

**SINCLAIR UNIT NO. 12  
WATERFLOOD EOR PROJECT**

**ANNUAL REPORT FOR 2017**

**May 31, 2018**

**Tundra Oil and Gas**

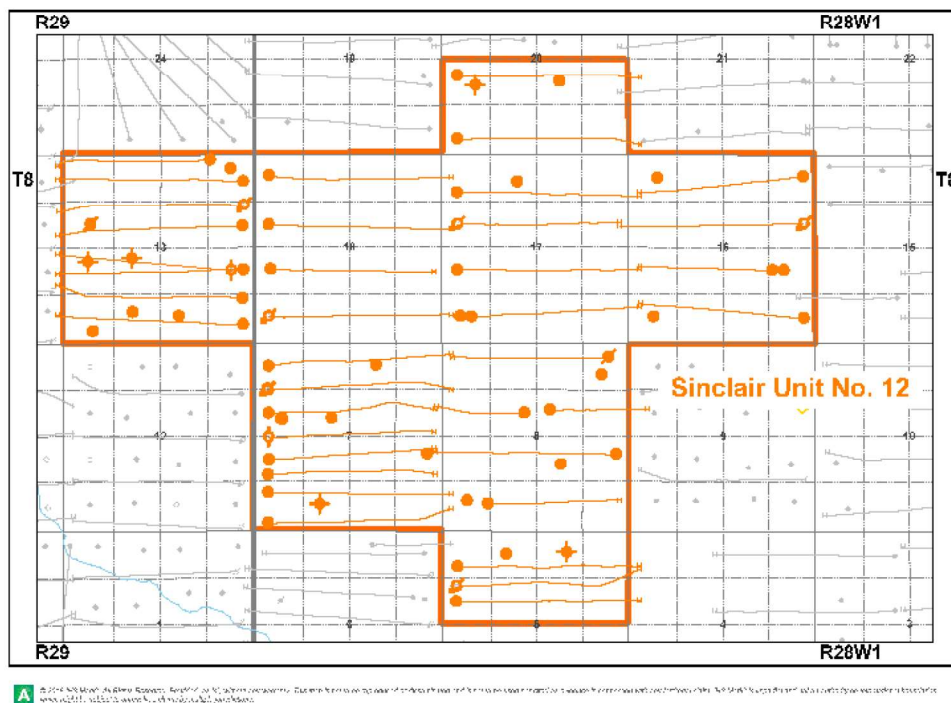
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## **INTRODUCTION**

Sinclair Unit No. 12 Enhanced Oil Recovery (EOR) Waterflood Project was approved under Waterflood Order No. 44, effective February 1, 2015 with Tundra Oil and Gas (Tundra) as Operator. The EOR Unit area, outlined in orange, contains 47 producing wells and 6 injection wells in 112 LSDs in Township 8 Ranges 28 & 29 W1 as shown in the figure below. Well list and well status is available in Appendix A.

**Figure 1: Sinclair Unit No. 12 Area Outline**



In accordance with Section 73 of the Manitoba Drilling and Production Regulation, Tundra hereby submits the following 2017 Annual Progress Report for Sinclair Unit No. 12.

## **DISCUSSION**

### **Production History**

For the wells included in Sinclair Unit No. 12, production started in July 2004 with the 00/16-08-008-28W1 well. Average oil production peaked at 5.94 m<sup>3</sup>/d per well in February 2010. This production was coming from 43 wells and totaled 255.5 m<sup>3</sup>/d for the Unit. In December 2017, the Unit was producing 37.85 m<sup>3</sup>/d of oil and 90.26 m<sup>3</sup>/d of water and had an average WOR of 2.26 m<sup>3</sup>/m<sup>3</sup> in 2017. Water injection commenced in

Sinclair Unit No. 12 in September 2015. The oil production rate, injection rate, and WOR for each injection pattern is presented in Appendix E. The rates and WOR are presented in Figure 2.

**Figure 2: Sinclair Unit No. 12 Production/Injection Rates and WOR vs Time**

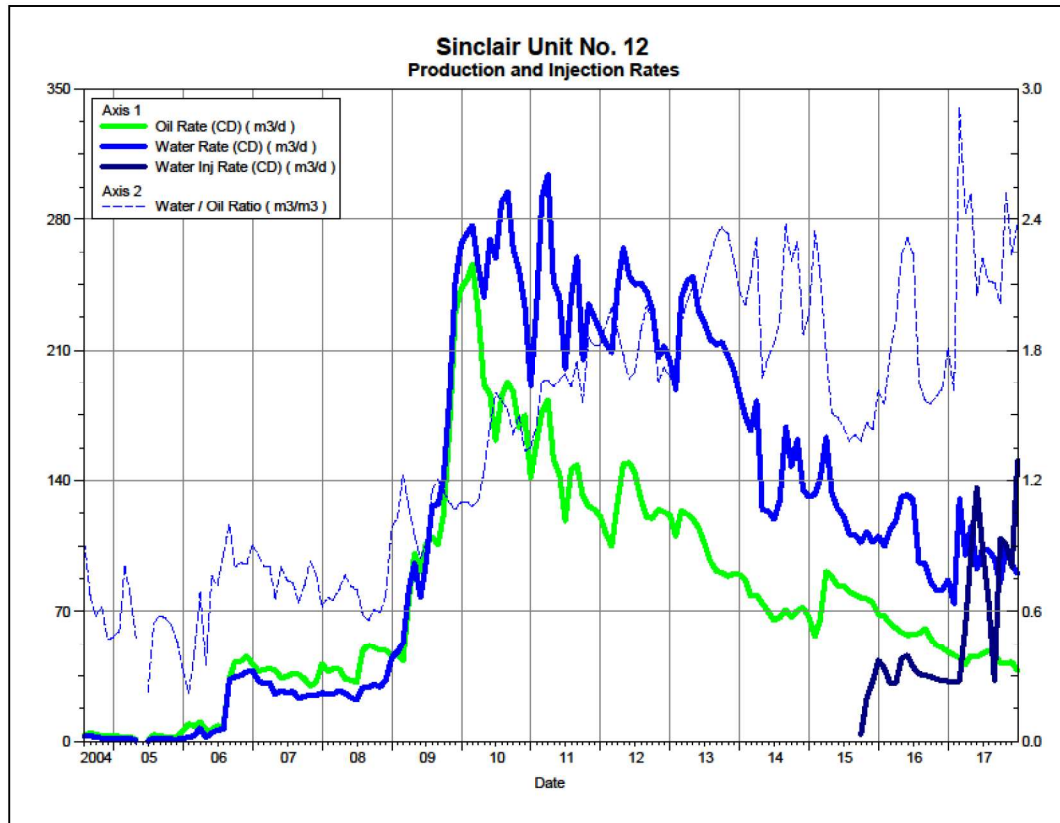
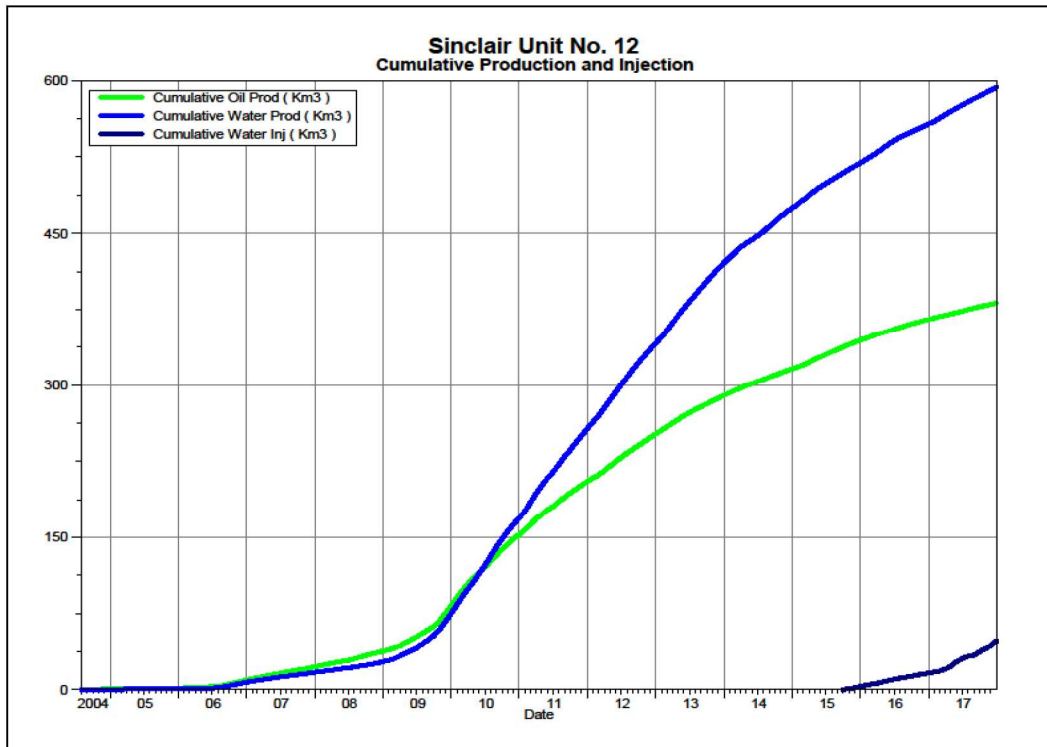


Figure 3 shows the cumulative production for Sinclair Unit No. 12 to the end of December 2017 as 381.24 e³m³ of oil, and 593.49 e³m³ of water, representing an 8.3% recovery factor of the OOIP (4,604 e³m³). The cumulative water injected is 47.99 e³m³. The cumulative volume of oil, and water produced and fluid injected for each injection pattern is presented in Appendix E.



**Figure 3: Sinclair Unit No. 12 Cumulative Oil, Water and Water Injected vs Time**



## **Waterflood Development Plan**

### **Sinclair Unit No. 12 Waterflood (WF) Development Plan**

Twenty-three (23) horizontal wells are planned to be drilled in Sinclair Unit No. 12. The new water injection wells will be placed on injection after a pre-production period. All of the horizontal wells are fracture stimulated to improve the injection rates. No vertical wells are planned for conversion. Water injection commenced in Sinclair Unit No. 12 in September 2015. In January 2017, the 03/16-13-008-29W1 well was drilled as a future injection well between existing horizontal/vertical producing wells, completing a waterflood pattern with effective 20 acre spacing. In 2017, the 03/12-07, 00/09-16 and 00/12-17-008-28W1 and 03/09-13-008-29W1 wells were converted to water injection. As of December 2017, Sinclair Unit No. 12 had 6 injection patterns in place. In 2018, Tundra is planning to convert the 03/01-13 and 03/16-13-008-29W1 wells and 3 more existing producers to injectors.

Production performance by injector pattern are summarized in Appendix B.

Any future revisions to the waterflood development or surveillance plan would be based on new production or performance response data, technical studies, or observed reservoir behavior and reserves recovery interpretations.

## **Waterflood EOR Operating Strategy and Performance**

### **Water Source and Quality**

The injection water for Sinclair Unit No. 12 was sourced from the 02/16-32-007-29W1 well (Lodgepole formation) until June 2016 when it was switched over to the newly recompleted source water well at 02/14-30-007-28W1 (Mannville formation). The water is treated at the 04-01-008-29W1 filtration plant where it is filtered to 0.1 microns and has scale inhibitor and biocide added. The injection water is then distributed to the injectors through the dedicated infrastructure system.

### **Injection Wellhead Pressures**

Injection started in this Unit in September 2015. The average monthly wellhead injection pressure for each injection well is summarized in Appendix D. Since injection in this Unit is still in the early stages, the injector(s) are still building up to a target injection pressure of 6300 kPaa.

### **Reservoir Pressure**

Where practical, Tundra is committed to collecting pressure data from newly drilled openhole injection wells. For Sinclair Unit No. 12, pressure data taken in 2015 and 2017 from 6 locations is currently available (Appendix C). Pressures are corrected to a common datum of -450 m SS for comparison with other units in the area.

### **Well Servicing**

The following table summarizes the well servicing performed in Sinclair Unit No. 12 during 2017:

**Table 1: Service and Maintenance in Sinclair Unit No. 12**

|                       |                             |           |
|-----------------------|-----------------------------|-----------|
| 100.13-05-008-28W1.00 | Pump change                 | 9/6/2017  |
| 100.05-07-008-28W1.00 | Packers Plus Drill out      | 9/29/2017 |
| 100.13-17-008-28W1.00 | Pump Change                 | 8/8/2017  |
| 100.05-18-008-28W1.00 | Tubing Upsize / Pump Change | 1/27/2017 |
| 100.05-18-008-28W1.00 | Polish Rod Repair           | 3/16/2017 |

### **Waterflood Performance Discussion**

Twenty-three (23) horizontal wells are planned to be drilled in Sinclair Unit No. 12 for waterflood conversion. No vertical wells are planned for conversion. Water injection commenced in Sinclair Unit No. 12 in September 2015. As of December 2017, Sinclair Unit No. 12 waterflood area had 6 of the 23 proposed injection patterns in place. In 2018, Tundra is planning to convert 5 more existing producers to injectors.

Plots of the production and injection data along with the VRR information is presented in Appendix E for each of the injection patterns.

## List of Appendices

Appendix A: Well Name and Well Status

Appendix B: Injection Pattern Summary

Appendix C: Reservoir Pressure Summary

Appendix D: Injection Pressure Summary

Appendix E: Injector Pattern Production/Injection Rates, Cumulative and VRR Plots for the following injectors:

102/12-05-008-28W1/0

103/12-07-008-28W1/0

100/09-16-008-28W1/0

100/12-17-008-28W1/0

100/04-18-008-28W1/0

103/01-13-008-29W1/0

103/09-13-008-29W1/0

103/16-13-008-29W1/0



## Appendix A

| UWI                  | Surface Location     | Type       | Well Status         |
|----------------------|----------------------|------------|---------------------|
| 100/12-05-008-28W1/0 | 100/12-04-008-28W1/C | Horizontal | Capable of Oil Prod |
| 102/12-05-008-28W1/0 | 102/13-04-008-28W1/C | Horizontal | WTR Injection       |
| 100/13-05-008-28W1/0 | 100/13-04-008-28W1/C | Horizontal | Capable of Oil Prod |
| 100/14-05-008-28W1/0 | ---                  | Vertical   | Capable of Oil Prod |
| 100/15-05-008-28W1/2 | ---                  | Vertical   | Abandoned Zone      |
| 100/03-07-008-28W1/0 | ---                  | Vertical   | Abandoned Zone      |
| 100/04-07-008-28W1/0 | 100/04-08-008-28W1/C | Horizontal | Capable of Oil Prod |
| 103/04-07-008-28W1/0 | 103/04-08-008-28W1/C | Horizontal | Capable of Oil Prod |
| 100/05-07-008-28W1/0 | 100/08-07-008-28W1/C | Horizontal | Capable of Oil Prod |
| 102/05-07-008-28W1/0 | 102/08-07-008-28W1/C | Horizontal | Capable of Oil Prod |
| 100/08-07-008-28W1/0 | ---                  | Vertical   | Capable of Oil Prod |
| 100/11-07-008-28W1/0 | ---                  | Vertical   | Capable of Oil Prod |
| 100/12-07-008-28W1/0 | ---                  | Vertical   | Capable of Oil Prod |
| 102/12-07-008-28W1/0 | 102/09-07-008-28W1/C | Horizontal | Capable of Oil Prod |
| 103/12-07-008-28W1/0 | 103/13-08-008-28W1/C | Horizontal | WTR Injection       |
| 100/13-07-008-28W1/0 | 100/13-08-008-28W1/C | Horizontal | Capable of Oil Prod |
| 100/15-07-008-28W1/0 | ---                  | Vertical   | Capable of Oil Prod |
| 100/04-08-008-28W1/0 | ---                  | Vertical   | Capable of Oil Prod |
| 102/04-08-008-28W1/0 | 102/01-08-008-28W1/C | Horizontal | Capable of Oil Prod |
| 100/07-08-008-28W1/0 | ---                  | Vertical   | Capable of Oil Prod |
| 100/08-08-008-28W1/0 | 100/08-07-008-28W1/C | Horizontal | Capable of Oil Prod |
| 100/10-08-008-28W1/0 | 100/12-09-008-28W1/C | Horizontal | Capable of Oil Prod |
| 100/11-08-008-28W1/0 | 100/09-07-008-28W1/C | Horizontal | Capable of Oil Prod |
| 100/16-08-008-28W1/0 | ---                  | Vertical   | Capable of Oil Prod |
| 102/16-08-008-28W1/0 | 102/13-08-008-28W1/C | Horizontal | Suspended           |
| 100/01-16-008-28W1/0 | 100/04-16-008-28W1/C | Horizontal | Capable of Oil Prod |
| 100/04-16-008-28W1/0 | ---                  | Vertical   | Capable of Oil Prod |
| 100/08-16-008-28W1/0 | ---                  | Vertical   | Capable of Oil Prod |
| 102/08-16-008-28W1/0 | 102/05-16-008-28W1/C | Horizontal | Capable of Oil Prod |
| 100/09-16-008-28W1/0 | 100/09-17-008-28W1/C | Horizontal | WTR Injection       |

| UWI                  | Surface Location     | Type       | Well Status         |
|----------------------|----------------------|------------|---------------------|
| 100/13-16-008-28W1/0 | ---                  | Vertical   | Capable of Oil Prod |
| 100/16-16-008-28W1/0 | 100/13-16-008-28W1/C | Horizontal | Capable of Oil Prod |
| 100/04-17-008-28W1/0 | ---                  | Vertical   | Capable of Oil Prod |
| 102/04-17-008-28W1/0 | 102/04-16-008-28W1/C | Horizontal | Capable of Oil Prod |
| 100/05-17-008-28W1/0 | 100/05-16-008-28W1/C | Horizontal | Capable of Oil Prod |
| 100/12-17-008-28W1/0 | 100/09-17-008-28W1/C | Horizontal | WTR Injection       |
| 100/13-17-008-28W1/0 | 100/13-16-008-28W1/C | Horizontal | Capable of Oil Prod |
| 100/14-17-008-28W1/0 | ---                  | Vertical   | Capable of Oil Prod |
| 100/04-18-008-28W1/0 | 100/04-17-008-28W1/C | Horizontal | WTR Injection       |
| 100/05-18-008-28W1/0 | 100/08-18-008-28W1/C | Horizontal | Capable of Oil Prod |
| 100/12-18-008-28W1/0 | 100/12-17-008-28W1/C | Horizontal | Capable of Oil Prod |
| 100/13-18-008-28W1/0 | 100/13-17-008-28W1/C | Horizontal | Capable of Oil Prod |
| 100/04-20-008-28W1/0 | 100/04-21-008-28W1/C | Horizontal | Capable of Oil Prod |
| 100/05-20-008-28W1/0 | ---                  | Vertical   | Abandoned Zone      |
| 102/05-20-008-28W1/0 | 102/05-21-008-28W1/C | Horizontal | Capable of Oil Prod |
| 100/07-20-008-28W1/2 | ---                  | Vertical   | Capable of Oil Prod |
| 102/01-13-008-29W1/0 | 102/01-14-008-29W1/C | Horizontal | Capable of Oil Prod |
| 103/01-13-008-29W1/0 | 103/08-14-008-29W1/0 | Horizontal | Capable of Oil Prod |
| 100/02-13-008-29W1/0 | ---                  | Vertical   | Capable of Oil Prod |
| 100/03-13-008-29W1/0 | ---                  | Vertical   | Capable of Oil Prod |
| 100/04-13-008-29W1/0 | ---                  | Vertical   | Capable of Oil Prod |
| 100/05-13-008-29W1/0 | ---                  | Vertical   | Abandoned Zone      |
| 100/06-13-008-29W1/0 | ---                  | Vertical   | Abandoned Zone      |
| 100/08-13-008-29W1/0 | 100/08-14-008-29W1/C | Horizontal | Capable of Oil Prod |
| 102/09-13-008-29W1/0 | 102/09-14-008-29W1/C | Horizontal | Capable of Oil Prod |
| 103/09-13-008-29W1/0 | 103/09-14-008-29W1/C | Horizontal | WTR Injection       |
| 100/12-13-008-29W1/0 | ---                  | Vertical   | Suspended           |
| 100/16-13-008-29W1/0 | ---                  | Vertical   | Capable of Oil Prod |
| 102/16-13-008-29W1/0 | 102/16-14-008-29W1/C | Horizontal | Capable of Oil Prod |
| 103/16-13-008-29W1/0 | 103/16-14-008-29W1/C | Horizontal | Capable of Oil Prod |

**Appendix B**

**Sinclair Unit No. 12 Injection Pattern Summary as of December 2017**

| Pattern Name       | Injector BH Location<br>(008-28W1) | Injector Surf. Location<br>(008-28W1) | Status              | No. of Supported Wells | Supported Wells<br>(008-28W1)                          | Allocation Factor  | Pattern Prod Start Month | Injector Start Month | Oil Rate<br>(m³/d) | Water Rate<br>(m³/d) | WOR<br>(m³/m³) | Water Injection<br>(m³/d) | Cum Oil<br>(E-m³) | Cum Water<br>(E-m³) | Cum Inj Water<br>(E-m³) | Monthly VRR | Cum VRR |
|--------------------|------------------------------------|---------------------------------------|---------------------|------------------------|--|--------------------|--------------------------|----------------------|--------------------|----------------------|----------------|---------------------------|-------------------|---------------------|-------------------------|-------------|---------|
| 02/12-05-008-28Inj | 02/12-05                           | 02/13-04                              | WTR Injection       | 4                      | 12-05, 13-05<br>14-05, 15-05                           | 0.5<br>0.25        | Aug 2006                 | Nov 2015             | 1.04               | 1.58                 | 1.52           | -                         | 11.03             | 13.73               | 6.96                    | 0.000       | 0.273   |
| 03/12-07-008-28Inj | 03/12-07                           | 03/13-08                              | WTR Injection       | 5                      | 11-07, 12-07<br>13-07                                  | 0.3<br>0.5         | Aug 2006                 | Sep 2017             | 1.16               | 3.34                 | 2.88           | 29.61                     | 15.55             | 24.41               | 2.23                    | 6.458       | 0.054   |
| 00/09-16-008-28Inj | 00/09-16                           | 00/09-17                              | WTR Injection       | 4                      | 02/12-07, 15-07<br>08-16, 02/08-16, 16-16<br>13-16     | 1.0<br>0.5<br>0.25 | Nov 2006                 | Feb 2017             | 1.18               | 3.13                 | 2.65           | 39.55                     | 21.10             | 26.61               | 8.96                    | 8.984       | 0.182   |
| 00/12-17-008-28Inj | 00/12-17                           | 00/09-17                              | WTR Injection       | 3                      | 05-17, 13-17<br>14-17                                  | 0.5<br>0.25        | Aug 2006                 | Feb 2017             | 1.82               | 1.91                 | 1.05           | 39.51                     | 25.69             | 25.99               | 8.20                    | 10.234      | 0.153   |
| 00/04-18-008-28Inj | 00/04-18                           | 00/04-17                              | WTR Injection       | 2                      | 13-07, 05-18   | 0.50               | Aug 2006                 | Sep 2015             | 1.15               | 12.90                | 11.19          | 27.52                     | 16.59             | 85.44               | 20.80                   | 1.947       | 0.202   |
| 03/01-13-008-29W1  | 03/01-13-008-29W1                  | 03/04-18-0C8-29W1                     | Capable of OIL Prod | 7                      | 02-13, 03-13, 04-13<br>08-13, 02/01-13<br>05-13, 06-13 | 0.7<br>0.5<br>0.3  | Dec 2005                 | -                    | 3.66               | 3.52                 | 0.96           | -                         | 17.37             | 21.51               | 0.00                    | 0.000       | 0.000   |
| 03/09-13-008-29Inj | 03/09-13-008-29W1                  | 03/09-14-0C8-29W1                     | WTR Injection       | 3                      | 02/09-13, 02/16-13<br>12-13                            | 0.5<br>1.0         | Aug 2006                 | Oct 2017             | 1.50               | 1.97                 | 1.31           | 14.68                     | 16.09             | 19.72               | 0.85                    | 4.096       | 0.023   |
| 03/16-13-008-29Inj | 03/16-13-008-29W1                  | 03/16-14-0C8-29W1                     | Capable of OIL Prod | 6                      | 16-13<br>02/16-13<br>02/01-24, 02-24, 03-24, 02/13-24  | 1.0<br>0.5<br>0.25 | Oct 2006                 | -                    | 3.20               | 8.29                 | 2.59           |                           | 13.41             | 14.86               | 0.00                    | 0.000       | 0.000   |



## APPENDIX C

### Sinclair Unit No. 12 - Pressure Summary

| Location            | Test Date                   | Final Pressure (kPaa) | MPP (mTVD) | KB     | Datum Depth | Gradient | Pressure @ -450 masl |
|---------------------|-----------------------------|-----------------------|------------|--------|-------------|----------|----------------------|
| 02/12-05-008-28W1/0 | Dec 10 - Jan 31, 2015       | 1593.3                | 933.18     | 502.90 | -450        | 8.25     | 1756                 |
| 02/05-07-008-28W1/0 | Nov 30, 2014 - Jan 31, 2015 | 4821.7                | 938.67     | 507.75 | -450        | 8.25     | 4979                 |
| 03/12-07-008-28W1/0 | Dec 2 - Jan 20, 2015        | 5771.6                | 931.15     | 507.30 | -450        | 8.25     | 5987                 |
| 03/01-13-008-29W1/0 | Jan 19 - Feb 11, 2015       | 3837.0                | 936.69     | 511.05 | -450        | 8.25     | 4038                 |
| 03/09-13-008-29W1/0 | Nov 22, 2014 - Jan 7, 2015  | 4218.6                | 938.11     | 512.09 | -450        | 8.25     | 4416                 |
| 03/16-13-008-29W1/0 | Feb 3 - Mar 2, 2017         | 4334.3                | 931.82     | 511.78 | -450        | 8.25     | 4582                 |



|                            |  |
|----------------------------|--|
| <b>Company Name</b>        | <b>TUNDRA OIL &amp; GAS PARTNERSHIP</b>              |
| <b>Well Name</b>           | <b>TUNDRA SINCLAIR UNIT No. 12 HZNTL A16-13-8-29</b> |
| <b>Unique Well ID</b>      | <b>103/16-13-008-29W1/00</b>                         |
| <b>Well License Number</b> | <b>10636</b>   |
| <b>Formation</b>           | <b>BAKKEN</b>  |
| <b>Test Type</b>           | <b>RESERVOIR PRESSURE SURVEY</b>                     |
| <b>Start Test Date</b>     | <b>2017/02/03</b>                                    |
| <b>Final Test Date</b>     | <b>2017/03/02</b>                                    |

**Prepared By DOLLCO Well Data Services**

# Pressure Survey Report

## Company Information

Company Name  
Contact  
e-mail  
Phone  
Site Contact  
Site Phone

TUNDRA OIL & GAS PARTNERSHIP  
CHRIS [REDACTED]  
chris.perkins@tundraoilandgas.com  
(204) 851-2146  
MARK [REDACTED]  
(204) 851-5689

## Well Information

Well Name  
Unique Well ID  
Surface Location  
Well License Number  
Well Type  
Well Fluid Type  
Field

TUNDRA SINCLAIR UNIT No. 12 HZNTL A16-13-8-29  
103/16-13-008-29W1/00  
(16D-14) 16-13-8-29W1  
10636  
Horizontal  
01 Oil  
SINCLAIR UNIT No. 12

KB Elevation (SL)  
CF Elevation (SL)  
GL Elevation (SL)  
Distance from KB to CF (Log)  
KB-GL Offset

511.78 m  
507.93 m  
507.58 m  
3.85 m  
4.20 m

Tubing ID  
Tubing OD  
Tubing Depth(Log KB)  
Tubing Depth(TVD KB)

mm  
mm  
m  
m

Casing ID  
Casing OD  
Casing Depth(Log KB)  
Casing Depth(TVD KB)

mm  
114.3 mm  
1047.50000 m  
933.28000 m

PBTD(Log KB)  
PBTD(TVD KB)

m  
m



# Pressure Survey Report

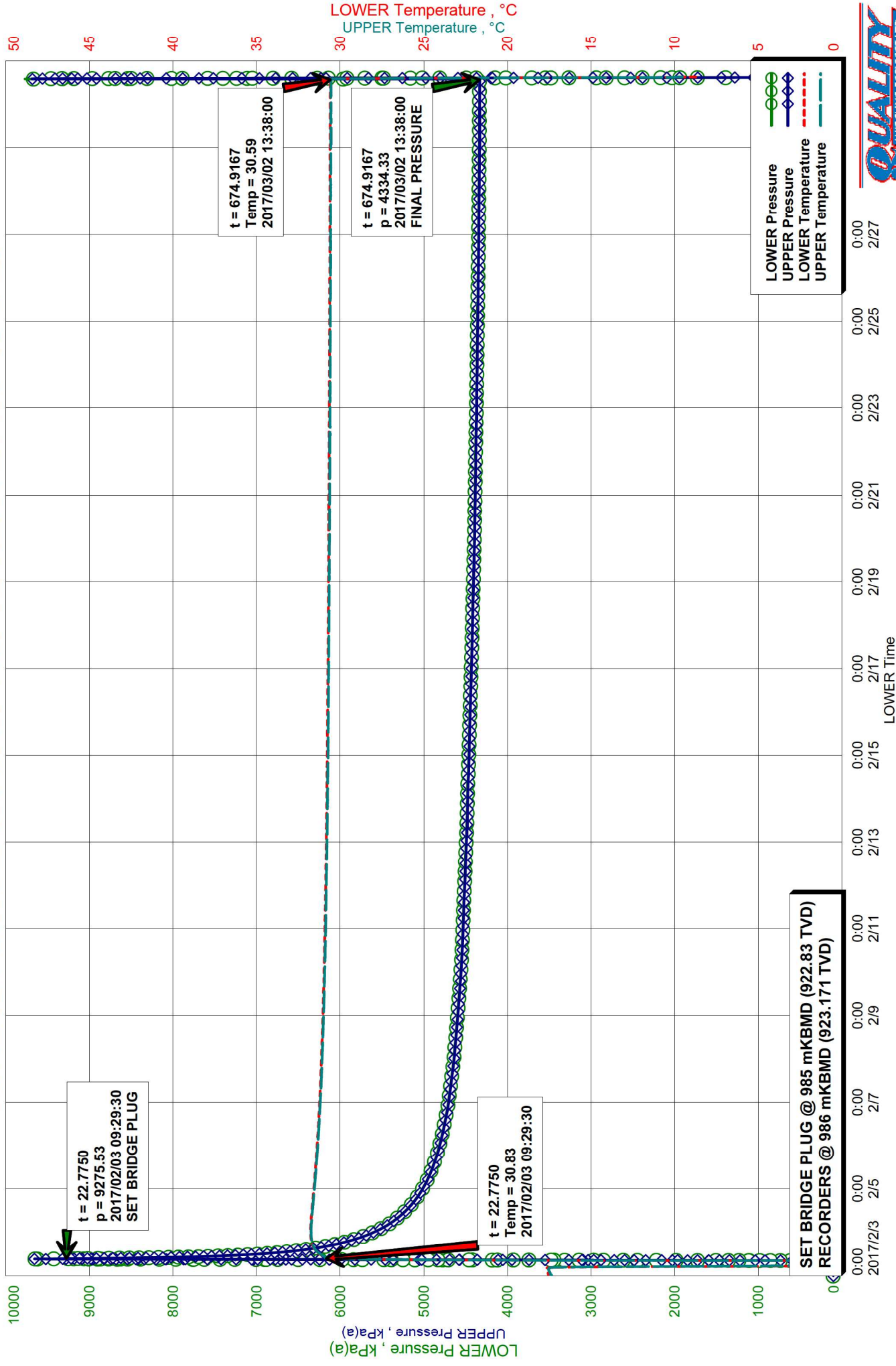
## Test Information

|                                     |   |
|-------------------------------------|---|
| Well Name                           | TUNDRA SINCLAIR UNIT No. 12 HZNTL A16-13-8-29 |
| Unique Well ID                      | 103/16-13-008-29W1/00                         |
| Surface Location                    | (16D-14) 16-13-8-29W1                         |
| Well License                        | 10636   |
| Well Fluid Type                     | 01 Oil  |
| Test Purpose                        | Other   |
| Test Type                           | RESERVOIR PRESSURE SURVEY                     |
| Formation                           | BAKKEN  |
| Well Type Indicator                 | Horizontal                                    |
| Test/Prod. Interval Top KB (Log)    | 1047.50 m                                     |
| Test/Prod. Interval Base KB (Log)   | 2197.00 m                                     |
| MPP(Log KB)                         | 1622.25 m                                     |
| Test/Prod. Interval Top m KB (TVD)  | 933.28 m                                      |
| Test/Prod. Interval Base m KB (TVD) | 930.36 m                                      |
| MPP(TVD KB)                         | 931.82 m                                      |
| Tubing Pressure Initial             | 93.00 kPa(a)                                  |
| Casing Pressure Initial             | 93.00 kPa(a)                                  |
| Tubing Pressure: Final              | 93.00 kPa(a)                                  |
| Casing Pressure: Final              | 93.00 kPa(a)                                  |
| Final Test Date/Time                | 2017/03/02 13:38:00                           |
| Time/Date Well Shut-In              | 2017/02/03 09:29:30                           |
| Gauge Serial Number                 | V81   |
| Run Depth (TVD KB)                  | 923.171 m                                     |
| Last Measured Pressure at Run Depth | 4334.34 kPa(a)                                |
| Reservoir Temperature               | °C  |
| Service Company                     | Quality Wireline Services Ltd.                |
| Representative                      | BART [REDACTED]                               |
| Prepared By                         | DOLLCO Well Data Services                     |
| Qualified By                        | RICK [REDACTED]                               |
| Report Date                         | 2017/03/03                                    |

OPEN HOLE: 1047.5 - 2197.0 mKBMD (933.28 - 930.36 TVD)  
RECORDERS @ 986 mKBMD (923.171 TVD, BELOW BRIDGE PLUG @ 985 mKBMD (922.83 TVD)

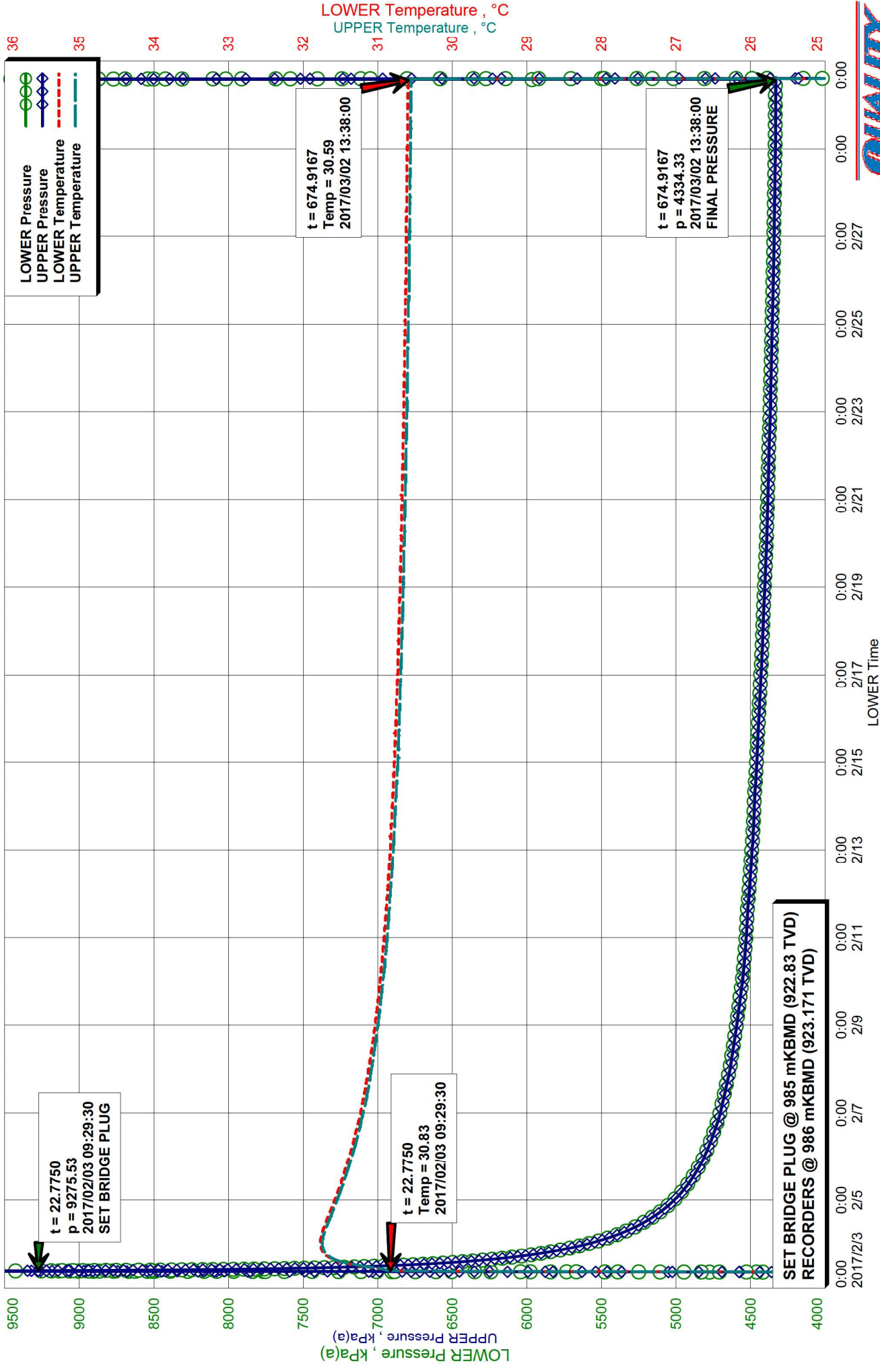


# TUNDRA SINCLAIR UNIT No. 12 HZNTL A16-13-8-29



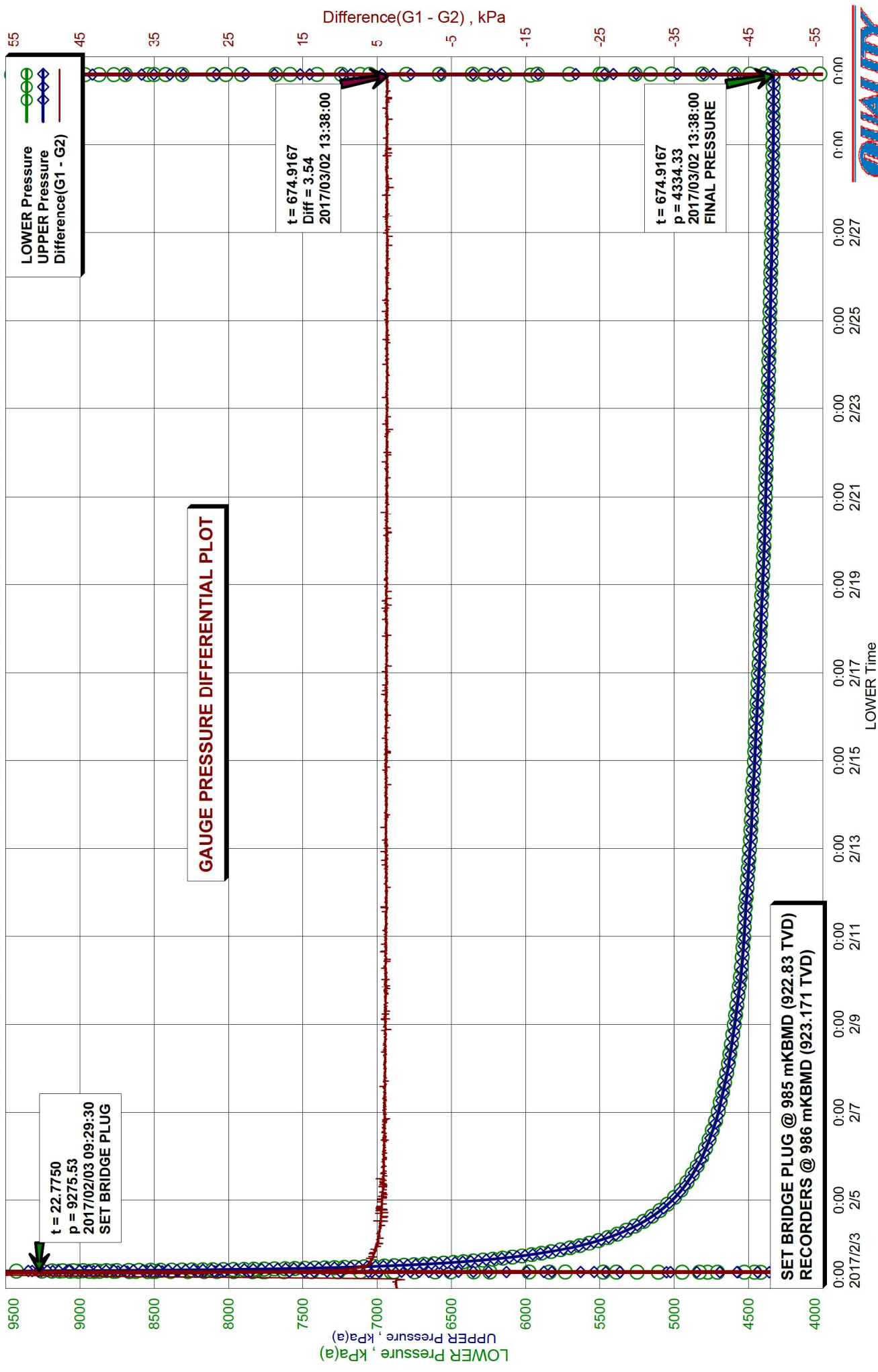


# TUNDRA SINCLAIR UNIT No. 12 HZNTL A16-13-8-29





# TUNDRA SINCLAIR UNIT No. 12 HZNTL A16-13-8-29



# Recorder Information

|                        |   |
|------------------------|---|
| <b>Company Name</b>    | TUNDRA OIL & GAS PARTNERSHIP                  |
| <b>Unique Well ID</b>  | 103/16-13-008-29W1/00                         |
| <b>Well Name</b>       | TUNDRA SINCLAIR UNIT No. 12 HZNTL A16-13-8-29 |
| <b>Formation</b>       | BAKKEN  |
| <b>Start Test Date</b> | 2017/02/03                                    |
| <b>Final Test Date</b> | 2017/03/02                                    |

## Gauge 1

|                                 |            |                               |                        |
|---------------------------------|------------|-------------------------------|------------------------|
| <b>Gauge Name</b>               | LOWER      | <b>Gauge Type</b>             | ELECTRONIC             |
| <b>Gauge Serial Number</b>      | V81        | <b>Gauge Manufacturer</b>     | REAL TIME MEASUREMENTS |
| <b>Run Depth (Log KB)</b>       | 986.00 m   | <b>Gauge Model</b>            | KC3 STRAIN             |
| <b>Date of Last Calibration</b> | 2015/10/21 | <b>Maximum Recorder Range</b> | 20680.00 kPa           |
| <b>Gauge Start Date</b>         | 2017/02/02 | <b>Gauge Start Time</b>       | 10:43:00               |
| <b>Gauge Stop Date</b>          | 2017/03/02 | <b>Gauge Stop Time</b>        | 15:08:30               |
| <b>Date Gauge On Bottom</b>     | 2017/02/03 | <b>Time Gauge On Bottom</b>   | 09:26:00               |
| <b>Date Gauge Off Bottom</b>    | 2017/03/02 | <b>Time Gauge Off Bottom</b>  | 13:38:00               |

## Gauge 2

|                                 |            |                               |                        |
|---------------------------------|------------|-------------------------------|------------------------|
| <b>Gauge Name</b>               | UPPER      | <b>Gauge Type</b>             | ELECTRONIC             |
| <b>Gauge Serial Number</b>      | B7X        | <b>Gauge Manufacturer</b>     | REAL TIME MEASUREMENTS |
| <b>Run Depth (Log KB)</b>       | 986.00 m   | <b>Gauge Model</b>            | KC3 STRAIN             |
| <b>Date of Last Calibration</b> | 2015/10/21 | <b>Maximum Recorder Range</b> | 20680.00 kPa           |
| <b>Gauge Start Date</b>         | 2017/02/02 | <b>Gauge Start Time</b>       | 10:43:00               |
| <b>Gauge Stop Date</b>          | 2017/03/02 | <b>Gauge Stop Time</b>        | 15:08:30               |
| <b>Date Gauge On Bottom</b>     | 2017/02/03 | <b>Time Gauge On Bottom</b>   | 09:26:00               |
| <b>Date Gauge Off Bottom</b>    | 2017/03/02 | <b>Time Gauge Off Bottom</b>  | 13:38:00               |



TUNDRA OIL & GAS PARTNERSHIP  
103/16-13-008-29W1/00  
Start Test Date: 2017/02/03  
Final Test Date: 2017/03/02

TUNDRA SINCLAIR UNIT No. 12 HZNTL A16-13-8-29  
Formation: BAKKEN  
**RESERVOIR PRESSURE SURVEY**  
**RECORDERS @ 986 mKBMD (923.171 TVD)**

|    | LOWER<br>Date<br>yyyy/mm/dd | LOWER<br>Clk Time<br>hh:mm:ss | LOWER<br>Time<br>hr | LOWER<br>Pres.<br>kPa(a)                     | LOWER<br>Temp.<br>°C | UPPER<br>Time<br>hr | UPPER<br>Pres.<br>kPa(a) | UPPER<br>Temp.<br>°C | Diff.<br>G1 - G2<br>kPa |
|----|-----------------------------|-------------------------------|---------------------|--|----------------------|---------------------|--------------------------|----------------------|-------------------------|
| 1  | 2017/02/02                  | 10:43:00                      | 0.0000              | 103.38                                       | 16.22                | 0.0000              | 101.54                   | 17.74                | 1.84                    |
| 2  | 2017/02/02                  | 10:43:00                      | 0.0000              | ACTIVATE RECORDERS S/N: V81(L) & V7X(U)      |                      |                     |                          |                      |                         |
| 3  | 2017/02/02                  | 10:43:30                      | 0.0083              | 103.35                                       | 16.22                | 0.0083              | 101.55                   | 17.76                | 1.80                    |
| 4  | 2017/02/02                  | 12:43:00                      | 2.0000              | 106.68                                       | 13.46                | 2.0083              | 103.30                   | 14.60                | 3.40                    |
| 5  | 2017/02/02                  | 14:43:00                      | 4.0000              | 104.74                                       | 17.95                | 4.0083              | 102.09                   | 17.85                | 2.66                    |
| 6  | 2017/02/02                  | 16:43:00                      | 6.0000              | 102.41                                       | 17.83                | 6.0083              | 100.33                   | 17.52                | 2.09                    |
| 7  | 2017/02/02                  | 18:43:00                      | 8.0000              | 102.39                                       | 17.72                | 8.0083              | 100.42                   | 17.50                | 1.98                    |
| 8  | 2017/02/02                  | 20:43:00                      | 10.0000             | 102.64                                       | 17.63                | 10.0083             | 100.43                   | 17.49                | 2.20                    |
| 9  | 2017/02/02                  | 22:43:00                      | 12.0000             | 102.51                                       | 17.51                | 12.0083             | 100.21                   | 17.38                | 2.30                    |
| 10 | 2017/02/03                  | 00:43:00                      | 14.0000             | 102.77                                       | 17.53                | 14.0083             | 100.41                   | 17.42                | 2.36                    |
| 11 | 2017/02/03                  | 02:43:00                      | 16.0000             | 102.97                                       | 17.64                | 16.0166             | 100.49                   | 17.52                | 2.48                    |
| 12 | 2017/02/03                  | 04:43:00                      | 18.0000             | 100.09                                       | 16.31                | 18.0166             | 98.20                    | 16.49                | 1.76                    |
| 13 | 2017/02/03                  | 06:43:00                      | 20.0000             | 92.21  | -11.36               | 20.0166             | 45.80                    | -9.59                | 46.00                   |
| 14 | 2017/02/03                  | 07:15:00                      | 20.5333             | 91.84  | -13.06               | 20.5333             | 34.32                    | -11.96               | 57.52                   |
| 15 | 2017/02/03                  | 07:15:00                      | 20.5333             | RUN IN HOLE WITH RECORDERS BELOW BRIDGE PLUG |                      |                     |                          |                      |                         |
| 16 | 2017/02/03                  | 07:15:30                      | 20.5417             | 91.85  | -13.07               | 20.5416             | 34.17                    | -11.99               | 57.68                   |
| 17 | 2017/02/03                  | 08:43:00                      | 22.0000             | 3813.27                                      | 23.16                | 22.0166             | 4111.91                  | 23.43                | -242.55                 |
| 18 | 2017/02/03                  | 09:26:00                      | 22.7167             | 9259.23                                      | 30.76                | 22.7166             | 9276.52                  | 30.79                | -17.29                  |
| 19 | 2017/02/03                  | 09:26:00                      | 22.7167             | RECORDERS ON DEPTH @ 986 mKBMD (923.171 TVD) |                      |                     |                          |                      |                         |
| 20 | 2017/02/03                  | 09:26:30                      | 22.7250             | 9275.24                                      | 30.77                | 22.7250             | 9262.02                  | 30.80                | 13.22                   |
| 21 | 2017/02/03                  | 09:29:30                      | 22.7750             | 9275.53                                      | 30.83                | 22.7750             | 9252.24                  | 30.83                | 23.29                   |
| 22 | 2017/02/03                  | 09:29:30                      | 22.7750             | SET BRIDGE PLUG @ 985 mKBMD (922.83 TVD)     |                      |                     |                          |                      |                         |
| 23 | 2017/02/03                  | 09:30:00                      | 22.7833             | 9240.47                                      | 30.83                | 22.7833             | 9220.25                  | 30.83                | 20.22                   |
| 24 | 2017/02/03                  | 10:43:00                      | 24.0000             | 7601.76                                      | 30.99                | 24.0166             | 7582.61                  | 30.97                | 8.06                    |
| 25 | 2017/02/03                  | 12:43:00                      | 26.0000             | 6777.02                                      | 31.32                | 26.0166             | 6766.47                  | 31.30                | 6.18                    |
| 26 | 2017/02/03                  | 14:43:00                      | 28.0000             | 6378.72                                      | 31.53                | 28.0166             | 6370.43                  | 31.51                | 5.76                    |
| 27 | 2017/02/03                  | 16:43:00                      | 30.0000             | 6119.41                                      | 31.65                | 30.0166             | 6112.03                  | 31.63                | 5.61                    |
| 28 | 2017/02/03                  | 18:43:00                      | 32.0000             | 5931.43                                      | 31.71                | 32.0166             | 5924.61                  | 31.69                | 5.46                    |
| 29 | 2017/02/03                  | 20:43:00                      | 34.0000             | 5785.57                                      | 31.75                | 34.0166             | 5779.26                  | 31.72                | 5.22                    |
| 30 | 2017/02/03                  | 22:43:00                      | 36.0000             | 5666.88                                      | 31.76                | 36.0166             | 5660.96                  | 31.74                | 5.01                    |
| 31 | 2017/02/04                  | 00:43:00                      | 38.0000             | 5568.04                                      | 31.77                | 38.0166             | 5562.41                  | 31.74                | 4.87                    |
| 32 | 2017/02/04                  | 02:43:00                      | 40.0000             | 5484.43                                      | 31.76                | 40.0166             | 5478.84                  | 31.74                | 4.93                    |
| 33 | 2017/02/04                  | 04:43:00                      | 42.0000             | 5411.70                                      | 31.75                | 42.0166             | 5406.36                  | 31.73                | 4.79                    |
| 34 | 2017/02/04                  | 06:43:00                      | 44.0000             | 5349.55                                      | 31.74                | 44.0166             | 5344.28                  | 31.71                | 4.77                    |
| 35 | 2017/02/04                  | 08:43:00                      | 46.0000             | 5294.22                                      | 31.72                | 46.0166             | 5289.13                  | 31.69                | 4.63                    |
| 36 | 2017/02/04                  | 10:43:00                      | 48.0000             | 5244.74                                      | 31.71                | 48.0166             | 5239.78                  | 31.67                | 4.55                    |
| 37 | 2017/02/04                  | 12:43:00                      | 50.0000             | 5201.54                                      | 31.69                | 50.0166             | 5195.72                  | 31.66                | 5.45                    |
| 38 | 2017/02/04                  | 14:43:00                      | 52.0000             | 5160.45                                      | 31.67                | 52.0166             | 5155.78                  | 31.64                | 4.35                    |
| 39 | 2017/02/04                  | 16:43:00                      | 54.0000             | 5123.83                                      | 31.65                | 54.0166             | 5119.16                  | 31.61                | 4.38                    |
| 40 | 2017/02/04                  | 18:43:00                      | 56.0000             | 5091.02                                      | 31.63                | 56.0166             | 5086.38                  | 31.60                | 4.37                    |

LOWER Serial Number: V81 Start Date: 2017/02/02 10:43:00 Run Depth: 986.00  
UPPER Serial Number: B7X Start Date: 2017/02/02 10:43:00 Run Depth: 986.00  
Print Filter: Print every 2 hour



TUNDRA OIL & GAS PARTNERSHIP  
103/16-13-008-29W1/00  
Start Test Date: 2017/02/03  
Final Test Date: 2017/03/02

TUNDRA SINCLAIR UNIT No. 12 HZNTL A16-13-8-29  
**RESERVOIR PRESSURE SURVEY**  
Formation: BAKKEN  
**RECORDERS @ 986 mKBMD (923.171 TVD)**

|    | LOWER<br>Date<br>yyyy/mm/dd | LOWER<br>Clk Time<br>hh:mm:ss | LOWER<br>Time<br>hr | LOWER<br>Pres.<br>kPa(a) | LOWER<br>Temp.<br>°C | UPPER<br>Time<br>hr | UPPER<br>Pres.<br>kPa(a) | UPPER<br>Temp.<br>°C | Diff.<br>G1 - G2<br>kPa |
|----|-----------------------------|-------------------------------|---------------------|--------------------------|----------------------|---------------------|--------------------------|----------------------|-------------------------|
| 41 | 2017/02/04                  | 20:43:00                      | 58.0000             | 5060.70                  | 31.61                | 58.0166             | 5055.98                  | 31.58                | 4.49                    |
| 42 | 2017/02/04                  | 22:43:00                      | 60.0000             | 5032.84                  | 31.59                | 60.0166             | 5028.32                  | 31.56                | 4.31                    |
| 43 | 2017/02/05                  | 00:43:00                      | 62.0000             | 5007.54                  | 31.57                | 62.0166             | 5003.02                  | 31.54                | 4.34                    |
| 44 | 2017/02/05                  | 02:43:00                      | 64.0000             | 4983.64                  | 31.55                | 64.0166             | 4979.11                  | 31.52                | 4.32                    |
| 45 | 2017/02/05                  | 04:43:00                      | 66.0000             | 4961.92                  | 31.54                | 66.0166             | 4957.54                  | 31.50                | 4.21                    |
| 46 | 2017/02/05                  | 06:43:00                      | 68.0000             | 4941.98                  | 31.51                | 68.0166             | 4937.68                  | 31.48                | 4.11                    |
| 47 | 2017/02/05                  | 08:43:00                      | 70.0000             | 4922.72                  | 31.50                | 70.0166             | 4918.45                  | 31.46                | 4.12                    |
| 48 | 2017/02/05                  | 10:43:00                      | 72.0000             | 4905.73                  | 31.49                | 72.0166             | 4901.47                  | 31.45                | 3.79                    |
| 49 | 2017/02/05                  | 12:43:00                      | 74.0000             | 4889.44                  | 31.47                | 74.0166             | 4885.16                  | 31.43                | 4.13                    |
| 50 | 2017/02/05                  | 14:43:00                      | 76.0000             | 4874.03                  | 31.45                | 76.0166             | 4869.85                  | 31.42                | 4.05                    |
| 51 | 2017/02/05                  | 16:43:00                      | 78.0000             | 4859.16                  | 31.44                | 78.0166             | 4854.98                  | 31.40                | 4.04                    |
| 52 | 2017/02/05                  | 18:43:00                      | 80.0000             | 4844.85                  | 31.42                | 80.0166             | 4840.58                  | 31.39                | 4.17                    |
| 53 | 2017/02/05                  | 20:43:00                      | 82.0000             | 4831.88                  | 31.41                | 82.0166             | 4827.70                  | 31.38                | 4.08                    |
| 54 | 2017/02/05                  | 22:43:00                      | 84.0000             | 4820.55                  | 31.39                | 84.0166             | 4816.28                  | 31.35                | 4.18                    |
| 55 | 2017/02/06                  | 00:43:00                      | 86.0000             | 4809.95                  | 31.38                | 86.0166             | 4805.77                  | 31.34                | 4.11                    |
| 56 | 2017/02/06                  | 02:43:00                      | 88.0000             | 4798.99                  | 31.36                | 88.0166             | 4794.88                  | 31.33                | 4.03                    |
| 57 | 2017/02/06                  | 04:43:00                      | 90.0000             | 4788.45                  | 31.35                | 90.0166             | 4784.37                  | 31.31                | 4.01                    |
| 58 | 2017/02/06                  | 06:43:00                      | 92.0000             | 4778.33                  | 31.33                | 92.0166             | 4774.20                  | 31.30                | 4.08                    |
| 59 | 2017/02/06                  | 08:43:00                      | 94.0000             | 4768.68                  | 31.32                | 94.0166             | 4764.63                  | 31.29                | 3.97                    |
| 60 | 2017/02/06                  | 10:43:00                      | 96.0000             | 4759.98                  | 31.31                | 96.0166             | 4755.87                  | 31.27                | 4.08                    |
| 61 | 2017/02/06                  | 12:43:00                      | 98.0000             | 4751.60                  | 31.30                | 98.0166             | 4747.52                  | 31.26                | 4.02                    |
| 62 | 2017/02/06                  | 14:43:00                      | 100.0000            | 4741.89                  | 31.29                | 100.0166            | 4737.77                  | 31.25                | 4.05                    |
| 63 | 2017/02/06                  | 16:43:00                      | 102.0000            | 4733.62                  | 31.27                | 102.0166            | 4729.55                  | 31.24                | 4.03                    |
| 64 | 2017/02/06                  | 18:43:00                      | 104.0000            | 4725.08                  | 31.26                | 104.0166            | 4721.00                  | 31.23                | 3.97                    |
| 65 | 2017/02/06                  | 20:43:00                      | 106.0000            | 4717.25                  | 31.25                | 106.0166            | 4713.16                  | 31.22                | 4.02                    |
| 66 | 2017/02/06                  | 22:43:00                      | 108.0000            | 4710.26                  | 31.24                | 108.0166            | 4706.26                  | 31.20                | 3.94                    |
| 67 | 2017/02/07                  | 00:43:00                      | 110.0000            | 4703.52                  | 31.23                | 110.0166            | 4699.47                  | 31.19                | 3.99                    |
| 68 | 2017/02/07                  | 02:43:00                      | 112.0000            | 4698.30                  | 31.22                | 112.0166            | 4694.27                  | 31.18                | 3.98                    |
| 69 | 2017/02/07                  | 04:43:00                      | 114.0000            | 4692.99                  | 31.21                | 114.0166            | 4689.02                  | 31.17                | 3.91                    |
| 70 | 2017/02/07                  | 06:43:00                      | 116.0000            | 4686.81                  | 31.20                | 116.0166            | 4682.84                  | 31.16                | 3.94                    |
| 71 | 2017/02/07                  | 08:43:00                      | 118.0000            | 4681.06                  | 31.19                | 118.0166            | 4676.99                  | 31.15                | 4.02                    |
| 72 | 2017/02/07                  | 10:43:00                      | 120.0000            | 4675.84                  | 31.18                | 120.0166            | 4671.78                  | 31.14                | 4.03                    |
| 73 | 2017/02/07                  | 12:43:00                      | 122.0000            | 4670.57                  | 31.17                | 122.0166            | 4666.54                  | 31.13                | 4.00                    |
| 74 | 2017/02/07                  | 14:43:00                      | 124.0000            | 4665.08                  | 31.16                | 124.0166            | 4661.08                  | 31.12                | 3.96                    |
| 75 | 2017/02/07                  | 16:43:00                      | 126.0000            | 4659.90                  | 31.15                | 126.0166            | 4655.83                  | 31.11                | 4.02                    |
| 76 | 2017/02/07                  | 18:43:00                      | 128.0000            | 4653.88                  | 31.14                | 128.0166            | 4649.87                  | 31.10                | 3.95                    |
| 77 | 2017/02/07                  | 20:43:00                      | 130.0000            | 4648.95                  | 31.14                | 130.0166            | 4645.01                  | 31.10                | 3.91                    |
| 78 | 2017/02/07                  | 22:43:00                      | 132.0000            | 4643.68                  | 31.13                | 132.0166            | 4639.73                  | 31.09                | 3.89                    |
| 79 | 2017/02/08                  | 00:43:00                      | 134.0000            | 4638.69                  | 31.12                | 134.0166            | 4634.81                  | 31.08                | 3.87                    |
| 80 | 2017/02/08                  | 02:43:00                      | 136.0000            | 4635.06                  | 31.11                | 136.0166            | 4631.14                  | 31.07                | 3.87                    |

LOWER Serial Number: V81 Start Date: 2017/02/02 10:43:00 Run Depth: 986.00  
UPPER Serial Number: B7X Start Date: 2017/02/02 10:43:00 Run Depth: 986.00  
Print Filter: Print every 2 hour



TUNDRA OIL & GAS PARTNERSHIP  
103/16-13-008-29W1/00  
Start Test Date: 2017/02/03  
Final Test Date: 2017/03/02

TUNDRA SINCLAIR UNIT No. 12 HZNTL A16-13-8-29  
**RESERVOIR PRESSURE SURVEY**  
Formation: BAKKEN  
**RECORDERS @ 986 mKBMD (923.171 TVD)**

|     | LOWER<br>Date<br>yyyy/mm/dd | LOWER<br>Clk Time<br>hh:mm:ss | LOWER<br>Time<br>hr | LOWER<br>Pres.<br>kPa(a) | LOWER<br>Temp.<br>°C | UPPER<br>Time<br>hr | UPPER<br>Pres.<br>kPa(a) | UPPER<br>Temp.<br>°C | Diff.<br>G1 - G2<br>kPa |
|-----|-----------------------------|-------------------------------|---------------------|--------------------------|----------------------|---------------------|--------------------------|----------------------|-------------------------|
| 81  | 2017/02/08                  | 04:43:00                      | 138.0000            | 4631.53                  | 31.10                | 138.0166            | 4627.59                  | 31.06                | 3.93                    |
| 82  | 2017/02/08                  | 06:43:00                      | 140.0000            | 4628.10                  | 31.10                | 140.0166            | 4624.18                  | 31.06                | 3.88                    |
| 83  | 2017/02/08                  | 08:43:00                      | 142.0000            | 4624.23                  | 31.09                | 142.0166            | 4620.27                  | 31.05                | 3.90                    |
| 84  | 2017/02/08                  | 10:43:00                      | 144.0000            | 4620.09                  | 31.08                | 144.0166            | 4616.18                  | 31.04                | 3.89                    |
| 85  | 2017/02/08                  | 12:43:00                      | 146.0000            | 4616.18                  | 31.07                | 146.0166            | 4612.22                  | 31.03                | 3.94                    |
| 86  | 2017/02/08                  | 14:43:00                      | 148.0000            | 4612.75                  | 31.07                | 148.0166            | 4608.74                  | 31.03                | 3.98                    |
| 87  | 2017/02/08                  | 16:43:00                      | 150.0000            | 4609.16                  | 31.06                | 150.0166            | 4605.22                  | 31.02                | 3.91                    |
| 88  | 2017/02/08                  | 18:43:00                      | 152.0000            | 4605.48                  | 31.05                | 152.0166            | 4601.57                  | 31.02                | 3.88                    |
| 89  | 2017/02/08                  | 20:43:00                      | 154.0000            | 4601.56                  | 31.05                | 154.0166            | 4597.61                  | 31.01                | 3.91                    |
| 90  | 2017/02/08                  | 22:43:00                      | 156.0000            | 4597.86                  | 31.04                | 156.0166            | 4593.88                  | 31.00                | 3.95                    |
| 91  | 2017/02/09                  | 00:43:00                      | 158.0000            | 4594.37                  | 31.03                | 158.0166            | 4590.49                  | 30.99                | 3.88                    |
| 92  | 2017/02/09                  | 02:43:00                      | 160.0000            | 4590.98                  | 31.03                | 160.0166            | 4587.17                  | 30.99                | 3.78                    |
| 93  | 2017/02/09                  | 04:43:00                      | 162.0000            | 4587.82                  | 31.02                | 162.0166            | 4583.97                  | 30.98                | 3.83                    |
| 94  | 2017/02/09                  | 06:43:00                      | 164.0000            | 4584.59                  | 31.01                | 164.0166            | 4580.72                  | 30.98                | 3.83                    |
| 95  | 2017/02/09                  | 08:43:00                      | 166.0000            | 4581.23                  | 31.01                | 166.0166            | 4577.35                  | 30.97                | 3.83                    |
| 96  | 2017/02/09                  | 10:43:00                      | 168.0000            | 4578.11                  | 31.00                | 168.0166            | 4574.15                  | 30.96                | 3.95                    |
| 97  | 2017/02/09                  | 12:43:00                      | 170.0000            | 4574.82                  | 31.00                | 170.0166            | 4570.96                  | 30.96                | 3.86                    |
| 98  | 2017/02/09                  | 14:43:00                      | 172.0000            | 4571.70                  | 30.99                | 172.0166            | 4567.71                  | 30.96                | 3.94                    |
| 99  | 2017/02/09                  | 16:43:00                      | 174.0000            | 4568.69                  | 30.99                | 174.0166            | 4564.80                  | 30.95                | 3.85                    |
| 100 | 2017/02/09                  | 18:43:00                      | 176.0000            | 4565.49                  | 30.98                | 176.0166            | 4561.58                  | 30.94                | 3.89                    |
| 101 | 2017/02/09                  | 20:43:00                      | 178.0000            | 4562.48                  | 30.98                | 178.0166            | 4558.54                  | 30.94                | 3.88                    |
| 102 | 2017/02/09                  | 22:43:00                      | 180.0000            | 4559.52                  | 30.97                | 180.0166            | 4555.65                  | 30.93                | 3.84                    |
| 103 | 2017/02/10                  | 00:43:00                      | 182.0000            | 4556.88                  | 30.97                | 182.0166            | 4552.97                  | 30.93                | 3.90                    |
| 104 | 2017/02/10                  | 02:43:00                      | 184.0000            | 4553.86                  | 30.96                | 184.0166            | 4550.03                  | 30.92                | 3.82                    |
| 105 | 2017/02/10                  | 04:43:00                      | 186.0000            | 4551.50                  | 30.96                | 186.0166            | 4547.59                  | 30.92                | 3.83                    |
| 106 | 2017/02/10                  | 06:43:00                      | 188.0000            | 4549.03                  | 30.95                | 188.0166            | 4545.21                  | 30.92                | 3.78                    |
| 107 | 2017/02/10                  | 08:43:00                      | 190.0000            | 4546.86                  | 30.95                | 190.0166            | 4543.03                  | 30.91                | 3.82                    |
| 108 | 2017/02/10                  | 10:43:00                      | 192.0000            | 4544.61                  | 30.94                | 192.0166            | 4540.65                  | 30.90                | 3.95                    |
| 109 | 2017/02/10                  | 12:43:00                      | 194.0000            | 4542.59                  | 30.94                | 194.0166            | 4538.77                  | 30.90                | 3.82                    |
| 110 | 2017/02/10                  | 14:43:00                      | 196.0000            | 4540.45                  | 30.94                | 196.0166            | 4536.57                  | 30.90                | 3.75                    |
| 111 | 2017/02/10                  | 16:43:00                      | 198.0000            | 4538.61                  | 30.93                | 198.0166            | 4534.86                  | 30.89                | 3.75                    |
| 112 | 2017/02/10                  | 18:43:00                      | 200.0000            | 4536.93                  | 30.92                | 200.0166            | 4533.18                  | 30.89                | 3.76                    |
| 113 | 2017/02/10                  | 20:43:00                      | 202.0000            | 4535.07                  | 30.92                | 202.0166            | 4531.21                  | 30.88                | 3.84                    |
| 114 | 2017/02/10                  | 22:43:00                      | 204.0000            | 4533.18                  | 30.92                | 204.0166            | 4529.38                  | 30.87                | 3.79                    |
| 115 | 2017/02/11                  | 00:43:00                      | 206.0000            | 4531.41                  | 30.91                | 206.0166            | 4527.67                  | 30.87                | 3.72                    |
| 116 | 2017/02/11                  | 02:43:00                      | 208.0000            | 4529.91                  | 30.91                | 208.0166            | 4526.00                  | 30.87                | 3.89                    |
| 117 | 2017/02/11                  | 04:43:00                      | 210.0000            | 4528.56                  | 30.91                | 210.0166            | 4524.72                  | 30.86                | 3.83                    |
| 118 | 2017/02/11                  | 06:43:00                      | 212.0000            | 4527.05                  | 30.90                | 212.0166            | 4523.18                  | 30.86                | 3.84                    |
| 119 | 2017/02/11                  | 08:43:00                      | 214.0000            | 4525.79                  | 30.90                | 214.0166            | 4522.00                  | 30.86                | 3.78                    |
| 120 | 2017/02/11                  | 10:43:00                      | 216.0000            | 4524.29                  | 30.89                | 216.0166            | 4520.47                  | 30.85                | 3.77                    |

LOWER Serial Number: V81 Start Date: 2017/02/02 10:43:00 Run Depth: 986.00  
UPPER Serial Number: B7X Start Date: 2017/02/02 10:43:00 Run Depth: 986.00  
Print Filter: Print every 2 hour



TUNDRA OIL & GAS PARTNERSHIP  
103/16-13-008-29W1/00  
Start Test Date: 2017/02/03  
Final Test Date: 2017/03/02

TUNDRA SINCLAIR UNIT No. 12 HZNTL A16-13-8-29  
Formation: BAKKEN

**RESERVOIR PRESSURE SURVEY**  
**RECORDERS @ 986 mKBMD (923.171 TVD)**

|     | LOWER<br>Date<br>yyyy/mm/dd | LOWER<br>Clk Time<br>hh:mm:ss | LOWER<br>Time<br>hr | LOWER<br>Pres.<br>kPa(a) | LOWER<br>Temp.<br>°C | UPPER<br>Time<br>hr | UPPER<br>Pres.<br>kPa(a) | UPPER<br>Temp.<br>°C | Diff.<br>G1 - G2<br>kPa |
|-----|-----------------------------|-------------------------------|---------------------|--------------------------|----------------------|---------------------|--------------------------|----------------------|-------------------------|
| 121 | 2017/02/11                  | 12:43:00                      | 218.0000            | 4523.06                  | 30.89                | 218.0166            | 4519.23                  | 30.85                | 3.82                    |
| 122 | 2017/02/11                  | 14:43:00                      | 220.0000            | 4521.84                  | 30.89                | 220.0166            | 4518.07                  | 30.85                | 3.73                    |
| 123 | 2017/02/11                  | 16:43:00                      | 222.0000            | 4520.08                  | 30.88                | 222.0166            | 4516.29                  | 30.84                | 3.78                    |
| 124 | 2017/02/11                  | 18:43:00                      | 224.0000            | 4518.50                  | 30.88                | 224.0166            | 4514.65                  | 30.84                | 3.85                    |
| 125 | 2017/02/11                  | 20:43:00                      | 226.0000            | 4516.23                  | 30.88                | 226.0166            | 4512.33                  | 30.84                | 3.87                    |
| 126 | 2017/02/11                  | 22:43:00                      | 228.0000            | 4513.99                  | 30.87                | 228.0166            | 4510.24                  | 30.83                | 3.76                    |
| 127 | 2017/02/12                  | 00:43:00                      | 230.0000            | 4511.95                  | 30.87                | 230.0166            | 4508.18                  | 30.83                | 3.76                    |
| 128 | 2017/02/12                  | 02:43:00                      | 232.0000            | 4509.75                  | 30.86                | 232.0166            | 4505.98                  | 30.83                | 3.75                    |
| 129 | 2017/02/12                  | 04:43:00                      | 234.0000            | 4508.31                  | 30.86                | 234.0166            | 4504.49                  | 30.82                | 3.78                    |
| 130 | 2017/02/12                  | 06:43:00                      | 236.0000            | 4507.00                  | 30.86                | 236.0166            | 4503.24                  | 30.82                | 3.74                    |
| 131 | 2017/02/12                  | 08:43:00                      | 238.0000            | 4505.36                  | 30.86                | 238.0166            | 4501.50                  | 30.82                | 3.86                    |
| 132 | 2017/02/12                  | 10:43:00                      | 240.0000            | 4503.53                  | 30.86                | 240.0166            | 4499.62                  | 30.81                | 3.90                    |
| 133 | 2017/02/12                  | 12:43:00                      | 242.0000            | 4501.94                  | 30.85                | 242.0166            | 4498.06                  | 30.81                | 3.87                    |
| 134 | 2017/02/12                  | 14:43:00                      | 244.0000            | 4499.68                  | 30.85                | 244.0166            | 4495.79                  | 30.81                | 3.84                    |
| 135 | 2017/02/12                  | 16:43:00                      | 246.0000            | 4498.36                  | 30.84                | 246.0166            | 4494.53                  | 30.81                | 3.82                    |
| 136 | 2017/02/12                  | 18:43:00                      | 248.0000            | 4497.30                  | 30.84                | 248.0166            | 4493.57                  | 30.80                | 3.74                    |
| 137 | 2017/02/12                  | 20:43:00                      | 250.0000            | 4495.40                  | 30.84                | 250.0166            | 4491.64                  | 30.80                | 3.75                    |
| 138 | 2017/02/12                  | 22:43:00                      | 252.0000            | 4494.35                  | 30.83                | 252.0166            | 4490.56                  | 30.80                | 3.79                    |
| 139 | 2017/02/13                  | 00:43:00                      | 254.0000            | 4492.87                  | 30.83                | 254.0166            | 4489.04                  | 30.79                | 3.81                    |
| 140 | 2017/02/13                  | 02:43:00                      | 256.0000            | 4490.13                  | 30.83                | 256.0250            | 4486.17                  | 30.79                | 3.89                    |
| 141 | 2017/02/13                  | 04:43:00                      | 258.0000            | 4487.77                  | 30.83                | 258.0250            | 4483.98                  | 30.78                | 3.84                    |
| 142 | 2017/02/13                  | 06:43:00                      | 260.0000            | 4486.58                  | 30.82                | 260.0250            | 4482.68                  | 30.78                | 3.87                    |
| 143 | 2017/02/13                  | 08:43:00                      | 262.0000            | 4485.53                  | 30.82                | 262.0250            | 4481.78                  | 30.78                | 3.75                    |
| 144 | 2017/02/13                  | 10:43:00                      | 264.0000            | 4484.33                  | 30.82                | 264.0250            | 4480.50                  | 30.78                | 3.82                    |
| 145 | 2017/02/13                  | 12:43:00                      | 266.0000            | 4483.29                  | 30.82                | 266.0250            | 4479.53                  | 30.77                | 3.73                    |
| 146 | 2017/02/13                  | 14:43:00                      | 268.0000            | 4481.64                  | 30.81                | 268.0250            | 4477.83                  | 30.77                | 3.81                    |
| 147 | 2017/02/13                  | 16:43:00                      | 270.0000            | 4480.57                  | 30.81                | 270.0250            | 4476.80                  | 30.77                | 3.73                    |
| 148 | 2017/02/13                  | 18:43:00                      | 272.0000            | 4479.45                  | 30.81                | 272.0250            | 4475.61                  | 30.77                | 3.81                    |
| 149 | 2017/02/13                  | 20:43:00                      | 274.0000            | 4478.36                  | 30.81                | 274.0250            | 4474.52                  | 30.77                | 3.85                    |
| 150 | 2017/02/13                  | 22:43:00                      | 276.0000            | 4478.11                  | 30.80                | 276.0250            | 4474.33                  | 30.77                | 3.75                    |
| 151 | 2017/02/14                  | 00:43:00                      | 278.0000            | 4477.89                  | 30.80                | 278.0250            | 4474.04                  | 30.76                | 3.80                    |
| 152 | 2017/02/14                  | 02:43:00                      | 280.0000            | 4475.90                  | 30.80                | 280.0250            | 4472.07                  | 30.76                | 3.80                    |
| 153 | 2017/02/14                  | 04:43:00                      | 282.0000            | 4475.24                  | 30.80                | 282.0250            | 4471.43                  | 30.75                | 3.85                    |
| 154 | 2017/02/14                  | 06:43:00                      | 284.0000            | 4474.23                  | 30.80                | 284.0250            | 4470.39                  | 30.75                | 3.85                    |
| 155 | 2017/02/14                  | 08:43:00                      | 286.0000            | 4473.09                  | 30.79                | 286.0250            | 4469.37                  | 30.75                | 3.74                    |
| 156 | 2017/02/14                  | 10:43:00                      | 288.0000            | 4470.54                  | 30.79                | 288.0250            | 4466.79                  | 30.75                | 3.72                    |
| 157 | 2017/02/14                  | 12:43:00                      | 290.0000            | 4468.48                  | 30.79                | 290.0250            | 4464.67                  | 30.75                | 3.77                    |
| 158 | 2017/02/14                  | 14:43:00                      | 292.0000            | 4466.89                  | 30.79                | 292.0250            | 4463.11                  | 30.74                | 3.77                    |
| 159 | 2017/02/14                  | 16:43:00                      | 294.0000            | 4465.51                  | 30.78                | 294.0250            | 4461.76                  | 30.74                | 3.74                    |
| 160 | 2017/02/14                  | 18:43:00                      | 296.0000            | 4464.35                  | 30.78                | 296.0250            | 4460.59                  | 30.74                | 3.75                    |

LOWER Serial Number: V81 Start Date: 2017/02/02 10:43:00 Run Depth: 986.00  
UPPER Serial Number: B7X Start Date: 2017/02/02 10:43:00 Run Depth: 986.00  
Print Filter: Print every 2 hour



TUNDRA OIL & GAS PARTNERSHIP  
103/16-13-008-29W1/00  
Start Test Date: 2017/02/03  
Final Test Date: 2017/03/02

TUNDRA SINCLAIR UNIT No. 12 HZNTL A16-13-8-29  
Formation: BAKKEN  
**RESERVOIR PRESSURE SURVEY**  
**RECORDERS @ 986 mKBMD (923.171 TVD)**

|     | LOWER<br>Date<br>yyyy/mm/dd | LOWER<br>Clk Time<br>hh:mm:ss | LOWER<br>Time<br>hr | LOWER<br>Pres.<br>kPa(a) | LOWER<br>Temp.<br>°C | UPPER<br>Time<br>hr | UPPER<br>Pres.<br>kPa(a) | UPPER<br>Temp.<br>°C | Diff.<br>G1 - G2<br>kPa |
|-----|-----------------------------|-------------------------------|---------------------|--------------------------|----------------------|---------------------|--------------------------|----------------------|-------------------------|
| 161 | 2017/02/14                  | 20:43:00                      | 298.0000            | 4462.85                  | 30.78                | 298.0250            | 4459.08                  | 30.73                | 3.77                    |
| 162 | 2017/02/14                  | 22:43:00                      | 300.0000            | 4461.70                  | 30.78                | 300.0250            | 4457.74                  | 30.73                | 3.90                    |
| 163 | 2017/02/15                  | 00:43:00                      | 302.0000            | 4460.40                  | 30.78                | 302.0250            | 4456.49                  | 30.73                | 3.85                    |
| 164 | 2017/02/15                  | 02:43:00                      | 304.0000            | 4459.04                  | 30.78                | 304.0250            | 4455.27                  | 30.73                | 3.78                    |
| 165 | 2017/02/15                  | 04:43:00                      | 306.0000            | 4458.46                  | 30.77                | 306.0250            | 4454.72                  | 30.73                | 3.76                    |
| 166 | 2017/02/15                  | 06:43:00                      | 308.0000            | 4457.09                  | 30.77                | 308.0250            | 4453.28                  | 30.73                | 3.81                    |
| 167 | 2017/02/15                  | 08:43:00                      | 310.0000            | 4456.20                  | 30.77                | 310.0250            | 4452.49                  | 30.73                | 3.70                    |
| 168 | 2017/02/15                  | 10:43:00                      | 312.0000            | 4455.24                  | 30.77                | 312.0250            | 4451.38                  | 30.73                | 3.82                    |
| 169 | 2017/02/15                  | 12:43:00                      | 314.0000            | 4454.43                  | 30.77                | 314.0250            | 4450.55                  | 30.72                | 3.86                    |
| 170 | 2017/02/15                  | 14:43:00                      | 316.0000            | 4453.54                  | 30.76                | 316.0250            | 4449.74                  | 30.72                | 3.79                    |
| 171 | 2017/02/15                  | 16:43:00                      | 318.0000            | 4452.14                  | 30.76                | 318.0250            | 4448.28                  | 30.72                | 3.81                    |
| 172 | 2017/02/15                  | 18:43:00                      | 320.0000            | 4450.65                  | 30.76                | 320.0250            | 4446.81                  | 30.72                | 3.85                    |
| 173 | 2017/02/15                  | 20:43:00                      | 322.0000            | 4449.36                  | 30.76                | 322.0250            | 4445.54                  | 30.71                | 3.78                    |
| 174 | 2017/02/15                  | 22:43:00                      | 324.0000            | 4447.75                  | 30.75                | 324.0250            | 4443.94                  | 30.71                | 3.79                    |
| 175 | 2017/02/16                  | 00:43:00                      | 326.0000            | 4446.49                  | 30.75                | 326.0250            | 4442.74                  | 30.71                | 3.77                    |
| 176 | 2017/02/16                  | 02:43:00                      | 328.0000            | 4445.02                  | 30.75                | 328.0250            | 4441.24                  | 30.71                | 3.78                    |
| 177 | 2017/02/16                  | 04:43:00                      | 330.0000            | 4444.09                  | 30.75                | 330.0250            | 4440.27                  | 30.71                | 3.77                    |
| 178 | 2017/02/16                  | 06:43:00                      | 332.0000            | 4443.07                  | 30.75                | 332.0250            | 4439.32                  | 30.71                | 3.75                    |
| 179 | 2017/02/16                  | 08:43:00                      | 334.0000            | 4442.82                  | 30.75                | 334.0250            | 4438.97                  | 30.70                | 3.85                    |
| 180 | 2017/02/16                  | 10:43:00                      | 336.0000            | 4441.12                  | 30.74                | 336.0250            | 4437.36                  | 30.70                | 3.78                    |
| 181 | 2017/02/16                  | 12:43:00                      | 338.0000            | 4438.92                  | 30.75                | 338.0250            | 4435.19                  | 30.70                | 3.64                    |
| 182 | 2017/02/16                  | 14:43:00                      | 340.0000            | 4438.12                  | 30.74                | 340.0250            | 4434.30                  | 30.70                | 3.80                    |
| 183 | 2017/02/16                  | 16:43:00                      | 342.0000            | 4436.94                  | 30.74                | 342.0250            | 4433.06                  | 30.70                | 3.84                    |
| 184 | 2017/02/16                  | 18:43:00                      | 344.0000            | 4435.47                  | 30.74                | 344.0250            | 4431.72                  | 30.70                | 3.72                    |
| 185 | 2017/02/16                  | 20:43:00                      | 346.0000            | 4434.58                  | 30.74                | 346.0250            | 4430.95                  | 30.69                | 3.65                    |
| 186 | 2017/02/16                  | 22:43:00                      | 348.0000            | 4433.68                  | 30.73                | 348.0250            | 4430.05                  | 30.69                | 3.61                    |
| 187 | 2017/02/17                  | 00:43:00                      | 350.0000            | 4432.48                  | 30.73                | 350.0250            | 4428.65                  | 30.69                | 3.79                    |
| 188 | 2017/02/17                  | 02:43:00                      | 352.0000            | 4430.76                  | 30.73                | 352.0250            | 4426.97                  | 30.69                | 3.77                    |
| 189 | 2017/02/17                  | 04:43:00                      | 354.0000            | 4428.97                  | 30.73                | 354.0250            | 4425.15                  | 30.68                | 3.77                    |
| 190 | 2017/02/17                  | 06:43:00                      | 356.0000            | 4428.08                  | 30.73                | 356.0250            | 4424.38                  | 30.69                | 3.73                    |
| 191 | 2017/02/17                  | 08:43:00                      | 358.0000            | 4427.05                  | 30.72                | 358.0250            | 4423.30                  | 30.68                | 3.71                    |
| 192 | 2017/02/17                  | 10:43:00                      | 360.0000            | 4426.13                  | 30.73                | 360.0250            | 4422.37                  | 30.68                | 3.76                    |
| 193 | 2017/02/17                  | 12:43:00                      | 362.0000            | 4425.05                  | 30.73                | 362.0250            | 4421.27                  | 30.68                | 3.76                    |
| 194 | 2017/02/17                  | 14:43:00                      | 364.0000            | 4423.85                  | 30.72                | 364.0250            | 4420.06                  | 30.68                | 3.76                    |
| 195 | 2017/02/17                  | 16:43:00                      | 366.0000            | 4422.72                  | 30.72                | 366.0250            | 4418.93                  | 30.68                | 3.76                    |
| 196 | 2017/02/17                  | 18:43:00                      | 368.0000            | 4422.39                  | 30.72                | 368.0250            | 4418.59                  | 30.68                | 3.78                    |
| 197 | 2017/02/17                  | 20:43:00                      | 370.0000            | 4421.17                  | 30.72                | 370.0250            | 4417.44                  | 30.67                | 3.68                    |
| 198 | 2017/02/17                  | 22:43:00                      | 372.0000            | 4420.40                  | 30.72                | 372.0250            | 4416.64                  | 30.67                | 3.77                    |
| 199 | 2017/02/18                  | 00:43:00                      | 374.0000            | 4419.55                  | 30.72                | 374.0250            | 4415.75                  | 30.67                | 3.78                    |
| 200 | 2017/02/18                  | 02:43:00                      | 376.0000            | 4418.34                  | 30.71                | 376.0250            | 4414.66                  | 30.67                | 3.69                    |

LOWER Serial Number: V81 Start Date: 2017/02/02 10:43:00 Run Depth: 986.00  
UPPER Serial Number: B7X Start Date: 2017/02/02 10:43:00 Run Depth: 986.00  
Print Filter: Print every 2 hour



TUNDRA OIL & GAS PARTNERSHIP  
103/16-13-008-29W1/00  
Start Test Date: 2017/02/03  
Final Test Date: 2017/03/02

TUNDRA SINCLAIR UNIT No. 12 HZNTL A16-13-8-29  
Formation: BAKKEN

**RESERVOIR PRESSURE SURVEY**  
**RECORDERS @ 986 mKBMD (923.171 TVD)**

|     | LOWER<br>Date<br>yyyy/mm/dd | LOWER<br>Clk Time<br>hh:mm:ss | LOWER<br>Time<br>hr | LOWER<br>Pres.<br>kPa(a) | LOWER<br>Temp.<br>°C | UPPER<br>Time<br>hr | UPPER<br>Pres.<br>kPa(a) | UPPER<br>Temp.<br>°C | Diff.<br>G1 - G2<br>kPa |
|-----|-----------------------------|-------------------------------|---------------------|--------------------------|----------------------|---------------------|--------------------------|----------------------|-------------------------|
| 201 | 2017/02/18                  | 04:43:00                      | 378.0000            | 4417.50                  | 30.71                | 378.0250            | 4413.68                  | 30.67                | 3.82                    |
| 202 | 2017/02/18                  | 06:43:00                      | 380.0000            | 4416.71                  | 30.71                | 380.0250            | 4412.99                  | 30.67                | 3.71                    |
| 203 | 2017/02/18                  | 08:43:00                      | 382.0000            | 4415.91                  | 30.71                | 382.0250            | 4412.02                  | 30.66                | 3.92                    |
| 204 | 2017/02/18                  | 10:43:00                      | 384.0000            | 4414.92                  | 30.71                | 384.0250            | 4411.09                  | 30.66                | 3.81                    |
| 205 | 2017/02/18                  | 12:43:00                      | 386.0000            | 4413.80                  | 30.71                | 386.0250            | 4410.07                  | 30.66                | 3.69                    |
| 206 | 2017/02/18                  | 14:43:00                      | 388.0000            | 4412.64                  | 30.71                | 388.0250            | 4408.83                  | 30.66                | 3.77                    |
| 207 | 2017/02/18                  | 16:43:00                      | 390.0000            | 4411.72                  | 30.71                | 390.0250            | 4407.84                  | 30.66                | 3.84                    |
| 208 | 2017/02/18                  | 18:43:00                      | 392.0000            | 4410.43                  | 30.70                | 392.0250            | 4406.65                  | 30.66                | 3.76                    |
| 209 | 2017/02/18                  | 20:43:00                      | 394.0000            | 4409.42                  | 30.70                | 394.0250            | 4405.62                  | 30.66                | 3.81                    |
| 210 | 2017/02/18                  | 22:43:00                      | 396.0000            | 4408.12                  | 30.70                | 396.0250            | 4404.35                  | 30.66                | 3.77                    |
| 211 | 2017/02/19                  | 00:43:00                      | 398.0000            | 4407.11                  | 30.70                | 398.0250            | 4403.39                  | 30.66                | 3.71                    |
| 212 | 2017/02/19                  | 02:43:00                      | 400.0000            | 4405.95                  | 30.70                | 400.0250            | 4402.25                  | 30.66                | 3.72                    |
| 213 | 2017/02/19                  | 04:43:00                      | 402.0000            | 4405.09                  | 30.70                | 402.0250            | 4401.41                  | 30.66                | 3.69                    |
| 214 | 2017/02/19                  | 06:43:00                      | 404.0000            | 4403.81                  | 30.70                | 404.0250            | 4400.12                  | 30.65                | 3.67                    |
| 215 | 2017/02/19                  | 08:43:00                      | 406.0000            | 4402.72                  | 30.69                | 406.0250            | 4399.13                  | 30.65                | 3.63                    |
| 216 | 2017/02/19                  | 10:43:00                      | 408.0000            | 4401.74                  | 30.70                | 408.0250            | 4398.00                  | 30.65                | 3.71                    |
| 217 | 2017/02/19                  | 12:43:00                      | 410.0000            | 4400.89                  | 30.69                | 410.0250            | 4397.27                  | 30.65                | 3.62                    |
| 218 | 2017/02/19                  | 14:43:00                      | 412.0000            | 4400.01                  | 30.69                | 412.0250            | 4396.34                  | 30.65                | 3.68                    |
| 219 | 2017/02/19                  | 16:43:00                      | 414.0000            | 4399.10                  | 30.69                | 414.0250            | 4395.27                  | 30.65                | 3.79                    |
| 220 | 2017/02/19                  | 18:43:00                      | 416.0000            | 4397.58                  | 30.69                | 416.0250            | 4393.86                  | 30.65                | 3.70                    |
| 221 | 2017/02/19                  | 20:43:00                      | 418.0000            | 4396.53                  | 30.69                | 418.0250            | 4392.75                  | 30.65                | 3.77                    |
| 222 | 2017/02/19                  | 22:43:00                      | 420.0000            | 4395.58                  | 30.69                | 420.0250            | 4391.93                  | 30.65                | 3.65                    |
| 223 | 2017/02/20                  | 00:43:00                      | 422.0000            | 4394.66                  | 30.68                | 422.0250            | 4391.03                  | 30.64                | 3.61                    |
| 224 | 2017/02/20                  | 02:43:00                      | 424.0000            | 4393.82                  | 30.68                | 424.0250            | 4389.67                  | 30.64                | 3.67                    |
| 225 | 2017/02/20                  | 04:43:00                      | 426.0000            | 4393.17                  | 30.68                | 426.0250            | 4389.47                  | 30.64                | 3.67                    |
| 226 | 2017/02/20                  | 06:43:00                      | 428.0000            | 4392.58                  | 30.68                | 428.0250            | 4388.95                  | 30.64                | 3.64                    |
| 227 | 2017/02/20                  | 08:43:00                      | 430.0000            | 4392.21                  | 30.68                | 430.0250            | 4388.48                  | 30.64                | 3.74                    |
| 228 | 2017/02/20                  | 10:43:00                      | 432.0000            | 4391.28                  | 30.68                | 432.0250            | 4387.62                  | 30.64                | 3.62                    |
| 229 | 2017/02/20                  | 12:43:00                      | 434.0000            | 4390.70                  | 30.68                | 434.0250            | 4387.06                  | 30.64                | 3.63                    |
| 230 | 2017/02/20                  | 14:43:00                      | 436.0000            | 4390.00                  | 30.68                | 436.0250            | 4386.28                  | 30.64                | 3.68                    |
| 231 | 2017/02/20                  | 16:43:00                      | 438.0000            | 4389.70                  | 30.68                | 438.0250            | 4386.00                  | 30.64                | 3.72                    |
| 232 | 2017/02/20                  | 18:43:00                      | 440.0000            | 4388.62                  | 30.68                | 440.0250            | 4384.83                  | 30.64                | 3.75                    |
| 233 | 2017/02/20                  | 20:43:00                      | 442.0000            | 4387.77                  | 30.67                | 442.0250            | 4384.09                  | 30.64                | 3.69                    |
| 234 | 2017/02/20                  | 22:43:00                      | 444.0000            | 4387.06                  | 30.68                | 444.0250            | 4383.32                  | 30.63                | 3.74                    |
| 235 | 2017/02/21                  | 00:43:00                      | 446.0000            | 4386.67                  | 30.67                | 446.0250            | 4382.95                  | 30.63                | 3.73                    |
| 236 | 2017/02/21                  | 02:43:00                      | 448.0000            | 4386.18                  | 30.67                | 448.0250            | 4382.50                  | 30.63                | 3.67                    |
| 237 | 2017/02/21                  | 04:43:00                      | 450.0000            | 4385.41                  | 30.67                | 450.0250            | 4381.61                  | 30.63                | 3.75                    |
| 238 | 2017/02/21                  | 06:43:00                      | 452.0000            | 4384.65                  | 30.67                | 452.0250            | 4380.97                  | 30.63                | 3.69                    |
| 239 | 2017/02/21                  | 08:43:00                      | 454.0000            | 4384.13                  | 30.67                | 454.0250            | 4380.36                  | 30.63                | 3.77                    |
| 240 | 2017/02/21                  | 10:43:00                      | 456.0000            | 4383.36                  | 30.67                | 456.0250            | 4379.58                  | 30.62                | 3.77                    |

LOWER Serial Number: V81 Start Date: 2017/02/02 10:43:00 Run Depth: 986.00  
UPPER Serial Number: B7X Start Date: 2017/02/02 10:43:00 Run Depth: 986.00  
Print Filter: Print every 2 hour



TUNDRA OIL & GAS PARTNERSHIP  
103/16-13-008-29W1/00  
Start Test Date: 2017/02/03  
Final Test Date: 2017/03/02

TUNDRA SINCLAIR UNIT No. 12 HZNTL A16-13-8-29  
Formation: BAKKEN

**RESERVOIR PRESSURE SURVEY**  
**RECORDERS @ 986 mKBMD (923.171 TVD)**

|     | LOWER<br>Date<br>yyyy/mm/dd | LOWER<br>Clk Time<br>hh:mm:ss | LOWER<br>Time<br>hr | LOWER<br>Pres.<br>kPa(a) | LOWER<br>Temp.<br>°C | UPPER<br>Time<br>hr | UPPER<br>Pres.<br>kPa(a) | UPPER<br>Temp.<br>°C | Diff.<br>G1 - G2<br>kPa |
|-----|-----------------------------|-------------------------------|---------------------|--------------------------|----------------------|---------------------|--------------------------|----------------------|-------------------------|
| 241 | 2017/02/21                  | 12:43:00                      | 458.0000            | 4382.88                  | 30.67                | 458.0250            | 4379.23                  | 30.63                | 3.66                    |
| 242 | 2017/02/21                  | 14:43:00                      | 460.0000            | 4382.27                  | 30.66                | 460.0250            | 4378.62                  | 30.62                | 3.64                    |
| 243 | 2017/02/21                  | 16:43:00                      | 462.0000            | 4381.44                  | 30.66                | 462.0250            | 4377.77                  | 30.63                | 3.68                    |
| 244 | 2017/02/21                  | 18:43:00                      | 464.0000            | 4380.77                  | 30.66                | 464.0250            | 4377.07                  | 30.62                | 3.70                    |
| 245 | 2017/02/21                  | 20:43:00                      | 466.0000            | 4380.31                  | 30.66                | 466.0250            | 4376.63                  | 30.62                | 3.66                    |
| 246 | 2017/02/21                  | 22:43:00                      | 468.0000            | 4379.75                  | 30.66                | 468.0250            | 4376.08                  | 30.62                | 3.65                    |
| 247 | 2017/02/22                  | 00:43:00                      | 470.0000            | 4379.26                  | 30.66                | 470.0250            | 4375.56                  | 30.62                | 3.72                    |
| 248 | 2017/02/22                  | 02:43:00                      | 472.0000            | 4378.62                  | 30.66                | 472.0250            | 4374.94                  | 30.62                | 3.65                    |
| 249 | 2017/02/22                  | 04:43:00                      | 474.0000            | 4378.11                  | 30.66                | 474.0250            | 4374.37                  | 30.62                | 3.73                    |
| 250 | 2017/02/22                  | 06:43:00                      | 476.0000            | 4377.14                  | 30.66                | 476.0250            | 4373.44                  | 30.62                | 3.68                    |
| 251 | 2017/02/22                  | 08:43:00                      | 478.0000            | 4376.61                  | 30.66                | 478.0250            | 4372.91                  | 30.62                | 3.67                    |
| 252 | 2017/02/22                  | 10:43:00                      | 480.0000            | 4375.67                  | 30.66                | 480.0250            | 4372.02                  | 30.62                | 3.65                    |
| 253 | 2017/02/22                  | 12:43:00                      | 482.0000            | 4374.46                  | 30.66                | 482.0250            | 4370.73                  | 30.62                | 3.71                    |
| 254 | 2017/02/22                  | 14:43:00                      | 484.0000            | 4373.53                  | 30.65                | 484.0250            | 4369.78                  | 30.61                | 3.68                    |
| 255 | 2017/02/22                  | 16:43:00                      | 486.0000            | 4372.61                  | 30.65                | 486.0250            | 4368.97                  | 30.61                | 3.63                    |
| 256 | 2017/02/22                  | 18:43:00                      | 488.0000            | 4372.08                  | 30.65                | 488.0250            | 4368.38                  | 30.61                | 3.70                    |
| 257 | 2017/02/22                  | 20:43:00                      | 490.0000            | 4371.15                  | 30.65                | 490.0250            | 4367.46                  | 30.61                | 3.67                    |
| 258 | 2017/02/22                  | 22:43:00                      | 492.0000            | 4370.75                  | 30.65                | 492.0250            | 4367.12                  | 30.61                | 3.61                    |
| 259 | 2017/02/23                  | 00:43:00                      | 494.0000            | 4370.13                  | 30.65                | 494.0250            | 4366.43                  | 30.60                | 3.69                    |
| 260 | 2017/02/23                  | 02:43:00                      | 496.0000            | 4369.62                  | 30.65                | 496.0250            | 4365.97                  | 30.60                | 3.64                    |
| 261 | 2017/02/23                  | 04:43:00                      | 498.0000            | 4368.88                  | 30.65                | 498.0250            | 4365.16                  | 30.61                | 3.71                    |
| 262 | 2017/02/23                  | 06:43:00                      | 500.0000            | 4368.67                  | 30.65                | 500.0250            | 4364.97                  | 30.61                | 3.72                    |
| 263 | 2017/02/23                  | 08:43:00                      | 502.0000            | 4368.39                  | 30.65                | 502.0250            | 4364.67                  | 30.61                | 3.72                    |
| 264 | 2017/02/23                  | 10:43:00                      | 504.0000            | 4368.06                  | 30.65                | 504.0250            | 4364.39                  | 30.61                | 3.65                    |
| 265 | 2017/02/23                  | 12:43:00                      | 506.0000            | 4367.50                  | 30.65                | 506.0250            | 4363.87                  | 30.61                | 3.63                    |
| 266 | 2017/02/23                  | 14:43:00                      | 508.0000            | 4366.67                  | 30.64                | 508.0250            | 4363.00                  | 30.60                | 3.66                    |
| 267 | 2017/02/23                  | 16:43:00                      | 510.0000            | 4366.06                  | 30.64                | 510.0250            | 4362.33                  | 30.60                | 3.69                    |
| 268 | 2017/02/23                  | 18:43:00                      | 512.0000            | 4365.43                  | 30.64                | 512.0333            | 4361.75                  | 30.60                | 3.68                    |
| 269 | 2017/02/23                  | 20:43:00                      | 514.0000            | 4364.82                  | 30.64                | 514.0333            | 4361.09                  | 30.60                | 3.76                    |
| 270 | 2017/02/23                  | 22:43:00                      | 516.0000            | 4364.17                  | 30.64                | 516.0333            | 4360.60                  | 30.60                | 3.59                    |
| 271 | 2017/02/24                  | 00:43:00                      | 518.0000            | 4363.70                  | 30.64                | 518.0333            | 4360.06                  | 30.60                | 3.69                    |
| 272 | 2017/02/24                  | 02:43:00                      | 520.0000            | 4363.11                  | 30.64                | 520.0333            | 4359.39                  | 30.60                | 3.67                    |
| 273 | 2017/02/24                  | 04:43:00                      | 522.0000            | 4362.81                  | 30.65                | 522.0333            | 4359.15                  | 30.60                | 3.69                    |
| 274 | 2017/02/24                  | 06:43:00                      | 524.0000            | 4362.32                  | 30.64                | 524.0333            | 4358.60                  | 30.60                | 3.71                    |
| 275 | 2017/02/24                  | 08:43:00                      | 526.0000            | 4361.70                  | 30.64                | 526.0333            | 4358.05                  | 30.60                | 3.64                    |
| 276 | 2017/02/24                  | 10:43:00                      | 528.0000            | 4361.16                  | 30.64                | 528.0333            | 4357.37                  | 30.60                | 3.77                    |
| 277 | 2017/02/24                  | 12:43:00                      | 530.0000            | 4360.52                  | 30.64                | 530.0333            | 4356.89                  | 30.59                | 3.63                    |
| 278 | 2017/02/24                  | 14:43:00                      | 532.0000            | 4360.05                  | 30.64                | 532.0333            | 4356.38                  | 30.60                | 3.66                    |
| 279 | 2017/02/24                  | 16:43:00                      | 534.0000            | 4359.52                  | 30.64                | 534.0333            | 4355.89                  | 30.59                | 3.62                    |
| 280 | 2017/02/24                  | 18:43:00                      | 536.0000            | 4358.65                  | 30.63                | 536.0333            | 4355.09                  | 30.59                | 3.56                    |

LOWER Serial Number: V81 Start Date: 2017/02/02 10:43:00 Run Depth: 986.00  
UPPER Serial Number: B7X Start Date: 2017/02/02 10:43:00 Run Depth: 986.00  
Print Filter: Print every 2 hour



TUNDRA OIL & GAS PARTNERSHIP  
103/16-13-008-29W1/00  
Start Test Date: 2017/02/03  
Final Test Date: 2017/03/02

TUNDRA SINCLAIR UNIT No. 12 HZNTL A16-13-8-29  
Formation: BAKKEN  
**RESERVOIR PRESSURE SURVEY**  
**RECORDERS @ 986 mKBMD (923.171 TVD)**

|     | LOWER<br>Date<br>yyyy/mm/dd | LOWER<br>Clk Time<br>hh:mm:ss | LOWER<br>Time<br>hr | LOWER<br>Pres.<br>kPa(a) | LOWER<br>Temp.<br>°C | UPPER<br>Time<br>hr | UPPER<br>Pres.<br>kPa(a) | UPPER<br>Temp.<br>°C | Diff.<br>G1 - G2<br>kPa |
|-----|-----------------------------|-------------------------------|---------------------|--------------------------|----------------------|---------------------|--------------------------|----------------------|-------------------------|
| 281 | 2017/02/24                  | 20:43:00                      | 538.0000            | 4358.16                  | 30.63                | 538.0333            | 4354.46                  | 30.59                | 3.69                    |
| 282 | 2017/02/24                  | 22:43:00                      | 540.0000            | 4357.58                  | 30.63                | 540.0333            | 4353.86                  | 30.59                | 3.69                    |
| 283 | 2017/02/25                  | 00:43:00                      | 542.0000            | 4356.74                  | 30.63                | 542.0333            | 4353.04                  | 30.59                | 3.69                    |
| 284 | 2017/02/25                  | 02:43:00                      | 544.0000            | 4356.32                  | 30.63                | 544.0333            | 4352.64                  | 30.59                | 3.66                    |
| 285 | 2017/02/25                  | 04:43:00                      | 546.0000            | 4355.76                  | 30.63                | 546.0333            | 4352.12                  | 30.59                | 3.66                    |
| 286 | 2017/02/25                  | 06:43:00                      | 548.0000            | 4355.03                  | 30.63                | 548.0333            | 4351.38                  | 30.59                | 3.51                    |
| 287 | 2017/02/25                  | 08:43:00                      | 550.0000            | 4354.64                  | 30.63                | 550.0333            | 4350.90                  | 30.59                | 3.73                    |
| 288 | 2017/02/25                  | 10:43:00                      | 552.0000            | 4353.80                  | 30.63                | 552.0333            | 4350.18                  | 30.59                | 3.62                    |
| 289 | 2017/02/25                  | 12:43:00                      | 554.0000            | 4353.29                  | 30.63                | 554.0333            | 4349.59                  | 30.59                | 3.69                    |
| 290 | 2017/02/25                  | 14:43:00                      | 556.0000            | 4352.59                  | 30.63                | 556.0333            | 4348.92                  | 30.58                | 3.63                    |
| 291 | 2017/02/25                  | 16:43:00                      | 558.0000            | 4352.27                  | 30.63                | 558.0333            | 4348.57                  | 30.58                | 3.69                    |
| 292 | 2017/02/25                  | 18:43:00                      | 560.0000            | 4351.93                  | 30.63                | 560.0333            | 4348.19                  | 30.58                | 3.71                    |
| 293 | 2017/02/25                  | 20:43:00                      | 562.0000            | 4351.41                  | 30.63                | 562.0333            | 4347.74                  | 30.58                | 3.63                    |
| 294 | 2017/02/25                  | 22:43:00                      | 564.0000            | 4350.86                  | 30.63                | 564.0333            | 4347.22                  | 30.58                | 3.64                    |
| 295 | 2017/02/26                  | 00:43:00                      | 566.0000            | 4350.07                  | 30.62                | 566.0333            | 4346.40                  | 30.58                | 3.66                    |
| 296 | 2017/02/26                  | 02:43:00                      | 568.0000            | 4349.71                  | 30.62                | 568.0333            | 4346.00                  | 30.58                | 3.74                    |
| 297 | 2017/02/26                  | 04:43:00                      | 570.0000            | 4349.39                  | 30.62                | 570.0333            | 4345.72                  | 30.58                | 3.68                    |
| 298 | 2017/02/26                  | 06:43:00                      | 572.0000            | 4348.68                  | 30.62                | 572.0333            | 4345.03                  | 30.58                | 3.64                    |
| 299 | 2017/02/26                  | 08:43:00                      | 574.0000            | 4347.97                  | 30.62                | 574.0333            | 4344.38                  | 30.58                | 3.55                    |
| 300 | 2017/02/26                  | 10:43:00                      | 576.0000            | 4347.44                  | 30.62                | 576.0333            | 4343.77                  | 30.58                | 3.63                    |
| 301 | 2017/02/26                  | 12:43:00                      | 578.0000            | 4346.85                  | 30.62                | 578.0333            | 4343.28                  | 30.58                | 3.58                    |
| 302 | 2017/02/26                  | 14:43:00                      | 580.0000            | 4346.40                  | 30.62                | 580.0333            | 4342.73                  | 30.58                | 3.64                    |
| 303 | 2017/02/26                  | 16:43:00                      | 582.0000            | 4345.88                  | 30.62                | 582.0333            | 4342.10                  | 30.58                | 3.76                    |
| 304 | 2017/02/26                  | 18:43:00                      | 584.0000            | 4345.35                  | 30.62                | 584.0333            | 4341.72                  | 30.58                | 3.63                    |
| 305 | 2017/02/26                  | 20:43:00                      | 586.0000            | 4345.05                  | 30.62                | 586.0333            | 4341.35                  | 30.58                | 3.68                    |
| 306 | 2017/02/26                  | 22:43:00                      | 588.0000            | 4344.57                  | 30.62                | 588.0333            | 4340.88                  | 30.58                | 3.66                    |
| 307 | 2017/02/27                  | 00:43:00                      | 590.0000            | 4344.28                  | 30.61                | 590.0333            | 4340.72                  | 30.58                | 3.58                    |
| 308 | 2017/02/27                  | 02:43:00                      | 592.0000            | 4344.15                  | 30.61                | 592.0333            | 4340.49                  | 30.57                | 3.67                    |
| 309 | 2017/02/27                  | 04:43:00                      | 594.0000            | 4344.16                  | 30.62                | 594.0333            | 4340.44                  | 30.57                | 3.72                    |
| 310 | 2017/02/27                  | 06:43:00                      | 596.0000            | 4343.87                  | 30.62                | 596.0333            | 4340.17                  | 30.57                | 3.71                    |
| 311 | 2017/02/27                  | 08:43:00                      | 598.0000            | 4343.69                  | 30.62                | 598.0333            | 4339.89                  | 30.57                | 3.80                    |
| 312 | 2017/02/27                  | 10:43:00                      | 600.0000            | 4343.06                  | 30.61                | 600.0333            | 4339.31                  | 30.57                | 3.73                    |
| 313 | 2017/02/27                  | 12:43:00                      | 602.0000            | 4342.56                  | 30.61                | 602.0333            | 4338.88                  | 30.57                | 3.68                    |
| 314 | 2017/02/27                  | 14:43:00                      | 604.0000            | 4342.29                  | 30.61                | 604.0333            | 4338.55                  | 30.57                | 3.72                    |
| 315 | 2017/02/27                  | 16:43:00                      | 606.0000            | 4341.78                  | 30.61                | 606.0333            | 4338.10                  | 30.57                | 3.67                    |
| 316 | 2017/02/27                  | 18:43:00                      | 608.0000            | 4341.68                  | 30.61                | 608.0333            | 4338.00                  | 30.57                | 3.70                    |
| 317 | 2017/02/27                  | 20:43:00                      | 610.0000            | 4341.44                  | 30.61                | 610.0333            | 4337.70                  | 30.57                | 3.76                    |
| 318 | 2017/02/27                  | 22:43:00                      | 612.0000            | 4340.75                  | 30.61                | 612.0333            | 4337.05                  | 30.57                | 3.74                    |
| 319 | 2017/02/28                  | 00:43:00                      | 614.0000            | 4340.28                  | 30.61                | 614.0333            | 4336.61                  | 30.57                | 3.63                    |
| 320 | 2017/02/28                  | 02:43:00                      | 616.0000            | 4339.84                  | 30.61                | 616.0333            | 4336.10                  | 30.57                | 3.70                    |

LOWER Serial Number: V81 Start Date: 2017/02/02 10:43:00 Run Depth: 986.00  
UPPER Serial Number: B7X Start Date: 2017/02/02 10:43:00 Run Depth: 986.00  
Print Filter: Print every 2 hour



TUNDRA OIL & GAS PARTNERSHIP  
103/16-13-008-29W1/00  
Start Test Date: 2017/02/03  
Final Test Date: 2017/03/02

TUNDRA SINCLAIR UNIT No. 12 HZNTL A16-13-8-29  
**RESERVOIR PRESSURE SURVEY**  
Formation: BAKKEN  
**RECORDERS @ 986 mKBMD (923.171 TVD)**

|     | LOWER<br>Date<br>yyyy/mm/dd | LOWER<br>Clk Time<br>hh:mm:ss | LOWER<br>Time<br>hr | LOWER<br>Pres.<br>kPa(a)                          | LOWER<br>Temp.<br>°C | UPPER<br>Time<br>hr | UPPER<br>Pres.<br>kPa(a) | UPPER<br>Temp.<br>°C | Diff.<br>G1 - G2<br>kPa |
|-----|-----------------------------|-------------------------------|---------------------|---|----------------------|---------------------|--------------------------|----------------------|-------------------------|
| 321 | 2017/02/28                  | 04:43:00                      | 618.0000            | 4339.68   | 30.61                | 618.0333            | 4335.93                  | 30.57                | 3.70                    |
| 322 | 2017/02/28                  | 06:43:00                      | 620.0000            | 4339.48   | 30.61                | 620.0333            | 4335.85                  | 30.57                | 3.67                    |
| 323 | 2017/02/28                  | 08:43:00                      | 622.0000            | 4339.15   | 30.61                | 622.0333            | 4335.49                  | 30.57                | 3.69                    |
| 324 | 2017/02/28                  | 10:43:00                      | 624.0000            | 4338.88   | 30.61                | 624.0333            | 4335.07                  | 30.56                | 3.80                    |
| 325 | 2017/02/28                  | 12:43:00                      | 626.0000            | 4338.37   | 30.61                | 626.0333            | 4334.72                  | 30.57                | 3.64                    |
| 326 | 2017/02/28                  | 14:43:00                      | 628.0000            | 4337.97   | 30.61                | 628.0333            | 4334.31                  | 30.56                | 3.70                    |
| 327 | 2017/02/28                  | 16:43:00                      | 630.0000            | 4337.73   | 30.61                | 630.0333            | 4333.94                  | 30.56                | 3.77                    |
| 328 | 2017/02/28                  | 18:43:00                      | 632.0000            | 4337.37   | 30.60                | 632.0333            | 4333.62                  | 30.56                | 3.75                    |
| 329 | 2017/02/28                  | 20:43:00                      | 634.0000            | 4337.07   | 30.61                | 634.0333            | 4333.20                  | 30.56                | 3.85                    |
| 330 | 2017/02/28                  | 22:43:00                      | 636.0000            | 4336.49   | 30.61                | 636.0333            | 4332.84                  | 30.56                | 3.66                    |
| 331 | 2017/03/01                  | 00:43:00                      | 638.0000            | 4336.20   | 30.60                | 638.0333            | 4332.51                  | 30.56                | 3.69                    |
| 332 | 2017/03/01                  | 02:43:00                      | 640.0000            | 4335.78   | 30.60                | 640.0333            | 4332.12                  | 30.56                | 3.62                    |
| 333 | 2017/03/01                  | 04:43:00                      | 642.0000            | 4335.41   | 30.60                | 642.0333            | 4331.81                  | 30.56                | 3.62                    |
| 334 | 2017/03/01                  | 06:43:00                      | 644.0000            | 4335.07   | 30.60                | 644.0333            | 4331.42                  | 30.56                | 3.64                    |
| 335 | 2017/03/01                  | 08:43:00                      | 646.0000            | 4334.99   | 30.60                | 646.0333            | 4331.27                  | 30.56                | 3.69                    |
| 336 | 2017/03/01                  | 10:43:00                      | 648.0000            | 4334.90   | 30.60                | 648.0333            | 4331.32                  | 30.56                | 3.56                    |
| 337 | 2017/03/01                  | 12:43:00                      | 650.0000            | 4334.94   | 30.60                | 650.0333            | 4331.31                  | 30.56                | 3.66                    |
| 338 | 2017/03/01                  | 14:43:00                      | 652.0000            | 4334.84   | 30.60                | 652.0333            | 4331.17                  | 30.56                | 3.68                    |
| 339 | 2017/03/01                  | 16:43:00                      | 654.0000            | 4334.73   | 30.60                | 654.0333            | 4331.05                  | 30.56                | 3.65                    |
| 340 | 2017/03/01                  | 18:43:00                      | 656.0000            | 4334.82   | 30.60                | 656.0333            | 4331.13                  | 30.56                | 3.70                    |
| 341 | 2017/03/01                  | 20:43:00                      | 658.0000            | 4334.72   | 30.60                | 658.0333            | 4331.02                  | 30.56                | 3.69                    |
| 342 | 2017/03/01                  | 22:43:00                      | 660.0000            | 4334.68   | 30.59                | 660.0333            | 4331.01                  | 30.56                | 3.66                    |
| 343 | 2017/03/02                  | 00:43:00                      | 662.0000            | 4334.73   | 30.60                | 662.0333            | 4330.97                  | 30.56                | 3.76                    |
| 344 | 2017/03/02                  | 02:43:00                      | 664.0000            | 4334.43   | 30.60                | 664.0333            | 4330.71                  | 30.55                | 3.71                    |
| 345 | 2017/03/02                  | 04:43:00                      | 666.0000            | 4334.15   | 30.59                | 666.0333            | 4330.45                  | 30.56                | 3.70                    |
| 346 | 2017/03/02                  | 06:43:00                      | 668.0000            | 4334.17   | 30.59                | 668.0333            | 4330.55                  | 30.55                | 3.65                    |
| 347 | 2017/03/02                  | 08:43:00                      | 670.0000            | 4334.39   | 30.59                | 670.0333            | 4330.64                  | 30.55                | 3.75                    |
| 348 | 2017/03/02                  | 10:43:00                      | 672.0000            | 4334.38   | 30.59                | 672.0333            | 4330.77                  | 30.55                | 3.61                    |
| 349 | 2017/03/02                  | 12:43:00                      | 674.0000            | 4334.40   | 30.59                | 674.0333            | 4330.75                  | 30.55                | 3.65                    |
| 350 | 2017/03/02                  | 13:38:00                      | 674.9167            | 4334.33   | 30.59                | 674.9166            | 4330.79                  | 30.55                | 3.54                    |
| 351 | 2017/03/02                  | 13:38:00                      | 674.9167            | FINAL PRESSURE                                    |                      |                     |                          |                      |                         |
| 352 | 2017/03/02                  | 13:38:30                      | 674.9250            | 4334.41   | 30.59                | 674.9250            | 4330.71                  | 30.55                | 3.70                    |
| 353 | 2017/03/02                  | 13:55:00                      | 675.2000            | 4335.08   | 30.60                | 675.2000            | 4331.44                  | 30.56                | 3.64                    |
| 354 | 2017/03/02                  | 13:55:00                      | 675.2000            | PREP WELL TO UNSET BRIDGE PLUG                    |                      |                     |                          |                      |                         |
| 355 | 2017/03/02                  | 13:55:30                      | 675.2083            | 4335.09   | 30.61                | 675.2083            | 4331.45                  | 30.56                | 3.64                    |
| 356 | 2017/03/02                  | 14:00:00                      | 675.2833            | 9670.01   | 30.66                | 675.2833            | 9661.04                  | 30.72                | 8.97                    |
| 357 | 2017/03/02                  | 14:00:00                      | 675.2833            | BRIDGE PLUG IS UNSET                              |                      |                     |                          |                      |                         |
| 358 | 2017/03/02                  | 14:00:30                      | 675.2917            | 9667.12   | 30.67                | 675.2916            | 9657.46                  | 30.70                | 9.66                    |
| 359 | 2017/03/02                  | 14:11:00                      | 675.4667            | 9674.17   | 30.61                | 675.4666            | 9664.89                  | 30.62                | 9.28                    |
| 360 | 2017/03/02                  | 14:11:00                      | 675.4667            | TOOLS ARE PULLED FROM THE WELL BY THE SERVICE RIG |                      |                     |                          |                      |                         |

LOWER Serial Number: V81 Start Date: 2017/02/02 10:43:00 Run Depth: 986.00  
UPPER Serial Number: B7X Start Date: 2017/02/02 10:43:00 Run Depth: 986.00  
Print Filter: Print every 2 hour

TUNDRA OIL & GAS PARTNERSHIP  
 103/16-13-008-29W1/00  
 Start Test Date: 2017/02/03  
 Final Test Date: 2017/03/02

**RESERVOIR PRESSURE SURVEY**  
**RECORDERS @ 986 mKBMD (923.171 TVD)**

TUNDRA SINCLAIR UNIT No. 12 HZNTL A16-13-8-29  
 Formation: BAKKEN

|     | LOWER<br>Date<br>yyyy/mm/dd | LOWER<br>Clk Time<br>hh:mm:ss | LOWER<br>Time<br>hr | LOWER<br>Pres.<br>kPa(a) | LOWER<br>Temp.<br>°C | UPPER<br>Time<br>hr | UPPER<br>Pres.<br>kPa(a) | UPPER<br>Temp.<br>°C | Diff.<br>G1 - G2<br>kPa |
|-----|-----------------------------|-------------------------------|---------------------|--------------------------|----------------------|---------------------|--------------------------|----------------------|-------------------------|
| 361 | 2017/03/02                  | 14:11:30                      | 675.4750            | 9670.22                  | 30.58                | 675.4750            | 9606.32                  | 30.60                | 63.90                   |
| 362 | 2017/03/02                  | 14:43:00                      | 676.0000            | 2579.77                  | 15.80                | 676.0333            | 1939.63                  | 14.38                | 196.88                  |
| 363 | 2017/03/02                  | 14:55:00                      | 676.2000            | 98.39                    | 9.99                 | 676.2000            | 95.42                    | 9.98                 | 2.97                    |
| 364 | 2017/03/02                  | 14:55:00                      | 676.2000            | RECORDERS AT SURFACE     |                      |                     |                          |                      |                         |
| 365 | 2017/03/02                  | 14:55:30                      | 676.2083            | 98.44                    | 10.00                | 676.2083            | 95.53                    | 9.97                 | 2.91                    |
| 366 | 2017/03/02                  | 15:08:30                      | 676.4250            | 98.97                    | 8.73                 | 676.4250            | 95.81                    | 9.53                 | 3.16                    |

LOWER Serial Number: V81 Start Date: 2017/02/02 10:43:00 Run Depth: 986.00  
 UPPER Serial Number: B7X Start Date: 2017/02/02 10:43:00 Run Depth: 986.00  
 Print Filter: Print every 2 hour





|   |                                       |
|---|---------------------------------------|
| DATE: February 3 - March 2, 2017                                  | COMPANY: Tundra Oil & Gas Partnership |
| WELLNAME: Sinclair Unit No 12 HZNTL<br>(16D-14)Hz 16-13-008-29WPM | ADDRESS: Virden, MB                   |
| LOCATION: (16D-14)16-13-008-29WPM                                 | UWI:103.16-13-008-29W1.00             |
| FIELD: Sinclair Unit No 12  | FORMATION: Bakken                     |
| CO HQ REP: Chris [REDACTED]                                       | PHONE: 204-851-2146                   |
| FIELD REP: Mark S [REDACTED]                                      | PHONE: 204-851-5689                   |

REPORTS TO (NAME & EMAIL ADDRESS):

Brett [REDACTED] - brett.howell@tundraoilandgas.com  
 Robert [REDACTED] - robert.prefontaine@tundraoilandgas.com  
 Adam [REDACTED] - adam.berke@tundraoilandgas.com  
 Shellanne [REDACTED] - shellanne.langlois@tundraoilandgas.com  
 Allan [REDACTED] - allan.bertram@tundraoilandgas.com  
 Bill [REDACTED] - bill.jenkins@tundraoilandgas.com  
 Chris [REDACTED] - chris.perkins@tundraoilandgas.com  
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 Geoff [REDACTED] - geoff.puckett@tundraoilandgas.com  
 Kim [REDACTED] - kim.cowan@tundraoilandgas.com  
 Abhy [REDACTED] - abhy.pandey@tundraoilandgas.com  
 Chris [REDACTED] - chris.elliott@tundraoilandgas.com

|                               |                                |                                      |                       |
|-------------------------------|--------------------------------|--------------------------------------|-----------------------|
| STATUS: oil well (completion) |                                | TEST TYPE: build up                  |                       |
| ESTIMATED H2S CONTENT: 0%     |                                | ESTIMATED CO2 CONTENT: 0%            |                       |
| PRODUCING THROUGH: tubing     |                                | SHUT IN TIME/DATE: 09:30 Feb 3, 2017 |                       |
| KOP: 724 mKB                  | TVD: see survey                |                                      | LICENCE #: 10636      |
| PBTD: n/a                     | TD: 2197 mKB                   |                                      | WELL TYPE: horizontal |
| CASING SIZE: 177.8 mm         | CSG WEIGHT: 29.76 & 34.23 kg/m |                                      | CSG DEPTH: 1047.5 mKB |
| TUBING SIZE: none             | TBG WEIGHT: n/a                |                                      | TBG DEPTH: n/a        |
| Elevations KB: 511.78 m       | GRD: 507.58 m                  |                                      | CF: 507.93 m          |

PRODUCING INTERVAL

|                 |              |                               |
|-----------------|--------------|-------------------------------|
| TYPE: open hole | SIZE: 159 mm | INTERVAL: 1047.5 - 2197.0 mKB |
|-----------------|--------------|-------------------------------|

RECORDER INFORMATION

|                                 |                                      |                   |
|---------------------------------|--------------------------------------|-------------------|
| TOP S/N: V7X                    | FILE NAME: 16-14-16-13-8-29w1,9705.t | RANGE: 20,680 kPa |
| BOTTOM S/N: V81                 | FILE NAME: 16-14-16-13-8-29w1,9705.t | RANGE: 20,680 kPa |
| TOP BATTERY S/N: n/a            | BOTTOM BATTERY S/N: n/a              |                   |
| CONNECT TIME: 10:43 Feb 2, 2017 | DISCONNECT TIME: 15:08 March 2, 2017 |                   |

|                                    |                       |
|------------------------------------|-----------------------|
| SURFACE TEMP: -13 deg C            | LEASE CONDITION: good |
| WIRELINE OPERATOR: Bart [REDACTED] | PHONE: 306-421-9700   |
| WIRELINE ASSISTANT: n/a            |                       |
| DIRECTIONS:                        |                       |

DWG WELL HEAD PRESSURES:

|                               |                               |
|-------------------------------|-------------------------------|
| TUBING (before survey): 0 kPa | CASING (before survey): 0 kPa |
| TUBING (after survey): 0 kPa  | CASING (after survey): 0 kPa  |

|                                   |                                    |
|-----------------------------------|------------------------------------|
| FLUID LEVEL: n/a                  | RUN DEPTH: 986 mKB                 |
| TIME ON BOTTOM: 09:26 Feb 3, 2017 | TIME OFF BOTTOM: 14:00 Mar 2, 2017 |

GRADIENT STOPS

|            |      |       |     |        |     |
|------------|------|-------|-----|--------|-----|
| DEPTH mKB: | none | FROM: | n/a | UNTIL: | n/a |
|------------|------|-------|-----|--------|-----|

|           |
|-----------|
| COMMENTS: |
|-----------|

DESCRIPTION OF WORK DONE:

February 2, 2017

10:43 Set recorders to logging mode.

February 3, 2017

07:15 Recorders are ran into the well below a Tryton bridge plug by the drilling rig.

09:26 Tools are at set depth.

09:30 The bridge plug is set and the well is shut in.

March 2, 2017

13:55 Prep well to unset the bridge plug.

14:00 The bridge plug is unset.

14:11 Tools are pulled from the well by the service rig.

14:55 Recorders are at surface.

15:08 Download data from the recorders.

## Appendix D

| Month  | Average Monthly Injection Pressure (kPag) |           |           |           |           |           |
|--------|---|-----------|-----------|-----------|-----------|-----------|
|        | 102/12-05                                 | 103/12-07 | 100/09-16 | 100/12-17 | 100/04-18 | 103/09-13 |
| Jan-15 | -   | -         | -         | -         | -         | -         |
| Feb-15 | -   | -         | -         | -         | -         | -         |
| Mar-15 | -   | -         | -         | -         | -         | -         |
| Apr-15 | -   | -         | -         | -         | -         | -         |
| May-15 | -   | -         | -         | -         | -         | -         |
| Jun-15 | -   | -         | -         | -         | -         | -         |
| Jul-15 | -   | -         | -         | -         | -         | -         |
| Aug-15 | -   | -         | -         | -         | -         | -         |
| Sep-15 | -   | -         | -         | -         | 0         | -         |
| Oct-15 | 0   | -         | -         | -         | 656       | -         |
| Nov-15 | 52  | -         | -         | -         | 2832      | -         |
| Dec-15 | -17                                       | -         | -         | -         | 2959      | -         |
| Jan-16 | -78                                       | -         | -         | -         | 2982      | -         |
| Feb-16 | -35                                       | -         | -         | -         | 3570      | -         |
| Mar-16 | -18                                       | -         | -         | -         | 3992      | -         |
| Apr-16 | -57                                       | -         | -         | -         | 3445      | -         |
| May-16 | -66                                       | -         | -         | -         | 4843      | -         |
| Jun-16 | -70                                       | -         | -         | -         | 4936      | -         |
| Jul-16 | -92                                       | -         | -         | -         | 4977      | -         |
| Aug-16 | 313                                       | -         | -         | -         | 4975      | -         |
| Sep-16 | -92                                       | -         | -         | -         | 4974      | -         |
| Oct-16 | -85                                       | -         | -         | -         | 4971      | -         |
| Nov-16 | -87                                       | -         | -         | -         | 4977      | -         |
| Dec-16 | -93                                       | -         | -         | -         | 4972      | -         |
| Jan-17 | -93                                       | -         | -         | -         | 4973      | -         |
| Feb-17 | -89                                       | -         | 144       | 143       | 4975      | -         |
| Mar-17 | -92                                       | -         | -44       | -72       | 4929      | -         |
| Apr-17 | -86                                       | -         | 1187      | -56       | 4972      | -         |
| May-17 | -92                                       | -         | 2736      | 1111      | 5660      | -         |
| Jun-17 | -97                                       | -         | 3265      | 2149      | 6252      | -         |
| Jul-17 | -95                                       | -         | 3144      | 1617      | 6250      | -         |
| Aug-17 | -94                                       | -         | 395       | -41       | 6262      | -         |
| Sep-17 | -93                                       | -50       | 3929      | 2755      | 6258      | -         |
| Oct-17 | -92                                       | -91       | 4570      | 2971      | 6263      | 62        |
| Nov-17 | -92                                       | -92       | 4286      | 2483      | 5926      | -62       |
| Dec-17 | -92                                       | -87       | 5296      | 4424      | 6320      | -94       |



**Appendix E**  
**Rates and VRR Plots**

# Pattern: 02/12-05-008-28Inj Set: SinclairUnit#12

Oil Formation Vol Factor : 1.07100 m3/m3

Water Formation Vol Factor : 1.00150 m3/m3

Water / Oil Ratio : 2.00 m3/m3

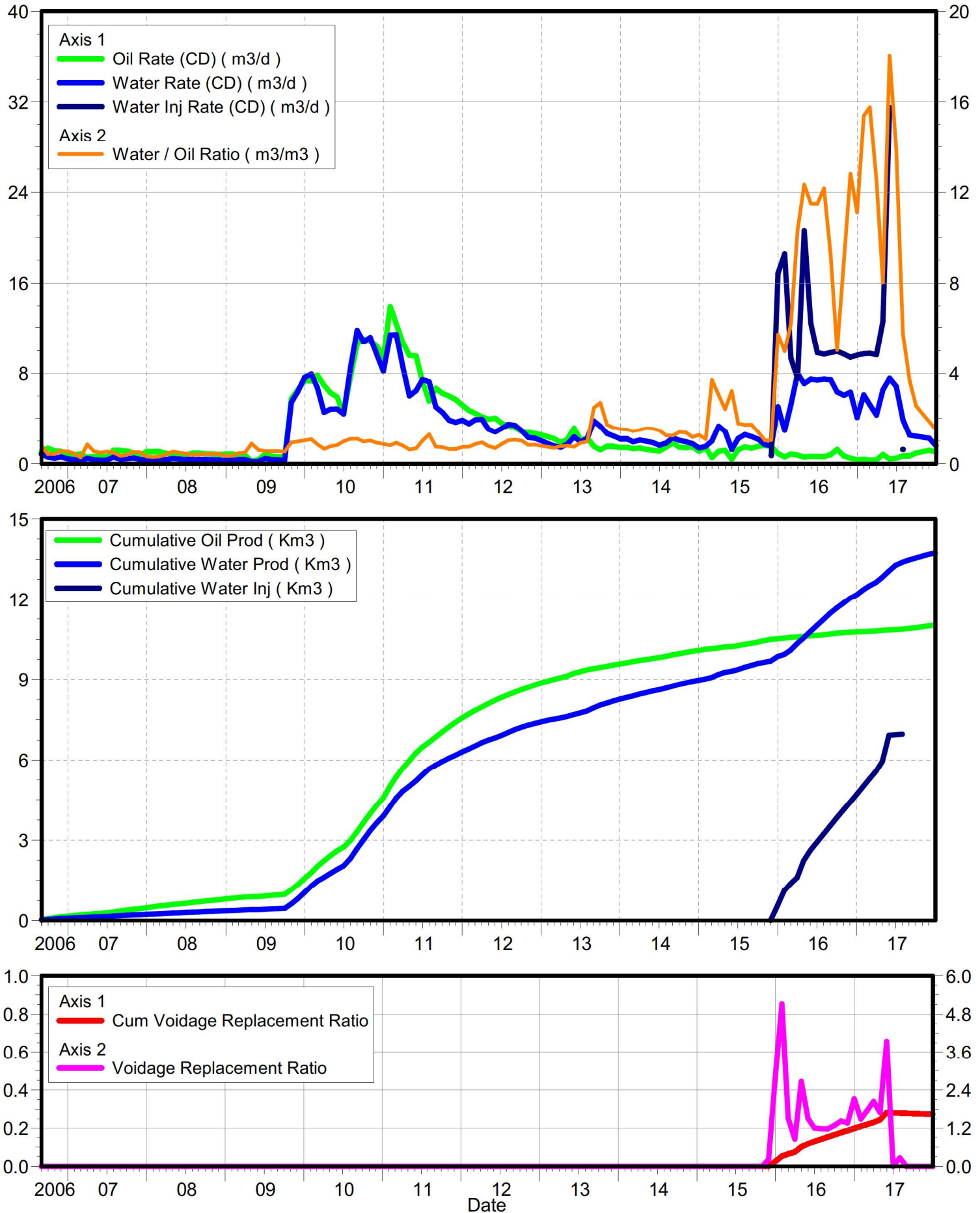
May 31, 2018

Operator: TUNDRA\_OIL\_AND\_GAS\_PARTNER

Oil Rate (CD) : 1.01 m3/d

Water Rate (CD) : 1.77 m3/d

Water Inj Rate (CD) : 1.27 m3/d



# Pattern: 03/12-07-008-28Inj Set: SinclairUnit#12

Oil Formation Vol Factor : 1.07100 m3/m3

Water Formation Vol Factor : 1.00150 m3/m3

Water / Oil Ratio : 4.21 m3/m3

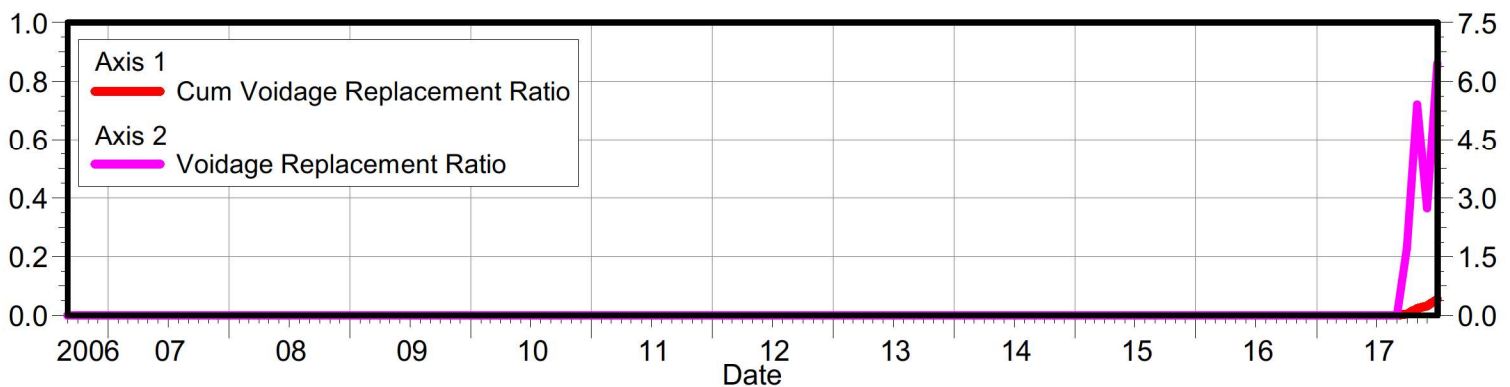
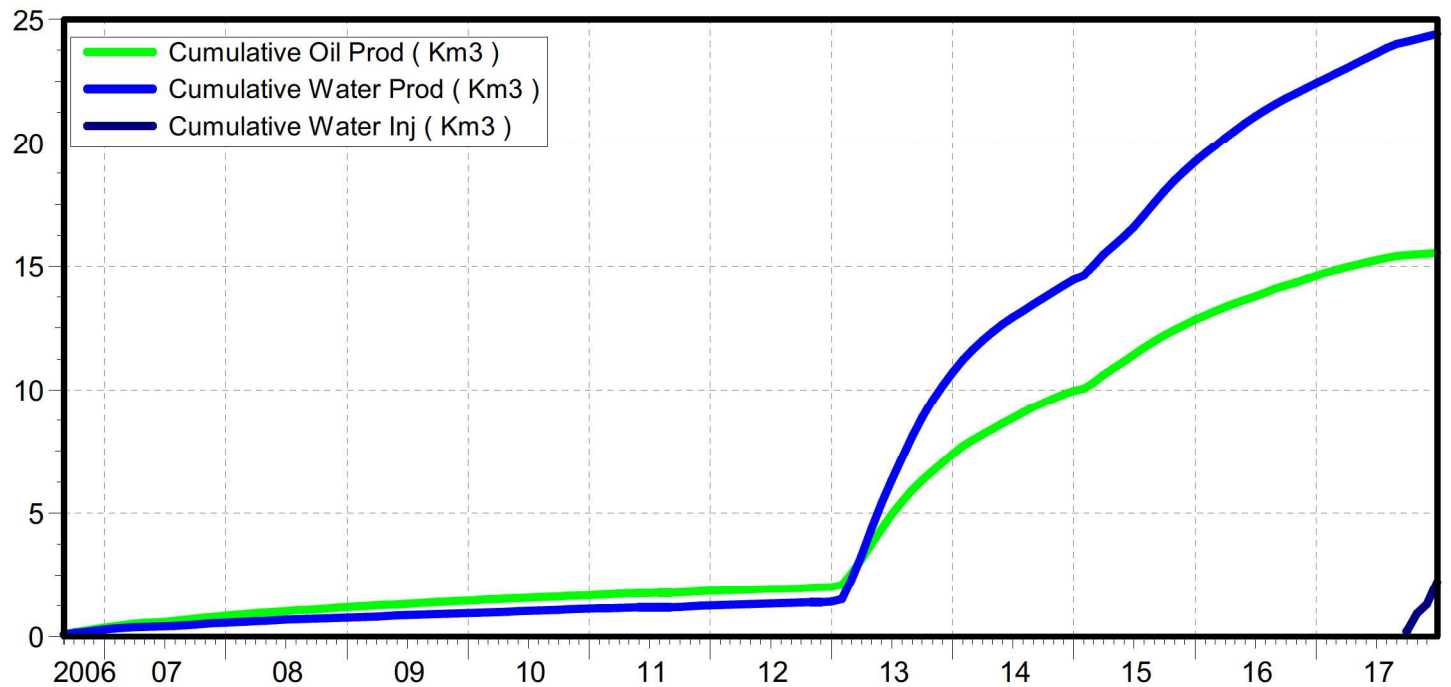
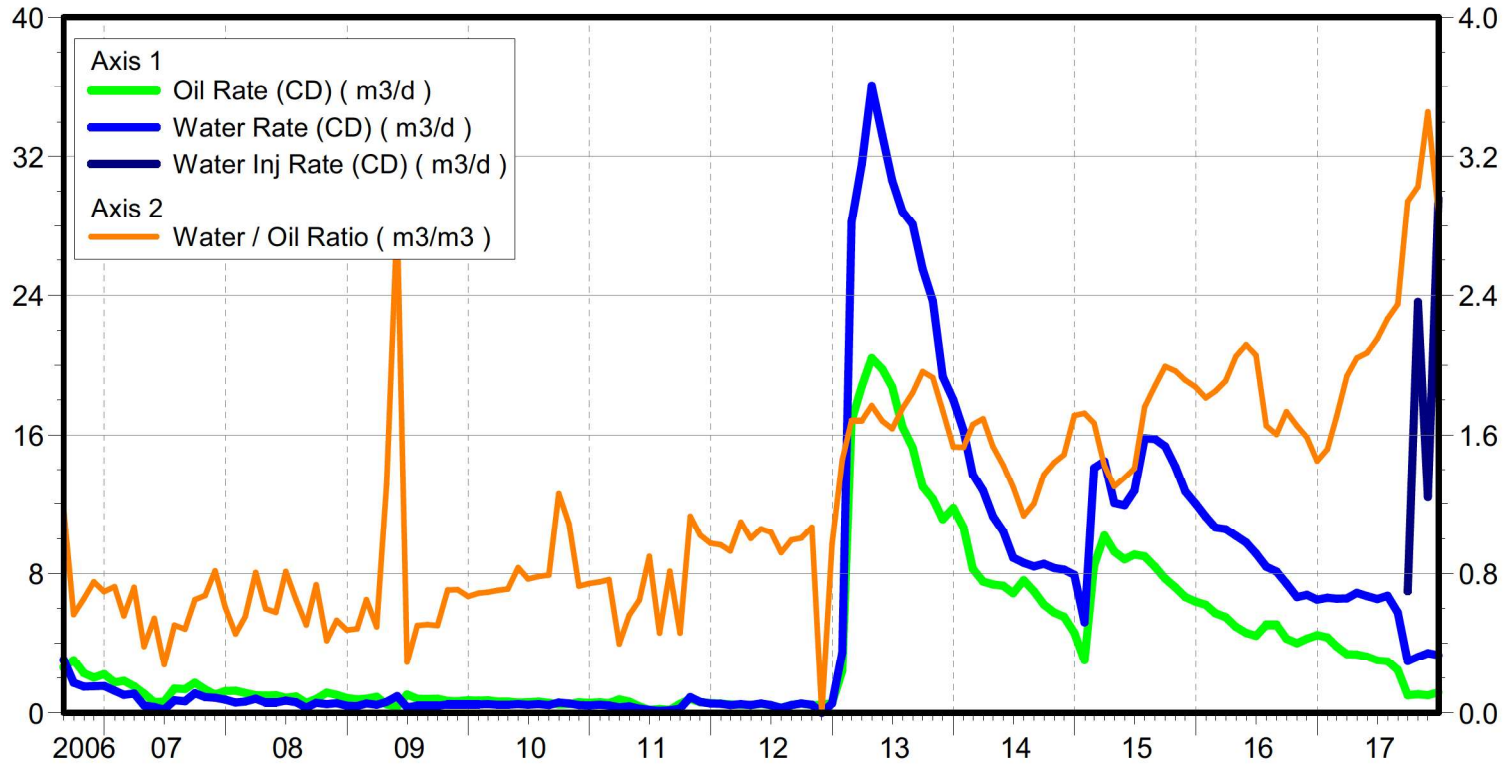
May 31, 2018

Operator: TUNDRA\_OIL\_AND\_GAS\_PARTNER

Oil Rate (CD) : 1.10 m3/d

Water Rate (CD) : 5.23 m3/d

Water Inj Rate (CD) : 39.71 m3/d





# Pattern: 00/09-16-008-28Inj Set: SinclairUnit#12

Oil Formation Vol Factor : 1.07100 m3/m3

Water Formation Vol Factor : 1.00150 m3/m3

Water / Oil Ratio : 1.23 m3/m3

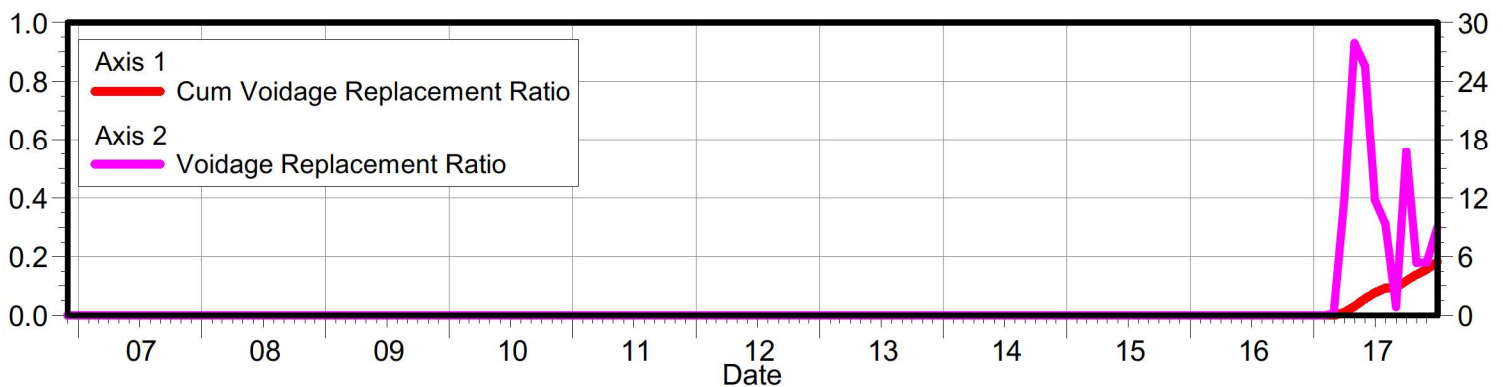
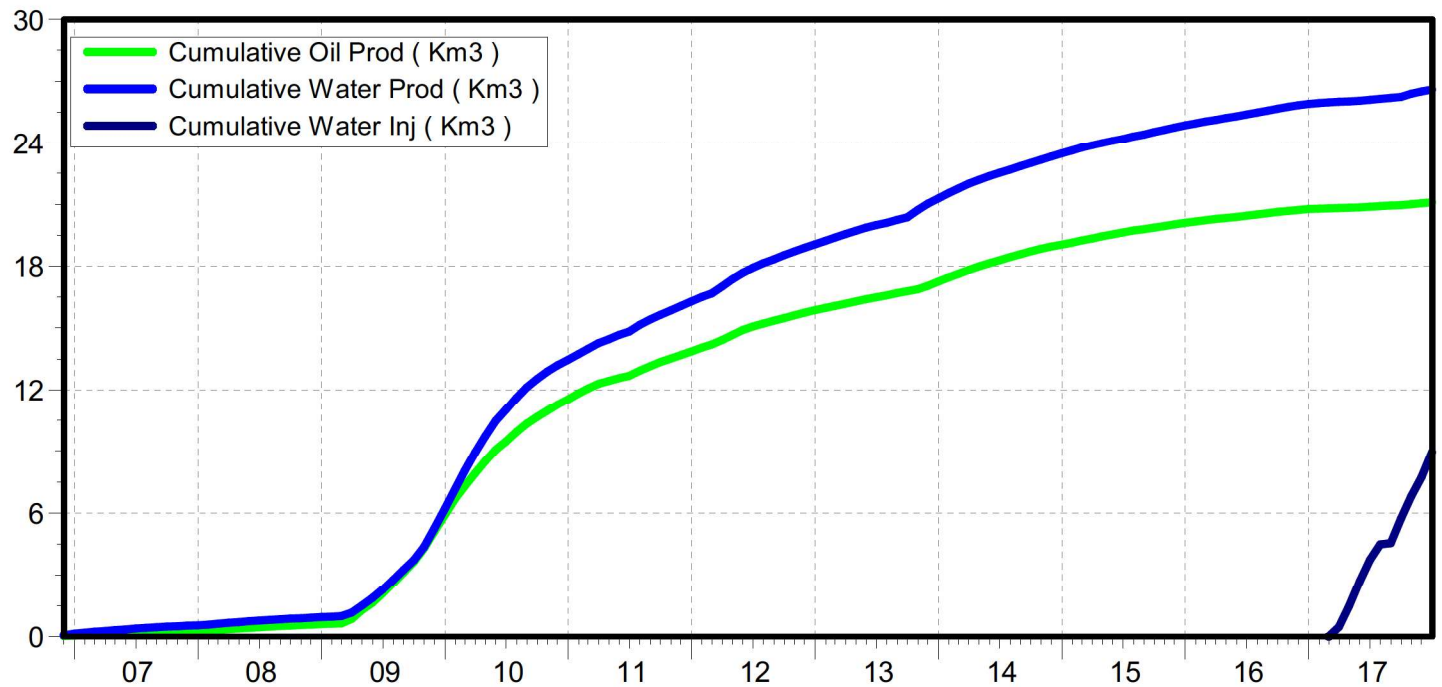
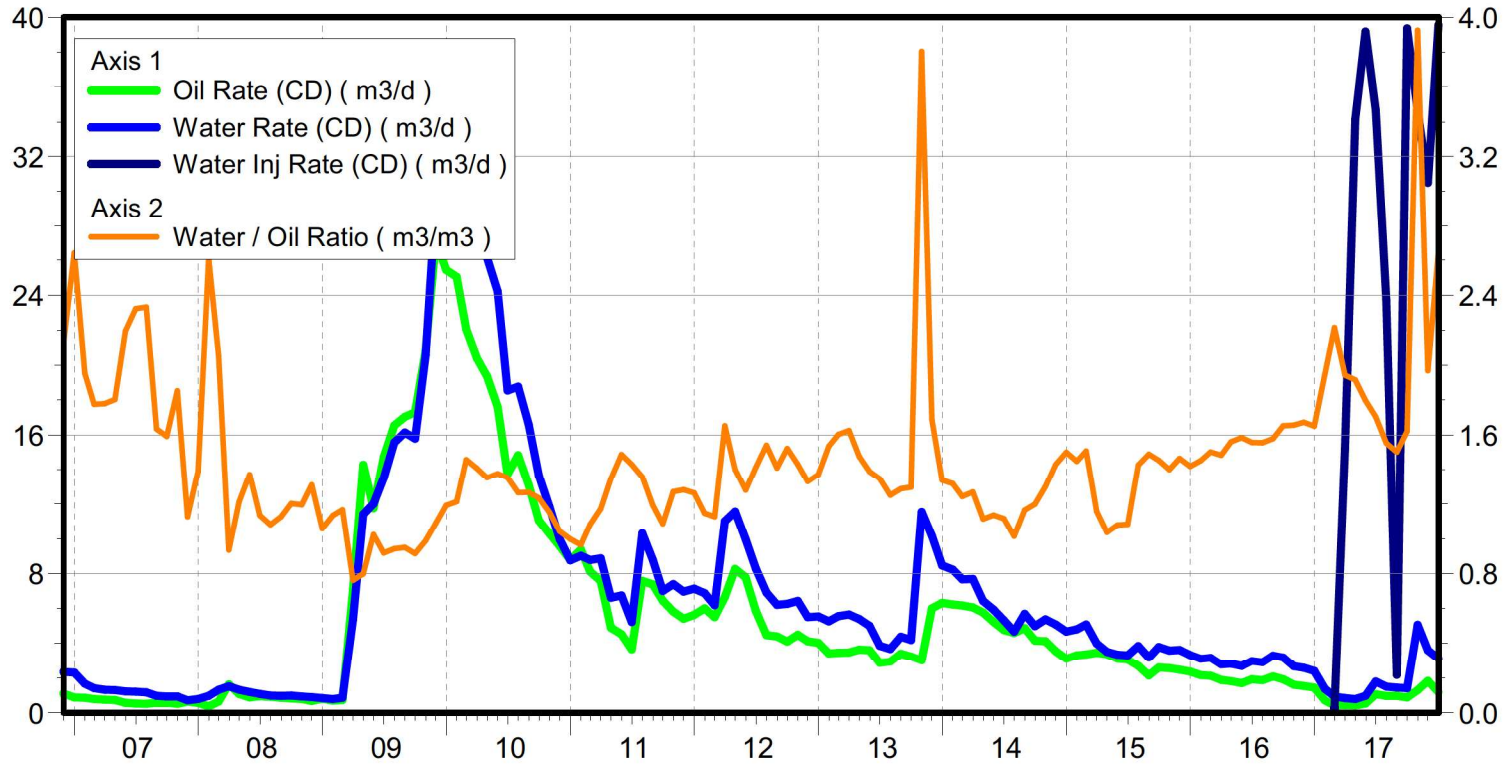
May 31, 2018

Operator: TUNDRA\_OIL\_AND\_GAS\_PARTNER

Oil Rate (CD) : 1.55 m3/d

Water Rate (CD) : 3.48 m3/d

Water Inj Rate (CD) : 38.55 m3/d



# Pattern: 00/12-17-008-28Inj Set: SinclairUnit#12

Oil Formation Vol Factor : 1.07100 m3/m3

Water Formation Vol Factor : 1.00150 m3/m3

Water / Oil Ratio : 1.54 m3/m3

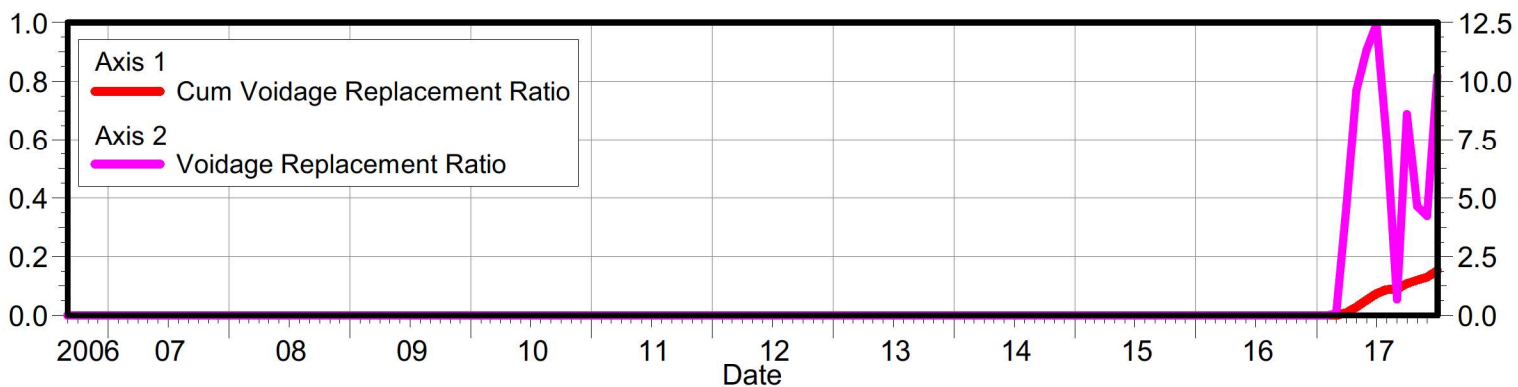
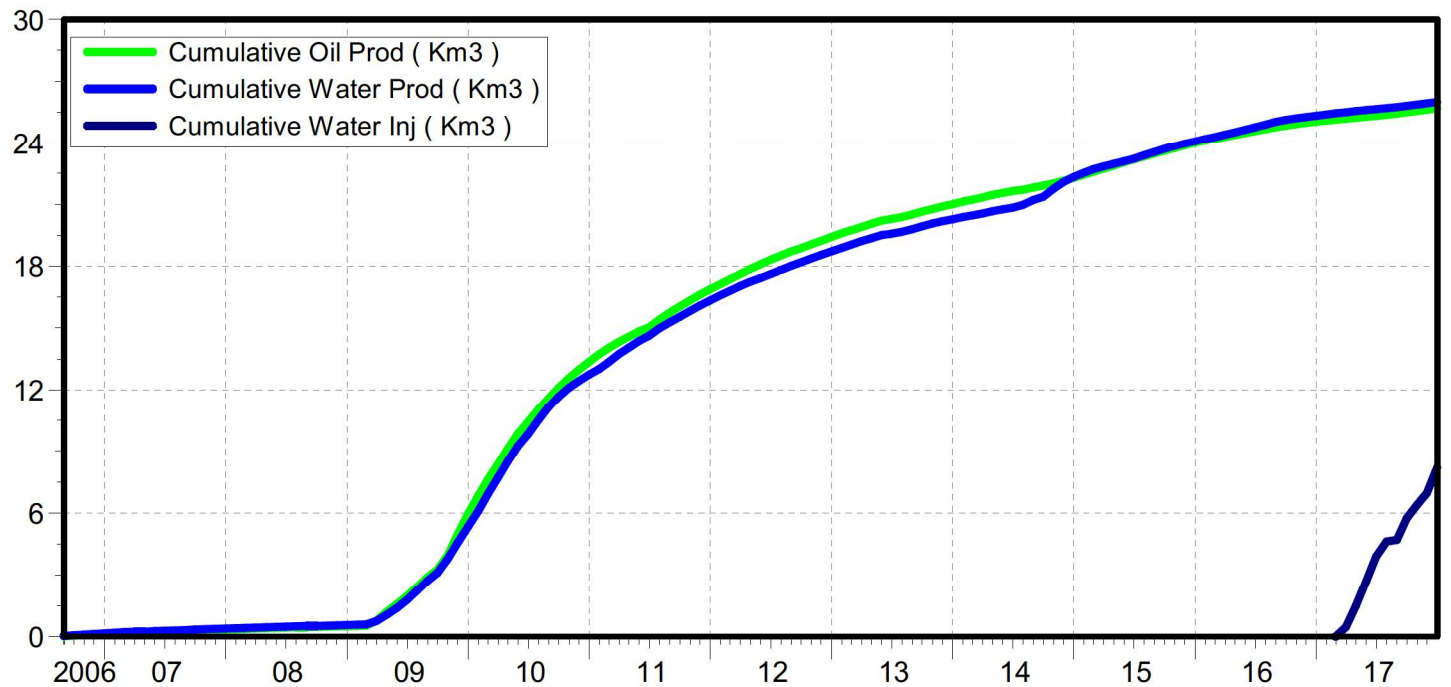
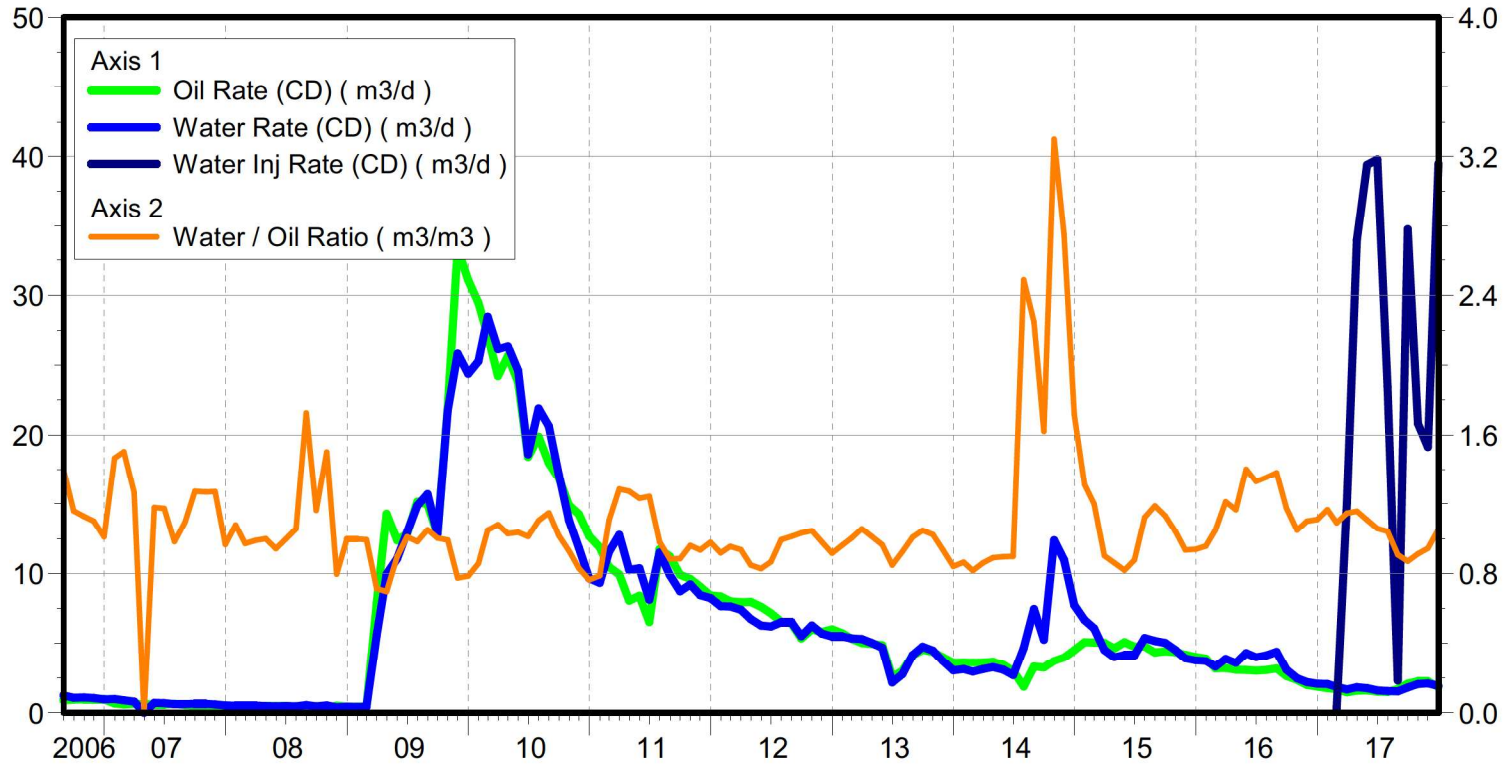
May 31, 2018

Operator: TUNDRA\_OIL\_AND\_GAS\_PARTNER

Oil Rate (CD) : 2.06 m3/d

Water Rate (CD) : 2.66 m3/d

Water Inj Rate (CD) : 29.40 m3/d



# Pattern: 00/04-18-008-28Inj Set: SinclairUnit#12

Oil Formation Vol Factor : 1.07100 m3/m3

Water Formation Vol Factor : 1.00150 m3/m3

Water / Oil Ratio : 11.33 m3/m3

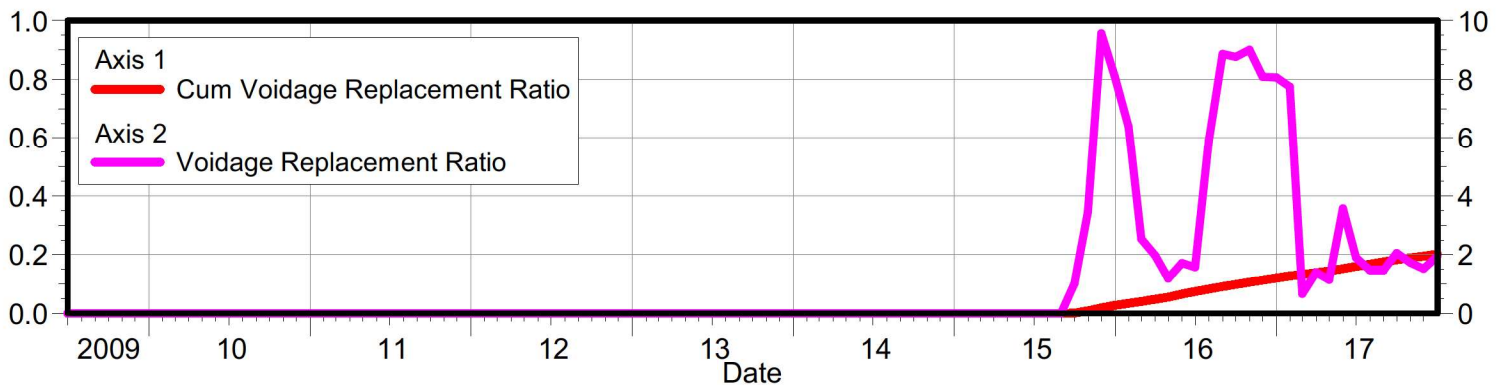
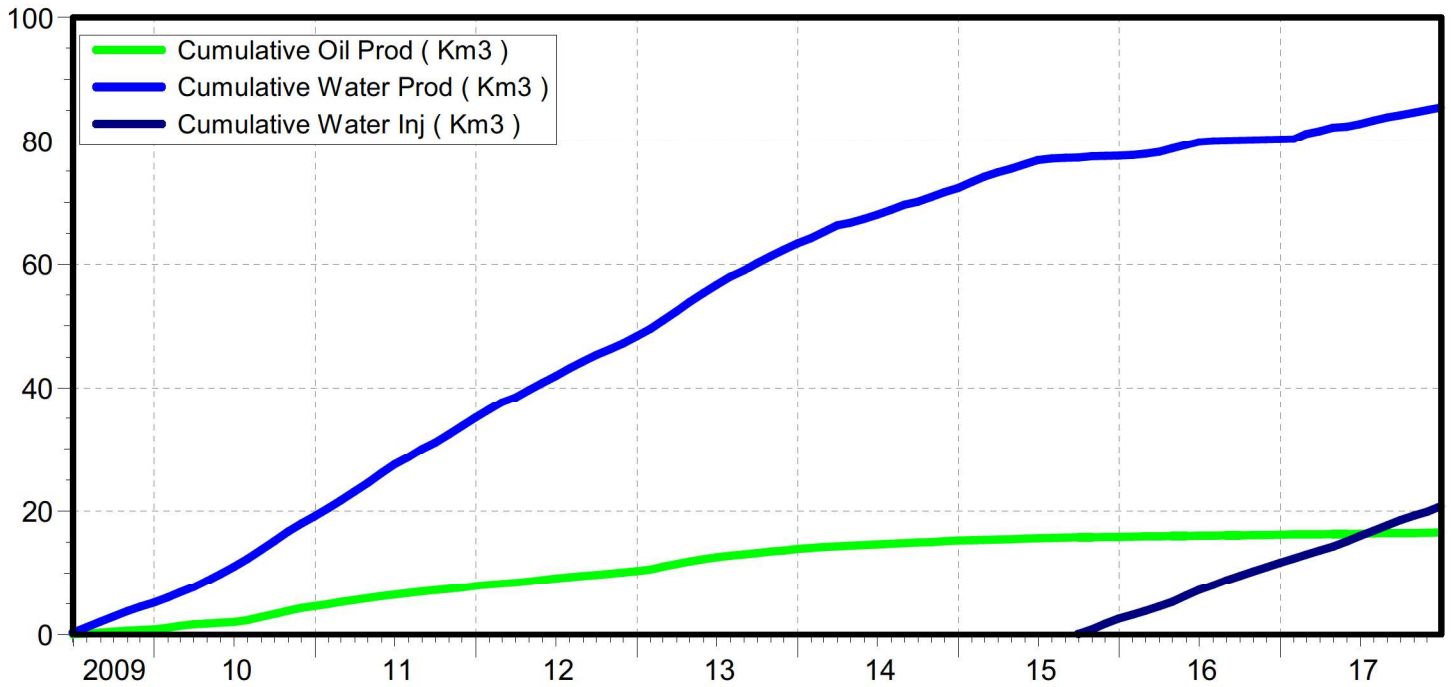
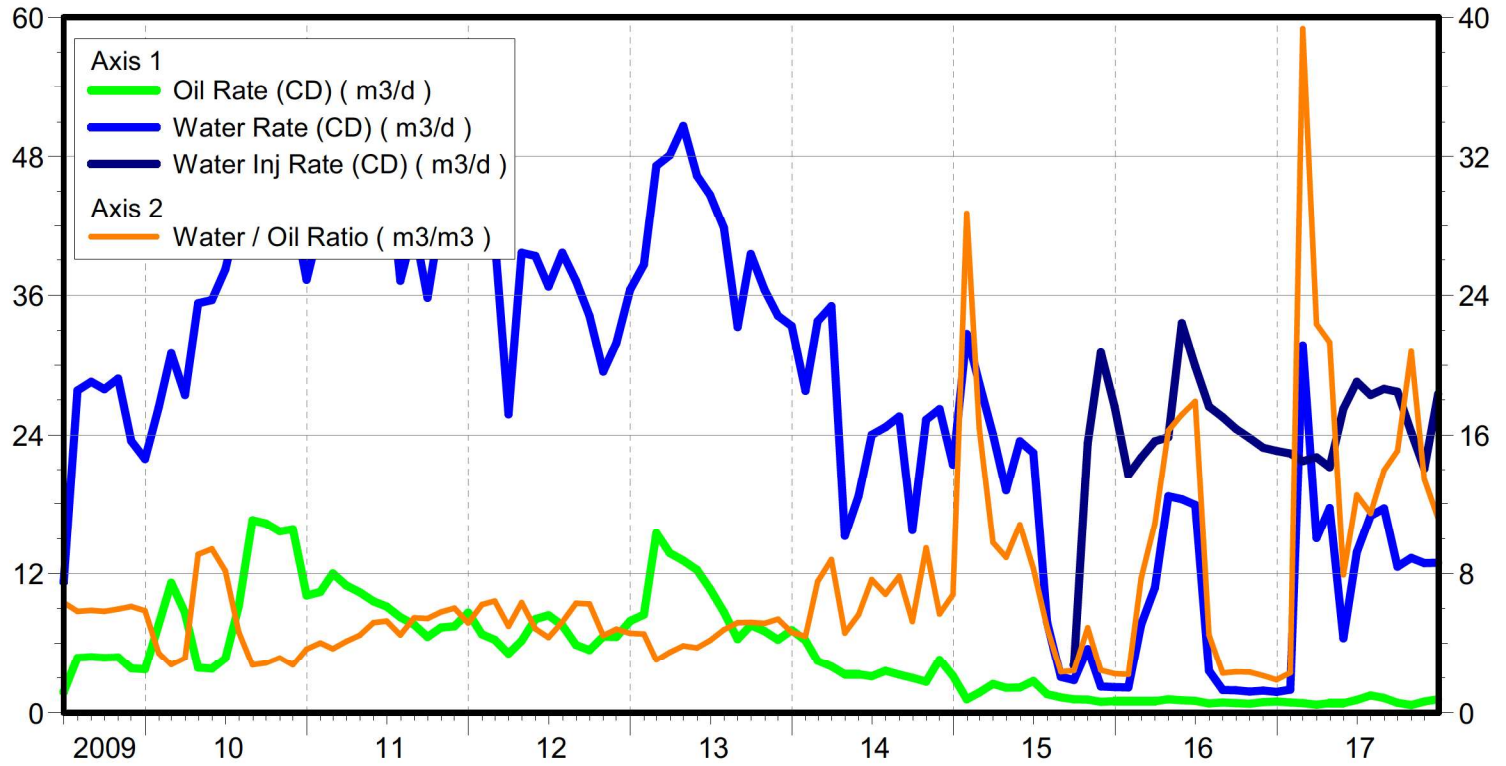
May 31, 2018

Operator: TUNDRA\_OIL\_AND\_GAS\_PARTNER

Oil Rate (CD) : 0.96 m3/d

Water Rate (CD) : 15.90 m3/d

Water Inj Rate (CD) : 26.43 m3/d





# Pattern: 03/01-13-008-29Inj Set: SinclairUnit#12

Oil Formation Vol Factor : 1.07100 m3/m3

Water Formation Vol Factor : 1.00150 m3/m3

Water / Oil Ratio : 2.29 m3/m3

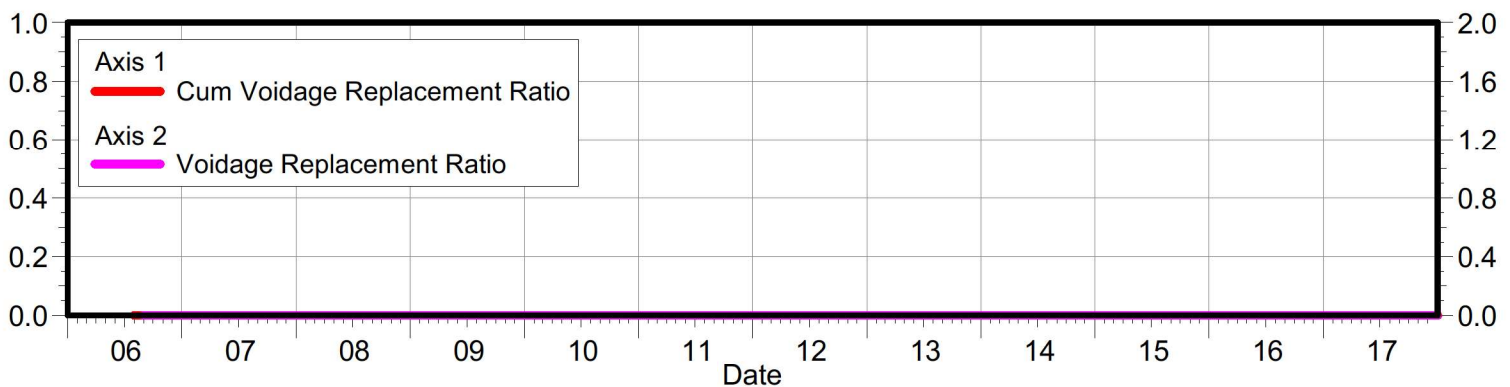
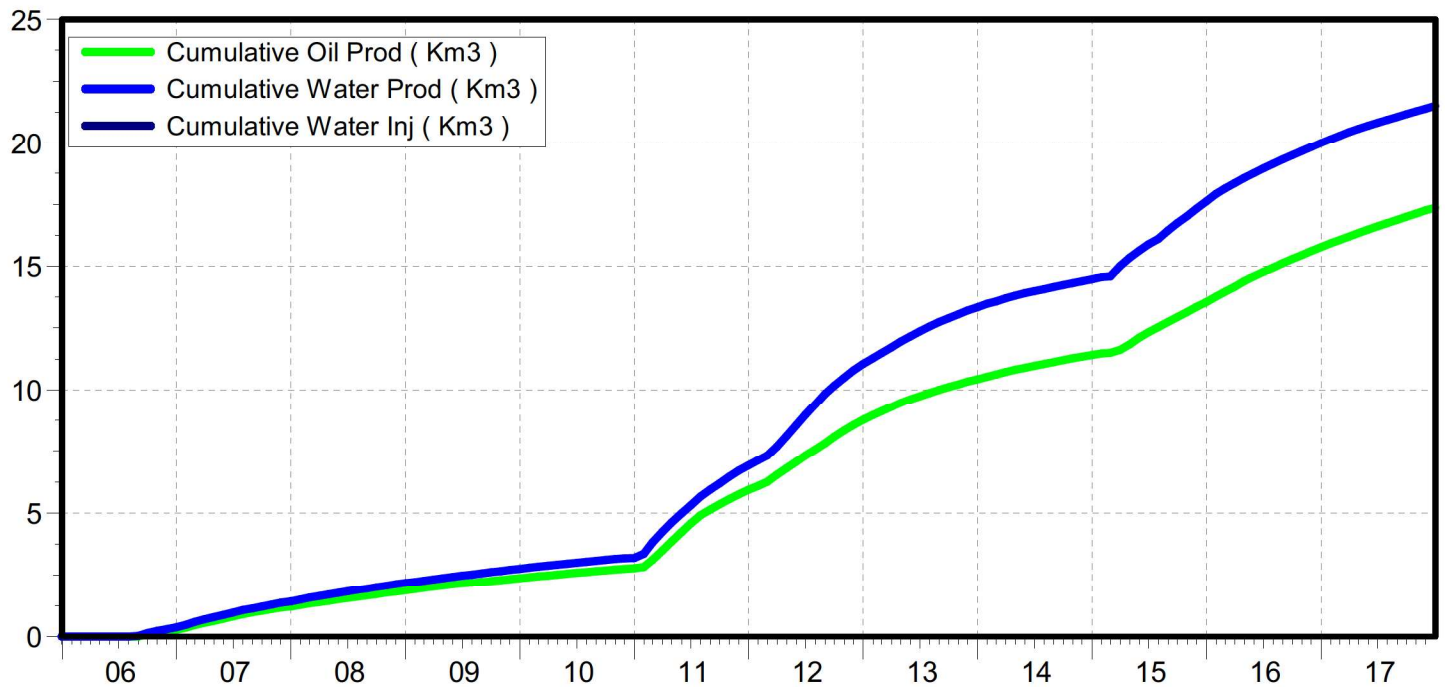
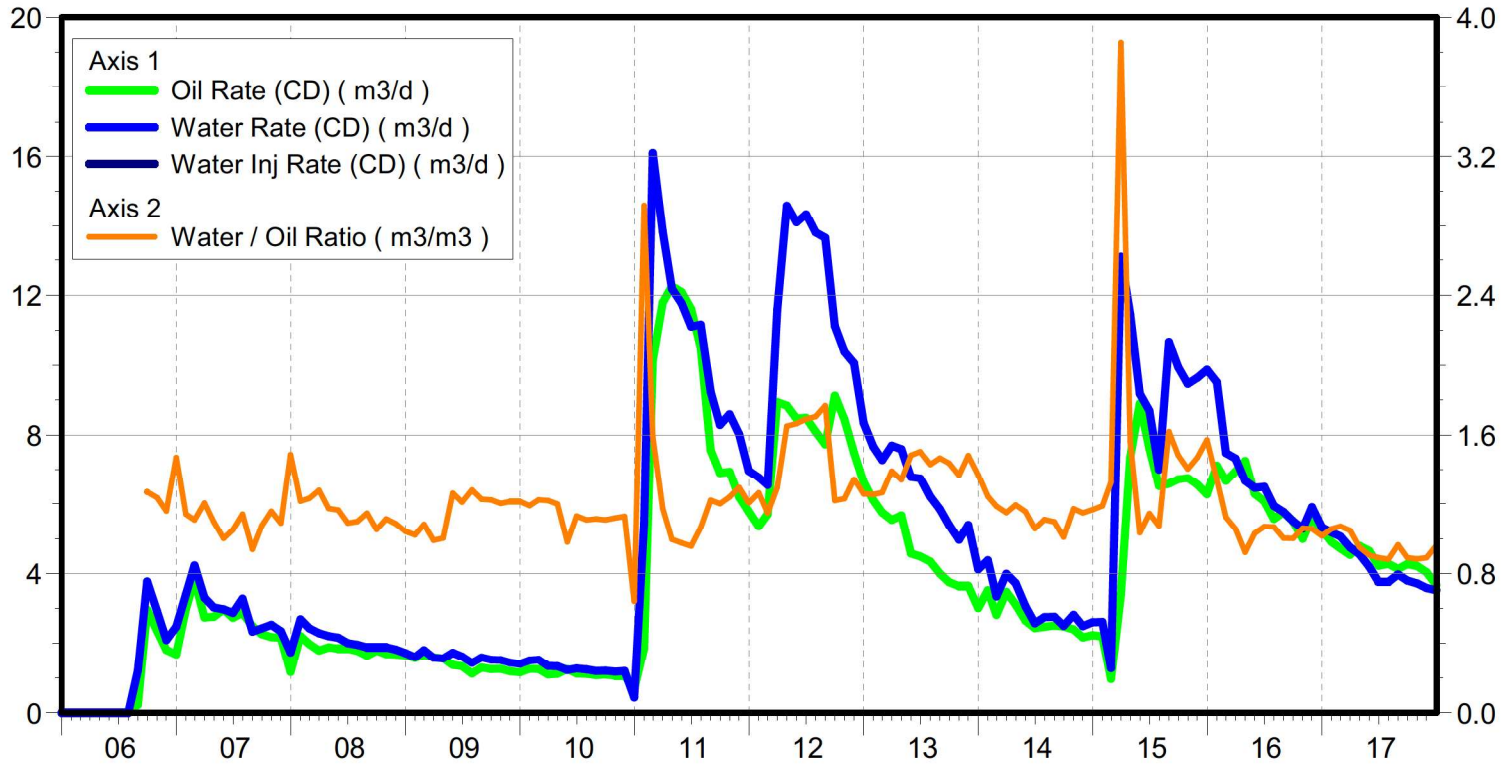
May 31, 2018

Operator: TUNDRA\_OIL\_AND\_GAS\_PARTNER

Oil Rate (CD) : 1.05 m3/d

Water Rate (CD) : 1.77 m3/d

Water Inj Rate (CD) : 11.89 m3/d



# Pattern: 03/09-13-008-29Inj Set: SinclairUnit#12

Oil Formation Vol Factor : 1.07100 m3/m3

Water Formation Vol Factor : 1.00150 m3/m3

Water / Oil Ratio : 2.92 m3/m3

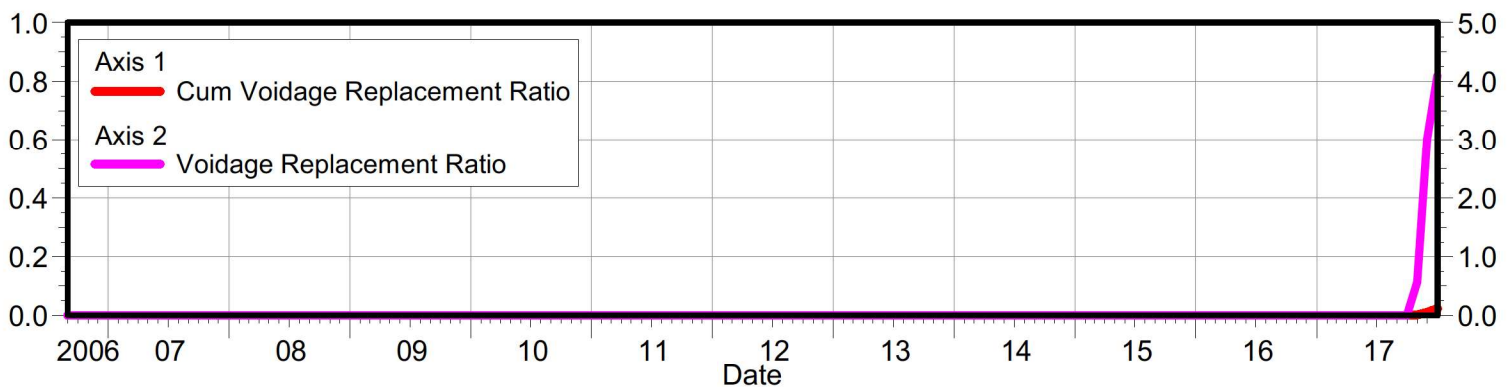
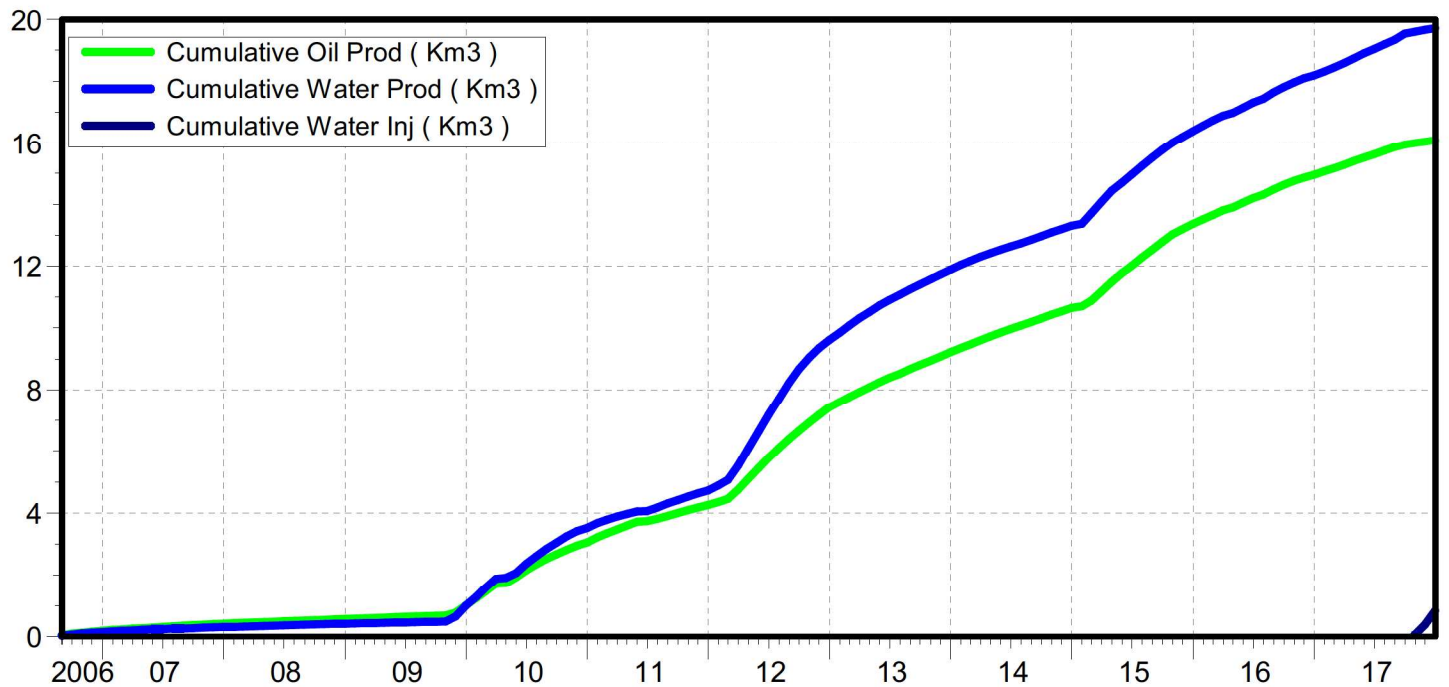
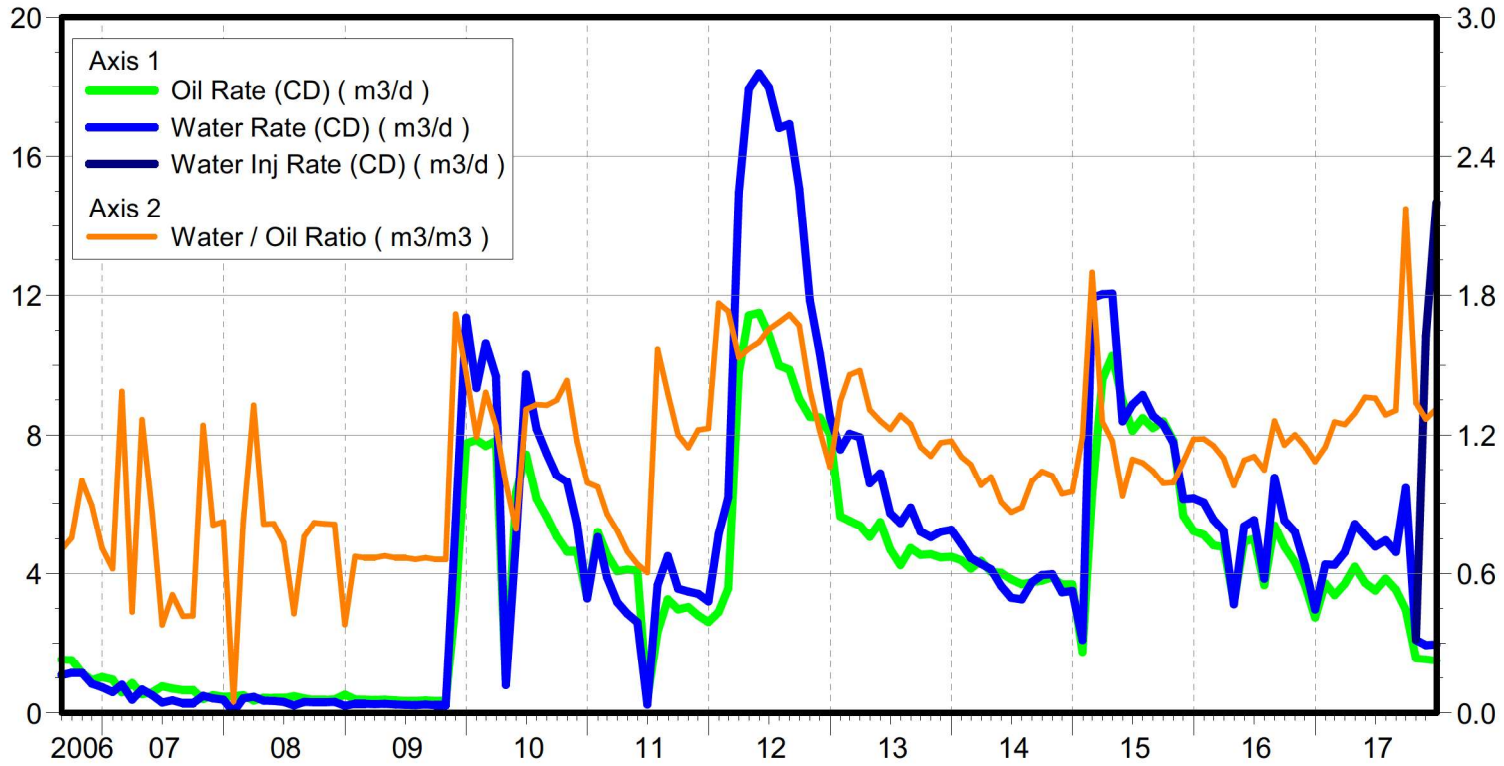
May 31, 2018

Operator: TUNDRA\_OIL\_AND\_GAS\_PARTNER

Oil Rate (CD) : 1.50 m3/d

Water Rate (CD) : 1.99 m3/d

Water Inj Rate (CD) : 20.82 m3/d



# Pattern: 03/16-13-008-29Inj Set: SinclairUnit#12

Oil Formation Vol Factor : 1.07100 m3/m3

Water Formation Vol Factor : 1.00150 m3/m3

Water / Oil Ratio : 2.01 m3/m3

May 31, 2018

Operator: TUNDRA\_OIL\_AND\_GAS\_PARTNER

Oil Rate (CD) : 2.30 m3/d

Water Rate (CD) : 5.51 m3/d

Water Inj Rate (CD) : \* m3/d

