

**NORTH VIRDEN SCALLION UNIT NO. 2**

**WATERFLOOD EOR PROJECT**

**ANNUAL REPORT FOR 2011**

**March 4, 2012**

**Tundra Oil and Gas Partnership**

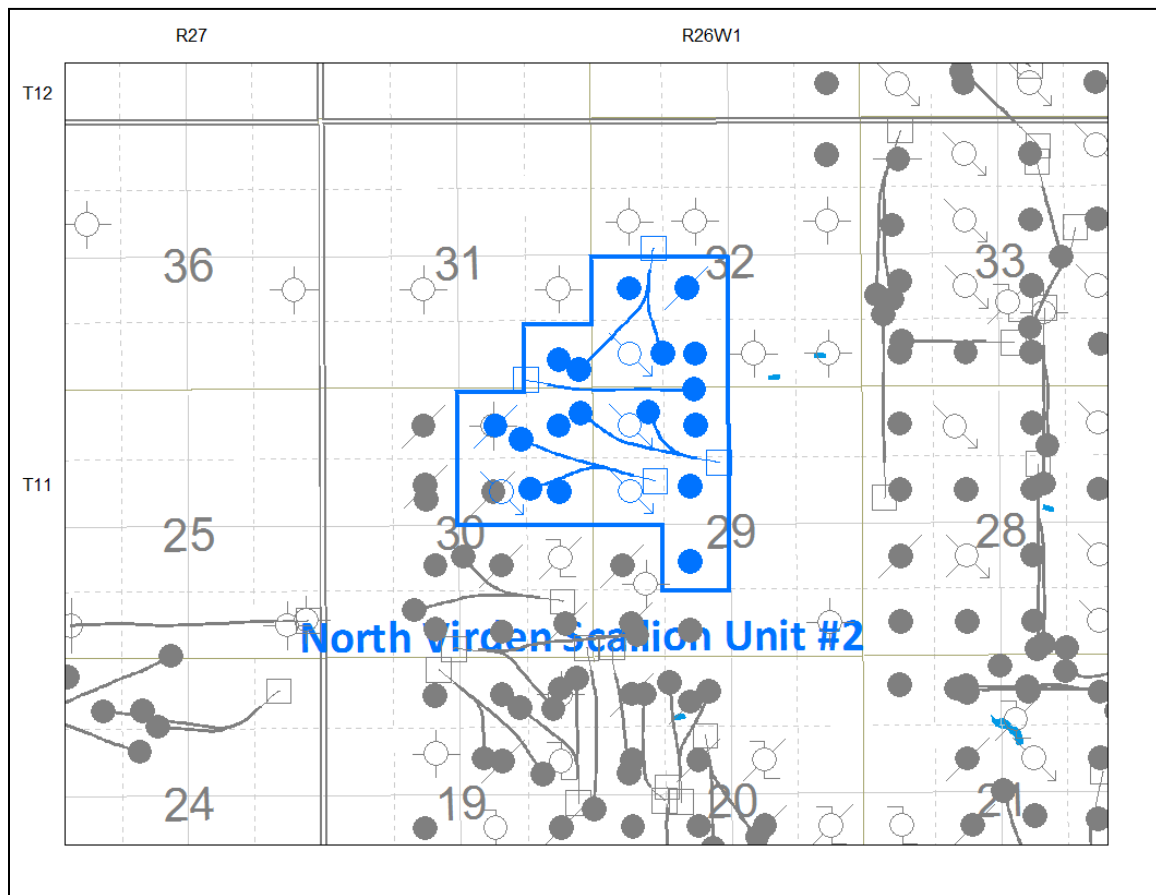
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## **INTRODUCTION**

North Virden Scallion Unit No. 2 Enhanced Oil Recovery (EOR) Waterflood Project was approved under Board Order No. PM 59 effective August 1989 with Saskoil and Gas Corporation as Operator. Mountcliff Resources Ltd. acquired the unit from Saskoil and Gas Corporation and became operator in January 1993. Tundra acquired the unit from Mountcliff Resources Ltd. in January 2000 and is the current operator of the unit. The EOR project area contains 21 wells in 5 LSDs in Township 11, Range 26 W1 as shown in the figure below. Well list and well status is available in Appendix A.

**Figure 1: North Virden Scallion Unit No. 2 Area Outline**



In accordance with Section 73 of the Manitoba Drilling and Production Regulation, Tundra hereby submits the 2011 Annual Progress Report for North Virden Scallion Unit No. 2 as required by Board Order No. PM 59.

## **DISCUSSION**

### **Production History**

For the wells included in North Virden Scallion unit No. 2, production started November 1982 with 00/13-29-009-26W1/0 well. Oil production peaked at 59.2 m<sup>3</sup>/d in March 2000.

The Unit was producing 7.2 m<sup>3</sup>/d of oil and 84 m<sup>3</sup>/d of water at the end of 2011, with a WOR of 11.7 m<sup>3</sup>/m<sup>3</sup>. The rates and WOR are plotted in Figure 2.

**Figure 2: North Virden Scallion Unit No. 2 Production/Injection Rates and WOR vs. Time**

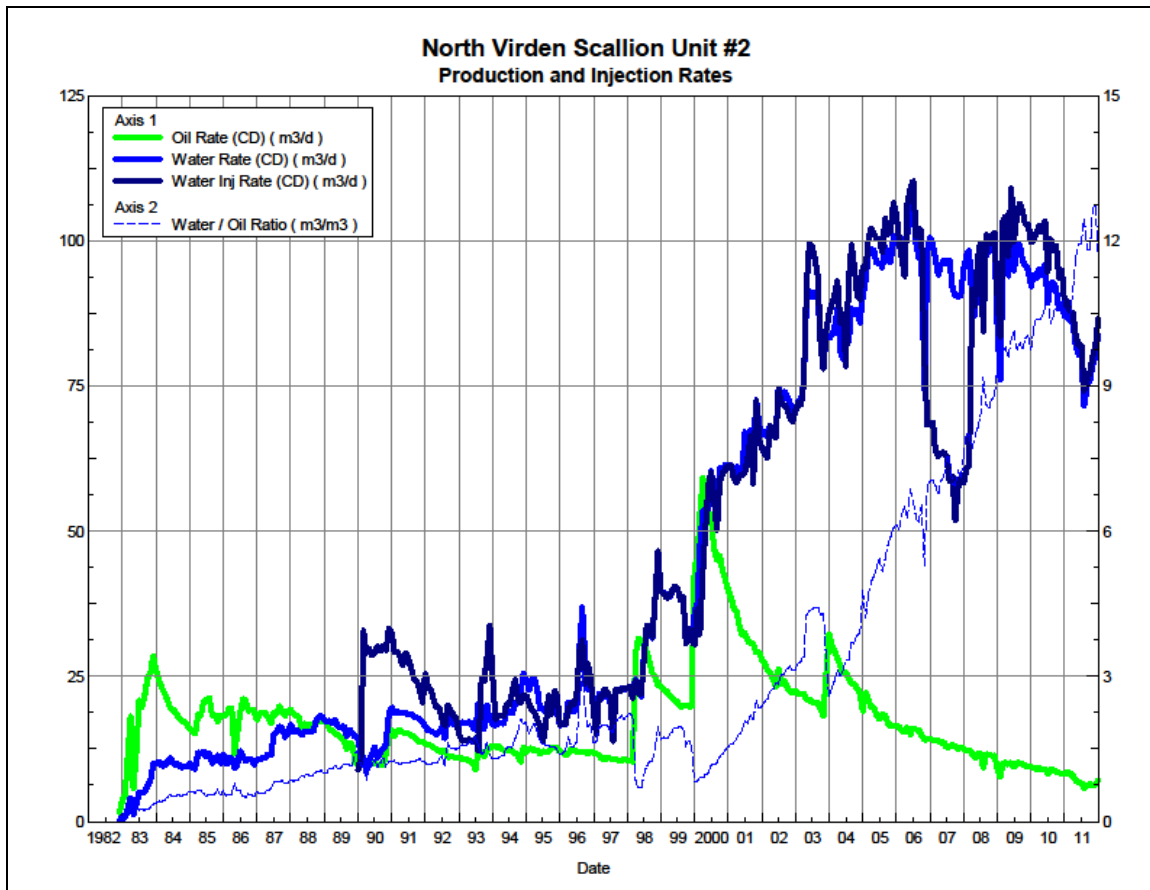
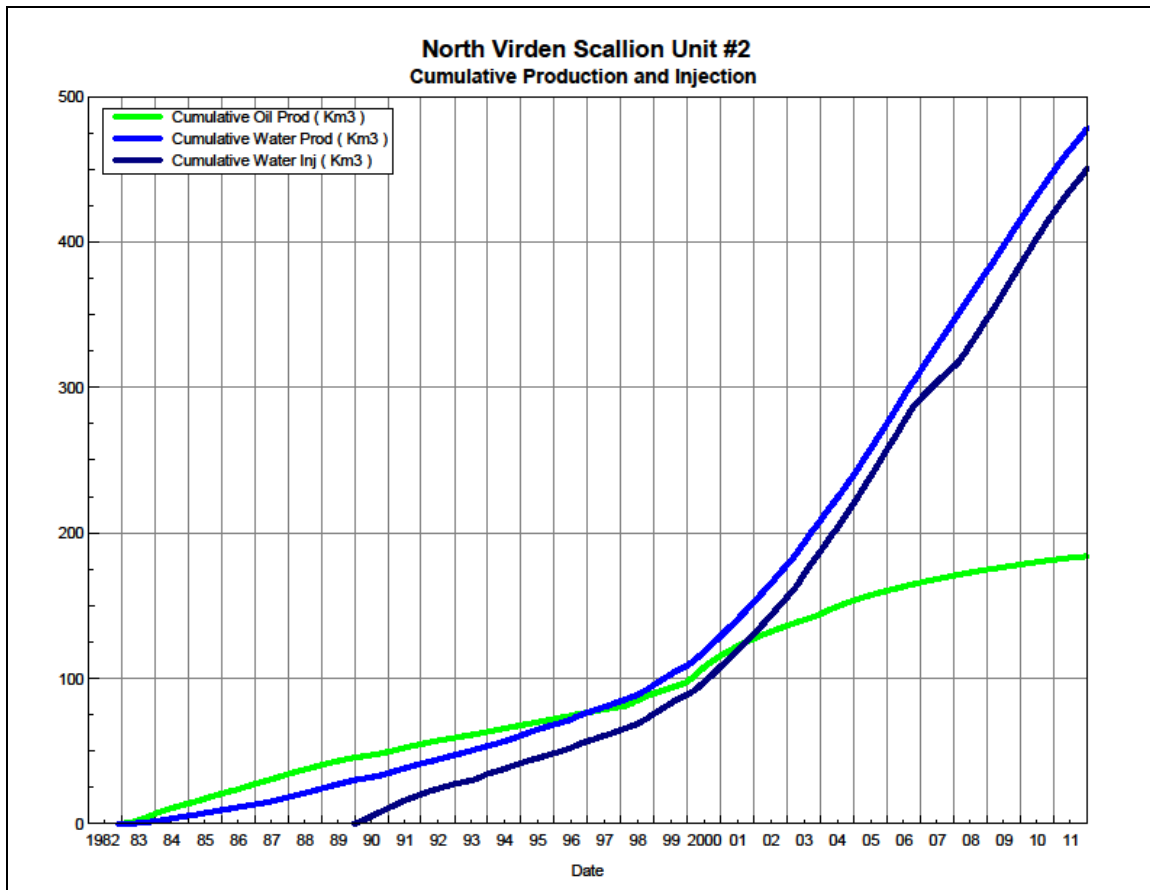


Figure 3 shows the cumulative production for North Virden Scallion Unit No. 2 to the end of December 2011 as 187 E<sup>3</sup>m<sup>3</sup> of oil, and 478 E<sup>3</sup>m<sup>3</sup> of water. The cumulative water injected is over 450 E<sup>3</sup>m<sup>3</sup>.

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



### **Waterflood History**

As of December 2011 the Unit has 4 active vertical injectors in 3 injector patterns. Water injection started in December 1989. An overall summary for each injector pattern is presented in Appendix C.

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

### **Waterflood EOR Operating Strategy and Performance**

#### **Water Source and Quality**

Currently there is no source water being used at North Virden Scallion Unit No. 2. Produced water is re-injected back into the formation after filtration.

### **Injection Wellhead Pressures**

The Average monthly wellhead injection pressures, for each injection well, are summarized in Appendix B, and show all injection pressure since 2003. Average pressure for the injectors is as follows: 5100 kPag for 00/04-32-11-26W1/00, 4500 kPag for 02/10-30-011-26W1/00, 5100 kPag for 00/12-29-011-26W1/00 and 5100 kPag for 00/13-29-11-26W1/00.

### **Reservoir Pressure**

No reservoir pressure measurements were taken at North Virden Scallion Unit No. 2, in 2011.

### **Well Servicing**

The following table summarizes the well servicing performed within North Virden Scallion Unit No. 2 during 2011:

**Table 1: North Virden Scallion Unit #2 Well Servicing**

00/14-29-011-26W1/0	Repairs, Pump Change and Acid Job	11/32/2011
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### **Voidage Replacement**

Cumulative voidage for the North Virden Scallion Unit No. 2 was 0.85 in December 2011. Tundra hopes to maintain this cumulative VRR, by keeping water injection at its current rate for the foreseeable future. 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 D.

### **Waterflood Performance Discussion**

OOIP for North Virden Scallion Unit No. 2 is 554 E<sup>3</sup>m<sup>3</sup>. Current recovery factor within the unit is approximately 33%. Ultimate recovery factor for the North Virden Scallion Unit No. 2 is estimated to approach 36% by decline analysis. The flood will outperform the predicted estimated ultimate recovery factor of 33.7% last predicted in March 2002.

Overall this waterflood has been quite effective as evident by the high estimated ultimate recovery factor. Likely the most significant factor that has contributed to this unit's high recovery factor was the application horizontal drilling technology. From 1998-2002, 4 Hz wells were drilled into the unit and since then the wells have recovered an average 20 E<sup>3</sup>m<sup>3</sup> each. A portion of the reserves recovered by each horizontal well can be attributed to production acceleration; however, decline analysis clearly indicates that incremental reserves were also encountered when the horizontal wells were drilled. These incremental reserves have contributed to the unit's overall high recovery factor.

Tundra has no definite plans to significantly alter the way in which the waterflood at North Virden Scallion Unit No. 2 is currently operating.

## **List of Appendices**

Appendix A: Well Name and Well Status

Appendix B: Monthly Injection Wellhead Pressures Table and Plots

Appendix C: North Virden Scallion Unit No. 2 Injection Pattern Summary

Appendix D: Injector Pattern Production/Injection Rates, Cumulative and VRRs

Plots and Tables for the following injectors:

00/12-29-011-26W1/00

02/10-30-011-26W1/00

00/04-32-011-26W1/00

## Appendix A

UWI	Surface Location	Well Status
100/06-29-011-26W1/00		Capable of OIL Prod
100/11-29-011-26W1/00		Capable of OIL Prod
100/12-29-011-26W1/00		WTR Injection
100/13-29-011-26W1/00		WTR Injection
102/13-29-011-26W1/02	11-29-011-26W1	Capable of OIL Prod
100/14-29-011-26W1/00		Capable of OIL Prod
100/09-30-011-26W1/00		Capable of OIL Prod
102/09-30-011-26W1/02	12-29-011-26W1	Capable of OIL Prod
102/10-30-011-26W1/00		WTR Injection
102/15-30-011-26W1/00		ABD Producer
103/15-30-011-26W1/00	12-29-011-26W1	Capable of OIL Prod
100/16-30-011-26W1/00		Capable of OIL Prod
102/16-30-011-26W1/00	11-29-011-26W1	Capable of OIL Prod
100/01-31-011-26W1/00		Capable of OIL Prod
102/01-31-011-26W1/02	12-32-011-26W1	Capable of OIL Prod
100/03-32-011-26W1/00		Capable of OIL Prod
102/03-32-011-26W1/00	12-32-011-26W1	Capable of OIL Prod
103/03-32-011-26W1/00	01-31-011-26W1	Capable of OIL Prod
100/04-32-011-26W1/00		WTR Injection
100/05-32-011-26W1/00		Capable of OIL Prod
100/06-32-011-26W1/00		ABD Producer



Appendix B

Average Monthly Injection Pressure (kPag)

Injection Pressure					Injection Pressure					Injection Pressure				
Month	100/04-32	100/12-29	100/13-29	102/10-30	Month	100/04-32	100/12-29	100/13-29	102/10-30	Month	100/04-32	100/12-29	100/13-29	102/10-30
Aug-02	6338	6279	0	6279	Jan-06	7524	7524	7524	7524	Jan-10	4964	4964	4964	4964
Sep-02	6338	6279	0	6279	Feb-06	7796	7796	7796	7796	Feb-10	4856	4856	4856	4856
Oct-02	6338	6279	0	6279	Mar-06	7053	7053	7053	7053	Mar-10	5104	5104	5104	5104
Nov-02	6338	6279	0	6279	Apr-06	6417	6417	6417	6417	Apr-10	5171	5171	5171	5171
Dec-02	6338	6279	0	6279	May-06	6719	6719	6719	6719	May-10	5171	5171	5171	5171
Jan-03	6338	6279	0	6279	Jun-06	7002	7002	7002	7002	Jun-10	5171	5171	5171	5171
Feb-03	6338	6279	0	6279	Jul-06	6416	6416	6032	6416	Jul-10	5171	5171	5171	5171
Mar-03	6338	6279	0	6279	Aug-06	5609	5609	5609	5609	Aug-10	5224	5224	5224	5224
Apr-03	6400	6333	253	6333	Sep-06	5796	5796	5796	5796	Sep-10	5240	5240	5240	5240
May-03	8200	7973	7818	7973	Oct-06	4596	4804	4804	4804	Oct-10	5240	5240	5240	5240
Jun-03	8200	8050	8050	8050	Nov-06	5235	5235	5235	5235	Nov-10	5056	5056	5056	5056
Jul-03	8200	8050	8050	8050	Dec-06	5636	5636	5636	5636	Dec-10	4550	4550	4550	4550
Aug-03	8406	8295	8295	8295	Jan-07	5798	5798	5798	5798	Jan-11	4479	4479	4479	4479
Sep-03	7923	8140	8140	8140	Feb-07	5817	5817	5817	5817	Feb-11	4299	4299	4299	4299
Oct-03	1200	5272	4629	5272	Mar-07	5720	5720	5720	5720	Mar-11	4274	4274	4274	4274
Nov-03	4774	5428	4774	5428	Apr-07	5839	5839	5839	5839	Apr-11	4274	4274	4274	4274
Dec-03	4800	4800	4800	4800	May-07	5947	5947	5947	5947	May-11	4274	4274	4274	4274
Jan-04	4800	4800	4800	4800	Jun-07	5920	5920	5920	5920	Jun-11	4274	4274	4274	4274
Feb-04	4800	4800	4800	4800	Jul-07	6016	6016	6016	6016	Jul-11	4274	4274	4274	4274
Mar-04	4800	4800	4800	4800	Aug-07	5927	5927	5927	5927	Aug-11	5303	5303	5303	0
Apr-04	4800	4800	4800	4800	Sep-07	5723	5955	5955	5961	Sep-11	5054	5054	5054	3282
May-04	5465	5465	5465	5465	Oct-07	5755	5755	5755	5790	Oct-11	6676	6676	6676	6676
Jun-04	6633	6633	6633	6633	Nov-07	5998	5998	5998	5998	Nov-11	6894	6894	6894	6894
Jul-04	7290	7290	7290	7290	Dec-07	6375	6375	6238	6375	Dec-11	7361	7361	7361	7361
Aug-04	7732	7732	7732	7732	Jan-08	6408	6408	6408	6408					
Sep-04	8190	8190	8190	8190	Feb-08	6645	6645	6645	6645					
Oct-04	6906	6906	6906	6509	Mar-08	6637	6637	6637	6637					
Nov-04	5681	5681	5681	5473	Apr-08	6670	6670	6670	6670					
Dec-04	5530	5530	5530	5530	May-08	7224	7224	7224	7224					
Jan-05	5591	5591	5591	5591	Jun-08	6619	6619	6619	6619					
Feb-05	6112	6112	6112	6112	Jul-08	6599	6599	6599	6599					
Mar-05	6555	6555	6555	6555	Aug-08	6431	6431	6431	6431					
Apr-05	6539	6539	6539	6539	Sep-08	6987	6987	6987	6987					
May-05	6506	6506	6506	6506	Oct-08	6963	6963	6963	6963					
Jun-05	7029	7029	7029	7029	Nov-08	6863	6863	6863	6863					
Jul-05	6460	6460	6460	6460	Dec-08	6826	6826	6826	6826					
Aug-05	5934	5934	5934	5934	Jan-09	6405	6405	6405	6405					
Sep-05	6077	6077	6077	6077	Feb-09	7239	7239	7239	7239					
Oct-05	6537	6537	6537	6537	Mar-09	7362	7362	7362	7362					
Nov-05	7199	7199	7199	7199	Apr-09	6812	6812	6812	6812					
Dec-05	7452	7452	7452	7452	May-09	7203	7203	7203	7203					
					Jun-09	6966	6966	6966	6966					
					Jul-09	5563	5563	5563	5563					
					Aug-09	5102	5102	5102	5102					
					Sep-09	4964	4964	4964	4964					
					Oct-09	4979	4979	4979	4979					
					Nov-09	4964	4964	4964	4964					
					Dec-09	4964	4964	4964	4964					

## Appendix C

## North Virden Scallion Unit 2 Pattern Summary as of December 2011

Pattern Name	Injector Location (011-26W)	Injector Surf. Location (011-26W)	Status	No. of Supported Wells	Supported Wells (011-26W)	Allocation Factor	Pattern Prod Start Month	Inj Start Month	Oil Rate (m³/d)	Water Rate (m³/d)	WOR (m³/m³)	Water Injection (m³/d)	Cum Oil (E³m³)	Cum Water (E³m³)	Cum Inj Water (E³m³)	Monthly VRR	Cum VRR
00/12-29-011-26W1 Injector	00/12-29 00/13-29	Vertical Well	WTR Injection	10	06-29, 11-29, 14-29, 02/13-29 (Surf 11-29), 02/16-30 (Surf 11-29)	1.0	Nov 1982	Feb 1990	4.1	43.8	10.58	51.7	92.4	237.9	173.5	1.1	0.66
					02/09-30 (Surf 12-29)	0.75											
					03/15-30 (Surf 12-29)	0.6											
					09-30, 16-30	0.5											
					03/03-32 (Surf 01-31)	0.45											
02/10-30-011-26W1 Injector	02/10-30	Vertical Well	WTR Injection	7	02/15-30	1.0	Mar 1983	Dec 1989	0.5	9.9	22.19		28.1	81.0	151.1		1.69
					01-31, 09-30, 16-30	0.5											
					03/15-30	0.4											
					02/09-30	0.25											
					03/03-32 (Surf 01-31)	0.1											
00/04-32-011-26W1 Injector	00/04-32	Vertical Well	WTR Injection	7	03-32, 05-32, 06-32, 02/01-31 (Surf 12-32), 02/03-32 (Surf 12-32)	1.0	Nov 1982	Feb 1990	2.6	28.0	10.95	34.8	62.3	146.2	125.8	1.2	0.77
					01-31	0.5											
					03/03-32 (Surf 01-31)	0.45											

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

# Pattern: 12-29-11-26 Set: NV Scallion Unit #2

Oil Formation Vol. Factor : 1.05 m3/m3

Water Formation Vol Factor : 1.00 m3/m3

Water / Oil Ratio : 10.58 m3/m3

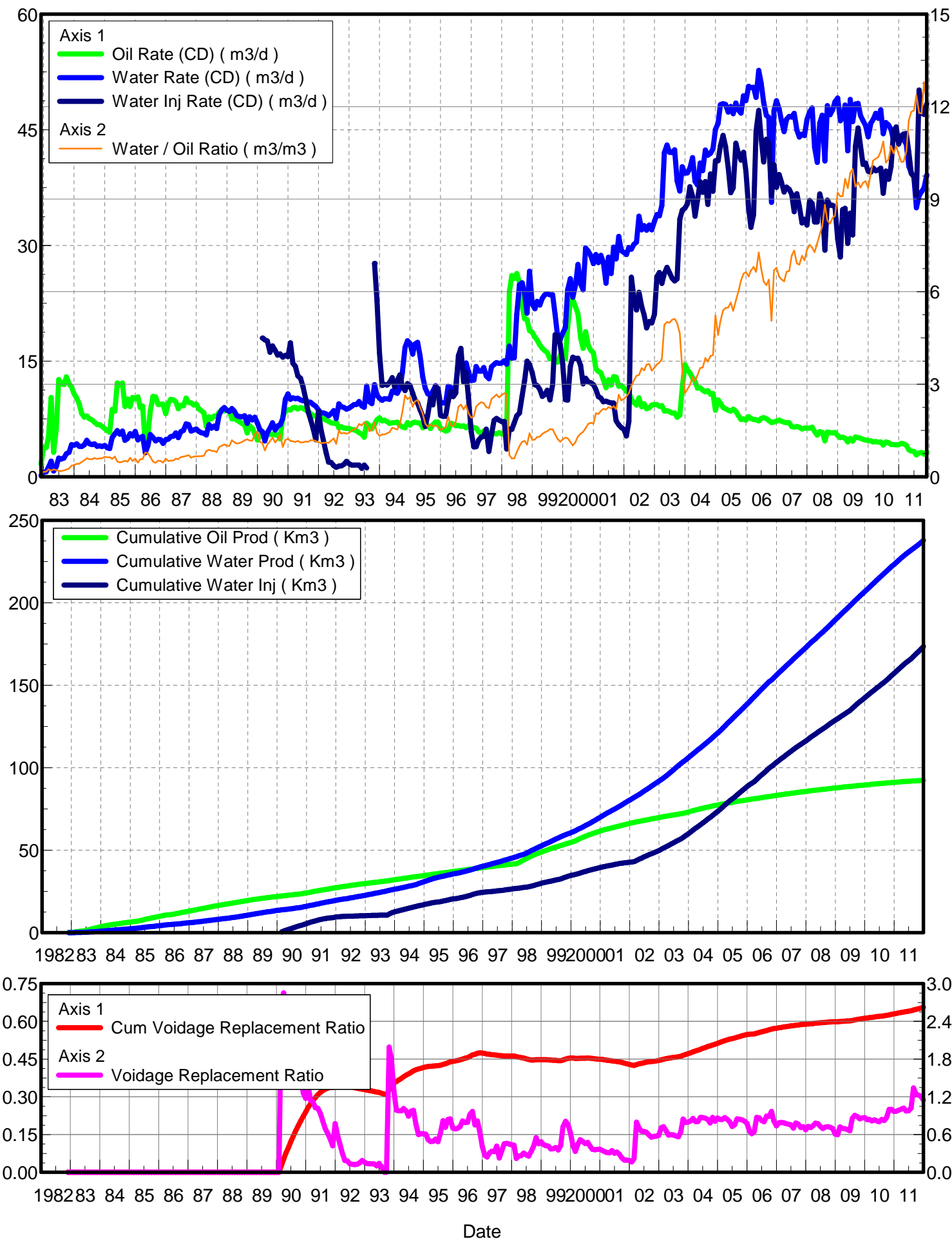
March 04, 2012

Operator: TUNDRA\_OIL\_&\_GAS\_LIMITED

Oil Rate (CD) : 4.14 m3/d

Water Rate (CD) : 43.81 m3/d

Water Inj Rate (CD) : 51.73 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
11/30/1982	1.61	0.15	0.09		0.05	0.00	0.00	0.000	0.000
12/31/1982	3.70	0.58	0.16		0.16	0.02	0.00	0.000	0.000
1/31/1983	3.79	0.63	0.17		0.28	0.04	0.00	0.000	0.000
2/28/1983	5.11	1.23	0.24		0.42	0.08	0.00	0.000	0.000
3/31/1983	10.29	2.01	0.20		0.74	0.14	0.00	0.000	0.000
4/30/1983	3.17	0.75	0.24		0.84	0.16	0.00	0.000	0.000
5/31/1983	6.21	1.32	0.21		1.03	0.20	0.00	0.000	0.000
6/30/1983	12.62	2.43	0.19		1.41	0.27	0.00	0.000	0.000
7/31/1983	12.16	2.28	0.19		1.79	0.35	0.00	0.000	0.000
8/31/1983	11.94	2.42	0.20		2.16	0.42	0.00	0.000	0.000
9/30/1983	12.97	2.98	0.23		2.54	0.51	0.00	0.000	0.000
10/31/1983	12.04	3.18	0.26		2.92	0.61	0.00	0.000	0.000
11/30/1983	11.66	4.16	0.36		3.27	0.73	0.00	0.000	0.000
12/31/1983	10.75	4.08	0.38		3.60	0.86	0.00	0.000	0.000
1/31/1984	10.20	4.28	0.42		3.92	0.99	0.00	0.000	0.000
2/29/1984	9.46	3.96	0.42		4.19	1.11	0.00	0.000	0.000
3/31/1984	8.20	3.91	0.48		4.45	1.23	0.00	0.000	0.000
4/30/1984	7.72	4.12	0.53		4.68	1.35	0.00	0.000	0.000
5/31/1984	7.87	4.71	0.60		4.92	1.50	0.00	0.000	0.000
6/30/1984	7.52	4.29	0.57		5.15	1.63	0.00	0.000	0.000
7/31/1984	7.37	4.17	0.57		5.38	1.76	0.00	0.000	0.000
8/31/1984	7.07	4.28	0.60		5.59	1.89	0.00	0.000	0.000
9/30/1984	6.79	3.95	0.58		5.80	2.01	0.00	0.000	0.000
10/31/1984	6.76	4.00	0.59		6.01	2.13	0.00	0.000	0.000
11/30/1984	6.54	3.91	0.60		6.20	2.25	0.00	0.000	0.000
12/31/1984	6.25	4.04	0.65		6.40	2.37	0.00	0.000	0.000
1/31/1985	5.99	3.75	0.63		6.58	2.49	0.00	0.000	0.000
2/28/1985	5.76	3.64	0.63		6.74	2.59	0.00	0.000	0.000
3/31/1985	8.72	5.08	0.58		7.02	2.75	0.00	0.000	0.000
4/30/1985	8.49	5.56	0.66		7.27	2.92	0.00	0.000	0.000
5/31/1985	12.17	5.99	0.49		7.65	3.10	0.00	0.000	0.000
6/30/1985	11.87	5.51	0.46		8.00	3.27	0.00	0.000	0.000
7/31/1985	12.14	5.93	0.49		8.38	3.45	0.00	0.000	0.000
8/31/1985	9.11	4.71	0.52		8.66	3.60	0.00	0.000	0.000
9/30/1985	10.06	4.96	0.49		8.96	3.75	0.00	0.000	0.000
10/31/1985	9.10	5.58	0.61		9.25	3.92	0.00	0.000	0.000
11/30/1985	10.28	5.27	0.51		9.55	4.08	0.00	0.000	0.000
12/31/1985	10.09	5.88	0.58		9.87	4.26	0.00	0.000	0.000
1/31/1986	10.37	4.77	0.46		10.19	4.41	0.00	0.000	0.000
2/28/1986	8.99	5.06	0.56		10.44	4.55	0.00	0.000	0.000
3/31/1986	9.15	5.23	0.57		10.72	4.71	0.00	0.000	0.000
4/30/1986	3.99	3.13	0.78		10.84	4.81	0.00	0.000	0.000
5/31/1986	5.30	4.01	0.76		11.01	4.93	0.00	0.000	0.000
6/30/1986	8.50	5.46	0.64		11.26	5.09	0.00	0.000	0.000
7/31/1986	10.42	5.11	0.49		11.59	5.25	0.00	0.000	0.000
8/31/1986	10.35	4.65	0.45		11.91	5.40	0.00	0.000	0.000
9/30/1986	9.37	4.85	0.52		12.19	5.54	0.00	0.000	0.000
10/31/1986	9.41	4.80	0.51		12.48	5.69	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
11/30/1986	9.41	4.33	0.46		12.76	5.82	0.00	0.000	0.000
12/31/1986	8.18	4.80	0.59		13.02	5.97	0.00	0.000	0.000
1/31/1987	9.57	4.88	0.51		13.31	6.12	0.00	0.000	0.000
2/28/1987	10.04	5.21	0.52		13.59	6.27	0.00	0.000	0.000
3/31/1987	9.97	5.27	0.53		13.90	6.43	0.00	0.000	0.000
4/30/1987	9.71	5.69	0.59		14.19	6.60	0.00	0.000	0.000
5/31/1987	8.82	5.06	0.57		14.47	6.76	0.00	0.000	0.000
6/30/1987	9.27	5.84	0.63		14.74	6.93	0.00	0.000	0.000
7/31/1987	9.18	6.00	0.65		15.03	7.12	0.00	0.000	0.000
8/31/1987	10.20	6.85	0.67		15.35	7.33	0.00	0.000	0.000
9/30/1987	9.63	6.76	0.70		15.63	7.53	0.00	0.000	0.000
10/31/1987	9.59	5.93	0.62		15.93	7.72	0.00	0.000	0.000
11/30/1987	9.29	6.05	0.65		16.21	7.90	0.00	0.000	0.000
12/31/1987	9.42	6.19	0.66		16.50	8.09	0.00	0.000	0.000
1/31/1988	8.79	5.87	0.67		16.77	8.27	0.00	0.000	0.000
2/29/1988	8.57	5.71	0.67		17.02	8.44	0.00	0.000	0.000
3/31/1988	8.28	5.64	0.68		17.28	8.61	0.00	0.000	0.000
4/30/1988	6.52	5.41	0.83		17.48	8.78	0.00	0.000	0.000
5/31/1988	7.78	6.76	0.87		17.72	8.99	0.00	0.000	0.000
6/30/1988	7.52	6.31	0.84		17.94	9.17	0.00	0.000	0.000
7/31/1988	7.88	6.57	0.83		18.19	9.38	0.00	0.000	0.000
8/31/1988	7.82	6.25	0.80		18.43	9.57	0.00	0.000	0.000
9/30/1988	8.36	8.00	0.96		18.68	9.81	0.00	0.000	0.000
10/31/1988	8.64	8.69	1.01		18.95	10.08	0.00	0.000	0.000
11/30/1988	8.55	8.98	1.05		19.20	10.35	0.00	0.000	0.000
12/31/1988	8.63	8.63	1.00		19.47	10.62	0.00	0.000	0.000
1/31/1989	8.46	8.46	1.00		19.73	10.88	0.00	0.000	0.000
2/28/1989	7.49	8.83	1.18		19.94	11.13	0.00	0.000	0.000
3/31/1989	7.57	8.50	1.12		20.18	11.39	0.00	0.000	0.000
4/30/1989	7.34	7.90	1.08		20.40	11.63	0.00	0.000	0.000
5/31/1989	7.13	7.80	1.10		20.62	11.87	0.00	0.000	0.000
6/30/1989	6.91	7.77	1.13		20.83	12.10	0.00	0.000	0.000
7/31/1989	6.71	7.91	1.18		21.03	12.35	0.00	0.000	0.000
8/31/1989	5.67	6.91	1.22		21.21	12.56	0.00	0.000	0.000
9/30/1989	6.63	7.78	1.17		21.41	12.80	0.00	0.000	0.000
10/31/1989	6.31	7.38	1.17		21.61	13.03	0.00	0.000	0.000
11/30/1989	5.59	7.72	1.38		21.77	13.26	0.00	0.000	0.000
12/31/1989	4.75	6.95	1.46		21.92	13.47	0.00	0.000	0.000
1/31/1990	5.36	6.08	1.13		22.09	13.66	0.00	0.000	0.000
2/28/1990	5.37	5.85	1.09	17.98	22.24	13.82	0.50	2.429	0.025
3/31/1990	5.43	4.65	0.86	17.75	22.41	13.97	1.05	2.853	0.052
4/30/1990	5.51	5.75	1.04	17.61	22.57	14.14	1.58	2.398	0.077
5/31/1990	5.47	6.30	1.15	16.13	22.74	14.34	2.08	2.047	0.100
6/30/1990	5.52	7.00	1.27	16.96	22.91	14.55	2.59	1.974	0.122
7/31/1990	5.43	6.06	1.12	16.39	23.07	14.73	3.10	2.149	0.145
8/31/1990	5.45	6.60	1.21	15.76	23.24	14.94	3.59	1.928	0.166
9/30/1990	4.91	6.73	1.37	15.93	23.39	15.14	4.07	1.955	0.186
10/31/1990	7.81	7.55	0.97	15.49	23.63	15.37	4.55	1.579	0.205

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
11/30/1990	8.47	10.03	1.18	15.73	23.89	15.68	5.02	1.261	0.222
12/31/1990	8.68	10.74	1.24	15.57	24.16	16.01	5.50	1.176	0.239
1/31/1991	8.66	10.05	1.16	17.38	24.42	16.32	6.04	1.385	0.258
2/28/1991	8.94	10.24	1.15	14.69	24.67	16.61	6.45	1.145	0.272
3/31/1991	9.00	10.14	1.13	14.31	24.95	16.92	6.89	1.123	0.286
4/30/1991	8.78	10.17	1.16	13.06	25.22	17.23	7.29	1.027	0.297
5/31/1991	8.97	9.97	1.11	12.77	25.50	17.53	7.68	1.016	0.308
6/30/1991	8.86	9.87	1.11	11.67	25.76	17.83	8.03	0.939	0.318
7/31/1991	8.66	9.90	1.14	10.09	26.03	18.14	8.34	0.814	0.325
8/31/1991	8.56	9.69	1.13	8.42	26.29	18.44	8.61	0.692	0.330
9/30/1991	8.18	9.64	1.18	7.39	26.54	18.73	8.83	0.616	0.334
10/31/1991	7.87	9.35	1.19	6.15	26.78	19.02	9.02	0.530	0.337
11/30/1991	7.90	9.13	1.16	4.81	27.02	19.29	9.16	0.421	0.338
12/31/1991	7.73	8.66	1.12	8.43	27.26	19.56	9.42	0.774	0.343
1/31/1992	7.63	8.28	1.09	6.13	27.50	19.82	9.61	0.584	0.346
2/29/1992	7.53	8.28	1.10	4.69	27.72	20.06	9.75	0.449	0.347
3/31/1992	7.35	8.13	1.11	3.11	27.94	20.31	9.85	0.303	0.347
4/30/1992	7.17	7.90	1.10	1.89	28.16	20.55	9.90	0.189	0.345
5/31/1992	7.00	8.18	1.17	1.85	28.38	20.80	9.96	0.182	0.343
6/30/1992	6.92	8.58	1.24	1.44	28.58	21.06	10.00	0.136	0.341
7/31/1992	7.10	7.57	1.07	1.23	28.80	21.29	10.04	0.128	0.339
8/31/1992	6.33	9.46	1.49	1.39	29.00	21.58	10.08	0.123	0.336
9/30/1992	6.49	9.09	1.40	1.41	29.19	21.86	10.13	0.129	0.334
10/31/1992	6.31	8.96	1.42	1.63	29.39	22.13	10.18	0.151	0.332
11/30/1992	6.26	8.75	1.40	2.00	29.58	22.40	10.24	0.189	0.331
12/31/1992	6.27	8.90	1.42	1.69	29.77	22.67	10.29	0.157	0.329
1/31/1993	6.12	9.13	1.49	1.50	29.96	22.96	10.34	0.138	0.327
2/28/1993	6.09	9.35	1.53	1.50	30.13	23.22	10.38	0.135	0.325
3/31/1993	5.96	9.39	1.57	1.50	30.32	23.51	10.42	0.135	0.323
4/30/1993	5.71	9.75	1.71	1.50	30.49	23.80	10.47	0.132	0.321
5/31/1993	5.54	9.20	1.66	1.10	30.66	24.09	10.50	0.102	0.319
6/30/1993	5.11	9.01	1.76	1.50	30.81	24.36	10.55	0.143	0.317
7/31/1993	6.94	11.74	1.69	1.14	31.03	24.72	10.58	0.083	0.314
8/31/1993	6.59	9.72	1.48		31.23	25.02	10.58	0.000	0.311
9/30/1993	6.21	9.49	1.53		31.42	25.31	10.58	0.000	0.308
10/31/1993	6.80	11.94	1.76	27.67	31.63	25.68	11.44	1.990	0.329
11/30/1993	7.41	10.54	1.42	22.78	31.85	25.99	12.13	1.796	0.344
12/31/1993	7.64	10.17	1.33	16.02	32.09	26.31	12.62	1.294	0.355
1/31/1994	7.23	9.90	1.37	11.85	32.31	26.62	12.99	0.988	0.361
2/28/1994	7.36	10.12	1.38	11.97	32.52	26.90	13.32	0.977	0.367
3/31/1994	7.16	10.09	1.41	11.88	32.74	27.21	13.69	0.977	0.373
4/30/1994	6.92	10.04	1.45	12.22	32.95	27.51	14.06	1.015	0.380
5/31/1994	7.00	11.11	1.59	12.85	33.17	27.86	14.46	0.978	0.386
6/30/1994	7.02	10.95	1.56	11.59	33.38	28.19	14.81	0.893	0.391
7/31/1994	7.08	10.81	1.53	12.48	33.60	28.52	15.19	0.971	0.397
8/31/1994	6.68	11.47	1.72	13.19	33.80	28.88	15.60	0.984	0.404
9/30/1994	6.45	13.51	2.09	11.70	34.00	29.28	15.95	0.761	0.408
10/31/1994	6.36	16.78	2.64	11.17	34.19	29.80	16.30	0.600	0.411

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
11/30/1994	7.01	17.64	2.52	12.08	34.40	30.33	16.66	0.614	0.414
12/31/1994	6.71	17.30	2.58	11.84	34.61	30.87	17.03	0.615	0.417
1/31/1995	6.99	15.90	2.27	10.85	34.83	31.36	17.36	0.606	0.419
2/28/1995	7.07	17.21	2.43	10.00	35.03	31.84	17.64	0.519	0.420
3/31/1995	6.99	17.42	2.49	9.55	35.24	32.38	17.94	0.491	0.421
4/30/1995	6.93	15.65	2.26	8.69	35.45	32.85	18.20	0.492	0.422
5/31/1995	6.35	12.94	2.04	7.82	35.65	33.25	18.44	0.529	0.423
6/30/1995	6.66	11.48	1.72	6.51	35.85	33.60	18.64	0.485	0.424
7/31/1995	6.64	10.78	1.62	7.96	36.05	33.93	18.89	0.627	0.426
8/31/1995	6.23	10.54	1.69	10.14	36.25	34.26	19.20	0.822	0.429
9/30/1995	6.75	11.07	1.64	9.33	36.45	34.59	19.48	0.716	0.432
10/31/1995	7.11	11.80	1.66	11.65	36.67	34.96	19.84	0.841	0.435
11/30/1995	7.08	11.41	1.61	11.43	36.88	35.30	20.18	0.850	0.439
12/31/1995	6.25	9.50	1.52	7.95	37.08	35.59	20.43	0.703	0.441
1/31/1996	6.11	9.59	1.57	7.83	37.27	35.89	20.67	0.689	0.443
2/29/1996	5.92	9.53	1.61	7.85	37.44	36.17	20.90	0.698	0.445
3/31/1996	6.03	11.72	1.94	9.76	37.62	36.53	21.20	0.725	0.447
4/30/1996	6.95	11.57	1.67	11.08	37.83	36.88	21.54	0.816	0.450
5/31/1996	6.81	11.17	1.64	10.38	38.04	37.22	21.86	0.790	0.453
6/30/1996	6.62	11.75	1.78	10.85	38.24	37.58	22.18	0.794	0.456
7/31/1996	6.64	15.10	2.27	15.72	38.45	38.04	22.67	0.924	0.461
8/31/1996	6.53	15.29	2.34	16.64	38.65	38.52	23.19	0.969	0.467
9/30/1996	6.59	14.39	2.18	12.29	38.85	38.95	23.55	0.754	0.469
10/31/1996	6.36	14.75	2.32	13.57	39.05	39.41	23.98	0.818	0.473
11/30/1996	6.62	13.62	2.06	10.17	39.24	39.82	24.28	0.655	0.475
12/31/1996	6.51	12.47	1.92	5.86	39.45	40.20	24.46	0.408	0.474
1/31/1997	6.39	12.53	1.96	3.88	39.64	40.59	24.58	0.270	0.472
2/28/1997	6.30	14.29	2.27	3.90	39.82	40.99	24.69	0.242	0.470
3/31/1997	5.81	13.70	2.36	4.76	40.00	41.42	24.84	0.309	0.469
4/30/1997	5.65	13.68	2.42	5.15	40.17	41.83	24.99	0.336	0.468
5/31/1997	5.93	14.15	2.39	5.23	40.35	42.26	25.16	0.329	0.466
6/30/1997	5.79	13.08	2.26	6.15	40.53	42.66	25.34	0.417	0.466
7/31/1997	5.72	12.71	2.22	3.27	40.70	43.05	25.44	0.228	0.464
8/31/1997	5.66	14.27	2.52	5.55	40.88	43.49	25.61	0.349	0.463
9/30/1997	5.61	14.55	2.59	7.31	41.05	43.93	25.83	0.452	0.463
10/31/1997	5.56	14.81	2.67	7.55	41.22	44.39	26.07	0.460	0.463
11/30/1997	5.72	14.70	2.57	7.35	41.39	44.83	26.29	0.450	0.463
12/31/1997	5.56	14.75	2.65	7.17	41.56	45.29	26.51	0.438	0.463
1/31/1998	5.57	15.05	2.70	7.16	41.74	45.75	26.73	0.430	0.462
2/28/1998	5.46	14.59	2.67	3.59	41.89	46.16	26.83	0.222	0.460
3/31/1998	23.92	16.94	0.71	6.19	42.63	46.69	27.02	0.260	0.458
4/30/1998	26.10	15.40	0.59	6.15	43.42	47.15	27.21	0.268	0.456
5/31/1998	25.73	15.42	0.60	7.00	44.21	47.63	27.43	0.306	0.454
6/30/1998	26.37	21.04	0.80	7.91	45.00	48.26	27.66	0.276	0.451
7/31/1998	25.22	24.87	0.99	8.25	45.79	49.03	27.92	0.257	0.448
8/31/1998	22.25	25.16	1.13	10.48	46.48	49.81	28.24	0.332	0.447
9/30/1998	20.51	23.86	1.16	12.46	47.09	50.53	28.62	0.418	0.446
10/31/1998	20.36	21.22	1.04	14.99	47.72	51.18	29.08	0.553	0.448



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
11/30/1998	18.95	26.64	1.41	14.55	48.29	51.98	29.52	0.453	0.448
12/31/1998	18.74	22.40	1.20	13.49	48.87	52.68	29.94	0.485	0.448
1/31/1999	18.08	21.78	1.20	11.91	49.43	53.35	30.31	0.441	0.448
2/28/1999	17.71	22.76	1.29	11.84	49.93	53.99	30.64	0.425	0.448
3/31/1999	17.09	22.28	1.30	11.33	50.46	54.68	30.99	0.416	0.447
4/30/1999	16.64	23.14	1.39	10.41	50.96	55.37	31.30	0.372	0.446
5/31/1999	16.35	23.60	1.44	10.66	51.46	56.11	31.63	0.376	0.446
6/30/1999	16.10	23.74	1.47	11.21	51.95	56.82	31.97	0.395	0.445
7/31/1999	15.30	23.60	1.54	9.96	52.42	57.55	32.28	0.355	0.444
8/31/1999	15.37	23.60	1.54	11.94	52.90	58.28	32.65	0.426	0.444
9/30/1999	15.26	21.05	1.38	18.41	53.35	58.91	33.20	0.723	0.447
10/31/1999	14.86	18.26	1.23	18.30	53.82	59.48	33.77	0.811	0.450
11/30/1999	15.74	17.81	1.13	17.09	54.29	60.01	34.28	0.764	0.453
12/31/1999	15.37	18.63	1.21	14.59	54.76	60.59	34.73	0.632	0.454
1/31/2000	15.25	19.35	1.27	9.98	55.24	61.19	35.04	0.420	0.454
2/29/2000	19.41	24.25	1.25	9.95	55.80	61.89	35.33	0.333	0.453
3/31/2000	22.81	25.68	1.13	14.29	56.51	62.69	35.77	0.443	0.453
4/30/2000	22.98	23.28	1.01	15.49	57.20	63.39	36.24	0.518	0.453
5/31/2000	22.05	24.86	1.13	15.33	57.88	64.16	36.71	0.491	0.454
6/30/2000	21.10	27.53	1.30	15.36	58.51	64.98	37.17	0.457	0.454
7/31/2000	17.99	25.03	1.39	14.39	59.07	65.76	37.62	0.476	0.454
8/31/2000	16.65	24.24	1.46	12.05	59.59	66.51	37.99	0.415	0.454
9/30/2000	18.82	29.68	1.58	12.77	60.15	67.40	38.38	0.364	0.453
10/31/2000	17.02	29.26	1.72	12.29	60.68	68.31	38.76	0.360	0.451
11/30/2000	16.40	28.68	1.75	12.18	61.17	69.17	39.12	0.365	0.450
12/31/2000	16.07	27.64	1.72	11.93	61.67	70.03	39.49	0.370	0.449
1/31/2001	13.99	28.81	2.06	11.31	62.10	70.92	39.84	0.344	0.448
2/28/2001	13.64	27.78	2.04	10.40	62.48	71.70	40.13	0.328	0.447
3/31/2001	13.48	28.70	2.13	10.21	62.90	72.59	40.45	0.313	0.446
4/30/2001	12.62	27.83	2.20	9.71	63.28	73.42	40.74	0.309	0.444
5/31/2001	11.54	25.11	2.18	9.80	63.64	74.20	41.05	0.345	0.443
6/30/2001	12.59	28.46	2.26	9.67	64.02	75.05	41.34	0.301	0.442
7/31/2001	11.88	26.37	2.22	9.57	64.39	75.87	41.63	0.321	0.441
8/31/2001	12.99	29.79	2.29	9.57	64.79	76.80	41.93	0.285	0.439
9/30/2001	12.89	28.26	2.19	7.26	65.17	77.64	42.15	0.227	0.437
10/31/2001	11.73	31.17	2.66	6.74	65.54	78.61	42.36	0.195	0.434
11/30/2001	11.82	29.32	2.48	6.37	65.89	79.49	42.55	0.195	0.432
12/31/2001	11.51	29.07	2.53	6.13	66.25	80.39	42.74	0.189	0.429
1/31/2002	11.06	28.82	2.61	5.28	66.59	81.28	42.90	0.165	0.427
2/28/2002	10.96	29.72	2.71	7.18	66.90	82.12	43.10	0.218	0.425
3/31/2002	10.05	29.51	2.94	25.86	67.21	83.03	43.90	0.798	0.428
4/30/2002	9.65	30.14	3.12	23.24	67.50	83.93	44.60	0.706	0.431
5/31/2002	9.30	30.43	3.27	21.64	67.79	84.88	45.27	0.653	0.433
6/30/2002	10.24	33.78	3.30	23.93	68.10	85.89	45.99	0.651	0.436
7/31/2002	9.09	32.02	3.52	22.12	68.38	86.88	46.68	0.638	0.438
8/31/2002	9.44	32.56	3.45	20.98	68.67	87.89	47.33	0.595	0.439
9/30/2002	8.80	31.98	3.63	19.30	68.93	88.85	47.91	0.559	0.440
10/31/2002	8.94	32.65	3.65	20.13	69.21	89.86	48.53	0.571	0.442

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11/30/2002	9.31	32.03	3.44	19.93	69.49	90.83	49.13	0.574	0.443
12/31/2002	9.37	33.11	3.53	21.06	69.78	91.85	49.78	0.588	0.444
1/31/2003	9.34	33.99	3.64	25.97	70.07	92.91	50.59	0.708	0.447
2/28/2003	9.14	33.84	3.70	26.50	70.33	93.85	51.33	0.726	0.449
3/31/2003	9.20	35.18	3.82	25.06	70.61	94.94	52.10	0.662	0.452
4/30/2003	8.53	42.03	4.93	26.37	70.87	96.20	52.90	0.592	0.453
5/31/2003	8.57	43.01	5.02	27.16	71.13	97.54	53.74	0.597	0.455
6/30/2003	8.44	42.09	4.99	26.47	71.39	98.80	54.53	0.594	0.457
7/31/2003	8.26	42.05	5.09	25.74	71.64	100.10	55.33	0.579	0.458
8/31/2003	8.29	42.41	5.12	25.39	71.90	101.42	56.12	0.567	0.459
9/30/2003	7.71	38.37	4.98	25.67	72.13	102.57	56.89	0.632	0.461
10/31/2003	7.97	37.05	4.65	33.39	72.38	103.72	57.92	0.848	0.465
11/30/2003	11.57	40.21	3.47	34.57	72.73	104.92	58.96	0.794	0.468
12/31/2003	14.54	39.38	2.71	34.83	73.18	106.15	60.04	0.799	0.472
1/31/2004	13.88	39.40	2.84	35.40	73.61	107.37	61.14	0.815	0.475
2/29/2004	13.48	40.02	2.97	37.62	74.00	108.53	62.23	0.857	0.479
3/31/2004	12.82	41.39	3.23	36.38	74.40	109.81	63.35	0.807	0.482
4/30/2004	12.35	38.30	3.10	33.79	74.77	110.96	64.37	0.807	0.485
5/31/2004	11.49	37.84	3.29	35.90	75.12	112.13	65.48	0.872	0.489
6/30/2004	11.55	40.69	3.52	38.25	75.47	113.35	66.63	0.869	0.493
7/31/2004	11.22	39.70	3.54	36.89	75.82	114.58	67.77	0.859	0.496
8/31/2004	11.02	42.37	3.85	38.29	76.16	115.90	68.96	0.840	0.500
9/30/2004	11.17	41.70	3.73	35.31	76.49	117.15	70.02	0.786	0.503
10/31/2004	10.72	41.94	3.91	39.27	76.83	118.45	71.23	0.872	0.506
11/30/2004	10.79	42.54	3.94	37.02	77.15	119.73	72.35	0.811	0.509
12/31/2004	8.61	45.04	5.23	40.98	77.42	121.12	73.62	0.862	0.513
1/31/2005	9.98	45.86	4.60	40.99	77.73	122.54	74.89	0.841	0.516
2/28/2005	9.57	48.26	5.04	42.91	77.99	123.89	76.09	0.841	0.520
3/31/2005	8.97	48.39	5.40	44.28	78.27	125.39	77.46	0.868	0.523
4/30/2005	8.82	48.30	5.48	42.82	78.54	126.84	78.75	0.842	0.527
5/31/2005	8.62	47.31	5.49	40.07	78.80	128.31	79.99	0.805	0.529
6/30/2005	8.50	48.02	5.65	36.84	79.06	129.75	81.09	0.730	0.531
7/31/2005	8.75	47.08	5.38	37.45	79.33	131.21	82.25	0.755	0.534
8/31/2005	8.48	48.48	5.71	43.25	79.59	132.71	83.59	0.849	0.537
9/30/2005	7.93	47.55	6.00	41.98	79.83	134.14	84.85	0.842	0.540
10/31/2005	7.41	47.17	6.36	41.07	80.06	135.60	86.13	0.833	0.543
11/30/2005	7.51	49.42	6.58	42.08	80.29	137.08	87.39	0.816	0.545
12/31/2005	7.35	48.80	6.64	39.57	80.51	138.60	88.62	0.777	0.547
1/31/2006	7.79	50.64	6.50	34.81	80.75	140.17	89.69	0.658	0.549
2/28/2006	7.55	50.47	6.68	32.34	80.97	141.58	90.60	0.614	0.549
3/31/2006	7.42	50.51	6.80	33.99	81.20	143.15	91.65	0.646	0.550
4/30/2006	7.41	49.19	6.64	44.82	81.42	144.62	93.00	0.873	0.553
5/31/2006	7.25	52.70	7.27	47.51	81.64	146.26	94.47	0.867	0.556
6/30/2006	7.57	51.02	6.74	43.85	81.87	147.79	95.79	0.824	0.559
7/31/2006	7.67	48.52	6.33	40.83	82.11	149.29	97.05	0.805	0.561
8/31/2006	7.54	46.87	6.21	43.78	82.34	150.74	98.41	0.892	0.564
9/30/2006	7.29	46.59	6.39	43.27	82.56	152.14	99.71	0.888	0.566
10/31/2006	7.03	35.59	5.06	36.45	82.78	153.24	100.84	0.969	0.569

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
11/30/2006	7.10	47.49	6.69	40.47	82.99	154.67	102.05	0.817	0.571
12/31/2006	7.20	48.77	6.78	37.54	83.22	156.18	103.22	0.738	0.573
1/31/2007	7.35	47.69	6.49	39.18	83.44	157.66	104.43	0.787	0.574
2/28/2007	7.22	46.20	6.40	38.24	83.64	158.95	105.50	0.792	0.576
3/31/2007	7.07	44.76	6.33	36.91	83.86	160.34	106.65	0.789	0.578
4/30/2007	6.98	46.36	6.64	37.56	84.07	161.73	107.77	0.776	0.579
5/31/2007	7.00	46.74	6.68	37.27	84.29	163.18	108.93	0.764	0.581
6/30/2007	6.51	46.65	7.17	36.62	84.49	164.58	110.03	0.754	0.582
7/31/2007	6.43	47.14	7.33	34.38	84.69	166.04	111.09	0.702	0.583
8/31/2007	6.50	44.97	6.92	36.71	84.89	167.44	112.23	0.784	0.585
9/30/2007	6.40	44.05	6.88	35.07	85.08	168.76	113.28	0.764	0.586
10/31/2007	6.20	44.44	7.17	32.91	85.27	170.13	114.30	0.712	0.587
11/30/2007	6.30	44.24	7.02	33.40	85.46	171.46	115.30	0.725	0.588
12/31/2007	6.30	46.34	7.36	32.65	85.66	172.90	116.32	0.678	0.588
1/31/2008	6.30	47.33	7.52	35.84	85.85	174.37	117.43	0.729	0.590
2/29/2008	6.44	47.83	7.43	35.44	86.04	175.75	118.45	0.713	0.590
3/31/2008	5.87	42.73	7.28	33.03	86.22	177.08	119.48	0.743	0.591
4/30/2008	5.38	40.78	7.58	33.03	86.38	178.30	120.47	0.780	0.593
5/31/2008	5.84	45.87	7.85	36.68	86.56	179.72	121.61	0.771	0.594
6/30/2008	5.78	46.90	8.12	35.47	86.73	181.13	122.67	0.730	0.595
7/31/2008	4.65	40.96	8.82	29.39	86.88	182.40	123.58	0.695	0.596
8/31/2008	5.79	48.11	8.31	35.88	87.06	183.89	124.69	0.721	0.596
9/30/2008	5.72	46.95	8.21	35.22	87.23	185.30	125.75	0.725	0.597
10/31/2008	5.67	47.58	8.38	35.22	87.41	186.77	126.84	0.716	0.598
11/30/2008	5.75	48.63	8.46	34.99	87.58	188.23	127.89	0.696	0.599
12/31/2008	5.33	49.13	9.21	30.85	87.74	189.76	128.85	0.609	0.599
1/31/2009	5.08	46.17	9.09	28.48	87.90	191.19	129.73	0.598	0.599
2/28/2009	5.12	46.55	9.10	34.65	88.04	192.49	130.70	0.721	0.600
3/31/2009	4.99	48.22	9.66	34.81	88.20	193.98	131.78	0.701	0.600
4/30/2009	4.52	42.26	9.36	30.25	88.33	195.25	132.69	0.694	0.601
5/31/2009	4.97	48.92	9.85	34.20	88.49	196.77	133.75	0.679	0.601
6/30/2009	4.62	46.08	9.97	31.36	88.63	198.15	134.69	0.661	0.602
7/31/2009	5.14	48.33	9.41	42.84	88.79	199.65	136.02	0.860	0.604
8/31/2009	5.07	48.43	9.54	45.24	88.94	201.15	137.42	0.907	0.606
9/30/2009	5.00	46.85	9.38	42.86	89.09	202.56	138.71	0.887	0.607
10/31/2009	4.85	46.18	9.53	40.49	89.24	203.99	139.96	0.851	0.609
11/30/2009	4.76	45.58	9.58	40.70	89.39	205.36	141.18	0.867	0.611
12/31/2009	4.71	44.09	9.37	39.61	89.53	206.72	142.41	0.871	0.612
1/31/2010	4.65	45.86	9.86	39.52	89.68	208.14	143.63	0.837	0.614
2/28/2010	4.52	46.34	10.25	40.04	89.80	209.44	144.76	0.840	0.615
3/31/2010	4.57	47.14	10.31	39.67	89.94	210.90	145.99	0.819	0.616
4/30/2010	4.49	46.49	10.36	39.79	90.08	212.30	147.18	0.833	0.617
5/31/2010	4.51	47.59	10.55	40.02	90.22	213.77	148.42	0.819	0.619
6/30/2010	4.10	44.50	10.87	36.75	90.34	215.11	149.52	0.804	0.620
7/31/2010	4.51	45.92	10.18	39.65	90.48	216.53	150.75	0.839	0.621
8/31/2010	4.43	45.60	10.30	38.59	90.62	217.95	151.95	0.823	0.622
9/30/2010	4.20	45.06	10.73	40.22	90.75	219.30	153.15	0.869	0.624
10/31/2010	4.16	43.63	10.49	44.85	90.87	220.65	154.54	1.000	0.626

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
11/30/2010	4.12	44.15	10.71	45.38	91.00	221.97	155.91	1.001	0.628
12/31/2010	4.15	43.39	10.45	43.15	91.13	223.32	157.24	0.968	0.630
1/31/2011	4.33	44.23	10.21	44.19	91.26	224.69	158.61	0.971	0.632
2/28/2011	4.28	43.70	10.22	44.45	91.38	225.91	159.86	0.989	0.633
3/31/2011	4.09	43.11	10.54	44.52	91.51	227.25	161.24	1.005	0.636
4/30/2011	3.49	40.26	11.55	42.11	91.61	228.46	162.50	1.020	0.637
5/31/2011	3.33	39.42	11.83	39.34	91.72	229.68	163.72	0.974	0.639
6/30/2011	3.27	38.84	11.88	38.91	91.81	230.85	164.89	0.978	0.641
7/31/2011	2.82	34.88	12.37	36.49	91.90	231.93	166.02	1.022	0.642
8/31/2011	3.09	36.44	11.80	50.15	92.00	233.06	167.57	1.343	0.645
9/30/2011	3.14	36.97	11.78	47.15	92.09	234.17	168.99	1.245	0.648
10/31/2011	2.93	37.48	12.79	47.00	92.18	235.33	170.45	1.226	0.651
11/30/2011	3.22	39.10	12.14	48.33	92.28	236.50	171.90	1.207	0.653
12/31/2011	4.14	43.81	10.58	51.73	92.41	237.86	173.50	1.149	0.656

# Pattern: 02/10-30-11-26 Set: NV Scallion Unit #2

Oil Formation Vol. Factor : 1.05 m3/m3

Water Formation Vol Factor : 1.00 m3/m3

Water / Oil Ratio : 22.19 m3/m3

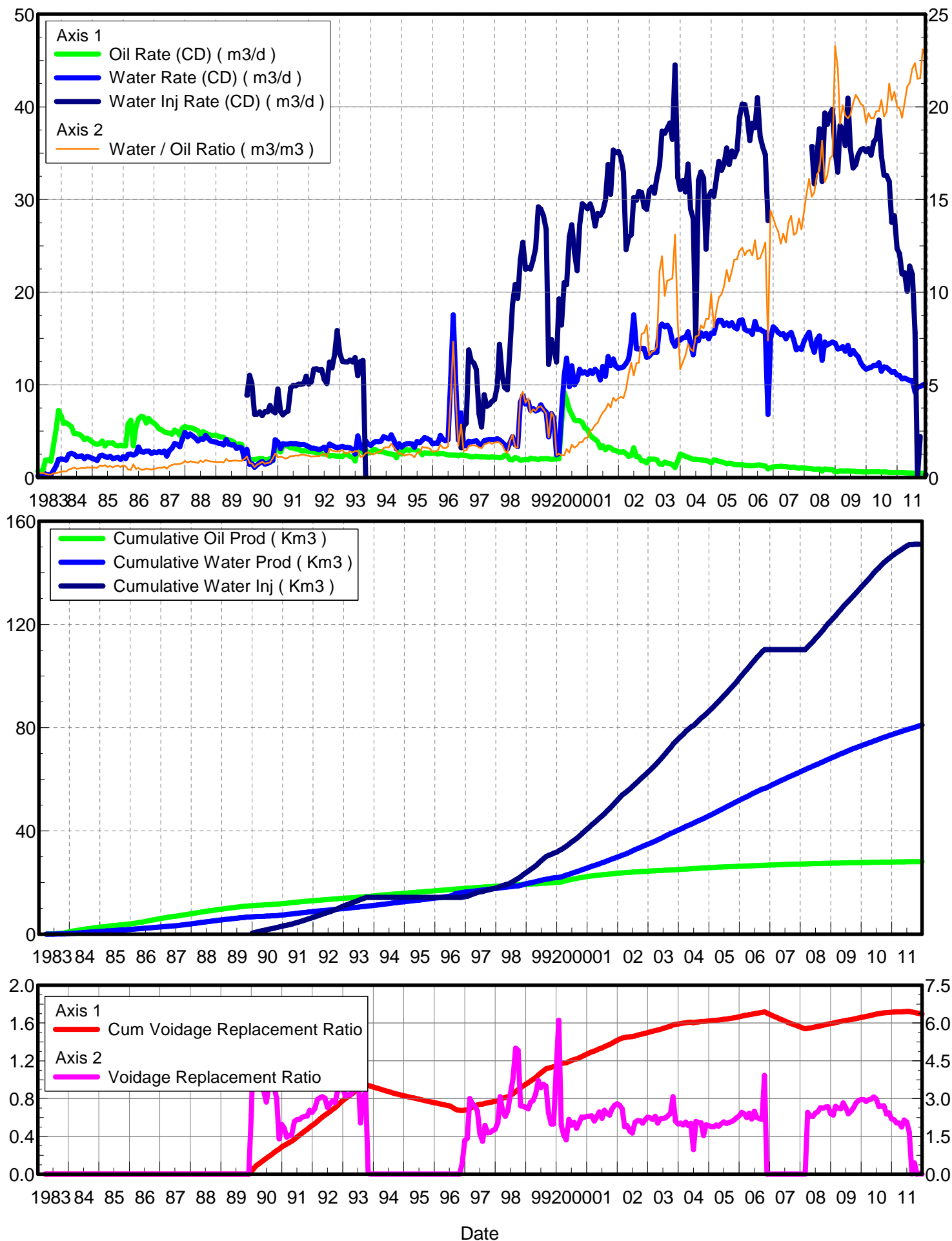
March 04, 2012

Operator: TUNDRA\_OIL\_&\_GAS\_LIMITED

Oil Rate (CD) : 0.45 m3/d

Water Rate (CD) : 9.93 m3/d

Water Inj Rate (CD) : 0.31 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 Replacemnt Ratio
3/31/1983	0.68	0.14	0.20		0.02	0.00	0.00	0.000	0.000
4/30/1983	0.59	0.14	0.24		0.04	0.01	0.00	0.000	0.000
5/31/1983	0.85	0.21	0.25		0.07	0.02	0.00	0.000	0.000
6/30/1983	1.90	0.36	0.19		0.12	0.03	0.00	0.000	0.000
7/31/1983	1.90	0.31	0.16		0.18	0.04	0.00	0.000	0.000
8/31/1983	1.76	0.29	0.17		0.24	0.04	0.00	0.000	0.000
9/30/1983	3.42	0.73	0.21		0.34	0.07	0.00	0.000	0.000
10/31/1983	5.17	1.24	0.24		0.50	0.10	0.00	0.000	0.000
11/30/1983	7.23	1.96	0.27		0.72	0.16	0.00	0.000	0.000
12/31/1983	6.61	2.00	0.30		0.92	0.23	0.00	0.000	0.000
1/31/1984	5.86	1.95	0.33		1.10	0.29	0.00	0.000	0.000
2/29/1984	5.89	1.88	0.32		1.27	0.34	0.00	0.000	0.000
3/31/1984	5.71	2.52	0.44		1.45	0.42	0.00	0.000	0.000
4/30/1984	5.50	2.60	0.47		1.61	0.50	0.00	0.000	0.000
5/31/1984	4.74	2.51	0.53		1.76	0.57	0.00	0.000	0.000
6/30/1984	4.72	2.26	0.48		1.90	0.64	0.00	0.000	0.000
7/31/1984	4.68	2.30	0.49		2.05	0.71	0.00	0.000	0.000
8/31/1984	4.46	2.33	0.52		2.19	0.79	0.00	0.000	0.000
9/30/1984	4.08	2.04	0.50		2.31	0.85	0.00	0.000	0.000
10/31/1984	4.22	2.27	0.54		2.44	0.92	0.00	0.000	0.000
11/30/1984	4.08	2.20	0.54		2.56	0.98	0.00	0.000	0.000
12/31/1984	3.83	2.07	0.54		2.68	1.05	0.00	0.000	0.000
1/31/1985	3.64	1.95	0.53		2.79	1.11	0.00	0.000	0.000
2/28/1985	3.58	1.84	0.51		2.89	1.16	0.00	0.000	0.000
3/31/1985	3.67	2.33	0.64		3.01	1.23	0.00	0.000	0.000
4/30/1985	3.94	2.40	0.61		3.13	1.30	0.00	0.000	0.000
5/31/1985	3.40	2.27	0.67		3.23	1.37	0.00	0.000	0.000
6/30/1985	3.73	2.15	0.57		3.34	1.44	0.00	0.000	0.000
7/31/1985	3.72	2.28	0.61		3.46	1.51	0.00	0.000	0.000
8/31/1985	3.73	2.04	0.55		3.57	1.57	0.00	0.000	0.000
9/30/1985	3.48	2.12	0.61		3.68	1.64	0.00	0.000	0.000
10/31/1985	3.43	2.19	0.64		3.79	1.70	0.00	0.000	0.000
11/30/1985	3.48	1.96	0.56		3.89	1.76	0.00	0.000	0.000
12/31/1985	3.42	2.24	0.65		4.00	1.83	0.00	0.000	0.000
1/31/1986	3.42	2.05	0.60		4.10	1.90	0.00	0.000	0.000
2/28/1986	5.79	2.50	0.43		4.26	1.97	0.00	0.000	0.000
3/31/1986	6.17	2.53	0.41		4.46	2.04	0.00	0.000	0.000
4/30/1986	3.42	2.42	0.71		4.56	2.12	0.00	0.000	0.000
5/31/1986	5.50	2.56	0.47		4.73	2.20	0.00	0.000	0.000
6/30/1986	6.31	3.29	0.52		4.92	2.29	0.00	0.000	0.000
7/31/1986	6.58	2.77	0.42		5.12	2.38	0.00	0.000	0.000
8/31/1986	6.52	2.72	0.42		5.32	2.46	0.00	0.000	0.000
9/30/1986	5.88	2.84	0.48		5.50	2.55	0.00	0.000	0.000
10/31/1986	6.36	2.85	0.45		5.70	2.64	0.00	0.000	0.000
11/30/1986	6.02	2.60	0.43		5.88	2.72	0.00	0.000	0.000
12/31/1986	5.86	2.76	0.47		6.06	2.80	0.00	0.000	0.000
1/31/1987	5.58	2.69	0.48		6.23	2.88	0.00	0.000	0.000
2/28/1987	5.26	2.81	0.53		6.38	2.96	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
3/31/1987	5.14	2.69	0.52		6.54	3.05	0.00	0.000	0.000
4/30/1987	4.91	2.85	0.58		6.69	3.13	0.00	0.000	0.000
5/31/1987	4.85	2.30	0.47		6.84	3.20	0.00	0.000	0.000
6/30/1987	4.78	2.91	0.61		6.98	3.29	0.00	0.000	0.000
7/31/1987	4.67	3.16	0.68		7.13	3.39	0.00	0.000	0.000
8/31/1987	5.11	3.67	0.72		7.28	3.50	0.00	0.000	0.000
9/30/1987	4.95	3.58	0.72		7.43	3.61	0.00	0.000	0.000
10/31/1987	4.55	3.30	0.73		7.57	3.71	0.00	0.000	0.000
11/30/1987	5.31	4.14	0.78		7.73	3.84	0.00	0.000	0.000
12/31/1987	5.50	4.87	0.88		7.90	3.99	0.00	0.000	0.000
1/31/1988	5.40	4.39	0.81		8.07	4.12	0.00	0.000	0.000
2/29/1988	5.36	4.68	0.87		8.23	4.26	0.00	0.000	0.000
3/31/1988	5.33	4.48	0.84		8.39	4.40	0.00	0.000	0.000
4/30/1988	5.16	4.26	0.83		8.55	4.53	0.00	0.000	0.000
5/31/1988	5.05	3.95	0.78		8.70	4.65	0.00	0.000	0.000
6/30/1988	4.59	4.15	0.90		8.84	4.77	0.00	0.000	0.000
7/31/1988	4.94	4.12	0.83		8.99	4.90	0.00	0.000	0.000
8/31/1988	4.81	4.55	0.95		9.14	5.04	0.00	0.000	0.000
9/30/1988	4.66	4.20	0.90		9.28	5.17	0.00	0.000	0.000
10/31/1988	4.55	3.94	0.87		9.42	5.29	0.00	0.000	0.000
11/30/1988	4.54	3.86	0.85		9.56	5.41	0.00	0.000	0.000
12/31/1988	4.56	3.81	0.84		9.70	5.52	0.00	0.000	0.000
1/31/1989	4.45	3.68	0.83		9.84	5.64	0.00	0.000	0.000
2/28/1989	4.36	3.66	0.84		9.96	5.74	0.00	0.000	0.000
3/31/1989	4.33	3.50	0.81		10.10	5.85	0.00	0.000	0.000
4/30/1989	4.10	4.09	1.00		10.22	5.97	0.00	0.000	0.000
5/31/1989	4.07	3.60	0.88		10.34	6.08	0.00	0.000	0.000
6/30/1989	3.96	3.51	0.89		10.46	6.19	0.00	0.000	0.000
7/31/1989	3.82	3.52	0.92		10.58	6.30	0.00	0.000	0.000
8/31/1989	3.42	3.13	0.91		10.69	6.39	0.00	0.000	0.000
9/30/1989	3.63	3.26	0.90		10.80	6.49	0.00	0.000	0.000
10/31/1989	3.53	3.18	0.90		10.91	6.59	0.00	0.000	0.000
11/30/1989	2.08	2.06	0.99		10.97	6.65	0.00	0.000	0.000
12/31/1989	2.67	3.02	1.13	8.88	11.05	6.75	0.28	2.340	0.028
1/31/1990	1.80	1.41	0.78	11.02	11.11	6.79	0.62	5.704	0.062
2/28/1990	1.96	1.48	0.76	10.14	11.16	6.83	0.90	4.966	0.090
3/31/1990	1.95	1.10	0.56	6.81	11.22	6.87	1.11	4.092	0.110
4/30/1990	1.98	1.36	0.69	6.83	11.28	6.91	1.32	3.533	0.129
5/31/1990	2.03	1.56	0.77	7.07	11.35	6.95	1.54	3.286	0.150
6/30/1990	2.04	1.74	0.85	6.67	11.41	7.01	1.74	2.867	0.168
7/31/1990	1.92	1.43	0.75	7.10	11.47	7.05	1.96	3.569	0.189
8/31/1990	1.93	1.52	0.79	7.07	11.53	7.10	2.18	3.404	0.209
9/30/1990	2.05	1.66	0.81	7.77	11.59	7.15	2.41	3.460	0.229
10/31/1990	1.80	1.87	1.04	7.17	11.64	7.21	2.63	3.003	0.249
11/30/1990	3.15	4.06	1.29	6.98	11.74	7.33	2.84	1.403	0.265
12/31/1990	3.51	3.83	1.09	9.56	11.85	7.45	3.14	1.972	0.288
1/31/1991	2.76	3.10	1.13	7.11	11.93	7.54	3.36	1.822	0.305
2/28/1991	3.35	3.64	1.09	6.77	12.03	7.64	3.55	1.470	0.319

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
3/31/1991	3.50	3.57	1.02	7.04	12.13	7.76	3.76	1.534	0.334
4/30/1991	3.38	3.60	1.06	7.17	12.24	7.86	3.98	1.568	0.349
5/31/1991	3.20	3.68	1.15	9.66	12.33	7.98	4.28	2.097	0.371
6/30/1991	3.18	3.65	1.15	9.92	12.43	8.09	4.58	2.169	0.392
7/31/1991	3.09	3.66	1.18	9.91	12.53	8.20	4.88	2.175	0.413
8/31/1991	3.06	3.58	1.17	10.07	12.62	8.31	5.20	2.257	0.434
9/30/1991	2.88	3.54	1.23	10.07	12.71	8.42	5.50	2.300	0.455
10/31/1991	2.88	3.56	1.24	10.13	12.80	8.53	5.81	2.307	0.475
11/30/1991	2.89	3.47	1.20	10.93	12.88	8.63	6.14	2.537	0.497
12/31/1991	2.83	3.30	1.17	10.09	12.97	8.73	6.45	2.450	0.517
1/31/1992	2.79	3.15	1.13	10.33	13.06	8.83	6.77	2.611	0.537
2/29/1992	2.75	3.15	1.14	11.69	13.14	8.92	7.11	2.961	0.559
3/31/1992	2.68	3.10	1.15	11.73	13.22	9.02	7.48	3.030	0.582
4/30/1992	2.62	3.01	1.15	11.59	13.30	9.11	7.82	3.078	0.604
5/31/1992	2.56	3.11	1.22	11.64	13.38	9.21	8.18	3.023	0.626
6/30/1992	2.53	3.27	1.29	10.60	13.45	9.30	8.50	2.649	0.644
7/31/1992	2.60	2.88	1.11	10.14	13.53	9.39	8.82	2.789	0.663
8/31/1992	2.32	3.60	1.56	12.46	13.61	9.51	9.20	2.914	0.685
9/30/1992	2.38	3.46	1.46	11.81	13.68	9.61	9.56	2.848	0.705
10/31/1992	2.32	3.30	1.42	13.30	13.75	9.71	9.97	3.349	0.728
11/30/1992	2.31	3.22	1.40	15.86	13.82	9.81	10.45	4.078	0.757
12/31/1992	2.31	3.28	1.42	13.37	13.89	9.91	10.86	3.388	0.780
1/31/1993	2.25	3.37	1.49	12.51	13.96	10.01	11.25	3.114	0.800
2/28/1993	2.51	3.24	1.29	12.48	14.03	10.11	11.60	3.148	0.819
3/31/1993	2.46	3.25	1.32	12.48	14.11	10.21	11.98	3.149	0.839
4/30/1993	2.28	3.19	1.40	12.66	14.18	10.30	12.36	3.287	0.859
5/31/1993	2.22	3.01	1.36	12.47	14.24	10.39	12.75	3.416	0.878
6/30/1993	1.77	2.52	1.42	12.93	14.30	10.47	13.14	4.265	0.900
7/31/1993	3.13	4.49	1.43	10.99	14.39	10.61	13.48	2.035	0.912
8/31/1993	2.93	3.24	1.11	12.52	14.48	10.71	13.87	3.061	0.931
9/30/1993	2.68	3.09	1.15	12.63	14.57	10.80	14.25	3.269	0.949
10/31/1993	3.02	3.97	1.31	0.16	14.66	10.93	14.25	0.033	0.940
11/30/1993	2.64	3.60	1.37		14.74	11.03	14.25	0.000	0.932
12/31/1993	2.72	3.48	1.28		14.82	11.14	14.25	0.000	0.924
1/31/1994	3.01	3.74	1.24		14.92	11.26	14.25	0.000	0.915
2/28/1994	2.97	3.89	1.31		15.00	11.37	14.25	0.000	0.907
3/31/1994	2.79	3.88	1.39		15.09	11.49	14.25	0.000	0.899
4/30/1994	2.78	3.90	1.40		15.17	11.60	14.25	0.000	0.891
5/31/1994	2.76	4.40	1.59		15.25	11.74	14.25	0.000	0.882
6/30/1994	2.63	4.29	1.63		15.33	11.87	14.25	0.000	0.874
7/31/1994	2.56	4.16	1.62		15.41	12.00	14.25	0.000	0.866
8/31/1994	2.53	4.59	1.82		15.49	12.14	14.25	0.000	0.857
9/30/1994	2.47	4.00	1.62		15.57	12.26	14.25	0.000	0.850
10/31/1994	2.12	3.08	1.45		15.63	12.36	14.25	0.000	0.844
11/30/1994	2.88	3.65	1.27		15.72	12.47	14.25	0.000	0.838
12/31/1994	2.54	3.30	1.30		15.80	12.57	14.25	0.000	0.832
1/31/1995	3.00	3.53	1.18		15.89	12.68	14.25	0.000	0.825
2/28/1995	2.99	3.65	1.22		15.97	12.78	14.25	0.000	0.819



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
3/31/1995	2.93	3.66	1.25		16.06	12.89	14.25	0.000	0.813
4/30/1995	2.99	3.63	1.21		16.15	13.00	14.25	0.000	0.806
5/31/1995	3.01	3.28	1.09		16.25	13.10	14.25	0.000	0.801
6/30/1995	2.92	3.89	1.33		16.33	13.22	14.25	0.000	0.794
7/31/1995	2.80	3.72	1.33		16.42	13.34	14.25	0.000	0.788
8/31/1995	2.45	4.03	1.64		16.50	13.46	14.25	0.000	0.782
9/30/1995	2.66	4.32	1.62		16.58	13.59	14.25	0.000	0.775
10/31/1995	2.62	4.19	1.60		16.66	13.72	14.25	0.000	0.769
11/30/1995	2.60	4.04	1.55		16.74	13.84	14.25	0.000	0.763
12/31/1995	2.63	3.64	1.39		16.82	13.95	14.25	0.000	0.757
1/31/1996	2.61	3.71	1.42		16.90	14.07	14.25	0.000	0.752
2/29/1996	2.53	3.69	1.46		16.97	14.18	14.25	0.000	0.747
3/31/1996	2.57	4.54	1.76		17.05	14.32	14.25	0.000	0.740
4/30/1996	2.58	4.12	1.60		17.13	14.44	14.25	0.000	0.735
5/31/1996	2.50	3.96	1.58		17.21	14.56	14.25	0.000	0.729
6/30/1996	2.44	4.07	1.67		17.28	14.69	14.25	0.000	0.724
7/31/1996	2.44	10.73	4.40		17.36	15.02	14.25	0.000	0.711
8/31/1996	2.40	17.55	7.32		17.43	15.56	14.25	0.000	0.692
9/30/1996	2.42	9.79	4.04		17.50	15.86	14.25	0.000	0.681
10/31/1996	2.34	4.04	1.73		17.58	15.98	14.25	0.000	0.677
11/30/1996	2.43	6.97	2.86	3.21	17.65	16.19	14.35	0.419	0.674
12/31/1996	2.39	3.42	1.43	5.53	17.72	16.30	14.52	1.346	0.678
1/31/1997	2.35	3.44	1.46	5.84	17.80	16.40	14.70	1.419	0.682
2/28/1997	2.32	3.92	1.69	13.77	17.86	16.51	15.09	2.999	0.696
3/31/1997	2.21	3.84	1.74	12.60	17.93	16.63	15.48	2.810	0.709
4/30/1997	2.25	3.92	1.75	12.33	18.00	16.75	15.85	2.696	0.722
5/31/1997	2.32	3.96	1.71	11.65	18.07	16.87	16.21	2.515	0.733
6/30/1997	2.23	3.63	1.62	6.85	18.13	16.98	16.41	1.602	0.738
7/31/1997	2.24	3.53	1.57	5.45	18.20	17.09	16.58	1.306	0.742
8/31/1997	2.22	3.96	1.79	8.93	18.27	17.21	16.86	1.940	0.749
9/30/1997	2.20	4.04	1.84	7.68	18.34	17.33	17.09	1.643	0.755
10/31/1997	2.18	4.11	1.89	7.87	18.41	17.46	17.33	1.659	0.761
11/30/1997	2.24	4.08	1.82	8.21	18.47	17.58	17.58	1.735	0.767
12/31/1997	2.18	4.10	1.88	8.41	18.54	17.71	17.84	1.780	0.773
1/31/1998	2.18	4.18	1.91	9.82	18.61	17.84	18.14	2.042	0.781
2/28/1998	2.14	4.05	1.89	14.37	18.67	17.95	18.55	3.079	0.794
3/31/1998	2.17	3.80	1.75	10.96	18.74	18.07	18.89	2.479	0.804
4/30/1998	2.40	3.53	1.47	9.70	18.81	18.18	19.18	2.297	0.812
5/31/1998	2.35	3.07	1.31	9.47	18.88	18.27	19.47	2.521	0.820
6/30/1998	1.93	3.72	1.93	13.66	18.94	18.38	19.88	3.192	0.833
7/31/1998	1.90	4.40	2.31	18.65	19.00	18.52	20.46	3.770	0.852
8/31/1998	2.15	3.54	1.64	20.83	19.06	18.63	21.11	5.005	0.874
9/30/1998	2.07	3.33	1.61	19.33	19.13	18.73	21.69	4.925	0.894
10/31/1998	1.87	8.11	4.33	23.50	19.18	18.98	22.41	2.717	0.914
11/30/1998	1.91	8.85	4.62	25.38	19.24	19.25	23.18	2.700	0.934
12/31/1998	1.96	7.92	4.03	22.47	19.30	19.49	23.87	2.648	0.952
1/31/1999	1.92	8.18	4.27	22.63	19.36	19.75	24.57	2.592	0.970
2/28/1999	2.08	7.24	3.48	22.50	19.42	19.95	25.20	2.867	0.986

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
3/31/1999	2.03	7.44	3.67	23.49	19.48	20.18	25.93	2.925	1.005
4/30/1999	2.00	7.19	3.60	24.74	19.54	20.40	26.67	3.186	1.024
5/31/1999	1.92	7.30	3.80	29.22	19.60	20.62	27.58	3.720	1.049
6/30/1999	2.04	7.83	3.84	28.96	19.66	20.86	28.45	3.440	1.072
7/31/1999	2.00	7.32	3.66	28.22	19.73	21.08	29.32	3.570	1.095
8/31/1999	2.05	7.07	3.45	26.78	19.79	21.30	30.15	3.496	1.116
9/30/1999	2.03	4.40	2.17	12.19	19.85	21.43	30.52	2.447	1.123
10/31/1999	1.96	6.89	3.52	14.90	19.91	21.65	30.98	1.997	1.130
11/30/1999	1.99	6.46	3.25	14.04	19.97	21.84	31.40	1.997	1.137
12/31/1999	2.04	2.47	1.21	12.48	20.03	21.92	31.79	4.075	1.147
1/31/2000	2.02	2.57	1.27	19.26	20.10	22.00	32.39	6.106	1.165
2/29/2000	5.70	6.85	1.20	16.46	20.26	22.20	32.86	1.937	1.171
3/31/2000	9.19	10.92	1.19	21.03	20.55	22.54	33.51	1.548	1.177
4/30/2000	8.41	12.86	1.53	20.81	20.80	22.92	34.14	1.360	1.180
5/31/2000	7.31	9.80	1.34	25.95	21.03	23.22	34.94	2.178	1.192
6/30/2000	6.82	12.05	1.77	27.26	21.23	23.59	35.76	1.945	1.203
7/31/2000	6.21	9.99	1.61	24.28	21.42	23.90	36.51	2.059	1.213
8/31/2000	6.12	10.49	1.71	22.33	21.61	24.22	37.21	1.821	1.221
9/30/2000	6.11	11.67	1.91	27.21	21.80	24.57	38.02	2.025	1.231
10/31/2000	5.91	11.27	1.91	29.55	21.98	24.92	38.94	2.277	1.245
11/30/2000	5.37	11.41	2.13	29.30	22.14	25.26	39.82	2.261	1.257
12/31/2000	5.15	11.12	2.16	29.00	22.30	25.61	40.72	2.299	1.270
1/31/2001	4.56	11.53	2.53	29.52	22.44	25.96	41.63	2.298	1.283
2/28/2001	4.32	11.22	2.60	28.81	22.56	26.28	42.44	2.310	1.294
3/31/2001	4.11	11.67	2.84	27.13	22.69	26.64	43.28	2.109	1.303
4/30/2001	3.87	11.38	2.94	28.49	22.81	26.98	44.13	2.279	1.314
5/31/2001	3.22	10.52	3.27	28.28	22.91	27.31	45.01	2.469	1.326
6/30/2001	3.41	11.97	3.51	28.72	23.01	27.67	45.87	2.216	1.337
7/31/2001	2.99	10.94	3.66	29.95	23.10	28.01	46.80	2.536	1.349
8/31/2001	3.28	13.05	3.98	33.77	23.20	28.41	47.85	2.413	1.362
9/30/2001	3.19	12.08	3.78	30.57	23.30	28.77	48.76	2.350	1.373
10/31/2001	2.97	12.78	4.31	35.34	23.39	29.17	49.86	2.592	1.388
11/30/2001	2.91	12.01	4.13	35.08	23.48	29.53	50.91	2.729	1.402
12/31/2001	2.76	11.79	4.28	35.18	23.56	29.90	52.00	2.796	1.417
1/31/2002	2.73	11.85	4.35	34.56	23.65	30.26	53.07	2.734	1.430
2/28/2002	2.78	11.93	4.28	32.96	23.73	30.60	54.00	2.589	1.442
3/31/2002	2.58	12.32	4.78	24.59	23.81	30.98	54.76	1.881	1.446
4/30/2002	2.30	12.79	5.57	25.94	23.87	31.36	55.54	1.928	1.451
5/31/2002	2.37	14.63	6.18	26.21	23.95	31.82	56.35	1.711	1.454
6/30/2002	3.19	17.54	5.50	30.21	24.04	32.34	57.26	1.636	1.457
7/31/2002	2.25	13.89	6.16	29.92	24.11	32.77	58.18	2.057	1.464
8/31/2002	2.24	13.88	6.19	30.85	24.18	33.20	59.14	2.123	1.471
9/30/2002	1.80	13.95	7.74	30.77	24.24	33.62	60.06	2.127	1.478
10/31/2002	1.78	13.91	7.80	29.19	24.29	34.05	60.97	2.023	1.484
11/30/2002	1.58	12.96	8.23	28.93	24.34	34.44	61.84	2.156	1.491
12/31/2002	1.99	13.09	6.59	30.94	24.40	34.85	62.80	2.264	1.499
1/31/2003	1.98	13.46	6.79	31.32	24.46	35.27	63.77	2.232	1.506
2/28/2003	1.97	13.51	6.85	30.68	24.52	35.64	64.63	2.178	1.512

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
3/31/2003	1.91	13.52	7.06	32.32	24.58	36.06	65.63	2.296	1.520
4/30/2003	1.46	16.23	11.13	33.73	24.62	36.55	66.64	2.026	1.526
5/31/2003	1.39	16.55	11.94	37.35	24.66	37.06	67.80	2.203	1.534
6/30/2003	1.66	16.25	9.80	37.13	24.71	37.55	68.91	2.219	1.542
7/31/2003	1.55	16.44	10.62	37.68	24.76	38.06	70.08	2.231	1.550
8/31/2003	1.50	16.02	10.68	38.26	24.81	38.56	71.27	2.325	1.558
9/30/2003	1.37	14.70	10.73	36.50	24.85	39.00	72.36	2.417	1.567
10/31/2003	1.08	14.16	13.10	44.52	24.88	39.44	73.74	3.076	1.581
11/30/2003	1.78	14.85	8.35	32.40	24.94	39.88	74.71	2.108	1.586
12/31/2003	2.54	14.83	5.85	31.08	25.01	40.34	75.68	1.997	1.591
1/31/2004	2.42	15.09	6.24	32.04	25.09	40.81	76.67	2.029	1.595
2/29/2004	2.30	15.10	6.57	30.80	25.16	41.25	77.56	1.954	1.598
3/31/2004	2.18	15.72	7.20	33.82	25.22	41.73	78.61	2.069	1.603
4/30/2004	2.08	14.43	6.93	28.99	25.29	42.17	79.48	1.928	1.606
5/31/2004	1.94	13.25	6.82	27.92	25.35	42.58	80.35	2.022	1.610
6/30/2004	1.97	15.01	7.61	15.18	25.41	43.03	80.80	0.974	1.604
7/31/2004	1.92	14.76	7.67	32.03	25.47	43.49	81.79	2.092	1.608
8/31/2004	1.90	15.62	8.21	32.97	25.52	43.97	82.82	2.040	1.613
9/30/2004	1.90	15.25	8.05	32.30	25.58	44.43	83.78	2.045	1.617
10/31/2004	1.82	15.55	8.55	24.63	25.64	44.91	84.55	1.532	1.616
11/30/2004	1.75	14.98	8.56	30.32	25.69	45.36	85.46	1.959	1.619
12/31/2004	1.57	15.56	9.90	30.86	25.74	45.84	86.41	1.927	1.622
1/31/2005	1.92	15.55	8.11	30.34	25.80	46.32	87.36	1.884	1.624
2/28/2005	1.84	16.61	9.03	32.19	25.85	46.79	88.26	1.878	1.626
3/31/2005	1.74	16.95	9.72	34.10	25.90	47.31	89.31	1.953	1.630
4/30/2005	1.71	16.93	9.89	33.15	25.96	47.82	90.31	1.903	1.632
5/31/2005	1.59	16.42	10.31	33.80	26.00	48.33	91.36	2.002	1.636
6/30/2005	1.49	16.69	11.19	35.56	26.05	48.83	92.42	2.077	1.640
7/31/2005	1.55	16.37	10.59	33.78	26.10	49.34	93.47	2.009	1.643
8/31/2005	1.50	16.70	11.15	35.22	26.14	49.86	94.56	2.055	1.647
9/30/2005	1.38	16.21	11.76	34.60	26.19	50.34	95.60	2.083	1.651
10/31/2005	1.36	16.04	11.77	35.34	26.23	50.84	96.69	2.150	1.655
11/30/2005	1.38	16.92	12.23	38.85	26.27	51.35	97.86	2.243	1.660
12/31/2005	1.37	17.01	12.40	40.29	26.31	51.88	99.11	2.315	1.666
1/31/2006	1.34	15.99	11.98	40.23	26.35	52.37	100.36	2.456	1.673
2/28/2006	1.30	15.83	12.22	38.99	26.39	52.81	101.45	2.406	1.678
3/31/2006	1.29	15.81	12.28	36.36	26.43	53.30	102.58	2.247	1.683
4/30/2006	1.29	15.45	11.97	38.24	26.47	53.77	103.72	2.417	1.689
5/31/2006	1.32	16.83	12.79	37.74	26.51	54.29	104.89	2.192	1.693
6/30/2006	1.36	15.98	11.77	41.00	26.55	54.77	106.12	2.504	1.699
7/31/2006	1.35	15.98	11.85	36.77	26.59	55.26	107.26	2.246	1.704
8/31/2006	1.29	15.78	12.23	35.63	26.63	55.75	108.37	2.205	1.708
9/30/2006	1.24	15.67	12.68	34.85	26.67	56.22	109.41	2.175	1.711
10/31/2006	0.92	6.81	7.40	27.71	26.70	56.43	110.27	3.918	1.719
11/30/2006	1.04	14.95	14.41		26.73	56.88	110.27	0.000	1.707
12/31/2006	1.16	16.26	14.01		26.76	57.39	110.27	0.000	1.693
1/31/2007	1.18	16.00	13.56		26.80	57.88	110.27	0.000	1.680
2/28/2007	1.18	15.66	13.28		26.83	58.32	110.27	0.000	1.669

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
3/31/2007	1.22	15.42	12.62		26.87	58.80	110.27	0.000	1.656
4/30/2007	1.18	15.52	13.15		26.91	59.27	110.27	0.000	1.645
5/31/2007	1.18	14.97	12.67		26.94	59.73	110.27	0.000	1.633
6/30/2007	1.12	15.41	13.74		26.98	60.19	110.27	0.000	1.622
7/31/2007	1.11	15.65	14.12		27.01	60.68	110.27	0.000	1.610
8/31/2007	1.13	14.84	13.10		27.05	61.14	110.27	0.000	1.599
9/30/2007	1.05	13.79	13.19		27.08	61.55	110.27	0.000	1.589
10/31/2007	1.00	13.97	13.97		27.11	61.98	110.27	0.000	1.579
11/30/2007	1.03	13.83	13.39		27.14	62.40	110.27	0.000	1.570
12/31/2007	1.02	14.75	14.39		27.17	62.86	110.27	0.000	1.559
1/31/2008	0.99	15.24	15.33		27.20	63.33	110.27	0.000	1.549
2/29/2008	0.97	15.69	16.11		27.23	63.78	110.27	0.000	1.539
3/31/2008	0.94	14.29	15.15	35.71	27.26	64.23	111.38	2.452	1.545
4/30/2008	0.88	13.51	15.37	31.70	27.29	64.63	112.33	2.302	1.549
5/31/2008	0.91	14.90	16.36	34.74	27.31	65.09	113.41	2.291	1.554
6/30/2008	0.92	15.29	16.54	37.63	27.34	65.55	114.54	2.419	1.559
7/31/2008	0.70	12.64	18.17	31.94	27.36	65.94	115.53	2.487	1.564
8/31/2008	0.92	14.62	15.95	39.33	27.39	66.40	116.75	2.642	1.571
9/30/2008	0.88	14.30	16.29	38.10	27.42	66.83	117.89	2.618	1.577
10/31/2008	0.84	14.48	17.21	39.25	27.44	67.28	119.10	2.666	1.584
11/30/2008	0.84	14.61	17.37	39.72	27.47	67.71	120.30	2.674	1.590
12/31/2008	0.62	14.49	23.27	35.23	27.49	68.16	121.39	2.402	1.595
1/31/2009	0.63	13.88	22.06	32.95	27.51	68.59	122.41	2.343	1.599
2/28/2009	0.73	13.91	19.08	37.97	27.53	68.98	123.47	2.688	1.605
3/31/2009	0.70	14.11	20.08	37.58	27.55	69.42	124.64	2.626	1.611
4/30/2009	0.70	13.64	19.54	35.83	27.57	69.83	125.71	2.589	1.616
5/31/2009	0.74	14.26	19.38	40.94	27.59	70.27	126.98	2.828	1.623
6/30/2009	0.68	13.27	19.56	35.47	27.62	70.67	128.05	2.634	1.628
7/31/2009	0.68	13.72	20.20	33.39	27.64	71.09	129.08	2.400	1.632
8/31/2009	0.64	13.30	20.64	33.74	27.66	71.51	130.13	2.501	1.637
9/30/2009	0.64	13.03	20.43	34.83	27.68	71.90	131.17	2.635	1.642
10/31/2009	0.61	12.34	20.14	35.39	27.69	72.28	132.27	2.826	1.647
11/30/2009	0.60	11.95	20.06	35.50	27.71	72.64	133.33	2.929	1.653
12/31/2009	0.61	11.68	19.14	35.16	27.73	73.00	134.42	2.965	1.659
1/31/2010	0.60	11.80	19.65	35.48	27.75	73.37	135.52	2.963	1.665
2/28/2010	0.61	11.89	19.38	34.79	27.77	73.70	136.50	2.884	1.670
3/31/2010	0.62	12.09	19.39	36.23	27.79	74.07	137.62	2.952	1.676
4/30/2010	0.61	12.10	19.75	36.53	27.80	74.44	138.72	2.975	1.682
5/31/2010	0.63	12.38	19.78	38.56	27.82	74.82	139.91	3.071	1.688
6/30/2010	0.56	11.46	20.36	34.72	27.84	75.16	140.95	2.988	1.694
7/31/2010	0.61	11.95	19.48	32.63	27.86	75.54	141.97	2.691	1.698
8/31/2010	0.60	11.87	19.72	32.59	27.88	75.90	142.98	2.706	1.703
9/30/2010	0.55	11.61	21.25	31.95	27.89	76.25	143.93	2.714	1.707
10/31/2010	0.56	11.36	20.35	27.54	27.91	76.60	144.79	2.390	1.710
11/30/2010	0.55	11.41	20.80	28.24	27.93	76.95	145.64	2.440	1.713
12/31/2010	0.55	11.07	20.00	24.70	27.95	77.29	146.40	2.198	1.715
1/31/2011	0.55	11.01	19.93	24.15	27.96	77.63	147.15	2.162	1.717
2/28/2011	0.55	10.65	19.42	21.96	27.98	77.93	147.76	2.033	1.718

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
3/31/2011	0.53	10.73	20.19	22.09	27.99	78.26	148.45	2.029	1.719
4/30/2011	0.50	10.59	21.09	20.08	28.01	78.58	149.05	1.870	1.720
5/31/2011	0.49	10.47	21.29	22.81	28.03	78.90	149.76	2.150	1.721
6/30/2011	0.47	10.45	22.06	21.93	28.04	79.22	150.42	2.071	1.722
7/31/2011	0.41	9.22	22.36	15.63	28.05	79.50	150.90	1.674	1.722
8/31/2011	0.45	9.74	21.51	0.12	28.07	79.81	150.91	0.012	1.716
9/30/2011	0.46	9.82	21.55	4.43	28.08	80.10	151.04	0.446	1.712
10/31/2011	0.43	9.96	23.09		28.09	80.41	151.04	0.000	1.706
11/30/2011	0.45	10.10	22.69	0.31	28.11	80.71	151.05	0.030	1.700
12/31/2011	0.45	9.93	22.19		28.12	81.02	151.05	0.000	1.694

# Pattern: 04-32-11-26 Set: NV Scallion Unit #2

Oil Formation Vol. Factor : 1.05 m3/m3

Water Formation Vol Factor : 1.00 m3/m3

Water / Oil Ratio : 10.95 m3/m3

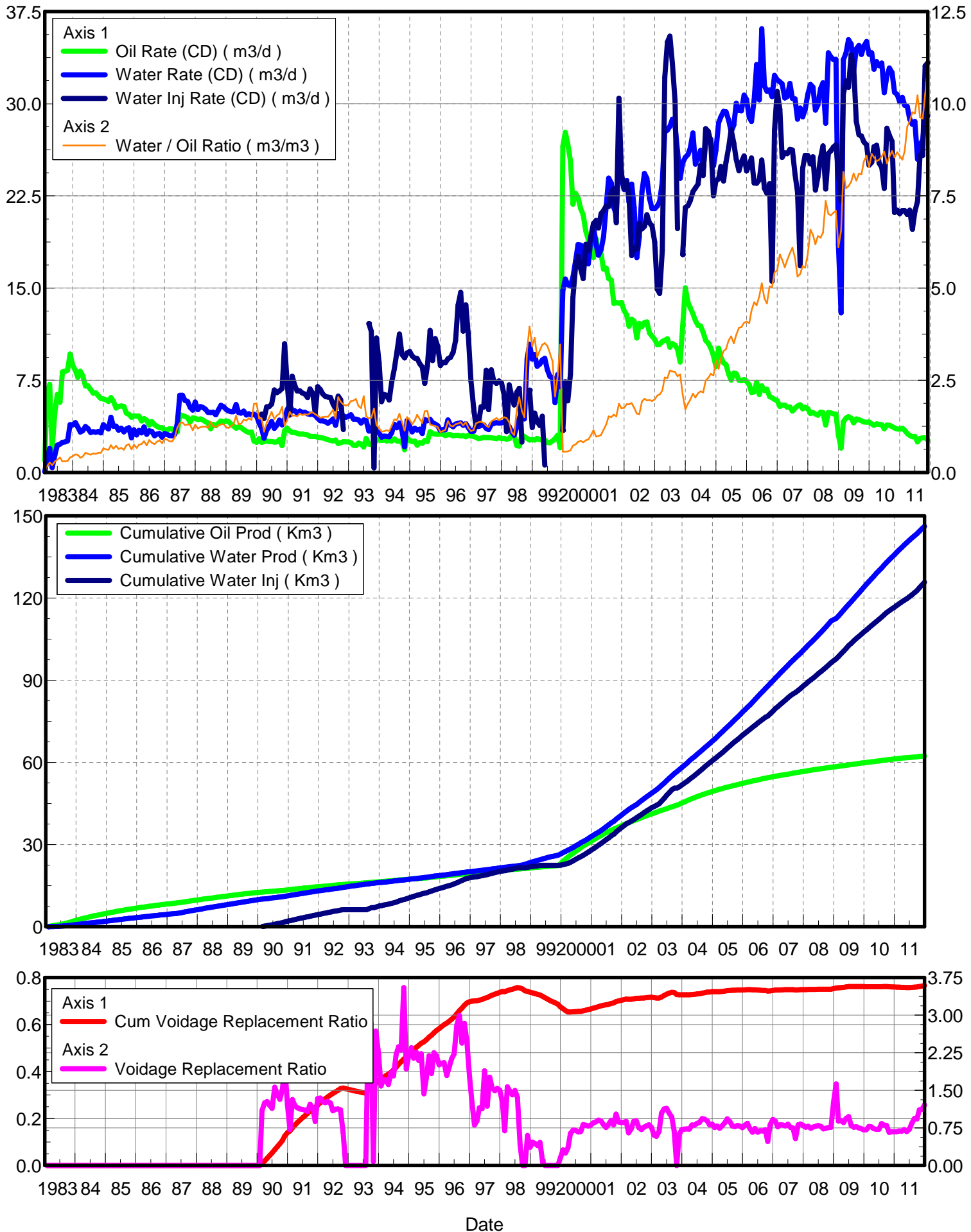
March 04, 2012

Operator: TUNDRA\_OIL\_&\_GAS\_LIMITED

Oil Rate (CD) : 2.56 m3/d

Water Rate (CD) : 28.01 m3/d

Water Inj Rate (CD) : 34.84 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 Replacemnt Ratio
1/31/1983	0.97	0.05	0.05		0.03	0.00	0.00	0.000	0.000
2/28/1983	6.44	1.05	0.16		0.21	0.03	0.00	0.000	0.000
3/31/1983	7.15	1.95	0.27		0.43	0.09	0.00	0.000	0.000
4/30/1983	1.97	0.39	0.20		0.49	0.10	0.00	0.000	0.000
5/31/1983	4.86	1.41	0.29		0.64	0.15	0.00	0.000	0.000
6/30/1983	6.35	2.21	0.35		0.83	0.21	0.00	0.000	0.000
7/31/1983	5.71	2.30	0.40		1.01	0.28	0.00	0.000	0.000
8/31/1983	8.18	2.45	0.30		1.26	0.36	0.00	0.000	0.000
9/30/1983	8.23	2.49	0.30		1.51	0.44	0.00	0.000	0.000
10/31/1983	8.32	2.57	0.31		1.77	0.51	0.00	0.000	0.000
11/30/1983	9.63	3.89	0.40		2.06	0.63	0.00	0.000	0.000
12/31/1983	8.72	3.87	0.44		2.33	0.75	0.00	0.000	0.000
1/31/1984	8.29	4.06	0.49		2.58	0.88	0.00	0.000	0.000
2/29/1984	7.74	3.69	0.48		2.81	0.98	0.00	0.000	0.000
3/31/1984	8.23	3.28	0.40		3.06	1.09	0.00	0.000	0.000
4/30/1984	7.87	3.41	0.43		3.30	1.19	0.00	0.000	0.000
5/31/1984	7.03	3.74	0.53		3.52	1.30	0.00	0.000	0.000
6/30/1984	7.04	3.56	0.51		3.73	1.41	0.00	0.000	0.000
7/31/1984	6.75	3.26	0.48		3.94	1.51	0.00	0.000	0.000
8/31/1984	6.44	3.32	0.52		4.14	1.62	0.00	0.000	0.000
9/30/1984	6.48	3.27	0.50		4.33	1.71	0.00	0.000	0.000
10/31/1984	6.22	3.33	0.53		4.52	1.82	0.00	0.000	0.000
11/30/1984	6.02	3.22	0.54		4.71	1.91	0.00	0.000	0.000
12/31/1984	5.98	3.88	0.65		4.89	2.03	0.00	0.000	0.000
1/31/1985	5.90	3.69	0.63		5.07	2.15	0.00	0.000	0.000
2/28/1985	5.77	3.54	0.61		5.24	2.25	0.00	0.000	0.000
3/31/1985	6.09	4.49	0.74		5.42	2.39	0.00	0.000	0.000
4/30/1985	5.80	3.75	0.65		5.60	2.50	0.00	0.000	0.000
5/31/1985	5.24	3.77	0.72		5.76	2.62	0.00	0.000	0.000
6/30/1985	5.38	3.43	0.64		5.92	2.72	0.00	0.000	0.000
7/31/1985	5.41	3.61	0.67		6.09	2.83	0.00	0.000	0.000
8/31/1985	5.37	3.30	0.62		6.26	2.93	0.00	0.000	0.000
9/30/1985	4.83	3.53	0.73		6.40	3.04	0.00	0.000	0.000
10/31/1985	4.74	3.64	0.77		6.55	3.15	0.00	0.000	0.000
11/30/1985	4.49	2.81	0.63		6.68	3.24	0.00	0.000	0.000
12/31/1985	4.61	3.47	0.75		6.83	3.34	0.00	0.000	0.000
1/31/1986	4.57	3.05	0.67		6.97	3.44	0.00	0.000	0.000
2/28/1986	4.59	3.43	0.75		7.10	3.53	0.00	0.000	0.000
3/31/1986	4.18	3.22	0.77		7.23	3.63	0.00	0.000	0.000
4/30/1986	4.38	3.70	0.84		7.36	3.74	0.00	0.000	0.000
5/31/1986	4.23	3.10	0.73		7.49	3.84	0.00	0.000	0.000
6/30/1986	3.85	3.38	0.88		7.60	3.94	0.00	0.000	0.000
7/31/1986	4.14	3.34	0.81		7.73	4.05	0.00	0.000	0.000
8/31/1986	3.89	2.98	0.77		7.85	4.14	0.00	0.000	0.000
9/30/1986	3.75	3.13	0.83		7.96	4.23	0.00	0.000	0.000
10/31/1986	3.63	3.16	0.87		8.08	4.33	0.00	0.000	0.000
11/30/1986	3.63	2.88	0.79		8.19	4.42	0.00	0.000	0.000
12/31/1986	3.45	3.16	0.92		8.29	4.51	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
1/31/1987	3.47	3.09	0.89		8.40	4.61	0.00	0.000	0.000
2/28/1987	3.56	3.01	0.85		8.50	4.69	0.00	0.000	0.000
3/31/1987	3.54	2.99	0.84		8.61	4.79	0.00	0.000	0.000
4/30/1987	3.31	3.11	0.94		8.71	4.88	0.00	0.000	0.000
5/31/1987	3.30	4.00	1.21		8.81	5.00	0.00	0.000	0.000
6/30/1987	4.70	6.27	1.33		8.95	5.19	0.00	0.000	0.000
7/31/1987	4.63	6.28	1.36		9.10	5.39	0.00	0.000	0.000
8/31/1987	4.56	5.86	1.28		9.24	5.57	0.00	0.000	0.000
9/30/1987	4.45	5.78	1.30		9.37	5.74	0.00	0.000	0.000
10/31/1987	4.09	5.31	1.30		9.50	5.91	0.00	0.000	0.000
11/30/1987	4.43	5.08	1.15		9.63	6.06	0.00	0.000	0.000
12/31/1987	4.40	5.72	1.30		9.77	6.24	0.00	0.000	0.000
1/31/1988	4.30	5.11	1.19		9.90	6.39	0.00	0.000	0.000
2/29/1988	4.36	5.35	1.23		10.03	6.55	0.00	0.000	0.000
3/31/1988	4.27	5.29	1.24		10.16	6.71	0.00	0.000	0.000
4/30/1988	4.12	5.14	1.25		10.28	6.87	0.00	0.000	0.000
5/31/1988	4.04	4.90	1.21		10.41	7.02	0.00	0.000	0.000
6/30/1988	3.55	4.87	1.37		10.51	7.17	0.00	0.000	0.000
7/31/1988	3.93	4.91	1.25		10.64	7.32	0.00	0.000	0.000
8/31/1988	3.81	4.69	1.23		10.75	7.46	0.00	0.000	0.000
9/30/1988	3.97	5.05	1.27		10.87	7.62	0.00	0.000	0.000
10/31/1988	4.20	5.45	1.30		11.00	7.78	0.00	0.000	0.000
11/30/1988	4.09	5.36	1.31		11.13	7.95	0.00	0.000	0.000
12/31/1988	4.19	5.14	1.23		11.26	8.10	0.00	0.000	0.000
1/31/1989	4.14	5.00	1.21		11.38	8.26	0.00	0.000	0.000
2/28/1989	3.93	4.93	1.25		11.49	8.40	0.00	0.000	0.000
3/31/1989	3.79	4.93	1.30		11.61	8.55	0.00	0.000	0.000
4/30/1989	3.60	5.53	1.54		11.72	8.72	0.00	0.000	0.000
5/31/1989	3.70	4.87	1.32		11.83	8.87	0.00	0.000	0.000
6/30/1989	3.66	4.82	1.32		11.94	9.01	0.00	0.000	0.000
7/31/1989	3.49	4.99	1.43		12.05	9.17	0.00	0.000	0.000
8/31/1989	3.33	4.68	1.40		12.16	9.31	0.00	0.000	0.000
9/30/1989	3.25	4.78	1.47		12.25	9.46	0.00	0.000	0.000
10/31/1989	3.28	4.68	1.43		12.36	9.60	0.00	0.000	0.000
11/30/1989	2.56	4.75	1.86		12.43	9.74	0.00	0.000	0.000
12/31/1989	2.45	4.58	1.87		12.51	9.88	0.00	0.000	0.000
1/31/1990	2.76	4.02	1.46		12.59	10.01	0.00	0.000	0.000
2/28/1990	2.46	3.61	1.47	4.74	12.66	10.11	0.13	1.097	0.010
3/31/1990	2.52	2.78	1.10	4.39	12.74	10.20	0.27	1.250	0.019
4/30/1990	2.56	3.45	1.35	5.35	12.82	10.30	0.43	1.277	0.031
5/31/1990	2.50	3.73	1.49	5.35	12.89	10.42	0.59	1.202	0.042
6/30/1990	2.52	4.14	1.64	5.55	12.97	10.54	0.76	1.141	0.053
7/31/1990	2.47	3.58	1.45	6.72	13.05	10.65	0.97	1.564	0.067
8/31/1990	2.49	3.85	1.55	6.49	13.12	10.77	1.17	1.420	0.080
9/30/1990	2.67	4.25	1.59	6.63	13.20	10.90	1.37	1.321	0.093
10/31/1990	2.18	3.87	1.78	6.82	13.27	11.02	1.58	1.515	0.106
11/30/1990	3.41	4.34	1.27	10.48	13.37	11.15	1.90	1.966	0.126
12/31/1990	3.61	5.08	1.41	7.44	13.49	11.31	2.13	1.215	0.140



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
1/31/1991	3.37	5.53	1.64	4.67	13.59	11.48	2.27	0.717	0.147
2/28/1991	3.25	5.01	1.54	7.83	13.68	11.62	2.49	1.316	0.160
3/31/1991	3.25	5.02	1.54	7.11	13.78	11.77	2.71	1.193	0.172
4/30/1991	3.19	4.84	1.52	6.63	13.88	11.92	2.91	1.151	0.183
5/31/1991	3.13	4.99	1.60	6.65	13.97	12.07	3.12	1.128	0.193
6/30/1991	3.13	4.88	1.56	6.46	14.07	12.22	3.31	1.118	0.203
7/31/1991	3.09	4.88	1.58	6.38	14.16	12.37	3.51	1.104	0.213
8/31/1991	3.06	4.77	1.56	6.10	14.26	12.52	3.70	1.079	0.222
9/30/1991	2.93	4.72	1.61	6.80	14.35	12.66	3.90	1.221	0.232
10/31/1991	2.92	4.75	1.62	6.43	14.44	12.81	4.10	1.149	0.241
11/30/1991	2.94	4.63	1.58	4.82	14.53	12.95	4.24	0.879	0.248
12/31/1991	2.87	4.40	1.53	6.99	14.61	13.08	4.46	1.336	0.258
1/31/1992	2.83	4.20	1.48	6.75	14.70	13.21	4.67	1.344	0.267
2/29/1992	2.80	4.20	1.50	6.38	14.78	13.33	4.86	1.273	0.276
3/31/1992	2.73	4.13	1.51	6.17	14.87	13.46	5.05	1.255	0.284
4/30/1992	2.66	4.01	1.51	6.12	14.95	13.58	5.23	1.281	0.292
5/31/1992	2.60	4.15	1.60	6.11	15.03	13.71	5.42	1.248	0.300
6/30/1992	2.57	4.36	1.70	5.56	15.11	13.84	5.59	1.090	0.307
7/31/1992	2.64	3.84	1.46	5.18	15.19	13.96	5.75	1.125	0.313
8/31/1992	2.35	4.81	2.04	6.20	15.26	14.11	5.94	1.130	0.321
9/30/1992	2.41	4.62	1.91	5.92	15.33	14.25	6.12	1.113	0.327
10/31/1992	2.50	4.60	1.84	3.48	15.41	14.39	6.22	0.654	0.330
11/30/1992	2.48	4.50	1.81		15.48	14.53	6.22	0.000	0.328
12/31/1992	2.48	4.57	1.84		15.56	14.67	6.22	0.000	0.325
1/31/1993	2.42	4.69	1.94		15.64	14.81	6.22	0.000	0.322
2/28/1993	2.22	4.33	1.95		15.70	14.93	6.22	0.000	0.320
3/31/1993	2.18	4.35	1.99		15.77	15.07	6.22	0.000	0.317
4/30/1993	2.38	4.27	1.80		15.84	15.20	6.22	0.000	0.315
5/31/1993	2.31	4.03	1.75		15.91	15.32	6.22	0.000	0.312
6/30/1993	2.06	4.27	2.07		15.97	15.45	6.22	0.000	0.310
7/31/1993	2.77	4.23	1.53		16.06	15.58	6.22	0.000	0.308
8/31/1993	2.31	3.37	1.46	12.11	16.13	15.69	6.60	2.995	0.324
9/30/1993	2.27	3.38	1.49	11.48	16.20	15.79	6.94	2.841	0.339
10/31/1993	2.39	4.13	1.73	0.38	16.27	15.92	6.96	0.080	0.337
11/30/1993	2.59	3.33	1.28	10.94	16.35	16.02	7.28	2.684	0.351
12/31/1993	2.68	3.21	1.20	8.92	16.43	16.11	7.56	2.238	0.362
1/31/1994	2.60	2.87	1.10	5.76	16.51	16.20	7.74	1.588	0.369
2/28/1994	2.64	2.95	1.12	6.35	16.59	16.29	7.92	1.709	0.376
3/31/1994	2.56	2.94	1.15	6.28	16.67	16.38	8.11	1.707	0.383
4/30/1994	2.59	2.90	1.12	5.90	16.74	16.46	8.29	1.616	0.389
5/31/1994	2.55	3.22	1.26	7.33	16.82	16.56	8.52	1.854	0.397
6/30/1994	2.73	3.93	1.44	8.44	16.90	16.68	8.77	1.790	0.407
7/31/1994	2.56	3.64	1.42	9.73	16.98	16.80	9.07	2.223	0.418
8/31/1994	2.53	4.02	1.59	11.26	17.06	16.92	9.42	2.369	0.431
9/30/1994	2.52	3.44	1.37	9.60	17.14	17.02	9.71	2.303	0.442
10/31/1994	1.84	2.09	1.13	9.31	17.19	17.09	10.00	3.552	0.453
11/30/1994	2.81	4.22	1.50	9.72	17.28	17.21	10.29	1.929	0.463
12/31/1994	2.62	3.73	1.42	9.83	17.36	17.33	10.59	2.190	0.474

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
1/31/1995	2.52	3.30	1.31	9.47	17.44	17.43	10.89	2.348	0.484
2/28/1995	2.56	3.60	1.41	9.30	17.51	17.53	11.15	2.141	0.493
3/31/1995	2.22	3.46	1.56	9.26	17.58	17.64	11.43	2.259	0.503
4/30/1995	2.43	3.51	1.44	8.83	17.65	17.75	11.70	2.095	0.512
5/31/1995	2.36	3.17	1.34	8.58	17.72	17.84	11.97	2.230	0.521
6/30/1995	2.60	4.31	1.66	7.25	17.80	17.97	12.18	1.432	0.527
7/31/1995	2.52	4.20	1.67	8.66	17.88	18.10	12.45	1.756	0.535
8/31/1995	3.32	4.32	1.30	11.56	17.98	18.24	12.81	2.189	0.547
9/30/1995	3.17	4.04	1.28	9.11	18.08	18.36	13.08	1.838	0.555
10/31/1995	3.11	3.94	1.26	10.88	18.17	18.48	13.42	2.250	0.565
11/30/1995	3.10	3.80	1.23	10.28	18.27	18.59	13.73	2.189	0.575
12/31/1995	3.12	3.43	1.10	8.70	18.36	18.70	14.00	2.009	0.583
1/31/1996	3.10	3.49	1.13	8.95	18.46	18.81	14.28	2.040	0.591
2/29/1996	3.01	3.47	1.15	8.91	18.55	18.91	14.53	2.053	0.599
3/31/1996	3.06	4.27	1.39	9.25	18.64	19.04	14.82	1.796	0.607
4/30/1996	3.06	3.88	1.27	9.36	18.73	19.16	15.10	1.966	0.614
5/31/1996	2.98	3.72	1.25	9.77	18.83	19.27	15.40	2.132	0.623
6/30/1996	3.02	3.94	1.31	10.72	18.92	19.39	15.73	2.225	0.633
7/31/1996	3.02	3.99	1.32	13.60	19.01	19.52	16.15	2.797	0.646
8/31/1996	2.96	4.04	1.36	14.65	19.10	19.64	16.60	2.992	0.660
9/30/1996	3.01	3.84	1.28	11.50	19.19	19.76	16.95	2.443	0.670
10/31/1996	2.90	3.97	1.37	13.64	19.28	19.88	17.37	2.839	0.682
11/30/1996	3.02	3.64	1.21	11.17	19.37	19.99	17.71	2.476	0.692
12/31/1996	2.96	3.34	1.13	7.43	19.47	20.09	17.94	1.771	0.697
1/31/1997	2.92	3.35	1.15	5.25	19.56	20.20	18.10	1.252	0.700
2/28/1997	2.87	3.82	1.33	3.76	19.64	20.30	18.20	0.807	0.701
3/31/1997	2.75	3.74	1.36	4.04	19.72	20.42	18.33	0.890	0.702
4/30/1997	2.79	3.83	1.37	5.34	19.81	20.53	18.49	1.153	0.704
5/31/1997	2.87	3.86	1.34	5.32	19.89	20.65	18.65	1.132	0.706
6/30/1997	2.83	3.58	1.27	8.32	19.98	20.76	18.90	1.890	0.712
7/31/1997	2.83	3.49	1.23	5.11	20.07	20.87	19.06	1.186	0.715
8/31/1997	2.81	3.91	1.39	8.35	20.15	20.99	19.32	1.765	0.720
9/30/1997	2.79	3.98	1.43	7.41	20.24	21.11	19.54	1.546	0.725
10/31/1997	2.75	4.05	1.47	7.24	20.32	21.24	19.77	1.493	0.729
11/30/1997	2.84	4.03	1.42	7.45	20.41	21.36	19.99	1.537	0.733
12/31/1997	2.75	4.04	1.47	7.27	20.49	21.48	20.22	1.504	0.738
1/31/1998	2.76	4.13	1.49	6.25	20.58	21.61	20.41	1.269	0.741
2/28/1998	2.71	3.99	1.47	3.32	20.65	21.72	20.50	0.695	0.740
3/31/1998	2.74	3.74	1.36	7.13	20.74	21.84	20.72	1.572	0.744
4/30/1998	3.04	3.31	1.09	6.23	20.83	21.94	20.91	1.485	0.748
5/31/1998	2.99	3.04	1.02	5.50	20.92	22.03	21.08	1.410	0.751
6/30/1998	2.19	3.72	1.70	6.52	20.99	22.14	21.28	1.498	0.754
7/31/1998	2.15	4.40	2.05	6.85	21.06	22.28	21.49	1.364	0.757
8/31/1998	3.04	5.04	1.66	2.46	21.15	22.43	21.56	0.416	0.755
9/30/1998	2.92	4.36	1.50		21.24	22.57	21.56	0.000	0.751
10/31/1998	2.77	9.22	3.33		21.32	22.85	21.56	0.000	0.743
11/30/1998	2.64	10.42	3.95	6.69	21.40	23.16	21.77	0.599	0.741
12/31/1998	2.69	9.22	3.43	3.65	21.49	23.45	21.88	0.365	0.738

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
1/31/1999	2.63	9.60	3.65	4.82	21.57	23.75	22.03	0.465	0.735
2/28/1999	2.76	8.64	3.13	4.14	21.64	23.99	22.14	0.439	0.732
3/31/1999	2.66	8.82	3.31	3.83	21.73	24.26	22.26	0.399	0.729
4/30/1999	2.65	9.15	3.46	4.57	21.81	24.54	22.40	0.461	0.726
5/31/1999	2.65	9.28	3.51	0.59	21.89	24.83	22.42	0.059	0.720
6/30/1999	2.43	8.33	3.43		21.96	25.08	22.42	0.000	0.713
7/31/1999	2.41	7.81	3.24		22.04	25.32	22.42	0.000	0.707
8/31/1999	2.56	7.71	3.01		22.12	25.56	22.42	0.000	0.702
9/30/1999	2.75	5.67	2.06		22.20	25.73	22.42	0.000	0.697
10/31/1999	3.04	7.96	2.62		22.29	25.97	22.42	0.000	0.691
11/30/1999	2.01	6.97	3.47		22.35	26.18	22.42	0.000	0.687
12/31/1999	26.54	14.82	0.56	3.42	23.18	26.64	22.52	0.152	0.675
1/31/2000	27.67	15.73	0.57	7.38	24.03	27.13	22.75	0.311	0.668
2/29/2000	26.74	15.29	0.57	5.83	24.81	27.57	22.92	0.253	0.660
3/31/2000	25.35	15.17	0.60	7.97	25.59	28.04	23.17	0.354	0.654
4/30/2000	21.82	15.86	0.73	14.23	26.25	28.52	23.60	0.642	0.653
5/31/2000	22.71	17.22	0.76	16.78	26.95	29.05	24.12	0.706	0.654
6/30/2000	22.35	18.55	0.83	17.61	27.62	29.61	24.64	0.704	0.655
7/31/2000	21.46	18.50	0.86	16.55	28.29	30.18	25.16	0.670	0.656
8/31/2000	20.96	17.15	0.82	15.76	28.94	30.71	25.65	0.679	0.656
9/30/2000	19.61	17.09	0.87	18.57	29.53	31.23	26.20	0.816	0.659
10/31/2000	18.93	16.97	0.90	18.05	30.11	31.75	26.76	0.804	0.661
11/30/2000	18.86	18.89	1.00	19.18	30.68	32.32	27.34	0.788	0.664
12/31/2000	17.49	20.07	1.15	20.25	31.22	32.94	27.97	0.806	0.666
1/31/2001	19.02	18.52	0.97	20.50	31.81	33.52	28.60	0.853	0.670
2/28/2001	18.01	17.67	0.98	19.88	32.32	34.01	29.16	0.869	0.673
3/31/2001	17.79	18.11	1.02	21.05	32.87	34.57	29.81	0.905	0.676
4/30/2001	16.54	19.16	1.16	21.31	33.36	35.15	30.45	0.890	0.680
5/31/2001	16.62	21.67	1.30	21.69	33.88	35.82	31.12	0.819	0.682
6/30/2001	15.76	23.94	1.52	21.63	34.35	36.54	31.77	0.759	0.684
7/31/2001	15.64	23.53	1.50	22.87	34.84	37.27	32.48	0.815	0.686
8/31/2001	13.75	21.55	1.57	23.07	35.26	37.93	33.20	0.904	0.690
9/30/2001	13.83	21.01	1.52	20.31	35.68	38.56	33.81	0.812	0.692
10/31/2001	13.77	25.65	1.86	30.44	36.10	39.36	34.75	1.027	0.698
11/30/2001	13.83	24.05	1.74	24.35	36.52	40.08	35.48	0.868	0.701
12/31/2001	13.16	23.03	1.75	23.07	36.93	40.79	36.19	0.860	0.703
1/31/2002	12.81	23.75	1.85	23.63	37.32	41.53	36.93	0.861	0.706
2/28/2002	11.89	22.00	1.85	22.49	37.66	42.15	37.56	0.884	0.708
3/31/2002	12.46	23.46	1.88	17.64	38.04	42.87	38.10	0.652	0.707
4/30/2002	12.31	21.54	1.75	18.24	38.41	43.52	38.65	0.727	0.707
5/31/2002	10.94	17.48	1.60	18.18	38.75	44.06	39.21	0.881	0.710
6/30/2002	12.12	19.14	1.58	20.28	39.12	44.64	39.82	0.896	0.712
7/31/2002	11.85	22.83	1.93	19.82	39.48	45.34	40.44	0.755	0.712
8/31/2002	12.19	24.33	2.00	20.02	39.86	46.10	41.06	0.718	0.712
9/30/2002	12.24	23.93	1.95	20.97	40.23	46.82	41.69	0.763	0.713
10/31/2002	11.34	22.27	1.96	20.29	40.58	47.51	42.32	0.794	0.714
11/30/2002	11.09	21.47	1.94	20.07	40.91	48.15	42.92	0.813	0.715
12/31/2002	10.82	21.45	1.98	18.74	41.25	48.82	43.50	0.763	0.716

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
1/31/2003	10.40	21.68	2.09	14.90	41.57	49.49	43.96	0.604	0.715
2/28/2003	10.43	22.05	2.11	14.57	41.86	50.11	44.37	0.581	0.713
3/31/2003	10.65	23.64	2.22	18.06	42.19	50.84	44.93	0.676	0.713
4/30/2003	10.75	27.70	2.58	32.13	42.52	51.67	45.89	1.043	0.717
5/31/2003	10.87	27.85	2.56	35.03	42.85	52.53	46.98	1.130	0.724
6/30/2003	10.18	28.16	2.77	35.50	43.16	53.38	48.04	1.141	0.729
7/31/2003	10.49	28.75	2.74	33.29	43.48	54.27	49.08	1.048	0.734
8/31/2003	10.35	28.21	2.72	30.23	43.80	55.14	50.01	0.969	0.738
9/30/2003	10.02	26.14	2.61	19.83	44.10	55.93	50.61	0.683	0.737
10/31/2003	8.98	23.92	2.66		44.38	56.67	50.61	0.000	0.728
11/30/2003	11.88	25.20	2.12	17.73	44.74	57.43	51.14	0.619	0.727
12/31/2003	15.02	25.63	1.71	21.55	45.20	58.22	51.81	0.719	0.727
1/31/2004	13.83	25.87	1.87	21.71	45.63	59.02	52.48	0.727	0.727
2/29/2004	13.40	26.39	1.97	22.10	46.02	59.79	53.12	0.730	0.727
3/31/2004	12.91	27.61	2.14	22.84	46.42	60.64	53.83	0.729	0.727
4/30/2004	12.36	25.08	2.03	23.13	46.79	61.40	54.52	0.807	0.728
5/31/2004	11.96	25.67	2.15	23.45	47.16	62.19	55.25	0.805	0.729
6/30/2004	11.92	26.20	2.20	25.00	47.52	62.98	56.00	0.843	0.730
7/31/2004	11.39	24.69	2.17	24.16	47.87	63.74	56.75	0.863	0.731
8/31/2004	10.73	26.78	2.49	27.97	48.21	64.57	57.62	0.936	0.734
9/30/2004	10.51	26.98	2.57	27.73	48.52	65.38	58.45	0.924	0.736
10/31/2004	10.13	27.10	2.68	26.87	48.84	66.22	59.28	0.895	0.738
11/30/2004	9.49	24.95	2.63	22.51	49.12	66.97	59.96	0.813	0.739
12/31/2004	8.61	26.24	3.05	23.74	49.39	67.78	60.69	0.826	0.740
1/31/2005	10.11	28.43	2.81	23.87	49.70	68.67	61.43	0.761	0.740
2/28/2005	9.38	28.92	3.08	24.89	49.96	69.48	62.13	0.787	0.740
3/31/2005	8.92	29.37	3.29	23.71	50.24	70.39	62.86	0.742	0.740
4/30/2005	8.77	29.35	3.35	25.25	50.50	71.27	63.62	0.792	0.741
5/31/2005	7.99	28.66	3.59	26.45	50.75	72.16	64.44	0.854	0.742
6/30/2005	7.51	27.71	3.69	27.88	50.98	72.99	65.28	0.933	0.744
7/31/2005	8.08	28.28	3.50	26.78	51.23	73.86	66.11	0.875	0.745
8/31/2005	8.04	30.04	3.74	25.45	51.48	74.79	66.90	0.786	0.746
9/30/2005	7.50	29.46	3.93	24.54	51.70	75.68	67.63	0.776	0.746
10/31/2005	7.47	29.43	3.94	25.26	51.93	76.59	68.42	0.800	0.747
11/30/2005	7.56	30.69	4.06	25.74	52.16	77.51	69.19	0.783	0.747
12/31/2005	7.42	30.35	4.09	24.54	52.39	78.45	69.95	0.755	0.747
1/31/2006	7.14	28.89	4.05	25.00	52.61	79.35	70.73	0.808	0.748
2/28/2006	6.51	28.56	4.39	25.59	52.79	80.15	71.44	0.841	0.749
3/31/2006	6.56	30.31	4.62	23.55	53.00	81.09	72.17	0.731	0.749
4/30/2006	7.32	33.19	4.53	23.52	53.22	82.08	72.88	0.666	0.748
5/31/2006	6.34	30.31	4.78	23.81	53.41	83.02	73.62	0.741	0.748
6/30/2006	7.04	36.09	5.13	25.41	53.62	84.10	74.38	0.667	0.747
7/31/2006	6.67	31.44	4.71	23.11	53.83	85.08	75.09	0.693	0.746
8/31/2006	6.77	31.01	4.58	22.70	54.04	86.04	75.80	0.689	0.746
9/30/2006	6.17	31.11	5.04	23.49	54.23	86.97	76.50	0.714	0.745
10/31/2006	6.08	30.57	5.03	15.56	54.41	87.92	76.98	0.481	0.743
11/30/2006	5.95	32.31	5.43	27.84	54.59	88.89	77.82	0.818	0.743
12/31/2006	5.84	31.96	5.48	31.00	54.77	89.88	78.78	0.921	0.745

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
1/31/2007	5.38	31.78	5.91	29.55	54.94	90.87	79.70	0.886	0.747
2/28/2007	5.48	31.62	5.77	25.63	55.09	91.75	80.41	0.772	0.747
3/31/2007	5.47	30.46	5.56	26.00	55.26	92.70	81.22	0.811	0.747
4/30/2007	5.30	30.57	5.76	25.93	55.42	93.61	82.00	0.807	0.748
5/31/2007	5.32	31.64	5.95	26.29	55.59	94.59	82.81	0.792	0.748
6/30/2007	4.99	30.42	6.10	26.23	55.74	95.51	83.60	0.823	0.749
7/31/2007	5.23	30.39	5.81	24.24	55.90	96.45	84.35	0.760	0.749
8/31/2007	5.41	28.74	5.31	22.80	56.07	97.34	85.06	0.752	0.749
9/30/2007	5.50	29.64	5.39	16.82	56.23	98.23	85.56	0.539	0.747
10/31/2007	5.17	28.93	5.60	24.74	56.39	99.13	86.33	0.813	0.748
11/30/2007	5.32	29.52	5.55	25.80	56.55	100.01	87.10	0.831	0.749
12/31/2007	5.20	30.76	5.92	25.77	56.71	100.97	87.90	0.799	0.749
1/31/2008	4.79	31.56	6.58	25.10	56.86	101.94	88.68	0.762	0.749
2/29/2008	4.87	31.35	6.44	25.69	57.00	102.85	89.43	0.784	0.749
3/31/2008	4.76	29.48	6.19	22.97	57.15	103.77	90.14	0.744	0.749
4/30/2008	4.66	29.90	6.41	24.03	57.29	104.66	90.86	0.769	0.749
5/31/2008	4.90	31.22	6.37	25.58	57.44	105.63	91.65	0.784	0.750
6/30/2008	4.88	31.70	6.50	26.57	57.59	106.58	92.45	0.802	0.750
7/31/2008	3.86	28.41	7.36	23.06	57.71	107.46	93.16	0.781	0.750
8/31/2008	4.87	34.14	7.01	25.95	57.86	108.52	93.97	0.730	0.750
9/30/2008	4.85	33.80	6.97	26.17	58.00	109.54	94.75	0.743	0.750
10/31/2008	4.77	33.59	7.04	26.49	58.15	110.58	95.57	0.757	0.750
11/30/2008	4.73	33.60	7.10	26.66	58.29	111.59	96.37	0.762	0.750
12/31/2008	3.03	18.54	6.11	24.41	58.39	112.16	97.13	1.257	0.753
1/31/2009	1.98	12.97	6.56	22.06	58.45	112.56	97.82	1.629	0.756
2/28/2009	4.12	33.58	8.15	30.78	58.57	113.50	98.68	0.885	0.756
3/31/2009	4.43	34.12	7.71	31.85	58.70	114.56	99.66	0.900	0.758
4/30/2009	4.54	35.20	7.76	31.33	58.84	115.62	100.60	0.858	0.759
5/31/2009	4.42	34.86	7.88	33.97	58.98	116.70	101.66	0.940	0.760
6/30/2009	4.03	32.67	8.11	33.07	59.10	117.68	102.65	0.977	0.762
7/31/2009	4.35	34.46	7.92	28.56	59.23	118.74	103.53	0.800	0.762
8/31/2009	4.29	34.73	8.10	27.47	59.36	119.82	104.39	0.764	0.762
9/30/2009	4.21	34.00	8.08	27.37	59.49	120.84	105.21	0.777	0.762
10/31/2009	4.11	34.69	8.44	26.89	59.62	121.92	106.04	0.749	0.762
11/30/2009	4.08	35.07	8.59	26.65	59.74	122.97	106.84	0.735	0.762
12/31/2009	4.11	34.03	8.28	25.00	59.87	124.02	107.62	0.710	0.761
1/31/2010	3.95	34.14	8.64	25.23	59.99	125.08	108.40	0.715	0.761
2/28/2010	3.84	32.79	8.55	26.50	60.10	126.00	109.14	0.782	0.761
3/31/2010	3.96	33.42	8.44	26.61	60.22	127.04	109.96	0.770	0.761
4/30/2010	3.90	33.08	8.48	25.17	60.34	128.03	110.72	0.736	0.761
5/31/2010	3.88	33.30	8.57	24.81	60.46	129.06	111.49	0.721	0.761
6/30/2010	3.55	30.89	8.70	23.10	60.56	129.99	112.18	0.724	0.761
7/31/2010	3.85	32.27	8.38	28.00	60.68	130.99	113.05	0.839	0.761
8/31/2010	3.84	32.90	8.56	27.42	60.80	132.01	113.90	0.806	0.761
9/30/2010	3.73	32.53	8.72	26.94	60.92	132.98	114.71	0.801	0.762
10/31/2010	3.62	30.93	8.55	21.15	61.03	133.94	115.36	0.662	0.761
11/30/2010	3.54	30.75	8.68	21.34	61.13	134.87	116.00	0.672	0.760
12/31/2010	3.51	30.15	8.59	21.05	61.24	135.80	116.66	0.675	0.760

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
1/31/2011	3.60	30.52	8.48	21.30	61.35	136.75	117.32	0.675	0.759
2/28/2011	3.43	29.87	8.70	21.30	61.45	137.58	117.91	0.690	0.759
3/31/2011	3.18	29.77	9.37	20.99	61.55	138.51	118.56	0.684	0.759
4/30/2011	3.02	28.75	9.53	21.34	61.64	139.37	119.20	0.720	0.758
5/31/2011	2.90	28.33	9.77	19.78	61.73	140.25	119.82	0.678	0.758
6/30/2011	2.94	28.56	9.73	21.22	61.82	141.10	120.45	0.721	0.758
7/31/2011	2.49	25.48	10.23	22.06	61.89	141.89	121.14	0.842	0.758
8/31/2011	2.77	26.69	9.63	25.83	61.98	142.72	121.94	0.939	0.759
9/30/2011	2.81	27.02	9.60	25.78	62.06	143.53	122.71	0.926	0.760
10/31/2011	2.82	28.93	10.25	33.08	62.15	144.43	123.74	1.112	0.762
11/30/2011	2.63	29.00	11.02	33.33	62.23	145.30	124.74	1.120	0.764
12/31/2011	2.56	28.01	10.95	34.84	62.31	146.17	125.82	1.212	0.766