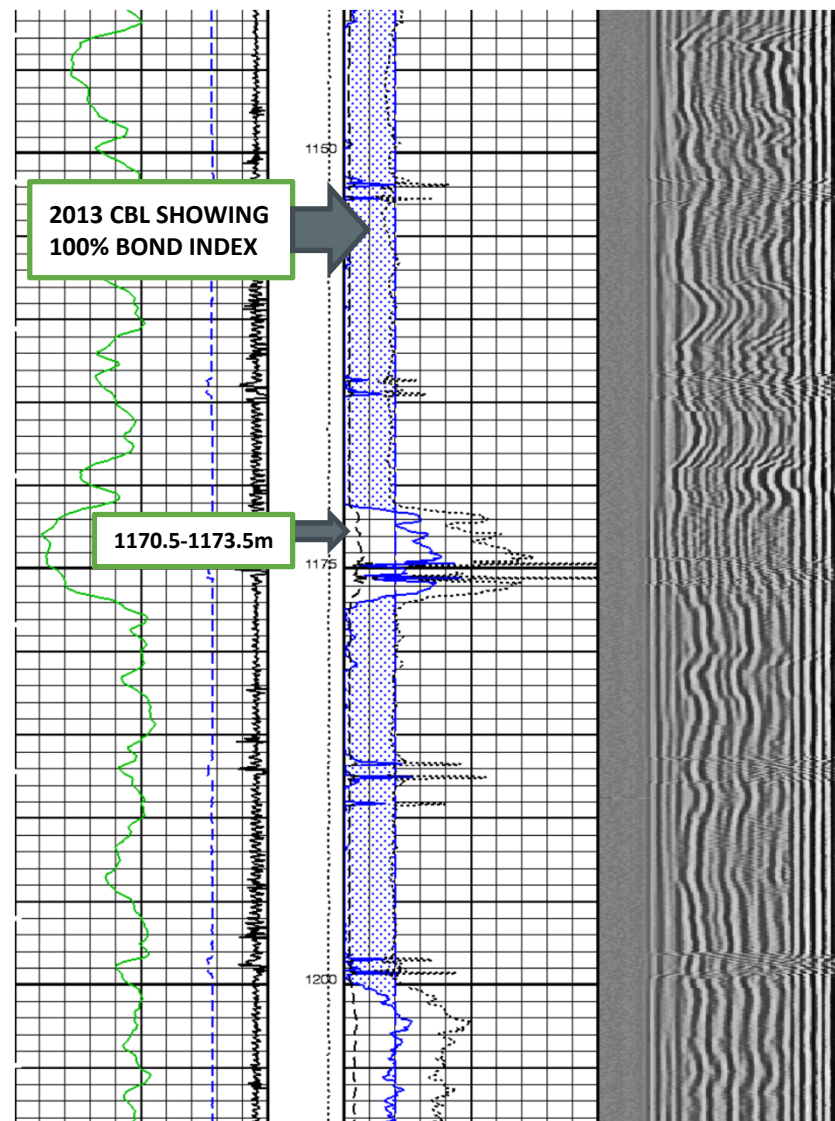
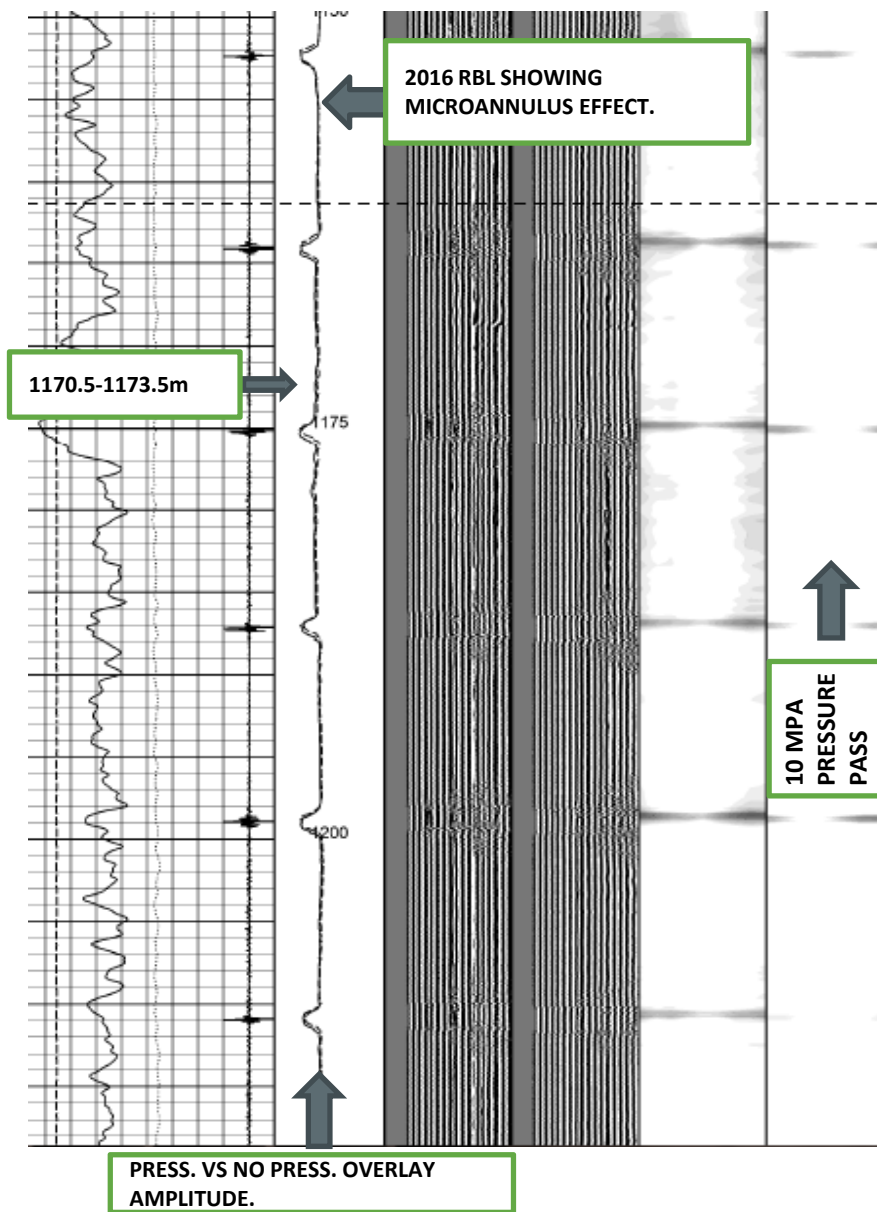
- Program was revised to omit the optional interval from 1542-1544 m KB and to add an interval from 1170.5-1173.5m KB near the base of the Martin House and the top of the Imperial sand. This interval was based on a small indication of flow from the geophone noise log, the open hole log showing indications of porosity and gas response, an indication of increase in gas units on the geological strip log while drilling. This area is also an apparent micro annulus area based on the new bond log information obtained from the RBL log ran Feb 20, 2016.
- Feb 24, 2016. Cement Squeezed Interval #5, 1170.5-1173.5m KB. Cement retainer squeeze. Placed 0.92m<sup>3</sup> Class G with gasblok and 3.0m<sup>3</sup> of SqueezeCrete. Final squeeze pressure of 12,800 Kpa at 10 L/min.



# N-20 Geophone Noise Log/CBL/Open Hole Porosity Composite Log



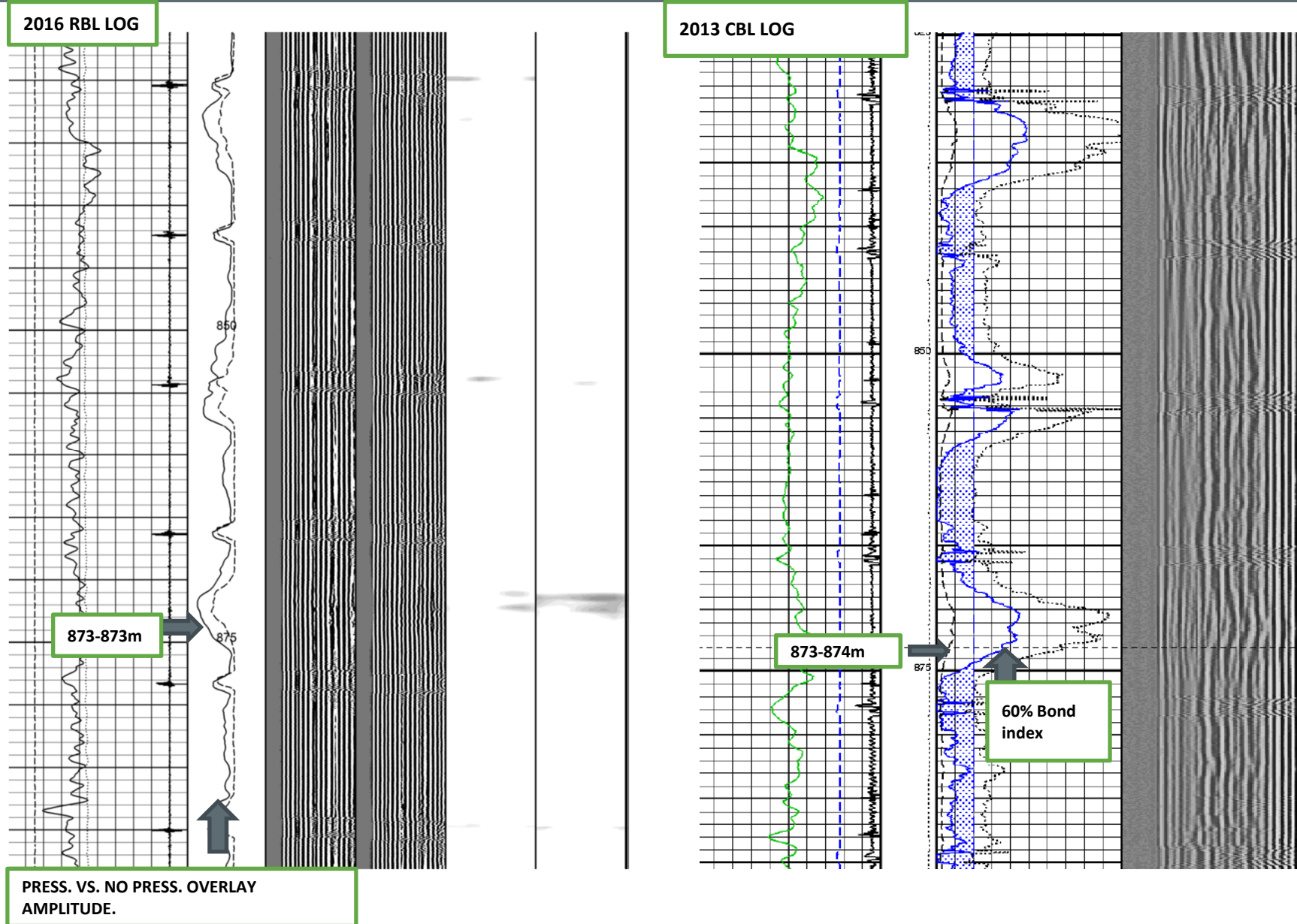
## N-20. RBL FEB 2016 LOG & 2013 CBL. MICRO ANNULUS EXAMPLE.



## Interval #6. 873-874m Micro-annulus Squeeze Program.

- Program was revised again and approval obtained to add an interval. The new interval was 873-874m KB. This is an area of micro annulus.
- The program was changed to include a micro-annulus procedure. This procedure would utilize a “Resinbond” cement.
- Resinbond cement is a gypsum based cement with a polymeric resin added. This cement sets up quickly, gains compressive strength quickly and also has expansion qualities. This cement typically cannot be pumped after 90 to 120 minutes after mixing is done.
- Perforating design was changed to use big hole charges and an UZI gun to ensure full coverage of the wellbore over a 1 meter interval and increase the chances of filling any micro annular area.
- After perforating is completed, a permanent bridge plug is placed within 0.5m of the bottom perforation. The Resinbond is then mixed and dump bailed in place, covering the perforations. Pressure is then applied as soon as possible and then pressure left on overnight.
- After overnight shut-in, cement top is tagged to confirm the total volume injected and then the perforations are abandoned with a permanent bridge or unactuated cement retainer and cement.
- Note: a temperature log was included because knowing the temperature is very important for the mixing of the ResinBond cement in order to avoid the cement setting up too quickly.

## N-20. RBL FEB 2016 LOG & 2013 CBL. MICRO ANNULUS EXAMPLE.

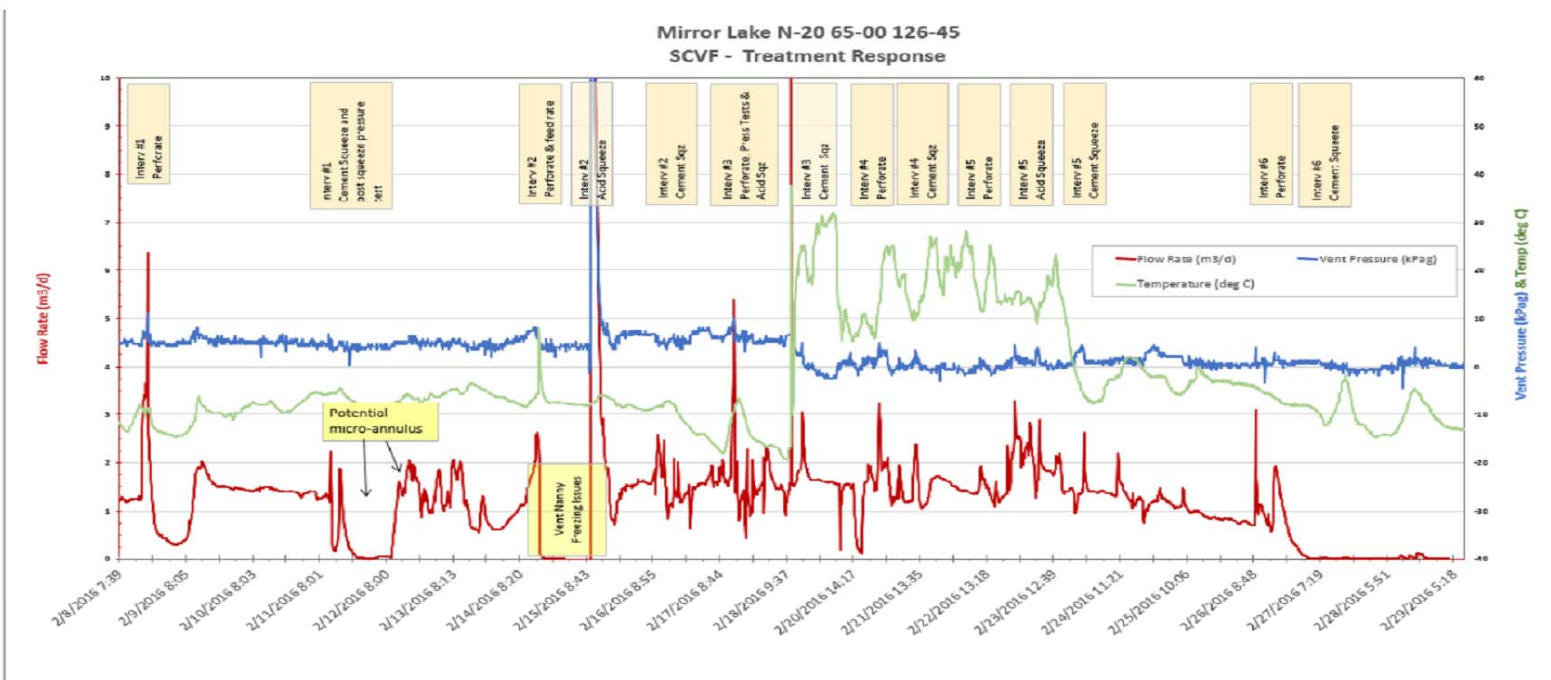




## Interval #6. 873-874m Micro-annulus Squeeze Operation.

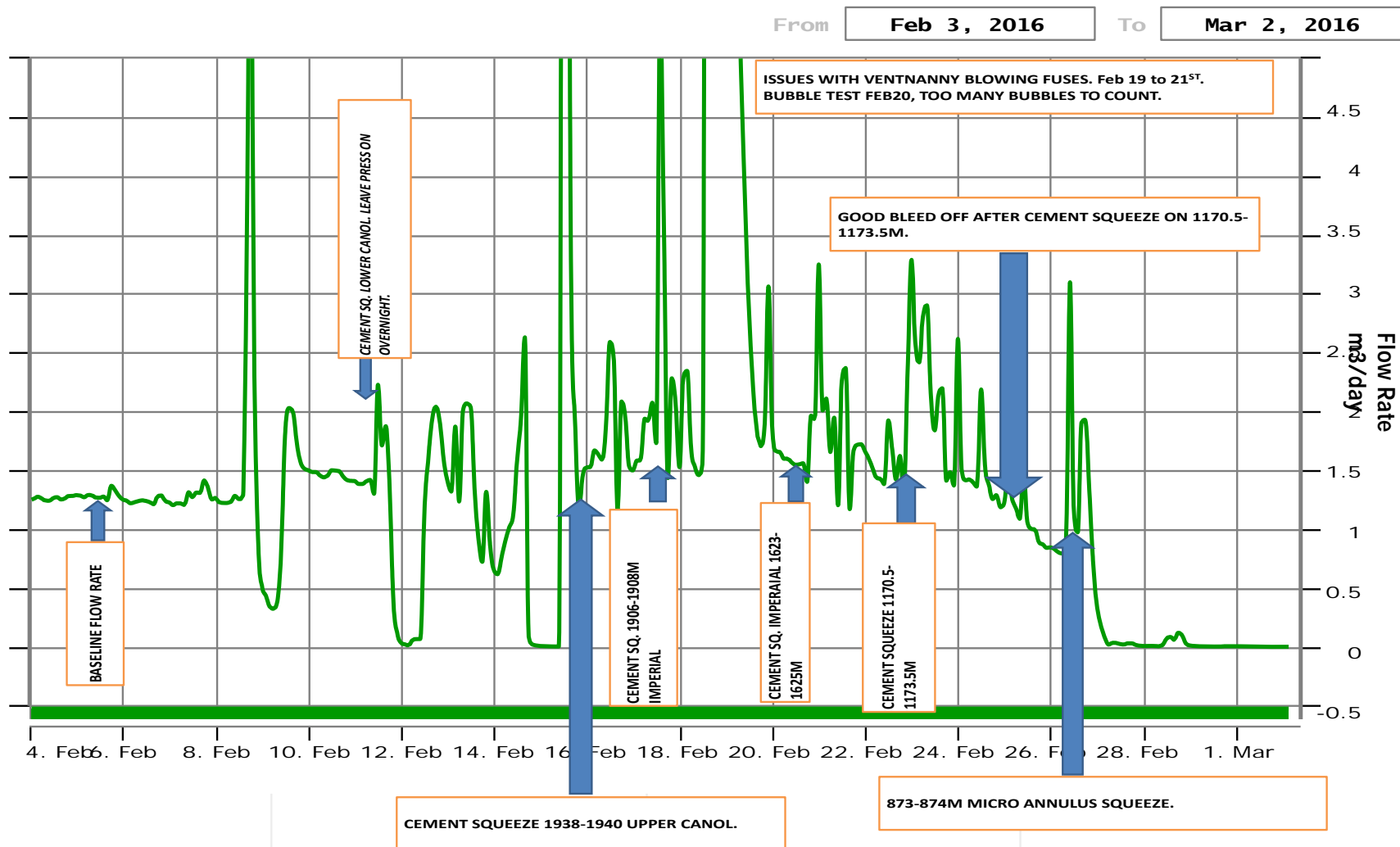
- Feb 26, 2016. With no perforations open in the wellbore, performed pressure/volume tests in order to evaluate volumes required to pressure up against a closed system. Used 7 Mpa and 14 Mpa as base line tests. It took an average 91.6 L to pressure up to 7 Mpa and 180.4 L to pressure up to 14 Mpa. These pressures would be used as baseline numbers in order to estimate volumes pumped at these very low rates.
- Feb 26, 2016. After pressure/volume testing was complete, perforated 873-874m KB. Permanent bridge plug was set 0.3m below bottom perforation. Ran a temperature log from 850 to 880m KB. Temperature recorded at perforation was 32.24 deg C.
- Feb 27, 2016. Set a permanent bridge plug 0.3m below bottom perforation. Mixed up and placed 150 L of Resinbond cement over perforations. Squeezed an estimated total of 85 L of cement and left 7.3 Mpa on well bore overnight.
- Feb 28, 2016. SICP = 2400 Kpa. Pressure tested wellbore to 7Mpa and held solid. Bubble tested surface casing and passed. Tag at 874m KB. No cement over perforations however pressure test held good. Abandoned perforations as planned with a permanent bridge plug and cement. Bubble test again at the end of the day and passed again. Left VentNanny to monitor.
- Feb 29, 2016. Bubble tested surface casing vent and passed again. Left VentNanny to monitor.
- March 1, 2016. Bubble tested surface casing vent and passed again. Removed VentNanny and prepared for cut and cap operations.
- March 2, 2016. Bubble tested surface casing vent and passed again. Cut and capped wellbore with NuWave system.

# N-20 SCVF TREATMENT RESPONSE GRAPH. Q1 2016



# N-20 FLOW RATE GRAPH. Q1 2016

## Mirror Lake N-20 (2016) Vent Nanny



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## **Appendix 9     Cut and Cap Photos**













N-20 5-00  
12 35  
MAR 2016







