

COPRC Mirror Lake P-20 Winter 2015-2016 Operations Report

OA-1211-002

ACW-2015-004 WID 2081

Grid # $65^{\circ}00'$, $126^{\circ}45'$

2016/03/30



COPRC Mirror Lake P-20

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1 SUMMARY OF OPERATIONS

Operations began on January 30, 2016 when a slickline unit performed a static gradient on the well.

C&J Energy Services Rig #414 moved onto the well on February 12, 2016. The well was killed and a plug was installed in the on-off located at 2025.1mKB Circulated well to fresh water. Following this, the tubing including control lines, on-off skirt, gauge carriers and bottomhole gauges were pulled from the well.

Two permanent bridge plugs were set at 2015 mKB CE and at 1729 mKB CE. Each bridge plug was pressure tested and capped with cement. The service rig was moved off the well on February 19, 2016.

On February 28, 2016 the well was cut and capped.

Copies of a daily activity summary, the daily reports, a fluid summary and the static gradient are included in Appendices and provide additional detail to the operations conducted.

Bottom hole pressures from the recovered gauges and an analysis of the pressure information will be submitted under separate cover.

2 GENERAL DATA

2.1 WELL NAME

COPRC Mirror Lake P-20

2.2 UNIQUE WELL IDENTIFIER

300P206500126450

2.3 GEOGRAPHIC CO-ORDINATES (NAD 27)

Well Center: 64°59'57.98" 126°47'08.73"

2.4 OPERATOR

ConocoPhillips Canada Resources Corporation

2.5 COMPLETION CONTRACTORS (> \$500,000 PROGRAM SPEND)

Canol Oilfield Services Inc. (Construction, Trucking)

C&J Energy Production Services Canada Ltd. (C&J Service Rig #217)
HRN Contracting Ltd. (Construction)
Schlumberger Canada Ltd. (Cementing, Wireline, Slickline)
Trumpeter Camp Company Partnership Ltd. (Camp)
V D M Trucking Service Ltd. (Long Haul Trucking)

2.6 DIFFICULTIES AND DELAYS

There were no significant drilling issues or delays experienced on this well.

2.7 ELEVATIONS

Ground Level: 284.15 m

Kelly Bushing: 289.35 m

KB – Ground Level: 5.20 m

2.8 WELL DEPTH

Measured Depth: 3148.7 mKB

True Vertical Depth: 2025.4 mKB

2.9 DATES

DH Operations Start: January 30, 2016

DH Operations Complete: February 18, 2016

Service Rig Release: February 19, 2016

Cut & Capped: February 28, 2016

2.10 WELL STATUS

Abandoned, Cut & Capped

2.11 HOLE SIZES AND DEPTHS

Surface Hole: 311 mm to 602 mKB

Intermediate Hole: 222 mm to 2152 mKB (MD)

Main Hole: 156 mm to 3152 mKB (MD)

2.12 CASING RECORD

Conductor:	508.0 mm, 197.9 kg/m, K-55 Welded set at 25.2 mKB
Surface Casing:	244.5 mm, 53.57 kg/m, J-55 LTC set at 602.0 mKB MD
Intermediate Casing:	177.8 mm, 38.69 kg/m, P-110 LTC set at 2152.0 mKB MD
Main Hole:	114.3 mm, 17.26 kg/m P-110 LTC set at 3148.7 mKB MD

3 WELL HISTORY

3.1 Q1-2014 DRILL AND INITIAL COMPLETION

Mirror Lake P-20 well was spudded on January 30, 2014 and the rig was released on February 23 2014 after reaching a total depth of 3152 m KB with a total of 25 operating days on the well.

Completion operations began on February 18 2014 with the setup of water tanks and well site trailers. Rig up of completions equipment began on February 27 2014 and completions operations commenced March 3 2014 when coil tubing was used to clean out the wellbore. Hydraulic fracturing operations began March 5 and were completed by March 10 2014. A total of 10 stages were hydraulically fractured in the P-20 well, with each frac consisting of about 790 m³ of water and 100 tonnes of sand proppant.

The well was again cleaned out using a coil tubing rig, a production packer was set at 2026 m KB on wireline and a tubing head was made up on the wellhead in preparation for flowback operations. Nabors Service Rig #414 rigged up on the well on March 13 and landed a string of 60.3 mm tubing in the packer. The string was complete with Weatherford surface readout down hole gauges. Nabors Service Rig #414 was released on March 18 2014 after the well had flowed to testers for 23 hours.

Mirror Lake P-20 flowed from March 18 until April 7, 2014 for a total of 506 hours. Down hole pressure gauges were left in the well to monitor pressure build up following flowback. All completions equipment was rigged out by April 8 2014 and the well was left with wellhead installed and valves locked.

3.2 Q2-2014 WELL INSPECTION

A well inspection was conducted on June 27, 2014. Wellhead, fencing and solar panel equipment were in good order with no signs of tampering. A bubble test was conducted which was negative.

3.3 Q3-2015 WELL INSPECTION

A well inspection was conducted on July 16, 2015. Wellhead, fencing and solar panel equipment were in good order with no signs of tampering however the batteries were not charging. A bubble test was conducted which was negative.



March 30, 2016

Daryl Stepanic
VP Frontiers & Business Development
ConocoPhillips Canada

APPENDICES

- Appendix 1 Legal Survey Plan**
- Appendix 2 Daily Activity and Cost Summary**
- Appendix 3 Daily Reports**
- Appendix 4 Fluid Summary**
- Appendix 5 SCVF Test Summary**
- Appendix 6 Final Wellbore Schematic**
- Appendix 7 Gas Analyses – Jan 22, 2016**
- Appendix 8 Static Gradient – Jan 23, 2016**
- Appendix 9 Cut and Cap Photos**