

EWART UNIT NO. 6

WATERFLOOD EOR PROJECT

ANNUAL REPORT FOR 2016

April 21, 2017

Tundra Oil and Gas Partnership

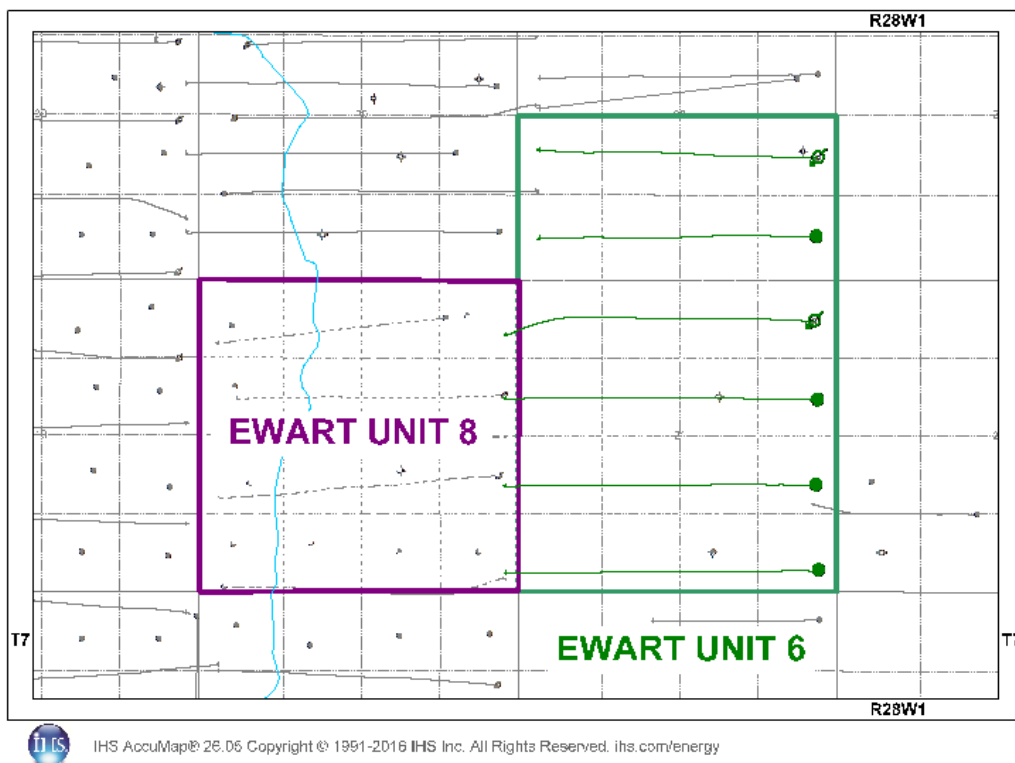
Table of Contents

Introduction	3.
Discussion	3.
Production History	3.
Waterflood Development Plan	5.
Waterflood EOR Operating Strategy and Performance	6.
Water Source and Quality	6.
Injection Wellhead Pressures	6.
Reservoir Pressure	6.
Well Servicing	6.
Waterflood Performance Discussion	6.
List of Appendices	7.
Appendix A: Well Name and Well Status	
Appendix B: Injection Pattern Summary	
Appendix C: Average Monthly Injection Pressure Summary	
Appendix D: Injector Pattern Production/Injection Rates, Cumulative and VRR Plots	

INTRODUCTION

Ewart Unit No. 6 Enhanced Oil Recovery (EOR) Waterflood Project was approved under Waterflood Order No. 42, effective January 1, 2015 with Tundra Oil and Gas (Tundra) as Operator. The EOR Unit area, outlined in green, contains 4 producing horizontal wells and 2 water injection wells in 24 LSDs in Township 7 Range 28 W1 as shown in Figure 1. Well list and well status is available in Appendix A.

Figure 1: Ewart Unit No. 6 Area Outline



In accordance with Section 73 of the Manitoba Drilling and Production Regulation, Tundra hereby submits the following 2016 Annual Progress Report for Ewart Unit No. 6.

DISCUSSION

Production History

For the wells included in Ewart Unit No. 6, production started in August 2009 with the 02/08-28-007-28W1 well. Average oil production peaked at 10.39 m³/d per well in March

2012. This production was coming from 6 wells and totaled 62.36 m³/d for the Unit. In December 2016, the Unit was producing 9.34 m³/d of oil and 12.10 m³/d of water. Water injection commenced in Ewart Unit No. 6 in April 2015. The rates and WOR are presented in Figure 2.

Figure 2: Ewart Unit No. 6 Production/Injection Rates and WOR vs Time

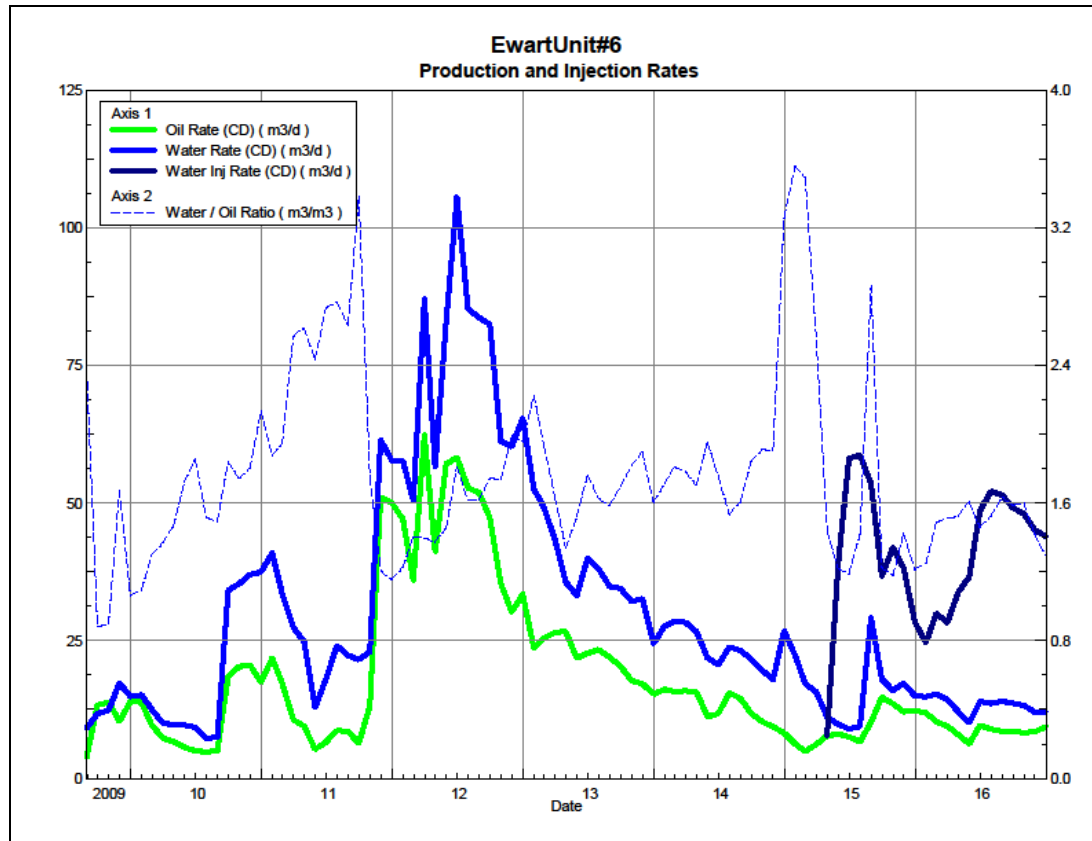
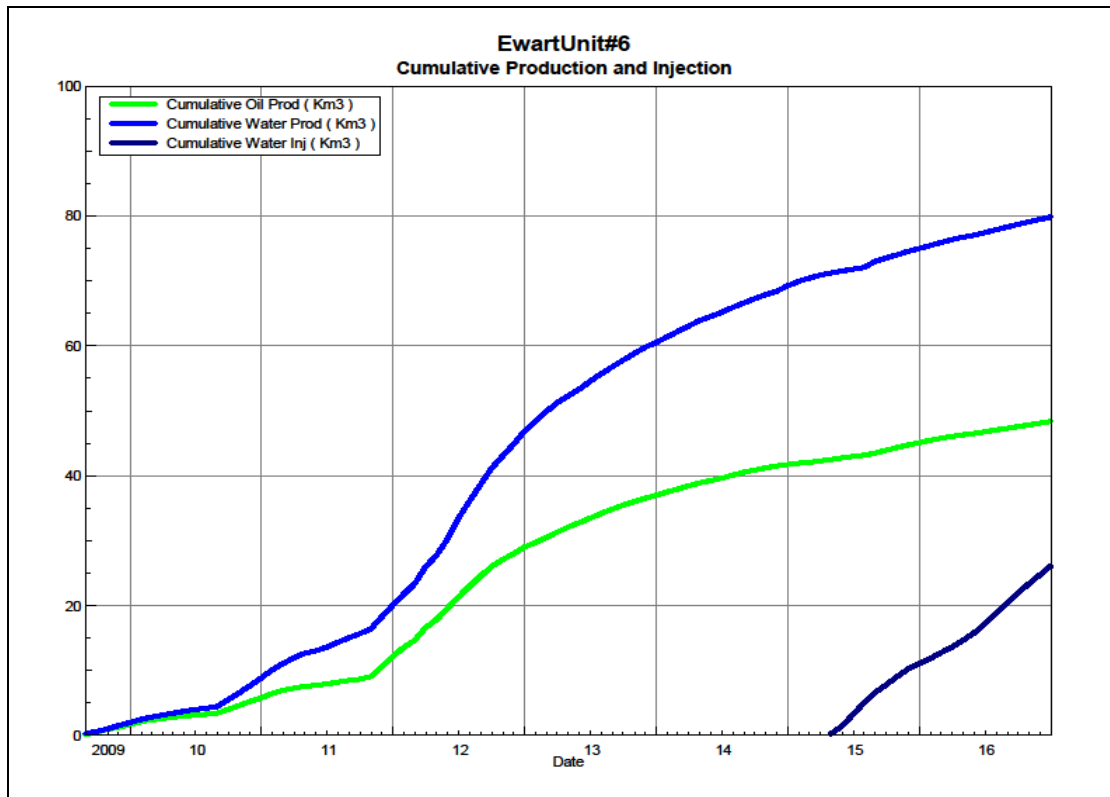


Figure 3 shows the cumulative production for Ewart Unit No. 6 to the end of December 2016 as 48.38 e³m³ of oil, and 79.86 e³m³ of water, representing a 7.4% recovery factor of the OOIP. The cumulative water injected is 26.09 e³m³.

Figure 3: Ewart Unit No. 6 Cumulative Oil, Water and Water Injected vs Time



Waterflood Development Plan

Ewart Unit No. 6 Waterflood (WF) Development Plan

Ewart Unit No. 6 is still in the development phase at the end of 2016. Three (3) of the existing horizontal producing will be converted to injection wells within Ewart Unit No. 6 to complete waterflood patterns with effective 40 acre spacing. Ewart Unit No. 6 will be the first horizontal line drive at 40 acre spacing in the Daly Sinclair Field. All of the horizontal wells are fracture stimulated to improve the injection rates. In 2015, Tundra converted the 00/16-21 and 02/08-28-007-28W1 producers to injectors. Tundra anticipates converting the 00/08-21 producer to an injector in Q3 2017. 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 Ewart Unit No. 6 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

Injection started in this Unit in April 2015. The average monthly wellhead injection pressure for each injector is summarized in Appendix C. Since injection in this Unit is still in the early stages, the injectors 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 Ewart Unit No. 6, no reservoir pressure measurements were taken in 2016.

Well Servicing

No maintenance was required on the 6 wells in Ewart Unit No. 6 in 2016.

Waterflood Performance Discussion

At the end of 2016, Ewart Unit No. 6 waterflood area had 2 injection patterns in place. The waterflood area had three (3) proposed horizontal injection wells drilled and put on production. Water injection began in April 2015, after the conversion of the 00/16-21 and 02/08-28 producers to injectors. Tundra currently plans to produce the 00/08-21 producer until the latter part of 2017 and then convert it to an injector.

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: Injection Pattern Summary

Appendix C: Average Monthly Injection Pressure Summary

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

00/08-21-007-28W1

00/16-21-007-28W1

02/08-28-007-28W1

APPENDIX A

<i>UWI</i>	<i>Surface Hole Location</i>	<i>License Number</i>	<i>Type</i>	<i>Status</i>
100/01-21-007-28W1/0	100/01-20-007-28W1/0	008152	Horizontal	Capable of OIL Prod
100/08-21-007-28W1/0	100/08-20-007-28W1/0	008513	Horizontal	Capable of OIL Prod
100/09-21-007-28W1/0	100/09-20-007-28W1/0	008154	Horizontal	Capable of OIL Prod
100/16-21-007-28W1/0	100/16-20-007-28W1/0	008500	Horizontal	WTR Injection
100/01-28-007-28W1/0	100/04-28-007-28W1/0	007389	Horizontal	Capable of OIL Prod
102/08-28-007-28W1/0	102/05-28-007-28W1/0	006971	Horizontal	WTR Injection

Appendix B

Ewart Unit No. 6 Injection Pattern Summary as of December 2016

Pattern Name	Injector BH Location (007-28W1)	Injector Surf. Location (007-28W1)	Status	No. of Supported Wells	Supported Wells (007-28W1)	Allocation Factor	Pattern Prod Start Month	Inj Start Month	Oil Rate (m³/d)	Water Rate (m³/d)	WOR (m³/m³)	Water Injection (m³/d)	Cum Oil (E³m³)	Cum Water (E³m³)	Cum Inj Water (E³m³)	Monthly VRR	Cum VRR
00/08-21-007-28Inj	00/08-21	00/08-20	Capable of OIL Prod	2	01-21, 09-21	0.5	Oct 2011	-	4.6	5.9	1.27	-	20.4	23.4	0.0	0.000	0.000
00/16-21-007-28Inj	00/16-21	00/16-20	WTR Injection	2	09-21, 01-28	0.5	Aug 2010	Apr 2015	1.6	2.7	1.67	15.1	10.9	27.3	12.4	3.416	0.317
02/08-28-007-28Inj	02/08-28	02/05-28	WTR Injection	2	01-28, 09-28	0.5	Aug 2009	Apr 2015	1.1	4.9	4.41	28.87	11.8	33.8	13.7	4.746	0.296

Appendix C

Average Monthly Injection Pressure (kPag)

Month	100/16-21	102/08-28
Jan-15	-	-
Feb-15	-	-
Mar-15	-	-
Apr-15	105	-28
May-15	195	-79
Jun-15	-85	1019
Jul-15	1020	1694
Aug-15	2687	2260
Sep-15	4361	2449
Oct-15	3486	2881
Nov-15	3459	3256
Dec-15	3465	3453
Jan-16	3485	3492
Feb-16	3728	3717
Mar-16	3992	3750
Apr-16	4801	3846
May-16	5049	4400
Jun-16	5680	4969
Jul-16	6089	5113
Aug-16	6093	5551
Sep-16	6047	5667
Oct-16	6195	5771
Nov-16	6224	5841
Dec-16	6029	5989

Appendix D

Rates and VRR Plots

Oil Formation Vol. Factor : 1.0015 m3/m3
Pattern: 00/08-21-007-28Inj Set: EwartUnit#6

Water Formation Vol Factor : 1.0015 m3/m3

Water / Oil Ratio : 1.28 m3/m3

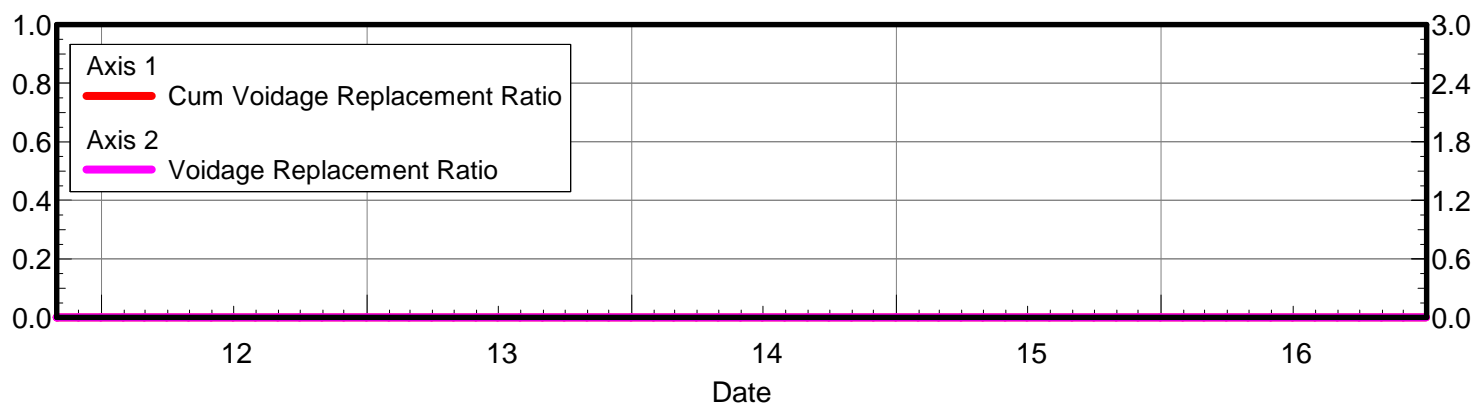
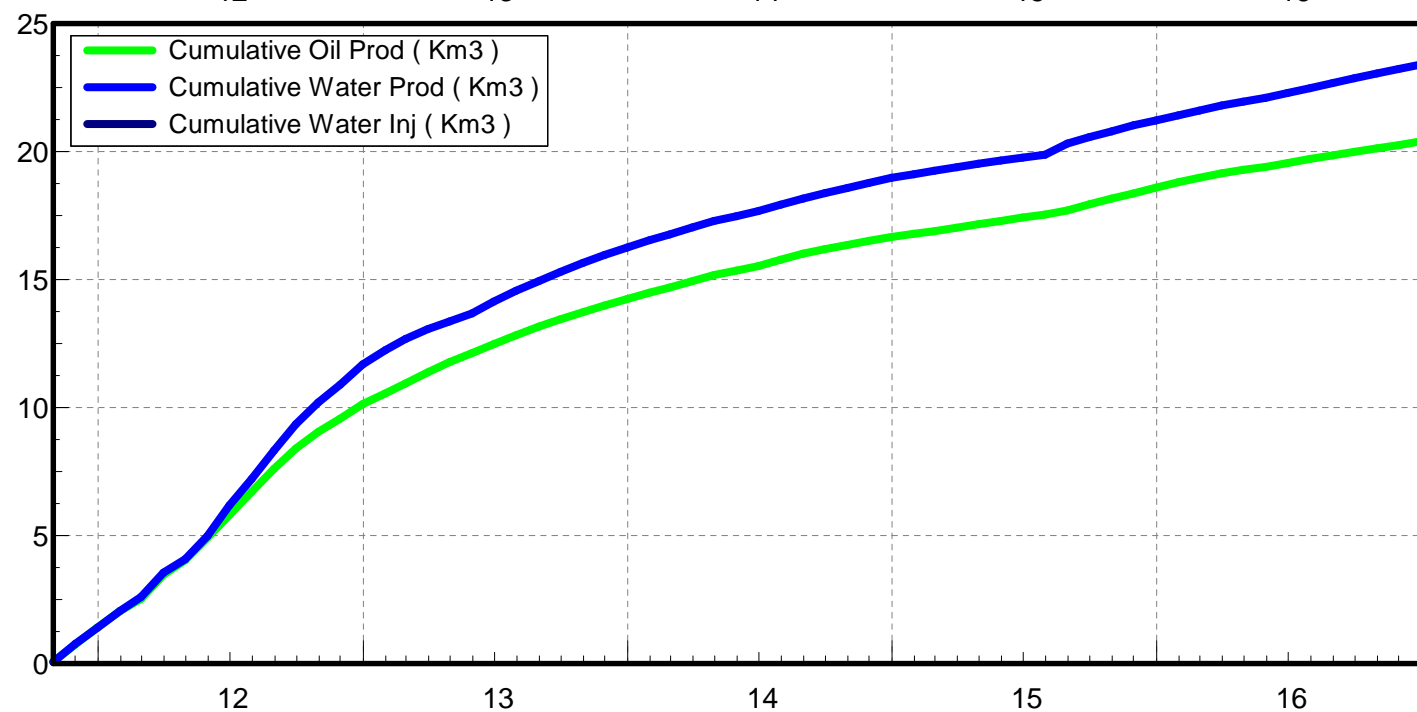
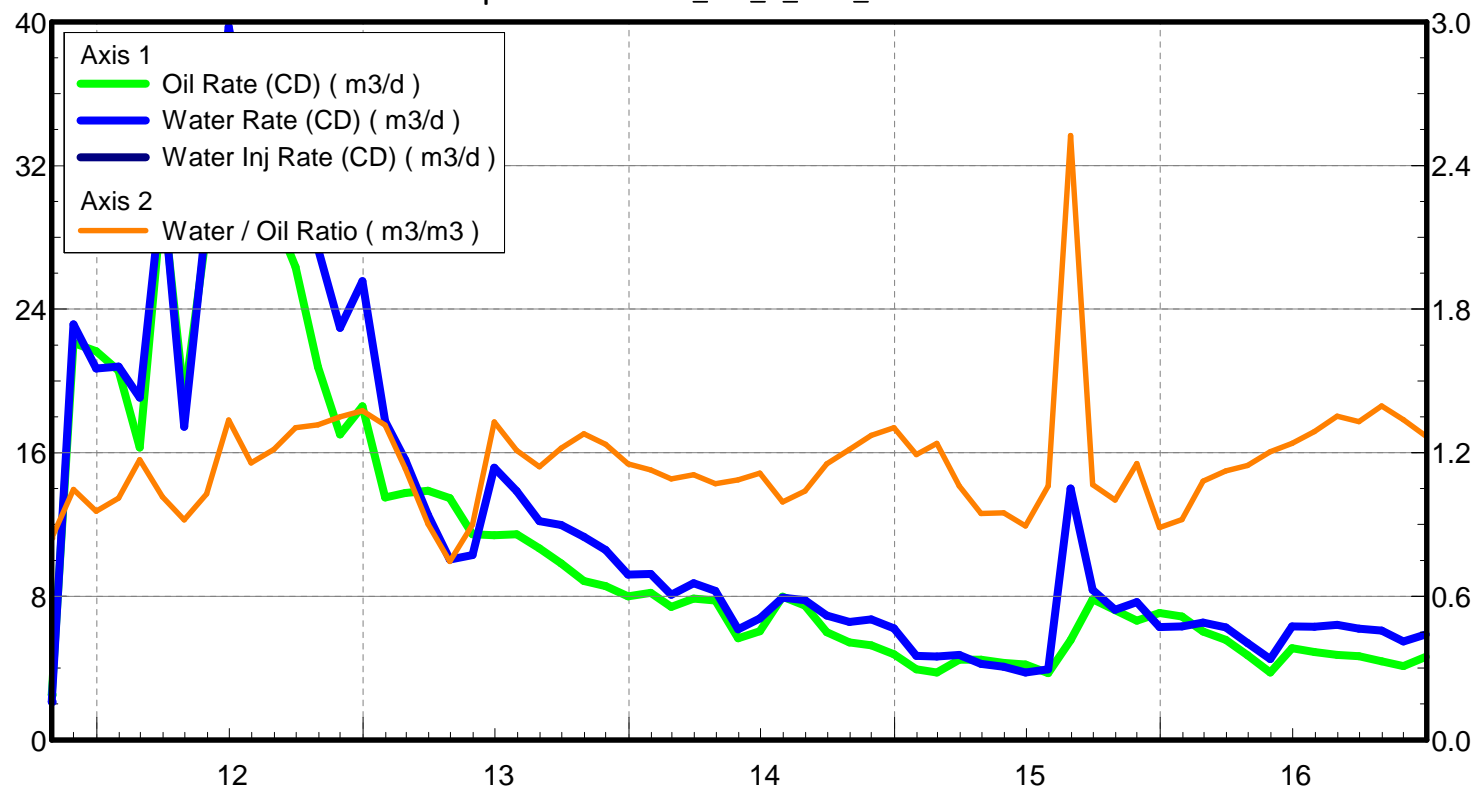
April 21, 2017

Operator: TUNDRA_OIL_&_GAS_LIMITED

Oil Rate (CD) : 4.27 m3/d

Water Rate (CD) : 5.48 m3/d

Water Inj Rate (CD) : * m3/d



Oil Formation Vol. Factor : 1.0115 m3/m3
Water Formation Vol Factor : 1.0015 m3/m3
Water / Oil Ratio : 1.83 m3/m3
Operator: TUNDRA_OIL_&_GAS_LIMITED

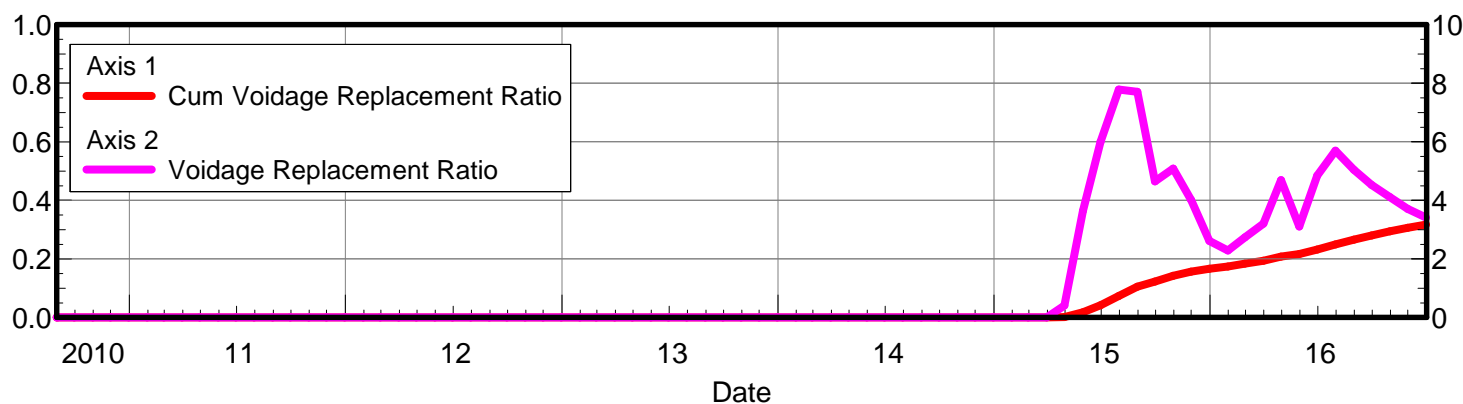
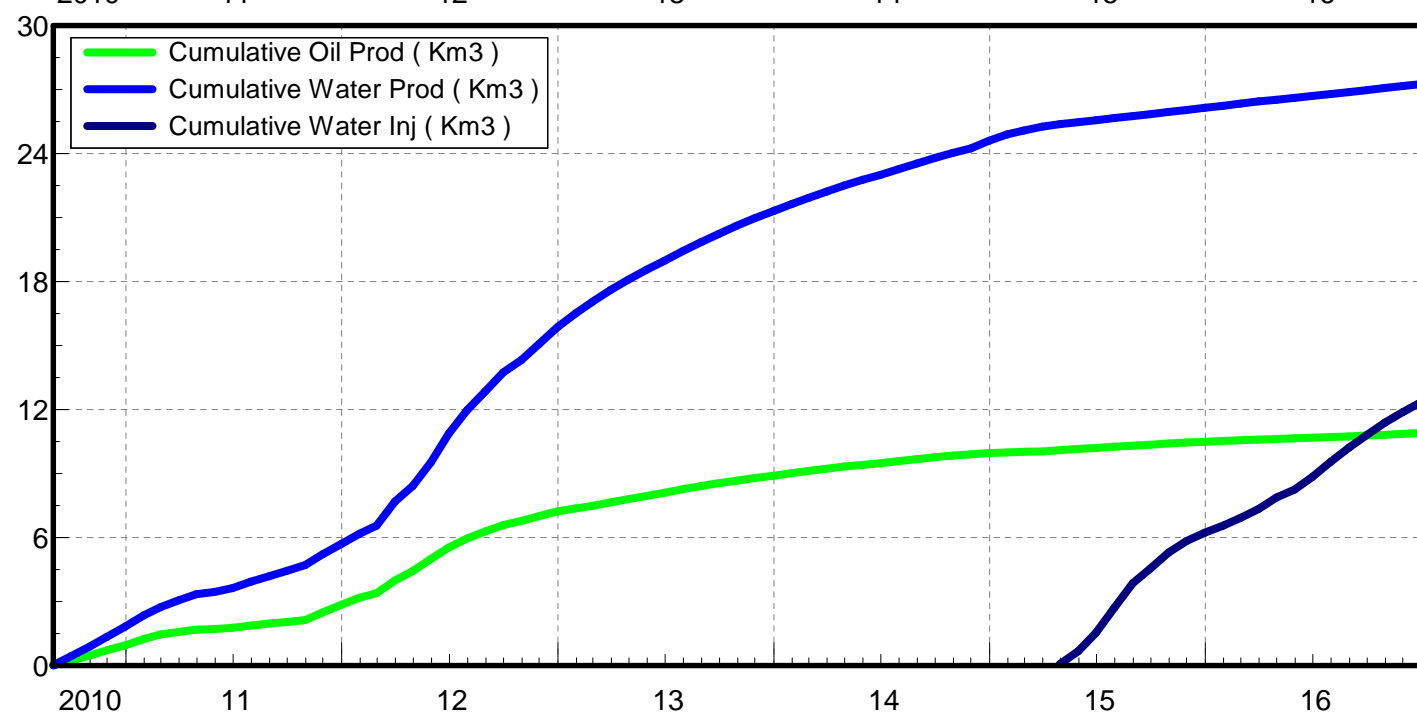
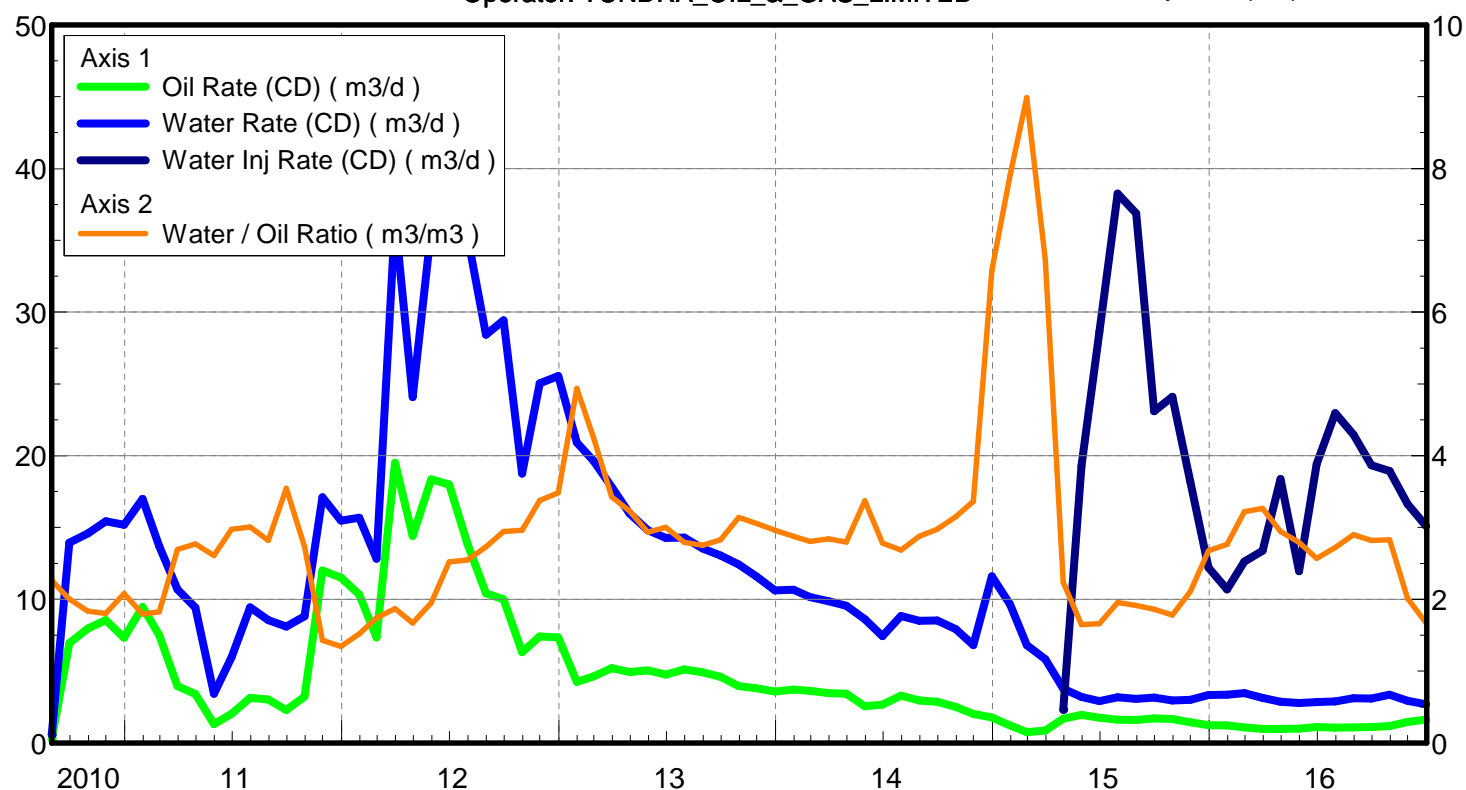
Pattern: 00/16-21-007-28Inj Set: EwartUnit#6

April 21, 2017

Oil Rate (CD) : 1.35 m3/d

Water Rate (CD) : 2.46 m3/d

Water Inj Rate (CD) : 13.65 m3/d



Oil Formation Vol. Factor : 1.0015 m3/m3
Water Formation Vol Factor : 1.0015 m3/m3
Water / Oil Ratio : 5.70 m3/m3
Operator: TUNDRA_OIL_&_GAS_LIMITED

Pattern: 02/08-28-007-28Inj Set: EwartUnit#6

Oil Rate (CD) : 1.07 m3/d

Water Rate (CD) : 6.12 m3/d

Water Inj Rate (CD) : 29.29 m3/d

April 21, 2017

