2015 Performance Presentation

Devon Canada Corporation
Jackfish SAGD Project

Commercial Scheme Approval No. 10097 (as amended)

October 2015

Advisory

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Subsurface Operations

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Subsurface Operations

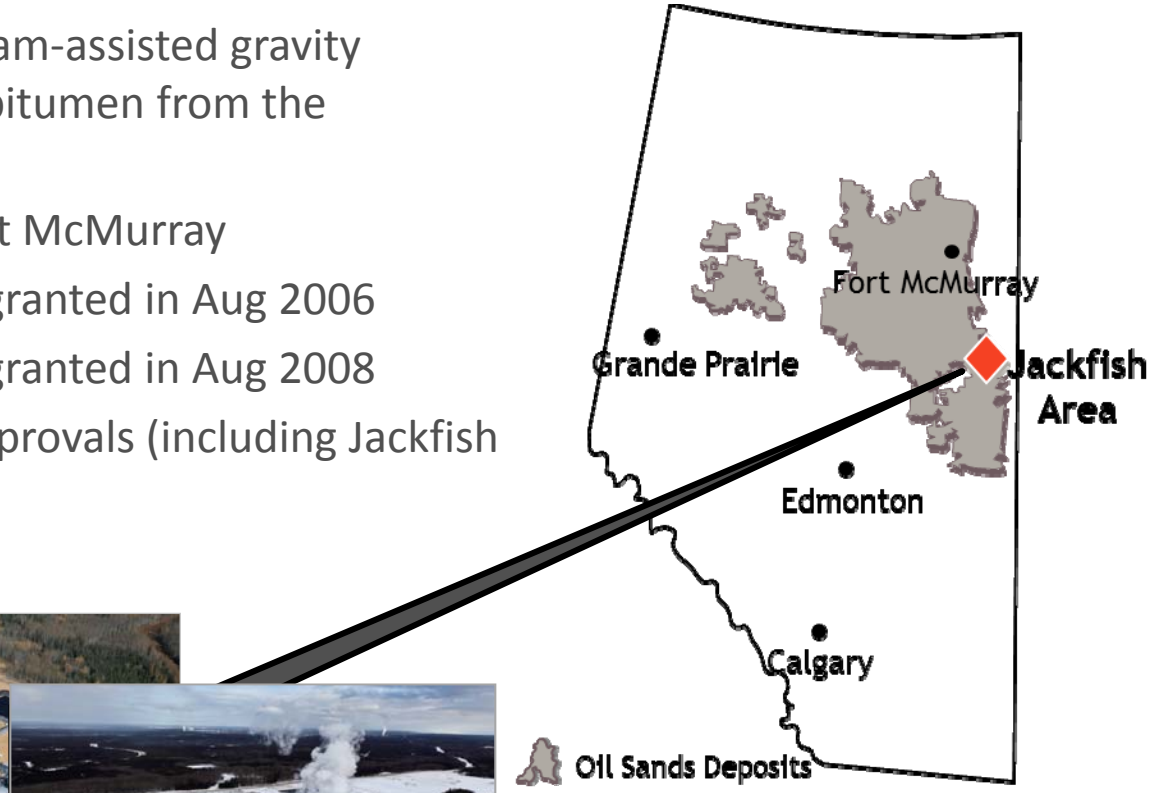
Project Background

Section 3.1.1-1

Brief Background of Scheme

3.1.1-1

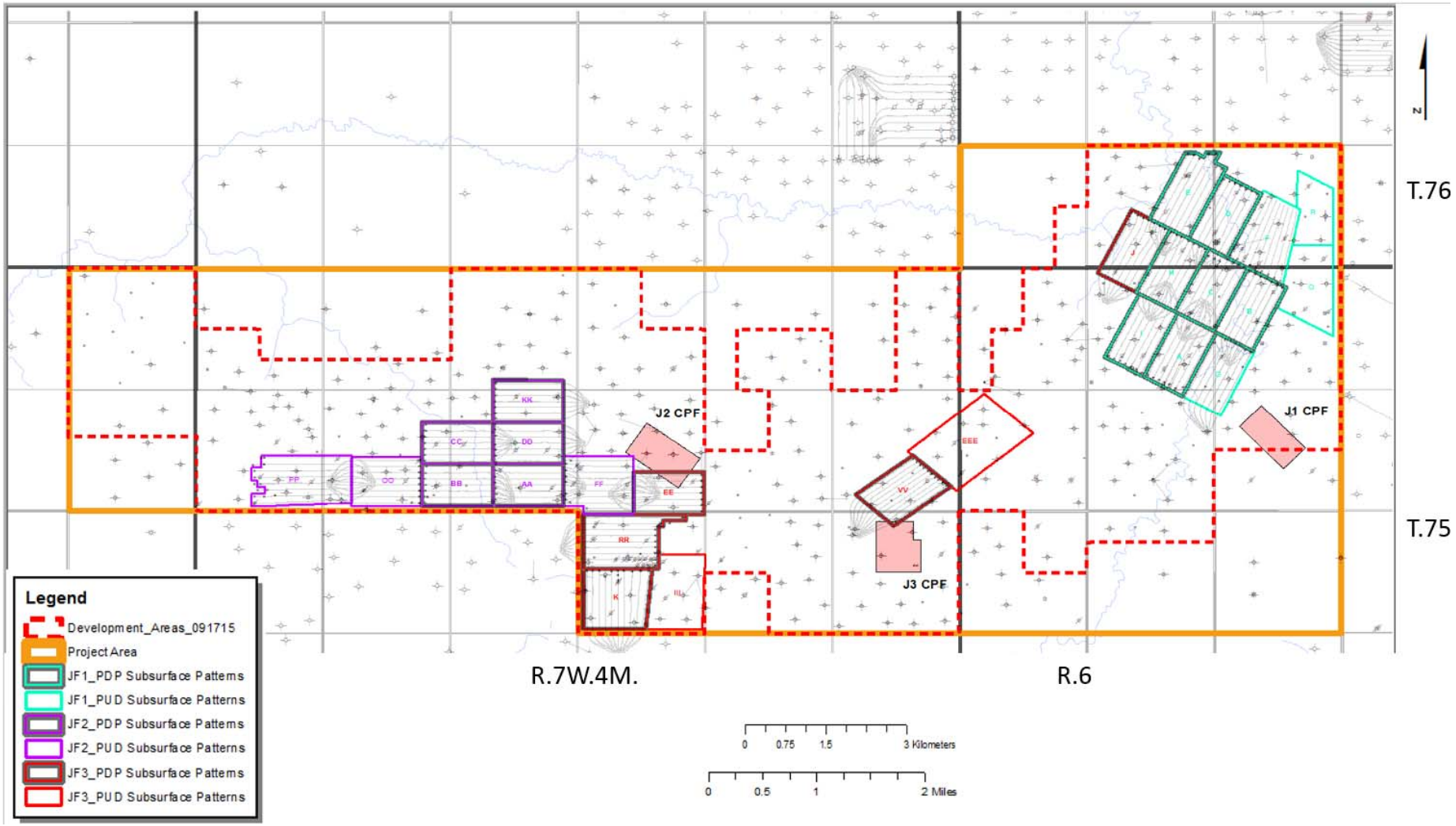
- Jackfish 1, 2 and 3 utilize steam-assisted gravity drainage (SAGD) to recover bitumen from the McMurray formation
- Located 150 km south of Fort McMurray
- Jackfish 1 Scheme approval granted in Aug 2006
- Jackfish 2 Scheme approval granted in Aug 2008
- Amalgamation of Jackfish approvals (including Jackfish 3) in Nov 2011



Brief Background of Scheme

Overall Scheme Map

3.1.1-1



Brief Background of Scheme

Jackfish

3.1.1-1

Asset	Scheme Capacity (bbl/d)	Number of Operating Pads	Number of Operating Well Pairs	Upcoming Pads
Jackfish 1	5,565 (35,000)	7	49	G, F
Jackfish 2	5,565 (35,000)	6	44	OO, PP
Jackfish 3	5,565 (35,000)	5	43	EEE
Total	***16,695 (105,000)***	***18***	***136***	**-**

Geology

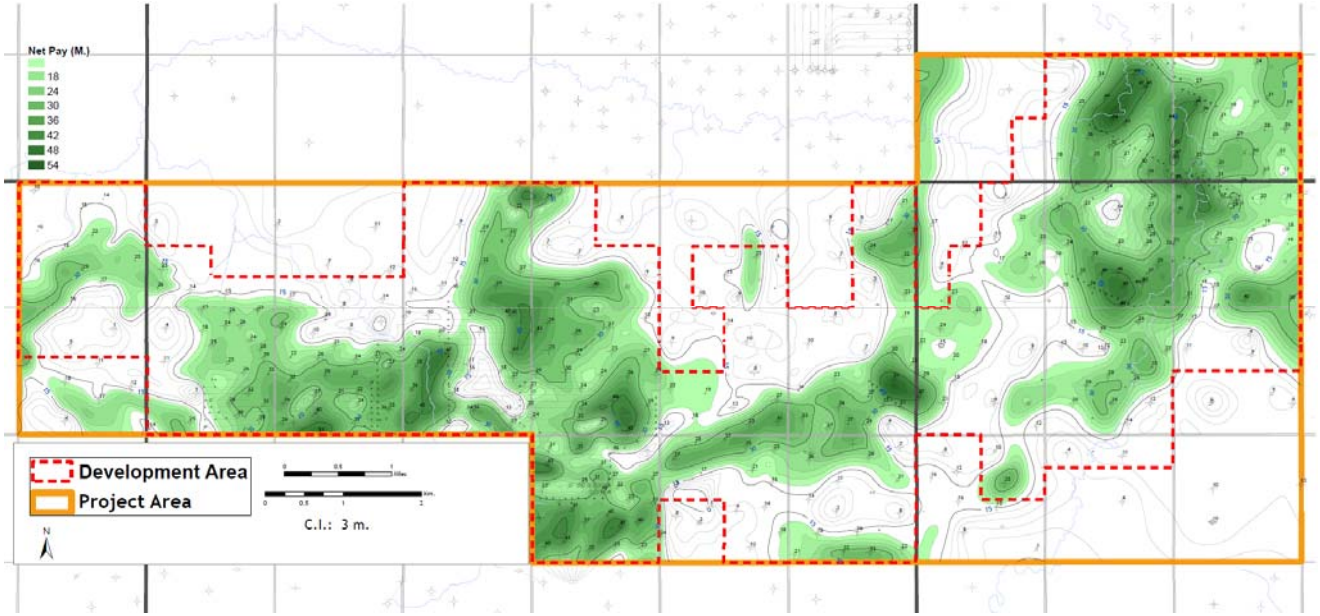
Section 3.1.1-2

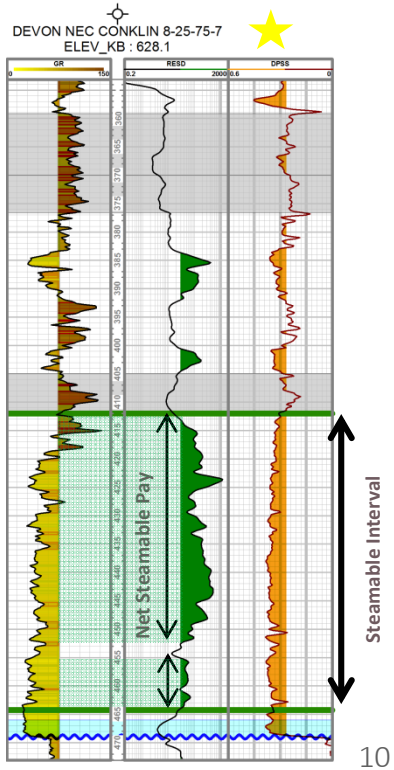
Geology
Jackfish Approved Area OBIP

3.1.1-2a

	Area (Ha)	OBIP (10^6m^3)*	Avg. Net Steamable Pay (m)**	Avg. Oil Saturation (So)**	Avg. Porosity (%)**
Project Area	7,668	228.6	21.4	78.0	33.0
Development Area	5,445	221.8	23.0	79.0	34.0

**OBIP derived from Geomodel: Steamable interval >18m*
***Average attributes derived from well control*





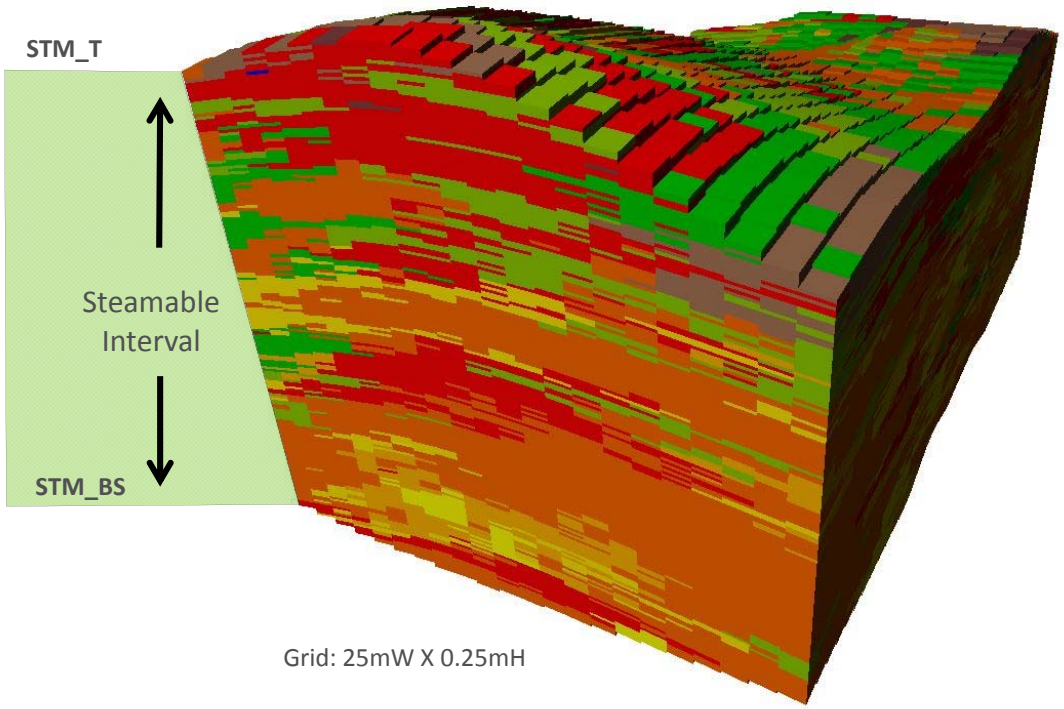
Phi>25%; So>50%; VSh<30%

Geology
Jackfish Approved Area OBIP Methodology

3.1.1-2a

J1 Pad A

Facies Distribution



Grid: 25mW X 0.25mH

1. Lithological facies are identified using core, logs and associated petrophysical attributes
2. Steamable interval is deterministically defined by a “steamable” top and base using vertical well control.
3. Create steamable top and base structure surfaces
4. 3D geomodel is statistically distributed with facies and their associated reservoir attributes (water saturation, porosity, permeability)

Geology

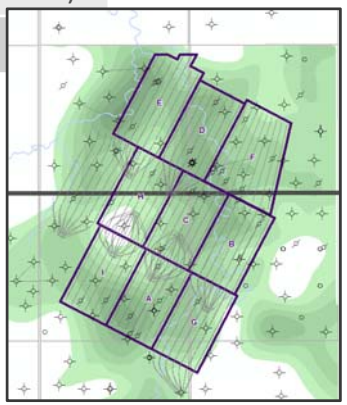
Jackfish 1 OBIP and Reservoir Properties

3.1.1-2b

Pad	OBIP (10^6m^3)	Avg Steamable Interval (m)	Avg Net Steamable Pay (m)	Avg Oil Saturation Of Pay (%)	Avg Porosity of Pay (%)	Status
A	6.0	37.1	36.8	86	33	Operating
B	4.0	28.5	25.7	83	35	Operating
C	4.1	36.2	35.9	86	35	Operating
D	4.8	38.0	38.0	84	35	Operating
E	3.9	28.8	26.9	81	35	Operating
H	3.4	25.1	23.0	84	34	Operating
I	4.0	29.8	25.5	84	33	Operating
G	5.1	32.3	29.3	83	35	Operating (Q3 2015)
F	6.0	34.8	29.4	80	36	Q3 2016

Net Steamable Pay

- Cumulative pay that exists within the steamable interval and contributes to OBIP
- Phi>25%; So>50%; Vsh <30%



Net Steamable Pay >18m

Geology

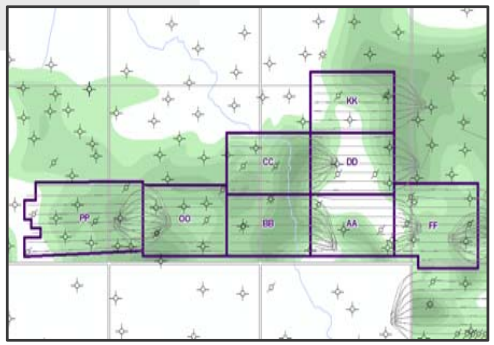
Jackfish 2 OBIP and Reservoir Properties

3.1.1-2b

Pad	OBIP (10^6m^3)	Avg Steamable Interval (m)	Avg Net Steamable Pay (m)	Avg Oil Saturation Of Pay (%)	Avg Porosity of Pay (%)	Status
AA	2.4	25.0	22.5	81	36	Operating
BB	4.5	36.4	35.6	81	35	Operating
CC	4.3	34.5	32.5	75	35	Operating
DD	2.9	32.2	26.2	77	35	Operating
KK	2.9	27.4	25.4	75	35	Operating
FF	5.2	29.8	29.0	79	34	Operating
OO	6.4	34.2	32.1	84	35	Q4 2015
PP	6.2	30.8	27.1	77	34	Q4 2015

Net Steamable Pay

- Cumulative pay that exists within the steamable interval and contributes to OBIP
- Phi>25%; So>50%; Vsh <30%



Net Steamable Pay >18m

Geology

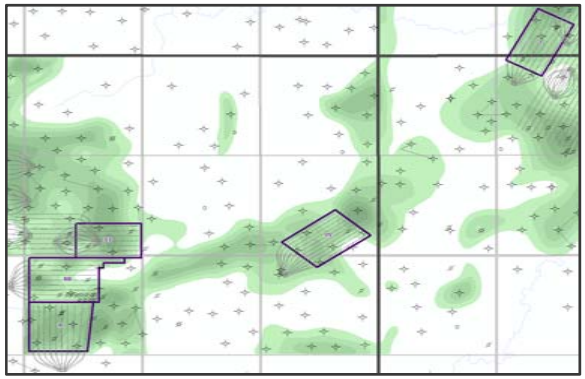
Jackfish 3 OBIP and Reservoir Properties

3.1.1-2b

Pad	OBIP (10^6m^3)	Avg Steamable Interval (m)	Avg Net Steamable Pay (m)	Avg Oil Saturation Of Pay (%)	Avg Porosity of Pay (%)	Status
VV	4.5	36.8	36.0	81	34	Operating
EE	4.6	44.8	44.5	83	34	Operating
J	4.1	37.2	36.3	81	35	Operating
RR	6.4	34.2	32.1	84	35	Operating
K	6.2	30.8	27.1	77	34	Operating

Net Steamable Pay

- Cumulative pay that exists within the steamable interval and contributes to OBIP
- Phi>25%; So>50%; Vsh <30%



Net Steamable Pay >18m

Geology

Jackfish 1, 2 & 3 Average Reservoir Properties

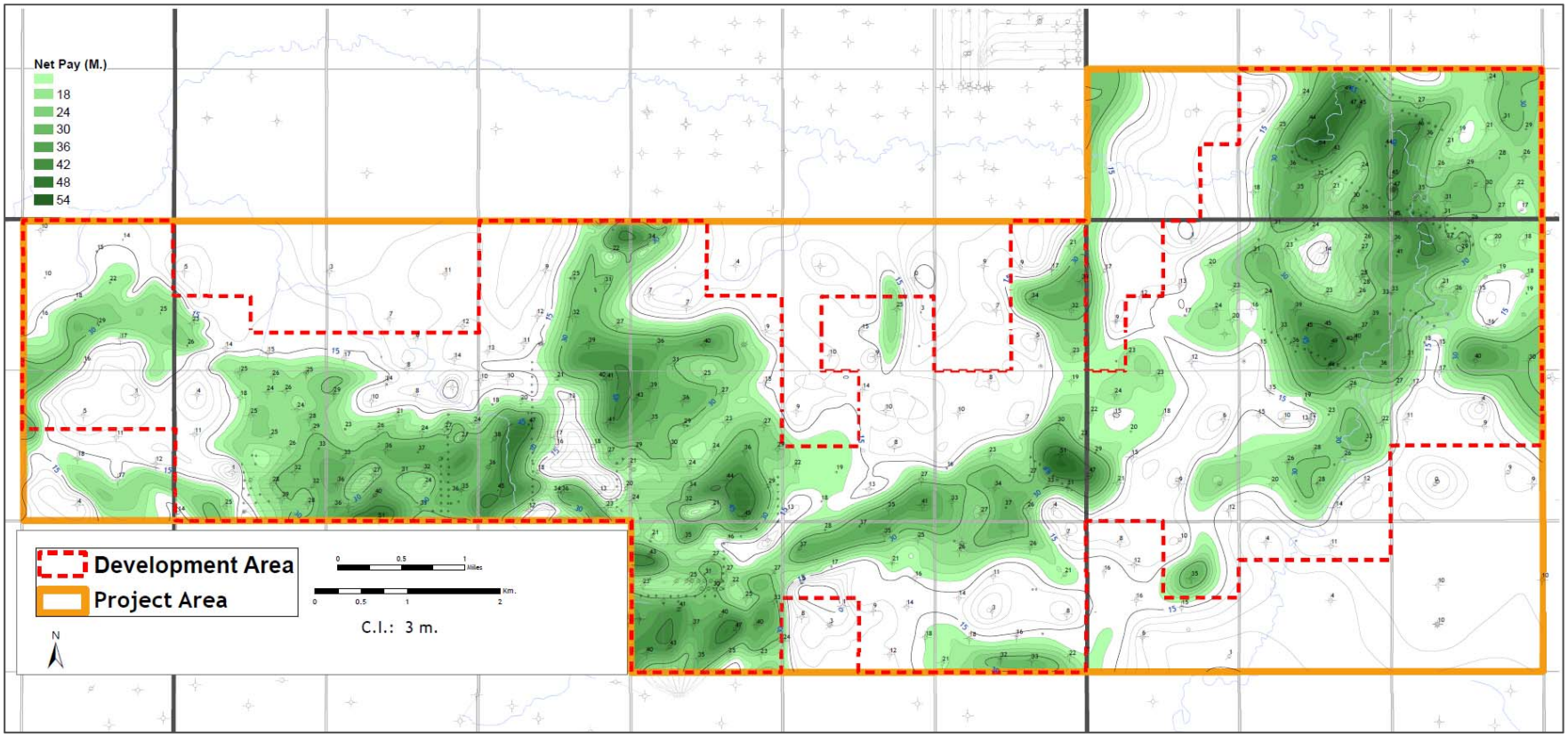
3.1.1-2b

Property	Jackfish 1	Jackfish 2	Jackfish 3
Avg Reservoir Depth *mTVD* Avg Reservoir Depth *mASL*	400 202	459 202	428 202
Avg. Original Reservoir Pressure kP*a*	2,700 @ scheme startup	2,700 @ scheme startup	2,700 @ scheme startup
Avg. Reservoir Temp. *ºC*	12	12	12
Avg Kh *md*	5,000	3,000	4,000
Avg Kv *md*	2,000	1,200	1,500
Avg Phi *%*	33	33	33
Avg Bitumen Visc. *Cp*	1,000,000+	1,000,000+	1,000,000+
Original Bottom Water Pressure *kPa*	2,300	2,300	2,300

Geology

Jackfish Net Steamable Pay > 18 m

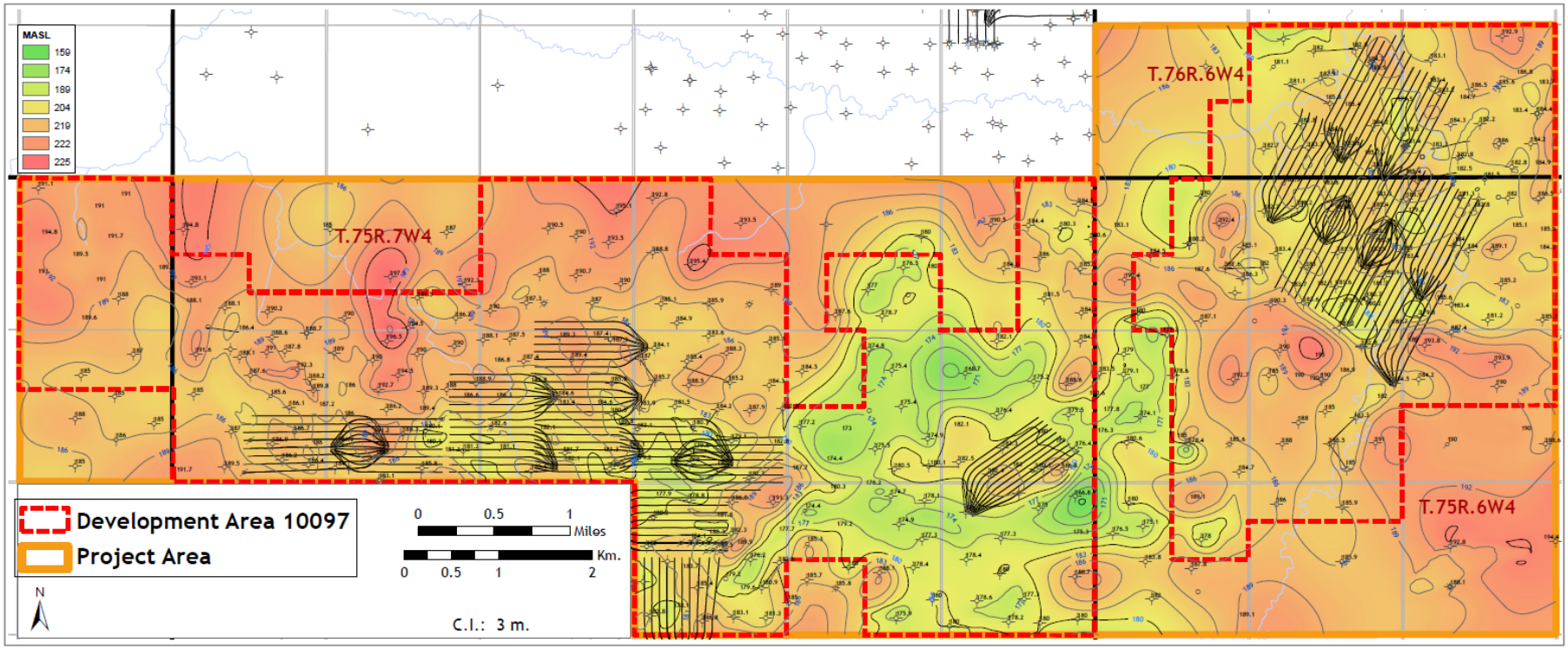
3.1.1-2c



Geology

Jackfish Structure On Base Steamable Surface

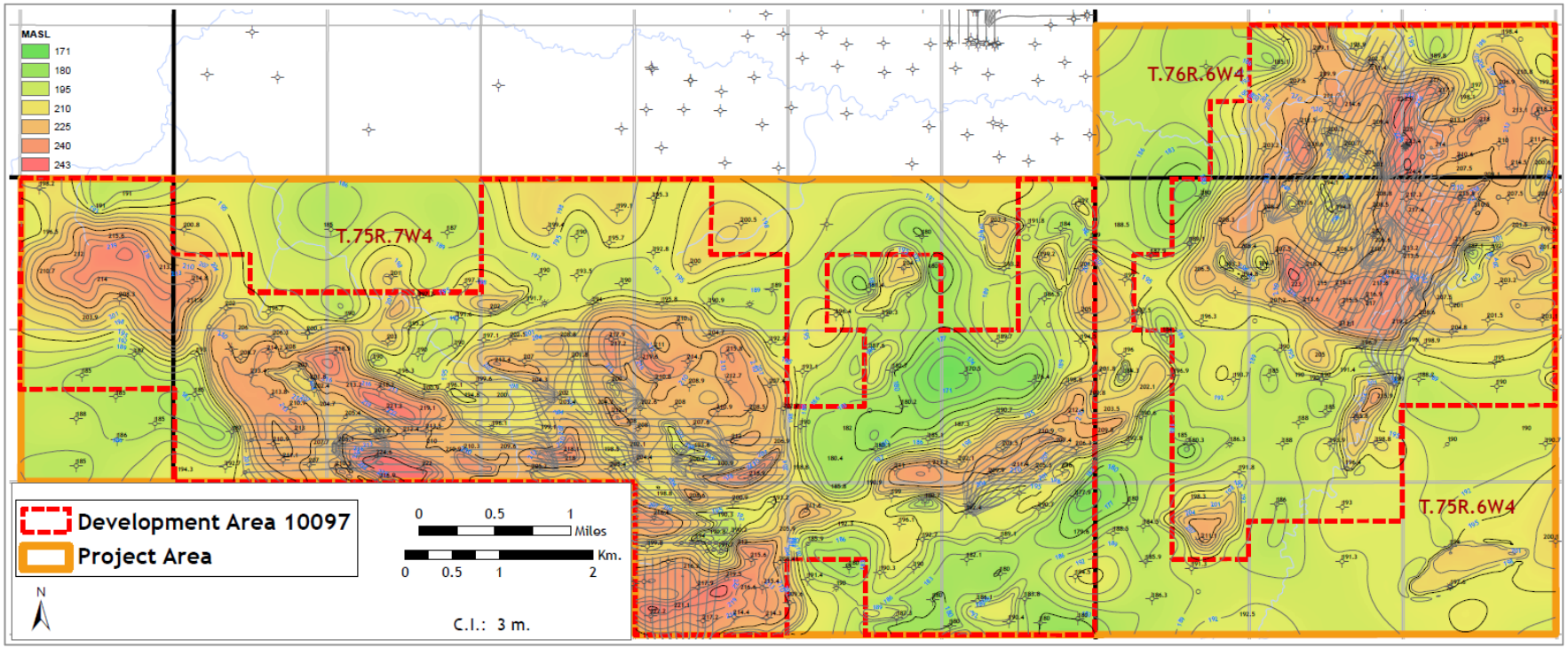
3.1.1-2d



Geology

Jackfish Structure On Top Steamable Surface

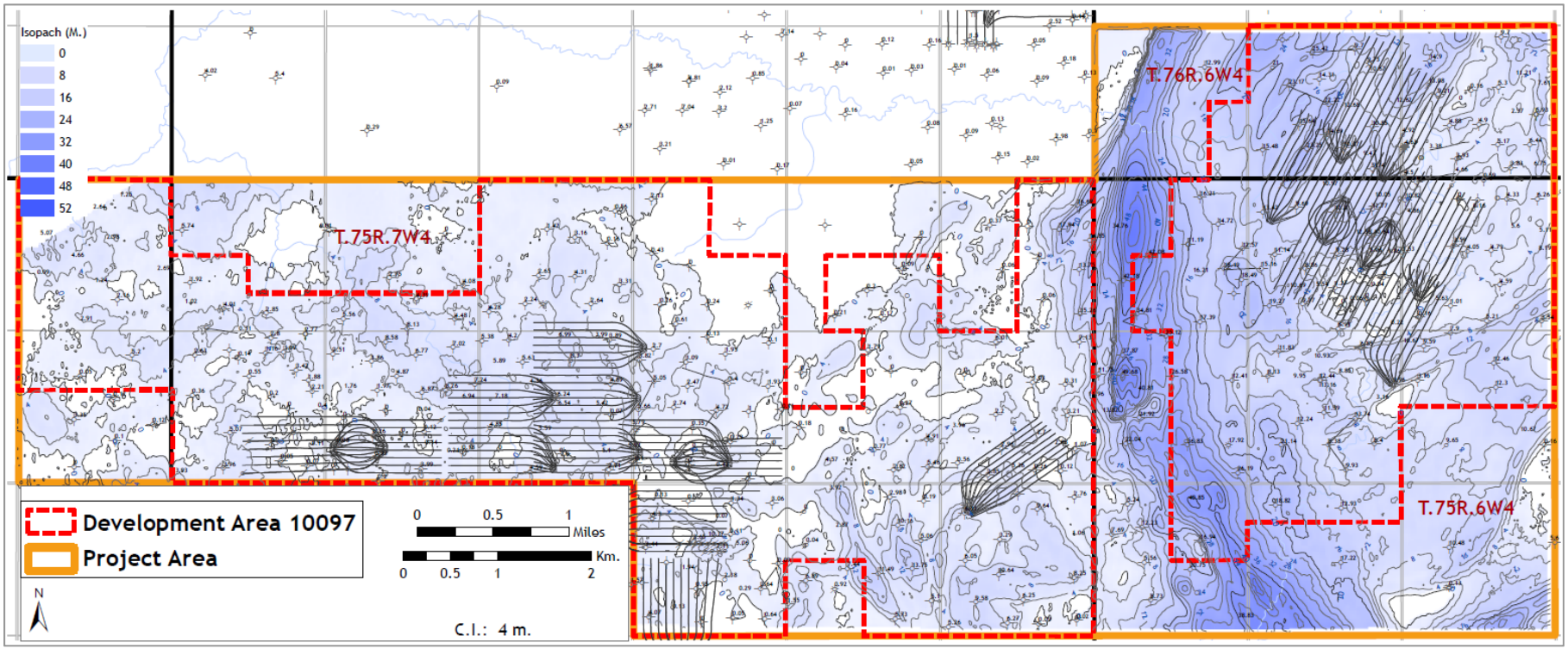
3.1.1-2d



Geology

Jackfish McMurray Water Contact to Paleozoic Isopach

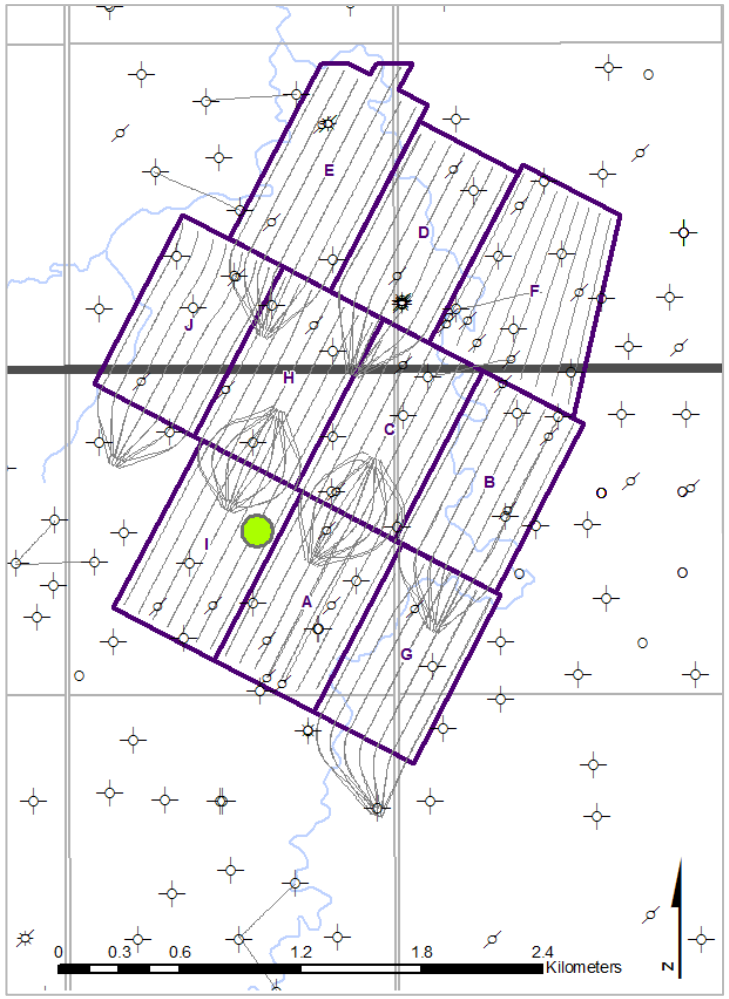
3.1.1-2d

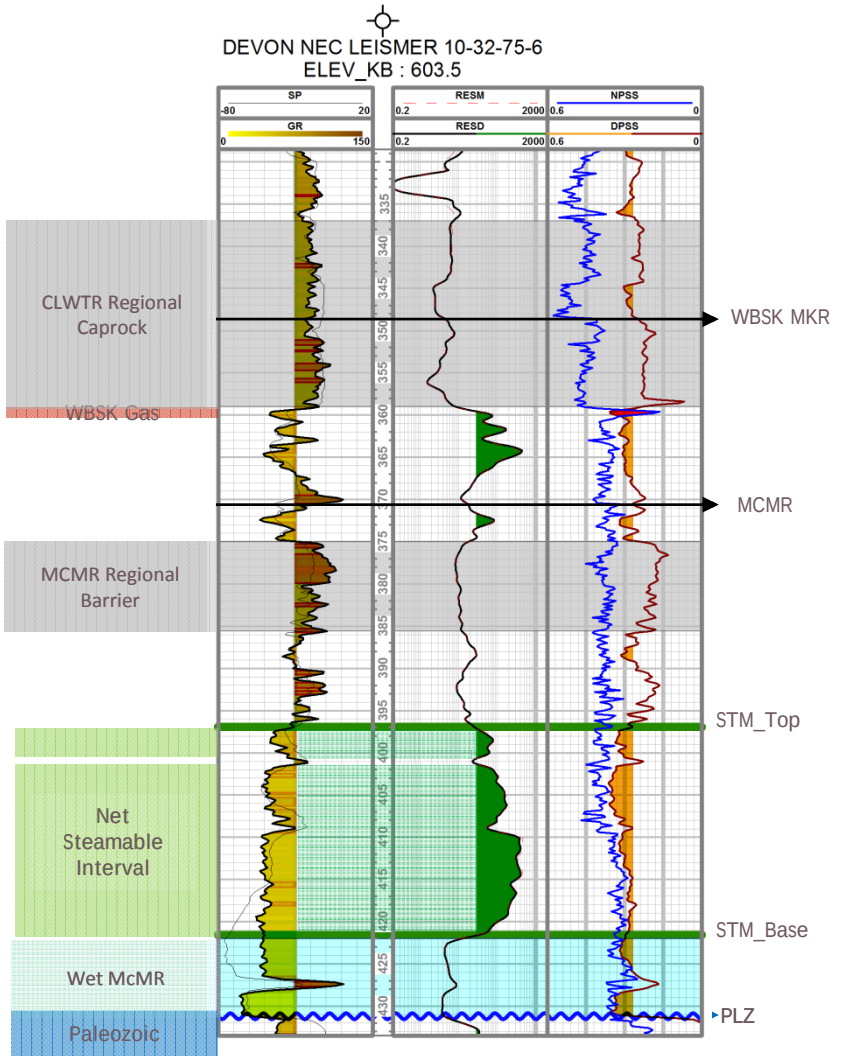


- Well placement is planned to be 3 m above the interpreted bitumen-water contact. Devon has the ability to adjust the plan upward if low resistivities in clean sand are encountered during drilling.

Geology
Jackfish 1 Representative Well Log

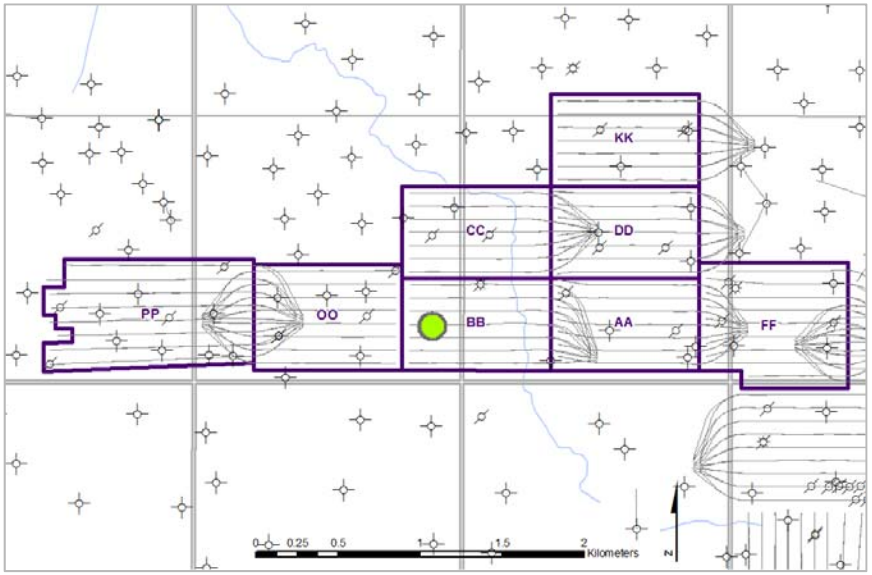
3.1.1-2e

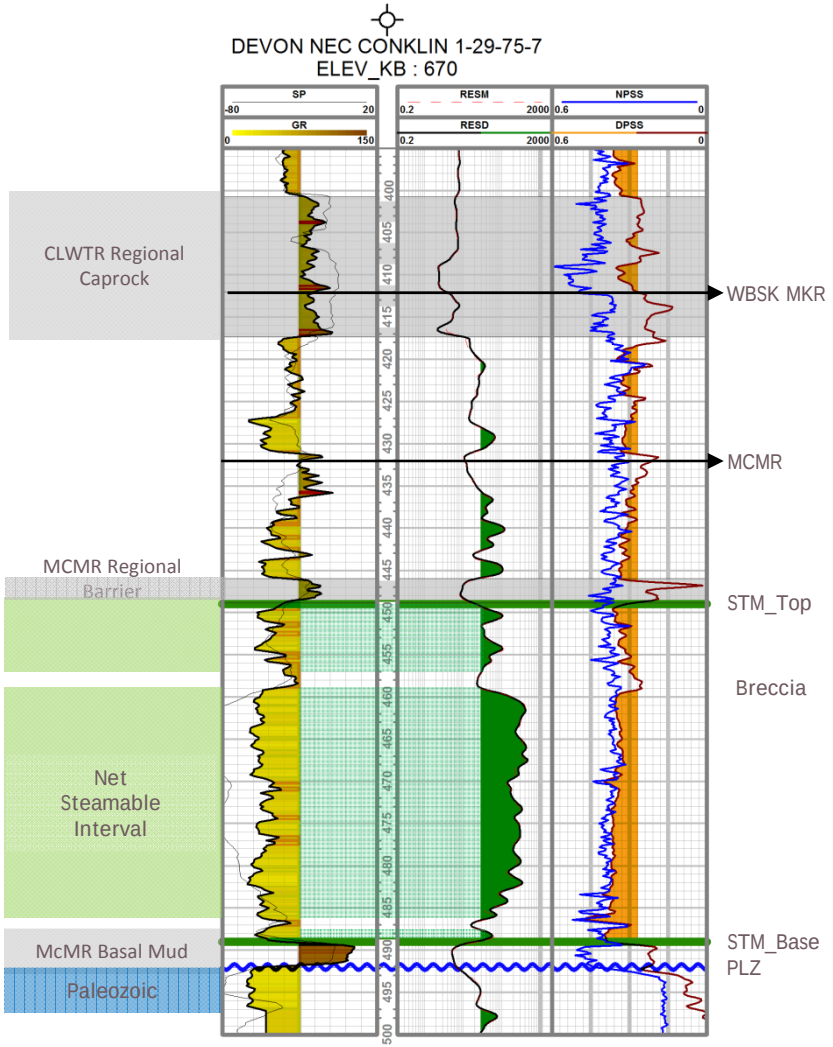




Geology
Jackfish 2 Representative Well Log

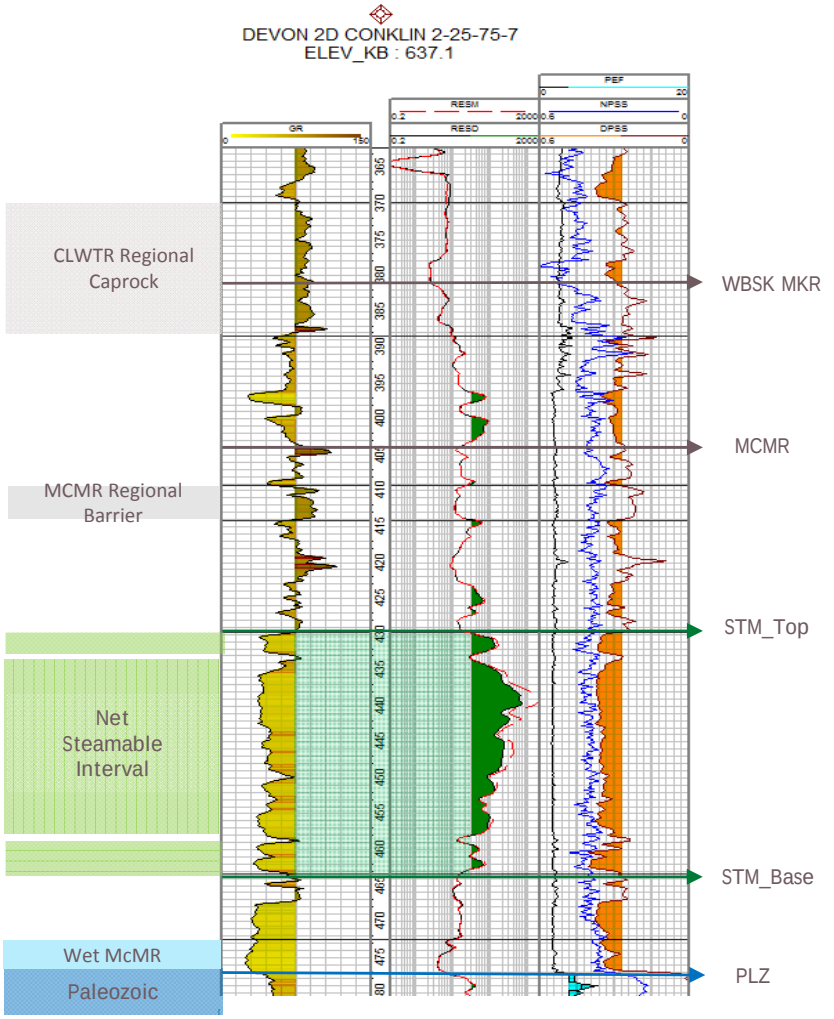
3.1.1-2e





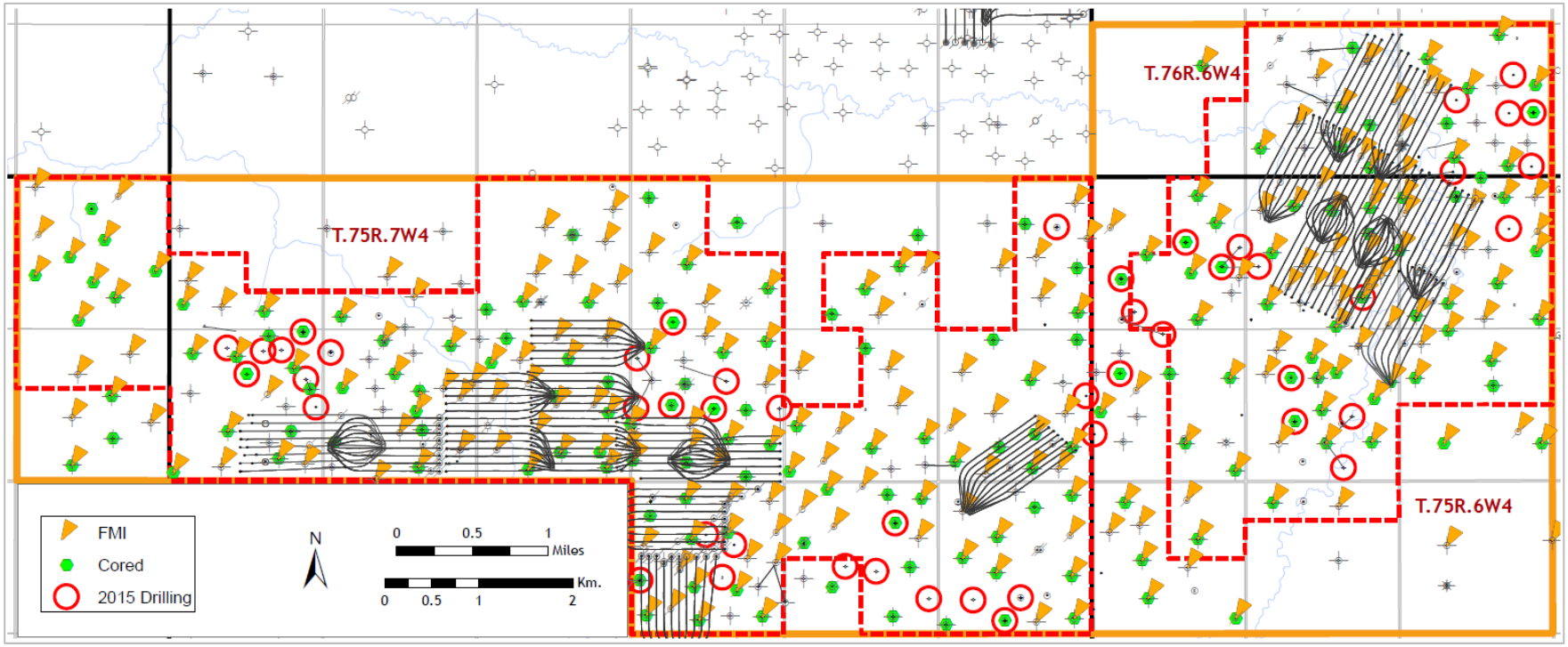
Geology
Jackfish 3 Representative Well Log

3.1.1-2e



Geology
Jackfish Cores and FMI Logs

3.1.1-2f



Project Area

2014-15 Wells: 50	Total Well Count: 429
2014-15 Core: 15	Total Core: 185
2014-15 FMI: 49	Total FMI: 343

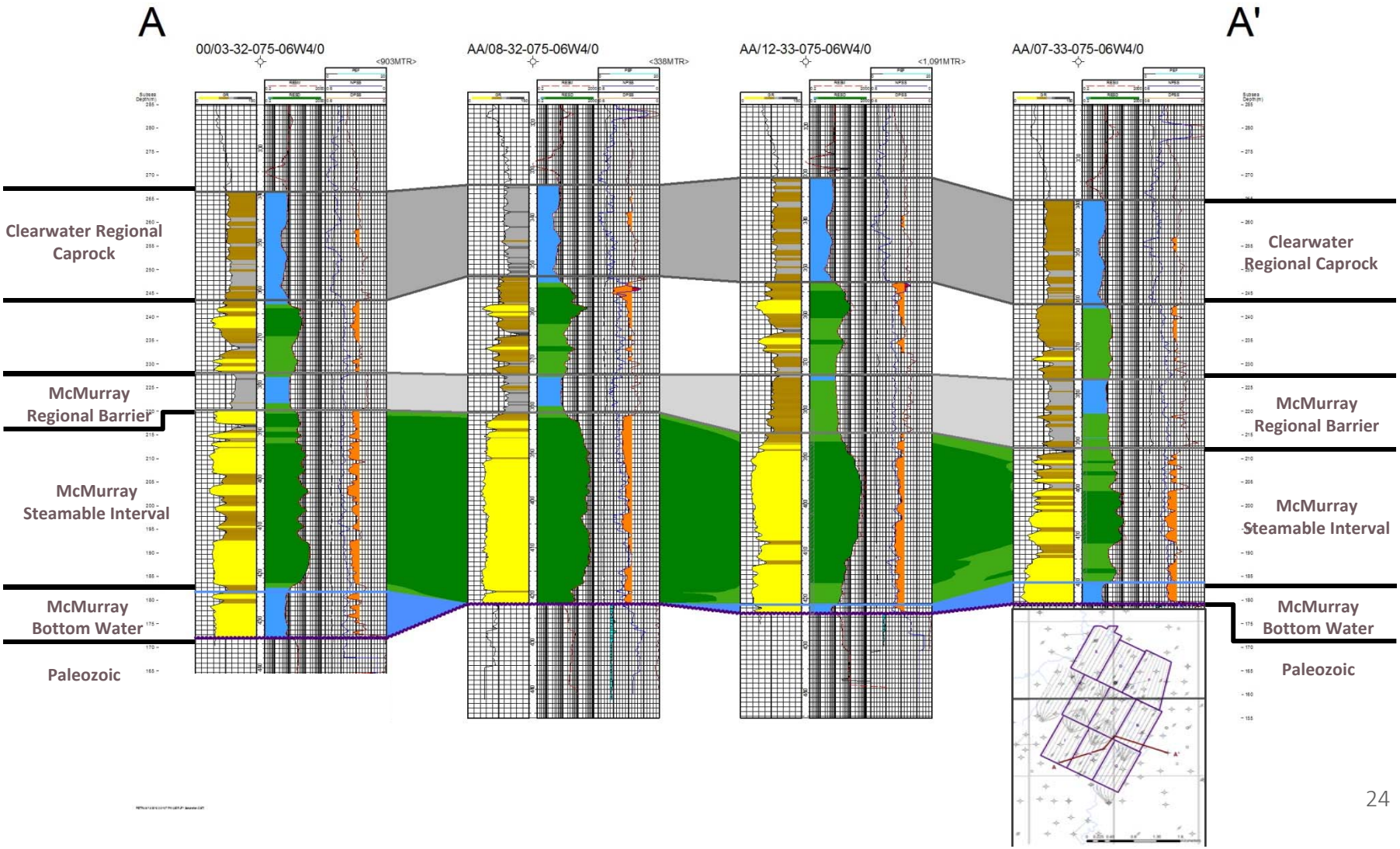
Special Core Analysis

3 caprock cores obtained during the 2014-15 drilling season

Geology

Jackfish 1 Representative Structural Cross-section

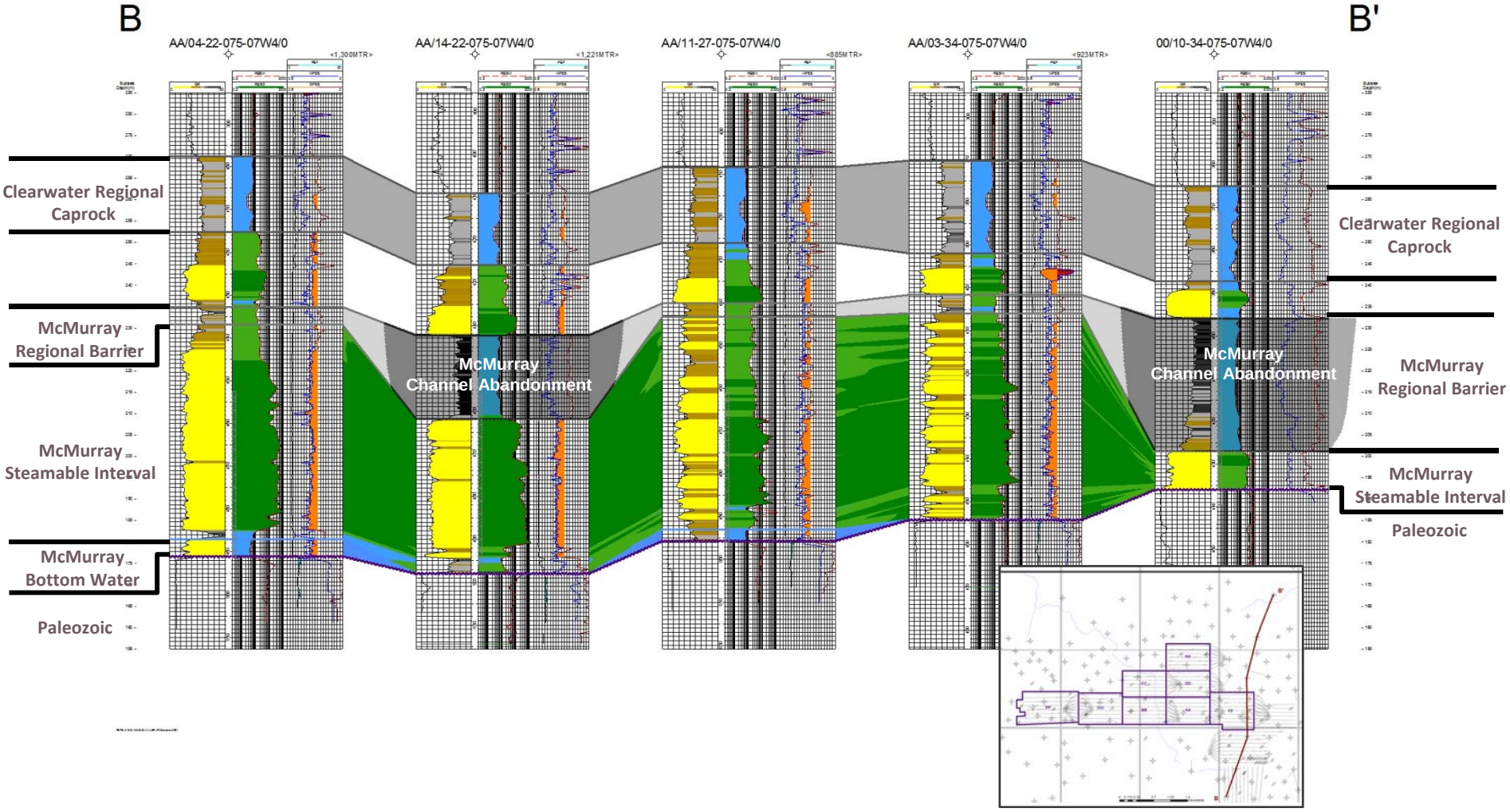
3.1.1-2i



Geology

Jackfish 2 Representative Structural Cross-section

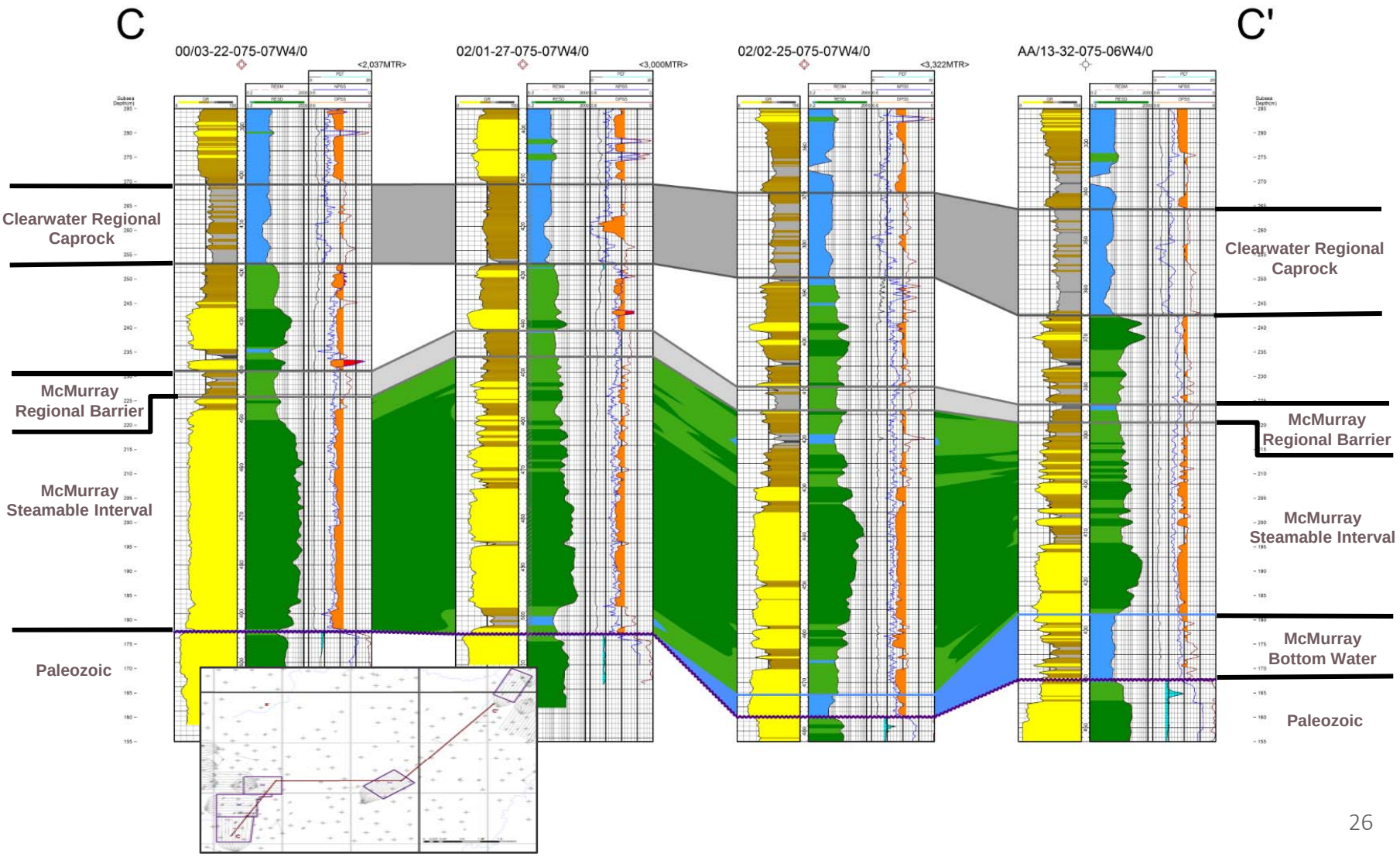
3.1.1-2i



Geology

Jackfish 3 Representative Structural Cross-section

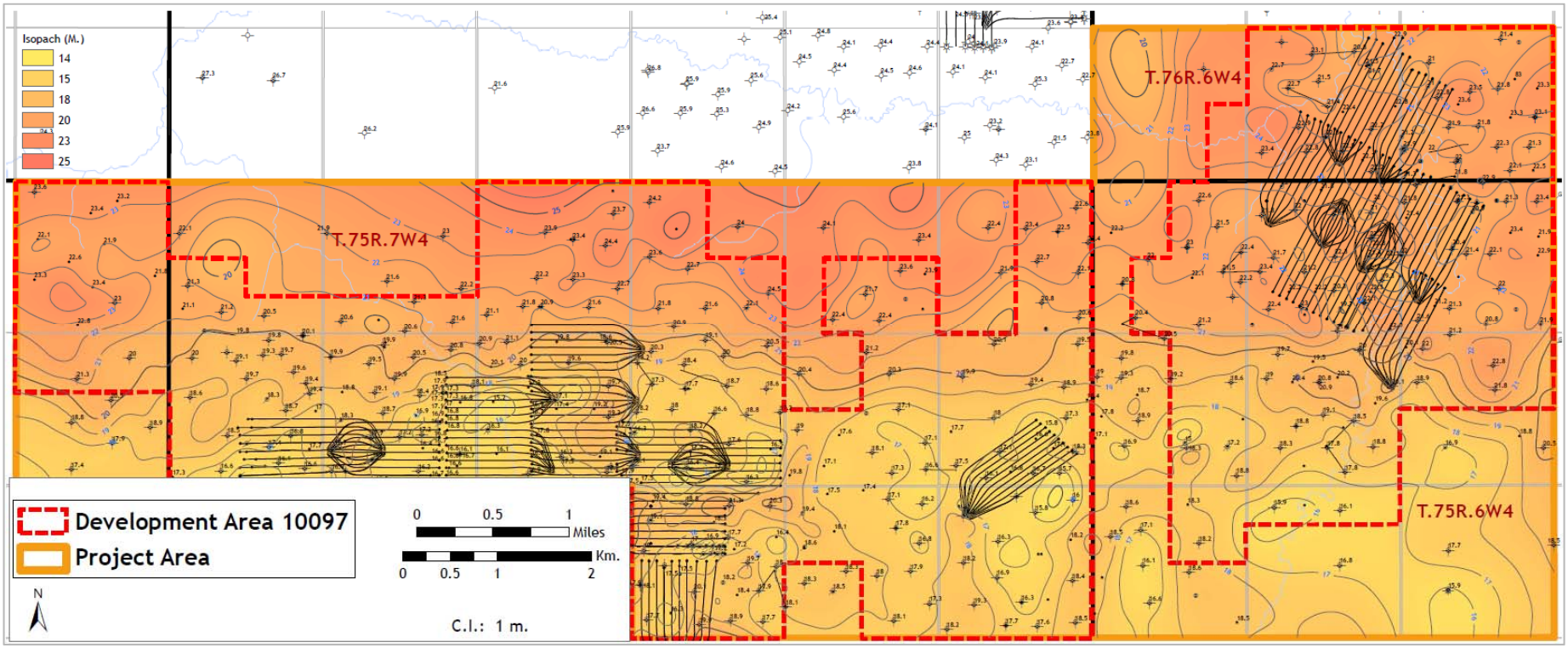
3.1.1-2i



Geology

Jackfish Clearwater Regional Cap Rock Isopach

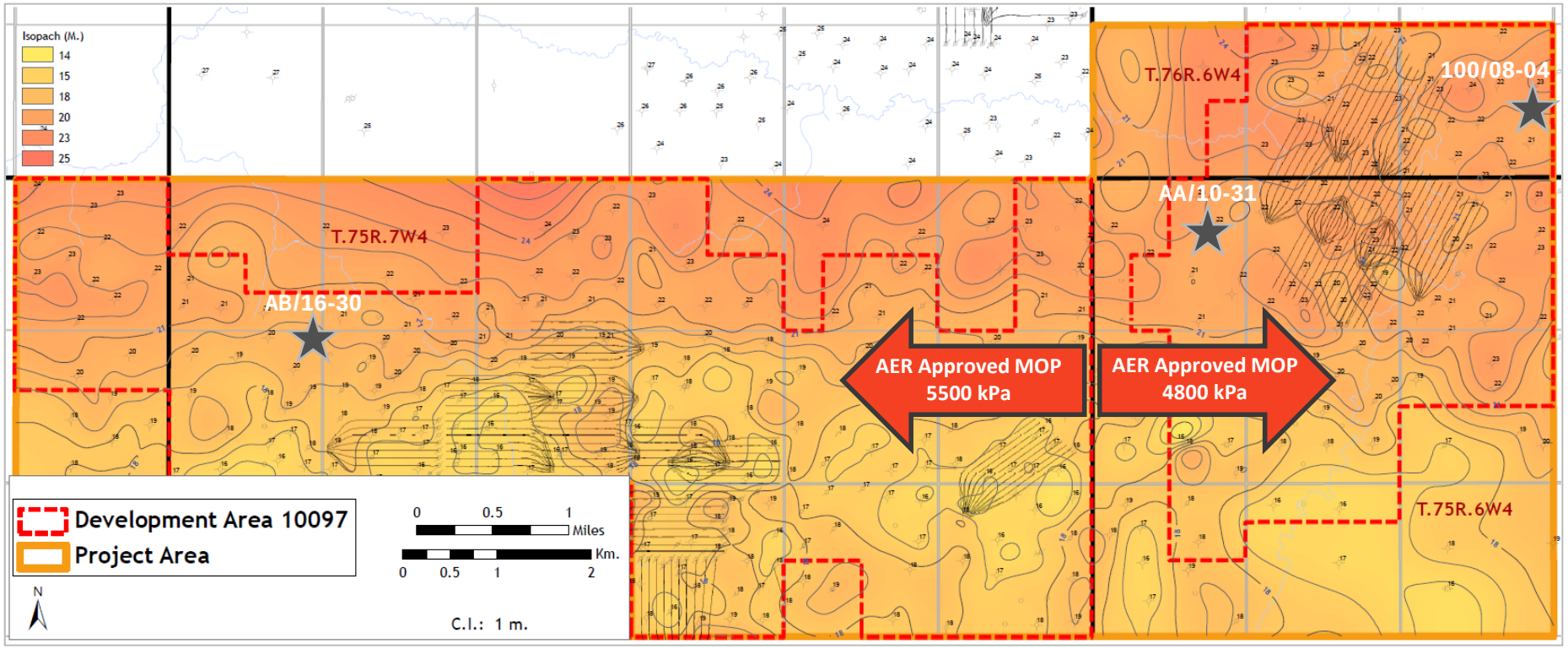
3.1.1-2j, m



- Regionally extensive
- 15 to 25 m throughout project area

Geology
Jackfish Caprock Cores & Mini Frac's

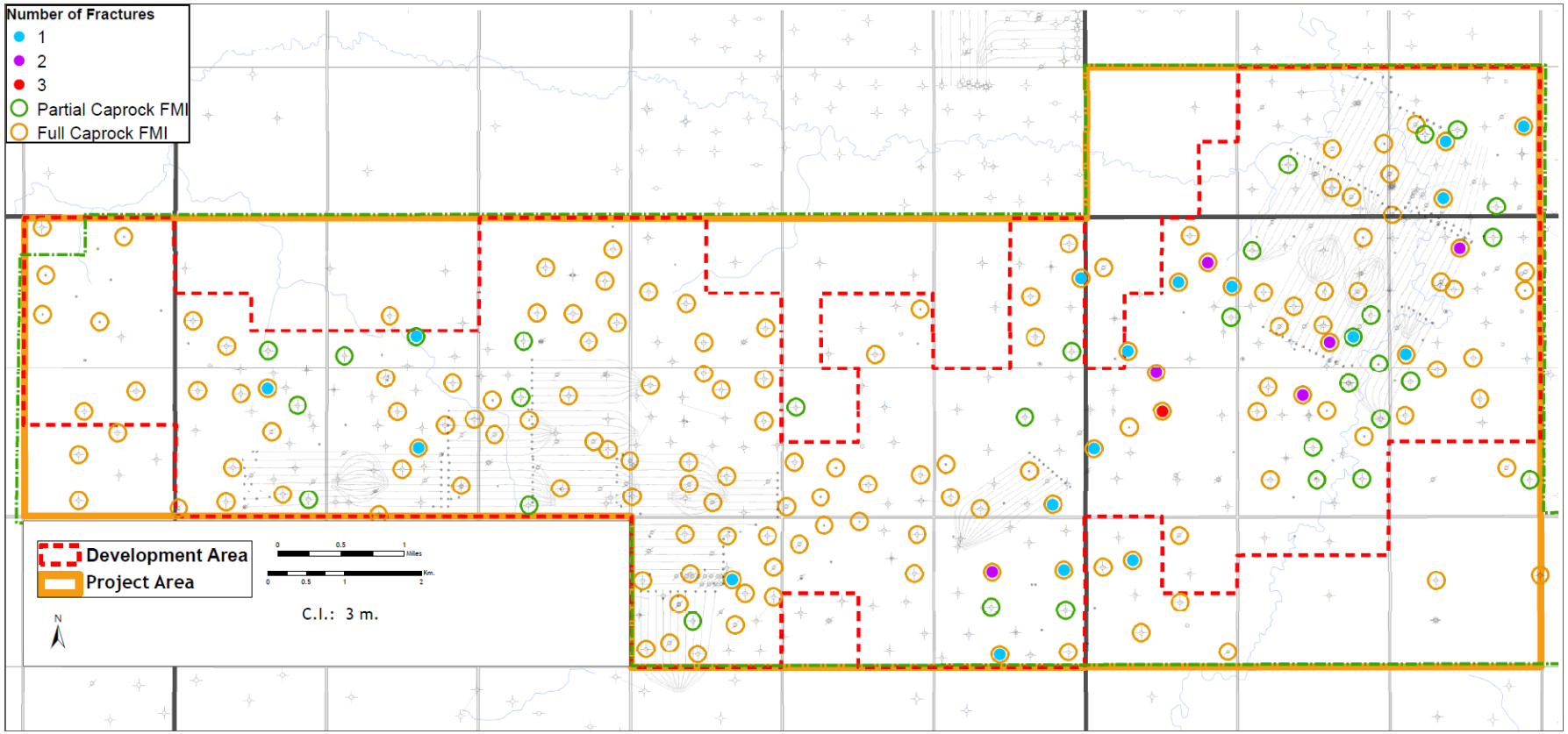
3.1.1-2j, m



- Jackfish MOP Application approved Jan 2015
- 3 additional caprock cores obtained during the 2014-15 drilling season
- Geomechanical testing underway on 08-04
- Mini Fracs completed on caprock cored wells
- Mini Frac results currently being analyzed

Geology
Caprock FMI Fracture Distribution

3.1.1-2j, m



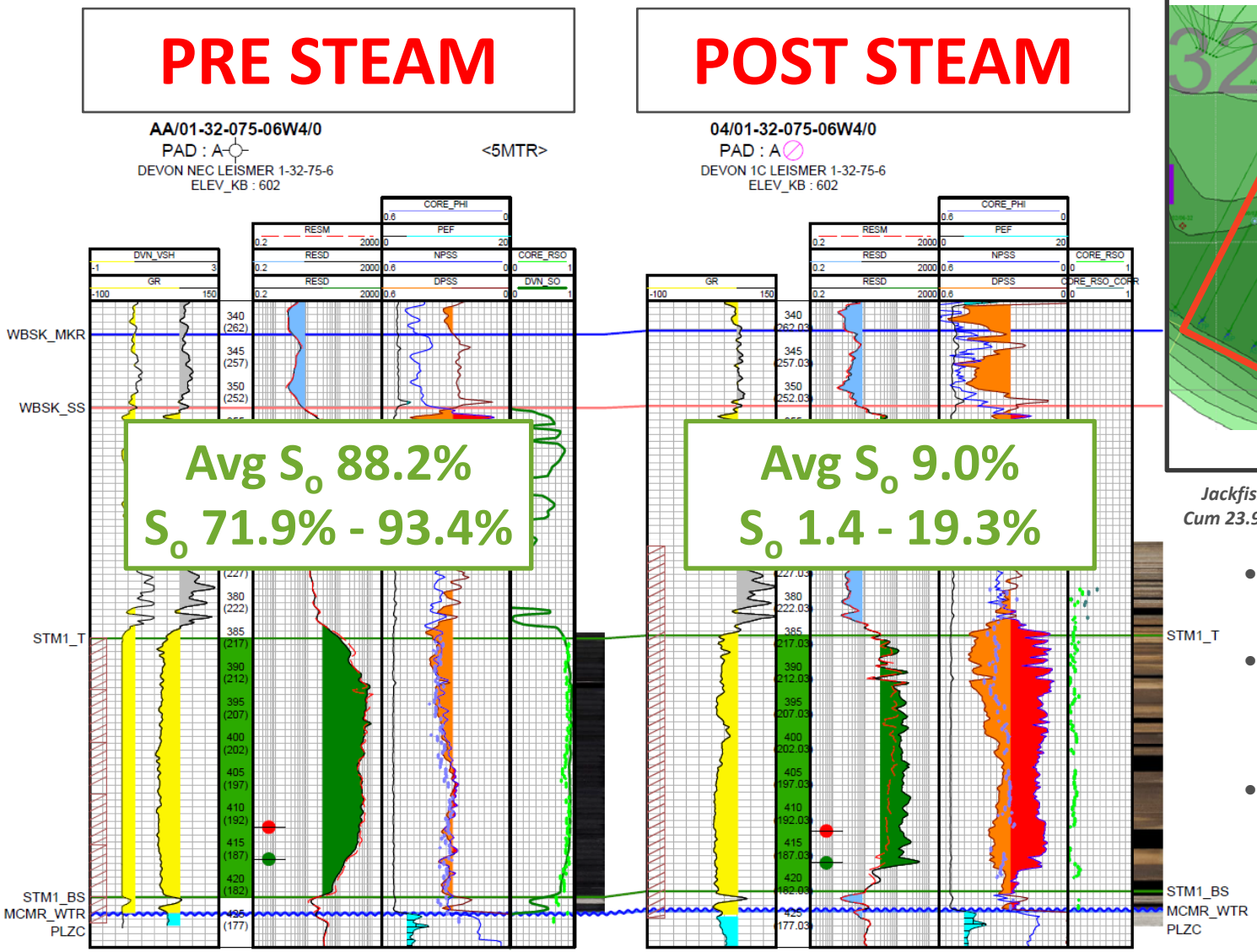
Full Caprock FMI Coverage: 152 wells
Partial Caprock FMI Coverage: 30 wells

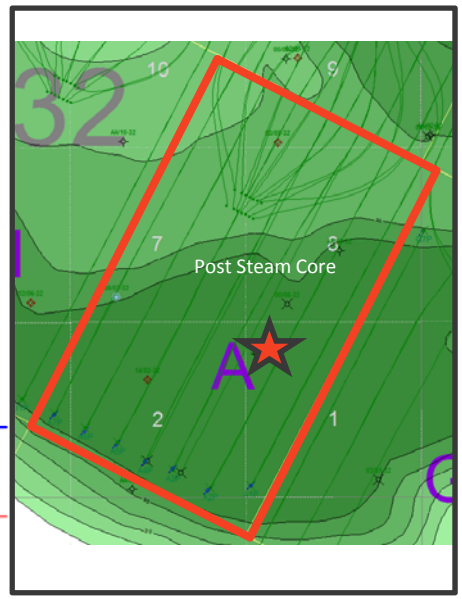
- 25 wells of 182 wells (14%) had evidence of fractures in the caprock
- Most fractures closed and exhibit insignificant (<20cm) or no bedding offset
- Fractures random & generally high angle (dip is 40-69º)

Pre & Post Steam Core & Logs

Jackfish 1 Pad A

3.1.1-2f



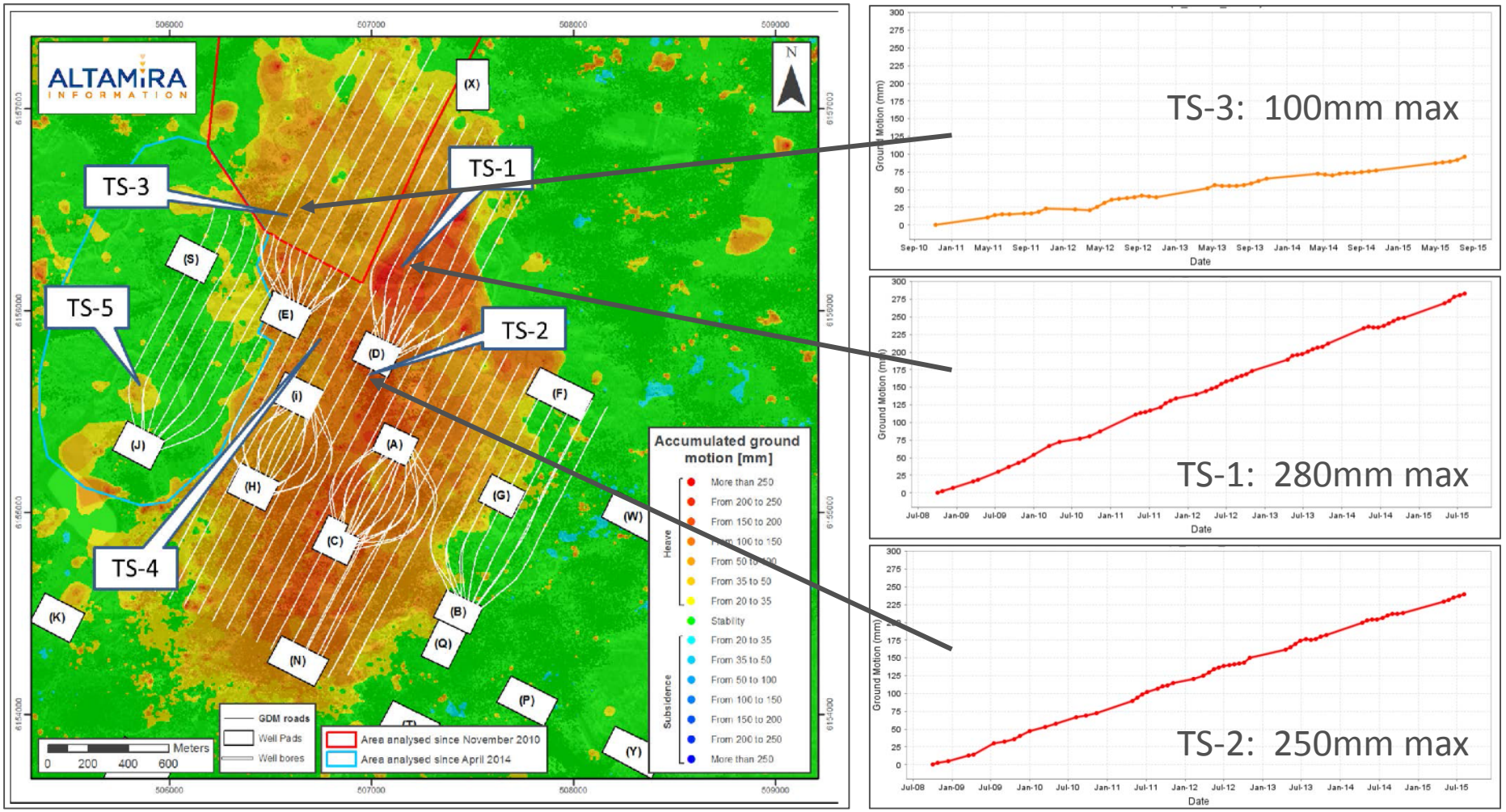


Jackfish 1 - Pad A (On Prod Q1 2008)
Cum 23.9 MMBbls – Producing 5000 BPD

- Devon's first steam core
- Drilled between A2 & A3 well pairs
- 86% core recovery

Jackfish 1
Accumulated Displacement 2008-2015

3.1.1-2k

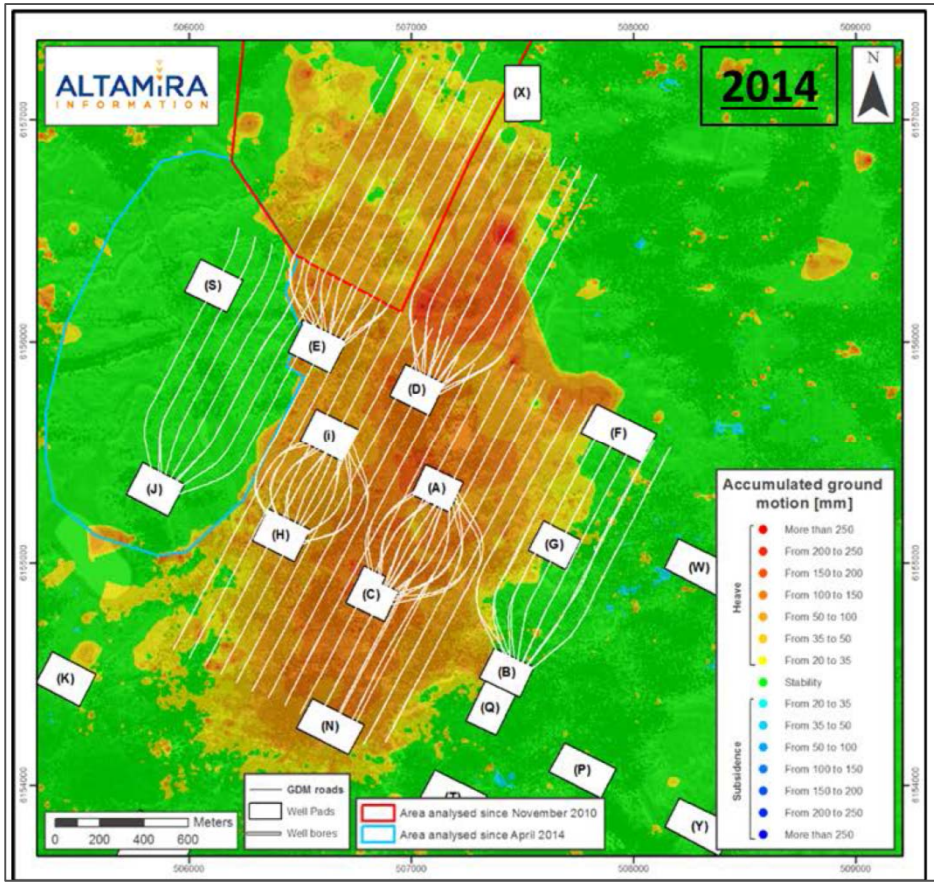


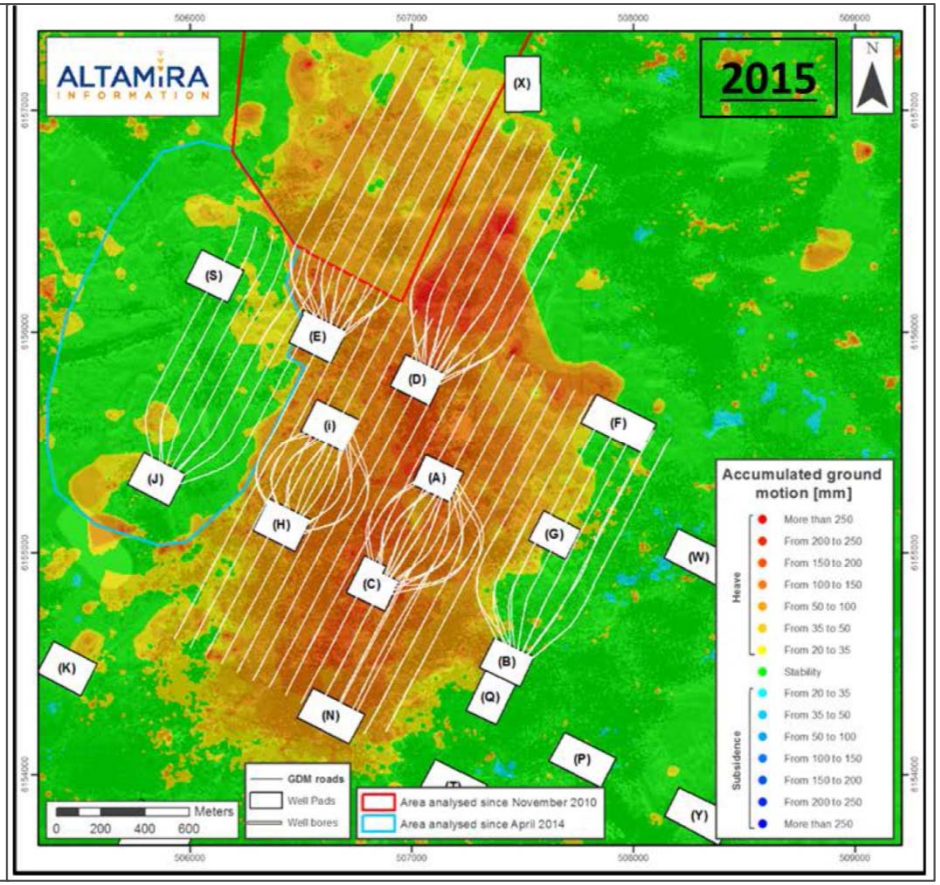
Jackfish 1 (2008-2015): max cumulative displacement: 280 mm (Pad D)

Jackfish 1

Comparing Accumulated Displacement 2014-2015

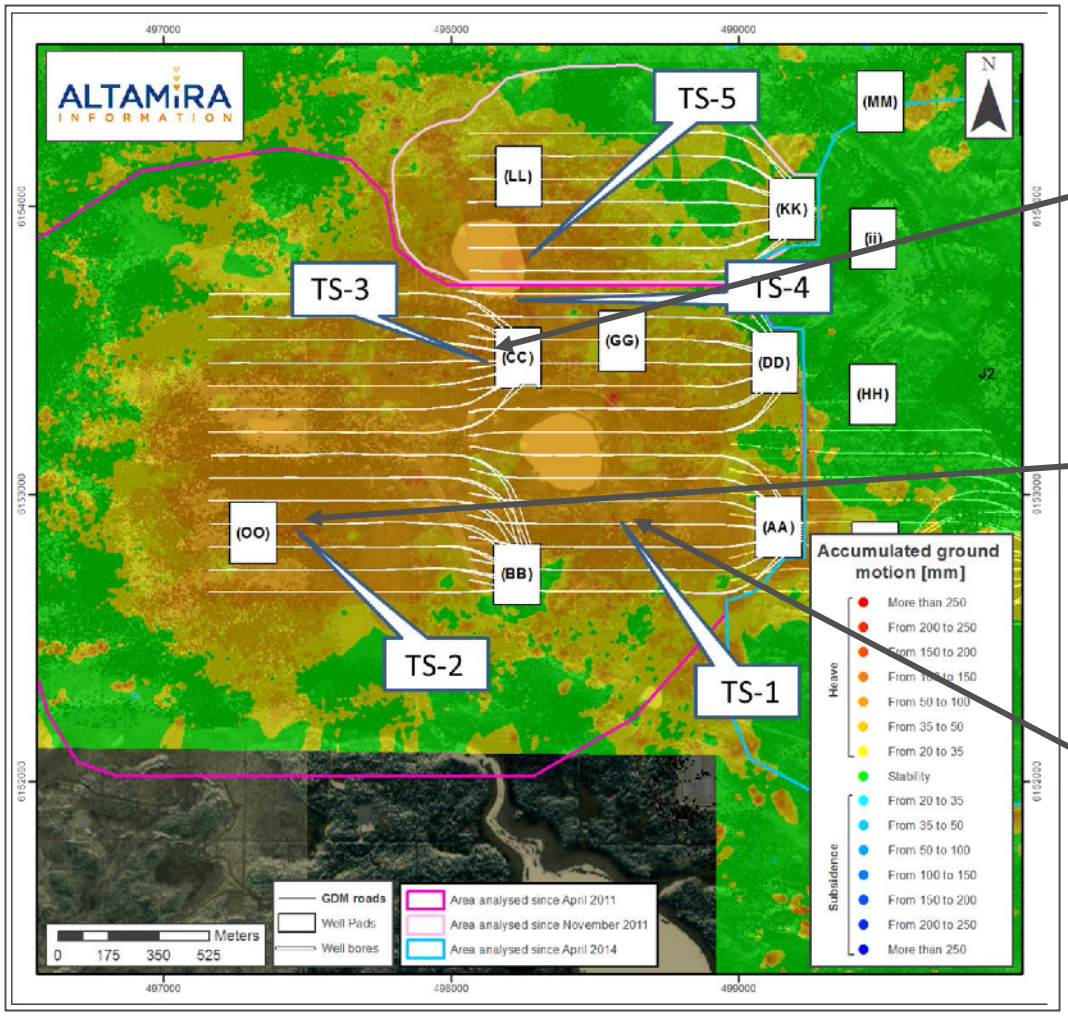
3.1.1-2k

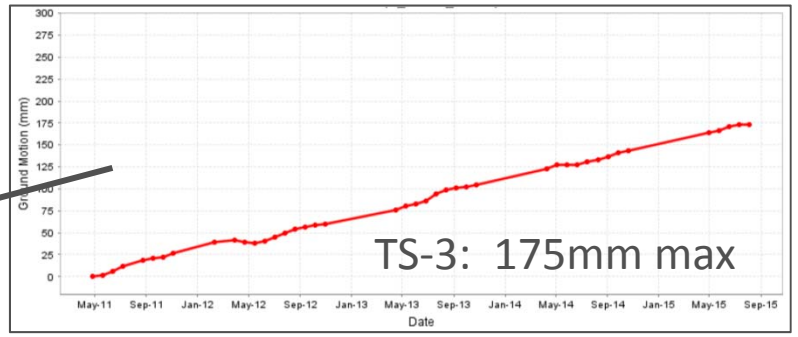


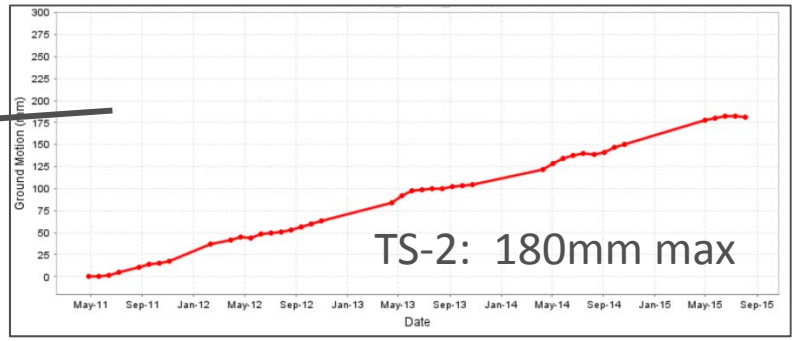


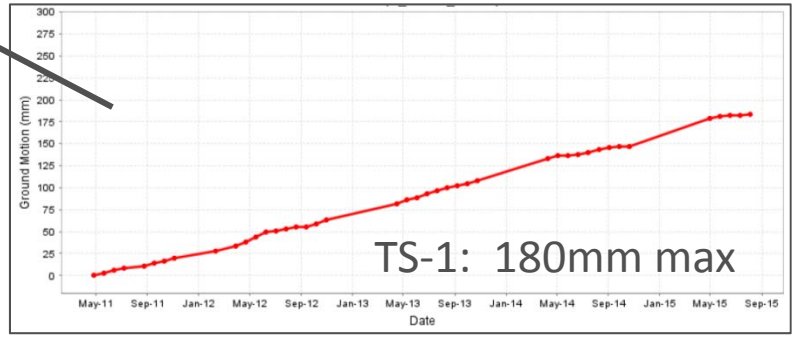
Jackfish 2
Accumulated Displacement 2008-2015

3.1.1-2k







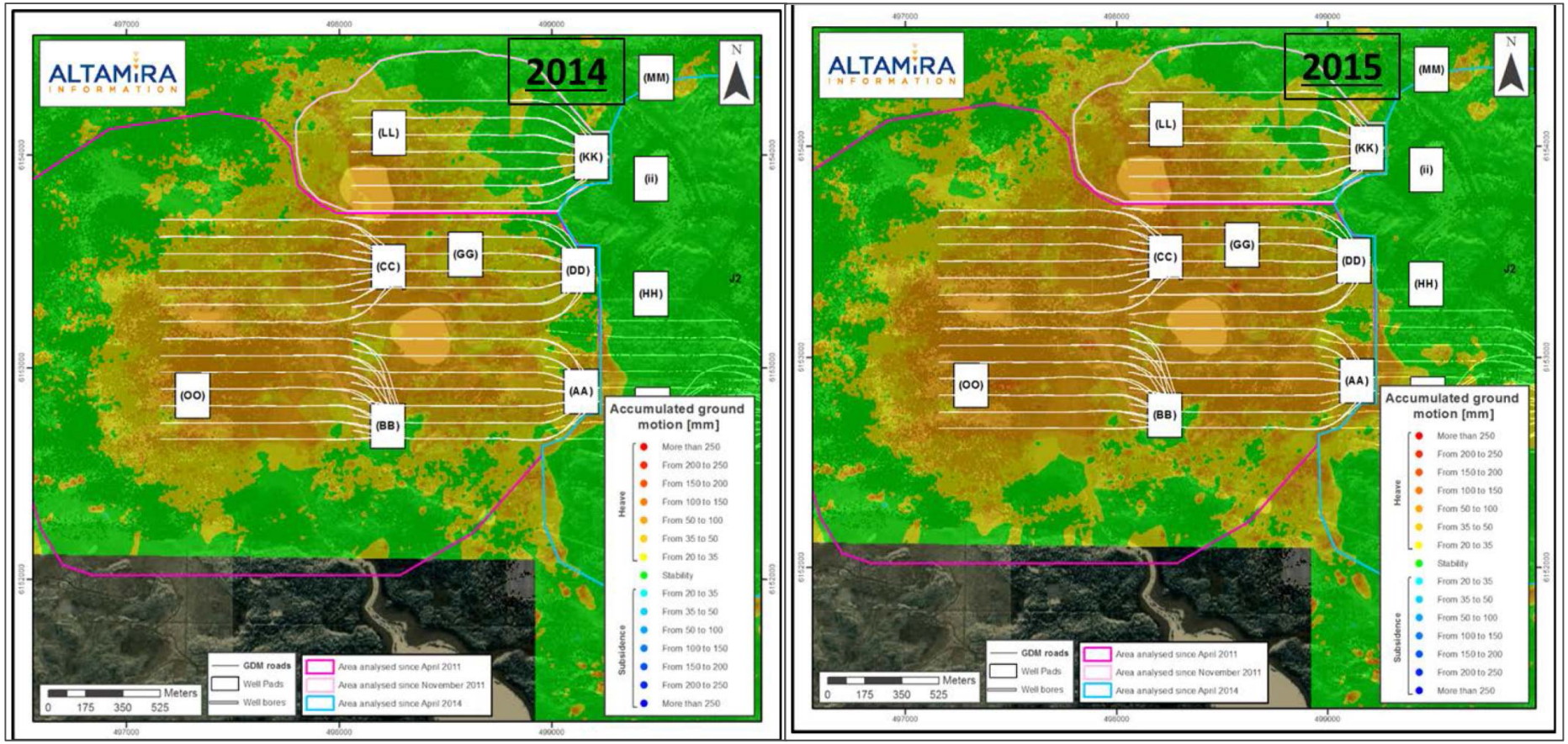


Jackfish 2 (2008-2015): max cumulative displacement: 180 mm (Pads AA/BB)

Jackfish 2

Comparing Accumulated Displacement 2014-2015

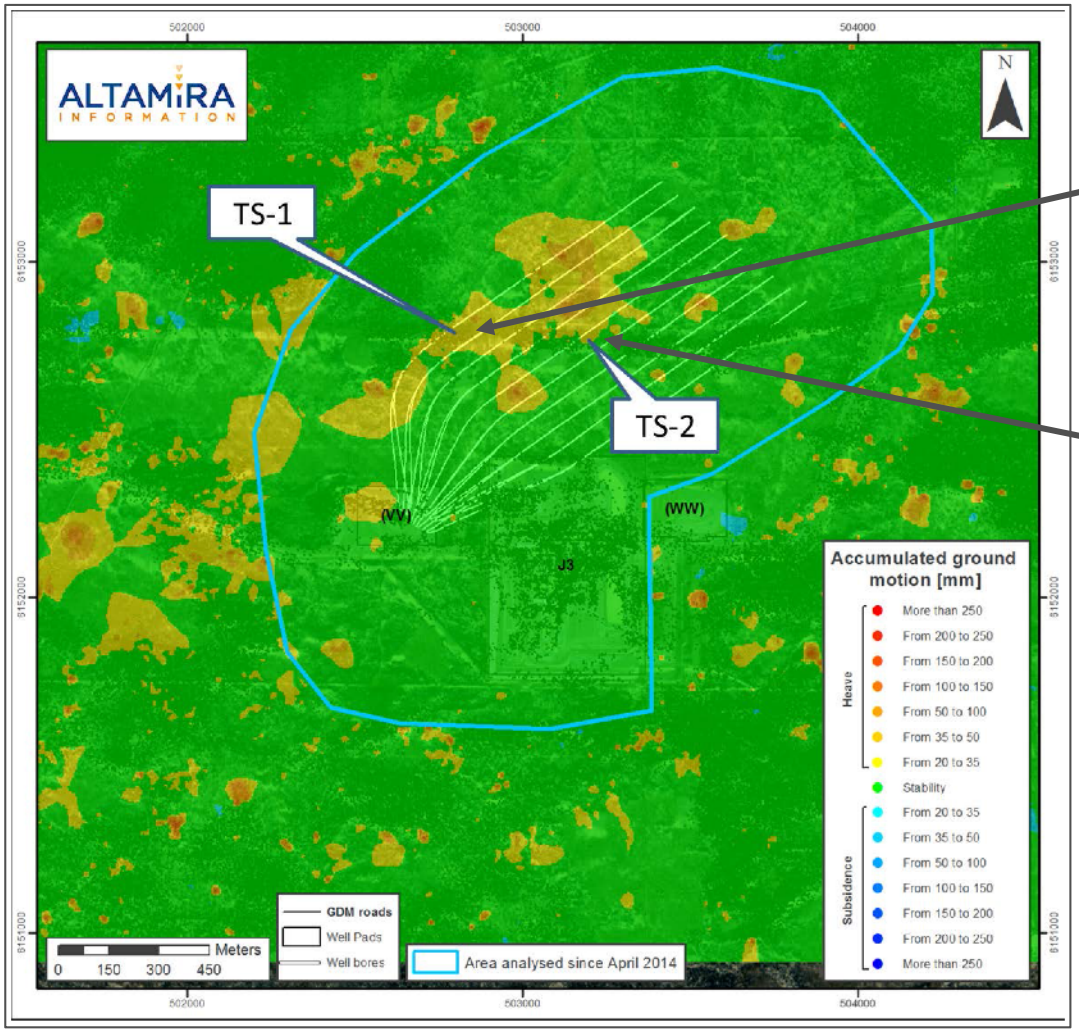
3.1.1-2k

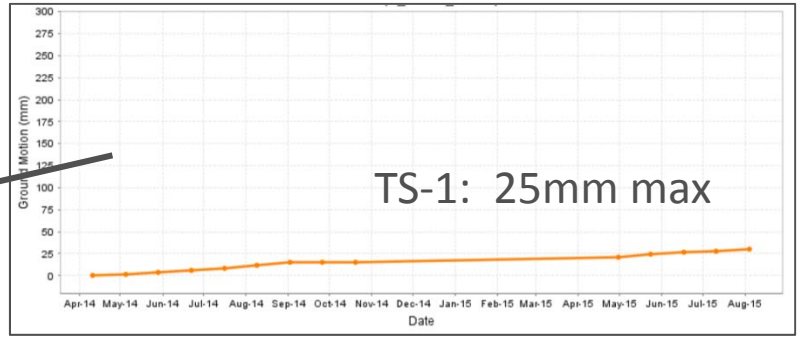


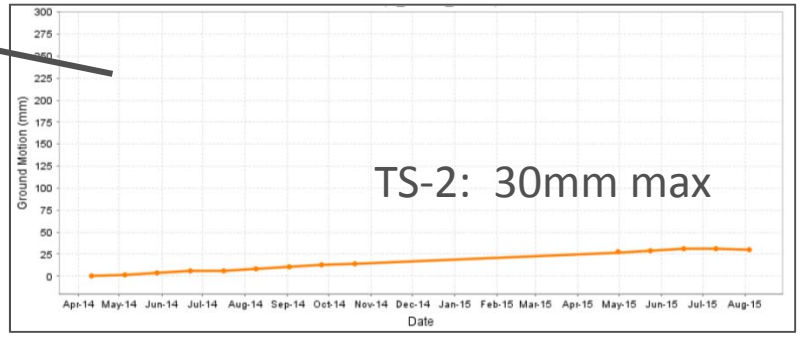
Jackfish 3

Accumulated Displacement 2008-2015

3.1.1-2k





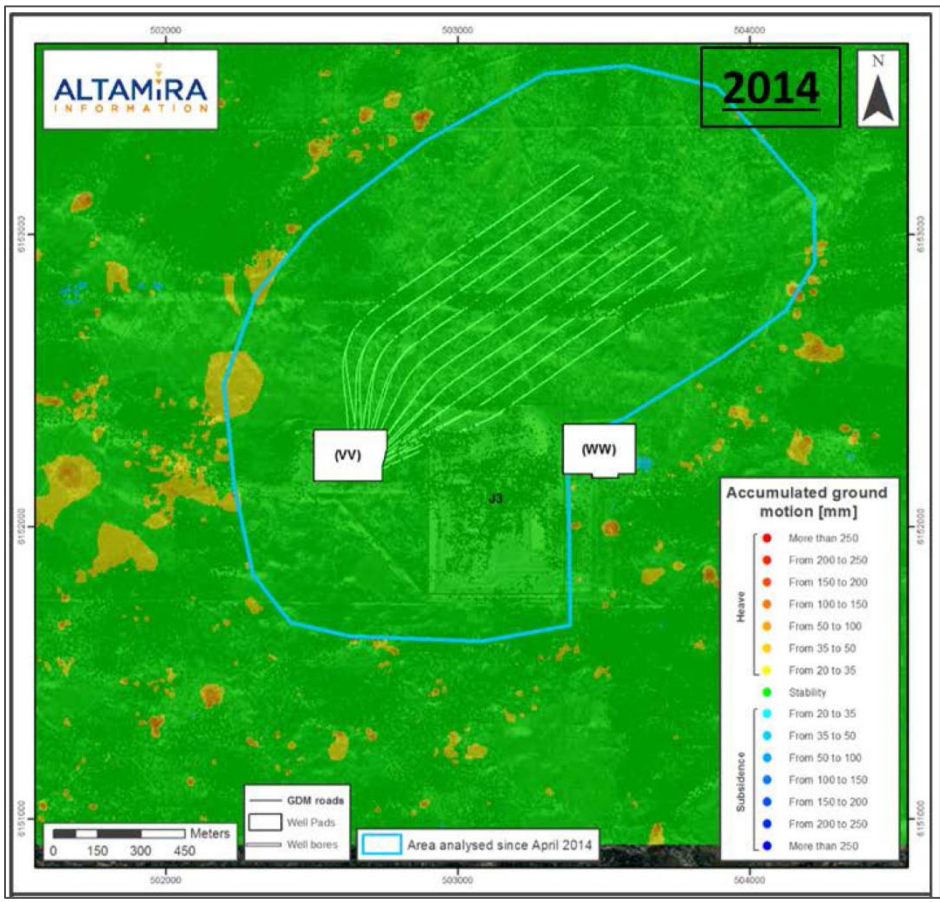


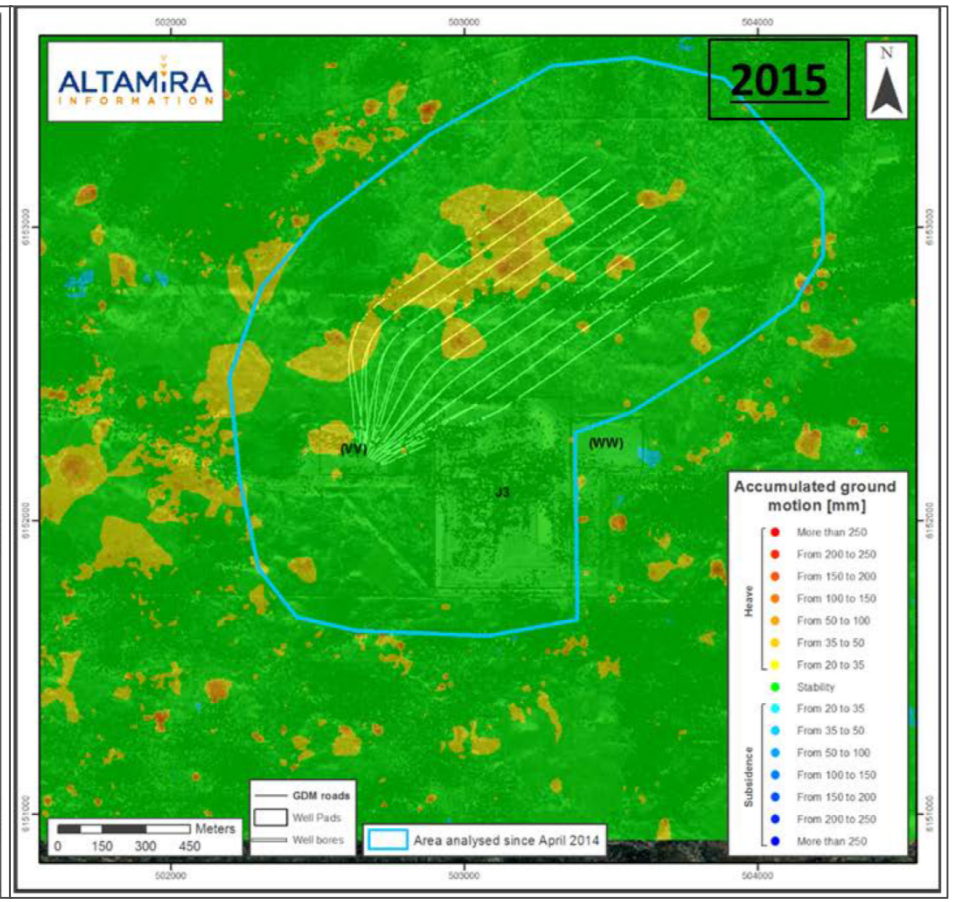
Jackfish 3 (2008-2015): max cumulative displacement: 30 mm (Pad VV)

Jackfish 3

Comparing Accumulated Displacement 2014-2015

3.1.1-2k





4-D Seismic

Section 3.1.1-6

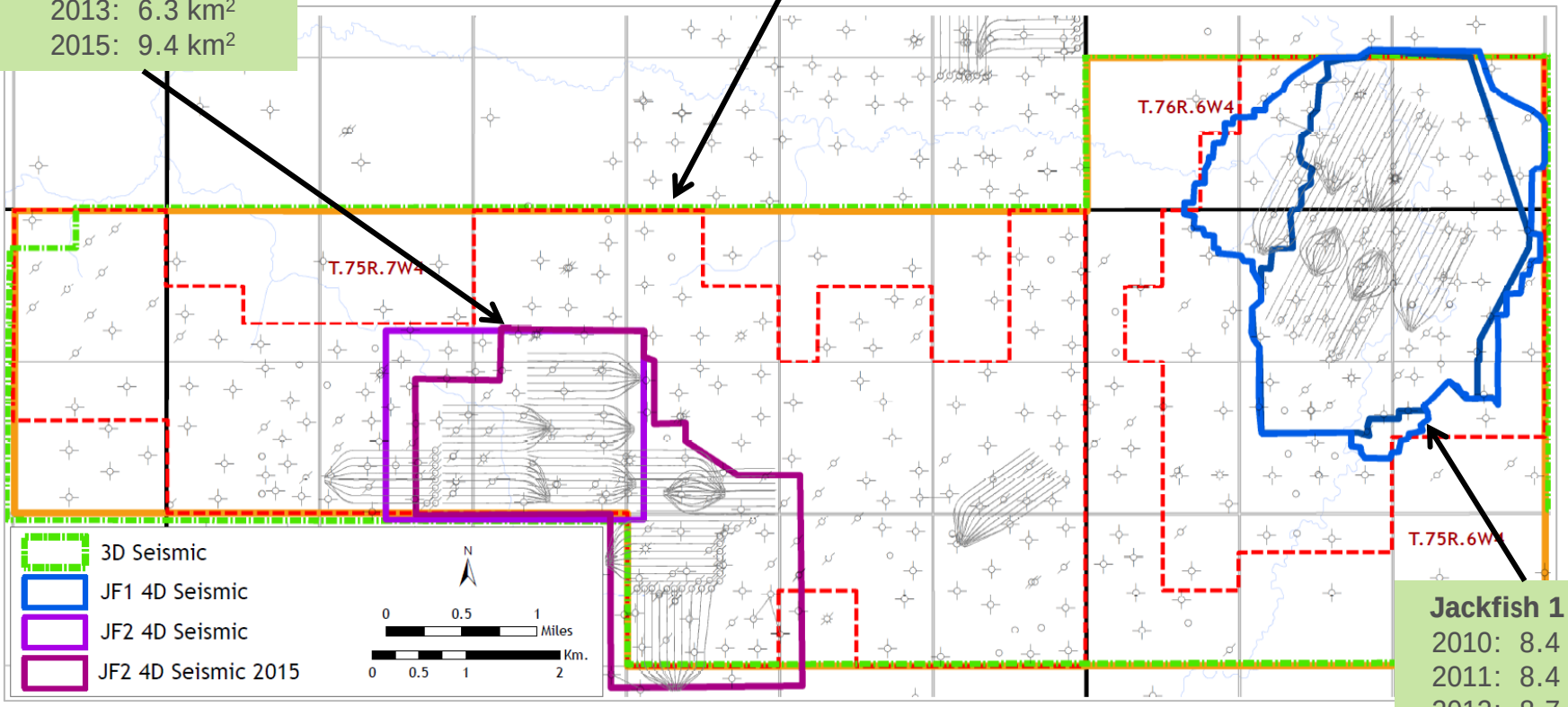
Seismic

Jackfish 3-D & 4-D Shoots

3.1.1-2l, 6a

2003-2008: Jackfish 3-D 23 km²

Jackfish 2 4-D
2013: 6.3 km²
2015: 9.4 km²

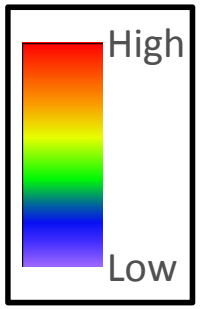


Jackfish 1 4-D
2010: 8.4 km²
2011: 8.4 km²
2012: 8.7 km²
2014: 11.6 km²

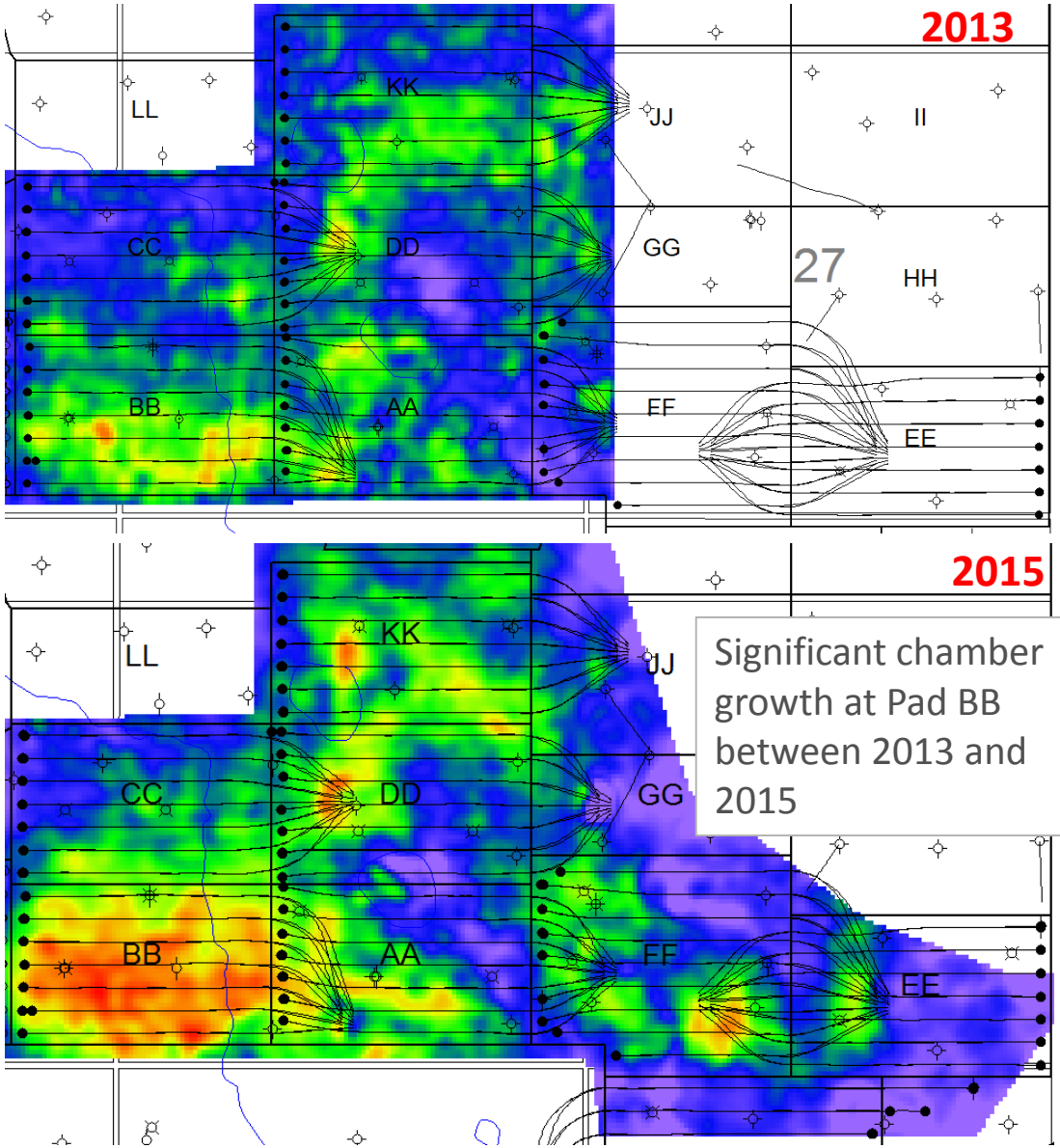
Jackfish 2 4-D Seismic Survey

2013 and 2014 Interpretation

3.1.1-6b



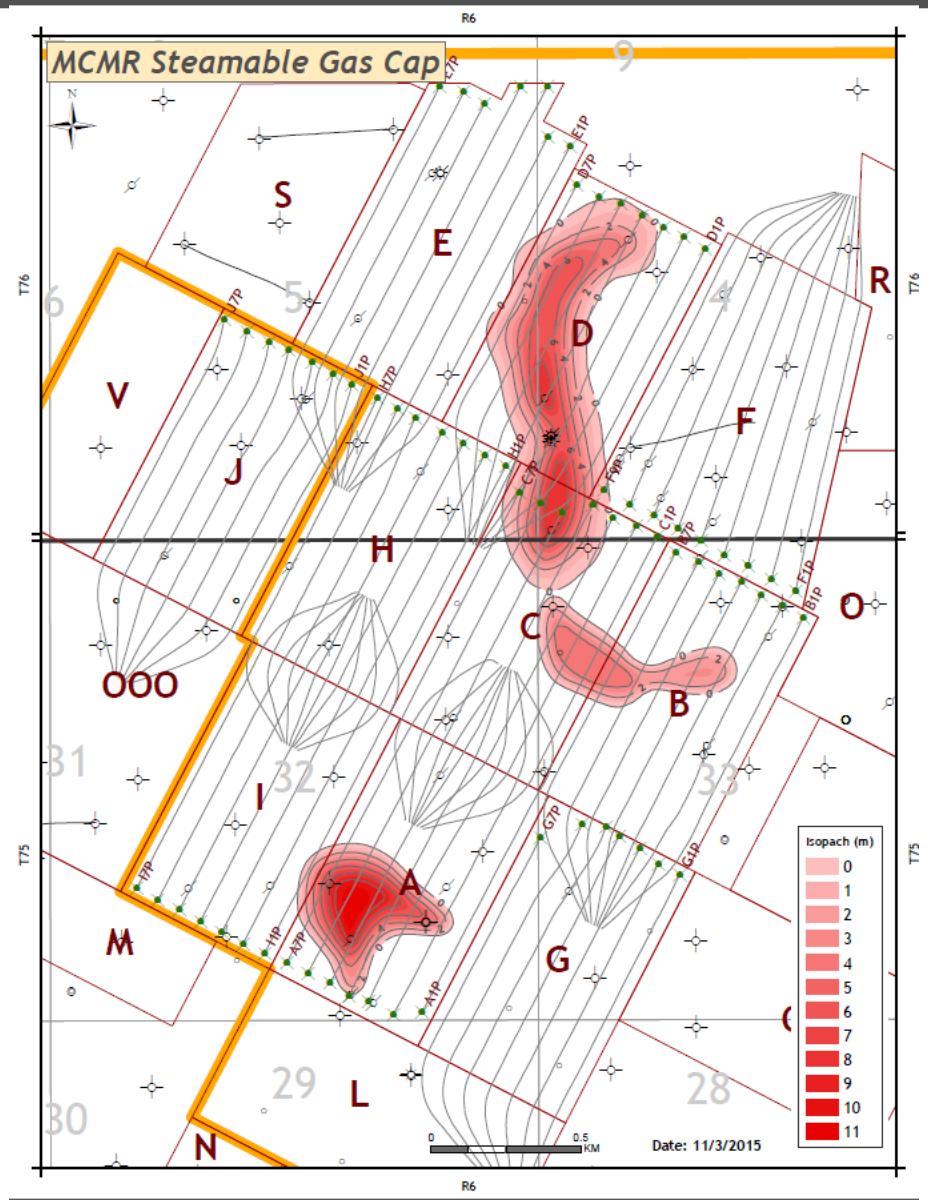
- Colour gradient represents BHL reflector time change from 2003 to 2013 and 2015
- Time delay is in direct relation to level of steam chamber development



Significant chamber growth at Pad BB between 2013 and 2015

4-D Seismic Survey

SIR



Drilling & Completions

Section 3.1.1-3

Drilling & Completions
Overview

3.1.1-3a

Operating SAGD Horizontal Wells

- **Jackfish 1:** 49 well pairs on 7 pads (Hz sections are 790 – 1,200m)
- **Jackfish 2:** 44 well pairs on 6 pads (Hz sections are 790 – 900m)
- **Jackfish 3:** 43 well pairs on 5 pads (Hz sections are 720 – 1,200m)

Observation Wells

- 41 SAGD observation wells in operation (2-3 per operating pad)
- 17 additional wells to be online
- 21 regional multi-zone monitoring wells equipped with piezometers

Service Wells

- 6 Grand Rapids brackish source water wells
- 2 McMurray brackish source water wells
- 13 water disposal wells (Class 1b)

Drilling & Completions
Jackfish 1 Overview – SAGD Wells

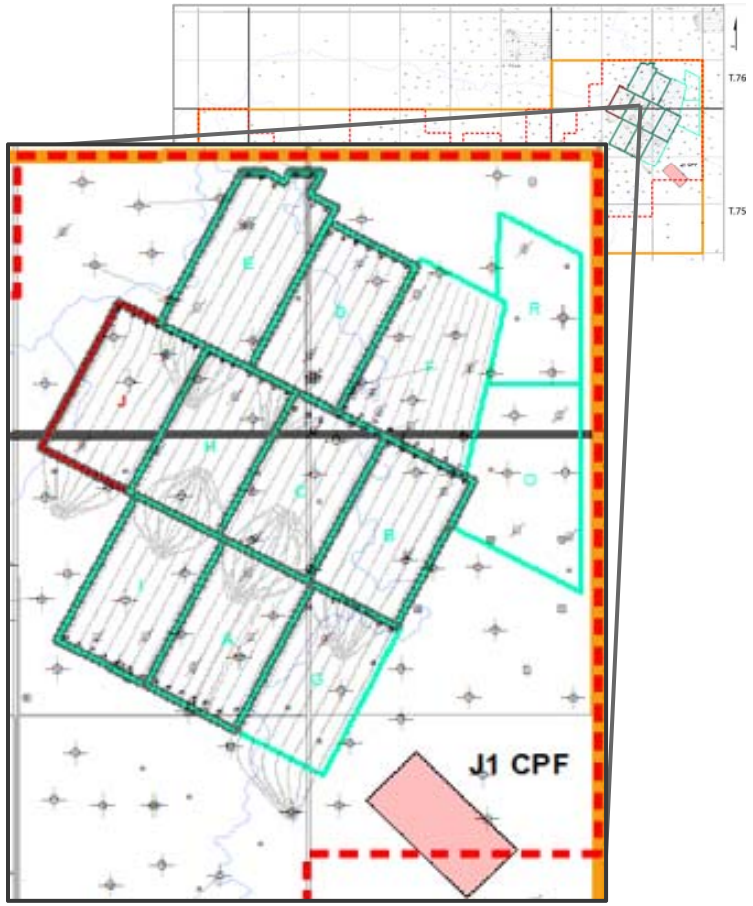
3.1.1-3a

Existing Pads

- Pad A, B, C, D, E, H & I: 7 well pairs per pad
- 2 observation wells per pad (heel and toe)

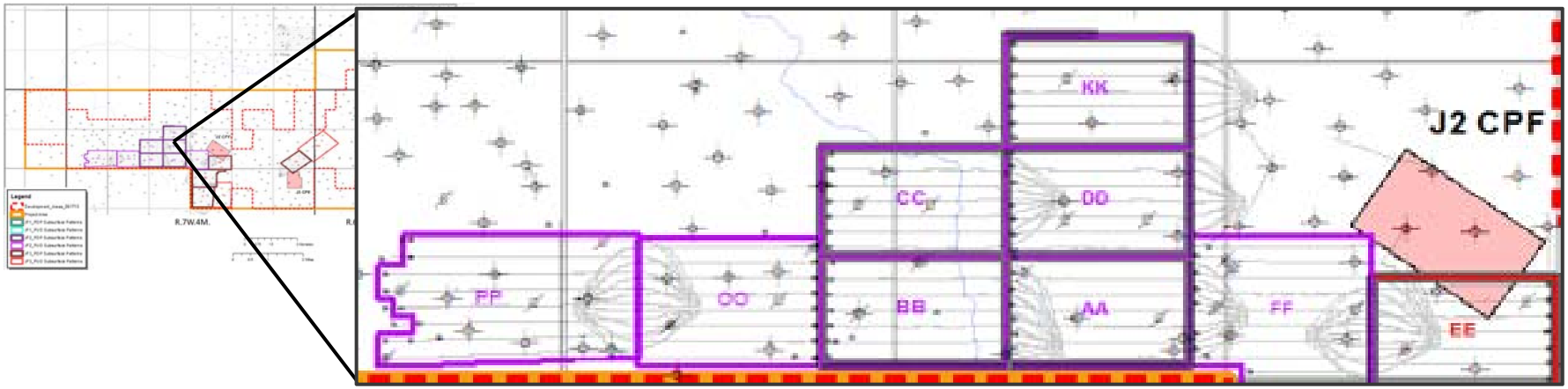
Future Pad Activity

- Pad G (7 well pairs) started Q3 2015
- Pad F (9 well pairs) to be started in 2016



Drilling & Completions
Jackfish 2 Overview – SAGD Wells

3.1.1-3a



Existing Pads

- Pad AA, BB, CC, DD & KK: 7 well pairs per pad
- Pad FF: 9 well pairs
- 2 observation wells per pad (heel and toe), 3 wells at Pad FF

Future Pad Activity

- Pad OO & PP (8 well pairs per pad) to be started in late 2015

Drilling & Completions
Jackfish 3 Overview – SAGD Wells

3.1.1-3a

Existing Pads

- Pad J & EE: 7 well pairs per pad
- Pad VV & K: 10 well pairs per pad
- Pad RR: 9 well pairs

Future Pad Activity

- Pad EEE (10 well pairs) to be started in 2017

Inter-well Spacing

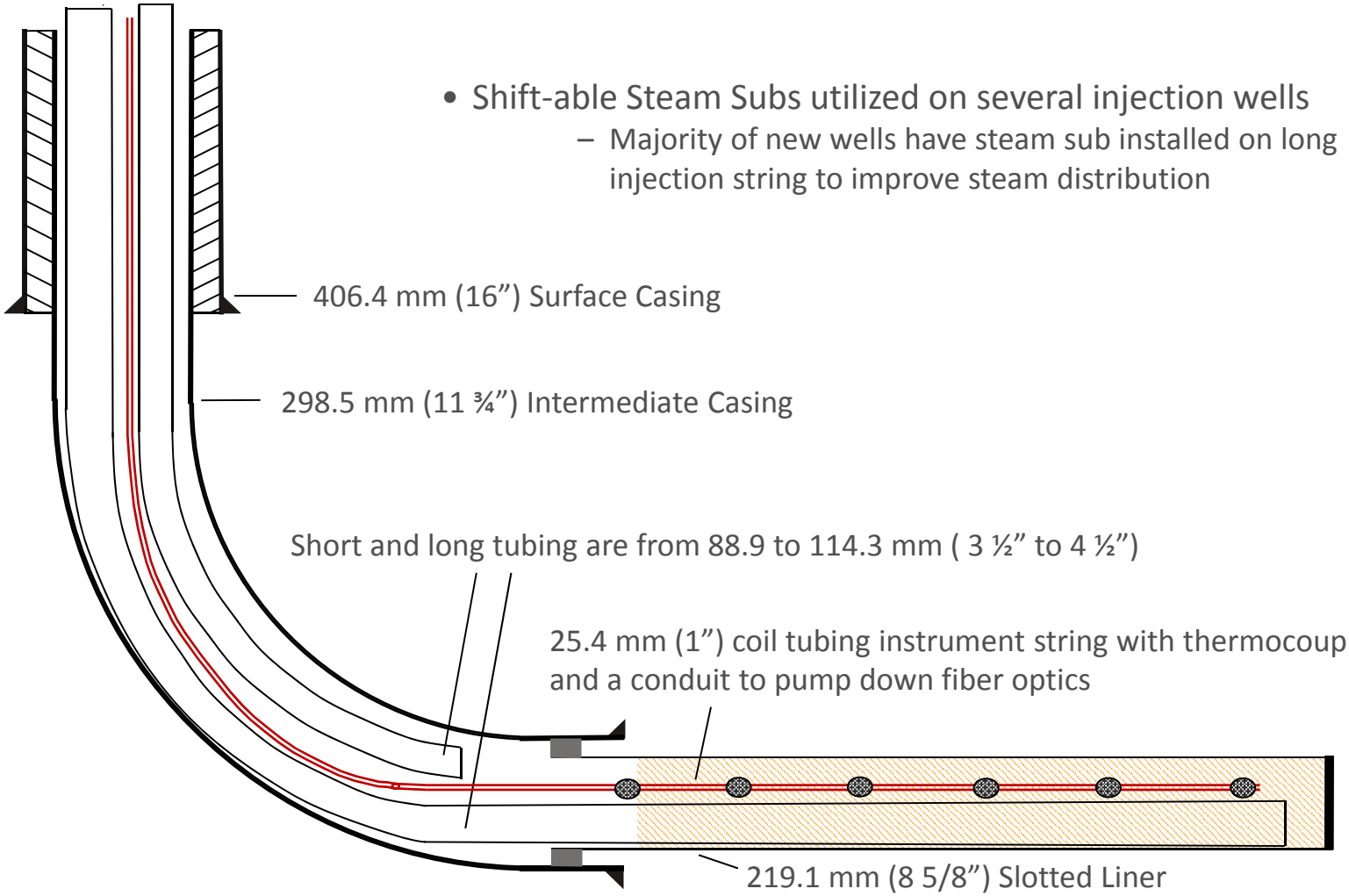
SIR

- Standard lateral inter-well spacing at Jackfish is 80m
- Currently drilled Pads that differ from the standard are:
  - Pad VV: Spacing of 60m
  - Pad F: 60m at the heels fanning to 90m at the toes (non-producing)

Drilling & Completions

Typical Injection Well Schematic

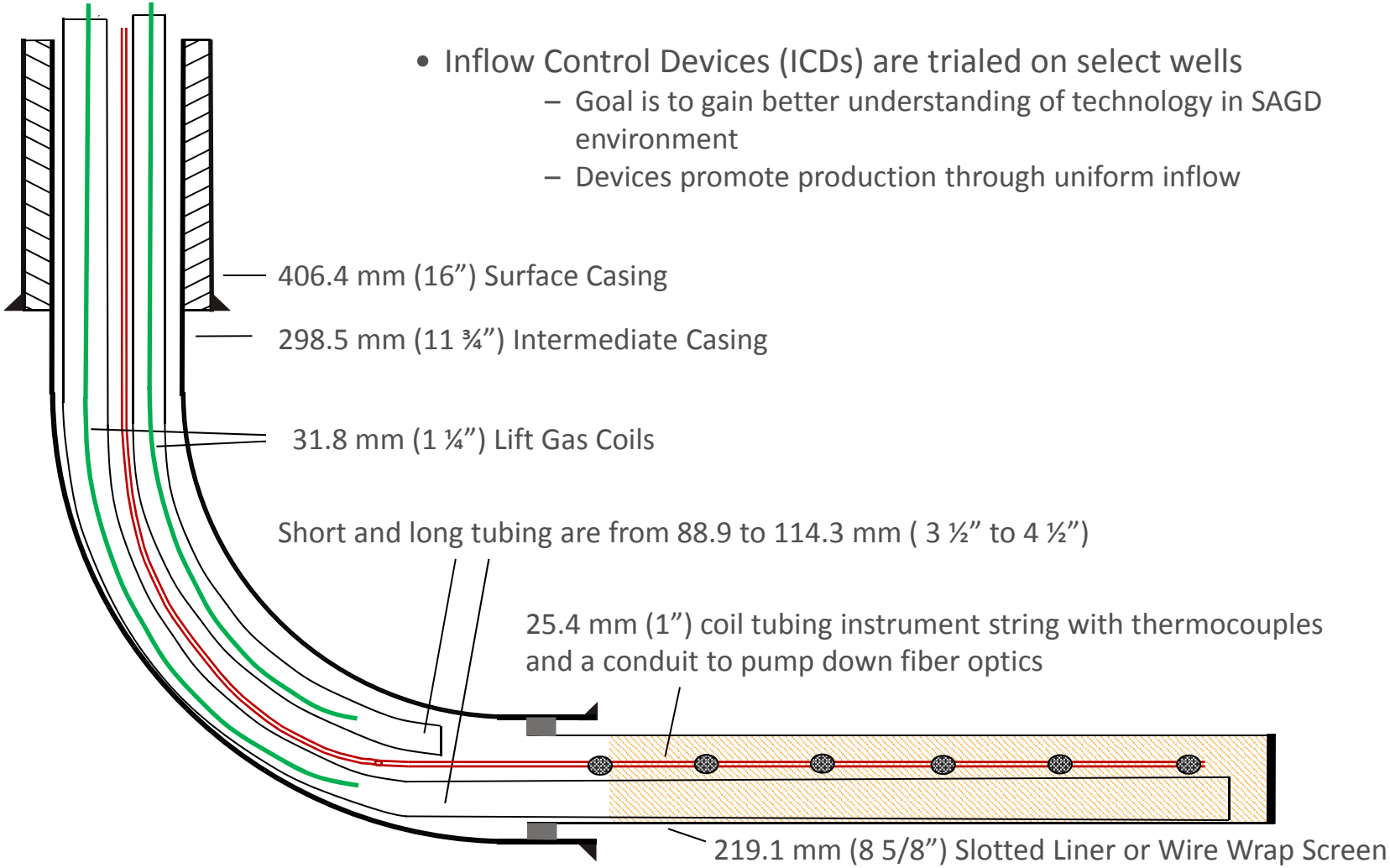
3.1.1-3c



- Shift-able Steam Subs utilized on several injection wells
  - Majority of new wells have steam sub installed on long injection string to improve steam distribution

Drilling & Completions
Typical Production Well Schematic

3.1.1-3c



- Inflow Control Devices (ICDs) are trialed on select wells
  - Goal is to gain better understanding of technology in SAGD environment
  - Devices promote production through uniform inflow

Drilling & Completions
Inflow Control Devices (ICDs)

3.1.1-3c

- Tubing Deployed systems on CC1P, DD2P, Ddrict
  - Installed successfully via service rig
- Liner Deployed systems on RR2P, RR6P
  - Installed successfully via drilling rig
- Key Learnings
  - Actual pressure drops through ICDs different than designed
  - Additional testing needed to understand multiphase flow through ICDs

Wire Wrapped Screens

Update

SIR

- Wire wrapped screens are currently considered the producer sand control liner standard for all future pads at Jackfish
- First implementation will be at Jackfish 1 - Pad F
  - Expected first steam in Q3 2016
- Expected benefits of wire wrapped screens:
  - Reduced liner pressure drop
  - Increased open flow area
  - Mechanical strength
  - Sand control

Liner Failures

SIR

- There have been no confirmed liner failures and no re-drills for this reporting period

Artificial Lift

Section 3.1.1-4

Artificial Lift

3.1.1-4a, b

- Gas lift is currently used for artificial lift at Jackfish District
- Gas lift continues to be an effective lift strategy for Jackfish operating conditions
  - Typical producer operating pressure above 1,800 kPag
  - Ability to handle over 1,000 m^3/day emulsion flow
  - No operating temperature limitation
- One ESP installed in 2015 (B3P)
  - B3P was selected due to life issues caused by high pressure drop when operating on gas lift
  - Plan to continue to evaluate feasibility and deploy ESPs as deemed necessary

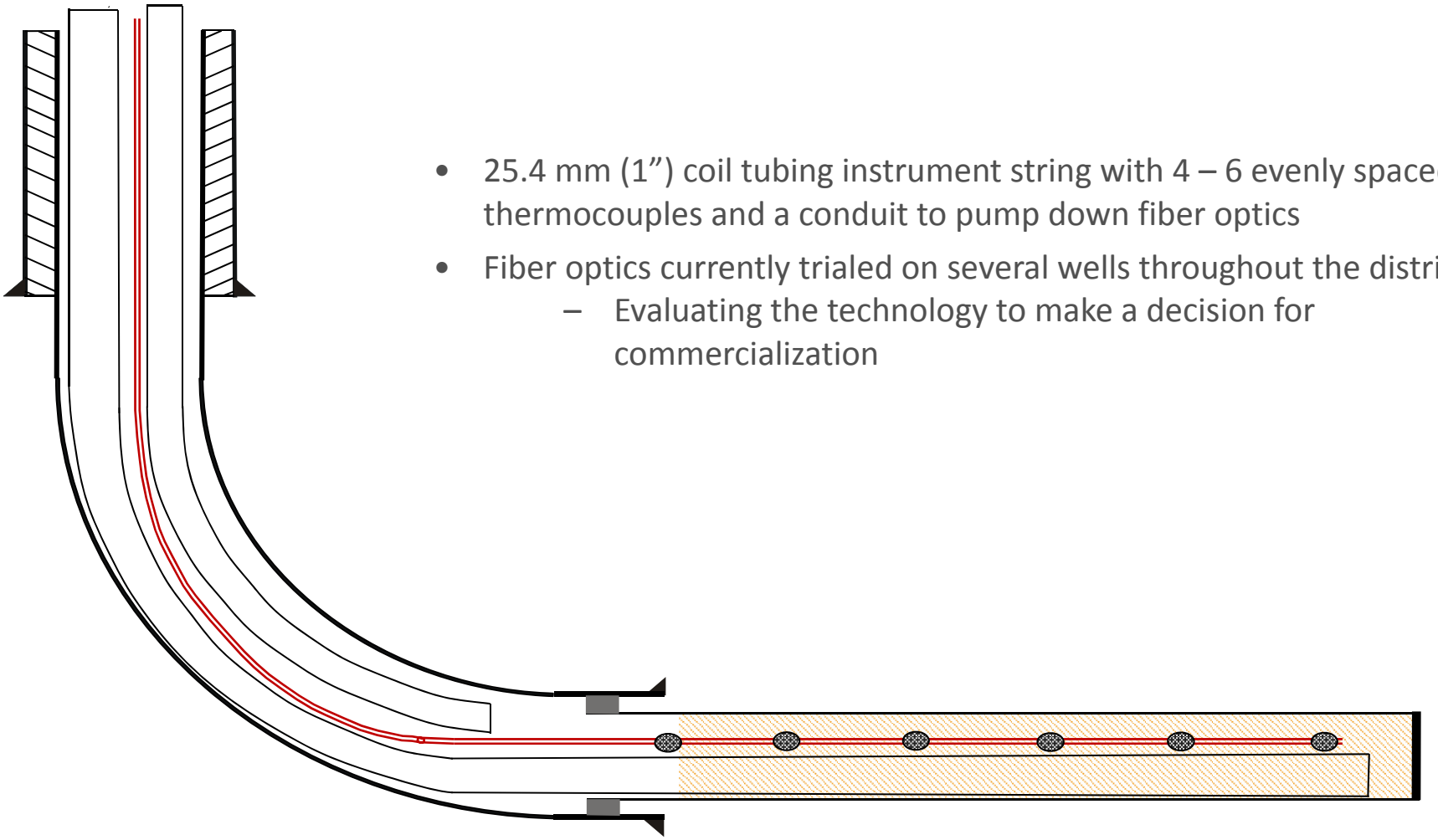
Instrumentation

Section 3.1.1-5

Instrumentation in Wells

SAGD Injection & Producer Wells

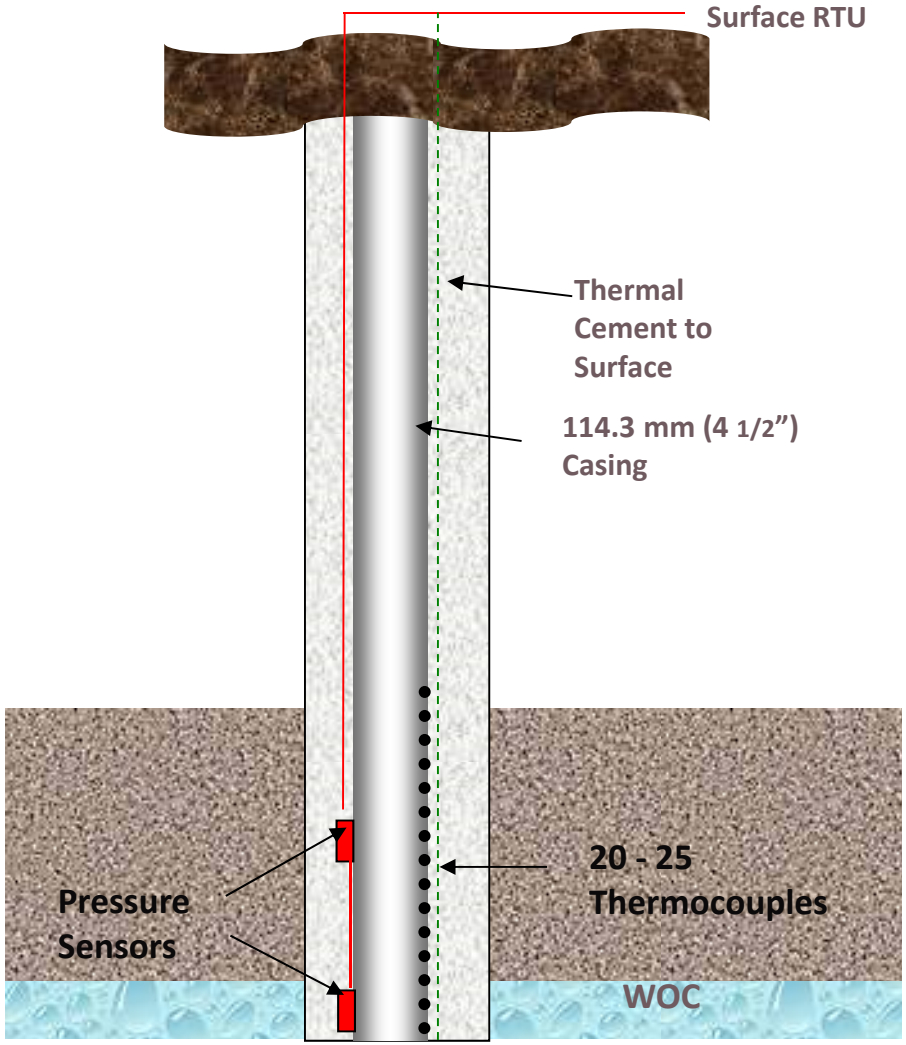
3.1.1-5b



- 25.4 mm (1”) coil tubing instrument string with 4 – 6 evenly spaced thermocouples and a conduit to pump down fiber optics
- Fiber optics currently trialed on several wells throughout the district
  - Evaluating the technology to make a decision for commercialization

Instrumentation in Wells
SAGD Observation Wells

3.1.1-5b



Jackfish 1, 2, & 3 SAGD observation wells contain:

- 20 points thermocouples (25 points in more recently drilled wells), spaced above, below & within pay interval
- 2 pressure sensors*, one in the bitumen and the other in the basal water

*New Jackfish 3 wells have an additional pressure sensor near the top of the McMurray

Instrumentation in Wells
SAGD Observation Wells

3.1.1-5b

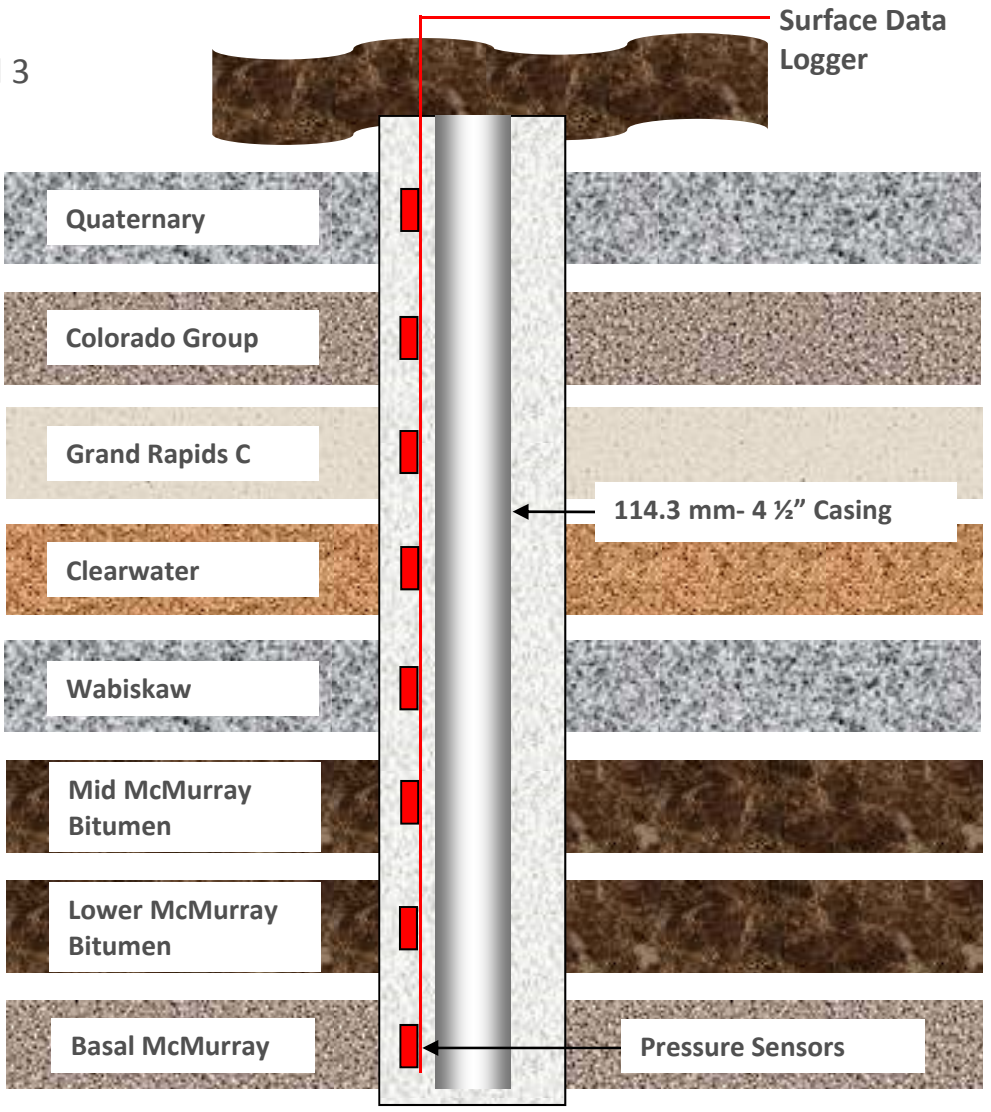
Monitoring wells cover areas of Jackfish 1, 2, and 3

Twenty-one wells

- 00/07-32-75-6W4 (5 piezometers)
- F1/08-28-75-6W4 (4 piezometers)
- F1/09-14-75-6W4 (4 piezometers)
- F1/12-31-75-6W4 (4 piezometers)
- F1/10-22-75-6W4 (5 piezometers)
- F1/04-26-75-7W4 (5 piezometers)
- F1/06-28-75-7W4 (5 piezometers)
- F1/15-19-75-6W4 (5 piezometers)
- F1/09-24-75-7W4 (5 piezometers)
- F1/14-25-75-6W4 (5 piezometers)
- F1/05-12-75-6W4 (5 piezometers)
- F1/09-22-75-7W4 (4 piezometers)
- 02/12-23-75-7W4 (4 piezometers) *
- 02/01-35-75-7W4 (3 piezometers)
- 00/15-07-75-5W4 (4 piezometers)
- 00/07-22-75-7W4 (2 piezometers)
- 00/03-15-75-6W4 (3 piezometers) **
- 02/09-33-75-6W4 (4 piezometers)
- 00/04-30-75-7W4 (3 piezometers)
- 00/01-19-75-6W4 (3 piezometers) **
- 00/11-30-75-6W4 (5 piezometers)

* Perf with a Level Logger

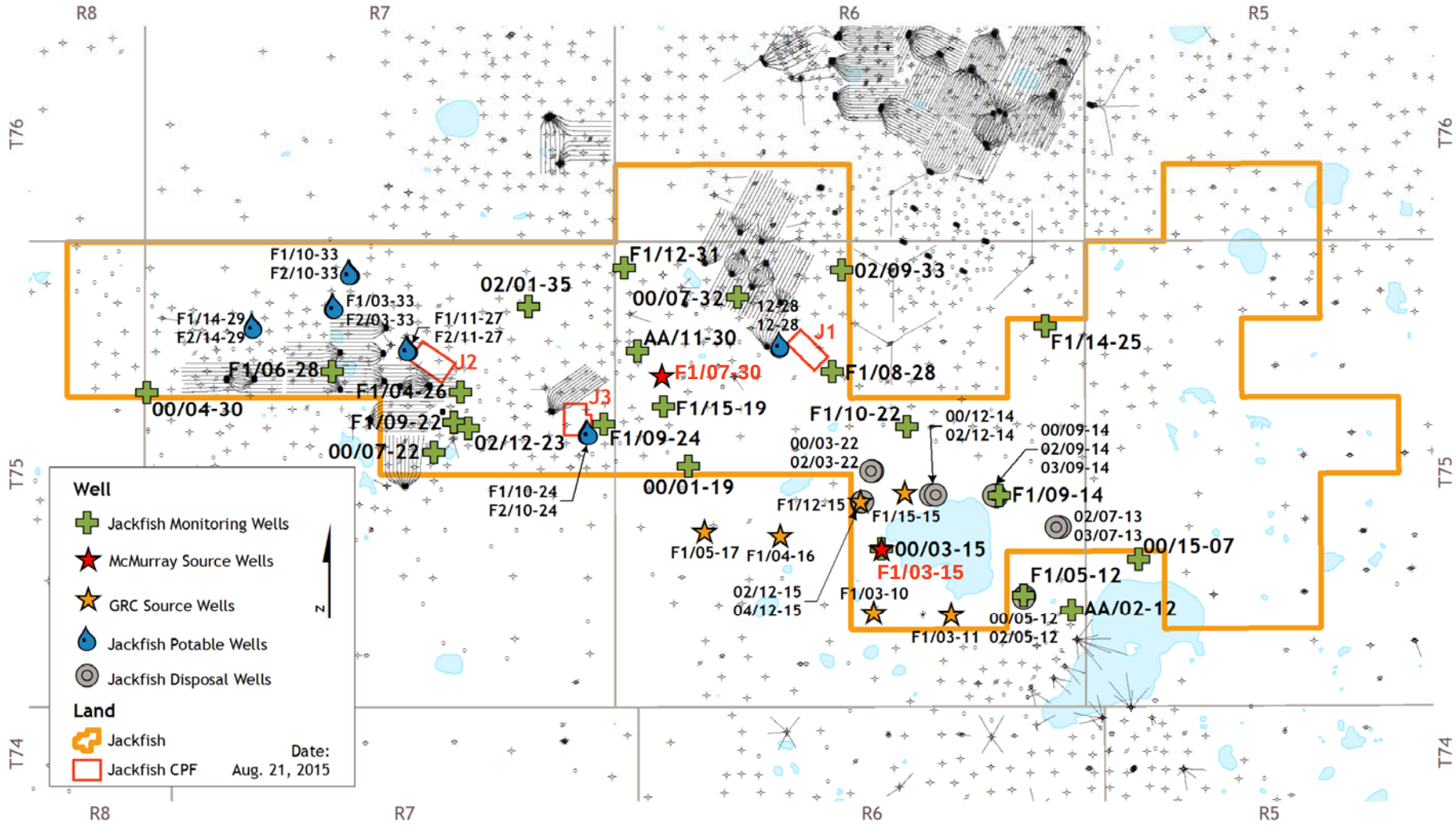
** Perf for water sampling



Instrumentation

Regional Multi-zone Monitoring Wells

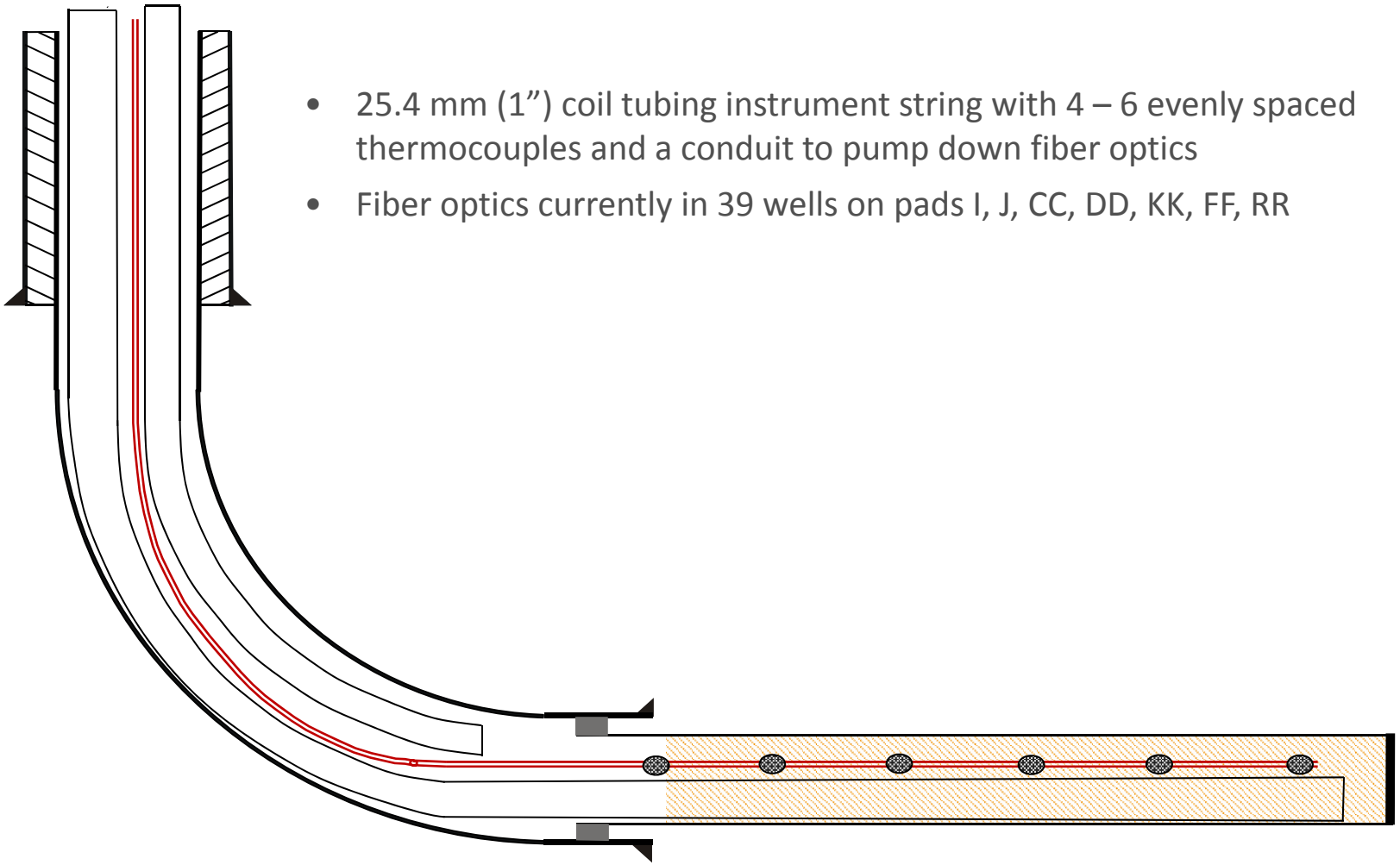
3.1.1-5b



Instrumentation in Wells

SAGD Injection & Producer Wells

3.1.1-5b

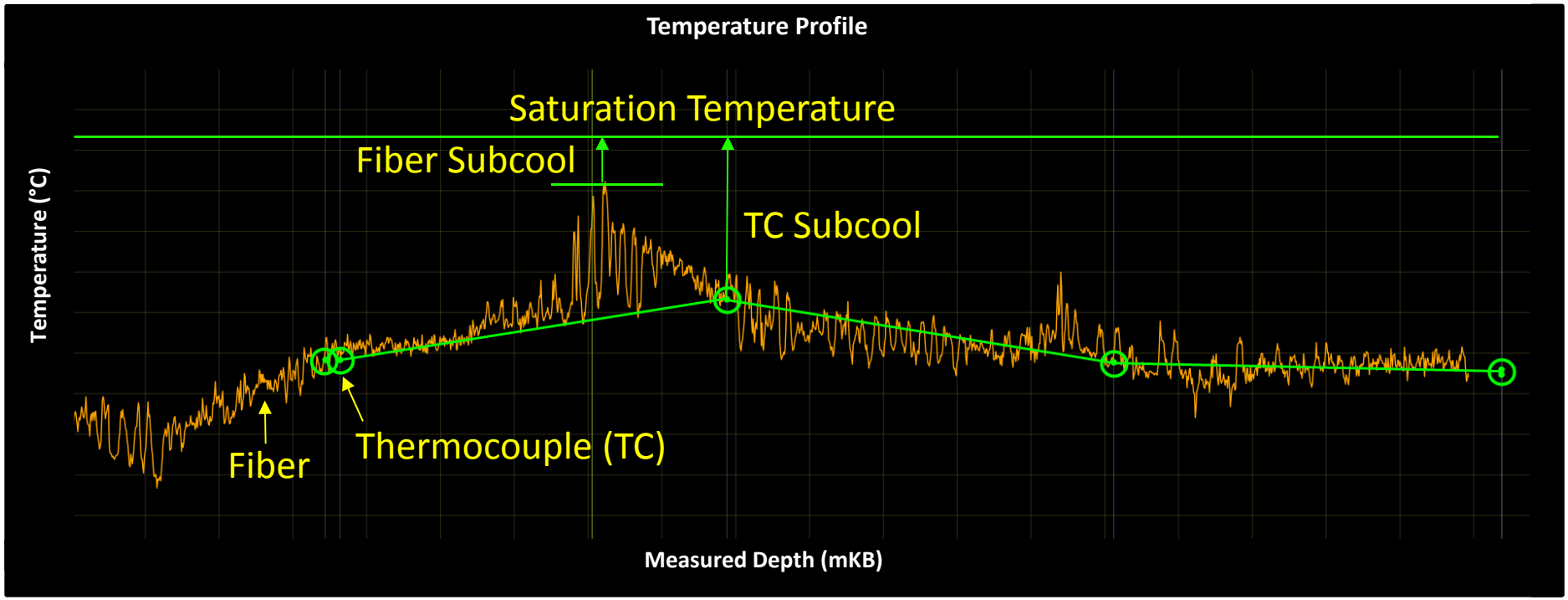


- 25.4 mm (1”) coil tubing instrument string with 4 – 6 evenly spaced thermocouples and a conduit to pump down fiber optics
- Fiber optics currently in 39 wells on pads I, J, CC, DD, KK, FF, RR

Instrumentation in Wells

Fiber Optics Learnings

3.1.1-5b



- Fiber provides high granularity data that can be missed by thermocouples
- Increased monitoring of data quality required to ensure fiber integrity and data collection systems are fully functional
- Continuing to evaluate the technology and deploy as required based on technical and economic merit

Instrumentation in Wells
Downhole Pressure Monitoring

3.1.1-5b

Various methods are used simultaneously to monitor down hole pressure

For Injector Wells:

- Using thermocouples / fiber optics temperature data to convert downhole live steam temperature from T_{sat} to P_{sat}*
- Conducting annulus blanket gas pressure survey on weekly basis
- Calculate downhole pressure based on surface steam injection pressures on short and long tubing strings
  - BHP = steam injection surface pressure – frictional losses
- Conducting periodic near-zero steam injection rate test to estimate bottomhole pressure from surface injection pressure

* Prior initial start up of circulation, well pairs would be purged to eliminate dead fluid column inside the wellbore. Historical data also showed such procedures improve warm up time in the horizontal wellbore section.

For Producer Wells:

- Use concentric open-ended lift gas (LG) coiled tubing to calculate down hole pressure
  - BHP = LG surface pressure – frictional losses + static head
  - Frictional losses are correlated/calculated by performing numerous gas lift step rate tests
- Validation of the above correlation is re-assured by periodic annulus blanket gas pressure surveys

Scheme Performance

Section 3.1.1-7

Scheme Performance Prediction

Jackfish

3.1.1-7a

- Well pair performance based numerical simulation, analogue-based methods, combined with empirical and analytical forecasting
- Well capability forecasted and subsequent well and plant service factors applied
- Service factors based on historical data, future plans and quantified risks

Scheme Performance
Jackfish Overview

3.1.1-7a

Jackfish 1

- Production is approximately 5,250 m^3/d (33,000 bbl/d)
- Current CSOR is approximately 2.5 which is below initial plant design of 2.65
- 49 wells currently on production from 7 pads

Jackfish 2

- Production is approximately 4,530 m^3/d (28,500 bbl/d)
- Current CSOR is 3.0, above plant design of 2.65
- 44 wells currently on production from 6 pads

Jackfish 3

- Production is approximately 5,720 m^3/d (36,000 bbl/d)
- Current ISOR is approximately 2.10 which is below initial plant design of 2.65
- 43 wells currently on production from 5 pads

Scheme Performance
Turnaround Frequency

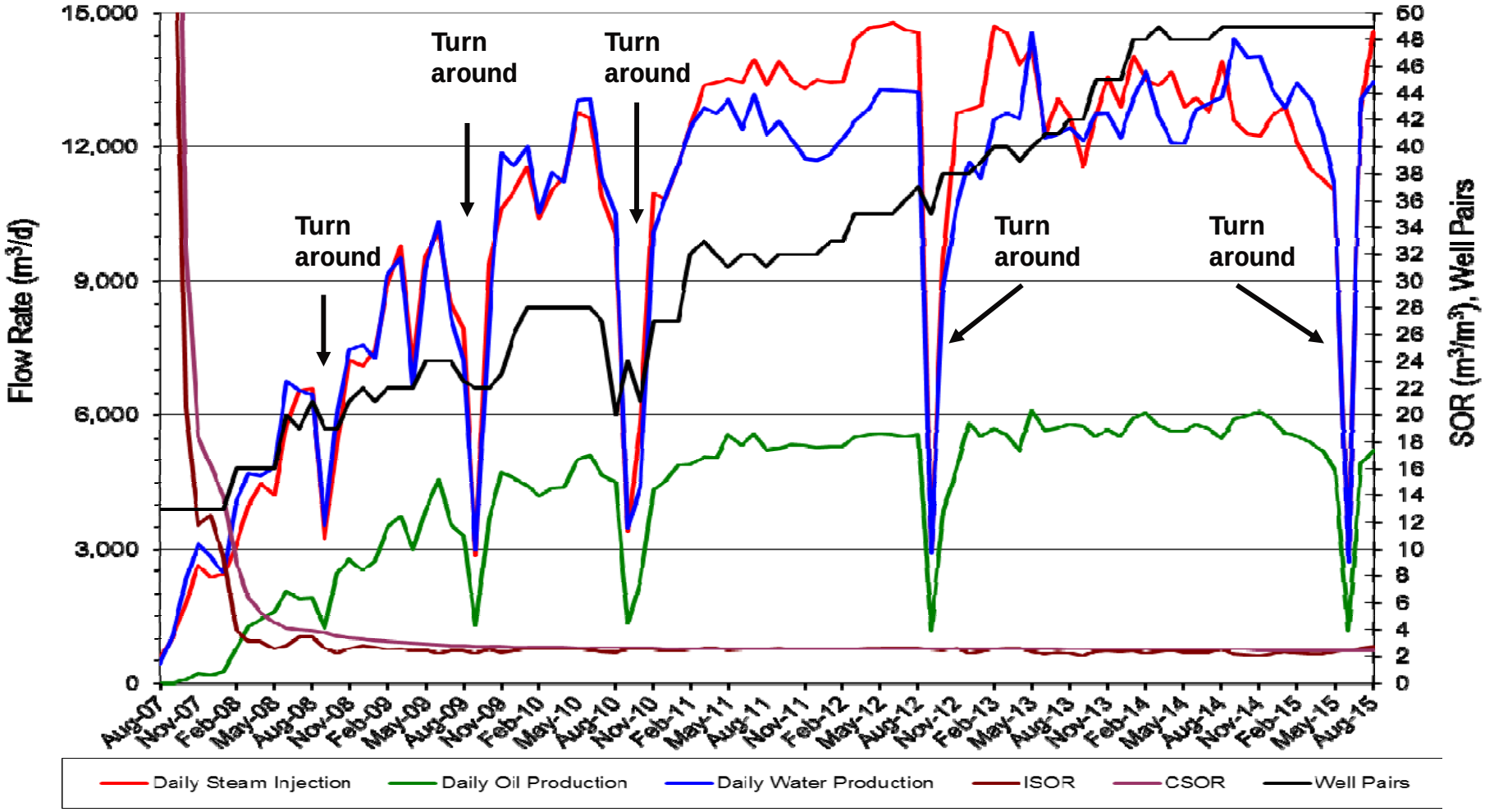
3.1.1-7a

- Devon plans to conduct turnarounds on each Jackfish CPF in a three year cycle
- The benefits of this strategy are felt to be:
  - Improved execution planning
  - Increased reservoir and production stability
  - Reduced downtime

Scheme Performance

Jackfish 1 Project Life Plot

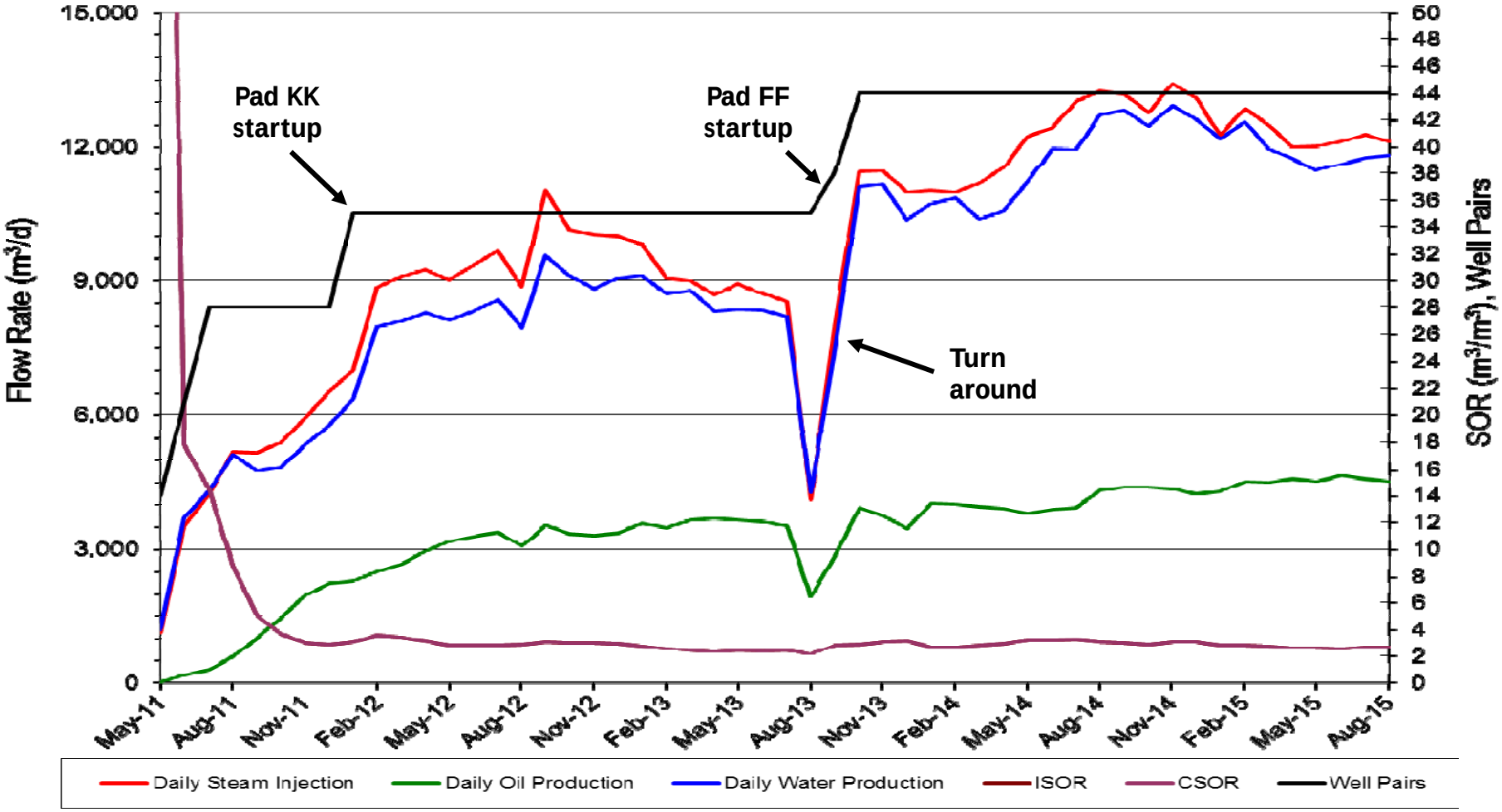
3.1.1-7a



Scheme Performance

Jackfish 2 Project Life Plot

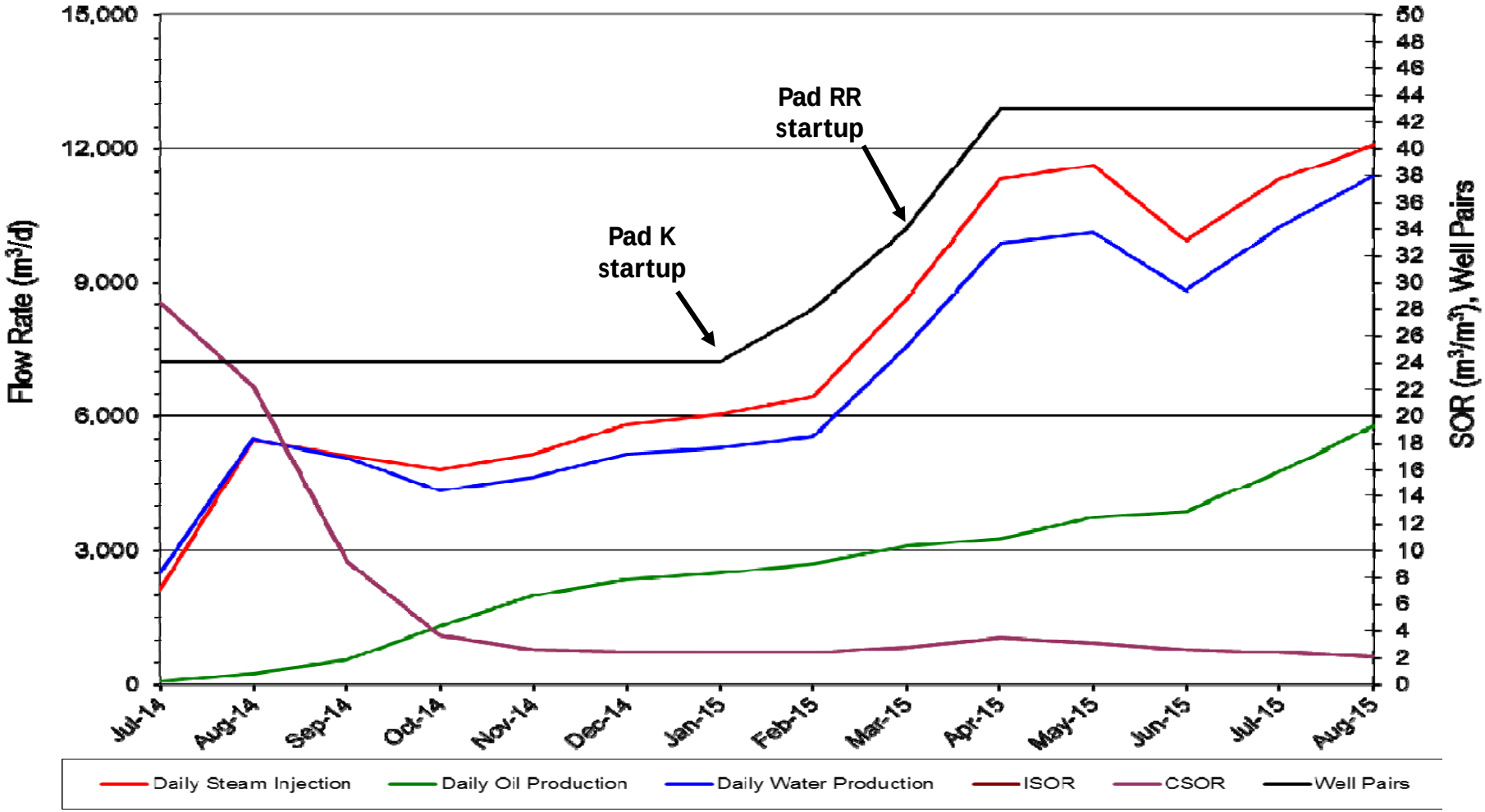
3.1.1-7a



Scheme Performance

Jackfish 3 Project Life Plot

3.1.1-7a

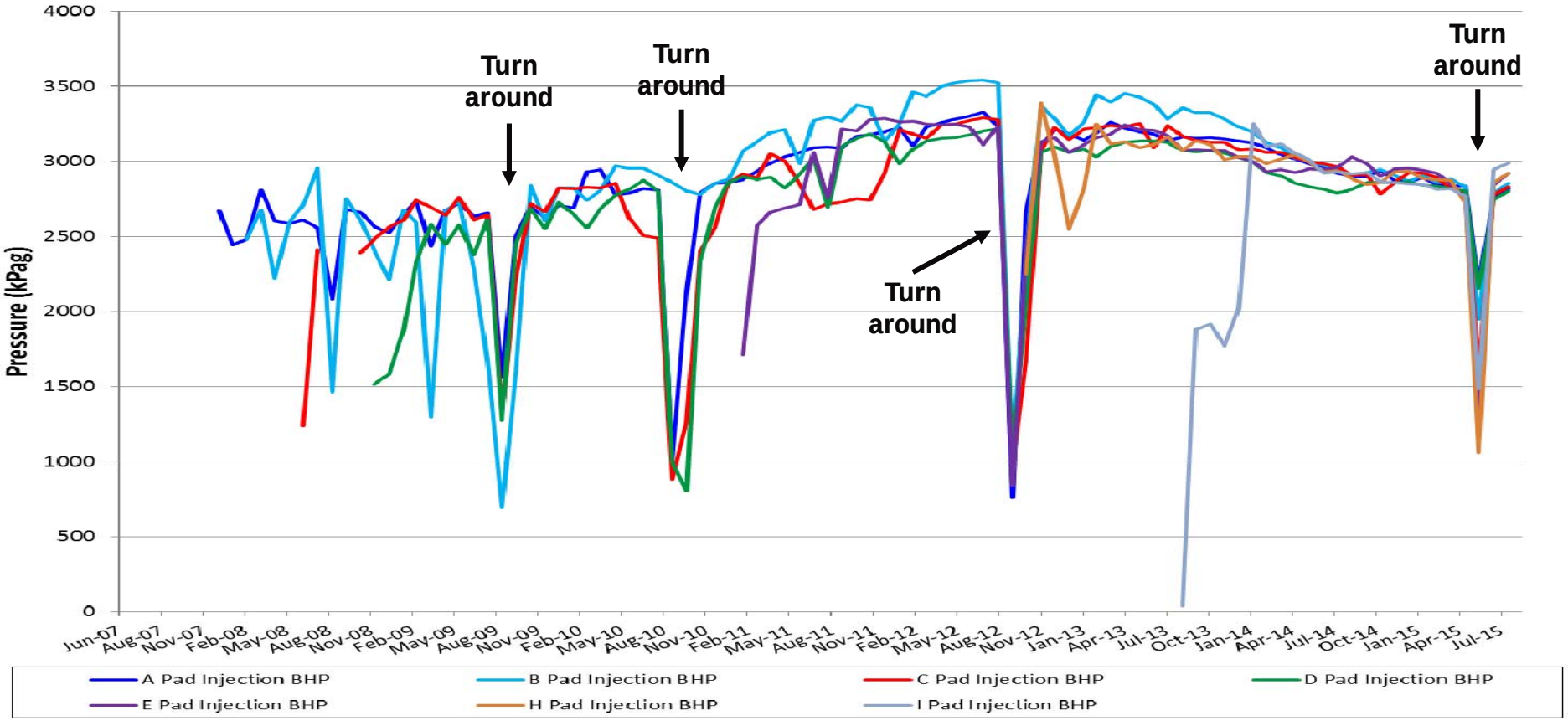


Scheme Performance

Jackfish 1 Bottom Hole Injector Pressures

3.1.1-7b

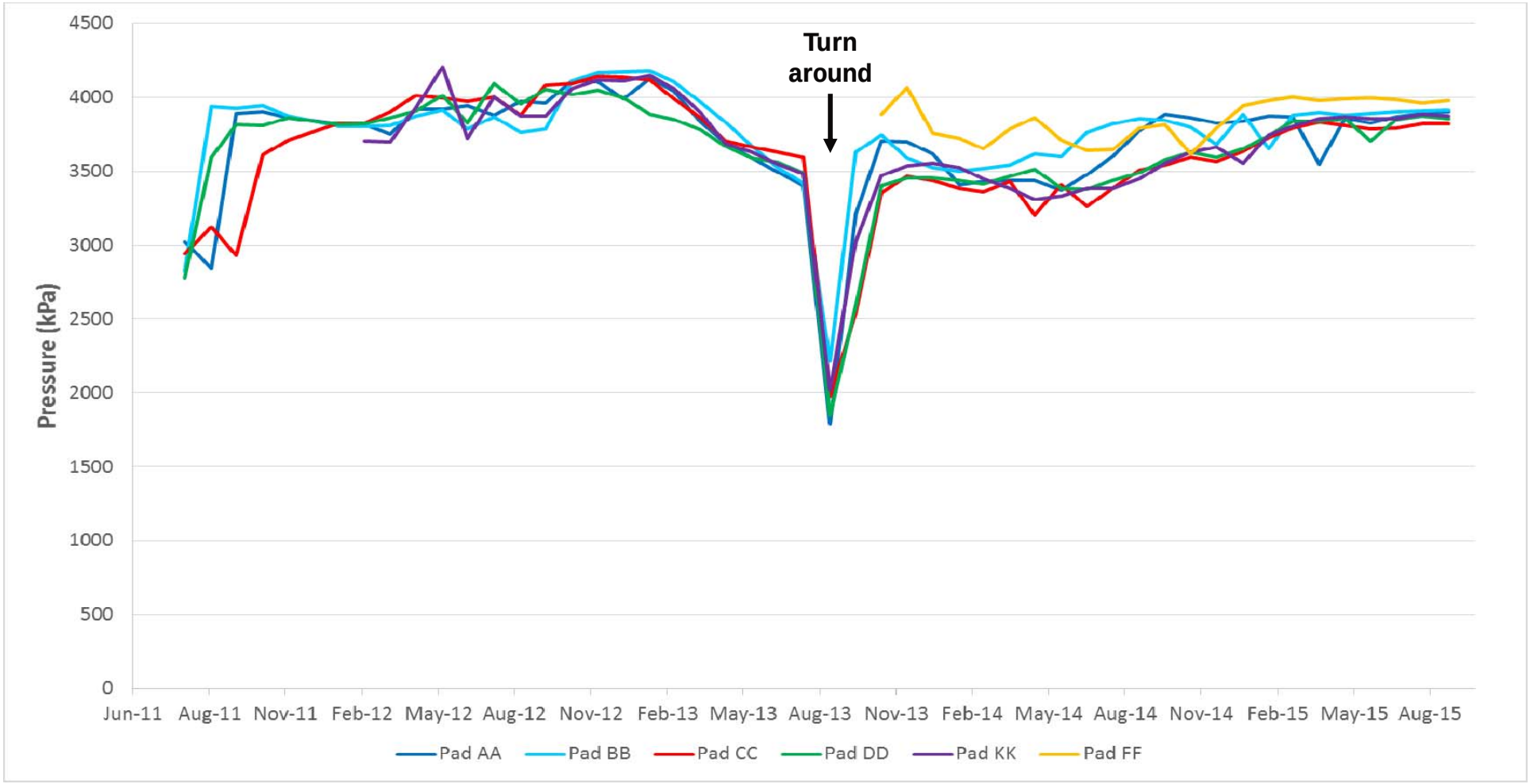
- Devon manages injection pressures to maximize producing rates, manage leakoff and increase overall reservoir recovery. A reduction in operating pressure was implemented in 2013 and continued into 2015



Scheme Performance

Jackfish 2 Bottom Hole Injector Pressures

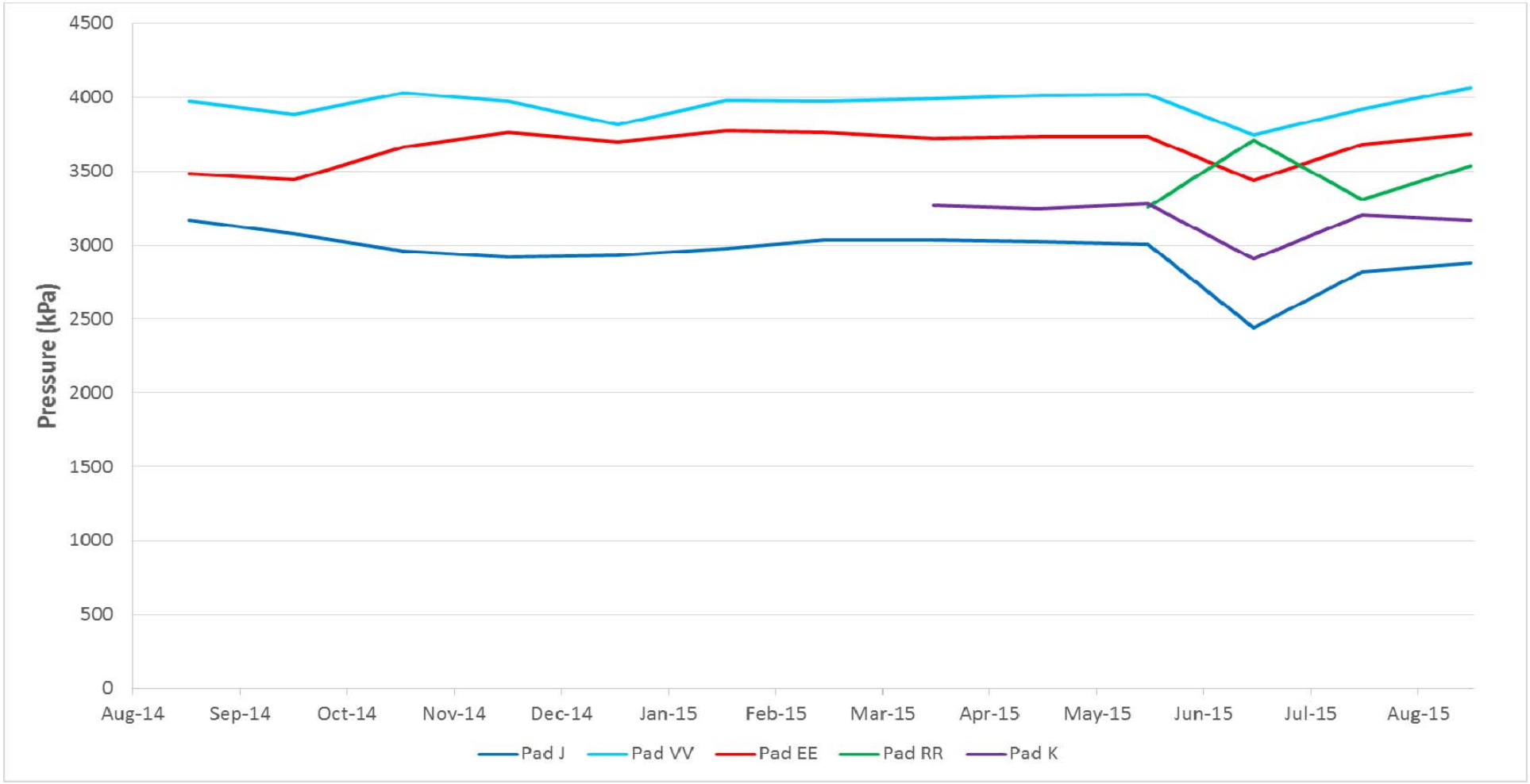
3.1.1-7b



Scheme Performance

Jackfish 3 Bottom Hole Injector Pressures

3.1.1-7b



Scheme Performance

Jackfish 1 Pad Recoveries

3.1.1-7c

Pad	OBIP (10^6m^3)	Ult Rec [1] (10^6m^3)	Cum Prod [2] (10^6m^3)	R.F. (%) to Date[2]
A	6.0	4.2	3.8	64
B	4.0	2.6	1.6	41
C	4.1	3.0	2.4	60
D	4.8	2.7	1.9	40
E	3.9	2.6	1.4	36
H	3.4	2.2	0.7	22
I	4.0	2.6	0.5	12

[1] Approximately 65% recovery factor (predicted) for most pads

[2] Effective August 31, 2015

Scheme Performance

Jackfish 2 Pad Recoveries

3.1.1-7c

Pad	OBIP (10^6m^3)	Ult Rec [1] (10^6m^3)	Cum Prod [2] (10^6m^3)	R.F. (%) to Date[2]
AA	2.4	1.6	1.0	40
BB	4.5	2.9	2.1	46
CC	4.3	1.9	0.5	11
DD	2.9	1.9	0.6	20
FF	5.2	3.4	0.6	11
KK	2.9	1.9	0.6	20

[1] Approximately 65% recovery factor (predicted) for most pads

[2] Effective August 31, 2015

Scheme Performance

Jackfish 3 Pad Recoveries

3.1.1-7c

Pad	OBIP (10^6m^3)	Ult Rec [1] (10^6m^3)	Cum Prod [2] (10^6m^3)	R.F. (%) to Date[2]
EE	4.6	3.0	0.4	8
J	4.1	2.6	0.2	4
VV	4.5	2.9	0.4	8
RR	6.4	2.3	0.1	1
K	6.2	2.2	0.1	2

[1] Approximately 65% recovery factor (predicted)

[2] Effective August 31, 2015

Jackfish 2 - Pad CC Highlights

Low Performer

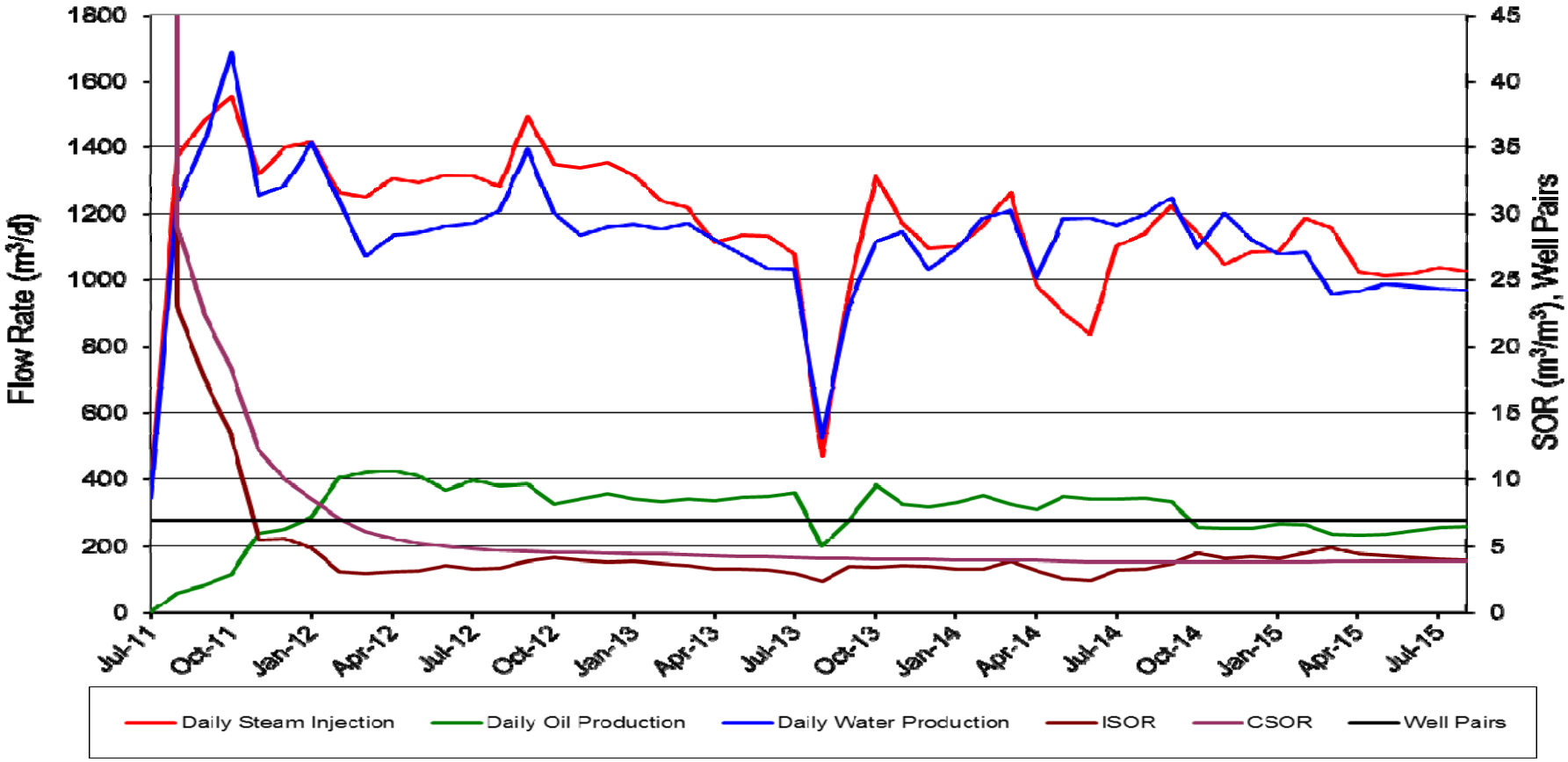
3.1.1-7c

- First steam occurred during June 2011
- 7 well pairs in operation
- Heterogeneous reservoir with low mid-heel ceiling of ~7m pay thickness
  - Limited vertical steam chamber growth
  - Poor temperature conformance
- Inflow Control Device, installed Aug. 2013 (CC1), continues to underperform due to uniform inflow design
- Production rates of northern well pairs (CC6 & CC7) gradually improving due to interpreted IHS drainage
- Potential fluid interaction with Pad BB due to base of pay sloping downward from North to South

Pad CC Performance

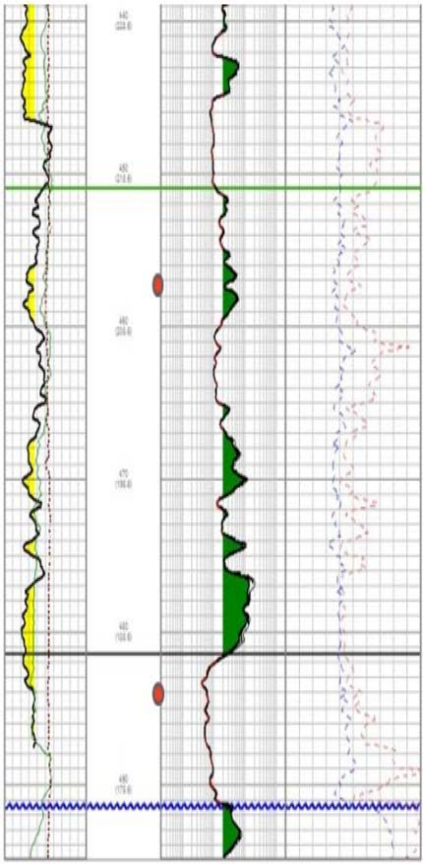
Jackfish 2 Pad CC Life Plot

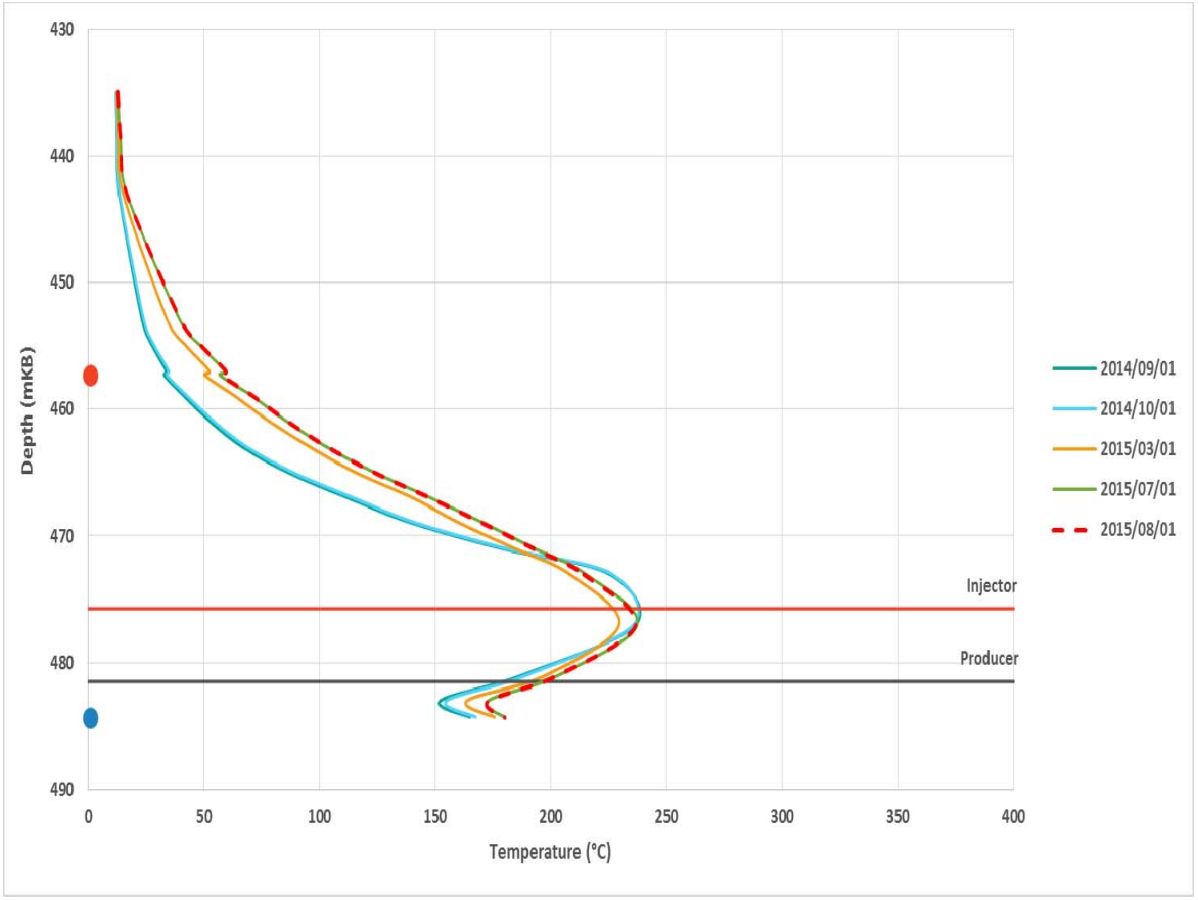
3.1.1-7c



Pad CC Toe Observation Well Temp
(11.7m from CC4 well pair)

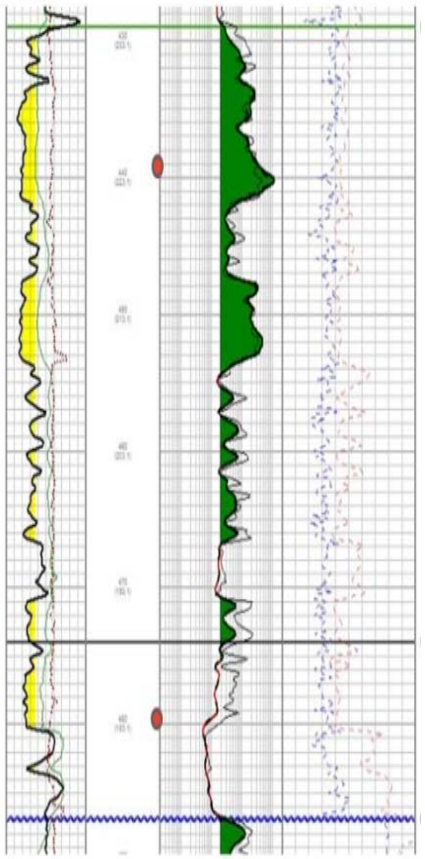
3.1.1-5d

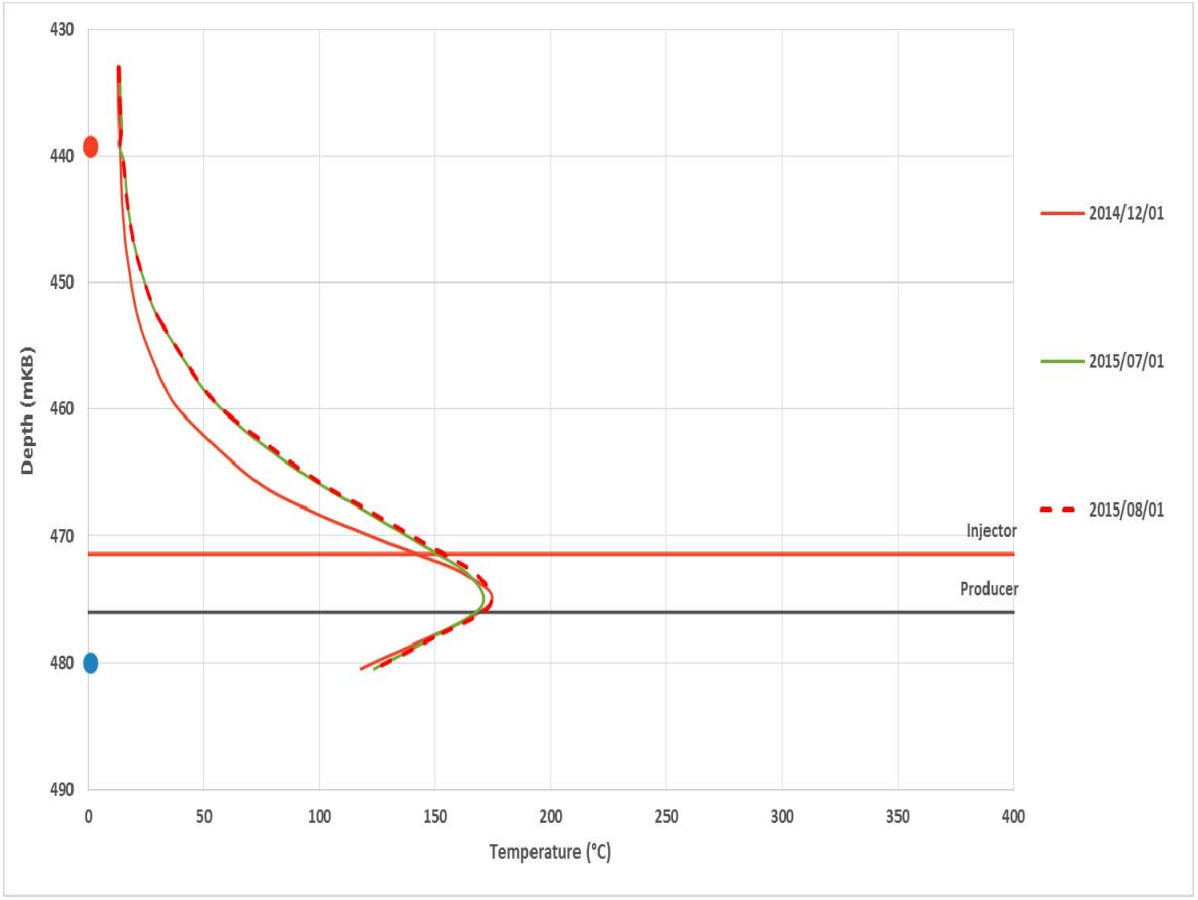




Pad CC Heel Observation Well Temp
(8m from CC4 well pair)

3.1.1-5d





Jackfish 1 - Pad B Highlights

Medium Performer

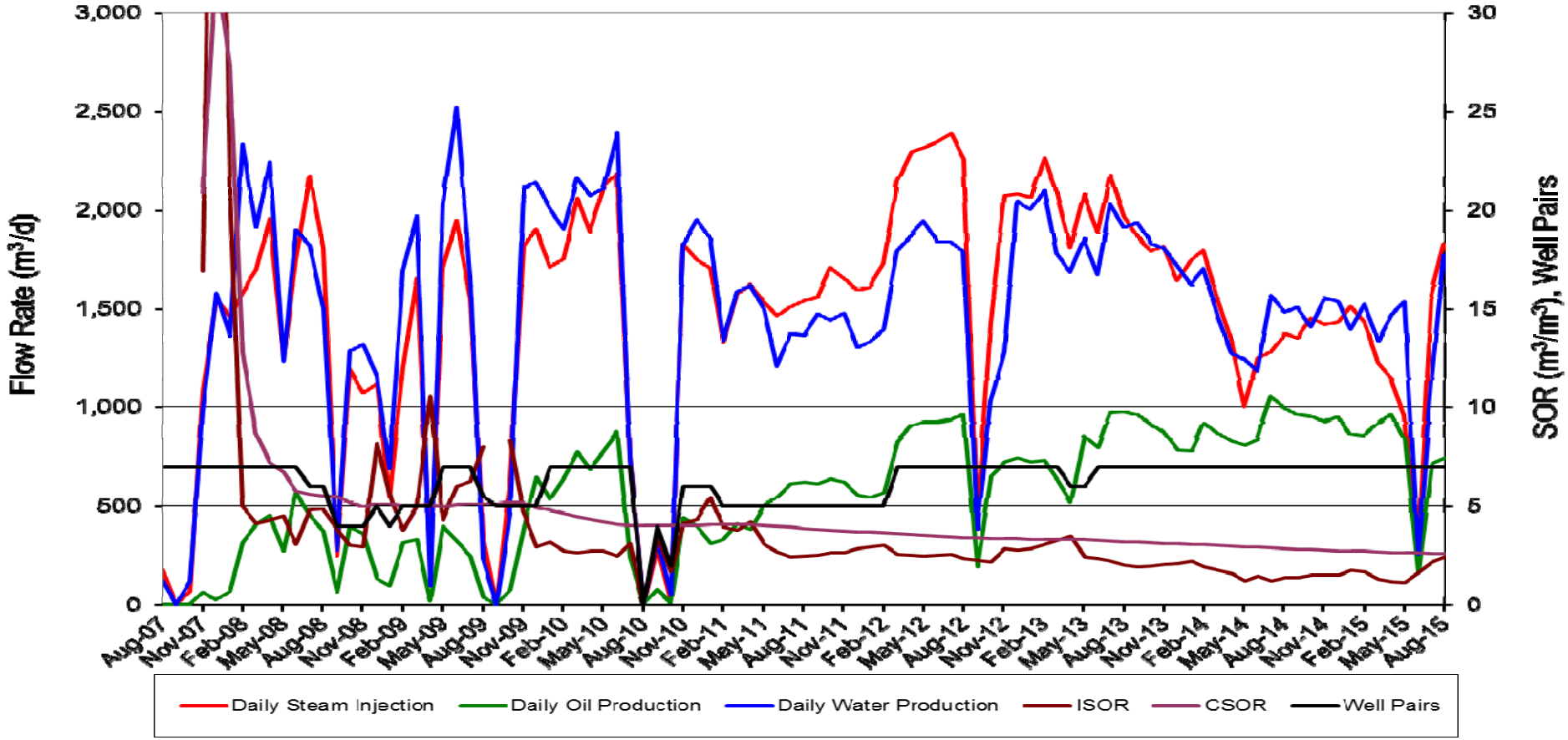
3.1.1-7c

- First steam in August 2007
- 7 well pairs in operation
- Production currently in the plateau phase, expected to decline by the end of 2015
- First ESP at Jackfish 1 was installed in B3P in March 2015; production has continued as expected
- Pad has historically had SOR values of below 2; post turnaround in June 2015, pad is being optimized towards historic SOR.
- Pressure target for the pad may change in future as part of Jackfish 1 asset pressure strategy

Pad B Performance

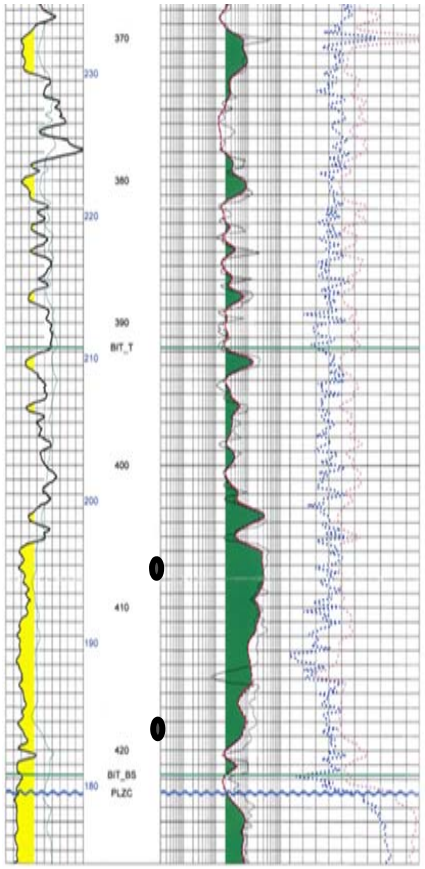
Jackfish 1 Pad B Life Plot

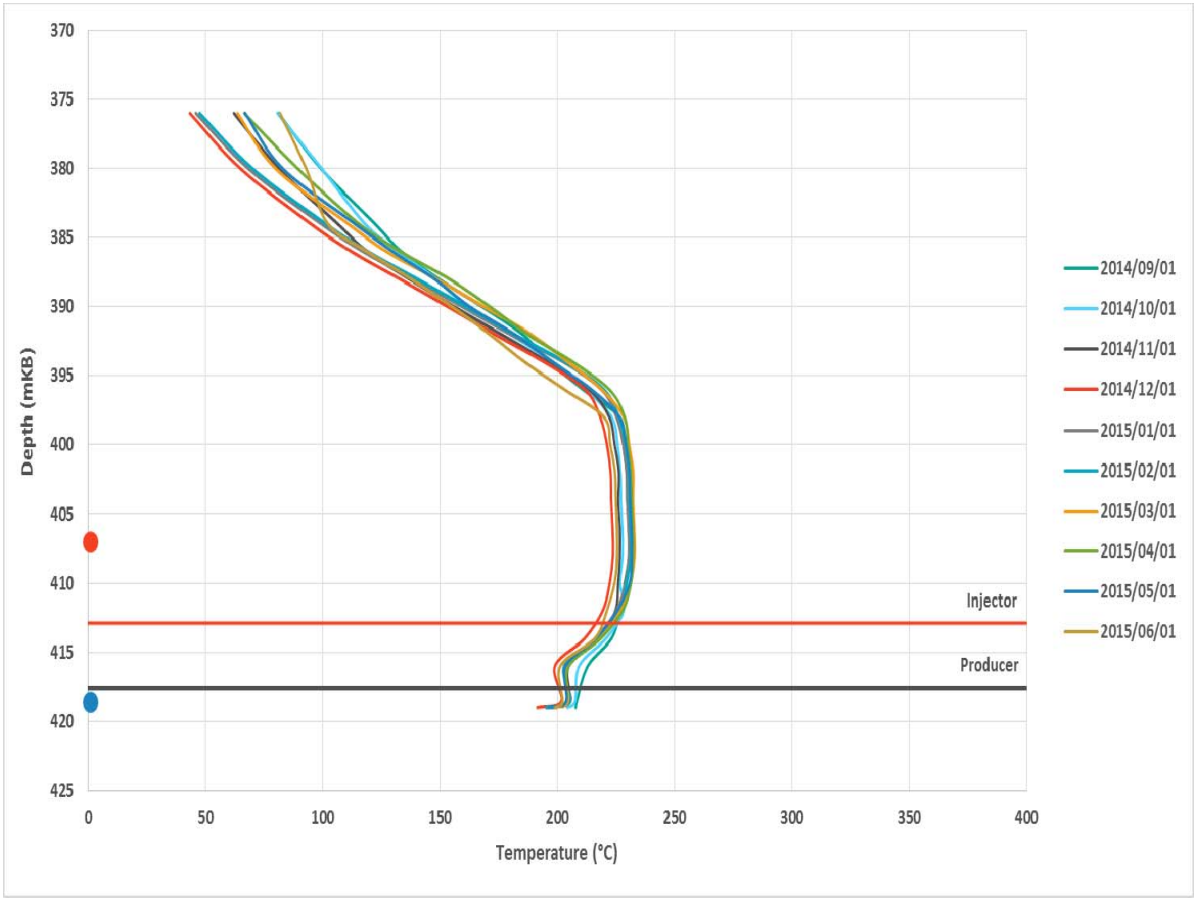
3.1.1-7c



Pad B Toe Observation Well Temp
(4.1m from B2 well pair)

3.1.1-5d





Jackfish 2 - Pad BB Highlights

High Performer

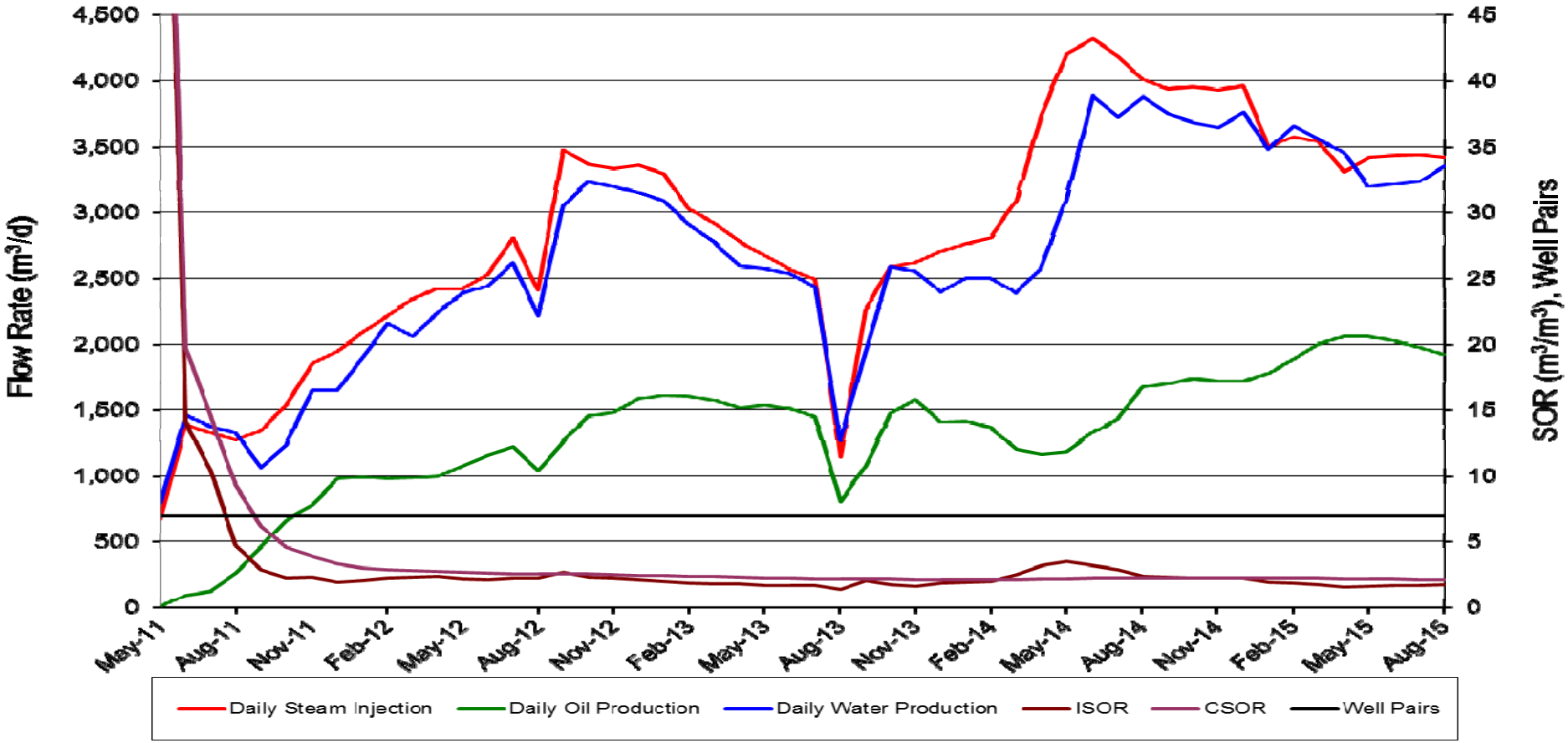
3.1.1-7c

- First steam occurred in May 2011
- Pad BB was the first pad to start up and has the longest production history at Jackfish 2
- All 7 well pairs are operational with good temperature conformance
- Best performing pad at Jackfish 2 and is exceeding expectation
- Pressure increase to 3,800 kPag resulted in gain of ~4,000 BPD and reduction of SOR below 2.0
- Pad may be benefiting from fluid migration from adjacent pads due to deeper wells (lower base of pay)
- Steam chamber growth observed up to ~23m above injector

Pad BB Performance

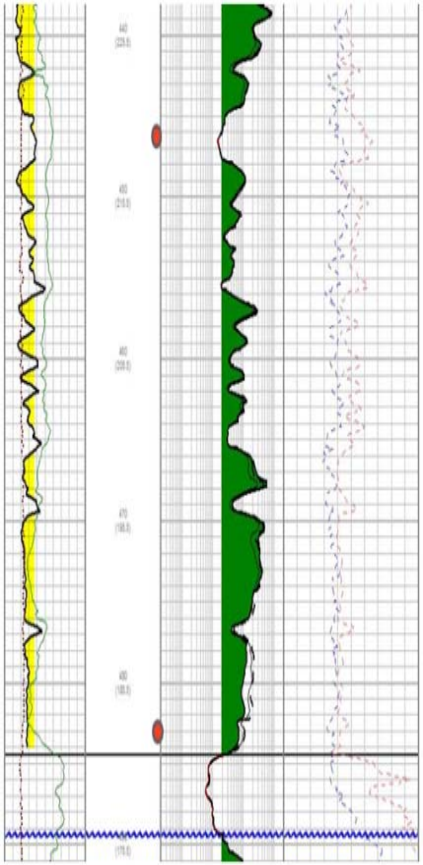
Jackfish 2 Pad BB Life Plot

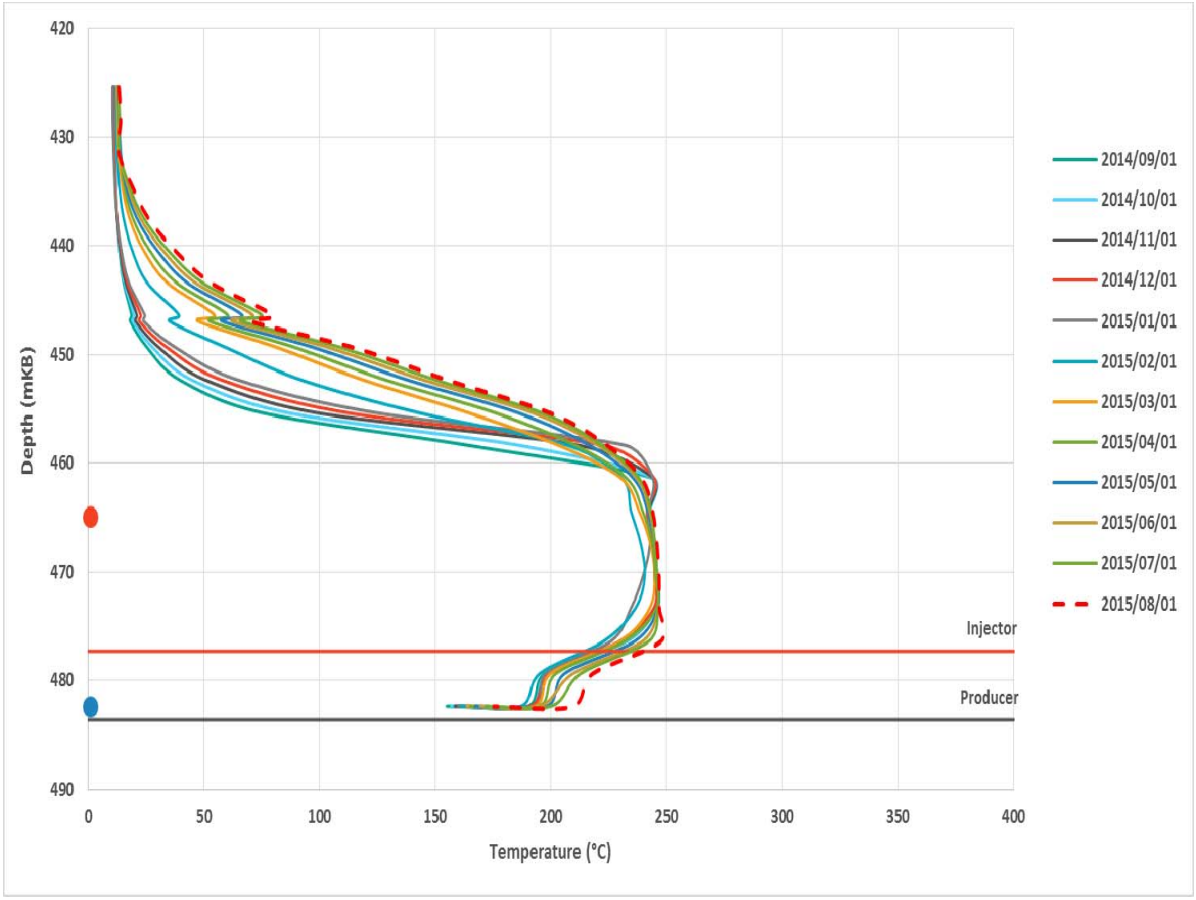
3.1.1-7c



Pad BB Heel Observation Well Temp
(13.5m from BB4 well pair)

3.1.1-5d

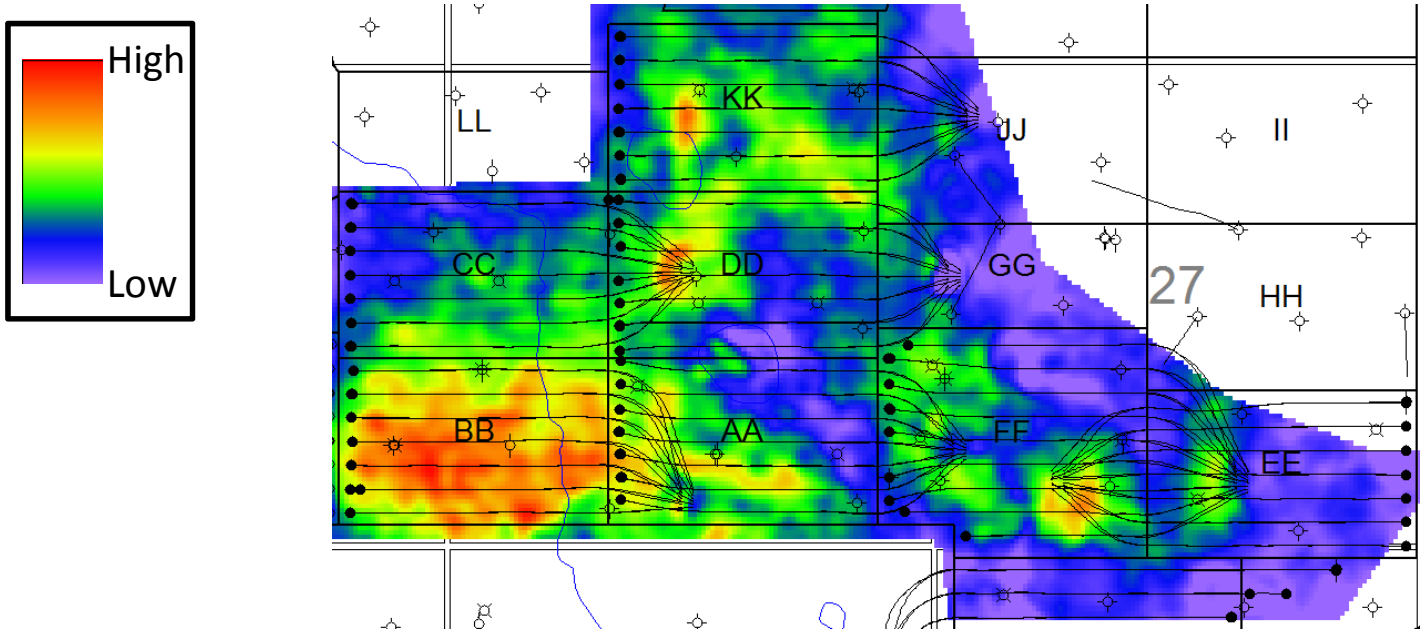




Pad BB and CC Comparison

2014 4D Seismic – High vs. Low Performer

3.1.1-5d



- 4-D indicates Pad BB steam chamber development is greater at Pad BB vs. CC
- Indicative of chamber coalescence between Pads BB and CC

Five Year Outlook

Jackfish Pad Abandonments

3.1.1-7c

- No anticipated pad abandonments at Jackfish within the next five years

Wellhead Steam Quality

3.1.1-7d

	Pressure (kPag)	Temperature (°C)	Quality (%)
Plant Gate	9,600	311	100%
JF1 Wellhead	2,800-4,500	230-257	97%
JF2 Wellhead	3,600-4,600	247-260	97%
JF3 Wellhead	2,800-4,900	232-264	97%

- 5.5 Mpa wellhead injection limit
- Losses occur as steam is transported to the pads
- Utilize condensate traps at each pad to maximize wellhead steam quality

Sand Production

SIR

With the SAGD operation, some amount of reservoir material (sand/fines) is expected to be produced. If a well is suspected to have abnormal levels of reservoir material being produced, then appropriate operational strategies and/or well remediations are implemented.

Pad A Methane Co-injection Pilot

Injection During Reporting Period

3.1.1-7e, g

Date	A3 (e^3m^3/d)	A4 (e^3m^3/d)	A5 (e^3m^3/d)
September 2014	5.5	5.5	5.5
October 2014	7.4	7.7	7.7
November 2014	4.3	9.6	8.3
December 2014	-	3.1	-

- NCG co-injection underwent temporary interruptions throughout the pilot period due to operational issues, and was discontinued in late 2014
- Overall, co-injection did not demonstrate a negative impact on production
- Rate of oil decline and SOR increase were reduced during co-injection periods
- Applications for NCG injection at JF1 and JF2 were submitted in April 2015

Jackfish Performance

Key Learnings

3.1.1-7f

- Continued focus on pressure management:
  - SOR optimization
  - Reduced leak off
  - Hot spot reduction
  - Improved ramp-up performance

Future Plans

Section 3.1.1-8

Future Plans
Well Operations, Drilling, and Trials

3.1.1-8a, b

Jackfish 1

- SAGD drilling on Pad O in Q4 2015
- Two pre-SAGD observation wells to be drilled on future Pad S
- Potential for wind-down commencement

Jackfish 2

- Expected to commence NCG co-injection at Pads DD, KK, & FF in 2016
- Two pre-SAGD observation wells to be drilled on future Pad GG
- One pre-SAGD observation well to be drilled on future Pad QQ

Jackfish 3

- Project development area expanded to accommodate Pad EEE
- One pre-SAGD observation well to be drilled on future Pad EEE
- SAGD drilling on Pad EEE in Q1 2016

Future Plans
Jackfish District Steam Strategy

3.1.1-8c

Jackfish 1

- Utilizing steam capacity while managing SOR through steam allocation and potential for wind-down on Pads A and C

Jackfish 2

- Utilizing steam capacity while managing SOR through steam allocation, pressure management, and potential for introduction of NCG co-injection on Pads DD, KK, and FF

Jackfish 3

- Utilizing steam capacity while managing SOR through steam allocation and pressure management, as base pads reach plateau while Pads K and RR continue to ramp up

Surface Operations

Table of Contents
Surface Operations

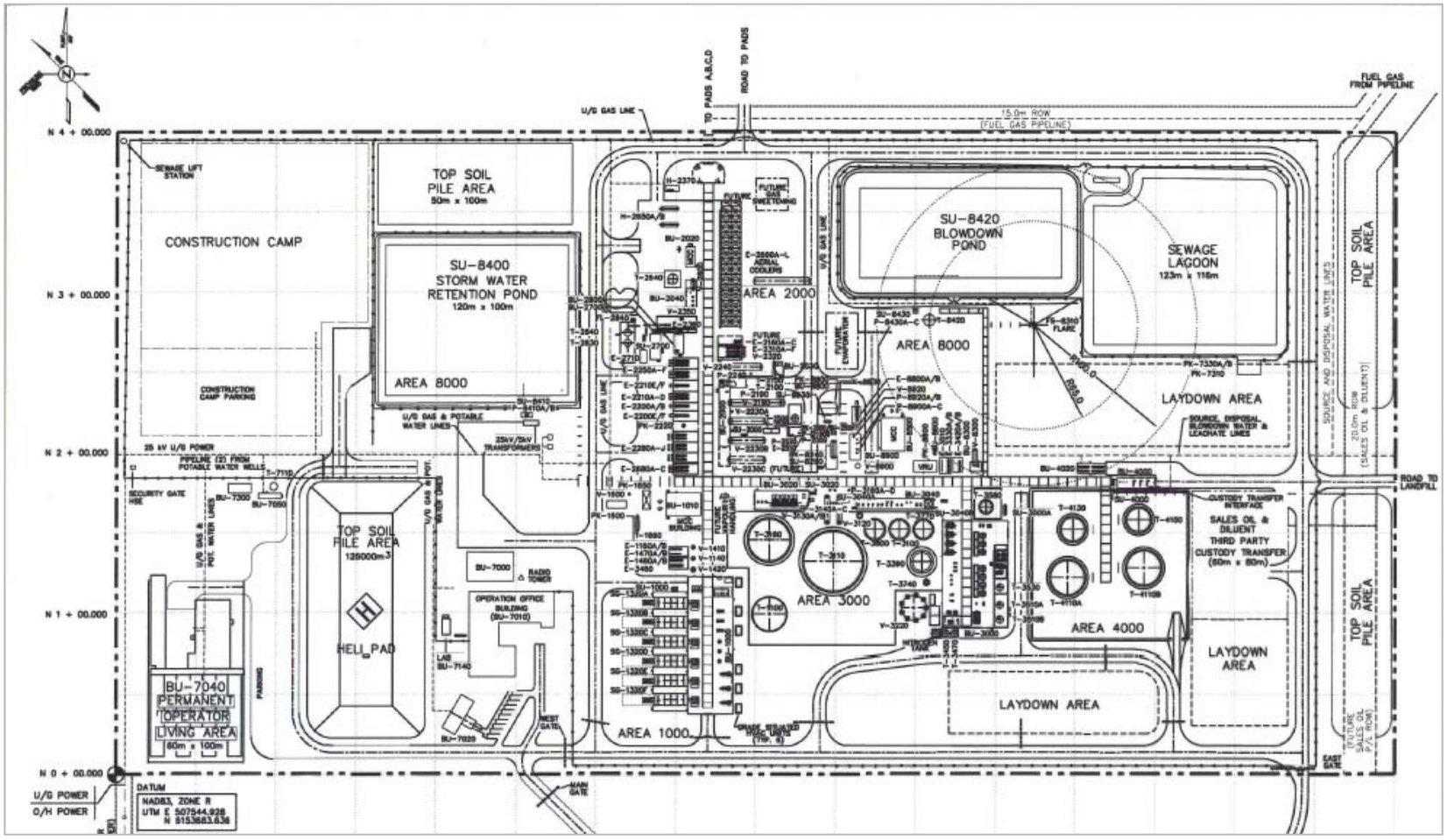
Facilities

Section 3.1.2-1

Facilities

Plot Plan – Jackfish 1

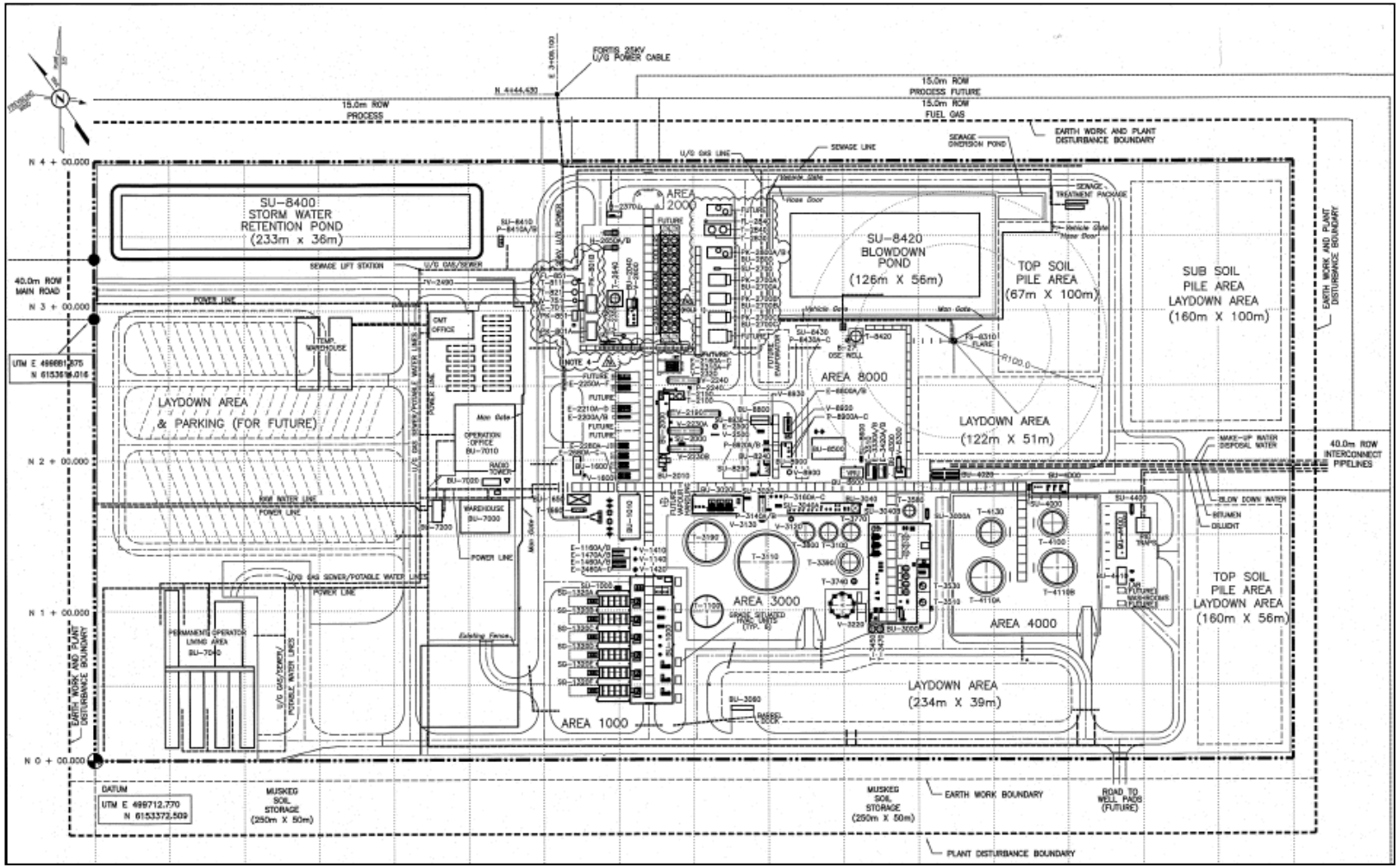
3.1.2-1a



Facilities

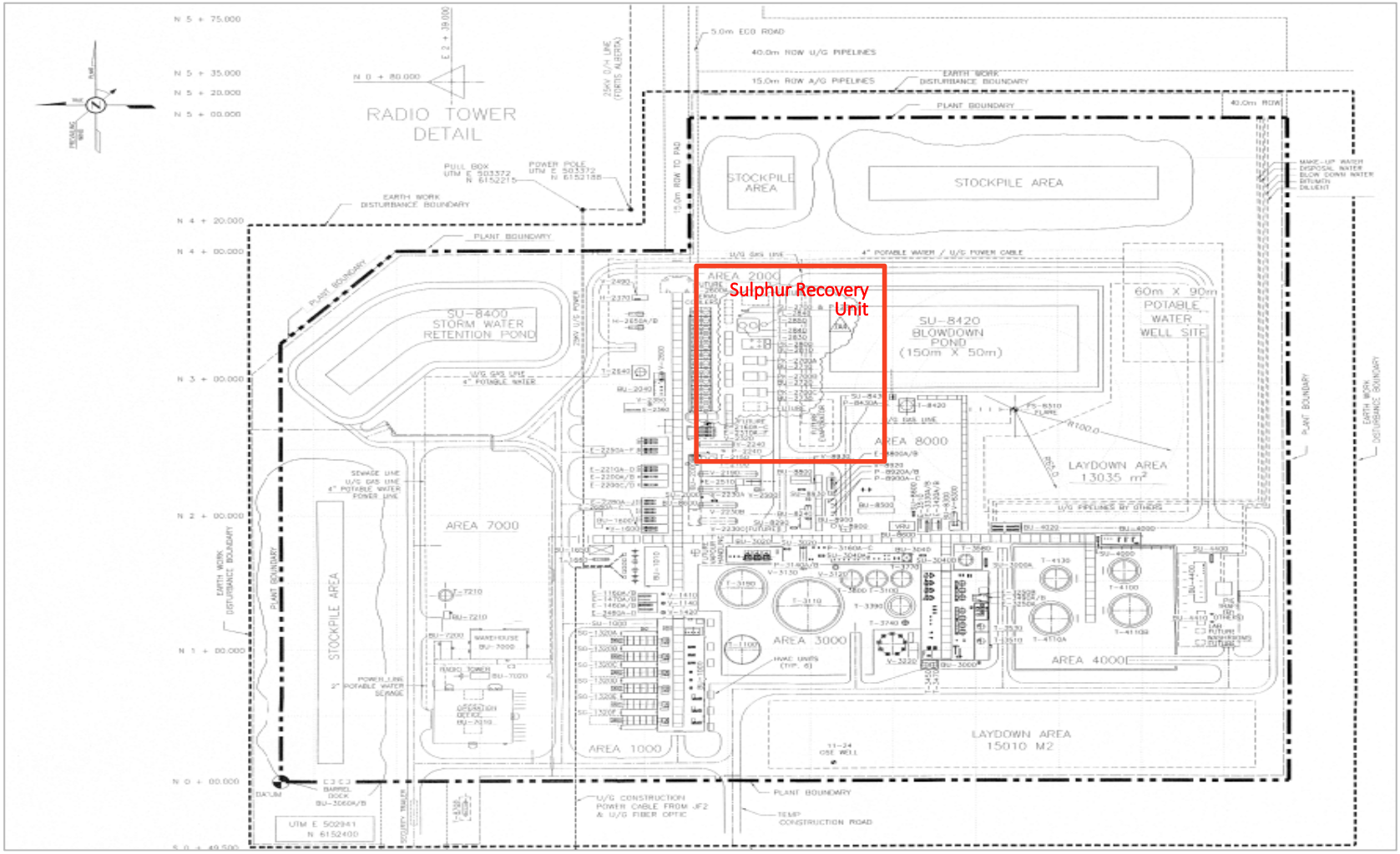
Plot Plan – Jackfish 2

3.1.2-1a



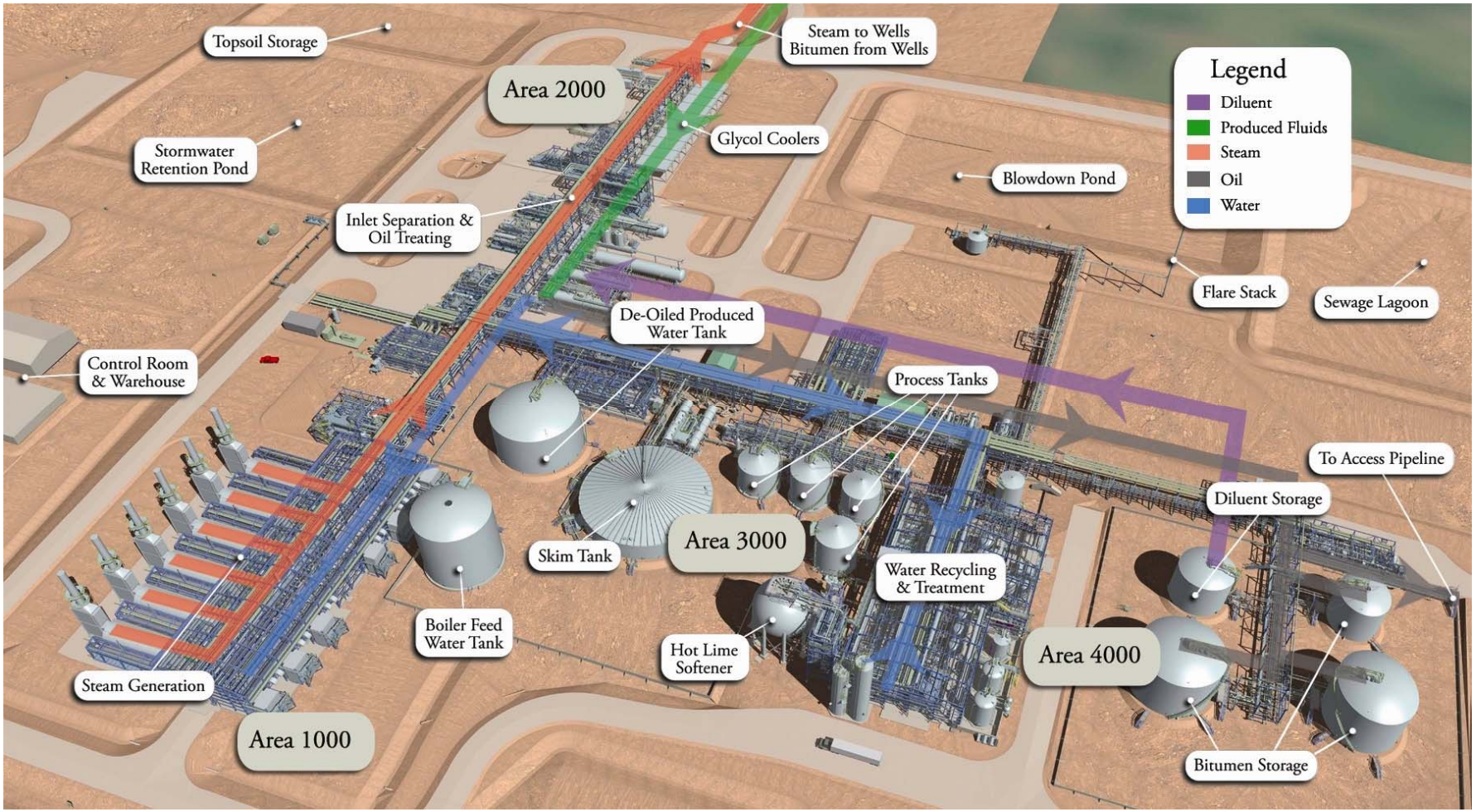
Facilities
Plot Plan – Jackfish 3

3.1.2-1a



Facilities
Plant Schematic

3.1.2-1b



Facilities Performance

Section 3.1.2-2

Facilities Performance
2015 Overall Highlights

3.1.2-2

Jackfish 1

- Average monthly production within facility nameplate capacity
- Maintenance turnaround completed June 2015

Jackfish 2

- Average monthly production less than facility nameplate capacity

Jackfish 3

- Achieved facility nameplate production within one year

	JF 1		JF 2		JF 3	
	Design	Current	JF 2	Current	JF 3	Current
Oil/Bitumen Capacity	6757	-19%	6026.9	-4%	6026.9	2%
Water Capacity	17098	-28%	17098	-34%	17097	-24%
Steam Capacity	15973	-21%	15973	-30%	15973	-17%

- Devon's current pad development strategy balances capital efficiency with operational flexibility, ensuring new pads are developed as base pads mature

Facilities Performance

2015 Highlights – Bitumen Treatment

3.1.2-2a

	Jackfish 1	Jackfish 2	Jackfish 3
Uptime	> 98.0%	> 99.0%	> 98.0%

Jackfish District

- Increased bitumen processing efficiency and reliability achieved through chemical and process optimization
- Stable operation maintained at higher blend densities and tight blend density ranges
- Production choke actuator/positioner upgrades to improve process control and reduce lost production

Jackfish 1

- Improved flowback method for well workover Chelant stimulations to control CPF process stability and minimize production disruption
- Installed an upgraded FWKO de-sand system to improve system reliability

Jackfish 2 / Jackfish 3

- Permanent Sulphur Recovery Unit to be commissioned Q3 2015 (J3), Q4 2015 (J2)

Facilities Performance

2015 Highlights – Water Treatment

3.1.2-2a

	Jackfish 1	Jackfish 2	Jackfish 3
Uptime	> 97.0%	> 99.0%	100.0%

Jackfish District

- Utilized brackish water wells with TDS ranging from 5,000-13,000 ppm for all make up water requirements

Jackfish 1

- HLS online cleaning system installed to increase plant reliability
- Upgrades completed to Lime and MagOx to improve system reliability
- Repair failed blowdown disposal pipeline liners in Q1 2015 and no pipeline corrosion was observed

Jackfish 2

- Successful regeneration waste recycle to HLS to reduce disposal

Jackfish 3

- Increasing blowdown recycle rates to maximize internal recycle rates to reduce disposal and chemical usage

Facilities Performance

2015 Highlights – Steam Generation

3.1.2-2a

	Jackfish 1	Jackfish 2	Jackfish 3
Uptime	> 99.0%	> 99.0%	> 99.0%

Jackfish District

- Ongoing refinement of critical operating directive to manage water quality excursions
- 80% overall steam quality trialed to decrease blowdown disposal volumes and increase steam generation

Jackfish 1

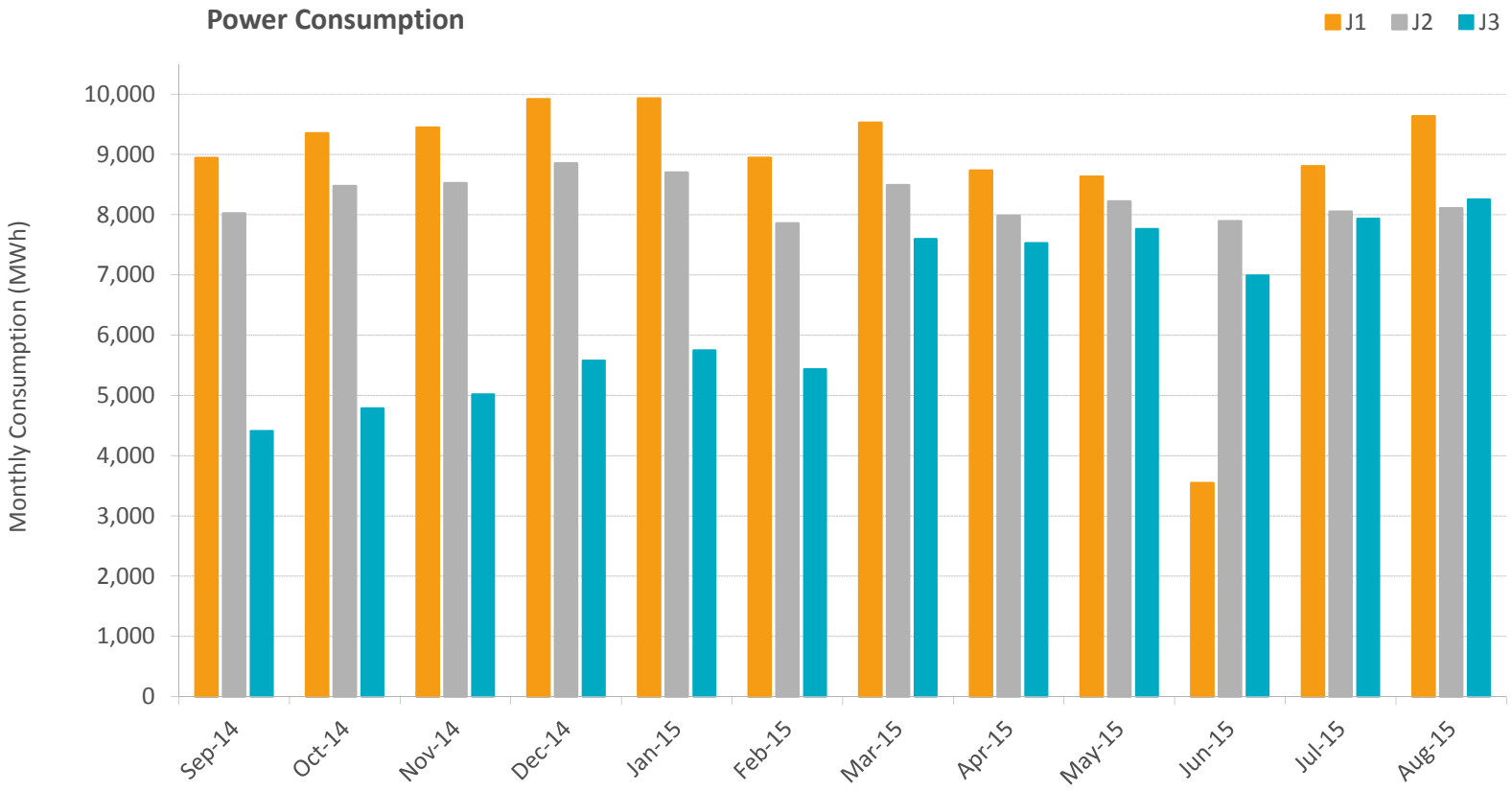
- HP BFW Seal Optimization (update from 2014)
  - New mechanical seal and bushings design installed, similar to Jackfish 2 design, to improve the HP BFW pump reliability.
- Main HP Steam Pipeline Condensation Study led to Steam Trap Optimization. The number of steam traps is reduced to ensure they are primed by condensate to reduce failure.

Jackfish 2

- OTSG Rifle Tube Pilot Project ongoing (evaluating results of 90% steam quality trial)
- 82% steam quality trial to decrease blowdown disposal volumes and increase steam generation

Facilities Performance
Power Consumption

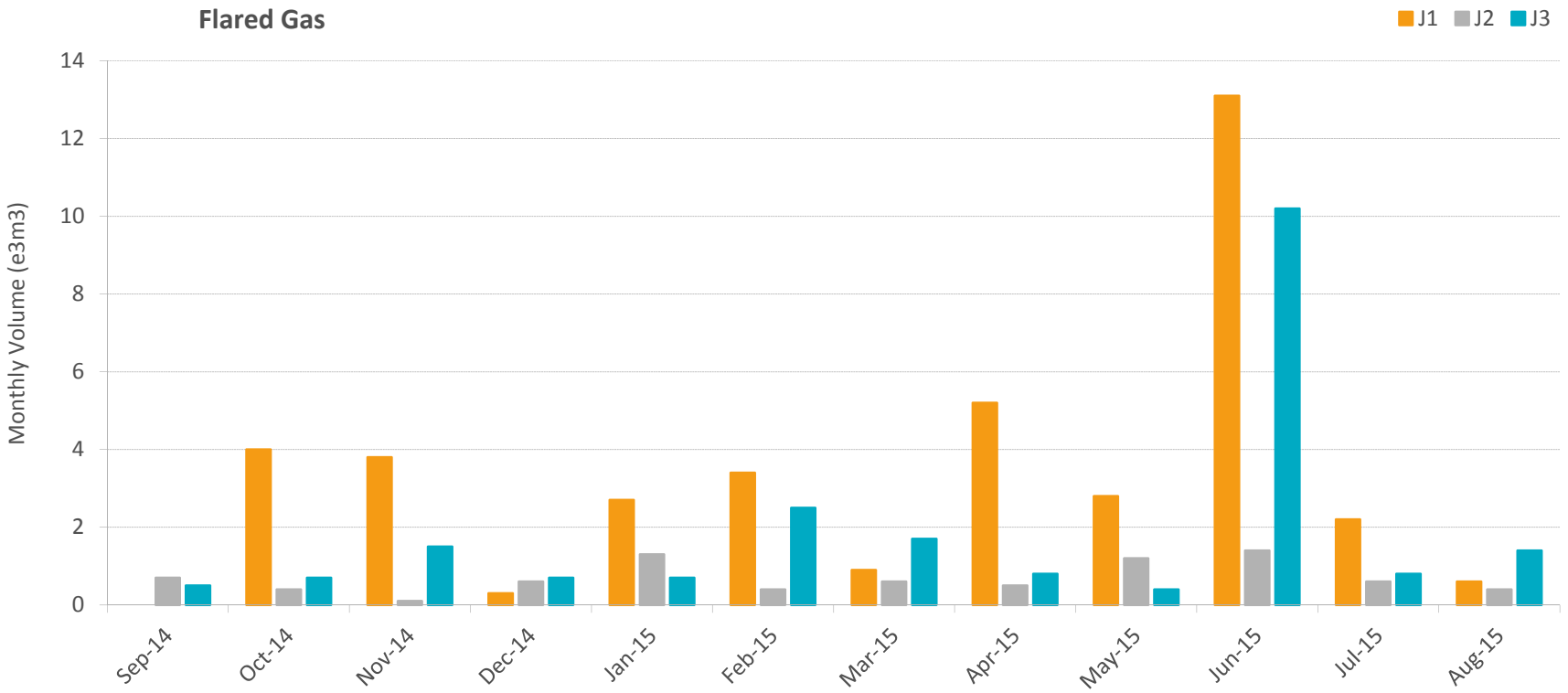
3.1.2-2d



- JF1 power consumption was low in June 2015 due to a planned maintenance turnaround

Facilities Performance
Flared Gas Volume

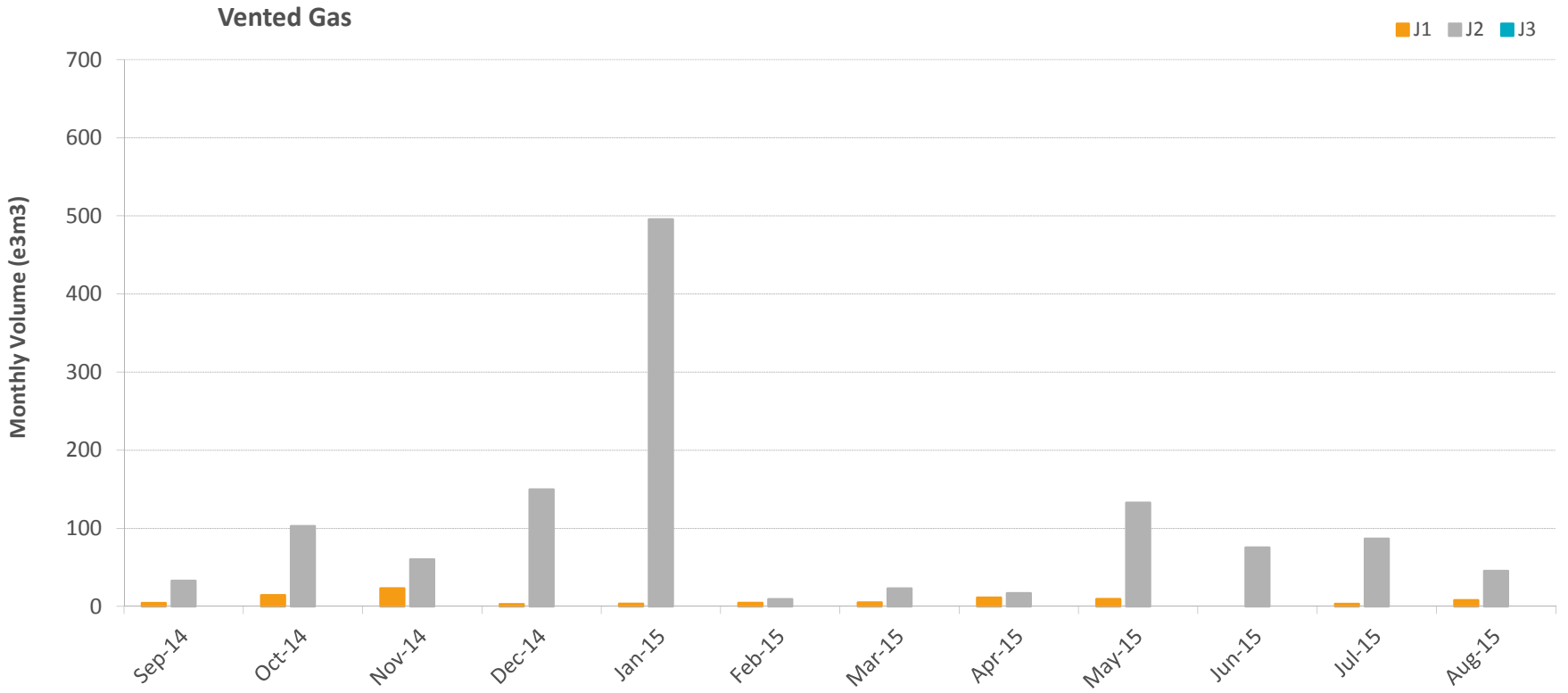
3.1.2-2e



- Flare volumes are produced gas only, volumes are aligned with Directive 17 and MARP reporting requirements for Jackfish
- Peak volumes in June 2015 at JF1 due to planned maintenance turnaround
- Peak volumes in June 2015 at JF3 due to CPF trip

Facilities Performance
Vented Gas Volume

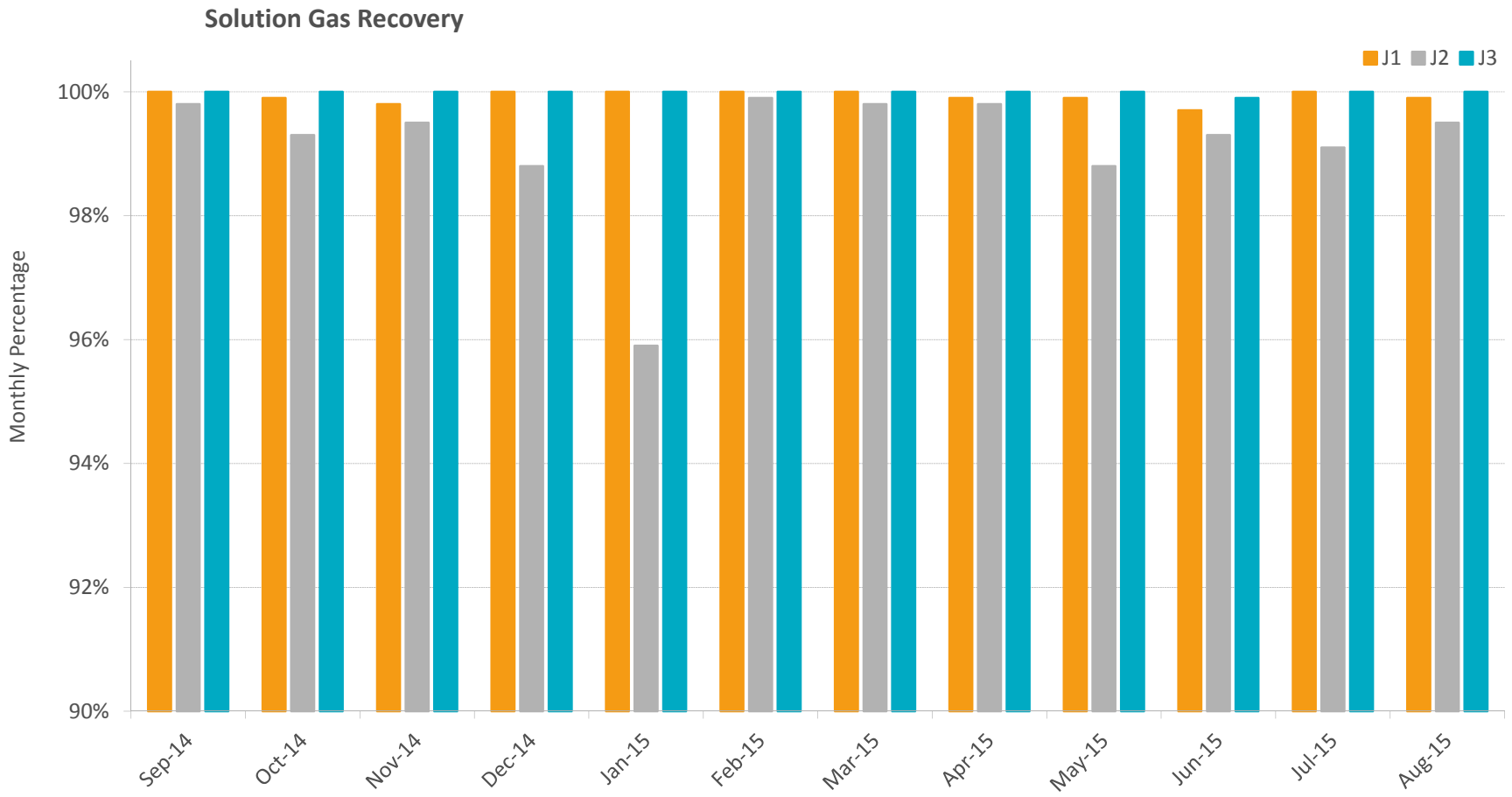
3.1.2-2e



- Peak volume in January 2015 at JF2 due to FWKO upsets

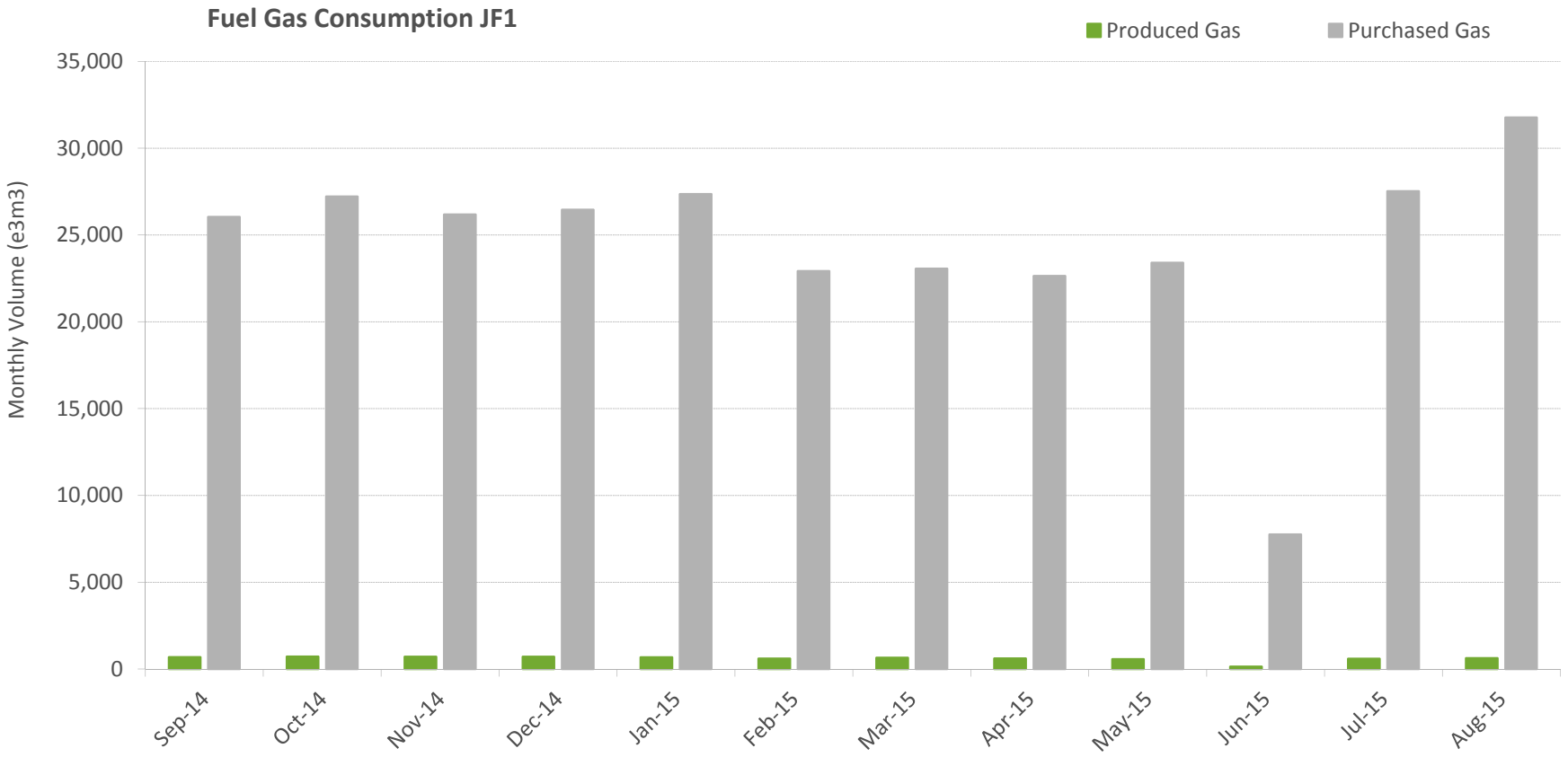
Facilities Performance
Solution Gas Recovery

3.1.2-2e



Facilities Performance
Fuel Gas Consumption

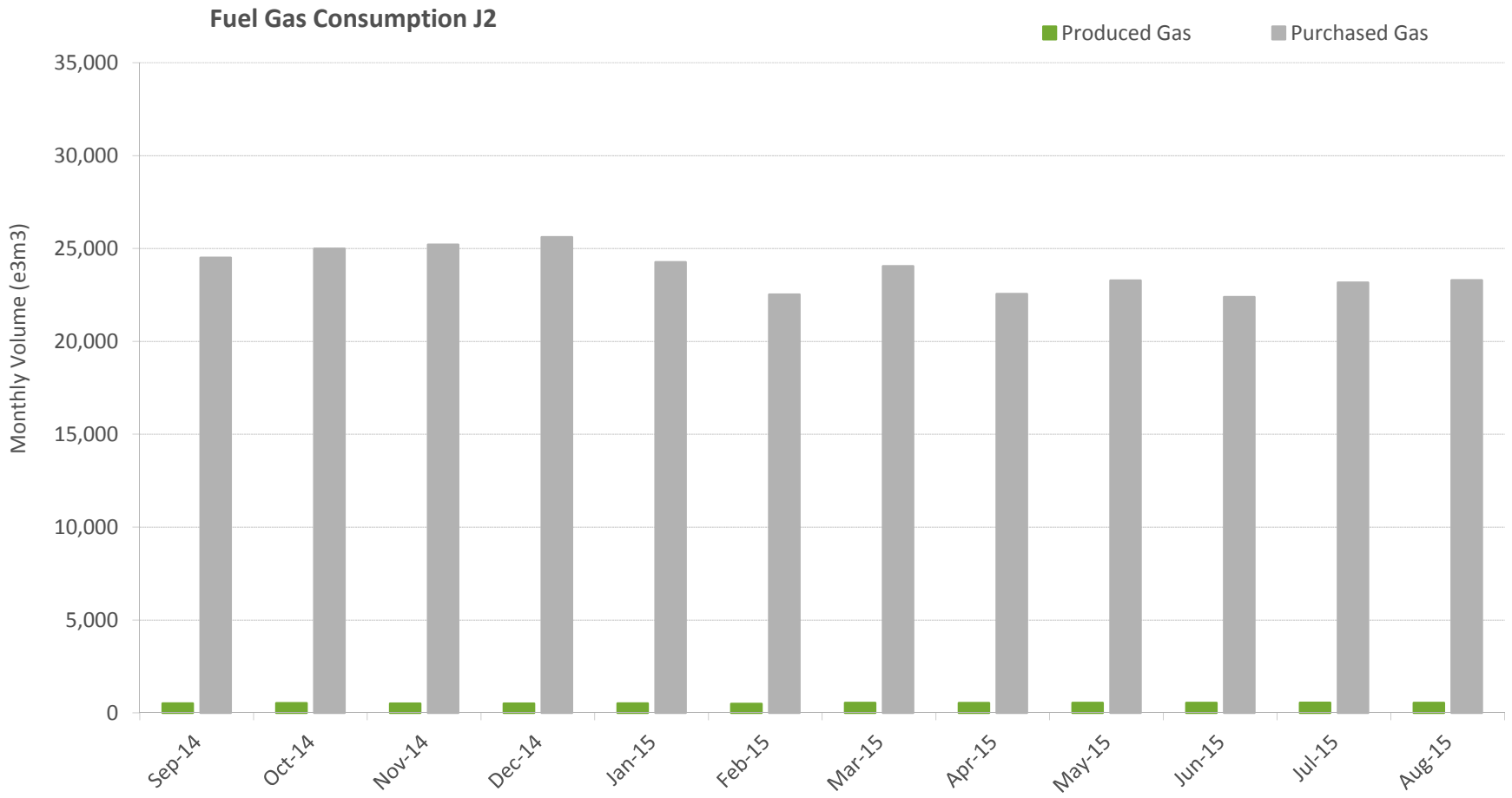
3.1.2-2e



- JF1 Fuel Gas Consumption was low in June 2015 due to a planned maintenance turnaround

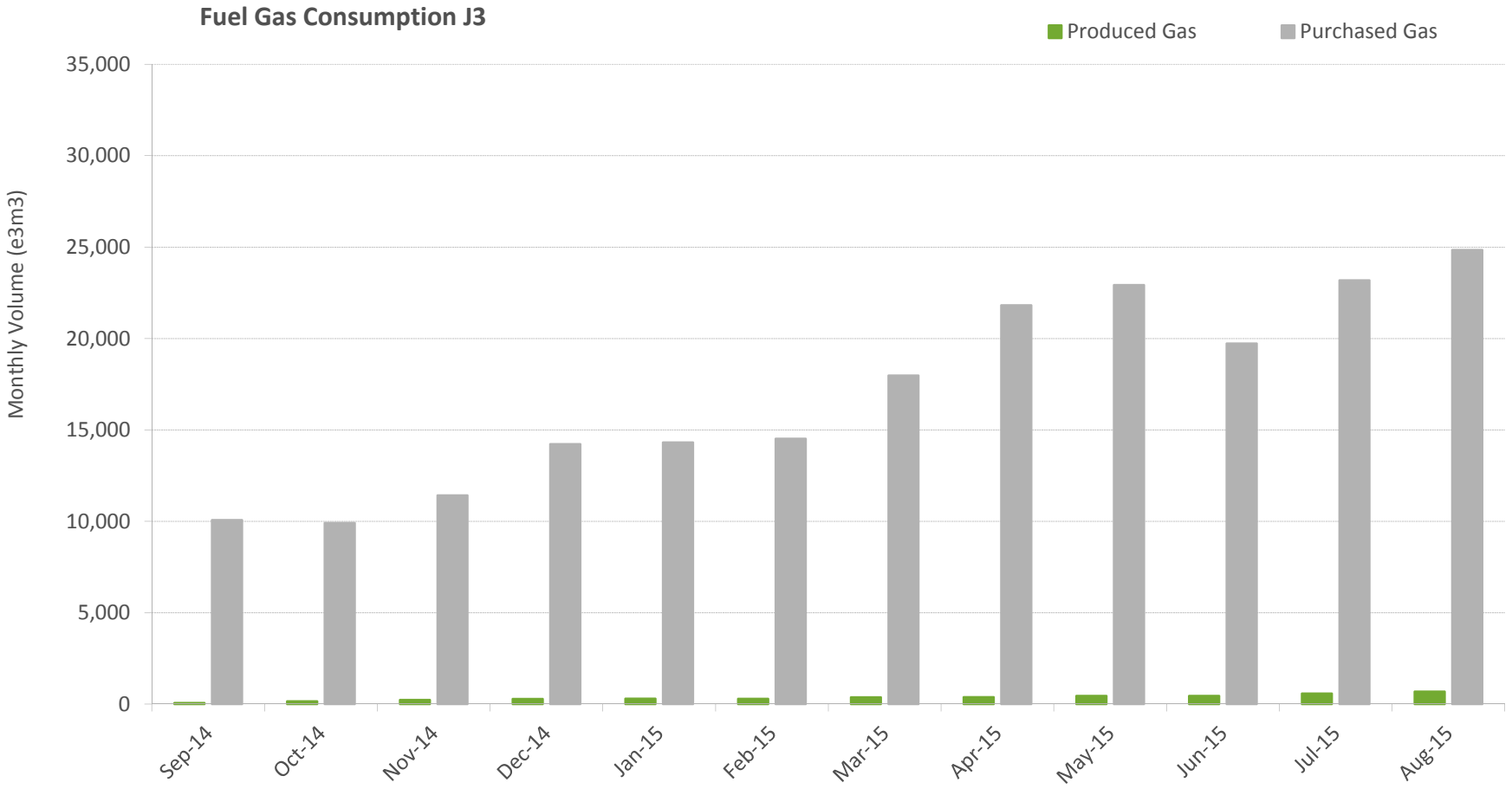
Facilities Performance
Fuel Gas Consumption

3.1.2-2e



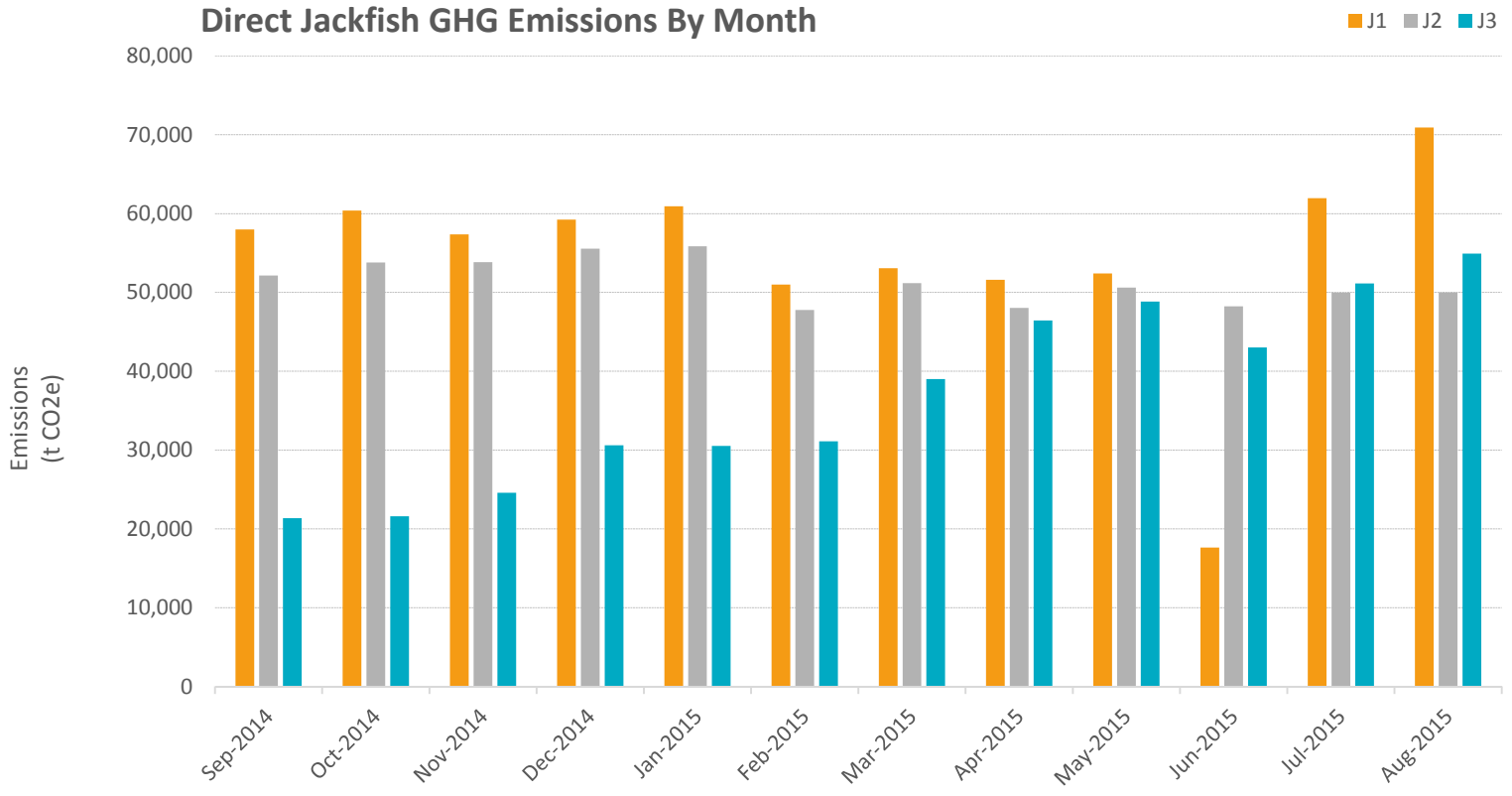
Facilities Performance
Fuel Gas Consumption

3.1.2-2e



Facilities Performance
Greenhouse Gas Emissions

3.1.2-2f



- JF1 12-month total: 654,405 tonnes CO_2E
- JF2 12-month total: 616,839 tonnes CO_2E
- JF3 12-month total: 443,024 tonnes CO_2E

Measurement & Reporting

Section 3.1.2-3

Measurement & Reporting

Production and Injection Volumes

3.1.2-3a, c

Well Bitumen / Water Production

- The total battery production is allocated to each SAGD producing well based on individual well tests
- Battery Bitumen Production = Dispositions – Receipts + ΔInventory + Blending Shrinkage
- Battery Water Production = Inlet Produced Water + ΔInventory + Truck Out – Truck in – Desand Water to Treater & FWKO
- Individual well test:
  - Each pad equipped with test separator along with coriolis meter and watercut analyzer on liquid leg
  - Vortex meter for gas measurement / water vapor calculation
  - Tested water volume includes the calculated water vapor (from $P_{sat}/P_{measured}$)
  - Typical well test duration is 9 hours

Measurement & Reporting

Production and Injection Volumes

3.1.2-3a, c

Well Gas Production

- Well estimated test gas production = GOR x test bitumen production
- Battery Gas Production = Fuel + Fuel to IF + Flare – TCPL Purchase – Receipt Gas – Diluent Flash
- Battery gas is allocated to each well based on well test

Steam Injection

- Total steam to field measured downstream of HP separators minus the steam condensate
- Vortex meters at each wellhead are used to allocate the total steam

Measurement & Reporting

Proration factors

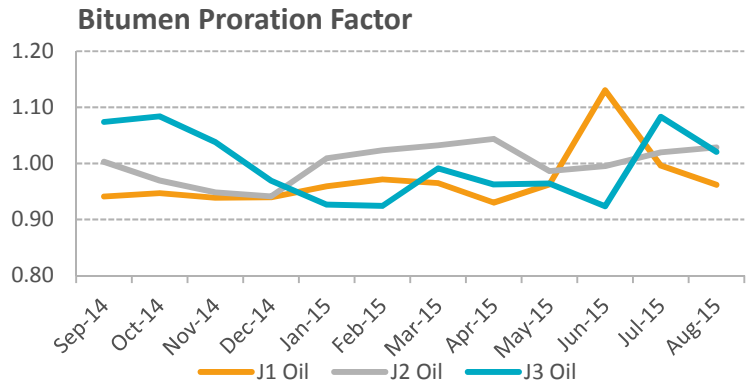
3.1.2-3a, b

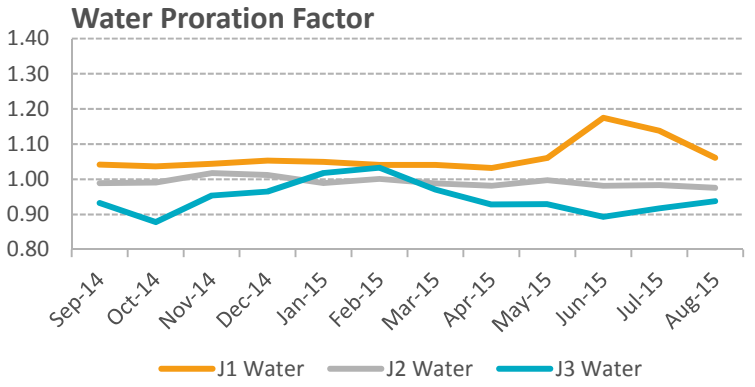
Bitumen / Water Proration Factor

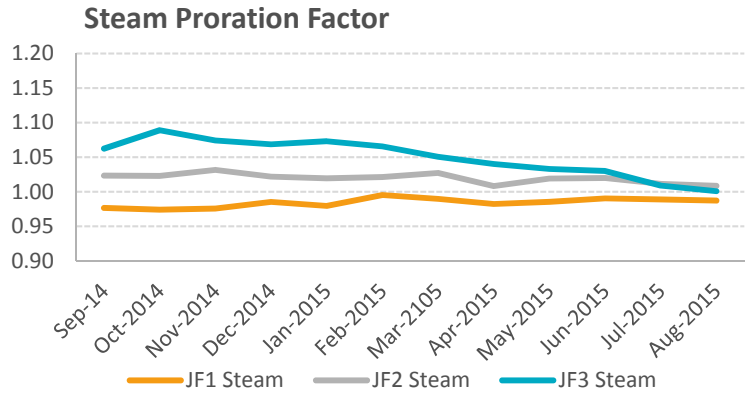
- Within AER target tolerances on an ongoing basis
- Jackfish 1 facility outage June 2015

Steam Proration Factor

- 12 months avg was 0.984 for Jackfish 1, 1.019 for Jackfish 2 & 1.050 for Jackfish 3
- Trends for Jackfish 1 and Jackfish 2 very consistent, Jackfish 3 settling as the steam injection is increased







Measurement & Reporting

Production and Injection Volumes

3.1.2-3a, c

Facility Reporting Codes

FACILITY CODE	FACILITY SUB-TYPE	DESCRIPTION
ABBT 0094366	344 In-Situ Oil Sands	Jackfish 1 CPF
ABIF 0094395	506 In-Situ Oil Sands	Jackfish 1 IF
ABBT 0114300	344 In-Situ Oil Sands	Jackfish 2 CPF
ABIF 0114303	506 In-Situ Oil Sands	Jackfish 2 IF
ABBT 0130642	344 In-Situ Oil Sands	Jackfish 3 CPF
ABIF 0130641	506 In-Situ Oil Sands	Jackfish 3 IF
ABIF 0115392	506 In-Situ Oil Sands	Source / Disposal Facility
ABGS 0131346	621 Gas Gathering System	Purchase Fuel Distribution

Measurement & Reporting

New Measurement Technology

3.1.2-3d

Current Implementation

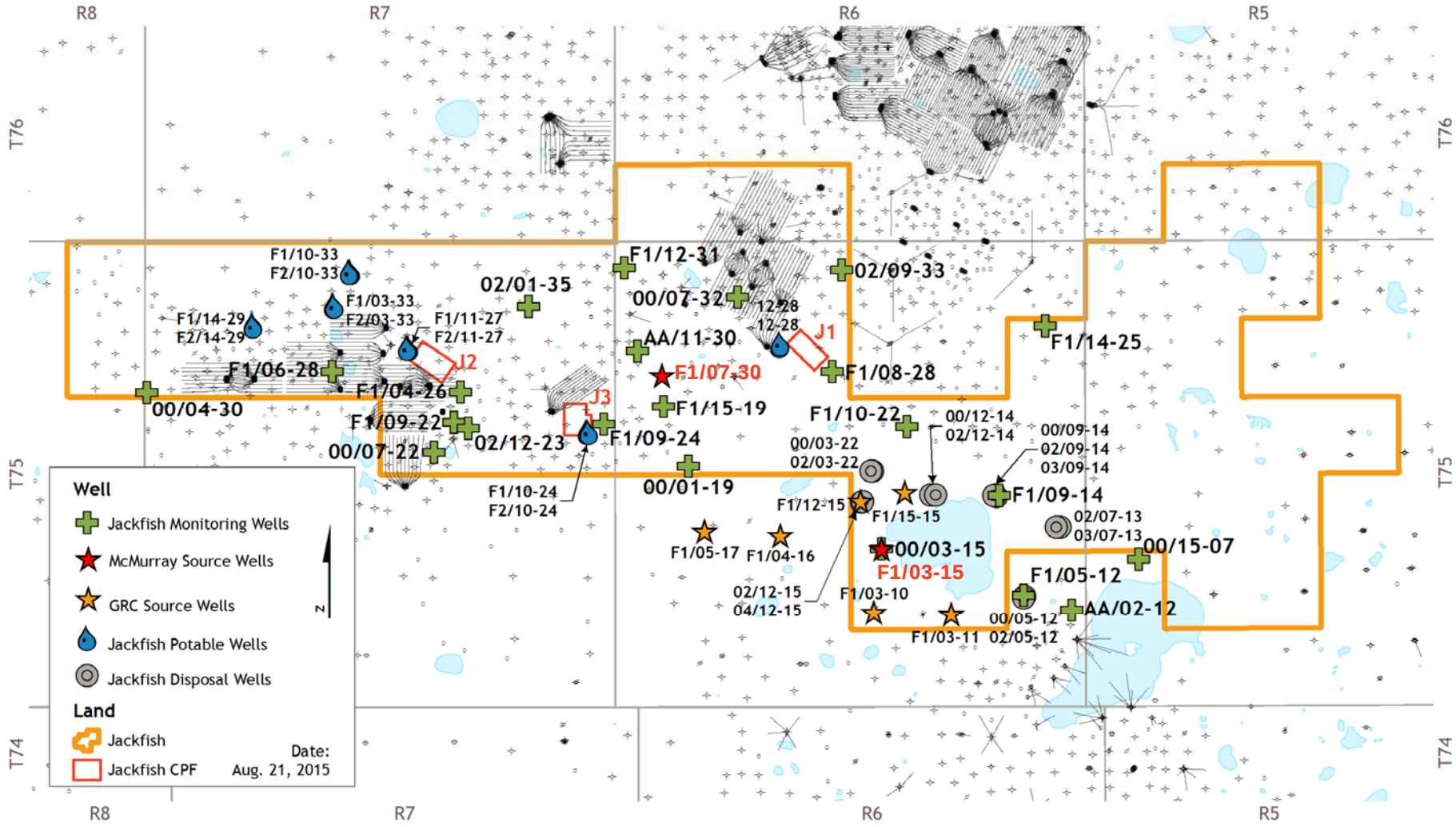
- Installation of replacement CPF steam meters completed and now operational

Water Production, Injection & Uses

Section 3.1.2-4

Water Disposal and Source Water
Well Locations

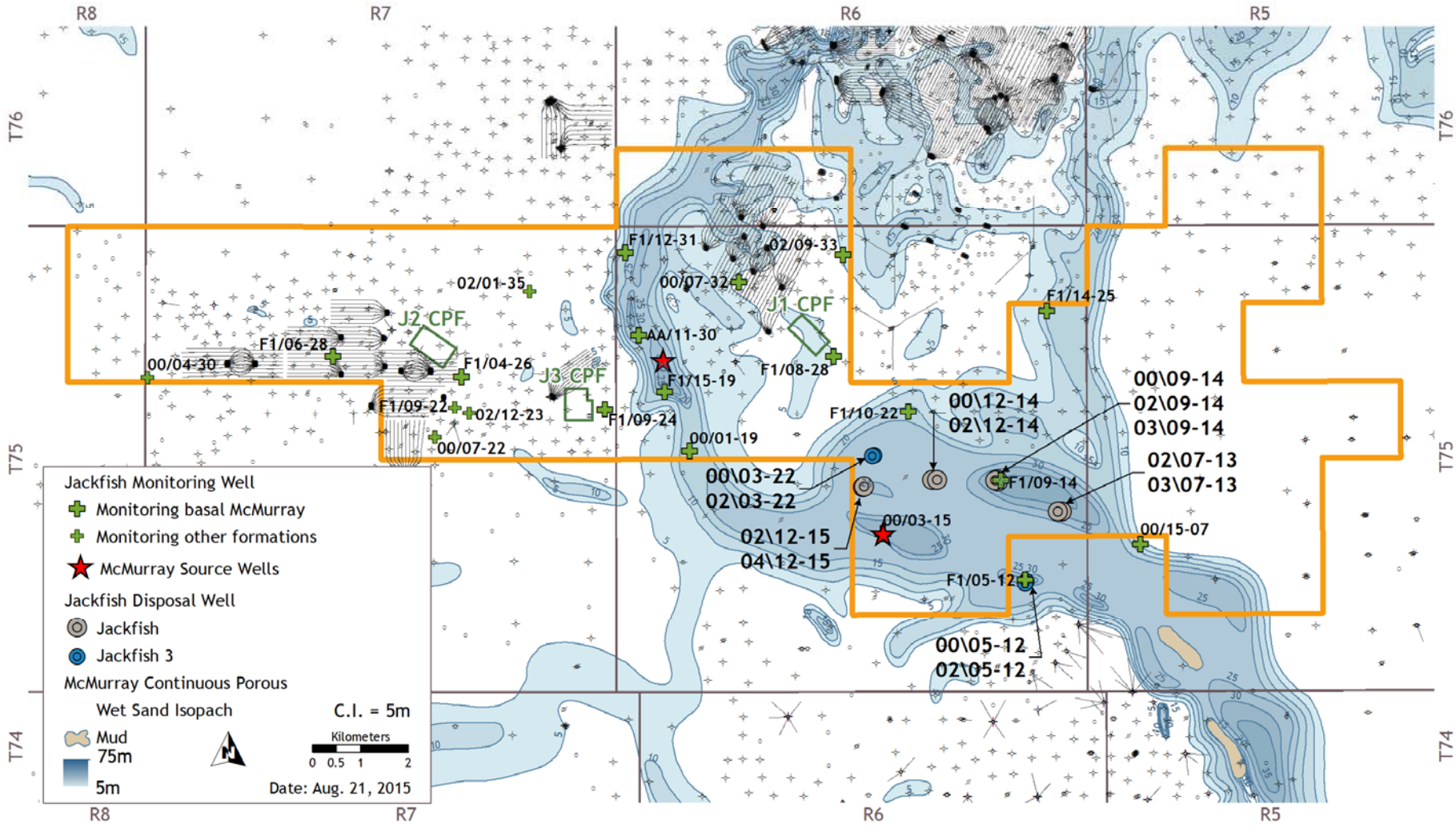
3.1.2-4a



Water Disposal Geology

Basal McMurray Aquifer

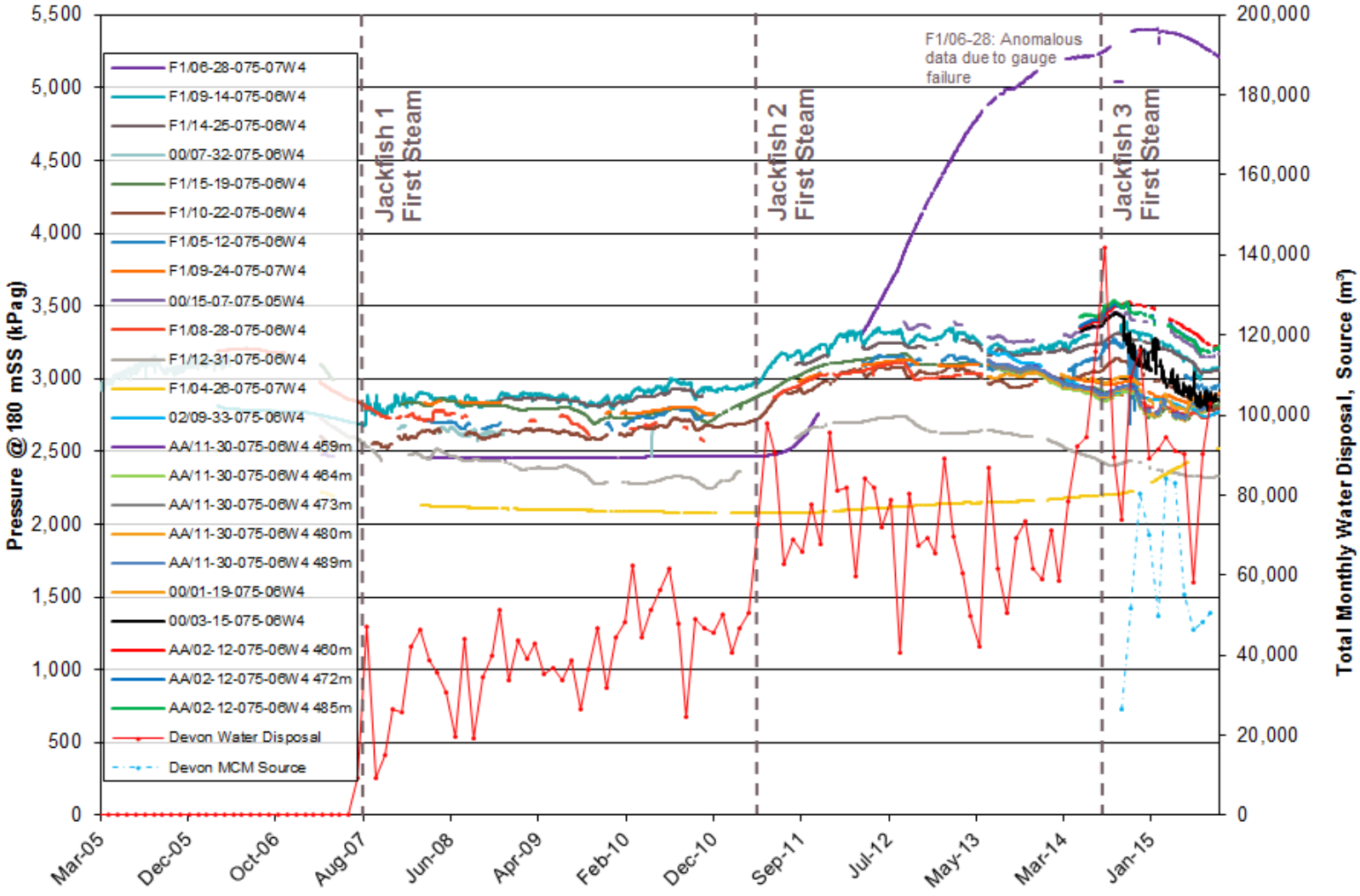
3.1.2-4a



Water Disposal Operations

Basal McMurray Pressure in 75-6W4, 75-7W4

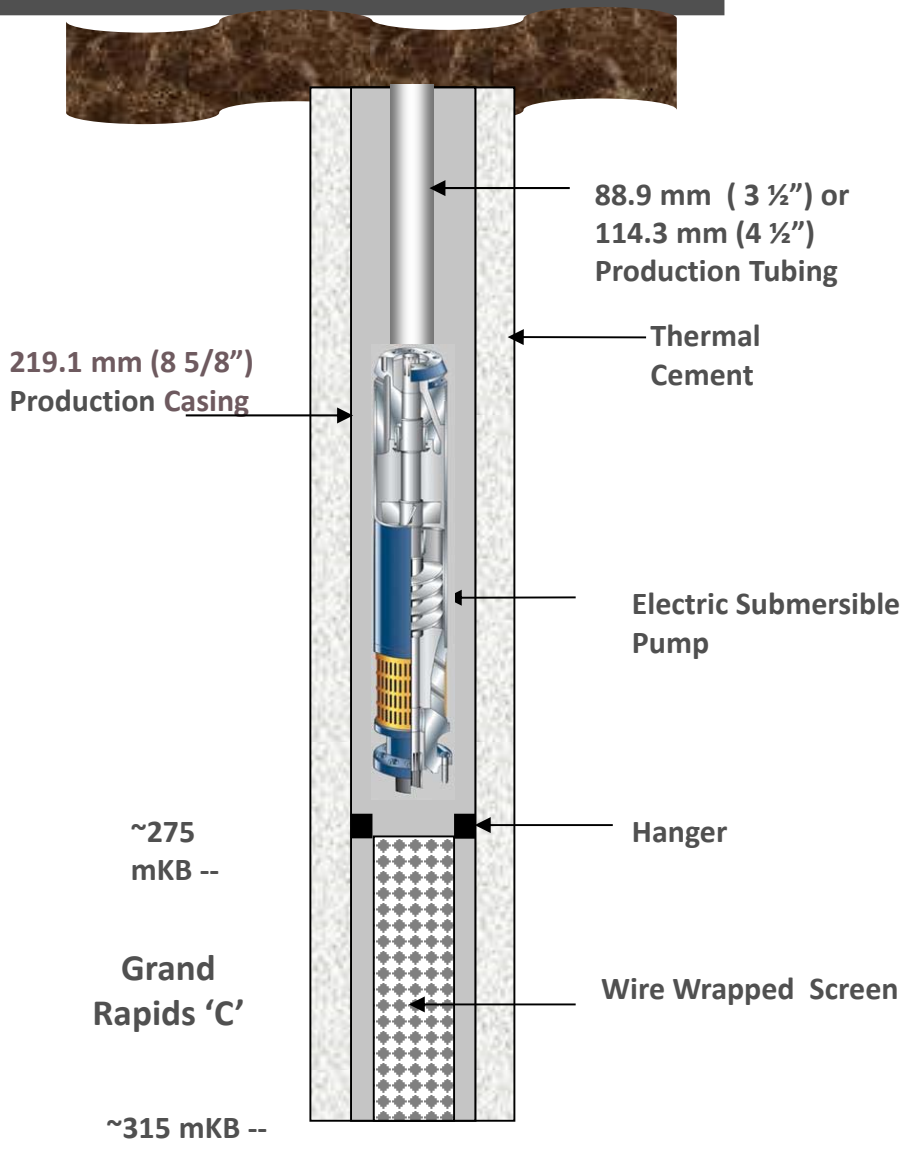
3.1.1-5b, 3.1.2-4a



Water Usage - Brackish

3.1.2-4a

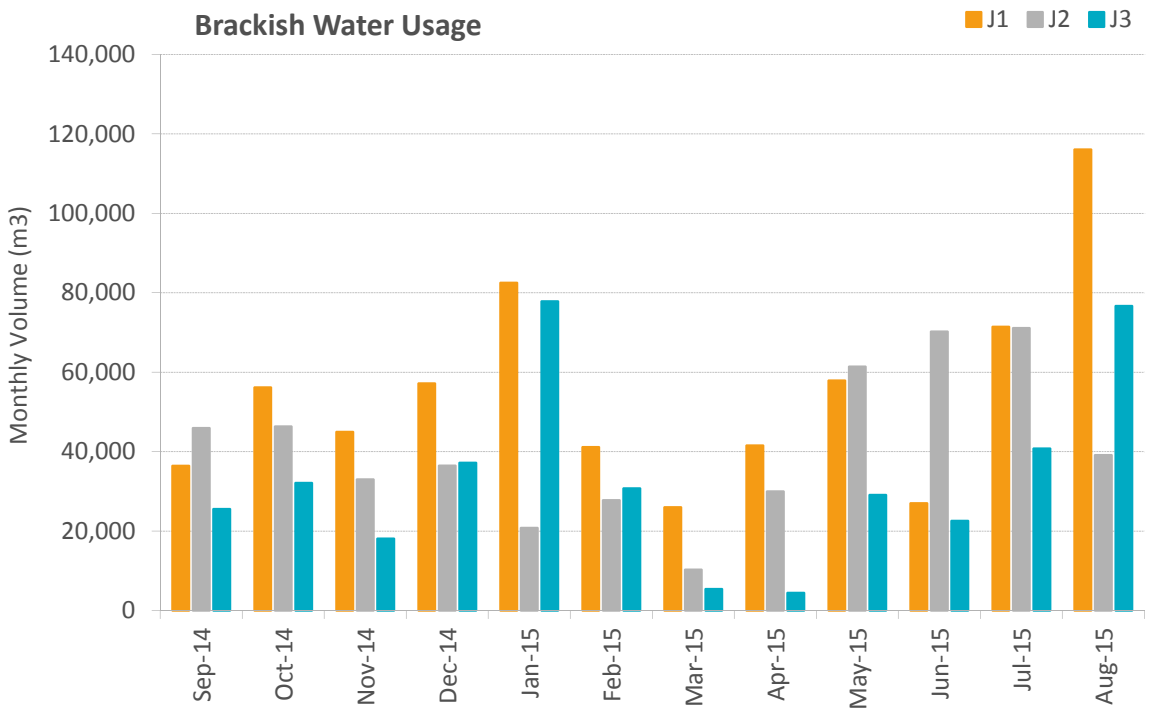
- Brackish source water produced from the Grand Rapids ‘C’ and McMurray zones
- Available for Jackfish 1, Jackfish 2 and Jackfish 3
- Two McMurray Wells:
  - F1/07-30-075-06W4
  - F1/03-15-075-06W4
- Six Grand Rapid Wells:
  - F1/12-15-075-06W4
  - F1/15-15-075-06W4
  - F1/03-10-075-06W4
  - F1/03-11-075-06W4
  - F1/04-16-075-06W4
  - F1/05-17-075-06W4



Water Usage - Brackish

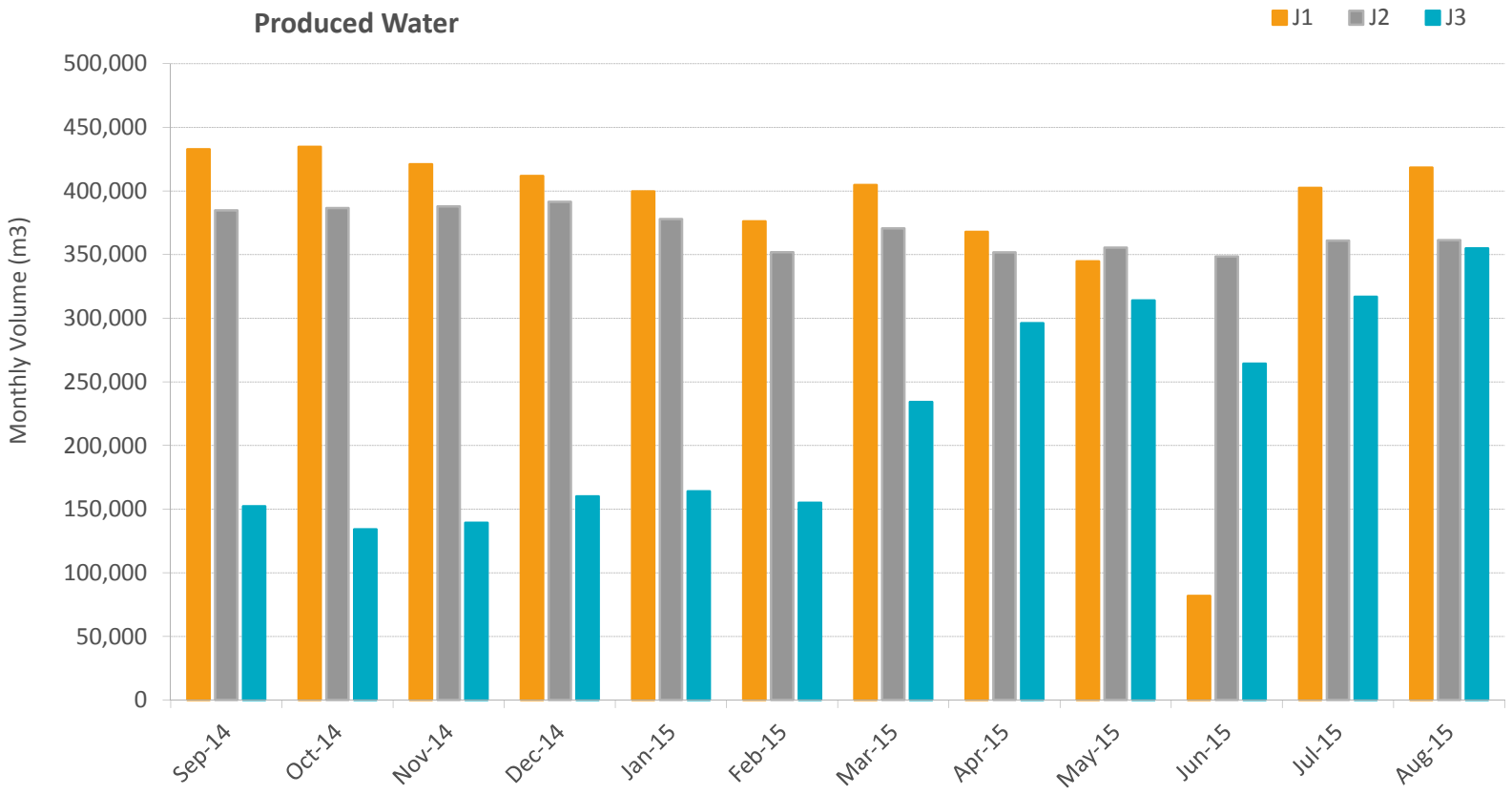
3.1.2-4b

- Brackish water production from the Grand Rapids ‘C’ commenced on July 12, 2007 and McMurray commenced on Oct 2, 2014
- Brackish water quality analyzed 1-2 times per year



Produced Water Volume

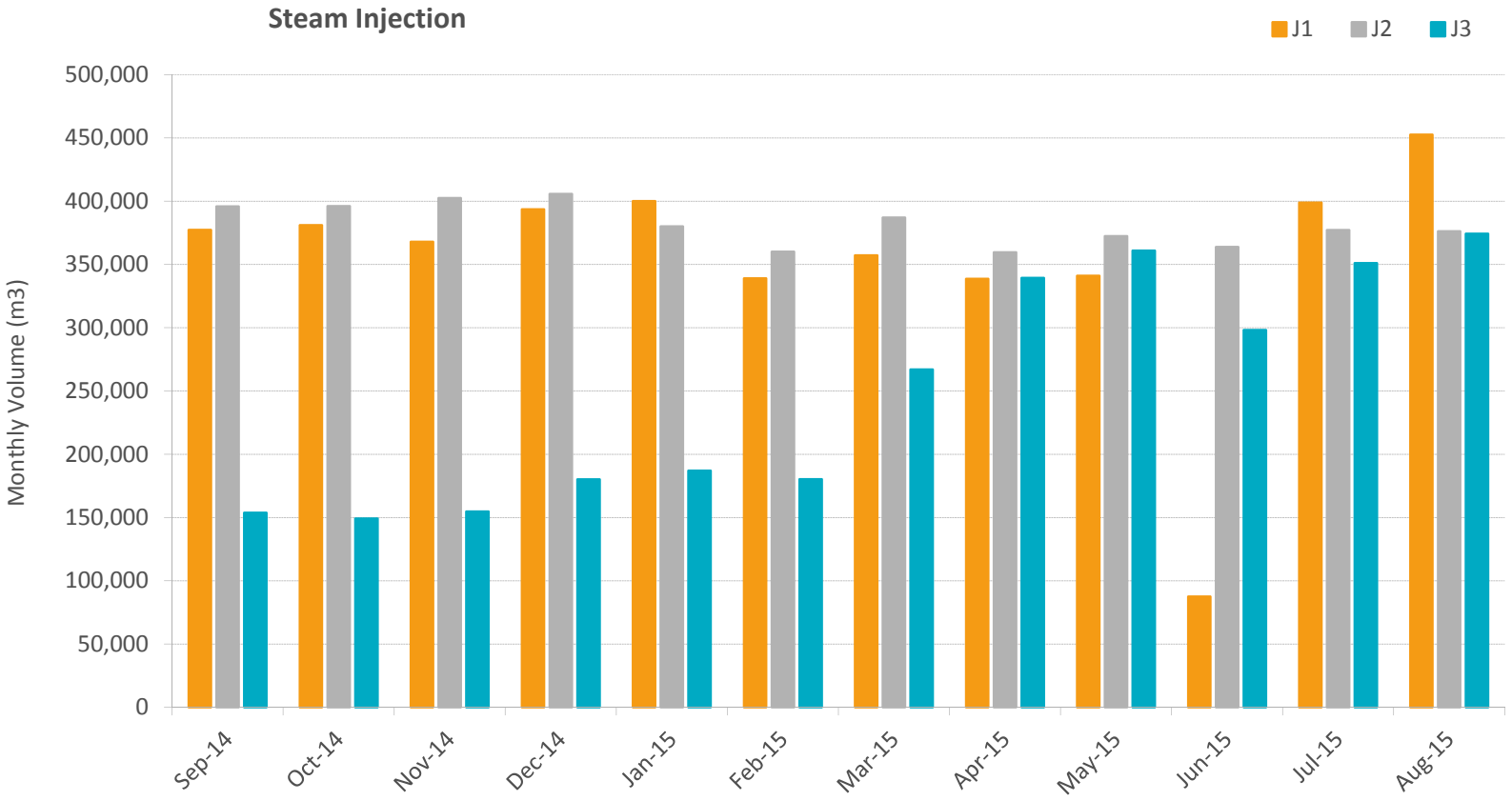
3.1.2-4c



- JF1 produced water was low in June 2015 due to a planned maintenance turnaround

Steam Injection Volume

3.1.2-4d

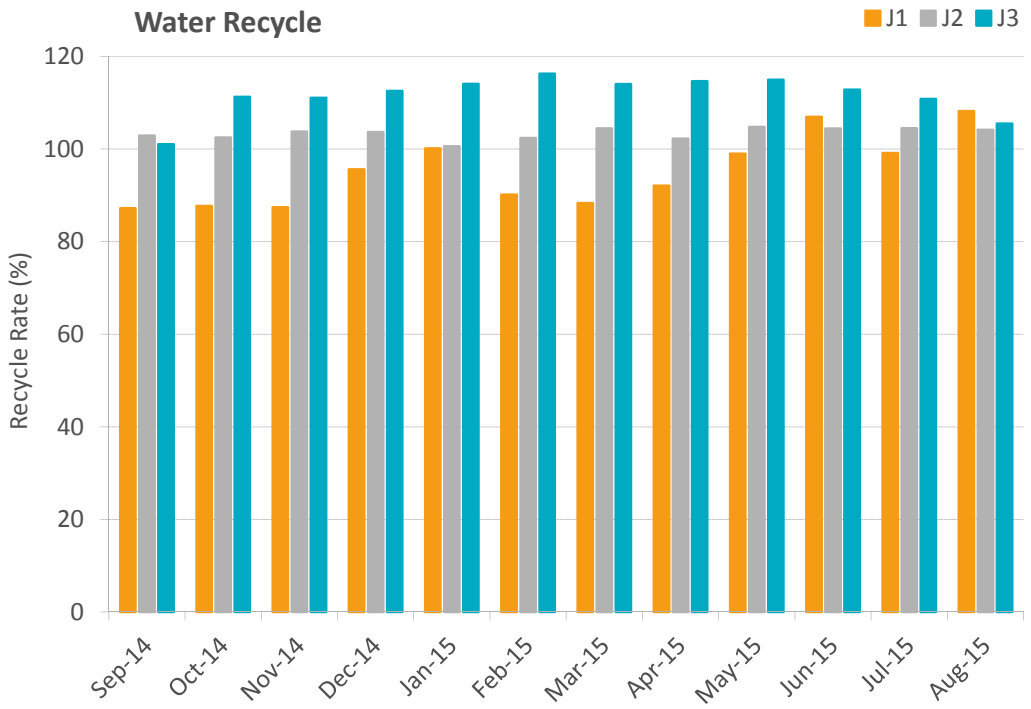


- JF1 produced water was low in June 2015 due to a planned maintenance turnaround

Produced Water Recycle

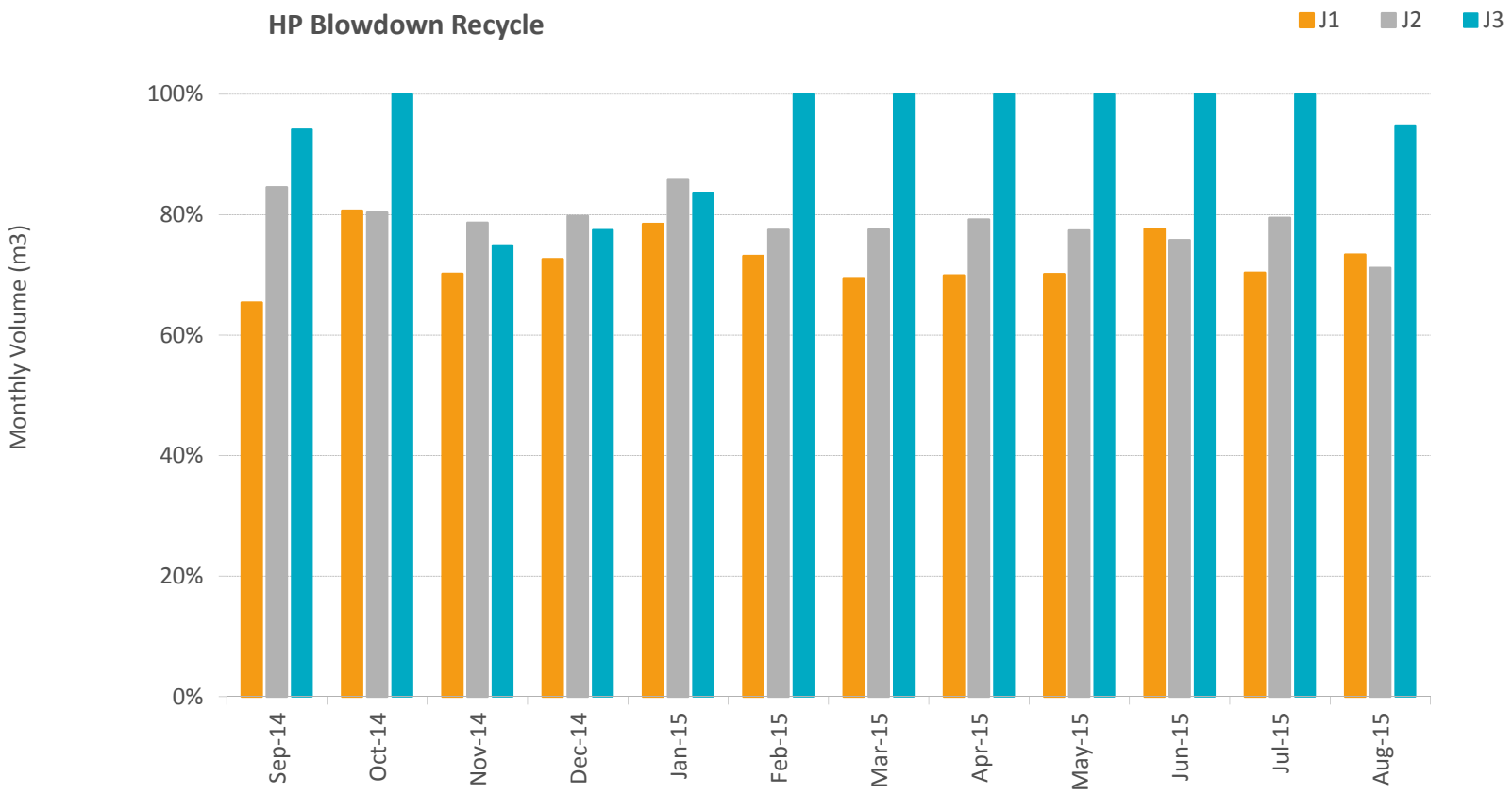
3.1.2-4e

- Only brackish water is used for required makeup volumes
- Recycle Rate: [Steam Injected / Water Produced] x 100%
  - Jackfish 1 2014/15 Recycle Rate Average: 95%
  - Jackfish 2 2014/15 Recycle Rate Average: 103%
  - Jackfish 3 2014/15 Recycle Rate Average: 112%
  - Jackfish Scheme approval minimum Recycle Rate: 95%
  - Devon is in full compliance with produced water recycle



Blowdown Recycle %

3.1.2-4f



$$\text{HP Blowdown Recycle Percentage} = 1 - \frac{Blowdown\ Water\ Volume}{Total\ BFW - Steam\ Production}$$

$$\text{Jackfish 1, September 2014: } 1 - \frac{46{,}721.1\ m^3}{512{,}170.0\ m^3 - 377{,}227.0\ m^3} = 65.4\%$$

Water Disposal – Approval No. 10790H

Class 1b

3.1.2-4g

Disposal System is shared between Jackfish 1, Jackfish 2 and Jackfish 3

Two disposal streams:

- blowdown & regen waste

Thirteen Class 1b disposal wells in total

Approved MWIP of 6,000 kPa (July 2009)

Jackfish 1 disposal wells:

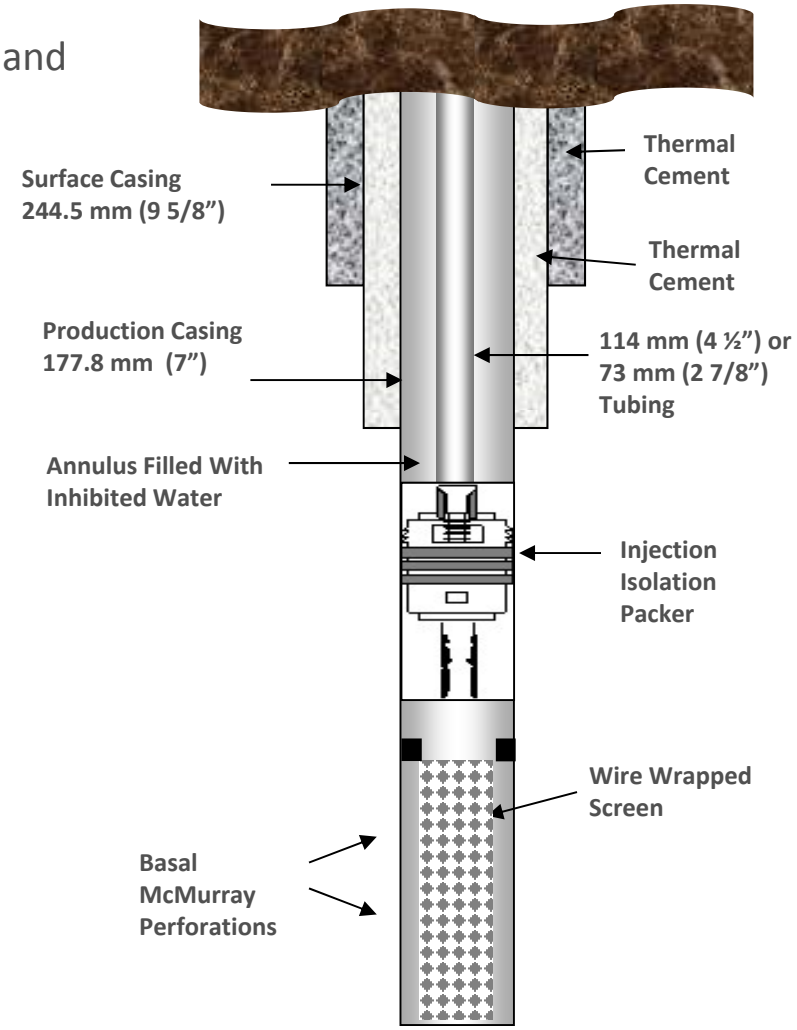
- 00, 02 & 03/09-14-075-06W4 (blowdown)
- 00 & 02/12-14-075-06W4 (regen)

Jackfish 2 disposal wells:

- 02 & 03/07-13-075-06W4 (blowdown)
- 02 & 04/12-15-075-06W4 (regen)

Jackfish 3 disposal wells:

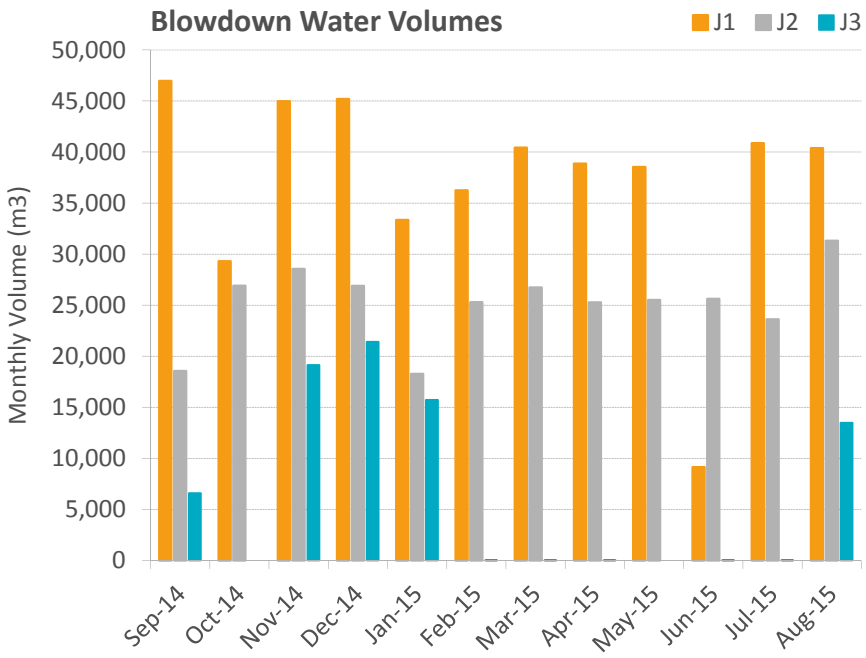
- 02 & 03/05-12-075-06W4 (blowdown)
- 00 & 02/03-22-075-06W4 (regen)

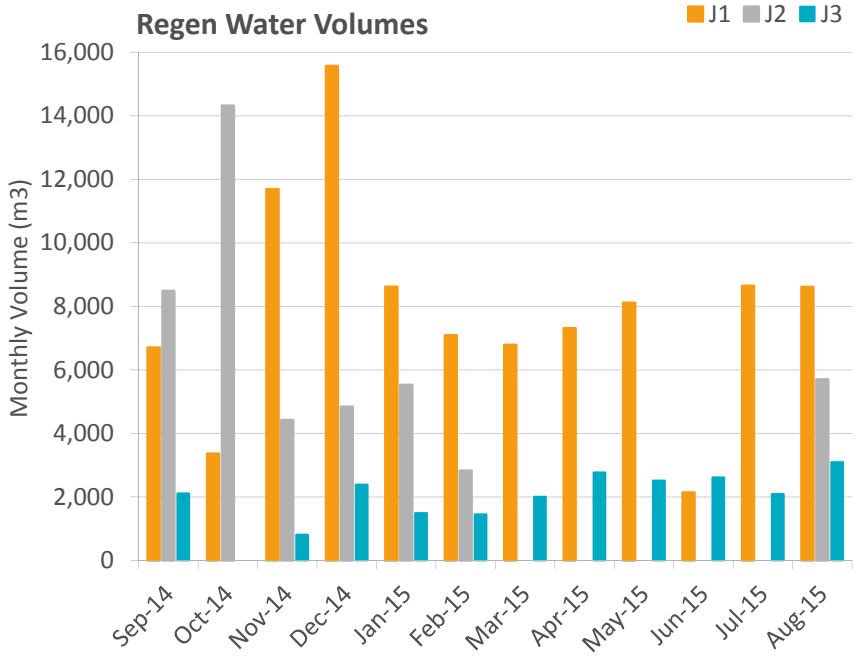


Water Disposal – Approval No. 10790H

Volume Summary

3.1.2-4h

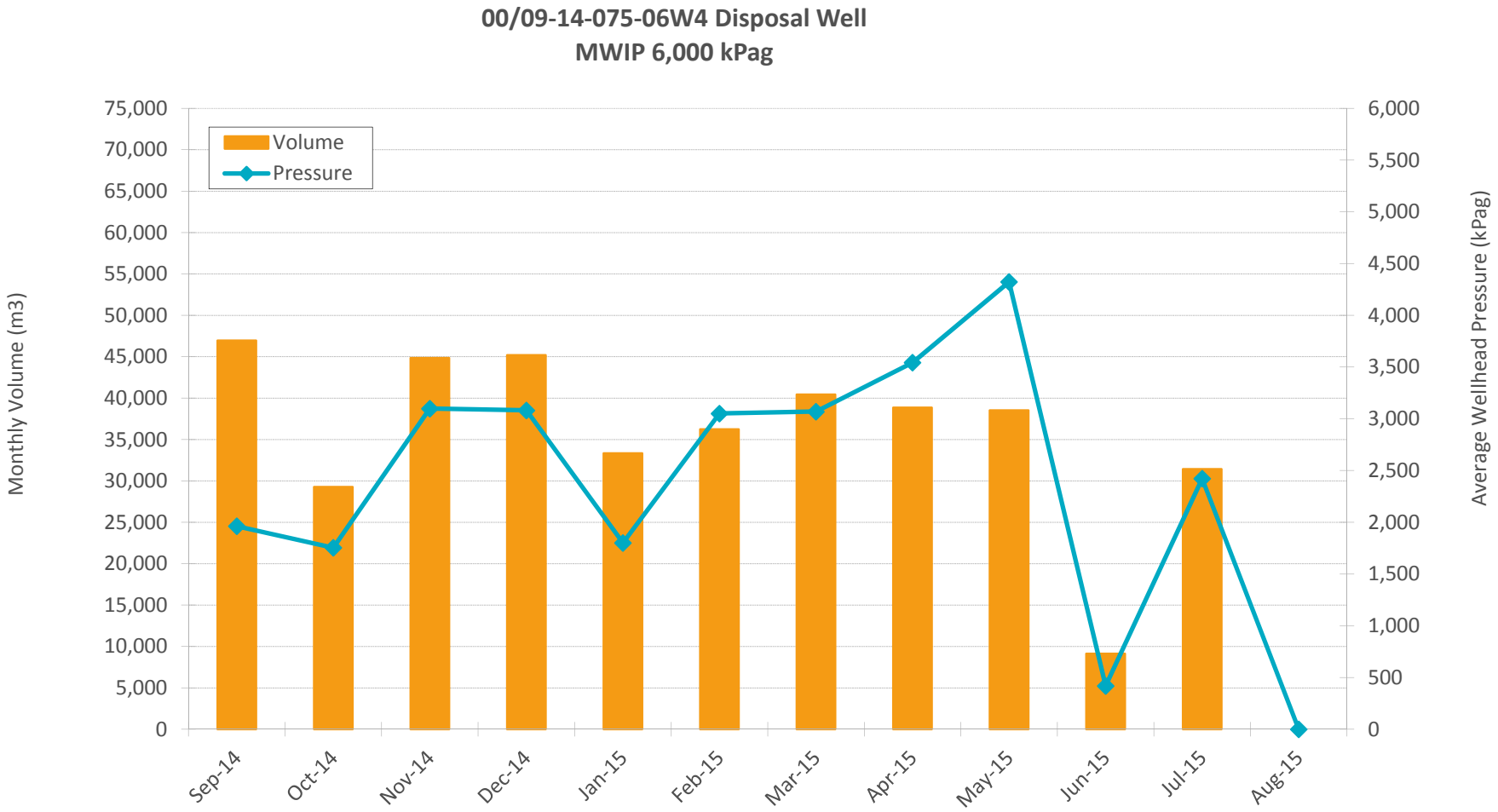




Water Disposal – Approval No. 10790

00/09-14-075-06W4

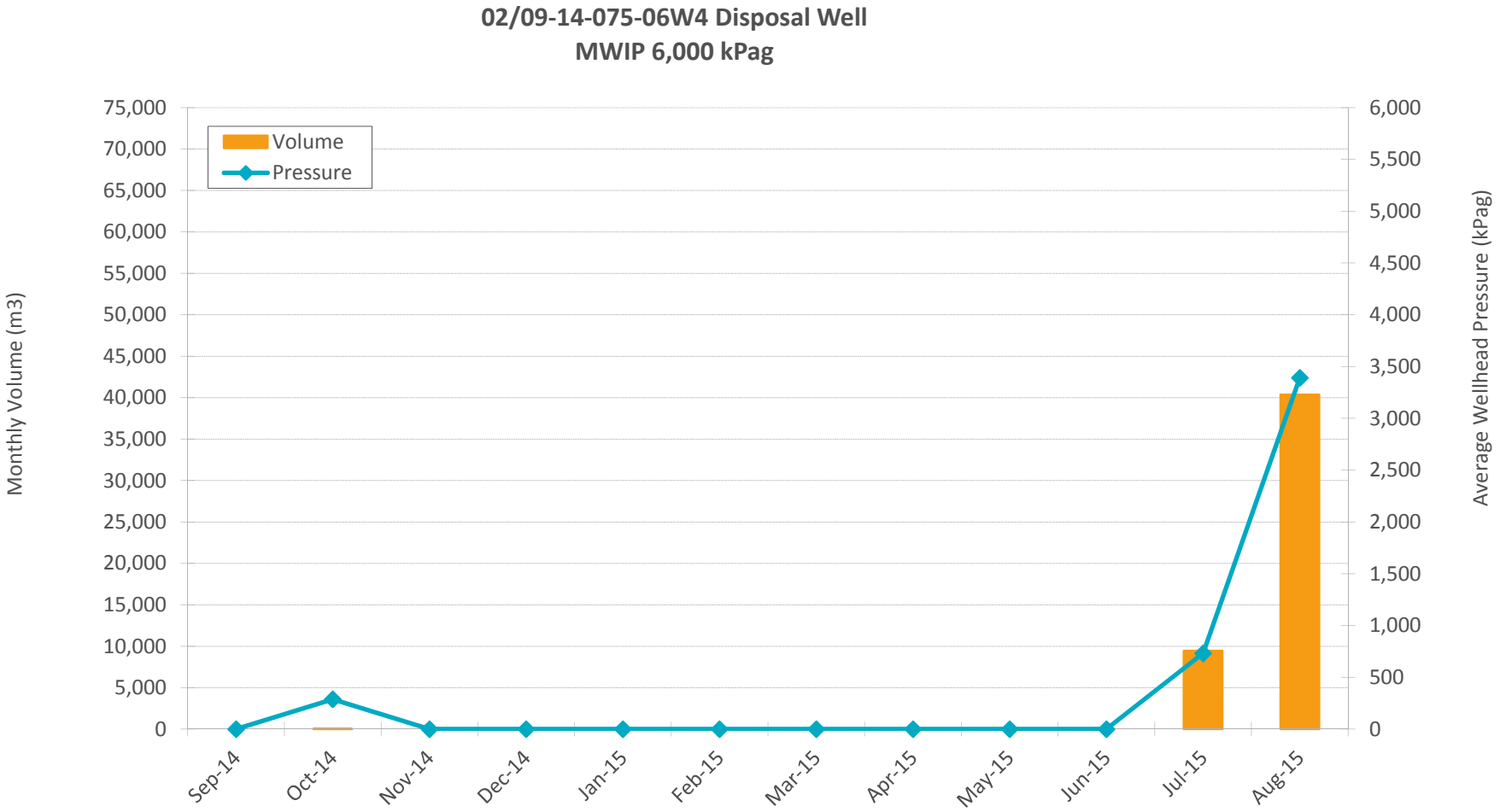
3.1.2-4h



Water Disposal – Approval No. 10790

02/09-14-075-06W4

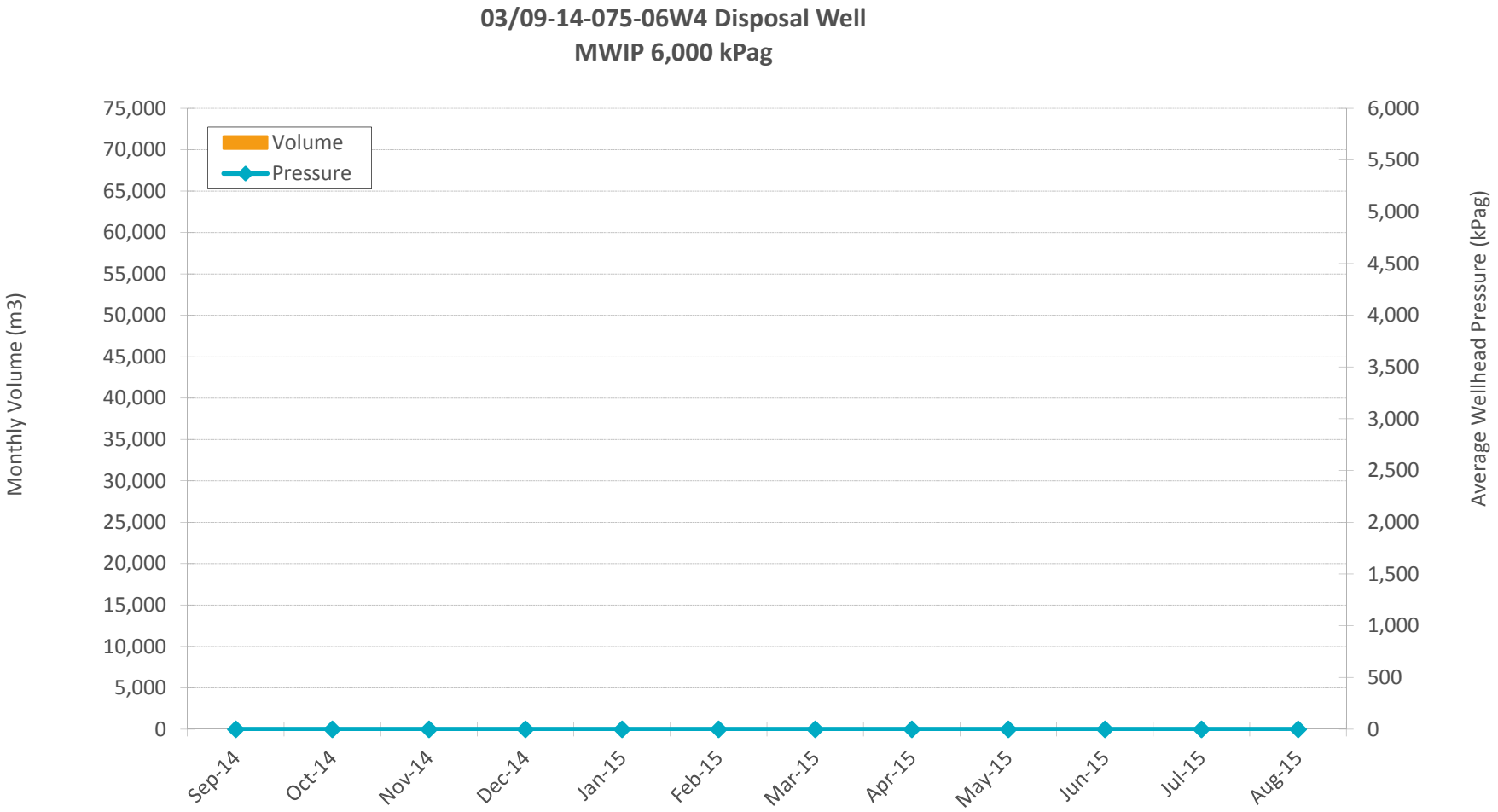
3.1.2-4h



Water Disposal – Approval No. 10790

03/09-14-075-06W4

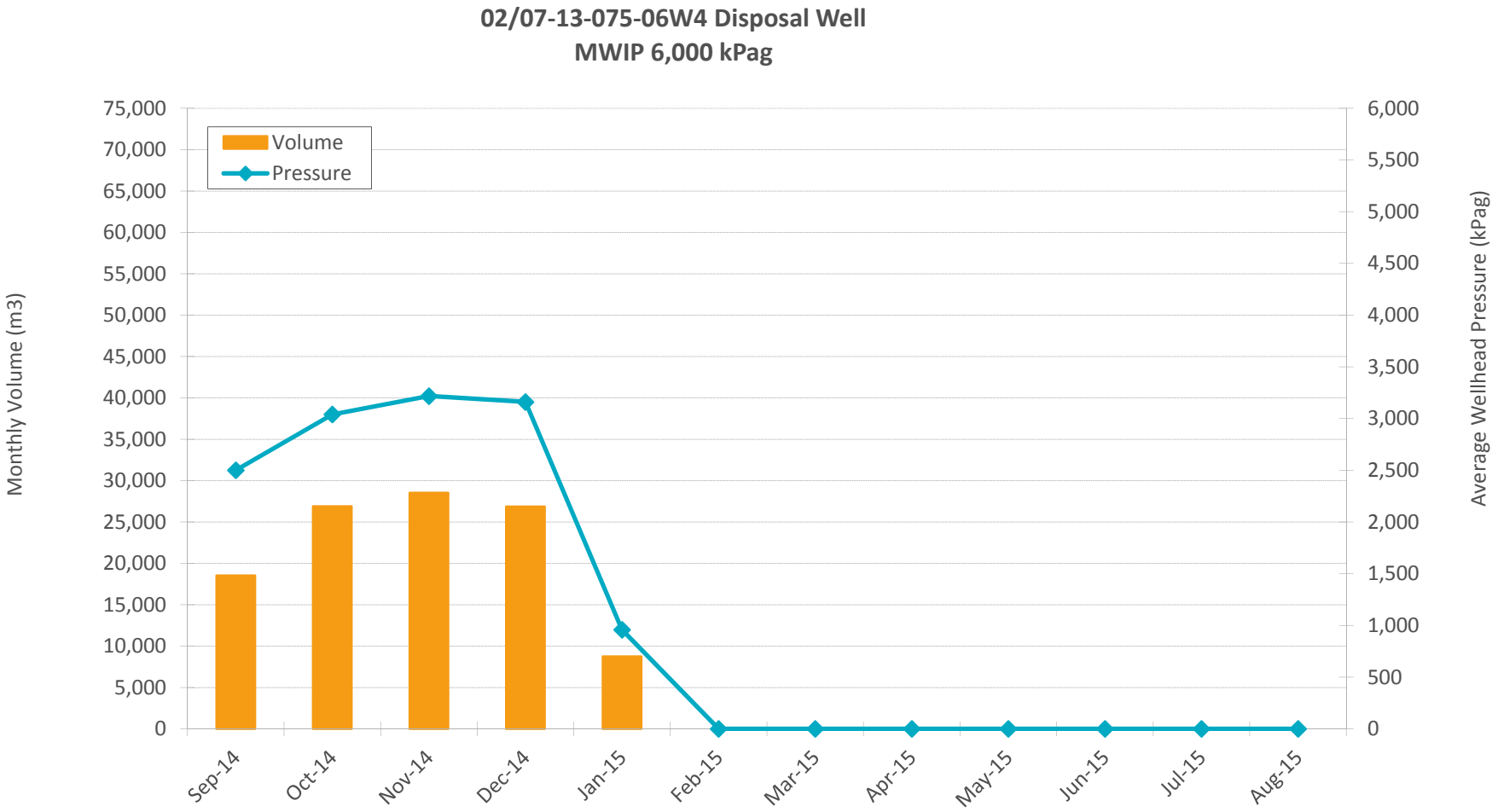
3.1.2-4h



Water Disposal – Approval No. 10790

02/07-13-075-06W4

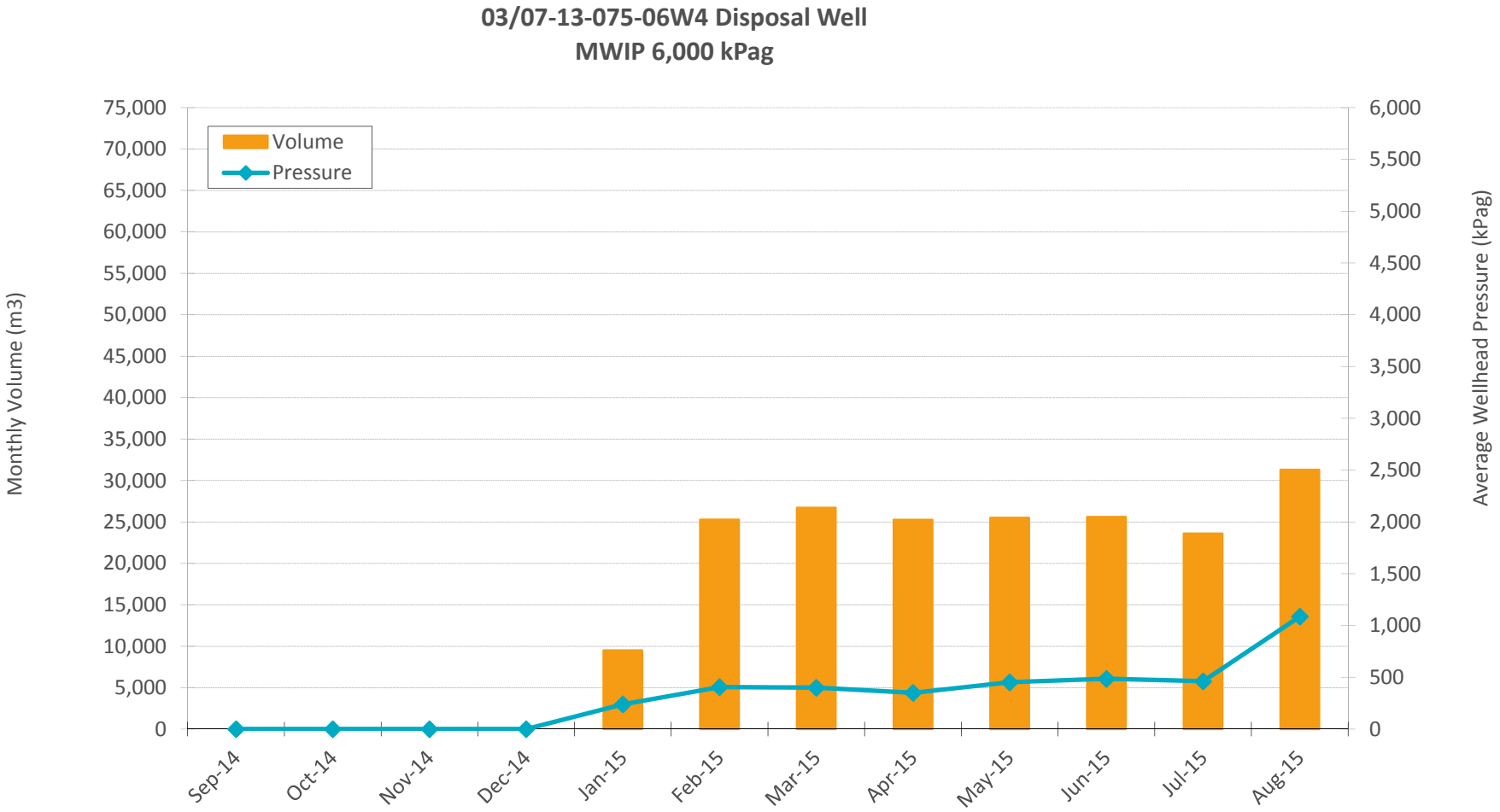
3.1.2-4h



Water Disposal – Approval No. 10790

03/07-13-075-06W4

3.1.2-4h



Water Disposal – Approval No. 10790

00/12-14-075-06W4

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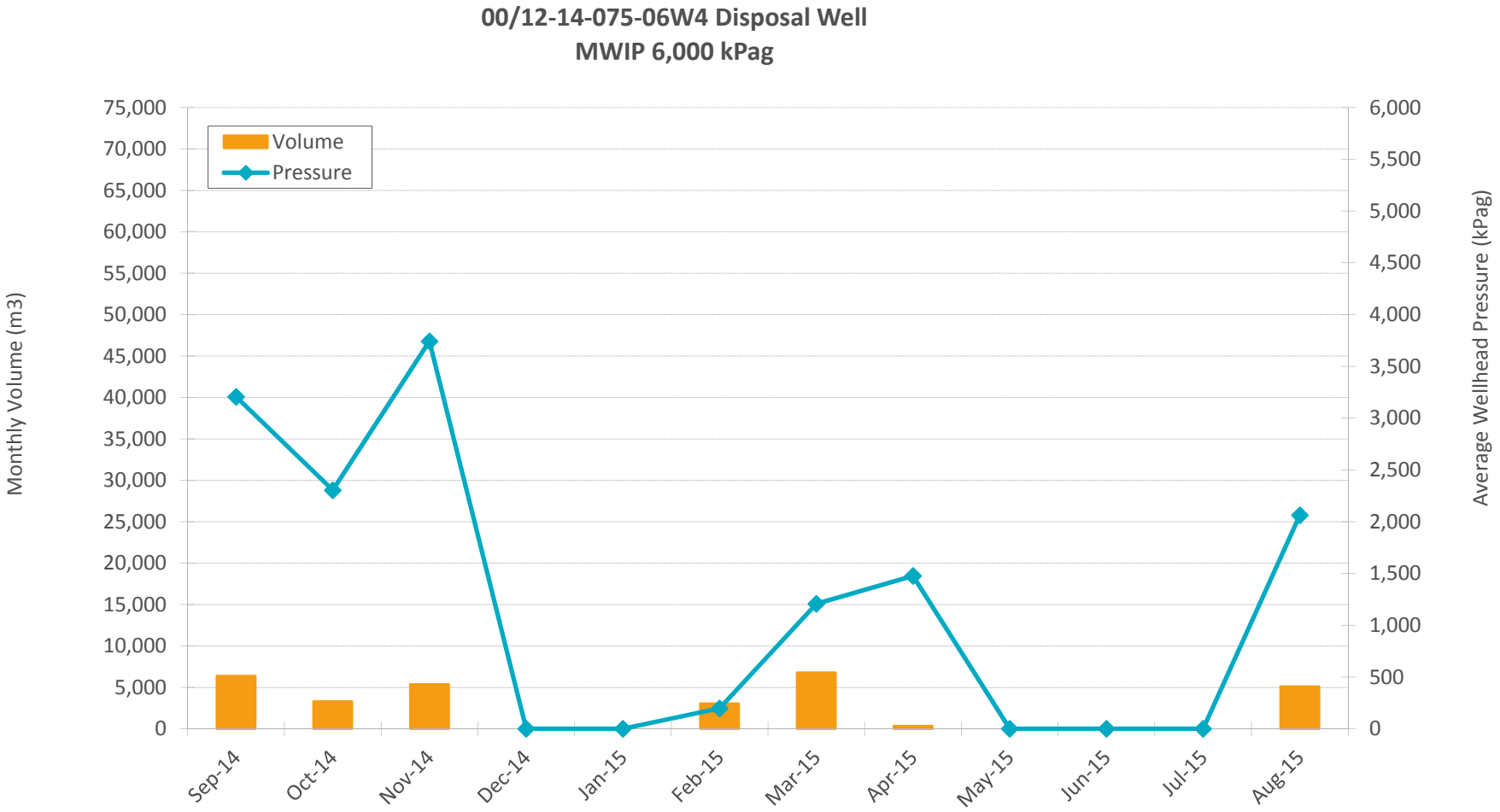
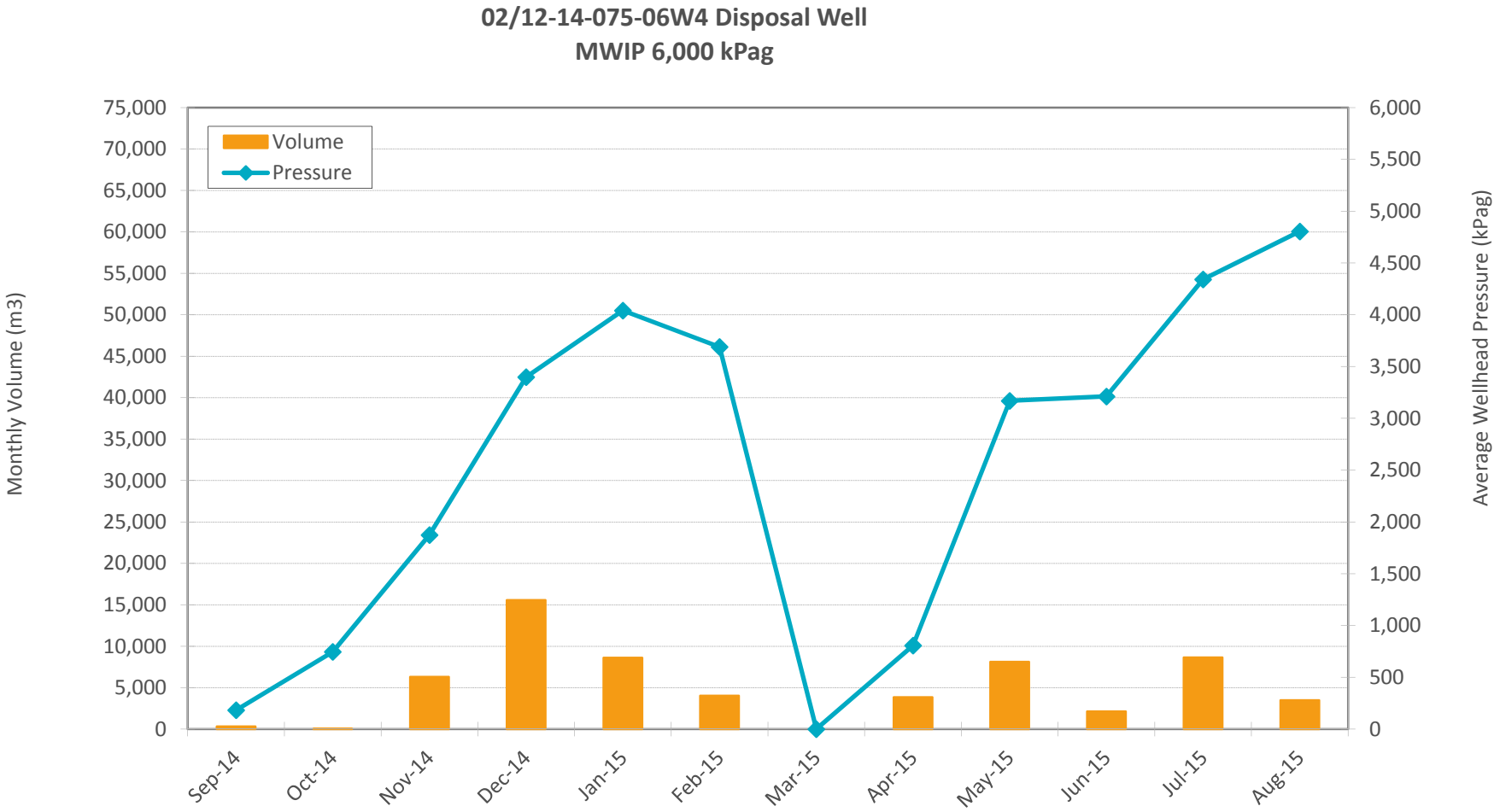


Water Disposal – Approval No. 10790

02/12-14-075-06W4

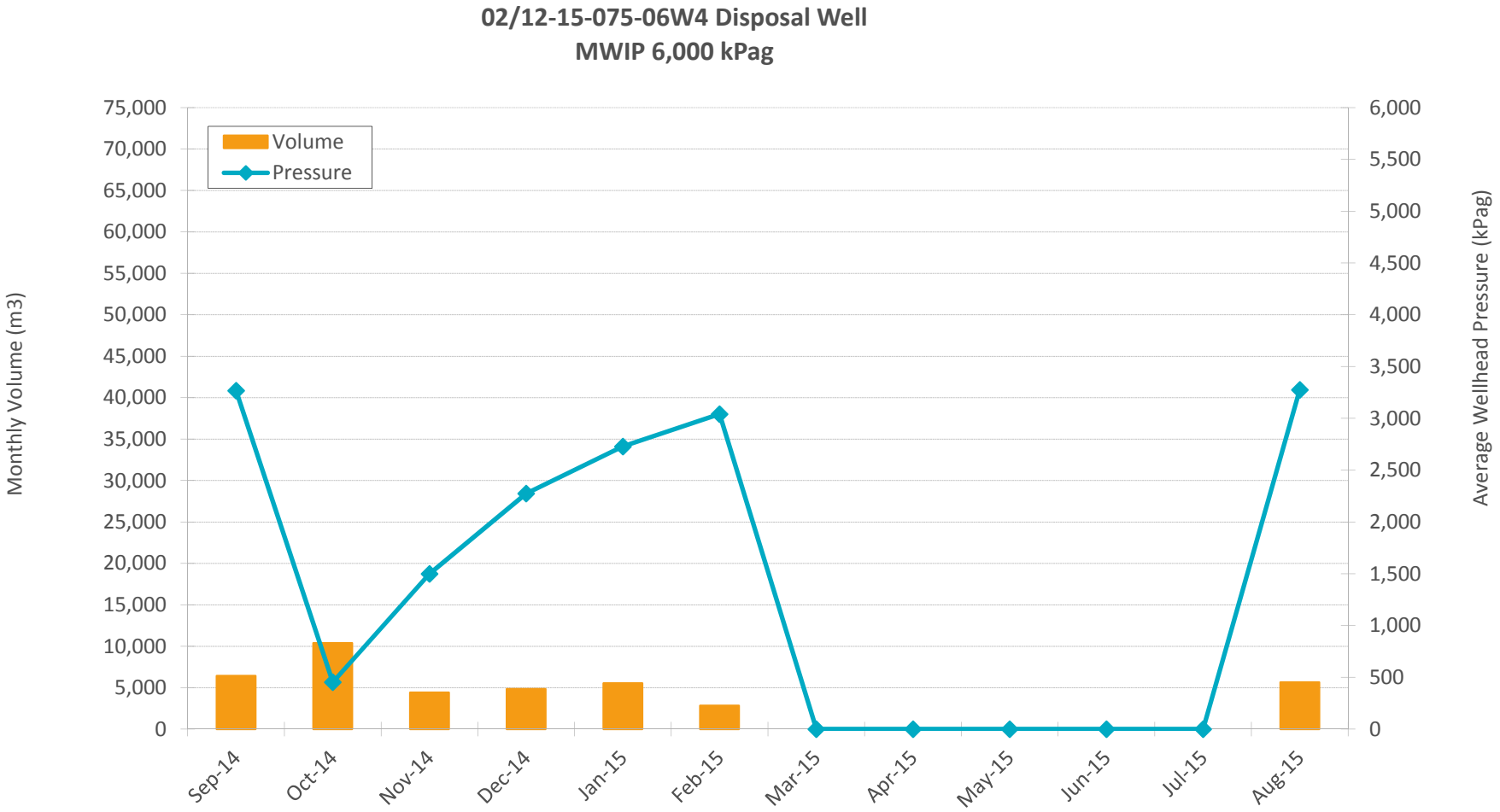
3.1.2-4h



Water Disposal – Approval No. 10790

02/12-15-075-06W4

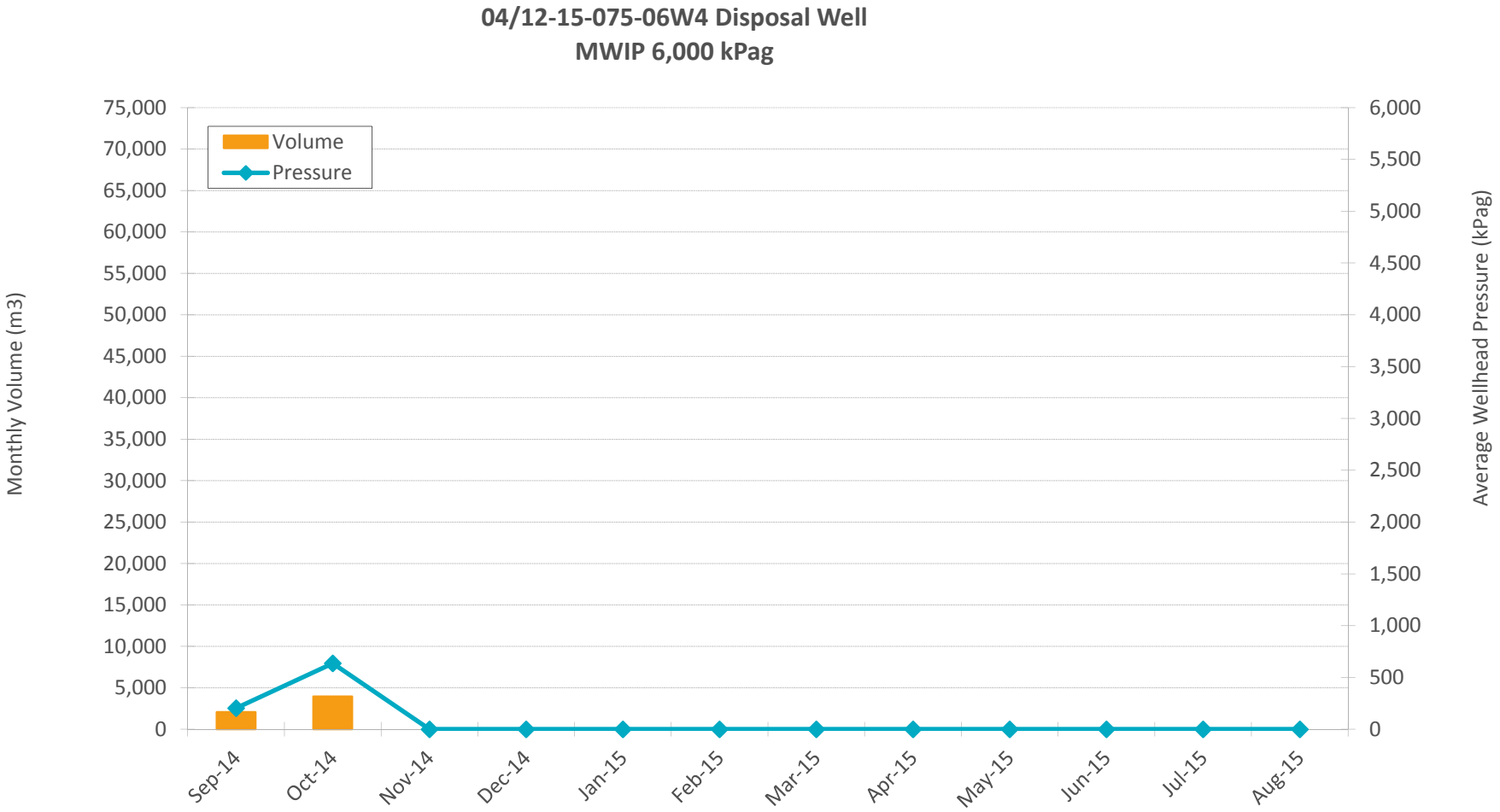
3.1.2-4h



Water Disposal – Approval No. 10790

04/12-15-075-06W4

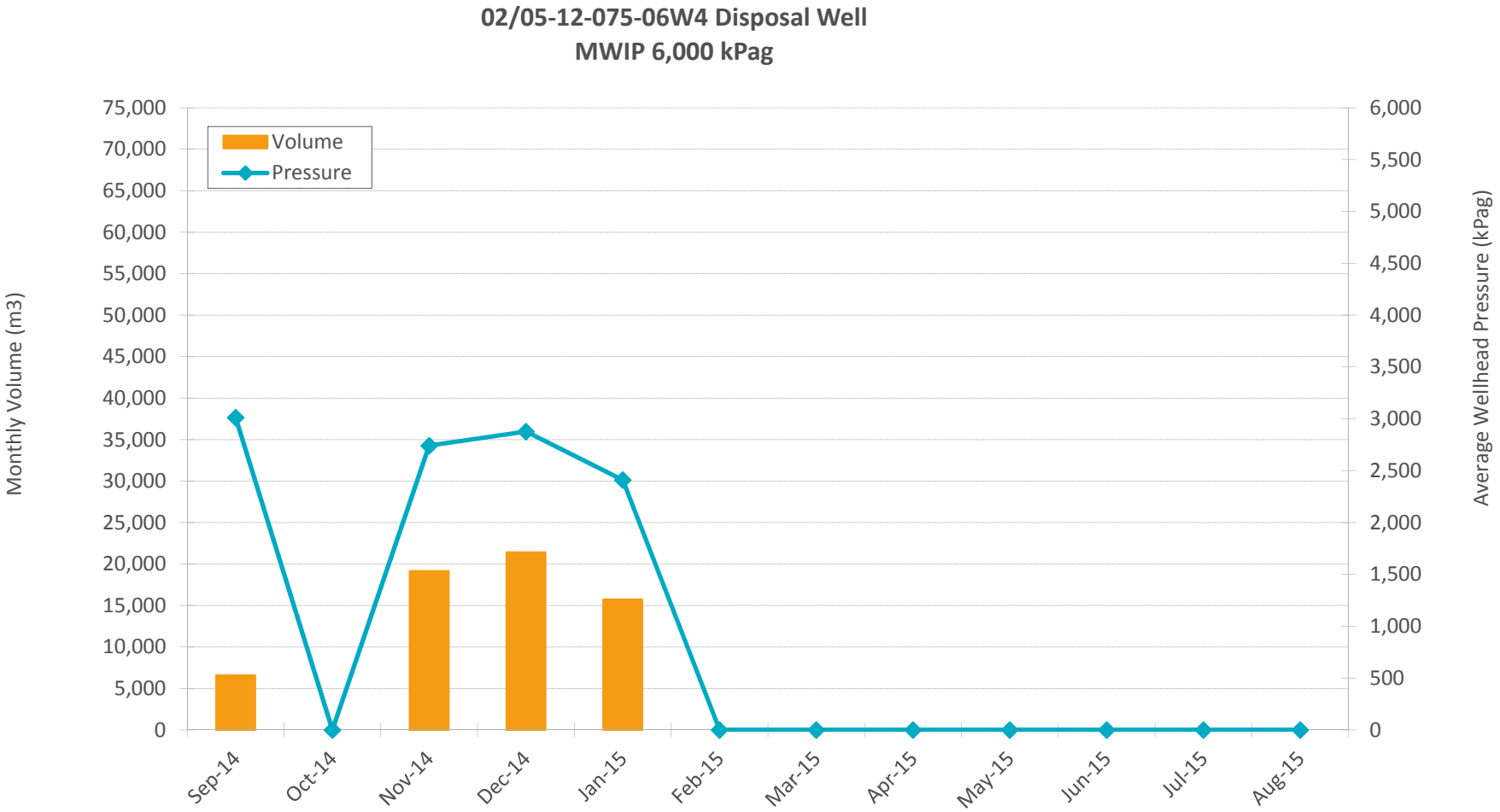
3.1.2-4h



Water Disposal – Approval No. 10790

02/05-12-075-06W4

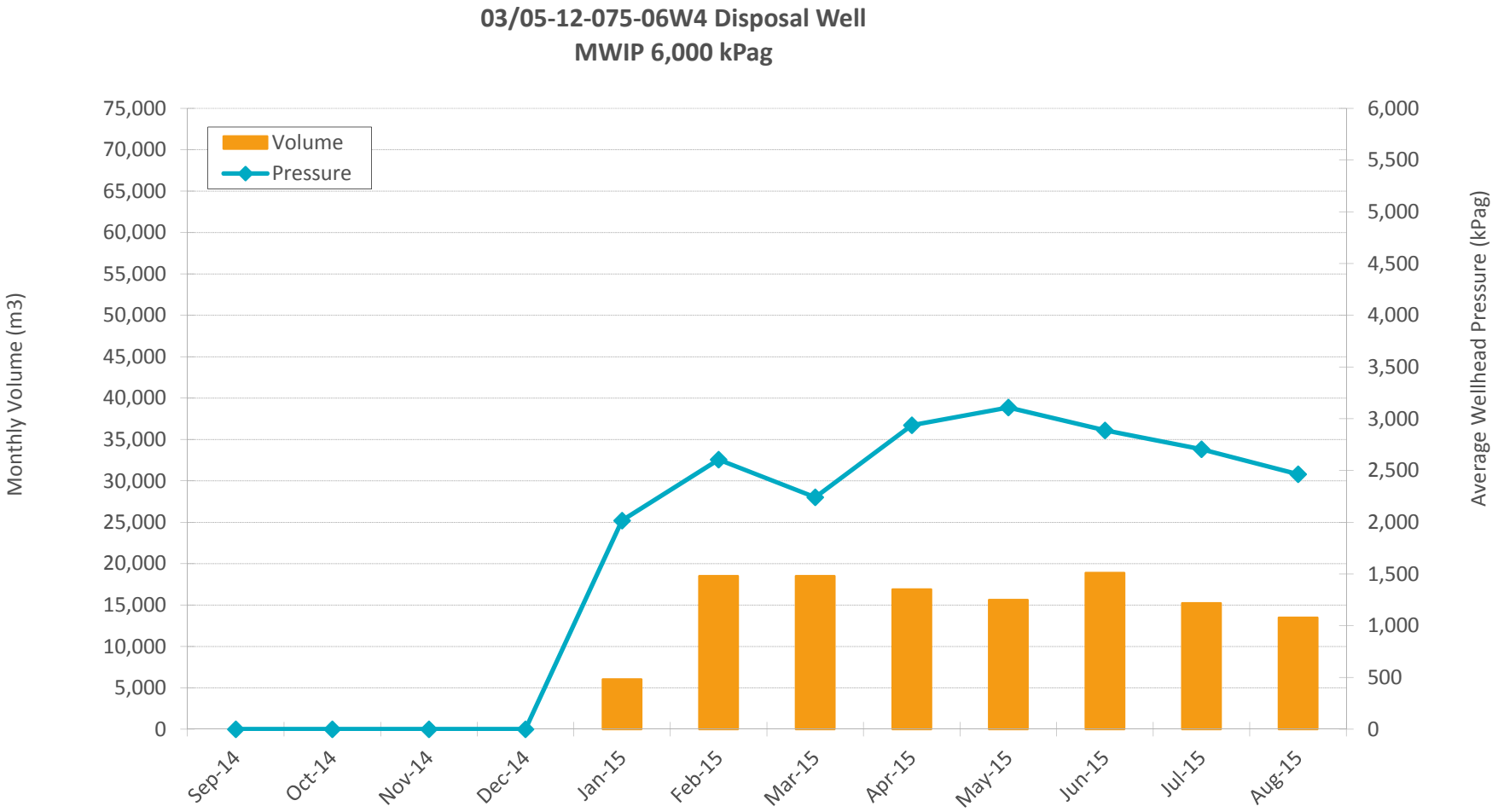
3.1.2-4h



Water Disposal – Approval No. 10790

03/05-12-075-06W4

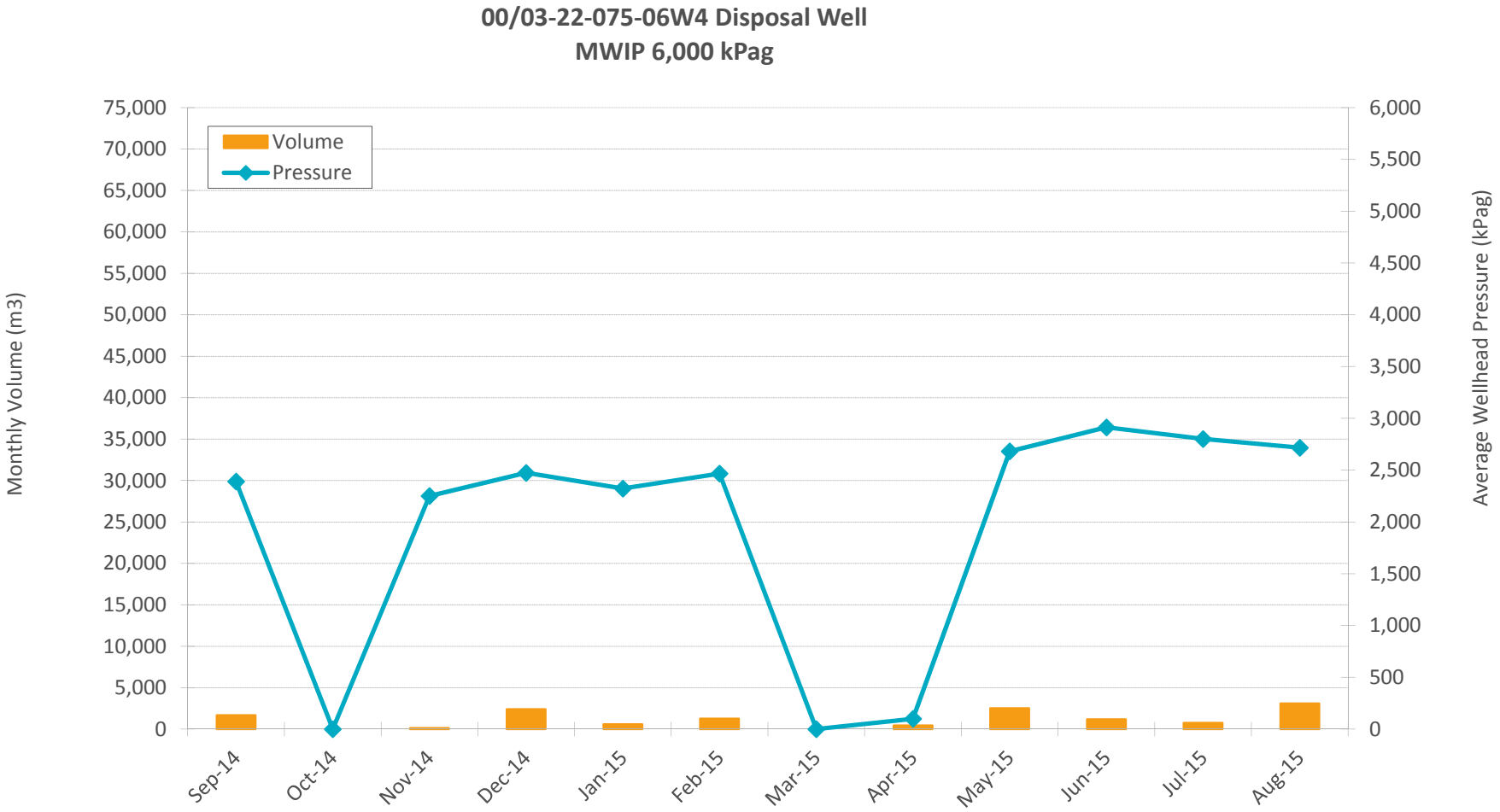
3.1.2-4h



Water Disposal – Approval No. 10790

00/03-22-075-06W4

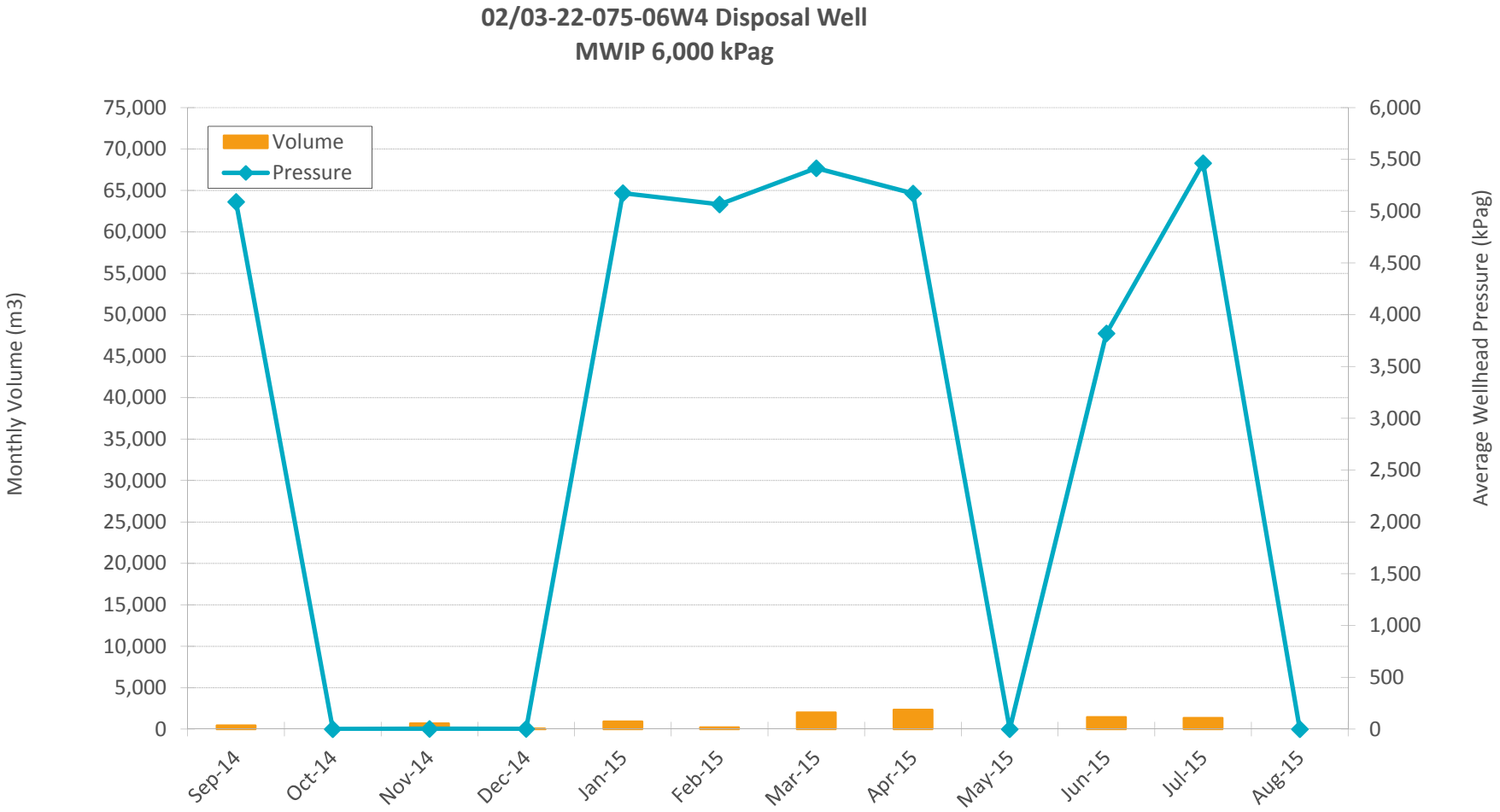
3.1.2-4h



Water Disposal – Approval No. 10790

02/03-22-075-06W4

3.1.2-4h



Off-site Water Disposal Volumes

3.1.2-4i

Facility	Volume (m^3)
Cancen WP	1,066
CEIBA Energy WP	13,039
Gibsons Mayerthorpe WP	3,389
Newalta Elk Point WP	14,149
Newalta Ninton Junction	50
Tervita Coronation WP	46
Tervita Lindberg WP	50,920
Tervita Mitsue WP	68
Total	**82,727**

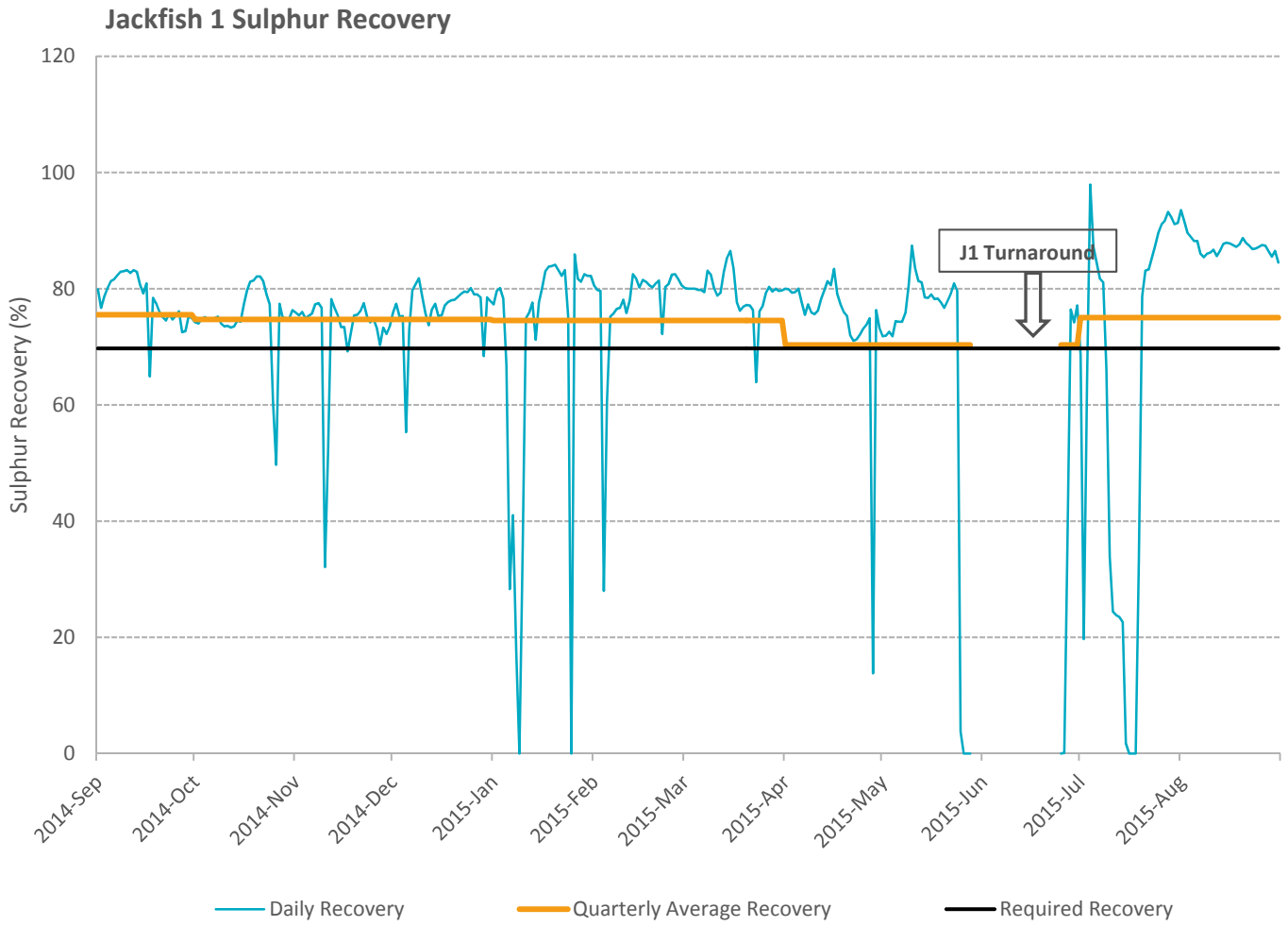
Sulphur Production & Air Emissions

Section 3.1.2-5

Sulphur Production

Operations with Sulphur Recovery

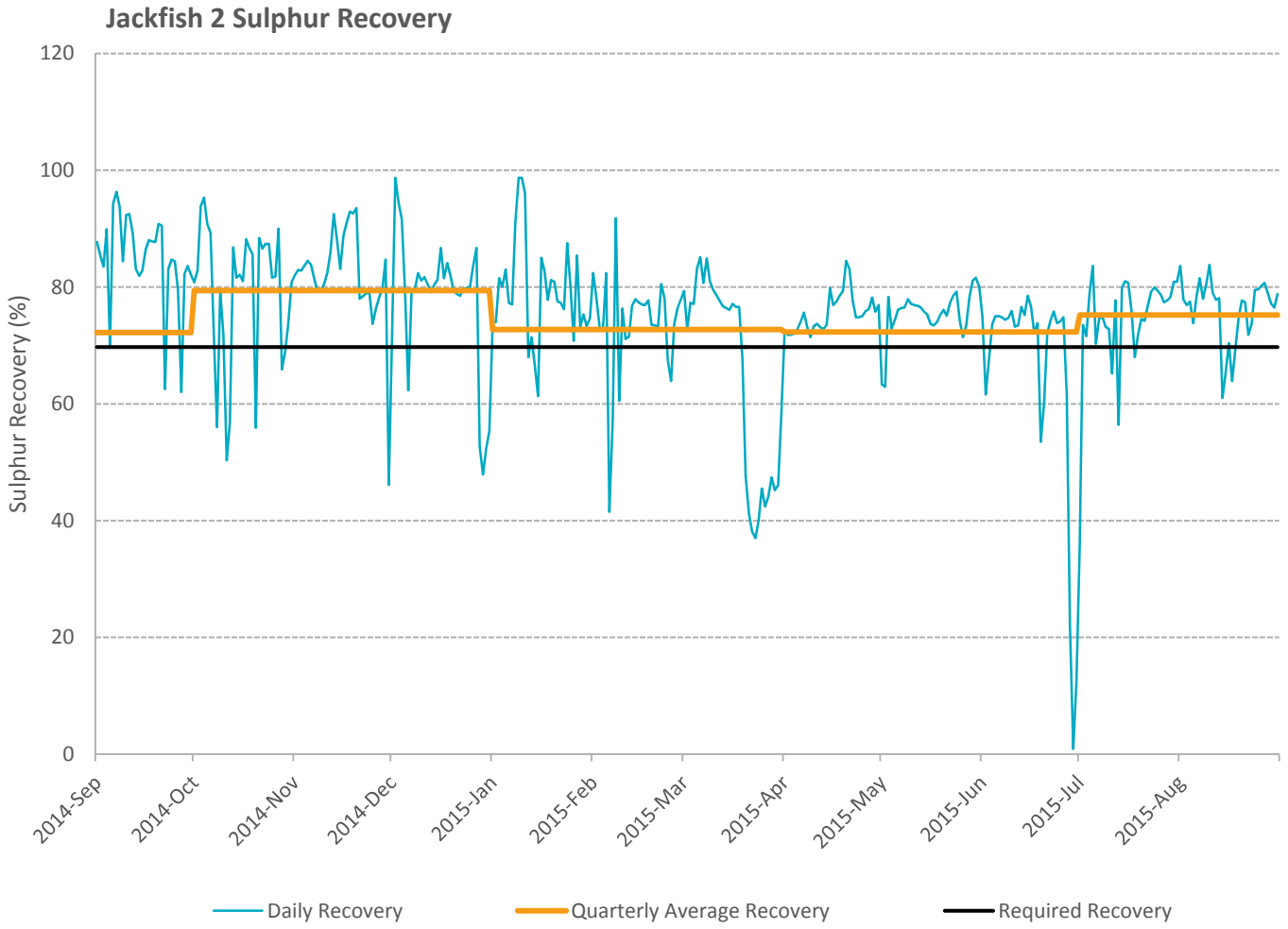
3.1.2-5a (i) and (ii)



Sulphur Production

Operations with Sulphur Recovery

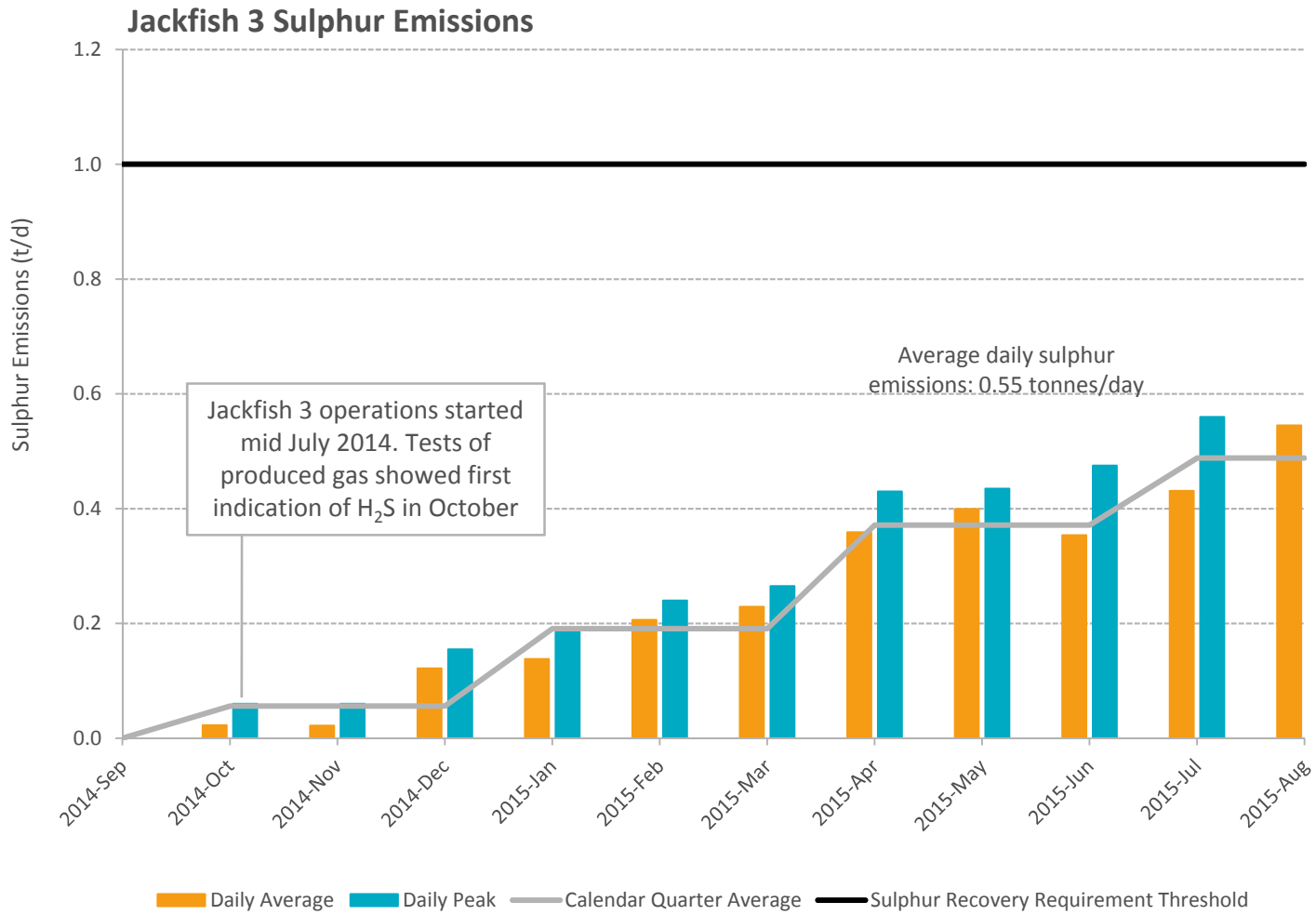
3.1.2-5a (i) and (ii)



Sulphur Production

Operations under 1 tonne/day

3.1.2-5b (i), (ii) and (iii)

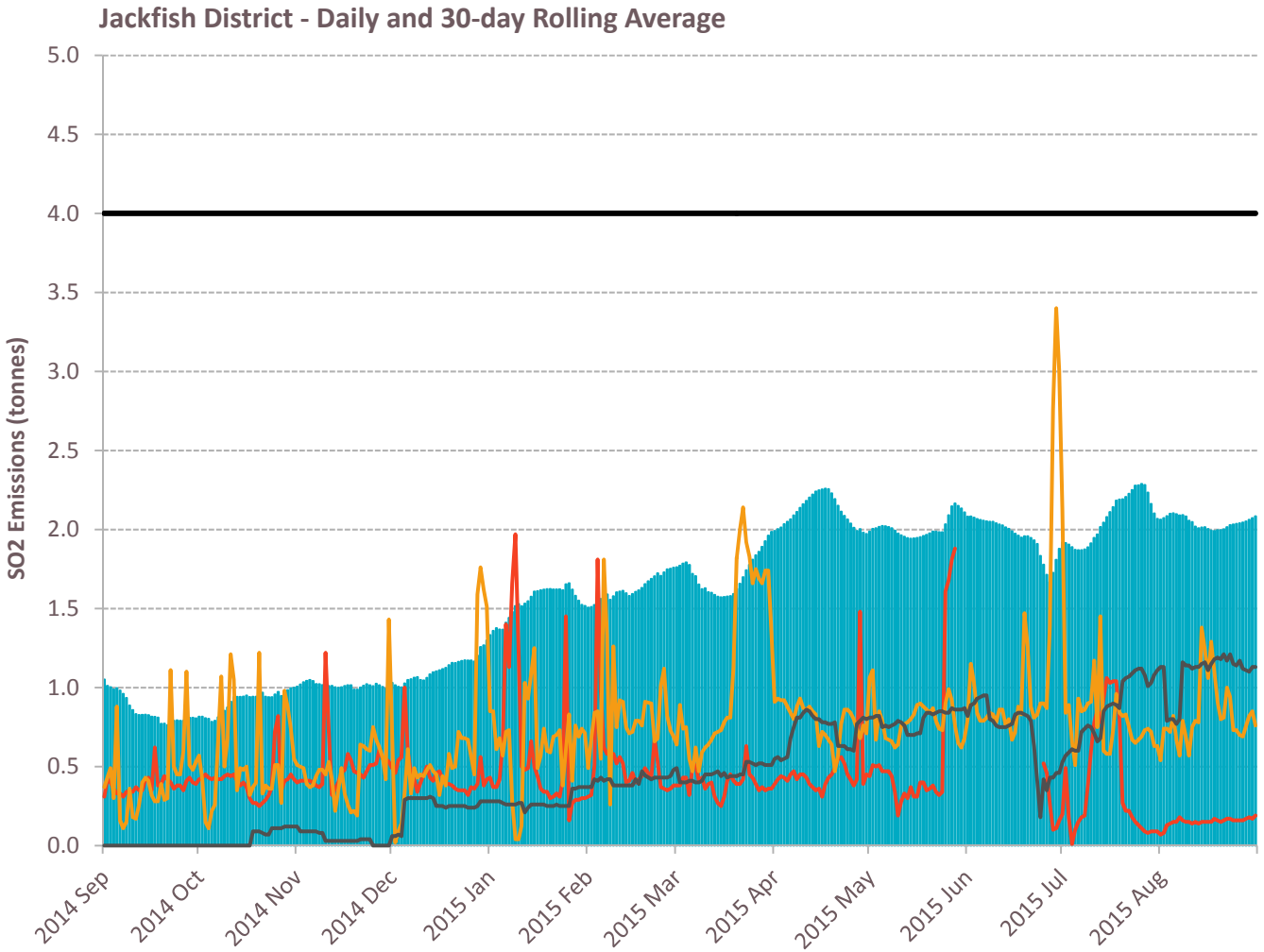


Sulphur Production

Peak Daily and Rolling Averages – SO_2 Emissions

3.1.2-5c

(30 day rolling average of the J1, J2 & J3 daily SO2 emissions)



Jackfish 1 went through a turnaround from May 29th until June 24th, 2015

Ambient Air Quality Monitoring

3.1.2-5d

Passive air monitoring

- At least four passive stations located at each Jackfish site to monitor sulphur dioxide and hydrogen sulphide

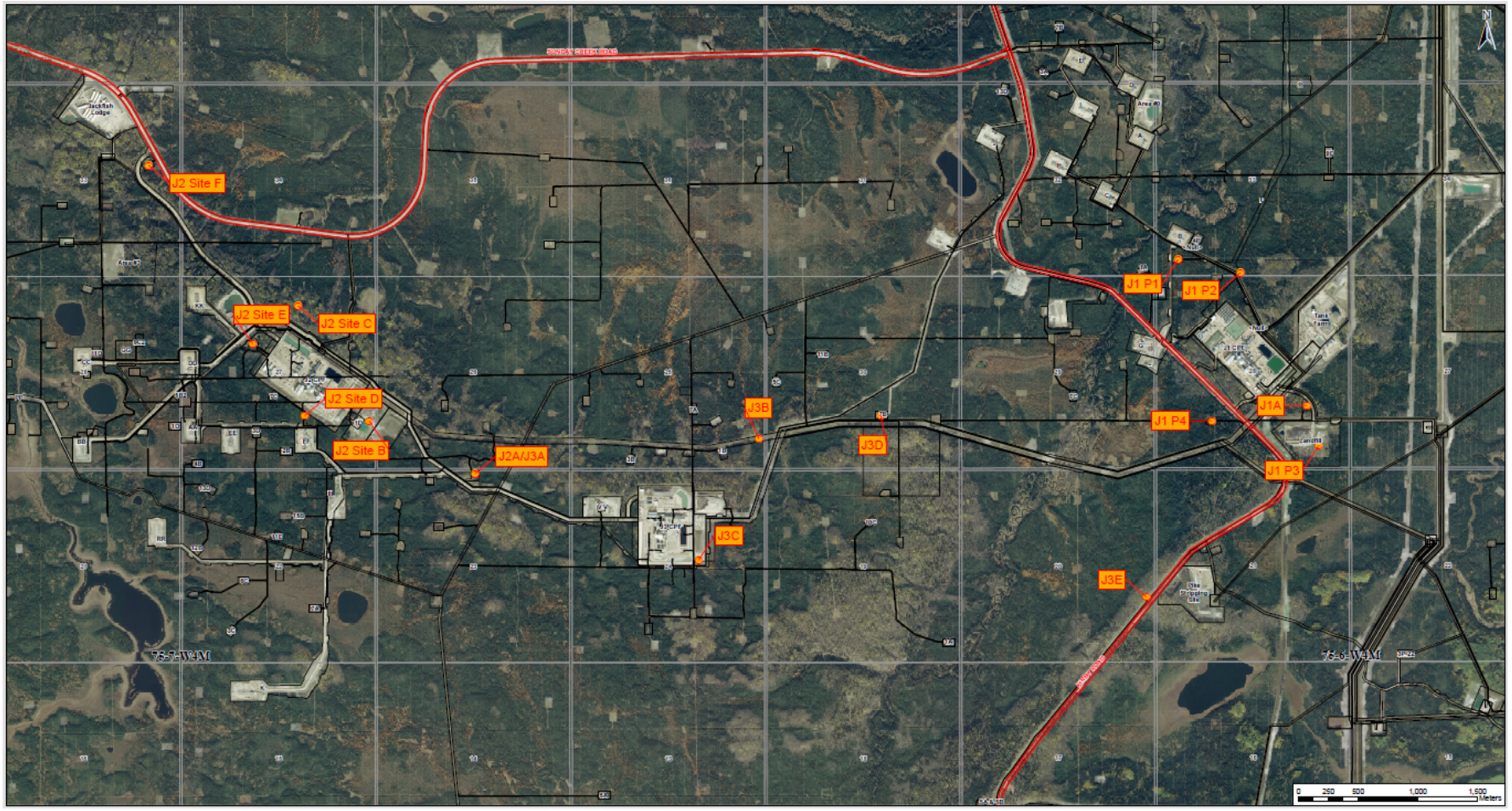
Continuous ambient monitoring

- Monitored parameters: sulphur dioxide, hydrogen sulphide, nitrogen dioxide, total hydrocarbons, wind speed and direction

2014-2015 monitoring and reporting requirements satisfactorily met. No criteria exceedances.

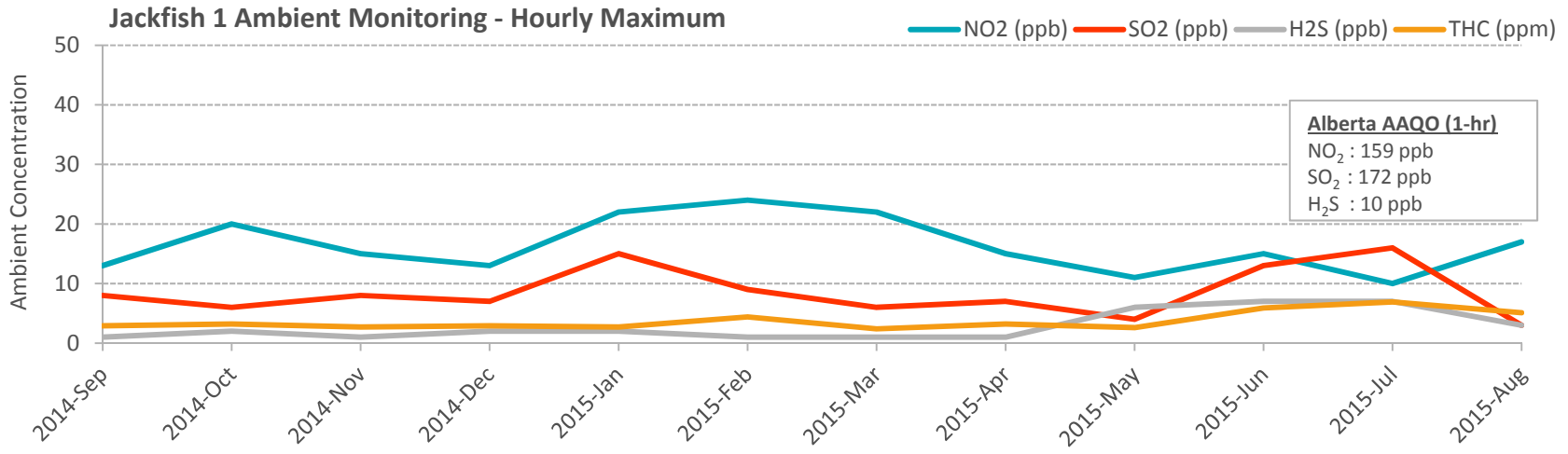
Ambient Air Quality Monitoring

3.1.2-5d

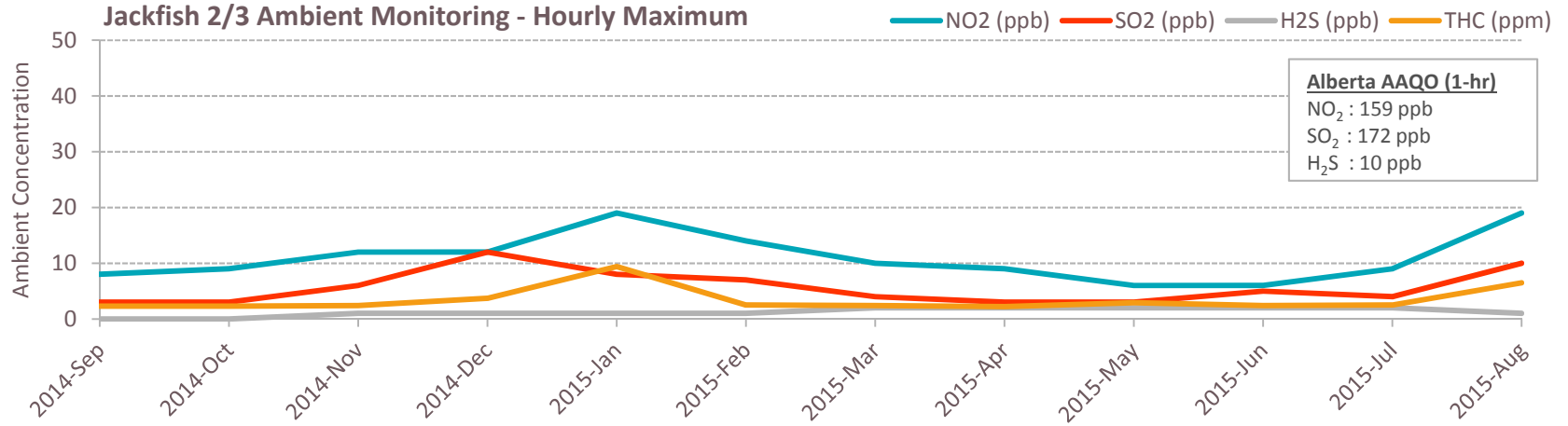


Ambient Air Quality Monitoring Results

3.1.2-5d



Minimal increase in NOx during winter months likely due to increase in trucking activities during winter months



Environmental Issues

Section 3.1.2-6

Environmental Non-Compliances

3.1.2-6a

Date	Event	Corrective Action
Dec 2014	Jackfish Class II Oilfield Landfill discrepancy in paint filter free liquids testing. A discrepancy was noted between paint filter test results from tests conducted by Devon and those conducted by Devon's third party laboratory	• An SOP was revised to ensure paint filter test methodology was consistent between Devon and external lab
2014/15	Monthly water level measurements were not taken for temporary diversion licenses related to pad well drilling for three pads. Water was withdrawn subsequent to application, but prior to receiving one TDL	• Devon has implemented a revised TDL procedure to ensure processes around TDLs are properly communicated and understood
Feb 2015	Jackfish CEMS Downtime	• No_x data was backfilled using the method approved by the AER • New probe was installed and the moisture issue with the flow measuring device was repaired through a manufacturer modification

Environmental Non-Compliances

3.1.2-6a

Date	Event	Corrective Action
May 2015	Jackfish 1 Landfill BTEX results indicated toluene levels were above Class II criteria while using a temporary centrifuge during the Jackfish 1 turnaround	• A modified test procedure was in place until permanent centrifuge was back online and samples confirmed all parameters were below Class II criteria
2014/15	Jackfish 1 & 3 Blowdown Pond ALR Exceedances	• Performed liner inspection and completed repairs • Monthly ALR have been in compliance

AER Regulatory Approval Summary

3.1.2-6b

D78 Amendments – September 2014 to August 2015

* Indicates current approval as of August 31, 2015

Amendment			Category
Pad III Proposal	September 26, 2015	10097W	2
Pad PP Wellbore Extension	November 6, 2014	10097Y	2
111/11-28-075-07W4M (DD7P) ICD	November 25, 2014	Letter	1
Pad PP Wellbore Extension 2	December 5, 2014	10097Z	2
Jackfish Maximum Operating Pressure Application	January 15, 2015	10097AA	3
Jackfish 2 Permanent Sulphur Removal Unit	January 15, 2015	10097AA	2
Jackfish 3 Sulphur Removal Unit Installation	January 15, 2015	10097AA	2
Pads O & R Proposal	May 21, 2015	10097BB*	2
Jackfish Pad EEE and Development Area Request	Under Review		2
Jackfish 1 NCG Injection and Wind-down	Under Review		2
Jackfish 2 NCG Injection	Under Review		2

AER Regulatory Approval Summary

3.1.2-6b

D56 Facilities Licences

- Jackfish 3 F44113 Licence Amendment - Updated compressor sizing for the sulphur recovery unit. Registered August 21, 2015

D65 Disposal Approval No. 10790 - September 2014 to August 2015

- UWI Change & Second Packer Installations, 100/05-12-075-06W4/0 & 102/03-22-075-06W4/0 – Issued September 26, 2014 (Approval 10790I)
- Second Packer Installations, 102/05-12-075-06W4/0 & 103/09-14-075-06W4/0 – Issued November 3, 2014 (Approval 10790J)

AER Regulatory Approval Summary

D58 Jackfish Class II Landfill

3.1.2-6b

Date Issued	Approval To:
2014/15	• Accept construction materials and blowdown water filters as an additional waste stream • Accept additional waste from Pike project
Apr 24, 2015	• Construct Landfill Cell 2 and increase the waste volume of Landfill Cell 1 (Approval No. WM 105D)

AER Regulatory Approvals & Amendments

Jackfish District

3.1.2-6b

EPEA Operating Approval No. 224816-00-04

- No Amendments

Water Diversion License No. 337687-00-00

- No Amendments

Water Diversion Licence No. 336307-00-00 & 336307-00-01

- No Amendments

Water Diversion Licence No. 336306-00-00

- No Amendments

AER Regulatory Reporting Requirements

3.1.2-6c

- Industrial Wastewater and Industrial Runoff Report
- Groundwater Monitoring Report
- Wetland Monitoring Report
- Potable Water Monitoring Report
- Air Monitoring Report
- Soil Management Report
- Soil Monitoring Report
- Conservation and Reclamation Annual Report
- Wildlife Mitigation and Monitoring Program
- Caribou Mitigation and Monitoring Program

Water Management
Jackfish 1, 2 and 3

3.1.2-6c

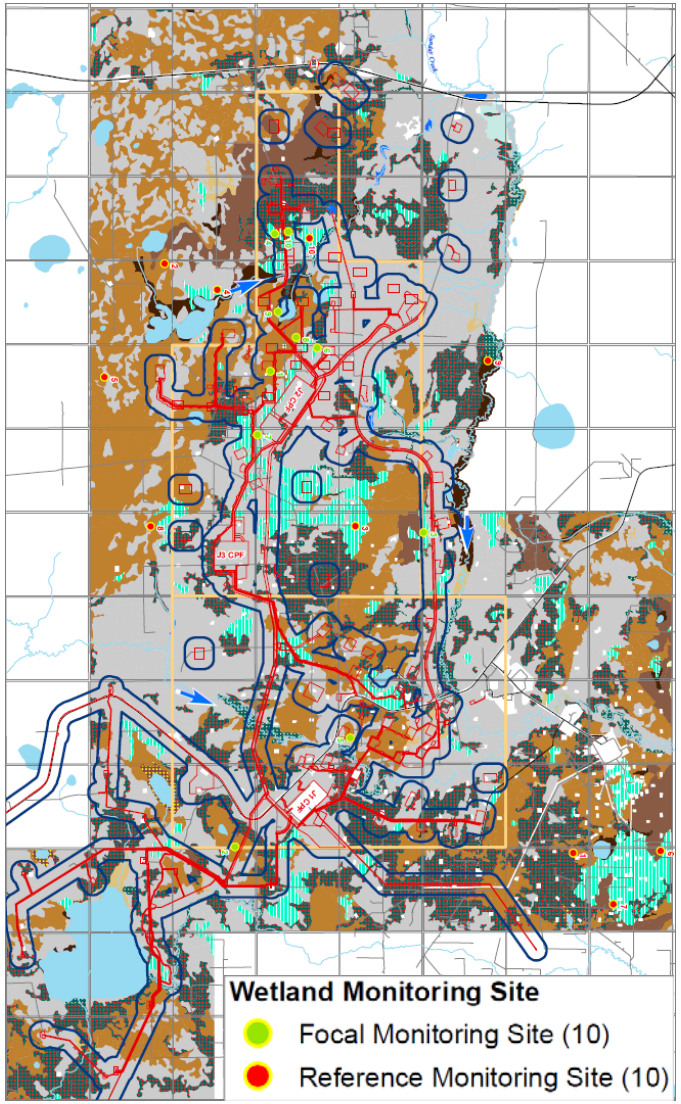
Groundwater

- Jackfish 1, 2 & 3 groundwater monitoring twice yearly at CPF, well pads and Tank Farm as per EPEA approval

- Groundwater monitoring to be proposed at one additional pad in 2016 to supplement assessment of thermally mobilized constituents.

Water Management
Jackfish 1, 2 and 3

3.1.2-6c



Wetlands

- Wetland monitoring program amendment approved by AER (Sept 3, 2015).
- Wetland monitoring sites were surveyed in Q3 2015

Jackfish 2 – Soil Monitoring & Soil Management

3.1.2-6c

- The Soil Monitoring Program consisted of Jackfish 2 operational areas (CPF and wells pads)
- A Soil Management Plan was completed and submitted March 2015
- The next Soil Monitoring Report for Jackfish 2 is scheduled for 2017

Environmental Monitoring & Progress

Wildlife Monitoring

3.1.2-6c

Summary

- As per EPEA Approval Condition, Devon's Jackfish Wildlife Monitoring Program was authorized in July 2012
- Recipient of 2014 CAPP Responsible Canadian Energy Award for Environmental Performance
- Monitoring program components:
  - Relative abundance of breeding songbirds and species at risk
  - Mitigation effectiveness
  - Wildlife habitat use surrounding project
  - Response to above ground pipelines
  - Amphibian mortality on project roads

Environmental Monitoring & Progress

Wildlife Monitoring

3.1.2-6c

Comprehensive Wildlife Report

- Mitigation performance: 11 of 13 program objectives met with 2 ongoing:
  - Ongoing targets of minimizing wetland disturbance and habitat fragmentation to be met over life of the Jackfish project
- Wildlife monitoring completed to date indicates:
  - Diversity and abundance of mammal species and breeding birds has remained stable
  - Moose appear to be declining regionally and within the study area

Regional and Other Initiatives

3.1.2-6d

- Christina Lake Regional Water Management Agreement (CLRWMA)
- Canada's Oil Sands Innovation Alliance (COSIA)
- Alberta Biodiversity Monitoring Institute (ABMI)
- Regional Aquatics Monitoring Program (RAMP)
- Ecological Monitoring Committee for the Lower Athabasca (EMCLA)
- AEMERA (Alberta Environmental Monitoring, Evaluation and Reporting Agency)
- Monitoring Avian Productivity and Survivorship (MAPS Program)
- Regional Industry Caribou Collaboration (RICC)
- Clean Air Strategic Alliance (CASA)
- Wood Buffalo Environmental Association (WBEA)
- Cumulative Environmental Management Association (CEMA)

Other Environmental Initiatives

3.1.2-6d

COSIA (Canada's Oil Sands Innovation Alliance)

- Devon is an active participant of the Water, Land and GHG Environmental Priority Areas (EPAs) and the COSIA Monitoring Working Group
- Aspirations for each EPA have been developed and Devon is striving to:
  - GHG: Produce oil with lower greenhouse gas emissions than other sources of oil
  - Land: Be world leaders in land management, restoring the land and preserving biodiversity of plants and animals
  - Water: Be world leaders in water management, producing Canadian energy with no adverse impact on water
- Devon is a participant and, in some cases leading, Joint Industry Projects in each of the EPAs

Other Environmental Initiatives

3.1.2-6d

EMCLA (Ecological Monitoring Committee for the Lower Athabasca)

- Devon has been a founding member, major participant, and leader on the EMCLA which consists of industry, government and academics designing monitoring program to address biodiversity and associated components at a regional scale rather than project-specific where it makes sense to do so

AEMERA (Alberta Environmental Monitoring, Evaluation and Reporting Agency)

- Devon continues to participate actively as members of the industry caucus

Other Environmental Initiatives

3.1.2-6d

MAPS Program (Monitoring Avian Productivity and Survivorship)

- Continued annual support (technical, financial) of the MAPS Program
- This program analyzes the influence of industry throughout NE Alberta

RICC (Regional Industry Caribou Collaboration)

- Devon is leading a consortium of organizations in implementing a collaborative caribou conservation program for the Cold Lake Range, which comprises the JF and Pike district
- This program focuses on:
  - Managing and reducing industry's current and future footprint
  - Identifying effective techniques to reduce wolf and bear movements throughout the caribou habitat

Regulatory Compliance

Section 3.1.2-7, -8

Statement of Compliance

3.1.2-7

Devon Canada Corporation believes the Jackfish Project is in compliance with AER approvals and regulatory requirements. As of August 31, 2015, Devon has no unaddressed non-compliant events.

AER Summary of Noncompliance

3.1.2-8

The following list summarizes non-compliant events in the reporting period. For all events corrective actions were identified and tracked to completion.

Date	Event	Corrective Actions
Sep 2014	Low Risk Enforcement Action for Application 1808452 – Jackfish 2 Pads OO, PP, and Flowlines to Pad BB	• Provided project specific information plan (PSIP) that included required information
Oct 2014	AER D050 DDS Audit Notice of Low Risk Noncompliance: Two DDS submissions for drilling waste disposal were identified as missing during an AER audit	• Devon completed the DDS Submissions and the noncompliant event was resolved
Jun 2015	Notice of noncompliance – outstanding serious SCVF / GM reports (W0414955, W0414961)	• W0414955 – requested and received approval to defer repair work until abandonment • W0414961 – re-classified as having no SCVF or GM issues per ID 2003-01 section 2.2. Requested an exemption to perform any remedial operations

AER Summary of Noncompliance

3.1.2-8

Date	Event	Corrective Actions
Jul 2015	10-04-076-06W4M (P-52345) Directive 056 pipeline application noncompliance (Section 6.9.11) – application was prepared as routine, but was administratively submitted as non-routine	• Provided the AER with an action plan to ensure that all Category C surface pipeline submissions associated with thermal in situ oil sand operations are categorized as non-routine
Jul 2015	Notice of noncompliance – outstanding non-abandoned oil sands evaluation wells	• Well licenses were amended as appropriate and DDS system well license abandonment records were updated

AER Spill Reporting		
Site	No. of Reportable Spills	Volume Released (m^3)
Jackfish 1	7	61
Jackfish 2	3	43
Jackfish 3	5	69

Future Plans

Section 3.1.2-9

Future Plans (2015 – 2016)

Surface Operations

3.1.2-9a, b, c, d

Jackfish 2

- Plant Maintenance Turnaround planned for 2016

Jackfish 3

- Plant Maintenance Turnaround planned for 2017

Future Plans (2015 – 2016)

Surface Operations

3.1.2-9a, b, c, d

District Plans

- Blowdown and Regen Disposal Reduction & Optimization
- Steam Generation Initiatives to decrease Blowdown disposal
  - Investigate feasibility to further increase steam qualities
  - Pending commercialization, new steam generation technology (rifle tubes at Jackfish 2)
- Jackfish 1 steam meter addition and replacement project
- Jackfish 2 Turnaround, Q2 2016

Rifle Tubes Update

SIR

Purpose

To validate increasing steam quality to 90% as a commercial-scale demonstration and retrofit.

Claimed Benefits

- Boiler blow down reduction
- Make up water reduction
- Increased steam capacity (constant heat input)
- Generated 90% SQ at current/constant firing rate
- Improved fuel efficiency = positive impact on GHG
- Reduced GHG emission intensity

Potential Risks

- High SQ operation is possible but has operational risks
- Heat integration modifications are required to commercialize rifle tubes

devon

Thank you.