

**SINCLAIR UNIT NO. 12**  
**WATERFLOOD EOR PROJECT**  
**ANNUAL REPORT FOR 2014**

**June 3, 2015**

**Tundra Oil and Gas Partnership**

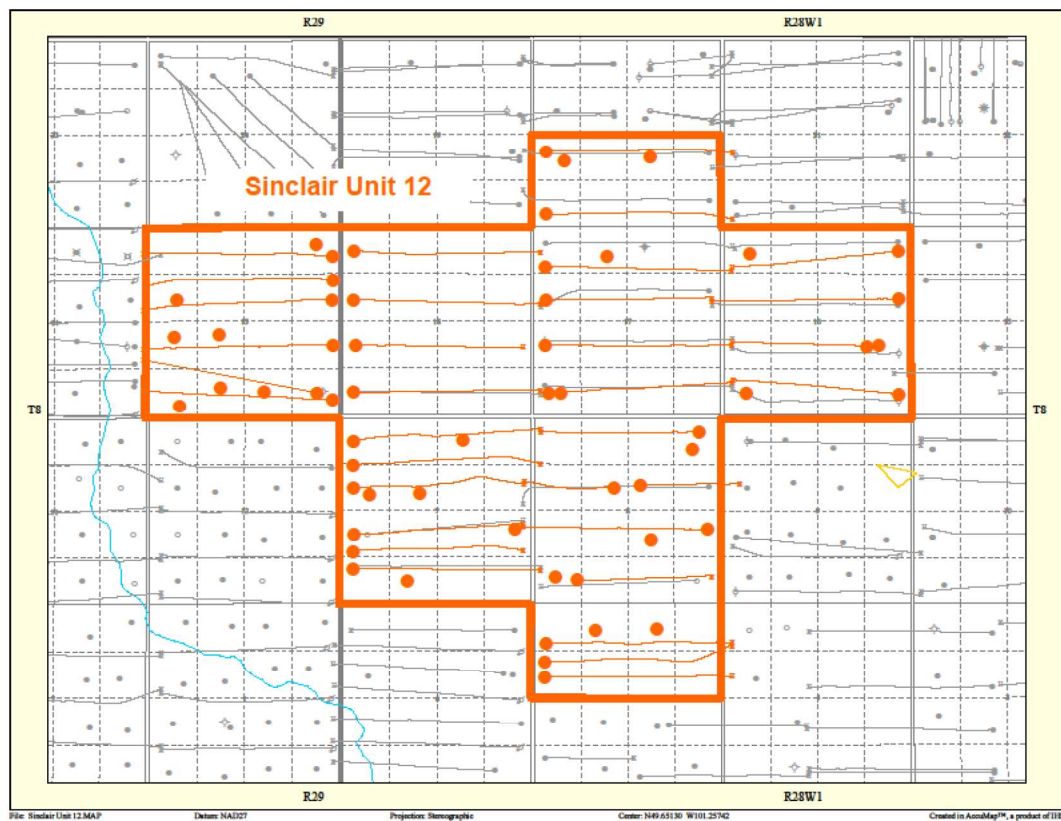
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## **INTRODUCTION**

Sinclair Unit No. 12 Enhanced Oil Recovery (EOR) Waterflood Project was approved on November 1, 2014 with Tundra Oil and Gas (Tundra) as Operator. The EOR Unit area, outlined in orange, contains 53 producing and 5 wells waiting to be completed 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 2014 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 2014, the Unit was producing 67.14 m<sup>3</sup>/d of oil and 131.36 m<sup>3</sup>/d of water. There is currently no water injection in Sinclair Unit No. 12. The rates and WOR are presented in Figure 2.

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

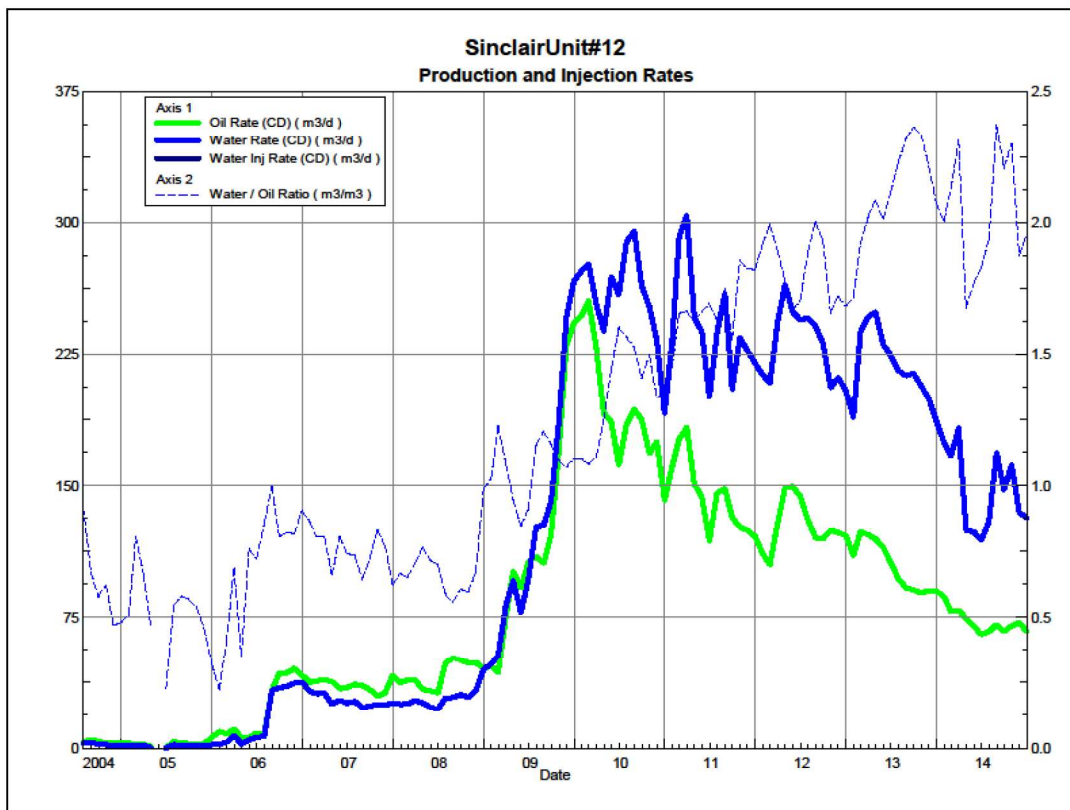
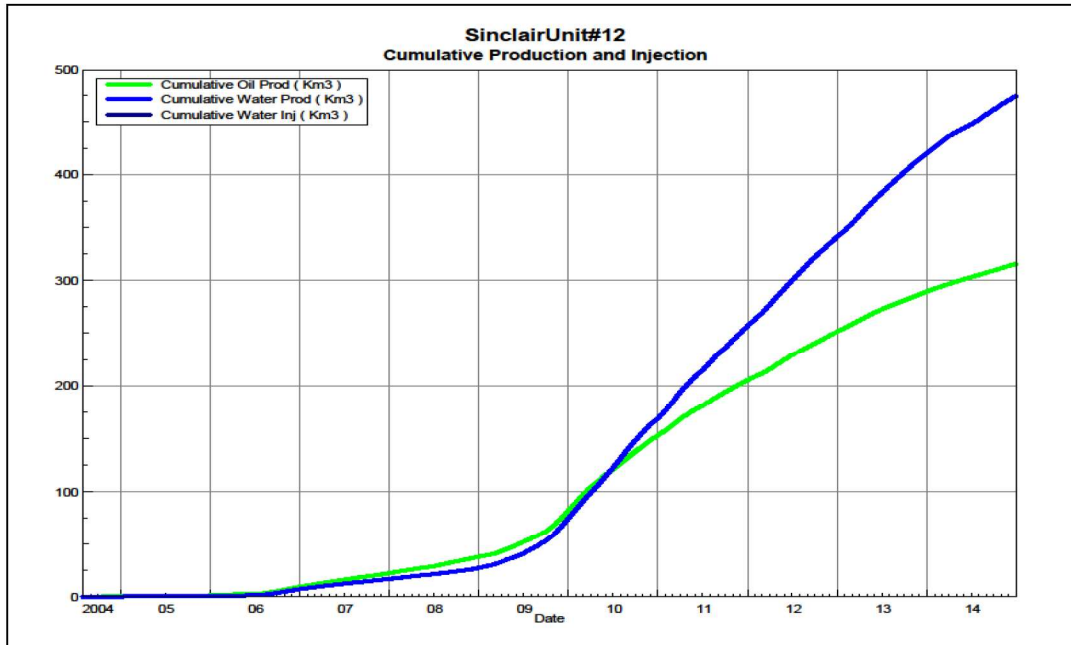


Figure 3 shows the cumulative production for Sinclair Unit No. 12 to the end of December 2014 as 315.9 e<sup>3</sup>m<sup>3</sup> of oil, and 474.2 e<sup>3</sup>m<sup>3</sup> of water, representing a 7.2% recovery factor of the OOIP.



**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**

Sinclair Unit No. 12 is still in the development phase at the end of 2014. In November 2014, four (4) proposed future injection wells (02/12-05, 02/05-07, 03/12-07-008-28W1 and 03/09-13-008-29W1) were drilled between existing horizontal/vertical producing wells, completing waterflood patterns with effective 20 acre spacing. All of the horizontal wells are fracture stimulated to improve the injection rates. In order to maximize recovery from this Unit, Tundra expects to produce all of the injectors for a short period of time to clean-up the reservoir near the wellbores. Tundra is planning to convert the 02/12-05-008-28W1 new drill and the 00/04-18-008-28W1 existing producer to injectors in 2015.

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 will be sourced from the 16-32-007-29W1 well (Lodgepole formation). The water is treated at the 03-04-007-29W1 battery where it is filtered to 0.5 microns and has scale inhibitor added. The injection water is then distributed to the injectors through the dedicated infrastructure system.

### **Injection Wellhead Pressures**

There is currently no injection in Sinclair Unit No. 12.

### **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 2014 from the 02/12-05 and 03/12-07-008-28W1 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**

No maintenance was required on the 58 wells in Sinclair Unit No. 12 in 2014.

## **Waterflood Performance Discussion**

At the end of 2014, there is currently no water injection in Sinclair Unit No. 12, therefore, there is no waterflood analysis that can be done at this time. The waterflood area had 5 of the proposed horizontal injection wells drilled (1 producing, 4 waiting to be completed) at the end of 2014. Conversion of the horizontal wells to water injection wells is anticipated to start in 2015.

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

## **List of Appendices**

Appendix A: Well Name and Well Status

Appendix B: Sinclair Unit No. 12 Injection Pattern Summary

Appendix C: Sinclair Unit No. 12 Reservoir Pressure Summary

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

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

102/05-07-008-28W1/0

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

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

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

## Appendix A

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

UWI	Surface Location	Type	Well Status
100/13-16-008-28W1/0	---	Vertical	Capable of Oil Prod
100/16-16-008-28W1/0	100/13-15-008-28W1/C	Horizontal	Capable of Oil Prod
100/04-17-008-28W1/0	---	Vertical	Capable of Oil Prod
102/04-17-008-28W1/0	102/04-15-008-28W1/C	Horizontal	Capable of Oil Prod
100/05-17-008-28W1/0	100/05-15-008-28W1/C	Horizontal	Capable of Oil Prod
100/12-17-008-28W1/0	100/09-17-008-28W1/C	Horizontal	Capable of Oil Prod
100/13-17-008-28W1/0	100/13-15-008-28W1/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	Capable of Oil Prod
100/05-18-008-28W1/0	100/08-13-008-28W1/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	Capable of Oil Prod
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/C	Horizontal	Completing
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	Capable of Oil Prod
100/06-13-008-29W1/0	---	Vertical	Capable of Oil Prod
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	Completing
100/12-13-008-29W1/0	---	Vertical	Capable of Oil Prod
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



Appendix B

Sinclair Unit No. 12 Injection Pattern Summary as of December 2014

Pattern Name	Injector BH Location (008-28W1)	Injector Surf. Location (008-28W1)	Status	No. of Supported Wells	Supported Wells (008-28W1)	Allocation Factor	Pattern Prod Start Month	Ini Start Month	Oil Rate (m³/d)	Water Rate (m³/d)	WOR (m³/m³)	Water Injection (m³/d)	Cum Oil (E+m³)	Cum Water (E+m³)	Cum Ini Water (E+m³)	Monthly VRR	Cum VRR
02/12-05-008-28 Injector	02/12-05	02/13-04	Completing	2	00/12-05, 00/13-05	1.0	Oct 2009	-	2.0	2.5	1.25		17.4	16.5	0.0	0.0	0.00
02/05-07-008-28 Injector	02/05-07	02/08-07	Completing	4	00/03-07, 00/04-07, 00/05-07, 00/08-07	1.0	Aug 2006	-	5.1	10.7	2.12		24.2	37.3	0.0	0.0	0.00
03/12-07-008-28 Injector	03/12-07	03/13-08	Completing	2	00/13-07 02/12-07, 00/15-07	0.5 1.0	Aug 2006	-	4.6	7.9	1.72		9.2	14.0	0.0	0.0	0.00
00/04-18-008-28 Injector	00/04-18	00/04-17	Capable of OIL Prod	2	00/13-07 00/05-18	0.5 1.0	Jun 2009	-	3.5	24.0	6.85		21.2	94.1	0.0	0.0	0.00
03/09-13-008-29 Injector	00/09-13-008-29W1	03/09-14-008-29W1	Completing	4	00/12-13, 00/16-13, 02/09-13, 02/16-13	1.0	Aug 2006	-	7.4	7.1	0.96		22.1	26.6	0.0	0.0	0.00

## 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	502.9	-450	8.25	1756
03/12-07-008-28W1/0	Dec 2 - Jan 20, 2015	5771.6	931.15	507.3	-450	8.25	5987



## TUNDRA OIL & GAS PARTNERSHIP

SINCLAIR UNIT No. 12 HZNTL A12C-5-8-28

102/12-05-008-28W1/00

LICENSE #: 10220

BAKKEN FORMATION

RESERVOIR PRESSURE SURVEY TEST

DECEMBER 10<sup>th</sup>, 2014 – JANUARY 31<sup>st</sup>, 2015

Prepared by: **DOLLCO Well Data Services**  
e-mail: [dollco@shaw.ca](mailto:dollco@shaw.ca)

PO Box 326  
417A Mississippian Drive  
Esteron, SK  
S4A 2A4

Cell: (306) 421 - 7330  
Fax: (306) 634 - 7976  
Res: (306) 634 - 8761

E-mail: [qualityw@sasktel.net](mailto:qualityw@sasktel.net)



# Pressure Survey Report

## Company Information

Company Name	TUNDRA OIL & GAS PARTNERSHIP
Contact	CRAIG [REDACTED]
e-mail	craig.lane@tundraoilandgas.com
Phone	(204) 748-4409
Site Contact	GORD [REDACTED]
Site Phone	(204) 851-3212

## Well Information

Well Name	SINCLAIR UNIT No 12 HZNTL A12C-5-8-28
Unique Well ID	102/12-05-008-28W1/00
Surface Location	13B-4 / A12C-5-8-28W1
Well License Number	10220
Well Type	Horizontal
Well Fluid Type	01 Oil
Field	SINCLAIR

KB Elevation (SL)	502.90 m
CF Elevation (SL)	498.40 m
GL Elevation (SL)	498.40 m
Distance from KB to CF (Log)	4.50 m
KB-GL Offset	4.50 m

Tubing ID	mm
Tubing OD	mm
Tubing Depth(Log KB)	m
Tubing Depth(TVD KB)	m
Casing ID	mm
Casing OD	177.8 mm
Casing Depth(Log KB)	1063.00000 m
Casing Depth(TVD KB)	929.26000 m
PBTD(Log KB)	m
PBTD(TVD KB)	m

# Pressure Survey Report

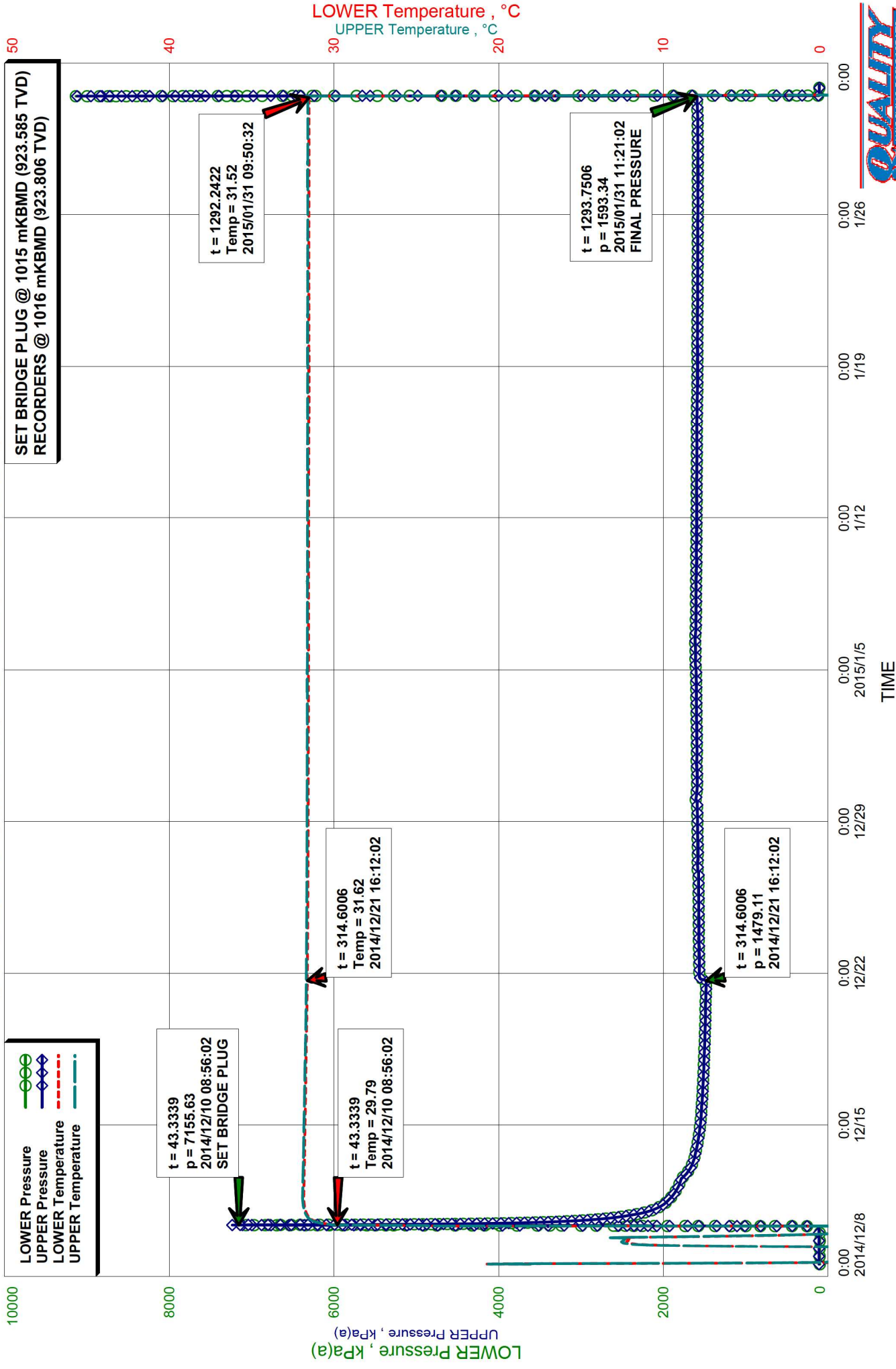
## Test Information

Well Name	SINCLAIR UNIT No 12 HZNTL A12C-5-8-28
Unique Well ID	102/12-05-008-28W1/00
Surface Location	13B-4 / A12C-5-8-28W1
Well License Number	10220
Well Fluid Type	01 Oil
Test Purpose	Initial Test
Test Type	RESERVOIR PRESSURE SURVEY
Formation	BAKKEN
Well Type Indicator	Horizontal
Test/Prod. Interval Top KB (Log)	1063.00 m
Test/Prod. Interval Base KB (Log)	2477.00 m
MPP(Log KB)	1770.00 m
Test/Prod Interval Top KB (TVD)	929.26 m
Test/Prod. Interval Base m KB (TVD)	937.09 m
MPP(TVD KB)	933.18 m
Tubing Pressure Initial	kPa(a)
Casing Pressure Initial	kPa(a)
Tubing Pressure: Final	kPa(a)
Casing Pressure: Final	kPa(a)
Time/Date Well Shut-In	2014/12/10 08:56:02
Final Test Date/Time	2015/01/31 11:21:02
Gauge Serial Number Used in Summary	2727
Last Measured Pressure at Run Depth	1593.34 kPa(a)
Reservoir Temperature	31.51 °C
Service Company	Quality Wireline Services Ltd.
Representative	IVORY [REDACTED]
Prepared By	DOLLCO Well Data Services
Qualified By	RICK [REDACTED]
Report Date	2014/02/04

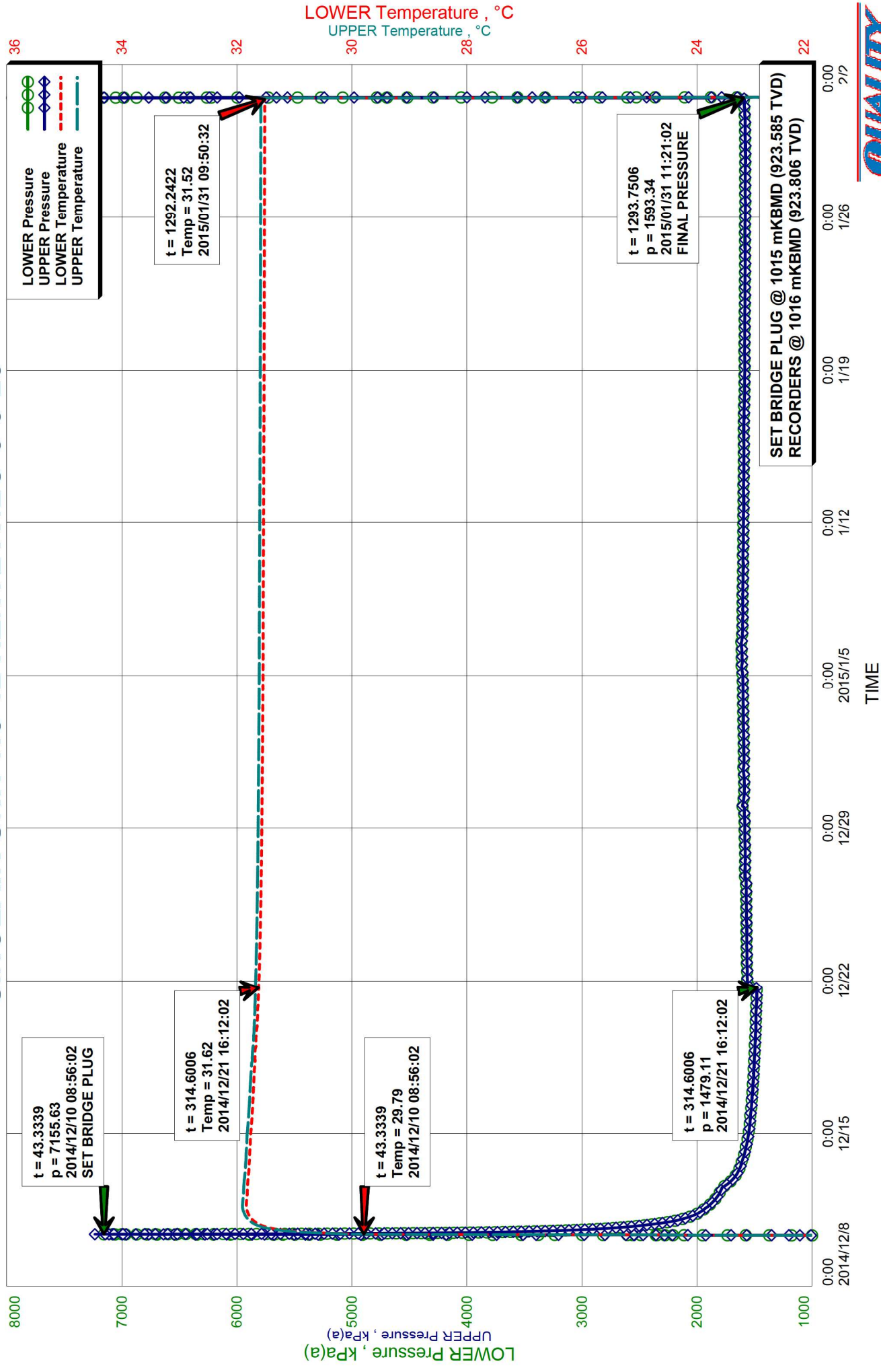
RECORDERS SET @ 1016 mKBMD (923.806 TVD), BELOW BRIDGE PLUG  
OPEN HOLE: 1063 - 2477 mKBMD (929.26 - 937.092 TVD)



# SINCLAIR UNIT No 12 HZNTL A12C-5-8-28

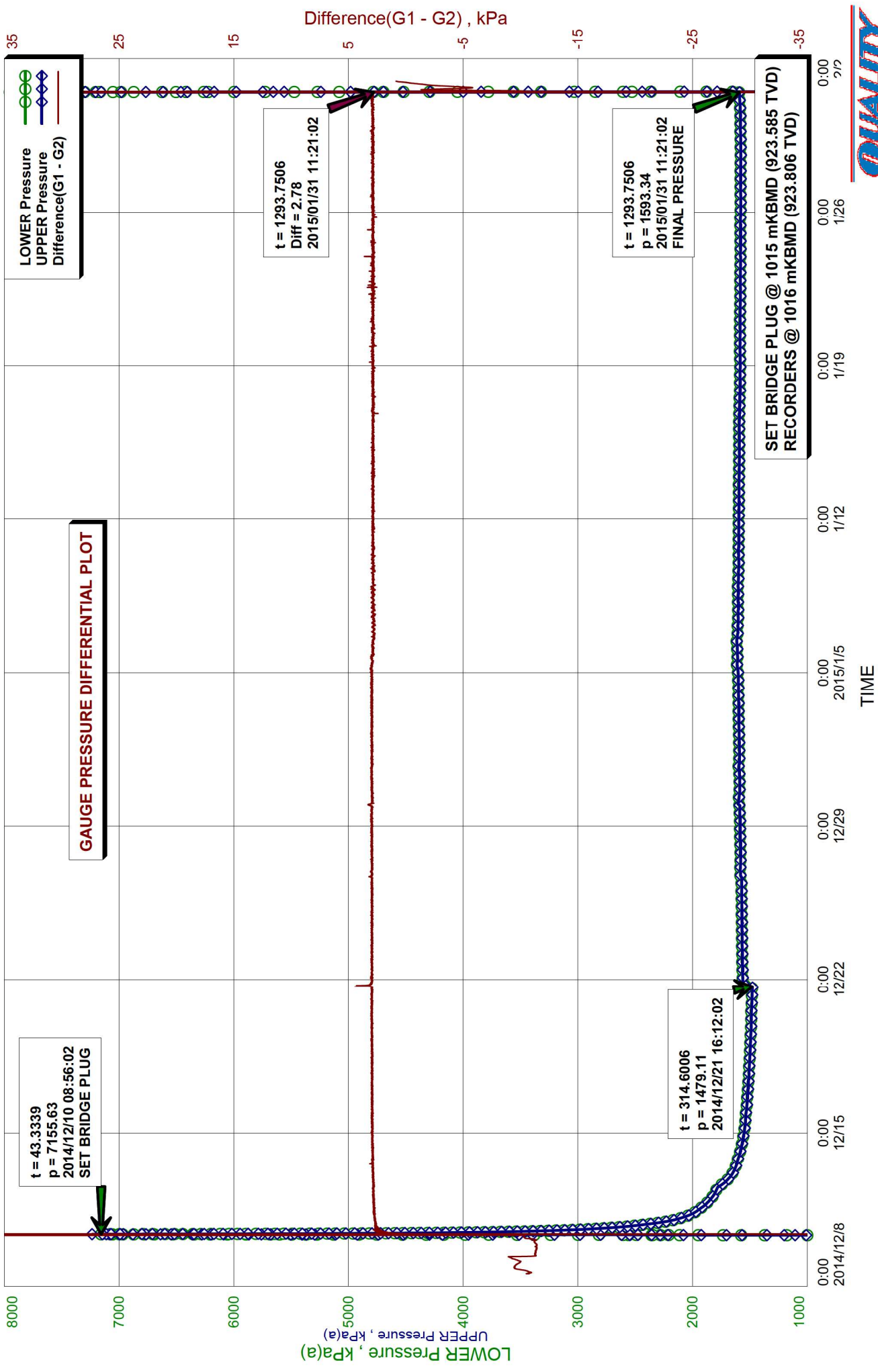


# SINCLAIR UNIT No 12 HZNTL A12C-5-8-28





SINCLAIR UNIT No 12 HZNTL A12C-5-8-28



# Recorder Information

Company Name	TUNDRA OIL & GAS PARTNERSHIP
Unique Well ID	102/12-05-008-28W1/00
Well Name	SINCLAIR UNIT No 12 HZNTL A12C-5-8-28
Formation	BAKKEN
Start Test Date	2014/12/10
Final Test Date	2015/01/31

## Gauge 1

Gauge Name	LOWER	Gauge Type	ELECTRONIC
Gauge Serial Number	2727	Gauge Manufacturer	PIONEER PETROTECH SERVICES
Run Depth (Log KB)	1016.00 m	Gauge Model	SILICON SAPPHIRE
Date of Last Calibration	2013/12/06	Maximum Recorder Range	20680.00 kPa
Gauge Start Date	2014/12/08	Gauge Start Time	13:36:00
Gauge Stop Date	2015/01/31	Gauge Stop Time	23:30:02
Date Gauge On Bottom	2014/12/10	Time Gauge On Bottom	08:55:32
Date Gauge Off Bottom	2015/01/31	Time Gauge Off Bottom	11:42:02

## Gauge 2

Gauge Name	UPPER	Gauge Type	ELECTRONIC
Gauge Serial Number	2717	Gauge Manufacturer	PIONEER PETROTECH SERVICES
Run Depth (Log KB)	1016.00 m	Gauge Model	SILICON SAPPHIRE
Date of Last Calibration	2013/12/06	Maximum Recorder Range	20680.00 kPa
Gauge Start Date	2014/12/08	Gauge Start Time	13:36:00
Gauge Stop Date	2015/01/31	Gauge Stop Time	23:30:02
Date Gauge On Bottom	2014/12/10	Time Gauge On Bottom	08:55:32
Date Gauge Off Bottom	2015/01/31	Time Gauge Off Bottom	11:42:02



TUNDRA OIL & GAS PARTNERSHIP  
102/12-05-008-28W1/00  
Start Test Date: 2014/12/10  
Final Test Date: 2015/01/31

SINCLAIR UNIT No 12 HZNTL A12C-5-8-28  
Formation: BAKKEN  
**RESERVOIR PRESSURE SURVEY**  
**RECORDERS @ 1016 mKBMD (923.806 TVD)**

	LOWER Date yyyy/mm/dd	LOWER Clk Time hh:mm:ss	LOWER Time hr	LOWER Pres. kPa(a)	LOWER Temp. °C	UPPER Time hr	UPPER Pres. kPa(a)	UPPER Temp. °C	Diff. G1 - G2 kPa
1	2014/12/08	13:36:01	0.0003	99.51	18.07	0.0003	110.17	18.10	-10.66
2	2014/12/08	13:36:01	0.0003	ACTIVATE RECORDERS S/N: 2727(L) & 2717(U)					
3	2014/12/08	13:36:04	0.0011	99.51	18.10	0.0011	110.17	18.24	-10.66
4	2014/12/08	21:36:02	8.0006	100.56	-7.92	8.0006	110.07	-7.66	-9.50
5	2014/12/09	05:36:32	16.0089	100.27	-8.63	16.0089	109.74	-8.38	-9.48
6	2014/12/09	13:36:32	24.0089	98.88	12.17	24.0089	110.21	12.46	-11.33
7	2014/12/09	21:36:32	32.0089	99.11	2.98	32.0089	110.50	3.42	-11.39
8	2014/12/10	05:36:32	40.0089	100.05	-5.26	40.0089	110.38	-5.16	-10.33
9	2014/12/10	07:31:32	41.9256	100.04	-5.23	41.9256	110.35	-5.41	-10.32
10	2014/12/10	07:31:32	41.9256	RUN IN HOLE WITH RECORDERS BELOW BRIDGE PLUG					
11	2014/12/10	07:32:02	41.9339	100.05	-5.15	41.9339	110.36	-5.40	-10.32
12	2014/12/10	08:55:32	43.3256	7086.06	29.76	43.3256	7084.59	29.79	1.46
13	2014/12/10	08:55:32	43.3256	RECORDERS ON BOTTOM @ 1016 mKBMD (923.806 TVD)					
14	2014/12/10	08:56:02	43.3339	7155.63	29.79	43.3339	7234.97	29.83	-79.34
15	2014/12/10	08:56:02	43.3339	SET BRIDGE PLUG @ 1015 mKBMD (923.585 TVD)					
16	2014/12/10	08:56:32	43.3422	7148.77	29.85	43.3422	7145.07	29.89	3.70
17	2014/12/10	13:36:32	48.0089	3064.31	31.21	48.0089	3061.95	31.29	2.36
18	2014/12/10	21:36:32	56.0089	2286.16	31.66	56.0089	2283.48	31.73	2.67
19	2014/12/11	05:36:32	64.0089	2033.08	31.79	64.0089	2030.32	31.85	2.76
20	2014/12/11	13:36:32	72.0089	1926.54	31.83	72.0089	1923.87	31.90	2.67
21	2014/12/11	21:36:32	80.0089	1854.47	31.83	80.0089	1851.69	31.90	2.77
22	2014/12/12	05:36:32	88.0089	1807.11	31.82	88.0089	1804.28	31.88	2.83
23	2014/12/12	13:36:32	96.0089	1762.81	31.81	96.0089	1760.00	31.88	2.81
24	2014/12/12	21:36:32	104.0089	1687.62	31.81	104.0089	1684.79	31.87	2.83
25	2014/12/13	05:36:32	112.0089	1643.33	31.79	112.0089	1640.47	31.86	2.86
26	2014/12/13	13:36:32	120.0089	1615.61	31.79	120.0089	1612.56	31.85	3.05
27	2014/12/13	21:36:32	128.0089	1599.44	31.78	128.0089	1596.55	31.84	2.88
28	2014/12/14	05:36:32	136.0089	1582.37	31.77	136.0089	1579.47	31.84	2.90
29	2014/12/14	13:36:32	144.0089	1567.53	31.77	144.0089	1564.62	31.83	2.90
30	2014/12/14	21:36:32	152.0089	1556.45	31.76	152.0089	1553.57	31.82	2.88
31	2014/12/15	05:36:32	160.0089	1546.48	31.75	160.0089	1543.60	31.81	2.88
32	2014/12/15	13:36:32	168.0089	1539.73	31.74	168.0089	1536.76	31.80	2.96
33	2014/12/15	21:36:32	176.0089	1535.39	31.73	176.0089	1532.49	31.79	2.90
34	2014/12/16	05:36:32	184.0089	1528.06	31.72	184.0089	1525.14	31.79	2.93
35	2014/12/16	13:36:32	192.0089	1524.04	31.72	192.0089	1521.10	31.78	2.94
36	2014/12/16	21:36:32	200.0089	1518.61	31.71	200.0089	1515.64	31.77	2.96
37	2014/12/17	05:36:32	208.0089	1514.72	31.71	208.0089	1511.80	31.77	2.92
38	2014/12/17	13:36:32	216.0089	1509.51	31.70	216.0089	1506.54	31.76	2.96
39	2014/12/17	21:36:32	224.0089	1507.86	31.70	224.0089	1504.93	31.75	2.93
40	2014/12/18	05:36:32	232.0089	1504.32	31.69	232.0089	1501.42	31.74	2.91

LOWER Serial Number: 2727 Start Date: 2014/12/08 13:36:00 Run Depth: 1016.00  
UPPER Serial Number: 2717 Start Date: 2014/12/08 13:36:00 Run Depth: 1016.00  
Print Filter: Print every 8 hour



TUNDRA OIL & GAS PARTNERSHIP  
102/12-05-008-28W1/00  
Start Test Date: 2014/12/10  
Final Test Date: 2015/01/31

SINCLAIR UNIT No 12 HZNTL A12C-5-8-28  
**RESERVOIR PRESSURE SURVEY**  
Formation: BAKKEN  
**RECORDERS @ 1016 mKBMD (923.806 TVD)**

	LOWER Date yyyy/mm/dd	LOWER Clk Time hh:mm:ss	LOWER Time hr	LOWER Pres. kPa(a)	LOWER Temp. °C	UPPER Time hr	UPPER Pres. kPa(a)	UPPER Temp. °C	Diff. G1 - G2 kPa
41	2014/12/18	13:36:32	240.0089	1500.74	31.68	240.0089	1497.81	31.73	2.94
42	2014/12/18	21:36:32	248.0089	1497.36	31.68	248.0089	1494.45	31.72	2.91
43	2014/12/19	05:36:32	256.0089	1495.28	31.67	256.0089	1492.32	31.71	2.96
44	2014/12/19	13:36:32	264.0089	1492.64	31.66	264.0089	1489.68	31.70	2.96
45	2014/12/19	21:36:32	272.0089	1490.21	31.65	272.0089	1487.24	31.70	2.97
46	2014/12/20	05:36:32	280.0089	1489.08	31.64	280.0089	1486.10	31.69	2.98
47	2014/12/20	13:36:32	288.0089	1488.41	31.64	288.0089	1485.48	31.69	2.93
48	2014/12/20	21:36:32	296.0089	1484.93	31.63	296.0089	1482.01	31.68	2.93
49	2014/12/21	05:36:32	304.0089	1482.39	31.63	304.0089	1479.40	31.68	2.99
50	2014/12/21	13:36:32	312.0089	1479.95	31.62	312.0089	1476.98	31.67	2.97
51	2014/12/21	21:36:32	320.0089	1563.70	31.62	320.0089	1560.72	31.68	2.98
52	2014/12/22	05:36:32	328.0089	1565.34	31.61	328.0089	1562.47	31.67	2.86
53	2014/12/22	13:36:32	336.0089	1565.34	31.61	336.0089	1562.39	31.67	2.95
54	2014/12/22	21:36:32	344.0089	1567.19	31.60	344.0089	1564.22	31.66	2.97
55	2014/12/23	05:36:32	352.0089	1567.13	31.60	352.0089	1564.15	31.66	2.98
56	2014/12/23	13:36:32	360.0089	1569.92	31.60	360.0089	1566.94	31.66	2.97
57	2014/12/23	21:36:32	368.0089	1568.69	31.60	368.0089	1565.76	31.66	2.93
58	2014/12/24	05:36:32	376.0089	1570.14	31.59	376.0089	1567.18	31.65	2.96
59	2014/12/24	13:36:32	384.0089	1569.19	31.59	384.0089	1566.17	31.65	3.02
60	2014/12/24	21:36:32	392.0089	1570.58	31.59	392.0089	1567.59	31.65	2.99
61	2014/12/25	05:36:32	400.0089	1570.99	31.59	400.0089	1568.07	31.65	2.92
62	2014/12/25	13:36:32	408.0089	1572.12	31.58	408.0089	1569.16	31.65	2.96
63	2014/12/25	21:36:32	416.0089	1573.15	31.58	416.0089	1570.15	31.64	3.00
64	2014/12/26	05:36:32	424.0089	1572.64	31.58	424.0089	1569.65	31.64	2.98
65	2014/12/26	13:36:32	432.0089	1573.32	31.58	432.0089	1570.35	31.64	2.97
66	2014/12/26	21:36:32	440.0089	1584.71	31.58	440.0089	1581.66	31.64	3.05
67	2014/12/27	05:36:32	448.0089	1582.79	31.57	448.0089	1579.83	31.64	2.96
68	2014/12/27	13:36:32	456.0089	1581.52	31.57	456.0089	1578.63	31.64	2.89
69	2014/12/27	21:36:32	464.0089	1582.08	31.57	464.0089	1579.15	31.64	2.93
70	2014/12/28	05:36:32	472.0089	1583.84	31.57	472.0089	1580.93	31.63	2.92
71	2014/12/28	13:36:32	480.0089	1585.31	31.57	480.0089	1582.34	31.63	2.97
72	2014/12/28	21:36:32	488.0089	1586.34	31.57	488.0089	1583.38	31.63	2.96
73	2014/12/29	05:36:32	496.0089	1586.23	31.57	496.0089	1583.24	31.63	2.99
74	2014/12/29	13:36:32	504.0089	1589.93	31.56	504.0089	1586.94	31.63	2.99
75	2014/12/29	21:36:32	512.0089	1588.84	31.56	512.0089	1585.86	31.63	2.98
76	2014/12/30	05:36:32	520.0089	1598.14	31.56	520.0089	1595.16	31.63	2.98
77	2014/12/30	13:36:32	528.0089	1590.37	31.56	528.0089	1587.42	31.63	2.96
78	2014/12/30	21:36:32	536.0089	1589.94	31.56	536.0089	1586.95	31.62	2.98
79	2014/12/31	05:36:32	544.0089	1590.75	31.56	544.0089	1587.79	31.62	2.97
80	2014/12/31	13:36:32	552.0089	1597.29	31.56	552.0089	1594.32	31.62	2.98

LOWER Serial Number: 2727 Start Date: 2014/12/08 13:36:00 Run Depth: 1016.00  
UPPER Serial Number: 2717 Start Date: 2014/12/08 13:36:00 Run Depth: 1016.00  
Print Filter: Print every 8 hour



TUNDRA OIL & GAS PARTNERSHIP  
102/12-05-008-28W1/00  
Start Test Date: 2014/12/10  
Final Test Date: 2015/01/31

SINCLAIR UNIT No 12 HZNTL A12C-5-8-28  
Formation: BAKKEN  
**RESERVOIR PRESSURE SURVEY**  
**RECORDERS @ 1016 mKBMD (923.806 TVD)**

	LOWER Date yyyy/mm/dd	LOWER Clk Time hh:mm:ss	LOWER Time hr	LOWER Pres. kPa(a)	LOWER Temp. °C	UPPER Time hr	UPPER Pres. kPa(a)	UPPER Temp. °C	Diff. G1 - G2 kPa
81	2014/12/31	21:36:32	560.0089	1594.14	31.56	560.0089	1591.13	31.62	3.01
82	2015/01/01	05:36:32	568.0089	1592.28	31.56	568.0089	1589.35	31.62	2.93
83	2015/01/01	13:36:32	576.0089	1593.86	31.55	576.0089	1590.95	31.62	2.90
84	2015/01/01	21:36:32	584.0089	1594.23	31.55	584.0089	1591.22	31.62	3.01
85	2015/01/02	05:36:32	592.0089	1595.23	31.55	592.0089	1592.22	31.62	3.01
86	2015/01/02	13:36:32	600.0089	1597.14	31.55	600.0089	1594.12	31.62	3.02
87	2015/01/02	21:36:32	608.0089	1597.84	31.55	608.0089	1594.88	31.62	2.96
88	2015/01/03	05:36:32	616.0089	1598.52	31.55	616.0089	1595.53	31.61	2.99
89	2015/01/03	13:36:32	624.0089	1599.17	31.55	624.0089	1596.20	31.61	2.96
90	2015/01/03	21:36:32	632.0089	1600.04	31.55	632.0089	1597.09	31.61	2.95
91	2015/01/04	05:36:32	640.0089	1600.61	31.55	640.0089	1597.67	31.61	2.94
92	2015/01/04	13:36:32	648.0089	1602.38	31.55	648.0089	1599.43	31.61	2.96
93	2015/01/04	21:36:32	656.0089	1602.83	31.55	656.0089	1599.83	31.61	3.00
94	2015/01/05	05:36:32	664.0089	1610.21	31.55	664.0089	1607.22	31.61	2.99
95	2015/01/05	13:36:32	672.0089	1608.30	31.54	672.0089	1605.36	31.61	2.94
96	2015/01/05	21:36:32	680.0089	1609.29	31.54	680.0089	1606.41	31.61	2.88
97	2015/01/06	05:36:32	688.0089	1612.35	31.54	688.0089	1609.45	31.61	2.91
98	2015/01/06	13:36:32	696.0089	1613.28	31.54	696.0089	1610.49	31.61	2.79
99	2015/01/06	21:36:32	704.0089	1607.53	31.54	704.0089	1604.72	31.61	2.81
100	2015/01/07	05:36:32	712.0089	1603.11	31.54	712.0089	1600.27	31.61	2.84
101	2015/01/07	13:36:32	720.0089	1604.96	31.54	720.0089	1602.02	31.61	2.94
102	2015/01/07	21:36:32	728.0089	1600.95	31.54	728.0089	1598.14	31.61	2.81
103	2015/01/08	05:36:32	736.0089	1605.42	31.54	736.0089	1602.47	31.61	2.95
104	2015/01/08	13:36:32	744.0089	1603.49	31.54	744.0089	1600.75	31.61	2.75
105	2015/01/08	21:36:32	752.0089	1603.06	31.54	752.0089	1600.09	31.61	2.97
106	2015/01/09	05:36:32	760.0089	1601.78	31.54	760.0089	1598.95	31.61	2.83
107	2015/01/09	13:36:32	768.0089	1602.27	31.54	768.0089	1599.33	31.60	2.94
108	2015/01/09	21:36:32	776.0089	1597.58	31.54	776.0089	1594.77	31.61	2.81
109	2015/01/10	05:36:32	784.0089	1601.31	31.54	784.0089	1598.42	31.60	2.89
110	2015/01/10	13:36:32	792.0089	1601.77	31.54	792.0089	1598.89	31.60	2.87
111	2015/01/10	21:36:32	800.0089	1598.22	31.54	800.0089	1595.40	31.60	2.83
112	2015/01/11	05:36:32	808.0089	1598.14	31.54	808.0089	1595.25	31.60	2.89
113	2015/01/11	13:36:32	816.0089	1598.40	31.54	816.0089	1595.57	31.60	2.83
114	2015/01/11	21:36:32	824.0089	1598.27	31.54	824.0089	1595.37	31.60	2.90
115	2015/01/12	05:36:32	832.0089	1598.10	31.53	832.0089	1595.27	31.60	2.83
116	2015/01/12	13:36:32	840.0089	1595.89	31.53	840.0089	1592.92	31.60	2.97
117	2015/01/12	21:36:32	848.0089	1595.81	31.53	848.0089	1592.96	31.60	2.85
118	2015/01/13	05:36:32	856.0089	1596.43	31.53	856.0089	1593.58	31.60	2.85
119	2015/01/13	13:36:32	864.0089	1596.79	31.53	864.0089	1593.90	31.60	2.90
120	2015/01/13	21:36:32	872.0089	1595.44	31.53	872.0089	1592.63	31.60	2.81

LOWER Serial Number: 2727 Start Date: 2014/12/08 13:36:00 Run Depth: 1016.00  
UPPER Serial Number: 2717 Start Date: 2014/12/08 13:36:00 Run Depth: 1016.00  
Print Filter: Print every 8 hour



TUNDRA OIL & GAS PARTNERSHIP  
102/12-05-008-28W1/00  
Start Test Date: 2014/12/10  
Final Test Date: 2015/01/31

SINCLAIR UNIT No 12 HZNTL A12C-5-8-28  
Formation: BAKKEN  
**RESERVOIR PRESSURE SURVEY**  
**RECORDERS @ 1016 mKBMD (923.806 TVD)**

	LOWER Date yyyy/mm/dd	LOWER Clk Time hh:mm:ss	LOWER Time hr	LOWER Pres. kPa(a)	LOWER Temp. °C	UPPER Time hr	UPPER Pres. kPa(a)	UPPER Temp. °C	Diff. G1 - G2 kPa
121	2015/01/14	05:36:32	880.0089	1594.79	31.53	880.0089	1591.96	31.60	2.84
122	2015/01/14	13:36:32	888.0089	1594.19	31.53	888.0089	1591.33	31.60	2.86
123	2015/01/14	21:36:32	896.0089	1593.15	31.53	896.0089	1590.24	31.60	2.91
124	2015/01/15	05:36:32	904.0089	1593.41	31.53	904.0089	1590.57	31.60	2.84
125	2015/01/15	13:36:32	912.0089	1593.24	31.53	912.0089	1590.40	31.60	2.84
126	2015/01/15	21:36:32	920.0089	1593.67	31.53	920.0089	1590.76	31.60	2.92
127	2015/01/16	05:36:32	928.0089	1593.79	31.53	928.0089	1590.92	31.59	2.87
128	2015/01/16	13:36:32	936.0089	1593.68	31.53	936.0089	1590.90	31.60	2.79
129	2015/01/16	21:36:32	944.0089	1590.91	31.53	944.0089	1588.01	31.60	2.89
130	2015/01/17	05:36:32	952.0089	1591.15	31.53	952.0089	1588.33	31.59	2.82
131	2015/01/17	13:36:32	960.0089	1589.10	31.53	960.0089	1586.45	31.60	2.65
132	2015/01/17	21:36:32	968.0089	1587.40	31.53	968.0089	1584.50	31.59	2.91
133	2015/01/18	05:36:32	976.0089	1587.02	31.53	976.0089	1584.14	31.60	2.88
134	2015/01/18	13:36:32	984.0089	1587.19	31.53	984.0089	1584.30	31.59	2.89
135	2015/01/18	21:36:32	992.0089	1586.18	31.53	992.0089	1583.36	31.59	2.82
136	2015/01/19	05:36:32	1000.0089	1586.43	31.53	1000.0089	1583.54	31.59	2.89
137	2015/01/19	13:36:32	1008.0089	1586.79	31.53	1008.0089	1583.81	31.59	2.98
138	2015/01/19	21:36:32	1016.0089	1589.11	31.53	1016.0089	1586.23	31.59	2.88
139	2015/01/20	05:37:02	1024.0172	1587.80	31.53	1024.0172	1584.89	31.59	2.91
140	2015/01/20	13:37:02	1032.0172	1585.29	31.52	1032.0172	1582.36	31.59	2.93
141	2015/01/20	21:37:02	1040.0172	1585.60	31.53	1040.0172	1582.73	31.59	2.87
142	2015/01/21	05:37:02	1048.0172	1586.68	31.52	1048.0172	1583.79	31.59	2.90
143	2015/01/21	13:37:02	1056.0172	1585.45	31.53	1056.0172	1582.58	31.59	2.86
144	2015/01/21	21:37:02	1064.0172	1584.64	31.52	1064.0172	1581.81	31.59	2.82
145	2015/01/22	05:37:02	1072.0172	1584.56	31.52	1072.0172	1581.70	31.59	2.86
146	2015/01/22	13:37:02	1080.0172	1583.56	31.52	1080.0172	1580.77	31.59	2.79
147	2015/01/22	21:37:02	1088.0172	1584.94	31.52	1088.0172	1582.13	31.59	2.81
148	2015/01/23	05:37:02	1096.0172	1583.78	31.52	1096.0172	1580.93	31.59	2.85
149	2015/01/23	13:37:02	1104.0172	1582.87	31.52	1104.0172	1579.84	31.59	3.03
150	2015/01/23	21:37:02	1112.0172	1582.09	31.52	1112.0172	1579.18	31.59	2.91
151	2015/01/24	05:37:02	1120.0172	1582.48	31.52	1120.0172	1579.67	31.59	2.80
152	2015/01/24	13:37:02	1128.0172	1582.87	31.52	1128.0172	1580.03	31.59	2.84
153	2015/01/24	21:37:02	1136.0172	1582.89	31.52	1136.0172	1579.94	31.59	2.95
154	2015/01/25	05:37:02	1144.0172	1583.65	31.52	1144.0172	1580.77	31.59	2.88
155	2015/01/25	13:37:02	1152.0172	1583.09	31.52	1152.0172	1580.28	31.59	2.82
156	2015/01/25	21:37:02	1160.0172	1581.45	31.52	1160.0172	1578.62	31.59	2.83
157	2015/01/26	05:37:02	1168.0172	1581.30	31.52	1168.0172	1578.37	31.59	2.93
158	2015/01/26	13:37:02	1176.0172	1580.76	31.52	1176.0172	1577.92	31.59	2.83
159	2015/01/26	21:37:02	1184.0172	1582.44	31.52	1184.0172	1579.57	31.59	2.87
160	2015/01/27	05:37:02	1192.0172	1582.46	31.52	1192.0172	1579.65	31.59	2.81

LOWER Serial Number: 2727 Start Date: 2014/12/08 13:36:00 Run Depth: 1016.00  
UPPER Serial Number: 2717 Start Date: 2014/12/08 13:36:00 Run Depth: 1016.00  
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TUNDRA OIL & GAS PARTNERSHIP  
102/12-05-008-28W1/00  
Start Test Date: 2014/12/10  
Final Test Date: 2015/01/31

SINCLAIR UNIT No 12 HZNTL A12C-5-8-28  
Formation: BAKKEN

**RESERVOIR PRESSURE SURVEY**  
**RECORDERS @ 1016 mKBMD (923.806 TVD)**

	LOWER Date yyyy/mm/dd	LOWER Clk Time hh:mm:ss	LOWER Time hr	LOWER Pres. kPa(a)	LOWER Temp. °C	UPPER Time hr	UPPER Pres. kPa(a)	UPPER Temp. °C	Diff. G1 - G2 kPa
161	2015/01/27	13:37:02	1200.0172	1582.08	31.52	1200.0172	1579.25	31.59	2.84
162	2015/01/27	21:37:02	1208.0172	1581.77	31.52	1208.0172	1578.93	31.58	2.85
163	2015/01/28	05:37:02	1216.0172	1581.20	31.52	1216.0172	1578.31	31.58	2.89
164	2015/01/28	13:37:02	1224.0172	1580.53	31.52	1224.0172	1577.67	31.59	2.85
165	2015/01/28	21:37:02	1232.0172	1581.04	31.52	1232.0172	1578.11	31.58	2.93
166	2015/01/29	05:37:02	1240.0172	1581.53	31.52	1240.0172	1578.73	31.59	2.80
167	2015/01/29	13:37:02	1248.0172	1582.01	31.52	1248.0172	1579.11	31.58	2.90
168	2015/01/29	21:37:02	1256.0172	1582.74	31.52	1256.0172	1579.87	31.58	2.87
169	2015/01/30	05:37:02	1264.0172	1583.10	31.52	1264.0172	1580.30	31.58	2.80
170	2015/01/30	13:37:02	1272.0172	1583.72	31.52	1272.0172	1580.88	31.58	2.84
171	2015/01/30	21:37:02	1280.0172	1587.13	31.52	1280.0172	1584.25	31.58	2.88
172	2015/01/31	05:37:02	1288.0172	1591.73	31.51	1288.0172	1588.80	31.58	2.93
173	2015/01/31	11:21:02	1293.7506	1593.34	31.51	1293.7506	1590.55	31.58	2.78
174	2015/01/31	11:21:02	1293.7506	FINAL PRESSURE, PREPARE TO UNSET BRIDGE PLUG					
175	2015/01/31	11:21:32	1293.7589	1593.58	31.52	1293.7589	1590.88	31.58	2.70
176	2015/01/31	11:24:32	1293.8089	1595.69	31.52	1293.8089	1592.79	31.58	2.90
177	2015/01/31	11:24:32	1293.8089	BRIDGE PLUG UNSET					
178	2015/01/31	11:25:02	1293.8172	8715.96	31.63	1293.8172	8815.42	31.70	-99.46
179	2015/01/31	11:42:02	1294.1006	7566.24	26.28	1294.1006	7561.61	26.37	4.63
180	2015/01/31	11:42:02	1294.1006	PULL OUT OF HOLE					
181	2015/01/31	11:42:32	1294.1089	7409.84	26.27	1294.1089	7397.46	26.36	12.38
182	2015/01/31	12:42:02	1295.1006	100.25	5.66	1295.1006	110.61	6.28	-10.36
183	2015/01/31	12:42:02	1295.1006	RECORDERS AT SURFACE					
184	2015/01/31	12:42:32	1295.1089	100.26	5.10	1295.1089	110.63	5.62	-10.37
185	2015/01/31	13:37:02	1296.0172	102.60	-16.73	1296.0172	106.59	-15.83	-3.99
186	2015/01/31	21:37:02	1304.0172	104.64	-20.87	1304.0172	104.95	-18.04	-0.31
187	2015/01/31	23:30:02	1305.9006	105.08	-21.77	1305.9006	104.23	-18.67	0.85

LOWER Serial Number: 2727 Start Date: 2014/12/08 13:36:00 Run Depth: 1016.00  
UPPER Serial Number: 2717 Start Date: 2014/12/08 13:36:00 Run Depth: 1016.00  
Print Filter: Print every 8 hour



DATE: December 10 <sup>th</sup> , 2014 - January 31 <sup>st</sup> , 2015	COMPANY: Tundra Oil & Gas Partnership
WELLNAME: Sinclair	ADDRESS: Virden, MB
LOCATION: 13B-4-12-5-8-28 W1	UWI: 102.12-05-008-28W1.00
FIELD: Sinclair	FORMATION: Bakken
CO HQ REP: Craig [REDACTED]	PHONE: 1204 748 4409
FIELD REP: Gord [REDACTED]	PHONE: 1204 851 3212
REPORTS TO (NAME & EMAIL ADDRESS): brett.howell@tundraoilandgas.com chris.perkins@tundraoilandgas.com robert.prefontaine@tundraoilandgas.com adam.berke@tundraoilandgas.com shirley.angus@tundraoilandgas.com allan.bertram@tundraoilandgas.com bill.jenkins@tundraoilandgas.com chris.perkins@tundraoilandgas.com craig.lane@tundraoilandgas.com eric.bjornsson@tundraoilandgas.com jane.mctaggart@tundraoilandgas.com anh.hgyen@tundraoilandgas.com justin.robertson@tundraoilandgas.com andrew.taylor@tundraoilandgas.com tim.howell@tundraoilandgas.com tyler.routledge@tundraoilandgas.com	

STATUS: Oil Well		TEST TYPE: Bridge Plug
ESTIMATED H2S CONTENT: <10 ppm		ESTIMATED CO2 CONTENT: <10 ppm
PRODUCING THROUGH: Tubing		SHUT IN TIME/DATE: See Discription
KOP: 732 mKB	TVD: See Survey	LICENCE #: 10220
PBTD: N/A	TD: 2477 mKB	WELL TYPE: Horizontal
CASING SIZE: 177.8 mm	CSG WEIGHT: 34.22 / 29.76 kg/m	CSG DEPTH: 1063 mKB
TUBING SIZE: N/A	TBG WEIGHT: N/A	TBG DEPTH: N/A
Elevations KB: 502.90 mKB	GRD: 498.40 mKB	CF: 4.50 mKB

#### PRODUCING INTERVAL

TYPE: Open Hole	SIZE: N/A	INTERVAL: 1063 - 2477 mKB
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#### RECORDER INFORMATION

TOP S/N: 2717	FILE NAME: 13B-4-12-5-8-28 W1	RANGE: 20,680 kPa
BOTTOM S/N: 2727	FILE NAME: 13B-4-12-5-8-28 W1	RANGE: 20,680 kPa
TOP BATTERY S/N: PPS1118C	BOTTOM BATTERY S/N: PPS1109C	
CONNECT TIME: December 8 <sup>th</sup> , 2014 13:36:01	DISCONNECT TIME: February 2 <sup>nd</sup> , 2015 19:22:32	

SURFACE TEMP: -20 C	LEASE CONDITION: Good
WIRELINE OPERATOR: Ivory [REDACTED]	PHONE: 1306 461 9504
WIRELINE ASSISTANT: N/A	
DIRECTIONS: N/A	

#### DWG WELL HEAD PRESSURES:

TUBING (before survey): N/A	CASING (before survey): N/A
TUBING (after survey): N/A	CASING (after survey): N/A

FLUID LEVEL: N/A	RUN DEPTH: N/A
TIME ON BOTTOM: N/A	TIME OFF BOTTOM: N/A

## GRADIENT STOPS

DEPTH mKB:	N/A	FROM:	N/A	UNTIL:	N/A
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COMMENTS: Tools were ran in the well by a drilling rig to collect the BHP + BHT below a bridge plug. Tools were then pulled by a service rig.

## DESCRIPTION OF WORK DONE:

Tools were ran in the well by a drilling rig to collect the BHP + BHT below a bridge plug. Tools were then pulled by a service rig.

December 8<sup>th</sup>, 2014

13:36:01 - Connect batteries

December 10<sup>th</sup>, 2014

07:31:32 - RIH

08:55:32 - On bottom

08:56:02 - Bridge plug set @1015 mKB      Recorders @1016 mKB

January 31<sup>st</sup>, 2015

11:24:32 - FINAL STABLE BHP + BHT

11:25:02 - Bridge plug un-set

11:42:02 - POOH

12:42:02 - Surface

February 1<sup>st</sup>, 2015

19:22:32 - Download data



## TUNDRA OIL & GAS PARTNERSHIP

SINCLAIR UNIT No 12 HZNTL A12C-7-8-28

103/12-07-008-28W1/00

LICENSE #: 10202

BAKKEN FORMATION

RESERVOIR PRESSURE SURVEY TEST  
DECEMBER 2<sup>nd</sup>, 2014 – JANUARY 20<sup>th</sup>, 2015

Prepared by: **DOLLCO Well Data Services**  
e-mail: [dollco@shaw.ca](mailto:dollco@shaw.ca)

PO Box 326  
417A Mississippian Drive  
Esteran, SK  
S4A 2A4

Cell: (306) 421 - 7330  
Fax: (306) 634 - 7976  
Res: (306) 634 - 8761

E-mail: [qualityw@sasktel.net](mailto:qualityw@sasktel.net)



# Pressure Survey Report

## Company Information

Company Name	TUNDRA OIL & GAS PARTNERSHIP
Contact	CRAIG [REDACTED]
e-mail	craig.lane@tundraoilandgas.com
Phone	(204) 748-4409
Site Contact	BRENT [REDACTED]
Site Phone	(204) 851-5013

## Well Information

Well Name	SINCLAIR UNIT No. 12 HZNTL A12C-7-8-28
Unique Well ID	103/12-07-008-28W1/00
Surface Location	13B-8-8-28W1
Well License Number	10202
Well Type	Horizontal
Well Fluid Type	01 Oil
Field	SINCLAIR

KB Elevation (SL)	507.30 m
CF Elevation (SL)	502.80 m
GL Elevation (SL)	502.80 m
Distance from KB to CF (Log)	4.50 m
KB-GL Offset	4.50 m

Tubing ID	mm
Tubing OD	mm
Tubing Depth(Log KB)	m
Tubing Depth(TVD KB)	m
Casing ID	mm
Casing OD	177.8 mm
Casing Depth(Log KB)	1052.00000 m
Casing Depth(TVD KB)	930.98000 m
PBTD(Log KB)	m
PBTD(TVD KB)	m

# Pressure Survey Report

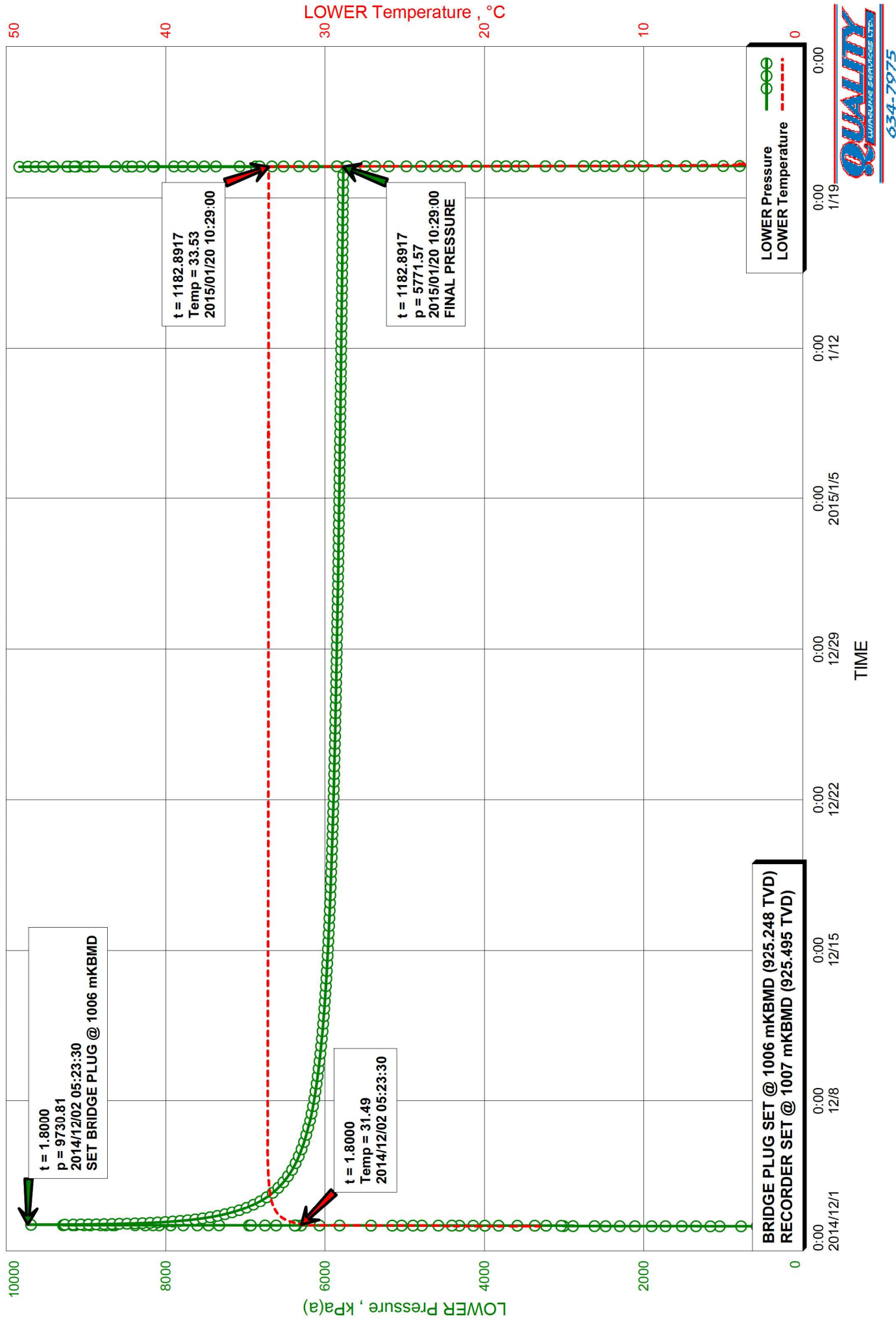
## Test Information

Well Name	SINCLAIR UNIT No. 12 HZNTL A12C-7-8-28
Unique Well ID	103/12-07-008-28W1/00
Surface Location	13B-8-8-28W1
Well License Number	10202
Well Fluid Type	01 Oil
Test Purpose	Initial Test
Test Type	RESERVOIR PRESSURE SURVEY
Formation	BAKKEN
Well Type Indicator	Horizontal
Test/Prod. Interval Top KB (Log)	1052.00 m
Test/Prod. Interval Base KB (Log)	2477.00 m
MPP(Log KB)	1764.50 m
Test/Prod Interval Top KB (TVD)	930.98 m
Test/Prod. Interval Base m KB (TVD)	931.33 m
MPP(TVD KB)	931.15 m
Tubing Pressure Initial	kPa(a)
Casing Pressure Initial	kPa(a)
Tubing Pressure: Final	kPa(a)
Casing Pressure: Final	kPa(a)
Time/Date Well Shut-In	2014/12/02 05:23:30
Final Test Date/Time	2015/01/20 10:29:00
Gauge Serial Number Used in Summary	40404
Last Measured Pressure at Run Depth	5771.57 kPa(a)
Reservoir Temperature	33.53 °C
Service Company	Quality Wireline Services Ltd.
Representative	IVORY [REDACTED]
Prepared By	DOLLCO Well Data Services
Qualified By	RICK [REDACTED]
Report Date	2015/01/30

RECORDERS SET @ 1007 mKBMD (925.495 TVD) BELOW BRIDGE PLUG  
OPEN HOLE: 1052 - 2477 mKBMD (930.98 - 931.33 TVD)  
UPPER RECORDER S/N: 40402, WOULD NOT DOWNLOAD



# SINCLAIR UNIT No. 12 HZNTL A12C-7-8-28



SINCLAIR UNIT No. 12 HZNTL A12C-7-8-28  
Formation: BAKKEN





# Recorder Information

Company Name	TUNDRA OIL & GAS PARTNERSHIP
Unique Well ID	103/12-07-008-28W1/00
Well Name	SINCLAIR UNIT No. 12 HZNTL A12C-7-8-28
Formation	BAKKEN
Start Test Date	2014/12/02
Final Test Date	2015/01/20

## Gauge 1

Gauge Name	LOWER	Gauge Type	ELECTRONIC
Gauge Serial Number	40404	Gauge Manufacturer	REAL TIME MEASUREMENTS
Run Depth (Log KB)	1007.00 m	Gauge Model	KC2 STRAIN
Date of Last Calibration	2012/06/13	Maximum Recorder Range	20680.00 kPa
Gauge Start Date	2014/12/02	Gauge Start Time	03:35:30
Gauge Stop Date	2015/01/20	Gauge Stop Time	14:00:00
Date Gauge On Bottom	2014/12/02	Time Gauge On Bottom	05:03:30
Date Gauge Off Bottom	2015/01/20	Time Gauge Off Bottom	10:29:00

## Gauge 2

TUNDRA OIL & GAS PARTNERSHIP  
103/12-07-008-28W1/00  
Start Test Date: 2014/12/02  
Final Test Date: 2015/01/20

**RESERVOIR PRESSURE SURVEY**  
**RECORDERS @ 1007 mKBMD (925.495 TVD)**

SINCLAIR UNIT No. 12 HZNTL A12C-7-8-28  
Formation: BAKKEN

	LOWER Date yyyy/mm/dd	LOWER Clk Time hh:mm:ss	LOWER Time hr	LOWER Pres. kPa(a)	LOWER Temp. °C	LOWER Comment
1	2014/12/02	03:35:30	0.0000	578.89	16.49	RIH, ACTIVATE RECORDER S/N 40404(L)
2	2014/12/02	05:03:00	1.4583	9237.01	31.38	
3	2014/12/02	05:03:30	1.4667	9228.23	31.39	RECORDERS ON DEPTH @ 1007 mKBMD
4	2014/12/02	05:04:00	1.4750	9227.49	31.40	(925.495 TVD)
5	2014/12/02	05:04:30	1.4833	9226.73	31.40	
6	2014/12/02	05:23:00	1.7917	9729.55	31.49	
7	2014/12/02	05:23:30	1.8000	9730.81	31.49	SET BRIDGE PLUG @ 1006 mKBMD
8	2014/12/02	05:24:00	1.8083	9264.15	31.49	(925.248 TVD)
9	2014/12/02	05:24:30	1.8167	9323.05	31.49	
10	2014/12/02	07:35:30	4.0000	8158.44	31.95	
11	2014/12/02	11:35:30	8.0000	7602.38	32.55	
12	2014/12/02	15:35:30	12.0000	7327.82	32.86	
13	2014/12/02	19:35:30	16.0000	7146.55	33.05	
14	2014/12/02	23:35:30	20.0000	7008.71	33.18	
15	2014/12/03	03:35:30	24.0000	6902.91	33.28	
16	2014/12/03	07:35:30	28.0000	6813.16	33.35	
17	2014/12/03	11:35:30	32.0000	6739.60	33.40	
18	2014/12/03	15:35:30	36.0000	6677.19	33.44	
19	2014/12/03	19:35:30	40.0000	6622.57	33.47	
20	2014/12/03	23:35:30	44.0000	6574.83	33.50	
21	2014/12/04	03:35:30	48.0000	6533.47	33.52	
22	2014/12/04	07:35:30	52.0000	6496.05	33.54	
23	2014/12/04	11:35:30	56.0000	6462.79	33.55	
24	2014/12/04	15:35:30	60.0000	6432.62	33.56	
25	2014/12/04	19:35:30	64.0000	6405.45	33.57	
26	2014/12/04	23:35:30	68.0000	6380.23	33.58	
27	2014/12/05	03:35:30	72.0000	6358.06	33.59	
28	2014/12/05	07:35:30	76.0000	6337.68	33.60	
29	2014/12/05	11:35:30	80.0000	6318.93	33.60	
30	2014/12/05	15:35:30	84.0000	6301.10	33.60	
31	2014/12/05	19:35:30	88.0000	6284.48	33.60	
32	2014/12/05	23:35:30	92.0000	6268.38	33.60	
33	2014/12/06	03:35:30	96.0000	6254.14	33.60	
34	2014/12/06	07:35:30	100.0000	6240.59	33.60	
35	2014/12/06	11:35:30	104.0000	6227.82	33.59	
36	2014/12/06	15:35:30	108.0000	6215.55	33.59	
37	2014/12/06	19:35:30	112.0000	6204.22	33.60	
38	2014/12/06	23:35:30	116.0000	6192.76	33.60	
39	2014/12/07	03:35:30	120.0000	6182.44	33.60	
40	2014/12/07	07:35:30	124.0000	6173.41	33.59	
41	2014/12/07	11:35:30	128.0000	6163.76	33.60	

LOWER Serial Number: 40404 Start Date: 2014/12/02 03:35:30 Run Depth: 1007.00  
Print Filter: Print every 4 hour



	LOWER Date yyyy/mm/dd	LOWER Clk Time hh:mm:ss	LOWER Time hr	LOWER Pres. kPa(a)	LOWER Temp. °C	LOWER Comment
42	2014/12/07	15:35:30	132.0000	6155.18	33.60	
43	2014/12/07	19:35:30	136.0000	6146.67	33.60	
44	2014/12/07	23:35:30	140.0000	6138.47	33.60	
45	2014/12/08	03:35:30	144.0000	6130.69	33.59	
46	2014/12/08	07:35:30	148.0000	6124.07	33.60	
47	2014/12/08	11:35:30	152.0000	6117.22	33.59	
48	2014/12/08	15:35:30	156.0000	6110.45	33.60	
49	2014/12/08	19:35:30	160.0000	6104.08	33.59	
50	2014/12/08	23:35:30	164.0000	6097.46	33.59	
51	2014/12/09	03:35:30	168.0000	6091.20	33.59	
52	2014/12/09	07:35:30	172.0000	6085.70	33.59	
53	2014/12/09	11:35:30	176.0000	6080.00	33.59	
54	2014/12/09	15:35:30	180.0000	6074.55	33.59	
55	2014/12/09	19:35:30	184.0000	6069.44	33.59	
56	2014/12/09	23:35:30	188.0000	6063.77	33.59	
57	2014/12/10	03:35:30	192.0000	6058.81	33.59	
58	2014/12/10	07:35:30	196.0000	6054.13	33.59	
59	2014/12/10	11:35:30	200.0000	6049.94	33.59	
60	2014/12/10	15:35:30	204.0000	6045.48	33.59	
61	2014/12/10	19:35:30	208.0000	6041.23	33.59	
62	2014/12/10	23:35:30	212.0000	6036.82	33.59	
63	2014/12/11	03:35:30	216.0000	6032.55	33.59	
64	2014/12/11	07:35:30	220.0000	6028.87	33.59	
65	2014/12/11	11:35:30	224.0000	6024.78	33.59	
66	2014/12/11	15:35:30	228.0000	6021.05	33.59	
67	2014/12/11	19:35:30	232.0000	6017.67	33.59	
68	2014/12/11	23:35:30	236.0000	6013.96	33.59	
69	2014/12/12	03:35:30	240.0000	6010.33	33.59	
70	2014/12/12	07:35:30	244.0000	6006.92	33.59	
71	2014/12/12	11:35:30	248.0000	6004.10	33.59	
72	2014/12/12	15:35:30	252.0000	6000.61	33.59	
73	2014/12/12	19:35:30	256.0000	5997.69	33.59	
74	2014/12/12	23:35:30	260.0000	5994.83	33.59	
75	2014/12/13	03:35:30	264.0000	5991.49	33.59	
76	2014/12/13	07:35:30	268.0000	5988.62	33.59	
77	2014/12/13	11:35:30	272.0000	5985.78	33.59	
78	2014/12/13	15:35:30	276.0000	5982.89	33.58	
79	2014/12/13	19:35:30	280.0000	5980.31	33.58	
80	2014/12/13	23:35:30	284.0000	5977.87	33.58	
81	2014/12/14	03:35:30	288.0000	5975.19	33.58	
82	2014/12/14	07:35:30	292.0000	5972.66	33.58	

LOWER Serial Number: 40404 Start Date: 2014/12/02 03:35:30 Run Depth: 1007.00

Print Filter: Print every 4 hour



TUNDRA OIL & GAS PARTNERSHIP  
103/12-07-008-28W1/00  
Start Test Date: 2014/12/02  
Final Test Date: 2015/01/20

**RESERVOIR PRESSURE SURVEY**  
**RECORDERS @ 1007 mKBMD (925.495 TVD)**

SINCLAIR UNIT No. 12 HZNTL A12C-7-8-28  
Formation: BAKKEN

	LOWER Date yyyy/mm/dd	LOWER Clk Time hh:mm:ss	LOWER Time hr	LOWER Pres. kPa(a)	LOWER Temp. °C	LOWER Comment
83	2014/12/14	11:35:30	296.0000	5970.30	33.58	
84	2014/12/14	15:35:30	300.0000	5967.71	33.58	
85	2014/12/14	19:35:30	304.0000	5965.54	33.58	
86	2014/12/14	23:35:30	308.0000	5963.15	33.58	
87	2014/12/15	03:35:30	312.0000	5961.28	33.57	
88	2014/12/15	07:35:30	316.0000	5959.14	33.57	
89	2014/12/15	11:35:30	320.0000	5956.86	33.57	
90	2014/12/15	15:35:30	324.0000	5954.69	33.57	
91	2014/12/15	19:35:30	328.0000	5952.45	33.57	
92	2014/12/15	23:35:30	332.0000	5950.31	33.57	
93	2014/12/16	03:35:30	336.0000	5948.41	33.57	
94	2014/12/16	07:35:30	340.0000	5946.46	33.57	
95	2014/12/16	11:35:30	344.0000	5944.74	33.57	
96	2014/12/16	15:35:30	348.0000	5942.62	33.57	
97	2014/12/16	19:35:30	352.0000	5940.69	33.56	
98	2014/12/16	23:35:30	356.0000	5938.74	33.56	
99	2014/12/17	03:35:30	360.0000	5936.69	33.56	
100	2014/12/17	07:35:30	364.0000	5934.90	33.56	
101	2014/12/17	11:35:30	368.0000	5933.29	33.56	
102	2014/12/17	15:35:30	372.0000	5931.61	33.56	
103	2014/12/17	19:35:30	376.0000	5929.63	33.56	
104	2014/12/17	23:35:30	380.0000	5927.80	33.56	
105	2014/12/18	03:35:30	384.0000	5926.04	33.56	
106	2014/12/18	07:35:30	388.0000	5924.80	33.56	
107	2014/12/18	11:35:30	392.0000	5922.83	33.56	
108	2014/12/18	15:35:30	396.0000	5921.33	33.56	
109	2014/12/18	19:35:30	400.0000	5919.42	33.56	
110	2014/12/18	23:35:30	404.0000	5918.00	33.56	
111	2014/12/19	03:35:30	408.0000	5916.50	33.56	
112	2014/12/19	07:35:30	412.0000	5914.83	33.56	
113	2014/12/19	11:35:30	416.0000	5913.39	33.56	
114	2014/12/19	15:35:30	420.0000	5912.29	33.56	
115	2014/12/19	19:35:30	424.0000	5910.51	33.56	
116	2014/12/19	23:35:30	428.0000	5908.76	33.56	
117	2014/12/20	03:35:30	432.0000	5907.66	33.56	
118	2014/12/20	07:35:30	436.0000	5906.33	33.56	
119	2014/12/20	11:35:30	440.0000	5904.73	33.56	
120	2014/12/20	15:35:30	444.0000	5903.57	33.56	
121	2014/12/20	19:35:30	448.0000	5902.11	33.56	
122	2014/12/20	23:35:30	452.0000	5899.97	33.56	
123	2014/12/21	03:35:30	456.0000	5899.07	33.56	

LOWER Serial Number: 40404 Start Date: 2014/12/02 03:35:30 Run Depth: 1007.00  
Print Filter: Print every 4 hour

	LOWER Date yyyy/mm/dd	LOWER Clk Time hh:mm:ss	LOWER Time hr	LOWER Pres. kPa(a)	LOWER Temp. °C	LOWER Comment
124	2014/12/21	07:35:30	460.0000	5897.81	33.56	
125	2014/12/21	11:35:30	464.0000	5896.45	33.56	
126	2014/12/21	15:35:30	468.0000	5895.19	33.56	
127	2014/12/21	19:35:30	472.0000	5893.89	33.56	
128	2014/12/21	23:35:30	476.0000	5892.57	33.56	
129	2014/12/22	03:35:30	480.0000	5891.19	33.56	
130	2014/12/22	07:35:30	484.0000	5890.24	33.56	
131	2014/12/22	11:35:30	488.0000	5889.01	33.56	
132	2014/12/22	15:35:30	492.0000	5888.29	33.56	
133	2014/12/22	19:35:30	496.0000	5887.08	33.55	
134	2014/12/22	23:35:30	500.0000	5885.92	33.56	
135	2014/12/23	03:35:30	504.0000	5885.01	33.56	
136	2014/12/23	07:35:30	508.0000	5883.81	33.56	
137	2014/12/23	11:35:30	512.0000	5883.05	33.56	
138	2014/12/23	15:35:30	516.0000	5882.10	33.56	
139	2014/12/23	19:35:30	520.0000	5880.97	33.55	
140	2014/12/23	23:35:30	524.0000	5879.62	33.56	
141	2014/12/24	03:35:30	528.0000	5878.16	33.55	
142	2014/12/24	07:35:30	532.0000	5877.14	33.55	
143	2014/12/24	11:35:30	536.0000	5875.32	33.55	
144	2014/12/24	15:35:30	540.0000	5874.59	33.55	
145	2014/12/24	19:35:30	544.0000	5873.68	33.55	
146	2014/12/24	23:35:30	548.0000	5872.49	33.55	
147	2014/12/25	03:35:30	552.0000	5871.39	33.55	
148	2014/12/25	07:35:30	556.0000	5870.55	33.55	
149	2014/12/25	11:35:30	560.0000	5869.83	33.55	
150	2014/12/25	15:35:30	564.0000	5869.09	33.55	
151	2014/12/25	19:35:30	568.0000	5868.47	33.55	
152	2014/12/25	23:35:30	572.0000	5867.65	33.55	
153	2014/12/26	03:35:30	576.0000	5866.68	33.55	
154	2014/12/26	07:35:30	580.0000	5865.59	33.55	
155	2014/12/26	11:35:30	584.0000	5864.92	33.55	
156	2014/12/26	15:35:30	588.0000	5863.63	33.55	
157	2014/12/26	19:35:30	592.0000	5862.53	33.55	
158	2014/12/26	23:35:30	596.0000	5861.63	33.55	
159	2014/12/27	03:35:30	600.0000	5860.75	33.55	
160	2014/12/27	07:35:30	604.0000	5859.92	33.55	
161	2014/12/27	11:35:30	608.0000	5858.86	33.55	
162	2014/12/27	15:35:30	612.0000	5858.09	33.55	
163	2014/12/27	19:35:30	616.0000	5857.00	33.55	
164	2014/12/27	23:35:30	620.0000	5856.16	33.55	

LOWER Serial Number: 40404 Start Date: 2014/12/02 03:35:30 Run Depth: 1007.00

Print Filter: Print every 4 hour



	LOWER Date yyyy/mm/dd	LOWER Clk Time hh:mm:ss	LOWER Time hr	LOWER Pres. kPa(a)	LOWER Temp. °C	LOWER Comment
165	2014/12/28	03:35:30	624.0000	5855.59	33.55	
166	2014/12/28	07:35:30	628.0000	5854.95	33.55	
167	2014/12/28	11:35:30	632.0000	5854.04	33.55	
168	2014/12/28	15:35:30	636.0000	5853.37	33.55	
169	2014/12/28	19:35:30	640.0000	5852.48	33.55	
170	2014/12/28	23:35:30	644.0000	5851.76	33.55	
171	2014/12/29	03:35:30	648.0000	5850.80	33.55	
172	2014/12/29	07:35:30	652.0000	5850.25	33.55	
173	2014/12/29	11:35:30	656.0000	5849.47	33.55	
174	2014/12/29	15:35:30	660.0000	5848.51	33.55	
175	2014/12/29	19:35:30	664.0000	5847.61	33.55	
176	2014/12/29	23:35:30	668.0000	5846.80	33.55	
177	2014/12/30	03:35:30	672.0000	5846.59	33.55	
178	2014/12/30	07:35:30	676.0000	5845.48	33.55	
179	2014/12/30	11:35:30	680.0000	5844.66	33.55	
180	2014/12/30	15:35:30	684.0000	5843.96	33.55	
181	2014/12/30	19:35:30	688.0000	5842.54	33.55	
182	2014/12/30	23:35:30	692.0000	5841.61	33.55	
183	2014/12/31	03:35:30	696.0000	5840.49	33.55	
184	2014/12/31	07:35:30	700.0000	5839.79	33.55	
185	2014/12/31	11:35:30	704.0000	5839.19	33.55	
186	2014/12/31	15:35:30	708.0000	5838.26	33.55	
187	2014/12/31	19:35:30	712.0000	5837.40	33.55	
188	2014/12/31	23:35:30	716.0000	5836.35	33.55	
189	2015/01/01	03:35:30	720.0000	5835.97	33.55	
190	2015/01/01	07:35:30	724.0000	5835.61	33.55	
191	2015/01/01	11:35:30	728.0000	5834.95	33.55	
192	2015/01/01	15:35:30	732.0000	5833.90	33.55	
193	2015/01/01	19:35:30	736.0000	5833.10	33.55	
194	2015/01/01	23:35:30	740.0000	5831.98	33.55	
195	2015/01/02	03:35:30	744.0000	5831.84	33.55	
196	2015/01/02	07:35:30	748.0000	5831.14	33.55	
197	2015/01/02	11:35:30	752.0000	5830.62	33.55	
198	2015/01/02	15:35:30	756.0000	5829.62	33.55	
199	2015/01/02	19:35:30	760.0000	5828.78	33.55	
200	2015/01/02	23:35:30	764.0000	5828.22	33.54	
201	2015/01/03	03:35:30	768.0000	5827.69	33.55	
202	2015/01/03	07:35:30	772.0000	5827.68	33.54	
203	2015/01/03	11:35:30	776.0000	5826.96	33.54	
204	2015/01/03	15:35:30	780.0000	5826.52	33.54	
205	2015/01/03	19:35:30	784.0000	5825.50	33.54	

LOWER Serial Number: 40404 Start Date: 2014/12/02 03:35:30 Run Depth: 1007.00

Print Filter: Print every 4 hour



	LOWER Date yyyy/mm/dd	LOWER Clk Time hh:mm:ss	LOWER Time hr	LOWER Pres. kPa(a)	LOWER Temp. °C	LOWER Comment
206	2015/01/03	23:35:30	788.0000	5824.56	33.54	
207	2015/01/04	03:35:30	792.0000	5824.10	33.54	
208	2015/01/04	07:35:30	796.0000	5823.71	33.54	
209	2015/01/04	11:35:30	800.0000	5823.01	33.55	
210	2015/01/04	15:35:30	804.0000	5822.50	33.54	
211	2015/01/04	19:35:30	808.0000	5821.63	33.54	
212	2015/01/04	23:35:30	812.0000	5820.56	33.54	
213	2015/01/05	03:35:30	816.0000	5820.02	33.54	
214	2015/01/05	07:35:30	820.0000	5819.23	33.55	
215	2015/01/05	11:35:30	824.0000	5818.95	33.54	
216	2015/01/05	15:35:30	828.0000	5817.97	33.54	
217	2015/01/05	19:35:30	832.0000	5817.48	33.54	
218	2015/01/05	23:35:30	836.0000	5816.79	33.54	
219	2015/01/06	03:35:30	840.0000	5816.23	33.54	
220	2015/01/06	07:35:30	844.0000	5815.72	33.54	
221	2015/01/06	11:35:30	848.0000	5815.58	33.54	
222	2015/01/06	15:35:30	852.0000	5814.83	33.55	
223	2015/01/06	19:35:30	856.0000	5814.66	33.54	
224	2015/01/06	23:35:30	860.0000	5813.80	33.54	
225	2015/01/07	03:35:30	864.0000	5813.40	33.54	
226	2015/01/07	07:35:30	868.0000	5812.63	33.54	
227	2015/01/07	11:35:30	872.0000	5812.08	33.54	
228	2015/01/07	15:35:30	876.0000	5811.44	33.54	
229	2015/01/07	19:35:30	880.0000	5810.43	33.54	
230	2015/01/07	23:35:30	884.0000	5809.00	33.54	
231	2015/01/08	03:35:30	888.0000	5808.16	33.54	
232	2015/01/08	07:35:30	892.0000	5807.78	33.54	
233	2015/01/08	11:35:30	896.0000	5807.83	33.54	
234	2015/01/08	15:35:30	900.0000	5807.49	33.54	
235	2015/01/08	19:35:30	904.0000	5806.91	33.54	
236	2015/01/08	23:35:30	908.0000	5806.19	33.54	
237	2015/01/09	03:35:30	912.0000	5805.37	33.54	
238	2015/01/09	07:35:30	916.0000	5805.06	33.54	
239	2015/01/09	11:35:30	920.0000	5804.17	33.54	
240	2015/01/09	15:35:30	924.0000	5803.70	33.54	
241	2015/01/09	19:35:30	928.0000	5803.07	33.54	
242	2015/01/09	23:35:30	932.0000	5802.36	33.54	
243	2015/01/10	03:35:30	936.0000	5801.76	33.54	
244	2015/01/10	07:35:30	940.0000	5801.38	33.54	
245	2015/01/10	11:35:30	944.0000	5800.55	33.54	
246	2015/01/10	15:35:30	948.0000	5800.16	33.54	

LOWER Serial Number: 40404 Start Date: 2014/12/02 03:35:30 Run Depth: 1007.00

Print Filter: Print every 4 hour

	LOWER Date yyyy/mm/dd	LOWER Clk Time hh:mm:ss	LOWER Time hr	LOWER Pres. kPa(a)	LOWER Temp. °C	LOWER Comment
247	2015/01/10	19:35:30	952.0000	5799.74	33.54	
248	2015/01/10	23:35:30	956.0000	5798.97	33.54	
249	2015/01/11	03:35:30	960.0000	5798.58	33.54	
250	2015/01/11	07:35:30	964.0000	5798.10	33.54	
251	2015/01/11	11:35:30	968.0000	5797.78	33.54	
252	2015/01/11	15:35:30	972.0000	5797.08	33.54	
253	2015/01/11	19:35:30	976.0000	5796.84	33.54	
254	2015/01/11	23:35:30	980.0000	5796.44	33.54	
255	2015/01/12	03:35:30	984.0000	5796.11	33.54	
256	2015/01/12	07:35:30	988.0000	5795.46	33.54	
257	2015/01/12	11:35:30	992.0000	5795.15	33.54	
258	2015/01/12	15:35:30	996.0000	5794.25	33.54	
259	2015/01/12	19:35:30	1000.0000	5793.50	33.54	
260	2015/01/12	23:35:30	1004.0000	5793.00	33.54	
261	2015/01/13	03:35:30	1008.0000	5792.17	33.54	
262	2015/01/13	07:35:30	1012.0000	5791.47	33.54	
263	2015/01/13	11:35:30	1016.0000	5791.10	33.54	
264	2015/01/13	15:35:30	1020.0000	5790.66	33.54	
265	2015/01/13	19:35:30	1024.0000	5790.14	33.54	
266	2015/01/13	23:35:30	1028.0000	5789.40	33.54	
267	2015/01/14	03:35:30	1032.0000	5789.07	33.54	
268	2015/01/14	07:35:30	1036.0000	5788.39	33.54	
269	2015/01/14	11:35:30	1040.0000	5787.79	33.54	
270	2015/01/14	15:35:30	1044.0000	5787.08	33.54	
271	2015/01/14	19:35:30	1048.0000	5786.60	33.54	
272	2015/01/14	23:35:30	1052.0000	5785.81	33.54	
273	2015/01/15	03:35:30	1056.0000	5785.68	33.54	
274	2015/01/15	07:35:30	1060.0000	5785.12	33.54	
275	2015/01/15	11:35:30	1064.0000	5785.02	33.54	
276	2015/01/15	15:35:30	1068.0000	5784.39	33.54	
277	2015/01/15	19:35:30	1072.0000	5783.80	33.54	
278	2015/01/15	23:35:30	1076.0000	5783.03	33.54	
279	2015/01/16	03:35:30	1080.0000	5782.36	33.54	
280	2015/01/16	07:35:30	1084.0000	5782.04	33.54	
281	2015/01/16	11:35:30	1088.0000	5781.33	33.54	
282	2015/01/16	15:35:30	1092.0000	5780.59	33.54	
283	2015/01/16	19:35:30	1096.0000	5780.07	33.54	
284	2015/01/16	23:35:30	1100.0000	5779.15	33.54	
285	2015/01/17	03:35:30	1104.0000	5778.93	33.54	
286	2015/01/17	07:35:30	1108.0000	5778.66	33.54	
287	2015/01/17	11:35:30	1112.0000	5778.15	33.54	

LOWER Serial Number: 40404 Start Date: 2014/12/02 03:35:30 Run Depth: 1007.00

Print Filter: Print every 4 hour



TUNDRA OIL & GAS PARTNERSHIP  
 103/12-07-008-28W1/00  
 Start Test Date: 2014/12/02  
 Final Test Date: 2015/01/20

**RESERVOIR PRESSURE SURVEY**  
**RECORDERS @ 1007 mKBMD (925.495 TVD)**

SINCLAIR UNIT No. 12 HZNTL A12C-7-8-28  
 Formation: BAKKEN

	LOWER Date yyyy/mm/dd	LOWER Clk Time hh:mm:ss	LOWER Time hr	LOWER Pres. kPa(a)	LOWER Temp. °C	LOWER Comment
288	2015/01/17	15:35:30	1116.0000	5777.56	33.54	
289	2015/01/17	19:35:30	1120.0000	5777.37	33.54	
290	2015/01/17	23:35:30	1124.0000	5776.75	33.54	
291	2015/01/18	03:35:30	1128.0000	5776.21	33.54	
292	2015/01/18	07:35:30	1132.0000	5776.18	33.53	
293	2015/01/18	11:35:30	1136.0000	5775.79	33.54	
294	2015/01/18	15:35:30	1140.0000	5774.92	33.54	
295	2015/01/18	19:35:30	1144.0000	5774.47	33.54	
296	2015/01/18	23:35:30	1148.0000	5773.86	33.53	
297	2015/01/19	03:35:30	1152.0000	5773.30	33.54	
298	2015/01/19	07:35:30	1156.0000	5773.07	33.54	
299	2015/01/19	11:35:30	1160.0000	5772.50	33.53	
300	2015/01/19	15:35:30	1164.0000	5772.30	33.54	
301	2015/01/19	19:35:30	1168.0000	5771.86	33.53	
302	2015/01/19	23:35:30	1172.0000	5771.27	33.53	
303	2015/01/20	03:35:30	1176.0000	5771.00	33.53	
304	2015/01/20	07:35:30	1180.0000	5770.29	33.53	
305	2015/01/20	10:28:30	1182.8833	5771.85	33.53	
306	2015/01/20	10:29:00	1182.8917	5771.57	33.53	FINAL PRESSURE
307	2015/01/20	10:29:30	1182.9000	9837.56	33.55	BRIDGE PLUG UNSET
308	2015/01/20	10:30:00	1182.9083	9745.47	33.55	
309	2015/01/20	10:42:00	1183.1083	9411.56	33.31	
310	2015/01/20	10:42:30	1183.1167	9437.17	33.20	PULL OUT OF HOLE
311	2015/01/20	10:43:00	1183.1250	9210.59	33.12	
312	2015/01/20	11:25:00	1183.8250	114.23	12.16	
313	2015/01/20	11:25:30	1183.8333	114.20	12.14	RECORDERS AT SURFACE
314	2015/01/20	11:26:00	1183.8417	114.07	12.13	
315	2015/01/20	11:35:30	1184.0000	114.02	11.22	
316	2015/01/20	14:00:00	1186.4083	113.91	4.12	

LOWER Serial Number: 40404 Start Date: 2014/12/02 03:35:30 Run Depth: 1007.00  
 Print Filter: Print every 4 hour





DATE: December 2 <sup>nd</sup> - January 20 <sup>th</sup> , 2015	COMPANY: Tundra Oil & Gas Partnership
WELLNAME: Sinclair	ADDRESS: Virden, MB
LOCATION: (13-8) 12-7-8-28 W1	UWI:103.12-07-008-28W1.00
FIELD: Sinclair	FORMATION: Bakken
CO HQ REP: Craig [REDACTED]	PHONE: 1204 748 4409
FIELD REP: Brent [REDACTED]	PHONE: 1204 851 5013
REPORTS TO (NAME & EMAIL ADDRESS): brett.howell@tundraoilandgas.com chris.perkins@tundraoilandgas.com robert.prefontaine@tundraoilandgas.com adam.berke@tundraoilandgas.com shirley.angus@tundraoilandgas.com allan.bertram@tundraoilandgas.com bill.jenkins@tundraoilandgas.com chris.perkins@tundraoilandgas.com craig.lane@tundraoilandgas.com eric.bjornsson@tundraoilandgas.com jane.mctaggart@tundraoilandgas.com anh.hgyen@tundraoilandgas.com justin.robertson@tundraoilandgas.com andrew.taylor@tundraoilandgas.com tim.howell@tundraoilandgas.com tyler.routledge@tundraoilandgas.com	

STATUS: Oil Well		TEST TYPE: Bridge Plug
ESTIMATED H2S CONTENT: <10 ppm		ESTIMATED CO2 CONTENT: <10 ppm
PRODUCING THROUGH: Tubing		SHUT IN TIME/DATE: See Discription
KOP: 741 mKB	TVD: See survey	LICENCE #: 10202
PBTD: N/A	TD: 2477 mKB	WELL TYPE: Horizontal
CASING SIZE: 177.8 mm	CSG WEIGHT: 34.22 / 29.76 kg/m	CSG DEPTH: 1052 mKB
TUBING SIZE: N/A	TBG WEIGHT: N/A	TBG DEPTH: N/A
Elevations KB: 507.30 mKB	GRD: 502.80 mKB	CF: 4.50 mKB

#### PRODUCING INTERVAL

TYPE: Open Hole	SIZE: N/A	INTERVAL: 1052 - 2477 mKB
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#### RECORDER INFORMATION

TOP S/N: 40402	FILE NAME: 13-8-12-7-8-28 W1	RANGE: 20,680 kPa
BOTTOM S/N: 40404	FILE NAME: 13-8-12-7-8-28 W1	RANGE: 20,680 kPa
TOP BATTERY S/N: N/A	BOTTOM BATTERY S/N: N/A	
CONNECT TIME: December 2 <sup>nd</sup> , 2014 03:35:30	DISCONNECT TIME: January 20 <sup>th</sup> , 2015 14:13:30	

SURFACE TEMP: -10 C	LEASE CONDITION: Good
WIRELINE OPERATOR: Ivory [REDACTED]	PHONE: 1306 461 9504
WIRELINE ASSISTANT: N/A	
DIRECTIONS: N/A	

#### DWG WELL HEAD PRESSURES:

TUBING (before survey): N/A	CASING (before survey): N/A
TUBING (after survey): N/A	CASING (after survey): N/A

FLUID LEVEL: N/A	RUN DEPTH: N/A
TIME ON BOTTOM: N/A	TIME OFF BOTTOM: N/A

## GRADIENT STOPS

DEPTH mKB:	N/A	FROM:	N/A	UNTIL:	N/A
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COMMENTS: Tools were ran in the well by a drilling rig to collect the BHP + BHT below a bridge plug. Tools were then pulled by the service rig.

## DESCRIPTION OF WORK DONE:

Tools were ran in the well by a drilling rig to collect the BHP + BHT below a bridge plug. Tools were then pulled by the service rig.

December 2<sup>nd</sup>, 2014

03:35:30 - RIH

05:03:30 - On depth @1006 mKB      Recorders @1007 mKB

05:23:30 - Bridge plug set

January 20<sup>th</sup>, 2015

10:29:00 - FINAL STABLE BHP + BHT

10:29:30 - Bridge plug un-set

10:42:30 - POOH

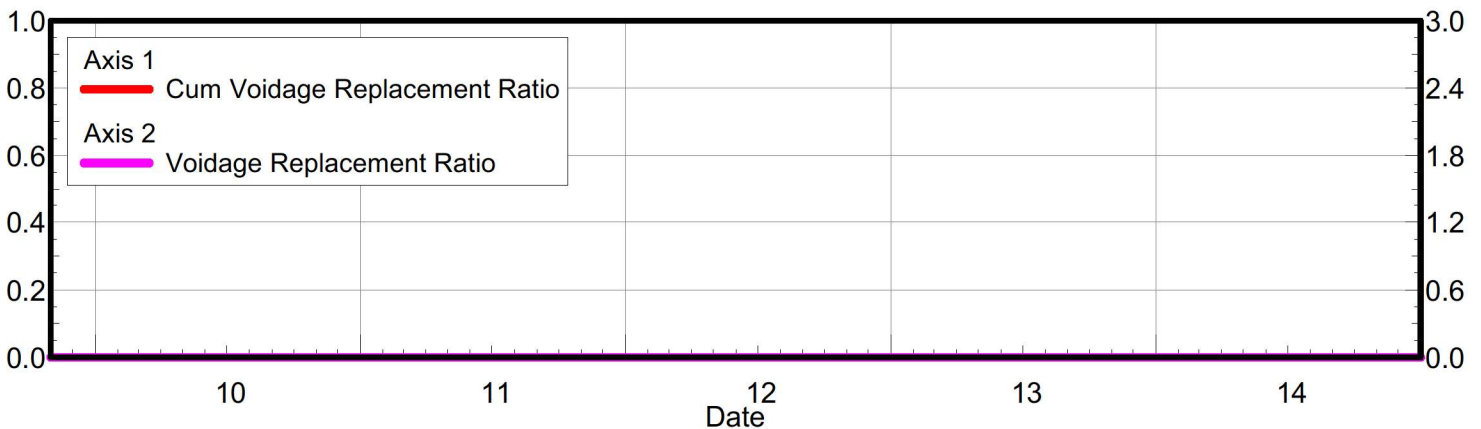
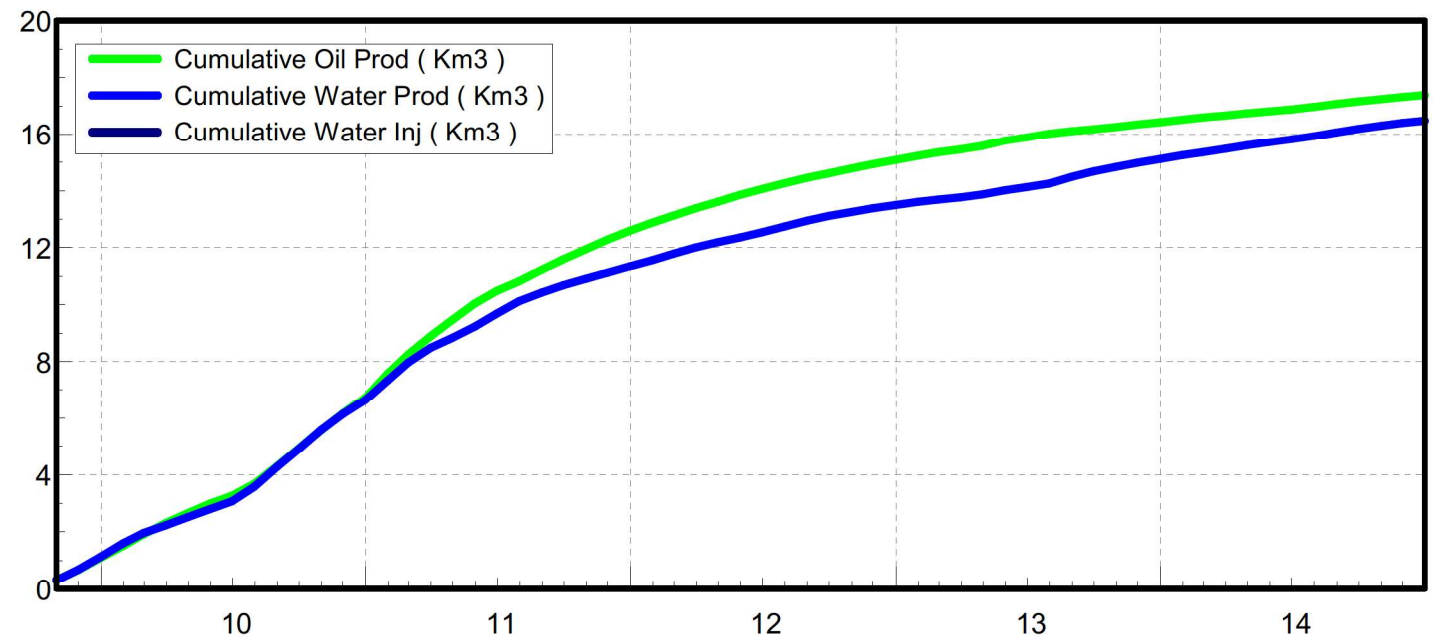
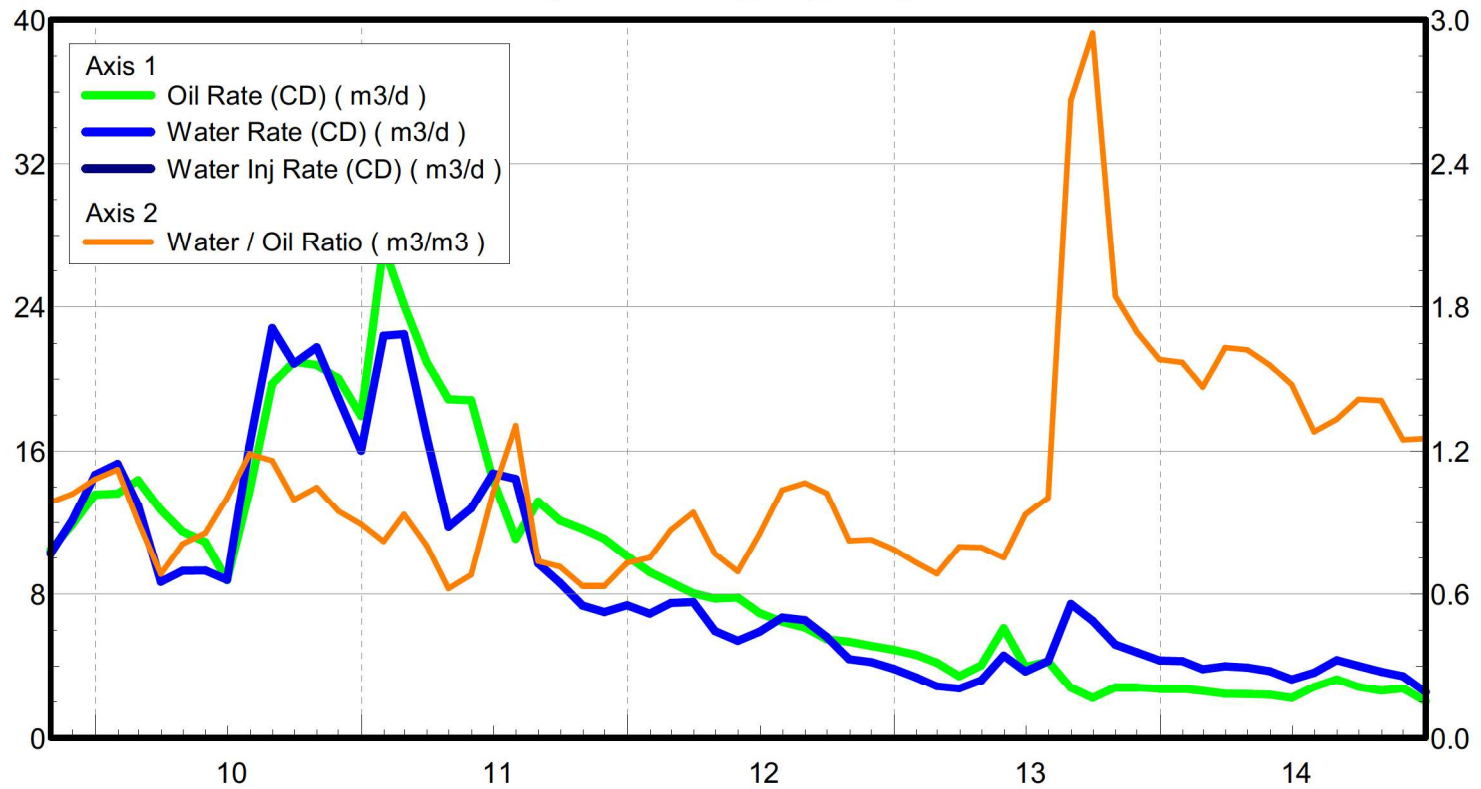
11:25:30 - Surface

14:13:30 - Download data

**Appendix D**  
**Rates and VRR Plots**



Oil Formation Vol Factor : 1.302  
 Water Formation Vol Factor : 1.00150 m3/m3  
 Water / Oil Ratio : 1.25 m3/m3  
 Pattern: 02/12-05-008-28Inj Set: SinclairUnit#12  
 June 03, 2015  
 Operator: Tundra\_O&G\_Prtshp  
 Oil Rate (CD) : 2.03 m3/d  
 Water Rate (CD) : 2.54 m3/d  
 Water Inj Rate (CD) : \* m3/d

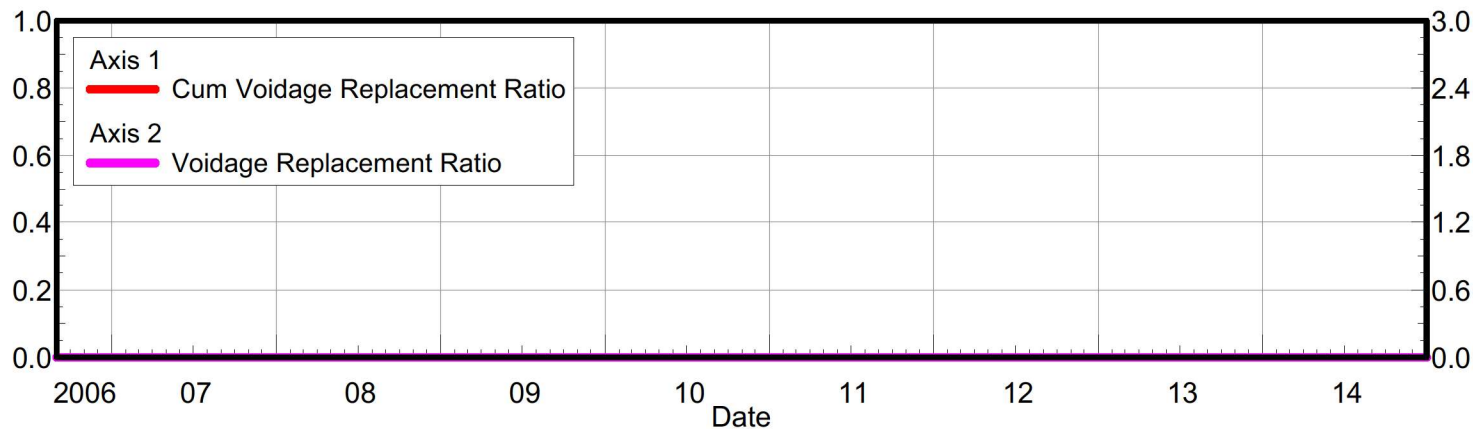
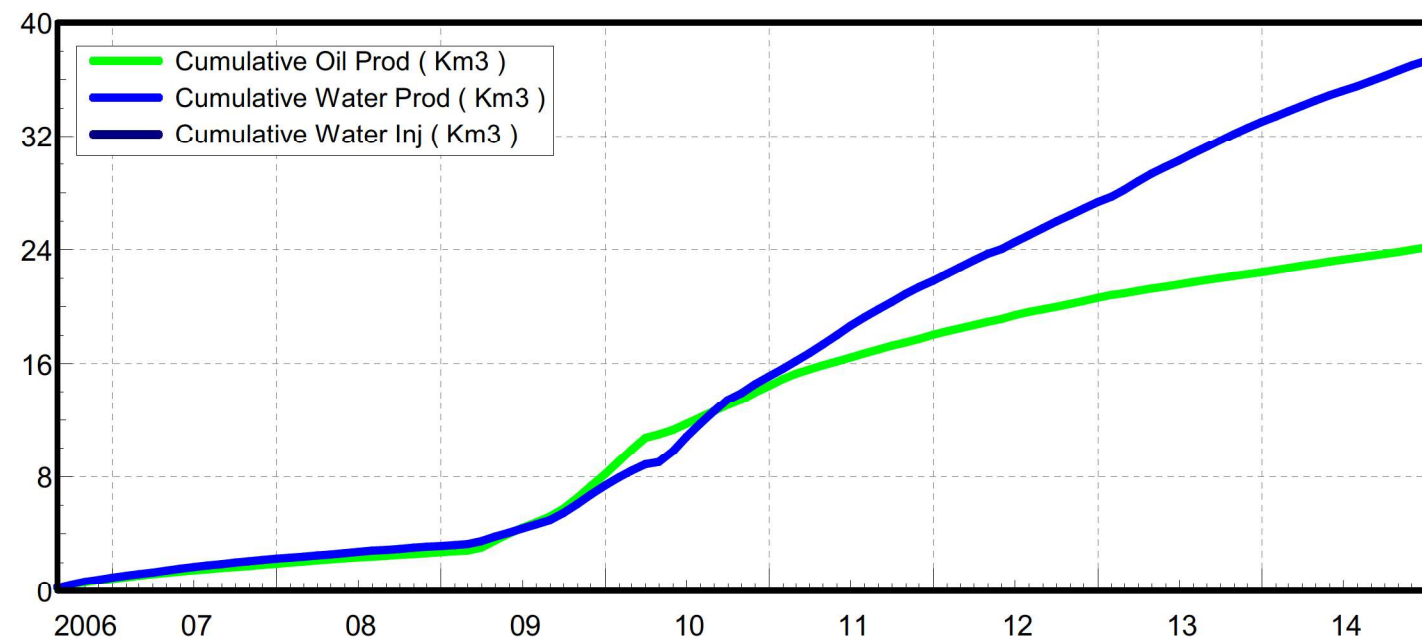
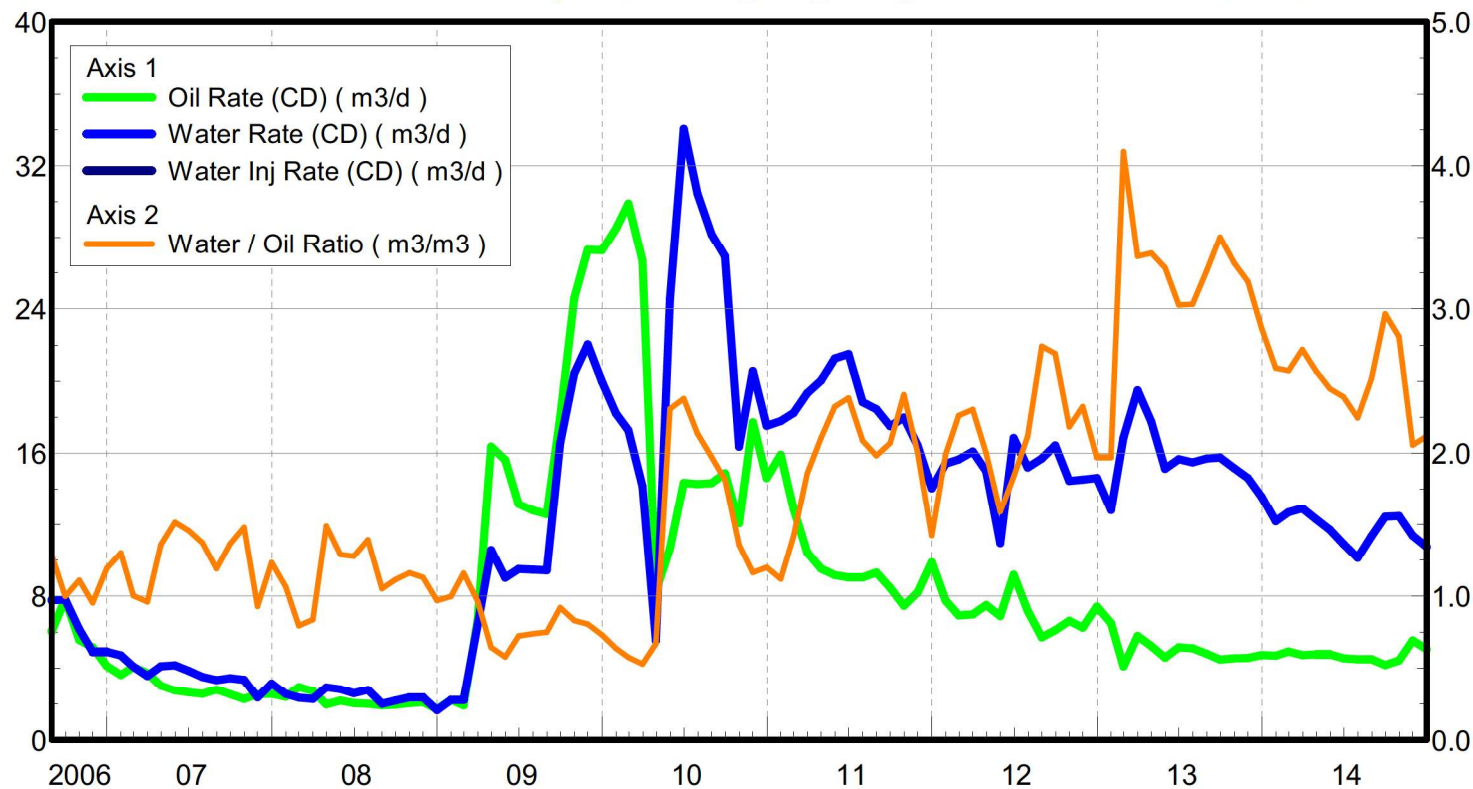


Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
10/31/2009	10.43	10.27	0.98		0.32	0.32	0.00	0.000	0.000
11/30/2009	11.88	12.12	1.02		0.68	0.68	0.00	0.000	0.000
12/31/2009	13.56	14.66	1.08		1.10	1.14	0.00	0.000	0.000
1/31/2010	13.61	15.26	1.12		1.52	1.61	0.00	0.000	0.000
2/28/2010	14.36	12.96	0.90		1.92	1.97	0.00	0.000	0.000
3/31/2010	12.69	8.67	0.68		2.32	2.24	0.00	0.000	0.000
4/30/2010	11.48	9.27	0.81		2.66	2.52	0.00	0.000	0.000
5/31/2010	10.89	9.30	0.85		3.00	2.81	0.00	0.000	0.000
6/30/2010	8.76	8.77	1.00		3.26	3.07	0.00	0.000	0.000
7/31/2010	13.74	16.29	1.19		3.69	3.58	0.00	0.000	0.000
8/31/2010	19.71	22.83	1.16		4.30	4.28	0.00	0.000	0.000
9/30/2010	20.96	20.86	1.00		4.93	4.91	0.00	0.000	0.000
10/31/2010	20.78	21.75	1.05		5.57	5.58	0.00	0.000	0.000
11/30/2010	20.02	18.93	0.95		6.17	6.15	0.00	0.000	0.000
12/31/2010	17.93	15.99	0.89		6.73	6.65	0.00	0.000	0.000
1/31/2011	27.35	22.41	0.82		7.58	7.34	0.00	0.000	0.000
2/28/2011	24.11	22.49	0.93		8.25	7.97	0.00	0.000	0.000
3/31/2011	20.95	16.79	0.80		8.90	8.49	0.00	0.000	0.000
4/30/2011	18.86	11.74	0.62		9.47	8.84	0.00	0.000	0.000
5/31/2011	18.79	12.77	0.68		10.05	9.24	0.00	0.000	0.000
6/30/2011	14.39	14.74	1.02		10.48	9.68	0.00	0.000	0.000
7/31/2011	11.06	14.43	1.30		10.82	10.13	0.00	0.000	0.000
8/31/2011	13.16	9.70	0.74		11.23	10.43	0.00	0.000	0.000
9/30/2011	12.10	8.63	0.71		11.59	10.69	0.00	0.000	0.000
10/31/2011	11.61	7.36	0.63		11.95	10.92	0.00	0.000	0.000
11/30/2011	11.06	7.01	0.63		12.29	11.13	0.00	0.000	0.000
12/31/2011	10.11	7.38	0.73		12.60	11.36	0.00	0.000	0.000
1/31/2012	9.21	6.91	0.75		12.89	11.57	0.00	0.000	0.000
2/29/2012	8.64	7.49	0.87		13.14	11.79	0.00	0.000	0.000
3/31/2012	8.04	7.55	0.94		13.39	12.02	0.00	0.000	0.000
4/30/2012	7.74	5.94	0.77		13.62	12.20	0.00	0.000	0.000
5/31/2012	7.80	5.41	0.69		13.86	12.37	0.00	0.000	0.000
6/30/2012	6.95	5.91	0.85		14.07	12.55	0.00	0.000	0.000
7/31/2012	6.47	6.70	1.04		14.27	12.75	0.00	0.000	0.000
8/31/2012	6.15	6.55	1.07		14.46	12.96	0.00	0.000	0.000
9/30/2012	5.50	5.62	1.02		14.62	13.12	0.00	0.000	0.000
10/31/2012	5.36	4.40	0.82		14.79	13.26	0.00	0.000	0.000
11/30/2012	5.12	4.23	0.83		14.94	13.39	0.00	0.000	0.000
12/31/2012	4.92	3.86	0.79		15.10	13.51	0.00	0.000	0.000
1/31/2013	4.63	3.37	0.73		15.24	13.61	0.00	0.000	0.000
2/28/2013	4.21	2.88	0.68		15.36	13.69	0.00	0.000	0.000
3/31/2013	3.45	2.75	0.80		15.46	13.78	0.00	0.000	0.000
4/30/2013	4.05	3.22	0.79		15.59	13.87	0.00	0.000	0.000
5/31/2013	6.11	4.59	0.75		15.78	14.02	0.00	0.000	0.000
6/30/2013	3.98	3.71	0.93		15.89	14.13	0.00	0.000	0.000
7/31/2013	4.27	4.29	1.00		16.03	14.26	0.00	0.000	0.000
8/31/2013	2.79	7.45	2.67		16.11	14.49	0.00	0.000	0.000
9/30/2013	2.21	6.52	2.94		16.18	14.69	0.00	0.000	0.000

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
10/31/2013	2.81	5.19	1.85		16.27	14.85	0.00	0.000	0.000
11/30/2013	2.81	4.77	1.69		16.35	14.99	0.00	0.000	0.000
12/31/2013	2.74	4.33	1.58		16.44	15.13	0.00	0.000	0.000
1/31/2014	2.74	4.30	1.57		16.52	15.26	0.00	0.000	0.000
2/28/2014	2.62	3.84	1.46		16.59	15.37	0.00	0.000	0.000
3/31/2014	2.46	4.01	1.63		16.67	15.49	0.00	0.000	0.000
4/30/2014	2.43	3.94	1.62		16.74	15.61	0.00	0.000	0.000
5/31/2014	2.39	3.73	1.56		16.82	15.72	0.00	0.000	0.000
6/30/2014	2.22	3.27	1.48		16.88	15.82	0.00	0.000	0.000
7/31/2014	2.85	3.64	1.28		16.97	15.94	0.00	0.000	0.000
8/31/2014	3.27	4.35	1.33		17.07	16.07	0.00	0.000	0.000
9/30/2014	2.85	4.03	1.41		17.16	16.19	0.00	0.000	0.000
10/31/2014	2.63	3.71	1.41		17.24	16.31	0.00	0.000	0.000
11/30/2014	2.76	3.44	1.25		17.32	16.41	0.00	0.000	0.000
12/31/2014	2.03	2.54	1.25		17.39	16.49	0.00	0.000	0.000



Oil Formation Vol Factor : 1.30  
 Water Formation Vol Factor : 1.00150 m3/m3  
 Water / Oil Ratio : 2.12 m3/m3  
 Pattern: 02/05-07-008-28  
 Inj Set: Sinclair Unit#12  
 June 03, 2015  
 Operator: Tundra\_O&G\_Prtshp  
 Oil Rate (CD) : 5.06 m3/d  
 Water Rate (CD) : 10.72 m3/d  
 Water Inj Rate (CD) : \* m3/d



Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
8/31/2006	6.05	7.76	1.28		0.19	0.24	0.00	0.000	0.000
9/30/2006	7.82	7.80	1.00		0.42	0.47	0.00	0.000	0.000
10/31/2006	5.57	6.17	1.11		0.59	0.67	0.00	0.000	0.000
11/30/2006	5.16	4.92	0.95		0.75	0.81	0.00	0.000	0.000
12/31/2006	4.13	4.92	1.19		0.88	0.97	0.00	0.000	0.000
1/31/2007	3.63	4.71	1.30		0.99	1.11	0.00	0.000	0.000
2/28/2007	4.08	4.09	1.00		1.10	1.23	0.00	0.000	0.000
3/31/2007	3.73	3.58	0.96		1.22	1.34	0.00	0.000	0.000
4/30/2007	3.03	4.11	1.36		1.31	1.46	0.00	0.000	0.000
5/31/2007	2.76	4.17	1.51		1.40	1.59	0.00	0.000	0.000
6/30/2007	2.66	3.86	1.45		1.48	1.71	0.00	0.000	0.000
7/31/2007	2.57	3.52	1.37		1.56	1.81	0.00	0.000	0.000
8/31/2007	2.82	3.35	1.19		1.64	1.92	0.00	0.000	0.000
9/30/2007	2.54	3.45	1.36		1.72	2.02	0.00	0.000	0.000
10/31/2007	2.27	3.35	1.48		1.79	2.13	0.00	0.000	0.000
11/30/2007	2.54	2.36	0.93		1.87	2.20	0.00	0.000	0.000
12/31/2007	2.55	3.15	1.23		1.94	2.29	0.00	0.000	0.000
1/31/2008	2.41	2.56	1.06		2.02	2.37	0.00	0.000	0.000
2/29/2008	2.95	2.34	0.79		2.11	2.44	0.00	0.000	0.000
3/31/2008	2.72	2.28	0.84		2.19	2.51	0.00	0.000	0.000
4/30/2008	1.97	2.93	1.48		2.25	2.60	0.00	0.000	0.000
5/31/2008	2.19	2.82	1.29		2.32	2.69	0.00	0.000	0.000
6/30/2008	2.04	2.60	1.27		2.38	2.77	0.00	0.000	0.000
7/31/2008	2.01	2.79	1.39		2.44	2.85	0.00	0.000	0.000
8/31/2008	1.91	2.01	1.05		2.50	2.91	0.00	0.000	0.000
9/30/2008	1.96	2.18	1.11		2.56	2.98	0.00	0.000	0.000
10/31/2008	2.04	2.37	1.16		2.62	3.05	0.00	0.000	0.000
11/30/2008	2.10	2.37	1.13		2.68	3.12	0.00	0.000	0.000
12/31/2008	1.71	1.65	0.97		2.74	3.18	0.00	0.000	0.000
1/31/2009	2.22	2.21	1.00		2.81	3.24	0.00	0.000	0.000
2/28/2009	1.92	2.22	1.16		2.86	3.31	0.00	0.000	0.000
3/31/2009	6.65	6.41	0.96		3.07	3.51	0.00	0.000	0.000
4/30/2009	16.35	10.55	0.65		3.56	3.82	0.00	0.000	0.000
5/31/2009	15.62	9.02	0.58		4.04	4.10	0.00	0.000	0.000
6/30/2009	13.13	9.50	0.72		4.43	4.39	0.00	0.000	0.000
7/31/2009	12.78	9.46	0.74		4.83	4.68	0.00	0.000	0.000
8/31/2009	12.57	9.43	0.75		5.22	4.97	0.00	0.000	0.000
9/30/2009	18.01	16.55	0.92		5.76	5.47	0.00	0.000	0.000
10/31/2009	24.61	20.42	0.83		6.52	6.10	0.00	0.000	0.000
11/30/2009	27.31	22.02	0.81		7.34	6.76	0.00	0.000	0.000
12/31/2009	27.26	19.98	0.73		8.19	7.38	0.00	0.000	0.000
1/31/2010	28.49	18.20	0.64		9.07	7.95	0.00	0.000	0.000
2/28/2010	29.89	17.25	0.58		9.91	8.43	0.00	0.000	0.000
3/31/2010	26.69	14.15	0.53		10.73	8.87	0.00	0.000	0.000
4/30/2010	8.27	5.53	0.67		10.98	9.03	0.00	0.000	0.000
5/31/2010	10.65	24.55	2.31		11.31	9.79	0.00	0.000	0.000
6/30/2010	14.32	34.04	2.38		11.74	10.82	0.00	0.000	0.000
7/31/2010	14.26	30.44	2.14		12.18	11.76	0.00	0.000	0.000

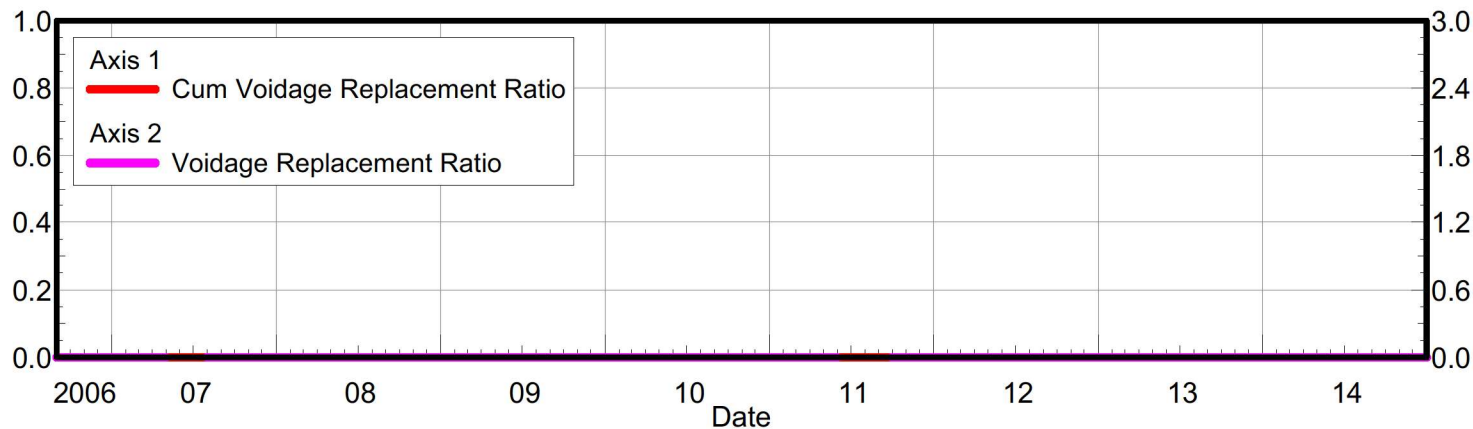
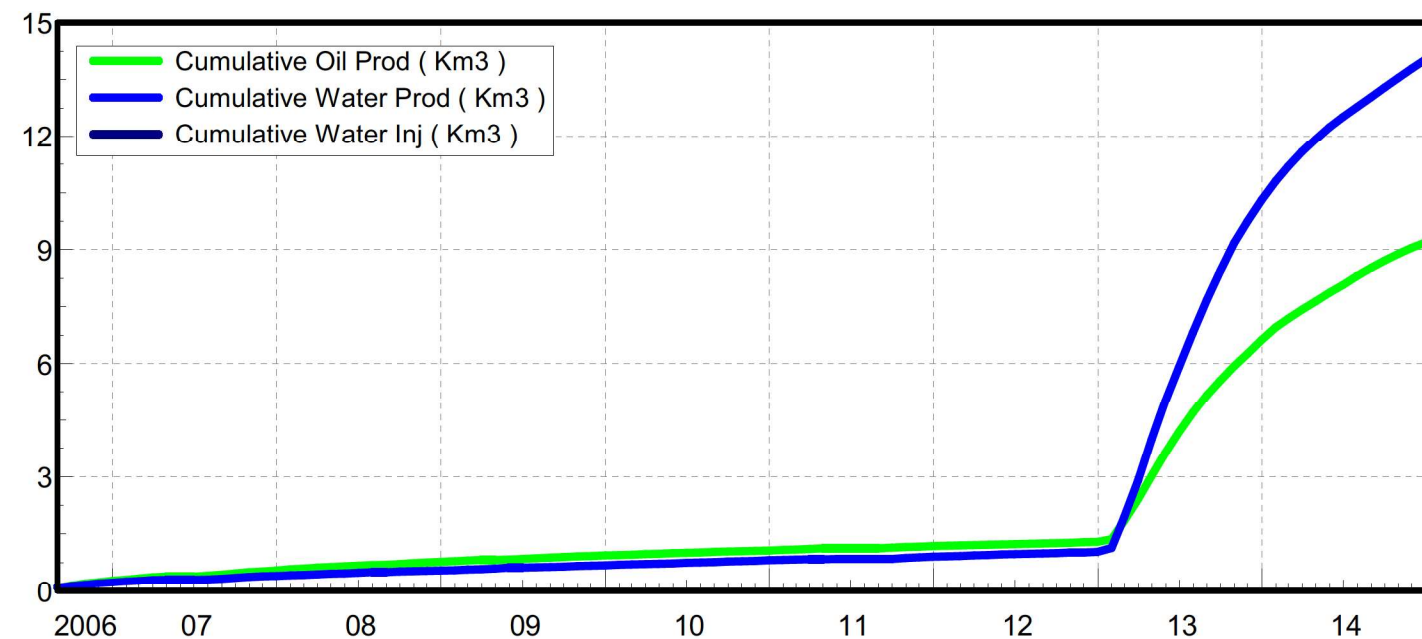
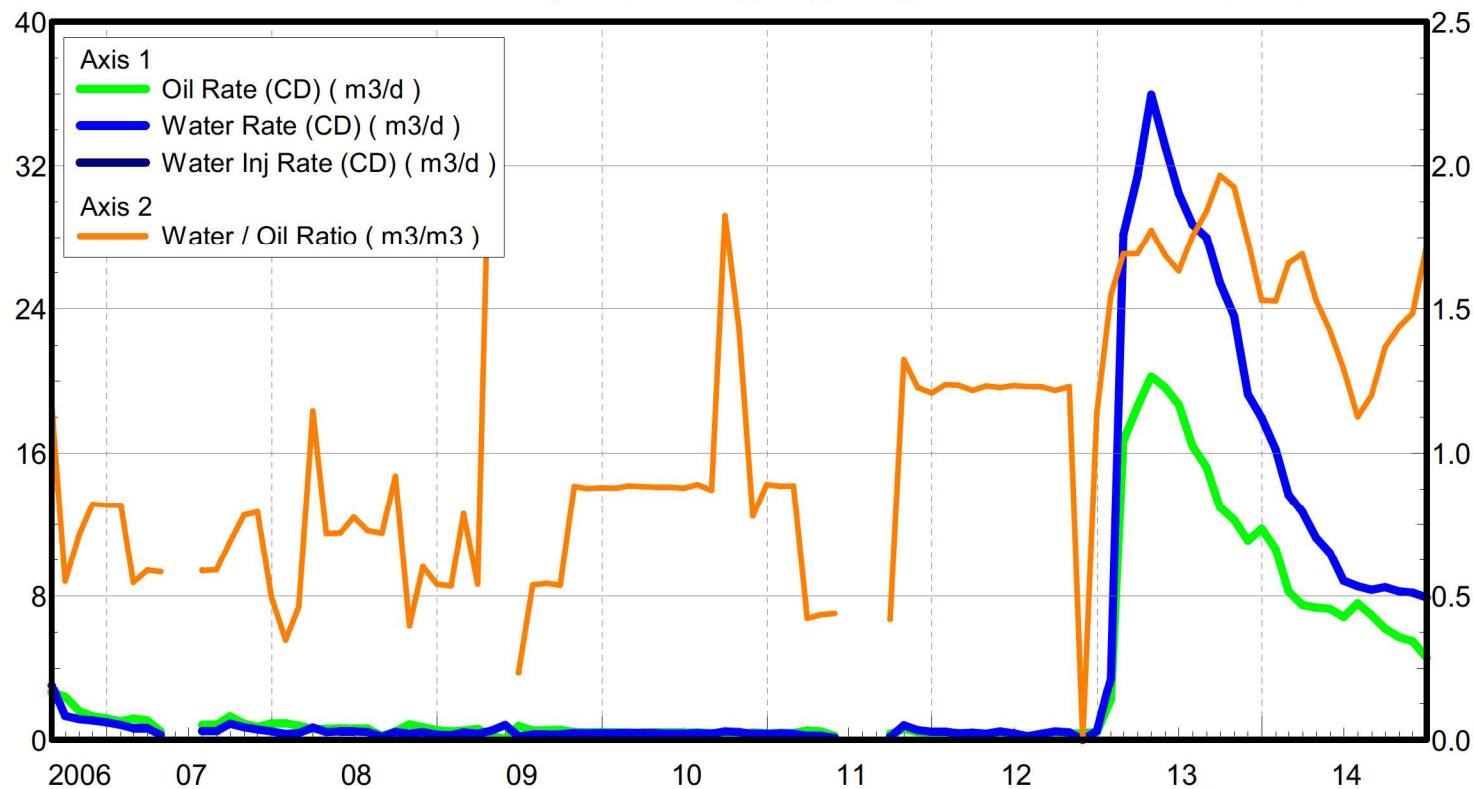


Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
8/31/2010	14.30	28.19	1.97		12.63	12.63	0.00	0.000	0.000
9/30/2010	14.85	26.93	1.81		13.07	13.44	0.00	0.000	0.000
10/31/2010	12.06	16.34	1.36		13.45	13.95	0.00	0.000	0.000
11/30/2010	17.69	20.55	1.16		13.98	14.56	0.00	0.000	0.000
12/31/2010	14.59	17.49	1.20		14.43	15.11	0.00	0.000	0.000
1/31/2011	15.89	17.77	1.12		14.92	15.66	0.00	0.000	0.000
2/28/2011	12.87	18.21	1.42		15.28	16.17	0.00	0.000	0.000
3/31/2011	10.40	19.32	1.86		15.61	16.77	0.00	0.000	0.000
4/30/2011	9.52	20.01	2.10		15.89	17.37	0.00	0.000	0.000
5/31/2011	9.15	21.25	2.32		16.17	18.03	0.00	0.000	0.000
6/30/2011	9.03	21.50	2.38		16.45	18.67	0.00	0.000	0.000
7/31/2011	9.03	18.83	2.09		16.73	19.25	0.00	0.000	0.000
8/31/2011	9.30	18.43	1.98		17.01	19.83	0.00	0.000	0.000
9/30/2011	8.46	17.49	2.07		17.27	20.35	0.00	0.000	0.000
10/31/2011	7.47	17.96	2.40		17.50	20.91	0.00	0.000	0.000
11/30/2011	8.20	16.41	2.00		17.75	21.40	0.00	0.000	0.000
12/31/2011	9.87	14.02	1.42		18.05	21.83	0.00	0.000	0.000
1/31/2012	7.75	15.40	1.99		18.29	22.31	0.00	0.000	0.000
2/29/2012	6.92	15.63	2.26		18.49	22.76	0.00	0.000	0.000
3/31/2012	6.98	16.07	2.30		18.71	23.26	0.00	0.000	0.000
4/30/2012	7.50	14.98	2.00		18.93	23.71	0.00	0.000	0.000
5/31/2012	6.89	10.93	1.59		19.15	24.05	0.00	0.000	0.000
6/30/2012	9.17	16.81	1.83		19.42	24.56	0.00	0.000	0.000
7/31/2012	7.17	15.17	2.12		19.64	25.03	0.00	0.000	0.000
8/31/2012	5.72	15.68	2.74		19.82	25.51	0.00	0.000	0.000
9/30/2012	6.10	16.41	2.69		20.01	26.00	0.00	0.000	0.000
10/31/2012	6.62	14.43	2.18		20.21	26.45	0.00	0.000	0.000
11/30/2012	6.25	14.50	2.32		20.40	26.89	0.00	0.000	0.000
12/31/2012	7.41	14.59	1.97		20.63	27.34	0.00	0.000	0.000
1/31/2013	6.50	12.80	1.97		20.83	27.74	0.00	0.000	0.000
2/28/2013	4.11	16.83	4.10		20.94	28.21	0.00	0.000	0.000
3/31/2013	5.79	19.49	3.37		21.12	28.81	0.00	0.000	0.000
4/30/2013	5.23	17.74	3.39		21.28	29.34	0.00	0.000	0.000
5/31/2013	4.60	15.11	3.29		21.42	29.81	0.00	0.000	0.000
6/30/2013	5.17	15.64	3.03		21.58	30.28	0.00	0.000	0.000
7/31/2013	5.10	15.47	3.03		21.74	30.76	0.00	0.000	0.000
8/31/2013	4.81	15.69	3.26		21.89	31.25	0.00	0.000	0.000
9/30/2013	4.49	15.73	3.50		22.02	31.72	0.00	0.000	0.000
10/31/2013	4.56	15.15	3.32		22.16	32.19	0.00	0.000	0.000
11/30/2013	4.57	14.59	3.19		22.30	32.63	0.00	0.000	0.000
12/31/2013	4.73	13.55	2.86		22.45	33.05	0.00	0.000	0.000
1/31/2014	4.70	12.16	2.59		22.59	33.42	0.00	0.000	0.000
2/28/2014	4.92	12.66	2.57		22.73	33.78	0.00	0.000	0.000
3/31/2014	4.74	12.89	2.72		22.88	34.18	0.00	0.000	0.000
4/30/2014	4.78	12.27	2.57		23.02	34.54	0.00	0.000	0.000
5/31/2014	4.78	11.69	2.45		23.17	34.91	0.00	0.000	0.000
6/30/2014	4.56	10.89	2.39		23.30	35.23	0.00	0.000	0.000
7/31/2014	4.51	10.11	2.24		23.44	35.55	0.00	0.000	0.000



Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
8/31/2014	4.50	11.32	2.51		23.58	35.90	0.00	0.000	0.000
9/30/2014	4.19	12.42	2.97		23.71	36.27	0.00	0.000	0.000
10/31/2014	4.44	12.45	2.81		23.85	36.66	0.00	0.000	0.000
11/30/2014	5.53	11.35	2.05		24.01	37.00	0.00	0.000	0.000
12/31/2014	5.06	10.72	2.12		24.17	37.33	0.00	0.000	0.000

Oil Formation Vol Factor : 0.830  
 Water Formation Vol Factor : 1.00150 m3/m3  
 Water / Oil Ratio : 1.72 m3/m3  
 Pattern: 03/12-07-008-28  
 Inj Set: Sinclair Unit#12  
 June 04, 2015  
 Operator: Tundra\_O&G\_Prtshp  
 Oil Rate (CD) : 4.59 m3/d  
 Water Rate (CD) : 7.90 m3/d  
 Water Inj Rate (CD) : \* m3/d



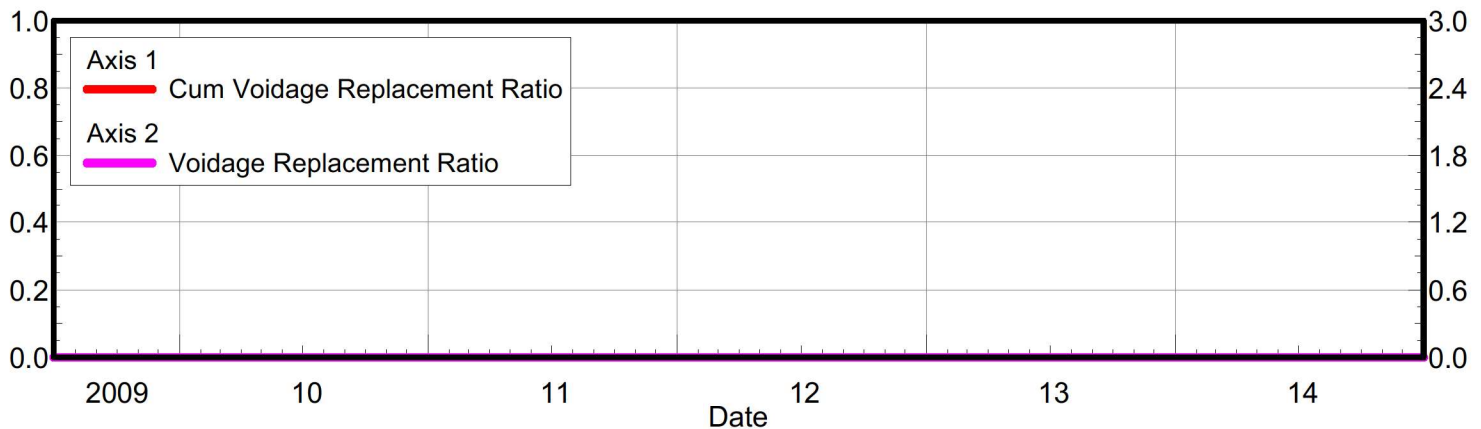
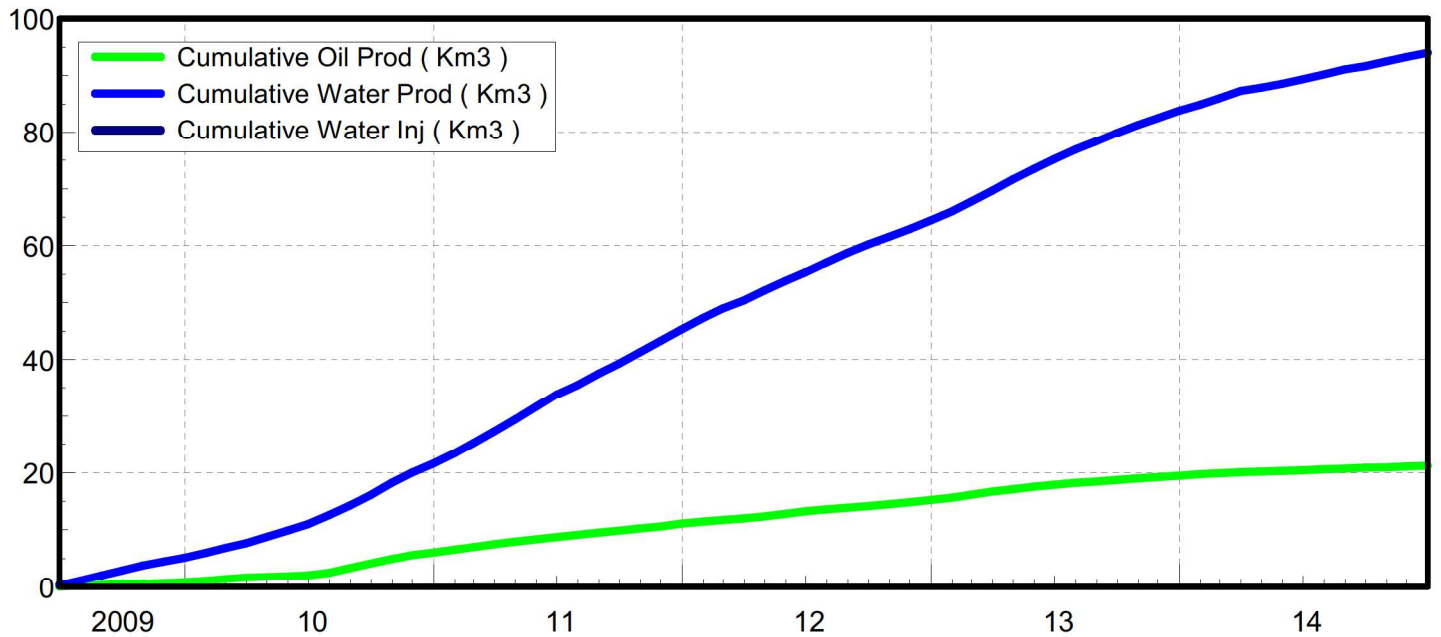
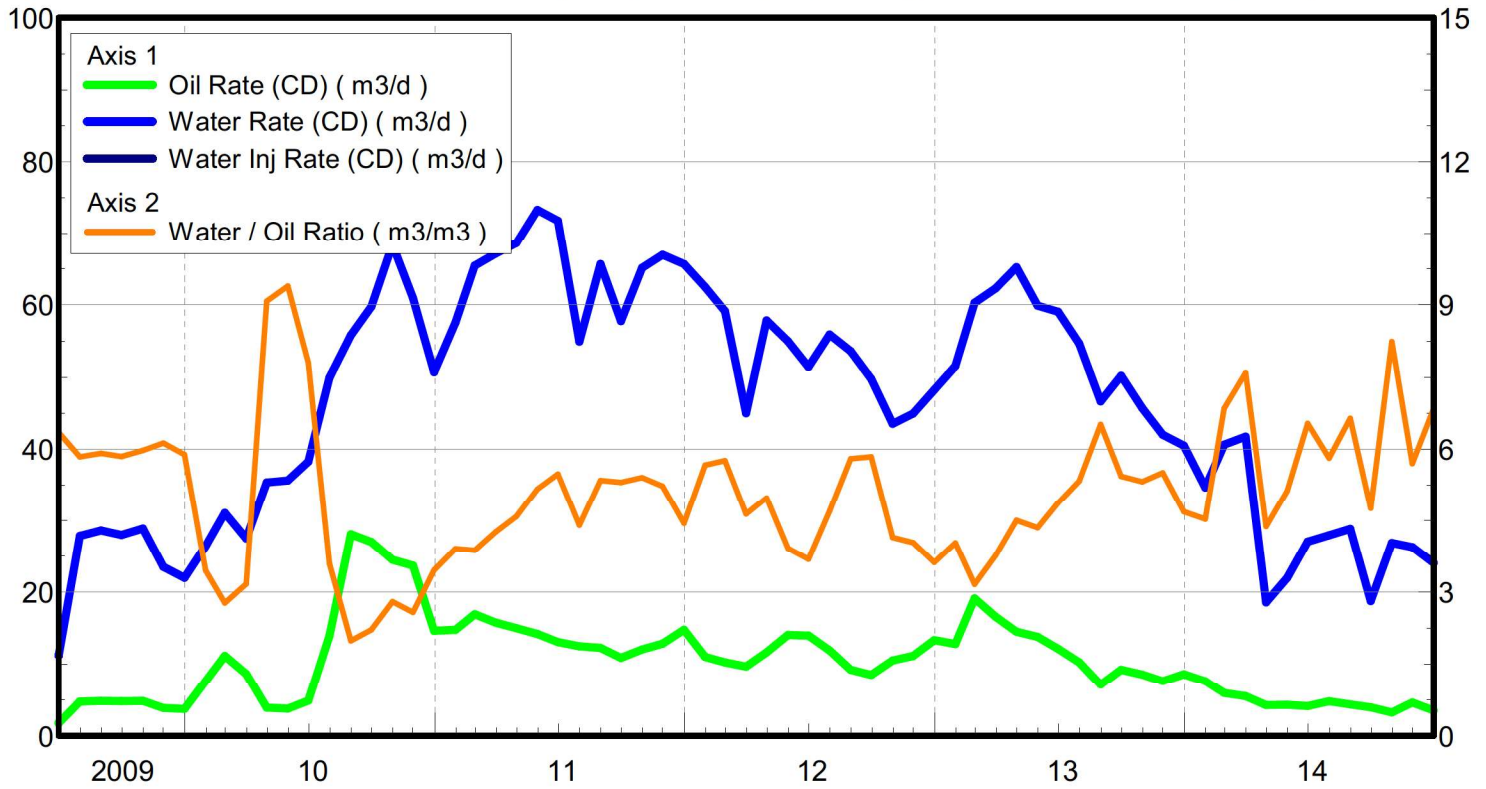
Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
8/31/2006	2.61	3.04	1.17		0.08	0.09	0.00	0.000	0.000
9/30/2006	2.39	1.32	0.55		0.15	0.13	0.00	0.000	0.000
10/31/2006	1.58	1.13	0.71		0.20	0.17	0.00	0.000	0.000
11/30/2006	1.29	1.06	0.82		0.24	0.20	0.00	0.000	0.000
12/31/2006	1.17	0.96	0.82		0.28	0.23	0.00	0.000	0.000
1/31/2007	1.00	0.82	0.82		0.31	0.26	0.00	0.000	0.000
2/28/2007	1.18	0.64	0.55		0.34	0.27	0.00	0.000	0.000
3/31/2007	1.07	0.63	0.59		0.37	0.29	0.00	0.000	0.000
4/30/2007	0.44	0.26	0.58		0.39	0.30	0.00	0.000	0.000
7/31/2007	0.81	0.48	0.59		0.41	0.32	0.00	0.000	0.000
8/31/2007	0.81	0.48	0.59		0.44	0.33	0.00	0.000	0.000
9/30/2007	1.29	0.89	0.69		0.48	0.36	0.00	0.000	0.000
10/31/2007	0.89	0.69	0.78		0.50	0.38	0.00	0.000	0.000
11/30/2007	0.71	0.56	0.79		0.52	0.40	0.00	0.000	0.000
12/31/2007	0.91	0.45	0.49		0.55	0.41	0.00	0.000	0.000
1/31/2008	0.91	0.32	0.35		0.58	0.42	0.00	0.000	0.000
2/29/2008	0.78	0.36	0.46		0.60	0.43	0.00	0.000	0.000
3/31/2008	0.58	0.66	1.14		0.62	0.45	0.00	0.000	0.000
4/30/2008	0.59	0.42	0.72		0.64	0.46	0.00	0.000	0.000
5/31/2008	0.63	0.45	0.72		0.66	0.48	0.00	0.000	0.000
6/30/2008	0.59	0.46	0.77		0.68	0.49	0.00	0.000	0.000
7/31/2008	0.59	0.43	0.73		0.69	0.50	0.00	0.000	0.000
8/31/2008	0.21	0.15	0.72		0.70	0.51	0.00	0.000	0.000
9/30/2008	0.45	0.41	0.92		0.71	0.52	0.00	0.000	0.000
10/31/2008	0.85	0.34	0.40		0.74	0.53	0.00	0.000	0.000
11/30/2008	0.69	0.42	0.60		0.76	0.54	0.00	0.000	0.000
12/31/2008	0.53	0.28	0.54		0.78	0.55	0.00	0.000	0.000
1/31/2009	0.46	0.25	0.53		0.79	0.56	0.00	0.000	0.000
2/28/2009	0.52	0.41	0.79		0.81	0.57	0.00	0.000	0.000
3/31/2009	0.60	0.32	0.54		0.83	0.58	0.00	0.000	0.000
4/30/2009	0.21	0.49	2.33		0.83	0.60	0.00	0.000	0.000
5/31/2009	0.04	0.81	19.31		0.83	0.62	0.00	0.000	0.000
6/30/2009	0.76	0.18	0.24		0.86	0.63	0.00	0.000	0.000
7/31/2009	0.51	0.27	0.54		0.87	0.64	0.00	0.000	0.000
8/31/2009	0.52	0.28	0.54		0.89	0.64	0.00	0.000	0.000
9/30/2009	0.54	0.29	0.54		0.90	0.65	0.00	0.000	0.000
10/31/2009	0.41	0.36	0.88		0.92	0.66	0.00	0.000	0.000
11/30/2009	0.40	0.35	0.88		0.93	0.67	0.00	0.000	0.000
12/31/2009	0.43	0.37	0.88		0.94	0.69	0.00	0.000	0.000
1/31/2010	0.40	0.35	0.88		0.95	0.70	0.00	0.000	0.000
2/28/2010	0.40	0.36	0.88		0.97	0.71	0.00	0.000	0.000
3/31/2010	0.39	0.34	0.88		0.98	0.72	0.00	0.000	0.000
4/30/2010	0.39	0.35	0.88		0.99	0.73	0.00	0.000	0.000
5/31/2010	0.38	0.34	0.88		1.00	0.74	0.00	0.000	0.000
6/30/2010	0.38	0.33	0.88		1.01	0.75	0.00	0.000	0.000
7/31/2010	0.41	0.36	0.89		1.03	0.76	0.00	0.000	0.000
8/31/2010	0.37	0.32	0.87		1.04	0.77	0.00	0.000	0.000
9/30/2010	0.25	0.46	1.83		1.04	0.78	0.00	0.000	0.000



Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
10/31/2010	0.29	0.42	1.43		1.05	0.80	0.00	0.000	0.000
11/30/2010	0.41	0.32	0.78		1.07	0.81	0.00	0.000	0.000
12/31/2010	0.35	0.31	0.89		1.08	0.82	0.00	0.000	0.000
1/31/2011	0.39	0.35	0.88		1.09	0.83	0.00	0.000	0.000
2/28/2011	0.38	0.33	0.89		1.10	0.84	0.00	0.000	0.000
3/31/2011	0.50	0.21	0.42		1.11	0.84	0.00	0.000	0.000
4/30/2011	0.46	0.20	0.43		1.13	0.85	0.00	0.000	0.000
5/31/2011	0.21	0.09	0.44		1.14	0.85	0.00	0.000	0.000
9/30/2011	0.32	0.13	0.42		1.14	0.86	0.00	0.000	0.000
10/31/2011	0.60	0.79	1.32		1.16	0.88	0.00	0.000	0.000
11/30/2011	0.43	0.52	1.23		1.18	0.90	0.00	0.000	0.000
12/31/2011	0.36	0.43	1.21		1.19	0.91	0.00	0.000	0.000
1/31/2012	0.35	0.44	1.24		1.20	0.92	0.00	0.000	0.000
2/29/2012	0.28	0.34	1.23		1.21	0.93	0.00	0.000	0.000
3/31/2012	0.31	0.38	1.22		1.22	0.94	0.00	0.000	0.000
4/30/2012	0.27	0.34	1.23		1.22	0.95	0.00	0.000	0.000
5/31/2012	0.37	0.45	1.23		1.24	0.97	0.00	0.000	0.000
6/30/2012	0.29	0.35	1.23		1.24	0.98	0.00	0.000	0.000
7/31/2012	0.15	0.19	1.23		1.25	0.98	0.00	0.000	0.000
8/31/2012	0.27	0.33	1.23		1.26	1.00	0.00	0.000	0.000
9/30/2012	0.37	0.45	1.22		1.27	1.01	0.00	0.000	0.000
10/31/2012	0.32	0.40	1.23		1.28	1.02	0.00	0.000	0.000
11/30/2012	0.37	0.00	0.00		1.29	1.02	0.00	0.000	0.000
12/31/2012	0.42	0.48	1.14		1.30	1.04	0.00	0.000	0.000
1/31/2013	2.22	3.44	1.55		1.37	1.14	0.00	0.000	0.000
2/28/2013	16.67	28.18	1.69		1.84	1.93	0.00	0.000	0.000
3/31/2013	18.56	31.40	1.69		2.41	2.90	0.00	0.000	0.000
4/30/2013	20.25	35.96	1.78		3.02	3.98	0.00	0.000	0.000
5/31/2013	19.64	33.12	1.69		3.63	5.01	0.00	0.000	0.000
6/30/2013	18.67	30.46	1.63		4.19	5.92	0.00	0.000	0.000
7/31/2013	16.38	28.74	1.75		4.70	6.82	0.00	0.000	0.000
8/31/2013	15.20	28.00	1.84		5.17	7.68	0.00	0.000	0.000
9/30/2013	12.94	25.44	1.97		5.56	8.45	0.00	0.000	0.000
10/31/2013	12.25	23.59	1.93		5.94	9.18	0.00	0.000	0.000
11/30/2013	11.08	19.25	1.74		6.27	9.76	0.00	0.000	0.000
12/31/2013	11.73	17.95	1.53		6.63	10.31	0.00	0.000	0.000
1/31/2014	10.59	16.18	1.53		6.96	10.81	0.00	0.000	0.000
2/28/2014	8.24	13.67	1.66		7.19	11.20	0.00	0.000	0.000
3/31/2014	7.51	12.69	1.69		7.42	11.59	0.00	0.000	0.000
4/30/2014	7.35	11.25	1.53		7.65	11.93	0.00	0.000	0.000
5/31/2014	7.29	10.40	1.43		7.87	12.25	0.00	0.000	0.000
6/30/2014	6.83	8.83	1.29		8.08	12.51	0.00	0.000	0.000
7/31/2014	7.58	8.53	1.13		8.31	12.78	0.00	0.000	0.000
8/31/2014	6.95	8.33	1.20		8.53	13.04	0.00	0.000	0.000
9/30/2014	6.20	8.48	1.37		8.71	13.29	0.00	0.000	0.000
10/31/2014	5.74	8.25	1.44		8.89	13.55	0.00	0.000	0.000
11/30/2014	5.51	8.18	1.48		9.06	13.79	0.00	0.000	0.000

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
12/31/2014	4.59	7.90	1.72		9.20	14.04	0.00	0.000	0.000

Oil Formation Vol Factor : **Pattern: 00/04-18-008-28Inj Set: SinclairUnit#12** Oil Rate (CD) : 3.50 m3/d  
 Water Formation Vol Factor : 1.00150 m3/m3 June 04, 2015 Water Rate (CD) : 23.98 m3/d  
 Water / Oil Ratio : 6.85 m3/m3 Operator: Tundra\_O&G\_Prtshp Water Inj Rate (CD) : \* m3/d

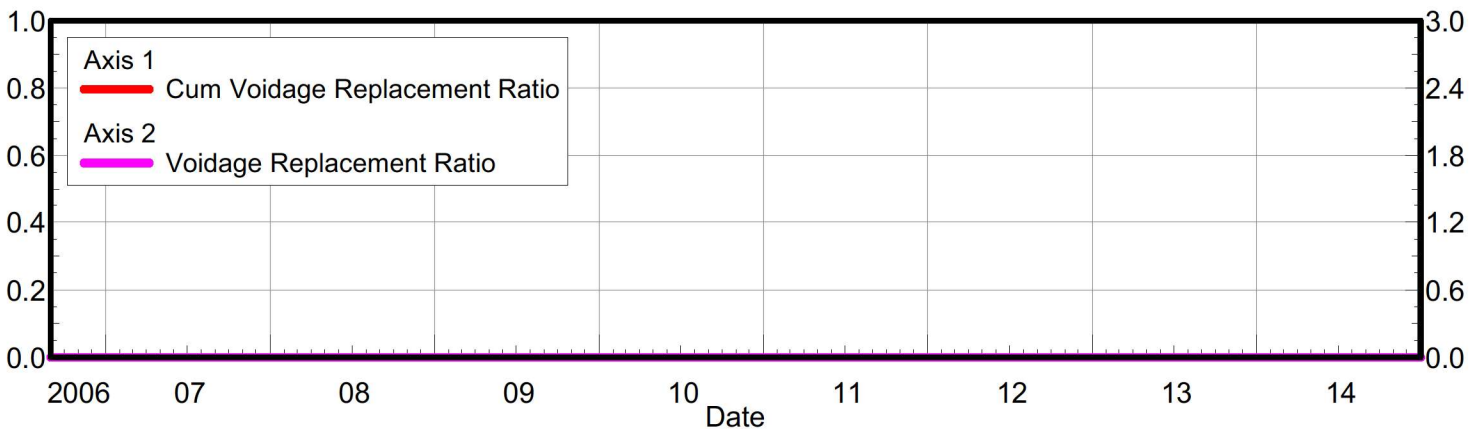
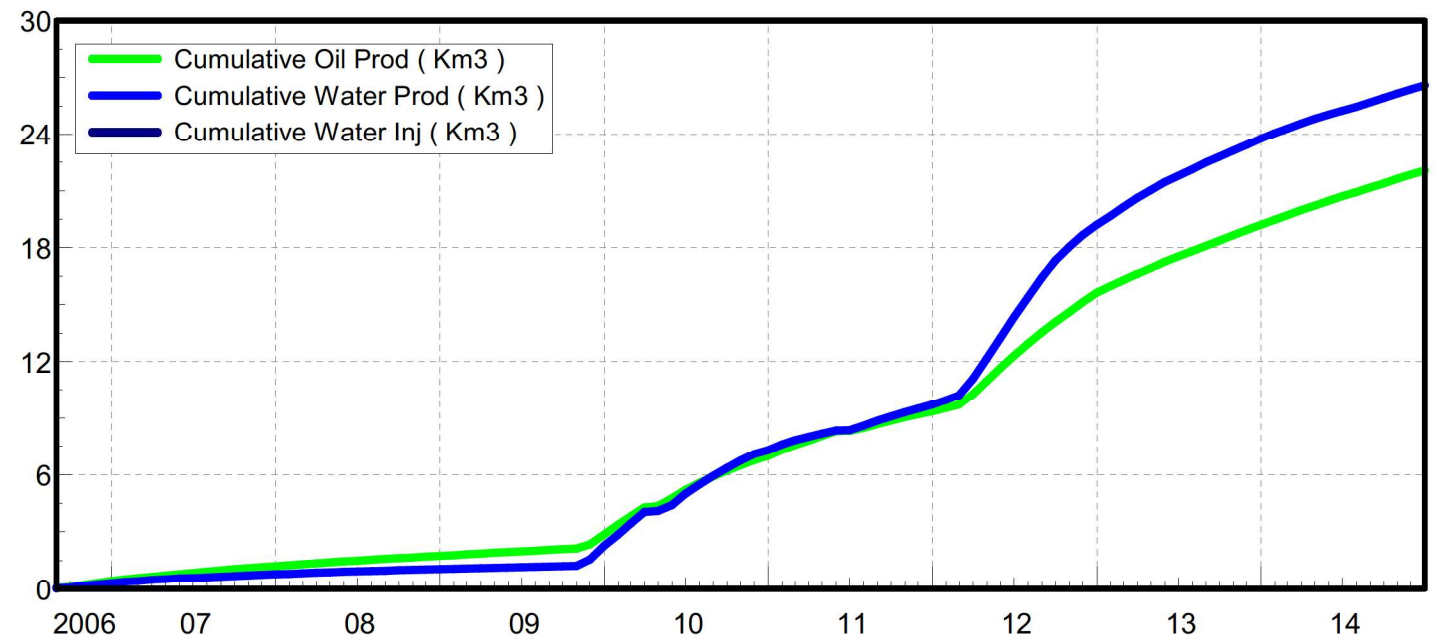
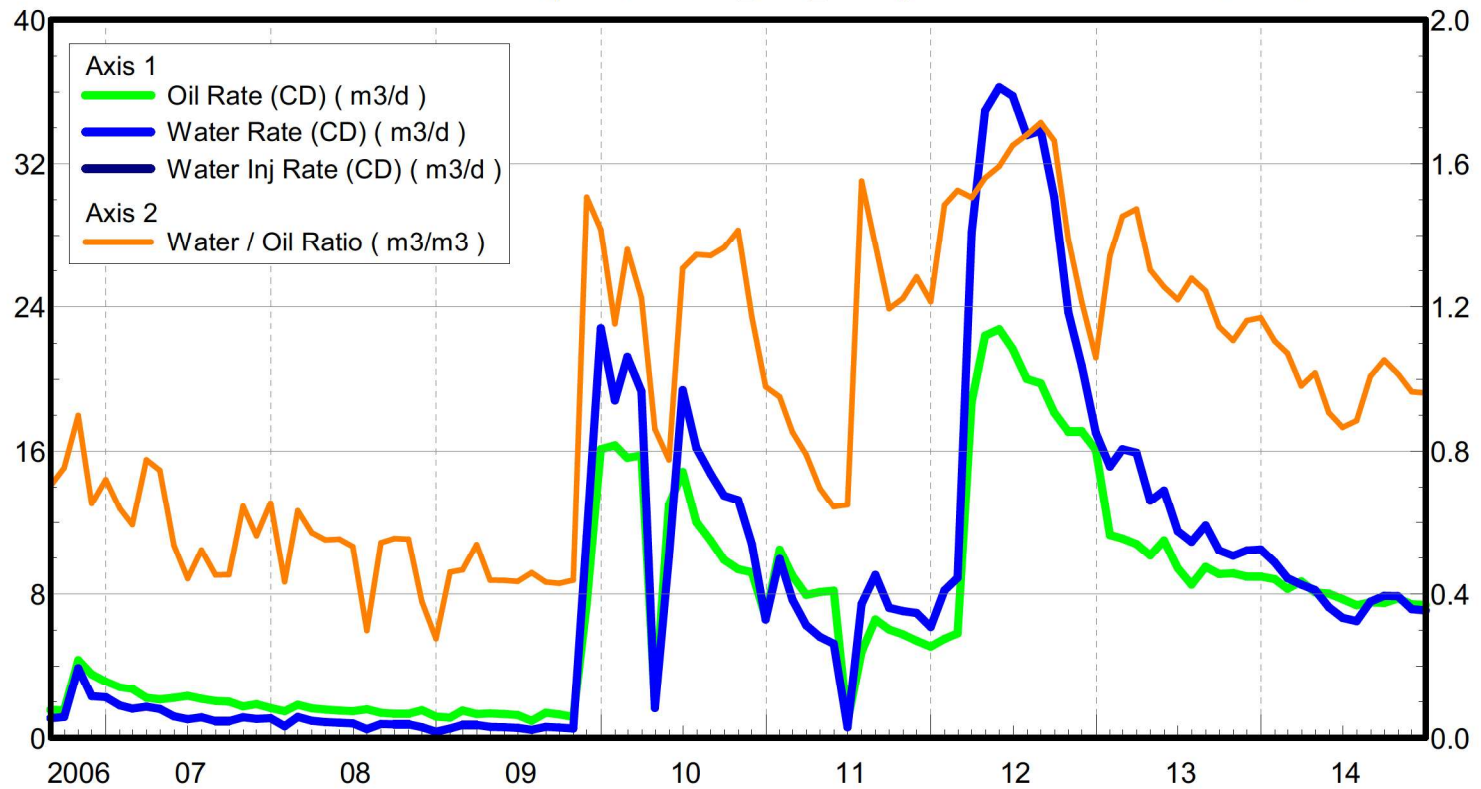




Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
6/30/2009	1.78	11.27	6.34		0.05	0.34	0.00	0.000	0.000
7/31/2009	4.76	27.80	5.84		0.20	1.20	0.00	0.000	0.000
8/31/2009	4.84	28.56	5.91		0.35	2.09	0.00	0.000	0.000
9/30/2009	4.78	27.91	5.84		0.49	2.92	0.00	0.000	0.000
10/31/2009	4.83	28.82	5.97		0.64	3.82	0.00	0.000	0.000
11/30/2009	3.84	23.49	6.12		0.76	4.52	0.00	0.000	0.000
12/31/2009	3.73	21.94	5.88		0.87	5.20	0.00	0.000	0.000
1/31/2010	7.65	26.36	3.44		1.11	6.02	0.00	0.000	0.000
2/28/2010	11.19	31.00	2.77		1.43	6.89	0.00	0.000	0.000
3/31/2010	8.66	27.43	3.17		1.69	7.74	0.00	0.000	0.000
4/30/2010	3.89	35.32	9.08		1.81	8.80	0.00	0.000	0.000
5/31/2010	3.79	35.60	9.39		1.93	9.90	0.00	0.000	0.000
6/30/2010	4.90	38.21	7.79		2.08	11.05	0.00	0.000	0.000
7/31/2010	13.92	49.91	3.58		2.51	12.59	0.00	0.000	0.000
8/31/2010	28.04	55.79	1.99		3.38	14.32	0.00	0.000	0.000
9/30/2010	26.94	59.74	2.22		4.18	16.11	0.00	0.000	0.000
10/31/2010	24.46	68.42	2.80		4.94	18.24	0.00	0.000	0.000
11/30/2010	23.65	60.97	2.58		5.65	20.06	0.00	0.000	0.000
12/31/2010	14.66	50.65	3.45		6.11	21.63	0.00	0.000	0.000
1/31/2011	14.76	57.58	3.90		6.56	23.42	0.00	0.000	0.000
2/28/2011	16.91	65.45	3.87		7.04	25.25	0.00	0.000	0.000
3/31/2011	15.77	67.15	4.26		7.53	27.33	0.00	0.000	0.000
4/30/2011	15.00	68.63	4.58		7.98	29.39	0.00	0.000	0.000
5/31/2011	14.20	73.28	5.16		8.42	31.66	0.00	0.000	0.000
6/30/2011	13.11	71.76	5.48		8.81	33.82	0.00	0.000	0.000
7/31/2011	12.50	54.90	4.39		9.20	35.52	0.00	0.000	0.000
8/31/2011	12.30	65.68	5.34		9.58	37.56	0.00	0.000	0.000
9/30/2011	10.90	57.74	5.30		9.91	39.29	0.00	0.000	0.000
10/31/2011	12.06	65.13	5.40		10.28	41.31	0.00	0.000	0.000
11/30/2011	12.84	66.98	5.22		10.66	43.32	0.00	0.000	0.000
12/31/2011	14.79	65.67	4.44		11.12	45.35	0.00	0.000	0.000
1/31/2012	11.05	62.48	5.66		11.47	47.29	0.00	0.000	0.000
2/29/2012	10.28	59.12	5.75		11.76	49.00	0.00	0.000	0.000
3/31/2012	9.71	44.97	4.63		12.06	50.40	0.00	0.000	0.000
4/30/2012	11.64	57.85	4.97		12.41	52.13	0.00	0.000	0.000
5/31/2012	14.07	54.95	3.91		12.85	53.84	0.00	0.000	0.000
6/30/2012	13.96	51.38	3.68		13.27	55.38	0.00	0.000	0.000
7/31/2012	11.92	55.86	4.69		13.64	57.11	0.00	0.000	0.000
8/31/2012	9.24	53.57	5.80		13.92	58.77	0.00	0.000	0.000
9/30/2012	8.52	49.72	5.84		14.18	60.26	0.00	0.000	0.000
10/31/2012	10.52	43.49	4.13		14.51	61.61	0.00	0.000	0.000
11/30/2012	11.15	44.91	4.03		14.84	62.96	0.00	0.000	0.000
12/31/2012	13.35	48.20	3.61		15.25	64.45	0.00	0.000	0.000
1/31/2013	12.80	51.52	4.02		15.65	66.05	0.00	0.000	0.000
2/28/2013	19.09	60.29	3.16		16.19	67.74	0.00	0.000	0.000
3/31/2013	16.57	62.27	3.76		16.70	69.67	0.00	0.000	0.000
4/30/2013	14.52	65.23	4.49		17.13	71.62	0.00	0.000	0.000
5/31/2013	13.78	59.87	4.34		17.56	73.48	0.00	0.000	0.000

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
6/30/2013	12.13	59.04	4.87		17.93	75.25	0.00	0.000	0.000
7/31/2013	10.25	54.62	5.33		18.24	76.94	0.00	0.000	0.000
8/31/2013	7.16	46.61	6.51		18.47	78.39	0.00	0.000	0.000
9/30/2013	9.24	50.15	5.43		18.74	79.89	0.00	0.000	0.000
10/31/2013	8.59	45.65	5.32		19.01	81.31	0.00	0.000	0.000
11/30/2013	7.63	41.96	5.50		19.24	82.57	0.00	0.000	0.000
12/31/2013	8.65	40.44	4.68		19.51	83.82	0.00	0.000	0.000
1/31/2014	7.65	34.61	4.53		19.74	84.89	0.00	0.000	0.000
2/28/2014	5.93	40.60	6.84		19.91	86.03	0.00	0.000	0.000
3/31/2014	5.50	41.71	7.58		20.08	87.32	0.00	0.000	0.000
4/30/2014	4.25	18.55	4.37		20.21	87.88	0.00	0.000	0.000
5/31/2014	4.29	21.94	5.12		20.34	88.56	0.00	0.000	0.000
6/30/2014	4.14	27.01	6.53		20.46	89.37	0.00	0.000	0.000
7/31/2014	4.80	27.87	5.80		20.61	90.23	0.00	0.000	0.000
8/31/2014	4.34	28.78	6.64		20.75	91.13	0.00	0.000	0.000
9/30/2014	3.95	18.75	4.75		20.87	91.69	0.00	0.000	0.000
10/31/2014	3.25	26.80	8.23		20.97	92.52	0.00	0.000	0.000
11/30/2014	4.60	26.21	5.69		21.11	93.31	0.00	0.000	0.000
12/31/2014	3.50	23.98	6.85		21.21	94.05	0.00	0.000	0.000

Oil Formation Vol Factor : 1.303  
 Water Formation Vol Factor : 1.00150 m3/m3  
 Water / Oil Ratio : 0.96 m3/m3  
 Pattern: 03/09-13-008-29  
 Inj Set: Sinclair Unit#12  
 June 03, 2015  
 Operator: Tundra\_O&G\_Prtshp  
 Oil Rate (CD) : 7.38 m3/d  
 Water Rate (CD) : 7.09 m3/d  
 Water Inj Rate (CD) : \* m3/d





Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
8/31/2006	1.54	1.08	0.70		0.05	0.03	0.00	0.000	0.000
9/30/2006	1.52	1.15	0.75		0.09	0.07	0.00	0.000	0.000
10/31/2006	4.35	3.90	0.90		0.23	0.19	0.00	0.000	0.000
11/30/2006	3.55	2.32	0.65		0.33	0.26	0.00	0.000	0.000
12/31/2006	3.15	2.26	0.72		0.43	0.33	0.00	0.000	0.000
1/31/2007	2.82	1.80	0.64		0.52	0.38	0.00	0.000	0.000
2/28/2007	2.71	1.61	0.59		0.60	0.43	0.00	0.000	0.000
3/31/2007	2.21	1.72	0.78		0.66	0.48	0.00	0.000	0.000
4/30/2007	2.13	1.59	0.75		0.73	0.53	0.00	0.000	0.000
5/31/2007	2.22	1.19	0.54		0.80	0.57	0.00	0.000	0.000
6/30/2007	2.32	1.03	0.44		0.87	0.60	0.00	0.000	0.000
7/31/2007	2.16	1.13	0.52		0.93	0.63	0.00	0.000	0.000
8/31/2007	2.04	0.92	0.45		1.00	0.66	0.00	0.000	0.000
9/30/2007	2.01	0.91	0.45		1.06	0.69	0.00	0.000	0.000
10/31/2007	1.75	1.13	0.64		1.11	0.72	0.00	0.000	0.000
11/30/2007	1.86	1.05	0.56		1.17	0.76	0.00	0.000	0.000
12/31/2007	1.65	1.08	0.65		1.22	0.79	0.00	0.000	0.000
1/31/2008	1.48	0.64	0.43		1.26	0.81	0.00	0.000	0.000
2/29/2008	1.83	1.16	0.63		1.32	0.84	0.00	0.000	0.000
3/31/2008	1.64	0.93	0.57		1.37	0.87	0.00	0.000	0.000
4/30/2008	1.56	0.86	0.55		1.42	0.90	0.00	0.000	0.000
5/31/2008	1.51	0.83	0.55		1.46	0.92	0.00	0.000	0.000
6/30/2008	1.48	0.79	0.53		1.51	0.95	0.00	0.000	0.000
7/31/2008	1.59	0.47	0.30		1.56	0.96	0.00	0.000	0.000
8/31/2008	1.39	0.75	0.54		1.60	0.98	0.00	0.000	0.000
9/30/2008	1.33	0.74	0.55		1.64	1.01	0.00	0.000	0.000
10/31/2008	1.33	0.74	0.55		1.68	1.03	0.00	0.000	0.000
11/30/2008	1.53	0.58	0.38		1.73	1.05	0.00	0.000	0.000
12/31/2008	1.18	0.33	0.28		1.76	1.06	0.00	0.000	0.000
1/31/2009	1.11	0.51	0.46		1.80	1.07	0.00	0.000	0.000
2/28/2009	1.50	0.70	0.47		1.84	1.09	0.00	0.000	0.000
3/31/2009	1.31	0.70	0.54		1.88	1.11	0.00	0.000	0.000
4/30/2009	1.35	0.59	0.44		1.92	1.13	0.00	0.000	0.000
5/31/2009	1.31	0.57	0.44		1.96	1.15	0.00	0.000	0.000
6/30/2009	1.27	0.55	0.43		2.00	1.17	0.00	0.000	0.000
7/31/2009	0.94	0.43	0.46		2.03	1.18	0.00	0.000	0.000
8/31/2009	1.39	0.60	0.43		2.07	1.20	0.00	0.000	0.000
9/30/2009	1.30	0.56	0.43		2.11	1.21	0.00	0.000	0.000
10/31/2009	1.15	0.51	0.44		2.15	1.23	0.00	0.000	0.000
11/30/2009	7.45	11.23	1.51		2.37	1.57	0.00	0.000	0.000
12/31/2009	16.10	22.82	1.42		2.87	2.27	0.00	0.000	0.000
1/31/2010	16.30	18.79	1.15		3.37	2.86	0.00	0.000	0.000
2/28/2010	15.60	21.22	1.36		3.81	3.45	0.00	0.000	0.000
3/31/2010	15.75	19.30	1.23		4.30	4.05	0.00	0.000	0.000
4/30/2010	1.92	1.65	0.86		4.36	4.10	0.00	0.000	0.000
5/31/2010	12.99	10.07	0.78		4.76	4.41	0.00	0.000	0.000
6/30/2010	14.82	19.37	1.31		5.20	4.99	0.00	0.000	0.000
7/31/2010	12.00	16.14	1.35		5.58	5.49	0.00	0.000	0.000

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
8/31/2010	10.97	14.73	1.34		5.92	5.95	0.00	0.000	0.000
9/30/2010	9.89	13.50	1.37		6.21	6.35	0.00	0.000	0.000
10/31/2010	9.37	13.25	1.41		6.50	6.77	0.00	0.000	0.000
11/30/2010	9.19	10.77	1.17		6.78	7.09	0.00	0.000	0.000
12/31/2010	6.74	6.59	0.98		6.99	7.29	0.00	0.000	0.000
1/31/2011	10.46	9.94	0.95		7.31	7.60	0.00	0.000	0.000
2/28/2011	9.00	7.67	0.85		7.56	7.82	0.00	0.000	0.000
3/31/2011	7.95	6.27	0.79		7.81	8.01	0.00	0.000	0.000
4/30/2011	8.11	5.63	0.69		8.05	8.18	0.00	0.000	0.000
5/31/2011	8.17	5.26	0.64		8.31	8.34	0.00	0.000	0.000
6/30/2011	0.90	0.58	0.65		8.33	8.36	0.00	0.000	0.000
7/31/2011	4.80	7.45	1.55		8.48	8.59	0.00	0.000	0.000
8/31/2011	6.59	9.05	1.37		8.69	8.87	0.00	0.000	0.000
9/30/2011	6.04	7.22	1.20		8.87	9.09	0.00	0.000	0.000
10/31/2011	5.76	7.05	1.22		9.05	9.31	0.00	0.000	0.000
11/30/2011	5.41	6.94	1.28		9.21	9.51	0.00	0.000	0.000
12/31/2011	5.09	6.19	1.21		9.37	9.71	0.00	0.000	0.000
1/31/2012	5.52	8.20	1.49		9.54	9.96	0.00	0.000	0.000
2/29/2012	5.82	8.89	1.53		9.71	10.22	0.00	0.000	0.000
3/31/2012	18.72	28.19	1.51		10.29	11.09	0.00	0.000	0.000
4/30/2012	22.40	34.95	1.56		10.96	12.14	0.00	0.000	0.000
5/31/2012	22.76	36.25	1.59		11.66	13.26	0.00	0.000	0.000
6/30/2012	21.67	35.77	1.65		12.31	14.34	0.00	0.000	0.000
7/31/2012	19.99	33.58	1.68		12.93	15.38	0.00	0.000	0.000
8/31/2012	19.75	33.83	1.71		13.55	16.43	0.00	0.000	0.000
9/30/2012	18.12	30.14	1.66		14.09	17.33	0.00	0.000	0.000
10/31/2012	17.06	23.70	1.39		14.62	18.07	0.00	0.000	0.000
11/30/2012	17.07	20.72	1.21		15.13	18.69	0.00	0.000	0.000
12/31/2012	16.05	17.00	1.06		15.63	19.22	0.00	0.000	0.000
1/31/2013	11.28	15.14	1.34		15.98	19.68	0.00	0.000	0.000
2/28/2013	11.07	16.10	1.45		16.29	20.14	0.00	0.000	0.000
3/31/2013	10.79	15.90	1.47		16.62	20.63	0.00	0.000	0.000
4/30/2013	10.13	13.20	1.30		16.93	21.02	0.00	0.000	0.000
5/31/2013	10.97	13.78	1.26		17.27	21.45	0.00	0.000	0.000
6/30/2013	9.42	11.49	1.22		17.55	21.80	0.00	0.000	0.000
7/31/2013	8.52	10.90	1.28		17.81	22.13	0.00	0.000	0.000
8/31/2013	9.49	11.81	1.24		18.11	22.50	0.00	0.000	0.000
9/30/2013	9.10	10.42	1.14		18.38	22.81	0.00	0.000	0.000
10/31/2013	9.14	10.12	1.11		18.66	23.13	0.00	0.000	0.000
11/30/2013	8.96	10.41	1.16		18.93	23.44	0.00	0.000	0.000
12/31/2013	8.96	10.48	1.17		19.21	23.76	0.00	0.000	0.000
1/31/2014	8.82	9.74	1.10		19.48	24.07	0.00	0.000	0.000
2/28/2014	8.28	8.86	1.07		19.72	24.31	0.00	0.000	0.000
3/31/2014	8.69	8.52	0.98		19.99	24.58	0.00	0.000	0.000
4/30/2014	8.08	8.21	1.02		20.23	24.82	0.00	0.000	0.000
5/31/2014	8.02	7.26	0.91		20.48	25.05	0.00	0.000	0.000
6/30/2014	7.72	6.68	0.86		20.71	25.25	0.00	0.000	0.000
7/31/2014	7.36	6.51	0.88		20.94	25.45	0.00	0.000	0.000



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8/31/2014	7.53	7.58	1.01		21.17	25.69	0.00	0.000	0.000
9/30/2014	7.49	7.88	1.05		21.39	25.92	0.00	0.000	0.000
10/31/2014	7.75	7.86	1.01		21.63	26.17	0.00	0.000	0.000
11/30/2014	7.43	7.16	0.96		21.86	26.38	0.00	0.000	0.000
12/31/2014	7.38	7.09	0.96		22.09	26.60	0.00	0.000	0.000