Husky Oil Operations Limited

Husky Slater River Project

Abandonment

End of Well Operations Report

for Husky Little Bear N-09

April 2019

ABSTRACT

This End of Well Operations Report covers abandonment operations of the Husky Little Bear N-09 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 N-09 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 is 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 N-09 is as follows:

Little Bear N-09	Northing	Easting
NAD83 UTM Zone 9	7,208,745.95	616,810.09
NAD27 UTM Zone 9	7,208,547.76	616,900.43

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 in June 2016 and was present during all inspections thereafter. Testing completed in June 2016 reported a flow rate of approximately 0.35 m^3/day. June 2018 testing showed a stabilized flow rate of 0.09 m^3/day. 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

A VentMeter was installed in January 2019. Once operations on H-64 had concluded, equipment was moved to N-09 and set up. After rigging up, pressure tests were completed on the BOP and Streamflo removed the backpressure valve (BPV). The tubing was disconnected from the packer using the on/off and circulated over to fresh water. It was discovered that the wellhead seals were leaking after the SCVF meter became filled with water while attempting to circulate. The tubing was pulled out of hole and the wellhead seals were pressure tested (unable to get a good test). At this point, the SCVF had stopped completely and a 10 minute bubble test was conducted with no bubbles.

A cement bond log was conducted from the packer to surface, and the on/off tool was RIH to latch onto the packer. The packer and remaining downhole equipment were then pulled out of hole and laid down. A gauge ring was run in hole without issue, and a 10K permanent bridge plug was set at 1781 mKB. By this point, seven 10-minute bubble tests had been conducted with zero bubbles observed in each. The decision was made to perforate the well in two areas of porosity and place a balanced cement plug to achieve zonal isolation. Perforations were placed from 1,050 – 1,053 mKB and from 955 – 958 mKB. Open-ended tubing was run in hole and tagged the bridge plug at 1781 mKB. A cement cap was circulated on top of the bridge plug, followed by a balanced plug across both sets of new perforations. The wellbore was pressured up to 1 MPa, pushing 600 L of cement behind the casing. The cement top was tagged at 891.5 mKB

and an attempt was made to pressure test to 7 MPa from surface with no success as the wellhead seals would not hold. A packer was run just inside the casing and was used to conduct a successful 7 MPa 10-minute pressure test. Another bubble test was conducted and no bubbles were observed, and rigging out commenced.

On March 6th, it was observed on the VentMeter that the vent flow had returned. Equipment which had already been rigged out was set back up and a noise/temperature log was conducted from cement top to surface. The cement plug was then drilled out to 971 mKB.

Wireline was used to place perforations from 945.0 – 948.0 mKB. No feedrate could be established initially, so synthetic acid was used to soak the perforations. Another 1 meter perforating gun was fired from 945.0 – 946.0 mKB and the well was swabbed/surged to establish a feedrate. A cement retainer was set at 943 mKB and 6.5 m^3 of cement was squeezed into the formation. During these operations and over the next two days, bubble tests were completed from time to time and zero bubbles were observed. Equipment was rigged out and put on trucks to be sent south. On the morning of February 13th (2.5 days after the cement squeeze was completed), the SCVF slowly began to come back once again. At this point due to impending road shutdowns, truck availability and exceptionally warm forecasted temperatures, no further work could be conducted and the decision was made to monitor the SCVF going forward to determine whether the flow was coming from a downhole source or was just uphole gas storage bleeding off.

1.2 Well Summary Data

Well Name	Husky Little Bear N-09
Well ID	2076
UWI	300N096500126301
Operating Licence No.	NWT-OL-2014-006
Operation Authorization No.	OA-2018-003
Well Type	Vertical
H_2S (%)	0.00
TD (m)	1,868.0
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
Lithology	Shale

1.3 Perforations

Top (mKB)	Bottom (mKB)	Date	Status
1,788	1,792	Feb 1st 2013	Abandoned (PBP/cement)
1,050	1,053	Mar 4th 2019	Abandoned (Cement plug)
955	958	Mar 4th 2019	Abandoned (Cement plug)
945	948	Mar 8th 2019	Abandoned (Retainer squeeze)

1.4 Problems Encountered/Incidents

The following issues/incidents occurred during abandonment operations at N-09:

- Incident: Pipe hydraulically lifted from wellbore: On March 5th, the pump lines were set up to circulate the wellbore over to fresh water, and when pumping was started, no returns were observed at the rig tank. Investigation revealed that the casing valve had not been opened, preventing the fluid from circulating up the annulus. This led to the tubing string being lifted from the hole as more water was pumped into the well. The next tubing connection caught on the pipe rams, preventing further lifting. The pump was shut down and operations were halted until a go-forward plan was developed. This resulted in the damaged tubing joint being cut off by hand and removed from the string. The pipe rams were inspected and the rubbers were replaced as a precaution. At this point, normal operations resumed, and the well was circulated to fresh water as intended.

2.0 Description of Completion Fluid Properties

Kill Fluid

Fresh water was used as kill fluid for all operations.

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 Status of Surface Casing Vent Flow

As noted in the operations summary, the SCVF began flowing once again while rigging out after squeezing the perforations from 945.0 – 948.0 mKB. The decision was made to set up the surface casing vent meter for continued monitoring during the spring to determine whether the SCVF is coming from a sustained downhole source. Husky has experience remediating wells in Alberta which can take several weeks or even months to fully bleed off all stored gas after a successful operation, especially if there are porous intervals uphole and in cases of low flow rates. If the SCVF is coming from a storage zone as the vent flow depletes to no flow, the well may be cut and capped in the summer season.

4.0 Downhole Schematic

Husky Energy — **Downhole Schematic (Detailed)**

Well Name: HUSKY LITTLE BEAR N-9

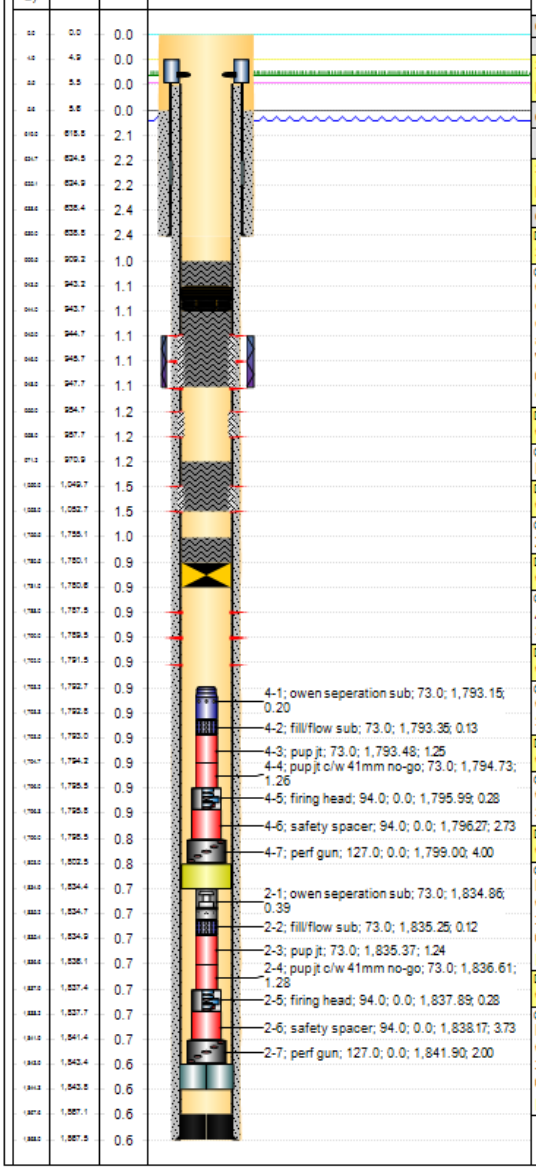
Licensed UWI	Surface Legal Location	Field Name	License #	State/Province	Well Configuration Type	Business Unit
300N9650012630	300N96500126300	SLATER RIVER	463	N.W.T.	VERT	Canada Frontier - Exploration

Sour Class	ERP Req ...	Cut/Fill (m)	Ground Elv. (m)	KB Elevation (m)	KB to Gnd (m)	CF Elev (m)	KB-CF (m)	TD All (TVD) (mKB)	PBTD (All) (mKB)
Sweet	No	0.52	253.52	258.80	5.28	253.33	5.47	Original Hole -	

BGWP Elevation (m asl) (m)	Well Status	Well Status Date
	Abandoned	3/14/2019

Directions To Well
From Norman Wells, Take the winter road south for approx 34.4km. Turn right and go through the security. Continue on the Husky Winter Rd to the location and km 22, RADIO CONTROLLED.

VERT, Original Hole, 300N96500126300, 3/27/2019 8:10:04 AM



General Notes

<Date?>

Comment

Open Hole Wellbore Section

Section Des	Size (mm)	Act Top (mKB)	Act Btm (mKB)
Surface	311.0	0.00	639.00
Production	222.0	639.00	1,868.00

Casing Strings

Csg Des	OD (mm)	Wt/Len (kg/m)	Grade	Top Thread	Set Depth (mKB)
Surface	244.5	53.574	J-55	8 rd LT & C	639.00
Production	177.8	34.228	L-80		1,868.00

Cementing Details

Description	Top Depth (mKB)	Bottom Depth (mKB)	Vol Cement Ret (m³)
Surface Casing Cement	5.60	639.00	10.00

Comment
Cement csg with, Pumped Preflush 4m3 water, Mix & pump 47 tonnes (43.1m3 slurry @ 130% excess) RFC cement + 2.0% CaC12 + 0.2% Anti Foam (6 sxs of Fed Seal) @ 1740kg/m3. Lost returns while pumping cement, slow pump rate to 0.50m3 rate and after approximently 4-5m3 got returns back, drop plug, Displace w/26m3 of water, When cement came to surface had 19m3 left to pump and lost returns, slow rate to 0.50m3 got returns 10m3 left of good returns to surface, pumped 0.50m3 over displacement and did not pump plug, at this time stopped pumping.

Description	Top Depth (mKB)	Bottom Depth (mKB)	Vol Cement Ret (m³)
Cement Production casing	5.50	1,868.00	1.00

Comment
Plug back Float collar 1843m Calc

Description	Top Depth (mKB)	Bottom Depth (mKB)	Vol Cement Ret (m³)
Cement Plug	1,755.50	1,780.50	

Comment
25m cap on bridge plug top @ 1780.50

Description	Top Depth (mKB)	Bottom Depth (mKB)	Vol Cement Ret (m³)
Cement Squeeze	971.20	1,053.00	0.20

Comment
Approx 600l squeezed into perfs, Cement top @ approx 893mKb. March 8/19 due to SCV leak drilled out cement down to 971.20mKb

Description	Top Depth (mKB)	Bottom Depth (mKB)	Vol Cement Ret (m³)
Cement Squeeze	955.00	958.00	

Comment
CHFL-1@0.25%, CHFR-1@0.05%, CHDF-P@0.2%, CHGC-2@2%, CHRT@0.25% Squeezed approx 600L into perfs

Description	Top Depth (mKB)	Bottom Depth (mKB)	Vol Cement Ret (m³)
Cement Squeeze	1,050.00	1,053.00	

Comment
CHFL-1@0.25%, CHFR-1@0.05%, CHDF-P@0.2%, CHGC-2@2%, CHRT@0.25% Squeezed approx 600L into perfs

Description	Top Depth (mKB)	Bottom Depth (mKB)	Vol Cement Ret (m³)
Cement Plug	944.00	948.00	

Comment
Pumped 4m3 Charger SQ150 1900 Kg/m3 Class G cement + 2% CHGC-2 + 1.5% CaCIL + 0.15% CHFL-1 + 0.05% CHFR-1 + 0.2% CHDF-P + 2% CHGC-2 followed by 3m3 Charger SQ 1900 Kg/m3 Class G cement + 0.05% CHFR-1 + 2% CHGC-2 + 0.15% CHFL-1 + 0.1% CHFR-1 + 0.2% CHDF-P + 2% CHGC-2. 6.5 m3 total cement pumped below the retainer and into formation. Obtained a 14 mpa flatline.

Description	Top Depth (mKB)	Bottom Depth (mKB)	Vol Cement Ret (m³)
Cement Squeeze	945.00	948.00	

Comment
Pumped 4m3 Charger SQ150 1900 Kg/m3 Class G cement + 2% CHGC-2 + 1.5% CaCIL + 0.15% CHFL-1 + 0.05% CHFR-1 + 0.2% CHDF-P + 2% CHGC-2 followed by 3m3 Charger SQ 1900 Kg/m3 Class G cement + 0.05% CHFR-1 + 2% CHGC-2 + 0.15% CHFL-1 + 0.1% CHFR-1 + 0.2% CHDF-P + 2% CHGC-2. 6.5 m3 total cement pumped below the retainer and into formation. Obtained a 14 mpa flatline.

Attachments

4.1 Completion Daily Reports

HUSKY LITTLE BEAR N-09 Daily Report

UWI: 300N9650012630

Report Period: Mar 01 2019

Time Log

Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	02:30	2.50	RIGDOWN	Rig down	Transfer fluid out of rig tank, Winterize pump and lines, Rig out pump & Tank, Clean out solids in rig tank with vac.
02:30	06:30	4.00	RIGDOWN	Rig down	Remove tubing board pre-fabs, Bleed rams, Lower mast, Prepare rig for transport. Continue to rig out all on lease equipment and prepare for rig move.
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review hazards and job scope for the day, rig move lots of hazards, pinch points snag points, slips and trips, backing up trucks, use of spotters, lots of different services working together.
07:00	18:30	11.50	MORU	Move on rig unit	Move and spot equipment from H64- to N09. Matt's spotted with Geo tech under them. All equipment on mats.
18:30	19:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Ensure all crew members are Fit For Duty. Review Hazards and Job Scope for the day, Review IRP 12 Hand signals and ensure spotters are free of crush points, visible at all times and use good communication/Driver can't see you/Driver doesn't move! Slippery lease, Discuss Slips & Trips, Boot Traction aids, Discuss multipal services rigging in equipment - Communication is key, Work as a team. Utilize our STOP, THINK, GO tool. Cold windy weather conditions - Use the buddy system/if your cold, WARM UP!/Safety First!
19:00	00:00	5.00	RIGUP	Rig up	Spot rig on matting, Perform Derrick inspection & break linkage inspection, Prepare to stand rig, Stand and secure mast into position. Visually inspect derrick locking mechanism, Function test crown saver. Utilize loader and spot rig tank and 1st pump into position. Rig in accumulator. Spot flare stack into position and raise/secure into position.

HUSKY LITTLE BEAR N-09 Daily Report

UWI: 300N9650012630

Report Period: Mar 02 2019

Time Log

Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	06:30	6.50	RIGUP	Rig up	Rig in all P. tank equipment. Rig in pump and tank lines, Rig in main boiler lines, Rig in power and ground cables, Bond all equipment, Spot Artic heater, Install winter Pre-fab and wind blockers at tubing board, rig floor, front of rig for swabbing. Tarp in and start and heating BOP and well head.
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review Hazards and job scope for the day, rig moving, high pressure lines, working with other services, spotting equipment, high winds, cold weather, working with steam, pumping water, very slippery location, slips trips and pinch and snag points.
07:00	13:00	6.00	MORU	Move on rig unit	11 loads from H64 to N9 with 5 loads back to camp. Spot all equipment, continue rig in. 3 crew members on N09 and 2 on H64 for the day, running loader and doing clean up.
13:00	14:30	1.50	TESTBOP	Test BOPs	Stump test BOP's. 1) Test blind rams to 1.4 low and 21mpa high, each held for 10min all tests good. 2) Install test joint in BOP's and test TIW and Pipe rams to 1.4low and 21mpa high each held for 10min test is good. 3) Test Annular to 1.4 low and 14mpa high each held for 10min, test is good. Test Accumulator make sure it meets all requirements.
14:30	15:00	0.50	BLDWN	Bleed wellbore press.	SITP 695kpa, SICP 4,700kpa. Hook testors to tubing and casing and bleed to test vessel, made a small amount of frac oil and bleeds right off.
15:00	15:30	0.50	NDWH	Nipple down wellhead	Pull well head off, install landing joint.
15:30	16:00	0.50	NUBOP	Nipple up BOP	Install BOP's, rig in rig floor, steam heaters in place, tarps up heat on BOP's.

Time Log

Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
16:00	16:30	0.50	TESTBOP	Test BOPs	Test ring groove 1.4low, 21mpa high each for 10min test is good.
16:30	18:30	2.00	MORU	Move on rig unit	Move on more equipment, and spot, pipe racks, pipe, swivel, drill collars. ect.
18:30	19:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Ensure all crew members are Fit For Duty. Review Hazards and Job Scope for the day, Slippery lease, Discuss Slips & Trips, Boot Traction aids. Discuss weather conditions.
19:00	20:15	1.25	MISC	Miscellaneous operations.	Rig in floor stairs, Prepare to Remove BPV, Install and secure flange/Lub. Sting in and equilize to Lub. Lub out BPV. Prepare to open to P.tank.
20:15	22:00	1.75	BLDWN	Bleed wellbore press.	Bleed off tubing pressure to the flare stack, flared off 1.33 103M3. No fluid, tubing full of gas, Bleed off casing to Flare stack.
22:00	00:00	2.00	MISC	Miscellaneous operations.	Fill tubing due to annulus full and tubing dry. Bowie pump not functioning on pump, By-pass Bowie, Pumped 5.30m3 to fill tubing, Spin out lag bolts - Good, Pull string to 24 dec, Work tubing in attempt to come off on/off. Made full turn to the left, Seems like tubing is backing off down hole. Made 2 turns to the left. Tubing was backing off. No back spin-no torque. Rig in tongs and began to torque up string. Work string to come off on off. No luck.

HUSKY LITTLE BEAR N-09 Daily Report

UWI: 300N9650012630

Report Period: Mar 03 2019

Time Log

Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	00:45	0.75	MISC	Miscellaneous operations.	Continue to work torque in string with packer in compression. Finding free point, Come off On/Off - 1/4 turn to left, Pull Tubing hanger, Close pipe rams. Prepare to circulate well clean.
00:45	02:15	1.50	CIRC	Circulate well clean	Pump down casing up tubing, caught fluid right away, Pump a total 39m3 at 500L/min @ 5mPa, Return frac fluid to empty 400bbl tank, Returns clean. Frac fluid removed.
02:15	02:30	0.25	MISC	Miscellaneous operations.	Lower string, Remove circulation chick, Remove tubing hanger/Threads from joint to hanger damaged, Lay out first joint with tubing hanger.

Time Log

Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
02:30	05:15	2.75	POOH_TB	POOH tubing	Prepare to POOH(Set up NORM Meter), POOH in total: Tubing Hanger(0.18m), 1 - 73.0mm L-80 9.67kg/m Tubing joint (9.61m), 1 - Space Out Nipple (0.34m), 1 - 4' 73.0mm L-80 9.67kg/m Pup joint(1.26m), 1 - 6' 73.0mm L-80 9.67kg/m Pup joint(1.86m), 1 - 8' 73.0mm L-80 9.67kg/m Pup joint(2.46m), 1 - 10' 73.0mm L-80 9.67kg/m Pup joint(3.08m), 181 - 73.0mm L-80 9.67kg/m Tubing joints(1743.74m), 1 - 10' 73.0mm L-80 9.67kg/m Pup joint(3.07m), 1 - 149.2mm On-Off tool(0.55m) *****Checked for NORMS every 10 Joints out with no findings. ***Last 17 joints layed out on pipe racks/stick full.
05:15	06:00	0.75	TESTCSG	Test casing	Fill hole, Pumped a total of 2.67m3 to fill hole. Pressure up and test casing to packer top @ 1176.22mKB to 7mPa/10min. Pressure test solid on casing from surface to packer top @ 1770.79mKb.
06:00	06:30	0.50	MISC	Miscellaneous operations.	Bleed off pressure line/well pressure to tank. Shut well in @ 05:45hrs.
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Crew change, review hazards and job scope for the day , today we wait on well to stabilize, fix a few things around lease, clean up moving trucks, high pressure lines.
07:00	07:30	0.50	MISC	Miscellaneous operations.	Hold meeting with Charger and review how we are going to spot equipment for cementing. Spot equipment.
07:30	11:30	4.00	TESTWH	Test wellhead seals	1)Last night when night crew came off the on/off, and circulated the well over to fresh water, the SCVF meter filled with water along with the knock out bottle, vent meter has been in bypass mode since 2AM, pull off the hose and drain it, switch out vent meters. To Unit 49 we had at camp. 2)Casing has 10kpa on it, open casing and leave open, do a bubble test on scv, Showing 0 bubbles. @9AM. 3)Stream flow conduct a pressure test on Well head seals to 19mpa and in 15min we lost 3.1mpa. Seems our SCVF is coming from our well head seals, not from down hole. Contact Calgary. New Vent meter was up and running @ 12:30 collecting DATA. and showing 0 bubbles.
11:30	15:30	4.00	LOG	Logging	Rig up Boreal. CBL log From 1770 to surface, showing blotchy cement from 1700 up, decent bond 1700 down. Suck back as we run in the hole. Rig out Boreal, send log to Calgary.
15:30	18:30	3.00	RIH_TB	Run in hole tubing	Run in the hole with on/off, ported sub, 10' pup, 183 joints. Talley in the hole. At 5:45 conduct another SCVF bubble test and still 0 bubbles. 10 min watch.
18:30	19:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Ensure all crew members are Fit For Duty. Review Hazards and Job Scope for the day, Slippery lease, Discuss Slips & Trips, Boot Traction aids. Discuss weather conditions.
19:00	22:15	3.25	SLICK	Slickline work	Space out and latch onto packer, Rig in slick liners, RIH and retrieve prong. Prong retrieved. Good shape. RIH to retrieve mandrel. Mandrel retrieved, Rig out Slick liners. ****21:57hrs Vent meter pulled off. Performed a 10 min bubble test. No Bubbles in 10 min test. Prepare to unset packer.
22:15	00:00	1.75	MISC	Miscellaneous operations.	Pump away 4.0m3 Frac oil, 7mPa @ 120l/m, Pump 6.0m3 water.(Rig tank) 7mPa @ 120l/m.

HUSKY LITTLE BEAR N-09 Daily Report

UWI: 300N9650012630

Report Period: Mar 04 2019

Time Log

Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	01:00	1.00	MISC	Miscellaneous operations.	Finish pumping a total of 6m3, Shut in well @ 7mPa. 25min to bleed off pressure. Prepare to POOH with packer. ****10 min bubble test/No bubbles in 10 min.

Time Log

Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
01:00	04:15	3.25	POOH_PL&PAC	POOH plug or packer	***Ventmeter back on @ 01:02hrs. POOH: 1 - 73.0mm L-80 9.67kg/m Tubing joint/Lay out on pipe rack. 1 - 6' 73.0mm L-80 9.67kg/m Pup joint 183 - 73.0mm L-80 9.67kg/m Tubing joints(1743.74m), 1 - 1 -10' 73.0mm L-80 9.67kg/m Pup joint 1 - Ported sub 1- On off tool 1 - Packer - Good shape 1 - 10' 73.0mm L-80 9.67kg/m Pup joint 1 - Space out nipple, 1 - 6' Perforated Pup joint, 1 - Space out nipple, 1 - 10' 73.0mm L-80 9.67kg/m Pup joint 1 - XN nipple 1 - TCP drop gun sub *****Ventmeter off @ 03:53hrs Performed 10 min Bubble test. No bubbles on 10min test.
04:15	05:00	0.75	MISC	Miscellaneous operations.	Pump away remaining 9m3 in rig tank. Had 5.0m3 left and O-ring seal on Hydraulic filter failed. Filter was stripped onto housing. Prepare for gauge ring run and install wireline flange.
05:00	06:30	1.50	WIRELINE	Other wireline related work (excluding log, swab,	RIH with a 154.4mm Gauge ring RIH down to 1785mkb, POOH with Gauge ring. Correlated on depth using Boreal Bond log dated March 3rd/2019. No issues RIH or POOH with Gauge ring. *****Performed a Bubble test @ 05:45hrs, No bubbles.
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review hazards and job scope for the day, setting BP, e line work, high pressure lines, use
07:00	09:00	2.00	WIRELINE	Other wireline related work (excluding log, swab,	Run in the hole with Boreal and set a DB-10 BP 1781mkb, 7m above top shot, pull up and tag plug it is there, pull out of the hole.
09:00	09:30	0.50	TESTPLUG	Test plug	Pressure test BP to 7mpa for 15min, with a dead weight gauge, isolated at well head and it was a solid pressure test.
09:30	13:30	4.00	WOO	Wait on orders	Wait on orders from Calgary.
13:30	16:00	2.50	WIRELINE	Other wireline related work (excluding log, swab,	1) Run in with e line and shoot one 3m GH, gun @1050-1053mkb, correlated to CBL log. All shots fired. Test casing to 7mpa and we have no feed rate, slight bleed off. 2) Shoot a 2nd 3m GH gun @ 955-958mkb, 7mpa pressure test, slight bleed off maybe 100kpa. Rig out Boreal.
16:00	18:30	2.50	RIH_TB	Run in hole tubing	Run in the hole open ended 183 joints, 8'pup 4'pup, 2 joints. Tag BP with an extra pup, pull pup and we have intake 1m off BP @ 1780mkb. Suck back as we run in the hole. hole is full. SCVF is still showing 0 bubbles. and did bubble test @ 17:00 confirm no bubbles.
18:30	19:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Ensure all crew members are Fit For Duty. Review Hazards and Job Scope for the day, Discuss cementing procedures with Charger. Slippery lease, Discuss Slips & Trips, Boot Traction aids. Discuss weather conditions.
19:00	21:00	2.00	CEM	Cementing	Ventmeter off @ 19:00hrs. Cementers taking on water. Mix/Pump 1/2m3 cement slurry @ 500l/min, Displace with 4.5m3 water, Balance plug. Cement top @ 1755.50mkb. POOH 10 joints up to 1684.0mKb. Backwash a total of 6.5m3 to clean up. Approx 100l in returns. Prepare to POOH
21:00	21:45	0.75	POOH_TB	POOH tubing	Pull and lay out 73 joints landing tubing bottom @ 1077.0mKb with 0.40m stick up. Rig in cementers. ****21:28hrs Ventmeter in squeeze mode.
21:45	00:00	2.25	CEM	Cementing	Mix 4.0m3 slurry(20deg/c), Displace with 2.0m3 water, POOH 20 joints with 3.16m stick up and back wash with 3.0m3 @ 882.0mKb/Approx 200l in cement returns, POOH 5 joints(87jts in hole) to 839.45mKb with 0.50m stick up and rig in to begin squeeze. Pumped 500l water away @ 50l/m with 250kPa squeeze pressure held. Wait 20min.

HUSKY LITTLE BEAR N-09 Daily Report

UWI: 300N9650012630

Report Period: Mar 05 2019

Time Log

Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	00:45	0.75	CEM	Cementing	Pressure held @ 250kPa, Bump up pressure 30l/min with another 50l water. 500kPa squeeze pressure held. Wait 20min, Pressure held @ 500kPa, Bump again @ 30l/min with 50l water. 1mPa squeeze pressure held. Wait 20 min. Pressure held @ 1mPa. Squeezed in approx 600L into perfs in total. Cement top @ approx 893mKb. Shut in well with 1mPa pressure held. Wait on cement to harden for morning tag. ****Ventmeter back on @ 12:45hrs.
00:45	06:30	5.75	MISC	Miscellaneous operations.	Rig out cementers, Rig crew preparing equipment for transportation such as spare pump and spare boiler ect. Organize equipment. Perform maintenance. 02:45hrs 10 min bubble test/No bubbles
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review hazards and job scope for the day, mixing up chemical, pumping, high pressure lines, working with steam, pumping water, rig out, slips and trips, pinch and snag points, tripping pipe,.
07:00	07:30	0.50	MISC	Miscellaneous operations.	Well has been shut in for the last 6 hours and left with 1mpa shut in pressure. SICP 800kpa SITP 800kpa, bleed off pressure.
07:30	08:30	1.00	RIH_TB	Run in hole tubing	Run in the hole and tag cement top @ 891.46mkb. pull 1 joint.
08:30	09:00	0.50	TESTPLUG	Test plug	Test cement plug to 7mpa, we have a slight bleed off, due to well head seals leaking, seems sometimes they will hold a test and sometimes not, this time not.

Time Log

Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
09:00	10:00	1.00	TESTPLUG	Test plug	Pull 5 joints run in with packer and MCL and 1 joint click casing collar, to make sure we do not set packer in collar, Set the packer @ 6m from surface, test cement plug to 7mpa for 10min, test is solid.
10:00	10:30	0.50	RIH_TB	Run in hole tubing	Run back in 4 joints and set intake at 884.7mkb.
10:30	15:00	4.50	HAZASSMENT	Hazard Assessment.	Went to circulate well over to fresh water, and we had an incident hydraulic a joint of tubing out of the hole. Contact our safety dept, talk to Calgary.
15:00	16:00	1.00	MISC	Miscellaneous operations.	Hack saw the bent joint, so the bend is cut off, lay it out. Spear in to the tubing joint pull broken joint out of the hole. Set pop valve for 10mpa.
16:00	17:30	1.50	TESTBOP	Test BOPs	Land the dog nut, pull pipe rams, we do not see any damage just normal wear and tear, change pipe ram rubber anyways. Pressure test pipe rams to 1.4 low and 21mpa high, each held for 10min test is good. Pull dog nut.
17:30	18:30	1.00	CIRC	Circulate well clean	Mix 325 grams of Calcium Hypochbrite with 27m3 river water, and circulate the well bore twice (40m3) well is all converted to fresh water.
18:30	19:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Ensure all crew members are Fit For Duty. Review Hazards and Job Scope for the day, Discuss recent incident and share learnings. Discuss Stop, Think, Go tool, Discuss Slippery lease conditions, Slips & Trips, Boot Traction aids. Discuss weather conditions.
19:00	20:00	1.00	POOH_TB	POOH tubing	POOH and lay out all tubing.
20:00	00:00	4.00	RIGDOWN	Rig down	Rig out stairs/hand rails/rig floor and secure, Remove BOP's and secure on stump, Rig out pump & tank, Cool down boiler and rig out boiler lines, Remove fuel from Boiler and haul to fuel skid at camp, Rig out P.Tank/Lines and flare stack. ********Ventmeter off. 08:47hrs: Performed a 10 min bubble test/No bubbles in 10 min test. Ventmeter back on.

HUSKY LITTLE BEAR N-09 Daily Report

UWI: 300N9650012630

Report Period: Mar 06 2019

Time Log

Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	06:30	6.50	SDFN	Shut down for night	SDFN.
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review hazards and job scope for the day rig out day, lay rig over pinch and snag points, clean rig tank, move equipment, get everything ready for rig move in the am.
07:00	18:00	11.00	RIGDOWN	Rig down	Get every thing on lease ready to move in AM. Clean rig tank, lay over rig, stage lease for rig out.
18:00	00:00	6.00	SDFN	Shut down for night	

HUSKY LITTLE BEAR N-09 Daily Report

UWI: 300N9650012630

Report Period: Mar 07 2019

Time Log

Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	06:30	6.50	SDFN	Shut down for night	Night crew was set to fly home, get ready for night shift again.
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review hazards and job scope for the day, rig up, spotting trucks, high pressure lines, spotting equipment, pinch and snag points, slips and trips.
07:00	13:00	6.00	MISC	Miscellaneous operations.	NOTE @ 12:50 the vent was bumped and shut in for 10min, then opened back up. Re Spot all equipment, fill boiler with water and fuel, stand the rig, ready to LOG the well.
13:00	17:00	4.00	LOG	Logging	Rig in Boreal and temp down and noise log up, send results to Calgary. Appears noise is coming from under the cement plug Rig in pump and tank and steam lines.
17:00	17:30	0.50	NUBOP	Nipple up BOP	Install BOP's, rig in rig floor.
17:30	18:30	1.00	TESTBOP	Test BOPs	Pressure test Blind Rams and ring groove, 1.4 low and 21mpa high on the well (Cased hole), each held for 10 min test is good.
18:30	19:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Ensure all crew members are Fit For Duty. Review Hazards and Job Scope for the day, Slippery lease, Discuss Slips & Trips, Boot Traction aids. Discuss weather conditions.
19:00	20:00	1.00	TESTBOP	Test BOPs	Land tubing hanger, Tighten lag bolts, Test pipe rams, TIW and Spool valve to 1.4 low and 21 mpa high each for 10min test is good. Test Annular to 1.4 low 10mpa high each for 10 min test is good. Pull Tubing hanger. Set Pop Off valve at rig pump @ 14mPa.

Time Log

Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
20:00	21:30	1.50	MISC	Miscellaneous operations.	Set up 2nd set of pipe racks for collars, Rig in Tongs, slips, V-door. Spot swap matt and spot power swivel on matt. Start/warm swivel. Move 6 drill collars to pipe racks and tally collars. ***20:00hrs. Vent meter off. Hoses checked - All good. 20:35hrs - 20:45hrs. Performed 10min bubble test - No bubbles after 10 min. 20:50hrs: Ventmeter back on flow.
21:30	22:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Perform Pre-Job safety meeting. Discuss drill out job scope. Hazards involved with picking up collars. Discuss Procedures involved with collar & swivel installation. Discuss hazards involved with drifting tubing.
22:00	00:00	2.00	RIH_TB	Run in hole tubing	Tally/Make up and RIH with 1 - New 6 1/4"(158.75mm) rock bit(0.11m), 3 1/2" Reg box X 3 1/2" IF X Box Bit sub(0.57m), 6 X 4 3/4" drill collars(56.78m), 3 1/2" IF Pin X 2 7/8" EUE Box Cross over sub(0.33m), 1 - 73.0mm Tubing joint.(9.45m). Install TIW and secure well.

HUSKY LITTLE BEAR N-09 Daily Report

UWI: 300N9650012630

Report Period: Mar 08 2019

Time Log

Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	01:00	1.00	MISC	Miscellaneous operations.	Change out tongs to 2 7/8" dies on back up's and spinning dies. Tally 73.0mm tubing. Ensure lines are warmed with steam. Prepare to RIH with 73.0mm tubing.
01:00	01:30	0.50	BRKTM	Coffee Break	Crew took lunch break.
01:30	03:45	2.25	RIH_TB	Run in hole tubing	RIH/Drift 73.0mm tubing. RIH a total of 80 joints and collars so far. Secure well. Tally remaining tubing.
03:45	04:00	0.25	BRKTM	Coffee Break	Crew took a quick break.
04:00	04:45	0.75	RIH_TB	Run in hole tubing	RIH last 6 - 73.0mm tubing joints, RIH a total of 86 - 73.0mm tubing joints. Tag on joint #86 with 1m stick up. POOH tag joint. Tag @ 883.84mkb. Prepare to rig in power swivel. Make line connection to stand pipe.
04:45	05:15	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Perform Pre-Job Safety Meeting. Discuss Hazards involved with rigging in Power swivel/Static lines/Installing Pack off and making connection to BHA.
05:15	06:30	1.25	MISC	Miscellaneous operations.	Strip on and install/secure pack off head, Rig in static lines and power swivel/Kelly cock, Install and secure kelly hose. Make connection to stand pipe, Pick up and make Swivel connection to BHA. Break reverse circulation to rig tank.
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review hazards and job scope for the day, drilling out cement, high pressure lines, rotating equipment, overhead loads, spotting equipment, pumping, slips and trips.

Time Log

Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
07:00	17:00	10.00	DRILLP	Drill down plug / mill	- Start drilling @ 883.84mkb soft tag, Hard drilling started @ 889.50mkb, pumping @ 400L/min at 1mpa, reverse circulating, getting good cement returns, drilling with 2dec bit weight. Drilling out cement @ 1m per 5min= 45min / joint on average. 15:00 we are at 942,50mkb. -SCVF was taken off at 8am, drain knock out bottle, maybe 1L water, make sure line has no water, do a bubble test while drilling, it was way to many to count, hook vent meter back up @ 10am, turn vent meter to build up mode @ 11:15, levels out @ 30kpa at 12:15, leave shut in until 13:30 and pressure stays at 30kpa, confirmed that with a dead weight gage, it is correct. 13:30 put vent meter back in to flow, and we are getting the odd bubble, and we are still drilling out cement. 14:30 we are at 0 bubbles.
17:00	17:30	0.50	TESTCSG	Test casing	-Pressure test 955-958mkb perfs to 7mpa for 10min lost 50kpa, isolated at the well with dead weight. -SCVF 0 bubbles. -SCVF pressure when sucking back on casing went to a -4kpa, another confirmation well head seals have a slight leak.
17:30	18:30	1.00	DRILLP	Drill down plug / mill	-Start Drilling at 961mkb, and continue to drill to 971.2mkb. Circulate 2 bottoms up @ 600L/min.
18:30	19:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Ensure all crew members are Fit For Duty. Review Hazards and Job Scope for the day, Slippery lease, Discuss Slips & Trips, Boot Traction aids. Discuss weather conditions.
19:00	20:00	1.00	MISC	Miscellaneous operations.	Steam out circulating lines, Rig out Power swivel and related equipment. Prepare to POOH with drill string BHA.
20:00	23:30	3.50	POOH_TB	POOH tubing	POOH and stand 95 tubing joints, Lay out collars.
23:30	00:00	0.50	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. ****Switch the vent meter to perf mode @ 22:10hrs, Arm and RIH with a 101.6 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 81mKb.

HUSKY LITTLE BEAR N-09 Daily Report

UWI: 300N9650012630

Report Period: Mar 09 2019

Time Log

Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	01:45	1.75	PERF	Perforate well - Wireline/TCP	RIH. Log and correlate with the Radial Cement Bond log performed by Boreal Wireline on March 3, 2019. Perforate from 945.0 - 948.0mKb @ 00:08 hrs. POOH with 1st gun, All shots fired. Casing dead with a slight vac on SCV then gone immediately. ***Performed 10min bubble test/No bubbles after 10 min. Prepare next gun, Arm and RIH with a 101.6 mm X 3.0 m ERHSC perforating gun, 17 SPM, 20 gram Good Hole charges c/w 30 degree phasing. Pick up the perforating gun and secured Lube Pressure test equipment with N2- Good. RIH and noticed fluid level at 81mKb again, RIH. Log and correlate with the Radial Cement Bond log performed by Boreal Wireline on March 3, 2019. Perforate from 945.0 - 948.0mKb @ 00:55 hrs. *****Vent meter back on flow @ 01:00hrs. Monitored casing. No pressure on casing, Slight vacuum after perforating then instantly gone, POOH and lay down the gun. All shots fired on gun, Rig out all wire liners equipment.
01:45	03:00	1.25	RIH_TB	Run in hole tubing	Make up and RIH with a 6 1/4" Rock Bit, 177.8mm Casing scraper, X-over sub, RIH 99 - 73.0mm tubing joints down to 952.63mKb, Lay out 2 joints, Secure well.
03:00	03:30	0.50	BRKTM	Coffee Break	Crew took break.
03:30	04:45	1.25	POOH_TB	POOH tubing	POOH with scaper standing all tubing. No issues RIH or POOH with scraper. Prepare to RIH with Packer BHA.

Time Log

Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
04:45	06:30	1.75	RIH_PL&PAC	Run in hole plug or packer	RIH 1- 0.13 m X 73.0 mm tubing collar, 1- 0.26 m - 73.0 mm R profile nipple c/w 57.15mm No-Go, 1- 3.09 m X 73.0 mm L80 pump joint, 1- 0.45 m X 177.8 mm x 73.0 mm MCC, 1- 2.25 m X 177.8 mm x 73.0 mm Tryton TX8 DG packer, 1- 3.07 m X 73mm L80 pup jt, 97- 73.0 mm tubing joints(930.35 m), Locate casing collars @ 837.80mKb, 849.20mKb, 860.90mKb to confirm depths. Spaced out and set the packer C/E @ 941.39mkb, 3.61m above top perf. Tubing bottom @ 946.57mKb. 1.57m below top perf. Set and pull packer into 3000 daN tension.
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review hazards and job scope for the day, pumping acid, high pressure lines, tripping pipe, clean rig tank, setting down hole tools, slips and trips, working with other services.
07:00	08:00	1.00	TESTCSG	Test casing	Pressure up to 9.5mpa on the 945-948mkb perfs, with the packer set, (Also pressuring up on the 955-958 perfs) and we have a 100kpa loss in 5min. very solid.
08:00	08:30	0.50	SETTOOL	Setting or unsetting packers	-Unset packer pull the 6' pup and put in a 10' pup, so our intake is now at 948mkb (bottom shot) Leave packer unset. -String in hole is now, Collar/ R nip/ 3m pup/ MCL/ Packer/ 3m pup/ 96 joints/ Two 3m pups/ 1 joint...
08:30	09:00	0.50	STIMUL	Acidize/fracture/inject surfactants	1)Rig in Charger, and spot 2m3 of inviro Acid down tubing up casing holding 3mpa back pressure. 2)Wash 200L by the perfs, pressure up well bore to 5mpa, let soak. Rig out Charger, drain surface lines, tarp in tubing. NOTE Water temp 42deg C, could create some SCVF. NOTE we did see a burst of bubbles when pumping the acid down hole.
09:00	11:30	2.50	MISC	Miscellaneous operations.	-Let Synthetic acid soak. -Clean solids out of the rig tank.
11:30	12:00	0.50	STIMUL	Acidize/fracture/inject surfactants	- We left 5mpa on the well when shut in, after 2.5 hours we have 3,800kpa on the well. -Pressure up tubing to 4mpa, open tubing, and wash 100L by the perfs, while holding back pressure. Shut the well in with 4mpa. - Drain lines and let soak. SCVF still 0 bubbles.
12:00	13:30	1.50	MISC	Miscellaneous operations.	Wait on acid soak to do its thing.
13:30	14:00	0.50	STIMUL	Acidize/fracture/inject surfactants	-We left the well with 4mpa and after 1.5 hours we are @ 3.1mpa. -Wash another 100L by the perfs, and shut the well in with 7mpa on it. -SCVF still 0 bubbles.
14:00	15:00	1.00	MISC	Miscellaneous operations.	Wait on acid to soak.
15:00	15:30	0.50	STIMUL	Acidize/fracture/inject surfactants	-7mpa was left on casing and after 1 hour we are at 6.4mpa. -Wash 800L by perfs, now acid is balanced. -Suck on tubing and casing, make sure acid is balanced, it is. - There is now a 100m +- acid plug over 945-948mkb perfs, soaking.
15:30	17:00	1.50	POOH_PL&PAC	POOH plug or packer	Pull packer out of the hole.
17:00	18:30	1.50	WIRELINE	Other wireline related work (excluding log, swab,	Rig in Boreal, gun hot shot has just arrived from GP. Shoot a 1m UZI from 945-946mkb.
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	20:00	1.00	MISC	Miscellaneous operations.	Finish rigging out wireline. - Fill the casing with fresh clean water. - Pressure up to 7.0 mpa @ 20:03 hrs. - Monitored for 10 minutes. It bled off 500 kpa. - Bled off the pressure @ 20:13 hrs and sucked back on the casing.

Time Log

Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
20:00	21:30	1.50	RIH_PL&PAC	Run in hole plug or packer	Make up and RIH with the following: 1- 73mm OD tubing coupler 1- 0.26 m RN nipple c/w 55.8 mm No-Go 3- 3.09 m X 73 mm pup joint 1- 2.70 m Tryton TX-8 packer c/w CCL 1- 3.07 m X 73 mm pup joint 88- 73 mm -L-80 tubing joints - Set the packer @ 850.38 mkb-CE. TE @ 855.56 mkb (Acid top spotted in casing) - Casing Collars located @ 837.8, 849.2, and 860.90 mkb.
21:30	22:00	0.50	TESTPACK	Test packer	Fill the annulas with 1.25 m3 water. - 21:30 hrs, Pressure test the annulas to 7.0 mpa. Held solid. Bled off the pressure.
22:00	00:00	2.00	MISC	Miscellaneous operations.	Pressure up the tubing to squeeze acid into the perforations. - Pressure up slowly and surge in increments to give the acid time to work on formation and obtain a feed rate. 21:50 hrs- Pressured up the tubing to 10.0 mpa. The pressure bled down to 8.0 mpa in 30 minutes. 22:20 hrs- Pressured up the tubing to 11.0 mpa. The pressure bled down to 10.0 mpa in 30 minutes. - Surged 5X 22:55 hrs- Pressured up the tubing to 12.0 mpa. The pressure bled down to 10.0 mpa in 30 minutes. - Surged 5X 23:25 hrs- Pressured up the tubing to 13 mpa. The pressure bled down to 10.5 mpa in 30 minutes. 23:55 hrs- Pressured up to 13.0 mpa. The formation started to take fluid. Pump 400 litres. Pumped 250 liters/minute@ 11.5 mpa. - Stopped and monitored. Let acid sit. - Checked the casing to confirm the packer was holding. Montiored the SCV. A slight increase in pressure was detected.

HUSKY LITTLE BEAR N-09 Daily Report

UWI: 300N9650012630

Report Period: Mar 10 2019

Time Log

Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	02:00	2.00	MISC	Miscellaneous operations.	00:30 hrs. The tubing pressure was @ 9.5 mpa. - Pumped 200 litres acid into the formation with a rate of 250 litres/minute@ 11.5 mpa. - Let acid soak for 30 minutes. 01:00 hrs. The tubing pressure was @ 9.5 mpa. - Pumped 200 litres acid into the formation with a rate of 250 litres/minute@ 11.5 mpa. 01:30 hrs. Removed the SCV meter hose. Performed a bubble test. 2.0 bubbles detected during a 10 minute test. Casing was open and static throughout.
02:00	03:00	1.00	MISC	Miscellaneous operations.	1.0 hour time change. Daylight Savings time. Waited one hour between pumping operations not two hours. Ventmeter adjusted 1.0 hr for time change(Bypass)??

Time Log

Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
03:00	05:30	2.50	MISC	Miscellaneous operations.	03:00 hrs. The tubing pressure was @ 9.0 mpa. - Pumped 200 litres acid into the formation with a rate of 250 litres/minute@ 11.5 mpa. 03:30 hrs. The tubing pressure was @ 9.7 mpa. - Pumped 200 litres acid into the formation with a rate of 250 litres/minute@ 11.5 mpa. 04:00 hrs. The tubing pressure was @ 9.8 mpa. - Pumped 400 litres acid into the formation with a rate of 250 litres/minute@ 11.5 mpa. 04:30 hrs. The tubing pressure was @ 10.0 mpa. - Pumped 400 litres acid into the formation with a rate of 250 litres/minute@ 11.5 mpa followed by 0.6 m3 water. - Let the acid sit in the formation for 30 minutes. Open the tubing to bleed back slowly to the tank. - Recovered 0.50 m3 - Pumped 2.0 m3 acid into the formation total. - Unset the packer.
05:30	05:45	0.25	RIH_PL&PAC	Run in hole plug or packer	RIH and set the packer @ 944.0 mkb-CE to get an accurate feed rate and to confirm retainer set depth. - String ran as follows: 1- 73mm OD tubing coupler 1- 0.26 m RN nipple c/w 55.8 mm No-Go 3- 3.09 m X 73 mm pup joint 1- 2.70 m Tryton TX-8 packer c/w CCL 1- 3.07 m X 73 mm pup joint 96- 73 mm -L-80 tubing joints 3- tubing pups-3.07, 3.08, and 1.86 m 1- 73 mm tubing joint. - Pressure test the annulas to 7 mpa. Held solid.
05:45	06:30	0.75	MISC	Miscellaneous operations.	Tie the pump line into the tubing to perform a feed rate. - Started pumping down the tubing at a rate of 300 liters/minute @ 12.0 mpa. - The rate and pressure remained the same with the first 5.0m3 pumped.
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review hazards and job scope for the day, high pressure lines, setting down hole tools, working with other services, use of steam, tripping pipe, cementing. Slips and trips, overhead loads.
07:00	11:30	4.50	MISC	Miscellaneous operations.	Continue to pump, we now have 15m3 away in total, squeezed into the 945-948mkb perfs and we are at 300L/min @ 12mpa, and we are seeing a increase in SCVF a flow rate of 0.5m3/day, this is most likely due to the fact we are pumping 32deg water, checked the vent while pumping it is making no fluid. 8:00 Finished pumping, shut in the well for 1 hour shut in pressure is 9.5mpa. SCVF is now 0 bubbles. 9:00 Slowly bleed well down and it is flowing back at us, made 5.5m3 in 2.5 hours, well is dead. SCVF no bubbles.
11:30	13:30	2.00	POOH_PL&PAC	POOH plug or packer	Pull Packer BHA out of the hole.
13:30	15:00	1.50	RIH_PL&PAC	Run in hole plug or packer	Run in the hole with Retainer/ 97 joints/ 2'pup/ 1 joint.
15:00	15:30	0.50	TESTPLUG	Test plug	Set Retainer top @ 943mkb, pressure test retainer to 7mpa for 10min test is good., test closed position to 7mpa test is good, confirm feed rate 300L/min @ 12mpa.
15:30	16:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Hold Safety meeting with all crew members, and review hazards with cementing, high pressure lines, and weather conditions.
16:00	18:30	2.50	CMTREM	Remedial cementing	Rig up Charger: Pressure test surface lines to 18mpa test is good. 1) Pump 4m3 of SQ150 away at 300L/min @ 12mpa, pressure dropped to 5mpa, with full cement column. 2) Pump 3m3 of G slurry @ 100L/min at pressure is starting to climb to 7mpa. 3) Switch to water and pump at 30L/min, pressure slowly climbed to 12mpa slow the rate down to 12L/min, pressure climbed to 15mpa. 4) Kick out the pump and pressure dropped to 12mpa, bump 4 times and we have a flat line of 14mpa. Sting out, with 400L still in the tubing, back wash on top of the retainer, leaving no cement on top. NOTE 6.5m3 squeezed into formation. SCVF is showing an increase in bubbles. during cement squeeze.

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)	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	20:00	1.00	POOH_TB	POOH tubing	POOH with the 73.0 mm string and cement stinger. - Tubing out @ 19:55 hrs.
20:00	21:30	1.50	MISC	Miscellaneous operations.	Slowly fill and top up the casing to replace tubing metal displacement volume. - The casing was full @ 21:10 hrs.
21:30	00:00	2.50	MISC	Miscellaneous operations.	Monitor the surface vent. - Clean up location and perform maintenance on equipment. -10:45 hrs- Held a man down drill with all personnel onsite. The drill went well.

HUSKY LITTLE BEAR N-09 Daily Report

UWI: 300N9650012630

Report Period: Mar 11 2019

Time Log

Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	06:30	6.50	MISC	Miscellaneous operations.	Monitor the surface vent. - Removed the SCV hose @ 23:57 hrs. Checked the line. Everthing looks good. - Performed a bubble test on the SCV @ 00:10 hrs. 0.0 bubbles detected during a 10 minute test. - Re-installed the SCV meter @ 00:23 hrs - Clean up location and perform maintenance on equipment. - Back blade the location
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review hazards and job scope for the day, tripping pipe, rig maintenance.
07:00	17:00	10.00	MISC	Miscellaneous operations.	Clean up around lease, wait on word from government to go ahead and balance cement plug. SCVF has showed 0 bubbles all day.
17:00	18:30	1.50	RIH_TB	Run in hole tubing	Run in the hole with 98 joints, intake @ 942.30mkb. Install master valve, ready to Balance cement plug.
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: Rigging out equipment - 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	20:30	1.50	CEM	Cementing	19:02 hrs- unhooked the SCV meter line and ensured it was clear. - Performed a 10 minute bubble test. 0.0 bubbles detected. 19:15 hrs- Reinstalled the SCV meter - Rigged in cementers and and transferred the necessary fresh water to the pump unit. - Broke circulation. 20:00 hrs- Mixed and pumped 0.7 m3 Charger SQ 1900 Kg/m3 Class G cement + 0.05% CHFR-1 + 2% CHGC-2 + 0.15% CHFL-1 + 0.1% CHFR-1 + 0.2% CHDF-P + 2% CHGC-2 followed by 2.0 m3 water to balance the cement on the retainer set @ 943.5 - 944.0 mkb. Finished pumping @ 20:10 hrs. - Let the the well sit for 5 minutes until balanced both sides. - Break off pump lines - Cement top @ 909.5 mkb.(34 vertical m cement on retainer)
20:30	22:00	1.50	POOH_TB	POOH tubing	- POOH and lay down the 73 mm tubing string.
22:00	00:00	2.00	RIGDOWN	Rig down	21:05- The test hand turned on the heater to the ventmeter affecting the temperature and pressure. Shut the heat off @ 22:20 hrs. - Start rigging out equipment and cleaning up location for transport.

HUSKY LITTLE BEAR N-09 Daily Report

UWI: 300N9650012630

Report Period: Mar 12 2019

Time Log

Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	06:30	6.50	RIGDOWN	Rig down	Continue to rig out equipment and organize location for move - Rig out ACC lines and stand - Removed tubing equipment, rig floor and BOP's - Rig out the pump and tank. 05:05 hrs- Removed the SCV hose and performed a bubble test. 0.0 bubbles detected during a 10 minute test. 05:21 hrs- Reinstalled the SCV meter line.
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review hazards and job scope for the day working with multiple trucks loading equipment to leave location, rig out, lay over rig, rig out boiler, loading pipe, very cold weather, high winds. slips and trips, over head objects.
07:00	18:30	11.50	RIGDOWN	Rig down	Rig down: -Spare pump and junk skid sent to Norman wells. -186 joints of pipe given to wielder in town. 2nd load. -Cement bins loaded up ready to travel out tonight. -Lay rig over. -Rig out boiler/ cool down. -Transfer 20m3 to 400 tank, suck out clean out rig tank. -Charger pin ups at camp ready to hook on. -Clean lease everything ready to go. - Bubble test @ 16:30 watch for 10min 0 bubbles. -3rd load out rig mats and propane tank. -Offload 400 tank fluid and boiler fluid in tank truck.

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)	Rig crew & WSL's cross shifted. - Held a safety meeting with all onsite personal. Daily Ask: Slips, trips and falls - Reviewed the ERP and hazard assessment. Discussed daily job scope and associated risks. - Perform daily walk around
19:00	00:00	5.00	RIGDOWN	Rig down	Monitor SCV - Wait on trucks. Move equipment as necessary

HUSKY LITTLE BEAR N-09 Daily Report

UWI: 300N9650012630

Report Period: Mar 13 2019

Time Log

Start Time	End Time	Dur (hr)	Activity Code	Activity Desc.	Com
00:00	06:30	6.50	MISC	Miscellaneous operations.	Monitor the SCV. Wait on trucks. Move equipment as necessary
06:30	07:00	0.50	SAFETY	Safety Meetings (Pre-job, daily)	Review hazards of day with rig crew, service rig driving out, trucks coming in to move the rig. loading trucks, pinch and snag points. 7:10-7:20 bubble test seen 0 bubbles in 10 min. The vent meter is showing 0.02m3/day that is not enough of a rate to record in a bubble test.
07:00	18:30	11.50	MISC	Miscellaneous operations.	-Monitor SCVF on N-9 -Pull vent meter off H-64 -Offload cut and cap truck, take on water, make game plan for cut and cap procedures. -Move all service rig equipment off location. 6 loads. -Clear off swamp mats, pick up boards.
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: Defensive driving - Reviewed the ERP and hazard assessment. Discussed daily job scope and associated risks. - Perform daily walk around
19:00	00:00	5.00	MISC	Miscellaneous operations.	-Monitor SCVF on N-9 - Clean up tickets and prepare to move equipment tomorrow. End of reports.