PROPOSED NORTH PIERSON UNIT NO. 4

APPLICATION FOR ENHANCED OIL RECOVERY WATERFLOOD PROJECT MISSION CANYON 3 (Mmc3) FORMATION

PIERSON, MANITOBA

Author(s):
Kory Galbraith, P Eng.
COO, Burgess Creek Exploration Inc
Jamie Potter, P. Geo
Geologist, Burgess Creek Exploration

Addressee: Officer of the Crown
Manitoba Government Regulatory Services (Oil and Gas)

Table of Contents

List of Tables

List of Figures

List of Appendices

Burgess Creek Exploration (BCX) is submitting an application to establish North Pierson Unit No. 4 and implement an Enhanced Oil Recovery (EOR) Waterflood Project within the Mission Canyon 3C (MC3) formation. The MC3 pool is currently undersaturated, exhibiting a gas-to-oil ratio (GOR) significantly lower than that of the adjacent Gainsborough Frobisher-Alida pool. This phenomenon is attributed to gas migration away from the pool, resulting in a low GOR of approximately 35 m^3/m^3. As well, observed pressure, as evidenced by falloff tests conducted in 2022 and 2023 behind plugs that were set after drilling the wells is indicating that the reservoir requires additional energy to improve the primary recovery factor. Pressures of 6,300 kPa and 4,900 kPa were recorded against an expected original reservoir pressure of ~10,000 kPa. This indicates reservoir connectivity and a lack of pressure support. The rapid pressure depletion is believed to be a consequence of high deliverability from the wells and the low GOR oil, leading to a swift decline in production rates. This has resulted in high initial production rates in the field followed by rapid production decline.

BCX aims to unitize the lands to create North Pierson Unit No. 4 (NPU4), building upon the successful EOR waterflood project in the adjacent North Pierson Unit No. 3 (NPU3), which has demonstrated increased recoverable reserves and improved reservoir performance. The proposed reservoir exhibits favorable mobility characteristics, confirmed through capillary pressure testing and the successful operational history of NPU3. The planned injection pattern will be producer-producer-injector. To date, BCX has conducted tests with 100m well producing spacing, noting there is no production interference effects. Using historical production data from Unit No. 3 has validated the geological parameters used for volumetric estimations presented herein and supports the economic viability of a waterflood strategy. The expected ultimate recovery under primary production is estimated to be 7-8%. The current estimated recovery factor of the NPU3 under waterflood is expected to be 40% from extrapolation of the hydrocarbon pore volume injected versus recovery factor plot to 300%.

The Burgess Creek Pierson Mission Canyon 3C Pool is situated in Section 07 Township 3, Range 29 W1M. Initially, reservoirs were tested with multipole vertical wells and now the focus has shifted to horizontal development. BCX's first horizontal well into the pool was in March 2021 and since early Q4 2024, three horizontal wells have been drilled within the proposed unit. A map detailing the locations of North Pierson Unit No. 3 and Unit No. 4 can be found in figure 12

BCX operates the lands within the application area including the adjacent unit, NPU3, that. The proposed unit, NPU4, will include three horizontal wells. The plan includes converting one existing horizontal well 102/16-07-003-29W1/00 in Q1/Q2 2025.

SUMMARY

1. The proposed North Pierson Unit No. 4 is to include a total of 5 wells. This would include the current 3 producing horizontal wells and 2 additional wells to be drilled within the next 12 months. The unit will have 2 injectors. The 102/16-07-003-29W1/00 well is a current producing well and will be converted to injection within the 6 legal subdivisions (LSD) that were completed in the Mission Canyon 3 formation (Figures 16). The proposed injection pattern will be the same as NPU3, that is producer-producer-injector.

2. The original oil in place (OOIP) for the proposed North Pierson Unit No. 4 is calculated as 439 10^3m^3 (2,759 Mbbl), for an average of 73 10^3m^3 (459 Mbbl) per LSD. OOIP estimates for the NPU4 area have increased due to the new recovery factor from the NPU3. This has increased volumetrics of the tract factor calculations for the NPU4. The OOIP calculated for each LSD was utilized to assign the appropriate ownership for NPU3. The tract factor calculations is shown in an attached spreadsheet.

3. Cumulative production in the proposed NPU4 to the end of September 2024 is 9.91 10^3m^3 (187.34 Mbbl) of oil. This represents a 3% recovery factor of the total OOIP. Cumulative recovery factor of the injection pattern no. 1 and the injection pattern no 2 in the NPU3 stand at 17% with a projected 40% recovery factor at a hydrocarbon pore volume injected of 300%, shown on figures 6 & 7. Given the similarities in lithology, drive mechanism and the continuity within the Pierson pool, the NPU4 is expected to behave similarly, similar recovery factors. A map showing the relative location of the two injection patterns in the NPU3 is shown in figure 1. And a more detailed description of the NPU3 analysis is provided beginning on page 7.

4. In January 2024, the first singe leg horizontal well was drilled within the proposed NPU4, 100/16-07-003-29W1, and is still currently producing. As of September 2024, the proposed NPU4 is producing 44.2 m^3/d (278.14 b/d) of oil and 170 m^3/d (1070.6 b/d) of water, a water cut of 80%. Peak production for the proposed unit occurred in September 26, 2024, with ~55 m^3/d (345.9 b/d) of oil and 177.5 m^3/d (1116.3 b/d) of water, giving a water cut of 76%

5. The Estimated Ultimate Recovery (EUR) of oil on primary production within the proposed NPU4, using decline analysis and a reservoir model, is 31 10^3m^3 (193.1 Mbbl), with 24 10^3m^3 (150 Mbbl) remaining as of October 2022. The Estimated Ultimate Recovery (EUR) under primary recovery as a percentage is 7-8% of the total OOIP in the MC3.

6. The development plan shall be to convert the existing producing horizontal well, 102/16-07-003-29W1/00, into an injector as soon as possible and commence waterflooding. The production response shall be monitored and two follow-up horizontal wells will be drilled. This timing is contingent upon the approval of the unitization and EOR waterflood application. All horizontal wells in the proposed NPU4 are completed open-hole.

GEOLOGY

Stratigraphy & Sedimentology (to be accompanied by schematic cross-section, Appendix VIII)

The target reservoir for BCX in the East Gainsborough / Pierson area is a locally deposited assemblage of thin (1-3m), dolomitized (presumed secondary) reservoir interbeds in a predominantly tight limestone matrix. Present as mid-Alida equivalent deposits, these “Pierson Pay” dolomites consist of five correlatable beds across the greater East Gainsborough area sitting unconformably on top of typical Alida Wayne and Landa limestones. Best identifiable in core, this unconformity shall be referenced as the “Wayne Unconformity”, which has been generally identified to erode into Alida section no deeper than the Wayne Ledge, a middle Alida unit identifiable on logs by its typical lower SP and conductivity signatures. Occasionally (on erosional highs) the Wayne Unconformity is also seen to preserve a younger detrital chert-rich limestone bed however, regardless of lithology, all sediments sitting in a 1-2m horizon directly underneath the unconformity show a similar pattern of porosity degradation mainly via the development of secondary blue anhydrite nodules and/or an increased chalkiness in limestone texture. This is presumed to be a direct result of the proximity to the exposure surface and acts as base seal for the overlying Pierson dolomite reservoirs.

The Pierson dolomites each consist of a fine-grained wacke-packstone showing varying levels of intercrystalline porosity, ranging from microcrystalline to microsucrosic, depending on the level of dolomitization. Porosity generally ranges between 18-30% in microsucrosic samples, while in non-economic limestone interbeds, porosity can be seen as low as 6-9% from comparable wackestone fabric. These low porosity limestones, also commonly found in gradational contact with the overlying anhydritic Mississippian caprocks (4-5m, 100/6-7-3-29W1) combine to provide up to 10m of robust top seal to the reservoir, preventing any possibility of fluid leakage into the overlying Lower Amaranth / red beds.

It should be noted that we believe the previously developed E and W Gainsborough fields in Saskatchewan are incorrectly designated as producing from the Alida Beds. We have identified a third “Intra-Alida Unconformity” (IAU) to occur between the Mississippian and Wayne unconformities, eroding into typical Alida section in west Gainsborough and, where present, Pierson beds moving east. The IAU creates the accommodation space to deposit what BCX has called the Frobisher “Peritidal” facies, or the actual producing reservoir in the Sceptre West Gainsborough (1988) and the Upton East Gainsborough (1995) pools. The Peritidal facies consists of a tidally influenced, pack-grainstone comprised of primarily coarse coated grains (peloids, pisoids) sorted into at least three fining upwards sequences (best seen in 9-8-3-30 core). Intergranular to vuggy porosity is common with an extensive overprinting of primary textures, preserved crusts, burrows, borings and silts as a result of periodic exposure. Karst features with collapsed cavings can be seen below the IAU exposure surface at 9-31-2-30. The Peritidal strata producing at E and W Gainsborough is younger than the Frobisher Stoughton beds, which are actually present in the area at the far western extent of the Gainsborough pool (111/1-6-3-30W1). There, where no IAU or Wayne erosion had occurred, the typical massively bedded, oolitic limestones of the Stoughton (MC5) sit conformably on top of familiar Glenburn (Upper Alida) section.

The final erosional events, key to reservoir preservation and present-day reservoir morphology, are likely to occur shortly pre-Mississippian unconformity time in deep (potentially greater than 10m) but narrow (0.5 - <1km) erosional channels. These channels have been identified by BCX as we horizontally drill the Pierson pool with encounters delineating the channels preserved directly beneath the Mississippian caprock. Mapped to generally orient in a NW-SE direction, the channels cross-cut and annihilate the preserved

section under the unconformity. We believe to have landed all 7 S-N horizontal wells into the same channel complex, in addition to tracking a separate W-E channel in section 18. Interception of one of these channels results in near immediate disappearance (or reappearance) of all reservoir facies; porous dolomite is replaced with chalky, barren, detrital lime infill. The channel at the south end of section 7 has established the segmentation and isolation the Pierson pay from the greater Gainsborough regional drive mechanism, therefore requiring the proposed waterflood to address the lack of reservoir energy needed to produce the wells within the BCX pool.

Structure

The Pierson pool currently being developed by BCX sits in an area exemplifying several cross-cutting complexities but, structurally, is primarily confined to a larger Lower Amaranth thin. This Paleo-high erosional feature aids in preserving both the reservoir stratigraphy and additional section above which acts as a physical buffer, shielding the dolomites from the anhydrite overprinting of the typical Mississippian caprock. The reservoir beds are bound to the east and west by SW-NE trending Spearfish thick trends and by their eventual subcrop edge (via the Mississippian unconformity) to the NE in section 17.

Reservoir

Maps for the reservoir units were generated using available open-hole logs and core data, and include net pay, porosity-thickness, and permeability-thickness. These maps are in Appendices I to VIII. These parameters are critical inputs into reservoir modelling.

Pore volume and permeability-thickness values were calculated for wells with core analysis data. Net pay was estimated using a 50% net to gross cutoff. The reservoir unit is considered conventional and is produced from open-hole completions. The reservoir rock and fluid properties are summarized in table 4. BCX conducted capillary pressure testing to measure both the average permeability and to construct a fluid saturation model of the transition zone between the oil-water contact. Cross plots of core porosity vs permeability were also modelled. The cross plots indicated a relationship between the porosity and permeability within the formation. Two trends were observed within the permeability vs porosity cross plots that are associated with the two zones within the formation – the Peritdal and the Pierson, with the Peritdal having lower reservoir quality.

The only drive mechanism within the reservoir is the pressure difference between the reservoir and the bottomhole pressure. Therefore, it is critical to implement a waterflood to maintain economic levels of oil production, this belief was proven from the results of the North Pierson Unit No. 3.

Fluid Contacts

The oil-water contact (OWC) in the proposed unit area is interpreted at -552 m SS from log and core data in offsetting wells that drilled through the contact, along with gas data and drill cuttings from several of the horizontal wells that also penetrated the contact. Capillary pressure testing was also conducted to construct a model of water saturation as a function of height above the free water level. In the proposed unit area, most of the bottom of the reservoir is in the transition zone between the OWC and the oil zone.

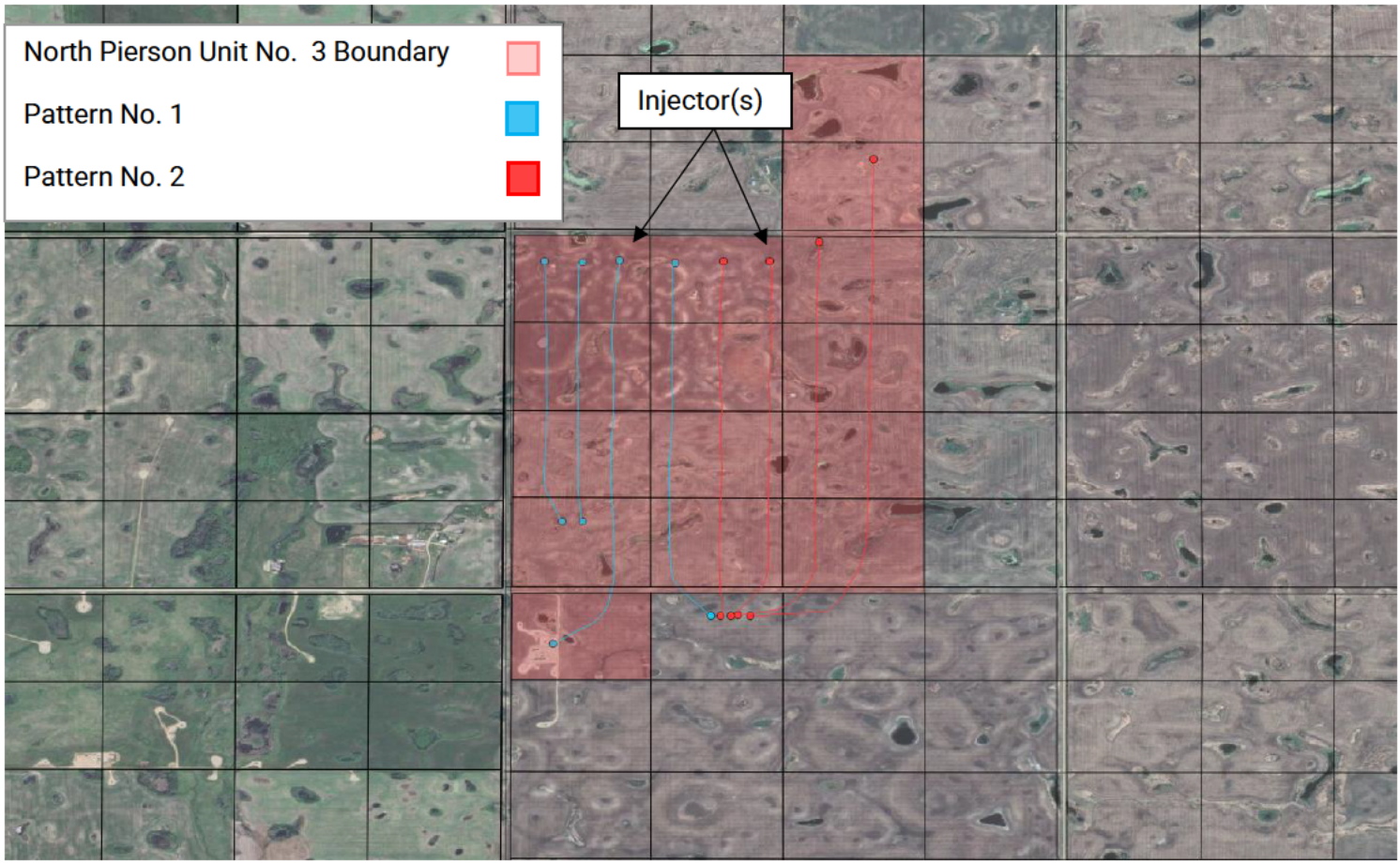
ANALOGUE POOL PERFORMANCE

North Pierson Unit No. 3

North Pierson Unit No. 3 Enhanced Oil Recovery (EOR) Waterflood Project Mission Canyon 3 (Mmc3) Formation was approved effective July 01, 2023, with Burgess Creek Exploration (BCX) as the operator. North Pierson Unit No. 3 encompasses LSD's 2 & 7 of Sect. 18-3-29WPM, LSD's 2-7 & 10-15 of Sect. 7-3-29WPM and LSD 13 of Sect. 6-3-29 in the Pierson – Mission Canyon 3C pool. The Unit contains 8 wells, 2 injectors and 6 producers. Unitization approval was provided by the Ministry on July 11, 2023. The first well was converted shortly thereafter with injection commencing on August 24, 2023. A second injection well was converted in early December of 2023 with injection beginning on December 31st, 2023.

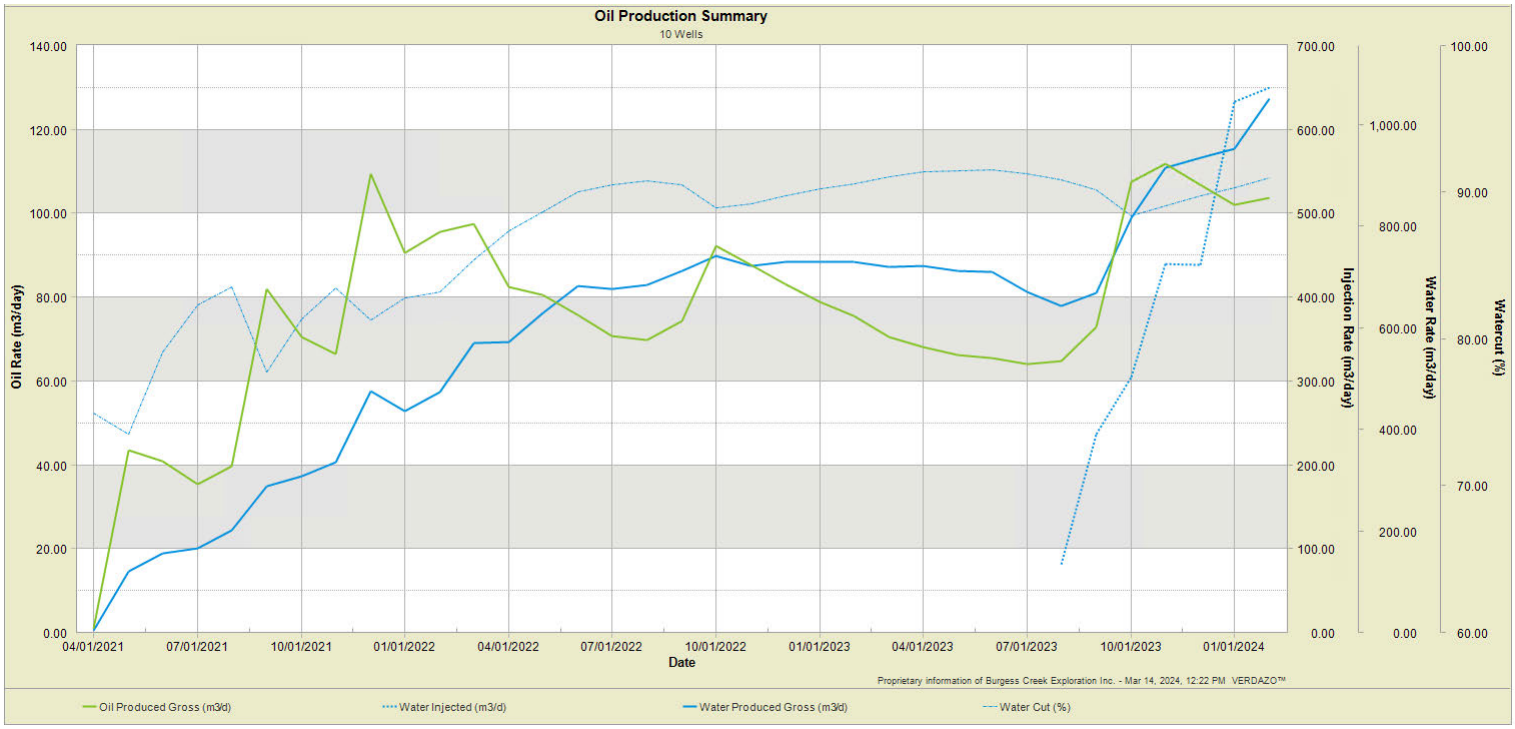
The basemap below provides a visualization of the North Pierson Unit No. 3 area, the pattern design, and the injector and producer locations within the Unit.

Figure 1 - North Pierson Unit No. 3 Map



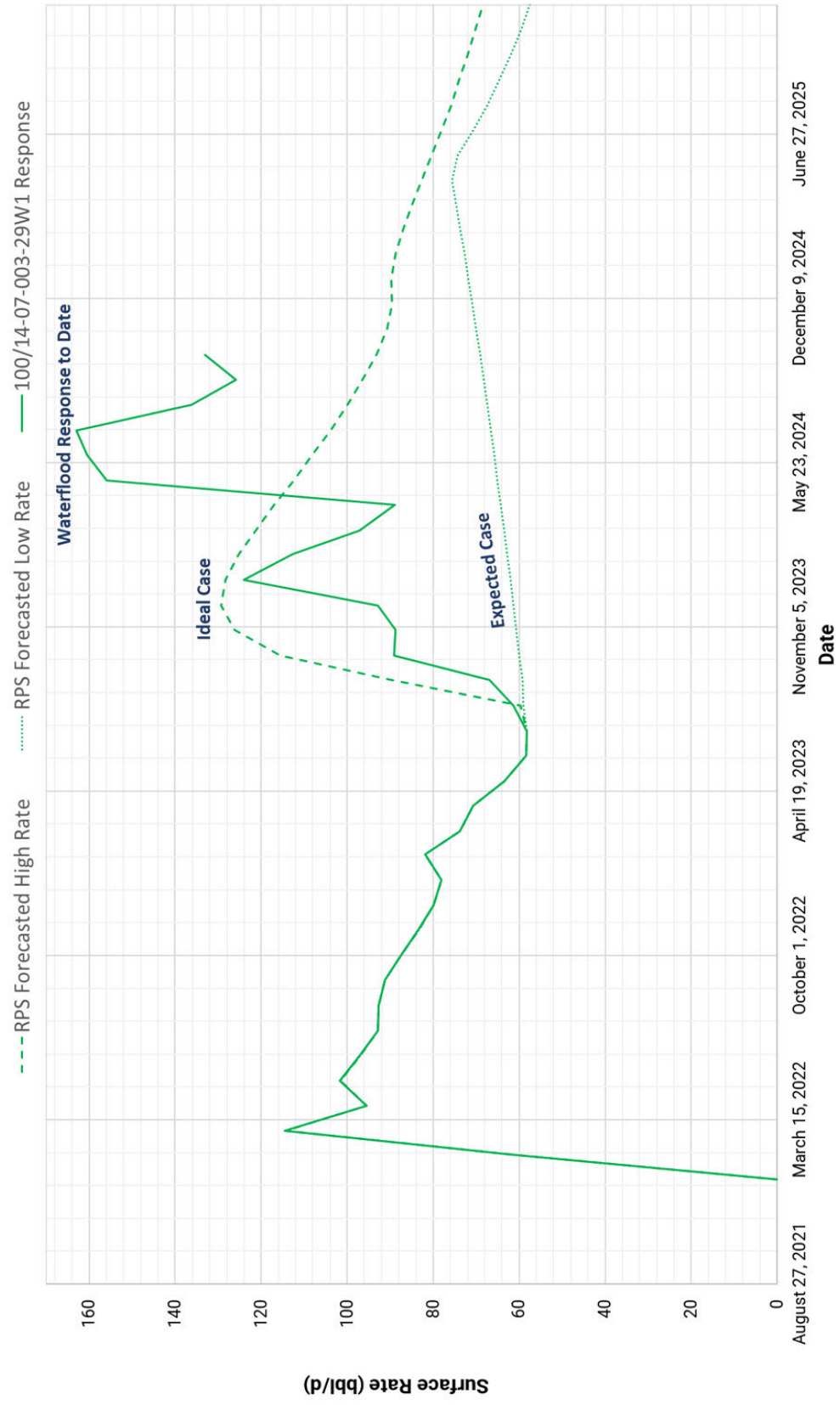
Pressure decline issues were identified early in the development of the BCX Pierson field conducting fall off tests behind a plug placed after drilling each new well shown in table 1. Figure 8, “North Pierson Unit No. 3 Performance Evaluation” (Page 22), demonstrates the reduction in initial production (IP) rates observed in the new wells drilled within the pool. Production rates peak after the third well is brought online and while subsequent wells in the field bring on additional production, the IP rates of new wells brought online in virgin reservoir begins to decrease, indicating the presence of pressure depletion. On August 24, 2023 the field experienced an increase in oil rate due to offsetting injection. The well 100/15-07-003-29W1 is put on production in the field which explains the sharp production increase observed in Sept/Oct of 2023, however the production decline across the field has remained relatively flat since injection began. BCX estimates that the EUR (expected ultimate recovery) for the field is now 40%, that is an increase of 32% from a primary EUR of 7-8%.

Figure 2 - North Pierson Unit No. 3 Production Summary



A production forecast for a single well is also provided for the Ministry to review. As presented and explained in our unitization application for the North Pierson Unit No. 3, BCX has conducted a reservoir simulation to model and predict the waterflood performance for the field. Several development scenarios were simulated, and for our purposes we will present the results from two cases. The first is an optimistic “Ideal” response, the second was an expected or “Real” response. Both forecasts are presented in Figure 9 “103/13-07-003-29W1: Waterflood Forecasted Versus Actual Results” (page 23). Both cases predicted a stabilization and increase in oil production rates relative to the forecasted decline. These are contrasted by the observed or “Actual” production response for the well once injection was commenced on August 24th, 2023. The response from the well surpasses BCX’s “Ideal” simulation forecast, indicating that the reservoir system parameters were correctly identified by BCX for the simulation and for the prediction of well and field performance.

Figure 3 - North Pierson Unit No.3 Simulation Expected Versus Actual Production Response



North Pierson Unit No. 3: Pattern Performance

The North Pierson Unit No. 3 consists of two distinct injection-production patterns: "Pattern No. 1" on the west side, comprised of wells 100/13-07-003-29W1, 102/13-07-003-29W1, 103/13-07-003-29W1 and 100/14-07-003-29W1, and "Pattern No. 2" on the east side, comprised of wells 102/14-07-003-29W1, 103/14-07-003-29W1, 100/15-07-003-29W1, 100/02-18-003-29W1.

Pattern No. 1 Performance

Pattern No. 1 was the first injection pattern established by BCX. Production within the pattern peaked in August, 2021. However, despite drilling two more wells, production began to decline. The gas-to-oil ratio (GOR) remained stable at approximately 125 scf/bbl until September 2022, when it began to rise sharply, peaking at 282 scf/bbl in August 2023. This increase in GOR signaled to BCX that solution gas was being liberated within the reservoir and produced. These findings prompted the initiation of a waterflood feasibility study, as outlined in the "North Pierson Unit No. 3 Application."

Following the approval of the North Pierson Unit No. 3, BCX converted well 100/13-07-003-29W1 into an injector. Immediate results were observed - GOR decreased from approximately 282 scf/bbl to 150 scf/bbl, while oil production increased from about 152 bbl/day to 324 bbl/day.

BCX has closely monitored the outcome of this project. Diagnostic plots at the pattern level indicate estimated ultimate recoveries (EUR) ranging from approximately 34% based on "Log WOR versus Recovery Factor" to about 43% from "Hydrocarbon Pore Volume (HCPV) Injected" versus Recovery Factor plots. All diagnostic and performance plots for Pattern No. 1 are included below for review.

Figure 4 - North Pierson Unit No. 3 Pattern No.1 Production Analysis

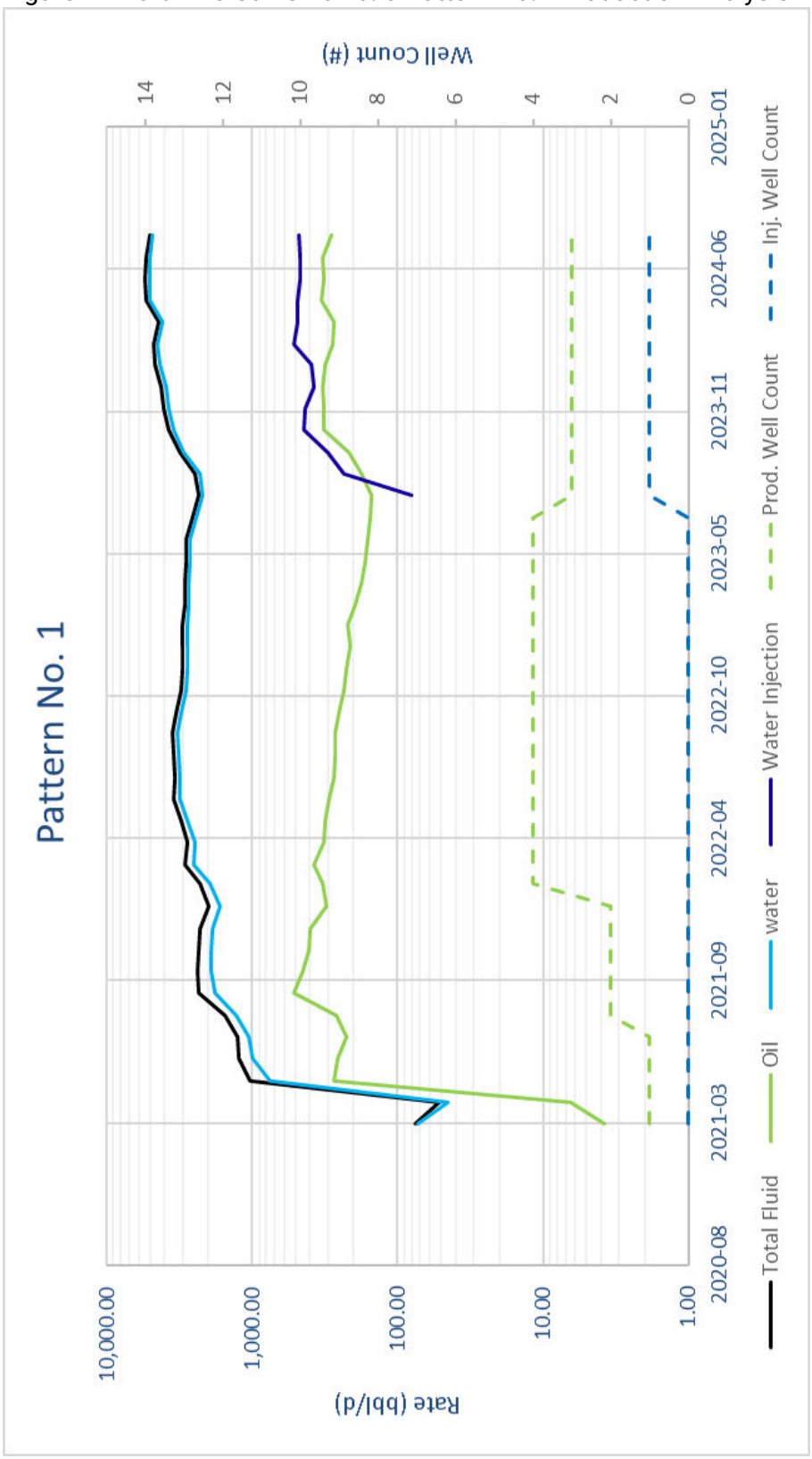


Figure 5 - North Pierson Unit No. 3 Pattern No.1 IVRR & GOR Response

Figure 6 - North Pierson Unit No. 3 Pattern No.1 Recovery Factor vs. HCPV Injected Analysis

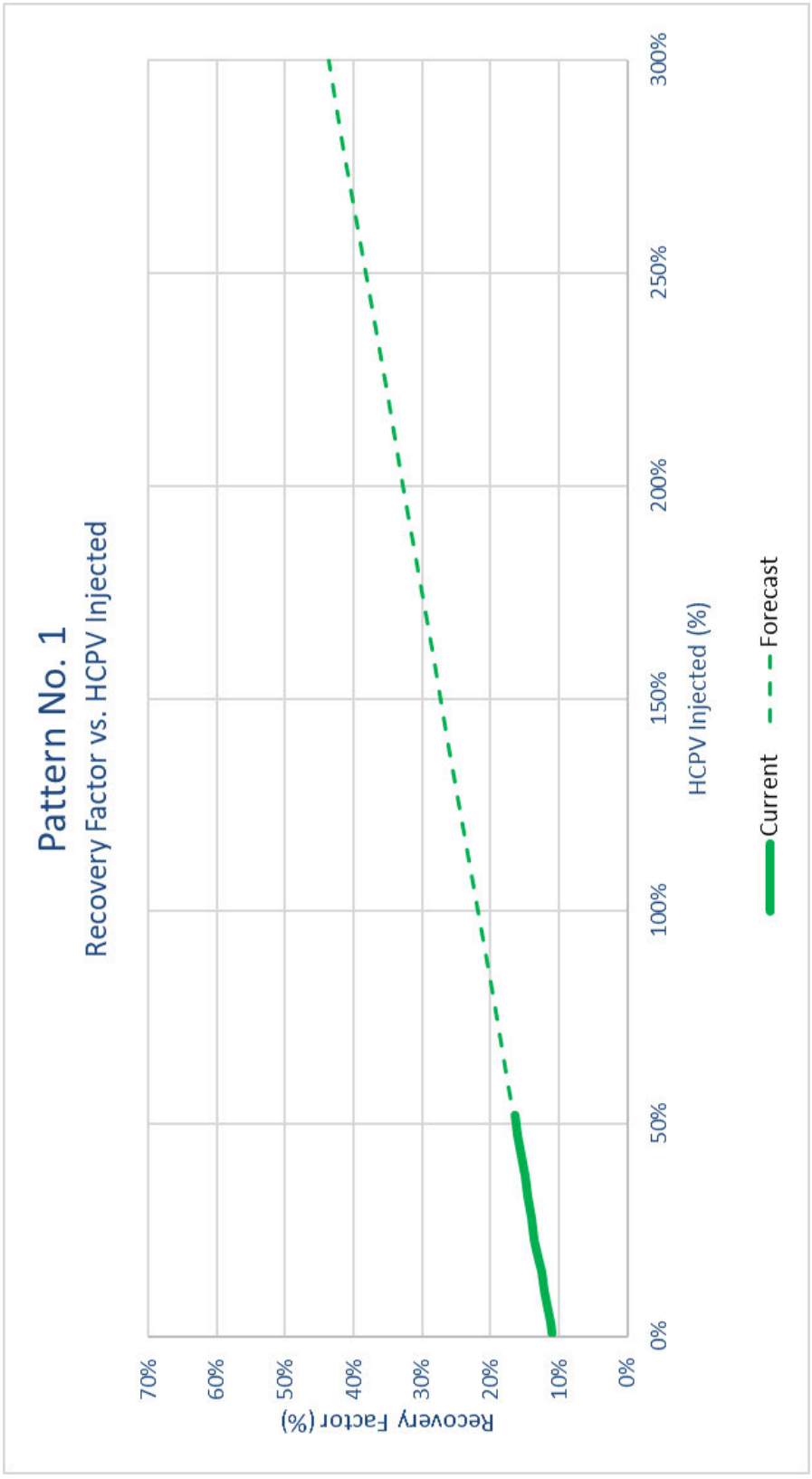


Figure 7 - North Pierson Unit No. 3 Pattern No.1 Water Oil Ratio vs. Recovery Factor Analysis

Pattern No. 2 Performance

Pattern No. 2 was the second injection pattern implemented by BCX. Production peaked in October 2023. Between drilling each well oil production declined. The gas-to-oil ratio (GOR) began to rise after the drilling of the third well, increasing from 50 scf/bbl in September 2022 to 210 scf/bbl by August 2023.

The GOR for Pattern No. 2 began to decline following the conversion of well 100/13-07-003-29W1 in Pattern No. 1, dropping to approximately 115 scf/bbl in August 2023. Oil production continued to decline until the conversion of 103/14-07-003-29W1 in January 2024. After the conversion, production rose from about 317 bbl/day to 346 bbl/day by June 2024.

Diagnostic plots for Pattern No. 2 indicate estimated ultimate recoveries (EUR) ranging from approximately 29% based on "Log WOR versus Recovery Factor" to about 43% from "Hydrocarbon Pore Volume (HCPV) Injected" versus Recovery Factor plots. All diagnostic and performance plots for Pattern No. 2 are included below for review.

Figure 8 - North Pierson Unit No. 3 Pattern No.2 Production Analysis

Figure 9 - North Pierson Unit No. 3 Pattern No.2 IVRR and GOR Response

Figure 10 - North Pierson Unit No. 3 Pattern No.2 Recovery Factor vs. HCPV Injected

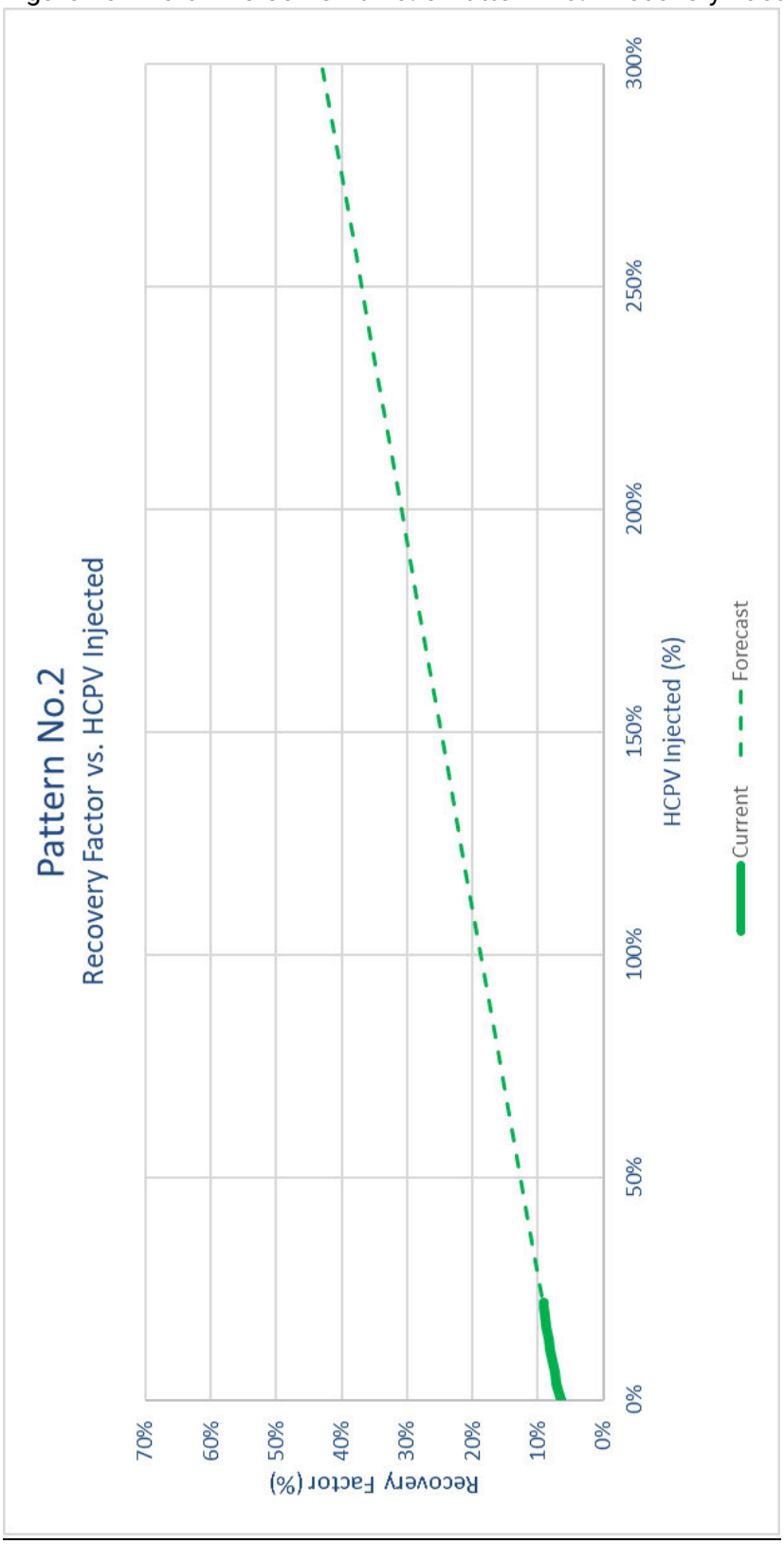


Figure 11 - North Pierson Unit No. 3 Pattern No.2 Water Oil Ratio vs. Recovery Factor Analysis

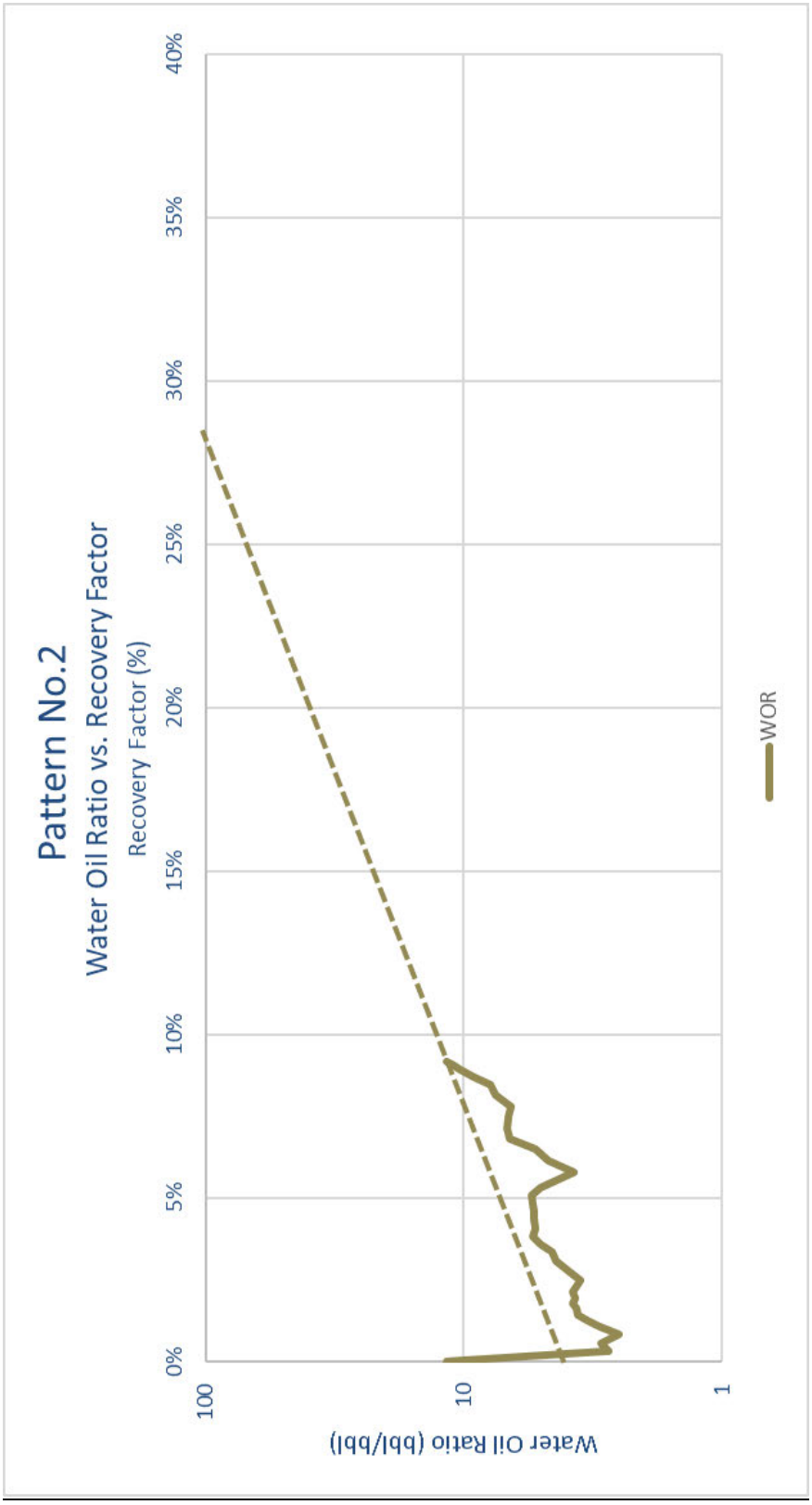
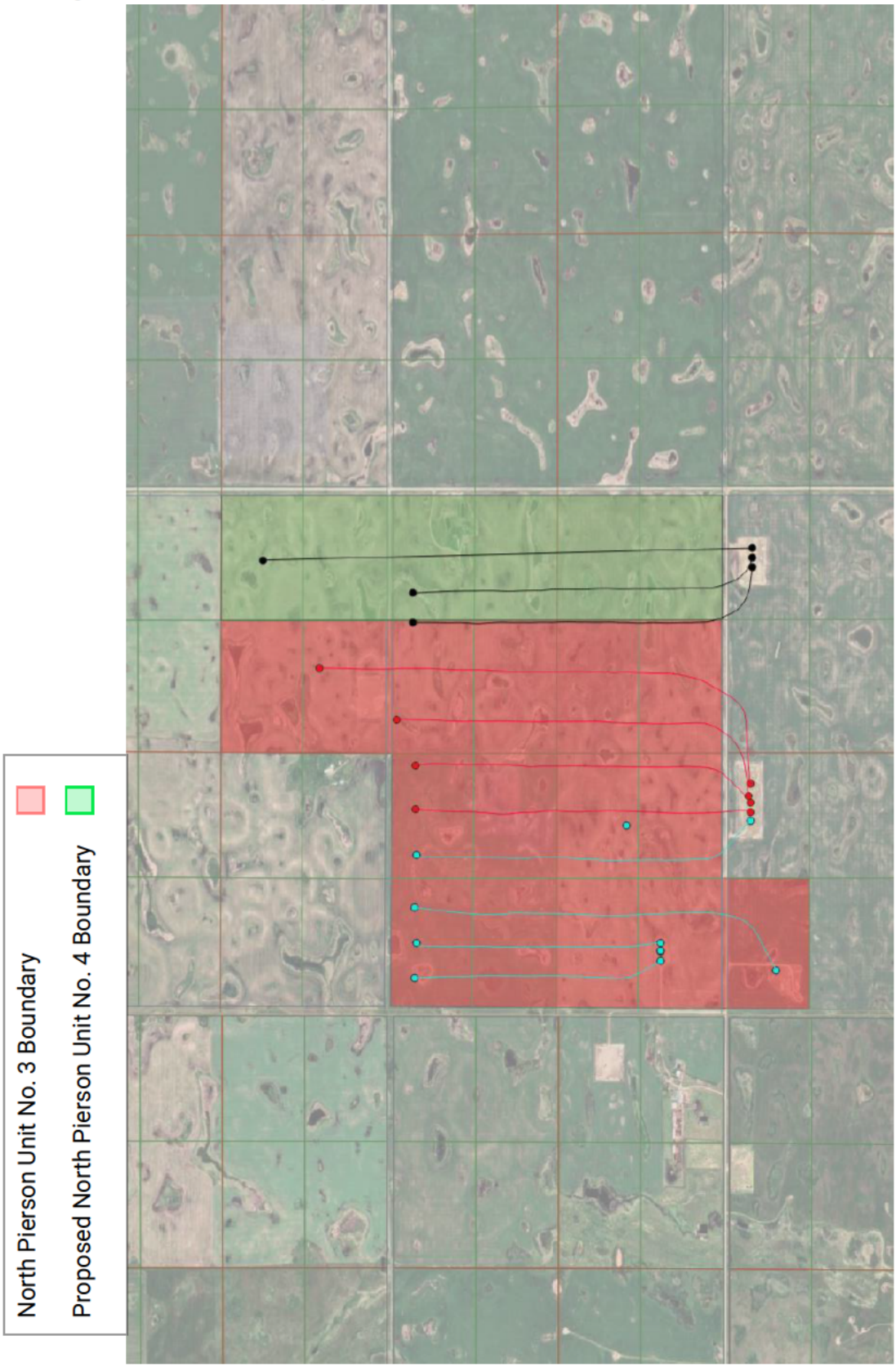


Figure 12 - NPU3 and Proposed NPU4 Locations



Original Oil in Place

The original-oil-in-place (OOIP) for the proposed North Pierson Unit. No. 4 pool is 439 10^3m^3 (2,759 Mbbl). The OOIP was calculated in-house and are the same values used for the tract factor calculation. Values of thickness, porosity, and water saturation of each LSD for the various reservoir zones are used to calculate the OOIP on an individual LSD basis. Details of the calculations are summarized in Table 1.

Historical Production

Figure 6 shows the production history of the wells within the proposed North Pierson Unit No. 4. There are three (3) horizontal wells on production, one (1) of which shall be converted into injection wells, one (1) future producing horizontal well and one (1) future injector shall be drilled. There is currently injection into the Mission Canyon 3 formation within the adjacent unit, the North Pierson Unit No. 3. Production from the producing wells is from the Mission Canyon 3 formation.

Up to and including the month of September 2024, the proposed North Pierson Unit No. 4 has produced cumulative volumes of oil of 9.91 10^3m^3 (62.35 Mbbl) and water of 29.79 10^3m^3 (187.34 MMbbl). The current recovery factor is approximately 3%.

Exploration in Section 07 began in June 1995 by HCO Energy Ltd, with one (1) vertical well, which was drilled, cored, acid stimulated and then abandoned in October 2000 with no recorded production. A second vertical well was drilled in August 1999 by Upton Resources Inc as an exploration/saltwater disposal well. The well was cored, and after eighteen (18) days the well was abandoned with no recorded production. In March 2021, a step out horizontal well was drilled by Burgess Creek Exploration within the proposed unit area and further horizontal development quickly followed.

Presently, there is water injection into the adjacent North Pierson Unit. No. 3; all fluids are currently taken to the Burgess Creek Exploration 13-06-003-29W1 battery where the saltwater is then processed, filtered and pumped to the two injection wells within the Unit, they are wells UWI 103/14-07-003-29W1 and 100/13-07-033-29W1. As of October 23, 2024 the combined injection rate of the two injection wells in North Pierson Unit No. 3 is ~900m^3/day.

Primary Recovery

Table 3 lists the wells within the proposed unit area; together with the cumulative oil production to the end of October 2024 and the EUR estimated using decline analysis. The total EUR for the proposed North Pierson Unit No. 4 is 33 10^3m^3 (207 Mbbl), for a recovery factor of 7-8% of the total OOIP in the Mission Canyon 3 formation.

Secondary Recovery

The proposed waterflood shall target the MC3 formation, which contains all of the estimated OOIP. A reservoir model of the proposed unit was built to estimate the expected recovery from waterflooding the MC3. This reservoir model used average reservoir properties and was tuned to match the historical production and a type well production profile of a representative horizontal producer within the proposed unitization area. The model results suggest an EUR of 7-8% under primary depletion.

The production results of the adjacent NPU3, indicate that by converting existing producing wells into injection wells an incremental recovery factor of 32% is achievable. BCX's waterflood strategy shall be to inject water with a voidage replacement ratio (VRR) of approximately 1.4 until a VRR of roughly 1.0 is achieved, after which the injection rate shall be scaled back to maintain a cumulative VRR of approximately 0.8. The injection pattern shall be producer-producer-injector. More information can be found in the "operating strategy" section.

UNITIZATION

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

Unit Name
Burgess Creek Exploration proposes the name of the new unit shall be North Pierson Unit No.4

Operator
Burgess Creek Exploration shall be the Operator for North Pierson Unit No. 4

Unitized Zones
The unitized zone to be waterflooded in the North Pierson Unit No. 4 shall be the Mission Canyon 3 Formation.

Unit Wells

The unit shall eventually include five (5) wells. Three (3) horizontal producers and two (2) horizontal wells that shall be converted into injection wells after a short production period. The proposed North Pierson Unit No. 4 is outlined in Table 2, including their status. For every year that the pool produces without waterflood, the secondary recovery factor shall be reduced by 2 percent.

Unit Lands

The North Pierson Unit No. 4 shall consist of all LSDs as follows:

- 01-07-003-29W1
- 08-07-003-29W1
- 09-07-003-29W1
- 16-07-003-29W1
- 01-18-003-29W1
- 08-18-003-29W1

The lands included in the 40-acre tracts are outlined in Figure 4 and Appendix III to V.

Tract Factors

The proposed North Pierson Unit No. 4 shall consist of 6 (6) tracts based on remaining OOIP using maps created internally by Burgess Creek Exploration per LSD, as of September, 2024, with the production from the horizontal wells being divided according to the existing production allocation agreements. The calculation of the tract factors is outlined in Table 1.

Working Interest Owners

Table 1 outlines the royalty interest for each recommended tract within the proposed North Pierson Unit No. 4. Burgess Creek Exploration shall have a 100% working interest across all tracts.

WATERFLOOD DEVELOPMENT

The objective of implementing a waterflood is to provide pressure support and improve recovery through sweep efficiency. The MC3 formation is relatively shallow, with undersaturated oil having low solution GOR's, no aquifer support, and as such, there is limited drive energy within the system. BCX has completed the development of an adjacent unit, the NPU3, that proves that additional energy supplied by water injection enhances the recovery by providing pressure support as well as displacing the oil from the injectors towards the producers.

With the success of the NPU4, BCX intends to drill two (2) additional horizontal wells, convert one (1) existing producer to a pressure maintenance well and convert one (1) of the additional horizontal well into a pressure maintenance well. BCX planned conversion candidate is 102/16-07-003-29W1. Water injection shall commence within two months of receiving both unitization and water injection application approval.

Rock and Fluid Properties

Rock and fluid properties for the MC3 formation are summarized in Table 4. These properties were estimated using standard correlations in the literature and using existing oil analysis and PVT data.

Using Burgess Creek Exploration internal database on tests in the MC3, the fracture gradient for the MC3 formation in the Pierson area is estimated to be 19.13 kPa/m. Based on the average fracture gradient a surface fracturing pressure of 9,590 kPa is anticipated. The equipment currently being utilized by BCX has maximum allowable injection pressures (MAP) of 6,500 kPa, which Burgess Creek Exploration feels is appropriate for the proposed North Pierson Unit No. 4.

Estimated Recovery

Using the results from a reservoir model and analogs within the area, the incremental reserves of 96 10^3m^3 (606 Mbbl) are expected. Based on the total OOIP for the MC3 formation, the incremental recovery factor is expected to be 32% for an overall recovery factor of 40%.

Economic Limit

The economic limit shall be when the net oil rate and net oil price revenue stream becomes less than the current producing operating costs. Based on current price forecasts, the economic limit for the project would be 0.5-1 m3/d/well or a field total of 15 bbl/d.

Source of Injection Water and Waterflood Facilities

The source of the injection water shall be from the MC3 formation and water supply shall come from the producing wells within the proposed NPU4, the NPU3, and from the producing well in section 06-003-29W1/00. The water has a total dissolved solids (TDS) measurement of 188,877mg/L, an upgraded filtration system is currently being commissioned at the 13-06-003-29W1 battery. This will allow BCX to increase the water treatment and injection volumes to meet the VVR requirements for both the NPU3 and the proposed NPU4. The NPU3, is also operated by BCX. The NPU3, and the wells in section 06-003-29W1/00 produce from the Mission Canyon 3 formation and already have facilities in place for water injection. A flowline shall be run from the 13-06-003-29W1 Battery high pressure injection system to the injection conversion wells in section 07-003-29W1 of the proposed NPU4. There shall be no additional waterflood facilities required for the NPU4.

A simplified process flow diagram of the system is located in Figure 10. All producing wells shall flow to test separators before entering gathering systems at the BCX 13-06-003-29W1 Battery. All injection wells shall have turbine meters and totalizers at the wellhead to record daily water injection volumes. This daily data shall be stored in a field data capture software called Production Manager™.

Water injection volumes and balancing shall be utilized to monitor the entire system measurement and integrity on a daily basis. The corrosion control program outlining the planned system design and operational practices to prevent corrosion is located in Figure 14.

Operating Strategy

The proposed injection scheme within the proposed NPU4 can be seen in Figure 7. The proposed injection pattern shall be producer-producer-injector a copy of the successful pattern in the NPU3. Burgess Creek Exploration has all of the equipment and facilities in place to convert the first producing well into an injector - 102/16-07-003-29W1. Burgess Creek Exploration hopes to have the conversion implemented by January 2025. All of the proposed horizontal injection wells shall be drilled initially as producing wells, and then converted into injection wells, the incremental recovery from the waterflood conversion is deemed more valuable than the production losses from producer/injector conversions. One (1) currently producing horizontal wells shall be converted into injectors.

Injection rates are expected to be in the range of 300 m3/d, subject to a maximum injection pressure of 8,630 kPa at the well head. This maximum pressure is based on a fracture pressure of 9,590 kPa and a safety factor of 90%. Initially, injection shall target a monthly voidage replacement ratio (VRR) of 1.4, but a range between 1.25 and 1.75 is deemed acceptable. This over-injection shall serve to replace the existing voidage within the proposed unit area. Once a cumulative VRR of one (1.00) is attained, the injection rate shall be scaled back to maintain the VRR of zero-point-eight to one (0.80 - 1.00), both monthly and a cumulative basis.

All producers shall be kept at pump-off condition.

Pressure

The initial pressure for the proposed unit area is believed to be normally pressured, with an offset pressure recorded in the Pierson pool of 10,314 kPa from the 100/13-08-003-29W1 well. A normally pressured reservoir for this formation would be in the range of 10,500 kPa. Falloff testing post-drilling indicates that pressure declines rapidly with production. Two pressure surveys conducted in the NPU3 in 2022 on the 102/13-07-003-29W1/00 103/13-07-003-29W1/00 wells wells had recorded pressures of 6,629 kPa and 6,144kPa respectively, indicating that there has been large pressure depletion from initial conditions. A more recent falloff test in 2023 on well 100/15-7-3-29W1 had a recorded pressure of 4,900 kPa. More recent real time pump controller technology allows one to estimate sand face pressure, this technique indicates producing pressures in the wells averaging 2,748kPa.

The pressure is expected to be lower than the initial pressure due to offsetting production depleting the reservoir pressure. Waterflooding will help to re-pressurize and add energy to the reservoir. As seen by the pressure surveys on new drills, the reservoir pressure is below its initial value and with further drilling and production within the unit the pressure shall drop further. Therefore, a waterflood scheme is deemed to be beneficial. Reservoir simulation and modelling predicts that each year the water flood project is delayed reduces the incremental recoverable reserves by (1% - 2%), therefore, it is deemed critical to begin water injection as soon as possible. Upon conversion, during the initial over-injection period, the reservoir pressure is expected to increase from the current level. Once the cumulative VRR reaches one (1.00), a monthly VRR of zero-point-eight to one (0.80 - 1.00) shall be maintained.

Wellbore and Surface Piping Specifications and Corrosion Control

All injection flowlines shall have a maximum operating pressure of at least 17,000 kPa. This is consistent with injection systems at the BCX 13-06-003-29W1 Battery. Typical operating pressure is expected to be around 6,500 kPa.

Maximum pump discharge from the BCX 13-06-003-29W1 Battery injection pumps is 6,500 kPa, limiting maximum wellhead pressure to 6,500 kPa. All wellheads are rated to 21,000 KPa.

All emulsion flowlines shall have a maximum operating pressure of greater than 5,500 kPa (consistent with the BCX 13-06-003-29W1 Battery gathering systems). Typical operating pressure is around 700-800 kPa.

Burgess Creek Exploration's planned corrosion control program is as follows:

Pipelines

- All injection flowlines shall be fiberglass. Production flowlines shall be internally coated. No corrosion inhibitor is required

Surface piping

- All above ground piping and wellheads shall be internally coated for producing wells. Injection wellheads shall be either internally coated or stainless steel. No corrosion inhibitor is required.

Producing Wells (Downhole)

- Continuous corrosion inhibition down annulus as required.
- Cathodic protection on casing
- Internally coated or stainless steel

Injection Wells (Downhole)

- Inhibited fluid in annulus
- Polyline steel or fiberglass injection tubing
- Cathodic protection on casing

Table 1 - Reservoir Pressure Test History - Purple: Original; Green: Producing

Well I.D	Date	Type of Test	Pressure Recorded (kPa)
102/13-7-3-29W1	2023-11-06	Inferred (Fluid Level)	2559
103/13-7-3-29W1	2023-11-06	Inferred (Fluid Level)	3718
100/14-7-3-29W1	2023-11-06	Inferred (Fluid Level)	3411
102/14-7-3-29W1	2023-11-06	Inferred (Fluid Level)	2164
103/14-7-3-29W1	2023-11-06	Inferred (Fluid Level)	1558
100/2-18-3-29W1	2023-11-06	Inferred (Fluid Level)	2306
100/15-7-3-29W1	2023-11-06	Inferred (Fluid Level)	3523
102/13-7-3-29W1	2022-02-13	Pressures Post Drill (Recorders Behind Plug)	6400
103/13-7-3-29W1	2022-02-01	Pressures Post Drill (Recorders Behind Plug)	6144
100/2-18-3-29W1	2022-09-14	Pressures Post Drill (Recorders Behind Plug)	6963
100/15-7-3-29W1	2023-09-18	Pressures Post Drill (Recorders Behind Plug)	4939

Waterflood Surveillance

Waterflood response within the proposed North Pierson Unit No. 4 shall be closely monitored with the following:

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

Project Schedule

Horizontal drilling in the area has been successful with wells having high initial production rates. This has decreased the timeline to initiate the waterflood. The existing proposed injection well, 102/16-07-003-29W1, shall be converted to injection immediately after approvals have been received. BCX plans to drill two final wells at 101/07-18-003-29W1 and 103/07-18-003-29W1 to complete the spacing.

The above schedule is contingent upon the approval of the Unitization and Waterflood application, as well as the various freehold mineral, stake holders, consenting to same.

NOTIFICATIONS

Burgess Creek Exploration shall notify all surface and mineral owners of the proposed EOR project and formation of the North Pierson Unit No. 4. Copies of the Notices, and proof of service, to all surface and mineral owners within the application area and mineral owners offsetting the application area shall be forwarded to the Petroleum Branch, when available, to complete the North Pierson Unit No. 4 Application.

Unitization and execution of the formal North Pierson Unit No. 4 agreement by affected mineral owners shall occur once the Petroleum Branch has reviewed the tract factors. Copies of the agreement shall be forwarded to the Petroleum Branch to complete the North Pierson Unit No. 4 application.

Should you have any comments and/or questions regarding this application, please contact:

Engineering:
John Jenkins - (403) 874-4744, john@burgesscreek.ca
Kory Galbraith - (403) 978-9023, kory@burgesscreek.ca

Geology:
Jamie Potter – (403) 470-0481, jamie@burgesscreek.ca

Land:
Cam Urquhart – (587) 582-8985, cam@burgesscreek.ca

Sincerely,

Burgess Creek Exploration Ltd.

Kory Galbraith, COO

Table 2 – Summary of Original Oil In Place and Tract Factor Calculations

Tract LSD	Tract Weighting	Total
Tract Factor		100.000000000%
Mission Canyon 3		
Area (ac)		240
h (m)		
Vb (ac-ft)		2461
phi		
Sw		
HCPV		464946
OOIP (Mbbls)		2925
OOIP (Mstb)		2759
OOIP (10^3m^3)		439
Total Mission Canyon		
Total OOIP (Mstb)		**2759**
Total OOIP (10^3m^3)		**439**
Cumulative Oil (Mstb)		**43**
OOIP - Cum Prd (Mstb)		**2716**

Table 3 – Summary of Original Oil In Place and Tract Factor Calculations (continued)

01-07-003-29W1	08-07-003-29W1	09-07-003-29W1	16-07-003-29W1	01-18-003-29W1	08-18-003-29W1
13.986881638%	18.803507936%	26.239002722%	23.830649577%	7.356218133%	9.783739993%
40	40	40	40	40	40
2.75	3.5	4.8	4.2	1.5	2
361	459	630	551	197	262
21.1%	22.0%	22.1%	22.8%	19.3%	19.1%
30.0%	29.5%	29.0%	28.5%	28.0%	27.5%
65749	87874	121919	110833	33741	44831
414	553	767	697	212	282
390	521	723	658	200	266
62	83	115	105	32	42
390	**521**	**723**	**658**	**200**	**266**
62	**83**	**115**	**105**	**32**	**42**
10.211871054	**10.656228425**	**10.699433914**	**10.337620125**	**0.392765634**	**0.258851429**
380	**511**	**713**	**647**	**200**	**266**

Table 4 – Well List – Status

Well ID	Prod./Inject. Formation	First Prod. YYYY/MM	Last Prod. YYYY/MM	Well Type
100/16-07-003-29W1/00	MC3	2024-01-02	Active	Horizontal
102/16-07-003-29W1/00	MC3	2024-02-04	Active	Horizontal
100/08-18-003-29W1/00	MC3	2024-09-09	Active	Horizontal

Table 5 – Cumulative Oil Production and Estimated Ultimate Recovery

Well	Well Type	Cumulative Oil (Mbbl)	Expected Ultimate Recovery (Mbbl)
100/16-07-003-29W1/00	Horizontal	33.3	-
102/16-07-003-29W1/00	Horizontal	26.9	-
100/08-18-003-29W1/00	Horizontal	2.2	-

Table 6 – Summary of Rock and Fluid Properties

Proposed North Pierson Unit No. 4.		
Rock and Fluid Properties		
Formation Pressure	kPa	9,800
Oil Gravity	°API	32.3
Solution Gas-Oil Ratio	m^3/m^3	0.025
Oil Formation Volume Factor	Rm^3/Sm^3	1.07
Average Water Saturation	fraction	0.32
Average Porosity	fraction	0.17
Average Air Permeability	mD	20 – 50
Water Total Dissolved Solids	mg/L	188,877

Well Name	License
100/16-07-003-29W1	12054
102/16-07-003-29W1	12085
100/08-18-003-29W1	12182

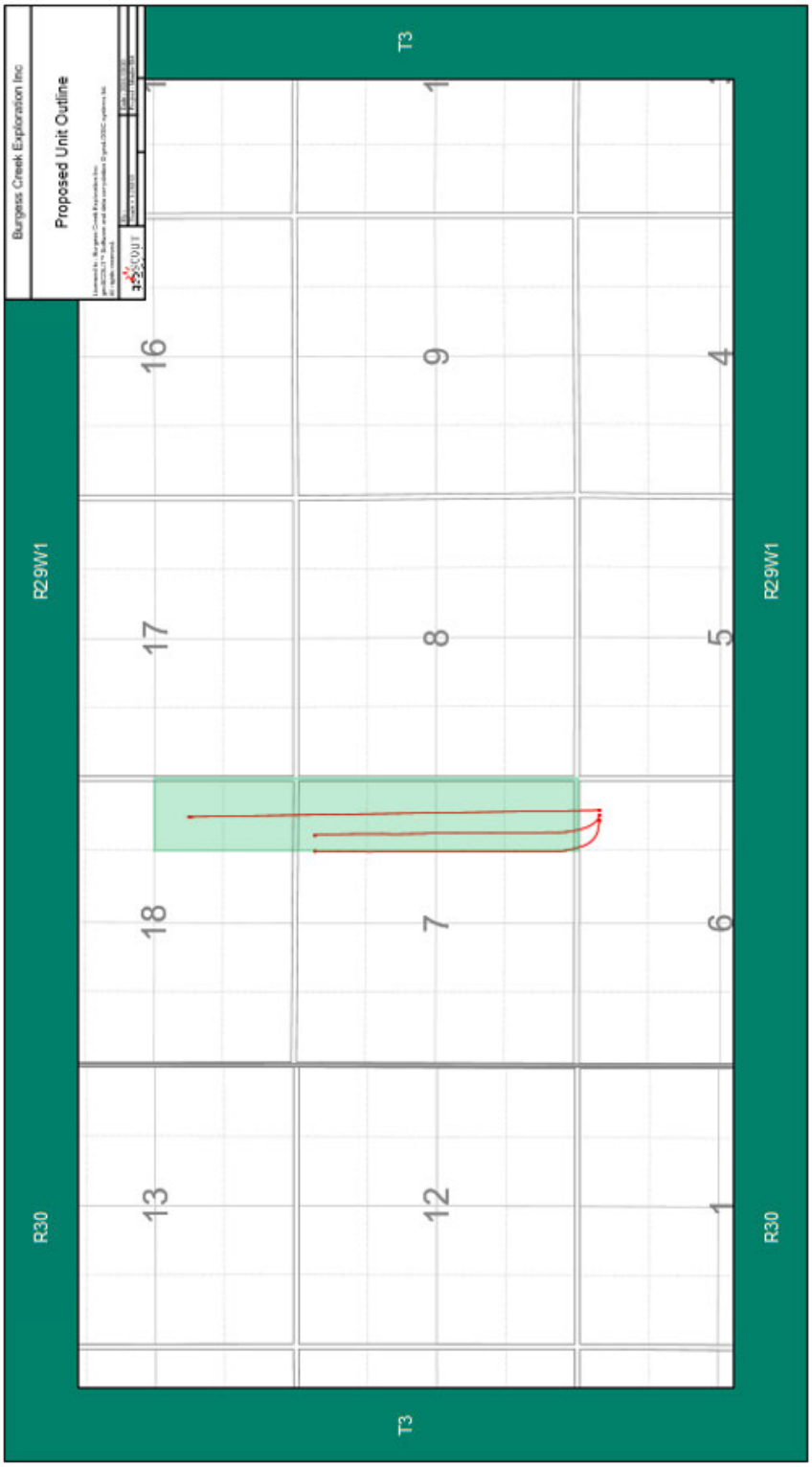


Figure 13 – Location of Proposed North Pierson Unit No. 4 and Existing Wells

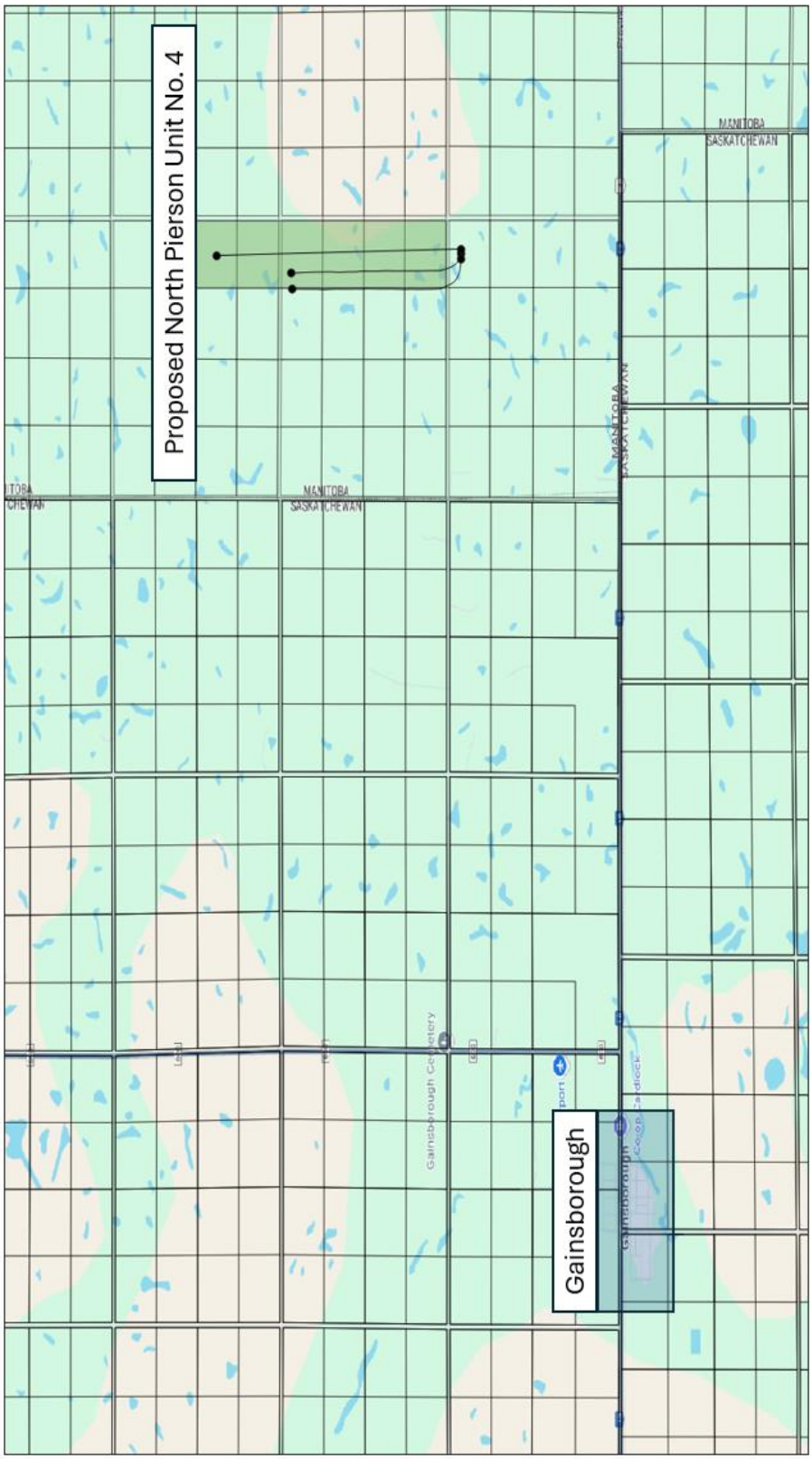


Figure 14 – Location of Proposed North Pierson Unit No. 4 within the Mission Canyon 3C Pool

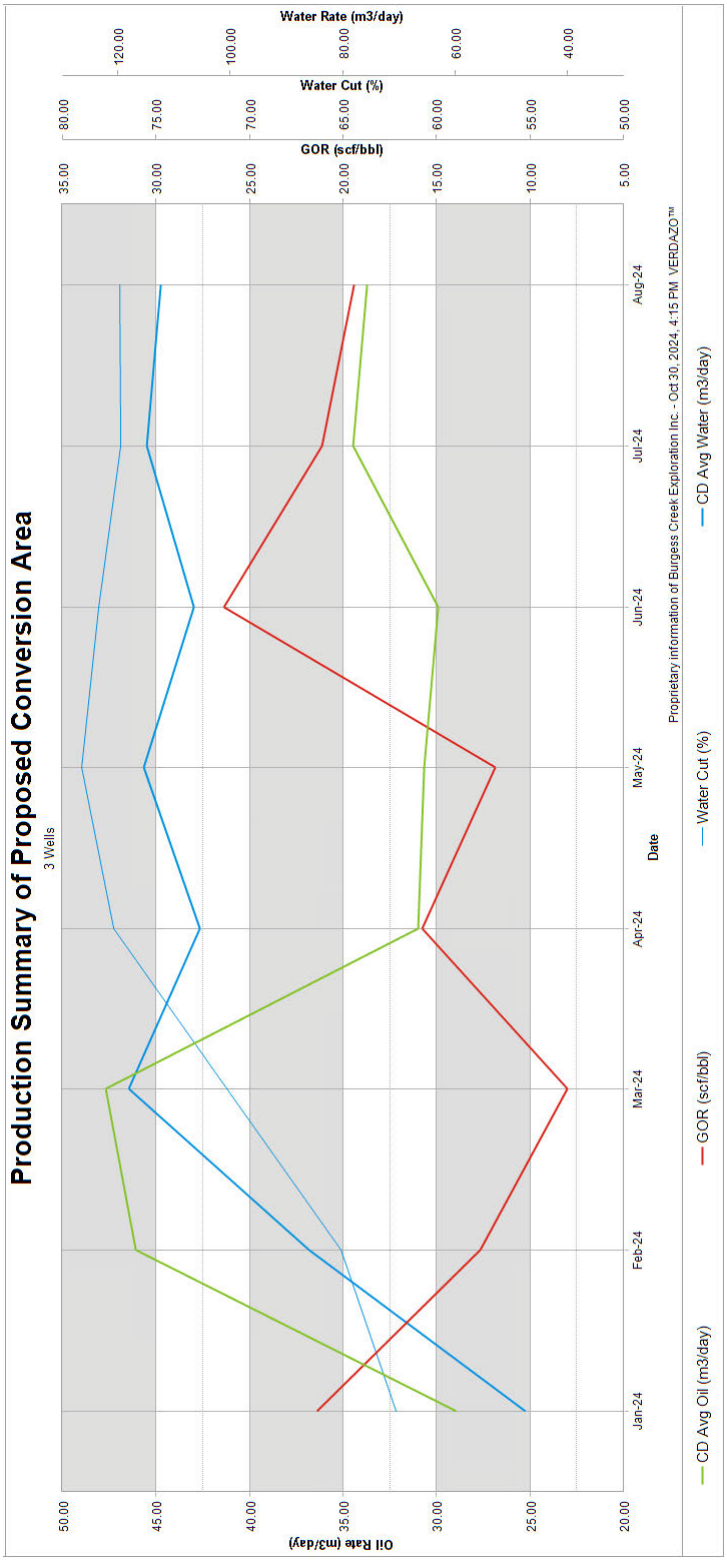
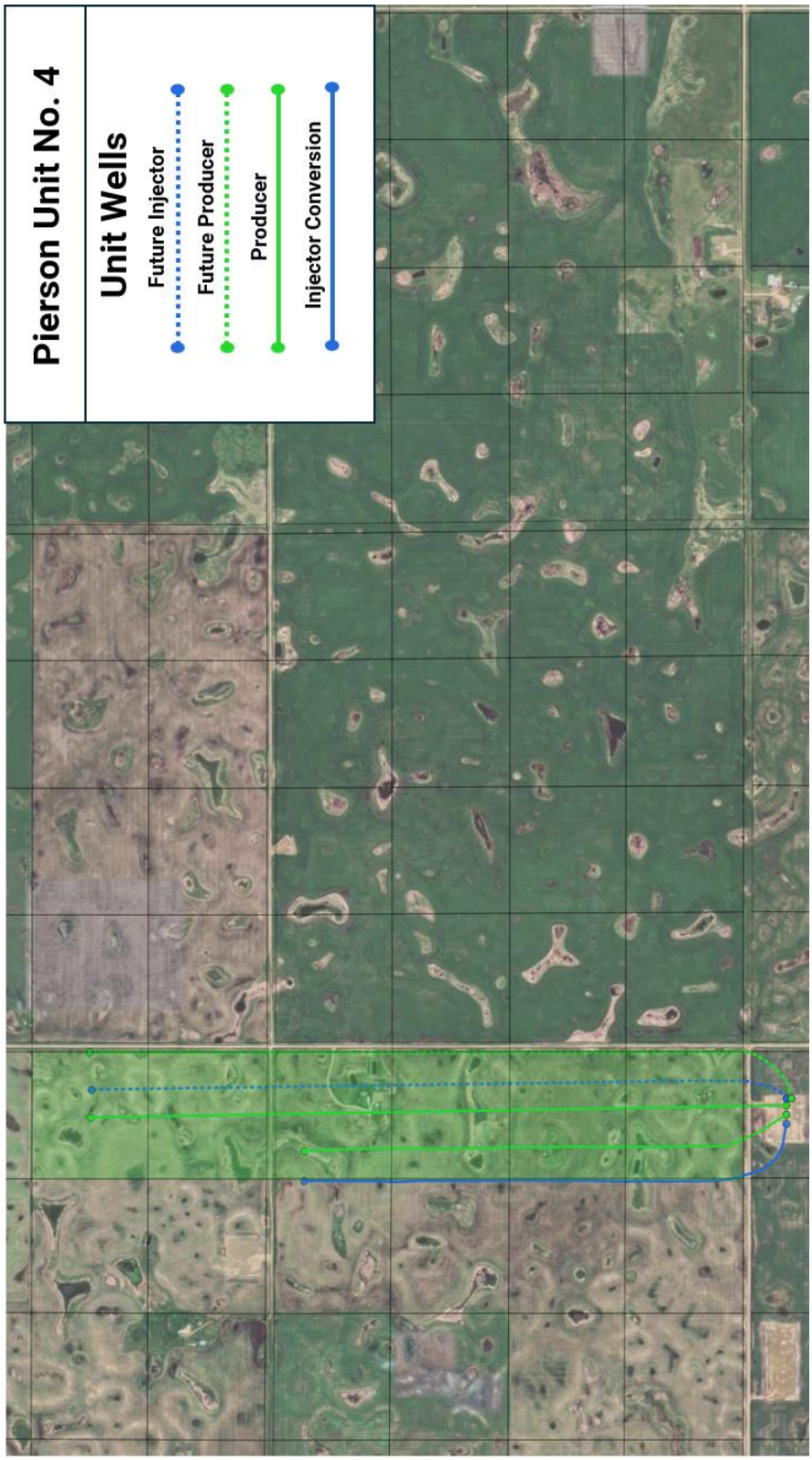


Figure 15 – Production History of Wells within Proposed BCX Pierson Pool

Figure 16 – Proposed Injector Locations. The future producer shall be drilled 105m (West of East) from the edge of the proposed North Pierson Unit. No 4 boundary.



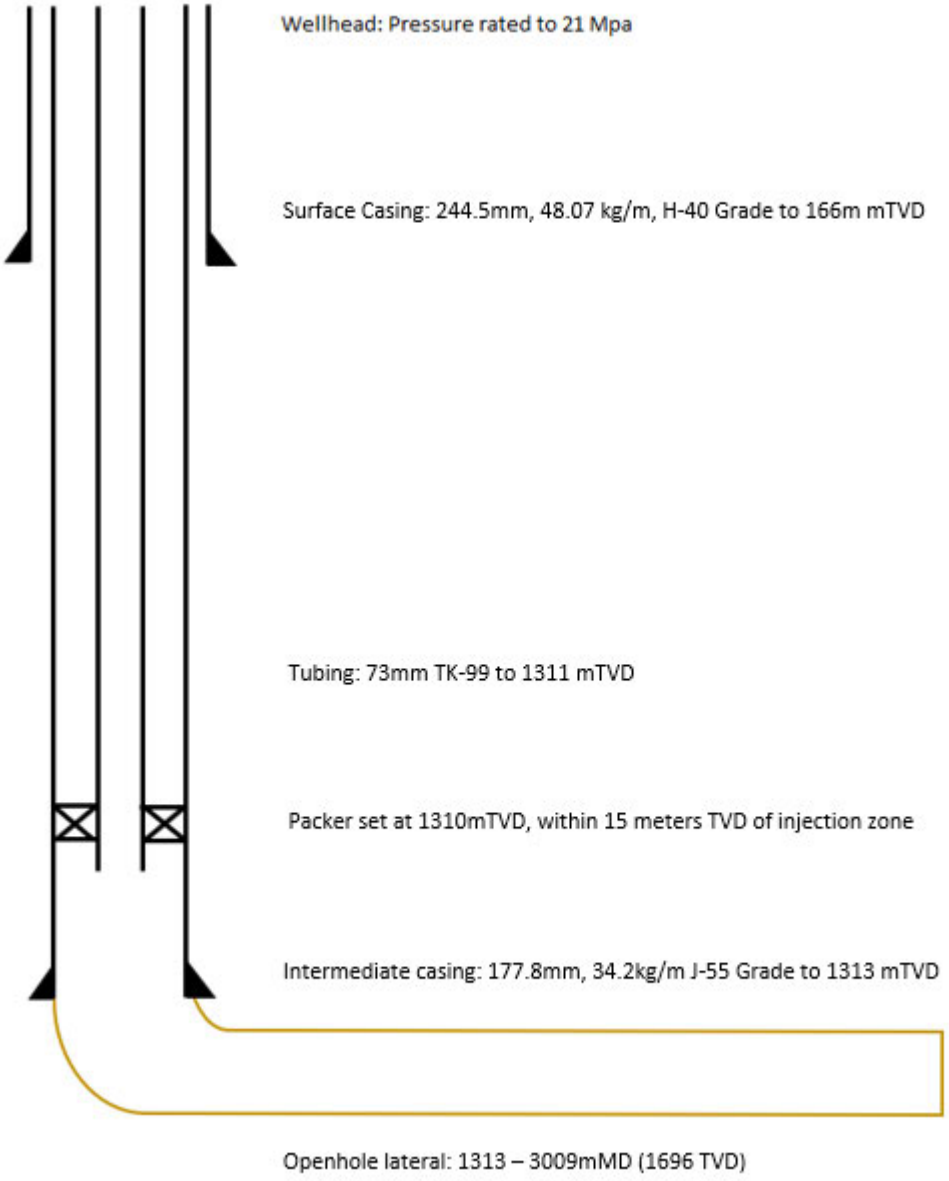
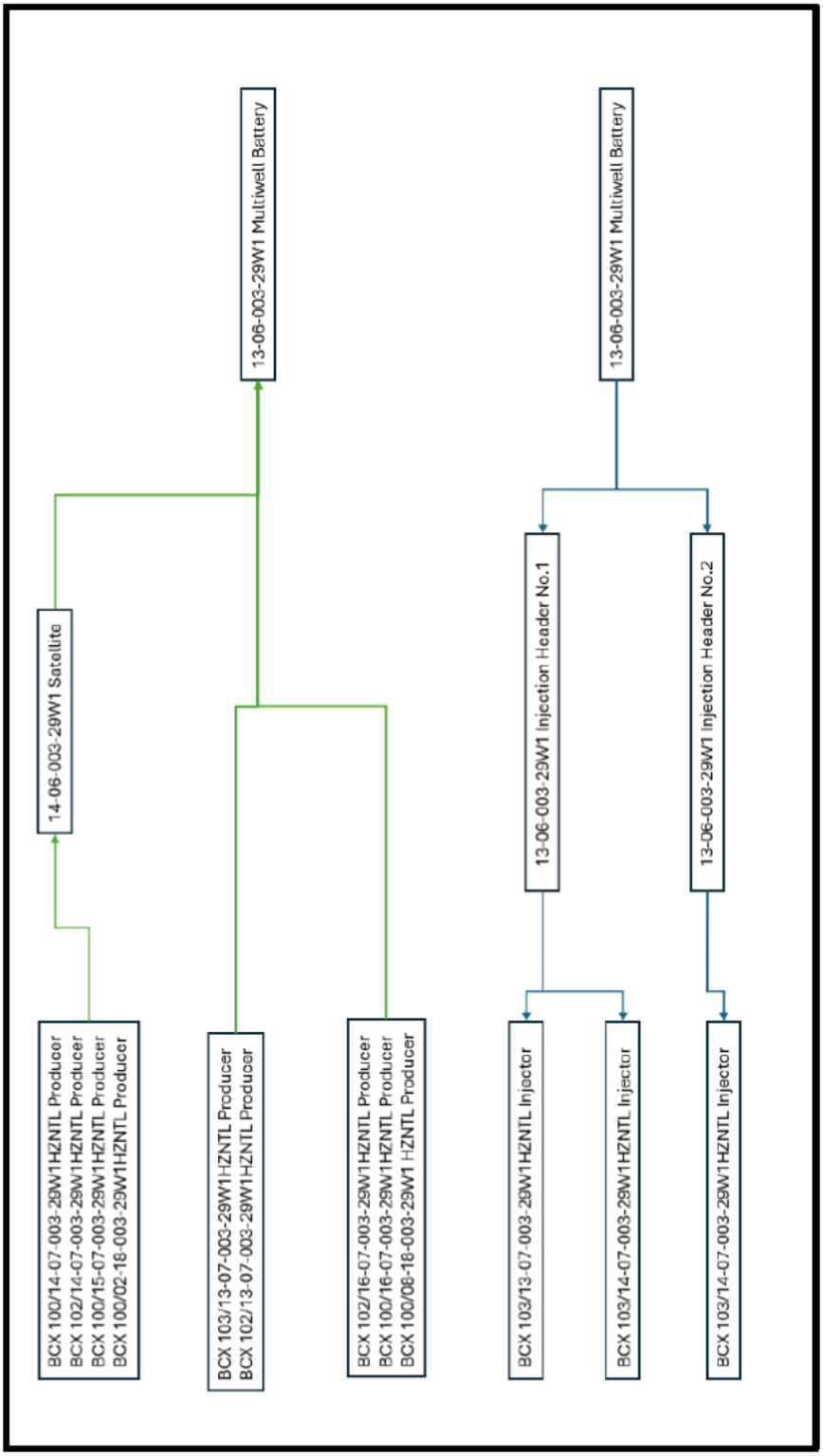


Figure 17 – Wellbore Schematic for Typical Injector



Injection pumps are located at the 13-6-3-29W1 Battery. Oil rates for all wells are measured at the test satellite, or at the 13-6-3-29W1 Battery shown above. Injection rates are measured through turbine meters at the wellhead

Figure 18a – Simplified Flow Diagram and Metering

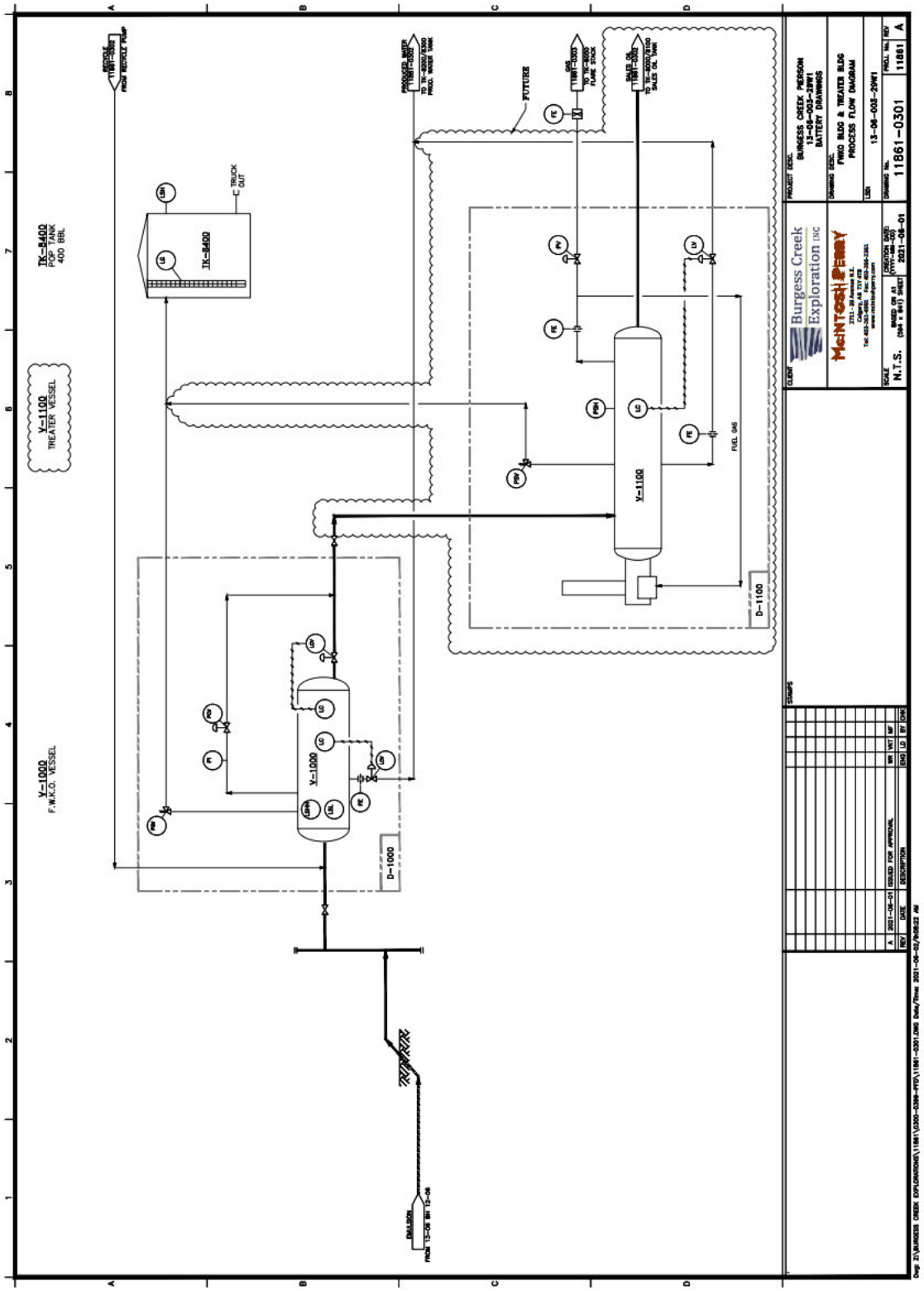


Figure 18b – Injection Pump at 2-06-011-25W1 Battery (12-30 similar design)

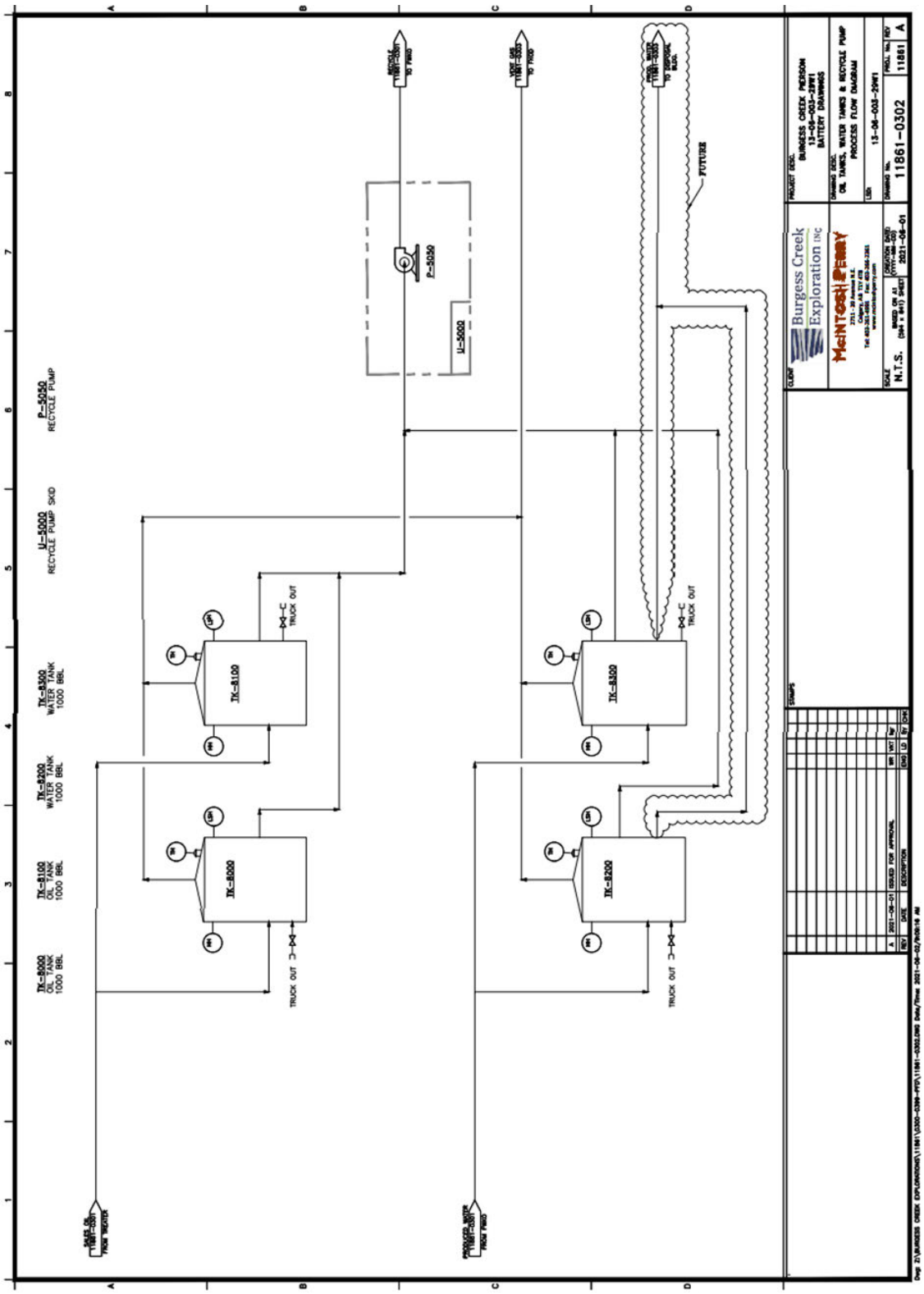


Figure 18b – BCX 13-06-003-29W1 Battery Injection Facilities cont.

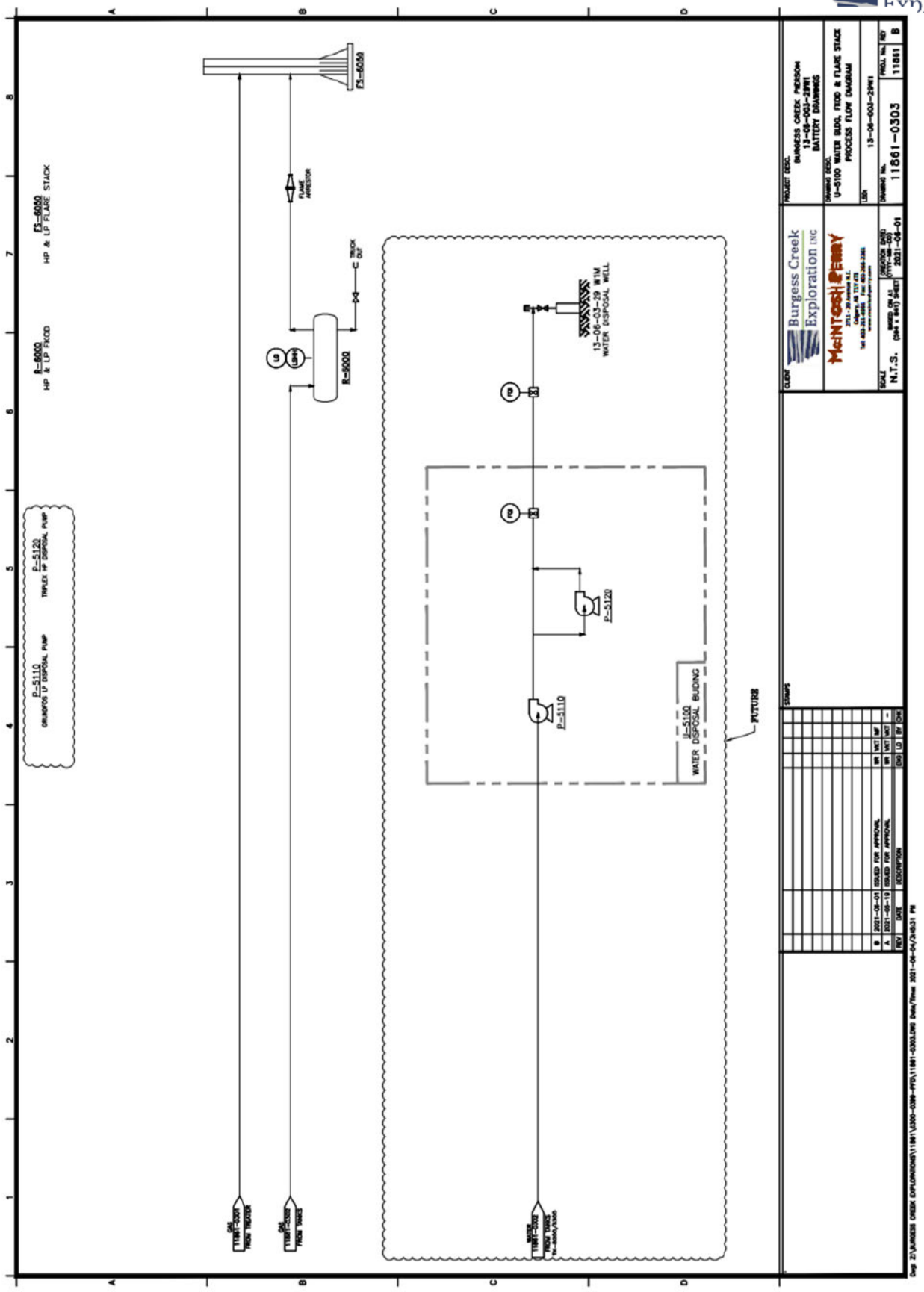
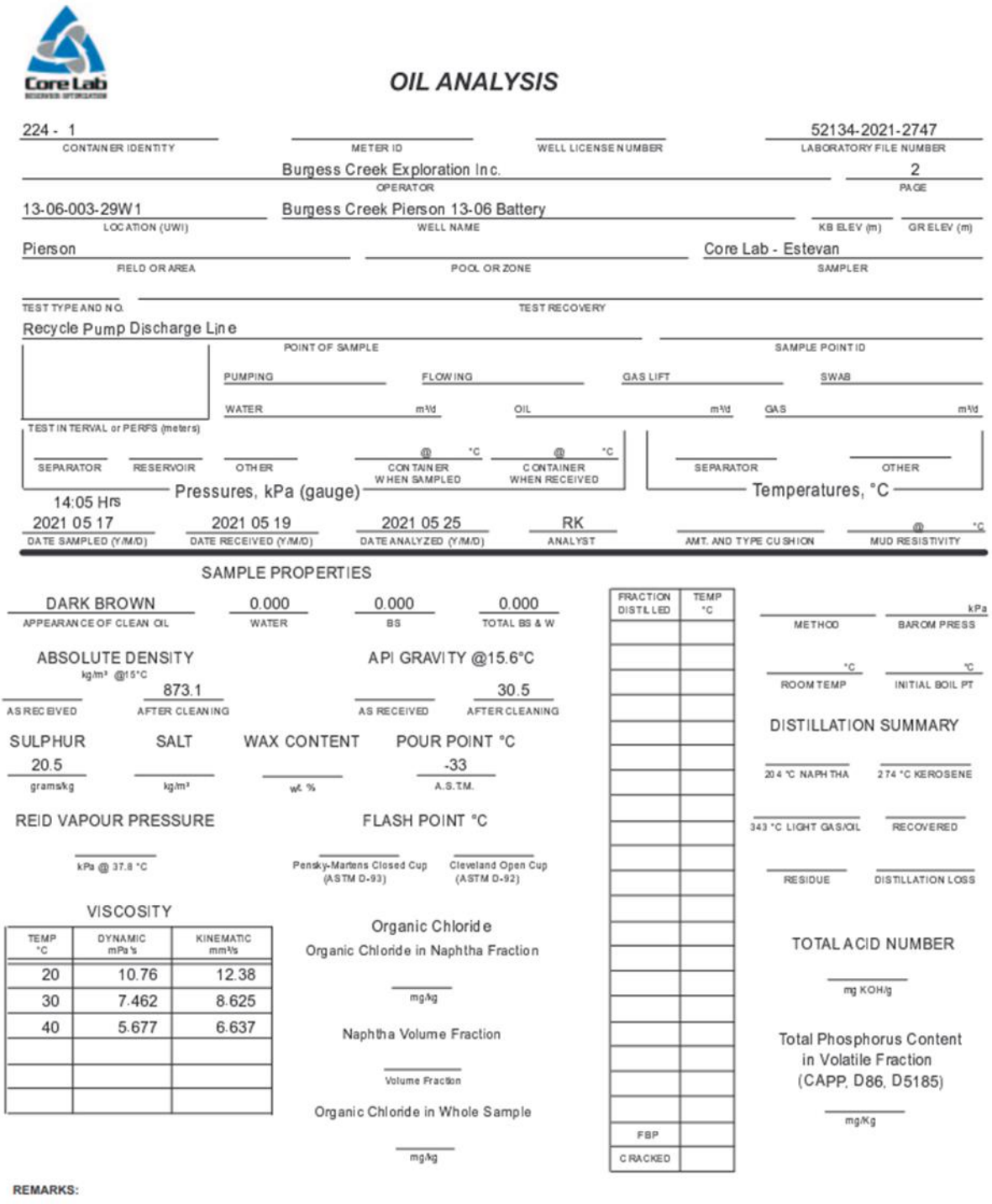


Figure 18b – BCX 13-06-003-29W1 Battery Injection Facilities cont.



Core Lab

OIL ANALYSIS

224 - 1 (CONTAINER IDENTITY) | (METER ID) | (WELL LICENSE NUMBER) | 52134-2021-2747 (LABORATORY FILE NUMBER)

Burgess Creek Exploration Inc. (OPERATOR) | 2 (PAGE)

13-06-003-29W1 (LOCATION (UWI)) | Burgess Creek Pierson 13-06 Battery (WELL NAME) | (KB ELEV (m)) | (GR ELEV (m))

Pierson (FIELD OR AREA) | (POOL OR ZONE) | Core Lab - Estevan (SAMPLER)

(TEST TYPE AND NO.) | (TEST RECOVERY)

Recycle Pump Discharge Line (POINT OF SAMPLE) | (SAMPLE POINT ID)

PUMPING | FLOWING | GAS LIFT | SWAB

WATER m³/d | OIL m³/d | GAS m³/d

TEST INTERVAL or PERFS (meters)

SEPARATOR | RESERVOIR | OTHER | @ °C CONTAINER WHEN SAMPLED | @ °C CONTAINER WHEN RECEIVED

Pressures, kPa (gauge)

SEPARATOR | OTHER

Temperatures, °C

14:05 Hrs

2021 05 17 (DATE SAMPLED (Y/M/D)) | 2021 05 19 (DATE RECEIVED (Y/M/D)) | 2021 05 25 (DATE ANALYZED (Y/M/D)) | RK (ANALYST) | (AMT. AND TYPE CUSHION) | @ °C MUD RESISTIVITY

SAMPLE PROPERTIES

APPEARANCE OF CLEAN OIL	WATER	BS	TOTAL BS & W
DARK BROWN	0.000	0.000	0.000

ABSOLUTE DENSITY kg/m³ @15°C: AS RECEIVED | 873.1 AFTER CLEANING

API GRAVITY @15.6°C: AS RECEIVED | 30.5 AFTER CLEANING

SULPHUR	SALT	WAX CONTENT	POUR POINT °C
20.5 grams/kg	kg/m³	wt. %	-33 A.S.T.M.

REID VAPOUR PRESSURE: kPa @ 37.8 °C

FLASH POINT °C: Pensky-Martens Closed Cup (ASTM D-93) | Cleveland Open Cup (ASTM D-92)

VISCOSITY

TEMP °C	DYNAMIC mPa's	KINEMATIC mm²/s
20	10.76	12.38
30	7.462	8.625
40	5.677	6.637

Organic Chloride

Organic Chloride in Naphtha Fraction: mg/kg

Naphtha Volume Fraction: Volume Fraction

Organic Chloride in Whole Sample: mg/kg

FRACTION DISTILLED	TEMP °C
FBP	
CRACKED	

METHOD | kPa BAROM PRESS

°C ROOM TEMP | °C INITIAL BOIL PT

DISTILLATION SUMMARY

204 °C NAPHTHA | 274 °C KEROSENE

343 °C LIGHT GAS/OIL | RECOVERED

RESIDUE | DISTILLATION LOSS

TOTAL ACID NUMBER: mg KOH/g

Total Phosphorus Content in Volatile Fraction (CAPP, D86, D5185): mg/Kg

REMARKS:

Figure 19 – Oil Properties

File: 52134-2021-2747
Page No: 3

Company Name: Burgess Creek Exploration Inc.
Well Name: Burgess Creek Pierson 13-06 Battery
Location: 13-06-003-29W1
Sampled From: Recycle Pump Discharge Line
Sampling Date: 2021 05 17

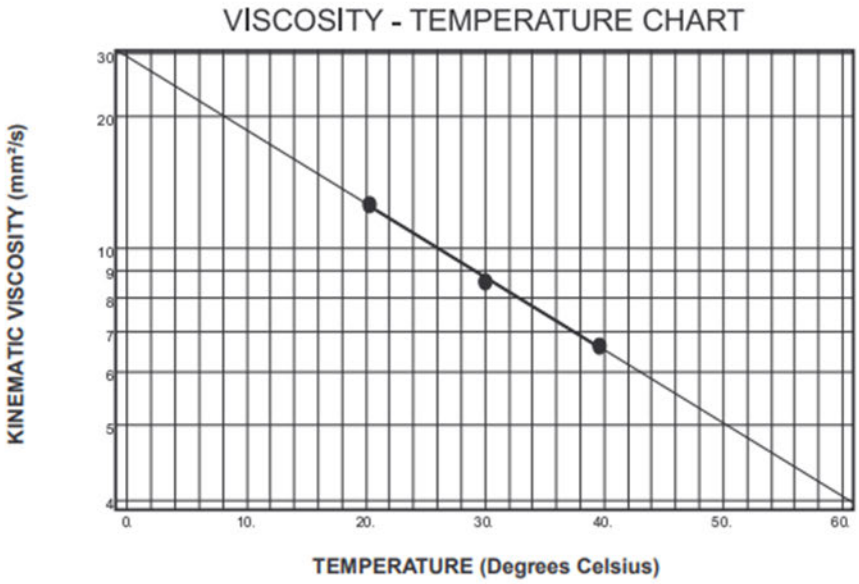


Figure 19 Cont. – Oil Properties

EXTENDED GAS ANALYSIS

V2287 - 1			52134-2021-2653
CONTAINER IDENTITY	METER ID	WELL LICENSE NUMBER	LABORATORY FILE NUMBER
Burgess Creek Exploration Inc.			1
OPERATOR			PAGE
13-06-003-29W1	BCX Pierson 13-6 Battery		
LOCATION (UWI)	WELL NAME	KB ELEV (m)	GR ELEV (m)
Pierson		Core Lab - Estevan	
FIELD OR AREA	POOL OR ZONE	SAMPLER	

TEST TYPE AND NO. | TEST RECOVERY

Flare Knock Out Sample Port

POINT OF SAMPLE | SAMPLE POINT ID

PUMPING | FLOWING | GAS LIFT | SWAB

WATER m³/d | OIL m³/d | GAS m³/d

TEST INTERVAL or PERFS (meters)

Pressures, kPa (gauge): SEPARATOR | RESERVOIR | OTHER | TSTM @ 15 °C CONTAINER WHEN SAMPLED | 0 @ 22 °C CONTAINER WHEN RECEIVED

Temperatures, °C: SEPARATOR | OTHER

10:45 Hrs

2021 05 07	2021 05 11	2021 05 19	DP		@ °C
DATE SAMPLED (Y/M/D)	DATE RECEIVED (Y/M/D)	DATE ANALYZED (Y/M/D)	ANALYST	AMT. AND TYPE CUSHION	MUD RESISTIVITY

COMPONENT	MOLE FRACTION AIR FREE AS RECEIVED	MOLE FRACTION AIR FREE ACID GAS FREE	mL/m³ AIR FREE AS RECEIVED
H_2	0.0022	0.0022	
He	0.0002	0.0003	
N_2	0.1386	0.1440	
CO_2	0.0153	0.0000	
H_2S	0.0226	0.0000	
C_1	0.2592	0.2696	
C_2	0.1672	0.1738	594.2
C_3	0.2098	0.2181	771.0
iC_4	0.0374	0.0389	163.3
C_4	0.0791	0.0822	332.8
iC_5	0.0239	0.0248	116.7
C_5	0.0205	0.0213	99.2
C_6	0.0137	0.0142	75.1
C_{7+}	0.0103	0.0106	56.4
Total	1.0000	1.0000	2,208.7

CALCULATED GROSS HEATING VALUE MJ/m³ @ 15°C & 101.325 kPa (abs.)

MOISTURE FREE	MOISTURE & ACID GAS FREE
66.82	68.84

CALCULATED VAPOR PRESSURE kPa (abs.) @ 40 °C: 97.9 (PENTANES PLUS)

CALCULATED TOTAL SAMPLE PROPERTIES (AIR=1) @ 15°C & 101.325 kPa
MOISTURE FREE AS SAMPLED

DENSITY	RELATIVE DENSITY	RELATIVE MOLECULAR MASS
1.519 kg/m³	1.240	35.9

CALCULATED PSEUDOCRITICAL PROPERTIES

AS SAMPLED pPc	AS SAMPLED pTc	ACID GAS FREE pPc	ACID GAS FREE pTc
4350.0 kPa (abs)	290.8 K	4192.9 kPa (abs)	288.6 K

C_{7+} PROPERTIES @ 15°C & 101.325 kPa		MOLE FRACTION	LOCATION	METHOD
DENSITY	MOLECULAR WEIGHT	HYDROGEN SULPHIDE		
742.0 kg/m³	95.3	0.0225600	Field	Tutweiler

REMARKS:

H2S determined in the field by Tutweiler = 2.26%

Duplicate sample was analyzed to confirm results.

Figure 20 – Gas Properties

PureChem™ Services

Total Water - SSI Analysis

Burgess Creek Exploration-Pierson

Battery:	13-06-003-29W1	**Account Manager:**	Mike Loustel
Legal Location:	13-06-003-29W1	**Sample Date:**	May 3, 2021
Sample Location:	N/A	**Received Date:**	May 3, 2021
Formation:	Mission Canyon	**Test Date:**	May 7, 2021

Cation*	mg/L	meq/L
Na^{+}	60,257.75	2621.06
K^{+}	1,148.91	29.39
Ca^{2+}	3,381.42	168.74
Mg^{2+}	935.49	76.98
Fe^{2+3+}	0.46	0.02
Mn^{2+}	0.07	0.00
Ba^{2+}	0.01	0.00
Sr^{2+}	83.86	1.91
Zn^{2+}	Not Determined	0.00
Pb^{2+}	Not Determined	0.00

Other		
Silicon	Not Determined	mg/L

*Total Dissolved Ions

Anion*	mg/L	meq/L
Cl^{-}	120,285.25	3392.81
SO_4^{2-}	2,434.35	50.68
HCO_3^{-}	297.68	4.88
CO_3^{2-}	Not Determined	0.00
OH^{-}	0.00	0.00

Dissolved Gas Composition		
H_2S	Not Determined	%
CO_2	1.66	%

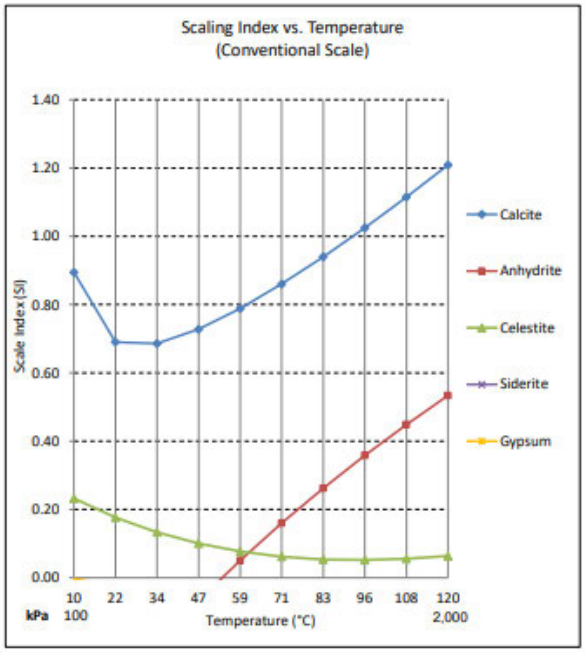
System Conditions**		
Temperature	21.3	°C
Pressure	100	kPa

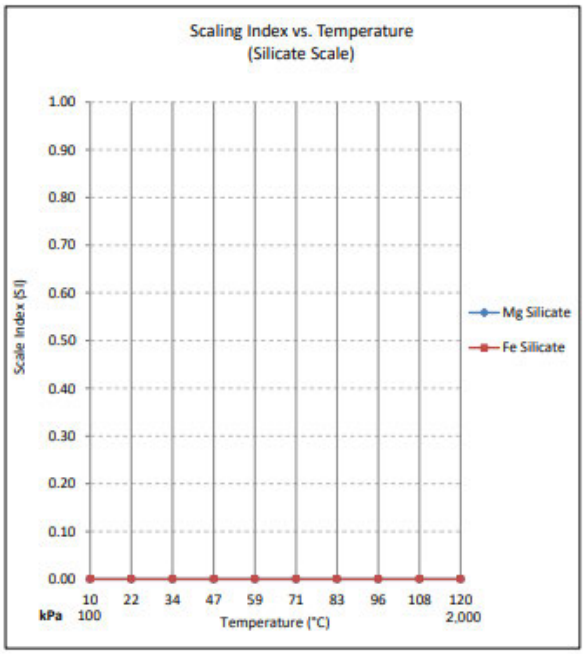
**If not provided, 20°C and 100 kPa used as default

Water Properties		
Measured pH	6.78	Field
Ionic Balance	0.840	Target = 1
Density at 15°C	1.1160	g/cm³
Total Dissolved Solids	188,877.56	mg/L
Conductivity	205.4	mS/cm
Resistivity	0.05	Ω·m
Refractive Index	1.3651	nD

Solids Precipitation Risk Matrix	
< 0	No Scale
0 to 1	Minor Risk
1 to 2	Moderate Risk
2 to 3	Severe Risk
> 3	Extreme Risk

Temp.	Press.	pH	Calcite CaCO3		Anhydrite CaSO4		Celestite SrSO4		Siderite FeCO3		Gypsum CaSO4·2H2O		Mg Silicate		Fe Silicate	
°C	kPa		SI	mg/L	SI	mg/L	SI	mg/L	SI	mg/L	SI	mg/L	SI	mg/L	SI	mg/L
10	100	6.68	0.89	156.7	-0.52	0.0	0.23	71.3	-1.43	0.0	0.00	0.0	0.00	0.0	0.00	0.0
22	311	6.28	0.69	133.2	-0.34	0.0	0.18	57.3	-1.58	0.0	-0.02	0.0	0.00	0.0	0.00	0.0
34	522	6.14	0.69	132.7	-0.19	0.0	0.13	45.2	-1.52	0.0	-0.04	0.0	0.00	0.0	0.00	0.0
47	733	6.07	0.73	137.9	-0.07	0.0	0.10	35.3	-1.42	0.0	-0.05	0.0	0.00	0.0	0.00	0.0
59	944	6.04	0.79	145.2	0.05	297.6	0.08	27.7	-1.32	0.0	-0.06	0.0	0.00	0.0	0.00	0.0
71	1,156	6.02	0.86	153.1	0.16	868.7	0.06	22.6	-1.23	0.0	-0.07	0.0	0.00	0.0	0.00	0.0
83	1,367	6.01	0.94	161.1	0.26	1,320.5	0.05	19.8	-1.16	0.0	-0.09	0.0	0.00	0.0	0.00	0.0
96	1,578	6.02	1.02	168.9	0.36	1,679.9	0.05	19.2	-1.09	0.0	-0.12	0.0	0.00	0.0	0.00	0.0
108	1,789	6.03	1.11	176.4	0.45	1,968.3	0.06	20.5	-1.04	0.0	-0.15	0.0	0.00	0.0	0.00	0.0
120	2,000	6.05	1.21	183.5	0.53	2,201.4	0.06	23.2	-1.00	0.0	-0.19	0.0	0.00	0.0	0.00	0.0





Note: This quantitative/qualitative analysis is specific to the sample provided and the sub-sample isolated for the test.

PureChem Services - Carlyle Lab

Document:	1211486_WaterAnalysis_BurgessCreek_Pierson_13-6-3-29W1_2021-05-10
Project:	1211486
Author:	Karis Reddick
Report Date:	May 11, 2021

PC-T-32 Rev A
Page 1 of 1

Figure 21 – Water Properties

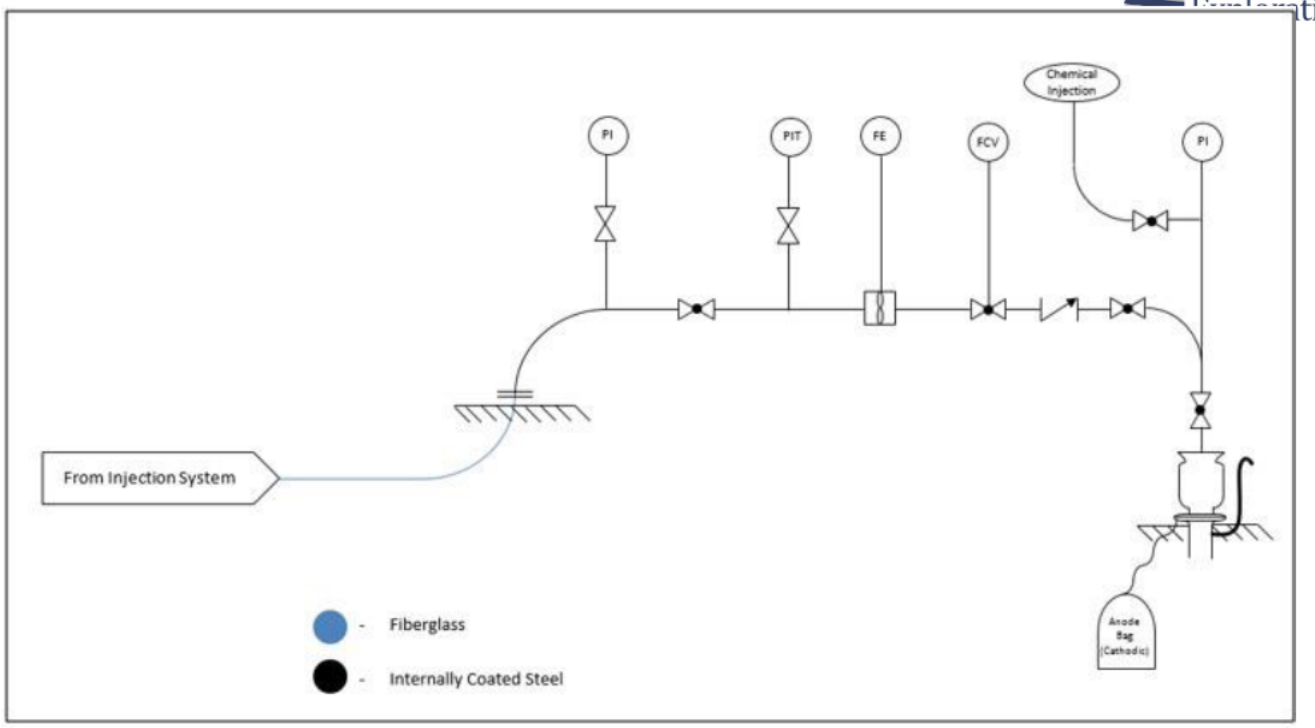
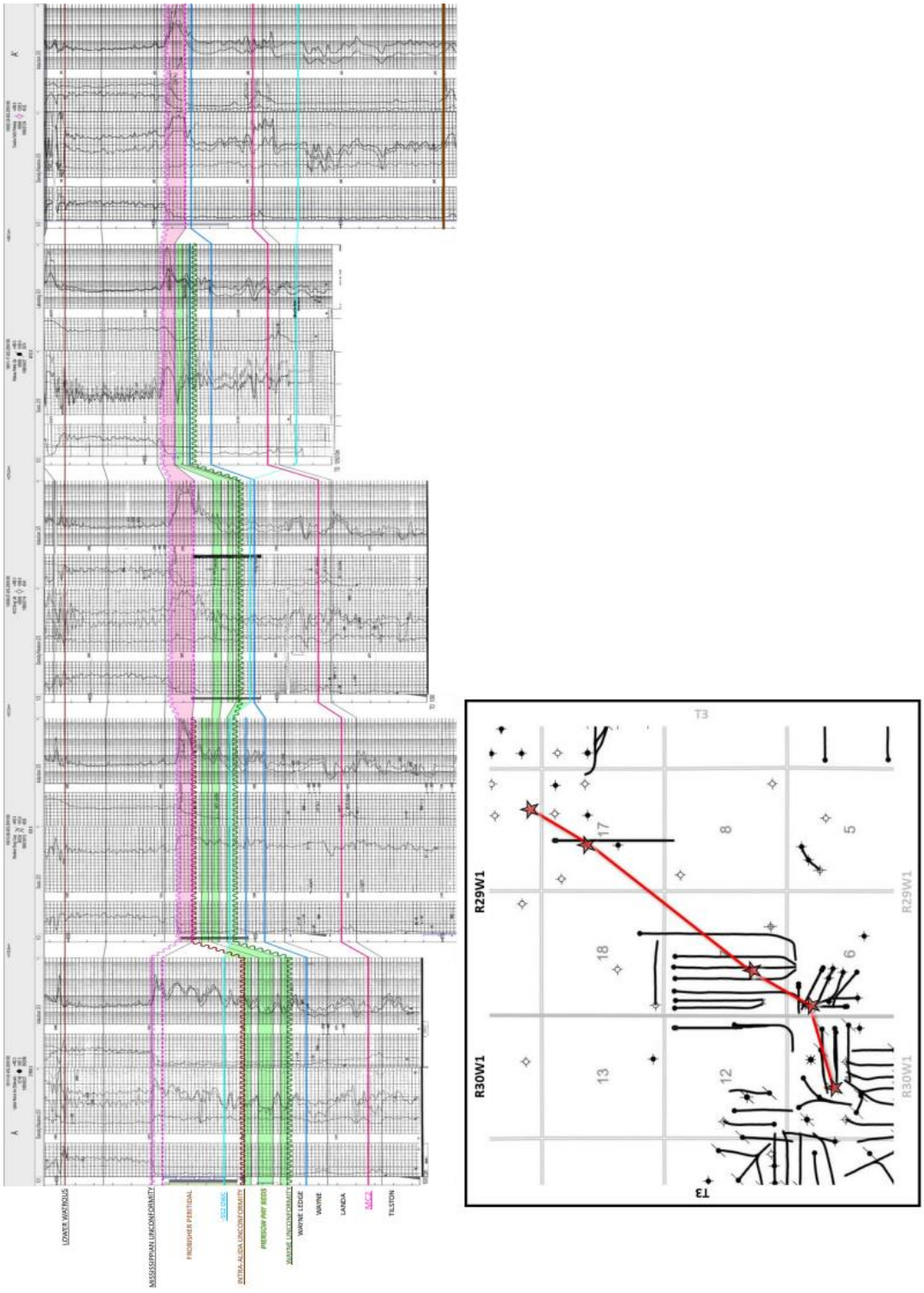
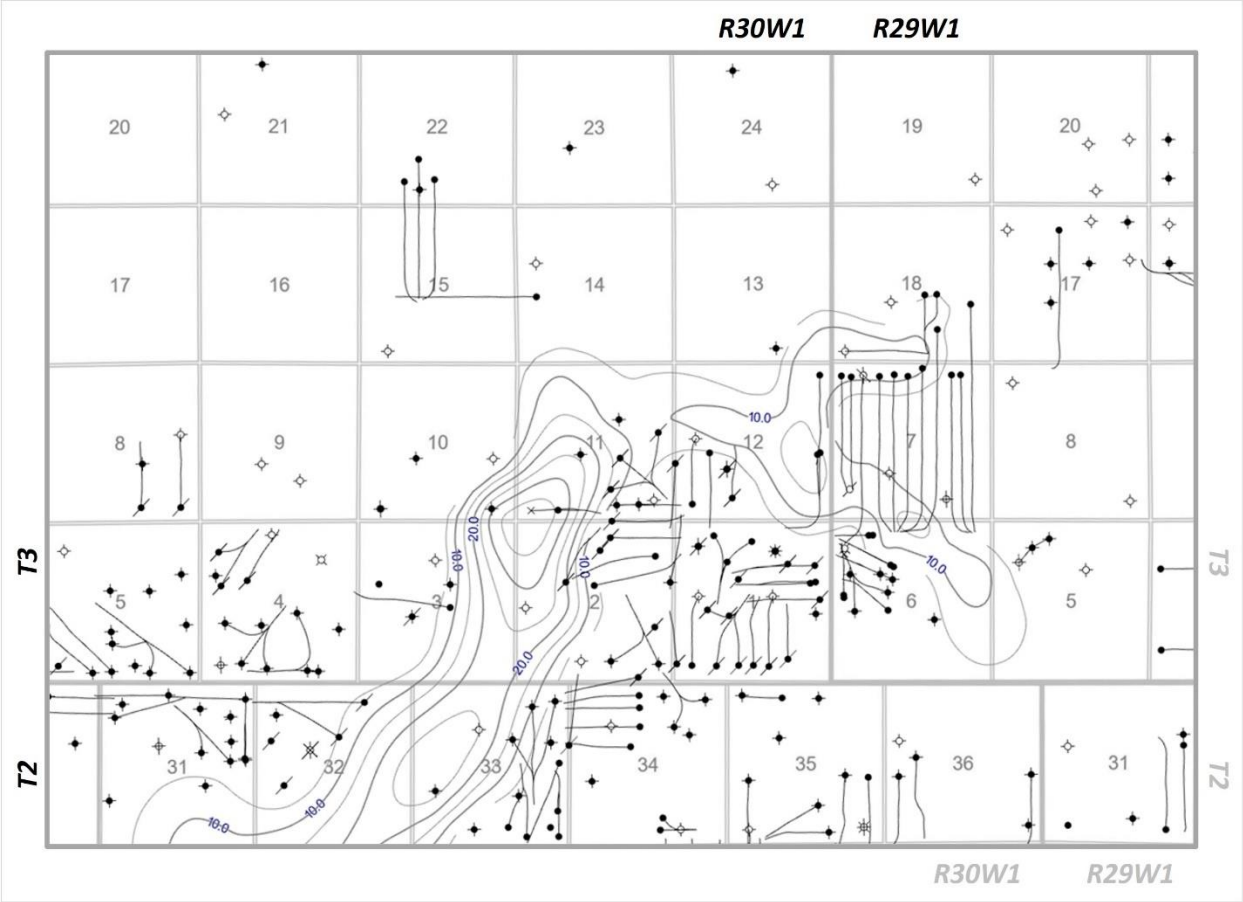


Figure 22 – Corrosion Control Systems

Appendix I – Mission Canyon 3 – Type Log / Cross Section (Full Cross-Section shown below has been included as a separate document in the Application Package)

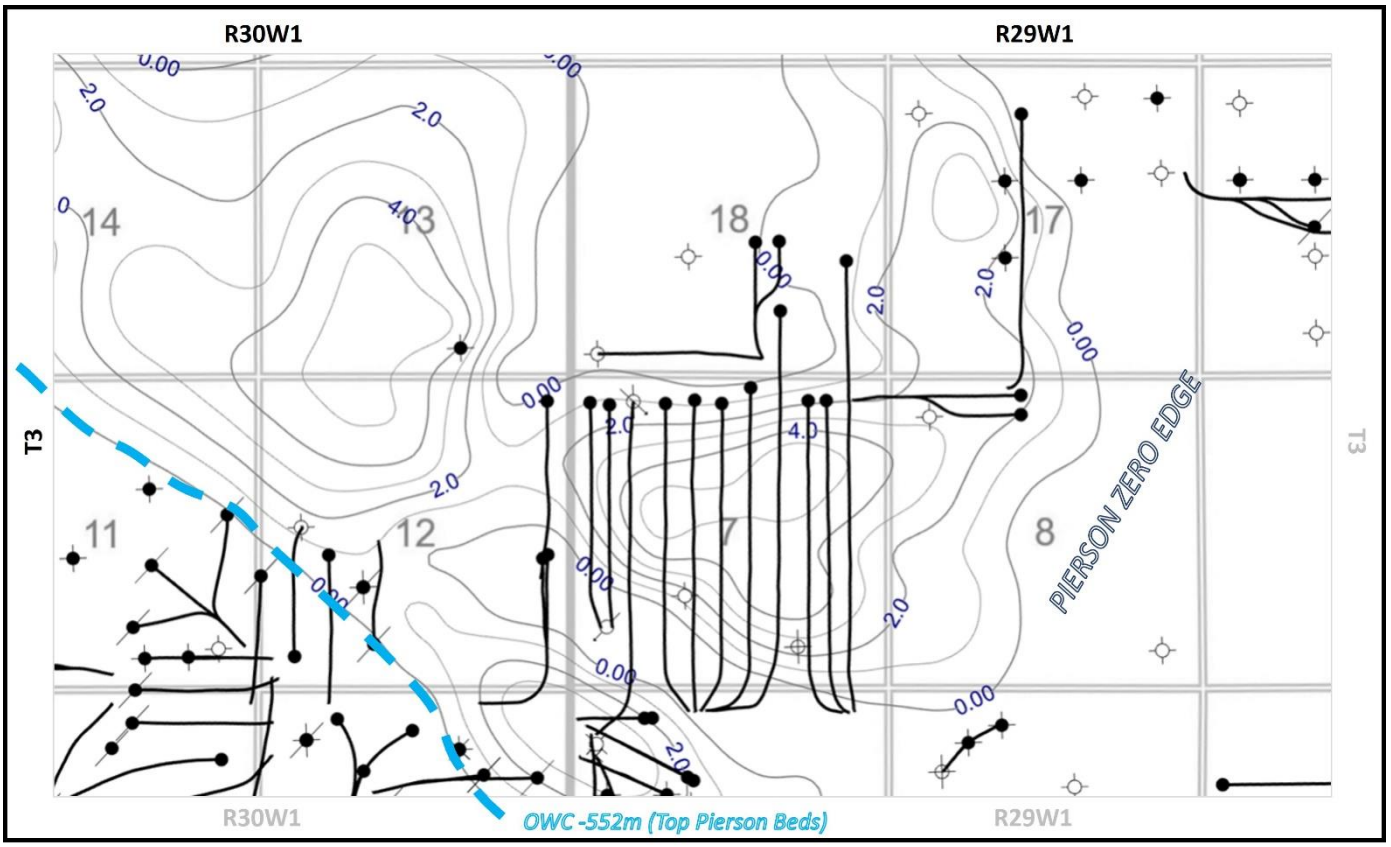


Appendix II – K1 Channel Incision



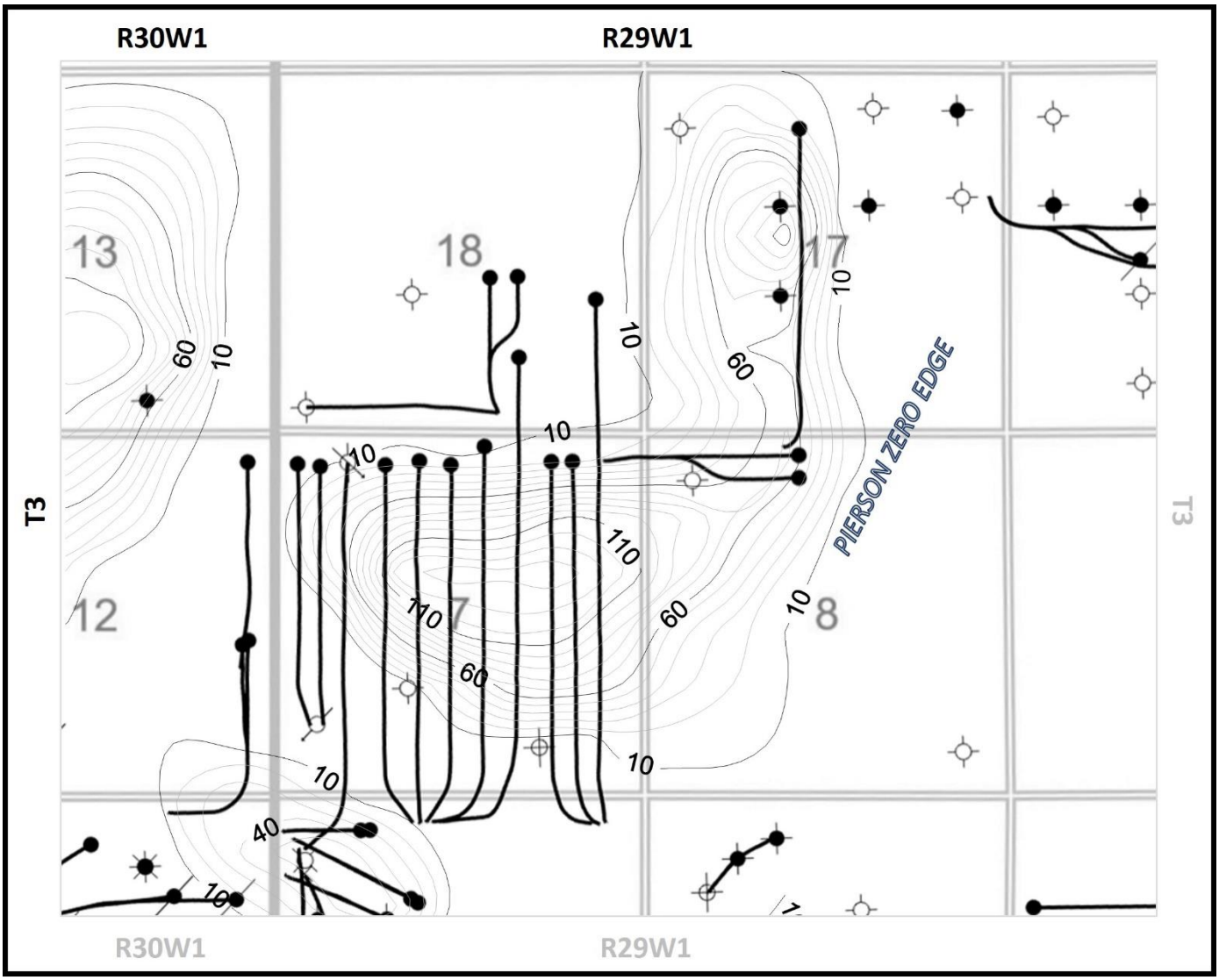
Isopach [CI = 5m] – Late Channel Incision

Appendix III – Mission Canyon 3 – Net Pay



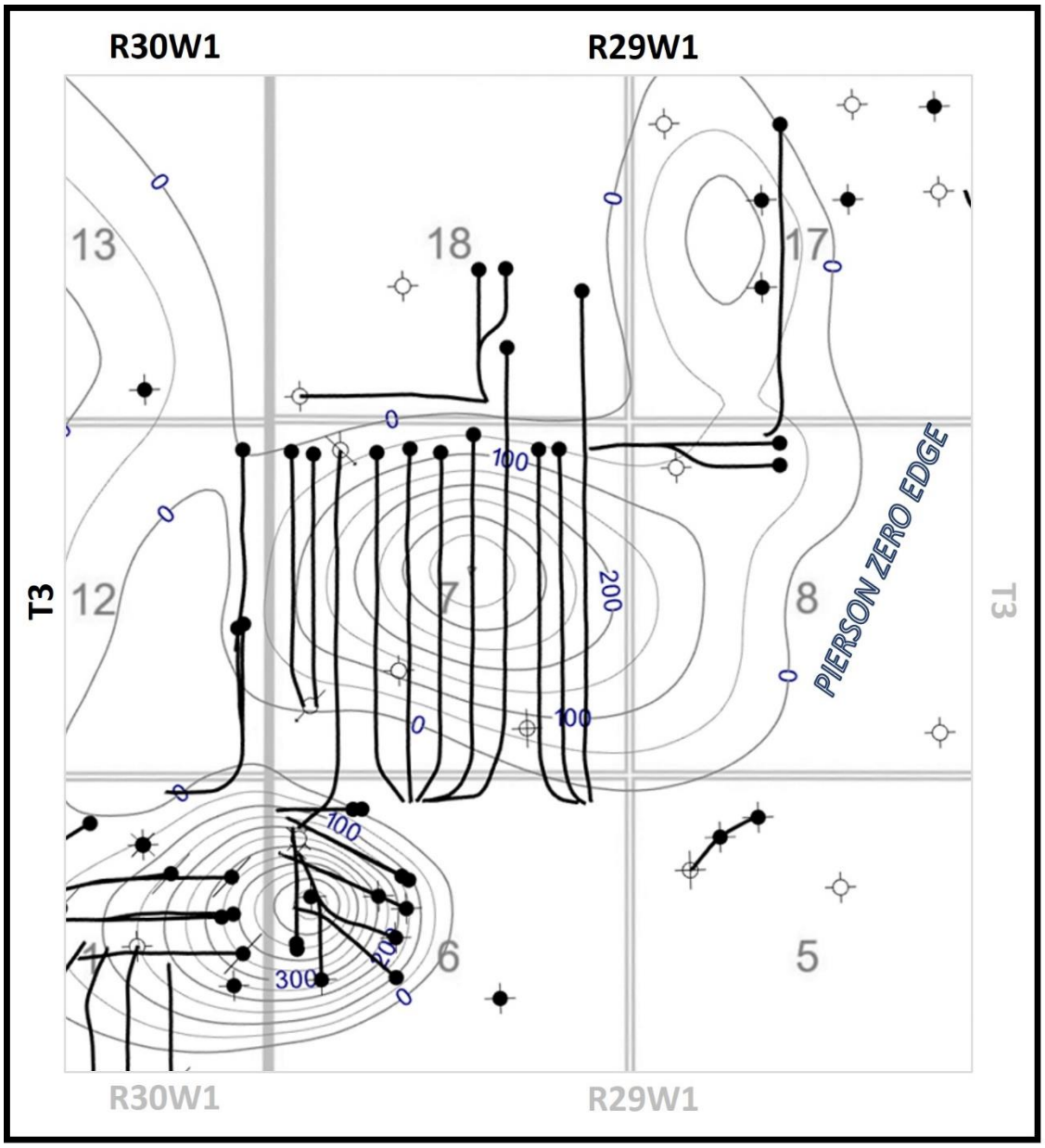
[CI = 1m] Net Pay – Alida Pierson Beds

Appendix IV – Mission Canyon 3 – Porosity-Thickness



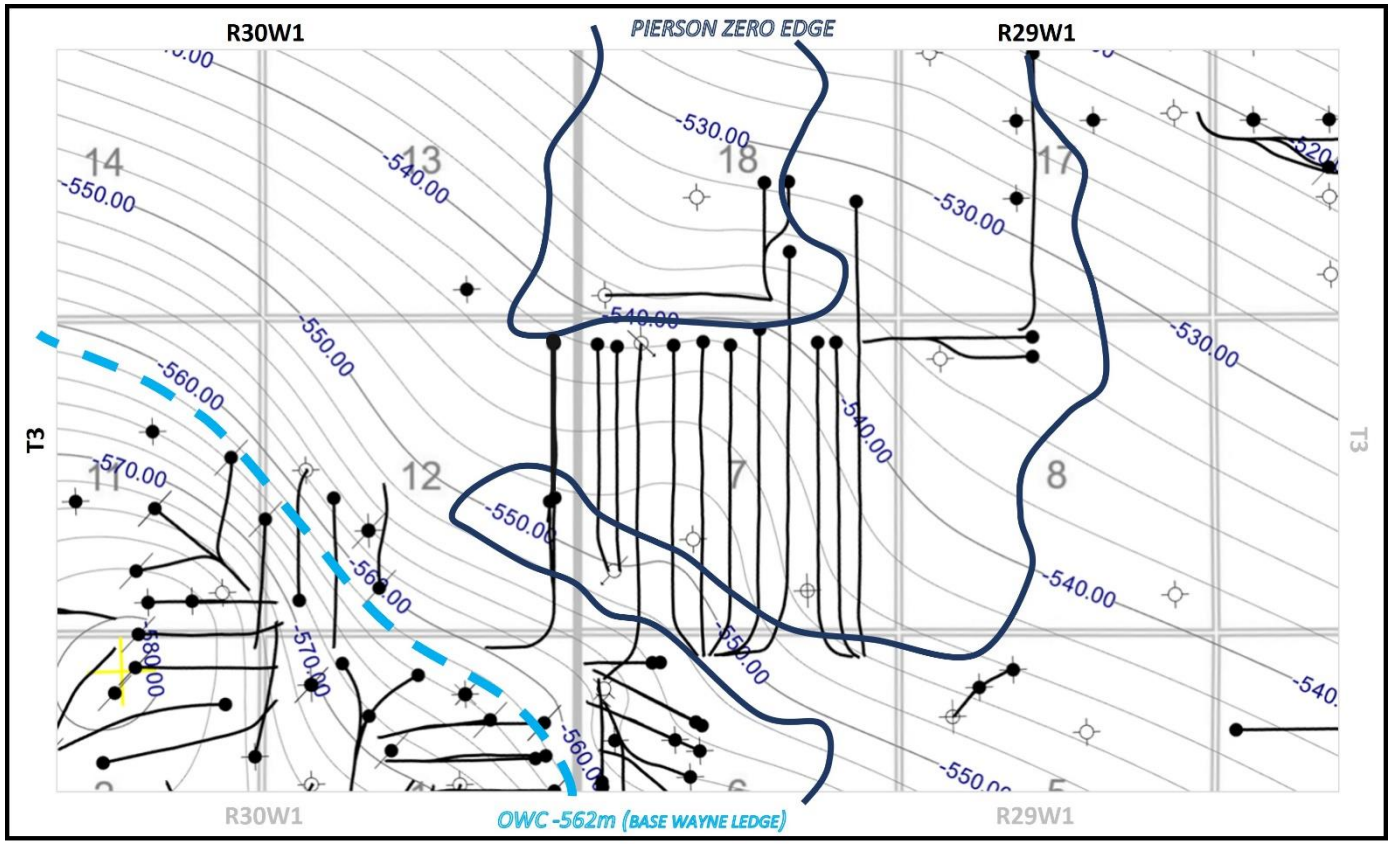
[CI = 10m] PHI-H x 100 – Alida Pierson Beds

Appendix V – Mission Canyon 3– Permeability-Thickness



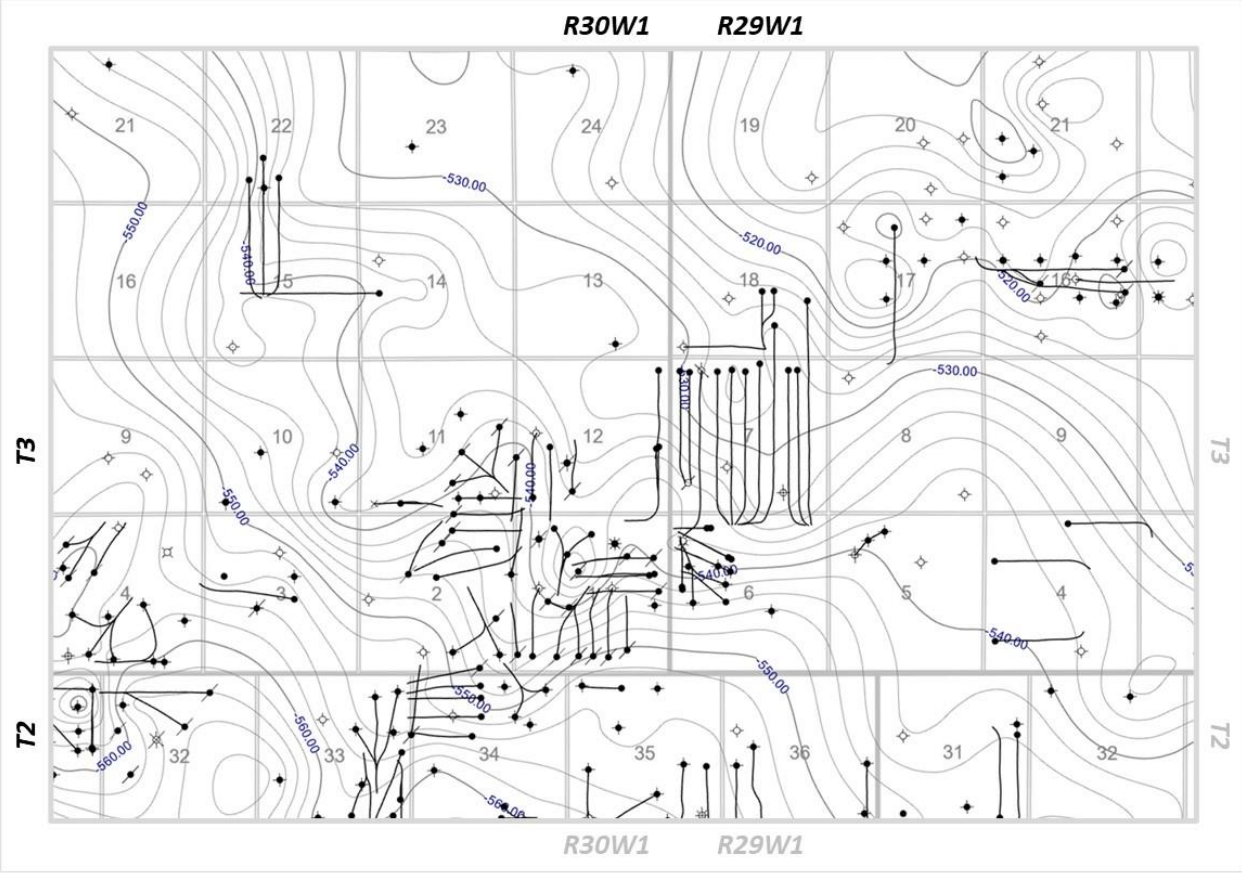
[CI = 50mDm] kH – Alida Pierson Beds

Appendix VI –Mission Canyon 2 Structure

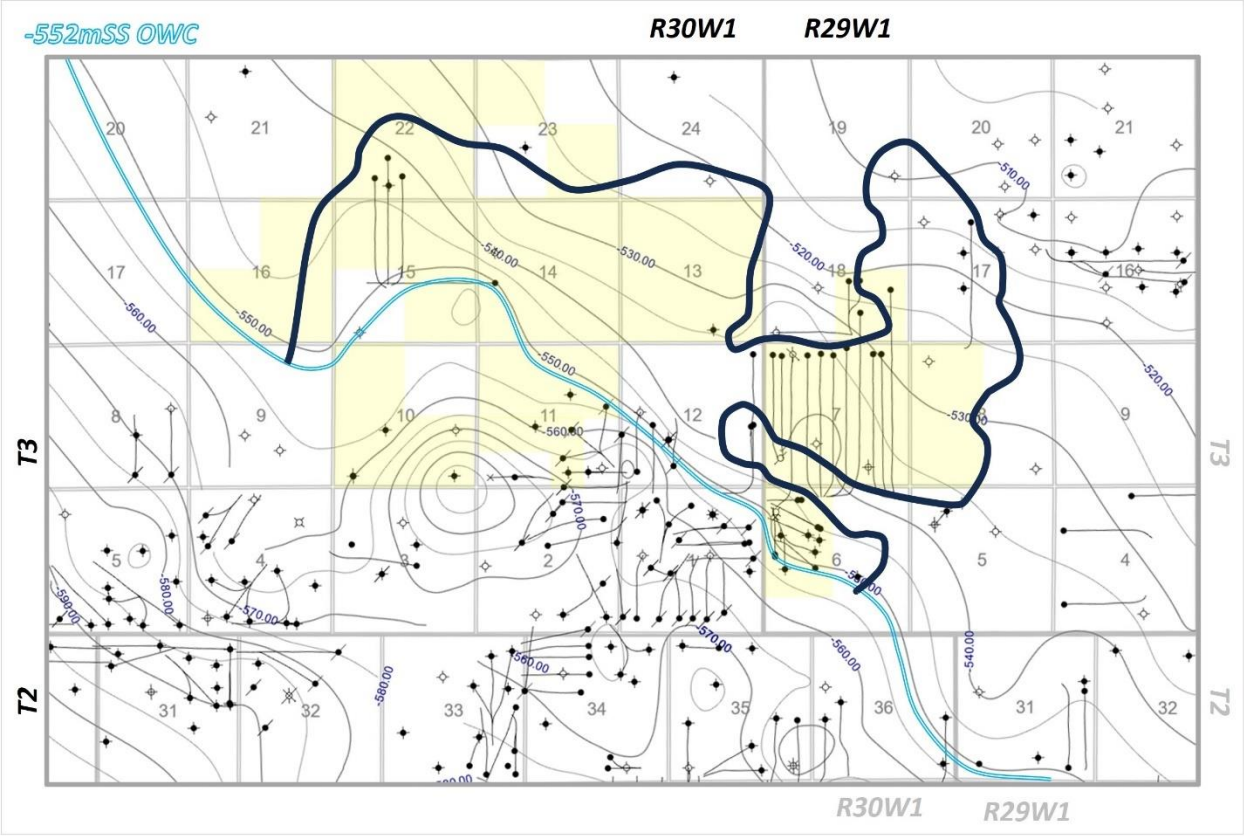


[CI = 2m] Bottom Structure – Base Wayne Ledge

Appendix VII – Mission Canyon 3 – Mississippian Unconformity Structure



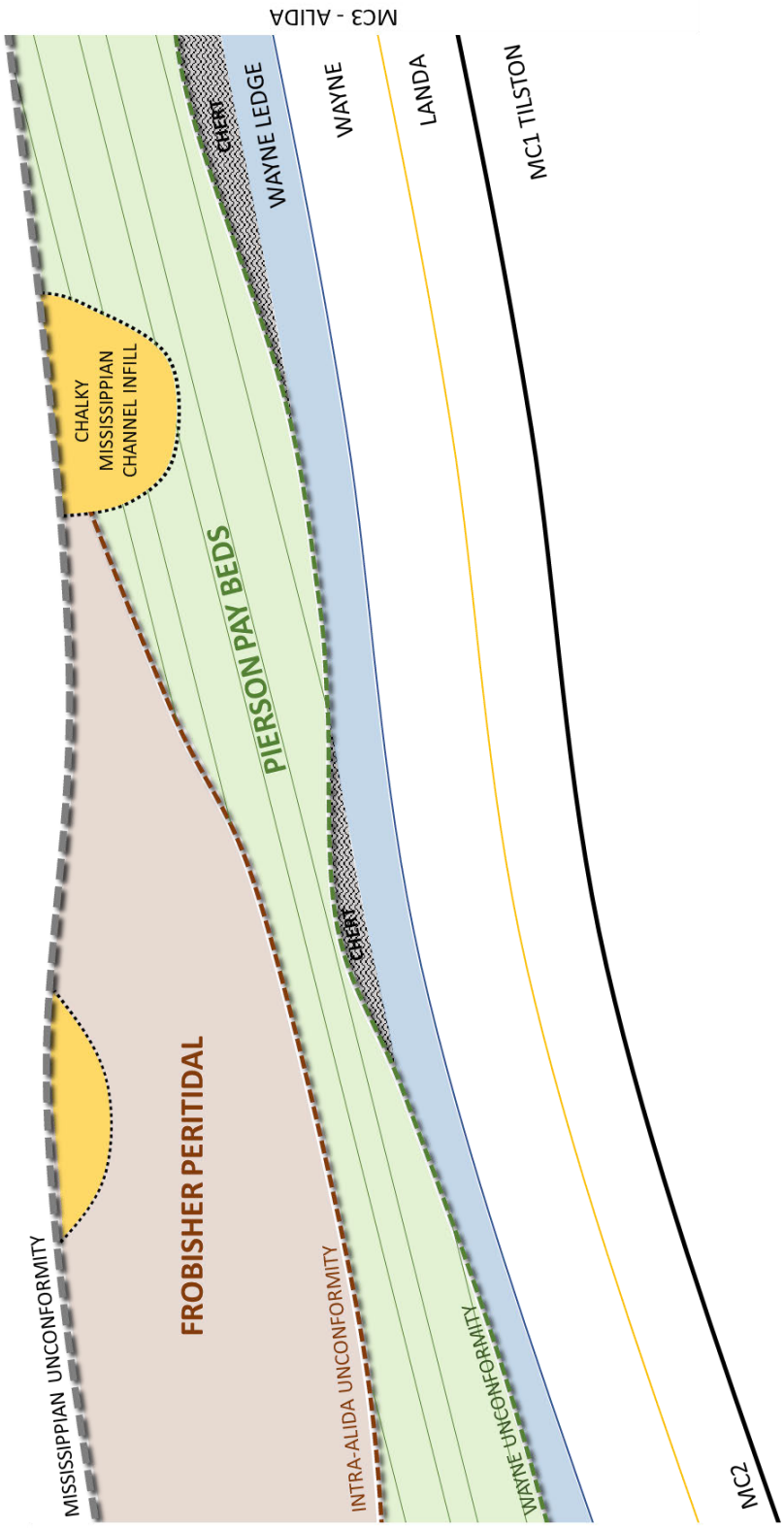
Appendix VIII – Mission Canyon 3 – Pierson Pool Stratigraphy



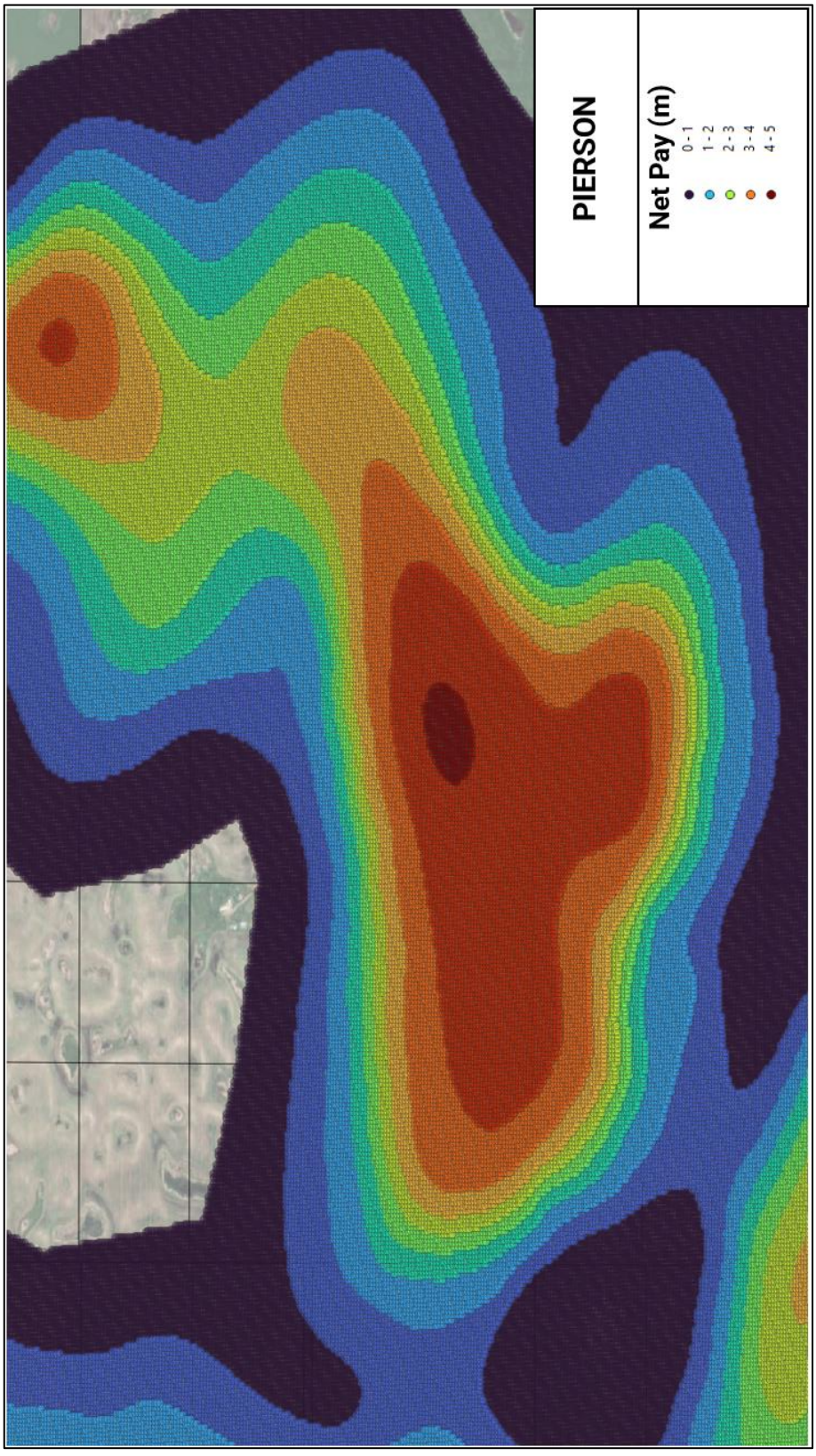
Structure [CI = 5m] – Alida Pierson Beds with predicted zero reservoir edge

Burgess Creek Exploration INC

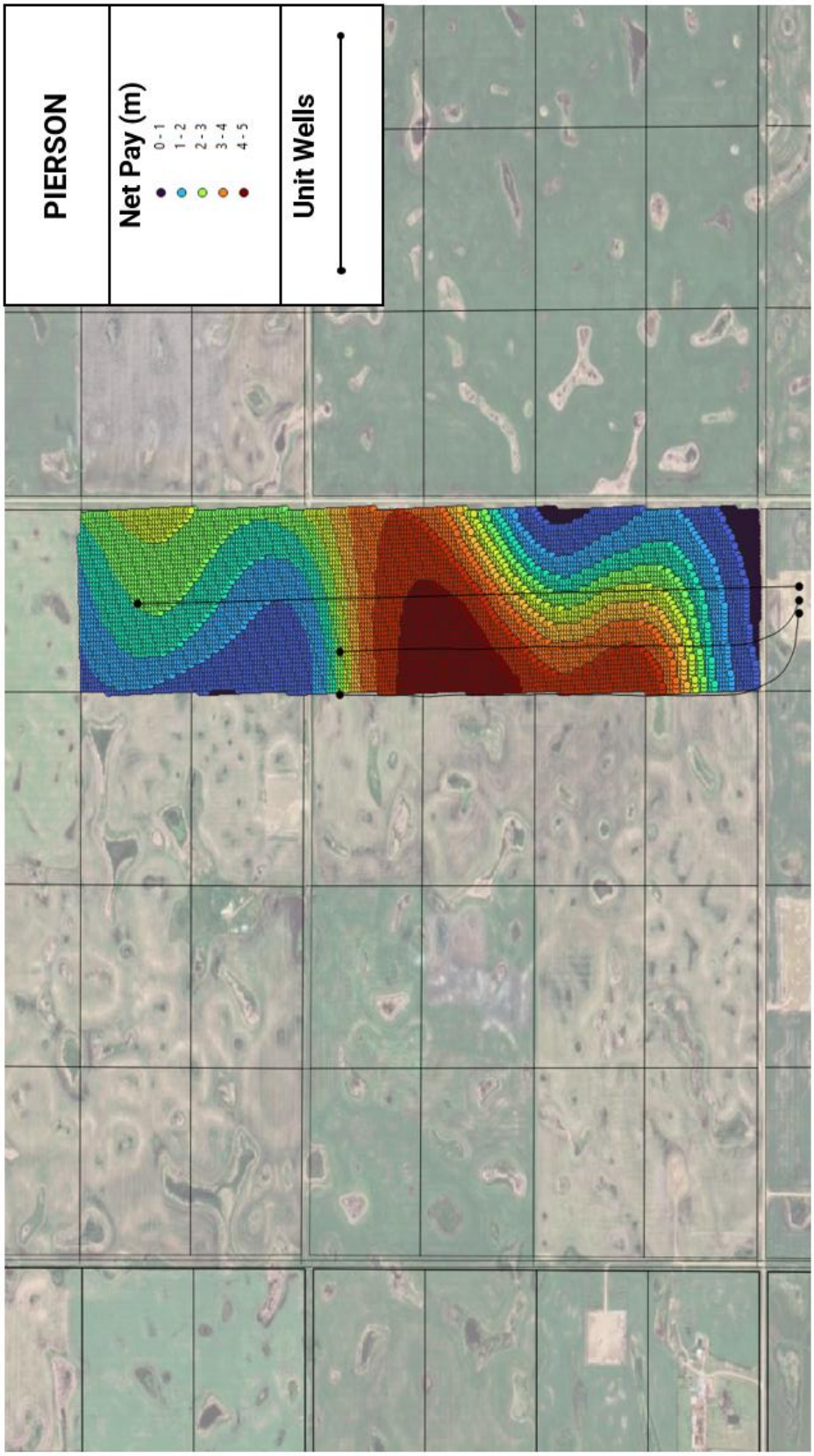
Appendix IX: Pierson Pool Geo-model Image



Appendix X– Pierson Netpay Contour



Appendix XI– North Pierson Unit No. 4 Netpay



Appendix XII– Pierson 6-7-3-29W1 Log Analysis

HCO Pierson 6-7-3-29W1