

Connacher Great Divide Commercial Scheme Approval No. 10587

2021 Directive 054 Performance Report

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Introduction

Scheme Setting and Background

Connacher Oil and Gas Limited (Connacher) operates the Great Divide steam assisted gravity drainage (SAGD) facility approximately 80 kilometers (km) south of Fort McMurray, Alberta. The Great Divide SAGD facility operates under the Oil Sands Conservation Act (OSCA) Commercial Scheme Approval No. 10587, and the Environmental Protection and Enhancement Act (EPEA) Approval No. 240008-01-01.

Pod One

Connacher's Pod One central processing facility (CPF) is located at NW 1/4 16 082 12 W4M. At Pod One, there are 22 well pairs plus 13 infill wells on the current well pads: 101, 102, and 104. The Development Area in Pod One has been expanded with the addition of LSDs 16-08-82-12W4 and 13-09-82-12W4 to accommodate Pad 104, well pairs 7-10.

Algar

Connacher's Algar CPF is located at N 1/2 18-082-11 W4M. Algar includes 18 well pairs (including one re-drill) plus 14 infills on the current well pads: 201, 202 and 203. In March 2022, Connacher received approval for three new well pairs at Pad 202, two new infills at Pad 202, and expansion of the development area to include TWP 82 RGE 11 W4M: Section 20 (LSD 5 and 12). The Development Area west of Pad 203 was expanded with the addition of LSDs 9 & 10 section 24-82-12W4 to accommodate the builds of new Pad 203W well pairs.

Subsurface

Production Plots

An annotated scheme-level lifespan plot of steam injection, NCG co-injection, oil production, and water production rates, and producing well count is shown in Figure 1, while the iSOR, cSOR, WSR are shown in Figure 2.

Figure 1: Annotated Scheme-Level Lifespan Production Plot

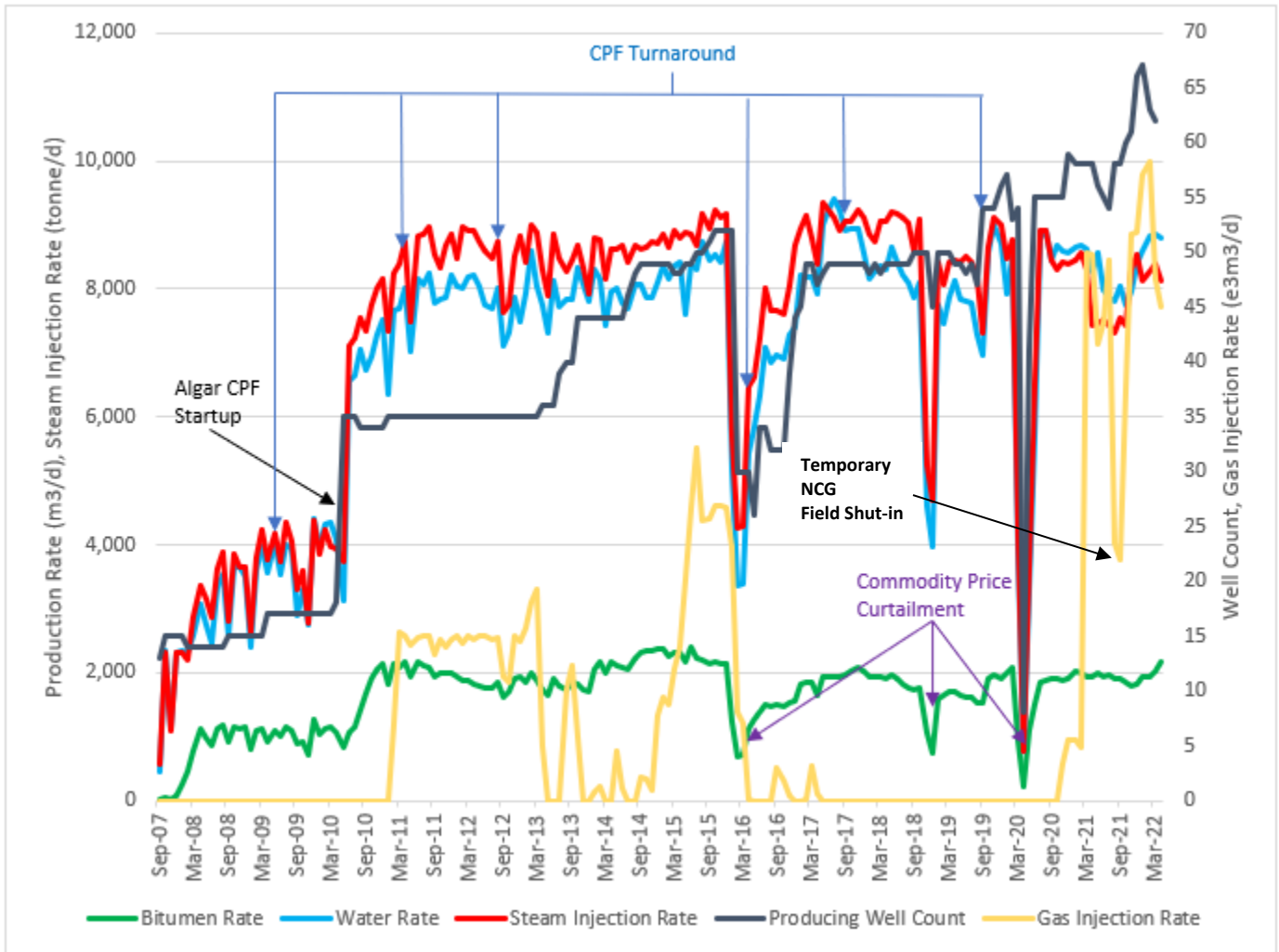
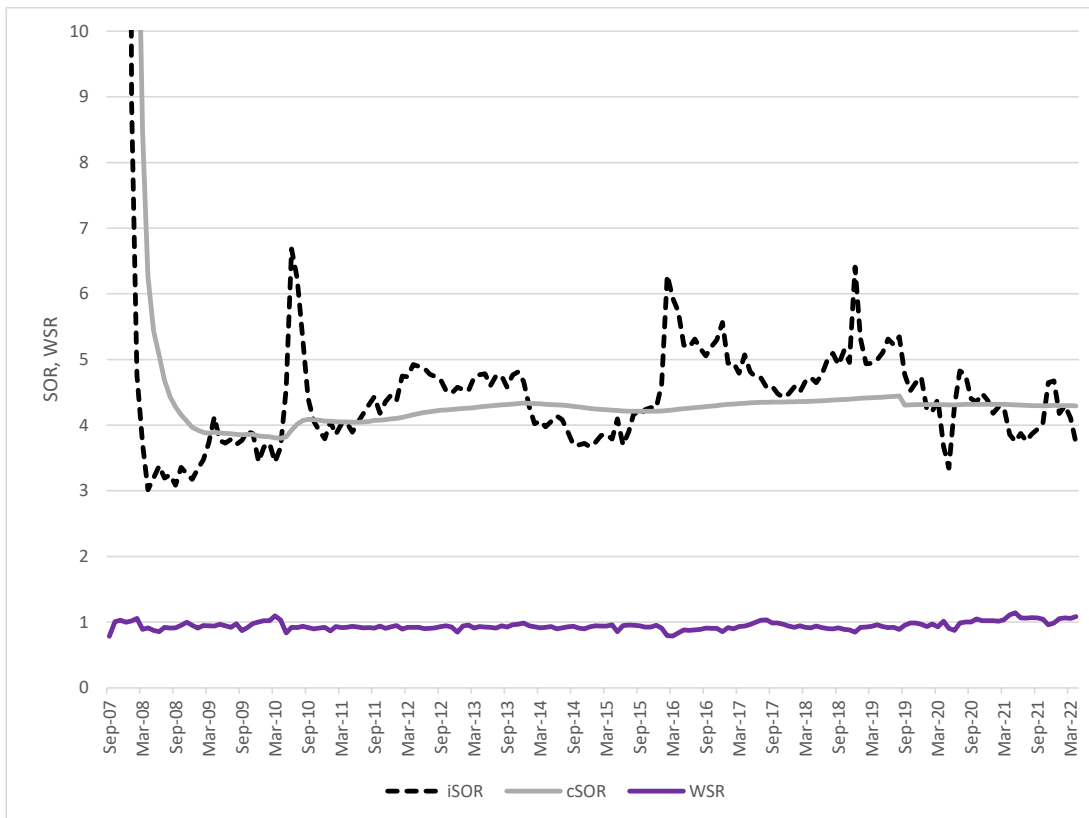


Figure 2: Scheme-Level iSOR, cSOR, WSR Plot



Development Area Map

Updated Development Area maps are provided in Figures 3 to 6, below.

See Figure 3 for a map of updated drilled and approved drainage patterns. Also shown in Figure 3 are future drainage patterns that have been applied for but not yet approved (see Table 5 for additional information). Pod One has 22 well pairs plus 13 infills. SAGD well pairs on 101N, 101S, 102S and 102W were drilled at 100m well pair spacing, while well pairs on 104 were drilled at 80m spacing. All existing infills were drilled at 50m spacing between the SAGD producers except 102 INF06, which was drilled at 35m spacing. Pad 104 has 8 existing well pairs at 80m spacing but was originally approved for 10. Connacher received approval in early 2022 to drill the remaining 2 well pairs at 100m well pair spacing. Pad 104 includes drainage areas 104, 104W and 104E.

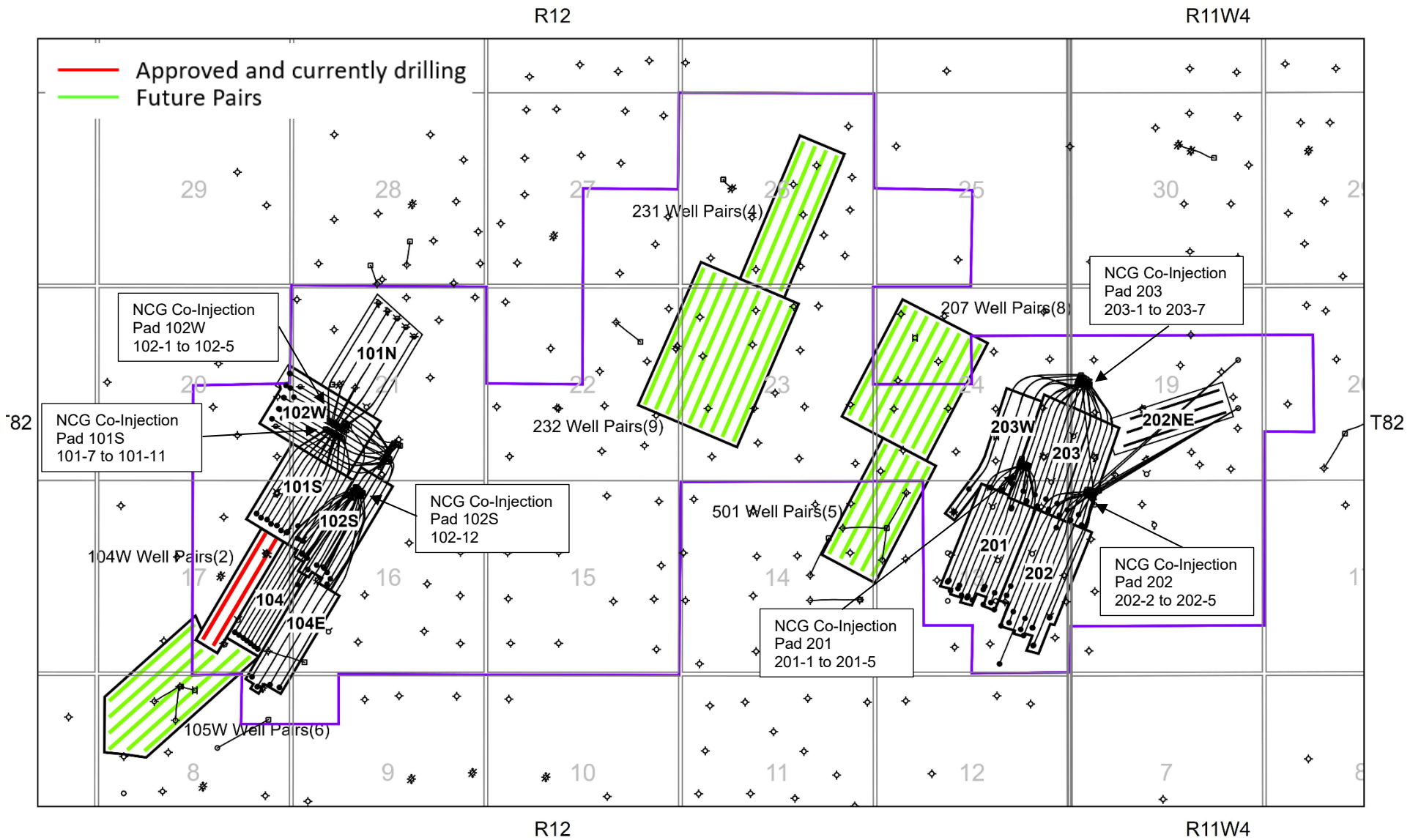
Algar has 18 SAGD well pairs and 14 infill wells on Pads 201, 202 and 203. All SAGD well pairs except 202 R01 were drilled at 100m well pair spacing. Well pair 202 R01 was drilled 35m from 201-01 and 65m from the 202-02 well pair. All infills are drilled at 50m spacing between SAGD producers. Figure 3 also shows locations where NCG is currently being injection.

See Figure 4 for the Great Divide area net pay map. Resource cut-off criteria consist of continuous net pay >10m, bitumen saturation of 7%-weight, and porosity >25%.

See Figure 5 for a combined gas cap, lean zone and bottom water map. The original pressure of the gas cap was 2,027 kPa in 1988. After depletion, the lowest pressure recorded was 746 kPa in 2003. The estimated original bottom water pressure of 2,500 kPa is based on the lowest gauge in Algar observation well 100/15-13-082-12W4, at 520 mKB, prior to steam injection in May 2010.

There are no known geomechanical anomalies in the development area. See Figure 6 for a seismic acquisition map in the project area.

Figure 3: Drilled and Approved Drainage Patterns



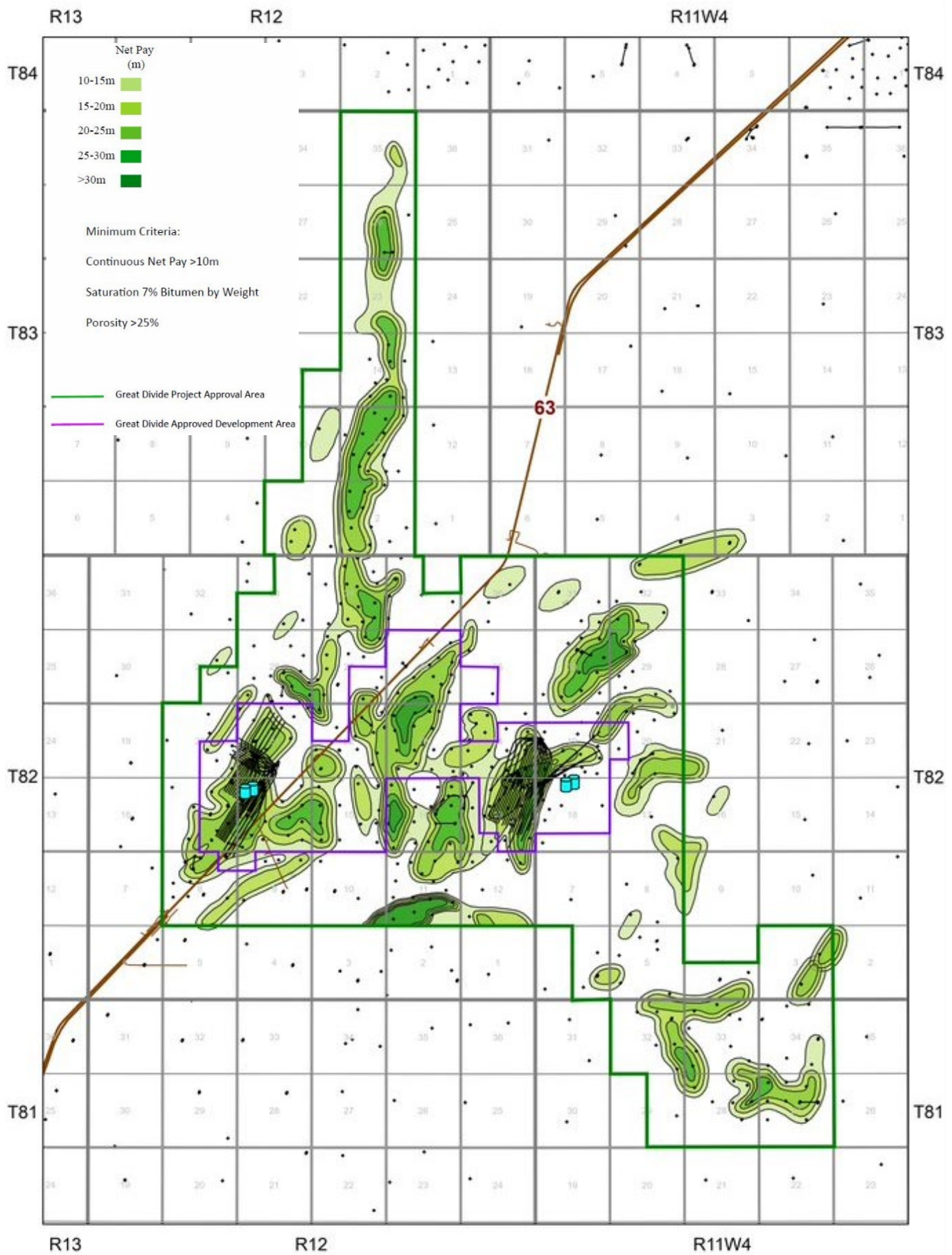


Figure 4: Net Pay Map

Figure 5: Combined Gas Cap & Lean Zone & Bottom Water Map

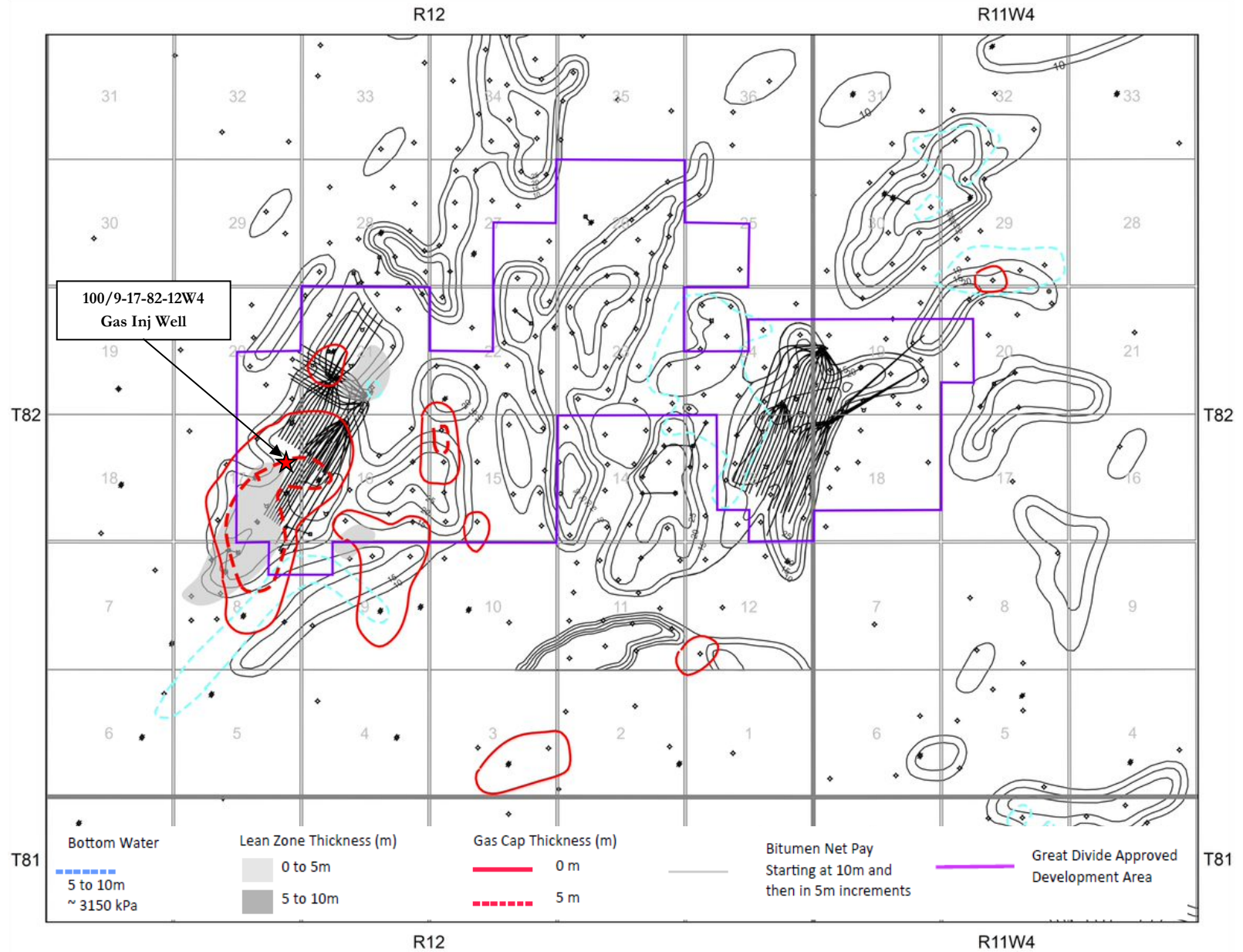
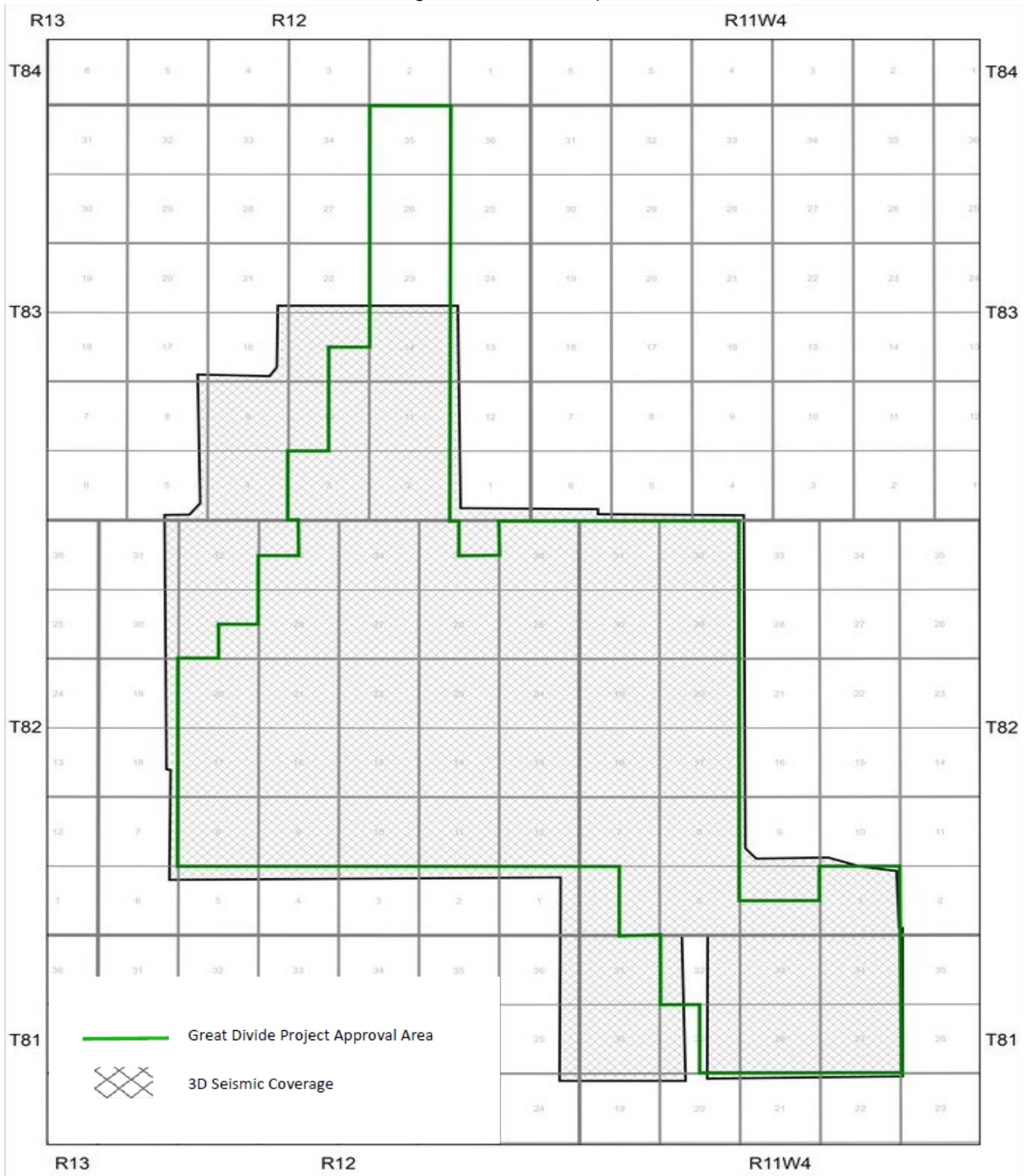
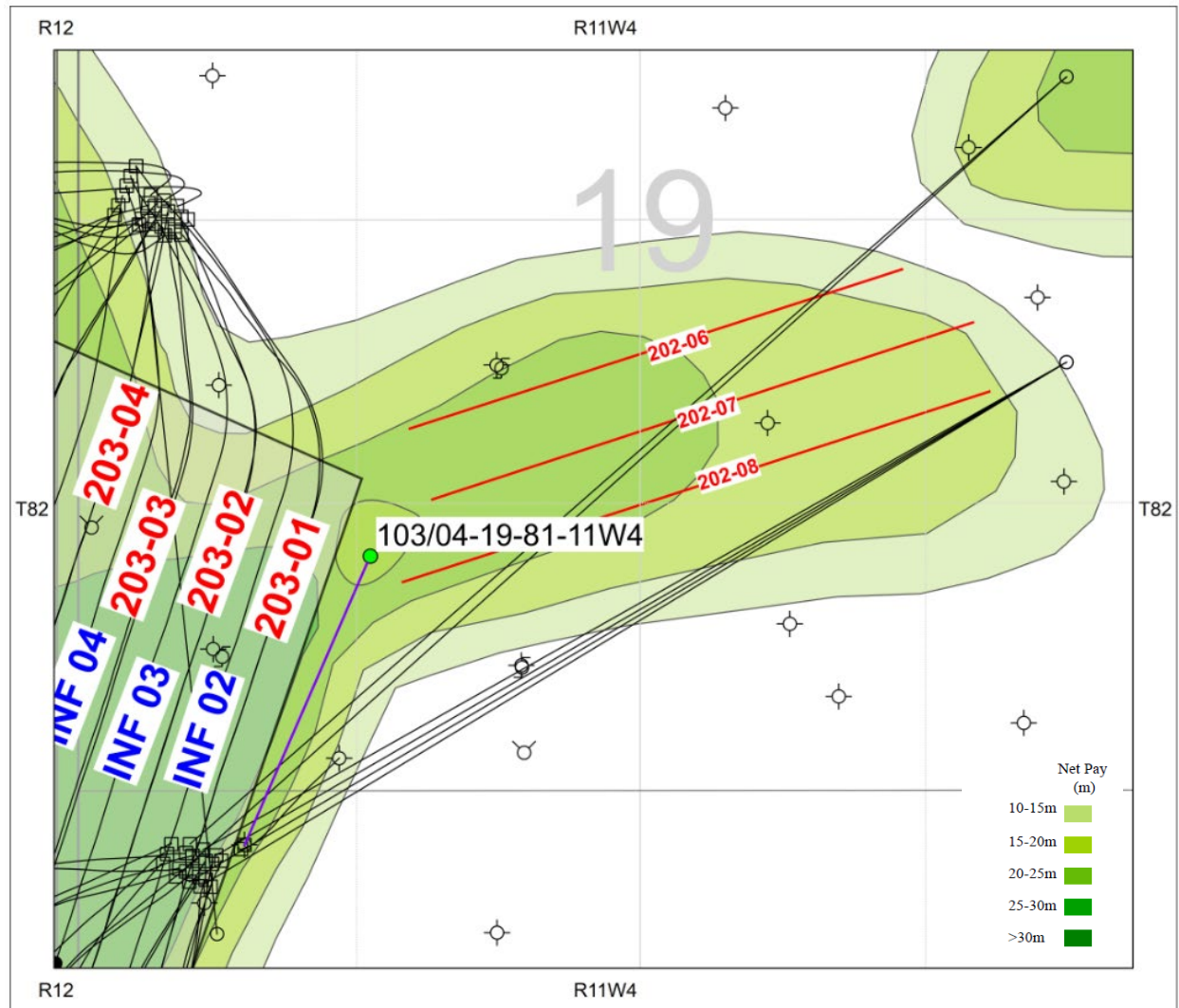


Figure 6: Seismic Map



Connacher deemed it necessary to drill an evaluation well in April 2022 to determine the reservoir quality at the heels of the horizontal wells within Pad 202NE. The well was drilled directionally from the surface of Pad 202 towards the northeast (purple line). The bottom hole location of the well is represented by the green circle in Figure 7. After the well was drilled, the elevations of the heels of the horizontal wells were verified and the Pad 202NE horizontal wells have since been drilled.

Figure 7: 103_04-19 Exploration Well



Representative Cross-Section of Active Development Area

See Figures 8 and 9 for typical well cross-sections in the active development area for Pod One and Algar, respectively.

For Pod 1 (Figure 8), Pad 101N is characterized by a higher abundance of IHS in the upper part of the reservoir. As seen in well 111/05-21-082-12W4, the sand body gradually thins to the west. In contrast, the reservoir to the south is dominated by clean Z1 sand facies (containing 0-10% fines) but develops a gas cap with a lean zone above the bitumen pay column.

The Algar reservoir (Figure 9) has some IHS along with a breccia deposit to the north seen in well 100/04-19-082-11W4. Despite poor gamma ray, well 1AB/09-13-082-12W4 confirms high quality reservoir to the east which can be seen on the resistivity curve and verified by core. The poor gamma ray is caused by inaccurate log calibration.

Figure 8: Typical Cross Section – Pod One

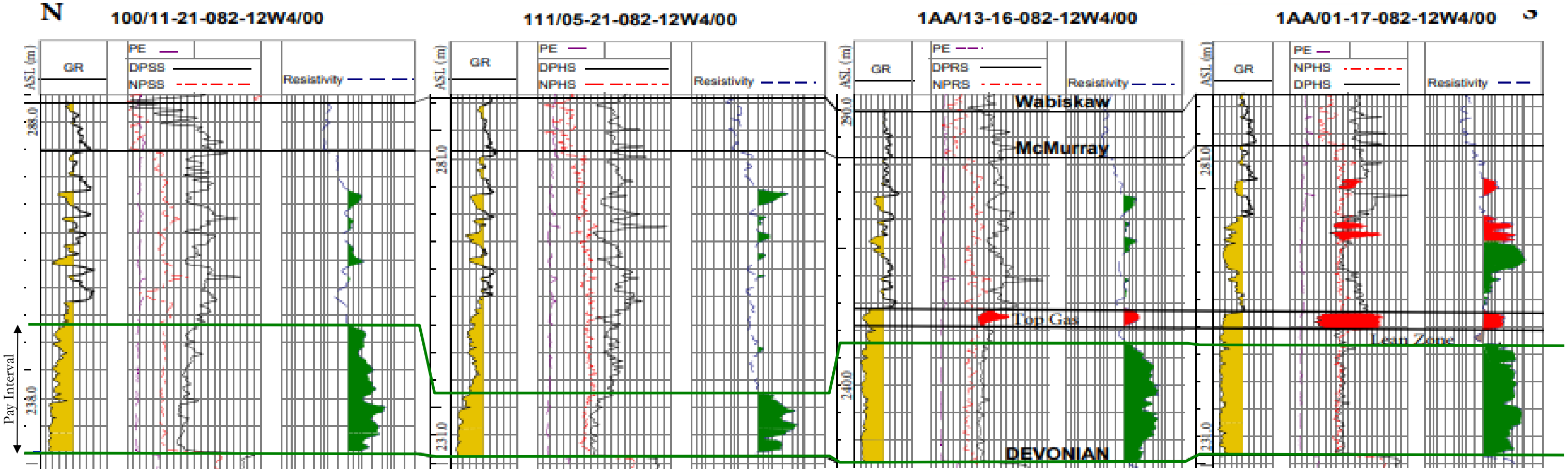
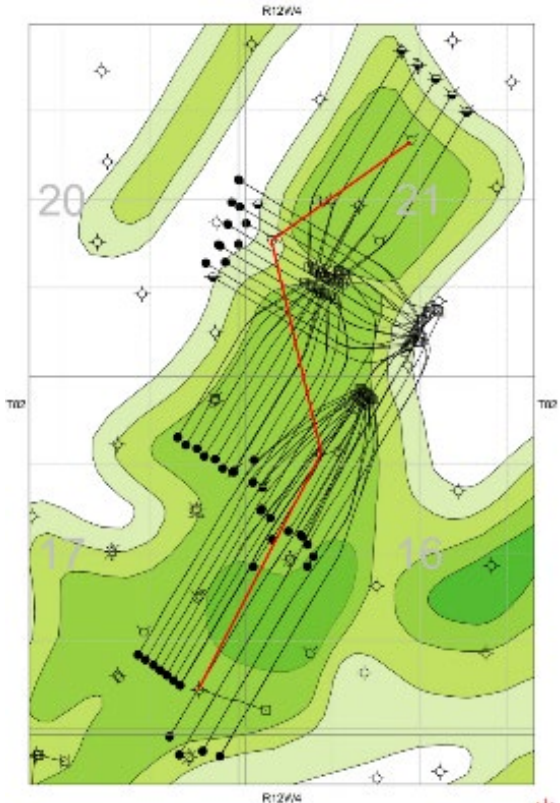
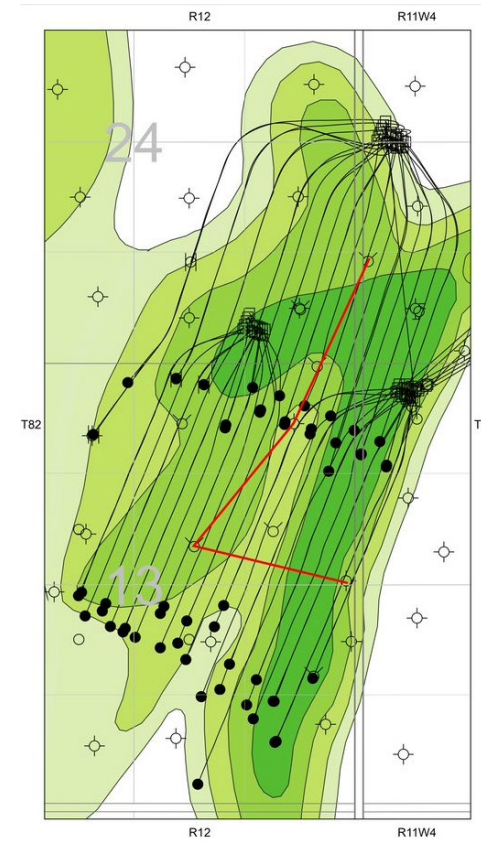


Figure 9: Typical Cross Section – Algar

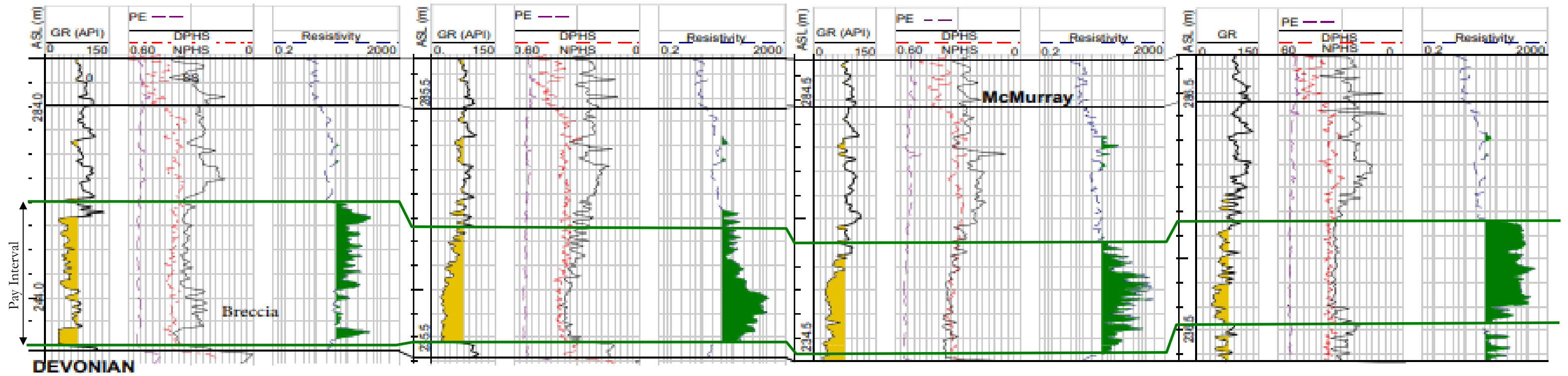


100/04-19-082-11W4/00

111/16-13-082-12W4/00

100/10-13-082-12W4/00

1AB/09-13-082-12W4/00



Resources

See Table 1 for original bitumen in place (OBIP) and cumulative bitumen production & percentage recovery for the Approved Project Area, Approved Development Area, and active pads.

Table 1: Original Bitumen in Place (OBIP) & Cumulative Bitumen Production

Area	OBIP (m3)	Cumulative Oil Production (Up to Dec 31, 2021) (m3)	Cumulative Oil Recovery (Up to Dec 31, 2021) (%)
Project Area	195,811,606	8,896,474	5%
Development Area	96,342,450		9%
Active Pads	21,803,674		41%

See Table 2 for average reservoir parameters for the Approved Development Area.

Table 2: Reservoir Parameters Within the Development Area

Parameter	Pod One		Algar	
	Range	Average	Range	Average
Reservoir Thickness (m)	10 - 30	22	10 - 30	25
Depth to Top of Reservoir (m)	450 - 490	475	465 - 500	485
Reservoir Net Pay (m)	10 - 25	21	10 - 30	22
Oil Saturation (%)	75 - 85	80	72 - 80	76
Bitumen Density (kg/m3)		1018		1018
Bitumen Viscosity (cPs)		> 1 million		> 1 million
Porosity (%)	32 - 34	33	32 - 34	33
Vertical Permeability (mD)	1,500 - 4,000	-	1,500 - 3,500	-
Horizontal Permeability (mD)	2,000 - 5,000	-	2,000 - 4,000	-
Initial Reservoir Temperature (°C)		13		13
Initial Reservoir Pressure (kPa)		3,500		4,500
Initial Bottom Water Pressure (kPa)				2,500

Well Patterns

See Table 3 for a list of Great Divide Project well patterns, which includes all reservoir and resource recovery parameters required in Directive 054.

Table 3: Well Patterns

Patterns	Area (ha)	Net Pay (m)	Porosity (%)	Initial Oil Saturation (%)	Kh (mD)	Kv (mD)	OBIP (m3)	Producible Bitumen in Place (m3)	Remaining Producible Reserves (m3)	Recovery Up to Dec 31, 2021 (% OBIP)	Estimate Ultimate Recovery (% OBIP)
101N	44	21	33	85	2000-5000	1500-4000	2,544,833	458,070	168	18%	18%
101S	45	22	33	85	2000-5000	1500-4000	2,756,563	1,940,345	229,309	62%	70%
102S	31	21	33	85	2000-5000	1500-4000	1,792,503	1,236,469	347,096	50%	69%
102W	44	17	33	85	2000-5000	1500-4000	2,072,781	1,387,313	192,766	58%	67%
104	27	22	33	85	2000-5000	1500-4000	1,686,595	1,286,872	331,701	57%	76%
104E	32	20	33	85	2000-5000	1500-4000	1,809,512	1,191,564	1,191,564	0%	66%
201	45	19	32	75	2000-4000	1500-3500	2,070,051	1,417,364	540,929	42%	68%
202	49	18	32	75	2000-4000	1500-3500	2,067,325	1,604,658	590,401	49%	78%
203	64	23	32	75	2000-4000	1500-3500	3,536,180	2,689,972	892,216	51%	76%
203W	31	20	32	75	2000-4000	1500-3500	1,467,331	958,460	958,460	0%	65%

In Tables 1 and 3, the original bitumen in place (OBIP) and reserves volumes are based on the December 31, 2021, 2P independent reserves assessment.

Top Gas Repressurization

The purpose of the gas cap repressurization in Pod One is to increase the pressure in the gas cap and bitumen lean zone immediately above Pad 104 and institute a more effective pressure balancing process. Simulations have shown long term benefits to production and SOR by repressuring to just below the SAGD operating pressures between approximately 2,800 to 3,200 kPa. Methane is injected into 100/9-17-82-12W4 at a rate of 12 to 25 e3 sm³ /d to maintain top gas pressure.

NCG Co-Injection Strategy

In March 2022 Connacher received approval for field-wide Non-Condensable Gas (NCG) co-injection and blowdown strategy for all existing and any future SAGD well pairs with no limitation on co-injection rates or mol% concentration, and the minimum steam injection rate during co-injection set to 50 m³/d per well (well pattern average). The previous approval was restrictive, with a maximum NCG injection rate of 10 e³ sm³/d per injector well, up to a concentration of 4 mol% with steam (on a monthly basis) and was limited to a maximum 20% steam reduction (on a 6-month average basis).

See Figure 3 for existing and approved drainage pattern and well pair locations for NCG co-injection (all existing and future well pairs).

During NCG co-injection, the steam and methane injection rates into the SAGD injector wells are determined by monitoring bottom-hole pressure (BHP) and balancing reservoir pressure to other connected well patterns, gas cap and/ or bottom water thief zones. Steam injection rates per SAGD injector range are expected to range between 50 to 600 T/d (pad average). The minimum steam rate of 50 T/d (pad average) ensures steam chamber temperatures are maintained. The NCG (methane) injection rates are anticipated to range between 0 e³ sm³ /d to a maximum of 20 e³ sm³ /d per injector well, which is consistent with other competitor operations. NCG co-injection volumes are optimized on well performance and maturity in order to maximize production and resource recovery.

Connacher monitors oil rate declines to ensure NCG co-injection does not escalate decline rates.

About 90% of the NCG is recovered.

NCG Blowdown Strategy

Steam injection will be discontinued, while full NCG (Methane) injection is implemented, on patterns that reach 50% or greater recovery factor based on Producing Bitumen in Place (PBIP). During blowdown, methane gas is injected into the reservoir to balance pattern BHP to neighbouring pads, associated gas caps and/ or bottom thief zones. Methane injection rates in the SAGD injector wells are determined by monitoring BHP. Patterns 101S and 102W have now recovered more than 50% recovery based on PBIP since September 2007. As the oil rates decline, the steam rates have been lowered over time to optimize steam-oil ratio (SOR), and non-condensable gas is injected to maintain bottom-hole reservoir pressure. Well pairs in Patterns 101S and 102W are currently producing an average oil rate of 35 m³ /d and 20 m³ /d respectively. Steam injection will be decreased and discontinued in patterns 101S and 102W overtime and NCG (Methane) injection will be increased to maintain downhole reservoir pressure. The steam from patterns 101S and 102W will then be re-allocated to ramp up performance in new 104, well pairs 7-10.

Impacts of NCG Co-Injection

In 2021, Connacher started co-injecting non-condensable gas (NCG) more consistently in well pads; 101S, 102W, 201, 202 and 203. Connacher's brief production history with NCG injection has demonstrated that NCG co-injection can improve

steam-oil-ratios (SORs) while having minimal impact on bitumen production rates, as was shown with the historical performance plots included in the application for field-wide NCG co-injection, which was approved in March 2022.

Surface

Infrastructure and Operations

See Figure 10A for a map of the built and planned infrastructure within the Great Divide Expansion Project Development Area and Figure 10B for the Algar sustaining production. There were no modifications in 2021 to the Pod One or Algar central processing facilities (CPFs) that required approvals.

Figures 11 and 12 compare operational bitumen and steam rates for Algar and Pod One facilities relative to design throughputs, respectively.

Figure 10A: Built and Planned Infrastructure Within Development Area – Great Divide Expansion Project

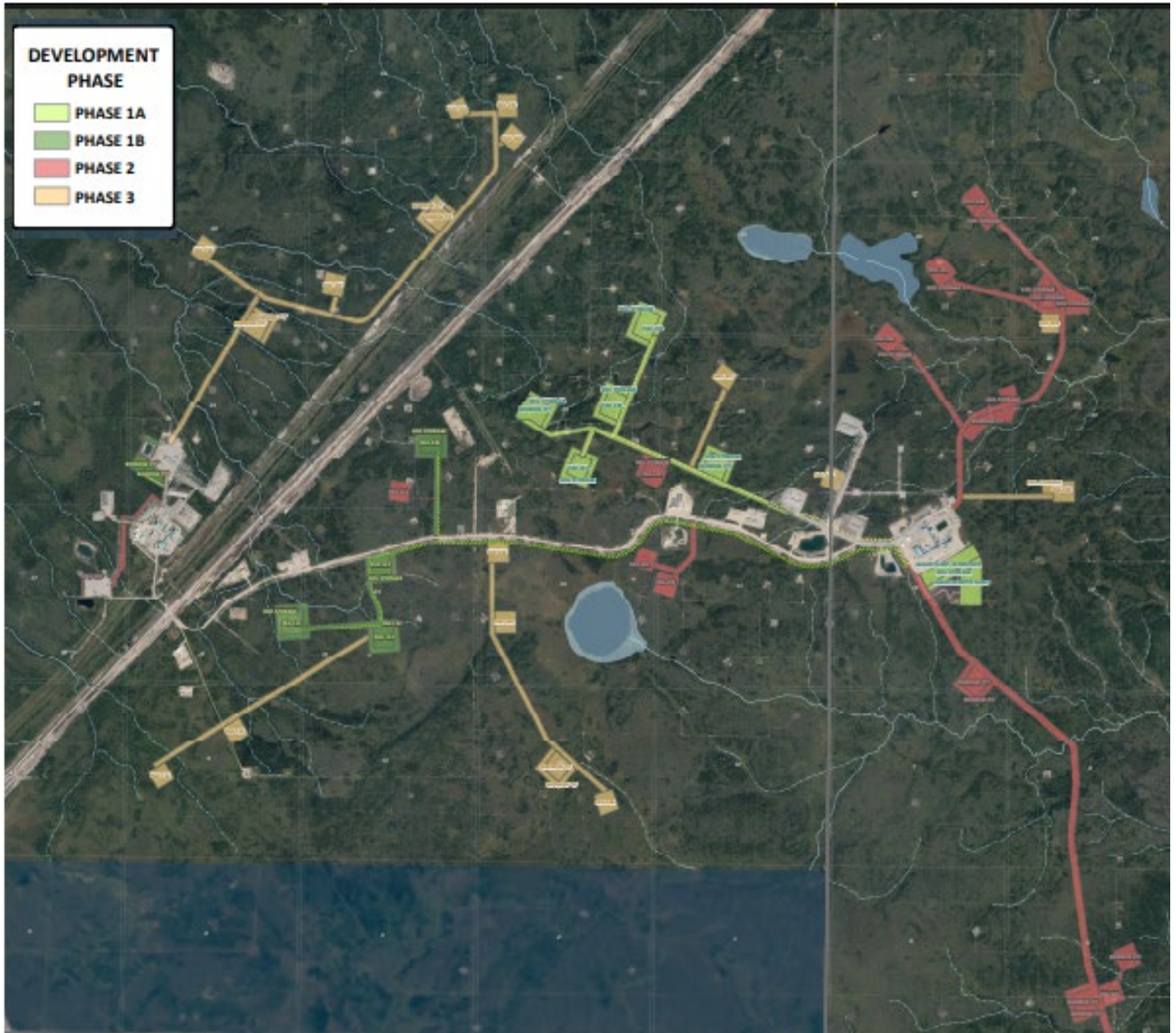


Figure 10B: Built and Planned Infrastructure Within Development Area – Algar Sustaining Production

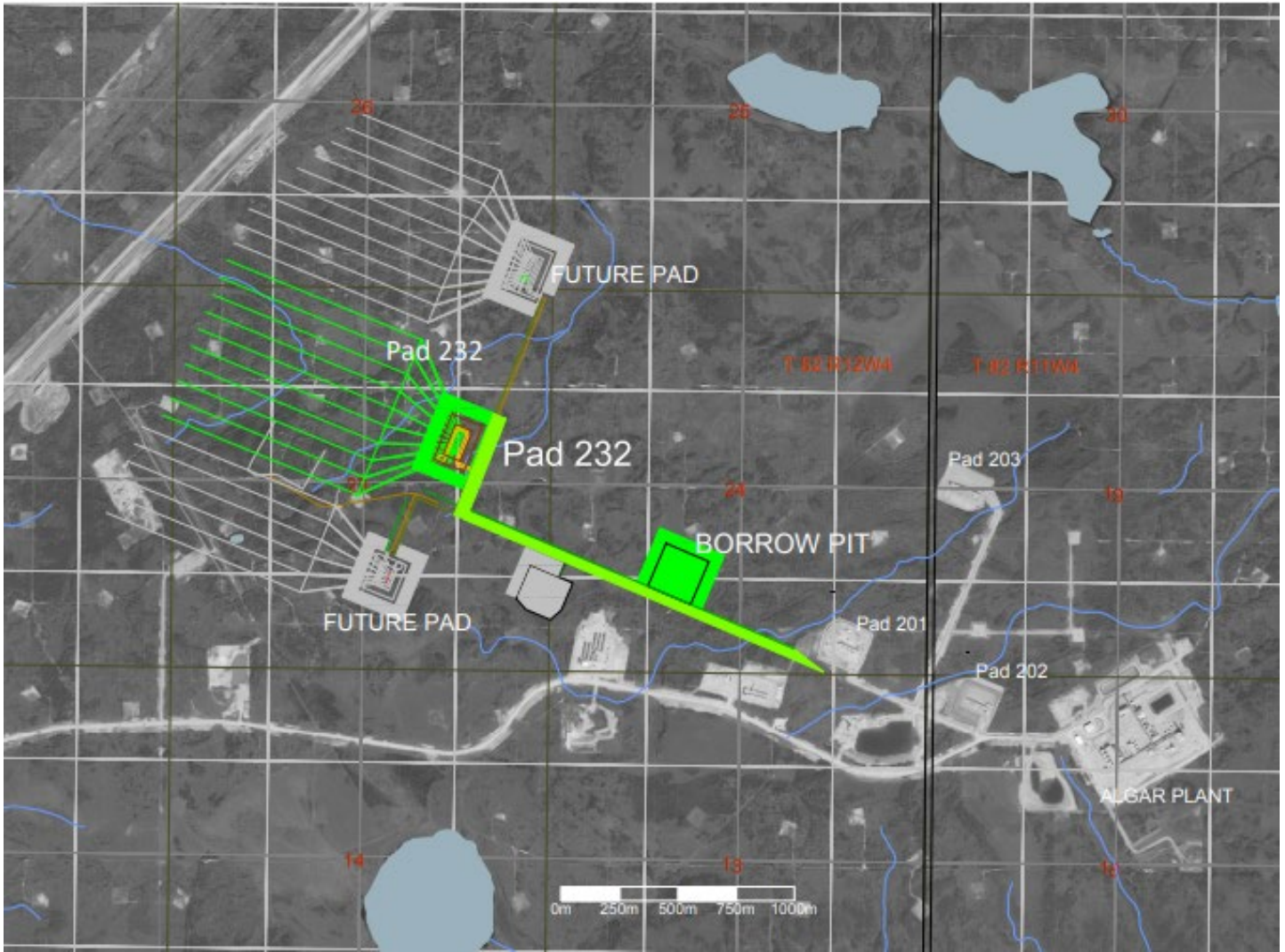


Figure 11: Operational Bitumen Rates vs. Design

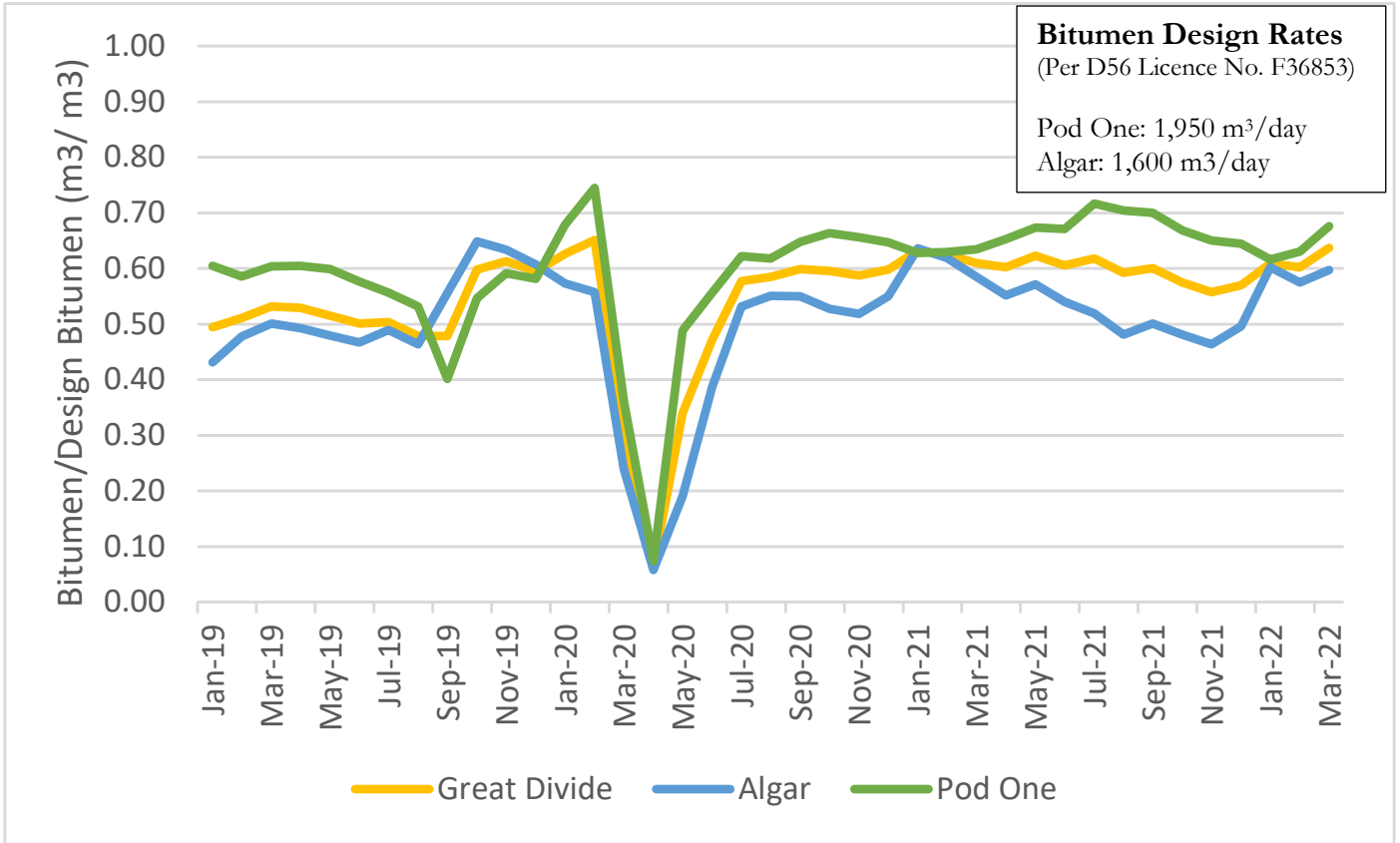
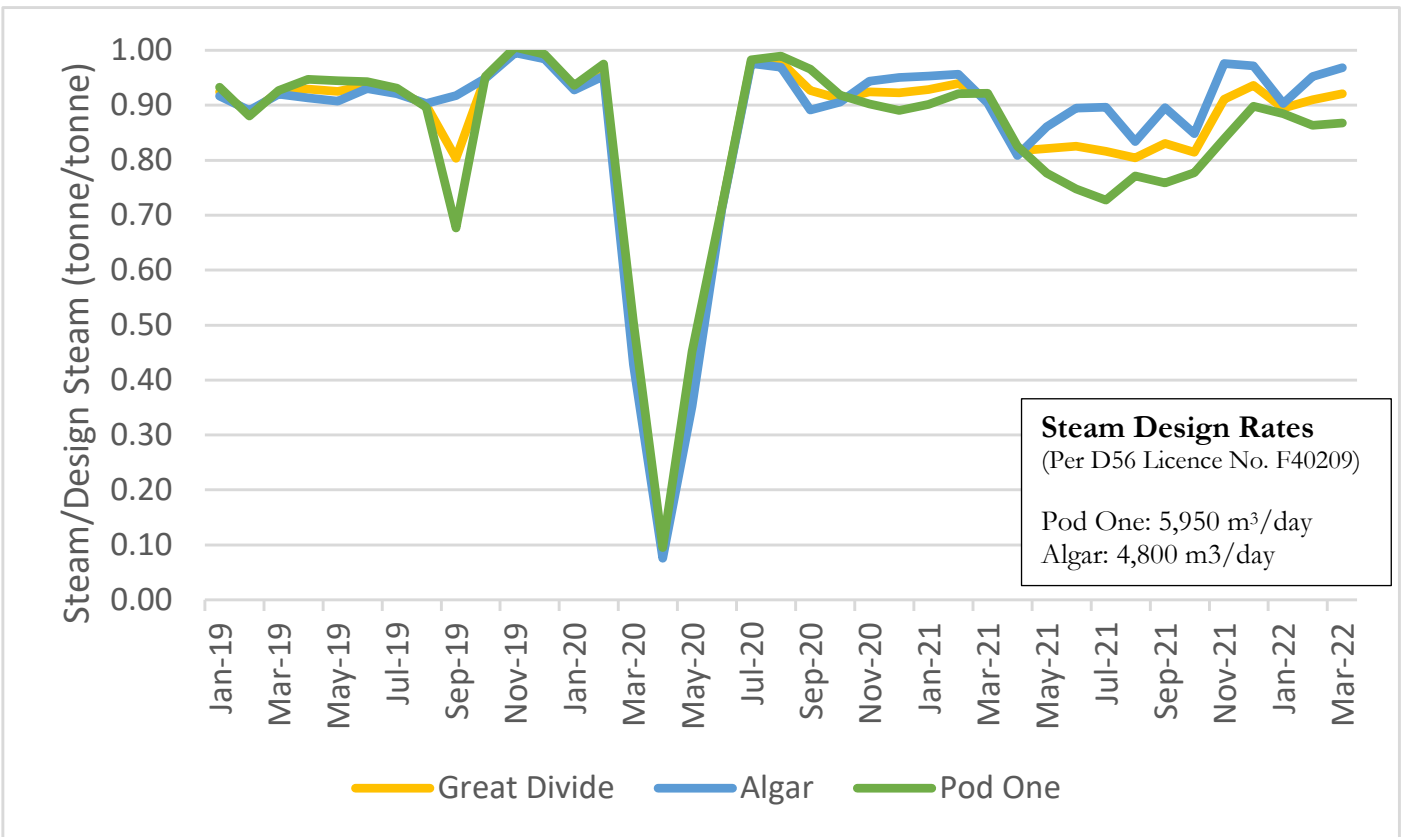


Figure 12: Operational Steam Rates vs. Design



Historical and Upcoming Activities

Suspensions and Abandonments

See Table 4 for a list of wells that were suspended or abandoned in 2021. No well patterns were abandoned or suspended in the reporting period.

Table 4: Well Suspension and Abandonments

Pattern	Well Name	Well License Number	License Status	Status Change Date
102	CLL 102 INF06 DIVIDE 8-20-82-12	464931	Suspended	6/1/2021
102	CLL 102 INF02 DIVIDE 5-21-82-12	452611	Suspended	6/1/2021
101	CLL 101 P04 DIVIDE 15-21-82-12	374147	Suspended	6/1/2021

Regulatory and Operational Changes

There were no events in the reporting period that materially affected scheme performance or energy/material balances.

In terms of operational lessons and successes, Connacher continues to develop SAGD+ (the co-injection of light hydrocarbons with steam). The injection of light hydrocarbon has demonstrated to increase the bitumen rate, decrease the steam-oil-ratio (SOR), reduce water usage, and lower greenhouse gas (GHG) emissions at Algar. Connacher will implement SAGD+ with 3 new well pairs on Pad 203 and is seeking approval for field-wide implementation on all existing and future wells associated with the Great Divide Project.

Compliance History

To the best of Connacher's knowledge, the Great Divide facility is in compliance with all regulatory requirements and approval conditions respecting Oil Sands Conservation Act (OSCA) Commercial Scheme Approval No. 10587, and the Environmental Protection and Enhancement Act (EPEA) Approval No. 240008-01-01. There were no unaddressed non-compliant events as at the end of the reporting period.

See Table 5 for an account of flaring and venting events. There were no other compliance events (reportable releases, voluntary self-disclosures (VSDs), other contraventions) to report in 2021.

Table 5 (1 of 4): Compliance History – Flaring and Venting

Event Type	Source Location	Start Date (m/d/y)	H ₂ S Conc. (mol/kmol)	Volume (e ³ m ³)	Duration (mins)	Summary	DDS Notification ID	AER CIC Reference #
Venting (Planned Maint.)	POD ONE	2021-01-28	51	0.84	444	Connacher commenced its intermittent venting from its Pod One CPF on January 28, 2021 @ 08:00 HRS. This venting event occurred due to having to take down K-613(Evaporator Vent Condenser Compressor) to replace a spool on V-109. This resulted in a release of air effluent stream to the atmosphere. The spool was replaced and K-613(EVC) was restarted. Intermittent venting ceased on January 28, 2021 @ 15:24 HRS. Venting was reported to the EDGE Call Center on Friday January 29, 2021 @ 12:13 HRS. REF #375583 by Connie Reichle. An email notification was sent to Field Operations East at AER on January 21, 2021.	31090472	375583
Venting (Emergency)	POD ONE	2021-02-01	51	0.11	57	Connacher commenced its intermittent venting from its Pod One CPF on February 01, 2021 @ 03:43 HRS. This venting event occurred due to a low volume pressure on K-613 (Evaporator Vent Condenser), causing it to trip offline. This resulted in a release of air effluent stream to the atmosphere. K-613(EVC) was restarted. Intermittent venting ceased on February 01, 2021 @ 04:31 HRS. Venting was reported to the EDGE Call Center on Monday February 01, 2021 @ 07:52 HRS. REF #375663 by Connie Reichle.	31090473	375663
Venting (Emergency)	POD ONE	2021-02-01	51	0.69	366	Connacher commenced its intermittent venting from its Pod One CPF on February 01, 2021 @ 18:36 HRS. This venting event occurred due to pressure swings on K-613 (Evaporator Vent Condenser) while bringing Evaporator 1 back online, causing it to trip offline. This resulted in a release of air effluent stream to the atmosphere. K-613(EVC) was restarted. Intermittent venting ceased on February 02, 2021 @ 00:42 HRS. Venting was reported to the EDGE Call Center on Tuesday February 02, 2021 @ 08:09 HRS. REF #375704 by Connie Reichle.	31090474	375704
Flaring (Unplanned Maint.)	ALGAR	2021-03-20	0	10.05	328	Connacher commenced its intermittent Flaring from its Algar CPF on March 20, 2021 @ 09:34 HRS. This flaring event occurred due to H-802 tripping offline. H-802 was unable to be restarted until the faulty regulator was replaced. Intermittent flaring ceased on March 20, 2021 @ 15:02 HRS. Total Volume: 10.05 e3m3, Total duration: 328 mins.	31174608	N/A
Flaring (Unplanned Maint.)	ALGAR	2021-03-31	0	39.63	1500	Connacher commenced its intermittent Flaring from its Algar CPF on March 31, 2021 @ 08:00 HRS. This flaring event occurred due to an Evap outage on Evaporator 1. This resulted in having to reduce boiler output and resulted in the need for less produced gas from the field. Evaporator 1 was restarted on April 01, 2021. Intermittent flaring ceased on April 01, 2021 @ 09:00 HRS. Total Volume: 39.626 e3m3, Total duration: 1,500 mins.	31190226	N/A
Venting (Planned Maint.)	POD ONE	2021-04-01	48	2.54	1,352	Connacher commenced its intermittent venting from its Pod One CPF on April 01, 2021 @ 04:21 HRS. This venting event occurred due to having to take down K-613(Evaporator Vent Condenser Compressor) to complete planned maintenance on V-109. This resulted in a release of air effluent stream to the atmosphere. The planned maintenance was completed and K-613(EVC) was restarted. Intermittent venting ceased on April 02, 2021 @ 02:40 HRS. Venting was reported to the EDGE Call Center on Friday April 02, 2021 @ 09:56 HRS. REF # 377555 by Connie Reichle. An email notification was sent to Field Operations East at AER on March 18, 2021.	31190751	377555
Flaring (Emergency)	ALGAR	2021-04-09	0	2.44	267	Connacher commenced its intermittent Flaring from its Algar CPF on April 9, 2021 @ 11:15 HRS. This flaring event occurred due to excess load on the VRU due to high temperatures. Temperatures were reduced. Intermittent flaring ceased on April 10, 2021 @ 04:30 HRS. Total Volume: 2.44 e3m3, Total duration: 267 mins.	31197757	N/A
Flaring (Emergency)	ALGAR	2021-04-15	0.0	3.28	1,145	Connacher commenced its intermittent Flaring from its Algar CPF on April 15, 2021 @ 12:55 HRS. This flaring event occurred due to depressurizing V-102 to take offline. V-102 was depressurized on April 16, 2021. Intermittent flaring ceased on April 16, 2021 @ 08:00 HRS. Total Volume: 3.279 e3m3, Total duration: 1,145 mins.	31203581	N/A

Table 5 (2 of 4): Compliance History – Flaring and Venting

Event Type	Source Location	Start Date (m/d/y)	H ₂ S Conc. (mol/kmol)	Volume (e ³ m ³)	Duration (mins)	Summary	DDS Notification ID	AER CIC Reference #
Flaring (Emergency)	ALGAR	2021-04-16	0.0	5.71	1320	Connacher commenced its intermittent Flaring from its Algar CPF on April 16, 2021 @ 08:00 HRS. This flaring event occurred due to V-102 being offline for cleaning. Intermittent flaring ceased on April 17, 2021 @ 08:00 HRS. Total Volume: 5.707 e3m3, Total duration: 1,320 mins.	31203758	N/A
Flaring (Emergency)	ALGAR	2021-04-17	0.0	2.59	757	Connacher commenced its intermittent Flaring from its Algar CPF on April 17, 2021 @ 08:00 HRS. This flaring event occurred due to V-102 being offline for cleaning, resulting in over pressurizing the VRU. Intermittent flaring ceased on April 18, 2021 @ 08:00 HRS. Total Volume: 2.591 e3m3, Total duration: 757 mins.	31203912	N/A
Flaring (Emergency)	ALGAR	2021-04-18	0.0	2.31	736	Connacher commenced its intermittent Flaring from its Algar CPF on April 18, 2021 @ 08:00 HRS. This flaring event occurred due to repressurizing V-102 to bring it back online. Intermittent flaring ceased on April 19, 2021 @ 08:00 HRS. Total Volume: 2.309 e3m3, Total duration: 736 mins.	31205322	N/A
Flaring (Planned Maint.)	ALGAR	2021-04-23	0.0	16.36	1560	Connacher commenced its intermittent Flaring from its Algar CPF on April 23, 2021 @ 02:00 HRS. This flaring event occurred due to cutting steam production to the field, which resulted in flaring until steam was brought back to normal operation. Intermittent flaring ceased on April 24, 2021 @ 04:00 HRS. Total Volume: 16.359 e3m3. Total Duration: 1560 mins.	31209549	N/A
Venting (Planned Maint.)	POD ONE	2021-04-26	52.6	0.08	45	Connacher commenced its intermittent venting from its Pod One CPF on April 26, 2021 @ 10:25 HRS. This venting event occurred due to planned maintenance and inspection on K-613 (Evaporator Vent Condenser Compressor) oil change and belt inspection. This resulted in a release of air effluent stream to the atmosphere. K-613(EVC) was restarted on April 26, 2021 @ 11:10 HRS. Intermittent venting ceased on April 26, 2021 @ 11:10 HRS. Venting was reported to the EDGE Call Center on Monday April 26, 2021 @ 15:00 HRS. REF #378278 by Janice Zeebregts.	31210668	378278
Venting (Planned Maint.)	POD ONE	2021-07-04	42.7	0.10	52	Connacher commenced its intermittent venting from its Pod One CPF on July 4, 2021 @ 08:39 HRS. This venting event occurred due to planned maintenance and inspection on K-613 (Evaporator Vent Condenser Compressor) oil change and belt inspection. This resulted in a release of air effluent stream to the atmosphere. K-613(EVC) was restarted on July 4, 2021 @ 09:31 HRS. Intermittent venting ceased on July 4, 2021 @ 09:31 HRS. Venting was reported to the EDGE Call Center on Sunday July 4, 2021 @ 12:20 HRS. REF #380758 by Janice Zeebregts.	31268801	380758
Venting (Emergency)	ALGAR	2021-07-18	167.1	0.05	23	Connacher commenced its intermittent venting from its Algar CPF on July 18, 2021 @ 10:22 HRS. This venting event occurred due to low O2 from the knockout desand, causing both boilers to trip offline. This resulted in a release of air effluent stream to the atmosphere. ESDV-613 was restarted on July 18, 2021 @ 10:45 HRS. Intermittent venting ceased on July 18, 2021 @ 10:45 HRS. Venting was reported to the EDGE Call Center on Monday July 18, 2021 @ 13:16 HRS. REF #381387 by Janice Zeebregts.	31291258	381387
Flaring (Unplanned Maint.)	ALGAR	2021-08-01	0.0	23.12	1,145	Connacher commenced its intermittent Flaring from its Algar CPF on August 1, 2021 @ 05:30 HRS. This flaring event occurred due to H-801 boiler repair. Bearings on the boiler forced draft fan required replacement. Intermittent flaring ceased on August 2, 2021 @ 00:35 HRS. Total Volume: 23.12 e3m3, Total duration: 1,145 mins. Flaring was reported to the EDGE Call Center on Monday August 2, 2021 @ 09:04 HRS. REF #381992 by Janice Zeebregts.	31306522	381992

Table 5 (3 of 4): Compliance History – Flaring and Venting

Event Type	Source Location	Start Date (m/d/y)	H ₂ S Conc. (mol/kmol)	Volume (e ³ m ³)	Duration (mins)	Summary	DDS Notification ID	AER CIC Reference #
Venting (Emergency)	ALGAR	2021-08-01	167.1	0.38	200	Connacher commenced its intermittent venting from its Algar CPF on August 1, 2021 @ 22:57 HRS. This venting event occurred due to low O2 from an expansion joint blowout on the outlet of the forced draft fan K-605, resulting in evap vent compressor K613-614 to trip with boiler H-802 being down for maintenance. This resulted in a release of air effluent stream to the atmosphere. ESDV-61302 was restarted on August 2, 2021 @ 02:17 HRS. Intermittent venting ceased on August 2, 2021 @ 02:17 HRS. Venting was reported to the EDGE Call Center on Monday August 2, 2021 @ 09:04 HRS. REF #381993 by Janice Zeebregts.	31306528	381993
Flaring (Unplanned Maint.)	ALGAR	2021-08-02	0.0	2.67	285	Connacher commenced its intermittent Flaring from its Algar CPF on August 2, 2021 @ 10:02 HRS. This flaring event occurred due displacing nitrogen purged diluent pipeline to flare. Intermittent flaring ceased on August 2, 2021 @ 14:47 HRS. Total Volume: 2.67 e3m3, Total duration: 285 mins. Flaring was reported to the EDGE Call Center on Monday August 2, 2021 @ 16:42 HRS. REF #382004 by Janice Zeebregts.	31306736	382004
Venting (Emergency)	ALGAR	2021-08-13	141.3	0.24	124	Connacher commenced its intermittent venting from its Algar CPF on August 13, 2021 @ 09:51 HRS. This venting event occurred due to a plant ESD which was a result of completing annual maintenance on the MCC-200 UPS unit, when a battery disconnect was opened up on the UPS unit. This resulted in a release of air effluent stream to the atmosphere. The PLant was restarted on August 13, 2021 @ 11:55 Hrs and the intermittent venting ceased. The venting event was reported to the EDGE call center on Saturday August 14, 2021 @ 07:48 HRS. REF # 382456 by Connie Reichle. Total Volume: 0.24 e3m3, H2S concentration: 141.3 mol/kmol, Total Duration: 124 mins	31317988	382456
Flaring (Planned Maint.)	ALGAR	2021-08-14	0.0	12.93	533	Connacher commenced its intermittent Flaring from its Algar CPF on August 14, 2021 @ 08:00 HRS. This flaring event occurred due to planned maintenance to replace the cone on Boiler H-801. Intermittent flaring ceased on August 14, 2021 @ 16:53 HRS. Total Volume: 12.93 e3m3, Total duration: 533 mins. Email Notification sent to FieldOpsEast on August 12, 2021.	31318085	N/A
Venting (Planned Maint.)	POD ONE	2021-09-10	50.1	0.10	55	Connacher commenced its intermittent venting from its Pod One CPF on September 10, 2021 @ 16:14 HRS. This venting event occurred due to the planned maintenance to replace the drive belts on arial cooler E-439, which required K-613 EVC to be shut down. This resulted in a release of air effluent stream to the atmosphere. The drive belts were replaced and K-613 was restarted on September 10, 2021 @ 17:09 Hrs and the intermittent venting ceased. The venting event was reported to the EDGE call center on Saturday September 11, 2021 @ 07:25 HRS. REF # 383389 by Connie Reichle. Total Volume: 0.10 e3m3, H2S concentration: 50.1 mol/kmol, Total Duration: 55 mins Email notification was sent to FieldEastOps on September 09, 2021.	31347534	383389
Flaring (Emergency)	ALGAR	2021-10-11	151.9	9.98	2,429	Connacher commenced its intermittent Flaring from its Algar CPF on October 11, 2021 @ 02:05 HRS. This flaring event occurred due to H-801 boiler tube leak . Intermittent flaring ceased on October 12, 2021 @ 18:02 HRS. Work to repair boiler H-801 continued until October 15, 2021. Total Volume: 9.98 e3m3, Total duration: 2429 mins.	31388931	N/A
Venting (Unplanned Maint.)	POD ONE	2021-11-29	53.4	0.04	17	Connacher commenced its intermittent venting from its Pod One CPF on November 29, 2021 @ 11:31 HRS. This venting event occurred due to bell damage noticed during routine maintenance on K-613 (Evaporator Vent Condenser). This resulted in a release of air effluent stream to the atmosphere. K-613(EVC) was restarted and intermittent venting ceased on November 29, 2021 @ 11:48 HRS. Venting was reported to the EDGE Call Center on Monday, November 29, 2021 @ 14:08 HRS. REF #385957 by Janice Zeebregts. Total Volume: 0.04 e3m3, H2S concentration 53.4 mol/kmol, Total Duration: 17 mins.	31446077	385957

Table 5 (4 of 4): Compliance History – Flaring and Venting

Event Type	Source Location	Start Date (m/d/y)	H ₂ S Conc. (mol/kmol)	Volume (e ³ m ³)	Duration (mins)	Summary	DDS Notification ID	AER CIC Reference #
Venting (Emergency)	POD ONE	2021-12-15	53.4	0.20	102	Connacher commenced its intermittent venting from its Pod One CPF on December 15, 2021 @ 22:07 HRS. This venting event occurred due to Evap going into hot standby, tripping K-613 (Evaporator Vent Condenser). This resulted in a release of air effluent stream to the atmosphere. K-613(EVC) was restarted and intermittent venting ceased on December 15, 2021 @ 23:49 HRS. Venting was reported to the EDGE Call Center on Thursday, December 16, 2021 @ 10:37 HRS. REF #386432 by Janice Zeebregts. Total Volume: 0.20 e3m3, H2S concentration 53.4 mol/kmol, Total Duration: 102 mins.	31474594	386432

Future Plans

Table 6 a list of applications that Connacher expected to submit, and later received approval for, in 2022.

Table 6: List of Regulatory Applications Expected to be Submitted in 2022

Application Number	Description	Approval Number	Approval Date
1935328	New Well Pairs (3) and infills (2) at Pad 202, Approved Development Area Land Expansion for Pad 202 Pairs	10587W	March 21, 2022
1935580	Revise Fieldwide NCG Injection Plan & Implement Blowdown Strategy	10587X	March 28, 2022
1936000	Pod One, Pad 104, Well Spacing Increase for Well Pairs 1 & 2	10587Y	April 18, 2022
1936181	New Well Pairs and Infills at Pads 105W, 501, 207, 231, and 232, Approved Development Area Expansion, Co-injection of Light Hydrocarbons, Removal of Clause 19	10587Z	August 2, 2022

Connacher received approval for Application No. 1936181 for new well pairs and infills at Pads 105W, 501, 207, 231 and 232, an expansion of the approved development area (ADA), and the co-injection of light hydrocarbons (SAGD+) in 2022. The expected drilling start-date for Pad 105W well pairs 105-04, 105-05, 105-06 is August 2022. Drilling of the remaining well pads and infill wells will occur in future years as described in Application No. 1936181.

Connacher also expects to commence the co-injection of light hydrocarbons with steam into new wells on Pad 203, including: CLC 203 I8 DIVIDE 15-13-82-12, CLC 203 I9 DIVIDE 15-13-82-12, CLC 203 I10 DIVIDE 15-13-82-12.