

Virden Roselea Unit No. 4
2020 Annual EOR Report

Executive Summary

In 2020, oil production in Virden Roselea Unit No. 4 (VRU #4) averaged 7 m³/d (44 bbl/d) totaling 2.6 e³m³ (16.1 mbbl). Annual production declined 1.3% from 2019 to 2020, using the yearly average, using December 2019 to December 2020 the production within the unit inclined by 58.1%. By the end of 2020 cumulative oil production from the VRU #4 was 34.4 e³m³ (216.6 mbbl). The unit is currently still under primary production and has had no water injected into the producing formations, however plans are underway to begin injection in 2021.

In December 2020 there were 5 producing oil wells and no active water injectors in the unit. In 2017, two wells were drilled within the unit. Corex Resources filed a unit application for Virden Roselea Unit #4 in 2017, thereby creating this area as a unit. In 2018, a re-entry on an existing horizontal well was performed. In 2019, there was no significant activity. In 2020, two horizontal wells were drilled.

Discussion

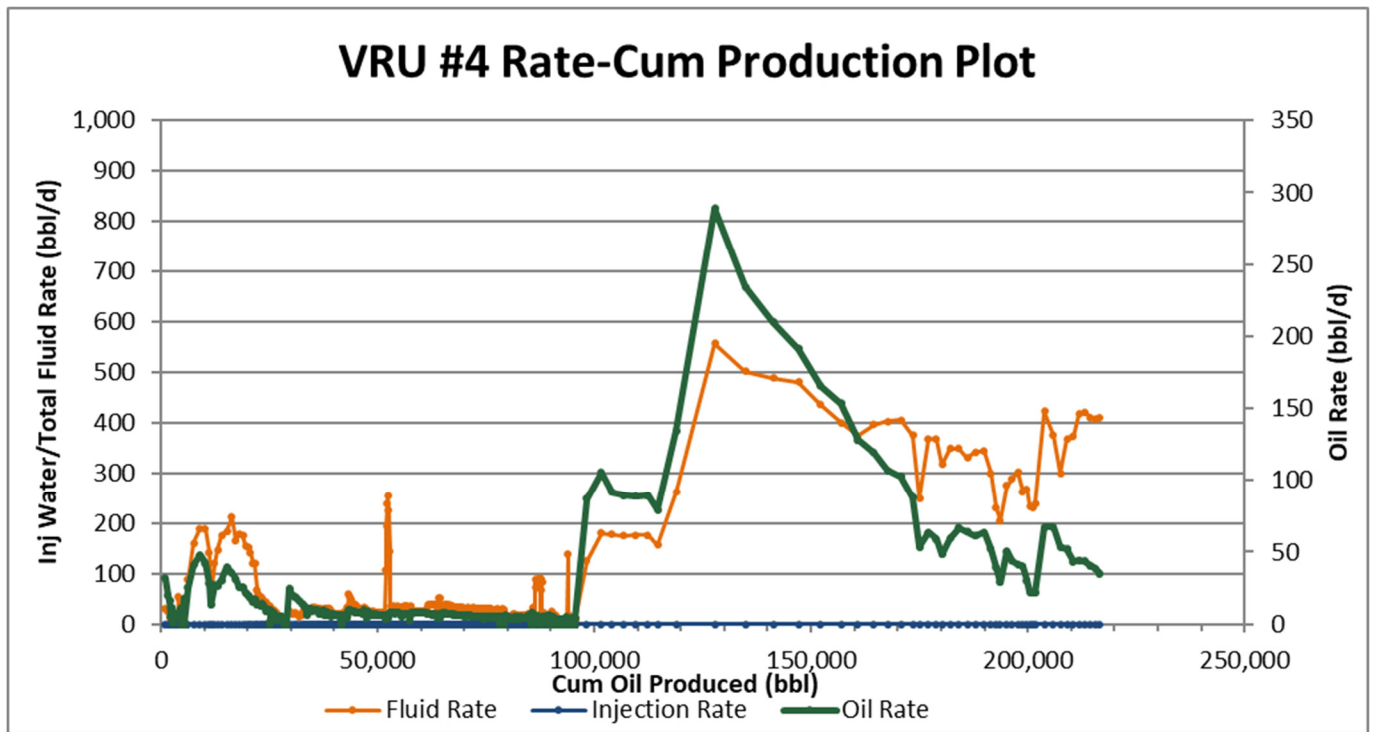
The VRU #4 was created as a unit in 2018, with the intention of further development through the implementation of a waterflood scheme.

Historically, four vertical producers were drilled within the unit area, resulting in minimal recovery. In 2016, a very successful horizontal Scallion well was drilled in the unit, followed by an additional two wells in 2017. There has been a significant decline in production with the depletion from the new wells, so much so that the additional wells drilled in 2020 did not add the reserves expected. Therefore, in 2021 there are plans to convert some of the wells to injection. In 2020, the producing WOR was 7.3 m³/m³ a slight decrease over last year.

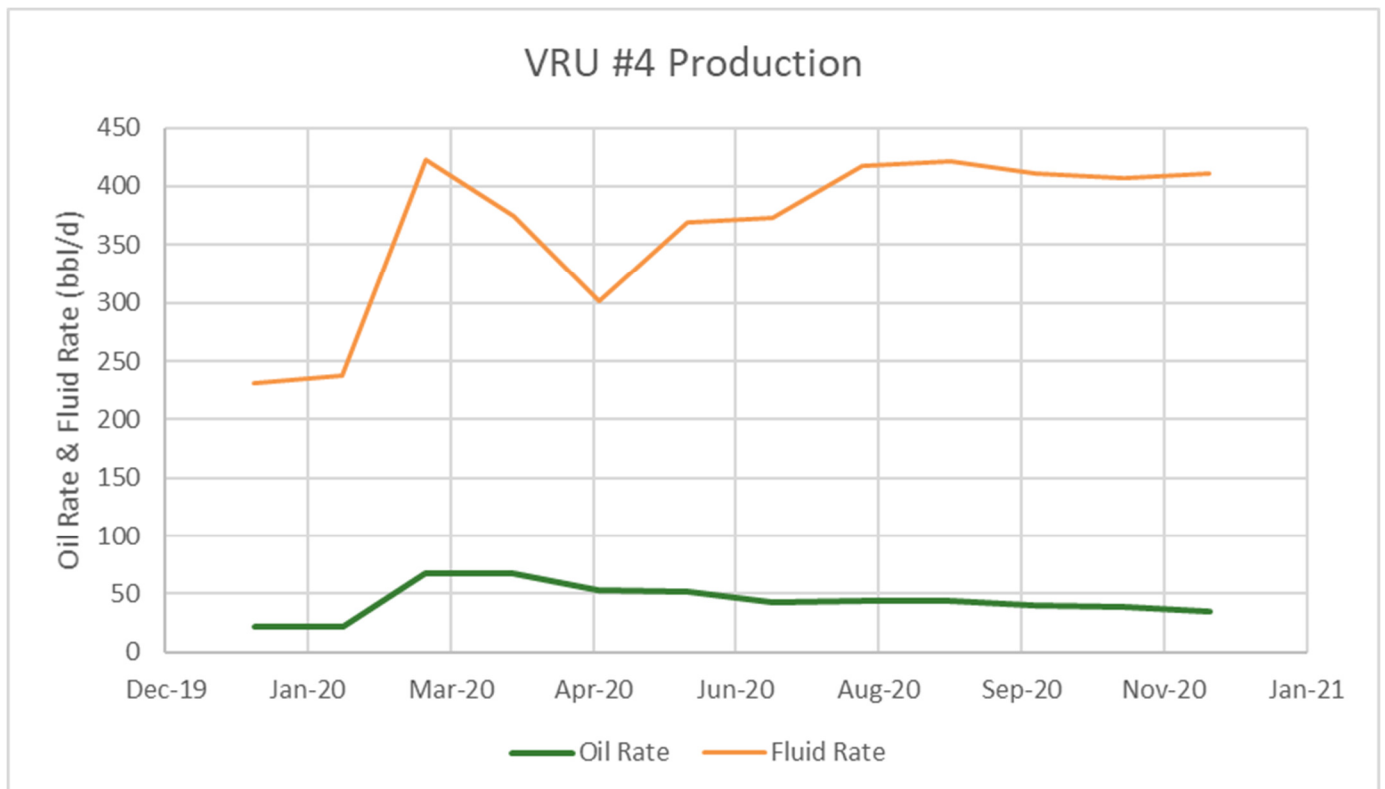
Significant events in 2020 are as follows:

- February 2020, drill the 102/05-24-010-26W1/00 horizontal well in the Scallion formation.
- February 2020, drill the 103/04-24-010-26W1/00 horizontal well in the Scallion formation.

VRU #4 – Rate vs Cum Oil Production



VRU #4 – Rate vs Time



2020 Reservoir Pressure Surveys

Unit	UWI	License	Test Type	Date of Pressure	Duration of SI (days)	Datum BHP (kPaa)
VRU #4	103/04-24-010-26W1/00	11389	BH BU	2020-02-24	17	2,632
VRU #4	102/05-24-010-26W1/00	11390	BH BU	2020-02-22	11	2,283

In 2020, two pressures were taken on the newly drilled horizontal wells, showing a decline in pressure within the unit. The average pressure recorded in 2020 was ~2,500. In 2018, one pressure was taken within the unit at around 3,100 kPa. From the pressures recorded in 2017, the average reservoir pressure was around 5,000 kPa. This is lower than the estimated initial reservoir pressure of 6,500 kPa. With further depletion due to production the reservoir pressure has noticeably decreased. This is also seen in production results with decreasing fluid production. Due to the depletion the newly drilled wells are planned to be converted to injection at the beginning of 2021. This will help to increase the pressure within the unit and provide support to adjacent wells.

2020 Well Servicing

UWI	Unit	Licence	Start Date	Job Category	Primary Job Type
7-24-10-26 to 14-13-10-26W1 Emulsion Lines	VRU#4	P20VIR001	2020-01-27 7:30	Facilities	Pipelines
103/04-24-010-26W1/00	VRU#4	11389	2020-02-04 10:00	Drilling	Drilling - original
102/05-24-010-26W1/00	VRU#4	11390	2020-02-08 0:00	Drilling	Drilling - original
102/05-24-010-26W1/00	VRU#4	11390	2020-02-21 14:00	Completion/Workover	Initial Completion
103/04-24-010-26W1/00	VRU#4	11389	2020-02-23 15:30	Completion/Workover	Initial Completion

Waterflood Pattern Map

