Annual Performance Review of In Situ Oil Sands Scheme Approval 9404W

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April 16, 2015

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Agenda

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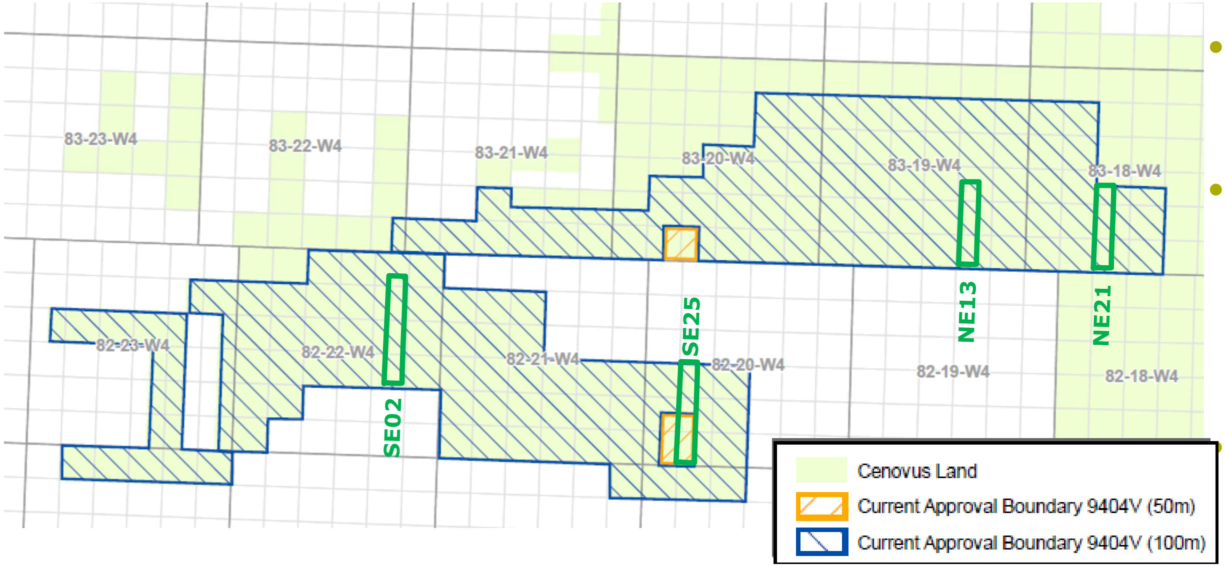
Agenda

- Current Approval, EOR History & Geological Overview
- Polymer Performance Update
- Hot Water Injection Update
- Field Surveillance Strategy
- Cap Rock Integrity & Monitoring Program
- Water Usage Update
- Facilities Update
- 2014/2015 Development Activities
- AER Regulatory Discussion & Key Learnings

Current Approval, EOR History and Geological Overview

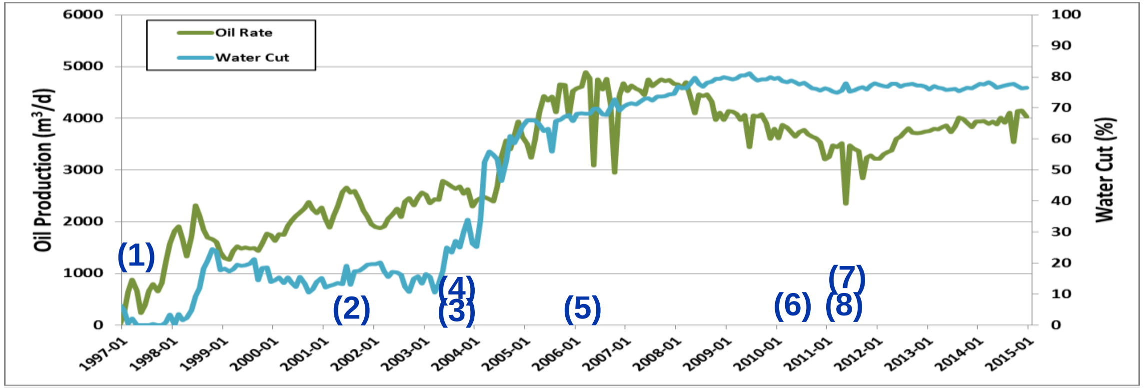
Approval 9404W – Current EOR Scheme Area

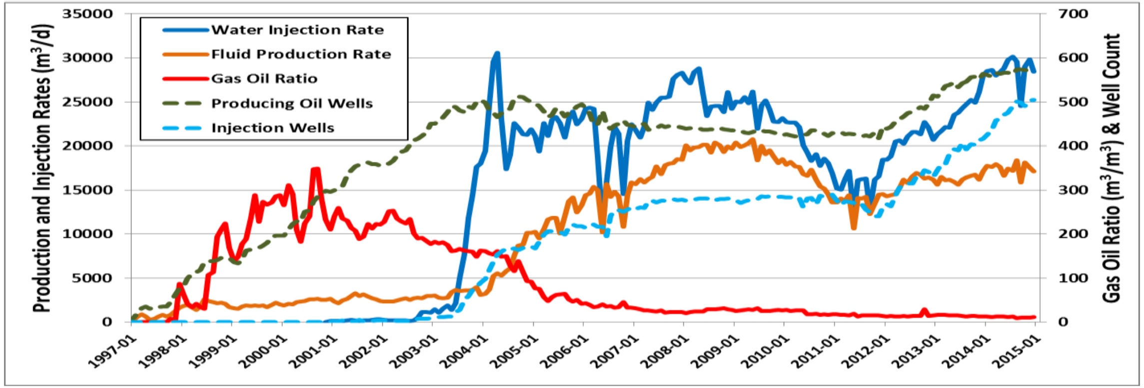


Interwell spacing distance is from producer to producer

- 9404W was originally approved in April 2014.
- No near term requirements to expand beyond existing boundaries and spacing.
- Pads shown in green are example infill pads shown later in presentation.

Scheme 9404W – Production Update (Cum Oil @ Dec 2014 = 20,404 E^3m^3)





Milestones

(1) Primary production (400m inter-well spacing)

(2) Waterflood pilot (200m inter-well)

(3) Commercial Waterflood

(4) Polymer Pilot

(5) Commercial Polymer

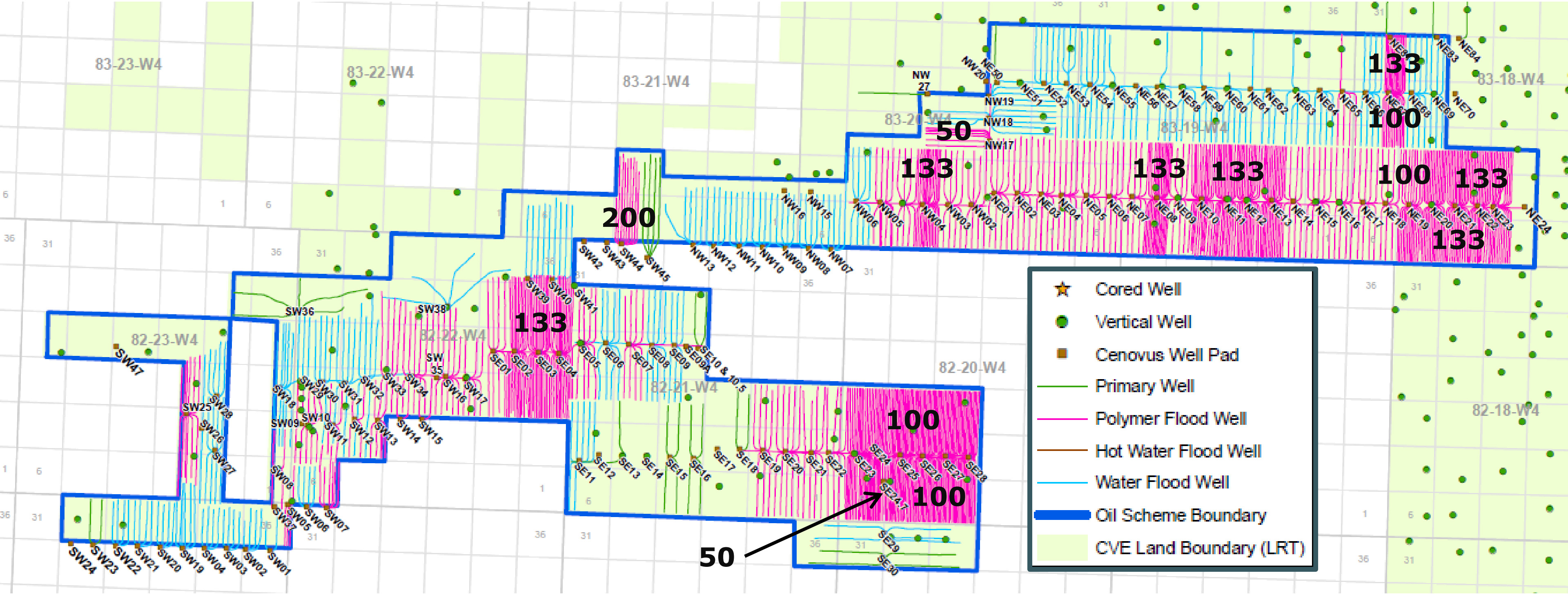
(6) Injection rates lowered to arrest watercut increases. Injection shut-in on pads for infill drilling program.

(7) Infill Drilling to 100m and 133m inter-well spacing

(8) Hot Water Pilot (Pad E29)

Pelican Lake Pads

Currently 610 producers, 410 polymer injectors, 114 waterflood injectors
(Dec 2014)

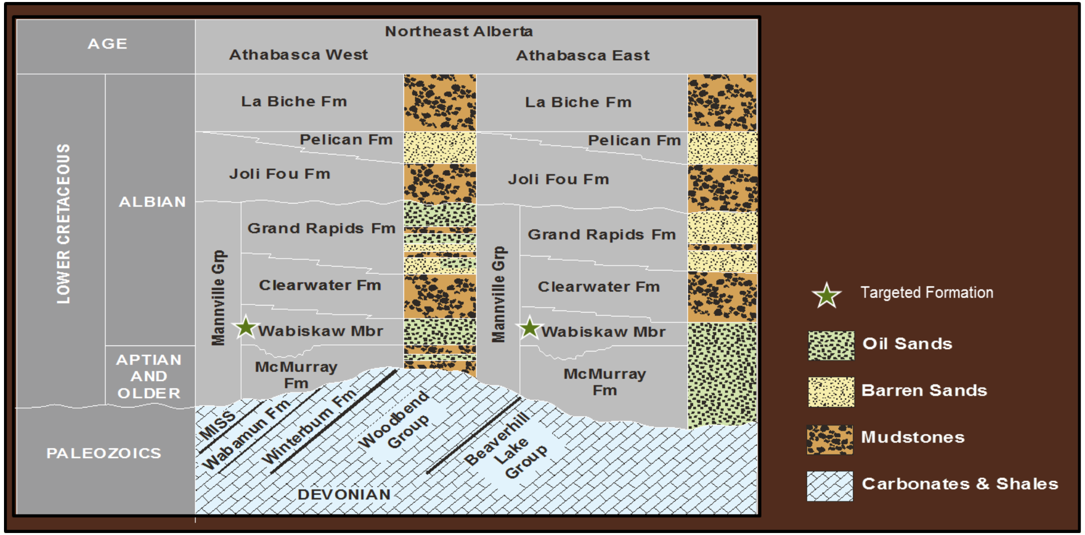


Interwell spacing distances shown are from producer to producer. Non infilled areas are at 400m spacing

Geologic Review

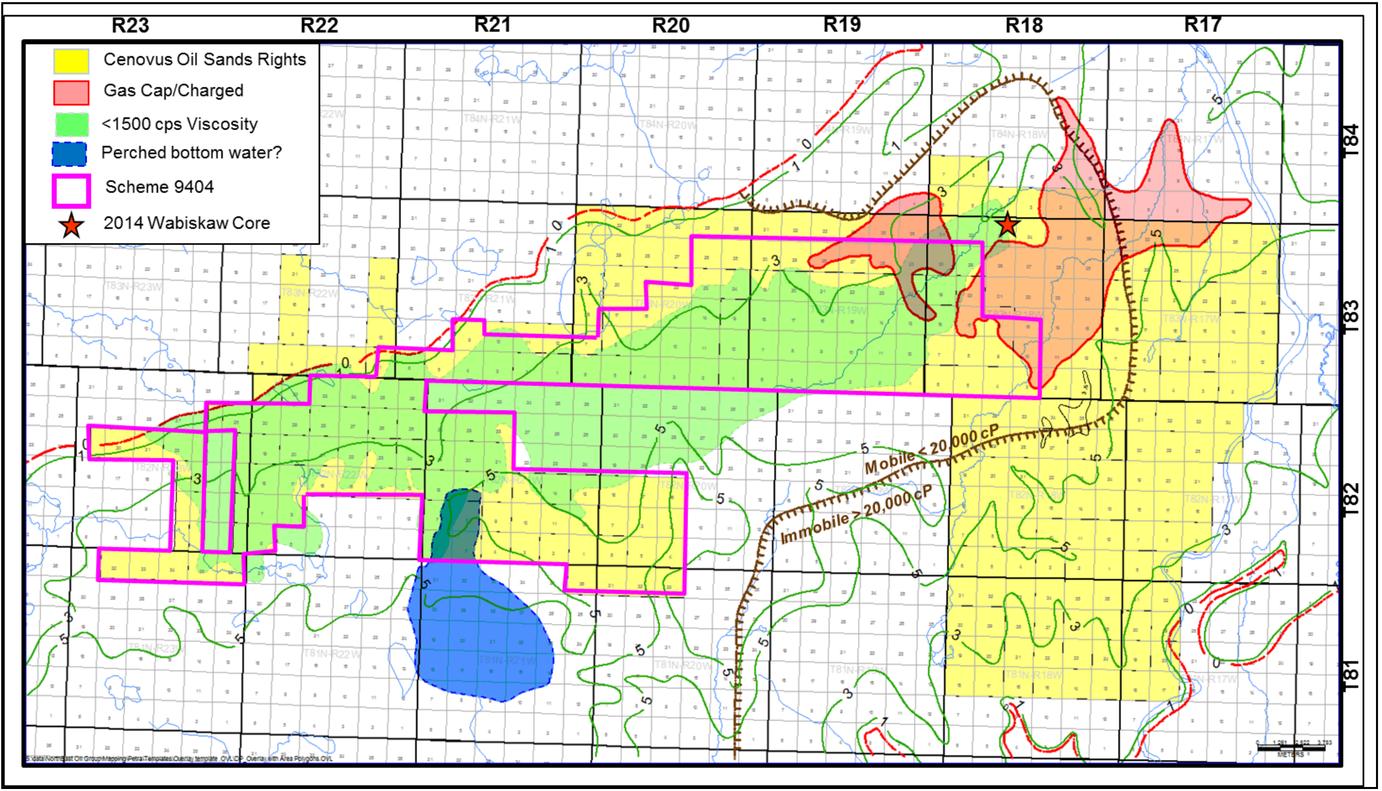
The development interval at Pelican Lake is the Wabiskaw Formation

- The Wabiskaw and Clearwater Formations are part of the Mannville Group.
- The Wabiskaw is composed of oil bearing shoreface sands.
- The Clearwater acts as a cap rock and is composed of mudstones and very competent calcified siltstones.
- Reservoir Properties are very consistent and of high quality across the field.



Parameter	Avg or Range	Comments
Depth	300 – 450m	Generally deeper in SW
Avg Thickness	3m	Thins towards North, ranges between 1 – 6m
Avg. Porosity	30%	
Avg. Oil Saturation	70%	
Avg. Permeability	300 – 3000mD	Generally better rock in Western portions of Pelican Lake
Reservoir Temp.	12 – 16 C	
Initial Reservoir Pressure	1800 – 2400kPa	
Oil Viscosity (dead)	1000 – 25000+ cP	Most of core land <= 2500 cP Polymer flood typically < 7000cP
Oil Gravity	11.5 – 16.5 API	

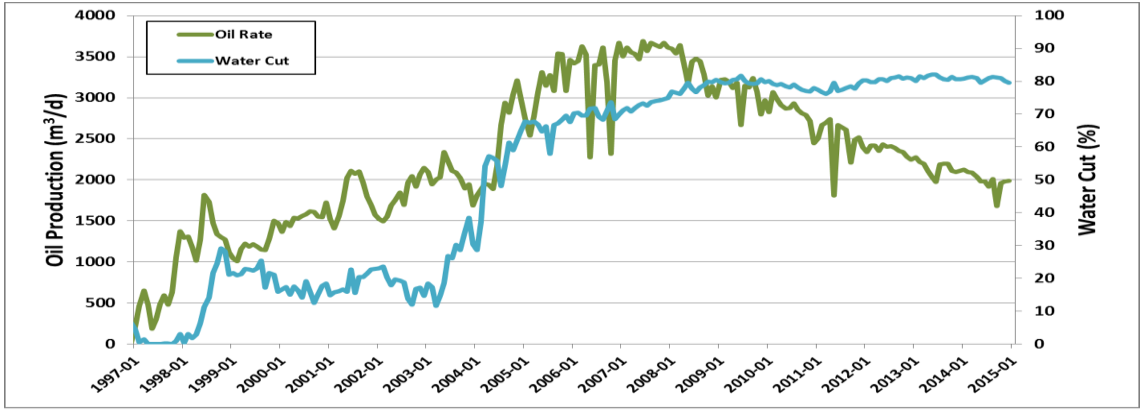
Wabiskaw Net Pay & Viscosity Fairway

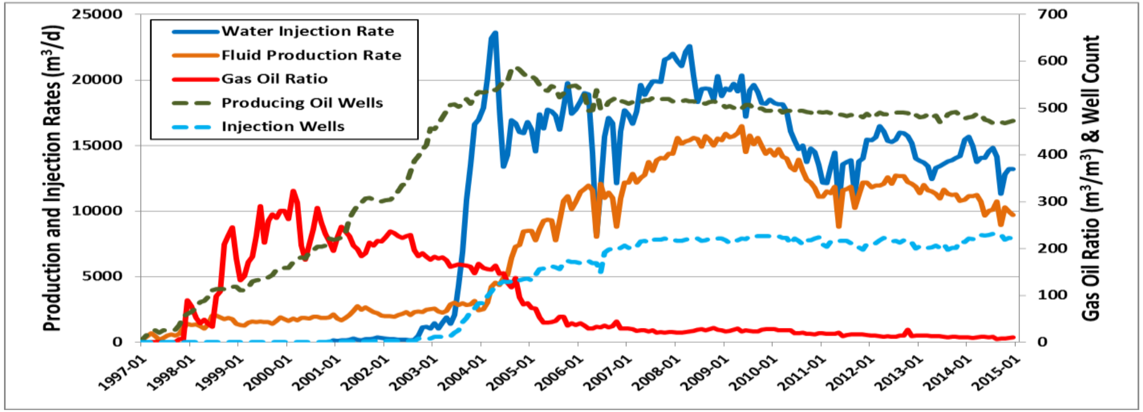


- Prograding shoreface environment makes the reservoir very uniform, continuous and predictable
- Net pay is bounded by onlap edge to the north and shoreface edge to the south, thinning uniformly from the center of the pool to the edges.
- Oil viscosity is low enough for mobile oil over the majority of the Pool, however, as we approach the edges of the pool, the viscosity gradient is very steep.
- Structure is driven by Paleozoic unconformity and rises dramatically to the NE.
- A number of Gas caps exist on associated highs, mostly in the NE part of the reservoir.
- A small area of potentially perched water lies in the South Central part of the field.

Polymer Performance Update

Base (400m Spacing Pads) Production Update





- Base production is a mix of primary, waterflood, and polymer flood pads.
- Polymer use is maintaining base water cut at 80%
- Compound annual decline rate of approximately 7%

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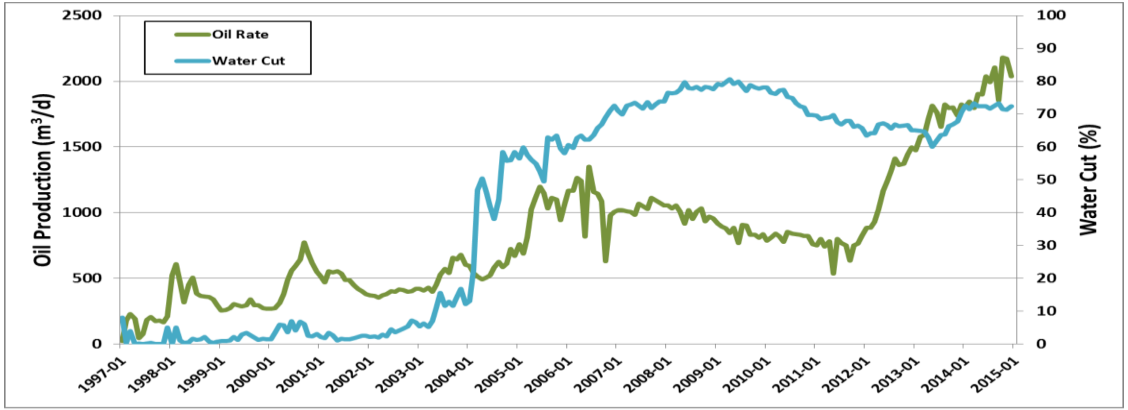
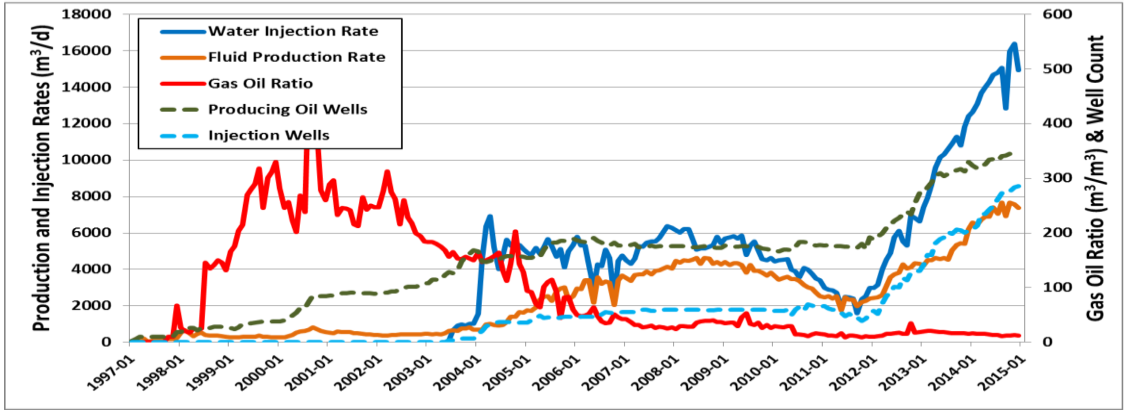
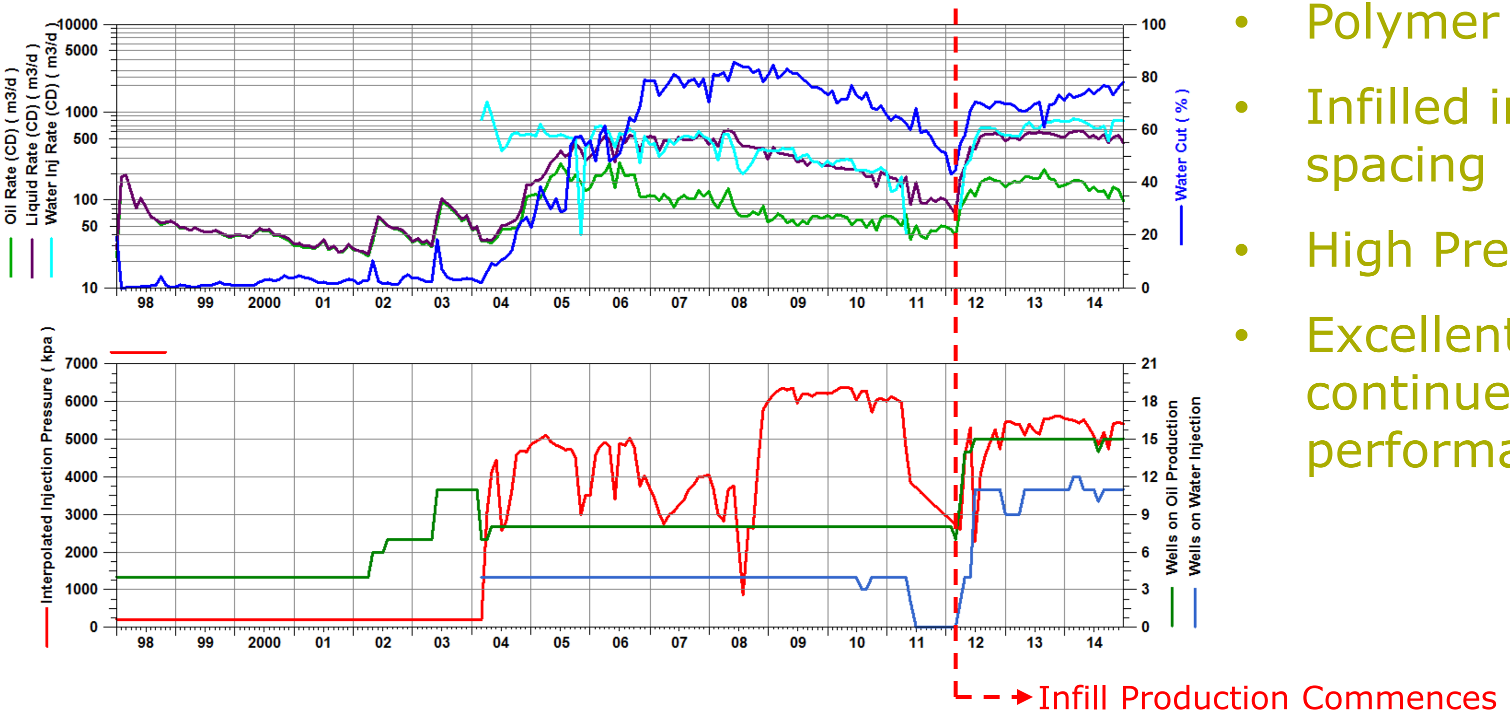
Infilled Pads Production Update





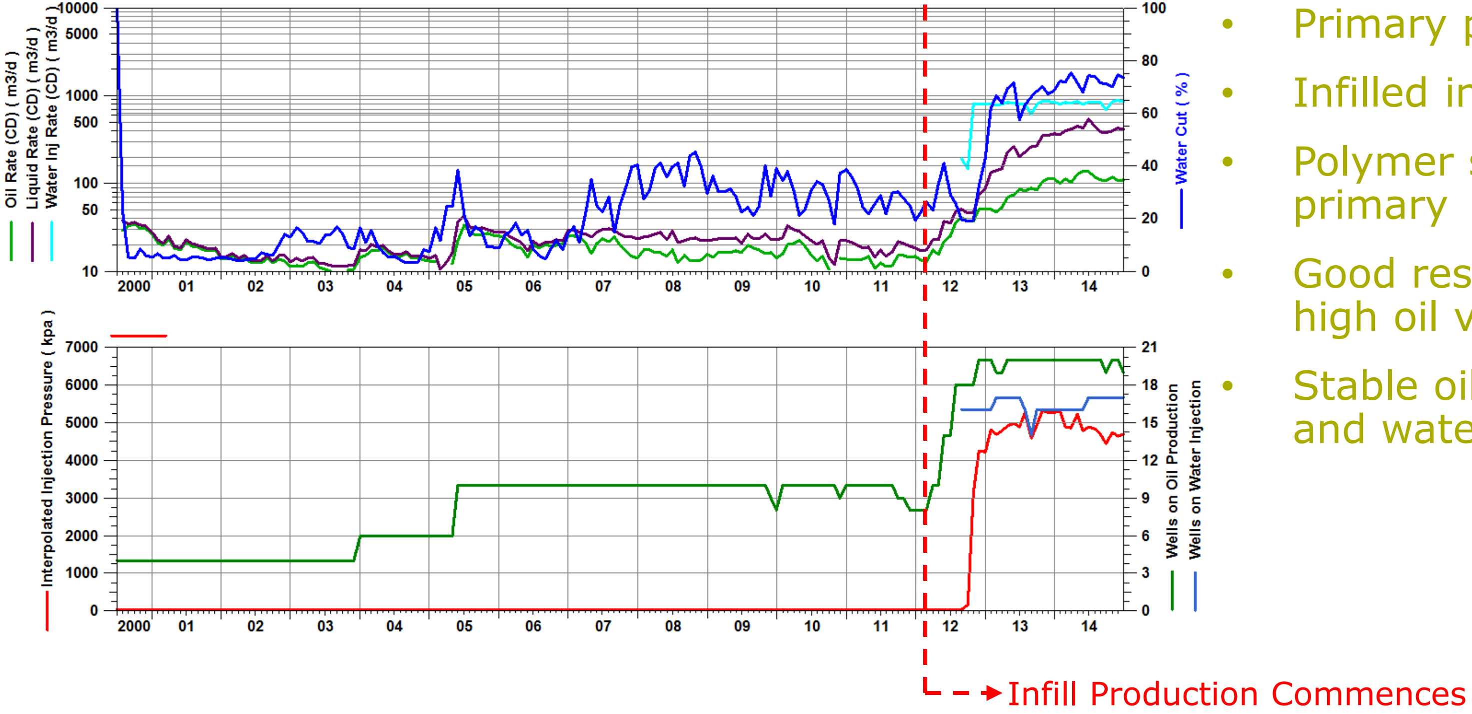
- Infill drilling commenced in 2011
- Continued oil & total fluid production growth, while maintaining low watercuts (~72%)
- Some pads are still filling up as they are adjacent to gas caps or were on primary before infill

SE02: Excellent Reservoir Quality & Flood Response



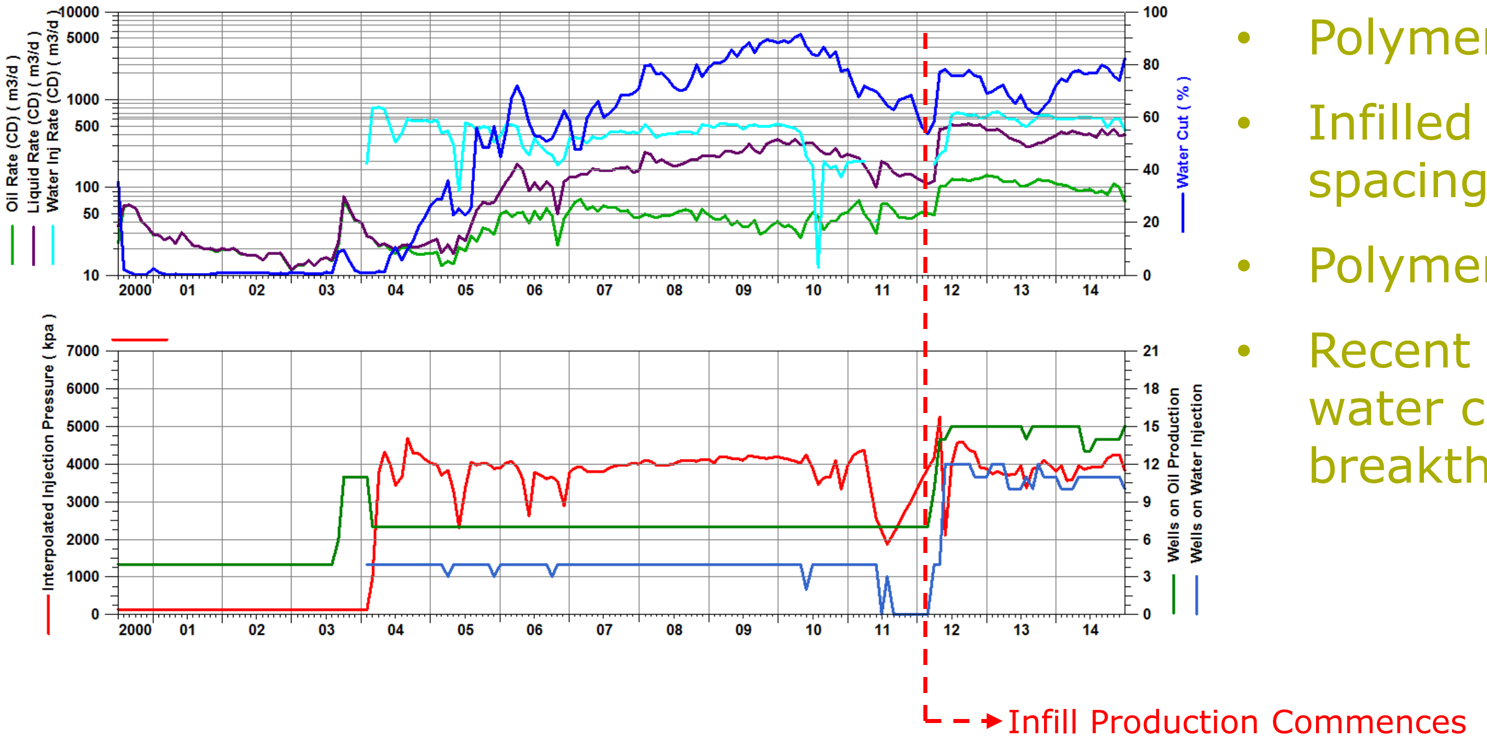
- Polymer started in 2008
- Infilled in 2012 to 133m spacing
- High Pressure pad
- Excellent oil response, continued good performance

SE25: Infill of High Oil Viscosity Primary Pad



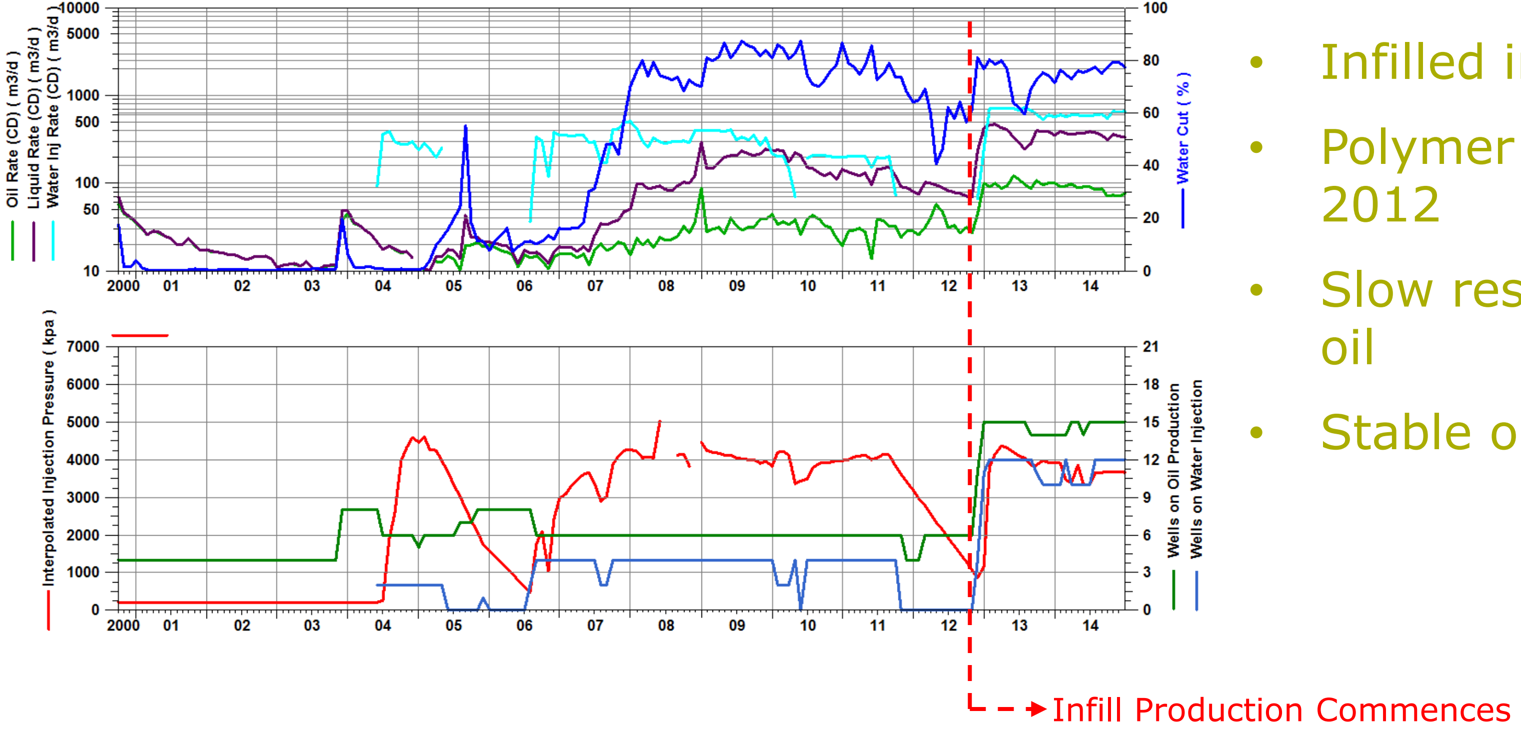
- Primary pad since 2000
- Infilled in 2012
- Polymer started in 2012 after primary
- Good response considering high oil viscosity area
- Stable oil production plateau and water cut

NE13: Below Average Reservoir Quality Infill Pad



- Polymer started 2010
- Infilled in 2012 @133m spacing
- Polymer is working
- Recent increase in water cut due to breakthroughs

NE21: Low Reservoir Quality Infill Pad

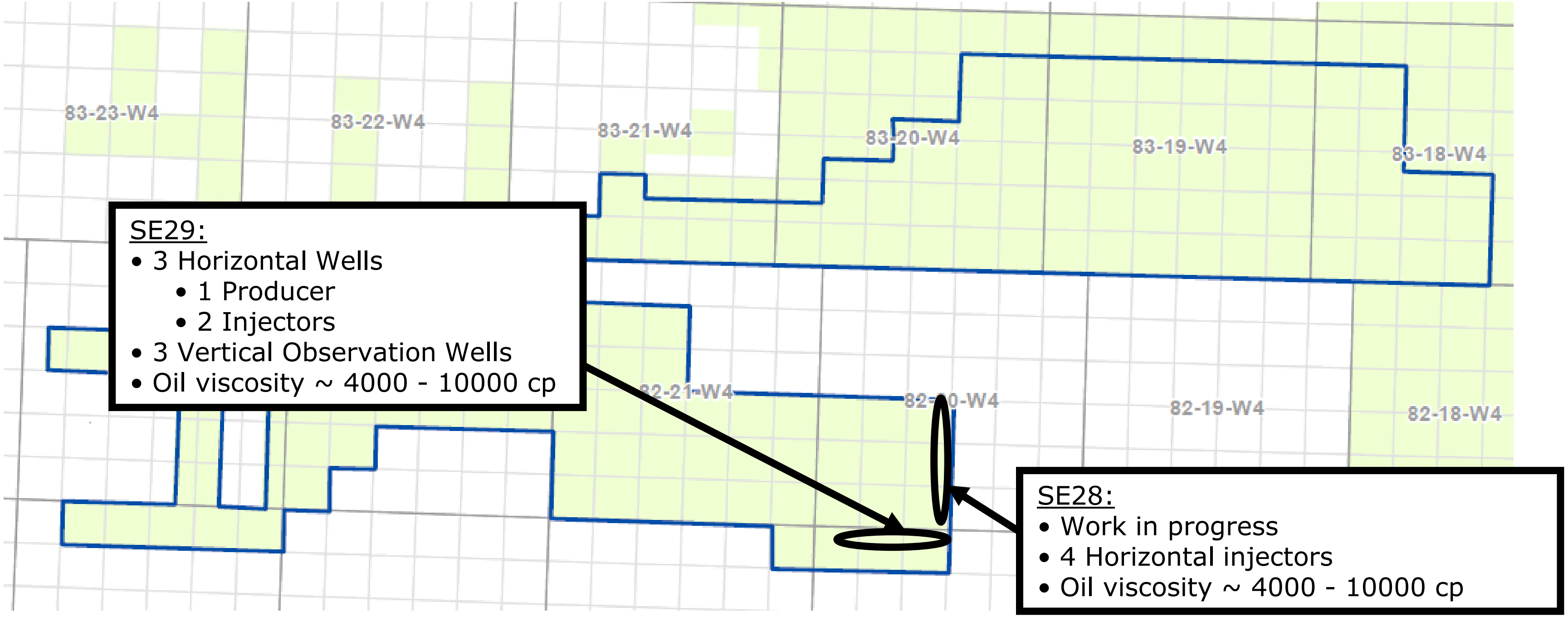


- Infilled in 2012
- Polymer started in 2012
- Slow response to peak oil
- Stable oil cut

Hot Water Injection Update

Pelican Lake Hot Water Injection Pilots

Pilot areas are only hot water (no polymer)



- *Both pilots target higher oil viscosity areas within Pelican Lake*
- *Expansion opportunities being evaluated offsetting current SE29 pilot*

Pelican Lake Hot Water Injection Status

SE29 Pilot Status Update

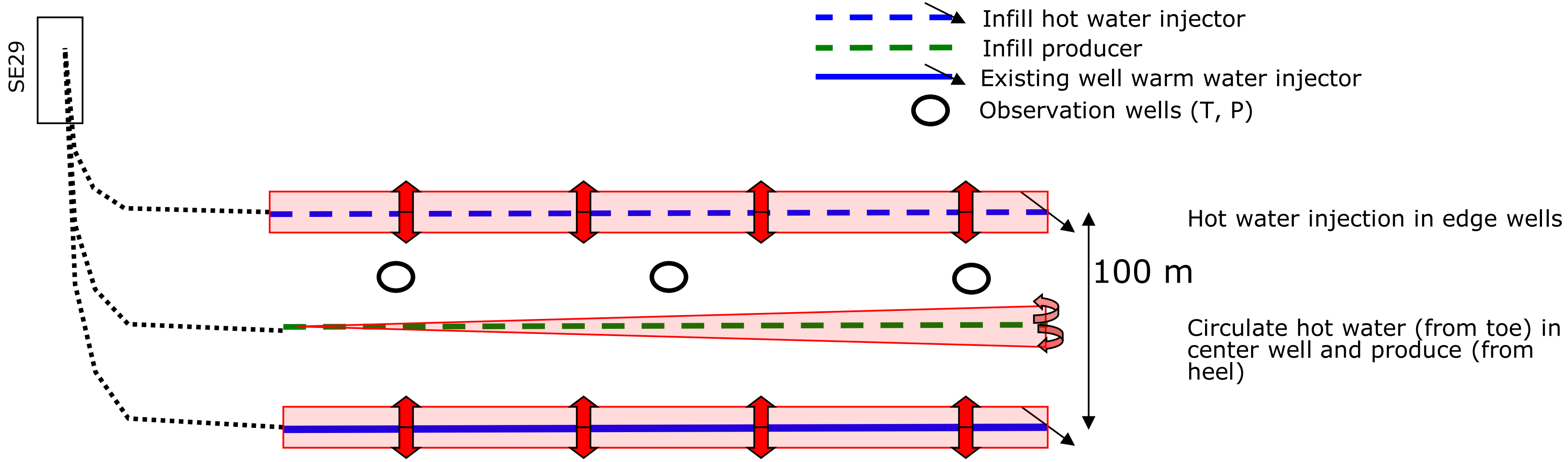
- Phase 1 Complete
    - Primary Production: November 28, 2010 - May 31, 2011
- Phase 2 Complete
    - Hot Waterflood: June 1, 2011 – March 13, 2012
- Phase 3 Ongoing
    - Hot Water Circulation: March 14, 2012 – thru 2014

SE28 Pilot Status Update

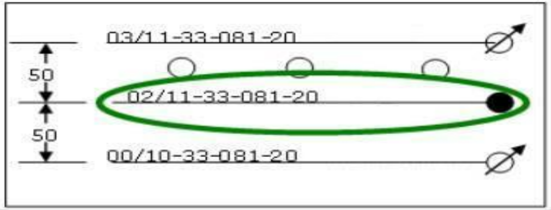
- Four injectors at SE28 targeting a surface injection temperature of 80°C using line heaters (Max temp 90°C)
    - Currently injecting water at much lower temperature than target due to technical issues with line heaters. Work ongoing to optimize design.

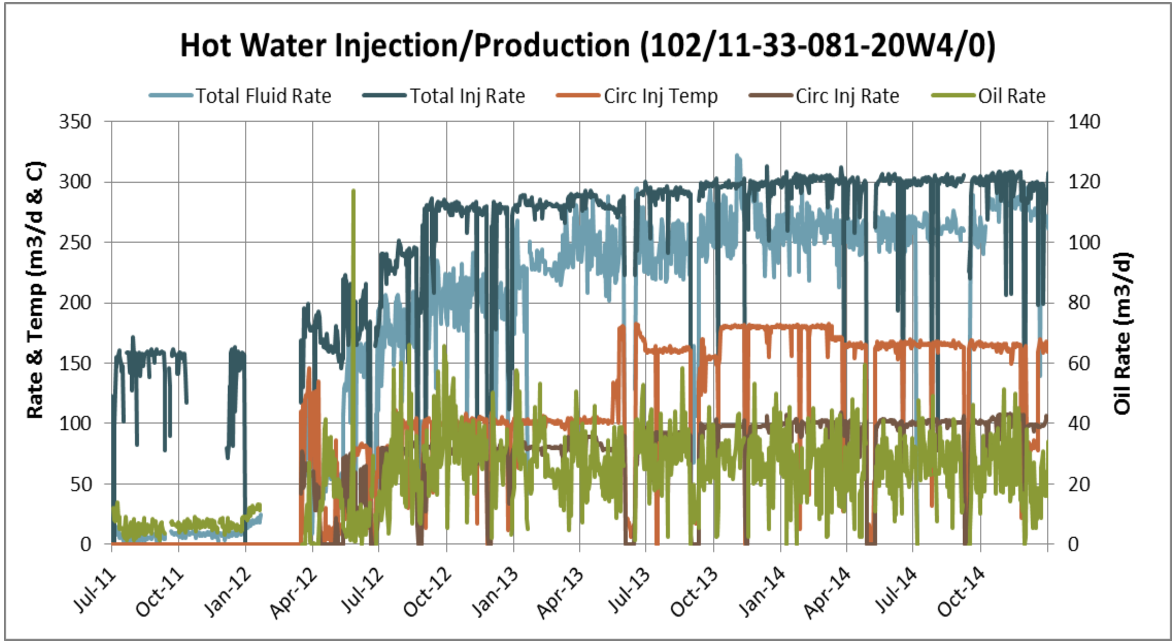
SE29 Hot Water Pilot Well Configuration

Phase 3: Hot Water Circulation (SE29)



SE29 Producer Performance





- Circulation Temperature held at ~160°C for most of 2014
- Injection Rate is representative of total injection from circulation & offsetting injectors
- Oil rates remained steady in 2014 at approximately 25m^3/d
- Will be testing pilot at different injection temperatures in 2015.

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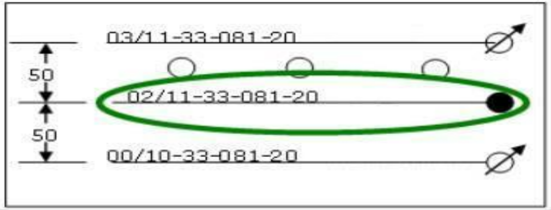
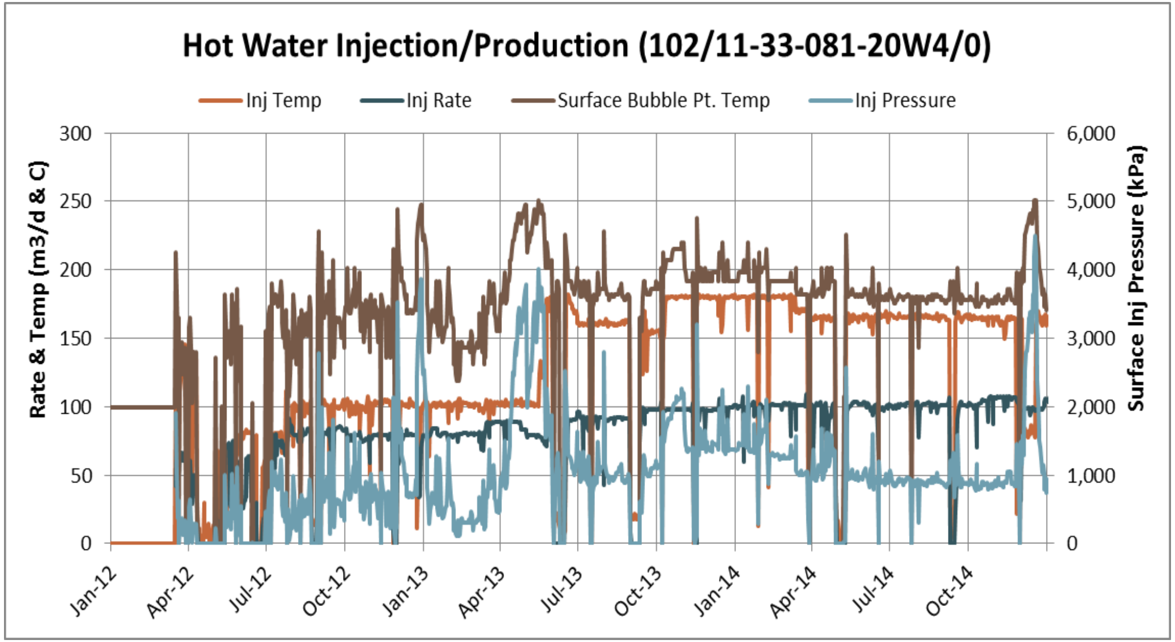
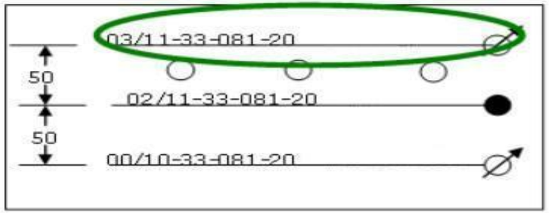
SE29 Hot Water Circulation Update

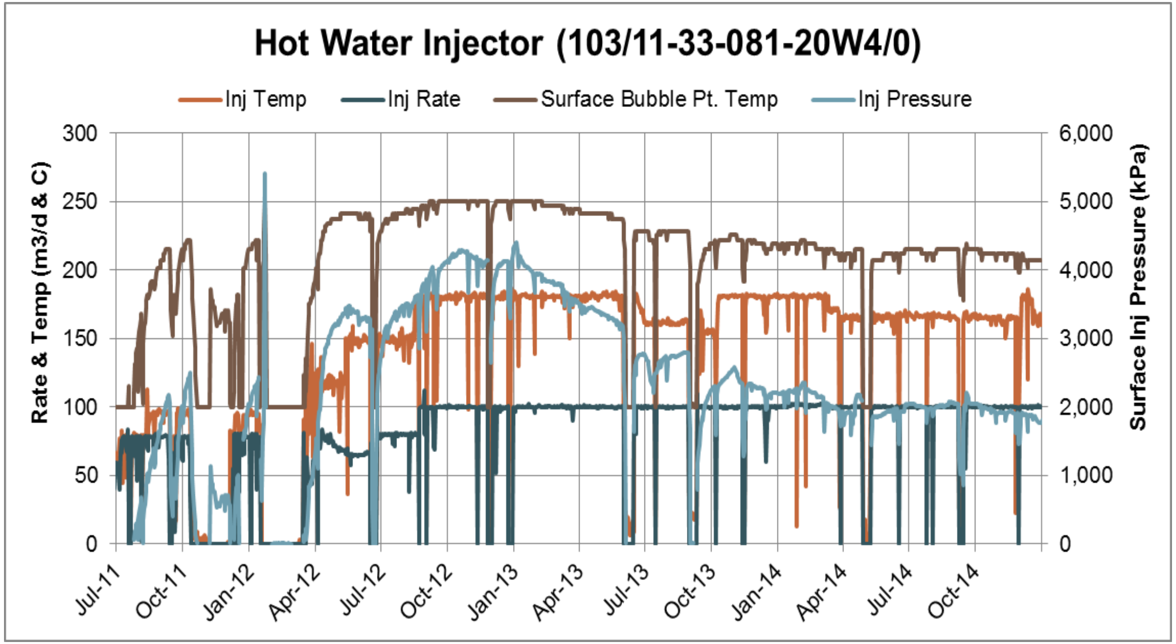




- Continue to operate under the constraint that the water injection temperature never exceeds bubble point temperature (as indicated by graph)
  - All injected fluids have remained as a liquid (no steam injection)

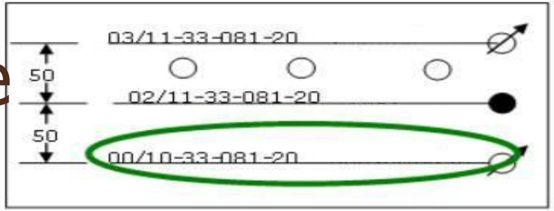
SE29 “Hot” Injector Performance

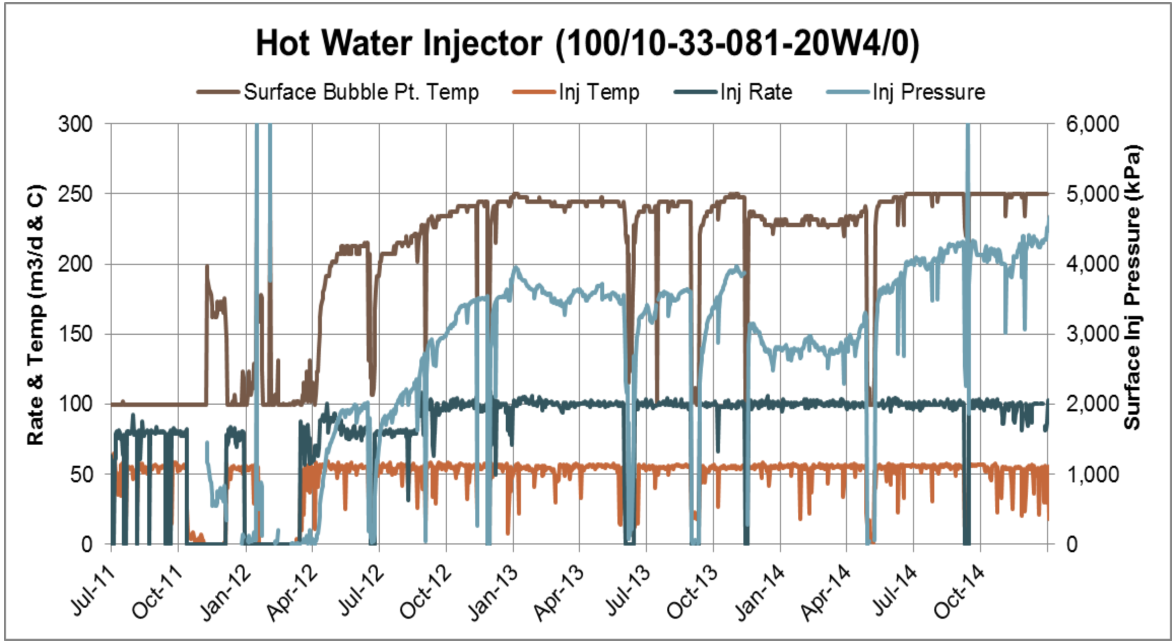




- Water injection temperature never exceeds bubble point temperature
- As expected, injection pressure starts to decrease over time as heat stimulates the reservoir
- Observation wells are also seeing an increase in temperature (25m away from injector)

SE29 “Warm” Injector Performance





- Existing primary well on pad converted to injector – casing spec not suitable for high temperature injection (~55 C max)

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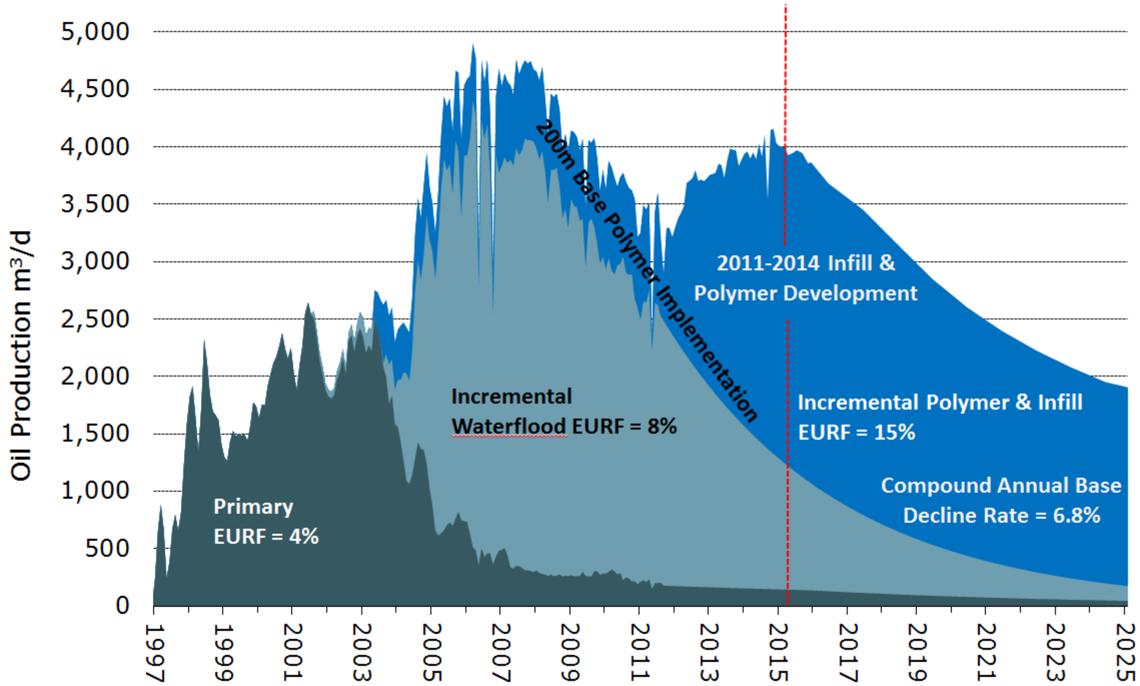
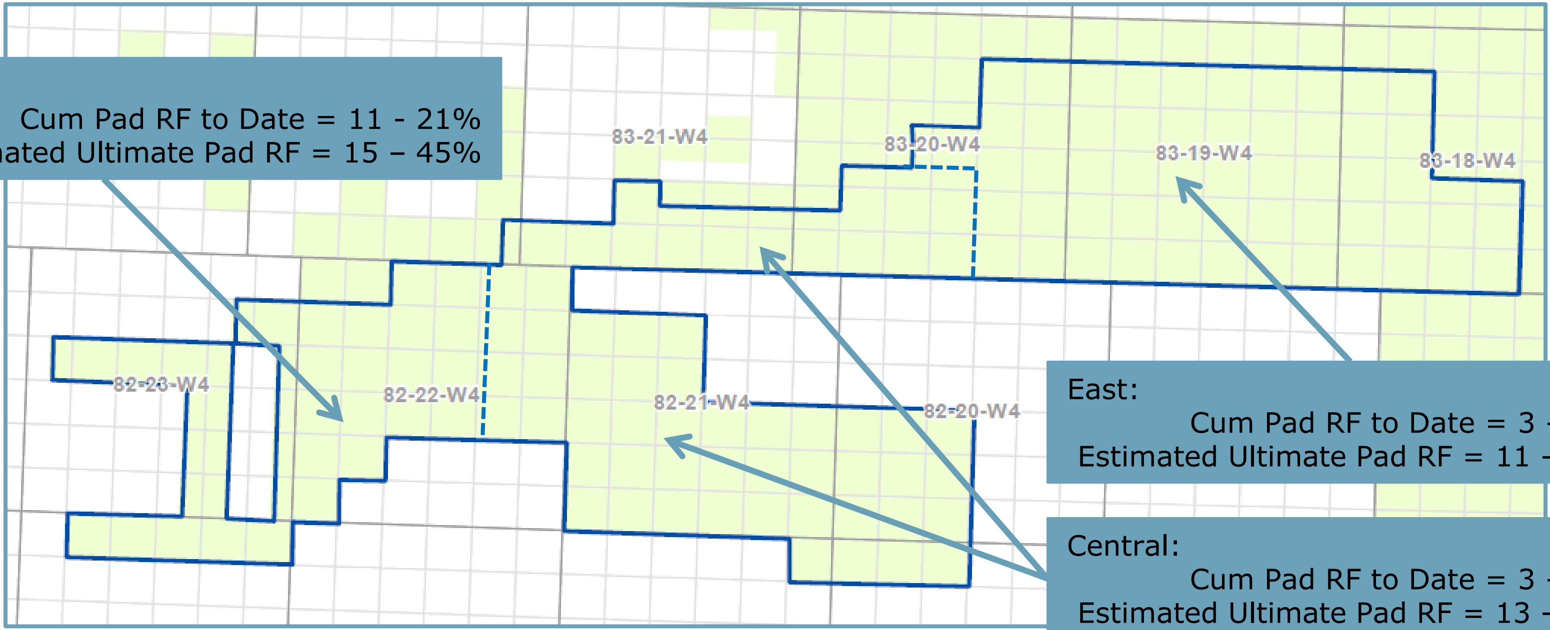
Field Surveillance Strategy

Current Base Production Performance



- Polymer & Infill Development contribute 70% of our total current production.
- Future infill pads will demonstrate similar recovery factors to the base wedges shown.
- Reservoir quality and timing of flood implementation impact each pad's individual recovery.

Current and Expected Ultimate Recovery Factors



West:
Cum Pad RF to Date = 11 - 21%
Estimated Ultimate Pad RF = 15 – 45%

East:
Cum Pad RF to Date = 3 - 17%
Estimated Ultimate Pad RF = 11 – 33%

Central:
Cum Pad RF to Date = 3 - 21%
Estimated Ultimate Pad RF = 13 – 44%

- Recovery Factors are dependent on reservoir quality & heterogeneity, pad maturity, well density/spacing, and if gas caps are present.
- Cumulative pad recovery factors includes primary recovery

Flood Surveillance

Pattern performance monitoring

- Fluid rate maximized for the producers
- Regular monitoring of the watercuts to help understand fluid flow and identify conformance issues
- Optimize injection rate/pressure to avoid water breakthroughs
- Monitor with hall plots as part of ongoing reservoir surveillance
- Wabiskaw observation wells used to understand pressure profiles and response times

Ongoing monthly injection target adjustment

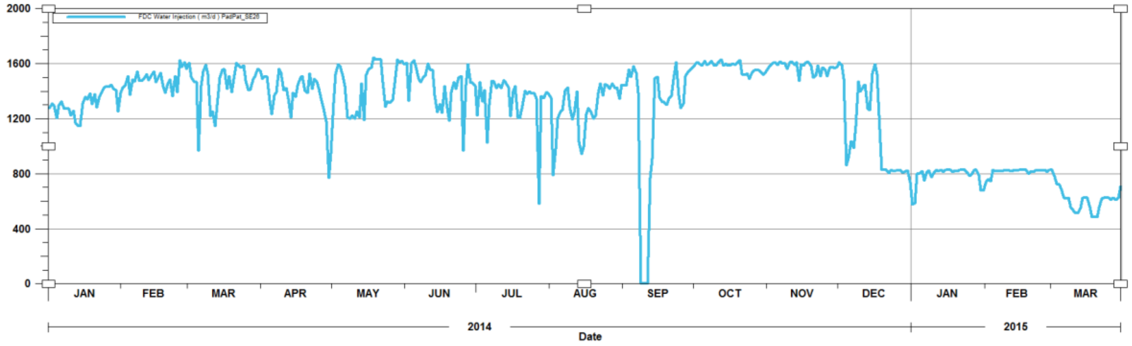
- Optimize injection rates to effectively flood each pattern. Gauge performance by fluid production response (VRR)
- Decrease rates when water cut increases are above normal expectations – good indicator of a potential breakthrough
- Optimal injection rates vary by pattern depending on reservoir quality, thickness, reservoir depth, oil viscosity, gas saturation, well spacing, etc.

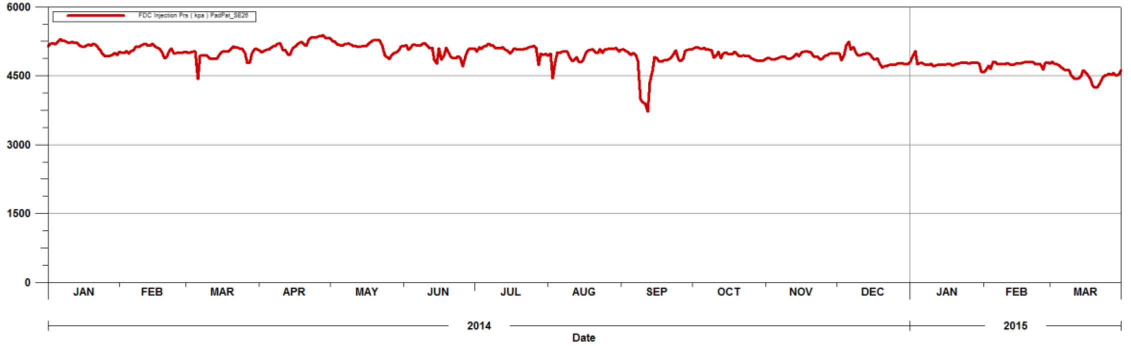
Monthly sampling for polymer returns

- Residuals analyzed at Core labs, concentrating more samples for newer infills and less for older producers (Testing frequency varies with the well vintage)

Example of Typical Polymer Injector Behavior

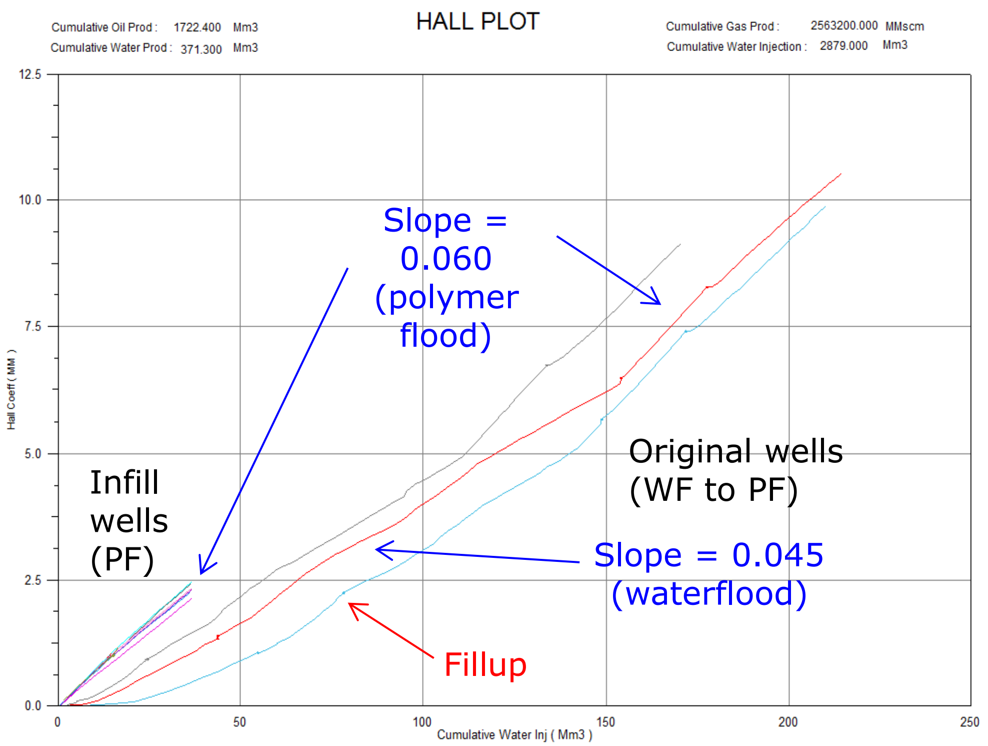
SE26 Pad





- Although rates have been reduced from 100m3/d to 50m3/d per well, no significant change in injection pressure has been noted.
- Pressure response in certain polymer areas do not change significantly with a change in injection rate.
- Contrary to polymer, water injection pressures are typically sensitive to changes in injection rates.

Flood Performance Surveillance using a Hall Plot



NE 21 Example

- Fill-up identified in one well
- Small gas cap – filled up prior to infill
- Hall plot slope changes upwards from waterflood to polymer flood

Cap Rock Monitoring Program

Cap Rock Monitoring Summary

No indication of any caprock breach based on on-going flood surveillance

- No abnormal pressures in cap rock or Grand Rapids while drilling in high pressure areas (228 penetrations to date at year end 2014)
- Real time monitoring of Wabiskaw injection pressures and regular review of pattern VRR
    - Injection pressures and VRR's support containment within the Wabiskaw
    - Using an automated a field wide alarm system in SCADA-ProcessNet to monitor and notify engineers of any changes in injectivity
    - Long term monitoring: Hall plots
- Real time monitoring of the bottom hole pressures and rates in Grand Rapids water source wells and bottom hole pressures in Grand Rapids observation wells. Supplemented by downhole
    - No increase in pressures in the Grand Rapids observation wells to suggest any communication with Wabiskaw formation

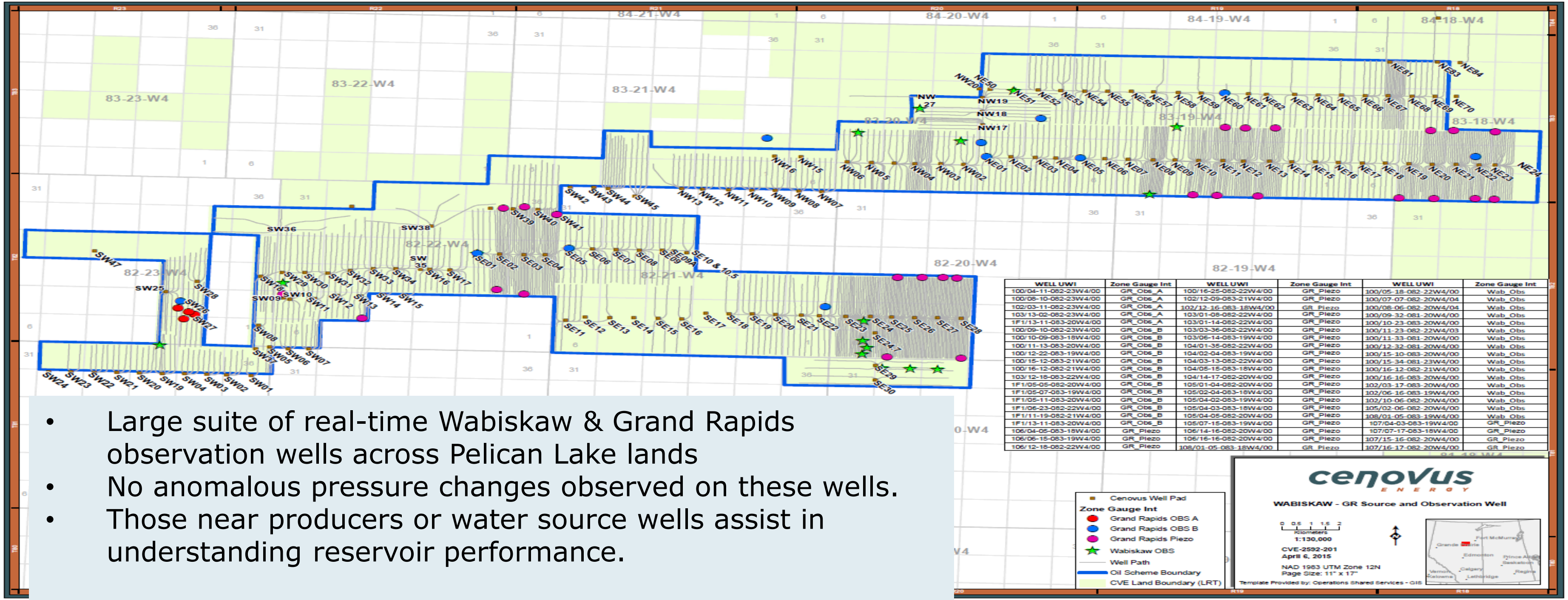
Annual water analysis on all Grand Rapids water source wells

- No increases in total dissolved solids (TDS) observed that can be attributed to a loss of caprock integrity.

2014 Cap Rock Monitoring Initiatives

- Additional geomechanical testing completed in 2014:
  - Cut a new caprock core in the well 1AA/11-33-083-18W4 in February 2014. Ran 10 mini-fracs between the Viking shale and the McMurray shale (Wab base rock). Results consistent with previous Pelican mini-fracs done on cores from 100/01-04-083-22W4M and 100/16-27-082-18W4M
  - BitCan completed additional triaxial rock strength testing on the 1AA/11-33-083-18W4M caprock core, focusing on Clearwater tight streaks and the McMurray shale. Waiting on final analysis and reports.
- Completed the first full year of employing an automated injection monitoring alarm system to monitor Wabiskaw injection data from SCADA. The system is effective at providing early detection and notification of differences in injectivity observed. Further system parameter tuning to reduce erroneous alarms and other improvements to be implemented in 2015.

Observation Well Summary



WELL UWI	Zone Gauge Int	WELL UWI	Zone Gauge Int	WELL UWI	Zone Gauge Int
100/04-11-082-23W4/00	GR_Obs_A	100/16-25-082-22W4/00	GR_Piezo	100/05-18-082-22W4/00	Wab_Obs
100/08-10-082-23W4/00	GR_Obs_A	102/12-09-083-21W4/00	GR_Piezo	100/07-07-082-20W4/04	Wab_Obs
102/03-11-082-23W4/00	GR_Obs_A	102/12-16-083-18W4/00	GR_Piezo	100/08-06-082-20W4/04	Wab_Obs
103/13-02-082-23W4/00	GR_Obs_A	103/01-08-082-22W4/00	GR_Piezo	100/09-32-081-20W4/00	Wab_Obs
1F1/13-11-083-20W4/00	GR_Obs_A	103/01-14-082-22W4/00	GR_Piezo	100/10-23-083-20W4/00	Wab_Obs
100/09-10-082-23W4/00	GR_Obs_B	103/03-36-082-22W4/00	GR_Piezo	100/11-23-082-22W4/03	Wab_Obs
100/10-09-083-18W4/00	GR_Obs_B	103/06-14-083-19W4/00	GR_Piezo	100/11-33-081-20W4/00	Wab_Obs
100/11-13-083-20W4/00	GR_Obs_B	104/01-35-082-22W4/00	GR_Piezo	100/12-32-081-20W4/00	Wab_Obs
100/12-22-083-19W4/00	GR_Obs_B	104/02-04-083-19W4/00	GR_Piezo	100/15-10-083-20W4/00	Wab_Obs
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103/12-18-083-22W4/00	GR_Obs_B	104/14-17-082-20W4/00	GR_Piezo	100/16-16-083-20W4/00	Wab_Obs
1F1/05-05-082-20W4/00	GR_Obs_B	105/01-04-082-20W4/00	GR_Piezo	102/03-17-083-20W4/00	Wab_Obs
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1F1/05-11-083-20W4/00	GR_Obs_B	105/04-02-083-19W4/00	GR_Piezo	102/10-06-082-20W4/00	Wab_Obs
1F1/06-23-082-22W4/00	GR_Obs_B	105/04-03-083-18W4/00	GR_Piezo	105/02-06-082-20W4/00	Wab_Obs
1F1/11-19-082-21W4/00	GR_Obs_B	105/04-05-082-20W4/00	GR_Piezo	108/01-05-083-19W4/00	Wab_Obs
1F1/13-11-083-20W4/00	GR_Obs_B	105/07-15-083-19W4/00	GR_Piezo	107/04-03-083-19W4/00	GR_Piezo
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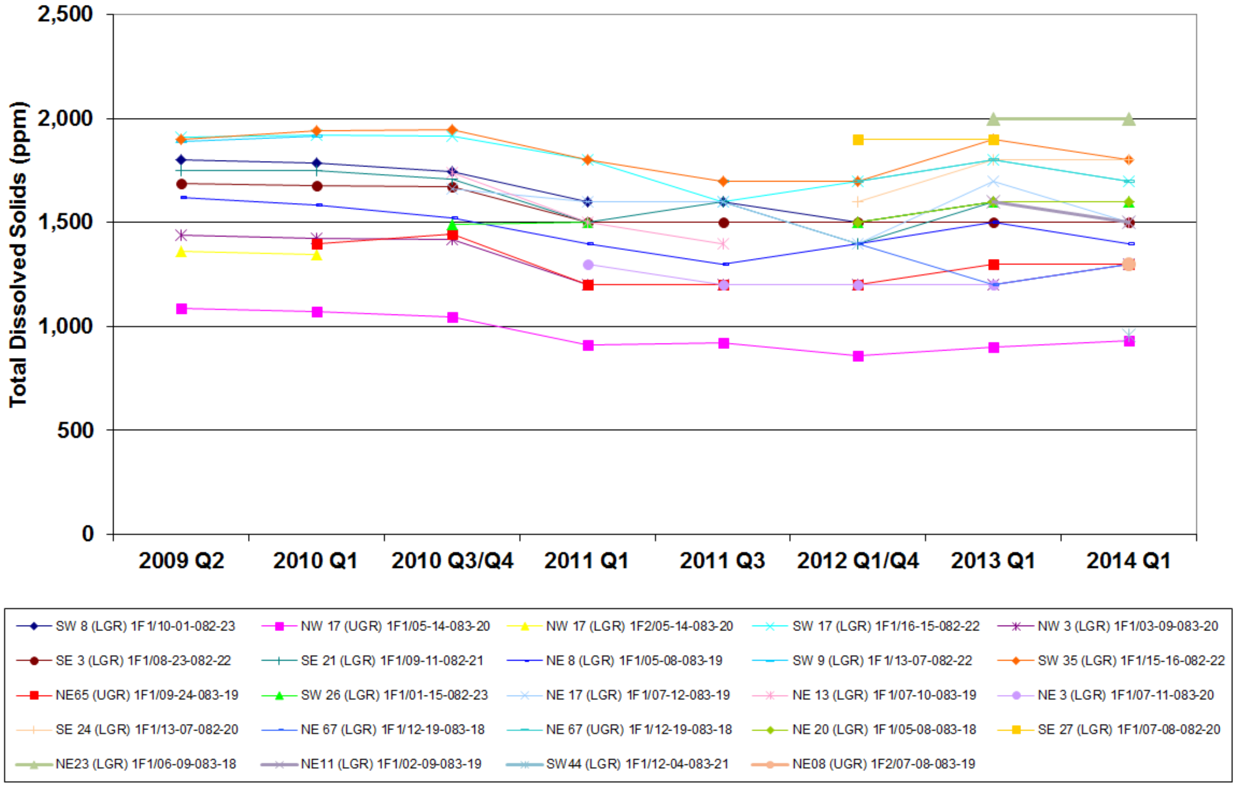
106/12-18-082-22W4/00	GR_Piezo	108/01-05-083-18W4/00	GR_Piezo	107/16-17-082-20W4/00	GR_Piezo

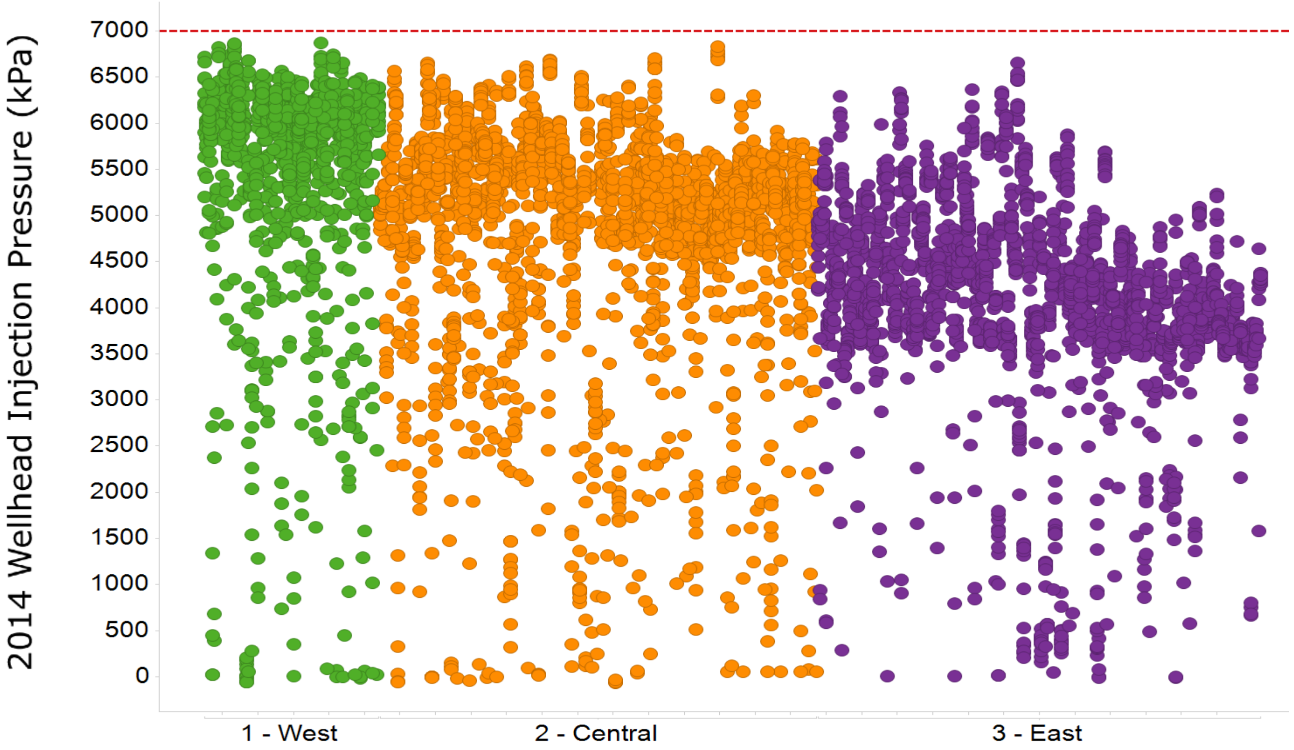
- Large suite of real-time Wabiskaw & Grand Rapids observation wells across Pelican Lake lands
- No anomalous pressure changes observed on these wells.
- Those near producers or water source wells assist in understanding reservoir performance.

Grand Rapids Water Source Well TDS Tracking



- Continued annual surveillance of Grand Rapids TDS at all observation wells.
- No deviation from TDS baseline through time.

Maximum 2014 Injection Pressures per Injector



Allowable Maximum Wellhead Injection Pressure = 7,000kPa

SCADA system logic does not allow injection pressures to exceed allowable.

Enhanced Injection Monitoring System

- Field wide automated monitoring system for early detection of potential anomalous behavior used to supplement manual surveillance
- Level 1 alarm = potentially anomalous behavior.
- Level 2 alarm = possible excursion out of zone. No alarms diagnosed as Level 2.

Level 1 Alarm Event Type
False alarm related to start-up
False alarm due to temporary SCADA/gauge outage
Operational issue/change
Encountering low pressure gas cap (SE, NE areas)
Encountering heterogeneous/high-perm reservoir
Injectivity increase due to breakthrough

Alarm system algorithms continue to be refined to reduce false alarms.

True Level 1 alarms show a temporary deviation in injection pressure behavior, and return back to norm.

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Definitions – Anomalous Injector Behavior

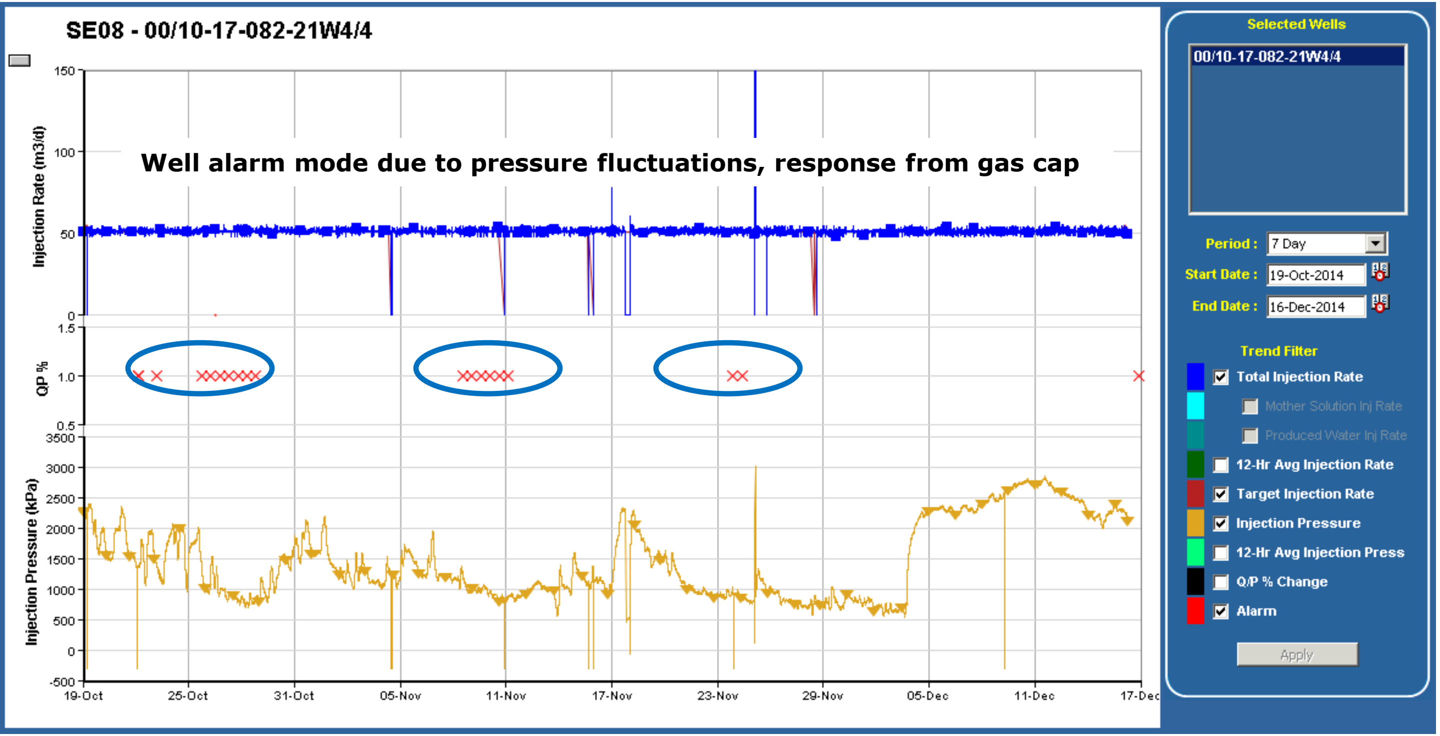
Defined two levels of anomalous behavior

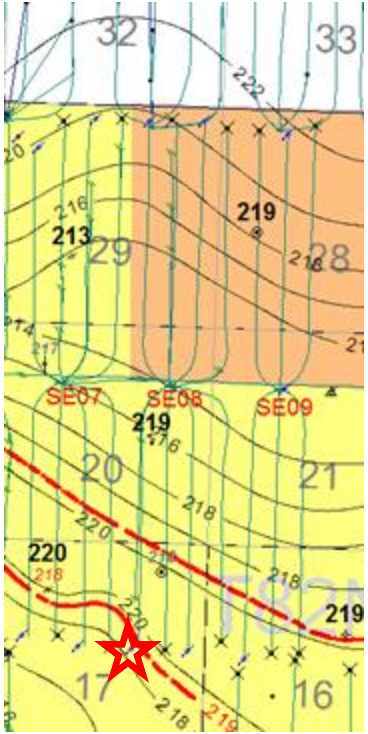
i. Level 1/Yellow - Gradual decrease in pressure behavior that is contrary to the expected result. Non-urgent but flagged as a "watch/monitor" with regular reviews to monitor, until stabilization occurs. Some examples would be :
   i. Decreasing pressure after an increase in injection rate.
   ii. Decreasing pressure after an increase in polymer concentration.
   iii. Decreasing pressure after no change in operational conditions.

ii. Level 2/Red - Large instantaneous drop in injection pressure when either:
   i. There is no change in operating conditions, or
   ii. a corresponding instantaneous increase in injection rate.

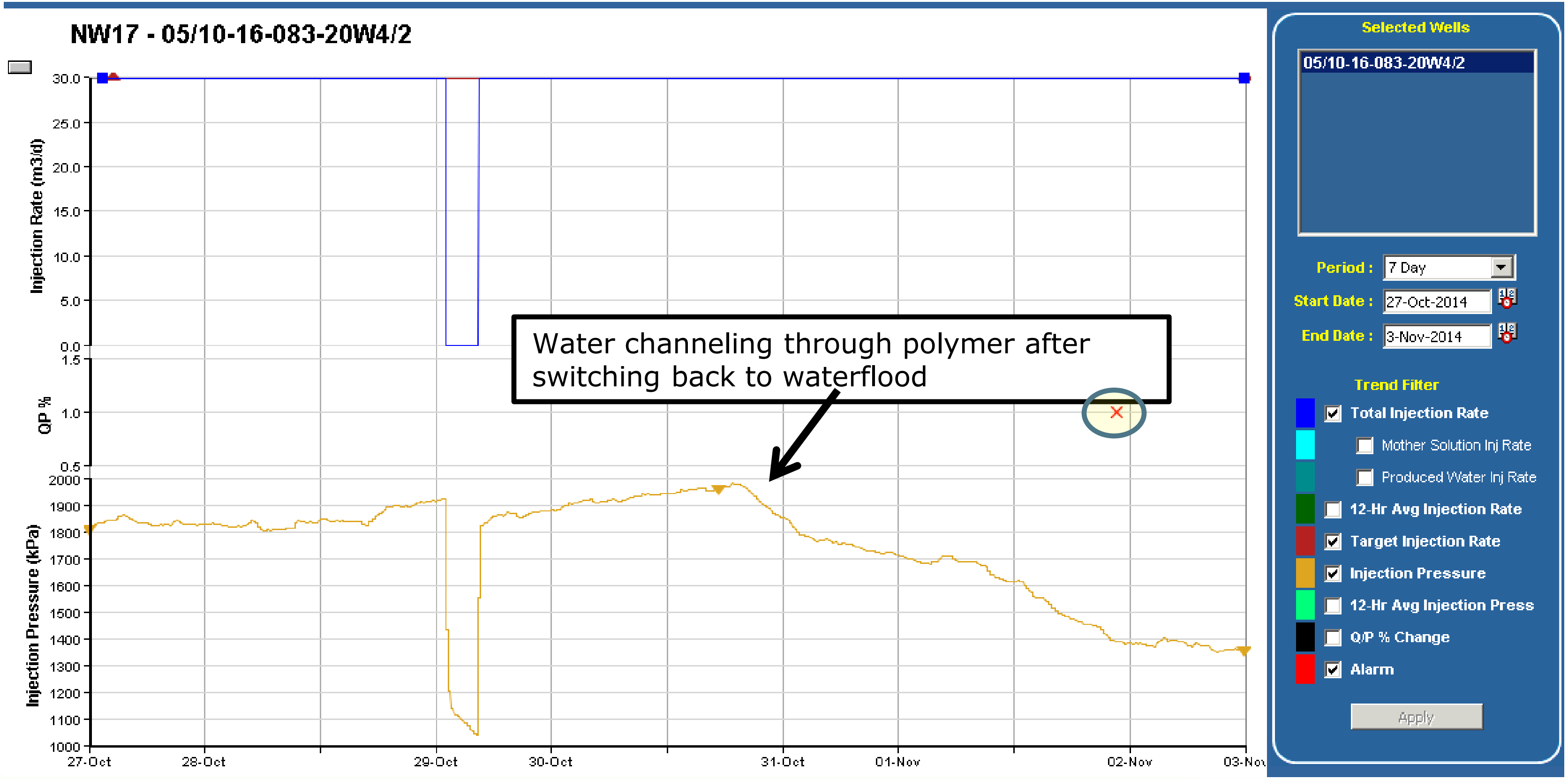
Level 2 alarm occurrence requires notification of AER within 72 hours

Alarm Example: Well adjacent to LP Gas Cap





Alarm Example: 50m Spacing Pilot – Reversion back to Water flood

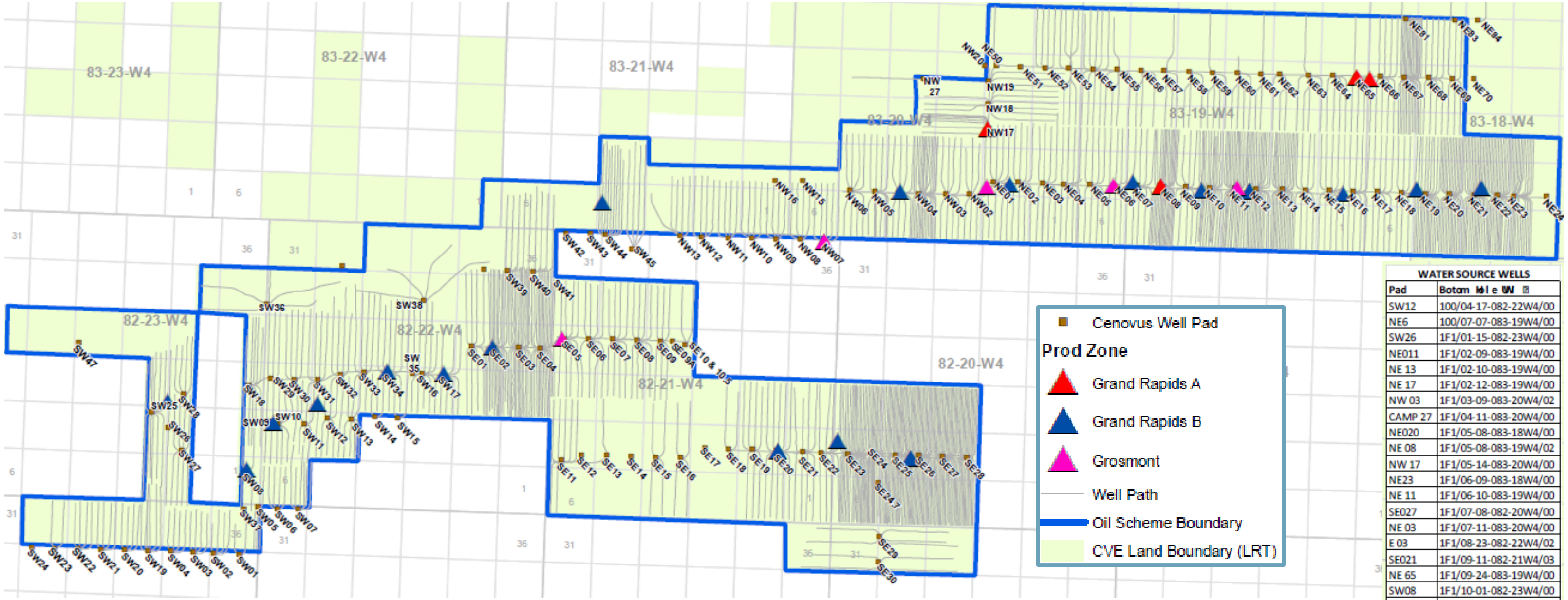


Cap Rock Monitoring Summary

- **Automated injection monitoring system in-place for field-wide monitoring for anomalous behavior :**
  - System is effective at alerting engineers to changes in well behavior.
  - Additional logic and system improvements planned for 2015.
- **Continuing to build on geomechanical dataset**
  - Drilled new strat well with caprock core at 1AA/11-33-083-18W4
  - Completed 10 mini-fracs on caprock, Wab sand and basal Wab shale
  - Completed additional triaxial testing on Clearwater tight streaks as well as on the McMurray shales (base rock). Final results are pending.
- **Investigating feasibility of surface heave monitoring**
  - InSAR monitoring at pad NE68 & NE69 in design

Water Usage Update

Water Source Well Map

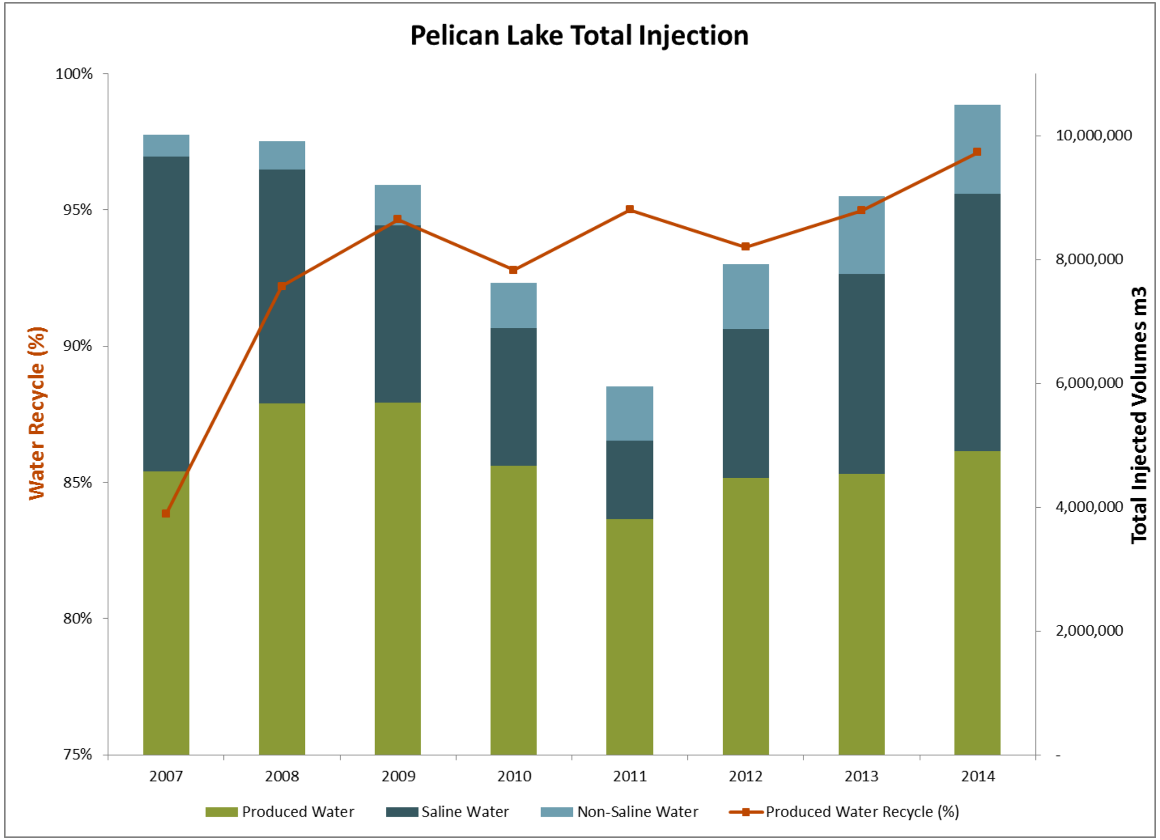


WATER SOURCE WELLS

Pad	Botom Hole UWI
SW12	100/04-17-082-22W4/00
NE6	100/07-07-083-19W4/00
SW26	1F1/01-15-082-23W4/00
NE011	1F1/02-09-083-19W4/00
NE 13	1F1/02-10-083-19W4/00
NE 17	1F1/02-12-083-19W4/00
NW 03	1F1/03-09-083-20W4/02
CAMP 27	1F1/04-11-083-20W4/00
NE020	1F1/05-08-083-18W4/00
NE 08	1F1/05-08-083-19W4/02
NW 17	1F1/05-14-083-20W4/00
NE23	1F1/06-09-083-18W4/00
NE 11	1F1/06-10-083-19W4/00
SE027	1F1/07-08-082-20W4/00
NE 03	1F1/07-11-083-20W4/00
E 03	1F1/08-23-082-22W4/02
SE021	1F1/09-11-082-21W4/03
NE 65	1F1/09-24-083-19W4/00
SW08	1F1/10-01-082-23W4/00
SW044	1F1/12-04-083-21W4/00
SE 05	1F1/12-19-082-21W4/00
NE67	1F1/12-19-083-18W4/00
NE67	1F1/12-19-083-18W4/02
SE24	1F1/13-07-082-20W4/00
SW09	1F1/13-07-082-22W4/00
SW035	1F1/15-16-082-22W4/00
NW 07	1F1/15-36-082-21W4/00
SW17	1F1/16-15-082-22W4/00
NE08	1F2/07-08-083-19W4/00

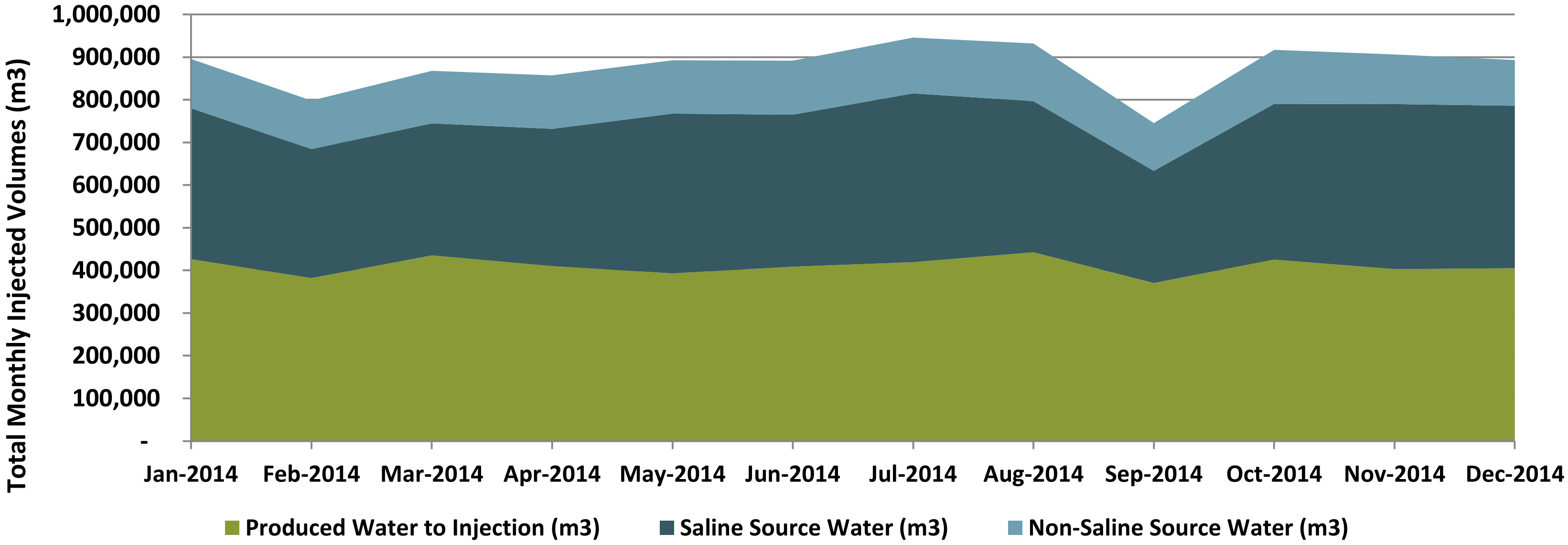
- Grand Rapids non-saline water source wells are predominantly located at polymer make-up sites throughout Pelican Lake.
- Five saline Grosmont wells are used to supplement injection volumes required to meet well target injection rates.

Historical Pelican Lake Water Injection



- Produced Water Recycle has improved over time to over 95%
- Non-saline Grand Rapids use is effectively managed
- Water injection was reduced in 2011 to arrest water cut increases & prepare for the start of the infill program

2014 Pelican Lake Injection



- Steady injection throughout 2014
- Facility turnaround in September decreased injection

Non-saline Water Use Summary

- Cenovus currently has 25 water diversion licenses from the AER that allow for 3,300,530 m3 of non-saline water usage for polymer injection in the Pelican Lake area.

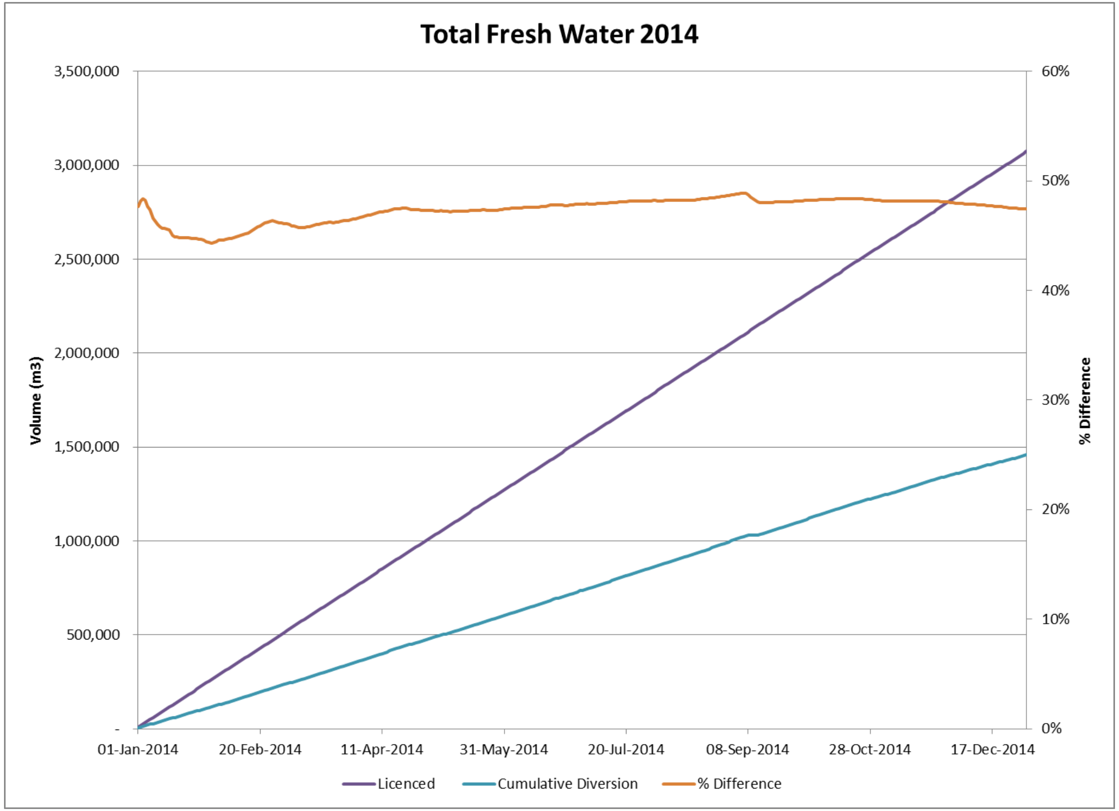
- In 2014, Cenovus used 47% of the total licensed volume.

- Non-saline water makes up approximately 13% of the total injected volume at Pelican Lake. Recycled produced water and saline source water make up the other 87%.

- Optimization projects are continually executed and evaluated to ensure that the non-saline water is being used to its full benefit for polymer hydration.

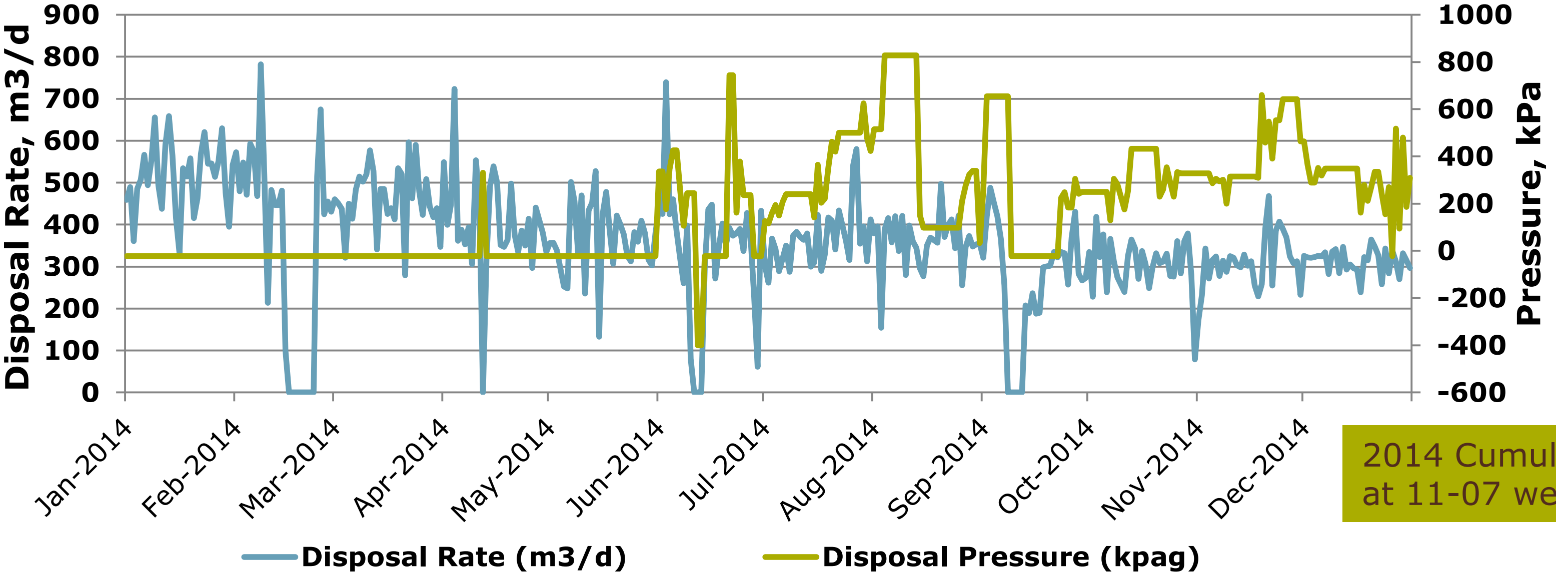
Non-saline Source Well Usage

Well Location	Zone	Licenced Rate (m3/d)	Licenced Volume (m3/year)	2014 Average Diversion Volumes (m3/d)
F1/04-17-082-22W4/0	Grand Rapids	449	163,885	189
F1/10-01-082-23W4/0	Grand Rapids	300	109,500	97
F1/15-16-082-22W4/0	Grand Rapids	600	189,800	222
F1/16-15-082-22W4/0	Grand Rapids	312	113,880	18
F1/07-11-083-20W4/0	Grand Rapids	400	146,000	184
F1/05-08-083-19W4/2	Grand Rapids	368	134,320	231
F2/07-08-083-19W4/0	Grand Rapids	300	109,500	92
F1/02-09-083-19W4/0	Grand Rapids	313	144,172	232
F1/02-10-083-19W4/0	Grand Rapids	230	41,975	81
F1/02-12-083-19W4/0	Grand Rapids	336	122,640	152
F1/05-08-083-18W4/0	Grand Rapids	253	92,345	162
F1/06-09-083-18W4/0	Grand Rapids	132	48,180	100
F1/09-24-083-19W4/0	Grand Rapids	175	63,875	58
F1/12-19-083-18W4/2	Grand Rapids	104.5	38,143	82
F1/12-19-083-18W4/0	Grand Rapids	182	66,430	141
F1/05-14-083-20W4/0	Grand Rapids	400	79,205	76
F1/03-09-083-20W4/2	Grand Rapids	324	118,280	155
F1/08-23-082-22W4/2	Grand Rapids	600	219,000	329
F1/09-11-082-21W4/3	Grand Rapids	700	255,500	486
F1/13-07-082-20W4/0	Grand Rapids	324	118,260	276
F1/07-08-082-20W4/0	Grand Rapids	92	32,850	80
F1/12-04-083-21W4/0	Grand Rapids	610	219,000	13
F1/13-07-082-22W4/0	Grand Rapids	509	185,785	189
F1/01-15-082-23W4/0	Grand Rapids	713	260,245	349
	TOTALS	8,727	3,072,770	3,994



cenovus ENERGY

Key Water Disposal Well: 102/11-07-082-22W4

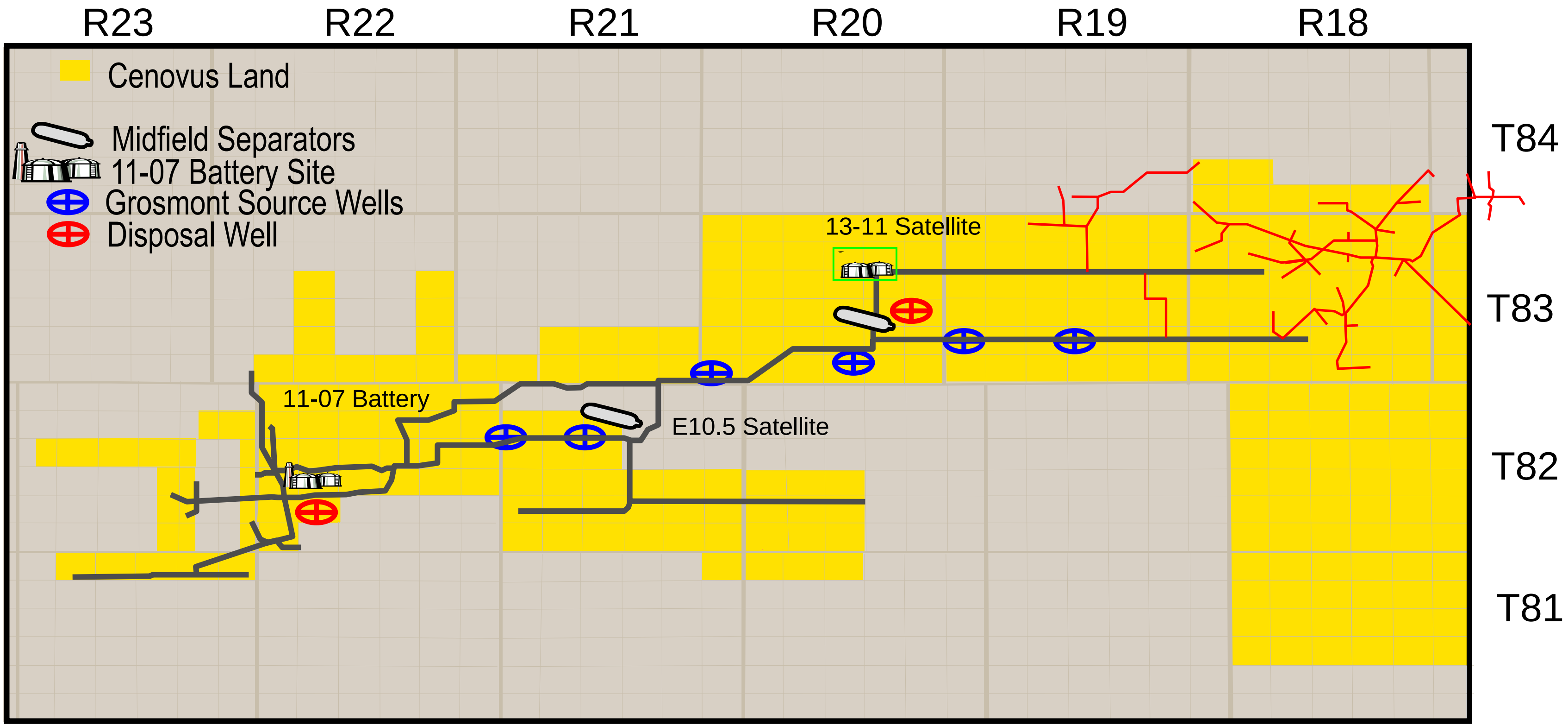


2014 Cumulative Disposal at 11-07 well: 133,259 m3

- Required water disposal rates have been steadily declining
- 102/11-07 well at Main Battery handled over 90% of disposal needs in 2014

Facilities Update

Pelican Lake Facilities Map



Pelican Lake Major Facilities Description

13-11 Satellite

- Utilizes two inclined free water knock out vessels (cold) to remove as much free water as possible from emulsion before sending to South Battery for processing
- Free water is pumped into high pressure injection line

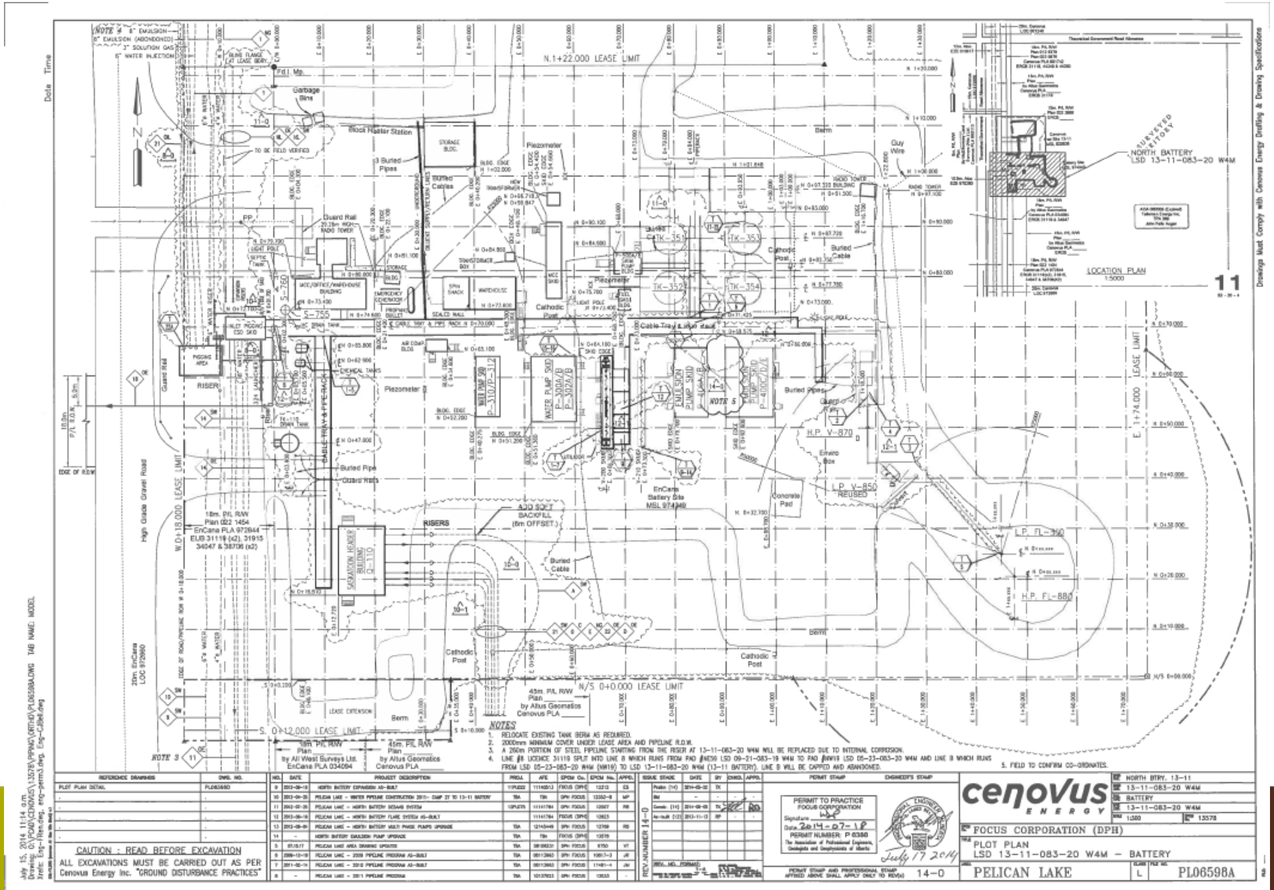
E10.5 Satellite

- Utilizes one inclined free water knock out vessel (cold) to remove as much free water as possible from emulsion before sending to South Battery for processing
- Free water is pumped into high pressure injection line

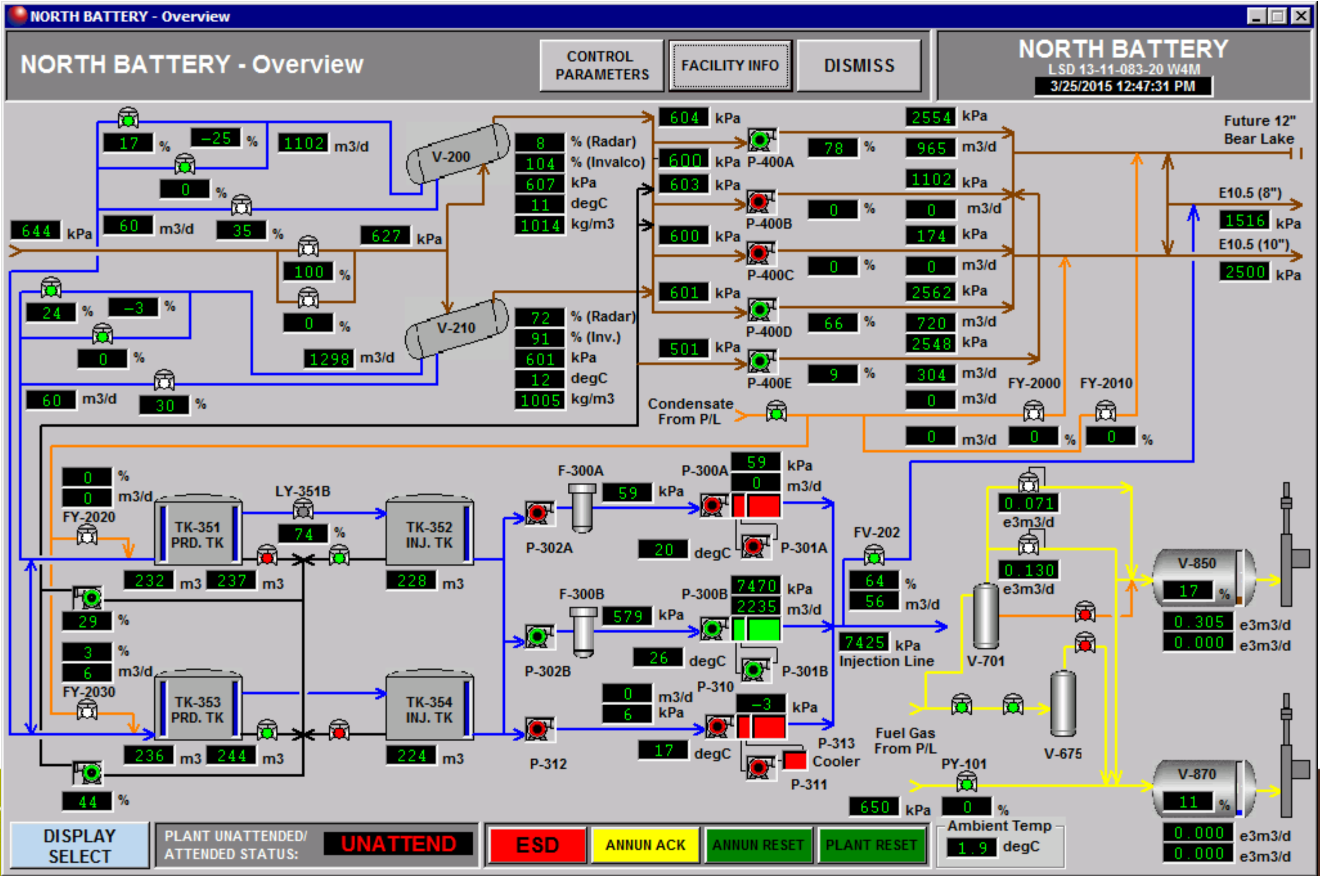
11-07 South Battery

- Utilizes inclined free water knock out (cold), heated knock out vessel, plate and frame heat exchangers and 5 treaters to dewater emulsion to sales oil spec
- De-oiled water is pumped into high pressure injection line

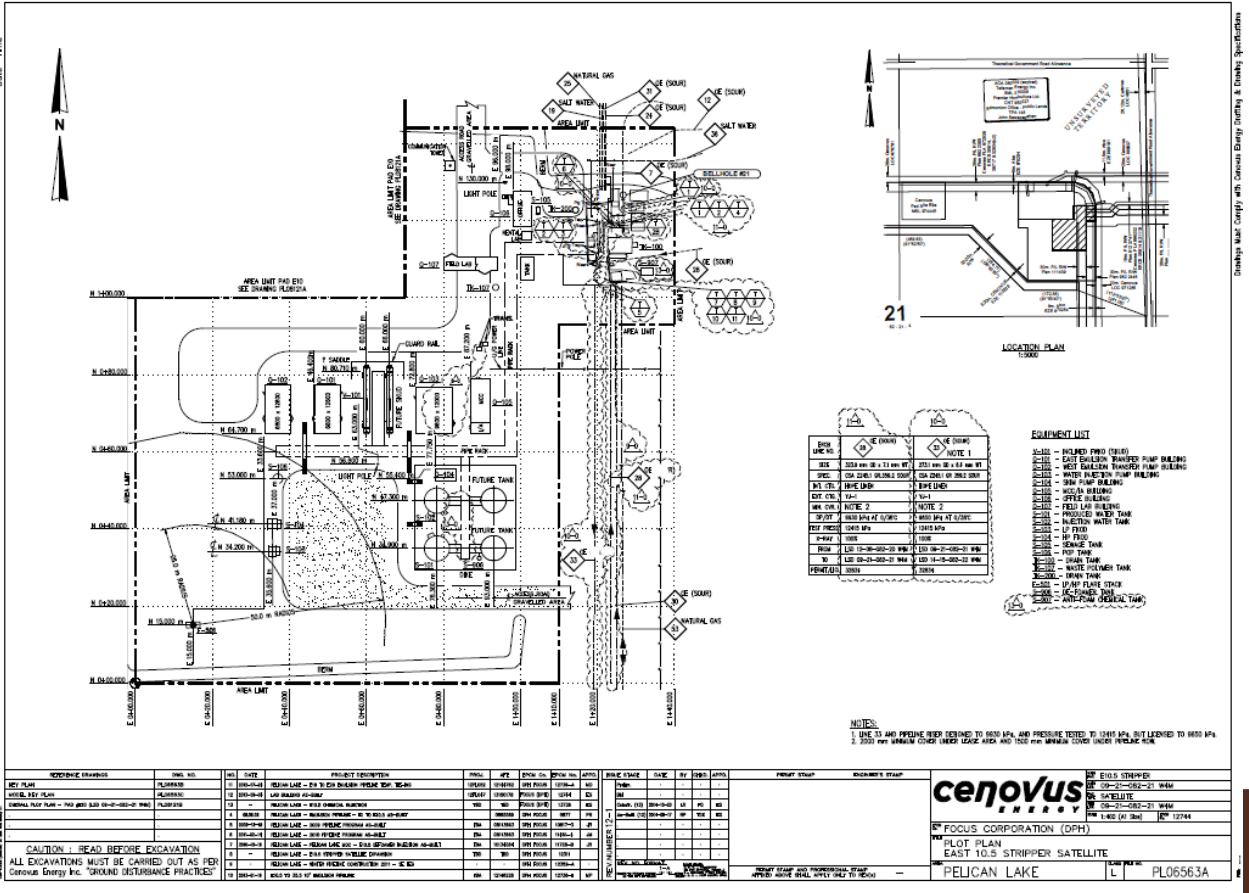
Facility: 13-11 Satellite Plot Plan



Facility: 13-11 Satellite Process Flow

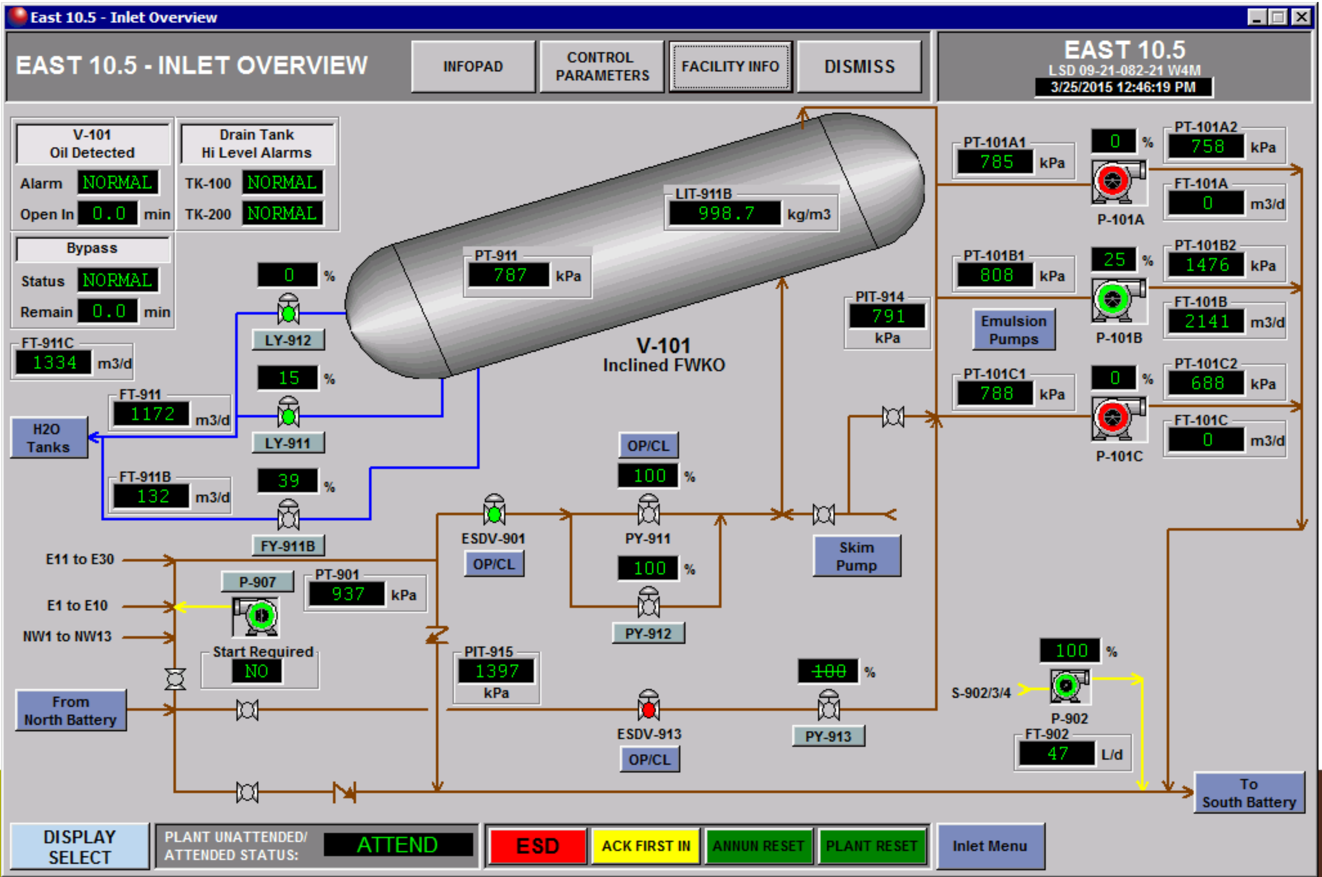


Facility: E10.5 Satellite Plot Plan

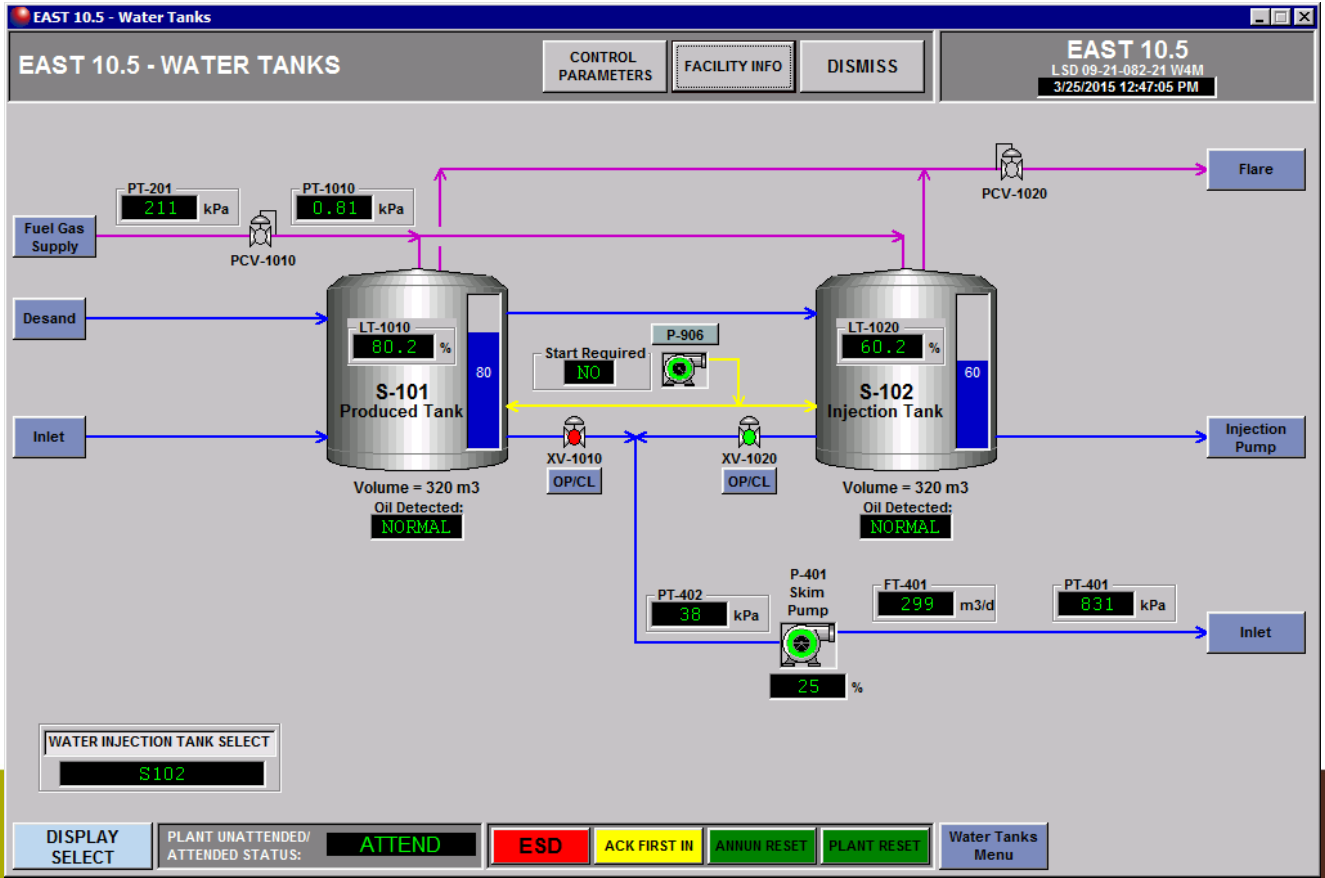


cenovus ENERGY

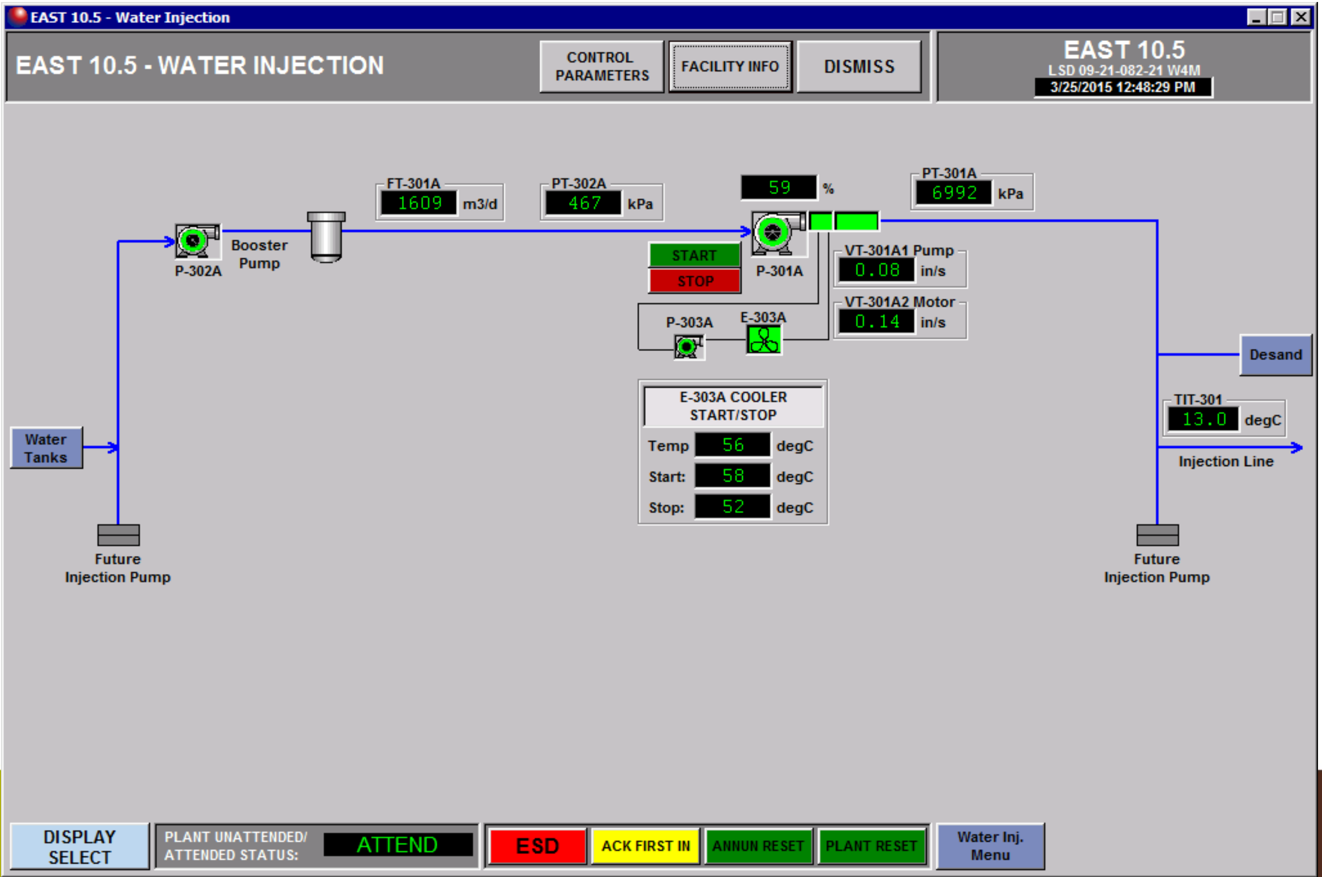
Facility: E10.5 Satellite Process Flow



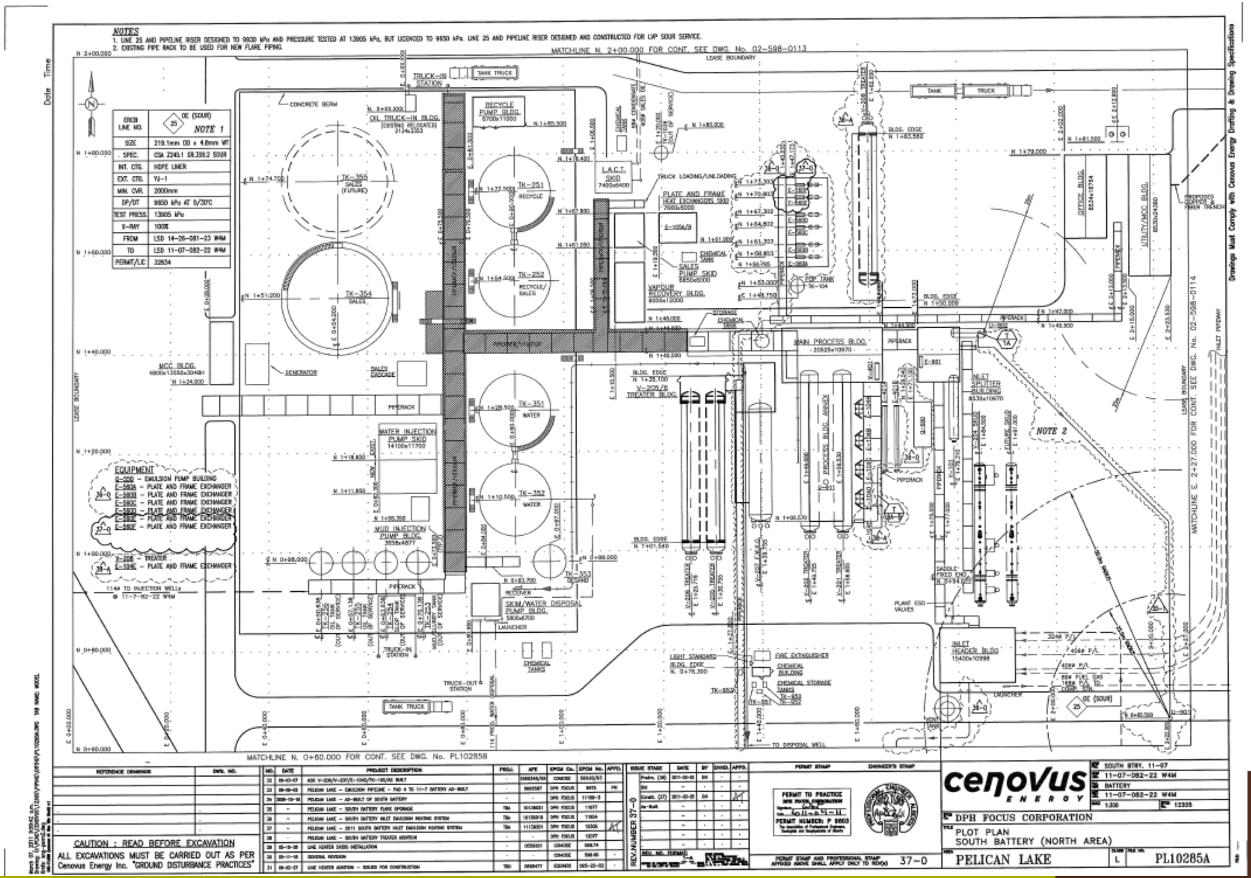
Facility: E10.5 Satellite Process Flow



Facility: E10.5 Satellite Process Flow



Facility: 11-7 South Battery Plot Plan



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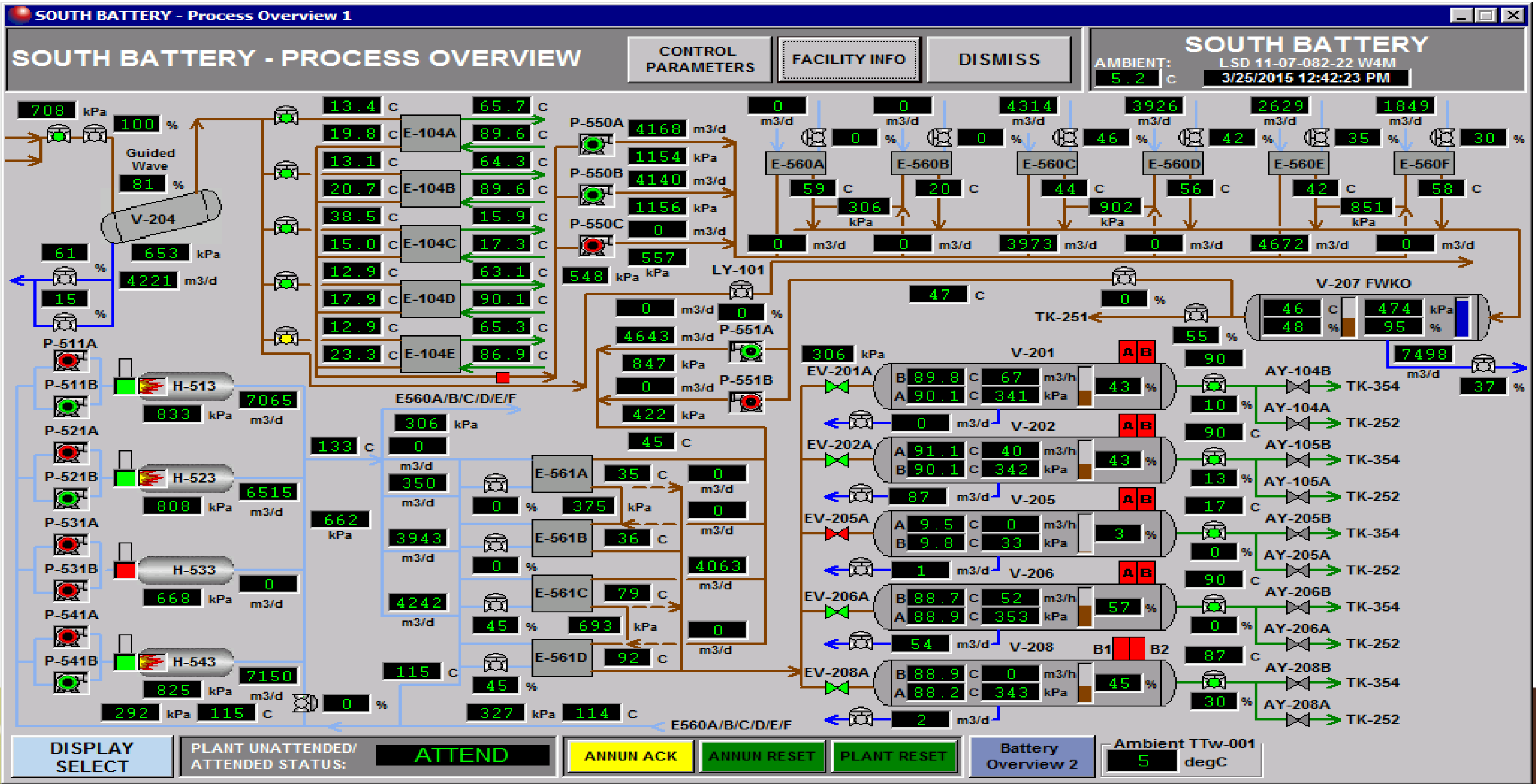
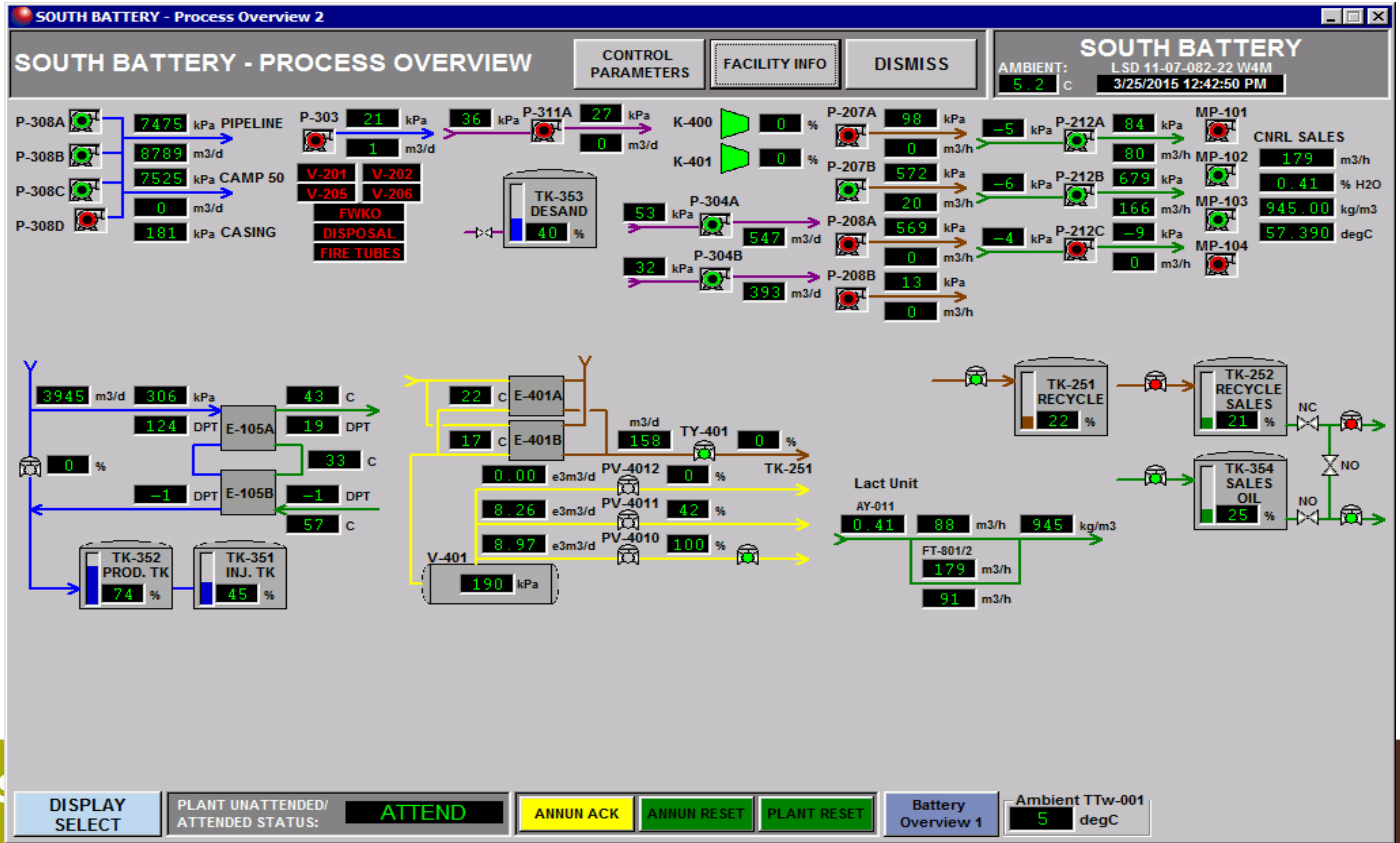
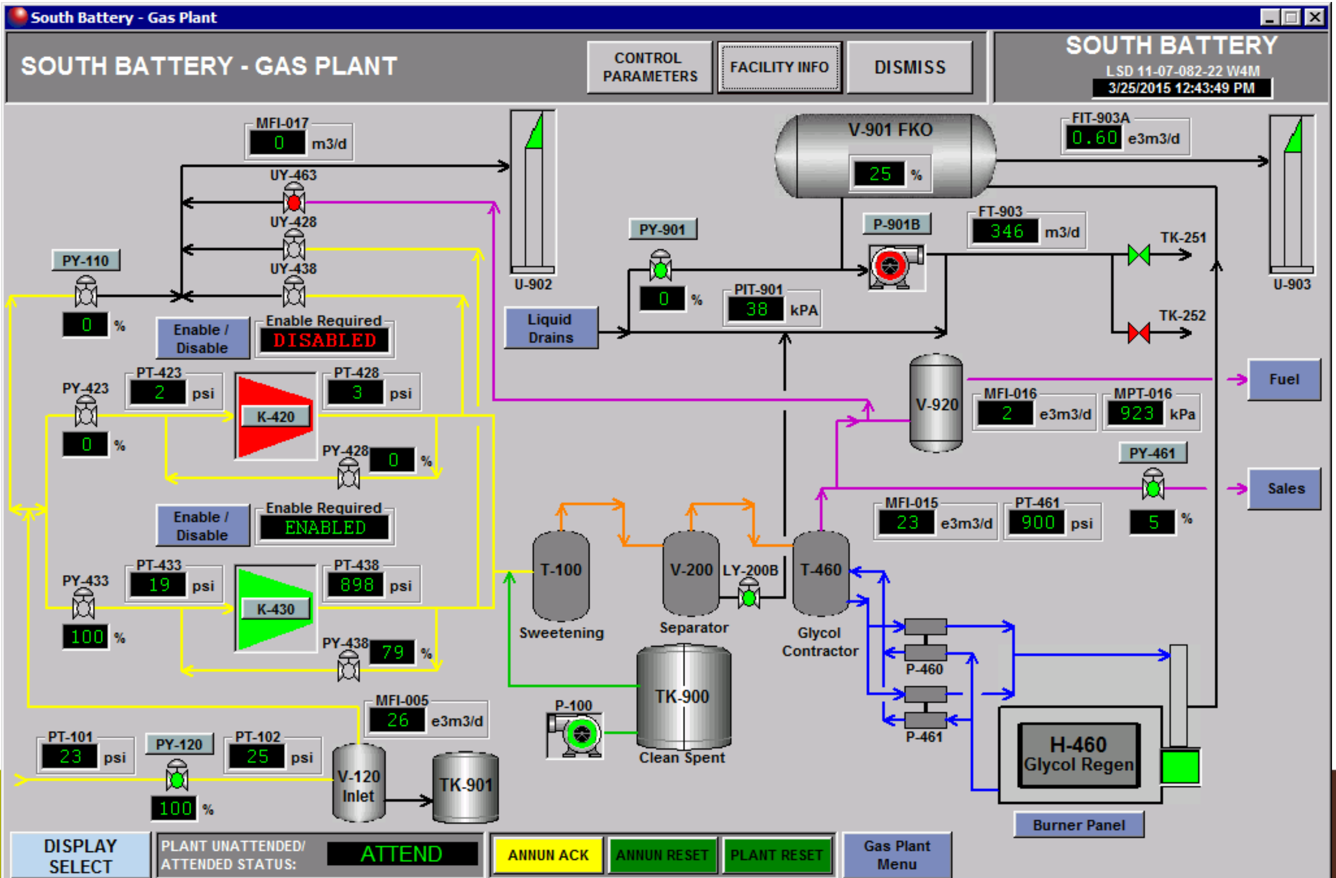
Facility: 11-7 South Battery Process Flow



Facility: 11-7 South Battery Process Flow



Facility: 11-7 South Battery Process Flow



cenovus ENERGY

2014 Facility Modifications

- 13-11 multiphase pump upgrade- 3rd and 4th pump
- 13-11 multiphase pump install- 5th pump (required to handle future emulsion from this site)
- 11-7 spiral heat exchanger upgrade (carbon steel to duplex stainless steel)
- NE13 water treatment pilot project- designed to treat 1600m3/d produced water for polymer injection- facility 95% built but currently on hold
- No major facility modifications planned for 2015

2014 Facility & Pipeline Upgrades

Facilities

- 13-11 multiphase pump upgrade- 3rd and 4th pump
- 13-11 multiphase pump install- 5th pump (required to handle future emulsion from this site)
- 11-07 spiral heat exchanger upgrade (carbon steel to duplex stainless steel)

Pipelines

- NE63-NW19 New 10" group emulsion pipeline replacing existing 8" pipeline
- Miscellaneous cathodic protection upgrade
- Water injection pipeline header work: 11-7, SW35.5, SW16.5
- Miscellaneous emulsion pig barrel replacement due to corrosion
- Continued with proactive group emulsion/injection pipeline improvement program
    - Currently in year 7 of 9 long term plan

No major facility or pipeline modifications planned for 2015

Measuring & Reporting Protocol

Methods of Measurement

- Oil and water: Flow meters on every producer and injector
- Solution gas: Proration from GOR testing

Typical Well Testing:

- Frequency and duration: Well testing as per Directive 17
- No test tanks on any wells. All wells have flow meters

Field Proration Factors

- Within acceptable range (Oil: 0.92, Water: 0.93)

Gas volumes- Total flared gas

- **Total flared gas: 304.9 e3m3/year**

Production Month	Operator BA	Operator Name	Facility ID	Facility Name	Facility Location	Activity	Product Grouping	Volume
2014-01	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	FLARE	GAS	39.2
2014-02	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	FLARE	GAS	23
2014-03	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	FLARE	GAS	26.3
2014-04	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	FLARE	GAS	15.5
2014-05	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	FLARE	GAS	21.4
2014-06	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	FLARE	GAS	26.1
2014-07	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	FLARE	GAS	27
2014-08	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	FLARE	GAS	47.9
2014-09	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	FLARE	GAS	31.2
2014-10	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	FLARE	GAS	23.5
2014-11	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	FLARE	GAS	13.2
2014-12	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	FLARE	GAS	10.6

Gas volumes- Total vented gas

- **Total vented gas: 2527.1 e3m3/year**

Production Month	Operator BA	Operator Name	Facility ID	Facility Name	Facility Location	Activity	Product Grouping	Volume
2014-01	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	VENT	GAS	194.5
2014-02	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	VENT	GAS	157.5
2014-03	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	VENT	GAS	222.2
2014-04	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	VENT	GAS	196.6
2014-05	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	VENT	GAS	189.1
2014-06	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	VENT	GAS	194.8
2014-07	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	VENT	GAS	215.5
2014-08	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	VENT	GAS	221.7
2014-09	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	VENT	GAS	191.5
2014-10	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	VENT	GAS	239.2
2014-11	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	VENT	GAS	249.5
2014-12	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	VENT	GAS	255

Gas volumes- Total produced gas

- **Total produced gas: 17262.0 e3m3/year**

Production Month	Operator BA	Operator Name	Facility ID	Facility Name	Facility Location	Activity	Product Grouping	Volume
2014-01	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	PROD	GAS	1529.6
2014-02	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	PROD	GAS	1320.9
2014-03	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	PROD	GAS	1517.4
2014-04	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	PROD	GAS	1545.3
2014-05	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	PROD	GAS	1499.7
2014-06	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	PROD	GAS	1428.9
2014-07	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	PROD	GAS	1477.4
2014-08	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	PROD	GAS	1296.1
2014-09	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	PROD	GAS	1261.0
2014-10	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	PROD	GAS	1410.3
2014-11	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	PROD	GAS	1457.7
2014-12	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	PROD	GAS	1517.7

Gas volumes- Total fuel gas consumed

- **Total fuel gas consumed: 23137.4 e3m3/year**

Production Month	Operator BA	Operator Name	Facility ID	Facility Name	Facility Location	Activity	Product Grouping	Volume
2014-01	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	FUEL	GAS	1867
2014-02	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	FUEL	GAS	1853.6
2014-03	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	FUEL	GAS	1973.5
2014-04	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	FUEL	GAS	1885.5
2014-05	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	FUEL	GAS	1855.5
2014-06	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	FUEL	GAS	1938
2014-07	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	FUEL	GAS	1853.5
2014-08	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	FUEL	GAS	1894.9
2014-09	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	FUEL	GAS	1831.6
2014-10	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	FUEL	GAS	1964.4
2014-11	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	FUEL	GAS	2060
2014-12	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	FUEL	GAS	2159.9

Gas volumes- Total purchased gas

- **Total purchased gas: 19596.8e3m3/year**

Production Month	Operator BA	Operator Name	Facility ID	Facility Name	Facility Location	From/To Facility Node ID	Activity	Product Grouping	Volume
2014-01	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	AB MS 0094854	REC	GAS	1277.1
2014-01	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	AB GS 0004693	REC	GAS	341.1
2014-02	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	AB MS 0094854	REC	GAS	1262.1
2014-02	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	AB GS 0004693	REC	GAS	321.2
2014-03	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	AB MS 0094854	REC	GAS	1368.1
2014-03	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	AB GS 0004693	REC	GAS	318.6
2014-04	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	AB GS 0004693	REC	GAS	391
2014-04	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	AB MS 0094854	REC	GAS	1270.8
2014-05	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	AB MS 0094854	REC	GAS	1208.6
2014-05	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	AB GS 0004693	REC	GAS	443.6
2014-06	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	AB MS 0094854	REC	GAS	1207.8
2014-06	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	AB GS 0004693	REC	GAS	440.5
2014-07	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	AB MS 0094854	REC	GAS	1175.2
2014-07	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	AB GS 0004693	REC	GAS	391.4
2014-08	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	AB MS 0094854	REC	GAS	1556.2
2014-08	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	AB GS 0004693	REC	GAS	57.7
2014-09	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	AB MS 0094854	REC	GAS	1510.1
2014-09	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	AB GS 0004693	REC	GAS	8.4
2014-10	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	AB MS 0094854	REC	GAS	1296.8
2014-10	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	AB GS 0004693	REC	GAS	226.3
2014-10	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	ABGE	REC	GAS	111.6
2014-11	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	AB MS 0094854	REC	GAS	1187.5
2014-11	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	AB GS 0004693	REC	GAS	368.8
2014-11	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	ABGE	REC	GAS	131.9
2014-12	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	AB MS 0094854	REC	GAS	1134.3
2014-12	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	AB GS 0004693	REC	GAS	448.6
2014-12	A5D4	CENOVUS ENERGY INC.	AB BT 0058285	AMBER BRITNELL 11-7-82-22	00-11-07-082-22 W4	ABGE	REC	GAS	141.5

Gas volumes- Total fuel gas sold

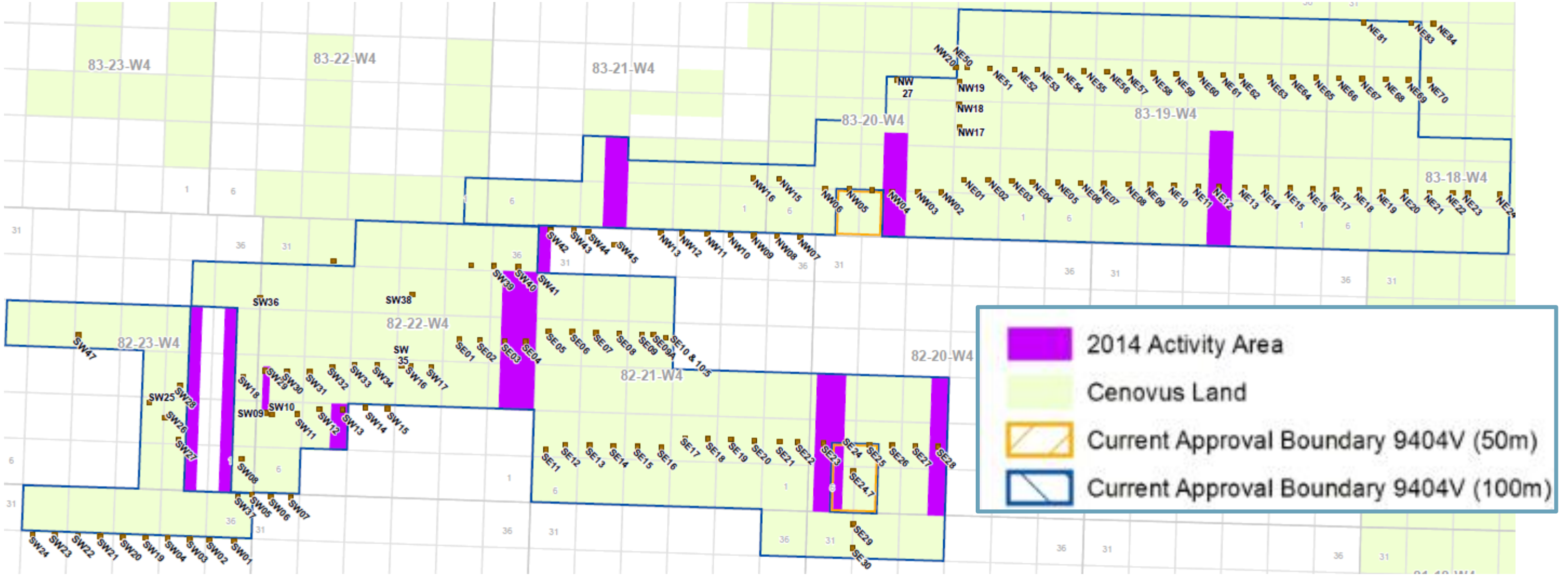
- **Total fuel gas sold: 0.0 e3m3/year**

2014 Greenhouse Gas Emissions

- VRUs installed on production tanks (no routine gas venting off tanks)
- Air compressors (‘instrument air’) installed for operating pneumatic equipment (no gas venting)
- Glycol dehydrator at 11-7 battery. Still column vent tied in to LP flare (vent gas is combusted, not vented to atmosphere)
- Gas conserved on pads where economically feasible
- Total green house gas emissions: 89,139 tonnes CO2 equivalent

2014 – 2015
Development Activities

2014/15 Development Activities



- 2014 Activities: 48 hz wells drilled, 76 completed and 81 wells tied-in
- Finished joint venture border injection project with CNRL
- Installed 1 polymer production facility (P-Pod) and 6 polymer injection facilities (I-Pod)
- Several pads constructed and ready for drilling upon program resumption

2014/15 Program Optimization Initiatives

- Surface casing has been incorporated into high pressure drilling program which has allowed intermediate casing to be landed in zone and has increased liner running efficiency.
- Liner extension program continued throughout 2014 and has decreased the risk of future casing failure on these wells
  - 60 well installations to date, at least 9 wells had indications that failure had initiated.
- 2015 priorities include:
  - Operating cost reductions:
    - Optimizing injection rates, non-saline water usage, and polymer consumption
    - Workover frequency reductions -> coated rods, POC optimization, etc.
  - Continued reservoir characterization & simulation modeling to enhance long term program strategy.

AER Regulatory Discussion & Key Learnings

AER Regulatory Discussion

- Current approval and downspacing is flexible for Cenovus to continue its infill program
- Pending amendment to 102/11-07 disposal well approval
- Feb 2015 104/13-18-082-20W4 incident reviewed with AER. Mitigating equipment now in place to reduce possibility of similar occurrence in the future
- Suggestions for flowing breakthrough wells during mediation

Key Learnings

- The polymer flood has improved mobility ratios and flood conformance resulting in increased recovery
- Reduced spacing is required to optimize recovery – encouraged by results to date
- High pressure drilling design successfully executed, with continued refinements to design.
- Pressures (low) encountered while drilling have further confirmed cap rock integrity in high pressure areas

End