

Virden Roselea Unit #2
2013 Annual EOR Report

Executive Summary

In 2013 oil production in the Virden Roselea Unit #2 (VRU #2) was 25.6 m³/d (161 bbl/d) totaling 9.3 e³m³ (58.7 mmbbl). Annual production was up 35.4% from 2012 to 2013. By the end of 2013 cumulative oil production from the VRU #2 was 1 145 e³m³ (7.2 mmbbl). The original forecasted recovery was 270 e³m³ (1.7 mmbbl) on primary recovery and 730 e³m³ (4.6 mmbbl) total primary plus secondary recovery. It should be noted that the pool was expanded slightly after the original waterflood forecast was made; however, the waterflood has made a tremendous increase to the ultimate oil recovery and has exceeded the original expectations.

In December 2013 there were 28 producing oil wells and 11 water injectors active in the unit. In 2013, one horizontal well was drilled and one injector was treated in an attempt to improve injectivity, which was unsuccessful. The horizontal well was quite successful and contributed greatly to the production increase for the year.

Corex Resources has operated VRU #2 since December 19, 2012.

Discussion

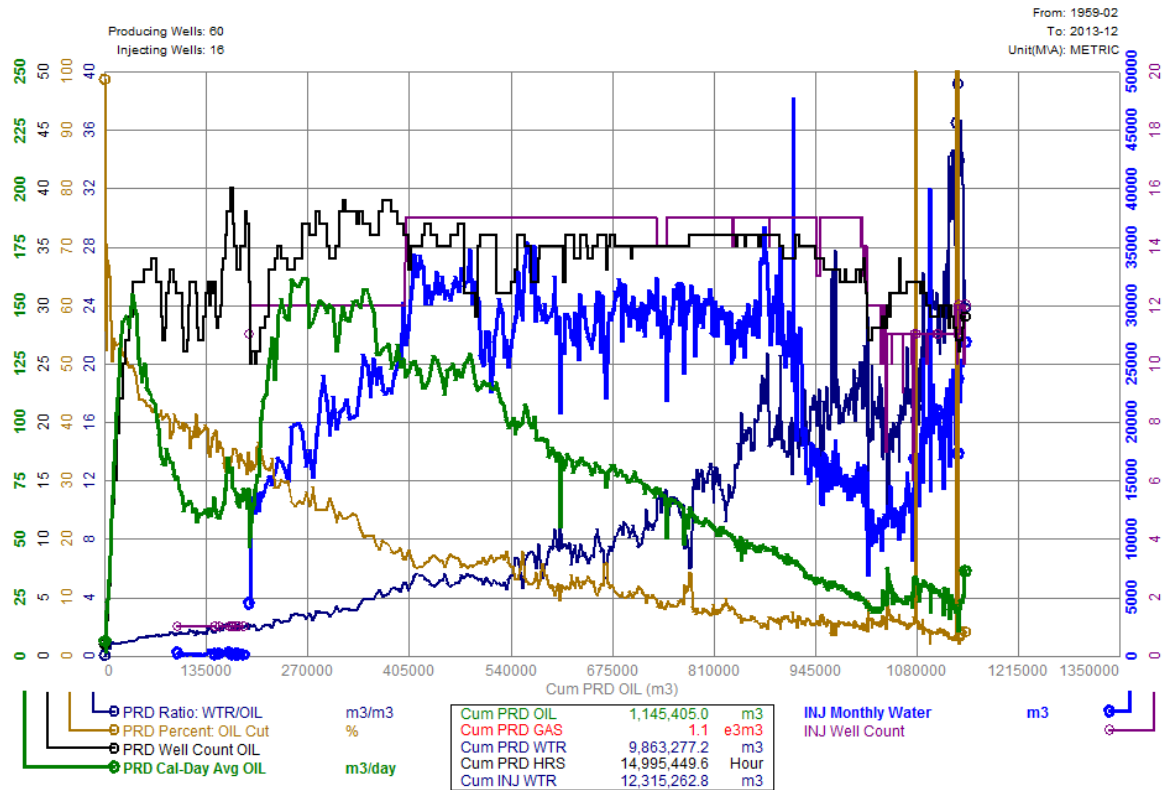
The VRU #2 has been under waterflood since 1966, seven years after first production from the pool in 1959. Water injection increased the oil production rate from $\sim 60 \text{ m}^3/\text{d}$ (377.4 bbl/d) to $\sim 150 \text{ m}^3/\text{d}$ (943.5 bbl/d), equivalent to peak production from the field. Expected ultimate oil recovery was increased by more than four times by the waterflood.

There has been no development activity in VRU #2 in the last 10 years. From 1997-2002, four horizontal wells were drilled in the unit, all with poor results. However, a new well was drilled in September 2013, 102/14-06-011-25W1/00. This new horizontal was very successful, producing for the months of November and December a combined total of 890 m^3 (5 598 bbl) of oil and 3154 m^3 (19 838 bbl) of water.

There have been no wells converted to injection since 1971. The water injection rate was $892 \text{ m}^3/\text{d}$ (5 610 bbl/d) in 2013 and the producing WOR was $40 \text{ m}^3/\text{m}^3$. The injected water at VRU #2 is not filtered or treated in any way.

In the composite rate – cumulative oil plot below, waterflood response is clearly demonstrated at a cumulative oil production of $200 \text{ e}^3\text{m}^3$.

Detailed production, injection, voidage tables and plots for the total unit and each injection pattern are at the end of this report.



2013 Reservoir Pressure Surveys

Unit	UWID	Licence	Test Date	Test Type	Shut-in Time (days)	Datum Pressure (kPaa)
VRU #2	100/04-07-011-25W1/00	1773	13/09/2013	FO & Injection	39.2	7962
VRU #2	102/14-06-011-25W1/00	9452	30/09/2013	Flow & BU	12.9	7527

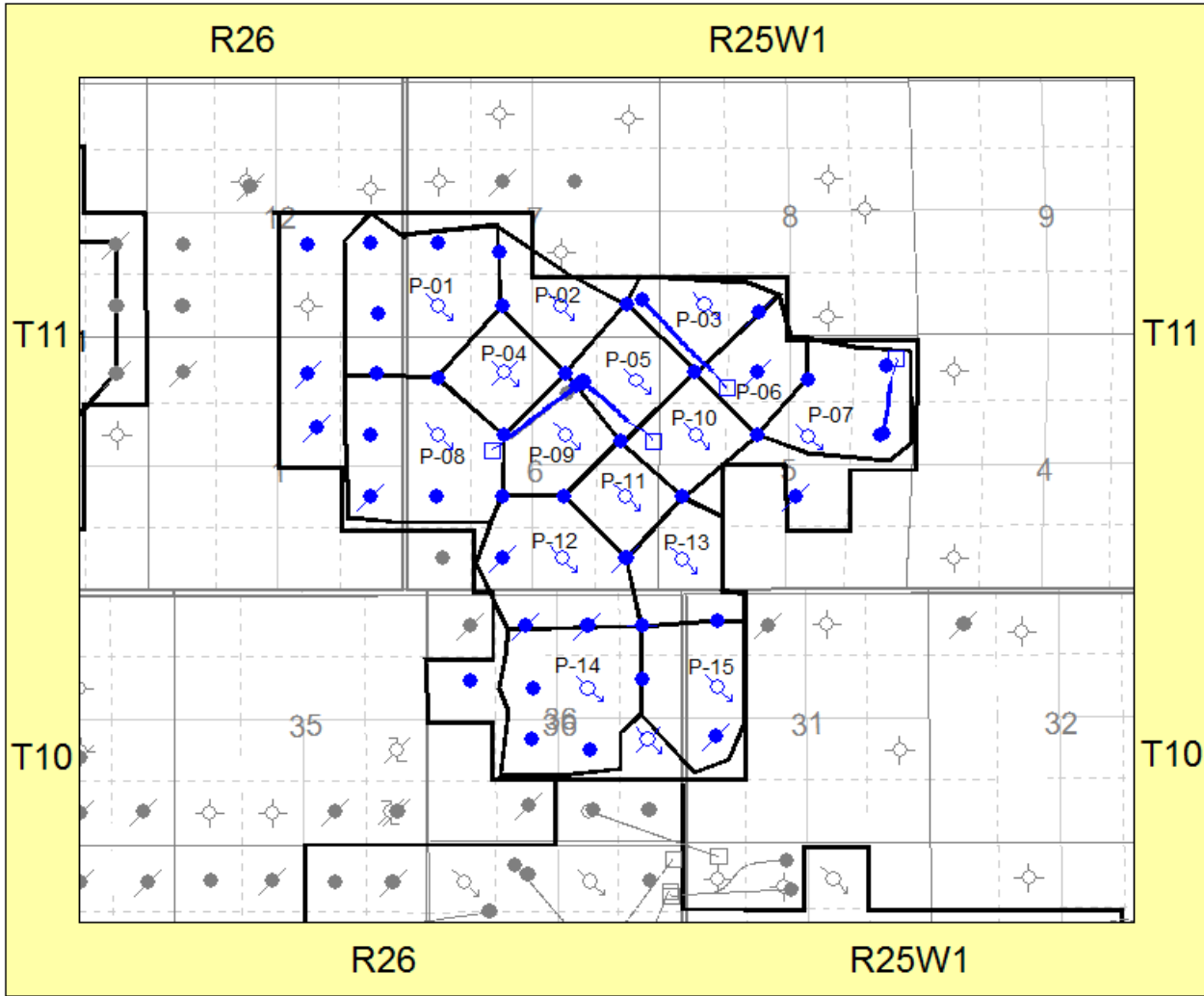
Two reservoir pressures measurements were taken in 2013, both are shown above. The pressures recorded this year are within the range of pressures recorded in previous years. Pressures taken from 2010 and 2011 ranged from 6 000 kPaa to 11 218 kPaa. The pressures for VRU #2 taken over the years are very variable resulting in a large array of pressures and uncertainty in the average pool pressure. As the pressures vary with area, and possibly by formation, it is unlikely we will be able to record consistent pressures. As the voidage replacement ratio (VRR) has been close to one over this time average pool pressure is expected to remain relatively stable. However, individual patterns have been over injecting or under injecting resulting in variable pressures by pattern.

The VRR in 2013 rose from 0.98 to 1.05 for a maximum. The cumulative VRR at year end was 1.12. An oil formation volume factor of $1.06 \text{ m}^3/\text{m}^3$ and a water formation volume factor of $1.04 \text{ m}^3/\text{m}^3$ were used in the VRR calculations.

2013 Well Servicing

UWID	Licence	Operation	Date	Objective
100/12-06-011-25W1/00	002200	Equipment Pressure Integrity Test	10-MAY-13	Annual annulus pressure test
100/04-07-011-25W1/00	001773	Equipment Pressure Integrity Test	10-MAY-13	Annual annulus pressure test
100/02-07-011-25W1/00	001792	Equipment Pressure Integrity Test	10-MAY-13	Annual annulus pressure test
100/02-06-011-25W1/00	001763	Equipment Pressure Integrity Test	10-MAY-13	Annual annulus pressure test
100/10-36-010-26W1/00	001737	Equipment Pressure Integrity Test	10-MAY-13	Annual annulus pressure test
100/10-05-011-25W1/00	002087	Equipment Pressure Integrity Test	13-MAY-13	Annual annulus pressure test
100/12-31-010-25W1/00	001809	Equipment Pressure Integrity Test	13-MAY-13	Annual annulus pressure test
100/12-05-011-25W1/00	001805	Equipment Pressure Integrity Test	13-MAY-13	Annual annulus pressure test
100/04-05-011-25W1/00	001793	Equipment Pressure Integrity Test	13-MAY-13	Annual annulus pressure test
100/08-06-011-25W1/00	001795	Equipment Pressure Integrity Test	13-MAY-13	Annual annulus pressure test
100/08-06-011-25W1/00	001795	Packer Repair	12-JUN-13	Repair failed pump
100/04-05-011-25W1/00	001793	Packer Repair	13-JUN-13	Repair failed pump
100/13-31-010-25W1/00	001784	Pump Repair	22-JUL-13	Repair failed pump
100/12-06-011-25W1/00	002200	Pressure Build-up/Survey	01-AUG-13	Perform pressure build up
100/04-07-011-25W1/00	001773	Pressure Build-up/Survey	01-AUG-13	Perform pressure build up
100/02-06-011-25W1/00	001763	Acid Treatment	28-OCT-13	Attempt to improve injectivity

Waterflood Pattern Map



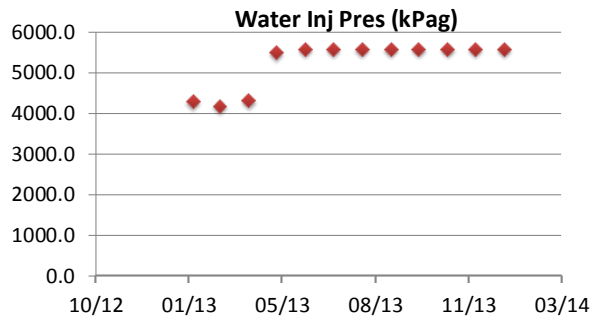
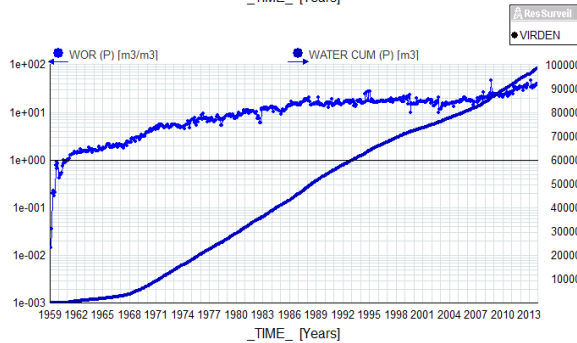
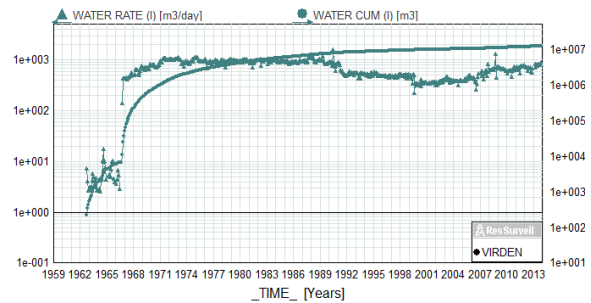
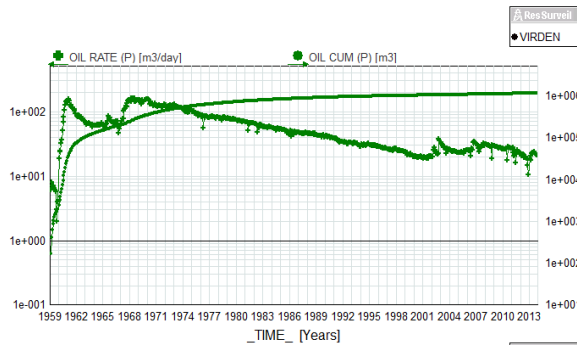
Waterflood Patterns and Corresponding Injectors

Pattern	Injection Well
P-01	100/04-07-011-25W1/00
P-02	100/02-07-011-25W1/00
P-03	100/04-08-011-25W1/00
P-04	100/14-06-011-25W1/00
P-05	100/16-06-011-25W1/00
P-06	100/14-05-011-25W1/00
P-07	100/10-05-011-25W1/00
P-08	100/12-06-011-25W1/00
P-09	100/10-06-011-25W1/00
P-10	100/12-05-011-25W1/00
P-11	100/08-06-011-25W1/00
P-12	100/02-06-011-25W1/00
P-13	100/04-05-011-25W1/00
P-14	100/10-36-010-26W1/00
P-15	100/12-31-010-25W1/00

Total for Virden Roselea Unit #2

Date	Monthly Oil Prod sm ³	Oil Rate (CD) sm ³ /d	Monthly Water Prod sm ³	Water Rate (CD) sm ³ /d	Water Oil Ratio	Monthly Water Inj sm ³	Water Inj Rate (CD) sm ³ /d	Water Inj Pressure kPa	Voidage Replacement Ratio	Cum Voidage Replacement Ratio
1/31/2013	576.9	18.61	0.0	0	0	0.0	0	4281.8	0.00	1.12
2/28/2013	485.1	17.33	23021.5	822.20	47.46	23655.0	844.82	4184.5	1.01	1.12
3/31/2013	637.0	20.55	21582.2	696.20	33.88	21760.0	701.94	4322.5	0.98	1.12
4/30/2013	678.0	22.60	23879.5	795.98	35.22	24051.0	801.70	5503.1	0.98	1.12
5/31/2013	720.1	23.23	23662.0	763.29	32.86	23832.0	768.77	5591.7	0.98	1.12
6/30/2013	684.6	22.82	25035.1	834.50	36.57	25215.0	840.50	5591.7	0.98	1.12
7/31/2013	736.2	23.75	24832.7	801.05	33.73	25015.0	806.94	5591.7	0.98	1.12
8/31/2013	716.4	23.11	24618.4	794.14	34.36	24800.0	800.00	5591.7	0.98	1.12
9/30/2013	675.1	22.50	24768.2	825.61	36.69	25015.5	833.85	5591.7	0.98	1.12
10/31/2013	676.6	21.83	24313.4	784.30	35.93	25703.1	829.13	5591.7	1.03	1.12
11/30/2013	635.0	21.17	25245.2	841.51	39.76	26769.2	892.31	5591.7	1.03	1.12
12/31/2013	631.1	20.36	24058.6	801.95	39.39	25961.3	865.38	5591.7	1.05	1.12

Cumulative Oil Produced (E3m3)	1143.92
Cumulative Water Produced (E3m3)	9858.84
Cumulative Water Injected (E3m3)	12315.26
Cumulative Voidage Replacement Ratio	1.12

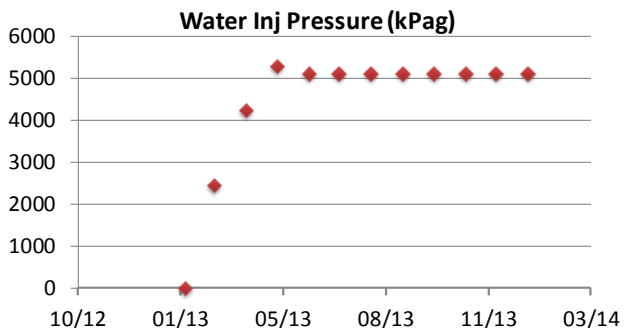
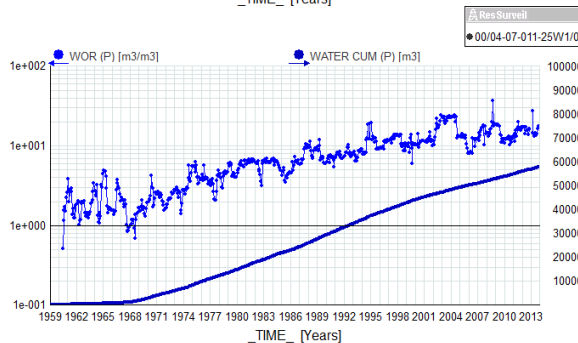
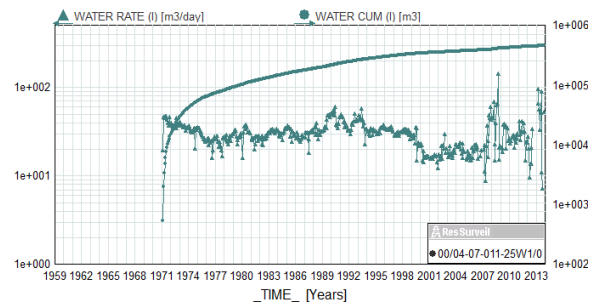
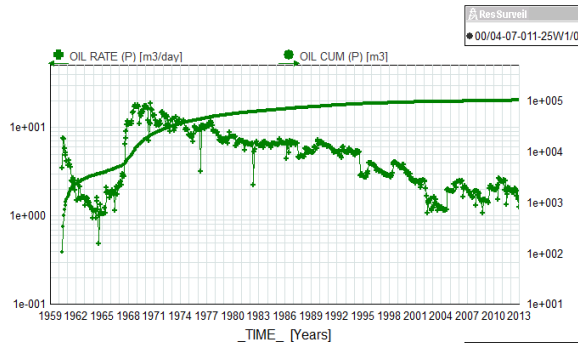


Virden Roselea Unit No. 2

Pattern P-01 - 00/04-07-011-25W1/0

Date	Monthly Oil Prod sm ³	Oil Rate (CD) sm ³ /d	Monthly Water Prod sm ³	Water Rate (CD) sm ³ /d	Water Oil Ratio m ³ /m ³	Monthly Water Inj sm ³	Water Inj Rate (CD) sm ³ /d	Water Inj Pressure kPg	Voidage Replacement Ratio	Cum Voidage Replacement Ratio
1/31/2013	60.9	1.96	0.00	0	0	0.0	0	0	0.00	0.67
2/28/2013	58.1	2.08	1596.57	57.02	27.46	2685.00	95.89	2436	45.06	0.67
3/31/2013	64.5	2.08	947.84	30.58	14.69	2057.00	66.35	4235	31.10	0.67
4/30/2013	64.9	2.16	914.64	30.49	14.10	1687.00	56.23	5293	25.38	0.67
5/31/2013	68.9	2.22	906.33	29.24	13.16	1023.00	33	5100	14.49	0.68
6/30/2013	65.7	2.19	959.33	31.98	14.60	1550.00	51.67	5100	23.01	0.68
7/31/2013	70.8	2.28	944.93	30.48	13.34	2769.00	89.32	5100	38.14	0.68
8/31/2013	69.5	2.24	964.18	31.10	13.87	338.20	10.91	5100	4.75	0.68
9/30/2013	66.9	2.23	950.63	31.69	14.22	214.80	7.16	5100	3.14	0.68
10/31/2013	58.7	1.89	971.69	31.34	16.57	0.0	0	5100	0.00	0.68
11/30/2013	54.9	1.83	960.48	32.02	17.49	1586.00	52.87	5100	28.19	0.68
12/31/2013	55.4	1.79	0.00	31.36	17.54	0.0	65.23	5100	35.59	0.68

Cumulative Oil Produced (E3m3)	104.44
Cumulative Water Produced (E3m3)	579.40
Cumulative Water Injected (E3m3)	467.26
Cumulative Voidage Replacement Ratio	0.68

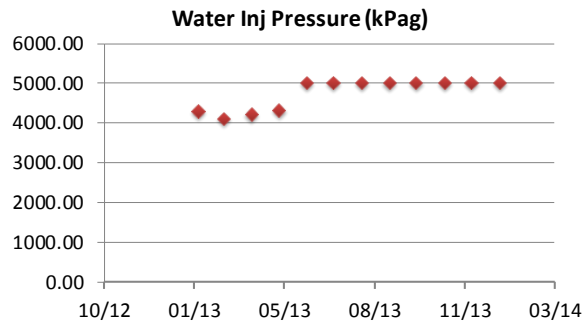
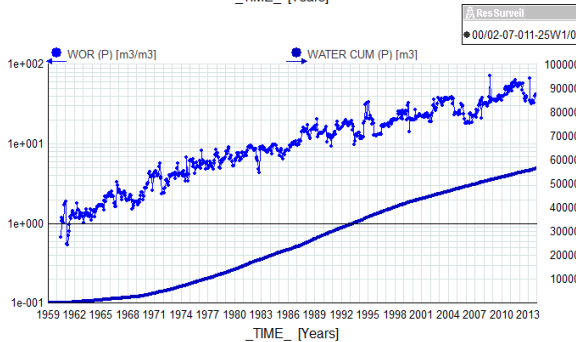
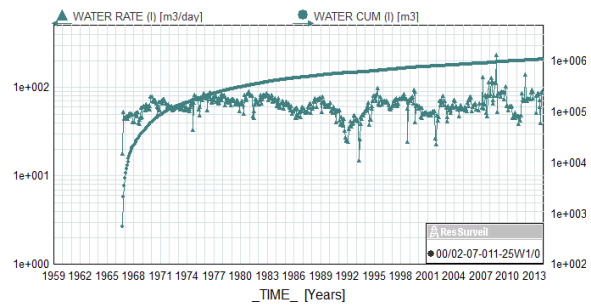
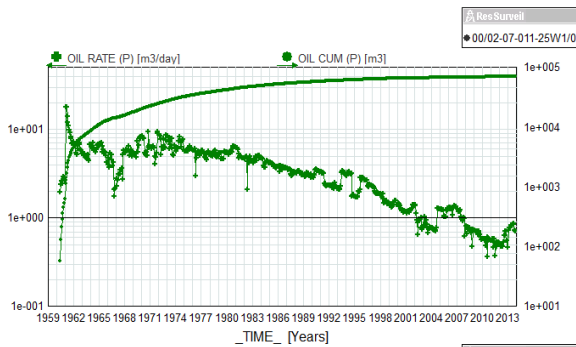


Virden Roselea Unit No. 2

Pattern P-02 - 00/02-07-011-25W1/0

Date	Monthly Oil Prod sm ³	Oil Rate (CD) sm ³ /d	Monthly Water Prod sm ³	Water Rate (CD) sm ³ /d	Water Oil Ratio m ³ /m ³	Monthly Water Inj sm ³	Water Inj Rate (CD) sm ³ /d	Water Inj Pressure kPg	Voidage Replacement Ratio	Cum Voidage Replacement Ratio
1/31/2013	22.32	0.72	0.00	0.00	0.00	0.00	0.00	4294.00	0.00	1.70
2/28/2013	21.47	0.77	1423.19	50.83	66.30	1451.00	51.82	4104.00	1.00	1.69
3/31/2013	23.91	0.77	844.77	27.25	35.34	2502.00	80.71	4203.00	2.88	1.70
4/30/2013	24.07	0.80	815.19	27.17	33.86	2451.00	81.70	4323.00	2.92	1.70
5/31/2013	25.57	0.82	807.77	26.06	31.59	2649.00	85.45	5000.00	3.18	1.70
6/30/2013	24.35	0.81	854.90	28.50	35.11	2534.00	84.47	5000.00	2.88	1.70
7/31/2013	26.00	0.84	839.23	27.07	32.28	2225.00	71.77	5000.00	2.57	1.70
8/31/2013	26.01	0.84	858.85	27.70	33.01	1874.70	60.47	5000.00	2.12	1.70
9/30/2013	25.83	0.86	844.47	28.15	32.69	1188.90	39.63	5000.00	1.37	1.70
10/31/2013	22.53	0.73	894.44	28.85	39.70	2737.40	88.30	5000.00	2.98	1.70
11/30/2013	21.18	0.71	884.08	29.47	41.74	2697.70	89.92	5000.00	2.98	1.71
12/31/2013	21.41	0.69	0.00	28.86	41.80	0.00	77.94	5000.00	2.64	1.71

Cumulative Oil Produced (E3m3)	70.53
Cumulative Water Produced (E3m3)	563.35
Cumulative Water Injected (E3m3)	1085.43
Cumulative Voidage Replacement Ratio	1.71

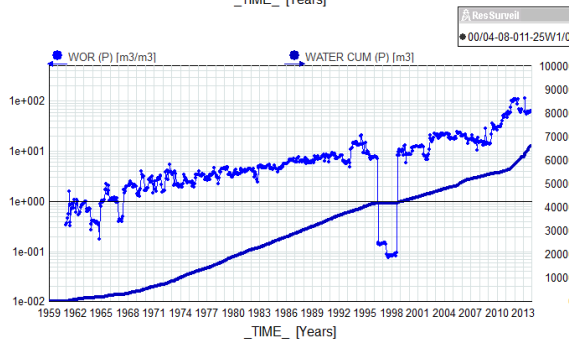
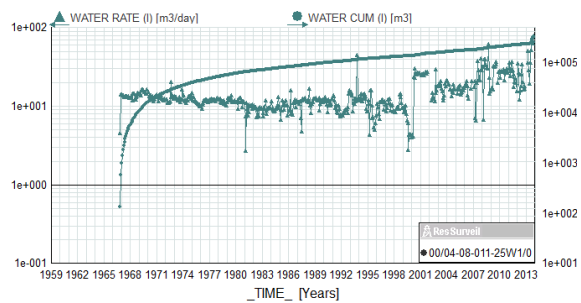
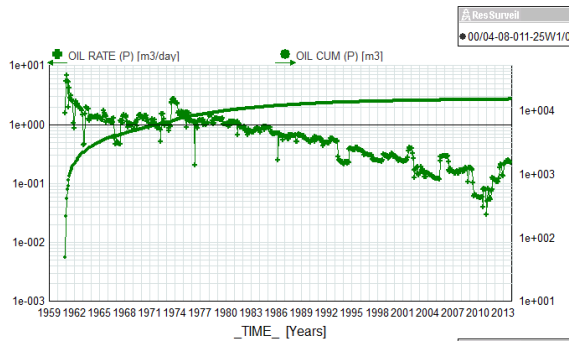


Virden Roselea Unit No. 2

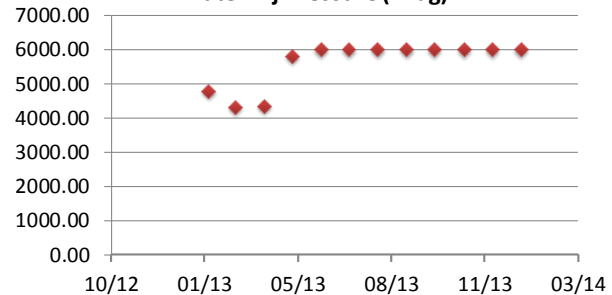
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Date	Monthly Oil Prod sm ³	Oil Rate (CD) sm ³ /d	Monthly Water Prod sm ³	Water Rate (CD) sm ³ /d	Water Oil Ratio m ³ /m ³	Monthly Water Inj sm ³	Water Inj Rate (CD) sm ³ /d	Water Inj Pressure kPg	Voidage Replacement Ratio	Cum Voidage Replacement Ratio
1/31/2013	83.48	2.69	0.00	0.00	0.00	0.00	0.00	4784.00	0.00	1.10
2/28/2013	79.15	2.83	3399.20	121.40	42.95	1441.00	51.46	4300.00	0.41	1.08
3/31/2013	88.03	2.84	2017.70	65.09	22.92	1105.00	35.65	4348.00	0.52	1.08
4/30/2013	88.70	2.96	1947.10	64.90	21.95	867.00	28.90	5807.00	0.43	1.07
5/31/2013	94.13	3.04	1929.38	62.24	20.50	604.00	19.48	6000.00	0.30	1.07
6/30/2013	89.68	2.99	2042.08	68.07	22.77	1092.00	36.40	6000.00	0.51	1.06
7/31/2013	97.25	3.14	2069.53	66.76	21.28	2141.00	69.06	6000.00	0.99	1.06
8/31/2013	95.45	3.08	2060.83	66.48	21.59	1625.60	52.44	6000.00	0.75	1.06
9/30/2013	87.85	2.93	2058.40	68.61	23.43	2235.50	74.52	6000.00	1.04	1.06
10/31/2013	91.30	2.95	2064.50	66.60	22.61	1982.80	63.96	6000.00	0.92	1.06
11/30/2013	85.63	2.85	2038.33	67.94	23.81	2390.00	79.67	6000.00	1.12	1.06
12/31/2013	86.52	2.79	0.00	66.62	23.87	0.00	60.68	6000.00	0.87	1.06

Cumulative Oil Produced (E3m3)	24.43
Cumulative Water Produced (E3m3)	214.61
Cumulative Water Injected (E3m3)	252.87
Cumulative Voidage Replacement Ratio	1.06



Water Inj Pressure (kPag)

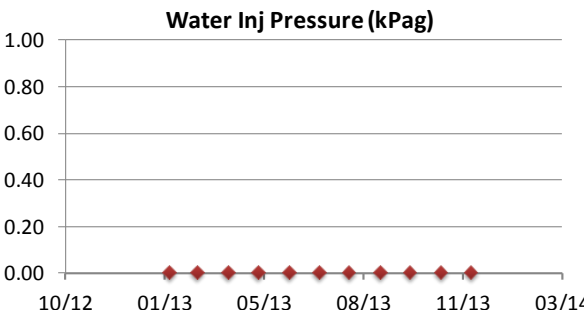
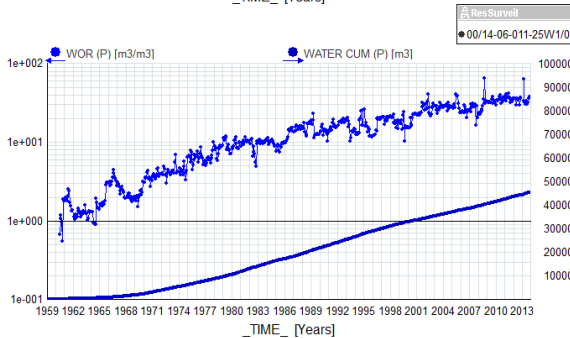
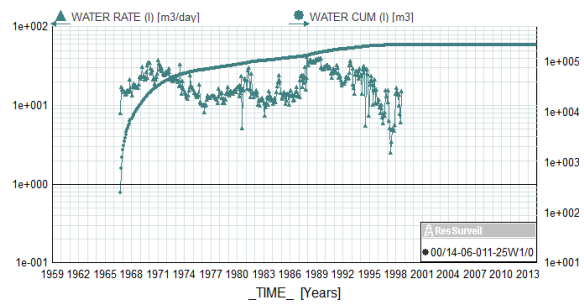
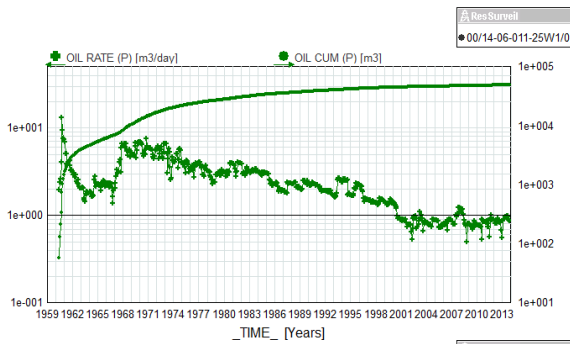


Virden Roselea Unit No. 2

Pattern P-04 - 00/14-06-011-25W1/0

Date	Monthly Oil Prod sm ³	Oil Rate (CD) sm ³ /d	Monthly Water Prod sm ³	Water Rate (CD) sm ³ /d	Water Oil Ratio m ³ /m ³	Monthly Water Inj sm ³	Water Inj Rate (CD) sm ³ /d	Water Inj Pressure kPg	Voidage Replacement Ratio	Cum Voidage Replacement Ratio
1/31/2013	26.57	0.86	0.00	0.00	0.00	0.00	0.00	--	0.00	0.45
2/28/2013	25.17	0.90	1582.82	56.53	62.89	0.00	0.00	--	0.00	0.45
3/31/2013	28.01	0.90	939.48	30.31	33.54	0.00	0.00	--	0.00	0.44
4/30/2013	28.14	0.94	906.63	30.22	32.22	0.00	0.00	--	0.00	0.44
5/31/2013	29.94	0.97	898.36	28.98	30.01	0.00	0.00	--	0.00	0.44
6/30/2013	28.46	0.95	950.83	31.69	33.40	0.00	0.00	--	0.00	0.44
7/31/2013	30.51	0.98	936.41	30.21	30.69	0.00	0.00	--	0.00	0.44
8/31/2013	30.16	0.97	952.88	30.74	31.59	0.00	0.00	--	0.00	0.44
9/30/2013	29.36	0.98	937.66	31.26	31.93	0.00	0.00	--	0.00	0.44
10/31/2013	27.55	0.89	996.54	32.15	36.17	0.00	0.00	--	0.00	0.44
11/30/2013	25.88	0.86	985.05	32.84	38.06	0.00	0.00	--	0.00	0.44
12/31/2013	25.48	0.82	0.00	31.85	38.76	0.00	0.00	--	0.00	0.44

Cumulative Oil Produced (E3m3)	49.31
Cumulative Water Produced (E3m3)	455.20
Cumulative Water Injected (E3m3)	220.82
Cumulative Voidage Replacement Ratio	0.44

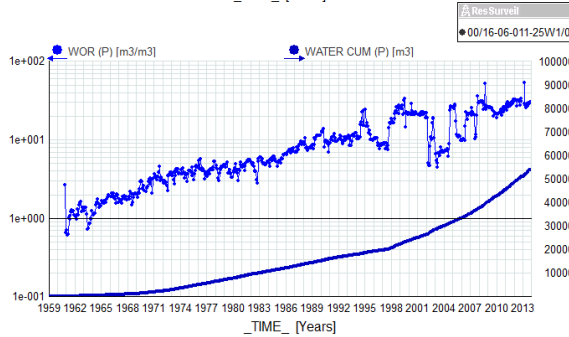
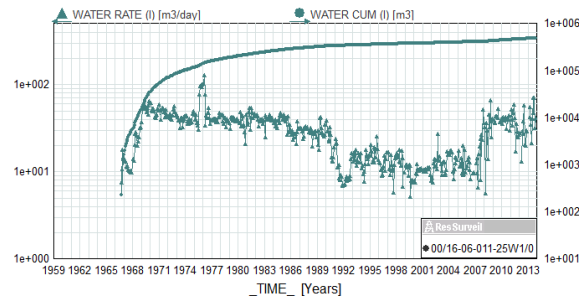
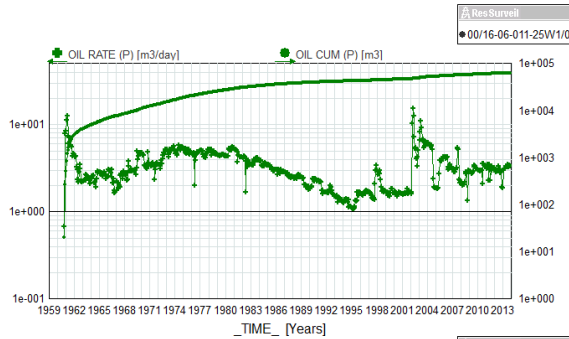


Virden Roselea Unit No. 2

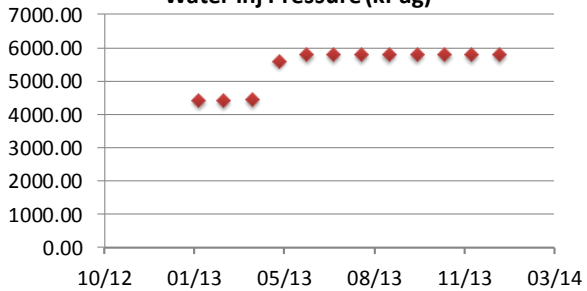
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Date	Monthly Oil Prod sm ³	Oil Rate (CD) sm ³ /d	Monthly Water Prod sm ³	Water Rate (CD) sm ³ /d	Water Oil Ratio m ³ /m ³	Monthly Water Inj sm ³	Water Inj Rate (CD) sm ³ /d	Water Inj Pressure kPg	Voidage Replacement Ratio	Cum Voidage Replacement Ratio
1/31/2013	15.40	0.50	0.00	0.00	0.00	0.00	0.00	4400.00	0.00	0.89
2/28/2013	14.88	0.53	2242.35	80.08	150.75	1554.00	55.50	4400.00	0.69	0.88
3/31/2013	16.43	0.53	1331.13	42.94	81.04	1317.00	42.48	4439.00	0.98	0.88
4/30/2013	16.60	0.55	1284.55	42.82	77.38	1037.00	34.57	5607.00	0.80	0.88
5/31/2013	17.63	0.57	1272.78	41.06	72.21	658.00	21.23	5800.00	0.51	0.88
6/30/2013	16.80	0.56	1347.10	44.90	80.18	1209.00	40.30	5800.00	0.89	0.88
7/31/2013	18.23	0.59	1365.28	44.04	74.91	2180.00	70.32	5800.00	1.58	0.89
8/31/2013	17.58	0.57	1350.43	43.56	76.84	1462.80	47.19	5800.00	1.07	0.89
9/30/2013	16.58	0.55	1360.30	45.34	82.07	2113.50	70.45	5800.00	1.53	0.89
10/31/2013	22.03	0.71	1559.23	50.30	70.79	991.60	31.99	5800.00	0.63	0.89
11/30/2013	20.33	0.68	1520.20	50.67	74.79	1239.60	41.32	5800.00	0.80	0.89
12/31/2013	20.85	0.67	0.00	50.32	74.81	0.00	39.71	5800.00	0.78	0.89

Cumulative Oil Produced (E3m3)	63.26
Cumulative Water Produced (E3m3)	492.96
Cumulative Water Injected (E3m3)	494.19
Cumulative Voidage Replacement Ratio	0.89



Water Inj Pressure (kPag)

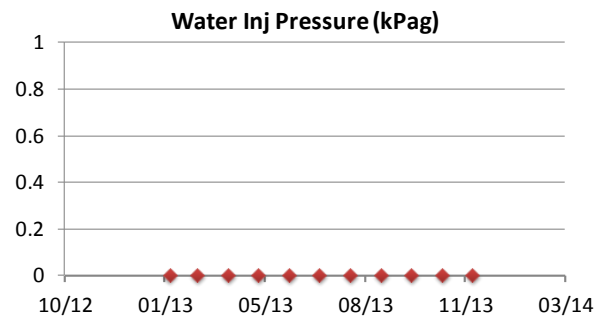
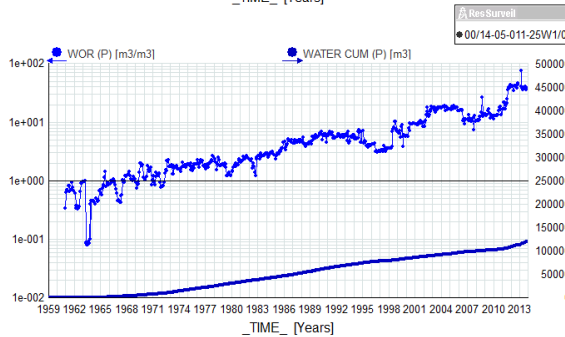
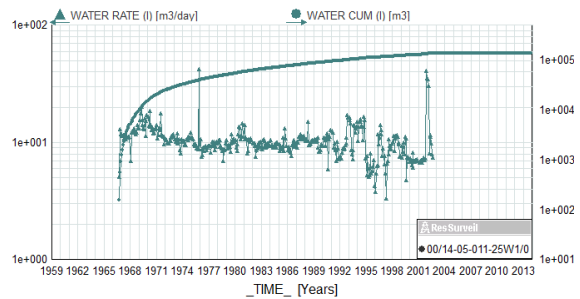
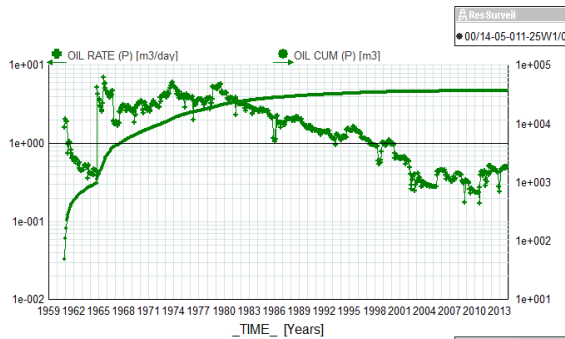


Virden Roselea Unit No. 2

Pattern P-06 - 00/14-05-011-25W1/0

Date	Monthly Oil Prod sm ³	Oil Rate (CD) sm ³ /d	Monthly Water Prod sm ³	Water Rate (CD) sm ³ /d	Water Oil Ratio m ³ /m ³	Monthly Water Inj sm ³	Water Inj Rate (CD) sm ³ /d	Water Inj Pressure kPg	Voidage Replacement Ratio	Cum Voidage Replacement Ratio
1/31/2013	13.7	0.440490324	0.00	0	0	0.0	0.00	--	0.00	0.90
2/28/2013	13.0	0.462989287	972.56	34.73411073	75.02141346	0.0	0.00	--	0.00	0.90
3/31/2013	14.3	0.461990324	577.29	18.62225808	40.30876213	0.0	0.00	--	0.00	0.89
4/30/2013	14.5	0.484333335	557.11	18.57025334	38.34188566	0.0	0.00	--	0.00	0.89
5/31/2013	15.4	0.49531613	552.00	17.80643549	35.94963781	0.0	0.00	--	0.00	0.89
6/30/2013	14.7	0.489610001	584.25	19.47493334	39.77642059	0.0	0.00	--	0.00	0.88
7/31/2013	15.8	0.510635485	592.08	19.09938711	37.40317243	0.0	0.00	--	0.00	0.88
8/31/2013	15.4	0.497735485	589.63	19.02035808	38.21378752	0.0	0.00	--	0.00	0.88
9/30/2013	14.5	0.483776668	591.64	19.72130001	40.76529794	0.0	0.00	--	0.00	0.87
10/31/2013	15.8	0.509029034	562.79	18.15449679	35.66495344	0.0	0.00	--	0.00	0.87
11/30/2013	14.7	0.490726668	553.91	18.46382334	37.62547371	0.0	0.00	--	0.00	0.87
12/31/2013	14.6	0.471132259	0.00	17.94105485	38.08071829	0.0	0.00	--	0.00	0.86

Cumulative Oil Produced (E3m3)	37.34
Cumulative Water Produced (E3m3)	120.47
Cumulative Water Injected (E3m3)	137.03
Cumulative Voidage Replacement Ratio	0.86

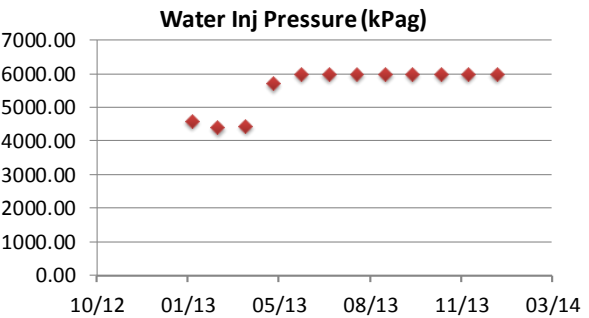
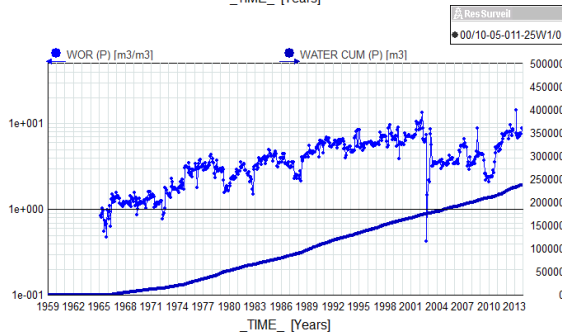
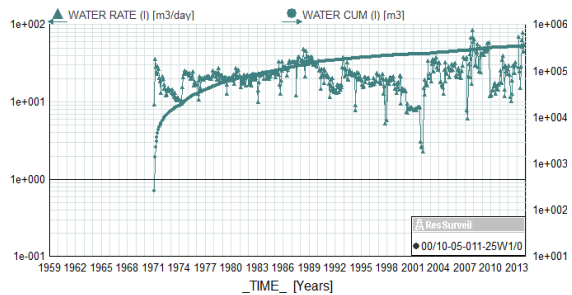
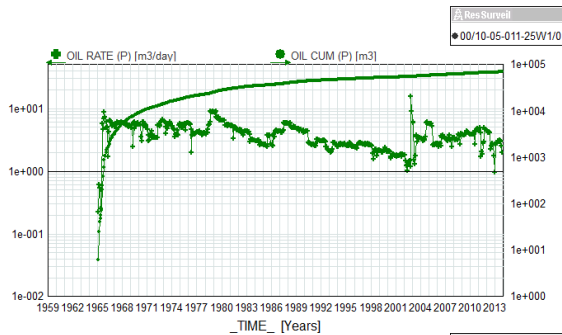


Virden Roselea Unit No. 2

Pattern P-07 - 00/10-05-011-25W1/0

Date	Monthly Oil Prod sm ³	Oil Rate (CD) sm ³ /d	Monthly Water Prod sm ³	Water Rate (CD) sm ³ /d	Water Oil Ratio m ³ /m ³	Monthly Water Inj sm ³	Water Inj Rate (CD) sm ³ /d	Water Inj Pressure kPg	Voidage Replacement Ratio	Cum Voidage Replacement Ratio
1/31/2013	83.68	2.70	0.00	0.00	0.00	0.00	0.00	4594.00	0.00	1.12
2/28/2013	79.81	2.85	1135.86	40.57	14.23	1950.00	69.64	4400.00	1.60	1.12
3/31/2013	86.80	2.80	666.39	21.50	7.68	882.00	28.45	4442.00	1.17	1.12
4/30/2013	89.23	2.97	650.61	21.69	7.29	754.00	25.13	5710.00	1.02	1.12
5/31/2013	94.63	3.05	644.72	20.80	6.81	478.00	15.42	6000.00	0.64	1.12
6/30/2013	89.01	2.97	673.77	22.46	7.57	858.00	28.60	6000.00	1.12	1.12
7/31/2013	97.68	3.15	691.56	22.31	7.08	1984.00	64.00	6000.00	2.51	1.13
8/31/2013	95.28	3.07	684.61	22.08	7.19	1597.80	51.54	6000.00	2.04	1.13
9/30/2013	89.36	2.98	690.64	23.02	7.73	2401.90	80.06	6000.00	3.07	1.13
10/31/2013	78.58	2.53	589.49	19.02	7.50	1402.50	45.24	6000.00	2.09	1.14
11/30/2013	58.60	1.95	517.49	17.25	8.83	0.00	0.00	6000.00	0.00	1.13
12/31/2013	58.38	1.88	0.00	16.57	8.80	0.00	38.55	6000.00	2.08	1.14

Cumulative Oil Produced (E3m3)	69.69
Cumulative Water Produced (E3m3)	238.93
Cumulative Water Injected (E3m3)	352.59
Cumulative Voidage Replacement Ratio	1.14

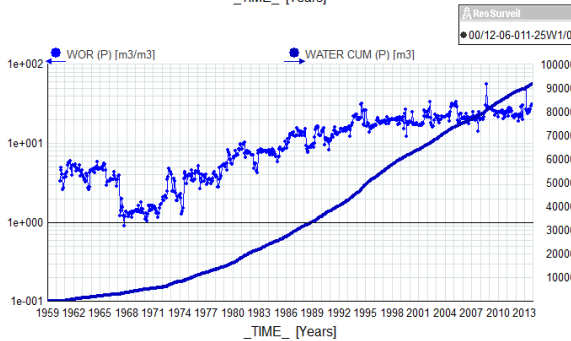
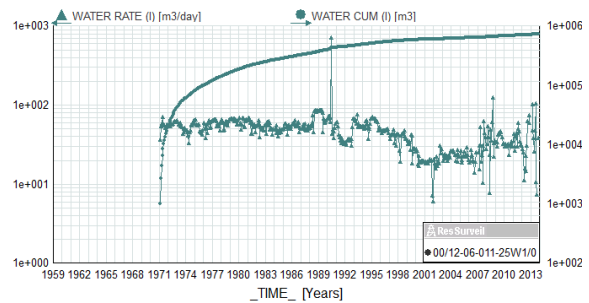
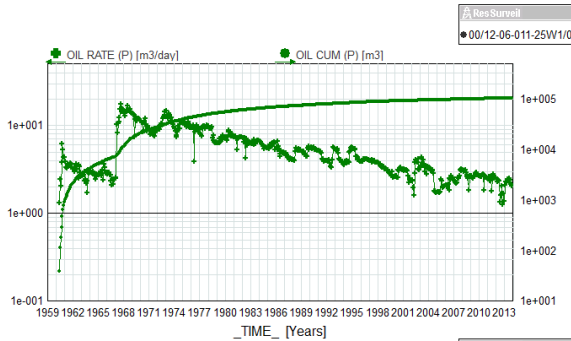


Virden Roselea Unit No. 2

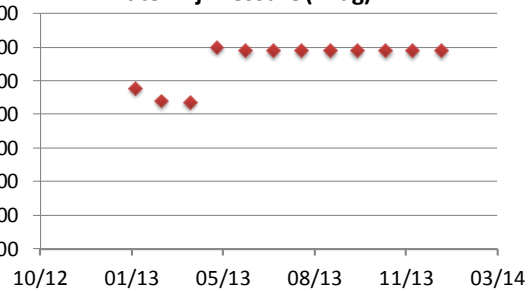
Pattern P-08 - 00/12-06-011-25W1/0

Date	Monthly Oil Prod sm ³	Oil Rate (CD) sm ³ /d	Monthly Water Prod sm ³	Water Rate (CD) sm ³ /d	Water Oil Ratio m ³ /m ³	Monthly Water Inj sm ³	Water Inj Rate (CD) sm ³ /d	Water Inj Pressure kPg	Voidage Replacement Ratio	Cum Voidage Replacement Ratio
1/31/2013	65.28	2.11	0.00	0.00	0.00	0.00	0.00	4787.00	0.00	0.72
2/28/2013	63.31	2.26	3175.67	113.42	50.16	2854.00	101.93	4396.00	0.88	0.72
3/31/2013	70.18	2.26	1884.92	60.80	26.86	1493.00	48.16	4355.00	0.76	0.72
4/30/2013	70.63	2.35	1819.05	60.63	25.76	1141.00	38.03	5997.00	0.60	0.72
5/31/2013	75.06	2.42	1802.42	58.14	24.01	801.00	25.84	5900.00	0.43	0.72
6/30/2013	71.44	2.38	1907.72	63.59	26.70	1442.00	48.07	5900.00	0.73	0.72
7/31/2013	77.46	2.50	1933.38	62.37	24.96	3260.00	105.16	5900.00	1.62	0.72
8/31/2013	73.99	2.39	1880.05	60.65	25.41	332.60	10.73	5900.00	0.17	0.72
9/30/2013	66.60	2.22	1789.12	59.64	26.87	222.50	7.42	5900.00	0.12	0.72
10/31/2013	66.18	2.13	1952.69	62.99	29.50	0.00	0.00	5900.00	0.00	0.71
11/30/2013	61.18	2.04	1891.94	63.06	30.92	1151.40	38.38	5900.00	0.59	0.71
12/31/2013	64.18	2.07	0.00	65.61	31.69	0.00	29.81	5900.00	0.44	0.71

Cumulative Oil Produced (E3m3)	105.81
Cumulative Water Produced (E3m3)	917.63
Cumulative Water Injected (E3m3)	732.34
Cumulative Voidage Replacement Ratio	0.71



Water Inj Pressure (kPag)

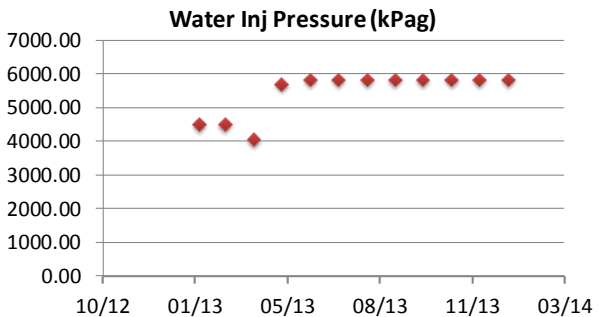
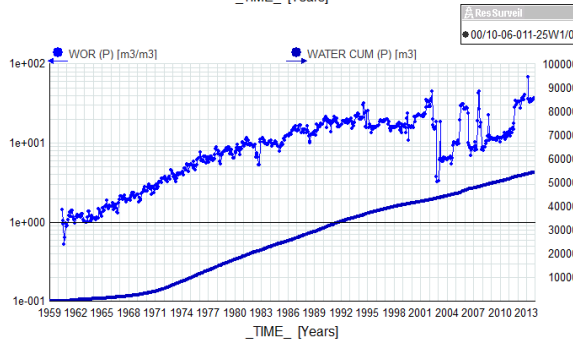
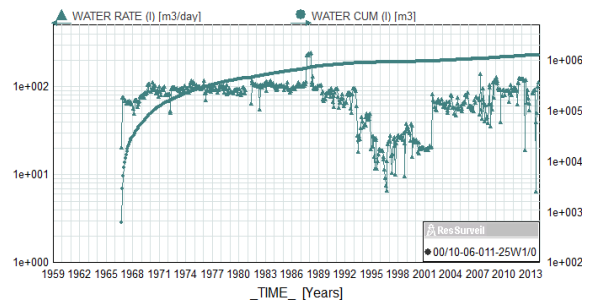
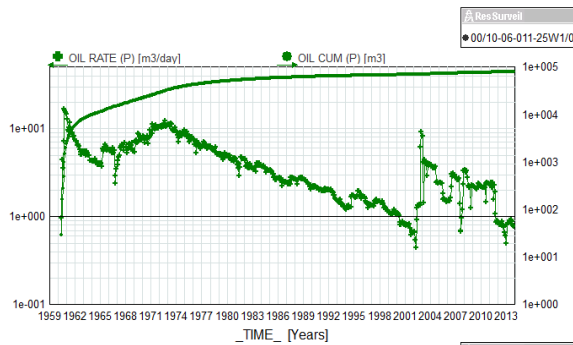


Virden Roselea Unit No. 2

Pattern P-09 - 00/10-06-011-25W1/0

Date	Monthly Oil Prod sm ³	Oil Rate (CD) sm ³ /d	Monthly Water Prod sm ³	Water Rate (CD) sm ³ /d	Water Oil Ratio m ³ /m ³	Monthly Water Inj sm ³	Water Inj Rate (CD) sm ³ /d	Water Inj Pressure kPag	Voidage Replacement Ratio	Cum Voidage Replacement Ratio
1/31/2013	24.80	0.80	0.00	0.00	0.00	0.00	0.00	4500.00	0.00	2.18
2/28/2013	23.57	0.84	1543.51	55.13	65.49	2338.00	83.50	4482.00	1.49	2.18
3/31/2013	26.18	0.84	916.22	29.56	35.00	2689.00	86.74	4055.00	2.85	2.18
4/30/2013	26.31	0.88	884.13	29.47	33.61	2701.00	90.03	5703.00	2.96	2.18
5/31/2013	27.97	0.90	876.05	28.26	31.32	2850.00	91.94	5800.00	3.15	2.19
6/30/2013	26.63	0.89	927.24	30.91	34.82	2747.00	91.57	5800.00	2.88	2.19
7/31/2013	28.91	0.93	939.76	30.31	32.50	200.00	6.45	5800.00	0.21	2.18
8/31/2013	27.40	0.88	900.35	29.04	32.86	1228.90	39.64	5800.00	1.32	2.18
9/30/2013	24.64	0.82	800.95	26.70	32.51	1532.30	51.08	5800.00	1.85	2.18
10/31/2013	24.70	0.80	830.10	26.78	33.60	3098.30	99.95	5800.00	3.62	2.18
11/30/2013	23.35	0.78	827.52	27.58	35.45	3357.20	111.91	5800.00	3.94	2.19
12/31/2013	22.97	0.74	804.57	26.82	36.19	2996.13	99.87	5800.00	3.62	2.19

Cumulative Oil Produced (E3m3) 76.28
 Cumulative Water Produced (E3m3) 512.58
 Cumulative Water Injected (E3m3) 1292.68
 Cumulative Voidage Replacement Ratio 2.19

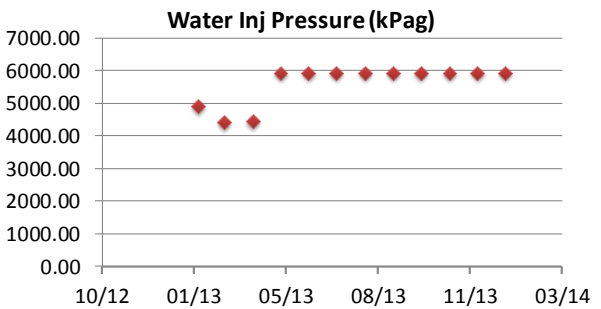
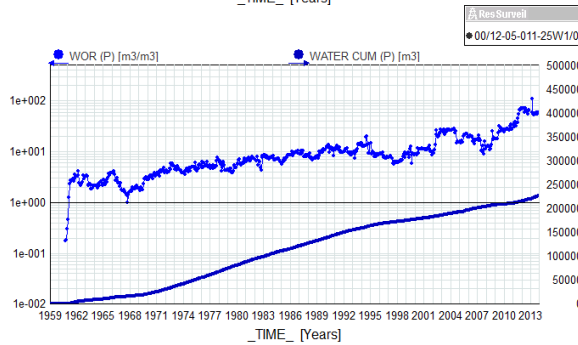
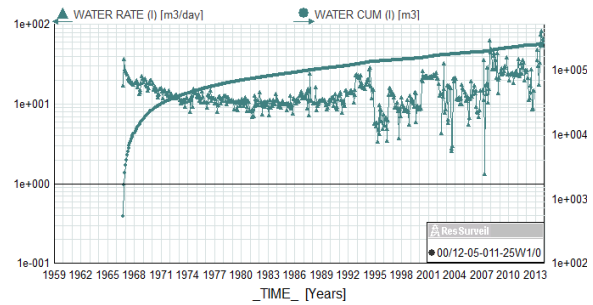
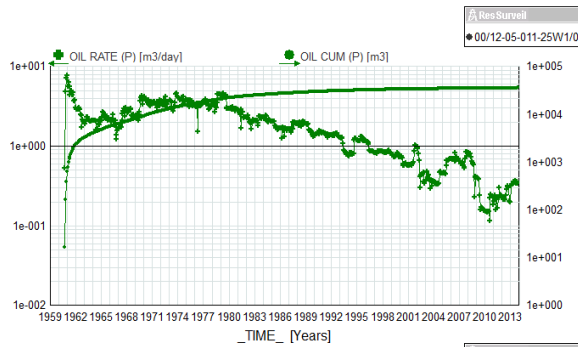


Virden Roselea Unit No. 2

Pattern P-10 - 00/12-05-011-25W1/0

Date	Monthly Oil Prod sm ³	Oil Rate (CD) sm ³ /d	Monthly Water Prod sm ³	Water Rate (CD) sm ³ /d	Water Oil Ratio m ³ /m ³	Monthly Water Inj sm ³	Water Inj Rate (CD) sm ³ /d	Water Inj Pressure kPag	Voidage Replacement Ratio	Cum Voidage Replacement Ratio
1/31/2013	9.71	0.31	0.00	0.00	0.00	0.00	0.00	4884.00	0.00	1.09
2/28/2013	9.21	0.33	940.36	33.58	102.06	1357.00	48.46	4400.00	1.43	1.09
3/31/2013	10.22	0.33	558.22	18.01	54.61	1105.00	35.65	4448.00	1.94	1.09
4/30/2013	10.33	0.34	538.68	17.96	52.15	914.00	30.47	5900.00	1.66	1.09
5/31/2013	10.95	0.35	533.75	17.22	48.72	550.00	17.74	5900.00	1.01	1.09
6/30/2013	10.44	0.35	564.92	18.83	54.12	1004.00	33.47	5900.00	1.74	1.09
7/31/2013	11.28	0.36	572.51	18.47	50.76	2318.00	74.77	5900.00	3.97	1.10
8/31/2013	10.98	0.35	570.13	18.39	51.93	1679.90	54.19	5900.00	2.89	1.11
9/30/2013	10.31	0.34	569.91	19.00	55.26	2516.10	83.87	5900.00	4.33	1.12
10/31/2013	10.88	0.35	570.89	18.42	52.47	1708.10	55.10	5900.00	2.93	1.12
11/30/2013	10.15	0.34	561.96	18.73	55.38	1983.00	66.10	5900.00	3.46	1.13
12/31/2013	10.28	0.33	0.00	18.42	55.56	0.00	32.52	5900.00	1.73	1.13

Cumulative Oil Produced (E3m3)	32.95
Cumulative Water Produced (E3m3)	194.74
Cumulative Water Injected (E3m3)	257.58
Cumulative Voidage Replacement Ratio	1.13

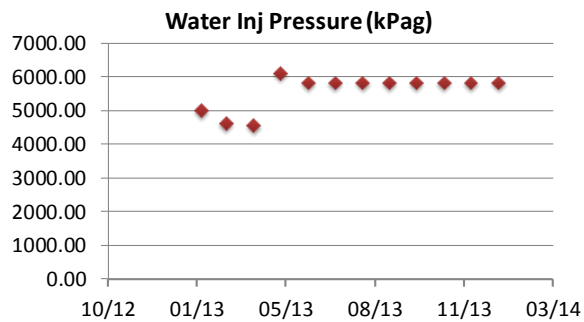
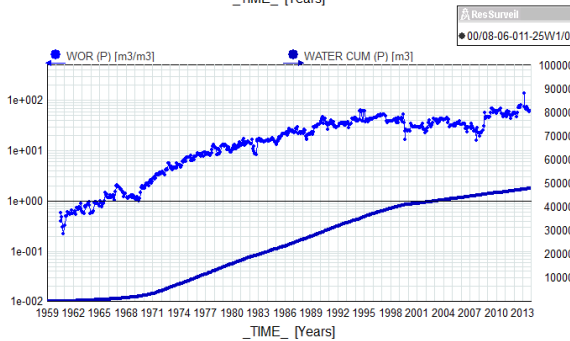
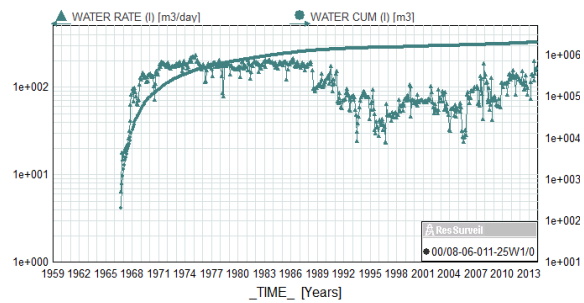
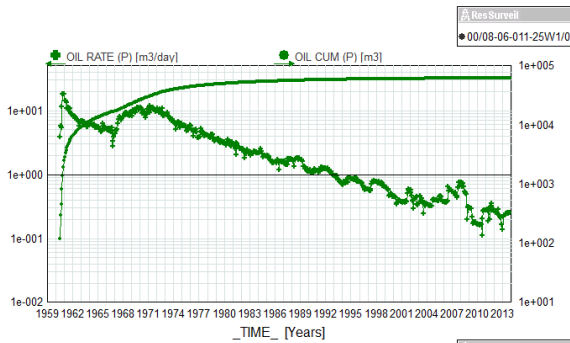


Virden Roselea Unit No. 2

Pattern P-11 - 00/08-06-011-25W1/0

Date	Monthly Oil Prod sm ³	Oil Rate (CD) sm ³ /d	Monthly Water Prod sm ³	Water Rate (CD) sm ³ /d	Water Oil Ratio m ³ /m ³	Monthly Water Inj sm ³	Water Inj Rate (CD) sm ³ /d	Water Inj Pressure kPg	Voidage Replacement Ratio	Cum Voidage Replacement Ratio
1/31/2013	6.76	0.22	0.00	0.00	0.00	0.00	0.00	4987.00	0.00	3.91
2/28/2013	6.43	0.23	828.42	29.59	128.90	2058.00	73.50	4596.00	2.46	3.91
3/31/2013	7.13	0.23	491.76	15.86	69.01	3582.00	115.55	4552.00	7.18	3.92
4/30/2013	7.16	0.24	474.54	15.82	66.28	4230.00	141.00	6090.00	8.78	3.92
5/31/2013	7.63	0.25	470.20	15.17	61.66	4300.00	138.71	5800.00	9.00	3.92
6/30/2013	7.26	0.24	497.65	16.59	68.55	4037.00	134.57	5800.00	7.99	3.93
7/31/2013	7.89	0.25	504.38	16.27	63.91	3741.00	120.68	5800.00	7.30	3.93
8/31/2013	7.63	0.25	484.53	15.63	63.54	6218.40	200.59	5800.00	12.63	3.94
9/30/2013	7.66	0.26	437.78	14.59	57.16	4335.60	144.52	5800.00	9.73	3.95
10/31/2013	7.84	0.25	422.97	13.64	53.93	4836.10	156.00	5800.00	11.22	3.95
11/30/2013	7.58	0.25	428.38	14.28	56.48	4976.30	165.88	5800.00	11.41	3.96
12/31/2013	7.62	0.25	0.00	13.99	56.91	0.00	129.77	5800.00	9.12	3.96

Cumulative Oil Produced (E3m3)	59.49
Cumulative Water Produced (E3m3)	447.17
Cumulative Water Injected (E3m3)	2013.53
Cumulative Voidage Replacement Ratio	3.96

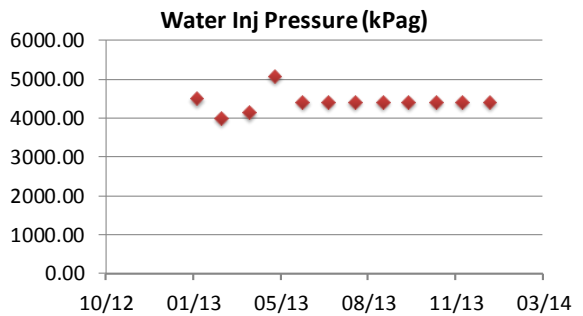
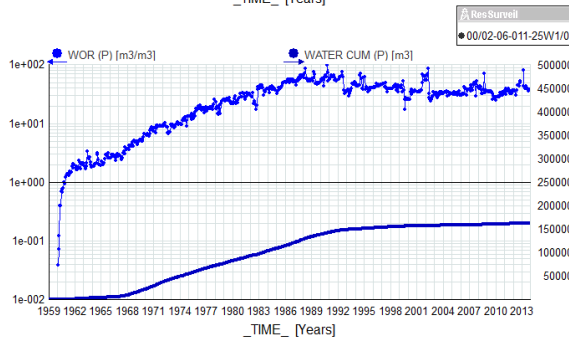
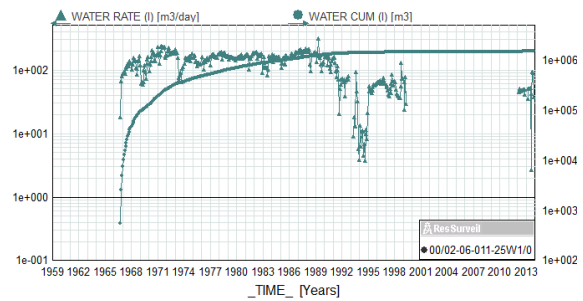
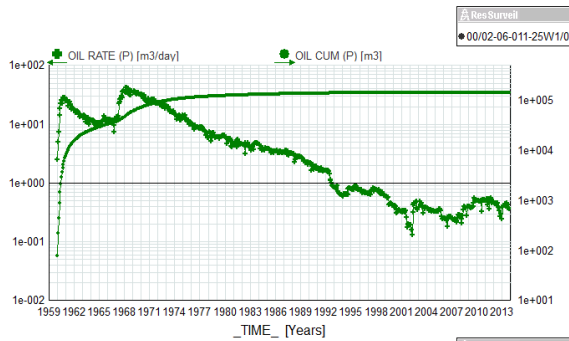


Virden Roselea Unit No. 2

Pattern P-12 - 00/02-06-011-25W1/0

Date	Monthly Oil Prod sm ³	Oil Rate (CD) sm ³ /d	Monthly Water Prod sm ³	Water Rate (CD) sm ³ /d	Water Oil Ratio m ³ /m ³	Monthly Water Inj sm ³	Water Inj Rate (CD) sm ³ /d	Water Inj Pressure kPg	Voidage Replacement Ratio	Cum Voidage Replacement Ratio
1/31/2013	11.99	0.39	0.00	0.00	0.00	0.00	0.00	4484.00	0.00	0.86
2/28/2013	11.39	0.41	921.91	32.93	80.95	980.00	35.00	4004.00	1.05	0.86
3/31/2013	12.65	0.41	547.25	17.65	43.25	1549.00	49.97	4132.00	2.76	0.86
4/30/2013	12.72	0.42	528.07	17.60	41.51	1520.00	50.67	5077.00	2.81	0.86
5/31/2013	13.52	0.44	523.28	16.88	38.70	1595.00	51.45	4400.00	2.97	0.86
6/30/2013	12.89	0.43	553.81	18.46	42.97	1554.00	51.80	4400.00	2.74	0.86
7/31/2013	13.99	0.45	561.30	18.11	40.13	84.00	2.71	4400.00	0.15	0.86
8/31/2013	13.12	0.42	526.24	16.98	40.11	1302.70	42.02	4400.00	2.41	0.86
9/30/2013	11.32	0.38	424.44	14.15	37.49	2761.80	92.06	4400.00	6.33	0.86
10/31/2013	11.46	0.37	411.55	13.28	35.93	2806.10	90.52	4400.00	6.63	0.86
11/30/2013	10.89	0.36	413.75	13.79	38.00	1123.50	37.45	4400.00	2.64	0.86
12/31/2013	11.06	0.36	408.46	13.62	38.18	990.97	33.03	4400.00	2.36	0.86

Cumulative Oil Produced (E3m3)	144.14
Cumulative Water Produced (E3m3)	1631.40
Cumulative Water Injected (E3m3)	1537.14
Cumulative Voidage Replacement Ratio	0.86

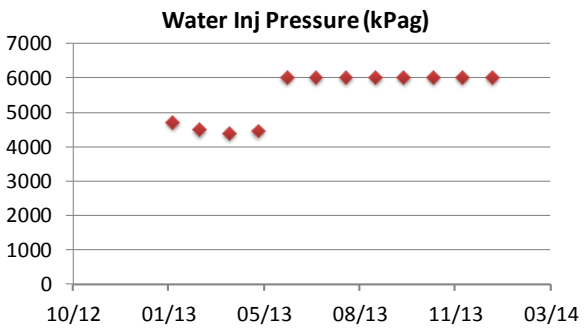
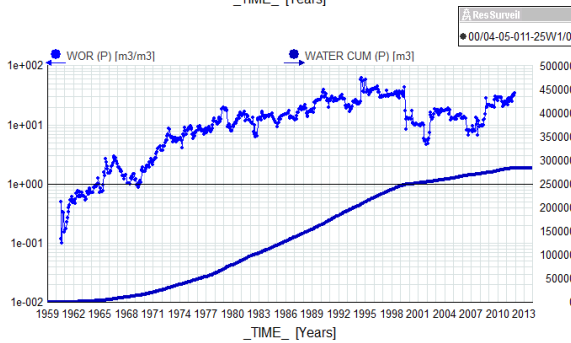
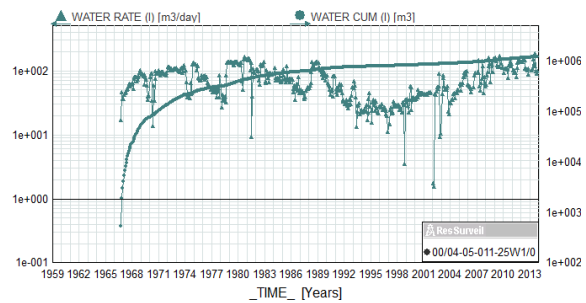
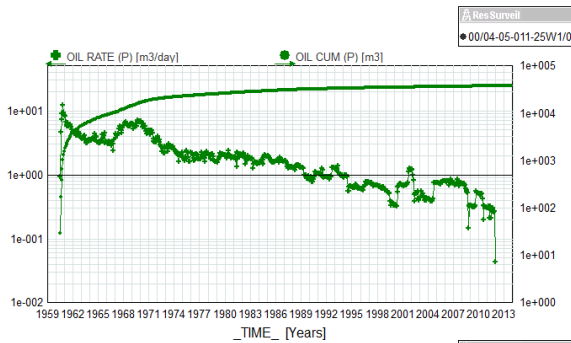


Virden Roselea Unit No. 2

Pattern P-13 - 00/04-05-011-25W1/0

Date	Monthly Oil Prod sm ³	Oil Rate (CD) sm ³ /d	Monthly Water Prod sm ³	Water Rate (CD) sm ³ /d	Water Oil Ratio m ³ /m ³	Monthly Water Inj sm ³	Water Inj Rate (CD) sm ³ /d	Water Inj Pressure kPa	Voidage Replacement Ratio	Cum Voidage Replacement Ratio
1/31/2013	0.0	0.00	0.00	0.00		0.0	0.0	4694		3.72
2/28/2013	0.0	0.00	0.00	0.00		2818.0	100.6	4496		3.73
3/31/2013	0.0	0.00	0.00	0.00		0.0	0.0	4400		3.73
4/30/2013	0.0	0.00	0.00	0.00		3239.0	108.0	4453		3.74
5/31/2013	0.0	0.00	0.00	0.00		4645.0	149.8	6000		3.76
6/30/2013	0.0	0.00	0.00	0.00		3632.0	121.1	6000		3.77
7/31/2013	0.0	0.00	0.00	0.00		3710.0	119.7	6000		3.78
8/31/2013	0.0	0.00	0.00	0.00		5809.3	187.4	6000		3.80
9/30/2013	0.0	0.00	0.00	0.00		2923.3	97.4	6000		3.81
10/31/2013	0.0	0.00	0.00	0.00		2826.6	91.2	6000		3.81
11/30/2013	0.0	0.00	0.00	0.00		2931.5	97.7	6000		3.82
12/31/2013	0.0	0.00	0.00	0.00		0.0	161.0	6000		3.84

Cumulative Oil Produced (E3m3)	37.77
Cumulative Water Produced (E3m3)	284.26
Cumulative Water Injected (E3m3)	1239.77
Cumulative Voidage Replacement Ratio	3.84

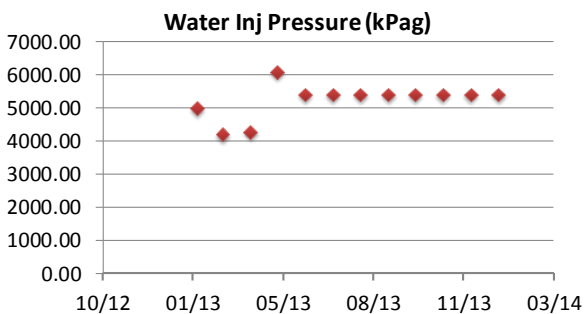
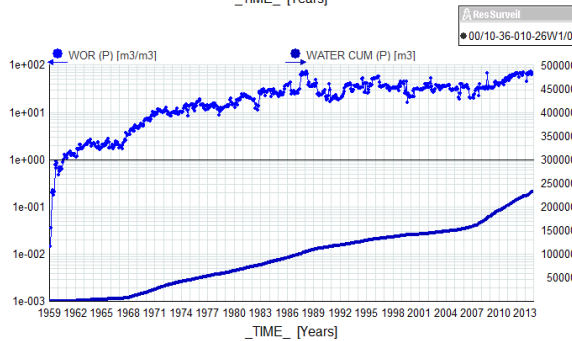
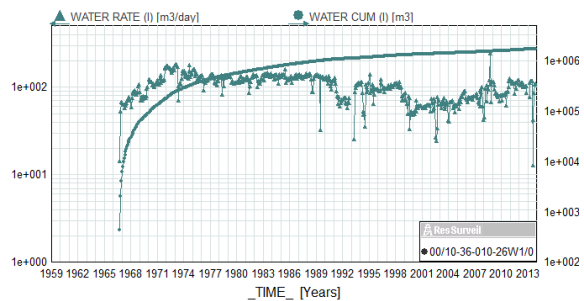
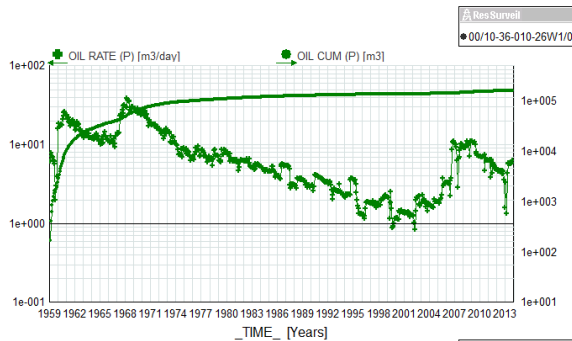


Virden Roselea Unit No. 2

Pattern P-14 - 00/10-36-010-26W1/0

Date	Monthly Oil Prod sm ³	Oil Rate (CD) sm ³ /d	Monthly Water Prod sm ³	Water Rate (CD) sm ³ /d	Water Oil Ratio m ³ /m ³	Monthly Water Inj sm ³	Water Inj Rate (CD) sm ³ /d	Water Inj Pressure kPg	Voidage Replacement Ratio	Cum Voidage Replacement Ratio
1/31/2013	101.85	3.29	0.00	0.00	0.00	0.00	0.00	4974.00	0.00	0.72
2/28/2013	37.30	1.33	1695.65	60.56	45.46	2169.00	77.46	4200.00	1.25	0.72
3/31/2013	134.75	4.35	8812.35	284.27	65.40	3479.00	112.23	4261.00	0.39	0.72
4/30/2013	170.55	5.69	11549.05	384.97	67.72	3510.00	117.00	6077.00	0.30	0.71
5/31/2013	181.15	5.84	11443.90	369.16	63.17	3679.00	118.68	5400.00	0.32	0.71
6/30/2013	172.50	5.75	12112.10	403.74	70.22	3556.00	118.53	5400.00	0.29	0.71
7/31/2013	180.85	5.83	11808.55	380.92	65.29	403.00	13.00	5400.00	0.03	0.71
8/31/2013	176.00	5.68	11726.45	378.27	66.63	1329.10	42.87	5400.00	0.11	0.70
9/30/2013	169.65	5.66	12226.75	407.56	72.07	2569.30	85.64	5400.00	0.21	0.70
10/31/2013	181.85	5.87	11413.45	368.18	62.76	3313.60	106.89	5400.00	0.29	0.70
11/30/2013	187.15	6.24	12613.10	420.44	67.40	3333.00	111.10	5400.00	0.26	0.70
12/31/2013	178.80	5.77	11591.71	386.39	66.99	2919.68	97.32	5400.00	0.25	0.69

Cumulative Oil Produced (E3m3)	161.63
Cumulative Water Produced (E3m3)	2342.77
Cumulative Water Injected (E3m3)	1741.41
Cumulative Voidage Replacement Ratio	0.69



Virden Roselea Unit No. 2

Pattern P-15 - 00/12-31-010-25W1/0

Date	Monthly Oil Prod sm ³	Oil Rate (CD) sm ³ /d	Monthly Water Prod sm ³	Water Rate (CD) sm ³ /d	Water Oil Ratio m ³ /m ³	Monthly Water Inj sm ³	Water Inj Rate (CD) sm ³ /d	Water Inj Pressure kPa	Voidage Replacement Ratio	Cum Voidage Replacement Ratio
1/31/2013	14.05	0.45	0.00	0.00	0.00	0.00	0.00	--	0.00	0.95
2/28/2013	13.80	0.49	937.05	33.47	67.90	0.00	0.00	--	0.00	0.95
3/31/2013	15.35	0.50	556.25	17.94	36.24	0.00	0.00	--	0.00	0.94
4/30/2013	15.45	0.52	536.75	17.89	34.74	0.00	0.00	--	0.00	0.94
5/31/2013	16.45	0.53	531.90	17.16	32.33	0.00	0.00	--	0.00	0.94
6/30/2013	15.60	0.52	562.90	18.76	36.08	0.00	0.00	--	0.00	0.94
7/31/2013	16.95	0.55	570.55	18.40	33.66	0.00	0.00	--	0.00	0.94
8/31/2013	16.50	0.53	568.15	18.33	34.43	0.00	0.00	--	0.00	0.94
9/30/2013	15.55	0.52	577.05	19.24	37.11	0.00	0.00	--	0.00	0.94
10/31/2013	17.85	0.58	615.95	19.87	34.51	0.00	0.00	--	0.00	0.94
11/30/2013	16.35	0.55	594.90	19.83	36.39	0.00	0.00	--	0.00	0.94
12/31/2013	16.00	0.52	0.00	18.77	36.36	0.00	0.00	--	0.00	0.93

Cumulative Oil Produced (E3m3) 52.50
 Cumulative Water Produced (E3m3) 463.85
 Cumulative Water Injected (E3m3) 483.90
 Cumulative Voidage Replacement Ratio 0.93

