# PROPOSED ROUTLEDGE UNIT NO. 2 APPLICATION FOR ENHANCED OIL RECOVERY WATERFLOOD PROJECT LODGEPOLE FORMATION VIRDEN, MANITOBA

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Corex Resources Ltd.

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#### INTRODUCTION

The Virden Lodgepole C Pool is located in Townships 9 to 10 Ranges 25 to 26 W1M. The field was originally developed with vertical wells, but recent exploitation has shifted to horizontal development. The first horizontal well in the application area was drilled in March 2006 at 102/01-22-009-25W1M and is currently operated by Corex Resources Ltd. ("Corex"). Since that time, an additional nine (9) horizontal wells have been drilled within the proposed unit lands.

Corex believes potential exists for incremental production and reserves from an Enhanced Oil Recovery ("EOR") waterflood project in the Lodgepole formation. Corex is the operator of the lands within the application area that contains ten (10) horizontal wells and five (5) vertical wells. Two of the vertical wells were dry and abandoned and the other three (3) vertical wells produced between October 1959 and September 1985 and have all been abandoned and the surface reclaimed. We do not anticipate drilling any additional horizontal wells and will ultimately convert 3 horizontal wells into injectors when implementing the EOR waterflood project.

Corex hereby applies to establish Routledge Unit No. 2 and implement an EOR Waterflood Project within the Lodgepole formation (Figure 1).

The proposed Routledge Unit No. 2 falls within the Virden Lodgepole C Pool (Figure 2).

#### **SUMMARY**

- 1. The proposed Routledge Unit No. 2 is to include fifteen (15) wells:
  - 2 vertical wells that were drilled and abandoned,
  - 3 vertical wells that were previously produced and now abandoned,
  - 10 producing horizontal wells,

All these wells are completed in the Lodgepole formation (Figure 1).

- 2. The original oil in place (OOIP) for the proposed Routledge Unit No. 2 is calculated as 1,274  $10^3 \text{m}^3$  (8,015 Mbbl), for an average of 57.9  $10^3 \text{m}^3$  (364 Mbbl) per LSD.
- 3. Cumulative production in the proposed Routledge Unit No. 2 to the end of August 2025 is 39.4  $10^3$ m<sup>3</sup> (248 Mbbl) of oil. This represents a 3% recovery factor of the total OOIP.
- 4. The last production from the original five vertical wells was in September 1985 and all are now abandoned. In February 2006, the first horizontal well was drilled and is still producing. As of August 2025, the proposed Routledge Unit No. 2 is producing 14.4 m³/d (90.7 bbl/d) of oil and 261.4 m³/d (1,644 bbl/d) of water, at a water cut of 94.8%. Peak production for the

proposed unit occurred in October 2021, with 35.3 m<sup>3</sup>/d (222 bbl/d) of oil and 100 m<sup>3</sup>/d (629 bbl/d) of water, giving a water cut of 73.9%.

- 5. The Estimated Ultimate Recovery (EUR) of oil on primary production within the proposed Routledge Unit No. 2 using decline analysis is 64.4 10<sup>3</sup>m<sup>3</sup> (405 Mbbl), with 25.1 10<sup>3</sup>m<sup>3</sup> (158 Mbbl) remaining as of August 2025. The Estimated Ultimate Recovery Factor (EURF) on primary would be 5.1% of the total OOIP in the Lodgepole section.
- 6. With the implementation of a waterflood within the Scallion member of the Lodgepole formation, incremental reserves of 128 10<sup>3</sup>m<sup>3</sup> (805 Mbbl) are expected. Based on the total OOIP for the Lodgepole formation, the incremental recovery factor is expected to be 10%, for an overall recovery factor of 15.1%.
- 7. The development plan will be to continue producing the existing horizontal wells and in 2026 convert 3 producers into injection wells (Figure 4) and commence waterflooding in the third quarter of 2026. This timing is contingent upon the approval of the unitization and EOR waterflood application. All horizontal wells in the proposed Routledge Unit No. 2 are completed openhole.

#### **GEOLOGY**

## Stratigraphy

The Lodgepole formation in the proposed unit area conformably overlies the Bakken formation and contains a number of hydrocarbon-bearing intervals. It was deposited in a gently sloping carbonate ramp setting and has been subdivided by Corex into a series of laterally continuous, shallowing upwards cycles. In ascending order, the sequence consists of a non-reservoir cycle, the Routledge Shale, which is overlain by two reservoir cycles, the Scallion and the Sandhill/Oolites, and is then capped by two non-reservoir cycles, the Virden and the Whitewater Lake. The Flossie Lake member of the Lodgepole has been eroded over all of the proposed unit area. The Whitewater Lake, Virden and uppermost Sandhill/Oolites are eroded over parts of the proposed Unit, especially to the north and east. The Lodgepole formation is unconformably overlain by the red silts and shales of the Lower Amaranth, which are in turn overlain by the anhydrites and shales of the Upper Amaranth that form the top seal for the Lodgepole hydrocarbon system. The stratigraphy of the Lodgepole formation is shown on a structural cross section which runs west to east through the proposed unit (Appendix I).

#### Sedimentology

Starting at the base of the Lodgepole section and working upwards, the first cycle immediately overlying the Bakken formation is the Routledge Shale. The Routledge Shale is a black to dark grey to, occasionally, brown fissile calcareous shale. This shale cycle was deposited in a relatively

deep, low energy, distal ramp environment. The Routledge Shale is non-reservoir, and it is capped by the Scallion.

The overlying Scallion is the first reservoir quality cycle deposited within the Lodgepole Formation. It is comprised of cream to tan microcrystalline limestone with varying amounts of chert and anhydrite, and occasional vertical fracturing. This unit is typically biofragmental with minor argillaceous interbeds. Bioclastic components are dominated by crinoids and shell fragments. All of this indicates deposition in a relatively quiet shallow marine proximal ramp environment. Most of the wells in the proposed unit area do not go through the entire Scallion reservoir interval. Therefore, reservoir parameters and fluid contacts have been interpreted from the available data in these wells along with data in offset vertical wells. The Scallion reservoir thickness varies across the area, as seen from the isopach (gross pay) map (Appendix II). The reservoir generally thins as the structure drops off to the south but it also thins to the north, where a salt collapse feature drops the Scallion below the oil/water contact, and to the east where the reservoir rock tightens up and eventually disappears. The net pay values, using a 9% porosity cutoff and 1mD permeability cutoff, have an interpreted range of 0 to 11m with gross reservoir thickness (above the oil/water contact) ranging from 0 to 18m (Appendices III and II respectively). Porosity ranges from 9 to 18% and permeability ranges from 1 to over 100mD in the nearby wells with core analysis data. The Scallion is the primary target for horizontal wells drilled by Corex and for the proposed waterflood.

The Sandhill/Oolites is the next reservoir unit and consists of a package of five thin shallowing upwards cycles, indicating frequent sea level changes. The uppermost cycles (Sandhill and Oolite 1) are eroded in the northeast part of the proposed Unit. Each cycle consists of an oil-bearing cream to tan oolitic wackestone that is capped by a barren pink to maroon argillaceous mudstone. Anhydrite is present in minor amounts, and in the proposed unit area the upper two cycles are more dolomitized. There is also occasional vertical fracturing. The oolitic wackestones are indicative of deposition in a relatively high energy but shallow water environment, while the argillaceous limestones are indicative of a relative sea level fall and the development of a lower energy, shallow, restricted environment. This is typical of a proximal to restricted ramp setting. The thickness of the Sandhill/Oolites section in the proposed unit area varies due to erosion, with gross thickness values ranging from 10 to 18m (Appendix VI) and net pays from 0 to 4m (Appendix VII), using a 9% porosity cutoff and 1mD permeability cutoff. There are very few nearby wells with core analysis data, but going farther away from the proposed Unit and estimating from drill cuttings in the horizontal wells gives porosity ranges from 9 to 15% and permeability ranges from 1 to over 100mD in the reservoir zones. The Sandhill/Oolites are generally tight in the south half of the proposed unit area but are a secondary target for drilling and waterflood in the north half (Appendix VII).

The Virden is a cream to tan cryptocrystalline dolomite with varying amounts of anhydrite and minor argillaceous components. The Virden is eroded over parts of the proposed Unit area, and is mainly present in the southwest part. Deposition of this shallowing upward sequence occurred in a more lagoonal, shallow marine, restricted ramp environment. Where it is present within the

proposed unit area, the Virden is tight and is considered non-reservoir. The member varies in gross thickness from 0 to 9m.

The final cycle of the Lodgepole sequence is the Whitewater Lake. It is eroded over much of the proposed Unit area and where present it is thin and discontinuous. The Whitewater Lake is a cream to tan to grey micritic dolomudstone to cryptocrystalline dolomite. Anhydrite is common, as are minor argillaceous partings. There is a minor bioclastic component composed of skeletal fragments. Deposition of this cycle occurred in a very shallow water, nearshore lagoon, restricted ramp environment. Where it is present within the proposed unit area, the Whitewater Lake is tight and is considered non-reservoir. The gross isopach ranges from 0 to 6m.

The Flossie Lake Member of the Lodgepole sequence has been eroded across all of the proposed unit.

#### Structure

The structure within the proposed unit area is generally relatively flat, and dips gently down to the south and to the east. To the north, the structure drops harder into a salt dissolution feature identified by the horizontal wells in Section 27-9-25W1 and by the 100/14-23-9-25W1 horizontal well. In this dissolution event, the Scallion reservoir drops below the oil-water contact however at least some of the Sandhill and Oolite reservoirs remain above it. There is no direct evidence from wells or 2D seismic indicating significant faulting at the Lodgepole level in the vicinity of the proposed unit area. Structure maps for the two reservoir units are included in Appendices X and XI.

#### Reservoir

Maps for each of the two reservoir units were generated using available open-hole logs, core data and drill cuttings, and include net pay, porosity-thickness, and permeability-thickness. These maps are in Appendices III to V for the Scallion and VII to IX for the Sandhill/Oolites. Pore volume and permeability-thickness values could only be calculated for wells with core analysis data, which is a very small number of the wells in and around the proposed unit area. Net pay for the Scallion and Sandhill/Oolites was calculated using a 9% porosity cutoff and a 1mD permeability cutoff. Both reservoir units are considered conventional reservoirs and are produced from open-hole completions. Weighted average permeability and porosity were calculated using the same cutoffs as used for net pay.

#### Fluid Contacts

The oil/water contact in the proposed unit area is interpreted at -203m SS from log and core data in vertical wells that drilled through the contact, along with gas data and drill cuttings from several of the horizontal wells that also penetrated the contact. In the proposed unit area this contact lies mainly within the Scallion reservoir unit, although in those areas where the structure has dropped down into a salt collapse feature it lies within the Sandhill/Oolites.

#### OIL IN PLACE, PRODUCTION HISTORY AND ESTIMATED RECOVERY

## Original Oil in Place

The original-oil-in-place (OOIP) for the proposed Routledge Unit No. 2 is 1,274 10<sup>3</sup>m<sup>3</sup> (8,015 Mbbl), for the Lodgepole formation. The OOIP was calculated in-house. Values of thickness, porosity, and water saturation of each LSD for the various reservoir zones are used to calculate the OOIP on an individual LSD basis. Details of the calculations are summarized in Table 1.

#### **Historical Production**

Figure 3 shows the production history of the wells within the proposed Routledge Unit No. 2. The application area contains ten (10) horizontal wells and five (5) vertical wells. Two of the vertical wells were dry and abandoned and the other three (3) vertical wells produced between October 1959 and September 1985 and have all been abandoned and the surface reclaimed. The ten (10) horizontal wells are currently producing. Historically, there has been no injection or disposal into the Lodgepole formation within the proposed Routledge Unit No. 2. Production from the producing wells is from the Lodgepole formation.

Up to and including the month of August 2025, the proposed Routledge Unit No. 2 has produced cumulative volumes of oil of 39.4 10<sup>3</sup>m<sup>3</sup> (248 Mbbl) and water of 298 10<sup>3</sup>m<sup>3</sup> (1,876 Mbbl). The current recovery factor is 3%.

Development began in August 1957, with one (1) vertical well, which was drilled & abandoned. Four (4) additional vertical wells were drilled and produced between September 1959 and November 1983. In January 2006, a horizontal well was drilled at 102/01-22-009-25W1M and put on production in March 2006. Corex drilled another nine (9) horizontal wells within the proposed unit area. No additional horizontal wells are planned within the proposed unit area.

At the end of August 2025, the proposed Routledge Unit No. 2 was producing 14.4 m³/d (90.6 bbl/d) of oil and 261 m³/d (1,644 bbl/d) of water, at a water cut of 94.8%. Peak production for the proposed unit occurred in October 2021, with 35.3 m³/d (222 bbl/d) of oil and 100 m³/d (627 bbl/d) of water, giving a water cut of 73.9%. Presently, there is no water injection or disposal; all fluids are flowlined to the Virden Routledge Unit No. 1 battery.

#### **Primary Recovery**

Table 3 lists the wells within the proposed unit area; together with the cumulative oil production to the end of August 2025 and the estimated ultimate recovery (EUR) using decline analysis. The total EUR for the proposed Routledge Unit No. 2 is 64.4 10<sup>3</sup>m<sup>3</sup> (405 Mbbl), for a recovery factor of 5.1% of the total OOIP in the Lodgepole section.

#### Secondary Recovery

Within the Lodgepole formation, the proposed waterflood will target the Scallion member, which contains 90% of the total OOIP. Analogue data from Routledge Unit No. 1 was used to estimate the expected incremental recovery from waterflooding the Scallion member. Analogue data suggests converting producers into injections wells will result in an incremental recovery factor from waterflood of 10%. Additional information on the reservoir model is included in Appendix XII.

#### UNITIZATION

The basis for unitization is to implement a waterflood to increase the ultimate recovery of the OOIP from the proposed project area.

#### Unit Name

Corex proposes the name of the new unit shall be Routledge Unit No. 2.

#### **Unit Operator**

Corex will be the Operator for Routledge Unit No. 2.

#### **Unitized Zones**

The unitized zone to be waterflooded in Routledge Unit No. 2 will be the Lodgepole Formation.

#### Unit Wells

The proposed Routledge Unit No. 2 will include fifteen (15) wells:

- 2 vertical well that were drilled and abandoned
- 3 vertical wells that were previously produced and now abandoned
- 10 producing horizontal wells

#### Unit Lands

The Routledge Unit No. 2 will consist of 22 LSDs as follows:

- LSDs 1, 8, 9, 10, 15 & 16 of Section 22 of Township 009, Range 25, W1M
- LSDs 3, 4, 5, 6, 11, 12, 13 & 14 of Section 23 of Township 009, Range 25, W1M
- LSDs 1, 2, 6, 7, 8, 11, 12 & 13 of Section 27 of Township 009, Range 25, W1M

The lands included in the 40 acre tracts are outlined in Appendix XIII.

#### Tract Factors

The proposed Routledge Unit No. 2 will consist of twenty two (22) tracts based on remaining OOIP per LSD using maps created internally by Corex as of August 2025, with the production from the horizontal wells being divided according to the existing production allocation agreements. The calculation of the tract factors is outlined in Table 1.

#### **Working Interest Owners**

Appendix XIII outlines the working interest for each recommended tract within the proposed Routledge Unit No. 2. Corex will have a 100% WI across all tracts.

#### WATERFLOOD DEVELOPMENT

The objective of implementing a waterflood is to provide pressure support and improve recovery. The Lodgepole formation is relatively shallow, with undersaturated oil having low solution gasoil ratios and as such, there is not much drive energy within the system. Corex believes additional energy is required to improve the recovery. Waterflooding will enhance the recovery by providing pressure support as well as displacing the oil from the injectors towards the producers.

Corex intends to convert three (3) horizontal producers to injection in 2026. Waterflood is expected to commence in Q3 2026, although this timing will be dependent upon the approval of the Unitization and Waterflood application, as well as the various stake holders coming to agreement.

#### Rock and Fluid Properties

Rock and fluid properties for the Lodgepole formation are summarized in Table 4. These properties were estimated using standard correlations in the literature and using existing oil analysis and PVT data.

Using Corex's internal database on step rate tests in the Lodgepole, the fracture gradient for the Lodgepole formation in the Virden area is estimated to be 22 kPa/m. Based on the average fracture gradient a surface fracturing pressure of 7,400 kPa is anticipated. Using a safety factor of 90%, the maximum allowable is calculated to be 6,70 kPa. As Routledge Unit No. 1 has a maximum allowable injection pressure (MAP) of 6,700 kPa, Corex feels 6,700 kPa is appropriate for the proposed Routledge Unit No. 2.

#### **Estimated Recovery**

Using the results from analogs within the area, incremental reserves of 128 10<sup>3</sup>m<sup>3</sup> (805 Mbbl) are expected. Based on the total OOIP for the Lodgepole formation, the incremental recovery factor is expected to be 10% for an overall recovery factor of 15%.

#### **Economic Limit**

The economic limit will be when the net oil rate and net oil price revenue stream becomes less than the current producing operating costs. Based on current price forecasts, the economic limit for the project would be  $1 \text{ m}^3$ /d.

#### Source of Injection Water and Waterflood Facilities

The source of the injection water will be from the Lodgepole formation and water supply will come from the offsetting unit, Routledge Unit No. 1 (RU #1). This unit is also operated by Corex Resources. RU #1 produces from the Lodgepole formation and already has facilities in place for water injection. Flowlines will be installed from the RU #1 high pressure injection system to the injectors in RU #2. Figure 5 shows the wellbore schematic for a typical injector.

A simplified process flow diagram of the gathering and injection system is located in Figure 6a. All producing wells will flow to test separators before entering gathering system in Routledge Unit #1. All injection wells will have turbine meters (totalizers) at the wellhead to record water injection volumes. The Process and Instrumentation Diagram for the RU #1 injection facility is showing in Figure 6b. There will be no additional waterflood facilities required at Routledge Unit No. 1.

Water injection volumes and balancing will be utilized to monitor the entire system measurement and integrity on a daily basis. The corrosion control program outlining the planned system design and operational practices to prevent corrosion is located in Figure 7.

#### Operating Strategy

The proposed injection scheme within the proposed Routledge Unit No. 2 can be seen in Figure 4. Three horizontal wells will be converted into injectors, forming alternating producer-injector pairs.

Injection rates are expected to be in the range of 50 m<sup>3</sup>/d to 100 m<sup>3</sup>/d, subject to a maximum injection pressure of 6,700 kPa at the well head. Initially, injection will target a monthly voidage replacement ratio (VRR) between 1.25 and 1.75. This over-injection will serve to replace the existing voidage within the proposed unit area. Once a cumulative VRR of one (1.0) is attained, the injection rate will be scaled back to maintain the VRR at one (1.0), both on a monthly basis and a cumulative basis.

All producers will be kept at pump-off condition.

#### **Pressure**

The initial pressure for the proposed unit area is assumed to be normally pressured. A normally pressured reservoir for this formation would be expected to have pressures in the range of 6,300kPa to 6,500 kPa. The current average reservoir pressure is around 3,000 kPa. The pressure is lower than the initial pressure due to production depleting the reservoir. Waterflooding will help to repressurize and add energy to the reservoir, and to displace oil from the injectors to the producers. Upon conversion, during the initial over-injection period, the reservoir pressure is expected to increase from the current level. Once the cumulative VRR reaches one (1.0), a monthly VRR of one (1.0) will be maintained.

## Wellbore and Surface Piping Specifications and Corrosion Control

All injection flowlines will have a maximum operating pressure of at least 9,928 kPa (consistent with injection systems in RU #1). Typical operating pressure is expected to be around 5,000 to 6,000 kPa.

Maximum pump discharge from the RU #1 injection pump is controlled to be less than 6,500 kPa, limiting maximum wellhead pressure to less than the proposed 6,700 kPa maximum. All wellheads are rated to 21,000 kPa.

All emulsion flowlines will have a maximum operating pressure of 3,365 kPa (consistent with the RU #1 gathering system). Typical operating pressure is around 800 kPa.

Corex's planned corrosion control program is as follows:

## Pipelines

• All pipelines are composite or fiberglass. No corrosion inhibitor is required.

#### Surface piping

• All above ground piping and wellheads are internally coated for producing wells. Injection well piping will be either internally coated or stainless steel. No corrosion inhibitor is required.

Producing Wells (Downhole)

- Continuous corrosion inhibition down annulus as required.
- Cathodic protection on casing

#### Injection Wells (Downhole)

- Inhibited fluid in annulus
- Internally coated packer and tubing
- Cathodic protection on casing

#### Waterflood Surveillance

Waterflood response within the proposed Routledge Unit No. 2 will be closely monitored with the following:

- Regular production well testing to monitor fluid rate and water cut to watch for waterflood response
- Real time monitoring of injection rates and pressures
- Monitor monthly and cumulative voidage replacement ratio by pattern and overall unit
- Evaluation of Hall plots
- New injection targets will be sent to the field on a regular basis

#### Project Schedule

Horizontal drilling in the area has been successful. After a period of primary recovery, Corex intends to implement a waterflood by converting horizontal producers into injection to support the remaining producers.

The injection conversions are expected to start in the second half of 2026. This schedule is contingent upon the approval of the Unitization and Waterflood application, as well as the various stake holders consenting to same.

#### **NOTIFICATIONS**

Corex will notify all surface and mineral owners of the proposed EOR project and formation of the Routledge Unit No. 2. Copies of the Notices, and proof of service, to all surface and mineral owners within the application area and mineral owners offsetting the application area will be forwarded to the Petroleum Branch, when available, to complete the Routledge Unit No. 2 Application.

Unitization and execution of the formal Routledge Unit No. 2 agreement by affected mineral owners will occur once the Petroleum Branch has reviewed and approved the tract factors. Copies of the agreement will be forwarded to the Petroleum Branch to complete the Routledge Unit No. 2 application.

Should you have any comments and/or questions regarding this application, please contact Peter Parkinson (at 403-718-6371 or peterp@corexresources.ca), or Dan Hompoth, Engineering, (at 587-390-0293 or danielh@corexresources.ca).

Yours truly,

Corex Resources Ltd.

(100) David McGuinness
Executive VP Land

Table 1 – Summary of Original Oil In Place and Tract Factor Calculations

Tract LSD	Tract Weighting	Total	01-22 01-22-009-25	08-22 08-22-009-25	09-22 09-22-009-25
Tract Factor		100.000000001%	5.504618496%	8.385547453%	9.931321871%
Virden					
Area (ac)		880	40	40	40
h (m)					
Vb (ac-ft)		0	0	0	0
phi					
Sw					
HCPV		791	0.000	0.000	0.000
OOIP (Mrb)		0	0	0	0
OOIP (Mstb)		0	0	0	0
OOIP (10 <sup>3</sup> m <sup>3</sup> )		0	0	0	0
Sandhill/Oolites					
Area (ac)		880	40.0	40.0	40.0
h (m)			0.3	0.6	0.0
Vb (ac-ft)		1,522	39	79	0
phi			9.2%	8.5%	
Sw			25%	25%	
HCPV		1	0.021	0.038	0.000
OOIP (Mrb)		874	21	39	0
OOIP (Mstb)		816	20	36	0
OOIP (10 <sup>3</sup> m <sup>3</sup> )		130	3	6	0
Scallion					
Area (ac)		880	40.0	40.0	40.0
n (m)			5.3	7.5	11.0
/b (ac-ft)		11,295	696	984	1,444
ohi			11.5%	12.0%	10.0%
Sw			25%	25%	25%
HCPV		8	0.457	0.675	0.825
OOIP (Mrb)		7,703	465	687	840
OOIP (Mstb)		7,199	435	642	785
OOIP (10 <sup>3</sup> m <sup>3</sup> )		1,145	69	102	125
Total Lodgepole					
Total OOIP (Mstb)		8,015	455	679	785
Total OOIP (10 <sup>3</sup> m <sup>3</sup> )		1,274	72	108	125
Cumulative Oil (Mstb)		247.6	27.07	27.29	13.55
OOIP-Cum Prd (Mstb)	100%	7,768	428	651	771
Avg per LSD (103m3)		57.9			
Avg per LSD (mstb)		364.3		2	
Comments:			Cumulative production to 2	025-08-31	
Во			1.07		

Well 1	100/01-22-009-25W1/00	102/01-22-009-25W1/00	102/01-22-009-25W1/00
Factor (%)	100.00	49.10	0.97
Cumulative Oil (Mstb)	1.9	47.0	47.0
Well 2	102/01-22-009-25W1/00	100/08-22-009-25W1/00	100/06-23-009-25W1/00
Factor (%)	49.93	100.00	12.67
Cumulative Oil (Mstb)	47.0	1.5	10.8
Well 3	100/03-23-009-25W1/00	100/03-23-009-25W1/00	102/11-23-009-25W1/00
Factor (%)	11.62	9.98	16.97
Cumulative Oil (Mstb)	14.6	14.6	36.2
Well 4		100/06-23-009-25W1/00	100/14-23-009-25W1/00
Factor (%)	0.00	12.02	5.28
Cumulative Oil (Mstb)	0.0	10.8	6.6
Well 5			102/07-27-009-25W1/00
Factor (%)	0.00	0.00	11.33
Cumulative Oil (Mstb)	0.0	0,0	37.4
Well 6			100/08-27-009-25W1/00
Factor (%)	0.00	0.00	3.34
Cumulative Oil (Mstb)	0.0	0.0	29.6

Table 1 – Summary of Original Oil In Place and Tract Factor Calculations (continued)

# Proposed Routledge Unit No. 2

Lodgepole	Unit	

Tract LSD	Tract Weighting	Total	10-22 10-22-009-25	15-22 15-22-009-25	16-22 16-22-009-25
Tract Factor		100.000000001%	10.146096562%	9.356565399%	9.121774875%
Virden					
Area (ac)		880	40	40	40
h (m)					
Vb (ac-ft)		0	0	0	0
phi					
Sw					
HCPV			0.000	0.000	0.000
OOIP (Mrb)		0	0	0	0
OOIP (Mstb)		0	O	0	0
OOIP (10 <sup>3</sup> m <sup>3</sup> )		0	0	0	0
Sandhill/Oolites					
Area (ac)		880	40.0	40.0	40.0
h (m)		37.50	0.0	0.0	0.0
Vb (ac-ft)		1,522	0	0	0
phi		M.54790.795			
Sw					
HCPV		1	0.000	0.000	0.000
OOIP (Mrb)		874	0	0	0
OOIP (Mstb)		816	0	0	0
OOIP (103m3)		130	0	0	0
Scallion					
Area (ac)		880	40.0	40.0	40.0
h (m)			8.6	8.1	8.5
Vb (ac-ft)		11,295	1,125	1,063	1,115
phi		ATTENDED TO THE PERSON OF THE	13.2%	13.0%	12.0%
Sw			25%	25%	25%
HCPV		8	0.848	0.790	0.765
OOIP (Mrb)		7,703	864	804	779
OOIP (Mstb)		7,199	807	751	728
OOIP (103m3)		1,145	128	119	116
Total Lodgepole					
Total OOIP (Mstb)		8,015	807	751	728
Total OOIP (10 3 m 3)		1,274	128	119	116
Cumulative Oil (Mstb)		247.6	19.16	24.65	19.34
OOIP-Cum Prd (Mstb)	100%	7,768	788	727	709
Avg per LSD (103m3)		57,9			
Avg per LSD (mstb)		364.3			
Comments:					
Во					

Well 1	100/07-27-009-25W1/00	100/07-27-009-25W1/00	102/11-23-009-25W1/00
Factor (%)	24.39	30.42	5.03
Cumulative Oil (Mstb)	58,2	58.2	36,2
Well 2	102/07-27-009-25W1/00	102/07-27-009-25W1/00	100/14-23-009-25W1/00
Factor (%)	13.28	18.58	18.80
Cumulative Oil (Mstb)	37.4	37.4	6.6
Well 3			102/07-27-009-25W1/00
Factor (%)	0.00	0.00	14.60
Cumulative Oil (Mstb)	0.0	0.0	37.4
Well 4			100/08-27-009-25W1/00
Factor (%)	0.00	0.00	36.50
Cumulative Oil (Mstb)	0.0	0.0	29.6
Well 5			
Factor (%)	0.00	0.00	0.00
Cumulative Oil (Mstb)	0.0	0.0	0.0
Well 6			
Factor (%)	0.00	0.00	0.00
Cumulative Oil (Mstb)	0.0	0.0	0.0

Table 1 – Summary of Original Oil In Place and Tract Factor Calculations (continued)

Tract LSD	Tract Weighting	Total	03-23 03-23-009-25	04-23 04-23-009-25	05-23 05-23-009-25
Tract Factor		100.000000001%	0.420247615%	6.022004228%	5.656562823%
Virden					
Area (ac)		880	40	40	40
h (m)					
Vb (ac-ft)		0	0	0	0
phi					
Sw					1047124882
HCPV			0.000	0.000	0.000
OOIP (Mrb)		0	0	0	0
OOIP (Mstb)		0	0	0	0
OOIP (10 <sup>3</sup> m <sup>3</sup> )		0	0	0	0
Sandhill/Oolites					
Area (ac)		880	40.0	40.0	40.0
h (m)			0.0	0.0	0.0
Vb (ac-ft)		1,522	0	0	0
phi					
Sw					
HCPV		1	0.000	0.000	0.000
OOIP (Mrb)		874	0	0	0
OOIP (Mstb)		816	0	0	0
OOIP (10 <sup>3</sup> m <sup>3</sup> )		130	0	0	0
Scallion	100				
Area (ac)		880	40.0	40.0	40.0
h (m)			0.5	5.5	5.2
Vb (ac-ft)		11,295	66	722	682
phi			10.0%	12.0%	12.0%
Sw			25%	25%	25%
HCPV		8	0.038	0.495	0.468
OOIP (Mrb)		7,703	38	504	476
OOIP (Mstb)		7,199	36	471	445
OOIP (10 <sup>3</sup> m <sup>3</sup> )		1,145	6	75	71
Total Lodgepole					
Total OOIP (Mstb)		8,015	36	471	445
Total OOIP (10 m3)		1,274	6	75	71
Cumulative Oil (Mstb)		247.6	3.04	3.22	5.92
OOIP-Cum Prd (Mstb)	100%	7,768	33	468	439
Avg per LSD (103m3)		57.9			
Avg per LSD (mstb)		364.3			
Comments:					
Во					

Well 1	100/03-23-009-25W1/00	100/03-23-009-25W1/00	100/03-23-009-25W1/00
Factor (%)	20.82	22.06	19.24
Cumulative Oil (Mstb)	14.6	14.6	14.6
Well 2			100/05-23-009-25W1/00
Factor (%)	0.00	0.00	100.00
Cumulative Oil (Mstb)	0.0	0.0	0.5
Well 3			100/06-23-009-25W1/00
Factor (%)	0.00	0.00	23.59
Cumulative Oil (Mstb)	0.0	0.0	10.8
Well 4			
Factor (%)	0.00	0.00	0.00
Cumulative Oil (Mstb)	0.0	0.0	0.0
Well 5			
Factor (%)	0.00	0.00	0.00
Cumulative Oil (Mstb)	0.0	0.0	0.0
Well 6			
Factor (%)	0.00	0.00	0.00
Cumulative Oil (Mstb)	0.0	0.0	0.0

Table 1 – Summary of Original Oil In Place and Tract Factor Calculations (continued)

Well 4

Well 5

Well 6

Factor (%)

Factor (%) Cumulative Oil (Mstb)

Factor (%) Cumulative Oil (Mstb)

Cumulative Oil (Mstb)

Tract LSD	Tract Weighting	Total	06-23 06-23-009-25	11-23 11-23-009-25	12-23 12-23-009-25
Tract Factor	T. U.S. IIIIIS	100.000000001%	0.491377611%	1.633070903%	10.346012387%
Virden					
Area (ac)		880	40	40	40
h (m)					
Vb (ac-ft)		0	0	0	0
phi					
Sw			0.000	0.000	0.000
HCPV		0	0.000	0.000	0.000
OOIP (Mrb)		0	0	0	0
OOIP (Mstb)		0	0	0	0
OOIP (10 <sup>3</sup> m <sup>3</sup> )	or and a second	U	Ü	Ü	0
Sandhill/Oolites				10.5	
Area (ac)		880	40.0	40.0	40.0
h (m)		4.500	0.0	0.0	0.0
Vb (ac-ft)		1,522	0	U	Ü
phi Sw					
HCPV		1	0.000	0.000	0.000
OOIP (Mrb)		874	0.000	0.000	0.000
OOIP (Mstb)		816	o o	o	o o
OOIP (10 <sup>3</sup> m <sup>3</sup> )		130	0	0	0
Scallion	8	100	•	-	
Area (ac)		880	40.0	40.0	40.0
h (m)		000	0.5	1,9	9.5
Vb (ac-ft)		11,295	66	249	1,247
phi		,,,,,,,	12.0%	10.0%	12.0%
Sw			25%	25%	25%
HCPV		8	0.045	0.143	0.855
OOIP (Mrb)		7,703	46	145	870
OOIP (Mstb)		7,199	43	136	814
OOIP (10 <sup>3</sup> m <sup>3</sup> )		1,145	7	22	129
Total Lodgepole					
Total OOIP (Mstb)		8,015	43	136	814
Total OOIP (103 m3)		1,274	7	22	129
Cumulative Oil (Mstb)		247.6	4.65	8.74	9.88
OOIP-Cum Prd (Mstb)	100%	7,768	38	127	804
Avg per LSD (103m3)		57.9			
Avg per LSD (mstb)		364.3			
<u>Comments:</u> Bo					
Well 1			100/03-23-009-25W1/00	100/06-23-009-25W1/00	100/06-23-009-25W1/00
Factor (%)			16.28	14.69	16.09
Cumulative Oil (Mstb)			14,6	10.8	10.8
Well 2			100/06-23-009-25W1/00	102/11-23-009-25W1/00	102/11-23-009-25W1/00
Factor (%)			20.94	19.74	22.47
Cumulative Oil (Mstb)			10.8	36.2	36.2
					100/14-23-009-25W1/00
Well 3					
Well 3 Factor (%)			0.00	0.00	0.08 6.6

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Table 1 – Summary of Original Oil In Place and Tract Factor Calculations (continued)

Tract LSD	Tract Weighting	Total	13-23 13-23-009-25	14-23 14-23-009-25	01-27 01-27-009-25
Tract Factor		100.000000001%	9.359782215%	0.910175040%	2.044239875%
Virden					
Area (ac)	-	880	40	40	40
h (m)					
Vb (ac-ft)		0	0	0	0
phi					
Sw					
HCPV			0.000	0.000	0.000
OOIP (Mrb)		0	0	0	0
OOIP (Mstb)		0	0	0	0
OOIP (103m3)		0	0	0	0
Sandhill/Oolites					
Area (ac)		880	40.0	40.0	40.0
h (m)		***	1.6	1.1	0.5
Vb (ac-ft)		1,522	210	144	66
phi		1.00	9.0%	9.0%	9.0%
Sw			25%	25%	25%
HCPV		1	0.108	0.074	0.034
OOIP (Mrb)		874	110	76	34
OOIP (Mstb)		816	103	71	32
OOIP (103m3)		130	16	- 11	5
Scallion	<b>37</b>				
Area (ac)	and .	880	40.0	40.0	40.0
h (m)			7.4	0.1	2.0
Vb (ac-ft)		11,295	971	13	262
phi			12.0%	12.0%	10.0%
Sw			25%	25%	25%
HCPV		8	0.666	0.009	0.150
OOIP (Mrb)		7,703	678	9	153
OOIP (Mstb)		7,199	634	9	143
OOIP (103m3)		1,145	101	1	23
Total Lodgepole		TO COMMON			
Total OOIP (Mstb)		8,015	736	79	175
Total OOIP (10 3 m3)		1,274	117	13	28
Cumulative Oil (Mstb)		247.6	9.42	8.51	16.05
OOIP-Cum Prd (Mstb)	100%	7,768	727	71	159
Avg per LSD (103m3)		57.9			
Avg per LSD (mstb)		364.3			
Comments:					
Во					

Well 1	102/11-23-009-25W1/00	102/11-23-009-25W1/00	102/07-27-009-25W1/0
Factor (%)	18.73	17.06	14.06
Cumulative Oil (Mstb)	36.2	36.2	37.4
Well 2	100/14-23-009-25W1/00	100/14-23-009-25W1/00	100/08-27-009-25W1/00
Factor (%)	40.23	35.61	36.37
Cumulative Oil (Mstb)	6.6	6.6	29.6
Well 3			
Factor (%)	0.00	0.00	0.00
Cumulative Oil (Mstb)	0.0	0.0	0.0
Well 4			
Factor (%)	0.00	0.00	0.00
Cumulative Oil (Mstb)	0.0	0.0	0.0
Well 5			
Factor (%)	0.00	0.00	0.00
Cumulative Oil (Mstb)	0.0	0.0	0.0
Well 6			
Factor (%)	0.00	0.00	0.00
Cumulative Oil (Mstb)	0.0	0.0	0.0

Table 1 – Summary of Original Oil In Place and Tract Factor Calculations (continued)

Tract LSD	Tract Weighting	Total	02-27 02-27-009-25	06-27 06-27-009-25	07-27 07-27-009-25
Tract Factor		100.000000001%	2.059723911%	3.853910713%	0.973512048%
Virden	3				
Area (ac)		880	40	40	40
h (m)					97
Vb (ac-ft)		0	0	0	0
phi					
Sw					
HCPV			0.000	0.000	0.000
OOIP (Mrb)		0	0	0	0
OOIP (Mstb)		0	0	0	0
OOIP (10 <sup>3</sup> m <sup>3</sup> )		0	0	0	0
Sandhill/Oolites					
Area (ac)		880	40.0	40.0	40.0
h (m)		000	1.9	2.0	1.1
Vb (ac-ft)		1,522	249	262	144
phi		T, Cana	11.0%	11.0%	11.0%
Sw			25%	25%	25%
HCPV		1	0.157	0.165	0.091
OOIP (Mrb)		874	160	168	92
OOIP (Mstb)		816	149	157	86
OOIP (103m3)		130	24	25	14
Scallion	BOOT	6354	100 N	700,000	
Area (ac)		880	40.0	40.0	40.0
h (m)		000	0.5	2.0	0.0
∨b (ac-ft)		11,295	66	262	0.0
phi		11,200	10.0%	10.0%	v
Sw			25%	25%	
HCPV		8	0.038	0.150	0.000
OOIP (Mrb)		7,703	38	153	0
OOIP (Mstb)		7,199	36	143	Ö
OOIP (10 <sup>3</sup> m <sup>3</sup> )		1,145	6	23	0
Total Lodgepole		10000		(574)	- T
Total OOIP (Mstb)		8,015	185	300	86
Total OOIP (10 3 m3)		1,274	29	48	14
Cumulative Oil (Mstb)		247.6	24.84	0.36	10.73
OOIP-Cum Prd (Mstb)	100%	7,768	160	299	76
Avg per LSD (103m3)	10070	57.9	100		• •
Avg per LSD (mstb)		364.3			
Comments:		001.0			
Во					

Well 1	100/07-27-009-25W1/00	100/06-27-009-25W1/00	100/07-27-009-25W1/00
Factor (%)	30.39	28.64	14.80
Cumulative Oil (Mstb)	58.2	1.3	58.2
Well 2	102/07-27-009-25W1/00		102/07-27-009-25W1/00
Factor (%)	19.11	0.00	5.66
Cumulative Oil (Mstb)	37.4	0.0	37.4
Well 3			
Factor (%)	0.00	0.00	0.00
Cumulative Oil (Mstb)	0,0	0.0	0.0
Well 4			
Factor (%)	0.00	0.00	0.00
Cumulative Oil (Mstb)	0.0	0.0	0.0
Well 5			
Factor (%)	0.00	0.00	0.00
Cumulative Oil (Mstb)	0.0	0.0	0.0
Well 6			
Factor (%)	0.00	0.00	0.00
Cumulative Oil (Mstb)	0.0	0.0	0.0

 $\begin{tabular}{ll} Table 1-Summary of Original Oil In Place and Tract Factor Calculations (continued) \\ Proposed Routledge Unit No. 2 \\ {\tt Lodgepole Unit} \end{tabular}$ 

Tract LSD	Tract Weighting	Total	08-27 08-27-009-25	11-27 11-27-009-25	12-27 12-27-009-25
Tract Factor		100.000000001%	0.306308622%	0.229381141%	3.051630219%
Virden					
Area (ac)		880	40	40	40
h (m)					
Vb (ac-ft)		0	0	0	0
phi					
Sw HCPV			0.000	0.000	0.000
OOIP (Mrb)		0	0.000	0.000	0.000
OOIP (Mstb)		ő	0	0	Ö
OOIP (10 <sup>3</sup> m <sup>3</sup> )		0	0	0	0
Sandhill/Oolites			17	1.0	17.
Area (ac)	NO.	880	40.0	40.0	40.0
h (m)			0.5	0.3	1.5
Vb (ac-ft)		1,522	66	33	197
phi		ANTONIOS.	9.0%	10.0%	9.0%
Sw			25%	25%	25%
HCPV		1	0.034	0.019	0,101
OOIP (Mrb)		874	34	19	103
OOIP (Mstb)		816	32	18	96
OOIP (10 <sup>3</sup> m <sup>3</sup> )		130	5	3	15
Scallion					
Area (ac)		880	40.0	40.0	40.0
h (m)			0.0	0.0	2.0
Vb (ac-ft)		11,295	0	0	262
phi Sw					10.0% 25%
HCPV		8	0.000	0.000	0.150
OOIP (Mrb)		7,703	0	0.000	153
OOIP (Mstb)		7,199	o	o	143
OOIP (103m3)		1,145	0	0	23
Total Lodgepole		200	100	57/	677776
Total OOIP (Mstb)		8,015	32	18	239
Total OOIP (103 m3)		1,274	5	3	38
Cumulative Oil (Mstb)		247.6	8.32	0.02	2.02
OOIP-Cum Prd (Mstb)	100%	7,768	24	18	237
Avg per LSD (103m3)		57.9			
Avg per LSD (mstb)		364.3			
Comments: Bo					
Well 1			102/07-27-009-25W1/00	100/06-27-009-25W1/00	100/13-27-009-25W1/00
Factor (%)			3.39	1.82	43.98
Cumulative Oil (Mstb)			37.4	1.3	4.6
			400/00 27 000 2544/00		100/05 37 000 3514// (00
Well 2			100/08-27-009-25W1/00		100/06-27-009-25W1/00
Factor (%) Cumulative Oil (Mstb)			23.78 29.6	0.00 0.0	1.01 1.3
Cumulative Oil (MSto)			29.0	0.0	1.3
Well 3					
Factor (%)			0.00	0.00	0.00
Cumulative Oil (Mstb)			0.0	0.0	0.0
Carridan Coll (Mato)			0.0	5.0	0.0
Well 4					
Factor (%)			0.00	0.00	0.00
Cumulative Oil (Mstb)			0.0	0.0	0.0
Well 5					
Factor (%)			0.00	0.00	0.00
Cumulative Oil (Mstb)			0.0	0.0	0.0
(many)			4.0	5,5	1010
Well 6					
Factor (%)			0.00	0.00	0.00
Cumulative Oil (Mstb)			0.0	0.0	0.0
					310

Table 1 – Summary of Original Oil In Place and Tract Factor Calculations (continued)

# Proposed Routledge Unit No. 2

Well 4

Well 5

Factor (%) Cumulative Oil (Mstb)

Factor (%) Cumulative Oil (Mstb)

Factor (%) Cumulative Oil (Mstb)

Lodgepole Unit				
Tract	Tract	Total	13-27	
LSD	Weighting		13-27-009-25	
Tract Factor	THE RESERVE OF THE PERSON OF T	100.000000001%	0.196135994%	
Virden				
Area (ac)		880	40	
h (m)		(2))	92	
Vb (ac-ft)		0	0	
phi				
Sw HCPV			0.000	
OOIP (Mrb)		0	0.000	
OOIP (Mstb)		ő	0	
OOIP (10 <sup>3</sup> m <sup>3</sup> )		o	o	
Sandhill/Oolites		*	o .	
Area (ac)	ALIA .	880	40.0	
h (m)		000	0.3	
Vb (ac-ft)		1,522	33	
phi		1,000	9.0%	
Sw			25%	
HCPV		1	0.017	
OOIP (Mrb)		874	17	
OOIP (Mstb)		816	16	
OOIP (103m3)		130	3	
Scallion				
Area (ac)		880	40.0	
h (m)			0.0	
Vb (ac-ft)		11,295	0	
phi				
Sw		120	Name and the Control of the Control	
HCPV		8	0.000	
OOIP (Mrb)		7,703	0	
OOIP (Mstb)		7,199	0	
OOIP (10 <sup>3</sup> m <sup>3</sup> )		1,145	U	
Total Lodgepole Total OOIP (Mstb)		8,015	16	
		1,274	3	
Total OOIP (10 <sup>3</sup> m <sup>3</sup> ) Cumulative Oil (Mstb)		247.6	0.82	
OOIP-Cum Prd (Mstb)	100%	7,768	15	
Avg per LSD (103m3)	10076	57.9	10	
Avg per LSD (mstb)		364.3		
Comments:		7.7.7.7		
Во				
				-
Well 1		3	100/13-27-009-25W1/00	
Factor (%)			17.97	
Cumulative Oil (Mstb)			4.6	
Well 2				
Factor (%)			0.00	
Cumulative Oil (Mstb)			0.0	
Well 3				
Factor (%)			0.00	
Cumulative Oil (Mstb)			0.0	
			17.17	

0.00

0.00

0.00

Table 2 – Well List – Status

Well ID	Prod./Inject. Formation	First Prod YYYY/MM	Last Prod. YYYY/MM	Well Type
100/01-22-009-25W1/00	Mlodgepl	1962-08-01	1963-09-30	Vertical
102/01-22-009-25W1/00	Mscallion	2006-03-01	2025-08-31	Horizontal
102/01-22-009-25W1/02				Horizontal
100/08-22-009-25W1/00	Mlodgepl	1959-10-01	1961-11-30	Vertical
100/10-22-009-25W1/00	Drilled & Abandoned			Vertical
100/03-23-009-25W1/00	Mscallion	2022-03-01	2025-08-31	Horizontal
100/05-23-009-25W1/00	Mlodgepl	1984-08-01	1985-09-30	Vertical
100/06-23-009-25W1/00	Mlodgepl	2020-12-01	2025-08-31	Horizontal
100/06-23-009-25W1/02				Horizontal
100/11-23-009-25W1/00	Drilled & Abandoned			Vertical
102/11-23-009-25W1/00	Mscallion	2022-10-01	2025-08-31	Horizontal
100/14-23-009-25W1/00	Moolite3	2023-12-01	2025-08-31	Horizontal
100/07-27-009-25W1/00	Mlodgepl	2020-12-01	2025-08-31	Horizontal
102/07-27-009-25W1/00	Mscallion	2021-09-01	2025-08-31	Horizontal
100/08-27-009-25W1/00	Moolite4	2023-12-01	2025-08-31	Horizontal
100/13-27-009-25W1/00	Mscallion	2023-12-01	2025-08-31	Horizontal
102/13-27-009-25W1/00		2025-03-01	2025-08-31	Horizontal

Table 3 – Cumulative Oil Production and Estimated Primary Ultimate Recovery

Well ID	Well Type	Cumulative OIL (Mbbl)	Expected Ultimate Recovery (Mbbl)
100/01-22-009-25W1/00	Vertical	1.908	1.908
102/01-22-009-25W1/00	Horizontal	46.989	62.31
102/01-22-009-25W1/02	Horizontal	-	-
100/08-22-009-25W1/00	Vertical	1.460	1.46
100/10-22-009-25W1/00	Vertical		
100/03-23-009-25W1/00	Horizontal	14.593	23.092
100/05-23-009-25W1/00	Vertical	0.549	0.549
100/06-23-009-25W1/00	Horizontal	10.849	11.174
100/06-23-009-25W1/02	Horizontal	-	•
100/11-23-009-25W1/00	Vertical		
102/11-23-009-25W1/00	Horizontal	36.181	56.506
100/14-23-009-25W1/00	Horizontal	6.569	24.833
100/07-27-009-25W1/00	Horizontal	58.173	69.093
102/07-27-009-25W1/00	Horizontal	37.448	41.136
100/08-27-009-25W1/00	Horizontal	29.648	83.302
100/13-27-009-25W1/00	Horizontal	4.569	28.299
102/13-27-009-25W1/00	Horizontal	1.261	1.600

Table 4 – Summary of Rock and Fluid Properties

Proposed Routledge Unit No. 2				
Rock and Fluid Properties				
Initial Formation Pressure	Кра	6,500		
Oil Gravity	°API	34.6		
Solution Gas-Oil Ration	m³/m³	16		
Oil Formation Volume Factor	Rm <sup>3</sup> /Sm <sup>3</sup>	1.07		
Average Porosity	fraction	0.11		
Average Air Permeability	mD	12.6		

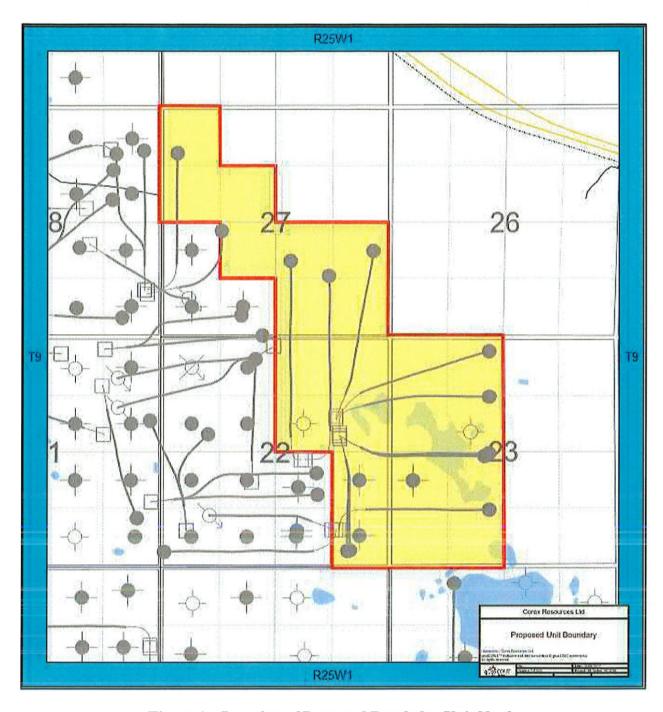


Figure 1 – Location of Proposed Routledge Unit No. 2

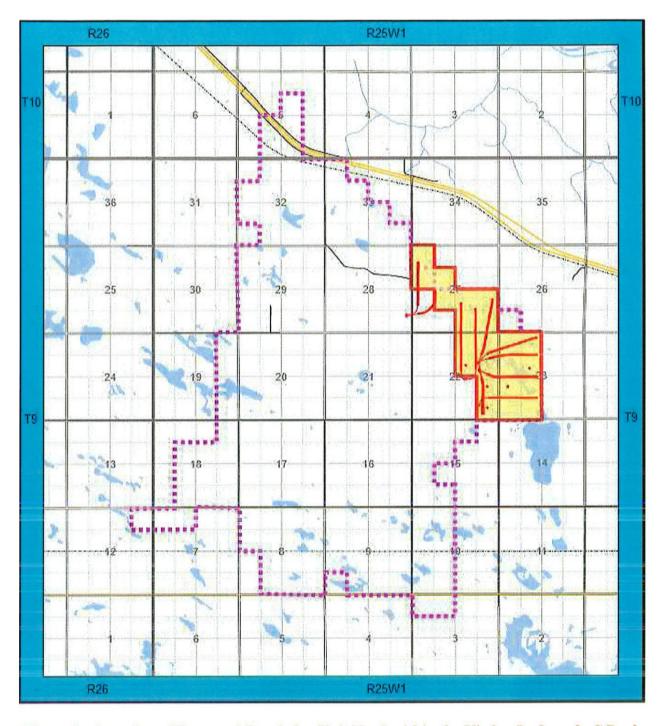


Figure 2 – Location of Proposed Routledge Unit No. 2 within the Virden Lodgepole C Pool

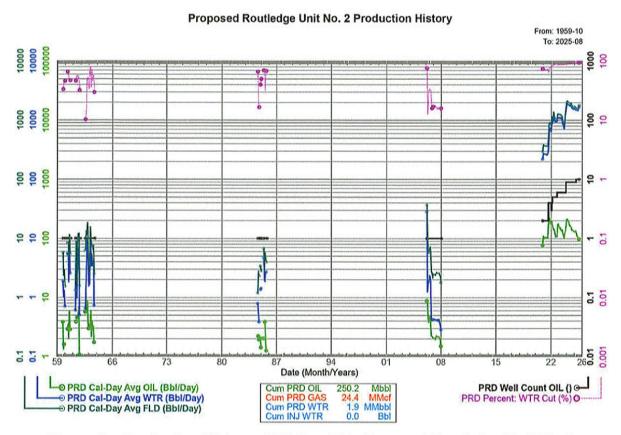


Figure 3 – Production History of Wells within Proposed Routledge Unit No. 2

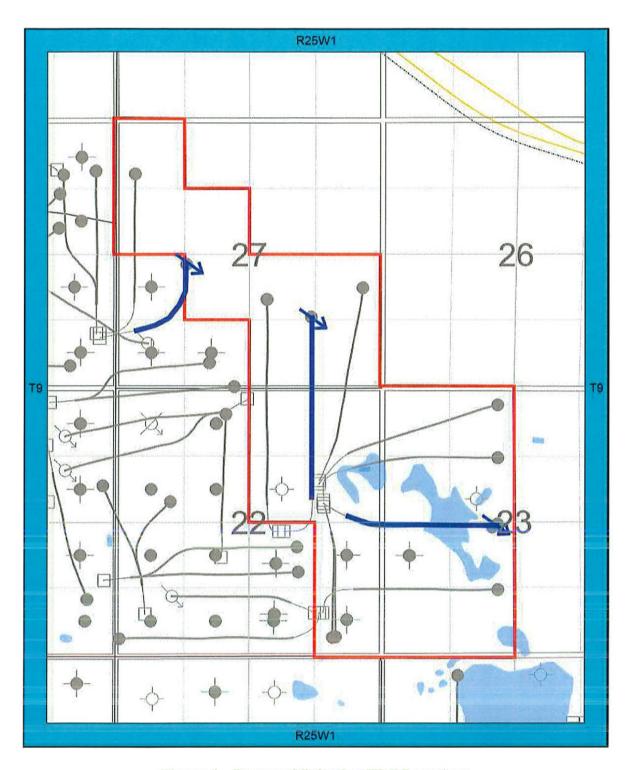


Figure 4 – Proposed Injection Well Locations

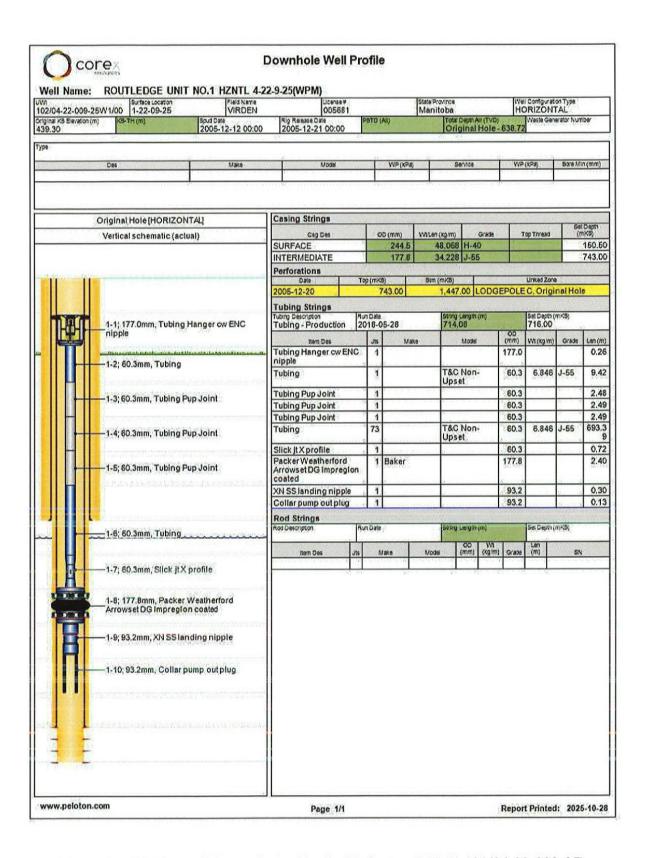
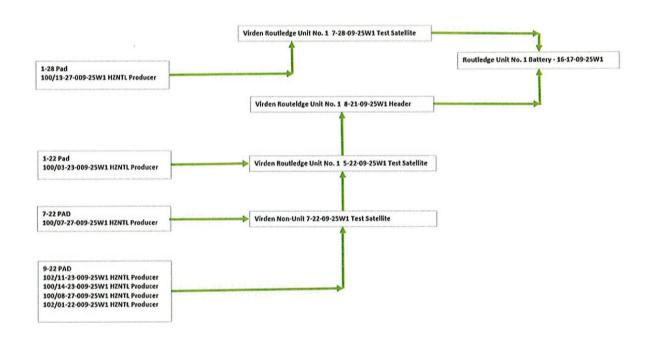
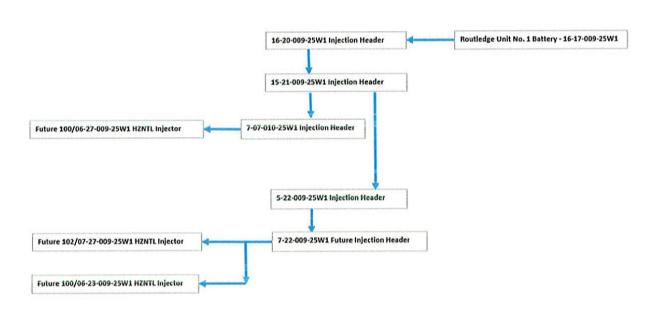


Figure 5 – Wellbore Schematic for Typical Injector (RU #1 102/04-22-009-25)





Oil rates for all wells are measured at the test satellites shown above. Injection rates are measured through turbine meters at the wellhead An injection pump is located at the 16-17-009-25W1 Battery.

Figure 6a - Simplified Flow Diagram and Metering

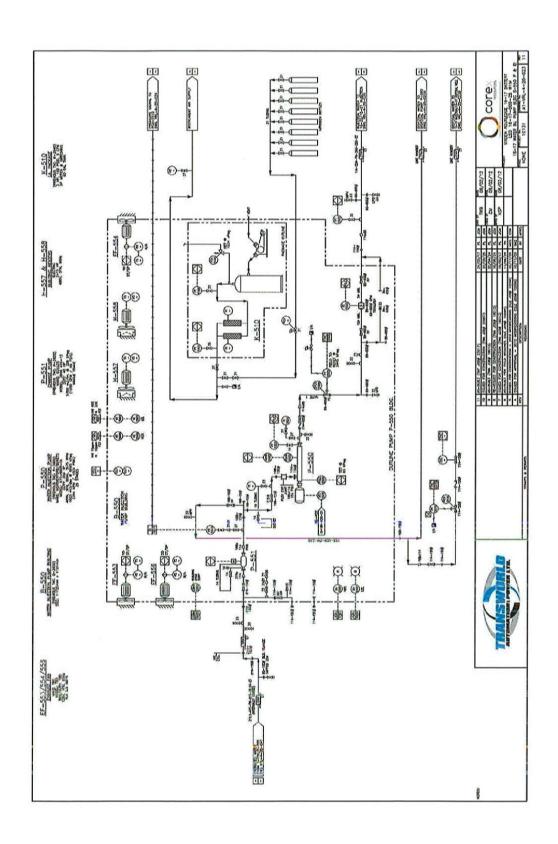
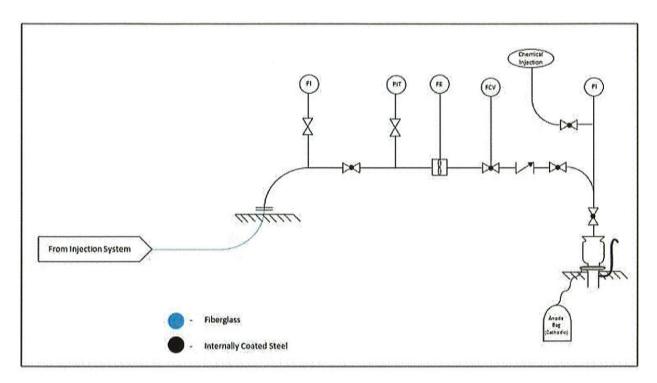
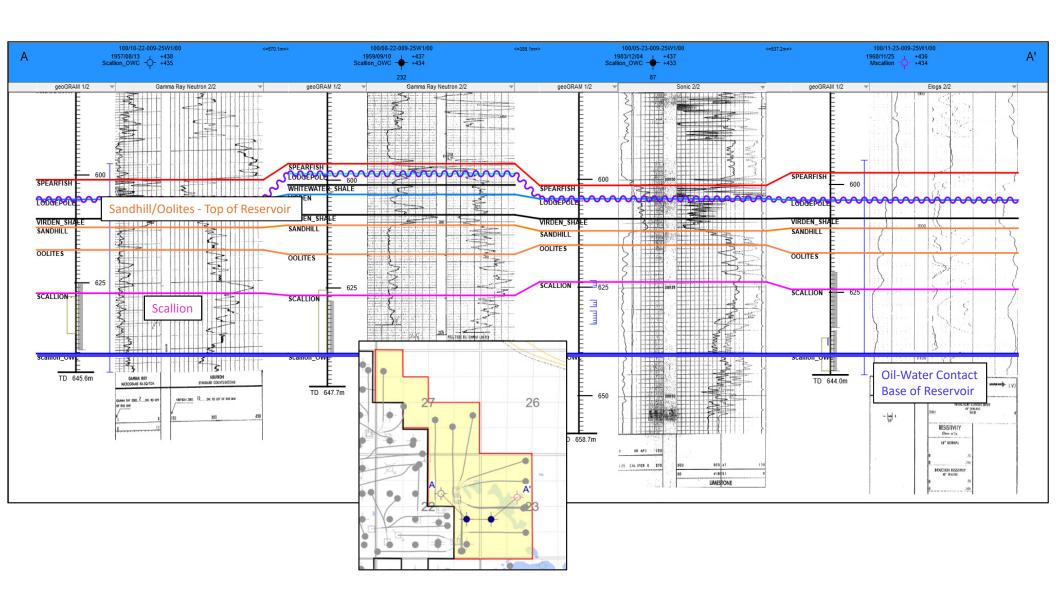


Figure 6b – Injection Pump at 16-17-009-25W1 Battery

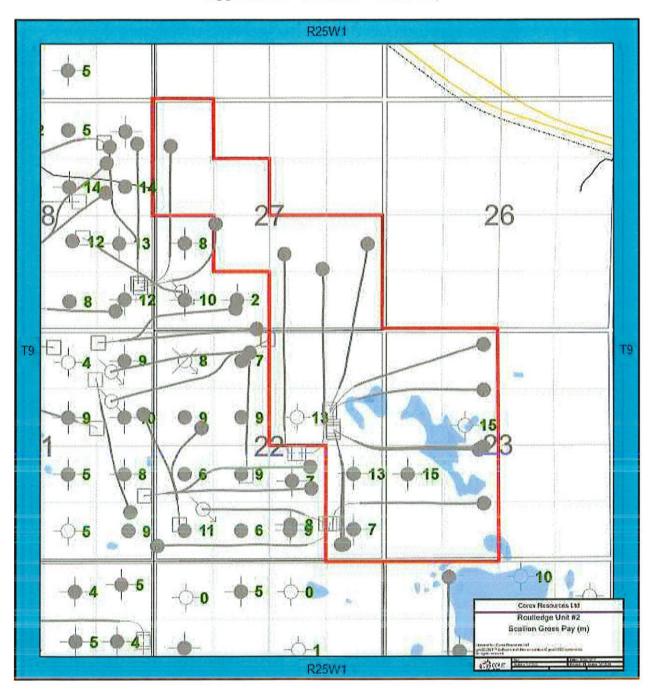


 ${\bf Figure~7-Corrosion~Control~System}$ 

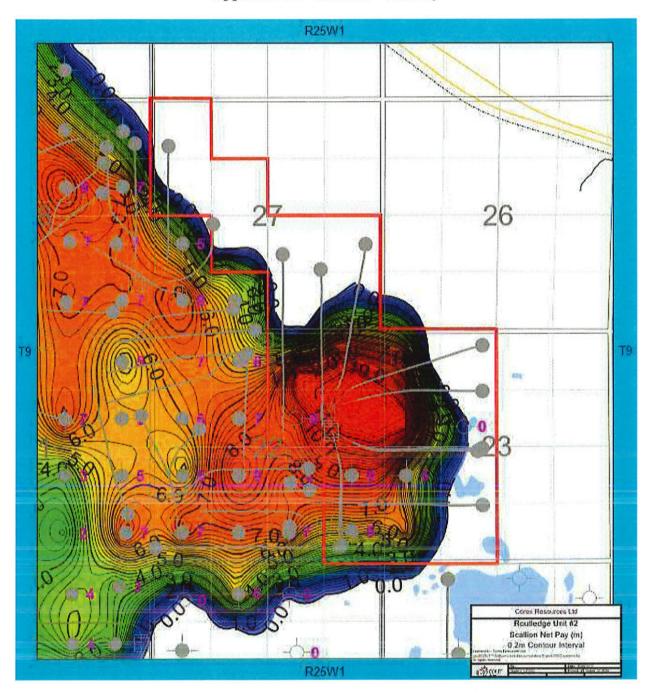
# **Appendix I - Stratigraphy of Lodgepole Formation**



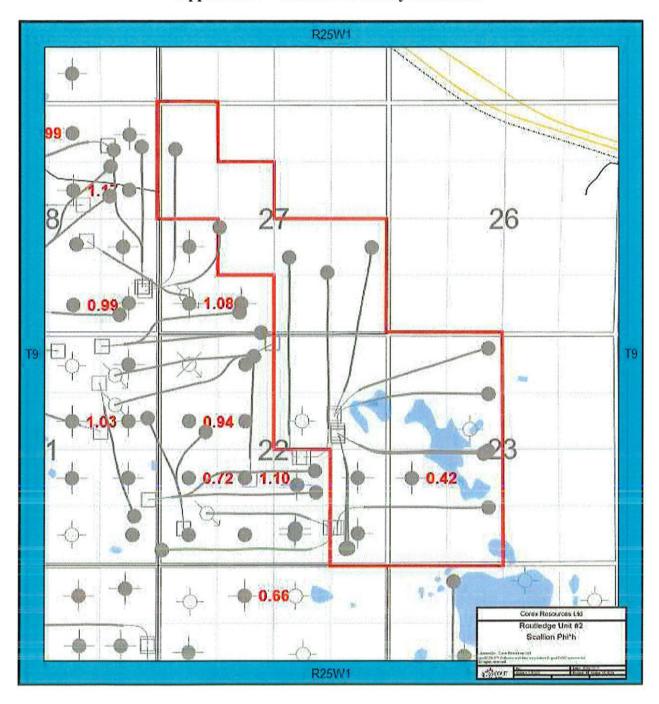
Appendix II – Scallion – Gross Pay



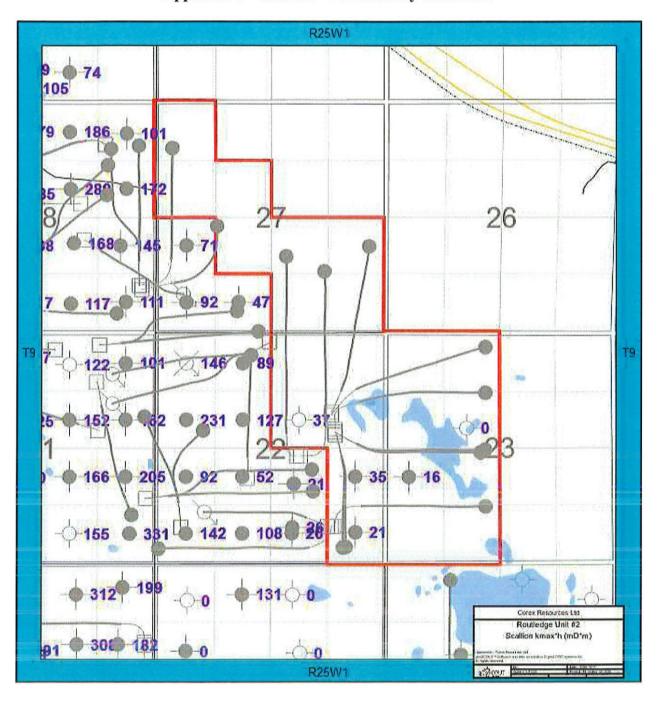
Appendix III - Scallion - Net Pay



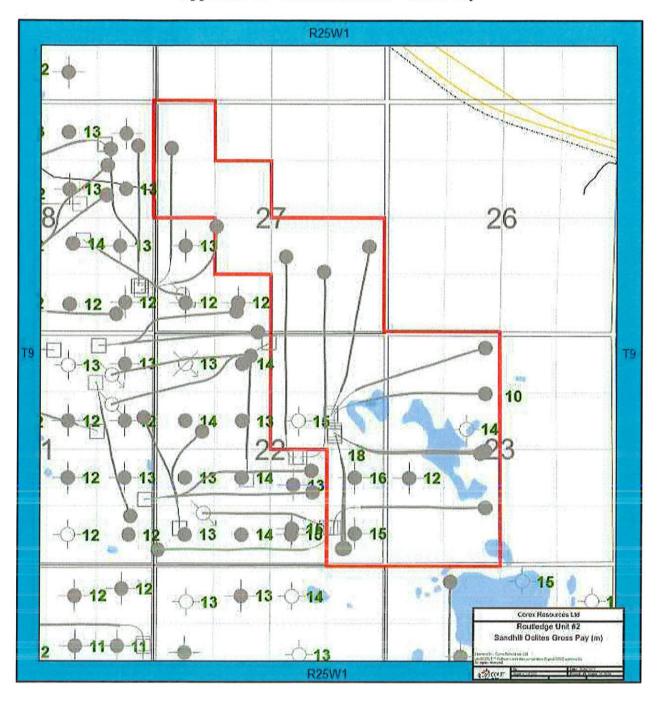
 ${\bf Appendix\ IV-Scallion-Porosity-Thickness}$ 



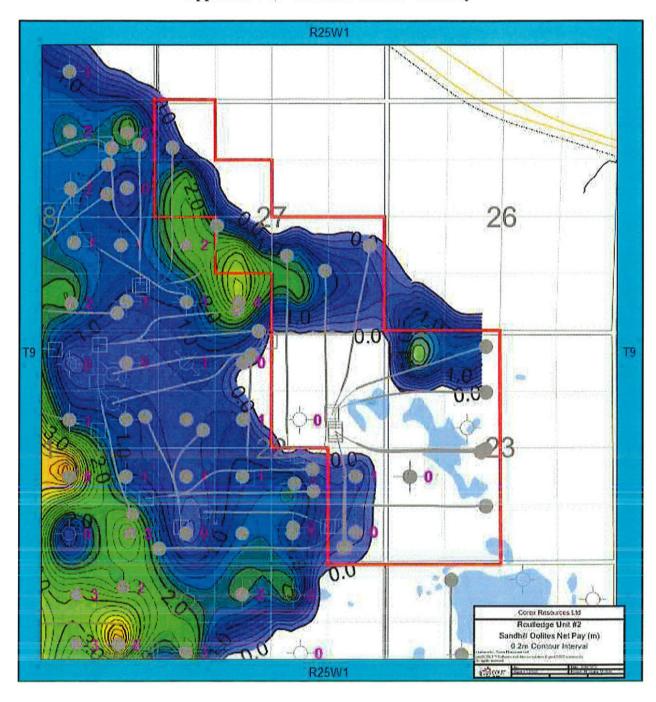
 $Appendix \ V-Scallion-Permeability-Thickness$ 



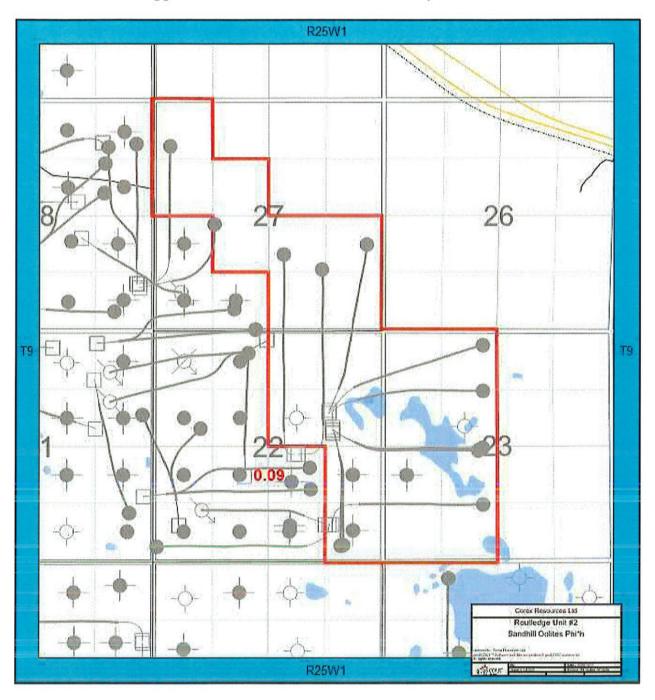
Appendix VI – Sandhill/Oolites – Gross Pay



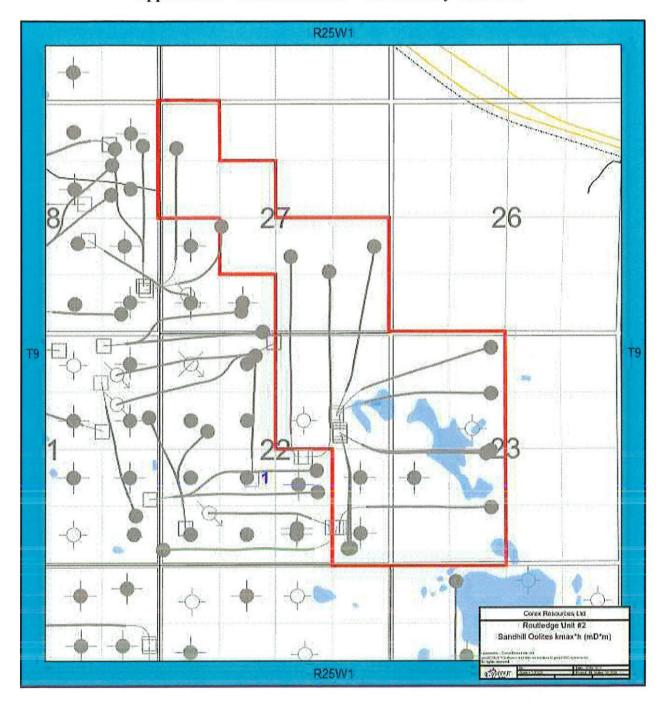
Appendix VII - Sandhill/Oolites - Net Pay



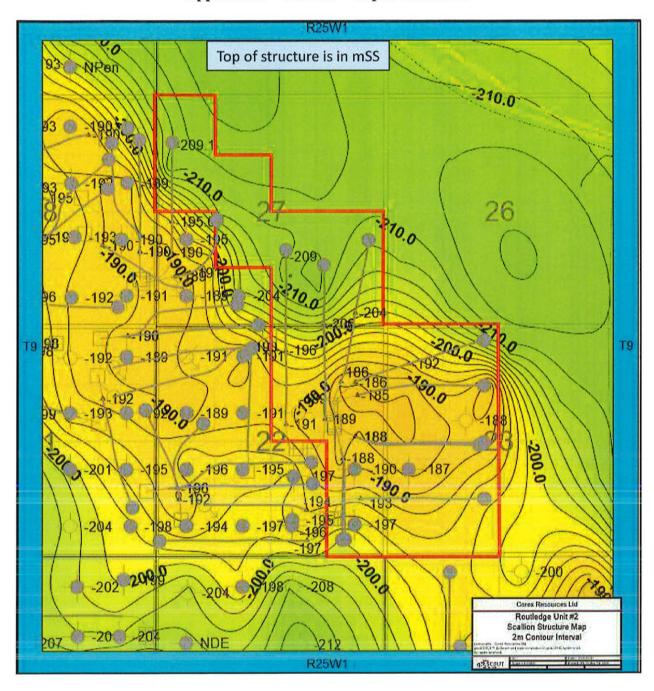
# ${\bf Appendix\ VIII-S and hill/Oolite-Porosity-Thickness}$



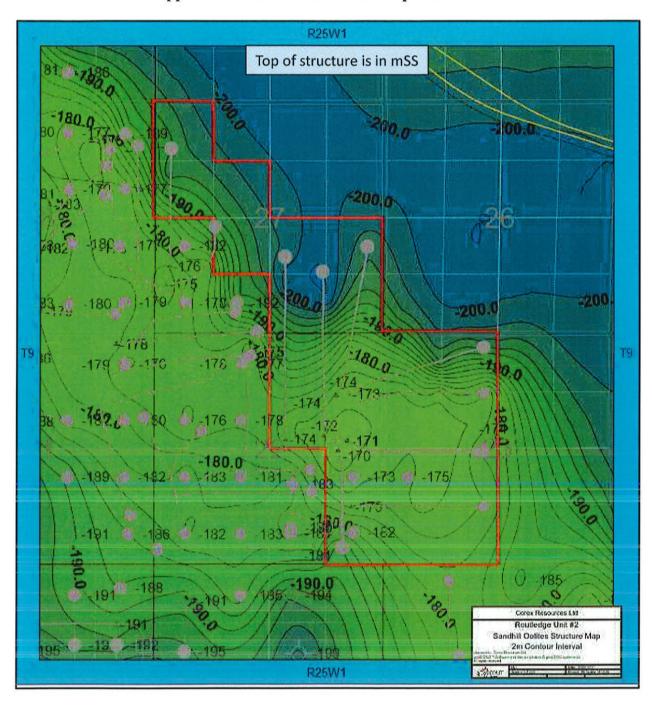
 ${\bf Appendix}\; {\bf IX-Sandhill/Oolites-Permeability-Thickness}$ 



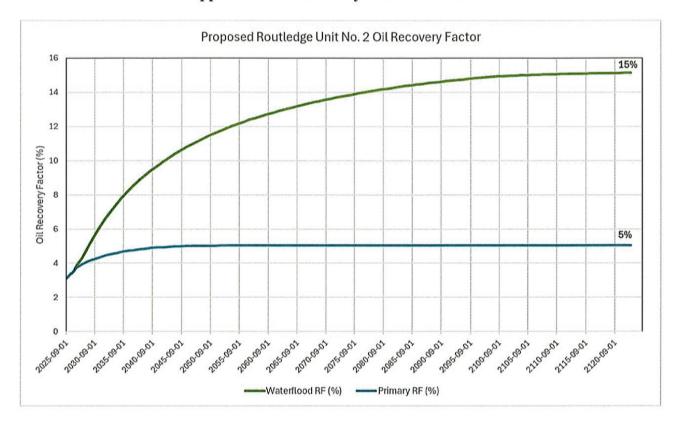
Appendix X - Scallion - Top of Structure



Appendix XI - Sandhill/Oolites - Top of Structure



# Appendix XII - Recovery Factor Forecast



Reservoir Model - Scallion - Recovery Factor

Appendix XIII - Tract Description and Working Interest Owners

	<u>Land</u>				
<u>Tract</u>	<u>Description</u>	Tract Factor	WI Owner	<u>WI Percent</u>	<u>Mineral Owner</u>
01-22	01-22-009-25W1	5.50461850%	Corex	100%	Fillion Trust (1)
08-22	08-22-009-25W1	8.38554745%	Corex	100%	Fillion Trust (1)
09-22	09-22-009-25W1	9.93132187%	Corex	100%	Manitoba (2)
10-22	10-22-009-25W1	10.14609656%	Corex	100%	Manitoba (2)
15-22	15-22-009-25W1	9.35656540%	Corex	100%	Manitoba (2)
16-22	16-22-009-25W1	9.12177488%	Corex	100%	Manitoba (2)
03-23	03-23-009-25W1	0.42024762%	Corex	100%	PrairieSky (3)
04-23	04-23-009-25W1	6.02200423%	Corex	100%	PrairieSky (3)
05-23	05-23-009-25W1	5.65656282%	Corex	100%	PrairieSky (3)
06-23	06-23-009-25W1	0.49137761%	Corex	100%	PrairieSky (3)
11-23	11-23-009-25W1	1.63307090%	Corex	100%	PrairieSky (3)
12-23	12-23-009-25W1	10.34601239%	Corex	100%	PrairieSky (3)
13-23	13-23-009-25W1	9.35978222%	Corex	100%	PrairieSky (3)
14-23	14-23-009-25W1	0.91017504%	Corex	100%	PrairieSky (3)
01-27	01-27-009-25W1	2.04423988%	Corex	100%	PrairieSky (3)
02-27	02-27-009-25W1	2.05972391%	Corex	100%	PrairieSky (3)
06-27	06-27-009-25W1	3.85391071%	Corex	100%	PrairieSky (3)
07-27	07-27-009-25W1	0.97351205%	Corex	100%	PrairieSky (3)
08-27	08-27-009-25W1	0.30630862%	Corex	100%	PrairieSky (3)
11-27	11-27-009-25W1	0.22938114%	Corex	100%	PrairieSky (3)
12-27	12-27-009-25W1	3.05163022%	Corex	100%	PrairieSky (3)
13-27	13-27-009-25W1	0.19613599%	Corex	100%	PrairieSky (3)

Total 100.0000000%

#### Notes:

- 1. Fillion Oil Royalty Trust c/o Scotia Trust
- 2. Manitoba Business, Mining, Trade and Job Creation
- 3. PrairieSky Royalty Ltd.