

Virden Roselea Unit #1
2015 Annual EOR Report

Executive Summary

In 2015 oil production in the Virden Roselea Unit #1 (VRU #1) was 67 m³/d (422 bbl/d) totaling 24.5 e³m³ (154.2 mmbbl). Annual production was up 7.2% from 2014 to 2015, one of the first times the annual production has not declined in recent years. By the end of 2015 cumulative oil production from the VRU #1 was 2 997 e³m³ (18.8 mmbbl). The original forecasted recovery was 845 e³m³ (5.3 mmbbl) on primary recovery and 2 300 e³m³ (14.4 mmbbl) total primary plus secondary recovery.

In December 2015 there were 58 producing oil wells and 18 water injectors active in the unit. In 2014, three horizontal Scallion wells were drilled in the unit and three horizontal Virden wells were also drilled. In 2015, only one well was drilled in the Virden formation.

Discussion

The VRU #1 has been under waterflood since 1965, 11 years after initial production in 1954. Water injection increased the oil production rate from $\sim 125 \text{ m}^3/\text{d}$ (786 bbl/d) just prior to injection to $\sim 250 \text{ m}^3/\text{d}$ ($\sim 1,570$ bbl/d), equivalent to peak production from the field. Expected ultimate oil recovery was increased by 2.5 – 3 times due to the waterflood. Due to this there are areas in the unit that have a higher recovery than what is seen in the other Roselea units, and overall, the unit has a higher recovery.

Horizontal drilling has offset the production decline over the last decade with 22 horizontal wells drilled in the unit. In 2014, an additional three Scallion horizontals and three Virden horizontals were drilled in this unit with variable results. In 2015, one Virden horizontal was drilled.

In this unit it appears as if there may be a preferential orientation as in large portions of the unit the wells offsetting injectors in the E-W direction were generally more successful than the adjacent producers to the North and South. The majority of the horizontals are aligned in an E-W orientation and the unit outline may support implementing an E-W line drive; technical work has yet to be conducted. The water injection rate was $1\,040 \text{ m}^3/\text{d}$ (6 541 bbl/d) in 2015 (Note: An error in geoScout production data for the month of May shows no injection in any of the wells for the entirety of the month, as such, the injection volume for the year was divided by 11 months), and the producing WOR was $24 \text{ m}^3/\text{m}^3$. The injected water at VRU #1 is not filtered or treated in any way.

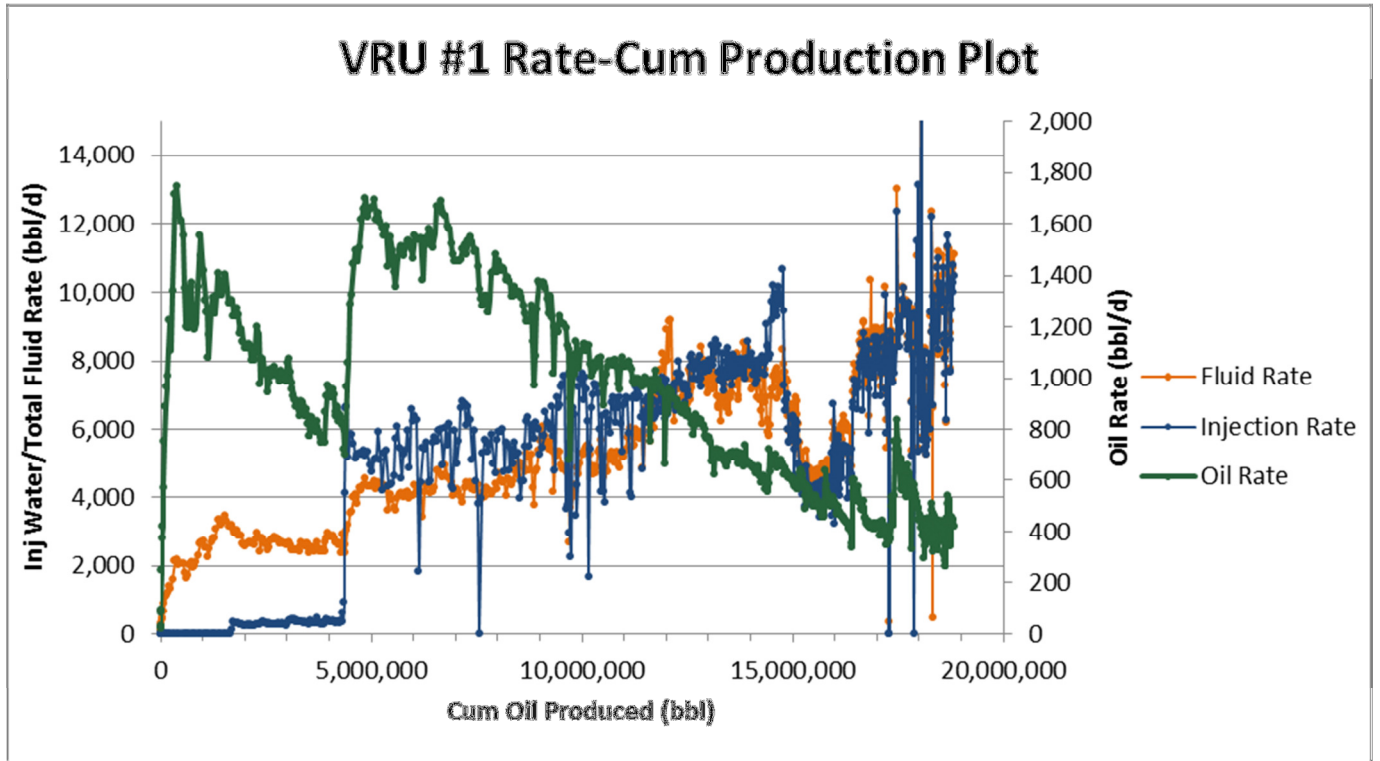
Significant events in 2015 are as follows:

- January 2015, the 104/11-23-010-26W1/00 horizontal Virden well was drilled in the unit.
- August 2015, attempt to perform a water shut off workover on the 102/13-24-010-26W1/00 Scallion well.
- August 2015, recompleat 100/14-23-010-26W1/00 in the Virden formation.
- October 2015, suspended the 100/11-21-010-25W1/00 vertical well.

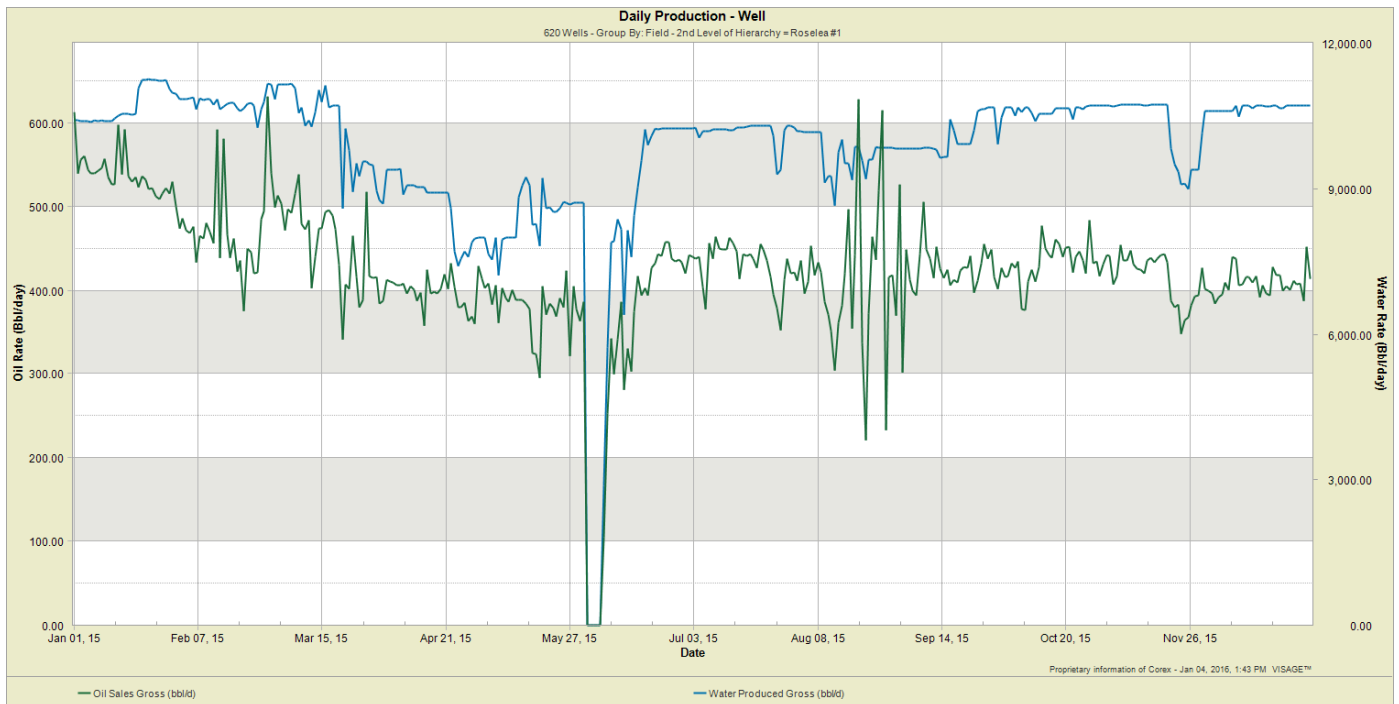
In the composite rate – cumulative oil plot below, waterflood response is clearly demonstrated at a cumulative oil production of $650 \text{ e}^3\text{m}^3$ (4 MMbbl).

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

VRU #1 – Rate vs Cumulative Oil Production



VRU #1 – Rate vs Time



2015 Reservoir Pressure Surveys

| Unit | UWI | License | Test Type | Date of Pressure | Duration of SI (days) | Datum BHP (kPaa) |
|--------|-----------------------|---------|-----------|------------------|-----------------------|------------------|
| VRU #1 | 100/14-23-010-26W1/00 | 531 | BH BU | 9/8/2015 | 10 | 5,879 |

In 2015, only one pressure was taken in the unit.

In 2014, there were nine reservoir pressures recorded averaging 7,200 kPaa. As with most of the Virden units there is a large range in pressure, the pressure recorded in 2015 appears to be a bit under pressure. The initial reservoir pressure is estimated at 6,340 kPaa and the bubble point pressure as 1,273 kPaa.

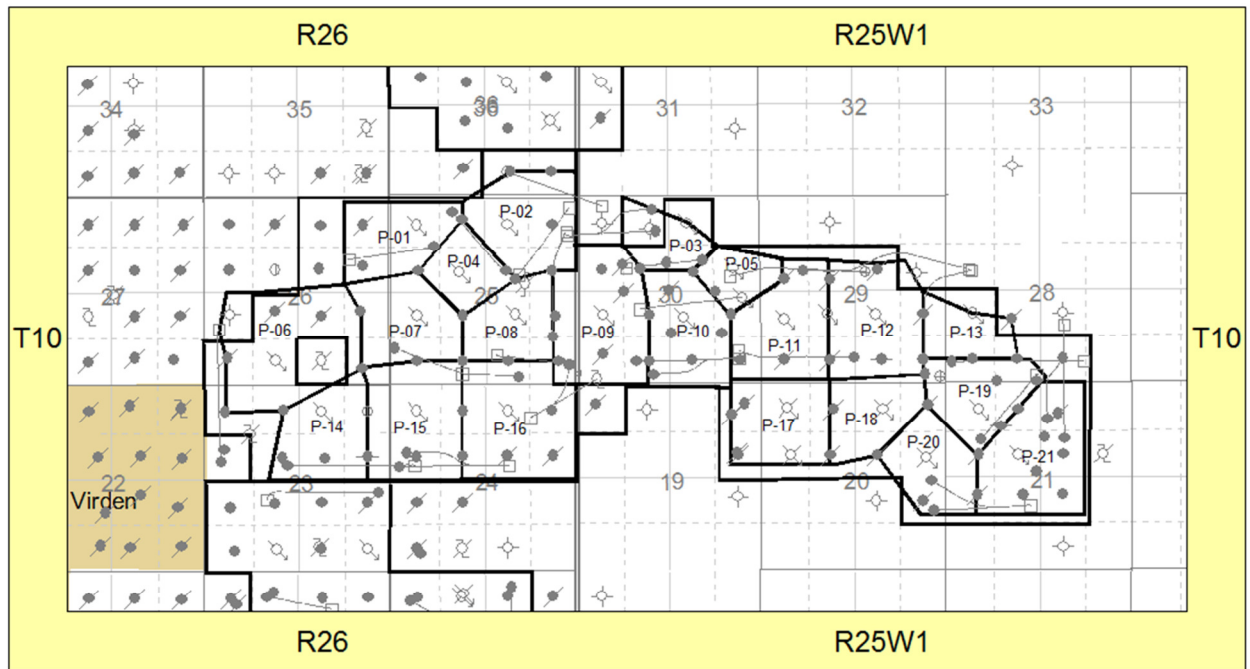
The voidage replacement ratio (VRR) in 2015 was maintained close to 1.00. The cumulative VRR at the end of 2014 was 0.96 (Note: Due to the error in geoScout data for the month of May the actual Cum VRR may differ slightly). An oil formation volume factor of $1.06 \text{ rm}^3/\text{sm}^3$ and a water formation volume factor of $1.04 \text{ rm}^3/\text{sm}^3$ were used in the VRR calculations.

The higher than initial reservoir pressure is inconsistent with the cumulative VRR of 0.96. The pressure inconsistency may be due to the partial pressure support for the field from an aquifer on the west side of the unit. This water influx from the aquifer is not accounted for in the VRR calculation.

2015 Well Servicing

| UWI | Licence | Unit | Operation | Date | Objective |
|------------------------|------------|-------|-----------------------------------|-----------|-------------------------------|
| 100/03-26-010-26W1/00 | 000797 | VRU#1 | Equipment Pressure Integrity Test | 10-JUN-15 | |
| 100/03-28-010-25W1/00 | 002131 | VRU#1 | In Line Inspection | 23-JUL-15 | |
| 100/04-25-010-26W1/00 | 000467 | VRU#1 | Pump Repair | 15-OCT-15 | |
| 100/05-25-010-26W1/00 | 000695 | VRU#1 | Equipment Pressure Integrity Test | 10-JUN-15 | |
| 100/05-29-010-25W1/00 | 001303 | VRU#1 | Equipment Pressure Integrity Test | 13-MAR-15 | |
| 100/05-30-010-25W1/00 | 000623 | VRU#1 | Equipment Pressure Integrity Test | 24-MAR-15 | |
| 100/07-29-010-25W1/00 | 001405 | VRU#1 | Equipment Pressure Integrity Test | 13-MAR-15 | |
| 100/07-30-010-25W1/00 | 000737 | VRU#1 | Equipment Pressure Integrity Test | 24-MAR-15 | |
| 100/08-30-010-25W1/00 | 001053 | VRU#1 | Inhibitor Squeeze | 29-SEP-15 | |
| 100/08-30-010-25W1/00 | 001053 | VRU#1 | In Line Inspection | 23-JUL-15 | |
| 100/09-26-010-26W1/00 | 000744 | VRU#1 | Pump Repair | 14-JAN-15 | |
| 100/09-30-010-25W1/00 | 001070 | VRU#1 | Equipment Pressure Integrity Test | 10-JUN-15 | |
| 100/11-21-010-25W1/00 | 001787 | VRU#1 | Suspension | 15-OCT-15 | |
| 100/11-25-010-26W1/00 | 000608 | VRU#1 | Equipment Pressure Integrity Test | 10-JUN-15 | |
| 100/12-23-010-26W1/00 | 000489 | VRU#1 | Pump Repair | 21-SEP-15 | |
| 100/12-24-010-26W1/00 | 000477 | VRU#1 | Pump Repair | 06-JAN-15 | |
| 100/13-21-010-25W1/00 | 001765 | VRU#1 | Pressure Build-up/Survey | 24-NOV-15 | |
| 100/13-24-010-26W1/00 | 000431 | VRU#1 | Packer Repair | 16-JUL-15 | |
| 100/13-25-010-26W1/00 | 000698 | VRU#1 | Equipment Pressure Integrity Test | 10-JUN-15 | |
| 100/14-23-010-26W1/00 | 000531 | VRU#1 | Recompletion | 26-AUG-15 | |
| 100/15-23-010-26W1/00 | 000543 | VRU#1 | Equipment Pressure Integrity Test | 10-JUN-15 | |
| 100/15-23-010-26W1/00 | 000543 | VRU#1 | Injection - Surface Monitoring | 01-DEC-15 | |
| 100/15-25-010-26W1/00 | 000672 | VRU#1 | Equipment Pressure Integrity Test | 24-MAR-15 | |
| 100/15-30-010-25W1/00 | 001110 | VRU#1 | Equipment Pressure Integrity Test | 10-JUN-15 | |
| 102/03-29-010-25W1/00 | 6867 | VRU#1 | Bridge Plug | 30-NOV-15 | |
| 102/07-25-010-26W1/00 | 9932 | VRU#1 | Cathodic | 23-SEP-15 | |
| 102/10-24-010-26W1/00 | 9933 | VRU#1 | Recompletion | 02-SEP-15 | |
| 102/12-23-010-26W1/00 | 6394 | VRU#1 | Upsize Pump | 28-NOV-15 | Reconfigure Tubing/Components |
| 102/13-24-010-26W1/00 | 10122 | VRU#1 | Workover | 16-AUG-15 | Water Shut Off |
| 103/11-23-010-26W1/00 | 9803 | VRU#1 | Cathodic | 01-AUG-15 | |
| 104/08-30-010-25W1/00 | 005124 | VRU#1 | Equipment Pressure Integrity Test | 24-MAR-15 | |
| 104/11-23-010-26W1/00 | 10296 | VRU#1 | Downsize Pump | 05-JUN-15 | |
| 104/11-23-010-26W1/00 | 10296 | VRU#1 | Equip & Tie-In | 06-MAR-15 | |
| 104/11-23-010-26W1/00 | 10296 | VRU#1 | Initial Completion | 23-FEB-15 | VIRDEN COMPLETION |
| 104/11-23-010-26W1/00 | 10296 | VRU#1 | Construction | 24-JAN-15 | |
| 104/11-23-010-26W1/00 | 10296 | VRU#1 | Drilling - original | 29-JAN-15 | |
| PIPELINE REPLACEMENT | P15-VIR-05 | VRU#1 | Pipelines | 02-JUN-15 | |
| SATELLITE INSTALLATION | F15-VIR-06 | VRU#1 | Satellite | 10-FEB-15 | |
| SATELLITE INSTALLATION | F15-VIR-05 | VRU#1 | Satellite | 18-FEB-15 | |
| WELLHEAD FITINGS | RM15-VR-01 | VRU#1 | Wellhead Repair | 09-APR-15 | |

VRU #1 Waterflood Pattern Map

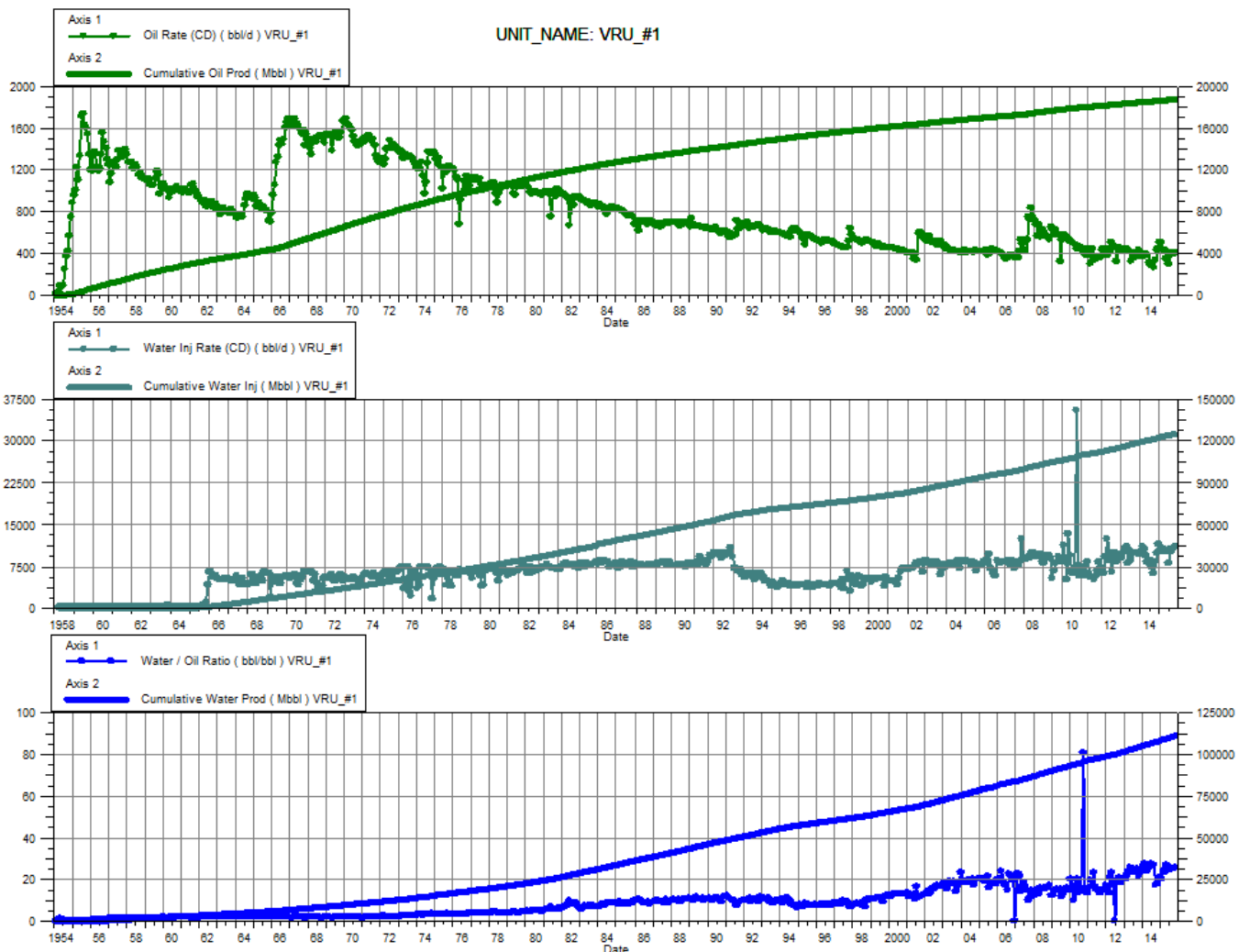


VRU #1 Waterflood Pattern Table

| Pattern | Well |
|---------|-----------------------|
| P-01 | 100/13-25-010-26W1/00 |
| P-02 | 100/15-25-010-26W1/00 |
| P-03 | 100/15-30-010-25W1/00 |
| P-04 | 100/11-25-010-26W1/00 |
| P-05 | 100/09-30-010-25W1/00 |
| P-06 | 100/03-26-010-26W1/00 |
| P-07 | 100/05-25-010-26W1/00 |
| P-08 | 100/07-25-010-26W1/00 |
| P-09 | 100/05-30-010-25W1/00 |
| P-09 | 103/01-25-010-26W1/00 |
| | 100/07-30-010-25W1/00 |
| P-10 | 104/08-30-010-25W1/00 |
| P-11 | 100/05-29-010-25W1/00 |
| P-12 | 100/06-29-010-25W1/00 |
| P-12 | 100/07-29-010-25W1/00 |
| P-13 | 100/05-28-010-25W1/00 |
| P-14 | 100/15-23-010-26W1/00 |
| P-15 | 100/13-24-010-26W1/00 |
| P-16 | 100/15-24-010-26W1/00 |
| P-16 | 103/01-25-010-26W1/00 |
| P-19 | 100/13-21-010-25W1/00 |
| P-21 | 100/11-21-010-25W1/00 |

Total for VRU #1

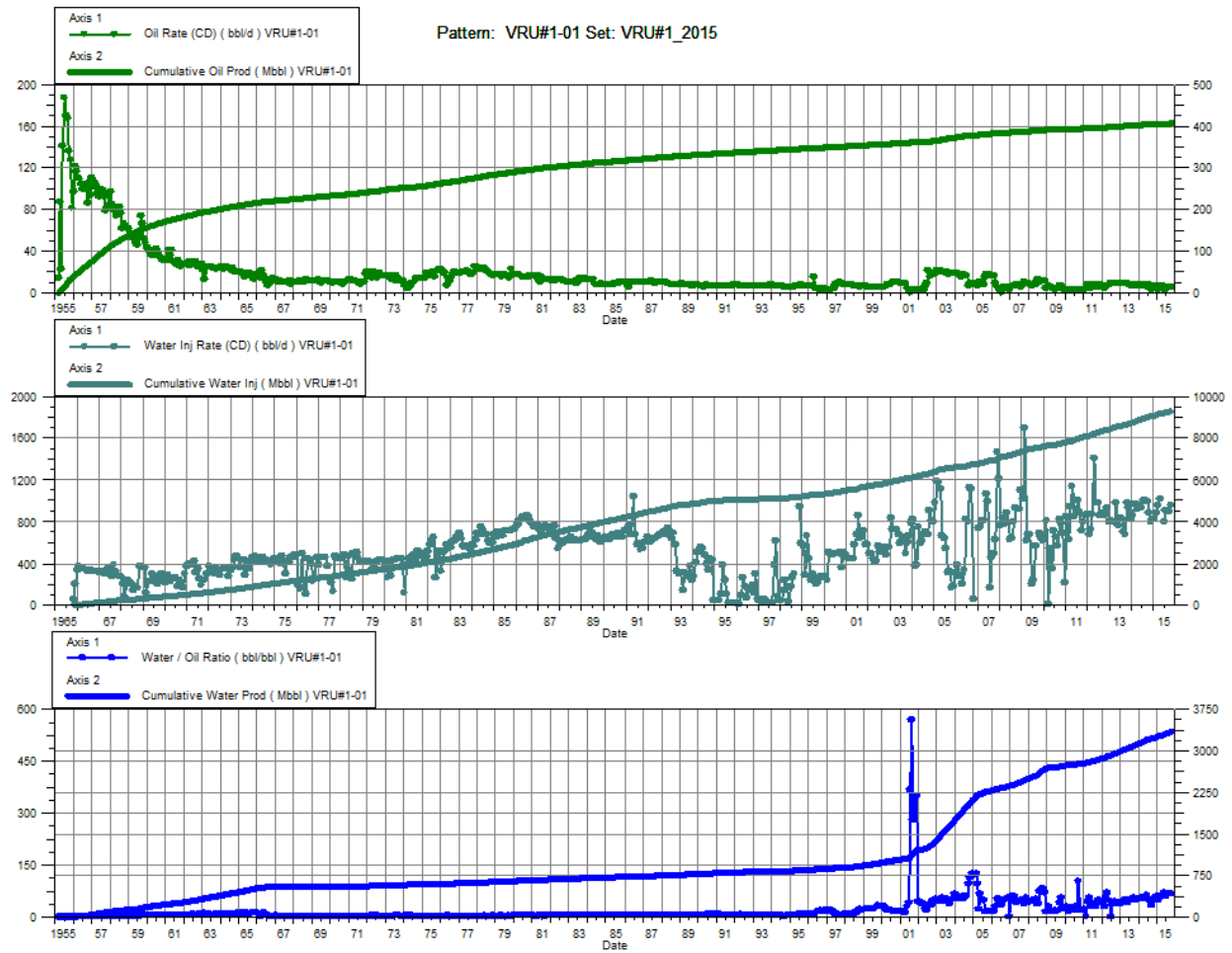
| Date | Oil Rate (CD) m3/d | Cum Oil Prod Mm3 | Water Rate (CD) m3/d | Cum Water Prod Mm3 | Water Inj Rate (CD) m3/d | Cum Water Inj Mm3 | Water Oil Ratio m3/m3 | Voidage Replacement Ratio | Cum Voidage Replacemt Ratio | Water Inj Pressure kPa |
|------------|-----------------------|---------------------|-------------------------|-----------------------|-----------------------------|----------------------|--------------------------|---------------------------------|--------------------------------|---------------------------|
| 1/31/2015 | 81.68 | 2966.61 | 1628.51 | 17259.13 | 1694.84 | 19505.81 | 19.94 | 0.99 | 0.96 | 5,992 |
| 2/28/2015 | 69.91 | 2968.57 | 1669.10 | 17305.86 | 1734.89 | 19554.38 | 23.87 | 1.00 | 0.96 | 6,213 |
| 3/31/2015 | 68.78 | 2970.70 | 1612.82 | 17355.86 | 1684.16 | 19606.59 | 23.45 | 1.00 | 0.96 | 6,145 |
| 4/30/2015 | 55.00 | 2972.35 | 1481.75 | 17400.31 | 1605.42 | 19654.76 | 26.94 | 1.04 | 0.96 | 6,240 |
| 5/31/2015 | 56.17 | 2974.09 | 1470.73 | 17445.90 | | 19654.76 | 26.18 | | 0.96 | 6,213 |
| 6/30/2015 | 48.21 | 2975.54 | 1236.60 | 17483.00 | 1295.41 | 19693.62 | 25.65 | 1.01 | 0.96 | 6,224 |
| 7/31/2015 | 64.77 | 2977.55 | 1589.45 | 17532.28 | 1689.87 | 19746.00 | 24.54 | 1.02 | 0.96 | 6,150 |
| 8/31/2015 | 62.13 | 2979.47 | 1555.57 | 17580.50 | 1619.49 | 19796.21 | 25.04 | 1.00 | 0.96 | 6,230 |
| 9/30/2015 | 64.27 | 2981.40 | 1614.69 | 17628.94 | 1679.78 | 19846.60 | 25.12 | 1.00 | 0.96 | 6,187 |
| 10/31/2015 | 66.33 | 2983.46 | 1706.47 | 17681.84 | 1768.74 | 19901.43 | 25.73 | 1.00 | 0.96 | 6,273 |
| 11/30/2015 | 62.45 | 2985.33 | 1661.30 | 17731.68 | 1723.42 | 19953.13 | 26.60 | 1.00 | 0.96 | 6,400 |
| 12/31/2015 | 61.45 | 2987.24 | 1673.16 | 17783.55 | 1733.39 | 20006.87 | 27.23 | 1.00 | 0.96 | 6,235 |



VRU No. 1

Pattern P-01 - 00/13-25-010-26W1/0

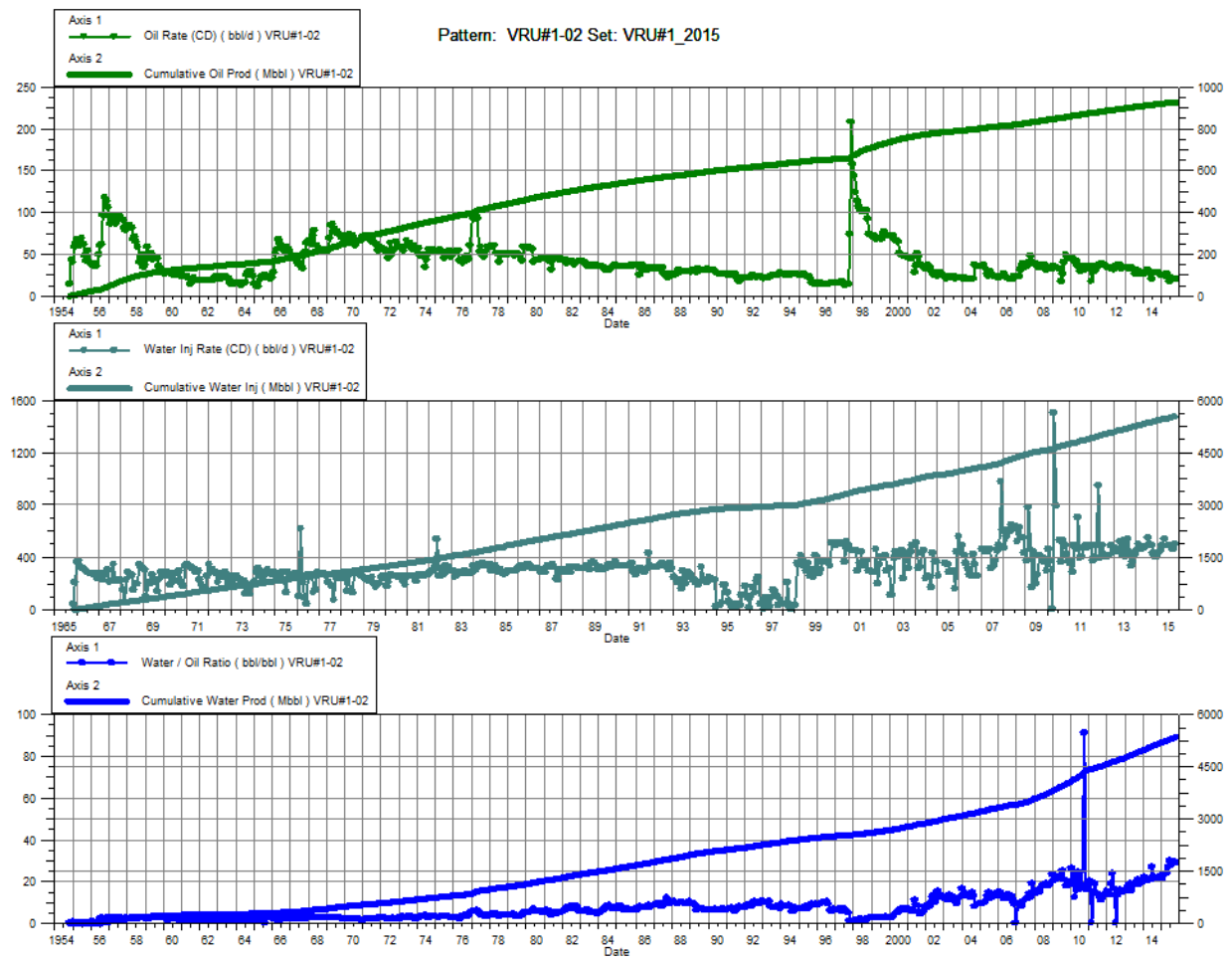
| Date | Oil Rate (CD) m3/d | Cum Oil Prod Mm3 | Water Rate (CD) m3/d | Cum Water Prod Mm3 | Water Inj Rate (CD) m3/d | Cum Water Inj Mm3 | Water Oil Ratio m3/m3 | Voidage Replacement Ratio | Cum Voidage Replacemt Ratio | Water Inj Pressure kPa |
|------------|-----------------------|---------------------|-------------------------|-----------------------|-----------------------------|----------------------|--------------------------|---------------------------------|--------------------------------|---------------------------|
| 1/31/2015 | 0.59 | 64.44 | 27.48 | 517.73 | 131.61 | 1448.02 | 46.42 | 4.69 | 2.48 | 4,806 |
| 2/28/2015 | 1.06 | 64.47 | 62.35 | 519.48 | 139.99 | 1451.93 | 58.85 | 2.21 | 2.48 | 5,000 |
| 3/31/2015 | 0.64 | 64.49 | 35.49 | 520.58 | 151.32 | 1456.63 | 55.27 | 4.19 | 2.48 | 5,003 |
| 4/30/2015 | 1.02 | 64.52 | 64.84 | 522.52 | 162.72 | 1461.51 | 63.83 | 2.47 | 2.48 | 5,100 |
| 5/31/2015 | 0.61 | 64.54 | 42.38 | 523.84 | | 1461.51 | 69.58 | | 2.48 | 5,103 |
| 6/30/2015 | 0.52 | 64.56 | 31.42 | 524.78 | 126.54 | 1465.30 | 60.63 | 3.96 | 2.48 | 5,080 |
| 7/31/2015 | 0.88 | 64.59 | 60.17 | 526.64 | 144.75 | 1469.79 | 68.13 | 2.37 | 2.48 | 4,523 |
| 8/31/2015 | 0.96 | 64.62 | 62.05 | 528.57 | 143.34 | 1474.23 | 64.53 | 2.27 | 2.48 | 5,200 |
| 9/30/2015 | 0.94 | 64.64 | 62.58 | 530.45 | 141.93 | 1478.49 | 66.53 | 2.23 | 2.48 | 5,200 |
| 10/31/2015 | 0.93 | 64.67 | 62.24 | 532.38 | 151.52 | 1483.19 | 67.17 | 2.40 | 2.48 | 5,206 |
| 11/30/2015 | 0.94 | 64.70 | 62.56 | 534.25 | 156.12 | 1487.87 | 66.41 | 2.46 | 2.48 | 5,387 |
| 12/31/2015 | 0.92 | 64.73 | 59.96 | 536.11 | 144.54 | 1492.35 | 65.29 | 2.37 | 2.48 | 4,994 |



VRU No. 1

Pattern P-02 - 00/15-25-010-26W1/0

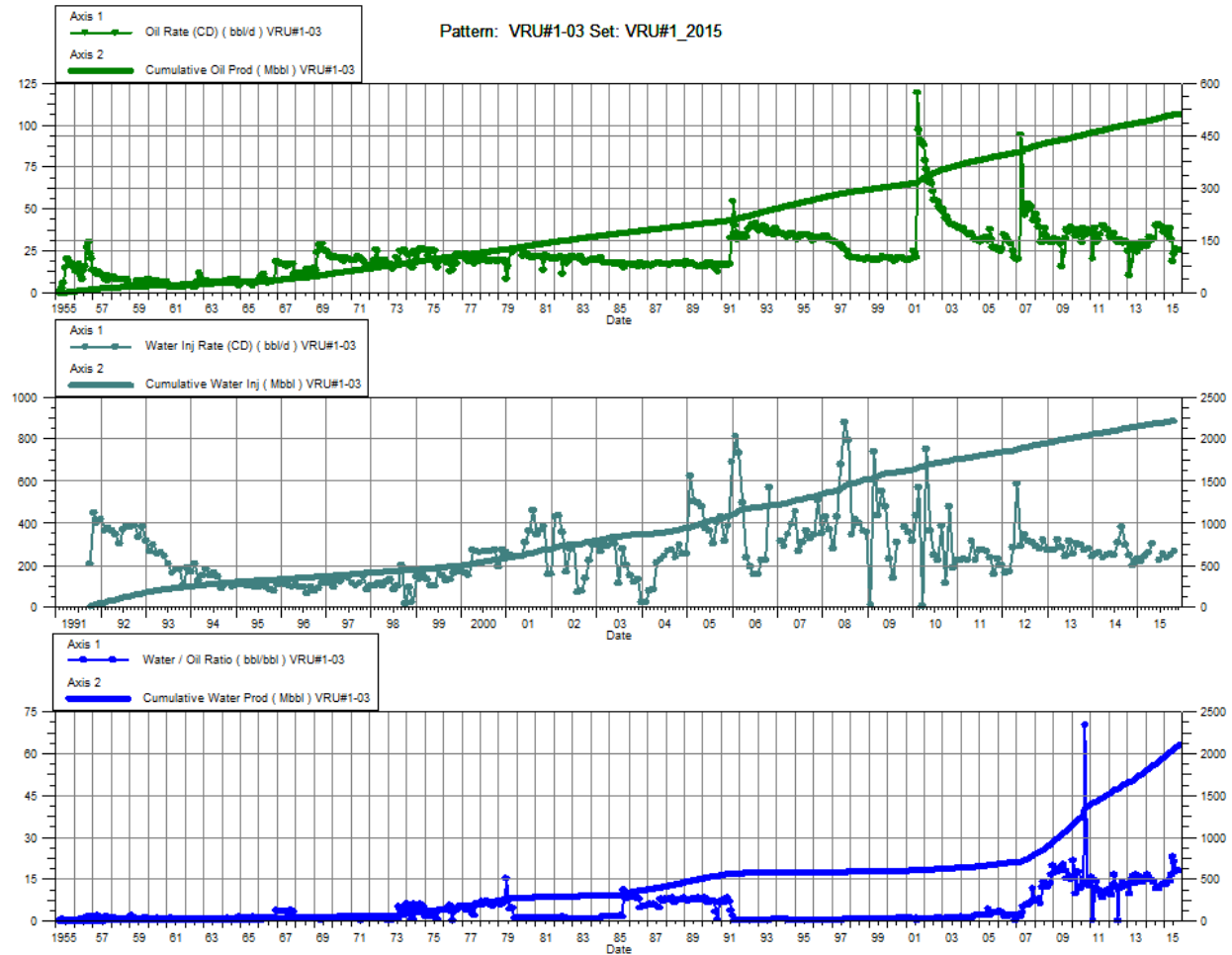
| Date | Oil Rate (CD) m3/d | Cum Oil Prod Mm3 | Water Rate (CD) m3/d | Cum Water Prod Mm3 | Water Inj Rate (CD) m3/d | Cum Water Inj Mm3 | Water Oil Ratio m3/m3 | Voidage Replacement Ratio | Cum Voidage Replacemt Ratio | Water Inj Pressure kPa |
|------------|-----------------------|---------------------|-------------------------|-----------------------|-----------------------------|----------------------|--------------------------|---------------------------------|--------------------------------|---------------------------|
| 1/31/2015 | 4.10 | 146.56 | 88.36 | 827.73 | 69.19 | 865.73 | 21.56 | 0.75 | 0.89 | 5,803 |
| 2/28/2015 | 4.00 | 146.67 | 89.78 | 830.24 | 72.21 | 867.75 | 22.46 | 0.77 | 0.89 | 5,904 |
| 3/31/2015 | 3.77 | 146.79 | 89.91 | 833.03 | 78.77 | 870.19 | 23.88 | 0.84 | 0.89 | 6,000 |
| 4/30/2015 | 4.25 | 146.92 | 101.97 | 836.09 | 85.72 | 872.76 | 23.98 | 0.81 | 0.89 | 6,000 |
| 5/31/2015 | 3.68 | 147.03 | 98.95 | 839.16 | | 872.76 | 26.90 | | 0.88 | 6,006 |
| 6/30/2015 | 2.77 | 147.11 | 83.15 | 841.65 | 78.05 | 875.11 | 30.00 | 0.91 | 0.88 | 6,190 |
| 7/31/2015 | 3.48 | 147.22 | 96.11 | 844.63 | 78.14 | 877.53 | 27.58 | 0.78 | 0.88 | 5,903 |
| 8/31/2015 | 3.35 | 147.33 | 95.61 | 847.59 | 74.83 | 879.85 | 28.52 | 0.76 | 0.88 | 6,000 |
| 9/30/2015 | 3.28 | 147.42 | 96.17 | 850.48 | 74.07 | 882.07 | 29.30 | 0.74 | 0.88 | 6,003 |
| 10/31/2015 | 3.31 | 147.53 | 95.49 | 853.44 | 79.58 | 884.54 | 28.88 | 0.81 | 0.88 | 6,106 |
| 11/30/2015 | 3.37 | 147.63 | 95.60 | 856.31 | 83.66 | 887.05 | 28.41 | 0.85 | 0.88 | 6,290 |
| 12/31/2015 | 3.21 | 147.73 | 93.12 | 859.19 | 72.95 | 889.31 | 29.03 | 0.76 | 0.88 | 5,994 |



VRU No. 1

Pattern P-03 - 00/15-30-010-25W1/0

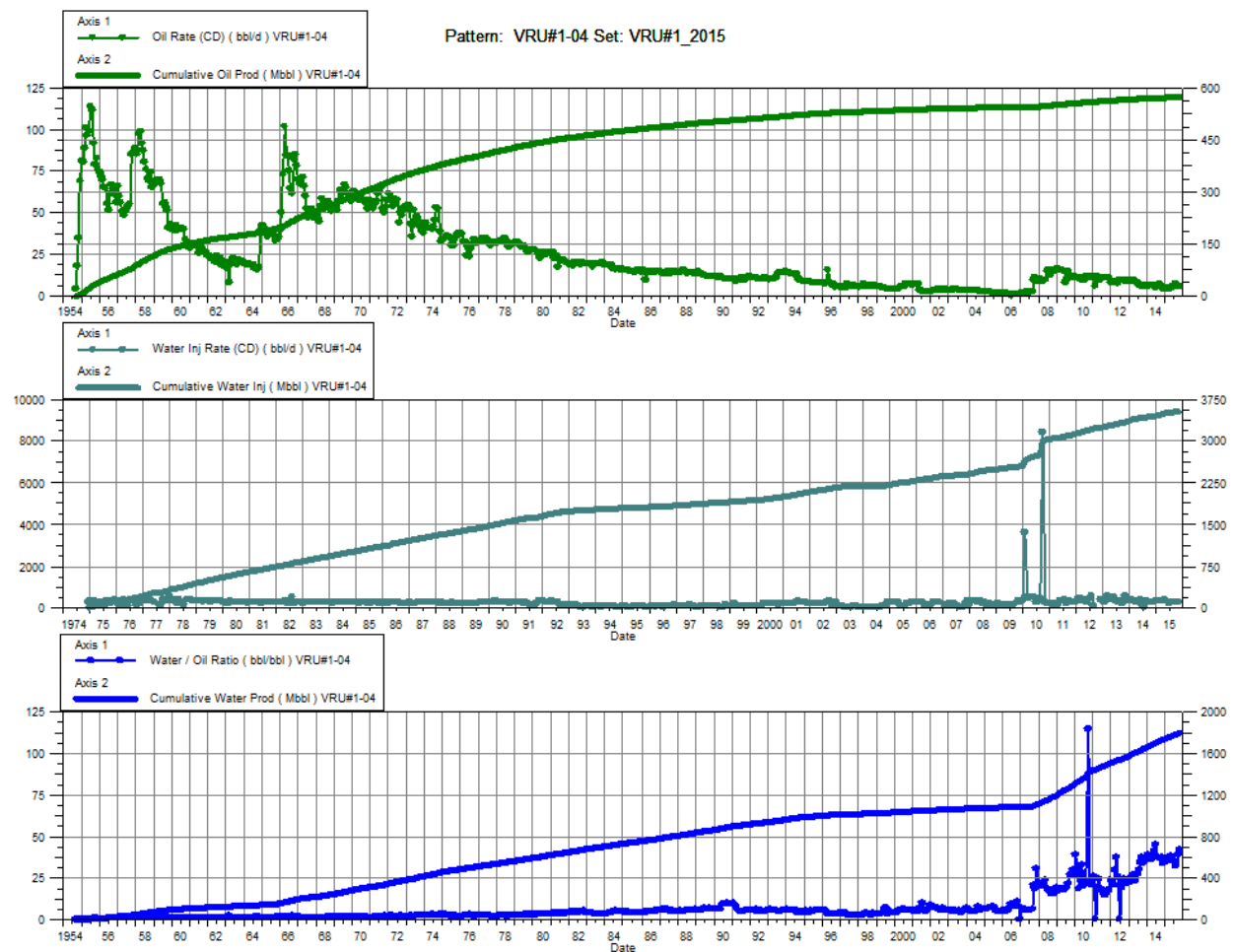
| Date | Oil Rate (CD) m3/d | Cum Oil Prod Mm3 | Water Rate (CD) m3/d | Cum Water Prod Mm3 | Water Inj Rate (CD) m3/d | Cum Water Inj Mm3 | Water Oil Ratio m3/m3 | Voidage Replacement Ratio | Cum Voidage Replacemt Ratio | Water Inj Pressure kPa |
|------------|-----------------------|---------------------|-------------------------|-----------------------|-----------------------------|----------------------|--------------------------|---------------------------------|--------------------------------|---------------------------|
| 1/31/2015 | 5.86 | 80.38 | 74.72 | 313.82 | 34.66 | 343.67 | 12.75 | 0.43 | 0.87 | 6,516 |
| 2/28/2015 | 5.72 | 80.54 | 76.22 | 315.95 | 38.14 | 344.74 | 13.33 | 0.47 | 0.87 | 7,000 |
| 3/31/2015 | 5.40 | 80.71 | 76.60 | 318.33 | 41.49 | 346.03 | 14.18 | 0.51 | 0.86 | 7,000 |
| 4/30/2015 | 6.10 | 80.89 | 87.16 | 320.94 | 47.81 | 347.46 | 14.28 | 0.51 | 0.86 | 7,000 |
| 5/31/2015 | 5.08 | 81.05 | 84.46 | 323.56 | | 347.46 | 16.61 | | 0.86 | 7,003 |
| 6/30/2015 | 2.94 | 81.14 | 67.39 | 325.58 | 35.51 | 348.53 | 22.91 | 0.51 | 0.85 | 7,090 |
| 7/31/2015 | 3.74 | 81.26 | 79.32 | 328.04 | 40.12 | 349.77 | 21.19 | 0.48 | 0.85 | 6,800 |
| 8/31/2015 | 4.19 | 81.39 | 73.02 | 330.31 | 37.72 | 350.94 | 17.44 | 0.49 | 0.85 | 6,797 |
| 9/30/2015 | 4.09 | 81.51 | 73.26 | 332.50 | 38.74 | 352.10 | 17.91 | 0.50 | 0.85 | 6,707 |
| 10/31/2015 | 4.06 | 81.63 | 72.15 | 334.74 | 42.39 | 353.42 | 17.75 | 0.56 | 0.85 | 6,906 |
| 11/30/2015 | 4.18 | 81.76 | 73.63 | 336.95 | 45.06 | 354.77 | 17.60 | 0.58 | 0.84 | 7,097 |
| 12/31/2015 | 3.98 | 81.88 | 71.39 | 339.16 | 37.03 | 355.92 | 17.93 | 0.49 | 0.84 | 6,987 |



VRU No. 1

Pattern P-04 - 00/11-25-010-26W1/0

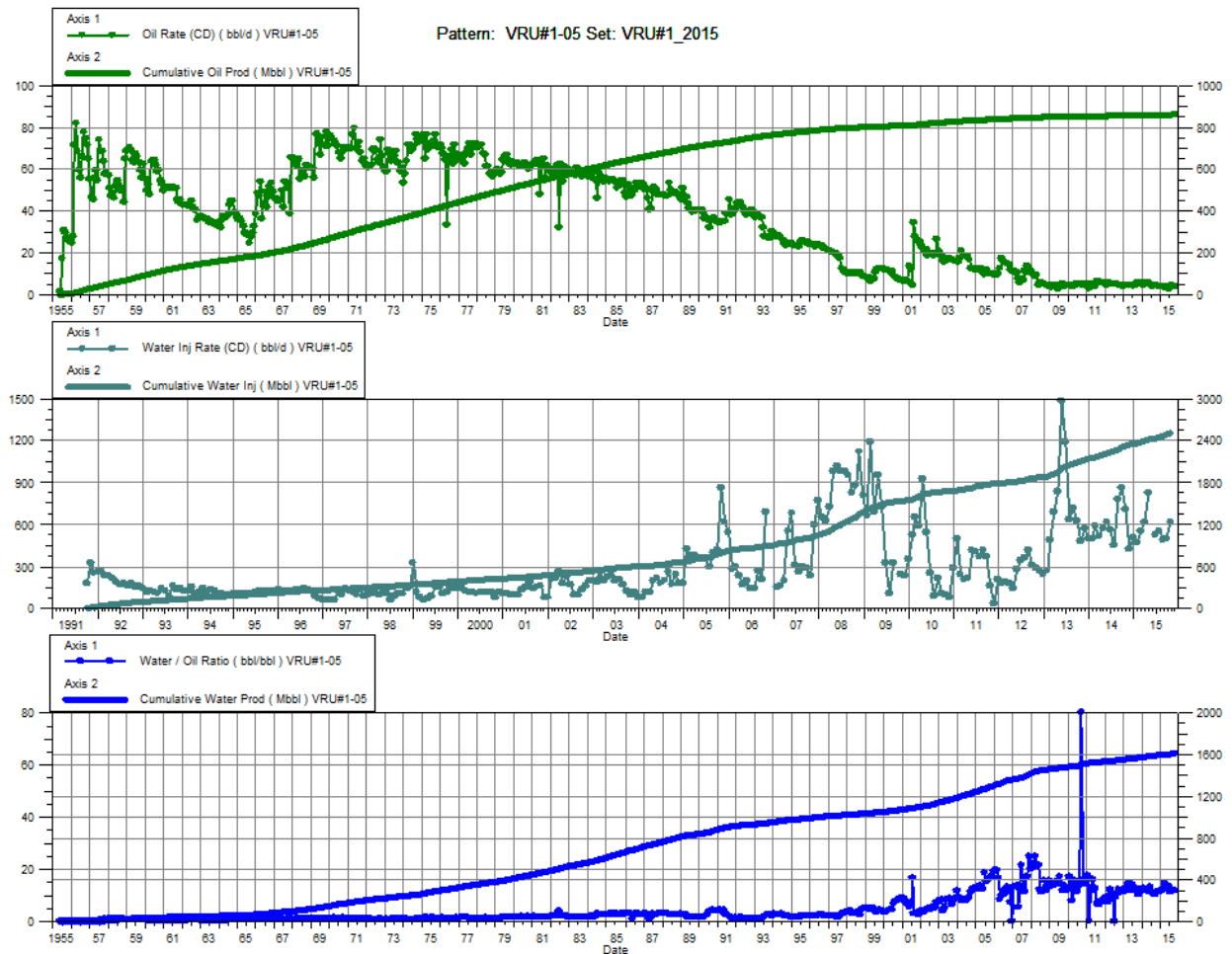
| Date | Oil Rate (CD) m3/d | Cum Oil Prod Mm3 | Water Rate (CD) m3/d | Cum Water Prod Mm3 | Water Inj Rate (CD) m3/d | Cum Water Inj Mm3 | Water Oil Ratio m3/m3 | Voidage Replacement Ratio | Cum Voidage Replacemt Ratio | Water Inj Pressure kPa |
|------------|-----------------------|---------------------|-------------------------|-----------------------|-----------------------------|----------------------|--------------------------|---------------------------------|--------------------------------|---------------------------|
| 1/31/2015 | 0.76 | 90.97 | 25.88 | 277.57 | 50.55 | 552.22 | 34.21 | 1.90 | 1.49 | 6,010 |
| 2/28/2015 | 0.74 | 90.99 | 26.40 | 278.31 | 56.67 | 553.80 | 35.76 | 2.09 | 1.49 | 6,289 |
| 3/31/2015 | 0.69 | 91.01 | 26.02 | 279.12 | 56.07 | 555.54 | 37.85 | 2.10 | 1.49 | 6,010 |
| 4/30/2015 | 0.79 | 91.04 | 30.24 | 280.03 | 64.24 | 557.47 | 38.21 | 2.07 | 1.50 | 6,293 |
| 5/31/2015 | 0.80 | 91.06 | 28.85 | 280.92 | | 557.47 | 36.20 | | 1.49 | 6,200 |
| 6/30/2015 | 0.89 | 91.09 | 31.42 | 281.86 | 37.15 | 558.58 | 35.37 | 1.15 | 1.49 | 6,200 |
| 7/31/2015 | 1.13 | 91.12 | 36.39 | 282.99 | 42.07 | 559.89 | 32.13 | 1.12 | 1.49 | 6,203 |
| 8/31/2015 | 1.17 | 91.16 | 37.87 | 284.17 | 42.76 | 561.21 | 32.32 | 1.10 | 1.49 | 6,297 |
| 9/30/2015 | 0.96 | 91.19 | 37.46 | 285.29 | 39.48 | 562.40 | 38.99 | 1.03 | 1.49 | 6,200 |
| 10/31/2015 | 0.89 | 91.21 | 36.90 | 286.43 | 44.70 | 563.78 | 41.69 | 1.18 | 1.49 | 6,210 |
| 11/30/2015 | 0.89 | 91.24 | 36.58 | 287.53 | 37.67 | 564.91 | 40.93 | 1.01 | 1.49 | 6,483 |
| 12/31/2015 | 0.86 | 91.27 | 35.90 | 288.64 | 36.07 | 566.03 | 41.88 | 0.98 | 1.48 | 6,000 |



VRU No. 1

Pattern P-05 - 00/09-30-010-25W1/0

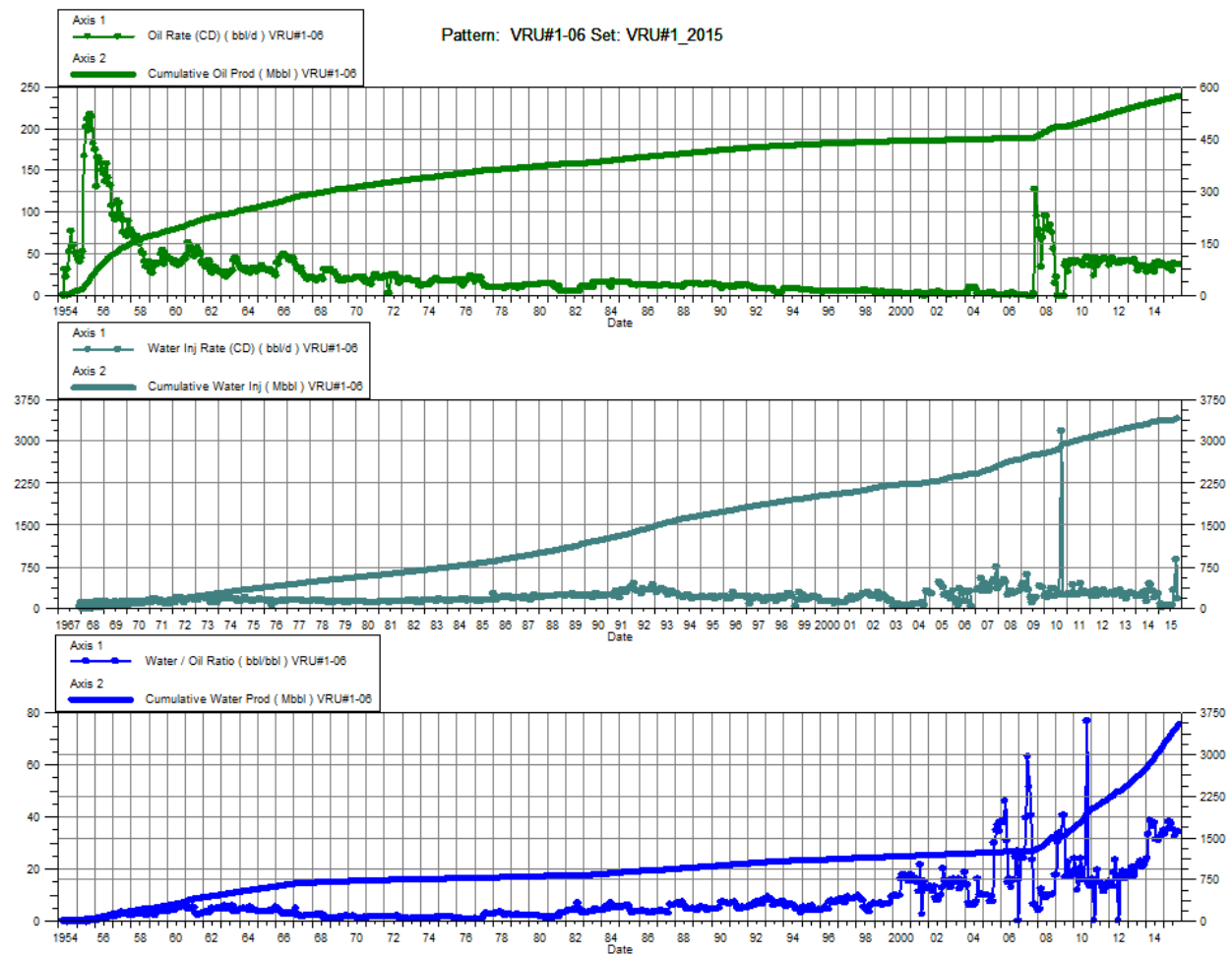
| Date | Oil Rate (CD) m3/d | Cum Oil Prod Mm3 | Water Rate (CD) m3/d | Cum Water Prod Mm3 | Water Inj Rate (CD) m3/d | Cum Water Inj Mm3 | Water Oil Ratio m3/m3 | Voidage Replacement Ratio | Cum Voidage Replacemt Ratio | Water Inj Pressure kPa |
|------------|-----------------------|---------------------|-------------------------|-----------------------|-----------------------------|----------------------|--------------------------|---------------------------------|--------------------------------|---------------------------|
| 1/31/2015 | 0.65 | 136.94 | 7.45 | 254.05 | 74.47 | 377.27 | 11.53 | 9.18 | 0.96 | 6,806 |
| 2/28/2015 | 0.63 | 136.96 | 7.60 | 254.27 | 88.22 | 379.74 | 12.13 | 10.71 | 0.96 | 7,000 |
| 3/31/2015 | 0.51 | 136.97 | 7.51 | 254.50 | 98.05 | 382.78 | 14.58 | 12.21 | 0.97 | 7,006 |
| 4/30/2015 | 0.67 | 136.99 | 8.68 | 254.76 | 131.22 | 386.72 | 12.94 | 14.02 | 0.98 | 7,200 |
| 5/31/2015 | 0.59 | 137.01 | 8.27 | 255.02 | | 386.72 | 13.94 | | 0.98 | 7,200 |
| 6/30/2015 | 0.49 | 137.03 | 6.42 | 255.21 | 83.03 | 389.21 | 13.15 | 12.00 | 0.99 | 7,193 |
| 7/31/2015 | 0.64 | 137.05 | 7.37 | 255.44 | 88.11 | 391.94 | 11.45 | 10.98 | 0.99 | 7,000 |
| 8/31/2015 | 0.71 | 137.07 | 7.83 | 255.68 | 78.06 | 394.36 | 11.05 | 9.13 | 1.00 | 7,000 |
| 9/30/2015 | 0.69 | 137.09 | 8.00 | 255.92 | 79.81 | 396.75 | 11.66 | 9.17 | 1.00 | 7,000 |
| 10/31/2015 | 0.69 | 137.11 | 8.00 | 256.17 | 98.44 | 399.80 | 11.62 | 11.31 | 1.01 | 7,006 |
| 11/30/2015 | 0.70 | 137.13 | 8.06 | 256.41 | 115.65 | 403.27 | 11.45 | 13.18 | 1.02 | 7,197 |
| 12/31/2015 | 0.67 | 137.15 | 7.81 | 256.65 | 90.37 | 406.08 | 11.70 | 10.64 | 1.02 | 7,090 |



VRU No. 1

Pattern P-06 - 00/03-26-010-26W1/0

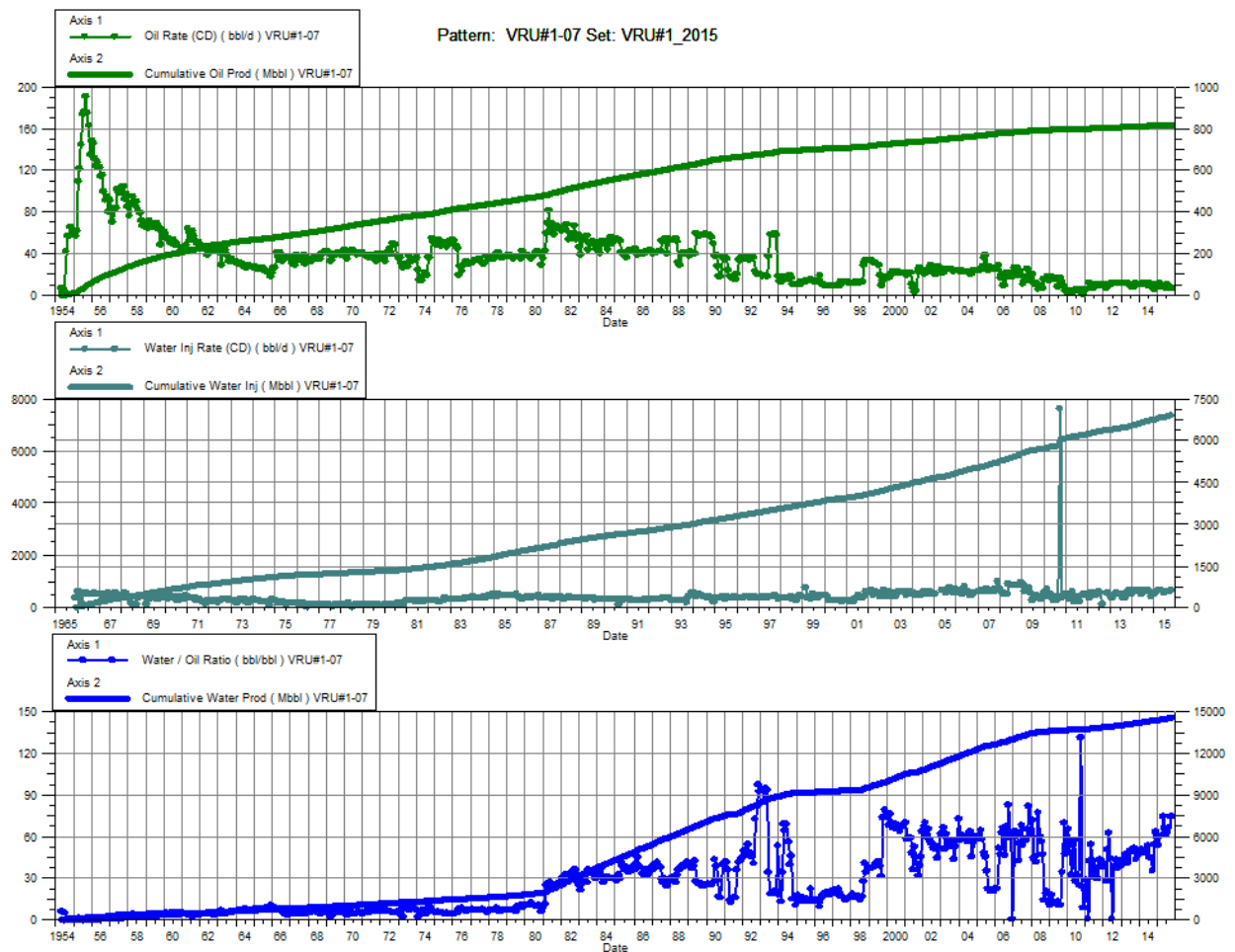
| Date | Oil Rate (CD) m3/d | Cum Oil Prod Mm3 | Water Rate (CD) m3/d | Cum Water Prod Mm3 | Water Inj Rate (CD) m3/d | Cum Water Inj Mm3 | Water Oil Ratio m3/m3 | Voidage Replacement Ratio | Cum Voidage Replacemt Ratio | Water Inj Pressure kPa |
|------------|-----------------------|---------------------|-------------------------|-----------------------|-----------------------------|----------------------|--------------------------|---------------------------------|--------------------------------|---------------------------|
| 1/31/2015 | 5.78 | 89.85 | 192.60 | 509.98 | 11.81 | 536.55 | 33.35 | 0.06 | 0.89 | 5,300 |
| 2/28/2015 | 5.63 | 90.00 | 195.80 | 515.46 | 0.04 | 536.55 | 34.79 | 0.00 | 0.88 | 5,300 |
| 3/31/2015 | 5.17 | 90.16 | 197.09 | 521.57 | 7.23 | 536.77 | 38.12 | 0.04 | 0.88 | 5,297 |
| 4/30/2015 | 5.86 | 90.34 | 224.41 | 528.30 | 10.18 | 537.08 | 38.33 | 0.04 | 0.87 | 5,207 |
| 5/31/2015 | 6.00 | 90.52 | 222.78 | 535.21 | | 537.08 | 37.15 | | 0.86 | 5,300 |
| 6/30/2015 | 4.88 | 90.67 | 171.43 | 540.35 | 7.49 | 537.30 | 35.14 | 0.04 | 0.85 | 5,303 |
| 7/31/2015 | 6.12 | 90.86 | 198.12 | 546.49 | 8.43 | 537.56 | 32.38 | 0.04 | 0.84 | 5,406 |
| 8/31/2015 | 6.09 | 91.05 | 198.41 | 552.64 | 50.67 | 539.13 | 32.59 | 0.25 | 0.84 | 5,597 |
| 9/30/2015 | 5.93 | 91.23 | 203.90 | 558.76 | 137.99 | 543.27 | 34.35 | 0.66 | 0.83 | 5,500 |
| 10/31/2015 | 6.08 | 91.42 | 207.86 | 565.20 | 28.53 | 544.16 | 34.19 | 0.13 | 0.83 | 5,500 |
| 11/30/2015 | 4.37 | 91.55 | 151.01 | 569.73 | | 544.16 | 34.57 | | 0.82 | 5,500 |
| 12/31/2015 | 5.90 | 91.73 | 205.94 | 576.12 | 30.94 | 545.12 | 34.93 | 0.15 | 0.81 | 5,448 |



VRU No. 1

Pattern P-07 - 00/05-25-010-26W1/0

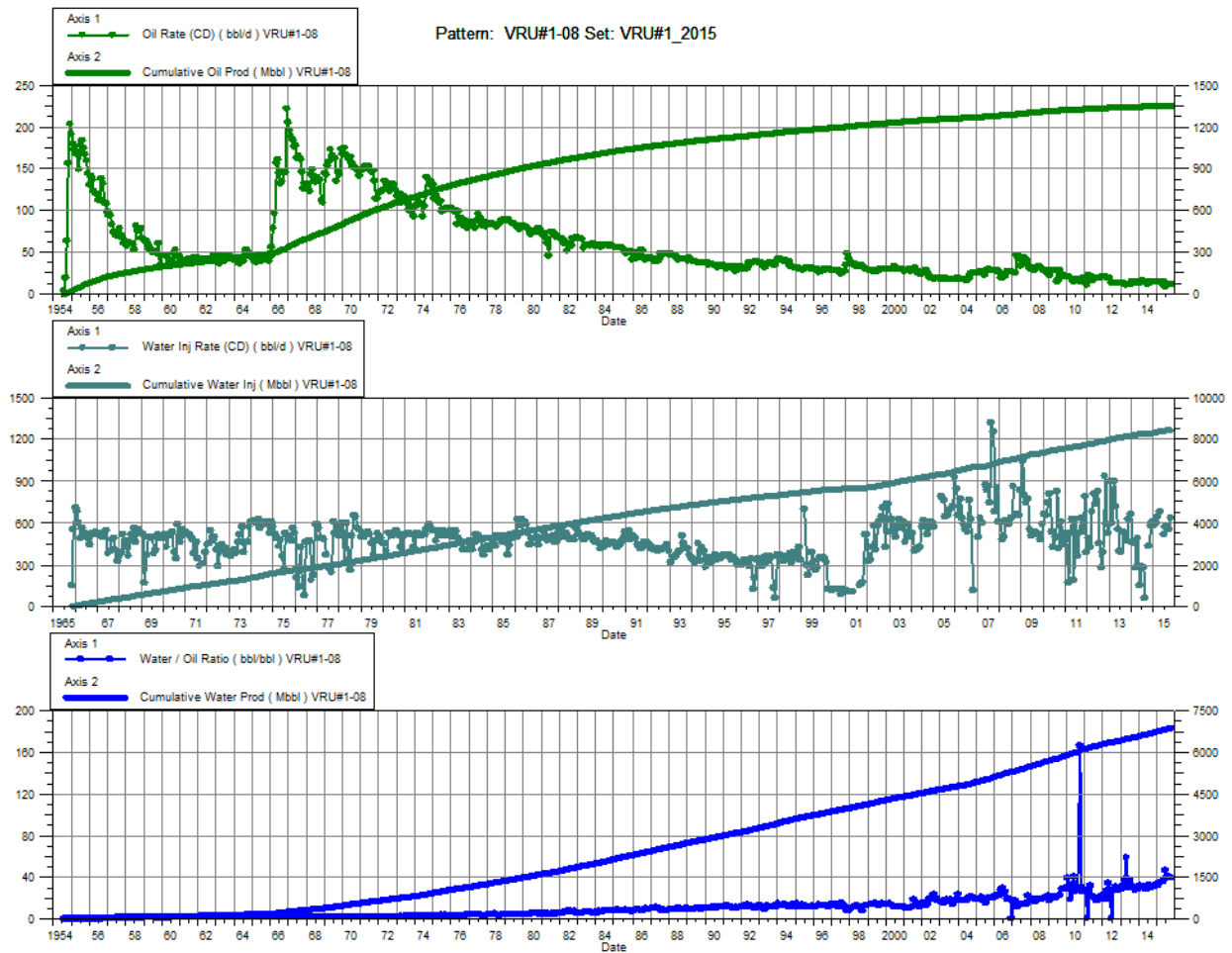
| Date | Oil Rate (CD) m3/d | Cum Oil Prod Mm3 | Water Rate (CD) m3/d | Cum Water Prod Mm3 | Water Inj Rate (CD) m3/d | Cum Water Inj Mm3 | Water Oil Ratio m3/m3 | Voidage Replacement Ratio | Cum Voidage Replacemt Ratio | Water Inj Pressure kPa |
|------------|-----------------------|---------------------|-------------------------|-----------------------|-----------------------------|----------------------|--------------------------|---------------------------------|--------------------------------|---------------------------|
| 1/31/2015 | 1.36 | 129.60 | 72.53 | 2291.17 | 82.14 | 1078.71 | 53.38 | 1.11 | 0.45 | 5,832 |
| 2/28/2015 | 1.81 | 129.66 | 108.31 | 2294.20 | 93.01 | 1081.32 | 59.90 | 0.84 | 0.45 | 6,764 |
| 3/31/2015 | 1.35 | 129.70 | 81.83 | 2296.74 | 103.51 | 1084.53 | 60.49 | 1.24 | 0.45 | 5,813 |
| 4/30/2015 | 1.34 | 129.74 | 100.15 | 2299.74 | 106.42 | 1087.72 | 74.54 | 1.05 | 0.45 | 6,187 |
| 5/31/2015 | 1.43 | 129.78 | 94.86 | 2302.69 | | 1087.72 | 66.14 | | 0.45 | 6,000 |
| 6/30/2015 | 1.08 | 129.81 | 65.23 | 2304.64 | 85.36 | 1090.28 | 60.59 | 1.29 | 0.45 | 6,000 |
| 7/31/2015 | 1.67 | 129.87 | 104.16 | 2307.87 | 95.20 | 1093.23 | 62.55 | 0.90 | 0.45 | 6,006 |
| 8/31/2015 | 1.42 | 129.91 | 94.35 | 2310.80 | 98.21 | 1096.28 | 66.48 | 1.03 | 0.45 | 6,194 |
| 9/30/2015 | 1.16 | 129.94 | 86.25 | 2313.38 | 94.22 | 1099.10 | 74.65 | 1.08 | 0.45 | 6,003 |
| 10/31/2015 | 1.13 | 129.98 | 83.61 | 2315.97 | 106.99 | 1102.42 | 74.17 | 1.26 | 0.45 | 6,110 |
| 11/30/2015 | 1.15 | 130.01 | 84.13 | 2318.50 | 94.69 | 1105.26 | 73.41 | 1.11 | 0.45 | 6,380 |
| 12/31/2015 | 1.11 | 130.05 | 80.53 | 2321.00 | 94.56 | 1108.19 | 72.69 | 1.16 | 0.45 | 5,800 |



VRU No. 1

Pattern P-08 - 00/07-25-010-26W1/0

| Date | Oil Rate (CD) m3/d | Cum Oil Prod Mm3 | Water Rate (CD) m3/d | Cum Water Prod Mm3 | Water Inj Rate (CD) m3/d | Cum Water Inj Mm3 | Water Oil Ratio m3/m3 | Voidage Replacement Ratio | Cum Voidage Replacemt Ratio | Water Inj Pressure kPa |
|------------|-----------------------|---------------------|-------------------------|-----------------------|-----------------------------|----------------------|--------------------------|---------------------------------|--------------------------------|---------------------------|
| 1/31/2015 | 2.32 | 215.08 | 73.57 | 1075.07 | 92.78 | 1324.96 | 31.74 | 1.22 | 1.02 | 6,516 |
| 2/28/2015 | 2.25 | 215.15 | 74.35 | 1077.15 | 95.59 | 1327.64 | 33.04 | 1.25 | 1.02 | 6,986 |
| 3/31/2015 | 2.14 | 215.21 | 75.29 | 1079.49 | 102.77 | 1330.82 | 35.19 | 1.33 | 1.03 | 6,616 |
| 4/30/2015 | 2.41 | 215.29 | 84.85 | 1082.03 | 108.81 | 1334.09 | 35.20 | 1.25 | 1.03 | 7,087 |
| 5/31/2015 | 2.25 | 215.36 | 84.34 | 1084.65 | | 1334.09 | 37.52 | | 1.02 | 6,900 |
| 6/30/2015 | 1.31 | 215.39 | 61.44 | 1086.49 | 81.93 | 1336.54 | 46.94 | 1.31 | 1.02 | 6,900 |
| 7/31/2015 | 1.74 | 215.45 | 73.08 | 1088.75 | 90.21 | 1339.34 | 42.04 | 1.21 | 1.02 | 6,903 |
| 8/31/2015 | 1.83 | 215.50 | 71.68 | 1090.98 | 90.90 | 1342.16 | 39.23 | 1.24 | 1.02 | 6,994 |
| 9/30/2015 | 1.78 | 215.56 | 69.63 | 1093.06 | 88.62 | 1344.82 | 39.22 | 1.24 | 1.02 | 6,803 |
| 10/31/2015 | 1.79 | 215.61 | 69.38 | 1095.22 | 101.76 | 1347.97 | 38.73 | 1.43 | 1.03 | 6,913 |
| 11/30/2015 | 1.84 | 215.67 | 70.34 | 1097.33 | 88.76 | 1350.63 | 38.15 | 1.23 | 1.03 | 7,270 |
| 12/31/2015 | 1.75 | 215.72 | 68.20 | 1099.44 | 85.64 | 1353.29 | 38.96 | 1.22 | 1.03 | 6,406 |

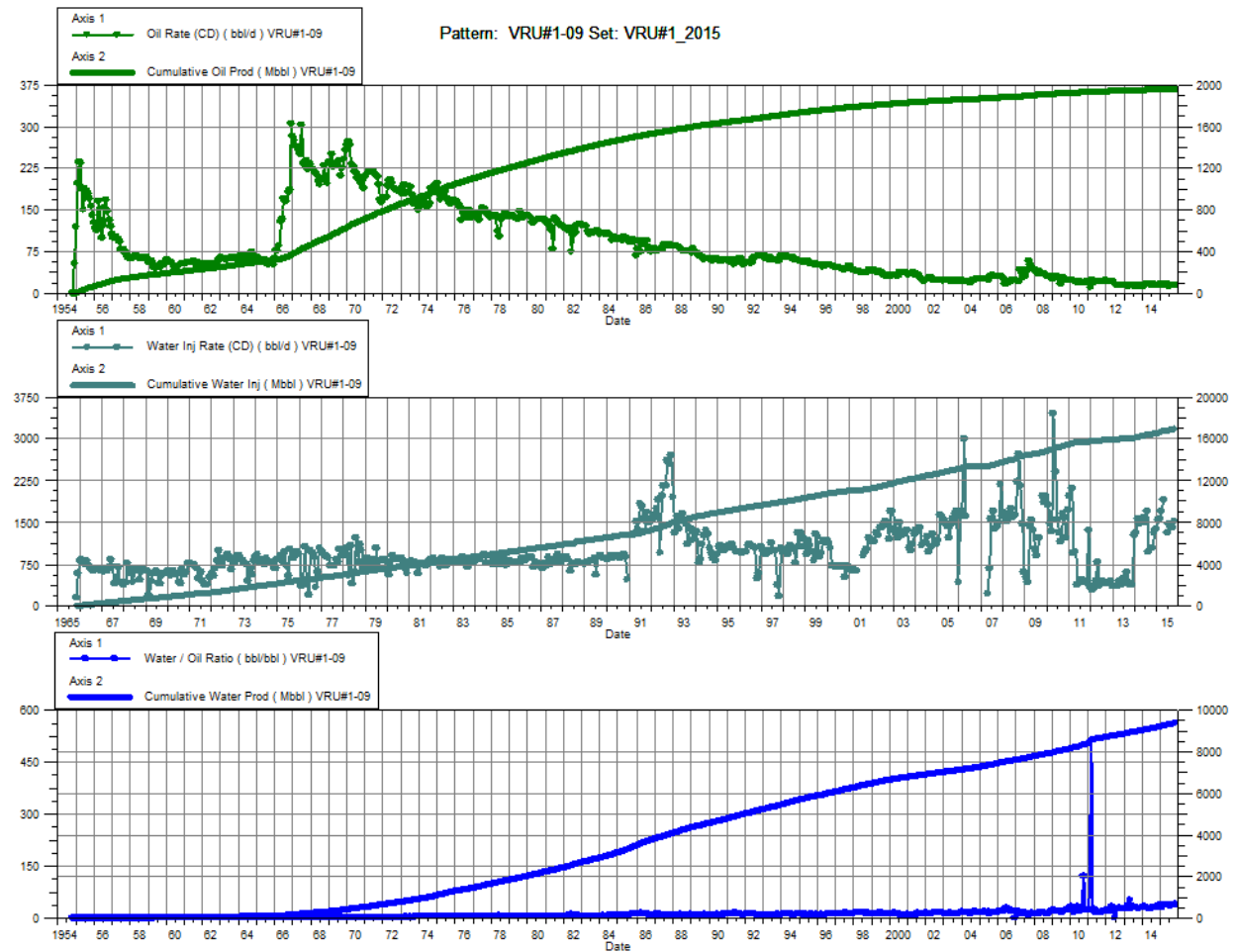


VRU No. 1

Pattern P-09 – 00/05-30-010-25W1/0

P-09 – 03/01-25-010-26W1/0

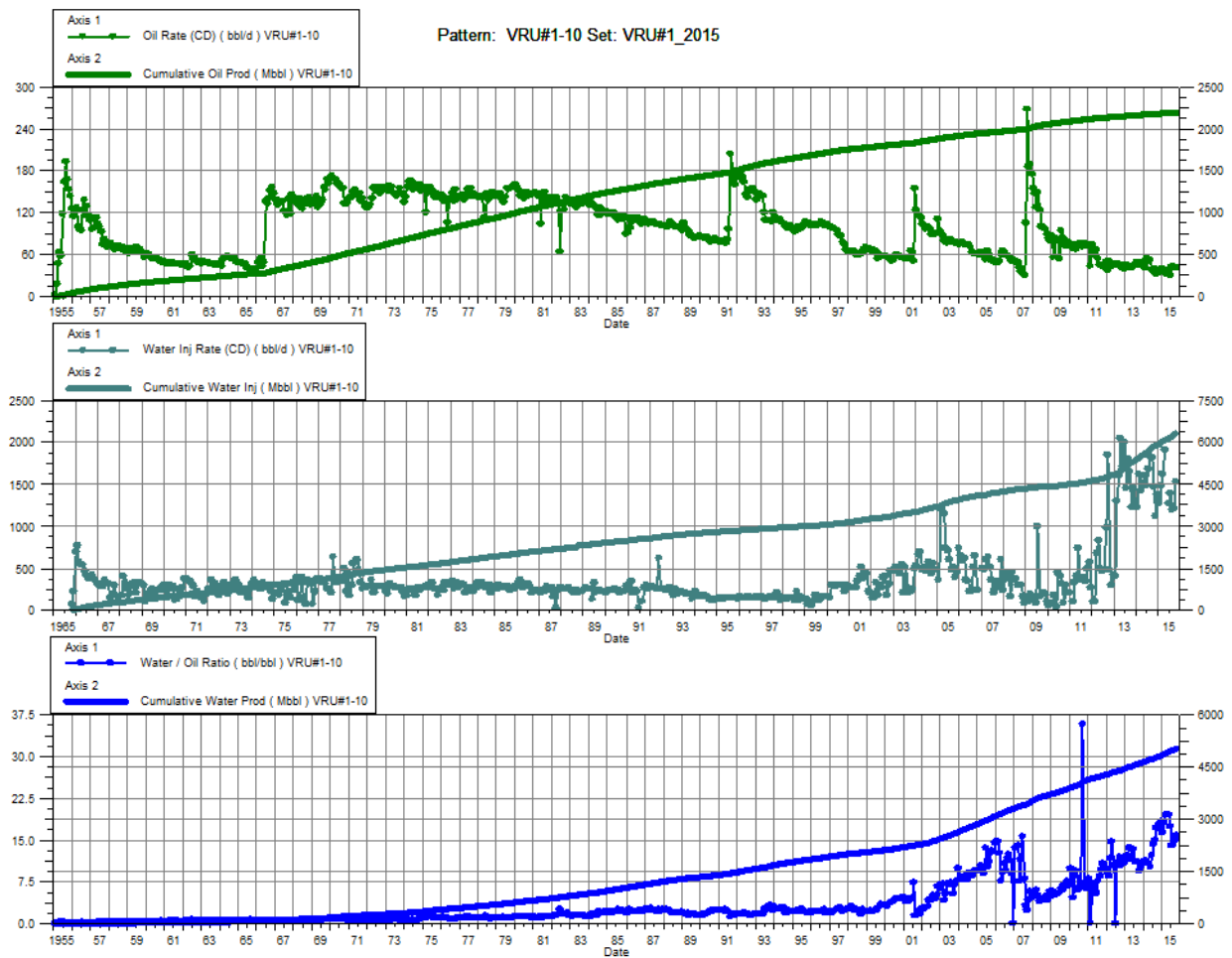
| Date | Oil Rate (CD) m3/d | Cum Oil Prod Mm3 | Water Rate (CD) m3/d | Cum Water Prod Mm3 | Water Inj Rate (CD) m3/d | Cum Water Inj Mm3 | Water Oil Ratio m3/m3 | Voidage Replacement Ratio | Cum Voidage Replacemt Ratio | Water Inj Pressure kPa | Water Inj Pressure kPa |
|------------|-----------------------|---------------------|-------------------------|-----------------------|-----------------------------|----------------------|--------------------------|---------------------------------|--------------------------------|---------------------------|---------------------------|
| 1/31/2015 | 2.93 | 311.85 | 88.90 | 1470.90 | 245.93 | 2644.39 | 30.34 | 2.68 | 1.48 | 5,813 | -- |
| 2/28/2015 | 2.52 | 311.92 | 89.89 | 1473.42 | 250.13 | 2651.39 | 35.67 | 2.71 | 1.48 | 6,200 | -- |
| 3/31/2015 | 2.38 | 311.99 | 90.59 | 1476.23 | 270.65 | 2659.78 | 38.00 | 2.91 | 1.48 | 6,206 | -- |
| 4/30/2015 | 2.68 | 312.08 | 102.35 | 1479.30 | 303.49 | 2668.89 | 38.16 | 2.89 | 1.49 | 6,397 | -- |
| 5/31/2015 | 2.67 | 312.16 | 101.31 | 1482.44 | | 2668.89 | 38.01 | | 1.48 | 6,313 | -- |
| 6/30/2015 | 1.96 | 312.22 | 75.12 | 1484.69 | 208.05 | 2675.13 | 38.25 | 2.70 | 1.48 | 6,303 | -- |
| 7/31/2015 | 2.52 | 312.30 | 87.75 | 1487.41 | 233.85 | 2682.38 | 34.80 | 2.59 | 1.49 | 6,400 | -- |
| 8/31/2015 | 2.51 | 312.37 | 89.22 | 1490.18 | 224.77 | 2689.35 | 35.59 | 2.45 | 1.49 | 6,400 | -- |
| 9/30/2015 | 2.52 | 312.45 | 92.70 | 1492.96 | 222.79 | 2696.03 | 36.84 | 2.34 | 1.49 | 6,403 | -- |
| 10/31/2015 | 2.34 | 312.52 | 94.40 | 1495.89 | 242.45 | 2703.55 | 40.27 | 2.51 | 1.49 | 6,503 | -- |
| 11/30/2015 | 2.40 | 312.59 | 95.43 | 1498.75 | 275.78 | 2711.82 | 39.76 | 2.82 | 1.49 | 6,597 | -- |
| 12/31/2015 | 2.38 | 312.67 | 92.29 | 1501.61 | 238.76 | 2719.22 | 38.83 | 2.52 | 1.49 | 6,490 | -- |



VRU No. 1

Pattern P-10 - 00/07-30-010-25W1/0

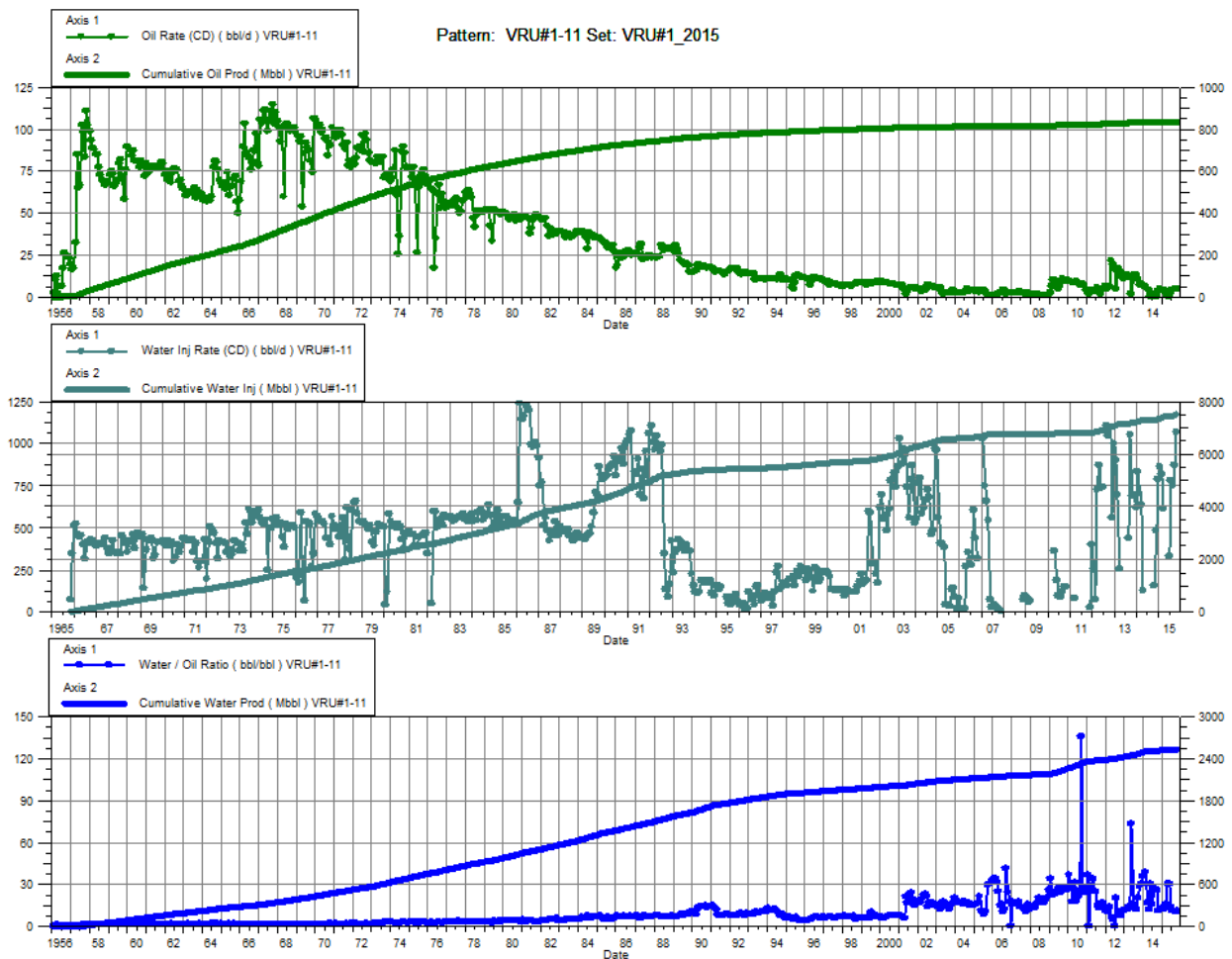
| Date | Oil Rate (CD) m3/d | Cum Oil Prod Mm3 | Water Rate (CD) m3/d | Cum Water Prod Mm3 | Water Inj Rate (CD) m3/d | Cum Water Inj Mm3 | Water Oil Ratio m3/m3 | Voidage Replacement Ratio | Cum Voidage Replacemt Ratio | Water Inj Pressure kPa | Water Inj Pressure kPa |
|------------|-----------------------|---------------------|-------------------------|-----------------------|-----------------------------|----------------------|--------------------------|---------------------------------|--------------------------------------|---------------------------|---------------------------|
| 1/31/2015 | 6.18 | 347.73 | 101.10 | 771.75 | 201.24 | 950.19 | 16.37 | 1.87 | 0.84 | 6,213 | 6,413 |
| 2/28/2015 | 5.70 | 347.89 | 103.01 | 774.64 | 236.84 | 956.82 | 18.09 | 2.18 | 0.85 | 6,600 | 6,800 |
| 3/31/2015 | 5.22 | 348.06 | 101.73 | 777.79 | 257.87 | 964.81 | 19.48 | 2.41 | 0.85 | 6,606 | 6,794 |
| 4/30/2015 | 6.06 | 348.24 | 117.57 | 781.32 | 304.64 | 973.95 | 19.39 | 2.46 | 0.86 | 6,797 | 6,600 |
| 5/31/2015 | 5.74 | 348.42 | 112.20 | 784.79 | | 973.95 | 19.54 | | 0.85 | 6,710 | 6,610 |
| 6/30/2015 | 4.96 | 348.56 | 86.44 | 787.39 | 202.24 | 980.02 | 17.43 | 2.21 | 0.86 | 6,697 | 6,600 |
| 7/31/2015 | 6.73 | 348.77 | 94.43 | 790.32 | 221.09 | 986.87 | 14.02 | 2.18 | 0.86 | 6,600 | 6,600 |
| 8/31/2015 | 6.85 | 348.99 | 95.96 | 793.29 | 190.01 | 992.76 | 14.01 | 1.85 | 0.86 | 6,600 | 6,600 |
| 9/30/2015 | 6.74 | 349.19 | 100.69 | 796.31 | 193.30 | 998.56 | 14.93 | 1.80 | 0.87 | 6,607 | 6,607 |
| 10/31/2015 | 6.49 | 349.39 | 103.20 | 799.51 | 243.32 | 1006.10 | 15.91 | 2.22 | 0.87 | 6,800 | 6,803 |
| 11/30/2015 | 6.42 | 349.58 | 105.67 | 802.68 | 296.98 | 1015.01 | 16.46 | 2.65 | 0.88 | 6,797 | 6,897 |
| 12/31/2015 | 6.21 | 349.77 | 102.23 | 805.85 | 234.98 | 1022.30 | 16.47 | 2.17 | 0.88 | 6,690 | 6,787 |



VRU No. 1

Pattern P-11 - 00/05-29-010-25W1/0

| Date | Oil Rate (CD) m3/d | Cum Oil Prod Mm3 | Water Rate (CD) m3/d | Cum Water Prod Mm3 | Water Inj Rate (CD) m3/d | Cum Water Inj Mm3 | Water Oil Ratio m3/m3 | Voidage Replacement Ratio | Cum Voidage Replacemt Ratio | Water Inj Pressure kPa |
|------------|-----------------------|---------------------|-------------------------|-----------------------|-----------------------------|----------------------|--------------------------|---------------------------------|--------------------------------|---------------------------|
| 1/31/2015 | 0.67 | 132.87 | 8.20 | 401.10 | 137.14 | 1173.60 | 12.26 | 15.44 | 2.19 | 6,400 |
| 2/28/2015 | 0.65 | 132.88 | 8.36 | 401.34 | 130.51 | 1177.25 | 12.80 | 14.45 | 2.19 | 6,404 |
| 3/31/2015 | 0.40 | 132.90 | 6.28 | 401.53 | 97.51 | 1180.28 | 15.72 | 14.57 | 2.20 | 6,500 |
| 4/30/2015 | 0.13 | 132.90 | 4.01 | 401.65 | | 1180.28 | 30.65 | | 2.20 | 6,500 |
| 5/31/2015 | 0.13 | 132.90 | 3.97 | 401.77 | | 1180.28 | 30.30 | | 2.20 | 6,500 |
| 6/30/2015 | 0.40 | 132.92 | 5.65 | 401.94 | 52.60 | 1181.86 | 14.26 | 8.68 | 2.20 | 6,503 |
| 7/31/2015 | 0.74 | 132.94 | 8.52 | 402.21 | 123.72 | 1185.69 | 11.44 | 13.34 | 2.21 | 6,597 |
| 8/31/2015 | 0.74 | 132.96 | 8.39 | 402.47 | 119.66 | 1189.40 | 11.34 | 13.09 | 2.21 | 6,500 |
| 9/30/2015 | 0.84 | 132.99 | 8.74 | 402.73 | 138.93 | 1193.57 | 10.37 | 14.48 | 2.22 | 6,497 |
| 10/31/2015 | 0.79 | 133.01 | 8.46 | 402.99 | 169.93 | 1198.84 | 10.68 | 18.34 | 2.23 | 6,403 |
| 11/30/2015 | 0.76 | 133.04 | 8.62 | 403.25 | 160.29 | 1203.64 | 11.35 | 17.07 | 2.23 | 6,500 |
| 12/31/2015 | 0.72 | 133.06 | 8.36 | 403.51 | 154.18 | 1208.42 | 11.57 | 16.95 | 2.24 | 6,506 |

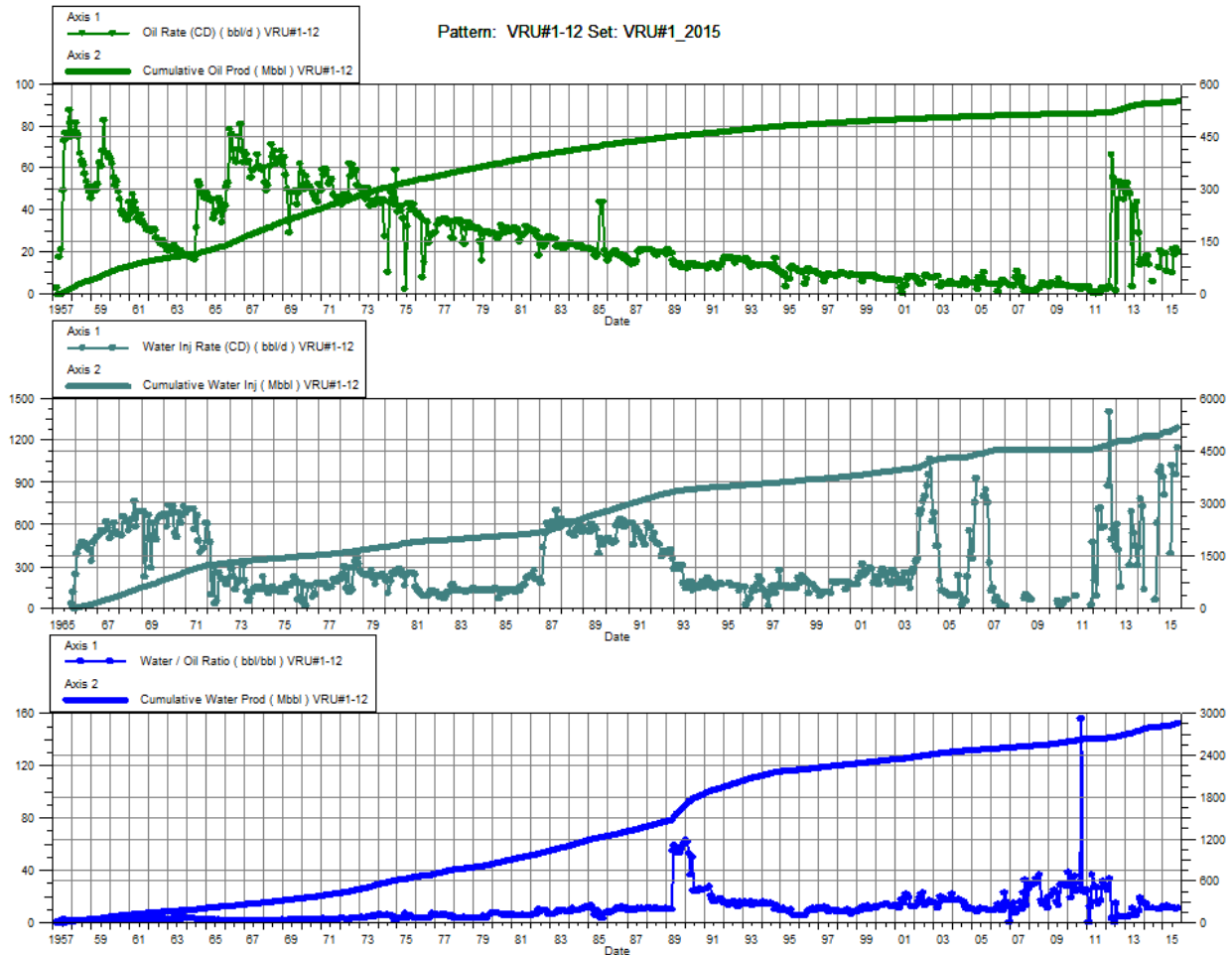


VRU No. 1

Pattern P-12 – 00/06-29-010-25W1/0

P-12 – 03/07-29-010-25W1/0

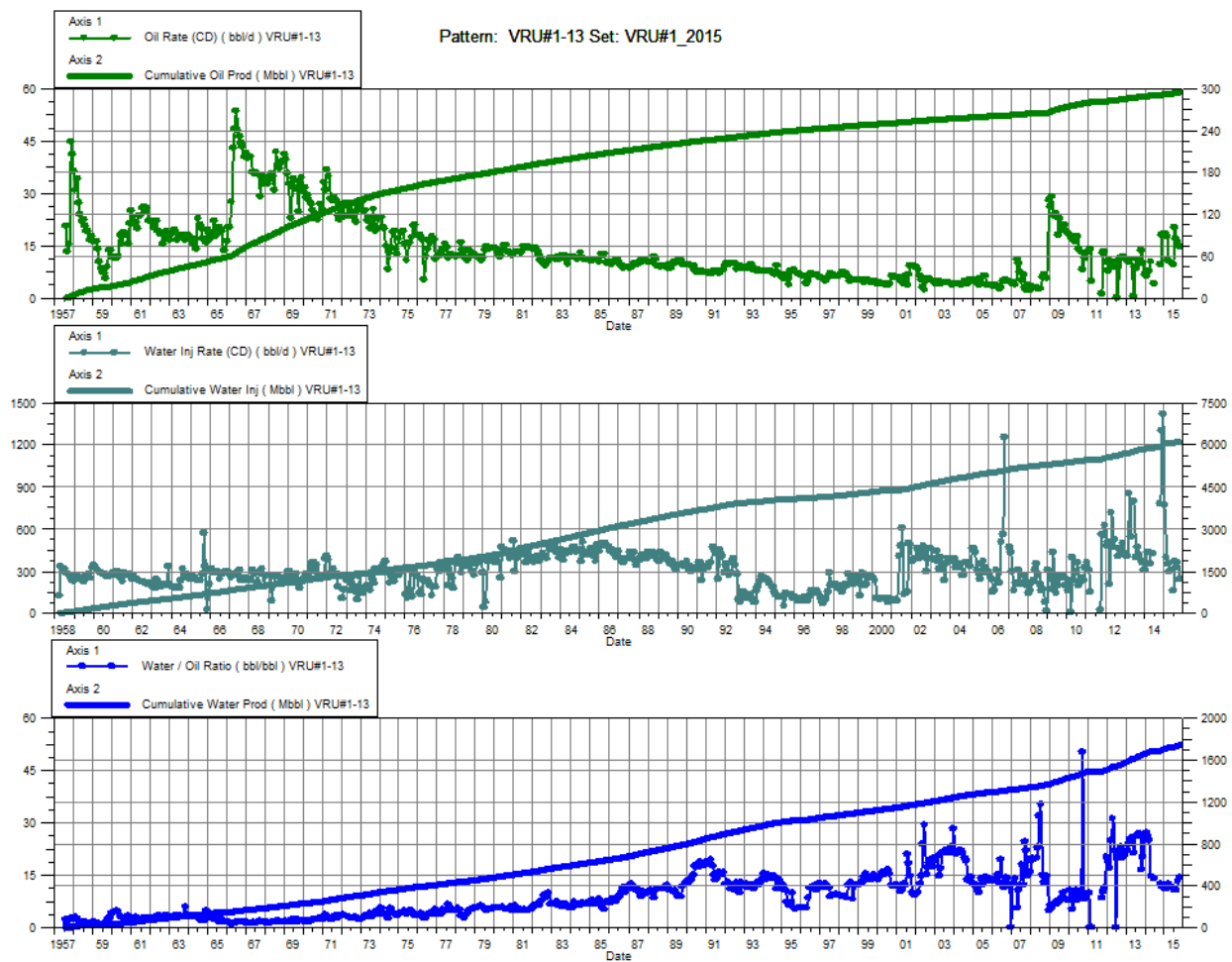
| Date | Oil Rate (CD) m3/d | Cum Oil Prod Mm3 | Water Rate (CD) m3/d | Cum Water Prod Mm3 | Water Inj Rate (CD) m3/d | Cum Water Inj Mm3 | Water Oil Ratio m3/m3 | Voidage Replacement Ratio | Cum Voidage Replacemt Ratio | Water Inj Pressure kPa | Water Inj Pressure kPa |
|------------|-----------------------|---------------------|-------------------------|-----------------------|-----------------------------|----------------------|--------------------------|---------------------------------|--------------------------------|---------------------------|---------------------------|
| 1/31/2015 | 3.12 | 86.99 | 34.39 | 448.47 | 160.30 | 794.42 | 11.03 | 4.27 | 1.48 | 6,213 | 6,503 |
| 2/28/2015 | 3.05 | 87.08 | 35.08 | 449.45 | 148.91 | 798.59 | 11.51 | 3.90 | 1.48 | 6,600 | 6,604 |
| 3/31/2015 | 1.70 | 87.13 | 21.23 | 450.11 | 129.04 | 802.59 | 12.48 | 5.62 | 1.49 | 6,600 | 6,700 |
| 4/30/2015 | | 87.13 | | 450.11 | | 802.59 | | | 1.49 | 6,600 | 6,700 |
| 5/31/2015 | | 87.13 | | 450.11 | | 802.59 | | | 1.49 | 6,600 | 6,700 |
| 6/30/2015 | 1.63 | 87.18 | 18.20 | 450.66 | 62.01 | 804.45 | 11.15 | 3.12 | 1.49 | 6,603 | 6,703 |
| 7/31/2015 | 3.33 | 87.29 | 34.73 | 451.73 | 161.78 | 809.47 | 10.43 | 4.24 | 1.50 | 6,700 | 6,800 |
| 8/31/2015 | 2.98 | 87.38 | 30.97 | 452.69 | 151.94 | 814.18 | 10.41 | 4.47 | 1.50 | 6,697 | 6,800 |
| 9/30/2015 | 3.46 | 87.48 | 34.52 | 453.73 | 151.62 | 818.73 | 9.98 | 3.99 | 1.51 | 6,610 | 6,807 |
| 10/31/2015 | 3.16 | 87.58 | 33.02 | 454.75 | 182.22 | 824.37 | 10.46 | 5.03 | 1.52 | 6,894 | 7,000 |
| 11/30/2015 | 3.11 | 87.67 | 32.22 | 455.72 | 170.57 | 829.49 | 10.37 | 4.82 | 1.52 | 6,690 | 6,990 |
| 12/31/2015 | 2.96 | 87.76 | 31.24 | 456.69 | 185.40 | 835.24 | 10.57 | 5.41 | 1.53 | 6,400 | 6,697 |



VRU No. 1

Pattern P-13 - 00/05-28-010-25W1/0

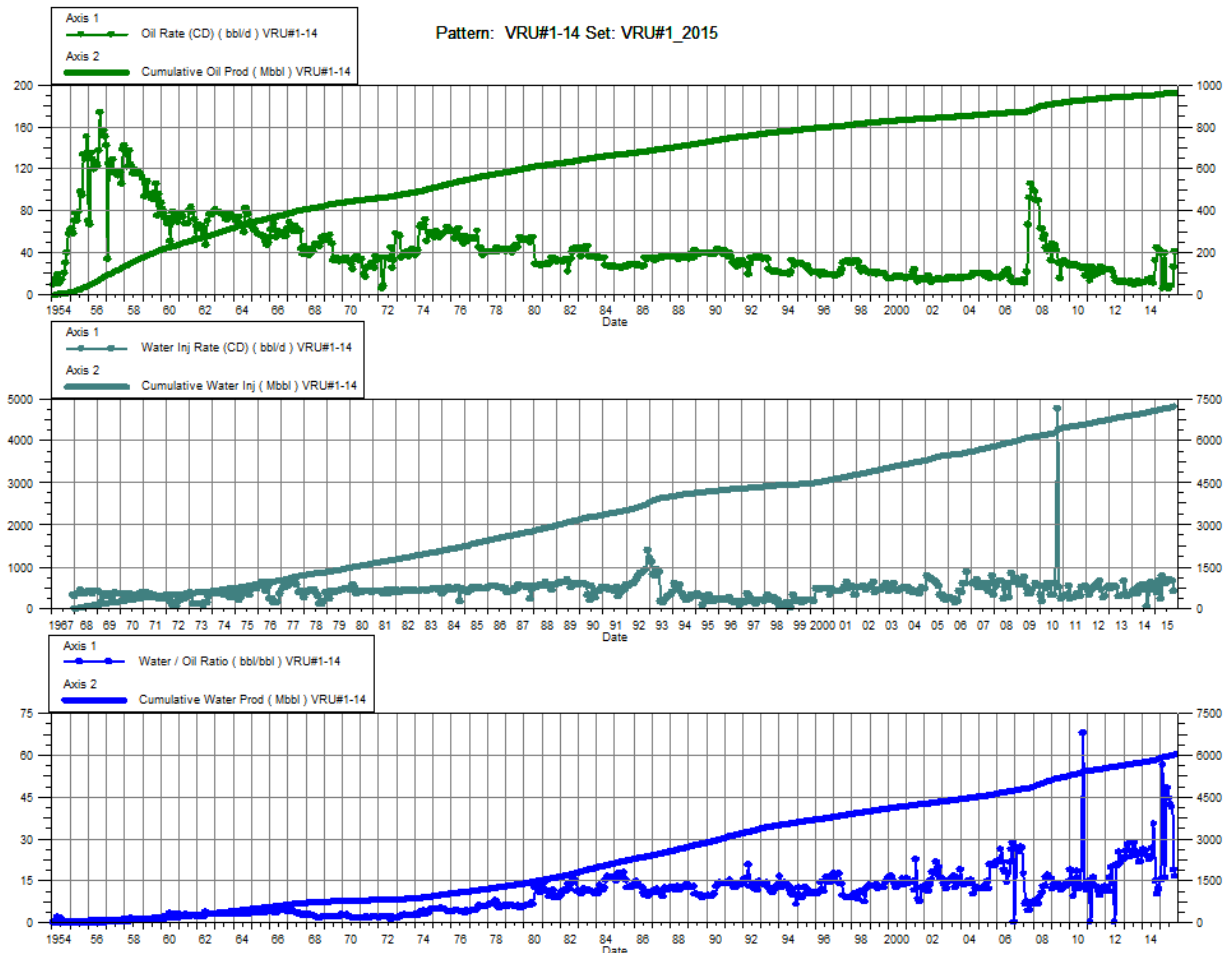
| Date | Oil Rate (CD) m3/d | Cum Oil Prod Mm3 | Water Rate (CD) m3/d | Cum Water Prod Mm3 | Water Inj Rate (CD) m3/d | Cum Water Inj Mm3 | Water Oil Ratio m3/m3 | Voidage Replacement Ratio | Cum Voidage Replacemt Ratio | Water Inj Pressure kPa |
|------------|-----------------------|---------------------|-------------------------|-----------------------|-----------------------------|----------------------|--------------------------|---------------------------------|--------------------------------|---------------------------|
| 1/31/2015 | 2.98 | 46.49 | 33.28 | 271.37 | 122.21 | 961.28 | 11.17 | 3.37 | 3.02 | 5,200 |
| 2/28/2015 | 2.81 | 46.56 | 33.05 | 272.30 | 63.15 | 963.05 | 11.76 | 1.76 | 3.01 | 5,211 |
| 3/31/2015 | 1.75 | 46.62 | 21.79 | 272.97 | 55.35 | 964.77 | 12.47 | 2.35 | 3.01 | 5,500 |
| 4/30/2015 | | 46.62 | | 272.97 | 47.81 | 966.20 | | | 3.02 | 5,500 |
| 5/31/2015 | | 46.62 | | 272.97 | | 966.20 | | | 3.02 | 5,500 |
| 6/30/2015 | 1.56 | 46.66 | 17.61 | 273.50 | 24.84 | 966.94 | 11.30 | 1.29 | 3.01 | 5,483 |
| 7/31/2015 | 3.25 | 46.77 | 34.15 | 274.56 | 58.69 | 968.76 | 10.52 | 1.57 | 3.01 | 5,000 |
| 8/31/2015 | 2.70 | 46.85 | 28.93 | 275.46 | 52.02 | 970.38 | 10.70 | 1.64 | 3.00 | 5,000 |
| 9/30/2015 | 2.62 | 46.93 | 34.81 | 276.50 | 57.40 | 972.10 | 13.30 | 1.53 | 3.00 | 5,003 |
| 10/31/2015 | 2.37 | 47.00 | 34.12 | 277.56 | 38.38 | 973.29 | 14.38 | 1.05 | 2.99 | 5,103 |
| 11/30/2015 | 2.22 | 47.07 | 32.56 | 278.53 | 51.20 | 974.82 | 14.69 | 1.47 | 2.99 | 5,247 |
| 12/31/2015 | 2.00 | 47.13 | 31.43 | 279.51 | 59.35 | 976.66 | 15.72 | 1.77 | 2.98 | 6,548 |



VRU No. 1

Pattern P-14 - 00/15-23-010-26W1/0

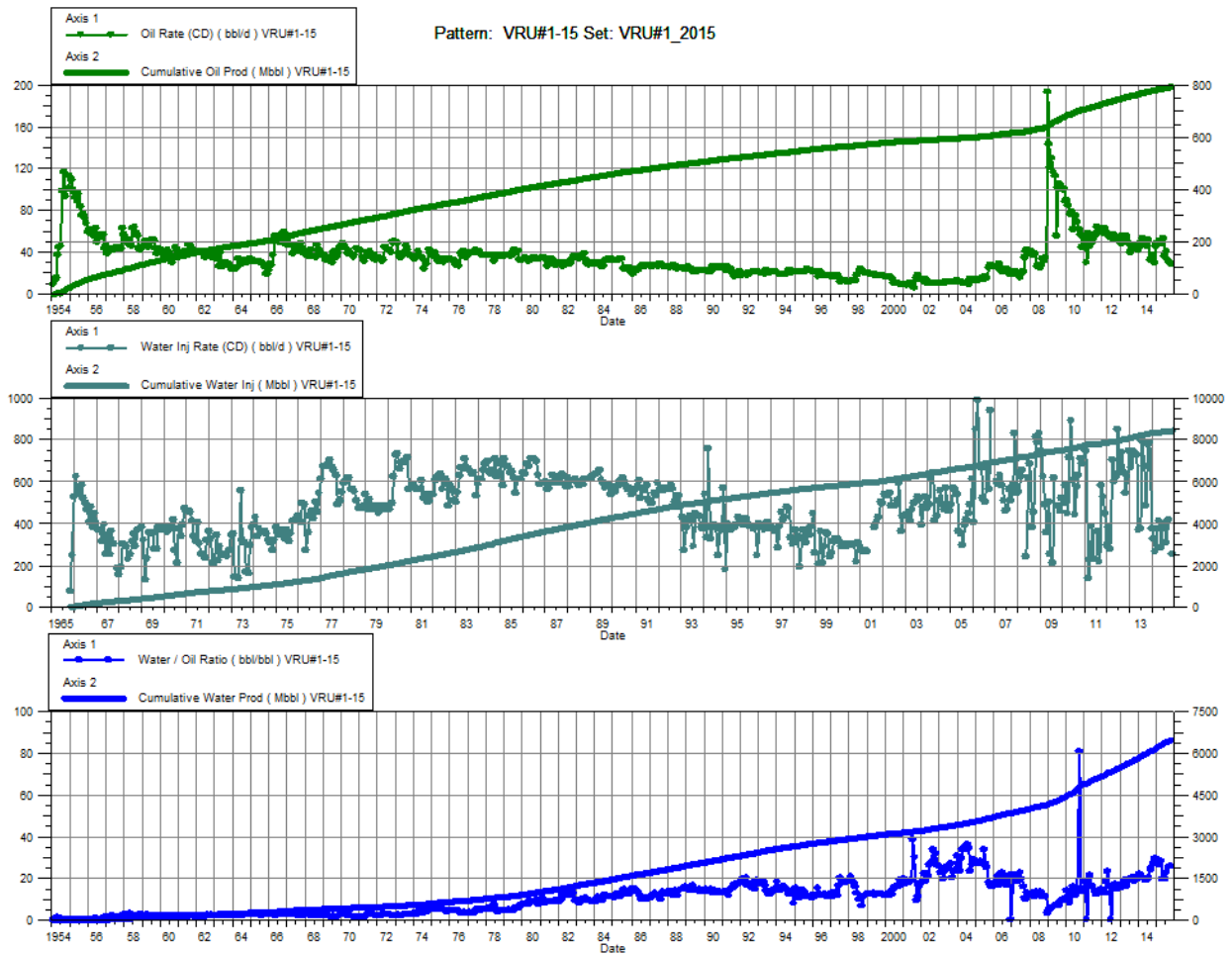
| Date | Oil Rate (CD) m3/d | Cum Oil Prod Mm3 | Water Rate (CD) m3/d | Cum Water Prod Mm3 | Water Inj Rate (CD) m3/d | Cum Water Inj Mm3 | Water Oil Ratio m3/m3 | Voidage Replacement Ratio | Cum Voidage Replacemt Ratio | Water Inj Pressure kPa |
|------------|-----------------------|---------------------|-------------------------|-----------------------|-----------------------------|----------------------|--------------------------|---------------------------------|--------------------------------|---------------------------|
| 1/31/2015 | 6.30 | 152.49 | 94.90 | 939.69 | 57.84 | 1127.90 | 15.06 | 0.57 | 1.03 | 5,400 |
| 2/28/2015 | 0.99 | 152.51 | 55.67 | 941.25 | 106.21 | 1130.87 | 56.37 | 1.87 | 1.03 | 5,400 |
| 3/31/2015 | 6.32 | 152.71 | 101.42 | 944.39 | 36.58 | 1132.01 | 16.06 | 0.34 | 1.03 | 5,397 |
| 4/30/2015 | 1.34 | 152.75 | 64.33 | 946.32 | 124.31 | 1135.74 | 47.95 | 1.89 | 1.03 | 5,313 |
| 5/31/2015 | 1.29 | 152.79 | 62.36 | 948.25 | | 1135.74 | 48.19 | | 1.03 | 5,500 |
| 6/30/2015 | 0.97 | 152.82 | 43.06 | 949.55 | 95.86 | 1138.61 | 44.33 | 2.18 | 1.03 | 5,500 |
| 7/31/2015 | 1.33 | 152.86 | 55.73 | 951.27 | 108.18 | 1141.97 | 41.98 | 1.90 | 1.03 | 5,506 |
| 8/31/2015 | 1.36 | 152.90 | 56.11 | 953.01 | 111.06 | 1145.41 | 41.11 | 1.93 | 1.03 | 5,697 |
| 9/30/2015 | 4.27 | 153.03 | 80.27 | 955.42 | 103.73 | 1148.52 | 18.82 | 1.23 | 1.03 | 5,603 |
| 10/31/2015 | 6.54 | 153.23 | 108.82 | 958.79 | 63.55 | 1150.49 | 16.64 | 0.55 | 1.03 | 5,700 |
| 11/30/2015 | 2.97 | 153.32 | 115.38 | 962.26 | | 1150.49 | 38.82 | | 1.03 | 5,700 |
| 12/31/2015 | 2.82 | 153.41 | 111.56 | 965.71 | 68.65 | 1152.62 | 39.54 | 0.60 | 1.03 | 5,645 |



VRU No. 1

Pattern P-15 - 00/13-24-010-26W1/0

| Date | Oil Rate (CD) m3/d | Cum Oil Prod Mm3 | Water Rate (CD) m3/d | Cum Water Prod Mm3 | Water Inj Rate (CD) m3/d | Cum Water Inj Mm3 | Water Oil Ratio m3/m3 | Voidage Replacement Ratio | Cum Voidage Replacemt Ratio | Water Inj Pressure kPa |
|------------|-----------------------|---------------------|-------------------------|-----------------------|-----------------------------|----------------------|--------------------------|---------------------------------|--------------------------------|---------------------------|
| 1/31/2015 | 7.63 | 124.44 | 206.77 | 988.33 | | 1338.49 | 27.11 | | 1.20 | - |
| 2/28/2015 | 8.04 | 124.67 | 210.76 | 994.24 | | 1338.49 | 26.22 | | 1.19 | - |
| 3/31/2015 | 7.83 | 124.91 | 219.31 | 1001.03 | | 1338.49 | 27.99 | | 1.19 | - |
| 4/30/2015 | 7.75 | 125.14 | 149.54 | 1005.52 | | 1338.49 | 19.31 | | 1.18 | - |
| 5/31/2015 | 8.41 | 125.40 | 165.27 | 1010.64 | | 1338.49 | 19.65 | | 1.18 | - |
| 6/30/2015 | 5.86 | 125.58 | 114.47 | 1014.08 | | 1338.49 | 19.55 | | 1.17 | - |
| 7/31/2015 | 6.46 | 125.78 | 144.97 | 1018.57 | | 1338.49 | 22.45 | | 1.17 | - |
| 8/31/2015 | 5.22 | 125.94 | 129.80 | 1022.60 | | 1338.49 | 24.88 | | 1.16 | - |
| 9/30/2015 | 4.75 | 126.08 | 123.06 | 1026.29 | | 1338.49 | 25.91 | | 1.16 | - |
| 10/31/2015 | 4.62 | 126.23 | 118.39 | 1029.96 | | 1338.49 | 25.60 | | 1.16 | - |
| 11/30/2015 | 4.61 | 126.36 | 117.56 | 1033.48 | | 1338.49 | 25.49 | | 1.15 | - |
| 12/31/2015 | 4.59 | 126.51 | 117.13 | 1037.12 | 45.37 | 1339.90 | 25.54 | 0.37 | 1.15 | 71 |

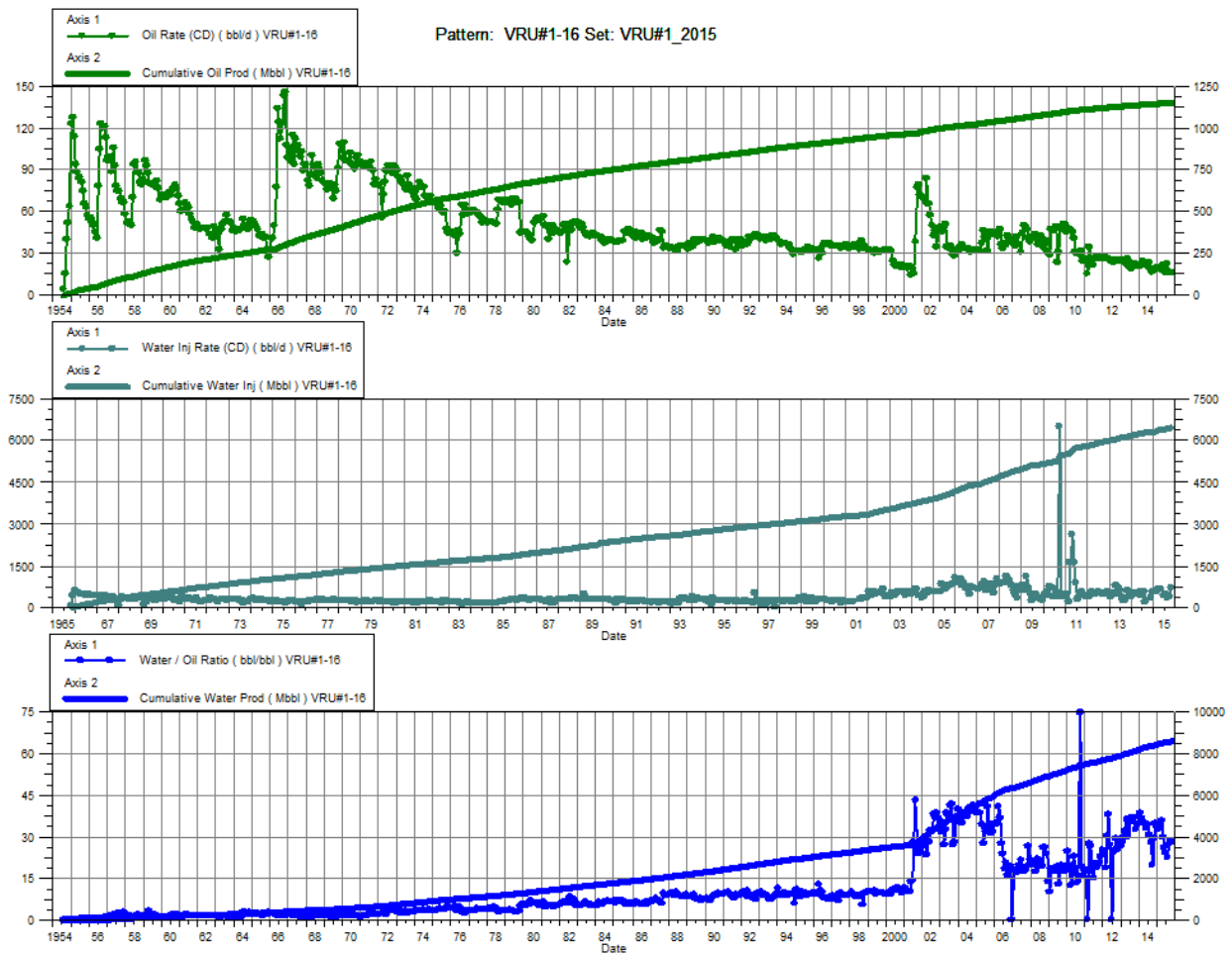


VRU No. 1

Pattern P-16 – 00/15-24-010-26W1/0

P-16 – 03/01-25-010-26W1/0

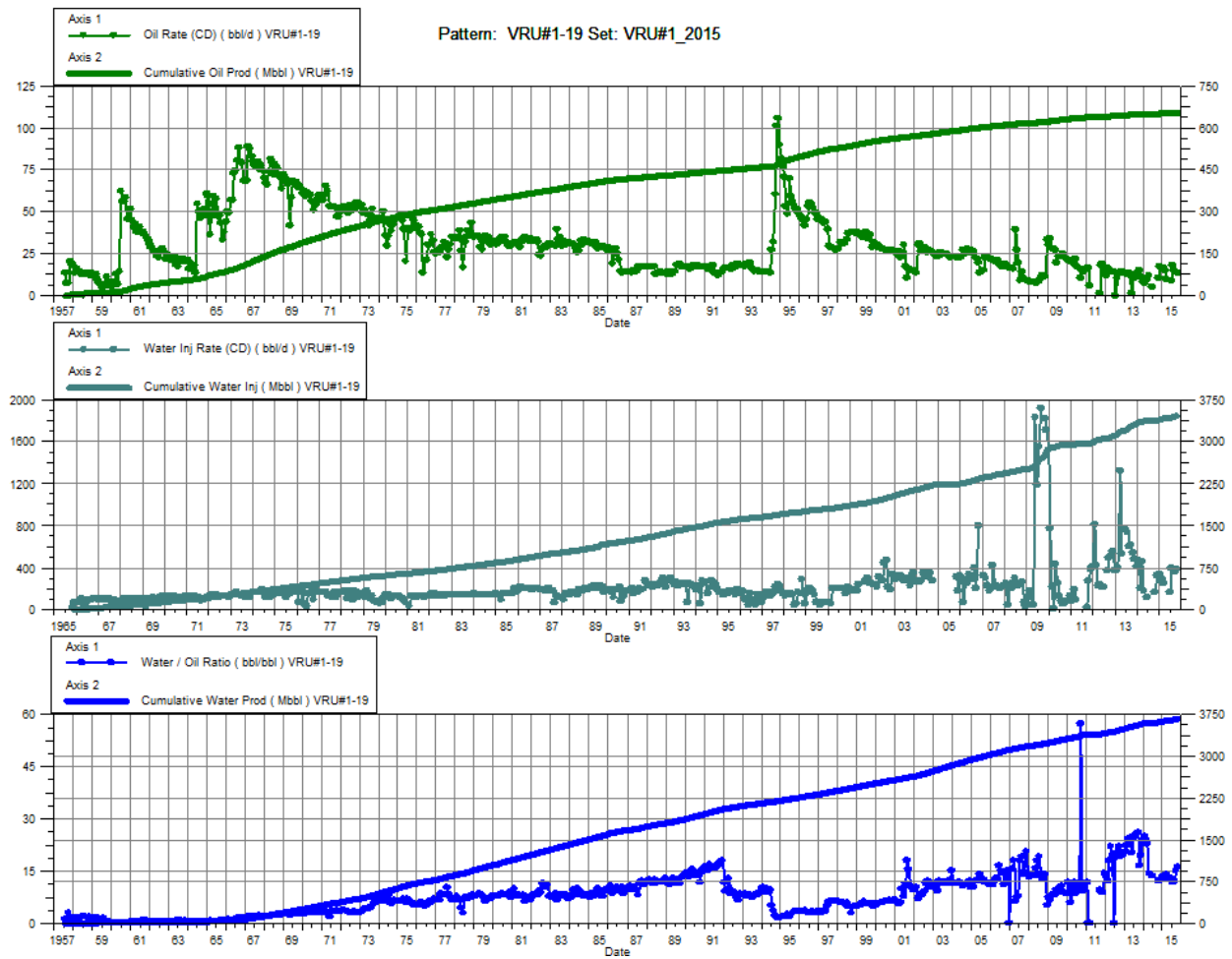
| Date | Oil Rate (CD) m3/d | Cum Oil Prod Mm3 | Water Rate (CD) m3/d | Cum Water Prod Mm3 | Water Inj Rate (CD) m3/d | Cum Water Inj Mm3 | Water Oil Ratio m3/m3 | Voidage Replacement Ratio | Cum Voidage Replacemt Ratio | Water Inj Pressure kPa | Water Inj Pressure kPa |
|------------|-----------------------|---------------------|-------------------------|-----------------------|-----------------------------|----------------------|--------------------------|---------------------------------|--------------------------------|---------------------------|---------------------------|
| 1/31/2015 | 3.10 | 182.22 | 100.62 | 1343.51 | 86.87 | 1006.09 | 32.45 | 0.84 | 0.66 | 6,316 | -- |
| 2/28/2015 | 3.03 | 182.31 | 102.65 | 1346.39 | 92.62 | 1008.69 | 33.92 | 0.88 | 0.66 | 6,786 | -- |
| 3/31/2015 | 2.86 | 182.40 | 102.78 | 1349.57 | 102.77 | 1011.87 | 35.95 | 0.97 | 0.66 | 6,413 | -- |
| 4/30/2015 | 3.33 | 182.50 | 99.78 | 1352.57 | 108.04 | 1015.11 | 30.00 | 1.05 | 0.66 | 6,787 | -- |
| 5/31/2015 | 3.52 | 182.61 | 91.37 | 1355.40 | | 1015.11 | 25.93 | | 0.66 | 6,600 | -- |
| 6/30/2015 | 2.65 | 182.69 | 64.78 | 1357.34 | 66.33 | 1017.10 | 24.45 | 0.98 | 0.66 | 6,600 | -- |
| 7/31/2015 | 3.61 | 182.80 | 81.56 | 1359.87 | 77.97 | 1019.52 | 22.59 | 0.92 | 0.66 | 6,600 | -- |
| 8/31/2015 | 2.78 | 182.88 | 75.21 | 1362.20 | 50.75 | 1021.09 | 27.04 | 0.65 | 0.66 | 6,600 | -- |
| 9/30/2015 | 2.58 | 182.96 | 73.01 | 1364.39 | 59.76 | 1022.89 | 28.35 | 0.79 | 0.66 | 6,600 | -- |
| 10/31/2015 | 2.57 | 183.04 | 72.53 | 1366.64 | 113.21 | 1026.39 | 28.19 | 1.51 | 0.66 | 6,613 | -- |
| 11/30/2015 | 2.63 | 183.12 | 73.34 | 1368.84 | 98.40 | 1029.35 | 27.93 | 1.29 | 0.66 | 6,993 | -- |
| 12/31/2015 | 2.52 | 183.20 | 71.48 | 1371.06 | 97.16 | 1032.36 | 28.34 | 1.31 | 0.66 | 6,784 | -- |



VRU No. 1

Pattern P-19 - 00/13-21-010-25W1/0

| Date | Oil Rate (CD) m3/d | Cum Oil Prod Mm3 | Water Rate (CD) m3/d | Cum Water Prod Mm3 | Water Inj Rate (CD) m3/d | Cum Water Inj Mm3 | Water Oil Ratio m3/m3 | Voidage Replacement Ratio | Cum Voidage Replacemt Ratio | Water Inj Pressure kPa |
|------------|-----------------------|---------------------|-------------------------|-----------------------|-----------------------------|----------------------|--------------------------|---------------------------------|--------------------------------|---------------------------|
| 1/31/2015 | 2.59 | 103.70 | 32.66 | 577.04 | 52.40 | 541.53 | 12.60 | 1.48 | 0.79 | 6,974 |
| 2/28/2015 | 2.43 | 103.77 | 32.42 | 577.95 | 44.79 | 542.78 | 13.36 | 1.28 | 0.79 | 6,204 |
| 3/31/2015 | 1.51 | 103.81 | 21.38 | 578.61 | 39.50 | 544.01 | 14.12 | 1.72 | 0.80 | 6,300 |
| 4/30/2015 | | 103.81 | | 578.61 | | 544.01 | | | 0.80 | 6,300 |
| 5/31/2015 | | 103.81 | | 578.61 | | 544.01 | | | 0.80 | 6,300 |
| 6/30/2015 | 1.37 | 103.86 | 17.56 | 579.14 | 26.48 | 544.80 | 12.85 | 1.40 | 0.80 | 6,303 |
| 7/31/2015 | 2.82 | 103.94 | 33.51 | 580.18 | 62.03 | 546.72 | 11.89 | 1.71 | 0.80 | 6,400 |
| 8/31/2015 | 2.34 | 104.02 | 28.37 | 581.06 | 60.07 | 548.59 | 12.15 | 1.95 | 0.80 | 6,400 |
| 9/30/2015 | 2.26 | 104.08 | 34.18 | 582.08 | 57.40 | 550.31 | 15.15 | 1.57 | 0.80 | 6,400 |
| 10/31/2015 | 2.09 | 104.15 | 33.75 | 583.13 | 61.78 | 552.22 | 16.15 | 1.72 | 0.80 | 6,406 |
| 11/30/2015 | 1.86 | 104.20 | 33.30 | 584.13 | 48.59 | 553.68 | 17.91 | 1.38 | 0.80 | 6,587 |
| 12/31/2015 | 1.66 | 104.26 | 32.14 | 585.13 | 57.44 | 555.46 | 19.33 | 1.70 | 0.80 | 6,203 |



VRU No. 1

Pattern P-21 - 00/11-21-010-25W1/0

| Date | Oil Rate (CD) m3/d | Cum Oil Prod Mm3 | Water Rate (CD) m3/d | Cum Water Prod Mm3 | Water Inj Rate (CD) m3/d | Cum Water Inj Mm3 | Water Oil Ratio m3/m3 | Voidage Replacement Ratio | Cum Voidage Replacemt Ratio | Water Inj Pressure kPa |
|------------|-----------------------|---------------------|-------------------------|-----------------------|-----------------------------|----------------------|--------------------------|---------------------------------|--------------------------------|---------------------------|
| 1/31/2015 | 0.76 | 94.21 | 36.20 | 627.79 | 83.72 | 649.37 | 47.65 | 2.27 | 0.90 | 4,806 |
| 2/28/2015 | 0.74 | 94.23 | 36.92 | 628.82 | 77.87 | 651.55 | 49.59 | 2.07 | 0.90 | 5,000 |
| 3/31/2015 | 0.45 | 94.25 | 23.94 | 629.57 | 55.67 | 653.28 | 52.81 | 2.28 | 0.90 | 5,000 |
| 4/30/2015 | | 94.25 | | 629.57 | | 653.28 | | | 0.90 | 5,000 |
| 5/31/2015 | | 94.25 | | 629.57 | | 653.28 | | | 0.90 | 5,000 |
| 6/30/2015 | 0.41 | 94.26 | 19.74 | 630.16 | 21.94 | 653.93 | 48.55 | 1.09 | 0.90 | 4,997 |
| 7/31/2015 | 0.83 | 94.29 | 37.34 | 631.32 | 55.52 | 655.65 | 44.78 | 1.45 | 0.90 | 4,903 |
| 8/31/2015 | 0.71 | 94.31 | 32.07 | 632.31 | 42.73 | 656.98 | 45.09 | 1.30 | 0.90 | 5,000 |
| 9/30/2015 | 1.36 | 94.35 | 36.48 | 633.40 | | 656.98 | 26.82 | | 0.90 | 5,000 |
| 10/31/2015 | 1.72 | 94.40 | 35.24 | 634.50 | | 656.98 | 20.44 | | 0.90 | 5,000 |
| 11/30/2015 | 2.94 | 94.49 | 36.22 | 635.58 | | 656.98 | 12.32 | | 0.90 | 5,000 |
| 12/31/2015 | 2.97 | 94.58 | 35.19 | 636.67 | | 656.98 | 11.84 | | 0.90 | 5,000 |

