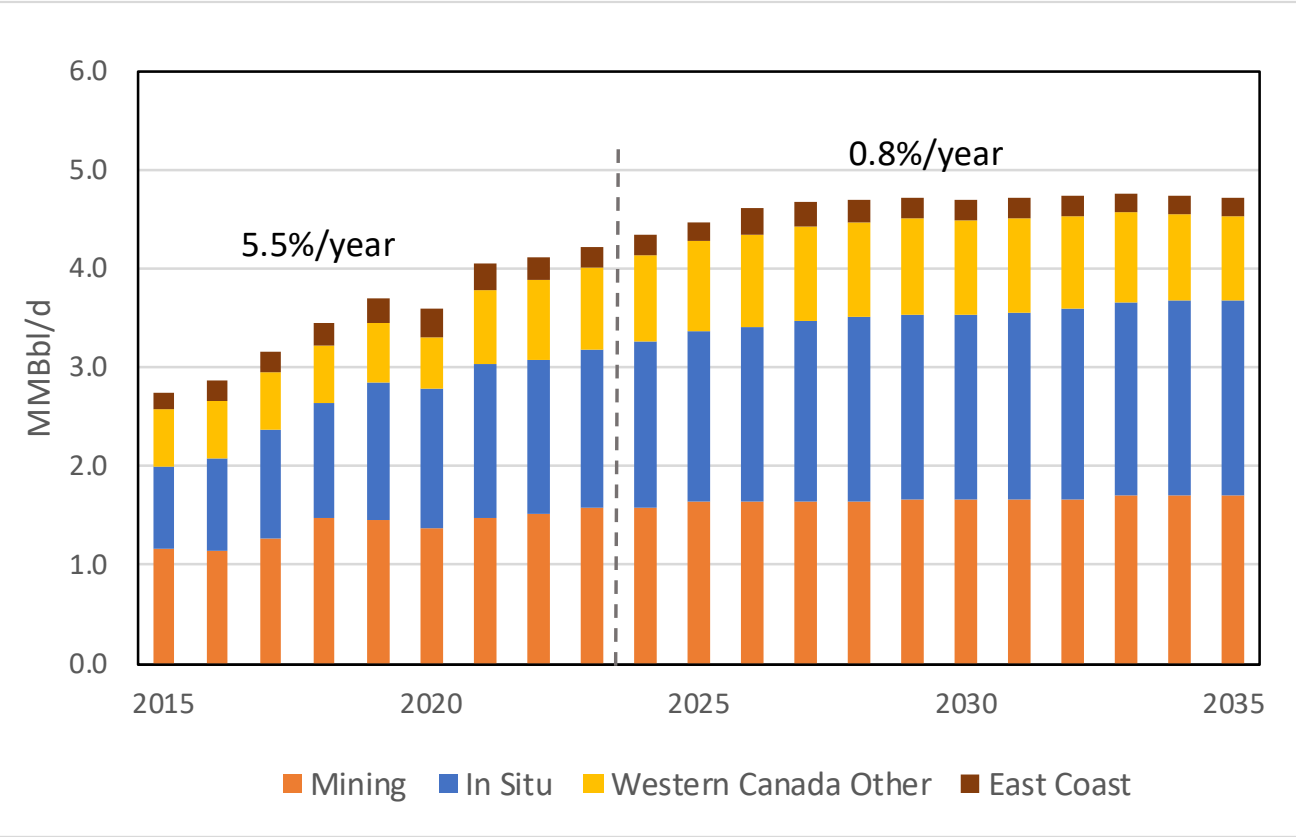
CANADIAN OIL SUPPLY

JUNE 2024

CANADIAN OIL PRODUCTION FORECAST TO 2035



Source: Alberta Oil Sands Royalty Data, 2022
Alberta Oil sands project data, 2022
Alberta Energy Regulator Plants and Facilities, 2023
C-NLOPB Statistical Information, 2023
CBC News, October 12, 2023
CBC News, May 9, 2023

Total Canadian oil production has been increasing at a healthy 5.5% annually between 2015 and 2023 growing from about 2.8 million barrels per day (MMBbl/d) to 4.3 MMBbl/d.

The Alberta oil sands accounted for about 75% of total Canadian production from 2015 through 2023. Mining accounted for about 60% of the total oil sands production in 2015 whereas today, mining and in situ represent about 50% each.

Other western Canadian production represents almost 20% of the total with Eastern Canada contributing about 7%.

Looking out to 2035, Incorrys is forecasting total Canadian oil production to continue to increase at about 2% annually through 2028 before leveling off for the remainder of the forecast period, averaging just 0.8% annually.

Oil sands production increases market share slightly to 78% in 2035 as East Coast Canada declines; Other Western Canada maintains its 20% share.

Note: data includes condensate from conventional and tight oil wells, but does not include condensate from well classified as gas or condensate.

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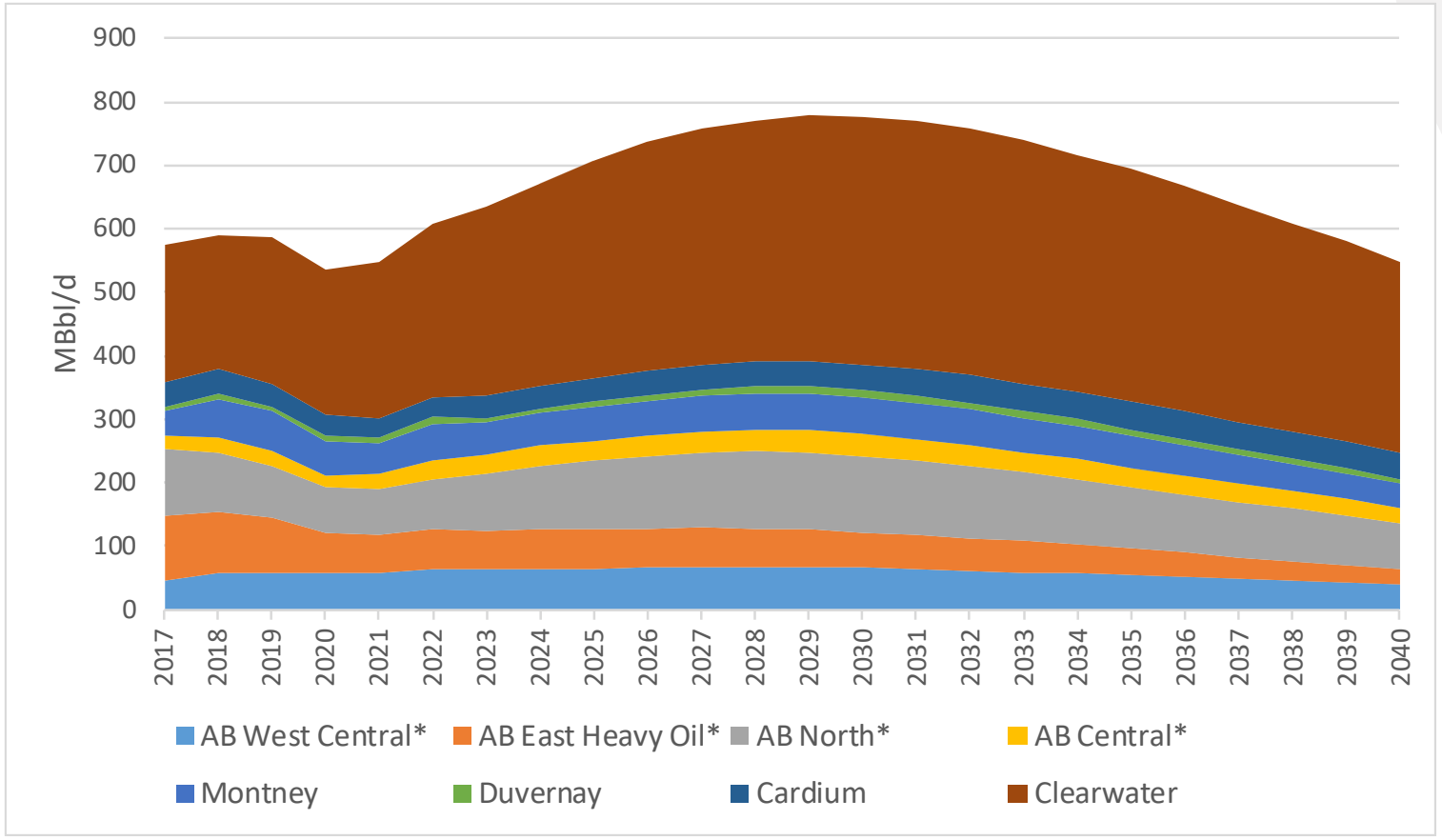
AB OIL PRODUCTION FORECAST (EXCLUDING OIL SANDS)



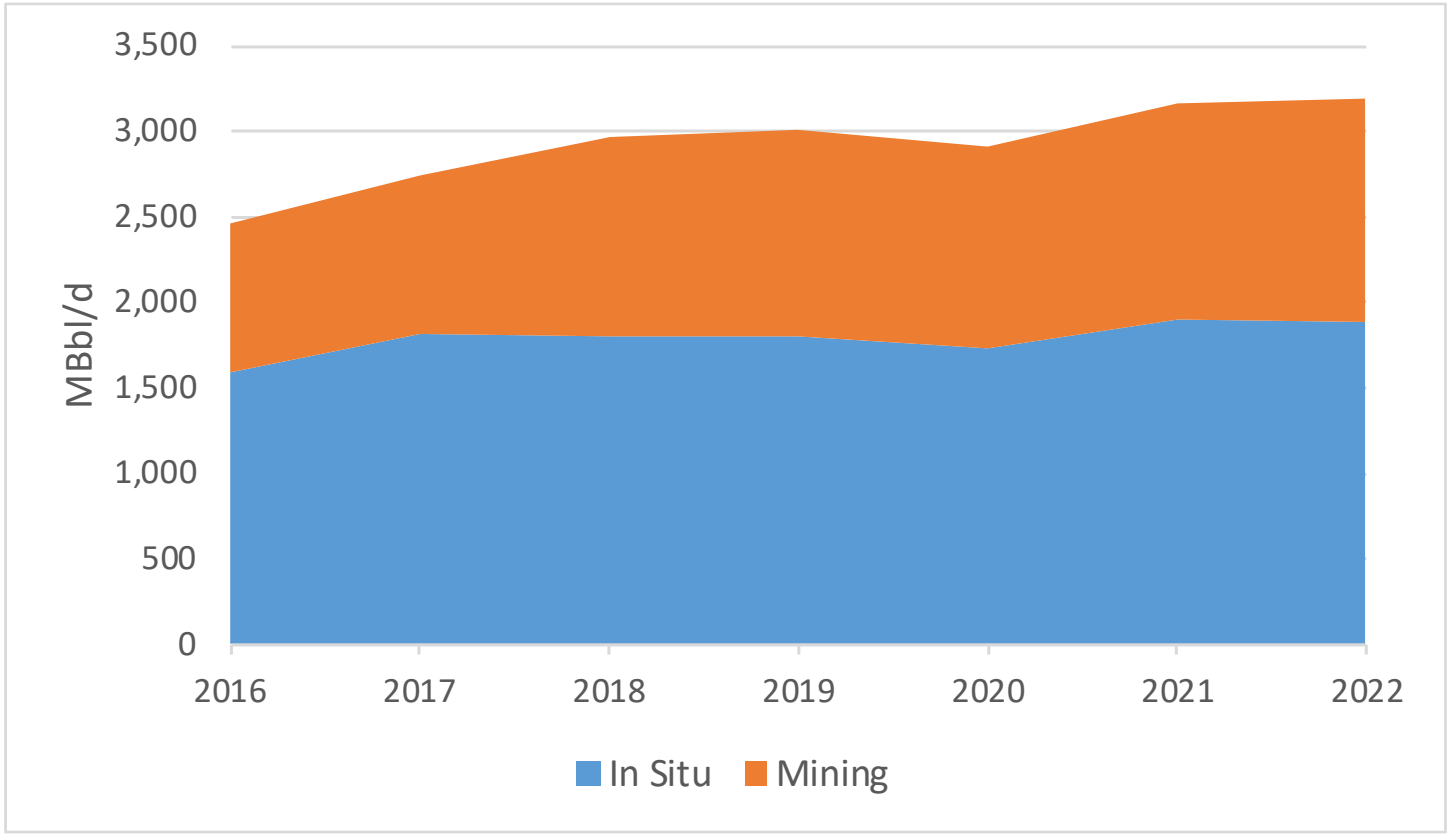
Alberta non oil sands production includes wells classified as volatile oil, oil and heavy oil and excludes wells classified as Condensate and Bitumen.

Note that heavy oil wells can be developed utilizing thermal methods.

- Alberta conventional and tight oil production grew from 2017 through 2019 reaching almost 600 MBbl/d before a noticeable drop resulting from the impacts of the 2020 Covid pandemic. Production has since recovered hitting 635 MBbl/d in 2023.
- The largest contributor is the Clearwater region accounting for over 40% of the total from 2017 to 2023. Alberta East Heavy oil and Alberta North each account for almost 15% over the same period.
- Incorrys is forecasting Alberta conventional and tight oil production to continue to grow to 780 MBbl/d by 2029, up 22% from 2023 before declining to 550 MBbl/d in 2040 reflecting the maturity of the Alberta basins.
- Clearwater remains the largest source of Alberta conventional and tight oil production, accounting for over 50% of future production through 2040.

* Geographical areas (AB West Central, AB East Heavy Oils, AB North and AB Central) don't include Montney, Clearwater, Duvernay and Cardium, which are analyzed separately.

TOTAL OIL SANDS PRODUCTION 2016-2022



Source: Alberta Oil Sands Royalty Data, 2022
Alberta Oil sands project data, 2022
Alberta Energy Regulator Plants and Facilities, 2023

Oil is extracted from oil sands using 2 different methods:

- Mining - surface mining is used when deposits are near the earths surface.
- In situ is used to access deeper deposits where wells are drilled, and steam is injected in make the bitumen fluid enough to pump to the surface. There are 2 types of in situ:
  - Steam Assisted Gravity Drainage (SAGD) and
  - Cyclic Steam Stimulation (CSS).

Mining accounts for about 40% of total oil sands production ranging from almost 900 MBbl/d in 2016 to over 1300 MBbl/d in 2022

In situ represents about 60% of total oil sands production.

Mining and in situ production have can fluctuate due to prevailing market conditions, available transportation capacity to market and prices. There is a noticeable drop in 2020 due to the impact of the Covid pandemic.

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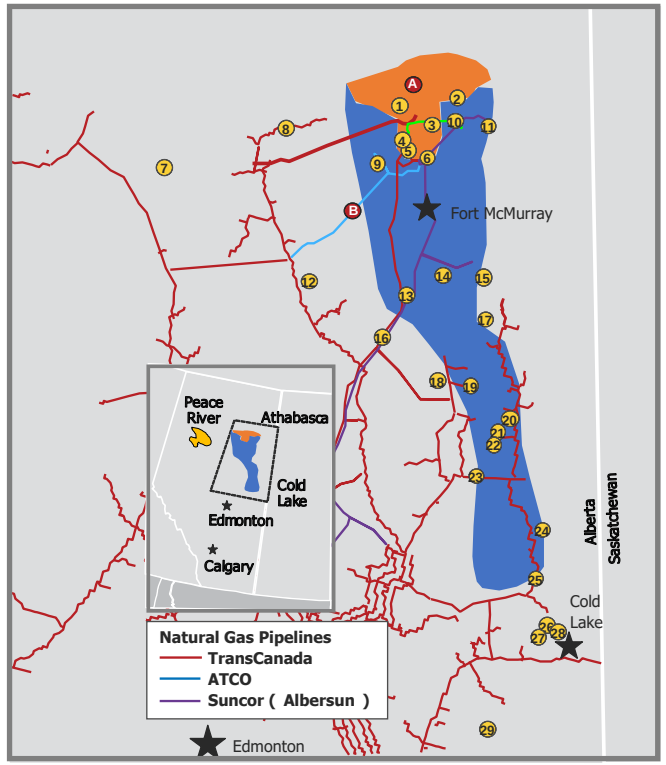
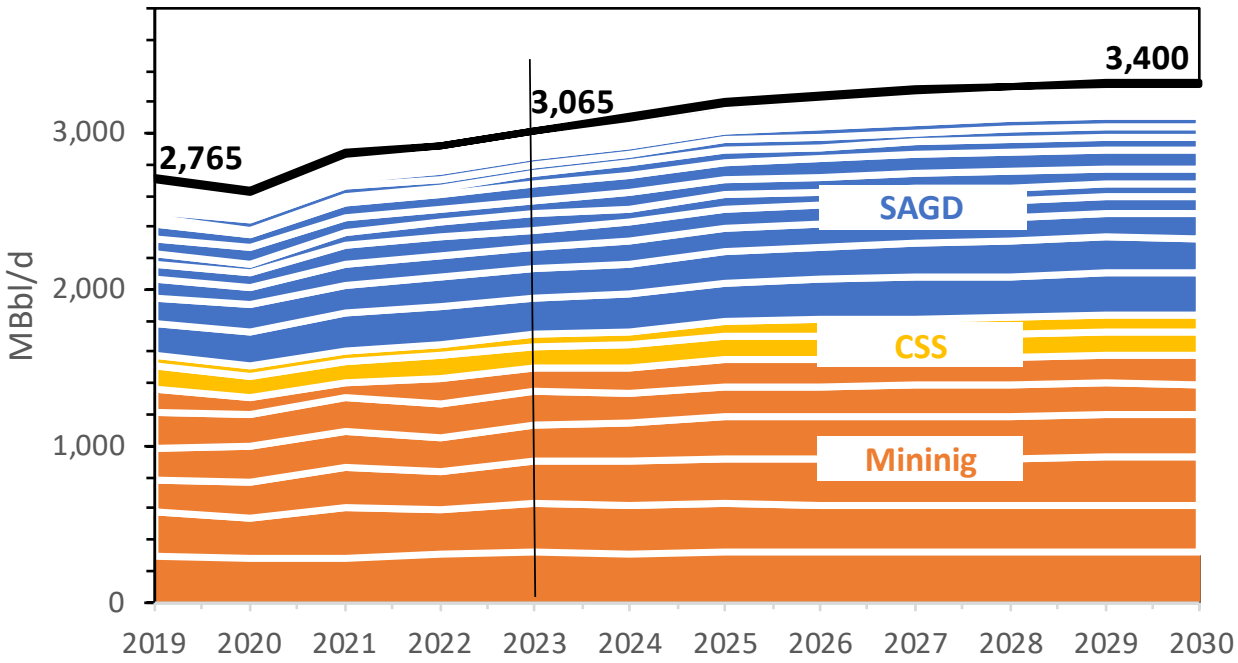
OIL SANDS PRODUCTION FORECAST BY PROJECT

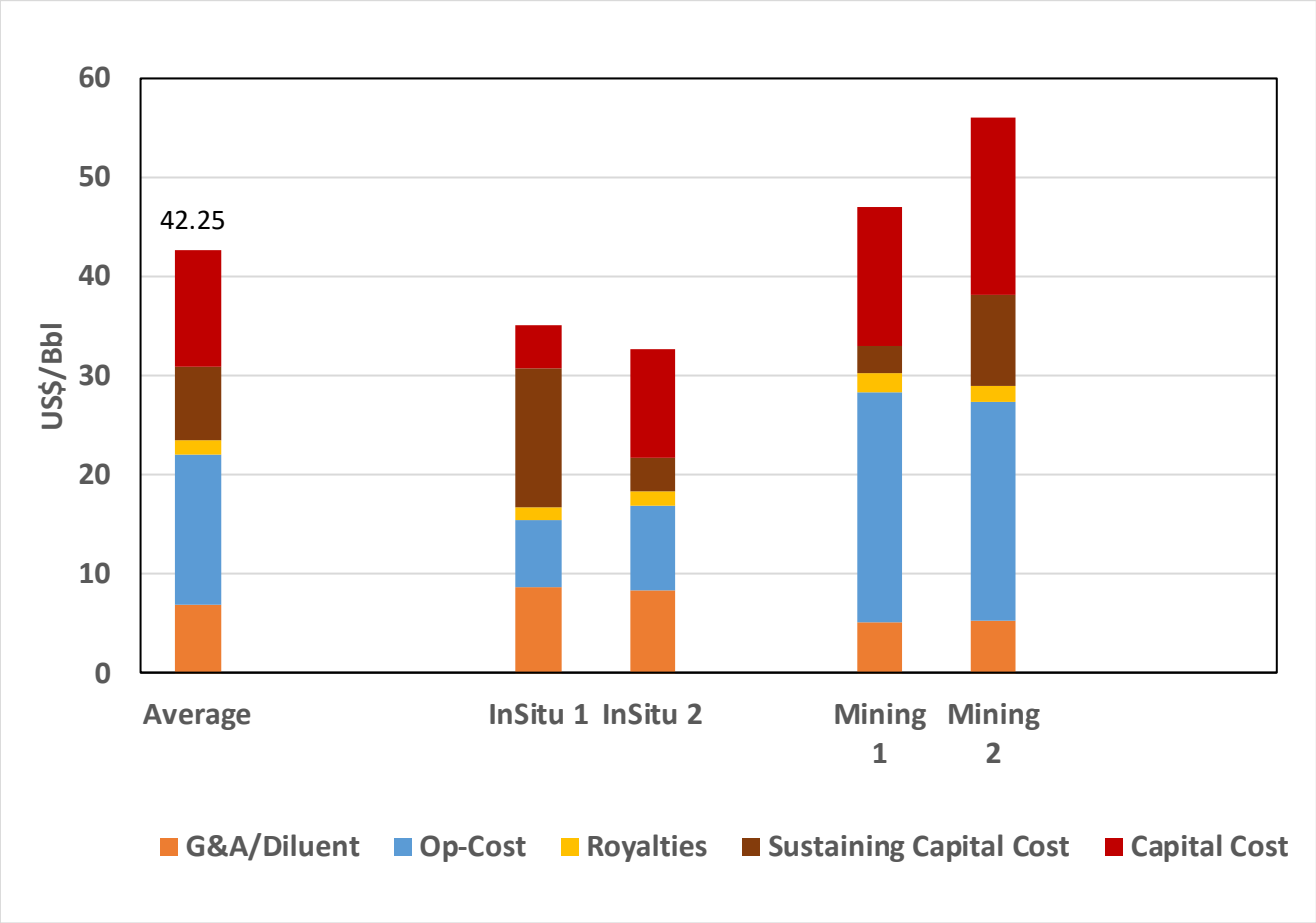




After posting a 2.6% per year growth rate from 2019 to 2023, Incorrys forecasts Canadian oil sands growth to slow with the completion of new large scale mining projects. Incorrys now forecasts an average annual growth rate of 1.5% (from 3.1MM Bbl/d in 2023 to 3.4MM Bbl/d in 2030). This represents nearly 80% of total Canadian oil production in 2030. Observations:

- In 2023, 3.1MM bbl/d was produced from the Alberta oil sands, 1.5MM Bbl/d from mining, and 1.6MM Bbl/d from *in situ* projects (Cyclic Steam Stimulation (CSS) and Steam Assisted Gravity Drainage (SAGD)).
- The majority of growth to 2030 is expected from *in situ* projects, which are scalable with lower up-front capital costs. *In situ* production grows to 1.8MM Bbl/d in 2030 from 1.6MM Bbl/d in 2023—an annual increase of 2.3% per year.
- Mining production increases at a slower annual rate of 0.7% per year and grows from 1.5MM Bbl/d in 2023 to 1.6MM Bbl/d in 2030. Growth is led by the debottlenecking Suncor Fort Hills mine and the Canadian Natural Resources Limited (CNRL) Horizon facility.
- With recent amalgamations, there are now only three operators mining oil sands: CNRL, Suncor, and Imperial.

FULL-CYCLE COST – OIL SANDS



* 15% Rate of return has been incorporated into the overall capital cost

- Over the past decade exit pipeline capacity from Alberta has become tight
- there has been limited number Greenfield expansion projects in the Alberta
- Overall, full-cycle cost for Oil Sands has averaged US$42.70/Bbl
  - Driven by both higher CAPEX and OPEX costs, new mining projects are more expensive averaging US$51.50/Bbl
  - New in situ projects are averaging US$33.90/Bbl

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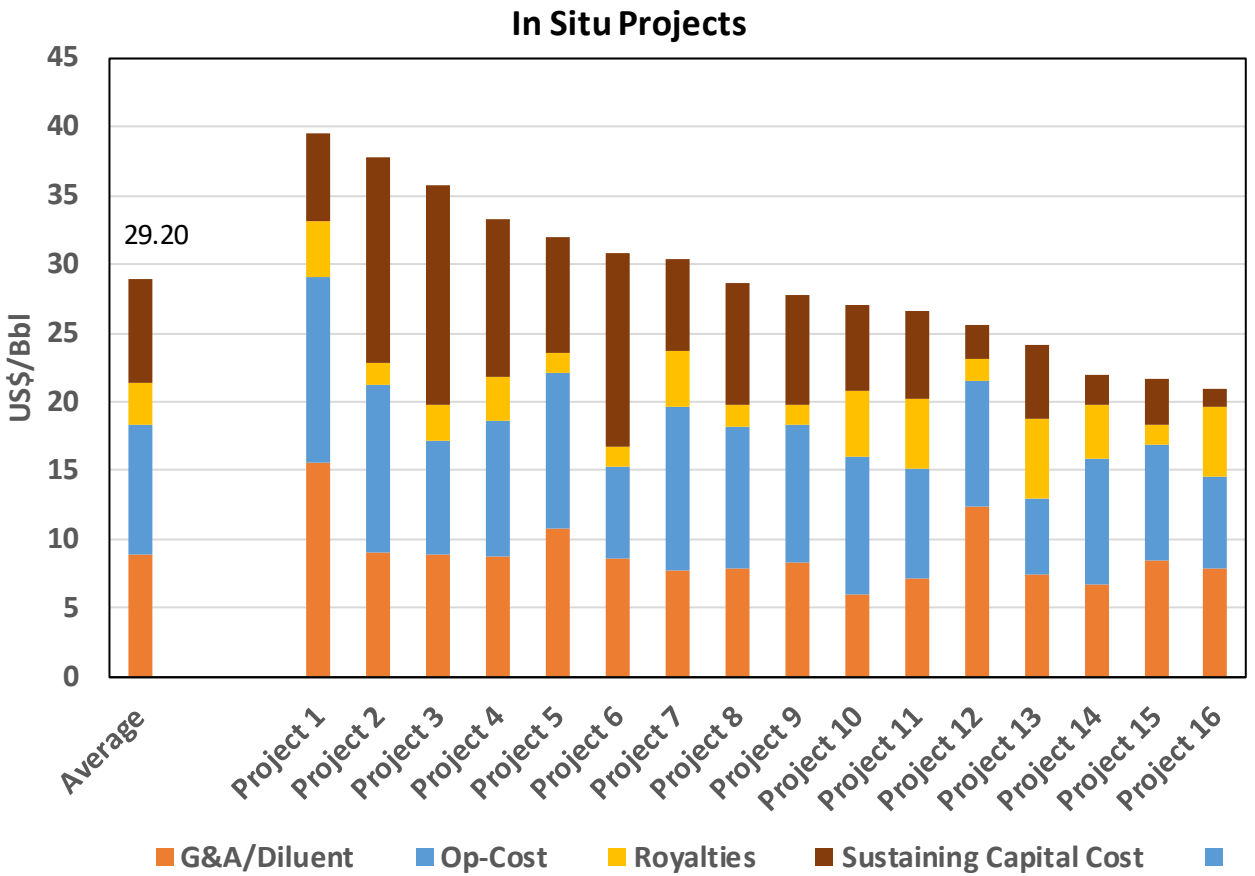
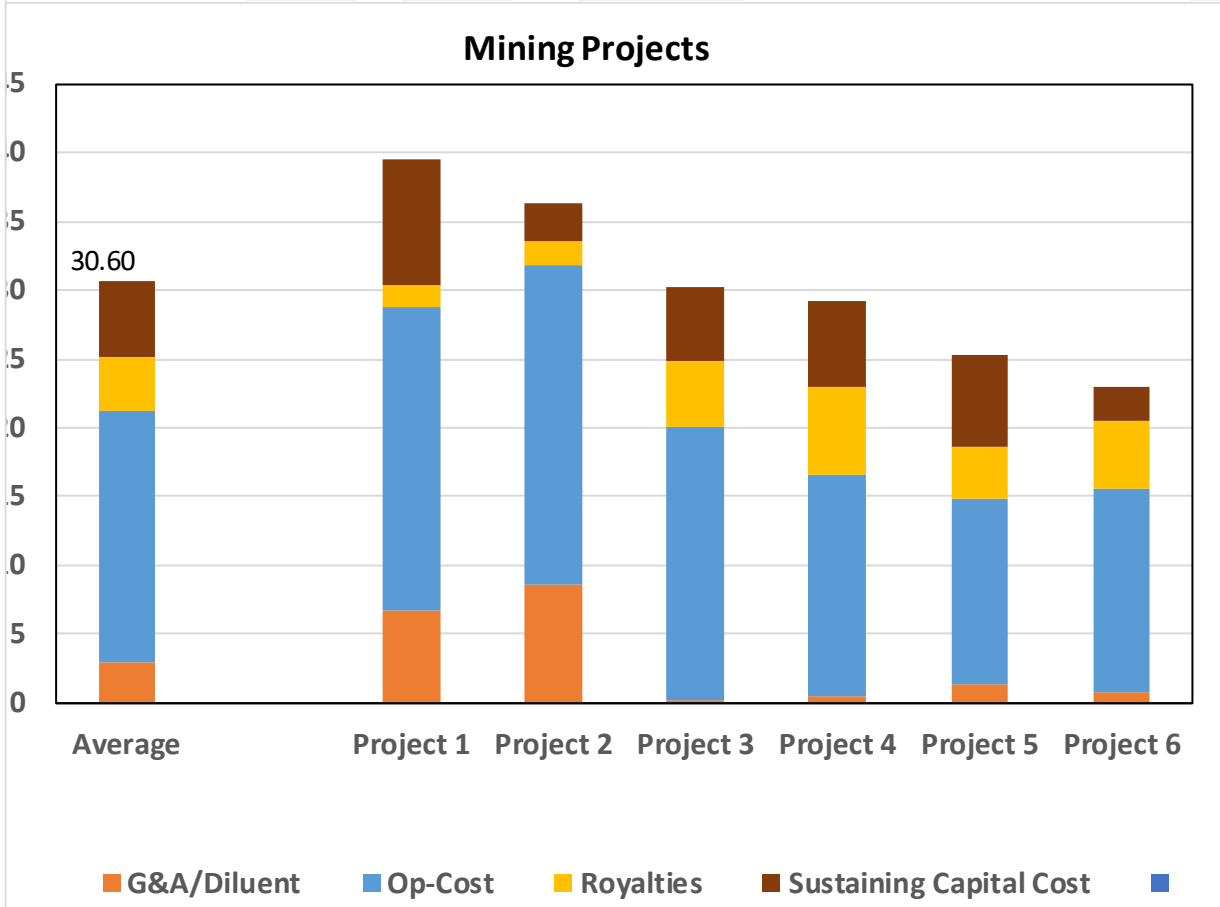
HALF-CYCLE COST – OIL SANDS





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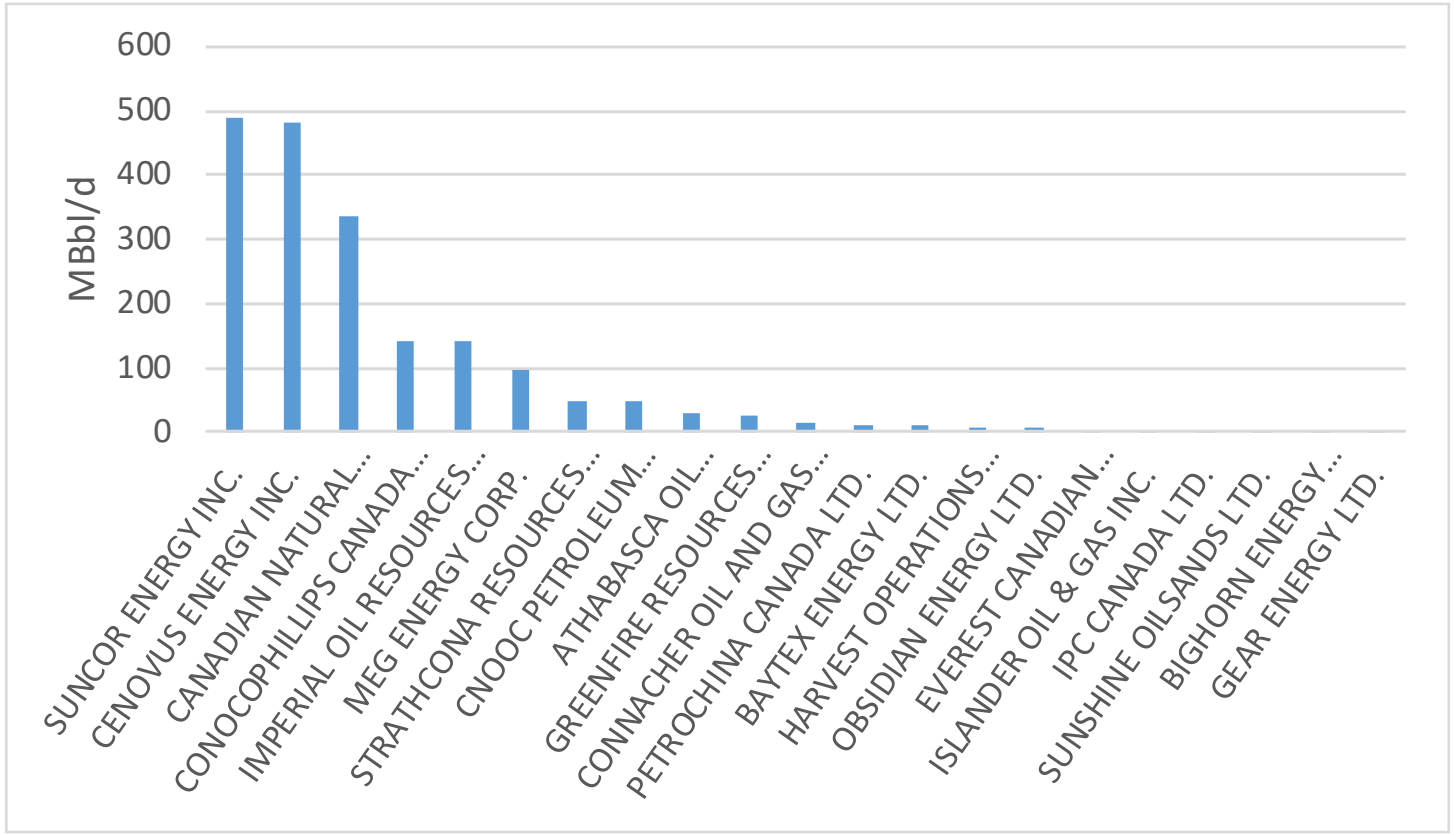
IN SITU OIL SANDS PRODUCTION PER COMPANY 2022



Source: Alberta Oil Sands Royalty Data, 2022
Alberta Oil sands project data, 2022
Alberta Energy Regulator Plants and Facilities, 2023

Top three In situ Producers:

- **Suncor Energy**: Suncor Energy Inc. leads the way with a production of almost 490 MBbl/d. Suncor is involved in both mining and in situ extraction operations.
- **Cenovus Energy**: Cenovus Energy Inc. follows closely behind Suncor with production of 480 MBbl/d. Cenovus is heavily invested in in situ extraction methods.
- **Canadian Natural Resources Limited**: CNRL ranks third with production of about 340 MBbl/d.

After the top 3 in situ producers, there is a significant drop in daily production ranging from about 140 MBbl/d (ConocoPhillips) down to near zero (Gear Energy).

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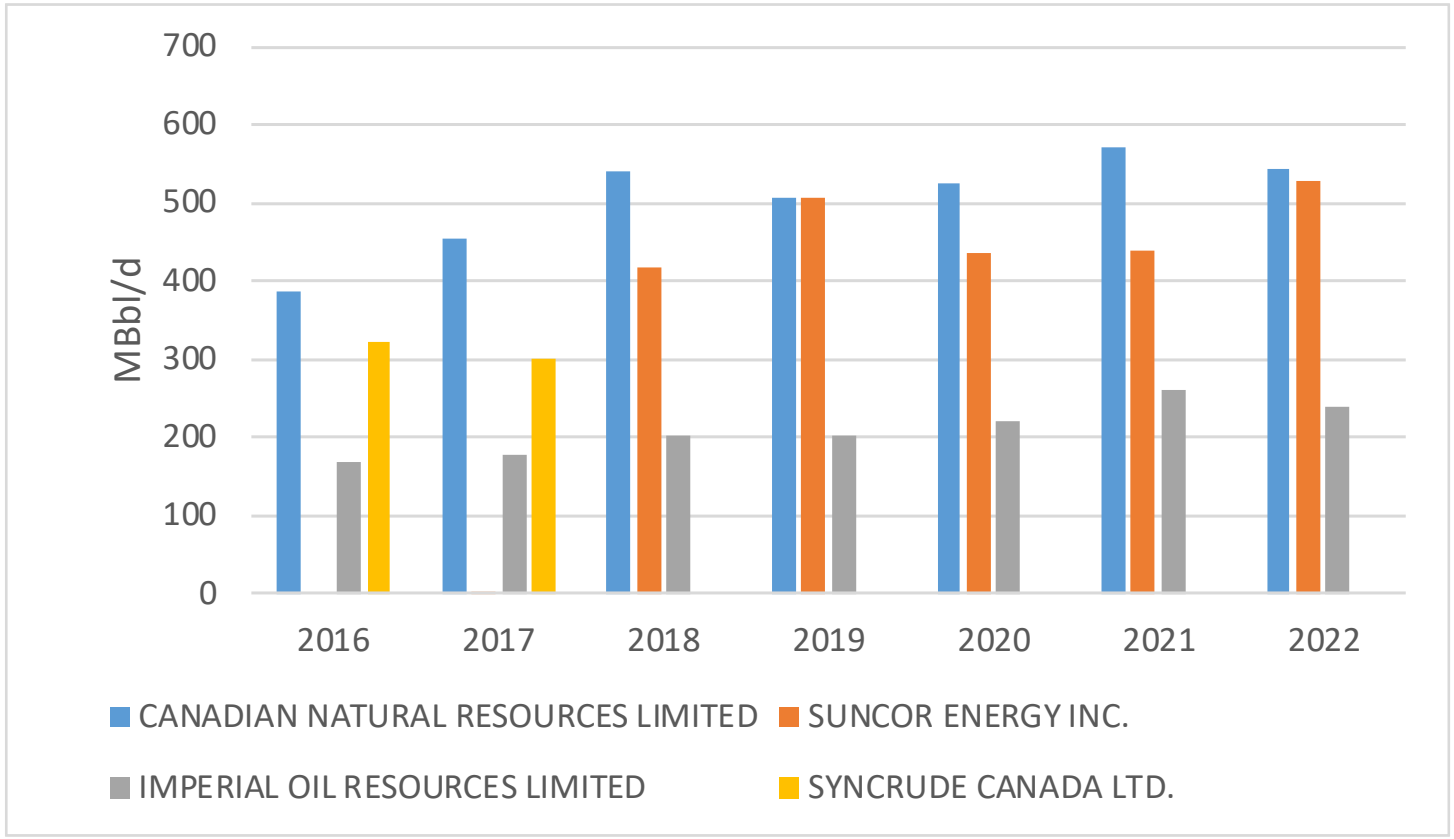
OIL SANDS MINING PRODUCTION PER COMPANY 2016-2022



The top 4 oil sands mining producers:

- Canadian Natural Resources Limited (CNRL): Production generally increased steadily from 390 MBbl/d in 2016 to a peak of 575 MBbl/d in 2021 before declining slightly to 540 Bbl/d in 2022.
- Suncor Energy: grew from zero production in 2016 to almost match CNRL at 530 MBbl/d in 2022.
- Imperial Oil: Production showed consistent growth from 170 MBbl/d in 2016 to 260 MBbl/d in 2021 before declining slightly decreased to 240 MBbl/d in 2022.
- Syncrude Canada: a joint venture between Suncor (59%), Imperial Oil (25%), Sinopec (9%), and CNOOC (7%). Production was significant in 2016 and 2017 (320 Bbl/d and 299 Bbl/d, respectively), but no production was reported from 2018 to 2022 individually by Syncrude.

Source: Alberta Oil Sands Royalty Data, 2022
Alberta Oil sands project data, 2022
Alberta Energy Regulator Plants and Facilities, 2023

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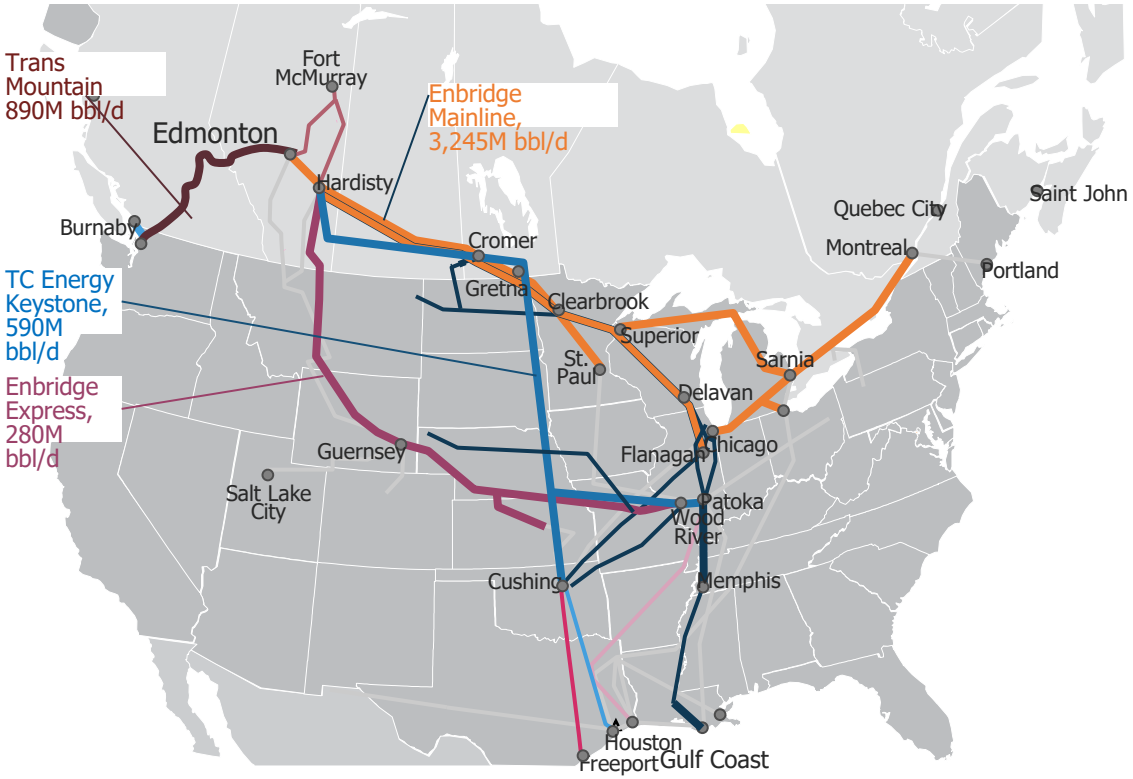
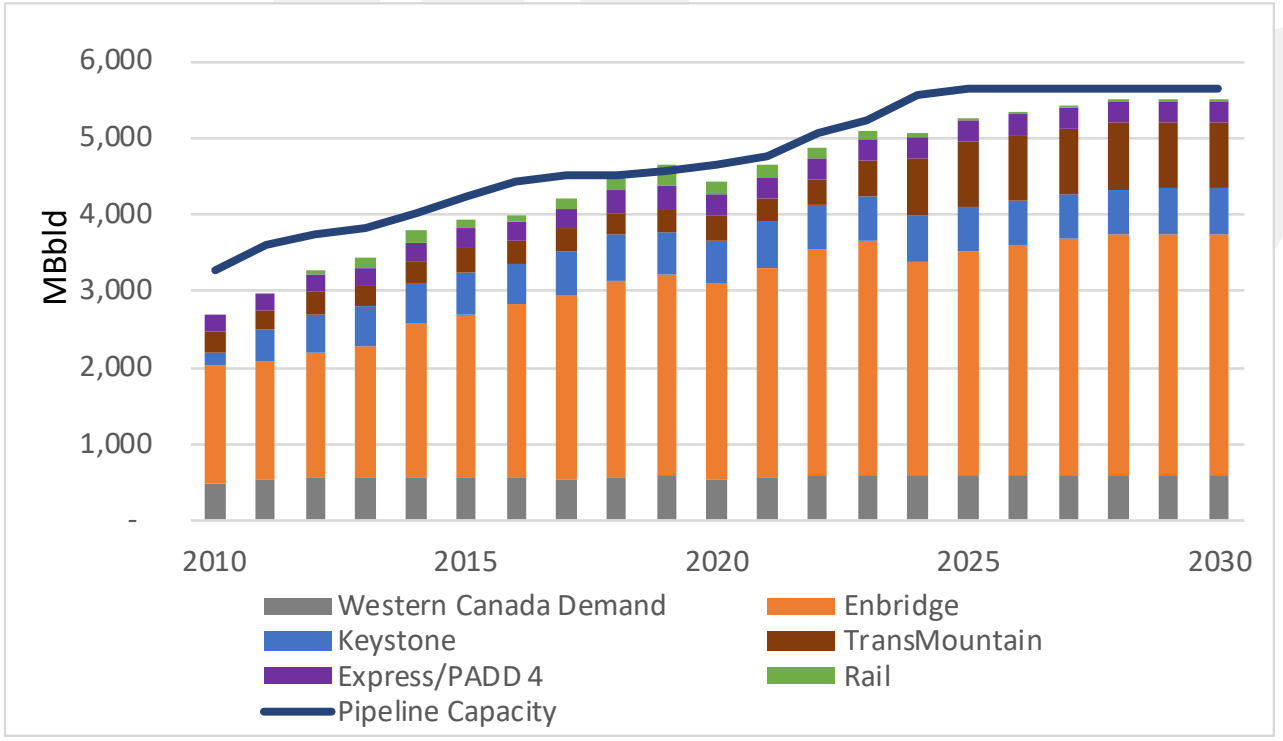
CANADA OIL PIPELINES AND WESTERN CANADA FLOWS



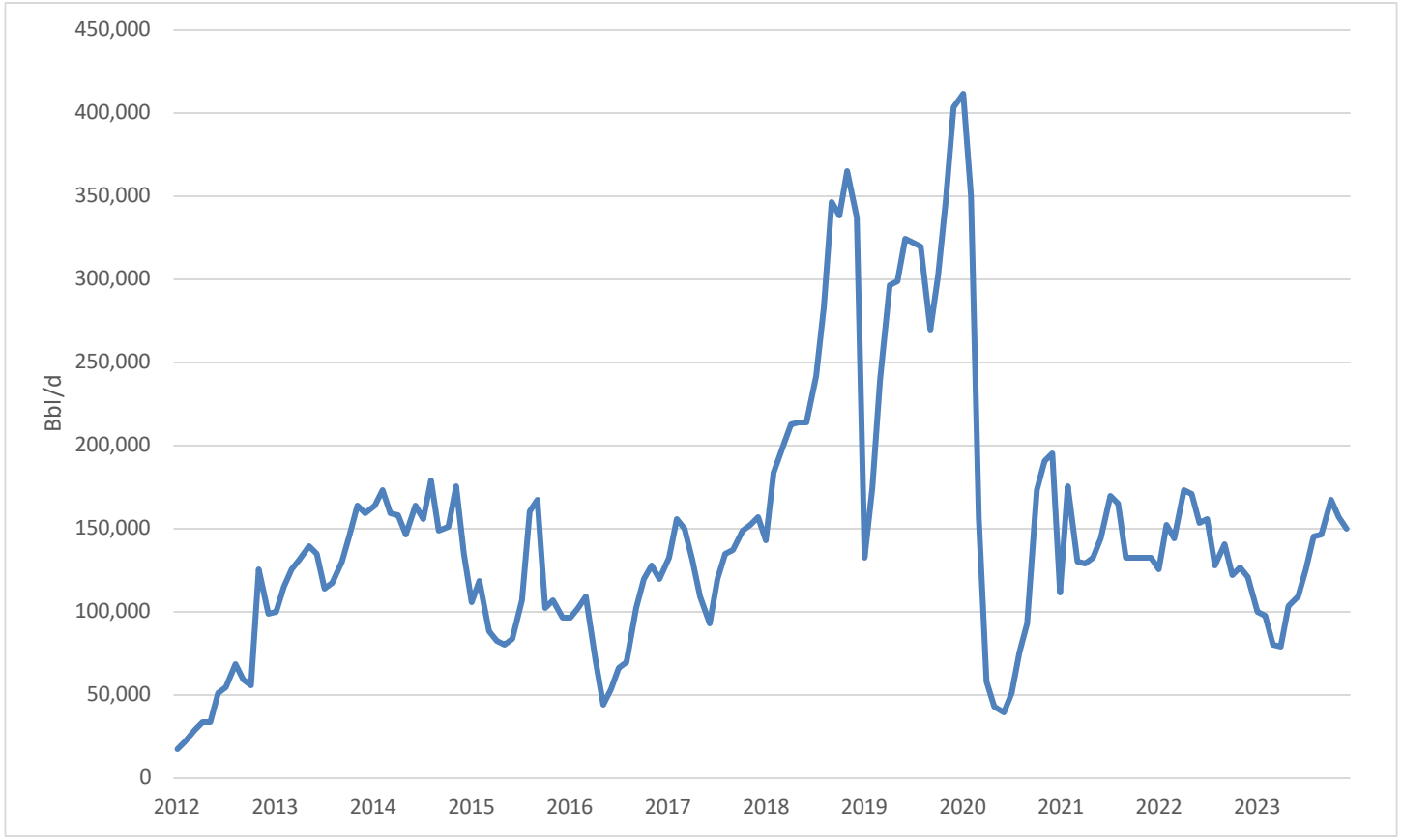


Note: data includes condensate.

The chart shows total Western Canada oil supply, pipeline capacity, Alberta refinery demand, and potential pipeline expansions through 2030. In the near term, oil production in excess of demand and pipeline capacity will be transported to market by rail. Forecast observations:

- With regulatory uncertainty and government intervention, oil sands producers have switched from business development to an operations strategy. Therefore, Incorrys believes producers will take a cautious “wait and see” approach and production will lag pipeline developments.
- Enbridge flows are expected to dip near term due to TMX fill, then recover as production grows modestly. Enbridge will have highest flows during the forecast period.
- TransMountain Expansion completion in 2024 diverts rail and Enbridge Midwest directed flows toward West Coast/Asian markets.
- With incremental new pipe completed in 2022, rail shipments are not required until 2027.

CANADIAN OIL EXPORTS BY RAIL 2012-2023



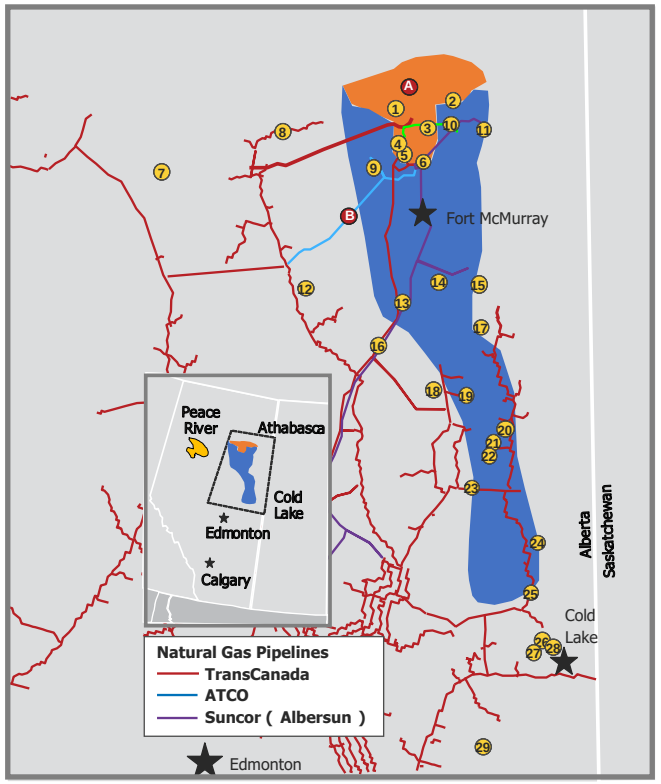
Due to continuing Alberta pipeline export capacity constraints, some Canadian oil must be transported by rail to US refineries, primarily in the US Gulf Coast (USGC) region.

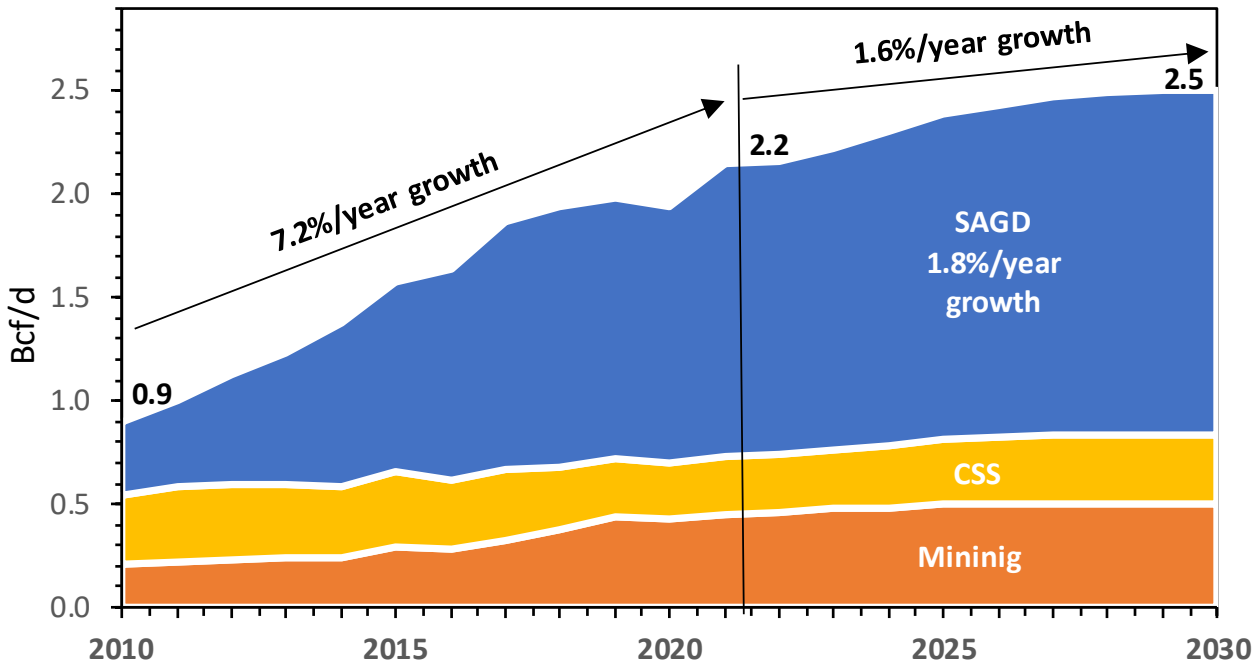
Monthly crude by rail volumes fluctuate significantly over time and have averaged about 150,000 Bbl/d since 2012. Increasing supply and lack of export pipeline capacity additions led to the highs seen from 2018 to 2020. Crude by rail increased dramatically over this period averaging 270,000 Bbls/d and peaking at over 410,000 Bbls/d. Volume later dropped to 140,000 Bbl/d when new pipeline (Enbridge Line 3) capacity become available. The new line replaced an aging Line 3 and began operating in October 2021, after Enbridge completed construction.

Shipping by rail is more expensive than via pipeline and typically ranges between USD $10-$20/Bbl. However, it may be economical as Canadian oil prices are lower than in US. The US – Canadian price differential widened from US$13/Bbl in 2021 to over US$18/Bbl in 2022. The differential is expected to narrow to US$14/Bbl in 2024 following the completion of the Trans Mountain expansion.

Source: Canada Energy Regulator Canadian Crude Oil Exports by Rail – Monthly Data, 2024

NATURAL GAS REQUIREMENTS FOR OIL SANDS

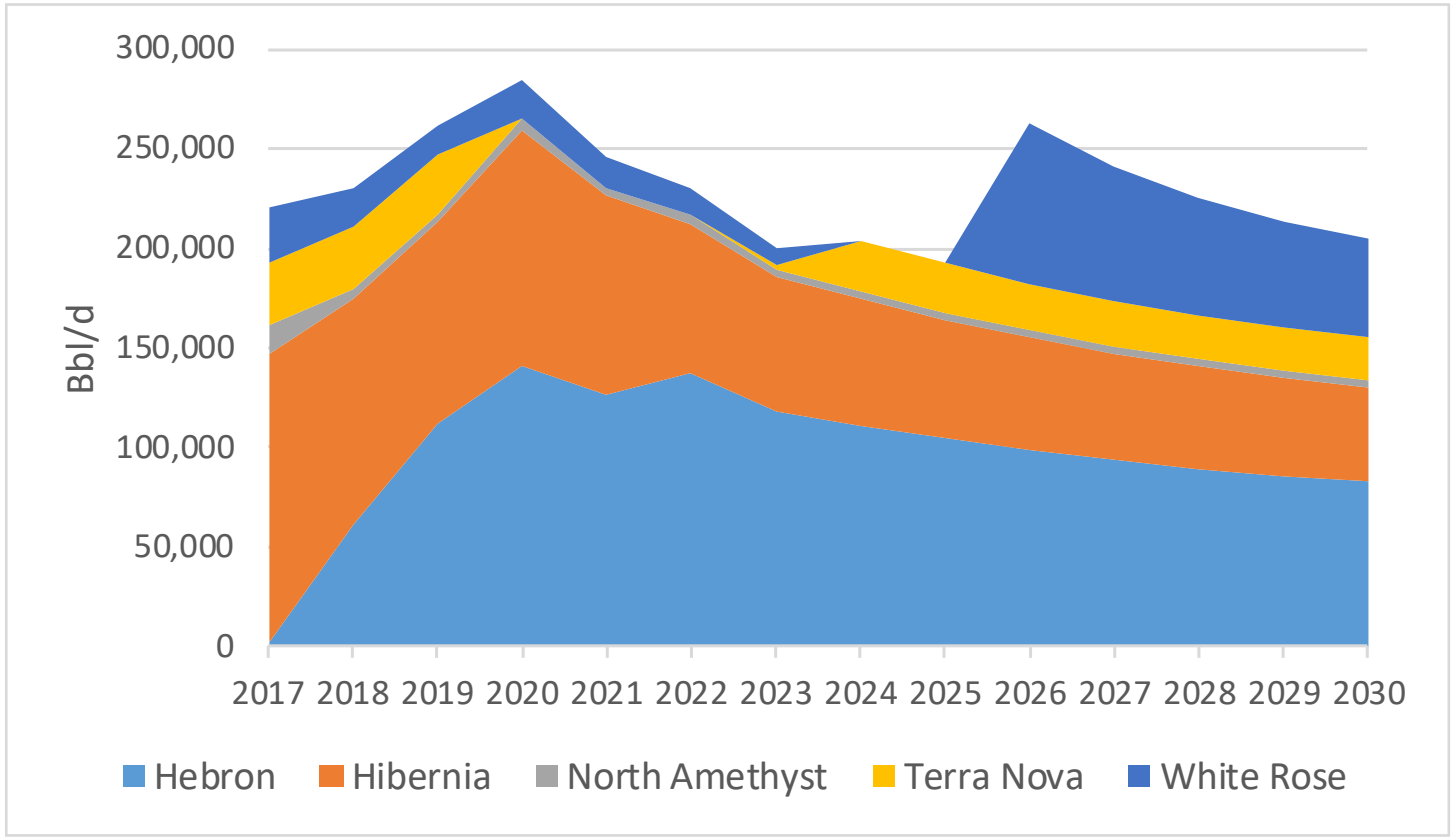




Natural gas requirements for Canadian oil sands grew at an average annual rate of 7.2% from 2010 through 2023 from under 1 Bcf/d to 2.2 Bcf/d. This strong growth is primarily due to growth in the natural gas intensive SAGD operations. Incorrys is forecasting annual growth in oil sands natural gas demand to slow to 1.6% from 2023 to 2030 as the rate of SAGD slows. Observations:

- Natural gas demand for mining grew from 0.2 Bcf/d in 2010 to almost 0.5 Bcf/d in 2023. Incorrys is forecasting gas demand to peak at 0.5 Bcf/d by 2026 and remain flat thereafter.
- Natural gas demand for CSS (Cyclic Steam Stimulation) is relatively stable at around 0.3 Bcf/d.
- SAGD (Steam Assisted Gravity Drainage) gas demand increased from 0.4 Bcf/d in 2010 to 1.5 Bcf/d in 2023. Incorrys is forecasting natural gas demand for SAGD to grow through 2030 to almost 1.7 Bcf/d.

OFFSHORE OIL PRODUCTION AND FORECAST 2017-2030



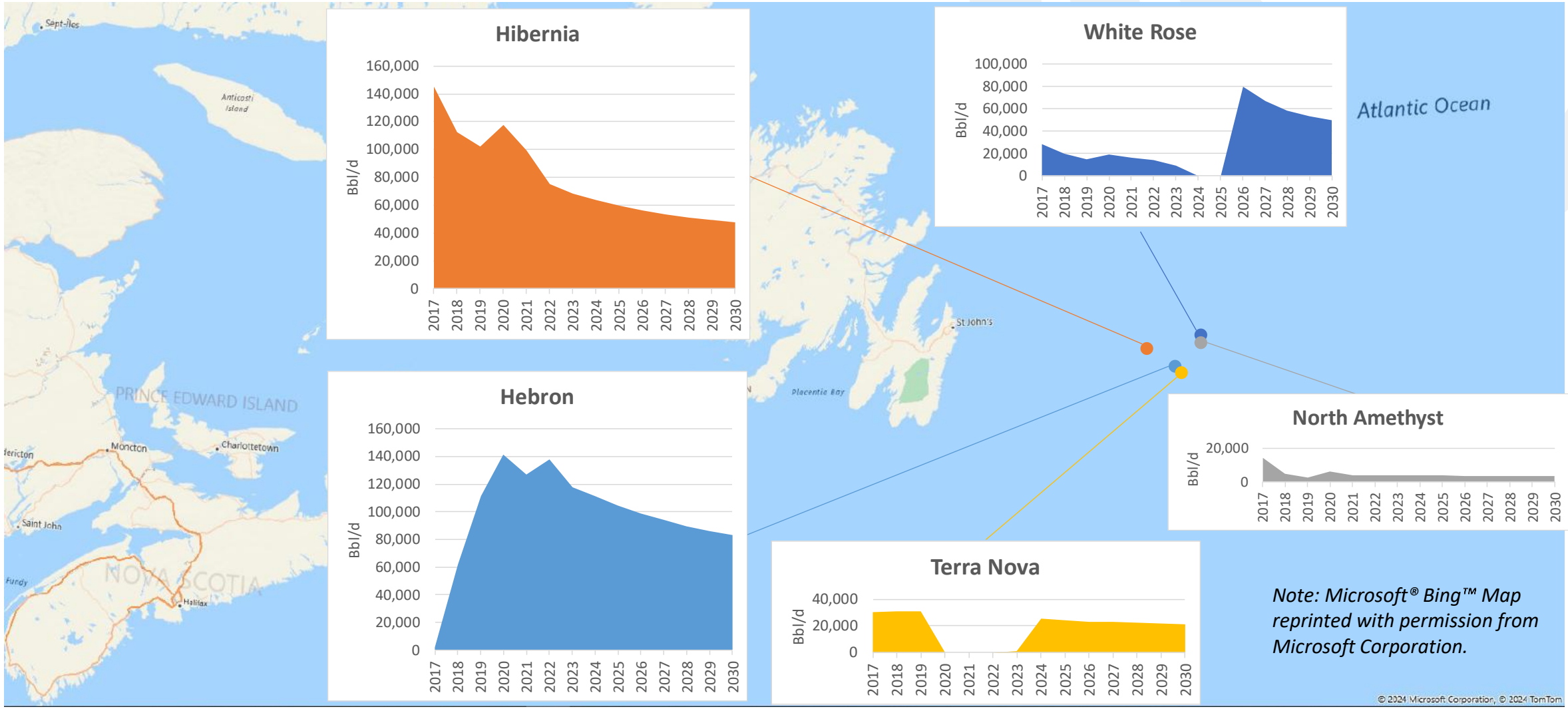
Source: C-NLOPB Statistical Information, 2023
CBC News, October 12, 2023
CBC News, May 9, 2023

Canadian Offshore oil production, located east of Newfoundland, grew rapidly from 220 to 260 MBbl/d in 2019. Offshore production has since dropped to 200 MBbl/d in 2023 due to well declines for all projects.

Primary offshore fields:

- **Hebron**: Production grew from just 2,000 Bbl/d in 2017 to over 140,000 Bbl/d in 2020. Production fluctuated between 118,000 and 138,000 Bbl/d into 2023 and is expected to gradually decline through the forecast from 118,000 Bbl/d in 2023 to 83,000 Bbl/d in 2030. There are no expansion plans.
- **Hibernia**: Hibernia had the highest production levels in 2017 at 145,000 Bbl/d in 2017 but have gradually declined to just 68,000 Bbl/d in 2023. There are no expansion plans.
- **North Amethyst**: Production started at 14,000 Bbl/d in 2017 declining to about 4,000 Bbl/d over the past 3 years. There are no expansion plans.
- **Terra Nova**: Terra Nova averaged about 31,000 Bbl/d from 2017 through 2019. Production was suspended from 2020 to 2023 to perform necessary repairs. Production resumed in 2023 and is expected to gradually decline from over 24,000 Bbl/d to about 21,500 Bbl/d in 2030.
- **White Rose**: Production levels declined from over 28,000 Bbl/d in 2017 to 9,000 Bbl/d in 2023. In 2026, a new project for oil production of 80,000 Bbl/d is expected. The project includes a fixed drilling rig tied back to the existing White Rose (SeaRose) FPSO.

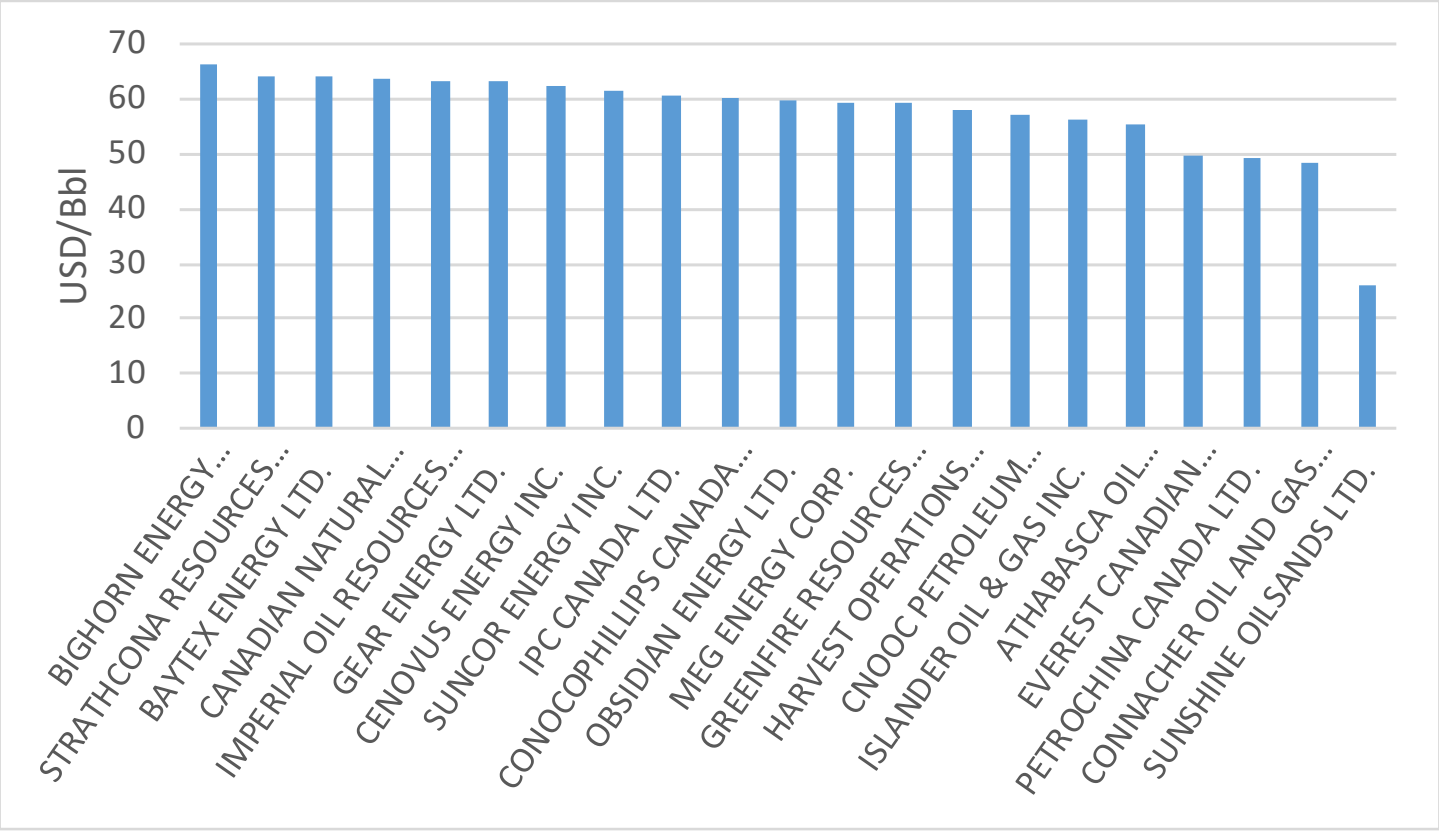
CANADIAN OFFSHORE OIL PROJECTS



Note: Microsoft® Bing™ Map reprinted with permission from Microsoft Corporation.

- Hibernia and Hebron are the 2 largest offshore plays in Canada.
- These 2 fields accounted for over 90% of Canada's total offshore oil production in 2020 with market share dropping to about 65% in 2030.

WEIGHTED GROSS REVENUE PER COMPANY 2022



Source: Alberta Oil Sands Royalty Data, 2022
Alberta Oil sands project data, 2022
Alberta Energy Regulator Plants and Facilities, 2023

Weighted gross revenue per company per barrel of oil production in 2022 ranged from a high of 66 USD/Bbl for Bighorn Energy to a low of 26 USD/Bbl for Sunshine Oil Sands.

Total weighted average revenue for all oil sands production in 2023 was USD 62.20.

Gross revenue per barrel of oil is calculated by Government of Alberta based on total revenue for all company projects divided by total production for these projects for the corresponding period. Converted from CAD to USD using a 1.3 exchange rate.*

**Total production is calculated as cleaned crude Bitumen at Royalty Calculation Point (RCP). Cleaned Crude Bitumen Crude bitumen is a bitumen from which impurities have been removed sufficiently to allow it, when blended with diluent, to be transported..*

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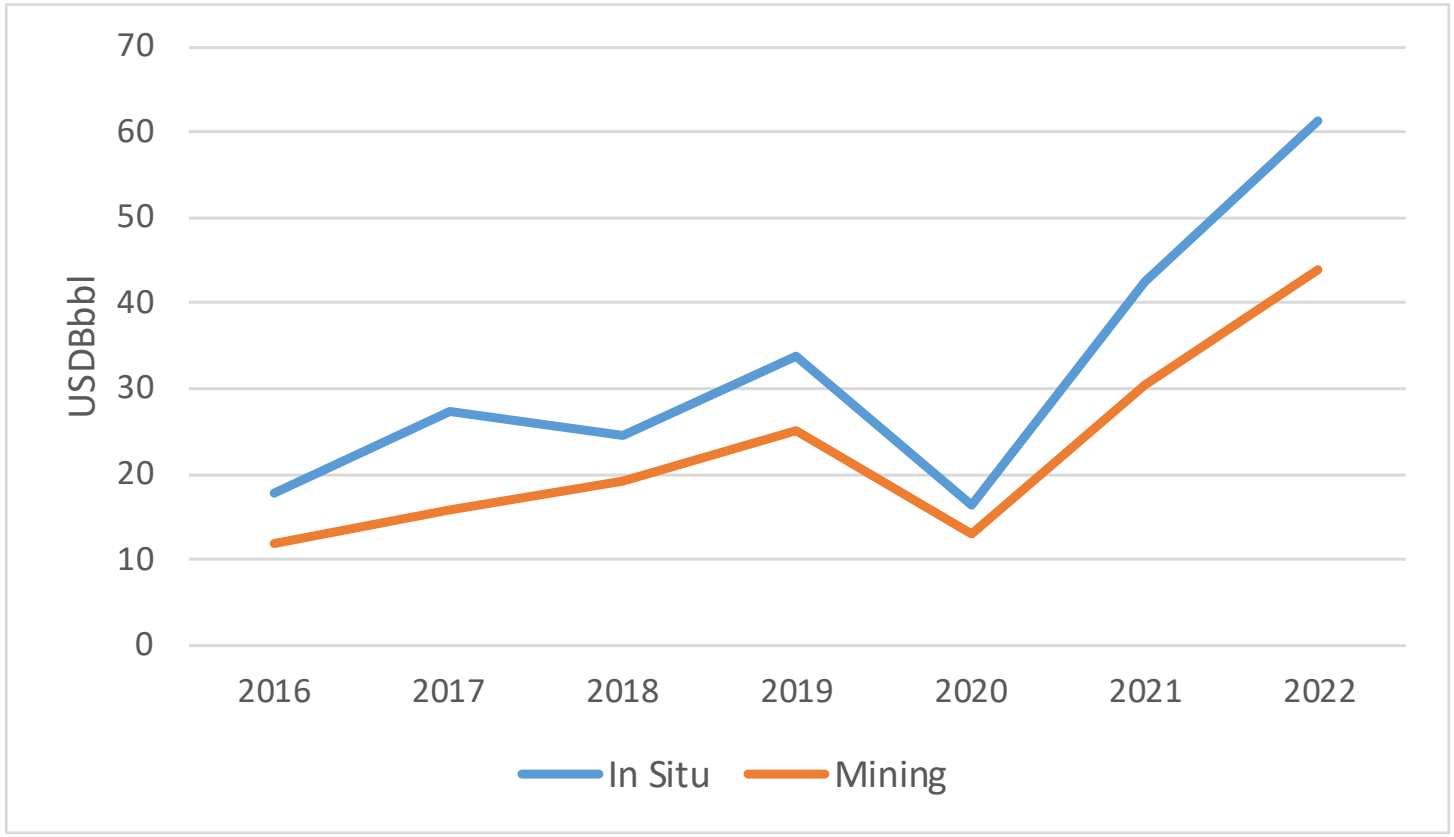
OIL SANDS WEIGHTED GROSS REVENUE PER BARREL 2016-2022



Source: Alberta Oil Sands Royalty Data, 2022
Alberta Oil sands project data, 2022
Alberta Energy Regulator Plants and Facilities, 2023

Since 2016, mining had lower weighted gross revenue per barrel compared to in situ.

In Situ: Weighed gross revenue for in situ has increased from 17 USD/Bbl in 2016 to over 60 USD/Bbl in 2022. Despite the notable fluctuation in revenue, especially during the Covid pandemic year of 2020, there is an overall upward trend in revenue increasing significantly in 2021 and 2022.

Mining: Weighed gross revenue for mining grew from 11 USD/Bbl in 2016 to 43 USD/Bbl in 2022. Like in situ, revenue fluctuates from year to year but shows an upward trend, again showing the fastest growth in 2021 and 2022.

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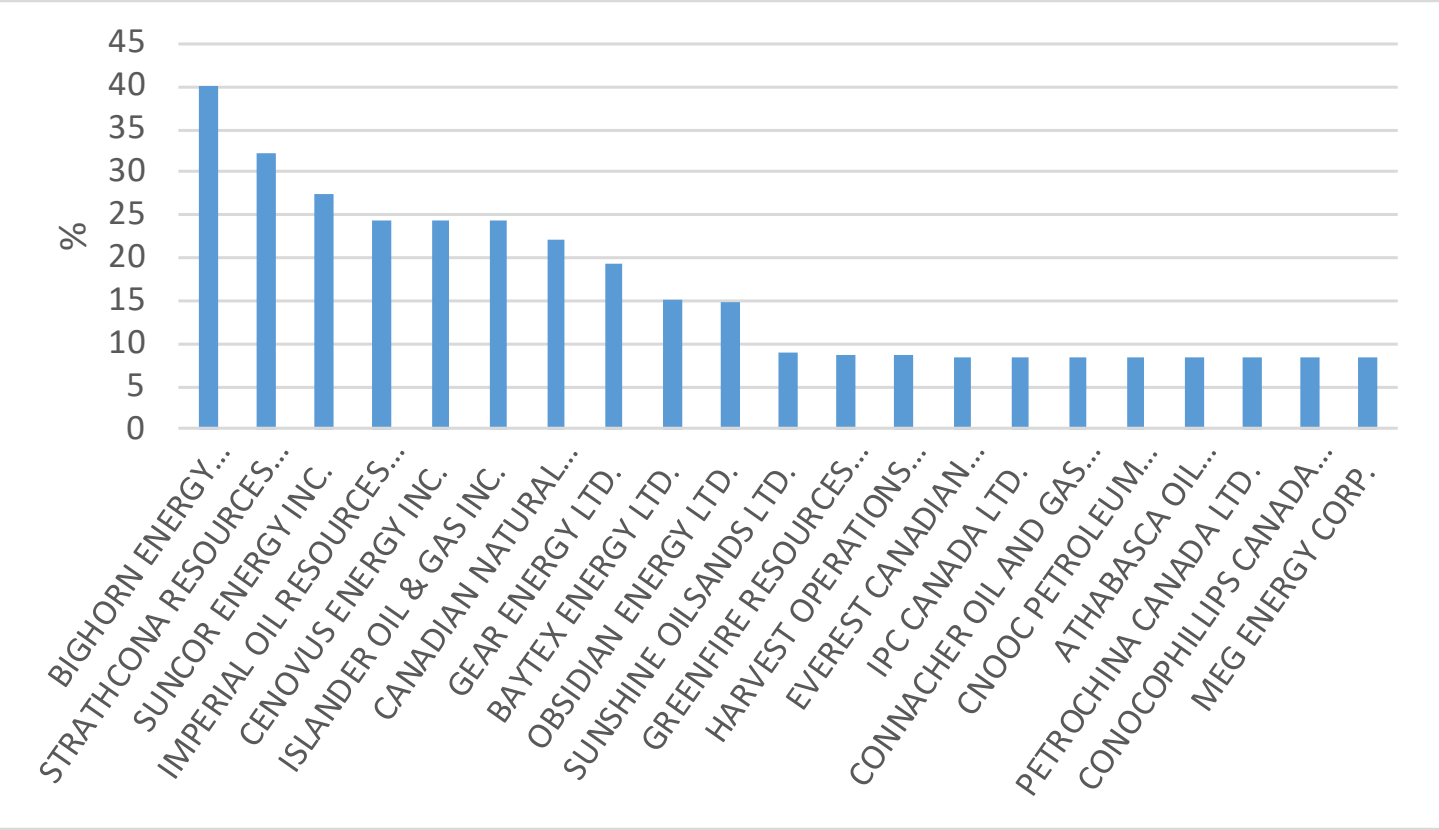
ROYALTY RATE PER COMPANY 2022



Source: Alberta Oil Sands Royalty Data, 2022
Alberta Oil sands project data, 2022
Alberta Energy Regulator Plants and Facilities, 2023

Royalty rates represent the percentage of revenue that companies pay to the government and/or landowners for the right to extract oil.

- Bighorn Energy has the highest royalty rate of all producers at 40.0%. Strathcona Resources (32.1%) and Suncor Energy (27.5%) round out the top 3.
- The next 4 range from a high of 24.3% (Imperial Oil) to 22.2% (CNRL).
- Rounding out the top 10 shows Gear Energy with a royalty rate of 19.3% down to 14.8% for Obsidian Energy.
- All others have the lowest royalty rates ranging from 8.4% to 8.80% indicating a uniformity in lower royalty rates among these companies.

Royalty rates differ among different companies reflecting different contractual agreements with government authorities and/or landowners for resource extraction rights.

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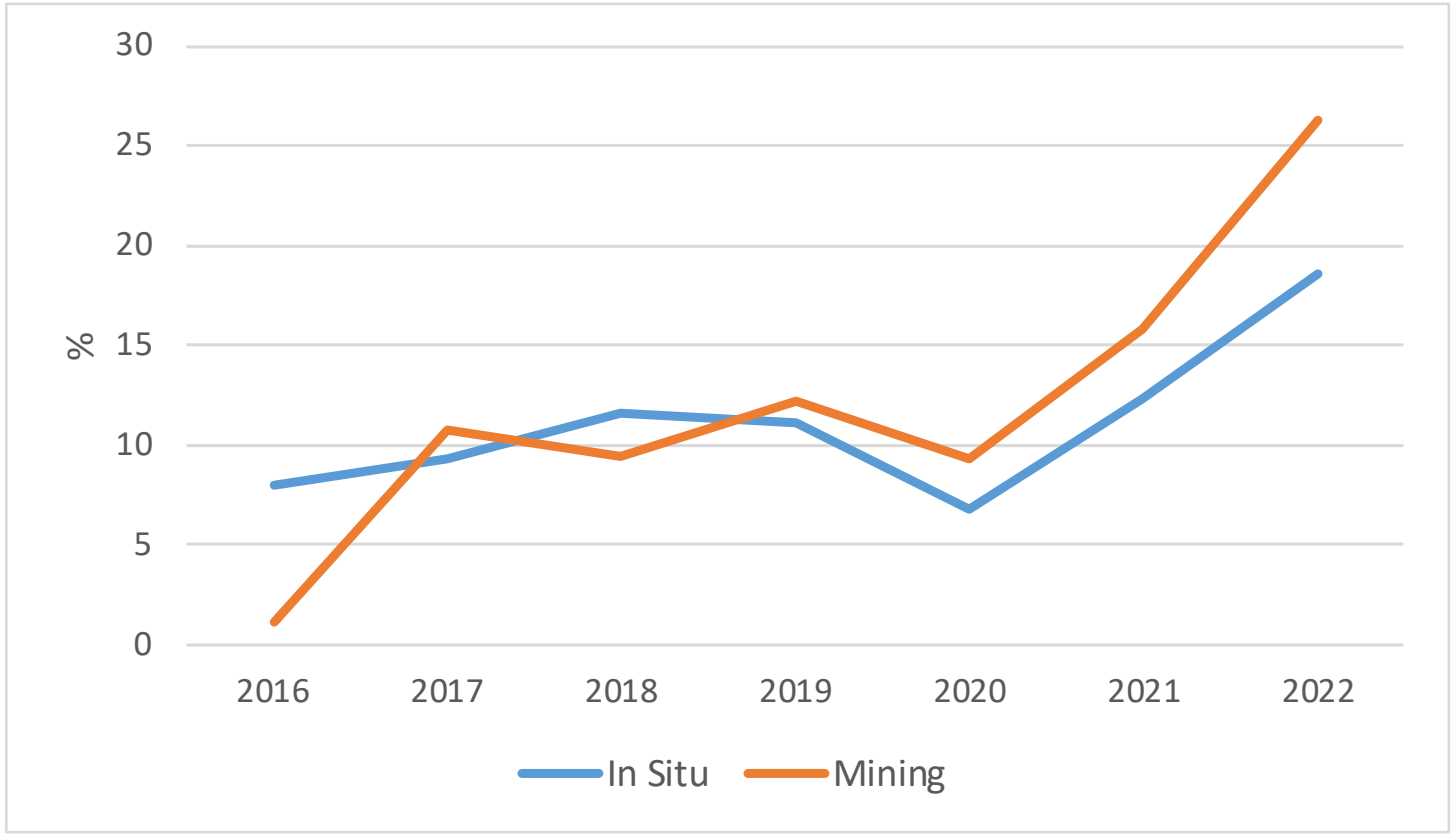
OIL SANDS ROYALTY BY PROJECT TYPE 2016-2022



Source: Alberta Oil Sands Royalty Data, 2022
Alberta Oil Sands Project Data, 2022
Alberta Energy Regulator Plants and Facilities, 2023

Breaking the royalty rates down further by project type (in situ and mining) yields these observations:

- **In Situ**: Royalty rates increased from 8.0% in 2016 to 18.6% in 2022. Despite year-over-year fluctuations, especially in the 2020 Covid pandemic year, royalty rates have been trending higher with the largest increases seen in 2021 and 2022.
- **Mining**: Royalty rates began at a mere 1.2% in 2016 and have increased to over 26% in 2022. Like in situ projects, despite annual fluctuations, royalty rates have been trending higher and at a considerably faster rate than in situ.

Alberta oil sands royalty rates are lower before payout than after payout. Growth of royalty rates reflect that fact that many oil sands projects reached payout.

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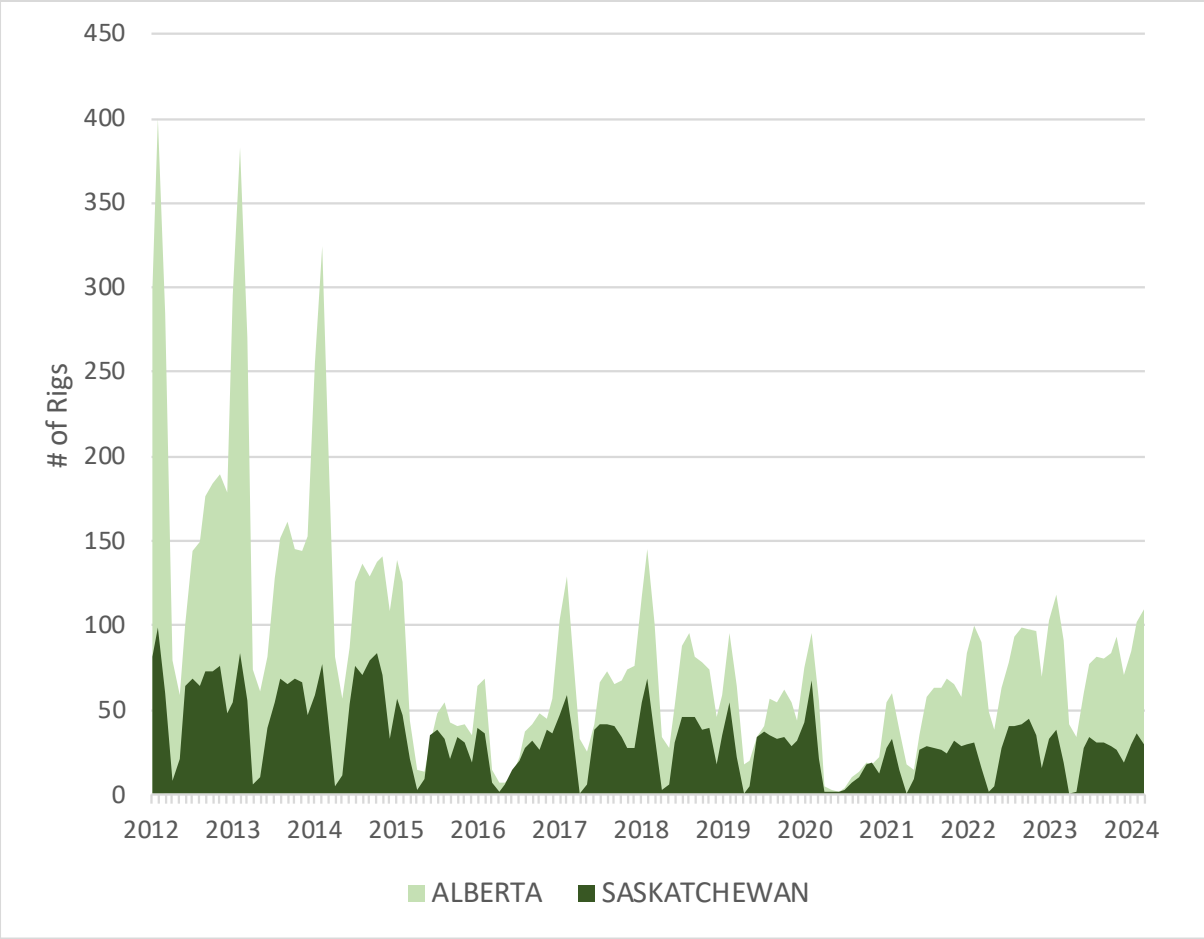
CANADIAN OIL RIG COUNT PER PROVINCE



Source: Baker Huges North America Rig Count, 2024

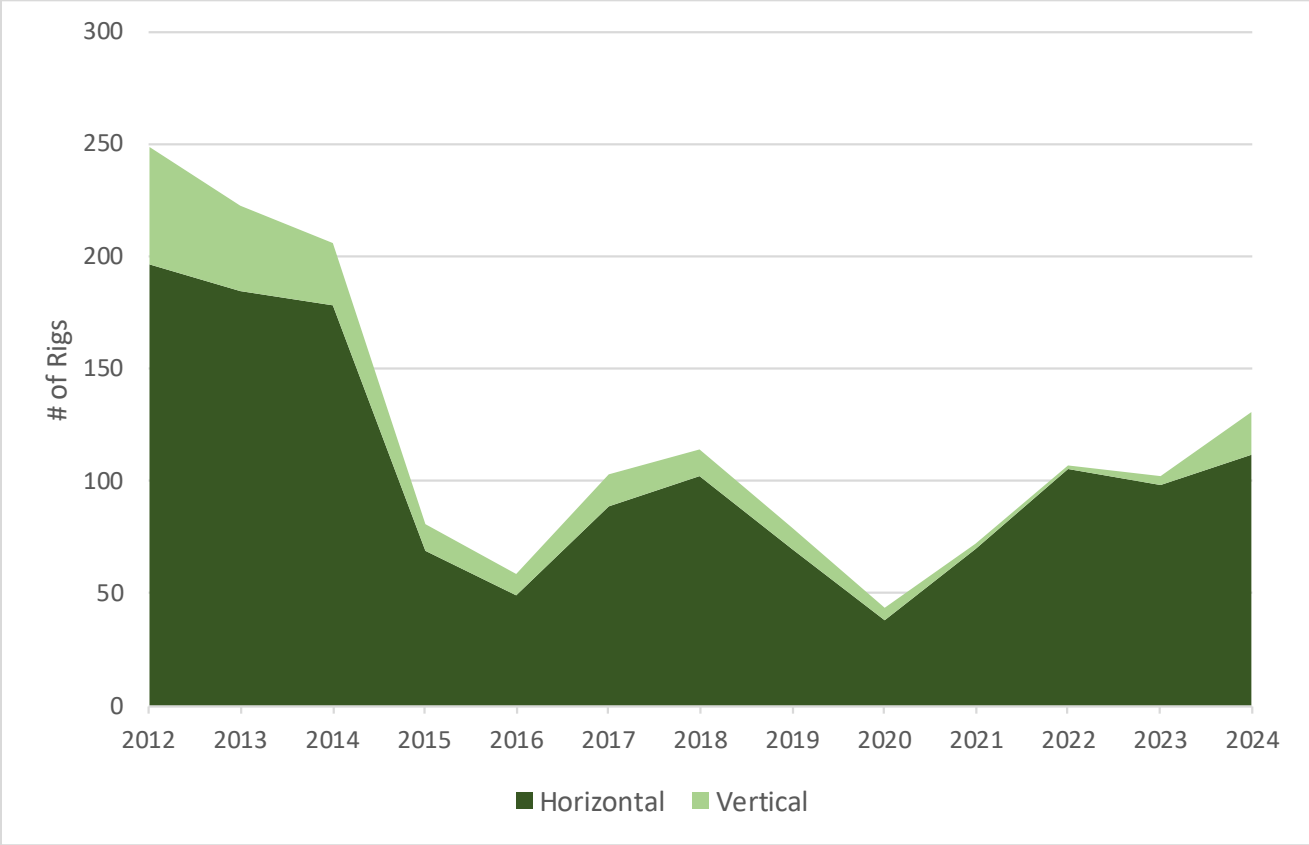
Canadian oil drilling activity is primarily centered in Alberta and Saskatchewan and is heavily influenced by prevailing market conditions and prices.

Alberta accounted for about 70% of the total annual average rig count vs 30% Saskatchewan.

Alberta recorded an average of 187 active rigs in 2012 and the count decreased steadily to just 35 rigs in 2016. The average annual rig count has fluctuated between 30 and 80 in subsequent years to average about 70, with the exception of the 2020 pandemic year where just 27 rigs were recorded.

Saskatchewan has experienced a relatively stable oil rig count compared to Alberta. They averaged over 55 rigs from 2012-2015 before declining to an average of 30 rigs from 2016 through Q1 2024 (ranging from 24 to 36), excluding the 2020 pandemic year of just 17.

CANADIAN OIL RIG COUNT BY TRAJECTORY



The total annual rig count dropped from a high of 250 in 2012 to just 59 in 2016. The rig count recovered slightly in 2017 and 2018 before reaching a low of 44 in the 2020 pandemic year. It has since recovered to 130 rigs in Q1 2024.

Horizontal drilling has been the primary focus as it results in higher well productivity and recoverable oil per well. After averaging about 85% of the total rig count from 2012 through 2020, horizonal drilling has averaged 95% since 2021.

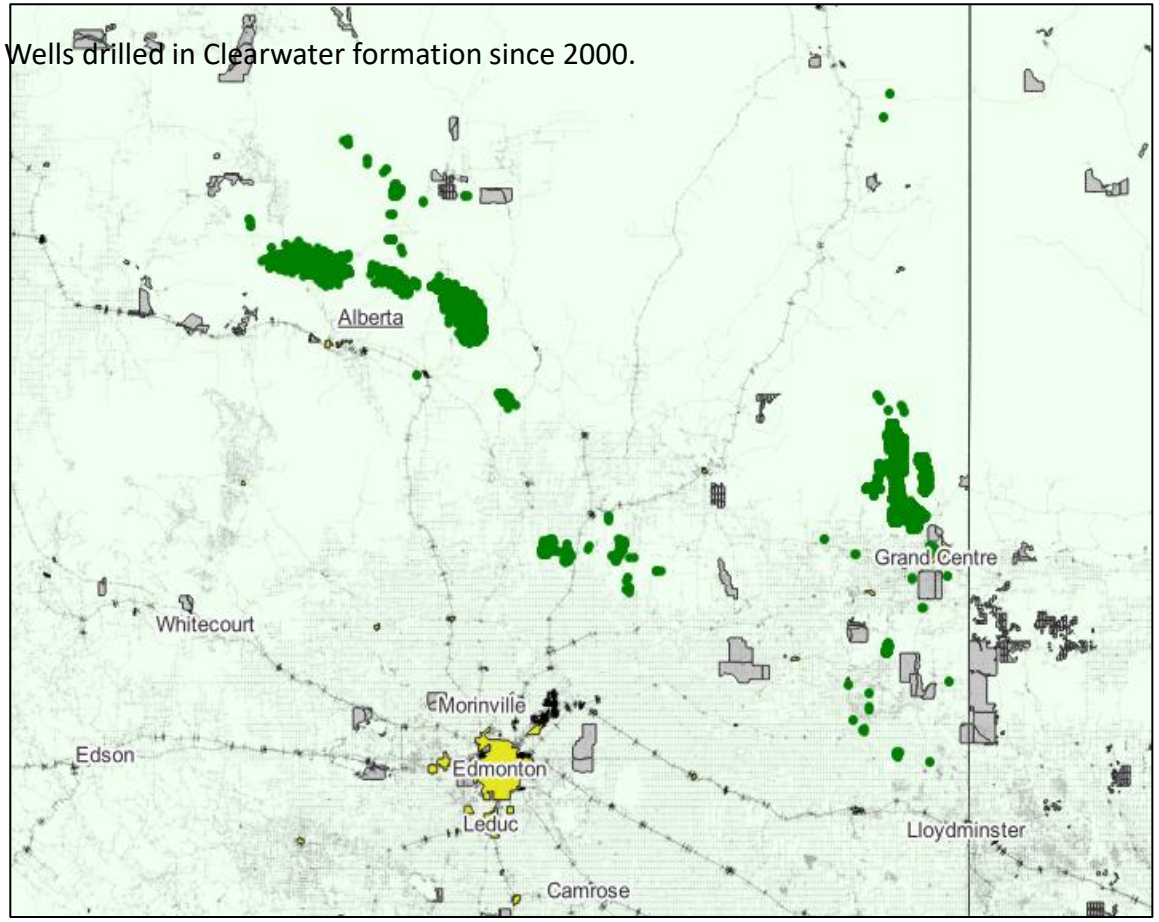
The vertical rig count has declined from about 20% of the total in 2012 to just 2% in 2022. There has been a slight improvement in Q1 2024.

Note: Some vertical production wells could still be drilled in some areas. These vertical wells will have lower F&D cost per unit of production ($/Bbl) than horizontals wells, which could potentially be drilled at the same location.

Source: Baker Huges North America Rig Count, 2024

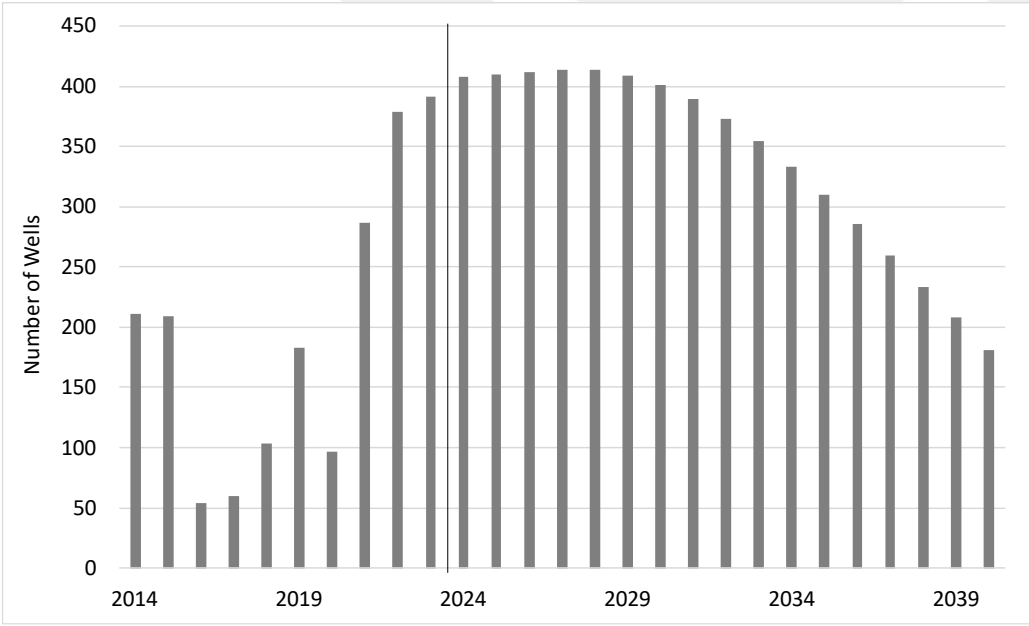
CLEARWATER OIL WELL LOCATIONS AND DRILLING

Wells drilled in Clearwater formation since 2000.



Location: Alberta
Number of oil wells drilled since 2010: ~ 2,600
Average New Well Initial Productivity in 2023: 320 Bbl/d
Peak Production: 2012 (520 MBbl/d)

Number of New Wells



- The number of new wells in the Clearwater formation increased significantly from under 100 in 2020 to almost 400 in 2023.
- Incorrys is forecasting the number of new wells to grow slowly and peak at about 415 wells in 2027 before declining to under 200 in 2040.

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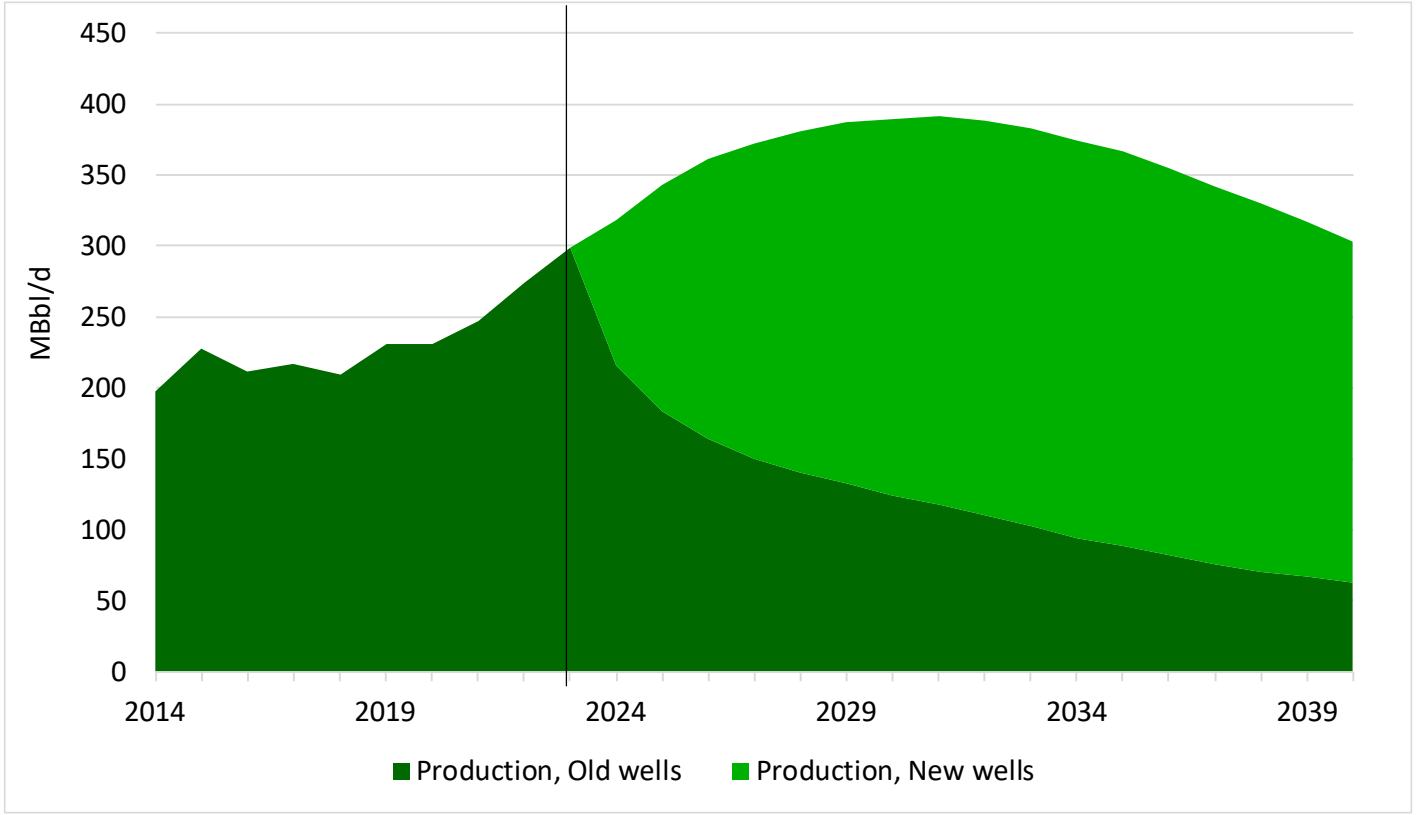
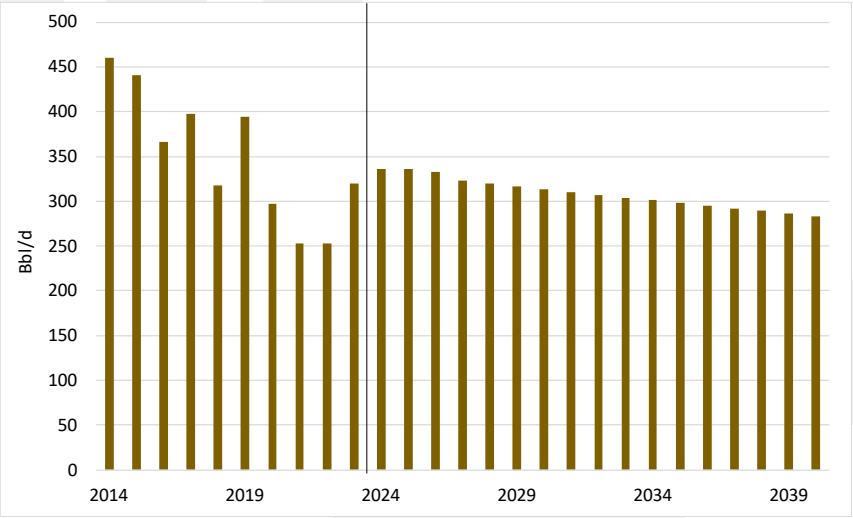
CLEARWATER OIL PRODUCTION

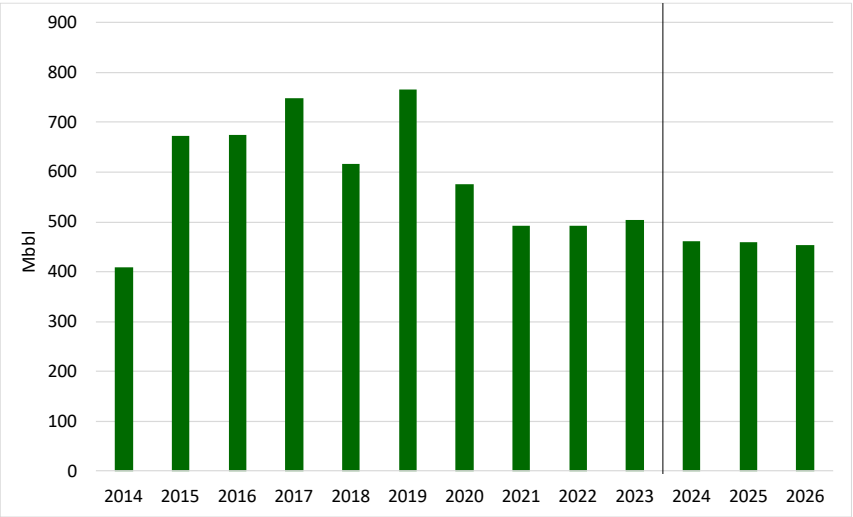


- Clearwater oil production grew from about 200,000 Bbl/d in 2014 to 300,000 Bbl/d in 2023. Incorrys is forecasting production to continue to grow post 2023 peaking at over 390,000 Bbl/d in 2031 before declining to 2023 levels by 2040.
- Well Initial Productivity (IP) dropped from over 450 Bbl/d in 2014 to about 320 Bbl/d in 2023. Initial productivity is expected to increase further in 2024 before declining to under 300 Bbl/d by 2040.
- Well Estimated Ultimate Recovery (EUR) peaked at over 760 MBbl in 2019 before dropping to about 500 MBbl over the past few years. Incorrys is forecasting well EUR to stabilize at about 460 MBbl post 2023.

Crude Oil Well Initial Productivity (IP)



Well Estimated Ultimate Recovery (EUR)



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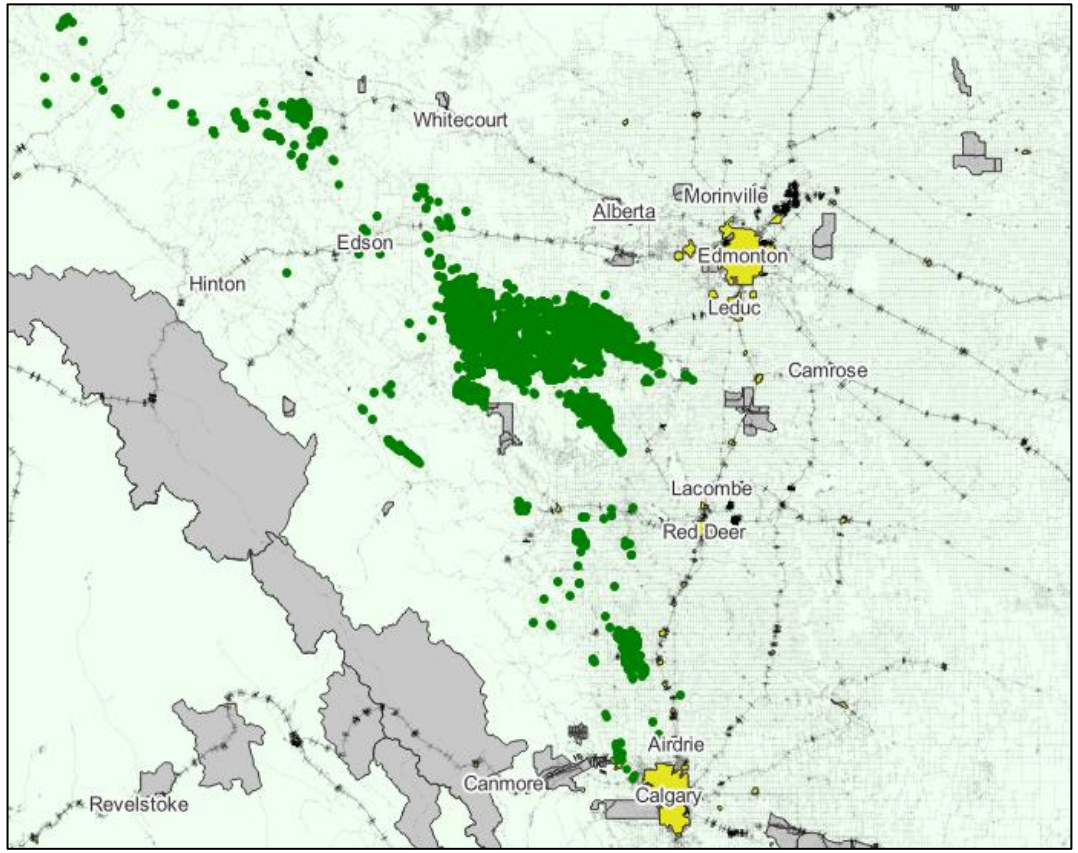
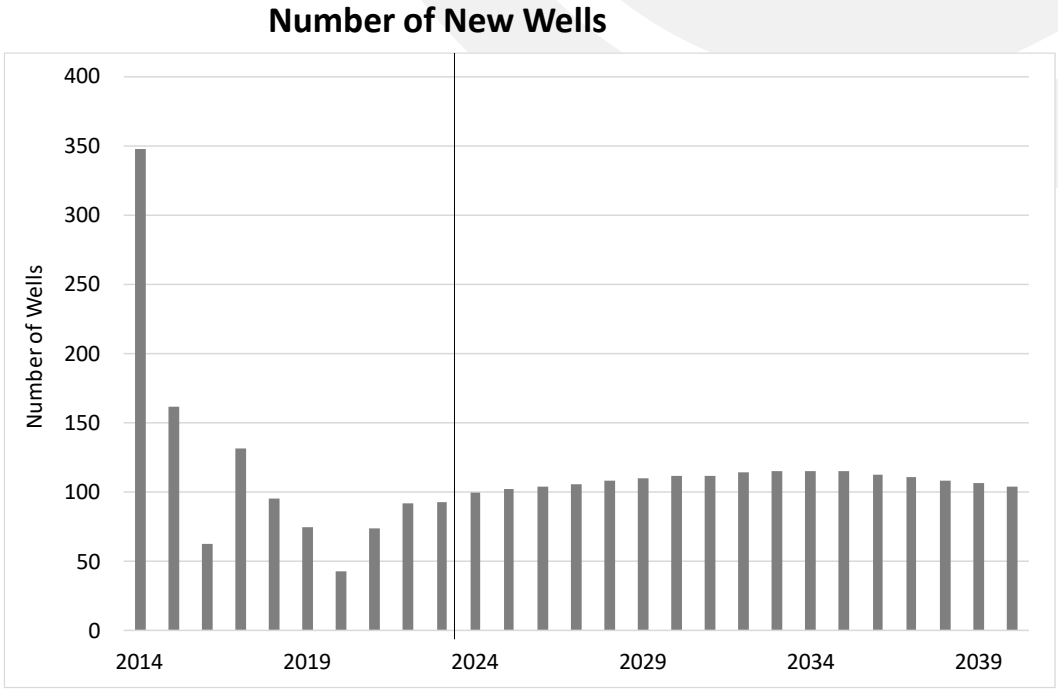
CARDIUM OIL

The map shows all wells drilled in various Cardium formations (Cardium A, B, …) since 2000.



* Commingled wells are not shown

Location: Alberta
Number of oil wells drilled since 2010: ~ 2,900
Average New Well Initial Productivity in 2023: 182 MBbl/d
Peak Production: 2012 (221 MBbl/d)



- The number of new wells in the Cardium formation dropped from 350 in 2014 to just under 100 over the past couple of years.
- Incorrys is forecasting the number of new wells to grow slowly to 115 by 2033 before declining slightly to 104 in 2040.

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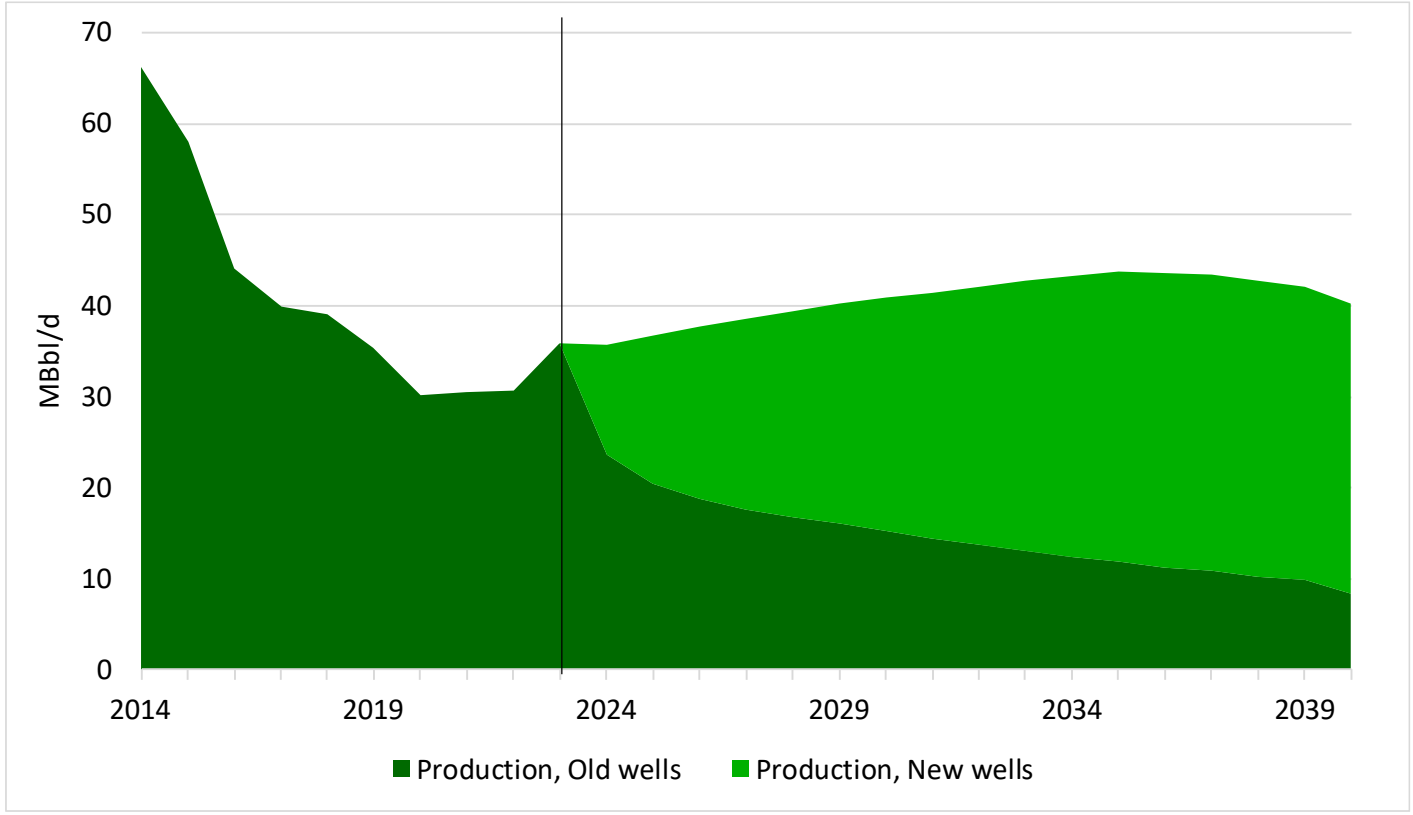
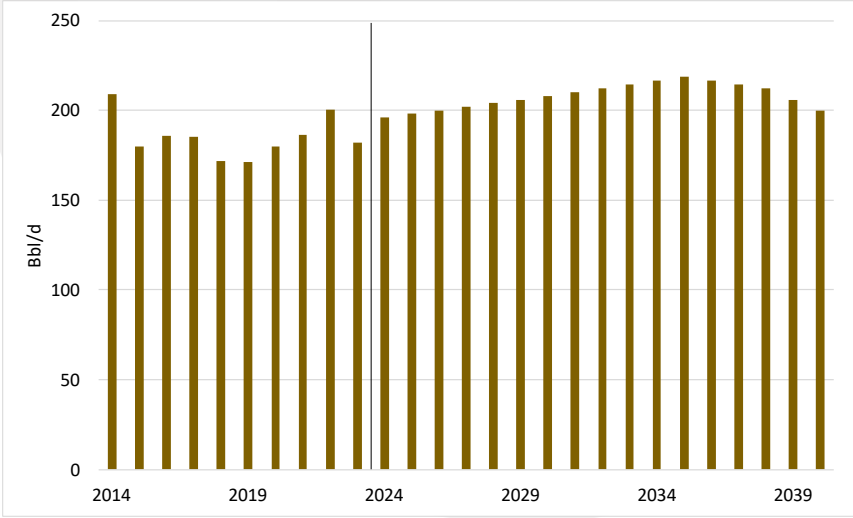
CARDIUM OIL PRODUCTION

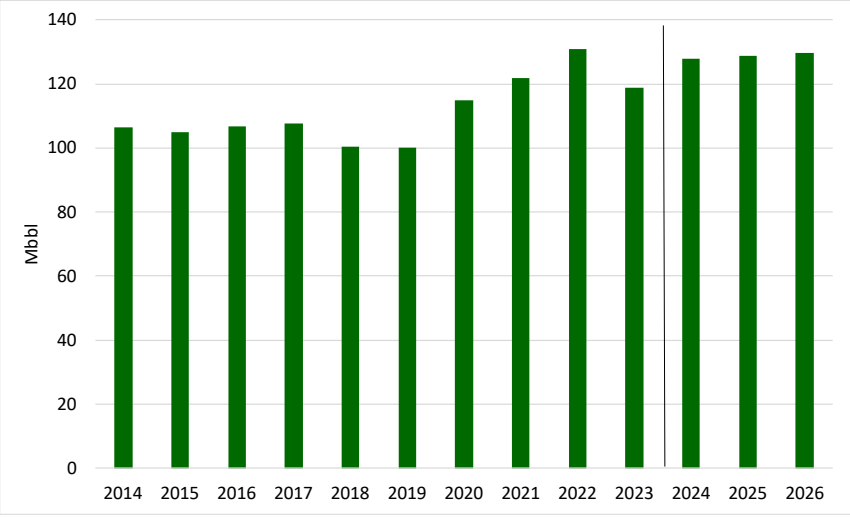


- Oil production from the Cardium declined from about 65,000 Bbl/d in 2014 to 36,000 Bbl/d in 2023. Incorrys is forecasting production to grow post 2023 to almost 45,000 Bbl/d before declining to 40,000 Bbl/d in 2040.
- Oil Well Initial Productivity (IP) dropped from 220 Bbl/d in 2014 to about 180 Bbl/d in 2023. Initial productivity is expected to grow post 2023 to 220 Bbl/d by 2035, declining to 200 Bbl/d by 2040.
- Well EUR averaged just over 100 MBbl between 2014 to 2019 and has since increased 120 MBbl er the past few years. Incorrys is forecasting well EUR to stabilize at about 130 MBbl post 2023.

Crude Oil Well Initial Productivity (IP)



Well Estimated Ultimate Recovery (EUR)



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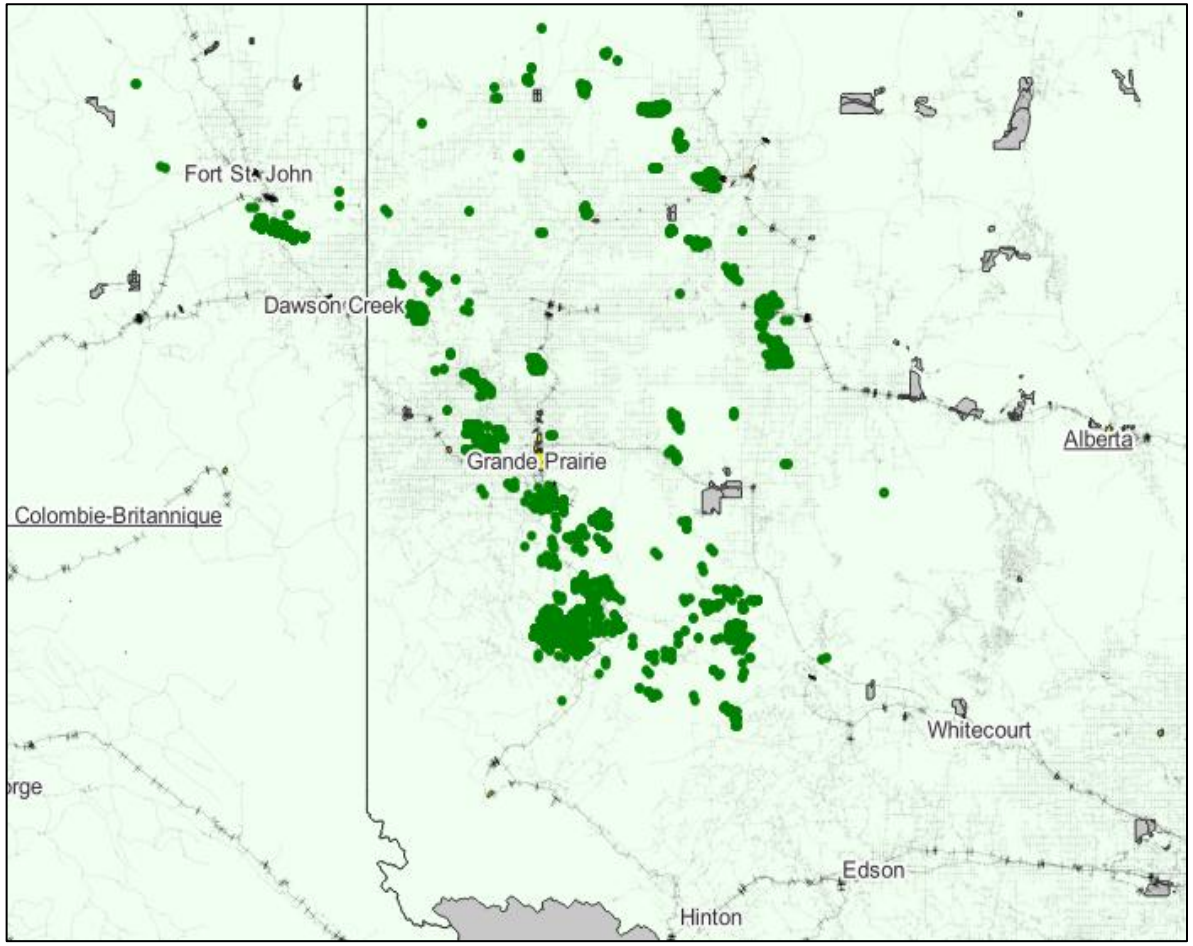
MONTNEY OIL WELLS

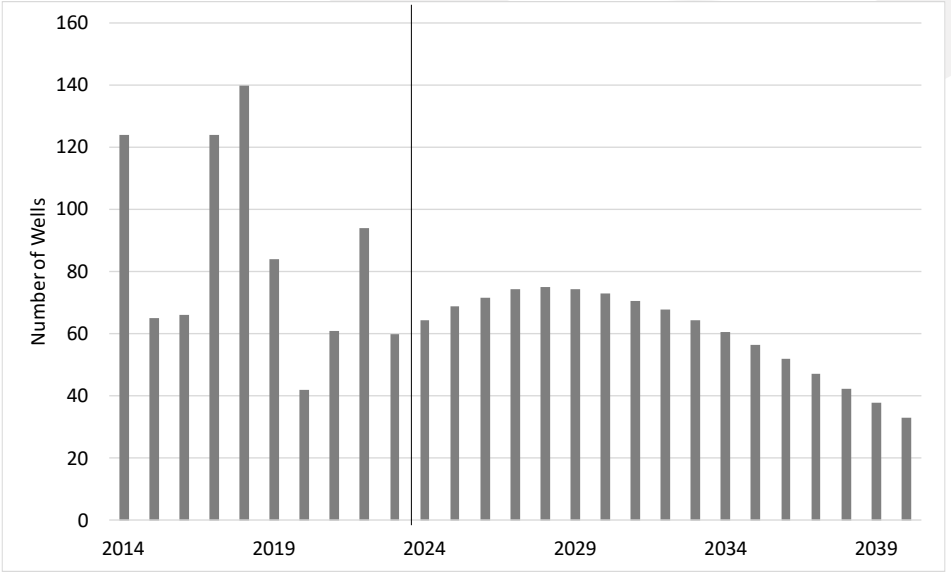
Wells drilled in the Montney formation since 2000.



- Wells classified as oil and volatile oil are shown and analyzed.
- Wells classified as condensate and commingled wells are not shown.

Location: Alberta, British Columbia
Number of oil wells drilled since 2010: ~ 1,200
Average New Well Initial Productivity in 2023: 710 Bbl/d
Peak Production: 2020 (819 MBbl/d)

Number of New Wells



- The number of new wells in the Montney formation increased significantly from under 100 in 2020 to almost 400 in 2023.
- Incorrys is forecasting the number of new wells to grow slowly and peak at about 415 wells in 2027 before declining to under 200 in 2040.

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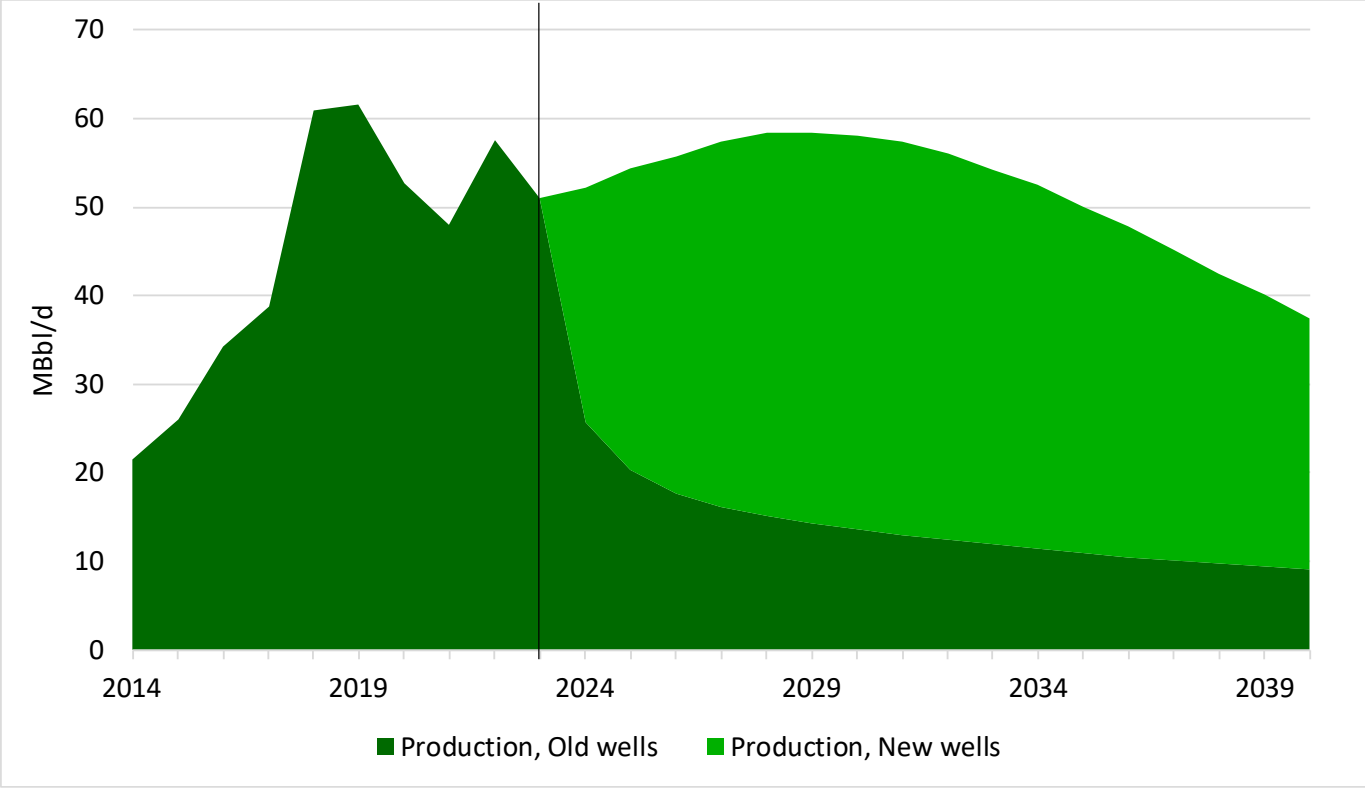
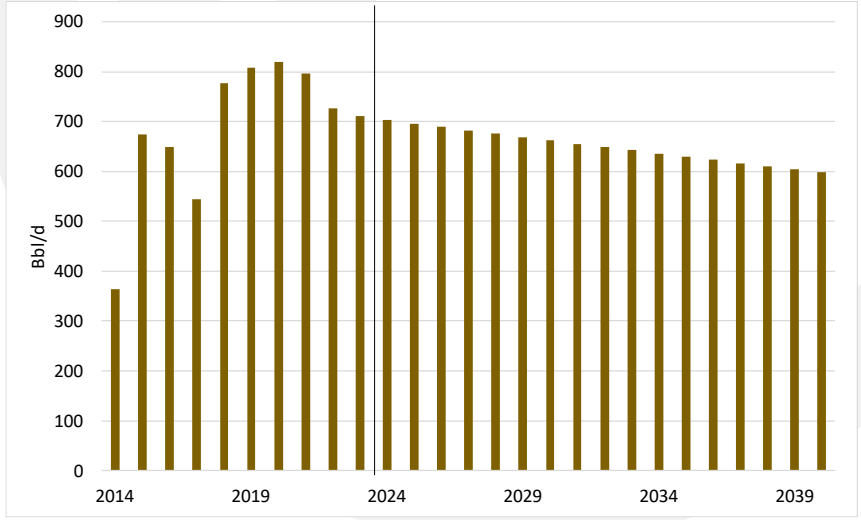
MONTNEY OIL PRODUCTION

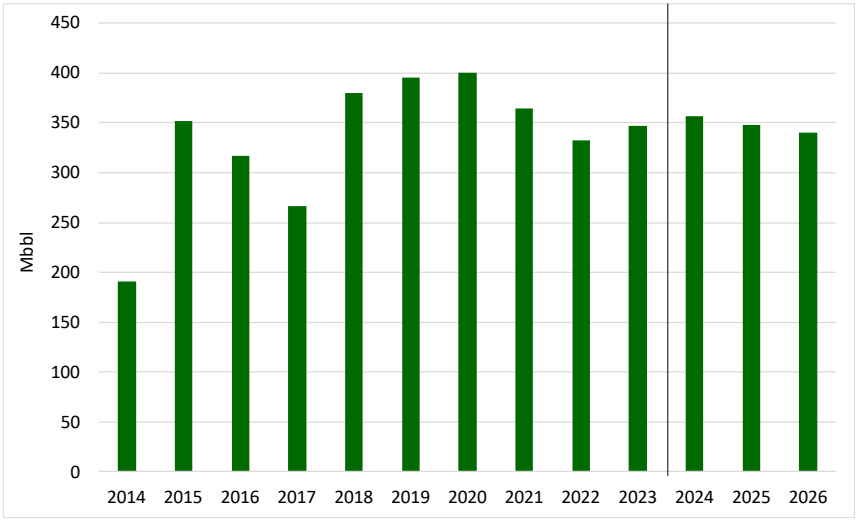


- Montney oil production grew from about 20,000 Bbl/d in 2014 to over 50,000 Bbl/d in 2023. Incorrys is forecasting production to continue to grow post 2023 peaking at almost 60,000 Bbl/d by 2028 before declining to 37,000 Bbl/d in 2040.
- Well Initial Productivity (IP) dropped from over 820 Bbl/d in 2020 just over 700 Bbl/d in 2023. Initial productivity is expected to gradually decline post 2023 to about 600 Bbl/d by 2040.
- Well EUR peaked at 400 MBbl in 2020 before dropping to about 350 MBbl in 2023. Incorrys is forecasting well EUR to decline slightly from over 350 MBbl in 2024 to 340 MBbl in 2026.

Crude Oil Well Initial Productivity (IP)



Well Estimated Ultimate Recovery (EUR)



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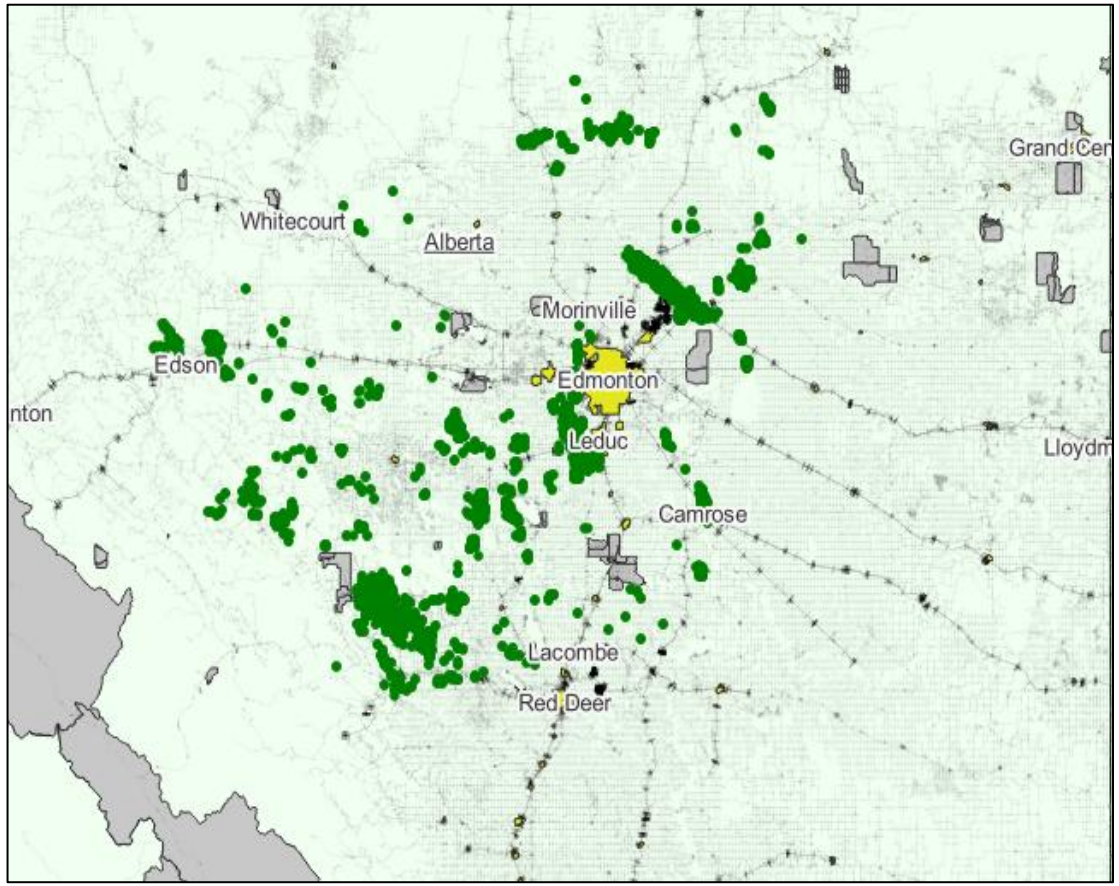
ALBERTA CENTRAL OIL WELLS

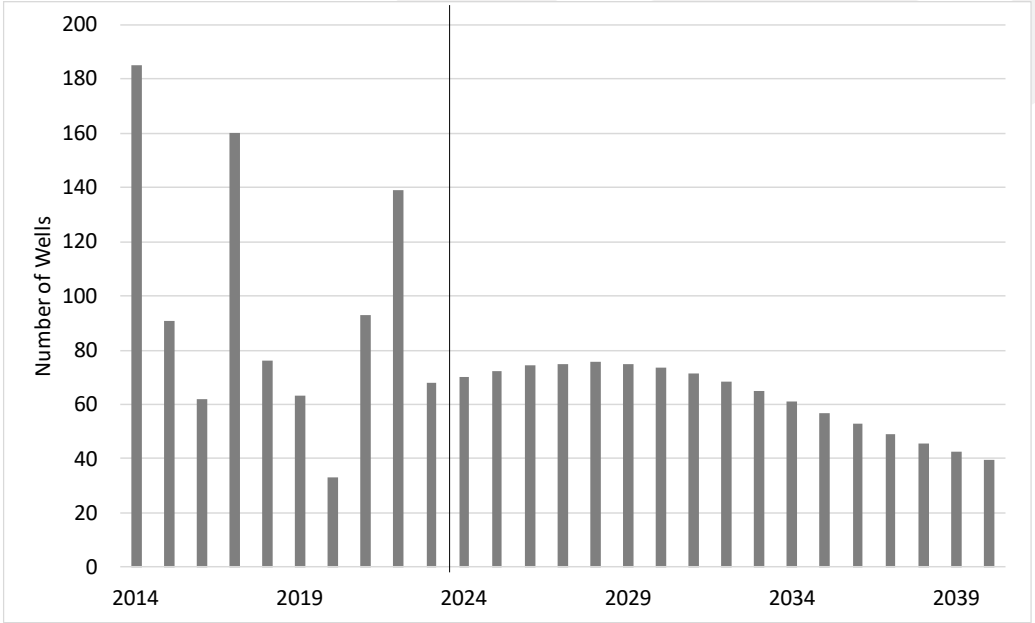
Map shows wells drilled in Alberta Central area since 2000.



- Well targeting Montney, Duvernay, and Clearwater formations are analyzed separately.
- Commingled wells are included
- Other formations included: Upper Mannville, Belly River, Viking, Glauconitic, Rock Creek, Sparky, Blueridge, and others

Location: Alberta
Number of oil wells drilled since 2010: ~ 1,700
Average New Well Initial Productivity in 2023: 219 Bbl/d
Peak Production: 2018 (323 MBbl/d)

Number of New Wells



- The number of new wells in the Alberta Central region dropped from over 180 in 2014 to almost 70 in 2023.
- Incorrys is forecasting the number of new wells to grow slowly and peak at about 76 wells in 2028 before declining to about 40 in 2040.

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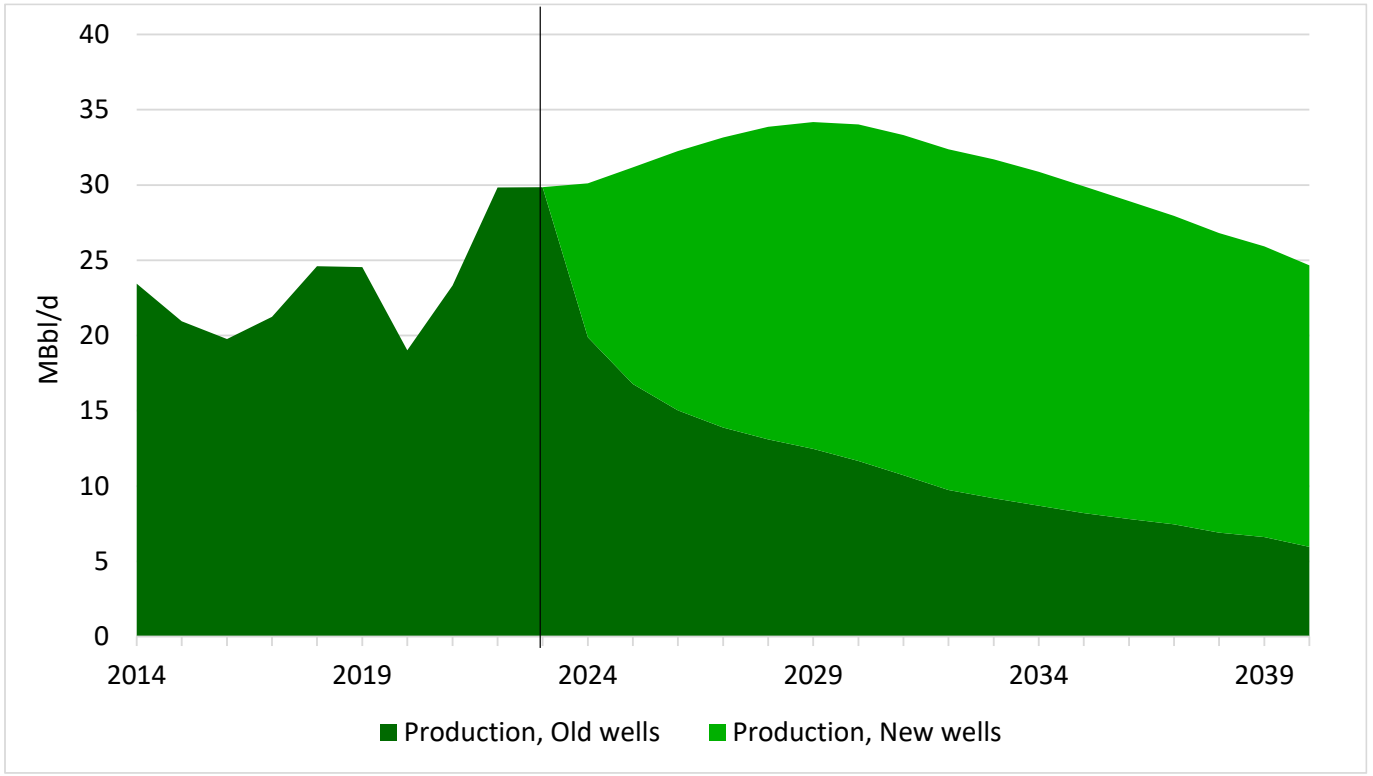
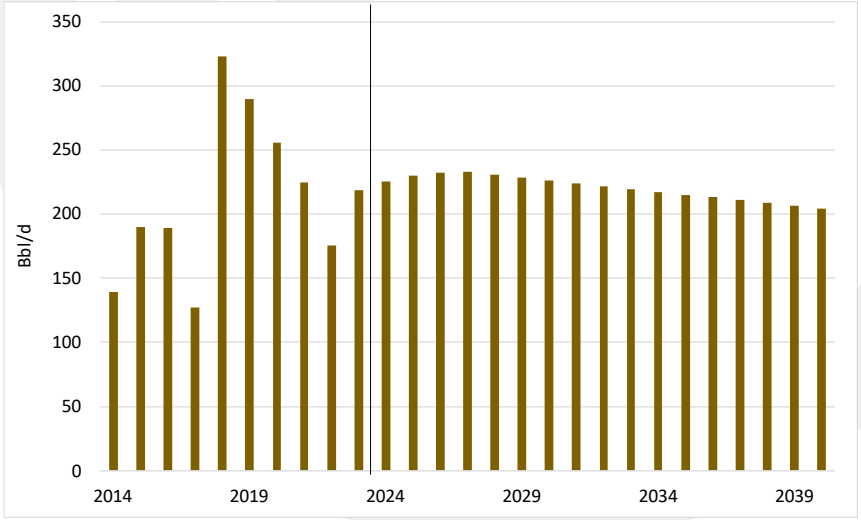
ALBERTA CENTRAL OIL PRODUCTION

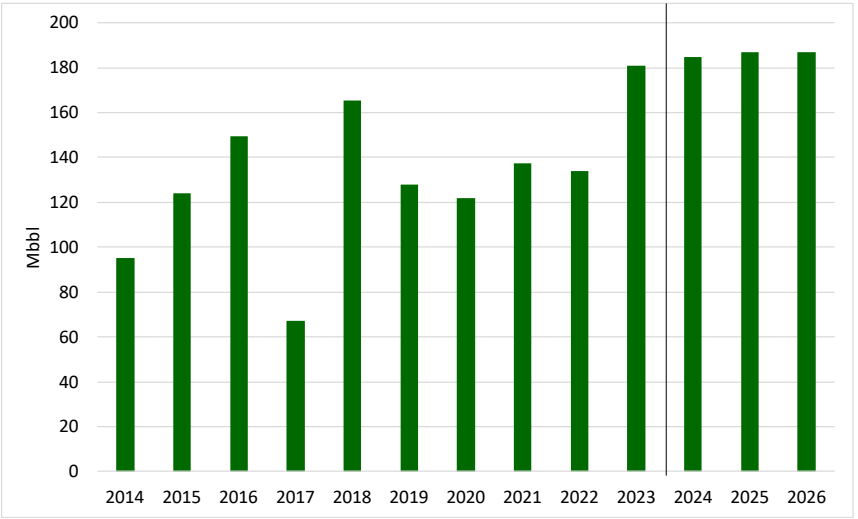


- Alberta Central oil production grew from about 23,000 Bbl/d in 2014 to 30,000 Bbl/d. Incorrys is forecasting production to continue to grow post 2024 peaking at 34,000 Bbl/d by 2028 before declining to under 25,000 Bbl/d in 2040.
- Well Initial Productivity (IP) dropped from over 320 Bbl/d in 2018 to 220 Bbl/d in 2023. Initial productivity is expected to grow to almost 235 Bbl/d by 2027 before declining to 205 Bbl/d in 2040.
- Well EUR grew from less than 100 MBbl in 2014 to 180 MBbl in 2023. Incorrys is forecasting well EUR to average about 185 MBbl over the next 3 years.

Crude Oil Well Initial Productivity (IP)



Well Estimated Ultimate Recovery (EUR)



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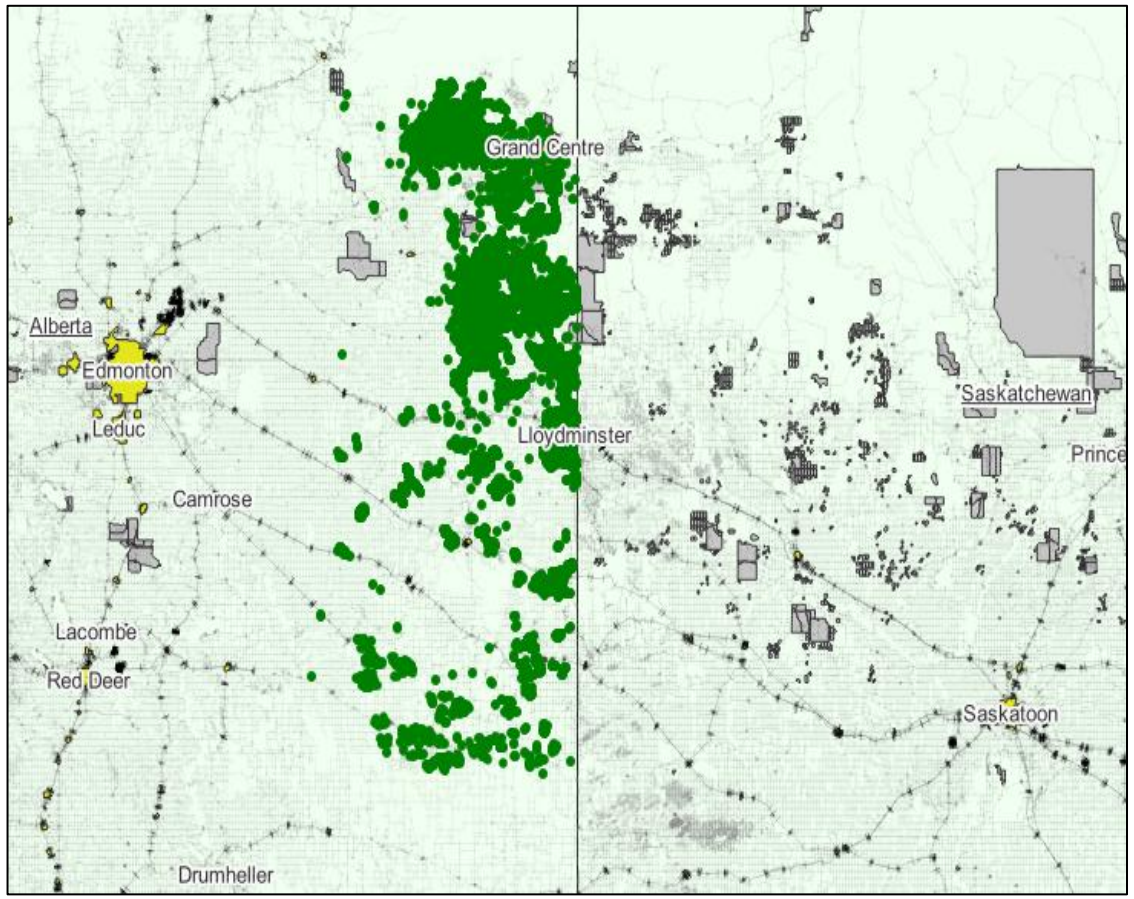
ALBERTA EAST HEAVY OIL

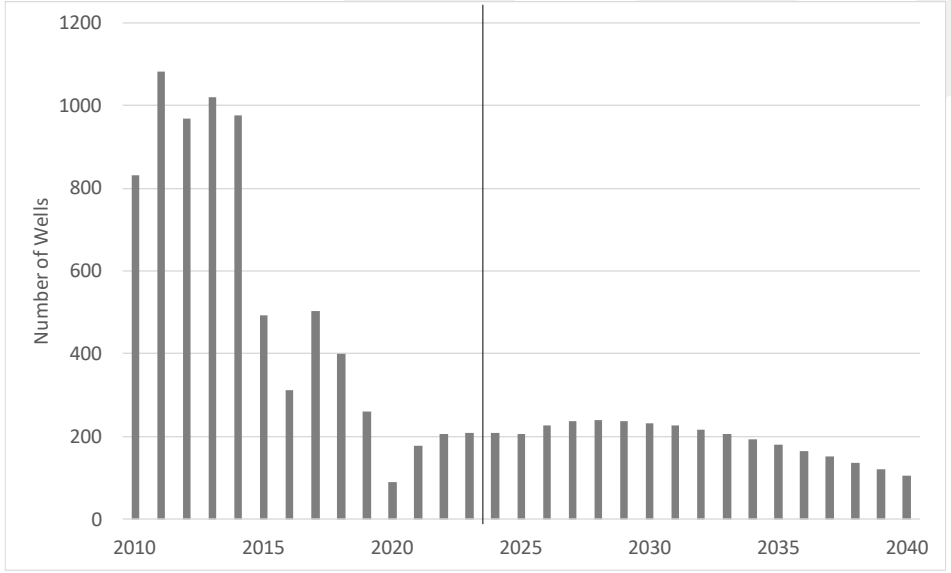
The map shows Heavy oil wells drilled in Eastern Alberta since 2000



- Wells targeting Clearwater formation are not included
- Wells classified as Bitumen are not included, however many heavy oil wells in this area are developed by thermal methods
- Commingled wells are included
- Other formations include Colony, Cummings, Sparky, Lower Grand Rapids and others

Location: Alberta
Number of oil wells drilled since 2010: ~ 7,500
Average New Well Initial Productivity in 2023: 112 Bbl/d
Peak Production: 2022 (118 MBbl/d)

Number of New Wells



- The number of new wells in the Alberta East Heavy oil region dropped from about 1000 wells 10 years ago to just 200 over the past couple of years.
- Incorrys is forecasting the number of new wells to grow slowly, reaching 240 wells in 2028 before declining to about 100 in 2040.

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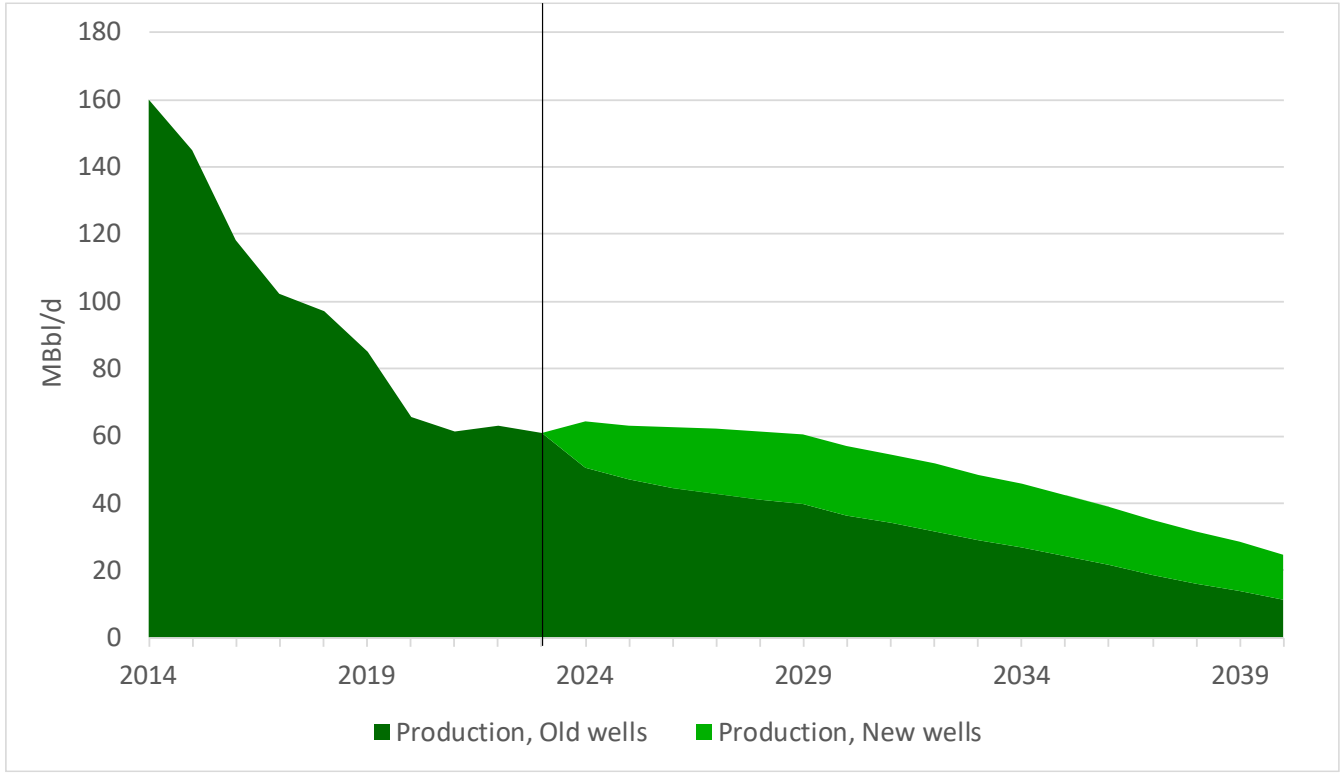
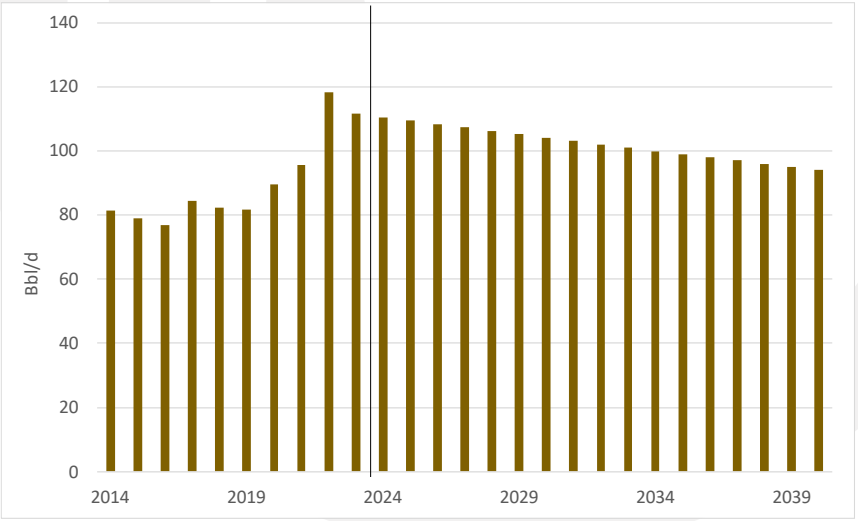
AB EAST HEAVY OIL PRODUCTION

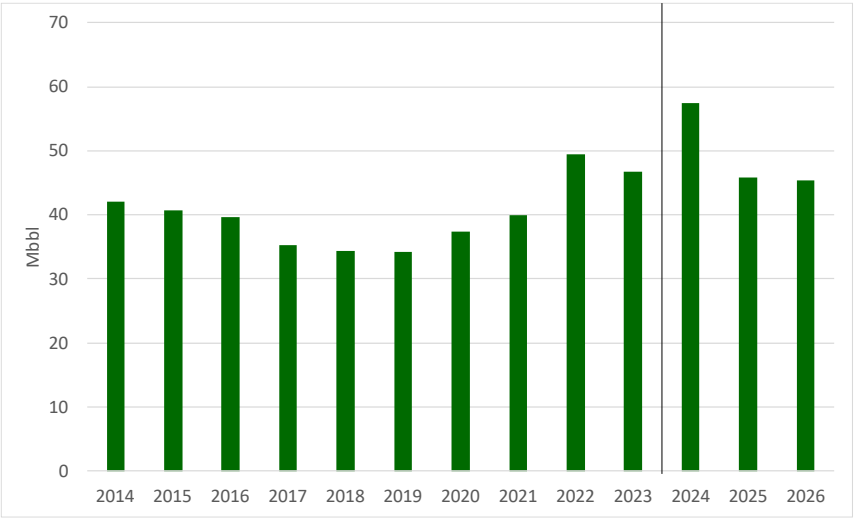


- Alberta East Heavy oil production has steadily declined from 160,000 Bbl/d in 2014 to about 60,000 Bbl/d in 2023. Incorrys is forecasting production to increase slightly in 2024 before declining to 25,000 Bbl/d in 2040.
- Well Initial Productivity grew from about 80 Bbl/d in 2014 to a high of almost 120 Bbl/d in 2022. Initial productivity declined into 2023 and is expected to gradually drop to under 100 Bbl/d by 2040.
- Well EUR declined from over 40 MBbl to under 35 MBbl from 2014-2019 before increasing to a high of 50 MBbl in 2022. Incorrys is forecasting well EUR to peak at almost 60 MBbl in 2024 before dropping to the 45 MBbl range in 2025 and 2026.

Crude Oil Well Initial Productivity (IP)



Well Estimated Ultimate Recovery (EUR)



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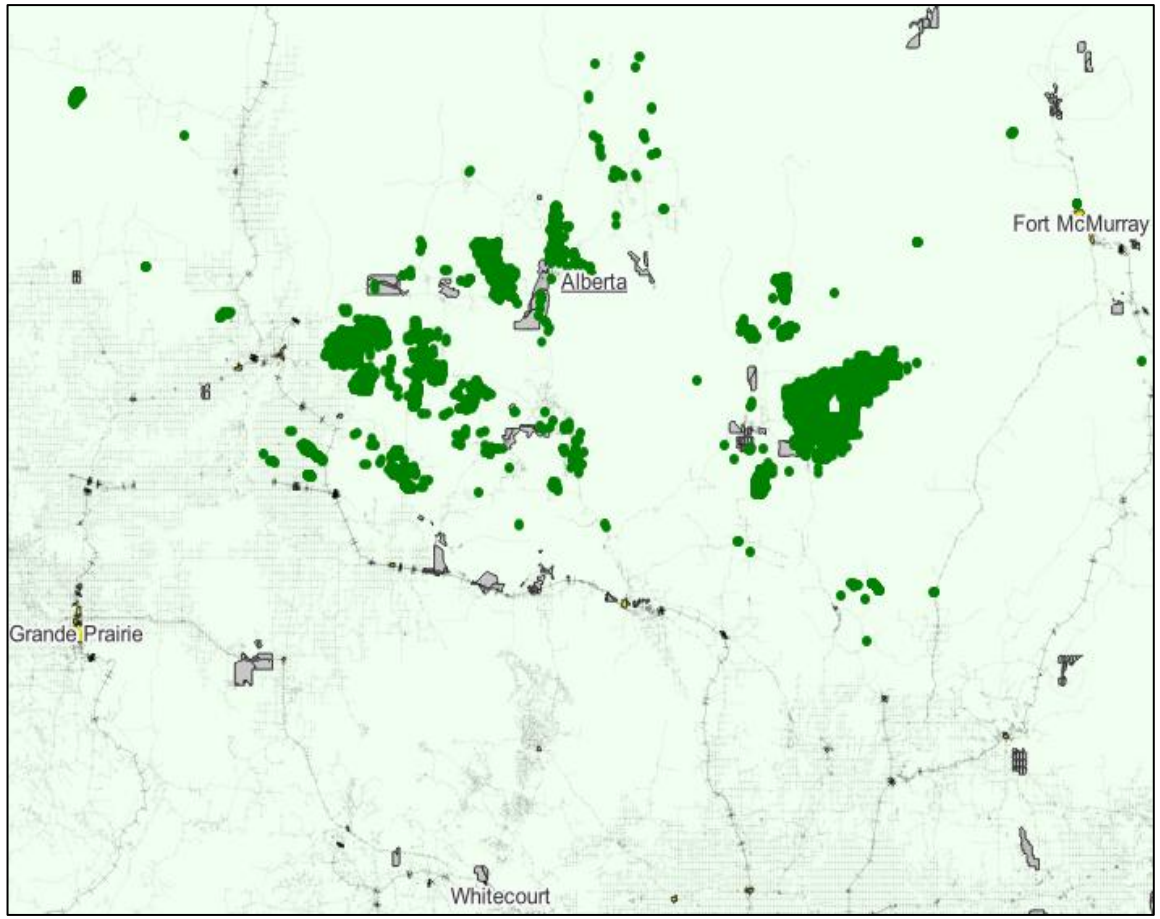
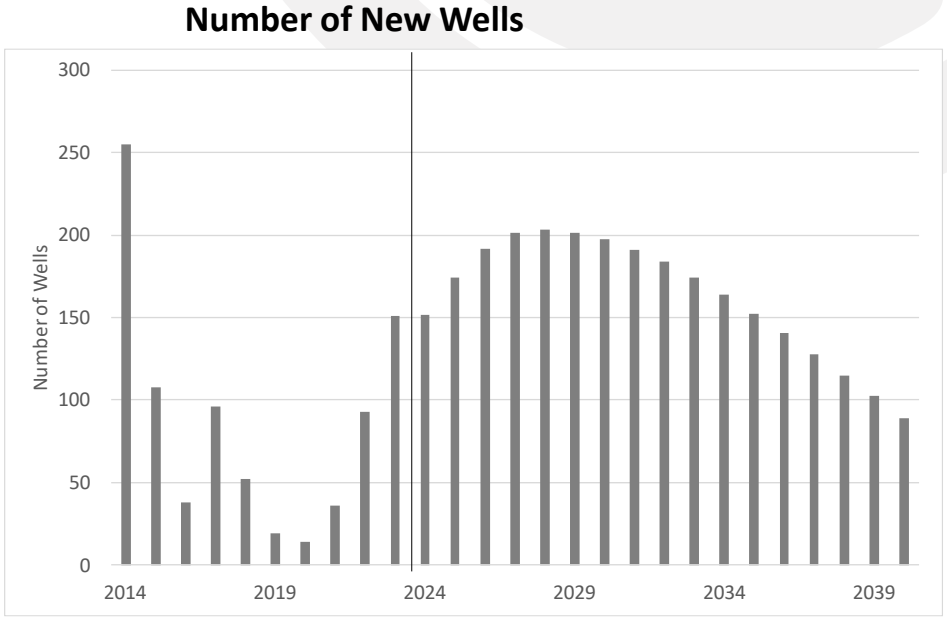
ALBERTA NORTH OIL WELLS

The map shows wells drilled in Alberta North area since 2000



- Wells targeting the Clearwater formation are not included
- Wells classified as Bitumen are not included
- Commingled wells are included
- Other target formations include Wabiskaw-McMurray, Pekisko, Keg River, Upper Grand Rapids, Bluesky-Getting, and others

Location: Alberta
Number of oil wells drilled since 2010: ~ 2,300
Average New Well Initial Productivity in 2023: 316 Bbl/d
Peak Production: 2022 (339 MBbl/d)



- The number of new wells in the Alberta North oil region dropped from 250 wells in 2014 a low of 15 in 2020 before rebounding to 150 in 2023.
- Incorrys is forecasting the number of new wells to increase to 200 by 2027 before declining to about 90 in 2040.

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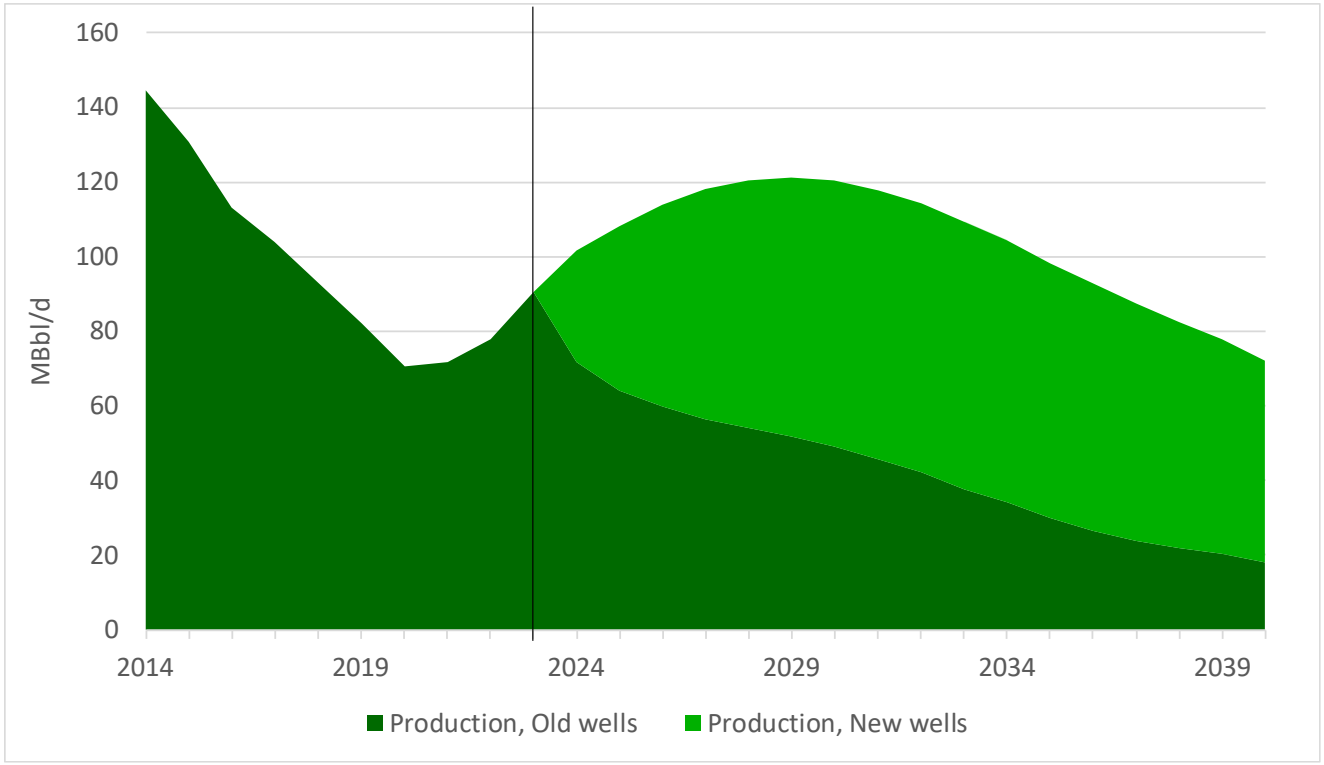
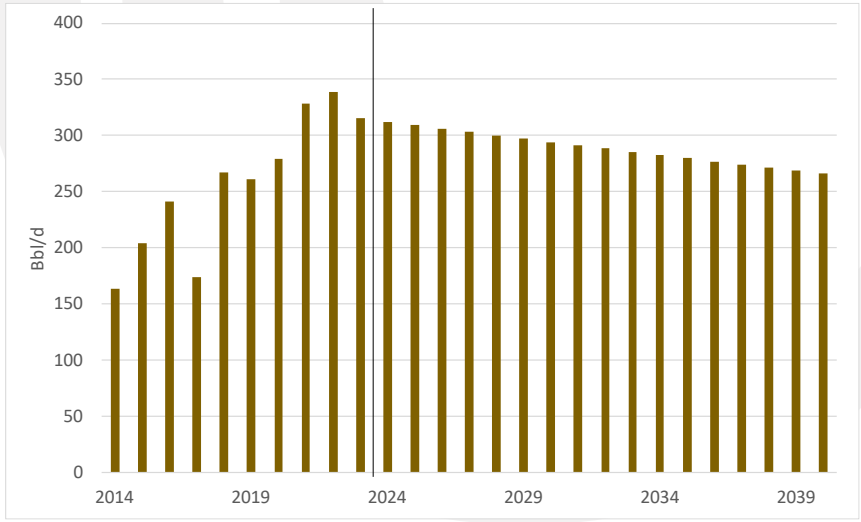
AB NORTH OIL PRODUCTION

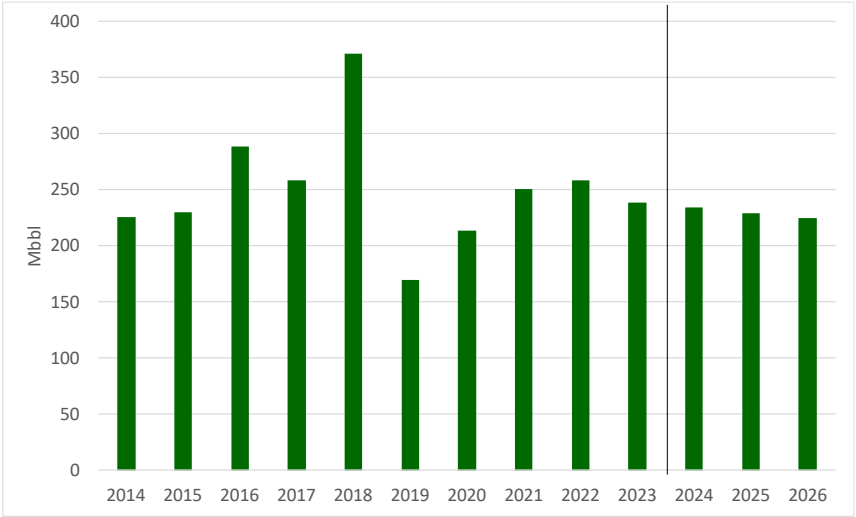


- Alberta North oil production declined from over 140,000 Bbl/d in 2014 to about 70,000 Bbl/d in 2020 before rebounding to 90,000 Bbl/d in 2023. Incorrys is forecasting production to increase to over 120,000 Bbl/d in 2029 before dropping to 70,000 Bbl/d in 2040.
- Well Initial Productivity (IP) grew from about 160 Bbl/d in 2014 to a high of almost 340 Bbl/d in 2022. Initial productivity declined into 2023 and is expected to gradually drop to under 270 Bbl/d by 2040.
- Well EUR grew from over 225 MBbl in 2014 to 370 MBbl in 2018, settling at about 240 MBbl in 2023. Incorrys is forecasting well EUR to decline slightly over the next 3 years to 225 MBbl in 2028.

Crude Oil Well Initial Productivity (IP)



Well Estimated Ultimate Recovery (EUR)



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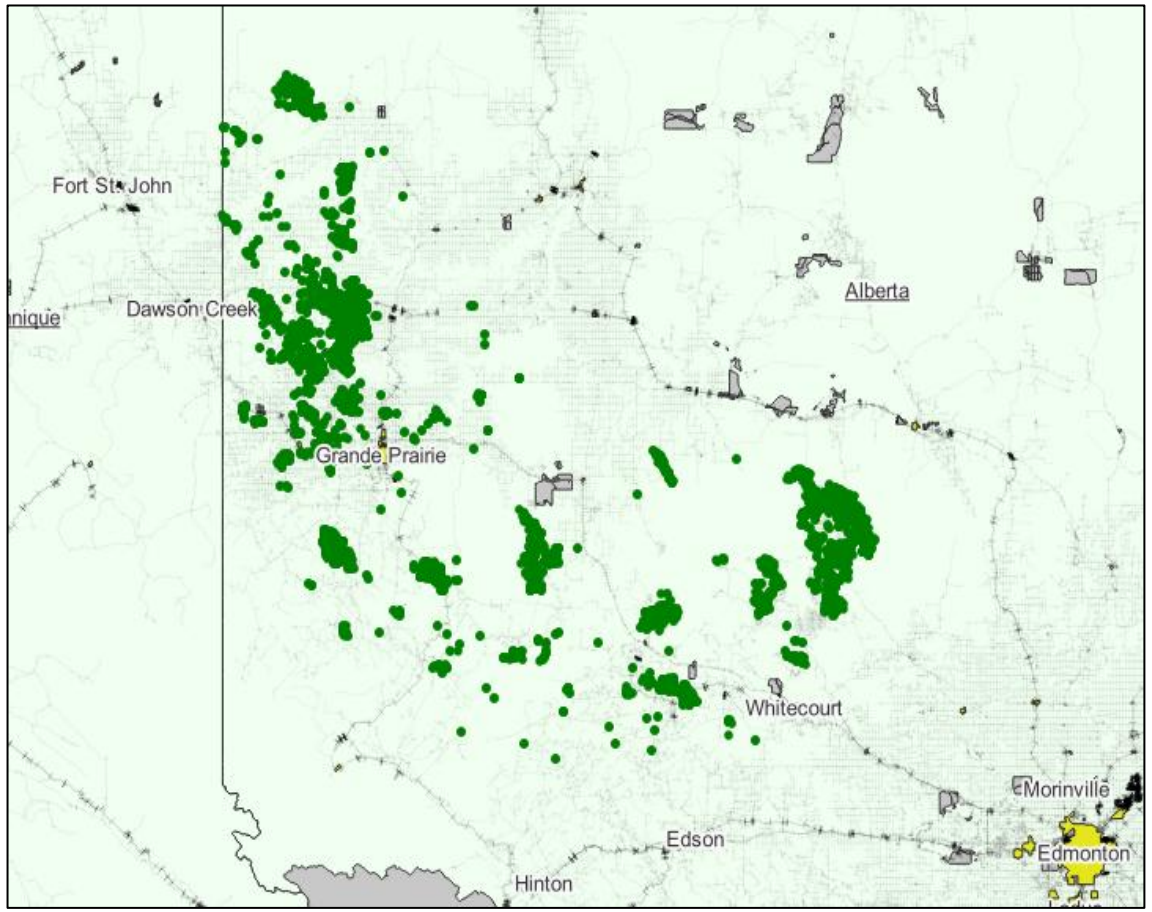
ALBERTA WEST CENTRAL OIL WELLS

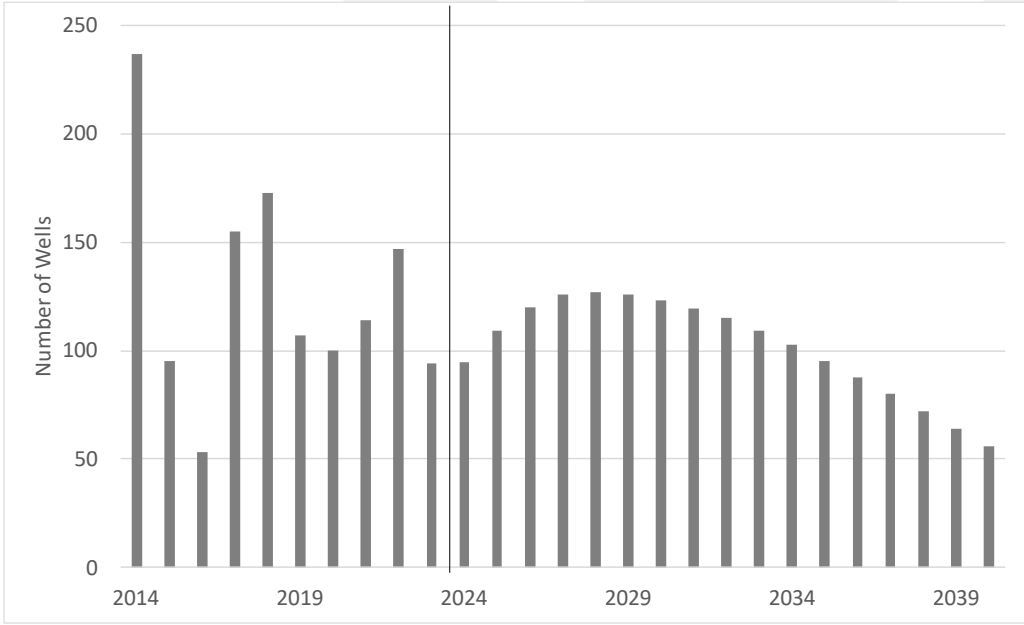
Map shows wells drilled Alberta West Central area since 2000



- Wells targeting Montney, Duvernay, and Cardium formations are not included
- Commingled wells are included
- Wells classified as Condensate are not included
- Other target formations include Charlie Lake, Beaverhill Lake, Dunvegan, Halfway, Doe Creek and others

Location: Alberta
Number of oil wells drilled since 2010: ~ 1,900
Average New Well Initial Productivity in 2023: 368 Bbl/d
Peak Production: 2022 (446 MBbl/d)

Number of New Wells



- The number of new wells in the Alberta West Central oil region dropped from 240 wells in 2014 to under 100 in 2023.
- Incorrys is forecasting the number of new wells to increase to about 125 by 2028 before declining to just over 50 in 2040.

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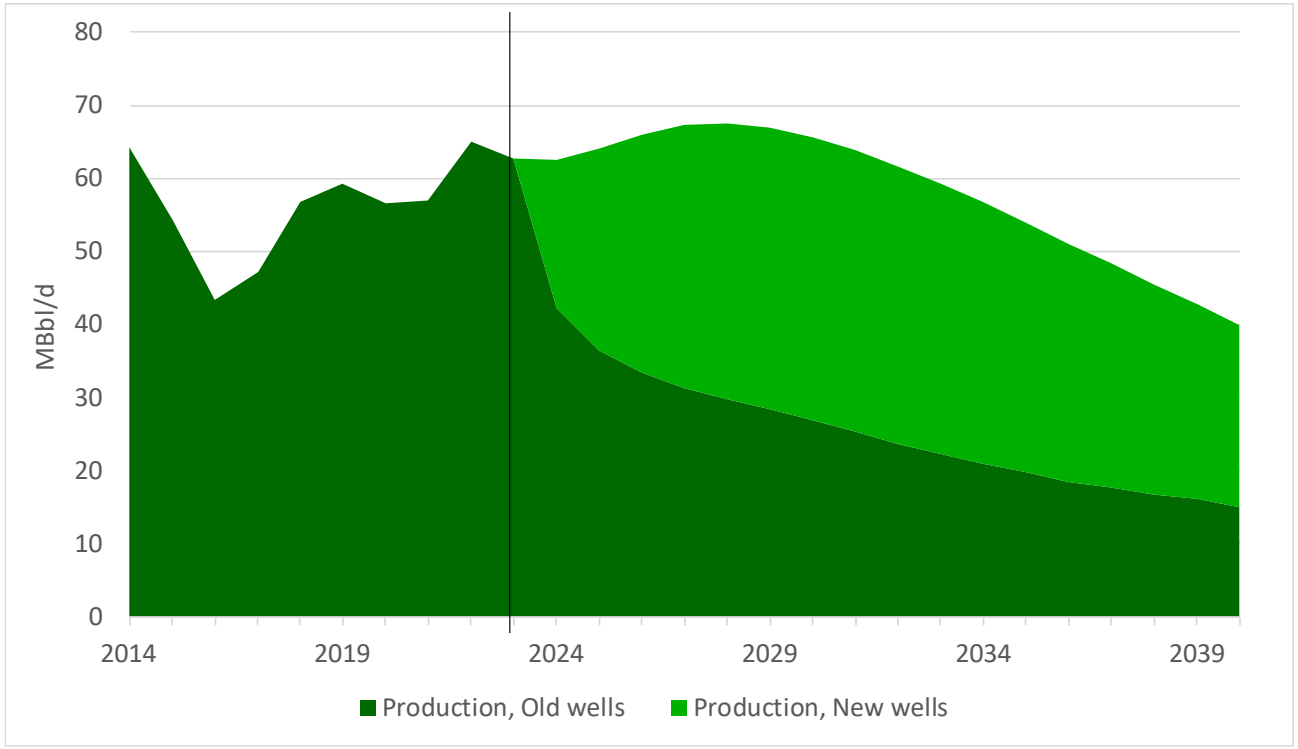
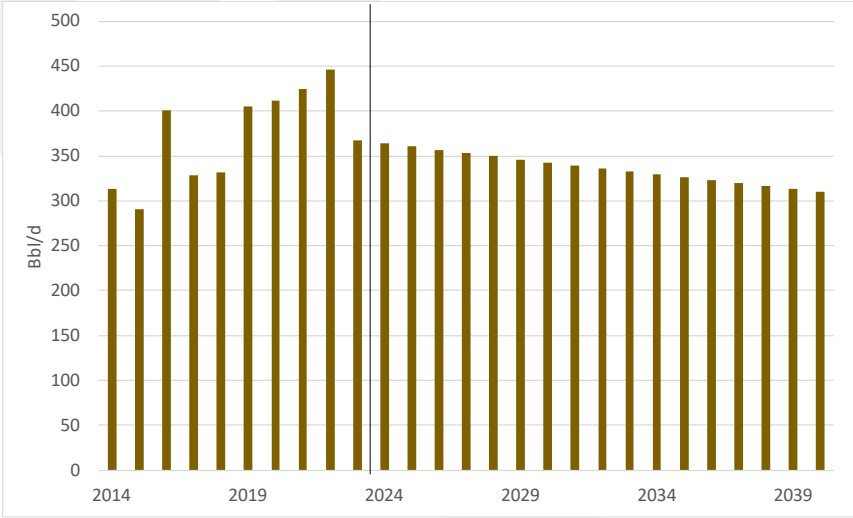
AB WEST CENTRAL OIL PRODUCTION

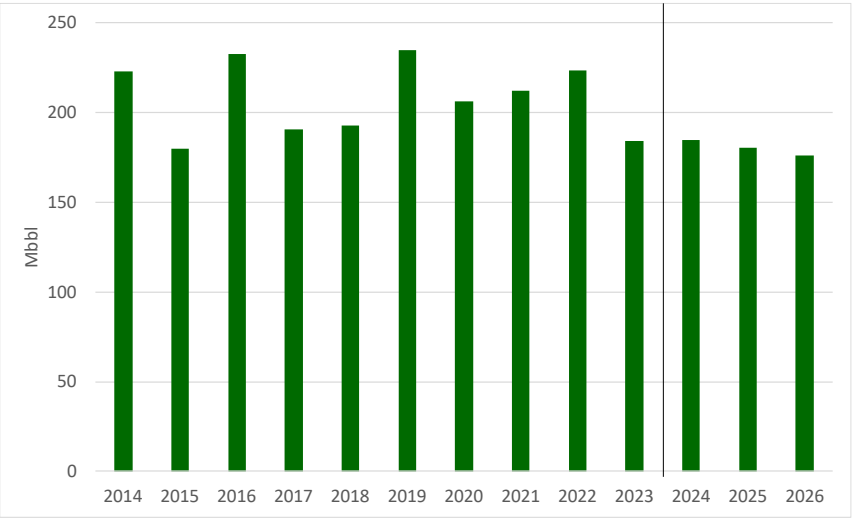


- Alberta West Central oil production declined from 65,000 Bbl/d in 2014 to a low of about 45,000 Bbl/d in 2016 before rebounding in 2023. Incorrys is forecasting production to increase to almost 70,000 Bbl/d in 2029 before dropping to 40,000 MBbl/d in 2040.
- Initially Productivity grew from about 300 Bbl/d in 2014 to a high of almost 450 Bbl/d in 2022. Initial productivity declined into 2023 and is expected to gradually drop to just over 300 Bbl/d by 2040.
- Well EUR averaged just over 210 MBbl between 2014 and 2022 before dropping to 185 MBbl in 2023. EUR finally settled at about 240 MBbl in 2023. Incorrys is forecasting well EUR to decline slightly over the next 3 years to 175 MBbl in 2028.

Crude Oil Well Initial Productivity (IP)



Well Estimated Ultimate Recovery (EUR)



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WHY INCORRYS INFORMATION SYSTEM

COMPREHENSIVE DATA

Incorrys constantly collects huge amount of data from multiple public sources world wide

ADVANCE ANALYTICS

Incorrys performs data analysis to ensure quality and consistency among different industries and jurisdictions

ACCURATE FORECASTS

Incorrys employs various forecasting methodologies to ensure accurate forecasts of trends in different industries.

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