PROPOSED EWART UNIT NO. 11

Application for Enhanced Oil Recovery Waterflood Project

Lodgepole Formation

Lodgepole AA (01 59AA)

Daly Sinclair Field, Manitoba

October 31st, 2016
Tundra Oil and Gas Partnership

INTRODUCTION

The Daly Sinclair oilfield is located in Townships 8, 9, 10 and 11, of Ranges 27, 28 & 29 WPM (Figure 1). Within the Daly Sinclair oilfield, most Lodgepole reservoirs have been developed with vertical producing wells on Primary Production and 40 acre spacing. Horizontal producing Lodgepole wells have recently been drilled by Tundra Oil and Gas (Tundra) in the southern part of the Daly Sinclair field.

Within the area, potential exists for incremental production and reserves from a Waterflood Enhanced Oil Recovery (EOR) project in the Lodgepole oil reservoir. The following represents an application by Tundra Oil and Gas Partnership (Tundra) to establish Ewart Unit No. 11 (Sections 16 & 17-008-28W1) and implement a Secondary Waterflood EOR scheme within the Lodgepole formation as outlined on Figure 2.

The proposed project area falls within the existing designated Lodgepole AA Pool of the Daly Sinclair Oilfield (Figure 3).

SUMMARY

1. The proposed Ewart Unit No. 11 consists of 14 horizontal Lodgepole wells, 13 are currently producing and 1 is standing and will be placed on production later in the year. The area of the proposed Ewart Unit No. 11 comprises 32 Legal Sub Divisions (LSD), and is located south of Ewart Unit No. 9 (Figure 2).

2. Total Original Oil in Place (OOIP) in the project area is estimated to be **3,586** e^3m^3 (22,552 Mbbl) for an average of **112.0** e^3m^3 (704.8 Mbbl) OOIP per 40 acre LSD. OOIP values were estimated by contouring phi*h values and applying volumetric methods.

3. Cumulative production to the end of June 2016 from the 13 producing Lodgepole wells within the proposed Ewart Unit No. 11 project area is 75.4 e^3m^3 (474.2 Mbbl) of oil and 15.7 e^3m^3 (98.6 Mbbl) of water, representing a 2.1% Recovery Factor (RF) of the OOIP.

4. Figure 4 shows that the oil production rate in the Ewart Unit No. 11 area peaked during August 2015 at 77.2 m^3 (486 bbl) of oil per day (OPD) when developed with horizontal wells at 400m inter-well spacing. Drilling 6 infill horizontal wells in 2016 at 200m inter-well spacing has resulted in a new peak rate from this area during March 2016 at 163.5 m^3 (1028 bbl) of oil per day (OPD). As of June 2016, production was 133.2 m^3 (837.6 bbl) OPD, 12.9 m^3 (81.1 bbl) water per day (WPD) and a 7.0% water cut (WCUT).

5. In March 2016, production averaged 12.9 m^3 (81.4 bbl) OPD per well in the proposed Ewart Unit No. 11. As of June 2016, average per well production has declined to 10.2 m^3 (64.2 bbl) OPD. Production from this area is expected to decline by 35-50% in the next year depending on the vintage of the wells. Oil production is expected to eventually stabilize to an annual decline of 15% under primary production.

6. Estimated Ultimate Recovery (EUR) of Primary producing oil reserves in the proposed Ewart Unit No. 11 project area is estimated to be 297.3 e^3m^3 (1,870 Mbbl), with 221.9 e^3m^3 (1,396 Mbbl) remaining as of the end of June 2016.

7. Ultimate oil recovery of the proposed Ewart Unit No. 11 OOIP, under the current Primary production method, is forecasted to be **8.3%**

8. Estimated Ultimate Recovery (EUR) of oil under Secondary Waterflood EOR for the proposed Ewart Unit No. 11 is estimated to be 412.4 e^3m^3 (2,594 Mbbl). An incremental 115.2 e^3m^3 (724.4 Mbbl) of oil is forecasted to be recovered under the proposed Unitization and Secondary EOR production, versus the existing Primary production method.

9. Total RF under Secondary WF in the proposed Ewart Unit No. 11 is estimated to be **11.5%**.

10. There are no nearby Lodgepole Dolomite waterflood analogues with enough waterflood history at this time. However, based on simulation, results of Primary production and successful waterfloods in the Permian basin of carbonate reservoirs with similar reservoir characteristics, the proposed project area is thought to be suitable reservoir for successful EOR trial.

11. Horizontal producers with multi-stage hydraulic fractures, will be converted to injectors (Figure 5) within the proposed Ewart Unit No. 11, to complete waterflood patterns with 200m Horizontal to Horizontal spacing.

DISCUSSION

The proposed Ewart Unit No. 11 project area is located within Township 8, Range 28 W1 of the Daly Sinclair oilfield (Figure 1). The proposed Ewart Unit No. 11 currently consists of 13 producing horizontal wells and 1 standing horizontal well within an area covering Sections 16 & 17-008-28W1M (Figure 2). A project area well list complete with recent production statistics is attached as Table 3.

Within the proposed Unit, potential exists for incremental production and reserves from a Waterflood EOR project in the Lodgepole oil reservoir.

Geology

Stratigraphy:

The proposed Ewart Unit No. 11 (Appendix 1) is located on the carbonate slope of the Mississippian Lodgepole Formation on the Eastern edge of the Williston Basin. The stratigraphy of the reservoir section in Ewart Unit #11 is shown in the structural cross section (Appendix 2). The cross section A – A' runs from West to East through the proposed unit.

The Lodgepole section is subdivided into 7 units. In ascending order these are: the Basal Lodgepole Limestone, the Cromer Shale, the Cruickshank Crinoidal, the Cruickshank Shale, the Middle Daly, the Upper Daly and the Unnamed. A Dolomitic facies is prevalent over the Daly Sinclair area and is predominantly in the Unnamed, however can extend as deep as the Middle Daly formation. Of the seven members, only the Dolomite facies is productive, the lower limestone units are considered non-reservoir. All of the Mississippian horizontal wells in the proposed unit area are drilled and completed in the Lodgepole Dolomite facies.

The Triassic-Jurassic aged Watrous Red Beds Formation overlays the Lodgepole Formation and consists of red argillaceous siltstones and anhydrites which form an effective seal for the Lodgepole dolomite reservoir. The structural cross-section (Appendix 2) shows the correlations of the various units in the Lodgepole section as well as the overlying Watrous Red Beds and Watrous Evaporite.

Sedimentology:

The whole of the Lodgepole Formation in the Daly Sinclair area consists of an overall shallowing upward cycle which begins with the Upper Bakken transgressive cycle and continues to the Lodgepole Dolomite facies, which represents the shallowest part of the cycle preserved. The Unnamed unit (which is most often dolomitized) consists of a series of "brining upward" cycles, comprised of 1-2 m sequences that begin at an erosional base with coarser grained carbonate grainstones which rapidly grade upward into fine-grained dolomitic mudstones that characterize the bulk of the cycle. The dolomite facies contains anhydrite bands of variable thickness and disseminated anhydrite. The coarser grained grainstones at the base of each cycle generally consist of fossil fragments which are often replaced by chert or are tightly cemented. The fine grained dolomitic mudstones bear rare fossils, generally fragmental, consisting of bryozoans, corals, brachiopods and crinoids. The intimate association of the anhydrites with the dolomitized part of the Upper Lodgepole suggests dolomitization by seepage reflux with the magnesium rich brines provided by the deposition of the anhydrites which cap each cycle. Other diagenetic processes include mobilization and re-precipitation of silica in the form of chert which is present in the form of nodules of massive, dense grey chert or as white "chalky" chert. The "chalky" chert can have considerable micro-porosity but is considered non-reservoir as these features are isolated and not connected to the main reservoir. The presence of the anhydrite beds within the Lodgepole Dolomite suggests deposition on the proximal part of a shallow carbonate ramp.

Reservoir development within the above mentioned cycles is largely due to secondary processes as most of the primary reservoir was likely cemented during deposition and early diagenesis. These secondary processes include: dolomitization, conversion of anhydrite to gypsum and leaching of fossils, grains and cements. These processes occurred while the Lodgepole was exhumed and eroded, but prior to deposition of the Watrous Red Beds.

The Lodgepole Limestone facies lies between the Cromer Shale and the Lodgepole Dolomite. Similar to the Dolomite facies, the Limestone facies displays evidence of cyclic deposition. The depositional cycles within the Limestone facies generally contain more grainstones at the base of each cycle and grade up into finer grained wackestones or mudstones. Grainstone beds, particularly the crinoidal grainstones, are frequently tightly cemented by chert. The lack of anhydrite beds and the presence of significantly more grainstones suggest deposition on a more distal and open marine part of the carbonate ramp than the overlying Lodgepole Dolomite facies. Within the Ewart Unit No. 11 area, the Lodgepole Limestone is considered non-reservoir.

The Cromer Shale is an argillaceous carbonate that appears as a higher gamma ray unit on logs and lies between the Lodgepole Limestone and the Basal Limestone. The Cromer Shale is considered non-reservoir.

The Basal Lodgepole Limestone lies between the Cromer Shale and the Upper Bakken Shale. Where cored, the Basal Limestone consists of a nodular lime mudstone to wackestone with numerous fossil fragments including crinoids, corals and brachiopods. The Basal Limestone is thought to represent deeper water conditions following the Upper Bakken transgression. The Basal Lodgepole Limestone is also considered non-reservoir.

An Isopach map is provided for the Lodgepole Dolomite facies as Appendix 3.

Structure:

A structure contour map is provided for the top of the Lodgepole Dolomite reservoir (Appendix 4). Structure on the top of the Lodgepole Formation reflects the erosional relief at the Mississippian Unconformity. A South West trending dip exists over the proposed unit. Structure descends to the East of the proposed unit, as you approach the edge of the Daly High, a paleo high associated with the Daly-Sinclair field.

Reservoir Quality:

Reservoir quality within the Lodgepole Dolomite facies is highly variable both laterally and vertically. Due to the heterolithic nature of the Lodgepole Dolomite reservoir and the inherent challenges in determining reservoir properties from petrophysical logs in carbonates, high resolution pressure-decay profile permeameter (PDPK) core data was used to determine an average net to gross ratio. A permeability cutoff of 0.5 md was applied to differentiate reservoir from non-reservoir. The gross thickness of the Lodgepole Dolomite is represented by the Dolomite Isopach (Appendix 3). The top and base of the Lodgepole Dolomite facies was determined using open hole wireline logs. An average net to gross ratio, calculated to be 38.1%, was applied to the gross thickness of the Lodgepole Dolomite facies to determine a net pay thickness.

An average porosity value was derived from routine core analysis using a 0.5mD cutoff. The average porosity of net pay was calculated to be 12.5%.

Fluid Contacts:

No oil-water contact is found within the Lodgepole formation in the area local to the proposed unit.

OOIP Estimates

Total volumetric OOIP for the Dolomite facies within the proposed unit has been calculated to be **3,586** e^3m^3 (22,552 Mbbl). Tundra generated maps integrate both open hole wireline logs and core data when available. (Appendix 1-6).

OOIP values were calculated using the following volumetric equation:

$$OOIP = \frac{Area * Net\ Pay * \ Porosity * (1 - Water\ Saturation)}{Initial\ Formation\ Volume\ Factor\ of\ Oil}$$

or

$$OOIP(m3) = \frac{A * h * \text{Ø} * (1 - Sw)}{Bo} * \frac{10{,}000m2}{ha}$$

or

$$OOIP(Mbbl) = \frac{A * h * \text{Ø} * (1 - Sw)}{Bo} * 3.28084 \frac{ft}{m} * 7{,}758.367 \frac{bbl}{acre * ft} * \frac{1Mbbl}{1{,}000bbl}$$

where

OOIP	=Original Oil in Place by LSD	= 22,552 Mbbl (total)
A	=Area	= 40 acres/LSD
h * Ø	=Net Pay * Porosity, or Phi * h	= 12.5% * 38.1% * Dolo Gross h(m)
Bo	=Formation Volume Factor of Oil	= 1.1 stb/rb
Sw	=Water Saturation	= 25%

The initial oil formation volume factor (Boi) was adopted from historical PVT information taken from the Sinclair Daly area and is representative of the fluid characteristics in the reservoir.

Historical Production

A historical group production plot for the proposed Ewart Unit No. 11 is shown as Figure 4. Oil production commenced from the proposed unit area in March 1986. The oil production rate in the Ewart Unit No. 11 area peaked during August 2015 at 77.2 m^3 of OPD when developed with horizontal wells at 400m inter-well spacing. Drilling 6 infill horizontal wells in 2016 at 200m inter-well spacing resulted in a new peak rate during March 2016 of 163.5 m^3 of OPD. Out of the 6 wells drilled, 1 well has not produced yet due to wet conditions which restricted access in the spring. After completion, this well is expected to begin production in August 2016. As of June 2016, production was 133.2 m^3 OPD, 12.9 m^3 WPD and a 7.0% WCUT.

Production from this area is expected to decline by 35-50% in the next year depending on the vintage of the wells. Oil production is expected to eventually stabilize to an annual decline of 15% under the current primary production method.

The remainder of the field's production and decline rates indicate the need for pressure restoration and maintenance. Waterflooding is deemed to be the most efficient means of secondary recovery to introduce energy back into the system and provide areal sweep between wells.

UNITIZATION

Unitization and implementation of a Waterflood EOR project is forecasted to increase overall recovery of OOIP from the proposed project area by 38% (from a recovery factor of 8.3% to 11.5%). The basis for unitization is to develop the lands in an effective manner that will be conducive to waterflooding. Unitizing will enable the reservoir to have a higher recovery of oil by allowing the development of additional drilling and injector conversions over time. In addition, Unitizing will facilitate a pressure maintenance scheme, and overall will increase oil production over time.

Unit Name

Tundra proposes that the official name of the new Unit shall be Ewart Unit No. 11.

Unit Operator

Tundra Oil and Gas Partnership (Tundra) will be the Operator of record for Ewart Unit No. 11.

Unitized Zone

The unitized zone(s) to be waterflooded in Ewart Unit No. 11 will be the Lodgepole formation.

Unit Wells

The 14 wells to be included in the proposed Ewart Unit No. 11 are outlined in Table 3.

Unit Lands

The Ewart Unit No. 11 will consist of 32 LSDs as follows:

Section 16, of Township 8, Range 28, W1M
Section 17, of Township 8, Range 28, W1M

The lands included in the 40 acre tracts are outlined in Table 1.

Tract Factors

The Tract Factor contribution for each of the LSD's within the proposed Ewart Unit No. 11 was calculated as follows:

- OOIP by LSD, minus cumulative production to date for the LSD as distributed by the LSD specific Production Allocation (PA) % in the applicable producing horizontal well (to yield Remaining OOIP)
- Tract Factor by LSD = The product of Remaining OOIP by LSD as a % of total proposed Unit Remaining OOIP

Tract Factor calculations for all individual LSD's based on the above methodology are outlined within Table 2.

Working Interest Owners

Table 1 outlines the working interest % (WI) for each recommended Tract within the proposed Ewart Unit No. 11.

Tundra Oil and Gas Partnership will have a 100% working interest in the proposed Ewart Unit No. 11.

WATERFLOOD EOR DEVELOPMENT

The waterflood performance predictions for the proposed Ewart Unit No. 11 Lodgepole project are based on internal engineering assessments. Project area specific reservoir and geological parameters were used to guide the overall Secondary Waterflood recovery factor.

Based on the geological descriptions, primary production decline rate, and positive waterflood response in the analog Clearfork formation in the Permian Basin of West Texas, the Lodgepole formation in the project area is deemed to be a suitable trial for waterflood EOR operations.

Pre-Production of New Horizontal Injection Wells

Six (6) of the existing producing horizontal wells will be converted to horizontal injection wells as shown in Figure 5. This will result in 200m Horizontal to Horizontal waterflood patterns within Ewart Unit No. 11. Placing new horizontal wells immediately on water injection in areas without significant reservoir pressure depletion has been problematic in similar low permeability formations, and has a negative impact on the ultimate total recovery factor of OOIP.

Considering the expected reservoir pressures and reservoir lithology described, Tundra believes an initial period of producing all 6 proposed horizontal wells prior to placing them on permanent water injection is essential and all Unit mineral owners will benefit.

Tundra monitors reservoir pressure, fluid production and decline rates in each pattern to determine when the well will be converted to water injection.

Reserves Recovery Profiles and Production Forecasts

The primary waterflood performance predictions for the proposed Ewart Unit No. 11 are based on oil production decline curve analysis, and the secondary predictions are based on internal engineering analysis performed by the Tundra reservoir engineering group using numerical simulation in combination with analogue studies of successful waterfloods in the Clearfork formation.

Primary Production Forecast

Cumulative production to the end of June 2016 from the 13 producing Lodgepole wells within the proposed Ewart Unit No. 11 project area is 75.4 e^3m^3 of oil and 15.7 e^3m^3 of water for a recovery factor of 2.1% of the total OOIP.

Based on decline curve analysis of the wells currently on production, the estimated ultimate recovery (EUR) for the proposed Unit with no further development is estimated to be 297.3 e^3m^3, representing a recovery factor of 8.3% of the total OOIP.

Production plots of the forecasted oil rate v. time and oil rate v. cumulative oil produced are shown in Figures 6 & 7, respectively.

Pre-Production Schedule/Timing for Conversion of Horizontal Wells to Water Injection

Tundra will plan an injection conversion schedule to allow for the most expeditious development of the waterflood within the proposed Ewart Unit No. 11, while maximizing reservoir knowledge.

Criteria for Conversion to Water Injection Well

Six (6) water injection wells are required for this proposed unit as shown in Figure 5.

Tundra will monitor the following parameters to assess the best timing for each individual horizontal well to be converted from primary production to water injection service.

- Measured reservoir pressures at start of and/or through primary production
- Fluid production rates and any changes in decline rate
- Any observed production interference effects with adjacent wells
- Pattern mass balance and/or oil recovery factor estimates
- Reservoir pressure relative to bubble point pressure

The above schedule allows for the proposed Ewart Unit No. 11 project to be developed equitably, efficiently, and moves the project to the best condition for the start of waterflood as quickly as possible. It also provides the Unit Operator flexibility to manage the reservoir conditions and response to help ensure maximum ultimate recovery of OOIP.

Secondary EOR Production Forecast

The proposed Ewart Unit No. 11 Secondary Waterflood oil production forecast over time is plotted on Figure 8. Total EOR recoverable volumes in the proposed Ewart Unit No. 11 project under Secondary WF has been estimated at 412.4 e^3m^3, resulting in an 11.5% overall RF of calculated Net OOIP.

An incremental 115.2 e^3m^3 of oil is forecast to be recovered under the proposed Unitization and Secondary EOR production scheme vs. the existing Primary Production method. This relates to an incremental 3.2% recovery factor as a result of secondary EOR implementation.

Estimated Fracture Pressure

The estimated fracture gradient for the Lodgepole is 21 kPa/m based on DFIT ISIP data in the area. The horizontal wells in this area are ~ 790mTVD. Therefore, the estimated frac pressure would be 16.6MPa.

WATERFLOOD OPERATING STRATEGY

Water Source

The injection water for the proposed Ewart Unit No. 11 will be supplied from the existing source and injection water system at the Sinclair 04-01-008-29 Water Filtration Plant. All existing injection water is obtained from the Mannville formation in the 102/14-30-007-28W1 licensed water source well. Mannville water from the 102/14-30 source well is pumped to the main Water Plant at 4-1-8-29W1, filtered, and pumped up to injection system pressure. A diagram of the Daly Sinclair water injection system and new pipeline connection to the proposed Ewart Unit No. 11 project area is shown as Figure 10.

Produced water is not currently used for any water injection in the Tundra-operated Daly Sinclair Units and there are no current plans to use produced water as a source supply for Ewart Unit No. 11.

Injection Wells

The water injection wells for the proposed Ewart Unit No. 11 have been drilled, are currently producing and plans are in progress to re-configure the wells for downhole injection after approval for waterflood has been received (Figure 11). The horizontal injection wells have been stimulated by multiple hydraulic fracture treatments to obtain suitable injection. 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 fracture growth and thereby limit the potential for future out-of-zone injection.

The new water injection well will be placed on injection after the pre-production period 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 implemented 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. An operating procedure for monitoring water injection volumes and meter balancing will also be utilized to monitor the entire system measurement and integrity on a daily basis.

The proposed Ewart Unit No. 11 horizontal water injection well rate is estimated to average 10 – 25 m^3 WPD, based on expected reservoir permeability and pressure.

Reservoir Pressure

An initial reservoir pressure build-up test was conducted on 02/13-17-008-28W1/0 at the time of drilling. The results of this test can be seen in the table below.

UWI	Depth (mTVD)	Pressure (kPa)	Temperature (°C)
02/13-17-008-28W1/0	794.68	8446.07	29.1

Reservoir Pressure Management during Waterflood

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 approximately 1.25 to 1.75 within the 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 reservoir pressure.

Waterflood Surveillance and Optimization

Ewart Unit No. 11 EOR response and waterflood surveillance will consist of the following:

- Regular production well rate and WCT testing
- Daily water injection rate and pressure monitoring vs target
- Water injection rate / pressure / time vs cumulative injection plot
- Reservoir pressure surveys as required to establish pressure trends
- Pattern VRR
- Potential 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

The above surveillance methods will provide an ever increasing understanding of reservoir performance, and provide data to continually control and optimize the Ewart Unit No. 11 waterflood operation. Controlling the waterflood operation 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 waterflood operations may be altered to maximize ultimate secondary reserves recovery from the proposed Ewart Unit No. 11.

Economic Limits

Under the current Primary recovery method, existing wells within the proposed Ewart Unit No. 11 will be deemed uneconomic when the net oil rate and net oil price revenue stream becomes less than the current producing operating costs. With any positive oil production response under the proposed Secondary recovery method, the economic limit will be significantly pushed out into the future. The actual economic cut off point will then again be a function of net oil price, the magnitude and duration of production rate response to the waterflood, and then current operating costs. Waterflood projects generally become uneconomic to operate when Water Oil Ratios (WOR's) exceed 100.

WATER INJECTION FACILITIES

The Ewart Unit No. 11 waterflood operation will utilize the existing Tundra operated source well supply and water plant (WP) facilities located at 4-1-8-29 W1M Battery. Injection wells will be connected to the existing high pressure water pipeline system supplying other Tundra-operated Waterflood Units.

A complete description of all planned system design and operational practices to prevent corrosion related failures is shown on Figure 12.

NOTIFICATION OF MINERAL AND SURFACE RIGHTS OWNERS

Tundra will notify all mineral rights and surface rights owners of the proposed EOR project and formation of Ewart Unit No. 11. 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 Ewart Unit No. 11 Application.

Ewart Unit No. 11 Unitization, and execution of the formal Ewart Unit No. 11 Agreement by affected Mineral Owners, is expected during Q4 2016. Copies of same will be forwarded to the Petroleum Branch, when available, to complete the Ewart Unit No. 11 Application.

Should the Petroleum Branch have further questions or require more information, please contact Abhy Pandey at 403.767.1247 or by email at abhy.pandey@tundraoilandgas.com.

TUNDRA OIL & GAS PARTNERSHIP

Original Signed by Abhy Pandey, October 31st, 2016, in Calgary, AB

Proposed Ewart Unit No. 11

Application for Enhanced Oil Recovery Waterflood Project

List of Figures

Figure No. 1

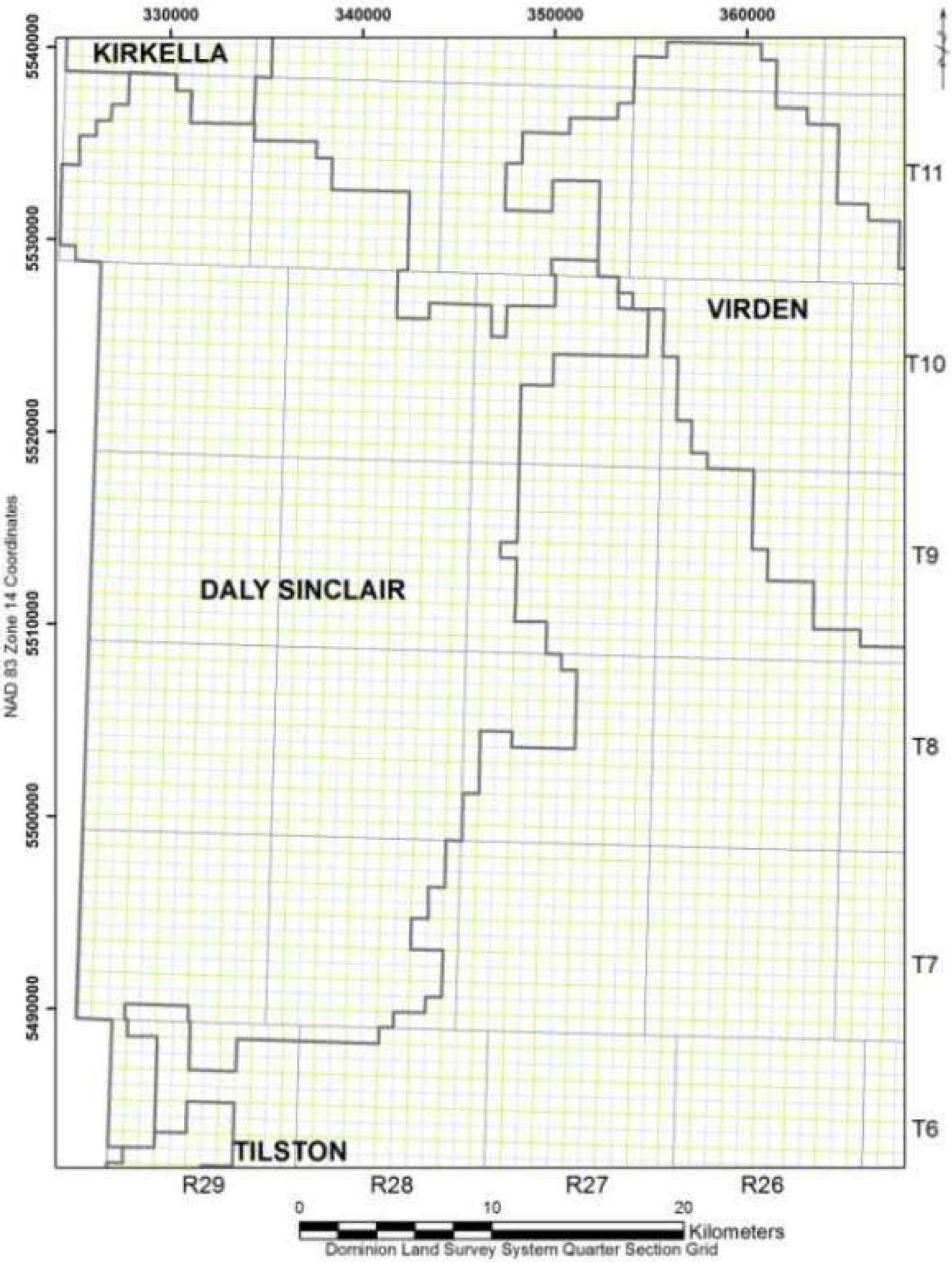


Figure 2 - Daly Sinclair (01)

Figure No. 2

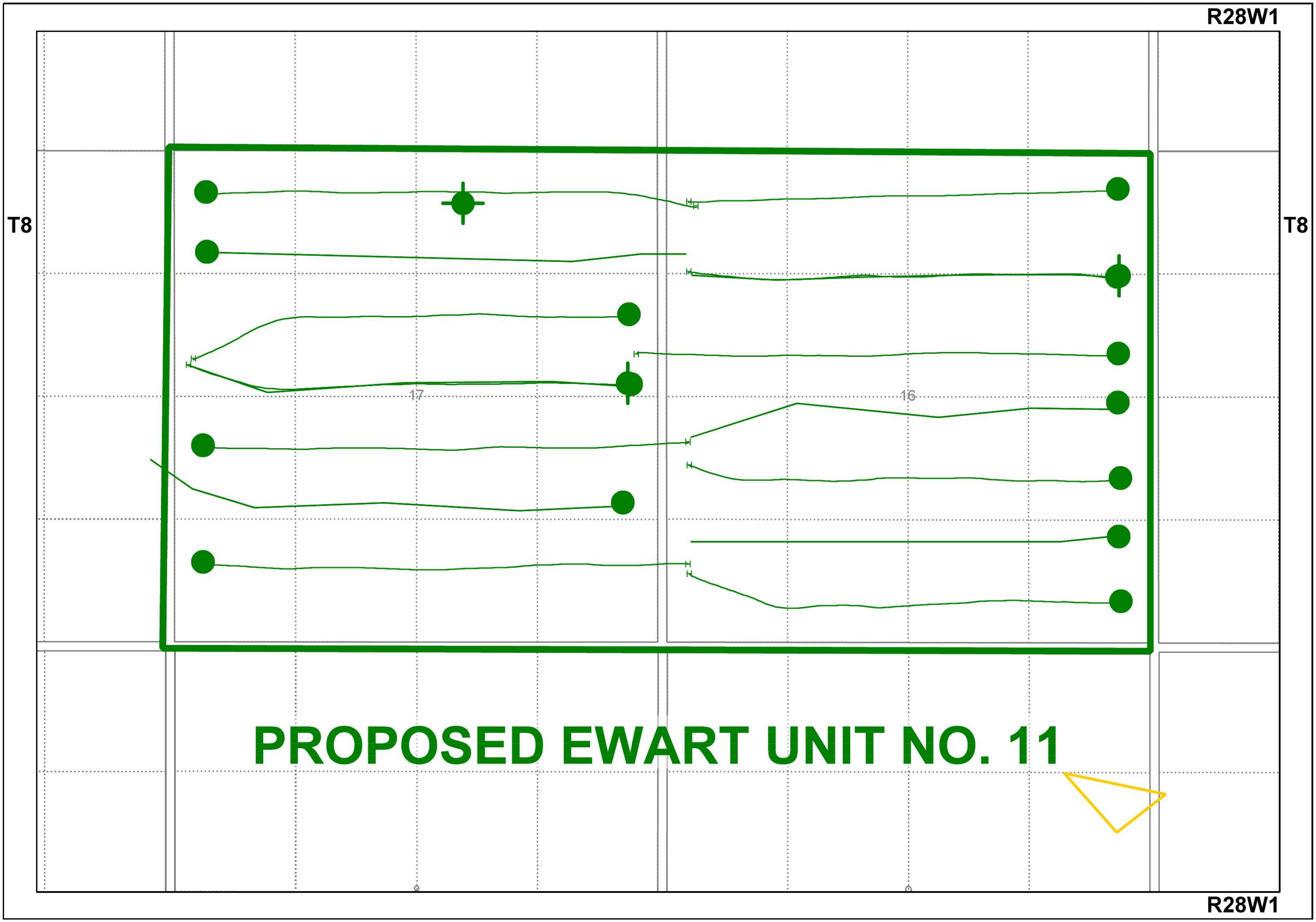


Figure No. 3

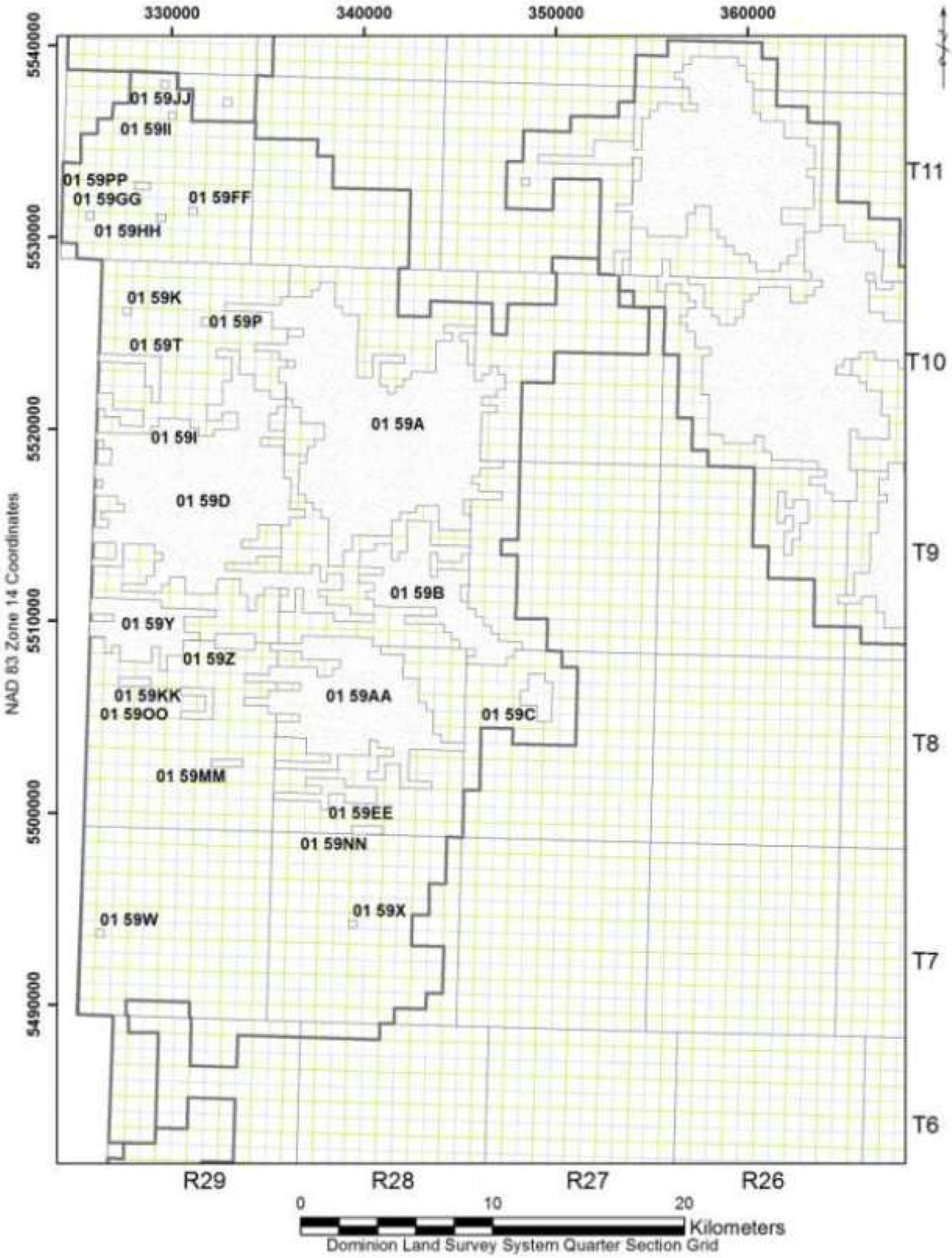


Figure 12 - Daly Sinclair Lodgepole Pools (01 59A, B, C, D, I, K, P, T, W, X, Y, Z, AA, EE, FF, GG, HH, II, JJ, KK, MM, NN, OO & PP)

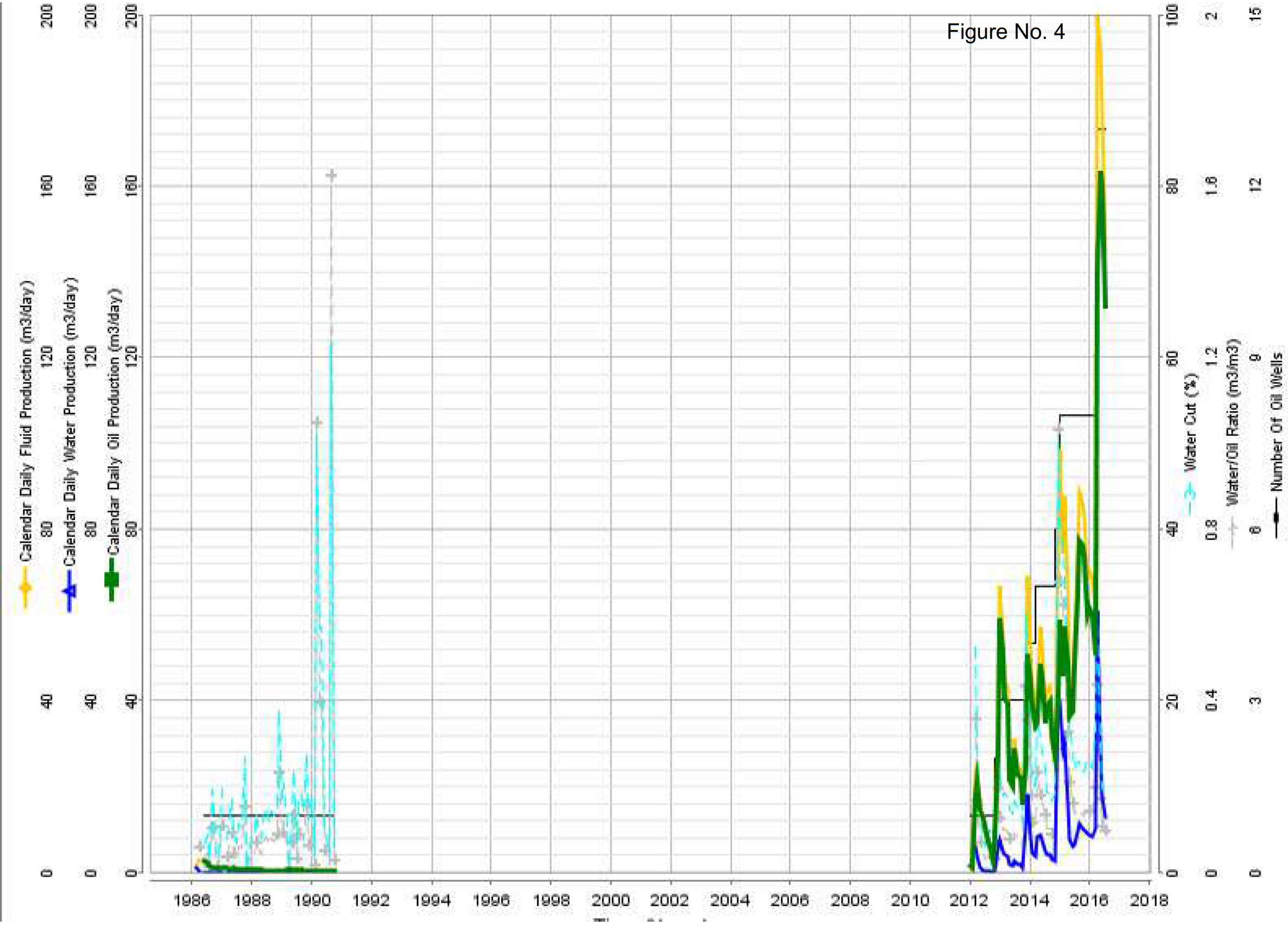

Calendar Daily Fluid Production (m3/day)
Calendar Daily Water Production (m3/day)
Calendar Daily Oil Production (m3/day)
Water Cut (%)
Water/Oil Ratio (m3/m3)
Number Of Oil Wells
0
40
80
120
160
200
0
20
40
60
80
100
0
0.4
0.8
1.2
1.6
2
0
3
6
9
12
15
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018

Figure No. 4

Figure No. 5

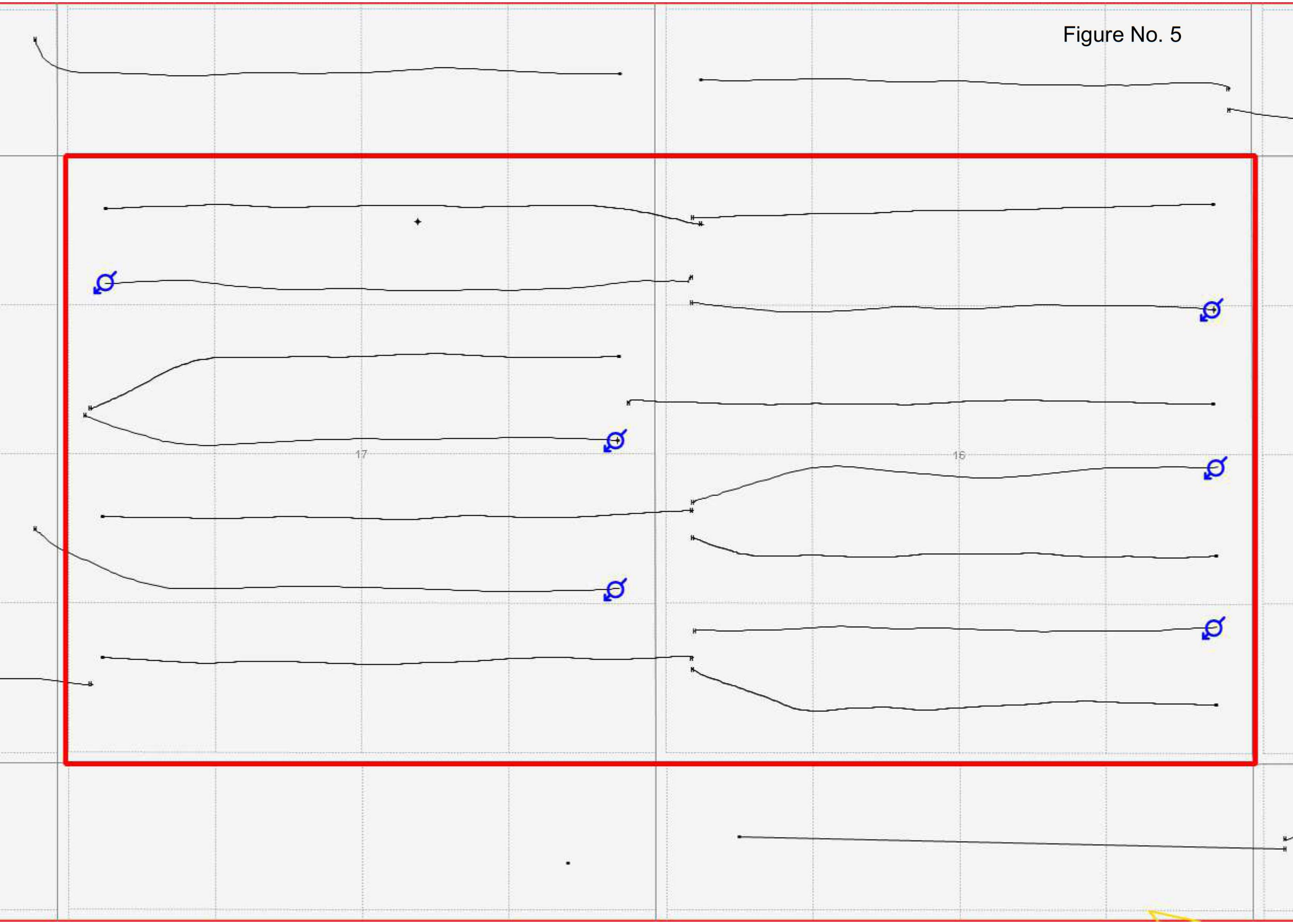


Figure No. 6

Primary Recovery

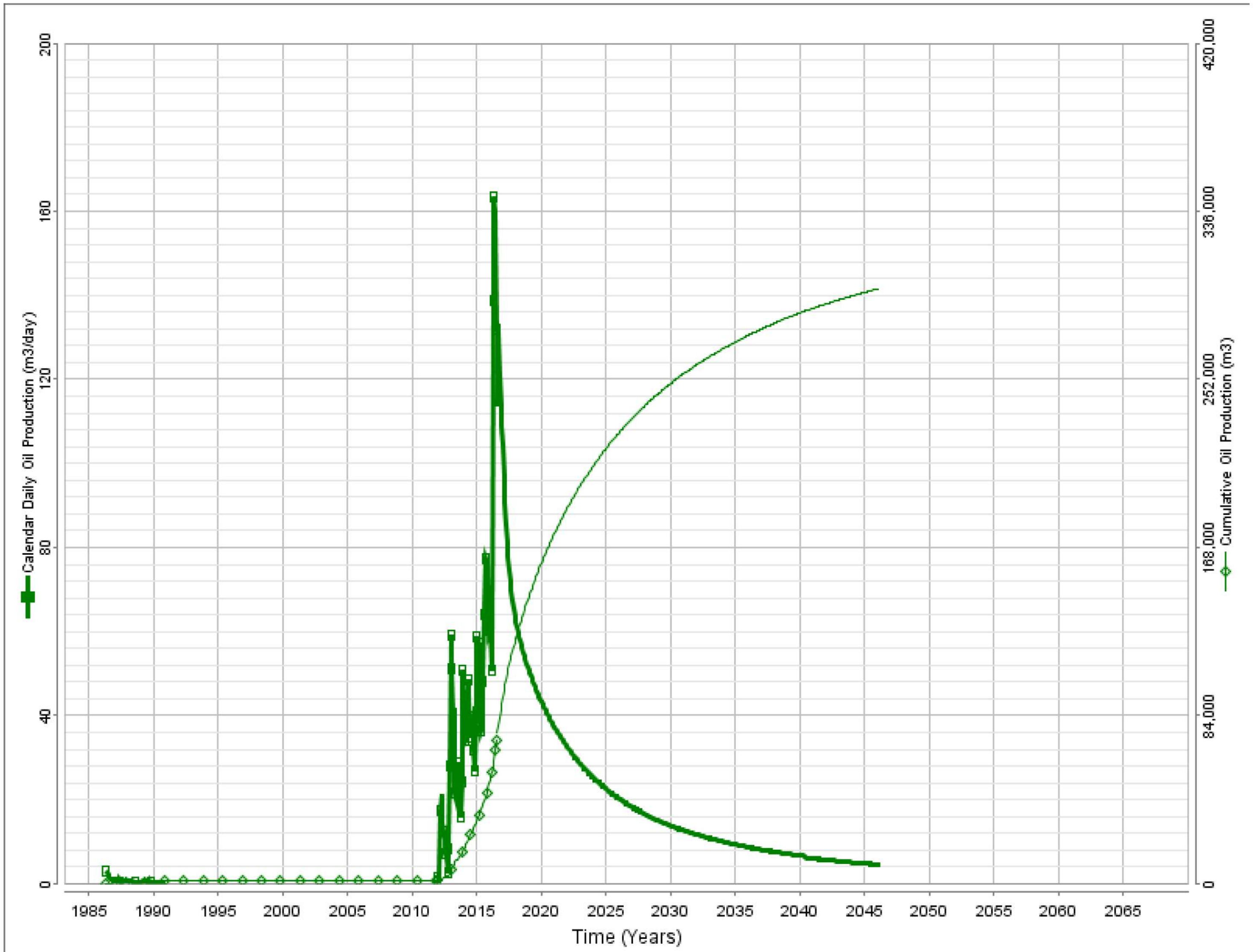
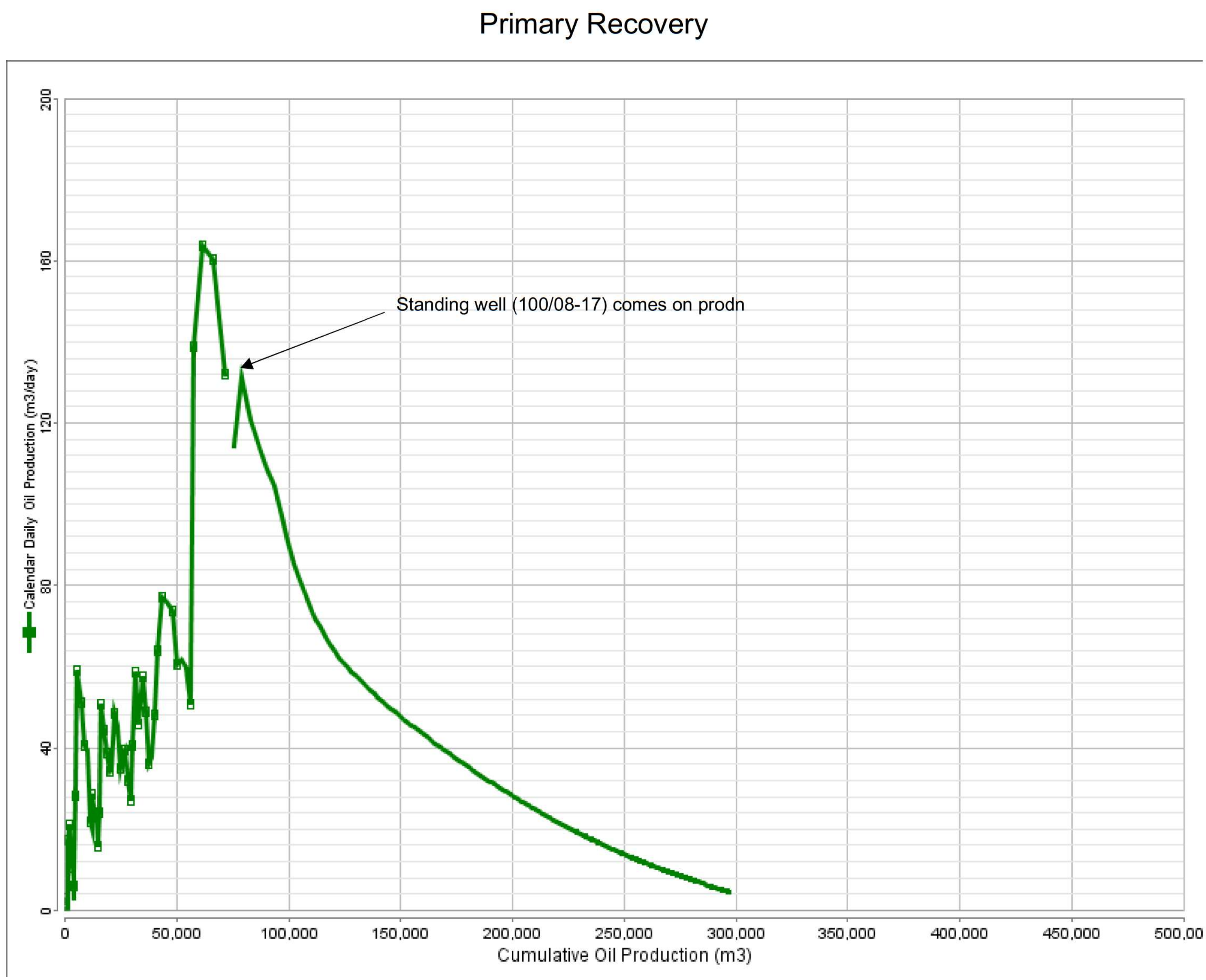


Figure No. 7



Primary Recovery
Standing well (100/08-17) comes on prodn
Calendar Daily Oil Production (m3/day)
0
40
80
120
160
200
0
50,000
100,000
150,000
200,000
250,000
300,000
350,000
400,000
450,000
500,00
Cumulative Oil Production (m3)

Figure No. 8

Primary + Secondary Recovery

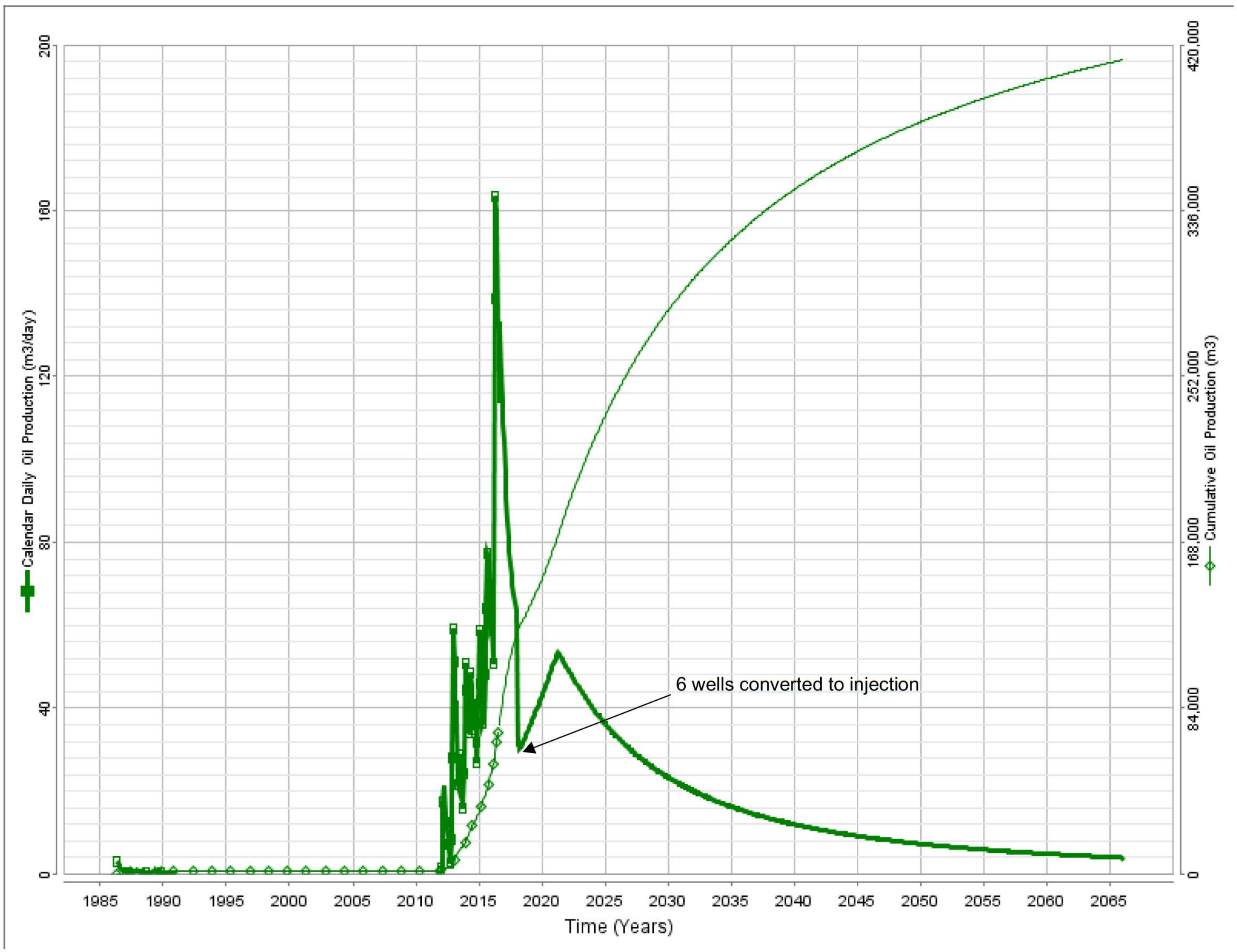


Figure No. 9

Primary + Secondary Recovery

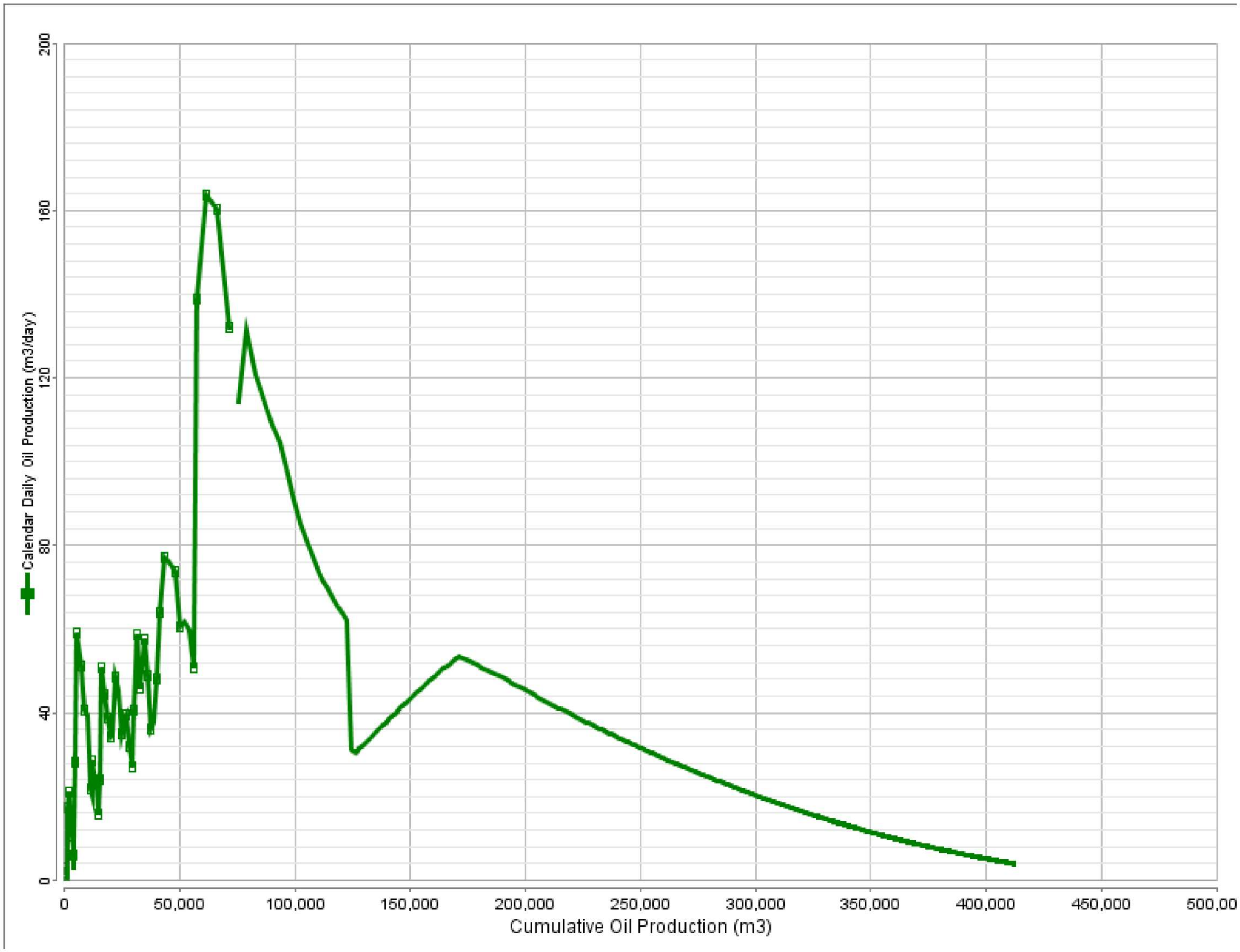
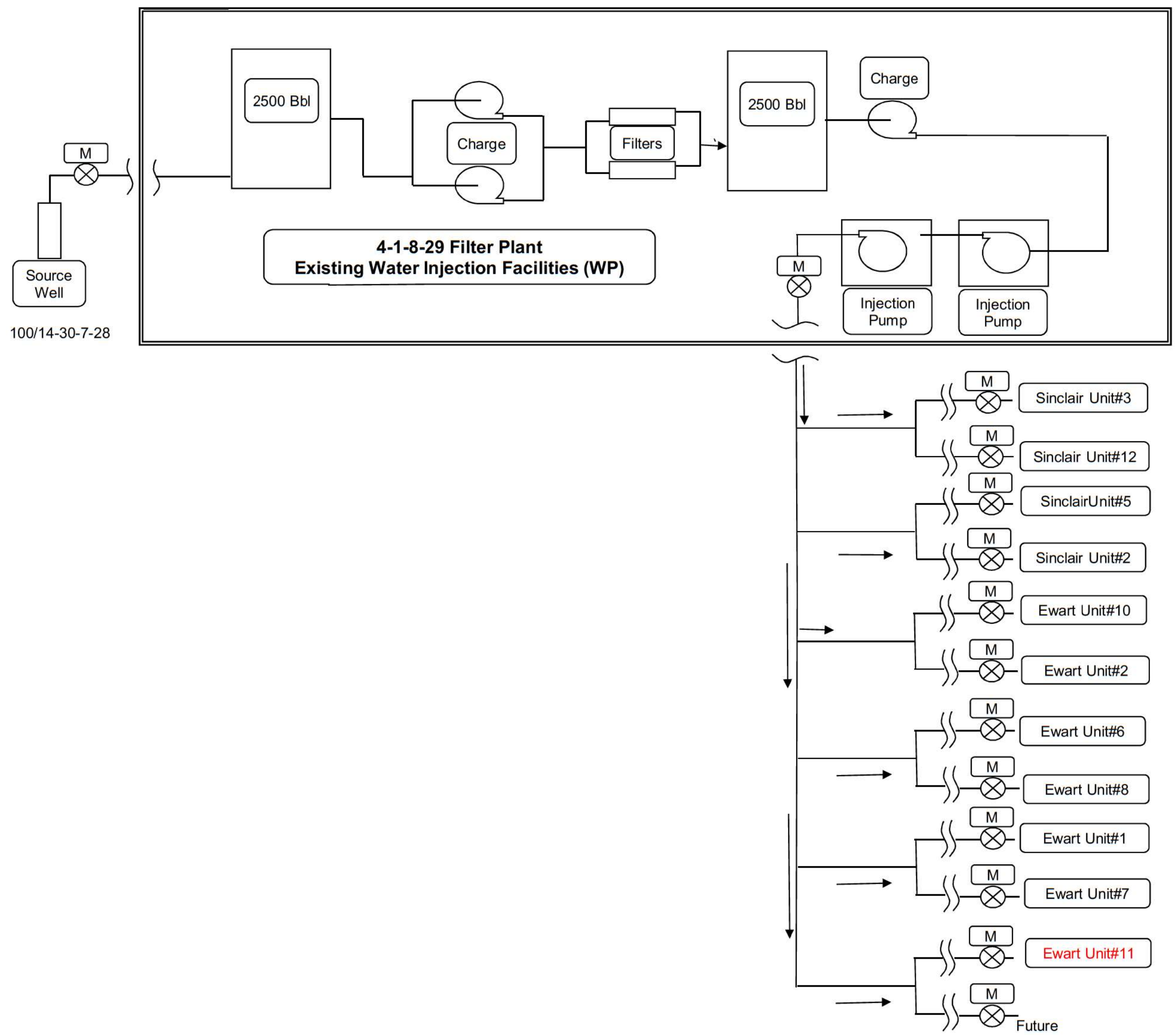


FIGURE NO. 10

Sinclair Water Injection System



Tundra Oil And Gas Partnership Figure No. 11

TYPICAL CEMENTED LINER WATER INJECTION WELL (WIW) DOWNHOLE DIAGRAM

WELL NAME:	**Tundra Ewart Unit 11 HZNTL Cemented Liner WIW**			**WELL LICENCE:**		
Prepared by	CP	(average depths)		Date:	2016	
Elevations :						
KB [m]			KB to THF [m]		TD [m]	2400.0
GL [m]			CF (m)		PBTD [m]	
Current Perfs:	**Cemented Casing / Liner**			950.0	to	2400.0
Current Perfs:					to	
KOP:	600 m MD		Total Interval		to	
Tubulars	**Size [mm]**	**Wt - Kg/m**	**Grade**	**Landing Depth [mKB]**		
Surface Casing	244.5	48.06	H-40 - ST&C	Surface	to	140.0
Intermed Csg (if run)	139.7	34.23 & 29.76	J-55 - LT&C	Surface	to	900.0
Production Liner	114.3	17.26	L-80	Surf or from Intermed Csg to		2400.0
Tubing	60.3 or 73.0 - TK-99	6.99 or 9.67	J-55	Surface	to	900.0

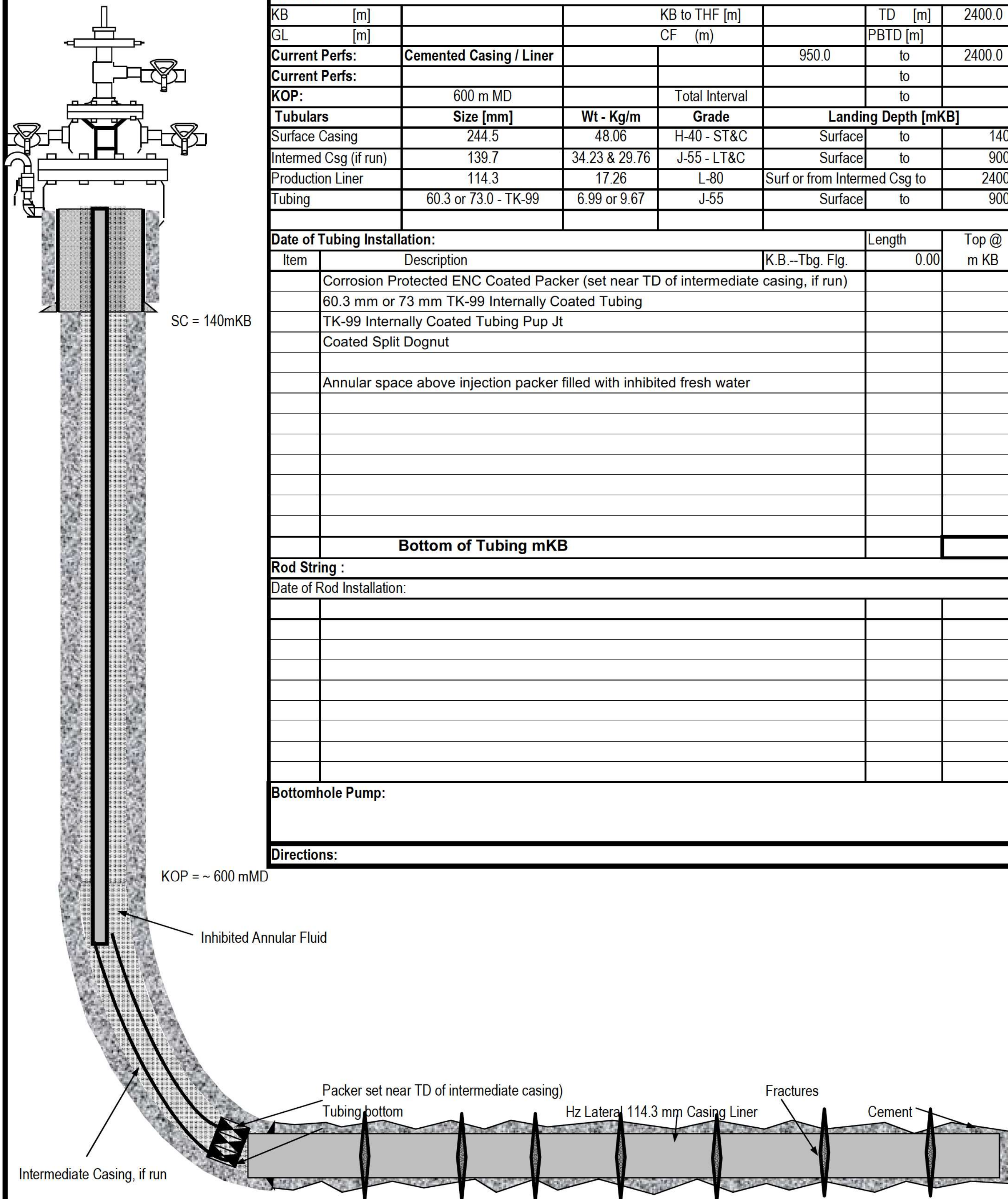
Date of Tubing Installation:		Length	Top @
Item	Description K.B.--Tbg. Flg.	0.00	m KB
	Corrosion Protected ENC Coated Packer (set near TD of intermediate casing, if run)		
	60.3 mm or 73 mm TK-99 Internally Coated Tubing		
	TK-99 Internally Coated Tubing Pup Jt		
	Coated Split Dognut		
	Annular space above injection packer filled with inhibited fresh water		
	Bottom of Tubing mKB		

Rod String :

Date of Rod Installation:

Bottomhole Pump:

Directions:



Ewart Unit No. 11

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 4-1-8-29 Water Plant - Fiberglass
- New High Pressure Pipeline to injection well – 2000 psi high pressure Fiberglass

Facilities
- 4-1-8-29 Water Plant and New Injection Pump Station
    - Plant piping – 600 ANSI schedule 80 pipe, Fiberglass or Internally coated
    - Filtration – Stainless steel, HDPE Poly, fiberglass materials
    - 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 Well
- 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 12

** subject to final design and engineering

Proposed Ewart Unit No. 11

Application for Enhanced Oil Recovery Waterflood Project

List of Tables

TABLE NO. 1: TRACT PARTICIPATION FOR PROPOSED EWART UNIT NO. 11

Working Interest				Royalty Interest		
Tract No.	**Land Description**	**Owner**	**Share (%)**	**Owner**	**Share (%)**	**Tract Participation (%)**
1	01-16-008-28W1M	Tundra Oil & Gas Partnership	100%	Minister of Finance - Manitoba	100.000%	3.256075797
2	02-16-008-28W1M	Tundra Oil & Gas Partnership	100%	Minister of Finance - Manitoba	100.000%	3.192400656
3	03-16-008-28W1M	Tundra Oil & Gas Partnership	100%	6590242 Manitoba Ltd.	45.240%	3.382468405
				Donald [redacted]	45.240%	
				University of Manitoba	9.520%	
4	04-16-008-28W1M	Tundra Oil & Gas Partnership	100%	6590242 Manitoba Ltd.	50.000%	3.799556247
				Donald [redacted]	50.000%	
5	05-16-008-28W1M	Tundra Oil & Gas Partnership	100%	6590242 Manitoba Ltd.	46.535%	3.483979773
				Donald [redacted]	46.535%	
				University of Manitoba	6.930%	
6	06-16-008-28W1M	Tundra Oil & Gas Partnership	100%	6590242 Manitoba Ltd.	48.795%	3.343497856
				Donald [redacted]	48.795%	
				University of Manitoba	2.410%	
7	07-16-008-28W1M	Tundra Oil & Gas Partnership	100%	Minister of Finance - Manitoba	100.000%	3.248110174
8	08-16-008-28W1M	Tundra Oil & Gas Partnership	100%	Minister of Finance - Manitoba	100.000%	3.201227754
9	09-16-008-28W1M	Tundra Oil & Gas Partnership	100%	Minister of Finance - Manitoba	100.000%	3.181692067
10	10-16-008-28W1M	Tundra Oil & Gas Partnership	100%	Minister of Finance - Manitoba	100.000%	3.247529113
11	11-16-008-28W1M	Tundra Oil & Gas Partnership	100%	6590242 Manitoba Ltd.	50.000%	3.197117062
				Donald [redacted]	50.000%	
12	12-16-008-28W1M	Tundra Oil & Gas Partnership	100%	6590242 Manitoba Ltd.	46.810%	3.056337999
				Donald [redacted]	46.810%	
				University of Manitoba	6.380%	
13	13-16-008-28W1M	Tundra Oil & Gas Partnership	100%	6590242 Manitoba Ltd.	50.000%	2.945676326
				Donald [redacted]	50.000%	
14	14-16-008-28W1M	Tundra Oil & Gas Partnership	100%	6590242 Manitoba Ltd.	50.000%	3.310282044
				Donald [redacted]	50.000%	
15	15-16-008-28W1M	Tundra Oil & Gas Partnership	100%	Minister of Finance - Manitoba	100.000%	3.415824314
16	16-16-008-28W1M	Tundra Oil & Gas Partnership	100%	Minister of Finance - Manitoba	100.000%	3.263987447
17	01-17-008-28W1M	Tundra Oil & Gas Partnership	100%	Purvis Energy Ltd.	50.000%	3.249898672
				1093105 Ontario Inc.	50.000%	
18	02-17-008-28W1M	Tundra Oil & Gas Partnership	100%	Purvis Energy Ltd.	50.000%	2.950168650
				1093105 Ontario Inc.	50.000%	
19	03-17-008-28W1M	Tundra Oil & Gas Partnership	100%	5301807 Manitoba Ltd.	50.000%	2.965205282
				1093105 Ontario Inc.	50.000%	
20	04-17-008-28W1M	Tundra Oil & Gas Partnership	100%	5301807 Manitoba Ltd.	50.000%	3.178167829
				1093105 Ontario Inc.	50.000%	
21	05-17-008-28W1M	Tundra Oil & Gas Partnership	100%	5301807 Manitoba Ltd.	50.000%	3.118657557
				1093105 Ontario Inc.	50.000%	
22	06-17-008-28W1M	Tundra Oil & Gas Partnership	100%	5301807 Manitoba Ltd.	50.000%	3.024371599
				1093105 Ontario Inc.	50.000%	
23	07-17-008-28W1M	Tundra Oil & Gas Partnership	100%	Purvis Energy Ltd.	50.000%	2.999564534
				1093105 Ontario Inc.	50.000%	
24	08-17-008-28W1M	Tundra Oil & Gas Partnership	100%	Purvis Energy Ltd.	50.000%	3.189558227
				1093105 Ontario Inc.	50.000%	
25	09-17-008-28W1M	Tundra Oil & Gas Partnership	100%	Purvis Energy Ltd.	49.0875%	2.898293384
				1093105 Ontario Inc.	49.0875%	
				Minister of Finance - MRO 18	1.8250%	
26	10-17-008-28W1M	Tundra Oil & Gas Partnership	100%	Purvis Energy Ltd.	50.000%	2.792565113
				1093105 Ontario Inc.	50.000%	
27	11-17-008-28W1M	Tundra Oil & Gas Partnership	100%	5301807 Manitoba Ltd.	50.000%	2.904260389
				1093105 Ontario Inc.	50.000%	
28	12-17-008-28W1M	Tundra Oil & Gas Partnership	100%	5301807 Manitoba Ltd.	50.000%	3.017597378
				1093105 Ontario Inc.	50.000%	
29	13-17-008-28W1M	Tundra Oil & Gas Partnership	100%	5301807 Manitoba Ltd.	50.000%	3.024362309
				1093105 Ontario Inc.	50.000%	
30	14-17-008-28W1M	Tundra Oil & Gas Partnership	100%	5301807 Manitoba Ltd.	50.000%	2.889643712
				1093105 Ontario Inc.	50.000%	
31	15-17-008-28W1M	Tundra Oil & Gas Partnership	100%	Purvis Energy Ltd.	50.000%	2.511417607
				1093105 Ontario Inc.	50.000%	
32	16-17-008-28W1M	Tundra Oil & Gas Partnership	100%	Purvis Energy Ltd.	45.3875%	2.760504724
				1093105 Ontario Inc.	45.3875%	
				Minister of Finance - MRO 18	9.2250%	
						100.000000000

TABLE NO. 2: TRACT FACTOR CALCULATIONS

TRACT FACTORS BASED ON OIL-IN-PLACE (OOIP) LESS CUMULATIVE OIL PRODUCED METHOD

PROPOSED EWART UNIT NO. 11

LSD-SEC	TWP-RGE	UWI	OOIP (m3)	Hz Allocated Cum Prodn June 2016 (m3)	Vertical Cum Prodn June 2016 (m3)	OOIP - Cum Oil Prodn (m3)	Tract Factor (%)	UWI
01-16	008-28W1M	100/01-16-008-28W1M	116,081	1786.9	0.0	114294	3.256075797	100/01-16-008-28W1M
02-16	008-28W1M	100/02-16-008-28W1M	113,934	1875.4	0.0	112059	3.192400656	100/02-16-008-28W1M
03-16	008-28W1M	100/03-16-008-28W1M	120,587	1856.1	0.0	118731	3.382468405	100/03-16-008-28W1M
04-16	008-28W1M	100/04-16-008-28W1M	134,502	1131.0	0.0	133371	3.799556247	100/04-16-008-28W1M
05-16	008-28W1M	100/05-16-008-28W1M	123,557	1263.0	0.0	122294	3.483979773	100/05-16-008-28W1M
06-16	008-28W1M	100/06-16-008-28W1M	119,822	2459.7	0.0	117363	3.343497856	100/06-16-008-28W1M
07-16	008-28W1M	100/07-16-008-28W1M	116,496	2481.7	0.0	114014	3.248110174	100/07-16-008-28W1M
08-16	008-28W1M	100/08-16-008-28W1M	114,677	2308.3	0.0	112369	3.201227754	100/08-16-008-28W1M
09-16	008-28W1M	100/09-16-008-28W1M	114,280	2597.3	0.0	111683	3.181692067	100/09-16-008-28W1M
10-16	008-28W1M	100/10-16-008-28W1M	116,694	2699.9	0.0	113994	3.247529113	100/10-16-008-28W1M
11-16	008-28W1M	100/11-16-008-28W1M	114,984	2759.7	0.0	112224	3.197117062	100/11-16-008-28W1M
12-16	008-28W1M	100/12-16-008-28W1M	109,632	2349.6	0.0	107283	3.056337999	100/12-16-008-28W1M
13-16	008-28W1M	100/13-16-008-28W1M	104,705	1306.3	0.0	103398	2.945676326	100/13-16-008-28W1M
14-16	008-28W1M	100/14-16-008-28W1M	118,731	2534.2	0.0	116197	3.310282044	100/14-16-008-28W1M
15-16	008-28W1M	100/15-16-008-28W1M	122,458	2556.8	0.0	119902	3.415824314	100/15-16-008-28W1M
16-16	008-28W1M	100/16-16-008-28W1M	116,956	2384.1	0.0	114572	3.263987447	100/16-16-008-28W1M
01-17	008-28W1M	100/01-17-008-28W1M	115,528	1451.2	0.0	114077	3.249898672	100/01-17-008-28W1M
02-17	008-28W1M	100/02-17-008-28W1M	105,349	1792.8	0.0	103556	2.950168650	100/02-17-008-28W1M
03-17	008-28W1M	100/03-17-008-28W1M	105,873	1789.0	0.0	104084	2.965205282	100/03-17-008-28W1M
04-17	008-28W1M	100/04-17-008-28W1M	113,285	1726.0	0.0	111559	3.178167829	100/04-17-008-28W1M
05-17	008-28W1M	100/05-17-008-28W1M	111,457	1986.9	0.0	109470	3.118657557	100/05-17-008-28W1M
06-17	008-28W1M	100/06-17-008-28W1M	108,287	2126.2	0.0	106161	3.024371599	100/06-17-008-28W1M
07-17	008-28W1M	100/07-17-008-28W1M	107,397	2106.8	0.0	105290	2.999564534	100/07-17-008-28W1M
08-17	008-28W1M	100/08-17-008-28W1M	114,001	2041.7	0.0	111959	3.189558227	100/08-17-008-28W1M
09-17	008-28W1M	100/09-17-008-28W1M	104,586	2851.1	0.0	101735	2.898293384	100/09-17-008-28W1M
10-17	008-28W1M	100/10-17-008-28W1M	101,071	3046.6	0.0	98024	2.792565113	100/10-17-008-28W1M
11-17	008-28W1M	100/11-17-008-28W1M	104,941	2995.9	0.0	101945	2.904260389	100/11-17-008-28W1M
12-17	008-28W1M	100/12-17-008-28W1M	108,060	2136.7	0.0	105923	3.017597378	100/12-17-008-28W1M
13-17	008-28W1M	100/13-17-008-28W1M	109,562	3401.5	0.0	106160	3.024362309	100/13-17-008-28W1M
14-17	008-28W1M	100/14-17-008-28W1M	104,972	3540.2	0.0	101432	2.889643712	100/14-17-008-28W1M
15-17	008-28W1M	100/15-17-008-28W1M	92,897	3515.8	1225.9	88155	2.511417607	100/15-17-008-28W1M
16-17	008-28W1M	100/16-17-008-28W1M	100,206	3306.9	0.0	96899	2.760504724	100/16-17-008-28W1M
			3,585,569	**74165.2**	**1225.9**	**3510178**	**100.000000000**	

TABLE NO. 3

Proposed Ewart Unit 11 Well List

UWI	License Number	Rig Release Date	Type	Pool Name	Producing Zone	Mode	On Prod Date	Prod Date	Cal Dly Oil (m3/d)	Monthly Oil (m3)	Cum Prd Oil (m3)	Cal Dly Water (m3/d)	Monthly Water (m3)	Cum Prd Water (m3)	WCT (%)
102/01-16-008-28W1/0	009995	9/17/2014	Horizontal	LODGEPOLE A	LODGEPOL	Producing	11/1/2014	Jun-2016	9.0	270.0	5518.5	0.95	28.5	2274.6	9.55
103/01-16-008-28W1/0	010512	1/24/2016	Horizontal	LODGEPOLE A	LODGEPOL	Producing	2/1/2016	Jun-2016	5.5	163.8	1379.4	0.1	4.0	517.2	2.38
103/08-16-008-28W1/0	010032	9/10/2014	Horizontal	LODGEPOLE A	LODGEPOL	Producing	12/18/2014	Jun-2016	10.6	318.2	6686.3	1.06	31.9	2427.0	9.11
104/08-16-008-28W1/0	010527	2/11/2016	Horizontal	LODGEPOLE A	LODGEPOL	Producing	3/1/2016	Jun-2016	15.2	454.7	2340.9	0.7	19.8	340.2	4.17
102/09-16-008-28W1/0	008724	9/28/2012	Horizontal	LODGEPOLE A	LODGEPOL	Producing	11/6/2012	Jun-2016	4.0	116.3	8498.8	0.22	6.3	784.8	5.14
102/16-16-008-28W1/0	008383	12/2/2011	Horizontal	LODGEPOLE A	LODGEPOL	Producing	12/22/2011	Jun-2016	2.2	65.6	7310.9	0.04	1.1	935.6	1.65
103/16-16-008-28W1/0	010517	1/30/2016	Horizontal	LODGEPOLE A	LODGEPOL	Producing	2/1/2016	Jun-2016	16.0	471.2	2615.1	1.8	55.1	465.6	10.47
103/04-17-008-28W1/0	009443	8/17/2013	Horizontal	LODGEPOLE A	LODGEPOL	Producing	9/16/2013	Jun-2016	4.6	136.8	6759.0	0.26	7.7	1397.4	5.33
102/05-17-008-28W1/0	010031	9/2/2014	Horizontal	LODGEPOLE A	LODGEPOL	Producing	10/17/2014	Jun-2016	13.1	391.4	7761.1	1.81	54.4	3015.8	12.20
100/08-17-008-28W1/0	010520	2/27/2016	Horizontal	LODGEPOLE A	LODGEPOL	Standing	N/A								
100/09-17-008-28W1/0	009754	2/11/2014	Horizontal	LODGEPOLE A	LODGEPOL	Producing	2/20/2014	Jun-2016	6.3	186.9	8820.9	0.34	10.2	1272.9	5.18
102/09-17-008-28W1/0	010519	2/16/2016	Horizontal	LODGEPOLE A	LODGEPOL	Producing	3/1/2016	Jun-2016	17.5	511.1	2246.1	1.8	51.8	535.9	9.20
102/13-17-008-28W1/0	008784	9/14/2012	Horizontal	LODGEPOLE A	LODGEPOL	Producing	10/17/2012	Jun-2016	5.8	169.6	11044.2	0.24	7.2	989.5	4.07
103/13-17-008-28W1/0	010518	2/5/2016	Horizontal	LODGEPOLE A	LODGEPOL	Producing	2/1/2016	Jun-2016	23.6	707.7	3184.0	3.6	106.6	589.4	13.09

These locations are abandoned and/or did not produce and will not be included in the Unit Well list.

UWI	License Number	Rig Release Date	Type	Pool Name	Producing Zone	Mode	On Prod Date	Prod Date	Cal Dly Oil (m3/d)	Monthly Oil (m3)	Cum Prd Oil (m3)	Cal Dly Water (m3/d)	Monthly Water (m3)	Cum Prd Water (m3)	WCT (%)
100/15-17-008-28W1/0	003829	2/12/1986	Vertical	LODGEPOLE A	LODGEPOL	Abandoned	3/3/1986	Sep-1990	0.4	13.4	1225.9	0.0	0.4	123.9	2.90
											75391.1			**15669.8**	

TABLE NO. 4: OOIP Calculation

UWI	Average Thickness (m)	OOIP (m3)	OOIP (bbls)
01-16-008-28W1M	8.419	116,081	730,127
02-16-008-28W1M	8.262	113,934	716,625
03-16-008-28W1M	8.740	120,587	758,468
04-16-008-28W1M	9.747	134,502	845,993
05-16-008-28W1M	8.957	123,557	777,149
06-16-008-28W1M	8.687	119,822	753,660
07-16-008-28W1M	8.450	116,496	732,739
08-16-008-28W1M	8.319	114,677	721,297
09-16-008-28W1M	8.293	114,280	718,802
10-16-008-28W1M	8.467	116,694	733,983
11-16-008-28W1M	8.339	114,984	723,229
12-16-008-28W1M	7.950	109,632	689,568
13-16-008-28W1M	7.595	104,705	658,573
14-16-008-28W1M	8.614	118,731	746,796
15-16-008-28W1M	8.887	122,458	770,239
16-16-008-28W1M	8.490	116,956	735,630
01-17-008-28W1M	8.361	115,528	726,652
02-17-008-28W1M	7.630	105,349	662,625
03-17-008-28W1M	7.670	105,873	665,921
04-17-008-28W1M	8.212	113,285	712,543
05-17-008-28W1M	8.079	111,457	701,045
06-17-008-28W1M	7.845	108,287	681,105
07-17-008-28W1M	7.777	107,397	675,506
08-17-008-28W1M	8.250	114,001	717,044
09-17-008-28W1M	7.569	104,586	657,828
10-17-008-28W1M	7.319	101,071	635,715
11-17-008-28W1M	7.602	104,941	660,057
12-17-008-28W1M	7.833	108,060	679,675
13-17-008-28W1M	7.941	109,562	689,124
14-17-008-28W1M	7.604	104,972	660,253
15-17-008-28W1M	6.726	92,897	584,304
16-17-008-28W1M	7.251	100,206	630,274
		3,585,569	**22,552,548**

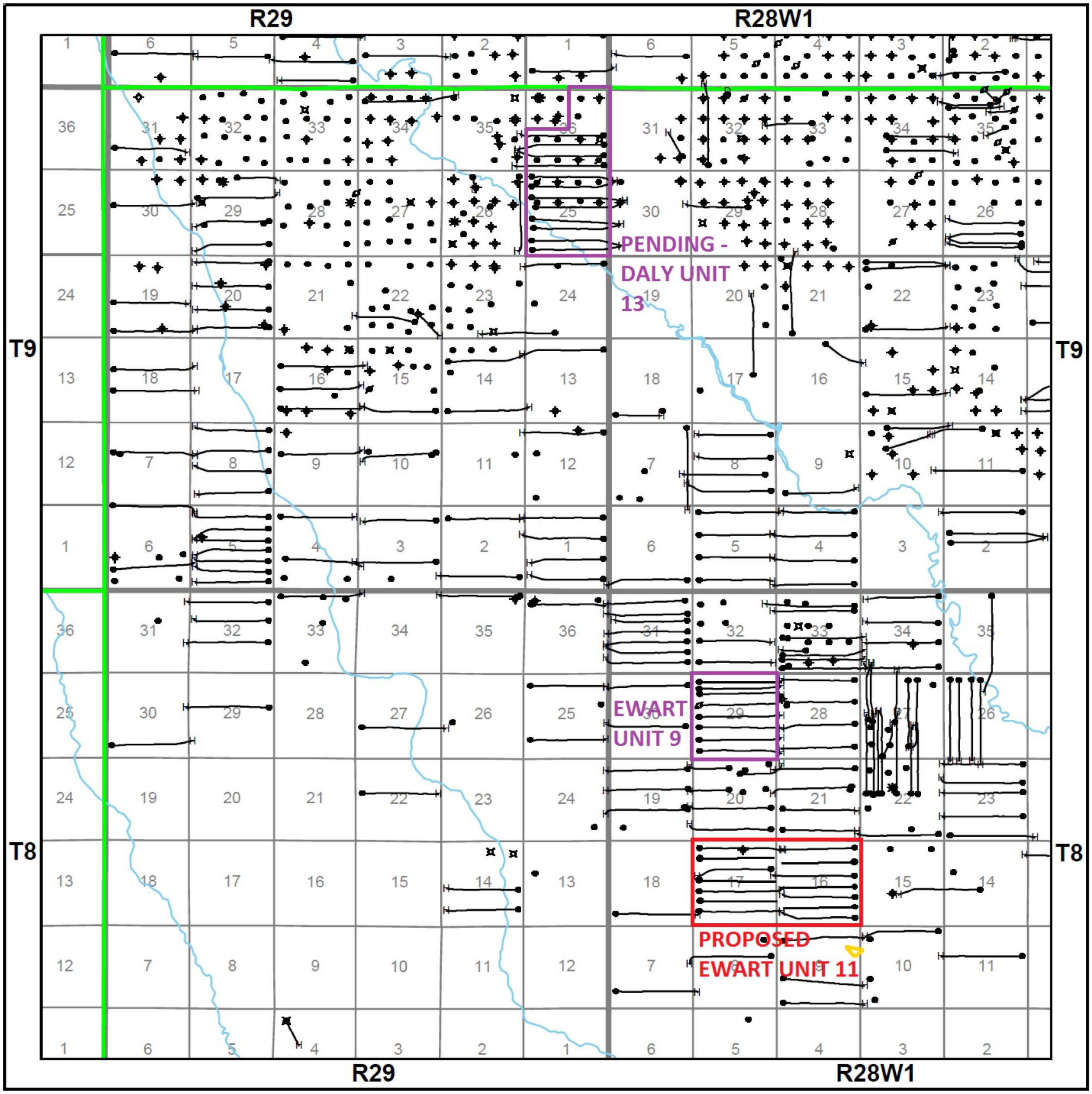
Average Net:Gross:	0.381
Average Porosity:	12.5%
Sw:	25.0%
Boi:	1.1

Proposed Ewart Unit No. 11

Application for Enhanced Oil Recovery Waterflood Project

LIST OF APPENDICES

APPENDIX 1



Datum: NAD27 Projection: Stereographic DLS Version AB: ATS 2.6, BC: PRB 2.0, SK: STS 2.5, MB: MLI07

Well Legend

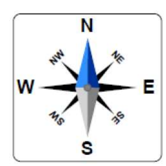
Abandoned Gas	Gas	Suspended
Abandoned Heavy Oil	Gas Injection	Suspended Gas
Abandoned Oil	Heavy Oil	Suspended Heavy Oil
Abandoned Oil & Gas	Injection	Suspended Oil
Abandoned Service	Location	Suspended Oil & Gas
Canceled	Oil	**Lists**
Drilling	Oil & Gas	Wells - Lpl wells2
Dry & Abandoned	Service or Drain	

Center: 49.7173, -101.2981

Scale: 1:111,575

0 1 2 3 4 km

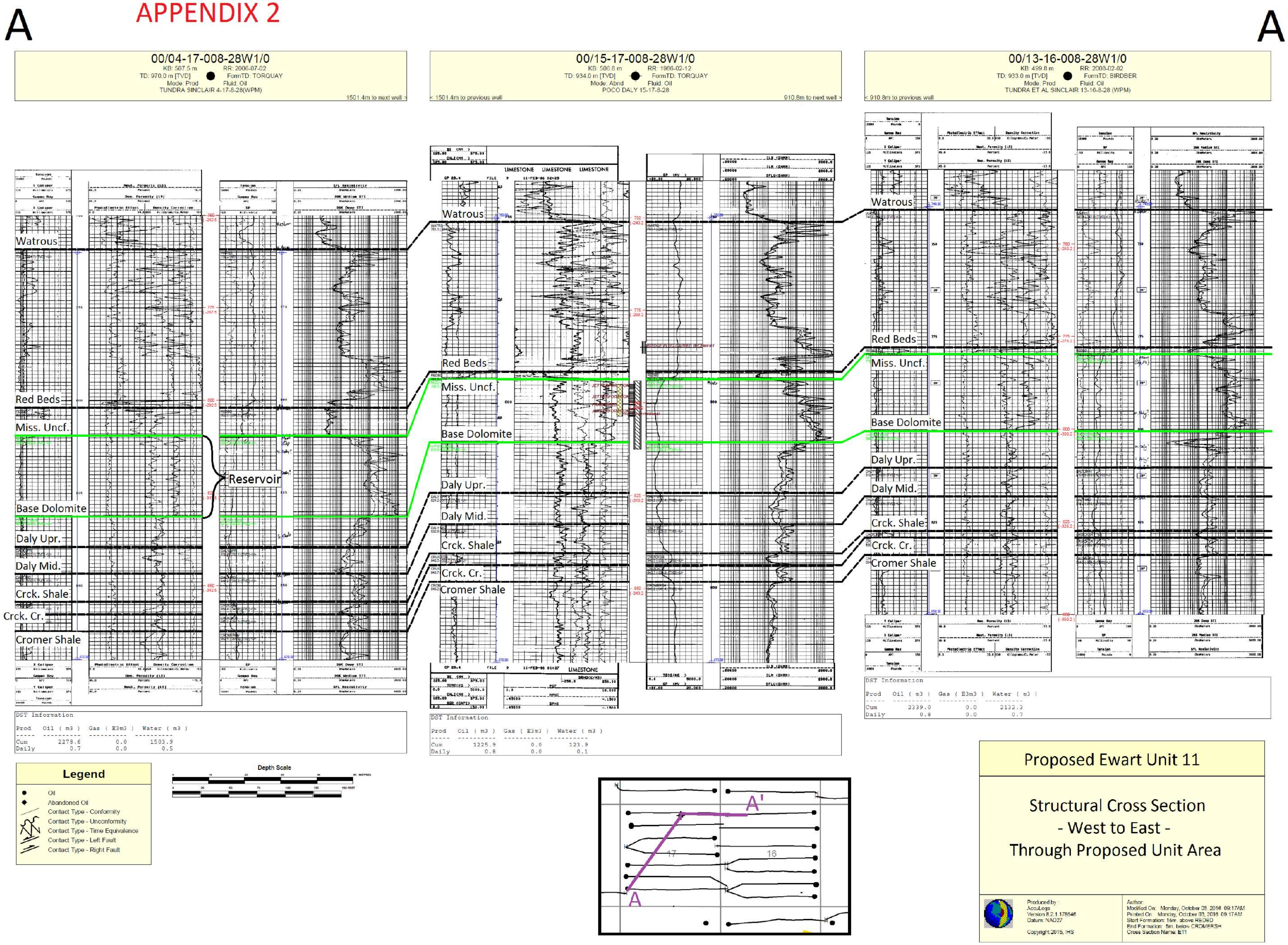
0 0.5 1 1.5 2 mi



Sinclair Daly Dolomite Unit Overview

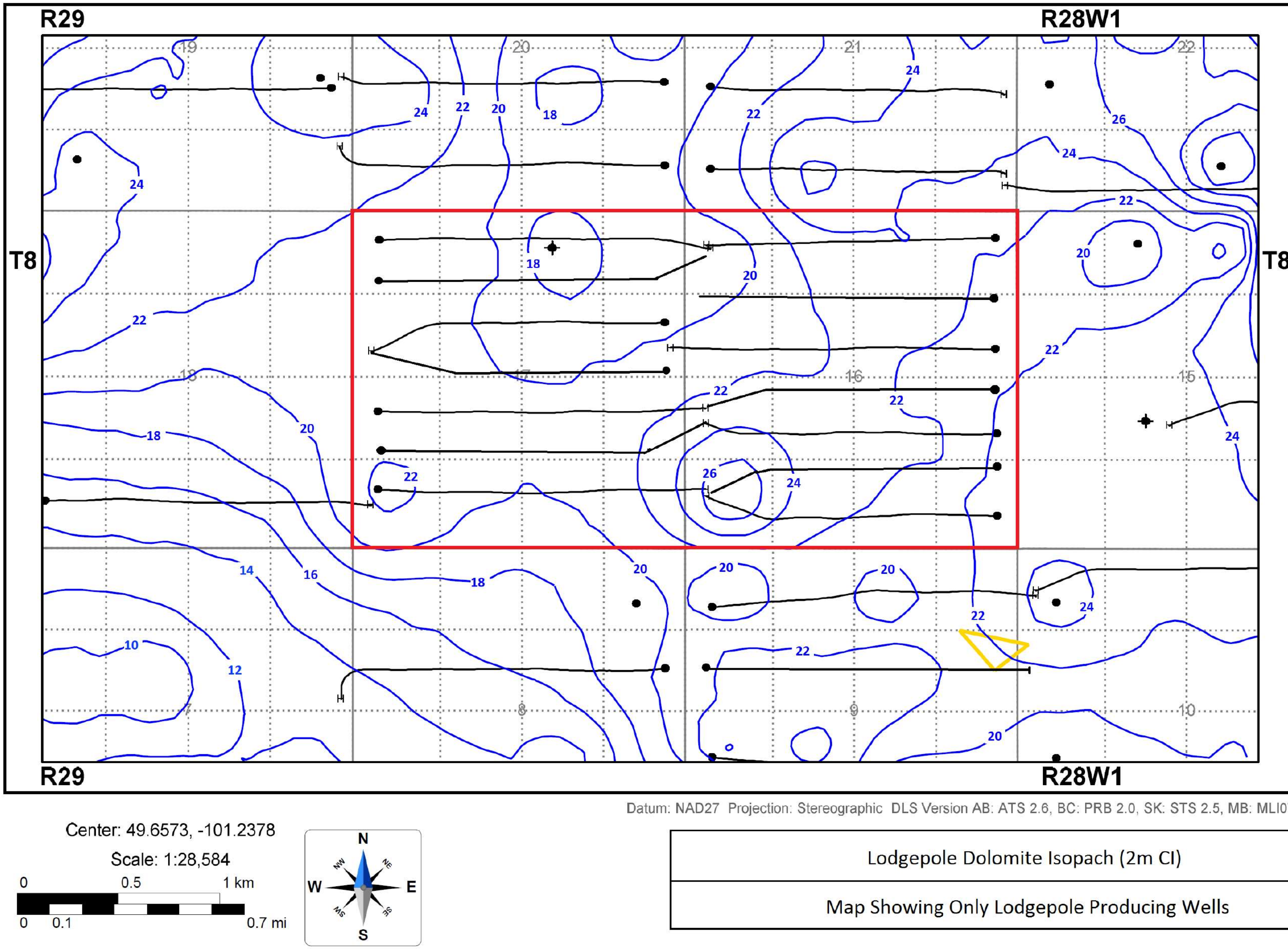
Map Showing Only Lodgepole Producing Wells

APPENDIX 2



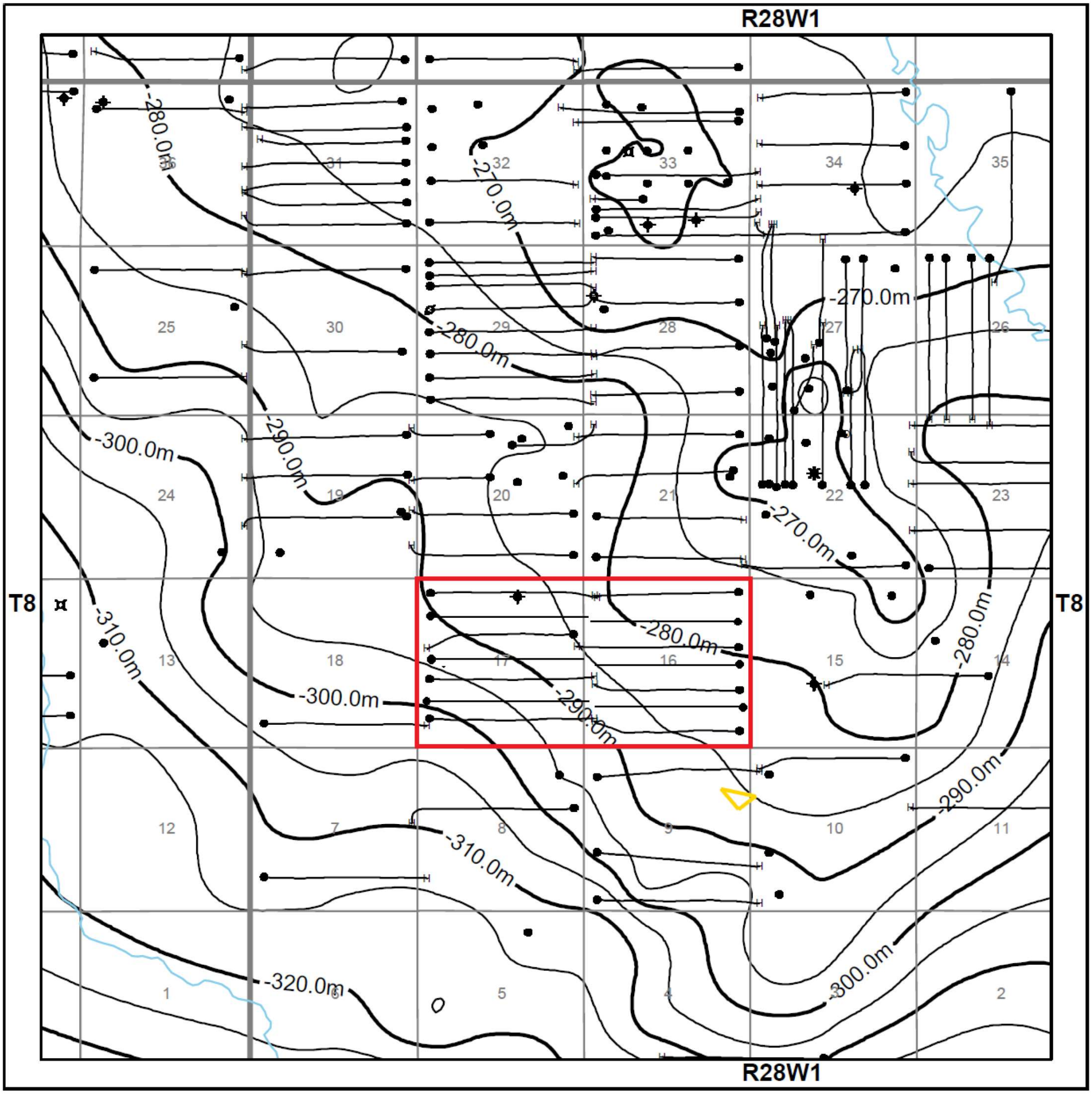
A
A'
00/04-17-008-28W1/0
KB: 507.5 m RR: 2006-07-02
TD: 970.0 m [TVD] FormTD: TORQUAY
Mode: Prod Fluid: Oil
TUNDRA SINCLAIR 4-17-8-28(WPM)
1501.4m to next well >
00/15-17-008-28W1/0
KB: 506.8 m RR: 1966-02-12
TD: 934.0 m [TVD] FormTD: TORQUAY
Mode: Abnd Fluid: Oil
POCO DALY 15-17-8-28
< 1501.4m to previous well
910.8m to next well >
00/13-16-008-28W1/0
KB: 499.8 m RR: 2008-02-02
TD: 933.0 m [TVD] FormTD: BIRDBER
Mode: Prod Fluid: Oil
TUNDRA ET AL SINCLAIR 13-16-8-28 (WPM)
< 910.8m to previous well
Watrous
Red Beds
Miss. Uncf.
Base Dolomite
Daly Upr.
Daly Mid.
Crck. Shale
Crck. Cr.
Cromer Shale
Reservoir
LIMESTONE
DST Information
Prod Oil (m3) Gas (E3m3) Water (m3)
Cum 2278.6 0.0 1503.9
Daily 0.7 0.0 0.5
DST Information
Prod Oil (m3) Gas (E3m3) Water (m3)
Cum 1225.9 0.0 123.9
Daily 0.8 0.0 0.1
DST Information
Prod Oil (m3) Gas (E3m3) Water (m3)
Cum 2339.0 0.0 2132.3
Daily 0.8 0.0 0.7
Legend
Oil
Abandoned Oil
Contact Type - Conformity
Contact Type - Unconformity
Contact Type - Time Equivalence
Contact Type - Left Fault
Contact Type - Right Fault
Depth Scale
17
16
Proposed Ewart Unit 11
Structural Cross Section
- West to East -
Through Proposed Unit Area
Produced by :
AccuLogs
Version 8.2.1.178546
Datum: NAD27
Copyright 2015, IHS
Author:
Modified On: Monday, October 03, 2016 09:17AM
Printed On: Monday, October 03, 2016 09:17AM
Start Formation: 16m. above REDBD
End Formation: 5m. below CROMERSH
Cross Section Name: E11

APPENDIX 3



Lodgepole Dolomite Isopach (2m CI)
Map Showing Only Lodgepole Producing Wells

APPENDIX 4



Datum: NAD27 Projection: Stereographic DLS Version AB: ATS 2.6, BC: PRB 2.0, SK: STS 2.5, MB: MLI07

Well Legend

Abandoned Gas	Location
Abandoned Heavy Oil	Oil
Abandoned Oil	Oil & Gas
Abandoned Oil & Gas	Service or Drain
Abandoned Service	Suspended
Canceled	Suspended Gas
Drilling	Suspended Heavy Oil
Dry & Abandoned	Suspended Oil
Gas	Suspended Oil & Gas
Gas Injection	**Lists**
Heavy Oil	Wells - Lodgepole producing wells
Injection	

Center: 49.6684, -101.2406

Scale: 1:56,165

0 0.5 1 1.5 2 km

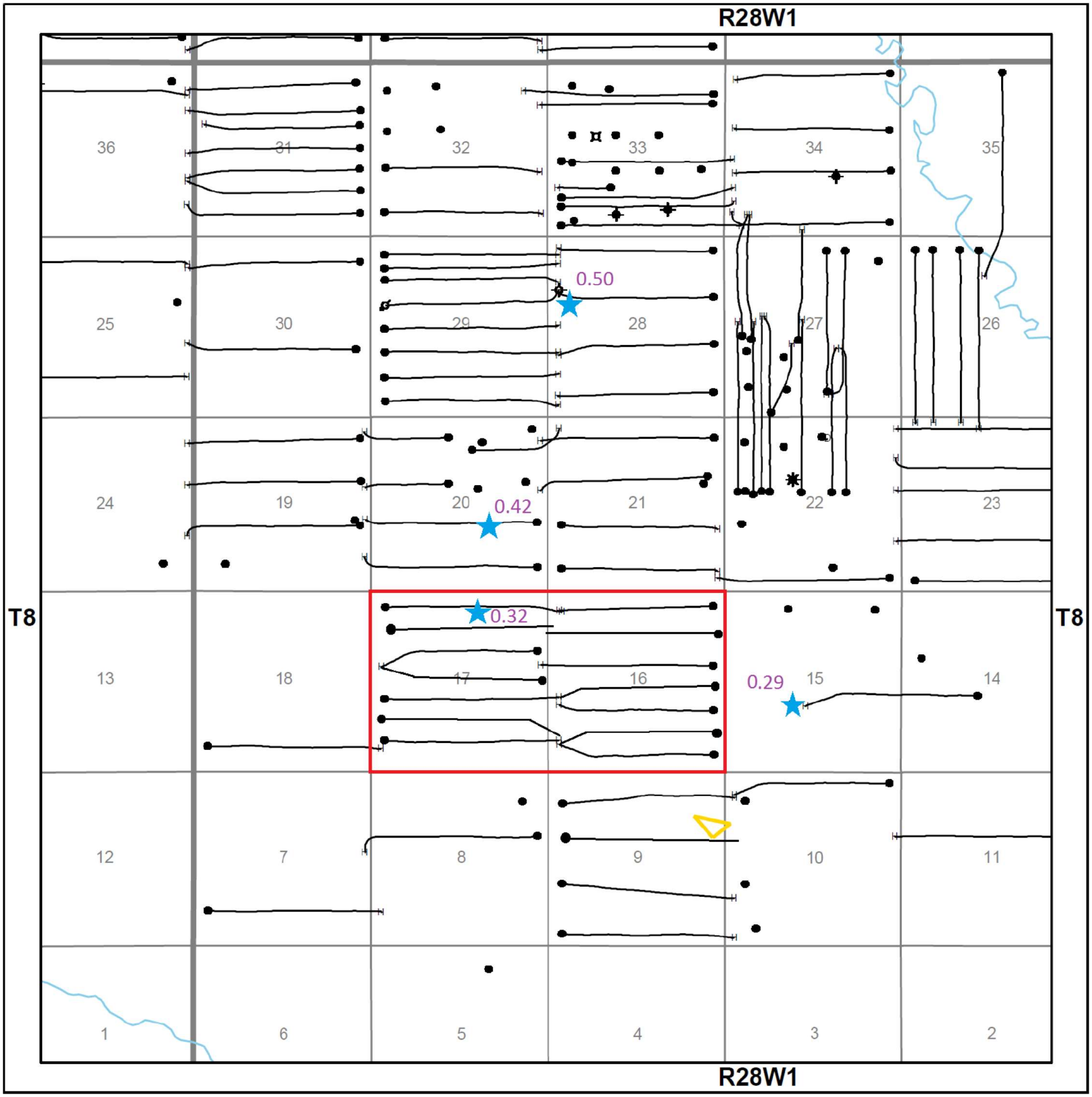
0 0.5 1 mi

N W E S

Top Lodgepole Structure (5m CI)

Map Showing Only Lodgepole Producing Wells

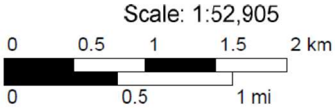
APPENDIX 5

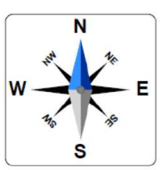


Datum: NAD27 Projection: Stereographic DLS Version AB: ATS 2.6, BC: PRB 2.0, SK: STS 2.5, MB: MLI07

Center: 49.6692, -101.2357

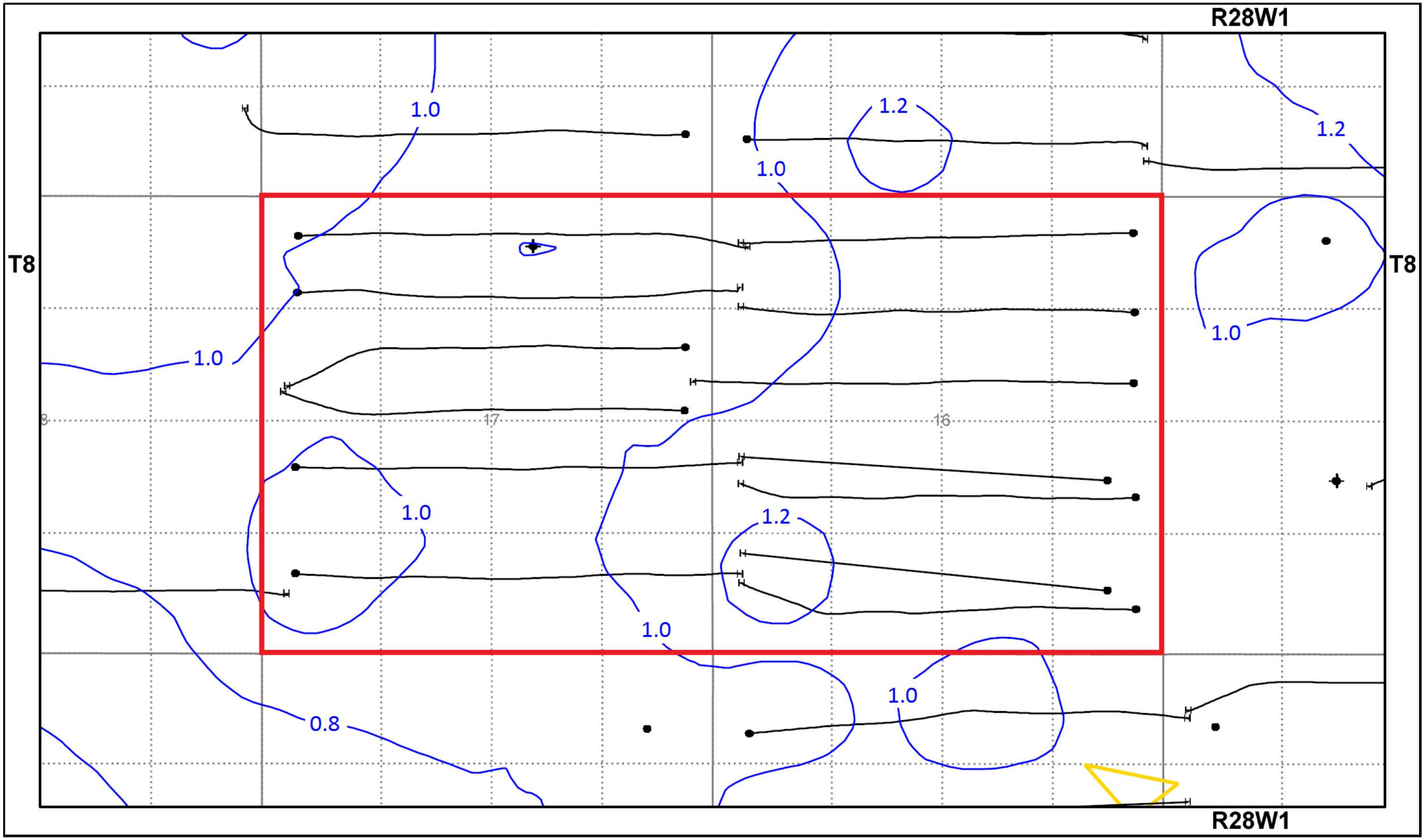
Scale: 1:52,905





Proposed Ewart Unit 11 - Core Data
Core PDPK Points Used for OOIP - N/G Values Posted

APPENDIX 6



Datum: NAD27 Projection: Stereographic DLS Version AB: ATS 2.6, BC: PRB 2.0, SK: STS 2.5, MB: MLI07

Lodgepole Dolomite Phi-h (0.2m CI)
Map Showing Only Lodgepole Producing Wells

Center: 49.6583, -101.2355

Scale: 1:20,327

0 0.5 1 km

0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 mi