BlackGold Project

Harvest Operations Corporation

Annual Performance – Commercial Scheme Approval No. 11387D

October 2017

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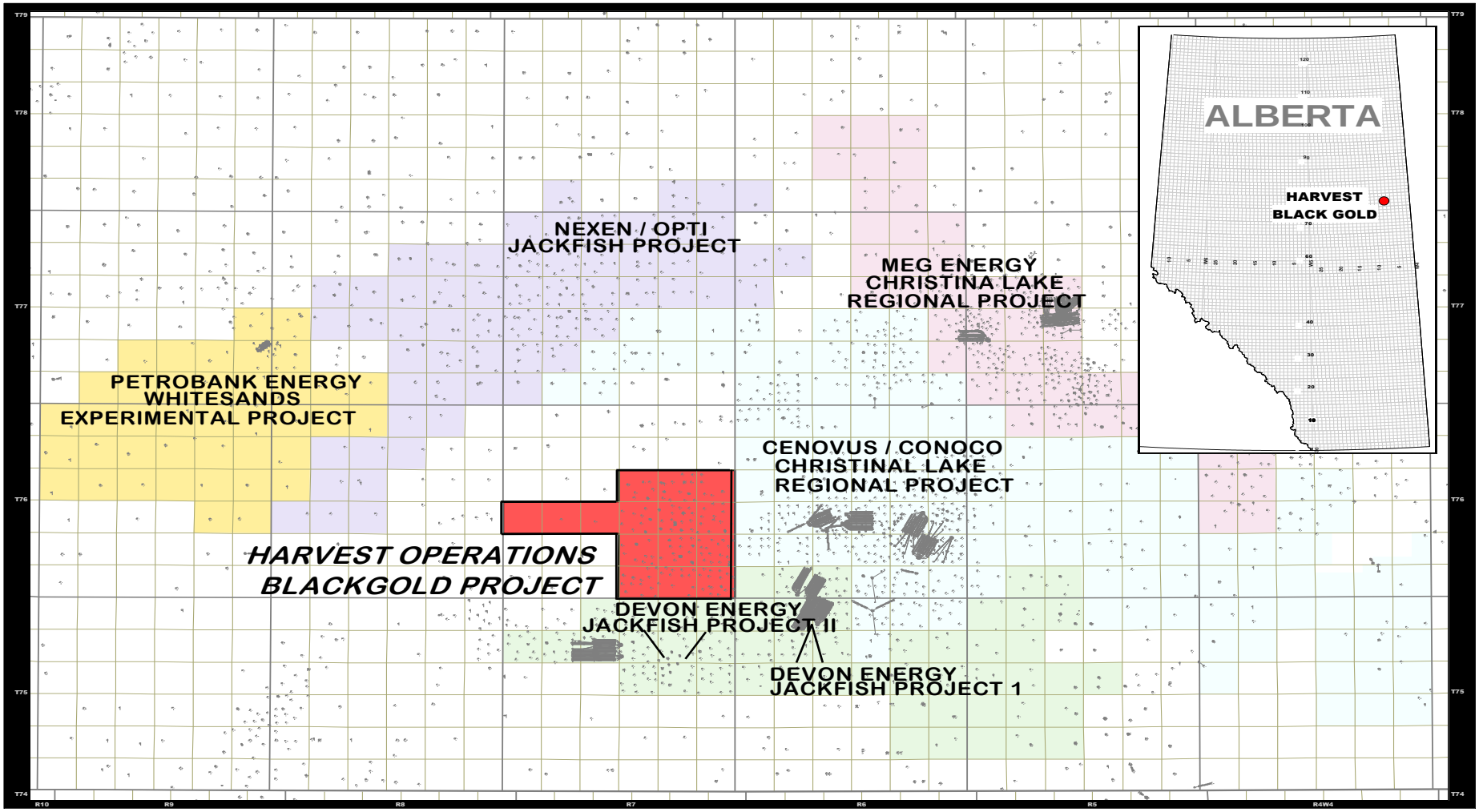
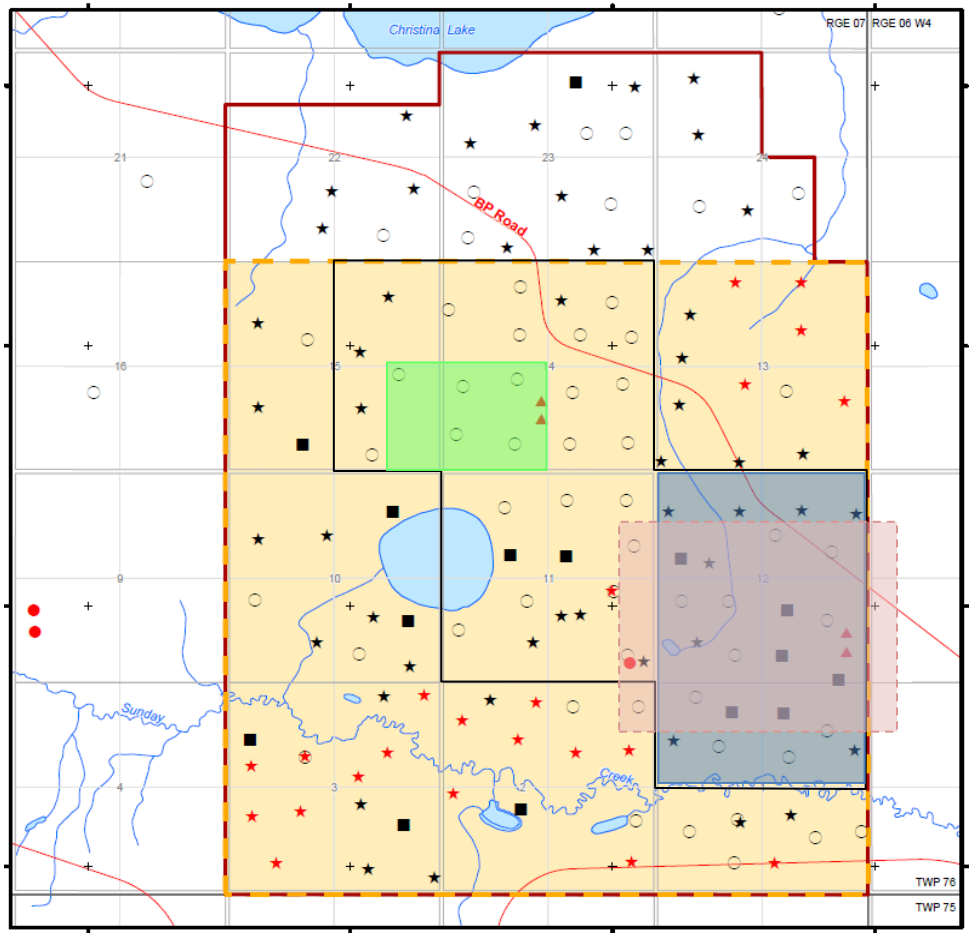
1. Background

- February 3, 2010 – Commercial Scheme Approval No. 11387 for BlackGold Phase 1 for 1,590 m^3/d bitumen recovered with the SAGD process.
- September 1, 2010 – Amendment Approval No. 11387A transfer of BlackGold Oil Sands Lease from KNOC Canada to Harvest Operations Corp.
- January 30, 2012 – Amendment Approval No. 11387B confirming minor modifications to the plot plan and modification of well trajectories.
- March 7, 2012 – Amendment Approval No. 11387C confirming a minor modifications to CPF.
- September 26, 2013 – Amendment Approval No. 11387D Phase 2 Application to produce an additional 3,180 m^3/d bitumen.
- April 22, 2014 – Amendment Approval No. 11387E – to reclassify well 1AA/06-12-077-06W4M
- September 26, 2014 – Amendment Approval No. 11387F – increasing the maximum bottom hole operating pressure of the pilot well pairs from 4,000 kPag to 5,500kPag.

1. Background

- Harvest holds 100% ownership of 15 sections in 76-7-W4M
  - located approximately 10 km southeast of Conklin





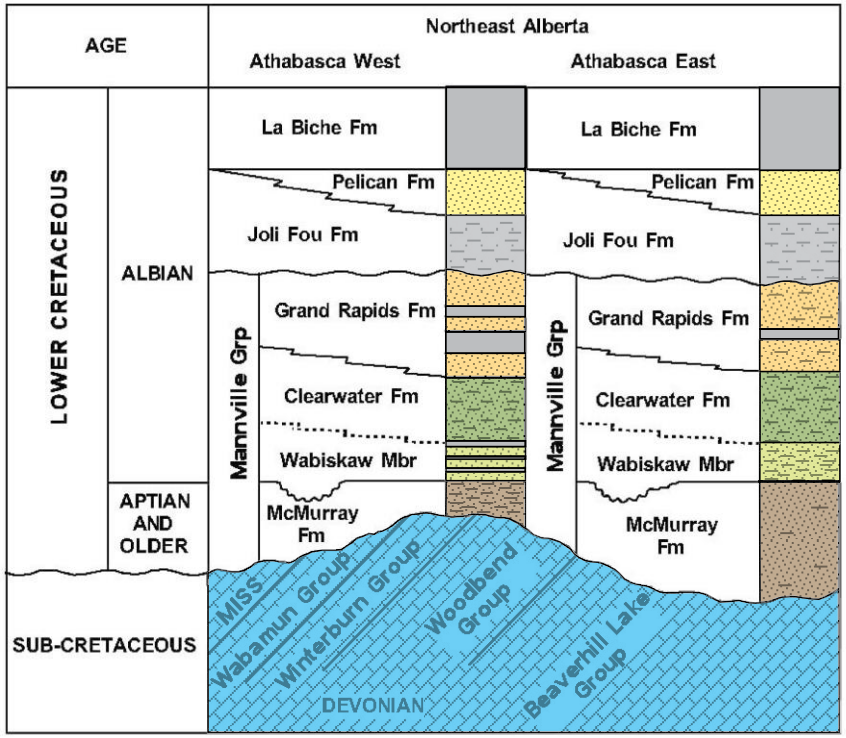
- Project Area
  - Initial Project Area
  - IDA (Initial Development Area)
  - Central Production Facility
  - Expansion Project Area
- Exploration Activity
  - Drilled before 2006 (52 wells)
  - Drilled 2007 (19 wells)
  - Drilled 2008 (32 wells)
  - Drilled 2009 (30 wells)
  - 3D Seismic (23 km^2)
  - 4D Seismic (4.3 km^2)

Agenda – 1. Subsurface

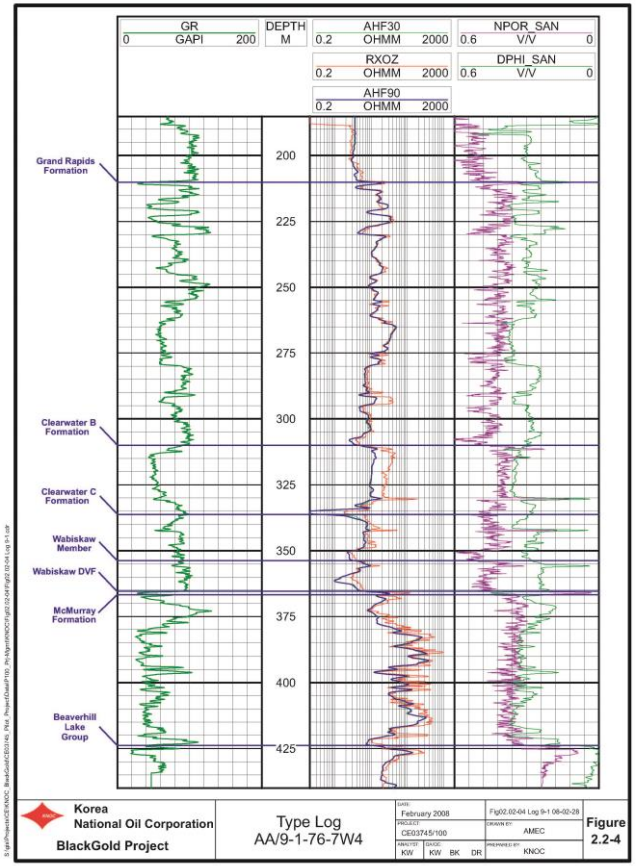
1.1	Background
1.2	Geology / Geoscience
1.3	Drilling and Completions
1.4	Artificial Lift
1.5	Instrumentation in Wells
1.6	4-D Seismic
1.7	Scheme Performance
1.8	Subsurface – Future Plans

- General Stratigraphy

Stratigraphic Column

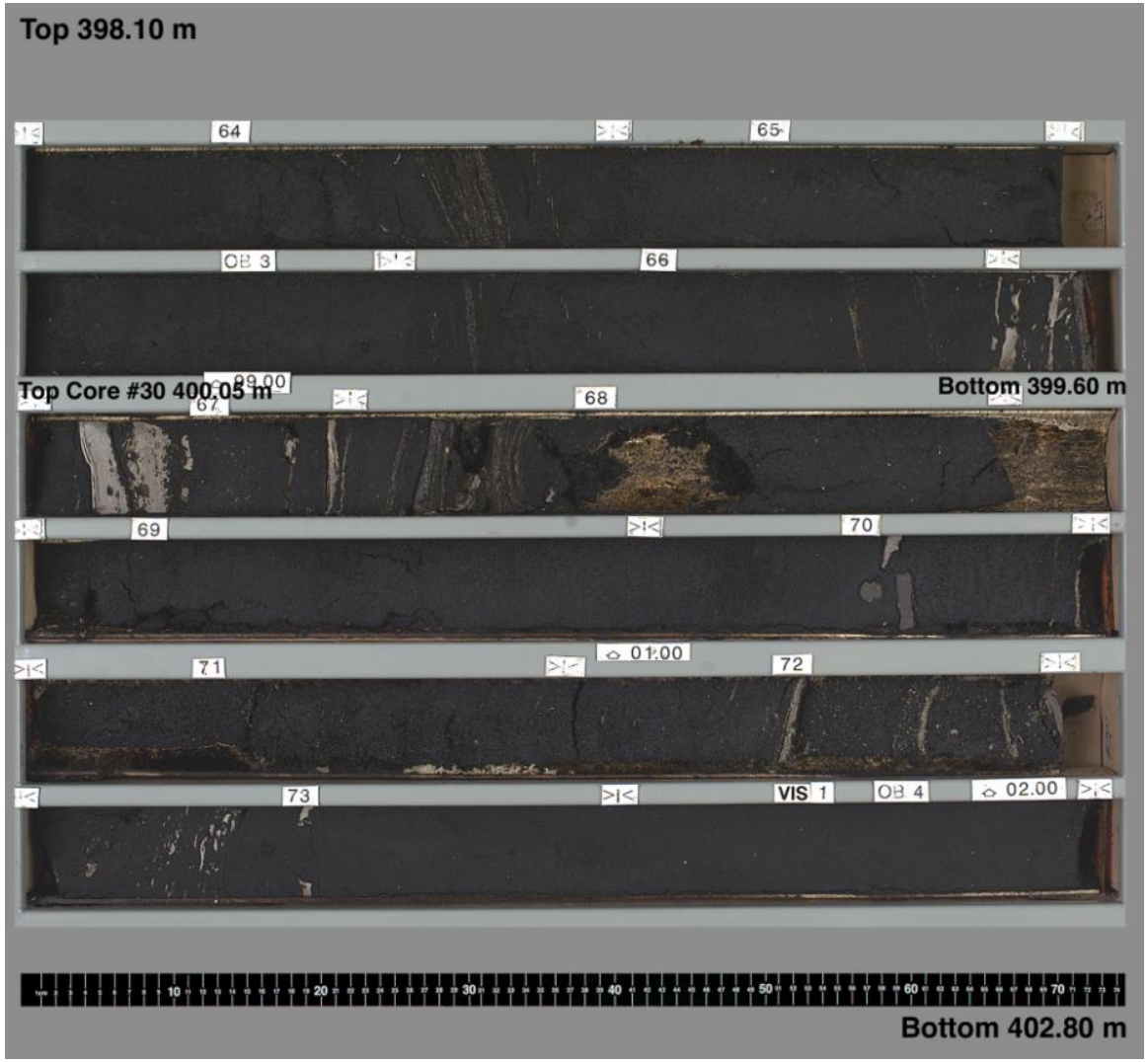


Reference Well 9-1-76-7W4M



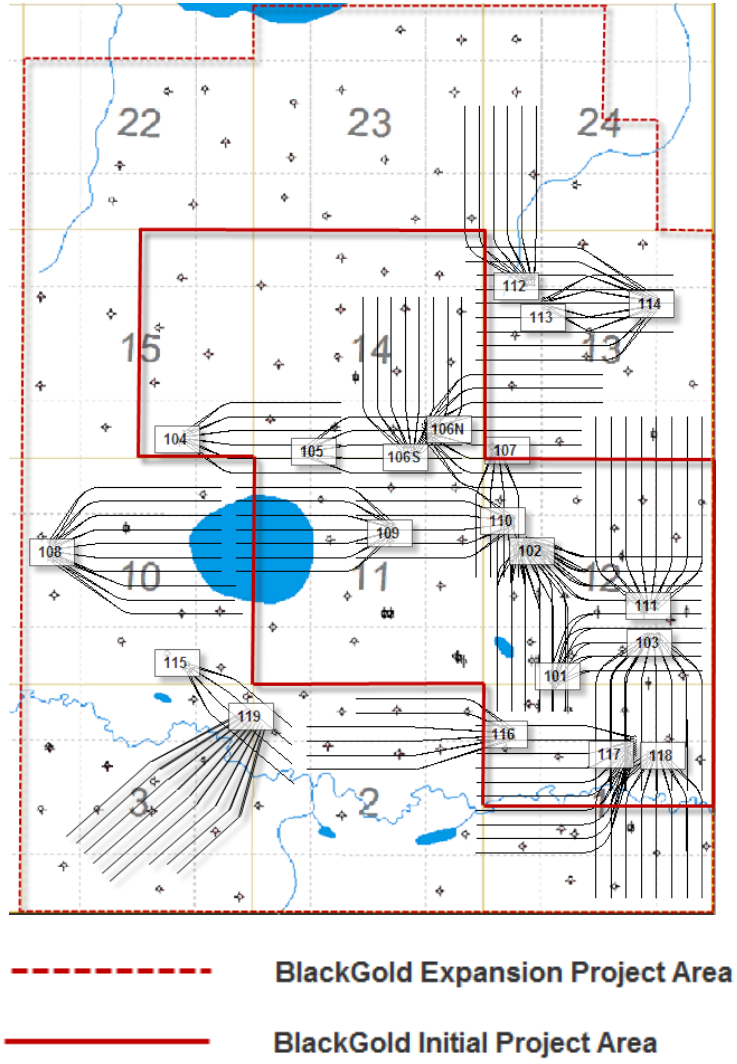
1.2 Geology / Geoscience

- Average Reservoir Properties:
  - Reservoir Depth: 400mTVD (~205mSSL)
  - McMurray Thickness: 45-55m
  - Pay Thickness: 25-35m
  - Porosity: 31%
  - Perm: Khmedian=4D, Kv/Kh ~ 0.7
  - Oil Saturation: 68%
  - Virgin Reservoir Pressure: 2.6 MPa
  - Virgin Reservoir Temp: 12°C

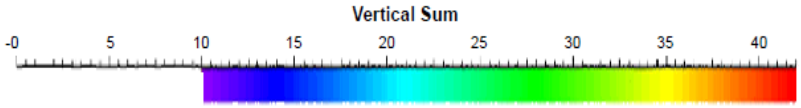


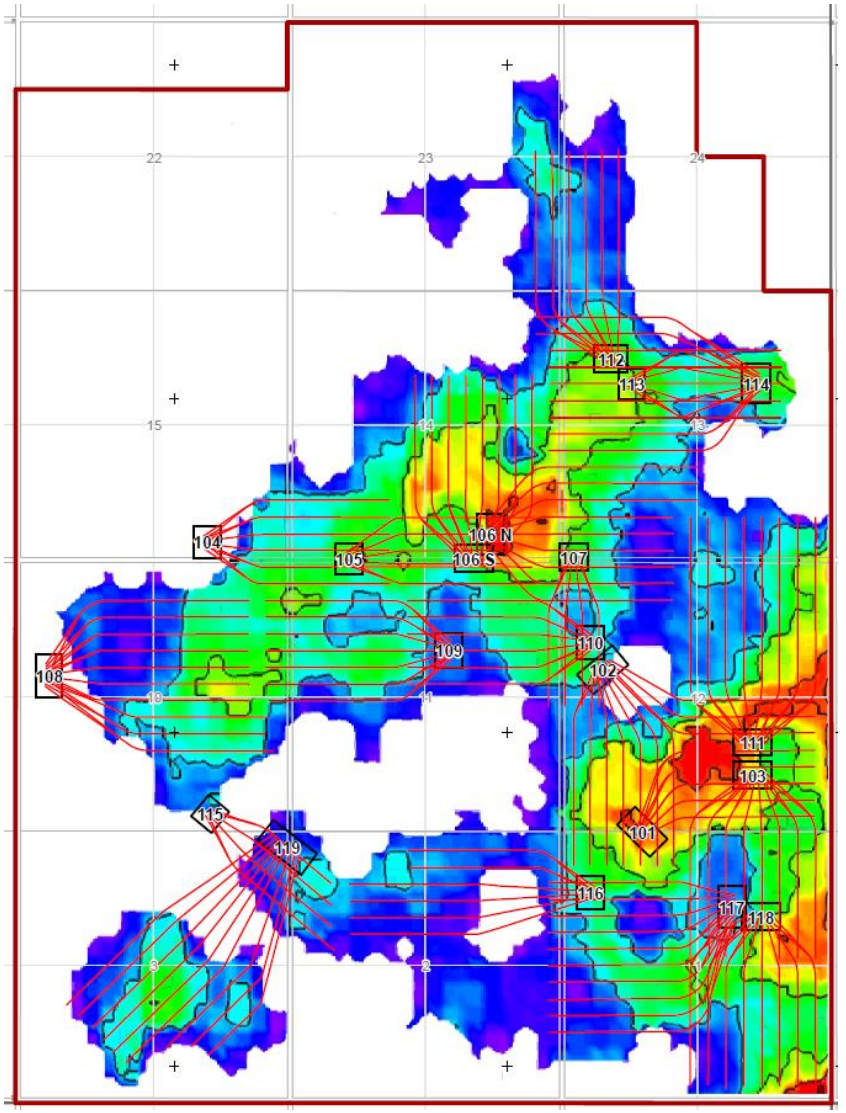
❑ Original bitumen in place:

Pad	Area (ha)	Average Porosity (%)	Average Oil Saturation (%)	Volumetric Pay Thickness (m)	OBIP ($10^6 m^3$)
PAD101	42.5	31.4	67.8	35.1	3.2
PAD102	86.0	31.6	67.7	32.6	6.0
PAD103	68.0	29.4	69.3	28.3	3.9
PAD104	51.0	30.5	71.7	25.0	2.8
PAD105	42.5	30.6	70.5	30.7	2.8
PAD106E	81.0	30.6	66.2	23.2	3.8
PAD106N	68.0	29.4	68.8	26.7	3.7
PAD107	26.0	31.4	67.7	21.8	1.2
PAD108	92.0	31.0	64.8	21.2	3.9
PAD109	59.5	29.6	66.8	23.6	2.8
PAD110	51.0	29.9	69.0	20.3	2.1
PAD111	88.0	31.0	65.5	23.7	4.2
PAD112	60.0	30.0	64.4	16.8	1.9
PAD113	32.5	28.7	62.8	20.7	1.2
PAD114	79.5	29.0	67.9	25.2	3.9
PAD115	28.5	27.0	65.0	16.3	0.8
PAD116	51.0	27.9	67.0	15.6	1.5
PAD117	85.0	29.9	66.8	19.6	3.3
PAD118	61.2	29.7	65.7	25.4	3.0
PAD119	51.0	29.3	67.4	21.3	2.1
Total	1204.2	29.9	67.1	473.3	58.4



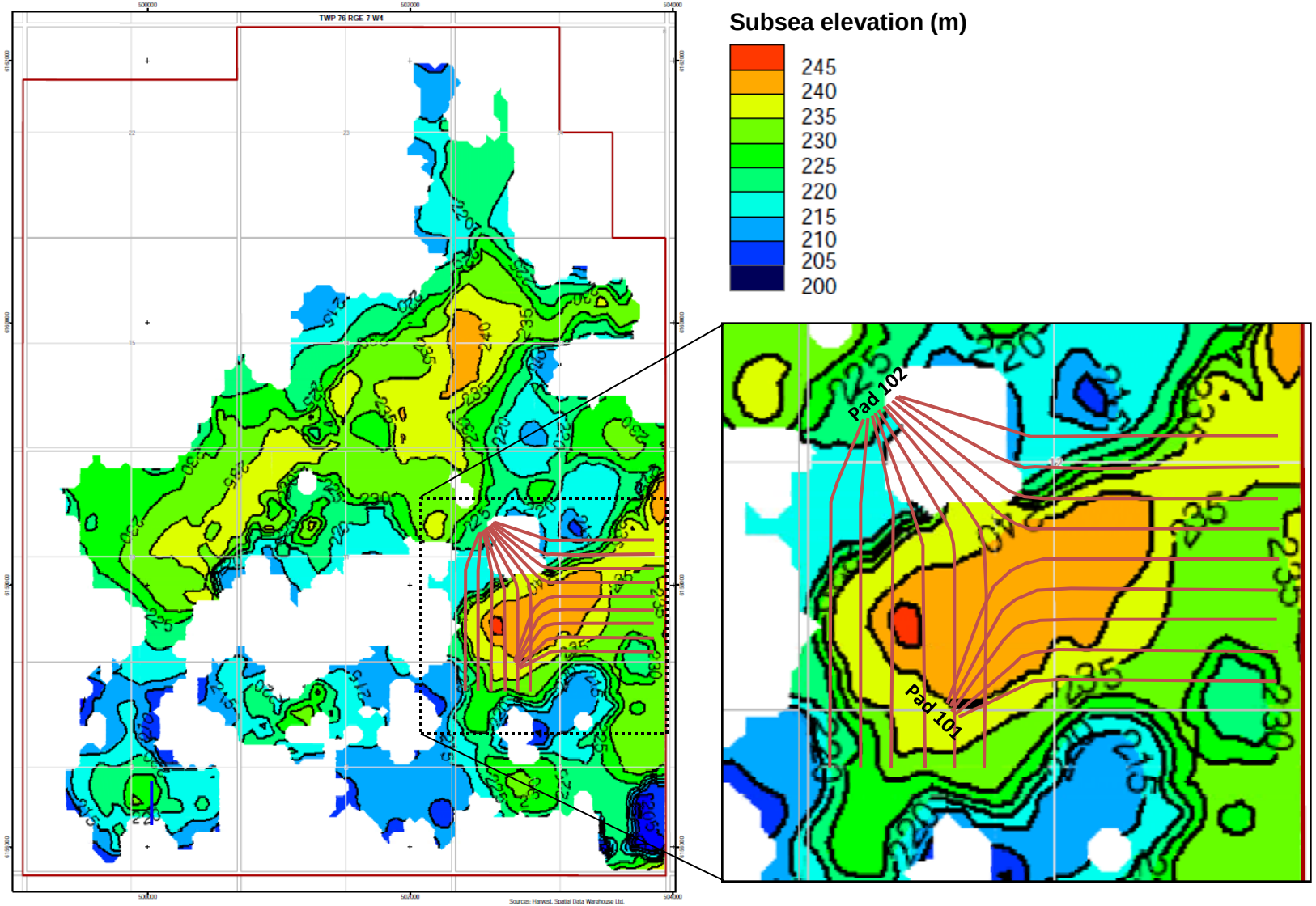
- Isopach map of net bitumen
  - Deterministic Pay Cut-Offs
    - Sw < 50%
    - Φe > 20%
    - Minimum SAGD Pay Isopach > 10m



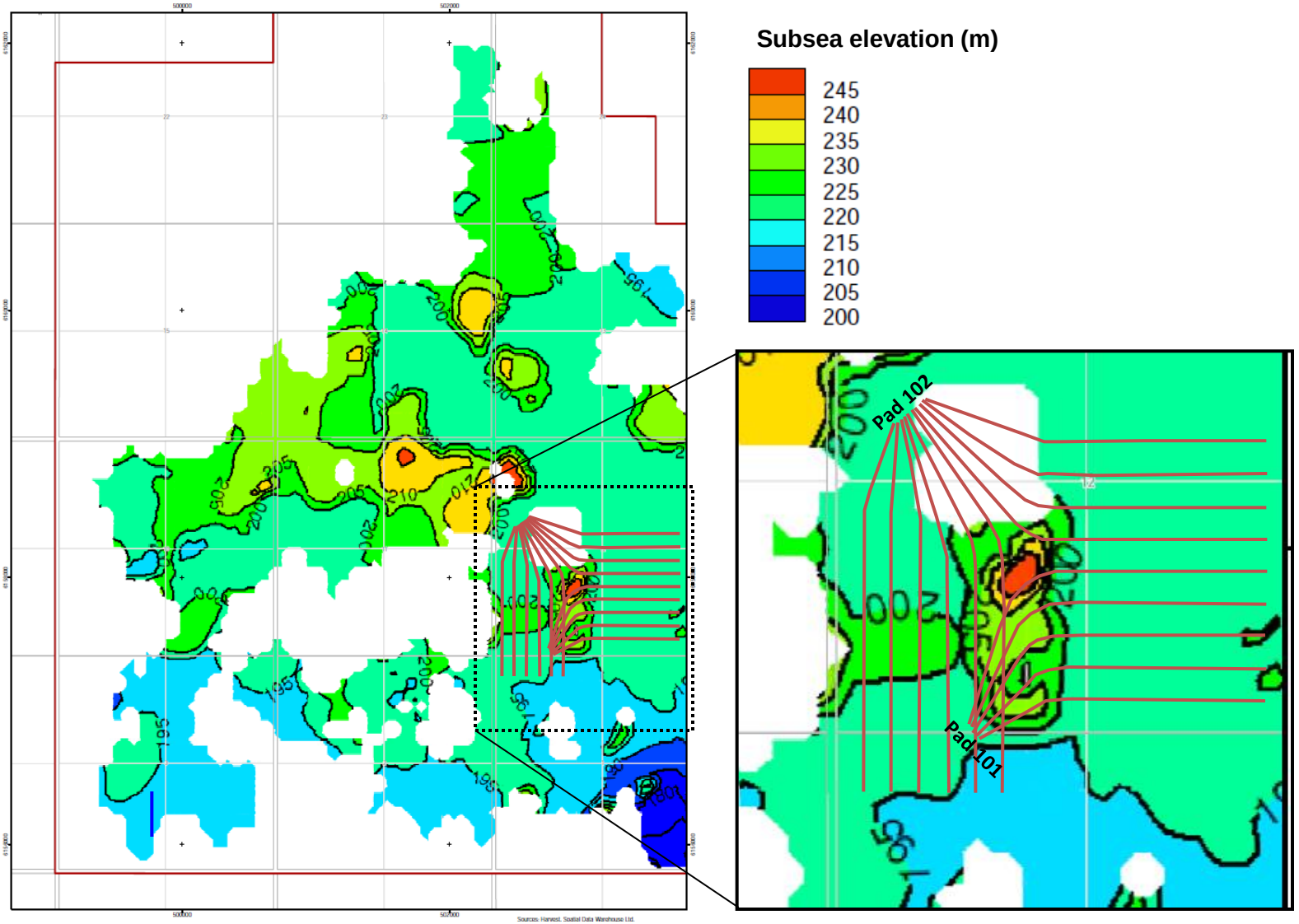


1.2 Geology / Geoscience

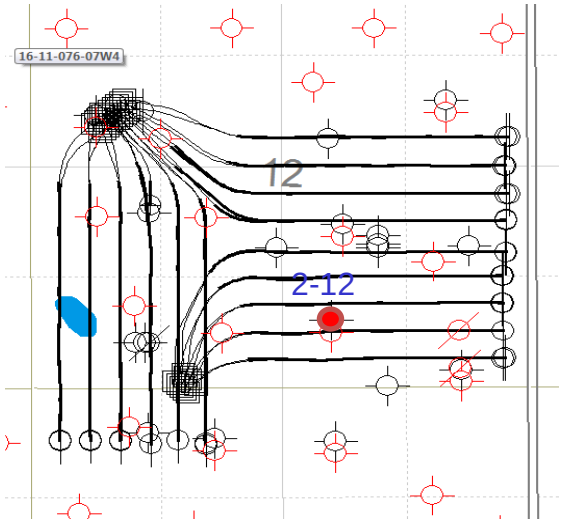
- Structure map for top of bitumen pay

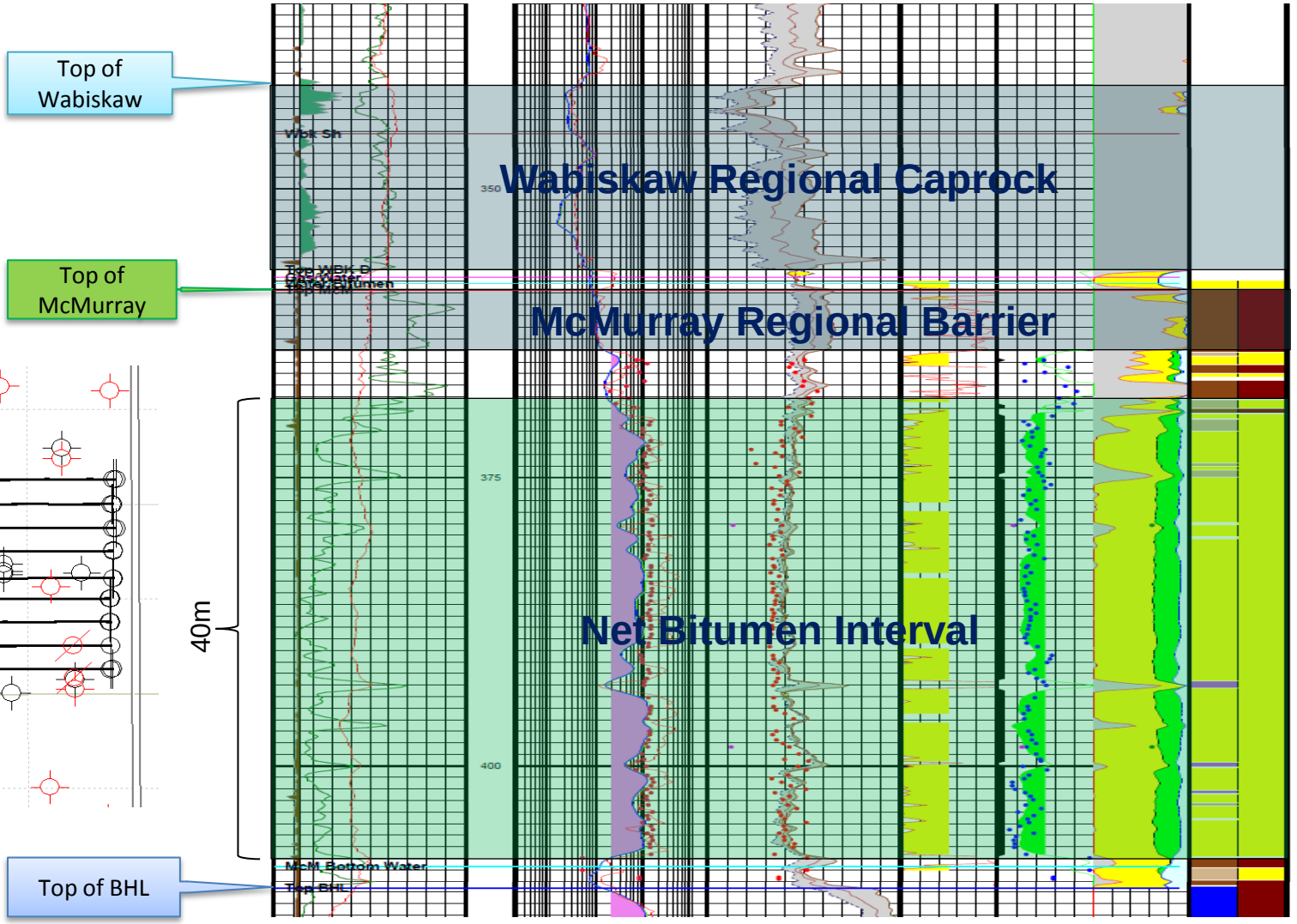


- Structure map for bottom of bitumen pay

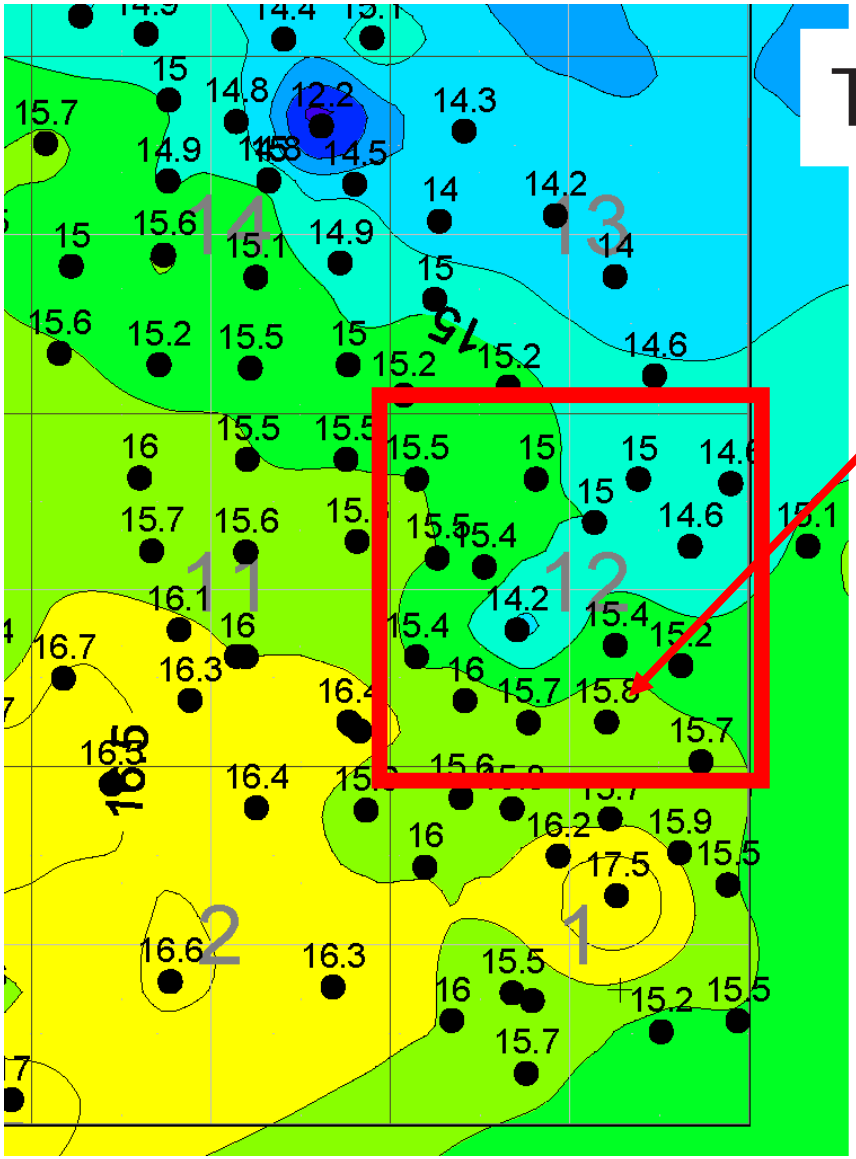


- Representative composite well log: 1AA/02-12-076-07 W4/0



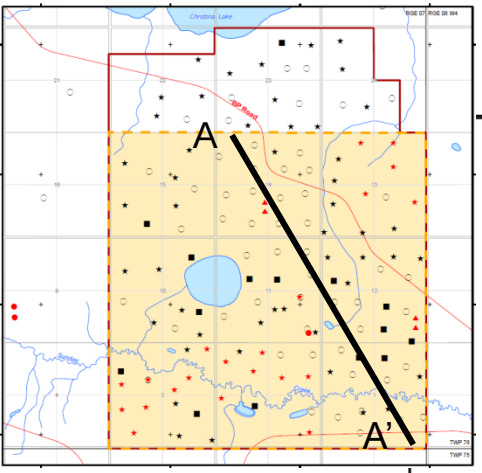


Blackgold McMurray Reservoir Caprock-Wabiskaw Regional Marine Shale

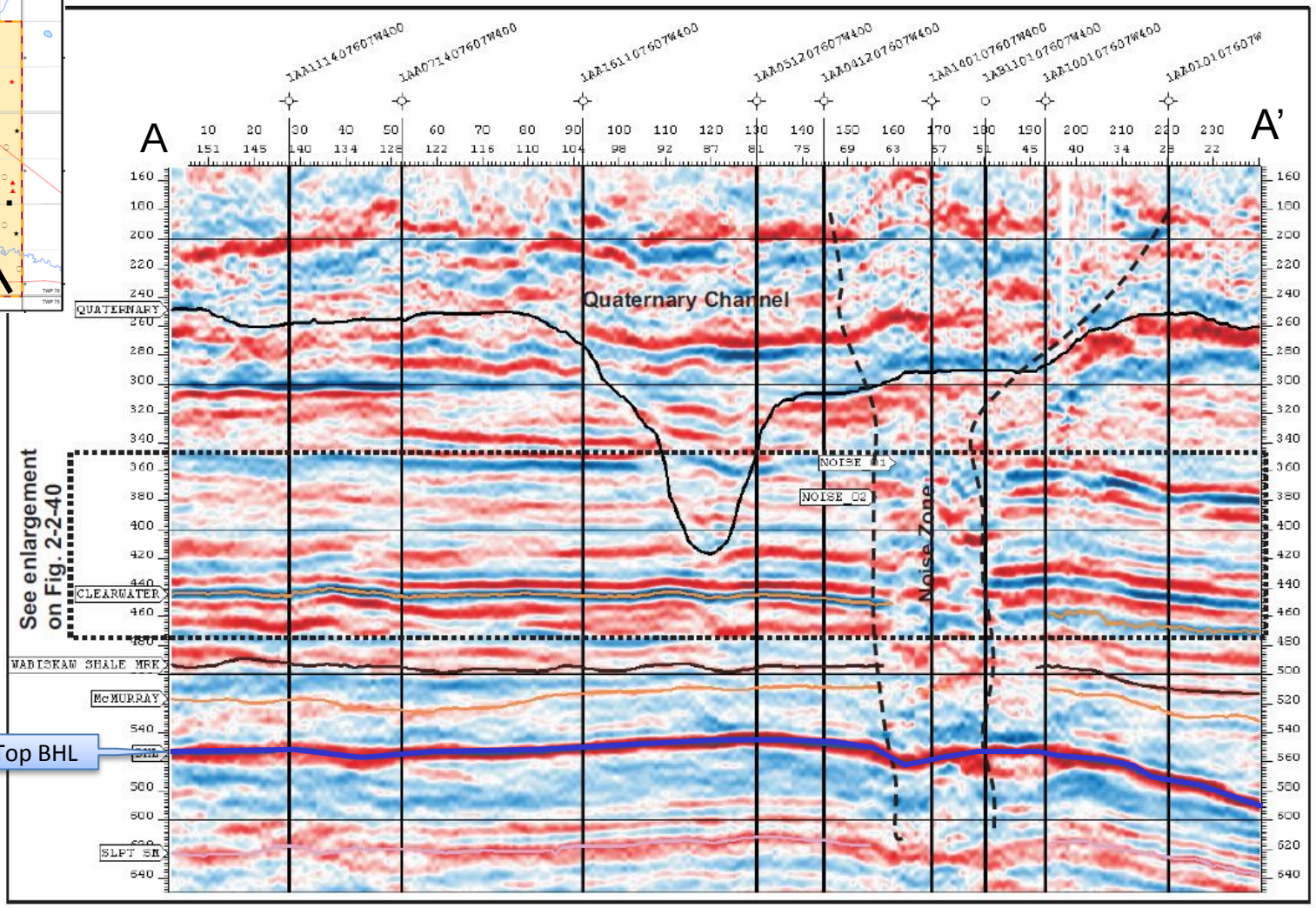


Wabiskaw Marine Shale Isopach
Harvest Blackgold Project
Contour interval = 0.5 m
(modified from July 2008)

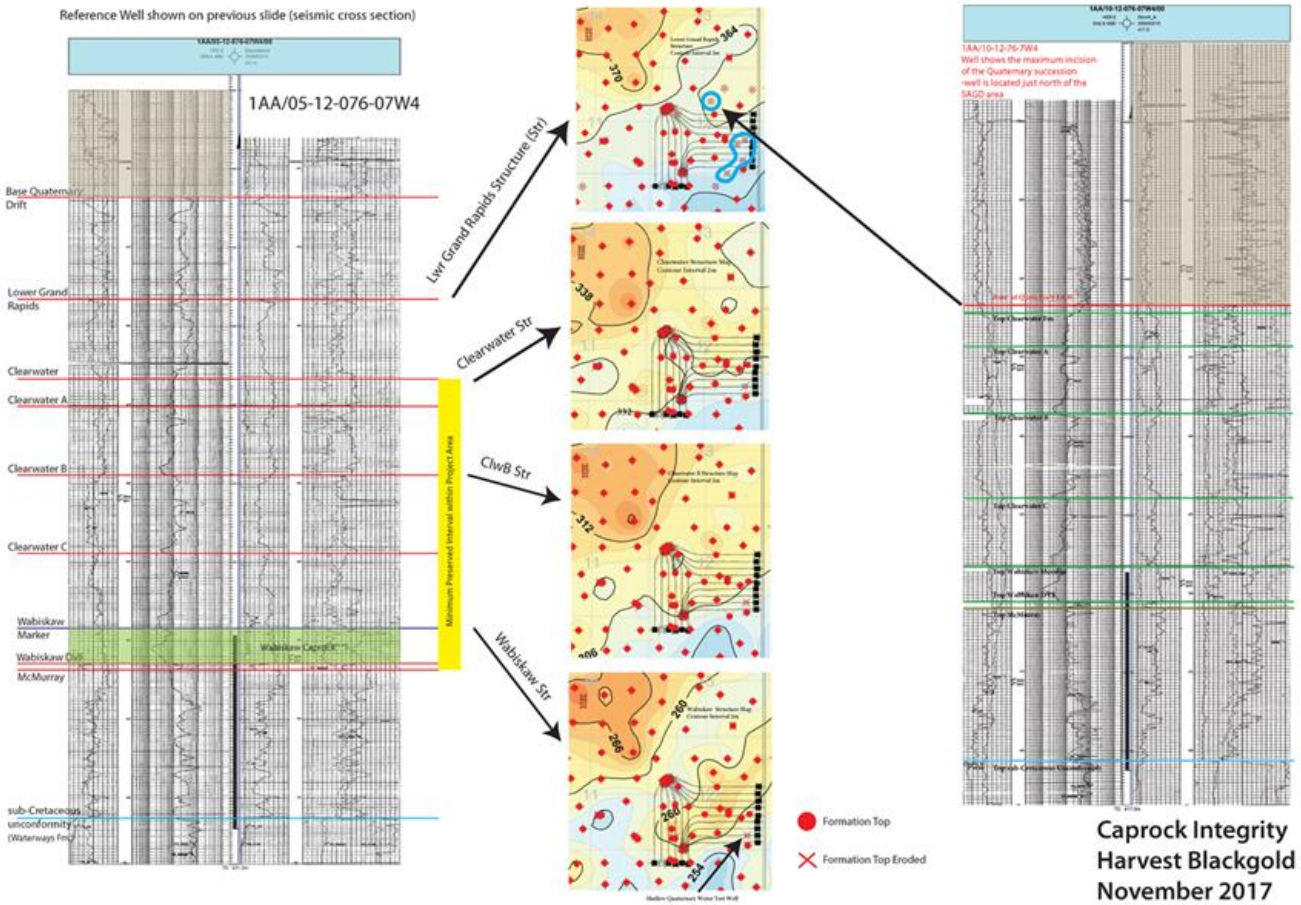
- BlackGold seismic cross section

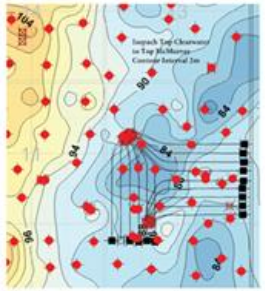


The Q-channel has been incised in Wabiskaw shale formation, BlackGold Oilsands Reservoir's main caprock.



Quaternary Channel Incision – BlackGold Project Area





Map showing the thickness from the top of the Clearwater Fm. to the top of the McMurray Fm. (interval highlighted in yellow, 5-12 ref well)

Summary

1) All wells within the Blackgold SAGD area display formation tops from the McMurray Formation to the top of the Clearwater Formation (no erosion). There is no evidence these formations have been comprimised by Quaternary incision.

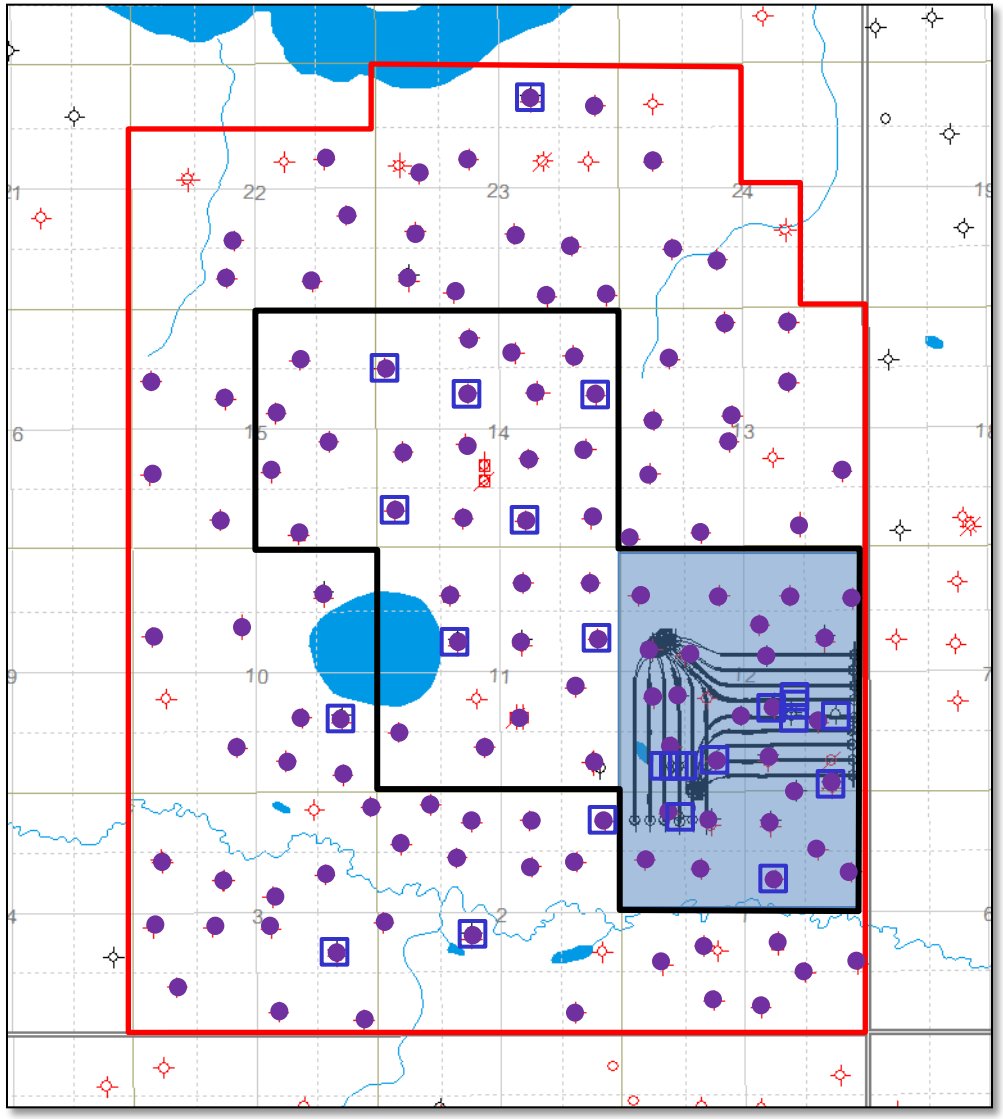
2) The majority of wells within the SAGD area display a well-defined Lower Grand Rapids top.

3) The Quaternary sucession does incise into the top of the Lower Grand Rapids in 4 wells within SAGD area.

4) The Quaternary does not incise into the top of the Clearwater shale (Clearwater Formation) within any of the Harvest's Blackgold oil sand leases.

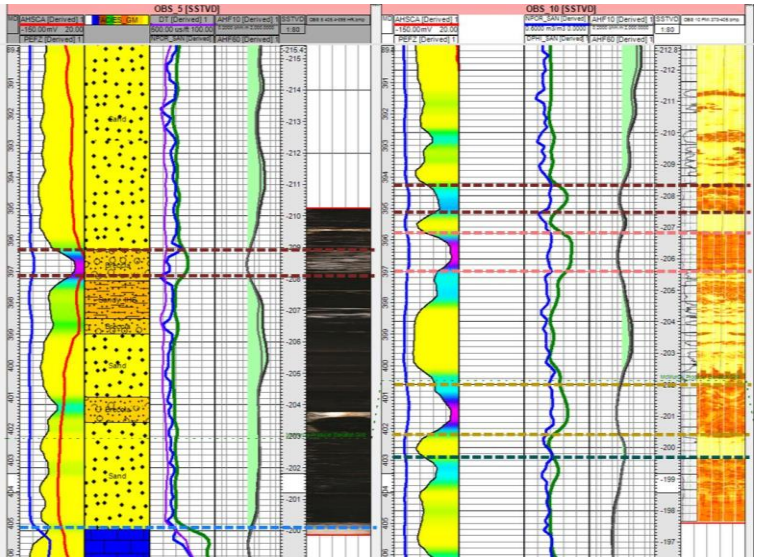
5) There is a minimum thickness of 84 m between the top of the McMurray Formation and the top of the Clearwater Formation.

- Existing core logs and Formation Micro-Imager (FMI) logs



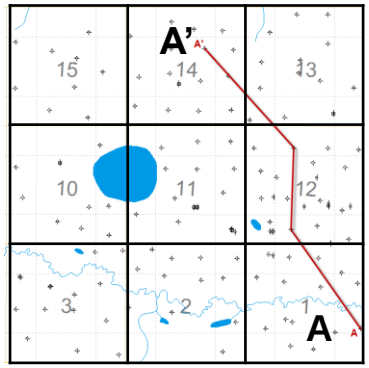
Legend

- : Expansion area
- : Initial area
- : Initial Development Area
- : Well with core (131 wells)
- : Well with FMI Logs (24 wells)

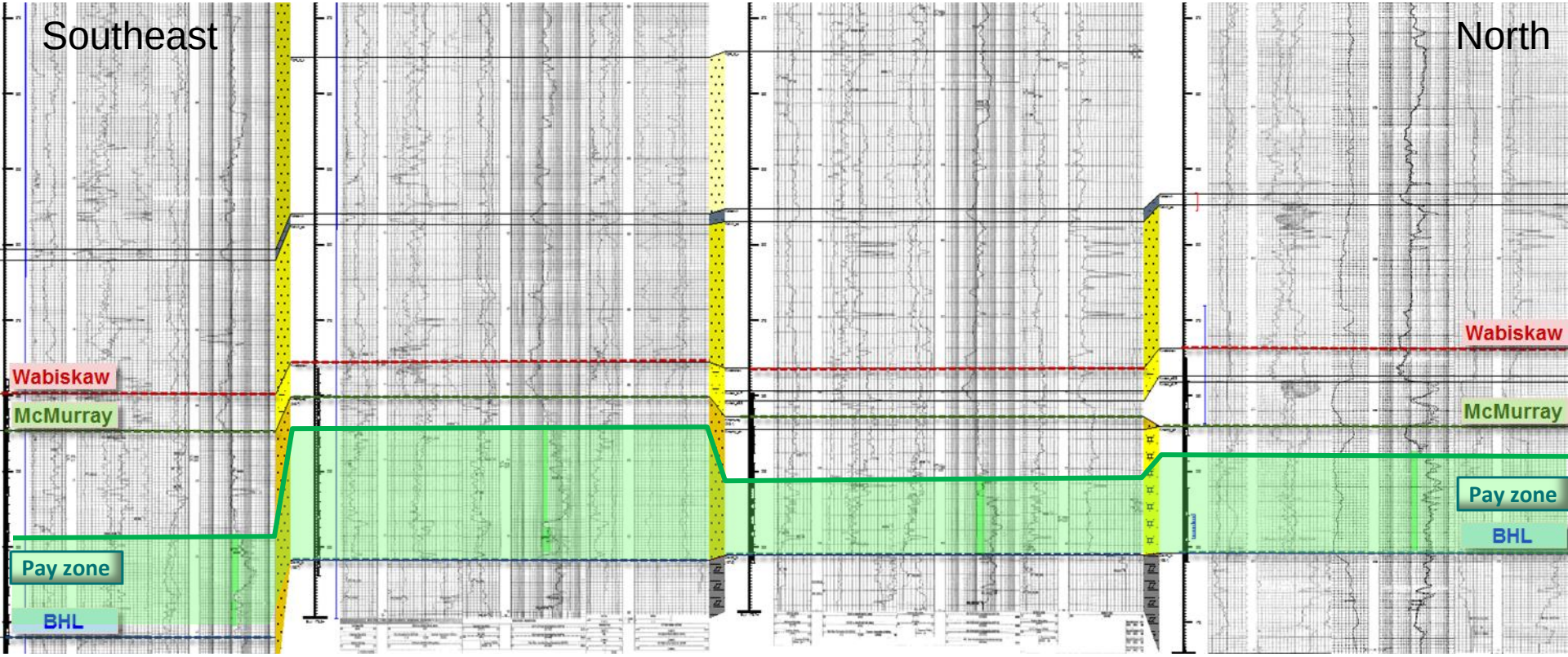


1.2 Geology / Geoscience

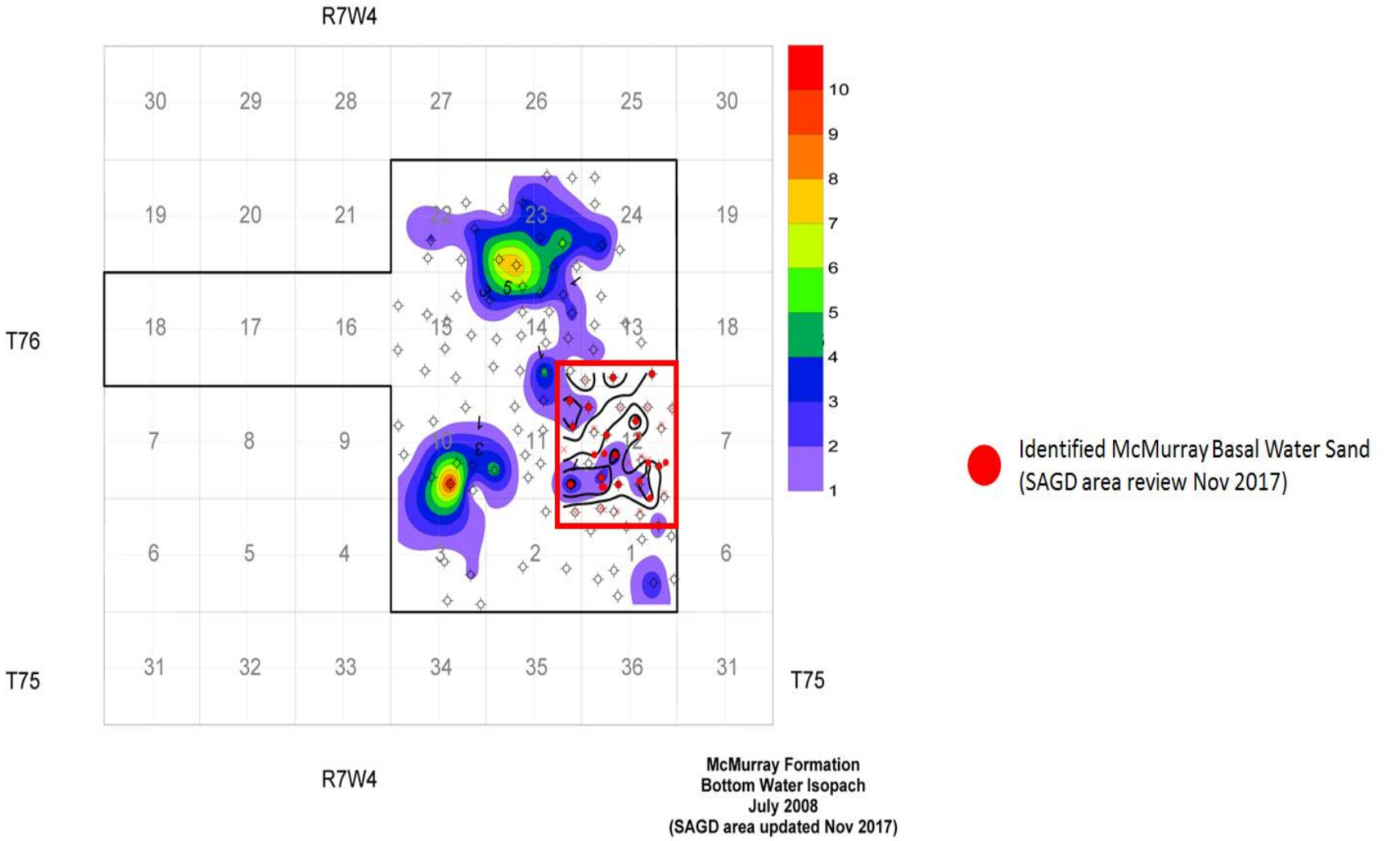
- BlackGold lease cross section – South to North



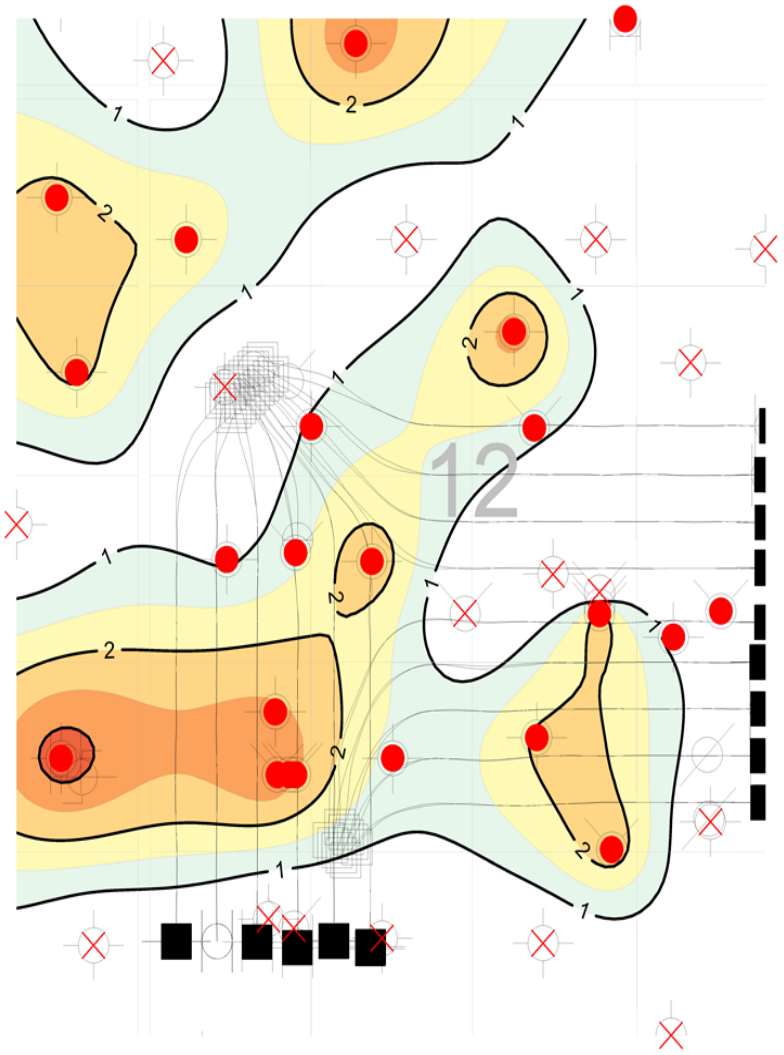
1AA/08-01-076-07W4 1AA/03-12-076-07W4 1AA/14-12-076-07W4 1AA/10-14-076-07W4



McMurray Bottom Water Sand Isopach Over BlackGold Oilsands Lease



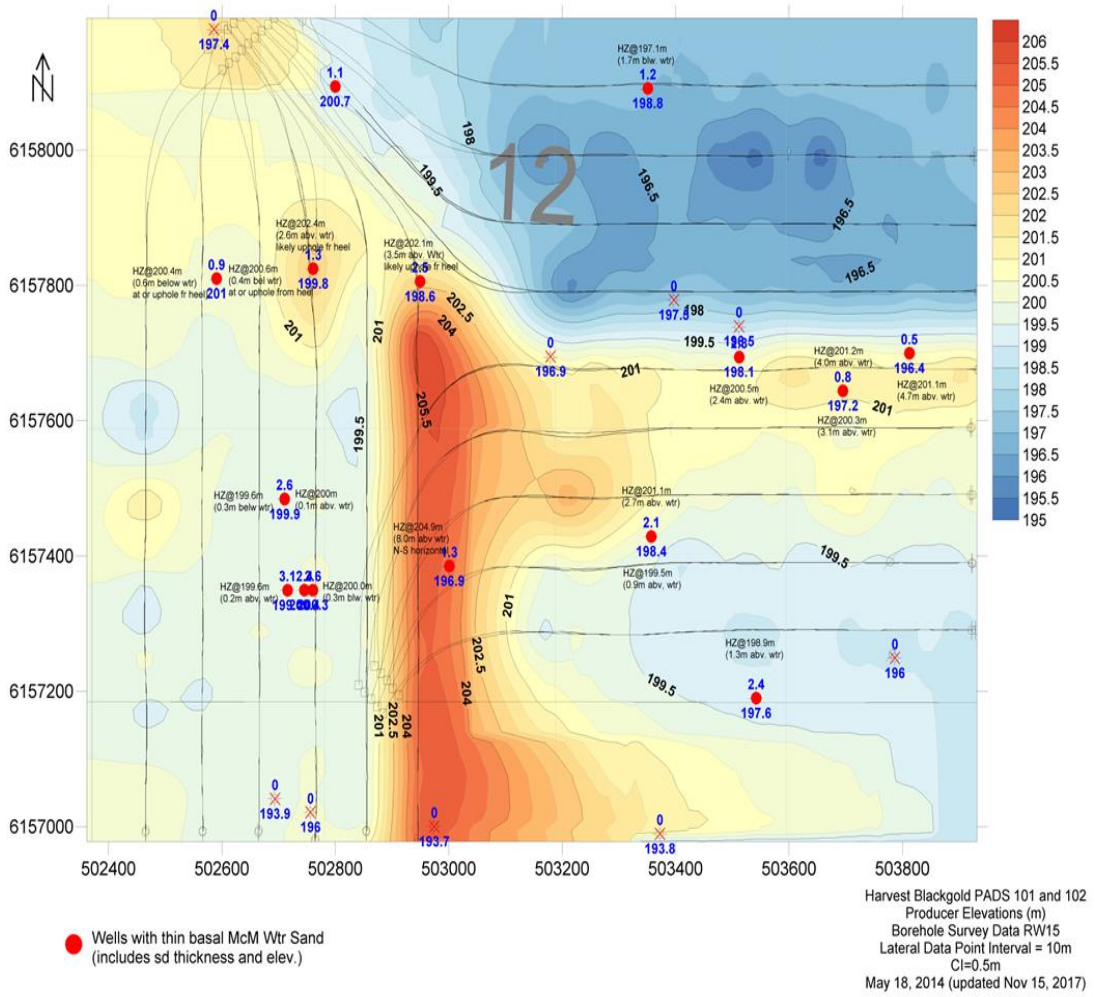
McMurray Bottom Water Sand Isopach Over the SAGD Wellpair Area



Identified McMurray Basal Water Sand
-water sand elevation included

Harvest Blackgold SAGD Project
McMurray Basal Water Sand Isopach
Contour interval = 0.5m
November 2017

SAGD Wellpair Elevations and the stand-off from McMurray Bottom Water Sand

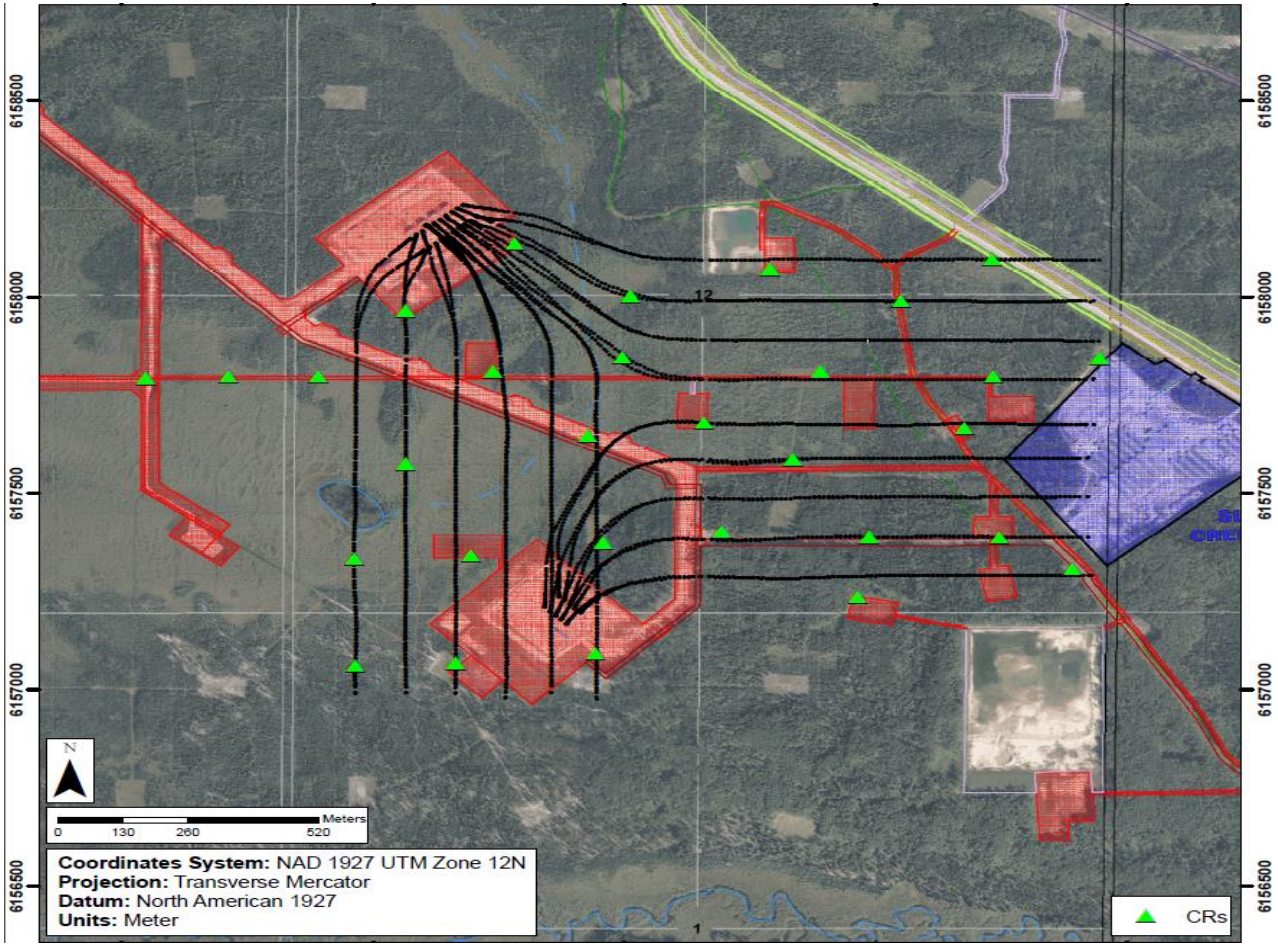


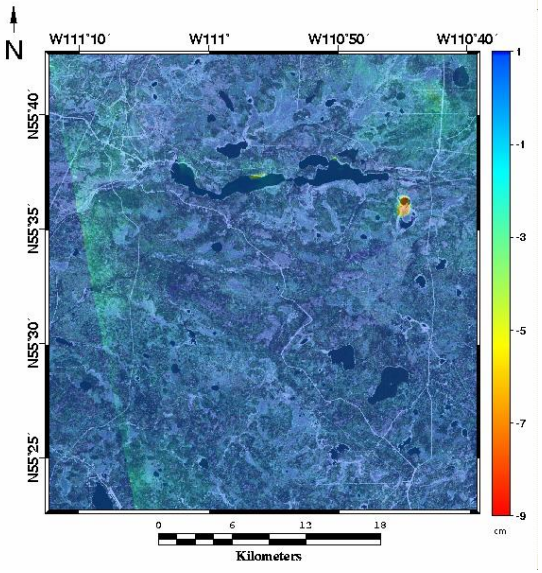
- Contoured Producer Elevations
- Basal McMurray Water Sand Thickness and Water Sand Elevation (blue text)

Harvest Blackgold SAGD Project
Producer Elevation Map
McMurray Water Sand
(thicknesses and elevations)
November 2017

1.2 Geology / Geoscience

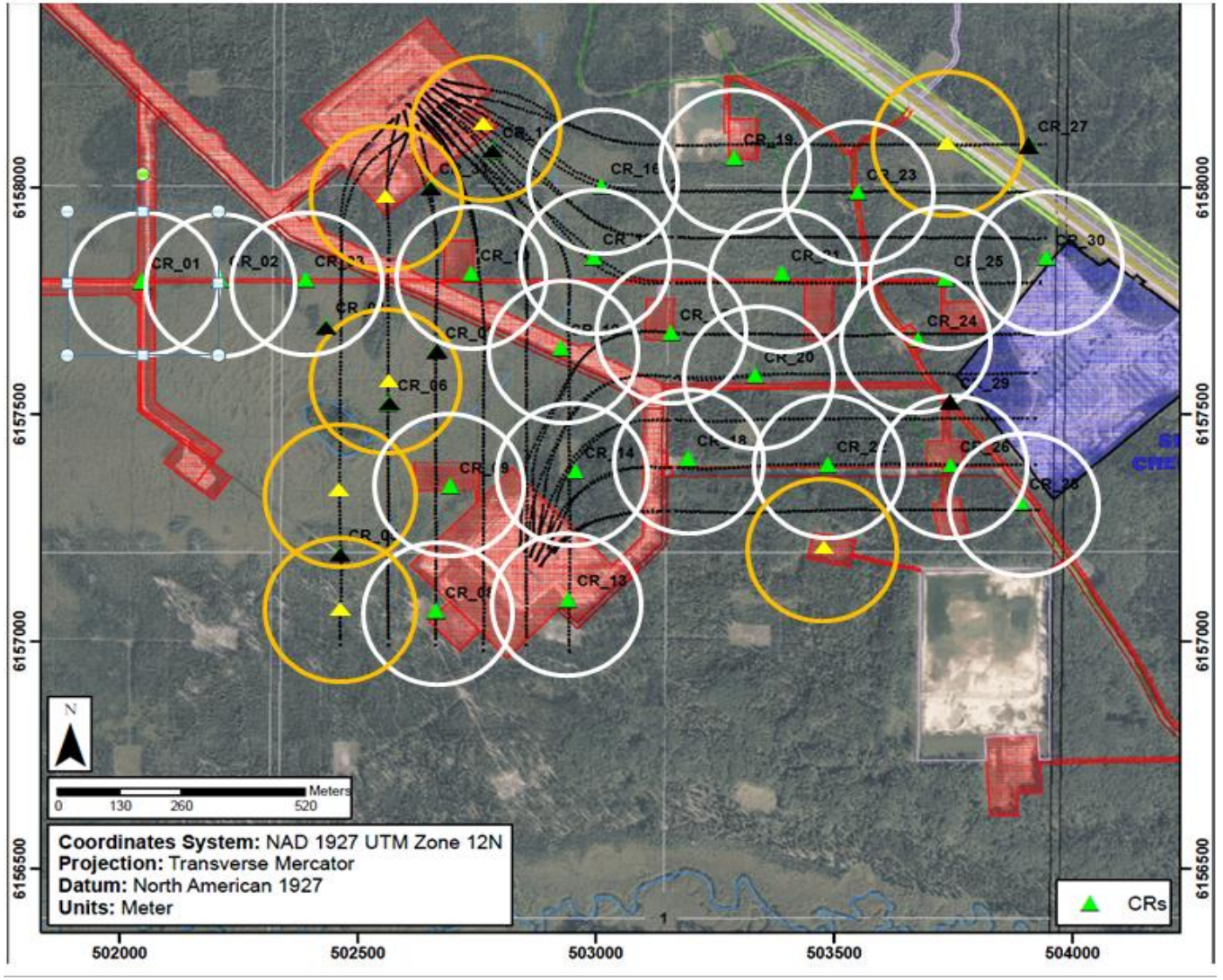
- 2007 five corner reflectors have been installed.
- 2007 June to August SAR analyzed, no surface deformation observed.
- 2016 January, 32 additional corner reflectors were installed.



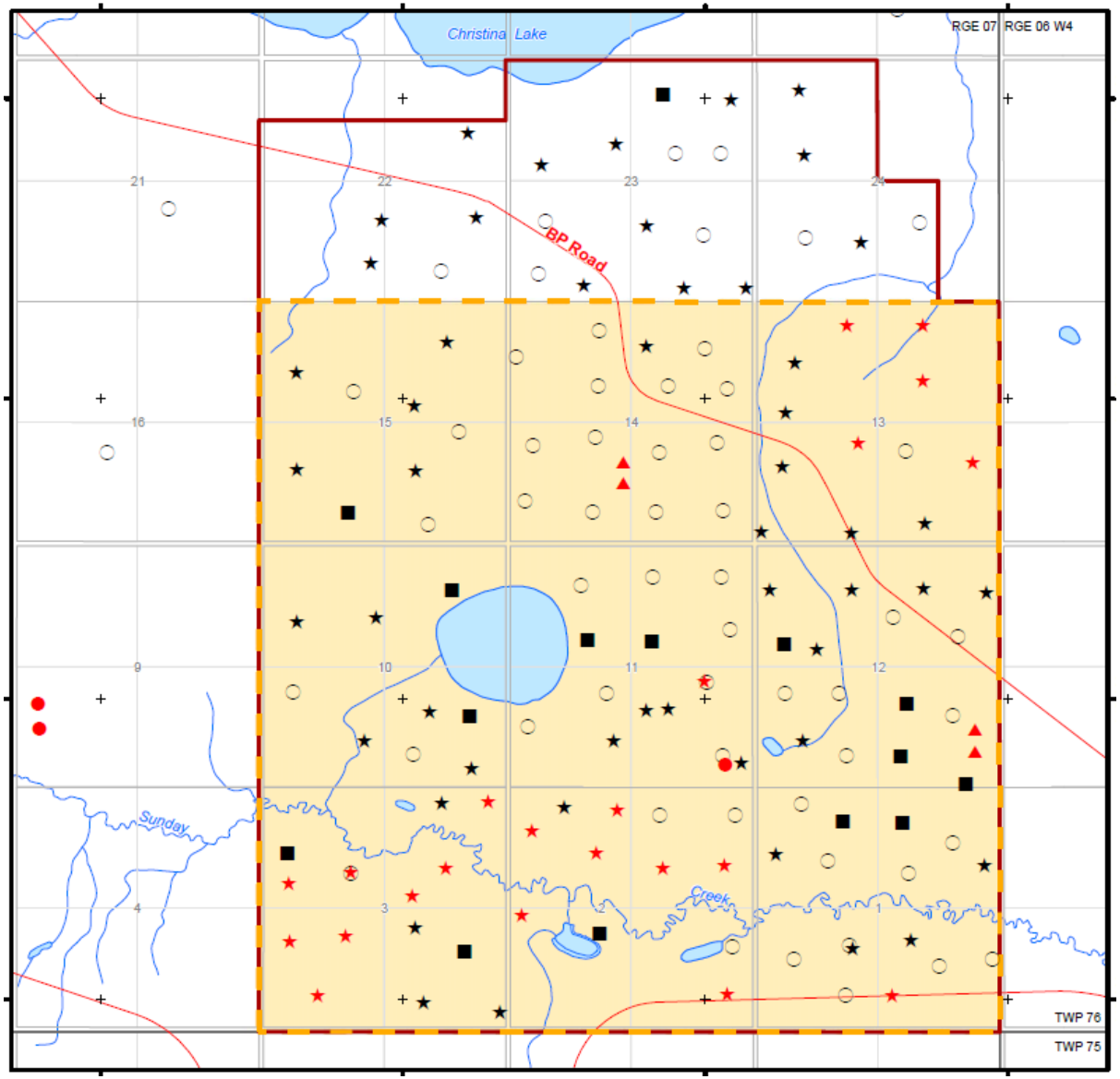


1.2 Geology / Geoscience

- Reflector sites have been placed.
- Satellite data will be collected and analyzed prior to first steam.
  - Each reflector allows monitoring of approximately a 150 m radius



❑ 3D seismic lines location map.



- Legend
  - 3D Seismic (23 km²)
  - Drilled before 2006 (52 wells)
  - Drilled 2007 (19 wells)
  - Drilled 2008 (32 wells)
  - Drilled 2009 (30 wells)

1.2 Geology / Geoscience

- BlackGold geomechanical data and analyses
  - Mini-fracture physical testing results obtained in 2008.
  - The in-situ minimum stress in the McMurray shale is between 6.01 Mpa and 6.9 MPa (16.7 to 19.2 kPa/m).
  - BlackGold geomechanical modeling confirmed that the McMurray cap rock integrity has a maximum down hole pressure of 6 MPa.
  - Approved maximum operating pressure is 5.5 MPa during steam circulation and 4 MPa during SAGD operations.

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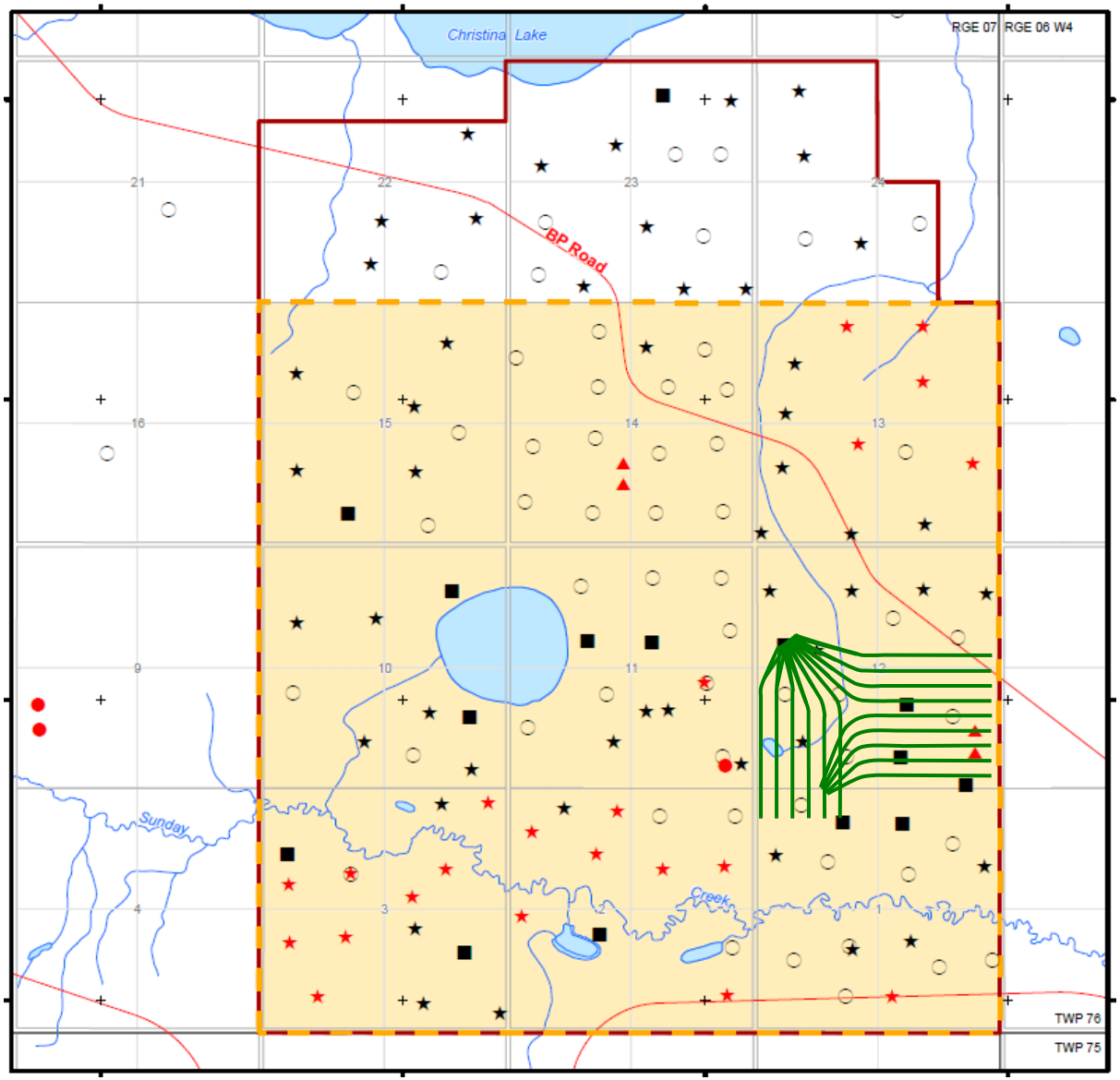
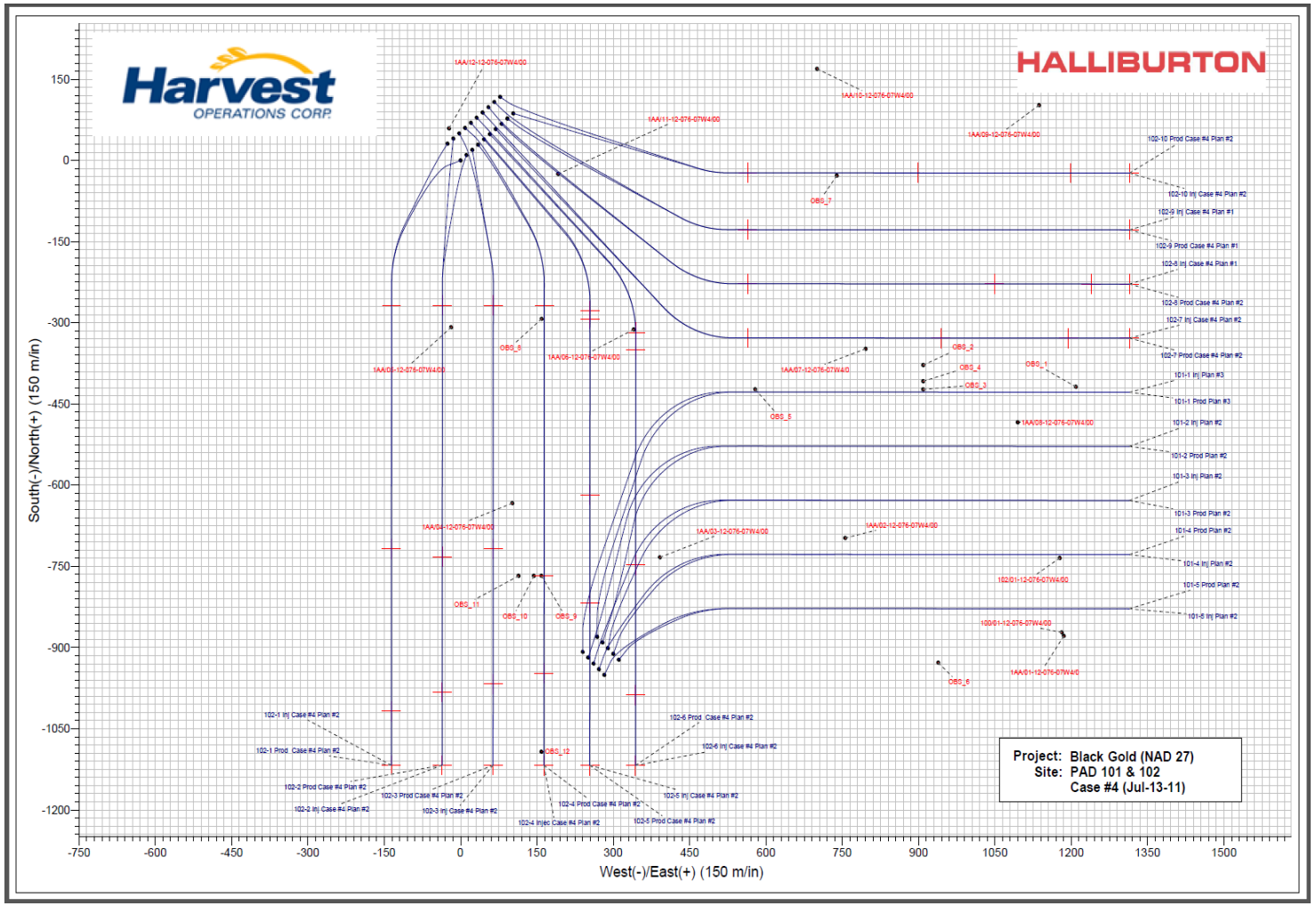
1.3 Drilling and Completions

- Well pair trajectories.



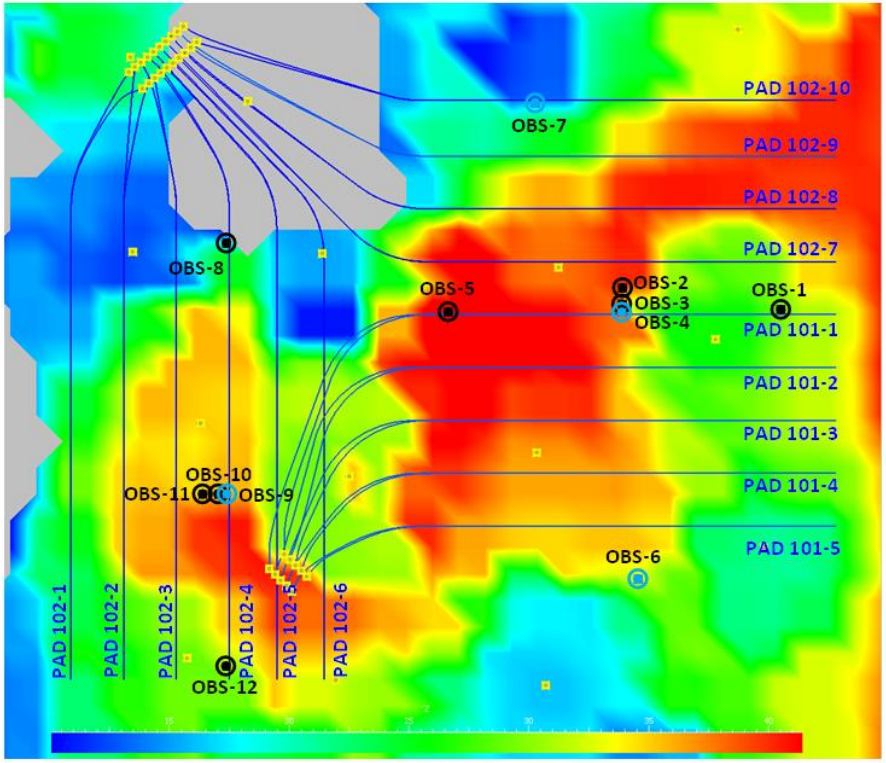
- Legend
  - Well Pair Trajectory
  - 3D Seismic (23 km^2)
  - Drilled before 2006 (52 wells)
  - Drilled 2007 (19 wells)
  - Drilled 2008 (32 wells)
  - Drilled 2009 (30 wells)

All BlackGold SAGD well pairs are spaced about 95 - 100 meters except for 102-4, 102-5 and 102-6 which are spaced about 85 - 90 meters.

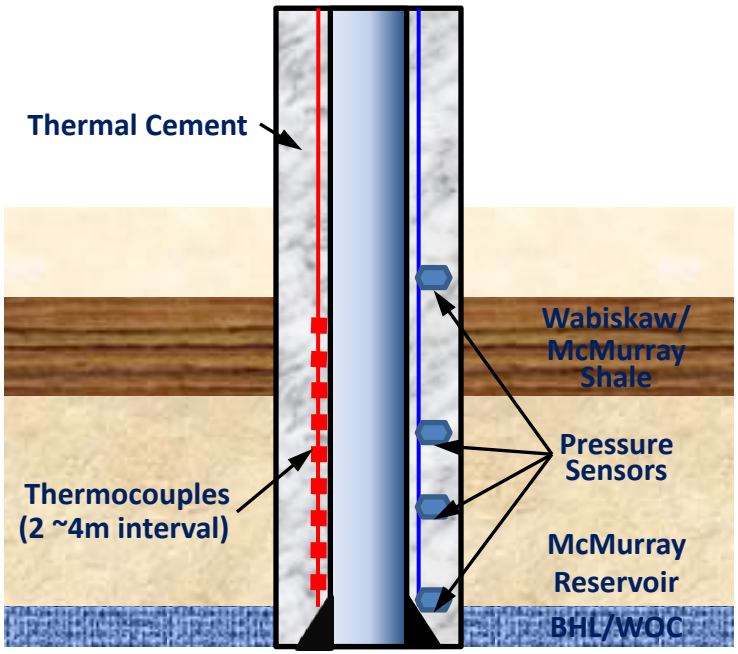


Overview of OBS Wells

- Harvest drilled 12 observation wells in 2011 to monitor performance
  - 4 clamp type wells installed thermocouples and pressure gauge
  - 8 spool in type wells installed thermocouples

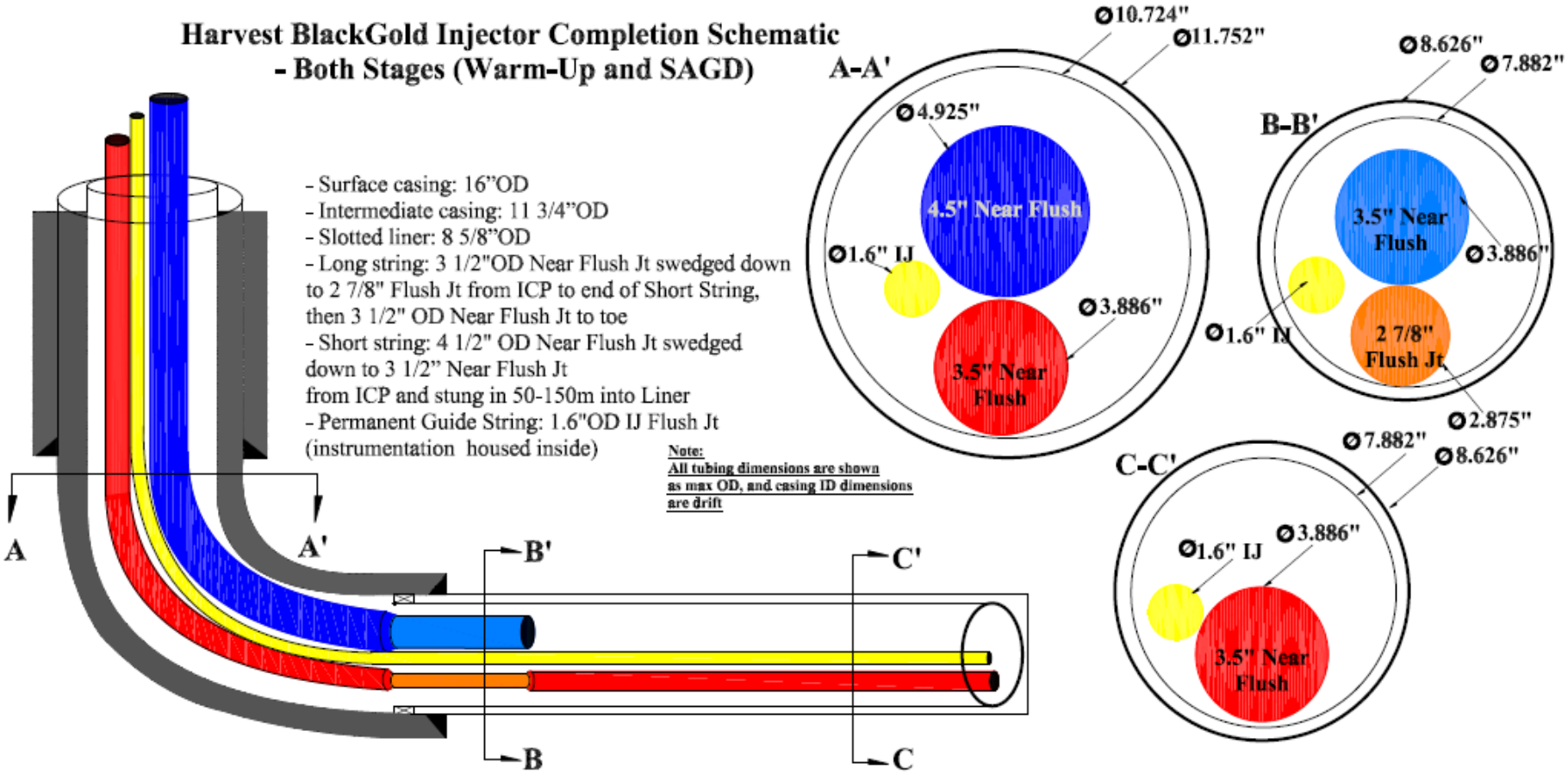


: Pres./Temp. Sensor : Temp. Sensor Only

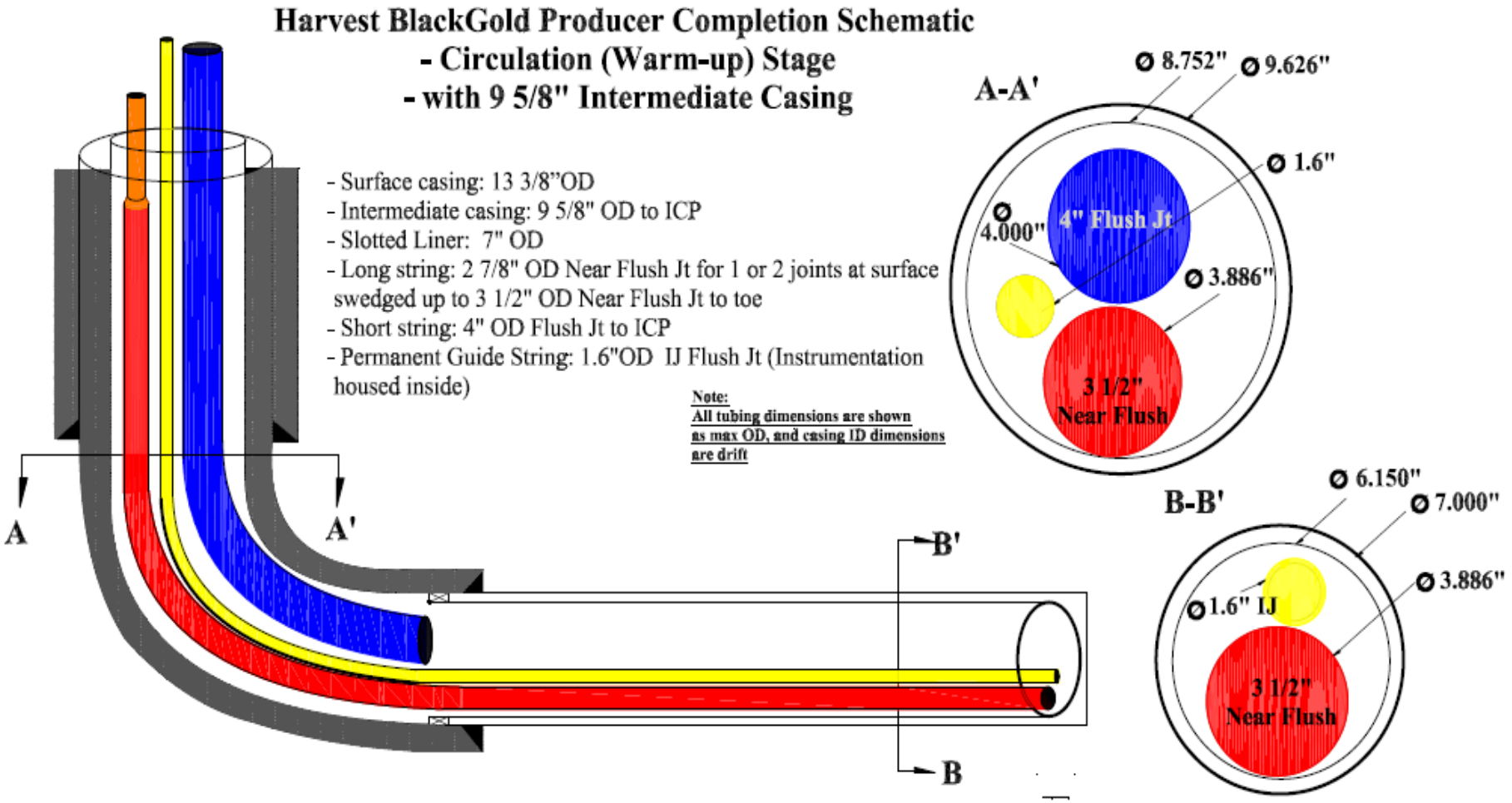


Details of OBS well instrumentations are included in the appendices

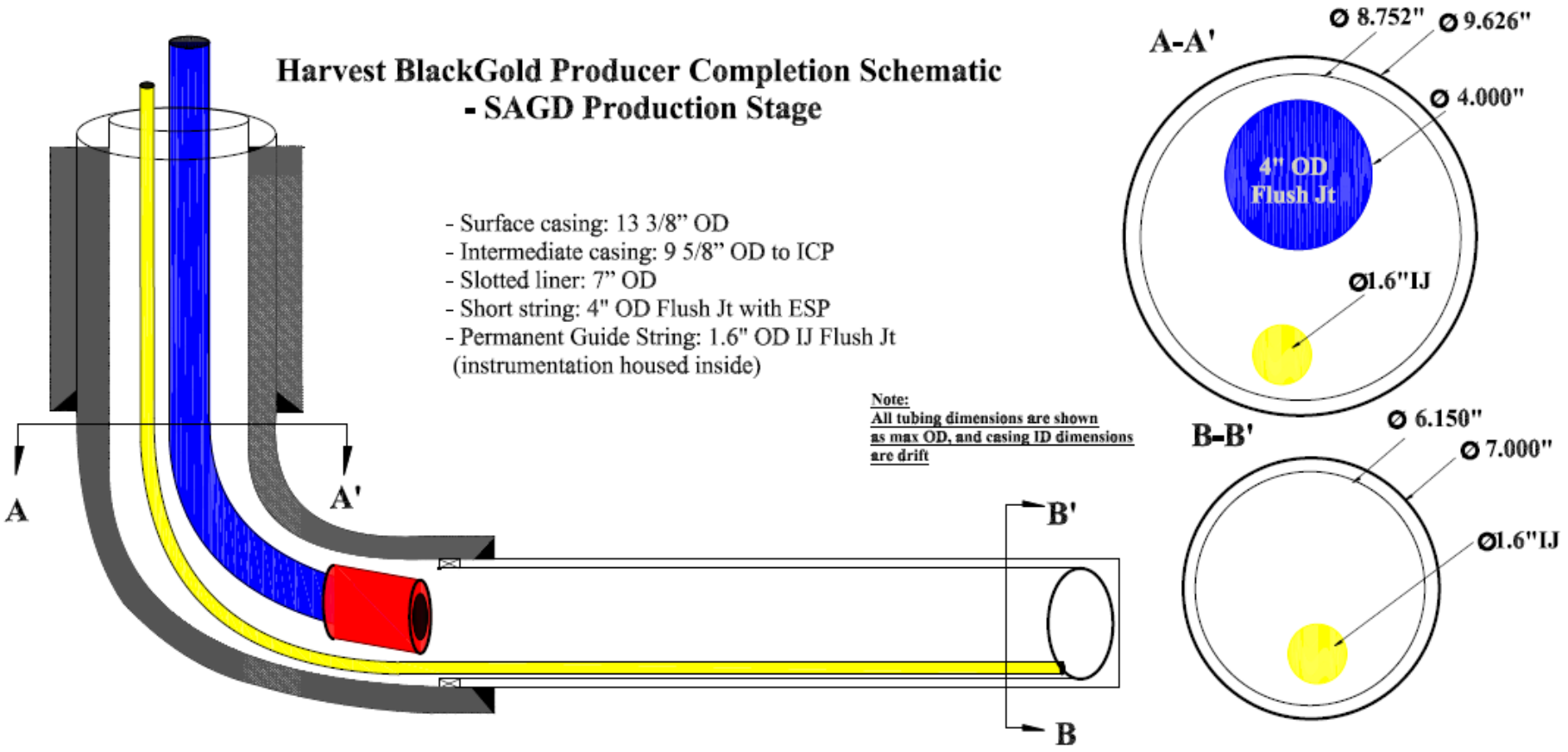
- Typical well bore schematic – Injector



- Typical well bore schematic – Producer during circulation

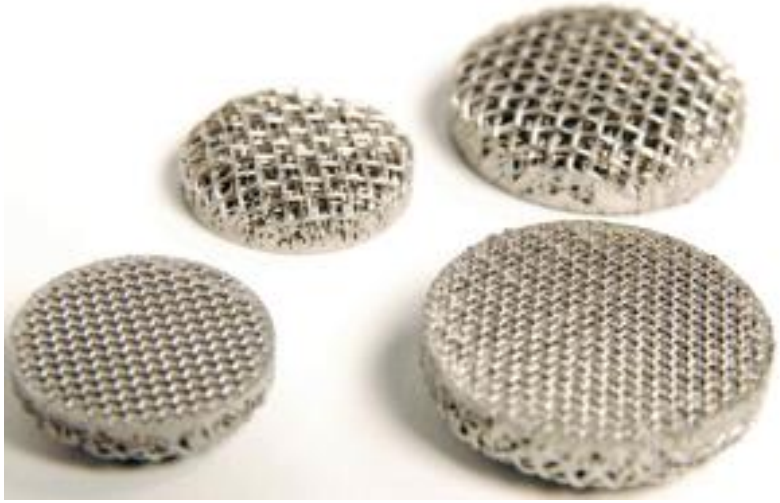


- Typical well bore schematic – Producer on SAGD production with ESP (Electric Submersible Pump)



1.3 Drilling and Completions

- Harvest installed a Flush Absolute Cartridge System (FacsRite) for sand control in 15 producers:
  - Sand retention and retained permeability properties.
  - Tolerates wider variation in Particle Size Distribution (PSD).
  - Higher Open Flow Area (OFA) than gap-based media.
  - Premium media discs flush mounted and tightly secured into the base material.
  - 316 SS, 25.4mm disc with OFA of 3.61% at 22 discs/ft.



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1.4 Artificial Lift

- All producers will be equipped with ESPs (Electric Submersible Pumps) rated for 250^{O}C.
- All ESPs will have pressure/temperature monitoring systems.
- ESP total fluid production capacity will vary between 300 to 730 m^3/day.

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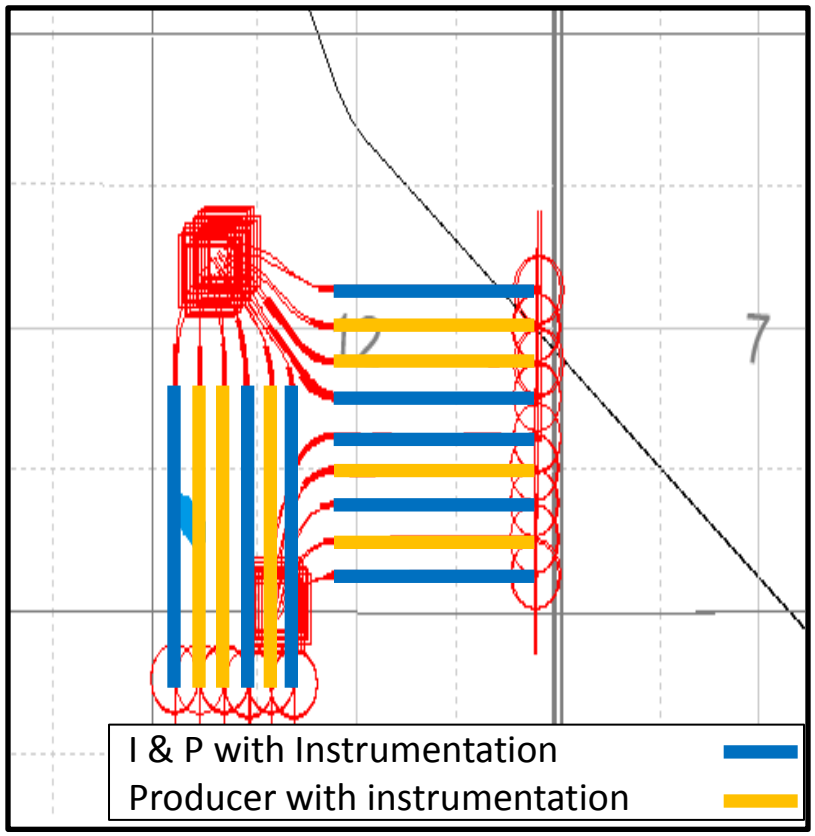
1.5 Instrumentation in Wells

- Producers:
  - 15 DTS fiber system during circulation and SAGD phase.
  - 15 bubble tube to toe during circulation phase and 15 bubble tube to both toe and heel during SAGD phase.

- Injectors:
  - 8 DTS fiber system during circulation and SAGD phase.
  - 8 bubble tube to toe during circulation and SAGD phase.



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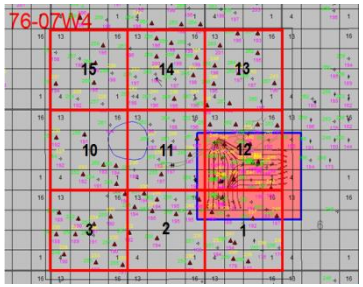
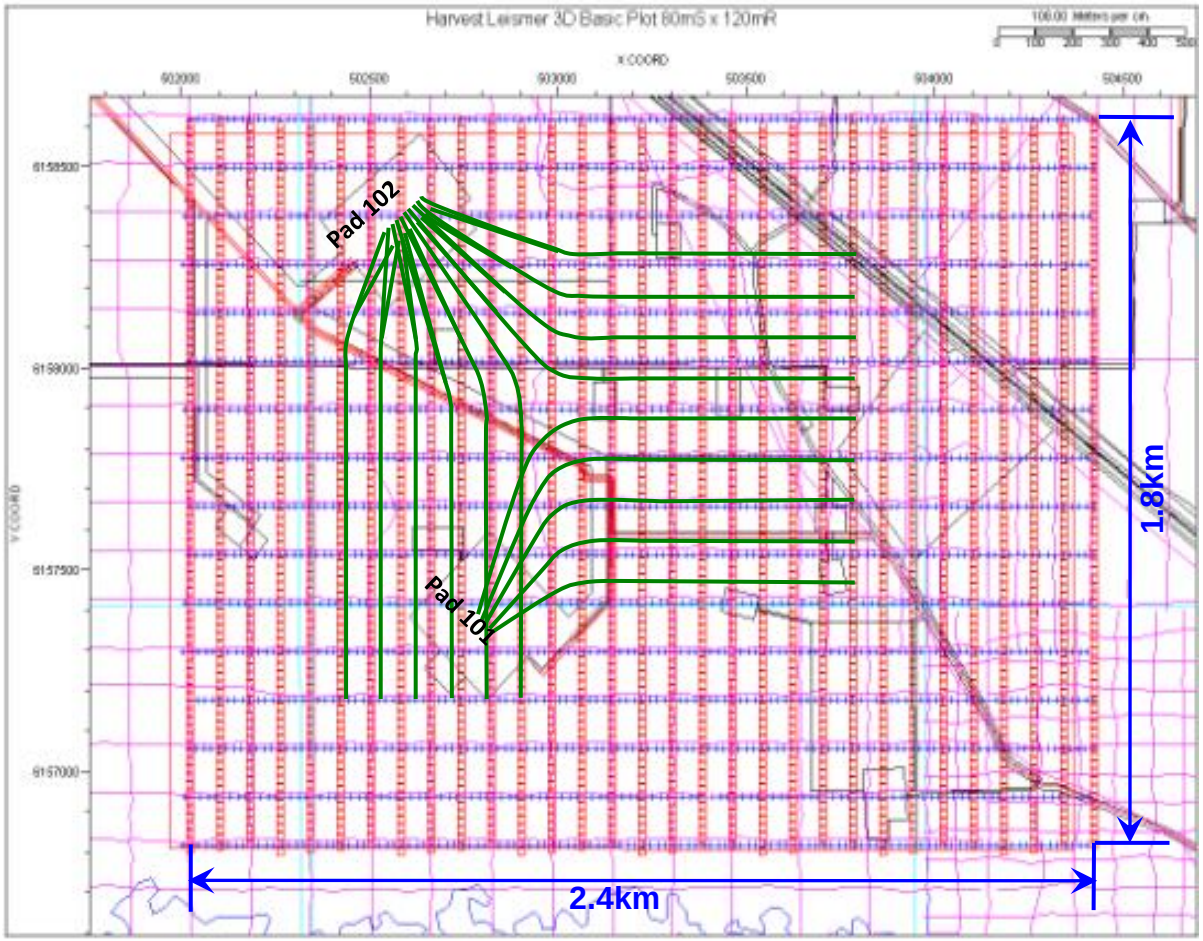
1.6 4-D Seismic

- Harvest acquired 4D seismic for initial development area in February 2012

4D Seismic Parameters	
Area	4.26 km^2
Bin size	10 m x 10 m
Shot interval	20 m
Shot line	80 m
Receiver interval	20 m
Receiver line	120 m
Record length	1,000 ms at 1/2 ms
Source type	Single vibe, 8-200 Hz linear@12,000 ms
Receiver type	GS-30CT, 6 over 1 m
Geophone type	10-14 Hz spiked geophone
Type of instrument	Telemetry





Agenda – 1. Subsurface

1.1	Background
1.2	Geology / Geoscience
1.3	Drilling and Completions
1.4	Artificial Lift
1.5	Instrumentation in Wells
1.6	4-D Seismic
1.7	Scheme Performance
1.8	Subsurface – Future Plans

1.7 Scheme Performance

- There is no scheme performance to report to date.

Agenda – 1. Subsurface

1.1	Background
1.2	Geology / Geoscience
1.3	Drilling and Completions
1.4	Artificial Lift
1.5	Instrumentation in Wells
1.6	4-D Seismic
1.7	Scheme Performance
1.8	Subsurface – Future Plans

1.8 Subsurface – Future Plans

- Commissioning of wells and pads in Q2 2018.
- First steam in Q2 2018.
- ESP conversion in Q3 2018.
- Harvest will acquire next a 4D survey in 2020.

Agenda – 2. Surface Operations

2.1	Facilities
2.2	MARP
2.3	Water Sources and Uses
2.4	Water Treatment Technology
2.5	Water and Waste Disposal
2.6	Sulphur Production
2.7	Environmental Issues & Compliance
2.8	Surface – Future Plans

2.1 Facilities

Modifications on Plot Plan

- There have been no modifications to the Plot Plan since the last presentation.

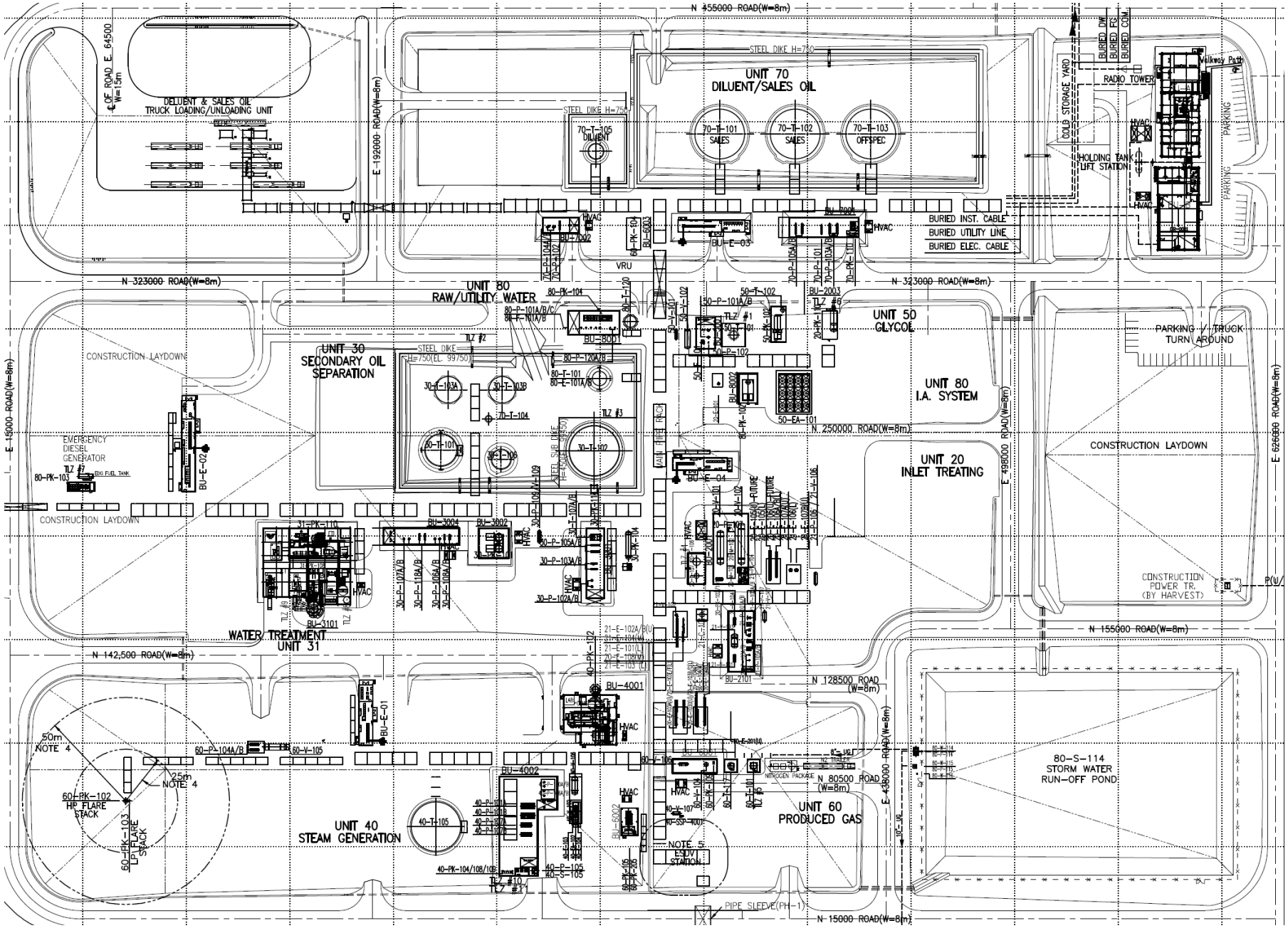
Plant Construction

- Construction substantially completed in Q1 2015.

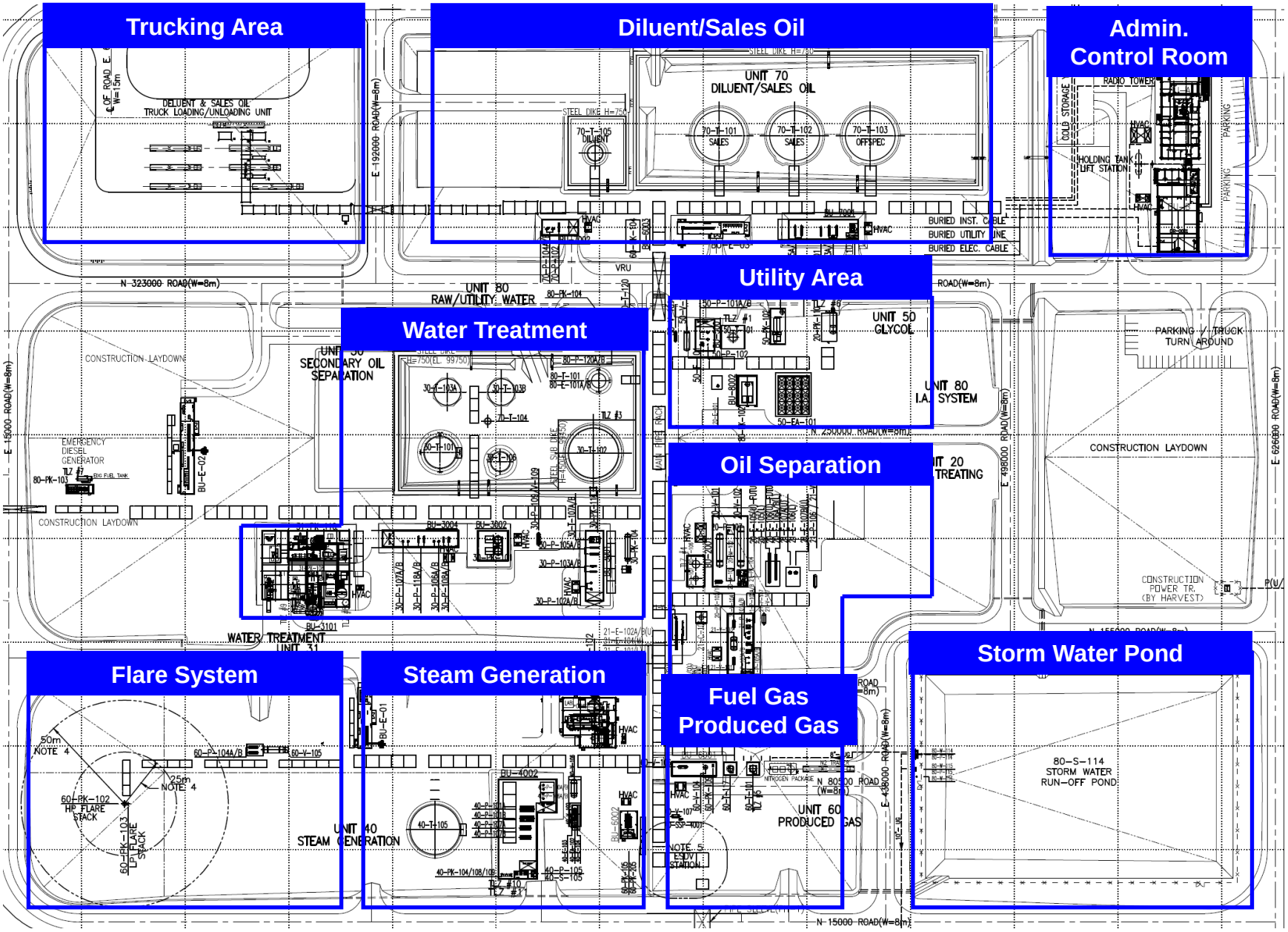
Plant Performance

- BlackGold is not operational as of Q4 2017.

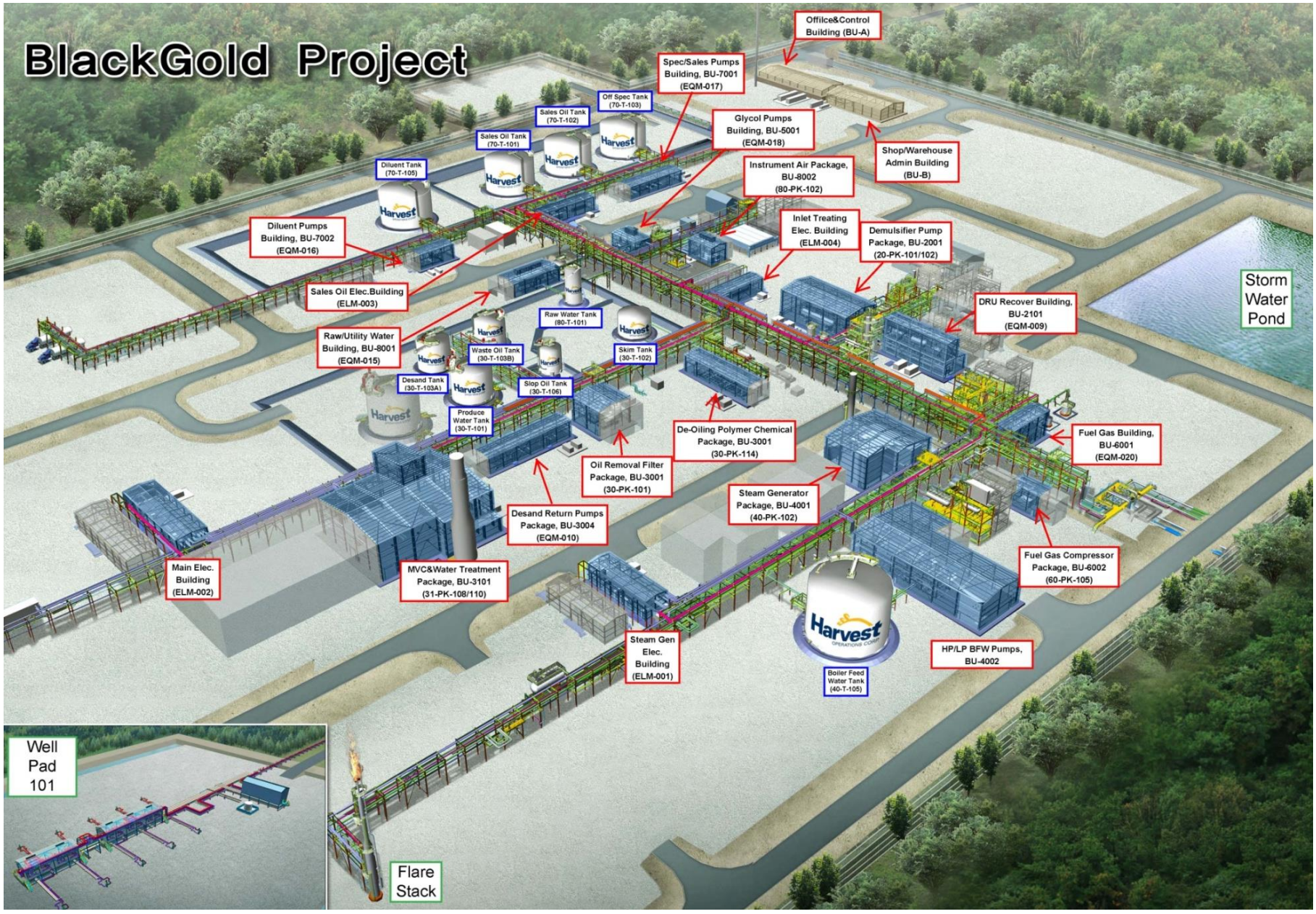
2.1 Facilities – Plot Plan



2.1 Facilities – Plot Plan



2.1 Facilities – 3D View



Agenda – 2. Surface Operations

2.1	Facilities
2.2	MARP
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2.2 MARP

Update

- The updated MARP was submitted and approved in 2017 in accordance with AER Directive 042 requirements.

Compliance with regulations

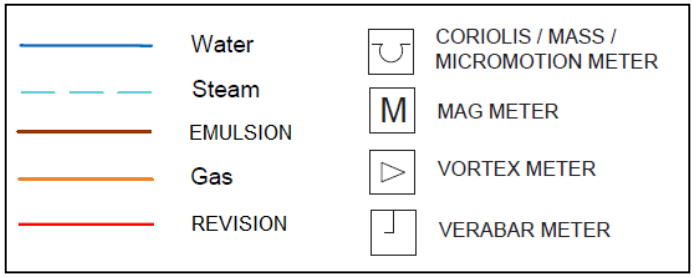
- Meters will be calibrated annually once the well is in service.

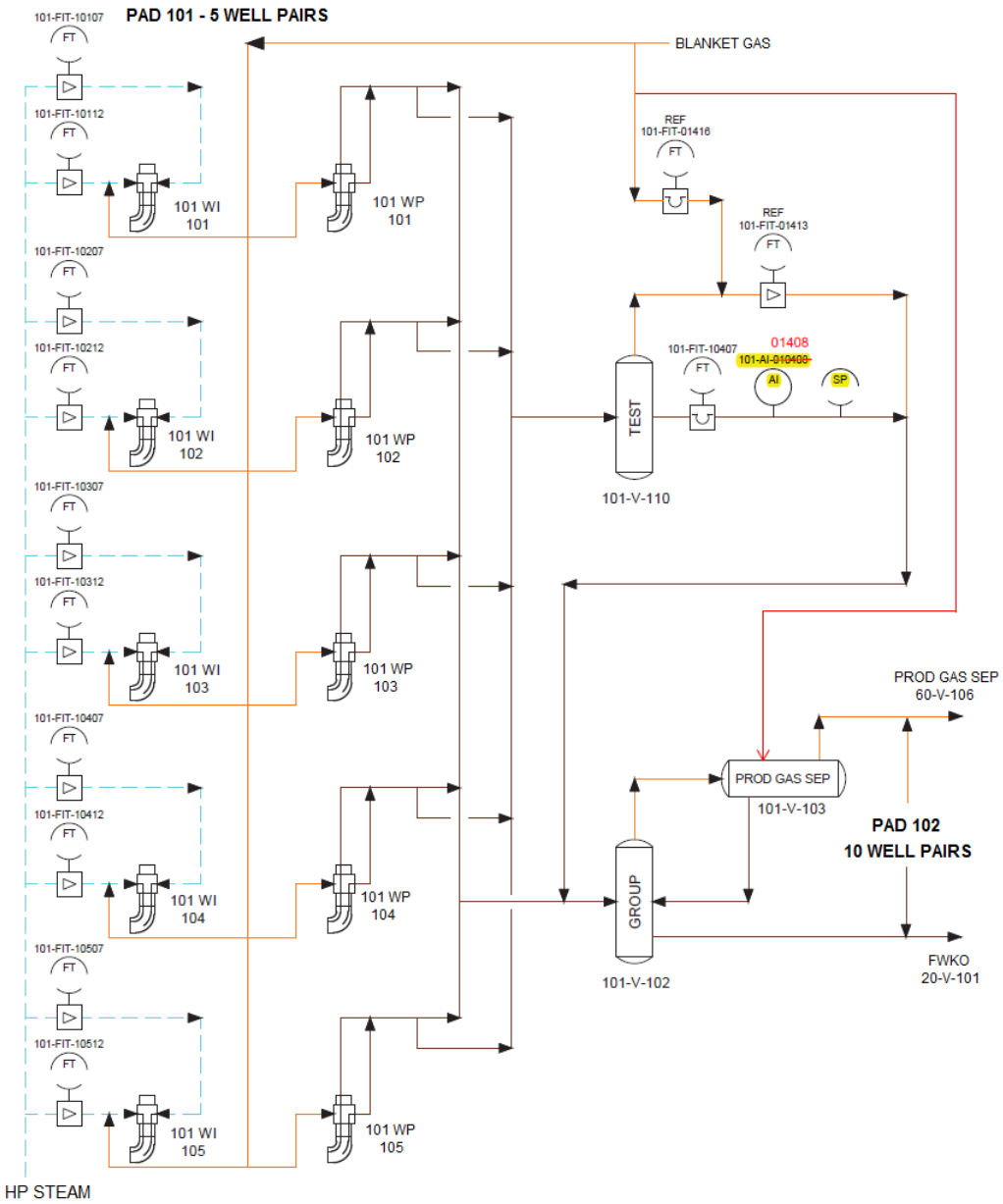
Solvent and gas injection

- No immediate plans to use solvent or gas co-injection.

2.2 MARP – Metering Schematic Diagram

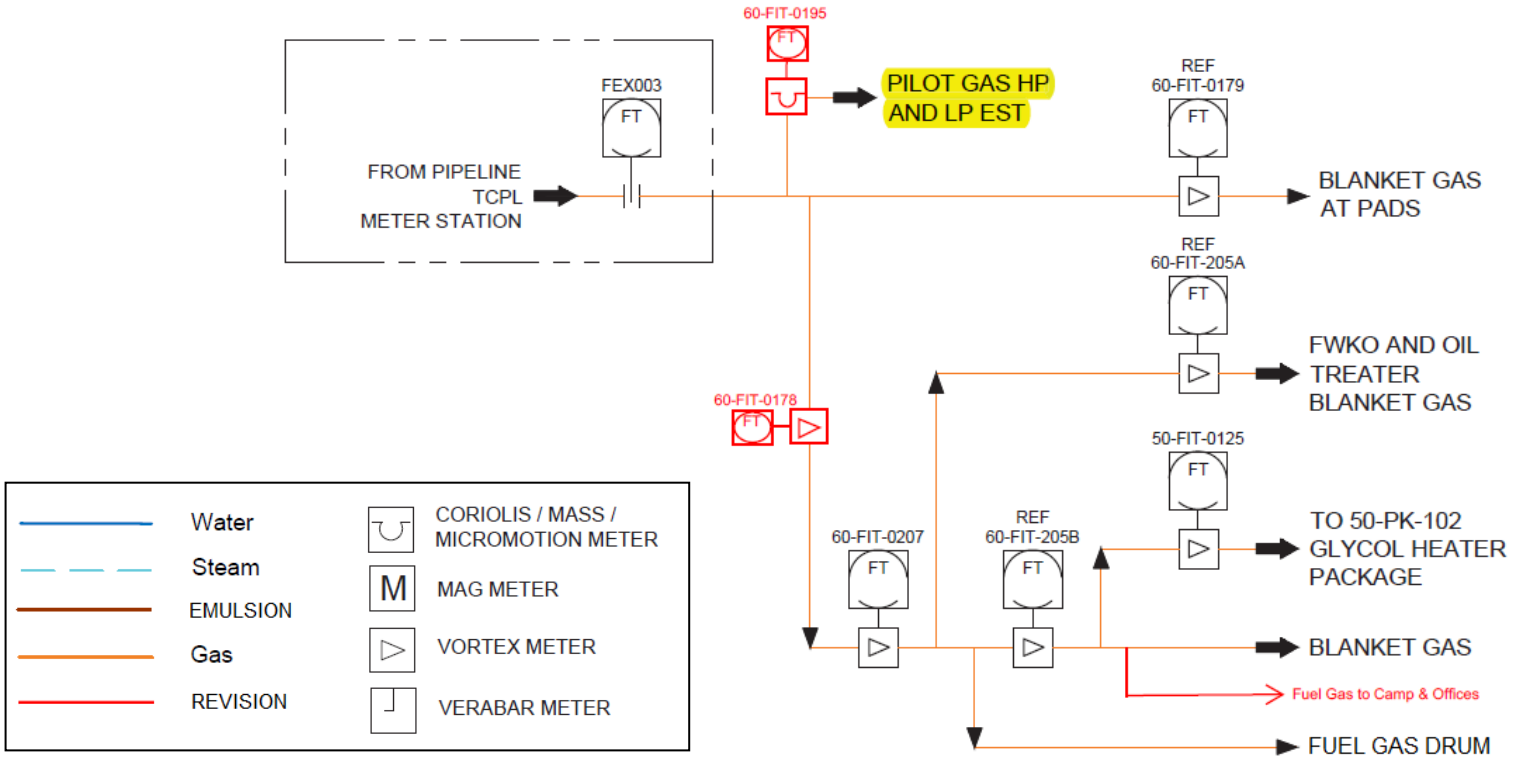
- 344 Oil Battery – Production Metering





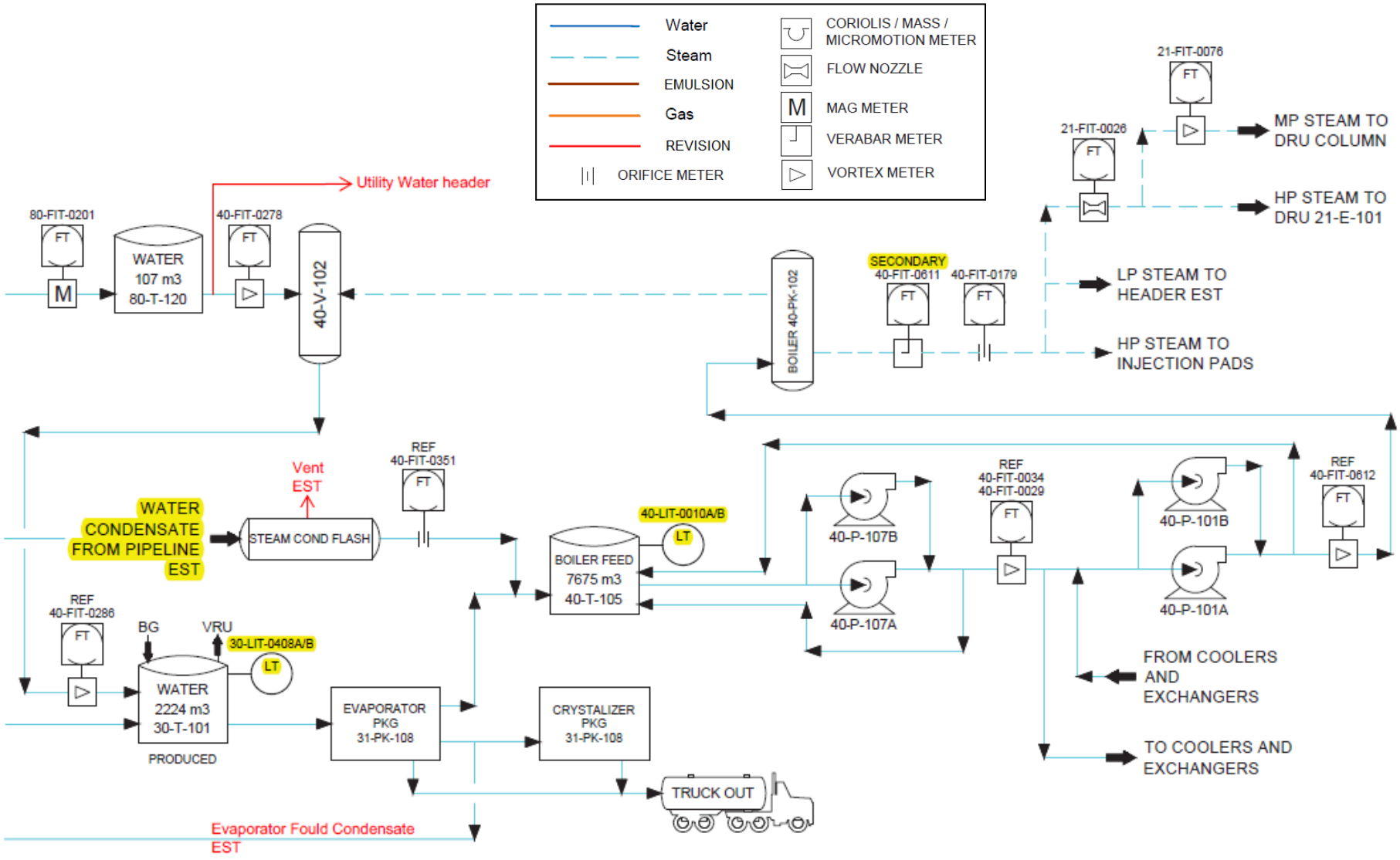
2.2 MARP – Metering Schematic Diagram

- 344 Oil Battery – Addition of a Coriolis meter and a Vortex meter to fuel gas supply line



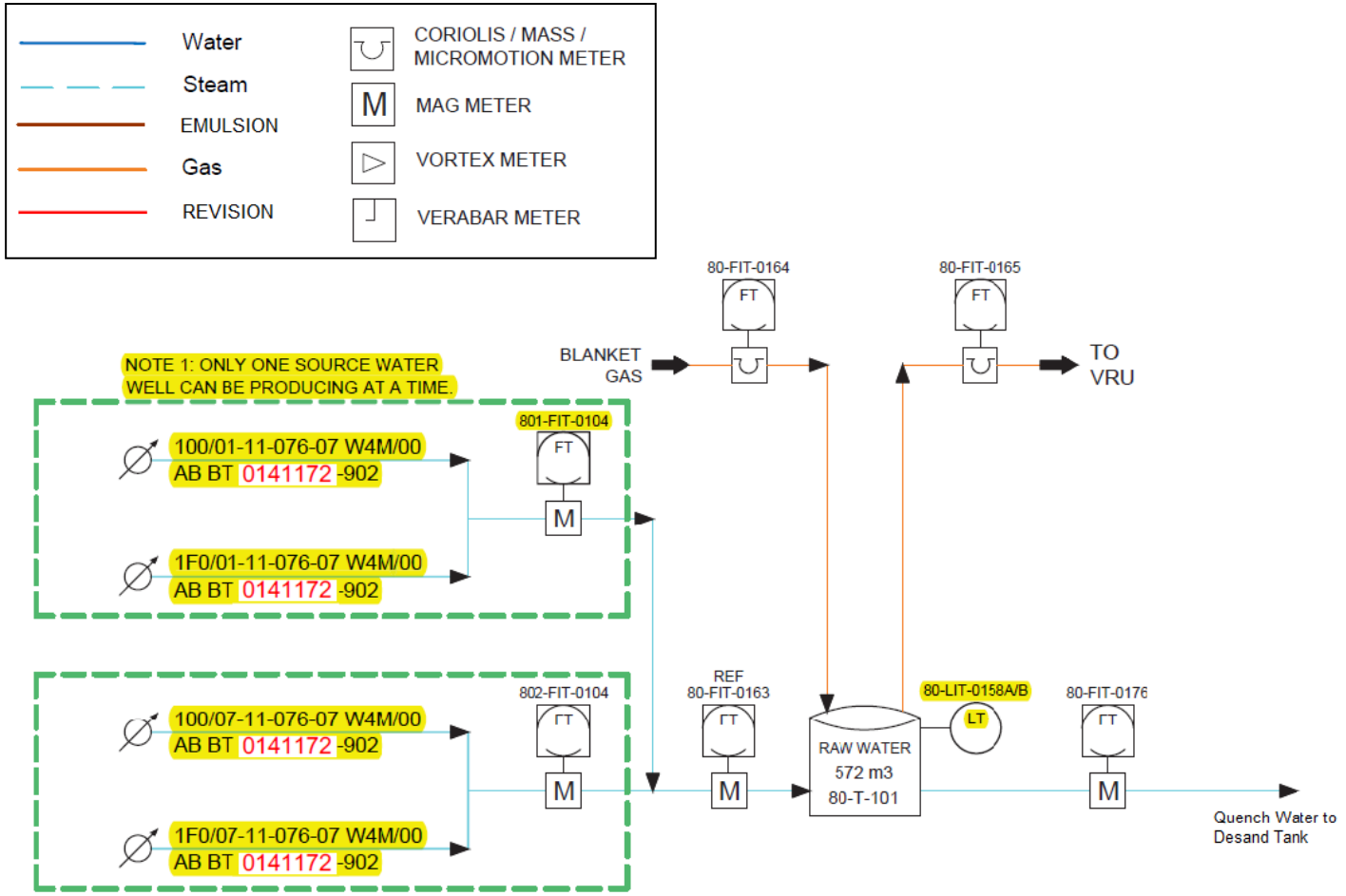
2.2 MARP – Metering Schematic Diagram

- 506 Steam Injection Facility



2.2 MARP – Metering Schematic Diagram

- 902 Water Source Battery



Agenda – 2. Surface Operations

2.1	Facilities
2.2	MARP
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2.8	Surface – Future Plans

2.3 Water Sources and Uses

Fresh Water Well

- SW-14-076-07W4: Well test was completed and estimated to generate approximately 600 m^3/d.

List of Brackish Water Wells

- 1F1/01-11-076-07W4/0 (Main Source well 802A)
- 1F1/07-11-076-07W4/0 (Main Source well 801A)
- 100/01-11-076-07W4/0 (Backup Well 802B)
- 100/07-11-076-07W4/0 (Backup Well 801B)

Volume of Saline Water

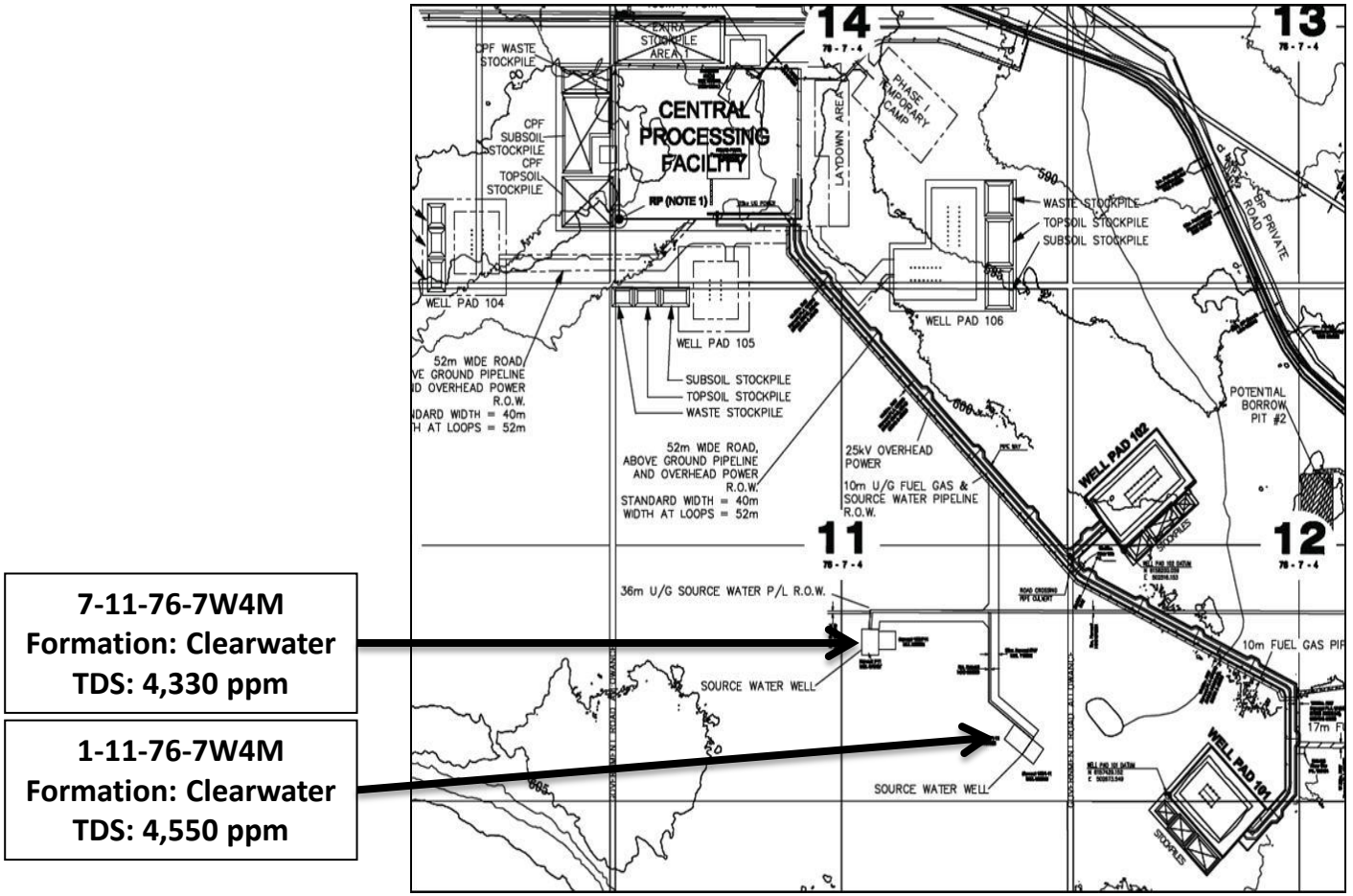
- The volume of brackish/saline water required for steaming operations is about 608 m^3/d for normal operation.

Saline Source Water Well Production Test commenced (Oct 2016)

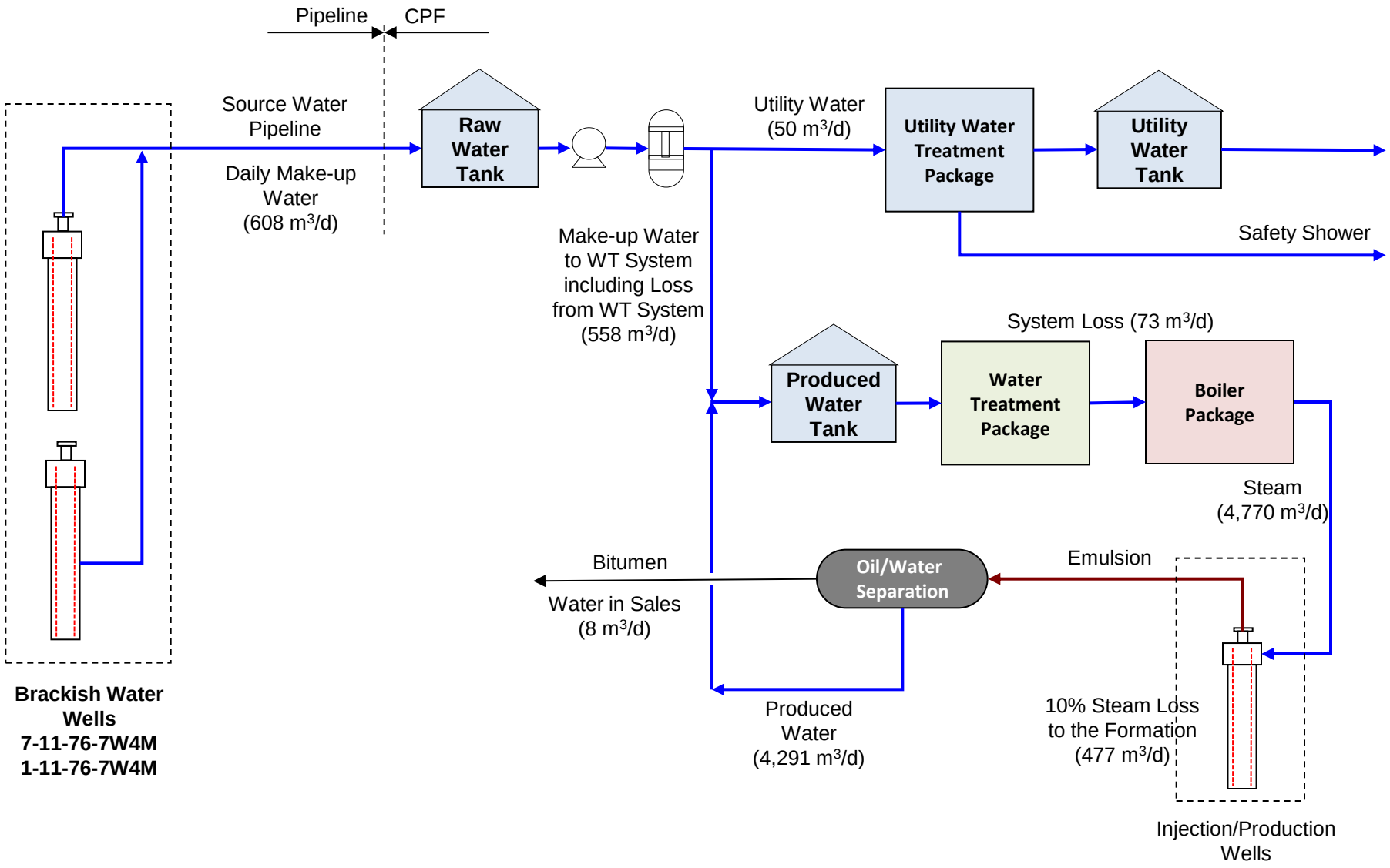
- The total volume of water produced was measured by flow meter installed in the well common header (801-FIT-0104 and 802-FIT-0104) and in CPF (80-FIT-0163) including flow totalizers.

2.3 Water Sources and Uses

- 1-11-76-7W4M & 7-11-76-7W4M
  - Depth: 350 m to 353 m Total Vertical Depth (TVD)
  - Formation: Clearwater
  - Total Dissolved Solids (TDS): 4,320 to 4,550 mg/L
  - Estimated production rate: 350 m^3/day/well



2.3 Water Sources and Uses



Agenda – 2. Surface Operations

2.1	Facilities
2.2	MARP
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2.5	Water and Waste Disposal
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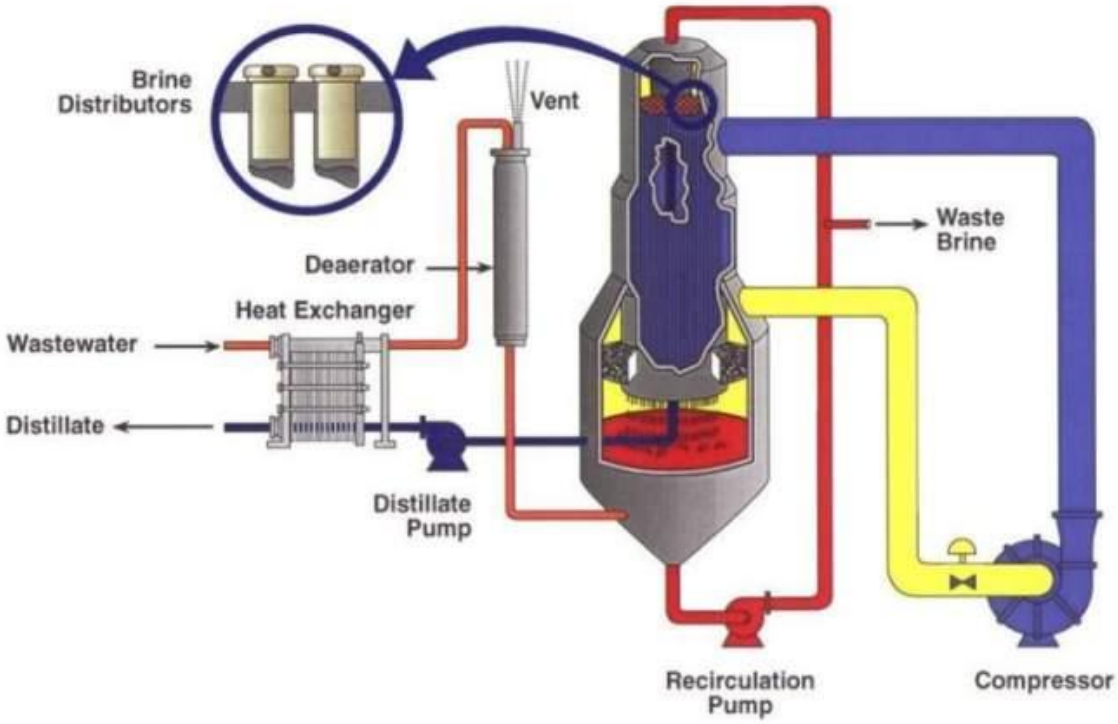
2.4 Water Treatment Technology

- The installed, but not operational, water treatment technology is a high pH Mechanical Vapour Compression (MVC) evaporator with a crystallizer and solid forming equipment.

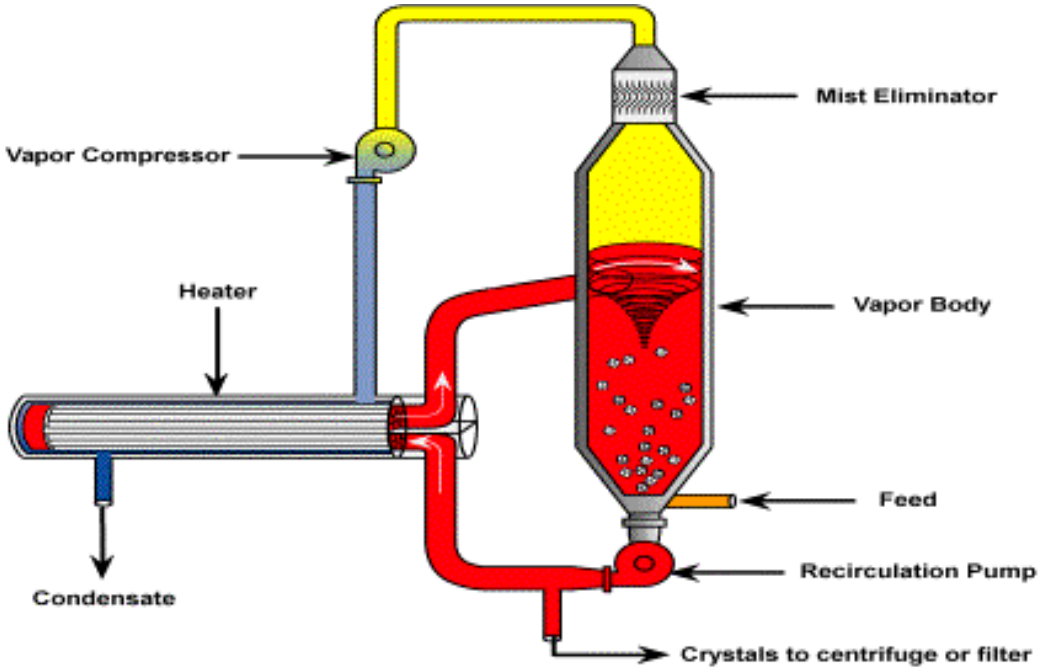
Evaporator Process

- The feed water enters the steam stripping de-aerator, which has five stages of separation that lowers the dissolved oxygen level to less than 7 parts per billion.
- The split-sump design minimizes energy consumption by evaporating roughly 70% of the total distillate flow in the first stage, or split.
- The remaining 30% of the total distillate flow is produced in the second split under slightly more rigorous operating conditions. Combined distillate from two splits flows through a common distillate collection line.



Crystallizer Process

- The liquid waste, or blow-down, from the Evaporator unit is collected in an agitated Crystallizer feed tank.
- The brine is heated a few degrees as it passes through the heater and flashes when it re-enters the vapour body.
- The vapour produced is collected in the vapour body, passes upward through an entrainment separator, and enters the suction side of the rotary lobe type vapour compressor. The vapour is transferred to the shell side of the heater where the vapour condenses, providing the thermal driving force for evaporation. The condensed vapour is collected in the condensate tank and transferred to the evaporator feed tank.
- To control the recirculation brine solids level, a slipstream is removed from the crystallizer recirculating brine and sent to the Crystallizer Waste Tank where it is continually mixed and recirculated to maintain suspension of the solids.



Agenda – 2. Surface Operations

2.1	Facilities
2.2	MARP
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2.5	Water and Waste Disposal
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2.5 Water and Waste Disposal

- No disposal wells are associated with this Scheme.
- Waste disposal sites will be the appropriate class for solid and liquid process waste after operation begins.

Agenda – 2. Surface Operations

2.1	Facilities
2.2	MARP
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2.5	Water and Waste Disposal
2.6	Sulphur Production
2.7	Environmental Issues & Compliance
2.8	Surface – Future Plans

2.6 Sulphur Production

- As the CPF and wells were not in operation, no sulphur was produced at the BlackGold Facility.

Agenda – 2. Surface Operations

2.1	Facilities
2.2	MARP
2.3	Water Sources and Uses
2.4	Water Treatment Technology
2.5	Water and Waste Disposal
2.6	Sulphur Production
2.7	Environmental Issues & Compliance
2.8	Surface – Future Plans

2.7 Environmental Issues & Compliance

- Harvest submitted the following plans in accordance with the EPEA Approval
- Wetland and Waterbody Monitoring Program Proposal in 2014
  - Authorized in December 2015.
  - Variance request was authorized to commence monitoring during start-up.
  - Amendment to the Program details was submitted in November 2016.
  - Amendment was authorized in January of 2017.
- Wildlife and Caribou Mitigation and Monitoring Programs
  - Initiated the camera monitoring program in 2012.
  - Observations of Moose, Wolves, Caribou, Sandhill Cranes, Owls.
  - Amendments to the programs were approved in 2016.
  - Track Surveys have been conducted.
  - Bird and Amphibian Surveys have been conducted.
  - Comprehensive Wildlife Report due September 2018.
- Ground Water Monitoring Program
  - Authorized in 2011.
  - Amendments were authorized in 2015.

2.7 Environmental Issues & Compliance

- Continuous Emissions Monitoring Program
  - Program approved in 2017.
- Air Monitoring Program
  - Currently under review by the AER.
- Project Level Conservation, Reclamation, and Closure Plan due October 31, 2017.
- Annual C&R reports have been submitted for the years 2012 – 2016.
- Amendment of Construction Deadline was authorized for September 2018.
- Temporary Diversion Licence for water to create ice roads in 2015 for the installation of reflector sites for the InSar programs.
- Authorization to store saline source water in the surface runoff pond during the winter and transfer it back to the pond in spring in 2016 and 2017.
- Temporary Diversion Licence to transfer surface runoff water to the project tanks in preparation for commissioning activities and steam start-up in March of 2017.
- Compliant with the Oil Sands Monitoring levy requirements.
- Reclamation has not commenced.

2.7 Environmental Issues & Compliance

- Self-disclosure to AER to notify of changes to licensed FG CO pipelines removing line segments which were not constructed.
- Self-disclosure to AER of changes to pipeline licenses to change piping material to duplex stainless steel (31803) in place of carbon steel for produced gas pipeline.
- Reported failure to submit Annual Groundwater Monitoring Report in 2015
  - Continuous groundwater monitoring had not commenced at that time.
  - Provided 7 day letter and Amendment request to vary annual reporting until project start-up.
- Harvest is not aware of any compliance issues with regards to regulatory approval conditions related to the development of the BlackGold Project.

Agenda – 2. Surface Operations

2.1	Facilities
2.2	MARP
2.3	Water Sources and Uses
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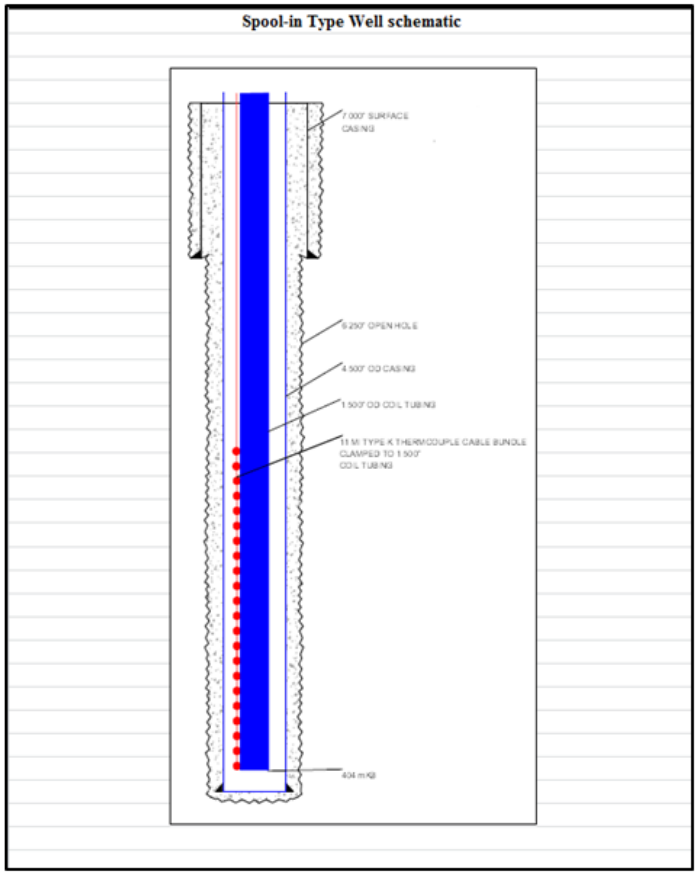
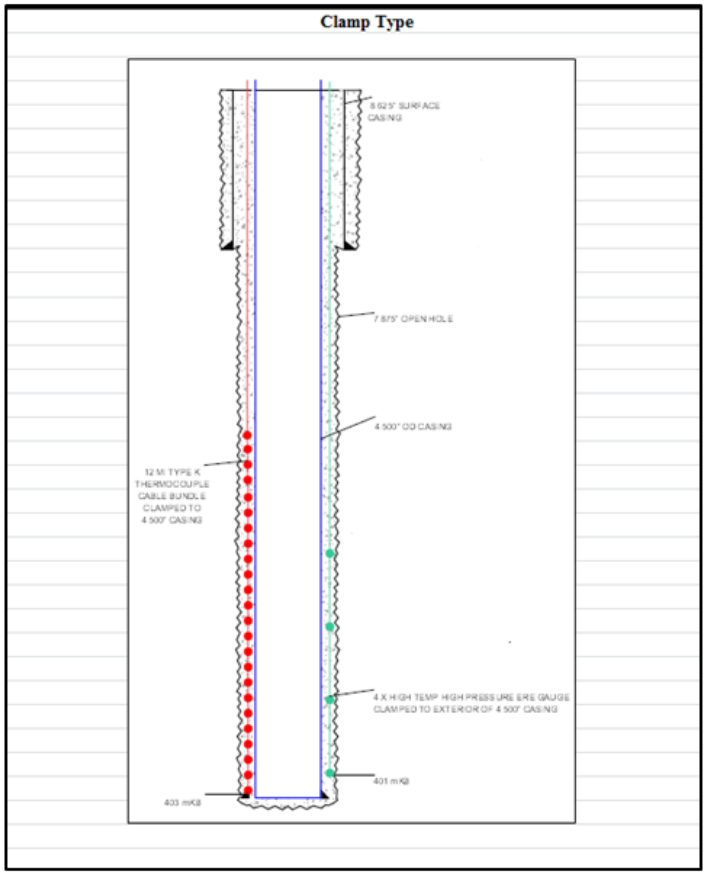
2.8	Surface – Future Plans

2.8 Surface – Future Plans

- Application to amend Environment Protection and Enhancement Act Approval No. 246984-00-00 for Project Expansion is amended as 246984-00-02 December 5, 2013.
  - Central Processing Facility Modifications.
  - Well Pad Modifications.
- BlackGold completion key dates and timelines:
  - December 2017, construction resumes.
  - Q2 2018, first steam generated.
  - Q3 2018, Electric Submersible Pump (ESP) installations begin.

Typical OBS Well Schematics





OBS Well Instrumentation Information

Data Description	Well	Sensor Depth (m)	UWI
OBS Well 1 TC 1	Ob well 1	404.00	100/08-12-76-7W4
OBS Well 1 TC 2	Ob well 1	402.00	
OBS Well 1 TC 3	Ob well 1	400.00	
OBS Well 1 TC 4	Ob well 1	398.00	
OBS Well 1 TC 5	Ob well 1	396.00	
OBS Well 1 TC 6	Ob well 1	394.00	
OBS Well 1 TC 7	Ob well 1	392.00	
OBS Well 1 TC 8	Ob well 1	390.00	
OBS Well 1 TC 9	Ob well 1	388.00	
OBS Well 1 TC 10	Ob well 1	386.00	
OBS Well 1 TC 11	Ob well 1	384.00	
OBS Well 1 TC 12	Ob well 1	382.00	
OBS Well 1 TC 13	Ob well 1	380.00	
OBS Well 1 TC 14	Ob well 1	378.00	
OBS Well 1 TC 15	Ob well 1	376.00	
OBS Well 1 TC 16	Ob well 1	374.00	
OBS Well 1 TC 17	Ob well 1	372.00	
OBS Well 1 TC 18	Ob well 1	370.00	
OBS Well 1 TC 19	Ob well 1	368.00	
OBS Well 1 TC 20	Ob well 1	364.00	
OBS Well 1 TC 21	Ob well 1	313.00	
OBS Well 1 TC 22	Ob well 1	308.00	

OBS Well 2 TC 1	Ob well 2	409.00	100/07-12-76-7W4
OBS Well 2 TC 2	Ob well 2	407.00	
OBS Well 2 TC 3	Ob well 2	405.00	
OBS Well 2 TC 4	Ob well 2	403.00	
OBS Well 2 TC 5	Ob well 2	401.00	
OBS Well 2 TC 6	Ob well 2	399.00	
OBS Well 2 TC 7	Ob well 2	397.00	
OBS Well 2 TC 8	Ob well 2	395.00	
OBS Well 2 TC 9	Ob well 2	393.00	
OBS Well 2 TC 10	Ob well 2	391.00	
OBS Well 2 TC 11	Ob well 2	389.00	
OBS Well 2 TC 12	Ob well 2	387.00	
OBS Well 2 TC 13	Ob well 2	385.00	
OBS Well 2 TC 14	Ob well 2	383.00	
OBS Well 2 TC 15	Ob well 2	381.00	
OBS Well 2 TC 16	Ob well 2	379.00	
OBS Well 2 TC 17	Ob well 2	377.00	
OBS Well 2 TC 18	Ob well 2	375.00	
OBS Well 2 TC 19	Ob well 2	373.00	
OBS Well 2 TC 20	Ob well 2	371.00	
OBS Well 2 TC 21	Ob well 2	369.00	
OBS Well 2 TC 22	Ob well 2	367.00	
OBS Well 2 TC 23	Ob well 2	365.00	
OBS Well 2 TC 24	Ob well 2	363.00	
OBS Well 2 TC 25	Ob well 2	361.00	
OBS Well 2 TC 26	Ob well 2	359.00	

OBS Well Instrumentation Information “Cont’d”

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OBS Well 3 TC 2	Ob well 3	405.00	
OBS Well 3 TC 3	Ob well 3	403.00	
OBS Well 3 TC 4	Ob well 3	401.00	
OBS Well 3 TC 5	Ob well 3	399.00	
OBS Well 3 TC 6	Ob well 3	397.00	
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OBS Well 4 TC 1	Ob well 4	403.00	103/07-12-76-7W4
OBS Well 4 TC 2	Ob well 4	401.00	
OBS Well 4 TC 3	Ob well 4	399.00	
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OBS Well 4 TC 21	Ob well 4	363.00	
OBS Well 4 TC 22	Ob well 4	361.00	
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OBS Well Instrumentation Information “Cont’d”

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OBS Well 5 TC 2	Ob well 5	401.00	
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OBS Well 5 TC 4	Ob well 5	397.00	
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OBS Well 5 TC 6	Ob well 5	393.00	
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OBS Well 5 TC 24	Ob well 5	357.00	
OBS Well 5 TC 25	Ob well 5	355.00	
OBS Well 5 TC 26	Ob well 5	353.00	

OBS Well 6 TC 1	Ob well 6	409.00	100/02-12-76-7W4
OBS Well 6 TC 2	Ob well 6	407.00	
OBS Well 6 TC 3	Ob well 6	405.00	
OBS Well 6 TC 4	Ob well 6	403.00	
OBS Well 6 TC 5	Ob well 6	401.00	
OBS Well 6 TC 6	Ob well 6	399.00	
OBS Well 6 TC 7	Ob well 6	397.00	
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OBS Well 6 Piezo T3	Ob well 6	392.00	
OBS Well 6 Piezo T4	Ob well 6	362.00	
OBS Well 6 Piezo P1	Ob well 6	405.00	
OBS Well 6 Piezo P2	Ob well 6	397.00	
OBS Well 6 Piezo P3	Ob well 6	392.00	
OBS Well 6 Piezo P4	Ob well 6	362.00	

OBS Well Instrumentation Information “Cont’d”

OBS Well 7 TC 1	Ob well 7	404.00	100/10-12-76-7W4
OBS Well 7 TC 2	Ob well 7	402.00	
OBS Well 7 TC 3	Ob well 7	400.00	
OBS Well 7 TC 4	Ob well 7	398.00	
OBS Well 7 TC 5	Ob well 7	396.00	
OBS Well 7 TC 6	Ob well 7	394.00	
OBS Well 7 TC 7	Ob well 7	392.00	
OBS Well 7 TC 8	Ob well 7	390.00	
OBS Well 7 TC 9	Ob well 7	388.00	
OBS Well 7 TC 10	Ob well 7	386.00	
OBS Well 7 TC 11	Ob well 7	384.00	
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OBS Well 7 Piezo T3	Ob well 7	386.00	
OBS Well 7 Piezo T4	Ob well 7	354.00	
OBS Well 7 Piezo P1	Ob well 7	402.00	
OBS Well 7 Piezo P2	Ob well 7	392.00	
OBS Well 7 Piezo P3	Ob well 7	386.00	
OBS Well 7 Piezo P4	Ob well 7	354.00	

OBS Well 8 TC 1	Ob well 8	401.00	100/05-12-76-7W4
OBS Well 8 TC 2	Ob well 8	399.00	
OBS Well 8 TC 3	Ob well 8	397.00	
OBS Well 8 TC 4	Ob well 8	395.00	
OBS Well 8 TC 5	Ob well 8	393.00	
OBS Well 8 TC 6	Ob well 8	391.00	
OBS Well 8 TC 7	Ob well 8	389.00	
OBS Well 8 TC 8	Ob well 8	387.00	
OBS Well 8 TC 9	Ob well 8	385.00	
OBS Well 8 TC 10	Ob well 8	383.00	
OBS Well 8 TC 11	Ob well 8	381.00	
OBS Well 8 TC 12	Ob well 8	379.00	
OBS Well 8 TC 13	Ob well 8	377.00	
OBS Well 8 TC 14	Ob well 8	375.00	
OBS Well 8 TC 15	Ob well 8	373.00	
OBS Well 8 TC 16	Ob well 8	371.00	
OBS Well 8 TC 17	Ob well 8	369.00	
OBS Well 8 TC 18	Ob well 8	367.00	
OBS Well 8 TC 19	Ob well 8	365.00	
OBS Well 8 TC 20	Ob well 8	363.00	
OBS Well 8 TC 21	Ob well 8	361.00	
OBS Well 8 TC 22	Ob well 8	357.00	
OBS Well 8 TC 23	Ob well 8	313.00	
OBS Well 8 TC 24	Ob well 8	308.00	

OBS Well Instrumentation Information “Cont’d”

OBS Well 9 TC 1	Ob well 9	403.00	100/04-12-76-7W4
OBS Well 9 TC 2	Ob well 9	401.00	
OBS Well 9 TC 3	Ob well 9	399.00	
OBS Well 9 TC 4	Ob well 9	397.00	
OBS Well 9 TC 5	Ob well 9	395.00	
OBS Well 9 TC 6	Ob well 9	393.00	
OBS Well 9 TC 7	Ob well 9	391.00	
OBS Well 9 TC 8	Ob well 9	389.00	
OBS Well 9 TC 9	Ob well 9	387.00	
OBS Well 9 TC 10	Ob well 9	385.00	
OBS Well 9 TC 11	Ob well 9	383.00	
OBS Well 9 TC 12	Ob well 9	381.00	
OBS Well 9 TC 13	Ob well 9	379.00	
OBS Well 9 TC 14	Ob well 9	377.00	
OBS Well 9 TC 15	Ob well 9	375.00	
OBS Well 9 TC 16	Ob well 9	373.00	
OBS Well 9 TC 17	Ob well 9	371.00	
OBS Well 9 TC 18	Ob well 9	369.00	
OBS Well 9 TC 19	Ob well 9	367.00	
OBS Well 9 TC 20	Ob well 9	365.00	
OBS Well 9 TC 21	Ob well 9	363.00	
OBS Well 9 TC 22	Ob well 9	361.00	
OBS Well 9 TC 23	Ob well 9	357.00	
OBS Well 9 TC 24	Ob well 9	353.00	
OBS Well 9 TC 25	Ob well 9	349.00	
OBS Well 9 Piezo T1	Ob well 9	401.00	
OBS Well 9 Piezo T2	Ob well 9	381.00	
OBS Well 9 Piezo T3	Ob well 9	365.00	
OBS Well 9 Piezo T4	Ob well 9	350.00	
OBS Well 9 Piezo P1	Ob well 9	401.00	
OBS Well 9 Piezo P2	Ob well 9	381.00	
OBS Well 9 Piezo P3	Ob well 9	365.00	
OBS Well 9 Piezo P4	Ob well 9	350.00	

OBS Well 10 TC 1	Ob well 10	409.00	102/04-12-76-7W4
OBS Well 10 TC 2	Ob well 10	407.00	
OBS Well 10 TC 3	Ob well 10	405.00	
OBS Well 10 TC 4	Ob well 10	403.00	
OBS Well 10 TC 5	Ob well 10	401.00	
OBS Well 10 TC 6	Ob well 10	399.00	
OBS Well 10 TC 7	Ob well 10	397.00	
OBS Well 10 TC 8	Ob well 10	395.00	
OBS Well 10 TC 9	Ob well 10	393.00	
OBS Well 10 TC 10	Ob well 10	391.00	
OBS Well 10 TC 11	Ob well 10	389.00	
OBS Well 10 TC 12	Ob well 10	387.00	
OBS Well 10 TC 13	Ob well 10	385.00	
OBS Well 10 TC 14	Ob well 10	383.00	
OBS Well 10 TC 15	Ob well 10	381.00	
OBS Well 10 TC 16	Ob well 10	379.00	
OBS Well 10 TC 17	Ob well 10	377.00	
OBS Well 10 TC 18	Ob well 10	375.00	
OBS Well 10 TC 19	Ob well 10	373.00	
OBS Well 10 TC 20	Ob well 10	371.00	
OBS Well 10 TC 21	Ob well 10	363.00	
OBS Well 10 TC 22	Ob well 10	361.00	
OBS Well 10 TC 23	Ob well 10	357.00	
OBS Well 10 TC 24	Ob well 10	313.00	
OBS Well 10 TC 25	Ob well 10	308.00	

OBS Well Instrumentation Information “Cont’d”

OBS Well 11 TC 1	Ob well 11	409.00	103/04-12-76-7W4
OBS Well 11 TC 2	Ob well 11	407.00	
OBS Well 11 TC 3	Ob well 11	405.00	
OBS Well 11 TC 4	Ob well 11	403.00	
OBS Well 11 TC 5	Ob well 11	401.00	
OBS Well 11 TC 6	Ob well 11	399.00	
OBS Well 11 TC 7	Ob well 11	397.00	
OBS Well 11 TC 8	Ob well 11	395.00	
OBS Well 11 TC 9	Ob well 11	393.00	
OBS Well 11 TC 10	Ob well 11	391.00	
OBS Well 11 TC 11	Ob well 11	389.00	
OBS Well 11 TC 12	Ob well 11	387.00	
OBS Well 11 TC 13	Ob well 11	385.00	
OBS Well 11 TC 14	Ob well 11	383.00	
OBS Well 11 TC 15	Ob well 11	381.00	
OBS Well 11 TC 16	Ob well 11	379.00	
OBS Well 11 TC 17	Ob well 11	377.00	
OBS Well 11 TC 18	Ob well 11	375.00	
OBS Well 11 TC 19	Ob well 11	373.00	
OBS Well 11 TC 20	Ob well 11	371.00	
OBS Well 11 TC 21	Ob well 11	363.00	
OBS Well 11 TC 22	Ob well 11	361.00	
OBS Well 11 TC 23	Ob well 11	357.00	
OBS Well 11 TC 24	Ob well 11	313.00	
OBS Well 11 TC 25	Ob well 11	308.00	

OBS Well 12 TC 1	Ob well 12	405.00	100/13-01-76-7W4
OBS Well 12 TC 2	Ob well 12	403.00	
OBS Well 12 TC 3	Ob well 12	401.00	
OBS Well 12 TC 4	Ob well 12	399.00	
OBS Well 12 TC 5	Ob well 12	397.00	
OBS Well 12 TC 6	Ob well 12	395.00	
OBS Well 12 TC 7	Ob well 12	393.00	
OBS Well 12 TC 8	Ob well 12	391.00	
OBS Well 12 TC 9	Ob well 12	389.00	
OBS Well 12 TC 10	Ob well 12	387.00	
OBS Well 12 TC 11	Ob well 12	385.00	
OBS Well 12 TC 12	Ob well 12	383.00	
OBS Well 12 TC 13	Ob well 12	381.00	
OBS Well 12 TC 14	Ob well 12	379.00	
OBS Well 12 TC 15	Ob well 12	377.00	
OBS Well 12 TC 16	Ob well 12	375.00	
OBS Well 12 TC 17	Ob well 12	373.00	
OBS Well 12 TC 18	Ob well 12	369.00	
OBS Well 12 TC 19	Ob well 12	315.00	
OBS Well 12 TC 20	Ob well 12	310.00	