



Well Operations Report

Well Name: ARROWHEAD RIVER I-75
UWI: 300/I-75-60.40-122.45/00
License #: WID1981
Field: FT LIARD (5501)
Profile: Directional
Zone: Slave Point
Class: Level I

CNRL has performed the well abandonment operations within the last 30 days for this well as outlined in the approved program. Included in this document are the daily reports, and a wellbore schematic of the current state of the well. Additional documentation will follow in the summer once a gas migration test is complete with a change of well status form, and pictures of the cut and capped wellbore.

Please advise if any additional information is required

Thank you,

Canadian Natural Resources Limited

A handwritten signature in black ink, appearing to read "T. Bernhard".

Terran Bernhard, P.Eng.

Abandonment Engineer

Canadian Natural Resources Limited

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**Canadian Natural****Downhole Schematic (Gov't Submission)****ANADARKO ARROWHEAD RIVER I-75**

Current Event (UWI) 300/I-75-60.40-122.45/00		Surface Legal Location		License # NT001981		Field Name FT LIARD			Province N.W.T				
Well Profile Directional		Fluid Type Deep Gas	Original KB Elevation (m)	517.90	KB-Ground Distance (m)	7.10	KB-Casing Flange Distance (m)	6.96	KB-Tubing Head Distance (m)	517.90			
Latitude (°) 60° 34' 32.689" N	Longitude (°) 122° 57' 56.848" W	Orig Spud Date 1/25/2003	Orig RR Date 2/28/2003	C&C Date 2/10/2023	GW Protected? Yes	BGWP (mKB) 607.10	Oilsand Area No						
Directions To Well From Ft. Liard, NWT go NE on Hwy #7 to Km 72 road (app 34km), right along Km 72 road to Km 33.5, left past camp 1.4km to location									H2S Classification Sour				
Directional - Original Hole, 3/3/2023 2:01:38 PM					SCVF & GM Tests (Last 2 Records)								
MD (mKB)	TVD (mKB)	Vertical schematic (actual)			Test Date 9/12/2022	Test Type SCVF	Failed?						
0.0	0.0				1/25/2023	SCVF	No						
7.1	7.1				Openhole Information								
9.0	9.0				Section Des Surface	Size (mm) 311.2	Top (mKB) 7.10	Bottom (mKB) 655.00					
9.1	9.1				Intermediate 1	215.9	655.00	2,586.00					
10.0	10.0				Main 1	155.6	2,586.00	2,878.00					
470.0	469.9				Casing Strings								
607.1	607.0				Csg Des Surface	OD (mm) 244.5	Wt/Len (kg/m) 59,527	Grade L-80	Top (mKB) 9.10	Set Depth (MD) (mKB) 657.00			
642.2	642.0				Intermediate	177.8	38,692	L-80	9.10	2,588.00			
642.5	642.3				Cement Stages								
655.0	654.8				Description Surface Cement	Cementing Start Date 2/1/2003	Top Depth (mKB) 9.10	Btm (mKB) 655.00	Vol Cement Re... 2.00				
656.5	656.3				Comment 39.0 tonnes (29.5m3) G, no additives, 2.0m3 cement returns								
657.0	656.8				Description Intermediate Cement	Cementing Start Date 2/16/2003	Top Depth (mKB) 470.00	Btm (mKB) 2,586.00	Vol Cement Re... 0.00				
697.0	696.8				Comment 29.4 (26m3) tonnes 1-1-2 G + 4.0% gel + 0.5% CD-31 + 0.05% R-3 + 5.0L/m3 AF-1 tailed with 7.3 tonnes Thermal 40F + 0.5% CD-32 + 0.4% FL-77 + 0.15% R-3 + 5.0L/m3 AF-1, 3.0m3 preflush returns - TOC calculated at 470mKB. (preflush/spacer was 6.0m3 HT40 NT, 6.0m3 Nowflush, 3.0m3 scavenger cement). TOC est'd at 470mKB.								
1,236.0	1,235.1				Perforations								
1,253.0	1,252.0				Zone Landry, Original Hole	Top (mKB) 2,849.00	Btm (mKB) 2,878.00	Current Status Abandoned					
1,658.0	1,643.8				Tubing Strings								
1,684.0	1,668.6				Tubing - Production set at 2,567.63mKB on 2/28/2003 00:00								
1,774.0	1,755.4				Tubing Description Tubing - Production	String Max N... 139.0	Wt (kg/m) 25,300	String Grade H40					
1,812.0	1,792.0				Comment Packer pressure tested to 15 MPa - 2/28/2003								
2,475.0	2,432.5				Wellhead installed, no comment about pressure testing seals - 2/28/2003								
2,525.0	2,481.1				Tubing Components								
2,525.4	2,481.5				Item # 1-1	Jts 1	Item Des Howco On-Off 47.63mm Baker "F" -...	OD (mm) 139.0	ID (mm) 76.0	Len (m) 10.50	Top (mKB) 2,543.15	Btm (mKB) 2,553.65	
2,543.1	2,498.7				1-2	1	Howco BWC Perm Packer	150.0	82.6	0.77	2,553.65	2,554.42	
2,553.6	2,508.9				1-3	1	BWC Crossxover 88.9 x 60.3 mm	88.9	50.7	0.11	2,554.42	2,554.53	
2,554.4	2,509.7				1-4	1	Tubing Pup Jt - Hydril 553 CB - coated	60.3	50.7	3.00	2,554.53	2,557.53	
2,554.5	2,509.8				1-5	1	Baker "F" Nipple 46mm - coated	60.3	46.0	0.28	2,557.53	2,557.81	
2,567.6	2,522.5				1-6	1	Perforated Pup Jt Hydril 553CB - co...	60.3	50.7	9.62	2,557.81	2,567.43	
2,567.6	2,522.5				1-7	1	Wireline Guide 45.5mm No-Go - co...	60.3	45.5	0.20	2,567.43	2,567.63	
2,574.0	2,528.8				FWG Plug set at 2,557.81mKB on 2/20/2004 19:00								
2,586.0	2,540.5				Tubing Description FWG Plug	String Max N... 45.9	Wt (kg/m)	String Grade					
2,587.8	2,542.2				Comment No positive test, negative only. First negative test failed overnight. Pulled, dressed and reran plug, appeared to hold negative pressure test.								
2,588.0	2,542.4				Tubing Components								
2,633.0	2,586.3				Item # 2-1	Jts 1	Item Des FSG Plug (1.81")	OD (mm) 45.9	ID (mm)	Len (m) 0.28	Top (mKB) 2,557.53	Btm (mKB) 2,557.81	
2,639.0	2,592.2				Slip Stop & HW Plug set at 61.00mKB on 2/20/2004 20:00								
2,828.0	2,774.3				Tubing Description Slip Stop & HW Plug	String Max N... 45.9	Wt (kg/m)	String Grade					
2,849.0	2,794.4				Comment No positive test on lower plug prior to setting, tbg full of inhibited fluid. Slip stop set at 54mCF.								
2,861.0	2,805.8												
2,862.4	2,807.1												
2,878.0	2,821.8												

**Canadian Natural****Downhole Schematic (Gov't Submission)****ANADARKO ARROWHEAD RIVER I-75**

Current Event (UWI)	Surface Legal Location	License #	Field Name	Province
300/I-75-60.40-122.45/00		NT001981	FT LIARD	N.W.T
Well Profile Directional	Fluid Type Deep Gas	Original KB Elevation (m)	KB-Ground Distance (m)	KB-Casing Flange Distance (m)
517.90			7.10	6.96
517.90				
Directional - Original Hole, 3/3/2023 2:01:40 PM				
MD (mKB)	TVD (mKB)	Vertical schematic (actual)		
0.0	0.0			
7.1	7.1			
9.0	9.0			
9.1	9.1			
10.0	10.0			
470.0	469.9			
607.1	607.0			
642.2	642.0			
642.5	642.3			
655.0	654.8			
656.5	656.3			
657.0	656.8			
697.0	696.8			
1,236.0	1,235.1			
1,253.0	1,252.0			
1,658.0	1,643.8			
1,684.0	1,668.6			
1,774.0	1,755.4			
1,812.0	1,792.0			
2,475.0	2,432.5			
2,525.0	2,481.1			
2,525.4	2,481.5			
2,543.1	2,498.7			
2,553.6	2,508.9			
2,554.4	2,509.7			
2,554.5	2,509.8			
2,557.5	2,512.7			
2,557.8	2,513.0			
2,558.0	2,513.2			
2,559.2	2,514.4			
2,559.5	2,514.7			
2,567.4	2,522.4			
2,567.6	2,522.5			
2,574.0	2,528.8			
2,586.0	2,540.5			
2,587.8	2,542.2			
2,588.0	2,542.4			
2,633.0	2,586.3			
2,639.0	2,592.2			
2,828.0	2,774.3			
2,849.0	2,794.4			
2,861.0	2,805.8			
2,862.4	2,807.1			
2,878.0	2,821.8			



Canadian Natural

Daily Service Report (Gov't Submissions)

ANADARKO ARROWHEAD RIVER I-75

Job: Abandonment
Report #: 1.0

1/12/2023 07:00 to 1/12/2023 16:00

Current Event (UWI) 300/I-75-60.40-122.45/00		Surface Legal Location	License # NT001981		Field Name FT LIARD	Province N.W.T
WI (%) 100.00	Objective				Plug Back Depth (mKB)	
Job Start Date 1/12/2023	Ground Elevation (m) 510.80	Tubing Head Elevation (m) 0.00	KB-TH (m) 517.90	Casing Pressure (kPa)	Tubing Pressure (kPa) 2,600	Set Depth (MD) (mKB) 2,588.00
Job End Date 2/10/2023	Original KB Elevation (m) 517.90	Casing Flange Elevation (m) 510.94	KB-Casing Flange Distance (m) 6.96	Road Condition Rough	Weather Clear	Temperature (°C) -11

Daily Activities

Morning Ops @ 7am

SR: MIRUSR

Daily Operations Summary

Move wellhead crew to location. Swept location with 4 head gas monitor with no LEL'S or H2S detected. Bubble test SCV = No Bubbles. SITP 2600 KpaDW. Rig in wellhead equipment pulled BPV from tbg hanger. Slickline pull G Pack-off plug from 52 mGL (no change in pressure) Pull Slip stop. Secured well. Rig out all equipment. Travel to A-77 & K-77 for SCV Bubble tests. Travel to camp.

Time Log

Start Time	Dur (hr)	Com
07:00	1.00	Travel from camp to location. Move in Stream Flo, United Safety air hand, Reliance Slickline unit HD0164. Move in Poorboy Picker
08:00	0.50	Review CNRL hazard assessment and TIW plan. Service providers complete HA & JSA for tasks today. Held safety meeting with all personal reviewed hazards of spotting equipment and pulling BPV. Slips, trips, line to fire, pinch points, backing up using spotters, Location just iced in with small amount of snow, Very slippery so make sure workers wearing traction aid.
08:30	1.00	Moved in and spotted Stream flo unit. Check for hazards around wellhead. Bubble test SCV = No bubbles, monitor throughout job. Had safety hand don air pack and checked for any H2S on tbg. No H2S. SITP 2600 KpaDW. Make up 88.9mm Lubricator & screw into BPV. Screw out BPV from Tubing hanger & Lubricate out 88.9mm back pressure valve from tbg hanger which is double check valve BPV. Shut in & secure well. Rig out Stream Flo crew
09:30	0.25	Held safety meeting with Reliance slickline crew & Poorboy Picker. Filled out JSA and reviewed hazards of slickline operations and procedures for pulling plug at 52 mGL.
09:45	2.25	MIRU Reliance slickline unit, BOP's and lubricator purged and pressure tested lubricator with N2 to 7 Mpa (good) RIH with equalizing prong to 52 mGL. Jar down many times with no pressure change. RIH GS pulling tool to 52 mGL. Latch and pull G Pack-off plug. POOH with plug to surface. Found Kobe's knockout broken. RIH RB pulling tool & latch Slip Stop. POOH Slip Stop. Shut in & secure well with double master valves. Rig out Reliance Slickline unit & Picker.
12:00	4.00	Travel to north end of field to Bubble test SCV on A77 & K77. Travel to camp.

Perforations Summary

Date	Zone	Top (mKB)	Btm (mKB)	Type	Com
2/24/2003 00:00	Landry, Original Hole	2,849.00	2,878.00	Open Hole	Perm B/P Set @ 2525mKB PT/7 mpa Capped with 50- lineal m/of "Thermal" Cement1-m3 CMT @ 2475mkb

Daily Fluids Summary

Daily Fluids Summary				Operational Supervisors	
Fluid	To well (m³)	From well (m³)	Left to recover (m³)	Contact	Title
				Jeffrey Willick	Abandonment Ops Mgr.
				Dale Duffy	Superintendent
				Phil Millard	Wellsite Supervisor
				Contractor Reliance Oilfield Services	Rig Number HD0164
				Rig Manager Brent Belanger	



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Daily Service Report (Gov't Submissions)

ANADARKO ARROWHEAD RIVER I-75

Job: Abandonment
Report #: 2.0

1/21/2023 07:00 to 1/21/2023 20:30

Current Event (UWI) 300/I-75-60.40-122.45/00		Surface Legal Location	License # NT001981	Field Name FT LIARD	Province N.W.T
WI (%) 100.00	Objective				Plug Back Depth (mKB)
Job Start Date 1/12/2023	Ground Elevation (m) 510.80	Tubing Head Elevation (m) 0.00	KB-TH (m) 517.90	Casing Pressure (kPa) 0	Tubing Pressure (kPa) 2,520
Job End Date 2/10/2023	Original KB Elevation (m) 517.90	Casing Flange Elevation (m) 510.94	KB-Casing Flange Distance (m) 6.96	Road Condition Rough	Set Depth (MD) (mKB) 2,588.00

Daily Activities

Morning Ops @ 7am

SR: Circulate Well To Fresh Water

Daily Operations Summary

Spot PD 829 service rig to well on jacks, Rig in pump / tank, P-Tank, Flare Stack And Boiler. Unloaded 63 m3 fresh water in 400 bbl tank. Remove 11" Wellhead And Install 11" BOP stack on well with picker. Stand and rig up PWS 829. Install BPV. Check precharge pressures on accumulator and booster pack. Function test BOPs. Complete PT on all BOP components. Remove BPV. MIRUWL, RT Gauge Ring To 2553 mkb, RIH Jet Cutter, Log Onto Depth, Jet Cut Tubing Above On / Off @ 2552.50 mkb. ROWL, Unable To Pull Free At 50 Dan, Would Not Rotate Free, Attempted Pumping Down Casing, Solid @ 7 Mpa, RUWL, RIH Jet Cutter, Log Onto Depth @ 2543 mkb, Cut Tubing, ROMOWL, Pull Tubing Free @ 42 Dan.

Time Log

Start Time	Dur (hr)	Com
07:00	0.50	07:00 - 07:30 Hrs - Complete a detailed Safety MTG with PWS (Service Rig Crew), Skyline, PoorBoy and United safety. Review CNRL, PWS, Skyline, PoorBoy, United Safety Policy's & Procedures, Review Transportation of injured worker Plan. Fire & Explosion Plan, Medic Locations, Ensure OROGO, OHS, CNRL, Policies are followed. Review CNRL 4-Pillars/KPI's, Review site specific Job details/JSA's, Detailed discussion on crew positioning, critical tasks and emergency muster points. Sweep lease and wellhead area for LEls and H2S, lease clear.
07:30	5.50	07:30 - 13:00 Hrs - Pack up qualified worker and air hand, check well pressures (2350 kpa tbg - 0 kap csg) No signs of H2S. Rig in testers line from well to P-Tank, pressure bled off instantly. Break apart 11" wellhead and remove with PoorBoy picker. Install 11" BOPs and Annular with picker. Rig in pump & tank, boiler, P-tank and flare stack. Back in and spot rig 829 on jacks. Complete level 1 inspection on mast raising components, stand and scope mast. Rig in working floor, stairs and handrails. Ensure all OROGO, CNRL, OHS and company specific regulations are followed. Rig in accumulator, spare bottles and booster pack. Install BPV in tubing.
13:00	2.00	13:00 - 15:00 Hrs - Check pre-charge pressures on all bottles in system: Bottle # 1 = 6800 kpa - Bottle # 2 = 6800 kpa - Bottle # 3 = 6800 kpa - Bottle # 4 = 6800 kpa - Bottle # 5 = 6800 kpa - Bottle # 6 = 6800 kpa - Bottle # 7 = 6800 kpa - Bottle # 8 = 6800 kpa - Bottle # 9 = 6500 kpa - Bottle # 10 = 6100 kpa. N2 Bottles as follows: Bottle # 1 = 14,000 kpa - Bottle # 2 = 14,000 kpa - Bottle # 3 = 15,200 kpa - Bottle # 4 = 13,800 kpa. Start pressure for accumulator = 14,000 kpa, After closing pipe rams, blind rams and annular a final pressure of 9500 kpa remained. Recharge time was 1 min 35 seconds. Change out pipe rams from 73 mm to 88.9 mm. Tie in pump line to working spool, pressure test pipe rams and blind rams (1.4 Mpa low - 32 Mpa high) 10 min test good. Pressure test Annular (1.4 Mpa low - 7 Mpa high) 10 min test good. Rig out pump lines.
15:00	5.00	15:00 - 20:00 Hrs - Hold PJSM with Eclipse Wireline. MU 70 mm gauge ring, lower blocks and pull 3 dan over string (31 Dan total) rig in wireline unit, BOP and lube. RIH gauge ring to 2553 mkb, (On - Off). Surfaced wireline and gauge ring. MU 60.3 mm jet cutter, Pickup, RIH and coorolate onto depth, Pick up 0.5 m and Set cutter @ 2552.50 mkb. Set off charges and cut tubing. Surface wireline and cutter, rig out lube and BOP laying out on catwalk. ROWL. Pull up on tubing string to 50 dan multiple times, attempted rotating but still unable to pull free. Tie pump line into casing and attempted to circulate, pressure up solid @ 7 Mpa. Rig out pump line. RUWL, Pickup, RIH and coorolate onto depth, Set cutter @ 2543 mkb. Set off charges and cut tubing. Surface wireline and cutter, ROMOWL. Pull tubing free @ 42 Dan.
20:00	0.50	20:00 - 20:30 Hrs - Shut, cap and secure well. Clean up tools and winterize equipment. SDFN.

Perforations Summary

Date	Zone	Top (mKB)	Btm (mKB)	Type	Com
2/24/2003 00:00	Landry, Original Hole	2,849.00	2,878.00	Open Hole	Perm B/P Set @ 2525mKB PT/7 mpa Capped with 50- lineal m/of "Thermal" Cement1-m3 CMT @ 2475mkb

Daily Fluids Summary

Fluid	To well (m ³)	From well (m ³)	Left to recover (m ³)	Operational Supervisors
Fresh Water				Contact Jeffrey Willick Abandonment Ops Mgr.
				Title Dale Duffy Superintendent
				Mike Loveless Well Site Supervisor
				Contractor Precision Well Servicing Rig Number 829
				Anthony Klimm



Canadian Natural

Daily Service Report (Gov't Submissions)

ANADARKO ARROWHEAD RIVER I-75

Job: Abandonment
Report #: 3.0

1/22/2023 07:00 to 1/22/2023 19:00

Current Event (UWI) 300/I-75-60.40-122.45/00		Surface Legal Location	License # NT001981	Field Name FT LIARD	Province N.W.T
WI (%) 100.00	Objective				Plug Back Depth (mKB)
Job Start Date 1/12/2023	Ground Elevation (m) 510.80	Tubing Head Elevation (m) 0.00	KB-TH (m) 517.90	Casing Pressure (kPa) 1,000	Tubing Pressure (kPa) 3,500
Job End Date 2/10/2023	Original KB Elevation (m) 517.90	Casing Flange Elevation (m) 510.94	KB-Casing Flange Distance (m) 6.96	Road Condition Rough	Set Depth (MD) (mKB) 2,588.00

Daily Activities

Morning Ops @ 7am
SR: WL Set PBP P/Test Run RBL
Daily Operations Summary S/S Equip Perform Rig Walk around, Hold Pre-Jsm with all personal Function test Equip Circulate well to fresh water 51m3 pumped 51m3 Returned Mob Fluid to tank farm. Remove Tbg Hanger POOH with 267 joints 1- cut off joint and 3 pups 88.9mm Hydro 553Cb to Cat Walk Racks Top fill hole with 4m3 of fresh water Change Handling equip from 88.9mm to 73mm P/Test to 1.4 & 32 Mpa and hold each element on low and high for 10mins each Good Test Bleed off pressure pull Tbg Hanger Secure well winterize equip SDFN.

Time Log

Start Time	Dur (hr)	Com
07:00	0.50	Conduct Pre-JSM with Services, Reviewed CNRL'S Workplace Harassment and Violence Prevention Policy Plan CNRL-OVR-POL-HR-000018 Review Hazard Assessment, TIWP and Fire & Explosion, 4-Pillars of safety, Ensure personal have CNRL CSO Orientation and are fit for duty, Review JSA's and sign off on services Hazard Assessment, Review Abandonment program and job scope, Hot Steam, Proper PPE Check Pressures, Line of fire, swing path, Crush Zones overhead loads, steam lines. Bump test personal 4 head monitor and H2S monitors Slips & Trips Know muster points and plan escape routes. Use 3 point contact at all times. Traffic Moving Equip Blind Spots and Spotters Circulating well to Fresh Water Laying out 88.9mm HYDRO Tbg Good Communication at all time.
07:30	3.50	Function Test SR Equip Crown Saver Air Kills and Ram Savers Do Rig Walk around, R/I Circu Equip and Reverse Circulate well to fresh water Pressured up to 7Mpa with no luck circulating or pulling Tbg Free Switch to Forward Circulate pulled to 50 DaN kicked in pump tbg came free, string weight went to 26 DaN Continue circulating Monitor Returns perform Dragger Pull on Fluid 40 PPM H2S in Returns No Gas Flared 51m3 Pumped 51m3 Returned R/O Circu equip. Monitor Pressures well is static.
11:00	6.50	Pull & Remove Cooper Cameron 177.8mm Tbg Hanger, POOH to Cat walk Racks with 88.9mm Hydril-553CB Performed BOP Drill on joint # 47 while POOH with Tbg Good Drill well secured in 45 Sec's, Top fill hole with 4m3 while pulling out of hole, total Tbg Pulled 267 joints 1-cut off joint and 3 pups
17:30	1.50	Land Tbg Hanger De-Energized BOP System Secure Leg Bolts Change Handling Equip from 88.9mm to 73mm P/Test Pipe Rams to 1.4 and 32 Mpa and hold each element on low and high for 10mins each Good Test Bleed off pressure pull Tbg Hanger Secure well winterize equip SDFN.

Perforations Summary

Date	Zone	Top (mKB)	Btm (mKB)	Type	Com
2/24/2003 00:00	Landry, Original Hole	2,849.00	2,878.00	Open Hole	Perm B/P Set @ 2525mKB PT/7 mpa Capped with 50- lineal m/of "Thermal" Cement 1-m3 CMT @ 2475mkb

Daily Fluids Summary

Fluid	To well (m³)	From well (m³)	Left to recover (m³)	Contact	Title
Fresh Water	51.00	0.00	51.00	Jeffrey Willick	Abandonment Ops Mgr.
Produced Water	0.00	51.00	-51.00	Dale Duffy	Superintendent
				Mike Loveless	Well Site Supervisor
				Contractor Precision Well Servicing	Rig Number 829
				Rig Manager Anthony Klimm	



Canadian Natural

Daily Service Report (Gov't Submissions)

ANADARKO ARROWHEAD RIVER I-75

Job: Abandonment
Report #: 4.0

1/23/2023 07:00 to 1/23/2023 19:00

Current Event (UWI) 300/I-75-60.40-122.45/00		Surface Legal Location	License # NT001981	Field Name FT LIARD	Province N.W.T
WI (%) 100.00	Objective				Plug Back Depth (mKB)
Job Start Date 1/12/2023	Ground Elevation (m) 510.80	Tubing Head Elevation (m) 0.00	KB-TH (m) 517.90	Casing Pressure (kPa) 0	Tubing Pressure (kPa)
Job End Date 2/10/2023	Original KB Elevation (m) 517.90	Casing Flange Elevation (m) 510.94	KB-Casing Flange Distance (m) 6.96	Road Condition Rough	Set Depth (MD) (mKB) 2,588.00

Daily Activities

Morning Ops @ 7am

SR: Run Tbg Balance Cement Plug

Daily Operations Summary

S/S Equip Perform Rig Walk around, Hold Pre-Jsm with all personal Function test Equip Spot & R/I Eclipse wireline RIH with 147mm G/Ring to 2531.3Mkb Run Perform RBL 75-95 High speed to Bottom 15 Meter p/min POOH Run set PBP at 2525Mkb top fill w/.5m3 P/Test to 7200Kpa 10min Final Results 7191Kpa Good RIH with 73mm tbg to 496Mkb 52 joints secure well Winterize Equip SDFN.

Time Log

Start Time	Dur (hr)	Com
07:00	0.50	Conduct Pre-JSM with Services, Reviewed CNRL'S Workplace Harassment and Voilence Prevention Policy Plan CNRL-OVR-POL-HR-000018 Review Hazard Assessment, TIWP and Fire & Explosion, 4-Pillars of safety, Ensure personal have CNRL CSO Orientation and are fit for duty, Review Jsa's and sign off on services Hazard Assessment, Review Abandonment program and job scope, Hot Steam, Proper PPE Check Pressures, Line of fire, swing path, Crush Zones overhead loads, steam lines. Bump test personal 4 head monitor and H2S monitors Slips & Trips Know muster points and plan escape routes. Use 3 point contact at all times. Traffic Moving Equip Blind Spots and Spotters R/I Eclipse Wireline G/Ring Explosive setting for PBP P/Testing PBP High pressure Running Tbg off of Catwalk Good Communication at all time.
07:30	7.00	Function Test SR Equip Crown Saver Air Kills and Ram Savers Do Rig Walk around, SICP= 0 H2S= 0 R/I Eclipse wireline RIH with 147mm G/Ring to Tag at 2531.3 GL tagged 3-times Pull strip Collar @ 2530 GL Inform Calgary with Results of G/Ring Run Wait on Approval from NWT OROGO Calgary Changed Order of Program Well be running RBL log while waiting on Approval for PBP Setting Depth POOH with G/Ring. Make up & RIH with RBL tools High speed overview @ 75-95 meters per min to 2531.3 GL POOH at 15-17 meters per min to surface, Bottom Hole Temp 153* C
14:30	1.50	Make up BHA & RIH with 177.8mm PBP on wireline Coralate to Packer Setting Log GR-CCL and previously pulled Strip and set PBP @ 2525Mkb pull up 3 meters RIH slow and tag PBP @ 2525Mkb Good Surface Tools. R/O Release Eclipse Wireline
16:00	0.50	R/I Circu equip to Csg Top fill hole with .5m3 of Fresh Water and P/Test PBP Set @ 2525Mkb to 7200Kpa for 10mins Final Results 7191Kpa DW Good Test Bleed off pressure
16:30	2.50	RIH with Open Ended Tbg to 496Mkb 52 joints secure well Winterize Equip SDFN.

Perforations Summary

Date	Zone	Top (mKB)	Btm (mKB)	Type	Com
2/24/2003 00:00	Landry, Original Hole	2,849.00	2,878.00	Open Hole	Perm B/P Set @ 2525mKB PT/7 mpa Capped with 50- lineal m/of "Thermal" Cement1-m3 CMT @ 2475mkb

Daily Fluids Summary

Daily Fluids Summary				Operational Supervisors	
Fluid	To well (m³)	From well (m³)	Left to recover (m³)	Contact	Title
Fresh Water			51.00	Jeffrey Willick	Abandonment Ops Mgr.
Produced Water	0.00	0.00	-51.00	Dale Duffy	Superintendent
				Mike Loveless	Well Site Supervisor
				Contractor Precision Well Servicing	Rig Number 829
				Rig Manager Anthony Klimm	



Canadian Natural

Daily Service Report (Gov't Submissions)

ANADARKO ARROWHEAD RIVER I-75

Job: Abandonment
Report #: 5.0

1/24/2023 07:00 to 1/24/2023 19:00

Current Event (UWI) 300/I-75-60.40-122.45/00		Surface Legal Location		License # NT001981		Field Name FT LIARD		Province N.W.T
WI (%) 100.00	Objective						Plug Back Depth (mKB)	
Job Start Date 1/12/2023		Ground Elevation (m) 510.80	Tubing Head Elevation (m) 0.00	KB-TH (m) 517.90	Casing Pressure (kPa) 0	Tubing Pressure (kPa)	Set Depth (MD) (mKB) 2,588.00	
Job End Date 2/10/2023		Original KB Elevation (m) 517.90	Casing Flange Elevation (m) 510.94	KB-Casing Flange Distance (m) 6.96	Road Condition Rough	Weather Clear	Temperature (°C) -21	

Daily Activities

Morning Ops @ 7am

SR: Pull Tubing Rig Out

Daily Operations Summary

S/S Equip Hold Pre-Jsm with all personal Function test equip, RIH with 73mm tbg to CMT @ 2525Mkb R/I Cementers Batch Spot 1m3 of Cement CMT 2475Mkb R/O Release Cementers Pulled 8 joints Back washed 15m3 of Fresh Water Release Vac Truck, POOH with 204 joints Secure well winterize Equip SDFN.

Time Log

Start Time	Dur (hr)	Com
07:00	0.50	Conduct Pre-JSM with Services, Reviewed CNRL'S Workplace Harassment and Voilence Prevention Policy Plan CNRL-OVR-POL-HR-000018 Review Hazard Assessment, TIWP and Fire & Explosion, 4-Pillars of safety, Ensure personal have CNRL CSO Orientation and are fit for duty, Review Jsa's and sign off on services Hazard Assessment, Review Abandonment program and job scope, Hot Steam, Proper PPE Check Pressures, Line of fire, swing path, Crush Zones overhead loads, steam lines. Bump test personal 4 head monitor and H2S monitors Slips & Trips Know muster points and plan escape routes. Use 3 point contact at all times. Traffic Moving Equip Blind Spots and Spotters Running Tbg off of Catwalk R/I Cementers Porper PPE Cement Dust Review MSDS Good Communication at all time.
07:30	0.50	Function Test SR Equip Crown Saver Air Kills and Ram Savers Do Rig Walk around, SICP= 0 H2S= 0
08:00	4.00	Continue in Hole with 73mm tbg to PBP @ 2525Mkb tagged with Joint 265 Jts to tag with .3 in pull joint 265 and layout total 264 Joints with 1 meter stick up Bottom of tbg @ 2524.5Mkb.
12:00	0.50	Held Pre-Jsm with all personal. Filled out hazard assessment and JSA for cementing. Identified all hazards. High pressure lines, steam, cement and addtives, noise from vacuum truck.
12:30	2.50	MIRU Charger pumping solutions. Break Circulation with Rig Pump Good 1 m3 Rig in iron on tbg and pump line onto csg, take on 580Ltrs to batch Pressure tested iron to 14000kPa. Mixed up 1m3 Thermal-40 @1800kg/m3. Addtives CHRT-H .8 % CHDF-L .2% CHGC-2 2% Circulated to bottom with 7.30m3 fresh water at 400L/min holding no back pressure pump pressure at 3029Kpa Balanced plug. Break off iron pulled and layed down 8 jts and 10" pup. Rig out cementers Leaving 50 lineal meters of Thermal cement on Cement top at 2525Mkb CMT @ 2475Mkb. Rig in Circu Equip pump line on to csg and Return line to tbg. Backed washed tbg with 15m3 Release Vac Truck
15:00	4.00	R/O Circu Equip Check Pressures Well is static open Pipe Rams and POOH with 73mm work string to Catwalk Racks with 204 Joint Secure well Winterize Equip SDFN.

Perforations Summary

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Daily Fluids Summary

Daily Fluids Summary				Operational Supervisors	
Fluid	To well (m³)	From well (m³)	Left to recover (m³)	Contact	Title
Fresh Water	0.00	0.00	51.00	Jeffrey Willick	Abandonment Ops Mgr.
Produced Water			-51.00	Dale Duffy	Superintendent
				Mike Loveless	Well Site Supervisor
				Contractor Precision Well Servicing	Rig Number 829
				Rig Manager Anthony Klimm	



Canadian Natural

Daily Service Report (Gov't Submissions)

ANADARKO ARROWHEAD RIVER I-75

Job: Abandonment
Report #: 6.0

1/25/2023 07:00 to 1/25/2023 19:00

Current Event (UWI) 300/I-75-60.40-122.45/00		Surface Legal Location	License # NT001981	Field Name FT LIARD	Province N.W.T
WI (%) 100.00	Objective				Plug Back Depth (mKB)
Job Start Date 1/12/2023	Ground Elevation (m) 510.80	Tubing Head Elevation (m) 0.00	KB-TH (m) 517.90	Casing Pressure (kPa) 0	Tubing Pressure (kPa) 0
Job End Date 2/10/2023	Original KB Elevation (m) 517.90	Casing Flange Elevation (m) 510.94	KB-Casing Flange Distance (m) 6.96	Road Condition Rough	Set Depth (MD) (mKB) 2,588.00

Daily Activities

Morning Ops @ 7am
C&C: Ready For Cut & Cap
Daily Operations Summary
SR S/S equip Hold Pre-Jsm with all Personal SITP=0 SICP= 0 H2s= 0 Function test equip POOH with 40 joints Top fill hole POOH with Remaing Tbg Mob Tbg to A-68 Mob Water From Location R/O SR Split & Remove BOP Stack onto Skid R/O SR Equip Testers and Flare Stack Move SR & Equip to 300/A-68-60.50-122.30/00
Perform 10 min bubble test 0 bubbles at time of test (Passed)

Time Log

Start Time	Dur (hr)	Com
07:00	0.50	Conduct Pre-JSM with Services, Reviewed CNRL'S Workplace Harassment and Violence Prevention Policy Plan CNRL-OVR-POL-HR-000018 Review Hazard Assessment, TIWP and Fire & Explosion, 4-Pillars of safety, Ensure personal have CNRL CSO Orientation and are fit for duty, Review JSA's and sign off on services Hazard Assessment, Review Abandonment program and job scope, Hot Steam, Proper PPE Check Pressures, Line of fire, swing path, Crush Zones overhead loads, steam lines. Bump test personal 4 head monitor and H2S monitors Slips & Trips Know muster points and plan escape routes. Use 3 point contact at all times. Traffic Moving Equip Blind Spots and Spotters Rigging out SR & Equip Good Communication at all time.
07:30	2.00	Function Test SR Equip Crown Saver Air Kills and Ram Savers Do Rig Walk around, SITP= 0 SICP= 0 H2S= 0 Continue OOH with 73mm Tbg top fill hole with 20 joints in hole Continue OOH with Tbg,
09:30	3.50	R/O Work floor and power Tongs, Split Stack & Remove BOPS with Pooboy Picker install & secure well Head R/O SR & Equip prepare to Move to 300/A-68-60.50-122.30/00 Move P/Tank and Flare Stack, 73mm Work string, 400 Brl and Pump & Tank Move SR & Equip to 300/A-68-60.50-122.30/00 Move in Spot Equip

Perforations Summary

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Produced Water	0.00	0.00	-51.00	Dale Duffy	Superintendent
				Mike Loveless	Well Site Supervisor
				Contractor Precision Well Servicing	Rig Number 829
				Rig Manager Anthony Klimm	



Canadian Natural

Daily Service Report (Gov't Submissions)

ANADARKO ARROWHEAD RIVER I-75

Job: Abandonment
Report #: 7.0

2/10/2023 12:30 to 2/10/2023 18:00

Current Event (UWI) 300/I-75-60.40-122.45/00		Surface Legal Location		License # NT001981		Field Name FT LIARD		Province N.W.T
WI (%) 100.00	Objective						Plug Back Depth (mKB)	
Job Start Date 1/12/2023		Ground Elevation (m) 510.80	Tubing Head Elevation (m) 0.00	KB-TH (m) 517.90	Casing Pressure (kPa) 0	Tubing Pressure (kPa)	Set Depth (MD) (mKB) 2,588.00	
Job End Date 2/10/2023		Original KB Elevation (m) 517.90	Casing Flange Elevation (m) 510.94	KB-Casing Flange Distance (m) 6.96	Road Condition Rough	Weather Clear	Temperature (°C) -17	

Daily Activities

Morning Ops @ 7am

RR: Ready for Reclamation

Daily Operations Summary

Conduct SCV/ GM test, both good. Dig up 2.5 M around well. Welder cut off wellhead. Weld vented plate between Surface & Production Casings. Weld on vented cap with ID #1981. Push in 5 M 73mm Jnt 1 M North of well centre. Back-fill hole with clean dirt. Make up sign with ID #, Company name, Date of Cut & Cap, Coordinates with NAD 83. Production casing cut 2 M below original ground level, Lease is ready for reclamation.

Time Log

Start Time	Dur (hr)	Com
12:30	0.50	Checked with GM tester no ppm's. Conduct Gas Migration test; Take 4 readings at 90° around casing, at a 2 meter radius and at a 6 m radius around well as per CNRL SCVF & GM Testing - Operational Procedures (July 2011). Recorded 0 ppm readings at all locations. SCVF/GM testing done as per CNRL SCVF & GM Testing – Operational Procedure: No issues. Ensure vent is clear. Bubble test SCV for 15 min (No Bubbles)
13:00	5.00	Travel to location Sweep work area with bump tested LEL monitor 0 - LEL's & 0 - PPM H2S. Conduct pre job safety meeting with services complete and review, Hazard Assessment, TIW and OROGO Regulations. Ensure all personnel have had CSO or PST Orientation. Review Beaver Enterprises & Nahanni Hazard Assessment. Dig down 2.5 M below GL. Weld vented plate between Surface & Production Casings. Weld on 177.8mm vented cap with ID #1981. Push in 5 M 73mm Jnt 1 M North of well centre. Back-fill hole with clean dirt. Make up sign with ID #, Company name, Date of Cut & Cap, Coordinates with NAD 83. Spray paint Sign & post Orange. Well cut 2 M below original ground level Ensure pictures of operations are in attachments. No Grd Dist as confirm no under ground lines in this field. Lease is now cleaned up. Well is Cut & Capped Feb 10 2023 Well is now ready for reclamation.

Perforations Summary

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Produced Water	0.00	0.00	-51.00	Dale Duffy	Superintendent
				Phil Millard	Wellsite Supervisor
				Contractor	Rig Number
				Rig Manager	