

**DALY UNIT NO. 4**  
**WATERFLOOD EOR PROJECT**  
**ANNUAL REPORT FOR 2013**

**April 8, 2014**

**Tundra Oil and Gas Partnership**

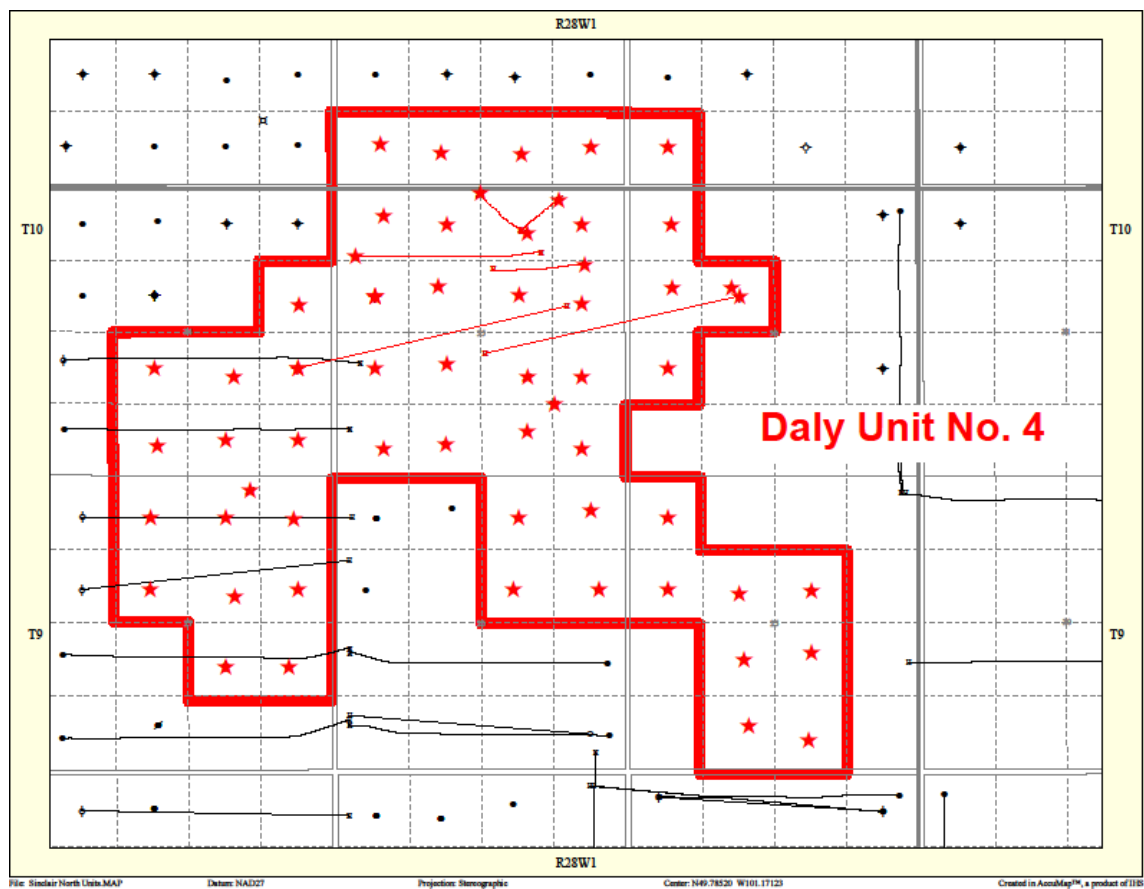
## **Table of Contents**

Introduction	3
Discussion	4
Production History	4
Waterflood History	5
Waterflood EOR Operating Strategy and Performance	6
Water Source and Quality	6
Injection Wellhead Pressure	6
Reservoir Pressure	6
Well Servicing	6
Voidage Replacement	7
Waterflood Performance and Discussion	7
List of Appendices	8
Appendix A: Well List and Well Status	
Appendix B: Daly unit No. 4 Injection Pattern Summary	
Appendix C: Average Monthly Injection Pressures	
Appendix D: Injector Pattern Production/Injection Rates, Cumulative and VRRS, Plots and Tables	

## **INTRODUCTION**

Daly Unit No.4 Enhanced Oil Recovery (EOR) Waterflood Project was approved under Board Order No. PM 65. Daly Unit No. 4 was acquired from Zargon Oil & Gas Ltd. on June 1, 2012 with Tundra Oil and Gas as the new Operator. The EOR project area, outlined in red in Figure 1, contains 62 wells over 52 LSDs in Township 9 and 10, Range 28W1. Well list and well status is available in Appendix A.

**Figure 1. Daly Unit No. 4 Area Outline**



In accordance with Section 73 of the Manitoba Drilling and Production Regulation, Tundra submits the following 2013 Annual Progress Report for Daly Unit No. 4 as required by Board Order No. PM 65.

## Discussion

### Production History

For the wells included in Daly Unit No.4, production started in September 1962 with 00/05-35-009-28W1/00. From 1980 – 1983, 51 wells were drilled. Oil production peaked at 84.37 m<sup>3</sup>/d in September of 1984. The average production for the unit was 15.32 m<sup>3</sup>/d of oil and 44.14 m<sup>3</sup>/d of water, and the average WOR was 3.18 m<sup>3</sup>/m<sup>3</sup> at the end of December 2013. The oil production rate, injection rate and WOR during each month for each injection pattern and for the whole project are presented in Appendix C. The rates and WOR are presented in Figure 2.

**Figure 2. Daly Unit No. 4 Production/Injection Rates and WOR vs. Time**

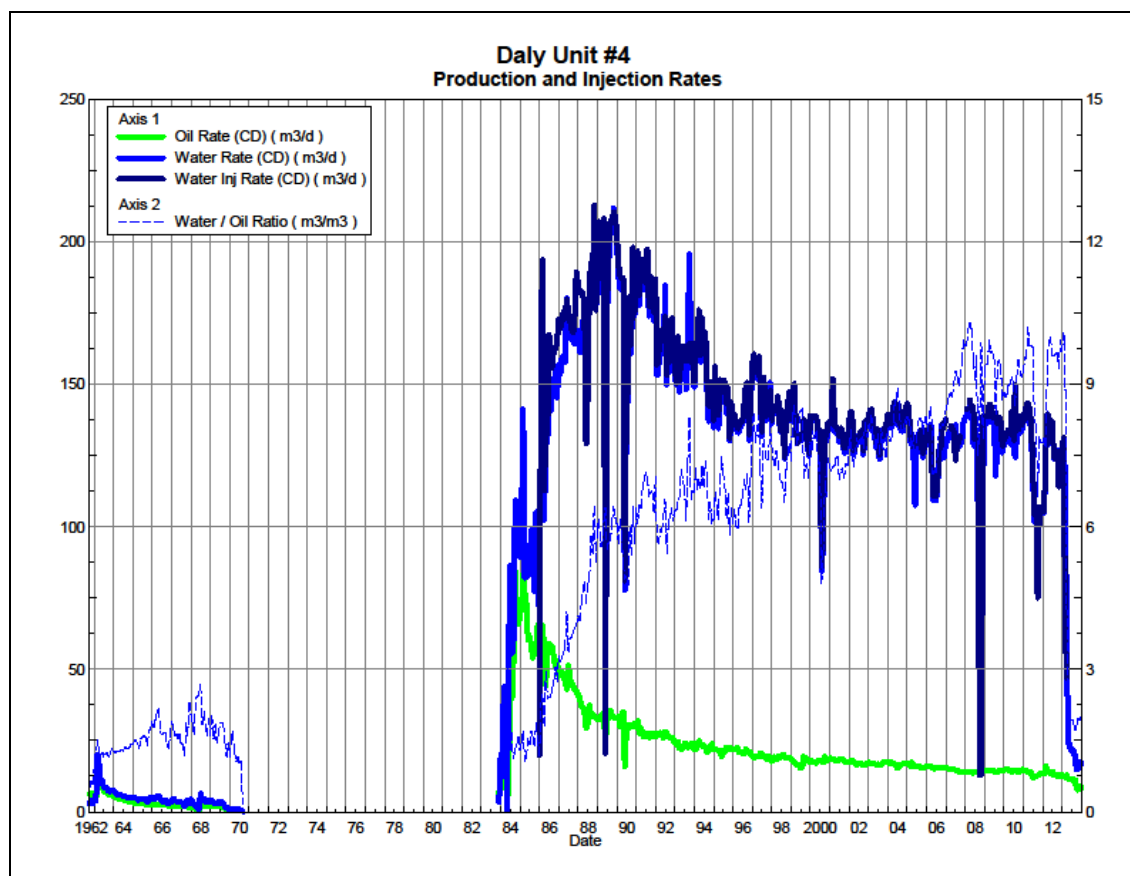
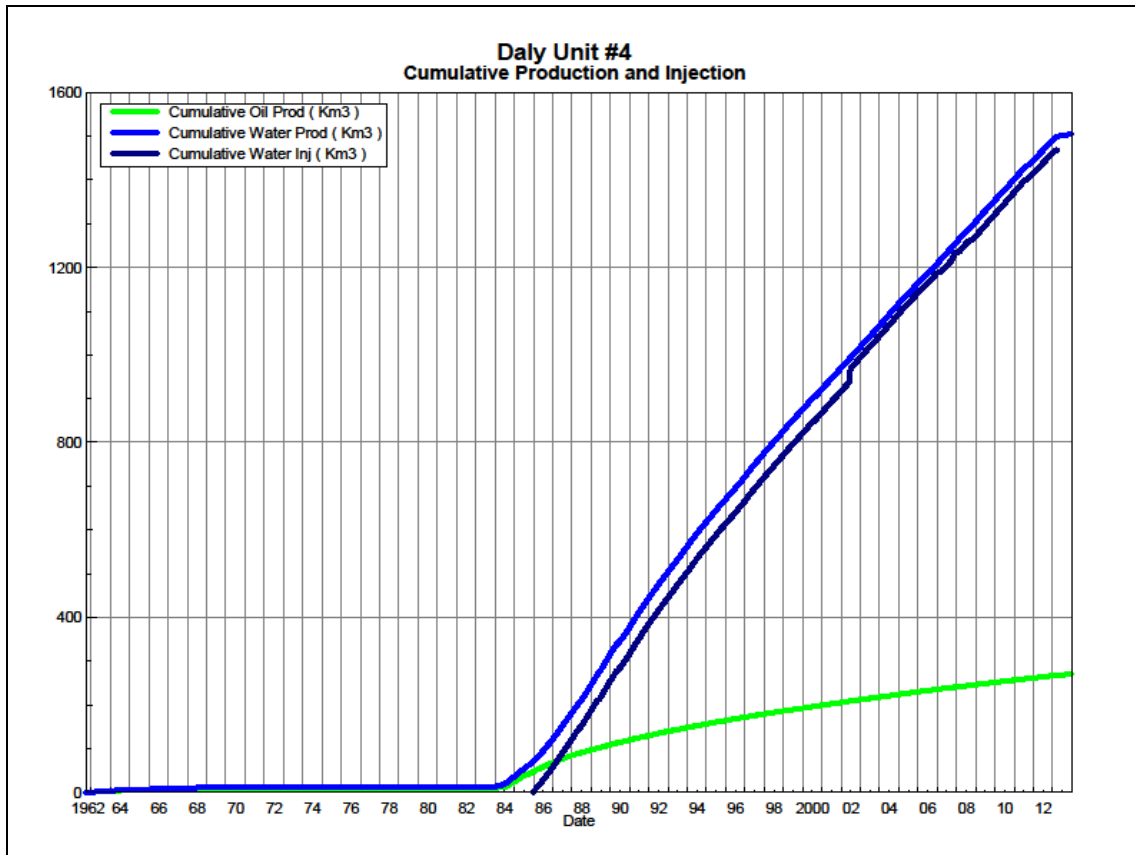


Figure 3 shows the cumulative production for Daly Unit No. 4 to the end of December 2013 as 271.09 E<sup>3</sup>m<sup>3</sup> of oil, and 1505.55 E<sup>3</sup>m<sup>3</sup> of water. The cumulative water injected is

over 1468.53 E<sup>3</sup>m<sup>3</sup>. The cumulative volume of oil, and water produced and fluid injected for each injection pattern and for the whole project for each injection well is presented in Appendix C.

**Figure 3. Daly Unit No. 4 Cumulative Oil, Water and Water Injected vs. Time**



### **Waterflood History**

Daly Unit No. 4 area was discovered in 1962 when 3 wells were initially drilled. In 1970 the wells were abandoned due to poor productivity. The area was not further delineated until 1983 when an aggressive drilling program was initiated. From 1980 – 1983, 51 wells were drilled. Prior to being unitized in April 1988, the area was developed on 40-acre spacing. Following unitization of the field in 1988, a pilot waterflood pattern was initiated in Section 27. The waterflood program in the unit currently has four patterns of which three are 40-acre inverted five-spot patterns and one 160-acre inverted nine-spot pattern.

Water injection started in January 1986. In March 2013, the water injection was suspended in the Unit because of safety concerns associated with using old pipelines and injection infrastructure. Tundra no longer wants to use produced water for injection purpose in this Unit, so we are currently evaluating a new source of water prior to reinitiating the waterflood in this Unit. Tundra is also planning on reconfiguring pattern designs in this Unit. The plan is expected to be implemented in 2014/2015 to improve ultimate recovery of reserves from this area. An overall summary for each injector pattern is presented 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 injected water in the area is currently treated with corrosion inhibitor to ensure the integrity of the field equipment is maintained.

#### **Injection Wellhead Pressures**

The 2013 monthly wellhead pressures are shown in Appendix C for each injection well. The pressures from January to May 2012 are not in the database since Tundra acquired Daly Unit No. 4 in June of 2012.

#### **Reservoir Pressure**

No reservoir pressure measurements were taken at Daly Unit No. 4 in 2013.

#### **Well Servicing**

Table 1 lists the maintenance that was required in Daly Unit No. 4 in 2013.

**Table 1: Service and Maintenance in Daly Unit No. 4**

00/06-34-009-28W1/0	Suspended	03/01/2013
00/09-34-009-28W1/0	Suspended	03/06/2013

**Voidage Replacement**

Cumulative voidage for Daly Unit No. 4 was 0.818 in December 2013. Calculation, plots and tables of the Voidage replacement ratio on a monthly and cumulative basis for each injection pattern and for the project area are presented in Appendix C.

**Waterflood Performance Discussion**

Given an OOIP of 7,949 e<sup>3</sup>m<sup>3</sup> (50 MMstb), the current recovery factor is 3.4%. The overall performance of this waterflood has been extremely poor as indicated by the low recovery factor, and obvious lack of waterflood response in producers. This is likely due to significant reservoir discontinuity and the location of the injectors, resulting in poor areal sweep efficiency. The Unit will require additional water injection wells in addition to increased fluid handling throughput in order to make this an effective waterflood.

## List of Appendices

Appendix A: Well List and Well Status

Appendix B: Daly unit No. 4 Injection Pattern Summary

Appendix C: Average Monthly Injection Pressures

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

02/15-27-009-28W1/0

00/07-35-009-28W1/0

02/14-35-009-28W1/0

02/16-35-009-28W1/0

## Appendix A: Well List and Well Status

UWI		Well Status		UWI		Well Status
100/02-25-009-28W1/00	Vertical	Capable Of Oil Prod		100/02-35-009-28W1/00	Vertical	Capable Of Oil Prod
100/03-25-009-28W1/00	Vertical	Capable Of Oil Prod		100/03-35-009-28W1/00	Vertical	Capable Of Oil Prod
100/06-25-009-28W1/00	Vertical	Capable Of Oil Prod		100/04-35-009-28W1/00	Vertical	Capable Of Oil Prod
100/07-25-009-28W1/00	Vertical	Capable Of Oil Prod		100/05-35-009-28W1/00	Vertical	ABD Producer
100/10-25-009-28W1/00	Vertical	Capable Of Oil Prod		100/05-35-009-28W1/02	Vertical	Capable Of Oil Prod
100/11-25-009-28W1/00	Vertical	Capable Of Oil Prod		100/06-35-009-28W1/00	Vertical	Capable Of Oil Prod
100/12-25-009-28W1/00	Vertical	Capable Of Oil Prod		100/07-35-009-28W1/00	Vertical	Water Injection Well
100/13-25-009-28W1/00	Vertical	Capable Of Oil Prod		100/08-35-009-28W1/00	Vertical	Capable Of Oil Prod
100/09-26-009-28W1/00	Vertical	Capable Of Oil Prod		100/09-35-009-28W1/00	Vertical	Capable Of Oil Prod
100/10-26-009-28W1/00	Vertical	Capable Of Oil Prod		102/09-35-009-28W1/00	Horizontal	Capable Of Oil Prod
100/15-26-009-28W1/00	Vertical	Capable Of Oil Prod		100/10-35-009-28W1/00	Vertical	Capable Of Oil Prod
100/16-26-009-28W1/00	Vertical	Capable Of Oil Prod		100/11-35-009-28W1/00	Vertical	Capable Of Oil Prod
100/07-27-009-28W1/00	Vertical	ABD Producer		100/12-35-009-28W1/00	Vertical	ABD Producer
100/08-27-009-28W1/00	Vertical	Capable Of Oil Prod		100/12-35-009-28W1/02	Vertical	Capable Of Oil Prod
100/09-27-009-28W1/00	Vertical	Capable Of Oil Prod		100/13-35-009-28W1/00	Vertical	Capable Of Oil Prod
100/10-27-009-28W1/00	Vertical	Capable Of Oil Prod		102/13-35-009-28W1/00	Horizontal	Capable Of Oil Prod
100/11-27-009-28W1/00	Vertical	Capable Of Oil Prod		100/14-35-009-28W1/00	Vertical	Capable Of Oil Prod
100/14-27-009-28W1/00	Vertical	Capable Of Oil Prod		102/14-35-009-28W1/00	Deviated	Water Injection Well
100/15-27-009-28W1/00	Vertical	Capable Of Oil Prod		100/15-35-009-28W1/00	Vertical	Capable Of Oil Prod
102/15-27-009-28W1/00	Vertical	Water Injection Well		100/16-35-009-28W1/00	Vertical	Capable Of Oil Prod
100/16-27-009-28W1/00	Vertical	Capable Of Oil Prod		102/16-35-009-28W1/00	Deviated	Water Injection Well
100/01-34-009-28W1/00	Vertical	Capable Of Oil Prod		100/05-36-009-28W1/00	Vertical	Capable Of Oil Prod
100/02-34-009-28W1/00	Vertical	Capable Of Oil Prod		100/11-36-009-28W1/00	Vertical	Capable Of Oil Prod
100/03-34-009-28W1/00	Vertical	Capable Of Oil Prod		102/11-36-009-28W1/00	Horizontal	Completing
100/06-34-009-28W1/00	Vertical	Capable Of Oil Prod		100/12-36-009-28W1/00	Vertical	Capable Of Oil Prod
100/07-34-009-28W1/00	Vertical	Capable Of Oil Prod		100/13-36-009-28W1/00	Vertical	Capable Of Oil Prod
100/08-34-009-28W1/00	Vertical	ABD Producer		100/04-01-010-28W1/00	Vertical	Capable Of Oil Prod
102/08-34-009-28W1/00	Horizontal	Location		100/01-02-010-28W1/00	Vertical	Capable Of Oil Prod
100/09-34-009-28W1/00	Vertical	Capable Of Oil Prod		100/02-02-010-28W1/00	Vertical	Capable Of Oil Prod
100/01-35-009-28W1/00	Vertical	Capable Of Oil Prod		100/03-02-010-28W1/00	Vertical	Capable Of Oil Prod
102/01-35-009-28W1/00	Vertical	ABD SWD		100/04-02-010-28W1/00	Vertical	Capable Of Oil Prod

## Appendix B

### Daly Unit No. 4 Pattern Summary as of December 31, 2013

Pattern Name	Injector Location (009-28W1)	Injector Surface Location	Status	No. of Supported Wells	Supported Wells	Allocation Factor	Pattern Prod Start Year	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
02/15-27-009-28W1/0	02/15-27	02/15-27	WTR Injection	4	00/01-34, 00/02-34, 00/15-27, 00/16-27	0.25	1984	Dec. 1988	0.28	0.56	2.01	0.00	12.28	15.81	834.80	0.000	28.845
00/07-35-009-28W1/0	00/07-35	00/07-35	WTR Injection	8	00/01-35, 00/03-35, 00/09-35, 00/11-35	0.25	1983	Dec. 1991	0.36	1.18	3.29	0.00	13.93	24.58	408.12	0.000	10.339
					00/02-35, 00/06-35, 00/08-35, 00/10-35	0.5											
02/14-35-009-28W1/0	02/14-35	00/15-35	WTR Injection	4	00/02-02, 00/03-02, 00/14-35, 00/15-35	0.25	1984	Jun. 2000	0.41	0.25	0.61	0.00	6.75	6.10	9.46	0.000	0.711
02/16-35-009-28W1/0	02/16-35	00/15-35	WTR Injection	4	00/01-02, 00/02-02, 00/15-35, 00/16-35	0.25	1983	Jun. 2000	0.66	0.91	1.38	0.00	9.08	21.71	33.81	0.000	1.076

## Appendix C

### Average Monthly Injection Pressures (kPa) for Daly Unit No. 4

Month	Injection Well Pressures			
	00/07-35	102/14-35	102/15-27	102/16-35
Jan-12	-	-	-	-
Feb-12	-	-	-	-
Mar-12	-	-	-	-
Apr-12	-	-	-	-
May-12	-	-	-	-
Jun-12	7900	7100	7900	7100
Jul-12	7901	7101	7901	7101
Aug-12	7901	7101	7901	7101
Sep-12	7901	7101	7901	7101
Oct-12	7901	7101	7901	7101
Nov-12	7901	7101	7901	7101
Dec-12	7900	7100	7900	7100
Jan-13	7900	7100	7900	7100
Feb-13	6346	2750	7445	2836
Mar-13	6837	1142	6855	774
Apr-13	6403	2342	5860	1728
May-13	6210	1810	5400	1152
Jun-13	6133	1540	5300	962
Jul-13	6010	1245	5121	795
Aug-13	5823	323	4668	221
Sep-13	5362	0	4551	0
Oct-13	4854	0	4052	0
Nov-13	4958	0	3498	0
Dec-13	6010	0	2689	0

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

Oil Formation Vol Factor : 1.07100 m3/m3

Water Formation Vol Factor : 1.00150 m3/m3

Water / Oil Ratio : 2.01 m3/m3

Pattern: 02/15-27-009-28Inj Set: DalyUnit#4

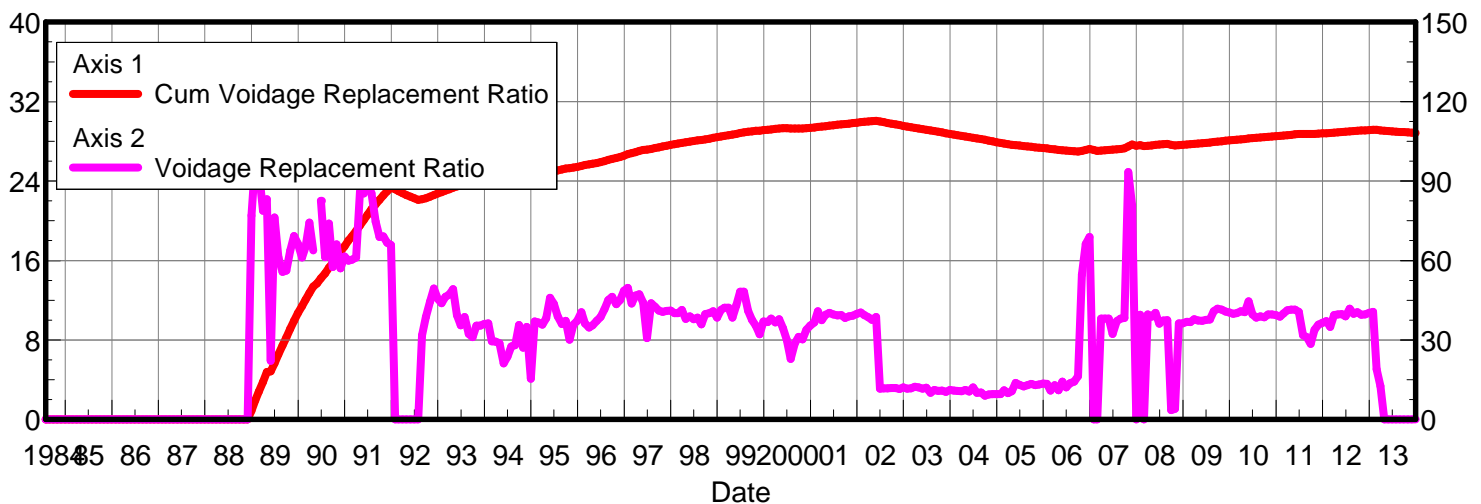
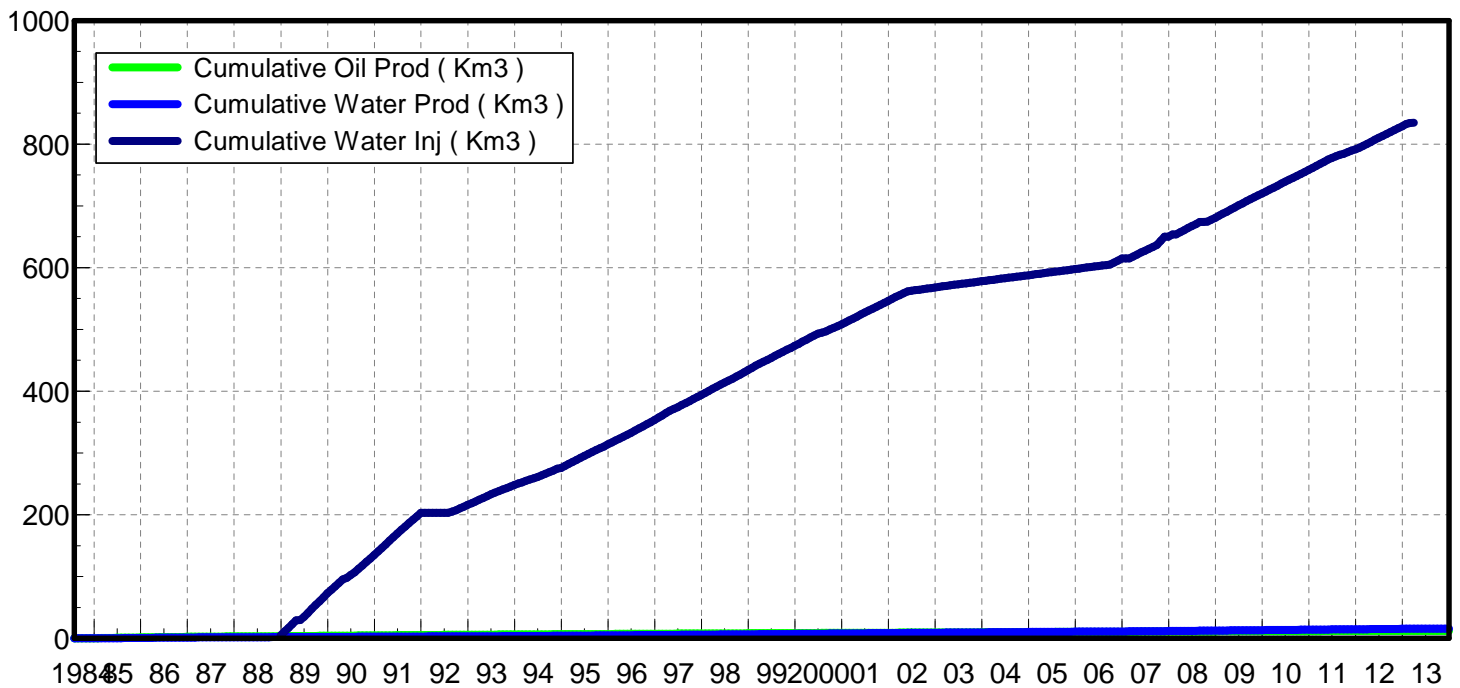
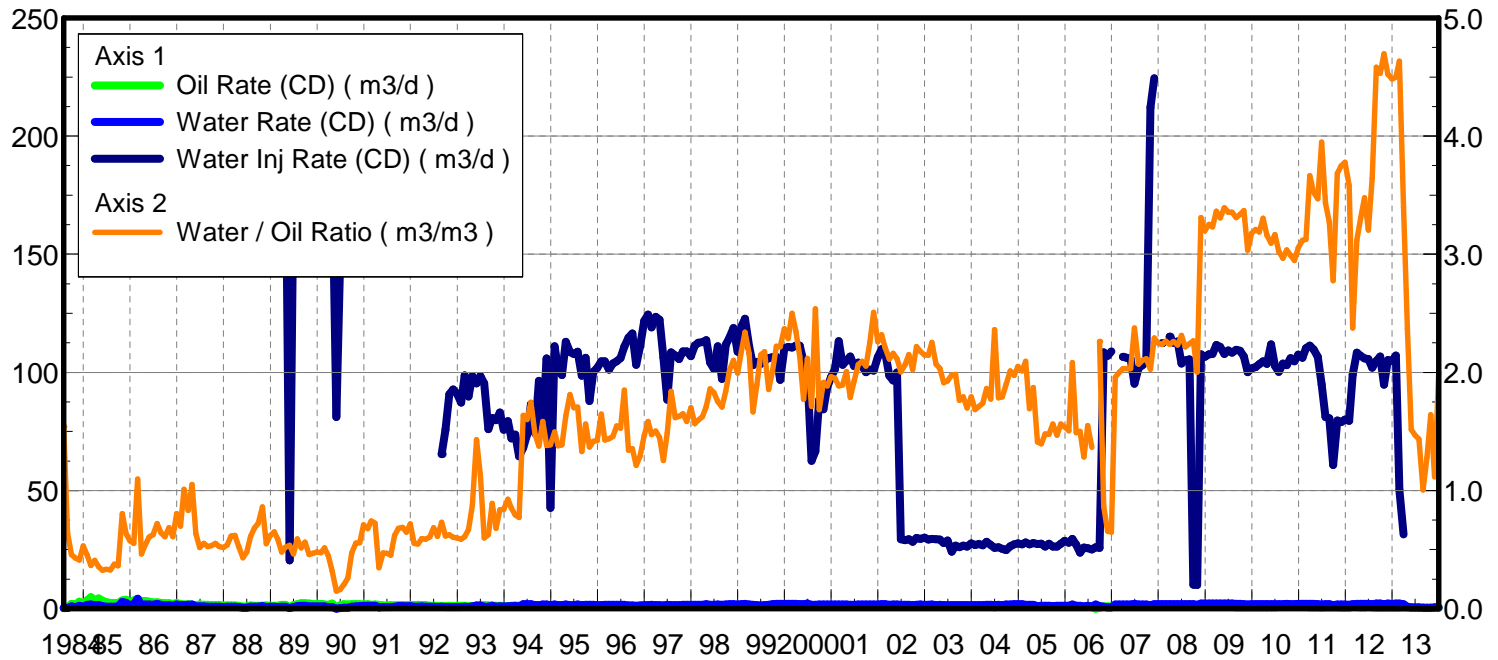
March 05, 2014

Operator: Tundra\_O&G\_Prtshp

Oil Rate (CD) : 0.28 m3/d

Water Rate (CD) : 0.56 m3/d

Water Inj Rate (CD) : 31.39 m3/d



Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
7/31/1984	0.22	0.34	1.54		0.01	0.01	0.00	0.000	0.000
8/31/1984	0.36	0.23	0.64		0.02	0.02	0.00	0.000	0.000
9/30/1984	1.99	0.91	0.46		0.08	0.05	0.00	0.000	0.000
10/31/1984	1.76	0.76	0.43		0.13	0.07	0.00	0.000	0.000
11/30/1984	2.98	1.23	0.41		0.22	0.11	0.00	0.000	0.000
12/31/1984	1.68	0.89	0.53		0.27	0.13	0.00	0.000	0.000
1/31/1985	3.58	1.63	0.45		0.38	0.18	0.00	0.000	0.000
2/28/1985	4.83	1.77	0.37		0.52	0.23	0.00	0.000	0.000
3/31/1985	3.52	1.44	0.41		0.63	0.28	0.00	0.000	0.000
4/30/1985	4.39	1.56	0.35		0.76	0.32	0.00	0.000	0.000
5/31/1985	3.45	1.12	0.32		0.87	0.36	0.00	0.000	0.000
6/30/1985	2.65	0.88	0.33		0.95	0.39	0.00	0.000	0.000
7/31/1985	2.42	0.79	0.33		1.02	0.41	0.00	0.000	0.000
8/31/1985	2.29	0.86	0.38		1.09	0.44	0.00	0.000	0.000
9/30/1985	2.48	0.90	0.36		1.17	0.46	0.00	0.000	0.000
10/31/1985	3.58	2.88	0.80		1.28	0.55	0.00	0.000	0.000
11/30/1985	3.87	2.45	0.63		1.40	0.63	0.00	0.000	0.000
12/31/1985	2.62	1.50	0.57		1.48	0.67	0.00	0.000	0.000
1/31/1986	3.49	1.92	0.55		1.58	0.73	0.00	0.000	0.000
2/28/1986	3.89	4.27	1.10		1.69	0.85	0.00	0.000	0.000
3/31/1986	3.27	1.51	0.46		1.79	0.90	0.00	0.000	0.000
4/30/1986	3.27	1.77	0.54		1.89	0.95	0.00	0.000	0.000
5/31/1986	2.98	1.81	0.61		1.99	1.01	0.00	0.000	0.000
6/30/1986	2.65	1.66	0.63		2.06	1.06	0.00	0.000	0.000
7/31/1986	2.77	2.00	0.72		2.15	1.12	0.00	0.000	0.000
8/31/1986	2.48	1.59	0.64		2.23	1.17	0.00	0.000	0.000
9/30/1986	2.26	1.38	0.61		2.30	1.21	0.00	0.000	0.000
10/31/1986	2.29	1.57	0.68		2.37	1.26	0.00	0.000	0.000
11/30/1986	2.10	1.28	0.61		2.43	1.30	0.00	0.000	0.000
12/31/1986	2.26	1.82	0.80		2.50	1.35	0.00	0.000	0.000
1/31/1987	1.99	1.39	0.70		2.56	1.40	0.00	0.000	0.000
2/28/1987	1.62	1.64	1.01		2.61	1.44	0.00	0.000	0.000
3/31/1987	1.93	1.61	0.83		2.67	1.49	0.00	0.000	0.000
4/30/1987	1.63	1.71	1.05		2.72	1.54	0.00	0.000	0.000
5/31/1987	1.48	0.94	0.63		2.76	1.57	0.00	0.000	0.000
6/30/1987	1.74	0.90	0.52		2.81	1.60	0.00	0.000	0.000
7/31/1987	1.65	0.91	0.55		2.86	1.63	0.00	0.000	0.000
8/31/1987	1.62	0.85	0.53		2.91	1.66	0.00	0.000	0.000
9/30/1987	1.54	0.82	0.53		2.96	1.68	0.00	0.000	0.000
10/31/1987	1.47	0.81	0.55		3.01	1.71	0.00	0.000	0.000
11/30/1987	1.51	0.79	0.53		3.05	1.73	0.00	0.000	0.000
12/31/1987	1.36	0.70	0.52		3.09	1.75	0.00	0.000	0.000
1/31/1988	1.41	0.76	0.54		3.14	1.77	0.00	0.000	0.000
2/29/1988	1.43	0.88	0.61		3.18	1.80	0.00	0.000	0.000
3/31/1988	1.37	0.85	0.62		3.22	1.83	0.00	0.000	0.000
4/30/1988	1.25	0.66	0.52		3.26	1.85	0.00	0.000	0.000
5/31/1988	0.83	0.36	0.43		3.29	1.86	0.00	0.000	0.000
6/30/1988	0.98	0.47	0.48		3.31	1.87	0.00	0.000	0.000

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
7/31/1988	1.33	0.81	0.61		3.36	1.90	0.00	0.000	0.000
8/31/1988	1.25	0.85	0.68		3.39	1.92	0.00	0.000	0.000
9/30/1988	1.23	0.89	0.72		3.43	1.95	0.00	0.000	0.000
10/31/1988	1.20	1.03	0.86		3.47	1.98	0.00	0.000	0.000
11/30/1988	1.31	0.72	0.55		3.51	2.00	0.00	0.000	0.000
12/31/1988	1.26	0.78	0.62	163.31	3.55	2.03	5.06	76.991	0.870
1/31/1989	1.23	0.80	0.65	206.93	3.58	2.05	11.48	98.218	1.950
2/28/1989	1.20	0.71	0.59	187.21	3.62	2.07	16.72	93.749	2.814
3/31/1989	1.61	0.78	0.48	196.91	3.67	2.10	22.82	78.770	3.792
4/30/1989	1.58	0.82	0.52	208.07	3.72	2.12	29.07	83.082	4.769
5/31/1989	0.58	0.31	0.54	20.48	3.73	2.13	29.70	22.114	4.851
6/30/1989	1.53	0.71	0.46	178.93	3.78	2.15	35.07	76.262	5.662
7/31/1989	1.96	1.16	0.59	199.19	3.84	2.19	41.24	61.249	6.553
8/31/1989	2.35	1.21	0.52	207.39	3.91	2.22	47.67	55.760	7.438
9/30/1989	2.25	1.27	0.56	206.97	3.98	2.26	53.88	56.247	8.264
10/31/1989	2.16	0.99	0.46	210.39	4.05	2.29	60.40	63.725	9.122
11/30/1989	1.96	0.92	0.47	208.90	4.11	2.32	66.67	69.303	9.932
12/31/1989	1.97	0.94	0.48	202.48	4.17	2.35	72.95	66.342	10.716
1/31/1990	2.03	0.96	0.47	192.03	4.23	2.38	78.90	61.198	11.428
2/28/1990	1.82	0.94	0.52	187.86	4.28	2.41	84.16	65.088	12.048
3/31/1990	1.66	0.74	0.45	187.48	4.33	2.43	89.97	74.320	12.738
4/30/1990	2.11	0.67	0.32	186.87	4.40	2.45	95.58	63.795	13.365
5/31/1990	0.38	0.06	0.15	81.10	4.41	2.45	98.09	175.288	13.689
6/30/1990	1.46	0.24	0.16	148.17	4.45	2.46	102.54	82.492	14.203
7/31/1990	1.88	0.39	0.21	146.55	4.51	2.47	107.08	61.215	14.681
8/31/1990	1.84	0.48	0.26	180.81	4.57	2.49	112.69	73.967	15.291
9/30/1990	1.85	0.87	0.47	163.93	4.62	2.51	117.60	57.575	15.775
10/31/1990	1.84	1.03	0.56	198.00	4.68	2.54	123.74	66.060	16.394
11/30/1990	1.89	1.05	0.56	175.10	4.74	2.58	128.99	57.019	16.884
12/31/1990	1.77	1.26	0.71	194.03	4.79	2.61	135.01	61.559	17.448
1/31/1991	1.88	1.27	0.68	196.48	4.85	2.65	141.10	59.914	17.999
2/28/1991	1.66	1.23	0.74	181.32	4.90	2.69	146.18	60.278	18.448
3/31/1991	1.75	1.26	0.72	191.45	4.95	2.73	152.11	61.101	18.965
4/30/1991	1.59	0.55	0.35	193.73	5.00	2.74	157.92	85.891	19.525
5/31/1991	1.41	0.67	0.47	185.84	5.04	2.76	163.69	85.264	20.070
6/30/1991	1.43	0.67	0.47	193.20	5.08	2.78	169.48	87.887	20.614
7/31/1991	1.52	0.69	0.45	197.23	5.13	2.81	175.60	85.437	21.173
8/31/1991	1.40	0.87	0.62	177.29	5.18	2.83	181.09	74.626	21.643
9/30/1991	1.56	1.06	0.68	187.83	5.22	2.86	186.73	68.894	22.101
10/31/1991	1.53	1.05	0.69	185.32	5.27	2.90	192.47	69.107	22.559
11/30/1991	1.53	0.99	0.65	175.33	5.31	2.93	197.73	66.767	22.963
12/31/1991	1.51	1.08	0.72	177.65	5.36	2.96	203.24	65.878	23.376
1/31/1992	1.55	0.86	0.55		5.41	2.99	203.24	0.000	23.167
2/29/1992	1.59	0.87	0.55		5.46	3.01	203.24	0.000	22.972
3/31/1992	1.54	0.91	0.59		5.50	3.04	203.24	0.000	22.768
4/30/1992	1.44	0.85	0.59		5.55	3.07	203.24	0.000	22.587
5/31/1992	1.29	0.78	0.61		5.59	3.09	203.24	0.000	22.420
6/30/1992	1.21	0.83	0.69		5.62	3.12	203.24	0.000	22.264

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
7/31/1992	1.22	0.75	0.61		5.66	3.14	203.24	0.000	22.110
8/31/1992	1.14	0.83	0.73	65.45	5.70	3.16	205.27	31.863	22.177
9/30/1992	1.16	0.72	0.62	75.77	5.73	3.19	207.54	38.676	22.281
10/31/1992	1.20	0.75	0.63	90.81	5.77	3.21	210.36	44.532	22.431
11/30/1992	1.12	0.68	0.60	92.83	5.80	3.23	213.14	49.480	22.593
12/31/1992	1.20	0.72	0.60	90.97	5.84	3.25	215.96	45.597	22.742
1/31/1993	1.20	0.70	0.59	87.23	5.88	3.27	218.66	43.931	22.879
2/28/1993	1.27	0.77	0.61	98.75	5.91	3.30	221.43	46.280	23.024
3/31/1993	1.09	0.73	0.67	89.77	5.95	3.32	224.21	47.166	23.171
4/30/1993	1.03	0.90	0.87	98.50	5.98	3.34	227.17	49.193	23.332
5/31/1993	0.97	1.38	1.43	95.32	6.01	3.39	230.12	39.396	23.455
6/30/1993	1.26	1.43	1.13	98.50	6.04	3.43	233.08	35.507	23.556
7/31/1993	1.48	0.88	0.60	95.32	6.09	3.46	236.03	38.690	23.672
8/31/1993	1.39	0.87	0.63	76.03	6.13	3.49	238.39	32.259	23.735
9/30/1993	1.33	1.18	0.89	80.67	6.17	3.52	240.81	31.032	23.791
10/31/1993	1.29	0.88	0.68	79.71	6.21	3.55	243.28	35.419	23.870
11/30/1993	1.23	1.03	0.84	83.00	6.25	3.58	245.77	35.466	23.950
12/31/1993	1.10	0.92	0.84	75.71	6.28	3.61	248.12	36.014	24.026
1/31/1994	1.10	1.01	0.93	79.35	6.32	3.64	250.58	36.307	24.106
2/28/1994	1.27	1.08	0.85	72.00	6.35	3.67	252.59	29.508	24.141
3/31/1994	1.35	1.07	0.79	73.68	6.40	3.70	254.88	29.416	24.180
4/30/1994	1.22	0.94	0.77	64.47	6.43	3.73	256.81	28.755	24.209
5/31/1994	1.19	1.95	1.64	68.19	6.47	3.79	258.93	21.169	24.181
6/30/1994	1.16	1.86	1.60	73.70	6.50	3.85	261.14	23.737	24.177
7/31/1994	1.11	1.95	1.75	86.52	6.54	3.91	263.82	27.580	24.207
8/31/1994	1.04	1.53	1.47	74.16	6.57	3.95	266.12	28.111	24.236
9/30/1994	1.11	1.52	1.37	96.48	6.60	4.00	269.01	35.722	24.320
10/31/1994	1.09	1.72	1.58	78.28	6.64	4.05	271.44	27.118	24.343
11/30/1994	1.24	1.71	1.38	105.90	6.67	4.10	274.62	34.941	24.429
12/31/1994	1.13	1.57	1.39	42.67	6.71	4.15	275.94	15.381	24.360
1/31/1995	1.17	1.75	1.50	111.02	6.75	4.21	279.38	37.042	24.463
2/28/1995	1.13	1.55	1.38	101.22	6.78	4.25	282.21	36.669	24.545
3/31/1995	1.13	1.56	1.39	98.93	6.81	4.30	285.28	35.819	24.628
4/30/1995	1.09	1.78	1.63	112.93	6.84	4.35	288.67	38.238	24.732
5/31/1995	0.82	1.49	1.81	108.64	6.87	4.40	292.04	45.968	24.864
6/30/1995	0.89	1.52	1.70	107.83	6.90	4.44	295.27	43.606	24.982
7/31/1995	1.01	1.72	1.71	108.76	6.93	4.50	298.64	38.927	25.083
8/31/1995	1.14	1.52	1.33	98.65	6.96	4.54	301.70	35.998	25.161
9/30/1995	1.08	1.69	1.56	106.18	7.00	4.60	304.89	37.219	25.246
10/31/1995	1.20	1.64	1.37	87.94	7.03	4.65	307.61	30.054	25.282
11/30/1995	1.13	1.59	1.42	100.25	7.07	4.69	310.62	35.828	25.354
12/31/1995	1.10	1.56	1.42	101.79	7.10	4.74	313.78	37.287	25.436
1/31/1996	0.95	1.57	1.65	104.65	7.13	4.79	317.02	40.542	25.533
2/29/1996	1.15	1.65	1.43	104.64	7.16	4.84	320.06	36.312	25.606
3/31/1996	1.16	1.67	1.44	101.18	7.20	4.89	323.19	34.667	25.671
4/30/1996	1.16	1.68	1.46	103.80	7.23	4.94	326.31	35.554	25.739
5/31/1996	1.08	1.66	1.55	104.72	7.27	4.99	329.55	37.213	25.817
6/30/1996	1.06	1.61	1.53	106.05	7.30	5.04	332.73	38.681	25.900

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
7/31/1996	0.92	1.69	1.85	110.96	7.33	5.09	336.17	41.534	26.000
8/31/1996	1.06	1.42	1.34	114.76	7.36	5.14	339.73	45.107	26.116
9/30/1996	1.04	1.41	1.36	116.50	7.39	5.18	343.23	46.268	26.232
10/31/1996	1.04	1.26	1.21	103.22	7.42	5.22	346.43	43.576	26.329
11/30/1996	1.04	1.35	1.29	110.87	7.46	5.26	349.75	45.057	26.433
12/31/1996	0.99	1.45	1.46	121.75	7.49	5.30	353.53	48.607	26.563
1/31/1997	0.94	1.50	1.59	124.45	7.52	5.35	357.38	49.680	26.697
2/28/1997	1.07	1.58	1.47	119.00	7.55	5.39	360.72	43.725	26.793
3/31/1997	1.03	1.54	1.50	123.50	7.58	5.44	364.54	46.740	26.914
4/30/1997	1.03	1.49	1.45	122.32	7.61	5.49	368.21	47.296	27.030
5/31/1997	1.04	1.30	1.25	106.36	7.64	5.53	371.51	44.137	27.123
6/30/1997	1.13	1.68	1.49	88.43	7.67	5.58	374.16	30.708	27.146
7/31/1997	0.85	1.56	1.84	108.49	7.70	5.63	377.53	43.932	27.238
8/31/1997	0.94	1.52	1.62	107.16	7.73	5.67	380.85	42.512	27.324
9/30/1997	0.95	1.55	1.63	105.64	7.76	5.72	384.02	41.156	27.400
10/31/1997	0.98	1.62	1.65	108.88	7.79	5.77	387.39	40.671	27.478
11/30/1997	1.00	1.59	1.59	108.95	7.82	5.82	390.66	40.941	27.554
12/31/1997	0.94	1.60	1.70	106.85	7.85	5.87	393.98	41.124	27.631
1/31/1998	1.05	1.65	1.56	111.35	7.88	5.92	397.43	40.168	27.706
2/28/1998	1.05	1.68	1.60	112.61	7.91	5.96	400.58	40.130	27.773
3/31/1998	1.01	1.65	1.62	112.87	7.94	6.02	404.08	41.308	27.852
4/30/1998	1.08	1.84	1.71	113.58	7.97	6.07	407.49	37.981	27.915
5/31/1998	0.91	1.70	1.86	104.20	8.00	6.12	410.72	38.888	27.977
6/30/1998	0.92	1.69	1.83	101.46	8.03	6.17	413.76	37.895	28.031
7/31/1998	1.02	1.80	1.75	111.04	8.06	6.23	417.20	38.416	28.093
8/31/1998	0.98	1.67	1.71	97.27	8.09	6.28	420.22	35.864	28.137
9/30/1998	0.97	1.78	1.84	111.71	8.12	6.34	423.57	39.715	28.202
10/31/1998	0.92	1.87	2.02	114.86	8.15	6.39	427.13	40.171	28.272
11/30/1998	0.92	1.92	2.10	118.80	8.18	6.45	430.69	40.917	28.345
12/31/1998	0.92	1.84	1.99	108.73	8.20	6.51	434.07	38.473	28.403
1/31/1999	0.89	1.94	2.18	119.46	8.23	6.57	437.77	41.336	28.478
2/28/1999	0.85	2.00	2.34	122.68	8.26	6.62	441.20	42.142	28.550
3/31/1999	0.82	1.76	2.16	110.97	8.28	6.68	444.64	42.157	28.622
4/30/1999	0.98	1.63	1.67	103.11	8.31	6.73	447.74	38.502	28.673
5/31/1999	0.82	1.55	1.89	104.41	8.34	6.78	450.97	43.007	28.741
6/30/1999	0.67	1.43	2.15	103.58	8.36	6.82	454.08	48.278	28.821
7/31/1999	0.67	1.46	2.18	104.88	8.38	6.86	457.33	48.171	28.904
8/31/1999	0.88	1.64	1.86	106.02	8.40	6.91	460.62	41.004	28.965
9/30/1999	0.92	1.85	2.01	106.51	8.43	6.97	463.81	37.598	29.011
10/31/1999	0.91	2.03	2.22	106.60	8.46	7.03	467.12	35.480	29.048
11/30/1999	0.91	2.03	2.22	96.78	8.49	7.09	470.02	32.213	29.066
12/31/1999	0.87	2.05	2.37	110.27	8.51	7.16	473.44	36.979	29.111
1/31/2000	0.90	2.05	2.29	110.74	8.54	7.22	476.87	36.733	29.154
2/29/2000	0.81	2.03	2.50	110.53	8.57	7.28	480.08	38.052	29.200
3/31/2000	0.89	2.09	2.35	111.27	8.59	7.35	483.53	36.652	29.242
4/30/2000	0.92	1.96	2.14	111.34	8.62	7.40	486.87	37.812	29.288
5/31/2000	1.07	1.89	1.77	104.55	8.65	7.46	490.11	34.510	29.317
6/30/2000	1.04	2.20	2.12	99.18	8.69	7.53	493.08	29.997	29.321

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
7/31/2000	0.99	1.69	1.71	62.53	8.72	7.58	495.02	22.807	29.288
8/31/2000	0.64	1.63	2.54	66.65	8.74	7.63	497.09	28.817	29.286
9/30/2000	1.03	1.73	1.69	88.44	8.77	7.68	499.74	31.217	29.296
10/31/2000	0.93	1.79	1.91	84.39	8.80	7.74	502.36	30.283	29.301
11/30/2000	0.94	1.76	1.88	93.72	8.82	7.79	505.17	33.907	29.323
12/31/2000	0.91	1.79	1.96	98.10	8.85	7.85	508.21	35.459	29.354
1/31/2001	0.92	1.79	1.95	101.29	8.88	7.90	511.35	36.631	29.389
2/28/2001	0.94	1.77	1.88	113.26	8.91	7.95	514.52	40.829	29.440
3/31/2001	0.93	1.76	1.89	103.21	8.94	8.01	517.72	37.466	29.479
4/30/2001	0.86	1.73	2.01	104.99	8.96	8.06	520.87	39.496	29.525
5/31/2001	0.93	1.66	1.79	106.77	8.99	8.11	524.18	40.241	29.574
6/30/2001	0.86	1.67	1.93	102.68	9.02	8.16	527.26	39.659	29.618
7/31/2001	0.85	1.75	2.07	104.10	9.04	8.21	530.49	39.250	29.663
8/31/2001	0.82	1.73	2.09	102.61	9.07	8.27	533.67	39.358	29.706
9/30/2001	0.84	1.72	2.05	100.10	9.09	8.32	536.67	38.359	29.744
10/31/2001	0.78	1.76	2.25	101.21	9.12	8.37	539.81	38.897	29.784
11/30/2001	0.72	1.81	2.51	100.78	9.14	8.43	542.83	39.114	29.824
12/31/2001	0.80	1.81	2.26	106.48	9.16	8.48	546.14	39.904	29.870
1/31/2002	0.80	1.86	2.32	109.80	9.19	8.54	549.54	40.437	29.918
2/28/2002	0.84	1.86	2.21	108.52	9.21	8.59	552.58	39.368	29.958
3/31/2002	0.80	1.70	2.11	98.66	9.24	8.65	555.64	38.516	29.994
4/30/2002	0.80	1.72	2.16	96.58	9.26	8.70	558.53	37.613	30.026
5/31/2002	0.81	1.72	2.12	100.01	9.29	8.75	561.63	38.734	30.063
6/30/2002	0.82	1.65	2.00	29.34	9.31	8.80	562.51	11.610	29.989
7/31/2002	0.78	1.62	2.06	28.97	9.34	8.85	563.41	11.807	29.915
8/31/2002	0.77	1.66	2.15	29.35	9.36	8.90	564.32	11.800	29.841
9/30/2002	0.78	1.57	2.02	28.36	9.38	8.95	565.17	11.821	29.773
10/31/2002	0.77	1.70	2.22	29.90	9.41	9.00	566.10	11.886	29.700
11/30/2002	0.79	1.73	2.18	29.47	9.43	9.05	566.98	11.457	29.626
12/31/2002	0.77	1.66	2.15	30.07	9.45	9.11	567.92	12.086	29.556
1/31/2003	0.78	1.68	2.15	29.30	9.48	9.16	568.82	11.614	29.483
2/28/2003	0.76	1.71	2.25	29.55	9.50	9.21	569.65	11.720	29.418
3/31/2003	0.76	1.57	2.07	29.46	9.52	9.25	570.57	12.404	29.354
4/30/2003	0.78	1.58	2.03	29.26	9.55	9.30	571.44	12.130	29.290
5/31/2003	0.80	1.54	1.91	27.76	9.57	9.35	572.30	11.583	29.223
6/30/2003	0.80	1.54	1.93	28.85	9.60	9.40	573.17	12.027	29.160
7/31/2003	0.78	1.55	1.98	24.12	9.62	9.44	573.92	10.085	29.088
8/31/2003	0.78	1.55	1.98	26.67	9.64	9.49	574.74	11.180	29.021
9/30/2003	0.85	1.49	1.76	25.97	9.67	9.54	575.52	10.834	28.956
10/31/2003	0.85	1.53	1.79	26.70	9.70	9.58	576.35	10.928	28.887
11/30/2003	0.91	1.55	1.70	26.35	9.72	9.63	577.14	10.452	28.818
12/31/2003	0.87	1.56	1.79	27.70	9.75	9.68	578.00	11.093	28.749
1/31/2004	0.90	1.51	1.68	27.00	9.78	9.73	578.84	10.926	28.682
2/29/2004	0.91	1.57	1.71	27.31	9.80	9.77	579.63	10.733	28.616
3/31/2004	0.90	1.56	1.74	26.87	9.83	9.82	580.46	10.662	28.547
4/30/2004	0.86	1.61	1.86	28.27	9.86	9.87	581.31	11.192	28.483
5/31/2004	0.90	1.59	1.77	26.96	9.89	9.92	582.14	10.575	28.414
6/30/2004	0.62	1.46	2.36	25.77	9.90	9.96	582.92	12.165	28.363

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7/31/2004	0.91	1.63	1.79	26.07	9.93	10.01	583.73	10.013	28.292
8/31/2004	0.86	1.55	1.79	25.31	9.96	10.06	584.51	10.235	28.225
9/30/2004	0.93	1.77	1.90	24.78	9.99	10.11	585.25	8.964	28.148
10/31/2004	0.91	1.83	2.01	26.47	10.02	10.17	586.08	9.467	28.070
11/30/2004	0.94	1.85	1.97	27.19	10.04	10.22	586.89	9.547	27.995
12/31/2004	0.92	1.89	2.05	27.61	10.07	10.28	587.75	9.615	27.917
1/31/2005	0.92	1.85	2.01	27.21	10.10	10.34	588.59	9.606	27.841
2/28/2005	0.81	1.69	2.09	28.08	10.12	10.39	589.38	10.973	27.784
3/31/2005	0.99	1.67	1.69	27.23	10.15	10.44	590.22	9.967	27.713
4/30/2005	0.89	1.66	1.87	27.74	10.18	10.49	591.05	10.650	27.651
5/31/2005	0.80	1.13	1.41	27.43	10.21	10.52	591.90	13.787	27.611
6/30/2005	0.85	1.19	1.40	27.50	10.23	10.56	592.73	13.138	27.569
7/31/2005	0.82	1.22	1.48	26.23	10.26	10.60	593.54	12.489	27.523
8/31/2005	0.83	1.23	1.48	27.44	10.28	10.64	594.39	12.920	27.479
9/30/2005	0.74	1.16	1.56	26.28	10.30	10.67	595.18	13.449	27.441
10/31/2005	0.80	1.18	1.47	26.31	10.33	10.71	596.00	12.932	27.399
11/30/2005	0.79	1.23	1.56	27.46	10.35	10.74	596.82	13.241	27.358
12/31/2005	0.81	1.25	1.54	28.71	10.38	10.78	597.71	13.542	27.317
1/31/2006	0.81	1.22	1.51	27.86	10.40	10.82	598.57	13.411	27.276
2/28/2006	0.86	1.79	2.08	29.54	10.43	10.87	599.40	10.883	27.220
3/31/2006	0.82	1.22	1.49	27.13	10.45	10.91	600.24	12.981	27.178
4/30/2006	0.84	1.26	1.50	23.66	10.48	10.95	600.95	10.981	27.131
5/31/2006	0.77	0.99	1.28	25.84	10.50	10.98	601.75	14.242	27.098
6/30/2006	0.81	1.25	1.55	25.63	10.53	11.01	602.52	12.109	27.055
7/31/2006	0.75	1.03	1.36	25.05	10.55	11.05	603.30	13.691	27.021
8/31/2006	0.08	1.73	22.12	25.96	10.55	11.10	604.10	14.309	26.989
9/30/2006	0.47	1.07	2.26	25.78	10.57	11.13	604.88	16.383	26.967
10/31/2006	1.03	0.89	0.87	108.45	10.60	11.16	608.24	54.638	27.043
11/30/2006	0.94	0.61	0.65	106.97	10.63	11.18	611.45	66.233	27.127
12/31/2006	0.92	0.60	0.65	108.87	10.65	11.20	614.82	68.942	27.218
1/31/2007	0.93	1.81	1.96		10.68	11.25	614.82	0.000	27.113
2/28/2007	0.91	1.83	2.00		10.71	11.30	614.82	0.000	27.020
3/31/2007	0.90	1.83	2.03	106.61	10.74	11.36	618.13	38.125	27.062
4/30/2007	0.90	1.83	2.03	106.13	10.76	11.41	621.31	38.065	27.102
5/31/2007	0.90	1.82	2.03	105.71	10.79	11.47	624.59	38.025	27.143
6/30/2007	0.85	2.03	2.38	95.17	10.82	11.53	627.44	32.304	27.163
7/31/2007	0.87	1.81	2.07	101.87	10.84	11.59	630.60	37.129	27.199
8/31/2007	0.85	1.79	2.10	103.06	10.87	11.64	633.80	38.099	27.239
9/30/2007	0.86	1.81	2.12	104.57	10.90	11.70	636.93	38.275	27.277
10/31/2007	0.73	1.49	2.03	212.06	10.92	11.74	643.51	93.343	27.476
11/30/2007	0.83	1.90	2.29	224.53	10.94	11.80	650.24	80.721	27.665
12/31/2007	0.85	1.91	2.25		10.97	11.86	650.24	0.000	27.562
1/31/2008	0.86	1.92	2.24	112.39	11.00	11.92	653.73	39.512	27.607
2/29/2008	0.87	1.96	2.26		11.02	11.98	653.73	0.000	27.509
3/31/2008	0.88	1.97	2.24	115.16	11.05	12.04	657.30	39.649	27.555
4/30/2008	0.87	1.97	2.26	112.50	11.08	12.10	660.67	38.776	27.596
5/31/2008	0.85	1.90	2.23	113.13	11.10	12.16	664.18	40.202	27.642
6/30/2008	0.85	1.96	2.31	103.77	11.13	12.21	667.29	36.192	27.672

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
7/31/2008	0.86	1.90	2.21	105.13	11.15	12.27	670.55	37.410	27.707
8/31/2008	0.85	1.91	2.24	105.52	11.18	12.33	673.82	37.500	27.743
9/30/2008	0.85	1.92	2.27	10.14	11.21	12.39	674.13	3.584	27.658
10/31/2008	0.82	1.63	2.00	10.06	11.23	12.44	674.44	4.018	27.583
11/30/2008	0.68	2.24	3.31	107.63	11.25	12.51	677.67	36.286	27.615
12/31/2008	0.69	2.20	3.20	106.62	11.27	12.58	680.97	36.309	27.647
1/31/2009	0.68	2.20	3.25	107.60	11.29	12.64	684.31	36.878	27.681
2/28/2009	0.68	2.20	3.23	107.75	11.31	12.71	687.33	36.735	27.711
3/31/2009	0.66	2.24	3.37	111.54	11.33	12.78	690.78	37.850	27.748
4/30/2009	0.68	2.24	3.31	110.77	11.35	12.84	694.11	37.365	27.782
5/31/2009	0.65	2.20	3.39	107.76	11.37	12.91	697.45	37.203	27.816
6/30/2009	0.66	2.20	3.36	109.24	11.39	12.98	700.72	37.642	27.850
7/31/2009	0.65	2.18	3.36	108.35	11.41	13.04	704.08	37.753	27.885
8/31/2009	0.61	2.03	3.31	109.61	11.43	13.11	707.48	40.892	27.928
9/30/2009	0.59	1.98	3.34	109.22	11.45	13.17	710.76	41.830	27.970
10/31/2009	0.58	1.95	3.37	106.67	11.47	13.23	714.06	41.492	28.013
11/30/2009	0.60	1.82	3.03	100.12	11.49	13.28	717.07	40.769	28.049
12/31/2009	0.59	1.88	3.18	101.64	11.50	13.34	720.22	40.383	28.087
1/31/2010	0.60	1.92	3.21	102.24	11.52	13.40	723.39	39.925	28.123
2/28/2010	0.60	1.93	3.19	103.43	11.54	13.45	726.28	40.196	28.157
3/31/2010	0.59	1.93	3.30	104.67	11.56	13.51	729.53	40.886	28.196
4/30/2010	0.60	1.91	3.16	103.65	11.58	13.57	732.64	40.551	28.233
5/31/2010	0.60	1.86	3.09	111.80	11.59	13.63	736.10	44.579	28.282
6/30/2010	0.61	1.94	3.17	102.73	11.61	13.69	739.19	39.639	28.315
7/31/2010	0.64	1.93	3.03	100.21	11.63	13.75	742.29	38.400	28.347
8/31/2010	0.66	1.96	2.97	103.74	11.65	13.81	745.51	38.925	28.380
9/30/2010	0.65	1.98	3.04	103.00	11.67	13.87	748.60	38.537	28.411
10/31/2010	0.66	1.97	2.99	106.05	11.69	13.93	751.89	39.599	28.446
11/30/2010	0.66	1.94	2.95	104.68	11.71	13.99	755.03	39.693	28.479
12/31/2010	0.66	2.02	3.05	107.51	11.73	14.05	758.36	39.420	28.514
1/31/2011	0.65	2.04	3.12	106.25	11.75	14.11	761.65	38.802	28.547
2/28/2011	0.66	2.05	3.13	110.30	11.77	14.17	764.74	40.058	28.580
3/31/2011	0.57	2.09	3.67	111.32	11.79	14.23	768.19	41.177	28.619
4/30/2011	0.57	2.03	3.52	109.65	11.81	14.29	771.48	41.511	28.657
5/31/2011	0.57	1.96	3.47	106.58	11.82	14.36	774.79	41.486	28.695
6/30/2011	0.47	1.84	3.95	94.88	11.84	14.41	777.63	40.668	28.726
7/31/2011	0.57	1.95	3.43	81.08	11.86	14.47	780.15	31.768	28.735
8/31/2011	0.60	1.96	3.27	80.53	11.87	14.53	782.64	31.035	28.742
9/30/2011	0.55	1.54	2.78	60.84	11.89	14.58	784.47	28.596	28.742
10/31/2011	0.50	1.83	3.68	79.68	11.91	14.63	786.94	33.806	28.755
11/30/2011	0.46	1.72	3.75	78.92	11.92	14.69	789.30	35.747	28.772
12/31/2011	0.45	1.71	3.78	80.08	11.93	14.74	791.79	36.520	28.791
1/31/2012	0.46	1.65	3.58	79.54	11.95	14.79	794.25	37.069	28.811
2/29/2012	0.82	1.96	2.37	99.04	11.97	14.85	797.13	34.929	28.829
3/31/2012	0.66	2.05	3.12	108.29	11.99	14.91	800.48	39.384	28.862
4/30/2012	0.62	2.04	3.31	106.94	12.01	14.97	803.69	39.629	28.893
5/31/2012	0.59	2.04	3.48	105.88	12.03	15.03	806.97	39.720	28.925
6/30/2012	0.64	2.03	3.20	105.69	12.05	15.10	810.14	38.952	28.954

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
7/31/2012	0.52	1.88	3.64	102.00	12.06	15.15	813.31	41.874	28.989
8/31/2012	0.47	2.13	4.58	104.77	12.08	15.22	816.55	39.840	29.020
9/30/2012	0.47	2.13	4.53	106.70	12.09	15.28	819.75	40.465	29.053
10/31/2012	0.42	1.95	4.70	94.74	12.11	15.34	822.69	39.492	29.080
11/30/2012	0.47	2.15	4.52	105.23	12.12	15.41	825.85	39.680	29.110
12/31/2012	0.47	2.10	4.48	104.84	12.13	15.47	829.10	40.230	29.141
1/31/2013	0.47	2.13	4.50	107.13	12.15	15.54	832.42	40.652	29.174
2/28/2013	0.46	2.15	4.63	50.29	12.16	15.60	833.83	18.988	29.148
3/31/2013	0.56	1.89	3.39	31.39	12.18	15.66	834.80	12.658	29.104
4/30/2013	0.37	0.89	2.37		12.19	15.69	834.80	0.000	29.065
5/31/2013	0.38	0.57	1.52		12.20	15.70	834.80	0.000	29.034
6/30/2013	0.37	0.55	1.47		12.21	15.72	834.80	0.000	29.006
7/31/2013	0.39	0.55	1.44		12.23	15.74	834.80	0.000	28.975
8/31/2013	0.43	0.43	1.01		12.24	15.75	834.80	0.000	28.948
9/30/2013	0.31	0.40	1.28		12.25	15.76	834.80	0.000	28.926
10/31/2013	0.30	0.48	1.64		12.26	15.78	834.80	0.000	28.901
11/30/2013	0.45	0.50	1.12		12.27	15.79	834.80	0.000	28.872
12/31/2013	0.28	0.56	2.01		12.28	15.81	834.80	0.000	28.845

Oil Formation Vol Factor : 1.07100 m3/m3

Water Formation Vol Factor : 1.00150 m3/m3

Water / Oil Ratio : 3.29 m3/m3

Pattern: 00/07-35-009-28Inj Set: DalyUnit#4

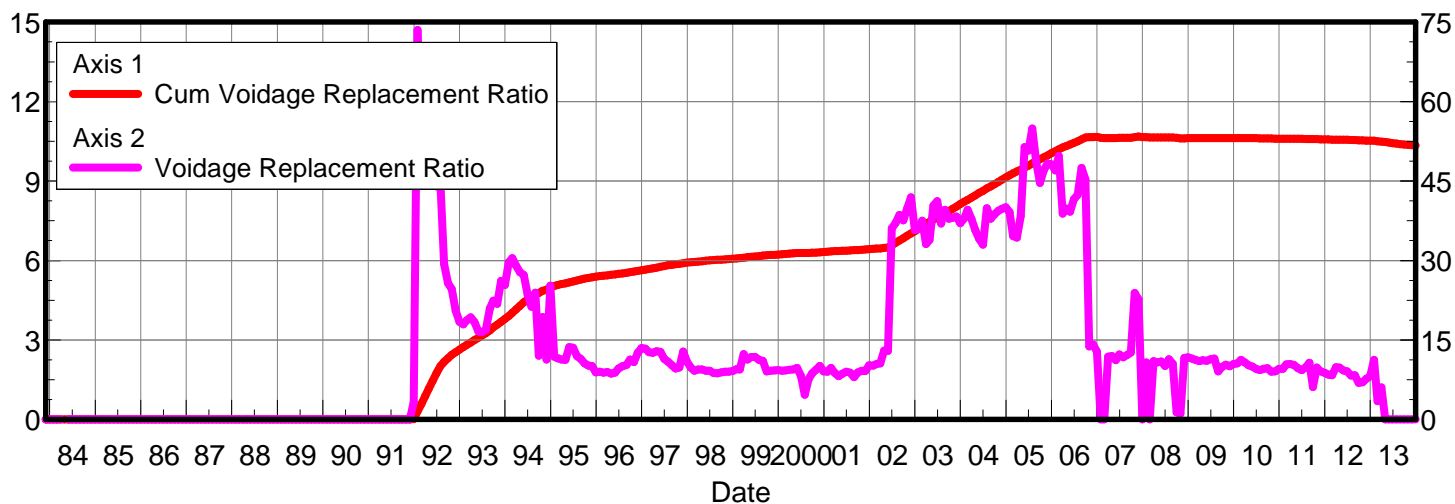
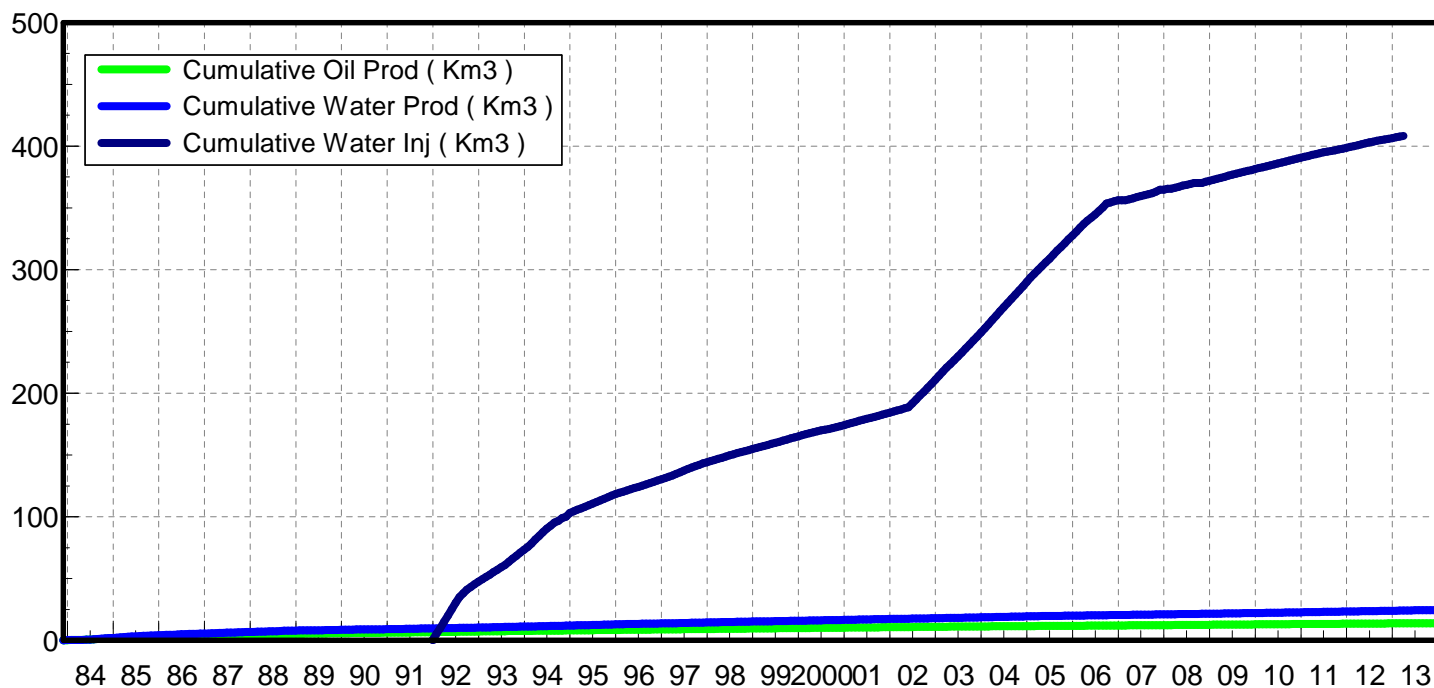
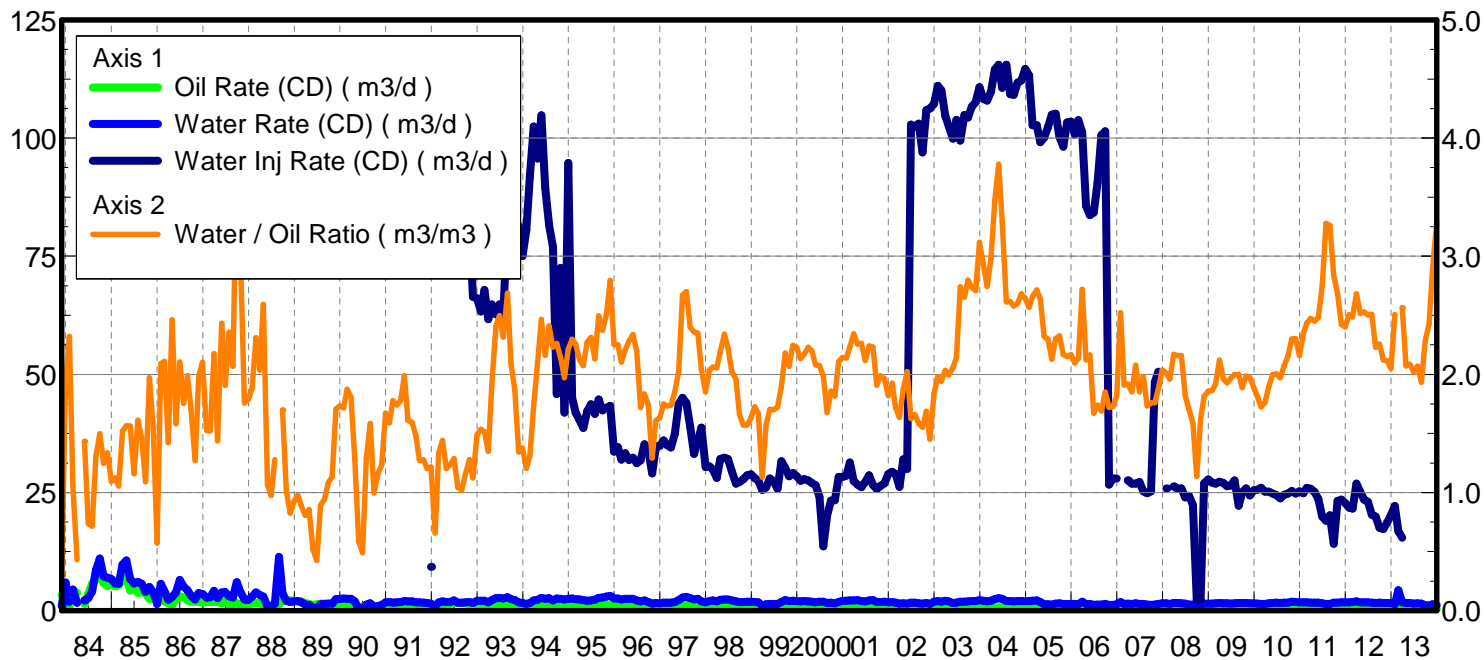
March 05, 2014

Operator: Tundra\_O&G\_Prtshp

Oil Rate (CD) : 0.36 m3/d

Water Rate (CD) : 1.18 m3/d

Water Inj Rate (CD) : 15.45 m3/d



Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
11/30/1983	3.33	1.01	0.30		0.10	0.03	0.00	0.000	0.000
12/31/1983	3.07	5.96	1.94		0.20	0.22	0.00	0.000	0.000
1/31/1984	0.82	1.91	2.32		0.22	0.27	0.00	0.000	0.000
2/29/1984	4.28	4.48	1.05		0.34	0.40	0.00	0.000	0.000
3/31/1984	3.82	1.65	0.43		0.46	0.46	0.00	0.000	0.000
5/31/1984	1.50	2.15	1.43		0.51	0.52	0.00	0.000	0.000
6/30/1984	3.57	2.63	0.74		0.62	0.60	0.00	0.000	0.000
7/31/1984	5.68	4.07	0.72		0.79	0.73	0.00	0.000	0.000
8/31/1984	6.56	8.58	1.31		1.00	0.99	0.00	0.000	0.000
9/30/1984	7.37	11.04	1.50		1.22	1.32	0.00	0.000	0.000
10/31/1984	5.83	7.28	1.25		1.40	1.55	0.00	0.000	0.000
11/30/1984	5.24	7.00	1.33		1.56	1.76	0.00	0.000	0.000
12/31/1984	6.13	6.72	1.10		1.75	1.97	0.00	0.000	0.000
1/31/1985	5.12	5.76	1.13		1.90	2.15	0.00	0.000	0.000
2/28/1985	5.42	5.73	1.06		2.06	2.31	0.00	0.000	0.000
3/31/1985	6.41	9.73	1.52		2.25	2.61	0.00	0.000	0.000
4/30/1985	6.79	10.62	1.57		2.46	2.93	0.00	0.000	0.000
5/31/1985	4.30	6.72	1.56		2.59	3.14	0.00	0.000	0.000
6/30/1985	4.94	5.73	1.16		2.74	3.31	0.00	0.000	0.000
7/31/1985	3.79	6.11	1.61		2.86	3.50	0.00	0.000	0.000
8/31/1985	3.90	5.69	1.46		2.98	3.67	0.00	0.000	0.000
9/30/1985	3.69	4.03	1.09		3.09	3.79	0.00	0.000	0.000
10/31/1985	2.54	5.00	1.97		3.17	3.95	0.00	0.000	0.000
11/30/1985	2.55	3.95	1.55		3.24	4.07	0.00	0.000	0.000
12/31/1985	2.52	1.44	0.57		3.32	4.11	0.00	0.000	0.000
1/31/1986	2.71	5.67	2.09		3.41	4.29	0.00	0.000	0.000
2/28/1986	1.94	4.10	2.11		3.46	4.40	0.00	0.000	0.000
3/31/1986	1.61	2.29	1.42		3.51	4.47	0.00	0.000	0.000
4/30/1986	1.17	2.89	2.46		3.55	4.56	0.00	0.000	0.000
5/31/1986	2.43	3.85	1.58		3.62	4.68	0.00	0.000	0.000
6/30/1986	3.08	6.49	2.10		3.71	4.88	0.00	0.000	0.000
7/31/1986	2.88	5.06	1.76		3.80	5.03	0.00	0.000	0.000
8/31/1986	2.17	4.32	1.99		3.87	5.17	0.00	0.000	0.000
9/30/1986	1.88	3.21	1.71		3.93	5.26	0.00	0.000	0.000
10/31/1986	1.87	2.38	1.27		3.98	5.34	0.00	0.000	0.000
11/30/1986	1.87	3.72	1.99		4.04	5.45	0.00	0.000	0.000
12/31/1986	1.69	3.55	2.10		4.09	5.56	0.00	0.000	0.000
1/31/1987	1.81	2.77	1.53		4.15	5.64	0.00	0.000	0.000
2/28/1987	1.86	2.84	1.52		4.20	5.72	0.00	0.000	0.000
3/31/1987	1.93	4.19	2.18		4.26	5.85	0.00	0.000	0.000
4/30/1987	1.86	2.68	1.44		4.32	5.93	0.00	0.000	0.000
5/31/1987	1.59	3.87	2.43		4.37	6.05	0.00	0.000	0.000
6/30/1987	2.05	3.92	1.91		4.43	6.17	0.00	0.000	0.000
7/31/1987	1.30	3.05	2.36		4.47	6.27	0.00	0.000	0.000
8/31/1987	1.34	2.78	2.07		4.51	6.35	0.00	0.000	0.000
9/30/1987	1.57	6.04	3.84		4.56	6.53	0.00	0.000	0.000
10/31/1987	1.31	3.87	2.95		4.60	6.65	0.00	0.000	0.000
11/30/1987	1.37	2.41	1.76		4.64	6.73	0.00	0.000	0.000

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
12/31/1987	1.30	2.33	1.79		4.68	6.80	0.00	0.000	0.000
1/31/1988	1.57	2.96	1.88		4.73	6.89	0.00	0.000	0.000
2/29/1988	1.66	3.84	2.31		4.78	7.00	0.00	0.000	0.000
3/31/1988	1.62	3.29	2.04		4.83	7.10	0.00	0.000	0.000
4/30/1988	1.15	2.98	2.59		4.86	7.19	0.00	0.000	0.000
5/31/1988	0.91	0.97	1.07		4.89	7.22	0.00	0.000	0.000
6/30/1988	0.95	0.93	0.98		4.92	7.25	0.00	0.000	0.000
7/31/1988	1.18	1.50	1.28		4.95	7.30	0.00	0.000	0.000
8/31/1988	1.39	11.39	8.18		5.00	7.65	0.00	0.000	0.000
9/30/1988	2.14	3.64	1.70		5.06	7.76	0.00	0.000	0.000
10/31/1988	2.08	2.10	1.01		5.13	7.82	0.00	0.000	0.000
11/30/1988	2.20	1.82	0.83		5.19	7.88	0.00	0.000	0.000
12/31/1988	2.12	1.97	0.93		5.26	7.94	0.00	0.000	0.000
1/31/1989	2.06	2.01	0.98		5.32	8.00	0.00	0.000	0.000
2/28/1989	1.99	1.76	0.89		5.38	8.05	0.00	0.000	0.000
3/31/1989	1.60	1.29	0.81		5.43	8.09	0.00	0.000	0.000
4/30/1989	1.46	1.25	0.86		5.47	8.13	0.00	0.000	0.000
5/31/1989	1.20	0.62	0.52		5.51	8.15	0.00	0.000	0.000
6/30/1989	1.36	0.58	0.43		5.55	8.17	0.00	0.000	0.000
7/31/1989	1.49	1.33	0.89		5.59	8.21	0.00	0.000	0.000
8/31/1989	1.50	1.42	0.94		5.64	8.25	0.00	0.000	0.000
9/30/1989	1.40	1.51	1.08		5.68	8.30	0.00	0.000	0.000
10/31/1989	1.33	1.50	1.13		5.72	8.34	0.00	0.000	0.000
11/30/1989	1.44	2.46	1.71		5.77	8.42	0.00	0.000	0.000
12/31/1989	1.46	2.54	1.73		5.81	8.49	0.00	0.000	0.000
1/31/1990	1.51	2.60	1.72		5.86	8.58	0.00	0.000	0.000
2/28/1990	1.34	2.51	1.88		5.90	8.65	0.00	0.000	0.000
3/31/1990	1.39	2.51	1.81		5.94	8.72	0.00	0.000	0.000
4/30/1990	1.52	1.94	1.28		5.99	8.78	0.00	0.000	0.000
5/31/1990	0.58	0.34	0.59		6.00	8.79	0.00	0.000	0.000
6/30/1990	0.92	0.45	0.49		6.03	8.81	0.00	0.000	0.000
7/31/1990	1.02	1.32	1.29		6.06	8.85	0.00	0.000	0.000
8/31/1990	0.98	1.55	1.58		6.09	8.89	0.00	0.000	0.000
9/30/1990	0.90	0.90	1.00		6.12	8.92	0.00	0.000	0.000
10/31/1990	0.81	0.93	1.16		6.15	8.95	0.00	0.000	0.000
11/30/1990	0.98	1.21	1.24		6.18	8.99	0.00	0.000	0.000
12/31/1990	1.07	1.79	1.67		6.21	9.04	0.00	0.000	0.000
1/31/1991	1.15	1.82	1.59		6.24	9.10	0.00	0.000	0.000
2/28/1991	0.97	1.71	1.78		6.27	9.15	0.00	0.000	0.000
3/31/1991	1.01	1.76	1.74		6.30	9.20	0.00	0.000	0.000
4/30/1991	1.02	1.81	1.78		6.33	9.26	0.00	0.000	0.000
5/31/1991	1.01	2.01	1.99		6.36	9.32	0.00	0.000	0.000
6/30/1991	1.22	1.96	1.61		6.40	9.38	0.00	0.000	0.000
7/31/1991	1.24	1.97	1.59		6.44	9.44	0.00	0.000	0.000
8/31/1991	1.20	1.77	1.48		6.48	9.49	0.00	0.000	0.000
9/30/1991	1.38	1.75	1.27		6.52	9.55	0.00	0.000	0.000
10/31/1991	1.35	1.72	1.28		6.56	9.60	0.00	0.000	0.000
11/30/1991	1.35	1.62	1.20		6.60	9.65	0.00	0.000	0.000

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
12/31/1991	1.23	1.50	1.22	9.26	6.64	9.69	0.29	3.280	0.017
1/31/1992	1.23	0.81	0.66	156.77	6.68	9.72	5.15	73.518	0.305
2/29/1992	1.31	1.76	1.34	161.45	6.71	9.77	9.83	51.060	0.580
3/31/1992	1.37	1.97	1.44	168.55	6.76	9.83	15.05	49.075	0.883
4/30/1992	1.52	1.83	1.20	165.93	6.80	9.89	20.03	48.116	1.167
5/31/1992	1.46	1.80	1.23	165.03	6.85	9.94	25.15	49.043	1.457
6/30/1992	1.68	2.16	1.29	173.57	6.90	10.01	30.36	43.964	1.746
7/31/1992	1.61	1.67	1.04	153.10	6.95	10.06	35.10	45.133	2.007
8/31/1992	1.65	1.68	1.02	100.87	7.00	10.11	38.23	29.287	2.173
9/30/1992	1.54	1.78	1.16	88.20	7.04	10.16	40.87	25.765	2.310
10/31/1992	1.43	1.83	1.28	82.42	7.09	10.22	43.43	24.592	2.440
11/30/1992	1.47	1.66	1.12	66.43	7.13	10.27	45.42	20.575	2.538
12/31/1992	1.40	2.09	1.49	66.10	7.18	10.33	47.47	18.428	2.636
1/31/1993	1.35	2.08	1.54	63.29	7.22	10.40	49.43	17.945	2.728
2/28/1993	1.40	2.12	1.51	67.86	7.26	10.46	51.33	18.743	2.817
3/31/1993	1.32	1.78	1.35	61.68	7.30	10.51	53.24	19.270	2.906
4/30/1993	1.18	2.27	1.91	64.80	7.33	10.58	55.19	18.350	2.995
5/31/1993	1.08	2.61	2.41	62.71	7.37	10.66	57.13	16.614	3.081
6/30/1993	1.10	2.75	2.50	64.80	7.40	10.75	59.08	16.514	3.166
7/31/1993	1.10	2.55	2.32	62.71	7.44	10.82	61.02	16.851	3.250
8/31/1993	1.05	2.83	2.69	82.97	7.47	10.91	63.59	20.976	3.365
9/30/1993	1.18	2.47	2.09	83.73	7.50	10.99	66.11	22.422	3.477
10/31/1993	1.22	2.27	1.86	78.13	7.54	11.06	68.53	21.835	3.584
11/30/1993	1.29	1.73	1.34	81.47	7.58	11.11	70.97	26.164	3.694
12/31/1993	1.21	1.66	1.38	75.00	7.62	11.16	73.30	25.397	3.797
1/31/1994	1.19	1.44	1.21	80.55	7.65	11.20	75.79	29.685	3.909
2/28/1994	1.27	1.66	1.31	91.93	7.69	11.25	78.37	30.484	4.024
3/31/1994	1.26	2.19	1.74	102.42	7.73	11.32	81.54	29.001	4.164
4/30/1994	1.09	2.28	2.09	95.70	7.76	11.39	84.41	27.816	4.288
5/31/1994	1.09	2.68	2.46	104.84	7.79	11.47	87.66	27.232	4.426
6/30/1994	1.17	2.54	2.16	89.43	7.83	11.55	90.35	23.599	4.535
7/31/1994	1.10	2.66	2.41	81.61	7.86	11.63	92.88	21.284	4.635
8/31/1994	0.97	2.17	2.23	77.00	7.89	11.70	95.26	23.961	4.730
9/30/1994	1.15	2.59	2.26	45.82	7.93	11.77	96.64	12.010	4.771
10/31/1994	1.17	2.50	2.14	72.50	7.96	11.85	98.89	19.314	4.855
11/30/1994	1.22	2.40	1.97	41.90	8.00	11.92	100.14	11.338	4.890
12/31/1994	1.14	2.53	2.21	94.72	8.04	12.00	103.08	25.284	5.005
1/31/1995	1.13	2.59	2.30	45.04	8.07	12.08	104.47	11.848	5.044
2/28/1995	1.09	2.46	2.26	41.89	8.10	12.15	105.65	11.556	5.075
3/31/1995	1.12	2.38	2.12	40.33	8.14	12.22	106.90	11.293	5.108
4/30/1995	1.09	2.27	2.07	38.64	8.17	12.29	108.06	11.240	5.138
5/31/1995	0.92	2.10	2.27	42.20	8.20	12.36	109.36	13.694	5.177
6/30/1995	0.95	2.20	2.31	43.67	8.23	12.42	110.68	13.569	5.215
7/31/1995	1.09	2.31	2.13	41.62	8.26	12.50	111.97	11.982	5.249
8/31/1995	1.10	2.74	2.49	44.70	8.29	12.58	113.35	11.427	5.284
9/30/1995	1.16	2.76	2.37	42.39	8.33	12.66	114.62	10.582	5.314
10/31/1995	1.18	2.97	2.50	42.96	8.37	12.76	115.95	10.154	5.343
11/30/1995	1.11	3.10	2.80	43.35	8.40	12.85	117.26	10.118	5.371

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
12/31/1995	1.14	2.56	2.25	33.66	8.43	12.93	118.30	8.919	5.390
1/31/1996	1.15	2.59	2.25	34.58	8.47	13.01	119.37	9.040	5.410
2/29/1996	1.14	2.40	2.11	31.98	8.50	13.08	120.30	8.832	5.426
3/31/1996	1.14	2.51	2.21	33.34	8.54	13.16	121.33	8.956	5.444
4/30/1996	1.10	2.51	2.28	31.87	8.57	13.23	122.29	8.654	5.460
5/31/1996	1.08	2.52	2.34	32.34	8.61	13.31	123.29	8.807	5.477
6/30/1996	0.99	2.18	2.19	31.22	8.63	13.37	124.23	9.637	5.495
7/31/1996	1.13	1.95	1.72	31.85	8.67	13.43	125.21	10.067	5.515
8/31/1996	1.18	2.16	1.84	35.24	8.71	13.50	126.31	10.297	5.537
9/30/1996	1.07	1.87	1.74	34.07	8.74	13.56	127.33	11.322	5.560
10/31/1996	1.13	1.47	1.29	29.04	8.77	13.60	128.23	10.839	5.579
11/30/1996	1.03	1.66	1.61	34.80	8.80	13.65	129.27	12.562	5.604
12/31/1996	0.96	1.56	1.63	34.89	8.83	13.70	130.35	13.506	5.631
1/31/1997	0.95	1.67	1.75	36.04	8.86	13.75	131.47	13.382	5.659
2/28/1997	0.98	1.71	1.73	35.03	8.89	13.80	132.45	12.708	5.682
3/31/1997	0.98	1.70	1.74	34.56	8.92	13.85	133.52	12.610	5.707
4/30/1997	1.00	1.85	1.85	37.48	8.95	13.91	134.65	12.876	5.734
5/31/1997	1.10	2.24	2.03	43.73	8.99	13.98	136.00	12.790	5.766
6/30/1997	1.05	2.81	2.67	45.03	9.02	14.06	137.35	11.423	5.794
7/31/1997	1.07	2.89	2.70	43.96	9.05	14.15	138.72	10.905	5.821
8/31/1997	1.10	2.63	2.40	38.94	9.08	14.23	139.92	10.241	5.843
9/30/1997	1.01	2.38	2.36	33.16	9.11	14.31	140.92	9.592	5.859
10/31/1997	1.07	2.52	2.35	35.99	9.15	14.38	142.03	9.824	5.877
11/30/1997	0.97	1.98	2.04	38.75	9.18	14.44	143.20	12.834	5.903
12/31/1997	0.95	1.77	1.85	30.38	9.21	14.50	144.14	10.887	5.921
1/31/1998	1.00	2.04	2.04	30.52	9.24	14.56	145.08	9.795	5.936
2/28/1998	1.04	2.14	2.06	29.86	9.27	14.62	145.92	9.172	5.948
3/31/1998	0.95	1.96	2.06	28.13	9.30	14.68	146.79	9.457	5.962
4/30/1998	1.04	2.29	2.19	32.12	9.33	14.75	147.76	9.440	5.976
5/31/1998	1.03	2.41	2.34	32.35	9.36	14.82	148.76	9.215	5.990
6/30/1998	1.06	2.36	2.23	32.10	9.39	14.90	149.72	9.185	6.004
7/31/1998	1.09	2.20	2.02	29.51	9.43	14.96	150.64	8.780	6.015
8/31/1998	1.02	1.99	1.96	26.88	9.46	15.03	151.47	8.719	6.025
9/30/1998	1.12	1.86	1.66	27.25	9.49	15.08	152.29	8.925	6.036
10/31/1998	1.17	1.84	1.57	27.85	9.53	15.14	153.15	9.007	6.047
11/30/1998	1.20	1.89	1.57	28.63	9.56	15.19	154.01	9.022	6.058
12/31/1998	1.17	1.90	1.63	28.82	9.60	15.25	154.90	9.155	6.070
1/31/1999	1.05	1.82	1.73	28.03	9.63	15.31	155.77	9.525	6.082
2/28/1999	1.06	1.77	1.67	27.47	9.66	15.36	156.54	9.447	6.093
3/31/1999	0.94	1.06	1.13	25.54	9.69	15.39	157.33	12.368	6.109
4/30/1999	0.87	1.37	1.57	26.06	9.72	15.43	158.11	11.320	6.123
5/31/1999	0.85	1.45	1.71	27.97	9.74	15.48	158.98	11.817	6.139
6/30/1999	0.84	1.43	1.70	27.36	9.77	15.52	159.80	11.784	6.154
7/31/1999	0.82	1.42	1.72	25.83	9.79	15.57	160.60	11.252	6.168
8/31/1999	0.96	1.83	1.90	31.60	9.82	15.62	161.58	11.078	6.184
9/30/1999	1.02	2.23	2.18	30.19	9.85	15.69	162.49	9.104	6.196
10/31/1999	0.98	2.03	2.07	28.43	9.88	15.75	163.37	9.213	6.207
11/30/1999	0.95	2.14	2.25	29.12	9.91	15.82	164.24	9.233	6.217

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
12/31/1999	0.93	2.06	2.23	28.47	9.94	15.88	165.13	9.327	6.228
1/31/2000	0.93	1.99	2.13	27.48	9.97	15.94	165.98	9.200	6.239
2/29/2000	0.93	2.02	2.17	27.81	10.00	16.00	166.78	9.243	6.249
3/31/2000	0.89	1.99	2.23	27.54	10.03	16.06	167.64	9.351	6.259
4/30/2000	0.88	1.93	2.20	27.03	10.05	16.12	168.45	9.442	6.269
5/31/2000	0.86	1.80	2.08	26.55	10.08	16.18	169.27	9.755	6.280
6/30/2000	0.93	1.92	2.07	24.09	10.11	16.23	170.00	8.261	6.287
7/31/2000	0.96	1.90	1.98	13.60	10.14	16.29	170.42	4.643	6.281
8/31/2000	0.96	1.62	1.68	20.15	10.17	16.34	171.04	7.619	6.285
9/30/2000	0.91	1.69	1.86	23.29	10.19	16.39	171.74	8.727	6.292
10/31/2000	0.87	1.57	1.82	23.35	10.22	16.44	172.46	9.353	6.301
11/30/2000	0.88	1.85	2.11	28.28	10.25	16.50	173.31	10.125	6.313
12/31/2000	0.97	2.09	2.14	28.32	10.28	16.56	174.19	9.052	6.322
1/31/2001	0.99	2.11	2.14	28.58	10.31	16.63	175.08	9.020	6.332
2/28/2001	0.97	2.17	2.23	31.38	10.33	16.69	175.95	9.755	6.343
3/31/2001	0.92	2.15	2.34	27.40	10.36	16.75	176.80	8.759	6.351
4/30/2001	0.98	2.22	2.26	26.71	10.39	16.82	177.61	8.172	6.358
5/31/2001	0.91	2.06	2.26	26.17	10.42	16.89	178.42	8.627	6.365
6/30/2001	0.94	2.00	2.12	27.22	10.45	16.95	179.23	9.033	6.374
7/31/2001	0.98	2.19	2.24	28.67	10.48	17.01	180.12	8.858	6.383
8/31/2001	1.01	2.25	2.23	26.61	10.51	17.08	180.95	7.987	6.389
9/30/2001	0.97	1.85	1.91	25.73	10.54	17.14	181.72	8.901	6.396
10/31/2001	0.94	1.87	1.99	26.40	10.57	17.20	182.54	9.202	6.405
11/30/2001	0.97	1.91	1.96	26.98	10.60	17.25	183.35	9.152	6.414
12/31/2001	0.98	1.79	1.82	28.94	10.63	17.31	184.24	10.201	6.425
1/31/2002	0.97	1.86	1.92	29.36	10.66	17.37	185.15	10.150	6.437
2/28/2002	0.99	1.70	1.72	28.94	10.69	17.41	185.96	10.470	6.448
3/31/2002	0.92	1.50	1.64	26.21	10.71	17.46	186.78	10.578	6.459
4/30/2002	0.84	1.57	1.88	32.05	10.74	17.51	187.74	12.998	6.475
5/31/2002	0.75	1.52	2.02	30.02	10.76	17.56	188.67	12.927	6.491
6/30/2002	1.06	1.72	1.62	102.88	10.79	17.61	191.76	36.066	6.578
7/31/2002	1.01	1.68	1.66	102.39	10.83	17.66	194.93	37.079	6.667
8/31/2002	1.01	1.59	1.58	103.07	10.86	17.71	198.12	38.629	6.758
9/30/2002	0.98	1.53	1.55	96.96	10.89	17.75	201.03	37.608	6.839
10/31/2002	0.96	1.63	1.69	105.88	10.92	17.80	204.32	39.845	6.931
11/30/2002	1.00	1.46	1.45	106.23	10.95	17.85	207.50	41.937	7.021
12/31/2002	1.03	1.90	1.84	107.28	10.98	17.91	210.83	35.772	7.111
1/31/2003	1.01	2.01	1.98	111.05	11.01	17.97	214.27	35.953	7.204
2/28/2003	0.97	1.89	1.94	110.09	11.04	18.02	217.35	37.527	7.288
3/31/2003	1.02	2.07	2.03	104.73	11.07	18.09	220.60	33.098	7.372
4/30/2003	0.99	1.97	2.00	102.51	11.10	18.15	223.68	33.914	7.452
5/31/2003	0.79	1.63	2.06	99.85	11.12	18.20	226.77	40.341	7.536
6/30/2003	0.78	1.68	2.14	103.85	11.15	18.25	229.89	41.220	7.621
7/31/2003	0.71	1.94	2.74	99.49	11.17	18.31	232.97	36.973	7.702
8/31/2003	0.71	1.89	2.65	104.88	11.19	18.37	236.22	39.598	7.788
9/30/2003	0.71	1.99	2.80	104.33	11.21	18.42	239.35	37.901	7.870
10/31/2003	0.74	2.02	2.74	106.63	11.23	18.49	242.66	38.044	7.956
11/30/2003	0.74	2.02	2.71	107.59	11.26	18.55	245.88	38.276	8.039

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12/31/2003	0.71	2.23	3.12	110.75	11.28	18.62	249.32	37.033	8.127
1/31/2004	0.71	2.09	2.94	108.29	11.30	18.68	252.68	37.928	8.213
2/29/2004	0.71	1.96	2.74	107.93	11.32	18.74	255.81	39.601	8.293
3/31/2004	0.72	2.14	2.99	109.84	11.34	18.80	259.21	37.827	8.379
4/30/2004	0.71	2.45	3.47	114.53	11.37	18.88	262.65	35.738	8.464
5/31/2004	0.70	2.64	3.78	115.53	11.39	18.96	266.23	34.049	8.550
6/30/2004	0.77	2.53	3.30	110.66	11.41	19.04	269.55	33.017	8.629
7/31/2004	0.79	2.06	2.61	115.54	11.43	19.10	273.13	39.856	8.718
8/31/2004	0.78	2.05	2.62	109.27	11.46	19.16	276.52	37.855	8.801
9/30/2004	0.77	1.99	2.58	109.18	11.48	19.22	279.79	38.748	8.882
10/31/2004	0.77	2.01	2.60	111.72	11.51	19.29	283.26	39.396	8.967
11/30/2004	0.75	2.02	2.68	112.21	11.53	19.35	286.62	39.758	9.049
12/31/2004	0.77	2.04	2.64	114.65	11.55	19.41	290.18	40.087	9.136
1/31/2005	0.80	2.04	2.57	113.28	11.58	19.47	293.69	39.165	9.220
2/28/2005	0.80	2.12	2.66	102.74	11.60	19.53	296.56	34.631	9.286
3/31/2005	0.79	2.15	2.71	102.74	11.62	19.60	299.75	34.299	9.359
4/30/2005	0.69	1.84	2.64	99.13	11.64	19.65	302.72	38.448	9.429
5/31/2005	0.57	1.33	2.32	100.05	11.66	19.69	305.82	51.408	9.508
6/30/2005	0.60	1.38	2.30	102.33	11.68	19.74	308.89	50.746	9.585
7/31/2005	0.60	1.27	2.13	104.97	11.70	19.78	312.15	54.933	9.668
8/31/2005	0.64	1.47	2.30	105.14	11.72	19.82	315.41	48.699	9.749
9/30/2005	0.66	1.54	2.33	100.22	11.74	19.87	318.41	44.657	9.821
10/31/2005	0.64	1.40	2.17	98.17	11.76	19.91	321.46	47.065	9.896
11/30/2005	0.66	1.43	2.15	103.34	11.78	19.95	324.56	48.322	9.971
12/31/2005	0.66	1.44	2.17	103.48	11.80	20.00	327.77	48.129	10.049
1/31/2006	0.68	1.42	2.10	100.75	11.82	20.04	330.89	47.032	10.124
2/28/2006	0.65	1.39	2.14	103.78	11.84	20.08	333.79	49.746	10.195
3/31/2006	0.69	1.87	2.72	101.23	11.86	20.14	336.93	38.872	10.266
4/30/2006	0.67	1.43	2.12	85.67	11.88	20.18	339.50	39.798	10.324
5/31/2006	0.66	1.43	2.17	83.71	11.90	20.23	342.10	39.234	10.382
6/30/2006	0.74	1.24	1.67	84.27	11.92	20.26	344.63	41.568	10.439
7/31/2006	0.76	1.32	1.74	90.53	11.95	20.30	347.43	42.403	10.503
8/31/2006	0.77	1.30	1.69	100.62	11.97	20.34	350.55	47.456	10.576
9/30/2006	0.77	1.42	1.85	101.42	11.99	20.39	353.59	45.296	10.647
10/31/2006	0.69	1.19	1.72	26.68	12.01	20.42	354.42	13.791	10.652
11/30/2006	0.70	1.22	1.73	27.97	12.04	20.46	355.26	14.174	10.659
12/31/2006	0.76	1.38	1.82	28.00	12.06	20.50	356.13	12.821	10.663
1/31/2007	0.72	1.82	2.52		12.08	20.56	356.13	0.000	10.637
2/28/2007	0.75	1.42	1.91		12.10	20.60	356.13	0.000	10.618
3/31/2007	0.78	1.49	1.92	27.58	12.13	20.65	356.98	11.875	10.620
4/30/2007	0.77	1.42	1.85	26.90	12.15	20.69	357.79	11.991	10.623
5/31/2007	0.76	1.59	2.08	26.87	12.17	20.74	358.62	11.182	10.624
6/30/2007	0.76	1.40	1.85	27.20	12.20	20.78	359.44	12.298	10.628
7/31/2007	0.70	1.40	1.98	25.26	12.22	20.82	360.22	11.759	10.630
8/31/2007	0.73	1.26	1.73	24.84	12.24	20.86	360.99	12.166	10.633
9/30/2007	0.70	1.24	1.76	25.23	12.26	20.90	361.75	12.655	10.636
10/31/2007	0.71	1.26	1.76	48.32	12.28	20.94	363.25	23.887	10.661
11/30/2007	0.76	1.42	1.88	50.60	12.31	20.98	364.77	22.655	10.684

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
12/31/2007	0.78	1.58	2.04		12.33	21.03	364.77	0.000	10.661
1/31/2008	0.78	1.56	2.01	25.87	12.35	21.08	365.57	10.798	10.661
2/29/2008	0.73	1.44	1.96		12.38	21.12	365.57	0.000	10.641
3/31/2008	0.74	1.60	2.17	26.29	12.40	21.17	366.38	11.020	10.642
4/30/2008	0.75	1.61	2.16	25.83	12.42	21.22	367.16	10.741	10.642
5/31/2008	0.73	1.57	2.16	25.84	12.44	21.27	367.96	10.977	10.643
6/30/2008	0.82	1.50	1.82	23.97	12.47	21.31	368.68	10.090	10.642
7/31/2008	0.77	1.31	1.70	24.29	12.49	21.35	369.43	11.373	10.643
8/31/2008	0.80	1.27	1.59	22.32	12.52	21.39	370.12	10.514	10.643
9/30/2008	0.77	0.88	1.14	2.28	12.54	21.42	370.19	1.334	10.629
10/31/2008	0.79	1.29	1.62	2.38	12.56	21.46	370.26	1.114	10.611
11/30/2008	0.81	1.46	1.82	26.94	12.59	21.50	371.07	11.588	10.613
12/31/2008	0.81	1.50	1.86	27.75	12.61	21.55	371.93	11.705	10.615
1/31/2009	0.80	1.50	1.86	27.08	12.64	21.59	372.77	11.478	10.617
2/28/2009	0.80	1.53	1.92	26.85	12.66	21.64	373.52	11.247	10.618
3/31/2009	0.77	1.64	2.12	27.27	12.69	21.69	374.37	11.039	10.619
4/30/2009	0.80	1.56	1.96	26.99	12.71	21.74	375.18	11.171	10.620
5/31/2009	0.79	1.53	1.93	26.33	12.73	21.78	376.00	11.074	10.621
6/30/2009	0.77	1.51	1.97	26.48	12.76	21.83	376.79	11.371	10.623
7/31/2009	0.78	1.56	2.00	27.59	12.78	21.88	377.65	11.522	10.625
8/31/2009	0.80	1.60	2.00	22.22	12.81	21.93	378.33	9.049	10.621
9/30/2009	0.85	1.61	1.89	25.09	12.83	21.97	379.09	9.950	10.620
10/31/2009	0.82	1.63	1.98	25.87	12.86	22.03	379.89	10.341	10.619
11/30/2009	0.80	1.58	1.97	24.41	12.88	22.07	380.62	10.036	10.618
12/31/2009	0.82	1.55	1.89	25.45	12.91	22.12	381.41	10.492	10.618
1/31/2010	0.84	1.52	1.81	25.61	12.93	22.17	382.20	10.566	10.618
2/28/2010	0.83	1.43	1.73	26.00	12.96	22.21	382.93	11.246	10.619
3/31/2010	0.82	1.45	1.76	25.19	12.98	22.25	383.71	10.797	10.619
4/30/2010	0.83	1.57	1.90	25.16	13.01	22.30	384.47	10.238	10.618
5/31/2010	0.81	1.62	2.00	24.79	13.03	22.35	385.24	9.954	10.617
6/30/2010	0.83	1.67	2.00	24.43	13.06	22.40	385.97	9.537	10.615
7/31/2010	0.84	1.66	1.97	23.79	13.08	22.45	386.71	9.302	10.612
8/31/2010	0.81	1.69	2.07	24.49	13.11	22.50	387.47	9.581	10.610
9/30/2010	0.80	1.71	2.16	24.77	13.13	22.56	388.21	9.663	10.608
10/31/2010	0.83	1.91	2.30	25.32	13.16	22.61	388.99	9.028	10.604
11/30/2010	0.81	1.86	2.30	24.76	13.18	22.67	389.74	9.101	10.600
12/31/2010	0.82	1.77	2.16	25.25	13.21	22.73	390.52	9.546	10.598
1/31/2011	0.76	1.79	2.35	24.88	13.23	22.78	391.29	9.551	10.596
2/28/2011	0.71	1.74	2.44	26.02	13.25	22.83	392.02	10.397	10.595
3/31/2011	0.70	1.73	2.47	25.83	13.27	22.88	392.82	10.440	10.595
4/30/2011	0.69	1.70	2.45	25.13	13.29	22.93	393.57	10.269	10.595
5/31/2011	0.69	1.70	2.48	23.62	13.31	22.99	394.31	9.696	10.593
6/30/2011	0.56	1.54	2.75	19.93	13.33	23.03	394.90	9.291	10.590
7/31/2011	0.45	1.46	3.28	19.01	13.34	23.08	395.49	9.825	10.589
8/31/2011	0.44	1.42	3.26	20.17	13.36	23.12	396.12	10.679	10.589
9/30/2011	0.59	1.67	2.84	14.14	13.38	23.17	396.54	6.136	10.581
10/31/2011	0.63	1.70	2.68	23.20	13.40	23.23	397.26	9.782	10.580
11/30/2011	0.74	1.79	2.42	23.51	13.42	23.28	397.97	9.090	10.577

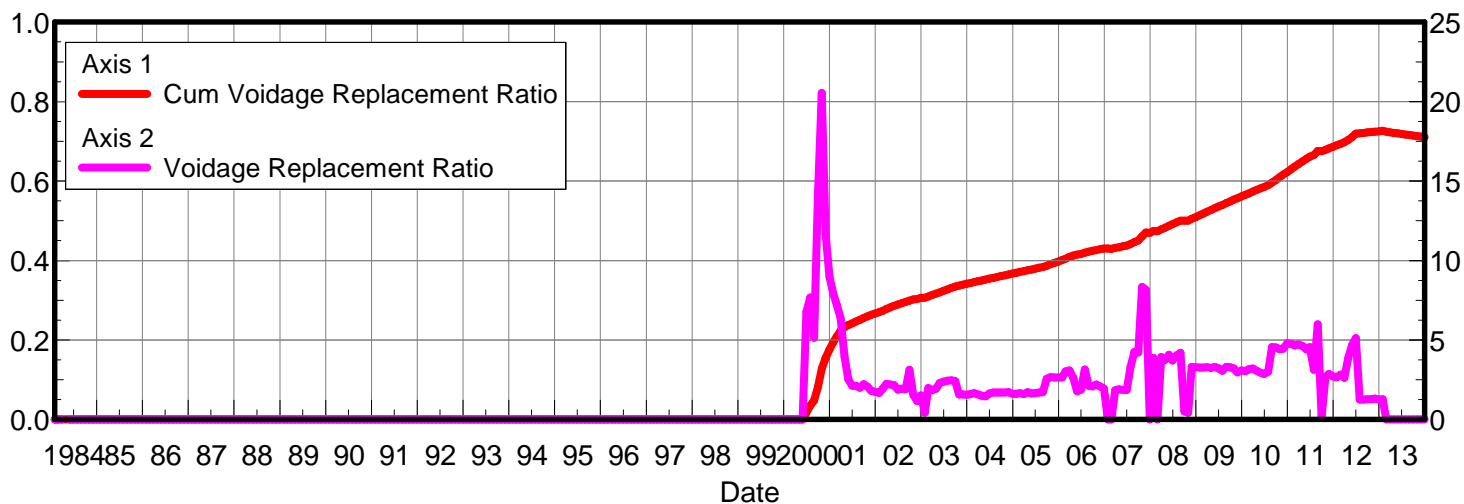
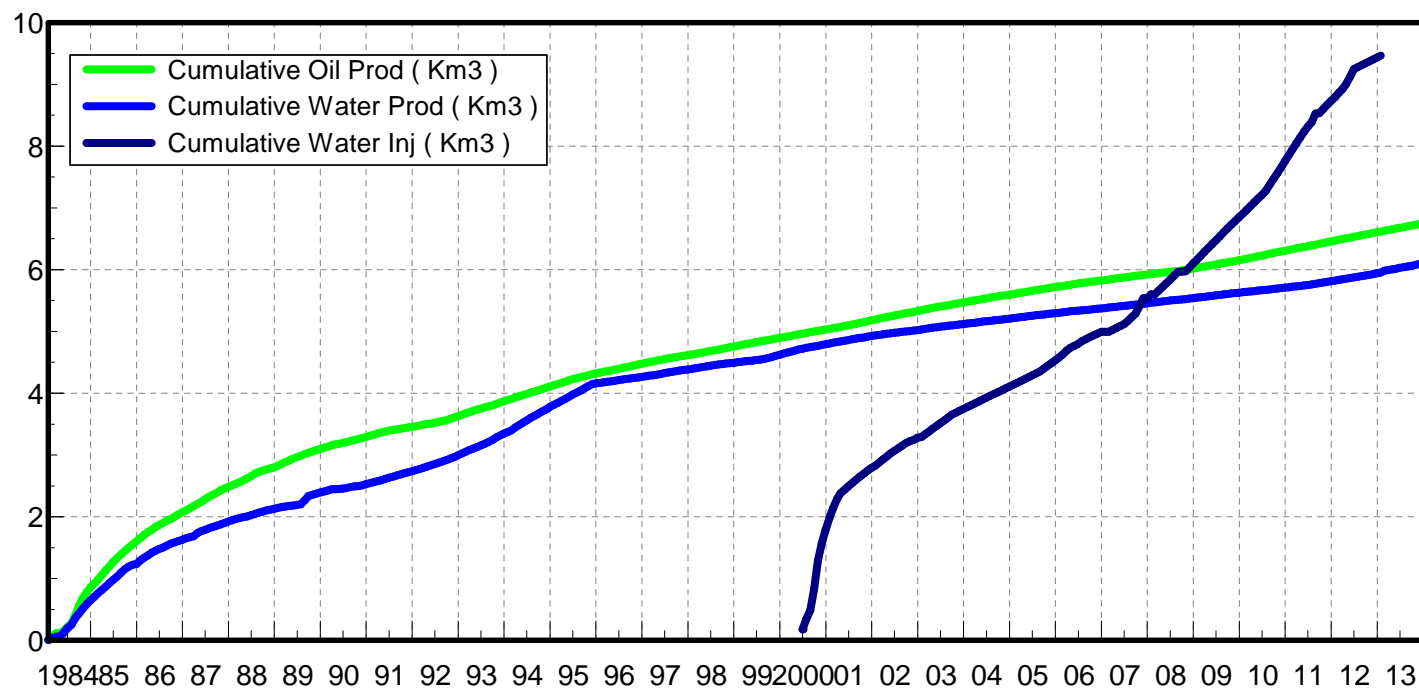
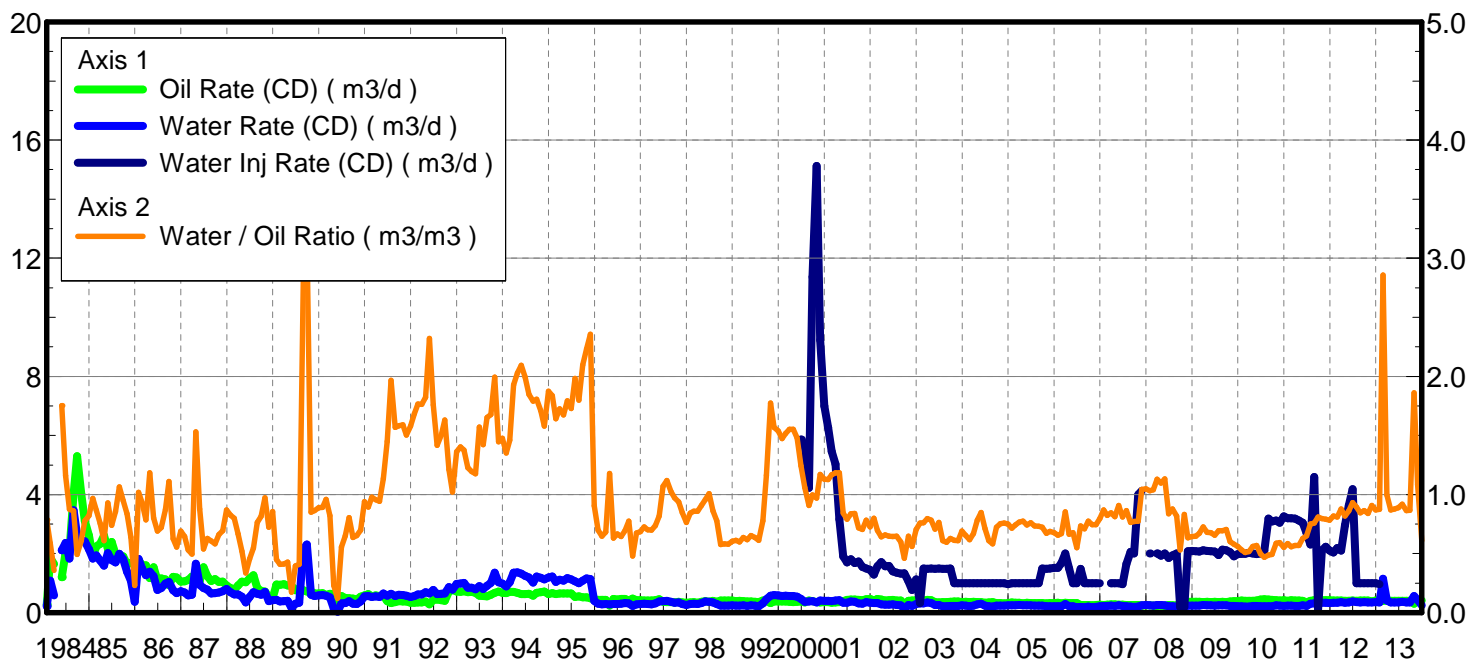
Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
12/31/2011	0.74	1.79	2.40	22.75	13.44	23.33	398.67	8.815	10.573
1/31/2012	0.72	1.80	2.51	21.79	13.46	23.39	399.35	8.485	10.568
2/29/2012	0.73	1.81	2.49	21.60	13.48	23.44	399.98	8.352	10.564
3/31/2012	0.73	1.95	2.68	26.92	13.51	23.50	400.81	9.888	10.562
4/30/2012	0.71	1.80	2.52	25.11	13.53	23.56	401.56	9.814	10.561
5/31/2012	0.70	1.78	2.53	23.47	13.55	23.61	402.29	9.262	10.558
6/30/2012	0.71	1.78	2.50	23.05	13.57	23.67	402.98	9.060	10.555
7/31/2012	0.69	1.72	2.51	20.29	13.59	23.72	403.61	8.271	10.551
8/31/2012	0.72	1.61	2.23	19.94	13.61	23.77	404.23	8.365	10.547
9/30/2012	0.76	1.72	2.26	17.57	13.64	23.82	404.76	6.926	10.539
10/31/2012	0.77	1.64	2.12	17.29	13.66	23.87	405.29	7.017	10.532
11/30/2012	0.76	1.61	2.11	18.63	13.68	23.92	405.85	7.710	10.527
12/31/2012	0.79	1.63	2.05	20.26	13.71	23.97	406.48	8.184	10.522
1/31/2013	0.55	1.38	2.51	22.16	13.73	24.01	407.17	11.247	10.524
2/28/2013	0.48	4.37	9.10	16.82	13.74	24.13	407.64	3.444	10.499
3/31/2013	0.70	1.79	2.57	15.45	13.76	24.19	408.12	6.078	10.490
4/30/2013	0.78	1.63	2.07		13.78	24.24	408.12	0.000	10.470
5/31/2013	0.78	1.62	2.09		13.81	24.29	408.12	0.000	10.449
6/30/2013	0.73	1.49	2.02		13.83	24.33	408.12	0.000	10.431
7/31/2013	0.77	1.58	2.07		13.85	24.38	408.12	0.000	10.411
8/31/2013	0.78	1.51	1.93		13.88	24.43	408.12	0.000	10.392
9/30/2013	0.52	1.18	2.28		13.89	24.47	408.12	0.000	10.378
10/31/2013	0.44	1.06	2.43		13.91	24.50	408.12	0.000	10.366
11/30/2013	0.46	1.34	2.90		13.92	24.54	408.12	0.000	10.351
12/31/2013	0.36	1.18	3.29		13.93	24.58	408.12	0.000	10.339

Oil Formation Vol Factor : 1.07100 m3/m3  
Water Formation Vol Factor : 1.00150 m3/m3  
Water / Oil Ratio : 0.61 m3/m3

Pattern: 02/14-35-009-28Inj Set: DalyUnit#4

March 05, 2014  
Operator: Tundra\_O&G\_Prtshp

Oil Rate (CD) : 0.41 m3/d  
Water Rate (CD) : 0.25 m3/d  
Water Inj Rate (CD) : 0.97 m3/d



Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
1/31/1984	0.27	0.21	0.79		0.01	0.01	0.00	0.000	0.000
2/29/1984	1.85	1.09	0.59		0.06	0.04	0.00	0.000	0.000
3/31/1984	1.65	0.59	0.36		0.11	0.06	0.00	0.000	0.000
5/31/1984	1.21	2.12	1.75		0.15	0.12	0.00	0.000	0.000
6/30/1984	2.04	2.36	1.16		0.21	0.19	0.00	0.000	0.000
7/31/1984	2.09	1.83	0.88		0.28	0.25	0.00	0.000	0.000
8/31/1984	4.03	3.47	0.86		0.40	0.36	0.00	0.000	0.000
9/30/1984	5.30	2.62	0.49		0.56	0.44	0.00	0.000	0.000
10/31/1984	4.03	2.45	0.61		0.69	0.51	0.00	0.000	0.000
11/30/1984	3.11	2.42	0.78		0.78	0.58	0.00	0.000	0.000
12/31/1984	2.61	2.14	0.82		0.86	0.65	0.00	0.000	0.000
1/31/1985	1.90	1.83	0.97		0.92	0.71	0.00	0.000	0.000
2/28/1985	2.24	1.94	0.87		0.98	0.76	0.00	0.000	0.000
3/31/1985	2.34	1.76	0.75		1.05	0.82	0.00	0.000	0.000
4/30/1985	2.61	1.59	0.61		1.13	0.86	0.00	0.000	0.000
5/31/1985	2.17	2.02	0.93		1.20	0.93	0.00	0.000	0.000
6/30/1985	2.40	1.77	0.74		1.27	0.98	0.00	0.000	0.000
7/31/1985	1.99	1.70	0.86		1.33	1.03	0.00	0.000	0.000
8/31/1985	1.87	1.99	1.06		1.39	1.09	0.00	0.000	0.000
9/30/1985	1.90	1.81	0.95		1.45	1.15	0.00	0.000	0.000
10/31/1985	1.65	1.38	0.84		1.50	1.19	0.00	0.000	0.000
11/30/1985	1.69	1.08	0.64		1.55	1.22	0.00	0.000	0.000
12/31/1985	1.61	0.37	0.23		1.60	1.24	0.00	0.000	0.000
1/31/1986	1.79	1.82	1.02		1.65	1.29	0.00	0.000	0.000
2/28/1986	1.61	1.50	0.93		1.70	1.33	0.00	0.000	0.000
3/31/1986	1.61	1.27	0.79		1.75	1.37	0.00	0.000	0.000
4/30/1986	1.17	1.39	1.18		1.78	1.41	0.00	0.000	0.000
5/31/1986	1.54	1.24	0.80		1.83	1.45	0.00	0.000	0.000
6/30/1986	1.11	0.77	0.69		1.87	1.48	0.00	0.000	0.000
7/31/1986	1.16	0.84	0.72		1.90	1.50	0.00	0.000	0.000
8/31/1986	1.13	0.99	0.87		1.94	1.53	0.00	0.000	0.000
9/30/1986	0.94	1.04	1.11		1.97	1.56	0.00	0.000	0.000
10/31/1986	1.22	0.76	0.63		2.00	1.59	0.00	0.000	0.000
11/30/1986	1.19	0.66	0.56		2.04	1.61	0.00	0.000	0.000
12/31/1986	1.06	0.73	0.69		2.07	1.63	0.00	0.000	0.000
1/31/1987	1.06	0.68	0.64		2.10	1.65	0.00	0.000	0.000
2/28/1987	1.11	0.59	0.53		2.14	1.67	0.00	0.000	0.000
3/31/1987	1.23	0.61	0.50		2.17	1.69	0.00	0.000	0.000
4/30/1987	1.08	1.66	1.53		2.21	1.74	0.00	0.000	0.000
5/31/1987	1.07	0.94	0.88		2.24	1.77	0.00	0.000	0.000
6/30/1987	1.54	0.83	0.54		2.29	1.79	0.00	0.000	0.000
7/31/1987	1.24	0.78	0.63		2.32	1.81	0.00	0.000	0.000
8/31/1987	1.07	0.65	0.61		2.36	1.83	0.00	0.000	0.000
9/30/1987	1.13	0.66	0.58		2.39	1.85	0.00	0.000	0.000
10/31/1987	1.04	0.69	0.66		2.42	1.88	0.00	0.000	0.000
11/30/1987	1.05	0.73	0.69		2.45	1.90	0.00	0.000	0.000
12/31/1987	0.92	0.80	0.87		2.48	1.92	0.00	0.000	0.000
1/31/1988	0.84	0.69	0.83		2.51	1.94	0.00	0.000	0.000

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
2/29/1988	0.78	0.62	0.80		2.53	1.96	0.00	0.000	0.000
3/31/1988	0.92	0.61	0.67		2.56	1.98	0.00	0.000	0.000
4/30/1988	1.05	0.55	0.52		2.59	2.00	0.00	0.000	0.000
5/31/1988	1.03	0.35	0.34		2.62	2.01	0.00	0.000	0.000
6/30/1988	1.16	0.53	0.46		2.66	2.02	0.00	0.000	0.000
7/31/1988	1.27	0.70	0.55		2.70	2.05	0.00	0.000	0.000
8/31/1988	0.84	0.64	0.76		2.72	2.07	0.00	0.000	0.000
9/30/1988	0.74	0.60	0.81		2.75	2.08	0.00	0.000	0.000
10/31/1988	0.72	0.70	0.97		2.77	2.11	0.00	0.000	0.000
11/30/1988	0.54	0.39	0.72		2.79	2.12	0.00	0.000	0.000
12/31/1988	0.49	0.42	0.86		2.80	2.13	0.00	0.000	0.000
1/31/1989	0.96	0.43	0.45		2.83	2.14	0.00	0.000	0.000
2/28/1989	0.94	0.38	0.41		2.86	2.15	0.00	0.000	0.000
3/31/1989	0.96	0.40	0.41		2.89	2.17	0.00	0.000	0.000
4/30/1989	0.93	0.40	0.43		2.91	2.18	0.00	0.000	0.000
5/31/1989	0.91	0.16	0.17		2.94	2.18	0.00	0.000	0.000
6/30/1989	0.76	0.30	0.40		2.96	2.19	0.00	0.000	0.000
7/31/1989	0.81	0.33	0.41		2.99	2.20	0.00	0.000	0.000
8/31/1989	0.76	2.17	2.85		3.01	2.27	0.00	0.000	0.000
9/30/1989	0.71	2.31	3.23		3.04	2.34	0.00	0.000	0.000
10/31/1989	0.71	0.60	0.85		3.06	2.36	0.00	0.000	0.000
11/30/1989	0.66	0.57	0.86		3.08	2.38	0.00	0.000	0.000
12/31/1989	0.66	0.58	0.89		3.10	2.39	0.00	0.000	0.000
1/31/1990	0.67	0.59	0.89		3.12	2.41	0.00	0.000	0.000
2/28/1990	0.60	0.58	0.96		3.13	2.43	0.00	0.000	0.000
3/31/1990	0.64	0.52	0.82		3.15	2.44	0.00	0.000	0.000
4/30/1990	0.63	0.15	0.23		3.17	2.45	0.00	0.000	0.000
5/31/1990	0.30	0.04	0.12		3.18	2.45	0.00	0.000	0.000
6/30/1990	0.56	0.31	0.55		3.20	2.46	0.00	0.000	0.000
7/31/1990	0.50	0.33	0.65		3.22	2.47	0.00	0.000	0.000
8/31/1990	0.49	0.39	0.80		3.23	2.48	0.00	0.000	0.000
9/30/1990	0.48	0.30	0.64		3.24	2.49	0.00	0.000	0.000
10/31/1990	0.44	0.29	0.65		3.26	2.50	0.00	0.000	0.000
11/30/1990	0.54	0.38	0.70		3.27	2.51	0.00	0.000	0.000
12/31/1990	0.59	0.56	0.94		3.29	2.53	0.00	0.000	0.000
1/31/1991	0.63	0.57	0.89		3.31	2.55	0.00	0.000	0.000
2/28/1991	0.55	0.54	0.98		3.33	2.56	0.00	0.000	0.000
3/31/1991	0.58	0.56	0.96		3.35	2.58	0.00	0.000	0.000
4/30/1991	0.56	0.53	0.94		3.36	2.59	0.00	0.000	0.000
5/31/1991	0.57	0.65	1.14		3.38	2.61	0.00	0.000	0.000
6/30/1991	0.40	0.57	1.45		3.39	2.63	0.00	0.000	0.000
7/31/1991	0.32	0.64	1.97		3.40	2.65	0.00	0.000	0.000
8/31/1991	0.36	0.56	1.57		3.41	2.67	0.00	0.000	0.000
9/30/1991	0.39	0.61	1.58		3.43	2.69	0.00	0.000	0.000
10/31/1991	0.38	0.60	1.59		3.44	2.70	0.00	0.000	0.000
11/30/1991	0.38	0.57	1.50		3.45	2.72	0.00	0.000	0.000
12/31/1991	0.34	0.53	1.58		3.46	2.74	0.00	0.000	0.000
1/31/1992	0.34	0.57	1.69		3.47	2.76	0.00	0.000	0.000

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
2/29/1992	0.35	0.62	1.77		3.48	2.77	0.00	0.000	0.000
3/31/1992	0.35	0.61	1.76		3.49	2.79	0.00	0.000	0.000
4/30/1992	0.38	0.69	1.82		3.50	2.81	0.00	0.000	0.000
5/31/1992	0.28	0.65	2.32		3.51	2.83	0.00	0.000	0.000
6/30/1992	0.44	0.77	1.76		3.52	2.86	0.00	0.000	0.000
7/31/1992	0.44	0.62	1.42		3.54	2.88	0.00	0.000	0.000
8/31/1992	0.43	0.64	1.50		3.55	2.90	0.00	0.000	0.000
9/30/1992	0.40	0.65	1.63		3.56	2.92	0.00	0.000	0.000
10/31/1992	0.72	0.87	1.21		3.58	2.94	0.00	0.000	0.000
11/30/1992	0.77	0.79	1.02		3.61	2.97	0.00	0.000	0.000
12/31/1992	0.71	0.97	1.36		3.63	3.00	0.00	0.000	0.000
1/31/1993	0.70	0.99	1.40		3.65	3.03	0.00	0.000	0.000
2/28/1993	0.73	1.00	1.38		3.67	3.05	0.00	0.000	0.000
3/31/1993	0.69	0.85	1.23		3.69	3.08	0.00	0.000	0.000
4/30/1993	0.71	0.84	1.19		3.71	3.11	0.00	0.000	0.000
5/31/1993	0.68	0.79	1.18		3.74	3.13	0.00	0.000	0.000
6/30/1993	0.57	0.90	1.57		3.75	3.16	0.00	0.000	0.000
7/31/1993	0.56	0.80	1.42		3.77	3.18	0.00	0.000	0.000
8/31/1993	0.55	0.92	1.65		3.79	3.21	0.00	0.000	0.000
9/30/1993	0.60	1.01	1.68		3.80	3.24	0.00	0.000	0.000
10/31/1993	0.68	1.35	1.99		3.83	3.28	0.00	0.000	0.000
11/30/1993	0.71	1.03	1.45		3.85	3.31	0.00	0.000	0.000
12/31/1993	0.67	0.99	1.48		3.87	3.34	0.00	0.000	0.000
1/31/1994	0.66	0.89	1.35		3.89	3.37	0.00	0.000	0.000
2/28/1994	0.70	1.03	1.46		3.91	3.40	0.00	0.000	0.000
3/31/1994	0.70	1.35	1.93		3.93	3.44	0.00	0.000	0.000
4/30/1994	0.67	1.36	2.03		3.95	3.48	0.00	0.000	0.000
5/31/1994	0.63	1.32	2.09		3.97	3.52	0.00	0.000	0.000
6/30/1994	0.62	1.24	1.99		3.99	3.56	0.00	0.000	0.000
7/31/1994	0.64	1.19	1.85		4.01	3.60	0.00	0.000	0.000
8/31/1994	0.57	1.02	1.79		4.03	3.63	0.00	0.000	0.000
9/30/1994	0.68	1.22	1.81		4.05	3.67	0.00	0.000	0.000
10/31/1994	0.69	1.18	1.71		4.07	3.70	0.00	0.000	0.000
11/30/1994	0.72	1.13	1.58		4.09	3.74	0.00	0.000	0.000
12/31/1994	0.63	1.19	1.88		4.11	3.77	0.00	0.000	0.000
1/31/1995	0.67	1.23	1.84		4.13	3.81	0.00	0.000	0.000
2/28/1995	0.63	1.04	1.64		4.15	3.84	0.00	0.000	0.000
3/31/1995	0.65	1.12	1.73		4.17	3.88	0.00	0.000	0.000
4/30/1995	0.65	1.08	1.67		4.19	3.91	0.00	0.000	0.000
5/31/1995	0.65	1.17	1.79		4.21	3.95	0.00	0.000	0.000
6/30/1995	0.65	1.13	1.73		4.23	3.98	0.00	0.000	0.000
7/31/1995	0.53	1.06	1.98		4.24	4.01	0.00	0.000	0.000
8/31/1995	0.55	0.99	1.80		4.26	4.04	0.00	0.000	0.000
9/30/1995	0.52	1.08	2.10		4.28	4.08	0.00	0.000	0.000
10/31/1995	0.52	1.16	2.23		4.29	4.11	0.00	0.000	0.000
11/30/1995	0.48	1.14	2.36		4.31	4.15	0.00	0.000	0.000
12/31/1995	0.44	0.40	0.90		4.32	4.16	0.00	0.000	0.000
1/31/1996	0.44	0.31	0.70		4.33	4.17	0.00	0.000	0.000

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
2/29/1996	0.44	0.28	0.65		4.35	4.18	0.00	0.000	0.000
3/31/1996	0.43	0.30	0.68		4.36	4.18	0.00	0.000	0.000
4/30/1996	0.24	0.28	1.18		4.37	4.19	0.00	0.000	0.000
5/31/1996	0.47	0.30	0.63		4.38	4.20	0.00	0.000	0.000
6/30/1996	0.44	0.29	0.67		4.39	4.21	0.00	0.000	0.000
7/31/1996	0.47	0.30	0.64		4.41	4.22	0.00	0.000	0.000
8/31/1996	0.47	0.33	0.69		4.42	4.23	0.00	0.000	0.000
9/30/1996	0.41	0.32	0.78		4.44	4.24	0.00	0.000	0.000
10/31/1996	0.48	0.23	0.48		4.45	4.25	0.00	0.000	0.000
11/30/1996	0.42	0.28	0.68		4.46	4.26	0.00	0.000	0.000
12/31/1996	0.42	0.29	0.68		4.48	4.26	0.00	0.000	0.000
1/31/1997	0.41	0.30	0.73		4.49	4.27	0.00	0.000	0.000
2/28/1997	0.41	0.29	0.70		4.50	4.28	0.00	0.000	0.000
3/31/1997	0.41	0.28	0.70		4.51	4.29	0.00	0.000	0.000
4/30/1997	0.42	0.31	0.74		4.53	4.30	0.00	0.000	0.000
5/31/1997	0.46	0.38	0.82		4.54	4.31	0.00	0.000	0.000
6/30/1997	0.37	0.40	1.07		4.55	4.32	0.00	0.000	0.000
7/31/1997	0.36	0.40	1.12		4.56	4.34	0.00	0.000	0.000
8/31/1997	0.36	0.37	1.02		4.57	4.35	0.00	0.000	0.000
9/30/1997	0.35	0.34	0.97		4.58	4.36	0.00	0.000	0.000
10/31/1997	0.37	0.35	0.94		4.60	4.37	0.00	0.000	0.000
11/30/1997	0.35	0.29	0.85		4.61	4.38	0.00	0.000	0.000
12/31/1997	0.34	0.26	0.76		4.62	4.39	0.00	0.000	0.000
1/31/1998	0.35	0.30	0.84		4.63	4.39	0.00	0.000	0.000
2/28/1998	0.36	0.31	0.86		4.64	4.40	0.00	0.000	0.000
3/31/1998	0.34	0.29	0.86		4.65	4.41	0.00	0.000	0.000
4/30/1998	0.36	0.33	0.91		4.66	4.42	0.00	0.000	0.000
5/31/1998	0.40	0.38	0.96		4.67	4.43	0.00	0.000	0.000
6/30/1998	0.37	0.37	1.01		4.68	4.45	0.00	0.000	0.000
7/31/1998	0.40	0.35	0.86		4.70	4.46	0.00	0.000	0.000
8/31/1998	0.37	0.29	0.78		4.71	4.46	0.00	0.000	0.000
9/30/1998	0.41	0.24	0.58		4.72	4.47	0.00	0.000	0.000
10/31/1998	0.41	0.24	0.58		4.73	4.48	0.00	0.000	0.000
11/30/1998	0.42	0.24	0.58		4.74	4.49	0.00	0.000	0.000
12/31/1998	0.41	0.25	0.60		4.76	4.49	0.00	0.000	0.000
1/31/1999	0.40	0.24	0.61		4.77	4.50	0.00	0.000	0.000
2/28/1999	0.40	0.24	0.60		4.78	4.51	0.00	0.000	0.000
3/31/1999	0.39	0.25	0.64		4.79	4.52	0.00	0.000	0.000
4/30/1999	0.38	0.23	0.62		4.80	4.52	0.00	0.000	0.000
5/31/1999	0.38	0.25	0.65		4.82	4.53	0.00	0.000	0.000
6/30/1999	0.37	0.23	0.64		4.83	4.54	0.00	0.000	0.000
7/31/1999	0.36	0.22	0.61		4.84	4.54	0.00	0.000	0.000
8/31/1999	0.41	0.32	0.78		4.85	4.55	0.00	0.000	0.000
9/30/1999	0.39	0.46	1.16		4.86	4.57	0.00	0.000	0.000
10/31/1999	0.33	0.58	1.77		4.87	4.59	0.00	0.000	0.000
11/30/1999	0.38	0.60	1.57		4.88	4.60	0.00	0.000	0.000
12/31/1999	0.38	0.59	1.54		4.90	4.62	0.00	0.000	0.000
1/31/2000	0.38	0.57	1.47		4.91	4.64	0.00	0.000	0.000

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
2/29/2000	0.38	0.58	1.52		4.92	4.66	0.00	0.000	0.000
3/31/2000	0.37	0.57	1.55		4.93	4.67	0.00	0.000	0.000
4/30/2000	0.36	0.56	1.55		4.94	4.69	0.00	0.000	0.000
5/31/2000	0.37	0.54	1.48		4.95	4.71	0.00	0.000	0.000
6/30/2000	0.38	0.47	1.24	5.87	4.96	4.72	0.18	6.768	0.018
7/31/2000	0.35	0.37	1.06	5.65	4.97	4.73	0.35	7.669	0.035
8/31/2000	0.42	0.38	0.91	4.23	4.99	4.74	0.48	5.138	0.048
9/30/2000	0.39	0.39	1.00	11.37	5.00	4.76	0.82	14.068	0.081
10/31/2000	0.36	0.35	0.97	15.13	5.01	4.77	1.29	20.546	0.128
11/30/2000	0.35	0.41	1.17	9.23	5.02	4.78	1.57	11.696	0.155
12/31/2000	0.35	0.40	1.13	7.00	5.03	4.79	1.79	8.990	0.176
1/31/2001	0.36	0.41	1.13	6.26	5.04	4.80	1.98	7.919	0.194
2/28/2001	0.34	0.40	1.17	5.46	5.05	4.82	2.13	7.214	0.209
3/31/2001	0.35	0.42	1.18	5.03	5.06	4.83	2.29	6.366	0.223
4/30/2001	0.35	0.42	1.18	3.17	5.07	4.84	2.38	3.977	0.232
5/31/2001	0.39	0.33	0.84	1.90	5.09	4.85	2.44	2.530	0.237
6/30/2001	0.43	0.34	0.79	1.70	5.10	4.86	2.49	2.121	0.242
7/31/2001	0.45	0.38	0.84	1.81	5.11	4.87	2.55	2.116	0.247
8/31/2001	0.44	0.37	0.84	1.68	5.13	4.88	2.60	1.992	0.251
9/30/2001	0.44	0.32	0.72	1.73	5.14	4.89	2.65	2.212	0.255
10/31/2001	0.43	0.30	0.70	1.55	5.15	4.90	2.70	2.050	0.259
11/30/2001	0.45	0.35	0.78	1.50	5.17	4.91	2.75	1.794	0.263
12/31/2001	0.46	0.34	0.73	1.45	5.18	4.92	2.79	1.743	0.267
1/31/2002	0.41	0.33	0.80	1.29	5.19	4.93	2.83	1.675	0.270
2/28/2002	0.47	0.32	0.70	1.57	5.21	4.94	2.88	1.911	0.274
3/31/2002	0.45	0.29	0.64	1.71	5.22	4.95	2.93	2.238	0.278
4/30/2002	0.41	0.27	0.66	1.57	5.23	4.96	2.98	2.195	0.282
5/31/2002	0.42	0.28	0.65	1.58	5.25	4.97	3.02	2.169	0.286
6/30/2002	0.44	0.28	0.65	1.40	5.26	4.98	3.07	1.870	0.289
7/31/2002	0.41	0.26	0.65	1.35	5.27	4.99	3.11	1.933	0.293
8/31/2002	0.42	0.25	0.60	1.32	5.28	4.99	3.15	1.901	0.296
9/30/2002	0.28	0.13	0.46	1.33	5.29	5.00	3.19	3.123	0.299
10/31/2002	0.40	0.26	0.65	1.06	5.30	5.01	3.22	1.547	0.302
11/30/2002	0.41	0.23	0.56	0.77	5.32	5.01	3.25	1.144	0.303
12/31/2002	0.42	0.30	0.70	1.13	5.33	5.02	3.28	1.506	0.306
1/31/2003	0.42	0.32	0.76	0.32	5.34	5.03	3.29	0.423	0.306
2/28/2003	0.42	0.32	0.76	1.50	5.35	5.04	3.33	1.974	0.310
3/31/2003	0.43	0.34	0.80	1.48	5.37	5.05	3.38	1.838	0.313
4/30/2003	0.42	0.33	0.78	1.50	5.38	5.06	3.42	1.936	0.317
5/31/2003	0.36	0.26	0.71	1.48	5.39	5.07	3.47	2.296	0.320
6/30/2003	0.34	0.26	0.76	1.50	5.40	5.08	3.52	2.389	0.324
7/31/2003	0.36	0.22	0.61	1.48	5.41	5.08	3.56	2.436	0.328
8/31/2003	0.36	0.22	0.60	1.48	5.42	5.09	3.61	2.466	0.331
9/30/2003	0.36	0.23	0.63	1.50	5.44	5.10	3.65	2.421	0.335
10/31/2003	0.38	0.23	0.61	1.00	5.45	5.10	3.68	1.585	0.337
11/30/2003	0.38	0.23	0.61	1.00	5.46	5.11	3.71	1.578	0.339
12/31/2003	0.36	0.25	0.69	1.00	5.47	5.12	3.74	1.563	0.341
1/31/2004	0.37	0.24	0.65	1.00	5.48	5.13	3.77	1.587	0.344

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
2/29/2004	0.36	0.22	0.62	1.00	5.49	5.13	3.80	1.648	0.346
3/31/2004	0.36	0.24	0.67	1.00	5.50	5.14	3.84	1.579	0.348
4/30/2004	0.36	0.28	0.78	1.00	5.51	5.15	3.87	1.487	0.350
5/31/2004	0.36	0.30	0.85	1.00	5.53	5.16	3.90	1.457	0.352
6/30/2004	0.34	0.24	0.71	1.00	5.54	5.17	3.93	1.643	0.354
7/31/2004	0.35	0.21	0.61	1.00	5.55	5.17	3.96	1.691	0.356
8/31/2004	0.36	0.21	0.58	1.00	5.56	5.18	3.99	1.697	0.359
9/30/2004	0.33	0.24	0.72	1.00	5.57	5.19	4.02	1.691	0.361
10/31/2004	0.32	0.24	0.75	1.00	5.58	5.19	4.05	1.702	0.363
11/30/2004	0.32	0.24	0.76	1.00	5.59	5.20	4.08	1.723	0.365
12/31/2004	0.33	0.25	0.75	0.97	5.60	5.21	4.11	1.621	0.367
1/31/2005	0.35	0.25	0.72	1.00	5.61	5.22	4.14	1.619	0.369
2/28/2005	0.33	0.25	0.74	1.00	5.62	5.22	4.17	1.652	0.371
3/31/2005	0.34	0.26	0.77	1.00	5.63	5.23	4.20	1.599	0.373
4/30/2005	0.32	0.25	0.77	1.00	5.64	5.24	4.23	1.713	0.375
5/31/2005	0.34	0.25	0.74	1.00	5.65	5.25	4.26	1.634	0.377
6/30/2005	0.33	0.25	0.76	1.00	5.66	5.25	4.29	1.654	0.380
7/31/2005	0.33	0.24	0.73	1.00	5.67	5.26	4.32	1.706	0.382
8/31/2005	0.32	0.24	0.73	1.00	5.68	5.27	4.35	1.718	0.384
9/30/2005	0.33	0.24	0.72	1.50	5.69	5.28	4.40	2.560	0.387
10/31/2005	0.32	0.21	0.67	1.48	5.70	5.28	4.44	2.669	0.391
11/30/2005	0.32	0.22	0.69	1.50	5.71	5.29	4.49	2.648	0.394
12/31/2005	0.33	0.22	0.68	1.52	5.72	5.30	4.54	2.651	0.397
1/31/2006	0.33	0.22	0.65	1.52	5.73	5.30	4.58	2.634	0.401
2/28/2006	0.32	0.21	0.67	1.68	5.74	5.31	4.63	3.028	0.405
3/31/2006	0.34	0.29	0.85	2.00	5.75	5.32	4.69	3.077	0.409
4/30/2006	0.33	0.22	0.66	1.50	5.76	5.32	4.74	2.618	0.413
5/31/2006	0.32	0.22	0.68	1.00	5.77	5.33	4.77	1.769	0.415
6/30/2006	0.33	0.18	0.55	1.00	5.78	5.34	4.80	1.871	0.417
7/31/2006	0.26	0.19	0.74	1.48	5.78	5.34	4.84	3.137	0.420
8/31/2006	0.26	0.19	0.71	1.00	5.79	5.35	4.87	2.124	0.422
9/30/2006	0.26	0.20	0.78	1.00	5.80	5.35	4.90	2.085	0.424
10/31/2006	0.25	0.19	0.75	1.00	5.81	5.36	4.93	2.196	0.426
11/30/2006	0.27	0.20	0.75	1.00	5.82	5.37	4.96	2.072	0.429
12/31/2006	0.28	0.22	0.80	1.00	5.83	5.37	5.00	1.938	0.431
1/31/2007	0.26	0.22	0.87		5.83	5.38	5.00	0.000	0.430
2/28/2007	0.27	0.22	0.82		5.84	5.39	5.00	0.000	0.430
3/31/2007	0.28	0.24	0.85	1.00	5.85	5.39	5.03	1.844	0.432
4/30/2007	0.28	0.23	0.81	1.00	5.86	5.40	5.06	1.892	0.434
5/31/2007	0.27	0.25	0.91	1.00	5.87	5.41	5.09	1.867	0.436
6/30/2007	0.28	0.22	0.81	0.97	5.87	5.41	5.12	1.859	0.437
7/31/2007	0.26	0.22	0.87	1.65	5.88	5.42	5.17	3.306	0.441
8/31/2007	0.26	0.20	0.77	2.06	5.89	5.43	5.23	4.254	0.446
9/30/2007	0.26	0.20	0.77	2.00	5.90	5.43	5.29	4.207	0.451
10/31/2007	0.26	0.20	0.77	4.00	5.91	5.44	5.42	8.330	0.461
11/30/2007	0.24	0.25	1.04	4.13	5.91	5.45	5.54	8.158	0.471
12/31/2007	0.25	0.26	1.05		5.92	5.46	5.54	0.000	0.470
1/31/2008	0.25	0.25	1.03	2.00	5.93	5.46	5.60	3.868	0.475

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
2/29/2008	0.23	0.24	1.04		5.94	5.47	5.60	0.000	0.474
3/31/2008	0.23	0.26	1.13	2.00	5.94	5.48	5.66	3.931	0.479
4/30/2008	0.24	0.26	1.10	1.93	5.95	5.49	5.72	3.755	0.483
5/31/2008	0.22	0.25	1.13	2.00	5.96	5.49	5.78	4.064	0.487
6/30/2008	0.26	0.22	0.84	1.85	5.96	5.50	5.84	3.720	0.492
7/31/2008	0.25	0.22	0.88	1.94	5.97	5.51	5.90	4.039	0.496
8/31/2008	0.25	0.21	0.82	2.00	5.98	5.51	5.96	4.198	0.501
9/30/2008	0.25	0.13	0.53	0.20	5.99	5.52	5.97	0.508	0.501
10/31/2008	0.25	0.21	0.83	0.20	6.00	5.52	5.97	0.421	0.500
11/30/2008	0.37	0.23	0.63	2.08	6.01	5.53	6.04	3.302	0.505
12/31/2008	0.37	0.24	0.65	2.09	6.02	5.54	6.10	3.285	0.509
1/31/2009	0.37	0.24	0.65	2.08	6.03	5.55	6.17	3.274	0.514
2/28/2009	0.36	0.24	0.67	2.08	6.04	5.55	6.22	3.272	0.518
3/31/2009	0.36	0.26	0.73	2.11	6.05	5.56	6.29	3.287	0.523
4/30/2009	0.37	0.25	0.68	2.09	6.06	5.57	6.35	3.245	0.527
5/31/2009	0.36	0.25	0.68	2.08	6.07	5.58	6.42	3.300	0.532
6/30/2009	0.37	0.24	0.66	2.07	6.08	5.58	6.48	3.235	0.536
7/31/2009	0.36	0.25	0.69	1.95	6.10	5.59	6.54	3.074	0.540
8/31/2009	0.37	0.25	0.69	2.14	6.11	5.60	6.60	3.299	0.545
9/30/2009	0.36	0.26	0.70	2.11	6.12	5.61	6.67	3.283	0.549
10/31/2009	0.38	0.23	0.60	2.05	6.13	5.61	6.73	3.213	0.553
11/30/2009	0.39	0.23	0.58	1.90	6.14	5.62	6.79	2.973	0.557
12/31/2009	0.39	0.22	0.56	1.98	6.15	5.63	6.85	3.087	0.561
1/31/2010	0.41	0.22	0.53	1.99	6.17	5.63	6.91	3.051	0.565
2/28/2010	0.40	0.20	0.51	2.00	6.18	5.64	6.97	3.167	0.569
3/31/2010	0.40	0.21	0.52	2.02	6.19	5.65	7.03	3.198	0.573
4/30/2010	0.40	0.23	0.56	2.01	6.20	5.65	7.09	3.075	0.577
5/31/2010	0.41	0.23	0.57	1.98	6.21	5.66	7.15	2.951	0.581
6/30/2010	0.45	0.22	0.50	2.01	6.23	5.67	7.21	2.866	0.585
7/31/2010	0.45	0.21	0.47	2.10	6.24	5.67	7.28	3.003	0.589
8/31/2010	0.45	0.22	0.49	3.19	6.26	5.68	7.38	4.554	0.596
9/30/2010	0.44	0.22	0.49	3.08	6.27	5.69	7.47	4.533	0.603
10/31/2010	0.43	0.25	0.59	3.12	6.28	5.69	7.57	4.406	0.610
11/30/2010	0.41	0.24	0.59	3.05	6.29	5.70	7.66	4.457	0.616
12/31/2010	0.42	0.23	0.55	3.26	6.31	5.71	7.76	4.790	0.623
1/31/2011	0.41	0.24	0.58	3.19	6.32	5.72	7.86	4.760	0.630
2/28/2011	0.42	0.23	0.56	3.19	6.33	5.72	7.95	4.664	0.636
3/31/2011	0.41	0.23	0.57	3.18	6.34	5.73	8.05	4.726	0.643
4/30/2011	0.41	0.23	0.57	3.12	6.36	5.74	8.14	4.643	0.649
5/31/2011	0.40	0.25	0.63	3.04	6.37	5.75	8.23	4.423	0.656
6/30/2011	0.34	0.22	0.65	2.70	6.38	5.75	8.31	4.560	0.661
7/31/2011	0.41	0.30	0.75	2.31	6.39	5.76	8.39	3.131	0.666
8/31/2011	0.42	0.32	0.76	4.59	6.41	5.77	8.53	5.991	0.676
9/30/2011	0.42	0.34	0.81	0.12	6.42	5.78	8.53	0.152	0.675
10/31/2011	0.42	0.34	0.80	2.11	6.43	5.79	8.60	2.677	0.679
11/30/2011	0.42	0.33	0.79	2.24	6.44	5.80	8.66	2.855	0.683
12/31/2011	0.42	0.33	0.78	2.10	6.46	5.81	8.73	2.698	0.686
1/31/2012	0.41	0.33	0.82	2.04	6.47	5.82	8.79	2.657	0.690

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
2/29/2012	0.41	0.34	0.81	2.19	6.48	5.83	8.86	2.819	0.694
3/31/2012	0.41	0.36	0.88	2.10	6.49	5.84	8.92	2.628	0.698
4/30/2012	0.41	0.33	0.82	2.96	6.51	5.85	9.01	3.853	0.703
5/31/2012	0.40	0.35	0.86	3.63	6.52	5.86	9.12	4.670	0.711
6/30/2012	0.41	0.38	0.93	4.18	6.53	5.88	9.25	5.118	0.719
7/31/2012	0.40	0.36	0.89	1.00	6.54	5.89	9.28	1.260	0.720
8/31/2012	0.41	0.35	0.84	1.00	6.56	5.90	9.31	1.261	0.721
9/30/2012	0.41	0.35	0.87	1.00	6.57	5.91	9.34	1.266	0.722
10/31/2012	0.41	0.35	0.84	1.00	6.58	5.92	9.37	1.266	0.723
11/30/2012	0.38	0.35	0.91	1.00	6.59	5.93	9.40	1.325	0.724
12/31/2012	0.41	0.36	0.87	1.00	6.61	5.94	9.43	1.259	0.725
1/31/2013	0.39	0.34	0.87	0.97	6.62	5.95	9.46	1.270	0.726
2/28/2013	0.40	1.15	2.86		6.63	5.98	9.46	0.000	0.724
3/31/2013	0.41	0.41	1.00		6.64	6.00	9.46	0.000	0.722
4/30/2013	0.41	0.35	0.87		6.65	6.01	9.46	0.000	0.721
5/31/2013	0.40	0.35	0.88		6.67	6.02	9.46	0.000	0.720
6/30/2013	0.40	0.35	0.89		6.68	6.03	9.46	0.000	0.718
7/31/2013	0.40	0.37	0.92		6.69	6.04	9.46	0.000	0.717
8/31/2013	0.40	0.35	0.86		6.70	6.05	9.46	0.000	0.716
9/30/2013	0.40	0.35	0.87		6.72	6.06	9.46	0.000	0.715
10/31/2013	0.31	0.57	1.86		6.72	6.08	9.46	0.000	0.713
11/30/2013	0.40	0.43	1.08		6.74	6.09	9.46	0.000	0.712
12/31/2013	0.41	0.25	0.61		6.75	6.10	9.46	0.000	0.711

Oil Formation Vol Factor : 1.07100 m3/m3

Water Formation Vol Factor : 1.00150 m3/m3

Water / Oil Ratio : 1.38 m3/m3

Pattern: 02/16-35-009-28Inj Set: DalyUnit#4

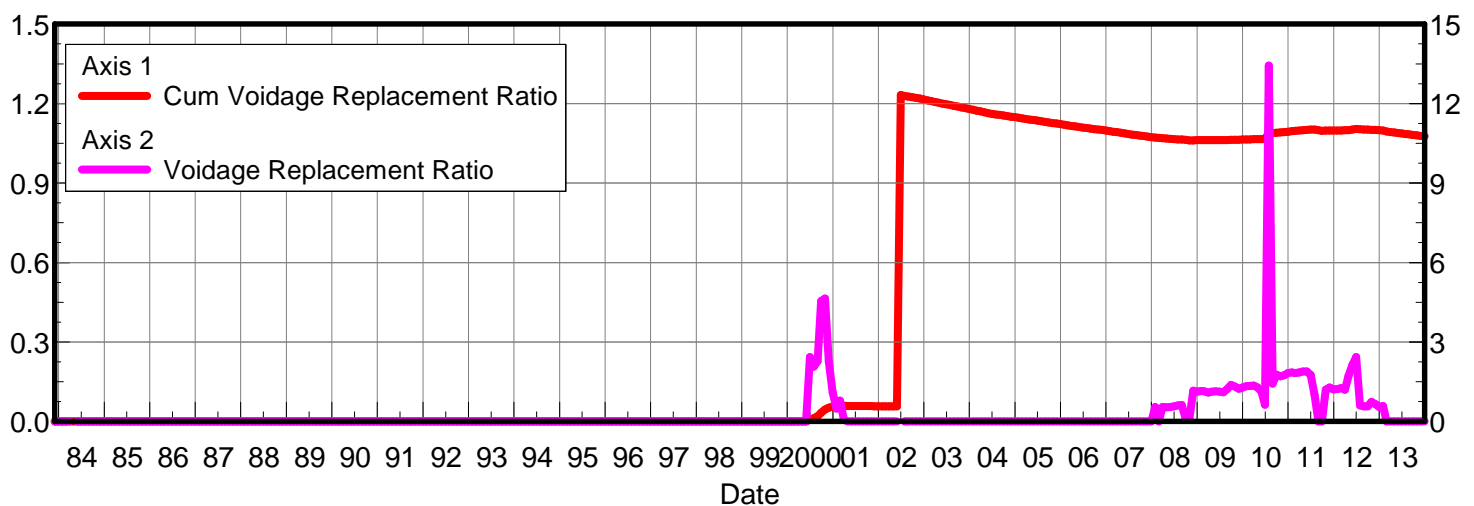
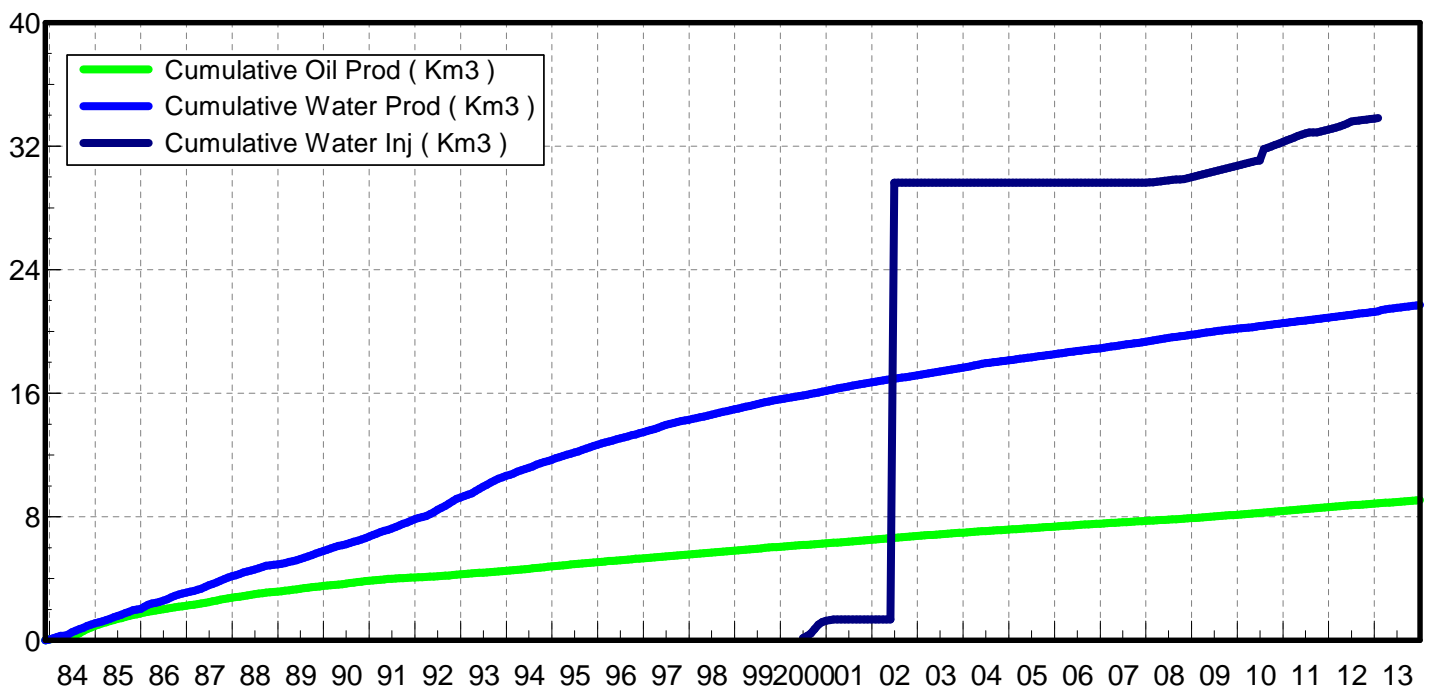
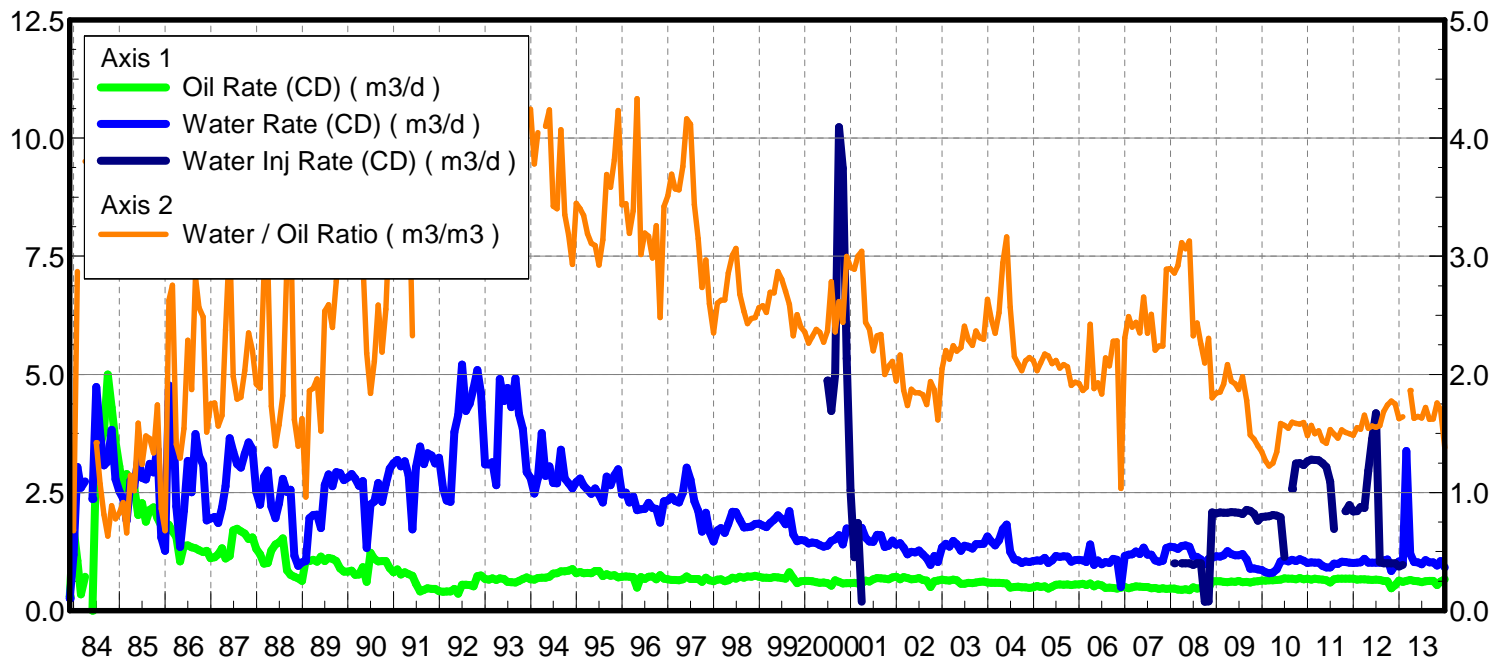
March 05, 2014

Operator: Tundra\_O&G\_Prtshp

Oil Rate (CD) : 0.66 m3/d

Water Rate (CD) : 0.91 m3/d

Water Inj Rate (CD) : 0.97 m3/d



Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
11/30/1983	0.30	0.26	0.86		0.01	0.01	0.00	0.000	0.000
12/31/1983	1.75	1.19	0.68		0.06	0.04	0.00	0.000	0.000
1/31/1984	1.06	3.04	2.87		0.10	0.14	0.00	0.000	0.000
2/29/1984	0.35	2.60	7.53		0.11	0.21	0.00	0.000	0.000
3/31/1984	0.72	2.73	3.80		0.13	0.30	0.00	0.000	0.000
5/31/1984	0.00	2.36			0.13	0.37	0.00	0.000	0.000
6/30/1984	3.33	4.73	1.42		0.23	0.51	0.00	0.000	0.000
7/31/1984	3.50	3.76	1.07		0.34	0.63	0.00	0.000	0.000
8/31/1984	3.79	3.08	0.81		0.45	0.73	0.00	0.000	0.000
9/30/1984	5.00	3.16	0.63		0.60	0.82	0.00	0.000	0.000
10/31/1984	4.30	3.83	0.89		0.74	0.94	0.00	0.000	0.000
11/30/1984	3.58	2.79	0.78		0.84	1.02	0.00	0.000	0.000
12/31/1984	3.05	2.53	0.83		0.94	1.10	0.00	0.000	0.000
1/31/1985	2.59	2.37	0.92		1.02	1.17	0.00	0.000	0.000
2/28/1985	2.89	1.90	0.66		1.10	1.23	0.00	0.000	0.000
3/31/1985	2.40	2.76	1.15		1.18	1.31	0.00	0.000	0.000
4/30/1985	2.59	2.63	1.02		1.25	1.39	0.00	0.000	0.000
5/31/1985	2.02	3.21	1.59		1.32	1.49	0.00	0.000	0.000
6/30/1985	2.27	2.81	1.24		1.38	1.58	0.00	0.000	0.000
7/31/1985	1.88	2.78	1.48		1.44	1.66	0.00	0.000	0.000
8/31/1985	2.13	3.11	1.46		1.51	1.76	0.00	0.000	0.000
9/30/1985	2.19	2.92	1.34		1.57	1.85	0.00	0.000	0.000
10/31/1985	1.96	3.42	1.74		1.63	1.95	0.00	0.000	0.000
11/30/1985	1.80	1.55	0.86		1.69	2.00	0.00	0.000	0.000
12/31/1985	1.87	1.27	0.68		1.75	2.04	0.00	0.000	0.000
1/31/1986	1.81	4.77	2.63		1.80	2.19	0.00	0.000	0.000
2/28/1986	1.68	4.63	2.75		1.85	2.32	0.00	0.000	0.000
3/31/1986	1.57	2.21	1.41		1.90	2.38	0.00	0.000	0.000
4/30/1986	1.04	1.35	1.29		1.93	2.42	0.00	0.000	0.000
5/31/1986	1.38	2.12	1.54		1.97	2.49	0.00	0.000	0.000
6/30/1986	1.38	3.17	2.29		2.01	2.59	0.00	0.000	0.000
7/31/1986	1.34	2.51	1.87		2.06	2.66	0.00	0.000	0.000
8/31/1986	1.32	3.74	2.83		2.10	2.78	0.00	0.000	0.000
9/30/1986	1.28	3.28	2.57		2.14	2.88	0.00	0.000	0.000
10/31/1986	1.24	3.09	2.49		2.17	2.97	0.00	0.000	0.000
11/30/1986	1.27	1.91	1.51		2.21	3.03	0.00	0.000	0.000
12/31/1986	1.11	1.95	1.75		2.25	3.09	0.00	0.000	0.000
1/31/1987	1.13	1.99	1.76		2.28	3.15	0.00	0.000	0.000
2/28/1987	1.19	1.86	1.56		2.31	3.20	0.00	0.000	0.000
3/31/1987	1.32	2.18	1.65		2.36	3.27	0.00	0.000	0.000
4/30/1987	1.11	2.63	2.38		2.39	3.35	0.00	0.000	0.000
5/31/1987	1.16	3.65	3.15		2.42	3.46	0.00	0.000	0.000
6/30/1987	1.70	3.37	1.98		2.48	3.57	0.00	0.000	0.000
7/31/1987	1.73	3.10	1.79		2.53	3.66	0.00	0.000	0.000
8/31/1987	1.68	3.03	1.81		2.58	3.76	0.00	0.000	0.000
9/30/1987	1.63	3.31	2.03		2.63	3.85	0.00	0.000	0.000
10/31/1987	1.51	3.56	2.35		2.68	3.97	0.00	0.000	0.000
11/30/1987	1.55	3.42	2.20		2.72	4.07	0.00	0.000	0.000

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemnt Ratio
12/31/1987	1.31	2.51	1.92		2.76	4.15	0.00	0.000	0.000
1/31/1988	1.19	2.24	1.88		2.80	4.22	0.00	0.000	0.000
2/29/1988	0.99	2.83	2.84		2.83	4.30	0.00	0.000	0.000
3/31/1988	1.01	2.97	2.94		2.86	4.39	0.00	0.000	0.000
4/30/1988	1.27	2.21	1.73		2.90	4.46	0.00	0.000	0.000
5/31/1988	1.40	1.96	1.39		2.94	4.52	0.00	0.000	0.000
6/30/1988	1.44	2.27	1.57		2.99	4.58	0.00	0.000	0.000
7/31/1988	1.53	2.79	1.82		3.03	4.67	0.00	0.000	0.000
8/31/1988	0.85	2.51	2.95		3.06	4.75	0.00	0.000	0.000
9/30/1988	0.76	2.56	3.38		3.08	4.83	0.00	0.000	0.000
10/31/1988	0.72	1.17	1.62		3.11	4.86	0.00	0.000	0.000
11/30/1988	0.68	0.95	1.39		3.13	4.89	0.00	0.000	0.000
12/31/1988	0.63	1.02	1.63		3.15	4.92	0.00	0.000	0.000
1/31/1989	1.09	1.05	0.96		3.18	4.95	0.00	0.000	0.000
2/28/1989	1.05	1.96	1.86		3.21	5.01	0.00	0.000	0.000
3/31/1989	1.08	2.03	1.88		3.24	5.07	0.00	0.000	0.000
4/30/1989	1.04	2.03	1.96		3.27	5.13	0.00	0.000	0.000
5/31/1989	1.15	1.75	1.52		3.31	5.19	0.00	0.000	0.000
6/30/1989	1.05	2.66	2.54		3.34	5.27	0.00	0.000	0.000
7/31/1989	1.11	2.89	2.59		3.37	5.36	0.00	0.000	0.000
8/31/1989	1.10	2.64	2.40		3.41	5.44	0.00	0.000	0.000
9/30/1989	1.05	2.94	2.79		3.44	5.53	0.00	0.000	0.000
10/31/1989	0.90	2.91	3.25		3.47	5.62	0.00	0.000	0.000
11/30/1989	0.83	2.77	3.33		3.49	5.70	0.00	0.000	0.000
12/31/1989	0.83	2.82	3.40		3.52	5.79	0.00	0.000	0.000
1/31/1990	0.85	2.89	3.42		3.54	5.88	0.00	0.000	0.000
2/28/1990	0.76	2.80	3.69		3.57	5.95	0.00	0.000	0.000
3/31/1990	0.76	2.64	3.46		3.59	6.04	0.00	0.000	0.000
4/30/1990	0.92	2.74	2.97		3.62	6.12	0.00	0.000	0.000
5/31/1990	0.61	1.33	2.18		3.64	6.16	0.00	0.000	0.000
6/30/1990	1.22	2.25	1.84		3.67	6.23	0.00	0.000	0.000
7/31/1990	1.09	2.31	2.11		3.71	6.30	0.00	0.000	0.000
8/31/1990	1.05	2.70	2.59		3.74	6.38	0.00	0.000	0.000
9/30/1990	1.05	2.31	2.19		3.77	6.45	0.00	0.000	0.000
10/31/1990	1.05	2.68	2.55		3.80	6.53	0.00	0.000	0.000
11/30/1990	0.90	3.01	3.34		3.83	6.62	0.00	0.000	0.000
12/31/1990	0.81	3.12	3.85		3.86	6.72	0.00	0.000	0.000
1/31/1991	0.88	3.19	3.65		3.88	6.82	0.00	0.000	0.000
2/28/1991	0.76	3.06	4.00		3.90	6.91	0.00	0.000	0.000
3/31/1991	0.81	3.16	3.90		3.93	7.00	0.00	0.000	0.000
4/30/1991	0.77	2.87	3.72		3.95	7.09	0.00	0.000	0.000
5/31/1991	0.74	1.72	2.33		3.98	7.14	0.00	0.000	0.000
6/30/1991	0.57	3.03	5.34		3.99	7.23	0.00	0.000	0.000
7/31/1991	0.41	3.47	8.56		4.00	7.34	0.00	0.000	0.000
8/31/1991	0.44	3.10	7.08		4.02	7.44	0.00	0.000	0.000
9/30/1991	0.47	3.33	7.06		4.03	7.54	0.00	0.000	0.000
10/31/1991	0.46	3.29	7.15		4.05	7.64	0.00	0.000	0.000
11/30/1991	0.46	3.12	6.71		4.06	7.73	0.00	0.000	0.000

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
12/31/1991	0.41	3.24	7.88		4.07	7.83	0.00	0.000	0.000
1/31/1992	0.40	2.57	6.44		4.09	7.91	0.00	0.000	0.000
2/29/1992	0.41	2.33	5.69		4.10	7.98	0.00	0.000	0.000
3/31/1992	0.41	2.31	5.65		4.11	8.05	0.00	0.000	0.000
4/30/1992	0.46	3.78	8.16		4.12	8.17	0.00	0.000	0.000
5/31/1992	0.36	4.14	11.53		4.14	8.29	0.00	0.000	0.000
6/30/1992	0.55	5.21	9.44		4.15	8.45	0.00	0.000	0.000
7/31/1992	0.55	4.22	7.65		4.17	8.58	0.00	0.000	0.000
8/31/1992	0.54	4.38	8.12		4.19	8.72	0.00	0.000	0.000
9/30/1992	0.51	4.71	9.19		4.20	8.86	0.00	0.000	0.000
10/31/1992	0.73	5.09	6.96		4.22	9.02	0.00	0.000	0.000
11/30/1992	0.75	4.61	6.18		4.25	9.15	0.00	0.000	0.000
12/31/1992	0.67	3.10	4.61		4.27	9.25	0.00	0.000	0.000
1/31/1993	0.66	3.09	4.68		4.29	9.35	0.00	0.000	0.000
2/28/1993	0.69	3.15	4.58		4.31	9.43	0.00	0.000	0.000
3/31/1993	0.65	2.65	4.09		4.33	9.52	0.00	0.000	0.000
4/30/1993	0.68	4.90	7.18		4.35	9.66	0.00	0.000	0.000
5/31/1993	0.67	4.43	6.62		4.37	9.80	0.00	0.000	0.000
6/30/1993	0.61	4.71	7.68		4.39	9.94	0.00	0.000	0.000
7/31/1993	0.60	4.31	7.13		4.40	10.08	0.00	0.000	0.000
8/31/1993	0.59	4.91	8.27		4.42	10.23	0.00	0.000	0.000
9/30/1993	0.63	4.16	6.59		4.44	10.35	0.00	0.000	0.000
10/31/1993	0.67	3.85	5.74		4.46	10.47	0.00	0.000	0.000
11/30/1993	0.70	2.93	4.16		4.48	10.56	0.00	0.000	0.000
12/31/1993	0.66	2.81	4.24		4.50	10.65	0.00	0.000	0.000
1/31/1994	0.66	2.48	3.78		4.53	10.72	0.00	0.000	0.000
2/28/1994	0.69	2.80	4.05		4.54	10.80	0.00	0.000	0.000
3/31/1994	0.70	3.76	5.40		4.57	10.92	0.00	0.000	0.000
4/30/1994	0.69	2.85	4.10		4.59	11.01	0.00	0.000	0.000
5/31/1994	0.72	3.06	4.24		4.61	11.10	0.00	0.000	0.000
6/30/1994	0.79	2.70	3.42		4.63	11.18	0.00	0.000	0.000
7/31/1994	0.79	2.69	3.40		4.66	11.26	0.00	0.000	0.000
8/31/1994	0.84	3.40	4.07		4.68	11.37	0.00	0.000	0.000
9/30/1994	0.83	2.80	3.35		4.71	11.45	0.00	0.000	0.000
10/31/1994	0.85	2.70	3.18		4.73	11.54	0.00	0.000	0.000
11/30/1994	0.88	2.59	2.93		4.76	11.61	0.00	0.000	0.000
12/31/1994	0.79	2.72	3.45		4.79	11.70	0.00	0.000	0.000
1/31/1995	0.82	2.80	3.40		4.81	11.79	0.00	0.000	0.000
2/28/1995	0.79	2.65	3.34		4.83	11.86	0.00	0.000	0.000
3/31/1995	0.80	2.56	3.19		4.86	11.94	0.00	0.000	0.000
4/30/1995	0.80	2.47	3.11		4.88	12.01	0.00	0.000	0.000
5/31/1995	0.84	2.59	3.09		4.91	12.09	0.00	0.000	0.000
6/30/1995	0.84	2.46	2.93		4.93	12.17	0.00	0.000	0.000
7/31/1995	0.73	2.29	3.14		4.96	12.24	0.00	0.000	0.000
8/31/1995	0.77	2.84	3.69		4.98	12.33	0.00	0.000	0.000
9/30/1995	0.74	2.66	3.58		5.00	12.41	0.00	0.000	0.000
10/31/1995	0.75	2.86	3.82		5.03	12.50	0.00	0.000	0.000
11/30/1995	0.71	2.99	4.23		5.05	12.59	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	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
12/31/1995	0.72	2.46	3.43		5.07	12.66	0.00	0.000	0.000
1/31/1996	0.72	2.50	3.44		5.09	12.74	0.00	0.000	0.000
2/29/1996	0.72	2.29	3.19		5.11	12.81	0.00	0.000	0.000
3/31/1996	0.71	2.42	3.39		5.13	12.88	0.00	0.000	0.000
4/30/1996	0.49	2.12	4.33		5.15	12.94	0.00	0.000	0.000
5/31/1996	0.71	2.15	3.01		5.17	13.01	0.00	0.000	0.000
6/30/1996	0.67	2.15	3.20		5.19	13.07	0.00	0.000	0.000
7/31/1996	0.72	2.28	3.17		5.21	13.15	0.00	0.000	0.000
8/31/1996	0.73	2.17	2.99		5.24	13.21	0.00	0.000	0.000
9/30/1996	0.66	2.15	3.26		5.26	13.28	0.00	0.000	0.000
10/31/1996	0.75	1.86	2.48		5.28	13.34	0.00	0.000	0.000
11/30/1996	0.68	2.31	3.42		5.30	13.40	0.00	0.000	0.000
12/31/1996	0.66	2.33	3.51		5.32	13.48	0.00	0.000	0.000
1/31/1997	0.65	2.41	3.70		5.34	13.55	0.00	0.000	0.000
2/28/1997	0.65	2.32	3.57		5.36	13.62	0.00	0.000	0.000
3/31/1997	0.64	2.29	3.56		5.38	13.69	0.00	0.000	0.000
4/30/1997	0.66	2.49	3.76		5.40	13.76	0.00	0.000	0.000
5/31/1997	0.73	3.02	4.16		5.42	13.86	0.00	0.000	0.000
6/30/1997	0.67	2.77	4.12		5.44	13.94	0.00	0.000	0.000
7/31/1997	0.67	2.31	3.44		5.46	14.01	0.00	0.000	0.000
8/31/1997	0.67	2.12	3.15		5.48	14.08	0.00	0.000	0.000
9/30/1997	0.61	1.67	2.73		5.50	14.13	0.00	0.000	0.000
10/31/1997	0.70	2.07	2.97		5.52	14.19	0.00	0.000	0.000
11/30/1997	0.64	1.67	2.60		5.54	14.24	0.00	0.000	0.000
12/31/1997	0.62	1.47	2.35		5.56	14.29	0.00	0.000	0.000
1/31/1998	0.65	1.70	2.60		5.58	14.34	0.00	0.000	0.000
2/28/1998	0.67	1.75	2.63		5.60	14.39	0.00	0.000	0.000
3/31/1998	0.63	1.65	2.63		5.62	14.44	0.00	0.000	0.000
4/30/1998	0.64	1.84	2.86		5.64	14.49	0.00	0.000	0.000
5/31/1998	0.70	2.09	3.01		5.66	14.56	0.00	0.000	0.000
6/30/1998	0.68	2.09	3.06		5.68	14.62	0.00	0.000	0.000
7/31/1998	0.72	1.92	2.68		5.70	14.68	0.00	0.000	0.000
8/31/1998	0.70	1.76	2.53		5.72	14.74	0.00	0.000	0.000
9/30/1998	0.73	1.77	2.43		5.75	14.79	0.00	0.000	0.000
10/31/1998	0.72	1.78	2.47		5.77	14.84	0.00	0.000	0.000
11/30/1998	0.74	1.84	2.48		5.79	14.90	0.00	0.000	0.000
12/31/1998	0.72	1.85	2.57		5.81	14.96	0.00	0.000	0.000
1/31/1999	0.70	1.80	2.58		5.83	15.01	0.00	0.000	0.000
2/28/1999	0.70	1.77	2.52		5.85	15.06	0.00	0.000	0.000
3/31/1999	0.69	1.86	2.70		5.88	15.12	0.00	0.000	0.000
4/30/1999	0.71	1.92	2.69		5.90	15.18	0.00	0.000	0.000
5/31/1999	0.70	2.02	2.87		5.92	15.24	0.00	0.000	0.000
6/30/1999	0.69	1.94	2.81		5.94	15.30	0.00	0.000	0.000
7/31/1999	0.68	1.83	2.70		5.96	15.35	0.00	0.000	0.000
8/31/1999	0.81	2.11	2.59		5.99	15.42	0.00	0.000	0.000
9/30/1999	0.69	1.61	2.33		6.01	15.47	0.00	0.000	0.000
10/31/1999	0.59	1.47	2.51		6.02	15.51	0.00	0.000	0.000
11/30/1999	0.62	1.50	2.40		6.04	15.56	0.00	0.000	0.000

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
12/31/1999	0.63	1.49	2.36		6.06	15.60	0.00	0.000	0.000
1/31/2000	0.63	1.42	2.27		6.08	15.65	0.00	0.000	0.000
2/29/2000	0.62	1.44	2.32		6.10	15.69	0.00	0.000	0.000
3/31/2000	0.60	1.43	2.38		6.12	15.74	0.00	0.000	0.000
4/30/2000	0.59	1.39	2.36		6.14	15.78	0.00	0.000	0.000
5/31/2000	0.60	1.35	2.27		6.16	15.82	0.00	0.000	0.000
6/30/2000	0.58	1.38	2.37	4.87	6.17	15.86	0.15	2.434	0.006
7/31/2000	0.53	1.47	2.79	4.23	6.19	15.91	0.28	2.072	0.012
8/31/2000	0.64	1.51	2.36	5.00	6.21	15.95	0.43	2.275	0.019
9/30/2000	0.61	1.60	2.62	10.23	6.23	16.00	0.74	4.547	0.033
10/31/2000	0.57	1.40	2.44	9.35	6.25	16.04	1.03	4.643	0.045
11/30/2000	0.58	1.74	3.00	5.33	6.26	16.10	1.19	2.258	0.052
12/31/2000	0.58	1.69	2.91	2.55	6.28	16.15	1.27	1.102	0.055
1/31/2001	0.59	1.70	2.89	1.13	6.30	16.20	1.30	0.484	0.057
2/28/2001	0.58	1.73	3.00	1.86	6.32	16.25	1.36	0.790	0.059
3/31/2001	0.58	1.75	3.04	0.19	6.33	16.30	1.36	0.082	0.059
4/30/2001	0.63	1.55	2.44		6.35	16.35	1.36	0.000	0.059
5/31/2001	0.61	1.46	2.38		6.37	16.40	1.36	0.000	0.059
6/30/2001	0.66	1.46	2.20		6.39	16.44	1.36	0.000	0.058
7/31/2001	0.69	1.60	2.33		6.41	16.49	1.36	0.000	0.058
8/31/2001	0.68	1.60	2.34		6.43	16.54	1.36	0.000	0.058
9/30/2001	0.68	1.35	2.00		6.45	16.58	1.36	0.000	0.058
10/31/2001	0.66	1.38	2.07		6.47	16.62	1.36	0.000	0.058
11/30/2001	0.70	1.48	2.11		6.50	16.67	1.36	0.000	0.058
12/31/2001	0.72	1.39	1.94		6.52	16.71	1.36	0.000	0.057
1/31/2002	0.66	1.43	2.16		6.54	16.75	1.36	0.000	0.057
2/28/2002	0.71	1.33	1.87		6.56	16.79	1.36	0.000	0.057
3/31/2002	0.69	1.19	1.74		6.58	16.83	1.36	0.000	0.057
4/30/2002	0.66	1.25	1.87		6.60	16.87	1.36	0.000	0.057
5/31/2002	0.67	1.23	1.84		6.62	16.90	1.36	0.000	0.057
6/30/2002	0.69	1.27	1.84	942.27	6.64	16.94	29.63	469.300	1.232
7/31/2002	0.65	1.19	1.83		6.66	16.98	29.63	0.000	1.229
8/31/2002	0.64	1.11	1.74		6.68	17.01	29.63	0.000	1.226
9/30/2002	0.50	0.97	1.94		6.70	17.04	29.63	0.000	1.224
10/31/2002	0.62	1.16	1.87		6.72	17.08	29.63	0.000	1.221
11/30/2002	0.64	1.03	1.61		6.73	17.11	29.63	0.000	1.219
12/31/2002	0.66	1.34	2.05		6.75	17.15	29.63	0.000	1.216
1/31/2003	0.64	1.42	2.20		6.77	17.20	29.63	0.000	1.212
2/28/2003	0.64	1.35	2.13		6.79	17.23	29.63	0.000	1.210
3/31/2003	0.66	1.48	2.24		6.81	17.28	29.63	0.000	1.206
4/30/2003	0.64	1.41	2.20		6.83	17.32	29.63	0.000	1.203
5/31/2003	0.57	1.27	2.23		6.85	17.36	29.63	0.000	1.200
6/30/2003	0.57	1.38	2.41		6.87	17.40	29.63	0.000	1.197
7/31/2003	0.59	1.35	2.30		6.88	17.44	29.63	0.000	1.194
8/31/2003	0.59	1.32	2.25		6.90	17.48	29.63	0.000	1.192
9/30/2003	0.59	1.41	2.37		6.92	17.53	29.63	0.000	1.189
10/31/2003	0.61	1.41	2.31		6.94	17.57	29.63	0.000	1.186
11/30/2003	0.61	1.41	2.30		6.96	17.61	29.63	0.000	1.183

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12/31/2003	0.60	1.57	2.64		6.98	17.66	29.63	0.000	1.179
1/31/2004	0.59	1.46	2.47		7.00	17.71	29.63	0.000	1.176
2/29/2004	0.59	1.38	2.35		7.01	17.75	29.63	0.000	1.174
3/31/2004	0.59	1.49	2.52		7.03	17.79	29.63	0.000	1.171
4/30/2004	0.59	1.73	2.94		7.05	17.84	29.63	0.000	1.167
5/31/2004	0.58	1.82	3.16		7.07	17.90	29.63	0.000	1.164
6/30/2004	0.49	1.25	2.57		7.08	17.94	29.63	0.000	1.161
7/31/2004	0.50	1.09	2.15		7.10	17.97	29.63	0.000	1.159
8/31/2004	0.51	1.06	2.09		7.11	18.00	29.63	0.000	1.157
9/30/2004	0.50	1.01	2.03		7.13	18.04	29.63	0.000	1.155
10/31/2004	0.49	1.04	2.11		7.14	18.07	29.63	0.000	1.153
11/30/2004	0.48	1.03	2.14		7.16	18.10	29.63	0.000	1.151
12/31/2004	0.50	1.05	2.12		7.17	18.13	29.63	0.000	1.148
1/31/2005	0.52	1.06	2.03		7.19	18.16	29.63	0.000	1.146
2/28/2005	0.50	1.06	2.10		7.20	18.19	29.63	0.000	1.144
3/31/2005	0.51	1.12	2.17		7.22	18.23	29.63	0.000	1.142
4/30/2005	0.47	1.01	2.16		7.23	18.26	29.63	0.000	1.140
5/31/2005	0.51	1.06	2.09		7.25	18.29	29.63	0.000	1.138
6/30/2005	0.55	1.16	2.12		7.26	18.33	29.63	0.000	1.135
7/31/2005	0.56	1.14	2.05		7.28	18.36	29.63	0.000	1.133
8/31/2005	0.55	1.15	2.08		7.30	18.40	29.63	0.000	1.131
9/30/2005	0.56	1.15	2.06		7.32	18.43	29.63	0.000	1.129
10/31/2005	0.55	1.04	1.91		7.33	18.46	29.63	0.000	1.126
11/30/2005	0.55	1.07	1.93		7.35	18.50	29.63	0.000	1.124
12/31/2005	0.56	1.08	1.92		7.37	18.53	29.63	0.000	1.122
1/31/2006	0.57	1.06	1.86		7.38	18.56	29.63	0.000	1.120
2/28/2006	0.55	1.03	1.89		7.40	18.59	29.63	0.000	1.118
3/31/2006	0.58	1.40	2.42		7.42	18.63	29.63	0.000	1.115
4/30/2006	0.51	0.97	1.88		7.43	18.66	29.63	0.000	1.113
5/31/2006	0.55	1.07	1.93		7.45	18.70	29.63	0.000	1.111
6/30/2006	0.53	0.98	1.83		7.47	18.73	29.63	0.000	1.109
7/31/2006	0.48	1.03	2.14		7.48	18.76	29.63	0.000	1.107
8/31/2006	0.49	1.01	2.07		7.50	18.79	29.63	0.000	1.105
9/30/2006	0.48	1.10	2.28		7.51	18.82	29.63	0.000	1.103
10/31/2006	0.47	1.08	2.28		7.52	18.86	29.63	0.000	1.101
11/30/2006	0.48	0.50	1.03		7.54	18.87	29.63	0.000	1.100
12/31/2006	0.50	1.16	2.31		7.55	18.91	29.63	0.000	1.098
1/31/2007	0.48	1.19	2.49		7.57	18.94	29.63	0.000	1.096
2/28/2007	0.50	1.19	2.40		7.58	18.98	29.63	0.000	1.094
3/31/2007	0.51	1.25	2.44		7.60	19.02	29.63	0.000	1.092
4/30/2007	0.51	1.20	2.35		7.61	19.05	29.63	0.000	1.090
5/31/2007	0.50	1.33	2.65		7.63	19.09	29.63	0.000	1.087
6/30/2007	0.51	1.19	2.35		7.65	19.13	29.63	0.000	1.085
7/31/2007	0.47	1.19	2.51		7.66	19.16	29.63	0.000	1.083
8/31/2007	0.48	1.06	2.21		7.67	19.20	29.63	0.000	1.081
9/30/2007	0.46	1.04	2.24		7.69	19.23	29.63	0.000	1.079
10/31/2007	0.47	1.06	2.24		7.70	19.26	29.63	0.000	1.077
11/30/2007	0.46	1.33	2.89		7.72	19.30	29.63	0.000	1.075

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
12/31/2007	0.47	1.36	2.90		7.73	19.34	29.63	0.000	1.073
1/31/2008	0.47	1.34	2.86	1.00	7.75	19.39	29.66	0.544	1.072
2/29/2008	0.45	1.31	2.92		7.76	19.42	29.66	0.000	1.070
3/31/2008	0.44	1.37	3.11	1.00	7.77	19.47	29.69	0.545	1.069
4/30/2008	0.45	1.38	3.06	1.00	7.79	19.51	29.72	0.536	1.068
5/31/2008	0.43	1.36	3.13	1.00	7.80	19.55	29.75	0.549	1.067
6/30/2008	0.50	1.16	2.33	0.97	7.81	19.58	29.78	0.573	1.066
7/31/2008	0.47	1.14	2.43	1.00	7.83	19.62	29.81	0.610	1.065
8/31/2008	0.48	1.09	2.26	1.00	7.84	19.65	29.84	0.625	1.064
9/30/2008	0.47	0.98	2.10	0.19	7.86	19.68	29.85	0.128	1.063
10/31/2008	0.48	1.10	2.31	0.20	7.87	19.72	29.86	0.124	1.061
11/30/2008	0.62	1.12	1.80	2.08	7.89	19.75	29.92	1.167	1.061
12/31/2008	0.62	1.15	1.84	2.06	7.91	19.79	29.98	1.132	1.061
1/31/2009	0.62	1.15	1.85	2.08	7.93	19.82	30.05	1.149	1.062
2/28/2009	0.61	1.17	1.92	2.08	7.95	19.85	30.10	1.136	1.062
3/31/2009	0.60	1.26	2.08	2.07	7.97	19.89	30.17	1.089	1.062
4/30/2009	0.62	1.20	1.94	2.09	7.98	19.93	30.23	1.125	1.062
5/31/2009	0.61	1.17	1.92	2.08	8.00	19.96	30.30	1.142	1.062
6/30/2009	0.63	1.18	1.87	2.07	8.02	20.00	30.36	1.121	1.062
7/31/2009	0.60	1.20	1.98	2.05	8.04	20.04	30.42	1.108	1.062
8/31/2009	0.61	1.09	1.78	2.14	8.06	20.07	30.49	1.227	1.063
9/30/2009	0.60	0.89	1.49	2.11	8.08	20.10	30.55	1.378	1.063
10/31/2009	0.62	0.90	1.45	2.05	8.10	20.13	30.61	1.319	1.064
11/30/2009	0.63	0.87	1.39	1.90	8.12	20.15	30.67	1.232	1.064
12/31/2009	0.64	0.86	1.35	1.98	8.14	20.18	30.73	1.289	1.064
1/31/2010	0.64	0.81	1.27	1.99	8.16	20.20	30.79	1.332	1.065
2/28/2010	0.65	0.79	1.23	2.00	8.17	20.23	30.85	1.348	1.065
3/31/2010	0.64	0.80	1.25	2.02	8.19	20.25	30.91	1.357	1.066
4/30/2010	0.65	0.87	1.34	2.01	8.21	20.28	30.97	1.285	1.066
5/31/2010	0.66	1.04	1.58	1.98	8.23	20.31	31.03	1.133	1.066
6/30/2010	0.68	1.07	1.57	1.14	8.25	20.34	31.07	0.632	1.065
7/31/2010	0.68	1.05	1.54	23.79	8.27	20.37	31.81	13.438	1.088
8/31/2010	0.68	1.08	1.60	2.57	8.30	20.41	31.89	1.427	1.089
9/30/2010	0.66	1.05	1.59	3.12	8.32	20.44	31.98	1.770	1.090
10/31/2010	0.69	1.09	1.58	3.12	8.34	20.47	32.08	1.706	1.091
11/30/2010	0.66	1.06	1.59	3.08	8.36	20.50	32.17	1.747	1.093
12/31/2010	0.68	1.01	1.48	3.16	8.38	20.54	32.27	1.824	1.094
1/31/2011	0.65	1.03	1.57	3.19	8.40	20.57	32.37	1.851	1.095
2/28/2011	0.68	1.02	1.50	3.19	8.42	20.60	32.46	1.831	1.097
3/31/2011	0.67	1.01	1.52	3.18	8.44	20.63	32.55	1.846	1.098
4/30/2011	0.66	0.95	1.44	3.12	8.46	20.66	32.65	1.887	1.099
5/31/2011	0.65	0.92	1.42	3.04	8.48	20.68	32.74	1.891	1.101
6/30/2011	0.59	0.91	1.53	2.73	8.50	20.71	32.82	1.761	1.102
7/31/2011	0.67	1.00	1.50	1.73	8.52	20.74	32.88	1.010	1.101
8/31/2011	0.68	0.99	1.46		8.54	20.77	32.88	0.000	1.099
9/30/2011	0.68	1.04	1.53		8.56	20.80	32.88	0.000	1.098
10/31/2011	0.68	1.03	1.51	2.11	8.58	20.84	32.94	1.202	1.098
11/30/2011	0.68	1.01	1.50	2.24	8.60	20.87	33.01	1.288	1.098

Date	Oil Rate (CD) m3/d	Water Rate (CD) m3/d	Water Oil Ratio m3/m3	Water Inj Rate (CD) m3/d	Cum Oil Prod Km3	Cum Water Prod Km3	Cum Water Inj Km3	Voidage Replacement Ratio	Cum Voidage Replacemt Ratio
12/31/2011	0.68	1.01	1.49	2.10	8.62	20.90	33.07	1.213	1.098
1/31/2012	0.66	1.02	1.55	2.11	8.64	20.93	33.14	1.227	1.098
2/29/2012	0.67	1.02	1.54	2.19	8.66	20.96	33.20	1.265	1.099
3/31/2012	0.66	1.10	1.66	2.17	8.68	20.99	33.27	1.204	1.099
4/30/2012	0.66	1.01	1.55	2.96	8.70	21.02	33.36	1.724	1.100
5/31/2012	0.65	1.01	1.56	3.63	8.72	21.05	33.47	2.126	1.102
6/30/2012	0.66	1.02	1.55	4.18	8.74	21.08	33.60	2.434	1.104
7/31/2012	0.65	1.02	1.56	1.03	8.76	21.12	33.63	0.603	1.103
8/31/2012	0.63	1.06	1.68	1.00	8.78	21.15	33.66	0.576	1.102
9/30/2012	0.62	1.09	1.74	1.00	8.80	21.18	33.69	0.570	1.101
10/31/2012	0.47	0.84	1.78	1.00	8.81	21.21	33.72	0.743	1.101
11/30/2012	0.54	0.95	1.75	1.00	8.83	21.24	33.75	0.652	1.100
12/31/2012	0.64	1.04	1.63	0.94	8.85	21.27	33.78	0.542	1.099
1/31/2013	0.61	1.00	1.64	0.97	8.87	21.30	33.81	0.583	1.098
2/28/2013	0.63	3.38	5.36		8.89	21.39	33.81	0.000	1.094
3/31/2013	0.65	1.21	1.86		8.91	21.43	33.81	0.000	1.092
4/30/2013	0.63	1.03	1.63		8.92	21.46	33.81	0.000	1.090
5/31/2013	0.62	1.03	1.65		8.94	21.49	33.81	0.000	1.089
6/30/2013	0.60	0.98	1.63		8.96	21.52	33.81	0.000	1.087
7/31/2013	0.62	1.07	1.72		8.98	21.56	33.81	0.000	1.085
8/31/2013	0.63	1.02	1.62		9.00	21.59	33.81	0.000	1.083
9/30/2013	0.63	1.02	1.62		9.02	21.62	33.81	0.000	1.081
10/31/2013	0.55	0.96	1.76		9.04	21.65	33.81	0.000	1.080
11/30/2013	0.62	1.05	1.70		9.06	21.68	33.81	0.000	1.078
12/31/2013	0.66	0.91	1.38		9.08	21.71	33.81	0.000	1.076