

**Proposed Unitization of Sinclair Unit No. 2**  
**Application for Enhanced Oil Recovery Waterflood Project**  
**Sinclair Unit No. 2**

**Lyleton member of the Three Forks Formation - Bakken B Pool**  
**Sinclair Field, Manitoba**

**May 19, 2009**  
**Tundra Oil and Gas Partnership**

## Proposed Sinclair Unit No. 2

### Application for Enhanced Oil Recovery Waterflood Project

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May 19, 2009

## **SUBJECT**

**Lyleton member of the Three Forks Formation - Bakken B Pool  
Sinclair Field, Manitoba**

**Proposed Unitization of Sinclair Unit No. 2**

**Application for Enhanced Oil Recovery Waterflood Project  
Sinclair Unit No. 2**

## **INTRODUCTION**

The Sinclair oilfield is located in Township 7, Ranges 28 & 29, and Township 8 Range 29 W1 (see Figure 1). Since discovery in 2004, the main portion of the field has been developed with vertical producing wells on 40 acre spacing. To date, most of the main oilfield has been on Primary Production mainly from the Lyleton member of the Three Forks Formation.

Enhanced Oil Recovery (EOR) operations in the Sinclair Field began with a Unitized Pilot Waterflood (WF) within Sections 4 & 9 Township 8, Range 29 W1 (8-29 W1) in July 2006 (Figure 2). The Pilot was implemented by Tundra Oil and Gas (Tundra) to test reservoir response with Waterflood (EOR) operations and address depleting reservoir pressure in the Lyleton.

Water injection was initially implemented in the north half of Section 9-8-29 W1 by converting 4 existing vertical producer wells to injection forming a pilot waterflood on 40 acre spacing. A horizontal injector was then drilled in the south half of Section 9-8-29, between the vertical producers, resulting in 20 acre waterflood spacing. In late 2007, water injection commenced into 4 more newly drilled horizontal injectors in Section 4 of 8-29 W1. This completed the Pilot development on 20 acre spacing and further tested waterflood response to horizontal injection in the Lyleton member.

Producing well responses to the Pilot Waterflood were encouraging and resulted in a 2008 application by Tundra to expand the EOR pilot project area and form Sinclair Unit No. 1. Petroleum Branch Approval of the Unitization and EOR scheme for Sinclair Unit No. 1 was received by Tundra, as Operator, in January 2009. The Sinclair Unit No. 1 waterflood project now encompasses 9 sections and 138 producing wells within Township 8-29 W1 (Figure 3).

Unit 1 water injection commenced January 2009 into 3 drilled for purpose horizontal injection wells in Section 8-8-29 W1, continuing on the 20 acre spacing pattern design. Six (6) additional Unit 1 horizontal wells were also drilled and placed on injection in Q1 2009. Horizontal injection well development in Sinclair Unit 1 will continue throughout 2009 on plan as operating conditions allow.

Production responses to the waterflood EOR scheme within the Unit 1 Pilot continue to be encouraging and suggest waterflood expansion to additional similar quality producing lands will also improve ultimate oil recovery. The following is an application by Tundra to establish Sinclair Unit No 2 and initiate a Secondary Waterflood EOR scheme within additional lands of the main Lyleton and middle Bakken.

## **CONCLUSIONS**

1. The Sinclair Unit No. 2, as proposed (Figure 4), will include 146 producing wells and 9 + additional sections of the southeast portion of the main Lyleton - Three Forks / middle Bakken producing area (Figure 5).
2. Total Original Oil in Place (OOIP) in the project area has been calculated to be 39,012,400 Barrels (bbls), for an average of 267,200 bbls per 40 acre LSD / well.
3. Cumulative production in the Sinclair Unit 2 area to end March 2009 was 1,647,700 bbls of oil, and 764,400 bbls of water, representing a 4.2 % Recovery Factor of the OOIP.
4. Ultimate Proved Producing Reserves in the Unit 2 project area under Primary production has been calculated to be 4,096,300 bbls, with 2,448,800 bbls remaining.
5. Ultimate oil recovery of the proposed Unit 2 OOIP, under the current Primary production method, is forecasted to be 10.5 %.
6. Production from the proposed area peaked during January 2008 at 3,026 bbls of oil per day (OPD) (Figure 6). Production averaged 25 bbls OPD per well, from approximately 120 active wells.
7. As of December 2008, production was 1,780 bbls OPD, and 850 bbls water per day (WPD), at a relatively stable 32 % watercut. With 146 wells, production averaged 12 bbls OPD per well.
8. Decline analysis of the last 12 months production data showed total oil declining at an annual rate of 23.8 % in the project area.
9. Recent Lyleton reservoir pressure surveys from within Sinclair Unit No 1 confirm significant depletion continues with primary production from the vertical wells.
10. Based on the Secondary EOR performance with horizontal injectors in Sinclair Pilot Waterflood within Unit 1, the Lyleton is considered to be an acceptable reservoir for further expansion of waterflood operations.
11. Using production responses observed with similar pattern spacing in the Pilot area, ultimate Total Proved oil reserves for the proposed Unit 2 under Secondary Waterflood EOR, has been calculated to be 8,582,700 bbls, with 6,935,200 bbls remaining.
12. Ultimate Secondary Waterflood Recovery Factor in Unit 2 is forecasted to be 22 %, or an incremental 11.5 % of OOIP over primary production.
13. An incremental 4,486,400 bbls of oil reserves are forecasted to be recovered under the proposed Unitization and Secondary EOR production vs the existing Primary production method.
14. Horizontal injectors, with multi-stage hydraulic fractures, will be constructed in 2 phases, between Unit 2 vertical producing wells, to complete waterflood patterns at an effective 20 acre spacing.



## **DISCUSSION**

### **RESOURCE POTENTIAL IN PROPOSED UNIT 2**

The Proposed Sinclair Unit No. 2 project area is located mostly within Township 7, Range 28 W1 and remainder in Township 7, Range 29 W1 (Figure 4). The proposed Unit No. 2 contains 146 producing wells within an area of approximately 9 sections.

#### **Geology**

A stratigraphic cross-section of the Sinclair Lyleton A / Three Forks – Bakken has been plotted through the proposed Unit 2 and is attached as Appendix 1. The cross section provides evidence that there is reservoir continuity between the wells over the proposed Unit 2 area. This is an essential requirement to facilitate successful waterflood operations.

A Structure map for the project area based on the Middle Bakken formation is attached as Appendix 2.

Porosity (Phi-h) and Permeability (k-h) maps for the project area are also included as Appendices 3 and 4 respectively.

#### **OOIP Estimates**

The Lyleton / Three Forks formation volumetric OOIP within the proposed Sinclair Unit 2 area has been estimated at 39,012,400 bbls. Appendix 5 outlines the Unit 2 volumetric OOIP estimates on an individual LSD / Well basis. Average OOIP by Individual LSD was determined to be 267,200 bbls, while the average per Section is 4,275,300 bbls.

A complete listing of Lyleton / Three Forks formation rock and fluid properties used to characterize the reservoir and calculate the OOIP estimates are provided in Table 1.

The OOIP values were determined independently by GLJ Petroleum Consultants of Calgary.

#### **Historical Production**

A historical production history plot for the proposed Sinclair Unit No 2 is shown as Figure 6. Oil production commenced from the proposed Unit area in August 2004 and peaked during January 2008 at 3,026 bbls OPD. Production averaged approximately 25 bbls OPD per well as of January 2008.

As of December 2008, production was 1,780 bbls OPD and 850 bbls WPD, at a relatively stable 32 % watercut (wct), with oil production averaging 12 bbls per well.

From peak production and through 2008 to date, oil production is declining at an annual rate of 24% under the current Primary Production as plotted to point A on Figure 7.

## **Unit 2 Reserves Recovery Profiles and Production Forecasts**

### **Primary Production** (current)

Cumulative production in the Sinclair Unit 2 area, to end March 2009, was 1,647,700 bbls of oil, and 764,400 bbls of water for a recovery factor of 4.2 % of the OOIP.

Ultimate Proved Producing oil reserves recovery for Unit 2 has been estimated to be 4,096,000 bbls, or a 10.5 % Recovery Factor (RF) of OOIP (Table 2).

Remaining Proved Producing Primary Reserves to end March 2009 has been estimated to be 2,449,000 bbls. The expected production decline and forecasted cumulative oil recovery under continued Primary production is shown at point A on Figure 8.

### **Secondary EOR Production** (proposed)

The forecasted project production profile under Secondary Waterflood over time is plotted to point C on Figure 7.

Total Proved EOR recoverable reserves in the proposed Unit 2 project area have been estimated at 8,582,700 bbls (point C on Figure 8), resulting in a 22.0 % RF of OOIP. Remaining Secondary Total Proved Reserves as of end March 2009 has been estimated at 6,935,200 bbls (Figure 8).

An incremental 4,486,400 bbls of oil reserves are forecasted to be recovered under the proposed Unitization and Secondary EOR production scheme vs. the existing Primary Production. Incremental Secondary RF is forecasted to be 11.5 %. Incremental reserves recovery per project producing well is forecasted to average 30,700 bbls.

Production decline rate is forecasted to average 9.3 % through the life of the EOR project.

All reserves recoveries estimates were generated independently by GLJ Petroleum Consultants.

## **Sinclair Pilot Waterflood EOR Response**

The production and reservoir response in the Sinclair Pilot Waterflood EOR project has been deemed a direct analogy to forecast potential Unit 2 response.

Figure 9 outlines the historical group production plot for the 12 vertical producing wells from within Section 4 of the Sinclair Pilot WF project. All 12 producing wells are part of 4 waterflood patterns with horizontal (hz) injectors on an effective 20 acre spacing (Figure 2).

The group production plot consists of 12 vertical producing wells within LSD's 3, 4, 5, 6, 9, 10, 11, 12, 13, 14, 15, and 16 of Section 4-8-29 W1.

The 4 pattern injectors are 02/4-4, 02/12-04, 03/13-04, 02/4-9-8-29 W1.

The Section 4-8-29 Pilot Waterflood production response plotted on Figure 9 can be summarized as follows:

- Total Primary Production from the 12 vertical wells peaked in September 2005 at 745 bbls OPD
- Total production declined steadily with reservoir pressure depletion over the next 2 years to a low of 174 bbls OPD in September 2007
- Four (4) new horizontal wells were placed on injection between Section 4 vertical producers in September 2007 to complete 20 acre spaced Waterflood patterns. New HZ Injection wells started were; 02/4-4, 02/12-04, 03/13-04, 02/4-9-8-29 W1
- Oil production decline rate started to flatten within a few months of pattern injection giving definitive indication of waterflood response by end 2007
- Strong waterflood response is confirmed in Section 4 producers throughout 2008 as oil production rate increased while watercut and water production rate decreased
- Total production from the 12 wells has increased steadily to 367 bbls OPD as of December 2008

Similar to the Section 4 Pilot WF, the Sinclair Unit No. 2 waterflood is proposed with horizontal injection wells, placed between vertical producers, on an effective 20 acre pattern spacing (Figure 10).

Expected Secondary EOR reserves recovery forecasts for Sinclair Unit 2 have been based on the actual production response profile data from the Sinclair Pilot WF project.

### **Technical Studies**

The waterflood performance predictions for the proposed Unit 2 Lyleton / Three Forks formation are based on recent geological and engineering studies.

Geological work included internal Tundra and Independent reviews of the available open-hole logs, core data, seismic, and completion information. These were used to develop a suite of geological maps and establish reservoir parameters to support Unit 2 OOIP calculations (Appendices 1 – 4 ).

An Independent Engineering review was also conducted by GLJ Petroleum Consultants of Calgary to assess historical production rates and responses to the Pilot EOR Waterflood project now within Sinclair Unit 1. Sinclair Pilot Waterflood EOR response profiles and forecasts were developed and are believed to be analogous to the Unit 2 reservoir. The response profile was applied to Unit 2 reservoir to generate ultimate reserves recovery estimates and corresponding production profiles for both Primary and Secondary Recovery schemes.

Reservoir simulation / modeling work has not been extended to the Unit 2 area to date.

No other Technical Studies relating to Unit 2, beyond those submitted with previous Sinclair Unit 1 EOR applications have been completed to date.

## **UNITIZATION and EOR DEVELOPMENT**

Unitization and implementation of a Waterflood EOR project will increase overall recovery of OOIP from the proposed area.

### **Unit Name**

Tundra proposes that the official name of the new Unit shall be Sinclair Unit No. 2.

### **Unit Operator**

Tundra Oil and Gas Partnership (Tundra) will be the Operator of record for Sinclair Unit No. 2.

### **Unitized Zone**

The unitized zone(s) to be waterflooded in the Sinclair Unit No. 2 will be the Lyleton / Bakken.

### **Unit Wells**

The 146 wells to be included in the proposed Sinclair Unit No. 2 are outlined in Table 3.

### **Unit Lands**

The Sinclair Unit No. 2 will consist of portions of 14 Sections as follows:

Sections 4, 5, 6, 7, 8, 17, 18, 19, 30, 31 of Township 7, Range 28, W1M  
Sections 13, 24, 25, and 36 of Township 7, Range 29, W1M

Sinclair Unit No. 2 will consist of 146 LSD's. Production allocation will be based on 40 acre tracts so the proposed Unit will consist of 146 tracts. The lands included in the 40 acre tracts are outlined in Appendix 6.

### **Tract Factors**

The proposed Sinclair Unit No. 2 will consist of 146 Tracts, based on the 40 acre Legal Sub Divisions (LSD) containing the existing 146 vertical producing wells (Appendix 6). Total oil production from the first 90 operating days (2160 hours) for each LSD/well, and the OOIP by LSD/well, were used to determine all the proposed Unit tract factors. Both 90 day production volume and OOIP each received an equal 50 % weighting in calculating overall individual Tract Factors.

The initial 90 day Production Tract Factor contribution calculation for all individual LSD's are outlined within Appendix 7.

The OOIP Tract Factor contribution calculation for all individual LSD's are outlined within Appendix 8.

The Total Tract Factor calculation for each LSD / well, and the relative contribution of First 90 days Production and OOIP Factors to the Total, is also shown on Appendix 8.

All combined and recommended Unit 2 Tract Factors are listed by LSD per Section, complete with Working Interest and Royalty Interest per Tract, as shown in Appendix 6.

### **Working Interest Owners**

Appendix 6 also outlines the Working Interest % for each recommended Tract within the proposed Sinclair Unit No. 2. Tundra Oil and Gas Partnership holds 100 % Working Interest ownership in all the proposed Tracts.

Tundra Oil and Gas Partnership will have a 100 % working interest in Sinclair Unit No. 2 as proposed.

### **Waterflood Development**

Similar to the Sinclair Unit 1 EOR Waterflood Pilot development, new horizontal injection wells will be constructed between the existing vertical producing wells. At present, Tundra plans to ultimately construct up to 4 new horizontal injection wells per Section within Unit 2. This will ultimately result in development of up to 33 new horizontal injection wells within the proposed Unit.

A two phased injection well development program is planned for Unit 2 as shown in Figure 10. Injection well construction is proposed to occur over a 2 year period. This development plan will ultimately create 4 horizontal injection wells per Section and result in an effective 20 acre waterflood operation.

Any future revisions to the proposed waterflood development plan would be based on; new production or performance response data from Sinclair Unit No 1 EOR, new technical studies, or revised reservoir behavior and reserves interpretations.

### **Waterflood Operating Strategy**

#### **Water Source and Injection Wells**

Unit 2 water will be supplied from the existing Sinclair Unit 1 source and injection water system. All Unit 1 injection water is obtained from the Lodgepole formation in the 102 / 16-32-7-29 W1 licensed water source well. Lodgepole water from the 102 / 16-32 source well is pumped to the main Unit 1 Water Plant at 3-4-8-29 W1. All source water is filtered at the 3-4 Water Pant and pumped up to injection system pressure. A simplified flow diagram for the existing Unit 1 water injection system is shown as Figure 11.

Produced water is not currently used for any water injection in Unit 1 and there are no current plans to use produced water as a source supply for Unit 2 injection.

Extensive compatibility testing between Lyleton produced water and 102/16-32 source Lodgepole water was previously conducted for the Unit 1 EOR project. All potential mixture ratios between the two waters, under a range of temperatures, have been simulated and evaluated for multiple scaling tendencies. Testing of multiple scale inhibitors has also been conducted and minimum inhibition concentration requirements for the source water volume determined. At present, continuous scale inhibitor injection is maintained into the source water stream for all Unit 1 water injection. Maintenance of the source water scale inhibition system is part of an existing routine maintenance program. Injection rates vs time plots are routinely monitored for evidence of any injection restriction due to scaling or other operational problems.

New Unit 2 water injection wells will be drilled, cleaned out, and configured downhole for injection as shown in Figure 12. All hz injection wells will be stimulated by multiple hydraulic fracture treatments to obtain suitable injection rates. Tundra has extensive experience with horizontal fracturing in the area and all jobs are rigorously programmed and monitored during execution. This helps ensure optimum placement of each fracture stage to prevent, or minimize, the potential for out of zone frac growth and thereby limit the potential for future out-of-zone injection.

New water injection wells will be placed on injection after Application and Approval to inject. Wellhead injection pressures will be maintained below the least value of either;

1. the area specific known and calculated fracture gradient, or
2. the licensed surface injection Maximum Allowable Pressure (MOP)

Tundra 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. surface MOP and the known area formation fracture pressures.

All new water injection wells will be surface equipped with injection volume metering and rate/pressure control (Figure 13). 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.

Unit 2 hz water injection well rates are forecasted to average 10 – 25 m3 WPD based on reservoir conditions and Unit 1 injection profile history.

#### Reservoir Pressure

No recent or representative pressure surveys are currently available for the Unit 2 project area. The extremely long shut in and build up times required to obtain any possible representative surveys from the vertical producing wells are economically prohibitive. However, reasonable reservoir pressure surveys were recently acquired in new Sinclair Unit 1 horizontal injection wells prior to first injection. Three (3) surveys measured the Lyleton reservoir pressure (Pr) ranging from 2400 – 3000 kPa.

Based on cumulative production voidage in Unit 2, compared with the Unit 1, reservoir pressure in Unit 2 has been estimated to range between 4000 – 7000 kPa. Initial Unit 2 project area reservoir pressure was 9500 kPa.

Tundra expects to inject water for a minimum 2 – 4 year period to re-pressurize the reservoir due to cumulative primary production voidage and pressure depletion. Initial Voidage Replacement Ratio (VRR) is expected to be 1.25 to 1.75 by individual pattern during the fill up period. As the cumulative VRR approaches 1, Target reservoir operating pressure for Waterflood operations will be 75 – 90 % of original Pr (7000 – 8500 KPa).

### Waterflood Surveillance and Optimization

Unit 2 EOR response and waterflood surveillance will consist of the following;

- Regular production well rate and wct testing as done in Unit 1
- Daily water injection rates and pressures monitoring vs targets
- Water injection rate / pressure / time vs cumulative injection plots
- Reservoir pressure surveys on new injection wells prior to start of first injection
- Reservoir pressure trends
- VRR by pattern
- Selected use of chemical tracers to track water injector / producer responses
- Use of some or all of; Water Oil Ratio (WOR) trends, Log WOR vs Cum Oil, Hydrocarbon Pore volumes Injected, Conformance Plots, Pattern Balancing

The above surveillance methods will provide an ever increasing understanding of reservoir performance and provide data to continually control and optimize Unit 2 waterflood operations design. Controlling waterflood operations will significantly reduce or eliminate the potential for out-of-zone injection, undesired channeling or water breakthrough, or out-of-Unit migration. The monitoring and surveillance will also provide early indicators of any such issues so that injection well construction or waterflood operations may be altered to maximize ultimate secondary reserves recovery.

### **Wells to be Converted**

No existing producer wells within the proposed Unit 2 project are planned for conversion to water injection. All injection wells are planned to be drilled for purpose as described in Waterflood Development.

### **Water Injection Facilities**

The Sinclair Unit No. 2 waterflood operation will utilize the existing source well supply and water plant (WP) facilities located at 3-4-8-29 W1M and operated by Tundra. Low pressure water will be transferred from 3-4 water plant to new proposed Water Injection Pump Station (IP) to be located just north of the proposed Unit 2 project area. The Pump Station will increase the downstream system pressure to wellhead injection requirements, and deliver the water to a new Unit 2 high pressure pipeline system and each injection well. The proposed new water injection system, subject to future detailed engineering, is outlined on Figure 14.

Tundra proposes to construct the Pump Station and major water injection distribution pipelines in late 2009 – early 2010. Construction of in field water pipelines for individual wells will coincide with the injector well drilling schedule.

A complete description of all planned system design and operational practices to prevent corrosion related failures is shown on Figure 15.

### **Notification of Mineral and Surface Rights Owners**

Tundra is in the process of notifying all mineral rights and surface rights owners of the EOR project and the proposed formation of Sinclair Unit No. 2. Copies of the Notices, and proof of service, to all surface rights owners will be forwarded to the Petroleum Branch, when available, to complete the Unit 2 Application.

Sinclair No. 2 Unitization, and execution of the formal Unit 2 Agreement by affected Mineral Owners, is expected during Q3 2009. Copies of same will be forwarded to the Petroleum Branch, when available, to complete the Unit 2 Application.

### **TUNDRA OIL & GAS PARTNERSHIP**

wrj  
Calgary



## **Proposed Sinclair Unit No. 2**

### **Application for Enhanced Oil Recovery Waterflood Project**

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## **Proposed Sinclair Unit No. 2**

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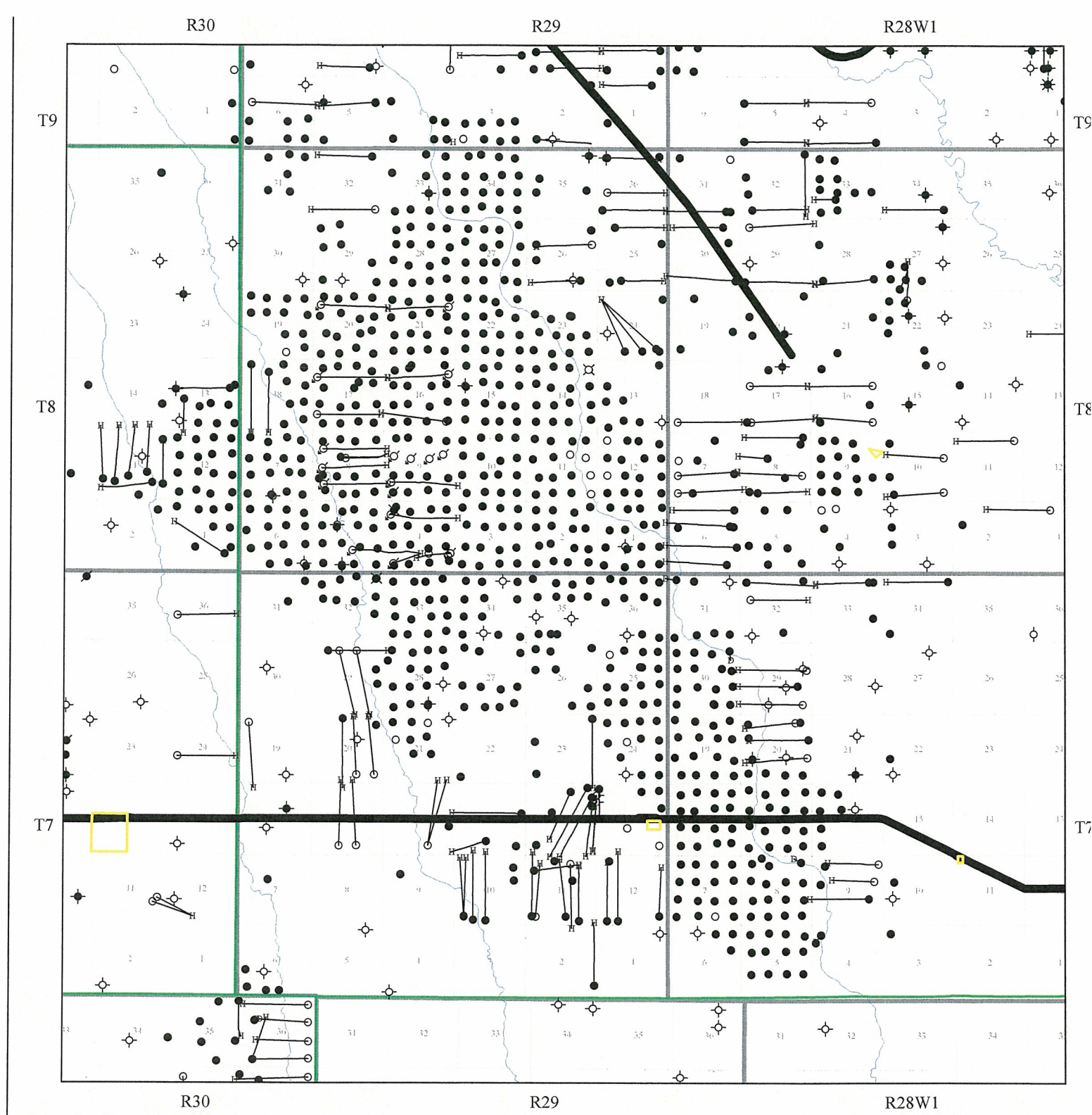
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### **Application for Enhanced Oil Recovery Waterflood Project**

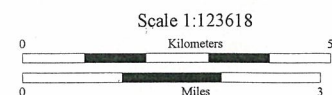
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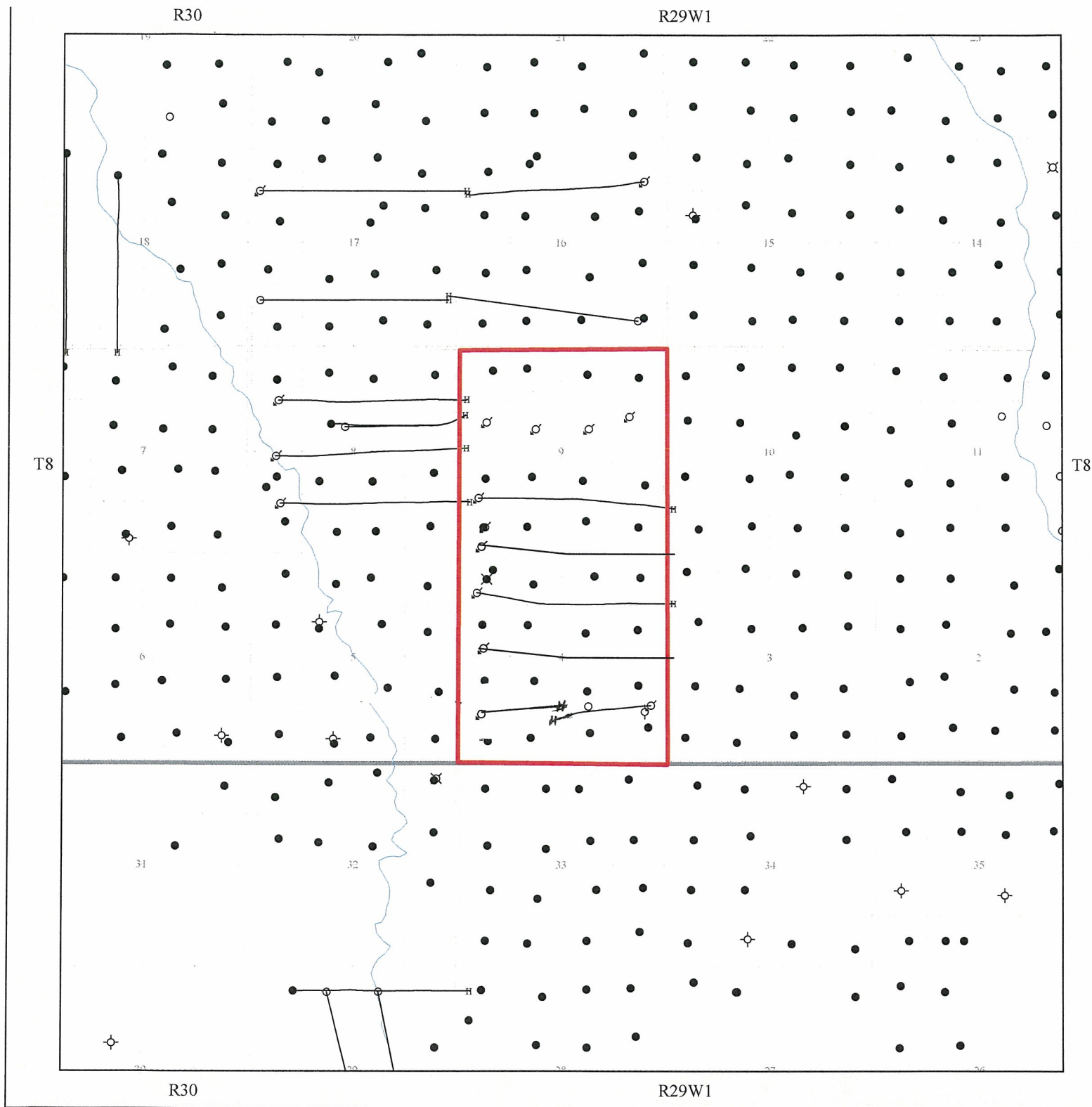
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WELL LEGEND			
Bottom Hole Locations:			
○ Location	◇ Suspended		
⊗ Service or Drain	● Oil		
⊕ Dry & Abandoned	⊗ Suspended Oil		
⊕ Abandoned Oil	⊗ Abandoned Service		
⊕ Injection			
Surface Hole Locations:			
—○ Directional	—H Horizontal		

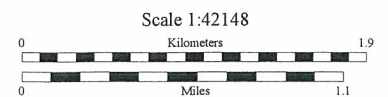
<p>Manitoba</p> <p>Sinclair Oil Field</p> <p>Figure 1</p>	
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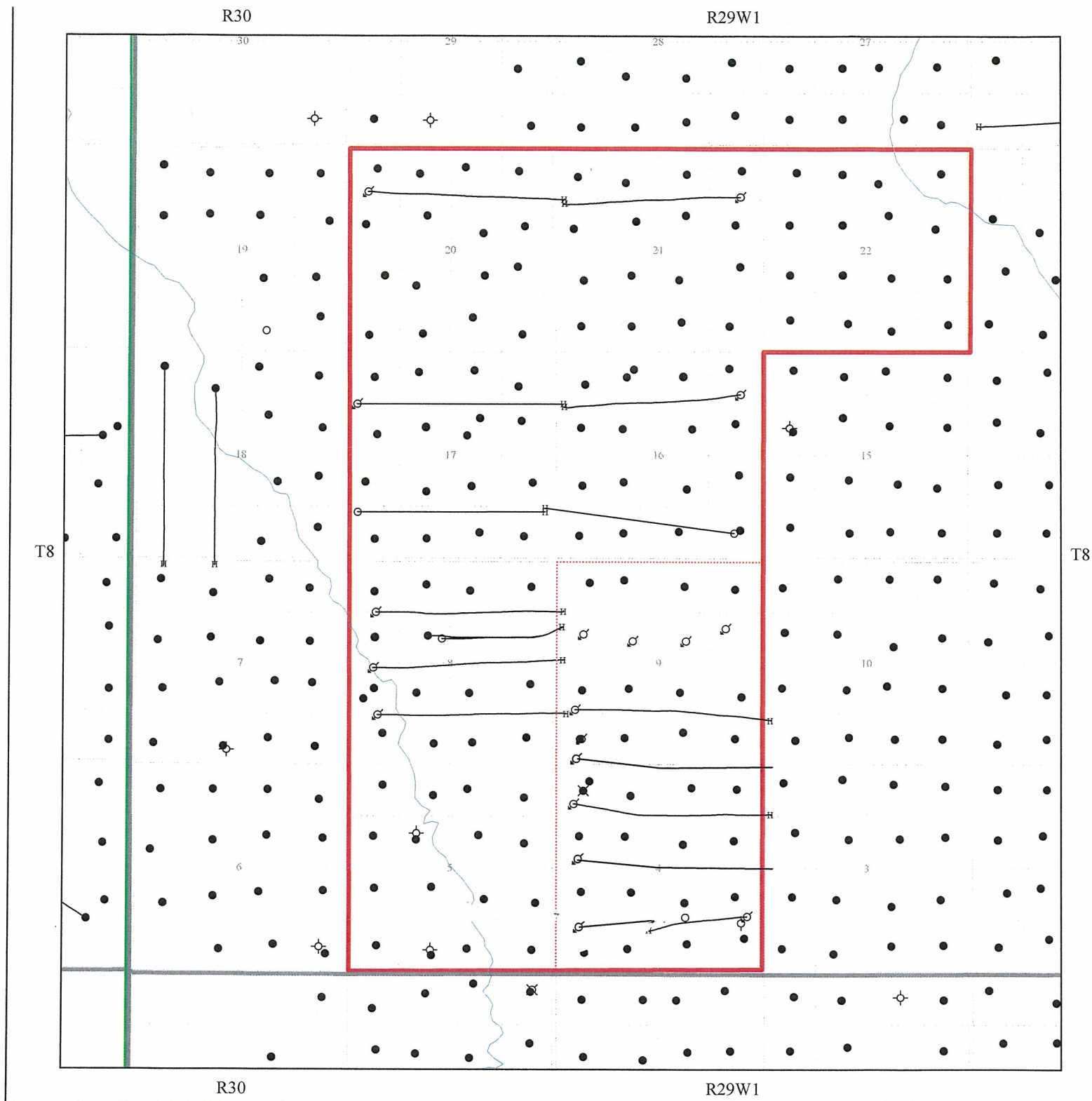


WELL LEGEND	
Bottom Hole Locations:	
○ Location	◊ Suspended
⊠ Service or Drain	● Oil
⊕ Dry & Abandoned	⊗ Injection
Surface Hole Locations:	
—H— Horizontal	

Sinclair Pilot WF Project	
Prior to January 2009 Figure 2	
Created in AccuMap™ Product of IHS Datum: NAD27 Vol. 19 No. 84, Apr 17 2009 Copyright © 1991-2009 (403) 770-4646	Author: bill.jenkins Date: May 9, 2009 File: Sinclair WF Pilot MAP Scale: 1 : 42148 Projection: Stereographic Center: N49.63591 W101.35996
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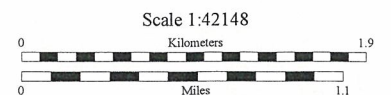






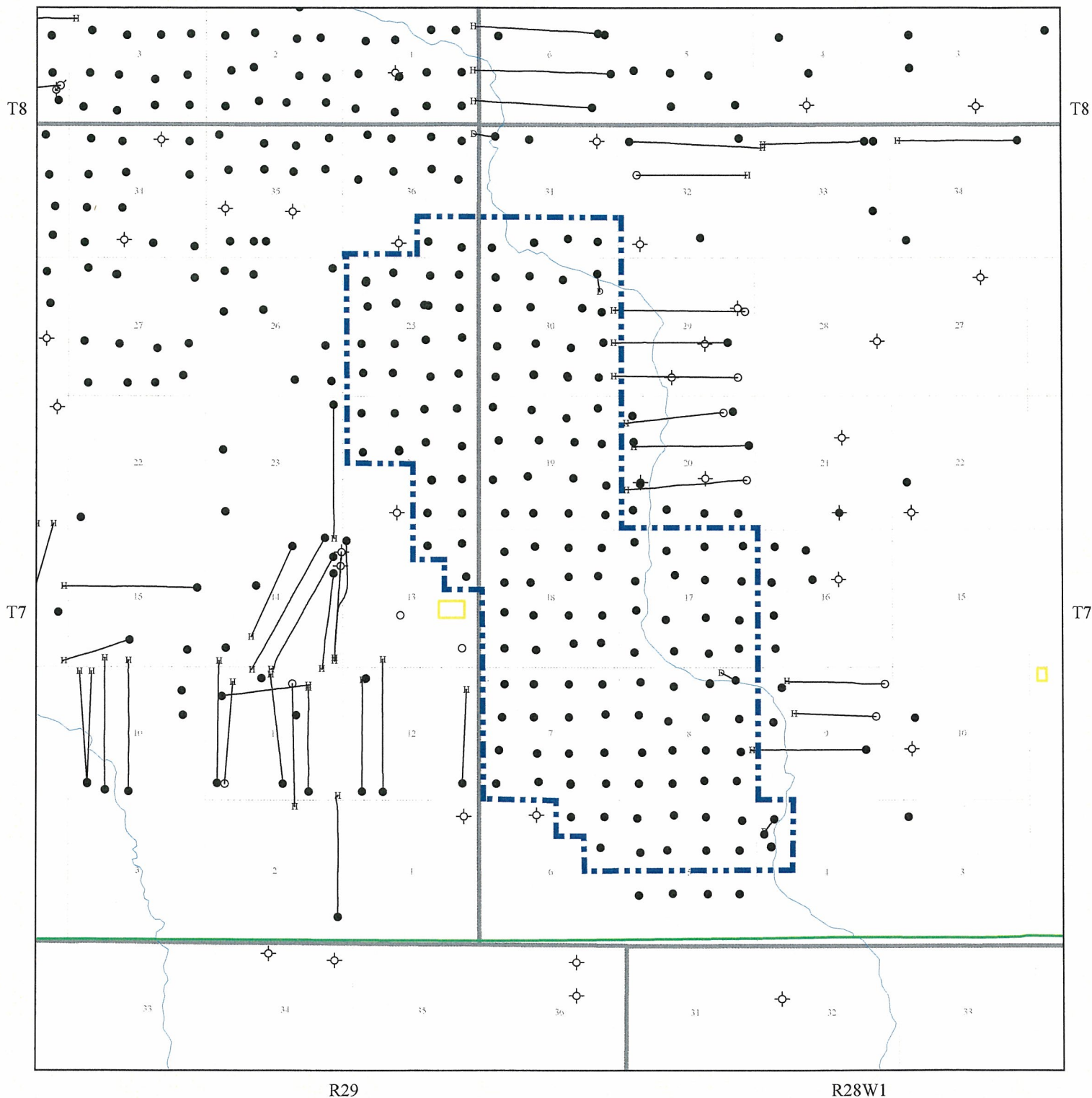
WELL LEGEND			
Bottom Hole Locations:			
○ Location	◇ Suspended		
⊠ Service or Drain	● Oil		
◇ Dry & Abandoned	⊕ Injection		
Surface Hole Locations:			
—H Horizontal			

Sinclair Unit No. 1			
Approved January 2009			
Figure 3			
Created in AccuMap™ Product of IHS Datum: NAD27 Vol. 19 No. 64, Apr 17 2009 (403) 770-6646 Copyright © 1991-2009		Author: Bill Jenkins Date: May 9, 2009 File: Sinclair Unit 1.MAP Scale: 1 : 42148 Projection: Stereographic Center: N49.65105 W101.37062	
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R29

R28W1



### WELL LEGEND

#### Bottom Hole Locations:


- Location
- Oil
- ⊕ Abandoned Oil
- ◇ Suspended
- ⊗ Dry & Abandoned
- ⊘ Injection

#### Surface Hole Locations:

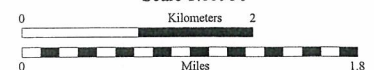
- Directional
- H Horizontal

## Proposed Sinclair Unit No 2

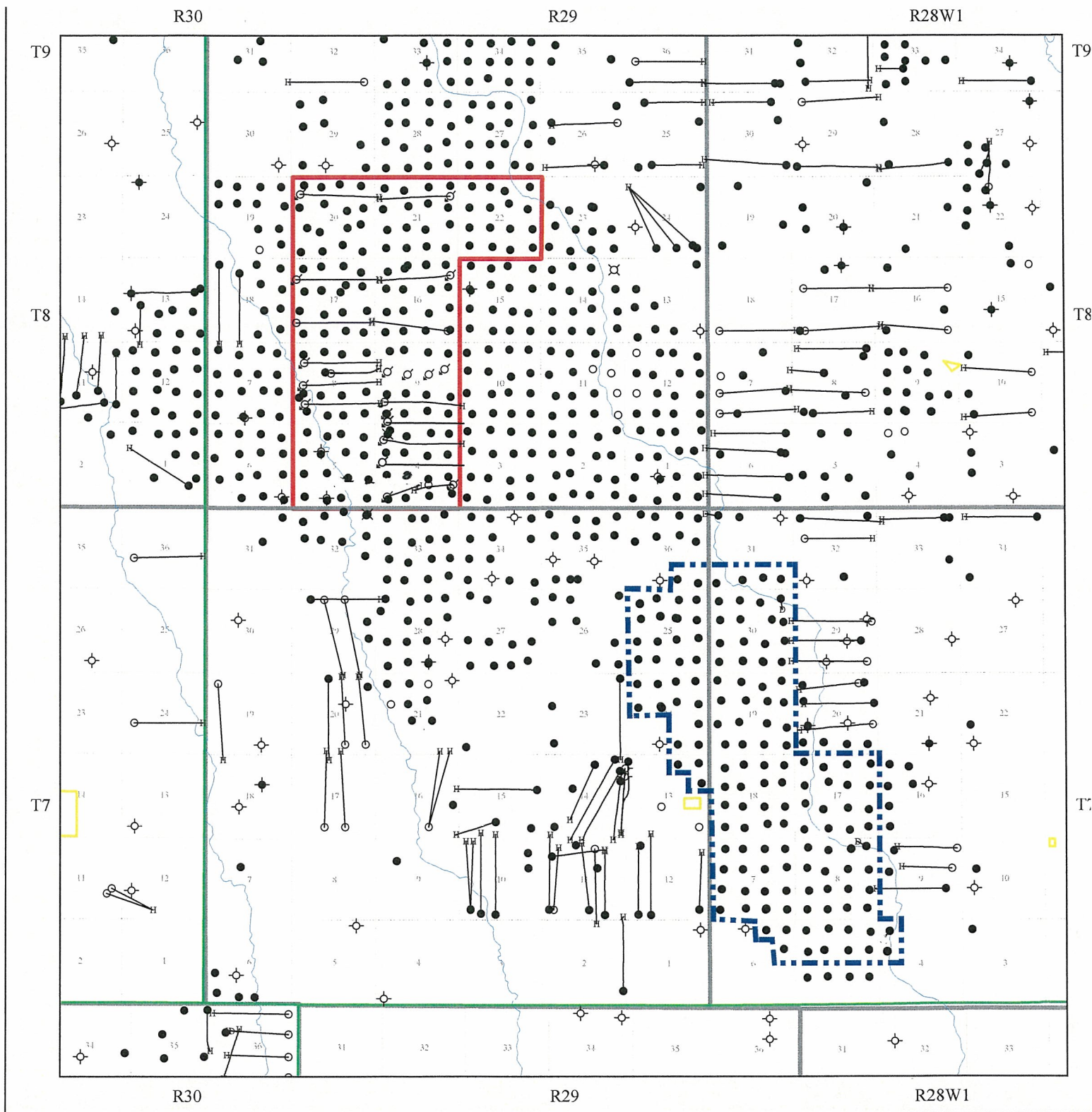
### Proposed Unit Boundary Figure 4

	Created in ArcMap™ Product of IHS Datum: NAD27 Vol. 19 No. 04, Apr 17 2009 (403) 770-4646	Author: WRJ Date: May 9, 2009 File: Sinclair Unit 2 Proposed R Scale: 1 : 65950 Projection: Stereographic Center: N49.57586 W101.26915
	Grid Information: DLS: IHS Enhanced Grid NTS: Theoretical Grid FPS: Theoretical Grid US: IHS US Grid	DLS Version Information: AB: ATS 2.6 BC: PRB 2.0 SK: STS 2.5 MB: MB 1.0

Scale 1:65950







#### WELL LEGEND

##### Bottom Hole Locations:


- |                    |                 |
|--------------------|-----------------|
| ○ Location         | ◇ Suspended     |
| ⊗ Service or Drain | ● Oil           |
| ◇ Dry & Abandoned  | ★ Abandoned Oil |
| □ Injection        |                 |

##### Surface Hole Locations:

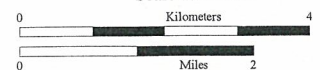
- |                |              |
|----------------|--------------|
| —○ Directional | — Horizontal |
|----------------|--------------|

## Proposed Sinclair Unit No. 2

### Sinclair Unit No. 1 - Red Figure 5

	Created in AccuMap™ Product of IHS Datum: NAD27 Vol. 19 No. 04, Apr 17 2009 Copyright © 1991-2009 (403) 770-4646	Author: WRJ Date: May 9, 2009 File: Sinclair Unit 1 and Propo Scale: 1 : 105854 Projection: Stereographic Center: N49.61231 W101.32037
	Grid Information: DLS: IHS Enhanced Grid NTS: Theoretical Grid FPS: Theoretical Grid US: IHS US Grid	DLS Version Information: AB: ATS 2.6 BC: PRB 2.0 SK: STS 2.5 MB: MB 1.0

Scale 1:105854



Unit 2 well list.WLS  
May 18, 2009

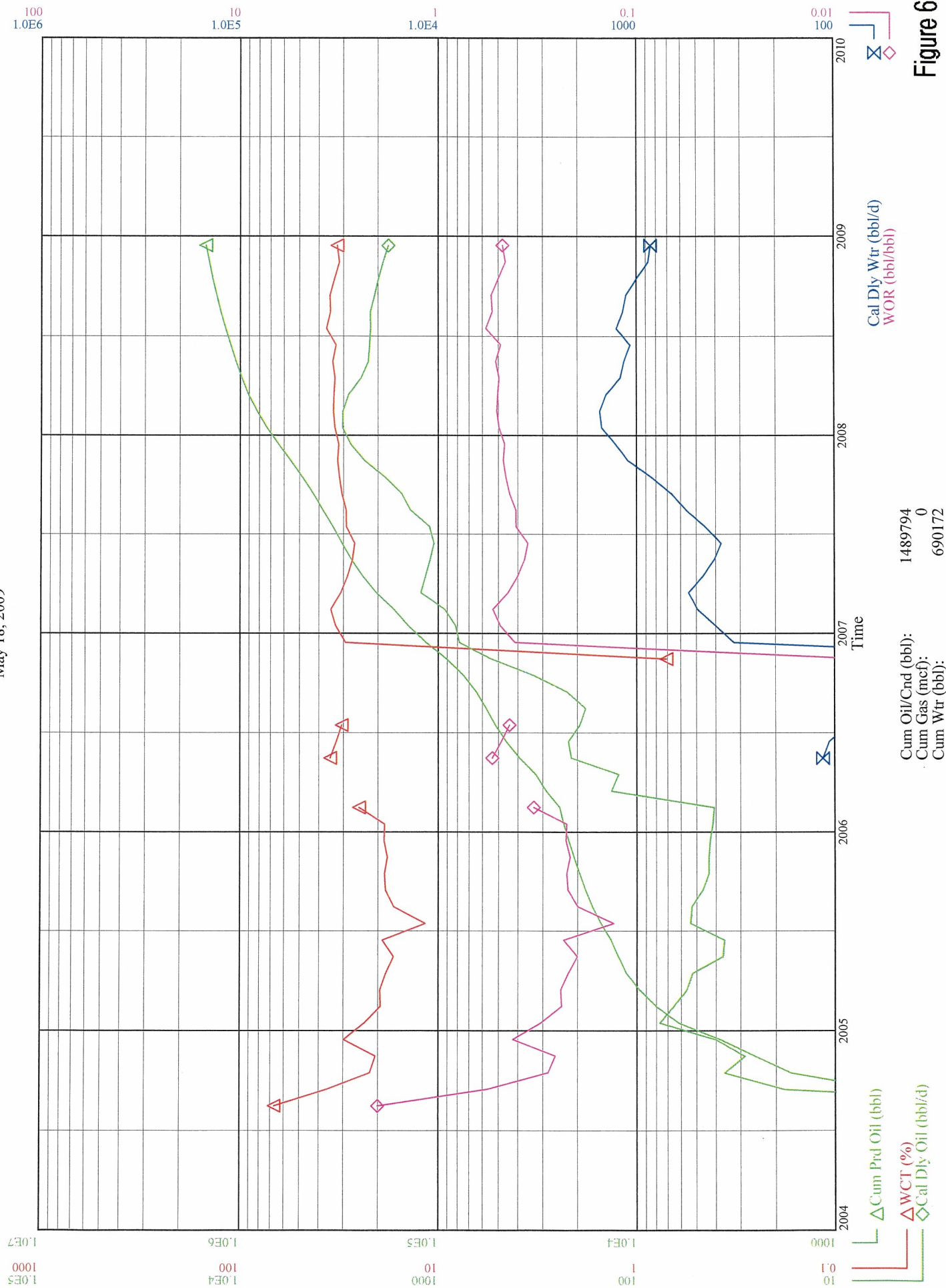


Figure 6



## Property :Sinclair Unit No. 2 (Proposed) &amp; Unit No. 3 (Proposed)



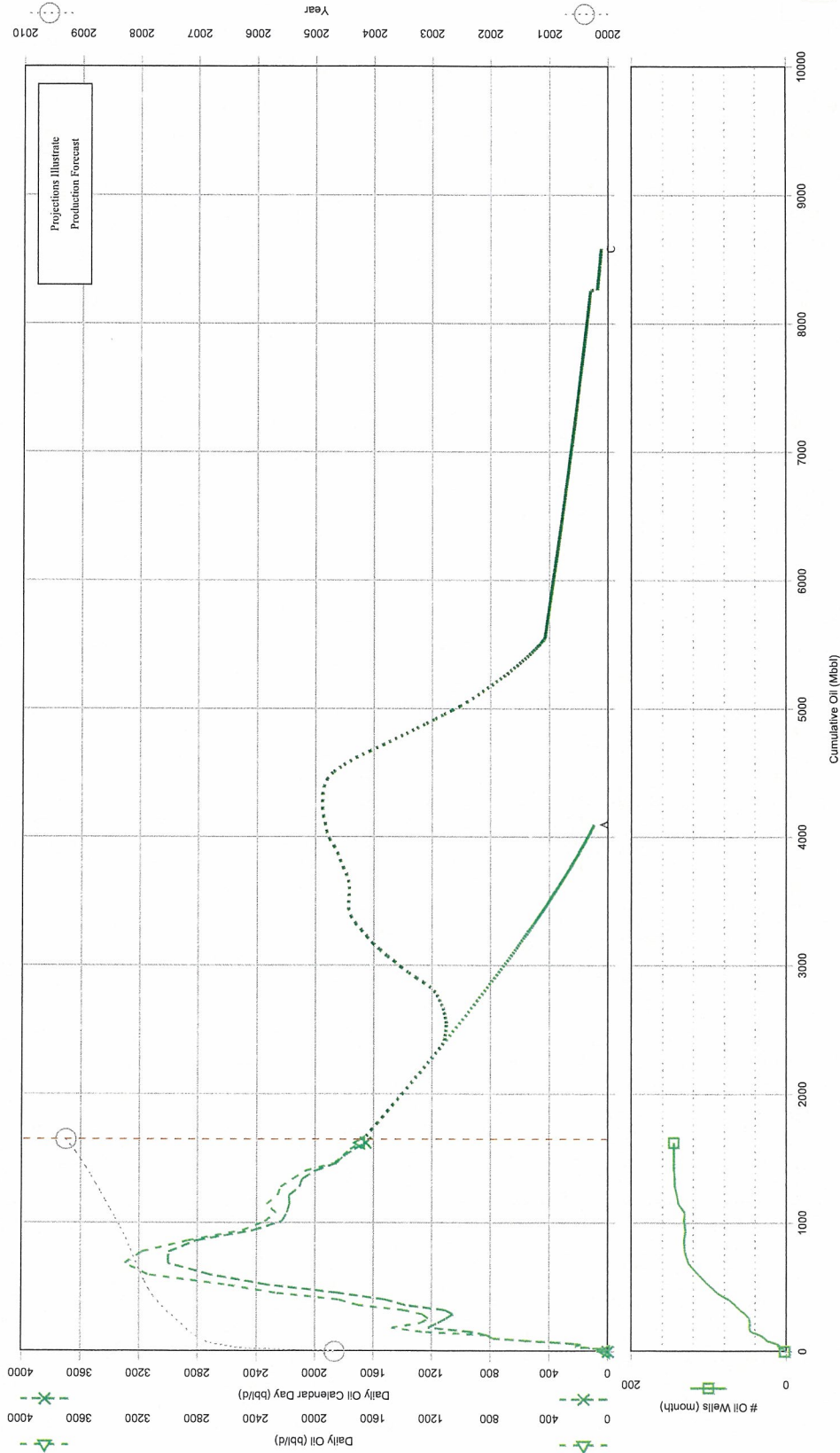
Decline Analysis Summary @ 2009/04/01

Decline Analysis Summary @ 2009/04/01										Average 12 months rates (Last 12 months ending 2007/02/21)							
Reserves		Reserves (Mbbbl)				Rates (bbl/d)				Decline							
		Ultimate	Cum Prd	Remain	Initial	Final	Initial	Exponent	Gas :	Oil :	Avg Wells :	WGR :	GOR :	WC :			
Pv Prd	A(R)	4096	1648	2449	1670	95	23.8%	0.20	0.0 Mcf/d	2105.8 bbl/d	0.0 Mcf/cd	0.0 bbl/MMcf	0.0 scf/stb	0.0 bbl/MMcf			
Total Pv	C(R)	8583	1648	6935	1670	95	9.3%	0.20	136.6			2034.9 bbl/cd		33.4 %			
Cumulative Production																	
		Oil :	1647.7 Mbbbl			Gas :	0.0 MMcf			Water :		764.4 Mbbbl					

(2009-May-1) OOIP for Unit 2 of 39,012.4 Mbbl is determined from planimetering porosity\*net pay mapping for the Lyleton A (GLJ map), Lyleton B (Tundra map) and Mid Bakken (Tundra map) intervals. Sinclair Unit No. 2 - Proposed 1099448 / May 19, 2009

# Historical and Forecast Production Sinclair Unit No. 2 - Proposed

Property : Sinclair Unit No. 2 (Proposed) & Unit No. 3 (Proposed)



(2009-May-1) OOIP for Unit 2 of 39,012.4 Mbbbl is determined from planimetry porosity\*net pay mapping for the Lyleton A (GLJ map), Lyleton B (Tundra map) and Mid Bakken (Tundra map) intervals.  
Sinclair Unit No. 2 - Proposed  
1099448 / May 19, 2009

Sinclair Section 4 WF Pilot Producers.wls  
May 22, 2009

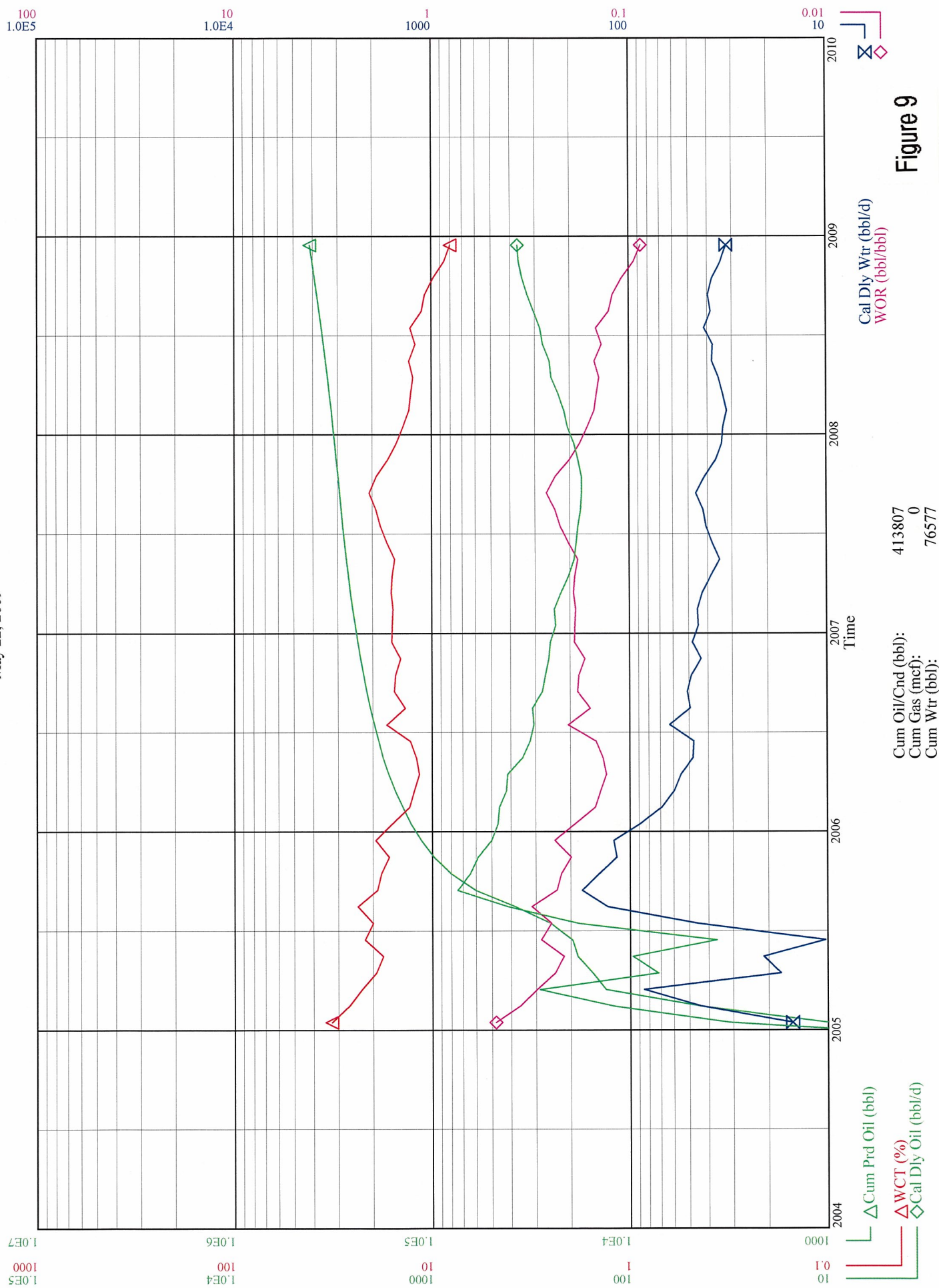


Figure 9



R29

R28W1

T8

T8

T7

T7

R29

R28W1

## WELL LEGEND

## Bottom Hole Locations:


- Location      ● Oil
- ⊕ Dry & Abandoned      ✦ Abandoned Oil

## Surface Hole Locations:

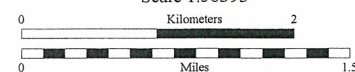
- Directional      —H Horizontal

## Unit 2 Planned HZ Injectors

Blue Phase I - Red Phase II  
Figure 10

 Copyright © 1991-2009	Created in AccuMap™ Product of IHS Datum: NAD27 Vol. 19 No. 04, Apr 17 2009 (403) 770-4646	Author: WRJ Date: May 9, 2009 File: Sinclair Unit 2 Proposed Re Scale: 1 : 56393 Projection: Stereographic Center: N49.57511 W101.26846
	Grid Information: DLS: IHS Enhanced Grid NTS: Theoretical Grid FPS: Theoretical Grid US: IHS US Grid	DLS Version Information: AB: ATS 2.6 BC: PRB 2.0 SK: STS 2.5 MB: MB 1.0

Scale 1:56393



# Sinclair Water Injection System

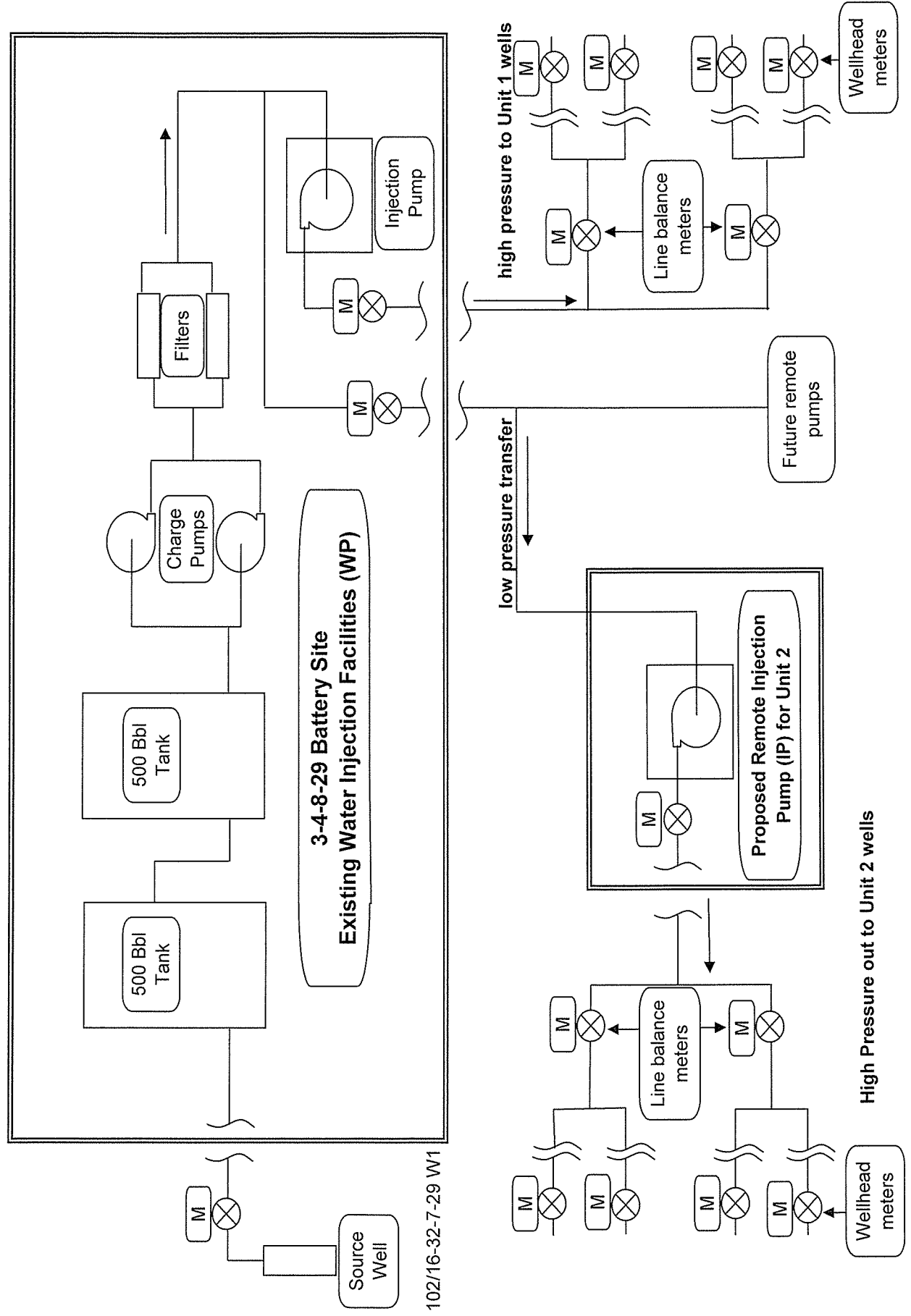
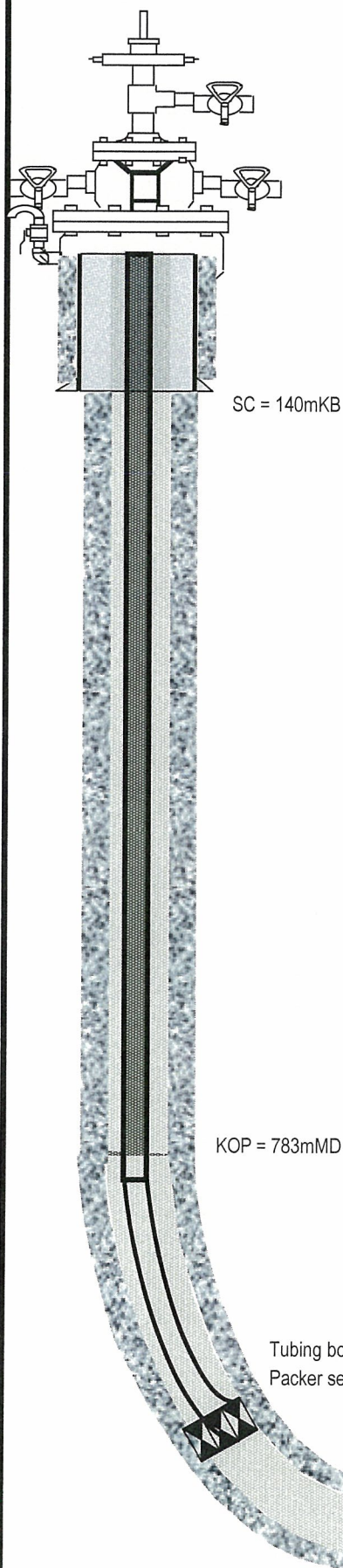


Figure 11

Existing

## TYPICAL WATER INJECTION WELL DOWNHOLE DIAGRAM

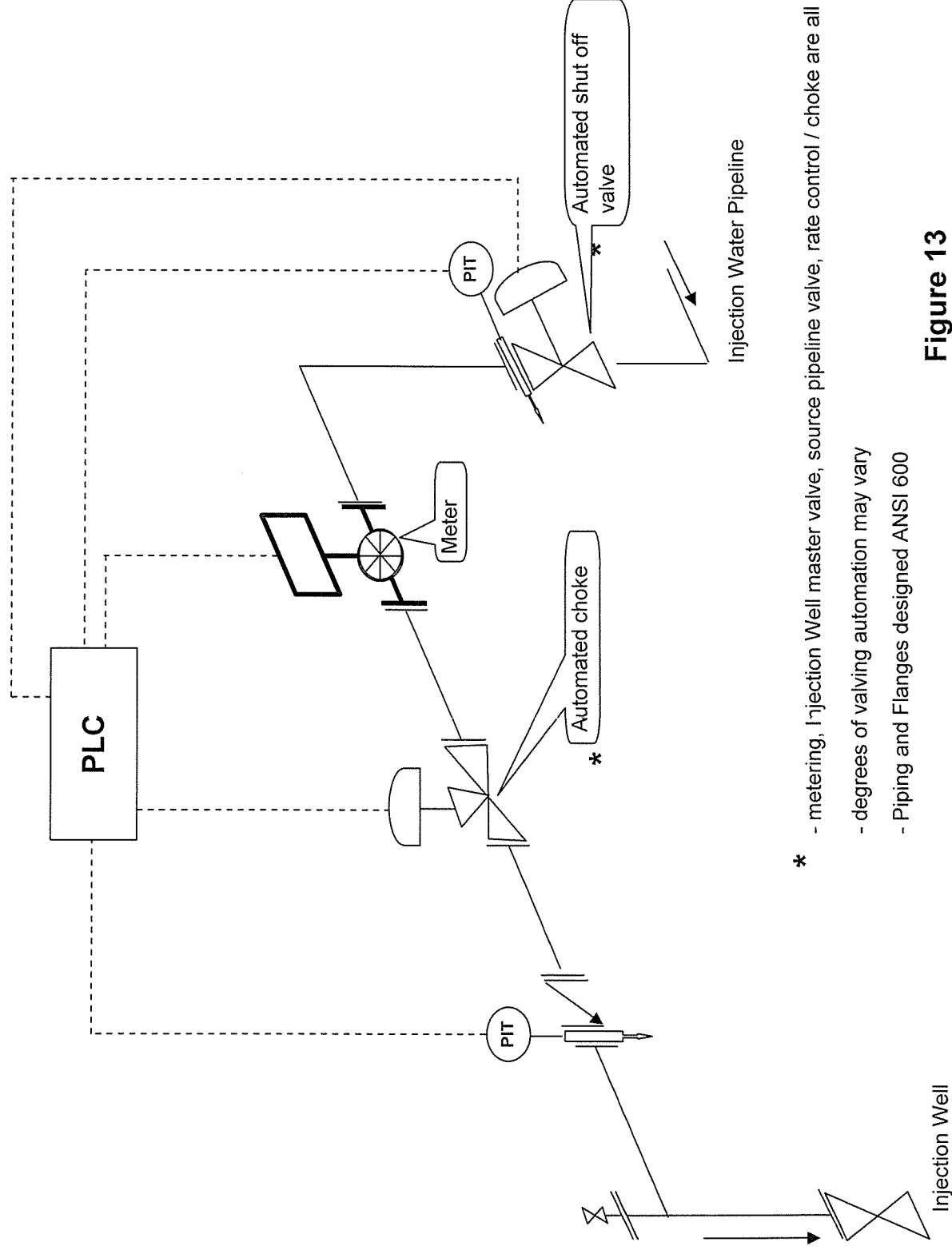
[illegible]

**Figure 12**



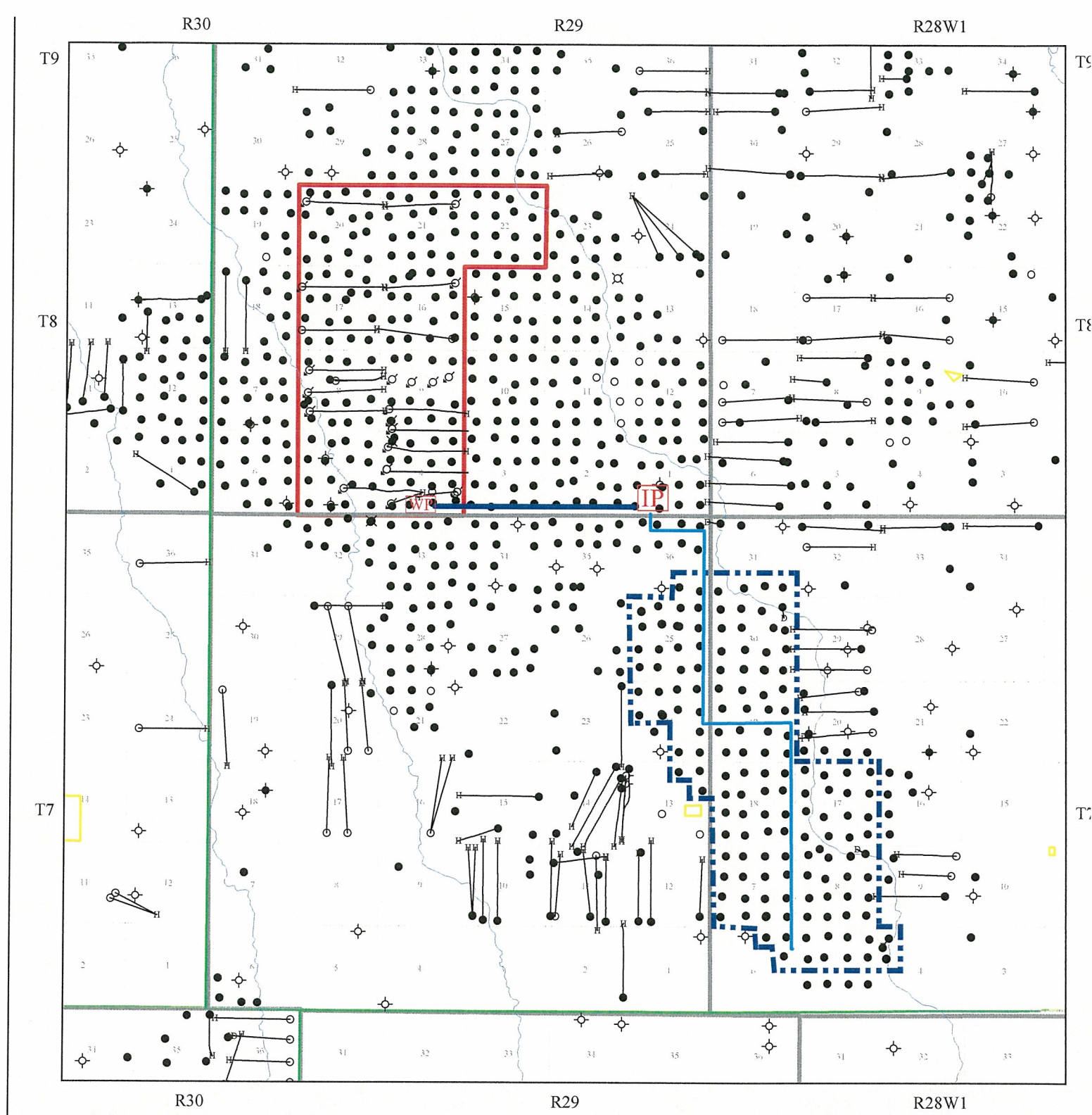
## Sinclair No. 2

### Proposed Injection Well Surface Piping P&ID



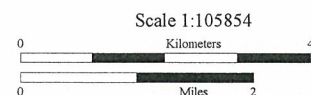
- \* - metering, Injection Well master valve, source pipeline valve, rate control / choke are all standard
- degrees of valving automation may vary
- Piping and Flanges designed ANSI 600

**Figure 13**



WELL LEGEND	
Bottom Hole Locations:	
○ Location	◇ Suspended
⊗ Service or Drain	● Oil
⊕ Dry & Abandoned	◆ Abandoned Oil
⊖ Injection	
Surface Hole Locations:	
—○ Directional	—H Horizontal

Water Injection System	
New Pipe & Injection Plant Figure 14	
<p>Created in ArcMap™ Product of IHS Datum: NAD27 Vol. 19 No. 04, Apr 17 2009 (403) 770-4646</p>	<p>Author: WRJ Date: May 19, 2009 File: Sinclair Unit 1 to Proposed Scale: 1 : 105854 Projection: Stereographic Center: N49.61231 W101.32037</p>
<p>Grid Information: DLS: IHS Enhanced Grid NTS: Theoretical Grid FPS: Theoretical Grid US: IHS US Grid</p>	<p>DLS Version Information: AB: ATS 2.6 BC: PRB 2.0 SK: STS 2.5 MB: MB 1.0</p>



# Sinclair Unit No 2

## EOR Waterflood Project

### Planned Corrosion Control Program \*\*

#### Source Well

- Continuous downhole corrosion inhibition
- Continuous surface corrosion inhibitor injection
- Downhole scale inhibitor injection
- Corrosion resistant valves and internally coated surface piping

#### Pipelines

- Source well to 3-4-8-29 Water Plant - Fiberglass
- 3-4 Water plant to 4-1-8-29 Pump Stn – Low pressure Fiberglass or HDPE
- 4-1 Pump Stn to Unit 2 wells – 2000 psi high pressure Fiberglass

#### Facilities

- 3-4-8-29 Water Plant and 4-1-8-29 Pump Station
  - Plant piping – 600 ANSI schedule 80 pipe, Fiberglass or Internally coated
  - Filtration – Stainless steel
  - Pumping – Ceramic plungers, stainless steel disc valves
  - Tanks – Fiberglass shell, corrosion resistant valves

#### Injection Wellhead / Surface Piping

- Corrosion resistant valves and internally coated surface piping

#### Injection Wells

- Casing cathodic protection where required
- Wetted surfaces coated downhole packer
- Corrosion inhibited water in the annulus between tubing / casing
- Internally coated tubing surface to packer
- Surface freeze protection of annular fluid
- Corrosion resistant master valve
- Corrosion resistant pipeline valve

#### Producing Wells

- Casing cathodic protection where required
- Downhole batch corrosion inhibition as required
- Downhole scale inhibitor injection as required

**Figure 15**

\*\* subject to final design and engineering

## **Proposed Sinclair Unit No. 2**

### **Application for Enhanced Oil Recovery Waterflood Project**

#### **LIST OF TABLES**

Table 1	Lyleton / Three Forks Formation Rock & Fluid Parameters
Table 2	Proposed Unit 2 Oil Volumetric Reservoir Parameters Original Oil in Place Estimate Proved Producing Reserves Recovery Forecast Total Proved Reserves Recovery Forecast
Table 3	Proposed Sinclair Unit 2 Well List

# TABLE NO. 1

## LYLETON / THREE FORKS FORMATION ROCK & FLUID PARAMETERS

### SINCLAIR UNIT No 2 Project Area

Formation Pressure		9500 kPa	Initial Average Reservoir Pressure
Formation Temperature		35 C	
Saturation Pressure		2,124 Kpa	Bubble Point
GOR		6.38 m3/m3	Gas Oil Ratio
Oil Gravity		41 API	
Oil Viscosity		2.31 cP	
Soi (fraction)		0.55	Initial Oil Saturation
Swi (fraction)		0.45	Initial Water Daturation
Sor (fraction)	stack 1	0.247	Residual Oil Saturation
	stack 2	0.278	
Swirr (fraction)	stack 1	0.225	Irreducible Water Saturation
	stack 2	0.273	
Wettability		Moderately oil-wet	
Average Air Permeability	stack 1	8.12 mD	From Core Data
	stack 2	1.43 mD	
koi (effective)	stack 1	0.0708 mD	Initial Permeability to oil
	stack 2	0.0826 mD	
kwf (effective)	stack 1	0.011 mD	Final Permeability to water
	stack 2	0.0166 mD	
Average Porosity	stack 1	12.0%	Core Derived Average Porosity
	stack 2	11.5%	
	2 samples	4 samples	
Micropores <1 micron	100	59 - 89%	Pore Size Distribution of Total
Mesopores 1 - 3 microns	0	8 - 23%	Pore Size Distribution of Total
Macropores > 3 microns	0	3 - 18%	Pore Size Distribution of Total

Entity: Sinclair Unit No. 2 - Proposed  
 Zone: BAKKEN-THREE FORKS B

## Table 2

Effective date: April 01, 2009

### Oil Volumetric Reservoir Parameters

		A Proved Producing	C Total Proved
Original Oil In-Place	Mbbl	39012	39012
Recovery Factor	%	10.5	22.0
Original Oil Resources	Mbbl	4096.3	8582.7
Cumulative Oil Production	Mbbl	1647.5	1647.5
Remaining Oil Resources	Mbbl	2448.8	6935.2

#### Notes

1. <sup>2009-May-11</sup> OOIP for Unit 2 of 39,012.4 Mbbl is determined from planimetering porosity\*net pay mapping for the Lyleton A (GLJ map), Lyleton B (Tundra map) and Mid Bakken (Tundra map) intervals.

TABLE NO. 3

## TUNDRA OIL &amp; GAS PARTNERSHIP

## SINCLAIR UNIT 2 WELL LIST

Section	Well	Section	Well	Section	Well	Section	Well	Section	Well	Section	Well	Section	Well
Section 4-7-28	12-4-7-28	Section 5-7-28	9-5-7-28	Section 6-7-28	9-6-7-28	Section 7-7-28	1-7-7-28	Section 8-7-28	1-8-7-28	Section 17-7-28	1-17-7-28	Section 18-7-28	1-18-7-28
	13-4-7-28		10-5-7-28		15-6-7-28		2-7-7-28		2-8-7-28		2-17-7-28		2-18-7-28
			11-5-7-28		16-06-7-28		3-7-7-28		3-8-7-28		3-17-7-28		3-18-7-28
			12-5-7-28				4-7-7-28		4-8-7-28		4-17-7-28		4-18-7-28
			13-5-7-28				5-7-7-28		5-8-7-28		5-17-7-28		5-18-7-28
			14-5-7-28				6-7-7-28		6-8-7-28		6-17-7-28		6-18-7-28
Section 19-7-28		Section 30-7-28	15-5-7-28	Section 31-7-28	15-6-7-28	Section 13-7-29	7-7-7-28	Section 24-7-29	7-24-7-29	Section 25-7-29	7-25-7-29	Section 36-7-29	7-36-7-29
			16-5-7-28				8-7-7-28		8-24-7-29		8-25-7-29		8-26-7-29
							9-7-7-28		9-24-7-29		9-25-7-29		9-26-7-29
							10-7-7-28		10-24-7-29		10-25-7-29		10-26-7-29
							11-7-7-28		11-24-7-29		11-25-7-29		11-26-7-29
							12-7-7-28		12-24-7-29		12-25-7-29		12-26-7-29
							13-7-7-28		13-24-7-29		13-25-7-29		13-26-7-29
							14-7-7-28		14-24-7-29		14-25-7-29		14-26-7-29
							15-7-7-28		15-24-7-29		15-25-7-29		15-26-7-29
							16-7-7-28		16-24-7-29		16-25-7-29		16-26-7-29
Section 19-7-28	1-19-7-28	Section 30-7-28	1-30-7-28	Section 31-7-28	1-31-7-28	Section 13-7-29	9-13-7-29	Section 24-7-29	9-24-7-29	Section 25-7-29	9-25-7-29	Section 36-7-29	9-36-7-29
	2-19-7-28		2-30-7-28		2-31-7-28		15-13-7-29		15-24-7-29		15-25-7-29		15-36-7-29
	3-19-7-28		3-30-7-28		3-31-7-28		16-13-7-29		16-24-7-29		16-25-7-29		16-36-7-29
	4-19-7-28		4-30-7-28		4-31-7-28								
	5-19-7-28		5-30-7-28										
	6-19-7-28		6-30-7-28										
	7-19-7-28		7-30-7-28										
	8-19-7-28		8-30-7-28										
	9-19-7-28		9-30-7-28										
	10-19-7-28		10-30-7-28										
	11-19-7-28		11-30-7-28										
	12-19-7-28		12-30-7-28										
	13-19-7-28		13-30-7-28										
	14-19-7-28		14-30-7-28										
	15-19-7-28		15-30-7-28										
	16-19-7-28		16-30-7-28										

## **Proposed Sinclair Unit No. 2**

### **Application for Enhanced Oil Recovery Waterflood Project**

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Appendix 1	Stratigraphic Cross Section of proposed Unit 2
Appendix 2	Geological Structure Map
Appendix 3	Unit 2 Porosity Map ( $\Phi - h$ )
Appendix 4	Unit 2 Permeability Map ( $k - h$ )
Appendix 5	Original Oil in Place Estimates by Well / LSD in Unit 2
Appendix 6	40 acre Tracts Land and Ownership Listing
Appendix 7	Tract Factors Based on First 90 Days Production Methodology and Calculations to Determine Production Contribution
Appendix 8	Tract Factors Based on Oil in Place (OOIP) by Well / LSD Methodology and Calculations to Determine OOIP Contribution



# Sinclair Field Manitoba

## Proposed Unit No. 2 OOlP Calculations

### Appendix 5

UWI	Logs/Core Analysis	GLJ Planimetered Values - Lyleton A		TOGL Planimetered Values - Lyleton B		TOGL Planimetered Values - Mid Bakken		Total OOlP (all zones) Mbbl
		ph1th'a (Acre-ft)	OOlP (Mbb)	ph1th'a (Acre-ft)	OOlP (Mbb)	ph1th'a (Acre-ft)	OOlP (Mbb)	
00/12-04-007-28W1/0	L	34.72	145.5	3.07	12.87	9.22	38.65	197.0
00/13-04-007-28W1/0	L	44.24	185.4	5.01	21.00	7.82	32.78	239.2
00/09-05-007-28W1/0	CA	Section 04-007-28W1	331.0	Section 04-007-28W1	33.87	Section 04-007-28W1	71.42	436.2
00/10-05-007-28W1/0	CA	49.84	208.9	3.00	12.57	4.96	20.79	242.3
00/11-05-007-28W1/0	L	79.00	331.1	9.73	40.78	2.43	10.19	382.1
00/12-05-007-28W1/0	CA	56.16	235.4	6.40	26.83	1.58	6.62	268.8
00/13-05-007-28W1/0	L	45.82	192.1	0.35	1.47	2.92	12.24	205.8
00/14-05-007-28W1/0	CA	60.59	254.0	0.06	0.25	2.67	11.19	265.4
00/15-05-007-28W1/0	CA	66.66	279.4	1.71	7.17	1.52	6.37	292.9
00/16-05-007-28W1/0	L	79.10	331.5	3.08	12.91	1.18	4.95	349.4
00/09-06-007-28W1/0	L	55.24	231.5	2.77	11.61	3.27	13.71	256.9
00/15-06-007-28W1/0	L	Section 05-007-28W1	2063.9	Section 05-007-28W1	113.59	Section 05-007-28W1	86.05	2263.6
00/16-06-007-28W1/0	CA	41.52	174.0	0.00	0.00	10.21	42.79	216.8
00/02-07-007-28W1/0	L	47.20	197.8	0.00	0.00	26.20	109.82	307.7
00/03-07-007-28W1/0	CA	68.07	285.3	0.00	0.00	7.40	31.02	316.3
00/01-07-007-28W1/0	L	Section 06-007-28W1	657.2	Section 06-007-28W1	0.00	Section 06-007-28W1	183.63	840.8
00/02-07-007-28W1/0	L	74.21	311.0	0.00	0.00	7.41	31.06	342.1
00/03-07-007-28W1/0	CA	65.07	272.7	0.00	0.00	10.67	44.72	317.5
00/04-07-007-28W1/0	CA	47.76	200.2	0.00	0.00	16.31	68.36	268.5
00/05-07-007-28W1/0	L	25.90	108.6	0.00	0.00	20.74	86.93	195.5
00/06-07-007-28W1/0	L	34.19	143.3	0.00	0.00	9.01	37.76	181.1
00/07-07-007-28W1/0	L	52.80	221.3	0.00	0.00	3.71	15.55	236.9
00/08-07-007-28W1/0	CA	66.57	279.0	0.00	0.00	3.53	14.80	293.8
00/09-07-007-28W1/0	L	73.67	308.8	0.00	0.00	6.69	28.04	336.8
00/10-07-007-28W1/0	L	54.30	227.6	0.00	0.00	2.68	11.23	238.8
00/11-07-007-28W1/0	L	64.34	269.7	0.00	0.00	1.66	6.96	276.6
00/12-07-007-28W1/0	CA	61.05	255.9	0.00	0.00	1.91	8.01	263.9
00/13-07-007-28W1/0	L	39.71	166.4	0.00	0.00	4.50	18.86	180.9
00/14-07-007-28W1/0	CA	40.88	171.3	0.00	0.00	2.27	9.51	291.3
00/15-07-007-28W1/0	L	68.64	287.7	0.00	0.00	0.86	3.60	261.4
00/16-07-007-28W1/0	L	61.82	259.1	0.03	0.13	0.52	2.18	229.0
00/01-08-007-28W1/0	L	53.29	223.4	1.00	4.19	0.34	1.43	4099.4
00/02-08-007-28W1/0	L	Section 07-007-28W1	3706.1	Section 07-007-28W1	4.32	Section 07-007-28W1	389.01	276.7
00/03-08-007-28W1/0	L	58.49	245.2	5.97	25.02	1.55	6.50	265.9
00/04-08-007-28W1/0	CA	57.73	242.0	3.06	12.83	0.26	1.09	284.4
00/05-08-007-28W1/0	L	64.12	268.8	1.06	4.44	2.67	11.19	366.2
00/06-08-007-28W1/0	L	81.34	340.9	0.00	0.00	6.02	25.23	330.6
00/07-08-007-28W1/0	L	73.81	309.4	0.07	0.29	5.00	20.96	226.3
00/08-08-007-28W1/0	CA	49.79	208.7	2.41	10.10	1.55	6.50	311.7
00/09-08-007-28W1/0	L	50.36	211.1	5.96	24.98	0.02	0.08	238.2
00/10-08-007-28W1/0	L	64.05	268.5	9.84	41.24	0.48	2.01	233.5
00/11-08-007-28W1/0	L	47.64	199.7	9.18	38.48	0.02	0.00	263.1
00/12-08-007-28W1/0	CA	49.63	208.0	6.08	25.48	0.00	0.00	354.7
		53.23	223.1	3.05	12.78	0.06	0.25	
		83.45	349.8	0.32	1.34	0.85	3.56	



# Sinclair Field Manitoba

## Proposed Unit No. 2 OOlP Calculations

### Appendix 5

UWI	Logs/Core Analysis	GLJ Planimetered Values - Lyleton A			TOGL Planimetered Values - Lyleton B			TOGL Planimetered Values - Mid Bakken			Total OOlP (all zones) Mbbl
		ph1h'a (Acre-ft)	OOlP (Mbb)		ph1h'a (Acre-ft)	OOlP (Mbb)		ph1h'a (Acre-ft)	OOlP (Mbb)		
00/13-08-007-28W1/0	L	70.75	296.5	Section 08-007-28W1 4127.3	2.79	11.69	Section 08-007-28W1 282.1	0.00	0.00	308.2	4487.79
00/14-08-007-28W1/0	L	64.18	269.0		4.39	18.40		0.03	0.13	287.5	
00/15-08-007-28W1/0	L	65.08	272.8		5.71	23.93		0.10	0.42	297.1	
00/16-08-007-28W1/0	L	51.05	214.0		7.41	31.06		0.09	0.38	245.4	
00/01-17-007-28W1/0	CA	41.72	174.9		6.56	27.50		0.85	3.56	205.9	
00/02-17-007-28W1/0	CA	84.53	354.3	Section 18-007-28W1 3592.4	6.19	25.95	Section 18-007-28W1 136.89	0.23	0.96	381.2	3737.31
00/03-17-007-28W1/0	L	75.19	315.2		6.33	26.53		0.06	0.25	341.9	
00/04-17-007-28W1/0	CA	66.02	276.7		5.52	23.14		0.00	0.00	299.9	
00/05-17-007-28W1/0		66.35	278.1		6.36	26.66		0.00	0.00	304.8	
00/06-17-007-28W1/0	L	69.90	293.0		8.16	34.20		0.01	0.04	327.2	
00/07-17-007-28W1/0		54.02	226.4		9.04	37.89		0.19	0.80	266.1	
00/08-17-007-28W1/0	L	20.97	87.9		9.51	39.86		1.51	6.33	134.1	
00/09-17-007-28W1/0	CA	51.84	217.3		12.94	54.24		0.40	1.68	273.2	
00/10-17-007-28W1/0	L	65.50	274.5		11.07	46.40		0.00	0.00	320.9	
00/11-17-007-28W1/0	CA	69.77	292.4		8.44	35.38		0.00	0.00	327.8	
00/12-17-007-28W1/0		67.36	282.3	Section 17-007-28W1 4051.3	5.34	22.38	Section 17-007-28W1 14.17	0.00	0.00	304.7	4557.49
00/13-17-007-28W1/0	L	62.00	259.9		2.10	8.80		0.03	0.13	268.8	
00/14-17-007-28W1/0	L	59.94	251.2		5.01	21.00		0.08	0.34	272.6	
00/15-17-007-28W1/0	CA	61.18	256.4		6.65	27.87		0.02	0.08	284.4	
00/16-17-007-28W1/0	L	50.28	210.7		8.16	34.20		0.00	0.00	244.9	
00/01-18-007-28W1/0	L	54.02	226.4	Section 18-007-28W1 3592.4	2.76	11.57	Section 18-007-28W1 8.05	0.00	0.00	238.0	3737.31
00/02-18-007-28W1/0	CA	52.26	219.0		0.23	0.96		0.04	0.17	220.2	
00/03-18-007-28W1/0	L	51.88	217.5		0.00	0.00		0.27	1.13	218.6	
00/04-18-007-28W1/0	CA	33.92	142.2		0.01	0.04		1.06	4.44	146.7	
00/05-18-007-28W1/0	L	42.43	177.8		0.73	3.06		0.31	1.30	182.2	
00/06-18-007-28W1/0	L	44.15	185.1	Section 18-007-28W1 3592.4	0.51	2.14	Section 18-007-28W1 8.05	0.04	0.17	167.4	3737.31
00/07-18-007-28W1/0	CA	65.51	274.6		1.42	5.95		0.00	0.00	280.5	
00/08-18-007-28W1/0	L	60.77	254.7		3.72	15.59		0.00	0.00	270.3	
00/09-18-007-28W1/0	L	62.10	260.3		4.18	17.52		0.00	0.00	277.8	
00/10-18-007-28W1/0	CA	49.15	206.0		6.12	25.65		0.00	0.00	231.7	
00/11-18-007-28W1/0	L	43.68	183.1	Section 18-007-28W1 3592.4	3.27	13.71	Section 18-007-28W1 8.05	0.02	0.08	196.9	3737.31
00/12-18-007-28W1/0	CA	49.39	207.0		2.68	11.23		0.10	0.42	218.7	
00/13-18-007-28W1/0	L	64.78	271.5		0.79	3.31		0.07	0.29	275.1	
00/14-18-007-28W1/0	L	52.52	220.1		2.22	9.31		0.01	0.04	229.5	
00/15-18-007-28W1/0	L	53.50	224.2		3.05	12.78		0.00	0.00	237.0	
00/16-18-007-28W1/0	CA	77.01	322.8	Section 18-007-28W1 3592.4	0.97	4.07	Section 18-007-28W1 8.05	0.00	0.00	326.8	3737.31
00/01-19-007-28W1/0		65.65	275.2		0.00	0.00		0.02	0.08	275.3	
00/02-19-007-28W1/0	L	64.50	270.3		0.13	0.54		0.03	0.13	271.0	
00/03-19-007-28W1/0	L	70.03	293.5		0.19	0.80		0.02	0.08	294.4	
00/04-19-007-28W1/0		75.79	317.7		0.00	0.00		0.00	0.00	317.7	
00/05-19-007-28W1/0	CA	74.81	313.6	Section 18-007-28W1 3592.4	0.33	1.38	Section 18-007-28W1 8.05	0.02	0.08	315.0	3737.31
00/06-19-007-28W1/0		75.84	317.9		0.42	1.76		0.29	1.22	320.9	



# Sinclair Field Manitoba

## Proposed Unit No. 2 OOP Calculations

### Appendix 5

UWI	Logs/Core Analysis	GLJ Planimetered Values - Lyleton A		TOGL Planimetered Values - Lyleton B		TOGL Planimetered Values - Mid Bakken		Total OOP (all zones) Mbbl
		phi*ha (Acre-ft)	OOP (Mbb)	phi*ha (Acre-ft)	OOP (Mbb)	phi*ha (Acre-ft)	OOP (Mbb)	
00/07-19-007-28W1/0		64.69	271.1		0.00		1.01	272.2
00/08-19-007-28W1/0	L	57.92	242.8	0.07	0.29	0.08	0.34	243.4
00/09-19-007-28W1/0		63.20	264.9	2.78	11.65	0.16	0.67	277.2
00/10-19-007-28W1/0	CA	65.77	275.7	1.28	5.37	0.41	1.72	282.8
00/11-19-007-28W1/0		69.39	290.8	4.57	19.15	0.56	2.35	312.3
00/12-19-007-28W1/0		58.90	246.9	4.72	19.78	0.12	0.50	267.2
00/13-19-007-28W1/0		51.85	217.3	15.93	66.77	0.10	0.42	284.5
00/14-19-007-28W1/0	L	63.42	265.8	13.21	55.37	0.54	2.26	323.5
00/15-19-007-28W1/0		63.01	264.1	8.75	36.68	0.44	1.84	302.6
00/16-19-007-28W1/0		62.04	260.0	9.65	40.45	0.22	0.92	301.4
Section 19-007-28W1		4387.7		Section 19-007-28W1	260.00	Section 19-007-28W1	13.62	4661.27
00/01-30-007-28W1/0	L	42.02	176.1	16.35	68.53	0.20	0.84	245.5
00/02-30-007-28W1/0	L	56.36	236.2	17.31	72.55	0.33	1.38	310.2
00/03-30-007-28W1/0	L	59.24	248.3	24.95	104.58	0.29	1.22	354.1
00/04-30-007-28W1/0	CA	49.90	209.2	27.39	114.80	0.02	0.08	324.0
00/05-30-007-28W1/0	L	59.81	250.7	18.93	79.34	0.00	0.00	330.0
00/06-30-007-28W1/0	CA	79.90	334.9	24.14	101.18	0.03	0.13	436.2
00/07-30-007-28W1/0	CA	49.78	208.7	18.68	78.30	0.13	0.54	287.5
00/08-30-007-28W1/0	CA	13.20	55.3	19.97	83.70	0.04	0.17	139.2
00/09-30-007-28W1/0		27.35	114.6	12.93	54.20	0.19	0.80	169.6
00/10-30-007-28W1/0	L	49.06	205.6	11.08	46.44	0.14	0.59	252.7
00/11-30-007-28W1/0	CA	80.68	338.2	12.18	51.05	0.00	0.00	289.6
00/12-30-007-28W1/0	L	58.57	245.5	9.70	40.66	0.82	3.44	389.2
00/13-30-007-28W1/0	L	64.82	271.7	8.29	34.75	2.72	11.40	317.8
00/14-30-007-28W1/0	CA	75.97	318.4	4.07	17.06	0.13	0.54	336.0
00/15-30-007-28W1/0	L	54.67	229.1	7.46	31.27	0.97	4.07	264.5
00/16-30-007-28W1/0		28.15	118.0	7.85	32.90	1.60	6.71	157.6
Section 30-007-28W1		3560.6		Section 30-007-28W1	1011.31	Section 30-007-28W1	31.90	4603.77
00/01-31-007-28W1/0	L	20.01	83.9	7.06	29.59	4.79	20.08	133.5
00/02-31-007-28W1/0	CA	53.25	223.2	9.93	41.62	3.79	15.89	280.7
00/03-31-007-28W1/0	L	60.13	252.0	9.18	38.48	2.27	9.51	300.0
00/04-31-007-28W1/0	CA	89.72	376.1	11.68	48.96	2.83	11.86	436.9
Section 31-007-28W1		935.2		Section 31-007-28W1	158.65	Section 31-007-28W1	57.34	1151.1
00/09-13-007-29W1/0	CA	50.42	211.3	3.93	16.47	0.13	0.54	228.4
00/15-13-007-29W1/0	CA	54.26	227.4	0.62	2.60	2.67	11.19	241.2
00/16-13-007-29W1/0	CA	65.64	275.1	1.08	4.53	0.01	0.04	279.7
Section 13-007-29W1		713.9		Section 13-007-29W1	23.60	Section 13-007-29W1	11.78	749.3
00/01-24-007-29W1/0	L	70.93	297.3	0.01	0.04	0.35	1.47	298.8
00/02-24-007-29W1/0	L	58.17	243.8	0.28	1.17	7.18	30.09	275.1
00/07-24-007-29W1/0	CA	61.72	258.7	2.49	10.44	2.64	11.07	280.2
00/08-24-007-29W1/0	L	58.14	243.7	0.30	1.26	0.02	0.08	245.0
00/09-24-007-29W1/0	CA	38.77	162.5	1.94	8.13	0.00	0.00	170.6
00/10-24-007-29W1/0	L	38.97	163.3	2.74	11.48	0.52	2.18	177.0
00/11-24-007-29W1/0	L	36.21	151.8	2.84	11.90	5.41	22.68	186.4
00/12-24-007-29W1/0	CA	18.57	77.8	1.26	5.28	9.97	41.79	124.9



# Sinclair Field Manitoba

## Proposed Unit No. 2 OOlP Calculations

### Appendix 5

UWI	Logs/Core Analysis	GLJ Planimetered Values - Lyleton A		TOGL Planimetered Values - Lyleton B		TOGL Planimetered Values - Mid Bakken		Total OOlP (all zones) Mbbl
		phr <sup>h</sup> a (Acre-ft)	OOlP (Mbbl)	phr <sup>h</sup> a (Acre-ft)	OOlP (Mbbl)	phr <sup>h</sup> a (Acre-ft)	OOlP (Mbbl)	
00/13-24-007-29W1/0	CA	40.97	171.7	4.95	20.75	13.25	55.54	248.0
00/14-24-007-29W1/0	L	45.12	189.1	5.11	21.42	6.63	27.79	238.3
00/15-24-007-29W1/0	CA	50.18	210.3	5.37	22.51	0.43	1.80	234.6
00/16-24-007-29W1/0	L	46.62	195.4	8.52	35.71	0.00	0.00	231.1
Section 24-007-29W1			2365.5		150.10		194.48	2710.1
00/01-25-007-29W1/0	L	49.25	206.4	13.97	58.55	0.02	0.08	265.1
00/02-25-007-29W1/0	L	54.35	227.8	8.66	36.30	1.94	8.13	272.2
00/03-25-007-29W1/0	CA	47.86	200.6	7.22	30.26	6.60	27.66	258.5
00/04-25-007-29W1/0	CA	37.78	158.4	3.34	14.00	9.33	39.11	211.5
00/05-25-007-29W1/0	L	45.75	191.8	6.41	26.87	12.65	53.02	271.6
00/06-25-007-29W1/0	CA	47.87	200.6	12.79	53.61	10.37	43.47	297.7
00/07-25-007-29W1/0	CA	53.28	223.3	11.96	50.13	4.45	18.65	292.1
00/08-25-007-29W1/0	L	67.52	283.0	9.14	38.31	0.34	1.43	322.7
00/09-25-007-29W1/0	CA	54.98	230.4	10.66	44.68	2.96	12.41	287.5
00/10-25-007-29W1/0	L	45.75	191.8	19.64	82.32	4.29	17.98	292.1
00/11-25-007-29W1/0	L	39.87	167.1	15.66	65.64	9.74	40.82	273.6
00/12-25-007-29W1/0	L	44.07	184.7	9.67	40.53	16.26	68.15	293.4
00/13-25-007-29W1/0	L	37.33	156.5	6.56	27.50	11.21	46.99	230.9
00/14-25-007-29W1/0	CA	36.10	151.3	7.57	31.73	2.86	11.99	195.0
00/15-25-007-29W1/0	L	44.07	184.7	13.90	58.26	2.93	12.28	255.3
00/16-25-007-29W1/0		55.50	232.6	11.76	49.29	6.87	28.80	310.7
Section 25-007-29W1			3191.1		707.98		430.97	4330.0
00/01-36-007-29W1/0	L	46.35	194.3	11.25	47.15	3.27	13.71	265.1
00/02-36-007-29W1/0	CA	20.15	84.5	10.06	42.17	0.59	2.47	129.1
Section 36-007-29W1			278.7		89.32		16.18	384.2
Total OOlP (Mbbl) =			33961.8		3463.69		1586.97	39012.42
Avg SW (%) =			0.4500		0.4500		0.4500	

# EXHIBIT 'A' TRACT PARTICIPATION

## Appendix 6

Attached to and made part of an Agreement Entitled  
Sinclair Unit No. 2 - Unit Agreement

Tract No.	Land Description	Working Interest		Royalty Interest		Tract Participation Participation %
		Owner	Share (%)	Owner	Share (%)	
1	LSD 12-4-7-28 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.364256531
2	LSD 13-4-7-28 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.479407118
3	LSD 9-5-7-28 WPM	Tundra Oil & Gas Partnership	100%	Radomski, O.K. & Milliken, R.J. Trustees	100%	0.522582049
4	LSD 10-5-7-28 WPM	Tundra Oil & Gas Partnership	100%	Radomski, O.K. & Milliken, R.J. Trustees	100%	0.778859209
5	LSD 11-5-7-28 WPM	Tundra Oil & Gas Partnership	100%	Harrison, Ellen Clara Harrison, Stanley Reid MacDougall, Phyllis Ironsides, Neila Margaret Fleming, Lillian MacDougall, Alexander Murray Brehaut, Louise (Estate) Belanger, Catherine Caroline McDougall, Patricia Anne McDougall, Donald Huckerby, Mervyn Arthur McDougall, Neil (Estate) Stutt, Annis Orla	25% 25% 1.66% 1.66% 1.67% 1.67% 1.67% 0.835% 0.835% 10% 10% 10% 10%	0.433488024
6	LSD 12-5-7-28 WPM	Tundra Oil & Gas Partnership	100%	Harrison, Ellen Clara Harrison, Stanley Reid MacDougall, Phyllis Ironsides, Neila Margaret Fleming, Lillian MacDougall, Alexander Murray Brehaut, Louise (Estate) Belanger, Catherine Caroline McDougall, Patricia Anne McDougall, Donald Huckerby, Mervyn Arthur McDougall, Neil (Estate) Stutt, Annis Orla	25% 25% 1.66% 1.66% 1.67% 1.67% 1.67% 0.835% 0.835% 10% 10% 10% 10%	0.453793216
7	LSD 13-5-7-28 WPM	Tundra Oil & Gas Partnership	100%	Harrison, Ellen Clara Harrison, Stanley Reid MacDougall, Phyllis Ironsides, Neila Margaret Fleming, Lillian MacDougall, Alexander Murray Brehaut, Louise (Estate) Belanger, Catherine Caroline McDougall, Patricia Anne McDougall, Donald Huckerby, Mervyn Arthur McDougall, Neil (Estate) Stutt, Annis Orla	25% 25% 1.66% 1.66% 1.67% 1.67% 1.67% 0.835% 0.835% 10% 10% 10% 10%	0.669635967
				Harrison, Ellen Clara Harrison, Stanley Reid	25% 25%	

8	LSD 14-5-7-28 WPM	Tundra Oil & Gas Partnership	100%	MacDougall, Phyllis	1.66%	0.691629520
				Ironside, Neila Margaret	1.66%	
				Fleming, Lillian	1.67%	
				MacDougall, Alexander Murray	1.67%	
				Brehaut, Louise (Estate)	1.67%	
				Belanger, Catherine Caroline	0.835%	
				McDougall, Patricia Anne	0.835%	
				McDougall, Donald	10%	
				Huckerby, Mervyn Arthur	10%	
				McDougall, Neil (Estate)	10%	
				Stutt, Annis Orla	10%	
9	LSD 15-5-7-28 WPM	Tundra Oil & Gas Partnership	100%	Radomski, O.K. & Milliken, R.J. Trustees	100%	0.683973100
10	LSD 16-5-7-28 WPM	Tundra Oil & Gas Partnership	100%	Radomski, O.K. & Milliken, R.J. Trustees	100%	0.550119230
11	LSD 9-6-7-28 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.415852959
12	LSD 15-6-7-28 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.650382770
13	LSD 16-6-7-28 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.653522614
14	LSD 1-7-7-28 WPM	Tundra Oil & Gas Partnership	100%	Kohaly, Elash & McGeough Re: Stewart C. Traill Estate	100%	0.784837404
15	LSD 2-7-7-28 WPM	Tundra Oil & Gas Partnership	100%	Kohaly, Elash & McGeough Re: Stewart C. Traill Estate	100%	0.738224775
16	LSD 3-7-7-28 WPM	Tundra Oil & Gas Partnership	100%	Kohaly, Elash & McGeough Re: Stewart C. Traill Estate	100%	0.710330200
17	LSD 4-7-7-28 WPM	Tundra Oil & Gas Partnership	100%	Kohaly, Elash & McGeough Re: Stewart C. Traill Estate	100%	0.332217766
18	LSD 5-7-7-28 WPM	Tundra Oil & Gas Partnership	100%	Kohaly, Elash & McGeough Re: Stewart C. Traill Estate	100%	0.343070481
19	LSD 6-7-7-28 WPM	Tundra Oil & Gas Partnership	100%	Kohaly, Elash & McGeough Re: Stewart C. Traill Estate	100%	0.754767323
20	LSD 7-7-7-28 WPM	Tundra Oil & Gas Partnership	100%	Kohaly, Elash & McGeough Re: Stewart C. Traill Estate	100%	0.798943132
21	LSD 8-7-7-28 WPM	Tundra Oil & Gas Partnership	100%	Kohaly, Elash & McGeough Re: Stewart C. Traill Estate	100%	0.817106479
22	LSD 9-7-7-28 WPM	Tundra Oil & Gas Partnership	100%	5596638 Manitoba Ltd.	100%	0.573318745
23	LSD 10-7-7-28 WPM	Tundra Oil & Gas Partnership	100%	5596638 Manitoba Ltd.	100%	0.694960477
24	LSD 11-7-7-28 WPM	Tundra Oil & Gas Partnership	100%	5596638 Manitoba Ltd.	50%	0.562235489
				Computershare Trust Company of Canada	50%	
25	LSD 12-7-7-28 WPM	Tundra Oil & Gas Partnership	100%	5596638 Manitoba Ltd.	50%	0.388468485
				Computershare Trust Company of Canada	50%	
26	LSD 13-7-7-28 WPM	Tundra Oil & Gas Partnership	100%	5596638 Manitoba Ltd.	50%	0.372781136
				Computershare Trust Company of Canada	50%	
27	LSD 14-7-7-28 WPM	Tundra Oil & Gas Partnership	100%	5596638 Manitoba Ltd.	50%	0.544742582
				Computershare Trust Company of Canada	50%	
28	LSD 15-7-7-28 WPM	Tundra Oil & Gas Partnership	100%	5596638 Manitoba Ltd.	100%	0.631965227
29	LSD 16-7-7-28 WPM	Tundra Oil & Gas Partnership	100%	5596638 Manitoba Ltd.	100%	0.645312363
30	LSD 1-8-7-28 WPM	Tundra Oil & Gas Partnership	100%	Double D 7 Holdings Ltd.	100%	0.665610087
31	LSD 2-8-7-28 WPM	Tundra Oil & Gas Partnership	100%	Double D 7 Holdings Ltd.	100%	0.563837362
32	LSD 3-8-7-28 WPM	Tundra Oil & Gas Partnership	100%	Chester, William John	16.67%	0.780242121
				Chester, Beryl Louise	16.66%	
				Sawchuk, Linda Gail	16.67%	
				5560012 Manitoba Ltd.	25%	
				5560004 Manitoba Ltd.	25%	

33	LSD 4-8-7-28 WPM	Tundra Oil & Gas Partnership	100%	Chester, William John Chester, Beryl Louise Sawchuk, Linda Gail 5560012 Manitoba Ltd. 5560004 Manitoba Ltd.	16.66% 16.67% 16.67% 25% 25%	0.806182552
34	LSD 5-8-7-28 WPM	Tundra Oil & Gas Partnership	100%	Chester, William John Chester, Beryl Louise Sawchuk, Linda Gail 5560012 Manitoba Ltd. 5560004 Manitoba Ltd.	16.67% 16.67% 16.66% 25% 25%	0.639273569
35	LSD 6-8-7-28 WPM	Tundra Oil & Gas Partnership	100%	Chester, William John Chester, Beryl Louise Sawchuk, Linda Gail 5560012 Manitoba Ltd. 5560004 Manitoba Ltd.	16.67% 16.66% 16.67% 25% 25%	0.661362036
36	LSD 7-8-7-28 WPM	Tundra Oil & Gas Partnership	100%	Double D 7 Holdings Ltd.	100%	0.680307870
37	LSD 8-8-7-28 WPM	Tundra Oil & Gas Partnership	100%	Double D 7 Holdings Ltd.	100%	0.656312486
38	LSD 9-8-7-28 WPM	Tundra Oil & Gas Partnership	100%	Double D 7 Holdings Ltd.	100%	0.467603345
39	LSD 10-8-7-28 WPM	Tundra Oil & Gas Partnership	100%	Double D 7 Holdings Ltd.	100%	0.609416307
40	LSD 11-8-7-28 WPM	Tundra Oil & Gas Partnership	100%	Chester, William John Chester, Beryl Louise Sawchuk, Linda Gail 5560012 Manitoba Ltd. 5560004 Manitoba Ltd.	16.66% 16.67% 16.67% 25% 25%	0.677791626
41	LSD 12-8-7-28 WPM	Tundra Oil & Gas Partnership	100%	Chester, William John Chester, Beryl Louise Sawchuk, Linda Gail 5560012 Manitoba Ltd. 5560004 Manitoba Ltd.	16.67% 16.67% 16.66% 25% 25%	0.714610128
42	LSD 13-8-7-28 WPM	Tundra Oil & Gas Partnership	100%	Chester, William John Chester, Beryl Louise Sawchuk, Linda Gail 5560012 Manitoba Ltd. 5560004 Manitoba Ltd.	16.67% 16.66% 16.67% 25% 25%	0.556092706
43	LSD 14-8-7-28 WPM	Tundra Oil & Gas Partnership	100%	Chester, William John Chester, Beryl Louise Sawchuk, Linda Gail 5560012 Manitoba Ltd. 5560004 Manitoba Ltd.	16.66% 16.67% 16.67% 25% 25%	0.783192692
44	LSD 15-8-7-28 WPM	Tundra Oil & Gas Partnership	100%	Double D 7 Holdings Ltd.	100%	0.798082590
45	LSD 16-8-7-28 WPM	Tundra Oil & Gas Partnership	100%	Double D 7 Holdings Ltd.	100%	0.573053688
46	LSD 1-17-7-28 WPM	Tundra Oil & Gas Partnership	100%	Karpinski, Conrad Leon (Estate) B & G 5 Ashcroft Oil Ltd.	25% 75%	0.648190250
47	LSD 2-17-7-28 WPM	Tundra Oil & Gas Partnership	100%	Karpinski, Conrad Leon (Estate) B & G 5 Ashcroft Oil Ltd.	25% 75%	1.031871760
48	LSD 3-17-7-28 WPM	Tundra Oil & Gas Partnership	100%	Encana Corporation	100%	0.791668009
49	LSD 4-17-7-28 WPM	Tundra Oil & Gas Partnership	100%	Encana Corporation	100%	0.689709331
50	LSD 5-17-7-28 WPM	Tundra Oil & Gas Partnership	100%	Encana Corporation	100%	0.709222766
51	LSD 6-17-7-28 WPM	Tundra Oil & Gas Partnership	100%	Encana Corporation	100%	0.906964230
52	LSD 7-17-7-28 WPM	Tundra Oil & Gas Partnership	100%	Karpinski, Conrad Leon (Estate) B & G 5 Ashcroft Oil Ltd.	25% 75%	0.623751858
53	LSD 8-17-7-28 WPM	Tundra Oil & Gas Partnership	100%	Karpinski, Conrad Leon (Estate) B & G 5 Ashcroft Oil Ltd.	25% 75%	0.420309764
54	LSD 9-17-7-28 WPM	Tundra Oil & Gas Partnership	100%	Karpinski, Conrad Leon (Estate) B & G 5 Ashcroft Oil Ltd.	25% 75%	0.728586713
55	LSD 10-17-7-28 WPM	Tundra Oil & Gas Partnership	100%	Karpinski, Conrad Leon (Estate) B & G 5 Ashcroft Oil Ltd.	25% 75%	0.780930403
56	LSD 11-17-7-28 WPM	Tundra Oil & Gas Partnership	100%	Encana Corporation	100%	0.828706237
57	LSD 12-17-7-28 WPM	Tundra Oil & Gas Partnership	100%	Encana Corporation	100%	0.766755091
58	LSD 13-17-7-28 WPM	Tundra Oil & Gas Partnership	100%	Encana Corporation	100%	0.793185325

59	LSD 14-17-7-28 WPM	Tundra Oil & Gas Partnership	100%	Encana Corporation	100%	0.757832065
60	LSD 15-17-7-28 WPM	Tundra Oil & Gas Partnership	100%	Karpinski, Conrad Leon (Estate) B & G 5 Ashcroft Oil Ltd.	25% 75%	0.889087654
61	LSD 16-17-7-28 WPM	Tundra Oil & Gas Partnership	100%	Karpinski, Conrad Leon (Estate) B & G 5 Ashcroft Oil Ltd.	25% 75%	0.733933756
62	LSD 1-18-7-28 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.645503006
63	LSD 2-18-7-28 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.603476878
64	LSD 3-18-7-28 WPM	Tundra Oil & Gas Partnership	100%	Goodman, Lynn Rural Municipality of Pipestone	98.75% 1.25%	0.577423379
65	LSD 4-18-7-28 WPM	Tundra Oil & Gas Partnership	100%	Goodman, Lynn Rural Municipality of Pipestone	98.75% 1.25%	0.343324575
66	LSD 5-18-7-28 WPM	Tundra Oil & Gas Partnership	100%	Goodman, Lynn Rural Municipality of Pipestone	98.75% 1.25%	0.627634321
67	LSD 6-18-7-28 WPM	Tundra Oil & Gas Partnership	100%	Goodman, Lynn Rural Municipality of Pipestone	98.75% 1.25%	0.517488089
68	LSD 7-18-7-28 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.720805269
69	LSD 8-18-7-28 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.765427546
70	LSD 9-18-7-28 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.677341167
71	LSD 10-18-7-28 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.640842214
72	LSD11-18-7-28 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.687343081
73	LSD 12-18-7-28 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.654240318
74	LSD 13-18-7-28 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.754638611
75	LSD 14-18-7-28 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.717058867
76	LSD 15-18-7-28 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.521762314
77	LSD 16-18-7-28 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.883546987
78	LSD 1-19-7-28 WPM	Tundra Oil & Gas Partnership	100%	Rhodes Family Enterprises Ltd. Berry, Glenn Davis Berry, John Brent Johnson, Gary Leo Johnson, Earl Chris Johnson, Duane Harley (Estate) Johnson, Gary Leo Johnson, Earl Chris Johnson, Duane Harley (Estate)	50% 5% 5% 10% 10% 3.33% 3.33% 3.34% 10%	0.757819263
				Rhodes Family Enterprises Ltd. Berry, Glenn Davis	50% 5%	



79	LSD 2-19-7-28 WPM	Tundra Oil & Gas Partnership	100%	Berry, John Brent Johnson, Gary Leo Johnson, Earl Chris Johnson, Duane Harley (Estate) Johnson, Gary Leo Johnson, Earl Chris Johnson, Duane Harley (Estate)	5% 10% 10% 3.33% 3.33% 3.34% 10%	0.854984464
80	LSD 3-19-7-28 WPM	Tundra Oil & Gas Partnership	100%	Rhodes Family Enterprises Ltd. Berry, Glenn Davis Berry, John Brent Johnson, Gary Leo Johnson, Earl Chris Johnson, Duane Harley (Estate) Johnson, Gary Leo Johnson, Earl Chris Johnson, Duane Harley (Estate)	50% 5% 5% 10% 10% 3.34% 3.33% 3.33% 10%	0.764180216
81	LSD 4-19-7-28 WPM	Tundra Oil & Gas Partnership	100%	Rhodes Family Enterprises Ltd. Berry, Glenn Davis Berry, John Brent Johnson, Gary Leo Johnson, Earl Chris Johnson, Duane Harley (Estate) Johnson, Gary Leo Johnson, Earl Chris Johnson, Duane Harley (Estate) Rhodes Family Enterprises Ltd. Berry, Glenn Davis Berry, John Brent Johnson, Gary Leo Johnson, Earl Chris Johnson, Duane Harley (Estate) Johnson, Gary Leo Johnson, Earl Chris Johnson, Duane Harley (Estate)	45.3812500% 4.8106250% 4.8106250% 9.6212500% 9.6212500% 3.2070834% 3.2070833% 3.2070833% 9.6212500% 2.7250000% 0.3787500% 0.3787500% 0.7575000% 0.7575000% 0.7575000% 0.2525000% 0.2525000% 0.2525000%	0.935695022
82	LSD 5-19-7-28 WPM	Tundra Oil & Gas Partnership	100%	Rhodes Family Enterprises Ltd. Berry, Glenn Davis Berry, John Brent Johnson, Gary Leo Johnson, Earl Chris Johnson, Duane Harley (Estate) Johnson, Gary Leo Johnson, Earl Chris Johnson, Duane Harley (Estate)	50% 5% 5% 10% 10% 3.34% 3.33% 3.33% 10%	0.827634937
83	LSD 6-19-7-28 WPM	Tundra Oil & Gas Partnership	100%	Rhodes Family Enterprises Ltd. Berry, Glenn Davis Berry, John Brent Johnson, Gary Leo Johnson, Earl Chris Johnson, Duane Harley (Estate) Johnson, Gary Leo Johnson, Earl Chris Johnson, Duane Harley (Estate)	50% 5% 5% 10% 10% 3.34% 3.33% 3.33% 10%	0.821586120
84	LSD 7-19-7-28 WPM	Tundra Oil & Gas Partnership	100%	Rhodes Family Enterprises Ltd. Berry, Glenn Davis Berry, John Brent Johnson, Gary Leo Johnson, Earl Chris Johnson, Duane Harley (Estate) Johnson, Gary Leo Johnson, Earl Chris	50% 5% 5% 10% 10% 3.33% 3.33% 3.34%	0.809488963

				Johnson, Duane Harley (Estate)	10%	
85	LSD 8-19-7-28 WPM	Tundra Oil & Gas Partnership	100%	Rhodes Family Enterprises Ltd. Berry, Glenn Davis Berry, John Brent Johnson, Gary Leo Johnson, Earl Chris Johnson, Duane Harley (Estate) Johnson, Gary Leo Johnson, Earl Chris Johnson, Duane Harley (Estate)	50% 5% 5% 10% 10% 3.33% 3.33% 3.34% 10%	0.616270797
86	LSD 9-19-7-28 WPM	Tundra Oil & Gas Partnership	100%	Encana Corporation	100%	0.798447204
87	LSD 10-19-7-28 WPM	Tundra Oil & Gas Partnership	100%	Encana Corporation	100%	0.860176621
88	LSD 11-19-7-28 WPM	Tundra Oil & Gas Partnership	100%	Kemp, Connie-Lee	100%	0.828150988
89	LSD 12-19-7-28 WPM	Tundra Oil & Gas Partnership	100%	Kemp, Connie-Lee	100%	0.792743797
90	LSD 13-19-7-28 WPM	Tundra Oil & Gas Partnership	100%	Kemp, Connie-Lee	100%	0.751214847
91	LSD 14-19-7-28 WPM	Tundra Oil & Gas Partnership	100%	Kemp, Connie-Lee	100%	0.811041439
92	LSD 15-19-7-28 WPM	Tundra Oil & Gas Partnership	100%	Encana Corporation	100%	0.808211228
93	LSD 16-19-7-28 WPM	Tundra Oil & Gas Partnership	100%	Encana Corporation	100%	0.719159960
94	LSD 1-30-7-28 WPM	Tundra Oil & Gas Partnership	100%	University of Manitoba	100%	0.660151282
95	LSD 2-30-7-28 WPM	Tundra Oil & Gas Partnership	100%	University of Manitoba	100%	0.775679726
96	LSD 3-30-7-28 WPM	Tundra Oil & Gas Partnership	100%	5403937 Manitoba Ltd.	100%	0.819324631
97	LSD 4-30-7-28 WPM	Tundra Oil & Gas Partnership	100%	5403937 Manitoba Ltd.	100%	0.826819084
98	LSD 5-30-7-28 WPM	Tundra Oil & Gas Partnership	100%	5403937 Manitoba Ltd.	100%	0.854702816
99	LSD 6-30-7-28 WPM	Tundra Oil & Gas Partnership	100%	5403937 Manitoba Ltd.	100%	1.096744092
100	LSD 7-30-7-28 WPM	Tundra Oil & Gas Partnership	100%	University of Manitoba	100%	0.867469098
101	LSD 8-30-7-28 WPM	Tundra Oil & Gas Partnership	100%	University of Manitoba	100%	0.417229921
102	LSD 9-30-7-28 WPM	Tundra Oil & Gas Partnership	100%	5031613 Manitoba Ltd. Milliken Farms Ltd.	50% 50%	0.281674814
103	LSD 10-30-7-28 WPM	Tundra Oil & Gas Partnership	100%	5031613 Manitoba Ltd. Milliken Farms Ltd.	50% 50%	0.724910363
104	LSD 11-30-7-28 WPM	Tundra Oil & Gas Partnership	100%	University of Manitoba	100%	0.963481578
105	LSD 12-30-7-28 WPM	Tundra Oil & Gas Partnership	100%	University of Manitoba	100%	0.849234299
106	LSD 13-30-7-28 WPM	Tundra Oil & Gas Partnership	100%	University of Manitoba	100%	0.755746818
107	LSD 14-30-7-28 WPM	Tundra Oil & Gas Partnership	100%	University of Manitoba	100%	0.892004490
108	LSD 15-30-7-28 WPM	Tundra Oil & Gas Partnership	100%	5031613 Manitoba Ltd. Milliken Farms Ltd.	50% 50%	0.978671096
109	LSD 16-30-7-28 WPM	Tundra Oil & Gas Partnership	100%	5031613 Manitoba Ltd. Milliken Farms Ltd.	50% 50%	0.475536943
110	LSD 1-31-7-28 WPM	Tundra Oil & Gas Partnership	100%	Fairwind Oil Ltd.	100%	0.441682467
111	LSD 2-31-7-28 WPM	Tundra Oil & Gas Partnership	100%	Fairwind Oil Ltd.	100%	0.837917662
112	LSD 3-31-7-28 WPM	Tundra Oil & Gas Partnership	100%	Fairwind Oil Ltd.	100%	0.660663884
113	LSD 4-31-7-28 WPM	Tundra Oil & Gas Partnership	100%	Fairwind Oil Ltd.	100%	0.952092799
114	LSD 9-13-7-29 WPM	Tundra Oil & Gas Partnership	100%	5135401 Manitoba Ltd.	100%	0.710575953
115	LSD 15-13-7-29 WPM	Tundra Oil & Gas Partnership	100%	5135401 Manitoba Ltd.	100%	0.640221464
116	LSD 16-13-7-29 WPM	Tundra Oil & Gas Partnership	100%	5135401 Manitoba Ltd.	100%	0.839432209
117	LSD 1-24-7-29 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.942722682
118	LSD 2-24-7-29 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.755088141
119	LSD 7-24-7-29 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.643018979
120	LSD 8-24-7-29 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.756759285
121	LSD 9-24-7-29 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.393966395

122	LSD 10-24-7-29 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.423411993
123	LSD 11-24-7-29 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.909308051
124	LSD 12-24-7-29 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.219323637
125	LSD 13-24-7-29 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.768984813
126	LSD 14-24-7-29 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.724008224
127	LSD 15-24-7-29 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.685778916
128	LSD 16-24-7-29 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.473784175
129	LSD 1-25-7-29 WPM	Tundra Oil & Gas Partnership	100%	Gates, Norman K. & Gates, Howard J.	100%	0.549361097
30	LSD 2-25-7-29 WPM	Tundra Oil & Gas Partnership	100%	Gates, Norman K. & Gates, Howard J.	100%	0.741801595
131	LSD 3-25-7-29 WPM	Tundra Oil & Gas Partnership	100%	5206201 Manitoba Ltd. McCutcheon, Shannon M. Mitchell, Diane J. Thordarson, Dennis M. Thordarson, Robert W.	20% 20% 20% 20% 20%	0.758600030
132	LSD 4-25-7-29 WPM	Tundra Oil & Gas Partnership	100%	5206201 Manitoba Ltd. McCutcheon, Shannon M. Mitchell, Diane J. Thordarson, Dennis M. Thordarson, Robert W.	20% 20% 20% 20% 20%	0.703233646
133	LSD 5-25-7-29 WPM	Tundra Oil & Gas Partnership	100%	5206201 Manitoba Ltd. McCutcheon, Shannon M. Mitchell, Diane J. Thordarson, Dennis M. Thordarson, Robert W.	20% 20% 20% 20% 20%	0.657941573
134	LSD 6-25-7-29 WPM	Tundra Oil & Gas Partnership	100%	5206201 Manitoba Ltd. McCutcheon, Shannon M. Mitchell, Diane J. Thordarson, Dennis M. Thordarson, Robert W.	20% 20% 20% 20% 20%	0.653036288
135	LSD 7-25-7-29 WPM	Tundra Oil & Gas Partnership	100%	Gates, Norman K. & Gates, Howard J.	100%	0.671791138
136	LSD 8-25-7-29 WPM	Tundra Oil & Gas Partnership	100%	Gates, Norman K. & Gates, Howard J.	100%	0.751895128
137	LSD 9-25-7-29 WPM	Tundra Oil & Gas Partnership	100%	5206201 Manitoba Ltd. McCutcheon, Shannon M. Mitchell, Diane J. Thordarson, Dennis M. Thordarson, Robert W.	20% 20% 20% 20% 20%	0.743292249
138	LSD 10-25-7-29 WPM	Tundra Oil & Gas Partnership	100%	5206201 Manitoba Ltd. McCutcheon, Shannon M. Mitchell, Diane J. Thordarson, Dennis M. Thordarson, Robert W.	20% 20% 20% 20% 20%	0.604230183
				5206201 Manitoba Ltd. McCutcheon, Shannon M.	20% 20%	

139	LSD 11-25-7-29 WPM	Tundra Oil & Gas Partnership	100%	Mitchell, Diane J. Thordarson, Dennis M. Thordarson, Robert W.	20% 20% 20%	0.640426501
140	LSD 12-25-7-29 WPM	Tundra Oil & Gas Partnership	100%	5206201 Manitoba Ltd. McCutcheon, Shannon M. Mitchell, Diane J. Thordarson, Dennis M. Thordarson, Robert W.	20% 20% 20% 20% 20%	0.858652012
141	LSD 13-25-7-29 WPM	Tundra Oil & Gas Partnership	100%	5206201 Manitoba Ltd. McCutcheon, Shannon M. Mitchell, Diane J. Thordarson, Dennis M. Thordarson, Robert W.	20% 20% 20% 20% 20%	0.588381924
142	LSD 14-25-7-29 WPM	Tundra Oil & Gas Partnership	100%	5206201 Manitoba Ltd. McCutcheon, Shannon M. Mitchell, Diane J. Thordarson, Dennis M. Thordarson, Robert W.	20% 20% 20% 20% 20%	0.444426483
143	LSD 15-25-7-29 WPM	Tundra Oil & Gas Partnership	100%	5206201 Manitoba Ltd. McCutcheon, Shannon M. Mitchell, Diane J. Thordarson, Dennis M. Thordarson, Robert W.	20% 20% 20% 20% 20%	0.897188793
144	LSD 16-25-7-29 WPM	Tundra Oil & Gas Partnership	100%	5206201 Manitoba Ltd. McCutcheon, Shannon M. Mitchell, Diane J. Thordarson, Dennis M. Thordarson, Robert W.	20% 20% 20% 20% 20%	0.805782190
145	LSD 1-36-7-29 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.558844420
146	LSD 2-36-7-29 WPM	Tundra Oil & Gas Partnership	100%	HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF MANITOBA	100%	0.483868733

100.000000000

# TUNDRA OIL & GAS PARTNERSHIP

## Appendix 7

50% OOIP & 50% 1st 2160 hours

### SINCLAIR UNIT UNIT NO. 2

#### DETERMINATION OF TRACT FACTORS BASED ON FIRST 90 PRODUCING DAYS

Section	Well / LSD	First 90 Days of Production			Tract Factor 100% Production (%)	Tract Factor 50% Production (%)
		Oil Volume (m3)	Produced (hours)	Produced (days)		
4-7-28	12-4-7-28	155.4	2,160.0	90	0.223442481	0.111721240
	13-4-7-28	240.4	2,160.0	90	0.345660054	0.172830027
	<b>Total</b>	<b>395.8</b>				
	<b>% of Total Unit</b>	<b>0.6</b>			<b>0.569102535</b>	<b>0.284551267</b>
5-7-28	9-5-7-28	295.0	2,160.0	90	0.424166872	0.212083436
	10-5-7-28	402.2	2,160.0	90	0.578304799	0.289152400
	11-5-7-28	123.7	2,160.0	90	0.177862515	0.088931258
	12-5-7-28	264.4	2,160.0	90	0.380168545	0.190084273
	13-5-7-28	458.3	2,160.0	90	0.658968397	0.329484199
	14-5-7-28	439.8	2,160.0	90	0.632368102	0.316184051
	15-5-7-28	328.5	2,160.0	90	0.472334974	0.236167487
	16-5-7-28	307.3	2,160.0	90	0.441852473	0.220926237
	<b>Total</b>	<b>2619.2</b>				
	<b>% of Total Unit</b>	<b>3.8</b>			<b>3.766026678</b>	<b>1.883013339</b>
6-7-28	9-6-7-28	191.9	2,160.0	90	0.275924145	0.137962072
	15-6-7-28	356.2	2,160.0	90	0.512163524	0.256081762
	16-6-7-28	345.1	2,160.0	90	0.496203347	0.248101674
	<b>Total</b>	<b>893.2</b>				
	<b>% of Total Unit</b>	<b>1.3</b>			<b>1.284291016</b>	<b>0.642145508</b>
7-7-28	1-7-7-28	481.8	2,160.0	90	0.692757962	0.346378981
	2-7-7-28	460.9	2,160.0	90	0.662706817	0.331353409
	3-7-7-28	509.3	2,160.0	90	0.732298941	0.366149471
	4-7-7-28	113.6	2,160.0	90	0.163340192	0.081670096
	5-7-7-28	154.4	2,160.0	90	0.222004627	0.1111002314
	6-7-7-28	627.6	2,160.0	90	0.902397046	0.451198523
	7-7-7-28	587.5	2,160.0	90	0.844739109	0.422369554
	8-7-7-28	536.1	2,160.0	90	0.770833423	0.385416712
	9-7-7-28	371.7	2,160.0	90	0.534450258	0.267225129
	10-7-7-28	473.5	2,160.0	90	0.680823775	0.340411888
	11-7-7-28	311.6	2,160.0	90	0.448035245	0.224017622
	12-7-7-28	210.0	2,160.0	90	0.301949298	0.150974649
	13-7-7-28	196.1	2,160.0	90	0.281963131	0.140981565
	14-7-7-28	238.4	2,160.0	90	0.342784346	0.171392173
	15-7-7-28	413.0	2,160.0	90	0.593833620	0.296916810
	16-7-7-28	489.4	2,160.0	90	0.703685651	0.351842825
	<b>Total</b>	<b>6174.9</b>				
	<b>% of Total Unit</b>	<b>8.9</b>			<b>8.878603441</b>	<b>4.439301721</b>
8-7-28	1-8-7-28	432.6	2,160.0	90	0.622015555	0.311007777
	2-8-7-28	328.1	2,160.0	90	0.471759832	0.235879916
	3-8-7-28	578.3	2,160.0	90	0.831510854	0.415755427
	4-8-7-28	468.6	2,160.0	90	0.673778292	0.336889146

5-8-7-28	299.8	2,160.0	90	0.431068570	0.215534285
6-8-7-28	518.3	2,160.0	90	0.745239626	0.372619813
7-8-7-28	525.3	2,160.0	90	0.755304602	0.377652301
8-8-7-28	357.2	2,160.0	90	0.513601378	0.256800689
9-8-7-28	225.7	2,160.0	90	0.324523603	0.162261802
10-8-7-28	431.4	2,160.0	90	0.620290130	0.310145065
11-8-7-28	521.8	2,160.0	90	0.750272114	0.375136057
12-8-7-28	361.7	2,160.0	90	0.520071720	0.260035860
13-8-7-28	224.0	2,160.0	90	0.322079252	0.161039626
14-8-7-28	576.8	2,160.0	90	0.829354073	0.414677036
15-8-7-28	580.4	2,160.0	90	0.834530347	0.417265173
16-8-7-28	359.6	2,160.0	90	0.517052227	0.258526114

**Total**  
**% of Total Unit**

**6789.6**  
**9.8**

**9.762452173**

**4.881226087**

**17-7-28**

1-17-7-28	534.5	2,160.0	90	0.768532857	0.384266429
2-17-7-28	755.7	2,160.0	90	1.086586118	0.543293059
3-17-7-28	491.6	2,160.0	90	0.706848929	0.353424465
4-17-7-28	424.8	2,160.0	90	0.610800295	0.305400148
5-17-7-28	443.2	2,160.0	90	0.637256805	0.318628403
6-17-7-28	678.2	2,160.0	90	0.975152448	0.487576224
7-17-7-28	395.0	2,160.0	90	0.567952252	0.283976126
8-17-7-28	345.6	2,160.0	90	0.496922274	0.248461137
9-17-7-28	526.4	2,160.0	90	0.756886241	0.378443121
10-17-7-28	514.1	2,160.0	90	0.739200640	0.369600320
11-17-7-28	568.3	2,160.0	90	0.817132316	0.408566158
12-17-7-28	523.3	2,160.0	90	0.752428895	0.376214447
13-17-7-28	624.1	2,160.0	90	0.897364558	0.448682279
14-17-7-28	568.2	2,160.0	90	0.816988530	0.408494265
15-17-7-28	729.7	2,160.0	90	1.049201919	0.524600960
16-17-7-28	584.2	2,160.0	90	0.839994191	0.419997096

**Total**  
**% of Total Unit**

**8706.9**  
**12.5**

**12.519249268**

**6.259624634**

**18-7-28**

1-18-7-28	473.6	2,160.0	90	0.680967561	0.340483780
2-18-7-28	446.9	2,160.0	90	0.642576864	0.321288432
3-18-7-28	413.5	2,160.0	90	0.594552547	0.297276274
4-18-7-28	216.1	2,160.0	90	0.310720207	0.155360103
5-18-7-28	548.2	2,160.0	90	0.788231454	0.394115727
6-18-7-28	385.8	2,160.0	90	0.554723997	0.277361998
7-18-7-28	502.5	2,160.0	90	0.722521535	0.361260768
8-18-7-28	582.8	2,160.0	90	0.837981196	0.418990598
9-18-7-28	446.9	2,160.0	90	0.642576864	0.321288432
10-18-7-28	478.4	2,160.0	90	0.687869259	0.343934629
11-18-7-28	605.1	2,160.0	90	0.870045336	0.435022668
12-18-7-28	520.2	2,160.0	90	0.747971548	0.373985774
13-18-7-28	559.2	2,160.0	90	0.804047846	0.402023923
14-18-7-28	588.3	2,160.0	90	0.845889392	0.422944696
15-18-7-28	303.2	2,160.0	90	0.435957273	0.217978636
16-18-7-28	646.3	2,160.0	90	0.929284912	0.464642456

**Total**  
**% of Total Unit**

**7717.0**  
**11.1**

**11.095917789**

**5.547958895**

**19-7-28**

1-19-7-28	563.4	2,160.0	90	0.810086832	0.405043416
2-19-7-28	706.1	2,160.0	90	1.015268570	0.507634285
3-19-7-28	538.1	2,160.0	90	0.773709131	0.386854565
4-19-7-28	735.2	2,160.0	90	1.057110115	0.528555058

5-19-7-28	589.6	2,160.0	90	0.847758602	0.423879301
6-19-7-28	570.8	2,160.0	90	0.820726950	0.410363475
7-19-7-28	640.8	2,160.0	90	0.921376716	0.460688358
8-19-7-28	423.3	2,160.0	90	0.608643514	0.304321757
9-19-7-28	616.4	2,160.0	90	0.886293083	0.443146542
10-19-7-28	692.4	2,160.0	90	0.995569972	0.497784986
11-19-7-28	595.1	2,160.0	90	0.855666798	0.427833399
12-19-7-28	626.4	2,160.0	90	0.900671622	0.450335811
13-19-7-28	537.7	2,160.0	90	0.773133989	0.386566995
14-19-7-28	551.5	2,160.0	90	0.792976372	0.396488186
15-19-7-28	584.7	2,160.0	90	0.840713118	0.420356559
16-19-7-28	463.0	2,160.0	90	0.665726310	0.332863155

**Total**  
**% of Total Unit**

**9434.5**  
**13.6**

**13.565431694**

**6.782715847**

**30-7-28**

1-30-7-28	480.6	2,160.0	90	0.691032537	0.345516269
2-30-7-28	526.0	2,160.0	90	0.756311100	0.378155550
3-30-7-28	508.4	2,160.0	90	0.731004873	0.365502436
4-30-7-28	572.4	2,160.0	90	0.823027516	0.411513758
5-30-7-28	600.5	2,160.0	90	0.863431208	0.431715604
6-30-7-28	747.9	2,160.0	90	1.075370858	0.537685429
7-30-7-28	694.1	2,160.0	90	0.998014324	0.499007162
8-30-7-28	332.2	2,160.0	90	0.477655033	0.238827516
9-30-7-28	89.4	2,160.0	90	0.128544130	0.064272065
10-30-7-28	557.9	2,160.0	90	0.802178636	0.401089318
11-30-7-28	646.3	2,160.0	90	0.929284912	0.464642456
12-30-7-28	665.0	2,160.0	90	0.956172778	0.478086389
13-30-7-28	484.6	2,160.0	90	0.696783952	0.348391976
14-30-7-28	641.7	2,160.0	90	0.922670785	0.461335392
15-30-7-28	889.8	2,160.0	90	1.279402313	0.639701156
16-30-7-28	380.5	2,160.0	90	0.547103372	0.273551686

**Total**  
**% of Total Unit**

**8817.3**  
**12.7**

**12.677988328**

**6.338994164**

**31-7-28**

1-31-7-28	376.3	2,160.0	90	0.541064386	0.270532193
2-31-7-28	665.1	2,160.0	90	0.956316564	0.478158282
3-31-7-28	384.1	2,160.0	90	0.552279645	0.276139823
4-31-7-28	545.5	2,160.0	90	0.784349249	0.392174624

**Total**  
**% of Total Unit**

**1971.0**  
**2.8**

**2.834009844**

**1.417004922**

**13-7-29**

9-13-7-29	581.3	2,160.0	90	0.835824415	0.417912208
15-13-7-29	460.5	2,160.0	90	0.662131676	0.331065838
16-13-7-29	669.0	2,160.0	90	0.961924193	0.480962097

**Total**  
**% of Total Unit**

**1710.8**  
**2.5**

**2.459880284**

**1.229940142**

**24-7-29**

1-24-7-29	778.6	2,160.0	90	1.119512970	0.559756485
2-24-7-29	559.9	2,160.0	90	0.805054344	0.402527172
7-24-7-29	394.9	2,160.0	90	0.567808466	0.283904233
8-24-7-29	615.8	2,160.0	90	0.885430371	0.442715186
9-24-7-29	243.8	2,160.0	90	0.350548757	0.175274378
10-24-7-29	273.4	2,160.0	90	0.393109229	0.196554615
11-24-7-29	932.6	2,160.0	90	1.340942456	0.670471228
12-24-7-29	82.4	2,160.0	90	0.118479153	0.059239577
13-24-7-29	627.5	2,160.0	90	0.902253261	0.451126630

14-24-7-29	582.2	2,160.0	90	0.837118483	0.418559242
15-24-7-29	535.6	2,160.0	90	0.770114496	0.385057248
16-24-7-29	247.0	2,160.0	90	0.355149889	0.177574945

**Total**  
**% of Total Unit**

**5873.7**  
**8.4**

**8.445521876**

**4.222760938**

**25-7-29**

1-25-7-29	291.6	2,160.0	90	0.419278169	0.209639084
2-25-7-29	546.5	2,160.0	90	0.785787103	0.392893551
3-25-7-29	594.3	2,160.0	90	0.854516514	0.427258257
4-25-7-29	601.2	2,160.0	90	0.864437706	0.432218853
5-25-7-29	430.9	2,160.0	90	0.619571203	0.309785602
6-25-7-29	377.6	2,160.0	90	0.542933596	0.271466798
7-25-7-29	413.7	2,160.0	90	0.594840118	0.297420059
8-25-7-29	470.5	2,160.0	90	0.676510214	0.338255107
9-25-7-29	521.3	2,160.0	90	0.749553187	0.374776593
10-25-7-29	319.8	2,160.0	90	0.459825646	0.229912823
11-25-7-29	403.1	2,160.0	90	0.579598868	0.289799434
12-25-7-29	671.3	2,160.0	90	0.965231257	0.482615629
13-25-7-29	406.7	2,160.0	90	0.584775141	0.292387571
14-25-7-29	270.5	2,160.0	90	0.388939453	0.194469727
15-25-7-29	792.9	2,160.0	90	1.140074280	0.570037140
16-25-7-29	566.9	2,160.0	90	0.815119320	0.407559660

**Total**  
**% of Total Unit**

**7678.8**  
**11.0**

**11.040991774**

**5.520495887**

**36-7-29**

1-36-7-29	322.5	2,160.0	90	0.463707851	0.231853926
2-36-7-29	442.9	2,160.0	90	0.636825449	0.318412724

**Total**  
**% of Total Unit**

**765.4**  
**1.1**

**1.100533300**

**0.550266650**

Tract Factors  
100% Production  
(%)

Tract Factors  
50% Production  
(%)

**Total Production**   **69,548.1**   **m3**  
**100.0000**   **%**

**100.000000000**

**50.000000000**



# TUNDRA OIL & GAS PARTNERSHIP

## Appendix 8

50% OOIP & 50% 1st 2160 hours

### SINCLAIR UNIT UNIT NO. 2

#### TRACT FACTORS BASED ON OIL-IN-PLACE (OOIP) & FIRST 90 DAYS PRODUCTION

##### Determination of Proposed Unit 2 Tract Factors and Working Interests

Section	OOIP (MBOE)	Tract Factor 100% OOIP	Tract Factor 50% OOIP	Well	Tract Factor 100% Prod.	Tract Factor 50% Prod.	Total Tract Factor
SEC. 4-7-28	197.0	0.505070582	0.252535291	12-4-7-28	0.223442481	0.111721240	0.364256531
	239.2	0.613154182	0.306577091	13-4-7-28	0.345660054	0.172830027	0.479407118
<b>Total Section 4-7-28</b>	<b>436.2</b>	<b>1.118224764</b>	<b>0.559112382</b>		<b>0.569102535</b>	<b>0.284551267</b>	<b>0.843663650</b>
SEC. 5-7-28	242.3	0.620997227	0.310498614	9-5-7-28	0.424166872	0.212083436	0.522582049
	382.1	0.979413620	0.489706810	10-5-7-28	0.578304799	0.289152400	0.778859209
	268.8	0.689113532	0.344556766	11-5-7-28	0.177862515	0.088931258	0.433488024
	205.8	0.527417887	0.263708944	12-5-7-28	0.380168545	0.190084273	0.453793216
	265.4	0.680303537	0.340151768	13-5-7-28	0.658968397	0.329484199	0.669635967
	292.9	0.750890938	0.375445469	14-5-7-28	0.632368102	0.316184051	0.691629520
	349.4	0.895611226	0.447805613	15-5-7-28	0.472334974	0.236167487	0.683973100
	256.9	0.658385987	0.329192994	16-5-7-28	0.441852473	0.220926237	0.550119230
<b>Total Section 5-7-28</b>	<b>2263.6</b>	<b>5.802133953</b>	<b>2.901066976</b>		<b>3.766026678</b>	<b>1.883013339</b>	<b>4.784080315</b>
SEC. 6-7-28	216.8	0.555781774	0.277890887	9-6-7-28	0.275924145	0.137962072	0.415852959
	307.7	0.788602015	0.394301007	15-6-7-28	0.512163524	0.256081762	0.650382770
	316.3	0.810841881	0.405420940	16-6-7-28	0.496203347	0.248101674	0.653522614
<b>Total Section 6-7-28</b>	<b>840.8</b>	<b>2.155225670</b>	<b>1.077612835</b>		<b>1.284291016</b>	<b>0.642145508</b>	<b>1.719758343</b>
SEC. 7-7-28	342.1	0.876916845	0.438458423	1-7-7-28	0.692757962	0.346378981	0.784837404
	317.5	0.813742733	0.406871367	2-7-7-28	0.662706817	0.331353409	0.738224775
	268.5	0.688361459	0.344180730	3-7-7-28	0.732298941	0.366149471	0.710330200
	195.5	0.501095340	0.250547670	4-7-7-28	0.163340192	0.081670096	0.332217766
	181.1	0.464136336	0.232068168	5-7-7-28	0.222004627	0.111002314	0.343070481
	236.9	0.607137600	0.303568800	6-7-7-28	0.902397046	0.451198523	0.754767323
	293.8	0.753147156	0.376573578	7-7-7-28	0.844739109	0.422369554	0.798943132
	336.8	0.863379536	0.431689768	8-7-7-28	0.770833423	0.385416712	0.817106479
	238.8	0.612187232	0.306093616	9-7-7-28	0.534450258	0.267225129	0.573318745
	276.6	0.709097180	0.354548590	10-7-7-28	0.680823775	0.340411888	0.694960477
	263.9	0.676435734	0.338217867	11-7-7-28	0.448035245	0.224017622	0.562235489
	185.3	0.474987671	0.237493836	12-7-7-28	0.301949298	0.150974649	0.388468485
	180.9	0.463599141	0.231799570	13-7-7-28	0.281963131	0.140981565	0.372781136
	291.3	0.746700818	0.373350409	14-7-7-28	0.342784346	0.171392173	0.544742582
	261.4	0.670096835	0.335048417	15-7-7-28	0.593833620	0.296916810	0.631965227
	229.0	0.586939075	0.293469537	16-7-7-28	0.703685651	0.351842825	0.645312363
<b>Total Section 7-7-28</b>	<b>4099.4</b>	<b>10.507960690</b>	<b>5.253980345</b>		<b>8.878603441</b>	<b>4.439301721</b>	<b>9.693282066</b>
SEC. 8-7-28	276.7	0.709204619	0.354602309	1-8-7-28	0.622015555	0.311007777	0.665610087
	255.9	0.655914891	0.327957446	2-8-7-28	0.471759832	0.235879916	0.563837362
	284.4	0.728973388	0.364486694	3-8-7-28	0.831510854	0.415755427	0.780242121

366.2	0.938586812	0.469293406	4-8-7-28	0.673778292	0.336889146	0.806182552
330.6	0.847478569	0.423739284	5-8-7-28	0.431068570	0.215534285	0.639273569
225.3	0.577484446	0.288742223	6-8-7-28	0.745239626	0.372619813	0.661362036
236.1	0.605311138	0.302655569	7-8-7-28	0.755304602	0.377652301	0.680307870
311.7	0.799023595	0.399511797	8-8-7-28	0.513601378	0.256800689	0.656312486
238.2	0.610683086	0.305341543	9-8-7-28	0.324523603	0.162261802	0.467603345
233.5	0.598542483	0.299271241	10-8-7-28	0.620290130	0.310145065	0.609416307
236.1	0.605311138	0.302655569	11-8-7-28	0.750272114	0.375136057	0.677791626
354.7	0.909148535	0.454574268	12-8-7-28	0.520071720	0.260035860	0.714610128
308.2	0.790106160	0.395053080	13-8-7-28	0.322079252	0.161039626	0.556092706
287.5	0.737031311	0.368515655	14-8-7-28	0.829354073	0.414677036	0.783192692
297.1	0.761634834	0.380817417	15-8-7-28	0.834530347	0.417265173	0.798082590
245.4	0.629055149	0.314527575	16-8-7-28	0.517052227	0.258526114	0.573053688

<b>Total Section 8-7-28</b>	<b>4487.79</b>	<b>11.503490155</b>	<b>5.751745077</b>	<b>9.762452173</b>	<b>4.881226087</b>	<b>10.632971164</b>
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**SEC. 17-7-28**

205.9	0.527847643	0.263923821	1-17-7-28	0.768532857	0.384266429	0.648190250
381.2	0.977157401	0.488578701	2-17-7-28	1.086586118	0.543293059	1.031871760
341.9	0.876487090	0.438243545	3-17-7-28	0.706848929	0.353424465	0.791668009
299.9	0.768618367	0.384309184	4-17-7-28	0.610800295	0.305400148	0.689709331
304.8	0.781188726	0.390594363	5-17-7-28	0.637256805	0.318628403	0.709222766
327.2	0.838776012	0.419388006	6-17-7-28	0.975152448	0.487576224	0.906964230
265.1	0.679551464	0.339775732	7-17-7-28	0.567952252	0.283976126	0.623751858
134.1	0.343697254	0.171848627	8-17-7-28	0.496922274	0.248461137	0.420309764
273.2	0.700287184	0.350143592	9-17-7-28	0.756886241	0.378443121	0.728586713
320.9	0.822660167	0.411330084	10-17-7-28	0.739200640	0.369600320	0.780930403
327.8	0.840280158	0.420140079	11-17-7-28	0.817132316	0.408566158	0.828706237
304.7	0.781081287	0.390540644	12-17-7-28	0.752428895	0.376214447	0.766755091
268.8	0.689006093	0.344503046	13-17-7-28	0.897364558	0.448682279	0.793185325
272.6	0.698675600	0.349337800	14-17-7-28	0.816988530	0.408494265	0.757832065
284.4	0.728973388	0.364486694	15-17-7-28	1.049201919	0.524600960	0.889087654
244.9	0.627873321	0.313936660	16-17-7-28	0.839994191	0.419997096	0.733933756

<b>Total Section 17-7-28</b>	<b>4557.49</b>	<b>11.682161156</b>	<b>5.841080578</b>	<b>12.519249268</b>	<b>6.259624634</b>	<b>12.100705212</b>
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**SEC. 18-7-28**

238.0	0.610038452	0.305019226	1-18-7-28	0.680967561	0.340483780	0.645503006
220.2	0.564376892	0.282188446	2-18-7-28	0.642576864	0.321288432	0.603476878
218.6	0.560294211	0.280147105	3-18-7-28	0.594552547	0.297276274	0.577423379
146.7	0.375928944	0.187964472	4-18-7-28	0.310720207	0.155360103	0.343324575
182.2	0.467037188	0.233518594	5-18-7-28	0.788231454	0.394115727	0.627634321
187.4	0.480252181	0.240126090	6-18-7-28	0.554723997	0.277361998	0.517488089
280.5	0.719089004	0.359544502	7-18-7-28	0.722521535	0.361260768	0.720805269
270.3	0.692873896	0.346436948	8-18-7-28	0.837981196	0.418990598	0.765427546
277.8	0.712105471	0.356052735	9-18-7-28	0.642576864	0.321288432	0.677341167
231.7	0.593815168	0.296907584	10-18-7-28	0.687869259	0.343934629	0.640842214
196.9	0.504640826	0.252320413	11-18-7-28	0.870045336	0.435022668	0.687343081
218.7	0.560509089	0.280254544	12-18-7-28	0.747971548	0.373985774	0.654240318
275.1	0.705229377	0.352614688	13-18-7-28	0.804047846	0.402023923	0.754638611
229.5	0.588228342	0.294114171	14-18-7-28	0.845889392	0.422944696	0.717058867
237.0	0.607567356	0.303783678	15-18-7-28	0.435957273	0.217978636	0.521762314
326.8	0.837809062	0.418904531	16-18-7-28	0.929284912	0.464642456	0.883546987

<b>Total Section 18-7-28</b>	<b>3737.31</b>	<b>9.579795458</b>	<b>4.789897729</b>	<b>11.095917789</b>	<b>5.547958895</b>	<b>10.337856623</b>
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**SEC. 19-7-28**

275.3	0.705551694	0.352775847	1-19-7-28	0.810086832	0.405043416	0.757819263
271.0	0.694700358	0.347350179	2-19-7-28	1.015268570	0.507634285	0.854984464
294.4	0.754651301	0.377325651	3-19-7-28	0.773709131	0.386854565	0.764180216

317.7	0.814279928	0.407139964	4-19-7-28	1.057110115	0.528555058	0.935695022
315.0	0.807511273	0.403755637	5-19-7-28	0.847758602	0.423879301	0.827634937
320.9	0.822445289	0.411222645	6-19-7-28	0.820726950	0.410363475	0.821586120
272.2	0.697601210	0.348800605	7-19-7-28	0.921376716	0.460688358	0.809488963
243.4	0.623898079	0.311949040	8-19-7-28	0.608643514	0.304321757	0.616270797
277.2	0.710601325	0.355300663	9-19-7-28	0.886293083	0.443146542	0.798447204
282.8	0.724783269	0.362391634	10-19-7-28	0.995569972	0.497784986	0.860176621
312.3	0.800635179	0.400317590	11-19-7-28	0.855666798	0.427833399	0.828150988
267.2	0.684815973	0.342407987	12-19-7-28	0.900671622	0.450335811	0.792743797
284.5	0.729295705	0.364647853	13-19-7-28	0.773133989	0.386566995	0.751214847
323.5	0.829106505	0.414553253	14-19-7-28	0.792976372	0.396488186	0.811041439
302.6	0.775709339	0.387854669	15-19-7-28	0.840713118	0.420356559	0.808211228
301.4	0.772593609	0.386296804	16-19-7-28	0.665726310	0.332863155	0.719159960

<b>Total Section 19-7-28</b>	<b>4661.27</b>	<b>11.948180038</b>	<b>5.974090019</b>	<b>13.565431694</b>	<b>6.782715847</b>	<b>12.756805866</b>
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**SEC. 30-7-28**

245.5	0.629270027	0.314635014	1-30-7-28	0.691032537	0.345516269	0.660151282
310.2	0.795048353	0.397524176	2-30-7-28	0.756311100	0.378155550	0.775679726
354.1	0.907644390	0.453822195	3-30-7-28	0.731004873	0.365502436	0.819324631
324.0	0.830610651	0.415305325	4-30-7-28	0.823027516	0.411513758	0.826819084
330.0	0.845974423	0.422987212	5-30-7-28	0.863431208	0.431715604	0.854702816
436.2	1.118117326	0.559058663	6-30-7-28	1.075370858	0.537685429	1.096744092
287.5	0.736923872	0.368461936	7-30-7-28	0.998014324	0.499007162	0.867469098
139.2	0.356804808	0.178402404	8-30-7-28	0.477655033	0.238827516	0.417229921
169.6	0.434805498	0.217402749	9-30-7-28	0.128544130	0.064272065	0.281674814
252.7	0.647642091	0.323821045	10-30-7-28	0.802178636	0.401089318	0.724910363
389.2	0.997678244	0.498839122	11-30-7-28	0.929284912	0.464642456	0.963481578
289.6	0.742295820	0.371147910	12-30-7-28	0.956172778	0.478086389	0.849234299
317.8	0.814709684	0.407354842	13-30-7-28	0.696783952	0.348391976	0.755746818
336.0	0.861338195	0.430669098	14-30-7-28	0.922670785	0.461335392	0.892004490
264.5	0.677939879	0.338969940	15-30-7-28	1.279402313	0.639701156	0.978671096
157.6	0.403970514	0.201985257	16-30-7-28	0.547103372	0.273551686	0.475536943

<b>Total Section 30-7-28</b>	<b>4603.77</b>	<b>11.800773775</b>	<b>5.900386888</b>	<b>12.677988328</b>	<b>6.338994164</b>	<b>12.239381051</b>
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**SEC. 31-7-28**

133.5	0.342300548	0.171150274	1-31-7-28	0.541064386	0.270532193	0.441682467
280.7	0.719518759	0.359759380	2-31-7-28	0.956316564	0.478158282	0.837917662
300.0	0.769048123	0.384524061	3-31-7-28	0.552279645	0.276139823	0.660663884
436.9	1.119836349	0.559918174	4-31-7-28	0.784349249	0.392174624	0.952092799

<b>Total Section 31-7-28</b>	<b>1151.14</b>	<b>2.950703779</b>	<b>1.475351889</b>	<b>2.834009844</b>	<b>1.417004922</b>	<b>2.892356811</b>
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**SEC. 13-7-29**

228.4	0.585327490	0.292663745	9-13-7-29	0.835824415	0.417912208	0.710575953
241.2	0.618311253	0.309155626	15-13-7-29	0.662131676	0.331065838	0.640221464
279.7	0.716940224	0.358470112	16-13-7-29	0.961924193	0.480962097	0.839432209

<b>Total Section 13-7-29</b>	<b>749.26</b>	<b>1.920578967</b>	<b>0.960289484</b>	<b>2.459880284</b>	<b>1.229940142</b>	<b>2.190229626</b>
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**SEC. 24-7-29**

298.8	0.765932393	0.382966196	1-24-7-29	1.119512970	0.559756485	0.942722682
275.1	0.705121938	0.352560969	2-24-7-29	0.805054344	0.402527172	0.755088141
280.2	0.718229492	0.359114746	7-24-7-29	0.567808466	0.283904233	0.643018979
245.0	0.628088199	0.314044099	8-24-7-29	0.885430371	0.442715186	0.756759285
170.6	0.437384033	0.218692017	9-24-7-29	0.350548757	0.175274378	0.393966395
177.0	0.453714756	0.226857378	10-24-7-29	0.393109229	0.196554615	0.423411993
186.4	0.477673646	0.238836823	11-24-7-29	1.340942456	0.670471228	0.909308051
124.9	0.320168120	0.160084060	12-24-7-29	0.118479153	0.059239577	0.219323637

248.0	0.635716365	0.317858183	13-24-7-29	0.902253261	0.451126630	0.768984813
238.3	0.610897964	0.305448982	14-24-7-29	0.837118483	0.418559242	0.724008224
234.6	0.601443335	0.300721668	15-24-7-29	0.770114496	0.385057248	0.685778916
231.1	0.592418462	0.296209231	16-24-7-29	0.355149889	0.177574945	0.473784175

<b>Total Section 24-7-29</b>	<b>2710.11</b>	<b>6.946788703</b>	<b>3.473394352</b>	<b>8.445521876</b>	<b>4.222760938</b>	<b>7.696155290</b>
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**SEC. 25-7-29**

265.1	0.679444025	0.339722012	1-25-7-29	0.419278169	0.209639084	0.549361097
272.2	0.697816088	0.348908044	2-25-7-29	0.785787103	0.392893551	0.741801595
258.5	0.662683546	0.331341773	3-25-7-29	0.854516514	0.427258257	0.758600030
211.5	0.542029587	0.271014793	4-25-7-29	0.864437706	0.432218853	0.703233646
271.6	0.696311943	0.348155971	5-25-7-29	0.619571203	0.309785602	0.657941573
297.7	0.763138980	0.381569490	6-25-7-29	0.542933596	0.271466798	0.653036288
292.1	0.748742158	0.374371079	7-25-7-29	0.594840118	0.297420059	0.671791138
322.7	0.827280043	0.413640021	8-25-7-29	0.676510214	0.338255107	0.751895128
287.5	0.737031311	0.368515655	9-25-7-29	0.749553187	0.374776593	0.743292249
292.1	0.748634719	0.374317360	10-25-7-29	0.459825646	0.229912823	0.604230183
273.6	0.701254135	0.350627068	11-25-7-29	0.579598868	0.289799434	0.640426501
293.4	0.752072766	0.376036383	12-25-7-29	0.965231257	0.482615629	0.858652012
230.9	0.591988706	0.295994353	13-25-7-29	0.584775141	0.292387571	0.588381924
195.0	0.499913512	0.249956756	14-25-7-29	0.388939453	0.194469727	0.444426483
255.3	0.654303307	0.327151653	15-25-7-29	1.140074280	0.570037140	0.897188793
310.7	0.796445059	0.398222530	16-25-7-29	0.815119320	0.407559660	0.805782190

<b>Total Section 25-7-29</b>	<b>4330.02</b>	<b>11.099089885</b>	<b>5.549544942</b>	<b>11.040991774</b>	<b>5.520495887</b>	<b>11.070040829</b>
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**SEC. 36-7-29**

255.1	0.653980990	0.326990495	1-36-7-29	0.463707851	0.231853926	0.558844420
129.1	0.330912017	0.165456009	2-36-7-29	0.636825449	0.318412724	0.483868733

<b>Total Section 36-7-29</b>	<b>384.23</b>	<b>0.984893007</b>	<b>0.492446503</b>	<b>1.100533300</b>	<b>0.550266650</b>	<b>1.042713153</b>
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<b>Total</b>	<b>39012.42</b>	<b>100.00000000</b>	<b>50.00000000</b>	<b>100.00000000</b>	<b>50.00000000</b>	<b>100.00000000</b>
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Total Wells / LSD's	<b>146</b>
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Ave OOIP per Well / LSD (MBOE)	<b>267.2</b>
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Ave OOIP per Section (MBOE)	<b>4275.3</b>
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