

NORTH VIRDEN SCALLION UNIT NO. 2

WATERFLOOD EOR PROJECT

ANNUAL REPORT FOR 2015

March 24, 2016

Tundra Oil and Gas Partnership

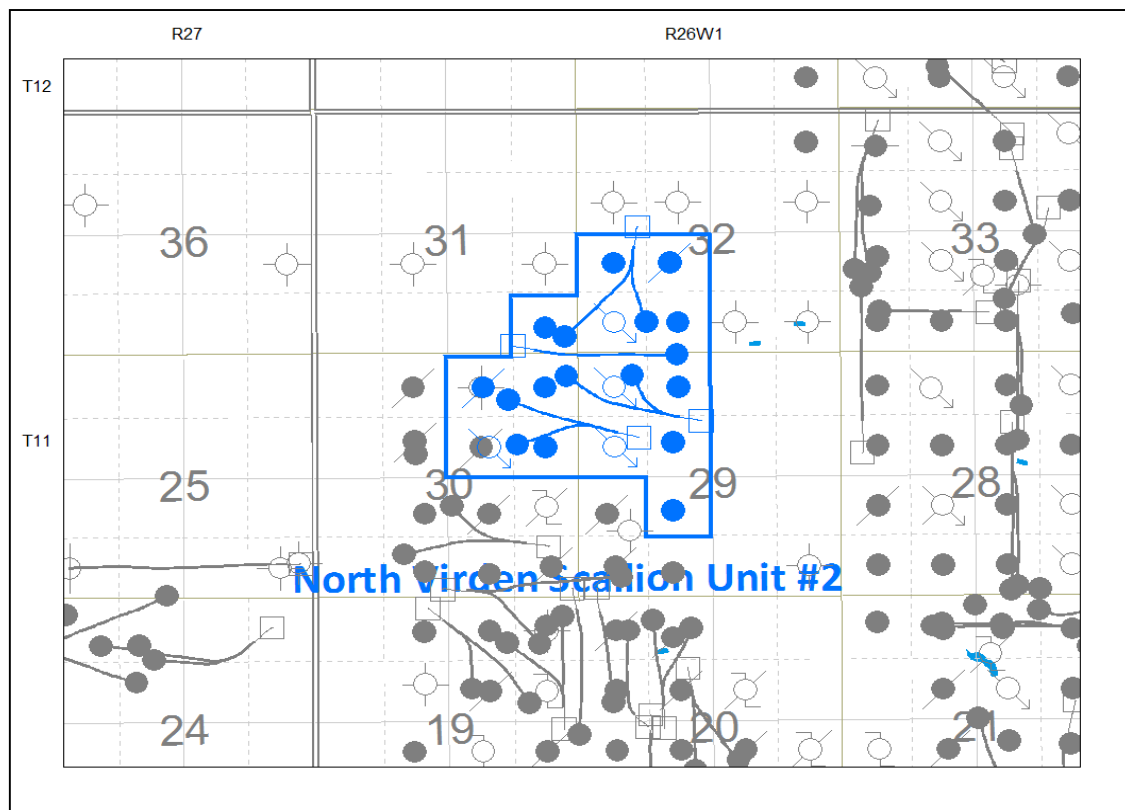
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INTRODUCTION

North Virden Scallion Unit No. 2 (NVSU2) 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: NVSU2 Area Outline



In accordance with Section 73 of the Manitoba Drilling and Production Regulation, Tundra hereby submits the 2015 Annual Progress Report for NVSU2 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 the 00/13-29-009-26W1/0 well. Oil production peaked at 59.2 m³/d in March

2000. The Unit was producing 5.52 m³/d of oil and 35.78 m³/d of water at the end of 2015, with a WOR of 6.48 m³/m³. The rates and WOR are plotted in Figure 2.

Figure 2: NVSU2 Production/Injection Rates and WOR vs. Time

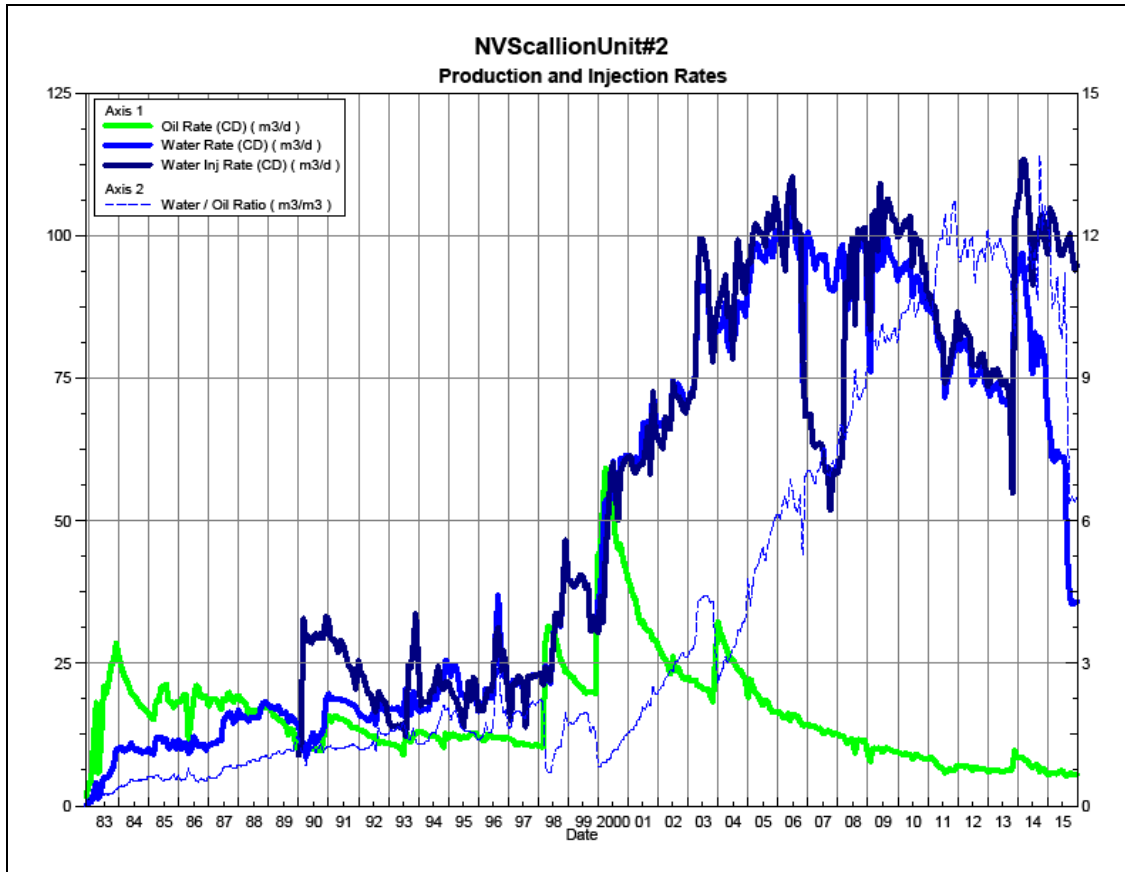
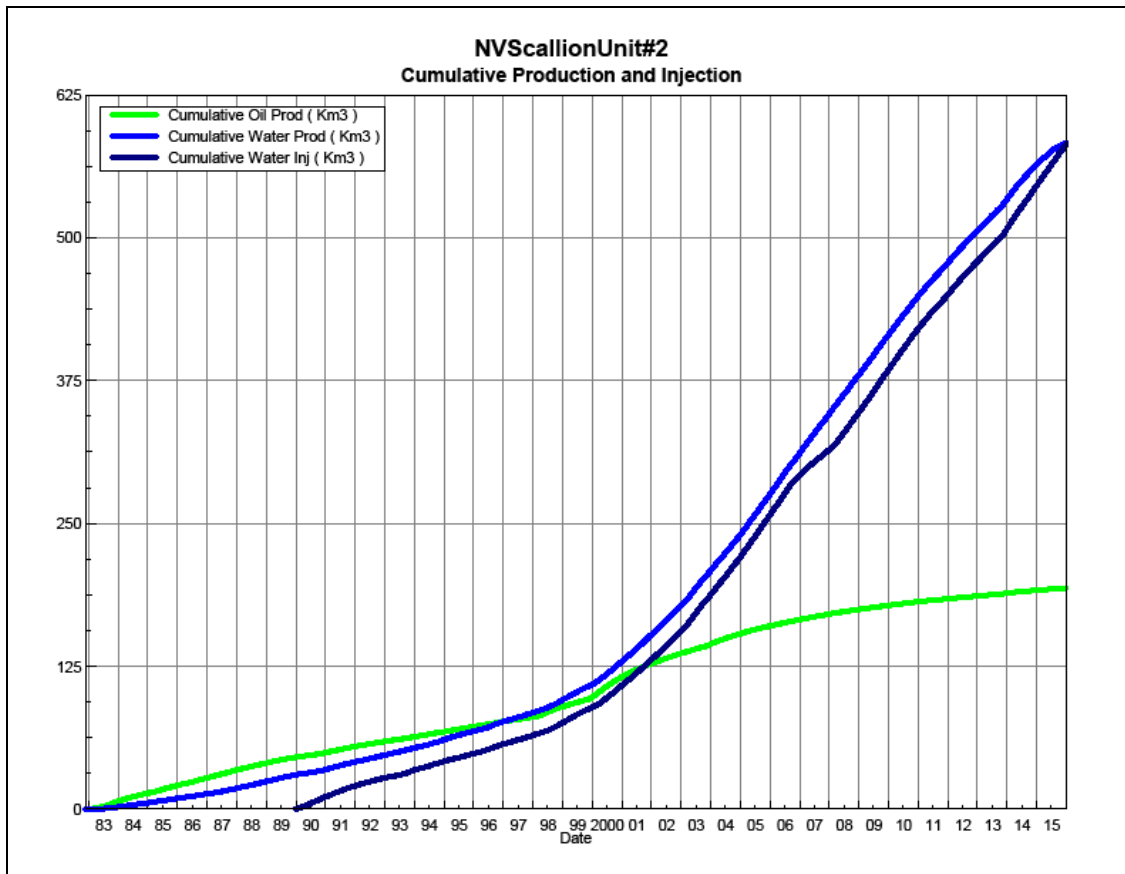


Figure 3 shows the cumulative production for NVSU2 to the end of December 2015 as 193.6 e³m³ of oil, and 583.3 e³m³ of water. The cumulative water injected is 581.7 e³m³.

Figure 3: NVSU2 Cumulative Oil, Water and Water Injected vs. Time



Waterflood History

As of December 2015, 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 NVSU2. 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 pressures since 2002. The average injection pressure for each injection well was 5362 kPag for 2015.

Reservoir Pressure

No reservoir pressure measurements were taken at NVSU2 in 2015.

Well Servicing

No maintenance was required on the 21 wells in NVS Unit No. 2 in 2015.

Voidage Replacement

Cumulative voidage for the NVSU2 was 0.740 in December 2015. Tundra hopes to maintain this cumulative VRR, by keeping water injection at its current rate for the foreseeable future. Plots of the Voidage Replacement Ratio on a monthly and cumulative basis for each injection pattern are presented in Appendix D.

Waterflood Performance Discussion

OOIP for NVSU2 is 554 e³m³. Current recovery factor within the unit is approximately 34.9%. Ultimate recovery factor for the NVSU2 is estimated to approach 36% by decline analysis.

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 of horizontal drilling technology. From 1998-2002, 4 horizontal wells were drilled into the unit and since then the wells have recovered an average 20.0 e³m³ 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 NVSU2 is currently operating.

List of Appendices

Appendix A: Well Name and Well Status

Appendix B: Monthly Injection Wellhead Pressures Table

Appendix C: Injection Pattern Summary

Appendix D: Injector Pattern Production/Injection Rates, Cumulative and VRR Plots
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					Injection Pressure				
Month	100/12-29	100/13-29	102/10-30	100/04-32	Month	100/12-29	100/13-29	102/10-30	100/04-32	Month	100/12-29	100/13-29	102/10-30	100/04-32	Month	100/12-29	100/13-29	102/10-30	100/04-32
					Jan-06	7524	7524	7524	7524	Jan-10	4964	4964	4964	4964	Jan-14	5297	5297	5297	5297
					Feb-06	7796	7796	7796	7796	Feb-10	4856	4856	4856	4856	Feb-14	5171	5171	5171	5171
					Mar-06	7053	7053	7053	7053	Mar-10	5104	5104	5104	5104	Mar-14	5171	5171	5171	5171
					Apr-06	6417	6417	6417	6417	Apr-10	5171	5171	5171	5171	Apr-14	5171	5171	5171	5171
					May-06	6719	6719	6719	6719	May-10	5171	5171	5171	5171	May-14	4951	4902	4951	4951
					Jun-06	7002	7002	7002	7002	Jun-10	5171	5171	5171	5171	Jun-14	4550	4412	4550	4550
					Jul-06	6416	5059	6416	6416	Jul-10	5171	5171	5171	5171	Jul-14	4550	4412	4550	4550
Aug-02	6279	0	6279	6338	Aug-06	5609	5609	5609	5609	Aug-10	5224	5224	5224	5224	Aug-14	4550	4412	4550	4550
Sep-02	6279	0	6279	6338	Sep-06	5796	5796	5796	5796	Sep-10	5240	5240	5240	5240	Sep-14	4550	4412	4550	4550
Oct-02	6279	0	6279	6338	Oct-06	4804	4804	4804	4003	Oct-10	5240	5240	5240	5240	Oct-14	4550	4412	4550	4550
Nov-02	6279	0	6279	6338	Nov-06	5235	5235	5235	5235	Nov-10	5056	5056	5056	5056	Nov-14	4910	4882	4910	4910
Dec-02	6279	0	6279	6338	Dec-06	5636	5636	5636	5636	Dec-10	4550	4550	4550	4550	Dec-14	5071	5071	5071	5071
Jan-03	6279	0	6279	6338	Jan-07	5798	5798	5798	5798	Jan-11	4479	4479	4479	4479	Jan-15	5200	5200	5200	5200
Feb-03	6279	0	6279	6338	Feb-07	5817	5817	5817	5817	Feb-11	4299	4299	4299	4299	Feb-15	5200	5200	5200	5200
Mar-03	6279	0	6279	6338	Mar-07	5720	5720	5720	5720	Mar-11	4274	4274	4274	4274	Mar-15	5200	5200	5200	5200
Apr-03	6333	253	6333	6400	Apr-07	5839	5839	5839	5839	Apr-11	4274	4274	4274	4274	Apr-15	5200	5200	5200	5200
May-03	7973	7818	7973	8200	May-07	5947	5947	5947	5947	May-11	4274	4274	4274	4274	May-15	5200	5200	5200	5200
Jun-03	8050	8050	8050	8200	Jun-07	5920	5920	5920	5920	Jun-11	4274	4274	4274	4274	Jun-15	5186	5186	5186	5186
Jul-03	8050	8050	8050	8200	Jul-07	6016	6016	6016	6016	Jul-11	4136	4274	3309	4274	Jul-15	5171	5171	5171	5171
Aug-03	8295	8295	8295	8406	Aug-07	5927	5927	5927	5927	Aug-11	5303	5303	0	5303	Aug-15	5365	5365	5410	5410
Sep-03	8140	8140	8140	7923	Sep-07	5955	5955	5961	4769	Sep-11	5054	5054	1641	5054	Sep-15	5600	5600	5700	5700
Oct-03	5272	1045	5272	271	Oct-07	5755	5755	5790	5755	Oct-11	6676	6676	6676	6676	Oct-15	5600	5600	5700	5700
Nov-03	5428	3660	5428	3660	Nov-07	5998	5998	5998	5998	Nov-11	6894	6894	6894	6894	Nov-15	5600	5600	5700	5700
Dec-03	4800	4800	4800	4800	Dec-07	6375	5433	6375	6375	Dec-11	7361	7361	7361	7361	Dec-15	5600	5600	5700	5700
Jan-04	4800	4800	4800	4800	Jan-08	6408	6408	6408	6408	Jan-12	7860	7860	7860	7860					
Feb-04	4800	4800	4800	4800	Feb-08	6645	6645	6645	6645	Feb-12	7860	7860	7860	7860					
Mar-04	4800	4800	4800	4800	Mar-08	6637	6637	6637	6637	Mar-12	7860	7860	7860	7860					
Apr-04	4800	4800	4800	4800	Apr-08	6670	6670	6670	6670	Apr-12	7860	7860	7860	7860					
May-04	5465	5465	5465	5465	May-08	7224	7224	7224	7224	May-12	7860	7860	7860	7860					
Jun-04	6633	6633	6633	6633	Jun-08	6619	6619	6619	6619	Jun-12	7860	7860	7860	7860					
Jul-04	7290	7290	7290	7290	Jul-08	6599	6599	6599	6599	Jul-12	7860	7860	7860	7860					
Aug-04	7732	7732	7732	7732	Aug-08	6431	6431	6431	6431	Aug-12	7860	7860	7860	7860					
Sep-04	8190	8190	8190	8190	Sep-08	6987	6987	6987	6987	Sep-12	7860	7860	7860	7860					
Oct-04	6906	6906	6509	6906	Oct-08	6963	6963	6963	6963	Oct-12	7860	7860	7860	7860					
Nov-04	5681	5681	5473	5681	Nov-08	6863	6863	6863	6863	Nov-12	7860	7860	7860	7860					
Dec-04	5530	5530	5530	5530	Dec-08	6826	6826	6826	6826	Dec-12	7860	7860	7860	7860					
Jan-05	5591	5591	5591	5591	Jan-09	6405	6405	6405	6405	Jan-13	7860	7860	7860	7860					
Feb-05	6112	6112	6112	6112	Feb-09	7239	7239	7239	7239	Feb-13	7860	7860	7860	7860					
Mar-05	6555	6555	6555	6555	Mar-09	7362	7362	7362	7362	Mar-13	7860	7860	7860	7860					
Apr-05	6539	6539	6539	6539	Apr-09	6812	6812	6812	6812	Apr-13	7860	7860	7860	7860					
May-05	6506	6506	6506	6506	May-09	7203	7203	7203	7203	May-13	7860	7860	7860	7860					
Jun-05	7029	7029	7029	7029	Jun-09	6966	6966	6966	6966	Jun-13	7860	7860	7860	7860					
Jul-05	6460	6460	6460	6460	Jul-09	5563	5563	5563	5563	Jul-13	7539	7539	3803	7539					
Aug-05	5934	5934	5934	5934	Aug-09	5102	5102	5102	5102	Aug-13	7239	7239	0	7239					
Sep-05	6077	6077	6077	6077	Sep-09	4964	4964	4964	4964	Sep-13	7239	7239	0	7239					
Oct-05	6537	6537	6537	6537	Oct-09	4979	4979	4979	4979	Oct-13	4688	4688	0	4688					
Nov-05	7199	7199	7199	7199	Nov-09	4964	4964	4964	4964	Nov-13	4839	3150	4839	4839					
Dec-05	7452	7452	7452	7452	Dec-09	4964	4964	4964	4964	Dec-13	5377	5377	5377	5377					

Appendix C

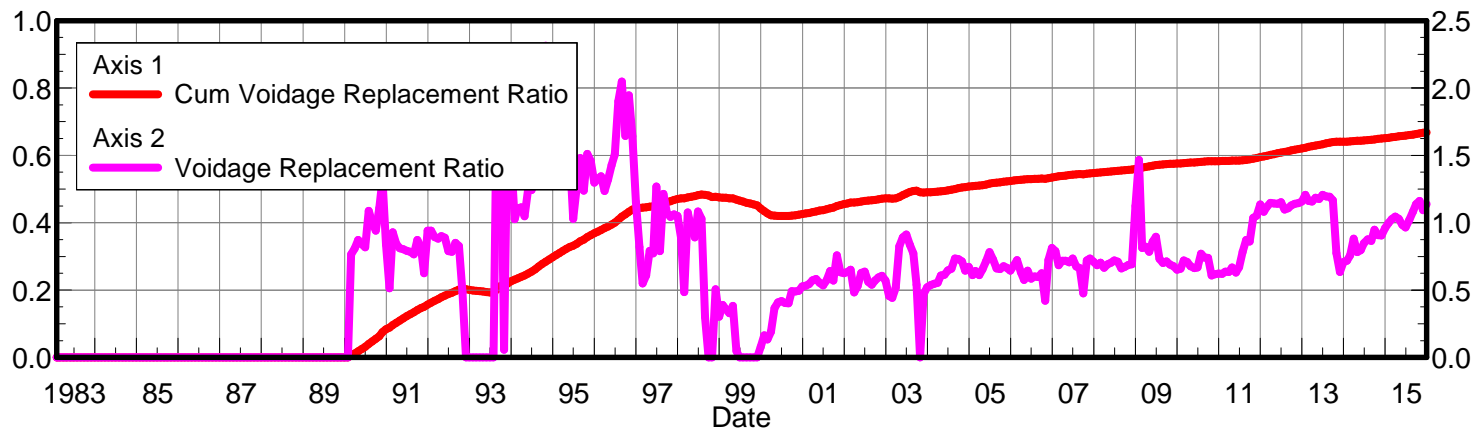
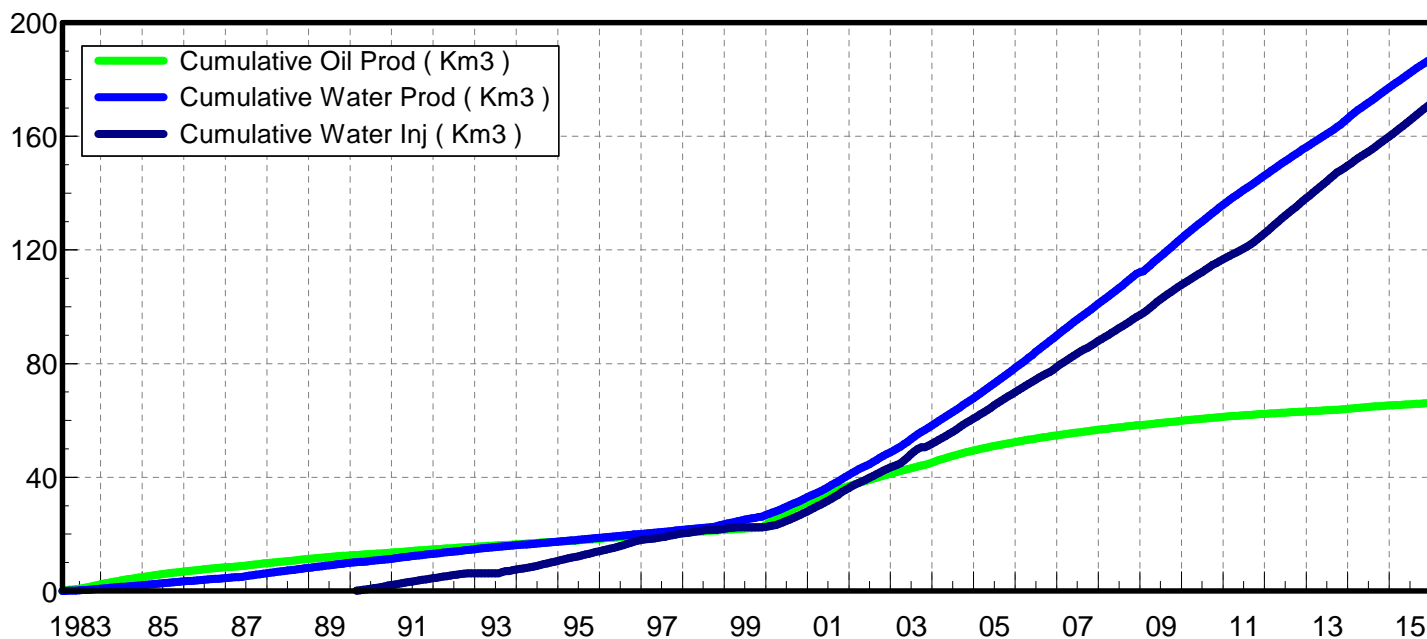
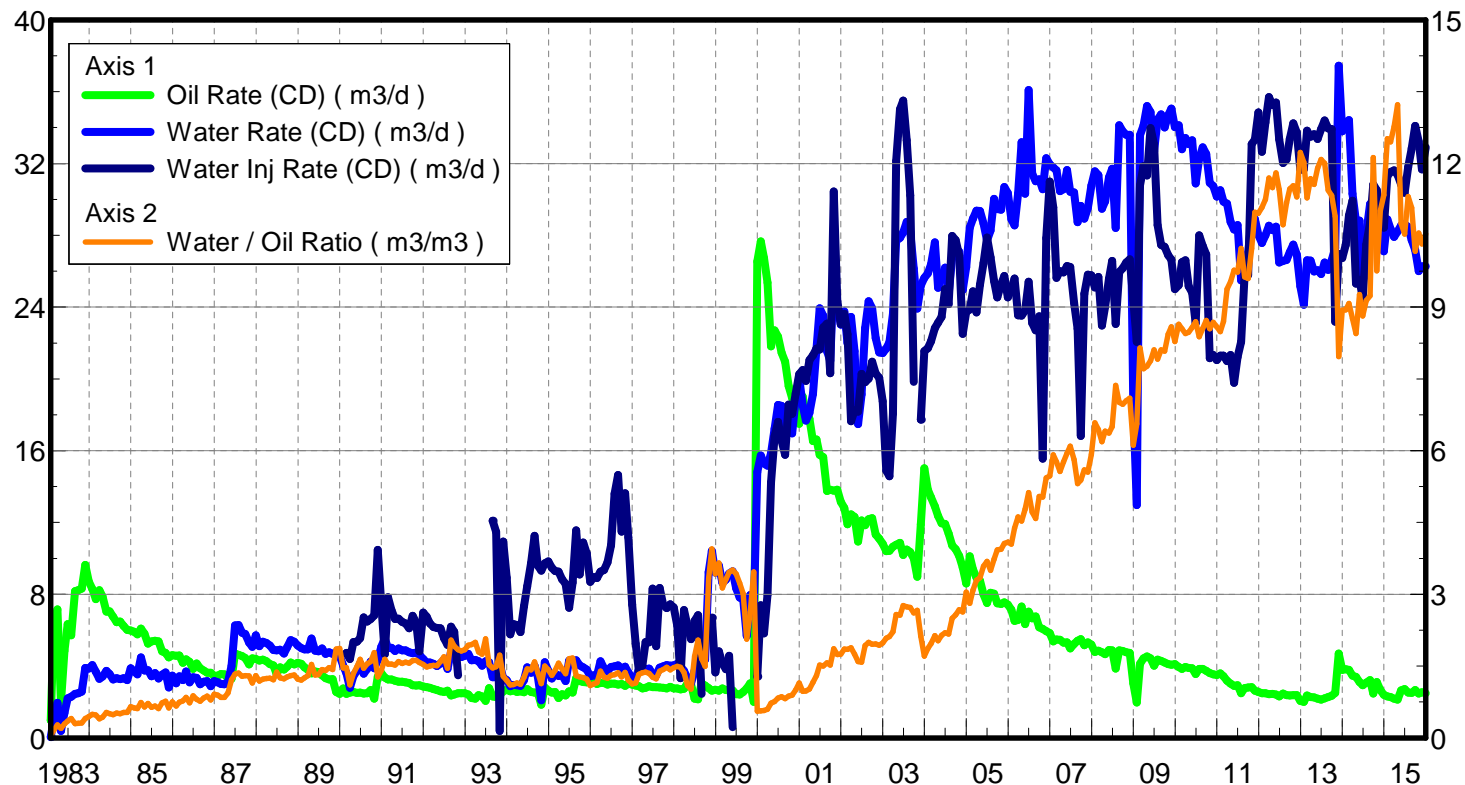
North Virden Scallion Unit 2 Pattern Summary as of December 2015

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	2.5	8.0	3.25	37.3	98.6	305.0	238.4	3.5	0.58
					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	0.6	1.5	2.66	24.7	28.9	91.0	171.7	11.9	1.42
					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	2.5	26.3	10.53	32.9	66.2	187.2	171.6	1.1	0.67
					01-31	0.5											
					03/03-32 (Surf 01-31)	0.45											

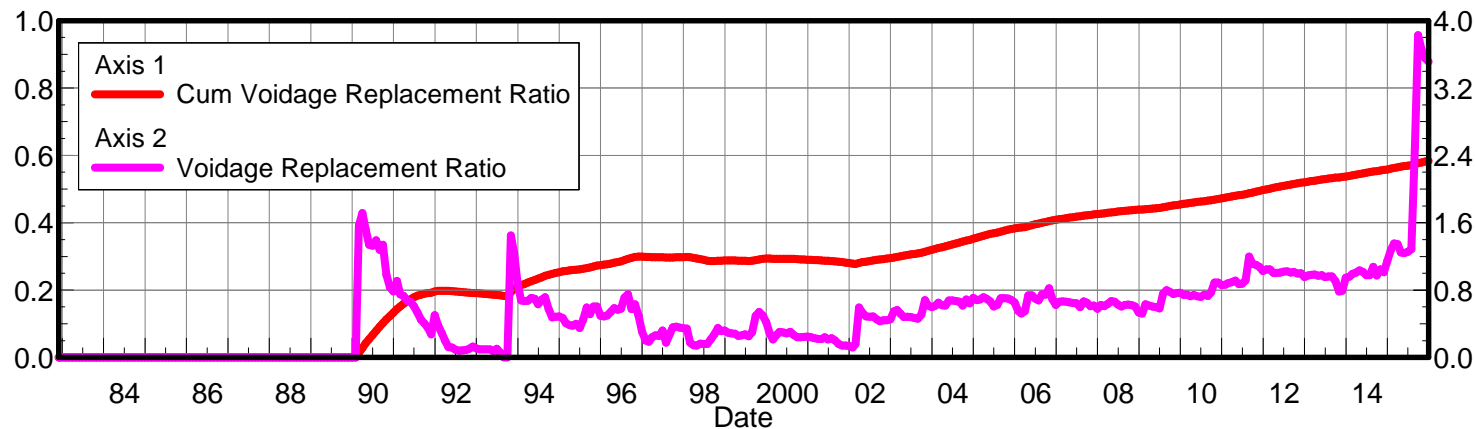
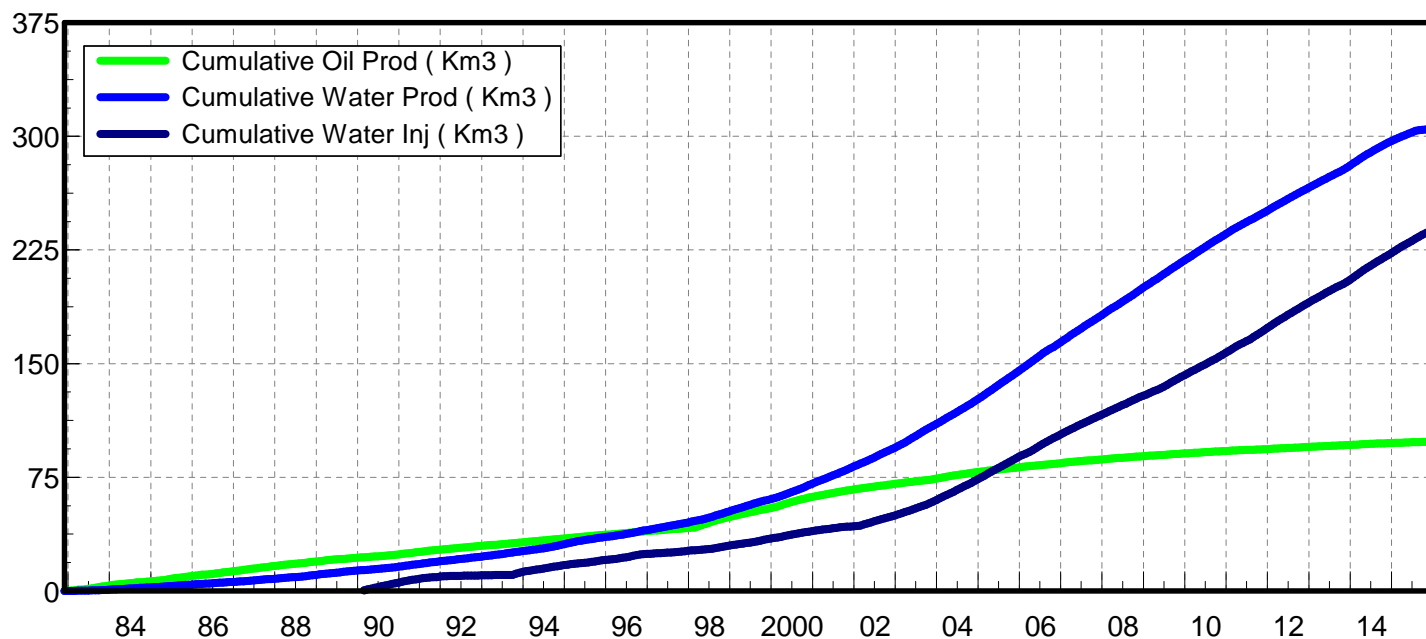
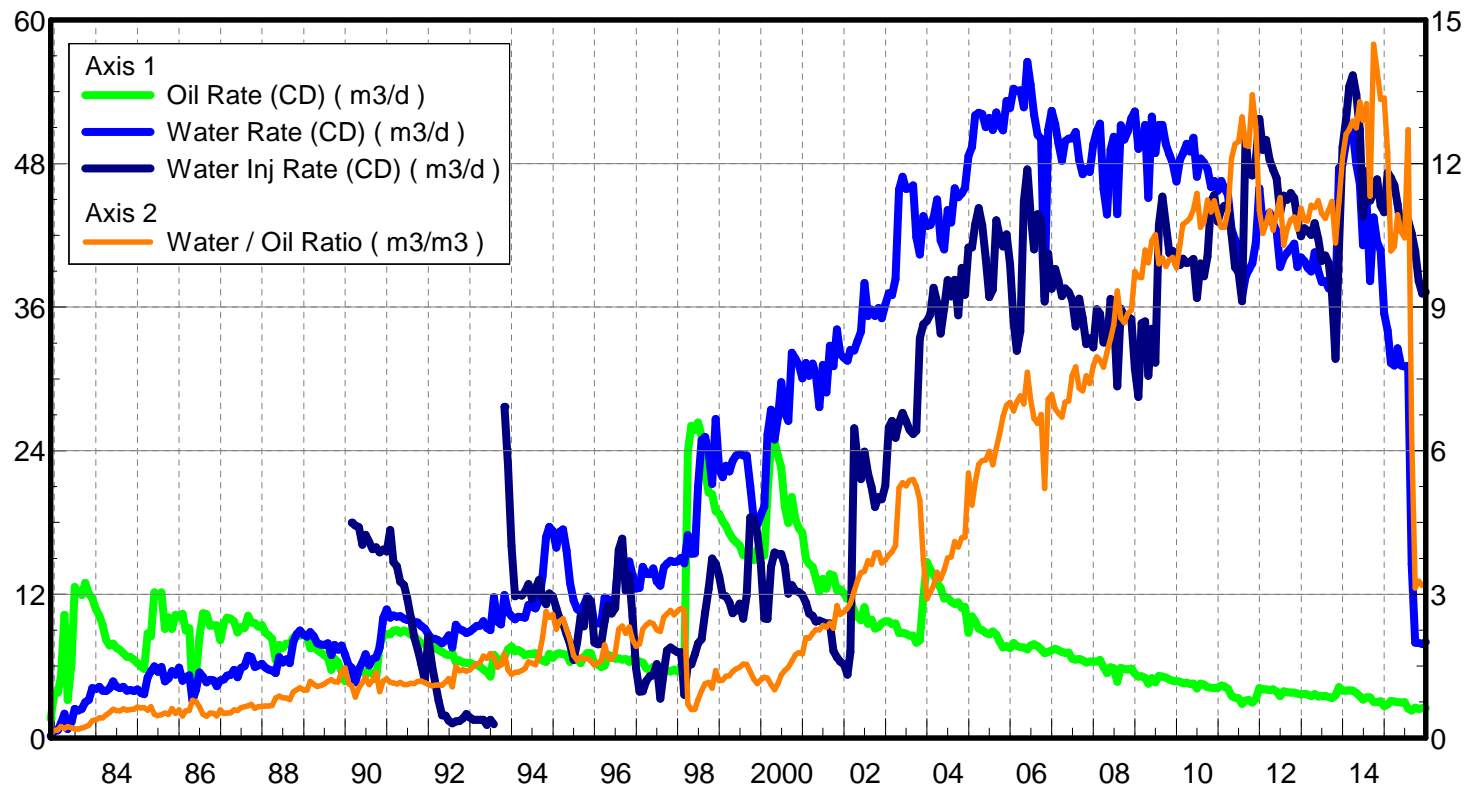
Appendix D

Rates and VRR Plots

Oil Formation Vol Factor : 1.000000 m3/m3
 Water Formation Vol Factor : 1.000000 m3/m3
 Water / Oil Ratio : 10.53 m3/m3
 Pattern: 04-32-11-26 Set: NVScallionUnit#2
 March 11, 2016
 Operator: Tundra_O&G_Prtshp
 Oil Rate (CD) : 2.50 m3/d
 Water Rate (CD) : 26.28 m3/d
 Water Inj Rate (CD) : 32.90 m3/d



Oil Formation Vol Factor : 1.000000 m3/m3
 Water Formation Vol Factor : 1.000000 m3/m3
 Water / Oil Ratio : 3.25 m3/m3
 Pattern : 12-29-11-26 Set: NVScallionUnit#2
 March 11, 2016
 Operator: Tundra_O&G_Prtshp
 Oil Rate (CD) : 2.47 m3/d
 Water Rate (CD) : 8.02 m3/d
 Water Inj Rate (CD) : 37.27 m3/d



Oil Formation Vol Factor : 0.27 m3/m3
 Water Formation Vol Factor : 1.00000 m3/m3
 Water / Oil Ratio : 2.66 m3/m3
 Pattern : 02/10-30-011-26
 Inj Set: NV
 Scallion Unit#2
 March 11, 2016
 Operator: Tundra_O&G_Prtshp
 Oil Rate (CD) : 0.56 m3/d
 Water Rate (CD) : 1.48 m3/d
 Water Inj Rate (CD) : 24.69 m3/d

