



March 19, 2015

Manitoba Mineral Resources  
Petroleum Branch  
Suite 360, 1395 Ellice Avenue  
Winnipeg, Manitoba  
R3G 3P2  
**Attention: Mr. Keith Lowdon, Director, Petroleum**

Manitoba Mineral Resources  
Petroleum Branch  
Suite 360, 1395 Ellice Avenue  
Winnipeg, Manitoba  
R3G 3P2  
**Attention: Mr. Leonardo Leonen, Technical Engineering Officer**

**RE: APPLICATION FOR A NEW UNIT NO. 15 AND NEW ENHANCED RECOVERY SCHEME IN  
THE BAKKEN-THREE FORKS POOL IN SECTION 15-007-29W1M  
IN THE DALY SINCLAIR FIELD**

IHS Associates Inc. (IHS) on behalf of Red River Oil Inc. (Red River), operator and working interest owner of the subject lands and wells, submits this application for approval for a new Unit No. 15 (**Exhibit 1**) and a new enhanced oil recovery scheme by the injection of water into wells 100/05-15-007-29W1M and 100/12-15-007-29W1M in the Middle Bakken and Three Forks Formation (Bakken-Three Forks B Pool - 01 62B) to improve oil production from Section 15-007-29W1M, in accordance with Sections 116 and 134 of the Oil and Gas Act of Manitoba (OGAM) and Section 71 of the Drilling and Production Regulation of Manitoba (DPRM).

The proposed new scheme is west of Red River's existing Sinclair Unit No. 4 Project that began injection in 2009.

## **SUMMARY**

The Sinclair portion of the Daly Sinclair Oil Field is located in Townships 007 and 008 Ranges 28 and 29 W1M (**Exhibit 2**). Since discovery in 2004, the main oilfield area was developed with vertical wells at 16 hectare spacing on primary production. Since early 2009, a significant portion of the main oilfield has been unitized and placed on enhanced oil recovery by waterflood, mainly from the Lyleton A and B members of the Three Forks Formation. Recently, horizontal well development has been successfully used to further develop and recover oil from the Bakken-Three Forks Formation in the Field.

ER by waterflood has been proven to be effective in the Daly Sinclair Bakken-Three Forks Pool by Red River and offset operators.

- Red River is a working interest owner and operator in the area of application.
- Injection water for the proposed Sinclair Unit No.15 will be supplied from Red River's produced water from surrounding Bakken- Three Forks wells via Red River's battery and injection facility located at 08-16-007-29W1M. These are the same facilities servicing Red River's Sinclair Unit No. 4 waterflood scheme.
- The injected water will be confined to the producing zone.
- Red River expects to recover 10-15% of initial oil in place, incremental to primary production, in Section 15-007-29W1M.

This application is being submitted simultaneously with an application for a new waterflood unit and project area Unit No. 16 comprised of N/2 18, 19 and W/2 20-007-29W1M.

### **Exhibits 1 and 2 – Approval Area and Field Map**

Maps illustrating the application area and mineral ownership in the Daly Sinclair Bakken-Three Forks B Pool are included in **Exhibit 1**. Sections 15-007-29W1M is subject to default spacing stipulating one well per pool per legal subdivision (LSD) with centre targets in accordance with Section 11 of the DPRM. To date, there are 6 horizontal and one vertical well that have been drilled within the application area. All are currently producing. The Bakken-Three Forks B Pool is a very large pool; production history for those wells offsetting the area of application and potentially having an impact or being impacted by the proposed new scheme have been shown on the map and included on the well status summary in **Exhibit 1**.

### **Exhibit 3 – Equity and Notification**

Red River is the only well licensee and lessee in the Bakken-Three Forks B Pool within the application area. The application area contains a mixture of Crown and freehold lessors. Red River and Tundra are the lessees offsetting the area of application with the lessors being a mixture of Crown and freehold owners. Offsetting wells are licensed to Red River or Tundra Oil and Gas Limited (Tundra), primarily. The required setbacks have been adhered to in the wells in and offsetting Section 15-007-29W1M to insure there will be no adverse impact on offset wells.

Sample notification letters to the lessors, lessees, well licensees and surface owners has been attached in **Exhibit 3** along with the record of mailing and receipt of registered letters to the recipients, as required. Letters were mailed March 19, 2015.



As required by Section 71 (e) of the DPRM, letters to the surface owners were sent by Canada Post 'double registered'. The registration record is attached and will be updated as individuals pick up their letters and complete the registration return. Please note all confidential information has been included in Exhibit 13 and is only available to Manitoba Petroleum Branch staff.

After the 3 week notification period elapses, the results of the notification will be forwarded to the Manitoba Petroleum Branch. No concerns or objections have been received to date, and none are expected. A land data map, land schedules, well status summary and proof of notification are attached.

#### **Exhibit 4 – Original Oil in Place and Unit Tract Factor Allocation**

Net pay mapping and volumetrics were used to estimate the Original Oil in Place (OOIP) for the Bakken-Three Forks B Pool in the Sections 15-007-29W1M application area. As shown in **Exhibit 4, Table 1**, the OOIP is estimated to be  $838.3 \times 10^3 \text{ m}^3$  (5,272,591 barrels). Supporting geological data for the OOIP estimation is discussed further in Exhibits 7-10.

Total remaining oil in place per legal subdivision (LSD) was used as the basis to determine the Unit Tract Factors (UTF). Remaining oil in place was calculated by subtracting the cumulative oil production per LSD (production calculated from the Production Allocation percentage per horizontal or vertical well contained for each LSD) from the OOIP per LSD. OOIP and UTF calculations for all individual LSD's based on this methodology have been calculated to 9 decimal places, results of these calculations are attached in **Exhibit 4**.

Red River proposes that the official name of the new Unit shall be Sinclair Unit No. 15 and that Red River Oil Inc. will be the operator of record for Sinclair Unit No. 15. The unitized zone(s) to be water flooded in the Sinclair Unit No. 15 will be the Middle Bakken and Three Forks formations.

#### **Exhibit 5 – Reserves and Production Data**

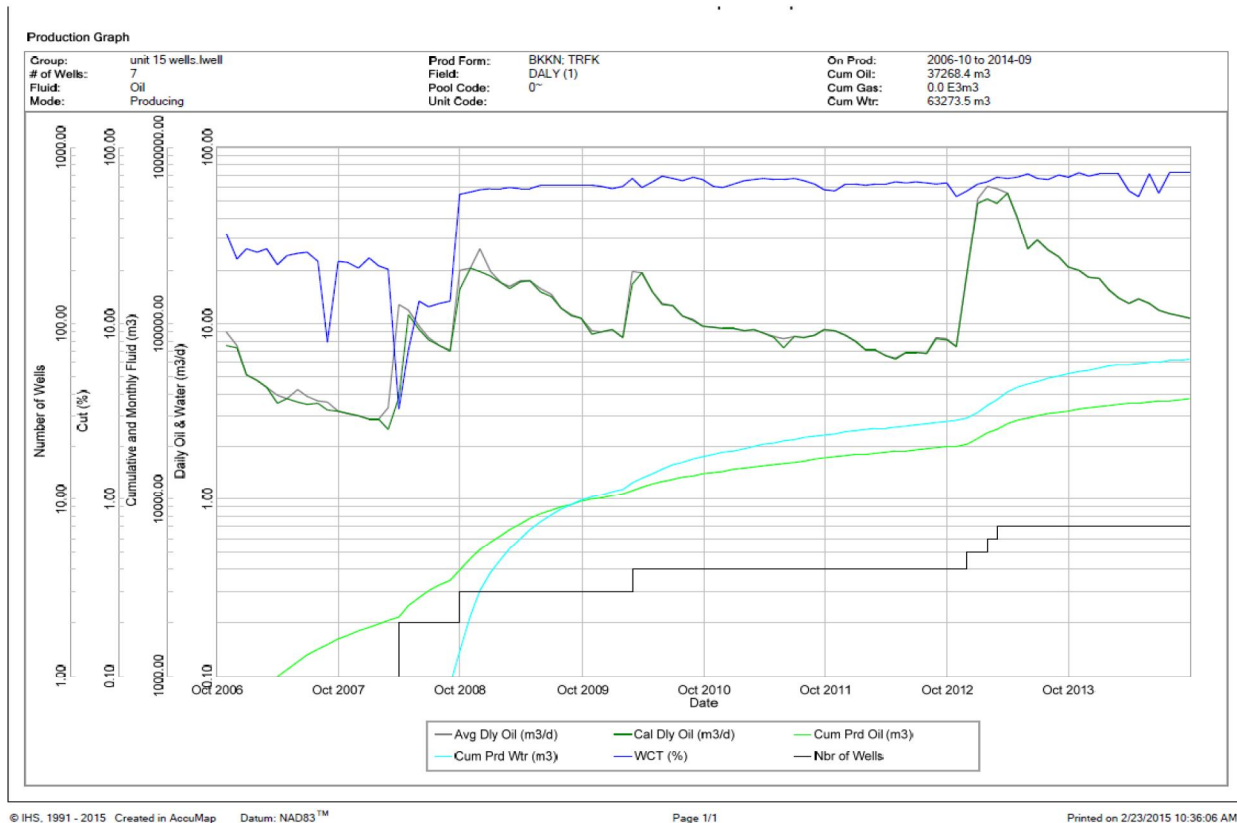
The proposed Sinclair Unit No. 15 project area is located within Township 007 Range 29 W1 of the Daly Sinclair oil field. The proposed Unit 15 currently consists of 7 existing producing wells within the application area. The production, as at September 30, 2014 for the individual wells is:

| UWI                  | On Production  | Last Production | Current Oil Producing Rate<br>m <sup>3</sup> /cday | Cum Oil<br>m <sup>3</sup> | Cum Gas<br>10 <sup>3</sup> m <sup>3</sup> | Cum Water<br>m <sup>3</sup> |
|----------------------|----------------|-----------------|--|---------------------------|---|-----------------------------|
| 100/01-15-007-29W1/0 | October 2006   | September 2014  | 0.5  | 5552                      | -   | 1657.5                      |
| 100/03-15-007-29W1/0 | March 2008     | September 2014  | 2.0  | 7342                      | -   | 8592                        |
| 102/03-15-007-29W1/0 | February 2013  | September 2014  | 2.8  | 3948                      | -   | 7022                        |
| 100/05-15-007-29W1/0 | November 2012  | September 2014  | 2.1  | 4873                      | -   | 8076                        |
| 100/09-15-007-29W1/0 | September 2008 | September 2014  | 1.2  | 9248                      | -   | 22126                       |
| 100/12-15-007-29W1/0 | January 2013   | September 2014  | 1.6  | 2218                      | -   | 6320                        |
| 100/15-15-007-29W1/0 | February 2010  | September 2014  | 0.6  | 4086                      | -   | 9480                        |

A group production plot for the application area wells is shown below, individual well production plots can be found in **Exhibit 5**. Oil production commenced from the proposed Unit area in October 2006 in vertical well 100/01-15-007-29W1/0 (01-15). Well 01-15 continues to produce today. Well 01-15 is the only vertical well on the section; the remaining 6 wells are horizontal wells. From the group production plot it is evident that when each horizontal well was brought on a significant uplift in the production occurred but declined quickly. There are several production peaks but the most recent occurred in March 2013 at 55.5 m<sup>3</sup>/calendar day (cday), with 7 wells on production. Production from section 15-007-29W1 has since declined to 10.8 m<sup>3</sup>/cday in September 2014, with the same 7 wells on production. On a monthly basis, oil production peaked in March 2011 at 1,720 m<sup>3</sup>/month with 7 wells on production but has since declined to 323 m<sup>3</sup>/month in September 2014. Red River believes implementing the waterflood will significantly improve production and overall recovery in the proposed scheme area and



reduce the rate of decline in the horizontal producers.



All section 15-007-29W1M wells produce from the Daly Sinclair Bakken-Three Forks B Pool. As previously mentioned, a well status summary of wells in and offsetting the area of application is included in the attachments (**Exhibit 2**).

As at September 2014, 37,268 m<sup>3</sup> of oil and 63,274 m<sup>3</sup> of water have been produced from the wells in Section 15-007-29W1M. This equates to a recovery of 4.4% of the original oil in place at watercuts in the 60-70% range. There are currently 7 wells on production in section 15 -007-29W1M. Red River estimates 8.5% of the OOIP or 71,258 m<sup>3</sup> will be recovered through primary depletion. Based on the success of the offsetting schemes, Red River estimates an incremental 10-15% of the initial oil in place or 83,827 m<sup>3</sup> (527,259 barrels) to 125,741 m<sup>3</sup> (790,888 barrels) of oil is recoverable by implementing a new ER in Section 15-007-29W1M in the Bakken-Three Forks B Pool.

A table outlining Bakken-Three Forks reservoir parameters can be found below.

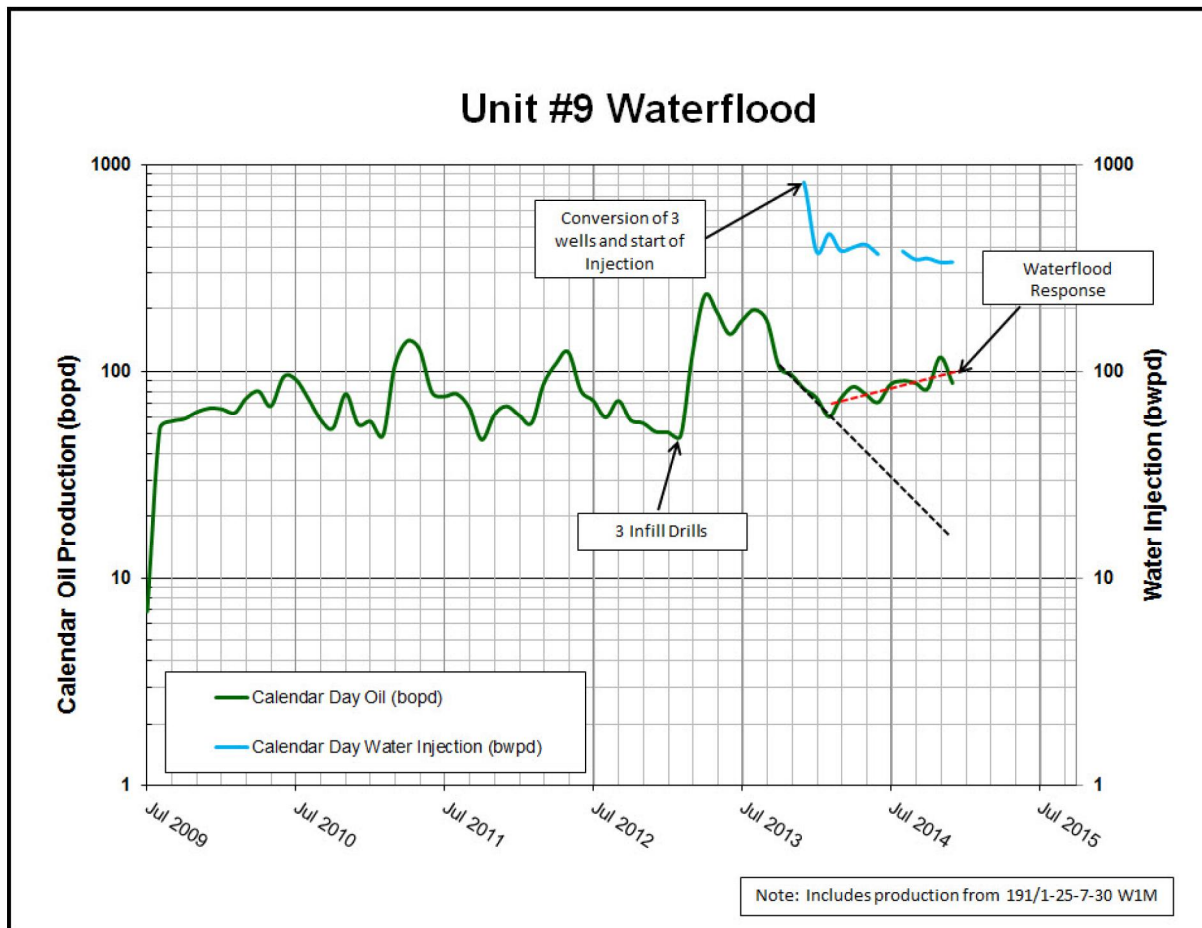
| <b>RESERVOIR</b>   |   |
|--|---|
| <b>Formation Rock and Fluid Parameters</b>                 | <b>Sinclair Unit No. 15</b>                                     |
| Formation pressure (kPa)                                   | 9,500   |
| Saturation pressure (kPa) Bubble pressure                  | 2,034   |
| Formation temperature                                      | 30°C  |
| Current estimated pressure (kPa)                           | 4,500   |
| GOR ( m <sup>3</sup> /m <sup>3</sup> )                     | 6-10  |
| Oil Gravity  | 42° API   |
| Oil Viscosity (cp)   | 4.94  |
| Oil density (kg/m <sup>3</sup> )                           | 815.6   |
| Produced water specific gravity                            | 1.08  |
| S <sub>oi</sub> (fraction)- Initial oil saturation         | 0.55  |
| S <sub>wi</sub> (fraction)- initial water saturation       | 0.45  |
| S <sub>or</sub> (fraction)- Residual Oil saturation        | NA  |
| S <sub>wirr</sub> (fraction)- Irreducible water saturation | NA  |
| Wettability  | Moderately oil wet  |
| Average air permeability mD                                | Lyleton/Three Forks Member 0.3-1.5; 1-15<br>Middle Bakken 0.3-5 |
| k <sub>oi</sub> (effective) initial permeability to oil    | NA  |
| k <sub>wf</sub> (effective) final permeability to water    | NA  |
| Average porosity   | Lyleton/Three Forks Member 15.2%<br>Middle Bakken 14.7%         |
| produced water pH  | 7.1-7.3   |
| produced water TDS   | 125,000   |

### Waterflood Production Forecast

Due to the unconventional nature of the reservoir, reservoir simulation cannot be used to accurately model and predict ultimate recoveries and sweep efficiency of the proposed waterflood. The absence of water breakthrough in offsetting waterfloods increases the difficulty in obtaining a production match and hence a reliable reservoir model for predictive purposes.

Red River believes the offsetting Red River Unit No. 9 (shown below) and Tundra waterflood projects are suitable analogues because the geology and well spacing is similar. Red River's Unit No. 15 scheme will be comprised of horizontal producers and injectors as is the case in Red River's Unit No. 9 scheme. Based on the results from Red River's Sinclair Unit No.9, and other offsetting waterflood projects, Red River expects to see a general flattening of the oil decline within 3-6 months of the start of injection.





## Exhibit 6 – Development Plan

As previously discussed, there are 6 producing horizontal and one producing vertical well in the Bakken Three Forks B Pool within the application area. It is Red River's intention to convert 2 existing horizontal producers to injectors as shown in **Exhibit 6**.

The proposed Sinclair Unit No. 15 will be serviced by the existing battery and injection facility located at 08-16-007-29W1. The water to be injected will be filtered Bakken-Three Forks produced water.

Under the current primary depletion strategy, existing wells within the proposed Sinclair Unit No. 15 will be deemed uneconomic when the net oil rate and net oil price revenue stream becomes less than the current producing operating costs. With any positive oil production response under the proposed waterflood scheme, Red River expects the economic limit will be significantly delayed into the future. The actual economic cut off will be a function of net oil price and the production rate response to the waterflood versus the scheme operating costs.

## Exhibits 7-10 Geology

Red River Oil Inc. is currently developing light 42 degree API oil from the Bakken-Three Forks reservoir system in the Sinclair area with long reach horizontal wells and multi-stage frac completions. Waterflooding is the next phase in optimizing reserve recovery from this play. This application is being made to establish a new waterflood Unit in Section 15-7-29W1M of the Sinclair Bakken-Three Forks B pool.

Initial production from Section 15 commenced in October 2006 at the vertical well 100/1-15-7-29W1. Subsequently, 6 horizontal wells were drilled across Section 15 in the Bakken-Three Forks reservoir system over a five year period from 2008 to 2013. Red River plans to convert two of these horizontal wells 100/5-15-7-29W1 and 100/12-15-7-29W1 to water injectors in order to set up the water flood scheme.

Producing zones of interest for this waterflood application are the Upper Devonian Lyleton A Member of the Three Forks Formation and the immediately overlying Mississippian Middle Bakken Siltstones. Horizontal wells have undulated through both the Three Forks Lyleton A Member and the Bakken Siltstones over the length of the laterals.

## Stratigraphy

**Exhibit 7** is a Cross-section that ties three wells on and in the immediate vicinity of Section 15-7-29W1. Bakken Siltstones are highlighted, immediately overlying Three Forks Lyleton A dolomitic siltstones. Upper Bakken Shales and Red Bed Shales represent effective top and bottom seals to the Bakken Siltstone / Lyleton A reservoir package and will contain water injection to allow for effective sweep efficiencies.

The Lyleton A Member of the Three Forks Formation was deposited in an evaporitic, shallow marine tidal flat / sabkha setting. Three distinct cleaning upward cycles make up the Lyleton A section in this area. These cycles grade upward from green shale/dolomitic siltstone breccias (poorer grade reservoir core porosity of 0.12-0.19,  $K_{max}$  0.3-1.5mD) into cleaner, more massive ripple bedded dolomitic siltstones (best reservoir core Phi 0.12-0.19,  $K_{max}$  1.0-15.0mD). Cycles 1, 2 and 3 highlighted on cross-section A-A' represent the top of each of these cleaning upward zones. These cycles can be correlated across the entire Sinclair area and represent excellent continuous reservoir units in which to efficiently sweep oil via water flood. The Lyleton A member is the primary oil producing horizon in this area and is approximately 3.5 - 7.0 m thick with net pay in the order of 1.5 - 3.7 m. Net pay mapping and core data plots of the Lyleton A member are attached in **Exhibit 8**.

The Middle Bakken Siltstones unconformably overlie the Three Forks in this area. Bakken silts were deposited in a shallow marine setting and in this area are made up fine lee laminated quartzose



siltstones, very fine sands and shales. Core porosities of 0.09-0.18 and permeabilities of 0.3-5 mD are characteristic of this zone. The silts thicken over the western half of Section 15 from 1.0 - 4.0 m where they erosively cut out and replace the upper section of the Three Forks reservoir system. Net pay mapping and core data plots of the Middle Bakken Siltstones member are attached in **Exhibit 9**.

Three D seismic mapping of the Upper Bakken Shale in the Sinclair area provides detailed control on the structural configuration of the Bakken Siltstone/Lyleton A reservoir package. **Exhibit 10** is a depth converted 3D seismic structure map of the Upper Bakken Shale over Section 15-7-29W1. This map shows an undulating and SW dipping surface across Section 15. This mapping is used to design the trajectory of horizontal wells to maximize reservoir contact during drilling. No faults in the reservoir package were observed on 3D seismic or encountered in the horizontal wells drilled across these lands to date. No obvious fluid contacts have been recognized within the Bakken Siltstone/Lyleton A reservoir package on the proposed waterflood unit lands.

Volumetric reserve estimates for Section 15-7-29W1 have been determined on an LSD basis by quantifying the Bakken Siltstones and Three Forks Lyleton A reserves separately. Summing these separate analyses gives an accurate assessment of OOIP for this reservoir package.

#### **Pressure Data**

The original reservoir pressure in the project area is estimated to be 9.5 MPa. No recent or representative pressure surveys are currently available from the horizontal producing wells within the proposed Unit 15 project area; however, it is expected that current reservoir pressure is lower due to production from these producers.

#### **Exhibit 11 – Wellbore Schematic**

Completion data from the existing producing wells within the project area indicate an actual fracture pressure gradient range of 16 to 18 kPa/m true vertical depth (TVD). Red River expects the fracture gradient that will be encountered during completion of the proposed horizontal infill wells to be similar to these values. A typical waterflood injection well schematic is shown in **Exhibit 11**.

#### **Exhibit 12 – Water Injection Facility Schematic Details and Corrosion Control Details**

The Sinclair Unit No. 15 waterflood operation will utilize the existing battery and injection plant located at 08-16-007-029W1M. Produced water from the Bakken Three Forks B is to be filtered and injected at the 08-16-7-29W1 facility. Operational practices to prevent corrosion related failures along with injection facility and wellhead schematics are Included in **Exhibit 12**.

## Waterflood Operating Strategy

The 7 wells to be included in the proposed Sinclair Unit No. 15 are:

### Proposed Producers

100/01-15-007-29W1  
100/03-15-007-29W1  
102/03-15-007-29-W1  
100/09-15-007-29W1  
100/15-15-007-29W1

### Proposed Injectors

100/05-15-007-29W1  
100/12-15-007-29W1

Red River will review and monitor the water filtration and treatment system as part of a routine maintenance program. Injection well rates vs. time plots will be monitored for evidence of any injection restriction due to wellbore skin build up.

Existing horizontal producers will be converted for the proposed waterflood as shown in the attachments.

Wellhead injection pressures will be maintained below the lesser value of either:

- the area specific known and calculated fracture gradient, or
- the licensed surface injection Maximum Wellhead Injection Pressure (MWIP)

Red River has a thorough understanding of area fracture gradients. A management program will be utilized to set and routinely review injection target rates and pressures vs. MWIP and the known area formation fracture pressures. All water injection wells will be surface equipped with injection volume metering and rate/pressure control (**Exhibit 12**). An operating procedure for monitoring water injection volumes and meter balancing will also be utilized to monitor the entire system measurement and integrity on a daily basis. The proposed Unit 15 horizontal water injection well rates are forecasted to average 15 – 35 m<sup>3</sup>/cday of water to meet voidage requirements.

## Annual Reporting and Monitoring

In accordance with Section 73 of the DPRM and Section 116 of the OGAM, Red River will submit an annual EOR report within 60 days after the end of each calendar year.

The solution gas to oil ratio (Rs) is virtually zero in the Daly Sinclair Bakken-Three Forks Pool. Consequently, all initial production is primarily a result of depletion drive in this dead oil system. Therefore, Red River believes paying strict attention to and managing volumes withdrawn versus volumes injected is key to the success of this proposed waterflood scheme. Red River is implementing the scheme very early in the life of Sections 15-007-29W1M. Hence, initially Red River intends to inject water volumes 1.0-1.5 times the fluid withdrawal volumes from the section in order to achieve a cumulative voidage ratio as close as possible to 1.0.



Red River's Unit No. 15 waterflood surveillance and annual reporting will consist of the following:

- a) the oil production rate, injection rate, GOR, and WOR during each month for each injection pattern and for the whole project;
- b) the cumulative volume of oil, gas, and water produced and fluid injected for each injection pattern and for the whole project at the end of the year;
- c) the monthly wellhead injection pressure for each injection well;
- d) a summary of the results of any survey of reservoir pressure conducted during the year;
- e) the date and type of any well servicing conducted during the year;
- f) voidage replacement ratio calculations on a monthly and cumulative basis for the project area;
- g) an outline of the method used for quality control and treatment of the injected fluid;
- h) a report of any unusual performance problems and remedial measures taken or being considered;
- i) any other information that the operator or director considers necessary to evaluate the performance of the project.

Red River will review the data for trends and anomalies and provide an analysis if appropriate.

### **Emergency Response Plan (ERP)**

A site specific ERP for this ER scheme is not required. Red River Oil does have an ERP for the Greater Sinclair Area.

In summary, we believe implementation of a new ER scheme in Section 15-007-29W1M in the Bakken-Three Forks B Pool will respond similarly to the nearby Red River and Tundra schemes and is necessary to maximize oil recovery in this portion of the Pool.

In support of the application the following information has been attached:

|           |  |
|-----------|--|
| Exhibit 1 | Application Area and Lessor/Lessee Maps and Lists            |
| Exhibit 2 | Sinclair Daly Pool Map and Well Status Summary               |
| Exhibit 3 | Notification Lists, Sample Letters and Proof of Notification |
| Exhibit 4 | Original Oil in Place and Unit Tract Factor Allocation       |
| Exhibit 5 | Reserves and Production Data                                 |
| Exhibit 6 | Development Plan   |
| Exhibit 7 | Cross Section  |
| Exhibit 8 | Lyleton A Net Pay Mapping and Core Interpretation            |

- Exhibit 9 Middle Bakken Net Pay Mapping and Core Interpretation
- Exhibit 10 Structural Mapping
- Exhibit 11 Wellbore Schematic
- Exhibit 12 Water Injection Facility Schematic and Corrosion Control Details
- Exhibit 13 Confidential Information

We trust this information and application meets your requirements and in the interest of conservation of the oil, your earliest attention to this application would be appreciated. Please contact the undersigned at 403-213-4250 if you have any questions or discussions regarding this application.

Yours truly,  
**IHS Global Canada Ltd.**



Robyn Swanson, P. Eng, C.E.T.  
Senior Engineer

Phone: 403.213.4250

Email: [robyn.swanson@ihs.com](mailto:robyn.swanson@ihs.com)

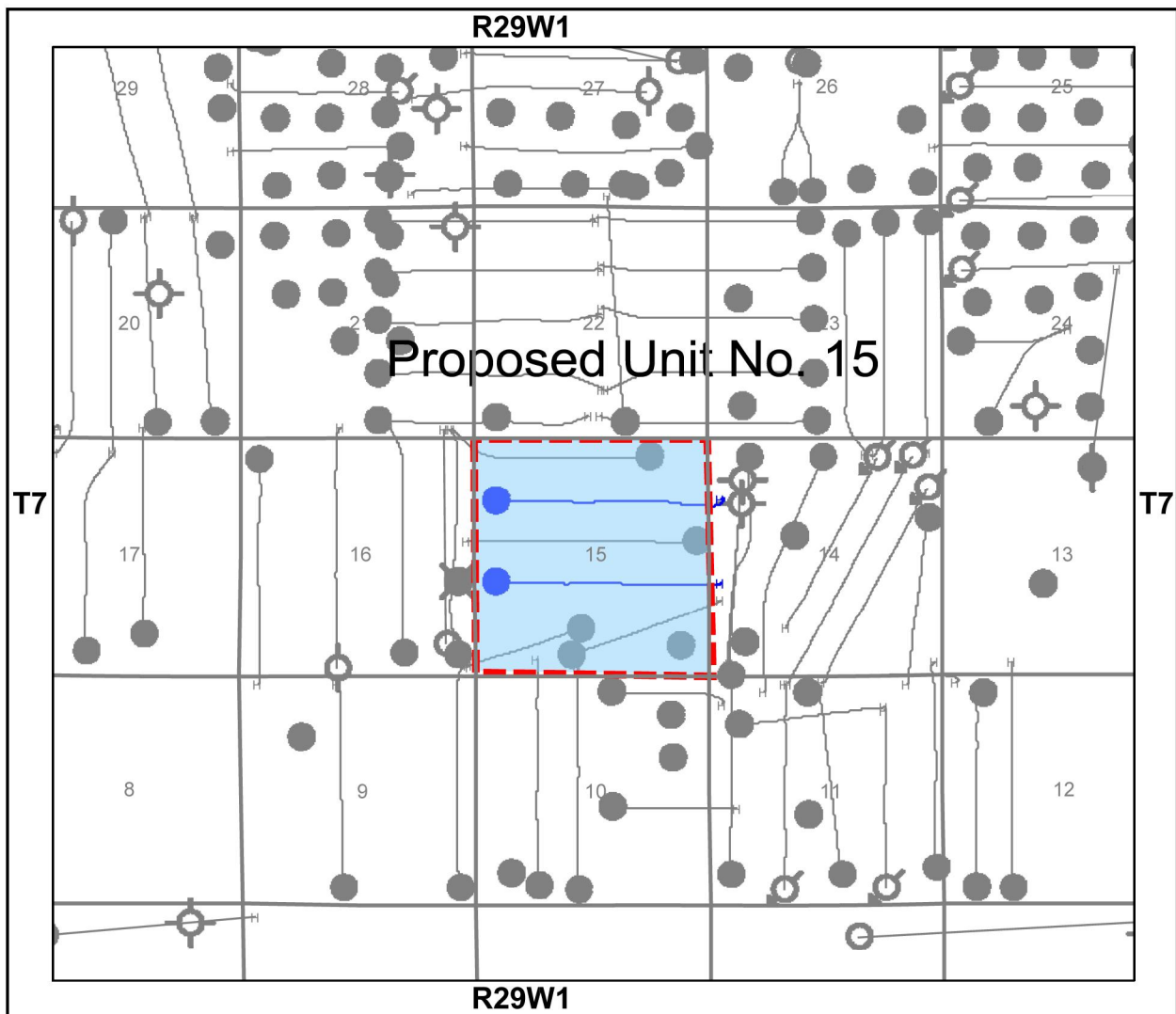
cc. Ken Frankiw, Red River  
Ben MacIsaac, Red River

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**EXHIBIT 1     APPLICATION AREA AND LESSOR/LESSEE MAPS AND LISTS**



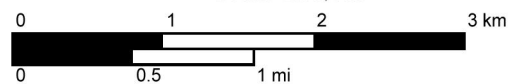


Datum: NAD83 Projection: Stereographic DLS Version AB: ATS 4.1, BC: PRB 2.0, SK: STS 2.5, MB: MLI07

| Map Legend            |                               |
|-----------------------|-------------------------------|
| <b>Grid</b>           | Gas Injection                 |
| <b>DLSS Grid</b>      | Heavy Oil                     |
| Section               | Injection                     |
| Township/Range        | Location                      |
| <b>Culture</b>        | Oil                           |
| First Nation Reserves | Oil & Gas                     |
| <b>Wells</b>          | Service or Drain              |
| Abandoned Gas         | Suspended                     |
| Abandoned Heavy Oil   | Suspended Gas                 |
| Abandoned Oil         | Suspended Heavy Oil           |
| Abandoned Oil & Gas   | Suspended Oil                 |
| Abandoned Service     | Suspended Oil & Gas           |
| Drilling              | <b>Lists</b>                  |
| Dry & Abandoned       | Wells - Injectors (Injectors) |
| Gas                   |                               |

Center: 49.5724, -101.3382

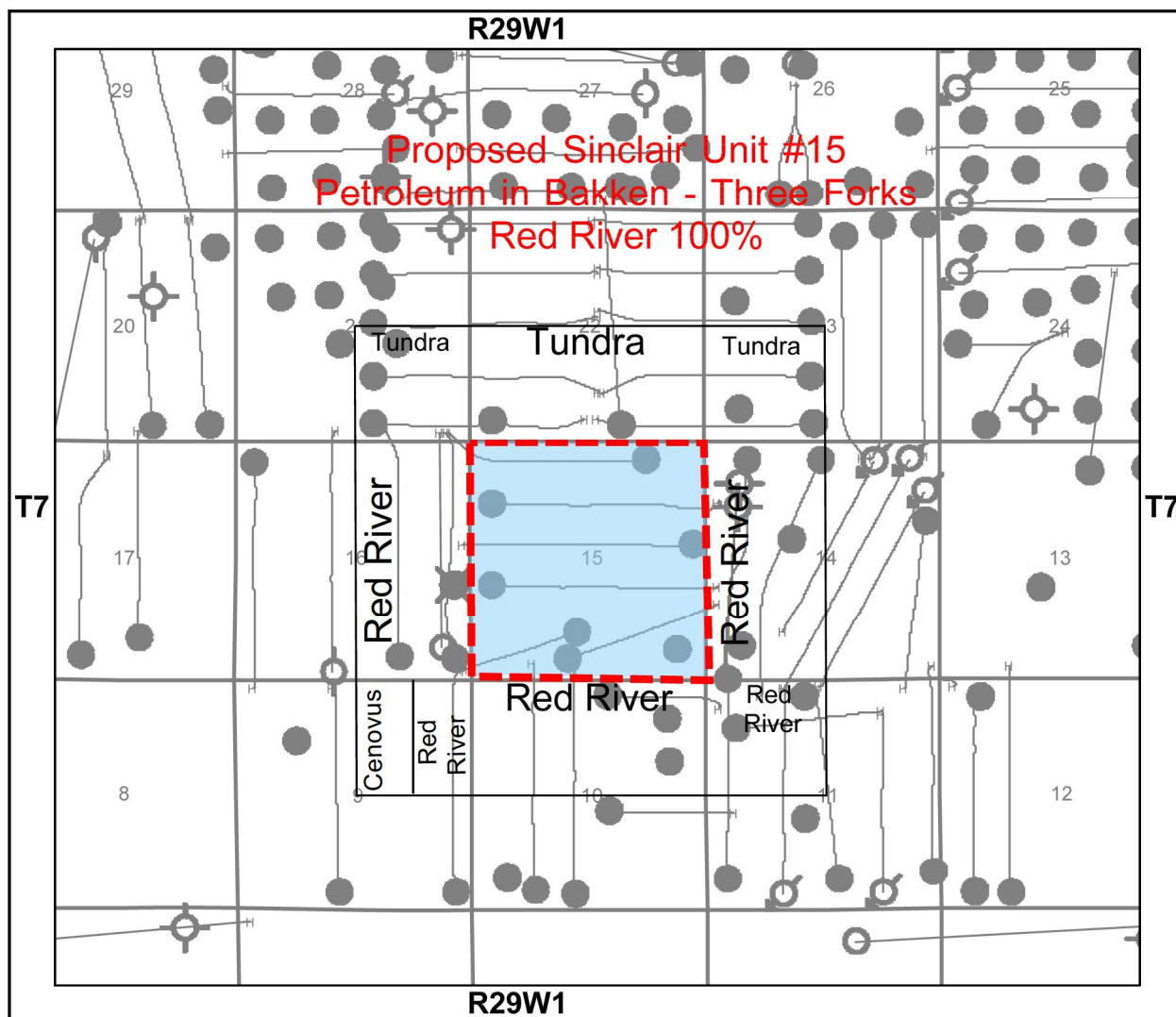
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|   |
| Daly Sinclair Field, MB<br>Application Area<br>Development Plan Unit No. 15 |
| Erin Boyd, February 23, 2015  |
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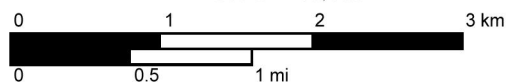


Datum: NAD83 Projection: Stereographic DLS Version AB: ATS 4.1, BC: PRB 2.0, SK: STS 2.5, MB: MLI07

| Map Legend            |                     |
|-----------------------|---------------------|
| <b>Grid</b>           | Gas                 |
| <b>DLSS Grid</b>      | Gas Injection       |
| Section               | Heavy Oil           |
| Township/Range        | Injection           |
| <b>Culture</b>        | Location            |
| First Nation Reserves | Oil                 |
| <b>Wells</b>          | Oil & Gas           |
| Abandoned Gas         | Service or Drain    |
| Abandoned Heavy Oil   | Suspended           |
| Abandoned Oil         | Suspended Gas       |
| Abandoned Oil & Gas   | Suspended Heavy Oil |
| Abandoned Service     | Suspended Oil       |
| Drilling              | Suspended Oil & Gas |
| Dry & Abandoned       |                     |

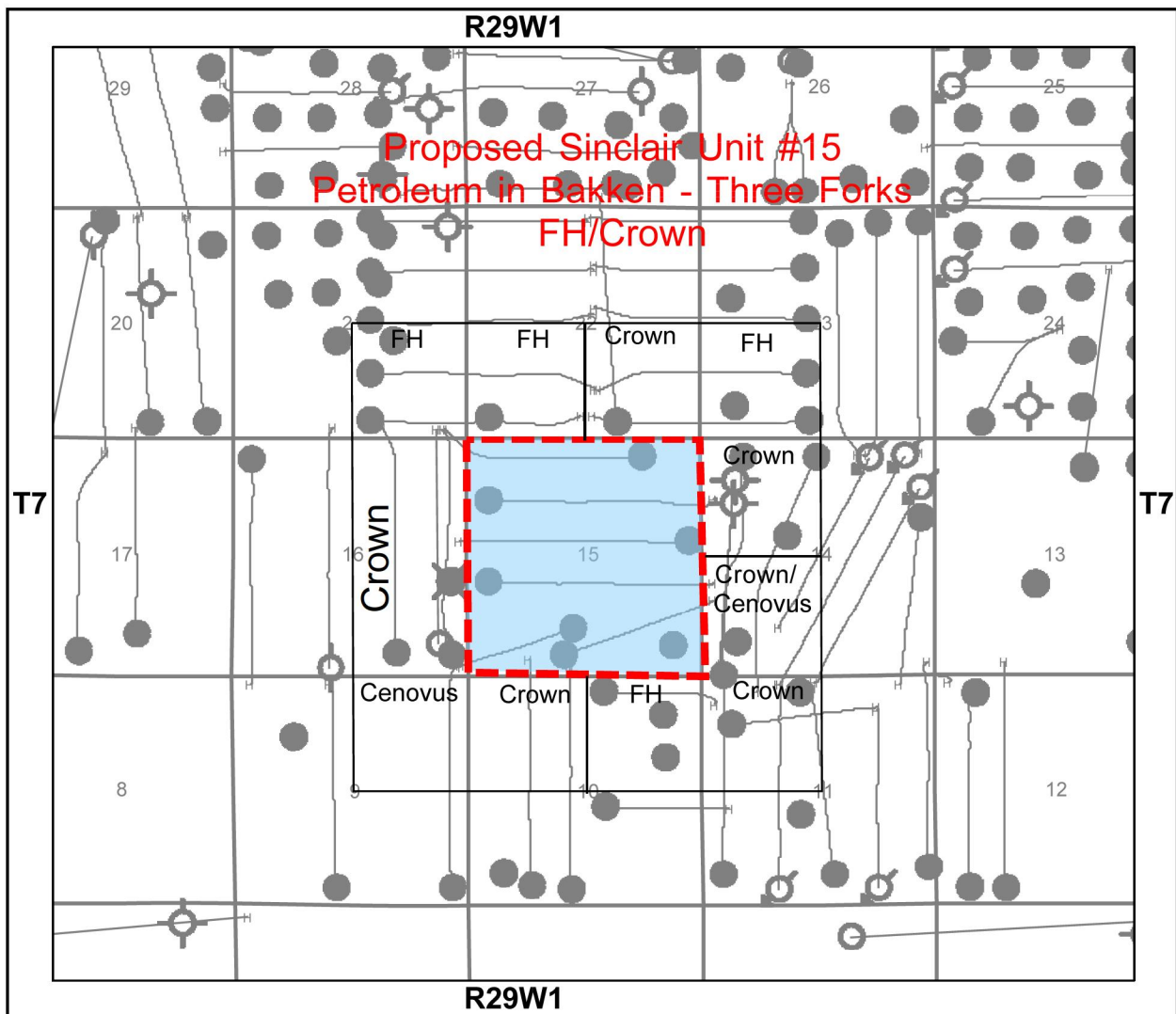
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| Daly Sinclair Field, MB<br>Lessees                          |
| EB, January 20, 2015  |
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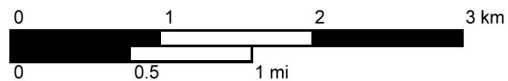


Datum: NAD83 Projection: Stereographic DLS Version AB: ATS 4.1, BC: PRB 2.0, SK: STS 2.5, MB: MLI07

| Map Legend            |                     |
|-----------------------|---------------------|
| <b>Grid</b>           | Gas                 |
| <b>DLSS Grid</b>      | Gas Injection       |
| Section               | Heavy Oil           |
| Township/Range        | Injection           |
| <b>Culture</b>        | Location            |
| First Nation Reserves | Oil                 |
| <b>Wells</b>          | Oil & Gas           |
| Abandoned Gas         | Service or Drain    |
| Abandoned Heavy Oil   | Suspended           |
| Abandoned Oil         | Suspended Gas       |
| Abandoned Oil & Gas   | Suspended Heavy Oil |
| Abandoned Service     | Suspended Oil       |
| Drilling              | Suspended Oil & Gas |
| Dry & Abandoned       |                     |

Center: 49.5724, -101.3375

Scale: 1:50,000



Daly Sinclair Field, MB  
Lessors

EB, January 20, 2015

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**EXHIBIT 2     SINCLAIR DALY POOL MAP AND WELL STATUS SUMMARY**



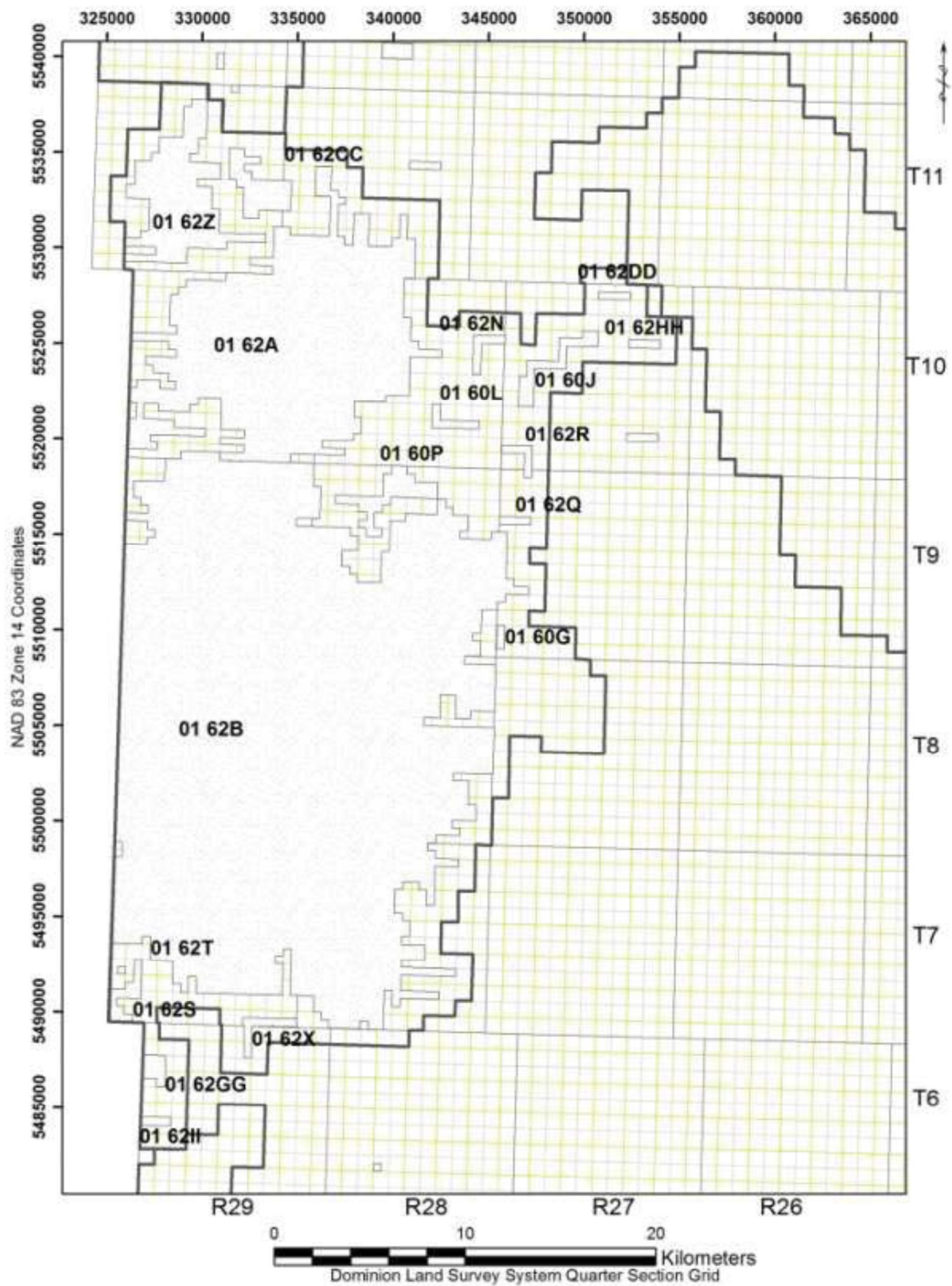


Figure 13 - Daly Sinclair Bakken & Bakken-Torquay Pools (01 60A-0160P & 01 62A-01 62II).



Daily Sinclair Field, MB  
Well Status Summary

| UWI                      | Mode      | Fluid           | License Number | Current Licensee             | Field Name | Pool Name            | Producing Zone | On Prod Date | Last Prod Date | Cum Gas (E3m3) | Avg Dly Gas First(3) Prod Last(3) Prod (E3m3/d) | Avg Dly Gas Last(3) Prod (E3m3/d) | Cum Oil (m3) | Avg Dly Oil First(3) Prod Last(3) Prod (m3/d) | Avg Dly Oil Last(3) Prod (m3/d) | Cum Water (m3) | Avg Dly Water First(3) Prod Last(3) Prod (m3/d) | Avg Dly Water Last(3) Prod (m3/d) |
|--------------------------|-----------|-----------------|----------------|------------------------------|------------|----------------------|----------------|--------------|----------------|----------------|---|-----------------------------------|--------------|---|---------------------------------|----------------|---|-----------------------------------|
| Inside Application Area  |           |                 |                |                              |            |                      |                |              |                |                |   |                                   |              |   |                                 |                |   |                                   |
| 100/01-15-007-29W1/0     | Producing | Oil             | 006022         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | BKKN           | 01/10/2008   | 30/09/2014     | C0             | 0.0   | 0.0                               | 5552.1       | 7.1   | 0.5                             | 1657.5         | 2.7   | 0.2                               |
| 100/03-15-007-29W1/0     | Producing | Oil             | 006626         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | BKKN           | 01/03/2008   | 30/09/2014     | C0             | 0.0   | 0.0                               | 7342.4       | 7.9   | 2.0                             | 8592.1         | 0.4   | 6.9                               |
| 102/03-15-007-29W1/0     | Producing | Oil             | 009173         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | TRK,BKKN       | 01/02/2013   | 30/09/2014     | C0             | 0.0   | 0.0                               | 3948.2       | 16.4  | 2.8                             | 7021.5         | 32.2  | 5.4                               |
| 100/05-15-007-29W1/0     | Producing | Oil             | 008948         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | BKKN           | 01/11/2012   | 30/09/2014     | C0             | 0.0   | 0.0                               | 4873.0       | 20.0  | 2.3                             | 8076.5         | 29.0  | 4.9                               |
| 100/09-15-007-29W1/0     | Producing | Oil             | 006740         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | BKKN           | 01/09/2008   | 30/09/2014     | C0             | 0.0   | 0.0                               | 9248.5       | 13.6  | 1.2                             | 22126.1        | 25.6  | 4.6                               |
| 100/12-15-007-29W1/0     | Producing | Oil             | 008949         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | TRK,BKKN       | 01/02/2013   | 30/09/2014     | C0             | 0.0   | 0.0                               | 2146.7       | 8.9   | 1.6                             | 6095.2         | 23.8  | 5.0                               |
| 100/15-15-007-29W1/0     | Producing | Oil             | 007182         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | BKKN           | 01/02/2010   | 30/09/2014     | C0             | 0.0   | 0.0                               | 4086.4       | 9.8   | 0.6                             | 9480.3         | 20.1  | 1.8                               |
| Outside Application Area |           |                 |                |                              |            |                      |                |              |                |                |   |                                   |              |   |                                 |                |   |                                   |
| 100/01-09-007-29W1/0     | Producing | Oil             | 008047         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | TRK,BKKN       | 01/09/2011   | 30/09/2014     | C0             | 0.0   | 0.0                               | 1551.4       | 3.1   | 0.8                             | 16069.3        | 25.8  | 8.0                               |
| 100/03-10-007-29W1/0     | Producing | Oil             | 006730         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | BKKN           | 01/09/2008   | 30/09/2014     | C0             | 0.0   | 0.0                               | 4799.6       | 7.0   | 0.8                             | 23390.4        | 28.4  | 4.9                               |
| 102/03-10-007-29W1/0     | Producing | Oil             | 006731         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | BKKN           | 01/10/2008   | 30/09/2014     | C0             | 0.0   | 0.0                               | 4228.2       | 5.1   | 0.5                             | 33998.0        | 32.3  | 6.1                               |
| 100/09-10-007-29W1/0     | Producing | Oil             | 005835         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | UBKN           | 01/07/2006   | 31/08/2007     | C0             | 0.0   | 0.0                               | 301.9        | 1.7   | 0.3                             | 1466.1         | 9.1   | 1.5                               |
| 100/15-10-007-29W1/0     | Producing | Oil             | 009603         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | MIEBK          | 01/01/2014   | 30/09/2014     | C0             | 0.0   | 0.0                               | 1252.3       | 5.9   | 2.1                             | 2069.4         | 10.4  | 7.5                               |
| 100/02-10-007-29W1/0     | Producing | Oil             | 005828         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | BKKN           | 01/07/2006   | 30/09/2014     | C0             | 0.0   | 0.0                               | 2352.8       | 2.9   | 0.3                             | 3029.3         | 4.4   | 0.6                               |
| 100/02-11-007-29W1/0     | Producing | Oil             | 006659         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | BKKN           | 01/08/2008   | 30/09/2014     | C0             | 0.0   | 0.0                               | 2402.4       | 3.9   | 1.4                             | 29174.5        | 17.9  | 15.6                              |
| 100/03-11-007-29W1/0     | Injection | Water Injection | 006948         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | BKKN           | 01/07/2008   | 28/02/2011     | C0             | 0.0   | 0.0                               | 1138.1       | 5.7   | 8.0                             | 6010.3         | 28.6  |                                   |
| 100/13-11-007-29W1/0     | Producing | Oil             | 005486         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | BKKN           | 01/11/2005   | 30/11/2011     | C0             | 0.0   | 0.0                               | 5765.3       | 4.6   | 0.0                             | 14706.2        | 28.9  | 7.4                               |
| 102/13-11-007-29W1/0     | Producing | Oil             | 009531         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | TRK,BKKN       | 01/10/2013   | 30/09/2014     | C0             | 0.0   | 0.0                               | 3053.5       | 12.5  | 6.0                             | 7287.2         | 38.3  | 13.7                              |
| 100/04-14-007-29W1/0     | Producing | Oil             | 005379         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | BKKN           | 01/02/2005   | 30/09/2014     | C0             | 0.0   | 0.0                               | 4391.6       | 3.9   | 0.4                             | 1631.9         | 5.2   | 0.2                               |
| 100/11-14-007-29W1/0     | Producing | Oil             | 005481         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | BKKN,TOOY      | 01/09/2006   | 30/09/2014     | C0             | 0.0   | 0.0                               | 2446.0       | 4.6   | 0.5                             | 2905.8         | 3.7   | 0.5                               |
| 100/12-14-007-29W1/2     | Abandoned | N/A             | 006712         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | BKKN           | 01/10/2005   | 30/09/2014     | C0             | 0.0   | 0.0                               | 1344.2       | 1.8   | 0.4                             | 1809.0         | 4.8   | 0.2                               |
| 100/13-14-007-29W1/0     | Abandoned | N/A             | 006712         | RED RIVER OIL INC.           | DAILY      | N/A                  | N/A            | N/A          | N/A            |                |   |                                   |              |   |                                 |                |   |                                   |
| 100/13-14-007-29W1/3     | Producing | Oil             | 006712         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | BKKN           | 01/08/2008   | 31/07/2011     | C0             | 0.0   | 0.0                               | 3133.6       | 11.2  | 0.0                             | 7665.6         | 23.1  | 3.9                               |
| 100/14-14-007-29W1/0     | Producing | Oil             | 009165         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | TRK,BKKN       | 01/02/2013   | 30/09/2014     | C0             | 0.0   | 0.0                               | 3063.0       | 14.8  | 2.3                             | 7651.2         | 40.3  | 6.4                               |
| 100/15-14-007-29W1/0     | Injection | Water Injection | 006530         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | BKKN           | 01/01/2008   | 30/11/2009     | C0             | 0.0   | 0.0                               | 3890.7       | 15.6  |                                 | 5337.3         | 21.0  |                                   |
| 100/16-14-007-29W1/0     | Injection | Water Injection | 006638         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | BKKN           | 01/07/2008   | 30/11/2009     | C0             | 0.0   | 0.0                               | 3138.4       | 9.7   |                                 | 9403.4         | 27.5  |                                   |
| 102/16-14-007-29W1/0     | Injection | Water Injection | 006734         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | BKKN           | 01/09/2008   | 30/09/2014     | C0             | 0.0   | 0.0                               | 8250.2       | 17.2  | 2.0                             | 10854.7        | 15.7  | 2.4                               |
| 100/01-16-007-29W1/0     | Producing | Oil             | 006758         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | BKKN           | 01/07/2009   | 30/09/2014     | C0             | 0.0   | 0.0                               | 2227.9       | 6.5   | 0.6                             | 10285.3        | 26.4  | 2.6                               |
| 102/01-16-007-29W1/0     | N/A       | N/A             | 009477         | RED RIVER OIL INC.           | DAILY      | N/A                  | N/A            | N/A          | N/A            |                |   |                                   |              |   |                                 |                |   |                                   |
| 102/02-16-007-29W1/0     | Producing | Oil             | 006949         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | BKKN           | 01/07/2009   | 30/09/2014     | C0             | 0.0   | 0.0                               | 2113.6       | 4.7   | 0.4                             | 9975.8         | 29.0  | 1.6                               |
| 100/08-16-007-29W1/0     | Pumping   | Oil             | 005728         | RED RIVER OIL INC.           | DAILY      | BAKKEN-THREE FORKS B | BKKN           | 01/02/2006   | 30/11/2008     | C0             | 0.0   | 0.0                               | 875.7        | 2.1   | 0.6                             | 2002.4         | 5.4   | 1.5                               |
| 100/08-16-007-29W1/2     | Disposal  | Salt Water      | 005728         | RED RIVER OIL INC.           | DAILY      | LOGGEPOLE            | LDGP           | N/A          | N/A            |                |   |                                   | 0.0          |   |                                 | 0.0            |   |                                   |
| 100/02-21-007-29W1/0     | Producing | Oil             | 008225         | TUNDRA OIL & GAS PARTNERSHIP | DAILY      | BAKKEN-THREE FORKS B | BKKN           | 01/08/2012   | 30/09/2014     | C0             | 0.0   | 0.0                               | 4003.7       | 7.0   | 3.3                             | 13003.0        | 46.6  | 8.9                               |
| 100/02-21-007-29W1/0     | Producing | Oil             | 006281         | TUNDRA OIL & GAS PARTNERSHIP | DAILY      | BAKKEN-THREE FORKS B | BKKN           | 01/03/2007   | 30/09/2014     | C0             | 0.0   | 0.0                               | 2864.0       | 2.7   | 0.4                             | 2942.6         | 0.0   | 0.5                               |
| 102/07-21-007-29W1/0     | Producing | Oil             | 009317         | TUNDRA OIL & GAS PARTNERSHIP | DAILY      | BAKKEN-THREE FORKS B | TRK,BKKN       | 01/10/2013   | 30/09/2014     | C0             | 0.0   | 0.0                               | 1212.9       | 2.0   | 5.8                             | 3173.7         | 7.9   | 11.8                              |
| 100/02-22-007-29W1/0     | Producing | Oil             | 007009         | TUNDRA OIL & GAS PARTNERSHIP | DAILY      | BAKKEN-THREE FORKS B | BKKN           | 01/08/2009   | 30/09/2014     | C0             | 0.0   | 0.0                               | 3205.1       | 5.0   | 0.4                             | 10845.7        | 14.0  | 1.6                               |
| 100/04-22-007-29W1/0     | Producing | Oil             | 005271         | TUNDRA OIL & GAS PARTNERSHIP | DAILY      | BAKKEN-THREE FORKS B | BKKN           | 01/07/2004   | 30/09/2014     | C0             | 0.0   | 0.0                               | 1992.9       | 2.1   | 0.1                             | 4635.3         | 6.0   | 0.4                               |
| 100/03-23-007-29W1/0     | Producing | Oil             | 008509         | TUNDRA OIL & GAS PARTNERSHIP | DAILY      | BAKKEN-THREE FORKS B | BKKN           | 01/08/2012   | 30/09/2014     | C0             | 0.0   | 0.0                               | 4067.9       | 11.5  | 2.3                             | 12792.8        | 40.0  | 7.4                               |
| 100/04-23-007-29W1/0     | Producing | Oil             | 006030         | TUNDRA OIL & GAS PARTNERSHIP | DAILY      | BAKKEN-THREE FORKS B | BKKN           | 01/10/2006   | 30/09/2014     | C0             | 0.0   | 0.0                               | 914.1        | 1.4   | 0.1                             | 3369.0         | 4.0   | 0.5                               |
| 100/06-23-007-29W1/0     | Producing | Oil             | 009316         | TUNDRA OIL & GAS PARTNERSHIP | DAILY      | BAKKEN-THREE FORKS B | MIEBK          | 01/10/2013   | 30/09/2014     | C0             | 0.0   | 0.0                               | 1507.2       | 5.6   | 2.3                             | 4410.9         | 19.3  | 7.9                               |

**EXHIBIT 3     NOTIFICATION LISTS, SAMPLE LETTERS AND PROOF OF NOTIFICATION**



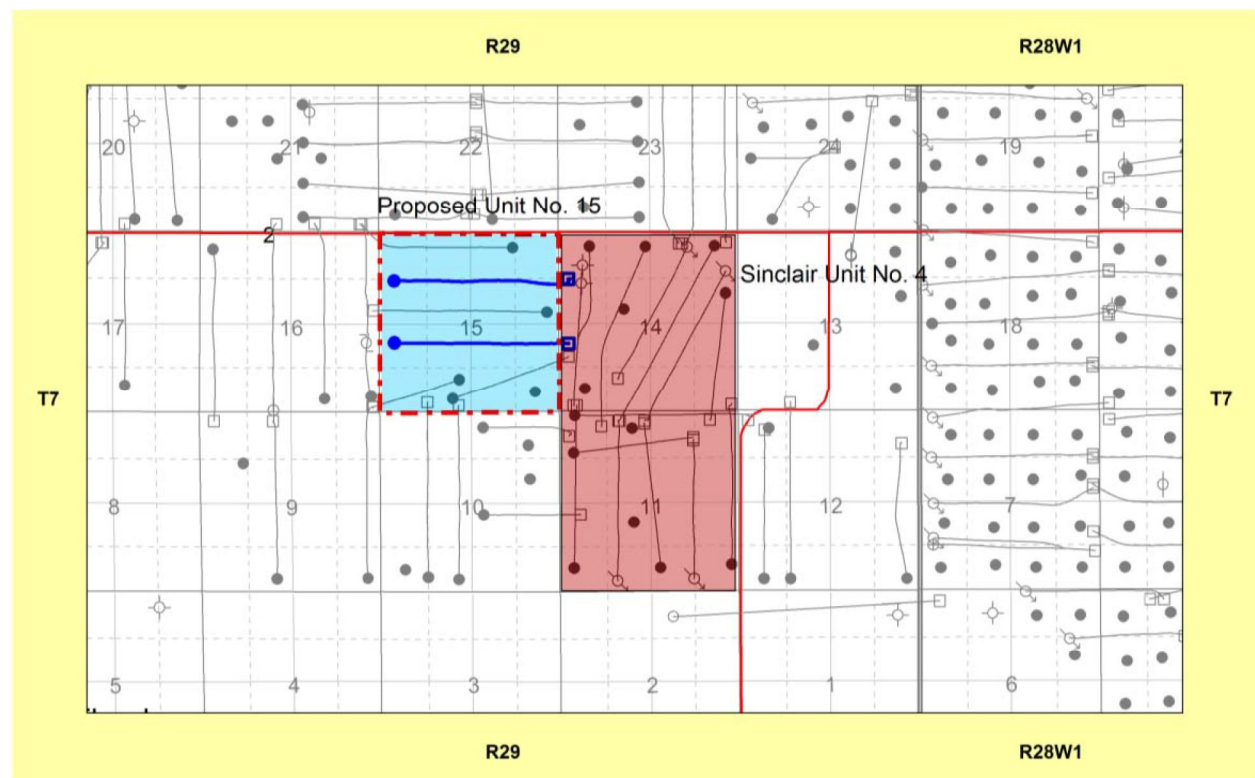
March 13, 2015

**PROJECT NO. RED13\_1002\_A\_03**

**RE: APPLICATION FOR A NEW UNIT NO. 15 AND NEW ENHANCED RECOVERY SCHEME IN THE BAKKEN-THREE FORKS B POOL IN SECTION 15-007-29W1M IN THE DALY SINCLAIR FIELD**

**ATTN:MINERAL INTEREST OWNERS OFFSETTING THE APPLICATION AREA**

IHS Global Canada Limited (IHS) on behalf of Red River Oil Inc. (Red River), operator and working interest owner of the subject lands and wells, submits this application for approval for a new Unit No. 15 and a new enhanced oil recovery scheme by the injection of produced water into wells 100/05-15-007-29 W1M and 100/12-15-007-29 W1M in the Middle Bakken and Three Forks Formation (Bakken and Three Forks B Pool - 01 62B) to improve oil production from the section 15 -007-29W1M, in accordance with Sections 116 and 134 of the Oil and Gas Act of Manitoba (OGAM) and Section 71 of the Drilling and Production Regulation of Manitoba (DPRM).



Note: Proposed injection wells are shown in blue.



## SUMMARY

The Sinclair portion of the Daly Sinclair Oil Field is located in Townships 007 and 008 Ranges 28 and 29 W1M. Since discovery in 2004, the main oilfield area was developed with vertical wells at 16 hectare spacing on primary production. Since early 2009, a significant portion of the main oilfield has been unitized and placed on enhanced oil recovery by waterflood, mainly from the Lyleton A and B members of the Three Forks Formation.

- ER by waterflood has been proven to be effective in the Daly Sinclair Bakken Three Forks Pool by offset operators.
- Red River is a working interest owner and operator in the area of application.
- The injected water will be produced water from Red River's surrounding Bakken- Three Forks production.
- The injected water will be confined to this zone.

You are being notified as a mineral owner/well licensee in the Daly Sinclair Bakken and Three Forks B Pool (01 62B Pool), within or 0.5 km offsetting the area of application.

Any questions regarding this application are to be directed to the undersigned at 403.213.4250. If you have any concerns regarding the application, a written submission must be filed with the undersigned, quoting the project number as shown above. Submissions can be sent Attention: Robyn Swanson, to the following address **800 – 112 4th Avenue SW East Tower, Calgary, AB, T2P 0H3** or by fax or e-mail within 15 working days from the date of this letter. The applicant will then contact you to discuss your concerns. Should your concerns remain unresolved, they will be included as a submission to the application when filed with the Manitoba Petroleum Branch.

In the absence of a response on or before 15 working days from the date of this letter, we will assume that you have no objections to the proposed application and the



Manitoba Petroleum Branch may process the application without further contact with you.

Copies of the application may be obtained by contacting the undersigned or may be viewed electronically the Manitoba Petroleum Branch web site at:

<http://www.gov.mb.ca/iem/petroleum/applications/index.html>

Yours truly,  
**IHS Global Canada Limited**

A handwritten signature in black ink, appearing to read 'Robyn Swanson', written in a cursive style.

Robyn Swanson, C.E.T., P. Eng.  
Senior Technical Advisor

**Fax: 403.213.4298**  
**Email: [robyn.swanson@ihs.com](mailto:robyn.swanson@ihs.com)**

cc : Ben MacIsaac, Red River



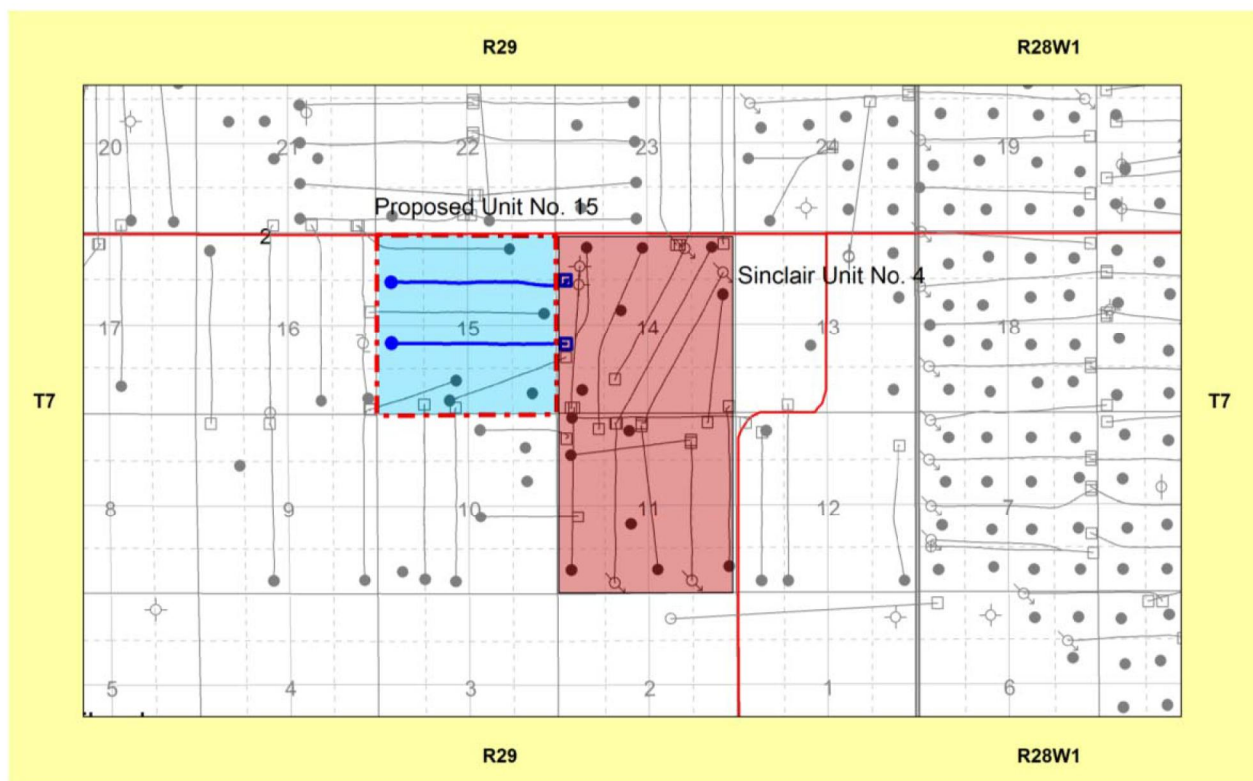
March 13, 2015

**PROJECT NO. RED13\_1002\_A\_03**

**RE: APPLICATION FOR A NEW UNIT NO. 15 AND NEW ENHANCED RECOVERY SCHEME  
IN THE BAKKEN-THREE FORKS B POOL IN SECTION 15-007-29W1M  
IN THE DALY SINCLAIR FIELD**

**ATTN: MINERAL INTEREST OWNERS WITHIN THE APPLICATION AREA**

IHS Global Canada Limited (IHS) on behalf of Red River Oil Inc. (Red River), operator and working interest owner of the subject lands and wells, submits this application for approval for a new Unit No. 15 and a new enhanced oil recovery scheme by the injection of produced water into wells 100/05-15-007-29 W1M and 100/12-15-007-29 W1M in the Middle Bakken and Three Forks Formation (Bakken and Three Forks B Pool - 01 62B) to improve oil production from the section 15 -007-29W1M, in accordance with Sections 116 and 134 of the Oil and Gas Act of Manitoba (OGAM) and Section 71 of the Drilling and Production Regulation of Manitoba (DPRM).



Note: Proposed injectors are shown in blue



## SUMMARY

The Sinclair portion of the Daly Sinclair Oil Field is located in Townships 007 and 008 Ranges 28 and 29 W1M. Since discovery in 2004, the main oilfield area was developed with vertical wells at 16 hectare spacing on primary production. Since early 2009, a significant portion of the main oilfield has been unitized and placed on enhanced oil recovery by waterflood, mainly from the Lyleton A and B members of the Three Forks Formation.

- ER by waterflood has been proven to be effective in the Daly Sinclair Bakken Three Forks Pool by Red River and offset operators.
- Red River is a working interest owner and operator in the area of application.
- The injected water will be produced water from Red River's surrounding Bakken- Three Forks production.
- The injected water will be confined to this zone.

You are being notified as a mineral owner within the area of application in the Daly Sinclair Bakken and Three Forks B Pool (01 62B Pool).

Copies of the application may be obtained by contacting the undersigned or may be viewed electronically on the Manitoba Petroleum Branch web site at:  
<http://www.gov.mb.ca/iem/petroleum/applications/index.html>

If you have any questions regarding the application, please contact:

**Ben MacIsaac**

Phone: 403-930-2842

Email: [bmacisaac@redriveroil.ca](mailto:bmacisaac@redriveroil.ca)

Red River Oil Inc.

Suite 600, 521 – 3<sup>rd</sup> Avenue SW

Calgary, Alberta

T2P 3T3

Should your concerns remain unresolved, they will be included as a submission to the application when filed with the Manitoba Petroleum Branch.

In the absence of a response on or before **15 working days** from the date of this letter, we will assume that you have no objections to the proposed application and the Manitoba Petroleum Branch may process the application without further contact with you.



In addition, if you have no objections to the proposed application, the attached Unit No. 15 Agreement, approved by the Manitoba Petroleum Branch, requires your review and signature. Kindly execute the agreement along with all the counterpart execution pages and return the counterpart execution pages to Red River's Offices for distribution. We request that the Unit Agreement be executed no later than **March 31, 2015**.

Yours truly,  
**IHS Global Canada Limited**



Robyn Swanson, C.E.T., P. Eng.  
Senior Technical Advisor

**Fax: 403.213.4298**

**Email: [robyn.swanson@ihs.com](mailto:robyn.swanson@ihs.com)**

cc : Ben MacIsaac, Red River

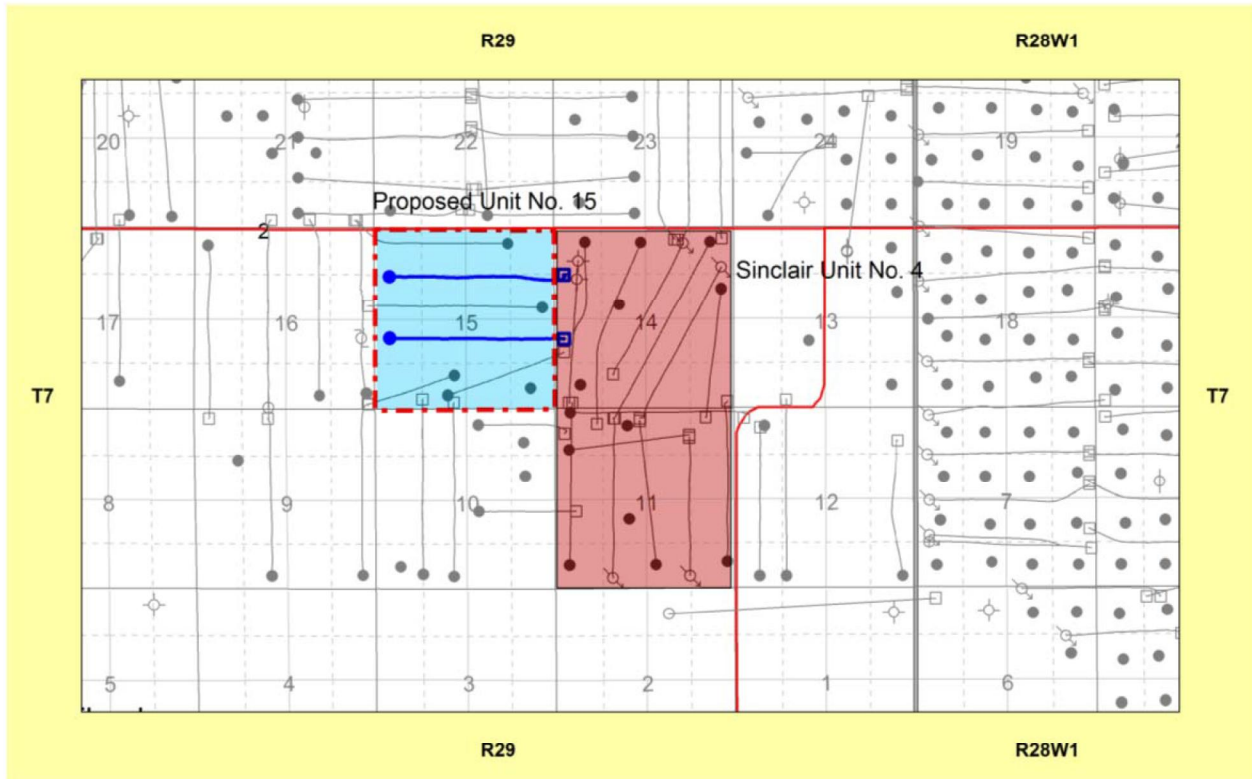
March 19, 2015

**PROJECT NO: RED13-1002-03**

**RE: APPLICATION FOR A NEW UNIT NO. 15 AND NEW ENHANCED RECOVERY SCHEME IN THE BAKKEN-THREE FORKS POOL IN SECTION 15-007-29W1M IN THE DALY SINCLAIR FIELD**

**ATTN: SURFACE OWNERS WITHIN THE APPLICATION AREA**

IHS Global Canada Limited (IHS) on behalf of Red River Oil Inc. (Red River), operator and working interest owner of the subject lands and wells, submits this application for approval for a new Unit No. 15 and a new enhanced oil recovery scheme by the injection of produced water into wells 100/05-15-007-29 W1M and 100/12-15-007-29 W1M in the Middle Bakken and Three Forks Formation (Bakken and Three Forks B Pool - 01 62B) to improve oil production from the section 15 -007-29W1M, in accordance with Sections 116 and 134 of the Oil and Gas Act of Manitoba (OGAM) and Section 71 of the Drilling and Production Regulation of Manitoba (DPRM).



Note: Proposed injection wells are shown in blue



## SUMMARY

The Sinclair portion of the Daly Sinclair Oil Field is located in Townships 007 and 008 Ranges 28 and 29 W1M. Since discovery in 2004, the main oilfield area was developed with vertical wells at 16 hectare spacing on primary production. Since early 2009, a significant portion of the main oilfield has been unitized and placed on enhanced oil recovery by waterflood, mainly from the Lyleton A and B members of the Three Forks Formation.

- Enhanced oil recovery by waterflood has been proven to be effective in the Daly Sinclair Bakken Three Forks Pool by offset operators.
- Red River is a working interest owner and operator in the area of application.
- The injected water will be produced water from Red River's surrounding Bakken- Three Forks production.
- The injected water will be confined to Bakken Three Forks formation.

You are being notified as a surface owner within the area of application.

Copies of the application may be obtained by contacting the undersigned or may be viewed electronically on the Manitoba Petroleum Branch web site at:

<http://www.gov.mb.ca/iem/petroleum/applications/index.html>

If you have any questions regarding the application, please contact:

**Mike Charles**

Phone: 403-930-2833

Email: [mcharles@redriveroil.ca](mailto:mcharles@redriveroil.ca)

Red River Oil Inc.

Suite 600, 521 – 3<sup>rd</sup> Avenue SW

Calgary, Alberta

T2P 3T3

Should your concerns remain unresolved, they will be included as a submission to the application when filed with the Manitoba Petroleum Branch.\



In the absence of a response on or before **15 working days** from the date of this letter, we will assume that you have no objections to the proposed application and the Manitoba Petroleum Branch may process the application without further contact with you.

Yours truly,  
**IHS Global Canada Limited**

A handwritten signature in black ink, appearing to read 'Robyn Swanson', written in a cursive style.

Robyn Swanson, C.E.T., P. Eng.  
Senior Technical Advisor

Fax: 403-213-4298  
Email: [rswanson@fekete.com](mailto:rswanson@fekete.com)

cc : Ben MacIsaac, Red River

**EXHIBIT 4    OOIP, UNITIZATION AND TRACT FACTOR CALCULATIONS**





TABLE 1 OOIP

Red River Oil Inc.

Sinclair Unit # 15

DETERMINATION OF TRACT FACTORS BASED ON OOIP

|             |     | Bakken Silts |             |      |     |                         | Lyleton A / Three Forks |             |         |     |                         | Total                   |
|-------------|-----|--------------|-------------|------|-----|-------------------------|-------------------------|-------------|---------|-----|-------------------------|-------------------------|
| Section     | Lsd | Area (Ha)    | Net Pay (m) | Phi  | Sw  | OOIP ( m <sup>3</sup> ) | Area (Ha)               | Net Pay (m) | Avg Phi | Sw  | OOIP ( m <sup>3</sup> ) | OOIP ( m <sup>3</sup> ) |
| 15-7-29 W1M | 1   | 16           | 1           | 0.13 | 0.5 | 10,196                  | 16                      | 3.5         | 0.15    | 0.4 | 49,412                  | 59,608                  |
| 15-7-29 W1M | 2   | 16           | 0.75        | 0.13 | 0.5 | 7,647                   | 16                      | 3.5         | 0.15    | 0.4 | 49,412                  | 57,059                  |
| 15-7-29 W1M | 3   | 16           | 0.75        | 0.13 | 0.5 | 7,647                   | 16                      | 3           | 0.16    | 0.4 | 45,176                  | 52,824                  |
| 15-7-29 W1M | 4   | 16           | 2           | 0.15 | 0.5 | 23,529                  | 16                      | 2           | 0.16    | 0.4 | 30,118                  | 53,647                  |
| 15-7-29 W1M | 5   | 16           | 2           | 0.15 | 0.5 | 23,529                  | 16                      | 2           | 0.16    | 0.4 | 30,118                  | 53,647                  |
| 15-7-29 W1M | 6   | 16           | 0.75        | 0.14 | 0.5 | 8,235                   | 16                      | 2.5         | 0.16    | 0.4 | 37,647                  | 45,882                  |
| 15-7-29 W1M | 7   | 16           | 0.75        | 0.14 | 0.5 | 8,235                   | 16                      | 3.5         | 0.16    | 0.4 | 52,706                  | 60,941                  |
| 15-7-29 W1M | 8   | 16           | 0.75        | 0.13 | 0.5 | 7,647                   | 16                      | 3.5         | 0.16    | 0.4 | 52,706                  | 60,353                  |
| 15-7-29 W1M | 9   | 16           | 0.75        | 0.13 | 0.5 | 7,647                   | 16                      | 3.5         | 0.16    | 0.4 | 52,706                  | 60,353                  |
| 15-7-29 W1M | 10  | 16           | 0.75        | 0.13 | 0.5 | 7,647                   | 16                      | 3.5         | 0.16    | 0.4 | 52,706                  | 60,353                  |
| 15-7-29 W1M | 11  | 16           | 0.75        | 0.13 | 0.5 | 7,647                   | 16                      | 2.5         | 0.16    | 0.4 | 37,647                  | 45,294                  |
| 15-7-29 W1M | 12  | 16           | 2           | 0.15 | 0.5 | 23,529                  | 16                      | 2           | 0.16    | 0.4 | 30,118                  | 53,647                  |
| 15-7-29 W1M | 13  | 16           | 2           | 0.14 | 0.5 | 21,961                  | 16                      | 2           | 0.16    | 0.4 | 30,118                  | 52,078                  |
| 15-7-29 W1M | 14  | 16           | 0.75        | 0.14 | 0.5 | 8,235                   | 16                      | 1.5         | 0.16    | 0.4 | 22,588                  | 30,824                  |
| 15-7-29 W1M | 15  | 16           | 0.75        | 0.14 | 0.5 | 8,235                   | 16                      | 2.5         | 0.16    | 0.4 | 37,647                  | 45,882                  |
| 15-7-29 W1M | 16  | 16           | 0.75        | 0.14 | 0.5 | 8,235                   | 16                      | 2.5         | 0.16    | 0.4 | 37,647                  | 45,882                  |
| Total       |     | 189,804      |             |      |     |                         | 648,471                 |             |         |     |                         | 838,275                 |

TABLE 2 90 DAY TRACT FACTOR

# Red River Oil Inc.

## Sinclair Unit # 15

### DETERMINATION OF TRACT FACTORS BASED ON REMAINING OIP

| Section       | Lsd | Well                                      | OPIP (m3)      | Cum Oil Produced (m <sup>3</sup> ) | Remaining Oil (m <sup>3</sup> ) | Tract Factor (%) |
|---------------|-----|---|----------------|------------------------------------|---------------------------------|------------------|
| 15-7-29 W1M   | 1   | 100/1-15-007-29 W1M and 102/3-15-7-29 W1M | 59607.8        | 7530.2                             | 52,077.6                        | 0.065016343      |
| 15-7-29 W1M   | 2   | 102/3-15-7-29 W1M                         | 57058.8        | 1975.4                             | 55,083.5                        | 0.068768971      |
| 15-7-29 W1M   | 3   | 100/3-15-7-29 W1M                         | 52823.5        | 3672.5                             | 49,151.0                        | 0.061362624      |
| 15-7-29 W1M   | 4   | 100/3-15-7-29 W1M                         | 53647.1        | 3672.5                             | 49,974.6                        | 0.062390760      |
| 15-7-29 W1M   | 5   | 100/5-15-7-29 W1M                         | 53647.1        | 1219.0                             | 52,428.1                        | 0.065453829      |
| 15-7-29 W1M   | 6   | 100/5-15-7-29 W1M                         | 45882.4        | 1219.0                             | 44,663.4                        | 0.055759980      |
| 15-7-29 W1M   | 7   | 100/5-15-7-29 W1M                         | 60941.2        | 1219.0                             | 59,722.2                        | 0.074560173      |
| 15-7-29 W1M   | 8   | 100/5-15-7-29 W1M                         | 60352.9        | 1219.0                             | 59,133.9                        | 0.073825790      |
| 15-7-29 W1M   | 9   | 100/9-15-7-29 W1M and 100/12-15-7-29 W1M  | 60352.9        | 2867.5                             | 57,485.4                        | 0.071767718      |
| 15-7-29 W1M   | 10  | 100/9-15-7-29 W1M and 100/12-15-7-29 W1M  | 60352.9        | 2867.5                             | 57,485.4                        | 0.071767718      |
| 15-7-29 W1M   | 11  | 100/9-15-7-29 W1M and 100/12-15-7-29 W1M  | 45294.1        | 2867.5                             | 42,426.6                        | 0.052967525      |
| 15-7-29 W1M   | 12  | 100/9-15-7-29 W1M and 100/12-15-7-29 W1M  | 53647.1        | 2867.5                             | 50,779.6                        | 0.063395757      |
| 15-7-29 W1M   | 13  | 100/15-15-7-29 W1M                        | 52078.4        | 1361.6                             | 50,716.8                        | 0.063317386      |
| 15-7-29 W1M   | 14  | 100/15-15-7-29 W1M                        | 30823.5        | 1361.6                             | 29,461.9                        | 0.036781697      |
| 15-7-29 W1M   | 15  | 100/15-15-7-29 W1M                        | 45882.4        | 1361.6                             | 44,520.7                        | 0.055581890      |
| 15-7-29 W1M   | 16  |   | 45882.4        |                                    | 45,882.4                        | 0.057281839      |
| <b>Totals</b> |     |   | <b>838,275</b> | <b>37,281</b>                      | <b>800,993</b>                  | <b>1.000000</b>  |

Table 3

# Red River Oil Inc.

## Sinclair Unit # 15

### Tract Factors

| Section     | Lsd | Tract Factor based on<br>Remaining OIP<br>(%) |
|-------------|-----|---|
| 15-7-29 W1M | 1   | 0.065016343                                   |
| 15-7-29 W1M | 2   | 0.068768971                                   |
| 15-7-29 W1M | 3   | 0.061362624                                   |
| 15-7-29 W1M | 4   | 0.062390760                                   |
| 15-7-29 W1M | 5   | 0.065453829                                   |
| 15-7-29 W1M | 6   | 0.055759980                                   |
| 15-7-29 W1M | 7   | 0.074560173                                   |
| 15-7-29 W1M | 8   | 0.073825790                                   |
| 15-7-29 W1M | 9   | 0.071767718                                   |
| 15-7-29 W1M | 10  | 0.071767718                                   |
| 15-7-29 W1M | 11  | 0.052967525                                   |
| 15-7-29 W1M | 12  | 0.063395757                                   |
| 15-7-29 W1M | 13  | 0.063317386                                   |
| 15-7-29 W1M | 14  | 0.036781697                                   |
| 15-7-29 W1M | 15  | 0.055581890                                   |
| 15-7-29 W1M | 16  | 0.057281839                                   |

**Totals**

**1.000000000**



**EXHIBIT 5      RESERVES AND PRODUCTION DATA**



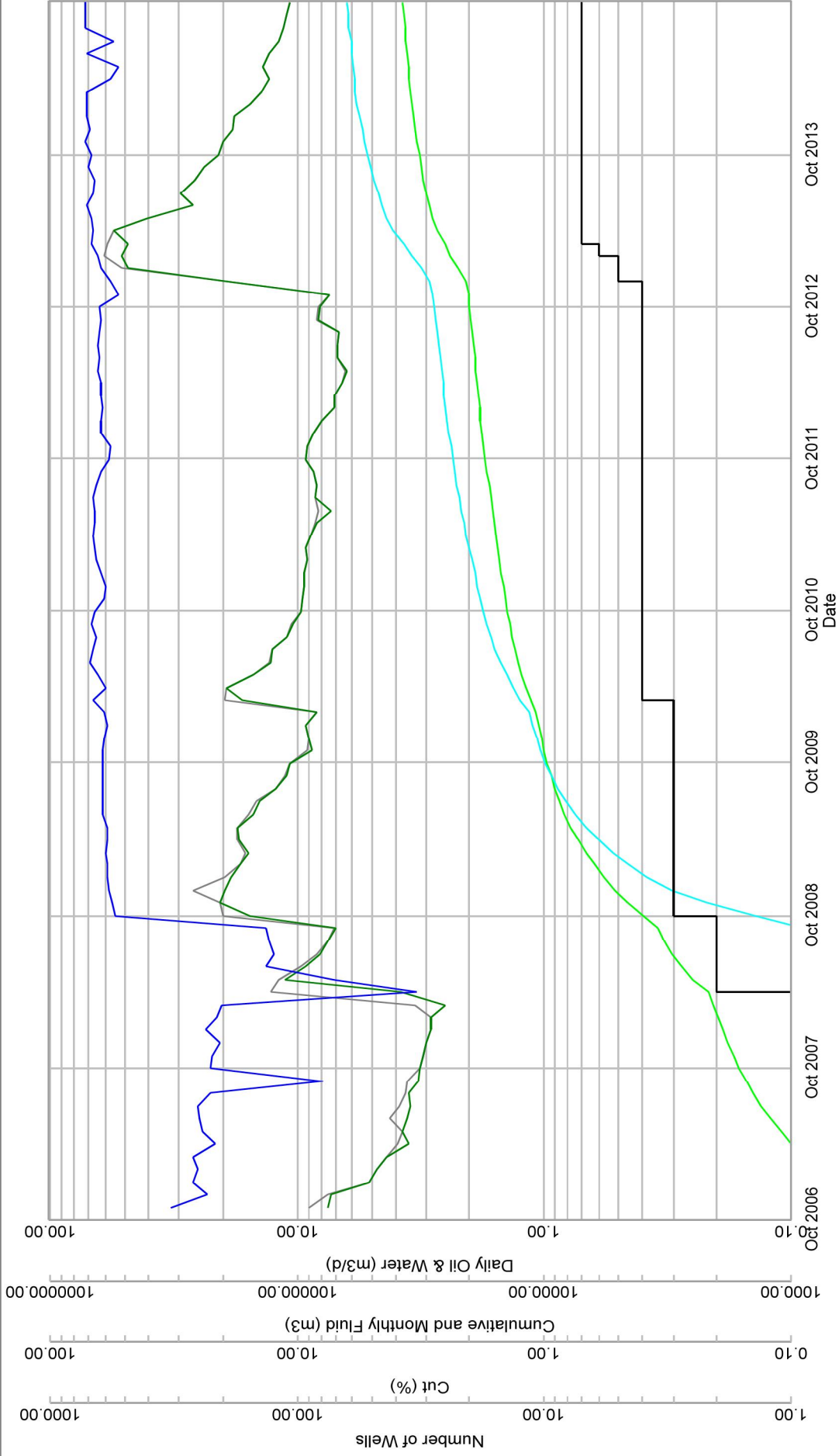
Well Information as of 1/16/2015 - Group Well Report

Production Graph

Group: unit 15 wells.lwell  
# of Wells: 7  
Fluid: Oil  
Mode: Producing

Prod Form: BKKNI, TRFK  
Field: DALY (1)  
Pool Code: 0~  
Unit Code:

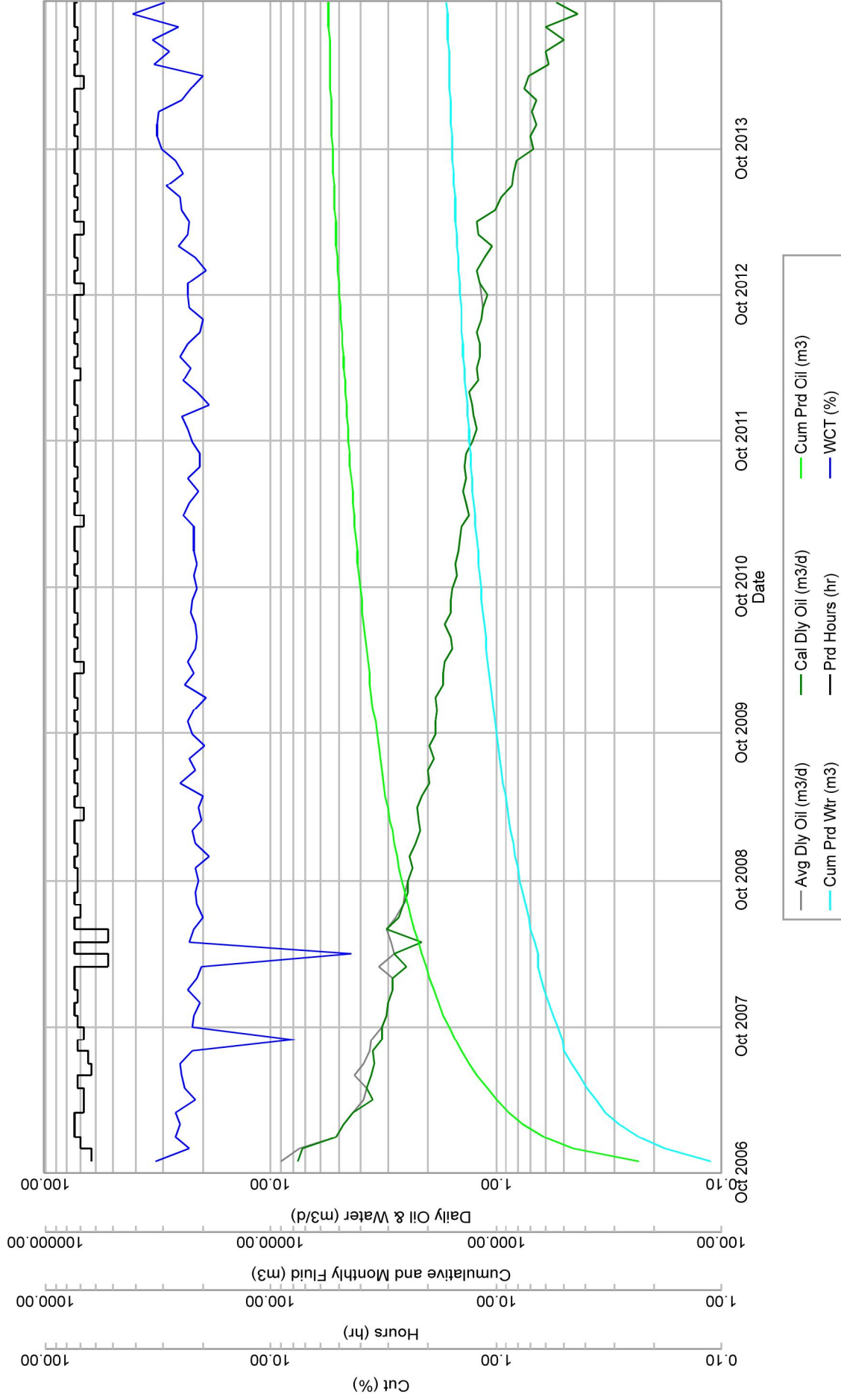
On Prod: 2006-10 to 2014-09  
Cum Oil: 37268.4 m3  
Cum Gas: 0.0 E3m3  
Cum Wtr: 63273.5 m3



— Avg Dly Oil (m3/d) — Cum Prd Oil (m3)  
— Cum Prd Wtr (m3) — WCT (%)  
— Nbr of Wells

Production Graph

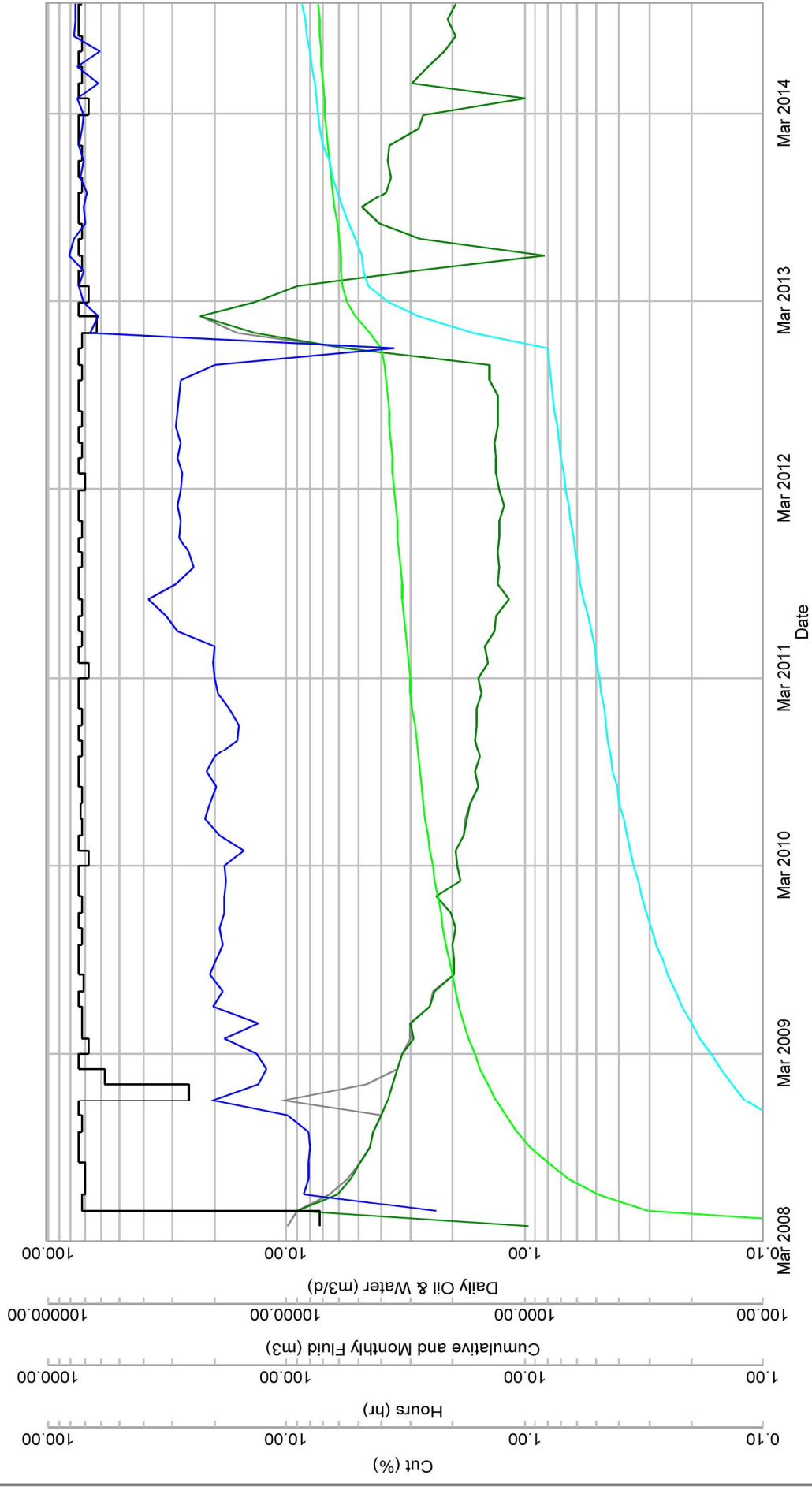
|                |  |            |          |            |           |
|----------------|--|------------|----------|------------|-----------|
| UWI:           | 00/01-15-007-29W1/0                      | Prod Form: | BKKN     | On Prod:   | 10/1/2006 |
| Well Name:     | FAIRBORNE ET AL SINCLAIR 1-15-7-29 (WPM) | Field:     | DALY (1) | Cum Oil:   | 5552.1 m3 |
| Curr Licensee: | RED RIVER OIL INC.                       | Pool Code: | 0~       | Cum Gas:   | 0.0 E3m3  |
| Orig Licensee: | RED RIVER OIL INC.                       | Unit Code: |          | Cum Water: | 1657.5 m3 |
| Status:        | Oil, Producing                           | Battery:   |          |            |           |





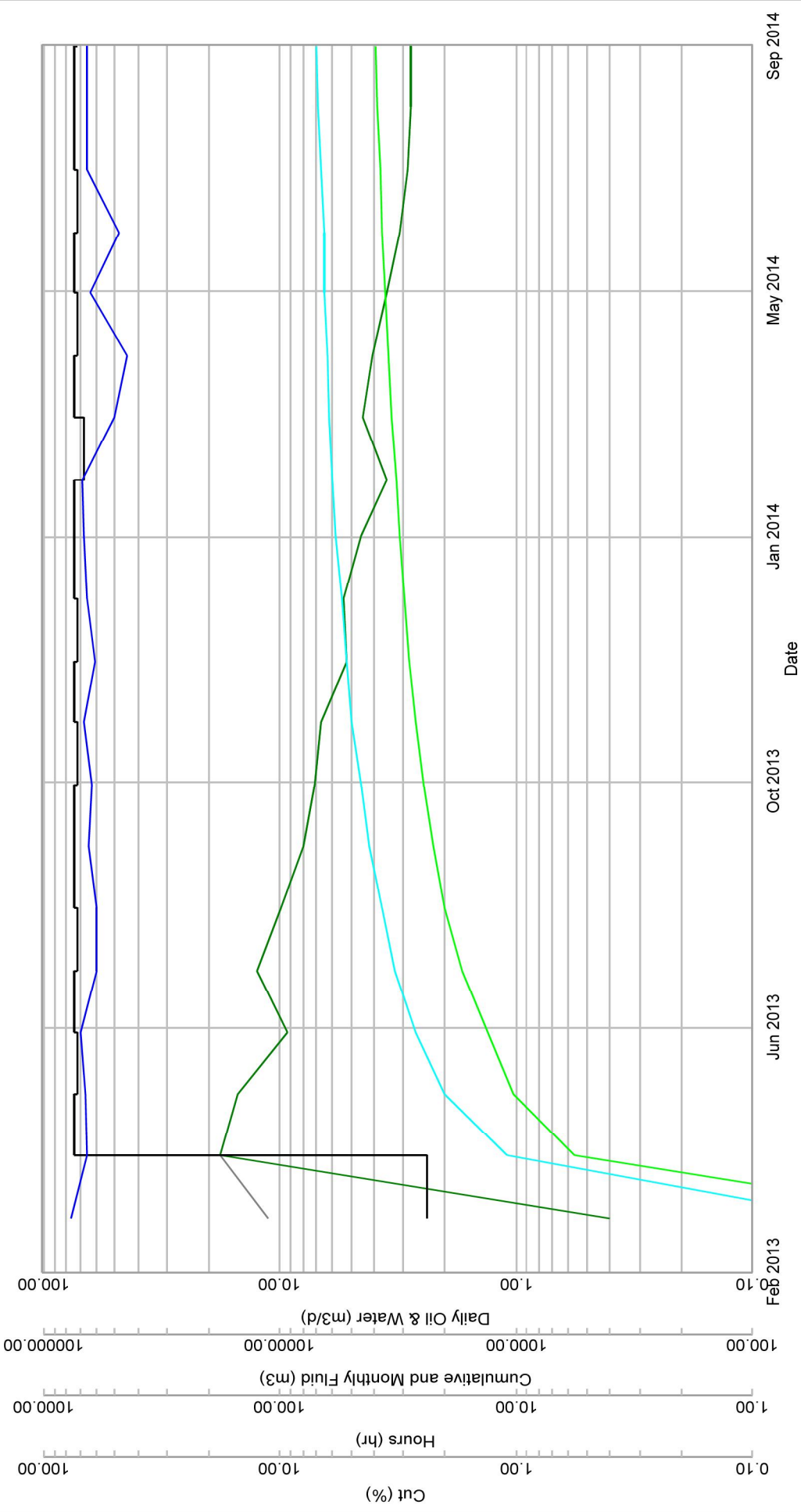
Production Graph

|                |  |            |          |            |           |
|----------------|--|------------|----------|------------|-----------|
| UWI:           | 00/03-15-007-29W1/0                      | Prod Form: | BKKN     | On Prod:   | 3/1/2008  |
| Well Name:     | FAIRBORNE SINCLAIR HZNTL 3-15-7-29 (WPM) | Field:     | DALY (1) | Cum Oil:   | 7342.4 m3 |
| Curr Licensee: | RED RIVER OIL INC.                       | Pool Code: | 0~       | Cum Gas:   | 0.0 E3m3  |
| Orig Licensee: | RED RIVER OIL INC.                       | Unit Code: |          | Cum Water: | 8592.1 m3 |
| Status:        | Oil, Producing                           | Battery:   |          |            |           |



Production Graph

|                |                               |            |            |            |           |
|----------------|-------------------------------|------------|------------|------------|-----------|
| UWI:           | 02/03-15-007-29W1/0           | Prod Form: | TRFK: BKKN | On Prod:   | 2/1/2013  |
| Well Name:     | RED RIVER DALY SINCLAIR HZNTL | Field:     | DALY (1)   | Cum Oil:   | 3948.2 m3 |
| Curr Licensee: | A3-15-7-29 (WPM)              | Pool Code: | 0~         | Cum Gas:   | 0.0 E3m3  |
| Orig Licensee: | RED RIVER OIL INC.            | Unit Code: |            | Cum Water: | 7021.5 m3 |
| Status:        | RED RIVER OIL INC.            | Battery:   |            |            |           |
|                | Oil, Producing                |            |            |            |           |



Avg Dly Oil (m3/d)

Cum Prd Oil (m3)

Prod Hours (hr)

Cum Prd Oil (m3)

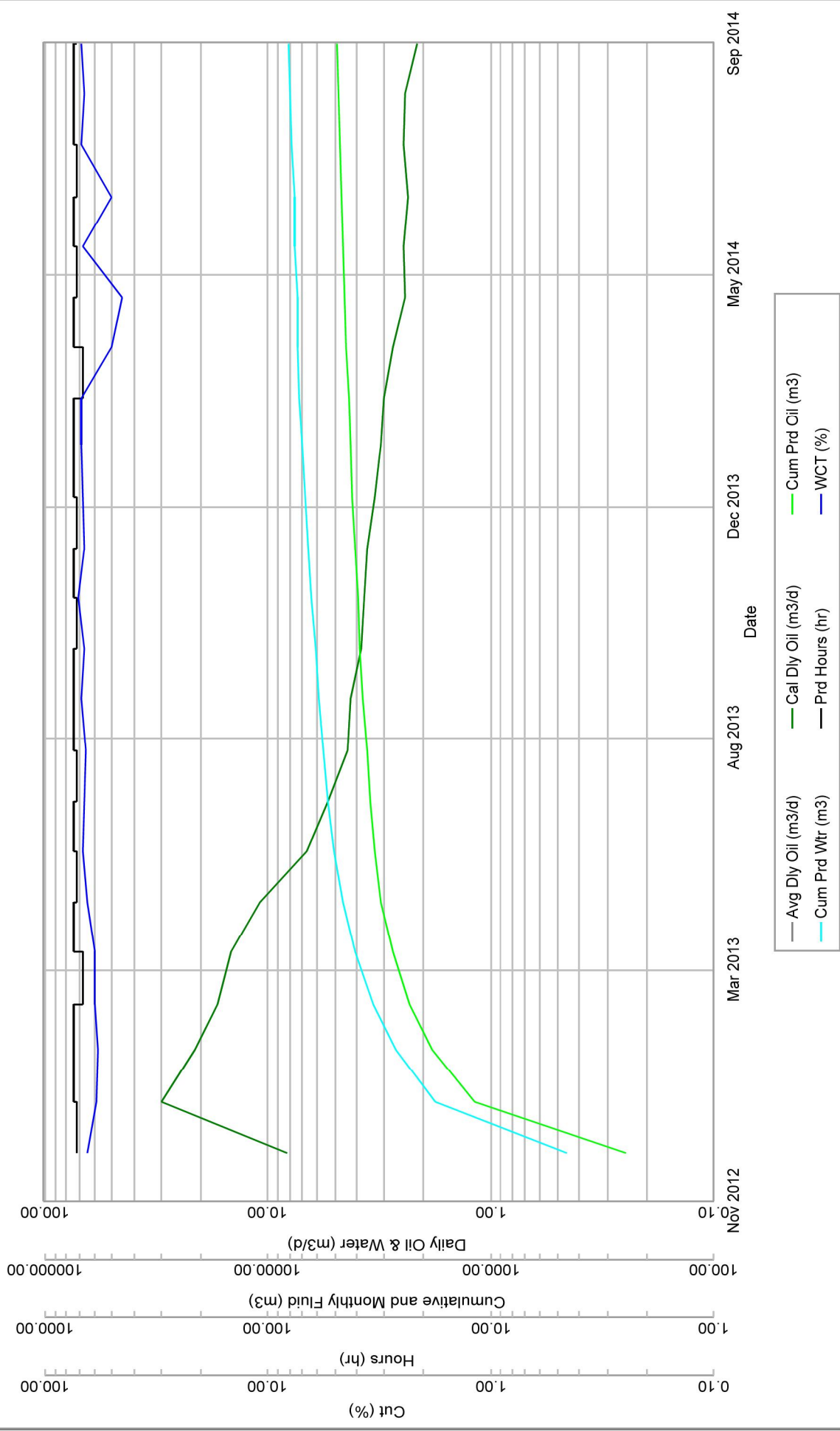
WCT (%)

Cum Prd Oil (m3)

WCT (%)

Production Graph

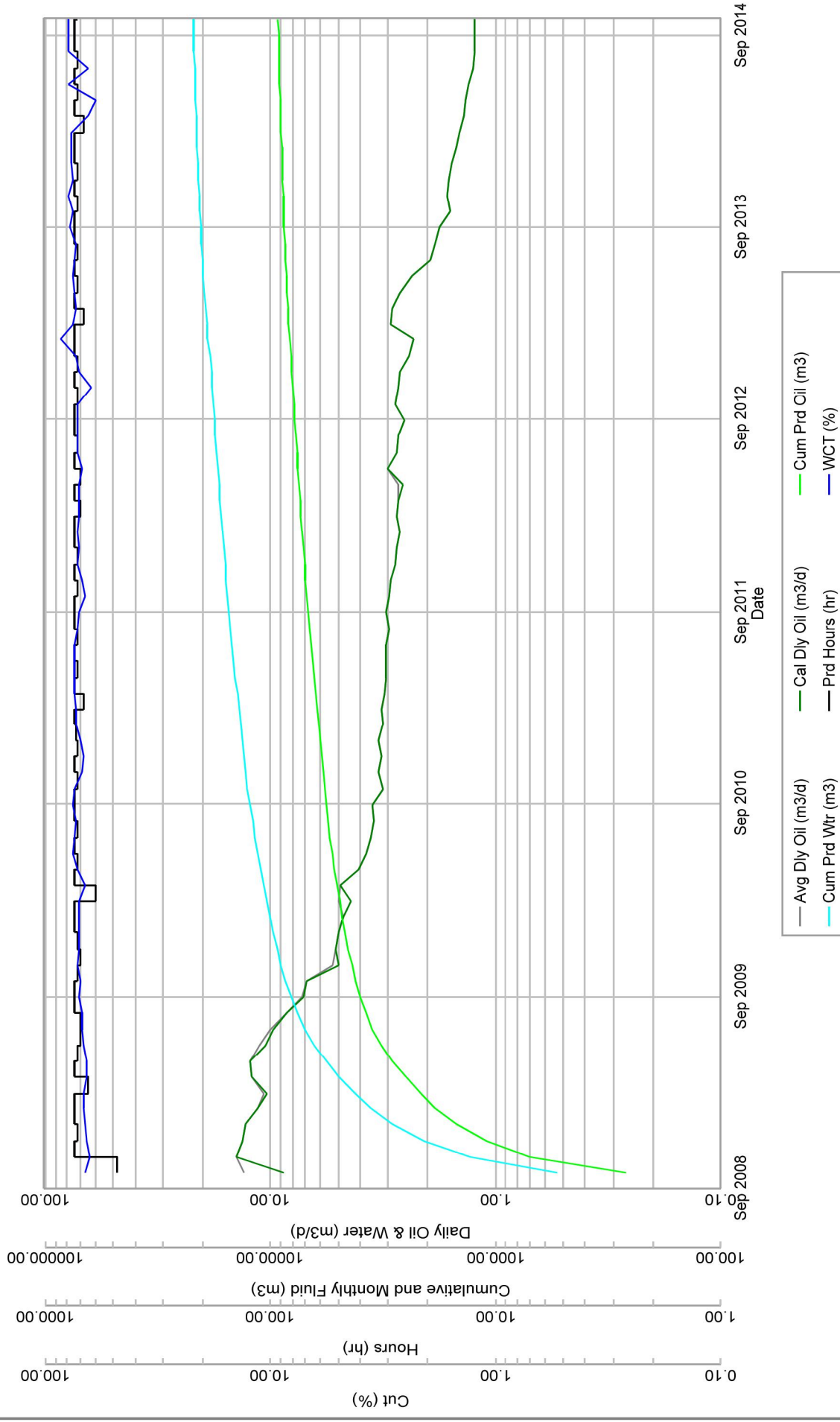
|                |                               |            |            |            |           |
|----------------|-------------------------------|------------|------------|------------|-----------|
| UWI:           | 00/05-15-007-29W1/0           | Prod Form: | TRFK: BKKN | On Prod:   | 11/1/2012 |
| Well Name:     | RED RIVER DALY SINCLAIR HZNTL | Field:     | DALY (1)   | Cum Oil:   | 4873.0 m3 |
| Curr Licensee: | 5-15-7-29 (WPM)               | Pool Code: | 0~         | Cum Gas:   | 0.0 E3m3  |
| Orig Licensee: | RED RIVER OIL INC.            | Unit Code: |            | Cum Water: | 8076.5 m3 |
| Status:        | RED RIVER OIL INC.            | Battery:   |            |            |           |
|                | Oil, Producing                |            |            |            |           |





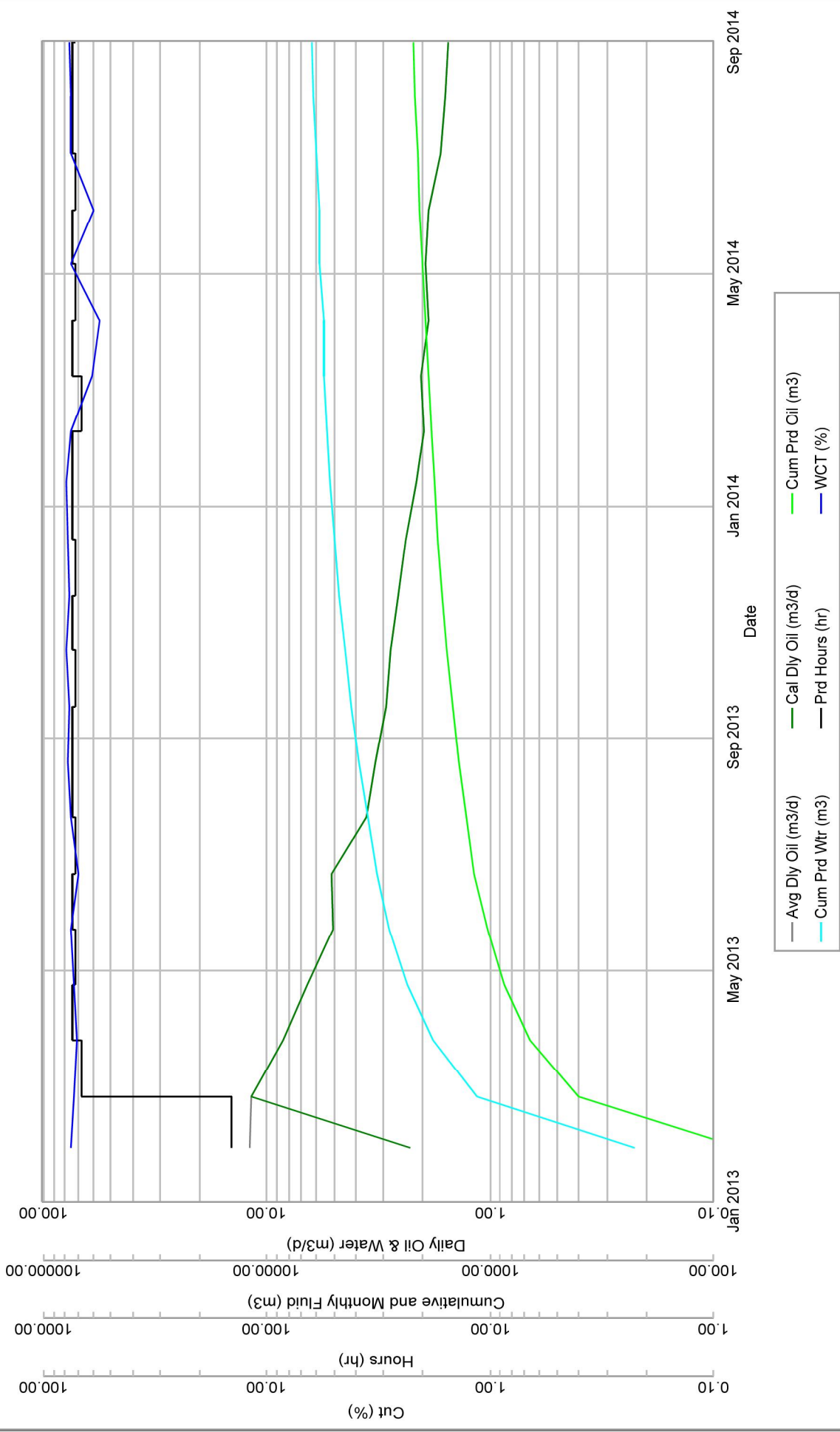
Production Graph

|                |  |            |          |            |            |
|----------------|--|------------|----------|------------|------------|
| UWI:           | 00/09-15-007-29W1/0                      | Prod Form: | BKKN     | On Prod:   | 9/1/2008   |
| Well Name:     | FAIRBORNE SINCLAIR HZNTL 9-15-7-29 (WPM) | Field:     | DALY (1) | Cum Oil:   | 9248.5 m3  |
| Curr Licensee: | RED RIVER OIL INC.                       | Pool Code: | 0~       | Cum Gas:   | 0.0 E3m3   |
| Orig Licensee: | RED RIVER OIL INC.                       | Unit Code: |          | Cum Water: | 22126.1 m3 |
| Status:        | Oil, Producing                           | Battery:   |          |            |            |



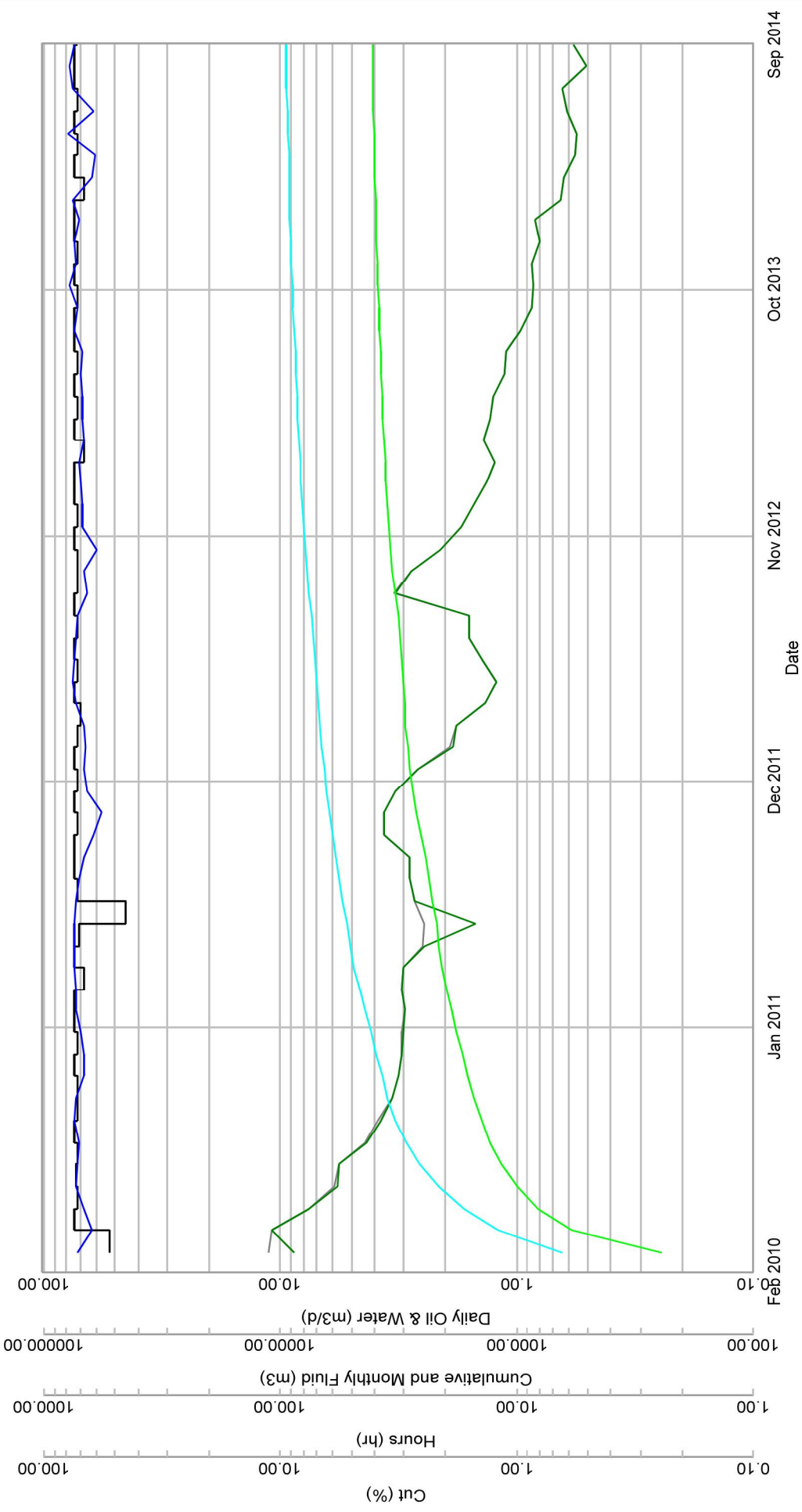
Production Graph

|                |                               |            |            |            |           |
|----------------|-------------------------------|------------|------------|------------|-----------|
| UWI:           | 00/12-15-007-29W1/0           | Prod Form: | TRFK: BKKN | On Prod:   | 1/1/2013  |
| Well Name:     | RED RIVER DALY SINCLAIR HZNTL | Field:     | DALY (1)   | Cum Oil:   | 2217.8 m3 |
| Curr Licensee: | 12-15-7-29 (WPM)              | Pool Code: | 0~         | Cum Gas:   | 0.0 E3m3  |
| Orig Licensee: | RED RIVER OIL INC.            | Unit Code: |            | Cum Water: | 6319.5 m3 |
| Status:        | RED RIVER OIL INC.            | Battery:   |            |            |           |
|                | Oil, Producing                |            |            |            |           |



Production Graph

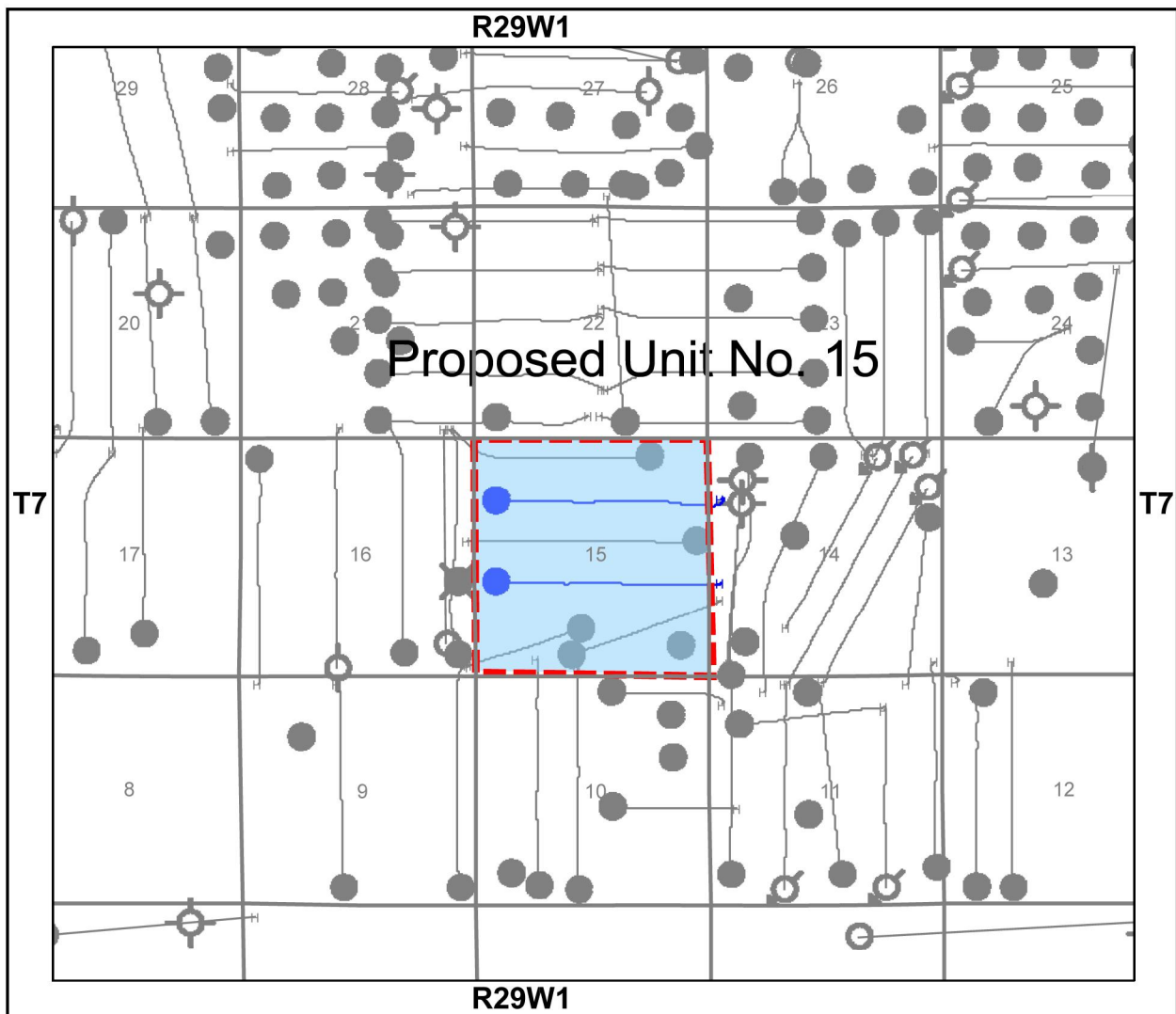
|                |                               |            |          |            |           |
|----------------|-------------------------------|------------|----------|------------|-----------|
| UWI:           | 00/15-15-007-29W1/0           | Prod Form: | BKKN     | On Prod:   | 2/1/2010  |
| Well Name:     | FAIRBORNE DALY SINCLAIR HZNTL | Field:     | DALY (1) | Cum Oil:   | 4086.4 m3 |
| Curr Licensee: | 15-15-7-29 (WPM)              | Pool Code: | 0~       | Cum Gas:   | 0.0 E3m3  |
| Orig Licensee: | RED RIVER OIL INC.            | Unit Code: |          | Cum Water: | 9480.3 m3 |
| Status:        | RED RIVER OIL INC.            | Battery:   |          |            |           |
|                | Oil, Producing                |            |          |            |           |





## **EXHIBIT 6    DEVELOPMENT PLAN**



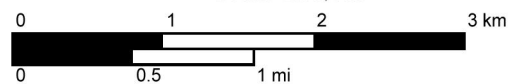


Datum: NAD83 Projection: Stereographic DLS Version AB: ATS 4.1, BC: PRB 2.0, SK: STS 2.5, MB: MLI07

| Map Legend            |                               |
|-----------------------|-------------------------------|
| <b>Grid</b>           | Gas Injection                 |
| <b>DLSS Grid</b>      | Heavy Oil                     |
| Section               | Injection                     |
| Township/Range        | Location                      |
| <b>Culture</b>        | Oil                           |
| First Nation Reserves | Oil & Gas                     |
| <b>Wells</b>          | Service or Drain              |
| Abandoned Gas         | Suspended                     |
| Abandoned Heavy Oil   | Suspended Gas                 |
| Abandoned Oil         | Suspended Heavy Oil           |
| Abandoned Oil & Gas   | Suspended Oil                 |
| Abandoned Service     | Suspended Oil & Gas           |
| Drilling              | <b>Lists</b>                  |
| Dry & Abandoned       | Wells - Injectors (Injectors) |
| Gas                   |                               |

Center: 49.5724, -101.3382

Scale: 1:50,000



|   |
|---|
|   |
| Daly Sinclair Field, MB<br>Application Area<br>Development Plan Unit No. 15 |
| Erin Boyd, February 23, 2015  |
| G:\RED13\RED13_1002\RED13_1002_A_03\Accumap\Application Area 2.accumap      |



## **EXHIBIT 7    CROSS SECTION**





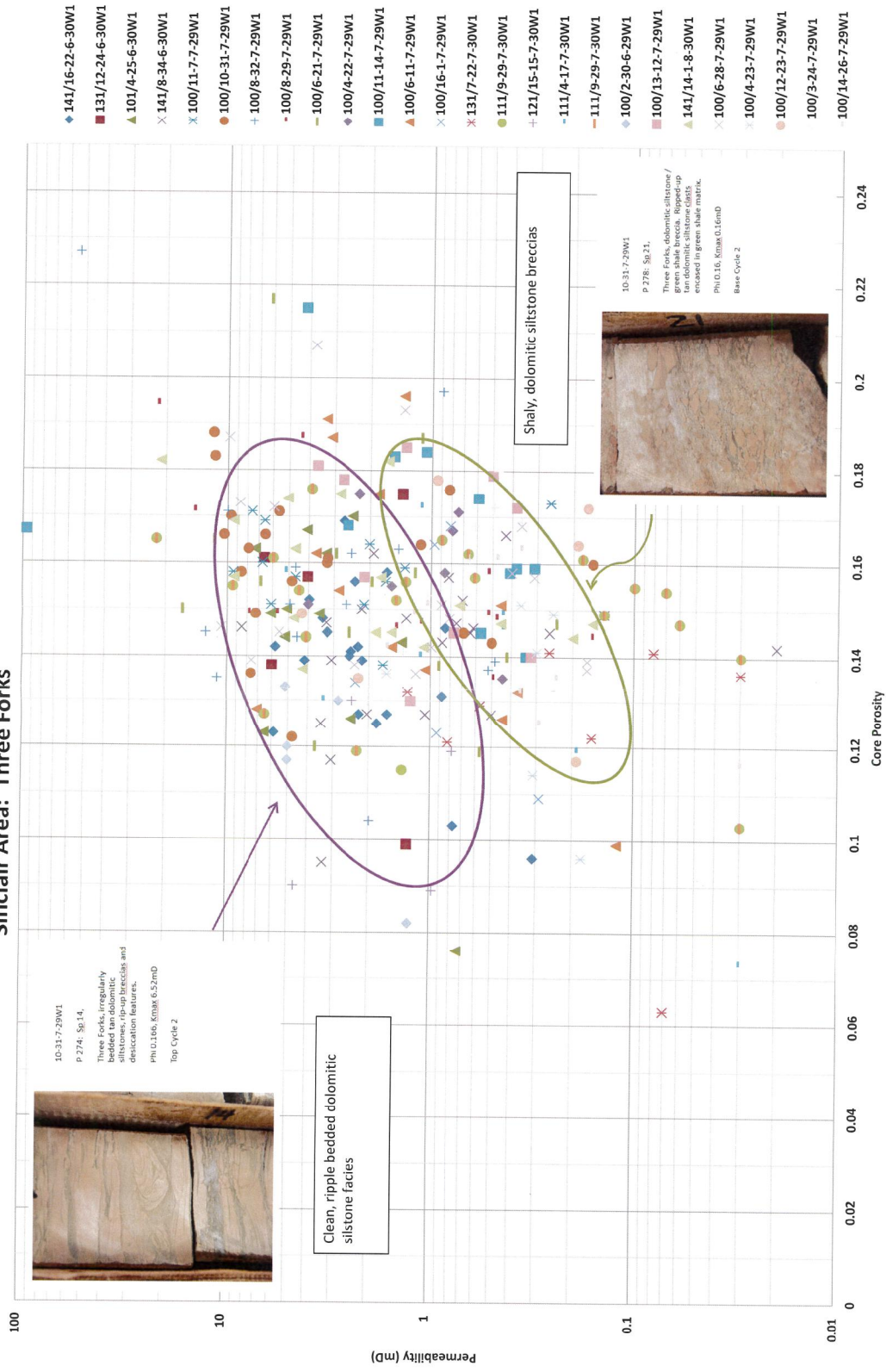


**EXHIBIT 8    LYLETON A NET PAY MAPPING AND CORE INTERPRETATION**





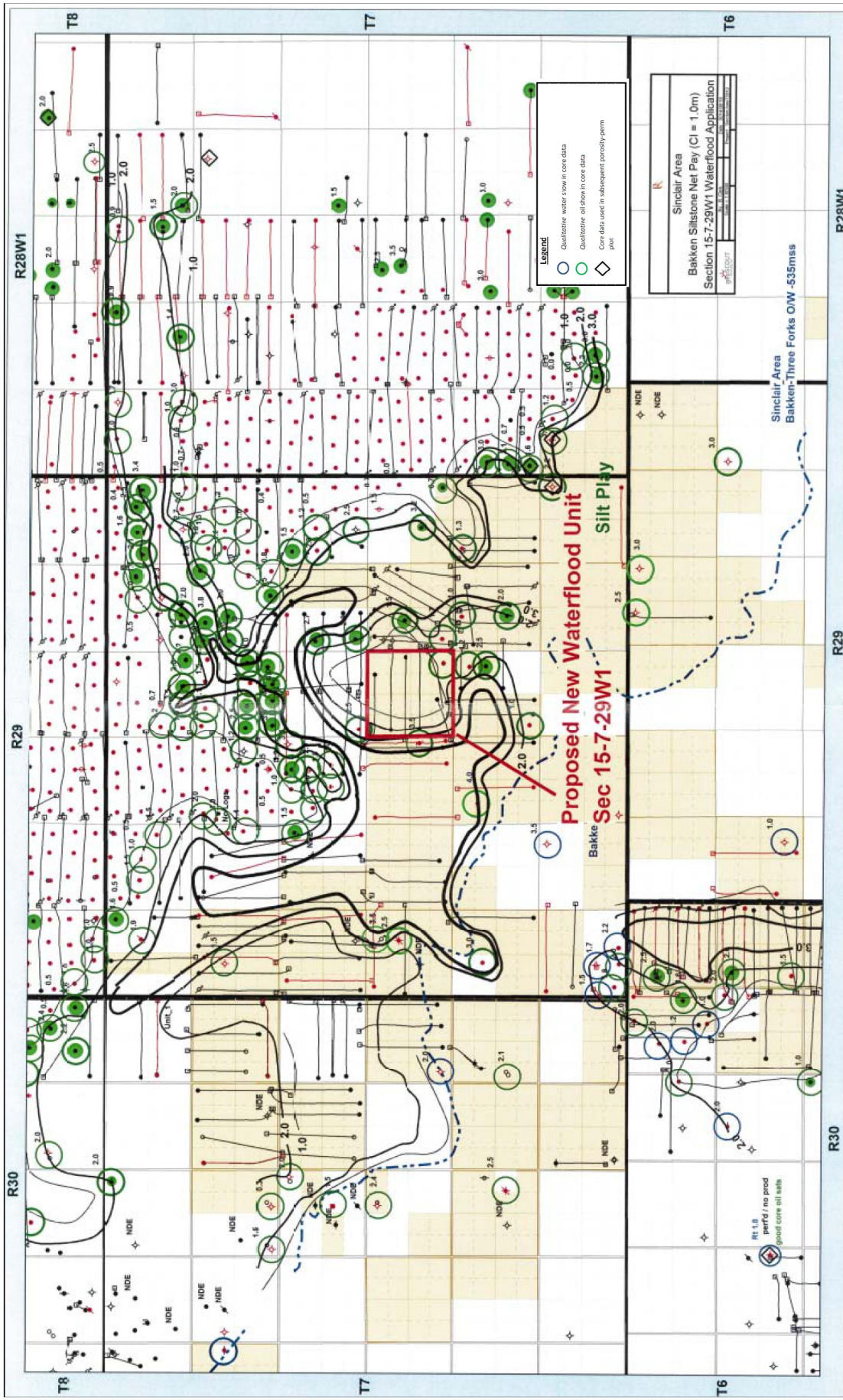
# Sinclair Area: Three Forks



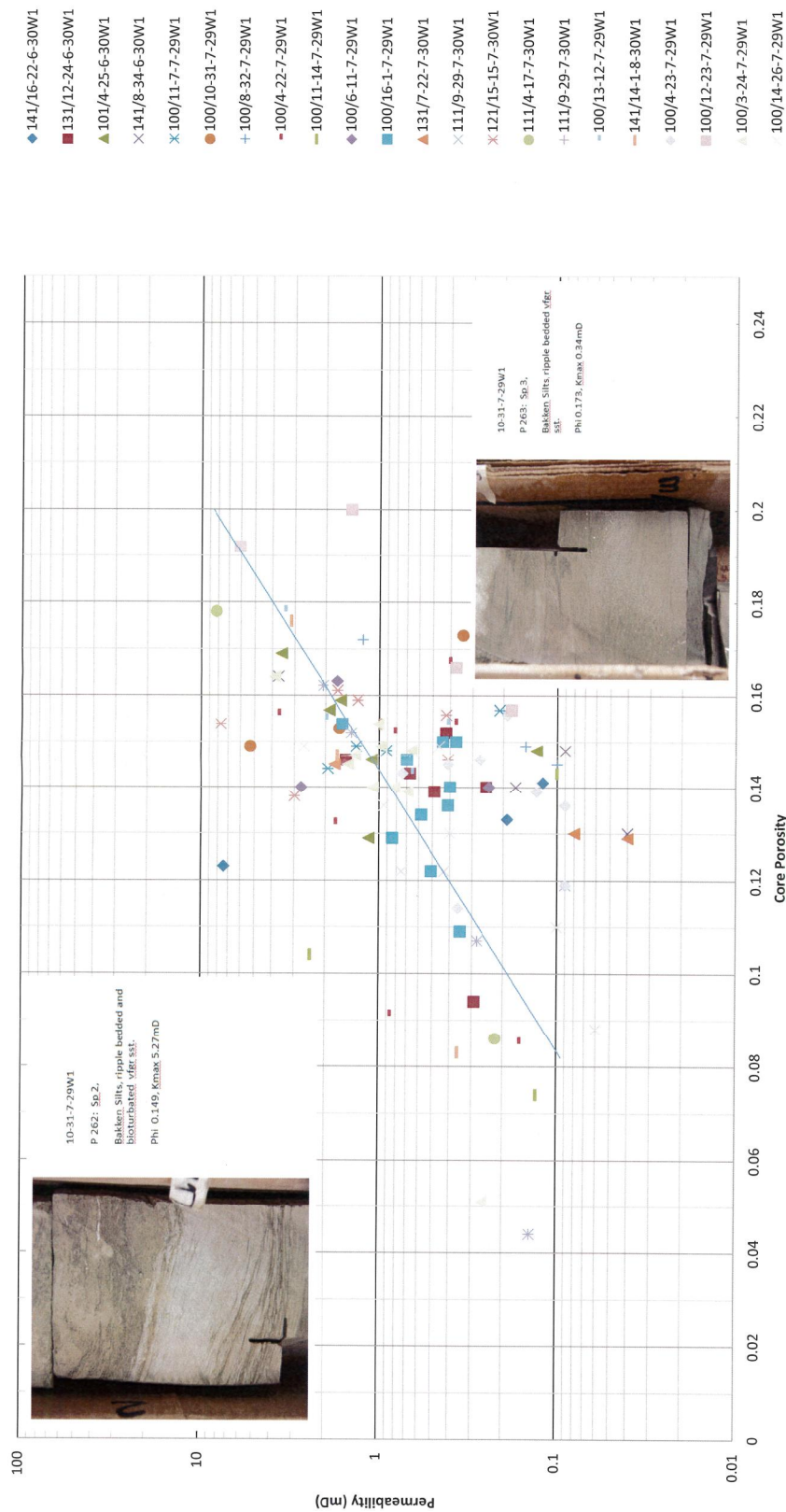
**EXHIBIT 9     MIDDLE BAKKEN NET PAY MAPPING AND CORE INTERPRETATION**







# Sinclair Area: Bakken Siltstones



## EXHIBIT 10 STRUCTURAL MAPPING





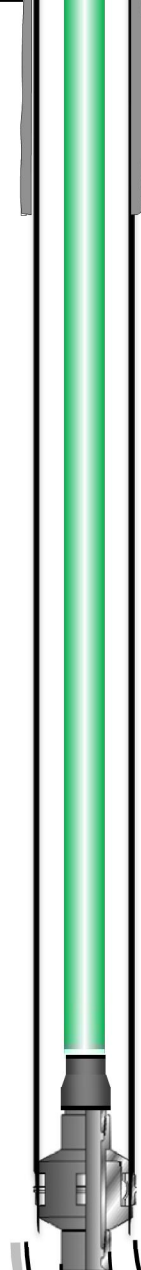
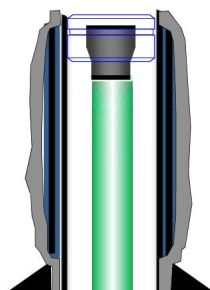




## EXHIBIT 11 WELLBORE SCHEMATIC



## TYPICAL WATERFLOOD INJECTION WELL DIAGRAM



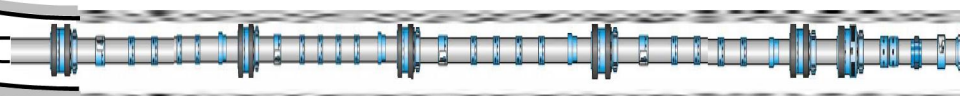
KOP at ~800 m

Coated or Fiberglass  
89 mm Tubing

Cross Over

Packer at ~1070 m

|   |  |                      |              |                         |                   |
|---|--|----------------------|--------------|-------------------------|-------------------|
| <b>WELL NAME:</b> Typical RROI Injector     |  |                      |              | <b>LICENCE</b>          |                   |
| <b>PREPARED BY</b>                          |  |                      |              | <b>DATE:</b>            |                   |
| <b>ELEVATIONS (meters):</b>                 |  |                      |              | <b>DEPTHS (mKB)</b>     |                   |
| KB: m                                       | GL: m  | KB-GL: m             | KB-THF:m     | TD:                     | 2,198.0           |
| 512.06                                      | 507.14   | 4.92                 | 4.00         | PBTD:                   | 2,198.0           |
| <b>CASING/TUBING</b>                        | <b>SIZE (mm)</b>   | <b>WEIGHT (Kg/m)</b> | <b>GRADE</b> | <b>DEPTHS (mKB)</b>     |                   |
| Surface Csg:                                | 244.50   | 48.07                | H-40         | 135.00                  |                   |
| Intermediate Csg:                           | 177.80   | 34.22                | J-55         | 1,093.33                |                   |
| Intermediate Csg:                           | 0.00   | 0.00                 | 0.00         | 0.00                    |                   |
| Production Csg:                             | 0.00   | 0.00                 | 0.00         | 0.00                    |                   |
| Liner Csg:                                  | 88.90  | 13.80                | L-80         | 2,188.90                |                   |
| Tubing                                      |  |                      |              |                         |                   |
| Tubing                                      |  |                      |              |                         |                   |
| <b>Remarks</b>                              |  |                      |              |                         |                   |
| <b>TUBING STRING / BOTTOM HOLE ASSEMBLY</b> |  |                      |              |                         |                   |
| <b>ITEM</b>                                 | <b>DESCRIPTION (From Top Down)</b>                                 |                      |              | <b>LENGTH (m)</b>       | <b>Btm (mKB)</b>  |
| 1   | 197.4 mm x 88.9 mm CTC1A-EN tbg hangar w BPV threads and extd neck |                      |              |                         |                   |
| 2   | pup joint 88.9 Stainless J55 EUE                                   |                      |              |                         |                   |
| 3   | pup joint 88.9 Centron Fiberglass DH2000                           |                      |              |                         |                   |
| 4   | pup joint 88.9 Stainless J55 EUE                                   |                      |              |                         |                   |
| 5   | pup joint 88.9 Centron Fiberglass DH2000                           |                      |              |                         |                   |
| 6   | 119 joints 88.9 mm Centron Fiberglass DH200                        |                      |              |                         |                   |
| 7   | X-over SS 8rd x DH2000 Fiberglass                                  |                      |              |                         |                   |
| 8   | Pup Joint J-55 SSR222 Coated                                       |                      |              |                         |                   |
| 9   | On / Off tool 147 mm Packer plus SSR222 Coated                     |                      |              |                         |                   |
| 10  |  |                      |              |                         |                   |
| 11  |  |                      |              |                         |                   |
| 12  |  |                      |              |                         |                   |
| 13  |  |                      |              |                         |                   |
| 14  |  |                      |              |                         |                   |
| 15  |  |                      |              |                         |                   |
| 16  |  |                      |              |                         |                   |
| 17  |  |                      |              |                         |                   |
|   |  |                      |              | <b>Total Tubing (m)</b> |                   |
|   |  |                      |              | <b>Total (Mkb)</b>      |                   |
| <b>PRODUCTION ROD STRING</b>                |  |                      |              |                         |                   |
| <b>ITEM</b>                                 | <b>DESCRIPTION (From Top Down)</b>                                 |                      |              | <b>LENGTH (m)</b>       | <b>Btm (m KB)</b> |
| 1   |  |                      |              |                         |                   |
| 2   |  |                      |              |                         |                   |
| 3   |  |                      |              |                         |                   |
| 4   |  |                      |              |                         |                   |
| 5   |  |                      |              |                         |                   |
| 6   |  |                      |              |                         |                   |
| 7   |  |                      |              |                         |                   |
| 8   |  |                      |              |                         |                   |
| 9   |  |                      |              |                         |                   |
| 10  |  |                      |              |                         |                   |



Cemented Liner with Frac Ports or Packers Plus Liner

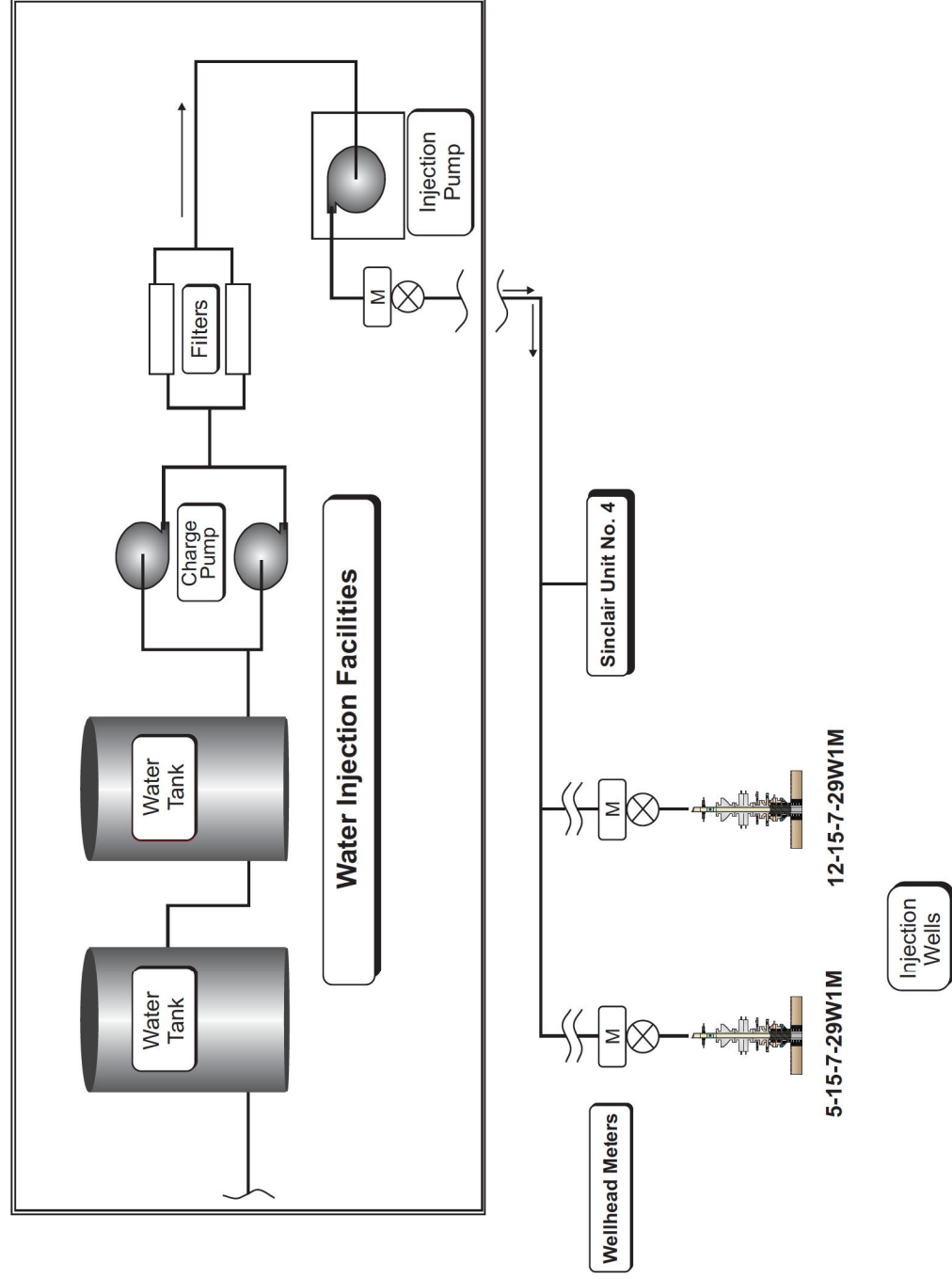
**EXHIBIT 12   WATER INJECTION FACILITY SCHEMATIC AND CORROSION CONTROL  
DETAILS**





RED RIVER OIL INC.

## Sinclair Unit No. 15 Sinclair 8-16-7-29W1M Battery Water Injection System





**RROI SINCLAIR -WATERFLOOD PROJECT APPLICATION**  
**February 23 , 2015**

**SPILL & CORROSION MITIGATION DETAILS**

**1. Pipelines**

- Group Injection flowline and individual injection well flowlines to be 2000-2500 psi fiberglass, strapped for ease of line locating
- Buried flowlines in proximity of the flowline construction area will be surveyed and line located.
- Where construction is in close proximity to or requires pipeline/utility crossings, all such lines will be hydrovac'd and exposed per Red River Oil's Ground Disturbance Policy & Procedures
- Isolation valves will be installed at both ends of all injection lines; i.e. at the source/injection wellheads and injection/water plant -see injection system & P&ID drawings
- Low pressure shutdown on the group injection line
- Fittings and valves will be stainless steel or fiberglass

**2. Water plant and Injection Facilities**

- Plant piping -600 ANSI stainless steel schedule 80 pipe
- Filtration –stainless steel bodies, piping, and valves
- Pumping –ceramic plungers, stainless steel disc valves, or other corrosion resistant material as required for the specific pump style
- Tanks -100% internally coated or fiberglass, corrosion resistant valves

**3. Injection Well & Surface Wellhead Piping**

- Cathodic protection where required
- Internally coated or fiberglass tubing -surface to packer
- Downhole packer and tubular fittings coated where in contact with injection fluid
- Corrosion inhibited water in annulus between tubing and casing
- Corrosion resistant master/pipeline valves and stainless steel or internally coated surface wellhead piping
- Surface freeze protection during winter months

**4. Producing Wells**

- Regular downhole batch treatments or continuous injection with corrosion inhibitor
- Regular downhole batch treatments or continuous injection with scale inhibitor

TABLE 4 TRACT PARTICIPATION

## Red River Oil Inc.

## Sinclair Unit # 15

## Tract Participation

| Tract No. | Land Description   | Working Interest   |            | Royalty Interest                              |              | Tract Participation (%) |
|-----------|--------------------|--------------------|------------|---|--------------|-------------------------|
|           |                    | Owner              | Share (%)  | Owner   | Share (%)    |                         |
| 1         | Lsd 1-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Joanne Louise Thompson                        | 13.333333333 | 0.866884567             |
| 2         | Lsd 1-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Carolyn Elaine Taxer                          | 13.333333333 | 0.866884567             |
| 3         | Lsd 1-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Sylvia Jean Font                              | 13.333333333 | 0.866884567             |
| 4         | Lsd 1-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Susan Jean Rodani                             | 10.000000000 | 0.650163425             |
| 5         | Lsd 1-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Edwin Kenneth Zelmer & Terrence Oliver Mayert | 50.000000000 | 3.250817127             |
| 6         | Lsd 2-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Joanne Louise Thompson                        | 13.333333333 | 0.916919616             |
| 7         | Lsd 2-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Carolyn Elaine Taxer                          | 13.333333333 | 0.916919616             |
| 8         | Lsd 2-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Sylvia Jean Font                              | 13.333333333 | 0.916919616             |
| 9         | Lsd 2-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Susan Jean Rodani                             | 10.000000000 | 0.687689712             |
| 10        | Lsd 2-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Edwin Kenneth Zelmer & Terrence Oliver Mayert | 50.000000000 | 3.438448560             |
| 11        | Lsd 3-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Joanne Louise Thompson                        | 13.333333333 | 0.818168319             |
| 12        | Lsd 3-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Carolyn Elaine Taxer                          | 13.333333333 | 0.818168319             |
| 13        | Lsd 3-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Sylvia Jean Font                              | 13.333333333 | 0.818168319             |
| 14        | Lsd 3-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Susan Jean Rodani                             | 10.000000000 | 0.613626240             |
| 15        | Lsd 3-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Edwin Kenneth Zelmer & Terrence Oliver Mayert | 50.000000000 | 3.068131198             |
| 16        | Lsd 4-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Joanne Louise Thompson                        | 13.333333333 | 0.831876794             |
| 17        | Lsd 4-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Carolyn Elaine Taxer                          | 13.333333333 | 0.831876794             |
| 18        | Lsd 4-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Sylvia Jean Font                              | 13.333333333 | 0.831876794             |
| 19        | Lsd 4-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Susan Jean Rodani                             | 10.000000000 | 0.623907595             |
| 20        | Lsd 4-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Edwin Kenneth Zelmer & Terrence Oliver Mayert | 50.000000000 | 3.119537976             |
| 21        | Lsd 5-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Joanne Louise Thompson                        | 12.607008537 | 0.825176986             |
| 22        | Lsd 5-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Carolyn Elaine Taxer                          | 12.607008537 | 0.825176986             |
| 23        | Lsd 5-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Sylvia Jean Font                              | 12.607008537 | 0.825176986             |
| 24        | Lsd 5-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Susan Jean Rodani                             | 9.455256403  | 0.618882740             |
| 25        | Lsd 5-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Edwin Kenneth Zelmer & Terrence Oliver Mayert | 47.276282013 | 3.094413699             |
| 26        | Lsd 5-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | RR 102 BLTO (Manitoba Crown)                  | 5.447435974  | 0.356555545             |
| 27        | Lsd 6-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Joanne Louise Thompson                        | 12.607008537 | 0.702966541             |
| 28        | Lsd 6-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Carolyn Elaine Taxer                          | 12.607008537 | 0.702966541             |
| 29        | Lsd 6-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Sylvia Jean Font                              | 12.607008537 | 0.702966541             |
| 30        | Lsd 6-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Susan Jean Rodani                             | 9.455256403  | 0.527224906             |
| 31        | Lsd 6-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Edwin Kenneth Zelmer & Terrence Oliver Mayert | 47.276282013 | 2.636124530             |
| 32        | Lsd 6-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | RR 102 BLTO (Manitoba Crown)                  | 5.447435974  | 0.303748920             |
| 33        | Lsd 7-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Joanne Louise Thompson                        | 12.712778453 | 0.947866961             |
| 34        | Lsd 7-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Carolyn Elaine Taxer                          | 12.712778453 | 0.947866961             |
| 35        | Lsd 7-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Sylvia Jean Font                              | 12.712778453 | 0.947866961             |
| 36        | Lsd 7-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Susan Jean Rodani                             | 9.534583839  | 0.710900221             |
| 37        | Lsd 7-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Edwin Kenneth Zelmer & Terrence Oliver Mayert | 47.672919197 | 3.554501104             |
| 38        | Lsd 7-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | RR 102 BLTO (Manitoba Crown)                  | 4.654161606  | 0.347015095             |
| 39        | Lsd 8-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Joanne Louise Thompson                        | 12.712778453 | 0.938530919             |
| 40        | Lsd 8-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Carolyn Elaine Taxer                          | 12.712778453 | 0.938530919             |
| 41        | Lsd 8-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Sylvia Jean Font                              | 12.712778453 | 0.938530919             |
| 42        | Lsd 8-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Susan Jean Rodani                             | 9.534583839  | 0.703898189             |
| 43        | Lsd 8-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Edwin Kenneth Zelmer & Terrence Oliver Mayert | 47.672919197 | 3.519490944             |
| 44        | Lsd 8-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | RR 102 BLTO (Manitoba Crown)                  | 4.654161606  | 0.343597160             |
| 45        | Lsd 9-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Pioneer Legacy Investments Ltd.               | 32.428693901 | 2.327333363             |
| 46        | Lsd 9-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Crystal Rhodes                                | 8.107173475  | 0.581833341             |
| 47        | Lsd 9-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | Curtis Rhodes                                 | 8.107173475  | 0.581833341             |
| 48        | Lsd 9-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | 6320180 Manitoba Ltd.                         | 16.214346950 | 1.163666682             |
| 49        | Lsd 9-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | 6589741 Manitoba Ltd.                         | 16.214346950 | 1.163666682             |
| 50        | Lsd 9-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | 723837 Alberta Ltd.                           | 16.214346950 | 1.163666682             |
| 51        | Lsd 9-15-7-29 W1M  | Red River Oil Inc. | 100.000000 | RR 102 BLTO (Manitoba Crown)                  | 2.713918298  | 0.194771723             |
| 52        | Lsd 10-15-7-29 W1M | Red River Oil Inc. | 100.000000 | Pioneer Legacy Investments Ltd.               | 32.428693901 | 2.327333363             |
| 53        | Lsd 10-15-7-29 W1M | Red River Oil Inc. | 100.000000 | Crystal Rhodes                                | 8.107173475  | 0.581833341             |
| 54        | Lsd 10-15-7-29 W1M | Red River Oil Inc. | 100.000000 | Curtis Rhodes                                 | 8.107173475  | 0.581833341             |
| 55        | Lsd 10-15-7-29 W1M | Red River Oil Inc. | 100.000000 | 6320180 Manitoba Ltd.                         | 16.214346950 | 1.163666682             |
| 56        | Lsd 10-15-7-29 W1M | Red River Oil Inc. | 100.000000 | 6589741 Manitoba Ltd.                         | 16.214346950 | 1.163666682             |
| 57        | Lsd 10-15-7-29 W1M | Red River Oil Inc. | 100.000000 | 723837 Alberta Ltd.                           | 16.214346950 | 1.163666682             |
| 58        | Lsd 10-15-7-29 W1M | Red River Oil Inc. | 100.000000 | RR 102 BLTO (Manitoba Crown)                  | 2.713918298  | 0.194771723             |
| 59        | Lsd 11-15-7-29 W1M | Red River Oil Inc. | 100.000000 | Pioneer Legacy Investments Ltd.               | 32.688647485 | 1.731436749             |
| 60        | Lsd 11-15-7-29 W1M | Red River Oil Inc. | 100.000000 | Crystal Rhodes                                | 8.172161871  | 0.432859187             |
| 61        | Lsd 11-15-7-29 W1M | Red River Oil Inc. | 100.000000 | Curtis Rhodes                                 | 8.172161871  | 0.432859187             |
| 62        | Lsd 11-15-7-29 W1M | Red River Oil Inc. | 100.000000 | 6320180 Manitoba Ltd.                         | 16.344323743 | 0.865718375             |



TABLE 4 TRACT PARTICIPATION

| Tract No. | Land Description   | Working Interest   |            | Royalty Interest                |              | Tract Participation (%) |
|-----------|--------------------|--------------------|------------|---------------------------------|--------------|-------------------------|
|           |                    | Owner              | Share (%)  | Owner                           | Share (%)    |                         |
| 63        | Lsd 11-15-7-29 W1M | Red River Oil Inc. | 100.000000 | 6589741 Manitoba Ltd.           | 16.344323743 | 0.865718375             |
| 64        | Lsd 11-15-7-29 W1M | Red River Oil Inc. | 100.000000 | 723837 Alberta Ltd.             | 16.344323743 | 0.865718375             |
| 65        | Lsd 11-15-7-29 W1M | Red River Oil Inc. | 100.000000 | RR 102 BLTO (Manitoba Crown)    | 1.934057545  | 0.102442241             |
| 66        | Lsd 12-15-7-29 W1M | Red River Oil Inc. | 100.000000 | Pioneer Legacy Investments Ltd. | 32.688647485 | 2.072321555             |
| 67        | Lsd 12-15-7-29 W1M | Red River Oil Inc. | 100.000000 | Crystal Rhodes                  | 8.172161871  | 0.518080389             |
| 68        | Lsd 12-15-7-29 W1M | Red River Oil Inc. | 100.000000 | Curtis Rhodes                   | 8.172161871  | 0.518080389             |
| 69        | Lsd 12-15-7-29 W1M | Red River Oil Inc. | 100.000000 | 6320180 Manitoba Ltd.           | 16.344323743 | 1.036160778             |
| 70        | Lsd 12-15-7-29 W1M | Red River Oil Inc. | 100.000000 | 6589741 Manitoba Ltd.           | 16.344323743 | 1.036160778             |
| 71        | Lsd 12-15-7-29 W1M | Red River Oil Inc. | 100.000000 | 723837 Alberta Ltd.             | 16.344323743 | 1.036160778             |
| 72        | Lsd 12-15-7-29 W1M | Red River Oil Inc. | 100.000000 | RR 102 BLTO (Manitoba Crown)    | 1.934057545  | 0.122611042             |
| 73        | Lsd 13-15-7-29 W1M | Red River Oil Inc. | 100.000000 | Pioneer Legacy Investments Ltd. | 33.333333333 | 2.110579541             |
| 74        | Lsd 13-15-7-29 W1M | Red River Oil Inc. | 100.000000 | Crystal Rhodes                  | 8.333333333  | 0.527644885             |
| 75        | Lsd 13-15-7-29 W1M | Red River Oil Inc. | 100.000000 | Curtis Rhodes                   | 8.333333333  | 0.527644885             |
| 76        | Lsd 13-15-7-29 W1M | Red River Oil Inc. | 100.000000 | 6320180 Manitoba Ltd.           | 16.666666667 | 1.055289770             |
| 77        | Lsd 13-15-7-29 W1M | Red River Oil Inc. | 100.000000 | 6589741 Manitoba Ltd.           | 16.666666667 | 1.055289770             |
| 78        | Lsd 13-15-7-29 W1M | Red River Oil Inc. | 100.000000 | 723837 Alberta Ltd.             | 16.666666667 | 1.055289770             |
| 79        | Lsd 14-15-7-29 W1M | Red River Oil Inc. | 100.000000 | Pioneer Legacy Investments Ltd. | 33.333333333 | 1.226056560             |
| 80        | Lsd 14-15-7-29 W1M | Red River Oil Inc. | 100.000000 | Crystal Rhodes                  | 8.333333333  | 0.306514140             |
| 81        | Lsd 14-15-7-29 W1M | Red River Oil Inc. | 100.000000 | Curtis Rhodes                   | 8.333333333  | 0.306514140             |
| 82        | Lsd 14-15-7-29 W1M | Red River Oil Inc. | 100.000000 | 6320180 Manitoba Ltd.           | 16.666666667 | 0.613028280             |
| 83        | Lsd 14-15-7-29 W1M | Red River Oil Inc. | 100.000000 | 6589741 Manitoba Ltd.           | 16.666666667 | 0.613028280             |
| 84        | Lsd 14-15-7-29 W1M | Red River Oil Inc. | 100.000000 | 723837 Alberta Ltd.             | 16.666666667 | 0.613028280             |
| 85        | Lsd 15-15-7-29 W1M | Red River Oil Inc. | 100.000000 | Pioneer Legacy Investments Ltd. | 33.333333333 | 1.852729668             |
| 86        | Lsd 15-15-7-29 W1M | Red River Oil Inc. | 100.000000 | Crystal Rhodes                  | 8.333333333  | 0.463182417             |
| 87        | Lsd 15-15-7-29 W1M | Red River Oil Inc. | 100.000000 | Curtis Rhodes                   | 8.333333333  | 0.463182417             |
| 88        | Lsd 15-15-7-29 W1M | Red River Oil Inc. | 100.000000 | 6320180 Manitoba Ltd.           | 16.666666667 | 0.926364834             |
| 89        | Lsd 15-15-7-29 W1M | Red River Oil Inc. | 100.000000 | 6589741 Manitoba Ltd.           | 16.666666667 | 0.926364834             |
| 90        | Lsd 15-15-7-29 W1M | Red River Oil Inc. | 100.000000 | 723837 Alberta Ltd.             | 16.666666667 | 0.926364834             |
| 91        | Lsd 16-15-7-29 W1M | Red River Oil Inc. | 100.000000 | Pioneer Legacy Investments Ltd. | 33.333333333 | 1.909394626             |
| 92        | Lsd 16-15-7-29 W1M | Red River Oil Inc. | 100.000000 | Crystal Rhodes                  | 8.333333333  | 0.477348656             |
| 93        | Lsd 16-15-7-29 W1M | Red River Oil Inc. | 100.000000 | Curtis Rhodes                   | 8.333333333  | 0.477348656             |
| 94        | Lsd 16-15-7-29 W1M | Red River Oil Inc. | 100.000000 | 6320180 Manitoba Ltd.           | 16.666666667 | 0.954697313             |
| 95        | Lsd 16-15-7-29 W1M | Red River Oil Inc. | 100.000000 | 6589741 Manitoba Ltd.           | 16.666666667 | 0.954697313             |
| 96        | Lsd 16-15-7-29 W1M | Red River Oil Inc. | 100.000000 | 723837 Alberta Ltd.             | 16.666666667 | 0.954697313             |

100.000000000

# Red River Oil Inc.

## Sinclair Unit # 15

### Summary of Royalty Interest

| Royalty Interest                                 |              |
|--|--------------|
| Owner  | Share (%)    |
| 6320180 Manitoba Ltd.                            | 7.778592713  |
| 6589741 Manitoba Ltd.                            | 7.778592713  |
| 723837 Alberta Ltd.                              | 7.778592713  |
| Carolyn Elaine Taxer                             | 6.848390703  |
| Crystal Rhodes                                   | 3.889296356  |
| Curtis Rhodes                                    | 3.889296356  |
| Edwin Kenneth Zelmer & Terrence<br>Oliver Mayert | 25.681465138 |
| Joanne Louise Thompson                           | 6.848390703  |
| Pioneer Legacy Investments Ltd.                  | 15.557185425 |
| RR 102 BLTO (Manitoba Crown)                     | 1.965513450  |
| Susan Jean Rodani                                | 5.136293028  |
| Sylvia Jean Font                                 | 6.848390703  |

|               |
|---------------|
| 100.000000000 |
|---------------|