

EWART UNIT NO. 4
WATERFLOOD EOR PROJECT
ANNUAL REPORT FOR 2014

March 23, 2015

Tundra Oil and Gas Partnership

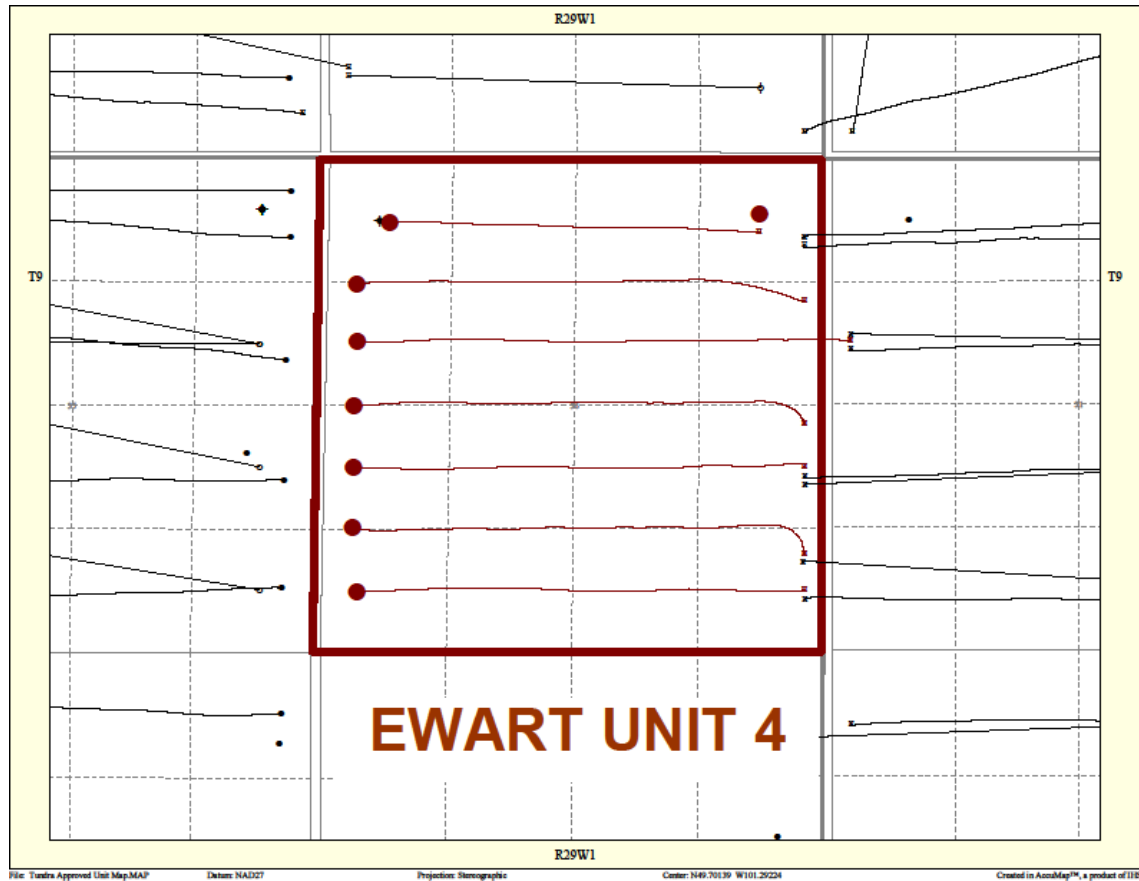
Table of Contents

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: Ewart Unit No. 4 Well Name and Status Table	
Appendix B: Ewart Unit No. 4 Injection Pattern Summary	
Appendix C: Ewart Unit No. 4 Reservoir Pressure Summary	
Appendix D: Injector Pattern Production/Injection Rates, Cumulative and VRR Plots for the following injectors:	
102/05-36-008-29W1	
102/12-36-008-29W1	
103/12-36-008-29W1	

INTRODUCTION

Ewart Unit No. 4 was approved on August 1, 2013 with Tundra Oil and Gas (Tundra) as Operator. The Unit area contains 1 vertical and 7 horizontal producing wells in 16 LSDs in Township 8 Range 29 W1 as shown in the figure below.

Figure 1: Ewart Unit No. 4 Area Outline



In accordance with Section 73 of the Manitoba Drilling and Production Regulation, Tundra hereby submits the following 2014 Annual Progress Report for Ewart Unit No. 4.

DISCUSSION

Production History

For the wells included in Ewart Unit No. 4, production started in October 2006 with the 00/16-36-008-29W1 well. Average oil production peaked at 3.08 m³/d per well in January of 2012. This production was coming from 3 wells and totaled 24.64 m³/d for the whole

Unit. In December 2014, the Unit was producing 7.75 m³/d of oil and 22.60 m³/d of water. There is currently no water injection in Ewart Unit No. 4. The rates and WOR are presented in Figure 2.

Figure 2: Ewart Unit No. 4 Production/Injection Rates and WOR vs Time

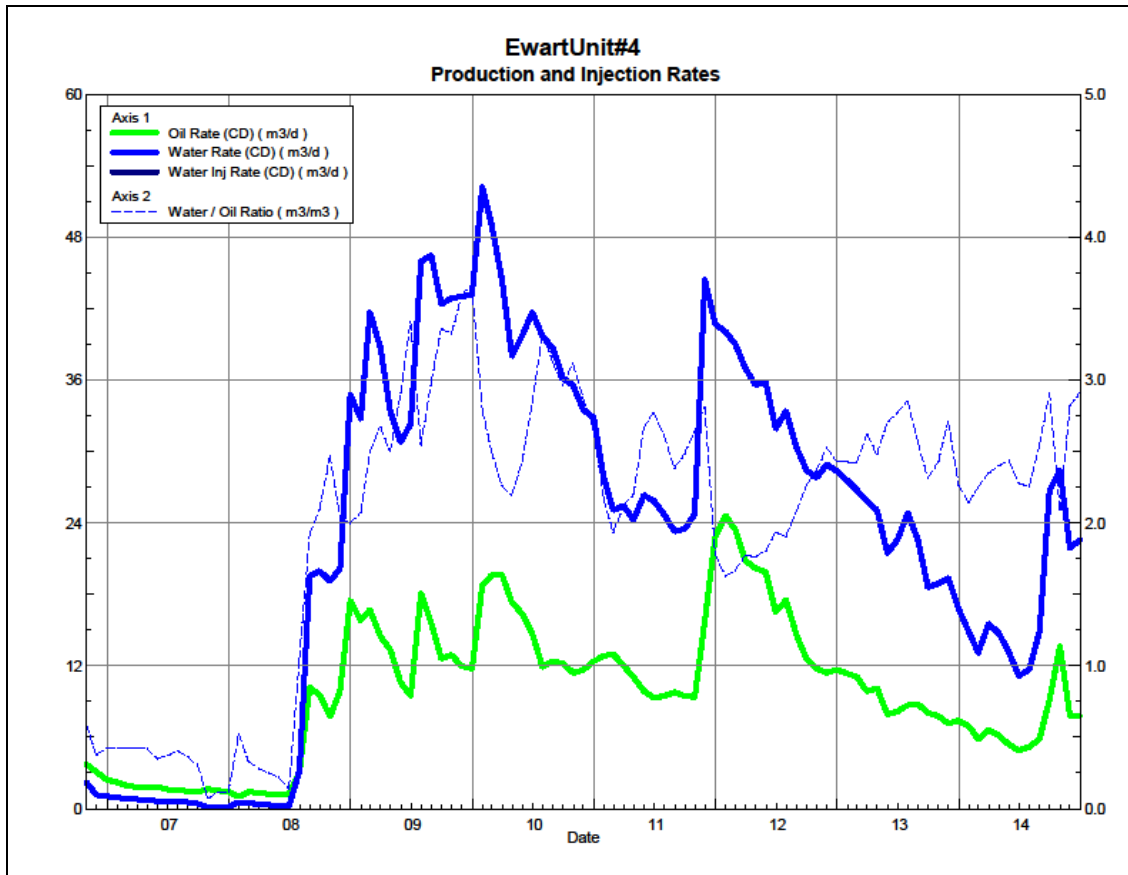
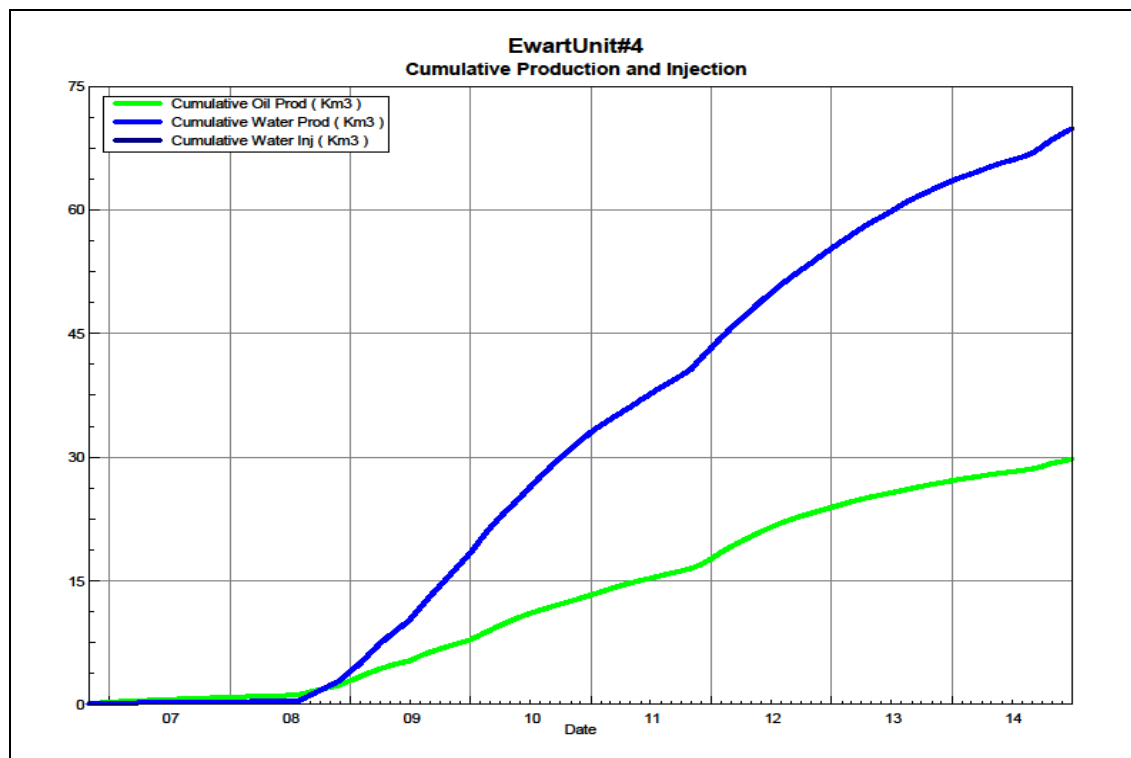


Figure 3 shows the cumulative production for Ewart Unit No. 4 to the end of December 2014 as 29.75 E³m³ of oil, and 69.9 E³m³ of water, representing a 5.6% recovery factor of the OOIP.

Figure 3: Ewart Unit No. 4 Cumulative Oil, Water and Water Injected vs Time



Waterflood Development Plan

Ewart Unit No. 4 Waterflood (WF) Development Plan

Ewart Unit No. 4 is still in the development phase at the end of 2014. The three (3) proposed horizontal injection wells were drilled in 2011 between the existing horizontal producing wells, completing an effective 20 acre line drive waterflood pattern. In November 2011, the proposed injectors were put on production. In order to maximize recovery from this Unit, Tundra has chosen to produce the future injectors for a short period of time to clean-up the reservoir near the wellbores. All horizontal wells are fracture stimulated to improve the injection rates. Tundra is planning to convert the 02/12-36 and 03/12-36 producers to injectors in Q2 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 Ewart Unit No. 4 will be sourced from the 16-32-007-29W1 well (Lodgepole formation). The water is treated at the 03-04-008-29W1 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 Ewart Unit No. 4.

Reservoir Pressure

Where practical, Tundra is committed to collecting pressure data from newly drilled injection wells. For Ewart Unit No. 4, pressure data is currently available for the 02/05-36, 02/12-36 and 03/12-36-008-29W1 locations. A summary table is presented in 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 8 wells in Ewart Unit No. 4 in 2014.

Waterflood Performance Discussion

At the end of 2014, there is currently no water injection in Ewart Unit No. 4. The waterflood area had 3 injection wells drilled in 2011 that are currently on production. Water injection is anticipated to begin in 2015, after the expected conversion of the 02/12-36 and 03/12-36 producers to injectors.

A summary table of the injector pattern(s) is presented in Appendix B. Plots of the production are presented in Appendix D for each of the injection pattern(s).

List of Appendices

Appendix A: Ewart Unit No. 4 Well Name and Status Table

Appendix B: Ewart Unit No. 4 Injection Pattern Summary

Appendix C: Ewart Unit No. 4 Reservoir Pressure Summary

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

102/05-36-008-29W1

102/12-36-008-29W1

103/12-36-008-29W1

Appendix A

UWI	Surface Location	Well Status
00/04-36-008-29W1/0	01-36-008-29W1	Capable of OIL Prod
00/05-36-008-29W1/0	08-36-008-29W1	Capable of OIL Prod
02/05-36-008-29W1/0	02/01-36-008-29W1	Capable of OIL Prod
00/12-36-008-29W1/0	12-31-008-28W1	Capable of OIL Prod
02/12-36-008-29W1/0	02/08-36-008-29W1	Capable of OIL Prod
03/12-36-008-29W1/0	03/09-36-008-29W1	Capable of OIL Prod
02/13-36-008-29W1/0	16-36-008-29W1	Capable of OIL Prod
00/16-36-008-29W1/0	16-36-008-29W1	Capable of OIL Prod

Appendix B

Ewart Unit No. 4 Injection Pattern Summary as of December 2013

Pattern Name	Injector BH Location (008-29W1)	Injector Surf. Location (008-29W1)	Status	No. of Supported Wells	Supported Wells (008-29W1)	Allocation Factor	Pattern Prod Start Month	Injector Start Month	Oil Rate (m ³ /d)	Water Rate (m ³ /d)	WOR (m ³ /m ³)	Water Injection (m ³ /d)	Cum Oil (E ³ /m ³)	Cum Water (E ³ /m ³)	Cum Inj Water (E ³ /m ³)	Monthly VRR	Cum VRR
02/05-36-008-29W1 Injector	02/05-36	02/01-36	Capable of Oil Production	2	04-36, 05-36	0.5	Nov 2008	-	1.7	8.4	4.98		7.1	20.8	0.0	0.0	0.00
02/12-36-008-29W1 Injector	02/12-36	02/08-36	Capable of Oil Production	2	05-36, 12-36	0.5	Jun 2009	-	1.5	8.2	5.46		6.9	16.7	0.0	0.0	0.00
03/12-36-008-29W1 Injector	03/12-36	03/09-36	Capable of Oil Production	3	12-36, 02/13-36, 16-36	0.5	Oct 2006	-	2.8	3.5	1.26		9.4	15.0	0.0	0.0	0.00

APPENDIX C

Ewart Unit No. 4 - Pressure Summary

Location	Test Date	Final Pressure (kPaa)	MPP (mTVD)	KB	Datum Depth	Gradient	Pressure @ -450 masl
102/05-36-008-29W1/00	Oct 5 - 25, 2011	6854.4	911.7	517.5	-450	8.25	7314
102/12-36-008-29W1/00	Sep 17 - 26, 2011	7060.8	911.7	517.0	-450	8.25	7517
103/12-36-008-29W1/00	Sep 26 - Oct 7, 2011	5986.4	910.9	515.6	-450	8.25	6437

Appendix D

Rates and VRR Plots

Pattern: 02/05-36-008-29Inj Set: EwartUnit#4

Oil Formation Vol Factor : 1.07100 m3/m3

Water Formation Vol Factor : 1.00150 m3/m3

Water / Oil Ratio : 4.98 m3/m3

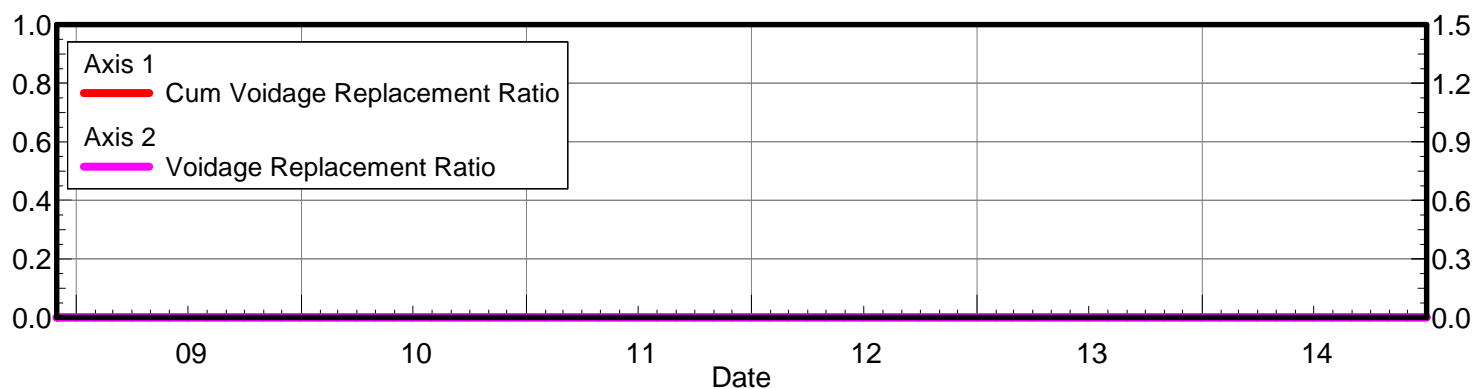
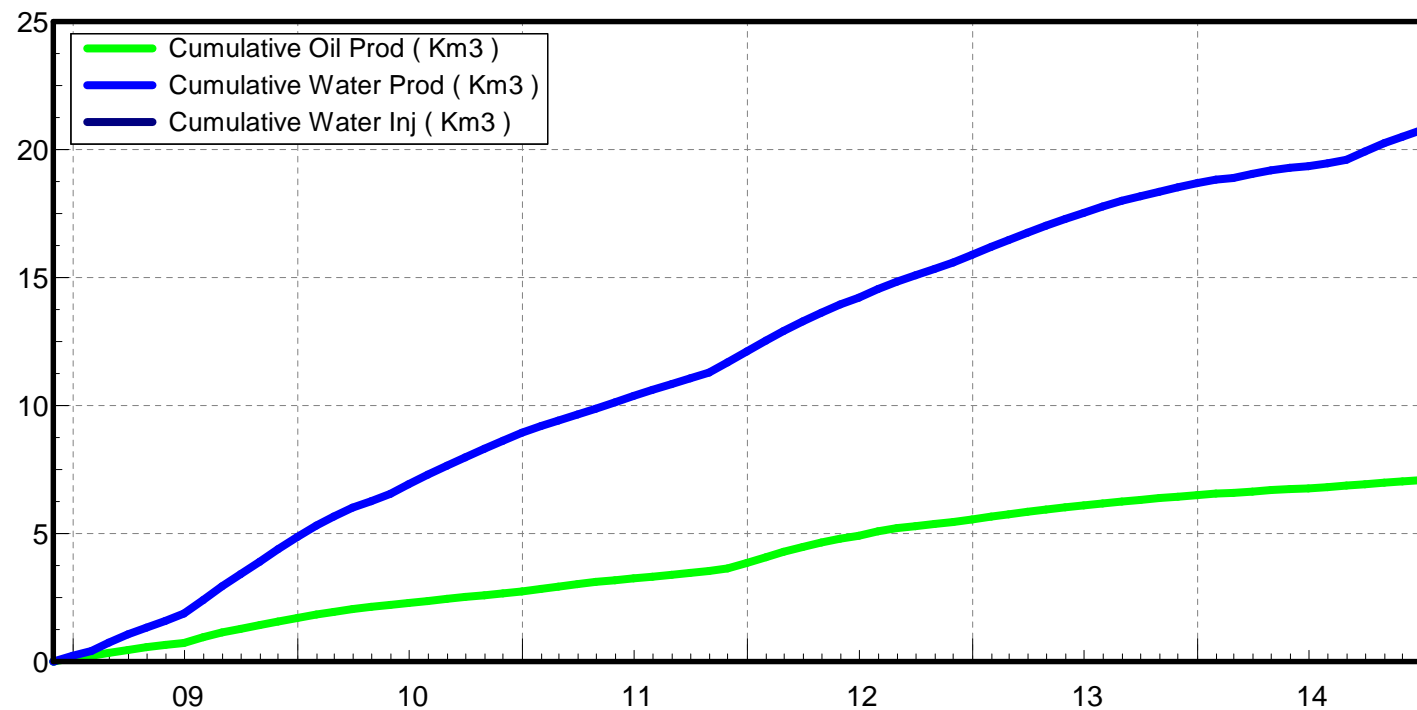
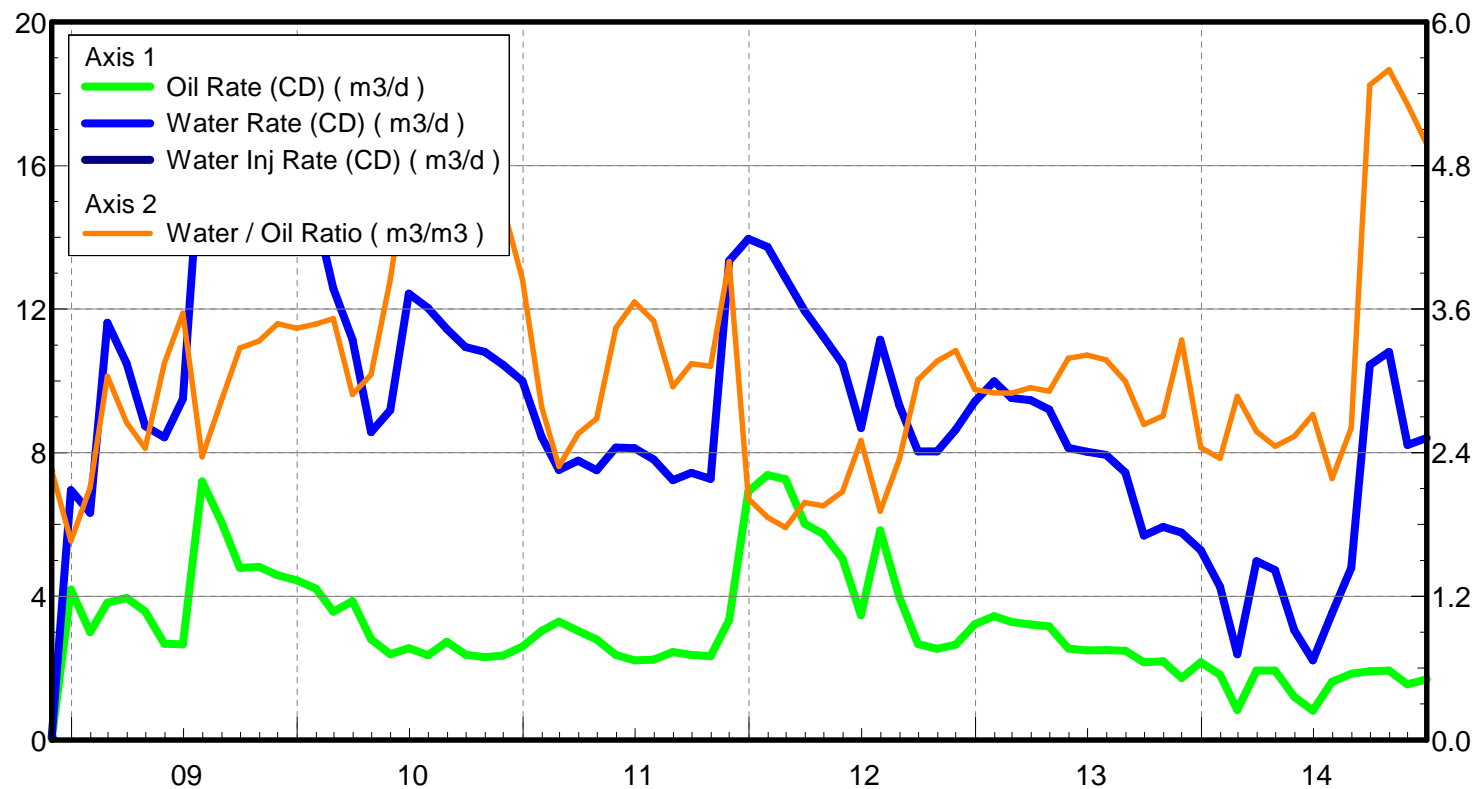
March 23, 2015

Operator: Tundra_O&G_Prtshp

Oil Rate (CD) : 1.69 m3/d

Water Rate (CD) : 8.41 m3/d

Water Inj Rate (CD) : * m3/d



Pattern: 02/12-36-008-29Inj Set: EwartUnit#4

Oil Formation Vol Factor : 1.07100 m3/m3

Water Formation Vol Factor : 1.00150 m3/m3

Water / Oil Ratio : 5.46 m3/m3

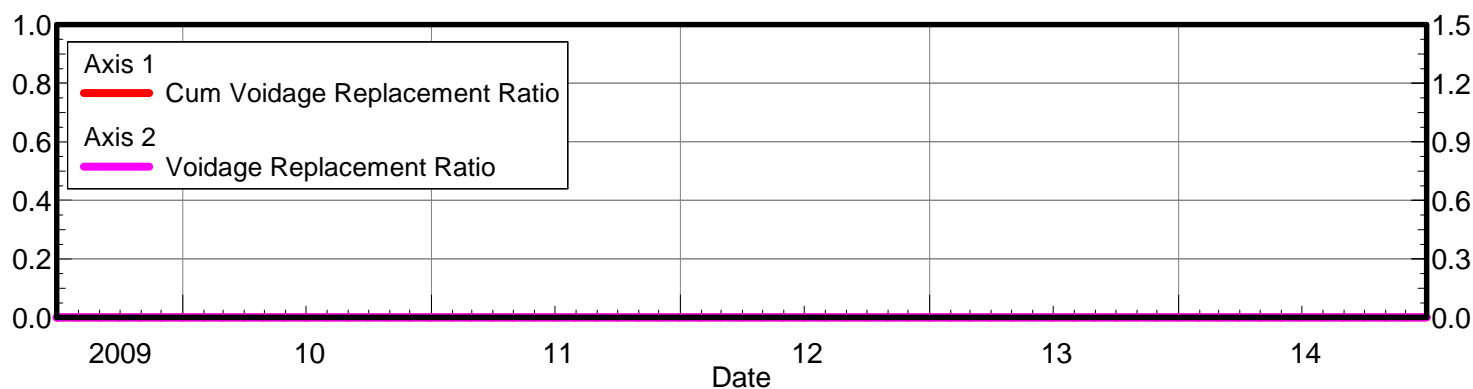
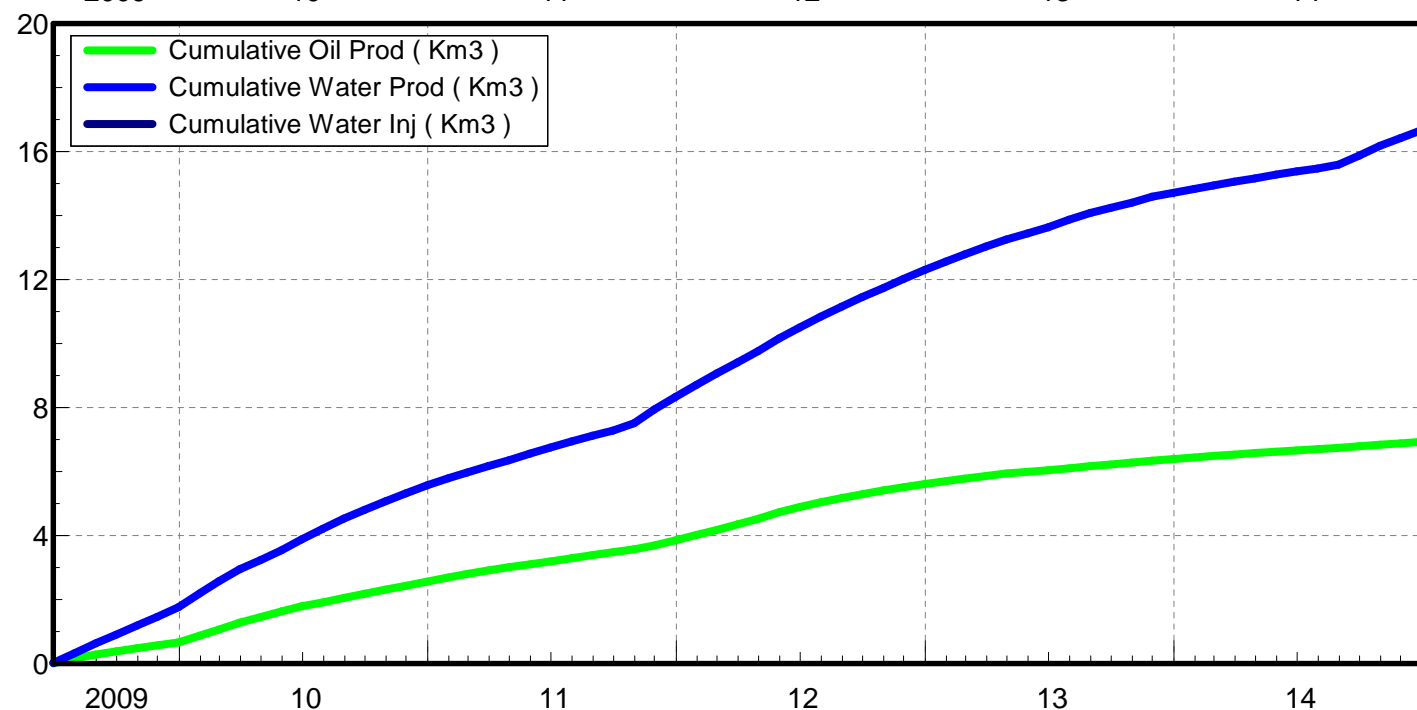
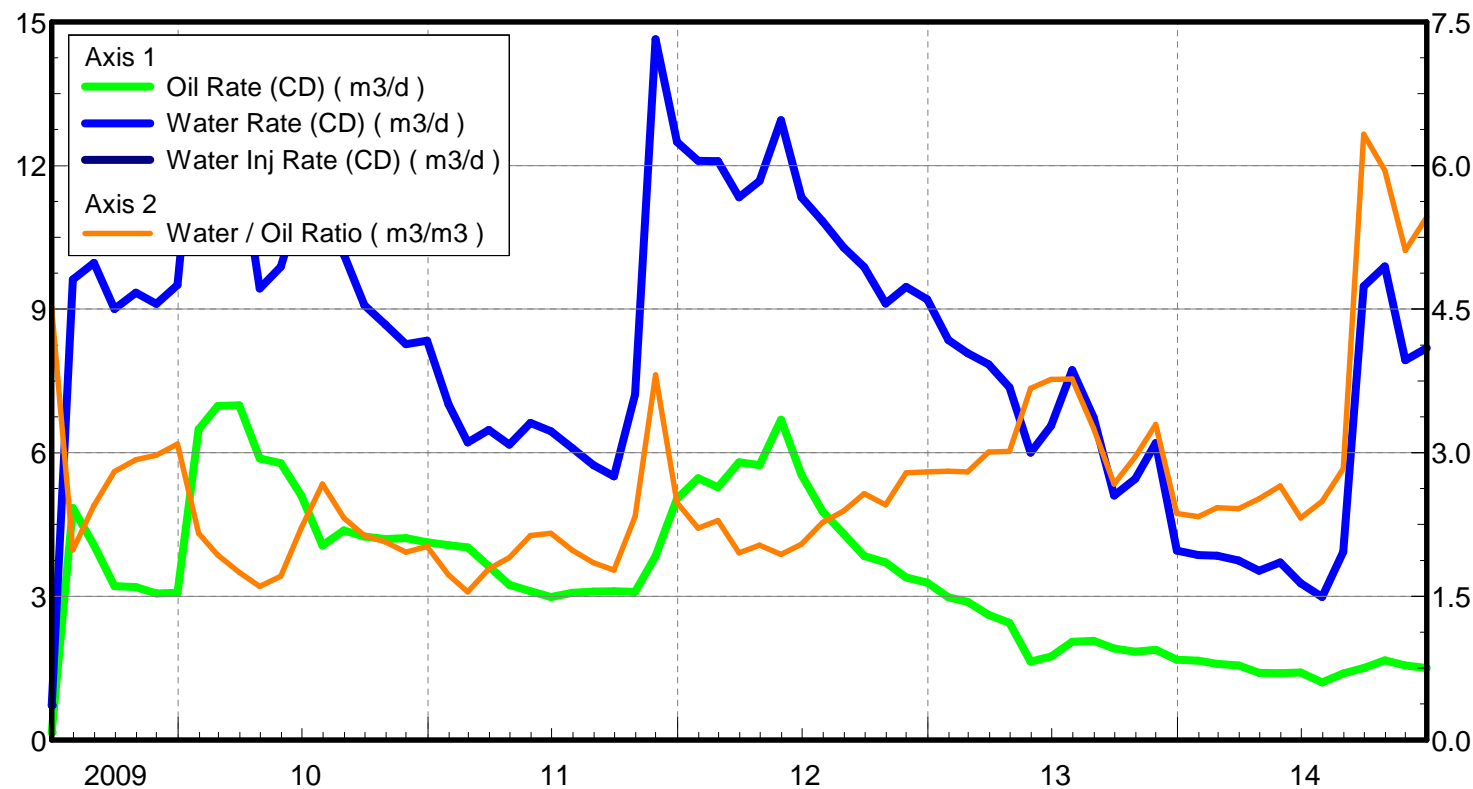
March 23, 2015

Operator: Tundra_O&G_Prtshp

Oil Rate (CD) : 1.50 m3/d

Water Rate (CD) : 8.18 m3/d

Water Inj Rate (CD) : * m3/d



Pattern: 03/12-36-008-29Inj Set: EwartUnit#4

Oil Formation Vol Factor : 1.07100 m3/m3

Water Formation Vol Factor : 1.00150 m3/m3

Water / Oil Ratio : 1.26 m3/m3

March 23, 2015

Operator: Tundra_O&G_Prtshp

Oil Rate (CD) : 2.78 m3/d

Water Rate (CD) : 3.48 m3/d

Water Inj Rate (CD) : * m3/d

