

# **Husky Slater River Project**

**Abandonment**

**End of Well Operations Report**

**for Husky Little Bear H-64**

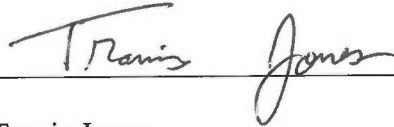


**April 2019**

ABSTRACT

This End of Well Operations Report covers abandonment operations of the Husky Little Bear H-64 well executed in NWT Slater River Project area during Q1 of 2019.

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# 1.0 Summary of Well Operation

## 1.1 Introduction

Husky Little Bear H-64 was originally completed by Husky Oil Operations Limited in Q1 of 2013.

Husky Oil Operations Limited had a 100% working interest in the project.

The program area was located approximately 55 km south-southeast (SSE) of the Town of Norman wells in a low-lying area within the Mackenzie River valley.

The location of Little Bear H-64 is as follows:

<b>Little Bear H-64</b>	<b>Northing</b>	<b>Easting</b>
NAD83 UTM Zone 9	7,199,296.55	632,977.85
NAD27 UTM Zone 9	7,199,097.54	633,068.47

The well was suspended in 2013 and routine inspections have been completed each summer since that time. A surface casing vent flow (SCVF) was observed prior to starting initial completion work and was present during all inspections thereafter. Testing completed in summer 2013 reported a flow rate of approximately 4.0 m<sup>3</sup>/day with a stabilized buildup pressure of around 2,000 kPa. No liquid hydrocarbon or water flow was observed from the vent. The SCV was left open after suspension operations were completed.

## 1.2 Well Operations Summary

Equipment began mobilizing to location in late January 2019 and abandonment operations commenced on January 31<sup>st</sup>. The VentMeter was installed, and the initial SCVF rate was approximately 3.0 m<sup>3</sup>/day. After rigging up, pressure tests were completed on the wellhead and casing, and Streamflo was brought in to remove the surface back pressure valve. The tubing string was disconnected from the packer using the on/off assembly and a packer retrieval assembly was run in hole. The packer was unset, and the assembly was pulled to surface along with the spent tubing-conveyed perforating gun.

A milling assembly was run in hole and used to mill through the top bridge plug at 1,220.8 mKB, and the wellbore was cleaned down to the top of the lower bridge plug at 1,241.8 mKB. The milling assembly was pulled out of hole and a bit/scrapper was run and used to scrape the casing. After pulling the bit/scrapper from the well, a wireline-retrievable (WR) plug was run in hole and set above the upper perforations, and a MiCRO/CHAT (cased-hole analysis tool) + noise/temperature/radial bond log (RBL) was run from the top of the WR plug to surface. The WR plug was then pulled, and a test packer assembly on tubing was used to pressure test the existing bridge plug above the lowest set of perforations. After getting a good test on the bridge plug, the test packer was moved uphole and used to inject fluid into both sets of open perforations in order to try and establish a feedrate. The test packer assembly was then pulled out of the hole

and an e-line dump bailer was used to dump bail 6.0 vertical meters of Hydromite cement on top of the existing bridge plug.

After the lowest perforations were abandoned, a double-grip test packer was run in hole once again and used to swab/surge the perforations from 1,225.0 – 1,232.0 mKB. After an acceptable feedrate was established, a cement retainer was set above the perforations using wireline. The test packer assembly was run in hole and used to pressure test the cement retainer. After obtaining a good test, tubing was run in hole and stung into the retainer. 4.2 m<sup>3</sup> of cement was squeezed through the retainer and a 10 minute, 10 MPa flatline was obtained. The retainer was capped with cement and the tubing was pulled out of hole. There were some issues with the VentMeter hose freezing at this point, but the vent flow rate did not seem to be significantly affected.

After swabbing and surging the perforations from 1,192 mKB to 1,194 mKB for some time, a suitable feedrate to conduct a cement squeeze could not be obtained, so the perforations were abandoned using a pressure tested permanent bridge plug and cement cap.

The first new perforations were then put in the casing at 1,078 – 1,081 mKB, but once again, no feedrate could be established, so a pressure tested permanent bridge plug and cement cap was used to abandon the interval.

The casing was then perforated from 782 – 785 mKB and a 4.5 m<sup>3</sup> cement squeeze was conducted, finishing with an 8.2 MPa flatline pressure for 10 minutes. The SCVF was not significantly affected by this operation (2.7 m<sup>3</sup>/day).

New perforations were placed at 699 – 702 mKB and a 4.5 m<sup>3</sup> cement squeeze was conducted, finishing with a 7.7 MPa flatline pressure for 10 minutes. This operation reduced the SCVF to approximately 1.6 m<sup>3</sup>/day.

The next set of perforations were from 673 – 676 mKB. 5.5 m<sup>3</sup> of cement was squeezed through a retainer and into the perforations, finishing with a flatline pressure of 9.8 MPa for 10 minutes. The SCVF rate averaged 1.0 m<sup>3</sup>/day after this operation. After this operation was completed, a noise/temperature and radial bond log were conducted.

The well was then perforated at 649 – 653 mKB and a 6.6 m<sup>3</sup> cement squeeze was completed with a 7.0 MPa, 10 minute flatline pressure. The SCVF rate was reduced to around 0.3 m<sup>3</sup>/day.

For the sixth cement squeeze, two sets of perforations were placed from 535 – 538 mKB and 542 – 545 mKB. Both sets of perforations were abandoned using a single retainer, and 5.2 m<sup>3</sup> of cement was squeezed into the perforations, finishing with a 7.3 MPa x 10-minute flatline. This did not significantly affect the SCVF rate (0.4 m<sup>3</sup>/day)

Next, perforations were placed from 512 – 515 mKB and 1 m<sup>3</sup> of acid was spotted to help open up the zone. A cement squeeze was conducted, resulting in 6.0 m<sup>3</sup> of cement being squeezed into the formation. A flatline pressure of 14.0 MPa was obtained for 10 minutes. After this operation, the average SCVF rate was 0.2 m<sup>3</sup>/day. Another MiCRO/CHAT (cased-hole analysis tool) + noise/temperature log was conducted.

The final target was selected based on the temperature logs conducted previously, which showed a difference in temperature between flowing and shut-in conditions starting at around 428 mKB, indicating gas movement behind pipe. The interval from 417

– 420 mKB was perforated and swabbed/surged to establish connectivity. Some effect was noted on the SCVF rate, and the decision was made to reperforate the top of the interval with a 1 meter channel gun, having an immediate effect. Pumping fluid into this zone killed the vent flow, and a cement squeeze was conducted, cutting off the SCVF (ie. sustained zero flow and zero bubbles in bubble test). 5.5 m<sup>3</sup> of cement was pumped, achieving a 14 MPa flatline for 10 minutes. Equipment was then rigged out and moved to N-09 to commence operations on that location.

The rig was released on February 28<sup>th</sup>, 2019. SCVF monitoring was conducted while N-09 operations were ongoing to ensure the SCVF repair was successful. The well was cut and capped on March 14<sup>th</sup>, 2019.

## 1.2 Well Summary Data

Well Name	Husky Little Bear H-64
Well ID	2077
UWI	300H646500126001
Operating Licence No.	NWT-OL-2014-006
Operation Authorization No.	OA-2018-003
Well Type	Vertical
H <sub>2</sub> S (%)	0.00
TD (m)	1340.79
Surface Casing (mm, kg/m, grade, connection)	244.5, 53.57, J-55, LT&C
Prod. Casing (mm, kg/m, grade, connection)	177.8, 34.23, L-80, LT&C
Perforations (mKB)	See Table
Formation	Hare Indian Lower Canol
Lithology	Shale

### 1.3 Perforations

Top (mKB)	Bottom (mKB)	Date	Status
1,245	1,247	2/11/2013	Abandoned (PBP/cement)
1,225	1,232	2/18/2013	Abandoned (Retainer/squeeze)
1,192	1,194	3/4/2013	Abandoned (PBP/cement)
1,078	1,081	2/12/2019	Abandoned (PBP/cement)
782	785	2/14/2019	Abandoned (Retainer/squeeze)
699	702	2/15/2019	Abandoned (Retainer/squeeze)
673	676	2/16/2019	Abandoned (Retainer/squeeze)
649	653	2/18/2019	Abandoned (Retainer/squeeze)
542	545	2/21/2019	Abandoned (Retainer/squeeze)
535	538	2/22/2019	Abandoned (Retainer/squeeze)
512	515	2/23/2019	Abandoned (Retainer/squeeze)
417	420	2/27/2019	Abandoned (Retainer/squeeze)



## 1.4 Problems Encountered/Incidents

The following issues/incidents occurred during abandonment operations at H-64:

- Incident: Check valve in accumulator system - During OROGO rig inspection, it was noted that the accumulator pressure gauges were not responding as expected during BOP function testing. Operations were shut down on February 7<sup>th</sup> until the cause of the problem was identified and the issue corrected. It was identified that a check valve in the accumulator system was causing the issue. The problem was resolved and operations restarted that night.
- Incident: Steam hose failure – On February 13<sup>th</sup>, a 2” steam line burst during normal operations. There was no environmental damage and no injury to personnel. The steam header was shut in and the system inspected to ensure there were no other leaks. After verifying that the remainder of the system was not impacted, the hose was replaced, and the system was put back into normal operation.
- Incident: Accumulator pump switch turned off – On February 13<sup>th</sup>, it was noticed by the driller that the accumulator pressure was not recharging after a BOP function test. Investigation revealed that the main accumulator pump switch had been turned off. The pump was turned back on and the system re-pressurized normally.
- Incident: KCL/water spill – On February 13<sup>th</sup>, a disconnected suction hose between a 400 bbl tank and pump led to a spill of approximately 200 L of KCL/fresh water mix. The ice pad prevented any fluid from reaching the ground and the spill was immediately cleaned up using the on-site vac truck/crew with shovels.
- Incident: Cement hose disconnection – On February 17<sup>th</sup>, while transferring dry cement from a cement storage trailer to a bulker onsite, the hose became disconnected and struck a worker approximately 5 to 6 feet away on his shoulder and then up to his ear/jaw area. The worker fell down and the tool push immediately went to check on him. The worker was assessed by the night medic who was a paramedic and was deemed to be okay to return to work.
- Incident: Cement spill – On February 20<sup>th</sup> after completing a cement squeeze, a vac truck was offloading cement water into the cement bins. While offloading, a leak was discovered at a seal on the bin. The appropriate personnel were notified and the spill was cleaned up without issue.

## **2.0 Description of Completion Fluid Properties**

### Kill Fluid

1,050 kg/m<sup>3</sup> KCL/fresh water mix was used as kill fluid for the operation. This required an 8% concentration of KCL.

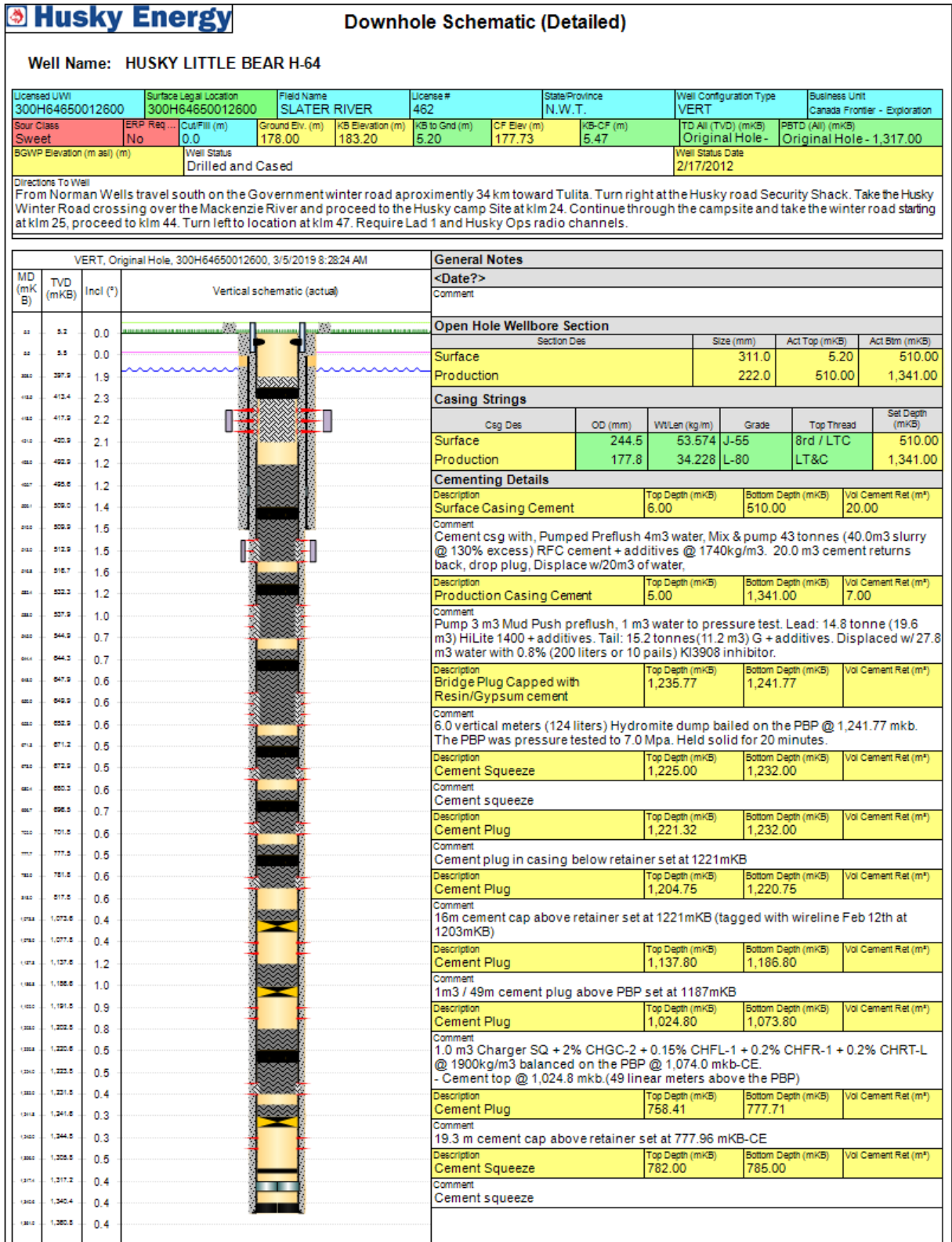
### Synthetic Acid

OptiFrac Oil Safe AR is a safe acid replacement product used in place of traditional hydrochloric acid treatments. It is non-toxic, non-fuming and is fully biodegradable.

### Abandonment Fluid

Fresh water sourced from Norman Wells was left in the wellbore from the top of cement to surface.

### 3.0 Downhole Schematic



## **Attachments**

- 3.1 Well Termination Record (OROGO)**
- 3.2 Change of Well Status Form (OROGO)**
- 3.3 Completion Daily Reports**

## WELL TERMINATION RECORD

### INSTRUCTIONS:

1. Complete both pages.
2. Send one electronic copy of this form and supporting technical documentation by email to [orogo@gov.nt.ca](mailto:orogo@gov.nt.ca).
3. Send two signed hard copies of this form and supporting technical documentation by courier to:  
 Chief Conservation Officer  
 Office of the Regulator of Oil and Gas Operations  
 4th floor Northwest Tower  
 5201 50th Avenue  
 Yellowknife NT X1A 3S9

### WELL INFORMATION

Well Name	Little Bear H-64	Operator	Husky Oil Operations Ltd.
Well Type	Exploratory Well (if Other, specify _____)	Contractor	_____
Well Identifier	2077	Current Well Status	Abandoned

### RELATED LICENCES AND AUTHORIZATIONS

Operating Licence No.	NWT-OL-2014-006	Operations Authorization	OA - 2018-002
	Exploration Licence		
PRA Licence No.	494	Approval to Alter Condition of Well	ACW - 2018-003

### LOCATION INFORMATION

**Coordinates** Datum: NAD83 (if Other, please specify \_\_\_\_\_)

Surface	Lat 64 ° 53 ' 28.80 "	Long -126 ° 11 ' 26.77 "
Bottom Hole	Lat 64 ° 53 ' 28.84 "	Long -126 ° 11 ' 26.24 "

Region: Sahtu      Unit H      Section 64      Grid 65-00 126-00

### ACTIVITY INFORMATION

Target Formation(s)	Lower Canol/Hare Indian	Field/Pool(s)	Slater River /
Elevation KB/RT	183.2 m	Ground Level / Seafloor	178.0 m
Spud/Re-entry Date	Jan 31 2019	Total Depth	1340.8 m KB
Rig Release Date	Feb 28 2019	Total Vertical Depth	1340.8 m KB

### CASING AND CEMENTING PROGRAM

O.D. (mm)	Weight (kg/m)	Grade	Setting Depth (m KB)	Cementing (m <sup>3</sup> )
508	Conductor Pipe	ASTM A 53	23	15
244.5	53.6	J-55	510	40

177.8	34.2	L-80	1341	30.8

### PLUGGING PROGRAM

Type of Plug	Interval (m KB)	Felt	Setting Depth (m KB)	Cementing (m <sup>3</sup> )
Bridge	1241.8-1242.3	Yes	1241.8	0.1
Cement Retainer	1220.8-1221.3	Yes	1220.8	4.8
Bridge	1186.8-1187.2	Yes	1186.8	1.0
Bridge	1073.8-1074.2	Yes	1073.8	1.0
Cement Retainer	777.7-778.3	Yes	777.7	4.9
Cement Retainer	696.1-696.7	Yes	696.1	4.8
Cement Retainer	671.3-671.9	Yes	671.3	5.8
Cement Retainer	644.4-644.8	Yes	644.4	6.9
Cement Retainer	531.9-532.4	Yes	531.9	5.5
Cement Retainer	509.1-509.6	Yes	509.1	6.3
Cement Retainer	413.0-413.5	Yes	413.0	5.8

### PERFORATION

Interval (m KB)	Comments
1245-1247	Perforation from initial completion
1225-1232	Perforation from initial completion
1192-1194	Perforation from initial completion
1078-1081	
782-785	
699-702	
673-676	
649-653	
542-545	
535-538	
512-515	
417-420	


### OTHER

Lost Circulation/Overpressure Zones	None
Equipment Left on Site (Describe)	None
Provision for Re-entry (Describe and attach sketch)	N/A



Other Downhole Completion/Suspension	N/A
Additional Comments	

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

Name	Al Pate	Phone	(403) 750-1507
Title	VP, E&PS	E-Mail	Al.Pate@huskyenergy.com
Operator	Husky Oil Operations Limited		
Signature		Date	April 4, 2019
	<i>Responsible Officer of Company</i>		

**OROGO use only**

Unique Well Identifier 30 /        -        -        /         
(eg. 300 / A01 60-00 120-00 / 0)

## CHANGE OF WELL STATUS

This form must be filed with the Office of the Regulator of Oil and Gas Operations within 14 days of a change in well status.

### INSTRUCTIONS:

1. Complete both pages.
2. Send one electronic copy of this form by email to [orogo@gov.nt.ca](mailto:orogo@gov.nt.ca).

### WELL INFORMATION

Well Name	Little Bear H-64	Operator	Husky Oil Operations Ltd.
Well Identifier	2077	Unique Well Identifier	300H646500126001

### STATUS INFORMATION

Effective Date: March 14, 2019

Well Type: Exploration

If other, specify:

Well Mode: Abandoned

If other, specify:

Other:

If other, specify:

Fluid Production: (choose all applicable)

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

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

Name	Al Pate	Phone	(403) 750-1507
Title	VP, E&PS	E-Mail	Al.Pate@huskyenergy.com
Operator	Husky Oil Operations Limited		
Signature		Date	April 4, 2019
<i>Responsible Officer of Company</i>			

**OROGO Use Only** (OROGO Use Only)

Date \_\_\_\_\_



# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: January 31 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	03:00	3.00	RIGUP	Rig up	Spotted cat walk, Completed CAODC rig inspection.
03:00	06:30	3.50	FLUID	Mix workover fluid	Loaded 20 bags of KCL onto rig tank at a time, Broke circulation & mixed/jetted a total of 100 bags of KCL. Weight is at 1050 kg/m
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review hazards and job scope for the day working in cold weather and high winds, frost bite, heavy loads, high pressure, use of steam, pinch and snag points,
07:00	12:00	5.00	RIGUP	Rig up	Build tank farm berm, need rig crew help due to high winds.
12:00	13:00	1.00	TESTWH	Test wellhead seals	Stream Flow test well head seals to 1.4 low and 14mpa high, each held for 10min, test is good.
13:00	13:30	0.50	BRKTM	Lunch Break	eat warm up.
13:30	14:30	1.00	RIGUP	Rig up	Set up cement tank farm, on water well lease 0.5km away, level and ready to move.
14:30	15:30	1.00	MISC	Miscellaneous operations.	Offload 10m3 into water shack, try and run it and both pumps are broken cracked from freezing. Water shack will need repair. Fill boiler with water, and both WSL shacks.
15:30	16:30	1.00	MISC	Miscellaneous operations.	Load up crates to go to coil rig. on total truck.
16:30	17:00	0.50	BRKTM	Coffee Break	Warm up.

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
17:00	18:30	1.50	MISC	Miscellaneous operations.	Get loader to plow out lease road, Finnish setting up catwalk.
18:30	19:30	1.00	SAFETY	Safety Meetings (Pre-job, daily)	Husky reps and PWS reps on lease. Review job scope and hazards for the day. Discuss working in cold weather, Stored Energy bulletin, Over head loads, high winds, snowing conditions. Operations with the Loader discussion. Crush points, Slips and Trips, Steam, Mixing of KCL with MSDS awareness discussion.
19:30	21:30	2.00	MISC	Miscellaneous operations.	Serviced and started equipment, Completed maintenance on pump manifold, Completed rigging in steam into 2 - 400bbl tanks.
21:30	00:00	2.50	FLUID	Mix workover fluid	Off loaded KCL bags onto tank, Started mixing KCL water to 1050kg/m. Crew spelled off each other for warm up's.

# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 01 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	04:00	4.00	FLUID	Mix workover fluid	Mixed/Rolled another 84 KCL bags(184 total), 45m3 of KCL water on lease mixed to 1050kg/m. Reposition light tower and Herman Nelson and rig in. Performed Husky SERVICE RIG SAFETY INSPECTION CHECKLIST.
04:00	06:30	2.50	MISC	Miscellaneous operations.	Repaired rig E-kill - All E-Kills functioning on all equipment, Replaced rig air horn, Changed out 1" boiler valve on return line, tidy up around all equipment and in doghouses.
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Hold safety meeting, review hazards and job scope for the day, working in cold weather, loader work, high pressure lines, pumping, slips and trips, unloading bed trucks, moving equipment watch for frost bite.
07:00	12:00	5.00	MISC	Miscellaneous operations.	-Planks in tank farm for walking on. -Planks in fuel Berm for walking on. -Change out fuel hose on fuel skid, to winter hose. -Set up second pipe rack. -Offload Bonnets gun skid, and spot. -Offload Bonnets, work trailer and rig in. -Stand flare stack. -Offload garbage to willow creek truck. - Offload 5,000L diesel into Surface equipment, 7000L into fuel skid.
12:00	12:30	0.50	BRKTM	Lunch Break	Lunch and warm up

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
12:30	18:30	6.00	MISC	Miscellaneous operations.	-Offload 12m3 of lake water and mix with Our KCL water to a weight of 1050 KG/m. -Send in Hazards ID's -Spot cement trailer, fill with Diesel.
18:30	19:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review job scope and hazards for the day. Discuss working in cold weather, Over head loads, high winds, snowing conditions. Crush points, Slips and Trips, Steam, Rolling of KCL fluid.
19:00	23:30	4.50	MISC	Miscellaneous operations.	Continue to roll KCL fluid. Weight @ 1040kg/m, Added 30 more bags KCL, Rolled and weight at 1050kg/m as per program. Perform maintenance and house keeping.
23:30	00:00	0.50	MORU	Move on rig unit	P. Tank on lease. Back in and prepare to spot tank. Pump liner lubricator line failed then repaired.

# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 02 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	02:30	2.50	MISC	Miscellaneous operations.	Offload P.tank into position and prepare to rig in. Unit was frozen to trailer, Rollers on trailer frozen, Extra time taken to off load unit.
02:30	03:00	0.50	BRKTM	Lunch Break	Crew took Lunch/Warm up break.
03:00	03:15	0.25	SAFETY	Safety Meetings (Pre-job, daily)	Perform Pre-Job Safety Meeting. Review rig in procedures on P.Tank.
03:15	05:30	2.25	MISC	Miscellaneous operations.	Rig in P.tank, Flare line and return line to spool.
05:30	05:45	0.25	BRKTM	Coffee Break	Crew took warm up break
05:45	06:30	0.75	MISC	Miscellaneous operations.	Gauges on P.tank frozen, Wall panels loose from move, 1 flange bolt loose, Unit needs a thorough visual inspection before use. Rig crew performing maintenance and house keeping, P.tank operator inspecting unit.
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review hazards and job scope for the day -40 temp, working with water, high pressure lines, use of steam, use of water, circulating the well slips trips, pinch and snag points.
07:00	09:00	2.00	MISC	Miscellaneous operations.	700KPA on Casing, 5000KPA on Tubing, 36 hour shut in on SCV is 1932kpa, that is a flat line. Lub out BPV, close blind rams.
09:00	10:30	1.50	BLDWN	Bleed wellbore press.	-Bleed off tubing pressure to the flare stack, flared off 0.195 103M3. -Bleed off casing to Flare stack. Shut tubing in for 15min make sure we are not building pressure and we are not, plug seems to be holding.

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
10:30	11:00	0.50	BRKTM	Coffee Break	-40 out we are taking lots of warm up breaks, through out the day.
11:00	15:00	4.00	MISC	Miscellaneous operations.	-Switch to our spare pump, the lube pump, that lubes the plungers is not working on pump #1. -Spare pump we can not keep running, found the problem to be a collapsed check valve, fix problem and pump is running. -Switch all pump lines and suction hoses to spare pump. -Send steam down both pump lines, we are ready to come off on/off.
15:00	16:00	1.00	MISC	Miscellaneous operations.	-Pull lag screws, they came out with out any problem. -Pull string to 15dec, came back down, found free point, 1/4 turn to left, pull dog nut out of the stack, close pipe rams.
16:00	18:00	2.00	CIRC	Circulate well clean	-Pump down casing up tubing, took 3.8m3 to catch fluid, once we caught fluid Pumped 27m3 at 400L/min @ 5mpa, Returning frac fluid to empty 400. Took test sample during last 1m3 returns looked clean. Call for disposal of fluid.
18:00	18:30	0.50	MISC	Miscellaneous operations.	Lower string, break off circ chick, break out dog nut, circulate lines with KCL water.
18:30	19:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review job scope and hazards for the day. Discuss working in cold weather, Over head loads, high winds, snowing conditions. Crush points, Slips and Trips, Steam, Rolling of KCL fluid.
19:00	22:30	3.50	POOH_TB	POOH tubing	Prepare to POOH(Set up NORM Meter), POOH and remove Tubing Hanger(0.18m), 1 - 73.0mm L-80 9.67kg/m Tubing joint (9.67m), 1 - Space Out Nipple 73.0mm L-80 9.67kg/m(0.19m), 119 - 73.0mm L-80 9.67kg/m Tubing joints(1146.42m), 1 - 73.0mm L-80 9.67kg/m Pup joint(1.86m), 1 - 73.0mm L-80 9.67kg/m Tubing joint(9.67m), 1 - 73.0mm L-80 9.67kg/m Pup joint(3.08m), 1 - 149.2mm On-Off tool(0.55m) ***1/2 hr Warm up Break taken 40Jts out with a hole top up prior.***Checked for NORMS every 10 Joints out with no findings. NO NORM's found. Performed a BOP drill - Good drill. 47 seconds to shut in the well. See Safety Checks.
22:30	00:00	1.50	TESTCSG	Test casing	Slowly fill hole to prevent trapped air.(80L/Min), Pumped a total of approx 1.50m3 to fill hole. Slowly pressure up and test casing to packer top @ 1176.22mKB to 7mPa/10min. Pressure test solid on casing from surface to packer top @ 1176.20mKb. *See Equipment Pressure Tests.*

# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 03 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	06:30	6.50	MISC	Miscellaneous operations.	Bleed off pressure line/well pressure to tank. Shut well in @ 12:09am. Rig crew winterized equipment, Serviced tongs, Completed maintenance & housekeeping.
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review hazards and job scope for the day, cold weather, working with steam and water, slips and trips, working with other services. Doing rig maintenance.
07:00	12:00	5.00	MISC	Miscellaneous operations.	-Wait for the well to get stabilized so we can noise log the well, do maintenance on rig.
12:00	18:30	6.50	WOS	Waiting On Services (Ex: Coil Tubing, TMX Unit)	Wire Line truck is broken down, so we are doing rig maintenance, while waiting for fix on truck.
18:30	19:15	0.75	SAFETY	Safety Meetings (Pre-job, daily)	Review job scope and hazards for the day. Discuss working in extremely cold weather, Over head loads, high winds, Crush points, Slips and Trips, Steam, Discuss RIH and retrieving packer with crew and tool hand. Discuss equipment preparation for flawless execution during packer retrieval - Displacing fluid & pushing with stream to ensure no freeze ups.
19:15	20:30	1.25	MISC	Miscellaneous operations.	Warm and prep equipment and ready operations to RIH to retrieve packer. Install escape buggy securement.
20:30	20:45	0.25	BRKTM	Coffee Break	Crew took warm up break.

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
20:45	00:00	3.25	RIH_TB	Run in hole tubing	Assemble, tally packer retrieval BHA, RIH w/ 1 - 150.0mm On/Off X 0.45m, 1 - 73.0mm Ported sub X 0.26m, 1 - 73.0mm X 3.09m Pup, 1 - 55.80mm R profiled Nipple X 0.27m, 121 - 73.0mm Tubing joints(1168.25m), 1 - 73.0mm Pup joint X 1.86m, 1 - 73.0mm Pup joint X 2.47m *****Crew stopped & took 1/2hr warm up/lunch break when tripping into the hole @ 60 Jt mark. *****

# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 04 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	01:30	1.50	SETTOO L	Setting or unsetting packers	Drain pumping and return lines, Service pump. 6cm gain from displacement RIH - approx 1.40m3 gain. RIH and latch onto packer. Work/stage up packer with a half turn right to a total of a 20 daN pull and repeat procedure using gentle spuds down. Packer free. Tubing and casing on slight vac. Secured well with a BOP Drill. See Safety Checks.
01:30	02:00	0.50	BRKTM	Lunch Break	Let Packer element relax/Crew took warm up break.
02:00	03:00	1.00	MISC	Miscellaneous operations.	Matting below pipe trays shifting due to heating around well head. Remove matting and install planks to build up around well head area. Replace matting and pipe trays. Prepare to POOH with packer BHA.
03:00	04:30	1.50	POOH_TB	POOH tubing	POOH slowly with packer BHA. Hanging up at random and at casing collars, Changed over tongs and gave string right hand turns. Continue to slowly POOH working packer with right hand turns. Pulled in total 1 - 8' 73.0mm Pup joint, 1 - 6' 73.0mm Pup joint, 40 - 73.0mm Tubing joints.
04:30	05:00	0.50	BRKTM	Coffee Break	Crew took warm up break.
05:00	06:30	1.50	POOH_TB	POOH tubing	Continue to POOH slowly with Packer BHA. Pulled in total 64 - 73.0mm tubing joints, 57 - Tubing joints remaining with R - Profiled nipple, 10' pup, Ported sub, on/off with packer and remaining BHA left to recover. Secured well for crew change.
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review hazards and job scope for the day working with steam, cold weather light wind, slips and trips, tripping pipe, overhead loads, high pressure lines, Drilling on plug. Rotating equipment.

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
07:00	10:00	3.00	POOH_P L&PAC	POOH plug or packer	Pull packer out of the hole, if you pull at more than an idle packer sets up, 2 packer elements are scarred up bad and 3rd is still set a bit, but whole packer is still intact, BHA below the packer was as per Well View. Everything below the flow sub was full of sand.
10:00	10:30	0.50	BRKTM	Coffee Break	Warm up break. -39 plus wind today.
10:30	13:30	3.00	RIH_TB	Run in hole tubing	Make up and run in the hole with, 6-1/4 rock bit, bit sub, six 4-3/4 drill collars, X/O, joint (out of tubing brought to location), 2' pup, TTS. -Steam all IF connections, before making them up. -6000ft/lb on IF connections.
13:30	14:00	0.50	BRKTM	Lunch Break	Warm up lunch break.
14:00	17:30	3.50	RIH_TB	Run in hole tubing	Continue to run in the hole. 65 joints in the hole we hit fluid. Steam out line, hook in T and steam inject then suck back as we run in the hole. FYI testers spent the whole day fueling up all equipment. They are key to this operation.
17:30	18:30	1.00	MISC	Miscellaneous operations.	SCV line is frozen off, take line off put in boiler dump some methanol in the line re hook up. -Tag fill @ 7.3m in on joint 119 ...1217mkb -Bury 2 pups, 10' and 6'.
18:30	19:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review job scope and hazards for the day. Discuss working in cold weather, Drill out procedures and Hazards, Over head loads, high winds, Crush points, Slips and Trips, Steam, Discuss equipment preparation for flawless execution during drill out.  *****VENTMETER IN OPERATION AGAIN 18:48HRS*****
19:00	23:30	4.50	MISC	Miscellaneous operations.	Prepare pumping lines and all pumping equipment, Warm and install Pack-off head/Secure, Pick up and latch onto swivel. Install static arms and secure in short position, Make connection from swivel to a full joint, Pick up and stab into stump connection. Install Static lines and tighten up. Position Swivel remote at drillers pad and rig in, Tighten connection. *****We had a hard time lowering the power swivel down to tag due to no rod basket making the tubing board lines connect to the Derrick causing the static arms sticking out further then the tubing board lines. We had to loosen the static lines and work the Static arms past the tubing board lines in order to lower the Power swivel to tag out.*****
23:30	00:00	0.50	DRILLP	Drill down plug / mill	RIH and tag hard fill @ 1217.0mKb, Pick up and break reverse circulation to rig tank @ approx 23:33 @ 0.50m3/min with 4mPa pumping pressure. Begin to drill out and remove gravel pack above Bridge plug.

# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 05 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	04:30	4.50	DRILLP	Drill down plug / mill	<p>Approx 5m of fill above bridge plug removed. 01:30hrs - Drilled out approx 2.0 hrs now and good steel shavings in returns. Made approx 20cm drilling on Bridge plug - Approx half way through packer. Still seeing good steel shavings in returns/No rubber yet. Start tank gauge was 85cm now down to 72cm/13cm loss approx 2.21m3 fluid loss.</p> <p>03:30hrs: Drilled out approx 4.0 hrs now and good steel shavings in returns. Made approx 15cm drilling on Bridge plug. Still seeing good steel shavings in returns/Minor Rubber in returns. 3cm loss approx 0.51m3 fluid loss in last 2 hrs. 2.72m3 loss total in 4 hrs so far.</p> <p>04:30hrs. Through Bridge plug. Only small amount of rubber noticed in returns. Reverse circulate until returns are clean. Shut down pump. Secured well with a BOP drill. See Safety Checks.</p>
04:30	07:00	2.50	MISC	Miscellaneous operations.	<p>Break connection and lay out joint, Rack back swivel and secure/Hoses to brittle to wrap up right now. Install TIW in joint #122, Install circulation chock and kelly hose and secure all. Pick up Joint #122 and make connection to drill string, RIH and tag @ approx 1238.55mKb and begin circulating/working BHA. No hole gain, pushing down remaining drilled out packer. POOH and lay out #122, Pick up power swivel &amp; make connection to #122, Make connection to drill string. Circulate/Rotate and gently work string down only approx 0.30m to 1238.40mKB. Pick up 7m and circulate well clean/Prepare for crew change. ***Total of 2.89m3 loss during drill out process.</p>

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
07:00	07:30	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review hazards and job scope for the day, cold cold weather, drilling, high pressure lines, overhead loads, rotating equipment, use of steam, tripping pipe, lay out drill collars.slips and trips, pinch and snag points.
07:30	08:00	0.50	MISC	Miscellaneous operations.	-Pull SCVF hose off at 7:30 to see if there is any pressure build up and there is not vent meter seems to be reading correctly, and it appears the SCVF is slowly dieing off, we started the job with a average flow of 3.66m3 per day we are now down to 0.429m3 /day, with dead spots occuring. Seen a masive drop in flow at 23:30 on the 4th, and slowly die off since then.
08:00	11:00	3.00	DRILLP	Drill down plug / mill	<p>-Night shift has made 0.25m of hole when they tagged 1238.7mkb sand top, there is still 1/2 of the 1120.8mkb BP to be drilled out. Make meter marks on the tubing, and start drilling.</p> <p>-Returns are mostly sand with some metal shavings. It appears we are NOT on the 1241.77BP, and we are drilling out the 1120.8mkb bottom half of BP, and sand pack. Pumping at 330L/min @ 1mpa. Start drilling with 69cm in rig tank.</p> <p>-Tag 1241.77mkb BP, Stop drilling.</p>
11:00	11:30	0.50	CIRC	Circulate well clean	<p>Up rate to 500L/min, circulate for 15min, returns are clean.</p> <p>Lost 9cm while drilling rig tank is at 11.2m3 60cm. Lost 1.83m3 + 2.21m3 while drilling = 4.04 m3 total loss of fluid while drilling out 1220.77mkb BP and sand packs.</p>
11:30	14:30	3.00	RIGDOWN	Rig down	<p>-Rig out power swivel, pack off head, drain pump lines.</p> <p>-SCVF seems to die off completely while we were drilling, and is coming back alive when we were done drilling, 1225mkb perfs are looking like a good candidate as the cause of SCVF, path of least resistance up casing when drilling, column of fluid stagnant in well bore, new path of least resistant up SCV me thinks.</p> <p>-Monitor well seems to be staying dead.</p>
14:30	15:30	1.00	POOH_TB	POOH tubing	Pull half way out of the hole, shut in Monitor well to make sure we are not taking inflow.
15:30	16:00	0.50	BRKTM	Coffee Break	Warm up break. SCVF is on a strong comeback.
16:00	18:30	2.50	POOH_TB	POOH tubing	Pull out of the hole lay out drill collars. Bit is still intact, lots of broken teeth. SCVF is still climbing, almost back to original rate, still climbing.
18:30	19:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review hazards and job scope for the day working with steam, cold weather light wind, slips and trips, tripping pipe, overhead loads, high pressure lines, Discuss scraper run, Gauge ring/CCL run, W/R plug run and hole top up for a 12hr stabilization.
19:00	20:15	1.25	MISC	Miscellaneous operations.	Reconfigure steam to ensure no freeze up. Prepare scraper BHA.
20:15	00:00	3.75	RIH_TB	Run in hole tubing	<p>Make up and RIH with a 177.8mm Casing scraper, 1 - 3 1/2" reg X 2 7/8" eue X-over, 1 - 8' Pup joint, R profile Nipple, 62 - 73.0mm Tubing joints. Started displacing fluid with 62 joints in the hole. Return line frozen, Thaw line, Reconfigured return line to push displacing fluid with steam.***</p> <p>****Backup's on tongs were not grabbing proper/Spindle to hold one dye in place was broken most likely due to breaking out drill collars at a higher torque. Replaced spindle and reassembled back ups.****</p>



# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 06 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	01:15	1.25	RIH_TB	Run in hole tubing	Continue to RIH Tubing, Ran in total 129 - 73.0mm Tubing joints. RIH and tag gently @ 1241.77mKb. Prepare to POOH scraper.
01:15	01:45	0.50	BRKTM	Lunch Break	Crew took lunch/warm up break.
01:45	02:45	1.00	POOH_TB	POOH tubing	POOH with scraper BHA.
02:45	06:30	3.75	WIRELIN E	Other wireline related work ( excluding log, swab,	Perform Tail-gate Safety Meeting - Discuss Hazards involved with RIH and setting W/R plug. Rig in wireliners, Purge/Pressure test Lube and stack to 500psi/10min with N2. Good test. RIH with 155.1mm Gauge ring/CCL, Tag bottom @ 1241.30mKb, Log from 1241.30mKb to 1160mKb, POOH with wireline. Change out lube and tool string, Purge/Pressure test Lube and stack to 500psi/10min with N2. Good test. RIH with 152.4mm OD W/R plug, Correlate on depth, Set W/R Center element @ 1185.0mKb, Top of plug @ 1184.28mkb, Bottom of plug @ 1185.78mKb. POOH. Fluid level @ 50m

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
06:30	07:30	1.00	SAFETY	Safety Meetings (Pre-job, daily)	Rig crews cross shifted. WSL's held handover meeting (John Orvec going out, Clint McDougall going out later today, Brian Gonda taking over for days with Dan Parish taking over on nights).  A morning safety briefing was held with all workers reviewing the daily job scope and related hazards: wireline, pressure test WR plug, let wellbore stabilize, tidy up, maintenance, safe footing, use of PPE, appropriate warm up breaks, working in the cold, need for clear communication.
07:30	08:00	0.50	RIGDOWN	Rig down	Rig down Bonnett's Boreal E-line. Rig in circ. equip.
08:00	08:30	0.50	TESTPLUG	Test plug	Top up the wellbore with warm KCL water (1050kg/m3) and pressure test the WR plug / wellbore to 7MPa x 20min= solid test.
08:30	09:00	0.50	BLDWN	Bleed wellbore press.	Bleed off the test pressure, blow lines dry and winterize, secured the well
09:00	16:15	7.25	MISC	Miscellaneous operations.	Allowing the wellbore to stabilize for 12hrs. Crews doing preventative maintenance, catching up on fueling of equip and had 12.5m3 diesel hauled in, rental vendors out to do misc. repairs (plumbing issues on one double-ender, added insulation and heat tape to another, replace suction tube on main fuel skid tank). Tied in slow rate pumper trailer to steam loop & getting it warmed up. Repaired and function tested pump #1 to ensure it is now operational.
16:15	19:00	2.75	SAFETY	Safety Meetings (Pre-job, daily)	Site specific HA with Husky Corporate responsibility Jennica Von Kuster and Lisa Warren and walk around site inspection. Field visit from two OROGO reps (Brian Heppelle & Micheal Martin) and AER rep Natalie Burge
19:00	20:30	1.50	SAFETY	Safety Meetings (Pre-job, daily)	Held a safety meeting with all onsite personal including Husky Corporate responsibility rep- Jennica Von Kuster and Lisa Warren as well as OROGO reps (Brian Heppelle & Micheal Martin) and AER rep Natalie Burge. Daily Ask: Cold weather work - Reviewed the ERP and hazard assessment. Discussed daily job scope and associated risks. - Perform daily walk around - Perform a BOP function test to be witnessed by OROGO and the AER rep. Performed a visual on BOP's during functions. - Monitored pressure after 3 functions and charge times. The test was successful with all aspects meeting OROGO requirements.
20:30	00:00	3.50	LOG	Logging	Held a safety meeting - Make up and RIH perform a microchat log from surface @ +/- 10 meters/minute - Correlate with the previous open hole log performed by Baker Hughes Wireline, Mar. 6th/2012 - Shut down the rig and light towers due to noise affecting the log. - Log back 50 m up from the WR plug set @ 1,185.0 mkb-CE for log overlap - Run tools back down to 1,184.6 mkb.. (plug top) - POOH and continue to log the well. Perform 5- 1 meter stops for 30 seconds each. - Perform 30 second stops every 5 meters.

# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 07 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	07:00	7.00	LOG	Logging	Continue to perform a Micro Chat log. - Pull and lay down the logging tools - Start up rig and equipment. Start heating ( Shut down overnight due to interference for the log) - Switch over to e-line from fiber optic line. - Make up RBL tools and prepare to RIH.
07:00	07:30	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Crews cross shifted. Morning safety briefing held with all crews reviewing plans of the day & related hazards: wireline logging, pulling WR, tripping in packer, safely fueling equipment, working in cold weather.
07:30	10:00	2.50	LOG	Logging	Perform RCBL
10:00	11:30	1.50	BHA	Handle&inspect BHA	Lay out RCBL tool string. Prepare slickline retrieval tool c/w grapple removed. Bonnett's discovered they were not sent a 5/8" x 3/4" pin by pin crossover to make the tool string work to retrieval head. Install grapple into retrieval head and prep. for WR plug retrieval via jointed tubing. Remove wireline pressure control equipment and adaptor flange from BOP's.
11:30	12:00	0.50	BRKTM	Coffee Break	Crew lunch / warm up break. Held a safety meeting with Caliber tool hand reviewing WR retrieval procedure, tubing torque spec, sucking back with rig pump, etc.
12:00	12:30	0.50	BHA	Handle&inspect BHA	Warm up tong hydraulics. Assemble pulling tool BHA

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
12:30	13:45	1.25	RIH_TB	Run in hole tubing	RIH with the following retrieval string & BHA:  0.67m - Caliber 149.22mm WR retrieval tool head (c/w 0.37m swallow) 1.86m - 73mm, 9.67kg/m, EUE L-80 6ft pup joint 0.26m - 73mm "R" profile nipple (57.15mm) 550.42m - 57jts of 73mm, 9.67kg/m, EUE L-80 tubing  NOTE: tubing currently landed at 556mKB
13:45	16:15	2.50	TESTBOP	Test BOPs	OROGO / AER reps back onsite 13:15hrs. Crew stopped for warm up break and performed BOP drill while tripping for OROGO reps. Performed another BOP function test (all components functioning fine with no issues) but we still observed the gauge for the accumulator pressure on the BOP remote control stand (5000psi gauge) having very minimal response, just a needle flicker. Crew flushed oil through hose, tarped in and heated remote stand and inspected oil in accumulator reservoir (NOTE: brand new day shift crew to rig yesterday afternoon). All controls and components function fine and all gauges respond when functioned at accumulator instelf. When the BOP controls are functioned at the remote stand, the BOP's function fine BUT the gauges do not respond aside from manifold pressure gauge.  OROGO requesting we do no proceed until the issue has been resolved and a repeatable function test with responsive gauges at remote control stand is obtained.  WSL notified superintendent and sent in a detailed Word doc./write up of situation and OROGO requests.
16:15	19:00	2.75	REPAIR	Rig repair/wait on parts	Trouble shoot to try & repair accumulator gauge issue at remote control stand and it was found that at some point in the past, for unknown reasons there was a inline check valve installed on the accumulator in the main pressure line from the accumulator bottles to the pressure relief valve. This valve was removed from and the system now functions properly (multiple testes were done for varification). The rig manager varified these repairs with the accumulator company and with his Precision field sup. Pictures were taken and a summary forwarded to superintendent to discuss with OROGO.
19:00	19:30	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Held a safety meeting with all onsite personal. Daily Ask: working with steam - Reviewed the ERP and hazard assessment. Discussed daily job scope and associated risks. - - Perform daily walk around
19:30	22:15	2.75	WOO	Wait on orders	Performed a full function test on the accumulator system - Took pictures of gauge pressures during each function at both the remote control stand and the ACC. - Completed the report with pictures and information added, then sent to Calgary. - Wait on the go ahead from OROGO to proceed with operations pending the review of the report, and confirmation that the deficiencies have been rectified. - 22:15 Hrs. Obtained the approval to proceed with operations from OROGO in email form.
22:15	00:00	1.75	RIH_TB	Run in hole tubing	- Suck back on the casing to recover displacement. Tied in a steam line and Tee to prevent freezing. - Continue to RIH with the following retrieval string & BHA:  1- 0.67m X 149.22 mm- Caliber WR retrieval tool head (c/w 0.37m swallow) 1- 1.86m X 73mm Tubing pup joint (9.67kg/m, EUE L-80 6ft pup joint) 1- 0.26m X 73mm "R" profile nipple (57.15mm) 73mm tubing to surface. - Install the safety valve on the tag joint.



# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 08 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc	Com
00:00	01:00	1.00	SETTOOL	Setting or unsetting packers	RIH and latch onto the WR. - Set down 4 daN. - Monitor the well- slight blow, TSTM. - Pick up and unset the WR. Change over equipment. Lower the string 1 m past set point. - Shut in. Crew went for warm up and lunch break.
01:00	03:45	2.75	POOH_PL&PAC	POOH plug or packer	POOH with the 73 mm string and WR plug. - Break apart and lay down
03:45	07:00	3.25	RIH_PL&PAC	Run in hole plug or packer	- Warm up tools with steam - Make up and RIH with a test packer as follows:  1- 2.24 m Tryton TX-8 packer c/w CCL 1- 2.46 m X 73 mm pup joint 1- 0.26 m RN nipple c/w 55.8 mm No-Go RIH with 99 joints 73 mm -L-80 tubing  - The wind picked up. Took extra breaks to warm up during the course of the night.
07:00	07:30	0.50	SAFETY	Safety Meetings (Pre-job, daily)	All crews cross shifted. Held a morning safety briefing reviewing the planned activities of the day and related hazards: tripping tubing, packer setting procedure, high pressure lines, feedrate test, max pressure, working in very cold conditions, safe footing, use of PPE, etc.
07:30	08:30	1.00	RIH_PL&PAC	Run in hole plug or packer	RIH with remaining 29jts of 73mm tubing. Crew took warm up break.

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
08:30	09:00	0.50	SETTOOL	Setting or unsetting packers	Feel with MCCL for collar and located at 1236.36mKB. Space out and set DG packer w/ C.E. at 1234.5mKB
09:00	09:45	0.75	TESTPLUG	Test plug	Rig in circ. equipment & pulled tubing string into slight tension. P/T the existing PBP at 1241.77mKB to 7MPa x 20min= solid test, crew had warm up break during test. Bleed back test pressure & unset packer.
09:45	13:00	3.25	MISC	Miscellaneous operations.	<p>Pull 4jts of 73mm tubing and reposition / set packer C.E. at 1199mKB.</p> <p>10:20hrs - Pressure up on tubing to 7MPa but just a bleed off  - bleeds from 7MPa to 3.7MPa in 2min.  - bump up &amp; let leak down to 5MPa then repeat for 10min  - work up like this in 1MPa increments to 10MPa</p> <p>10:55hrs - P/up to 10MPa and surge back quickly to shock formation  - work formation like this for 20min. and seeing small feedrate</p> <p>11:28hrs - feedrate of 80L/min. at 10.5MPa x 2.5m3  - stable feedrate of 150L/min. obtained at 10.5MPa  - final inj pressure at 11.5 to 12MPa at 150L/min.  - injected 10m3 observing effect on SCVF</p> <p>Stopped pumping at ~12:45hrs. Bled off tubing and flowed back recovering 1m3 then flow died to a steady trickle. Note: fluid injected was a 70% fresh water / 30% 1050 kg KCL mix from rig tank</p>
13:00	13:45	0.75	SETTOOL	Setting or unsetting packers	Unset the packer and shut pipe rams, allow fluid to U-tube (1050kg KCL on annulus side, tubing is mixture of fresh & KCL) sucked back on tubing recovering an additional 1m3. Pulled and lay out 2 jts to position packer C.E. at 1181mKB, pack off elements.
13:45	15:45	2.00	MISC	Miscellaneous operations.	<p>P/T the annulus / packer to 7MPa= good test. Warm up break.</p> <p>14:30hrs - start to inject 1050kg/m3 clean KCL down the tubing  - initial rate 130L/min. at 11.5MPa  - final rate stable at 140L/min. &amp; 11.5MPa  - injected 10m3 observing a direct effect on SCVF</p>
15:45	16:15	0.50	CHECKPRESSURE	Check casing / tubing pressures	Done pumping at 15:31hrs. Monitor leak off recording 30min. SITP's as follows: ISIP= 10MPa, 5min= 9MPa, 10min= 8250 kPa, 15min= 7800kPa, 20min= 7500kPa, 25min= 7250kPa, 30min= 6900kPa
16:15	16:45	0.50	BLDWN	Bleed wellbore press.	Open up tubing to rig tank and flow back to bleed down charge pressure recovering 3.4m3 of KCL water
16:45	17:00	0.25	SETTOOL	Setting or unsetting packers	Unset the DG packer & let elements relax / warm up break.
17:00	19:00	2.00	POOH_PL&PAC	POOH plug or packer	POOH and stand tubing
19:00	19:30	0.50	SAFETY	Safety Meetings (Pre-job, daily)	<p>All crews cross shifted.</p> <p>- Held a safety meeting with all onsite personal. Daily Ask: Surge and swab operations</p> <p>- Reviewed the ERP and hazard assessment. Discussed daily job scope and associated risks.</p> <p>- - Perform daily walk around</p>
19:30	20:30	1.00	POOH_PL&PAC	POOH plug or packer	<p>POOH with the remaining 73.0 mm L-80 tubing string</p> <p>- Lay down and break apart the packer assembly</p> <p>- The packer elements had significant wear. Replace packer for swab/surge operations.</p>
20:30	22:30	2.00	CMTDUMP	Dump cement or hydromite to plug back	<p>Rig in wireline surface equipment and BOP's.</p> <p>- Pressure test equipment with N2.</p> <p>- Make up and RIH with the bailer assembly configured with squib.</p> <p>- Mix up 124.0 liters (6.0 linear meters in 177.8 mm casing) of Hydromite and fill the bailer</p> <p>- RIH and dump the hydromite on the previously pressure tested PBP @ 1,241.77 mkb.</p> <p>- POOH and lay down the bailer. Rig off the wireline equipment.</p>

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
22:30	00:00	1.50	RIH_PL&PAC	Run in hole plug or packer	<p>- Warm up tools with steam</p> <p>- Make up and RIH with a test packer as follows:</p> <p>1- 2.24 m Tryton TX-8 packer</p> <p>1- 2.46 m X 73 mm pup joint</p> <p>1- 0.26 m RN nipple c/w 55.8 mm No-Go</p> <p>126- 73 mm -L-80 tubing joints</p>

# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 09 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	01:00	1.00	RIH_PL&PAC	Run in hole plug or packer	RIH with the remaining 73 mm tubing. Pick up the necessary joints. - Set the packer @ 1,218.71 mkb. (Above the perforations @ 1,225.0 - 1,232.0 mkb.) - Casing Collar @ 1,213.96 mkb.

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
01:00	07:00	6.00	SWAB	Swabbing (includes swab test)	Rig in swab equipment. - Install the master valve and swab tree. - Start RIH and installing flags. Could not get through the saver head with the flags. Work up and down. - Could not get enough momentum with the cup on. Remove the cup and work through with the flags. - Pull up and re-install the swab cup. Install flags and RIH. Measure and count wraps on the way in. - Nipple @ 1,214.99 mkb. Tubing volume to nipple-3.67 m3. 02:30 hrs- Start swabbing 1- Pulled 4 swabs. Pulled from the nipple on final swab. Recovered 3.20 m3 total fluid. - Each swab was tagged @ close to previous pull depth. - Filled the tubing with 3.2 m3 fluid. - Surged 5X @ 11 mpa and 5X @ 12 mpa and 10X @ 13 mpa. - Obtained a feed rate of 150 litres/minute @ 13 mpa. - There was a slight trickle of fluid on the casing. No vacuum while swabbing.  05:00 hrs- Start swabbing. Could not get the flags through the saver head. Work the line up and down to wear new rubbers down. Lubricated the line with oil. (Line is rusty and dry due to not being used) 2- Pulled 3 swabs. Pulled from the nipple on final swab. Recovered 3.22 m3 total fluid. - Each swab was tagged @ close to previous pull depth. - The casing continued to flow slightly throughout swabbing operations.
07:00	07:30	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Crew cross shifts. Held a morning safety briefing with all workers discussing the planned activities of the day and related safety concerns / hazards: swabbing, pumping, high pressure lines, steady snow fall, shoveling walk paths, sweeping off steps, clear communication, safe footing & working in cold. Morning temp= -17°C with light steady snow (approx. 3.5" since 2am)
07:30	09:00	1.50	MISC	Miscellaneous operations.	Lay out swab lube & inspect saver head rubbers.  07:50hrs to 08:03hrs - surge/shock formation at 16MPa 8 times  08:04hrs to 08:50hrs - pressure up to 16.5MPa and able to chase feedrate up - stable feedrate 500L/min. 16MPa after 1m3 - slow decline in pump pressure while injecting - final feedrate 500L/min. at 15.25MPa - injected 20m3 total - decrease in SCVF observed on VentMeter - pump SD at 08:50hrs - no signs of communication from annulus at all

09:00	09:30	0.50	CHECKPRESSURE	Check casing / tubing pressures	Monitor SITP from 30min & record bleed offs: ISIP= 12MPa, 5min= 10.75MPa, 10min= 10MPa, 15min= 9.5MPa, 20min= 9.2MPa, 25min= 8.8MPa, 30min= 8.5MPa
09:30	10:00	0.50	BLDWN	Bleed wellbore press.	09:25hrs - Flow back the tubing to the rig tank to bleed off the charge pressure. VentMeter quit updating at 08:30hrs. Contact Doull - sounds like system is down / issue with satellite com. System back working at 09:40hrs. Monitor data to ensure unit is operating properly.
10:00	12:45	2.75	SWAB	Swabbing (includes swab test)	Rig up swab equipment, again having issues getting flags going through saver head and had to work it to RIH. Pulled 7 swabs recovering 5.5m3 of load water. Lay out swab lube. NOTE: Very windy since 11am, 31km/hr with constant 50km/hr gusts.
12:45	14:45	2.00	MISC	Miscellaneous operations.	13:50hrs - fill tubing at 300L/min. using lake water (2.6m3 to fill) 14:00hrs - start injecting at 300L/min. stable at 13.5MPa - after 4m3 stable at 300L/min. 13MPa - injected 10m3 total, no further change in pressure - SCVF shows slight decrease in flow - stopped pumping at 14:33hrs - let well sit static 15min. to update VentMeter
14:45	15:15	0.50	BLDWN	Bleed wellbore press.	Bleed off tubing to rig tank, flowed back 1.6m3 then died to a trickle. Put 2m3 into 2nd boiler vessel and fire boiler as a back up. Hauled in water to shacks & main boiler.
15:15	16:30	1.25	SWAB	Swabbing (includes swab test)	Swab tubing, started pulling deeper at 15:27hrs, can see SCVF drop, pulled another from PSN at 15:41hrs can see a good drop on SCVF with neg. pressure. Pull 3 swabs recover 3.9m3 total. Lay out swab lube & remove swab tree.

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
16:30	17:30	1.00	MISC	Miscellaneous operations.	14:30hrs - Fill tubing (1.5m3 to fill) start injecting 300L/min. at 13.5MPa - after 4m3 increase to 400L/min. stable at 14MPa - inj. 20.5m3 of fresh water total - inj. last 1m3 in at 500L/min. at 15MPa - no sign of communication with perfs above - stopped pumping at 17:30hrs
17:30	19:00	1.50	BLDWN	Bleed wellbore press.	Allow well to stabalize & monitor. 15min. SITP= 9600kPa. Opened tubing to flow back to rig tank at 17:50hrs, died to a trickle. Unset packer and allow casing to U-tube equalize
19:00	19:00		SAFETY	Safety Meetings (Pre-job, daily)	

# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 10 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	01:30	1.50	WIRELIN E	Other wireline related work ( excluding log, swab,	- Make up and RIH with a 10K Tryton cement retainer. - Correlate to the previous RBL/CCL log performed by Bonnett's wireline on Feb. 7th/2019. - Set the retainer @ 1,221.0 mkb-CE.(4 meters above the perforations @ 1,225.0 - 1,232.0 mkb)
01:30	03:45	2.25	RIH_PL& PAC	Run in hole plug or packer	- Warm up tools with steam - Make up and RIH with a test packer as follows: 1- 2.24 m Tryton TX-8 packer 1- 2.46 m X 73 mm pup joint 1- 0.26 m RN nipple c/w 55.8 mm No-Go 126- 73 mm -L-80 tubing joints - Ran in slow. Fluid displacing over the tubing. Sucked pack on the casing while RIH. - Set the packer @ 1,217.50 mkb.
03:45	04:15	0.50	TESTPL UG	Test plug	Tie in the pump line to the tubing. - Pressure test the cement retainer set @ 1,221.0 mkb-CE to a stabilized 7.0 mpa. Held solid for 15 minutes. - Bled off the pressure.
04:15	06:15	2.00	POOH_P L&PAC	POOH plug or packer	Unset the DG packer and let the elements relax. - POOH with the DG packer and 73.0 mm tubing.
06:15	07:00	0.75	BHA	Handle&inspect BHA	Lay out packer BHA, ready stinger J-latch. Crew change.

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
07:00	07:30	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Hold a morning pre-job safety briefing reviewing the planned activities of the day & hazards: tripping in tubing, circulating, rigging in cementers, cementing, back wash, POOH tbg, house keeping, safe fueling, zero spills, safe footing, 3pts contact & use of PPE.
07:30	09:30	2.00	RIH_TB	Run in hole tubing	RIH with J-latch retainer stinger on 84jts and started to displace fluid. Suck back on casing & RIH remaining 42jts. Took water onto SRP and finished cementers rig in (spotted and did most of rig in yesterday after coil cement job).  NOTE: Field visit from Jason Ayah - Tulita Renewable Resource Council enviro monitor. Performed walk around site inspection - noted as looking very good.
09:30	12:00	2.50	MISC	Miscellaneous operations.	Rig in surface swivel / circ. equipment & circ. into retainer for space out (10:30hrs). Rotate out to ensure proper function of retainer latch. Push 5m3 of potable town water from clean 400bbl tank to CNA. Spaced out and circ. back into retainer. Come to neutral and P/T tubing to 7MPa= solid test.
12:00	12:15	0.25	SAFETY	Safety Meetings (Pre-job, daily)	Hold a pre-cement job safety meeting with all onsite workers reviewing job scope, max pressures, product hazards, MSDS review, no-go zone, muster points & need for clear communication. 12:20hrs - send prompt to put VentMeter into build-up mode. Switch to squeeze mode for grey background.
12:15	12:45	0.50	MISC	Miscellaneous operations.	Inject another 6.3m3 of clean fresh water down the tubing so a total of 10m3 is ahead of cement, pumped at 300L/min. 14.5MPa stable. No signs of pressure on annulus. Shut down at 12:45hrs, ISIP= 13MPa.
12:45	15:15	2.50	CEM	Cementing	Remove rig line from tubing install CNA line & P/T to 20MPa. Open to tbg, SITP= 10MPa. 12:54hrs - pump 1m3 of CHAT at 150L/min. & 11MPa (1515kg/m3)  13:04hrs - start pumping 500L of CHRP-1 reactive pre-flush at 150L/min. & 11.5MPa (1515kg/m3)  13:08hrs - start pumping a 1m3 H2O spacer at 150L/min. & 11.3MPa  13:14hrs - start pumping 1m3 of Microfine cement at 155L/min. & 11MPa (1515kg/m3) observing a slow steady drop in treating pressure to 9.4MPa as the hydrostatic in tubing increased, start mixing G cement.  13:25hrs - switch to Charger SQ OWG cement c/w 2% gas control (1900kg/m3), pumped at 150L/min 9MPa initially observing a steady decrease in surface treating pressure as the tubing fluid column weight increased, with a full column of cement the treating pressure was down to 3.2MPa. Mixed and pumped a total of 4.2m3 of this slurry with stable rate of 150L/min.  13:49hrs - switch to water and displace cement with 700L of water at 150L/min & 3MPa  13:53hrs - drop rate to 50L/min for 1.6m3  14:27hrs - decrease rate to 15L/min. and continue to squeeze/displace cement out of tubing with fresh water until the treating pressure was 12MPa with 600L of cement sully left in the tubing.  15:00hrs - shut down and monitor, obtained a 10MPa x 10min. flatline with a total of 4.2m3 of cement squeezed through retainer (1m3 of Microfine & 3.2m3 of G)  Cement blends as follows: Microfine + 1/5% NaCL + 0.25% CHDF-P @ 1515kg/m3  Charger SQ + 2% CHGC-2 + 0.35% CHFL-1 + 0.25% CHFR-1 + 0.2% CHRT-L @ 1900kg/m3. Slurry temp= 32°C

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
15:15	16:45	1.50	MISC	Miscellaneous operations.	Pull to neutral with 10MPa squeeze pressure left on retainer. B/D to 3MPa & rotate out of snap latch observing SITP drop to zero as cement U-tubed. Lay out tbg swivel, pull 1 joint & 6.17m of pups to position T.E. 16.44m above retainer top. Back wash out remaining 280L of cement slurry until clean. Left a 16m linear / 320L cement cap above the retainer, calc. cement top= 1204.75mKB.  16:00hrs - stop back wash. Well has gentle flow from upper perms (now slightly under balanced with mainly fresh H2O in well). Pump 1m3 of 8% KCL water down tbg & suck on casing, still wants to flow, pump another 1m3, still slight flow, pump another 500L & got tbg on vacuum. Suck back on annulus.
16:45	18:15	1.50	POOH_TB	POOH tubing	Lay out 2 additional jts. POOH and stand remaining 123jts of 73mm tbg & remove retainer stinger.  NOTE: WSL forgot to switch switch VentMeter out of squeeze mode (grey background) until 17:05hrs (stung out at 15:20hrs)
18:15	18:15		MISC	Miscellaneous operations.	Secure the well & tidy up.

# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 11 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	04:00	4.00	MISC	Miscellaneous operations.	- Continued to let the well sit static post cement job and monitor. - Left the vent meter in Buildup mode. The pressure slowly increased and levelled out @ +/- 49.15 mkb.
04:00	06:00	2.00	RIH_PL&PAC	Run in hole plug or packer	04:00 hrs- Sent a prompt to switch the ventmeter from buildup mode to "flow" mode. - Over the course of buildup, the maximum pressure reading was 52.62 kpa - Make up and RIH with a test packer as follows: 1- 2.24 m Tryton TX-8 packer 1- 2.46 m X 73 mm pup joint 1- 0.26 m RN nipple c/w 55.8 mm No-Go 122- 73 mm -L-80 tubing joints - Installed required pup joints. - Set the packer @ 1,185.8 mkb-CE. TE @ 1,187.4 mkb. (4.6 m above the perforations @ 1,192.0 - 1,194.0 mkb) Casing Collar located @ 1,190.6 mkb.
06:00	06:30	0.50	TESTCS G	Test casing	Pressure test the casing and packer to 7.0 mpa for 10 minutes. Held solid.
06:30	07:00	0.50	SWAB	Swabbing (includes swab test)	Rig in swab equipment
07:00	08:00	1.00	SAFETY	Safety Meetings (Pre-job, daily)	Held a morning safety briefing with all workers onsite. Discussed daily plans & hazards. Reviewed EPS Safety Reconnect powerpoint safety ask from Al Pate, reviewed recent incidents, root casues and held a round table discussion to provide feedback for improvements / recommendations from a field perspective.
08:00	08:30	0.50	MISC	Miscellaneous operations.	Warm up lines with steam. Prep. to swab.

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
08:30	14:00	5.50	SWAB	Swabbing (includes swab test)	<p>Pulled 3 swabs at 9am, 915am &amp; 935am recovered 3.3m3 of water</p> <p>10:05hrs to 10:19hrs - surge formation at 12MPa X 10 times</p> <p>10:20hrs -P/up to 12MPa and no feedrate, leak off to 10MPa in 30sec, bump up to 13MPa and allow to bleed down to 10MPa, repeat &amp; work like this and eventually obtained a initial feedrate of 80L/min. at 14MPa. Work inject rate up to 140L/min &amp; 14MPa at one point but with a total of 19m3 injected the feedrate was down to 110L/min.</p> <p>13:30hrs - shut down rig pump, ISIP= 9.5MPa, 15min SIP= 7.5MPa.</p> <p>13:45hrs - Open tubing back to rig tank to bleed off, recovered 1.3m3</p> <p>NOTE: Field visit at site from Mark Dunleavy - EPS safety, Warren Watson - superintendent, John Butala - Sr. manager D&amp;C and Travis Jones, EIT</p>
14:00	19:00	5.00	SWAB	Swabbing (includes swab test)	<p>Pull 3 swabs out at: 14:30hrs, 14:35hrs, 14:55hrs, recovered 3.2m3 water</p> <p>15:26hrs - start injecting fresh water at 16MPa, initial rate at 160L/min. work up to 18MPa rate stable at 240L/min. Pumped a total of 10m3.</p> <p>16:16hrs - shut down pump, open well back to rig tank hard recovered 1.4m3</p> <p>Start swabbing pull 4 swabs at 16:30hrs, 16:40hrs, 17:00hrs, 17:20hrs, 18:00 &amp; 18:25hrs recovering 6.2m3 total.</p>
19:00	19:30	0.50	SAFETY	Safety Meetings (Pre-job, daily)	<p>All crews cross shifted.</p> <ul style="list-style-type: none"> <li>- Held a safety meeting with all onsite personal. Daily Ask: Overall safe work practices</li> <li>- Reviewed the ERP and hazard assessment. Discussed daily job scope and associated risks.</li> <li>- Perform daily walk around</li> <li>- Warren Watson - superintendent, John Butala - Sr. manager D&amp;C and Travis Jones, EIT present during the meeting.</li> </ul>
19:30	00:00	4.50	SWAB	Swabbing (includes swab test)	<p>19:40 hrs - Filled the tubing with fresh water. It took 0.8 m3 to fill and start pressuring up</p> <ul style="list-style-type: none"> <li>- Increased the pressure and started injecting fresh water at 18MPa. Initial rate at 200L/min.</li> <li>- Continued to pump with a final rate of 300 L/min @ 17.5 mpa. Pumped a total of 10m3.</li> <li>- Stopped pumping @ 20:18 hrs.</li> <li>- Opened the tubing back to the rig tank and recovered 1.5 m3 water.</li> </ul> <p>- Rigged in swab equipment and started to RIH to swab @ 20:35 hrs.</p> <ul style="list-style-type: none"> <li>- Pulled 5 swabs out @ : 20:45, 21:05, 21:30, 21:50, and 22:15 hrs.</li> <li>- Recovered 6.2 m3 total.</li> </ul> <p>22:40 hrs - Filled the tubing with fresh water. It took 1.3 m3 to fill and start pressuring up</p> <ul style="list-style-type: none"> <li>- Increased the pressure and started injecting fresh water at 18.0 mpa. Initial rate at 220L/min.</li> <li>- Continued to pump with a final rate of 250 L/min @ 18.0 mpa. Pumped a total of 10m3.</li> <li>- Stopped pumping @ 23:20 hrs.</li> <li>- The pressure dropped to 12 mpa in one minute, then 11 mpa in two minutes, and 9.5 mpa in 5 minutes.</li> <li>- The tubing continued to flow back. Could not get in with swab equipment.</li> </ul>



# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 12 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc	Com
00:00	02:00	2.00	SWAB	Swabbing (includes swab test)	<ul style="list-style-type: none"> <li>- The tubing continued to flow back. Recovered 0.6 m3 water.</li> <li>- Pulled 5 swabs out @ : 00:00, 00:20, 00:40, 01:05, and 01:30 hrs.</li> <li>- Recovered 6.0 m3 total.</li> <li>- Recovered fine formation sediment during swabbing</li> </ul>
02:00	05:00	3.00	MISC	Miscellaneous operations.	<p>01:40 hrs - Filled the tubing with fresh water. It took 1.8 m3 to fill and start pressuring up</p> <ul style="list-style-type: none"> <li>- Increased the pressure and started injecting fresh water at 18MPa. Initial rate at 100L/min. The rate continued to slowly increase to 220 L/minute @ 18 Mpa. Pumped 10 m3.</li> <li>- Surged 10X.</li> <li>- Continued to pump another 5 m3 to try and flush more fresh water into the formation with the same rate of 220 L/min @ 18 mpa. Pumped a total of 15 m3.</li> <li>- Stopped pumping @ 03:30 hrs.</li> <li>- Monitored Bleed down as follows: ISIP- 16 mpa. It bled to 9.5 mpa in 5 minutes, 9 mpa in ten minutes, 8.6 mpa in 15 minutes and 8.5 mpa in 30 minutes.</li> <li>- Opened up the tubing to the rig tank slowly. It bled down quickly with minimal fluid recovered and continued to trickle back.</li> <li>- Recovered 0.6 m3 water.</li> </ul> <p>**Note- there was a slight flow and pressure change on the ventmeter during pumping operations.</p>

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
05:00	06:30	1.50	SWAB	Swabbing (includes swab test)	- Rigged in swab equipment and started to RIH to swab @ 04:50 hrs. - Pulled a partial swab slowly to lower the fluid level and monitor. Could not run in due to the crown sheave frozen. methanol the sheave. The tubing continued to flow. - Discussed results with Calgary. Wait on orders to proceed. - Left the tubing open to the rig tank. The tubing continued to flow slightly.
06:30	07:00	0.50	SETTOOL	Setting or unsetting packers	Remove the swab equipment. Install a pup joint and master safety valve. - Pick up and unset the packer.
07:00	07:30	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Hold a morning safety briefing with all workers reviewing current ops, planned activities of the day, associated hazards, working in cold weather & need for clear communication.
07:30	09:00	1.50	BLDWN	Bleed wellbore press.	Bled back tubing, still lightly flowing (slightly under balanced with fresh water). Would not die to workable level. Pumped 1.5m3 of 8% KCL (1050kg/3) KCL down tubing & monitor, still flowing, pump another 1m3 of KCL & got tubing dead.
09:00	10:45	1.75	POOH_PL&PAC	POOH plug or packer	POOH & stand 73mm tubing
10:45	11:45	1.00	BHA	Handle&inspect BHA	Lay out 177.8mm Tryton DG packer BHA. Remove slips, install wireline adaptor flange to BOP's. Prep setting tool BHA
11:45	12:00	0.25	SAFETY	Safety Meetings (Pre-job, daily)	Hold a pre-arming safety meeting discussing safely arming the bridge plug.
12:00	13:00	1.00	SETTOOL	Setting or unsetting packers	RIH with 177.8mm 'DB' 10K permanent bridge plug, setting tool & CCL head. Observed existing FL at surface. Tagged cement top (of plug above retainer) at 1203mKB EWLU depth. Log plug into position correlating to Boreal GR-CCL-RCBL-VDL log dated Feb. 7th 2019 for depth control. Set the plug with C.E. at 1187mKB at 12:51hrs observing good setting action. Lightly tagged plug for verification & POOH.  NOTE: Field visit from: John Butala - D&C Sr. manager E&PS, Warren Watson - superintendent, Travis Jones - EIT, Chris Salewich - site wide services & Dean Clemenson - Exploration portfolio manager
13:00	14:00	1.00	TESTPLUG	Test plug	Pressure test the bridge plug & wellbore to 7MPa x 15min= solid test held 100%.
14:00	16:00	2.00	RIH_TB	Run in hole tubing	RIH with 123jts of 73mm tubing. Lightly tag PBP & picked up 30cm landing tubing at 1186.68mKB. Rig in Charger cementers to tubing.
16:00	16:15	0.25	SAFETY	Safety Meetings (Pre-job, daily)	Held a pre-cement job safety meeting with all workers reviewing the job scope, hazards, anticipated rates/pressures, use of PPE and muster points.
16:15	17:00	0.75	MISC	Miscellaneous operations.	Transfer 26'C warm potable town water to CNA. Issues with CNA getting suction - pump suction froze, steam & clear.
17:00	17:30	0.50	CEM	Cementing	Batch mix 1m3 of class G cement slurry and pump down the tubing at 300L/min. & avg. of 3MPa surface pressure, held 2MPa back pressure on annulus. Displaced cement with 3m3 of fresh warm water to balance the plug.  Cement blend as follows: Charger SQ + 2% CHGC-2 + 0.35% CHFL-1 + 0.25% CHFR-1 + 0.2% CHRT-L @ 1900kg/m3
17:30	18:15	0.75	MISC	Miscellaneous operations.	Rig out cement line & work valve from tubing. Slowly pull & L/D 7jts to position T.E. at 1120mKB. Back was tubing clean to remove cement residue. A 1m3 plug above PBP will put cement top at 1137.8mKB by volume calculations.
18:15	18:30	0.25	POOH_TB	POOH tubing	POOH & L/D 5jts of 73mm tubing. Start pulling & standing remaining 111jts.
18:30	18:30		SAFETY	Safety Meetings (Pre-job, daily)	Night shift pre-job safety meeting. Rig crew & WSL's cross shifted.

# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 13 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	00:30	0.50	MISC	Miscellaneous operations.	<p>Attempt to pump down the casing and obtain a feed rate.</p> <ul style="list-style-type: none"> <li>- 22:20 Pumped down the casing. It pressured up immediately and held solid @ 7 mpa.</li> <li>- Surge 10X</li> <li>- Pressure up to 7 mpa and monitor. Held solid</li> <li>- Surge 10X</li> <li>- Pressure up to 7 mpa and monitor. Held solid for 10 minutes with 0.0 kpa bleed off.</li> <li>- No significant change on the vent flow meter noted.</li> </ul>

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:30	03:00	2.50	RIH_PL&PAC	Run in hole plug or packer	<p>A slight low pressure leak on the tubing rams was suspected earlier in the shift.</p> <ul style="list-style-type: none"> <li>- Pulled the rams and replaced top and front seals as a precaution.</li> <li>- Installed the tubing hanger.</li> <li>- Perform a 1.4 mpa low, and 21.0 mpa high test on the tubing rams for 10 minutes each. Held solid.</li> <li>- Remove the tubing hanger.</li> <li>- Make up and RIH with a test packer as follows: <ul style="list-style-type: none"> <li>1- 2.24 m Tryton TX-8 packer</li> <li>1- 2.46 m X 73 mm pup joint</li> <li>1- 0.26 m RN nipple c/w 55.8 mm No-Go</li> </ul> </li> <li>109- 73 mm -L-80 tubing joints</li> <li>3- 73 mm- L-80- pup joints- 3.09, 3.08, 1.24 m</li> <li>1- 73 mm tubing joint</li> <li>- Set the packer @ 1,073.34 mkb-CE. TE @ 1,075.17 mkb. (CE- 4.6 m above the perforations @ 1,078.0 - 1,081.0 mkb) Casing Collars located @ 1,065.7 and 1,077.0 mkb.</li> <li>** 03:00 hrs. Safety incident. A steam hose blew. Shut main steam valve and replaced hose. Pressured up the system. All good.</li> </ul>
03:00	03:15	0.25	TESTCS G	Test casing	<p>Pressure test the casing and packer to 7.0 mpa for 10 minutes. Held solid.</p> <ul style="list-style-type: none"> <li>- Left the tubing open during test</li> </ul>
03:15	04:30	1.25	MISC	Miscellaneous operations.	<p>Monitor the annulus throughout</p> <ul style="list-style-type: none"> <li>- Rig in the master valve and flow tee.</li> <li>- Tie in a pump line</li> <li>- Pressure up the tubing in increments starting @ 10 mpa.</li> <li>- Continue to bump up the pressure and monitor. No bleed down @ 11.0 mpa to 18.0 mpa.</li> <li>- Bump and surge the tubing to 18.0 mpa 10X. Noted a slight bleed off.</li> <li>- Pressured to 18 mpa. It bled down to 17.2 mpa in 5 minutes and 16.5 mpa in 10 minutes.</li> <li>- Bump and surge the tubing to 18.0 mpa 10X.</li> <li>- Pressured up to 18 mpa with the same results.</li> </ul>
04:30	06:30	2.00	SWAB	Swabbing (includes swab test)	<p>04:15- Rigged in swab equipment. The swab sheave was frozen @ the crown.</p> <ul style="list-style-type: none"> <li>- It was frozen and seized with ice. Break the sheave loose. Spray on methanol and work until free.</li> <li>- Pulled 3 swabs @ 05:10, 05:25 and 06:00 hrs.</li> <li>- Recovered 2.5 m3 fluid.</li> <li>- Filled the tubing. Pressured up to 18 mpa. Bumped and surged the pressure 2X. The well started to feed.</li> <li>- Pumped 4.0 m3 water with a rate of 200 liters/minute @ 17.0 mpa.</li> <li>- Pumped 6.0 m3 water with a rate of 400 liters/minute @ 17.0 mpa.</li> <li>- Pumped 1.0 m3 water with a rate of 200 liters/minute @ 15.0 mpa.</li> <li>- Stopped pumping and monitored pressures.</li> <li>- The pressure bled from 15.0 mpa to 14.0 mpa immediately, then to 13.6 mpa in 1 minute, 12.8 mpa in 5 minutes and 12.3 mpa in 10 minutes.</li> </ul>
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	<p>Held a morning safety briefing with day crew discussing the plans for the day, hazards, safe work practices, use of PPE and safe footing. Morning temp= -19°C.</p>
07:00	11:00	4.00	SWAB	Swabbing (includes swab test)	<p>Swab tubing pulling swabs out at 07:30, 07:40 &amp; 07:55hrs recovering 1.9m3 of water</p> <p>08:30hrs - fill tubing &amp; inject at 400L/min at 20MPa x 4m3  08:38hrs - increase rate to 580L/min at 21MPa x 6m3, pressure at 20.75MPa at the end  08:52hrs - shut down pump, bleed back hard</p> <p>Swab tubing pulling swabs at 09:05, 09:20 &amp; 09:40hrs recovering 3m3 of water</p> <p>10:13hrs - fill tubing &amp; inject 500L/min at 20.75MPa, after 7m3 we had to reduce rate to 420 to 460L/min. to stay at 21MPa. Pumped 10m3 at this rate.  10:45hrs - decreased rate to 300L/min. stable at 19.75MPa, pumped 3m3</p>

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc	Com
11:00	13:45	2.75	SWAB	Swabbing (includes swab test)	<p>Vent meter shows SCVF dropped to near zero and flatline on pressure. Put the VM into gray scale at 11:30hrs &amp; remove / inspect plumbing finding the main hose blocked. Confirm bubbles with bubble tester (approx. 10 in a cluster, a one second pause and repeats). Unthawed hose and observed approx. 500mL of water from the hose when drained. Blew clear with air &amp; re-connect all components, VM online again ~12:10hrs.</p> <p>Pulled swabs at 11:00, 11:15 &amp; 11:30hrs recovering 3.7m3 of load water.</p> <p>12:00hrs - fill tubing (2.2m3) and inject water at 300L/min. at 19.75MPa but shortly had to reduce rate to 220L/min. then to 200L/min to stay below 21MPa. Pumped 5m3 total. Zone just getting charged up. Appears as a negligible effect on SCVF.</p> <p>12:35hrs - open tubing to flow back to rig tank to relieve charge pressure</p>
13:45	14:45	1.00	SETTOOL	Setting or unsetting packers	Rig down swab lube & tree. Unset the DG packer & allow the elements to relax, tubing flowing back. Monitor well for 30min. still flowing back lightly. Pumped 1m3 of 1050kg/m3 KCL down tubing to kill and suck back on annulus with rig pump.
14:45	16:30	1.75	POOH_PL&PAC	POOH plug or packer	- POOH with 111 joints 73 mm tubing. - Lay out 177.8mm Tryton DG packer BHA. Remove slips.
16:30	17:00	0.50	BHA	Handle&inspect BHA	Lay out the DG casing packer. Remove slips, install wireline adaptor flange & pressure control equipment to the well.
17:00	17:15	0.25	SAFETY	Safety Meetings (Pre-job, daily)	Held a wireline pre-arming safety meeting with all onsite personnel
17:15	18:15	1.00	WIRELINE	Other wireline related work ( excluding log, swab,	RIH with 177.8mm 'DB' 10K permanent bridge plug, setting tool & CCL head. Observed existing FL at 50m. Log plug into position correlating to Boreal GR-CCL-RCBL-VDL log dated Feb. 7th 2019 for depth control. Set the plug with C.E. at 1074mKB at 17:40hrs observing good setting action. Lightly tagged plug for verification, POOH & lay out setting tool.
18:15	19:00	0.75	TESTPLUG	Test plug	<p>18:30hrs - top up the wellbore with water and pressure tested the wellbore / plug to 7MPa x 15min= solid test.</p> <p>** 18:30 hrs. Safety incident. A small fluid spill occurred at the rig pump. Notified Calgary. Cleaned up.</p>
19:00	19:30	0.50	SAFETY	Safety Meetings (Pre-job, daily)	<p>Rig crew &amp; WSL's cross shifted.</p> <ul style="list-style-type: none"> <li>- Held a safety meeting with all onsite personnel. Daily Ask: Working safely and sensibly</li> <li>- Reviewed the ERP and hazard assessment. Discussed daily job scope and associated risks.</li> <li>- Perform daily walk around</li> </ul>
19:30	21:30	2.00	RIH_TB	Run in hole tubing	<p>RIH with 111 jts of 73mm tubing and 2.4 m pup joint. Lightly tag the PBP @ 1,074.0 mkb-CE. Plug top @ 1,073.80 mkb.</p> <p>- Picked up 0.3 m and landed tubing @ 1,073.5 mKB. Rig in Charger cementers to tubing.</p>
21:30	22:00	0.50	CEM	Cementing	<p>Transfer warm potable town water to CNA.</p> <ul style="list-style-type: none"> <li>- Pressure test surface lines to 10.0 mpa.</li> <li>- Batch mix 1m3 of Class G cement slurry and pump down the tubing at 300L/min. w/avg. of 3.0 mpa surface pressure</li> <li>- Held 2.0 mpa back pressure on annulus. Displaced cement with 2.9 m3 of fresh warm water to balance the plug. Cement blend as follows: Charger SQ + 2% CHGC-2 + 0.15% CHFL-1 + 0.2% CHFR-1 + 0.2% CHRT-L @ 1900kg/m3</li> <li>- Cement top @ 1,024.8 mkb.</li> </ul>
22:00	23:15	1.25	CIRC	Circulate well clean	<ul style="list-style-type: none"> <li>- Rig off cementers. Slowly pull and lay down 10 joints 73 mm tubing. T.E. at 975.0 mKB.</li> <li>- Tie in the pump lines and back wash tubing clean to remove cement residue.</li> <li>- Circulate the hole over to clean potable water.(23 m3 pumped)</li> <li>- Break off pump lines.</li> </ul>

# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 14 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	01:30	1.50	POOH_TB	POOH tubing	Pull and lay down 21 joints- 73 mm tubing. - Pull and stand the remaining 80 joints- 73 mm tubing in the derrick.
01:30	03:00	1.50	PERF	Perforate well - Wireline/TCP	Rig in wireline surface equipment and BOP's. - Held a pre-arming safety meeting discussing safely arming the perforating guns. - Unhooked the vent meter hose @ 02:15 hrs. Ensured the hose was clear. Tied back in @ 02:21 hrs. - Covered the unit and lines with a tarp and tied in a heat unit to keep equipment warm. - Switch the vent meter to perf mode @ 02:15 hrs - Arm and RIH with a 101.0 mm X 3.0 m ERHSC perforating gun, 20 SPM, 23 gram Good Hole charges c/w 60 degree phasing. - Picked up the perforating gun. - Pressure test equipment with N2. - Topped up the hole with water prior to perforating - RIH. Log and correlate with the RBL/CCL log performed by Boreal Wireline on Feb. 7th, 2019. - Perforate the Imperial zone @ 782.0 - 785.0 mkb @ 02:50 hrs. - Monitored casing. No pressure or vacuum after perforating - Switched the vent meter back to normal mode @ 02:52 hrs. - POOH and lay down the gun. All shots fired.

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
03:00	03:30	0.50	MISC	Miscellaneous operations.	Attempt to pump down the casing and obtain a feed rate. - 03:05 hrs. Pumped down the casing. It pressured up immediately to 7 mpa. - Monitored for 10 minutes. It bled down to 6.75 mpa in one minute, 6.6 mpa in 2 minutes, 6.1 mpa in 5 minutes, and 5.3 mpa in 10 minutes. - Surge 10X - Pressure up to 7 mpa and monitored. Same results as above in 10 minutes. - No significant change on the vent flow meter noted.
03:30	04:30	1.00	PERF	Perforate well - Wireline/TCP	- Switch the vent meter to perf mode @ 03:40 hrs - Arm and RIH with a 101.0 mm X 3.0 m ERHSC perforating gun, 17 SPM, 20 gram Good Hole charges c/w 30 degree phasing. - Picked up the perforating gun. - Pressure test equipment with N2. - RIH. Log and correlate with the RBL/CCL log performed by Boreal Wireline on Feb. 7th, 2019. - Perforate the Lower Imperial @ 782.0 - 785.0 mkb @ 04:13 hrs. - Monitored casing. No pressure or vacuum after shot - Switched the vent meter back to normal mode @ 04:14 hrs. - POOH and lay down the gun. All shots fired.
04:30	05:30	1.00	MISC	Miscellaneous operations.	Attempt to pump down the casing and obtain a feed rate. - 04:30 hrs Pumped down the casing. It pressured up immediately to 7 mpa. - Monitored for 10 minutes. It bled down to 6.75 mpa in one minute, 6.5 mpa in 2 minutes, 6.0 mpa in 5 minutes, and 5.2 mpa in 10 minutes. - Surge 10X - Pressured up to 7 mpa and bled down with the same results as above. - No significant change on the vent flow meter noted. - Crew took a warm up break
05:30	06:45	1.25	RIH_TB	Run in hole tubing	Transfer fluid from the rig tank to 400bbl to make room from circulating.  - Make up and RIH with a test packer as follows: 1- 2.24 m Tryton TX-8 packer c/w CCL 1- 2.46 m X 73 mm pup joint 1- 0.26 m RN nipple c/w 55.8 mm No-Go 18- 73 mm -L-80 tubing joints
06:45	07:00	0.25	SAFETY	Safety Meetings (Pre-job, daily)	Held a morning safety briefing with all workers reviewing the planned activities of the day, hazards, working in the cold & wind, use of PPE, high environmental standards, & safe footing. Morning temp= -19°C with -30°C windchill.

06:45	07:00	0.25	SAFETY	Safety Meetings (Pre-job, daily)	Held a morning safety briefing with all workers reviewing the planned activities of the day, hazards, working in the cold & wind, use of PPE, high environmental standards, & safe footing. Morning temp= -19°C with -30°C windchill.
07:00	08:30	1.50	RIH_PL&PAC	Run in hole plug or packer	Rig crews & WSL's cross shifted. Continued to RIH with remaining 62jts of 73mm tubing from the derrick.
08:30	09:00	0.50	SETTOOL	Setting or unsetting packers	Locate casing collars at 750.8m, 762.2m and 773.1m with MCCL for depth control. Set packer with C.E. at 777.06mKB & pull into 3000daN tension.
09:00	09:15	0.25	TESTPACK	Test packer	09:00hrs - P/T annulus/packer to 7MPa= solid test. Bleed off test pressure.
09:15	15:30	6.25	MISC	Miscellaneous operations.	Rig in swab tree and 73mm swab equipment. Fill the tubing with fresh water. 09:28hrs - surge at 10MPa ten times, 5min leak off to 9.5MPa 09:35hrs- surge 10X's at 10MPa again, same leak off  09:40 to 11:00hrs - change washed out 2" ball valve on surge line  11:00hrs - P/up to 14MPa and instantly dropped to 8MPa and started feeding. Stable feed rate of 300L/min. at 8MPa. Increase rate to 400L/min. & seen 8750kPa, increase rate to 500L/min. & observed 9250kPa. Injected 10m3 total.  11:53hrs - Shut down and bleed back tubing recover 1.66m3. Pulled 2 swabs recovering 2.3m3
15:30	16:15	0.75	SAFETY	Safety Meetings (Pre-job, daily)	Held a ERP exercise with scenario of WSL off site and rig manager has had medical emergency. The ERP process was initiated as a drill scenario and a round table debriefing was held afterwards with observational comments from safety rep & open house discussion. Onsite from Husky: Marc Dunleavy - EPS safety rep, Carson Nutting Husky Enviro advisor, Warren Watson superintendent, Travis Jones EIT.

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
16:15	18:15	2.00	MISC	Miscellaneous operations.	Warm up pump line. 16:25hrs - Fill tubing took 1.5m3 to fill. Inject 5m3 at 500L/min. & 9MPa stable. Inject 10m3 at 300L/min. & 7.5MPa stable.  17:10hrs to 17:23hrs - VentMeter flow dropped off suddenly as did temp. profile, removed meter hose and tried to blow through it by breath but could feel slight restriction, blew hose out with slip hose air and found approx. 200mL of methanol from knock out bottle had misted up & settled in low spot of hose. Cleared & re-install hose.  17:30hrs - start re-injecting at 300L/min. & 7.5MPa very stable, pumped 15m3 17:50hrs - stop the pump. Open & flow back tubing
18:15	18:30	0.25	SETTOOL	Setting or unsetting packers	Unset the DG packer at 777.06mKB & allow elements to relax.
18:30	19:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Rig crew & WSL's cross shifted. - Held a safety meeting with all onsite personal. Daily Ask: Working safely and sensibly - Reviewed the ERP and hazard assessment. Discussed daily job scope and associated risks. - Perform daily walk around
19:00	20:15	1.25	MISC	Miscellaneous operations.	Start to POOH. The tubing collars were catching slightly due to the rig settling. - Re-center the rig.
20:15	21:45	1.50	POOH_PL&PAC	POOH plug or packer	POOH with the DG packer and 73 mm tubing string. - Lay down and break apart the packer assembly
21:45	00:30	2.75	RIH_PL&PAC	Run in hole plug or packer	- Make up and RIH with a 10K Tryton cement retainer and 73 mm tubing string. - Rig in surface swivel / circ. equipment - Set the retainer @ 777.96.0 mkb-CE.(4.04 meters above the perforations @ 782.0 - 785.0 mkb) ***23:35 hrs. Removed hose from ventmeter to ensure free flow. Re-attach hose.



# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 15 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	00:30	0.50	TESTCS G	Test casing	Pressure test the annulus and retainer to 7 mpa for 10 minutes. Held Solid.
00:30	00:45	0.25	SAFETY	Safety Meetings (Pre-job, daily)	Hold a pre-cement job safety meeting with all onsite workers reviewing job scope, max pressures, product hazards, MSDS review, no-go zone, muster points & need for clear communication.

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:45	04:00	3.25	CEM	Cementing	Transfer 2 m3 KCL water and required fresh water to the cement pumper. - Heat fluid to temperature prior to mixing cement. 01:40 hrs- Switch the vent meter into squeeze mode 01:41 hrs- Pressure test surface lines to 14 mpa. The tubing was full. Sting in and feed 1.0 m3 water through the retainer. Rate was 300 liters/minute @ 7.0 mpa. 01:55 hrs- Pump 2.0 m3 1,050 kg/m3 KCL water followed by 150 liters fresh water spacer. 300 liters/minute @ 7.0 - 7.3 mpa. 02:00 hrs- Pump 2.0 m3 Charger CHSM Solution followed by a 150 liter fresh water spacer. 300 liters/minute @ 7.0 - 7.3 mpa. 02:08 hrs. Shut down and start mixing cement 02:20 hrs- Pump 1.0 m3 Charger SQ 200 OW "G" mixed @ 1900 kg/m3. 300 liters/minute. The pressure slowly dropped while pumping cement. 02:28 hrs- Lost dry cement supply from the bulker. Shut down and unplug the hose. 02:37 hrs- Continue to pump the remaining 1.0 m3 Charger SQ 200 OW "G" mixed @ 1900 kg/m3. 300 liters/minute. Pump pressure started to drop steadily. 02:44 hrs- Start tail. Pump 3.0 m3 Charger SQ 50 OW "G" mixed @ 1900 kg/m3. 300 liters/minute. The pressure continued to slowly drop while pumping cement. 02:55 hrs- Switched to fresh water. Pumped 500 liters. 100 liters/minute @ 3.0 mpa. 03:00 hrs- Reduced the rate to 40 liters/minute and pumped another 500 liters @ 4.5 mpa. The pressure steadily increased 03:20 hrs- Decreased the rate to 20 liters/ minute @ 6.0 mpa for 500 liters. 03:38 hrs- Decreased the rate to 15 liters/ minute for 300 liters to max pressure of 9.0 mpa. - Monitored the pressure. There was a slight and slow bleed. 04:05 hrs The pressure levelled out and held @ 8.2 mpa. Monitored solid flatline for 10 minutes. 04:18 hrs- Left the 8.2 mpa pressure on and pulled the retainer into neutral.
04:00	04:30	0.50	CEM	Cementing	- Bled the pressure down to 3.0 mpa. - Rotated out of the retainer - Pumped another 100 liters to flush the tubing. Slight pressure noted. Casing flowing slightly. - Broke off surface equipment. The tubing was on a slight vacuum. - Pulled and layed down 2 joints- 73.0 mm tubing. - A total of 4.5m3 of cement was squeezed through retainer (2 m3 of Charger SQ200 Class G & 2.5 of Charger SQ50 Class G cement) - Cement blends as follows: - 2.0 m3 Charger SQ200 + 2% CaCl + 0.15% CHFL-1 + 0.05% CHFR-1 + 0.2% CHDF-P + 2% CHGC-2 @ 1900 kg/m3 - 2.5 m3 Charger SQ50 + 0.5% CaCl + 0.15% CHFL-1 + 0.05% CHFR-1 + 0.2% CHDF-P + 2% CHGC-2 @ 1900 kg/m3 - Slurry temp= 32°C
04:30	05:00	0.50	CIRC	Circulate well clean	Land the tubing @ 758.41 mkb. - Tie in pump lines and backwash the tubing with 7.0 m3 fresh clean water. - Recovered approx. 120 liters thick cement during backwash. - Left 19.3 linear m cement on the retainer. 04:59 hrs- Switched the vent meter back into flow mode
05:00	06:15	1.25	POOH_TB	POOH tubing	- Lay down another 7 joints - POOH with the remaining 71 joints 73 mm tubing.

06:15	07:00	0.75	WIRELIN E	Other wireline related work ( excluding log, swab,	Rig in wireline surface equipment and BOP's.
07:00	07:30	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Hold a morning safety briefing with all workers reviewing daily plans and discussed hazards. Had HSE onsite medic do a review of what he has in his medic packs & did demonstration of AED machine for everyone. Held a wireline pre-arming meeting and shut off all transmitters onsite. Morning temp= -22°C w/ -26°C windchill
07:30	09:00	1.50	PERF	Perforate well - Wireline/TCP	Measure, arm & RIH with 102mm ERHSC loaded to 3m with 25g GH charges at 20spm & 60' phasing. Log into position correlating to Bonnett's GR-CCL-RCBL-VDL dated Feb 7, 2019 for depth control. Perforate remedial interval 699m to 702m at 08:03hrs. POOH & lay out spent carrier, ASA&F.  Held a 2nd pre-arming meeting. RIH with ERHSC loaded to 3m with 20g GH charges at 17spm & 30' phasing and re-perforate same interval 699 to 702m at 08:47hrs. POOH & lay out spent carrier, ASA&F.

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
09:00	09:45	0.75	MISC	Miscellaneous operations.	09:18hrs - top up wellbore with fresh water (1m3 to fill) and P/up to 7MPa, no feedrate, leaks off 500kPa in 5min. Bled off pressure. Rig out wireline pressure control equipment & adaptor flange from the well. Ready packer BHA
09:45	11:15	1.50	RIH_PL&PAC	Run in hole plug or packer	RIH with the following: 0.13m - 73mm tubing collar 0.44m - 177.8mm x 73mm MCCL 2.26m - 177.8mm x 73mm Tryton TX8 DG packer 2.46m - 73mm L80 pump joint 0.26m - 73mm R profile nipple c/w 57.15mm No-Go 675.95m - 70jts of 73mm, 9.67kg/m, EUE L80 tubing 4.95m - 73mm L80 pup jts (10ft & 6ft) 9.67m - 1 joint of 73mm, 9.67kg/m, EUE L80 tubing -1.8m - tbgt to wireline correction
11:15	12:15	1.00	SETTOOL	Setting or unsetting packers	Locate casing collars at 671m, 682.5m & 693.8m with MCCL for depth control. Space out & set packer with C.E. at 695.25mKB (depth correction is -1.8m). Pulled packer into 3000daN tension to prevent cycling of mandrel. Crew took warm up break 11:20 to 11:50hrs.  11:46hrs to 11:52hrs - removed VentMeter hose & checked, blew out, re-attached. 12:12hrs - Pressure test annulus/packer to 7MPa= solid test
12:15	16:00	3.75	SWAB	Swabbing (includes swab test)	12:20 to 12:27hrs - surge at 8MPa 15X's Pressure up to 10MPa then 12MPa, negligible leak off. Surge at 12MPa 10X's. Pressure up to 14MPa then 15MPa. Surged at 15MPa, 16, 17 & 18MPa but unable to obtain feedrate. Pressure up to 21MPa and holds solid for 5min. Bled off pressure at 13:10hrs. Rig in to swab, had frozen shieve, got moving.  NOTE: Rig, camp & security gate lost all cell service from 13:00hrs to 13:20hrs then hit & miss until 13:35hrs.  Pull swabs out at 13:52, 14:10 (tstm) & 14:23hrs (dry). Removed swab tree & tie into tubing.  14:50hrs - fill tubing and P/up to 21MPa observing slow bleed off, P/up to 23MPa and seen steady bleed off, surged at 25MPa 4X's and pressure dropped and obtained feedrate of 150L/min at 12MPa (15:00hrs), inject 1m3, increase to 300L/min. & 11MPa stable for 1m3.  15:08hrs - increase rate to 500L/min. at 11.5MPa stable X 10m3. 15:30hrs - drop rate to 300L/min. 10MPa X 5m3, final pressure at 9.5MPa. 15:45hrs - stop pump monitor leak off, ISIP= 6MPa, 5min= 5.75, 10min= 5.5 & 15min= 5.25MPa  NOTE: 15:30 to 16:00hrs site visit and tour of Trevor Bremner - Manager, Resource Management Sahtu Region Lands - Government of Northwest Territories and Jonathan Gillingham (accompanied by Chris Salewich and Brian Gonda) excellent positive feedback given.
16:00	16:30	0.50	MISC	Miscellaneous operations.	16:10hrs - filled tubing and injected at 600L/min. & 11MPa, 700L/min. at 11MPa for a total of 5m3, inject at 800L/min. & 12.5MPa stable x 5m3.  16:28hrs - flow back tubing to rig tank to relieve charge pressure
16:30	17:30	1.00	SETTOOL	Setting or unsetting packers	Flowed back tubing for 35min. until it died. Unset packer - had to work packer a bit, unset at 15:15hrs & allowed elements to relax.
17:30	18:15	0.75	POOH_PL&PAC	POOH plug or packer	POOH and stand 71jts of 73mm tubing in the derrick
18:15	18:30	0.25	BHA	Handle&inspect BHA	
18:30	19:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Rig crew & WSL's cross shifted. - Held a safety meeting with all onsite personal. Daily Ask: Working safely and sensibly - Reviewed the ERP and hazard assessment. Discussed daily job scope and associated risks. - Perform daily walk around



**Time Log**

Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
19:00	21:45	2.75	RIH_PL&PAC	Run in hole plug or packer	<ul style="list-style-type: none"> <li>- Make up and RIH with a 10K Tryton cement retainer and 73 mm tubing string.</li> <li>- Rig in surface swivel / circ. equipment</li> <li>- Set the retainer @ 696.49.0 mkb-CE.(2.51 meters above the perforations @ 699.0 - 702.0 mkb)</li> <li>*** 21:32 hrs. Removed hose from ventmeter to ensure free flow. Re-attach hose.</li> </ul>
21:45	22:00	0.25	TESTCSG	Test casing	Pressure test the annulus and retainer to 7 mpa for 10 minutes. Held Solid.
22:00	22:15	0.25	SAFETY	Safety Meetings (Pre-job, daily)	Hold a pre-cement job safety meeting with all onsite workers reviewing job scope, max pressures, product hazards, MSDS review, no-go zone, muster points & need for clear communication.
22:15	00:00	1.75	CEM	Cementing	<ul style="list-style-type: none"> <li>Transfer 2 m3 KCL water and required fresh water to the cement pumper.</li> <li>- Heat fluid to temperature prior to mixing cement.</li> <li>- Switch the vent meter into squeeze mode 10:40 hrs</li> <li>- Pressure test surface lines to 21 mpa. The tubing was full. Sting in and feed 1.0 m3 water through the retainer. Rate was 300 liters/minute @ 9.0 mpa.</li> <li>10:55 hrs- Pump 2.0 m3 1,050 kg/m3 KCL water followed by 150 liters fresh water spacer. 300 liters/minute @ +/- 8.0 mpa.</li> <li>11:03 hrs- Pump 2.0 m3 Charger CHSM Solution followed by a 150 liter fresh water spacer. 300 liters/minute @ +/- 7.5 mpa.</li> <li>11:11 hrs. Shut down and start mixing cement</li> <li>11:23 hrs- Pump 2.0 m3 Charger SQ 200 OW "G" mixed @ 1900 kg/m3. 300 liters/minute. The pressure slowly dropped while pumping cement.</li> <li>- The pressure was @ 5 mpa with cement @ the retainer (300L/minute)</li> <li>11:30 hrs- Start tail. Pump 3.0 m3 Charger SQ 50 OW "G" mixed @ 1900 kg/m3. 300 liters/minute. The pressure continued to slowly drop while pumping cement. It dropped to 4 mpa.</li> <li>11:41 hrs- Switched to fresh water. Pumped 500 liters. 100 liters/minute @ 3.7 mpa.</li> <li>11:46 hrs- Reduced the rate to 40 liters/minute and pumped another 400 liters @ 4.7 mpa. The pressure steadily increased</li> <li>11:57 hrs- Decreased the rate to 20 liters/ minute @ 6.0 mpa for 400 liters.</li> </ul>

# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 16 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	01:30	1.50	CEM	Cementing	<p>00:20 hrs- Decreased the rate to 15 liters/ minute for 300 liters to max pressure of 8.5 mpa.</p> <p>- Monitored the pressure. There was a slight and slow bleed.</p> <p>00:52 hrs The pressure levelled out and held @ 7.7 mpa. Monitored solid flatline for 10 minutes.</p> <p>01:02 hrs- Left the 7.7 mpa pressure on and pulled the retainer into neutral.</p> <p>- Bled the pressure down to 3.0 mpa.</p> <p>- Rotated out of the retainer</p> <p>- The tubing was on a slight vac. Casing flowing slightly.</p> <p>- Broke off surface equipment.</p> <p>- Pulled and layed down 2 joints</p> <p>- 73.0 mm tubing. Installed a 3.08</p> <p>- A total of 4.5 m3 of cement was squeezed through retainer (2 m3 of Charger SQ200 Class G &amp; 2.5 of Charger SQ50 Class G cement)</p> <p>- Cement blends as follows: - 2.0 m3 Charger SQ200 + 2% CaCl + 0.15% CHFL-1 + 0.05% CHFR-1 + 0.2% CHDF-P + 2% CHGC-2 @ 1900 kg/m3</p> <p>- 2.5 m3 Charger SQ50 + 0.5% CaCl + 0.15% CHFL-1 + 0.05% CHFR-1 + 0.2% CHDF-P + 2% CHGC-2 @ 1900 kg/m3 - Slurry temp= 32°C</p>

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
01:30	02:15	0.75	CIRC	Circulate well clean	<p>Land the tubing @ 680.37 mkb.</p> <p>- Tie in pump lines and backwash. Started pumping. WSL noticed manifold was set up backwards. Stopped and switched valves. Continue pumping.</p> <p>- Backwashed the tubing with 8.0 m3 fresh clean water.</p> <p>- Recovered approx. 100 liters cement during backwash.</p> <p>- Left 15.75 linear m cement on the retainer.</p> <p>01:55 hrs- Switched the vent meter back into flow mode. Checked online. The vent meter appeared to still be in squeeze mode.</p> <p>02:15 hrs- Functioned the switch and monitored the ventmeter- Appears OK.</p>
02:15	03:45	1.50	POOH_TB	POOH tubing	<p>- Lay down another 1 joint and pup.</p> <p>- POOH with the remaining 69 joints 73 mm tubing.</p> <p>- Crew warmed up and had a lunch break.</p>
03:45	05:00	1.25	MISC	Miscellaneous operations.	<p>03:50 hrs- Topped up the hole and applied 7.0 mpa pressure to monitor vent reaction.</p> <p>- The vent rate and pressure slowly dropped, then started to transition back up slightly.</p> <p>04:50 hrs- Bled off pressure. Drained lines.</p> <p>- The vent rate and pressure started to climb after bleeding off the casing.</p>
05:00	06:45	1.75	PERF	Perforate well - Wireline/TCP	<p>Rig in wireline surface equipment and BOP's.</p> <p>- Held a pre-arming safety meeting discussing safely arming the perforating guns.</p> <p>- Switch the vent meter to perf mode @ 05:07 hrs</p> <p>- Arm and RIH with a 101.0 mm X 3.0 m ERHSC perforating gun, 20 SPM, 23 gram Good Hole charges c/w 60 degree phasing.</p> <p>- Picked up the perforating gun.</p> <p>- Pressure test equipment with N2.</p> <p>- Hole was full of fresh water</p> <p>- RIH. Log and correlate with the RBL/CCL log performed by Boreal Wireline on Feb. 7th, 2019.</p> <p>- Perforate the Imperial zone @ 673.0 - 676.0 mkb @ 05:38 hrs.</p> <p>- Monitored casing. No pressure or vacuum after perforating</p> <p>- POOH and lay down the gun. All shots fired</p> <p>- Arm and RIH with a 101.0 mm X 3.0 m ERHSC perforating gun, 17 SPM, 20 gram Good Hole charges c/w 30 degree phasing.</p> <p>- Picked up the perforating gun.</p> <p>- RIH. Log and correlate with the RBL/CCL log performed by Boreal Wireline on Feb. 7th, 2019.</p> <p>- Perforate the Lower Imperial @ 673.0 - 676.0 mkb @ 06:28 hrs.</p> <p>- Monitored casing. No pressure or vacuum after shot</p> <p>- Switched the vent meter back to normal mode @ 06:35 hrs.</p> <p>- POOH and lay down the gun. All shots fired.</p>

06:45	07:00	0.25	SAFETY	Safety Meetings (Pre-job, daily)	Hold a morning pre-job safety meeting with all onsite discussing the planned activities of the day and related hazards. Discuss working in cold weather, taking appropriate breaks and use of PPE. Morning temp= -35°C
07:00	07:45	0.75	MISC	Miscellaneous operations.	Rig down Bonnett's E-line from the wellhead. Fill the casing (300L) and pressure up to 7MPa at 07:15hrs but held solid for 5min, negligible leak off. Bled off pressure & suck back on casing. Ready packer BHA
07:45	08:45	1.00	RIH_PL& PAC	Run in hole plug or packer	RIH with the following: 0.13m - 73mm tubing collar 0.44m - 177.8mm x 73mm MCCL 2.26m - 177.8mm x 73mm Tryton TX8 DG packer 2.46m - 73mm L80 pump joint 0.26m - 73mm R profile nipple c/w 57.15mm No-Go 646.98m - 68jts of 73mm, 9.67kg/m, EUE L80 tubing 8.03m - 73mm L80 pup jts 9.65m - 1 joint of 73mm, 9.67kg/m, EUE L80 tubing -1.8m - tbg to wireline correction
08:45	09:15	0.50	SETTOOL	Setting or unsetting packers	Locate casing collars at 636.8m, 648.2m & 659.4mKB for depth control. Spaced out and set packer with C.E. at 669.34mKB. Pull into 3000daN tension. Pressure tested packer / annulus to 7MPa at 09:00hrs= solid test.

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
09:15	12:30	3.25	MISC	Miscellaneous operations.	09:15hrs - fill tbg, pressure up to 12MPa= solid. Surge 20 times at 12MPa, P/up to 15MPa surge 5X's, P/up to 18MPa and 21MPa still holds solid. P/up to 22MPa twice and obtained a leak off on the second time. Chase the leak off up and obtained feedrate at 09:33hrs of 120L/min. 14MPa with pressure slowly declining. Pumped 1m3  09:42hrs - increase rate to 300L/min & 11Ma initially 11:15hrs - shut down pump injected a total of 20m3 at 300L/min. final pressure stable at 10MPa 11:16hrs - flow back tubing recovered 1.9m3 of water 11:50hrs - Removed VentMeter to inspect as rate dropped off, found hose to be froze, wireliner took air heater hose off and stole a tarp to put heat on his BOP's that were racked on the stand on the ground (not needed until tomorrow).....discussed with wireline operator as this was 2nd day in a row. Unthaw hose & re-install at 12:28hrs. Rigged up the swab equipment while dealing with VM hose. Haul in lake water, potable water & 16.5m3 of diesel.
12:30	14:30	2.00	SWAB	Swabbing (includes swab test)	RIH to swab and tagged at 400m, could not get past - POOH to inspect cups, nothing abnormal. Try to RIH again and shieve was froze at crown and also pack off head, knock ice off and RIH with mandrel only, again tagging at 400m, POOH cement chunk on mandrel, re-ran but again tagged tight spot. Talked to superintendent, decision made to pump fluid.
14:30	15:00	0.50	MISC	Miscellaneous operations.	Rig down swab equipment. Prep to pump. Water trucks hauling if lake water to tank farm. Canol tractor arrived with Charger cement storage unit to offload cement product into bulker that has broke down tractor (idler pulley seized, belt broke, parts coming).
15:00	18:30	3.50	PROBLEM	Downtime/repairs other than rig repair	During the off loading of cement product a discharge hose came disconnected. Safety notes to follow.

18:30	19:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Rig crew & WSL's cross shifted. - Held a safety meeting with all onsite personal. Daily Ask: incident prevention - Reviewed the ERP and hazard assessment. Discussed daily job scope and associated risks. - Perform daily walk around
19:00	22:00	3.00	MISC	Miscellaneous operations.	19:30 hrs- Received approval to proceed with the operation. - Cement crew onsite. Held safety meeting. Inspect transfer hoses and equipment. Everything looked good. Sign off on cement transfer. Proceed and complete @ 21:00 hrs. - Tie in the pump line to the tubing. - Perform a 30 m3 fresh water feed rate down the tubing into the perforations @ 673.0 - 676.0 mkb. as follows: 20:10 hrs- Start pumping and bring rate up to 500 liters/min @ 12 mpa. 20:12 hrs- 500 liters/minute @ 10.5 mpa 20:22 hrs- 500 liters/minute @ 9.75 mpa 20:32 hrs- 500 liters/minute @ 9.50 mpa 20:47 hrs- 500 liters/minute @ 9.25 mpa 21:02 hrs- 500 liters/minute @ 9.00 mpa 21:10 hrs- 500 liters/minute @ 9.00 mpa - Shut down pump. The pressure dropped to 6.5 mpa quickly then held @ approx. 6.0 mpa. - Bled off the pressure. It bled down immediately and trickled back to the rig tank. - Monitored for 30 minutes. It continued to flow slowly back the rig tank. 21:35 hrs- Start pumping 20 m3 fresh water down the tubing and bring the rate up to 800 liters/minute. The pressure climbed and levelled out @ 12 mpa. 21:40 hrs- 800 liters/minute @ 12 mpa. 21:50 hrs- 800 liters/minute @ 12 mpa. 22:00 hrs- 800 liters/minute @ 12 mpa. - Slowly lowered the pump rate and stopped pumping.  22:00 hrs- The vent meter hose appeared to be freezing off. Pulled it off and inserted the end in methanol. The hose was clear and methanol bubbled. Re-attach the hose.
22:00	00:00	2.00	MISC	Miscellaneous operations.	Open the tubing to flow back to the rig tank until a manageable flow was observed. 23:27 hrs- Unset the packer. - The rig tank was filling up. Shut in the well to transfer fluid. The well built up and held @ 5.5 mpa. - Continue to transfer fluid.

# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 17 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc	Com
00:00	00:30	0.50	MISC	Miscellaneous operations.	Continue to transfer fluid out of the rig tank.
00:30	03:15	2.75	POOH_TB	POOH tubing	SITP- 5.5 mpa.SICP- 5.5 mpa. - 00:30- Open the casing up to the rig tank. Suck back with the rig pump. - Tubing was dead. The casing continued to flow throughout. - POOH with the DG packer and 73 mm tubing string. - Pin drift and visually inspect tubing while POOH. - Pulled 47 joints. Pin would not drift. Inspect. There is a buildup of cement on the inside of the tubing. - Layed down the remaining joints due to cement buildup. - CIW @ 02:20 hrs. The vent flow dropped. Drain lines. Crew had a warm up.
03:15	05:30	2.25	RIH_TB	Run in hole tubing	- Transfer fluid from the rig tank to 400 bbl to make room for RIH displacement. - Roll pipe over and tally the necessary tubing - Open the casing back to the rig tank @ 04:00 hrs. SICP- 5.0 mpa - Tally, make up and RIH with a 10K Tryton cement retainer and 73 mm tubing string. - Rig in surface swivel/circ. equipment - Set the retainer @ 671.50 mkb-CE.(1.5 meters above the perforations @ 673.0 - 676.0 mkb)

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
05:30	06:30	1.00	TESTCS G	Test casing	Pressure test the annulus and retainer to 7 mpa for 10 minutes. Held Solid. - Start testing @ 05:50 hrs. - Sting into retainer. The tubing was flowing. Pull into neutral. Wrap up the tubing and surface equipment and apply heat until ready to cement.
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Hold a morning safety briefing reviewing current operational status and the plans forward for the day: cementing, pumping, circulating, pressurized lines, working in the cold, recognizing hazards, safe footing & need for clear communication. Morning temp= -33'C
07:00	09:00	2.00	MISC	Miscellaneous operations.	Plumb in a T for cementing, unthaw frozen pump line & prep for cement job
09:00	09:30	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Hold a pre-cement job safety meeting reviewing job scope, rates,.
09:30	10:45	1.25	MISC	Miscellaneous operations.	09:37hrs - put VM in squeeze mode, remove hose & found frozen spot (was tarped in & heated), unthaw & re-connected. Stung in & tried to pump but pressured up, tubing stump had frozen, unthaw. Transfer mix water to CNA, P/T CNA lines. Pumped 2.5m3 fresh warm water down tubing at 200L/min. 7MPa (500L above tbg volume) to unsure no ice plug= good.
10:45	12:30	1.75	CEM	Cementing	10:45hrs - pumped 18m3 fresh warm water at 800L/min. & 12.5MPa ahead, drop rate to 300L/min. x 2m3. 11:16hrs - switch to CNA & pump 1m3 of CHAT gel at 150L/min. & 6.5MPa. Pump 150L water spacer 11:25hrs - pumped 2m3 of CHSM solution at 150L/min & 6.5MPa slow climb to 7MPa 11:48hrs - start OWG cement c/w 2% calcium at 150L/min. 6.3MPa, slow decrease to 3MPa with full column of cement. Pumped 3m3 of slurry. 12:06hrs - switch to OWG c/w 0.5% calcium at 150L/min. & 3MPa 12:25hrs - displace cement out of plumbing & just below surface w/ 150L of water. Shut down observing 800kPa position pressure. Did not pull neutral, allow cement to sit & ooze in under static conditions.
12:30	12:45	0.25	MISC	Miscellaneous operations.	Shut down for 20min. Wash up the CNA pumper & suck clean with vac truck. Threw a tarp over the tubing stump. Blow out rig feed water line with steam.
12:45	14:00	1.25	CEM	Cementing	12:50hrs - start displacing cement at 40L/min. & 3MPa with slow steady pressure increase to 7.3MPa with 1.2m3 away. 13:30hrs - drop rate to 15L/min. and squeezed away 180L until 8.5MPa 13:50hrs - switch to SRP and pump at 2L/min. until 10.1MPa bump twice to obtain a 9.8MPa x 10min. flatline 14:05hrs - pull to neutral leaving the 9.8MPa squeeze pressure on the retainer  Total class G cement squeezed through retainer= 5.5m3  Cement blends as follows: 3m3 of Charger SQ200 + 2% CaCl + 0.15% CHFL-1 + 0.05% CHFR-1 + 0.2% CHDF-P + 2% CHGC-2 @ 1900 kg/m3. Slurry temp= 37'C 3m3 of Charger SQ50 + 0.5% CaCl + 0.15% CHFL-1 + 0.05% CHFR-1 + 0.2% CHDF-P + 2% CHGC-2 @ 1900 kg/m3 - Slurry temp= 30'C
14:00	15:00	1.00	MISC	Miscellaneous operations.	Bleed SITP down to 2MPa & rotate out of retainer, pressure did not bleed off, pressure up to 6MPa & got cement moving, pump 350L to leave a 15m plug above retainer. Pull 2 jts & pup, RIH space out to 656.3m and attempt to back wash clean, got tstm returns then plugged off. Forward circ. ~10L and then try to reverse again but pressured up to 7MPa. Switch to forward circ. and pressured up to 20MPa - cement is packed off in the stinger. Pulled 12 jts to ensure tubing did not get planted. Rig up mud can.
15:00	17:00	2.00	POOH_TB	POOH tubing	Pull & stand / mud can out 45jts and found cement in tubing with 10jts remaining. Lay out 10 cemented off joints & stinger.
17:00	17:30	0.50	BRKTM	Coffee Break	Warm up break. Toolhand assembled BHA
17:30	18:30	1.00	RIH_TB	Run in hole tubing	RIH with the following: 0.12m - 158.75m OD tricone bit 1.45m - 177.8mm casing scraper & XO 1.86m - 73mm 6ft pup jnt
18:30	19:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Rig crew & WSL's cross shifted. - Held a safety meeting with all onsite personal. Daily Ask: Overhead hazards - Reviewed the ERP and hazard assessment. Discussed daily job scope and associated risks. - Perform daily walk around

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
19:00	19:30	0.50	RIH_TB	Run in hole tubing	Continue to RIH with the casing scraper. - Tagged cement top @ 662.64 mkb. Minimum required cement top is 656.27 mkb.
19:30	21:00	1.50	POOH_TB	POOH tubing	POOH with the casing scraper and 73 mm tubing string. - Break apart and lay down the BHA. - Install wireline flange and required surface equipment.
21:00	00:00	3.00	MISC	Miscellaneous operations.	Leave the well static. Wait the required time recommended by Boreal Wireline prior to performing a noise/temp log. - Organized tubing and remove damaged pipe from racks. - performed walkaround and fill in any uneven ground with snow and level out.

# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 18 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	01:00	1.00	MISC	Miscellaneous operations.	Leave the well static. Wait the required time recommended by Boreal Wireline prior to performing a noise/temp log. - Organized tubing and remove damaged pipe from racks. - performed walkaround and fill in any uneven ground with snow and level out.
01:00	06:30	5.50	LOG	Logging	<p>Make up and RIH with Noise/Temp tools</p> <ul style="list-style-type: none"> <li>- Perform an initial temperature baseline log to PBTD. Tagged @ 660.50 mkb-CCL + tools (1.7m) = 662.2 mkb.</li> <li>- Measured depth tag @ 662.64 mkb.</li> <li>- POOH. lay down tools due to the gamma ray tool having issues. Replace with spare and pick up.</li> <li>- 02:14 hrs. Opened the SCV valve and bled the pressure down to prevent condensation from forming in the lines by bleeding to the ventmeter.</li> <li>- 02:17 hrs. Closed the valve and sent prompt to open the ventmeter on flow mode.</li> <li>- 02:20 hrs. The ventmeter switched and started registering in flow mode.</li> <li>- The pressure continued to bleed with no sustained flow. Continued to monitor and let pressure bleed down.</li> <li>03:14 hrs. Waited 1.0 hr as recommended by wireline engineer. RIH and perform a secondary temperature log.</li> <li>03:19 hrs. The temperature increased and then started to drop(Possibly freezing off)</li> </ul> <p>Check vent meter lines. Slight pressure on vent. The ventmeter hose was clear. Suspect possibly the panel box was freezing up. Wrapped up the box to warm up.</p> <ul style="list-style-type: none"> <li>- Perform a Noise log from PBTD to surface</li> </ul>

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Hold a morning safety meeting with all day shift personnel reviewing current ops, plan forward for the day, associated task hazards, need for clear communication, safe footing, use of PPE & working in cold weather conditions. Morning temp= -26°C & windy.
07:00	08:00	1.00	MISC	Miscellaneous operations.	Rig crew cross shift, rig down E-line from the well, cementers warming up equipment, warm up pump lines. Prep to RIH
08:00	09:45	1.75	RIH_TB	Run in hole tubing	RIH with the following slick string: 0.13m - 73mm tubing collar 656.49m - 68jts of 73mm, 9.67kg/m, EUE L80 tubing 6.17m - two 73mm L80 10ft pup joints 2.72m - KB diff -1.75m - depth correction.  Lightly tag low cement top at 662.64mKB. Pick up 20cm. Rig in work valve & prep to cement. Stopped half way through pipe trip for warm up break, very cold wind.
09:45	10:00	0.25	SAFETY	Safety Meetings (Pre-job, daily)	Hold a pre-cement job safety meeting reviewing job procedures, pressures, muster point & head count (16)
10:00	10:30	0.50	CEM	Cementing	Warm up pump lines with steam. Tie in CNA to tubing. P/T treating line. 10:00hrs - fill hole with warm fresh water - took 1.8m3 to break circ. 10:20hrs - Batch mix up 500L of 0.1:0 G cement slurry and circulate down the tubing at 280L/min. & 2.8MPa displacing with 1.9m3 fresh water to balance the cement plug, held 2MPa while circ. 10:28hrs - cement placed as a balance plug  Cement blend: 0WG + 0.15% CHFL-1 + 0.05% CHFR-1 + 0.2% CHDF-P + 2% CHGC-2 @ 1900 kg/m3 - Slurry temp= 27°C
10:30	11:00	0.50	MISC	Miscellaneous operations.	Pull space out pups to position T.E. at 656.2m. Back wash out the remaining cement slurry leaving a total of 15m of class G cement above the retainer set at 671.5mKB C.E. (retainer top= 671.25m), cement top will be 656.25mKB. 10:50hrs - back wash complete. Rig down & blow out lines with steam.
11:00	11:30	0.50	BRKTM	Coffee Break	Warm up break
11:30	12:30	1.00	POOH_TB	POOH tubing	POOH & stand 66jts of tubing
12:30	13:00	0.50	MISC	Miscellaneous operations.	Top up wellbore for pipe displacement with 1m3 fresh clean water. Rig up Bonnett's adaptor flange to the well & ready bond tool.
13:00	15:15	2.25	LOG	Logging	Perform a RCBL
15:15	16:00	0.75	MISC	Miscellaneous operations.	Lay out logging tools VentMeter shows a reduction of flowrate since being opened after shut in. The reduction starts approx. 10:00hrs when we started filling the hole to break circ. for cementing. 15:45hrs - put VM in gray scale and removed 40ft main hose, moved VM closer to well and elevated on matting so any condensation will naturally drain towards bottle and replaced with a 20ft main hose. All hoses & bottle clear no blockages. **Performed a SCVF bubble test and observed a +/-50% reduction in bubble rate from test 3 days ago; now observe approx. four to six bubbles a one second pause and repeats** 16:00hrs - reconnect meter & tarp in line with dry heat.
16:00	18:30	2.50	WOO	Wait on orders	Await bond log analysis. Crews did maintenance, house keeping, & misc.
18:30	19:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Rig crew & WSL's cross shifted. - Held a safety meeting with all onsite personal. Daily Ask: Overhead hazards - Reviewed the ERP and hazard assessment. Discussed daily job scope and associated risks. - Perform daily walk around



Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
19:00	21:15	2.25	PERF	Perforate well - Wireline/TCP	Rig in wireline surface equipment and BOP's. - Held a pre-arming safety meeting discussing safely arming the perforating guns. - Switch the vent meter to perf mode @ 19:17 hrs - Arm and RIH with a 101.0 mm X 3.0 m ERHSC perforating gun, 20 SPM, 23 gram Good Hole charges c/w 60 degree phasing. - Picked up the perforating gun. - Pressure test equipment with N2. - Hole was full of fresh water - RIH. Log and correlate with the RBL/CCL log performed by Boreal Wireline on Feb. 7th, 2019. - Perforate the Middle Imperial zone @ 649.0 - 652.0 mkb @ 20:06 hrs. - Monitored casing. No pressure or vacuum after perforating - POOH and lay down the gun. All shots fired - Arm and RIH with a 101.0 mm X 3.0 m ERHSC perforating gun, 17 SPM, 20 gram Good Hole charges c/w 30 degree phasing. - Picked up the perforating gun. - RIH. Log and correlate with the RBL/CCL log performed by Boreal Wireline on Feb. 7th, 2019. - Perforate the Middle Imperial zone @ 650.0 - 653.0 mkb @ 21:03 hrs. - Monitored casing. No pressure or vacuum after shot - Switched the vent meter back to normal mode @ 21:05 hrs. - POOH and lay down the gun. All shots fired. - Rig off wireline equipment.
21:15	21:45	0.50	MISC	Miscellaneous operations.	Fill the casing and pressure up to 7MPa at 09:25 hrs. Held solid for 5min. Bled off pressure & suck back on casing. - There was less affect on the SCV than during previous casing tests.
21:45	00:00	2.25	RIH_PL&PAC	Run in hole plug or packer	Make up and RIH with the DG packer and 73 mm tubing string. - Tally and drift the tubing on the way in the hole out of the derrick. - Had issues drifting 30% of the tubing. Cement rings in collars, and light cement lining some joints. - Replace joints as necessary.



# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 19 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	01:00	1.00	RIH_PL&PAC	Run in hole plug or packer	<p>*** Checked vent meter hose @ 00:05 hrs. All clear.</p> <p>RIH with the following:</p> <ul style="list-style-type: none"> <li>1- 0.13 m X 73.0 mm tubing collar</li> <li>1- 0.44 m X 177.8 mm x 73.0 mm MCCL</li> <li>1- 2.24 m X 177.8 mm x 73.0 mm Tryton TX8 DG packer</li> <li>1- 3.10 m X 73.0 mm L80 pump joint</li> <li>1- 0.26 m - 73.0 mm R profile nipple c/w 57.15mm No-Go</li> <li>65- 73.0 mm tubing joints(627.33 mkb), 73.0 mm, 9.67kg/m, EUE L80 tubing</li> <li>1- 1.24 m X 73mm L80 pup jt</li> <li>1- 3.10 m X 73mm L80 pup jt</li> <li>1- 9.67 m X 1 joint of 73mm, 9.67kg/m, EUE L80 tubing</li> <li>-1.52 m - tbg to wireline correction</li> </ul> <p>- Locate casing collars @ 614.1, 625.6, and 636.8 mkb to confirm depths.</p> <p>- Spaced out and set the packer @ 646.83 mkb-CE . Pull into 3000 daN tension.</p>
01:00	01:30	0.50	TESTCSG	Test casing	Pressure tested packer and annulus to 7.0 mpa at 01:18 hrs to 01:28 hrs. Held solid.

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
01:30	03:30	2.00	MISC	Miscellaneous operations.	<ul style="list-style-type: none"> <li>- Tie in the pump line to the tubing.</li> <li>- Filled the tubing with clean fresh water.</li> <li>- Pressured up to 7.0 mpa. Held solid. Pressure up to 12 mpa. Held solid.</li> <li>- Pressured up to 15 mpa and surged 5X. Pressured up to 15 mpa. Same result.</li> <li>- Pressured up to 18 mpa and surged 5X. Pressured up to 18 mpa. Same result.</li> <li>- Pressured up to 20 mpa and surged 5X. Minimal bleed down.</li> <li>- Pressured up to 21 mpa. Surged 4X.</li> <li>- The pressure started to drop. Kick in the pump and slowly increase the rate</li> <li>- 01:55 hrs. Started to feed in fresh water. Increase the rate to 300 liters/minute.</li> <li>- Monitored the SCV. The pressure and flow appeared to slowly transition down.</li> <li>- Pumped 10.5 m3 @ 300 liters/minute with an initial pump pressure of 12.0 mpa and final pressure of 7.75 mpa. Bled the pressure off to the rig tank. The tubing continued to slowly trickle fluid.</li> <li>- Stopped pumping @ 02:35 hrs. Monitored for 30 minutes. The pressure seemed to level out.</li> <li>- 03:05 hrs. Pumped 5 m3 water @ 500 liters/minute. Initial pump pressure was 11 mpa and the final pressure was 6 mpa. Shut down @ 03:16 hrs. A slight SCV pressure increase was noted while pumping and a slight bleed down after pumping was stopped.</li> <li>- Bleed the well back until flow was low enough to install swab equipment.</li> <li>- Prepare to pull swabs to see if there is any affect on the vent flow with lowered hydrostatic pressure.</li> </ul>
03:30	06:30	3.00	SWAB	Swabbing (includes swab test)	<ul style="list-style-type: none"> <li>Flow and suck back on the tubing. There was a steady positive flow.</li> <li>- 04:17 hrs. Take off vent hose and blow through it to ensure clear. All OK.</li> <li>- Install a bubble tester directly on the SCV. Observed 72 bubbles/minute @ a steady flow.</li> <li>- 04:28 hrs. Re-installed the hose.</li> <li>- The tubing continued to flow. Rig in the swab equipment while flowing</li> <li>- RIH with swab cup to 100 m. Could not go further. POOH.</li> <li>- RIH.</li> </ul>
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Hold a morning safety meeting with all day shift personnel reviewing current ops, plan forward for the day, associated task hazards, need for clear communication, safe footing, use of PPE & working in the cold. Morning temp= -16°C light snow.
07:00	07:15	0.25	MISC	Miscellaneous operations.	Rig crew cross shift. Day crew walk around inspection & test ASO's.
07:15	12:15	5.00	SWAB	Swabbing (includes swab test)	<ul style="list-style-type: none"> <li>Pull swabs from 07:15hrs to 08:00hrs pulled 5 swabs recover 4m3, some cement flakes / shale in returns.</li> <li>08:35hrs - start filling tubing with fresh water, 1.2m3 to fill, injected 1m3 at 300L/min. with pressure at 13MPa initially down to 11.5MPa after 1m3</li> <li>08:43hrs - increase to 500L/min. 12MPa stable x 1m3</li> <li>08:45hrs - increase to 800L/min. 12.5MPa with a gradual decrease to 10.5MPa x 13m3</li> <li>09:03hrs - shut down pump &amp; flow back hard recover 2.1m3</li> <li>Swab from 09:15hrs to 11:05hrs, recovered 6.6m3 total, shale/formation flakes in returns</li> <li>11:28hrs - fill hole at 300L/min. took 300L. Increase pump rate to 800L/min. 13MPa initially, pumped a total of 20m3, final pressure at 10.5MPa.</li> <li>11:57hrs - shut down pump, flow back tubing immediately, recovered 6.7m3</li> <li>12:20hrs RIH to swab, could not get down all the way, found formation debris on mandrel (small grey chips like shale drill cuttings &amp; some fines). Worked a few times and got in.</li> <li>13:30hrs to 14:30hrs - pulled a total of 8 swabs recovered 7m3</li> </ul>
12:15	14:30	2.25	SWAB	Swabbing (includes swab test)	12:20hrs RIH to swab, could not get down all the way, found formation debris on mandrel (small grey chips like shale drill cuttings & some fines). Worked a few times and got in. 13:30hrs to 14:30hrs - pulled a total of 8 swabs recovered 7m3
14:30	15:30	1.00	MISC	Miscellaneous operations.	Left well shut in & monitor VentMeter for 1 hour
15:30	18:30	3.00	SWAB	Swabbing (includes swab test)	<ul style="list-style-type: none"> <li>15:50hrs - start pumping, injected 30m3 at 800L/min. &amp; 11.5MPa stable.</li> <li>16:35hrs - drop rate to 300L/min. pumped 2m3 stable at 7.5MPa</li> <li>16:42hrs - shut down pump &amp; monitor, 5min. SIP was 6MPa.</li> <li>16:45hrs - flow back tubing recovered 8m3</li> <li>17:40hrs - start to swab again</li> </ul>
18:30	19:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	<ul style="list-style-type: none"> <li>Rig crew &amp; WSL's cross shifted.</li> <li>- Held a safety meeting with all onsite personal. Daily Ask: Overhead hazards</li> <li>- Reviewed the ERP and hazard assessment. Discussed daily job scope and associated risks.</li> <li>- Perform daily walk around</li> </ul>

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
19:00	22:15	3.25	MISC	Miscellaneous operations.	<ul style="list-style-type: none"> <li>Rig out swab equipment.</li> <li>- Install the pump line and chick san directly on the well.</li> <li>- 19:55 hrs. Start pumping fresh water down the tubing into the perforations.</li> <li>- Bring the rate up to 800 liters/minute @ 12 mpa.</li> <li>- Continue to pump water @ 800 liters/minute. The pressure slowly dropped while pumping.</li> <li>- 20:35 hrs. Shut down pump.</li> <li>- Pumped 30 m3 total. Final pumping pressure was 10 mpa @ 800 liters/minute.</li> <li>- ISIP @ 6.0 mpa.</li> <li>- Opened up the well to the rig tank and flowback.</li> <li>- Prepare the swab equipment and let the well flow until flow rate is low enough to swab.</li> <li>- Flowed back 14.0 m3 total.</li> </ul>
22:15	00:00	1.75	SWAB	Swabbing (includes swab test)	<ul style="list-style-type: none"> <li>The tubing was still flowing slightly</li> <li>- RIH and and start swabbing as follows:</li> <li>- Pulled 4 swabs. Fluid was @ surface for the first 3 swabs.</li> <li>- Recovered 5.75 m3 water total.</li> </ul>

# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 20 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	06:15	6.25	SWAB	Swabbing (includes swab test)	Continue to swab the well as follows and evaluate the SCV: - Tubing nipple @ 642.39 mkb 02:00 hrs- The well swabbed dry. - Continued to pull swabs. The fluid level continued to increase with each swab. 03:00 hrs- The fluid level started to level out @ +/- 430 mkb. 03:45 hrs- Noted discolored water in swab returns. Slight salt content in swab returns. 04:09 hrs- Removed the ventmeter hose and checked to ensure clear. All good. - Performed bubble test on the SCV. Observed 40 bubbles/minute and a steady flow. (72 bubbles per minute observed the prior nightshift). 04:17 hrs- Re-connected the ventmeter 04:45 hrs- Fluid tag depth came up to +/- 340 m and is fluctuating up and down. - Pulled 26 swabs total. - Recovered 15.28 m3. - Had a 24.0 m3 gain from swabbing above what was pumped (30m3) at crew change.
06:15	06:30	0.25	MISC	Miscellaneous operations.	Started pumping 10 m3 fresh water down the tubing and into the perforations @ 649.0 - 653 mkb @ 06:21 hrs. - It took 800 liters to fill the hole. Pumping 7.0 mpa @ 100 liters/minute.
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Hold a morning safety meeting with all day shift personnel reviewing current ops, plan forward for the day, associated task hazards, need for clear communication, safe footing, use of PPE & working in the cold. Morning temp= -12'C breezy.

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
07:00	10:00	3.00	MISC	Miscellaneous operations.	Crews cross shifted. WSL Dan Parish going home, WSL John Oravec replacing. Continued pumping the remainder of 10m3 at 100L/min. The final pressure was 6MPa. 08:03hrs - stop pumping. Leave shut in, monitor for 1hr Pressure remained at 5500kPa for all but the last reading, 1hr SIP= 5400kPa  09:10hrs - flow back tubing to rig tank to bleed down pressure to unset packer
10:00	10:30	0.50	SETTOO L	Setting or unsetting packers	Unset the packer at 646.83mKB & allow elements to relax. Flowing gently, suck back with rig pump
10:30	11:30	1.00	POOH_P L&PAC	POOH plug or packer	POOH and stand 66jts of 73mm tubing.
11:30	12:00	0.50	BHA	Handle&inspect BHA	Lay out packer BHA & assemble retainer BHA
12:00	12:45	0.75	RIH_PL& PAC	Run in hole plug or packer	RIH with the following:  -1.52m - depth correction 2.72m - KBD 9.67m - 1jt of 73mm, 9.67kg/m, EUE L80 tubing 3.08m - 73mm L80 10ft pup joint 3.09m - 73mm L80 10ft pup joint 627.22m - 65jts of 73mm, 9.67kg/m, EUE L80 tubing 0.82m - Mech. setting tool 0.60m - Kappa 10K cement retainer for 177.8mm casing
12:45	13:15	0.50	SETTOO L	Setting or unsetting packers	Space out and mechanically set retainer w/ C.E. at 644.61mKB
13:15	14:15	1.00	TESTPA CK	Test packer	Pressure test annulus / retainer to 7MPa x 10min= solid test no leak off. Pull neutral and P/T tubing to 14MPa x 10min= solid test. B/D to 1MPa positive pressure, close work valve & sting in. Rig up cementers to tubing. Blow out pump lines with steam.
14:15	14:30	0.25	SAFETY	Safety Meetings (Pre-job, daily)	Hold a pre-cement job safety meeting with all workers reviewing job scope, hazards & muster point, head count= 16
14:30	15:00	0.50	MISC	Miscellaneous operations.	Feed warm mix water to CNA. Put VM into squeeze mode 14:42hrs. Sent prompt to VM for build up mode. P/T CNA to 16MPa.
15:00	16:30	1.50	CEM	Cementing	15:00hrs - open tubing and pump 150L of fresh water at 7.5MPa. Pump 1m3 of CHAT gel at 150L/min. & 7.8MPa followed by a 150L fresh water spacer. 15:11hrs - pump 2m3 of SMS solution at 150L/min. & 7MPa 15:20hrs - start mixing up 0:1:0 G cement 15:35hrs - pump 4m3 of cement slurry c/w 2% CaCl2 at 150L/min. & 7MPa with slow pressure decrease as tubing column filled with cement, still had 3MPa positive pressure after 4m3 off surface. Mix & pump 3m3 with no CaCl2 at 150L/min. & final pressure at 2.5MPa. 16:20hrs - displace cement off surface / out of plumbing with 150L of fresh water. Shut down and SIP bled down to & held at 600kPa. Wash up CNA
16:30	18:15	1.75	CEM	Cementing	16:34hrs - start squeezing cement at 100L/min. & 2.5MPa for 200L Drop rate to 40L/min. & pump 600L, pressure from 2.5MPa to 4MPa Drop rate to 25L/min. & pump 400L, pressure from 4MPa to 5.2MPa  17:15hrs - switch to SRP and squeeze at 10L/min x 100L from 4.9MPa to 5.8MPa, dropped to 5L/min. for 200L pressure up to 7.2MPa, decrease rate to 2L/min x 25L until 7MPa x 10min flatline  Total class G cement squeezed through retainer= 6.57m3  Cement blends as follows: 4m3 of Charger SQ200 (0:1:0 G) + 2% CaCl + 0.15% CHFL-1 + 0.05% CHFR-1 + 0.2% CHDF-P + 2% CHGC-2 @ 1900 kg/m3. Slurry temp= 41°C 3m3 of Charger SQ (0:1:0 G) + 0.15% CHFL-1 + 0.05% CHFR-1 + 0.2% CHDF-P + 2% CHGC-2 @ 1900 kg/m3 - Slurry temp= 34°C
18:15	18:45	0.50	MISC	Miscellaneous operations.	Pull to neutral with 7MPa squeeze pressure left on retainer, bled down to 6.3MPa and rotate out (17min. past working time) and seen pressure drop to zero. Remove SRP line from tubing & tie in rig pump, forward circ. out 350L at 80L/min. Pull & L/D one joint & two x 10ft pups, land stump high to leave a 16.5m cement cap on the retainer.  18:40hrs - back wash out remaining 80L of cement slurry from the tubing observing good returns.

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
18:45	19:15	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review job scope and hazards for the day. Discuss current weather conditions (-19 w/wind chill), Discuss Over head loads, Crush points, Slips and Trips, Steam hazards. Review ERP with all on lease.
19:15	20:45	1.50	POOH_TB	POOH tubing	POOH and lay out 10Jts of 73.0mm tubing. Stand remaining 55 Jts. ** 20:00 hrs. Safety incident. A fluid spill on MW 19B lease at cement slop tanks. Notified Calgary.
20:45	22:15	1.50	MISC	Miscellaneous operations.	Shut in well as instructed and continue to monitor. Rig crew performing maintenance.
22:15	00:00	1.75	MISC	Miscellaneous operations.	Open the well to rig tank as instructed @ 22:19hrs. Ventmeter on flow @ 22:26 - hard time switching to flow. Well dead with no returns. Continue to monitor as instructed. *** Checked vent meter hose @ 22:58 hrs. All clear. ***

# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 21 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	03:00	3.00	MISC	Miscellaneous operations.	Continue to monitor well as instructed. Well dead with no returns to tank. Rig crew performing maintenance.
03:00	04:30	1.50	PERF	Perforate well - Wireline/TCP	Instructed from Calgary to perf next interval. Rig in wireline surface equipment and BOP's. Held a pre-arming safety meeting discussing safely arming the perforating guns. Switch the vent meter to perf mode @ 3:21 hrs, Arm and RIH with a 101.0 mm X 3.0 m ERHSC perforating gun, 20 SPM, 25 gram Good Hole charges c/w 60 degree phasing. Pick up the perforating gun and secured Lube Pressure test equipment with N2- Good. RIH and noticed fluid level at approx 40mKb, RIH. Log and correlate with the RBL/CCL log performed by Boreal Wireline on Feb. 7th, 2019. Perforate Lower Cretaceous zone @ 542.0 - 545.0 mkb @ 3:57 hrs. Vent meter back on @ 3:59 hrs. Monitored casing. No pressure or vacuum after perforating, POOH and lay down the gun. All shots fired on gun. Rig out wire liners.
04:30	06:45	2.25	CIRC	Circulate well clean	Instructed to work pressures down casing and return through vent. Tie into casing. Pumped approx 940L. Work pressure slowly up to 7mPa. Only 1/4 mPa loss in 10 min. Communicated with Calgary. Continue working pressures on casing up to a max of 9mPa. Achieved a break @ 9mPa on casing and have circulation to tank 300l/min @ 7mPa for approx 1/4 m3 back then lost circulation. Pumped a total of 1.50m3 down casing. Communicate with Calgary. Pump down casing for a total of 6.0m3 @ 6mPa, 300l/min. No returns to tank.

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
06:45	07:15	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Hold a morning safety meeting with all workers (day crew has changed - crew has been here prior on nights of 1st hitch). Reviewed current operational status, plan forward for the day, hazards, need for clear communication, use of PPE, safe footing & working in the cold. Morning temp= -26°C light breeze
07:15	08:00	0.75	MISC	Miscellaneous operations.	Day crew inspected equipment. Blow water out of SCV plumbing and re-install VentMeter 08:13hrs. Shut in SCV at 08:40hrs while RIH to prevent fluid surge & flooding VM
08:00	09:30	1.50	RIH_PL&PAC	Run in hole plug or packer	RIH with the following:  9.38m - 1jnt of 73mm, 9.67kg/m, EUE L80 tubing 1.86m - 73mm L80 6ft pup jnt 520.91m - 54jts of 73mm, 9.67kg/m, EUE L80 tubing 0.26m - 73mm 'R' profile nipple, L80, c/w 57.15mm ID 3.09m - 73mm L80 10ft pup jnt 2.24m - 177.8mm Tryton TX8 DG casing packer RHS/RHR 0.44m - 177.8mm x 73mm MCCL 0.13m - 73mm tubing collar
09:30	10:30	1.00	RIGUP	Rig up	Steam & replace saver head rubbers. Install work valve & swab tree onto tubing. Prep to swab. Warm up break
10:30	10:45	0.25	SAFETY	Safety Meetings (Pre-job, daily)	Pre-swab tailgate safety meeting held
10:45	16:45	6.00	SWAB	Swabbing (includes swab test)	Swab the wellbore fluid down with packer unset. Start rig out of P-tank & flare stack. Hauled in 1 load of potable H2O 15:55hrs to 15:58hrs - removed VM hose and check, hose was clear & bubbling when put in water, approx. 2 to 3 bubbles per second. Pulled a total of 18 swabs recovering 9.2m3 of water, trace of shale solids on last few swabs. The last 2 swabs were tstm recovering, waited 15min to check for inflow between last 2 swabs.
16:45	17:15	0.50	SETTOOL	Setting or unsetting packers	Rig down swab equip. Set the packer with C.E. at 538.18mKB, packed off w/ 10,000daN over string & leave in 2500daN tension.
17:15	18:30	1.25	SWAB	Swabbing (includes swab test)	Rig swab equip back in, pulled 2 swabs, recovered 200L on 1st swab, 2nd was dry. Set up to pump down tubing.
18:30	19:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Ensure all on lease are Fit For Duty. Review job scope and hazards for the day. Discuss current weather conditions (-23 w/wind chill), Discuss Over head loads, Crush points, Slips and Trips, Steam hazards.
19:00	21:00	2.00	MISC	Miscellaneous operations.	***Vent meter off @ 19:06 hrs.*** Tie in pumping and return lines. Filled the tubing with fresh water. It took 1.20 m3 to fill and start pressuring up and surging back pressures pumping to a max of 4 - 5mPa. 20:06hrs - Pin hole on a hydraulic hose detected on the pump. Shut down and repaired hose. 20:27 back surging. 20:35 hrs: Took 5 min to bleed off from 5 mPa - 4 mPa. Bleed off and flow back pressure until dead. Returned approx 250L. Prepare to RIH and swab.
21:00	21:45	0.75	SWAB	Swabbing (includes swab test)	Swab tubing. Pulled 2 swabs, 1st swab tagged at surface, Recovered 1.00m3. Second swab pulled dry.
21:45	23:00	1.25	MISC	Miscellaneous operations.	Filled the tubing. 1.20 m3 to fill and start pressuring up and surging back pressures pumping to a max of 4 - 5mPa. Took 10 min to bleed off from 5 mPa - 4 mPa. Bleed off and flow back pressure until dead. Communicated with Calgary. Instructed to perforate next interval. Open well and flow back pressure. Returned approx 300L. RIH and pull 1 swab from 515mkb to remove hydrostatic prior to packer unset, POOH, returned 1.00m3. Prepare to unset packer.
23:00	23:45	0.75	SETTOOL	Setting or unsetting packers	Rig down swab lube & tree. ***Vent meter back on flow @ 11:15hrs.*** Unset the DG packer & allow the element to relax.
23:45	00:00	0.25	BRKTM	Coffee Break	Crew took coffee break



# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 22 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc	Com
00:00	01:00	1.00	POOH_P L&PAC	POOH plug or packer	POOH: 9.38m - 1jnt of 73mm, 9.67kg/m, EUE L80 tubing, 1.86m - 73mm L80 6ft pup jnt, 520.91m - 54jts of 73mm, 9.67kg/m, EUE L80 tubing, 0.26m - 73mm 'R' profile nipple, L80, c/w 57.15mm ID, 3.09m - 73mm L80 10ft pup jnt, 2.24m - 177.8mm Tryton TX8 DG casing packer RHS/RHR, 0.44m - 177.8mm x 73mm MCCL, 0.13m - 73mm tubing collar
01:00	02:30	1.50	PERF	Perforate well - Wireline/TCP	Instructed from Calgary to perf next interval, Rig in wireline surface equipment and BOP's. Held a pre-arming safety meeting discussing safely arming the perforating guns. Switch the vent meter to perf mode @ 1:29 hrs, Arm and RIH with a 101.0 mm X 3.0 m ERHSC perforating gun, 20 SPM, 25 gram Good Hole charges c/w 60 degree phasing. Pick up the perforating gun and secured Lube Pressure test equipment with N2- Good. RIH and noticed fluid level at approx 380mKb, RIH. Log and correlate with the RBL/CCL log performed by Boreal Wireline on Feb. 7th, 2019. Perforate Lower Cretaceous zone @ 535.0 - 538.0 mkb @ 02:00 hrs. *****Vent meter back on flow @ 02:03 hrs. Monitored casing. No pressure or vacuum after perforating, POOH and lay down the gun. All shots fired on gun, Rig out wire liners.

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc	Com
02:30	04:00	1.50	RIH_PL& PAC	Run in hole plug or packer	RIH 1- 0.13 m X 73.0 mm tubing collar, 1- 0.44 m X 177.8 mm x 73.0 mm MCC, 1- 2.24 m X 177.8 mm x 73.0 mm Tryton TX8 DG packer, 1- 3.09 m X 73.0 mm L80 pump joint, 1 - 0.26 m - 73.0 mm R profile nipple c/w 57.15mm No-Go, 53- 73.0 mm tubing joints (511.25 m), 73.0 mm, 9.67kg/m, EUE L80 tubing, 1- 3.09 m X 73mm L80 pup jt, 1- 1.86 m X 73mm L80 pup jt, 1- 73.0 mm tubing joint(9.66m) mkb), 73.0 mm, 9.67kg/m, EUE L80 tubing -1.52 m - tbg to wireline correction. Locate casing collars @ 512.10, 523.20, 534.50, 541.10 to confirm depths. Spaced out and set the packer C/E @ 531.58mkb, C/E 3.42m away from perf top @ 535.0mKb, Top of nipple @ 527.19mKb, Pull into 3000 daN tension.
04:00	04:30	0.50	TESTCS G	Test casing	Pressure tested packer and annulus to 7.0 mpa at 04:00 hrs to 04:10 hrs. Held solid. 8.60m3 to fill hole. Bleed back pressure.
04:30	05:00	0.50	MISC	Miscellaneous operations.	Warm up lines with steam. Change out rubbers and warm swab lube, Prep. to swab. Replace all sandline flags.
05:00	05:45	0.75	SWAB	Swabbing (includes swab test)	RIH and begin to swab well. First pull from nipple top recovered 0.50m3, Second pull dry. 3rd pull dry. Swabs pulled @ 05:02 hrs, 05:12 hrs, 05:31 hrs. Communicated with Calgary. Instructed to fill tubing and surge 5 - 6mPa max.
05:45	06:30	0.75	MISC	Miscellaneous operations.	Fill tubing - 1.70m3. Begin surging pressures 5 - 6 mPa max. Had a 1 mPa bleed off in 4 min. 5 - 4 mPa. Continue to surge pressures. Surged 125 times.
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Hold a morning safety meeting with all personnel reviewing current operational status, plan forward & hazard review. Morning temp= -20 w/ -28°C windchill
07:00	09:45	2.75	MISC	Miscellaneous operations.	Tied in VM and pump down tubing. P/up to 6MPa, leaks to 4MPa in just over 1min. Bump up and chase the leak off, on 4th attempt we had a feedrate for approx. 150L at a time. Chase leak off, removed VM & installed bubble tester. 07:50hrs - obtained stable rate 290-300L/min at 6.5MPa, steady decrease in bubble size & frequency 08:04hrs - VM back in service 08:45hrs - 16m3 away, rate stable 300L/min. 7MPa 09:17hrs - 24m3 away, rate stable 300L/min. 7MPa. Shut down pump & monitor leak off. Holds at 6.5MPa, lost 100kPa after 30min.
09:45	10:45	1.00	BLDWN	Bleed wellbore press.	Flow back tubing recovering 3m3 of water, last 1.5m3 had a light grey tinge to it, no fines but light grey in color.
10:45	11:15	0.50	SETTOO L	Setting or unsetting packers	Unset the packer & allow elements to relax. Monitor flow
11:15	12:00	0.75	POOH_P L&PAC	POOH plug or packer	POOH and stand 55jts of tubing
12:00	12:45	0.75	BHA	Handle&inspect BHA	Lay out packer BHA. Warm up / lunch break. Assemble pick up retainer BHA
12:45	13:15	0.50	RIH_PL& PAC	Run in hole plug or packer	RIH with the following: -1.38m - depth correction 2.72m - KBD 530.59m - 65jts of 73mm, 9.67kg/m, EUE L80 tubing 0.82m - Mech. setting tool 0.60m - Kappa 10K cement retainer for 177.8mm casing
13:15	13:45	0.50	SETTOO L	Setting or unsetting packers	Locate casing collar at 534.3mKB for depth control space out and mechanically set the retainer w/ C.E. at 532.28mKB
13:45	14:30	0.75	TESTPA CK	Test packer	Top up annulus and P/T retainer to 7MPa x 15min.= solid test. Pull neutral and P/T tubing to 14MPa= solid test. Bleed off test pressure, sting in & close master valve. Tie in CNA line, tarp in stump.
14:30	14:45	0.25	SAFETY	Safety Meetings (Pre-job, daily)	Hold a pre-cement job safety with all workers reviewing the job scope, hazard zones, HP lines, safe footing, clear communciation, SDS review & muster point.

14:45	15:45	1.00	MISC	Miscellaneous operations.	Pump fresh warm potable water to CNA. P/T CNA treating line/pump to 14MPa  ***NOTE: 15:40hrs - field visit & site tour from Government of the Northwest Territories Manager of Wildlife & Environment Sahtu Region - Laurel McDonald and Water Resource Officer - Erin Goose. Friendly and positive tour experience - no issues identified***
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Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
15:45	17:15	1.50	CEM	Cementing	15:40hrs - pump 1m3 of CHAT gel at 150L/min. & 5.9MPa Pump 150L H2O spacer 150L/min & 6MPa 15:48hrs - pump 2m3 of SMS solution 150L/min. & 6.1MPa Pump a 150L water spacer & SD, pressure bled to 5.9MPa & holds there 16:18hrs - pump Charger SQ 250 aggressive lead cement at 150L/min. 6MPa x 4m3 with slow pressure decrease to 3MPa. Follow with 2.5m3 of control tail cement at 150L/min. 3.3MPa. Displace cement off surface / out of plumbing with 160L of fresh warm water. 17:10hrs - Shut down CNA pumper. Pressure holds at 2.17MPa  Cement blends as follows: 4m3 of Charger SQ200 (0:1:0 G) + 2% CaCl + 0.15% CHFL-1 + 0.05% CHFR-1 + 0.2% CHDF-P + 3% CHGC-2 @ 1900 kg/m3. Slurry temp= 45°C 2.5m3 of Charger SQ50 (0:1:0 G) + 0.5% CaCl2 + 0.15% CHFL-1 + 0.05% CHFR-1 + 0.2% CHDF-P + 2% CHGC-2 @ 1900 kg/m3 - Slurry temp= 42°C
17:15	17:45	0.50	WOC	Wait on cement	Wash up CNA with vac truck. WOC for 40min. as per program to give SMS as much time as possible to react.
17:45	18:15	0.50	CEM	Cementing	15:56hrs - start pumping at 40L/min. & 5.4MPa with pressure steadily rising, pumped 200L and had 7MPa. Drop rate to 15L/min. and squeeze away another 100L to 8.5MPa. Bump 3 times to 7.3MPa x 10min. flatline. Total cement below retainer= 5.2m3
18:15	18:45	0.50	MISC	Miscellaneous operations.	Pull to neutral leaving full squeeze pressure on the zone. Bled tubing down to 3MPa and rotate out of stinger. Forward circ. pumping 1m3 of fresh water to balance the remaining 1.3m3 of slurry in the wellbore. Pull & L/D 2jts of 73mm tubing, ran 10ft & 4ft pups to position T.E. at 516.76mKB. Back wash clean 2.5 tubing volumes with fresh water. Left a 15.15m (311L) cement cap on the retainer. Cement top= 516.76mKB
18:45	19:15	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Ensure all on lease are Fit For Duty, Review job scope and hazards for the day. Discuss current weather conditions(-22 w/wind chill), Discuss Over head loads, Crush points, Slips and Trips, Steam hazards. Review ERP procedures.
19:15	20:15	1.00	POOH_TB	POOH tubing	POOH with cementing BHA standing all tubing.
20:15	22:30	2.25	MISC	Miscellaneous operations.	Leave well static and monitor. Rig crew performing maintenance. Performed a Slip & Cut on drill line.
22:30	00:00	1.50	PERF	Perforate well - Wireline/TCP	Instructed from Calgary to perf next interval with Channel gun @ 512.0 - 513.0 mKB. Rig in wireline surface equipment and BOP's. Held a pre-arming safety meeting discussing safely arming the perforating guns. Switch the vent meter to perf mode @ 23:01 hrs, Arm and RIH with a 127.0 mm X 1.0 m ERHSC Channel perforating gun, 118 SPM, 6 gram Deep Penetrating charges c/w 120 degree phasing. Pick up the perforating gun and secured Lube Pressure test equipment with N2- Good. RIH and noticed fluid level at approx 37 mKb, RIH/Tag cement top PB @ 516.60mKB. Log and correlate with the RBL/CCL log performed by Boreal Wireline on Feb. 7th, 2019. Perforate Lower Cretaceous zone @ 512.0 - 513.0 mkb @ 22:38hrs. *****Vent meter back on flow @ 22:40 hrs. Monitored casing. No pressure or vacuum after perforating, POOH and lay down the gun. All shots fired on gun, Rig out wire liners.



# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 23 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	01:15	1.25	RIH_PL&PAC	Run in hole plug or packer	RIH 1- 0.13 m X 73.0 mm tubing collar, 1- 0.44 m X 177.8 mm x 73.0 mm MCCL, 1- 2.24 m X 177.8 mm x 73.0 mm Tryton TX8 DG packer, 1- 1.86 m X 73.0 mm L80 pump joint, 1 - 0.26 m - 73.0 mm R profile nipple c/w 57.15mm No-Go, 51- 73.0 mm tubing joints (491.95), 73.0 mm, 9.67kg/m, EUE L80 tubing, 1- 3.08 m X 73mm L80 pup jt, 1- 9.64 m X 1 joint of 73mm, 9.67kg/m, EUE L80 tubing - 1.38 m - tbg to wireline correction. - Locate casing collars @ 477.50, 489.10, 500.70, and 512.00 mkb to confirm depths.
01:15	02:45	1.50	RIGUP	Rig up	Steam & replace saver head rubbers. Install work valve & swab tree onto tubing. Prep to swab. Crew took lunch break.

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
02:45	06:30	3.75	SWAB	Swabbing (includes swab test)	RIH and begin to swab well. ****Checked Vent meter hose @ 03:18 hrs/Slight plug off/Hose cleared. - Pull from nipple top @ 506.01mKb. 1st swab - 1.26m3 recovered, Out of hole @ 03:26 2nd swab - 1.26m3 recovered, Out of hole @ 03:48 3rd swab - 1.26m3 recovered, Out of hole @ 04:04 4th swab - 1.05m3 recovered, Out of hole @ 04:22 5th swab - 0.21m3 recovered, Out of hole @ 04:39 - Changed out swab cups. 6th swab - 0.83m3 recovered, Out of hole @ 04:57 7th swab - 0.42m3 recovered, Out of hole @ 05:13 8th swab - 0.42m3 recovered, Out of hole @ 05:22 9th swab - 0.21m3 recovered, Out of hole @ 05:33 - Sheave at crown freezing up, took the time to de-ice sheave. - 6.89m3 recovered. - Lay out lube and change out rubbers.
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Hold a morning pre-job safety meeting with all workers discussing current operational status, plan forward for the day, working in cold weather and clear communication. Morning temp - -25°C w/ 32°C
07:00	09:15	2.25	SWAB	Swabbing (includes swab test)	Set the packer w/ C.E. at 509.17mKB & pack off elements. Leave in 2000daN tension ('R' nipple at 506mKB). Swab the tubing dry recovering 0.8m3 & pulled 2 dry swabs for confirmation. No signs of formation debris on cups or discolored water.
09:15	12:00	2.75	CHECKP RESSUR E	Check casing / tubing pressures	Set up to surge. 09:33hrs - fill tbg= 1.3m3, P/up to 4MPa holds, P/up 5MPa leaks off to 3.5MPa in 5min. Surge at 5MPa 10X's. P/up to 5.5MPa and bleeds to 4MPa in 5min. Surge 10X's at 5.5MPa. P/up to 6MPa, bleeds to 4MPa in 5min. Surge 30X's at 6MPa. P/up to  ***10:45 to 11:00hrs - removed & checked all hoses on VentMeter, small amount like 1 teaspoon of condensation fluid found in hose***
12:00	13:00	1.00	SWAB	Swabbing (includes swab test)	Swab the tubing dry, pulled 4 swabs recovering 1.3m3, last swab dry
13:00	16:00	3.00	MISC	Miscellaneous operations.	Removed VentMeter at ~13:15hrs to check hoses and monitor SCV with bubble tester, put VM ino squeeze mode & left unhooked. Warm up break for crew (-32°C winchill) 14:00hrs - Fill tubing to continue swab-surge ops. P/up to 6.5MPa & let bleed off to 5MPa (1min) then pressure up to 6.5MPa again trying to chase leak off, seeing little progress. Surge 30X's repeat.  15:00hrs - VentMeter tied back in & out of grey mode  15:20hrs - bleed off surge pressure. Swab the tubing dry to balance well for unsetting packer. Rig out swab equipment.
16:00	16:15	0.25	SETTOO L	Setting or unsetting packers	Unset the packer at 509.17mKB & let elements relax
16:15	17:15	1.00	POOH_T B	POOH tubing	POOH and stand 52jts of 73mm tubing in the derrick. Lay out the packer BHA. Rig up wireline adaptor flange & pressure control equipment.

17:15	17:30	0.25	SAFETY	Safety Meetings (Pre-job, daily)	Wireline pre-arming safety meeting with all onsite personnel
17:30	19:45	2.25	PERF	Perforate well - Wireline/TCP	Arm & pick up perf gun. P/T lubricator/wireline BOP's with N2. RIH w/ 101.6mm ERHSC loaded to 3m with 25g GH charges at 20spm & 60' phasing and tagged existing FL at 360m. 18:10hrs - perforate 512m to 515mKB. POOH and lay out spent carrier - ASA&F.  Arm & pick up 2nd perf gun. P/T lubricator/wireline BOP's with N2. RIH w/ 101.6mm ERHSC loaded to 3m with 20g GH charges at 17spm & 30' phasing and tagged existing FL at 320m. 18:55hrs - perforate 512m to 515mKB. POOH and lay out spent carrier - All shots fired.

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
19:45	21:00	1.25	RIH_PL&PAC	Run in hole plug or packer	RIH 1- 0.13 m X 73.0 mm tubing collar, 1- 0.44 m X 177.8 mm x 73.0 mm MCCL, 1- 2.24 m X 177.8 mm x 73.0 mm Tryton TX8 DG packer, 1- 1.86 m X 73.0 mm L80 pump joint, 1 - 0.26 m - 73.0 mm R profile nipple c/w 57.15mm No-Go, 51- 73.0 mm tubing joints (491.95), 73.0 mm, 9.67kg/m, EUE L80 tubing, 1- 3.08 m X 73mm L80 pup jt, 1- 9.64 m X 1 joint of 73mm, 9.67kg/m, EUE L80 tubing -1.38 m - tbg to wireline correction. - Locate casing collars @ 477.50, 489.10, 500.70, and 512.00 mkb to confirm depths. Packer C/E sitting @ 509.17mKb. - Not set. Prepare for acid job. Steam lines clear,
21:00	00:00	3.00	STIMUL	Acidize/fracture/inject surfactants	Fill hole and broke circulation to rig tank 8.50m3 fresh. - Pumped 1m3 CHEA(Synthetic acid). - Pumped 400l fresh water. - Set packer in 2000daN tension. - Crossed over to slow rate pumper. - 22:40 hrs - Pressure up to 7 mPa and hold. - 22:48 hrs pressure up to 9.2 mPa/10L pumped away, 90L water until acid to perfs. - 23:32 hrs - Slowly increase pressure, Break @ 12.3mPa, 1 l/min feed rate, pumped a total of 20l. - 23:34 hrs Feed rate 1l/min @ 12.2mPa for 5 litres. - 23:39 hrs increased rate to 2 l/min. - 23:41hrs increased rate to 3l/min @ 12.9mPa for 24L, 63 litres away total so far. - 23:49 hrs Increased rate to 4l/min @ 12.7mPa for 8L. - 23:51hrs increased rate to 5l/min @ 12.2mPa for 95L, ***Ventmeter on Squeeze @ 22:42 hrs.

# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 24 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	01:45	1.75	STIMUL	Acidize/fracture/inject surfactants	- 00:05 hrs increased rate to 7 l/min @ 11.3 mPa for 10L - 00:07 hrs Increased rate to 9 l/min @ 11.7 mPa for 30L - 00:09 hrs increased rate to 12l/min @ 12mpa for 30L - 00:10 increased rate 14 l/min, Feed rate of 7.2 mPa for 864L - 01:10 hrs Shut down slow rate. - ISIP 6.6 mPa. 01:13 shut in master valve. Wait on acid. Approx 960L squeezed into formation. - Rig out equipment and tarp/warm well.  ***00:45 hrs Ventmeter on build up. ***01:03 hrs Checked ventmeter hose - Good. No build up.
01:45	06:30	4.75	MISC	Miscellaneous operations.	Wait on acid to soak. Rig crew performing maintenance. ***Checked Ventmeter hose @ 04:42hrs.
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Hold a morning pre-job safety meeting with all workers reviewing the current operational status, plan forward, hazards, need for clear communication, safety footing and working in the cold. Morning temp= -21'C c/w -25'C windchill.
07:00	08:00	1.00	WOC	Wait on cement	Wait for an additional hour to allow Oil Safe AR acid to soak

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
08:00	10:30	2.50	SWAB	Swabbing (includes swab test)	<p>Tie in lines &amp; ready pump. Send prompt to VentMeter</p> <p>08:20hrs - VentMeter to flow mode</p> <p>08:24hrs - SITP= 0, pump &gt;100L pressure up to 7MPa no bleed off, P/up to 8MPa same, started feeding at 8.5MPa. Inject 2m3 of fresh clean water at stable rate of 110L/min. &amp; 7.5MPa.</p> <p>08:45hrs - Shut down monitor leak off, ISIP= 6.5MPa, 5min= 6MPa, 10min= 5.4MPa &amp; 15min= 5.4MPa</p> <p>09:05hrs - surge 20X's at 6MPa, P/up to 6MPa &amp; bleed back hard, died quickly</p> <p>**09:25hrs - remove vent meter &amp; install bubble tester= 1-2 bubbles per sec. steady**</p> <p>09:35hrs - pump fresh water down tubing, P/up to 9MPa and started feeding at 230L/min quickly increase to 330L/min. &amp; 9.5MPa. Injected 5m3 total with final pressure stable at 8.7MPa. Slight decrease in bubble size &amp; frequency while pumping, returned to normal once pump was stopped.</p> <p>09:51hrs - shut down, ISIP= 7MPa, 5min= 500kPa, 15min= 5.7MPa, bled off tubing, flowed back little bit then died quickly</p>
10:30	10:45	0.25	SETTOOL	Setting or unsetting packers	Unset packer & let elements relax.
10:45	11:45	1.00	POOH_TB	POOH tubing	POOH and stand 52jts of 73mm tubing. Lay out packer BHA
11:45	12:45	1.00	RIH_PL&PAC	Run in hole plug or packer	<p>RIH with the following:</p> <ul style="list-style-type: none"> <li>-1.38m - depth correction</li> <li>2.72m - KB diff</li> <li>9.64m - 1jt of 73mm, 9.67kg/m, EUE L80 tubing</li> <li>3.08m - 73mm 10ft L80 pup jnt</li> <li>3.09m - 73mm 10ft L80 pup jnt</li> <li>491.95m - 51jts of 73mm, 9.67kg/m, EUE L80 tubing</li> <li>0.82m - Mech. setting tool</li> <li>0.60m - Kappa 10K cement retainer for 177.8mm casing</li> </ul> <p>Mech. set retainer with C.E. at 509.45mKB &amp; pack off elements</p> <p>Note: held BOP drill while tripping went well - 46 seconds</p>
12:45	13:15	0.50	TESTPLUG	Test plug	Pressure test annulus / retainer to 7MPa x 15min= solid test.
13:15	18:30	5.25	SWAB	Swabbing (includes swab test)	<p>Rotate out of retainer, pull 1 jnt &amp; remove 10ft pup, re-run jnt, land T.E. at 506.36mKB. Rig up to &amp; swab the wellbore as dry as possible, pull confirmation swabs. Rig down swab equip. Filled slowrate with water &amp; prep'd cementers while swabbing.</p>
18:30	19:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Cross shift and night crew safety meeting reviewing current ops, plan forward, hazards etc
19:00	19:30	0.50	MISC	Miscellaneous operations.	<p>FL in wellbore swabbed down to 400mKB, last swab tstm didnt even blow out lines. Rig down swab lube &amp; tree. Pull 1 joint, re-install 10ft space out pup, RIH and sting into retainer. Rig up Charger cementers to the tubing.</p> <p>19:10hrs - closed in the valve on SCV to isolate the VentMeter</p>
19:30	19:45	0.25	SAFETY	Safety Meetings (Pre-job, daily)	Pre-cement job safety meeting
19:45	20:15	0.50	MISC	Miscellaneous operations.	Transfer fresh potable water to CNA (24°C). P/T CNA pumper & tubing to 16Mpa. Mix up CHAT gel and SMS solution.
20:15	21:00	0.75	CEM	Cementing	<p>20:20hrs - fill tubing with fresh water (1.1m3) and ensure feedrate= 150L/min. at 8MPa. Pumped 1m3 of CHAT gel at 150L/min. &amp; 8MPa</p> <p>Pumped 2m3 of 3% SMS solution c/w 1% CaCl2 at 150L/min. &amp; 7.7MPa</p> <p>Clean up CNA tanks. Start mixing 0:1:0 G cement slurry</p>
21:00	22:15	1.25	CEM	Cementing	<p>Pump 4m3 of Charger SQ250 cement at 7.3MPa &amp; 150L/min, initially with slow pressure decrease to 4.5MPa with all 4m 3 away. Switch to Charger SQ50 at 100L/min. &amp; 4.5MPa pumped 2.5m3. Displace off surface with 150L of water to clear plumbing. Drop rate to 40L/min. at 4.4MPa and pumped 500L, pressure at 6.2MPa.</p> <p>Cement blends as follows:</p> <p>4m3 of Charger SQ250 (0:1:0 G) + 2.5% CaCl + 0.15% CHFL-1 + 0.05% CHFR-1 + 0.2% CHDF-P + 3% CHGC-2 @ 1900 kg/m3. Slurry temp= 36°C</p> <p>2.5m3 of Charger SQ50 (0:1:0 G) + 0.5% CaCl2 + 0.15% CHFL-1 + 0.05% CHFR-1 + 0.2% CHDF-P + 3% CHGC-2 @ 1900 kg/m3 - Slurry temp= 38°C</p>

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
22:15	00:00	1.75	CEM	Cementing	<p>20:10hrs - switch to slow rate pumper at 15L/min. &amp; 6MPa squeezed 300L with pressure at 9.7MPa at the end. Drop rate to 10L/min. pumped 200L from 9.3MPa up to 12.9MPa. Drop rate to 5L/min. squeezed 25L from 11.1MPa to 14.5MPa. Bump to try and obtain 14MPa flatline. Observed the same ~600kPa loss in 10min. on 6 bumps, not even. Bump up to 14.1MPa and monitor for couple mins then close in master valve &amp; valve on SRP pumper line at tubing (23:54hrs) and observed a increased leak off with those valves shut in which indicates the slow rate pumper has a slow leak &amp; we have had a flatline for quite a while.</p> <p>Pull to neutral with 14MPa squeeze pressure on retainer. Pull neutral &amp; B/D tubing to 7MPa. Rotate out of retainer with 7MPa on tubing - did not loose any pressure when we stung out at midnight.</p> <p>Total cement below retainer= 6m3</p>

# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 25 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	00:30	0.50	CMTRE M	Remedial cementing	Attempt to forward circ. out cement form tubing - holds 21MPa solid x 10min. Rig down circ. equipment. Prepare to POOH.
00:30	02:00	1.50	POOH_T B	POOH tubing	POOH/Mud can out cementing string. Lay out 19 cemented joints. Shut in well with a BOP drill.
02:00	06:30	4.50	WOC	Wait on cement	Wait on cement to cure. Rig crew performing maintenance.
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review hazards and job scope for the day working in warming up weather, making roads slippery, Tripping pipe, overhead loads, use of steam, high pressure lines, man down drill today, slips and trips and overhead loads.
07:00	08:00	1.00	MISC	Miscellaneous operations.	Maintenance of rig and support equipment while we let cement cure until 11AM.
08:00	08:30	0.50	MISC	Miscellaneous operations.	Disconnect Vent meter and put a gauge in the SCV, Pressure is at 180KP and holding steady there.
08:30	09:00	0.50	HAZASS MENT	Hazard Assessment.	Hold a man down BOP drill, one person did not hear the horn, so we did full pack up and search for missing man, great drill good practice.
09:00	11:00	2.00	MISC	Miscellaneous operations.	Continue to maintenance on lease and fuel up all equipment.
11:00	11:30	0.50	MISC	Miscellaneous operations.	Bleed off the 180KPA on SCV to rig tank, leave open for 5min, install bubble tester, and we are at a bubble pre sec, that is not to much for the vent meter to Handel, and it is making no fluid, hook SCV to vent meter, and see if bubbles die off.
11:30	14:30	3.00	MISC	Miscellaneous operations.	SCVF is slowly dropping off and has not leveled out yet.

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
14:30	15:30	1.00	MISC	Miscellaneous operations.	Fill the hole with fresh potable town water @ 33deg C, Started pumping @ 14:30 Finished @ 15:15, fill the hole slow as we could pump. Need to wait 12 hours now before we can log, and see if noise is coming from above the shoe.
15:30	18:30	3.00	MISC	Miscellaneous operations.	Set up to log well, install flange, get ready to log the well.
18:30	19:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Ensure all on lease are Fit For Duty, Review job scope and hazards for the day. Discuss Over head loads, Crush points, Slips and Trips, Steam hazards.
19:00	00:00	5.00	MISC	Miscellaneous operations.	Well static for next wire line procedure for a total of 12 hrs. Rig crew performing maintenance.

# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 26 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	01:30	1.50	MISC	Miscellaneous operations.	Well static for next wire line procedure. Rig crew performing maintenance. Changing out oils/filters on lease equipment.
01:30	02:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Perform Pre-Job safety meeting involving procedures to perform log. Discuss equipment that needs to be shut down during log, pick up and lay down of tool string. Overhead hazards, Crush points, Slips & Trips.
02:00	06:30	4.50	WIRELIN E	Other wireline related work ( excluding log, swab,	Prepare tool, Pick up and RIH, Perform a HiFi Micro Sonic Noise Depth log. Start from surface and log down to 509.0 mKb with Gamma/Temp tool. Log up making 10 - 1m stops off bottom then +/- 5m stops to surface with sonar tool. Log correlated to Boreal GR -CCL-RCBL-VDL Radial cement bond log dated Feb 7/19. At surface with tool, Lay out tool string and remove flange. Wait on orders.
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review hazards and job scope for the day, we are waiting on orders, its a nice day shut down equipment we don't need, clean up around lease, clean up any spills, get lease organized for rig move.
07:00	18:30	11.50	WOO	Wait on orders	-Rig maintenance, look at next lease, organize some work on getting next lease ready to move rig to. -@ 8:15 pull off SCVF hose and do a bubble test we get 90bubbles/min. Hook vent hose back up.
18:30	19:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Ensure all on lease are Fit For Duty. Review hazards and job scope for the day, Waiting on orders, Continue to clean up around lease, Continue to get lease organized for rig move. Discuss warmer weather conditions causing roads and lease with slippery conditions.
19:00	22:00	3.00	WOO	Wait on orders	Waiting on orders. Crew performing maintenance.

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
22:00	00:00	2.00	RIH_PL& PAC	Run in hole plug or packer	Received approval and program to continue forward with operations. Prepare to RIH with tubing. Pick up off catwalk & drift all tubing. RIH with the following: 0.13m - 73mm Saw tooth tubing collar, 51jts of 73mm, 9.67kg/m, EUE L80 tubing 492.30m, 3.08m - 73mm L80 pump joint, 3.09m - 73mm L80 pump joint, 1jt of 73mm, 9.67kg/m, EUE L80 tubing 9.66m. kb diff - 2.72m, Correction -1.38m. Tag retainer top @ 509mKb, Pick up 0.50m, Prepare to rig in cementers, Prepare and warm pumping lines. Wait on cementers to arrive.

# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 27 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	00:30	0.50	MISC	Miscellaneous operations.	Cementers preparing equipment.
00:30	00:45	0.25	SAFETY	Safety Meetings (Pre-job, daily)	Perform Pre-Job Safety Meeting. Discuss cementing procedures and hazards.
00:45	01:45	1.00	CEM	Cementing	12:47hrs - fill hole with warm fresh water - took 300L to fill. Break circ. to ng tank 10:20hrs - Batch mix up 500L of 0:1:0 G cement slurry and circulate down the tubing at 280L/min. displacing with 1.4m3 fresh water to balance the cement plug, held 2MPa while circ. POOH and circulate 3.0m3 to clean up tubing. Cement top @ 493mKb. 16m cap on retainer. Cement blend: 0.15% CHFL-1 + 0.05% CHFR-1 + 0.2% CHDF-P + 2% CHGC-2 @ 1900 kg/m3 - Slurry temp = 18°C
01:45	02:30	0.75	POOH_TB	POOH tubing	POOH with tubing laying out 10 joints and stand 42 joints.
02:30	03:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Perform Pre-Job Safety Meeting. Discuss cementing procedures and hazards.

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
03:00	04:15	1.25	PERF	Perforate well - Wireline/TCP	Rig in wireline surface equipment and BOP's. Held a pre-arming safety meeting discussing safely arming the perforating guns. Switch the vent meter to perf mode @ 02:40 hrs, Arm and RIH with a 101.0 mm X 3.0 m ERHSC perforating gun, 20 SPM, 25 gram Good Hole charges c/w 60 degree phasing. Pick up the perforating gun and secured Lube Pressure test equipment with N2- Good. RIH and noticed fluid level at approx 32mKb, RIH. Log and correlate with the RBL/CCL log performed by Boreal Wireline on Feb. 7th, 2019. Perforate cretaceous zone @ 417.0 - 420.0 mkb @ 03:02 hrs. Monitored casing. No pressure or vacuum after perforating, POOH and lay down the gun. All shots fired on gun, Rig out wire liners. *****Vent meter off @ 03:11 hrs.
04:15	05:30	1.25	MISC	Miscellaneous operations.	Prepare pump and lines, Fill hole w/0.70m3, Slowly stage pressure up in 2 min increments to 7mPa. 7 - 6mPa bleed off in 3 min. Repeat process. 7mPa seen break, Attempt to circulate. Pumped 2.0m3, No Returns, Pumping @ 7mpa - 320 l/min. with no returns, Pumped a total of 7m3. Communicated with Calgary
05:30	06:30	1.00	RIH_PL&PAC	Run in hole plug or packer	RIH - 0.13m - 73mm tubing collar. - 0.44m - 177.8mm x 73mm MCCL, - 2.26m - 177.8mm Tryton TX8 DG casing packer RHS/RHR, - 1.86m - 73mm L80 6ft pup jnt, - 0.26m - 73mm 'R' profile nipple, L80, c/w 57.15mm ID - 395.66m - 41jts of 73mm, 9.67kg/m, EUE L80 tubing, - 3.08m - 73mm L80 10ft pup jnt, - 1.24m - 73mm L80 4ft pup jnt, - 9.67m - 1jnt of 73mm, 9.67kg/m, EUE L80 tubing KB diff - 2.72 Correction -1.38 - Packer not set - C/E sitting @ 414.15mKb. - R Nipple top @ 410.99mKb
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review Hazards and job scope for the day, tripping pipe, swabbing, high pressure lines, slips and trips, overhead loads, watch footing, have great communication.
07:00	09:00	2.00	SWAB	Swabbing (includes swab test)	Rig in Swab gear. Run in with a fluid swab cup, and we can only get down to 308mkb. Run a sand cup same problem cement in sand cup. Run 1/2 a fluid cup same problem. NOTE vent meter pulled off to do bubble test 8:10 to 8:30. 60 bubbles/min, steady flow no pauses.
09:00	10:00	1.00	POOH_TB	POOH tubing	Trip tubing out of the hole.
10:00	11:30	1.50	RIH_TB	Run in hole tubing	Drift back in the hole with the following: -Profile -3m pup -50 joints. Intake is at 488mkb, cement top @ 494mkb. Note joint # 32 had cement in it, took out of Talley.
11:30	15:00	3.50	SWAB	Swabbing (includes swab test)	Rig in Swab gear, ready to swab. we all ready have 2.6m3 out from trying to get past 308mkb. 12:00 pull 1st swab, made it all the way down to 488mkb no problem tag the Profile. Out of a possible 8m3 ( if we got all fluid out to top shot), we got out 7.2m3, rig out swab gear.
15:00	15:45	0.75	POOH_TB	POOH tubing	Pull slick string out of the hole.
15:45	16:30	0.75	RIH_PL&PAC	Run in hole plug or packer	Run in the hole with Profile, MCL, 10' Pup, Packer, 10' Pup, 41 Joints, 6' Pup, Joint.
16:30	17:00	0.50	MISC	Miscellaneous operations.	-Disconnect SCV meter @ 16:15, build a T system off SCV. -Set packer @ 414mkb, Intake @ 417mkb. Leave in 2 dec tension.
17:00	18:30	1.50	MISC	Miscellaneous operations.	-Pump into the 417-420mkb perf @ 220L/min at 7mpa, Bubble rate is 60 bubbles per min, after 5m3 pumped we seen the bubble rate drop to 36 bubbles per min and held there for 3min, then climbed back to 60 bubbles per min. -Continue to pump @ 220L/min 8.2m3 pumped away now still 60 bubbles per min. 10.5m3 pumped away 54 bubbles/min. -Increase rate to 280L/min @ 7.5mpa 60 bubbles/min. 13m3 pumped. -Increase rate to 300L/min @ 8mpa, still 60 bubbles per min. 15m3 pumped away. -Slow rate to 160L min and we are at 7mpa, 60 bubbles per min 20m3 pumped away.



Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
18:30	19:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review hazards and job scope for the day working in warming up weather, making roads slippery, Tripping pipe, overhead loads, use of steam, high pressure lines, slips and trips and overhead loads. Security Team on lease to do a inspection with dog. Perform On lease search. No issues during search.
19:00	20:30	1.50	MISC	Miscellaneous operations.	-Continue to Pump into the 417-420mkb perms. Pick up rate to 520L/min at 9mPa for 10m3. Bubble test consistant @ 60bpm. Pumped a total of 35m3. Stop pump and flow back well. ****Ventmeter back on @ 20:35hrs.
20:30	21:30	1.00	POOH_P L&PAC	POOH plug or packer	Prepare to un-set packer. Unset packer and POOH standing all tubing. ****Performed a BOP drill while tripping out - Good drill.
21:30	23:00	1.50	PERF	Perforate well - Wireline/TCP	Instructed from Calgary to perf interval with Channel gun @ 417.0 - 418.0 mKB. Rig in wireline surface equipment and BOP's. Held a pre-arming safety meeting discussing safely arming the perforating guns. Switch the vent meter to perf mode @ 22:24 hrs, Arm and RIH with a 127.0 mm X 1.0 m ERHSC Channel(Uzi) perforating gun, 118 SPM, 6 gram Deep Penetrating charges c/w 120 degree phasing. Pick up the perforating gun and secured Lube Pressure test equipment with N2- Good. RIH and noticed fluid level at approx 176 mKb, Log and correlate with the RBL/CCL log performed by Boreal Wireline on Feb. 7th, 2019. Perforate @ 417.0 - 418.0 mkb @ 22:50hrs. *****Vent meter back on flow @ 22:51 hrs. Monitored casing. No pressure or vacuum after perforating, POOH and lay down the gun. All shots fired on gun, Rig out wire liners.
23:00	00:00	1.00	RIH_TB	Run in hole tubing	RIH w/ - 0.13m - 73mm Saw tooth collar. - 0.26m - 73mm 'R' profile nipple, L80, c/w 57.15mm ID - 405.32m - 42jts of 73mm, 9.67kg/m, EUE L80 tubing, - 3.08m - 73mm L80 10ft pup jnt, - 1.86m - 73mm L80 6ft pup jnt, - 9.66m - 1jnt of 73mm, 9.67kg/m, EUE L80 tubin KB diff - 2.72 Correction -1.38 Leave 0.65m stick up, Bottom of tubing landed @ 421mKB - 1m past perms.
00:00	00:00		STIMUL	Acidize/fracture/inject surfactants	Fill hole and broke circulation to ng tank 8.50m3 fresh. - Pumped 1m3 CHEA(Synthetic acid). - Pumped 400l fresh water. - Crossed over to slow rate pumper. - 22:40 hrs - Pressure up to 7 mPa and hold. - 22:48 hrs pressure up to 9.2 mPa/10L pumped away, 90L water until acid to perms. - 23:32 hrs - Slowly increase pressure, Break @ 12.3mPa, 1 l/min feed rate, pumped a total of 20l. - 23:34 hrs Feed rate 1l/min @ 12.2mPa for 5 litres. - 23:39 hrs increased rate to 2 l/min. - 23:41hrs increased rate to 3l/min @ 12.9mPa for 24L, 63 litres away total so far. - 23:49 hrs Increased rate to 4l/min @ 12.7mPa for 8L. - 23:51hrs increased rate to 5l/min @ 12.2mPa for 95L, ***Ventmeter on Squeeze @ 22:42 hrs.

# HUSKY LITTLE BEAR H-64 Daily Report

UWI: 300H646500126001

Report Period: February 28 2019

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	06:30	6.50	STIMUL	Acidize/fracture/inject surfactants	<p>Perform Tail-Gate Safety Meeting prior to Operations, Discuss Hazards and job scope. Pressure test pumping line to 7mPa/2min - Good. Fill hole and broke circulation to rig tank w/3.00m3 fresh. Pumped 1m3 CHEA(Synthetic acid) while holding 2mPa back pressure, Displaced acid to bottom of tubing with 300L fresh. Rig out Acid pumpers, Tie into tubing.</p> <p>00:45hrs - Squeeze 100L acid. 2.5mPa @ approx 90L/min. 5 min to bleed off to 0kPa.</p> <p>****01:35hrs - Checked Ventmeter hose. All clear.</p> <p>01:45: Squeeze 70L acid. 1.5mPa @ approx 90L/min. into perfs. Wash 30L Acid over perfs. Instantly bleed to 0kPa</p> <p>02:45: Squeeze 70L acid. 500kPa @ approx 90L/min. into perfs. Wash 30L Acid over perfs. Instantly bled off to 0kPa</p> <p>03:45: Squeeze 70L acid. 500kPa @ approx 90L/min. into perfs. Wash 30L Acid over perfs. Instantly bleed off to 0kPa</p> <p>04:45: Squeeze 70L acid. 500kPa @ approx 90L/min. into perfs. Wash 30L Acid over perfs. Instantly bleeds off to 0kPa.</p> <p>05:14hrs: Checked Ventmeter hose - All clear, Performed Bubble test. 25bpm</p> <p>05:45: Squeeze 70L acid. 500kPa @ approx 90L/min. into perfs. Wash 30L Acid over perfs. Instantly bleeds off to 0kPa.</p> <p>06:30: Squeeze 70L acid. 500kPa @ approx 90L/min. into perfs. Wash 30L Acid over perfs. bleed off to 0kPa</p>

Time Log					
Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review hazards and job scope, cold day high pressure lines, pumping, tripping pipe, setting down hole tools, cementing.
07:00	11:00	4.00	MISC	Miscellaneous operations.	7:30 Disconnect SCVF meter we have 36 bubbles/min, there is a slick string in hole, well bore is full of fluid. 1) 7:30 Kick in the pump and pump down tubing into 417-420mkb perms @ 150L/min @ 6.5mpa, pumped a total of 5m3, soon as we started pumping bubble rate dropped to 4 bubbles/min, bubbles look like depletion bubbles they can barely make it out of the cup. 2) 8:00 Kick out the pump pressure is at 7mpa, bubbles still at a week 4 per min. 3) 8:30 Well is still shut in and we are down to 5200kpa, bubbles are dead. 4) 8:45 Well still shut in Pressure is at 4400kpa, starting to see the odd weak bubble again. 5) 9:00 Vent meter is in squeeze mode, but we have it disconnected, pressure is at 4100kpa, bleed off tubing and let it flow to the rig tank until 10:00 and we made back 400L, and we are at 11 bubbles/min. 6) 10:45 Vent meter is hooked back up, and in flow mode, Pump 5m3 into 417-420mkb perms @ 210L/min @ 7mpa. 7) 11:10 Kick pump out at 7mpa, leave well shut in and in 10 min we lost 600kpa, 11:20 open to the rig tank, 11:30 well is dead flowed back 1.2m3. SCVF is staying dead.
11:00	12:00	1.00	POOH_TB	POOH tubing	Pull slick string out of the hole.
12:00	13:00	1.00	RIH_PL&PAC	Run in hole plug or packer	Warm up retainer and run in the hole with, Retainer, 41 Joints, 10'Pup, 10'Pup, 1 Joint,
13:00	13:30	0.50	TESTPLUG	Test plug	Casing collar @ 409.3mkb Top shot @ 417mkb. Set top of the Retainer @ 413mkb. Test Retainer to 7mpa for 10min test is good, test closed position to 10mpa test good.
13:30	14:30	1.00	MISC	Miscellaneous operations.	13:45 kick in the pump and pump 10m3 into 417-420mkb perms @ 190L/min @ 7mpa, seen an influx in SCVF when start pumping, then died off again.
14:30	15:00	0.50	MISC	Miscellaneous operations.	Hold safety meeting with cement crew and all cementing services, review hazards and job scope for the job.
15:00	18:30	3.50	CMTREM	Remedial cementing	Rig in Charger cementing, pressure test surface lines to 14mpa, ready to pump. 1) Pump 1m3 of CHAT 210L/min @7mpa. 2) Pump 2m3 of CHMS at 210L/min @ 7mpa. 3) Pump 4m3 of SQ 250 @ 120L/min pressure dropped to 4.2mpa by the time cement was off the truck, we were at 6mpa. 4) Pump 2m3 of SQ 100 @ 110L/min, pressure is now at 7mpa. 5) Switch to slow rate pumper, kick in at 4L/min and over the course of 1 hour 30min pressure climbed to 15mpa, seen 4 monster breaks but pressure climbed right back up after breaks, ended up with a 14 mpa flat line. Rig out Charger.
18:30	19:15	0.75	CIRC	Circulate well clean	Pull 1 joint and two 10' pups, backwash 500L slurry out of the hole, leaving cement top @ 397.2mkb. Circulate the well over to fresh clean potable water.
19:15	19:45	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Ensure all on lease are Fit For Duty. Review hazards and job scope for the day. Perform lease Hazard assessment - Day crew cementing and must continue. Stay out of working areas until operations have completed. Discuss cold weather working conditions, slips & trips, working with steam. Medic giving methods and examples to help not pass colds or flu around to others.
19:45	20:15	0.50	POOH_TB	POOH tubing	POOH and lay out 41 joints. Fluid level left @ approx 22mKb.
20:15	00:00	3.75	RIGDOWN	Rig down	Rig out tongs and pipe tripping equipment, Remove all pre-fab hand rails & stairs, Secure rig floor in up position, Remove and secure BOP's, Cool down and rig out spare boiler, Rig out accumulator and hoses. Break apart and put away all chicks/Line pipe pups. Prepare rig to rig out.