

**NORTH EBOR UNIT NO. 2
WATERFLOOD EOR PROJECT**

ANNUAL REPORT FOR 2017

June 4, 2018

Tundra Oil and Gas

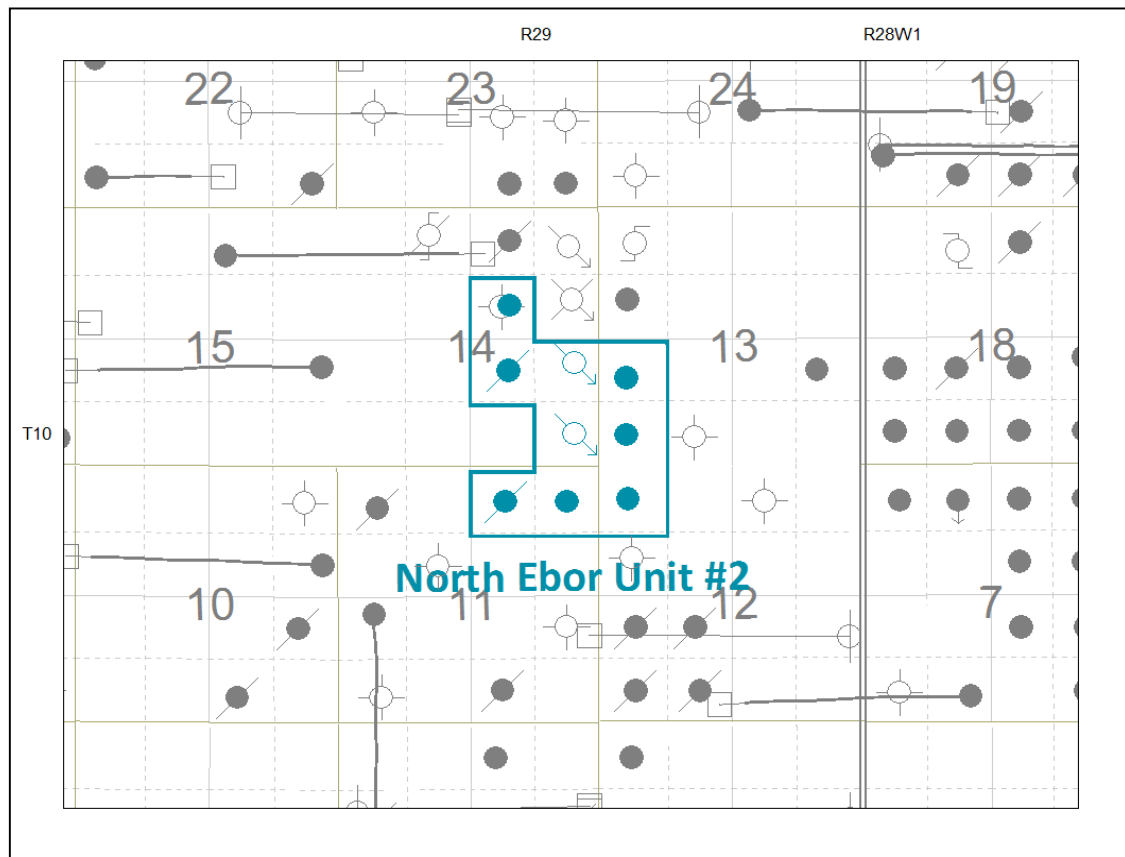
Table of Contents

INTRODUCTION	3
DISCUSSION.....	3
Production History	3
Waterflood History	5
Waterflood EOR Operating Strategy and Performance	6
Water Source and Quality	6
Injection Wellhead Pressures.....	6
Reservoir Pressure	6
Well Servicing	6
Voidage Replacement.....	6
Waterflood Performance Discussion.....	6
List of Appendices.....	8
Appendix A: Well Name and Well Status	
Appendix B: Monthly Injection Wellhead Pressures Table	
Appendix C: North Ebor Unit No.2 Injection Pattern Summary	
Appendix D: Injector Pattern Production/Injection Rates, Cumulative and VRR Plots and Tables	

INTRODUCTION

North Ebor Unit No. 2 Enhanced Oil Recovery (EOR) Waterflood Project was approved under Board Order No. PM 67 effective Oct. 1, 1991, with Tundra Oil and Gas as Operator. The EOR project area contains 9 wells in 9 LSDs in Township 10, Range 29 W1 as shown in the figure below. Well list and well status is available in Appendix A.

Figure 1: North Ebor Unit No. 2 Area Outline



In accordance with Section 73 of the Manitoba Drilling and Production Regulation, Tundra hereby submits the 2017 Annual Progress Report for North Ebor Unit No. 2 as required by Board Order No. PM 67.

DISCUSSION

Production History

For the wells included in North Ebor Unit No. 2, production started in January 1986 with 00/16-11-010-29W1/0 well. Oil production peaked at 26.5 m³/d in June 1991. In

December 2017, the Unit was producing 3.02 m³/d of oil and 22.80 m³/d of water and had a WOR of 7.54 m³/m³. There is currently no water injection in North Ebor Unit No. 2. The rates and WOR are plotted in Figure 2.

Figure 2: North Ebor Unit No. 2 Production/Injection Rates and WOR vs. Time

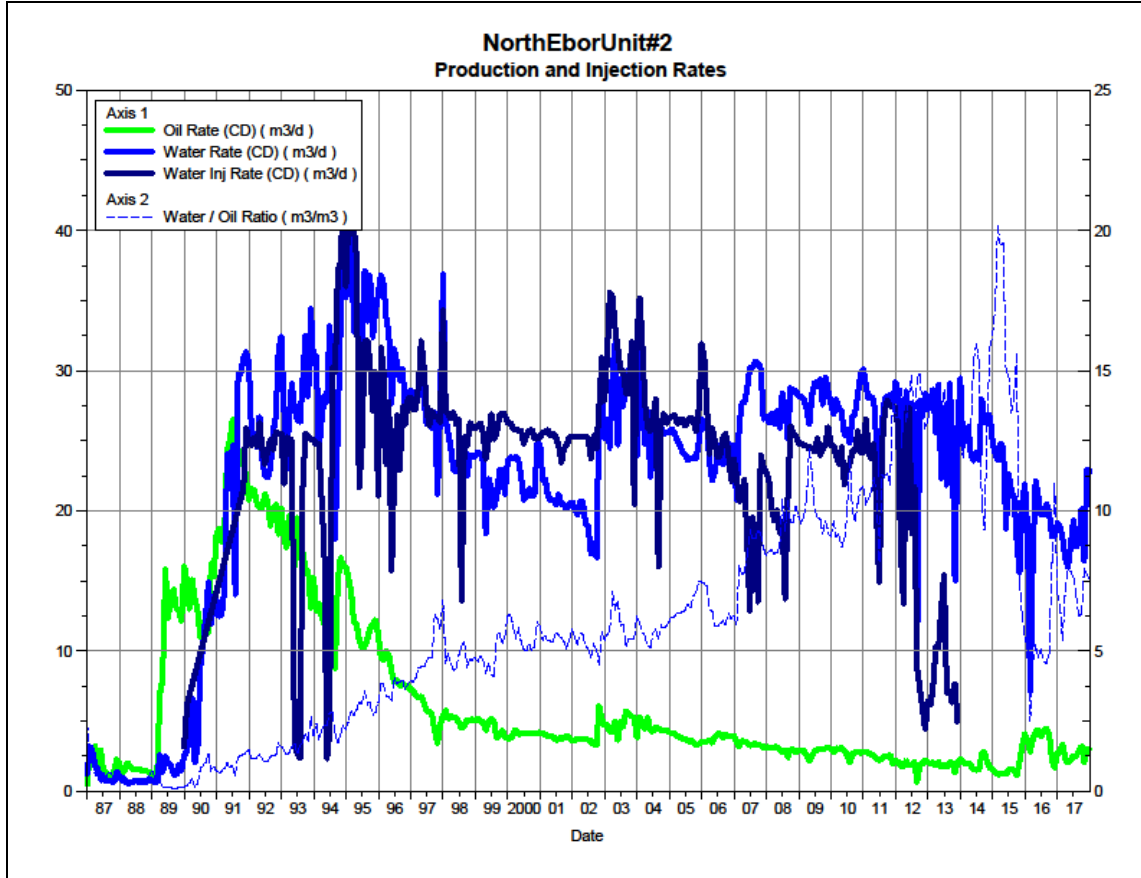
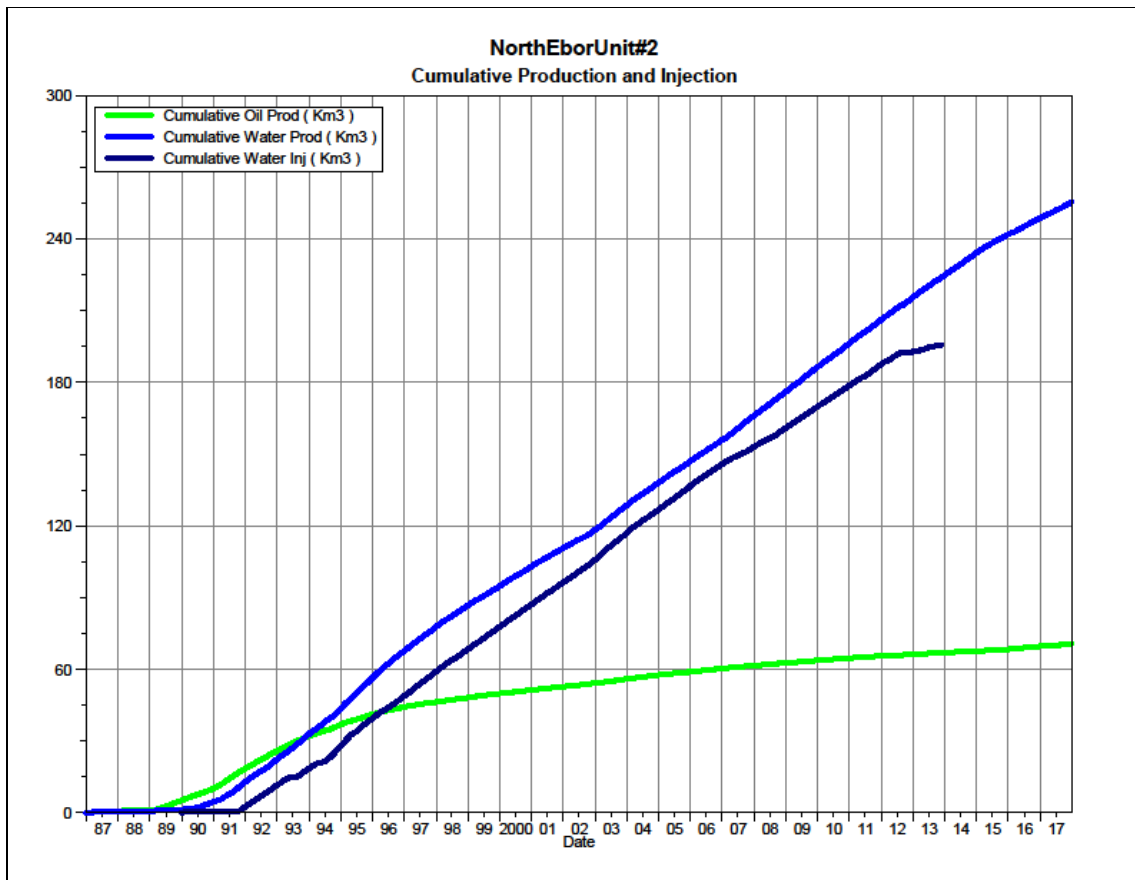


Figure 3 shows the cumulative production for North Ebor Unit No. 2 to the end of December 2017 as 70.61 e³m³ of oil, and 255.51 e³m³ of water. The cumulative water injected is 195.71 e³m³.

Figure 3: North Ebor Unit No. 2 Cumulative Oil, Water and Water Injected vs. Time



Waterflood History

At the end of 2017, North Ebor Unit No. 2 had 2 injector patterns in place, one vertical injector on the north side 00/08-14-010-29W1/00 (00/08-14), the other vertical injector on the south side at 00/01-14-010-29W1/00 (00/01-14). Water injection started in October 1991. In November 2013, the 00/01-14 and 00/08-14 injectors were suspended pending system modifications. An overall summary for each injector pattern is presented in Appendix C.

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

Until November 2013, the injection water for North Ebor Unit No. 2 was being sourced from the 00/13-13-010-29W1/00 well (Lodgepole formation). Injected fluid consisted of produced water from the Lodgepole formation, from the unit and surrounding area. In the future, injection water for North Ebor Unit No. 2 will be supplied from the Jurassic source water well at 100/02-25-010-29W1 (2-25). Tundra received approval from the Petroleum Branch in March 2013 to use the 2-25 well as a source water well for waterflood operations. Jurassic-sourced water will be pumped from the 2-25 source well to the Daly 12-24-10-29 battery, where it will be filtered to 50 microns and then pumped up to injection system pressure.

Injection Wellhead Pressures

The average monthly wellhead injection pressure for each injection well is summarized in Appendix B, and shows all injection pressures since 2003. In November 2013, the 00/01-14 and 00/08-14 injectors were suspended.

Reservoir Pressure

No reservoir pressure measurements were taken at North Ebor Unit No. 2 in 2017.

Well Servicing

No maintenance was required on the 9 wells in North Ebor Unit No. 2 in 2017.

Voidage Replacement

Cumulative voidage for the North Ebor Unit No. 2 was 0.591 in December 2017. Calculations, plots and tables of the Voidage replacement ratio on a monthly and cumulative basis for each injection pattern is presented in Appendix D.

Waterflood Performance Discussion

The original oil-in-place (OOIP) of the Unit is estimated at 412.0 e³m³. In 2017, the recovery factor of the Unit is 17.1% based on 69.64 e³m³ of cumulative oil recovered to date. The ultimate expected recoverable reserve based on decline analysis is 78.0 e³m³ or an ultimate recovery factor of 18.9%.

The overall performance of this waterflood has been good as indicated by an expected recovery factor of 18.9%, beyond the primary recovery factor. Waterflood response is clearly evident in wells in the Unit. Trends in production are very stable and mature. No changes are anticipated in the future trends without changes to the waterflood itself.

Performance should improve with efforts to increase the instantaneous voidage above 1 so that eventually a cumulative voidage of unity is reached. In addition to increasing the water injection rate, the individual VRR plots clearly show that injection should be reduced in the 08-14 pattern and increased in the 01-14 pattern to support the withdrawals in those areas. These changes will improve performance of the waterflood.

List of Appendices

Appendix A: Well Name and Well Status

Appendix B: Monthly Injection Wellhead Pressures Table

Appendix C: North Ebor Unit No.2 Injection Pattern Summary

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

00/01-14-010-29W1/0

00/08-14-010-29W1/0

Appendix A

UWI

100/15-11-010-29W1/00
100/16-11-010-29W1/02
100/13-12-010-29W1/00
100/04-13-010-29W1/00
100/05-13-010-29W1/00
100/01-14-010-29W1/00
100/07-14-010-29W1/00
100/08-14-010-29W1/00
102/10-14-010-29W1/00

Well Status

ABD Producer
Capable of OIL Prod
Capable of OIL Prod
Capable of OIL Prod
Capable of OIL Prod
WTR Injection
ABD Producer
WTR Injection
Capable of OIL Prod

Appendix B

Average Monthly Injection Pressure (kPag)

Injection Pressure			Injection Pressure			Injection Pressure			Injection Pressure		
Month	100/01-14	100/08-14	Month	100/01-14	100/08-14	Month	100/01-14	100/08-14	Month	100/01-14	100/08-14
			Jan-06	10100	7500	Jan-10	9696	8139	Jan-14	-	-
			Feb-06	8937	7579	Feb-10	9690	8200	Feb-14	-	-
			Mar-06	8620	7600	Mar-10	9622	8448	Mar-14	-	-
			Apr-06	7672	7540	Apr-10	9300	8460	Apr-14	-	-
			May-06	9010	9842	May-10	9387	8397	May-14	-	-
			Jun-06	10787	9233	Jun-10	9313	8307	Jun-14	-	-
			Jul-06	10801	8755	Jul-10	9239	8394	Jul-14	-	-
Aug-02	1562	1214	Aug-06	10801	9271	Aug-10	9200	8400	Aug-14	-	-
Sep-02	3720	2908	Sep-06	10161	9673	Sep-10	10273	8727	Sep-14	-	-
Oct-02	10800	8453	Oct-06	9858	8826	Oct-10	9977	8623	Oct-14	-	-
Nov-02	10800	8193	Nov-06	9493	8960	Nov-10	9900	8610	Nov-14	-	-
Dec-02	10655	8488	Dec-06	9977	8527	Dec-10	9900	8600	Dec-14	-	-
Jan-03	9752	8520	Jan-07	9510	9181	Jan-11	9813	8600	Jan-15	-	-
Feb-03	10118	8791	Feb-07	9475	8111	Feb-11	9800	8600	Feb-15	-	-
Mar-03	10450	8900	Mar-07	10116	9200	Mar-11	9852	8065	Mar-15	-	-
Apr-03	10747	8830	Apr-07	10521	7480	Apr-11	10200	8700	Apr-15	-	-
May-03	10800	9065	May-07	11000	1200	May-11	8655	8839	May-15	-	-
Jun-03	10800	9200	Jun-07	2553	7347	Jun-11	9493	8900	Jun-15	-	-
Jul-03	10800	9200	Jul-07	4903	8194	Jul-11	9881	8916	Jul-15	-	-
Aug-03	10800	9200	Aug-07	7497	8755	Aug-11	10410	9016	Aug-15	-	-
Sep-03	10800	9200	Sep-07	1480	8840	Sep-11	10417	9037	Sep-15	-	-
Oct-03	9981	9200	Oct-07	8368	8994	Oct-11	10229	9026	Oct-15	-	-
Nov-03	9681	9139	Nov-07	9180	9000	Nov-11	10240	9080	Nov-15	-	-
Dec-03	8965	8895	Dec-07	9300	9000	Dec-11	10000	9000	Dec-15	-	-
Jan-04	8965	8895	Jan-08	9290	9000	Jan-12	10000	9000	Jan-16	-	-
Feb-04	8965	8895	Feb-08	8876	9000	Feb-12	10000	9000	Feb-16	-	-
Mar-04	8965	8895	Mar-08	9881	9142	Mar-12	10000	9042	Mar-16	-	-
Apr-04	8965	8895	Apr-08	10103	9117	Apr-12	9953	9077	Apr-16	-	-
May-04	9866	8725	May-08	10000	9100	May-12	9916	9058	May-16	-	-
Jun-04	10000	8700	Jun-08	8273	7733	Jun-12	9933	9003	Jun-16	-	-
Jul-04	10000	8700	Jul-08	3419	9600	Jul-12	8542	8094	Jul-16	-	-
Aug-04	10000	8700	Aug-08	5987	7955	Aug-12	9300	8300	Aug-16	-	-
Sep-04	8890	8100	Sep-08	8450	7600	Sep-12	9300	8300	Sep-16	-	-
Oct-04	8800	8000	Oct-08	8868	7600	Oct-12	0	0	Oct-16	-	-
Nov-04	8800	8000	Nov-08	9120	7606	Nov-12	376	862	Nov-16	-	-
Dec-04	8800	8000	Dec-08	9707	7574	Dec-12	570	1166	Dec-16	-	-
Jan-05	8800	8000	Jan-09	9613	7520	Jan-13	639	840	Jan-17	-	-
Feb-05	8800	8000	Feb-09	9541	7596	Feb-13	0	1025	Feb-17	-	-
Mar-05	8800	8000	Mar-09	9600	7600	Mar-13	0	1100	Mar-17	-	-
Apr-05	8733	8000	Apr-09	9347	7600	Apr-13	0	1150	Apr-17	-	-
May-05	8400	8000	May-09	9200	7600	May-13	213	1150	May-17	-	-
Jun-05	8400	8000	Jun-09	9200	7600	Jun-13	765	1220	Jun-17	-	-
Jul-05	8400	8000	Jul-09	9200	7600	Jul-13	950	1294	Jul-17	-	-
Aug-05	8458	8000	Aug-09	9200	7600	Aug-13	950	1321	Aug-17	-	-
Sep-05	8973	7617	Sep-09	9200	7600	Sep-13	950	1331	Sep-17	-	-
Oct-05	9326	7500	Oct-09	9482	7777	Oct-13	950	1350	Oct-17	-	-
Nov-05	10100	7500	Nov-09	9634	7845	Nov-13	-	-	Nov-17	-	-
Dec-05	10100	7500	Dec-09	9760	7957	Dec-13	-	-	Dec-17	-	-

Appendix C

North Ebor Unit No. 2 Pattern Summary as of December 2017

Pattern Name	Injector Location (010-29W)	Status	Supported Wells (010-29W1)	No. of Supported Wells	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
00/01-14-010-29W1 Injector	00/01-14	WTR Injection	04-13, 13-12, 15-11, 16-11	4	1	Dec 1986	Jul 1994	2.1	16.0	7.59	0.0	43.0	213.3	92.9	0.000	0.358
00/08-14-010-29W1 Injector	00/08-14	WTR Injection	09-14, 12-13, 02/10-14 05-13, 07-14	5	0.5 1	Feb 1987	Oct 1991	0.9	5.4	5.96	0.0	31.3	43.2	110.2	0.000	1.438

Appendix D
Rates and VRR
Plots and Tables

Pattern: 00/01-14-010-29Inj Set: NorthEborUnit#2

Oil Formation Vol Factor : 1.07100 m3/m3

Water Formation Vol Factor : 1.00150 m3/m3

Water / Oil Ratio : -414.67 m3/m3

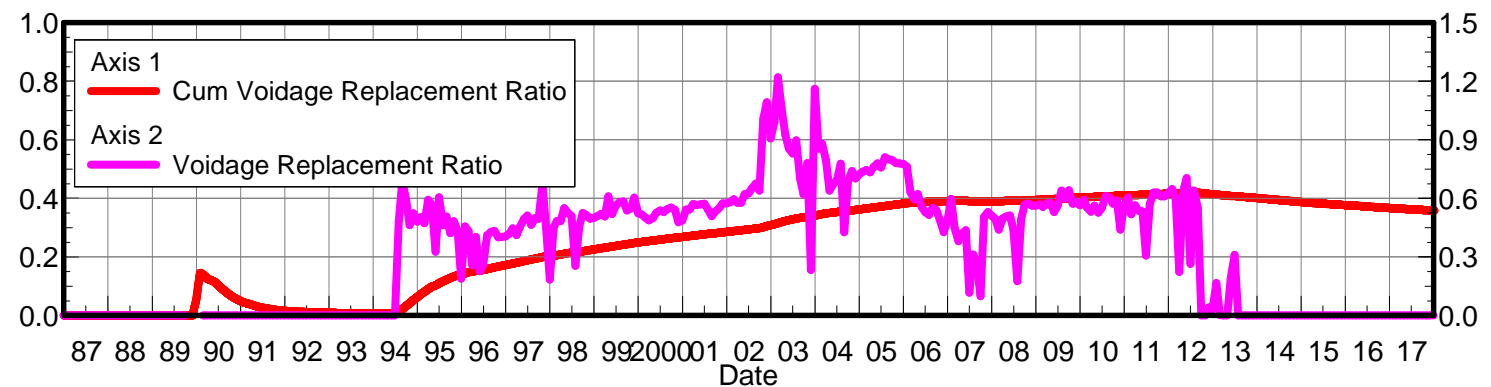
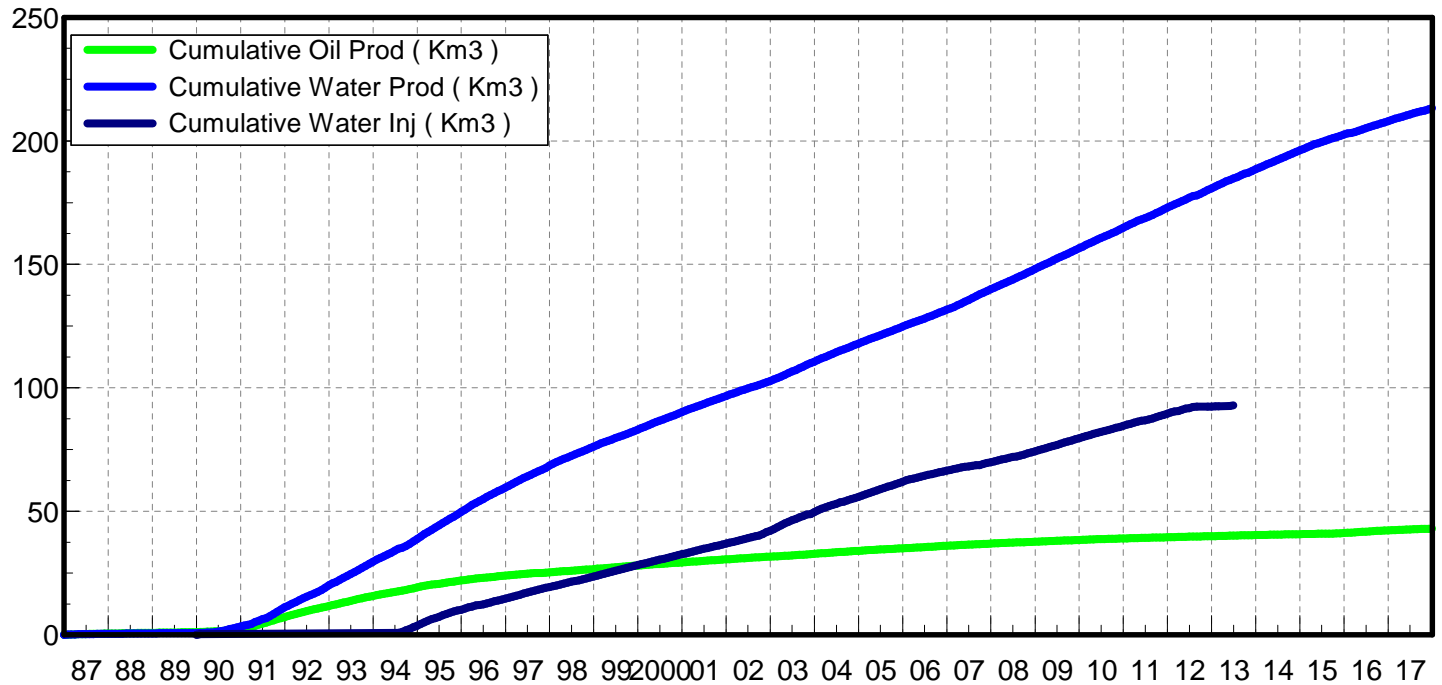
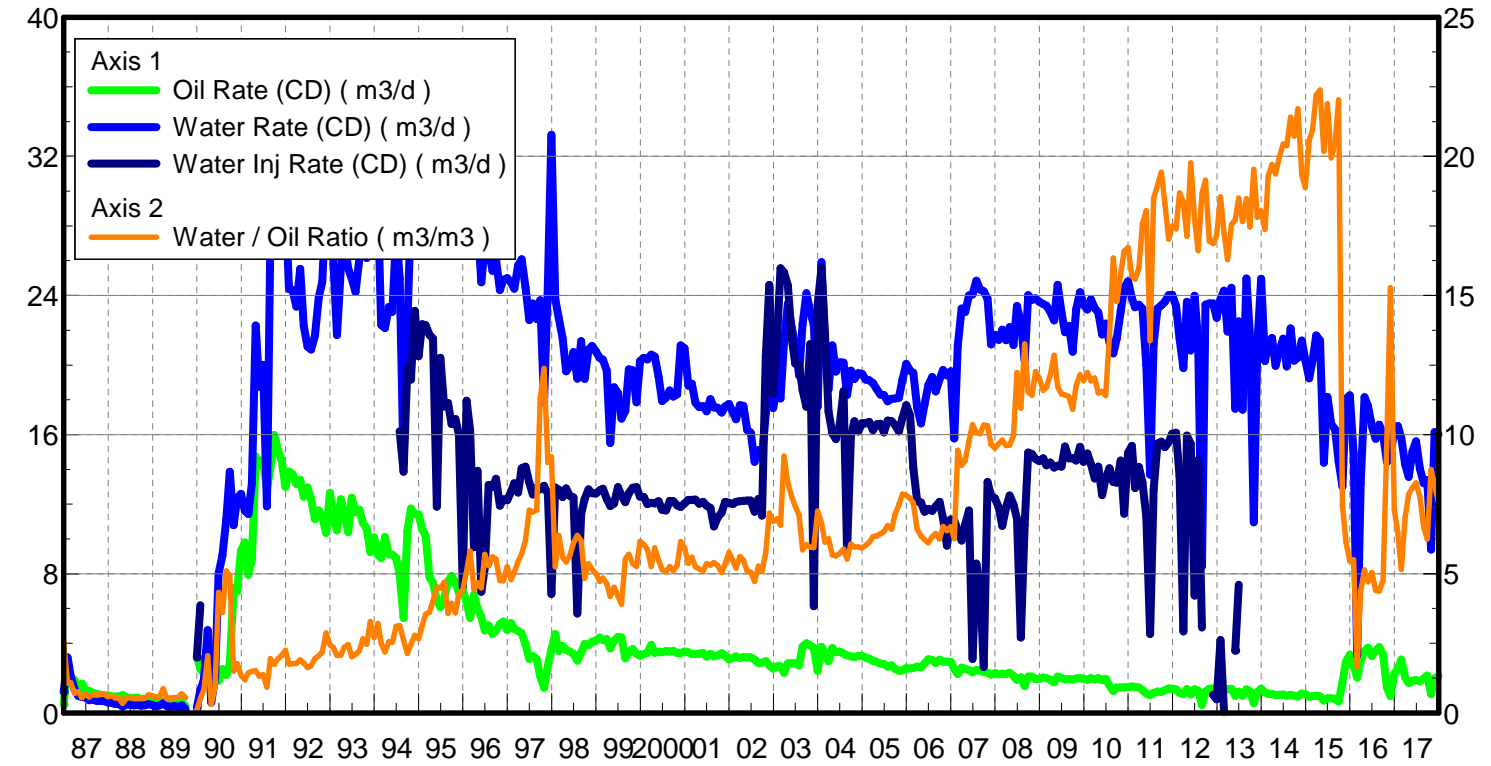
June 04, 2018

Operator: TUNDRA_OIL_AND_GAS_PARTNER

Oil Rate (CD) : 0.49 m3/d

Water Rate (CD) : 18.56 m3/d

Water Inj Rate (CD) : 7.37 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	VRR	Cum VRR
12/31/1986	0.48	1.21	2.50		0.01	0.04	0.00	0.000	0.000
1/31/1987	2.96	3.19	1.08		0.11	0.14	0.00	0.000	0.000
2/28/1987	1.91	2.09	1.09		0.16	0.19	0.00	0.000	0.000
3/31/1987	1.89	1.35	0.71		0.22	0.24	0.00	0.000	0.000
4/30/1987	1.28	0.99	0.77		0.26	0.27	0.00	0.000	0.000
5/31/1987	1.68	0.91	0.54		0.31	0.29	0.00	0.000	0.000
6/30/1987	1.32	0.89	0.67		0.35	0.32	0.00	0.000	0.000
7/31/1987	1.27	0.72	0.57		0.39	0.34	0.00	0.000	0.000
8/31/1987	1.15	0.77	0.66		0.42	0.37	0.00	0.000	0.000
9/30/1987	1.09	0.69	0.63		0.46	0.39	0.00	0.000	0.000
10/31/1987	1.04	0.68	0.66		0.49	0.41	0.00	0.000	0.000
11/30/1987	0.99	0.67	0.68		0.52	0.43	0.00	0.000	0.000
12/31/1987	1.01	0.59	0.59		0.55	0.45	0.00	0.000	0.000
1/31/1988	0.94	0.58	0.62		0.58	0.47	0.00	0.000	0.000
2/29/1988	0.94	0.50	0.54		0.61	0.48	0.00	0.000	0.000
3/31/1988	0.95	0.51	0.54		0.64	0.50	0.00	0.000	0.000
4/30/1988	1.03	0.35	0.34		0.67	0.51	0.00	0.000	0.000
5/31/1988	0.90	0.48	0.54		0.69	0.52	0.00	0.000	0.000
6/30/1988	0.85	0.47	0.56		0.72	0.54	0.00	0.000	0.000
7/31/1988	0.86	0.44	0.52		0.75	0.55	0.00	0.000	0.000
8/31/1988	0.88	0.45	0.52		0.77	0.56	0.00	0.000	0.000
9/30/1988	0.78	0.41	0.53		0.80	0.58	0.00	0.000	0.000
10/31/1988	0.80	0.43	0.54		0.82	0.59	0.00	0.000	0.000
11/30/1988	0.78	0.51	0.65		0.85	0.61	0.00	0.000	0.000
12/31/1988	0.74	0.45	0.61		0.87	0.62	0.00	0.000	0.000
1/31/1989	0.63	0.35	0.57		0.89	0.63	0.00	0.000	0.000
2/28/1989	0.75	0.44	0.59		0.91	0.64	0.00	0.000	0.000
3/31/1989	0.63	0.55	0.87		0.93	0.66	0.00	0.000	0.000
4/30/1989	0.75	0.38	0.50		0.95	0.67	0.00	0.000	0.000
5/31/1989	0.65	0.34	0.53		0.97	0.68	0.00	0.000	0.000
6/30/1989	0.72	0.40	0.55		0.99	0.69	0.00	0.000	0.000
7/31/1989	0.63	0.35	0.55		1.01	0.70	0.00	0.000	0.000
8/31/1989	0.64	0.43	0.68		1.03	0.72	0.00	0.000	0.000
9/30/1989	0.40	0.22	0.55		1.04	0.72	0.00	0.000	0.000
10/31/1989					1.04	0.72	0.00		0.000
11/30/1989					1.04	0.72	0.00		0.000
12/31/1989	3.25	0.30	0.09	3.20	1.14	0.73	0.10	0.845	0.051
1/31/1990	2.53	1.30	0.51	6.18	1.22	0.77	0.29	1.543	0.140
2/28/1990	2.26	1.91	0.84		1.29	0.83	0.29	0.000	0.132
3/31/1990	2.32	4.76	2.06		1.36	0.97	0.29	0.000	0.120
4/30/1990	1.91	0.59	0.31		1.42	0.99	0.29	0.000	0.116
5/31/1990	2.17	2.05	0.94		1.48	1.06	0.29	0.000	0.110
6/30/1990	1.85	8.01	4.33		1.54	1.30	0.29	0.000	0.099
7/31/1990	2.51	9.06	3.61		1.62	1.58	0.29	0.000	0.088
8/31/1990	2.18	11.13	5.10		1.68	1.92	0.29	0.000	0.078
9/30/1990	2.81	13.87	4.93		1.77	2.34	0.29	0.000	0.069

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
10/31/1990	7.17	10.79	1.50		1.99	2.67	0.29	0.000	0.061
11/30/1990	6.98	12.36	1.77		2.20	3.04	0.29	0.000	0.054
12/31/1990	9.32	12.59	1.35		2.49	3.43	0.29	0.000	0.048
1/31/1991	9.80	11.62	1.19		2.79	3.79	0.29	0.000	0.043
2/28/1991	7.94	11.44	1.44		3.01	4.11	0.29	0.000	0.040
3/31/1991	8.85	13.21	1.49		3.29	4.52	0.29	0.000	0.036
4/30/1991	14.76	22.28	1.51		3.73	5.19	0.29	0.000	0.032
5/31/1991	14.23	18.75	1.32		4.17	5.77	0.29	0.000	0.028
6/30/1991	14.54	20.01	1.38		4.61	6.37	0.29	0.000	0.026
7/31/1991	12.82	11.88	0.93		5.01	6.74	0.29	0.000	0.024
8/31/1991	14.12	27.47	1.95		5.44	7.59	0.29	0.000	0.022
9/30/1991	15.99	27.94	1.75		5.92	8.43	0.29	0.000	0.020
10/31/1991	15.10	29.38	1.95		6.39	9.34	0.29	0.000	0.018
11/30/1991	14.54	30.01	2.06		6.83	10.24	0.29	0.000	0.017
12/31/1991	13.00	29.29	2.25		7.23	11.15	0.29	0.000	0.015
1/31/1992	13.86	24.38	1.76		7.66	11.91	0.29	0.000	0.014
2/29/1992	13.73	24.31	1.77		8.06	12.61	0.29	0.000	0.014
3/31/1992	13.16	23.35	1.77		8.47	13.34	0.29	0.000	0.013
4/30/1992	13.41	25.52	1.90		8.87	14.10	0.29	0.000	0.012
5/31/1992	12.43	22.25	1.79		9.25	14.79	0.29	0.000	0.012
6/30/1992	12.96	21.06	1.63		9.64	15.42	0.29	0.000	0.011
7/31/1992	12.31	20.89	1.70		10.02	16.07	0.29	0.000	0.011
8/31/1992	11.14	21.68	1.95		10.37	16.74	0.29	0.000	0.010
9/30/1992	11.64	23.89	2.05		10.72	17.46	0.29	0.000	0.010
10/31/1992	11.31	24.77	2.19		11.07	18.23	0.29	0.000	0.010
11/30/1992	10.35	29.75	2.87		11.38	19.12	0.29	0.000	0.009
12/31/1992	12.65	30.93	2.45		11.77	20.08	0.29	0.000	0.009
1/31/1993	11.03	25.82	2.34		12.11	20.88	0.29	0.000	0.009
2/28/1993	10.49	21.72	2.07		12.41	21.49	0.29	0.000	0.008
3/31/1993	12.29	25.56	2.08		12.79	22.28	0.29	0.000	0.008
4/30/1993	11.50	27.18	2.36		13.13	23.10	0.29	0.000	0.008
5/31/1993	10.38	25.54	2.46		13.46	23.89	0.29	0.000	0.008
6/30/1993	12.38	24.98	2.02		13.83	24.64	0.29	0.000	0.007
7/31/1993	11.53	24.21	2.10		14.18	25.39	0.29	0.000	0.007
8/31/1993	11.68	26.14	2.24		14.55	26.20	0.29	0.000	0.007
9/30/1993	10.92	29.13	2.67		14.87	27.07	0.29	0.000	0.007
10/31/1993	10.61	26.16	2.47		15.20	27.88	0.29	0.000	0.007
11/30/1993	9.25	30.38	3.28		15.48	28.79	0.29	0.000	0.006
12/31/1993	10.10	27.41	2.71		15.79	29.64	0.29	0.000	0.006
1/31/1994	9.08	29.16	3.21		16.08	30.55	0.29	0.000	0.006
2/28/1994	8.90	22.32	2.51		16.32	31.17	0.29	0.000	0.006
3/31/1994	10.11	22.13	2.19		16.64	31.86	0.29	0.000	0.006
4/30/1994	9.13	23.34	2.56		16.91	32.56	0.29	0.000	0.006
5/31/1994	9.10	23.06	2.53		17.19	33.27	0.29	0.000	0.006
6/30/1994	8.90	27.66	3.11		17.46	34.10	0.29	0.000	0.006
7/31/1994	7.97	25.00	3.14	16.19	17.71	34.88	0.79	0.483	0.015

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
8/31/1994	5.45	14.30	2.62	13.87	17.88	35.32	1.22	0.689	0.022
9/30/1994	10.46	22.34	2.13	19.87	18.19	35.99	1.82	0.593	0.033
10/31/1994	11.75	28.86	2.46	19.16	18.56	36.89	2.41	0.463	0.043
11/30/1994	11.43	31.94	2.79	23.12	18.90	37.84	3.11	0.523	0.054
12/31/1994	11.42	30.47	2.67	20.50	19.25	38.79	3.74	0.480	0.063
1/31/1995	10.57	33.03	3.12	22.35	19.58	39.81	4.43	0.504	0.073
2/28/1995	10.21	36.19	3.54	22.29	19.87	40.83	5.06	0.473	0.081
3/31/1995	7.82	28.28	3.62	21.73	20.11	41.70	5.73	0.593	0.091
4/30/1995	7.47	29.97	4.01	21.52	20.33	42.60	6.38	0.567	0.099
5/31/1995	6.48	29.35	4.53	11.85	20.53	43.51	6.75	0.327	0.103
6/30/1995	6.07	27.21	4.48	20.42	20.72	44.33	7.36	0.606	0.111
7/31/1995	6.60	30.96	4.69	17.62	20.92	45.29	7.90	0.463	0.117
8/31/1995	7.58	27.07	3.57	17.82	21.15	46.13	8.46	0.506	0.123
9/30/1995	7.86	30.99	3.94	16.60	21.39	47.06	8.95	0.421	0.128
10/31/1995	7.51	26.98	3.59	16.91	21.62	47.89	9.48	0.483	0.133
11/30/1995	6.89	29.52	4.28	15.99	21.83	48.78	9.96	0.434	0.138
12/31/1995	7.05	30.99	4.40	7.25	22.05	49.74	10.18	0.188	0.139
1/31/1996	6.38	32.54	5.10	17.94	22.25	50.75	10.74	0.456	0.144
2/29/1996	5.46	31.74	5.81	16.24	22.40	51.67	11.21	0.432	0.148
3/31/1996	6.78	30.02	4.43	9.53	22.61	52.60	11.51	0.256	0.150
4/30/1996	6.03	28.21	4.68	13.92	22.80	53.45	11.92	0.401	0.153
5/31/1996	5.52	24.76	4.49	6.97	22.97	54.21	12.14	0.227	0.154
6/30/1996	4.74	26.98	5.70	8.34	23.11	55.02	12.39	0.260	0.155
7/31/1996	5.03	26.61	5.29	13.12	23.27	55.85	12.80	0.410	0.159
8/31/1996	4.54	25.42	5.60	12.99	23.41	56.64	13.20	0.429	0.162
9/30/1996	4.72	26.06	5.52	13.47	23.55	57.42	13.60	0.433	0.165
10/31/1996	5.12	24.32	4.75	11.92	23.71	58.17	13.97	0.400	0.167
11/30/1996	5.25	24.90	4.74	12.28	23.86	58.92	14.34	0.403	0.170
12/31/1996	4.76	25.00	5.25	12.22	24.01	59.69	14.72	0.406	0.172
1/31/1997	5.17	24.74	4.79	12.73	24.17	60.46	15.11	0.421	0.175
2/28/1997	4.83	24.39	5.05	13.21	24.31	61.14	15.48	0.447	0.178
3/31/1997	4.73	25.73	5.44	12.66	24.45	61.94	15.88	0.411	0.180
4/30/1997	4.57	26.08	5.71	14.07	24.59	62.72	16.30	0.455	0.183
5/31/1997	3.95	24.49	6.20	14.17	24.71	63.48	16.74	0.493	0.186
6/30/1997	3.10	22.58	7.28	13.25	24.81	64.16	17.14	0.511	0.189
7/31/1997	3.26	23.55	7.22	12.55	24.91	64.89	17.53	0.464	0.191
8/31/1997	3.11	22.65	7.29	12.96	25.00	65.59	17.93	0.499	0.194
9/30/1997	2.10	23.73	11.30	12.86	25.07	66.30	18.31	0.495	0.197
10/31/1997	1.44	17.85	12.38	13.06	25.11	66.86	18.72	0.673	0.200
11/30/1997	2.74	24.66	9.00	12.59	25.19	67.60	19.10	0.456	0.202
12/31/1997	3.61	33.24	9.20	6.84	25.30	68.63	19.31	0.184	0.202
1/31/1998	4.54	23.81	5.25	12.95	25.45	69.37	19.71	0.452	0.204
2/28/1998	3.56	22.70	6.37	12.83	25.55	70.00	20.07	0.484	0.206
3/31/1998	3.85	21.55	5.60	12.41	25.66	70.67	20.45	0.484	0.208
4/30/1998	3.62	19.65	5.43	12.91	25.77	71.26	20.84	0.549	0.211
5/31/1998	3.52	19.97	5.67	12.47	25.88	71.88	21.23	0.526	0.213

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
6/30/1998	3.39	20.74	6.12	12.40	25.98	72.50	21.60	0.509	0.215
7/31/1998	3.02	19.23	6.37	5.72	26.08	73.10	21.78	0.255	0.216
8/31/1998	3.45	21.37	6.20	11.45	26.18	73.76	22.13	0.457	0.217
9/30/1998	3.97	19.21	4.84	12.30	26.30	74.34	22.50	0.524	0.220
10/31/1998	3.90	20.89	5.36	12.85	26.42	74.98	22.90	0.513	0.222
11/30/1998	4.09	21.09	5.16	12.63	26.55	75.62	23.28	0.496	0.224
12/31/1998	4.15	20.79	5.01	12.61	26.68	76.26	23.67	0.500	0.226
1/31/1999	4.33	20.42	4.72	12.79	26.81	76.89	24.06	0.511	0.228
2/28/1999	4.19	20.31	4.84	12.90	26.93	77.46	24.43	0.520	0.230
3/31/1999	4.25	19.68	4.64	12.30	27.06	78.07	24.81	0.508	0.232
4/30/1999	3.71	15.52	4.18	11.90	27.17	78.54	25.16	0.611	0.234
5/31/1999	4.15	18.72	4.51	12.05	27.30	79.12	25.54	0.520	0.236
6/30/1999	4.38	18.39	4.20	12.98	27.43	79.67	25.93	0.563	0.238
7/31/1999	4.34	16.91	3.90	12.50	27.56	80.19	26.31	0.580	0.240
8/31/1999	3.14	17.36	5.53	12.11	27.66	80.73	26.69	0.585	0.242
9/30/1999	3.46	19.75	5.70	12.63	27.77	81.32	27.07	0.539	0.244
10/31/1999	3.67	19.71	5.37	12.95	27.88	81.94	27.47	0.548	0.246
11/30/1999	3.39	17.87	5.27	12.98	27.98	82.47	27.86	0.604	0.248
12/31/1999	3.28	20.22	6.16	12.44	28.08	83.10	28.25	0.524	0.250
1/31/2000	3.37	20.42	6.05	12.42	28.19	83.73	28.63	0.517	0.251
2/29/2000	3.46	20.32	5.88	12.01	28.29	84.32	28.98	0.500	0.253
3/31/2000	3.91	20.59	5.26	12.09	28.41	84.96	29.35	0.488	0.254
4/30/2000	3.46	20.48	5.93	12.05	28.51	85.57	29.71	0.498	0.256
5/31/2000	3.52	19.34	5.49	12.18	28.62	86.17	30.09	0.527	0.258
6/30/2000	3.49	17.94	5.15	11.68	28.73	86.71	30.44	0.539	0.259
7/31/2000	3.57	18.11	5.08	11.64	28.84	87.27	30.80	0.531	0.261
8/31/2000	3.52	18.54	5.26	12.18	28.95	87.85	31.18	0.546	0.262
9/30/2000	3.57	18.19	5.10	12.17	29.05	88.39	31.55	0.553	0.264
10/31/2000	3.45	18.31	5.30	11.93	29.16	88.96	31.92	0.542	0.266
11/30/2000	3.43	21.14	6.16	11.84	29.26	89.59	32.27	0.477	0.267
12/31/2000	3.53	20.96	5.95	12.04	29.37	90.24	32.64	0.487	0.268
1/31/2001	3.50	18.81	5.38	12.25	29.48	90.83	33.02	0.543	0.270
2/28/2001	3.39	18.93	5.59	12.24	29.58	91.36	33.37	0.543	0.271
3/31/2001	3.40	17.84	5.25	12.26	29.68	91.91	33.75	0.571	0.273
4/30/2001	3.40	17.59	5.17	12.02	29.78	92.44	34.11	0.566	0.274
5/31/2001	3.46	17.63	5.10	12.13	29.89	92.98	34.48	0.569	0.276
6/30/2001	3.23	17.35	5.37	11.91	29.99	93.51	34.84	0.573	0.277
7/31/2001	3.40	18.05	5.31	11.78	30.09	94.06	35.21	0.543	0.279
8/31/2001	3.25	17.56	5.40	10.71	30.19	94.61	35.54	0.509	0.280
9/30/2001	3.31	17.54	5.30	11.26	30.29	95.14	35.88	0.534	0.281
10/31/2001	3.43	17.27	5.04	11.51	30.40	95.67	36.23	0.550	0.283
11/30/2001	3.29	17.63	5.36	12.14	30.50	96.20	36.60	0.574	0.284
12/31/2001	3.08	17.76	5.77	12.08	30.59	96.75	36.97	0.574	0.286
1/31/2002	3.16	17.28	5.47	12.01	30.69	97.29	37.34	0.581	0.287
2/28/2002	3.25	16.88	5.20	12.14	30.78	97.76	37.68	0.596	0.288
3/31/2002	3.15	17.69	5.62	12.18	30.88	98.31	38.06	0.578	0.290

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
4/30/2002	3.21	17.65	5.50	12.19	30.98	98.84	38.43	0.578	0.291
5/31/2002	3.19	16.25	5.09	12.21	31.07	99.34	38.81	0.621	0.293
6/30/2002	3.19	16.10	5.05	12.21	31.17	99.82	39.17	0.626	0.294
7/31/2002	3.06	14.44	4.72	11.56	31.27	100.27	39.53	0.653	0.296
8/31/2002	2.87	15.12	5.27	12.30	31.35	100.74	39.91	0.676	0.297
9/30/2002	2.88	14.65	5.09	11.35	31.44	101.18	40.25	0.640	0.299
10/31/2002	2.98	17.21	5.77	20.51	31.53	101.71	40.89	1.006	0.302
11/30/2002	2.73	19.61	7.18	24.61	31.61	102.30	41.63	1.092	0.306
12/31/2002	2.55	17.53	6.89	18.37	31.69	102.84	42.20	0.907	0.309
1/31/2003	2.68	18.71	6.97	21.42	31.78	103.42	42.86	0.993	0.312
2/28/2003	2.68	18.08	6.74	25.56	31.85	103.93	43.58	1.220	0.316
3/31/2003	2.31	21.32	9.23	25.33	31.92	104.59	44.36	1.064	0.320
4/30/2003	2.84	23.52	8.27	24.57	32.01	105.30	45.10	0.925	0.323
5/31/2003	2.86	22.16	7.75	21.55	32.10	105.98	45.77	0.855	0.326
6/30/2003	2.84	21.14	7.43	20.08	32.18	106.62	46.37	0.830	0.329
7/31/2003	2.73	19.40	7.11	20.01	32.27	107.22	46.99	0.897	0.332
8/31/2003	3.82	22.36	5.86	18.55	32.39	107.91	47.56	0.702	0.334
9/30/2003	4.00	24.14	6.04	17.61	32.51	108.64	48.09	0.620	0.335
10/31/2003	3.87	23.04	5.95	21.21	32.63	109.35	48.75	0.781	0.338
11/30/2003	3.75	22.30	5.94	6.13	32.74	110.02	48.93	0.233	0.337
12/31/2003	2.43	17.59	7.25	23.45	32.81	110.57	49.66	1.162	0.341
1/31/2004	3.79	25.91	6.83	25.59	32.93	111.37	50.45	0.854	0.344
2/29/2004	3.44	21.08	6.13	21.76	33.03	111.98	51.08	0.879	0.347
3/31/2004	2.97	18.59	6.27	17.32	33.12	112.56	51.62	0.796	0.349
4/30/2004	3.72	21.14	5.68	16.08	33.23	113.19	52.10	0.640	0.350
5/31/2004	3.48	19.63	5.64	15.75	33.34	113.80	52.59	0.674	0.352
6/30/2004	3.52	20.15	5.73	16.57	33.45	114.40	53.09	0.693	0.354
7/31/2004	3.42	20.15	5.89	18.50	33.55	115.03	53.66	0.777	0.356
8/31/2004	3.31	18.27	5.52	9.32	33.66	115.59	53.95	0.427	0.356
9/30/2004	3.24	19.68	6.07	15.90	33.75	116.19	54.43	0.687	0.357
10/31/2004	3.22	19.21	5.97	16.77	33.85	116.78	54.95	0.740	0.359
11/30/2004	3.28	19.53	5.96	16.19	33.95	117.37	55.43	0.703	0.361
12/31/2004	3.29	19.50	5.93	16.67	34.05	117.97	55.95	0.724	0.362
1/31/2005	3.18	19.17	6.02	16.65	34.15	118.57	56.47	0.737	0.364
2/28/2005	3.13	19.12	6.12	16.73	34.24	119.10	56.94	0.745	0.366
3/31/2005	2.99	18.95	6.33	16.26	34.33	119.69	57.44	0.734	0.367
4/30/2005	2.93	18.62	6.35	16.58	34.42	120.25	57.94	0.762	0.369
5/31/2005	2.84	18.30	6.44	16.63	34.51	120.81	58.45	0.779	0.371
6/30/2005	2.80	18.28	6.52	16.13	34.59	121.36	58.94	0.758	0.372
7/31/2005	2.66	17.91	6.73	16.80	34.68	121.92	59.46	0.810	0.374
8/31/2005	2.74	18.05	6.59	16.78	34.76	122.48	59.98	0.800	0.376
9/30/2005	2.53	18.08	7.14	16.55	34.84	123.02	60.47	0.796	0.377
10/31/2005	2.42	18.12	7.48	16.18	34.91	123.58	60.98	0.781	0.379
11/30/2005	2.44	19.15	7.86	16.95	34.98	124.16	61.48	0.779	0.381
12/31/2005	2.57	20.07	7.82	17.69	35.06	124.78	62.03	0.775	0.382
1/31/2006	2.55	19.68	7.71	17.11	35.14	125.39	62.56	0.764	0.384

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
2/28/2006	2.59	19.55	7.54	14.09	35.22	125.94	62.96	0.631	0.385
3/31/2006	2.66	17.57	6.61	12.17	35.30	126.48	63.33	0.596	0.386
4/30/2006	2.62	16.64	6.35	12.10	35.38	126.98	63.70	0.622	0.386
5/31/2006	2.85	17.73	6.23	11.56	35.47	127.53	64.06	0.556	0.387
6/30/2006	3.09	18.86	6.11	11.73	35.56	128.10	64.41	0.529	0.388
7/31/2006	3.05	19.30	6.33	11.62	35.65	128.69	64.77	0.515	0.388
8/31/2006	2.87	18.48	6.45	11.87	35.74	129.27	65.14	0.551	0.389
9/30/2006	3.07	19.19	6.25	12.14	35.83	129.84	65.50	0.540	0.390
10/31/2006	2.95	19.72	6.70	11.18	35.92	130.45	65.85	0.489	0.390
11/30/2006	2.96	19.40	6.55	9.62	36.01	131.04	66.14	0.426	0.390
12/31/2006	2.94	19.64	6.68	11.13	36.10	131.64	66.48	0.488	0.390
1/31/2007	2.52	15.78	6.27	11.05	36.18	132.13	66.82	0.598	0.391
2/28/2007	2.24	21.13	9.44	10.54	36.25	132.73	67.12	0.448	0.391
3/31/2007	2.61	23.25	8.90	9.91	36.33	133.45	67.43	0.381	0.391
4/30/2007	2.54	23.05	9.07	10.82	36.40	134.14	67.75	0.420	0.391
5/31/2007	2.46	24.01	9.77	11.64	36.48	134.88	68.11	0.437	0.392
6/30/2007	2.32	24.06	10.36	3.10	36.55	135.60	68.20	0.117	0.390
7/31/2007	2.47	24.86	10.07	8.58	36.63	136.37	68.47	0.312	0.390
8/31/2007	2.43	24.33	10.03	7.16	36.70	137.13	68.69	0.266	0.389
9/30/2007	2.34	24.24	10.34	2.64	36.77	137.86	68.77	0.099	0.388
10/31/2007	2.31	23.82	10.33	13.28	36.84	138.59	69.18	0.505	0.389
11/30/2007	2.20	21.18	9.64	12.46	36.91	139.23	69.56	0.530	0.389
12/31/2007	2.28	21.74	9.52	12.34	36.98	139.90	69.94	0.510	0.390
1/31/2008	2.22	21.45	9.68	11.82	37.05	140.57	70.31	0.496	0.390
2/29/2008	2.25	22.03	9.80	10.76	37.11	141.21	70.62	0.440	0.390
3/31/2008	2.23	21.43	9.61	11.83	37.18	141.87	70.98	0.497	0.391
4/30/2008	2.31	22.19	9.62	12.51	37.25	142.54	71.36	0.507	0.391
5/31/2008	2.12	21.15	9.96	11.99	37.32	143.19	71.73	0.512	0.392
6/30/2008	1.91	23.40	12.23	11.16	37.37	143.89	72.07	0.439	0.392
7/31/2008	2.05	22.45	10.96	4.34	37.44	144.59	72.20	0.176	0.391
8/31/2008	1.53	20.26	13.25	10.80	37.48	145.22	72.54	0.493	0.391
9/30/2008	2.08	24.02	11.53	14.96	37.55	145.94	72.98	0.570	0.392
10/31/2008	2.08	23.75	11.42	14.87	37.61	146.68	73.45	0.573	0.393
11/30/2008	1.94	23.84	12.27	14.60	37.67	147.39	73.88	0.563	0.394
12/31/2008	1.97	23.63	12.01	14.47	37.73	148.12	74.33	0.562	0.394
1/31/2009	2.03	23.51	11.59	14.63	37.79	148.85	74.79	0.570	0.395
2/28/2009	2.00	23.42	11.71	14.24	37.85	149.51	75.18	0.557	0.396
3/31/2009	1.90	23.06	12.14	14.40	37.91	150.22	75.63	0.574	0.396
4/30/2009	1.76	22.57	12.85	14.10	37.96	150.90	76.05	0.577	0.397
5/31/2009	2.10	24.61	11.74	14.22	38.03	151.66	76.49	0.529	0.398
6/30/2009	2.01	23.03	11.46	14.15	38.09	152.35	76.92	0.562	0.398
7/31/2009	1.92	21.89	11.42	15.31	38.15	153.03	77.39	0.640	0.399
8/31/2009	1.96	22.25	11.36	14.64	38.21	153.72	77.85	0.601	0.400
9/30/2009	1.90	20.76	10.91	14.64	38.26	154.34	78.29	0.642	0.401
10/31/2009	1.97	23.21	11.78	14.50	38.33	155.06	78.74	0.573	0.402
11/30/2009	1.99	24.18	12.15	15.29	38.39	155.79	79.20	0.581	0.402

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
12/31/2009	1.96	23.47	11.95	14.43	38.45	156.52	79.64	0.564	0.403
1/31/2010	1.90	23.20	12.23	14.92	38.50	157.24	80.11	0.592	0.404
2/28/2010	1.99	23.78	11.93	14.31	38.56	157.90	80.51	0.552	0.404
3/31/2010	1.93	23.26	12.04	13.47	38.62	158.62	80.92	0.532	0.405
4/30/2010	2.00	23.03	11.49	14.16	38.68	159.31	81.35	0.563	0.405
5/31/2010	1.88	21.75	11.55	12.52	38.74	159.99	81.74	0.527	0.406
6/30/2010	1.96	22.39	11.40	13.50	38.80	160.66	82.14	0.551	0.406
7/31/2010	1.57	21.31	13.56	14.07	38.85	161.32	82.58	0.612	0.407
8/31/2010	1.26	20.68	16.35	13.28	38.89	161.96	82.99	0.603	0.408
9/30/2010	1.46	21.54	14.79	13.24	38.93	162.61	83.39	0.573	0.408
10/31/2010	1.46	23.08	15.79	14.51	38.97	163.32	83.84	0.589	0.409
11/30/2010	1.47	24.44	16.59	11.46	39.02	164.06	84.18	0.440	0.409
12/31/2010	1.48	24.82	16.73	14.95	39.06	164.83	84.64	0.566	0.410
1/31/2011	1.52	23.85	15.70	15.36	39.11	165.57	85.12	0.603	0.410
2/28/2011	1.50	23.32	15.59	12.93	39.15	166.22	85.48	0.519	0.411
3/31/2011	1.47	23.46	15.99	14.15	39.20	166.95	85.92	0.565	0.411
4/30/2011	1.32	23.25	17.57	13.25	39.24	167.64	86.32	0.537	0.412
5/31/2011	1.11	20.02	18.04	11.31	39.27	168.26	86.67	0.533	0.412
6/30/2011	1.02	13.69	13.38	4.54	39.30	168.68	86.81	0.307	0.412
7/31/2011	1.15	21.23	18.49	12.83	39.34	169.33	87.20	0.571	0.412
8/31/2011	1.23	23.24	18.96	15.48	39.38	170.05	87.68	0.631	0.413
9/30/2011	1.21	23.44	19.43	15.60	39.41	170.76	88.15	0.631	0.414
10/31/2011	1.29	23.64	18.32	15.29	39.45	171.49	88.62	0.611	0.415
11/30/2011	1.41	24.01	17.03	15.56	39.50	172.21	89.09	0.610	0.415
12/31/2011	1.37	24.05	17.50	16.05	39.54	172.96	89.59	0.629	0.416
1/31/2012	1.35	23.40	17.40	16.11	39.58	173.68	90.09	0.649	0.417
2/29/2012	1.15	21.51	18.68	13.63	39.61	174.30	90.48	0.599	0.418
3/31/2012	1.08	19.83	18.35	4.69	39.65	174.92	90.63	0.224	0.417
4/30/2012	1.38	23.64	17.13	15.95	39.69	175.63	91.11	0.635	0.418
5/31/2012	1.05	20.85	19.76	15.46	39.72	176.28	91.59	0.704	0.419
6/30/2012	1.35	23.99	17.73	6.74	39.76	176.99	91.79	0.265	0.418
7/31/2012	1.29	21.38	16.61	14.55	39.80	177.66	92.24	0.639	0.419
8/31/2012	0.45	8.43	18.66	4.90	39.82	177.92	92.39	0.549	0.419
9/30/2012	1.23	23.48	19.14		39.85	178.62	92.39	0.000	0.418
10/31/2012	1.39	23.55	16.94		39.90	179.35	92.39	0.000	0.416
11/30/2012	1.40	23.55	16.86	1.03	39.94	180.06	92.42	0.041	0.415
12/31/2012	1.32	22.71	17.17	0.78	39.98	180.76	92.45	0.032	0.414
1/31/2013	1.28	23.81	18.55	4.19	40.02	181.50	92.58	0.166	0.413
2/28/2013	1.41	24.27	17.25	0.07	40.06	182.18	92.58	0.003	0.411
3/31/2013	1.35	21.92	16.29		40.10	182.86	92.58	0.000	0.410
4/30/2013	1.39	24.44	17.54		40.14	183.59	92.58	0.000	0.409
5/31/2013	0.99	17.49	17.72	3.58	40.17	184.14	92.69	0.193	0.408
6/30/2013	1.22	22.51	18.50	7.37	40.21	184.81	92.91	0.310	0.408
7/31/2013	0.99	17.43	17.65		40.24	185.35	92.91	0.000	0.407
8/31/2013	1.35	24.98	18.48		40.28	186.13	92.91	0.000	0.405
9/30/2013	1.24	21.71	17.46		40.32	186.78	92.91	0.000	0.404

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
10/31/2013	0.56	10.96	19.53		40.34	187.12	92.91	0.000	0.404
11/30/2013	1.19	21.14	17.81		40.37	187.75	92.91	0.000	0.402
12/31/2013	1.38	24.96	18.04		40.41	188.52	92.91	0.000	0.401
1/31/2014	1.16	20.23	17.37		40.45	189.15	92.91	0.000	0.400
2/28/2014	1.10	21.29	19.29		40.48	189.75	92.91	0.000	0.399
3/31/2014	1.09	21.55	19.71		40.52	190.42	92.91	0.000	0.397
4/30/2014	1.03	19.95	19.37		40.55	191.02	92.91	0.000	0.396
5/31/2014	1.04	20.82	19.98		40.58	191.66	92.91	0.000	0.395
6/30/2014	1.05	21.53	20.44		40.61	192.31	92.91	0.000	0.394
7/31/2014	0.98	19.92	20.38		40.64	192.92	92.91	0.000	0.393
8/31/2014	1.03	22.10	21.41		40.67	193.61	92.91	0.000	0.392
9/30/2014	0.98	20.25	20.73		40.70	194.22	92.91	0.000	0.391
10/31/2014	0.94	20.44	21.70		40.73	194.85	92.91	0.000	0.390
11/30/2014	1.11	21.40	19.34		40.76	195.49	92.91	0.000	0.389
12/31/2014	1.07	20.28	18.88		40.80	196.12	92.91	0.000	0.388
1/31/2015	0.94	19.24	20.56		40.83	196.72	92.91	0.000	0.387
2/28/2015	0.97	20.29	20.97		40.85	197.29	92.91	0.000	0.386
3/31/2015	0.98	21.70	22.20		40.88	197.96	92.91	0.000	0.384
4/30/2015	0.96	21.41	22.38		40.91	198.60	92.91	0.000	0.383
5/31/2015	0.71	14.39	20.18		40.93	199.05	92.91	0.000	0.383
6/30/2015	0.83	18.17	21.89		40.96	199.59	92.91	0.000	0.382
7/31/2015	0.83	16.60	19.95		40.99	200.11	92.91	0.000	0.381
8/31/2015	0.80	16.31	20.47		41.01	200.61	92.91	0.000	0.380
9/30/2015	0.66	14.46	22.03		41.03	201.05	92.91	0.000	0.379
10/31/2015	1.75	13.01	7.46		41.08	201.45	92.91	0.000	0.379
11/30/2015	2.94	18.06	6.14		41.17	201.99	92.91	0.000	0.378
12/31/2015	3.35	18.26	5.45		41.28	202.56	92.91	0.000	0.377
1/31/2016	2.71	14.89	5.50		41.36	203.02	92.91	0.000	0.376
2/29/2016	2.04	3.33	1.63		41.42	203.12	92.91	0.000	0.376
3/31/2016	3.02	13.22	4.38		41.51	203.53	92.91	0.000	0.375
4/30/2016	3.54	18.15	5.13		41.62	204.07	92.91	0.000	0.374
5/31/2016	3.74	17.64	4.71		41.73	204.62	92.91	0.000	0.373
6/30/2016	3.27	16.48	5.04		41.83	205.11	92.91	0.000	0.372
7/31/2016	3.58	15.77	4.40		41.94	205.60	92.91	0.000	0.371
8/31/2016	3.79	16.57	4.38		42.06	206.11	92.91	0.000	0.370
9/30/2016	3.36	16.01	4.76		42.16	206.59	92.91	0.000	0.369
10/31/2016	1.46	14.44	9.86		42.21	207.04	92.91	0.000	0.368
11/30/2016	0.97	14.77	15.28		42.24	207.48	92.91	0.000	0.368
12/31/2016	2.23	16.31	7.31		42.31	207.99	92.91	0.000	0.367
1/31/2017	2.54	16.50	6.49		42.38	208.50	92.91	0.000	0.366
2/28/2017	3.06	15.80	5.16		42.47	208.94	92.91	0.000	0.365
3/31/2017	2.03	14.28	7.03		42.53	209.39	92.91	0.000	0.365
4/30/2017	1.73	13.58	7.86		42.59	209.79	92.91	0.000	0.364
5/31/2017	1.86	15.04	8.09		42.64	210.26	92.91	0.000	0.363
6/30/2017	1.89	15.61	8.26		42.70	210.73	92.91	0.000	0.362
7/31/2017	1.81	14.04	7.77		42.76	211.16	92.91	0.000	0.362

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
8/31/2017	1.98	13.21	6.68		42.82	211.57	92.91	0.000	0.361
9/30/2017	2.14	13.39	6.25		42.88	211.97	92.91	0.000	0.360
10/31/2017	1.07	9.40	8.75		42.91	212.27	92.91	0.000	0.360
11/30/2017	1.98	16.15	8.16		42.97	212.75	92.91	0.000	0.359
12/31/2017	2.11	16.02	7.59		43.04	213.25	92.91	0.000	0.358

Pattern: 00/08-14-010-29Inj Set: NorthEborUnit#2

Oil Formation Vol Factor : 1.07100 m3/m3

Water Formation Vol Factor : 1.00150 m3/m3

Water / Oil Ratio : -340.00 m3/m3

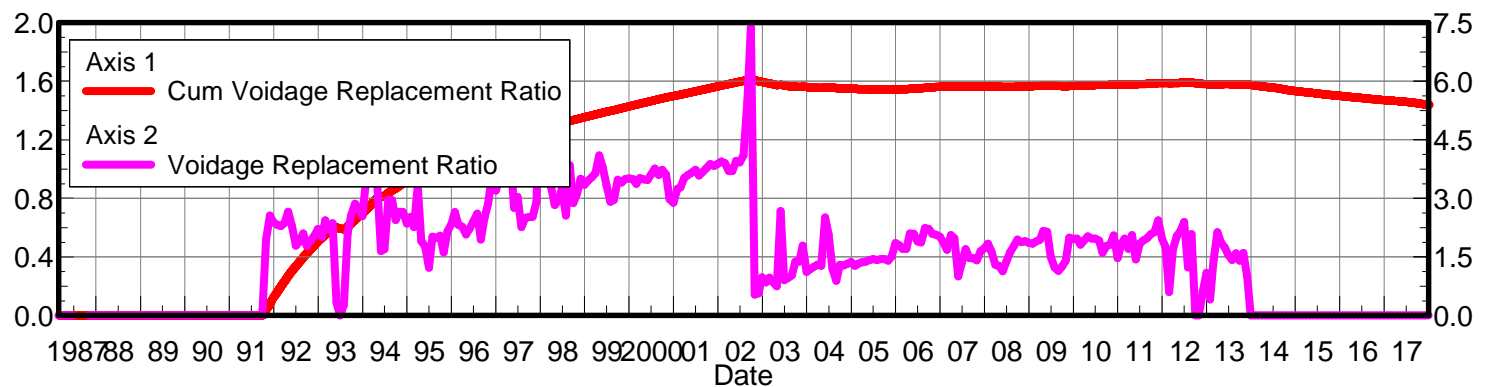
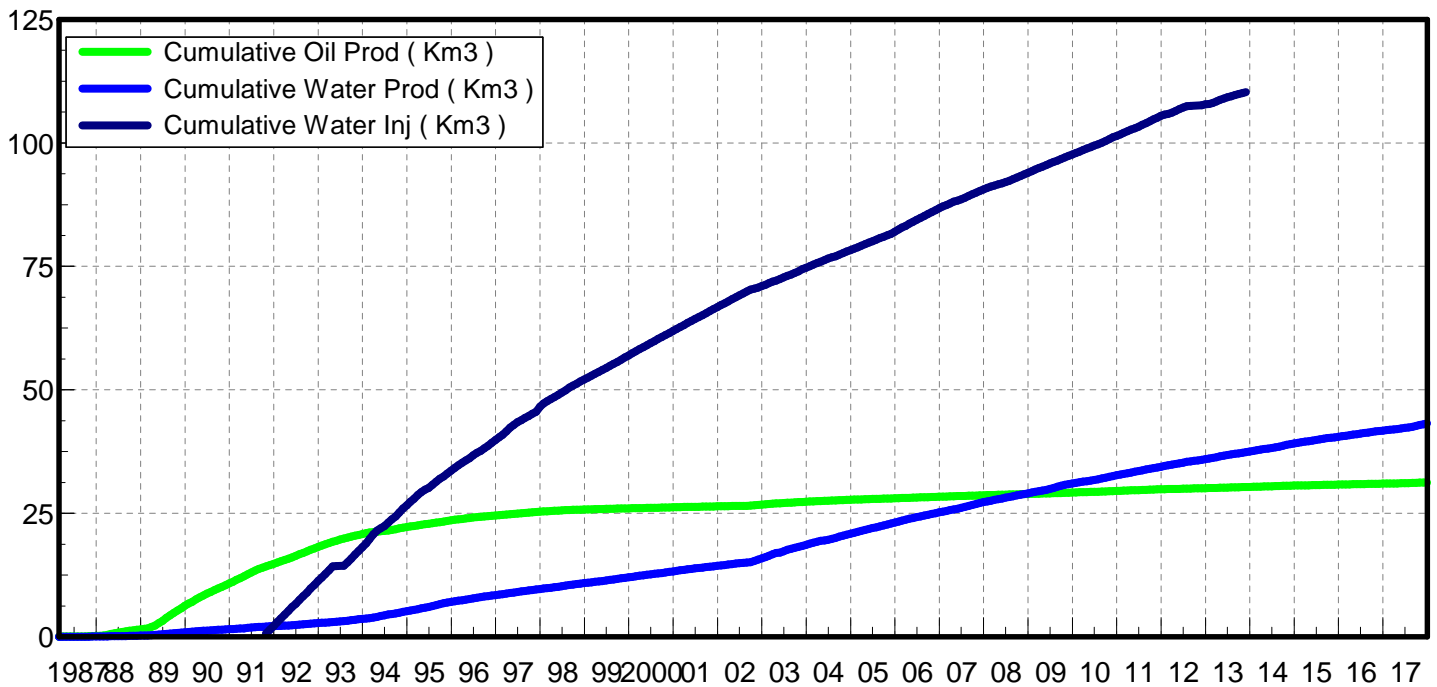
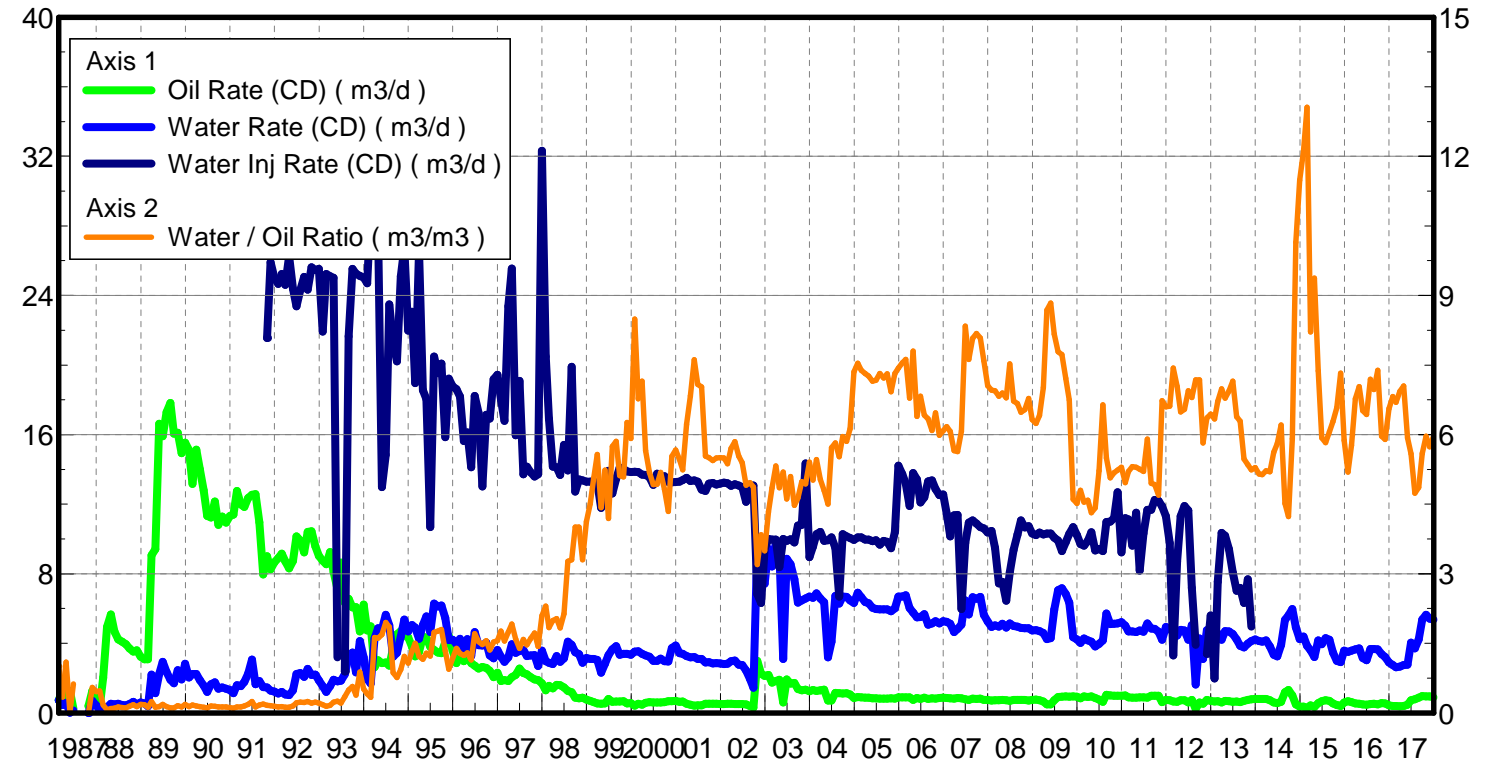
June 04, 2018

Operator: TUNDRA_OIL_AND_GAS_PARTNER

Oil Rate (CD) : 0.24 m3/d

Water Rate (CD) : 2.73 m3/d

Water Inj Rate (CD) : 4.96 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	VRR	Cum VRR
1/31/1987					0.00	0.00	0.00		
2/28/1987	0.72	0.73	1.00		0.02	0.02	0.00	0.000	0.000
3/31/1987	1.34	0.46	0.34		0.06	0.03	0.00	0.000	0.000
4/30/1987	0.53	0.58	1.09		0.08	0.05	0.00	0.000	0.000
5/31/1987	1.27	0.01	0.01		0.12	0.05	0.00	0.000	0.000
6/30/1987	0.22	0.14	0.63		0.12	0.06	0.00	0.000	0.000
7/31/1987					0.12	0.06	0.00		0.000
8/31/1987					0.12	0.06	0.00		0.000
9/30/1987					0.12	0.06	0.00		0.000
10/31/1987	0.39	0.00	0.00		0.14	0.06	0.00	0.000	0.000
11/30/1987	1.27	0.69	0.55		0.17	0.08	0.00	0.000	0.000
12/31/1987	0.93	0.43	0.46		0.20	0.09	0.00	0.000	0.000
1/31/1988	0.33	0.15	0.48		0.21	0.10	0.00	0.000	0.000
2/29/1988	2.04	0.34	0.17		0.27	0.11	0.00	0.000	0.000
3/31/1988	4.95	0.32	0.06		0.43	0.12	0.00	0.000	0.000
4/30/1988	5.65	0.53	0.09		0.60	0.13	0.00	0.000	0.000
5/31/1988	4.69	0.49	0.10		0.74	0.15	0.00	0.000	0.000
6/30/1988	4.23	0.53	0.13		0.87	0.16	0.00	0.000	0.000
7/31/1988	4.09	0.46	0.11		0.99	0.18	0.00	0.000	0.000
8/31/1988	3.95	0.43	0.11		1.12	0.19	0.00	0.000	0.000
9/30/1988	3.72	0.52	0.14		1.23	0.21	0.00	0.000	0.000
10/31/1988	3.53	0.63	0.18		1.34	0.22	0.00	0.000	0.000
11/30/1988	3.60	0.48	0.13		1.45	0.24	0.00	0.000	0.000
12/31/1988	3.22	0.59	0.18		1.55	0.26	0.00	0.000	0.000
1/31/1989	3.08	0.54	0.17		1.64	0.27	0.00	0.000	0.000
2/28/1989	3.08	0.38	0.12		1.73	0.28	0.00	0.000	0.000
3/31/1989	9.07	2.20	0.24		2.01	0.35	0.00	0.000	0.000
4/30/1989	9.42	1.14	0.12		2.29	0.39	0.00	0.000	0.000
5/31/1989	16.63	2.23	0.13		2.81	0.46	0.00	0.000	0.000
6/30/1989	15.91	2.94	0.18		3.28	0.54	0.00	0.000	0.000
7/31/1989	17.29	2.35	0.14		3.82	0.62	0.00	0.000	0.000
8/31/1989	17.83	1.91	0.11		4.37	0.68	0.00	0.000	0.000
9/30/1989	16.06	1.71	0.11		4.85	0.73	0.00	0.000	0.000
10/31/1989	16.11	2.46	0.15		5.35	0.80	0.00	0.000	0.000
11/30/1989	14.94	1.92	0.13		5.80	0.86	0.00	0.000	0.000
12/31/1989	15.54	2.82	0.18		6.28	0.95	0.00	0.000	0.000
1/31/1990	15.11	2.04	0.13		6.75	1.01	0.00	0.000	0.000
2/28/1990	13.16	2.23	0.17		7.12	1.08	0.00	0.000	0.000
3/31/1990	15.13	2.24	0.15		7.59	1.14	0.00	0.000	0.000
4/30/1990	14.00	1.89	0.13		8.01	1.20	0.00	0.000	0.000
5/31/1990	12.79	1.57	0.12		8.41	1.25	0.00	0.000	0.000
6/30/1990	11.32	1.20	0.11		8.75	1.29	0.00	0.000	0.000
7/31/1990	11.23	1.65	0.15		9.09	1.34	0.00	0.000	0.000
8/31/1990	12.15	1.76	0.14		9.47	1.39	0.00	0.000	0.000
9/30/1990	10.81	1.39	0.13		9.79	1.43	0.00	0.000	0.000
10/31/1990	11.30	1.47	0.13		10.15	1.48	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	VRR	Cum VRR
11/30/1990	10.94	1.38	0.13		10.47	1.52	0.00	0.000	0.000
12/31/1990	11.33	1.31	0.12		10.82	1.56	0.00	0.000	0.000
1/31/1991	11.40	1.14	0.10		11.18	1.60	0.00	0.000	0.000
2/28/1991	12.76	1.59	0.13		11.54	1.64	0.00	0.000	0.000
3/31/1991	11.98	1.54	0.13		11.91	1.69	0.00	0.000	0.000
4/30/1991	11.84	1.78	0.15		12.26	1.74	0.00	0.000	0.000
5/31/1991	12.36	2.26	0.18		12.65	1.81	0.00	0.000	0.000
6/30/1991	12.54	3.06	0.24		13.02	1.90	0.00	0.000	0.000
7/31/1991	12.59	1.65	0.13		13.41	1.95	0.00	0.000	0.000
8/31/1991	10.95	1.83	0.17		13.75	2.01	0.00	0.000	0.000
9/30/1991	7.96	1.49	0.19		13.99	2.06	0.00	0.000	0.000
10/31/1991	9.01	1.46	0.16	21.56	14.27	2.10	0.67	1.943	0.039
11/30/1991	8.26	1.28	0.16	25.91	14.52	2.14	1.45	2.562	0.082
12/31/1991	8.66	1.22	0.14	25.02	14.79	2.18	2.22	2.387	0.123
1/31/1992	8.90	1.11	0.12	24.66	15.06	2.21	2.99	2.319	0.163
2/29/1992	9.16	1.21	0.13	25.23	15.33	2.25	3.72	2.293	0.199
3/31/1992	8.71	1.07	0.12	24.62	15.60	2.28	4.48	2.372	0.236
4/30/1992	8.30	1.02	0.12	26.27	15.85	2.31	5.27	2.655	0.274
5/31/1992	8.73	1.30	0.15	24.39	16.12	2.35	6.03	2.293	0.308
6/30/1992	10.15	2.23	0.22	23.37	16.42	2.42	6.73	1.787	0.337
7/31/1992	9.91	2.29	0.23	24.32	16.73	2.49	7.48	1.886	0.367
8/31/1992	9.22	2.07	0.22	25.07	17.01	2.55	8.26	2.100	0.398
9/30/1992	10.40	2.53	0.24	24.33	17.33	2.63	8.99	1.782	0.425
10/31/1992	10.44	2.19	0.21	25.62	17.65	2.70	9.78	1.918	0.453
11/30/1992	9.58	2.20	0.23	25.46	17.94	2.76	10.55	2.046	0.481
12/31/1992	9.02	1.88	0.21	25.54	18.22	2.82	11.34	2.215	0.508
1/31/1993	8.75	1.53	0.17	21.93	18.49	2.87	12.02	2.014	0.531
2/28/1993	8.55	1.21	0.14	25.24	18.73	2.90	12.72	2.440	0.555
3/31/1993	9.24	1.53	0.17	25.10	19.01	2.95	13.50	2.199	0.580
4/30/1993	8.11	1.91	0.23	25.01	19.26	3.01	14.25	2.365	0.604
5/31/1993	7.12	1.81	0.25	3.20	19.48	3.06	14.35	0.339	0.601
6/30/1993	8.65	1.85	0.21		19.74	3.12	14.35	0.000	0.592
7/31/1993	6.33	2.22	0.35	2.38	19.93	3.19	14.43	0.265	0.589
8/31/1993	6.56	3.25	0.49	21.65	20.14	3.29	15.10	2.110	0.608
9/30/1993	6.06	3.47	0.57	25.54	20.32	3.39	15.86	2.567	0.631
10/31/1993	6.08	2.32	0.38	25.26	20.51	3.46	16.65	2.864	0.655
11/30/1993	4.68	4.13	0.88	25.13	20.65	3.59	17.40	2.751	0.678
12/31/1993	6.23	3.19	0.51	25.04	20.84	3.69	18.18	2.542	0.700
1/31/1994	4.74	1.95	0.41	24.71	20.99	3.75	18.94	3.518	0.723
2/28/1994	4.99	1.69	0.34	29.01	21.13	3.80	19.75	4.133	0.749
3/31/1994	2.63	4.27	1.62	31.52	21.21	3.93	20.73	4.449	0.779
4/30/1994	3.02	4.87	1.61	27.79	21.30	4.07	21.56	3.432	0.803
5/31/1994	2.86	4.82	1.68	12.97	21.39	4.22	21.97	1.647	0.811
6/30/1994	2.90	5.65	1.95	14.83	21.48	4.39	22.41	1.696	0.819
7/31/1994	2.71	5.03	1.86	23.49	21.56	4.55	23.14	2.960	0.838
8/31/1994	3.73	3.23	0.87	21.31	21.68	4.65	23.80	2.953	0.855

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
9/30/1994	4.52	3.44	0.76	20.22	21.81	4.75	24.41	2.441	0.869
10/31/1994	4.71	4.39	0.93	25.10	21.96	4.89	25.18	2.662	0.888
11/30/1994	4.42	5.37	1.22	26.75	22.09	5.05	25.99	2.649	0.906
12/31/1994	4.36	4.68	1.07	21.97	22.22	5.19	26.67	2.352	0.921
1/31/1995	3.81	5.05	1.33	23.06	22.34	5.35	27.38	2.527	0.936
2/28/1995	3.26	4.90	1.50	18.96	22.43	5.49	27.91	2.264	0.947
3/31/1995	3.50	4.26	1.22	26.59	22.54	5.62	28.74	3.322	0.967
4/30/1995	4.38	5.06	1.15	18.56	22.67	5.77	29.30	1.905	0.976
5/31/1995	4.31	5.55	1.29	18.05	22.81	5.94	29.85	1.777	0.984
6/30/1995	3.81	4.66	1.22	10.68	22.92	6.08	30.18	1.224	0.986
7/31/1995	3.62	6.28	1.74	20.50	23.03	6.28	30.81	2.020	0.997
8/31/1995	3.47	6.11	1.76	19.53	23.14	6.47	31.42	1.988	1.006
9/30/1995	3.44	6.17	1.79	20.09	23.24	6.65	32.02	2.040	1.016
10/31/1995	4.07	5.45	1.34	15.86	23.37	6.82	32.51	1.617	1.022
11/30/1995	4.42	4.18	0.94	19.22	23.50	6.95	33.09	2.157	1.031
12/31/1995	3.58	4.20	1.17	18.78	23.61	7.08	33.67	2.337	1.041
1/31/1996	2.86	3.97	1.39	18.62	23.70	7.20	34.25	2.647	1.052
2/29/1996	3.33	4.27	1.28	18.18	23.80	7.32	34.77	2.322	1.061
3/31/1996	2.98	3.70	1.24	15.64	23.89	7.44	35.26	2.270	1.069
4/30/1996	3.28	4.25	1.29	16.12	23.99	7.57	35.74	2.077	1.076
5/31/1996	2.87	3.27	1.14	14.12	24.08	7.67	36.18	2.227	1.083
6/30/1996	2.72	4.64	1.71	18.22	24.16	7.81	36.73	2.413	1.092
7/31/1996	2.54	3.90	1.53	17.26	24.24	7.93	37.26	2.607	1.101
8/31/1996	2.64	3.88	1.47	13.01	24.32	8.05	37.66	1.942	1.106
9/30/1996	2.59	4.03	1.56	17.14	24.40	8.17	38.18	2.521	1.114
10/31/1996	2.43	3.30	1.36	16.93	24.47	8.27	38.70	2.874	1.124
11/30/1996	2.05	3.14	1.53	19.18	24.54	8.37	39.28	3.593	1.135
12/31/1996	2.32	3.61	1.56	19.45	24.61	8.48	39.88	3.195	1.146
1/31/1997	1.83	3.23	1.76	18.03	24.66	8.58	40.44	3.479	1.157
2/28/1997	1.90	2.93	1.55	16.79	24.72	8.66	40.91	3.384	1.166
3/31/1997	1.83	3.19	1.75	23.38	24.77	8.76	41.64	4.545	1.181
4/30/1997	2.06	3.94	1.91	25.55	24.84	8.88	42.40	4.160	1.197
5/31/1997	2.18	3.46	1.59	15.95	24.90	8.98	42.90	2.756	1.204
6/30/1997	2.56	3.56	1.39	19.10	24.98	9.09	43.47	3.034	1.214
7/31/1997	2.29	3.62	1.58	13.72	25.05	9.20	43.89	2.261	1.220
8/31/1997	2.22	3.27	1.47	14.15	25.12	9.30	44.33	2.506	1.226
9/30/1997	2.05	3.30	1.61	13.83	25.18	9.40	44.75	2.519	1.232
10/31/1997	1.93	3.32	1.72	13.59	25.24	9.51	45.17	2.523	1.238
11/30/1997	1.89	2.70	1.43	13.73	25.30	9.59	45.58	2.910	1.244
12/31/1997	1.71	3.58	2.09	32.32	25.35	9.70	46.58	5.970	1.266
1/31/1998	1.29	2.97	2.30	20.48	25.39	9.79	47.22	4.708	1.278
2/28/1998	1.56	2.88	1.84	16.89	25.43	9.87	47.69	3.718	1.286
3/31/1998	1.41	2.81	1.99	14.15	25.48	9.96	48.13	3.277	1.294
4/30/1998	1.61	3.27	2.03	14.13	25.53	10.06	48.55	2.834	1.300
5/31/1998	1.60	2.93	1.83	13.67	25.58	10.15	48.98	2.946	1.306
6/30/1998	1.47	3.13	2.13	15.41	25.62	10.24	49.44	3.276	1.314

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
7/31/1998	1.25	4.10	3.27	13.94	25.66	10.37	49.87	2.560	1.319
8/31/1998	1.19	3.91	3.30	19.91	25.70	10.49	50.49	3.844	1.330
9/30/1998	0.87	3.48	4.00	12.72	25.72	10.59	50.87	2.882	1.335
10/31/1998	0.85	3.38	4.00	13.42	25.75	10.70	51.29	3.129	1.341
11/30/1998	0.87	2.88	3.30	13.37	25.77	10.79	51.69	3.506	1.348
12/31/1998	0.76	3.15	4.12	13.29	25.80	10.88	52.10	3.347	1.354
1/31/1999	0.69	3.11	4.51	13.29	25.82	10.98	52.51	3.459	1.361
2/28/1999	0.61	3.11	5.07	13.32	25.84	11.07	52.88	3.543	1.367
3/31/1999	0.55	3.05	5.58	13.22	25.85	11.16	53.29	3.639	1.373
4/30/1999	0.52	2.31	4.42	11.78	25.87	11.23	53.65	4.098	1.379
5/31/1999	0.54	2.83	5.24	12.94	25.89	11.32	54.05	3.797	1.386
6/30/1999	0.80	3.33	4.19	13.92	25.91	11.42	54.47	3.329	1.392
7/31/1999	0.64	3.65	5.74	12.61	25.93	11.53	54.86	2.913	1.397
8/31/1999	0.66	3.85	5.86	13.45	25.95	11.65	55.27	2.958	1.403
9/30/1999	0.66	3.35	5.11	14.10	25.97	11.75	55.70	3.480	1.409
10/31/1999	0.67	3.40	5.09	14.04	25.99	11.86	56.13	3.407	1.416
11/30/1999	0.54	3.39	6.26	13.88	26.01	11.96	56.55	3.495	1.422
12/31/1999	0.56	3.34	5.91	13.84	26.02	12.06	56.98	3.510	1.428
1/31/2000	0.41	3.52	8.49	13.86	26.04	12.17	57.41	3.498	1.435
2/29/2000	0.52	3.55	6.77	13.85	26.05	12.27	57.81	3.369	1.440
3/31/2000	0.47	3.39	7.15	13.70	26.07	12.38	58.23	3.516	1.447
4/30/2000	0.58	3.30	5.66	13.68	26.08	12.48	58.64	3.487	1.453
5/31/2000	0.62	3.24	5.19	13.56	26.10	12.58	59.07	3.471	1.459
6/30/2000	0.61	2.99	4.93	13.11	26.12	12.67	59.46	3.605	1.464
7/31/2000	0.61	3.00	4.93	13.75	26.14	12.76	59.88	3.769	1.471
8/31/2000	0.60	3.12	5.18	13.54	26.16	12.86	60.30	3.597	1.477
9/30/2000	0.62	2.98	4.82	13.60	26.18	12.95	60.71	3.735	1.483
10/31/2000	0.68	2.95	4.35	13.27	26.20	13.04	61.12	3.609	1.489
11/30/2000	0.68	3.73	5.53	13.26	26.22	13.15	61.52	2.978	1.494
12/31/2000	0.68	3.87	5.67	13.28	26.24	13.27	61.93	2.887	1.498
1/31/2001	0.63	3.43	5.46	13.29	26.26	13.38	62.35	3.236	1.504
2/28/2001	0.65	3.39	5.24	13.39	26.28	13.47	62.72	3.281	1.509
3/31/2001	0.53	3.27	6.22	13.52	26.29	13.57	63.14	3.525	1.514
4/30/2001	0.47	3.20	6.84	13.33	26.31	13.67	63.54	3.599	1.520
5/31/2001	0.42	3.20	7.61	13.38	26.32	13.77	63.95	3.660	1.526
6/30/2001	0.44	3.09	7.08	13.29	26.33	13.86	64.35	3.732	1.531
7/31/2001	0.44	3.10	7.03	12.83	26.35	13.96	64.75	3.585	1.537
8/31/2001	0.52	2.90	5.54	12.76	26.36	14.05	65.15	3.687	1.542
9/30/2001	0.53	2.92	5.50	13.18	26.38	14.14	65.54	3.785	1.548
10/31/2001	0.52	2.84	5.44	13.21	26.40	14.22	65.95	3.883	1.554
11/30/2001	0.52	2.87	5.50	13.13	26.41	14.31	66.34	3.834	1.559
12/31/2001	0.52	2.84	5.50	13.19	26.43	14.40	66.75	3.891	1.565
1/31/2002	0.51	2.81	5.50	13.24	26.44	14.48	67.16	3.943	1.571
2/28/2002	0.53	2.82	5.37	13.20	26.46	14.56	67.53	3.905	1.576
3/31/2002	0.52	2.97	5.71	13.06	26.48	14.66	67.94	3.701	1.581
4/30/2002	0.51	3.00	5.85	13.14	26.49	14.75	68.33	3.701	1.586

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
5/31/2002	0.50	2.77	5.54	13.08	26.51	14.83	68.74	3.960	1.592
6/30/2002	0.51	2.76	5.39	12.97	26.52	14.91	69.13	3.923	1.597
7/31/2002	0.50	2.43	4.91	12.14	26.54	14.99	69.50	4.098	1.603
8/31/2002	0.40	1.96	4.97	13.07	26.55	15.05	69.91	5.478	1.609
9/30/2002	0.30	1.45	4.87	13.08	26.56	15.09	70.30	7.378	1.616
10/31/2002	3.00	9.59	3.20	6.84	26.65	15.39	70.51	0.535	1.607
11/30/2002	2.25	8.65	3.84	6.32	26.72	15.65	70.70	0.572	1.599
12/31/2002	2.12	7.42	3.50	9.46	26.78	15.88	71.00	0.976	1.595
1/31/2003	2.17	9.43	4.34	10.00	26.85	16.17	71.31	0.851	1.589
2/28/2003	1.74	8.43	4.85	9.97	26.90	16.41	71.59	0.970	1.585
3/31/2003	1.84	9.80	5.33	9.97	26.96	16.71	71.89	0.847	1.579
4/30/2003	1.90	9.21	4.85	8.39	27.01	16.99	72.15	0.747	1.573
5/31/2003	0.60	3.10	5.19	10.00	27.03	17.08	72.46	2.676	1.575
6/30/2003	1.92	8.86	4.61	9.89	27.09	17.35	72.75	0.906	1.571
7/31/2003	1.68	8.54	5.10	9.98	27.14	17.62	73.06	0.965	1.566
8/31/2003	1.72	7.69	4.47	9.80	27.20	17.85	73.37	1.028	1.563
9/30/2003	1.37	6.34	4.64	10.77	27.24	18.04	73.69	1.380	1.562
10/31/2003	1.30	6.47	4.99	10.82	27.28	18.24	74.02	1.378	1.561
11/30/2003	1.33	6.57	4.94	14.34	27.32	18.44	74.45	1.793	1.562
12/31/2003	1.24	6.68	5.41	8.95	27.35	18.65	74.73	1.119	1.560
1/31/2004	1.32	6.62	5.02	9.55	27.40	18.85	75.03	1.189	1.558
2/29/2004	1.26	6.87	5.46	10.28	27.43	19.05	75.33	1.251	1.557
3/31/2004	1.31	6.58	5.03	10.40	27.47	19.26	75.65	1.304	1.555
4/30/2004	1.33	6.37	4.79	9.90	27.51	19.45	75.95	1.271	1.554
5/31/2004	0.71	3.19	4.50	9.92	27.53	19.55	76.25	2.515	1.556
6/30/2004	0.71	4.09	5.72	10.09	27.56	19.67	76.56	2.079	1.558
7/31/2004	1.15	6.72	5.82	9.48	27.59	19.88	76.85	1.191	1.556
8/31/2004	1.14	6.28	5.53	6.68	27.63	20.07	77.06	0.891	1.553
9/30/2004	1.12	6.70	5.96	10.27	27.66	20.27	77.36	1.300	1.552
10/31/2004	1.14	6.68	5.85	10.15	27.70	20.48	77.68	1.285	1.551
11/30/2004	1.05	6.46	6.13	10.06	27.73	20.67	77.98	1.326	1.550
12/31/2004	0.86	6.32	7.35	9.95	27.75	20.87	78.29	1.374	1.549
1/31/2005	0.92	6.92	7.54	10.09	27.78	21.09	78.60	1.277	1.547
2/28/2005	0.90	6.65	7.39	10.10	27.81	21.27	78.89	1.327	1.546
3/31/2005	0.87	6.37	7.32	9.97	27.84	21.47	79.19	1.365	1.546
4/30/2005	0.87	6.30	7.26	9.97	27.86	21.66	79.49	1.379	1.545
5/31/2005	0.85	6.04	7.15	9.88	27.89	21.85	79.80	1.423	1.544
6/30/2005	0.83	5.98	7.18	9.92	27.91	22.02	80.10	1.444	1.544
7/31/2005	0.81	5.95	7.32	9.66	27.94	22.21	80.40	1.418	1.544
8/31/2005	0.82	5.95	7.22	9.90	27.96	22.39	80.70	1.449	1.543
9/30/2005	0.81	5.95	7.31	9.84	27.99	22.57	81.00	1.444	1.543
10/31/2005	0.85	5.85	6.92	9.46	28.01	22.75	81.29	1.401	1.542
11/30/2005	0.82	6.01	7.32	10.38	28.04	22.93	81.60	1.507	1.542
12/31/2005	0.90	6.69	7.43	14.22	28.07	23.14	82.04	1.858	1.544
1/31/2006	0.89	6.68	7.54	13.73	28.09	23.35	82.47	1.800	1.545
2/28/2006	0.89	6.77	7.62	13.18	28.12	23.54	82.84	1.708	1.545

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
3/31/2006	0.89	6.03	6.79	11.90	28.15	23.72	83.21	1.704	1.546
4/30/2006	0.74	5.77	7.80	13.80	28.17	23.90	83.62	2.102	1.548
5/31/2006	0.86	5.49	6.39	13.42	28.19	24.07	84.04	2.096	1.550
6/30/2006	0.81	5.51	6.83	12.10	28.22	24.23	84.40	1.899	1.551
7/31/2006	0.88	5.67	6.42	12.40	28.25	24.41	84.79	1.874	1.552
8/31/2006	0.80	5.08	6.34	13.31	28.27	24.57	85.20	2.243	1.555
9/30/2006	0.84	5.14	6.09	13.36	28.30	24.72	85.60	2.212	1.557
10/31/2006	0.82	5.28	6.47	12.88	28.32	24.88	86.00	2.094	1.559
11/30/2006	0.86	5.14	5.98	12.53	28.35	25.04	86.37	2.070	1.560
12/31/2006	0.87	5.28	6.09	12.55	28.37	25.20	86.76	2.022	1.562
1/31/2007	0.85	5.25	6.17	11.45	28.40	25.36	87.12	1.861	1.563
2/28/2007	0.84	5.13	6.07	10.15	28.42	25.51	87.40	1.683	1.563
3/31/2007	0.82	4.65	5.66	11.36	28.45	25.65	87.75	2.056	1.565
4/30/2007	0.86	4.84	5.63	11.39	28.48	25.80	88.10	1.980	1.566
5/31/2007	0.84	5.07	6.07	5.97	28.50	25.95	88.28	1.001	1.564
6/30/2007	0.78	6.47	8.34	9.79	28.53	26.15	88.58	1.340	1.563
7/31/2007	0.74	5.66	7.62	10.94	28.55	26.32	88.91	1.696	1.564
8/31/2007	0.82	6.65	8.08	11.06	28.57	26.53	89.26	1.470	1.564
9/30/2007	0.80	6.56	8.18	10.88	28.60	26.73	89.58	1.467	1.563
10/31/2007	0.82	6.66	8.09	10.67	28.62	26.93	89.91	1.415	1.563
11/30/2007	0.74	5.64	7.59	10.61	28.65	27.10	90.23	1.648	1.563
12/31/2007	0.74	5.25	7.06	10.38	28.67	27.27	90.55	1.718	1.563
1/31/2008	0.71	4.94	6.96	10.45	28.69	27.42	90.88	1.835	1.564
2/29/2008	0.73	5.04	6.94	9.49	28.71	27.56	91.15	1.632	1.564
3/31/2008	0.73	4.96	6.83	7.45	28.73	27.72	91.39	1.299	1.564
4/30/2008	0.74	5.12	6.90	7.54	28.76	27.87	91.61	1.275	1.563
5/31/2008	0.72	4.90	6.80	6.45	28.78	28.02	91.81	1.137	1.561
6/30/2008	0.68	5.14	7.52	8.07	28.80	28.18	92.05	1.375	1.561
7/31/2008	0.74	5.00	6.72	9.38	28.82	28.33	92.34	1.619	1.561
8/31/2008	0.74	4.96	6.67	10.24	28.85	28.49	92.66	1.780	1.562
9/30/2008	0.76	4.89	6.48	11.07	28.87	28.63	92.99	1.942	1.563
10/31/2008	0.74	4.86	6.54	10.65	28.89	28.78	93.32	1.883	1.564
11/30/2008	0.72	4.87	6.78	10.74	28.91	28.93	93.65	1.904	1.565
12/31/2008	0.75	4.73	6.32	10.31	28.94	29.08	93.97	1.864	1.566
1/31/2009	0.76	4.75	6.24	10.22	28.96	29.22	94.28	1.836	1.566
2/28/2009	0.73	4.70	6.41	10.38	28.98	29.36	94.57	1.894	1.567
3/31/2009	0.65	4.60	7.02	10.25	29.00	29.50	94.89	1.936	1.568
4/30/2009	0.49	4.24	8.69	10.31	29.01	29.63	95.20	2.163	1.570
5/31/2009	0.49	4.30	8.83	10.32	29.03	29.76	95.52	2.139	1.571
6/30/2009	0.73	5.93	8.17	10.07	29.05	29.94	95.82	1.500	1.571
7/31/2009	0.91	7.06	7.79	9.91	29.08	30.16	96.13	1.234	1.569
8/31/2009	0.93	7.17	7.72	9.30	29.11	30.38	96.42	1.139	1.568
9/30/2009	0.95	6.84	7.21	9.81	29.14	30.58	96.71	1.250	1.566
10/31/2009	0.94	6.33	6.75	10.29	29.17	30.78	97.03	1.402	1.566
11/30/2009	0.94	4.35	4.60	10.69	29.19	30.91	97.35	1.994	1.567
12/31/2009	0.93	4.22	4.52	10.23	29.22	31.04	97.67	1.961	1.568

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
1/31/2010	0.84	4.03	4.80	9.71	29.25	31.17	97.97	1.971	1.569
2/28/2010	0.94	4.28	4.54	9.61	29.28	31.29	98.24	1.817	1.569
3/31/2010	0.91	4.17	4.59	9.89	29.30	31.42	98.55	1.922	1.570
4/30/2010	0.95	4.10	4.32	10.38	29.33	31.54	98.86	2.029	1.571
5/31/2010	0.86	3.81	4.42	9.34	29.36	31.66	99.15	1.971	1.572
6/30/2010	0.76	3.97	5.22	9.42	29.38	31.78	99.43	1.971	1.573
7/31/2010	0.63	4.18	6.64	9.30	29.40	31.90	99.72	1.917	1.574
8/31/2010	1.04	5.71	5.49	10.97	29.43	32.08	100.06	1.609	1.574
9/30/2010	1.01	5.10	5.07	10.99	29.46	32.23	100.39	1.779	1.575
10/31/2010	0.99	5.13	5.18	11.21	29.49	32.39	100.73	1.812	1.576
11/30/2010	0.98	5.14	5.23	12.69	29.52	32.55	101.12	2.052	1.577
12/31/2010	0.99	5.23	5.29	9.23	29.55	32.71	101.40	1.469	1.577
1/31/2011	1.01	5.01	4.96	11.20	29.59	32.87	101.75	1.839	1.577
2/28/2011	0.90	4.67	5.20	11.12	29.61	33.00	102.06	1.973	1.578
3/31/2011	0.88	4.69	5.31	9.62	29.64	33.14	102.36	1.708	1.579
4/30/2011	0.88	4.64	5.30	11.51	29.66	33.28	102.70	2.062	1.580
5/31/2011	0.90	4.74	5.25	8.18	29.69	33.43	102.96	1.435	1.580
6/30/2011	0.90	4.67	5.21	10.33	29.72	33.57	103.27	1.835	1.580
7/31/2011	0.87	5.15	5.90	11.68	29.75	33.73	103.63	1.921	1.581
8/31/2011	0.98	4.86	4.95	11.68	29.78	33.88	103.99	1.978	1.582
9/30/2011	0.98	4.84	4.93	12.24	29.81	34.02	104.36	2.081	1.584
10/31/2011	0.99	4.66	4.70	12.19	29.84	34.17	104.74	2.130	1.585
11/30/2011	0.63	4.21	6.73	11.88	29.86	34.29	105.09	2.438	1.587
12/31/2011	0.75	4.95	6.60	11.30	29.88	34.45	105.44	1.965	1.588
1/31/2012	0.73	4.80	6.61	9.75	29.90	34.60	105.75	1.749	1.588
2/29/2012	0.65	4.81	7.43	3.31	29.92	34.73	105.84	0.602	1.586
3/31/2012	0.63	4.44	7.04	8.71	29.94	34.87	106.11	1.702	1.586
4/30/2012	0.73	4.77	6.49	11.31	29.96	35.02	106.45	2.036	1.587
5/31/2012	0.73	4.75	6.54	11.90	29.98	35.16	106.82	2.155	1.589
6/30/2012	0.60	4.20	6.94	11.63	30.00	35.29	107.17	2.399	1.591
7/31/2012	0.74	5.05	6.80	7.18	30.03	35.45	107.39	1.230	1.590
8/31/2012	0.23	1.63	7.18	3.92	30.03	35.50	107.51	2.088	1.590
9/30/2012	0.60	4.29	7.18		30.05	35.62	107.51	0.000	1.587
10/31/2012	0.53	3.11	5.82		30.07	35.72	107.51	0.000	1.584
11/30/2012	0.75	4.75	6.36	3.39	30.09	35.86	107.61	0.612	1.582
12/31/2012	0.68	4.41	6.44	5.60	30.11	36.00	107.79	1.091	1.580
1/31/2013	0.65	4.12	6.34	1.97	30.13	36.13	107.85	0.409	1.578
2/28/2013	0.68	4.58	6.72	7.54	30.15	36.26	108.06	1.419	1.578
3/31/2013	0.60	4.20	6.99	10.35	30.17	36.39	108.38	2.134	1.579
4/30/2013	0.69	4.70	6.78	10.19	30.19	36.53	108.69	1.872	1.579
5/31/2013	0.67	4.68	6.94	9.41	30.21	36.67	108.98	1.742	1.580
6/30/2013	0.63	4.53	7.16	8.07	30.23	36.81	109.22	1.550	1.580
7/31/2013	0.66	4.22	6.39	7.02	30.25	36.94	109.44	1.424	1.579
8/31/2013	0.61	3.85	6.29	7.19	30.27	37.06	109.66	1.594	1.579
9/30/2013	0.69	3.77	5.48	6.33	30.29	37.17	109.85	1.405	1.579
10/31/2013	0.75	3.99	5.35	7.68	30.31	37.30	110.09	1.605	1.579

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
11/30/2013	0.79	4.14	5.24	4.96	30.34	37.42	110.24	0.996	1.578
12/31/2013	0.80	4.23	5.29		30.36	37.55	110.24	0.000	1.574
1/31/2014	0.80	4.13	5.15		30.39	37.68	110.24	0.000	1.571
2/28/2014	0.80	4.10	5.14		30.41	37.79	110.24	0.000	1.568
3/31/2014	0.80	4.17	5.22		30.43	37.92	110.24	0.000	1.564
4/30/2014	0.73	3.82	5.20		30.46	38.04	110.24	0.000	1.561
5/31/2014	0.60	3.35	5.62		30.47	38.14	110.24	0.000	1.559
6/30/2014	0.56	3.25	5.81		30.49	38.24	110.24	0.000	1.556
7/31/2014	0.63	3.92	6.21		30.51	38.36	110.24	0.000	1.553
8/31/2014	1.18	5.35	4.52		30.55	38.53	110.24	0.000	1.548
9/30/2014	1.33	5.61	4.23		30.59	38.69	110.24	0.000	1.544
10/31/2014	1.01	5.98	5.91		30.62	38.88	110.24	0.000	1.539
11/30/2014	0.48	4.92	10.15		30.63	39.03	110.24	0.000	1.536
12/31/2014	0.37	4.24	11.48		30.64	39.16	110.24	0.000	1.533
1/31/2015	0.36	4.40	12.12		30.66	39.30	110.24	0.000	1.529
2/28/2015	0.29	3.85	13.06		30.66	39.40	110.24	0.000	1.527
3/31/2015	0.44	3.60	8.21		30.68	39.51	110.24	0.000	1.524
4/30/2015	0.34	3.22	9.37		30.69	39.61	110.24	0.000	1.522
5/31/2015	0.56	4.16	7.37		30.70	39.74	110.24	0.000	1.519
6/30/2015	0.67	3.94	5.93		30.72	39.86	110.24	0.000	1.516
7/31/2015	0.74	4.29	5.82		30.75	39.99	110.24	0.000	1.513
8/31/2015	0.70	4.21	6.06		30.77	40.12	110.24	0.000	1.510
9/30/2015	0.55	3.48	6.28		30.79	40.23	110.24	0.000	1.507
10/31/2015	0.45	2.99	6.58		30.80	40.32	110.24	0.000	1.505
11/30/2015	0.40	2.92	7.33		30.81	40.41	110.24	0.000	1.503
12/31/2015	0.61	3.57	5.88		30.83	40.52	110.24	0.000	1.500
1/31/2016	0.68	3.51	5.19		30.85	40.63	110.24	0.000	1.497
2/29/2016	0.62	3.57	5.77		30.87	40.73	110.24	0.000	1.495
3/31/2016	0.54	3.65	6.78		30.89	40.84	110.24	0.000	1.492
4/30/2016	0.53	3.70	7.03		30.90	40.95	110.24	0.000	1.490
5/31/2016	0.48	3.15	6.52		30.92	41.05	110.24	0.000	1.487
6/30/2016	0.47	3.02	6.43		30.93	41.14	110.24	0.000	1.485
7/31/2016	0.51	3.67	7.20		30.95	41.26	110.24	0.000	1.483
8/31/2016	0.53	3.66	6.97		30.96	41.37	110.24	0.000	1.480
9/30/2016	0.50	3.65	7.38		30.98	41.48	110.24	0.000	1.478
10/31/2016	0.57	3.39	5.96		31.00	41.58	110.24	0.000	1.475
11/30/2016	0.55	3.21	5.90		31.01	41.68	110.24	0.000	1.473
12/31/2016	0.44	2.90	6.56		31.03	41.77	110.24	0.000	1.471
1/31/2017	0.40	2.75	6.82		31.04	41.86	110.24	0.000	1.469
2/28/2017	0.39	2.63	6.70		31.05	41.93	110.24	0.000	1.467
3/31/2017	0.38	2.66	6.93		31.06	42.01	110.24	0.000	1.465
4/30/2017	0.39	2.75	7.05		31.07	42.09	110.24	0.000	1.464
5/31/2017	0.47	2.77	5.93		31.09	42.18	110.24	0.000	1.462
6/30/2017	0.72	4.05	5.58		31.11	42.30	110.24	0.000	1.459
7/31/2017	0.78	3.71	4.74		31.13	42.42	110.24	0.000	1.456
8/31/2017	0.87	4.23	4.86		31.16	42.55	110.24	0.000	1.453

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
9/30/2017	0.96	5.37	5.59		31.19	42.71	110.24	0.000	1.449
10/31/2017	0.95	5.65	5.96		31.22	42.88	110.24	0.000	1.445
11/30/2017	0.94	5.41	5.74		31.25	43.05	110.24	0.000	1.442
12/31/2017	0.90	5.36	5.96		31.27	43.21	110.24	0.000	1.438