

BIRDTAIL UNIT NO. 3
WATERFLOOD EOR PROJECT
ANNUAL REPORT FOR 2015

June 16, 2016

Tundra Oil and Gas Partnership

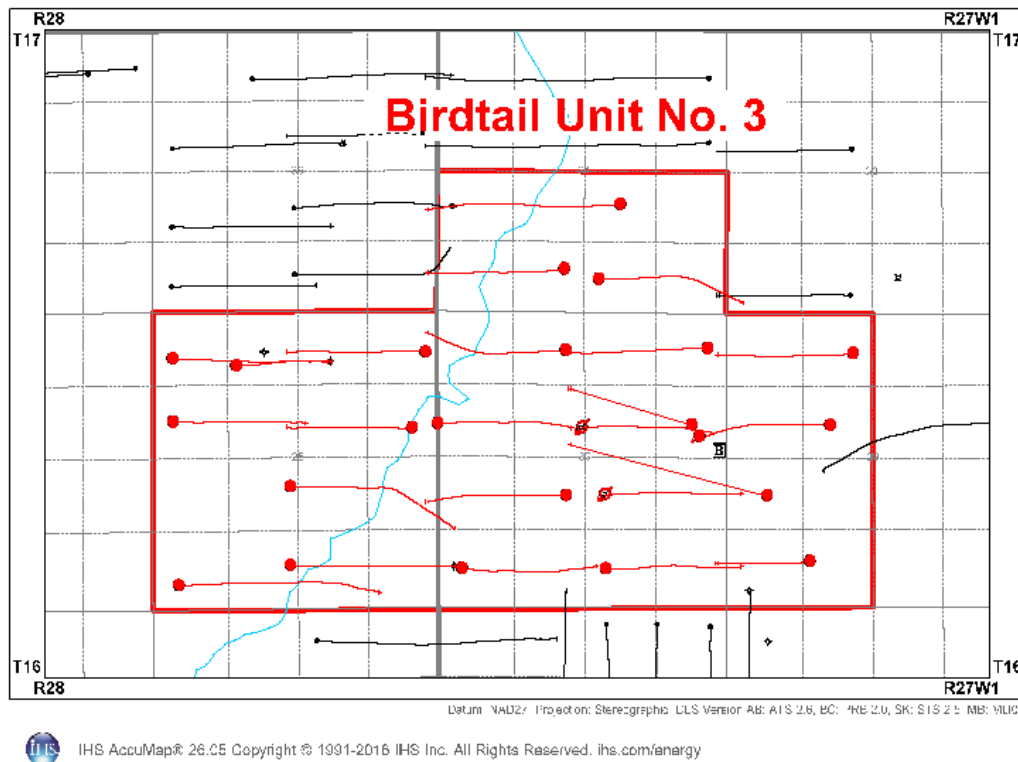
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INTRODUCTION

Birdtail Unit No. 3 Enhanced Oil Recovery (EOR) Waterflood Project was approved under Waterflood Order No. 45 effective May 1, 2015 with Tundra Oil and Gas (Tundra) as Operator. The EOR project area, outlined in red in Figure 1, contains 1 vertical and 24 horizontal producing wells in 48 LSDs in Township 16, Ranges 27 & 28 W1. Well list and well status is available in Appendix A.

Figure 1: Birdtail Unit No. 3 Area Outline



In accordance with Section 73 of the Manitoba Drilling and Production Regulation, Tundra hereby submits the 2015 Annual Progress Report for Birdtail Unit No. 3 as required by Waterflood Order No. 45.

DISCUSSION

Production History

For the wells included in Birdtail Unit No. 3, production started November 2009 with the 00/09-30-016-27W1/0 well. Oil production peaked at 79.66 m³/d in April 2012. The Unit was producing 32.97 m³/d of oil and 64.12 m³/d of water in December 2015 and had an average WOR of 1.15 m³/m³ in 2015. Water injection commenced in Birdtail Unit No. 3 in

July 2015. The oil production rate, injection rate, and WOR for each injection pattern is presented in Appendix E. The rates and WOR are plotted in Figure 2.

Figure 2: Birdtail Unit No. 3 Production/Injection Rates and WOR vs. Time

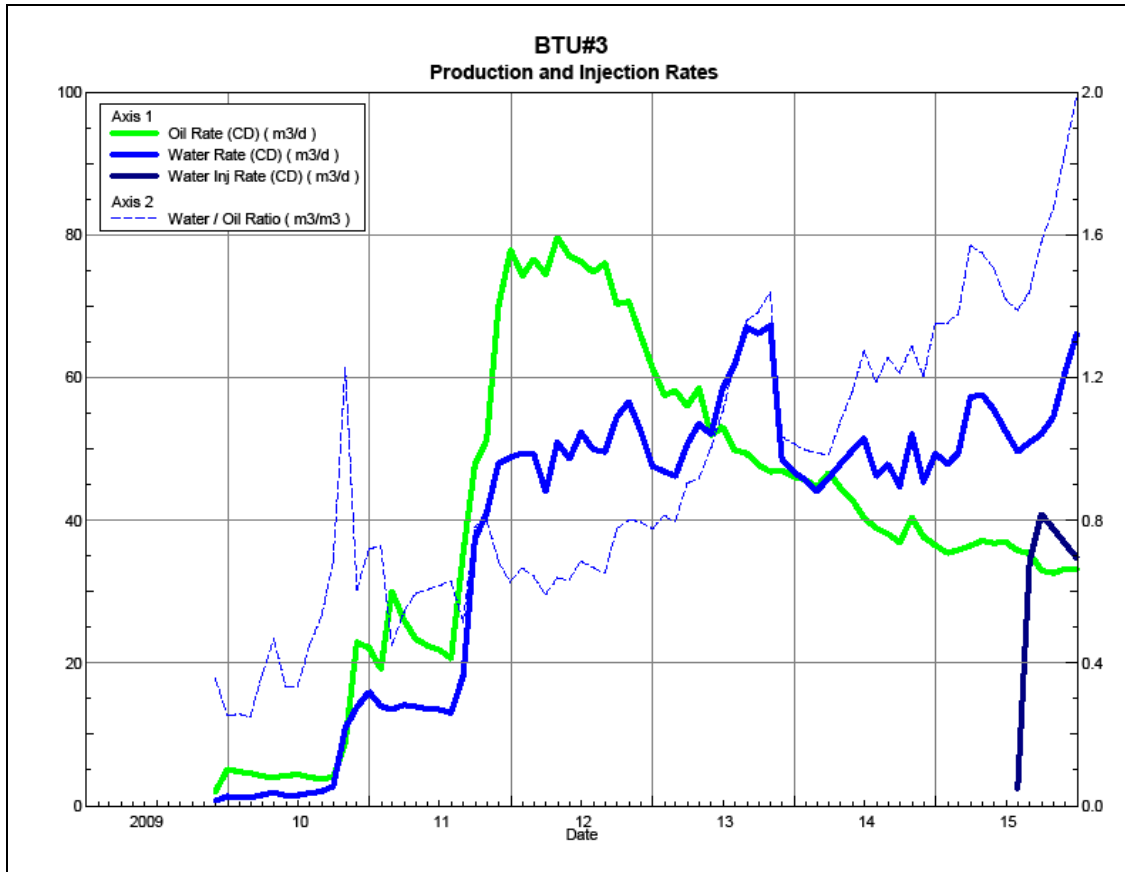
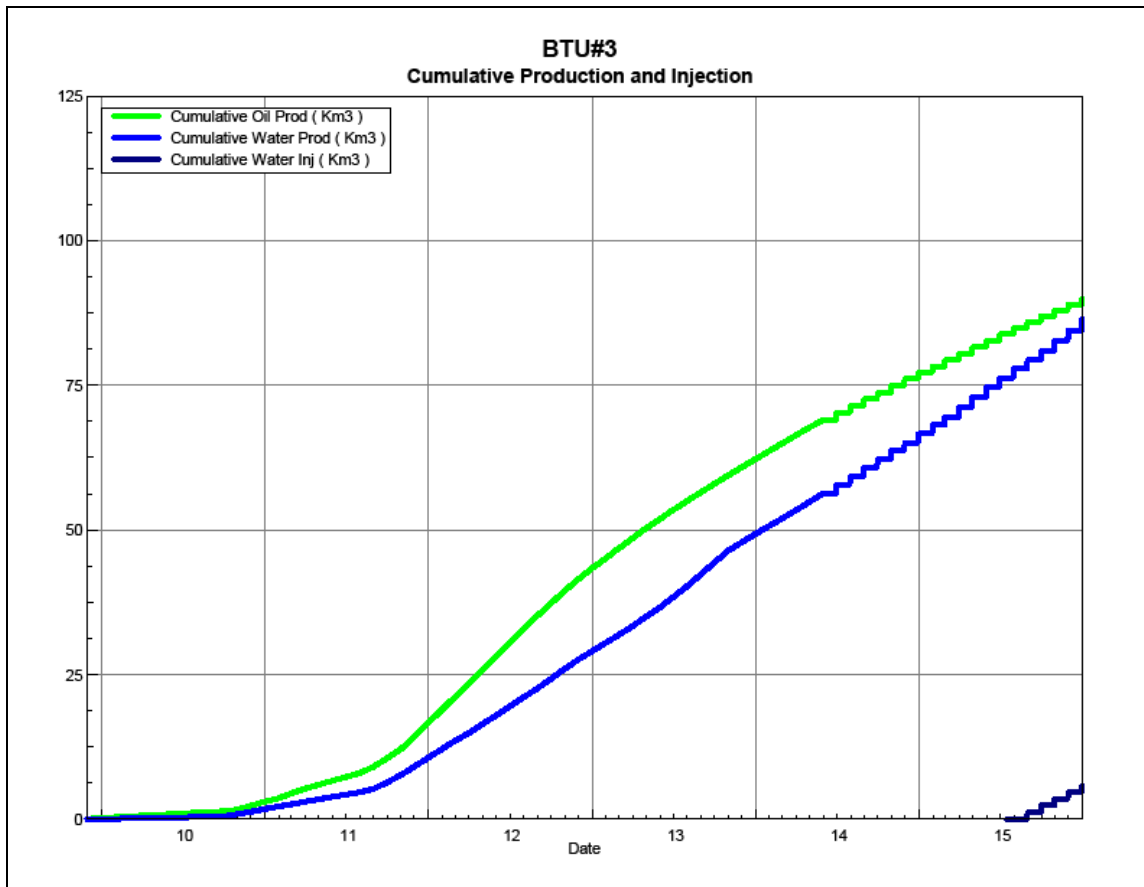


Figure 3 shows the cumulative production for Birdtail Unit No. 3 to the end of December 2015 as 89.99 e³m³ of oil, and 85.9 e³m³ of water, representing a 4.1% recovery factor of the OOIP. The cumulative water injected is 5.75 e³m³. The cumulative volume of oil, and water produced and fluid injected for each injection pattern is presented in Appendix E.

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



Waterflood History

Birdtail Unit No. 3 is still in the development phase at the end of 2015. As of December 2015, the Unit had 2 active horizontal injectors at 00/07-30 and 00/11-30-016-27W1, at 20 acre spacing. The final design of the waterflood will be determined based on the production results from the 20 acre infill horizontal wells drilled in 2015 at 00/05-29 and 02/09-30-016-27W1. Once the impact of infill drilling has been established, Tundra will proceed with converting the existing openhole producers into water injectors.

Production performance by injector pattern are summarized in Appendix B.

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

Waterflood EOR Operations

Water Source and Quality

The injection water for Birdtail Unit No. 3 is sourced from the 00/02-19-016-27W/2 well (Lodgepole formation). The water is treated at the 09-05-16-27W1 battery where it is filtered to 0.50 microns and has scale inhibitor added.

Injection Wellhead Pressures

Injection started in this Unit in July 2015. The average monthly wellhead injection pressure for each injection well 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 wells. For Birdtail Unit No. 3, pressure data taken in 2011 and 2012 from 14 locations is currently available (Appendix D). Pressures are corrected to a common datum of -450 m SS for comparison with other units in the area.

Well Servicing

Table 1 lists the maintenance that was required in Birdtail Unit No. 3 in 2015.

Table 1: Service and Maintenance in Birdtail Unit No. 3

100.05-29-016-27W1.00	OH Bakken Swab Completion	3/11/2015
100.07-30-016-27W1.00	WIW Conversion	6/25/2015
100.11-30-016-27W1.00	WIW Conversion	6/27/2015
100.11-29-016-27W1.00	Pump Change	12/4/2015

Waterflood Performance Discussion

At the end of 2015, Birdtail Unit No. 3 waterflood area had 2 injection patterns in place. Water injection began in July 2015, after the conversion of the 00/07-30 and 00/11-30 producers to injectors. Future water injection conversion wells for Birdtail Unit No. 3 will be determined based on the production results from the 20 acre infill horizontal wells drilled in 2015.

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

List of Appendices

Appendix A: Well List and Well Status

Appendix B: Injection Pattern Summary

Appendix C: Average Monthly Injection Pressure Summary

Appendix D: Reservoir Pressure Summary

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

00/07-30-016-27W1/0

00/11-30-016-29W1/0

Appendix A

UWI	Surface Location	Well Status
100/03-29-016-27W1/0	100/01-30-016-27W1/0	Capable of OIL Prod
100/05-29-016-27W1/0	100/11-30-016-27W1/0	Capable of OIL Prod
100/11-29-016-27W1/0	100/09-30-016-27W1/0	Capable of OIL Prod
100/14-29-016-27W1/0	100/16-30-016-27W1/0	Capable of OIL Prod
100/02-30-016-27W1/0	100/04-29-016-27W1/0	Capable of OIL Prod
102//04-30-016-27W1/0	102/02-30-016-27W1/0	Capable of OIL Prod
100/06-30-016-27W1/0	100/08-25-016-28W1/0	Capable of OIL Prod
100/07-30-016-27W1/0	100/05-29-016-27W1/0	WTR Injection
100/09-30-016-27W1/0		Capable of OIL Prod
102//09-30-016-27W1/0	102/11-30-016-27W1/0	Capable of OIL Prod
100/11-30-016-27W1/0	100/09-30-016-27W1/0	WTR Injection
100/14-30-016-27W1/0	100/16-25-016-28W1/0	Capable of OIL Prod
100/16-30-016-27W1/0	100/14-30-016-27W1/0	Capable of OIL Prod
100/02-31-016-27W1/0	102/04-32-016-27W1/0	Capable of OIL Prod
100/03-31-016-27W1/0	100/01-36-016-28W1/0	Capable of OIL Prod
100/07-31-016-27W1/0	102/08-36-016-28W1/0	Capable of OIL Prod
100/03-25-016-28W1/2	100/04-30-016-27W1/2	Capable of OIL Prod
100/04-25-016-28W1/0	100/01-25-016-28W1/0	Capable of OIL Prod
100/06-25-016-28W1/0	100/05-30-016-27W1/0	Capable of OIL Prod
100/09-25-016-28W1/0	100/11-30-016-27W1/0	Capable of OIL Prod
102//09-25-016-28W1/0	102/11-25-016-28W1/0	Capable of OIL Prod
100/12-25-016-28W1/0	100/10-25-016-28W1/0	Capable of OIL Prod
100/13-25-016-28W1/2	100/15-25-016-28W1/0	Capable of OIL Prod
102//14-25-016-28W1/3	100/15-25-016-28W1/0	Capable of OIL Prod
100/16-25-016-28W1/0	100/14-25-016-28W1/0	Capable of OIL Prod

Appendix B

Average Monthly Injection Pressure (kPag)

Month	Injection Pressure	
	100/07-30	100/11-30
Jan-15		
Feb-15		
Mar-15		
Apr-15		
May-15		
Jun-15		
Jul-15	-33	-14
Aug-15	-78	1629
Sep-15	633	2900
Oct-15	1475	2976
Nov-15	1986	2976
Dec-15	2189	2980

Appendix C

Birdtail Unit No.3 Pattern Summary as of December 2015

Pattern Name	Injector Location (016-27W1)	Injector Surf. Location (016-27W1)	Status	No. of Supported Wells	Supported Wells (016-27W1)	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
00/07-30-016-27Inj	00/07-30	00/05-29	WTR Injection	2	00/02-30, 00/05-29	0.5	Oct 2010	Jul 2015	0.70	4.67	6.62	22.35	4.48	12.03	3.59	4.622	0.274
00/11-30-016-27Inj	00/11-30	00/09-30	WTR Injection	2	00/05-29, 02/16-30	0.5	Aug 2011	Jul 2015	0.39	4.18	10.63	12.39	2.92	3.13	2.16	2.896	0.561

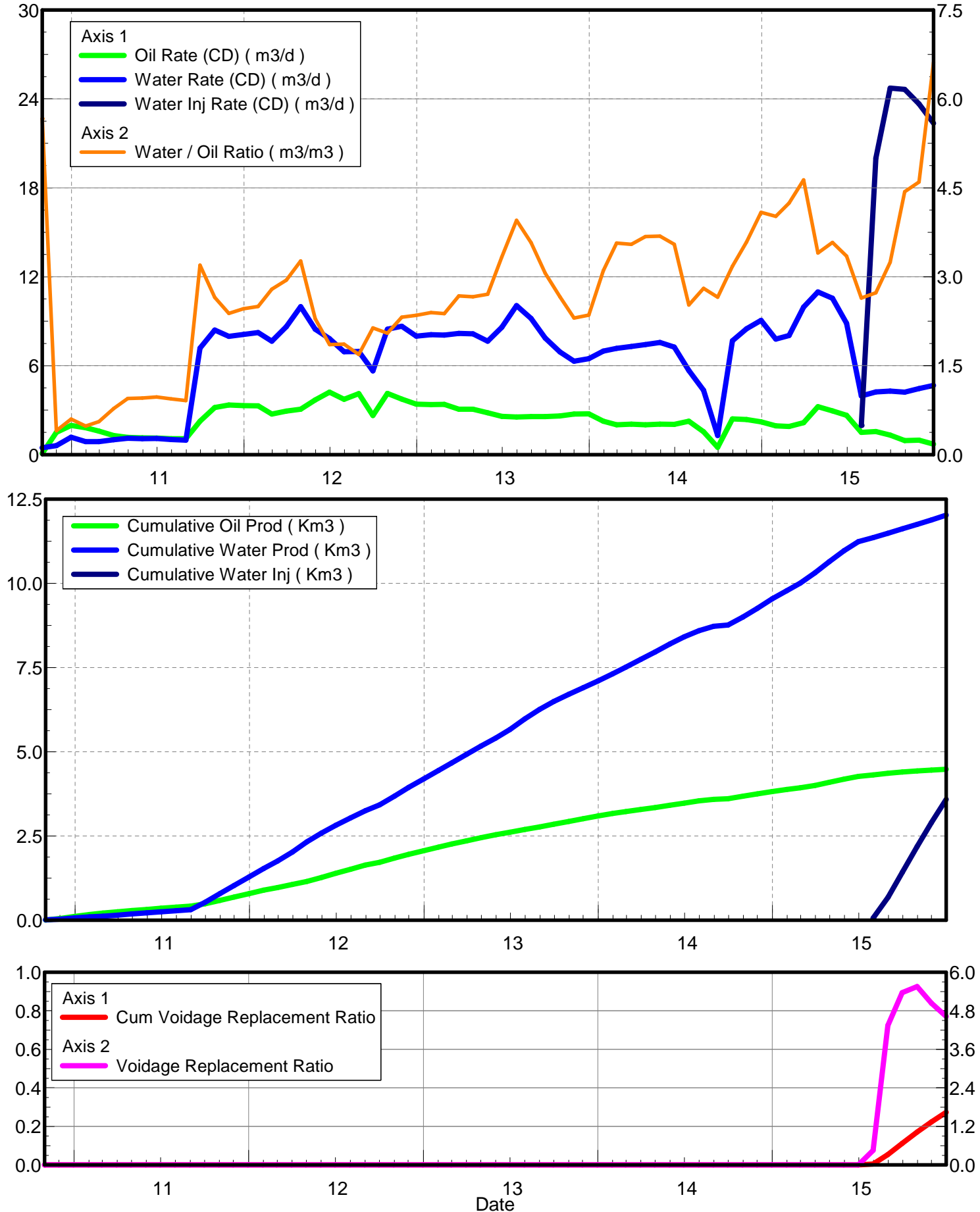
Appendix D

Birdtail Unit No. 3 - Pressure Summary

Location	Test Date	Final Pressure (kPaa)	MPP (mTVD)	KB	Datum Depth	Gradient	Pressure @ -450 masl	
100/11-29-016-27W1/0	July 21 - Aug 10, 2011	3529.3	540.4	498.4	-450	8.25	6895	
102/04-30-016-27W1/0	Jan 12 - 26, 2012	4127.7	519.5	483.0	-450	8.25	7540	
100/06-30-016-27W1/0	July 31 - Aug 31, 2011	4469.1	520.0	481.1	-450	8.25	7861	
100/07-30-016-27W1/0	July 19 - Aug 16, 2011	3809.1	540.6	499.2	-450	8.25	7180	
100/11-30-016-27W1/0	July 16 - Aug 7, 2011	4056.2	540.0	500.5	-450	8.25	7442	
100/14-30-016-27W1/0	Sept 2 - Oct 4, 2011	4938.7	519.7	483.2	-450	8.25	8350	
100/14-30-016-27W1/0	Oct 4, 2011	5096.5	519.7	483.2	-450	8.25	8508	Static Gradient
100/03-31-016-27W1/0	July 15 - 22, 2011	4130.0	537.5	503.0	-450	8.25	7557	
100/03-25-016-28W1/0	July 28 - Aug 4, 2011	4570.1	517.7	480.0	-450	8.25	7972	
100/06-25-016-28W1/0	March 8 - 10, 2012	4404.9	514.2	480.8	-450	8.25	7842	
100/09-25-016-28W1/0	Sept 13 - Oct 7, 2011	4288.5	527.2	490.7	-450	8.25	7700	
102/09-25-016-28W1/0	June 3 - 15, 2012	4382.2	513.9	479.7	-450	8.25	7812	
100/12-25-016-28W1/0	June 8 - 23, 2012	4413.1	511.7	479.4	-450	8.25	7859	
100/13-25-016-28W1/0	Jan 26 - Feb 4, 2012	4522.0	513.1	479.7	-450	8.25	7959	
100/16-25-016-28W1/0	Aug 9 - Sept 9, 2011	4368.2	510.4	479.0	-450	8.25	7822	
100/16-25-016-28W1/0	Sept 9, 2011	5178.4	510.4	479.0	-450	8.25	8632	Static Gradient

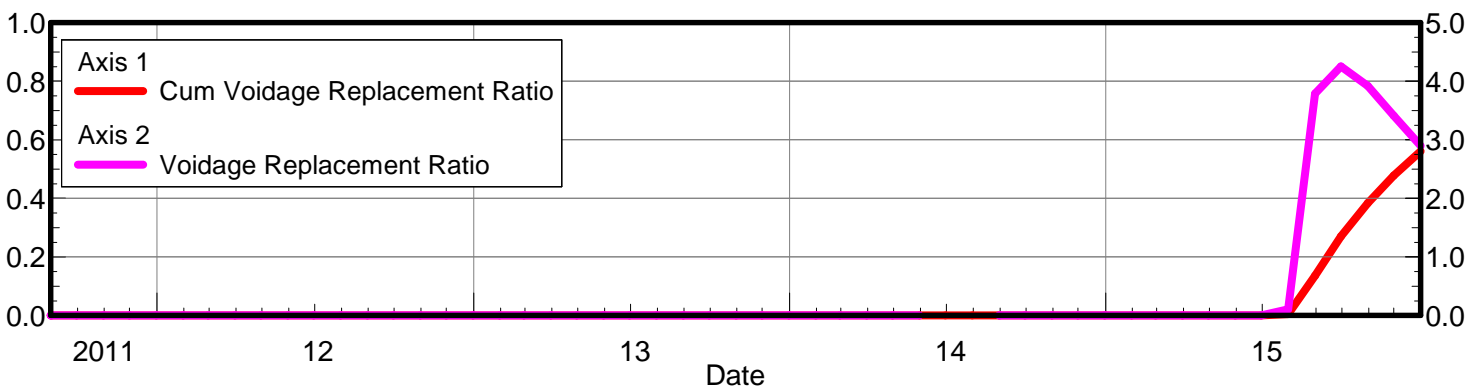
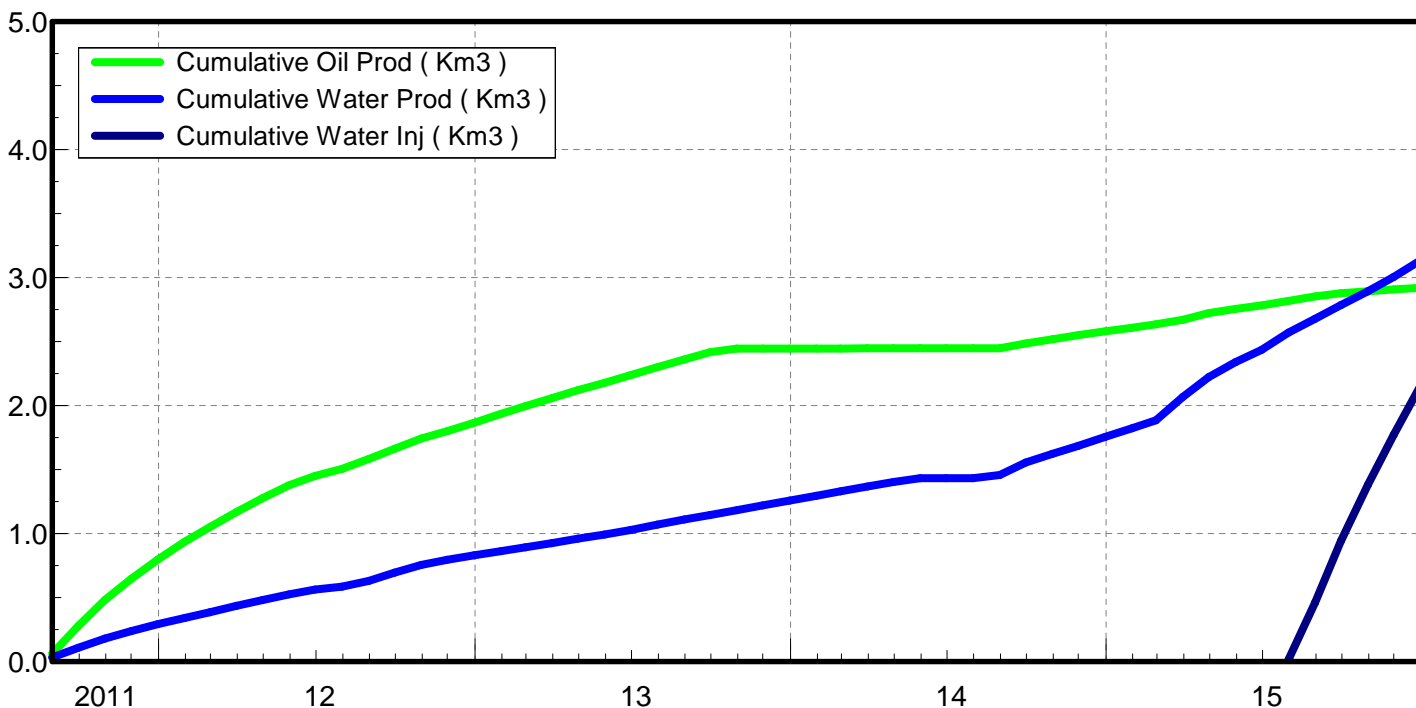
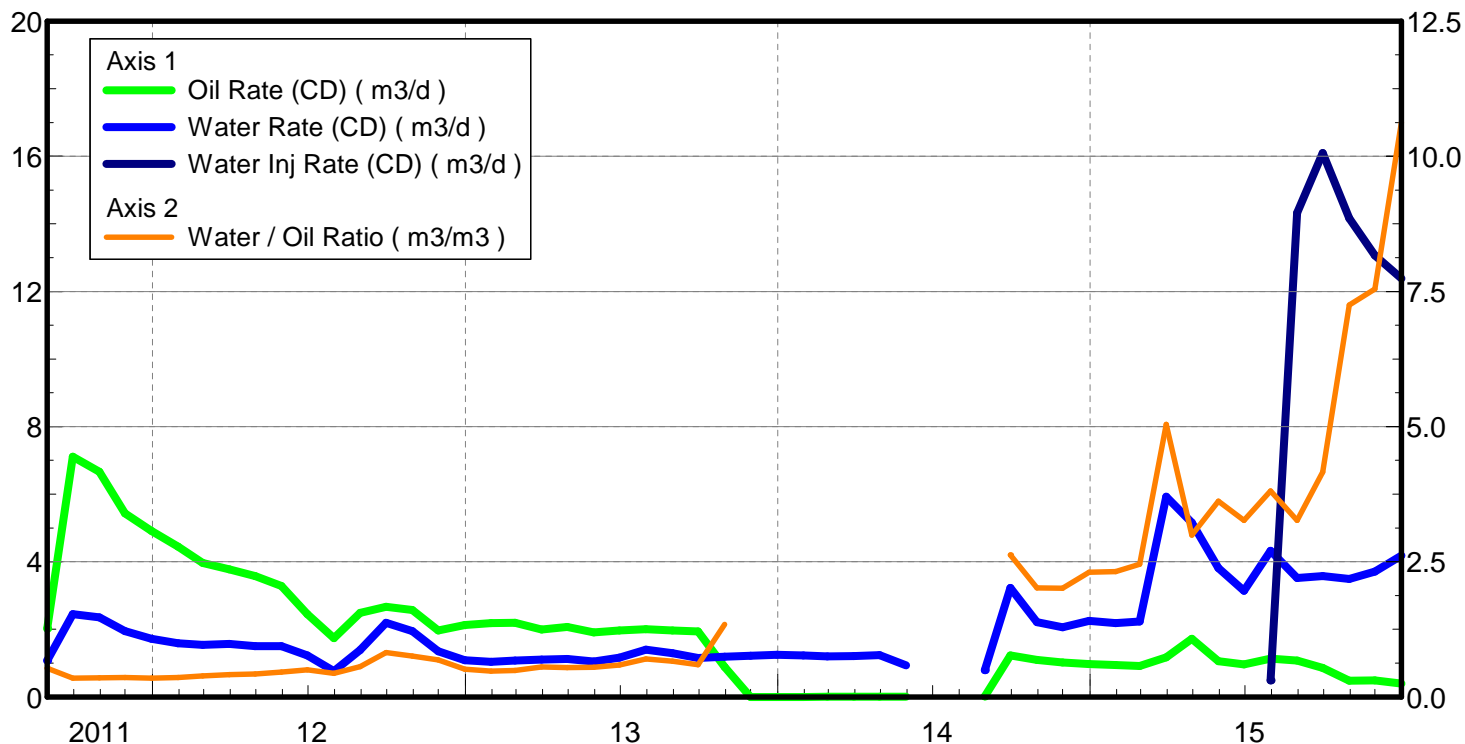
Appendix E

Rates and VRR Plots



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	VRR	Cum VRR
10/31/2010	0.08	0.47	5.67		0.00	0.01	0.00	0.000	0.000
11/30/2010	1.50	0.61	0.40		0.05	0.03	0.00	0.000	0.000
12/31/2010	1.97	1.18	0.60		0.11	0.07	0.00	0.000	0.000
1/31/2011	1.82	0.87	0.48		0.17	0.10	0.00	0.000	0.000
2/28/2011	1.59	0.88	0.56		0.21	0.12	0.00	0.000	0.000
3/31/2011	1.29	1.00	0.78		0.25	0.15	0.00	0.000	0.000
4/30/2011	1.16	1.10	0.95		0.28	0.19	0.00	0.000	0.000
5/31/2011	1.13	1.07	0.95		0.32	0.22	0.00	0.000	0.000
6/30/2011	1.12	1.09	0.97		0.35	0.25	0.00	0.000	0.000
7/31/2011	1.08	1.02	0.94		0.39	0.28	0.00	0.000	0.000
8/31/2011	1.07	0.98	0.91		0.42	0.31	0.00	0.000	0.000
9/30/2011	2.25	7.18	3.20		0.49	0.53	0.00	0.000	0.000
10/31/2011	3.17	8.41	2.65		0.59	0.79	0.00	0.000	0.000
11/30/2011	3.35	7.98	2.38		0.69	1.03	0.00	0.000	0.000
12/31/2011	3.30	8.11	2.46		0.79	1.28	0.00	0.000	0.000
1/31/2012	3.30	8.24	2.50		0.89	1.54	0.00	0.000	0.000
2/29/2012	2.74	7.65	2.79		0.97	1.76	0.00	0.000	0.000
3/31/2012	2.93	8.63	2.94		1.06	2.02	0.00	0.000	0.000
4/30/2012	3.06	9.99	3.27		1.15	2.32	0.00	0.000	0.000
5/31/2012	3.69	8.46	2.29		1.27	2.59	0.00	0.000	0.000
6/30/2012	4.22	7.83	1.85		1.39	2.82	0.00	0.000	0.000
7/31/2012	3.73	6.95	1.86		1.51	3.04	0.00	0.000	0.000
8/31/2012	4.12	6.95	1.69		1.64	3.25	0.00	0.000	0.000
9/30/2012	2.64	5.65	2.14		1.72	3.42	0.00	0.000	0.000
10/31/2012	4.13	8.46	2.05		1.84	3.68	0.00	0.000	0.000
11/30/2012	3.74	8.66	2.32		1.96	3.94	0.00	0.000	0.000
12/31/2012	3.40	8.00	2.35		2.06	4.19	0.00	0.000	0.000
1/31/2013	3.38	8.09	2.39		2.17	4.44	0.00	0.000	0.000
2/28/2013	3.39	8.07	2.38		2.26	4.67	0.00	0.000	0.000
3/31/2013	3.06	8.18	2.68		2.36	4.92	0.00	0.000	0.000
4/30/2013	3.06	8.15	2.66		2.45	5.17	0.00	0.000	0.000
5/31/2013	2.83	7.65	2.71		2.54	5.40	0.00	0.000	0.000
6/30/2013	2.58	8.59	3.34		2.61	5.66	0.00	0.000	0.000
7/31/2013	2.54	10.05	3.95		2.69	5.97	0.00	0.000	0.000
8/31/2013	2.57	9.19	3.57		2.77	6.26	0.00	0.000	0.000
9/30/2013	2.57	7.86	3.06		2.85	6.49	0.00	0.000	0.000
10/31/2013	2.60	6.93	2.66		2.93	6.71	0.00	0.000	0.000
11/30/2013	2.74	6.30	2.30		3.01	6.90	0.00	0.000	0.000
12/31/2013	2.75	6.47	2.35		3.10	7.10	0.00	0.000	0.000
1/31/2014	2.25	6.99	3.10		3.17	7.31	0.00	0.000	0.000
2/28/2014	2.01	7.17	3.57		3.22	7.52	0.00	0.000	0.000
3/31/2014	2.06	7.30	3.55		3.29	7.74	0.00	0.000	0.000
4/30/2014	2.02	7.42	3.68		3.35	7.96	0.00	0.000	0.000
5/31/2014	2.05	7.56	3.68		3.41	8.20	0.00	0.000	0.000
6/30/2014	2.05	7.26	3.55		3.47	8.42	0.00	0.000	0.000
7/31/2014	2.25	5.67	2.52		3.54	8.59	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	VRR	Cum VRR
8/31/2014	1.55	4.34	2.80		3.59	8.73	0.00	0.000	0.000
9/30/2014	0.48	1.29	2.66		3.60	8.77	0.00	0.000	0.000
10/31/2014	2.42	7.68	3.18		3.68	9.00	0.00	0.000	0.000
11/30/2014	2.37	8.49	3.59		3.75	9.26	0.00	0.000	0.000
12/31/2014	2.22	9.05	4.09		3.82	9.54	0.00	0.000	0.000
1/31/2015	1.94	7.80	4.02		3.88	9.78	0.00	0.000	0.000
2/28/2015	1.89	8.03	4.24		3.93	10.01	0.00	0.000	0.000
3/31/2015	2.15	9.96	4.64		4.00	10.31	0.00	0.000	0.000
4/30/2015	3.23	10.97	3.40		4.10	10.64	0.00	0.000	0.000
5/31/2015	2.95	10.55	3.58		4.19	10.97	0.00	0.000	0.000
6/30/2015	2.65	8.86	3.35		4.27	11.24	0.00	0.000	0.000
7/31/2015	1.50	3.96	2.64	1.97	4.31	11.36	0.06	0.456	0.005
8/31/2015	1.55	4.23	2.73	20.00	4.36	11.49	0.68	4.342	0.054
9/30/2015	1.32	4.29	3.24	24.73	4.40	11.62	1.42	5.369	0.112
10/31/2015	0.95	4.21	4.44	24.65	4.43	11.75	2.19	5.556	0.171
11/30/2015	0.97	4.46	4.60	23.67	4.46	11.88	2.90	5.039	0.223
12/31/2015	0.70	4.67	6.62	22.35	4.48	12.03	3.59	4.622	0.274



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	VRR	Cum VRR
8/31/2011	2.02	1.07	0.53		0.06	0.03	0.00	0.000	0.000
9/30/2011	7.11	2.45	0.34		0.28	0.11	0.00	0.000	0.000
10/31/2011	6.66	2.35	0.35		0.48	0.18	0.00	0.000	0.000
11/30/2011	5.43	1.95	0.36		0.65	0.24	0.00	0.000	0.000
12/31/2011	4.91	1.72	0.35		0.80	0.29	0.00	0.000	0.000
1/31/2012	4.45	1.58	0.36		0.94	0.34	0.00	0.000	0.000
2/29/2012	3.96	1.54	0.39		1.05	0.39	0.00	0.000	0.000
3/31/2012	3.78	1.56	0.41		1.17	0.43	0.00	0.000	0.000
4/30/2012	3.58	1.51	0.42		1.28	0.48	0.00	0.000	0.000
5/31/2012	3.29	1.51	0.46		1.38	0.53	0.00	0.000	0.000
6/30/2012	2.45	1.22	0.50		1.45	0.56	0.00	0.000	0.000
7/31/2012	1.74	0.76	0.44		1.50	0.59	0.00	0.000	0.000
8/31/2012	2.48	1.39	0.56		1.58	0.63	0.00	0.000	0.000
9/30/2012	2.66	2.19	0.82		1.66	0.69	0.00	0.000	0.000
10/31/2012	2.57	1.95	0.76		1.74	0.76	0.00	0.000	0.000
11/30/2012	1.97	1.35	0.69		1.80	0.80	0.00	0.000	0.000
12/31/2012	2.13	1.08	0.51		1.87	0.83	0.00	0.000	0.000
1/31/2013	2.19	1.04	0.48		1.93	0.86	0.00	0.000	0.000
2/28/2013	2.20	1.08	0.49		2.00	0.89	0.00	0.000	0.000
3/31/2013	1.99	1.10	0.55		2.06	0.93	0.00	0.000	0.000
4/30/2013	2.07	1.12	0.54		2.12	0.96	0.00	0.000	0.000
5/31/2013	1.91	1.05	0.55		2.18	0.99	0.00	0.000	0.000
6/30/2013	1.97	1.16	0.59		2.24	1.03	0.00	0.000	0.000
7/31/2013	2.00	1.40	0.70		2.30	1.07	0.00	0.000	0.000
8/31/2013	1.96	1.30	0.66		2.36	1.11	0.00	0.000	0.000
9/30/2013	1.93	1.15	0.60		2.42	1.15	0.00	0.000	0.000
10/31/2013	0.89	1.19	1.34		2.45	1.18	0.00	0.000	0.000
11/30/2013	0.00	1.22			2.45	1.22	0.00	0.000	0.000
12/31/2013	0.00	1.24			2.45	1.26	0.00	0.000	0.000
1/31/2014	0.00	1.23			2.45	1.30	0.00	0.000	0.000
2/28/2014	0.01	1.20	167.50		2.45	1.33	0.00	0.000	0.000
3/31/2014	0.01	1.21	125.33		2.45	1.37	0.00	0.000	0.000
4/30/2014	0.01	1.23	123.33		2.45	1.40	0.00	0.000	0.000
5/31/2014	0.01	0.93	144.50		2.45	1.43	0.00	0.000	0.000
8/31/2014	0.02	0.79	48.80		2.45	1.46	0.00	0.000	0.000
9/30/2014	1.23	3.23	2.63		2.48	1.55	0.00	0.000	0.000
10/31/2014	1.10	2.21	2.02		2.52	1.62	0.00	0.000	0.000
11/30/2014	1.02	2.06	2.01		2.55	1.68	0.00	0.000	0.000
12/31/2014	0.97	2.25	2.31		2.58	1.75	0.00	0.000	0.000
1/31/2015	0.94	2.18	2.32		2.61	1.82	0.00	0.000	0.000
2/28/2015	0.91	2.24	2.45		2.63	1.88	0.00	0.000	0.000
3/31/2015	1.17	5.92	5.04		2.67	2.07	0.00	0.000	0.000
4/30/2015	1.72	5.16	3.00		2.72	2.22	0.00	0.000	0.000
5/31/2015	1.05	3.81	3.62		2.75	2.34	0.00	0.000	0.000
6/30/2015	0.96	3.14	3.26		2.78	2.43	0.00	0.000	0.000
7/31/2015	1.14	4.33	3.81	0.48	2.82	2.57	0.01	0.105	0.005

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	VRR	Cum VRR
8/31/2015	1.08	3.52	3.27	14.32	2.85	2.68	0.46	3.787	0.136
9/30/2015	0.86	3.58	4.16	16.10	2.88	2.79	0.94	4.256	0.270
10/31/2015	0.48	3.50	7.25	14.16	2.89	2.89	1.38	3.921	0.384
11/30/2015	0.49	3.71	7.54	13.07	2.91	3.01	1.77	3.414	0.478
12/31/2015	0.39	4.18	10.63	12.39	2.92	3.13	2.16	2.896	0.561