



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. 16 AND  
NEW ENHANCED RECOVERY SCHEME IN THE BAKKEN-THREE FORKS POOL  
IN SECTION N18, 19, W20-007-29W1M  
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. 16 (**Exhibit 1**) and a new enhanced oil recovery scheme by the injection of water into wells 102/13-18-007-29 W1M, 100/01-19-007-29 W1M, 100/03-19-007-29 W1M, 100/13-19-007-29 W1M, 100/15-19-007-29 W1M, and 102/14-20-007-29 W1M in the Middle Bakken and Three Forks Formation (Bakken-Three Forks B Pool - 01 62B) to improve oil production from Sections N18, 19 and W20-007-29W1, 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 directly south of Red River's existing Sinclair Unit No. 9 Project that began injection November 2013. The Unit No. 9 scheme is not being expanded as the lessor mineral ownership in the proposed Unit No. 16 scheme area differs.

## **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.16 will be supplied from Red River's produced water from surrounding Bakken- Three Forks wells via Red River's injection facility located at 15-18-007-29W1M. These are the same facilities servicing Red River's Sinclair Unit No. 9 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 Sections N18, 19 and W20-007-29W1.

This application is being submitted simultaneously with an application for a new waterflood unit and project area Unit No. 15 comprised of section 15-007-29W1M.

### **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 N18, 19 and W20-007-29W1 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 14 horizontal, one standing vertical well (since November 2012) and two abandoned vertical wells that have been drilled within the application area. 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; the north half of section 18-007-29W1M is Crown while section 19 and the west half of section 20-007-29W1M is held by nine freehold mineral owners. Red River and Tundra Oil and Gas Limited (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 primarily. The required setbacks have been adhered to in the wells in and offsetting Sections N18, 19 and W20-007-29W1 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 N18, 19 and W20-007-29W1 application area. As shown in **Exhibit 4, Table 1**, the OOIP is estimated to be 2,23210<sup>3</sup>m<sup>3</sup> (14,037,800 barrels). Supporting geology 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**.

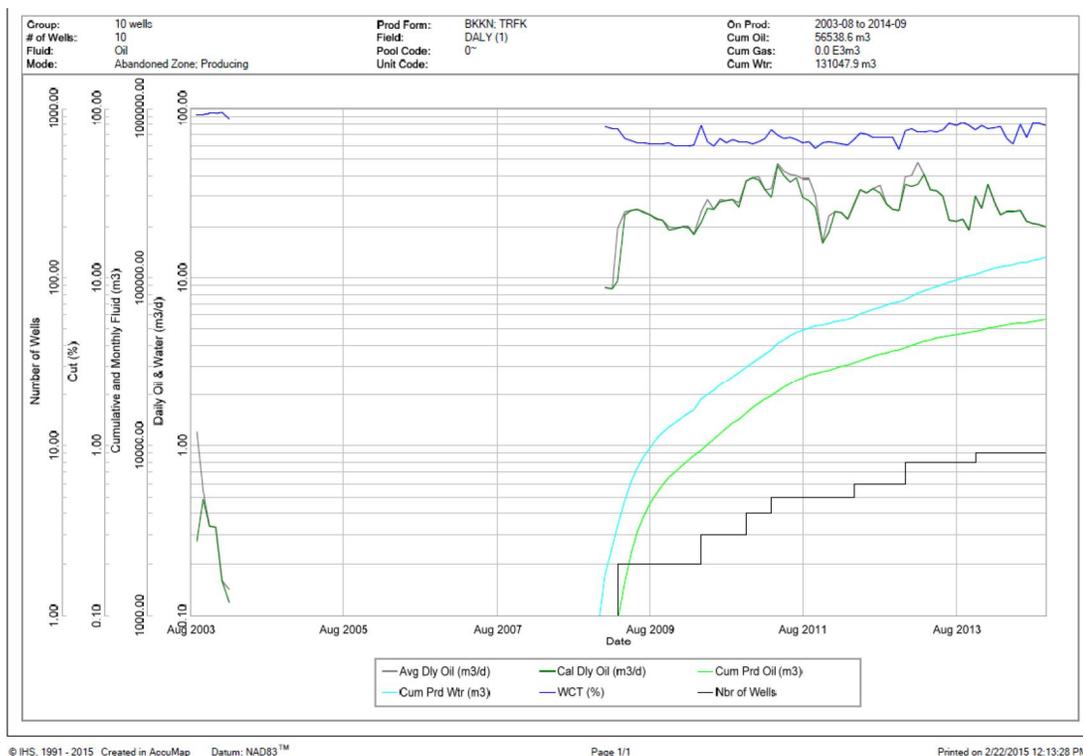
Red River proposes that the official name of the new Unit shall be Sinclair Unit No. 16 and that Red River Oil Inc. will be the operator of record for Sinclair Unit No. 16. The unitized zone(s) to be water flooded in the Sinclair Unit No. 16 will be the Middle Bakken and Three Forks formations.

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

The proposed Sinclair Unit No. 16 project area is located within Township 007 Range 29 W1 of the Daly Sinclair oil field. The proposed Unit 16 currently consists of 14 existing producing horizontal 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 m <sup>3</sup> /cday	Cum Oil m <sup>3</sup>	Cum Gas 10 <sup>3</sup> m <sup>3</sup>	Cum Water m <sup>3</sup>
00/10-18-007-29W1/2	January 2004	July 2004	-	55	-	792.2
100/12-18-007-29W1/0	November 2012	September 2014	2.0	2889	-	13530
100/13-18-007-29W1/0	October 2010	Sept 2014	1.0	4256	-	13226
102/13-18-007-29W1/0	December 2014		-	-	-	-
100/01-19-007-29W1/0	March 2012	Sept 2014	0.1	4785	-	23006
102/01-19-007-29W1/0	November 2014		-	-	-	-
100/03-19-007-29W1/0	October 2012	Sept 2014	1.2	9404	-	15900
102/03-19-007-29W1/0	November 2014		-	-	-	-
100/04-19-007-29W1/0	October 2013	Sept 2014	6.7	2993	-	5690
100/13-19-007-29W1/0	February 2009	Sept 2014	3.2	15534	-	20803
100/15-19-007-29W1/0	October 2012	Sept 2014	2.7	8125		13170
100/13-20-007-29W1/0	November 2012	Sept 2014	1.8	3061	-	9046
100/14-20-007-29W1/0	December 2008	Sept 2014	1.2	5437	-	15885
102/14-20-007-29W1/0	November 2014		-	-	-	-

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 August 2003 in well 100/10-18-007-29W1/2 (10-18) but ceased a year later in July 2004 and well 10-18/2 was abandoned. Production from the Bakken- Three Forks B Pool did not resume again until December 2008 in well 100/14-20-007-29W1. From the group production plot it is evident that as each horizontal well was brought on an uplift in the production occurred but declined shortly thereafter. Oil production peaked at 45.9 m<sup>3</sup>/calendar day, with 5 wells on production, in March 2011 but has since declined to 19.9 m<sup>3</sup>/calendar day (cday) in September 2014. On a monthly basis, oil production peaked at 1,420 m<sup>3</sup>/month, with 5 wells on production, in March 2011 but has since declined to 600 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.



All section N18, 19 and W20-007-29W1 wells produce from the Daly Sinclair Bakken-Three Forks B Pool. A well status summary of wells in and offsetting the area of application is included in the attachments (**Exhibit 2**).

As at September 2014, 56,656 m<sup>3</sup> of oil and 131,426 m<sup>3</sup> of water have been produced from the application area wells. This equates to a recovery of 2.5% of the original oil in place at watercuts in the 70-80% range. There are currently 14 wells on production in sections N18, 19 and W20 -007-29W1M. Red River estimates 5% of the OOIP or 111,600 m<sup>3</sup> will be recovered through primary depletion. Based



on the success of the offsetting schemes, it is estimated that an incremental 10-15% of the initial oil in place or 223,177 m<sup>3</sup> (1,403,783 barrels) to 334,765 m<sup>3</sup> (2,106,670 barrels) of oil is recoverable by implementing a new ER in Sections N18, 19 and W20-007-29W1 in the Bakken-Three Forks B Pool.

<b>RESERVOIR</b>	
<b>Formation Rock and Fluid Parameters</b>	<b>Sinclair Unit No. 16</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 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% Middle Bakken 14.7%
produced water pH	7.1-7.3
produced water TDS	125,000

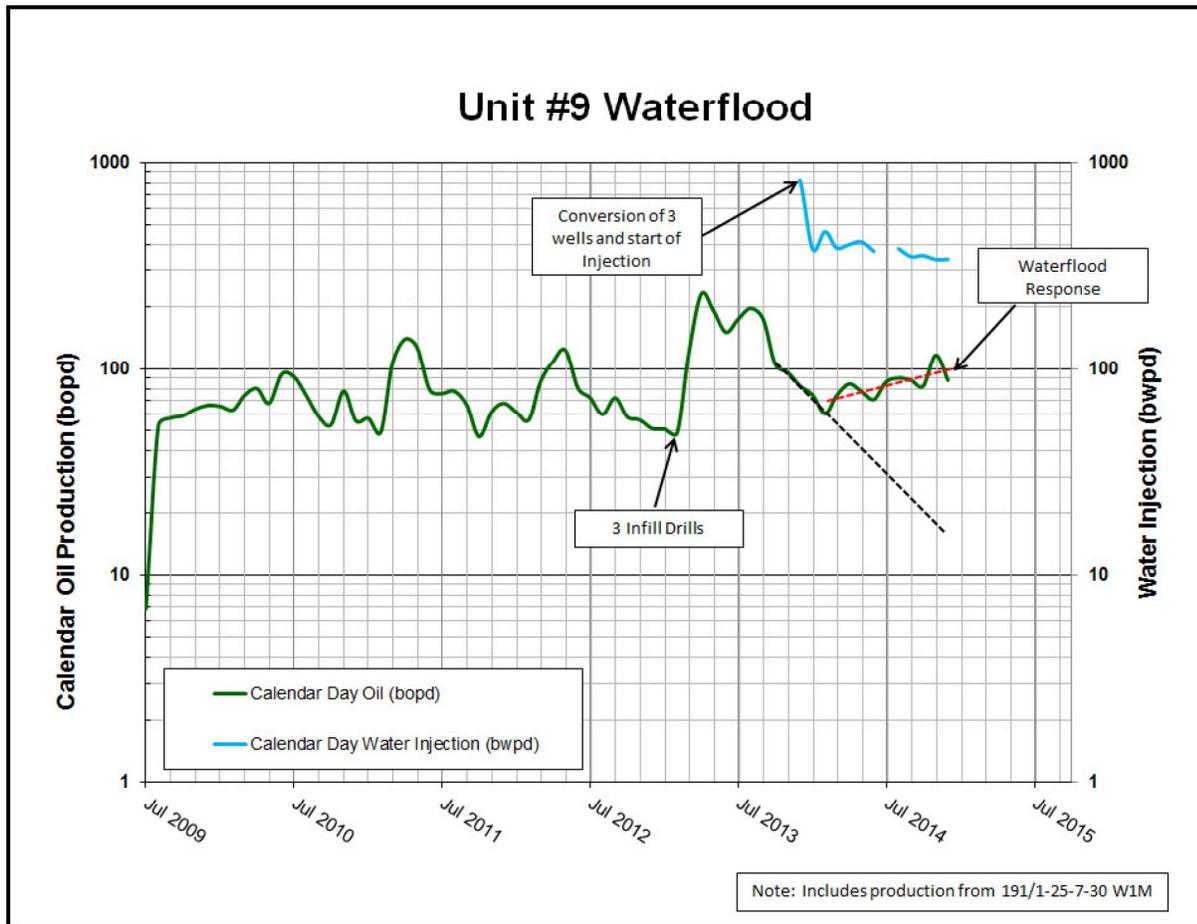
According to publicly available data, no special core analysis, simulation or modelling have been conducted on this Pool and Red River has not conducted any. Hence, information regarding irreducible saturations and relative permeabilities is not available.

#### 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. 16 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 14 producing horizontal wells and one abandoned vertical well in the Bakken Three Forks B Pool within the application area. It is Red River's intention to convert 6 existing horizontal producers to injectors as shown in **Exhibit 6**.

The proposed Sinclair Unit No. 16 will be serviced by the existing injection facility located at 15-18-007-29W1. As previously explained, the 15-18 facility also supports Red River's Sinclair Unit No. 9 waterflood project. 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. 16 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.

Production in the proposed Unit No. 16 area commenced in August 2003 in vertical well 10-18/2, but was short lived as this well ceased production and was abandoned in July 2004 after producing only 55 m<sup>3</sup> of oil and 792 m<sup>3</sup> of water. Production did not resume in the proposed application area until December 2008 again when well 100/14-20-007-29W1 (14-20) was the first horizontal well drilled in the area. In its first year on production, well 14-20 produced 2284 m<sup>3</sup> of oil and 7213 m<sup>3</sup> of water. As at September 2014, 14-20 has produced 5437 m<sup>3</sup> of oil and 15885 m<sup>3</sup> of water. Horizontal well development has recovered significantly more during shorter producing time periods than vertical wells were historically capable of. In 2014, Red River drilled four more infill wells in the application area to bring the interwell spacing distance to approximately 200 m. Alternate producing wells will be converted to water injection wells to set up an optimum waterflood pattern.

Producing zones of interest for this water flood 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 Sections 18, 19, 20 & 30-7-29W1. 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 Phi 0.12-0.19, Kmax 0.3-1.5mD) into cleaner, more massive ripple bedded dolomitic siltstones (best reservoir core Phi 0.12-0.19, Kmax 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 8m thick with net pay in the order of 3-4m. 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 finely laminated quartzose siltstones, very fine sands and shales. Core porosities of 0.09-0.18 and permeabilities of 0.3-5mD are characteristic of this zone. The silts vary from less than 1m thick on the east side of Sections 19 & 30-7- 29W1 to greater than 4m thick on the west side of Sections 20 & 30-7-29W1 and contribute oil to this reservoir system across the application area lands. 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 the application area. This map shows a regional SW dipping surface with a shallow structural low extending northeast into Section 30. 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 Unit expansion lands.

Volumetric reserve estimates for N/2 Section 18, 19 & W/2 Section 20-7-29W1 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 16 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. 16 waterflood operation will utilize the existing injection facility located at 15-18-007-29W1. Produced water from the Bakken Three Forks B is to be filtered and injected at the 15-18-7-29W1 facility. Operational practices to prevent corrosion related failures along with injection facility and wellhead schematics are Included in **Exhibit 12**.

### Waterflood Operating Strategy

The 14 wells to be included in the proposed Sinclair Unit No. 16 are:

Proposed Producers	Proposed Injectors
100/12-18-007-29W1	102/13-18-007-29W1
100/13-18-007-29W1	100/01-19-007-29W1
102/01-19-007-29-W1	100/03-19-007-29W1
102/03-19-007-29W1	100/13-19-007-29W1
100/04-19-007-29W1	100/15-19-007-29W1
102/15-19-007-29W1	102/14-20-007-29W1
100/13-20-007-29W1	
100/14-20-007-29W1	

Red River will review and monitor the 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 No. 16 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 N18, 19 and W20-007-29W1. 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. 16 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 Inc. does have an ERP for the Greater Sinclair Area.



In summary, we believe implementation of a new ER scheme in Sections N18, 19 and W20-007-29W1 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)

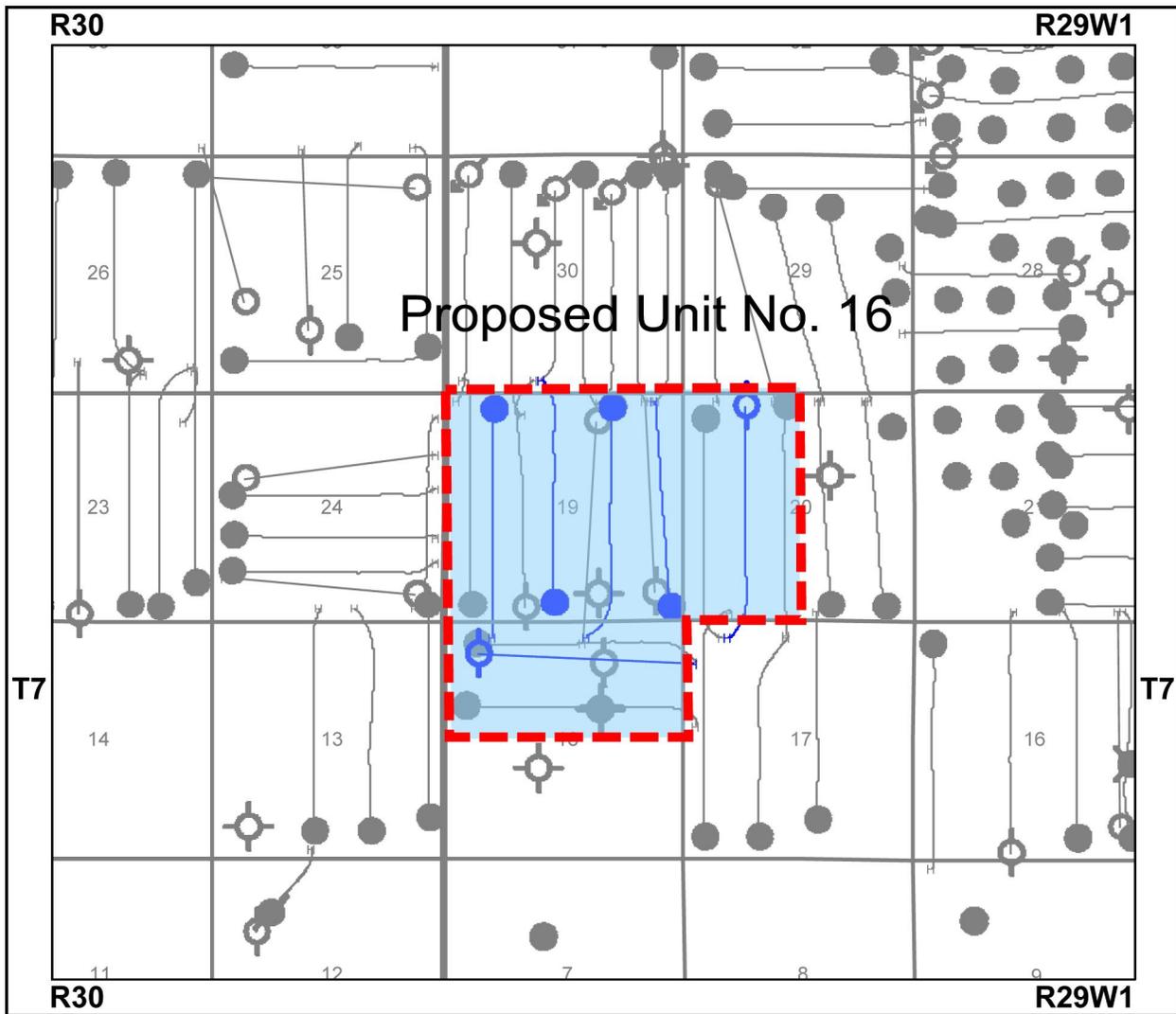
cc. Ken Frankiw, Red River  
Ben Maclsaac, Red River

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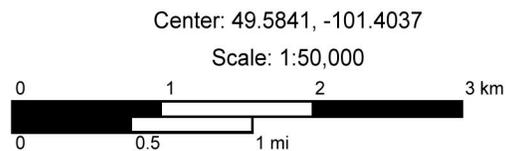
**EXHIBIT 1 APPLICATION AREA AND LESSOR/LESSEE MAPS AND LISTS**





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>	✕ Heavy Oil
<b>DLSS Grid</b>	⊠ Injection
— Section	○ Location
▬ Township/Range	● 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	
✱ Gas	<b>Lists</b>
✱ Gas Injection	✱ Wells - Injectors (Injectors)





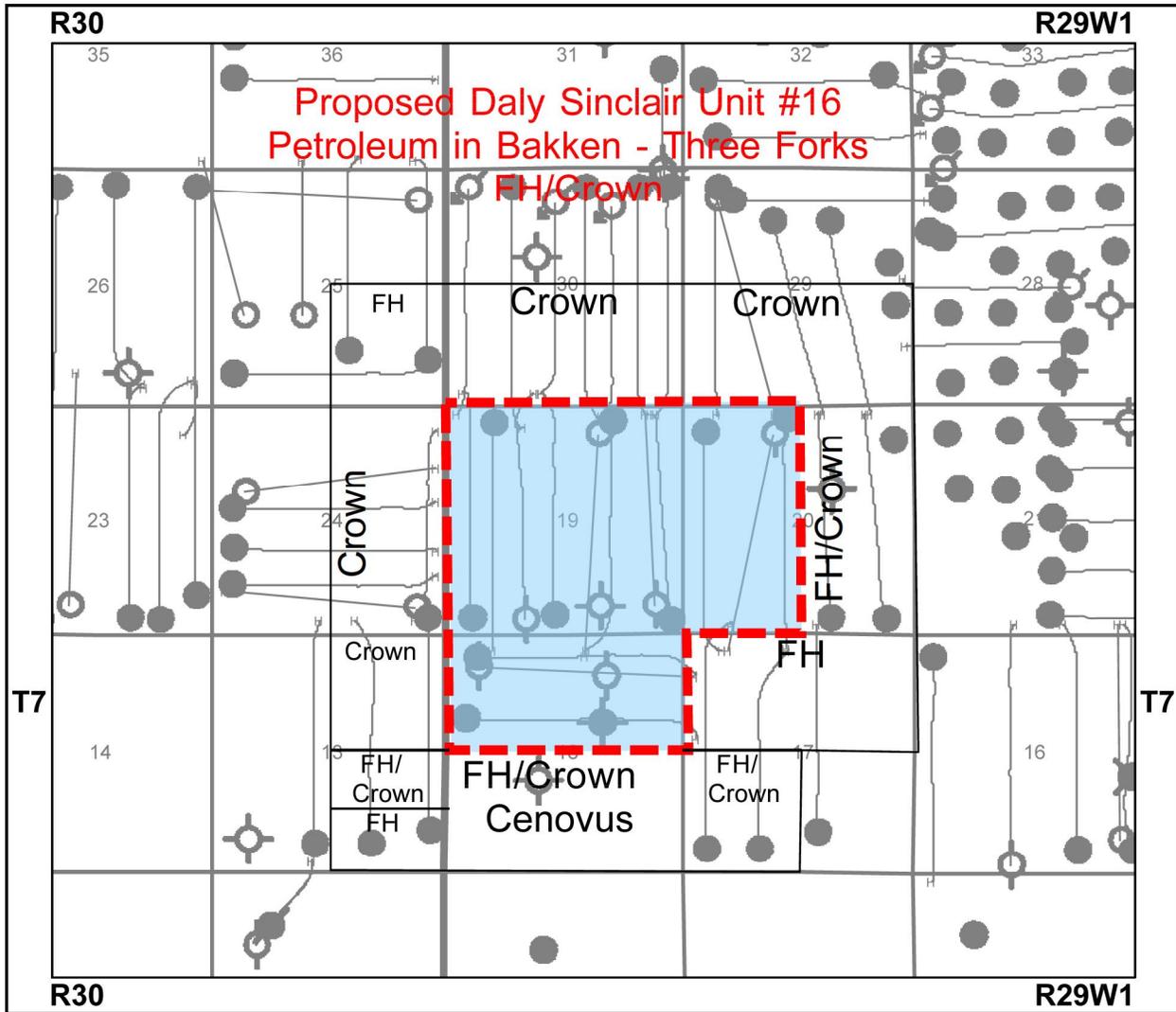
**Daly Sinclair Field, MB**  
Application Area  
Development Plan Unit No. 16

EB, 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 Injection
<b>DLSS Grid</b>	Heavy Oil
Section	Injection
Township/Range	Location
<b>Wells</b>	Oil
Abandoned Gas	Oil & Gas
Abandoned Heavy Oil	Service or Drain
Abandoned Oil	Suspended
Abandoned Oil & Gas	Suspended Gas
Abandoned Service	Suspended Heavy Oil
Drilling	Suspended Oil
Dry & Abandoned	Suspended Oil & Gas
Gas	

Center: 49.5851, -101.4037

Scale: 1:50,000

Daly Sinclair Field, MB  
Lessors

EB, January 21, 2015

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



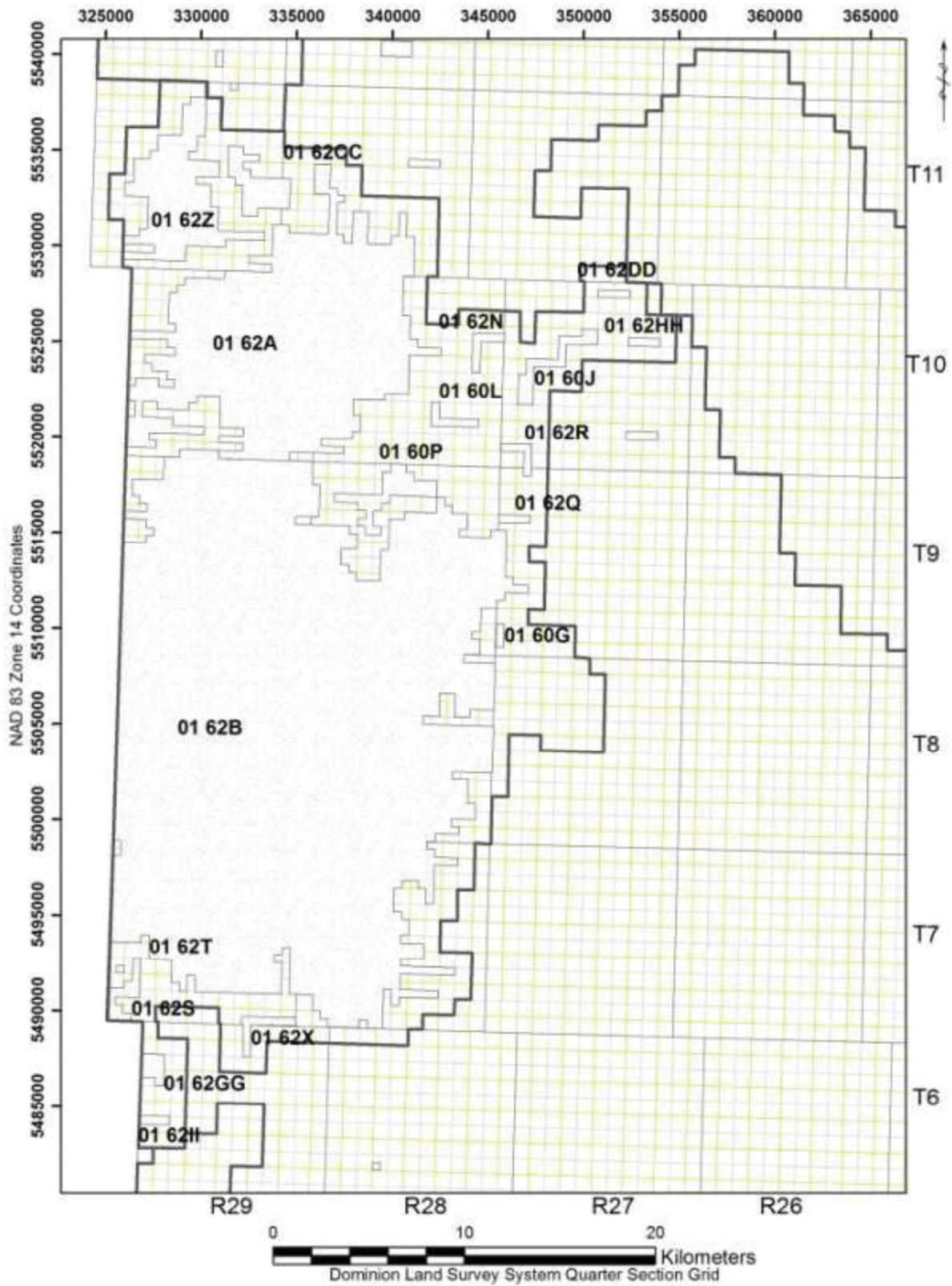


Figure 13 - Daly Sinclair Bakken & Bakken-Torquay Pools (01 60A-0160P & 01 62A-01 62II).

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 (E3m3/d)	Avg Dly Gas Last(3) Prod (E3m3/d)	Cum Oil (m3)	Avg Dly Oil First(3) Prod (m3/d)	Avg Dly Oil Last(3) Prod (m3/d)	Cum Water (m3)	Avg Dly Water First(3) Prod (m3/d)	Avg Dly Water Last(3) Prod (m3/d)	
<b>Inside Application Area</b>																			
1007/10-18-007-29W1/0	Abandoned Zone	Oil	005201	TUNDRA OIL & GAS PARTNERSHIP	DAILY	LODGEPOLE W	LDGP	01/08/2003	31/07/2004	0.0	0.0	0.0	117.8	1.2	3.3	378.1	1.2	3.4	
1007/10-18-007-29W1/0	Abandoned Zone	Oil	005201	TUNDRA OIL & GAS PARTNERSHIP	DAILY	BAKKEEN-THREE FORKS B	BKKN	01/08/2003	31/07/2004	0.0	0.0	0.0	54.7	0.5	2.5	792.2	7.4	0.7	
1007/10-18-007-29W1/0	Abandoned Zone	N/A	005201	TUNDRA OIL & GAS PARTNERSHIP	DAILY	N/A	N/A	N/A	N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1007/12-18-007-29W1/0	Producing	Oil	008912	RED RIVER OIL INC	DAILY	BAKKEEN-THREE FORKS B	TRFK,BKKN	01/11/2012	30/09/2014	0.0	0.0	0.0	2888.7	10.6	2.3	13530.2	48.7	12.4	
1007/13-18-007-29W1/0	Producing	Oil	007359	RED RIVER OIL INC	DAILY	BAKKEEN-THREE FORKS B	BKKN	01/10/2010	30/09/2014	0.0	0.0	0.0	4256.2	10.2	0.9	13226.2	26.8	4.0	
1007/13-18-007-29W1/0	Standing	N/A	009959	RED RIVER OIL LIMITED	DAILY	N/A	N/A	N/A	N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1007/15-18-007-29W1/0	Producing	Oil	009111	RED RIVER OIL INC	DAILY	BAKKEEN-THREE FORKS B	TRFK,BKKN	01/03/2012	30/09/2014	0.0	0.0	0.0	4784.8	11.7	0.3	23005.6	37.7	28.6	
1007/15-18-007-29W1/0	Producing	Oil	008351	RED RIVER OIL LIMITED	DAILY	N/A	N/A	N/A	N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1007/15-18-007-29W1/0	Abandoned	N/A	009962	SUPERST PETROLEUM CORPORATION LIMITED	DAILY	OTHER AREAS	N/A	N/A	N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1007/05-19-007-29W1/0	Producing	Oil	007192	RED RIVER OIL INC	DAILY	BAKKEEN-THREE FORKS B	BKKN	01/03/2010	30/09/2014	0.0	0.0	0.0	9403.9	9.7	1.3	15900.2	17.2	4.0	
1007/05-19-007-29W1/0	Producing	Oil	009998	RED RIVER OIL INC	DAILY	N/A	N/A	N/A	N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1007/04-19-007-29W1/0	Producing	Oil	009415	RED RIVER OIL INC	DAILY	BAKKEEN-THREE FORKS B	TRFK,BKKN	01/10/2013	30/09/2014	0.0	0.0	0.0	2993.0	9.1	7.1	5689.5	22.5	17.2	
1007/13-19-007-29W1/0	Producing	Oil	006823	RED RIVER OIL INC	DAILY	BAKKEEN-THREE FORKS B	BKKN	01/02/2009	30/09/2014	0.0	0.0	0.0	15533.8	16.3	2.7	20802.5	22.2	3.4	
1007/15-19-007-29W1/0	Producing	Oil	009470	RED RIVER OIL INC	DAILY	BAKKEEN-THREE FORKS B	BKKN	01/02/2011	30/09/2014	0.0	0.0	0.0	8125.3	18.3	2.6	13170.0	45.2	7.1	
1007/15-19-007-29W1/0	Potential	Oil	009476	RED RIVER OIL INC	DAILY	N/A	N/A	N/A	N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1007/13-20-007-29W1/0	Producing	Oil	008956	RED RIVER OIL INC	DAILY	BAKKEEN-THREE FORKS B	TRFK,BKKN	01/11/2012	30/09/2014	0.0	0.0	0.0	3061.2	9.9	2.0	9046.1	34.9	6.5	
1007/14-20-007-29W1/0	Producing	Oil	006807	RED RIVER OIL INC	DAILY	BAKKEEN-THREE FORKS B	BKKN	01/12/2008	30/09/2014	0.0	0.0	0.0	5437.0	8.6	1.2	15885.4	27.7	3.6	
1027/14-20-007-29W1/0	Standing	N/A	010001	RED RIVER OIL INC	DAILY	N/A	N/A	N/A	N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
<b>Outside Application Area</b>																			
1007/01-07-007-29W1/0	Producing	Oil	008235	RED RIVER OIL INC	DAILY	BAKKEEN-THREE FORKS S	BKKN	01/12/2011	30/09/2014	0.0	0.0	0.0	560.5	1.2	0.4	17130.5	58.2	10.6	
1007/02-17-007-29W1/0	Producing	Oil	006787	RED RIVER OIL INC	DAILY	BAKKEEN-THREE FORKS B	BKKN	01/11/2008	30/09/2014	0.0	0.0	0.0	5542.4	7.8	1.3	24442.9	29.7	6.0	
1007/03-17-007-29W1/0	Producing	Oil	007214	RED RIVER OIL INC	DAILY	BAKKEEN-THREE FORKS B	TOQY	01/10/2010	30/09/2014	0.0	0.0	0.0	3089.9	4.0	1.0	31411.1	31.9	13.5	
1007/04-17-007-29W1/0	Producing	Oil	009037	RED RIVER OIL INC	DAILY	BAKKEEN-THREE FORKS B	TRFK,BKKN	01/02/2013	30/09/2014	0.0	0.0	0.0	2121.8	10.5	1.4	10010.1	44.0	8.9	
1007/06-18-007-29W1/0	Abandoned	N/A	002678	SASKOIL	DAILY	OTHER AREAS	N/A	N/A	N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1007/01-20-007-29W1/0	Producing	Oil	006892	TUNDRA OIL & GAS PARTNERSHIP	DAILY	BAKKEEN-THREE FORKS B	BKKN	01/02/2009	30/09/2014	0.0	0.0	0.0	4900.5	7.8	1.0	17564.2	22.2	4.3	
1007/02-20-007-29W1/0	Producing	Oil	006918	TUNDRA OIL & GAS PARTNERSHIP	DAILY	BAKKEEN-THREE FORKS B	BKKN	01/07/2009	30/09/2014	0.0	0.0	0.0	3935.0	7.3	0.5	14880.9	23.8	2.7	
1007/10-20-007-29W1/0	Abandoned	N/A	003086	CORPORATE OIL AND GAS LIMITED	DAILY	OTHER AREAS	N/A	N/A	N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1007/16-20-007-29W1/0	Producing	Oil	006593	TUNDRA OIL & GAS PARTNERSHIP	DAILY	BAKKEEN-THREE FORKS B	BKKN	01/07/2008	30/09/2014	0.0	0.0	0.0	778.9	1.4	0.2	2491.2	4.2	0.5	
1007/07-28-007-29W1/0	Producing	Oil	008696	TUNDRA OIL & GAS PARTNERSHIP	DAILY	BAKKEEN-THREE FORKS B	BKKN	01/10/2012	30/09/2014	0.0	0.0	0.0	2571.6	2.2	3.4	3756.1	9.3	5.6	
1007/08-29-007-29W1/0	Producing	Oil	006504	TUNDRA OIL & GAS PARTNERSHIP	DAILY	BAKKEEN-THREE FORKS B	BKKN	01/12/2007	30/09/2014	0.0	0.0	0.0	2016.7	5.7	0.6	2016.7	4.6	0.2	
1007/13-29-007-29W1/0	Producing	Oil	009204	TUNDRA OIL & GAS PARTNERSHIP	DAILY	BAKKEEN-THREE FORKS B	TRFK,BKKN	01/03/2013	30/09/2014	0.0	0.0	0.0	2195.9	4.5	2.7	13933.3	39.9	16.4	
1007/13-29-007-29W1/0	N/A	N/A	009324	TUNDRA OIL & GAS PARTNERSHIP	DAILY	N/A	N/A	N/A	N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1007/14-29-007-29W1/0	Producing	Oil	006905	TUNDRA OIL & GAS PARTNERSHIP	DAILY	BAKKEEN-THREE FORKS B	BKKN	01/03/2009	30/09/2014	0.0	0.0	0.0	4310.8	7.7	0.8	18370.2	21.7	3.9	
1007/15-29-007-29W1/0	Producing	Oil	006893	TUNDRA OIL & GAS PARTNERSHIP	DAILY	BAKKEEN-THREE FORKS B	BKKN	01/02/2009	30/09/2014	0.0	0.0	0.0	4407.2	9.3	0.8	14407.2	23.4	2.9	
1007/13-30-007-29W1/0	Injection	Water Injection	007340	RED RIVER OIL INC	DAILY	BAKKEEN-THREE FORKS B	BKKN	01/03/2011	31/10/2013	0.0	0.0	0.0	3611.3	14.1	1.1	18974.0	56.4	2.9	
1007/14-30-007-29W1/0	Injection	Water Injection	009178	RED RIVER OIL INC	DAILY	BAKKEEN-THREE FORKS B	BKKN	01/03/2013	30/09/2014	0.0	0.0	0.0	3178.4	4.9	0.0	14050.6	20.2	0.0	
1007/14-30-007-29W1/0	Injection	Water Injection	007843	RED RIVER OIL INC	DAILY	BAKKEEN-THREE FORKS B	BKKN	01/03/2013	30/09/2014	0.0	0.0	0.0	1803.1	7.0	3.7	6897.7	33.5	11.9	
1007/15-30-007-29W1/0	Producing	Oil	009184	RED RIVER OIL INC	DAILY	BAKKEEN-THREE FORKS B	TRFK,BKKN	01/03/2013	30/09/2014	0.0	0.0	0.0	2120.9	7.3	2.6	10489.5	36.4	13.3	
1007/15-30-007-29W1/0	Producing	Oil	006490	RED RIVER OIL INC	DAILY	BAKKEEN-THREE FORKS B	BKKN	01/07/2009	30/09/2014	0.0	0.0	0.0	7695.7	8.1	1.1	18974.0	49.5	7.6	
1007/15-30-007-29W1/0	Producing	Oil	009138	RED RIVER OIL INC	DAILY	BAKKEEN-THREE FORKS B	TRFK,BKKN	01/07/2009	30/09/2014	0.0	0.0	0.0	1536.7	8.2	2.8	6427.3	34.0	9.7	
1007/15-30-007-29W1/0	Producing	Oil	009138	RED RIVER OIL INC	DAILY	BAKKEEN-THREE FORKS B	TRFK,BKKN	01/07/2009	30/09/2014	0.0	0.0	0.0	3228.0	45.8	2.9	8750.8	40.3	9.2	
1007/05-19-007-30W1/0	Producing	Oil	013039	RED RIVER OIL INC	RTYERSON	RTYERSON BAKKEN-TORQUAY	UBKN	01/04/2013	31/10/2014	1.0	0.0	0.0	5064.2	7.9	1.6	29060.1	40.0	11.9	
1007/05-19-007-30W1/0	Producing	Oil	011435	RED RIVER OIL INC	RTYERSON	RTYERSON BAKKEN-TORQUAY	UBKN	01/06/2011	31/10/2014	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
1007/05-19-007-30W1/0	Producing	N/A	0121001	TUNDRA OIL & GAS PARTNERSHIP	ANTLER	N/A	N/A	N/A	N/A	0.0	0.0	0.0	979.0	2.6	3.0	3043.6	11.0	8.9	
1007/02-24-007-30W1/0	Producing	Oil	013001	TUNDRA OIL & GAS PARTNERSHIP	ANTLER	RTYERSON BAKKEN-TORQUAY	TOQY	01/10/2013	31/10/2014	8.5	0.0	0.1	4075.1	4.7	2.5	11918.7	16.7	9.3	
1007/02-24-007-30W1/0	Producing	Oil	0118078	TUNDRA OIL & GAS PARTNERSHIP	ANTLER	RTYERSON BAKKEN-TORQUAY	BKKN	01/12/2011	31/10/2014	85.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
1007/02-24-007-30W1/0	Producing	Oil	0095150	TUNDRA OIL & GAS PARTNERSHIP	ANTLER	RTYERSON BAKKEN-TORQUAY	BKKN	01/06/2009	30/09/2014	114.0	0.0	0.1	885.1	17.1	0.8	12784.0	20.7	1.4	
1007/12-24-007-30W1/0	Producing	Oil	0114088	TUNDRA OIL & GAS PARTNERSHIP	ANTLER	RTYERSON BAKKEN-TORQUAY	BKKN	01/12/2011	31/10/2014	117.2	0.1	0.1	4172.8	4.2	2.5	16995.5	34.0	10.4	
1007/12-24-007-30W1/0	Cancelled	N/A	0118060	TUNDRA OIL & GAS PARTNERSHIP	ANTLER	N/A	N/A	N/A	N/A	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
1007/12-24-007-30W1/0	Producing	Oil	0121177	RED RIVER OIL INC	RTYERSON	RTYERSON BAKKEN-TORQUAY	BKKN	01/03/2013	31/10/2014	1.2	0.0	0.0	3223.4	10.4	3.8	11623.1	44.8	14.6	
1007/02-25-007-30W1/0	Producing	Oil	0133907	RED RIVER OIL INC	RTYERSON	RTYERSON BAKKEN-TORQUAY	BKKN	01/12/2013	31/10/2014	1.0	0.0	0.0	2193.4	9.9	7.0	9752.3	50.6	26.0	
1007/02-25-007-30W1/0	Producing	Oil	0108176	RED RIVER OIL INC	MISCELLANEOUS	BAKKEEN-TORQUAY	BKKN	01/03/2010	31/10/2014	0.2	0.0	0.0	3052.2	3.5	0.1	49498.6	29.6	18.6	

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



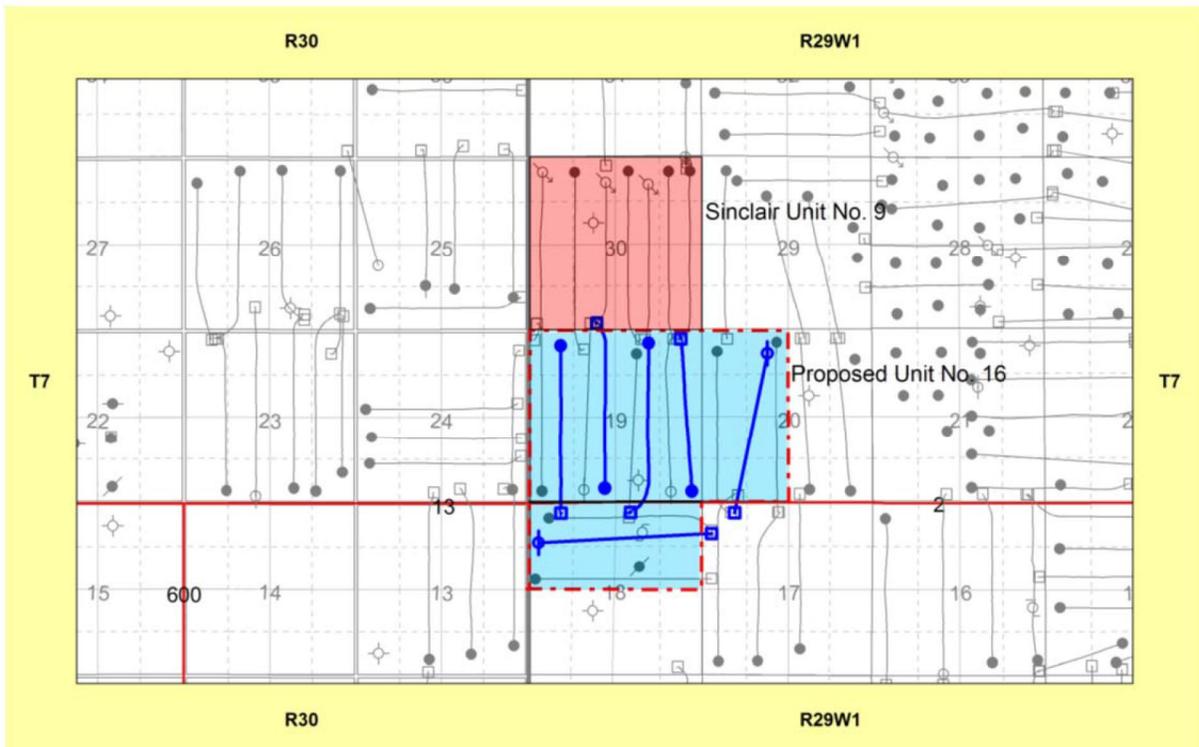
March 13, 2015

**PROJECT NO. RED13\_1002\_A\_02**

**RE: APPLICATION FOR A NEW UNIT NO. 16 AND NEW ENHANCED RECOVERY SCHEME IN THE BAKKEN-THREE FORKS B POOL IN SECTIONS N18, 19 and W20-007-29W1M 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. 16 and a new enhanced oil recovery scheme by the injection of produced water into wells 102/13-18-007-29 W1M, 100/01-19-007-29 W1M, 100/03-19-007-29 W1M, 100/13-19-007-29 W1M, 100/15-19-007-29 W1M, and 102/14-20-007-29 W1M in the Middle Bakken and Three Forks Formation (Bakken and Three Forks B Pool - 01 62B) to improve oil production from the north half of section 18, section 19 and the west half of section 20-007-29W1M, 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: 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/well licensee in the Daly Sinclair Bakken and Three Forks B Pool (01 62B Pool), 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**



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

Fax: 403.213.4298

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



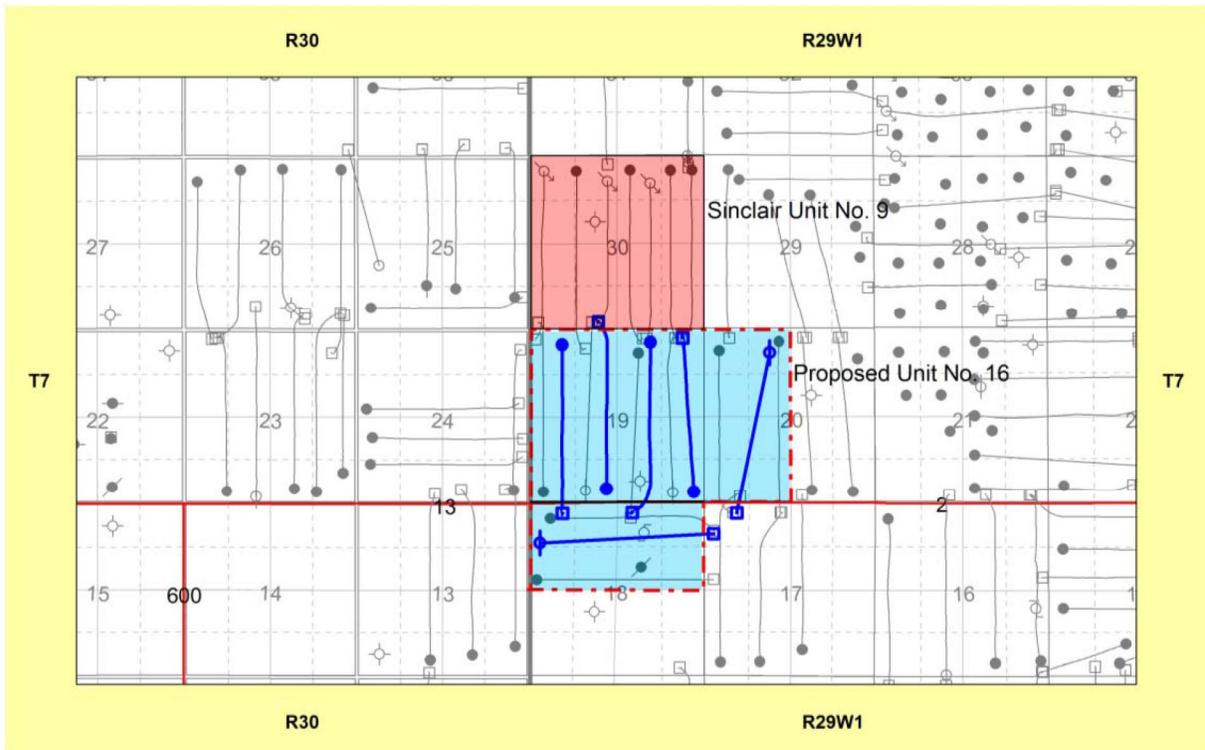
March 17, 2015

**PROJECT NO. RED13\_1002\_A\_02**

**RE: APPLICATION FOR A NEW UNIT NO. 16 AND NEW ENHANCED RECOVERY SCHEME IN THE BAKKEN-THREE FORKS B POOL IN SECTIONS N18, 19 and W20-007-29W1M 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. 16 and a new enhanced oil recovery scheme by the injection of produced water into wells 102/13-18-007-29 W1M, 100/01-19-007-29 W1M, 100/03-19-007-29 W1M, 100/13-19-007-29 W1M, 100/15-19-007-29 W1M, and 102/14-20-007-29 W1M in the Middle Bakken and Three Forks Formation (Bakken and Three Forks B Pool - 01 62B) to improve oil production from the north half of section 18, section 19 and the west half of section 20-007-29W1M, 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: 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. 16 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



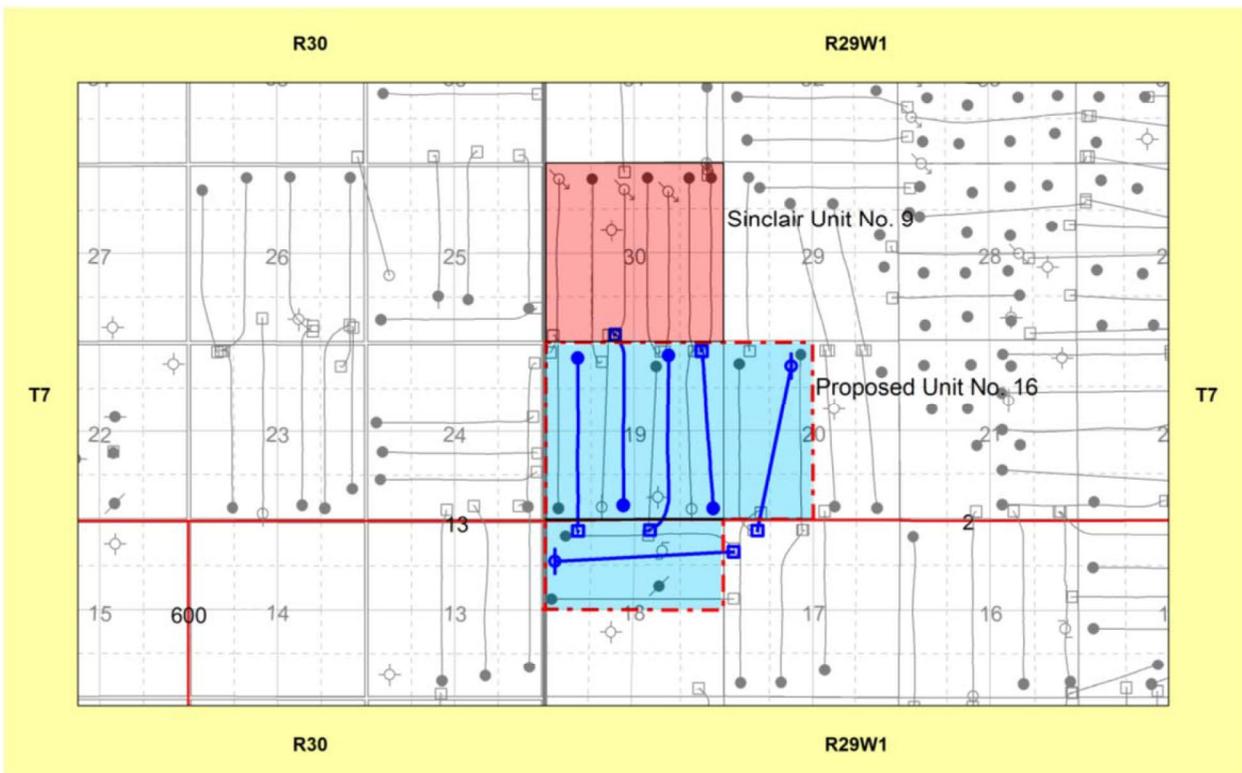
March 19, 2015

**PROJECT NO: RED13-1002-02**

**RE: APPLICATION FOR A NEW UNIT NO. 16 AND NEW ENHANCED RECOVERY SCHEME IN THE BAKKEN-THREE FORKS POOL IN SECTIONS N18, 19 and W20-007-29W1M 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. 16 and a new enhanced oil recovery scheme by the injection of produced water into wells 102/13-18-007-29 W1M, 100/01-19-007-29 W1M, 100/03-19-007-29 W1M, 100/13-19-007-29 W1M, 100/15-19-007-29 W1M, and 102/14-20-007-29 W1M in the Middle Bakken and Three Forks Formation (Bakken and Three Forks B Pool - 01 62B) to improve oil production from the north half of section 18, section 19 and the west half of section 20-007-29W1M, 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: 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.

- Enhanced oil recovery 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 the 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". The signature is fluid and cursive, written in a professional style.

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

Fax: 403-213-4298

Email: [rswanson@fekete.com](mailto:rswanson@fekete.com)

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



TABLE 1 OOIP

# Red River Oil Inc.

## Sinclair Unit # 16

DETERMINATION OF TRACT FACTORS BASED ON OOIP Calculations

Section	LSD	Bakken Silts					Lyleton A / Three Forks					Total OOIP (m <sup>3</sup> )
		Area (ha)	H	Phi	Sw	OOIP (m <sup>3</sup> )	Area (ha)	H	Avg Phi	Sw	OOIP (m <sup>3</sup> )	
18-7-29W1	9	16	3.5	0.13	0.5	35,686	16	4	0.16	0.45	55,216	90,902
18-7-29W1	10	16	2.5	0.13	0.5	25,490	16	3.5	0.16	0.45	48,314	73,804
18-7-29W1	11	16	1	0.13	0.5	10,196	16	1.5	0.16	0.45	20,706	30,902
18-7-29W1	12	16	2	0.13	0.5	20,392	16	2.5	0.16	0.45	34,510	54,902
18-7-29W1	13	16	1	0.13	0.5	10,196	16	4	0.16	0.45	55,216	65,412
18-7-29W1	14	16	1	0.13	0.5	10,196	16	3.5	0.16	0.45	48,314	58,510
18-7-29W1	15	16	3.5	0.13	0.5	35,686	16	3	0.16	0.45	41,412	77,098
18-7-29W1	16	16	4	0.13	0.5	40,784	16	4	0.16	0.45	55,216	96,000
19-7-29W1	1	16	3.75	0.13	0.5	38,235	16	4.5	0.16	0.45	62,118	100,353
19-7-29W1	2	16	2.75	0.13	0.5	28,039	16	4	0.16	0.45	55,216	83,255
19-7-29W1	3	16	1.75	0.13	0.5	17,843	16	3.5	0.16	0.45	48,314	66,157
19-7-29W1	4	16	1.5	0.13	0.5	15,294	16	3.5	0.16	0.45	48,314	63,608
19-7-29W1	5	16	1.5	0.13	0.5	15,294	16	3.5	0.16	0.45	48,314	63,608
19-7-29W1	6	16	1.5	0.13	0.5	15,294	16	3.5	0.16	0.45	48,314	63,608
19-7-29W1	7	16	2	0.13	0.5	20,392	16	3.5	0.16	0.45	48,314	68,706
19-7-29W1	8	16	2.75	0.13	0.5	28,039	16	4	0.16	0.45	55,216	83,255
19-7-29W1	9	16	2	0.13	0.5	20,392	16	3.5	0.16	0.45	48,314	68,706
19-7-29W1	10	16	1.5	0.13	0.5	15,294	16	3.5	0.16	0.45	48,314	63,608
19-7-29W1	11	16	1.5	0.13	0.5	15,294	16	3.5	0.16	0.45	48,314	63,608
19-7-29W1	12	16	1.5	0.13	0.5	15,294	16	2.5	0.16	0.45	34,510	49,804
19-7-29W1	13	16	1.5	0.13	0.5	15,294	16	2.5	0.16	0.45	34,510	49,804
19-7-29W1	14	16	1.5	0.13	0.5	15,294	16	3.5	0.16	0.45	48,314	63,608
19-7-29W1	15	16	1.5	0.13	0.5	15,294	16	3.5	0.16	0.45	48,314	63,608
19-7-29W1	16	16	2.5	0.13	0.5	25,490	16	3.5	0.16	0.45	48,314	73,804
20-7-29W1	3	16	4.5	0.13	0.5	45,882	16	2	0.16	0.45	27,608	73,490
20-7-29W1	4	16	4	0.13	0.5	40,784	16	3	0.16	0.45	41,412	82,196
20-7-29W1	5	16	4	0.13	0.5	40,784	16	3	0.16	0.45	41,412	82,196
20-7-29W1	6	16	4.5	0.13	0.5	45,882	16	2	0.16	0.45	27,608	73,490
20-7-29W1	11	16	4.5	0.13	0.5	45,882	16	2	0.16	0.45	27,608	73,490
20-7-29W1	12	16	4	0.13	0.5	40,784	16	2	0.16	0.45	27,608	68,392
20-7-29W1	13	16	4	0.13	0.5	40,784	16	2	0.16	0.45	27,608	68,392
20-7-29W1	14	16	4.5	0.13	0.5	45,882	16	2	0.16	0.45	27,608	73,490

**Total**

**851,373**

**1,380,392**

**2,231,765**

TABLE 2 90 DAY TRACT FACTOR

# Red River Oil Inc.

## Sinclair Unit # 16

DETERMINATION OF TRACT FACTORS BASED ON REMAINING OIP

Section	LSD	Well	OOIP (m <sup>3</sup> )	Cum Oil Produced (m <sup>3</sup> )	Remaining OOIP (m <sup>3</sup> )	Tract Factor (%)
18-7-29W1	9	100/12-18-007-29W1	90,902.0	722.3	90,179.7	0.041501038
18-7-29W1	10	100/12-18-007-29W1 & 100/10-18-007-29W1	73,803.9	777.3	73,026.7	0.033607146
18-7-29W1	11	100/12-18-007-29W1	30,902.0	722.3	30,179.7	0.013888815
18-7-29W1	12	100/12-18-007-29W1	54,902.0	722.3	54,179.7	0.024933704
18-7-29W1	13	100/13-18-007-29W1	65,411.8	1,064.0	64,347.8	0.029613081
18-7-29W1	14	100/13-18-007-29W1	58,509.8	1,064.0	57,445.8	0.026436773
18-7-29W1	15	100/13-18-007-29W1	77,098.0	1,064.0	76,034.0	0.034991148
18-7-29W1	16	100/13-18-007-29W1	96,000.0	1,064.0	94,936.0	0.043689900
19-7-29W1	1	100/01-19-007-29W1 & 102/01-19-007-29W1	100,352.9	1,196.3	99,156.7	0.045632278
19-7-29W1	2	100/15-19-007-29W1 & 102/15-19-007-29W1	83,254.9	2,600.0	80,654.9	0.037117686
19-7-29W1	3	100/03-19-007-29W1 & 102/03-19-007-29W1	66,156.9	2,351.0	63,805.9	0.029363695
19-7-29W1	4	100/04-19-007-29W1 & 100/13-19-007-29W1	63,607.8	4,631.8	58,976.1	0.027141018
19-7-29W1	5	100/04-19-007-29W1 & 100/13-19-007-29W1	63,607.8	4,631.8	58,976.1	0.027141018
19-7-29W1	6	100/03-19-007-29W1 & 102/03-19-007-29W1	63,607.8	2,351.0	61,256.8	0.028190627
19-7-29W1	7	100/15-19-007-29W1 & 102/15-19-007-29W1	68,705.9	2,600.0	66,105.9	0.030422173
19-7-29W1	8	100/01-19-007-29W1 & 102/01-19-007-29W1	83,254.9	1,196.3	82,058.7	0.037763697
19-7-29W1	9	100/01-19-007-29W1 & 102/01-19-007-29W1	68,705.9	1,196.3	67,509.6	0.031068184
19-7-29W1	10	100/15-19-007-29W1 & 102/15-19-007-29W1	63,607.8	2,600.0	61,007.8	0.028076036
19-7-29W1	11	100/03-19-007-29W1 & 102/03-19-007-29W1	63,607.8	2,351.0	61,256.8	0.028190627
19-7-29W1	12	100/04-19-007-29W1 & 100/13-19-007-29W1	49,803.9	4,631.8	45,172.2	0.020788401
19-7-29W1	13	100/04-19-007-29W1 & 100/13-19-007-29W1	49,803.9	4,631.8	45,172.2	0.020788401
19-7-29W1	14	100/03-19-007-29W1 & 102/03-19-007-29W1	63,607.8	2,351.0	61,256.8	0.028190627
19-7-29W1	15	100/15-19-007-29W1 & 102/15-19-007-29W1	63,607.8	2,600.0	61,007.8	0.028076036
19-7-29W1	16	100/01-19-007-29W1 & 102/01-19-007-29W1	73,803.9	1,196.3	72,607.7	0.033414321
20-7-29W1	3	100/14-20-007-29W1 & 102/14-20-007-29W1	73,490.2	1,359.3	72,130.9	0.033194930
20-7-29W1	4	100/13-20-007-29W1	82,196.1	765.3	81,430.8	0.037474770
20-7-29W1	5	100/13-20-007-29W1	82,196.1	765.3	81,430.8	0.037474770
20-7-29W1	6	100/14-20-007-29W1 & 102/14-20-007-29W1	73,490.2	1,359.3	72,130.9	0.033194930
20-7-29W1	11	100/14-20-007-29W1 & 102/14-20-007-29W1	73,490.2	1,359.3	72,130.9	0.033194930
20-7-29W1	12	100/13-20-007-29W1	68,392.2	765.3	67,626.9	0.031122154
20-7-29W1	13	100/13-20-007-29W1	68,392.2	765.3	67,626.9	0.031122154
20-7-29W1	14	100/14-20-007-29W1 & 102/14-20-007-29W1	73,490.2	1,359.3	72,130.9	0.033194930

Totals

2,231,765

58,814

2,172,951

1.000000000

Table 3

# Red River Oil Inc.

## Sinclair Unit # 16

### Tract Factors

Section	LSD	Tract Factor (%)
18-7-29W1	9	4.150103845
18-7-29W1	10	3.360714597
18-7-29W1	11	1.388881520
18-7-29W1	12	2.493370450
18-7-29W1	13	2.961308074
18-7-29W1	14	2.643677271
18-7-29W1	15	3.499114776
18-7-29W1	16	4.368990044
19-7-29W1	1	4.563227822
19-7-29W1	2	3.711768598
19-7-29W1	3	2.936369545
19-7-29W1	4	2.714101750
19-7-29W1	5	2.714101750
19-7-29W1	6	2.819062714
19-7-29W1	7	3.042217303
19-7-29W1	8	3.776369696
19-7-29W1	9	3.106818400
19-7-29W1	10	2.807603641
19-7-29W1	11	2.819062714
19-7-29W1	12	2.078840143
19-7-29W1	13	2.078840143
19-7-29W1	14	2.819062714
19-7-29W1	15	2.807603641
19-7-29W1	16	3.341432062
20-7-29W1	3	3.319492977
20-7-29W1	4	3.747477023
20-7-29W1	5	3.747477023
20-7-29W1	6	3.319492977
20-7-29W1	11	3.319492977
20-7-29W1	12	3.112215417
20-7-29W1	13	3.112215417
20-7-29W1	14	3.319492977

100.00000000

**EXHIBIT 5      RESERVES AND PRODUCTION**



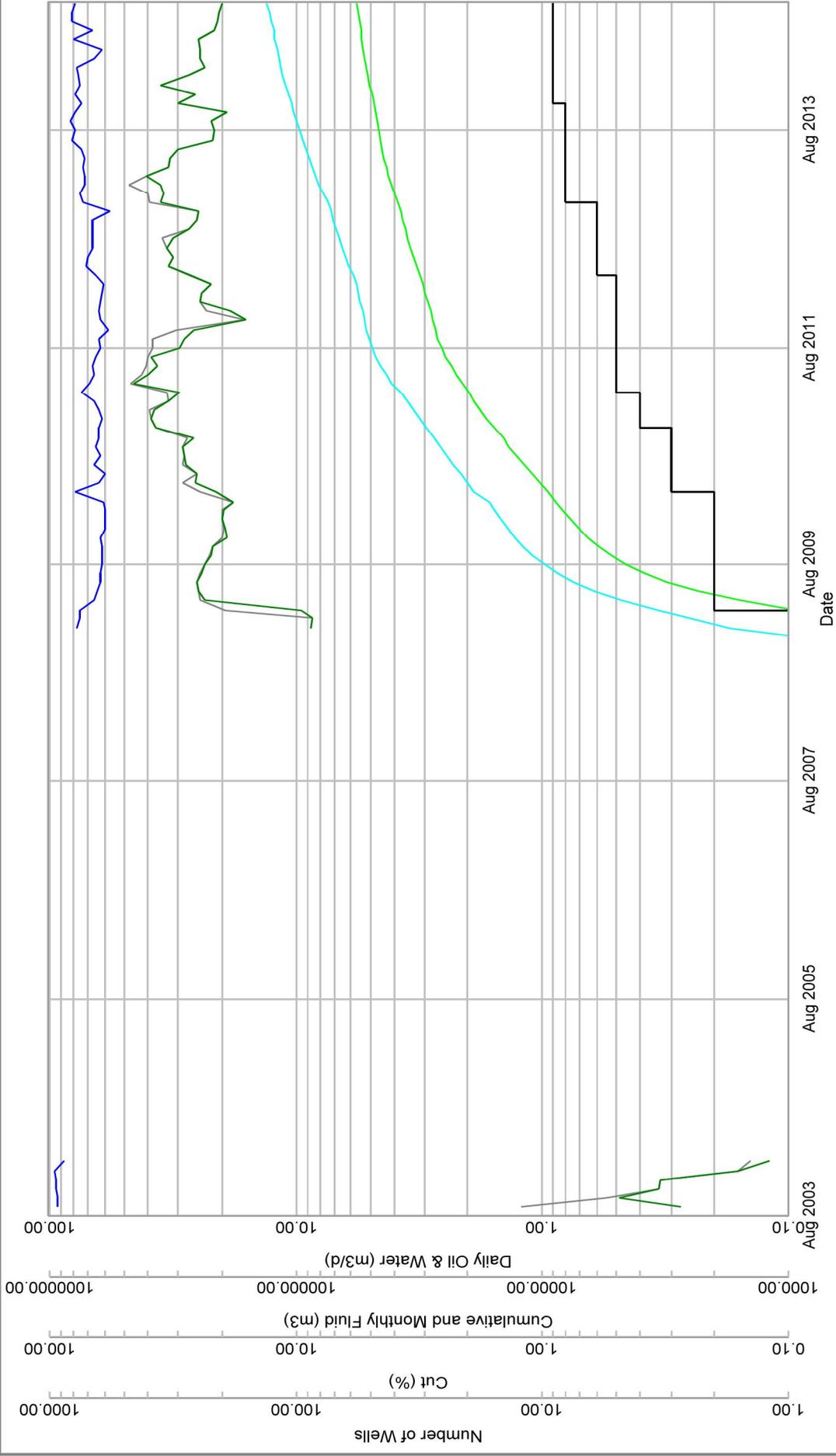
# Well Information as of 1/16/2015 - Group Well Report

## Production Graph

Group: 10 wells  
 # of Wells: 10  
 Fluid: Oil  
 Mode: Abandoned Zone; Producing

Prod Form: BKKI; TRFK  
 Field: DALY (1)  
 Pool Code: 0~  
 Unit Code:

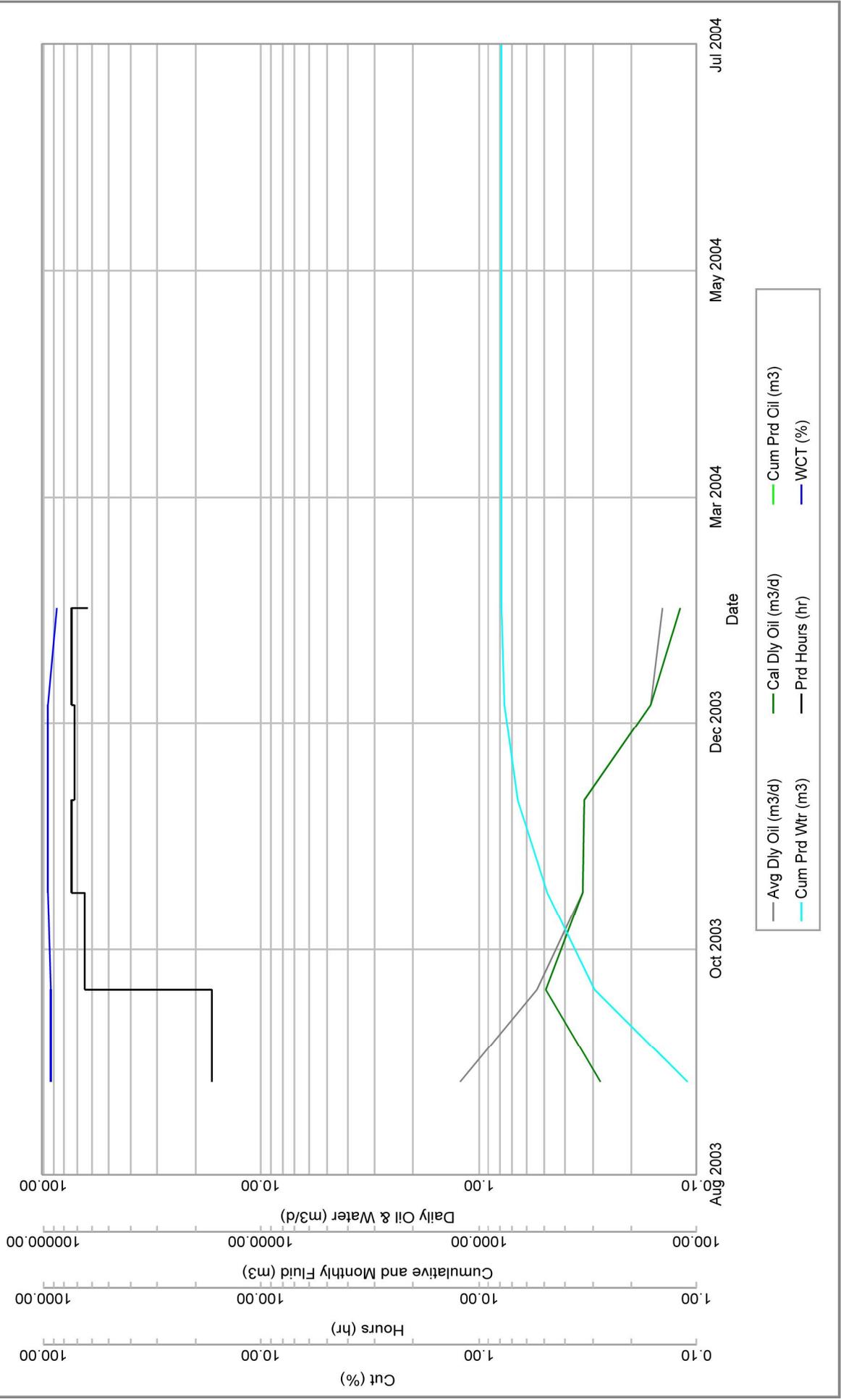
On Prod: 2003-08 to 2014-09  
 Cum Oil: 56538.6 m3  
 Cum Gas: 0.0 E3m3  
 Cum Wtr: 131047.9 m3



Well 00/10-18-007-29W1/2 Information as of 1/16/2015

Production Graph

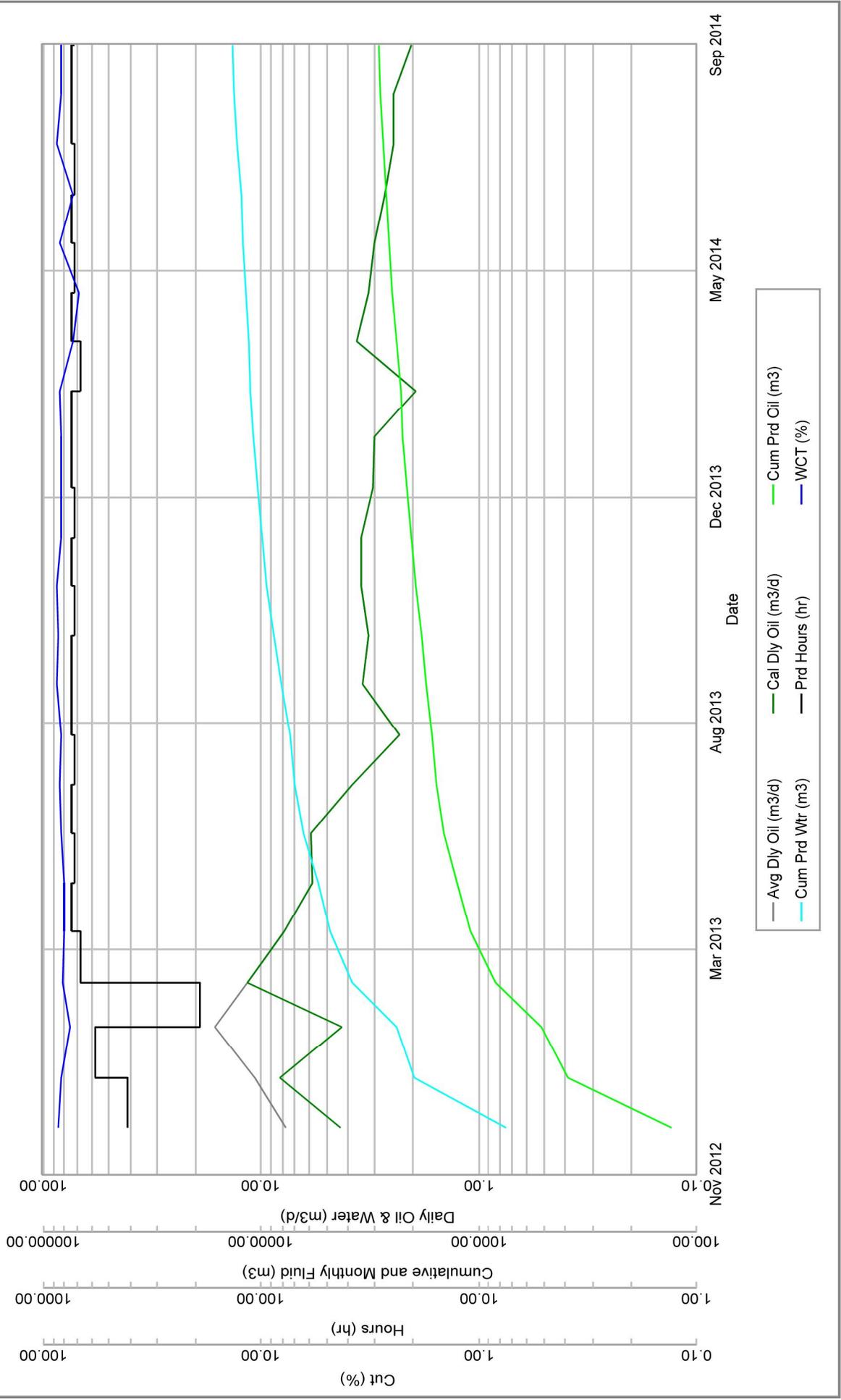
**LWI:** 00/10-18-007-29W1/2  
**Well Name:** TUNDRA SINCLAIR PROV. COM 10-18-7-29 (WPM)  
**Prod Form:** BKKN  
**Field:** DALY (1)  
**On Prod:** 8/1/2003  
**Cum Oil:** 54.7 m3  
**Cum Gas:** 0.0 E3m3  
**Cum Water:** 792.2 m3  
**Pool Code:** 0~  
**Unit Code:**  
**Battery:**



Well 00/12-18-007-29W1/0 Information as of 1/16/2015

Production Graph

LWI: 00/12-18-007-29W1/0 Well Name: RED RIVER DALY SINCLAIR PROV. HZNTL 12-18-7-29 (WPM) Curr Licensee: RED RIVER OIL INC. Orig Licensee: RED RIVER OIL INC. Status: Oil, Producing	Prod Form: TRFK: BKKN Field: DALY (1) Pool Code: 0~ Unit Code: Battery:	On Prod: 11/1/2012 Cum Oil: 2888.7 m3 Cum Gas: 0.0 E3m3 Cum Water: 13530.2 m3
---	---	--



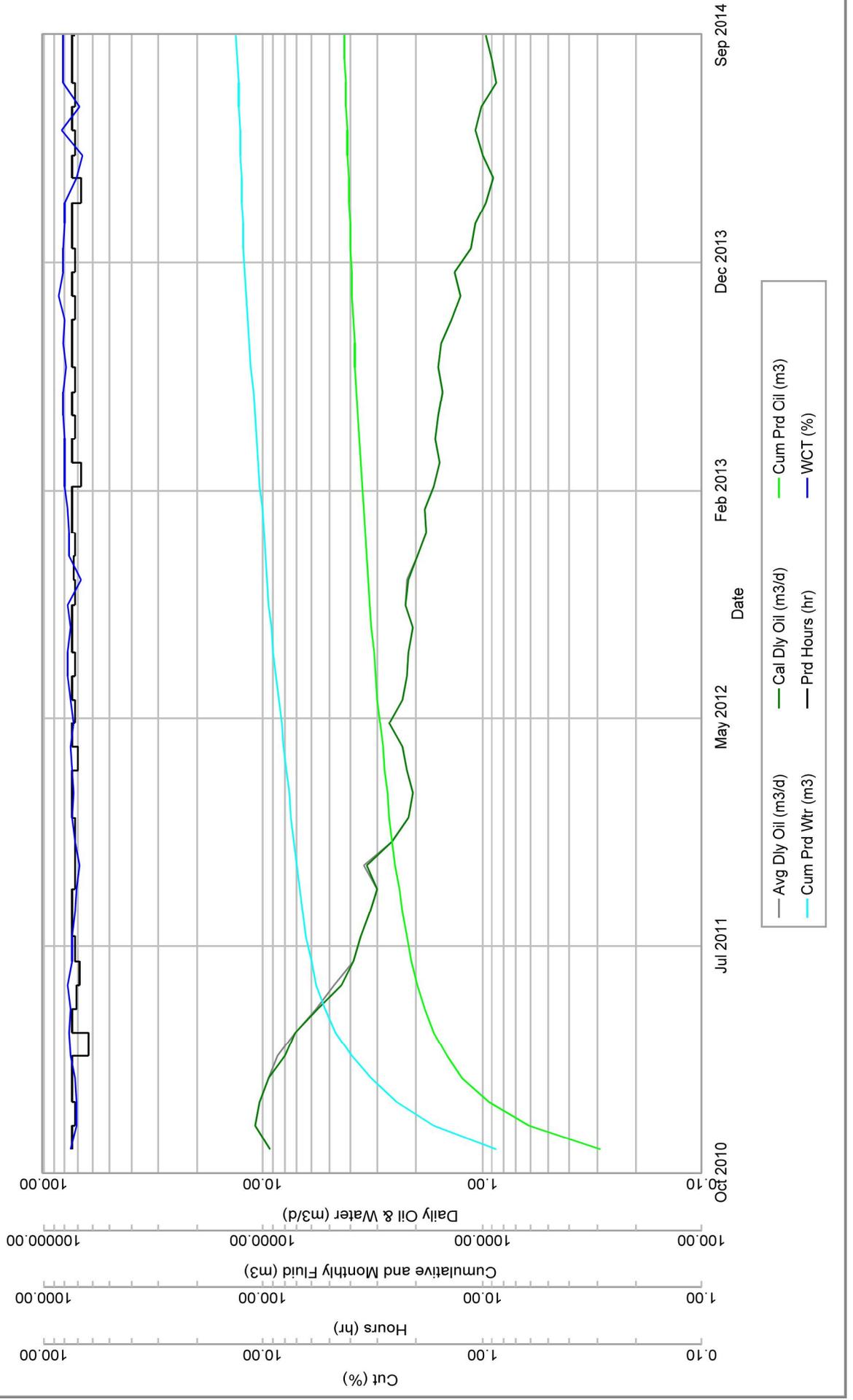
Well 00/13-18-007-29W1/0 Information as of 1/16/2015

Production Graph

**LWI:** 00/13-18-007-29W1/0  
**Well Name:** FAIRBORNE DALY SINCLAIR PROV.  
**Curr Licensee:** HZNTL 13-18-7-29 (WPM)  
**Orig Licensee:** RED RIVER OIL INC.  
**Status:** RED RIVER OIL INC.  
 Oil, Producing

**Prod Form:** BKKN  
**Field:** DALY (1)  
**Pool Code:** 0~  
**Unit Code:**  
**Battery:**

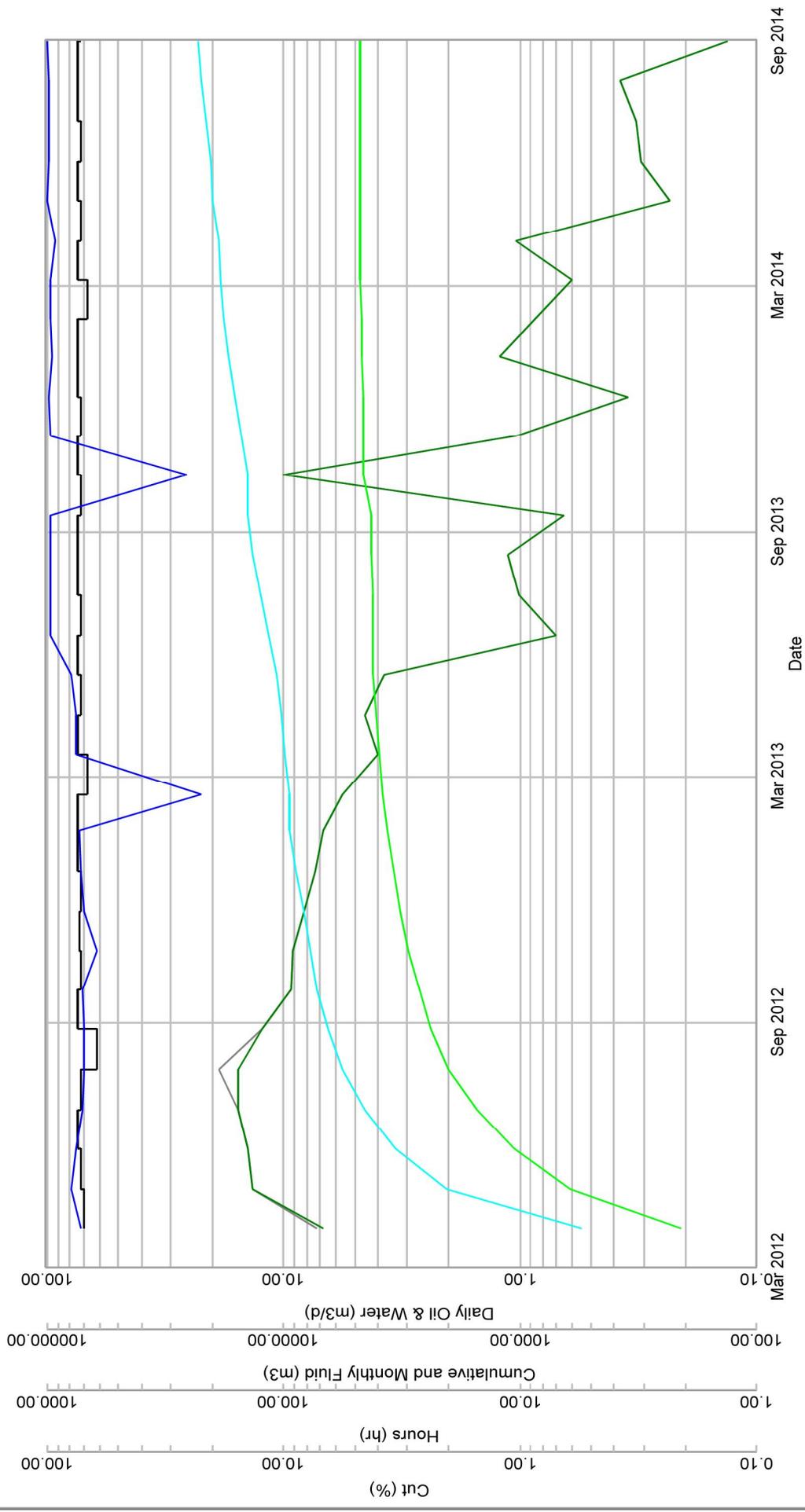
**On Prod:** 10/1/2010  
**Cum Oil:** 4256.2 m3  
**Cum Gas:** 0.0 E3m3  
**Cum Water:** 13226.2 m3



Well 00/01-19-007-29W1/0 Information as of 1/16/2015

Production Graph

**LWI:** 00/01-19-007-29W1/0  
**Well Name:** FAIRBORNE ET AL DALY SINCLAIR HZNTL  
 1-19-7-29 (WPM)  
**Prod Form:** BKKN  
 DALY (1)  
**On Prod:** 3/1/2012  
**Cum Oil:** 4784.8 m3  
**Cum Gas:** 0.0 E3m3  
**Cum Water:** 23005.6 m3  
**Pool Code:** 0~  
**Unit Code:**  
**Battery:**

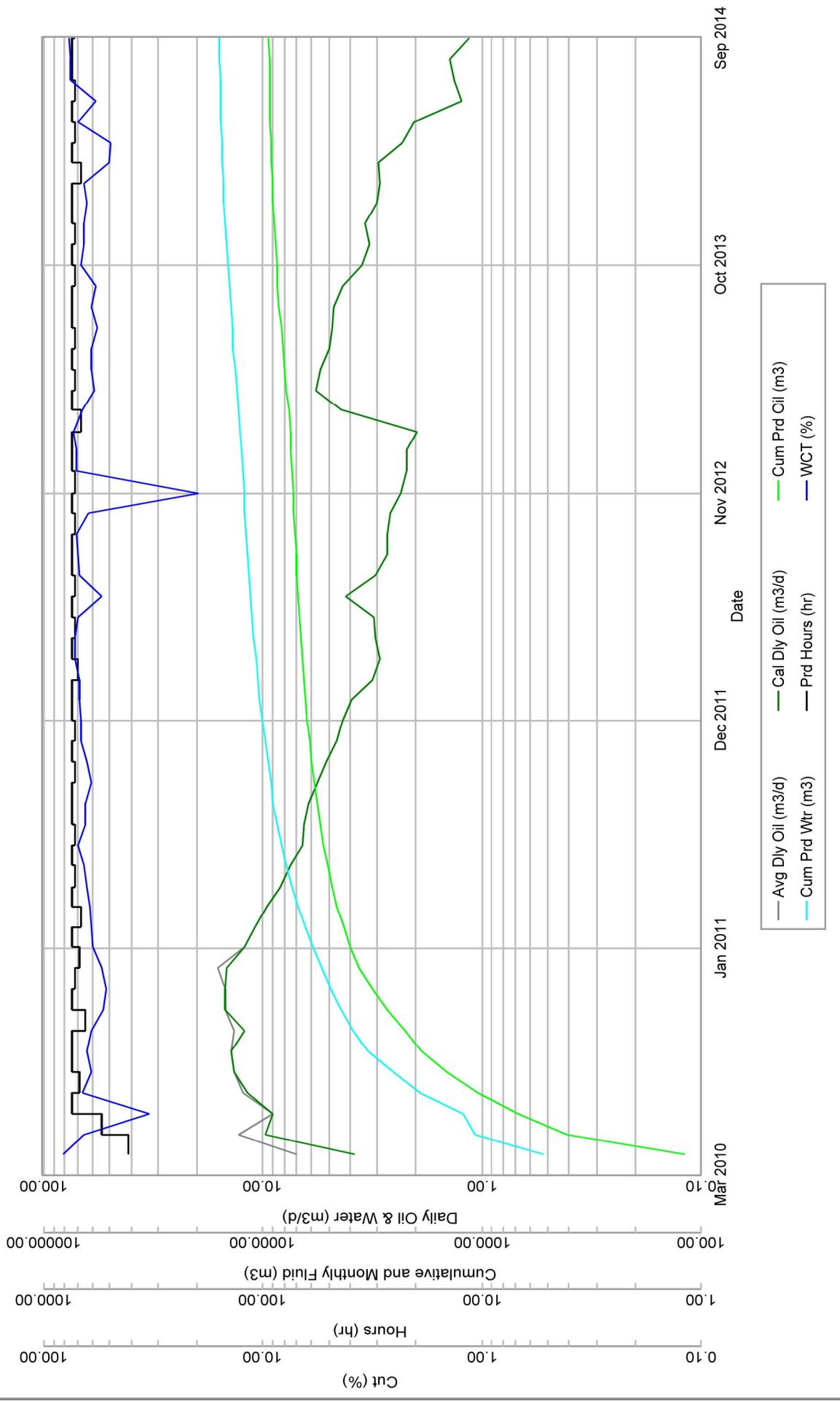


— Avg Dily Oil (m3/d)  
 — Cum Prd Oil (m3)  
 — Cum Prd Wtr (m3)  
 — Daily Oil & Water (m3/d)  
 — Prd Hours (hr)  
 — WCT (%)

Well 00/03-19-007-29W1/0 Information as of 1/16/2015

Production Graph

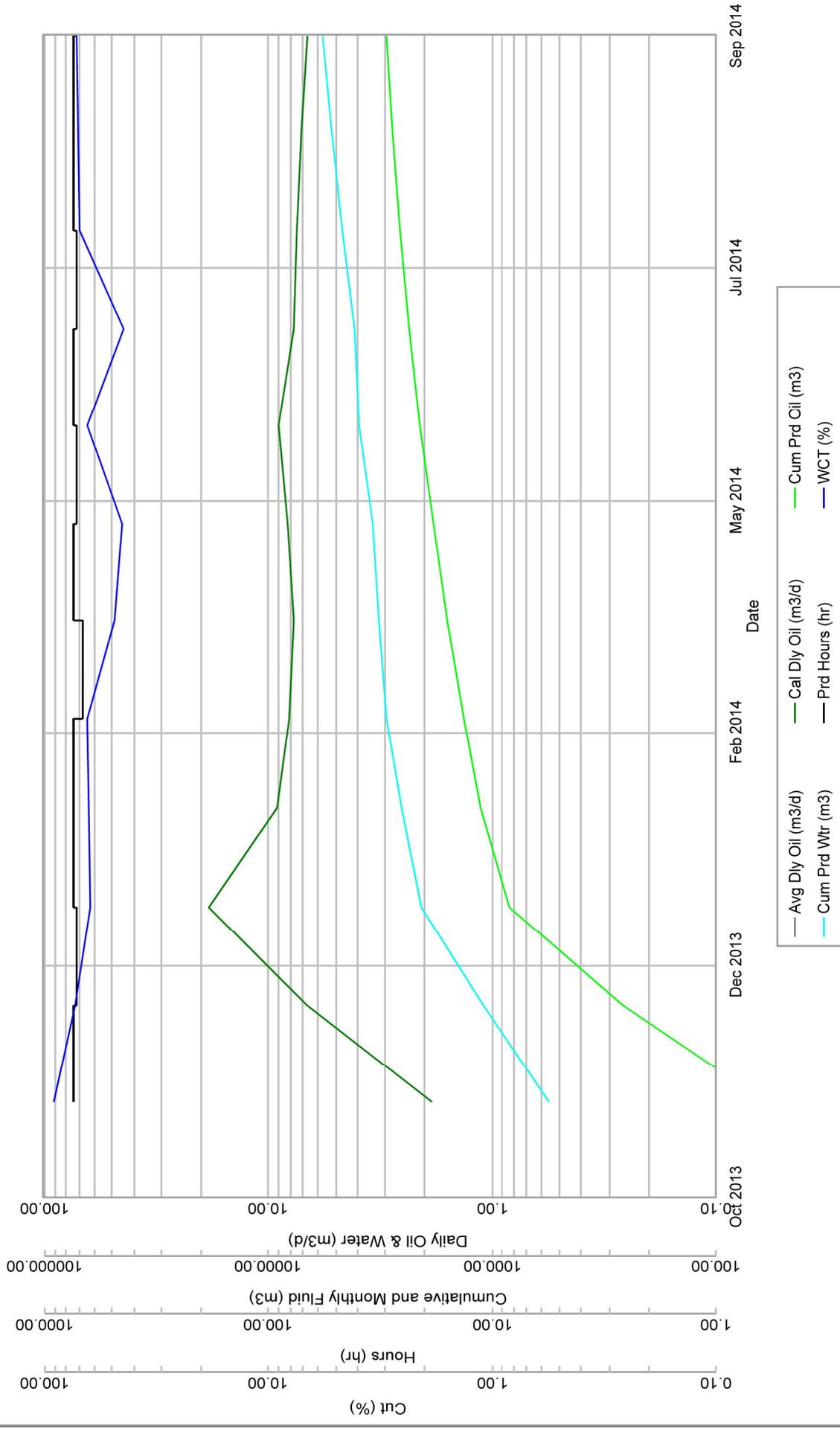
**LWI:** 00/03-19-007-29W1/0  
**Well Name:** FAIRBORNE SINCLAIR HZNTL 3-19-7-29 (WPM)  
**Prod Form:** BKKN  
**Field:** DALY (1)  
**On Prod:** 3/1/2010  
**Cum Oil:** 9403.9 m3  
**Cum Gas:** 0.0 E3m3  
**Cum Water:** 15900.2 m3  
**Pool Code:** 0~  
**Unit Code:**  
**Battery:**



Well 00/04-19-007-29W1/0 Information as of 1/16/2015

Production Graph

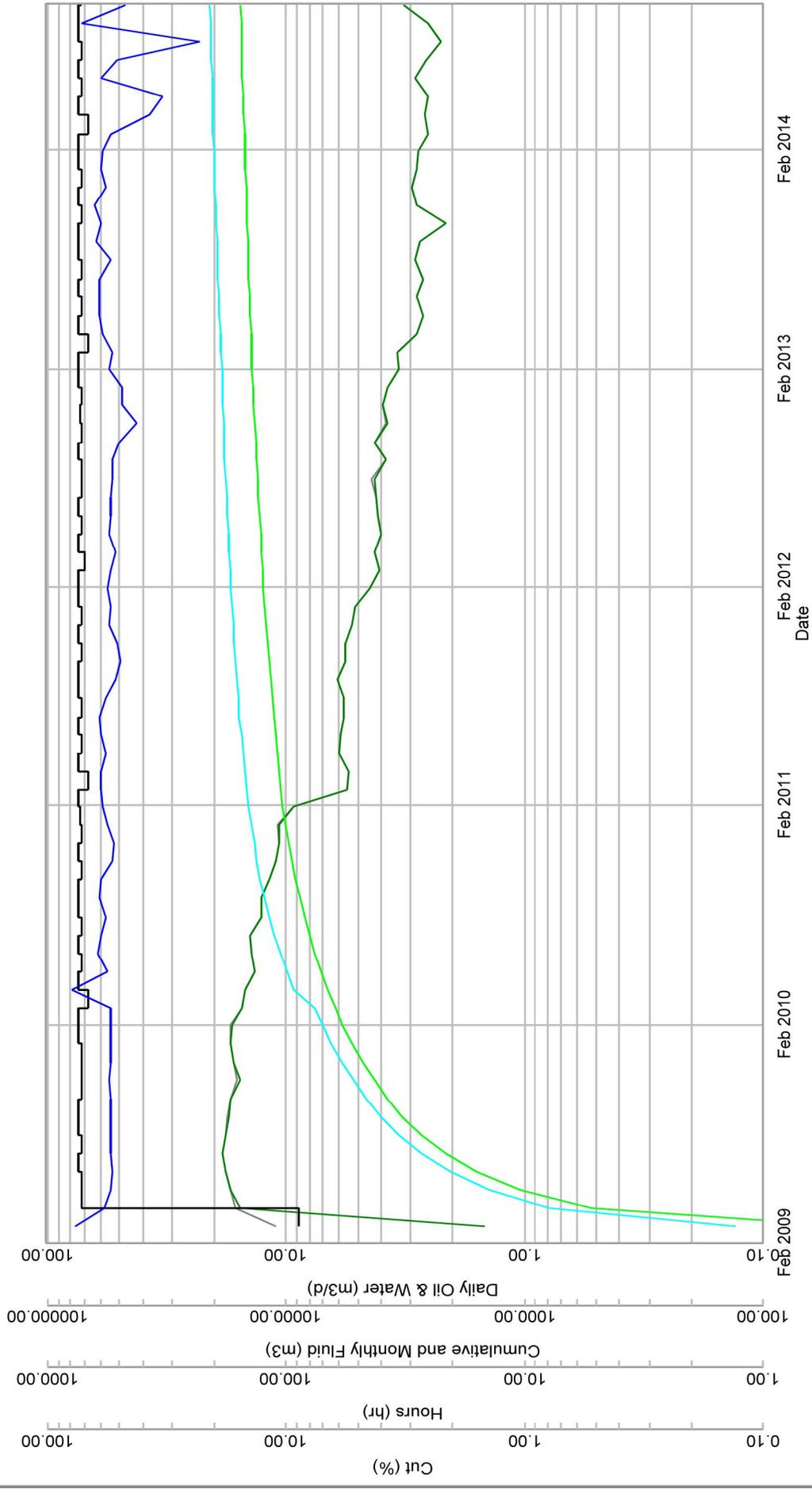
**LWI:** 00/04-19-007-29W1/0  
**Well Name:** RED RIVER DALY SINCLAIR HZNTL  
**Field:** TRFK: BKKN  
 DALY (1)  
**Prod Form:**  
**Pool Code:** 0~  
**Unit Code:**  
**Battery:**  
**On Prod:** 10/1/2013  
**Cum Oil:** 2993.0 m3  
**Cum Gas:** 0.0 E3m3  
**Cum Water:** 5689.5 m3  
**Cur Licensee:** RED RIVER OIL INC.  
**Orig Licensee:** RED RIVER OIL INC.  
**Status:** Oil, Producing



Well 00/13-19-007-29W1/0 Information as of 1/16/2015

Production Graph

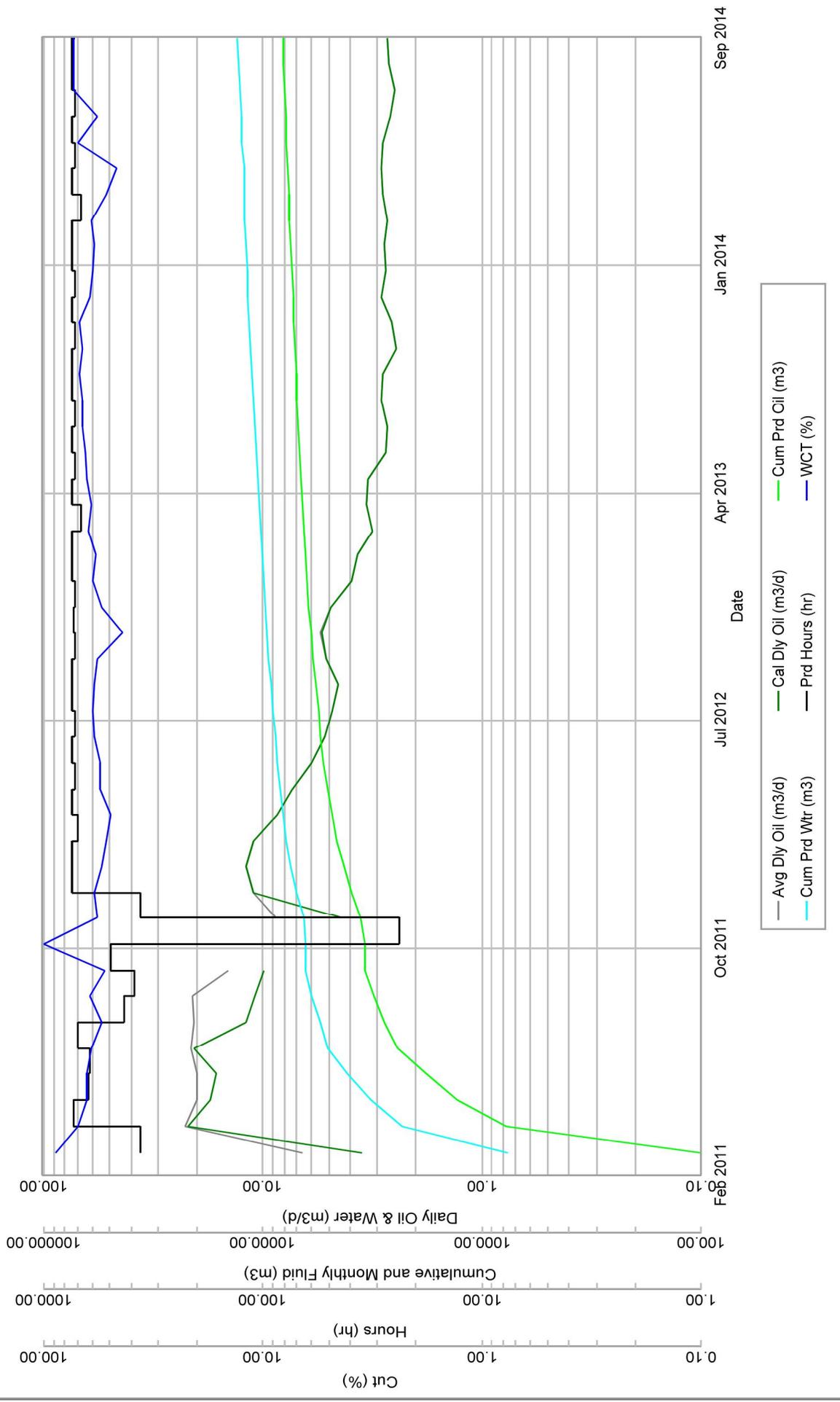
LWI: 00/13-19-007-29W1/0 Well Name: FAIRBORNE SINCLAIR HZNTL 13-19-7-29 (WPM) Curr Licensee: RED RIVER OIL INC. Orig Licensee: RED RIVER OIL INC. Status: Oil, Producing	Prod Form: BKKN Field: DALY (1) Pool Code: 0~ Unit Code: Battery:	On Prod: 2/1/2009 Cum Oil: 15533.8 m3 Cum Gas: 0.0 E3m3 Cum Water: 20802.5 m3
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Well 00/15-19-007-29W1/0 Information as of 1/16/2015

Production Graph

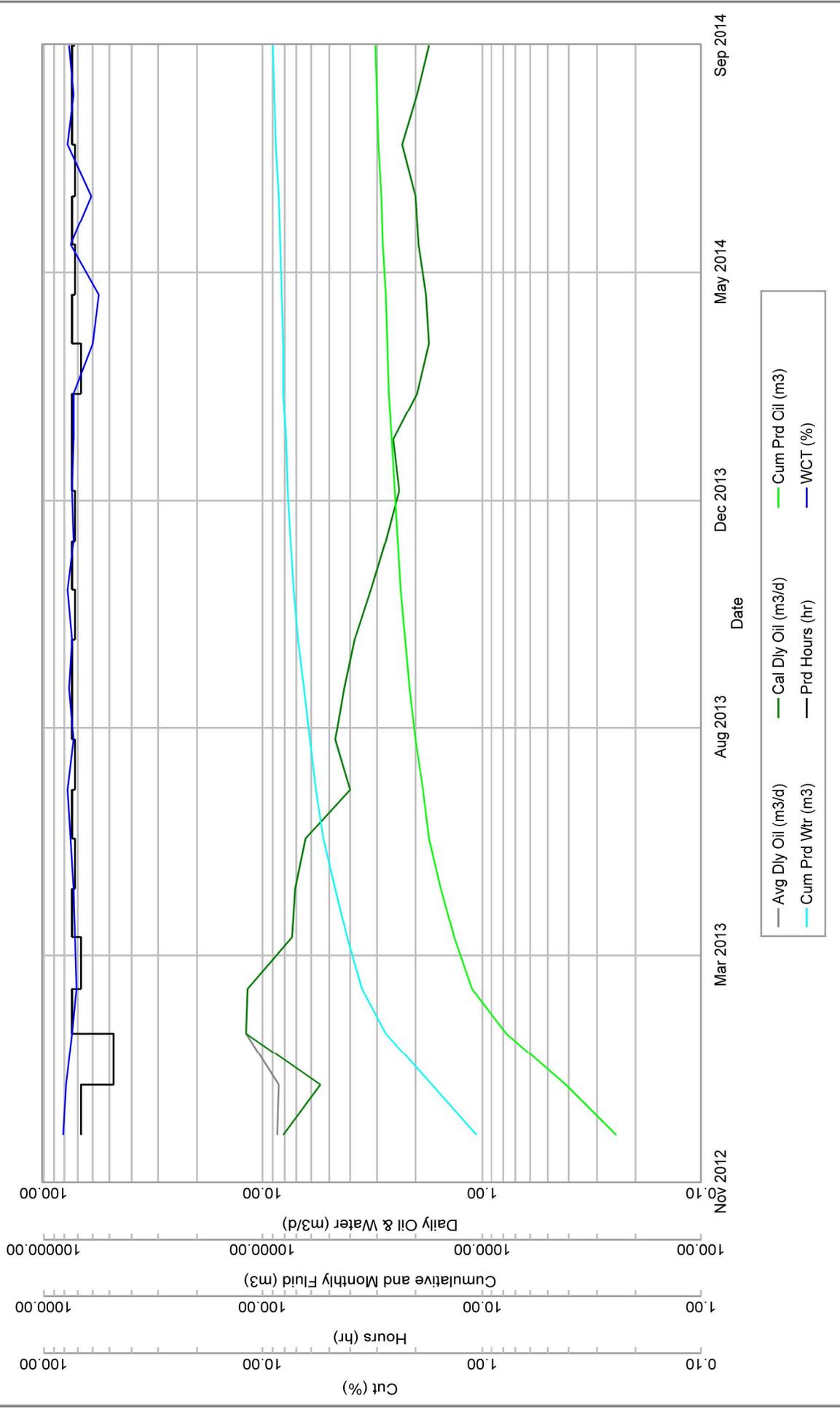
**LWI:** 00/15-19-007-29W1/0  
**Well Name:** FAIRBORNE ET AL DALY SINCLAIR HZNTL  
**Prod Form:** BKKN  
**Field:** DALY (1)  
**On Prod:** 2/1/2011  
**Cum Oil:** 8125.3 m3  
**Cum Gas:** 0.0 E3m3  
**Cum Water:** 13170.0 m3  
**Pool Code:** 0~  
**Unit Code:**  
**Battery:**



Well 00/13-20-007-29W1/0 Information as of 1/16/2015

Production Graph

**LWI:** 00/13-20-007-29W1/0  
**Well Name:** RED RIVER DALY SINCLAIR HZNTL  
**Prod Form:** TRFK: BKKN  
 Field: DALY (1)  
**Cum Gas:** 0.0 E3m3  
**Cum Water:** 9046.1 m3  
**On Prod:** 11/1/2012  
**Cum Oil:** 3061.2 m3  
**Pool Code:** 0~  
**Unit Code:**  
**Battery:**



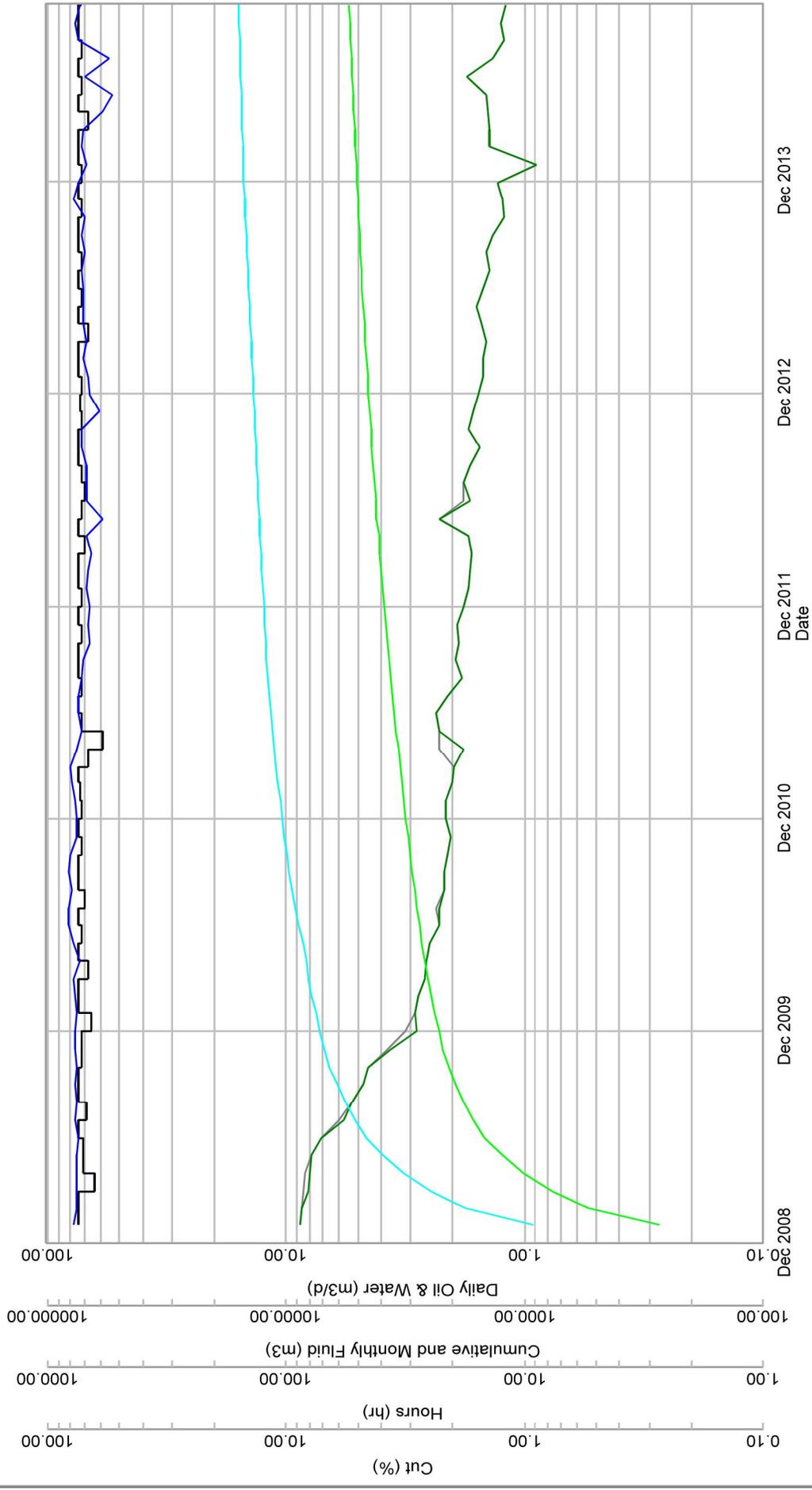
Well 00/14-20-007-29W1/0 Information as of 1/16/2015

Production Graph

**Well Name:** 00/14-20-007-29W1/0  
**Prod Form:** BKKN  
**Field:** FAIRBORNE SINCLAIR HZNTL 14-20-7-29  
**Unit Code:** DALY (1)  
**Pool Code:** 0~  
**Battery:**

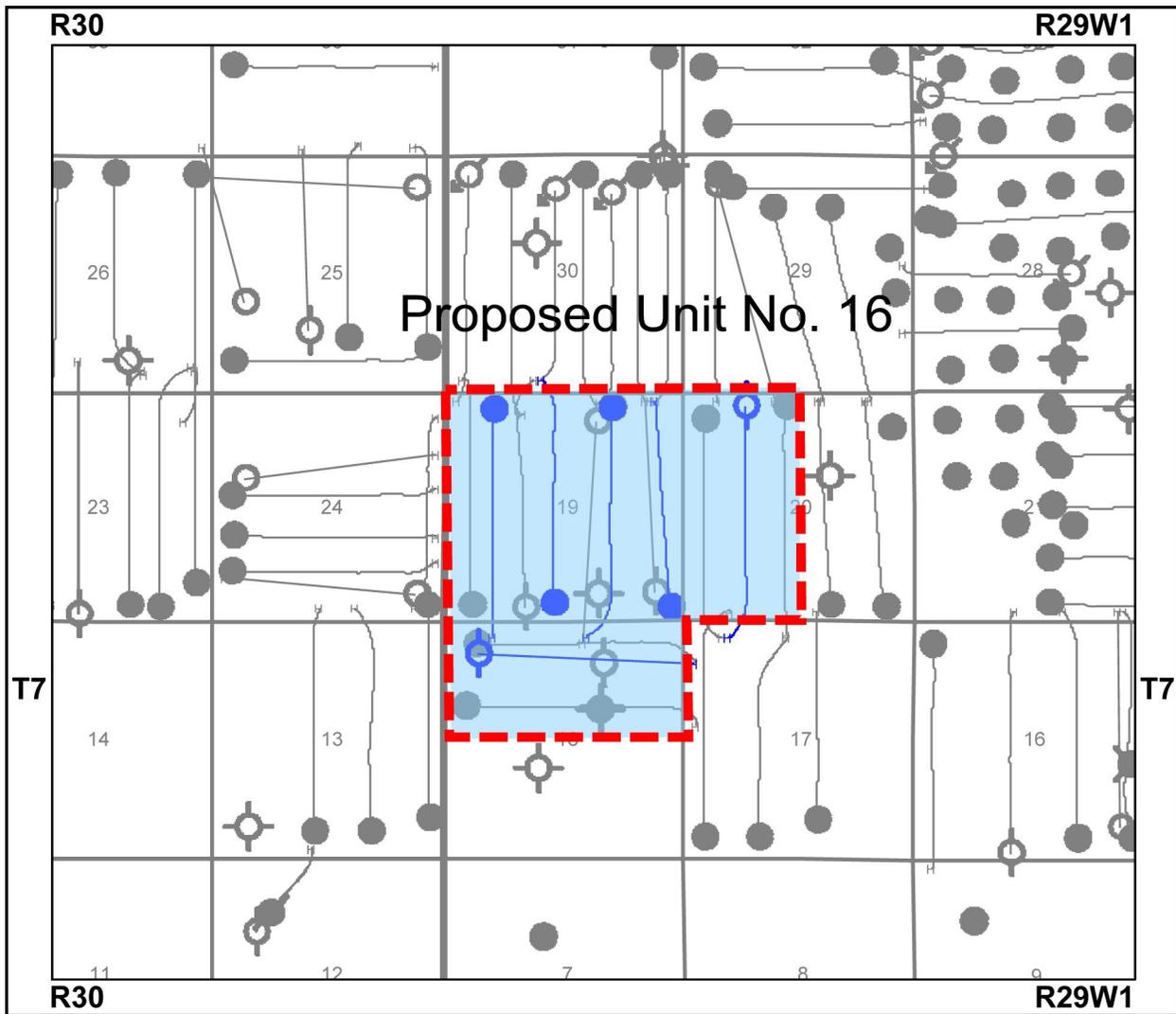
**On Prod:** 12/1/2008  
**Cum Oil:** 5437.0 m3  
**Cum Gas:** 0.0 E3m3  
**Cum Water:** 15885.4 m3

**Well Licensee:** RED RIVER OIL INC.  
**Orig Licensee:** RED RIVER OIL INC.  
**Status:** Oil, Producing



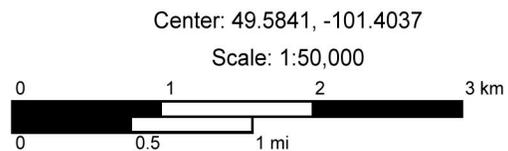
**EXHIBIT 6    DEVELOPMENT PLAN**





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>	<ul style="list-style-type: none"> <li>✕ Heavy Oil</li> <li>⊕ Injection</li> <li>○ Location</li> <li>● Oil</li> <li>⊗ Oil &amp; Gas</li> <li>⊞ Service or Drain</li> <li>⊕ Suspended</li> <li>⊗ Suspended Gas</li> <li>⊞ Suspended Heavy Oil</li> <li>⊕ Suspended Oil</li> <li>⊗ Suspended Oil &amp; Gas</li> </ul>
<b>DLSS Grid</b>	
— Section	
— Township/Range	
<b>Wells</b>	<ul style="list-style-type: none"> <li>✕ Abandoned Gas</li> <li>✕ Abandoned Heavy Oil</li> <li>✕ Abandoned Oil</li> <li>✕ Abandoned Oil &amp; Gas</li> <li>✕ Abandoned Service</li> <li>⊕ Drilling</li> <li>⊕ Dry &amp; Abandoned</li> <li>✕ Gas</li> <li>✕ Gas Injection</li> </ul>
	<ul style="list-style-type: none"> <li>⊕ Wells - Injectors (Injectors)</li> </ul>





**Daly Sinclair Field, MB**  
Application Area  
Development Plan Unit No. 16

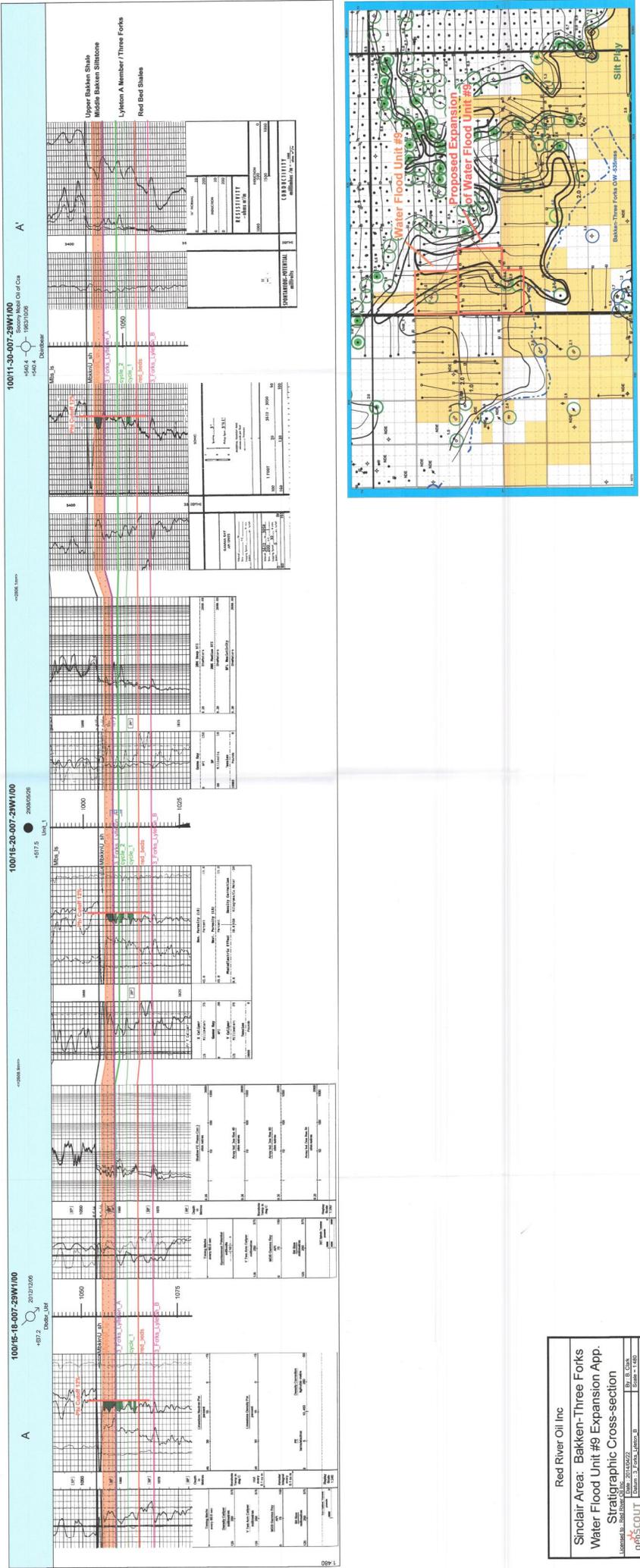
EB, February 23, 2015

G:\RED13\RED13\_1002\RED13\_1002\_A\_02\Accumap\Application Area 2.accumap



**EXHIBIT 7 CROSS SECTION**

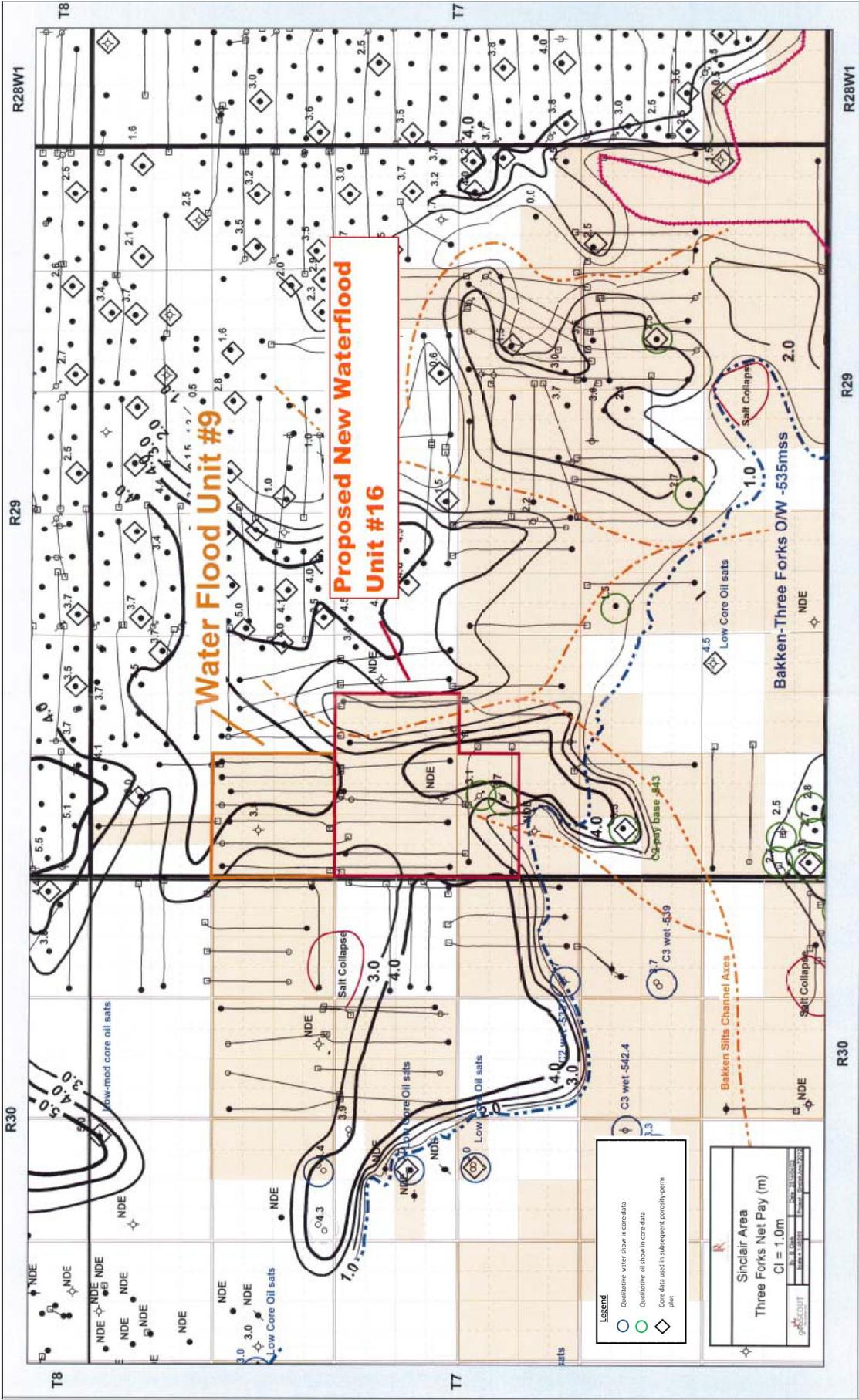




Red River Oil Inc  
 Sinclair Area: Bakken-Three Forks  
 Water Flood Unit #9 Expansion App.  
 Stratigraphic Cross-section  
 License No. 068286-0000-2017-0000  
 06855C00T  
 Date: 08/15/2017  
 Scale: 1" = 500'

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





**Proposed New Waterflood Unit #16**

**Water Flood Unit #9**

**Legend**

- Core data used in subsequent porosity-perm plot
- ◇ Core data used in core data
- Core data used in core data

**Sinclair Area**  
**Three Forks Net Pay (m)**  
 CI = 1.0m

R28W1

R29

R30

R28W1

T8

T7

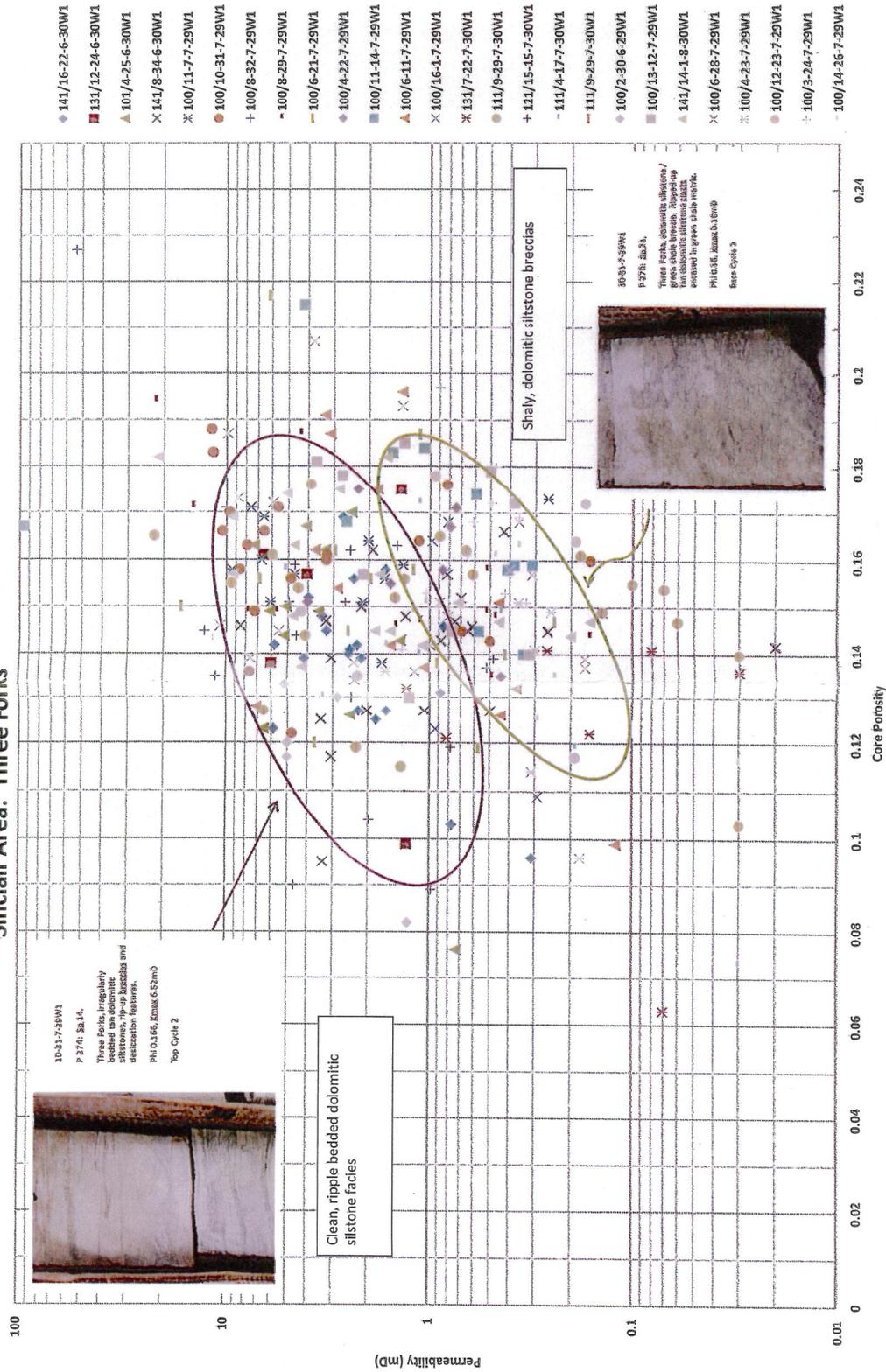
T7

R29

R30

R28W1

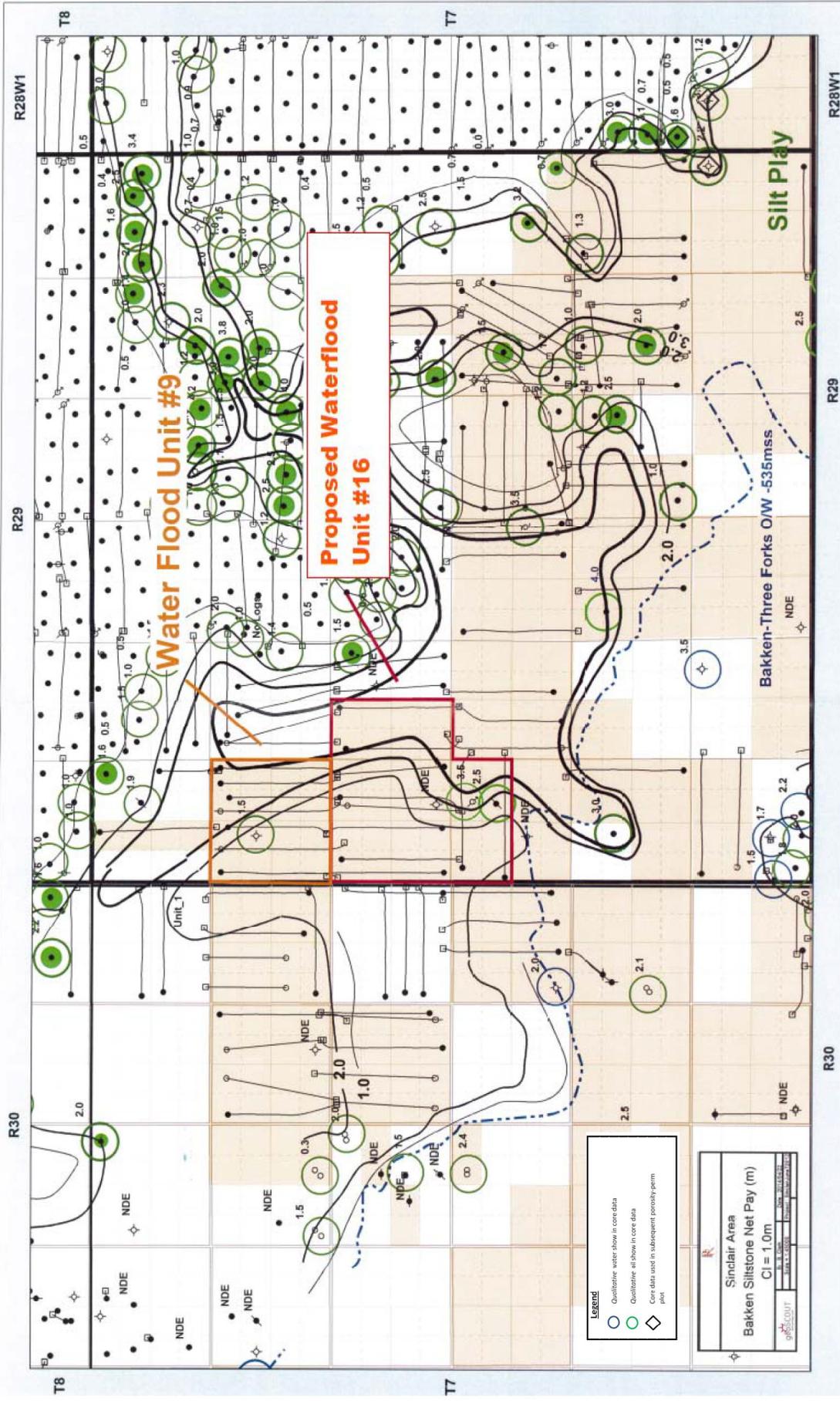
# Sinclair Area: Three Forks



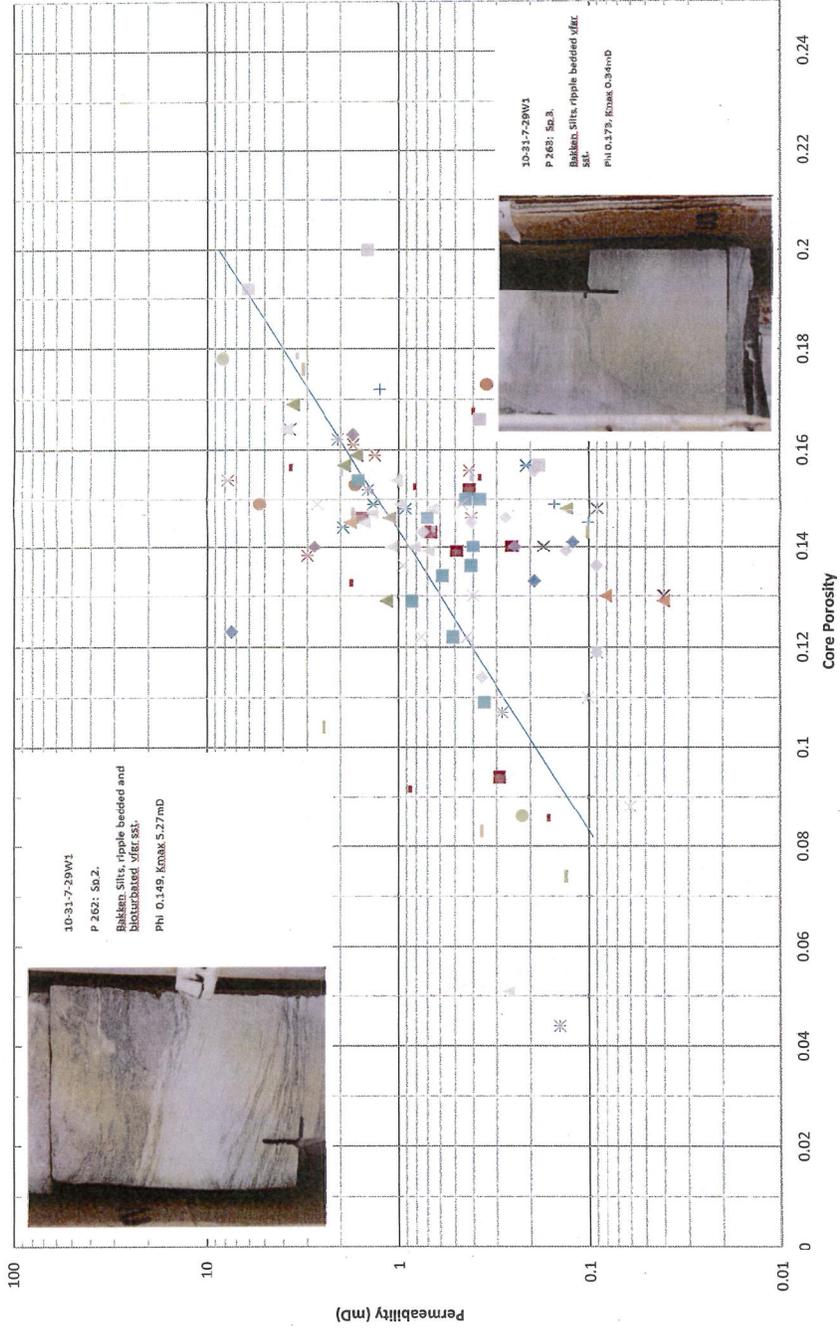
- ◆ 141/16-22-6-30W1
- 131/12-24-6-30W1
- ▲ 101/4-25-6-30W1
- × 141/8-34-6-30W1
- × 100/11-7-29W1
- 100/10-31-7-29W1
- + 100/8-32-7-29W1
- 100/8-29-7-29W1
- 100/6-21-7-29W1
- ◆ 100/4-22-7-29W1
- 100/11-14-7-29W1
- ▲ 100/6-11-7-29W1
- × 100/16-1-7-29W1
- × 131/7-22-7-30W1
- × 111/9-29-7-30W1
- + 121/15-15-7-30W1
- 111/4-17-7-30W1
- 111/9-29-7-30W1
- ◆ 100/2-30-6-29W1
- 100/13-12-7-29W1
- ▲ 141/14-1-8-30W1
- × 100/6-28-7-29W1
- × 100/4-23-7-29W1
- 100/12-23-7-29W1
- ◆ 100/3-24-7-29W1
- 100/14-26-7-29W1

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





# Sinclair Area: Bakken Siltstones



**EXHIBIT 10 STRUCTURAL MAPPING**





**Description**

BAKKEN SHALE DEPTH MAP  
Cl: 2 m MAY, 2014

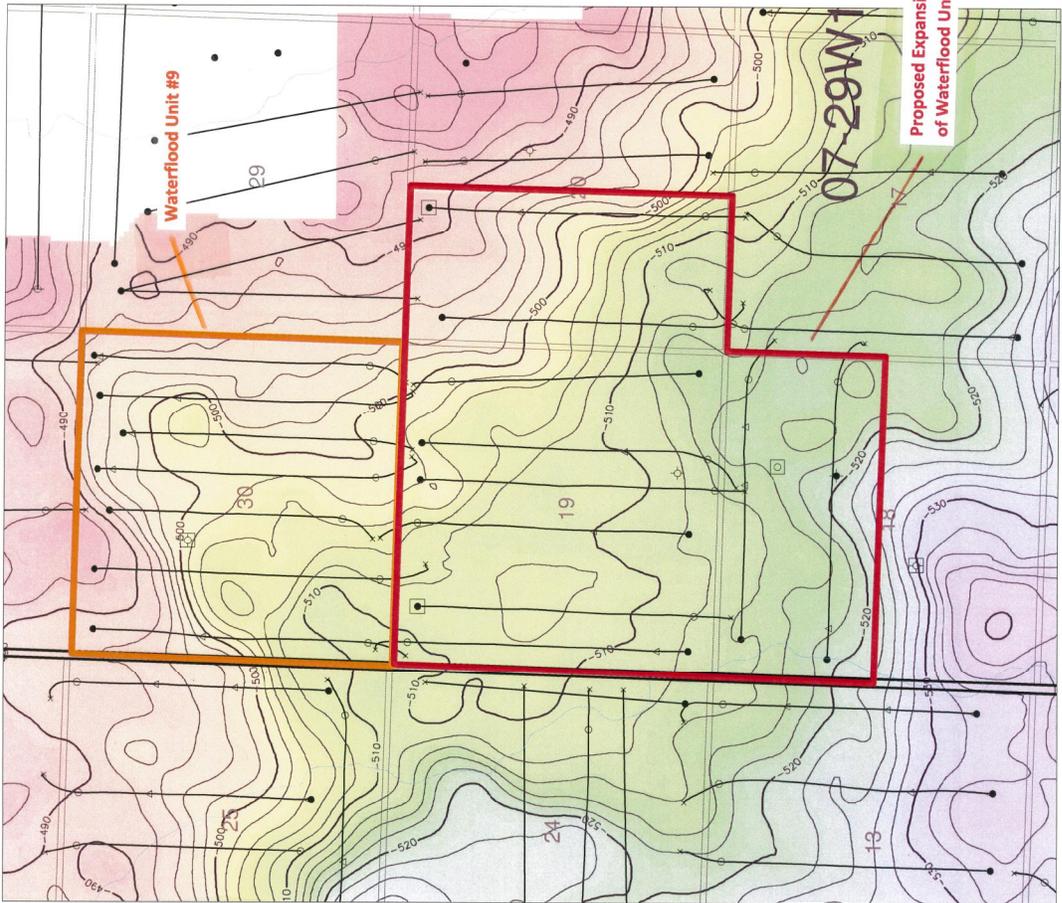
**Parameters**

Posting: BkrSlcDpMar1014\_elevation\_(above sea) in meters  
Interpolation: Color Pixel + 3D 2X2 Bin  
Contouring: BkrSlcDpMar1014\_elevation\_(above sea)\_in\_meters  
Map Scale: 1: 25000  
UTM Range: 324054\_5492650 - 328656\_5498014

Doug Bonar 07/05/2014 11:36:17 AM

**SINCLAIRNAD83\_1**

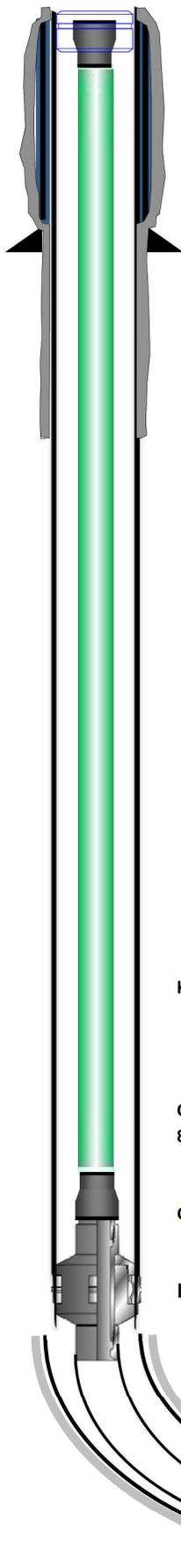
**Colorbar**



**EXHIBIT 11 WELLBORE SCHEMATIC**



## TYPICAL WATERFLOOD INJECTION WELL DIAGRAM



<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	PBD:	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

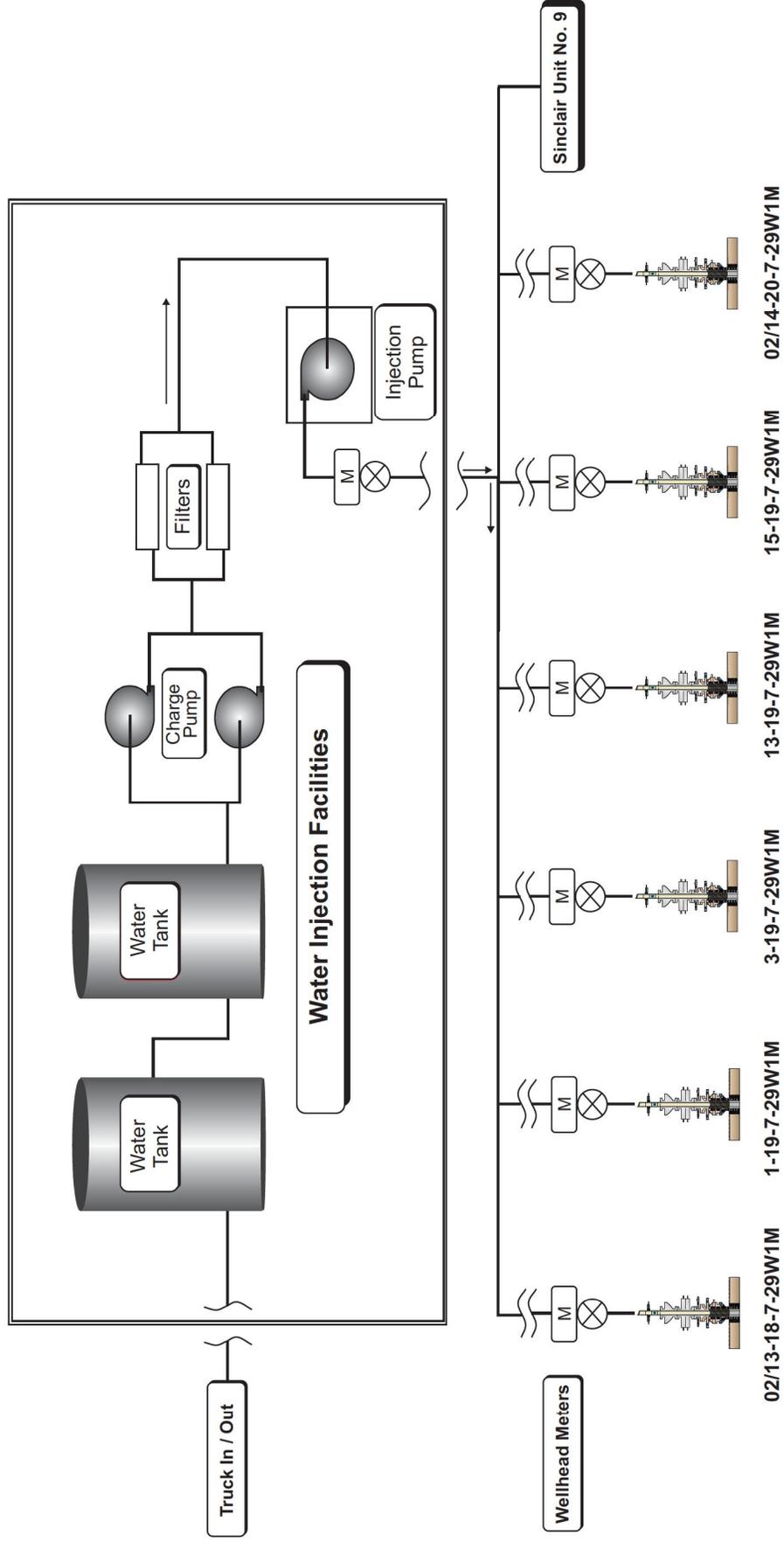
**EXHIBIT 12 WATER INJECTION FACILITY SCHEMATIC AND CORROSION CONTROL  
DETAILS**





RED RIVER OIL INC.

# Sinclair Unit No. 16 Sinclair 15-18-7-29W1M Injection Facility Water Injection System



Injection Wells

**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 # 16 Tract Participation

Tract No.	Land Description	Working Interest		Royalty Interest		Tract Participation (%)
		Owner	Share (%)	Owner	Share (%)	
1	Lsd 9-18-007-29W1M	Red River Oil Inc.	100.000000	Manitoba Crown L084-3018	100.000000000	4.150103845
2	Lsd 10-18-007-29W1M	Red River Oil Inc.	100.000000	Manitoba Crown L084-3018	100.000000000	3.360714597
3	Lsd 11-18-007-29W1M	Red River Oil Inc.	100.000000	Manitoba Crown L084-3018	100.000000000	1.388881520
4	Lsd 12-18-007-29W1M	Red River Oil Inc.	100.000000	Manitoba Crown L084-3018	100.000000000	2.493370450
5	Lsd 13-18-007-29W1M	Red River Oil Inc.	100.000000	Manitoba Crown L084-3018	100.000000000	2.961308074
6	Lsd 14-18-007-29W1M	Red River Oil Inc.	100.000000	Manitoba Crown L084-3018	100.000000000	2.643677271
7	Lsd 15-18-007-29W1M	Red River Oil Inc.	100.000000	Manitoba Crown L084-3018	100.000000000	3.499114776
8	Lsd 16-18-007-29W1M	Red River Oil Inc.	100.000000	Manitoba Crown L084-3018	100.000000000	4.368990044
9	Lsd 1-19-007-29W1M	Red River Oil Inc.	100.000000	Computershare Trust Company of Canada	25.000000000	1.140806956
10	Lsd 1-19-007-29W1M	Red River Oil Inc.	100.000000	Sandra Lee Dixon	25.000000000	1.140806956
11	Lsd 1-19-007-29W1M	Red River Oil Inc.	100.000000	Darlene Leota Dixon	25.000000000	1.140806956
12	Lsd 1-19-007-29W1M	Red River Oil Inc.	100.000000	Garnet Hartley Dixon	25.000000000	1.140806956
13	Lsd 2-19-007-29W1M	Red River Oil Inc.	100.000000	Computershare Trust Company of Canada	25.000000000	0.927942150
14	Lsd 2-19-007-29W1M	Red River Oil Inc.	100.000000	Sandra Lee Dixon	25.000000000	0.927942150
15	Lsd 2-19-007-29W1M	Red River Oil Inc.	100.000000	Darlene Leota Dixon	25.000000000	0.927942150
16	Lsd 2-19-007-29W1M	Red River Oil Inc.	100.000000	Garnet Hartley Dixon	25.000000000	0.927942150
17	Lsd 3-19-007-29W1M	Red River Oil Inc.	100.000000	Computershare Trust Company of Canada	25.000000000	0.734092386
18	Lsd 3-19-007-29W1M	Red River Oil Inc.	100.000000	Sandra Lee Dixon	25.000000000	0.734092386
19	Lsd 3-19-007-29W1M	Red River Oil Inc.	100.000000	Darlene Leota Dixon	25.000000000	0.734092386
20	Lsd 3-19-007-29W1M	Red River Oil Inc.	100.000000	Garnet Hartley Dixon	25.000000000	0.734092386
21	Lsd 4-19-007-29W1M	Red River Oil Inc.	100.000000	Computershare Trust Company of Canada	24.969593311	0.677700169
22	Lsd 4-19-007-29W1M	Red River Oil Inc.	100.000000	Sandra Lee Dixon	24.969593311	0.677700169
23	Lsd 4-19-007-29W1M	Red River Oil Inc.	100.000000	Darlene Leota Dixon	24.969593311	0.677700169
24	Lsd 4-19-007-29W1M	Red River Oil Inc.	100.000000	Garnet Hartley Dixon	24.969593311	0.677700169
25	Lsd 4-19-007-29W1M	Red River Oil Inc.	100.000000	Manitoba Crown L08-3038	0.121626758	0.003301074
26	Lsd 5-19-007-29W1M	Red River Oil Inc.	100.000000	Computershare Trust Company of Canada	25.000000000	0.678525438
27	Lsd 5-19-007-29W1M	Red River Oil Inc.	100.000000	Sandra Lee Dixon	25.000000000	0.678525438
28	Lsd 5-19-007-29W1M	Red River Oil Inc.	100.000000	Darlene Leota Dixon	25.000000000	0.678525438
29	Lsd 5-19-007-29W1M	Red River Oil Inc.	100.000000	Garnet Hartley Dixon	25.000000000	0.678525438
30	Lsd 6-19-007-29W1M	Red River Oil Inc.	100.000000	Computershare Trust Company of Canada	25.000000000	0.704765678
31	Lsd 6-19-007-29W1M	Red River Oil Inc.	100.000000	Sandra Lee Dixon	25.000000000	0.704765678
32	Lsd 6-19-007-29W1M	Red River Oil Inc.	100.000000	Darlene Leota Dixon	25.000000000	0.704765678
33	Lsd 6-19-007-29W1M	Red River Oil Inc.	100.000000	Garnet Hartley Dixon	25.000000000	0.704765678
34	Lsd 7-19-007-29W1M	Red River Oil Inc.	100.000000	Computershare Trust Company of Canada	25.000000000	0.760554326
35	Lsd 7-19-007-29W1M	Red River Oil Inc.	100.000000	Sandra Lee Dixon	25.000000000	0.760554326
36	Lsd 7-19-007-29W1M	Red River Oil Inc.	100.000000	Darlene Leota Dixon	25.000000000	0.760554326
37	Lsd 7-19-007-29W1M	Red River Oil Inc.	100.000000	Garnet Hartley Dixon	25.000000000	0.760554326
38	Lsd 8-19-007-29W1M	Red River Oil Inc.	100.000000	Computershare Trust Company of Canada	25.000000000	0.944092424
39	Lsd 8-19-007-29W1M	Red River Oil Inc.	100.000000	Sandra Lee Dixon	25.000000000	0.944092424
40	Lsd 8-19-007-29W1M	Red River Oil Inc.	100.000000	Darlene Leota Dixon	25.000000000	0.944092424
41	Lsd 8-19-007-29W1M	Red River Oil Inc.	100.000000	Garnet Hartley Dixon	25.000000000	0.944092424
42	Lsd 9-19-007-29W1M	Red River Oil Inc.	100.000000	Computershare Trust Company of Canada	25.000000000	0.776704600
43	Lsd 9-19-007-29W1M	Red River Oil Inc.	100.000000	Sandra Lee Dixon	25.000000000	0.776704600
44	Lsd 9-19-007-29W1M	Red River Oil Inc.	100.000000	Darlene Leota Dixon	25.000000000	0.776704600
45	Lsd 9-19-007-29W1M	Red River Oil Inc.	100.000000	Garnet Hartley Dixon	25.000000000	0.776704600
46	Lsd 10-19-007-29W1M	Red River Oil Inc.	100.000000	Computershare Trust Company of Canada	25.000000000	0.701900910
47	Lsd 10-19-007-29W1M	Red River Oil Inc.	100.000000	Sandra Lee Dixon	25.000000000	0.701900910
48	Lsd 10-19-007-29W1M	Red River Oil Inc.	100.000000	Darlene Leota Dixon	25.000000000	0.701900910
49	Lsd 10-19-007-29W1M	Red River Oil Inc.	100.000000	Garnet Hartley Dixon	25.000000000	0.701900910
50	Lsd 11-19-007-29W1M	Red River Oil Inc.	100.000000	Gerald John Duncan	33.333333333	0.939687571
51	Lsd 11-19-007-29W1M	Red River Oil Inc.	100.000000	Hugh Murray Duncan Estate	33.333333333	0.939687571
52	Lsd 11-19-007-29W1M	Red River Oil Inc.	100.000000	Claudia Ann Cawood	11.111111111	0.313229190
53	Lsd 11-19-007-29W1M	Red River Oil Inc.	100.000000	Wendy Lou Renwick	11.111111111	0.313229190
54	Lsd 11-19-007-29W1M	Red River Oil Inc.	100.000000	Ward William Kay	11.111111111	0.313229190
55	Lsd 12-19-007-29W1M	Red River Oil Inc.	100.000000	Gerald John Duncan	33.333333333	0.692946714
56	Lsd 12-19-007-29W1M	Red River Oil Inc.	100.000000	Hugh Murray Duncan Estate	33.333333333	0.692946714
57	Lsd 12-19-007-29W1M	Red River Oil Inc.	100.000000	Claudia Ann Cawood	11.111111111	0.230982238
58	Lsd 12-19-007-29W1M	Red River Oil Inc.	100.000000	Wendy Lou Renwick	11.111111111	0.230982238
59	Lsd 12-19-007-29W1M	Red River Oil Inc.	100.000000	Ward William Kay	11.111111111	0.230982238
60	Lsd 13-19-007-29W1M	Red River Oil Inc.	100.000000	Gerald John Duncan	33.333333333	0.692946714
61	Lsd 13-19-007-29W1M	Red River Oil Inc.	100.000000	Hugh Murray Duncan Estate	33.333333333	0.692946714
62	Lsd 13-19-007-29W1M	Red River Oil Inc.	100.000000	Claudia Ann Cawood	11.111111111	0.230982238
63	Lsd 13-19-007-29W1M	Red River Oil Inc.	100.000000	Wendy Lou Renwick	11.111111111	0.230982238
64	Lsd 13-19-007-29W1M	Red River Oil Inc.	100.000000	Ward William Kay	11.111111111	0.230982238
65	Lsd 14-19-007-29W1M	Red River Oil Inc.	100.000000	Gerald John Duncan	33.333333333	0.939687571
66	Lsd 14-19-007-29W1M	Red River Oil Inc.	100.000000	Hugh Murray Duncan Estate	33.333333333	0.939687571
67	Lsd 14-19-007-29W1M	Red River Oil Inc.	100.000000	Claudia Ann Cawood	11.111111111	0.313229190
68	Lsd 14-19-007-29W1M	Red River Oil Inc.	100.000000	Wendy Lou Renwick	11.111111111	0.313229190

TABLE 4 TRACT PARTICIPATION

Tract No.	Land Description	Working Interest		Royalty Interest		Tract Participation (%)
		Owner	Share (%)	Owner	Share (%)	
69	Lsd 14-19-007-29W1M	Red River Oil Inc.	100.000000	Ward William Kay	11.1111111111	0.313229190
70	Lsd 15-19-007-29W1M	Red River Oil Inc.	100.000000	Computershare Trust Company of Canada	25.0000000000	0.701900910
71	Lsd 15-19-007-29W1M	Red River Oil Inc.	100.000000	Sandra Lee Dixon	25.0000000000	0.701900910
72	Lsd 15-19-007-29W1M	Red River Oil Inc.	100.000000	Darlene Leota Dixon	25.0000000000	0.701900910
73	Lsd 15-19-007-29W1M	Red River Oil Inc.	100.000000	Garnet Hartley Dixon	25.0000000000	0.701900910
74	Lsd 16-19-007-29W1M	Red River Oil Inc.	100.000000	Computershare Trust Company of Canada	25.0000000000	0.835358015
75	Lsd 16-19-007-29W1M	Red River Oil Inc.	100.000000	Sandra Lee Dixon	25.0000000000	0.835358015
76	Lsd 16-19-007-29W1M	Red River Oil Inc.	100.000000	Darlene Leota Dixon	25.0000000000	0.835358015
77	Lsd 16-19-007-29W1M	Red River Oil Inc.	100.000000	Garnet Hartley Dixon	25.0000000000	0.835358015
78	Lsd 3-20-007-29W1M	Red River Oil Inc.	100.000000	Vaughn Ronald Bender	6.666666667	0.221299532
79	Lsd 3-20-007-29W1M	Red River Oil Inc.	100.000000	Lisa Marie Boux	6.666666667	0.221299532
80	Lsd 3-20-007-29W1M	Red River Oil Inc.	100.000000	Perry Douglas & Patricia Gale Bender	6.666666667	0.221299532
81	Lsd 3-20-007-29W1M	Red River Oil Inc.	100.000000	5047898 Manitoba Ltd.	80.0000000000	2.655594382
82	Lsd 4-20-007-29W1M	Red River Oil Inc.	100.000000	Vaughn Ronald Bender	6.666666667	0.249831802
83	Lsd 4-20-007-29W1M	Red River Oil Inc.	100.000000	Lisa Marie Boux	6.666666667	0.249831802
84	Lsd 4-20-007-29W1M	Red River Oil Inc.	100.000000	Perry Douglas & Patricia Gale Bender	6.666666667	0.249831802
85	Lsd 4-20-007-29W1M	Red River Oil Inc.	100.000000	5047898 Manitoba Ltd.	80.0000000000	2.997981619
86	Lsd 5-20-007-29W1M	Red River Oil Inc.	100.000000	Vaughn Ronald Bender	6.666666667	0.249831802
87	Lsd 5-20-007-29W1M	Red River Oil Inc.	100.000000	Lisa Marie Boux	6.666666667	0.249831802
88	Lsd 5-20-007-29W1M	Red River Oil Inc.	100.000000	Perry Douglas & Patricia Gale Bender	6.666666667	0.249831802
89	Lsd 5-20-007-29W1M	Red River Oil Inc.	100.000000	5047898 Manitoba Ltd.	80.0000000000	2.997981619
90	Lsd 6-20-007-29W1M	Red River Oil Inc.	100.000000	Vaughn Ronald Bender	6.666666667	0.221299532
91	Lsd 6-20-007-29W1M	Red River Oil Inc.	100.000000	Lisa Marie Boux	6.666666667	0.221299532
92	Lsd 6-20-007-29W1M	Red River Oil Inc.	100.000000	Perry Douglas & Patricia Gale Bender	6.666666667	0.221299532
93	Lsd 6-20-007-29W1M	Red River Oil Inc.	100.000000	5047898 Manitoba Ltd.	80.0000000000	2.655594382
94	Lsd 11-20-007-29W1M	Red River Oil Inc.	100.000000	Vaughn Ronald Bender	6.666666667	0.221299532
95	Lsd 11-20-007-29W1M	Red River Oil Inc.	100.000000	Lisa Marie Boux	6.666666667	0.221299532
96	Lsd 11-20-007-29W1M	Red River Oil Inc.	100.000000	Perry Douglas & Patricia Gale Bender	6.666666667	0.221299532
97	Lsd 11-20-007-29W1M	Red River Oil Inc.	100.000000	5047898 Manitoba Ltd.	80.0000000000	2.655594382
98	Lsd 12-20-007-29W1M	Red River Oil Inc.	100.000000	Vaughn Ronald Bender	6.666666667	0.207481028
99	Lsd 12-20-007-29W1M	Red River Oil Inc.	100.000000	Lisa Marie Boux	6.666666667	0.207481028
100	Lsd 12-20-007-29W1M	Red River Oil Inc.	100.000000	Perry Douglas & Patricia Gale Bender	6.666666667	0.207481028
101	Lsd 12-20-007-29W1M	Red River Oil Inc.	100.000000	5047898 Manitoba Ltd.	80.0000000000	2.489772333
102	Lsd 13-20-007-29W1M	Red River Oil Inc.	100.000000	Vaughn Ronald Bender	6.666666667	0.207481028
103	Lsd 13-20-007-29W1M	Red River Oil Inc.	100.000000	Lisa Marie Boux	6.666666667	0.207481028
104	Lsd 13-20-007-29W1M	Red River Oil Inc.	100.000000	Perry Douglas & Patricia Gale Bender	6.666666667	0.207481028
105	Lsd 13-20-007-29W1M	Red River Oil Inc.	100.000000	5047898 Manitoba Ltd.	80.0000000000	2.489772333
106	Lsd 14-20-007-29W1M	Red River Oil Inc.	100.000000	Vaughn Ronald Bender	6.666666667	0.221299532
107	Lsd 14-20-007-29W1M	Red River Oil Inc.	101.000000	Lisa Marie Boux	6.666666667	0.221299532
108	Lsd 14-20-007-29W1M	Red River Oil Inc.	102.000000	Perry Douglas & Patricia Gale Bender	6.666666667	0.221299532
109	Lsd 14-20-007-29W1M	Red River Oil Inc.	100.000000	5047898 Manitoba Ltd.	80.0000000000	2.655594382

100.00000000

# Red River Oil Inc.

## Sinclair Unit # 16

### Summary of Royalty Interest

Royalty Interest	
Owner	Share (%)
5047898 Manitoba Ltd.	21.597885431
Claudia Ann Cawood	1.088422857
Computershare Trust Company of Canada	9.584343962
Darlene Leota Dixon	9.584343962
Garnet Hartley Dixon	9.584343962
Gerald John Duncan	3.265268571
Hugh Murray Duncan Estate	3.265268571
Lisa Marie Boux	1.799823786
Manitoba Crown L08-3038	0.003301074
Manitoba Crown L084-3018	24.866160576
Perry Douglas & Patricia Gale Bender	1.799823786
Sandra Lee Dixon	9.584343962
Vaughn Ronald Bender	1.799823786
Ward William Kay	1.088422857
Wendy Lou Renwick	1.088422857

**100.00000000**