ATHABASCA OIL CORPORATION

HANGINGSTONE D54 PERFORMANCE REPORT 2022

June 2023

AGENDA

SUMMARY

- Development Overview
- Subsurface
- Surface Operations
- Regulatory and Compliance

DEVELOPMENT OVERVIEW

HANGINGSTONE PROJECT

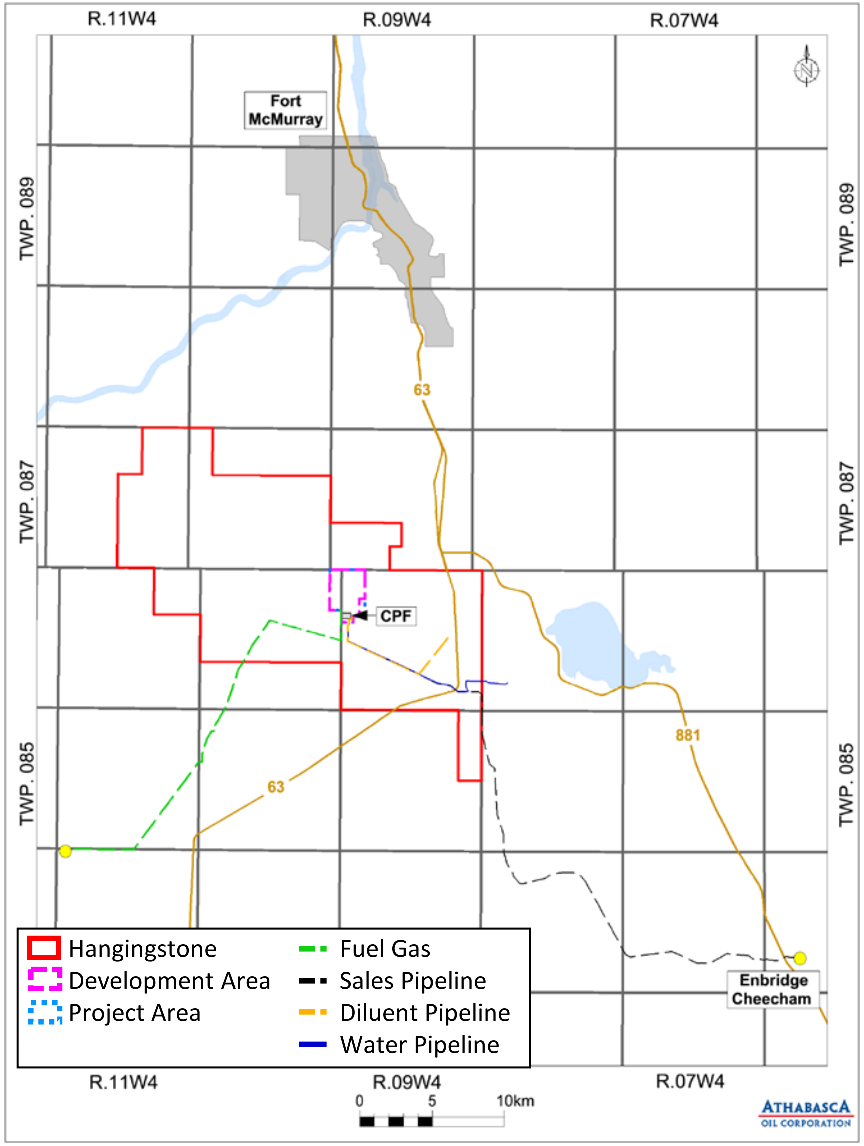
- First steam March 2015
- 25 well pairs

PROJECT DETAILS

- Located 20 km south of Fort McMurray, AB
- 5 production pads (5 pairs per pad)
- 2 approved sustaining drainage areas
- Central Processing Facility (CPF)
- Offsite services and utilities

INFRASTRUCTURE

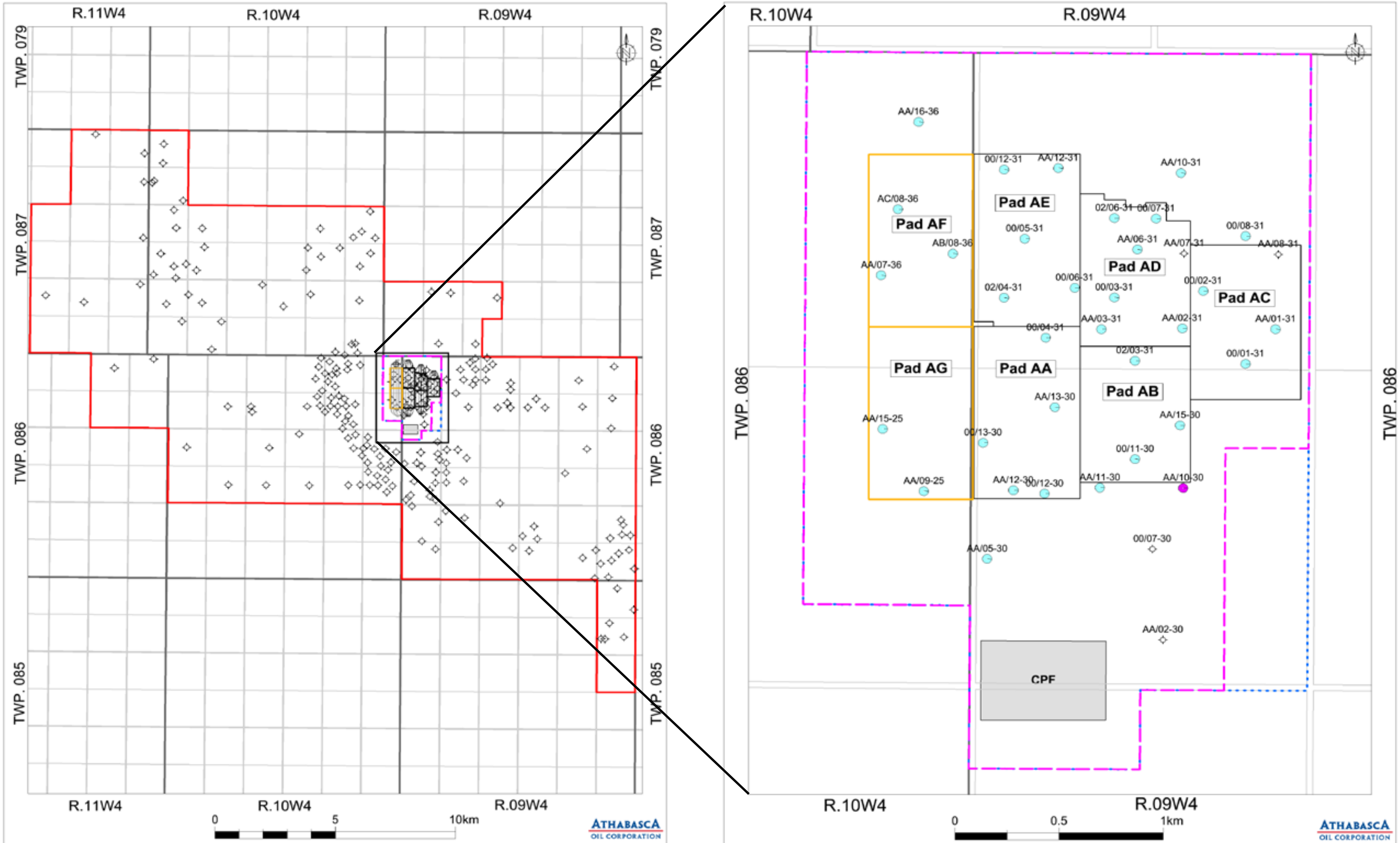
- Fuel gas from TransCanada Pipeline (TCPL)
- Dilbit export to Enbridge Cheecham Terminal
- Diluent from Inter Pipeline (IPL)



SUBSURFACE

ATHABASCA OIL CORPORATION

SURFACE DATA OVERVIEW



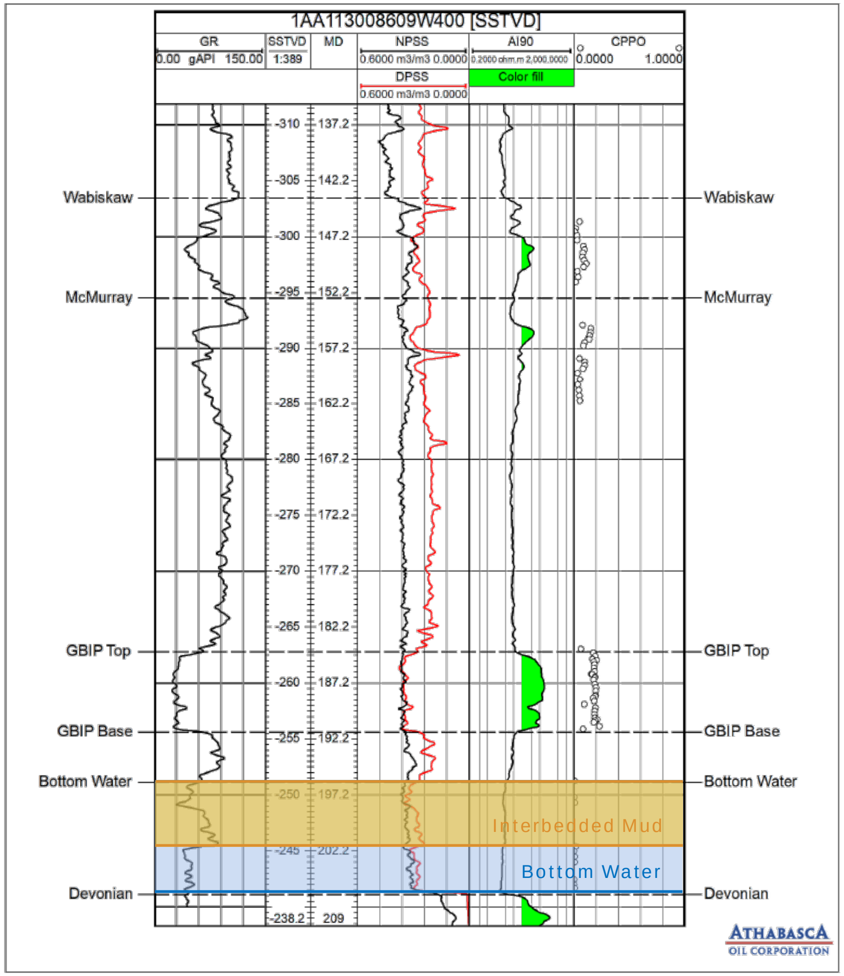
Area	Area (km²)	MCMR Cored Wells	Image Logs	Caprock Core
Development Area	7.32	32	34	1
Project Area	7.81	32	34	1

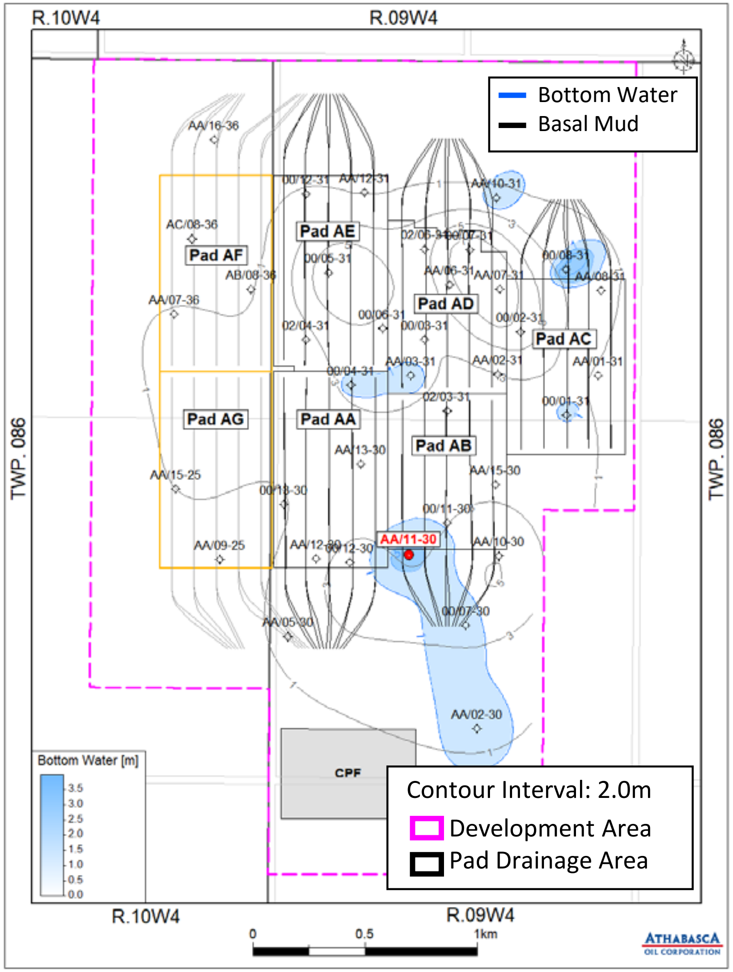
Wells with Core
Caprock Core Well
Development Area
Project Area
Existing Pad Drainage Area
Approved Pad Drainage Area

BOTTOM WATER THICKNESS MAP

BOTTOM WATER

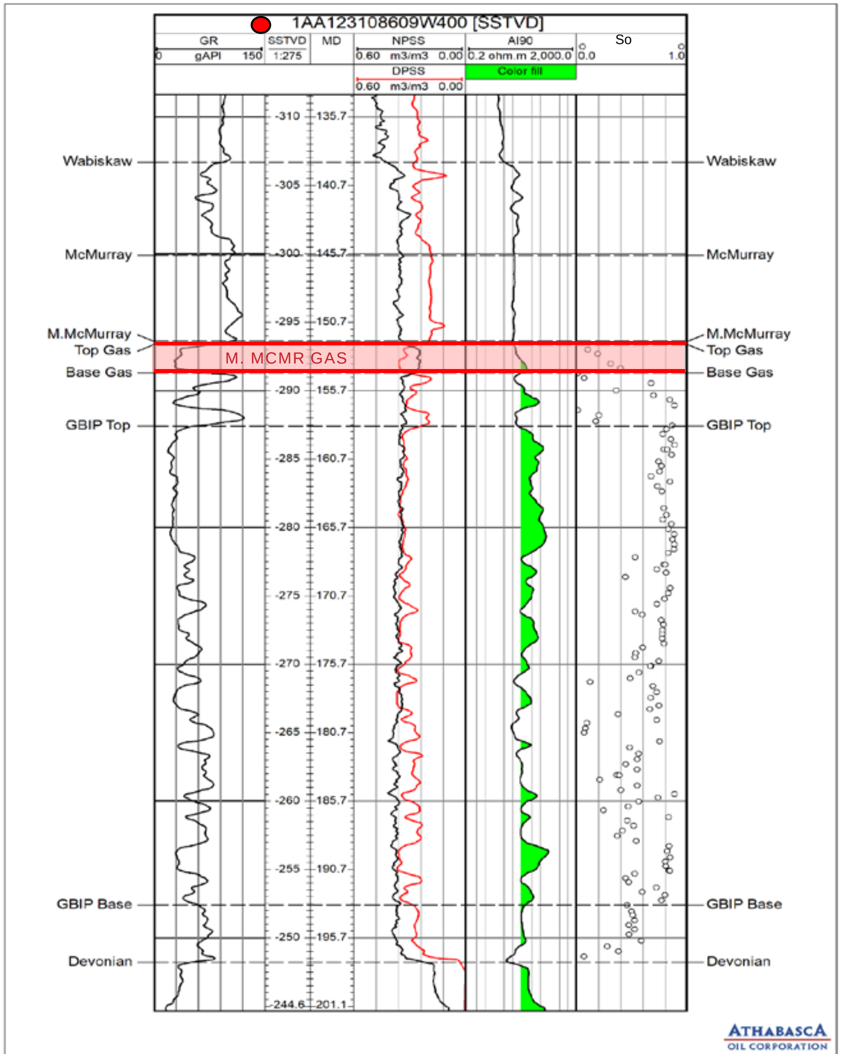
- Localized and not in direct contact with bitumen; separated by MIHS and/or basal mud
- Bottom water interval consists of interbedded mud and sand (resistivity < 10 ohm-m)

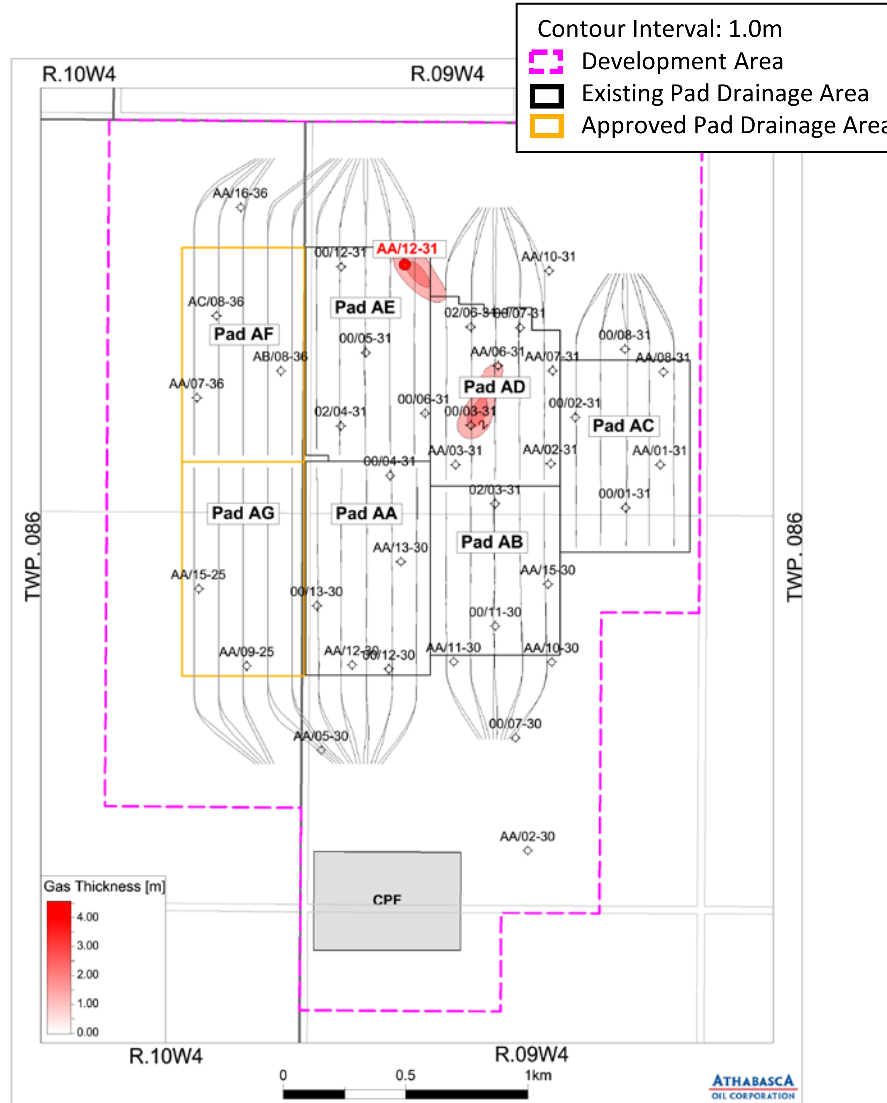




MIDDLE MCMURRAY FM GAS THICKNESS MAP

MINIMAL GAS THICKNESS AND LIMITED DISTRIBUTION WITHIN DEVELOPMENT AREA





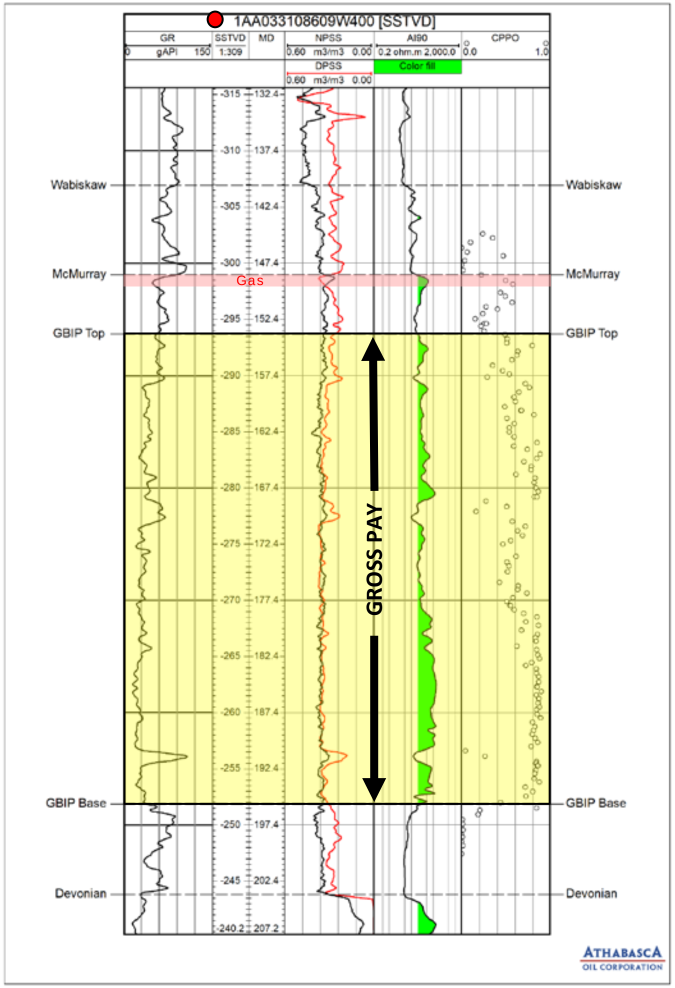
BITUMEN PAY CLASSIFICATION

RESERVOIR CRITERIA

- Facies classification based on percentage mud
  - *F1: Breccia = variable*
  - *F2: Sand = 0-10%*
  - *F3: Sandy IHS = 10-30%*
  - *F4: Muddy IHS = 30-70%*
  - *F5:Mud = >70%*
- Gross Bitumen in Place (GBIP) Reservoir criteria: F1-4, <1m F5

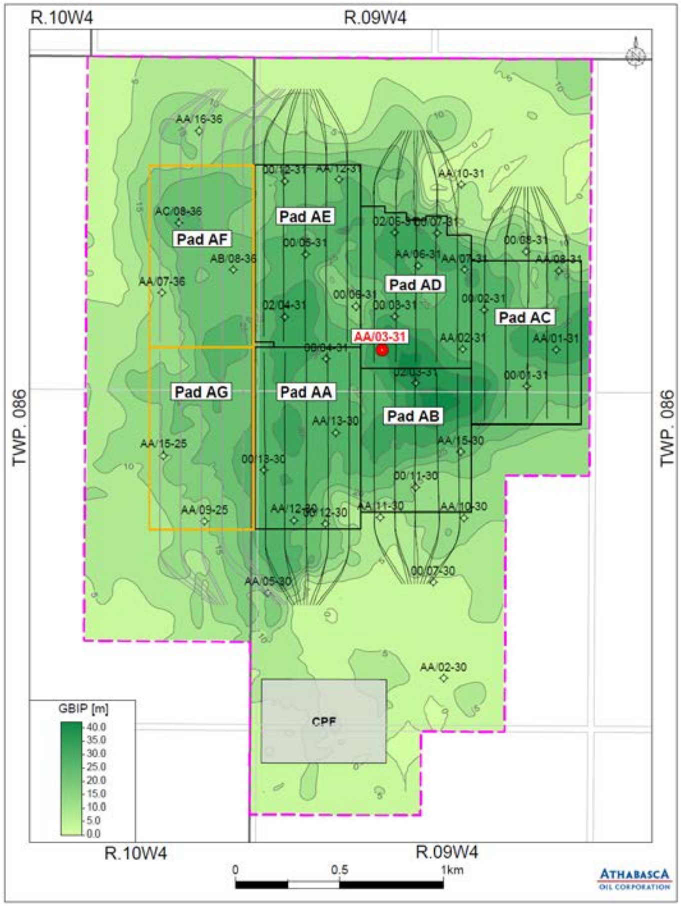
NET PAY CRITERIA

- Gross Bitumen in Place (GBIP) Petrophysical criteria:
  - *Porosity (PHIT) >= 27%*
  - *Saturation (SwT) <= 50%*



Final GBIP volumes include mid-lean zone. Mid-lean zones volumes calculated using PHIT 27% and no saturation cut off

NET PAY ISOPACH



Contour Interval: 5.0m
Existing Pad Drainage Area
Development Area
Approved Pad Drainage Area

SEISMIC DATA OVERVIEW

2022

- No new data acquired in reporting period

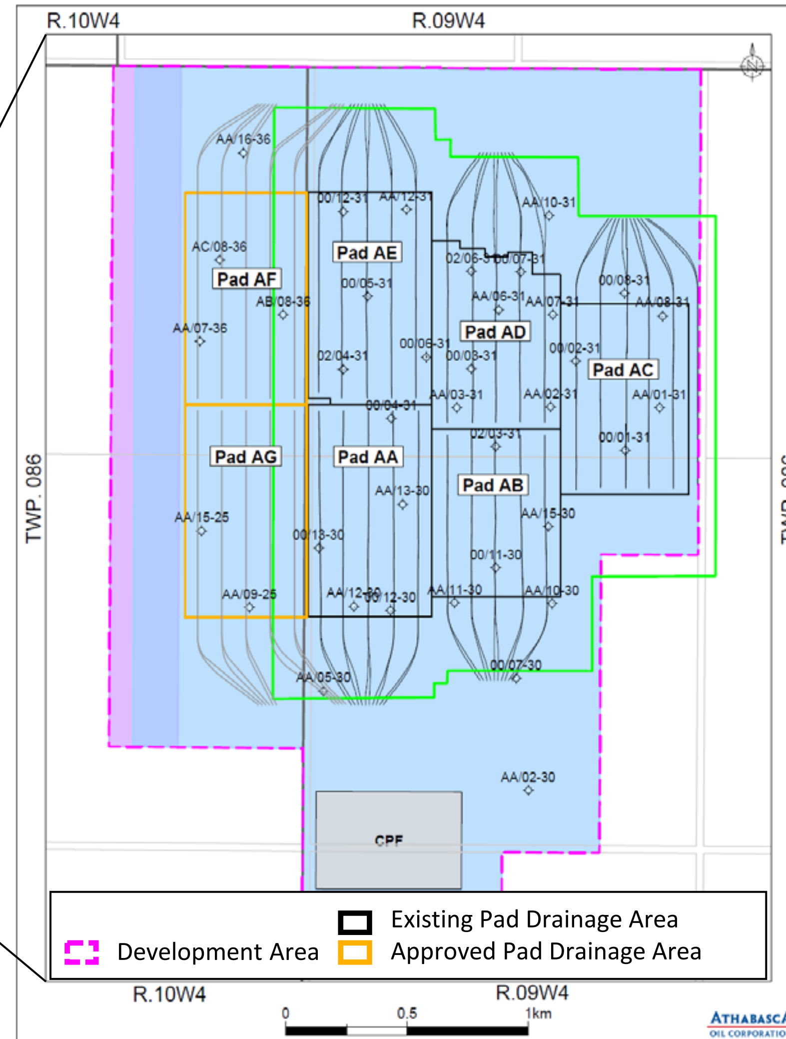
HISTORICAL

- 3D acquired in 2011 and 2012, merged in 2012
- Total proprietary 2D ~ 450 km
- Total 3D area ~98 km^2 (merged), covers development area
- Total 4D area ~3.72 km^2
  - *Baseline acquired Q1 2014*
  - *First Monitor acquired Q1 2016 / Second Monitor acquired Q1 2017*

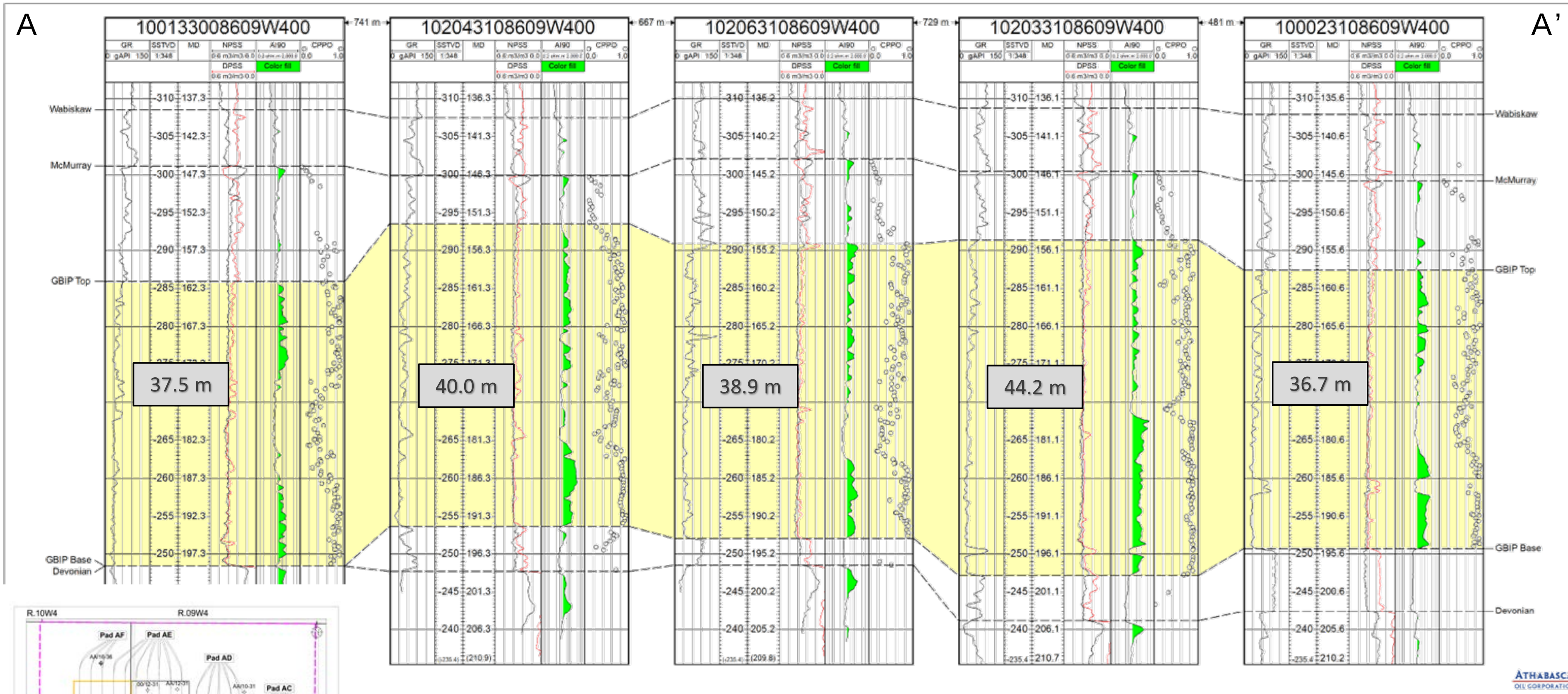
3D/4D PARAMETERS

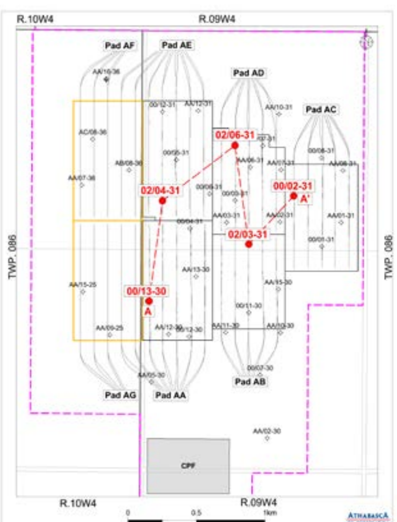
- Source line/source spacing: 60m/20m
- Receiver line/receiver spacing: 40-60m/20m

- AOC Lease Area
- Development Area
- 2011 Hangingstone River 3D
- 2011 Hangingstone River North 3D
- 2012 Halfway Creek 3D
- 2012 Highway 3D Seismic
- 2015/16/17 4D Seismic
- Proprietary 2D Seismic



PADS AA-AE STRUCTURAL CROSS SECTION NW-SE





Gross GBIP thickness

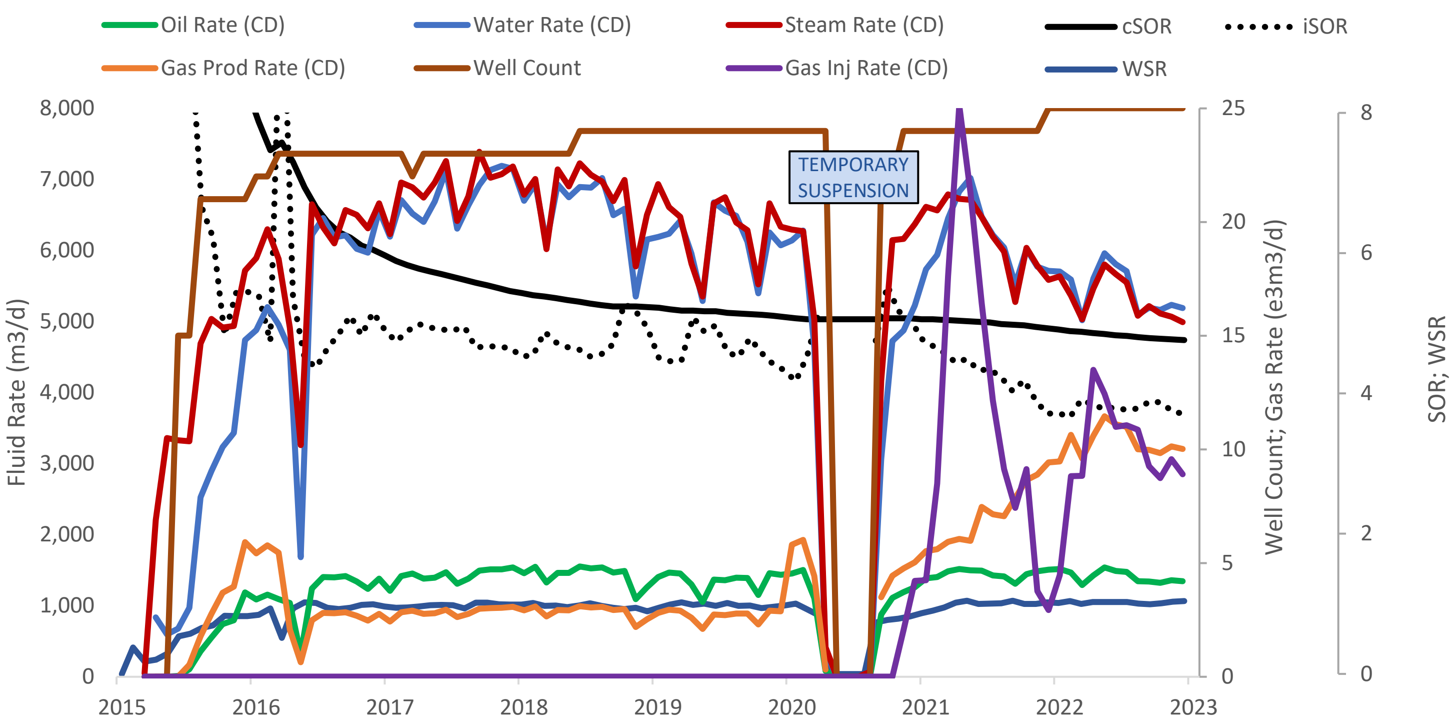
*no bottom water or associated gas within wells in the cross section

PRODUCTION HISTORY

REPORTING YEAR HIGHLIGHTS

- 5 producing pads (25 producing SAGD well pairs)
- Utilizing NCG co-injection on all pads for pressure support and SOR optimization

HANGINGSTONE FIELD PRODUCTION



PAD RESERVOIR PROPERTIES AND RECOVERY FACTOR

RESERVOIR PROPERTIES

- Typical Producer Depth: 191 TVD (258 masl)
- Initial Reservoir Pressure @ 190 m TVD: 600 kPaa
- Initial Reservoir Temperature: 8°C
- Bitumen Viscosity @ initial reservoir temperature: >1 mln cP
- GBIP= Net GBIP plus Lean Zone (without saturation constraint)

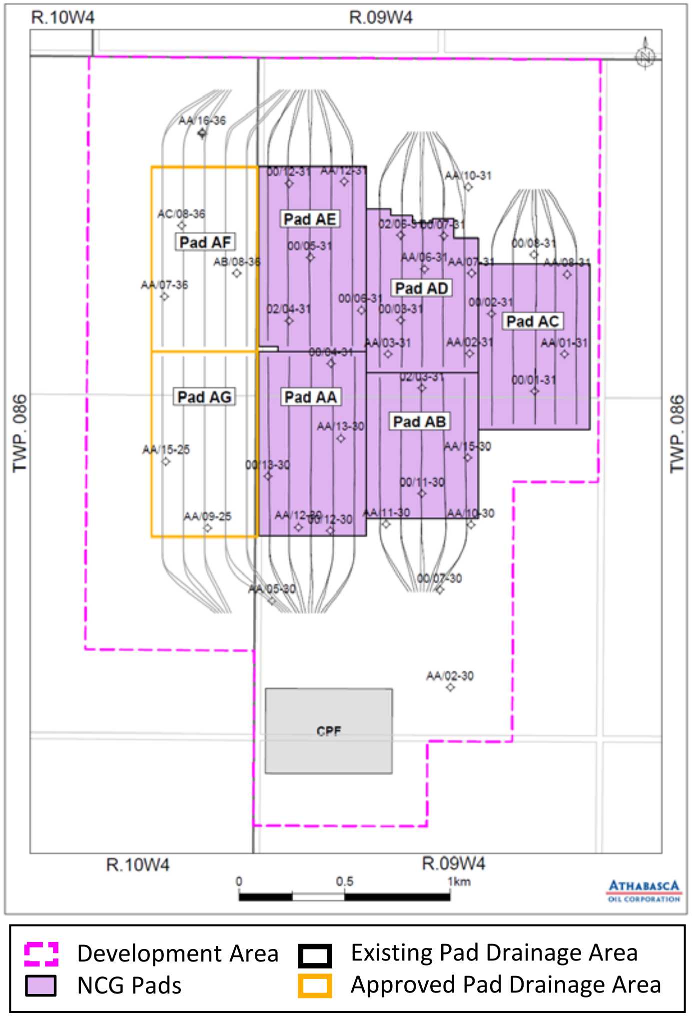
Pad	Well Pairs	Lateral Length (m)	Area (10^3 m^2)	Oil Saturation (frac)	Porosity (frac)	Perm Kh (D)	Perm Kv (D)	Net Pay (m)	GBIP Net (10^6 m^3)	Cumulative Production (10^6 m^3)	Recovery Factor (%)	EUR = Producible Bitumen in place (10^6 m^3)	EUR RF (%)
AA	5	850	459	0.72	0.35	4.6	2.9	27.5	3.5	0.7	19%	1.8-2.5	50-70%
AB	5	640	347	0.75	0.36	5.0	3.6	26.5	2.8	1.0	37%	1.4-1.9	50-70%
AC	5	750	399	0.74	0.34	4.8	3.5	25.9	2.8	0.4	15%	1.4-1.9	50-70%
AD	5	670	381	0.73	0.34	4.5	3.2	29.4	3.0	0.6	21%	1.5-2.1	50-70%
AE	5	830	448	0.73	0.34	5.3	3.7	25.3	3.1	0.6	20%	1.6-2.2	50-70%
TOTAL	**25**		**2,034**						**15.2**	**3.3**	**22%**		**50-70%**

- Cumulative production as of December 31, 2022
- Well Spacing: 100 m, Spacing between pads: 130 m
- Volumetrics include 25 m at heel and toe of the well pair
- Full Project Area= 7.8 $10^6 m^2$, GBIP net-hydrocarbon pore volume 23 $10^6 m^3$ (based on PHIT >= 27% and SwT <= 50%)
- Full Development Area= 7.3 $10^6 m^2$, GBIP net-hydrocarbon pore volume 22.9 $10^6 m^3$ (based on PHIT >= 27% and SwT <= 50%)
- OBIP is gross oil volume between base and top of pay inclusive of Lean Zone without saturation constraint
- EUR = Estimated Ultimate Recovery of Bitumen = Producible Bitumen in Place within the GBIP interval
- RF = The ratio of recoverable bitumen reserves to the estimated bitumen in place in the reservoir

NON-CONDENSABLE GAS CO-INJECTION

SUMMARY

- NCG co-injection has been expanded across all pads to help with pressure management and SOR reduction
- NCG rates increased in early 2021 to assist with pressure recovery in the field following 2020 temporary suspension (see rates on slide 13)
- Once the field reached pressure target, NCG rates were optimized (slide 13)
- No adverse impacts observed
- Continuing vertical temperature growth at observation wells



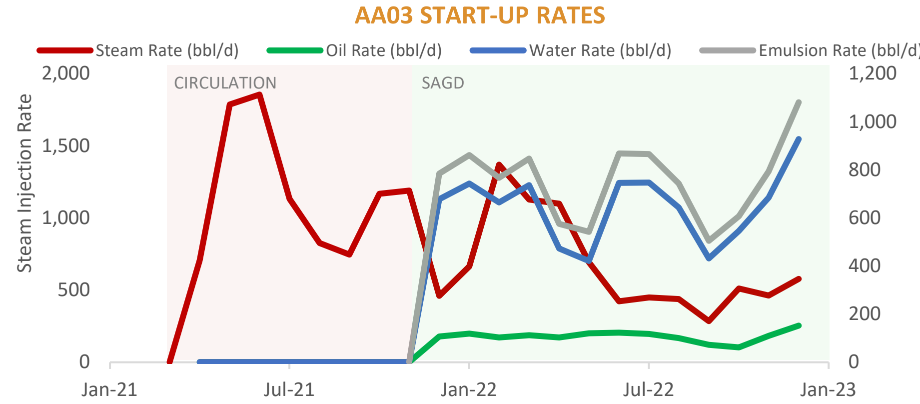
AA03 START-UP PERFORMANCE

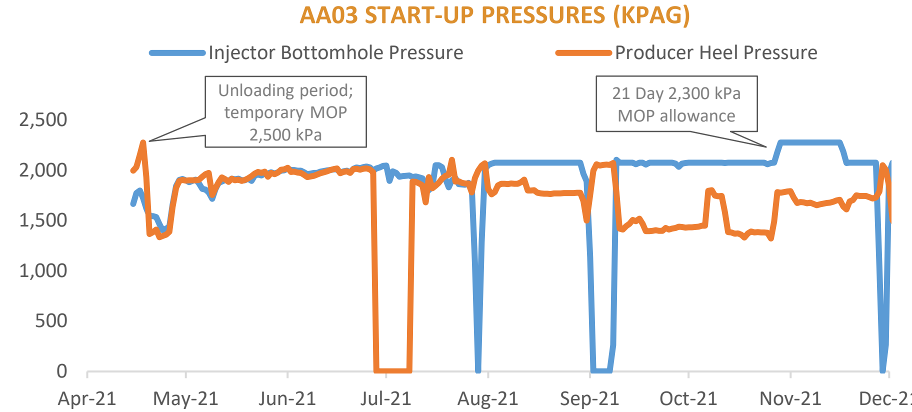
START-UP SUMMARY

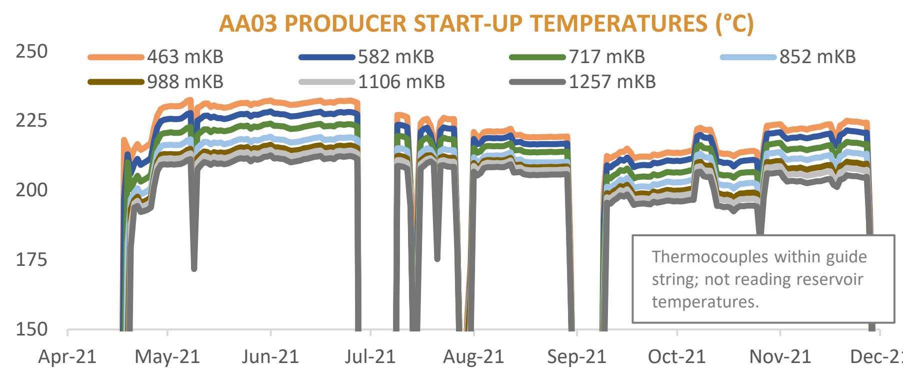
- Well started up through circulation
  - *Steam used for warm-up and circulation*
- Circulation began Apr 15, 2021
- Well converted to SAGD Dec 1, 2021

PERFORMANCE

- Circulation was longer than typical to improve well conformance
- Well initially operated with PCP
- Converted to ESP in Sept 2022







SURFACE OPERATIONS

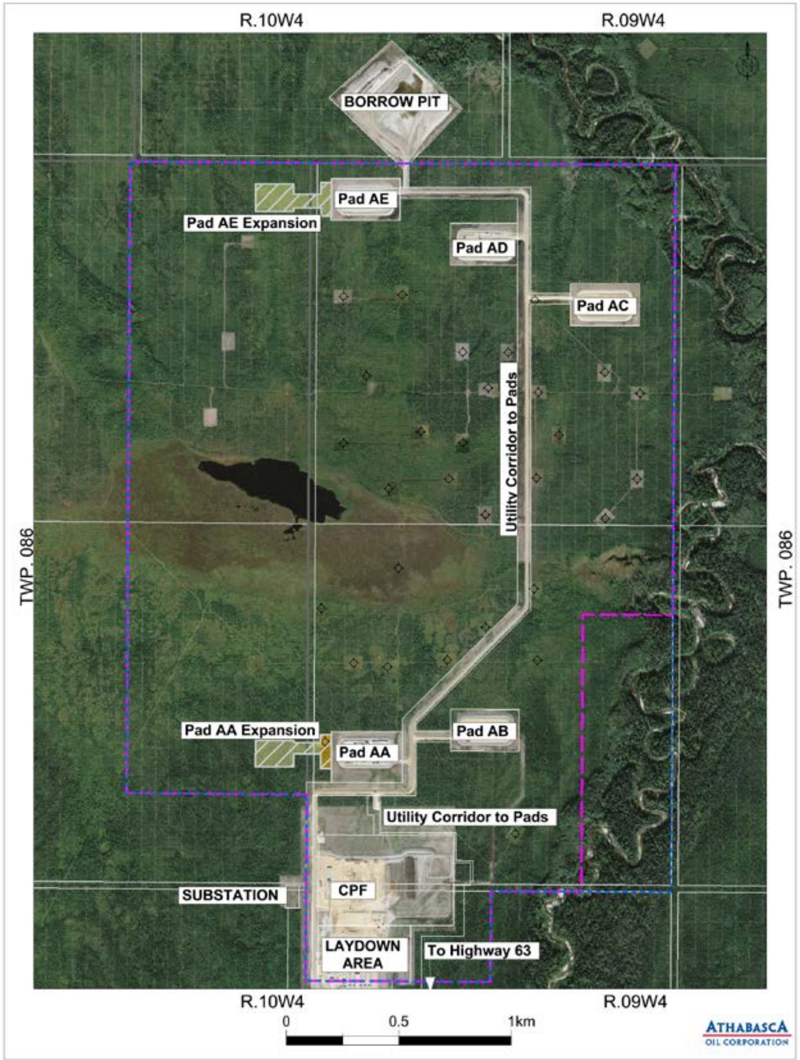
SURFACE DEVELOPMENT OVERVIEW

2022 ACTIVITY

- No modification were made to the CPF during the year that required an AER application
- No pad development or drilling activity

SUSPENSION AND ABANDONMENT

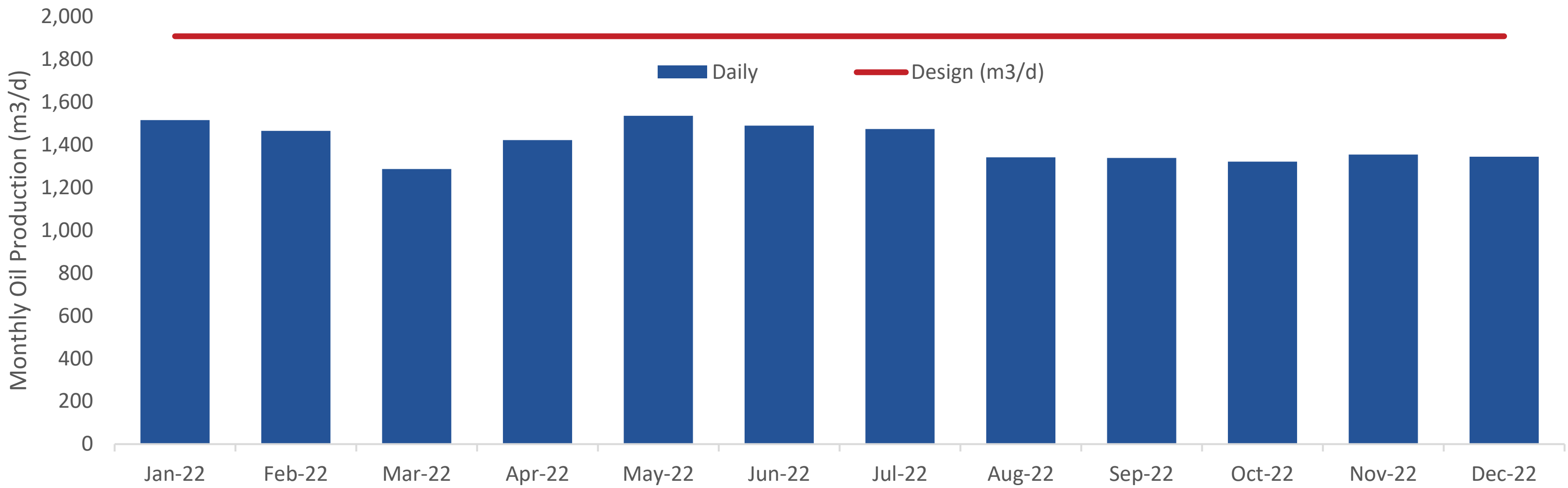
- No wells abandoned or suspended to date



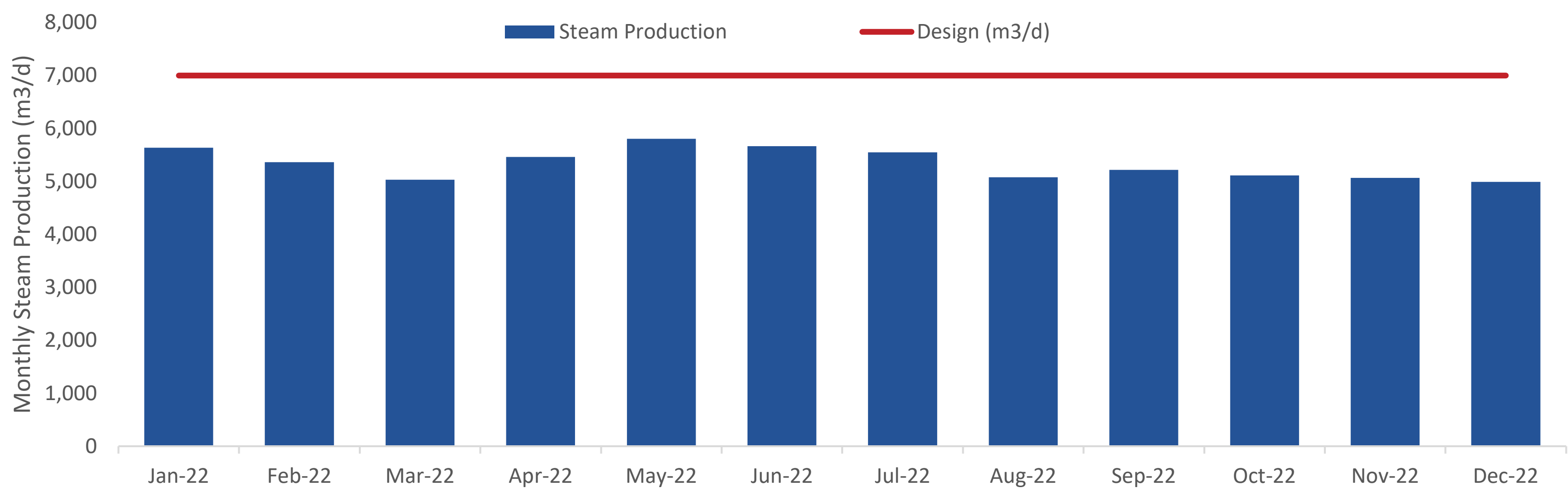
Development Area Project Area

HANGINGSTONE OIL AND STEAM RATES

OIL



STEAM



REGULATORY & COMPLIANCE

ATHABASCA OIL CORPORATION

APPROVALS, AMENDMENTS, AND RENEWALS

Application No. or Approval No.	Approval Date	Description
OSCA Application No. 1935228 D023 Category 1	January 20, 2022	Produced water transfers - Hangingstone Facility to Leismer Facility
EPEA Approval No. 289664-00-02 Renewal	April 25, 2022	10 year term
OSCA Application No. 1938515 D023 Category 3	November 22, 2022	Addition of 2 sustaining drainage areas
EPEA Approval No. 289664-00-02 Amendment	October 31, 2022	SO_2 daily limit increase

EPEA – Environmental Protection and Enhancement Act
OSCA – Oil Sands Conservation Act

COMPLIANCE

SPILLS

- No reportable spills in 2022

AUDITS

- No AER audits completed in 2022

INSPECTIONS

- AER completed 9 inspections; no items outstanding

NON-COMPLIANCE AND VOLUNTARY SELF DISCLOSURE (VSD) SUMMARY

Reference	Event	Corrective Action
EDGE 0388388	CEMS Code 90% uptime not met due to gas flow instrument malfunction (March)	Equipment repaired and an alternative method of estimation was approved to backfill missing data
VSD 11493	Maximum operating pressure of 2,100 kPa exceeded (2,108 kPa) for 1 minute (October)	Injector well pressure relieved and the Mode Selector allowing operator to select Production or Circulation was deactivated
EDGE 0407718	CEMS Code 90% uptime not met due to zero-point reflector malfunction (December)	Equipment repaired, data lose was minimal and did not require an approved method to backfill

CEMS – Continuous Emissions Monitoring System

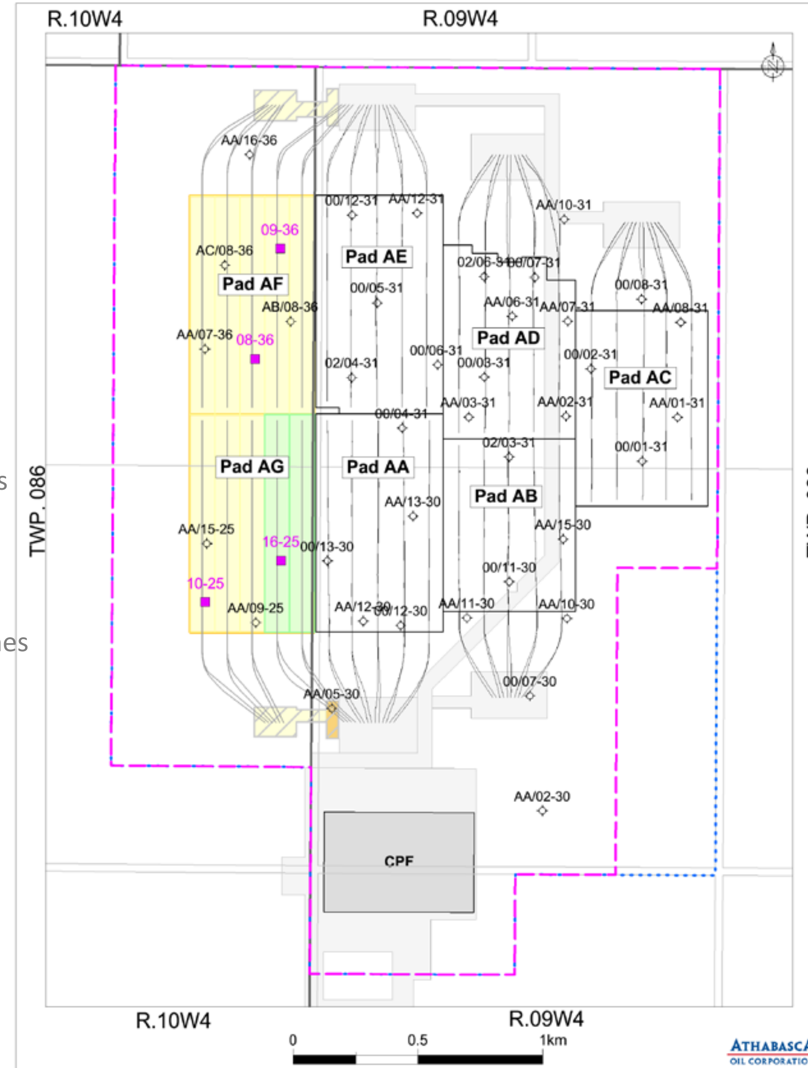
FUTURE PLANS

2022 SUMMARY

- Continue NCG injection field-wide for pressure management and energy intensity reduction
- EPEA Approval No. 289664 renewal application approved
- Oil Sands Conservation Act Commercial Scheme amendment application for sustaining pads approved

FUTURE PLANS

- 2023 - construct Pad AA expansion to accommodate two additional well pairs
- 2024 – drill two well pairs in Pad AG drainage and 4 observation wells
- Continue to evaluate opportunities for producer Flow Control Devices (FCDs)
- Develop additional sustaining well pads in accordance with production declines



	Existing Pad Drainage Area		2023 Surface Pad Expansion
	Development Area		2024 SAGD Well Pairs
	Project Area		Future Surface Pad Expansion
	2024 Observation Well		Future SAGD Well Pairs

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