

Routledge Unit #1
2013 Update and Waterflood Study

Background

Corex Resources has operated Routledge Unit #1 since December 19, 2012. Prior to the acquisition of the asset the previous owner, Enerplus, had applied to implement a waterflood in this unit. Corex Resources has considered this option and plans to proceed with executing a waterflood in Routledge Unit #1 at some point in the future. Currently, a geological model is being utilized to assess various development strategies within the unit. Presently, there are two disposal wells in the unit and no injection at this time. Corex Resources is at this time contemplating how best to employ an effective waterflood in the unit.

2013 Update

In 2013 oil production in the Routledge Unit #1 was 47.9 m³/d (301 bbl/d), totaling 17.5 e³m³ (109.9 mmbbl). Annual production was down 14.4% from 2012 to 2013. Cumulative oil production from the Routledge Unit #1 was 2,560 e³m³ (16.1 mmbbl) at the end of 2013. The Unit started with 52 oil producers in January and ended with 49 oil producers in December.

Water disposal in 2013 in the Routledge Unit #1 was 2,193 m³/d (13,790 bbl/d), totaling 800.5 e³m³ (5,035 mmbbl). Water was disposed into two wells (100/15-17-009-25W1/00 predominantly and 100/16-17-009-25W1/00).

2013 Reservoir Pressure Surveys

Unit	UWID	Licence	Test Date	Test Type	Shut-in Time (days)	Datum Pressure (kPaa)
Routledge	100/07-28-009-25W1/00	1339	15/10/2013	BH BU	21.9	3513.1
Routledge	100/09-20-009-25W1/00	1705	15/10/2013	BH BU	21.9	6169.6
Routledge	102/01-20-009-25W1/00	4731	9/10/2013	BH BU	38	5801.1
Routledge	102/05-21-009-25W1/00	6469	16/09/2013	Pump & BU	88	670.5
Routledge	102/05-21-009-25W1/00	6469	17/10/2013	Swab & BU	5.9	4197.9
Routledge	102/13-21-009-25W1/00	6444	9/10/2013	BH BU	14.3	5773.4

Pressure data shows a wide range, from 3,513 kPa to 6,170 kPa, with an average of 5,091 kPa, (discounting the low value of 671 kPa). This range of pressure is consistent with pressure data previously recorded. The initial reservoir pressure was estimated at 6,700 kPa.

Unit History

Figure 1 shows the production history of the Routledge Unit #1.

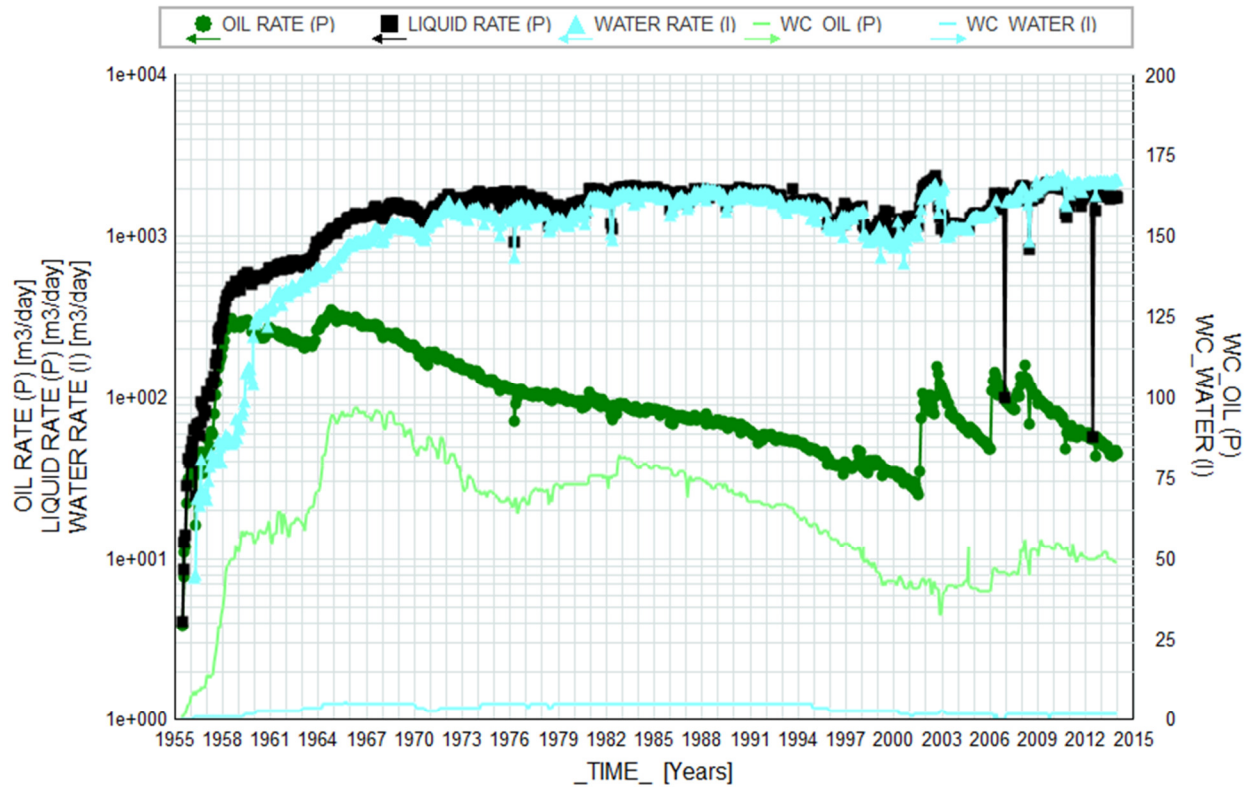


Figure 1: Routledge Unit #1 – Production History

Production in the Routledge Unit #1 started in June 1955. Water disposal was initiated in March 1956, less than one year after production started. From the late 1950's to the mid 1960's the production increases appear to be a function of well count. Production increases in the 2000's were a result of horizontal wells. The latest wells drilled were three horizontal producers in 2008.

Water was initially disposed into eight wells. Since the early 2000's, only two disposal wells remained active, namely 100/15-17-009-25W1/00 and 100/16-17-009-25W1/00. Due to the rather local extent, water disposal did not affect any significant displacing of oil towards the producers.

Waterflood Study

In 2013, a waterflood study was initiated. This study focused on a sub-area of the Routledge Unit #1 (see Figure 2).

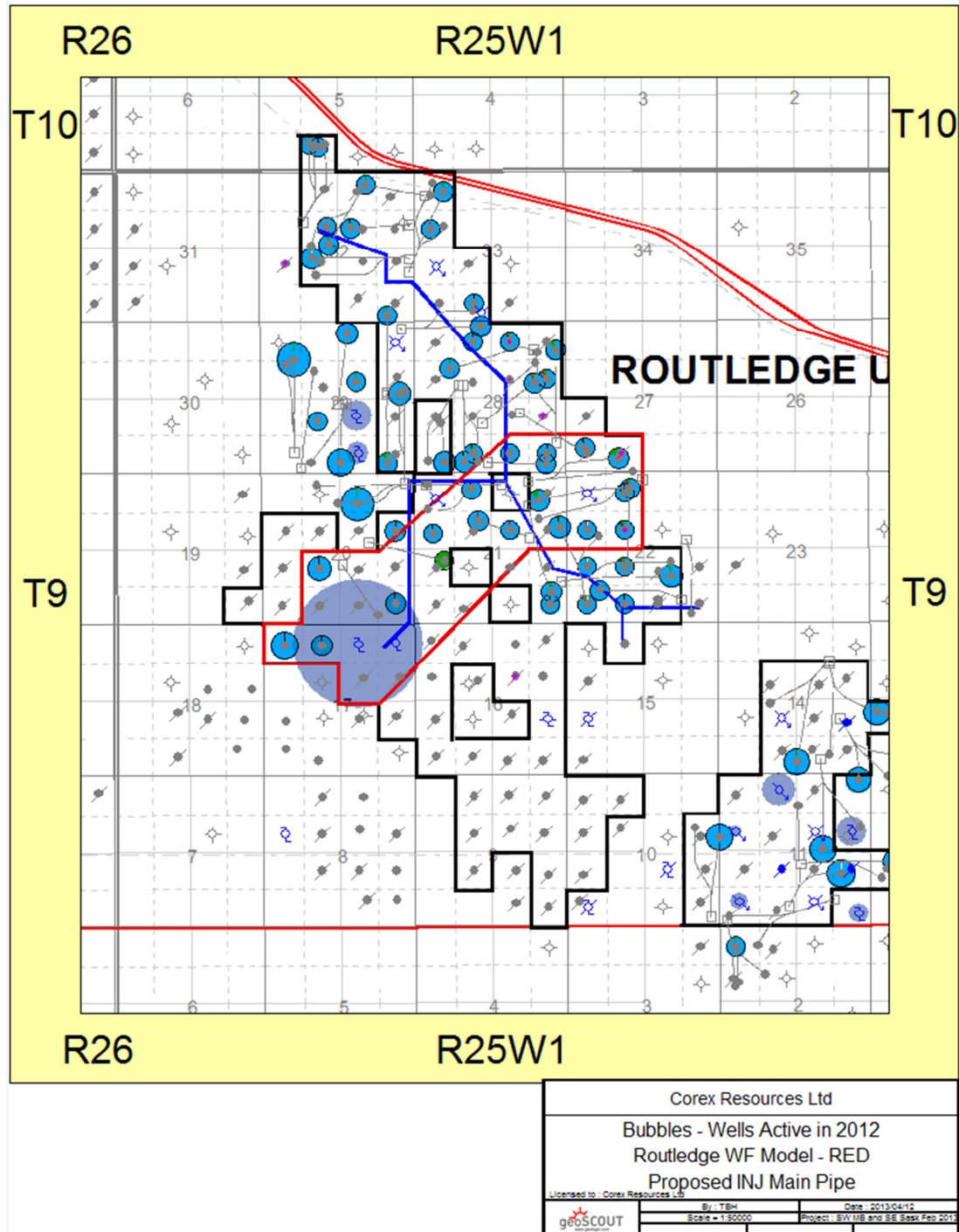


Figure 2: Routledge Unit #1 – Study Area

As part of this study, a geological model was built using all the available data and information, including the extensive core data. The geological model was calibrated against the historical performance of the Unit. During this process, the various rock and fluid properties were adjusted, including permeability, relative permeability, capillary pressure, oil-water contacts, etc. The long production history and the multiple producing zones rendered the calibration process a complex and difficult one, and the amount of time required for history matching exceeded the amount originally anticipated. An excellent match has now been obtained.

Currently the calibrated model is being used to assess the potential of some infill locations, and to assess the upside of implementing a waterflood in the Scallion formation. Once these locations have been confirmed through economic analysis, a waterflood pilot will be implemented in the Unit. The first phase of injection is expected after breakup to be in the Scallion formation around the northeast of the study area. The waterflood performance will be monitored to optimize the operations. It is envisioned that the waterflood scheme will be expanded to cover the other parts of the Unit.