


Jean Marie B-48 (WID 0448) Re-Abandonment
ACW-2021-IMP-B-48-WID 0448
WELL OPERATIONS REPORT
March 6, 2023

DocuSigned by:
 May 17, 2023
8EA58AD298E240A...

OPERATOR: Imperial Oil Ltd
WELL ID: 0448
WELL NAME: Cdn-Sup KMG Jean Marie B-48
WELL LOCATION: 61.452693, -120.640016 NAD 83
WELL TYPE: Exploration
WELL OPERATION: JM B48 Re-Abandonment
RIG NAME: Horizon Drilling / Rig 61
RIG START DATE: January 3, 2023 @ 00:00 HRS
RIG RELEASE DATE: February 4, 2023 @ 23:59 HRS

OA APPROVAL: 2021-11-24 Decision: Application for an Operations Authorization, Abandonment of the Jean Marie B-48 Well (OA-2021-004-IMP)
ACW APPROVAL: 2021-11-25 Decision: Abandonment of the Jean Marie B-48 Well (ACW-2021-IMP-B-48-WID0448)
2023-01-25 Decision: Variation 2 to ACW-2021-IMP-B-48-WID0448
2023-01-28 Decision: Variation 3 to ACW-2021-IMP-B-48-WID0448

Summary of Well Operations

Mobilized the Horizon 61 drilling rig and associated services to the Jean Marie B-48 wellsite starting on January 3rd, 2023. Started to spot and rig up the rig on January 7th, 2023. Continued to rig up the rig and 3rd party services over the next several days.

Sweep and monitor the cellar and substructure for presence of gas – no LEL or H2S detected. Exposed the cellar around the existing surface casing stump and found competent cement. Decision made to use the slip-on welded bowl vs the slip-lock casing head design. Removed existing pressure plate and dog collar from casing stump. Fluid level inside the surface casing observed to be 2.4m (8 feet) from surface. No visual signs of gas migration inside the casing string. Cut casing and weld on the casing bowl while continuously monitoring for LELs and H2S in the cellar and substructure. Pressure tested casing bowl to 7,000 kPa (1000 psi) for minutes.

Nipple up BOPs. Pressure test BOP choke, manifold valves, stabbing valves and inside BOP @ 1400 kPa Low and 21,000 kPa high, all for 10 minutes. Rigged in Managed Pressure Drilling (MPD) system with steam lines from Boiler # 2. Install test plug and pressure test lower pipe rams to low pressure of 1400 kPa and 21,000 kPa high for 10 minutes. Performed accumulator function and recovery test All test pressures charted and verified.

Lift snubbing unit and install onto test stump. Pressure test to low pressure of 1400 kPa and 21,000 kPa high for 10 minutes. Pressure test charted and verified. Lift remote circulating device (RCD) and install onto BOP. Install snubbing spools and hoist and install snubbing unit onto RCD. Make up tools on

Jean Marie B-48 (WID 0448) Re-Abandonment
ACW-2021-IMP-B-48-WID 0448
WELL OPERATIONS REPORT
March 6, 2023

catwalk, get measurements of snubbing unit once rigged up on floor (6.12m from snubbers handrail to floor) (5.10m from floor to top of casing flange) (.47m from top of casing flange to top of casing stub) 11.69m from snubbers handrail to top of casing. Continue rigging in snubbing unit. Run in hole with BHA to verify top of cement plug #3 – tagged top at 7.9 mKB. Picked up inflate tool with crane to floor, drop 1/2" Ball, install and secure in snubbing Unit. Land inflate tool with .62m stickup (Top of Seal area at Top of Casing stub - BOT @ 7.57m). Perform shell test to 1400 kPa low and 7,000 kPa high for 10 minutes. All tests charted and verified. Release inflate tool and pull out of hole.

Drilled out cement plug #1 with snubbing unit and returns to MPD system. Drilled cement from 7.9m to 10.6m with 159mm bit, no gas pressure or flow observed thru MPD system. Reamed / washed inside casing to 24.6m, no gas pressure or flow observed thru MPD system, pulled out of hole, and rigged out snubbing unit.

Note: Snubbing Unit operations consisted of ~12-hour day due to only a single crew available. Snubbing personnel had to rest and reset each day.

Conducted a pre-lift derrick inspection. Prepared to and raise the drilling rig derrick. Conducted a derrick inspection. Continued to rig up the floor, install pre-fabs, compensator rams and make upside torque gauge.

Surface casing inspection and cement evaluation. Washed / reamed in casing with 200mm bit from 7.8m to 65.3m, tagged early versus 115.3m (original well record: TOC at 115.2m), drilled plug from 65.3m to 115.2m (60-70% contaminated cement, 30-40% semi-solidified drilling mud). Ran casing scraper to 115.2 m to condition casing for running cased hole logs.

Rigged in Wireline Unit. Ran the Magnetic Flux Leakage Inspection tool (HRVRT), Multi-Finger Imaging Caliper tool (MFC) and Segmented Bond Tool (SBT) logging passes from loggers' depth of 115m to surface. Monitored well continuously – static.

The casing inspection logs were required to determine the allowable surface casing test pressure and results of the data indicated that the casing was in good condition for the re-abandonment operations.

HRVRT Analysis: Shows majority of casing is Class 1 (0-20%) and several areas as Class 2 (20-40%). Maximum metal loss based on the HRVRT data ranges from 20% to 31%. *The minimum burst pressure was verified based on the max metal loss values and the minimal burst pressure rating was determined to be ~14,019 kPa for 219.1 mm casing. The actual surface casing test pressure of 7,000 KPa is well below the new burst limits of casing.*

MFC analysis: Slight deformation / ovality was detected within Joint #1 at 5.5m (43.2% - out of round). Joints containing deformation ovality do not necessarily have metal "loss," but rather metal "moved". Baker's tool does not measure deformation ovality in terms of depth of penetration but rather they measure it as percent out of roundness. The percent out of roundness in the joints containing deformation ovality is represented at a higher value due to the magnitude of deflection of the maximum finger away from the nominal ID.

Jean Marie B-48 (WID 0448) Re-Abandonment
ACW-2021-IMP-B-48-WID 0448
WELL OPERATIONS REPORT
March 6, 2023

There was probable deposit build up was detected from 71.2m-73.7m, 82.3m-83.3m & 109.1m-109.9m likely due to cement sheath from the drill out of cement plug #2.

SBT Interpretation: The cement bond log run in the surface casing was done to establish some understanding of the cement bond behind casing. The SBT log was only run over the interval from 115 m to surface, since the cement plug #2 was drilled out to 115.2m not from the casing shoe depth of 141.1mKB due to the risk of gas below cement plug #2. Per the tour reports, the casing was originally cemented from 141.1 m to surface with 15.5# cement slurry with 2.5% CaCl₂ and good cement returns per the tour sheets.

- Since no compressive strength data was available for the surface casing cement, the SBT analysis was done with 10,342 kPa and 6895 kPa compressive strength values with similar results. Main SBT interval 9.8 m to 115m, compressive strength of 1000 psi for oilwell cement was applied.
- Moderate bond observed over the interval 72m to 21m with good bond from 34m to 18m.
 - Attenuation curves and wave form indicate reasonable cement coverage around the casing over this interval
 - Cement Map shows moderate bond over the same interval
- No apparent bond observed over the interval 113m to 72m or from 20m to surface.
- Of note, the original surface casing cement report, indicates cement to surface (per tour reports).
- Also, observed cement around the surface casing during the clean out of the cellar area during the re-abandonment operations prior to installing the slip-on weld bowl.

Per consultation with Baker Hughes, the min delta and max delta on the SBT log show good correlation, re-affirming the tool response is good – the observed cement sheath from the MFC caliper should not have impacted the tools capability in terms of pad contact for the intervals where no apparent bond was observed.

Drilled out cement plug #2 with drilling rig and returns to MPD system. Based on casing inspection results, pressure tested casing to 7.0 MPA for 10 minutes – good test. Drilled hard cement from 115.2m to 144 (3m below casing shoe) with the 200mm rotary plug tracker BHA, no gas pressure or flow observed thru MPD system.

Cuttings Description:

- 115.2-130m: 55-60% cement, variable hardness (original well record: TOC tagged at 115.2m)
- 130 - 138m: 75-80 % cement, hard-dense
- 138-142m: 75% cement, hard-dense (casing shoe @ 141.1m)
- 142-143m: 65-73% cement, hard-dense

Conducted a Dynamic Formation Integrity Test at 141.1m KB was conducted after drilling out 3m cement below shoe to 144.0mKB. Stabilized surface applied pressure ~809 kPa for 10+ minutes. Confirmed a formation gradient of 18.0 kPa/m - good shoe integrity.

Jean Marie B-48 (WID 0448) Re-Abandonment
ACW-2021-IMP-B-48-WID 0448
WELL OPERATIONS REPORT
March 6, 2023

- No influx observed. Inspected cellar area around the wellhead for any visible signs of gas migration from the backside – zero evidence.

Drilled cement plug with plug tracker BHA from 143m to 154.4m in open hole (65-70% cement and 30-35% drilling mud) with trace of cement at 154.4m (bottom of plug), no gas pressure or flow observed thru MPD system. Resume operations and drill cement plug #2 from 115.2 mKB to 144.0 mKB. Entered open hole at 141.0 mKB. No gas pressure or flow observed. Circulated the hole clean and work the drill string.

Cuttings Description:

- 143-147m: 30-35% cement, trace of siltstone, 65-75% drilling mud
- 147-150m: 70-75% cement, hard-dense, trace shale, 25-35% drilling mud
- 150-153m: 50% estimated cement, hard-dense, trace shale, 50% drilling mud
- 153-154m: 10% cement, 10% shale, 80% drilling mud
- 154-155.4m: trace cement, 15% shale, 85% drilling mud (original well record: base of cement plug at 155.4m)

Reamed-cleaned open hole from 154.4m to 193.4m with plug tracker BHA, monitor parameters and samples. Time drill @ 3-5m/hr Rotary: 80-90 RPM, Pump Rate: 1.0- 1.1 m³/min, WOB 3-5 kDaN

Cuttings Description

- 160m: Shale - green grey, slightly calcareous, micro micaceous, fissile
- 175-200m: Shale – green grey, very fine texture, medium hard, slightly calcareous, micro micaceous, fissile

Observed MPD peak gas at 229 U @ 165m – false readings as analyzer was plugged - MPD gas flow out was zero. Switched flow from MPD over to shakers at 174.4m. Circulated hole clean with 1250 kg/m³ mud prior to tripping for BHA. Flow check @ 180m, 108m and 40m – well static.

Clean-ream hole from 193.4m to 514m with 159mm Pilot Rotary BHA.

- Ream and clean hole from 193.4m to 197.5m, Time Drill @ 3-5m/hr Rotary: 80 - 90 RPM, Pump Rate: 1.0-1.1 m³/min, WOB 1.80 - 3.0 kDaN.
- Ream and clean from 197.15 mKB to 228.66 mKB. Time Drill @ 3-5m/hr Rotary: 80 - 90 RPM, Pump Rate: 1.0-1.1 m³/min, WOB 1.80 - 3.0 kDaN.
- Ream and clean from 228.66 mKB to 239.27 mKB. Time Drill @ 8m/hr Rotary: 70-90 RPM, Pump Rate: 1.0- 1.2 m³/min, WOB 1.8-3 kDaN. Pump sawdust sweep @ 237 mKB
- Ream and clean from 239.27 mKB to 249.95 mKB. Time Drill @ 8m/hr Rotary: 70-90 RPM, Pump Rate: 1.0- 1.1 m³/min, WOB 1.8-3 kDaN.
- Ream and clean from 249.95 mKB to 265.00 mKB. Time Drill @ 8m/hr Rotary: 70-90 RPM, Pump Rate: 1.0- 1.1 m³/min, WOB 1.8-3 kDaN.
- Ream and clean from 265.0 mKB to 274.92 mKB. Time Drill @ 8m/hr Rotary: 70-90 RPM, Pump Rate: 1.0- 1.2 m³/min, WOB 1.8-3 kDaN.
- Ream and clean from 274.92 mKB to 282.37. Time Drill @ 8m/hr Rotary: 70-90 RPM, Pump Rate: 1.0-1.2 m³/min, WOB 1.8-3 kDaN.

Jean Marie B-48 (WID 0448) Re-Abandonment
ACW-2021-IMP-B-48-WID 0448
WELL OPERATIONS REPORT
March 6, 2023

- Ream and clean from 282.37 mKB to 313.60 mKB. Time Drill @ 8m/hr Rotary: 70-90 RPM, Pump Rate: 1.0- 1.2 m³/min, WOB 1.8-3 kDaN.
- Ream and clean from 313.60 mKB to 321 mKB Time Drill @ 8m/hr Rotary: 80-100 RPM, Pump Rate: 1.1-1.2 m³/min, WOB 1.8-2.5 kDaN.
- Ream and clean from 321 mKB to 343 mKB Time Drill @ 8m/hr Rotary: 80-100 RPM, Pump Rate: 1.1- 1.2 m³/min, WOB 1.8-2.5 kDaN.
- Ream and clean from 343.0 mKB to 372.0 mKB Time Drill @ 8m/hr Rotary: 80-100 RPM, Pump Rate: 1.1- 1.2 m³/min, WOB 1.8-2.5 kDaN.
- Ream and clean from 376.86 mKB to 402.0 mKB Time Drill @ 8m/hr Rotary: 70-110 RPM, Pump Rate: 1.1- 1.2 m³/min, WOB 1.8-2.5 kDaN.
- Ream and clean from 402.02 mKB to 410.0 mKB. Rotary: 90-110 RPM, Pump Rate: 1.1-1.2 m³/min, WOB 1.3-1.8 kDaN.
- Ream and clean from 410.0 mKB to 427.0 mKB. Rotary: 90-110 RPM, Pump Rate: 1.1-1.2 m³/min, WOB 1.3- 1.8 kDaN.
- Ream and clean from 427.0 mKB to 439.10 mKB. Time Drill @ 8m/hr Rotary: 80-100 RPM, Pump Rate: 1.1- 1.2 m³/min, WOB 1.8-2.5 kDaN.
- Ream and clean from 439.10 mKB to 446.60 mKB. Time Drill @ 8m/hr Rotary: 80-100 RPM, Pump Rate: 1.1 -1.2 m³/min, WOB 1.8-2.5 kDaN.
- Ream and clean from 446.60 mKB to 486.41 mKB. Time Drill @ 8m/hr Rotary: 70-90 RPM, Pump Rate: 1.0- 1.2 m³/min, WOB 1.8-3 kDaN
- Ream and clean from 486.41 mKB to 498.44 mKB. Time Drill @ 8m/hr Rotary: 80-100 RPM, Pump Rate: 1.0 -1.2 m³/min, WOB 1.8-3 kDaN.
- Ream and clean from 498.44 mKB to 506.0 mKB. Time Drill @ 8m/hr Rotary: 80-100 RPM, Pump Rate: 1.0- 1.2 m³/min, WOB 1.8-3 kDaN. Circulated bottom hole sample up at 501m – no indication of cement in returns. (Original well record: TOC cement plug 1 tagged at 501 m).
- Ream and clean from 506.0 mKB to 511.0 mKB. Time Drill @ 8m/hr Rotary: 80-100 RPM, Pump Rate: 1.0- 1.2 m³/min, WOB 1.8-3 kDaN. Circulate bottom hole sample at 511m - no indication of cement in returns.
- Ream and clean from 511.0 mKB to 514.0 mKB. Time Drill @ 8m/hr Rotary: 80-100 RPM, Pump Rate: 1.0- 1.2 m³/min, WOB 1.8-3 kDaN. Circulate bottom hole sample at 514m - no indication of cement in returns or evidence of cement plug 1 – most likely reason due to well sidetracked – all drilling parameters and cuttings samples were relatively constant.
- Top of shallowest Hydrocarbon zone at ~520m based on existing well logs – stopped reaming to avoid penetrating gas zone.

Cuttings Description:

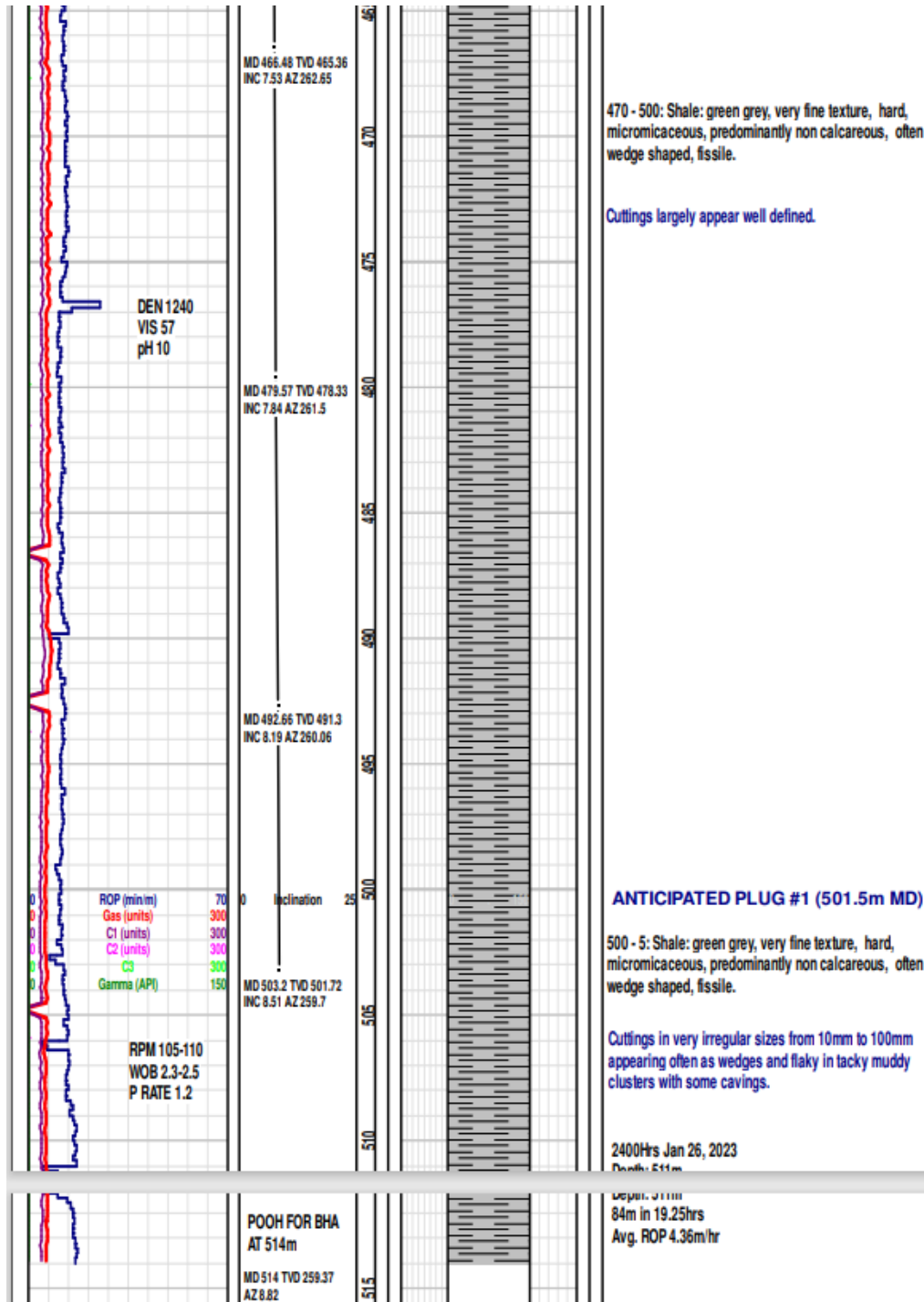
- 200-240m – shale: green grey, very fine, medium hard, slightly calcareous, micro micaceous, fissile (sample appear as tacky, soluble mudstone)
- 240-270m - shale: green grey, very fine, medium hard, slightly calcareous, micro micaceous, fissile
- 270-300m - shale: green grey, very fine, medium hard, slightly calcareous, micro micaceous, fissile (cuttings to surface do vary in appearance with respect to ROP, Cuttings are generally associated with muddy clusters, dominant appearance of very inconsistent cuttings sizes)

Jean Marie B-48 (WID 0448) Re-Abandonment
ACW-2021-IMP-B-48-WID 0448
WELL OPERATIONS REPORT
March 6, 2023

- 300-320m - shale: green grey, very fine, medium hard, slightly calcareous, micro micaceous, fissile (samples are difficult to wash due to the muddy nature, consisting of grainy particles in tacky clusters and variable sized fragments from 10mm to 100mm with occasional large splintery cavings)
- 320-330m - shale: green grey, very fine, medium hard, slightly calcareous, micro micaceous, fissile
- 330-360m - shale: green grey, very fine, medium hard, slightly calcareous, micro micaceous, fissile (samples 350 - 360 appearing with estimated 60% fairly uniform cuttings and 40% tacky clusters)
- 360 - 410: Shale: green grey, very fine texture, medium hard, micromicaceous, predominantly non calcareous to very slightly calcareous, often silty, fissile (cuttings largely fine in tacky clusters, common well defined, rare cavings. This could correlate to the fact that stratigraphically we are in a silty shale section of the well as the gamma log indicates over the interval from 360 to 411m)
- 410 - 440: Shale: green grey, very fine texture, hard, micromicaceous, predominantly non calcareous, fissile
- 440 - 470: Shale: green grey, very fine texture, hard, micromicaceous, predominantly non calcareous, often wedge shaped, fissile (cuttings in very irregular sizes from 10mm to 100mm appearing often as wedges and flaky in tacky muddy clusters with minor cavings)
- 470 - 500: Shale: green grey, very fine texture, hard, micromicaceous, predominantly non calcareous, often wedge shaped, fissile (cuttings largely appear well defined)
- 500 - 514: Shale: green grey, very fine texture, hard, micromicaceous, predominantly non calcareous, often wedge shaped, fissile (cuttings in very irregular sizes from 10mm to 100mm appearing often as wedges and flaky in tacky muddy clusters with some cavings)

Jean Marie B-48 (WID 0448) Re-Abandonment ACW-2021-IMP-B-48-WID 0448 WELL OPERATIONS REPORT March 6, 2023

- Strip log for the interval 465mKB to 514mKB



Jean Marie B-48 (WID 0448) Re-Abandonment
ACW-2021-IMP-B-48-WID 0448
WELL OPERATIONS REPORT
March 6, 2023

Circulate hole clean at 514mKB and trip out of hole with assembly. Make up 200mm rotary reaming cleanout assembly. Trip in hole to 193m (tag 159mm hole). Ream and clean 200mm hole from 193mKB to 379mKB. Perform roll test on MWD – test failed. Trip out of hole to change out MWD. Run back in hole with new MWD and ream with 200mm BHA from 379mKB to 514.4mKB. Circulate hole clean hole. Perform wiper trip to 138mKB. Trip back in hole to 514mKB, tag bridge at 503mKB. Circulate hole clean and pump sweep prior to pulling out of hole to run casing. Trip out of hole from 514.4mKB at 20m/min. Flow check at 494mKB, 266mKB and 126mKB and out of hole. Lay down BHA and prepared to run casing.

- On January 28, 2023, the Office of the Regulator of Oil and Gas Operations (OROGO) approved Imperial's application to vary ACW-2021-IMP-B-48-WID0448 variation 1 for the abandonment of the Jean Marie B-48 well (WID0448). Imperial requested a change to the approved JM B48 wellbore abandonment program as the wellbore was reamed-drilled to 514 m and no sign of cement was observed in the sample returns at the cement plug #1 (top of plug @ 501m per well records). There has been no gas pressure or flow encountered during the re-abandonment operations. Since the cement plug #1 was not encountered, it indicates that the wellbore was sidetracked from original wellbore – depth uncertain. The operational parameters and sample characterization were the primary method for reaming open hole and these parameters were relatively constant. There was no indication of sidetracking away from the original wellbore based on those operational parameters. With no gas present, Imperial recommended that the 139.7 mm casing be run to the current ream depth of 514 m and cemented in place from 514m to surface. A cement bond log will run, and the casing will be cut and capped.

Ran 139.7mm 23.07 kg/m³ J-55 LTC casing from surface to 514.4mKB at 18:30 hrs on January 31, 2023. Circulated and condition mud and hole prior to cementing. The 139.7 mm Abandonment Casing was cemented as follows:

- Pumped 1.0 m³ fresh water @ 0.8m³/min, pressure test lines to 7 MPa (low) and 15 MPa (high).
- Pumped 1.0 m³ of dye water at 0.8m³/min.
- Mixed and pumped 6.0 m³ Visweep @ 1350 kg/m³ + 560.7 kg/m³ Silica + 1.0 kg/m³ SCA-5 + 4.0 kg/m³ WG-4P + 2.0 kg/m³ DF-6P @ 0.8m³/min
- Mixed and pumped 21.0 m³ (21.1 ton) CemFIT Heal @ 1550 kg/m³ + 1.0% D205 CemFIT Heal + 0.5% CFR-2 + 0.15% WWS-7P + 0.3% CFL-3 + 0.3% CDF-6P + 1.0 kg/m³ LCF-7 @ 0.8m³/min.
- Dropped top plug and displaced with 5.87 m³ fresh water @ 0.8 m³/min slowed rate down to 0.4 m³/min for last 1.0 m³.
- Plug bumped @ 9000 kPa at 00:14 hrs on February 1 2023. Held pressure for 10 mins. Bled back 50 liters. Floats holding.
- 5.0 m³ full density returns to surface.
- Waited on cement for ~36 hours prior to running bond log.

Rigged in Wireline Unit and picked up Segmented Bond Tool (SBT). Logged 139.7 mm casing from 451.80mKB to surface (time on bottom 13:40hrs on Feb 2, 2023) – zero pressure pass. Tagged shoe track

Jean Marie B-48 (WID 0448) Re-Abandonment
ACW-2021-IMP-B-48-WID 0448
WELL OPERATIONS REPORT
March 6, 2023

cement top @ 451.80mKB. Results of SBT log were submitted to OROGO for approval on February 2, 2023.

SBT Interpretation:

- Cement to surface – confirmed during cement job and re-confirmed with SBT log
- Overall good bond (logged from 445.8m to surface)
 - Attenuation curves and wave form indicate 360 cement coverage around the casing
 - Cement Map shows good bond from 445.8m to 175m, some patchy bond from 175m to 160m and good bond from 160m to surface

On February 2, 2023, OROGO had no concerns with the SBT or the interpretations provided for the Jean Marie B-48 (WID 0448) well. Imperial was given approval to continue with the abandonment program as approved.

Pressure tested abandonment casing to 7,000 kPa for 10 minutes. Nipple down BOPs. Inspect the Cellar area, the Surface Casing Annulus and the 5 1/2" Abandonment String Annulus and confirm good cement at surface. Perform gas testing in cellar, confirm zero gas emissions. Suck out casing to 5m below ground level. Cut casing. Remove the casing bowl and weld on vented cap onto casing at 1.20 m below ground level.

Rig released on February 4, 2023 at 23:59 hrs. Wait on daylight to demob rig and rentals.

NON-PRODUCTIVE TIME (NPT)

NPT during the re-abandonment operations was attributed mostly to waiting on personnel to reset during the snubbing operations and MWD tool failure. The NPT events are summarized below:

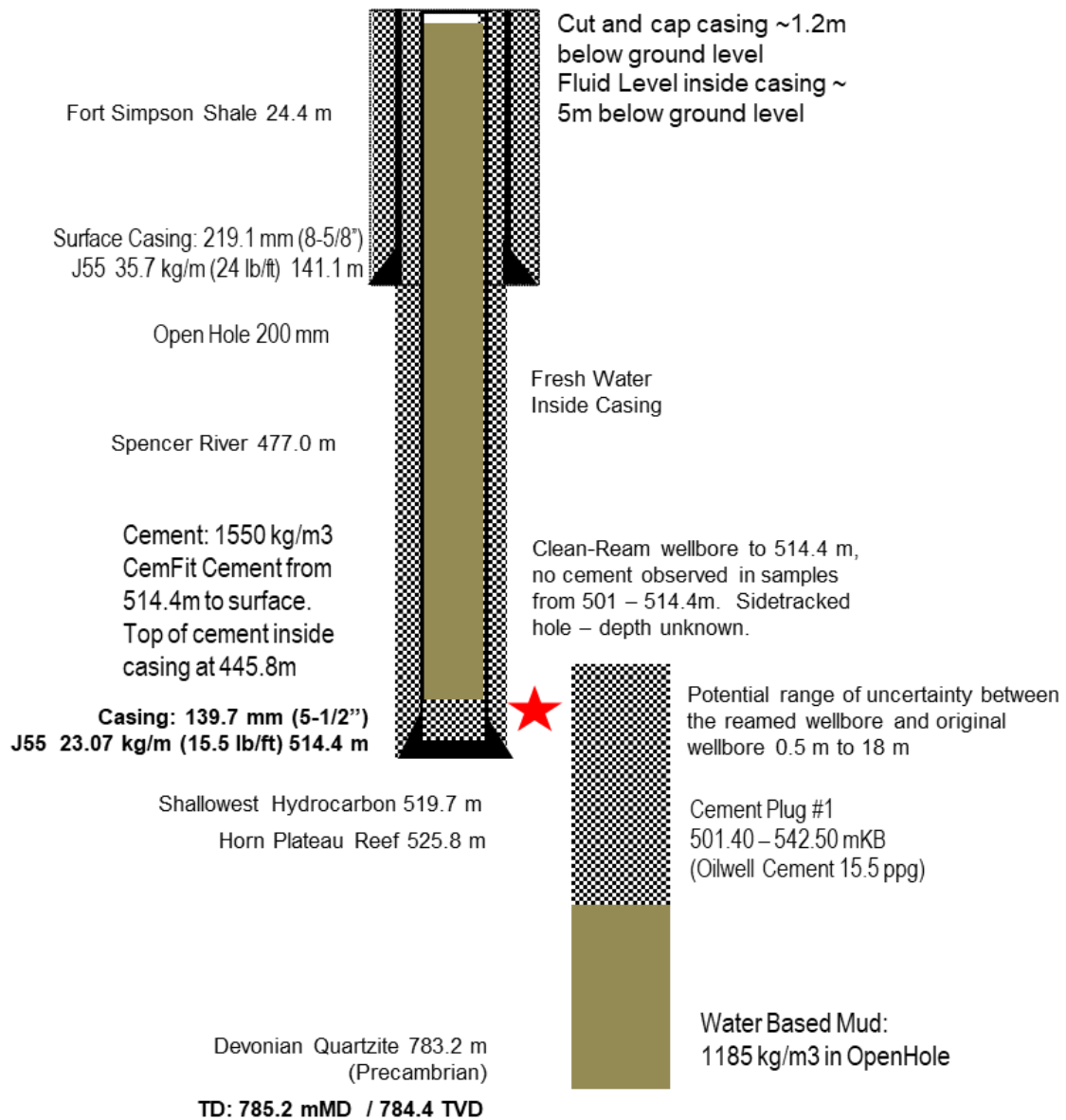
Ref No	Category	Type	Start Date	End Date	NPT (hr)	Problem Description / Comments
1	Wait	Personnel	1/10/2023 22:30	1/11/2023 6:30	8.0	Sent Snubbing personnel back to camp to Rest and Reset while moving forward with concurrent Operations.
2	Wait	Personnel	1/11/2023 21:00	1/12/2023 6:30	9.5	Sent Snubbing personnel back to camp to Rest and Reset. Critical path operations on hold waiting on crews.
3	Wait	Personnel	1/12/2023 19:00	1/13/2023 6:00	11.0	Sent Snubbing personnel back to camp to Rest and Reset. Critical path operations on hold waiting on crews.
4	Wait	Personnel	1/13/2023 22:00	1/14/2023 8:00	10.0	Sent Snubbing personnel back to camp to Rest and Reset. Critical

Jean Marie B-48 (WID 0448) Re-Abandonment
ACW-2021-IMP-B-48-WID 0448
WELL OPERATIONS REPORT
March 6, 2023

						path operations on hold waiting on crews.
5	Wait	Personnel	1/19/2023 23:00	1/20/2023 7:00	8.0	Wait on personnel to arrive to continue drilling ahead through the MPD system.
6	Rig or Unit	Draw works problem	1/21/2023 17:00	1/21/2023 18:15	1.25	Replaced failed floor motor electric starter motor.
7	Rig or Unit	Pipe handling systems problem	1/24/2023 2:00	1/24/2023 3:15	1.25	Issues with breaking out of tight connection, found worn threads on saver sub. Blowback top drive. Laydown single of drill pipe. Change out saver sub. Install new saver sub and clamp.
8	Rig or Unit	Pipe handling systems problem	1/27/2023 3:45	1/27/2023 6:00	2.25	While tripping out of the hole the cable to move the skate broke. The cable was replaced with a new in stock cable.
9	Rig or Unit	Mud pumps problem	1/28/2023 8:30	1/28/2023 9:30	1.0	Downtime - Fuel air lock for pump #1 engine. Fill tank. Bleed air from lines, filters, and injectors. Restart engine.
10	Formation Evaluation	Survey/measurement tool/communication problem	1/28/2023 22:00	1/29/2023 9:00	11.0	Roll tested MWD tools. Test results were out of accepted tolerances. Tripped out of the hole and changed out the MWD assembly. Sensor Failure for AZI & INC.

Jean Marie B-48 (WID 0448) Re-Abandonment
ACW-2021-IMP-B-48-WID 0448
WELL OPERATIONS REPORT
March 6, 2023

FINAL ABANDONMENT SCHEMATIC



Note: Schematics not to scale