ConocoPhillips Resources Canada

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

OA-1211-002

ACW-2015-006 WID 2079

Grid # 65°00', 126°45'

2016/03/30

COPRC Mirror Lake N-20

Table of Contents

1 SUMMARY OF OPERATIONS

Operations began on January 16th when A Roke Technology VentNanny was installed on the well. On January 27, 2016 a slickline unit moved onto the well. A G-Chem sample was obtained and the 2 WRPs were pulled with the slickline unit.

C&J Energy Services Rig #217 moved onto the well on February 6, 2016. From February 8, 2016 through February 27, 2016, six cement squeeze operations were conducted, which resolved the surface casing vent flow that existed on the well prior to these operations. These interventions were approved under ACW 2081 and approved revisions to the original program. The dates of these operations and the intervention intervals were:

1. February 8 to 13, 2016; 2068.0-2070.0 mKB and 2015.0-2017.0 mKB
2. February 14 to 16, 2016; 1938.0-1940.0 mKB
3. February 17 to 19, 2016; 1906.0-1908.0 mKB
4. February 20 to 22, 2016; 1623.0-1625.0mKB
5. February 22 to 24, 1170.5-1173.5 mKB
6. February 26 to 27, 873.0-874.0 mKB

A cement bond log with both an unpressured and a pressured pass was run on February 20, 2016 prior to perforation of the 4th interval.

After the SCVF was resolved, a permanent bridge plug was set at 869 mKB, pressure tested and capped with 8.7m of cement leaving the top of cement at 855.1mKB. The service rig was moved off the well on February 29, 2016.

On March 2, 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. As well a detailed report is attached detailing the methodology and results of the SCVF intervention.

2 GENERAL DATA

2.1 WELL NAME

COPRC Mirror Lake N-20

2.2 UNIQUE WELL IDENTIFIER

300N206500126450

2.3 Geographic Co-ordinates (NAD 27)

Well Center: 64°59'46.80" 126°48'14.58"

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:	286.50 m
Kelly Bushing:	281.30 m
KB – Ground Level:	5.20 m

2.8 Well Depth

Measured Depth:	2146.0 mKB
True Vertical Depth:	2144.7 mKB

2.9 Dates

DH Operations Start:	January 27, 2016
DH Operations Complete:	February 28, 2016
Service Rig Release:	February 29, 2016

Cut & Capped: March 2, 2016

2.10 Well Status

Abandoned, Cut & Capped

2.11 Hole sizes and depths

Surface Hole: 311 mm to 601 mKB

Main Hole: 222 mm to 2146 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, 59.53 kg/m, J-55 LTC set at 599.0 mKB MD

Production Casing: 177.8 mm, 38.69 kg/m, P-110 LTC set at 2146.0 mKB MD

3 Well History

3.1 Q1, 2013 Drill Well and Initial Completion

COPRC Mirror Lake N-20 was spudded on February 25, 2013 with the drill rig released on March 25, 2013 after reaching a total depth of 2146 m KB in 27 days.

2013 completion operations were conducted from March 26 to March 30, 2013. 3 DFITs were conducted on the Canol formation on three intervals. Each interval was suspended by setting two wireline retrievable bridge plugs above each set of perforations with recorders installed beneath the bottom WRBP in each set.

Mirror Lake N-20 was suspended with the wellhead installed and the valves locked.

3.2 Q3&Q4, 2013 Mirror Lake N-20 Well Inspections

A well inspection was conducted on July 31, 2013. The wellhead and fencing were in good order with no signs of tampering. A bubble test was conducted which revealed a surface casing vent flow (SCVF) issue on the well.

A Roke Vent Nanny meter was installed on the surface casing vent on September 10, 2013 and left in place to allow remote read-out of the SCVF. Five further wellsite visits were conducted from September 10 through November 29, 2013 to resolve metering issues and perform well inspections.

3.3 Q1-2014 Retrieve Bottomhole Data and Microseismic Monitoring

Completion operations for 2014 commenced on February 6, 2014 and completed on February 10 2014. ConocoPhillips recovered six bridge plugs and three sets of recorders, left in the wellbore at the end of the 2013/2014 winter drilling season, then set two bridge plugs, suspending the three DFIT intervals. The service rig was released on February 25, 2014.

Microseismic monitoring operations commenced on March 4, 2014 with operations completed on March 11, 2014. All ten hydraulic fracture stages conducted on Mirror Lake P-20 were monitored. No significant seismic events occurred during the operation. While pulling the geophone string from the well, numerous stops were made to identify gas zones potentially associated with the surface casing vent leak at Mirror Lake N-20.

On March 11, 2014, Mirror Lake N-20 well was suspended with the wellhead installed and the valves locked. The Roke Vent Nanny was removed.

3.4 Q2, 2014 & Q3-2015 Well Inspections

Well inspections were conducted on June 27, 2014 and July 16, 2015. Wellhead and fencing were in good order with no signs of tampering. Bubble tests were conducted confirming the SCVF issue still existed on the well at each inspection.

March 30, 2016

Daryl Stepanic
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ConocoPhillips Canada

APPENDICES