

# COPRC Loon Creek O-06 Winter 2015-2016 Operations Report

OA-1211-002

ACW-2015-006 WID 2080

Grid # 65<sup>0</sup>10', 127<sup>0</sup>00'

2016/03/30



# COPRC Loon Creek O-06

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# 1 SUMMARY OF OPERATIONS

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Operations began on January 13<sup>th</sup> when a Roke Technology VentNanny was installed on the well.

C&J Energy Services Rig #414 moved onto the well on January 15, 2016 and proceeded to rig up. On January 24, two WRPs were retrieved from the well. From January 25, 2016 through February 9, 2016, four cement squeeze operations were conducted. The service rig moved off the well on February 11, 2016 and the vent meter was left installed to allow observation of the SCVF remediation effectiveness.

C&J Energy Services Rig #414 again moved onto the well on February 29, 2016. From March 2, 2016 through March 10, 2016, four additional cement squeeze operations were conducted which resolved the surface casing vent flow.

These interventions were approved under ACW 2080 and approved revisions to the original program. The dates of these operations and the intervention intervals were:

1. January 25 to 29, 2016; 1739.0-1741.0, 1696.0-1698.0 and 1681.0-1683.0 mKB
2. January 30 to February 2, 2016; 1355.0-1359.0 mKB
3. February 3 to 5, 2016; 1339.0-1342.0 mKB
4. February 6 to 9, 2016; 1267.0-1269.0mKB
5. March 2 to 4, 936.0-938.0 mKB
6. March 5 to 6, 769.0-770.0 mKB
7. March 7 to 9, 730.0-731.0 mKB
8. March 10, 705.0-706.0 mKB

A cement bond log, with both unpressured and pressured passes, was run on March 5, 2016 prior to perforation of the 6<sup>th</sup> interval.

After the SCVF was resolved, a permanent bridge plug was set at 686 mKB, pressure tested and capped with 8.5m of cement leaving the top of cement at 687.3 mKB The service rig was moved off the well on March 11, 2016.

On March 13, 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

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### 2.1 WELL NAME

COPRC Loon Creek O-06

### 2.2 UNIQUE WELL IDENTIFIER

3000066510127000

### 2.3 GEOGRAPHIC CO-ORDINATES (NAD 27)

Well Center: 65°05'51.49" 127°00'30.69"

### 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 issues or delays experienced on this well.

### 2.7 ELEVATIONS

Ground Level: 252.40 m

Kelly Bushing: 257.60 m

KB – Ground Level: 5.20 m

## 2.8 WELL DEPTH

Measured Depth: 1856.0 mKB

True Vertical Depth: 1855.4 mKB

## 2.9 DATES

DH Operations Start: January 23, 2016

DH Operations Complete: March 11, 2016

Service Rig Release: March 12, 2016

Cut & Capped: March 13, 2016

## 2.10 WELL STATUS

Abandoned, Cut & Capped

## 2.11 HOLE SIZES AND DEPTHS

Surface Hole: 311 mm to 600 mKB

Main Hole: 222 mm to 1856 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, K-55 LTC set at 597.0 mKB MD

Production Casing: 177.8 mm, 38.69 kg/m, P-110 LTC set at 1856.0 mKB MD

### 3 WELL HISTORY

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#### 3.1 Q1, 2013 DRILL WELL AND INITIAL COMPLETION

COPRC Dodo Canyon E-76 was spudded on January 26, 2013 with the drill rig released on February 20, 2013 after reaching a total depth of 1856 m KB in 26 days.

2013 winter completion operations were conducted from February 22 to March 24, 2013.

Initially a GR/CBL log was obtained. Following this, 122 geophones were run on wireline from 1820.5mKB to surface. Recorded VSP information was then recorded

3 DFITs were then conducted on three intervals in the Canol formation; 1769.0-1773.0 mKB, 1727.0-1728.0 mKB and 1692.0-1693.0 mKB. 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. Bridge plugs and bottom hole gauges were retrieved after a two-week bleed off period.

Casing patches were then set and pressure tested over each of the three DFIT intervals.

On March 24, 2013 a surface casing vent flow (SCVF) was noted and recorded. ConocoPhillips obtained a ten-day buildup and a 24-hour flow rate for the SCVF. A real time SCV recorder assembly was installed. The SCV was shut-in SCV on April 4, 2013 to record build-up. COPRC Dodo Canyon E-76 was suspended with the wellhead installed and the valves locked.

#### 3.2 Q2 - Q4, 2013 WELL INSPECTIONS

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 MICROSEISMIC MONITORING

Completion operations for 2014 commenced on January 30, 2014 and completed on February 17, 2014. ConocoPhillips set and pressure tested two bridge plugs at 1688.2 mKB and 1676.8 mKB.

Microseismic monitoring operations commenced on February 5, 2014 with operations completed on February 17, 2014. Hydraulic fracture stages conducted on Dodo Canyon E-76 were monitored. No significant seismic events occurred during the operation. While installing the geophone string, numerous stops were made to identify gas zones potentially associated with the surface casing vent leak on the well.

On February 24, 2014, the Roke Vent Nanny was removed from Loon Creek O-06. The SCVF was left open to atmosphere. The well was suspended with the wellhead installed and the valves locked.

### **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  
VP Frontiers & Business Development  
ConocoPhillips Canada

## **APPENDICES**

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<b>Appendix 1</b>	<b>Legal Survey Plan</b>
<b>Appendix 2</b>	<b>Daily Activity and Cost Summary</b>
<b>Appendix 3</b>	<b>Daily Reports</b>
<b>Appendix 4</b>	<b>Fluid Summary</b>
<b>Appendix 5</b>	<b>SCVF Test Summary</b>
<b>Appendix 6</b>	<b>Final Wellbore Schematic</b>
<b>Appendix 7</b>	<b>G-Chem SCVF Analysis</b>
<b>Appendix 8</b>	<b>SCVF Evaluation</b>
<b>Appendix 9</b>	<b>Cut and Cap Photos</b>