



WELL TERMINATION RECORD

This record is submitted in compliance with Section 184 of the Canada Oil and Gas Drilling Regulations.

Well Name: Ranger North Liard P-66A Area: _____
Grid Area: N60°40'00"W123°30'00" Field / Pool: Nahanni
Interest _____ Final _____ Lat 60°40'00" Long 123°30'00"
Drilling _____ Elevations: KB459.9m (ASL) GL/Seafloor: KB-CF10.35m
Spud Date: _____ R.R.: _____ Total Depth: 3,499m KB

O.D. (mm)	Weight (kg/m)	Grade	Depth Set (m KB)	Cement (m³)
339.7	101.2	K-55	1.008	92t
244.5	79.6869.9	L-80	3.115	85t
177.8	38.7	L-80	3.499	14t
114.3		L-80	2.964	tubing

PLUGGING PROGRAM

Approval of the following program was obtained by (person) _____

from (person) _____ of the _____
by means of _____ on _____

Type of Plug	Interval (m KB)	Felt	Cement (m³)
<u>Pump 2m3 inhibited diesel in tubing. Run and</u>			
<u>pull the lock open mandrel from the sub-surface</u>			
<u>safety valve (SSSV) at 146.9m KB. Run and set</u>			
<u>Otis 96.82mm X plug in SSSV at 146.89m. PT with</u>			
<u>1.2m3 inhibited diesel to 21 MPa. Set dog nut</u>			
<u>plug in wellhead and PT to 21 MPa.</u>			

Lost Circulation/Overpressure Zones: _____

Equipment left on Seafloor (Describe): _____

Provision for Re-entry (Describe and attach sketch): See Attachment 2-Downhole diagrams

Cores: _____ Type: _____ Interval: _____

Other Downhole Completion/Suspension: _____

CERTIFICATION

I certify on the basis of personal knowledge of operations undertaken at the above named well that the above information is accurate.

Signed: Robert D. Hallert Title: Production Eng
Name: Robert D. Hallert P.Eng. Date: 01/06/11
Company: Canadian Natural Resources Ltd.

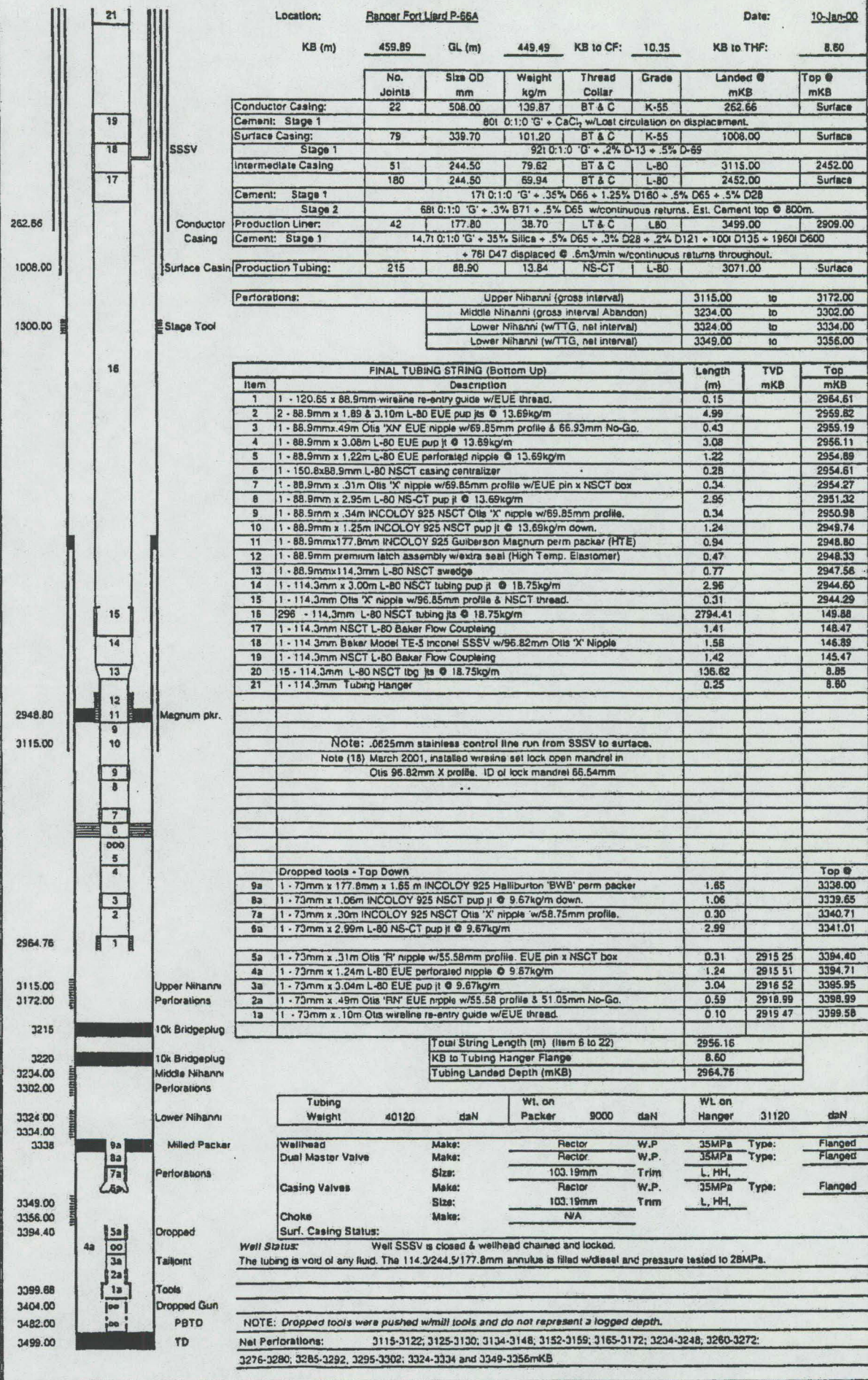
Well Status

Suspended ☒Completed ☐Abandoned ☐Acknowledged by: JM Baker

Chief Conservation Officer

Date: June 28/01File: 9211-R36-1-2UWI: 300P666040123303WID: 1823

EXISTING DOWNHOLE WELL PROFILE



EXPANDED DOWNHOLE WELL PERFORMANCE PROFILE

Date: 10-Jan-00

Perforation Interval (top down)			
Designation	Top	Bottom	Length
K	3115.00	3122.00	7.00
J	3125.00	3130.00	5.00
I	3134.00	3148.00	14.00
H	3152.00	3159.00	7.00
G	3165.00	3172.00	7.00
F	3234.00	3248.00	14.00
E	3260.00	3272.00	12.00
D	3276.00	3280.00	4.00
C	3285.00	3292.00	7.00
B	3295.00	3302.00	7.00
A	3324.00	3334.00	10.00
A1	3349.00	3356.00	7.00

'X' nipple w/Otis 'PX' Plug in place

FINAL TUBING STRING (Bottom Up)		Length		Top
Item	Description	m	TVD	mKB
1	1 - 120.65 x 88.9mm wireline re-entry guide w/EUE thread.	0.15		2954.61
2	2 - 88.9mm x 1.89 x 3.10m L-80 EUE pup jts @ 13.69kg/m	4.99		2959.62
3	1 - 88.9mm x 49m Otis 'XN' EUE nipple w/69.85mm profile & 66.93mm No-Go.	0.43		2959.19
4	1 - 88.9mm x 3.08m L-80 EUE pup jt @ 13.69kg/m	3.08		2956.11
5	1 - 88.9mm x 1.22m L-80 EUE perforated nipple @ 13.69kg/m	1.22		2954.89
6	1 - 150.6x88.9mm L-80 NSCT casing centralizer	0.28		2954.61
7	1 - 88.9mm x .31m Otis 'X' nipple w/69.85mm profile w/EUE pin x NSCT box	0.34		2954.27
8	1 - 88.9mm x 2.95m L-80 NS-CT pup jt @ 13.69kg/m	2.95		2951.32
9	1 - 88.9mm x .34m INCOLOY 925 NSCT Otis 'X' nipple w/69.85mm profile.	0.34		2950.98
10	1 - 88.9mm x 1.25m INCOLOY 925 NSCT pup jt @ 13.69kg/m down.	1.24		2949.74
11	1 - 88.9mm x 177.8mm INCOLOY 925 Guiberson Magnum perm packer (HYE)	0.94		2948.80
12	1 - 88.9mm premium latch assembly w/extra seal (High Temp. Elastomer)	0.47		2948.33
13	1 - 88.9mm x 114.3mm L-80 NSCT swedge	0.77		2947.56
14	1 - 114.3mm x 3.00m L-80 NSCT tubing pup jt @ 18.75kg/m	2.96		2944.60
15	1 - 114.3mm Otis 'X' nipple w/69.85mm profile & NSCT thread.	0.31		149.88
16	296 - 114.3mm L-80 NSCT tubing jts @ 18.75kg/m	2794.41		150.19
17	1 - 114.3mm NSCT L-80 Baker Flow Coupling	1.41		148.47
18	1 - 114.3mm Baker Model TE-5 Inconel SSSV w/96.82mm Otis 'X' Nipple	1.58		145.47
19	1 - 114.3mm NSCT L-80 Baker Flow Coupling	1.42		147.05
20	15 - 114.3mm L-80 NSCT tbg jts @ 18.75kg/m	136.62		8.85
21	1 - 114.3mm Tubing Hanger	0.25		8.60
Note: .0625mm stainless control line run from SSSV to surface.				
Total String Length (m) (Item 6 to 22)		2956.16		
KB to Tubing Hanger Flange		8.60		
Tubing Landed Depth (mKB)		2964.76		
Dropped tools - Top Down				Top @
9a	1 - 73mm x 177.8mm x 1.65 m INCOLOY 925 Halliburton 'BWB' perm packer	1.65		3338.00
8a	1 - 73mm x 1.06m INCOLOY 925 NSCT pup jt @ 9.67kg/m down.	1.06		3339.65
7a	1 - 73mm x .30m INCOLOY 925 NSCT Otis 'X' nipple w/58.75mm profile	0.30		3340.71
6a	1 - 73mm x 2.99m L-80 NS-CT pup jt @ 9.67kg/m	2.99		3341.01
5a	1 - 73mm x .31m Otis 'R' nipple w/55.58mm profile. EUE pin x NSCT box	0.31	2915.25	3394.40
4a	1 - 73mm x 1.24m L-80 EUE perforated nipple @ 9.67kg/m	1.24	2915.51	3394.71
3a	1 - 73mm x 3.04m L-80 EUE pup jt @ 9.67kg/m	3.04	2916.52	3395.95
2a	1 - 73mm x .49m Otis 'RN' EUE nipple w/55.58 profile & 51.05mm No-Go.	0.59	2918.99	3398.99
1a	1 - 73mm x .10m Otis wireline re-entry guide w/EUE thread.	0.10	2919.47	3399.58

Tubing		Wt. on		Wt. on	
Weight	40120	daN	Packer	9000	daN
Wellhead		Make:	Factor	W.P.	35MPa
Dual Master Valve		Make:	Factor	W.P.	35MPa
		Size:	79.375mm	Trim	A487
Casing Valves		Make:	Factor	W.P.	35MPa
		Size:	79.375mm	Trim	A487
Choke		Make:	N/A		

Surf. Casing Status:

Well Status: Temporary well suspension effective Aug. 30, 1999.

The tubing is suspended w/Otis 'PX' plug landed in the 'X' nipple @ 2950.98mKB. The tbg is filled w/inhibited water, topped w/diesel & pressure tested to 28MPa. Installed a backpressure valve in the dognut. Secured.

The 88.9/244.5/177.8mm annulus is filled w/inhibited water, topped w/diesel and pressure tested to 21MPa.

Water, topped w/methanol & pressure tested to 21MPa. Installed a backpressure valve in the dognut. Secured.

NOTE: Dropped tools were pushed w/mill tools and do not represent a logged depth.

Net Perforations: 3115-3122; 3125-3130; 3134-3148; 3152-3159; 3165-3172; 3234-3248; 3260-3272;

3276-3280; 3285-3292; 3295-3302; 3324-3334 and 3349-3356mKB

