



Well Operations Report

Well Name: ARROWHEAD RIVER F-56
UWI: 300/F-56-60.40-122.45/00
License #: WID1978
Field: FT LIARD (5501)
Profile: Directional
Zone: Keg River - Headless - Landry
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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Downhole Schematic (Gov't Submission)

ANADARKO ARROWHEAD RIVER F-56

Current Event (UWI) 300/F-56-60.40-122.45/00		Surface Legal Location		License # NT001978		Field Name FT LIARD			Province N.W.T				
Well Profile Directional	Fluid Type Deep Gas	Original KB Elevation (m)	595.50	KB-Ground Distance (m)	6.40	KB-Casing Flange Distance (m)	6.40	KB-Tubing Head Distance (m)	595.50				
Latitude (°) 60° 35' 29.911" N	Longitude (°) 122° 55' 46.11" W	Orig Spud Date 1/21/2004	Orig RR Date 2/6/2004	C&C Date 1/23/2023	GW Protected? Yes	BGWP (mKB) 606.40	Oilsand Area No	H2S Classification Sour					
Directions To Well Refer to aerial photos. No survey in files. From Ft. Liard, NWT Jtn: NE on Hwy #7 approx. 34km to 72k Rd, follow 72k Rd to 35.5km, turn right for 1.0km into													
Directional - Original Hole, 2/17/2023 1:58:37 PM					SCVF & GM Tests (Last 2 Records)								
MD (mKB)	TVD (mKB)	Vertical schematic (actual)			Test Date	Test Type	Failed?						
6.1	6.1				1/23/2023	Gas Migration	No						
6.4	6.4				1/23/2023	SCVF	No						
8.4	8.4				Openhole Information								
20.0	20.0				Section Des	Size (mm)	Top (mKB)	Bottom (mKB)					
375.0	375.0				Conductor	609.6	6.40	20.00					
602.0	601.9				Surface	311.2	20.00	663.00					
650.9	650.8				Intermediate 1	215.9	663.00	2,475.00					
663.0	662.9				Main 1	155.6	2,475.00	2,847.00					
665.0	664.9				Casing Strings								
711.0	710.9				Csg Des	OD (mm)	Wt/Len (kg/m)	Grade	Top (mKB)	Set Depth (MD) (mKB)			
1,225.0	1,224.6				Conductor	508.0	139.887	K-55	8.40	22.00			
1,655.5	1,655.0				Surface	244.5	59.527	L-80	8.40	665.00			
1,780.0	1,779.5				Intermediate	177.8	38.692	L-80	8.40	2,477.00			
2,399.8	2,398.3				Liner	114.3	17.263	L-80	2,406.1	2,846.50			
2,406.0	2,404.4				Cement Stages								
2,408.0	2,406.4				Description	Cementing Start Date	Top Depth (mKB)	Btm (mKB)	Vol Cement Re...				
2,408.8	2,407.2				Conductor Cement		8.40	20.00	0.10				
2,448.9	2,447.3				Comment	5.8 tonnes G + 2.0% CaCl ₂ , assumed cement to surface							
2,474.0	2,472.9				Description	Cementing Start Date	Top Depth (mKB)	Btm (mKB)	Vol Cement Re...				
2,476.6	2,475.5				Surface Cement	3/10/2003	8.40	663.00	4.00				
2,529.0	2,527.9				Comment	37.0 tonnes G, no additives, 4.0m3 cement returns							
2,582.0	2,580.7				Description	Cementing Start Date	Top Depth (mKB)	Btm (mKB)	Vol Cement Re...				
2,612.1	2,610.6				Intermediate Cement	3/22/2003	375.00	2,475.00	0.00				
2,616.0	2,614.5				Comment	27.0 tonnes G (24 m3) lead @ 1682 kg/m ³ , Tail with 3.2 tonnes (2.4 m3) Gasbond LT Thermal 40 F @ 1876 kg/m ³ , 4 m3 lead water returns (of 6 m3 pumped). TOC calculated @ 340 mKB based on water returns.							
2,616.6	2,615.1				Description	Cementing Start Date	Top Depth (mKB)	Btm (mKB)	Vol Cement Re...				
2,620.7	2,619.1				Liner Cement	2/3/2004	2,406.12	2,846.50	2.50				
2,624.0	2,622.4				Comment	6.7 tonnes G + 40% SSA-1 + 0.6% Halad 344 + 0.5% CFR-3 + 0.3% HR-12.							
2,627.3	2,625.7				Perforations								
2,637.0	2,635.3				Zone	Top (mKB)	Btm (mKB)	Current Status					
2,668.0	2,666.1				Keg River, Original Hole	2,635.00	2,644.00	Abandoned					
2,685.0	2,682.9				Keg River, Original Hole	2,668.00	2,674.00	Open - Not Flowing					
2,711.0	2,708.7				Headless, Original Hole	2,697.00	2,711.00	Open - Not Flowing					
2,726.0	2,723.5				Headless, Original Hole	2,718.00	2,726.00	Open - Not Flowing					
2,750.5	2,747.7				Landry, Original Hole	2,748.00	2,762.00	Open - Not Flowing					
2,788.2	2,784.9				Tubing Strings								
2,833.5	2,829.6				Tubing - Production set at 2,627.30mKB on 3/22/2004 00:00								
2,846.0	2,841.9				Tubing Description	String Max N...	Wt (kg/m)	String Grade					
2,847.0	2,842.9				Tubing - Production	60.3	6.994	J-55					
Comment					Wellhead installed nad pressure tested to 7 MPa - 2/6/2004.								
Packer pressure tested, no details - 3/22/2004.					PX Plug set in on-off, no mention of pressure test. G pack off landed on collar stop at 48.5 mCF and BPV installed in tubing hanger - 3/31/2004.								
Tubing Components					Tubing Components								
1-1	1	WCS QDG Packer - coated	98.5	50.7	1.28	2,616.36	2,617.64						
1-2	1	Tubing Pup Joint - coated	60.3	50.7	3.04	2,617.64	2,620.68						
1-3	1	X Nipple 47.5mm - coated	60.3	47.5	0.28	2,620.68	2,620.96						
1-4	1	Perforated Pup Joint - coated	60.3	50.7	3.07	2,620.96	2,624.03						
1-5	1	Tubing Pup Joint - coated	60.3	50.7	3.09	2,624.03	2,627.12						
1-6	1	Re-entry Guide 44.6mm No-Go - co...	60.3	44.6	0.18	2,627.12	2,627.30						



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Downhole Schematic (Gov't Submission)

ANADARKO ARROWHEAD RIVER F-56

Current Event (UWI)	Surface Legal Location	License #	Field Name	Province
300/F-56-60.40-122.45/00		NT001978	FT LIARD	N.W.T
Well Profile	Fluid Type	Original KB Elevation (m)	KB-Ground Distance (m)	KB-Casing Flange Distance (m)
Directional	Deep Gas	595.50	6.40	6.40
Directional - Original Hole, 2/17/2023 1:58:38 PM		Other In Hole		
MD (mKB)	TVD (mKB)	Vertical schematic (actual)		
- 6.1	6.1			
- 6.4	6.4			
- 8.4	8.4			
- 20.0	20.0			
- 375.0	375.0			
- 602.0	601.9			
- 650.9	650.8			
- 663.0	662.9			
- 665.0	664.9			
- 711.0	710.9			
- 1,225.0	1,224.6			
- 1,655.5	1,655.0			
- 1,780.0	1,779.5			
- 2,399.8	2,398.3			
- 2,406.0	2,404.4			
- 2,408.0	2,406.4			
- 2,408.8	2,407.2			
- 2,448.9	2,447.3			
- 2,474.0	2,472.9			
- 2,476.6	2,475.5			
- 2,529.0	2,527.9			
- 2,582.0	2,580.7			
- 2,612.1	2,610.6			
- 2,616.0	2,614.5			
- 2,616.6	2,615.1			
- 2,620.7	2,619.1			
- 2,624.0	2,622.4			
- 2,627.3	2,625.7			
- 2,637.0	2,635.3			
- 2,668.0	2,666.1			
- 2,685.0	2,682.9			
- 2,711.0	2,708.7			
- 2,726.0	2,723.5			
- 2,750.5	2,747.7			
- 2,788.2	2,784.9			
- 2,833.5	2,829.6			
- 2,846.0	2,841.9			
- 2,847.0	2,842.9			
		Formation Tops		
		Formation Name	Top (mKB)	Com
		Scatter	525.00	Porous - behind surface casing
		Garbutt	602.00	Behind surface casing
		Base Ground Water	606.40	OROGO Default
		Chinkeh	701.00	Porous
		Banff	711.00	Porous
		Exshaw	1,200.00	Tight
		Kotcho	1,225.00	Tight
		Tetcho	1,622.00	Tight
		Trout River	1,655.50	Tight
		Kakisa	1,744.00	Tight
		Fort Simpson	1,780.00	Tight
		Muskwa	2,460.50	Tight
		Slave Point	2,474.00	Porous streaks, no potential
		Watt Mountain	2,574.00	Tight
		Sulphur Point	2,582.00	Porous stringers, no potential
		Keg River	2,637.00	Tight
		Headless	2,685.00	Tight
		Landry	2,750.50	Porous
		Arnica	2,809.50	Tight



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Daily Service Report (Gov't Submissions)

ANADARKO ARROWHEAD RIVER F-56

Job: Abandonment
Report #: 1.0

1/5/2023 07:30 to 1/5/2023 18:00

Current Event (UWI) 300/F-56-60.40-122.45/00		Surface Legal Location		License # NT001978		Field Name FT LIARD		Province N.W.T
WI (%) 100.00	Objective						Plug Back Depth (mKB)	
Job Start Date 1/5/2023		Ground Elevation (m) 589.10	Tubing Head Elevation (m) 0.00	KB-TH (m) 595.50	Casing Pressure (kPa)	Tubing Pressure (kPa)	Set Depth (MD) (mKB) 2,846.50	
Job End Date 1/23/2023		Original KB Elevation (m) 595.50	Casing Flange Elevation (m) 589.10	KB-Casing Flange Distance (m) 6.40	Road Condition Rough	Weather Clear	Temperature (°C) -15	

Daily Activities

Morning Ops @ 7am

SR: Continue to rig in equipment

Daily Operations Summary

Moved rig equipment to location unload. Move wellhead crew to location. Swept location with gas rover no LEL'S detected. SCV frozen only in 2 threads. Checked tbg for H2S zero. Rig in wellhead equipment pulled BPV from tbg hanger. Secured well. Rig arrived at 14:30hrs held safety meeting. Spotted equipment stood derrick and secured. Plug in all equipment. SDFN

Time Log

Start Time	Dur (hr)	Com
07:30	0.50	Filled out hazard assessment and tewip. Filled out JSA for tasks today. Held safety meeting with all personal reviewed hazards of spotting equipment and pulling BPV. Slips, trips, line fire, pinch points, backing up using spotters,
08:00	1.00	Traveled from camp to location. Unloaded rig equipment and wait on rig.
09:00	1.00	Moved in and spotted Stream flo unit. Checkd for hazards around wellhead. SCV frozen and only in 2 threads. Had safety hand don air pack and checked for any H2S on tbg. No H2S. SITP zero kPa, SICP zero kPa. Pulled back pressure valve from tbg hanger. Secured well.
10:00	7.00	Service rig traveled from Fort Nelson to location.
17:00	0.50	Held safety meeting with rig crew. Filled out JSA for task fro spotting equipment and standing derrick. Slips, trips, line fire, pinch points, backing up using spotters, Overhead loads, swing paths.
17:30	2.00	Spotting rig equipment, pump, tank, matting, dog house, cat walk. boiler and 64m3 tank. Stood derrick and secured top section. Ran power cords to all equipment. 18:00hrs SDFN

Perforations Summary

Date	Zone	Top (mKB)	Btrn (mKB)	Type	Com
3/16/2004 22:00	Keg River, Original Hole	2,635.00	2,644.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 18:30	Keg River, Original Hole	2,668.00	2,674.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 17:20	Headless, Original Hole	2,697.00	2,711.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 14:30	Headless, Original Hole	2,718.00	2,726.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/12/2004 08:42	Landry, Original Hole	2,748.00	2,762.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATE LANDRY FORMATION MARCH 12, 2004

Daily Fluids Summary

Operational Supervisors					
Fluid	To well (m³)	From well (m³)	Left to recover (m³)	Contact	Title
				Roy Craft	Wellsite Supervisor
				Dale Duffy	Superintendent
				Jeffrey Willick	Abandonment Ops Mgr.
				Ashley Marshall	Rig Manager
				Contractor Precision Well Servicing	Rig Number 119
				Rig Manager Ashley Marshall	



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Daily Service Report (Gov't Submissions)

ANADARKO ARROWHEAD RIVER F-56

Job: Abandonment
Report #: 2.0

1/6/2023 07:30 to 1/6/2023 19:30

Current Event (UWI) 300/F-56-60.40-122.45/00		Surface Legal Location		License # NT001978		Field Name FT LIARD		Province N.W.T
WI (%) 100.00	Objective						Plug Back Depth (mKB)	
Job Start Date 1/5/2023		Ground Elevation (m) 589.10	Tubing Head Elevation (m) 0.00	KB-TH (m) 595.50	Casing Pressure (kPa) 0	Tubing Pressure (kPa) 0	Set Depth (MD) (mKB) 2,846.50	
Job End Date 1/23/2023		Original KB Elevation (m) 595.50	Casing Flange Elevation (m) 589.10	KB-Casing Flange Distance (m) 6.40	Road Condition Rough	Weather Clear	Temperature (°C) -18	

Daily Activities

Morning Ops @ 7am
SR: Stump test bop's and install.
Daily Operations Summary
Continued to rig in equipment. Fired up boiler start heating bop's. MIRU Slickline ran in hole tagged G packoff at 48mcf couldn't pull. Ran in with hydraulic jars and compounder jar free. Pull collar stop. Tried to pressure test tbg failed. Switched to csg to pressure test tbg started pressure up. Filled hole total 2.0m3 got solid pressure test of 7000kPa on csg and tbg. Plug in profile is 100%. Have leaky seals or hole in tbg. Did rig inspection and accumulator function tested bop's. Fire boiler over night.

Time Log

Start Time	Dur (hr)	Com
07:30	0.75	07:30hrs. Serviced and started equipment. Reviewed hazard assessment with all personal on location. Filled out JSA for task today. Identify hazards on location and for each task. Review sop's. Right to refuse unsafe work, working in winter conditions, dress properly, watch for frost bite,Slips trips, pinch point, line fire, swing path, over head loads, high pressure lines or hydraulic hoses accumulator system. Use spotters when backing up and equipment. Stay clear when rasing flare stack. All PPE on and in good condition. Working with steam under pressure hot steam lines using steam hose or wand. Do point steam at any personal have firm grip. Set up TIWEP for location and camp site, Post in dog house, MTU and testers office trailer.
08:15	2.00	Continue rig in equipment. Rig in pump tank lay out pump lines, Fire up boiler and rig in steam lines tarp in bop's and start heating up. Run grounding cables and bond all equipment. Check continuity. Place drip trays under all equipment. Haul in 50m3 of fresh water unload into 64m3 tank. Make sure restraints are in good condition and installed properly. Checked SITP zero kPa. SICP slight vacuum.
10:15	0.25	Held safety meeting with Reliance slickline crew. Filled out JSA and reviewed hazards of slickline operations and procedures for pulling plug and pressure testing.
10:30	4.25	MIRU Reliance slickline unit, bop's and lunricator purged and pressure tested lubricator with N2 each run. Ran equalizing prong tagged at 48mcf jar down several times. Tried to run 89.0mm RB tool tagged tbg hanger had wrong information on down hole. Ran smaller equalizing prong tagged at 48mcf no pressure change. Ran 63.5mm GS pulling tool and latched onto G packoff plug. Jarred by hand for 1 hr couldn't unset plug. Sheared off pulled out of hole. Ran in hole with GS pulling tool with hydraulic jars and compounder and worked for 45min pulling up to 1000lbs. Unset plug and pulled to surface. Found Kobe knockout still intacted. Ran JUC latched onto collar stop and pulled. Rig out slick line.
14:45	3.25	Rig pump line onto tbg and bled off remaining N2 pressure 600kPa. Filled tbg with 0.50m3 of pressure water. Pressure test plug and tbg to 7000kPa. Tbg pressure test failed bled down to zero kPa in 7min. Checked csg had slight blow. Switched pump line to csg filled csg with 1.2m3 fresh water pressured up to 7000kPa. Bleeding off slowly monitored tbg. Tbg started building pressure continued to bump up csg to 7000kPa and tbg pressure came up. Csg and Tbg pressure both stable at 7000kPa. PX plug in profile nipple at 2615.87mKB is holding 100%. Bled off pressure on csg and tbg pressure came down. Drained equipment. Secured well. Boilerman on night shift.

Perforations Summary

Date	Zone	Top (mKB)	Btm (mKB)	Type	Com
3/16/2004 22:00	Keg River, Original Hole	2,635.00	2,644.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 18:30	Keg River, Original Hole	2,668.00	2,674.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 17:20	Headless, Original Hole	2,697.00	2,711.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 14:30	Headless, Original Hole	2,718.00	2,726.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/12/2004 08:42	Landry, Original Hole	2,748.00	2,762.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATE LANDRY FORMATION MARCH 12, 2004

Daily Fluids Summary

Fluid	To well (m³)	From well (m³)	Left to recover (m³)	Operational Supervisors	
				Contact	Title
Fresh Water	2.00	0.00	2.00	Roy Craft	Wellsite Supervisor
				Dale Duffy	Superintendent
				Jeffrey Willick	Abandonment Ops Mgr.
				Ashley Marshall	Rig Manager
				Contractor Precision Well Servicing	Rig Number 119
				Ashley Marshall	



Canadian Natural

Daily Service Report (Gov't Submissions)

ANADARKO ARROWHEAD RIVER F-56

Job: Abandonment
Report #: 3.0

1/7/2023 07:30 to 1/7/2023 19:30

Current Event (UWI) 300/F-56-60.40-122.45/00		Surface Legal Location	License # NT001978	Field Name FT LIARD	Province N.W.T
WI (%) 100.00	Objective				Plug Back Depth (mKB)
Job Start Date 1/5/2023	Ground Elevation (m) 589.10	Tubing Head Elevation (m) 0.00	KB-TH (m) 595.50	Casing Pressure (kPa) 0	Tubing Pressure (kPa) 0
Job End Date 1/23/2023	Original KB Elevation (m) 595.50	Casing Flange Elevation (m) 589.10	KB-Casing Flange Distance (m) 6.40	Road Condition Rough	Set Depth (MD) (mKB) 2,846.50

Daily Activities

Morning Ops @ 7am
SR: Heat up 279mm bop's and stump test
Daily Operations Summary
Stump tested bop's blind rams and pipe rams 1400kPa and 35000kPa, annular 1400kPa and 7000kPa 10 min each. Removed top section wellhead found 179mm tbg hanger screwed into 279mm sleeve. Need 279mm bop stack. Installed wellhead and secured well. Drained equipment. Fired boiler over night.

Time Log

Start Time	Dur (hr)	Com
07:30	0.50	07:30hrs. Serviced and started equipment. Held safety meeting with all personal. Filled out JSA for tasks today and discussed hazards. Line of fire, swing, path, high pressure lines, overhead loads, Working in contested area, steam lines, Right to refuse unsafe work. Dress for weather. Use buddy system. Function tested personal LEL monitor.
08:00	5.00	Stump tested blind rams and 73mm pipe rams 1400kPa low and 35000kPa high. Annular 1400kPa low and 7000kPa high all 10 min each. Thawed out scv on wellhead and installed vent assembly. Did 10 min bubble test no bubbles and no LEL'S. Removed top section of wellhead install 88.9mm hydral c/o sub with 73mm pup jt and safety valve. Found 177.8mm tbg hanger landed in 279mm sleeve. Backed out locking screws tbg hanger is screwed into sleeve. Land tbg hange removed pup jt. Installed top section of wellhead. Drained equipment secured well.
13:00	6.50	Removed wellhead found need 279mm bop stack.

Perforations Summary

Date	Zone	Top (mKB)	Btm (mKB)	Type	Com
3/16/2004 22:00	Keg River, Original Hole	2,635.00	2,644.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 18:30	Keg River, Original Hole	2,668.00	2,674.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 17:20	Headless, Original Hole	2,697.00	2,711.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 14:30	Headless, Original Hole	2,718.00	2,726.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/12/2004 08:42	Landry, Original Hole	2,748.00	2,762.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATE LANDRY FORMATION MARCH 12, 2004

Daily Fluids Summary

Fluid	To well (m³)	From well (m³)	Left to recover (m³)	Operational Supervisors		
				Contact	Title	
Fresh Water			2.00	Roy Craft	Wellsite Supervisor	
				Dale Duffy	Superintendent	
				Jeffrey Willick	Abandonment Ops Mgr.	
				Ashley Marshall	Rig Manager	
				Contractor Precision Well Servicing	Rig Number 119	
				Rig Manager Ashley Marshall		



Canadian Natural

Daily Service Report (Gov't Submissions)

ANADARKO ARROWHEAD RIVER F-56

Job: Abandonment
Report #: 4.0

1/8/2023 07:30 to 1/8/2023 21:30

Current Event (UWI) 300/F-56-60.40-122.45/00		Surface Legal Location		License # NT001978		Field Name FT LIARD		Province N.W.T
WI (%) 100.00	Objective						Plug Back Depth (mKB)	
Job Start Date 1/5/2023		Ground Elevation (m) 589.10	Tubing Head Elevation (m) 0.00	KB-TH (m) 595.50	Casing Pressure (kPa) 0	Tubing Pressure (kPa) 0	Set Depth (MD) (mKB) 2,846.50	
Job End Date 1/23/2023		Original KB Elevation (m) 595.50	Casing Flange Elevation (m) 589.10	KB-Casing Flange Distance (m) 6.40	Road Condition Rough	Weather Overcast	Temperature (°C) -18	

Daily Activities

Morning Ops @ 7am
SR: Pressure test bop's.

Daily Operations Summary

Waited on 279mm bop stack and equipment. Installed BPV and removed wellhead. Have picker install annular on bop's and set on wellhead. Rigged in 4 bottle booster pack and 2 extra N2 bottles. Rigged in floor, stairs, hand rails and tongs. Change rams to 73 mm. Tarp in bop's and cover floor. Secured well. Fire boiler over night.

Time Log

Start Time	Dur (hr)	Com
07:30	0.50	07:30hrs. Serviced and started equipment. Held safety meeting with all personal. Filled out JSA for tasks today and discussed hazards. Line of fire, swing, path, high pressure lines, overhead loads, Working in contested area, steam lines, Right to refuse unsafe work. Dress for weather. Use buddy system. Function tested personal LEL monitor.
08:00	8.00	Wait on 279mm bop stack from GP. Installed BPV in tbg hanger removed top section of wellhead.
16:00	4.50	JDA arrived with 279mm bop stack. Unloaded equipment. Rigged in booster pack and 2 extra N2 bottles. Had picker install annular bop's and set on wellhead. Torqued to spec with hydraulic torque wrench borrowed from Paramount. Rigged in floor, stairs, handrails, v door. Tarp in bop's and floor. Change rams to 73mm. Function tested bop's. Secured well. 21:00hrs SDFN

Perforations Summary

Date	Zone	Top (mKB)	Btrn (mKB)	Type	Com
3/16/2004 22:00	Keg River, Original Hole	2,635.00	2,644.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 18:30	Keg River, Original Hole	2,668.00	2,674.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 17:20	Headless, Original Hole	2,697.00	2,711.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 14:30	Headless, Original Hole	2,718.00	2,726.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/12/2004 08:42	Landry, Original Hole	2,748.00	2,762.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATE LANDRY FORMATION MARCH 12, 2004

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	2.00	Roy Craft	Wellsite Supervisor
Produced Water				Dale Duffy	Superintendent
				Jeffrey Willick	Abandonment Ops Mgr.
				Contractor Precision Well Servicing	Rig Number 119
				Rig Manager Ashley Marshall	



Canadian Natural

Daily Service Report (Gov't Submissions)

ANADARKO ARROWHEAD RIVER F-56

Job: Abandonment
Report #: 5.0

1/9/2023 07:30 to 1/9/2023 19:30

Current Event (UWI) 300/F-56-60.40-122.45/00		Surface Legal Location		License # NT001978		Field Name FT LIARD		Province N.W.T
WI (%) 100.00	Objective						Plug Back Depth (mKB)	
Job Start Date 1/5/2023		Ground Elevation (m) 589.10	Tubing Head Elevation (m) 0.00	KB-TH (m) 595.50	Casing Pressure (kPa) 0	Tubing Pressure (kPa) 0	Set Depth (MD) (mKB) 2,846.50	
Job End Date 1/23/2023		Original KB Elevation (m) 595.50	Casing Flange Elevation (m) 589.10	KB-Casing Flange Distance (m) 6.40	Road Condition Rough	Weather Overcast	Temperature (°C) -20	

Daily Activities

Morning Ops @ 7am

SR: Rig in wireline

Daily Operations Summary

Checked precharge pressures on accumulator and function tested. P/T bop's blind rams and pipe rams 1400kPa low and 34000kPa high, Annular 1400kPa low and 7000kPa high 10 min each. Good test. Came off packer with on/off tools string weight 18000dAN'S. Circulated well to fresh water 50.1m3 to pank. No H2S.

POOH laying down 73mm production string 274 jts 48 with SCC and on/off connector. Drained equipment and secured well. No gas flared while circulating.

Time Log

Start Time	Dur (hr)	Com
07:30	0.50	07:30hrs. Serviced and started equipment. Held safety meeting with all personal. Filled out JSA for tasks today and discussed hazards. Line of fire, swing, path, high pressure lines, overhead loads, steam lines, Right to refuse unsafe work. Dress for weather. Function tested personal LEL monitor.
08:00	2.50	Have 279mm X 35Mpa bop stack. Checked precharge pressures on 10 bottles. (1 7000kPa, 2 7000kPa, 3 7000kPa, 4 7000kPa, 5 7000kPa, 6 7000kPa, 7 7700kPa, 8 7700kPa, 9 7700kPa, 10 7700kPa. N2 bottles 14000kPa, 13500kPa, 15750kPa. Start pressure 16500kPa, close blind rams 12500kPa 12 sec, close pipe rams 11500kPa 12 sec, close annular 9500kPa 60 sec. Recharge time 3 min 18 sec. Pressure tested blind rams and pipe rams 1400kPa low and 34000kPa high. Annular 1400kPa low and 7000kPa high all 10 min each.
10:30	1.50	Removed BPV installed pup jt with 88.9mm c/o sub x 73mm with pup jt and safety valve. Picked up on tbg string rotated to the left and came off packer with on/off tool. Rigged pump line into tbg and testers line in to csg. Pressure tested pump line to 7000kPa. Open stabbing valve circulated well over to fresh water at 0.62m3/min at 7000kPa. Total pumped 50.1m3 fresh water. No H2S detected. Inhibited fluid was foamy. No gas flared.
12:00	7.50	Rig out circulating equipment pulled and layed down 279mm tbg hanger. Pull out of hole laying down 73mm production string total of 274jts 48 with SCC and on/off connector. Filled hole while tripping out 2.8m3. Drained equipment and secured well 19:30hrs SDFN

Perforations Summary

Date	Zone	Top (mKB)	Btm (mKB)	Type	Com
3/16/2004 22:00	Keg River, Original Hole	2,635.00	2,644.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 18:30	Keg River, Original Hole	2,668.00	2,674.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 17:20	Headless, Original Hole	2,697.00	2,711.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 14:30	Headless, Original Hole	2,718.00	2,726.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/12/2004 08:42	Landry, Original Hole	2,748.00	2,762.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATE LANDRY FORMATION MARCH 12, 2004

Daily Fluids Summary

Daily Fluids Summary				Operational Supervisors	
Fluid	To well (m³)	From well (m³)	Left to recover (m³)	Contact	Title
Fresh Water	53.00	0.00	55.00	Roy Craft	Wellsite Supervisor
Produced Water	0.00	50.10	-50.10	Dale Duffy	Superintendent
				Jeffrey Willick	Abandonment Ops Mgr.
				Contractor Precision Well Servicing	Rig Number 119
				Rig Manager Ashley Marshall	



Canadian Natural

Daily Service Report (Gov't Submissions)

ANADARKO ARROWHEAD RIVER F-56

Job: Abandonment
Report #: 6.0

1/10/2023 07:30 to 1/10/2023 19:30

Current Event (UWI) 300/F-56-60.40-122.45/00		Surface Legal Location		License # NT001978		Field Name FT LIARD		Province N.W.T
WI (%) 100.00	Objective						Plug Back Depth (mKB)	
Job Start Date 1/5/2023		Ground Elevation (m) 589.10	Tubing Head Elevation (m) 0.00	KB-TH (m) 595.50	Casing Pressure (kPa) 0	Tubing Pressure (kPa)	Set Depth (MD) (mKB) 2,846.50	
Job End Date 1/23/2023		Original KB Elevation (m) 595.50	Casing Flange Elevation (m) 589.10	KB-Casing Flange Distance (m) 6.40	Road Condition Rough	Weather Overcast	Temperature (°C) -17	

Daily Activities

Morning Ops @ 7am
SR: Continue to run tbg
Daily Operations Summary
MIRU wireline ran 114.3mm GR junk basket to 2616.0mKB tagged packer. POOH. Ran in hole with 114.3mm 10K PBP correlated on depth to IPS CBL dated mar 12/2004 set c/e at 2612.00mKB. POOH rigged out wireline. PT PBP and csg to 7150-7130kPa in 10 min solid test. Talled and drifted in hole with 73mm work string ran total 254 jts rotated into top of liner. Drained equipment secured well.

Time Log

Start Time	Dur (hr)	Com
07:30	0.50	07:30hrs. Serviced and started equipment. Held safety meeting with all personal. Filled out JSA for tasks today and discussed hazards. Line of fire, swing, path, high pressure lines, overhead loads, steam lines, Right to refuse unsafe work. Dress for weather. Hazards of wireline operations rotating equipment, working with explosives. Function tested personal LEEL monitor.
08:00	4.00	Checked SICP zero pressure. MIRU wireline unit. Installed 279mm x 177mm c/o flange on bop's and wireline bop's. Picked up lubricator stabbed on purged and pressure tested with N2 to 7000kPa. Ran in hole with 94mm GR junk basket to 2616.34mKB tagged top of packer. POOH. Picked up and ran in hole with 114.3mm 10K PBP. Correlated on depth to IPS cement bond log dated Mar 12/2004. Positioned center element at 2612.0mKB. POOH and rigged out wireline.
12:00	0.50	Filled hole with 0.75m ³ fresh water. Pressure tested PBP start 7150kPa -7130kPa in 10 min solid test.
12:30	7.00	Tally and drift in hole with 73mm eue J-55 YB work string. Slow down with jts 249-251 to go through liner hanger. Rotated tbg into liner hanger ran total 254 jts. Drain equipment secured well. 19:30hrs SDFN

Perforations Summary

Date	Zone	Top (mKB)	Btm (mKB)	Type	Com
3/16/2004 22:00	Keg River, Original Hole	2,635.00	2,644.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 18:30	Keg River, Original Hole	2,668.00	2,674.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 17:20	Headless, Original Hole	2,697.00	2,711.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 14:30	Headless, Original Hole	2,718.00	2,726.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/12/2004 08:42	Landry, Original Hole	2,748.00	2,762.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATE LANDRY FORMATION MARCH 12, 2004

Daily Fluids Summary

Fluid	To well (m ³)	From well (m ³)	Left to recover (m ³)	Operational Supervisors	
				Contact	Title
Fresh Water	0.75	0.00	55.75	Roy Craft	Wellsite Supervisor
Produced Water	0.00	0.00	-50.10	Dale Duffy	Superintendent
				Jeffrey Willick	Abandonment Ops Mgr.
				Contractor Precision Well Servicing	Rig Number 119
				Rig Manager Ashley Marshall	



Canadian Natural

Daily Service Report (Gov't Submissions)

ANADARKO ARROWHEAD RIVER F-56

Job: Abandonment
Report #: 7.0

1/11/2023 07:30 to 1/11/2023 20:00

Current Event (UWI) 300/F-56-60.40-122.45/00		Surface Legal Location	License # NT001978	Field Name FT LIARD	Province N.W.T
WI (%) 100.00	Objective				Plug Back Depth (mKB)
Job Start Date 1/5/2023	Ground Elevation (m) 589.10	Tubing Head Elevation (m) 0.00	KB-TH (m) 595.50	Casing Pressure (kPa) 0	Tubing Pressure (kPa) 0
Job End Date 1/23/2023	Original KB Elevation (m) 595.50	Casing Flange Elevation (m) 589.10	KB-Casing Flange Distance (m) 6.40	Road Condition Rough	Set Depth (MD) (mKB) 2,846.50

Daily Activities

Morning Ops @ 7am

SR: RIH with tbg

Daily Operations Summary

RIH with 20 jts tagged PBP picked up 0.50m. MIRU Charger pumping solutions. Rig in iron on tbg and pump line onto csg. Broke circulation with 1.0m³ fresh water. Pressure tested iron to 15000kPa. Mixed up 0.50m³ Thermal-40 @1800kg/m³. Circulated to bottom with 7.5m³ fresh water balanced plug. Pulled 10 jts. Backed washed tbg 1.5 tbg volume. Cement 83.0m top at 2529.0mKB. POOH with 73mm tbg rack in derrick. MIRU wireline rig up on well. RIH with 152.0mm GR/junk basket to 2407.0mKB. RIH 177.8mm 10K PBP logged on depth set c/e at 2400.0mKB. PT 7250-7240kPa 10 min solid test. Drained equipment and secured well.

Time Log

Start Time	Dur (hr)	Com
07:30	0.50	07:30hrs. Serviced and started equipment. Held safety meeting with all personal. Filled out JSA for tasks today and discussed hazards. Line of fire, swing, path, high pressure lines, overhead loads, steam lines, Right to refuse unsafe work. Dress for weather. Reviewed cementers JSA and discussed hazards and cementing procedures. Print copy of SDS for cement.
08:00	1.00	Ran in hole with 20 jts tagged PBP at 2612.0mKB with 273jts. Spaced out added 4.50m pup jts landed tbg 0.50m above PBP 2611.50mKB.
09:00	2.00	MIRU Charger pumping solutions. Rig in iron on tbg and pump line onto csg. Broke circulation with 1.0m ³ fresh water. Pressure tested iron to 15000kPa. Mixed up 0.50m ³ Thermal-40 @1800kg/m ³ . Additives CHFL-1 0.3%, CHDF-P 0.1%, CHGC-2 1%, CHRT-H 0.6%, CHFR-1 -0.05%. Circulated to bottom with 7.5m ³ fresh water at 400L/min 4000kPa holding 4000kPa back pressure. Balanced plug. Break off iron pulled and layed down 10 jts tbg. Rig iron on to csg and pump line to tbg. Backed washed tbg with 9.0m ³ fresh water at 500L/min. Rig out cementers. Cement 83.0m top at 2529.0mKB.
11:00	3.50	POOH laying down 16 jts and rack back 250 jts 73mm tbg. Pumped 2.0m ³ fresh water down while tripping out.
14:30	5.00	MIRU wireline unit. Installed 279mm x 177mm c/o flange on bop's and wireline bop's. Picked up lubricator stabbed on purged and pressure tested with N2 to 7000kPa. Ran in hole with 152.0mm gauge ring junk basket. Tagged liner top at 2407.0mKB. POOH. RIH with 177.8mm 10K PBP. Correlated on depth to Plains perforating collar log dated mar 26/2003. Set plug c/e at 2400.00mKB. POOH rigged out wireline.
19:30	0.50	Filled hole with 0.80m ³ fresh water. Pressure tested PBP to 7250kPa-7240kPa 10 min solid test. Bled off pressure drained equipment. Secured well. 19:30hrs SDFN

Perforations Summary

Date	Zone	Top (mKB)	Btm (mKB)	Type	Com
3/16/2004 22:00	Keg River, Original Hole	2,635.00	2,644.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 18:30	Keg River, Original Hole	2,668.00	2,674.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 17:20	Headless, Original Hole	2,697.00	2,711.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 14:30	Headless, Original Hole	2,718.00	2,726.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/12/2004 08:42	Landry, Original Hole	2,748.00	2,762.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATE LANDRY FORMATION MARCH 12, 2004

Daily Fluids Summary

Daily Fluids Summary				Operational Supervisors	
Fluid	To well (m ³)	From well (m ³)	Left to recover (m ³)	Contact	Title
Fresh Water	2.80	0.00	58.55	Roy Craft	Wellsite Supervisor
Produced Water	0.00	0.00	-50.10	Dale Duffy	Superintendent
				Jeffrey Willick	Abandonment Ops Mgr.
				Contractor Precision Well Servicing	Rig Number 119
				Rig Manager Ashley Marshall	



Canadian Natural

Daily Service Report (Gov't Submissions)

ANADARKO ARROWHEAD RIVER F-56

Job: Abandonment
Report #: 8.0

1/12/2023 07:30 to 1/12/2023 19:30

Current Event (UWI) 300/F-56-60.40-122.45/00		Surface Legal Location		License # NT001978		Field Name FT LIARD		Province N.W.T
WI (%) 100.00	Objective						Plug Back Depth (mKB)	
Job Start Date 1/5/2023		Ground Elevation (m) 589.10	Tubing Head Elevation (m) 0.00	KB-TH (m) 595.50	Casing Pressure (kPa) 0	Tubing Pressure (kPa)	Set Depth (MD) (mKB) 2,846.50	
Job End Date 1/23/2023		Original KB Elevation (m) 595.50	Casing Flange Elevation (m) 589.10	KB-Casing Flange Distance (m) 6.40	Road Condition Rough	Weather Overcast	Temperature (°C) -19	

Daily Activities

Morning Ops @ 7am

SR: Continue to lay down tbg

Daily Operations Summary

RIH with 252 jts tagged PBP spaced out land tbg 0.50m above plug. MIRU Charger pumping solutions. Rig in iron on tbg and pump line onto csg. Broke circulation with 0.60m3 fresh water. Pressure tested iron to 14000kPa. Mixed up 0.50m3 Thermal-40 @1800kg/m3. Circulated to bottom with 6.5m3 holding 4000kPa back pressure. Balanced plug. Layed down 8 jts tbg. Backed washed tbg with 9.5m3. Cement 37.0m top 2362.80mKB. POOH laying down 248 jts. Drained equipment secured well.

Time Log

Start Time	Dur (hr)	Com
07:30	0.50	07:30hrs. Serviced and started equipment. Held safety meeting with all personal. Filled out JSA for tasks today and discussed hazards. Line of fire, swing, path, high pressure lines, overhead loads, steam lines.
08:00	4.00	Checked SICP zero kPa. Ran in hole with 252 jts tagged bridge plug at 2400.0mKB. Spaced out added 2 pups set tbg 0.50m3 above bridge plug.
12:00	0.25	Held safety meeting with all personal. Filled out hazard assessment and JSA for cementing. Identified all hazards. High pressure lines, steam, cement and additives, noise from vacuum truck.
12:15	2.00	MIRU Charger pumping solutions. Rig in iron on tbg and pump line onto csg. Broke circulation with 0.60m3 fresh water. Pressure tested iron to 14000kPa. Mixed up 0.50m3 Thermal-40 @1800kg/m3. Additives CHFL-1 0.15%, CHDF-P 0.2%, CHGC-2 2%, CHRT-H 0.6%, CHFR-1 -0.05%. Circulated to bottom with 6.5m3 fresh water at 400L/min 4000kPa holding 4000kPa back pressure. Balanced plug. Break off iron pulled and layed down 8 jts tbg. Rig iron on to csg and pump line to tbg. Backed washed tbg with 9.5m3 fresh water at 500L/min. Rig out cementers. Cement 37.0m top 2362.80mKB.
14:15	5.25	PPOH laying 248 jts total of 256 jts. Drained equipment and secured well. 19:30hrs SDFN

Perforations Summary

Date	Zone	Top (mKB)	Btm (mKB)	Type	Com
3/16/2004 22:00	Keg River, Original Hole	2,635.00	2,644.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 18:30	Keg River, Original Hole	2,668.00	2,674.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 17:20	Headless, Original Hole	2,697.00	2,711.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 14:30	Headless, Original Hole	2,718.00	2,726.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/12/2004 08:42	Landry, Original Hole	2,748.00	2,762.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATE LANDRY FORMATION MARCH 12, 2004

Daily Fluids Summary

Fluid	To well (m³)	From well (m³)	Left to recover (m³)	Operational Supervisors	
				Contact	Title
Fresh Water	0.00	0.00	58.55	Roy Craft	Wellsite Supervisor
Produced Water	0.00	0.00	-50.10	Dale Duffy	Superintendent
				Jeffrey Willick	Abandonment Ops Mgr.
				Contractor Precision Well Servicing	Rig Number 119
				Rig Manager Ashley Marshall	



Canadian Natural

Daily Service Report (Gov't Submissions)

ANADARKO ARROWHEAD RIVER F-56

Job: Abandonment
Report #: 9.0

1/13/2023 07:30 to 1/13/2023 14:00

Current Event (UWI) 300/F-56-60.40-122.45/00		Surface Legal Location		License # NT001978		Field Name FT LIARD		Province N.W.T
WI (%) 100.00	Objective						Plug Back Depth (mKB)	
Job Start Date 1/5/2023		Ground Elevation (m) 589.10	Tubing Head Elevation (m) 0.00	KB-TH (m) 595.50	Casing Pressure (kPa)	Tubing Pressure (kPa)	Set Depth (MD) (mKB) 2,846.50	
Job End Date 1/23/2023		Original KB Elevation (m) 595.50	Casing Flange Elevation (m) 589.10	KB-Casing Flange Distance (m) 6.40	Road Condition Rough	Weather Overcast	Temperature (°C) -15	

Daily Activities

Morning Ops @ 7am
C&C Ready to cut and cap
Daily Operations Summary
Pulled last 25 jts. Rig out tongs, stairs, floor. Remove bop's top off well with 3.0m3 fresh water. Installed top section of wellhead and secured well. Rigged out rig and all equipment. Cleaned up location make sure no spills or garbage. Well abandoned ready for C&C.

Time Log

Start Time	Dur (hr)	Com
07:30	0.50	07:30hrs. Serviced and started equipment. Held safety meeting with all personal. Filled out JSA for tasks today and discussed hazards. Line of fire, swing, path, high pressure lines, overhead loads, steam lines. Reviewed 4 pillars and TIWEP.
08:00	0.50	Checked well zero pressure.
08:30	5.50	Rigged out tongs, floor, stairs and v door. Grabbed lifting slings from picker with high lifting capacity for lifting off 279mm bop stack. Split stack setting annular on mat and chaining down. Removed bop's setting on stump. Top off wellbore with 3.0m3 fresh water. Installed wellhead. Start cooling down boiler. Rig out rig and all equipment. Clean up location. prepare to move to C-55. 14:00hrs Well ready for C&C

Perforations Summary

Date	Zone	Top (mKB)	Btrn (mKB)	Type	Com
3/16/2004 22:00	Keg River, Original Hole	2,635.00	2,644.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 18:30	Keg River, Original Hole	2,668.00	2,674.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 17:20	Headless, Original Hole	2,697.00	2,711.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 14:30	Headless, Original Hole	2,718.00	2,726.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/12/2004 08:42	Landry, Original Hole	2,748.00	2,762.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATE LANDRY FORMATION MARCH 12, 2004

Daily Fluids Summary

Fluid	To well (m³)	From well (m³)	Left to recover (m³)	Operational Supervisors	
				Contact	Title
Fresh Water	0.00	0.00	Roy Craft	Wellsite Supervisor	
Produced Water	3.00	0.00	61.55	Dale Duffy	Superintendent
	0.00	0.00	-50.10	Jeffrey Willick	Abandonment Ops Mgr.
				Contractor Precision Well Servicing	Rig Number 119
				Rig Manager Ashley Marshall	



Canadian Natural

Daily Service Report (Gov't Submissions)

ANADARKO ARROWHEAD RIVER F-56

Job: Abandonment
Report #: 10.0

1/23/2023 12:30 to 1/23/2023 17:00

Current Event (UWI) 300/F-56-60.40-122.45/00		Surface Legal Location		License # NT001978		Field Name FT LIARD		Province N.W.T
WI (%) 100.00	Objective						Plug Back Depth (mKB)	
Job Start Date 1/5/2023		Ground Elevation (m) 589.10	Tubing Head Elevation (m) 0.00	KB-TH (m) 595.50	Casing Pressure (kPa) 0	Tubing Pressure (kPa)	Set Depth (MD) (mKB) 2,846.50	
Job End Date 1/23/2023		Original KB Elevation (m) 595.50	Casing Flange Elevation (m) 589.10	KB-Casing Flange Distance (m) 6.40	Road Condition Rough	Weather Clear	Temperature (°C) -10	

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 & separate any dirty dirt from good dirt. Welder cut off wellhead. Weld vented plate between Surface & Production Casings. Weld on vented cap with ID #1978. 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	4.00	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 & Separate any contaminated dirt from good dirt. Weld vented plate between Surface & Production Casings. Weld on 177.8mm vented cap with ID #1978. 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 has wellhead & dirty dirt pile off to the side. Well is Cut & Capped Jan 23 2023 Well is now ready for reclamation.

Perforations Summary

Date	Zone	Top (mKB)	Btrn (mKB)	Type	Com
3/16/2004 22:00	Keg River, Original Hole	2,635.00	2,644.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 18:30	Keg River, Original Hole	2,668.00	2,674.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 17:20	Headless, Original Hole	2,697.00	2,711.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/16/2004 14:30	Headless, Original Hole	2,718.00	2,726.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATED ON MARCH 14, 2004
3/12/2004 08:42	Landry, Original Hole	2,748.00	2,762.00	Perforated	Supervisor: JOE GRAVES 250-261-4 PERFORATE LANDRY FORMATION MARCH 12, 2004

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	61.55	Jeffrey Willick	Abandonment Ops Mgr.
Produced Water	0.00	0.00	-50.10	Dale Duffy	Superintendent
				Phil Millard	Wellsite Supervisor
				Contractor	Rig Number
				Rig Manager	