Suncor Firebag In Situ Project

2025 Directive 54 Performance Report
Commercial Scheme Approval No. 8870

June 30, 2026

Reporting Period:

January 1, 2025 to December 31, 2025

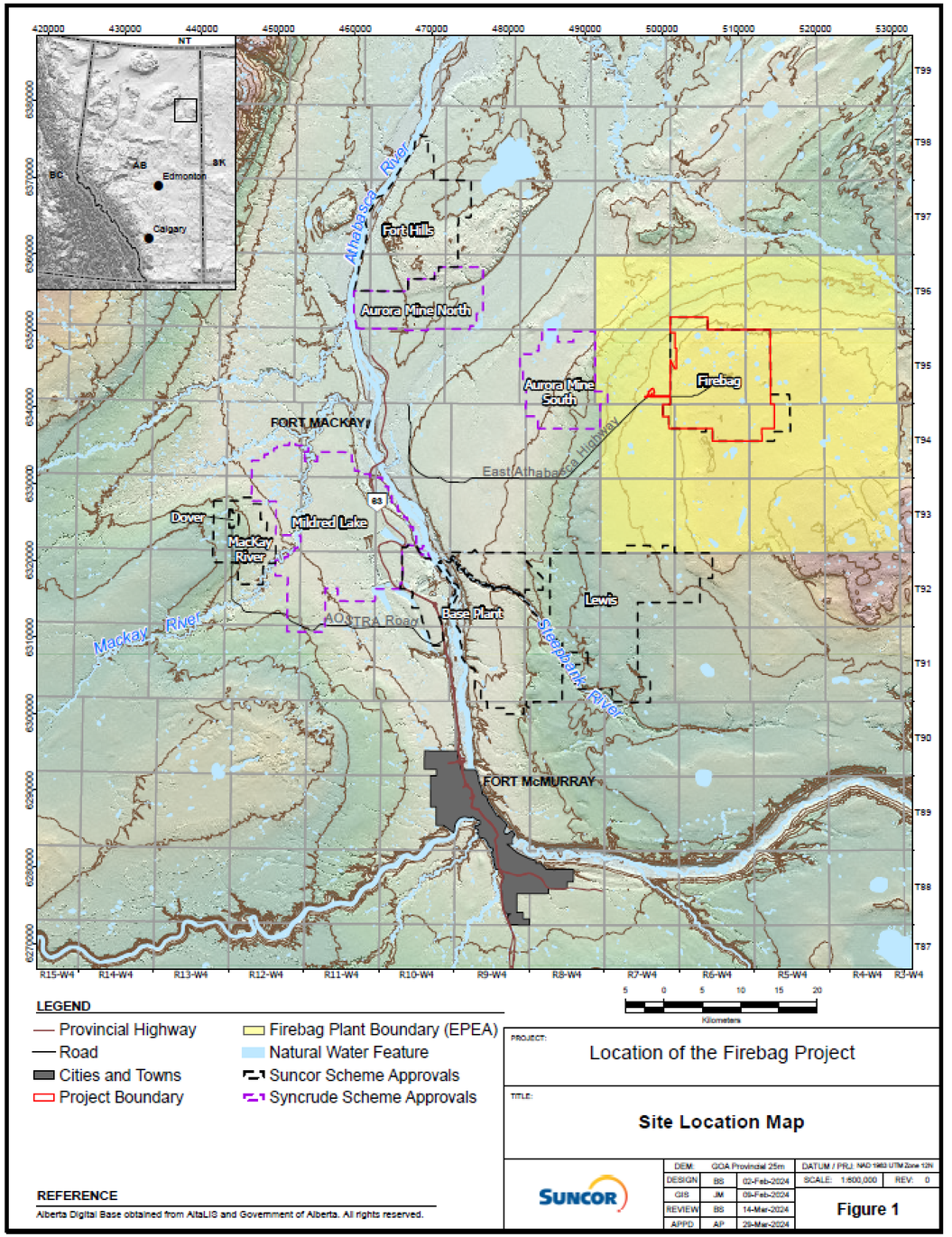
4.1) Introduction

Firebag Project Overview

The Firebag Project is a commercial Steam Assisted Gravity Drainage (SAGD) scheme. It is located 70 km NE of Fort McMurray and has been operating since 2003.

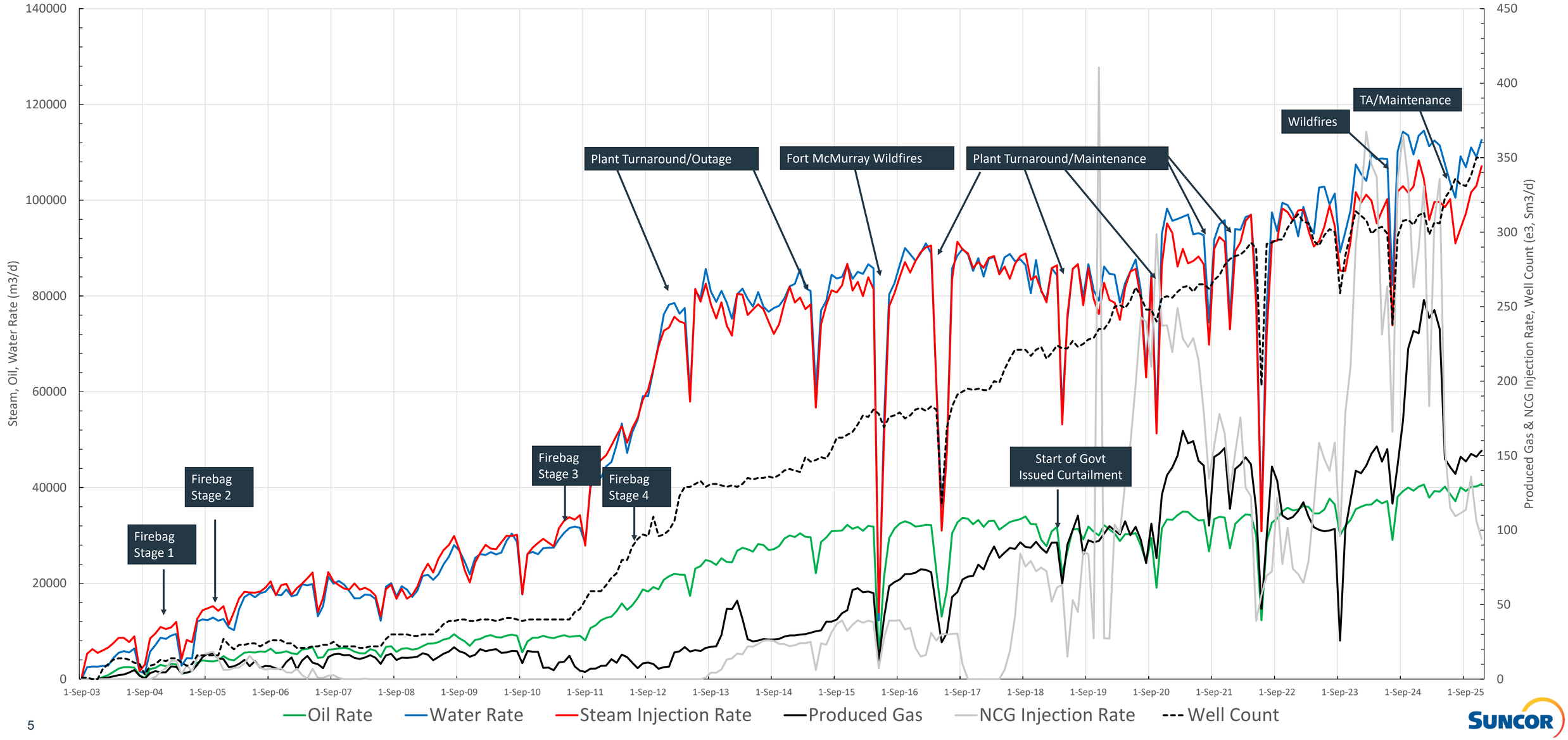
Average bitumen production for the reporting period was 38,892 m^3/day (244 kbbl/day) with a steam to oil ratio (SOR) of 2.58.



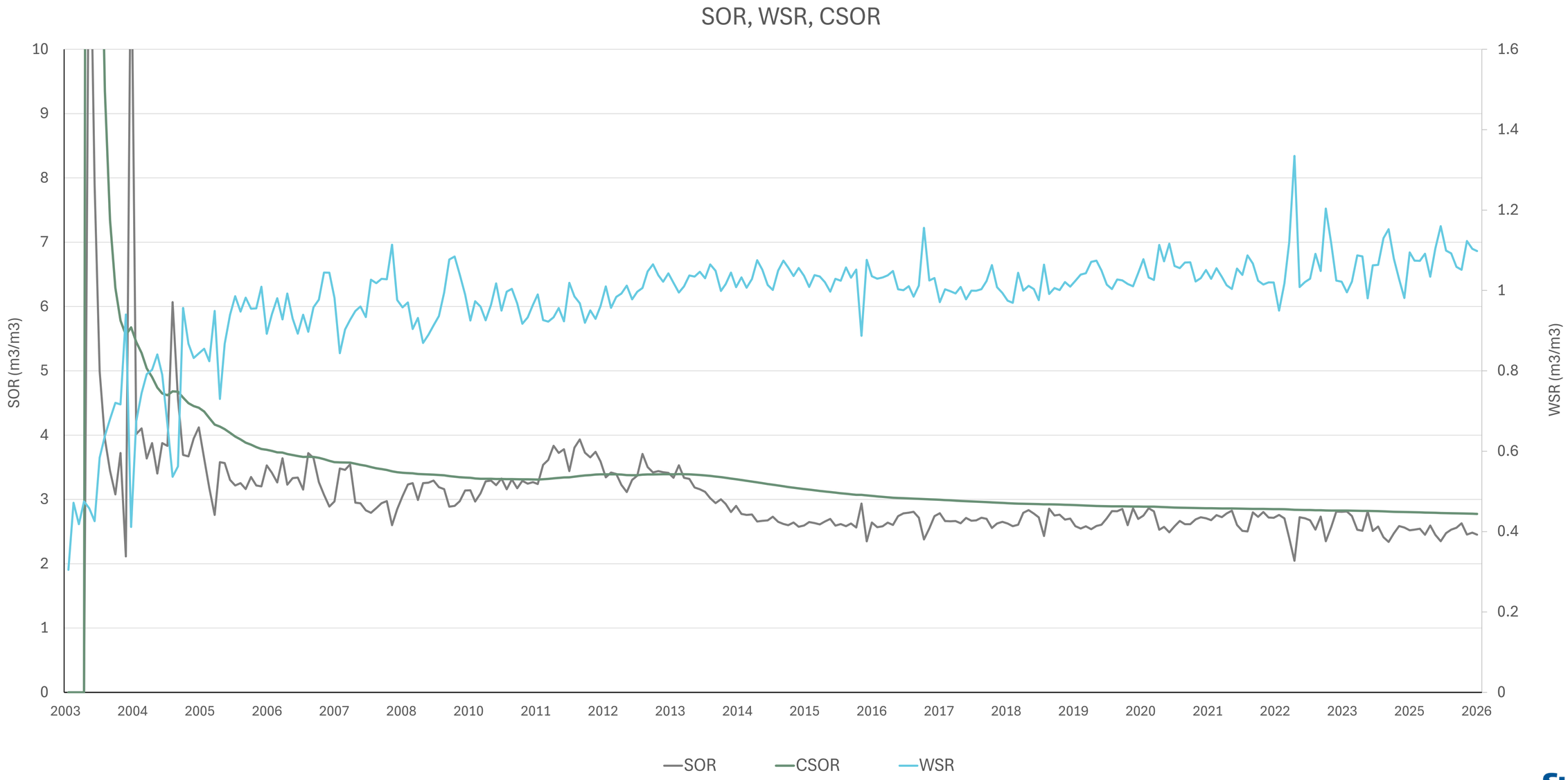


4.2) Subsurface

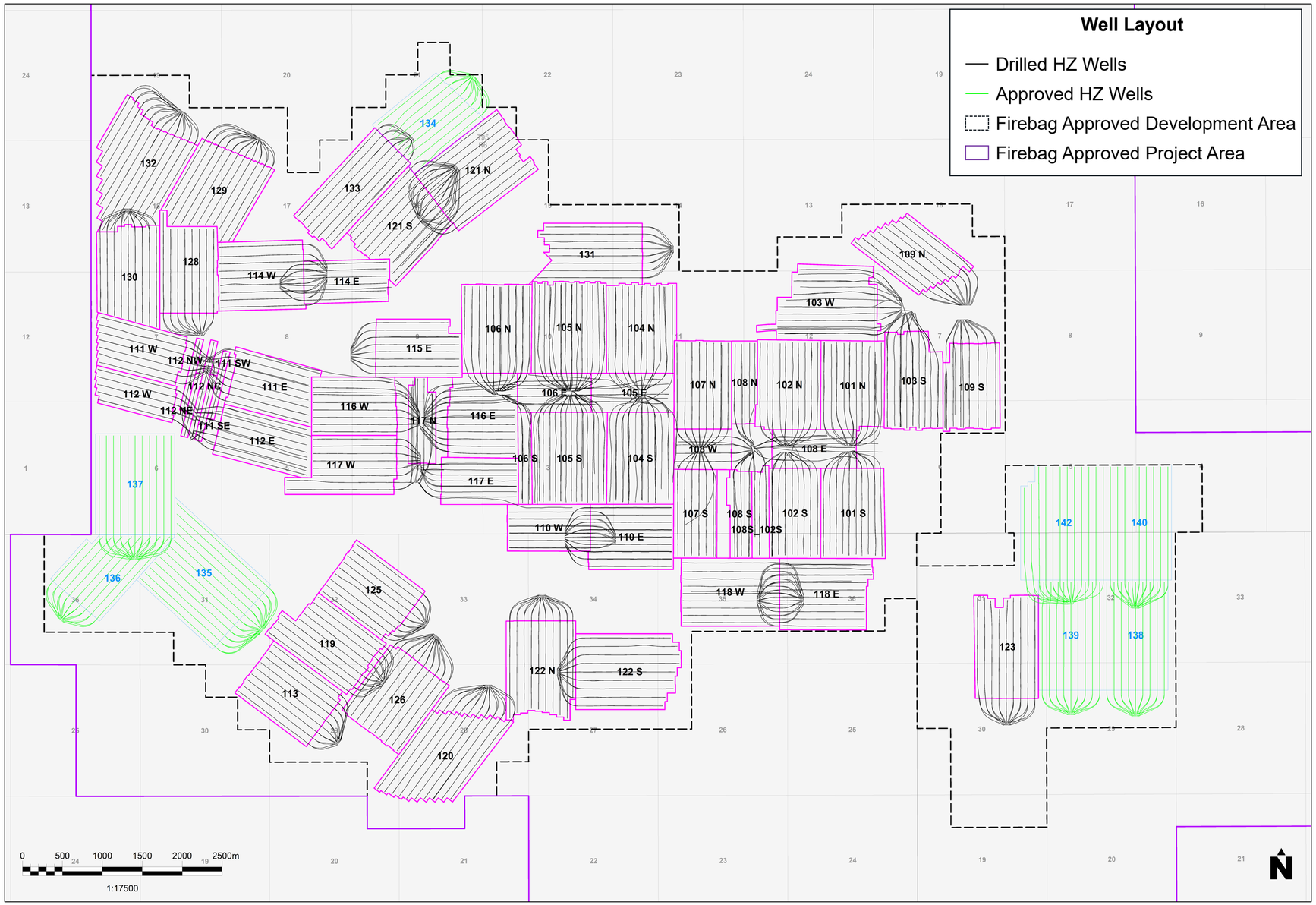
Scheme Performance – Well Production History



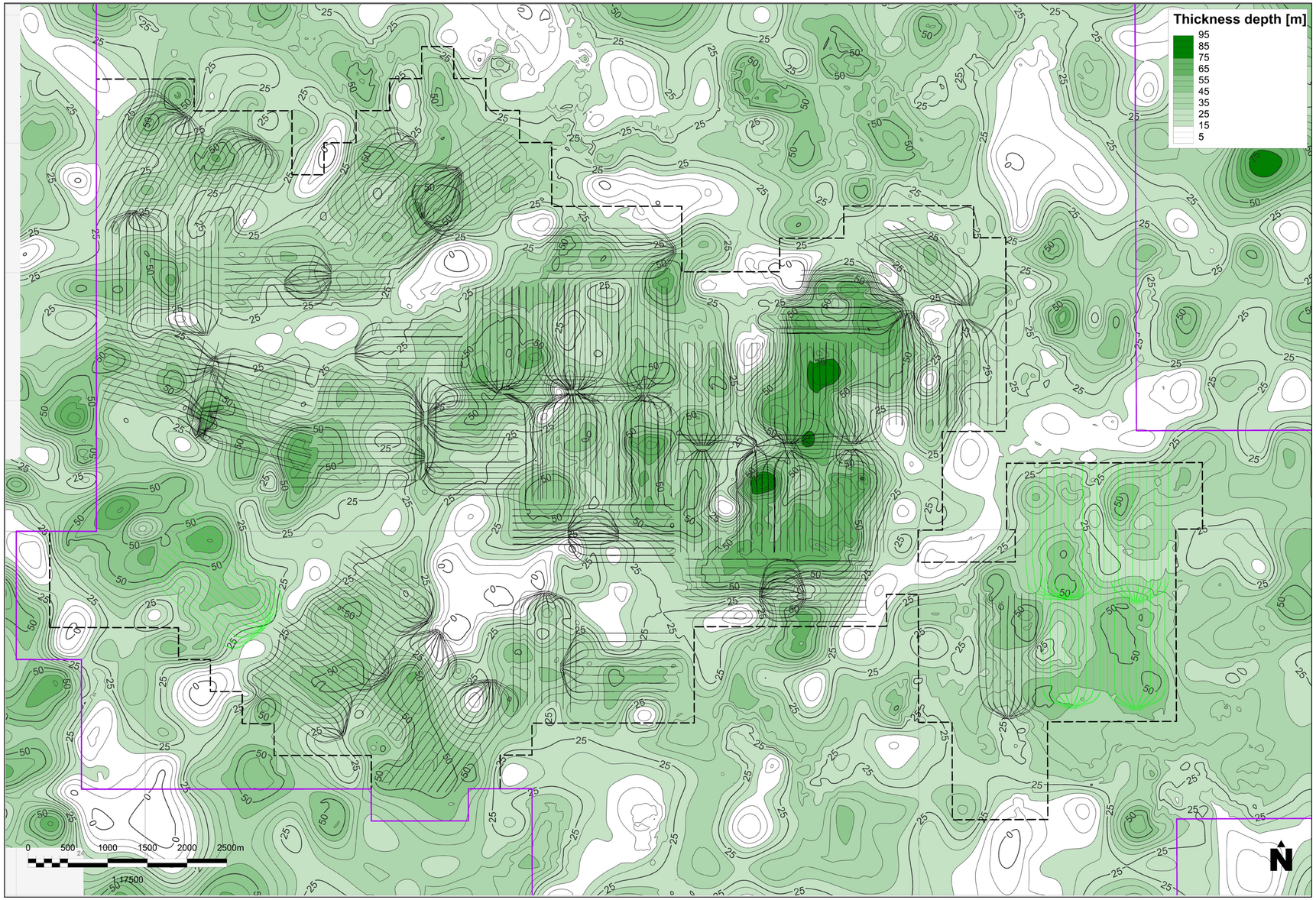
Scheme Performance – Well Production History



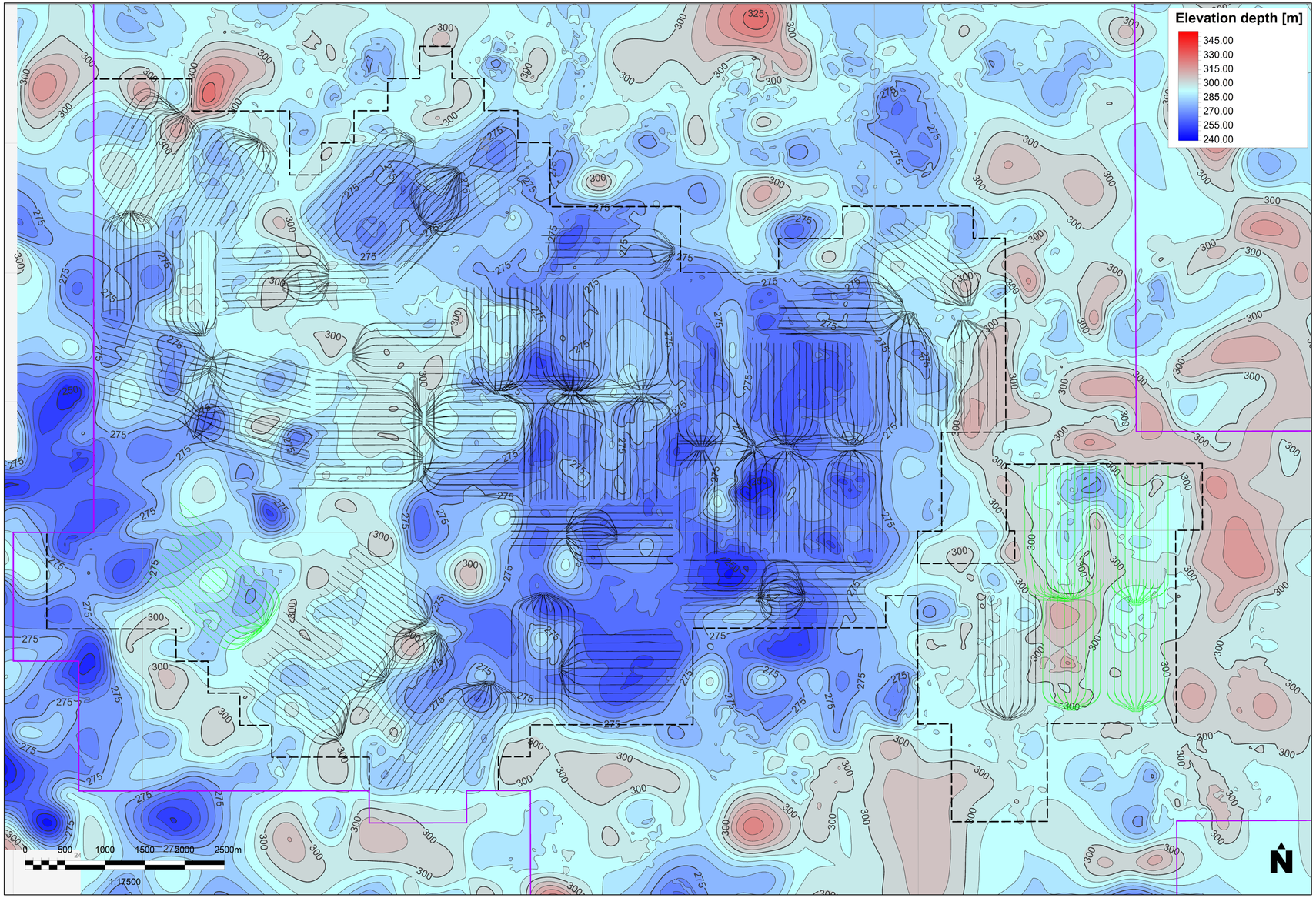
Drilled and Approved Drainage Pattern Areas



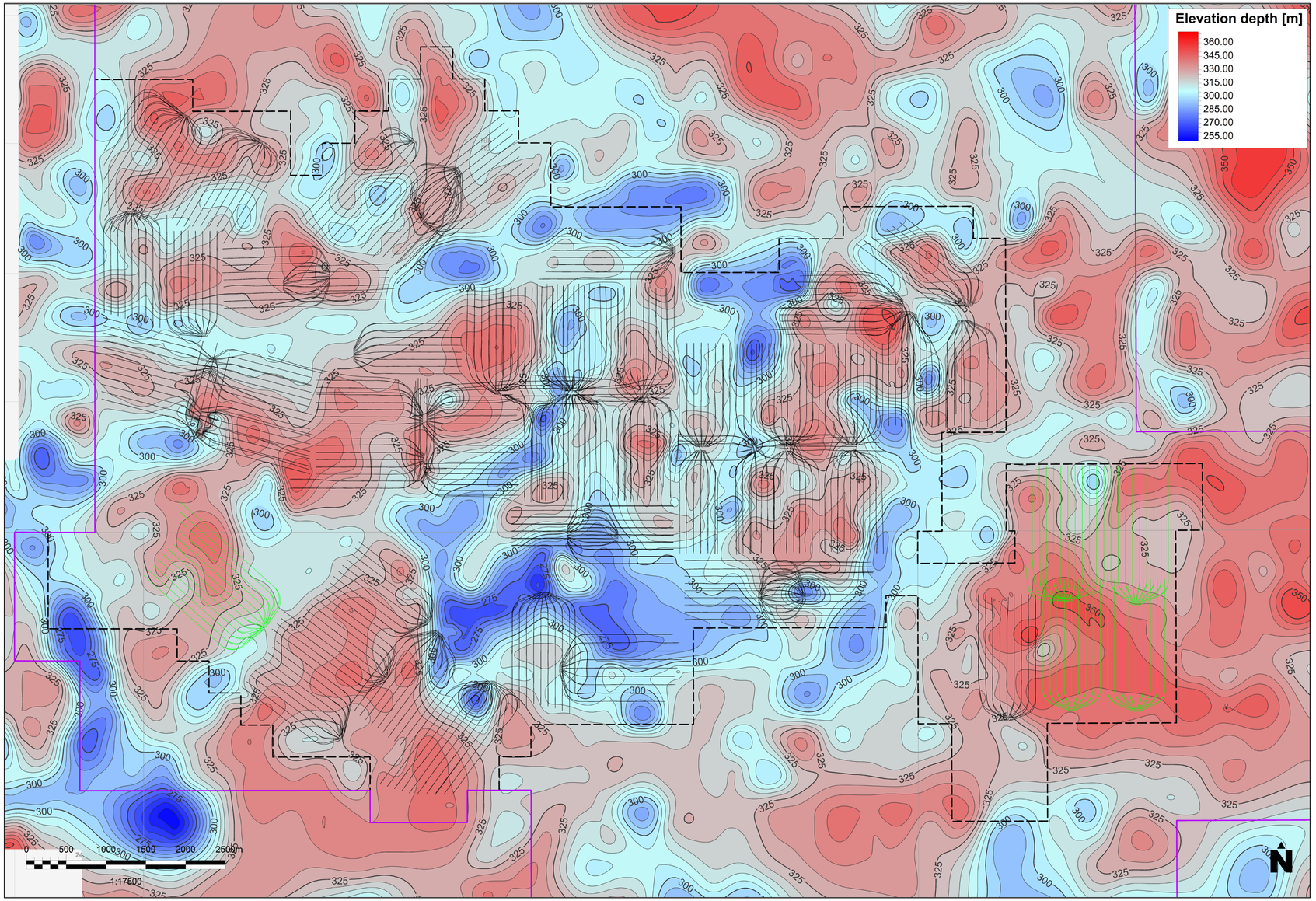
Continuous Reservoir Isopach Map



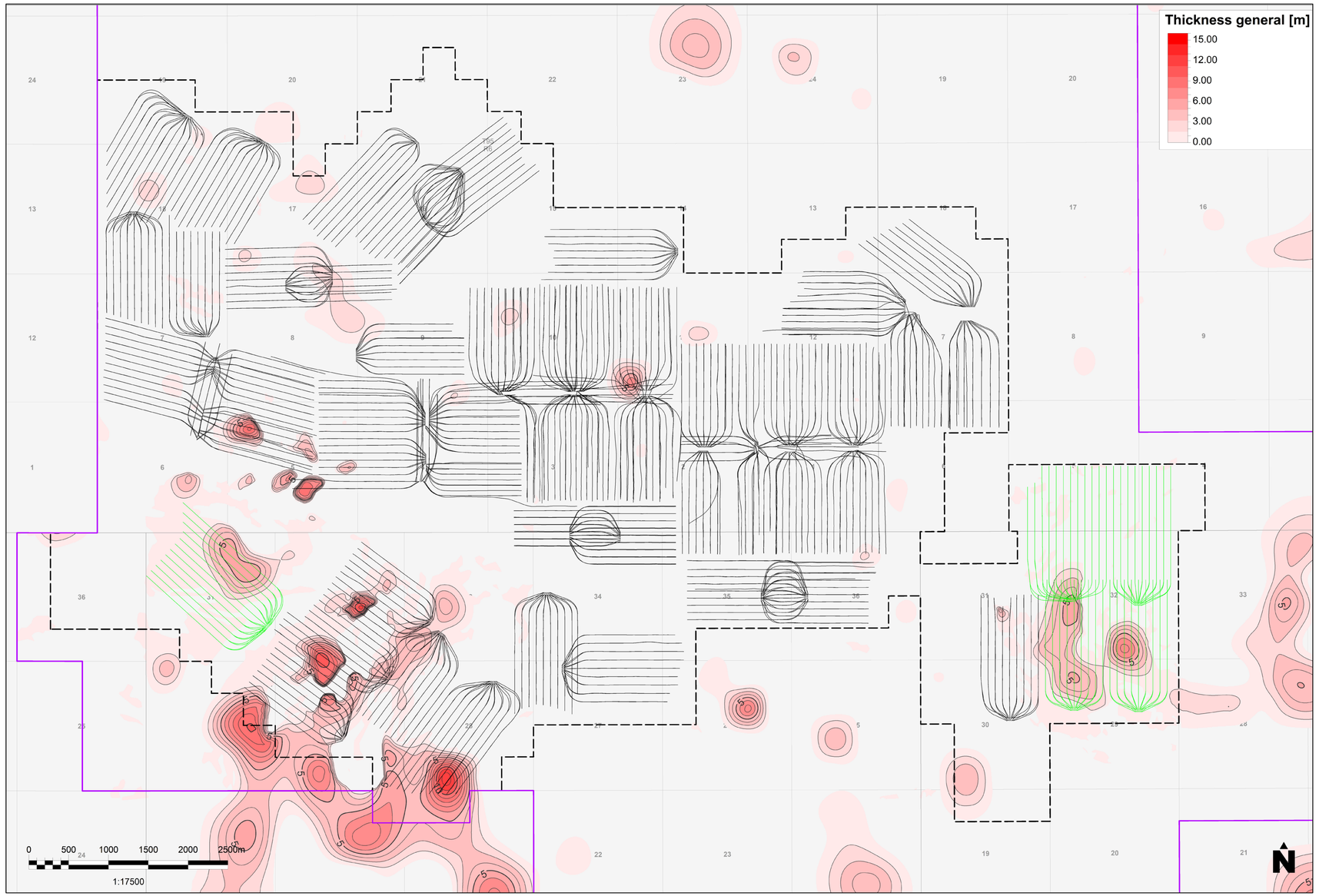
Base Continuous Reservoir Structure Map



Top Continuous Reservoir Structure Map



Reservoir Zone Gas Isopach

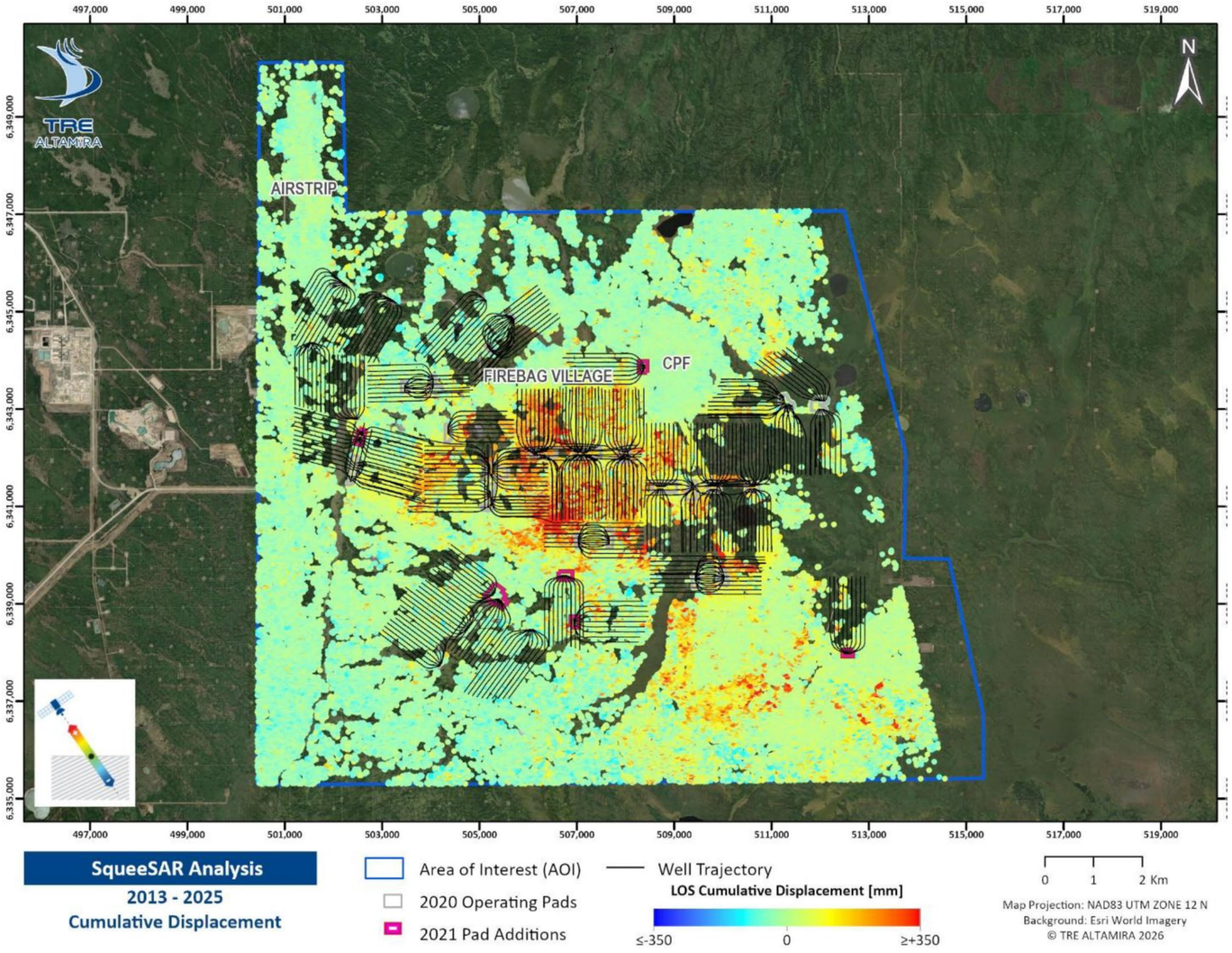


Gas zones shown are inconsequential to Firebag but are included for reference.

Water and Lean Zones

- No top or bottom water zones have been identified within the Firebag development area.
- Upper lean and middle lean are present in some parts of the Firebag development area. Thief zone potential is unknown at this time but is being assessed.
- For more information on lean zones, refer to applications 1871777 (Approval # 8870MMM) and 1925467 (Approval # 8870HHHH).

Geomechanical Anomalies

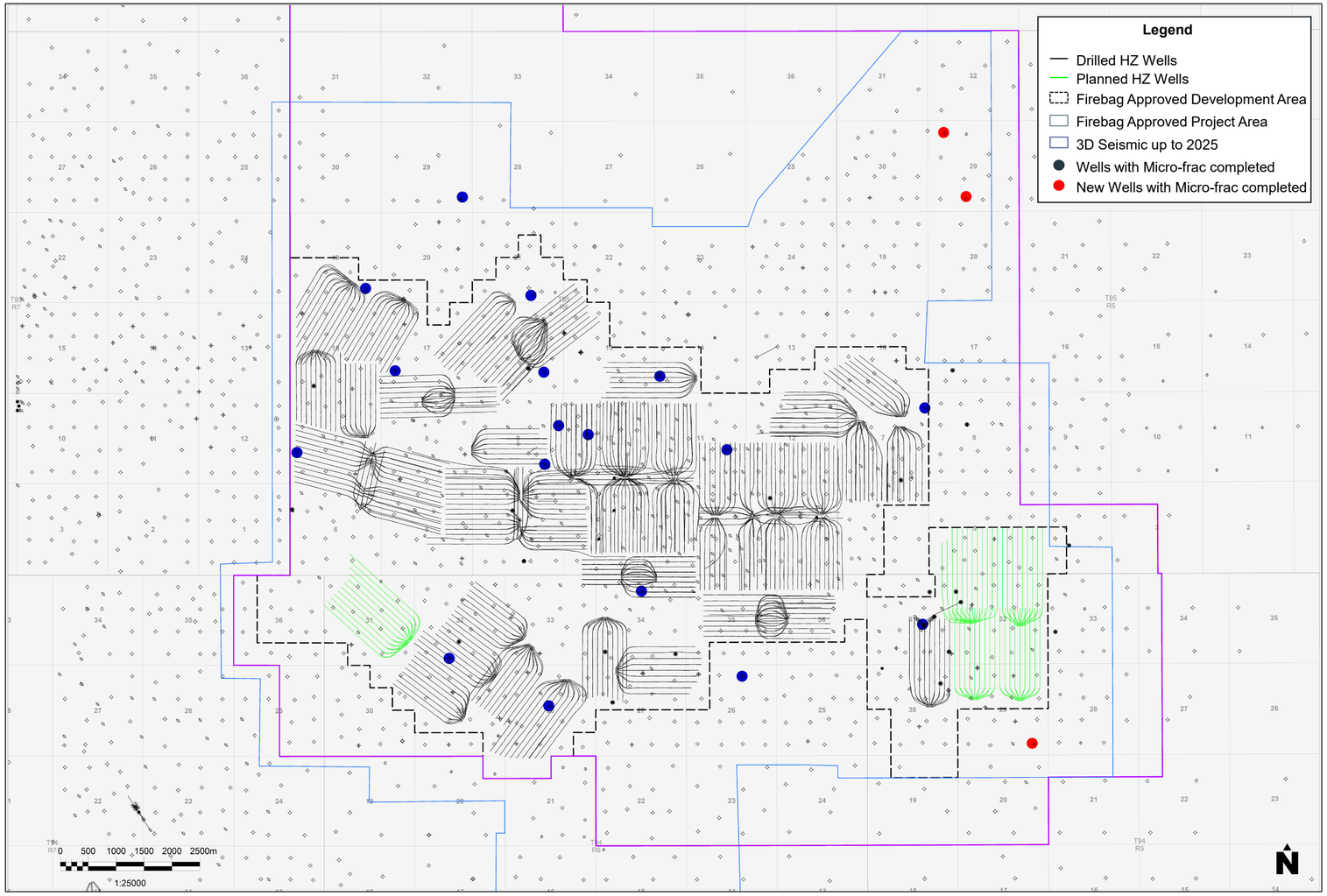


There are no geomechanical anomalies within the Firebag development area.

Heave monitoring is performed using interferometric Synthetic Aperture Radar (inSAR) on an annual basis. This data is used to calibrate geomechanical models as well as to monitor subsurface safety and flag areas that appear anomalous.

The heave results from 2013-2025 shows that a maximum heave of 574 mm was observed at Pad 105. The greatest average heave is 230 mm at Pad 116.

Caprock Integrity Assurance



Three new micro-frac wells were completed in 2025.

Three new caprock cores were collected during the reporting period.

Geomechanical simulations are developed to assess new pad startups.

These activities confirm that operating at the approved maximum operating pressure (MOP) does not impact Firebag caprock integrity.

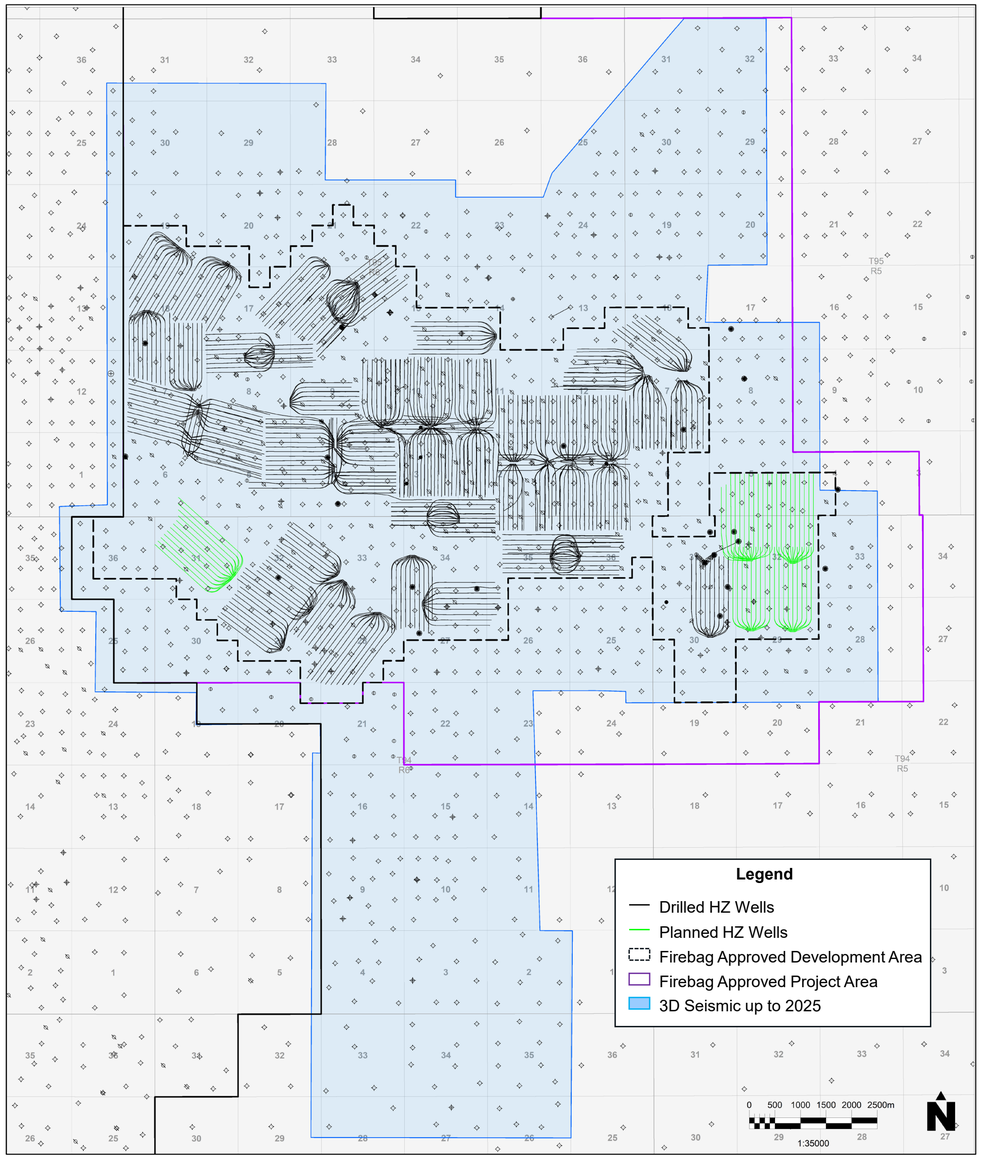
Fracture Closure Gradients

Fracture Closure Gradients are limited to the Overburden Gradient (~21.5 kPag/mGL)

Date	Well	Well Alias	TVD Perforated Interval (mKB)	Target Formation	Fracture Closure Pressure (kPag)	Fracture Closure Gradient (kPag/mGL)
15-Mar-12	01-16-095-06W4	OB134	297.0-298.0	lower McMurray 3 sand	5145.9	17.6
17-Mar-12	09-09-095-06W4	OB135	263.0-264.0	middle McMurray sand	5013.1	19.3
13-Mar-12	11-10-095-06W4	OB136	268.0-269.0	middle McMurray sand	4742.6	18.0
23-Feb-14	16-07-095-05W4	OB205	273.0-274.0	lower McMurray 3 sand	4226.7	15.7
11-Feb-15	05-07-095-06W4	OB147	255.0-258.0	middle McMurray sand	3775.3	15.1
10-Feb-16	15-26-094-06W4	OB140	296.0-299.0	middle McMurray sand	6078.9	20.6
08-Jan-19	03-32-094-06W4	OB145	272.0-275.0	middle McMurray sand	6871.0	19.5
22-Feb-22	11-28-094-06W4	N/A	296.0-297.0	lower McMurray 3 sand	5237.4	22.7
16-Mar-12	01-16-095-06W4	OB134	277.0-278.0	middle McMurray mudstone	5305.7	19.4
18-Mar-12	09-09-095-06W4	OB135	247.5-248.5	middle McMurray mudstone	3927.2	16.1
13-Mar-12	11-10-095-06W4	OB136	257.0-258.0	middle McMurray mudstone	4817.0	19.0
24-Feb-14	16-07-095-05W4	OB205	247.0-248.0	middle McMurray IHS	4314.6	17.7
12-Feb-15	05-07-095-06W4	OB147	227.0-228.0	middle McMurray mudstone	4018.5	18.0
10-Feb-16	15-26-094-06W4	OB140	276.0-277.0	middle McMurray mudstone	4638.0	16.9
16-Mar-12	01-16-095-06W4	OB134	253.5-254.5	Wabiskaw/lower Clearwater	5389.5	21.6
18-Mar-12	09-09-095-06W4	OB135	231.0-232.0	Wabiskaw/lower Clearwater	4967.2	21.9
14-Mar-12	11-10-095-06W4	OB136	238.0-239.0	Wabiskaw/lower Clearwater	4439.7	19.0
05-Mar-13	01-09-095-06W4	OB182	232.5-233.5	Wabiskaw/lower Clearwater	5144.2	22.5
25-Feb-14	16-07-095-05W4	OB205	225.5-226.5	Wabiskaw/lower Clearwater	4859.2	22.0
12-Feb-15	05-07-095-06W4	OB147	209.5-210.5	Wabiskaw/lower Clearwater	4586.0	22.3
11-Feb-16	15-26-094-06W4	OB140	250.5-251.5	Wabiskaw/lower Clearwater	5341.6	22.3
16-Feb-17	07-31-094-05W4	OB184	225.5-226.5	Wabiskaw/lower Clearwater	4822.9	22.2
10-Jan-19	03-32-094-06W4	OB145	229.0-230.0	Wabiskaw/lower Clearwater	5371.9	23.8
03-Feb-19	04-17-095-06W4	OB148	219.5-220.5	Wabiskaw/lower Clearwater	4900.3	22.7
06-Feb-20	04-14-095-06W4	N/A	256.0-257.0	Wabiskaw/lower Clearwater	5259.0	20.8
15-Feb-21	01-19-095-06W4	N/A	214.4-215.4	Wabiskaw/lower Clearwater	4792.3	22.3
23-Feb-22	11-28-094-06W4	N/A	248.0-249.0	Wabiskaw/lower Clearwater	5299.3	21.7
19-Mar-23	01-29-095-06W4	N/A	215.5-216.5	Wabiskaw/lower Clearwater/Quaternary	4640.1	21.9
01-Mar-24	02-21-095-06W4	N/A	224.0-225.0	Lower Clearwater	4784.9	21.7
08-Mar-25	01-29-094-05W4	N/A	225.0-226.0	Lower Clearwater	4850.9	21.9
10-Mar-25	13-29-095-05W4	N/A	215.5-216.5	McMurray/Wabiskaw/Quaternary	4833.6	22.8
03-Mar-25	03-29-095-05W4	N/A	232.0-233.0	Wabiskaw/Clearwater/Quaternary	5141.3	22.5

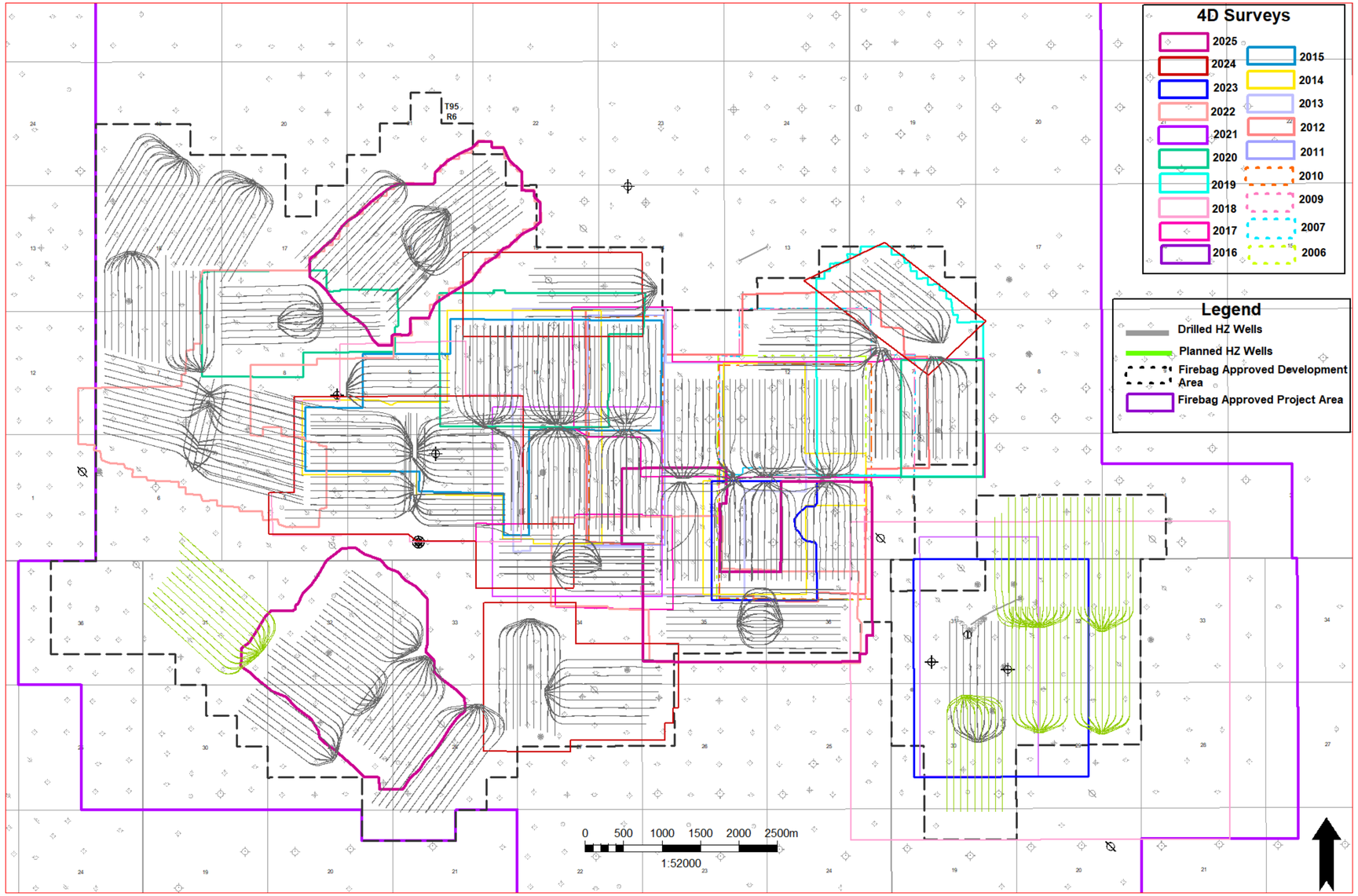
Seismic Acquisition – 3D Seismic Survey Outlines

- No new 3D seismic acquired in 2025

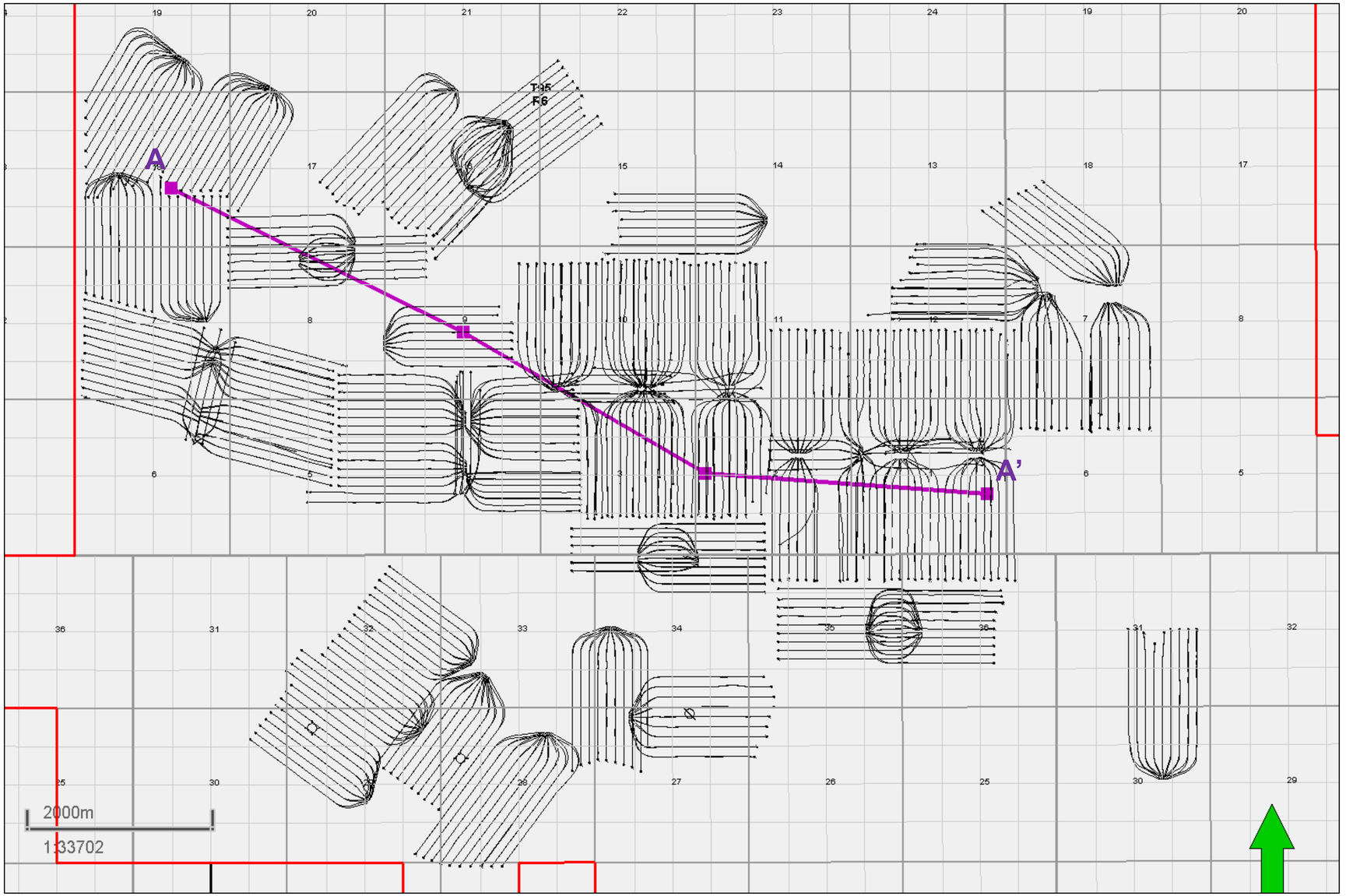


Seismic Acquisition – 4D Seismic

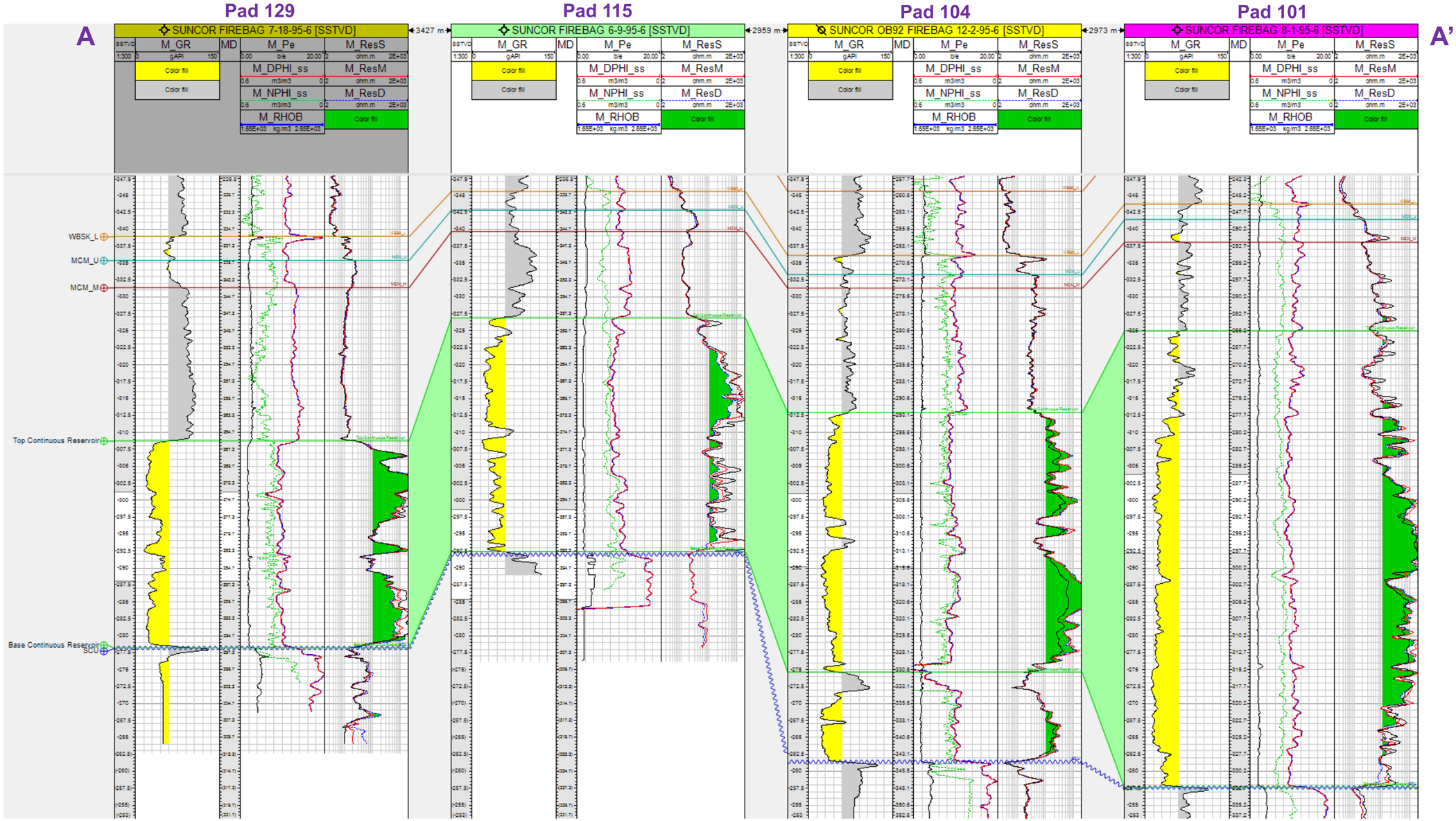
4D seismic surveys completed in 2025 over Pads 101, 107, 118, 119, 121, 125 and 126



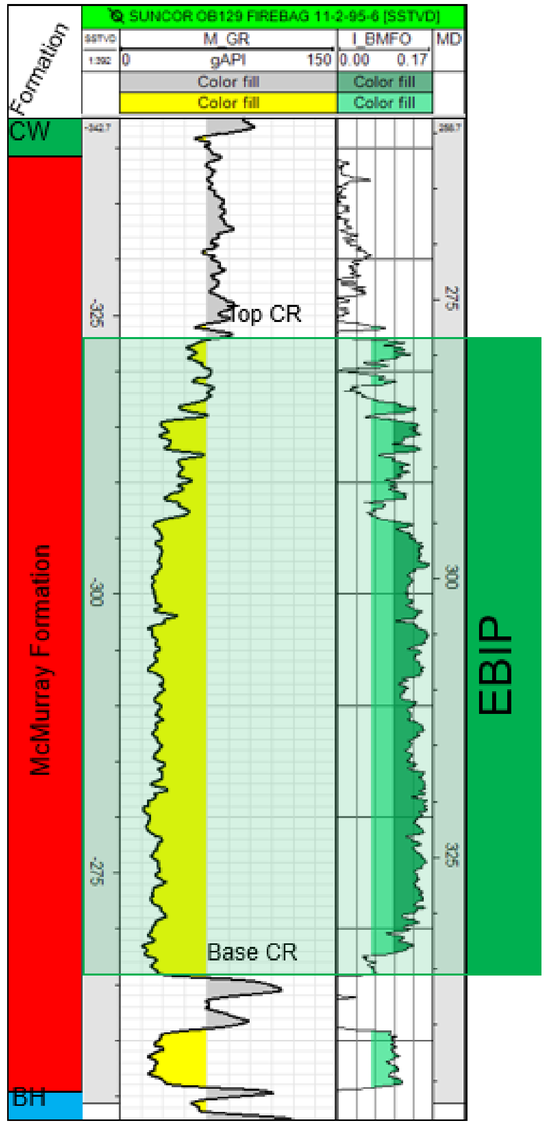
Representative Well Cross-section – Well Location Map



Structural Cross Section Example



Exploitable Bitumen in Place Methodology



Exploitable Bitumen in Place (EBIP) is defined in each well by the top and base of the Continuous Reservoir. It is selected at the base of a continuous sand unit, either developed or most likely to be developed.

Continuous Reservoir Base: lowest portion of the continuous reservoir sandstone with Bulk Mass Fraction of Oil (BMFO) cut off of 6%, <3m of >50% mud/breccia in the lower portion.

Continuous Reservoir top: 2m of mudstone, no BMFO or porosity cut offs.

Upper Lean, Middle Lean, and Gas Zones that are in pressure communication with the continuous reservoir are included with no thickness cutoffs.

Observation wells and 4D seismic will take precedence over pre-operations core and log based picks.

EBIP at Firebag/Mackay River is the same as the Original Bitumen in Place (OBIP). EBIP is the preferred term used on site.

Summary of Pad Performance and Reservoir Properties

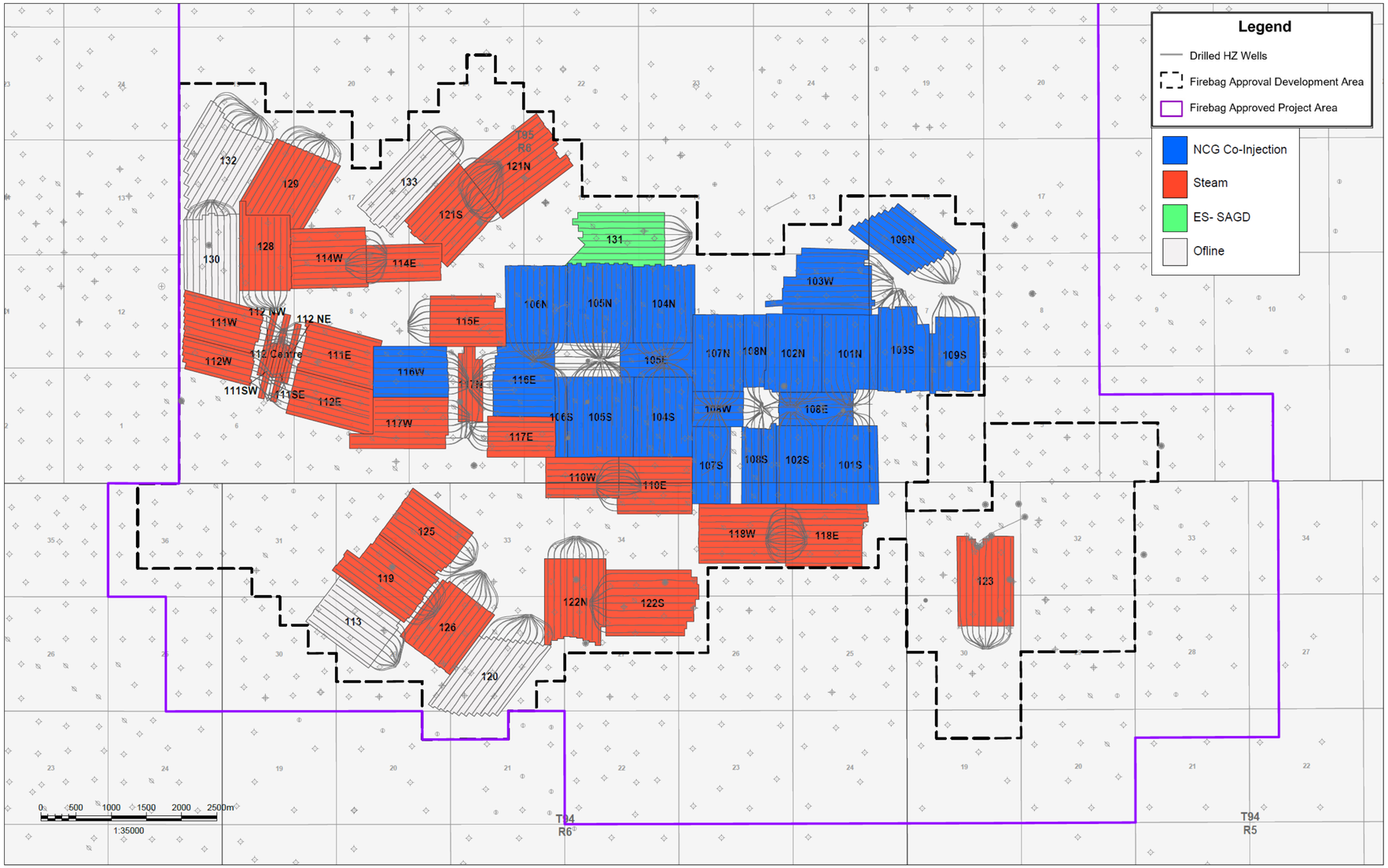
Pad	Hydrocarbon area (e^3m^2)	Continuous Reservoir Thickness (m)	Porosity	Average Permeability Kh (mD)	Average Permeability Kv (mD)	Oil Saturation	EBIP (e^3m^3)	Recovery to date (e^3m^3)	Recovery to date (%)	Expected Ultimate Recovery (%)
101	1,756	52.4	0.32	5800	3700	0.77	21,508	18,929	88%	98%
102	1,608	58.9	0.32	5000	2700	0.72	22,540	16,841	75%	88%
103	1,927	43.0	0.31	5000	2800	0.71	19,142	13,382	70%	81%
104	1,910	41.2	0.32	3700	2100	0.76	19,150	14,570	76%	89%
105	2,625	31.3	0.33	4500	2700	0.78	21,127	16,198	77%	90%
106	1,602	36.4	0.32	3800	2200	0.76	14,258	10,423	73%	87%
107	1,381	37.1	0.32	5100	4000	0.74	12,085	8,672	72%	88%
108	1,726	36.4	0.32	5400	2800	0.74	15,273	8,637	57%	83%
109	1,486	25.4	0.33	4300	2300	0.74	8,979	4,790	53%	78%
110	1,449	29.8	0.32	4000	2400	0.68	9,782	5,318	61%	77%
111	1,590	28.2	0.33	3900	2600	0.76	11,072	1,848	17%	81%
112	1,458	32.5	0.33	3400	2000	0.77	12,290	4,261	35%	77%
114	1,473	28.7	0.32	3200	2100	0.70	9,679	4,624	48%	79%
115	749	26.9	0.33	3400	2000	0.73	4,923	3,343	70%	84%
116	1,661	36.3	0.32	3400	2000	0.76	14,930	10,417	70%	84%
117	1,744	29.2	0.32	3300	2200	0.72	12,077	6,420	53%	81%
118	2,028	32.8	0.31	3400	2300	0.71	15,055	5,292	35%	78%

Table continued on the following slide

Summary of Pad Performance and Reservoir Properties (Cont'd)

Pad	Hydrocarbon area (e^3m^2)	Continuous Reservoir Thickness (m)	Porosity	Average Permeability Kh (mD)	Average Permeability Kv (mD)	Oil Saturation	EBIP (e^3m^3)	Recovery to date (e^3m^3)	Recovery to date (%)	Expected Ultimate Recovery (%)
119	925	34.9	0.33	3400	1900	0.73	7,747	965	12%	80%
121	2,094	36.3	0.33	3200	2500	0.65	16,235	4,237	26%	76%
122	2,165	31.0	0.32	5700	3300	0.68	14,547	2,978	20%	78%
123	998	37.3	0.32	4100	2500	0.68	8,062	2,514	31%	81%
125	848	28.4	0.33	3100	1800	0.73	5,803	1,084	19%	81%
126	943	39.1	0.33	3300	1900	0.71	8,622	1,354	16%	80%
128	799	29.3	0.33	2700	2100	0.72	5,605	750	13%	80%
129	1,038	29.9	0.32	2700	1800	0.78	6,050	401	7%	72%
130	907	32.1	0.32	3400	2200	0.67	6,321	6	0%	60%
131	918	29.8	0.32	4900	3200	0.77	6,925	2,729	39%	88%
132	1,283	26.9	0.33	2900	1700	0.72	8,188	50	0%	61%
Combined Active Well Pattern Area	41,091	34.8	0.32	3900	2400	0.73	337,975	170,983	51%	81%
Development Area	84,921	35.9	0.32	N/A	N/A	0.72	703,000	N/A	N/A	N/A
Project Area	196,706	31.1	0.32	N/A	N/A	0.70	1,369,200	N/A	N/A	N/A

Co-injection Overview



Non-condensable gas (NCG) co-injection has been implemented on the following well pads at Firebag:

- Pad 101
- Pad 102
- Pad 103
- Pad 104
- Pad 105
- Pad 106
- Pad 107
- Pad 108
- Pad 109
- Pad 116

Co-injection Overview

NCG (i.e., methane fuel gas) co-injected with steam has been implemented on 10 mature pads (Pads 101-109, 116) since May 2018.

NCG and steam co-injection typically commence on a pad when the estimated ultimate recovery has exceeded 65% through normal SAGD operations.

Geological characteristics, SAGD performances/optimization approaches and surface infrastructure are also considered when evaluating timelines for NCG co-injection.

The main factors considered to determine, execute, and monitor NCG co-injection rates involve:

- Monitor reservoir responses and main key performance indicators (KPIs) to adjust NCG target rates
- Field-wide strategies to cut steam from mature pads and replace with NCG
- Maintain the desired chamber pressure for the matured pads
- NCG retention within the reservoir, considering the balance between NCG leak off and volume of the NCG produced back
- Sulphur Recovery Unit (SRU) capacity limit to handle the level of produced gas at the field level

Co-injection Impact

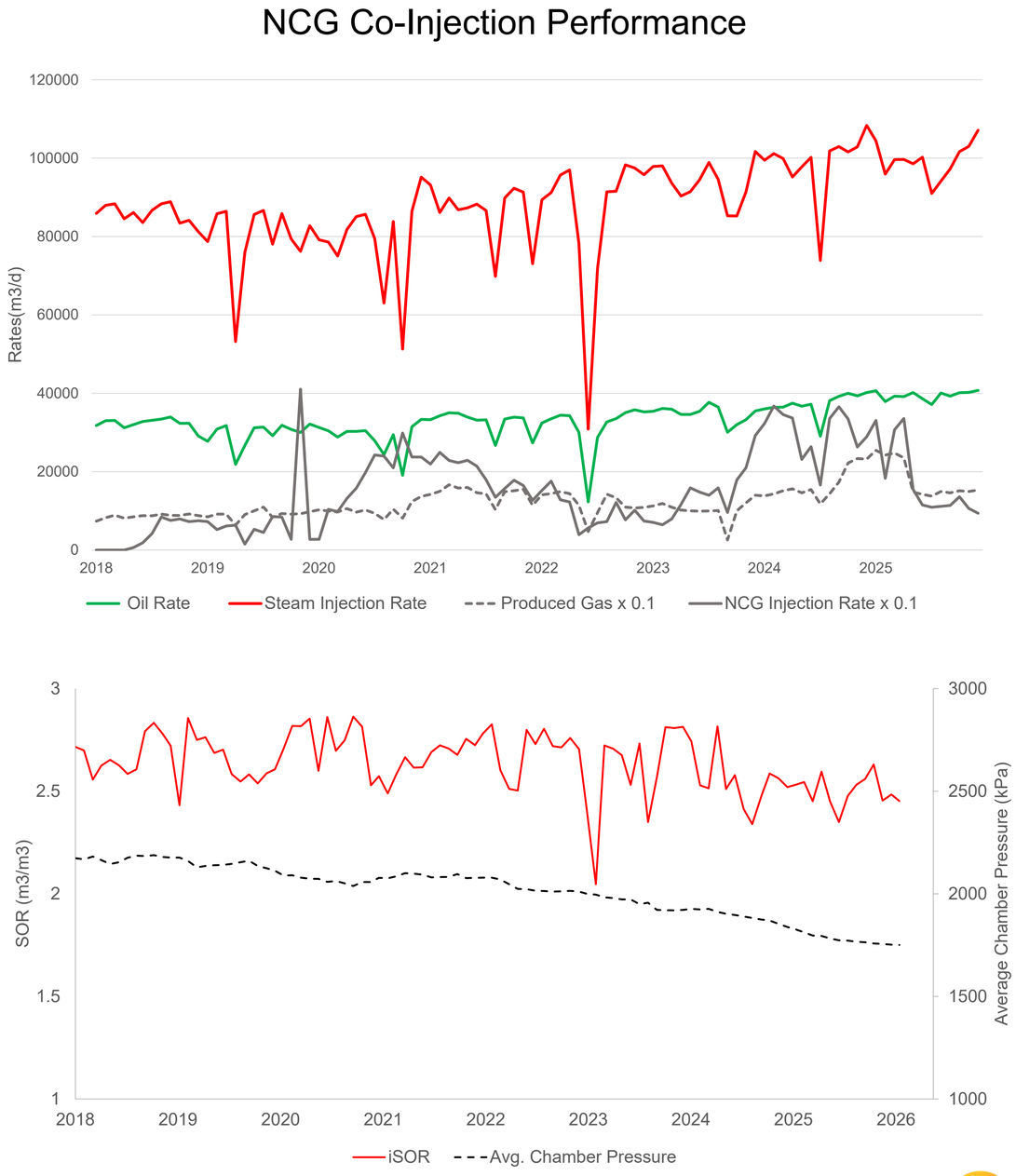
There have been no observations of negative impacts on oil rate after NCG co-injection

Continuous reduction of steam injection rate

- Steam re-allocated to newer pads

Gradual increase in produced gas from reservoir

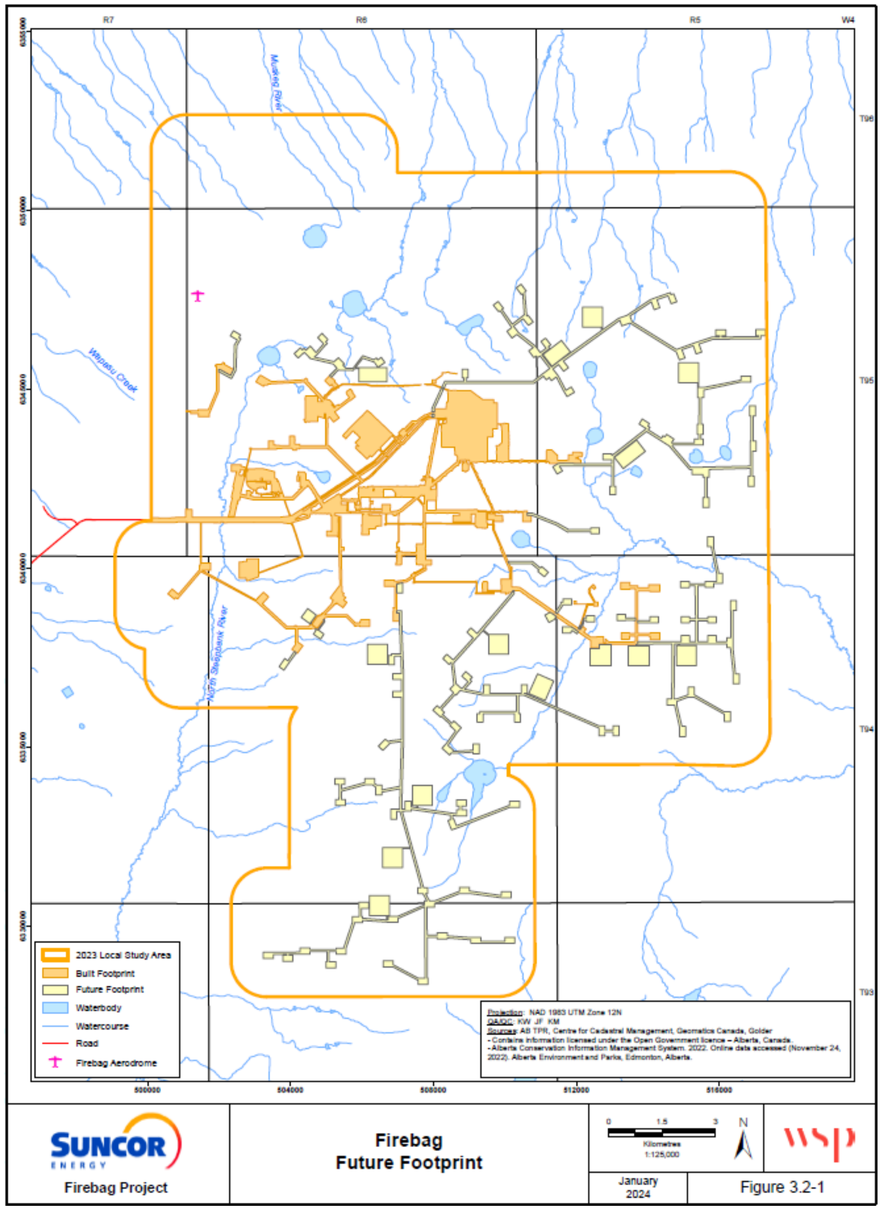
No significant temperature reductions have been observed within existing steam chambers from observation well temperature/pressure data



4.3) Surface

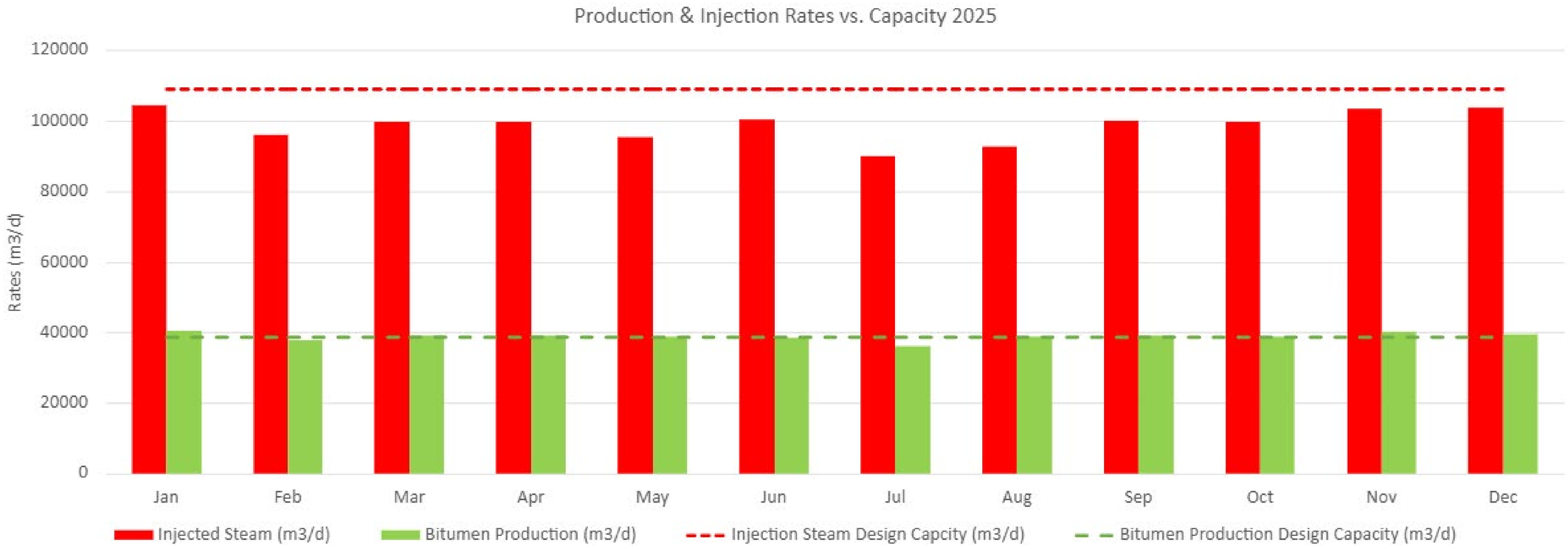
Overview of Built and Planned Surface Infrastructure

The Firebag Debottleneck project involves acceleration of installing an approved stage 5 once-through steam generator to be built at Plant 93. An application under Directive 23 was submitted (application no. 1959373) on October 14, 2025.



Bitumen and Steam Annual Rates

Firebag averaged 38,892 m^3/day (244 kbbl/day) of bitumen production and 98,766 m^3/day (621 kbbl/day) of steam injection for the reporting period.



4.4) Historical and Upcoming Activity

Well Suspension and Abandonment Activity

License	Well Type	Well Name	UWI	Spud Date	Activity*	Activity date	Justification	Remaining Reserves (m^3)
0292619	Producer	SUNCOR SAGD P3P5 STEEPBK 13-6-95-5	102/13-06-095-05W4/00	2004-09-03	Suspension	2025-06-07	Marginal producer	40,455
0420275	Injector	SUNCOR SAGD 3S11 FIREBAG 3-13-95-6	1S2/03-13-095-06W4/00	2010-05-23	Suspension	2025-06-10	Marginal injector	0
0303832	Producer	SUNCOR SAGD P4P1 FIREBAG 13-11-95-6	107/13-11-095-06W4/00	2004-03-23	Abandoned	2025-06-12	Marginal producer	0
0396199	Producer	SUNCOR SAGD P3P3B STEEPBK 14-6-95-5	107/14-06-095-05W4/00	2008-05-31	Abandoned	2025-10-14	Marginal producer	370,614
0260992	Producer	SUNCOR SAGD P2P3 FIREBAG 6-12-95-6	100/06-12-095-06W4/00	2001-11-16	Suspended	2025-10-19	Marginal producer	338,416
0428903	Producer	SUNCOR P5P4B FIREBAG 15-10-95-6	100/15-10-095-06W4/02	2011-02-12	Suspended	2025-10-21	Marginal producer	201,094
0420263	Producer	SUNCOR SAGD P3P11 FIREBAG 3-13-95-6	1S0/03-13-095-06W4/00	2010-05-24	Suspended	2025-11-25	Marginal producer	272,993
0365817	Producer	SUNCOR SAGD P7P1 FIREBAG 6-11-95-6	100/06-11-095-06W/400	2007-01-30	Suspended	2025-11-27	Marginal producer	208,415
0365831	Injector	SUNCOR SAGD P7S1 FIREBAG 6-11-95-6	102/06-11-095-06W/400	2006-12-11	Suspended	2025-11-28	Marginal injector	0
0365832	Injector	SUNCOR SAGD P7S2 FIREBAG 7-11-95-6	106/07-11-095-06W4/00	2006-12-12	Suspended	2025-11-30	Marginal injector	0
0365841	Injector	SUNCOR SAGD P7S11 FIREBAG 14-35-94-6	106/14-35-094-06W4/00	2006-12-06	Suspended	2025-12-02	Marginal injector	0
0446496	Producer	SUNCOR P4N3 FIREBAG 13-11-95-6	109/13-11-095-06W/400	2012-08-01	Suspended	2025-12-03	Marginal producer	153,010
0365843	Injector	SUNCOR SAGD P7S13 FIREBAG 13-35-94-6	100/13-35-094-06W4/00	2006-12-08	Suspended	2025-12-05	Marginal injector	0
0445357	Injector	SUNCOR P10S7 FIREBAG 13-35-94-6	115/13-35-094-06W4/00	2012-05-10	Suspended	2025-12-07	Marginal injector	0
0445394	Injector	SUNCOR P10S10 FIREBAG 16-33-94-6	103/16-33-094-06W/400	2013-01-21	Suspended	2025-12-09	Marginal injector	0
0421718	Producer	SUNCOR SAGD P16P8 FIREBAG 13-3-95-6	104/13-03-095-06W/400	2010-08-21	Suspended	2025-12-09	Marginal/Sidetrack	383,968
0445395	Injector	SUNCOR P10S11 FIREBAG 16-33-94-6	104/16-33-094-06W4/00	2013-01-18	Suspended	2025-12-12	Marginal injector	0
0404411	Producer	SUNCOR SAGD P6P10 FIREBAG 14-10-95-6	103/14-10-095-06W/400	2009-01-07	Suspended	2025-12-15	Marginal producer	136,306

*Activity = suspension, abandonment, blow-down, ramp-down

Regulatory/Operational Changes – Regulatory Applications

Application #	Description	Registration Date	Approval Date	Application Type
1955714	Firebag Debottleneck	05-Nov-24	21-Mar-2025	Directive 23 Category 2
1957017	Modify Disposal Well GW Monitoring	20-Feb-25	09-May-25	Directive 65
1957520	Pad 106 Injector Well Modification	10-Apr-25	22-Apr-25	Directive 23 Category 1
1957718	Pads 138, 139, 140 and 142 Solvent Injection	02-May-25	09-Oct-25	Directive 23 Category 2
1957720	Modify Disposal Approval to Add Two Class 1b Wells	02-May-25	18-Oct-25	Directive 65
1957820	Pad 132 NCG Co-injection	14-May-25	03-Jun-25	Directive 51 Class III/IV
1958084	Pad 130 NCG Co-injection	17-Jun-25	23-Jun-25	Directive 51 Class III/IV
1959373	Firebag Debottleneck	14-Oct-25	28-Jan-26	Directive 23 Category 2
1959744	Change Well Classification for Disposal Well 30	19-Nov-25	17-Dec-25	Directive 51 Class 1b
1959786	2026 Disposal Test Program	24-Nov-25	08-Jan-26	Directive 65
1959924	Modify Disposal Approval to Add One Class 1b Well	05-Dec-25	20-Mar-26	Directive 65
1960002	Pad 121 NCG Co-injection Methodology Update	12-Dec-25	26-May-26	Directive 23 Category 2
1960006	Non-oilfield Waste Disposal at Firebag Landfill	12-Dec-25	08-Jan-26	Directive 58
1960086	Temporary Use of Emissions Control Device	18-Dec-25	18-Mar-26	Directive 23 Category 2

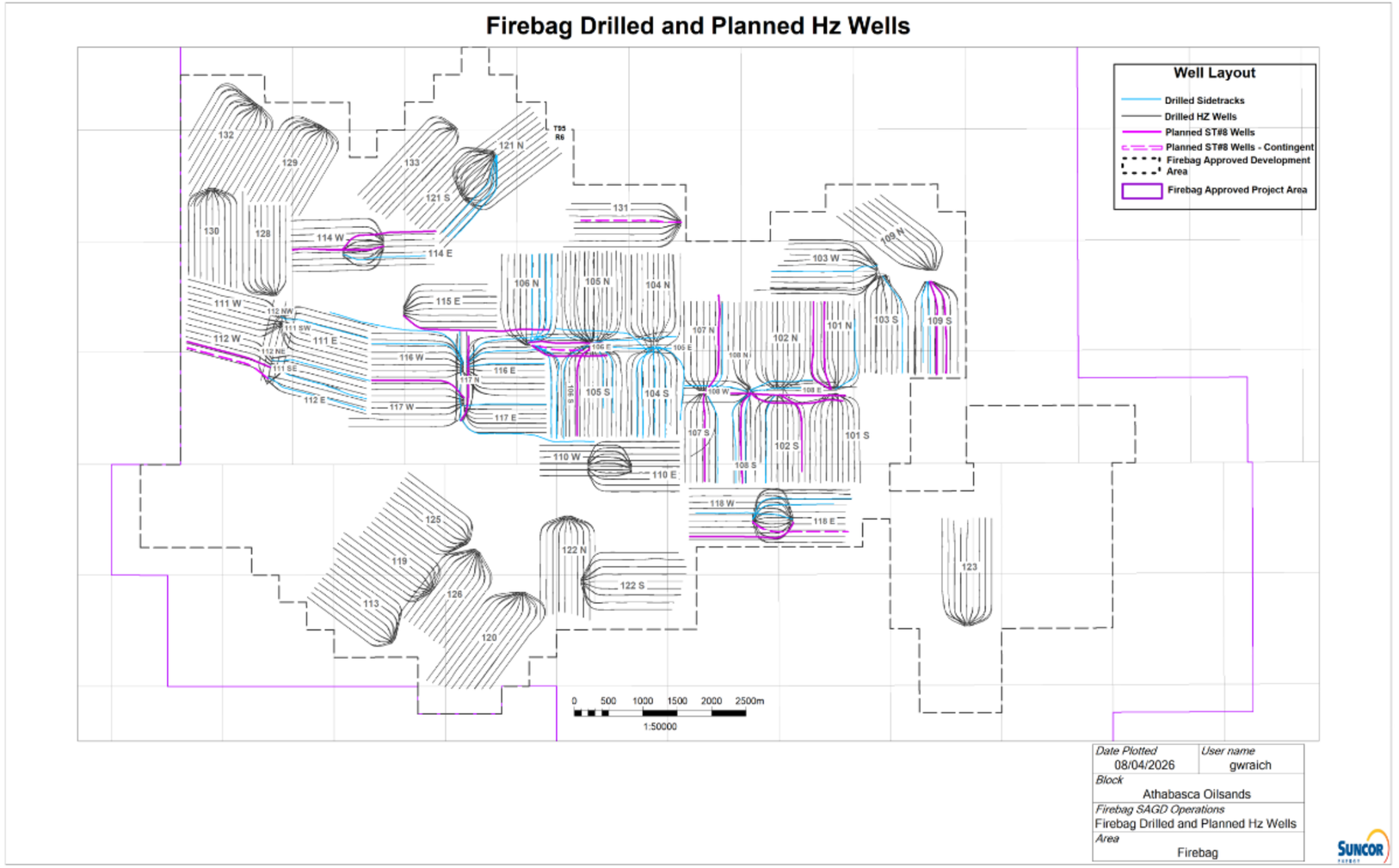
Regulatory/Operational Changes – Summary of Events

The following horizontal wells were drilled in two programs during the reporting period:

- 2025 Sidetrack Program producers: P4P6B, P4P7B, P8P6B, P4N1B, P111P3B
- 2025 Sidetrack Program producers: P3P2B, P5P18B, P5P10B, P5P8B, P8P2B, P8P9B, P6P11B, P16P2B, P16P4B, P16P17B, P16P19B, P114P5B, P117P6B, P109P5B, P112P9B, P112P5B, P118P15B, P118P4B, P121P11B, P121P12B, P121P13B

The following well pads were started up during the reporting period:

- Pad 130 (9 well pairs)
- Pad 132 (12 well pairs)



Regulatory/Operational Changes – Key Learnings

Start-up at Pad 130 and 132:

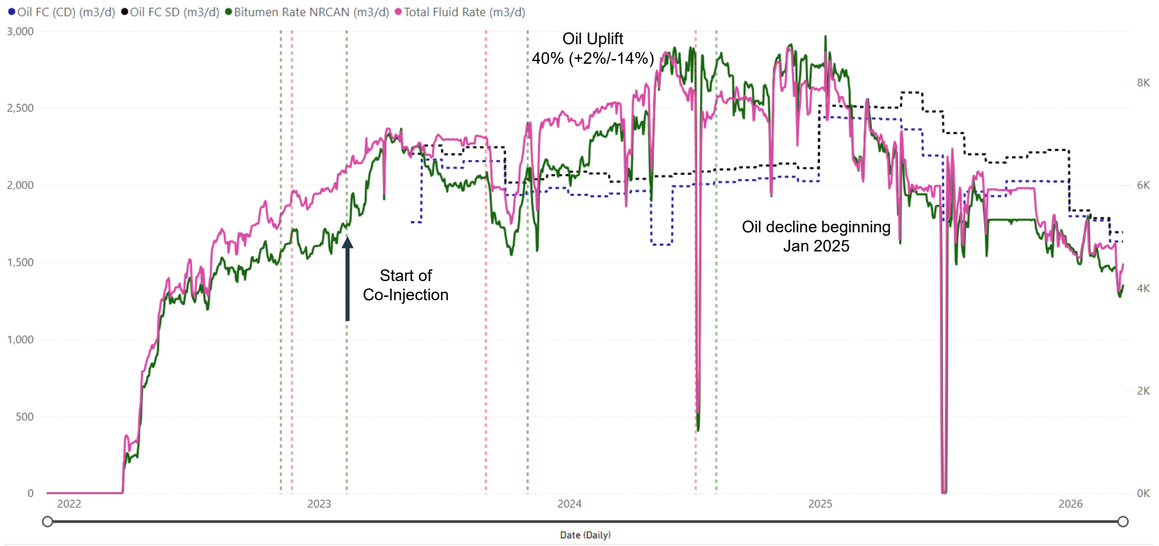
- Pad 130 and 132 have some of the longest wells in Firebag.
- Combined circulation and bullheading methods have been applied to new pad start-ups over the years.
- Pad 130 heating was achieved through bullheading.
- Pad 132 heating was achieved through bullheading but circulation was needed on a few wells for some days to achieve steam to toe since these wells had limited water mobility. Once reservoir mobility improved, these wells were bullheaded.
- A period of 90 days was targeted for this warmup period.
- This is the first start of Firebag with a steam splitter completion on all the injectors, and production sleeves on the producers.
- Production sleeves on Pad 130 were opened, and Pad 132 were left closed after Mechanical Lift Conversion to learn about the performance of such completion on the first years of SAGD. This ramp up performance assessment will be completed several months after first oil.

Regulatory/Operational Changes – Technology Update

Pad 131 ES-SAGD (Diluent Co-injection):

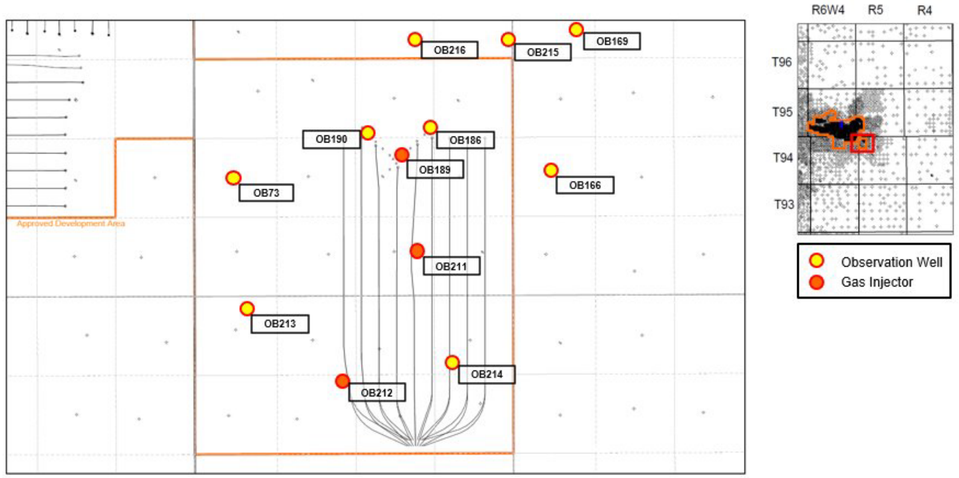
- Pad 131 designed as an ES-SAGD pad (commercial demonstration)
- Test separator (horizontal, vertical separators, instrumentation). This was bypassed in April 2024. Tests now flow to a Coriolis meter.
- Comprehensive surveillance program started with SAGD baseline (Mar 2022 - Jan 2023)
- All eight well pairs are co-injecting HT-MUD (hydrotreated make-up diluent) since Feb 2023
- Target hydrocarbon co-injection concentration is 10 vol%
- Planned duration of co-injection is 4+ years (end Feb 2026) but dependant on pad performance
- Oil Rate uplift and SOR improvement post solvent injection was observed at Pad 131. Solvent Recovery is as expected and monitoring is ongoing.

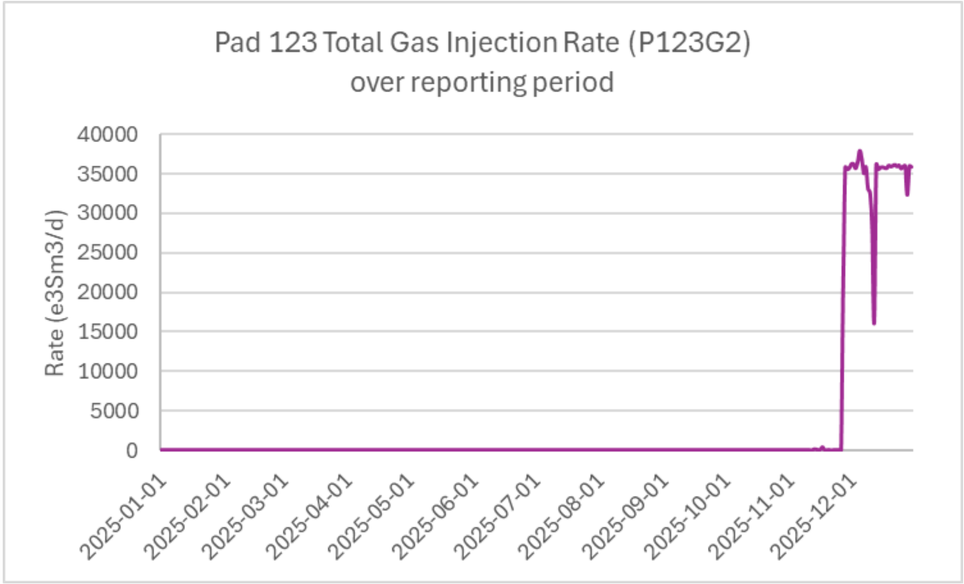




New Technology Update: Pad 123 Gas Injection Demonstration

- Suncor re-started gas injection in Pad 123 on November 27, 2025
- Suncor has safely ramped up to the total injection rate of 36e^{3}Sm^3/d of gas while adhering to the terms of the AER approval with respect to containment of gas in the McMurray zone
- Firebag fuel gas, consisting primarily of methane, is being used for the current injection scheme
- Only one gas injector, P123G2, has been re-started. Injection pressure has been continuously monitored and maintained below the approved maximum operating pressure (MOP) throughout operations
- Observation wells and reservoir response are being monitored to support optimization of gas injection and overall Pad 123 performance





Compliance History

Reference No.	Type of event	Date	Event details	Actions taken
437494	Contravention/Approval Violation	24-Jan-25	The Well Pad 108 emergency flare stack snuffed out due to extreme wind conditions in the region which caused uncombusted natural gas to vent to atmosphere.	Faulty flare stack ignitor was replaced.
437554	Contravention/Approval Violation	09-Feb-25	The Plant 91 flare stack snuffed out due to a snowstorm and high-speed winds which caused uncombusted natural gas to vent to atmosphere.	Thermocouple was replaced.
437713	Contravention/Venting > 10 min	15-Feb-25	The Plant 92 Vapour Recovery Unit (VRU) tripped due to high liquid levels in the produced gas which caused the skim and Micro-bubbler Flotation (MBF) tanks to vent.	Stopped the venting and investigations were performed, preventing further similar cases.
438021	Contravention/OSE Trespass	24-Feb-25	An Observation (OBS) Well was drilled under an OSE program and because there was instrumentation left on the well, it was in trespass and a conversion to MSL was required.	OBS Well was converted to an MSL.
438434	Contravention/Approval Violation	07-Mar-25	The Plant 91/92 flare stack snuffed out due to high wind speeds and gusty conditions which caused uncombusted natural gas to vent to atmosphere.	Service ignitor was replaced.
438437	Contravention/Venting > 10 min	08-Mar-25	The Plant 93 VRU compressor tripped due to low ring fluid flow resulting in tank pressure increase and venting of the P93 MBF tank.	Stopped the venting and investigations were performed, preventing further similar cases.
438697	Contravention/Venting > 10 min	17-Mar-25	The Plant 93 VRU tripped due to an incorrect compressor seal flush conducted and bypass installed which resulted in the Skimmed oil and EHP tank to vent to atmosphere.	Stopped the venting and investigations were performed, preventing further similar cases.
439064	Contravention/Approval Violation	28-Mar-25	The annual NO2 Alberta Ambient Air Quality Objective (AAAQO) limit was exceeded in 2024 and reported in March 2025.	Sample results from one ambient air monitoring station was abnormally high for one month and was most likely an anomaly caused by sample retrieval or laboratory handling errors.
439255	Contravention/Approval Violation	04-Apr-25	The Plant 91 flare stack snuffed out due to steaming and depressurizing vessels which caused uncombusted natural gas to vent to atmosphere.	Improved flare design completed.
439854	Contravention/Venting > 10 min	22-Apr-25	Plant 92 Operations were cleaning the expansion trim coolers which caused increased high temperature flow to the Plant 92 MBF which caused the tank to vent to atmosphere.	Stopped the venting and investigations were performed, preventing further similar cases.
439970	Contravention/Venting > 10 min	24-Apr-25	The Plant 93 VRU tripped due to high liquid levels in the produced gas which caused the skimmed oil and MBF tanks to vent.	Stopped the venting and investigations were performed, preventing further similar cases.
440576	Contravention/Approval Violation	10-May-25	The Plant 91/92 flare stack snuffed out due to high wind speeds and gusty conditions which caused uncombusted natural gas to vent to atmosphere.	Entire ignitor system was replaced.
442282	Contravention/Venting > 10 min	26-Jun-25	During SIF testing, the VRU overloaded, and the Plant 92 MBF tank and produced water tank vented to atmosphere.	Stopped the venting and investigations were performed, preventing further similar cases.
442496	Contravention/Venting > 10 min	02-Jul-25	Multiple pad trips caused a rapid swing in emulsion into Plant 93. The VRU overloaded and tripped, and the Plant 93 MBF tank vented to atmosphere.	Stopped the venting and investigations were performed, preventing further similar cases.
442634	Contravention/Approval Violation	06-Jul-25	Unplanned electrical outage in Plant 92 caused the Sulphur Recovery Unit (SRU) incinerator to trip, which resulted in a low stack top temperature for 3 one-hour averages.	Separate power source switches were installed to allow redundancy in the system.
442868	Contravention/Approval Violation	10-Jul-25	Breaker 29-752 tripped offline resulting in a power loss to the SRU/Incinerators which resulted in 2 one-hour average stack top temperature exceedances.	Reprogramming was conducted to trigger oscillography of the breaker.
443133	Contravention/Venting > 10 min	18-Jul-25	A blockage in the Plant 91/92 VRU discharge separator after startup caused the Plant 91 dilbit tank to pressure up and vent to atmosphere.	Stopped the venting and investigations were performed, preventing further similar cases.
443185	Contravention/Venting > 10 min	18-Jul-25	A blockage in the Plant 91/92 VRU discharge separator after startup caused the Plant 91 dilbit tank to pressure up and vent to atmosphere.	Stopped the venting and investigations were performed, preventing further similar cases.
445642	Contravention/Approval Violation	22-Sep-25	A faulty flow transmitter (99FT-1260) fuel gas to incinerator failed, which caused the Flow Valve (FV) to open to 100% and trip the Incinerator B, resulting in low stack top temperature for a one-hour average.	Faulty flow transmitter was replaced.
446148	Contravention/Venting > 10 min	03-Oct-25	A failed instrument air on the emulsion inlet valve led to instability in the process system which caused the Plant 93/94 dilbit tank to vent to atmosphere.	Failed component was replaced.
448784	Contravention/Approval Violation	22-Dec-25	The SRU glycol heater tripped due to a freezing air sensing line which caused instability in the amine stripping unit and excessive SO2 emissions.	Reconfigured the sensing line with added heat trace.

Compliance History (Cont'd)

Reference No.	Type of event	Date	Event details	Actions taken
436870	Reportable Spill	15-Jan-25	During Operator rounds, a leak was found of the reverse emulsion breaker tank mixer seal which is located within the tank berm. All fluids were contained within the secondary containment system and cleaned up.	Prevented further spilling, cleaned up spill and investigated to prevent further similar occurrences.
439932	Reportable Spill	23-Apr-25	A small leak was noticed from a drain valve upstream of the Plant 93/94 Hydrochloric acid storage tank level transmitter. The fluid slowly dripped into the secondary containment berm. Soda ash was used to neutralize the spill, and the free-standing fluid was removed.	Prevented further spilling, cleaned up spill and investigated to prevent further similar occurrences.
442660	Reportable Spill	06-Jul-25	The Pad 132 berm breached during a rainstorm event, resulting in rainfall runoff to flow over the side of the well pad berm. All water was tested and confirmed to be clean.	Prevented further spilling, cleaned up spill and investigated to prevent further similar occurrences.
443094	Reportable Spill	17-Jul-25	During Once-Through Steam Generator (OTSG) start up in Plant 92, boiler feed water was released from a PSV lifting due to back pressure in the system, which caused the building sump to overflow into the adjacent ditch. All free-standing fluids were removed.	Prevented further spilling, cleaned up spill and investigated to prevent further similar occurrences.
444497	Reportable Spill	23-Aug-25	The warm lime softener tank overflowed due to issues with max rate capacity which caused process fluid to flow into the adjacent ditching system. All free-standing fluids were removed.	Prevented further spilling, cleaned up spill and investigated to prevent further similar occurrences.
445612	Reportable Spill	19-Sep-25	During plant turnaround activities, a temporary line off a 400 Bbl. tank let go which caused glycol to release into the ground and into the surrounding ditching system outside the 91-3000 water treatment building. All free-standing fluids were removed.	Prevented further spilling, cleaned up spill and investigated to prevent further similar occurrences.
448191	Reportable Spill	02-Dec-25	A temporary fluid transfer line in the 91-3000 water treatment building failed causing treated water to release into the building's trench and sump system. The sump overflowed and the treated water migrated outside the building. All free-standing fluids were removed.	Prevented further spilling, cleaned up spill and investigated to prevent further similar occurrences.
448411	Reportable Spill	08-Dec-25	The 94D-3025 clarifier tank overflowed due to issues with the valve off the recycle water line. Fluids drained into the adjacent ditching system. All free-standing fluids were removed.	Prevented further spilling, cleaned up spill and investigated to prevent further similar occurrences.

Compliance History (Cont'd)

Directive 060 (Sec. 8.3) monthly venting exceedances

Type of event	Month	Event details	Actions taken	Costs
Venting Exceedance - Monthly	July	Overall Vent Gase (OVG) exceedance was primarily attributable to a Vapour Recovery Unit (VRU) upset on July 18, 2025. Approximately 90.89× 10^3 m^3 of venting occurred after the 4000 VRU tripped due to a high level in the hydrocarbon side of the discharge separator. During restart attempts, the discharge separator repeatedly tripped on high level after the second VRU was started. Operations suspected plugging within the discharge separator was affecting process flows and preventing stable VRU operation, resulting in venting from the production tank system. In addition, approximately 11.07 × 10^3 m^3 of venting was associated with well completion activities. Venting associated with these activities is part of the standard well kill procedure used to execute the completion work scope safely.	Upon identifying the VRU upset, Operations opened the crossover to the 2000 VRU system to reduce loading on the affected 4000 VRU while troubleshooting was underway. Hydrocarbon pumps were switched to the alternate pump, and dilbit tank levels were drawn down to further reduce VRU loading and stabilize the system. The affected VRU system was subsequently returned to service. Firebag continues to monitor VRU performance and identify opportunities to improve reliability and reduce the likelihood of similar upsets. Suncor will implement additional controls for tank management during startup activities to minimize venting where practicable. For completion activities, venting was conducted in accordance with the standard well kill procedure used to complete the work safely. Suncor continues to evaluate opportunities to reduce venting gas volumes during well completion activities and will implement alternatives where available and practicable.	Corrective actions related to the VRU upset were completed using existing operations and maintenance resources. Completion-related venting was associated with normal operating activities, and no standalone capital projects were required. Costs were limited to routine operating and maintenance activities.
Venting Exceedance - Monthly	October	OVG exceedance was attributable to two separate sources of venting. First, approximately 3.72 × 10^3 m^3 of venting was associated with a failed instrument air hose that caused a valve failure and tripped the High Integrity Pressure Protection System (HIPPS). The resulting shutdown of the 93/94 Oil and Diluent stripping unit DSU plants led to venting during the upset and recovery period. In addition, approximately 13.47 × 10^3 m^3 of venting was associated with well completion activities. Venting associated with these activities is part of the standard well kill procedure used to execute the completion work scope safely. October was a particularly active month for completion activities, resulting in higher than typical venting volumes.	Following the event, the failed instrument air hose was replaced and upgraded to a more robust type. Other air hoses in similar service were also identified and proactively replaced. For completion activities, venting was conducted in accordance with the standard well kill procedure used to complete the work safely. Suncor continues to evaluate opportunities to reduce venting gas volumes during well completion activities and will implement alternatives where available and practicable.	Corrective actions for the 93/94 plant event were completed through existing maintenance and reliability programs. Completion-related venting was associated with normal operating activities, and no standalone capital projects were required.

Future Plans – Activities and Applications

Activity	Location	Required Future Applications	Application Submission Date
Long-term disposal	Disposal Well 29	Directive 51 Class 1b	Q1 2026
First steam	Pad 120	Directive 51 Class III/IV	Q1 2026
Solvent injection	Pads 113 & 120	Directive 23 Category 2	Q2 2026
New well pad development (Pads 143, 144, 145, 146, 147)	New pads	Directive 23 Category 2	Q2 2026
First steam	Pad 113	Directive 51 Class III/IV	Q2 2026
NCG Expansion project	Field-wide	Directive 23 Category 2	Q2 2026
Firebag Stage 4.5 project	CPF	Directive 23 Category 2	Q2 2026
Amendment to Pads 138, 139, 140, & 142	Pads 138, 139, 140, 142	Directive 23 Category 2	Q2 2026
OSCA Project Area extension	General	Directive 23 Category 3	Q3 2026
Firebag Sustaining Footprint and Production Update	General	EPEA (EIA) + Directive 23 Category 3	Q4 2026

No activities are expected to occur in 2026 that could significantly alter performance or energy/material balance of the scheme.

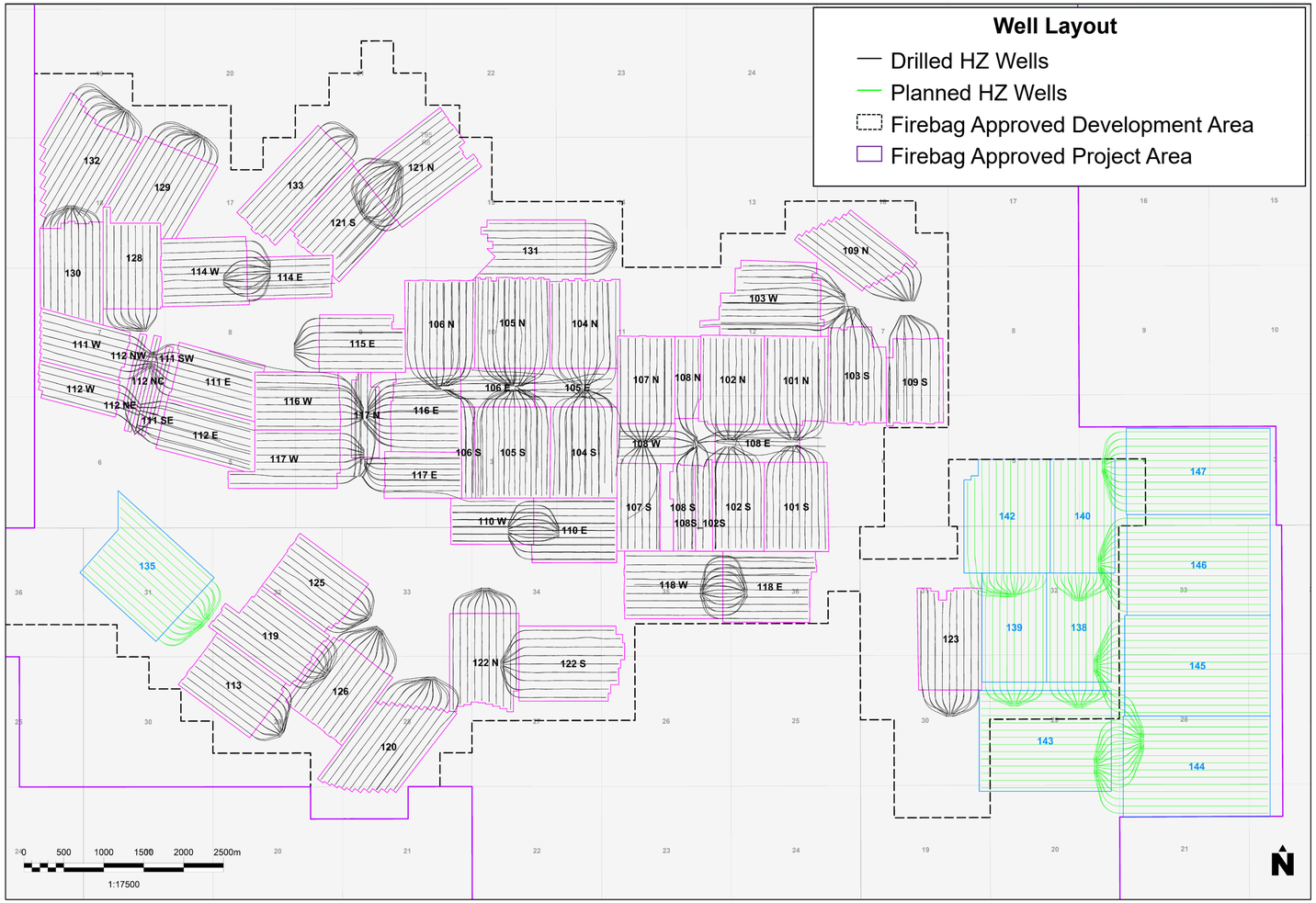
Future Plans – 5 Year Outlook

The following drilling activities are expected to commence within the next five years:

- Pad 140 – 9 well pairs: 2026
- Pad 138 – 9 well pairs: 2027
- Pad 139 – 9 well pairs: 2027
- Pad 142 – 12 well pairs: 2027
- Pad 135 – 12 well pairs: 2027
- Pad 143 – 14 well pairs: 2027
- Pad 144 – 14 well pairs: 2028
- Pad 145 – 14 well pairs: 2028
- Pad 146 – 14 well pairs: 2029
- Pad 147 – 12 well pairs: 2029

The following first steam dates are planned to occur within the next five years:

- Pad 120 – Q3 2026
- Pad 113 – Q1 2027
- Pad 133 – Q4 2027
- Pad 138 – Q3 2028
- Pad 139 – Q3 2028
- Pad 140 – Q3 2028
- Pad 142 – Q3 2028
- Pad 135 – Q4 2028
- Pad 143 – Q3 2029
- Pad 144 – Q3 2030
- Pad 145 - Q3 2030
- Pad 146 – Q3 2030
- Pad 147 – Q4 2030



Additional Updates

Update on Deferral Approval for 4P10 Repair of SCVF

- As per November 10, 2016, Approval, Suncor has drilled 3 Quaternary monitoring wells on Pad 104 to monitor for potential groundwater impacts around the SCVF at 4P10.
- Sampling results to date indicate no groundwater impacts from 4P10 SCVF. Based on groundwater sampling, geochemical and lab simulation conducted, increasing trends of a few parameters are attributed to heating as opposed to SCVF gases (2020 Groundwater Compliance Monitoring Report, Suncor Firebag Facility, Central Processing Facility and Well Pads, Approval No. 0080105-01-00, March 2021).
- Suncor has received permission to remove sampling of 4P10A and 4P10B from the sampling program and continue with the sampling of the new upgradient wells.
- In May 2023, a well intervention was performed on 4P10. Completion strings were pulled out, WR plug was set @ 311.5mKB, and a solid pressure test @7000kPa was held for 20 minutes. The well was left suspended downhole since.
- Monitoring to be continued throughout 2026 and reported in 2027.

Update on Deferral Approval for 14P10 Repair

SUNCOR P114P10 FIREBAG 16-7-95-6

- Suncor Firebag well 14P10 had a casing failure at 12.80 mKB. The casing failure was previously repaired by installing a high temperature Saltel casing patch over the casing failure location.
- The casing patch leaked. Attempts to repress the patch did not stop the leak permanently. The well was shut down for several months while investigating next steps.
- Suncor received an approval on August 17, 2022, to defer the repair of the casing failure.
- As per the approval, **Suncor conducts SCVF tests every six months. No significant pressure build up observed.**
- A vent nanny and H2S scrubber was set up for this well for continuous monitoring of SCVF. Nothing to report for 2025.

Updates required under Approval 8870

Condition 27

Injection testing was planned to be completed on four wells during the 2025 winter injection test program, however, were all ultimately cancelled due to low values of field salinity observed during sampling operations.

Condition 36

No SAGD well drilling has been undertaken within the expansion area or within 1 km of the unnamed stream described in Application No. 1941949 that would trigger the requirements of Condition 36.

Thank You