TD Cowen
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TD SECURITIES INC. - CANADA

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- Energy Producers
- Energy Producers - Seniors & Integrated

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SECTOR NOTE

SIFTING THROUGH THE SANDS - IN SITU MONTHLY PERFORMANCE TRACKER

THE TD COWEN INSIGHT

In the following charts, we summarize the performance of the major in situ oil sands projects (defined as SAGD and CSS projects with nameplate capacity >10mbbl/d). We highlight the following operational trends for December.

1) December in situ prod'n was up 1% m/m: In situ accounted for 51% of total oil sands prod'n of 3.5mmbbl/d and 32% of total Canadian oil prod'n (including East Coast offshore). Including mining projects, oil sands prod'n accounted for 62% of total Canadian oil prod'n. The WCS Hardisty heavy differential is currently ~US$14/bbl.

2) Canadian Natural Resources (CNQ-T): Combined thermal prod'n averaged 286mbbl/d (utilization up 5% m/m to 81%). Early results from solvent SAGD deployed on eight Kirby North wells points to a ~30% SOR reduction (vs. 40-50% target) with solvent recovery of >85%; this is a level that supports commercialization, in our view. See our notes: Q3/24 (earnings release and conference call) and 2025 Budget.

3) Foster Creek, Christina Lake, and Sunrise (CVE-T): FC averaged 195mbbl/d (utilization down 2% m/m to 108%), while CL averaged 244mbbl/d (utilization down 4% m/m to 94%). Sunrise averaged 53mbbl/d (utilization up 1% m/m to 89%). CVE has several in-flight thermal growth projects that combined are expected to add 80mbbl/d of capacity through 2027/2028, with initial volumes in H2/25. See our notes: Q3/24 (earnings release and conference call) and 2025 Budget.

4) Cold Lake (IMO-T): Cold Lake prod'n averaged 162mbbl/d (utilization down 1% m/m to 90%). Grand Rapids Phase 1 prod'n averaged an impressive 27mbbl/d in Dec. (vs. 15mbbl/d capacity). This is the industry's first commercial SA-SAGD project and is expected to reduce project GHGi by 40% vs. traditional CSS, and unit opex by ~US$1/bbl. We expect Cold Lake digital twins to drive further efficiencies. Future Grand Rapids phases could be sanctioned once Leming is online (late-2025), supporting mid-term Cold Lake prod'n of 165+mbbl/d. Its opex target has been re-rated to an impressive US$13/bbl. See our notes: Q3/24 (earnings release and conference call) and 2025 Budget.

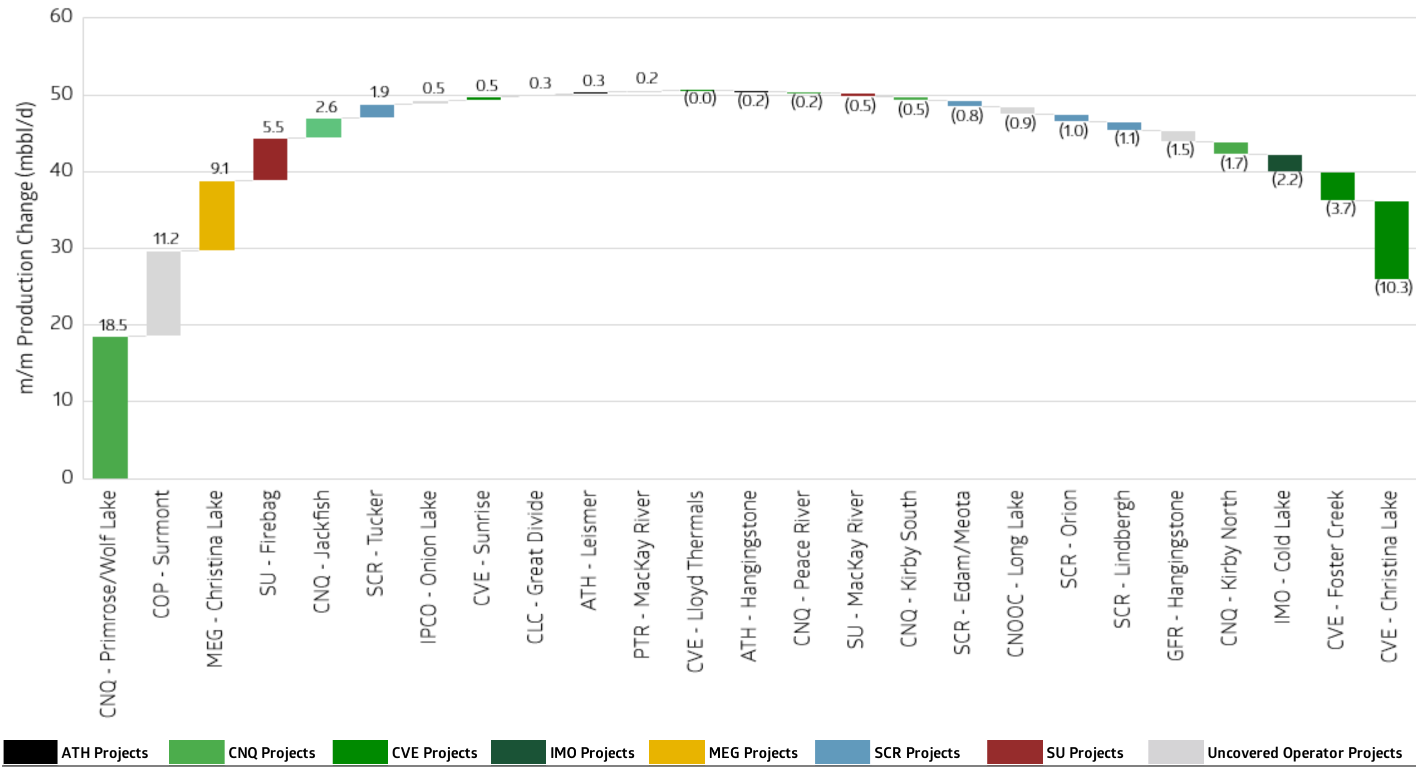
5) Firebag and MacKay River (SU-T): Firebag prod'n averaged 253mbbl/d (utilization up 3% m/m to 117%), achieving record quarterly and annual prod'n of 250mbbl/d and 234mbbl/d, respectively. MacKay River prod'n averaged 36mbbl/d (utilization down 1% m/m to 93%). Should SU elect to develop select new capacity towards 2030, we expect in situ opportunities to attract the lion's share of new development capital. See our notes: Q3/24 (earnings release, and conference call), Meeting Takeaways and 2025 Budget.

6) Leismer and Hangingstone (ATH-T): Leismer prod'n averaged 26mbbl/d (utilization up 1% m/m to 94%) while Hangingstone averaged 7mbbl/d (utilization down 2% m/m at 74%). See our notes: Q3/24 (earnings release) and 2025 Budget.

7) Christina Lake (MEG-T): CL prod'n averaged 104mbbl/d (utilization up 8% m/m to 95%). MEG also sanctioned FEP, which increases capacity by 25mbbl/d, to 135mbbl/d, by late-2027 for $440mm ($17,600/bbl/d, increasing to ~$25,000/bbl/d after factoring in well capital required to fill the plant). See our notes: Q3/24 (earnings release and conference call) and 2025 Budget (budget release, conference call, investor questions).

8) Lindbergh, Orion, and Tucker (SCR-T): Lindbergh prod'n averaged 19mbbl/d (utilization down 5% m/m to 96%), Orion averaged 20mbbl/d (utilization down 4% m/m to 80%), and Tucker averaged 21mbbl/d (utilization up 6% m/m/ to 71%). See our notes: Q3/24 (earnings release) and Investor Day.

Figure 1 - Monthly Change in In Situ Production By Tracked Project (mbbl/d)



Source: geoSCOUT, Company reports, TD Cowen

Figure 2 - Historical Bitumen Production, ISORs and Utilization

		Production (mbbl/d)						ISOR	Capacity	Utilization
Operator	**Project**	**Jul-24**	**Aug-24**	**Sep-24**	**Oct-24**	**Nov-24**	**Dec-24**	**Dec-24**	**(mbbl/d)**	**Dec-24**
Alberta										
ATH	Hangingstone	7.2	7.4	7.5	7.6	7.6	7.4	3.6	10.0	74%
ATH	Leismer	28.1	27.6	26.9	26.7	26.1	26.4	3.3	28.0	94%
CLC	Great Divide	15.9	15.6	15.5	13.2	14.9	15.2	4.0	20.0	76%
CNOOC	Long Lake	60.5	59.0	75.3	76.0	76.7	75.8	3.1	72.0	105%
CNQ	Jackfish	124.5	131.3	128.0	121.9	120.9	123.5	2.4	120.0	103%
CNQ	Kirby North	31.5	29.7	28.1	29.7	28.8	27.1	3.9	40.0	68%
CNQ	Kirby South	33.0	35.4	34.2	34.1	33.3	32.8	3.5	40.0	82%
CNQ	Peace River	2.4	2.2	1.8	1.9	1.9	1.7	18.2	12.5	13%
CNQ	Primrose/Wolf Lake	78.3	68.0	68.0	70.7	82.6	101.1	4.7	140.0	72%
COP	Surmont	136.5	55.3	72.8	138.5	132.5	143.8	2.6	148.0	97%
CVE	Christina Lake	242.0	241.3	150.9	257.5	253.9	243.5	2.1	260.0	94%
CVE	Foster Creek	202.1	194.4	189.7	188.2	198.3	194.5	2.1	180.0	108%
CVE	Sunrise	50.9	48.4	51.8	53.0	52.9	53.3	3.7	60.0	89%
GFR	Hangingstone Expansion	22.3	23.5	18.7	22.4	21.6	20.2	3.6	35.0	58%
IMO	Cold Lake	157.0	134.0	157.0	160.6	163.8	161.6	4.1	180.0	90%
MEG	Christina Lake	103.0	104.1	103.1	101.2	95.0	104.1	2.4	110.0	95%
PTR	MacKay River	10.0	9.9	9.8	9.3	9.7	9.9	5.7	35.0	28%
SCR	Lindbergh	18.5	20.0	19.0	19.3	20.3	19.3	3.1	20.0	96%
SCR	Orion	20.2	19.9	20.1	20.6	20.7	19.7	3.6	24.5	80%
SCR	Tucker	18.9	19.3	19.1	19.1	19.5	21.4	4.7	30.0	71%
SU	Firebag	182.5	239.8	246.3	251.3	246.9	252.5	2.6	215.0	117%
SU	MacKay River	35.9	35.7	2.7	33.6	36.0	35.5	3.1	38.0	93%
Total AB In Situ Production		**1,581.3**	**1,521.7**	**1,446.1**	**1,656.5**	**1,663.9**	**1,690.2**	**2.9**		
Saskatchewan										
CVE	Bolney	2.3	2.1	1.8	1.7	1.6	1.3	6.7	9.3	14%
CVE	Celtic	6.7	6.2	6.4	5.3	4.5	5.1	4.8	9.3	55%
CVE	Dee Valley	5.9	6.3	5.4	6.1	5.1	5.6	3.0	10.0	56%
CVE	Edam East	14.7	15.7	15.1	13.8	13.3	12.8	2.7	10.0	128%
CVE	Pikes Peak South	14.1	13.7	12.5	13.1	11.3	10.0	2.5	11.6	86%
CVE	Rush Lake	21.9	22.2	20.4	20.6	18.7	18.8	3.2	25.1	75%
CVE	Spruce Lake Central	8.0	6.4	7.4	5.9	5.9	5.2	3.8	10.0	52%
CVE	Spruce Lake North	6.7	4.8	4.6	5.2	5.0	7.4	3.8	10.0	74%
CVE	Vawn	4.6	4.9	4.8	4.7	5.1	4.3	5.6	10.0	43%
IPCO	Onion Lake	12.3	12.2	7.6	12.1	12.0	12.5	3.5	14.0	89%
SCR	Edam	6.6	7.3	7.3	6.9	7.2	7.3	3.0	10.0	73%
SCR	Meota West	14.6	13.0	11.3	10.9	14.2	13.6	4.2	20.0	68%
SCR	Meota East	4.9	4.9	4.6	5.2	5.4	5.0	5.6	10.0	50%
Total SK In Situ Production		**123.2**	**119.7**	**109.1**	**111.7**	**109.4**	**109.0**	**3.6**		

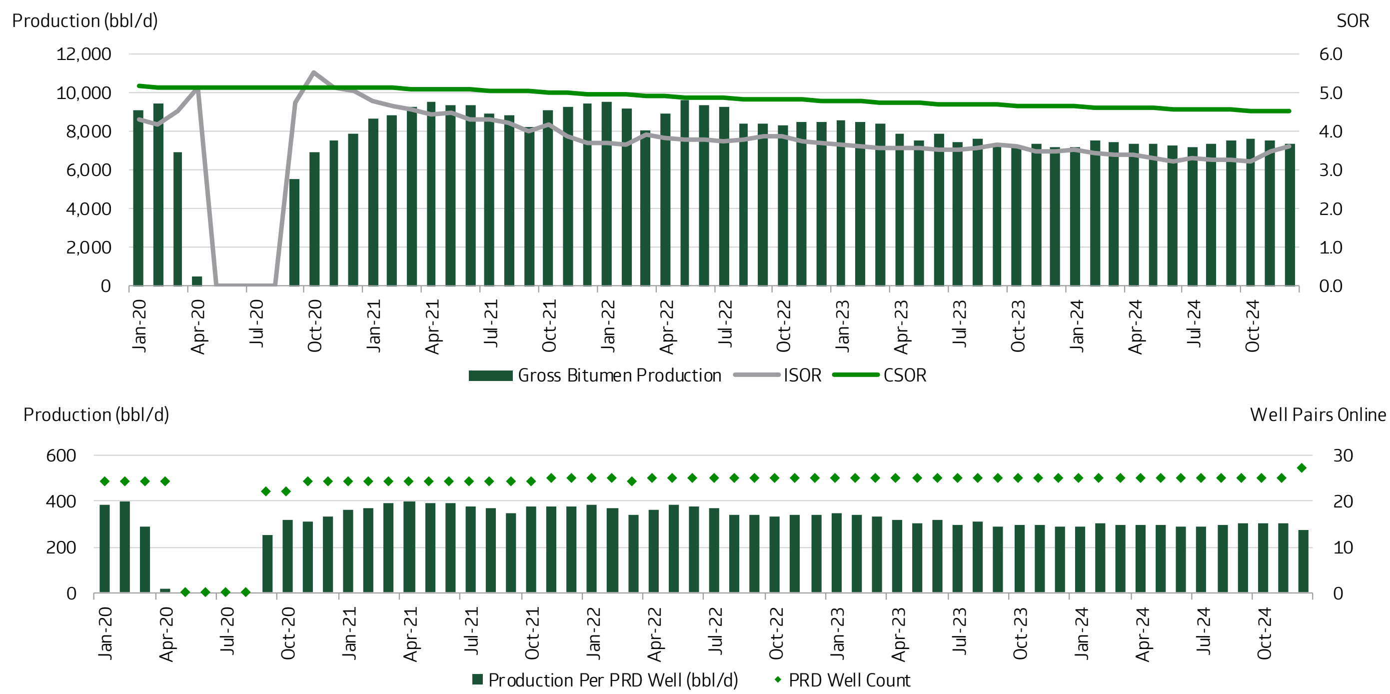
Source: geoSCOUT, Company reports, TD Cowen

Figure 3 - ISORs and Utilization as % of Nameplate Capacity

		ISOR						Utilization						ISOR	Capacity	Utilization
Operator	**Project**	**Jul-24**	**Aug-24**	**Sep-24**	**Oct-24**	**Nov-24**	**Dec-24**	**Jul-24**	**Aug-24**	**Sep-24**	**Oct-24**	**Nov-24**	**Dec-24**	**Dec-24**	**(mbbl/d)**	**Dec-24**
Alberta																
ATH	Hangingstone	3.3	3.3	3.3	3.2	3.5	3.6	72%	74%	75%	76%	76%	74%	3.6	10.0	74%
ATH	Leismer	3.1	3.1	3.2	3.2	3.3	3.3	100%	98%	96%	95%	93%	94%	3.3	28.0	94%
CLC	Great Divide	3.5	3.7	4.0	4.3	4.0	4.0	79%	78%	77%	66%	75%	76%	4.0	20.0	76%
CNOOC	Long Lake	2.9	3.1	3.1	3.1	3.1	3.1	84%	82%	105%	106%	107%	105%	3.1	72.0	105%
CNQ	Jackfish	2.3	2.3	2.3	2.3	2.3	2.4	104%	109%	107%	102%	101%	103%	2.4	120.0	103%
CNQ	Kirby North	3.6	3.7	3.5	3.9	4.0	3.9	79%	74%	70%	74%	72%	68%	3.9	40.0	68%
CNQ	Kirby South	3.2	3.3	3.3	3.4	3.5	3.5	83%	88%	86%	85%	83%	82%	3.5	40.0	82%
CNQ	Peace River	6.2	10.3	17.5	16.7	16.8	18.2	19%	18%	15%	15%	15%	13%	18.2	12.5	13%
CNQ	Primrose/Wolf Lake	5.9	6.9	7.0	6.8	5.7	4.7	56%	49%	49%	50%	59%	72%	4.7	140.0	72%
COP	Surmont	2.6	2.7	2.3	2.5	2.6	2.6	92%	37%	49%	94%	90%	97%	2.6	148.0	97%
CVE	Christina Lake	2.1	2.1	1.7	2.0	2.0	2.1	93%	93%	58%	99%	98%	94%	2.1	260.0	94%
CVE	Foster Creek	2.2	2.3	2.4	2.4	2.2	2.1	112%	108%	105%	105%	110%	108%	2.1	180.0	108%
CVE	Sunrise	3.0	3.3	3.4	3.6	3.7	3.7	85%	81%	86%	88%	88%	89%	3.7	60.0	89%
GFR	Hangingstone Expansion	3.1	3.2	3.1	3.3	3.4	3.6	64%	67%	53%	64%	62%	58%	3.6	35.0	58%
IMO	Cold Lake	4.2	4.3	4.2	4.1	4.0	4.1	87%	74%	87%	89%	91%	90%	4.1	180.0	90%
MEG	Christina Lake	2.4	2.4	2.3	2.4	2.4	2.4	94%	95%	94%	92%	86%	95%	2.4	110.0	95%
PTR	MacKay River	5.5	5.7	5.9	5.9	6.1	5.7	29%	28%	28%	26%	28%	28%	5.7	35.0	28%
SCR	Lindbergh	3.1	3.0	3.0	3.0	3.0	3.1	93%	100%	95%	97%	102%	96%	3.1	20.0	96%
SCR	Orion	3.3	3.8	3.7	3.4	3.6	3.6	82%	81%	82%	84%	85%	80%	3.6	24.5	80%
SCR	Tucker	5.1	5.6	5.7	5.7	5.4	4.7	63%	64%	64%	64%	65%	71%	4.7	30.0	71%
SU	Firebag	2.5	2.6	2.5	2.4	2.5	2.6	85%	112%	115%	117%	115%	117%	2.6	215.0	117%
SU	MacKay River	3.0	3.0	3.0	3.3	3.1	3.1	95%	94%	7%	88%	95%	93%	3.1	38.0	93%
Total AB In Situ Production		**2.9**	**3.0**	**3.0**	**3.0**	**2.9**	**2.9**							**2.9**		
Saskatchewan																
CVE	Bolney	3.7	4.6	3.6	2.8	4.1	6.7	24%	22%	20%	19%	18%	14%	6.7	9.3	14%
CVE	Celtic	4.4	5.0	4.8	5.3	5.2	4.8	73%	67%	69%	57%	49%	55%	4.8	9.3	55%
CVE	Dee Valley	3.1	2.6	2.7	2.7	3.1	3.0	59%	63%	54%	61%	51%	56%	3.0	10.0	56%
CVE	Edam East	2.2	2.2	2.3	2.5	2.7	2.7	147%	157%	151%	138%	133%	128%	2.7	10.0	128%
CVE	Pikes Peak South	2.2	2.2	2.0	2.3	2.5	2.5	121%	118%	108%	113%	98%	86%	2.5	11.6	86%
CVE	Rush Lake	2.9	2.9	3.1	3.2	3.3	3.2	87%	88%	81%	82%	74%	75%	3.2	25.1	75%
CVE	Spruce Lake Central	2.8	3.4	2.9	3.4	3.1	3.8	80%	64%	74%	59%	59%	52%	3.8	10.0	52%
CVE	Spruce Lake North	3.9	6.3	6.6	5.3	5.1	3.8	67%	48%	46%	52%	50%	74%	3.8	10.0	74%
CVE	Vawn	5.0	4.3	4.4	4.5	4.6	5.6	46%	49%	48%	47%	51%	43%	5.6	10.0	43%
IPCO	Onion Lake	3.5	3.5	3.5	3.5	3.6	3.5	88%	87%	55%	87%	86%	89%	3.5	14.0	89%
SCR	Edam	3.3	2.9	3.0	3.1	2.9	3.0	66%	73%	73%	69%	72%	73%	3.0	10.0	73%
SCR	Meota West	3.8	4.1	4.5	4.6	3.9	4.2	73%	65%	56%	54%	71%	68%	4.2	20.0	68%
SCR	Meota East	5.4	5.4	6.0	5.4	5.2	5.6	49%	49%	46%	52%	54%	50%	5.6	10.0	50%
Total SK In Situ Production		**3.2**	**3.4**	**3.4**	**3.5**	**3.5**	**3.6**							**3.6**		

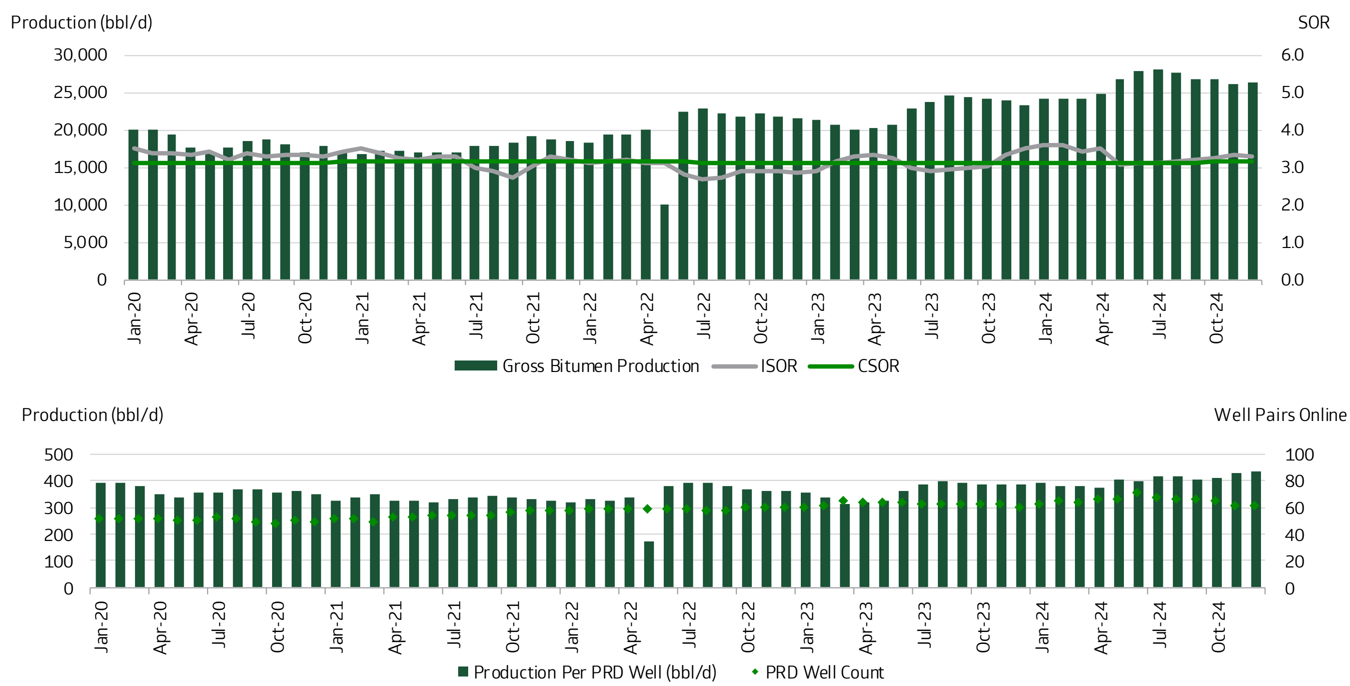
Source: geoSCOUT, Company reports, TD Cowen

Figure 4 - Performance History – Hangingstone – Athabasca Oil Corp. (ATH-T)



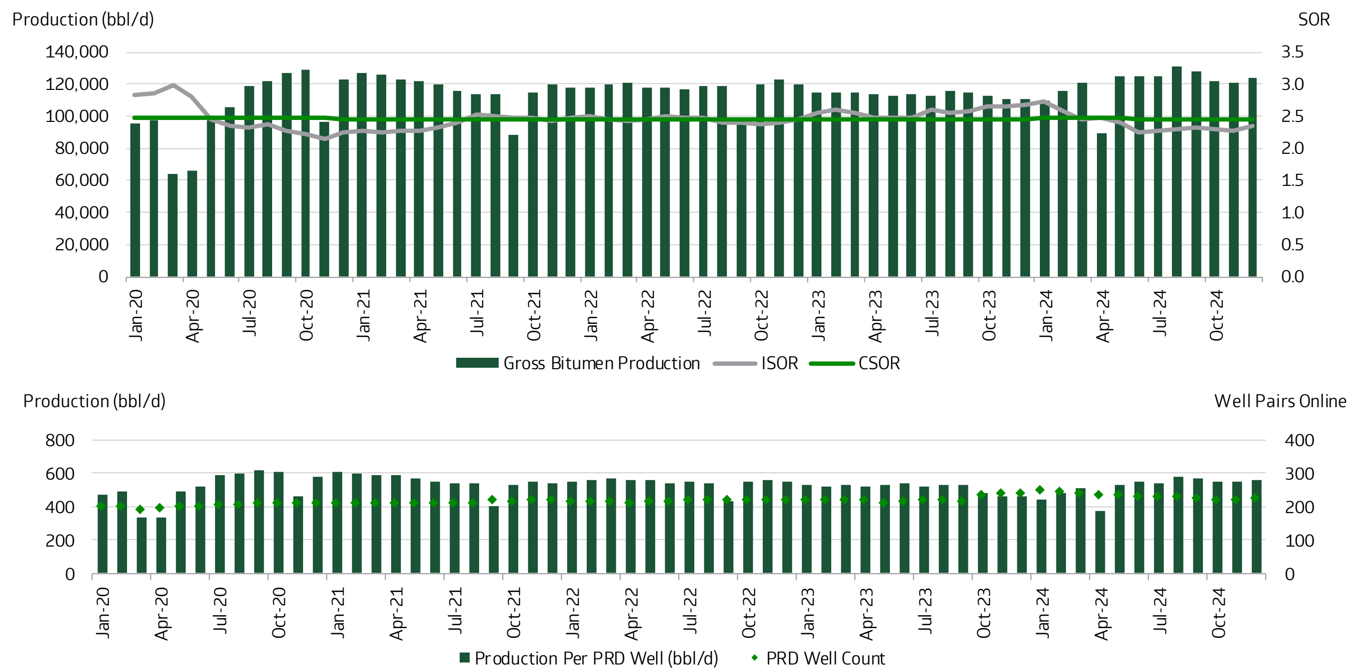
Source: geoSCOUT, Company reports, TD Cowen

Figure 5 - Performance History – Leismer – Athabasca Oil Corp. (ATH-T)



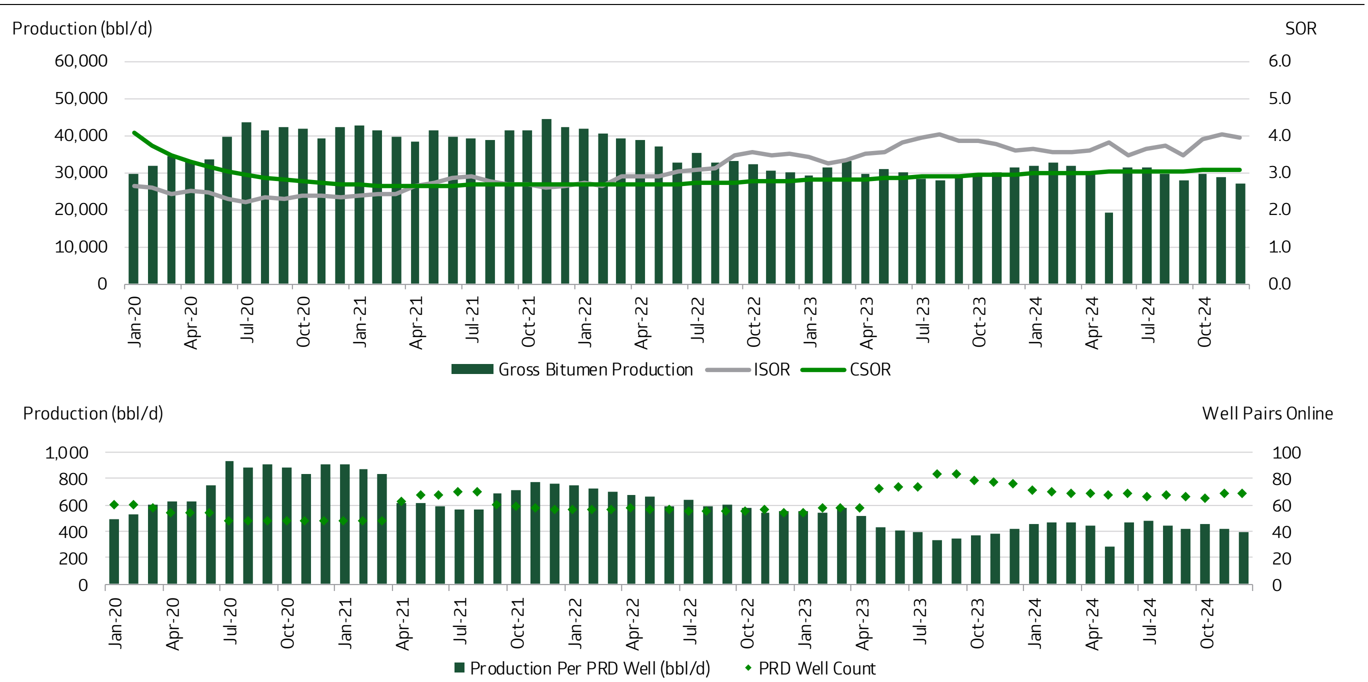
Source: geoSCOUT, Company reports, TD Cowen

Figure 6 - Performance History – Jackfish – Canadian Natural Resources Ltd. (CNQ-T)



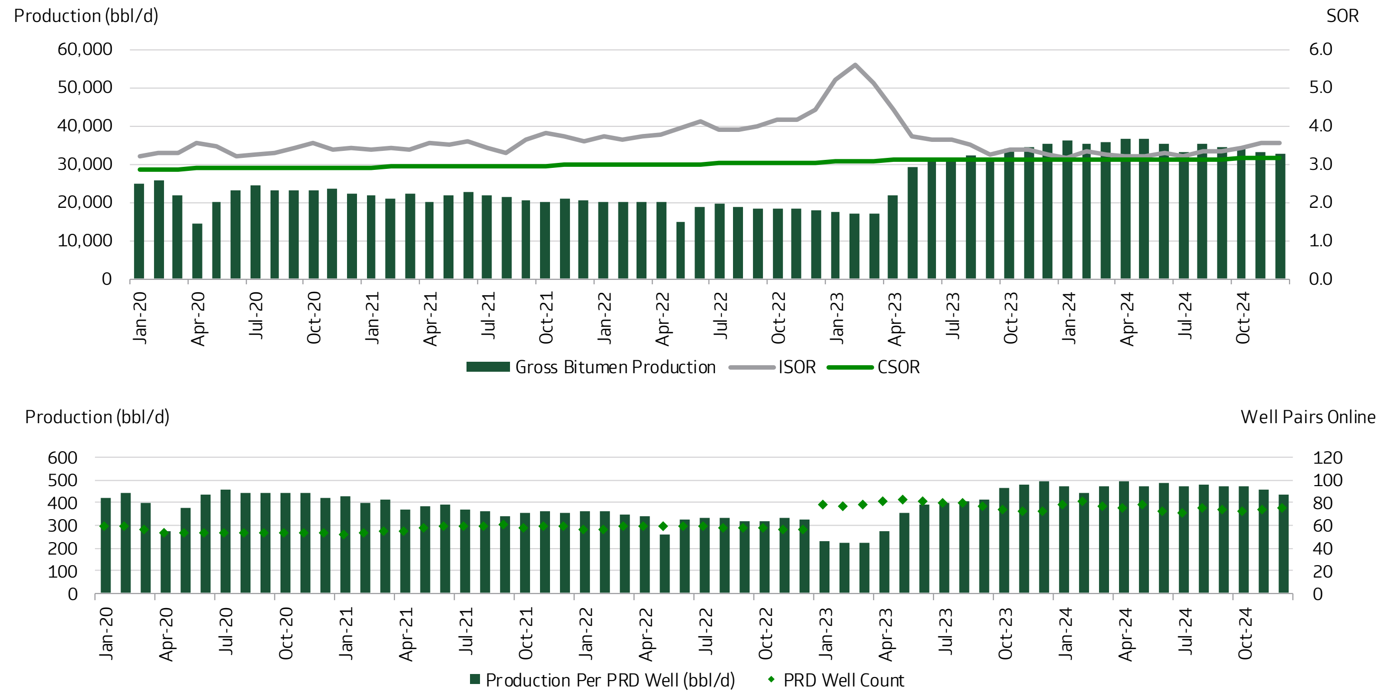
Source: geoSCOUT, Company reports, TD Cowen

Figure 7 - Performance History – Kirby North – Canadian Natural Resources Ltd. (CNQ-T)



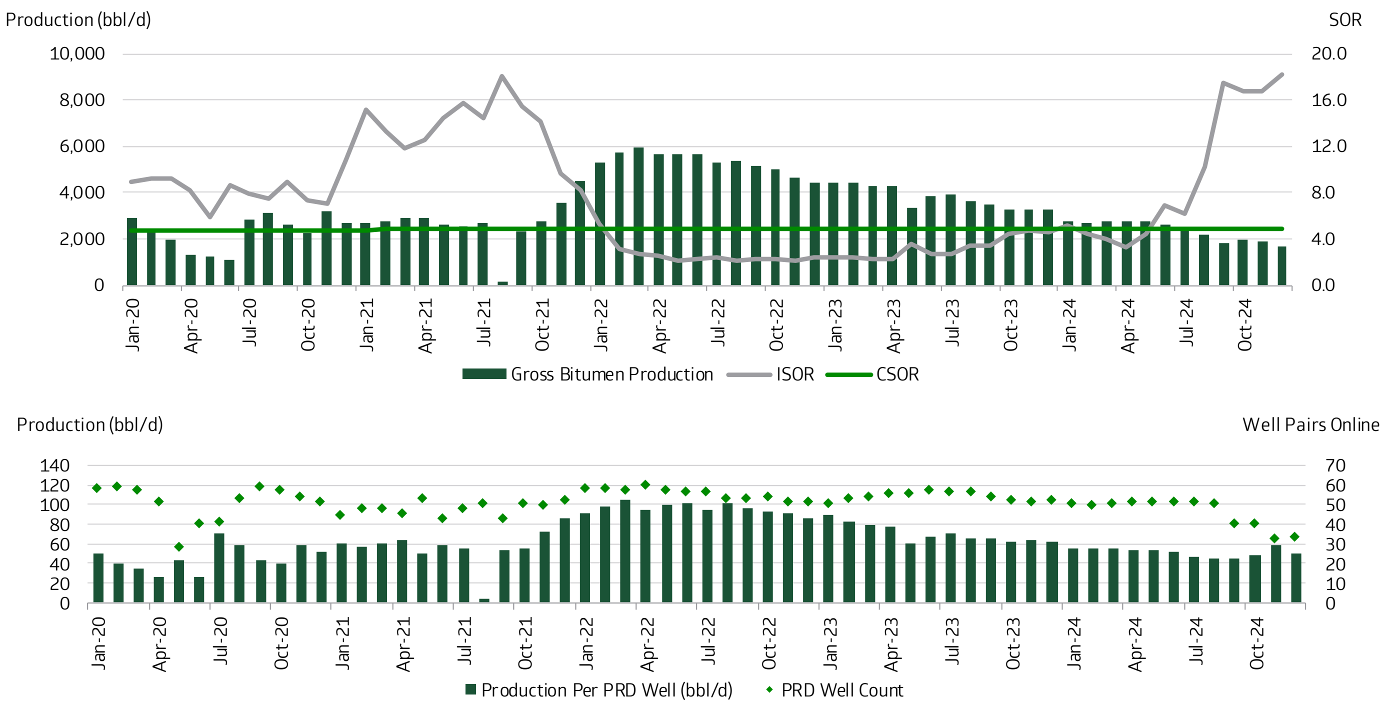
Source: geoSCOUT, Company reports, TD Cowen

Figure 8 - Performance History – Kirby South – Canadian Natural Resources Ltd. (CNQ-T)



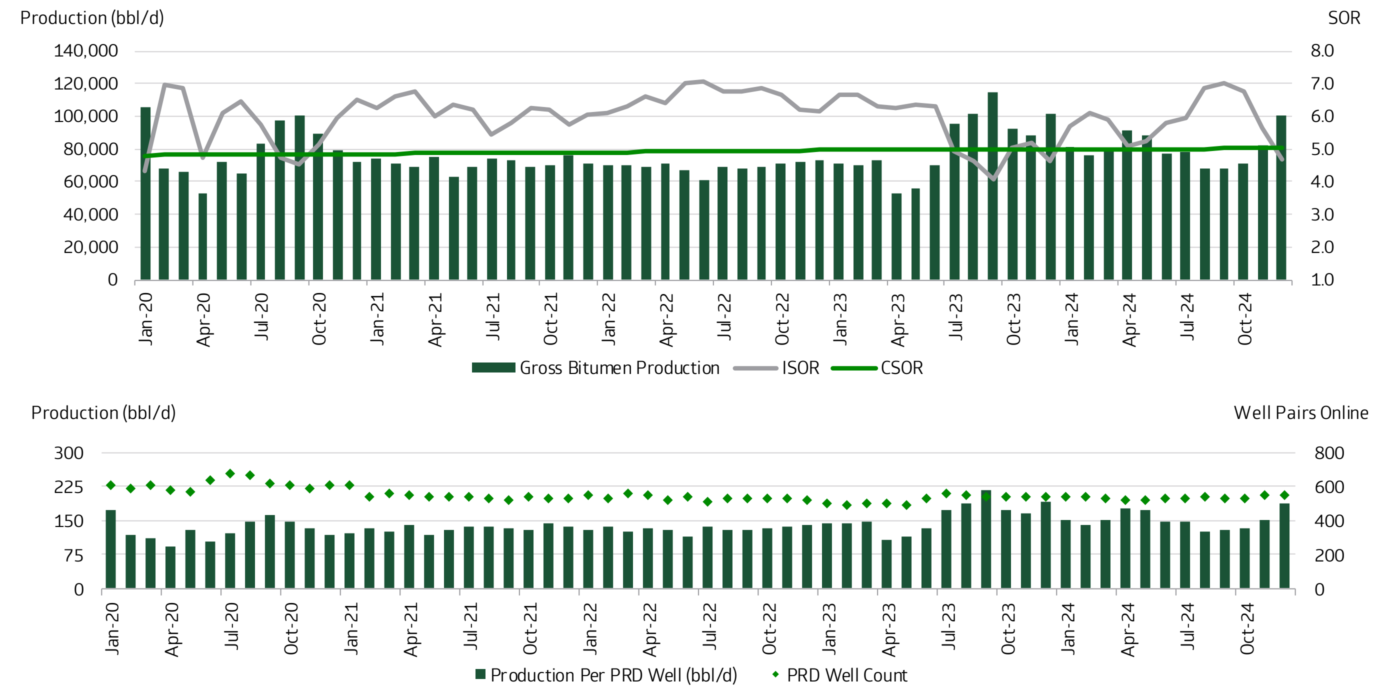
Source: geoSCOUT, Company reports, TD Cowen

Figure 9 - Performance History – Peace River – Canadian Natural Resources Ltd. (CNQ-T)



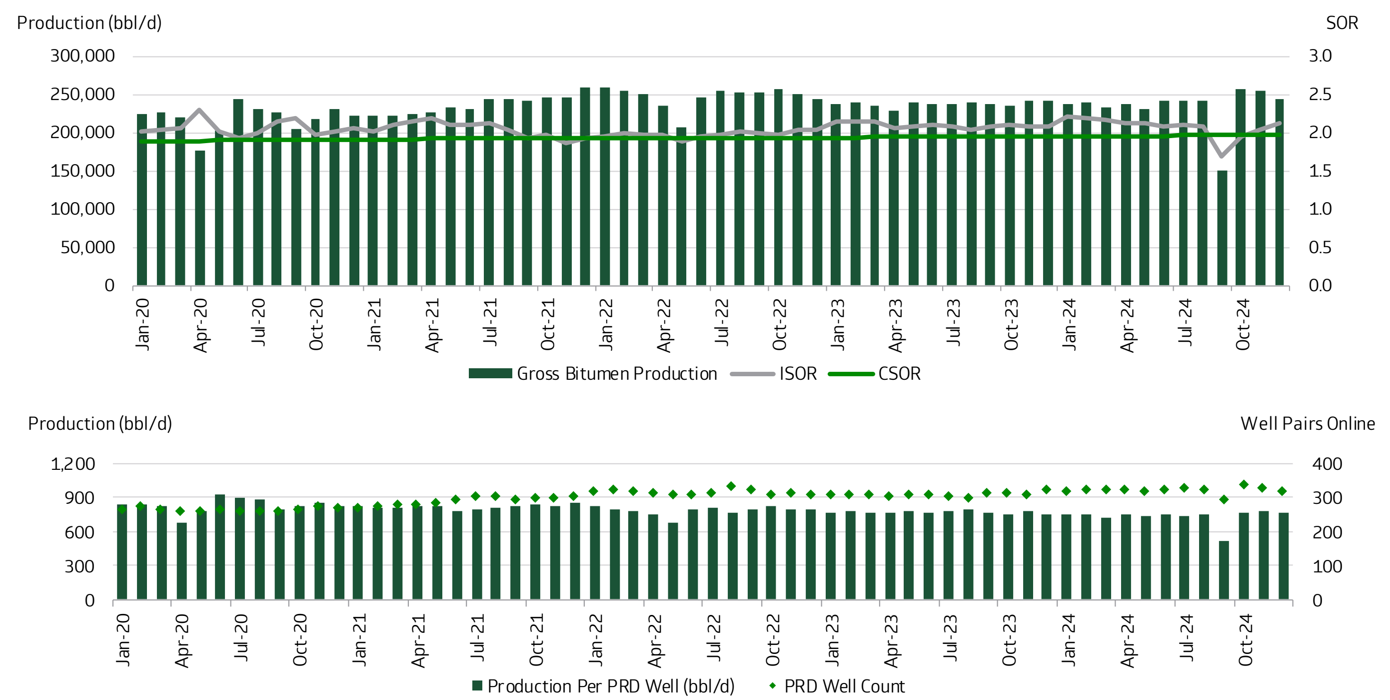
Source: geoSCOUT, Company reports, TD Cowen

Figure 10 - Performance History – Primrose/Wolf Lake – Canadian Natural Resources Ltd. (CNQ-T)



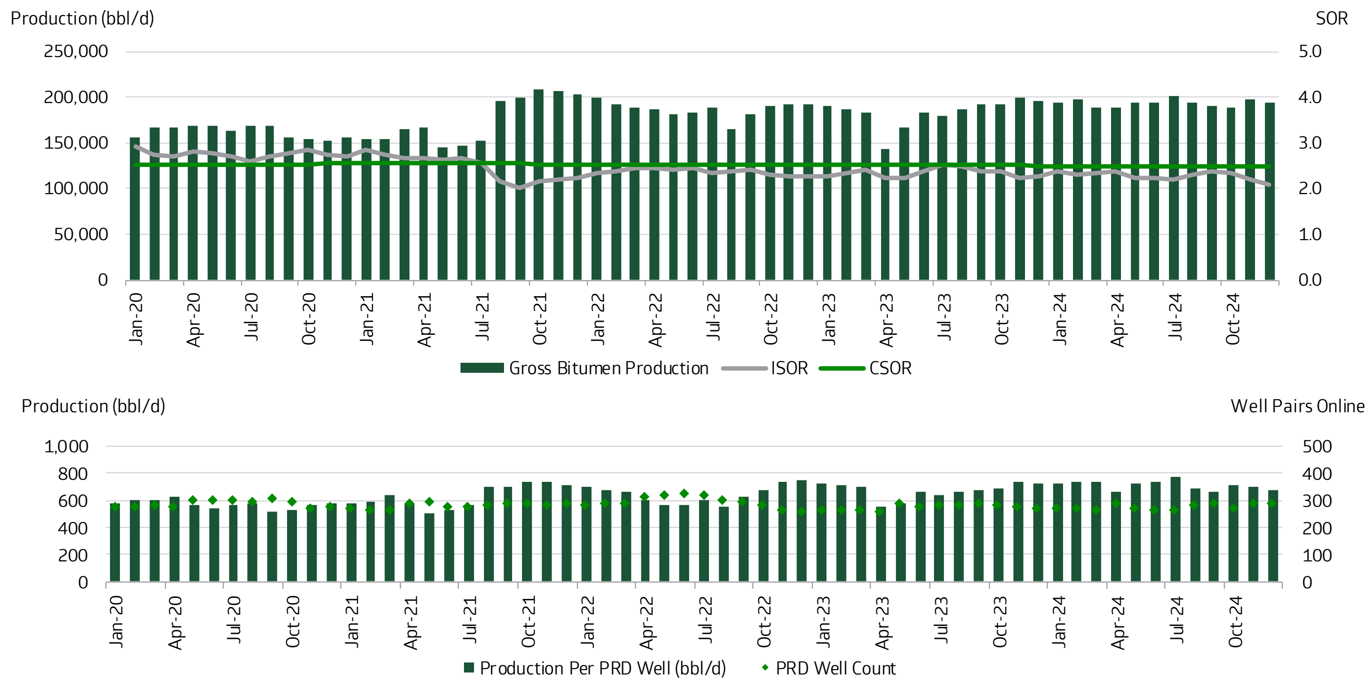
Source: geoSCOUT, Company reports, TD Cowen

Figure 11 - Performance History – Christina Lake – Cenovus Energy Inc. (CVE-T)



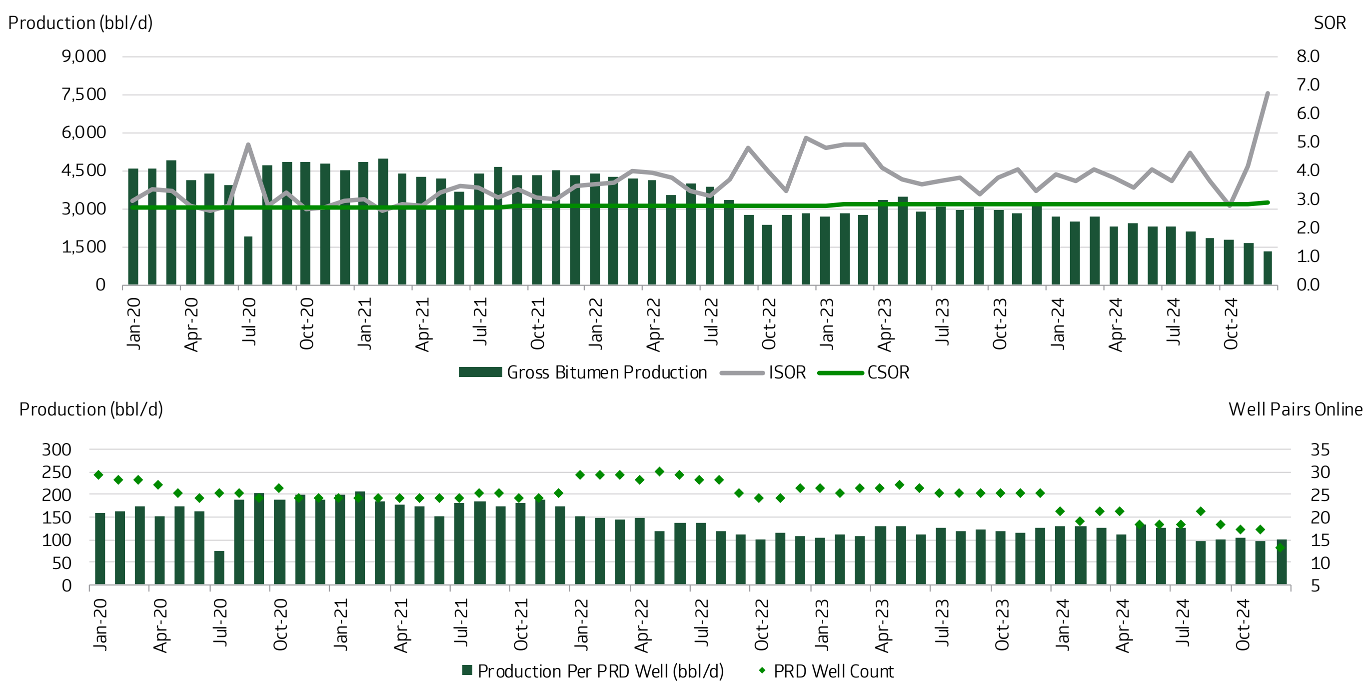
Source: geoSCOUT, Company reports, TD Cowen

Figure 12 - Performance History – Foster Creek – Cenovus Energy Inc. (CVE-T)



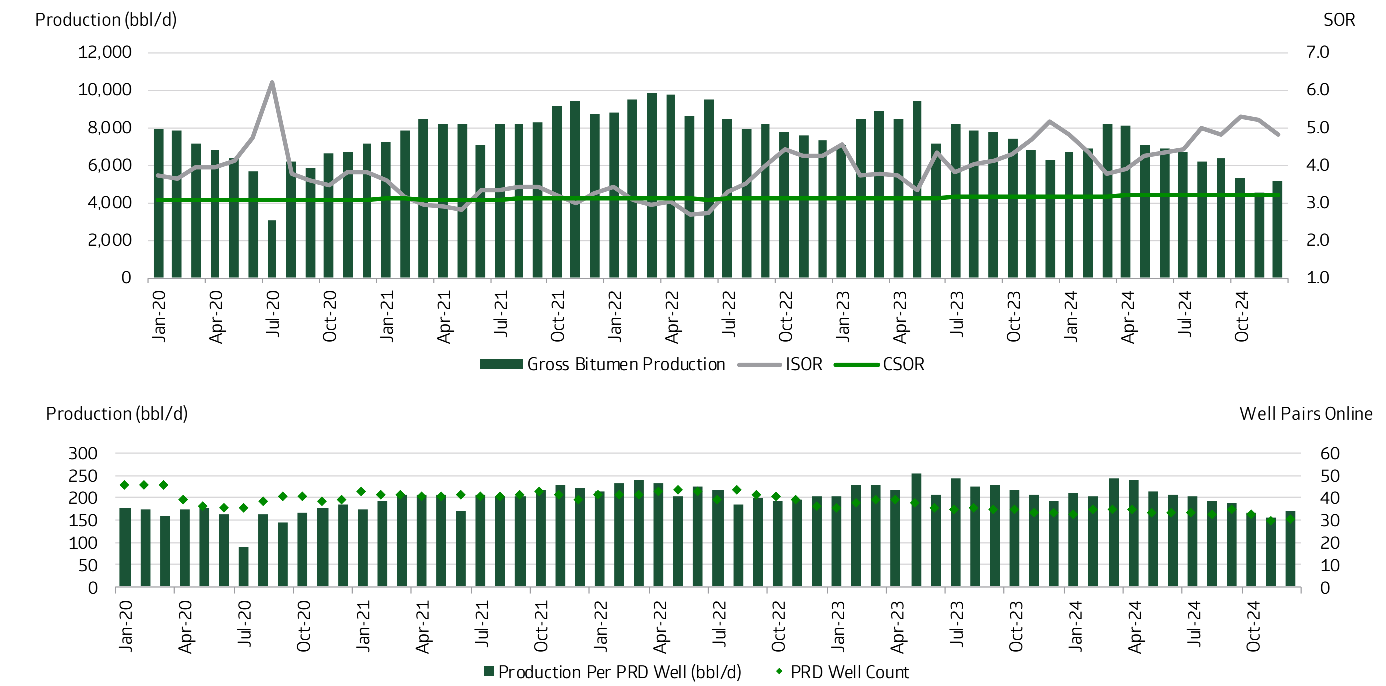
Source: geoSCOUT, Company reports, TD Cowen

Figure 13 - Performance History – Bolney – Cenovus Energy Inc. (CVE-T)



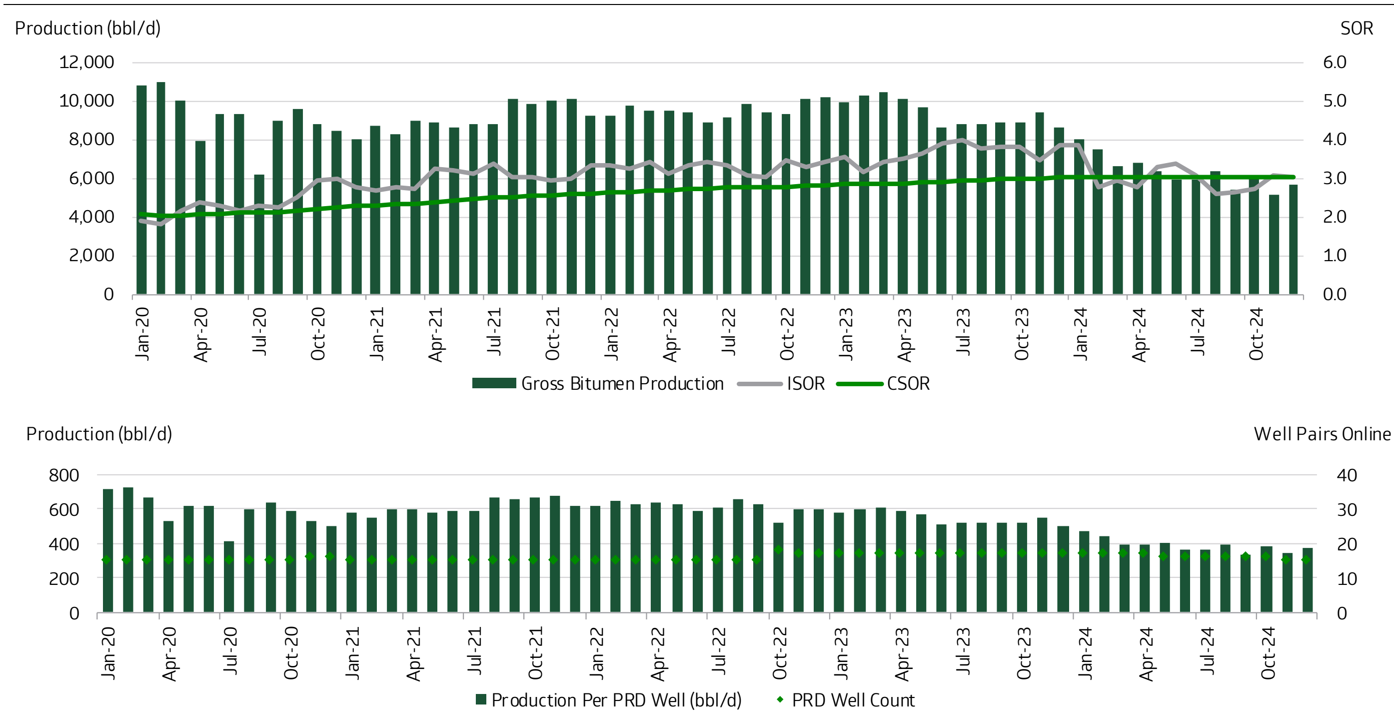
Source: geoSCOUT, Company reports, TD Cowen

Figure 14 - Performance History – Celtic – Cenovus Energy Inc. (CVE-T)



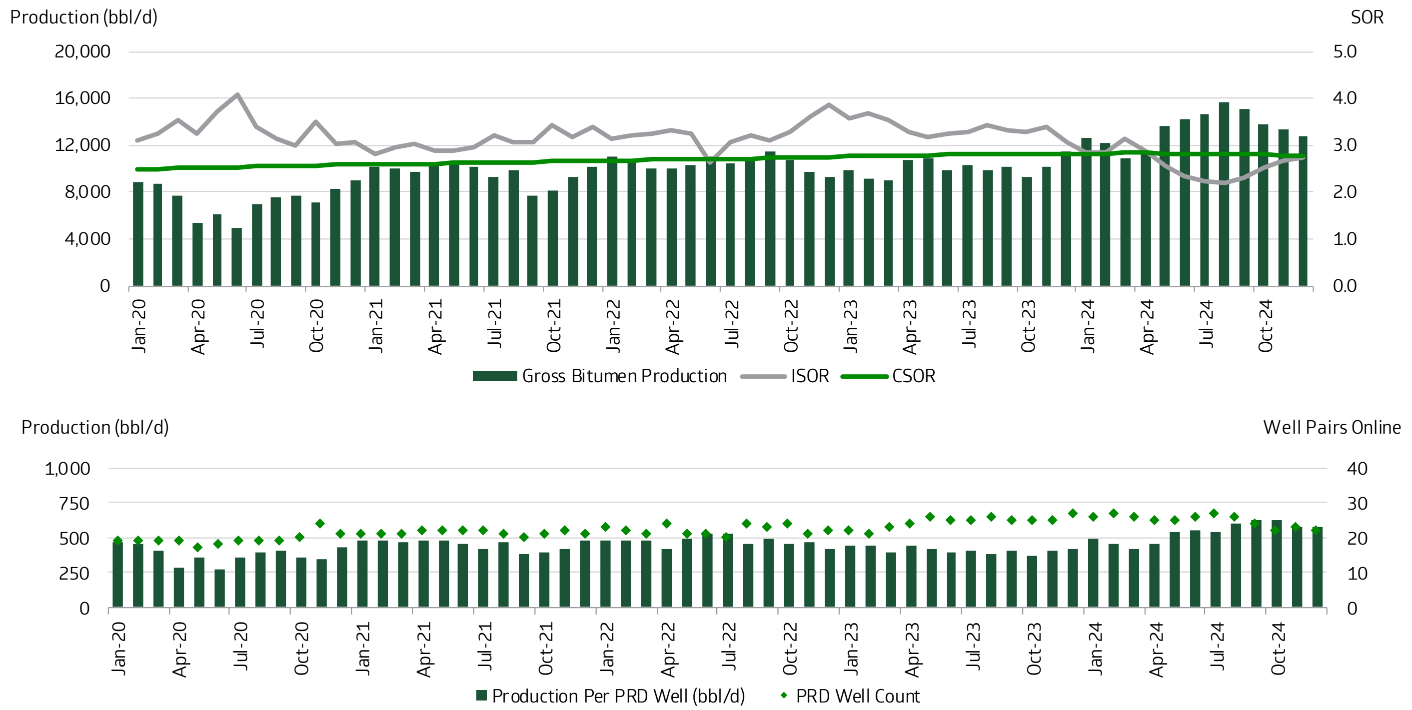
Source: geoSCOUT, Company reports, TD Cowen

Figure 15 - Performance History – Dee Valley – Cenovus Energy Inc. (CVE-T)



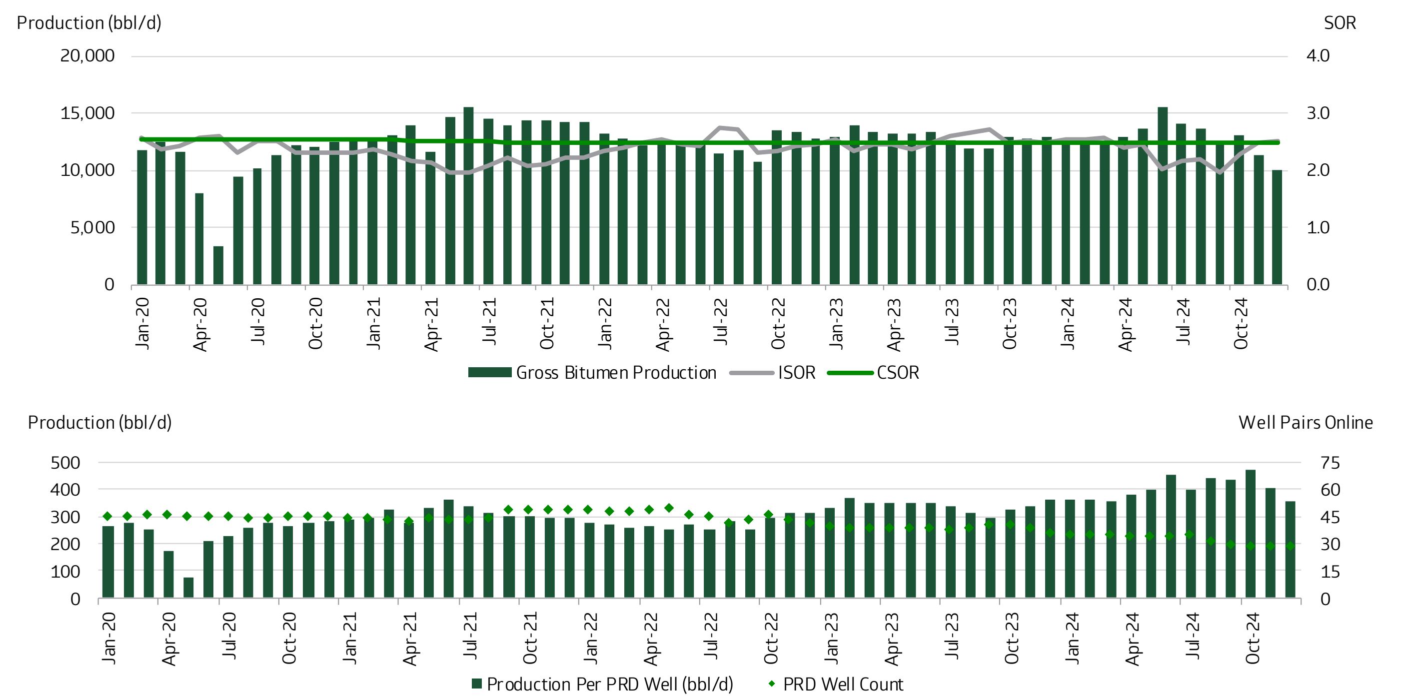
Source: geoSCOUT, Company reports, TD Cowen

Figure 16 - Performance History – Edam East – Cenovus Energy Inc. (CVE-T)



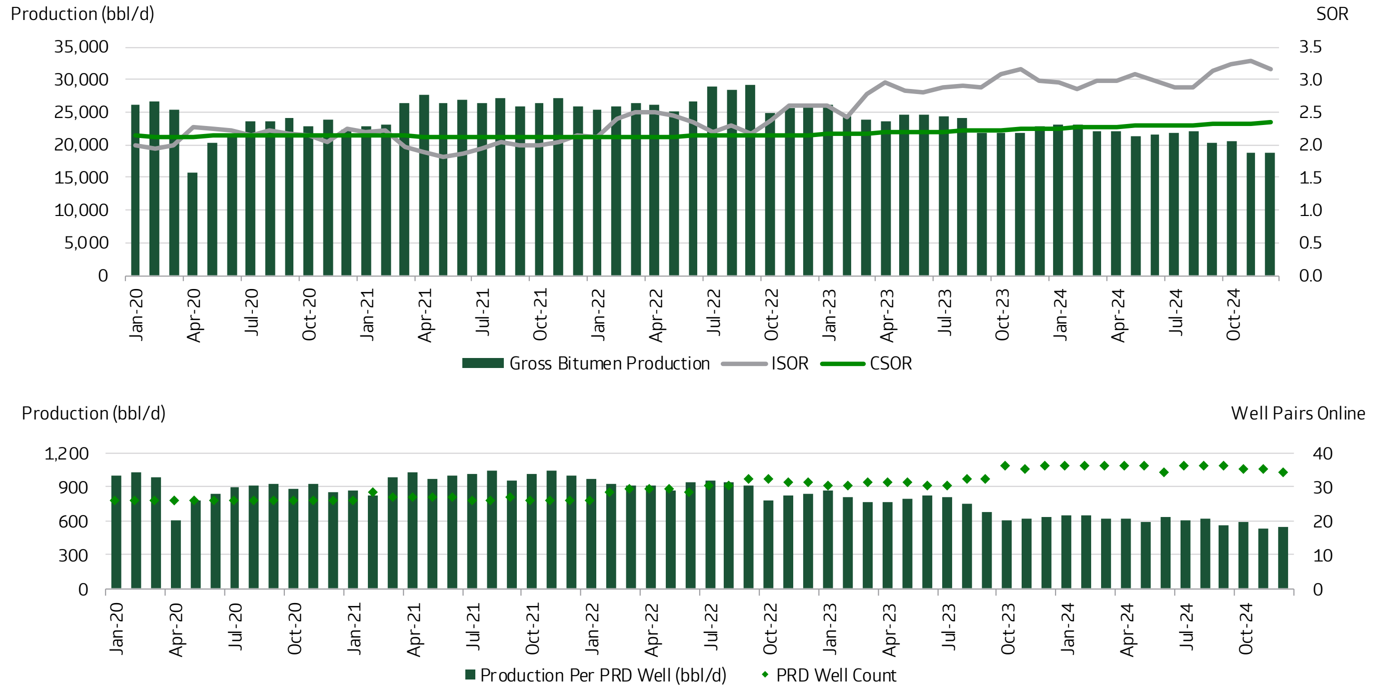
Source: geoSCOUT, Company reports, TD Cowen

Figure 17 - Performance History – Pikes Peak South – Cenovus Energy Inc. (CVE-T)



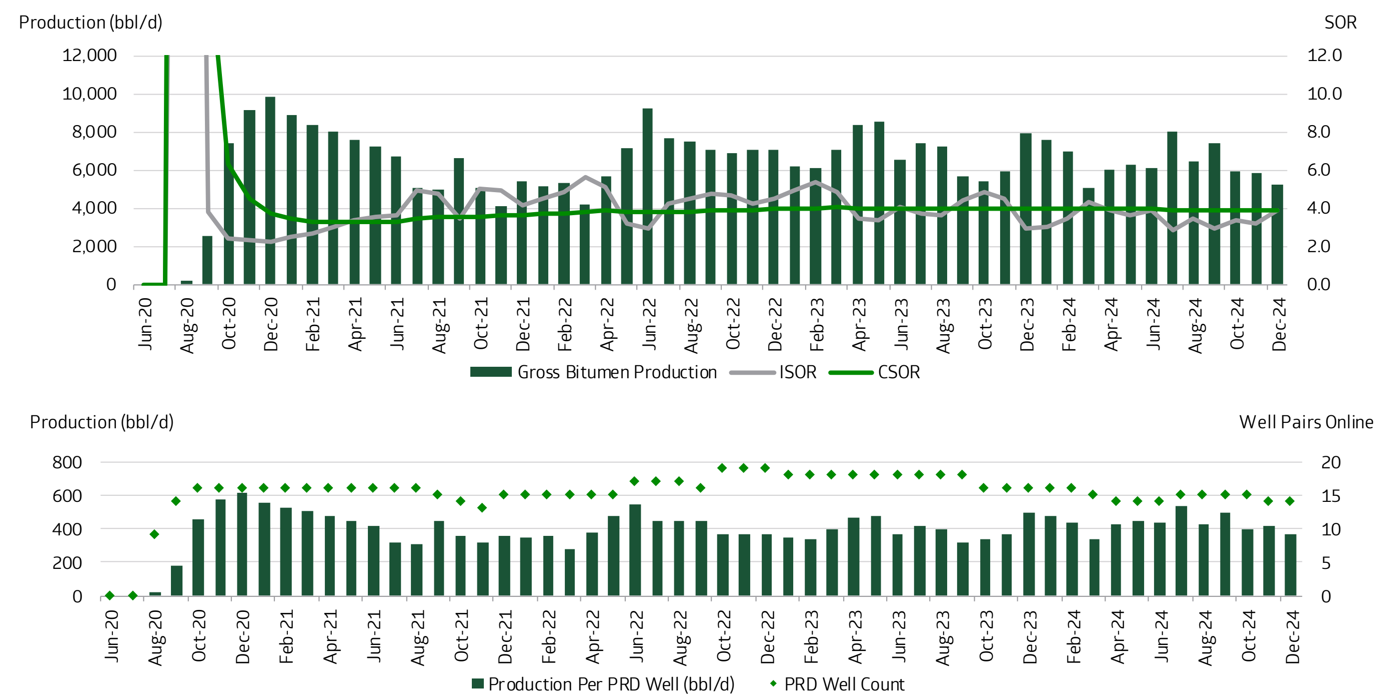
Source: geoSCOUT, Company reports, TD Cowen

Figure 18 - Performance History – Rush Lake – Cenovus Energy Inc. (CVE-T)



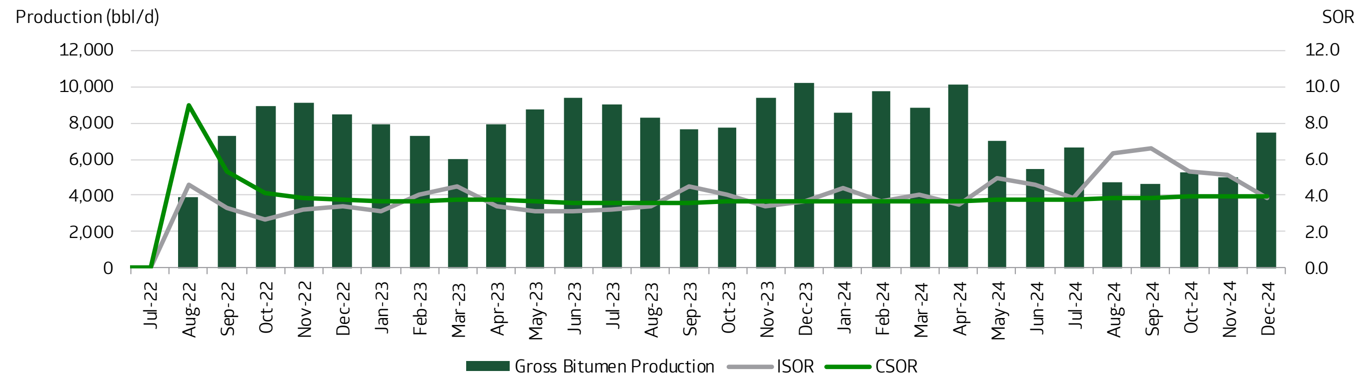
Source: geoSCOUT, Company reports, TD Cowen

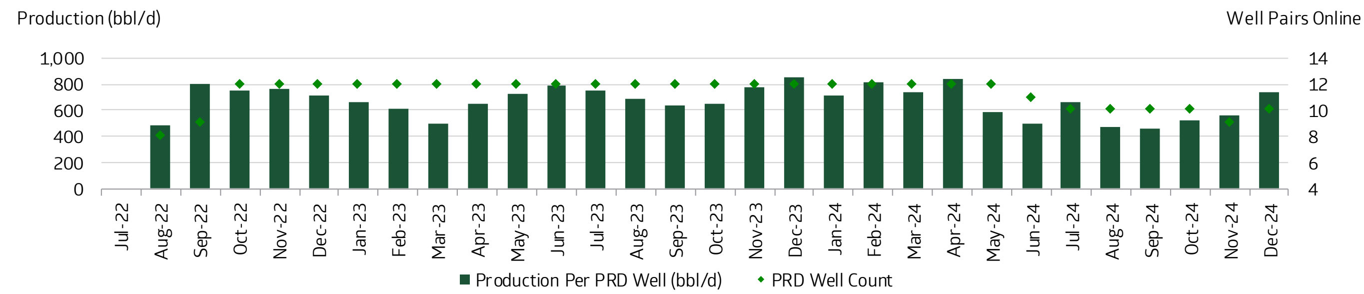
Figure 19 - Performance History – Spruce Lake Central – Cenovus Energy Inc. (CVE-T)



Source: geoSCOUT, Company reports, TD Cowen

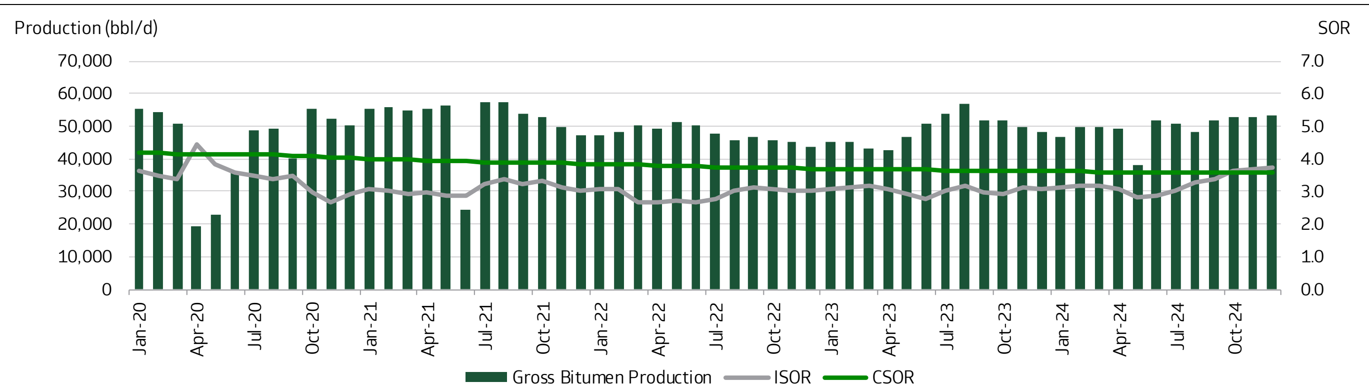
Figure 20 - Performance History – Spruce Lake North – Cenovus Energy Inc. (CVE-T)

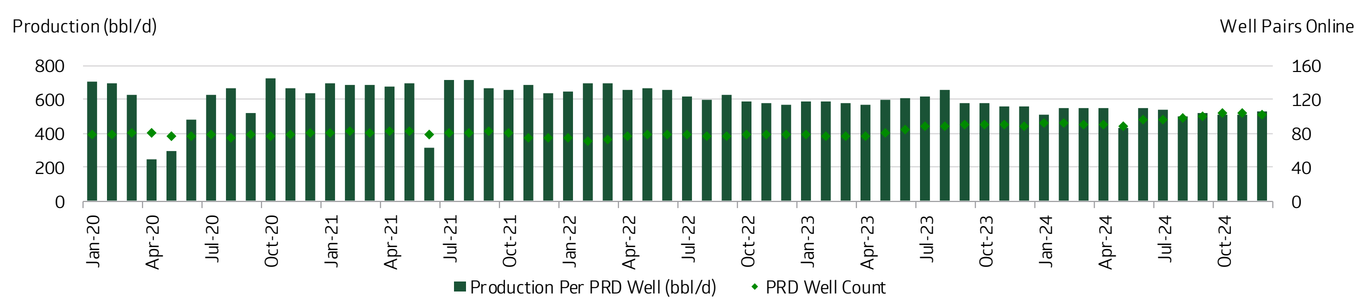




Source: geoSCOUT, Company reports, TD Cowen

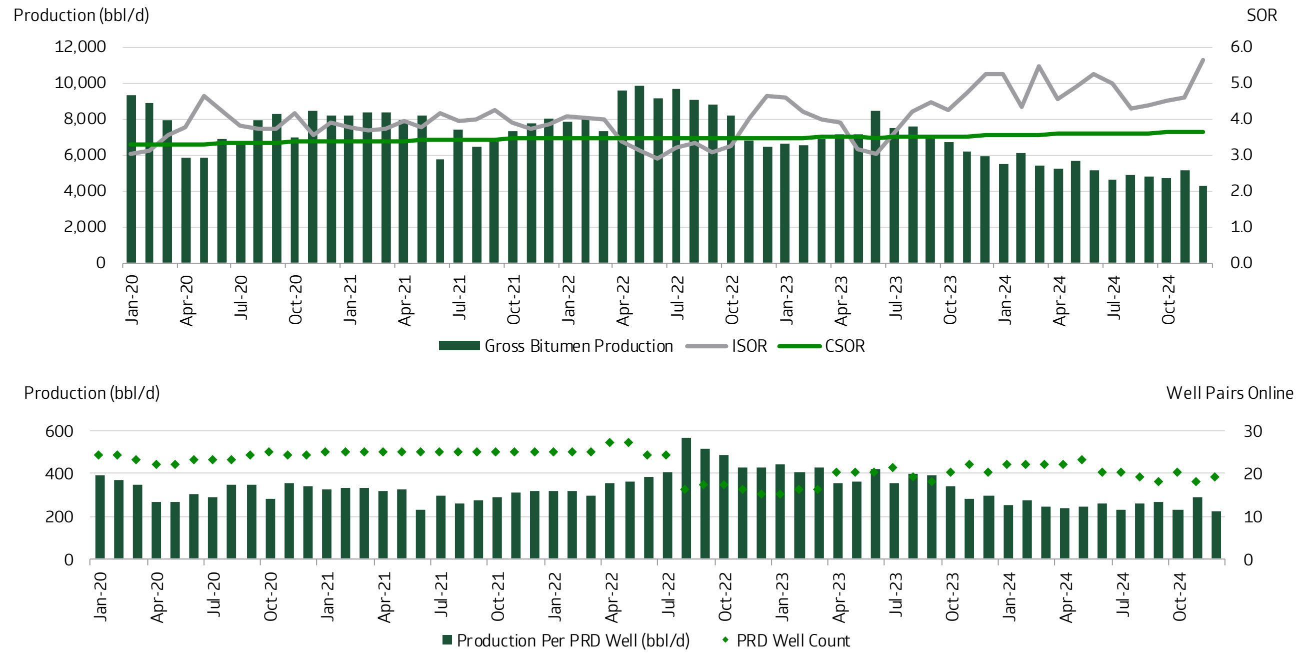
Figure 21 - Performance History – Sunrise – Cenovus Energy Inc. (CVE-T)





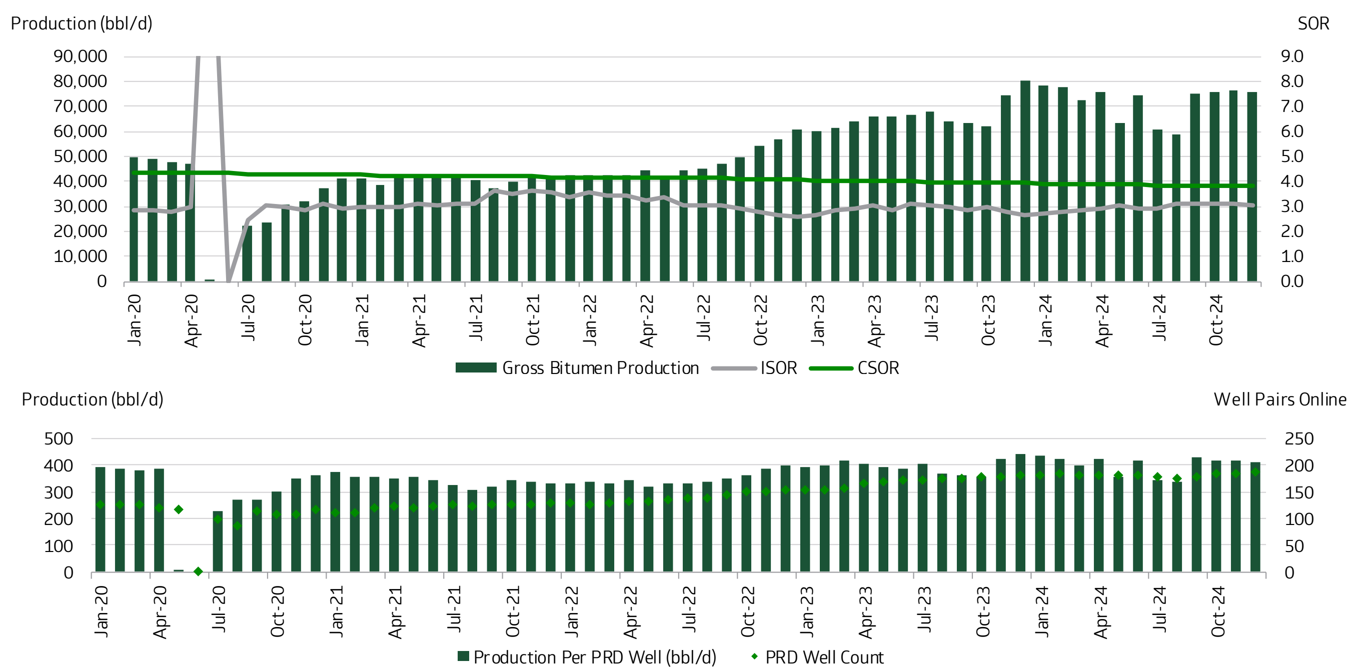
Source: geoSCOUT, Company reports, TD Cowen

Figure 22 - Performance History – Vawn – Cenovus Energy Inc. (CVE-T)



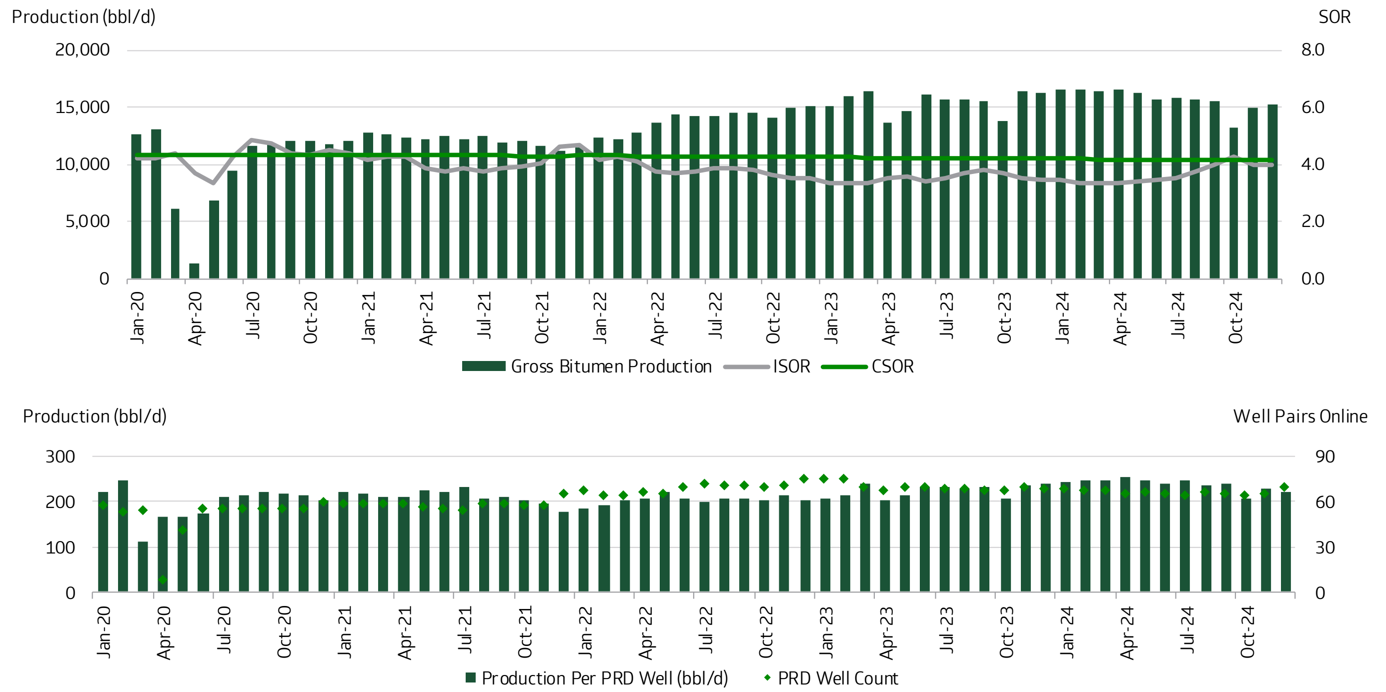
Source: geoSCOUT, Company reports, TD Cowen

Figure 23 - Performance History – Long Lake – CNOOC Ltd. (CNU-T)



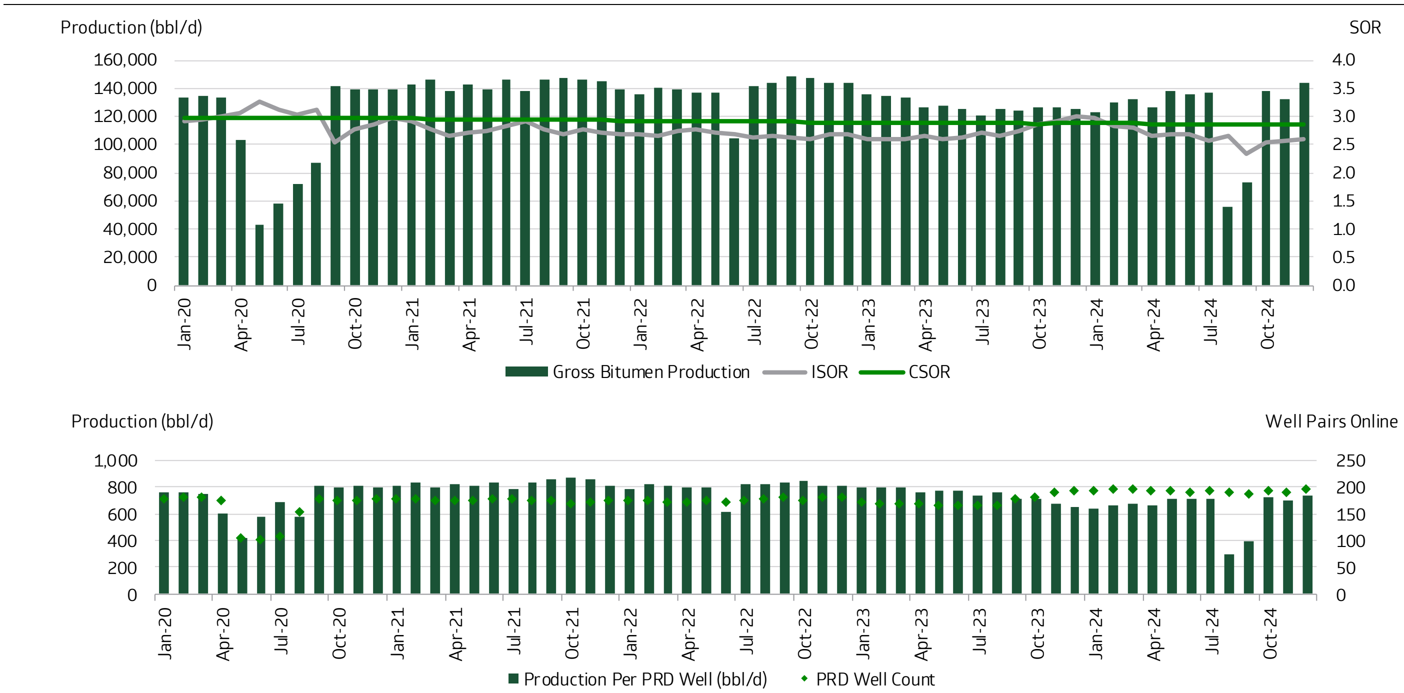
Source: geoSCOUT, Company reports, TD Cowen

Figure 24 - Performance History – Great Divide – Connacher Oil Sands Ltd.



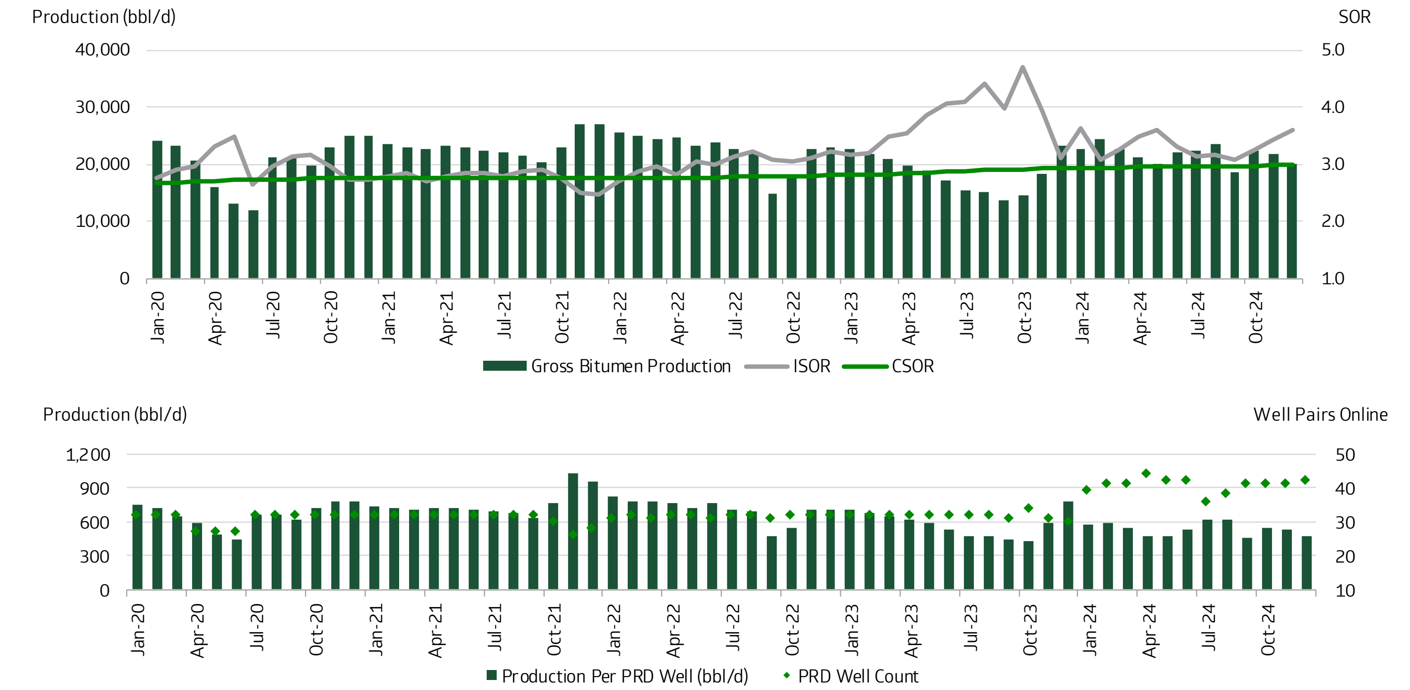
Source: geoSCOUT, Company reports, TD Cowen

Figure 25 - Performance History – Surmont – ConocoPhillips. (COP-N)



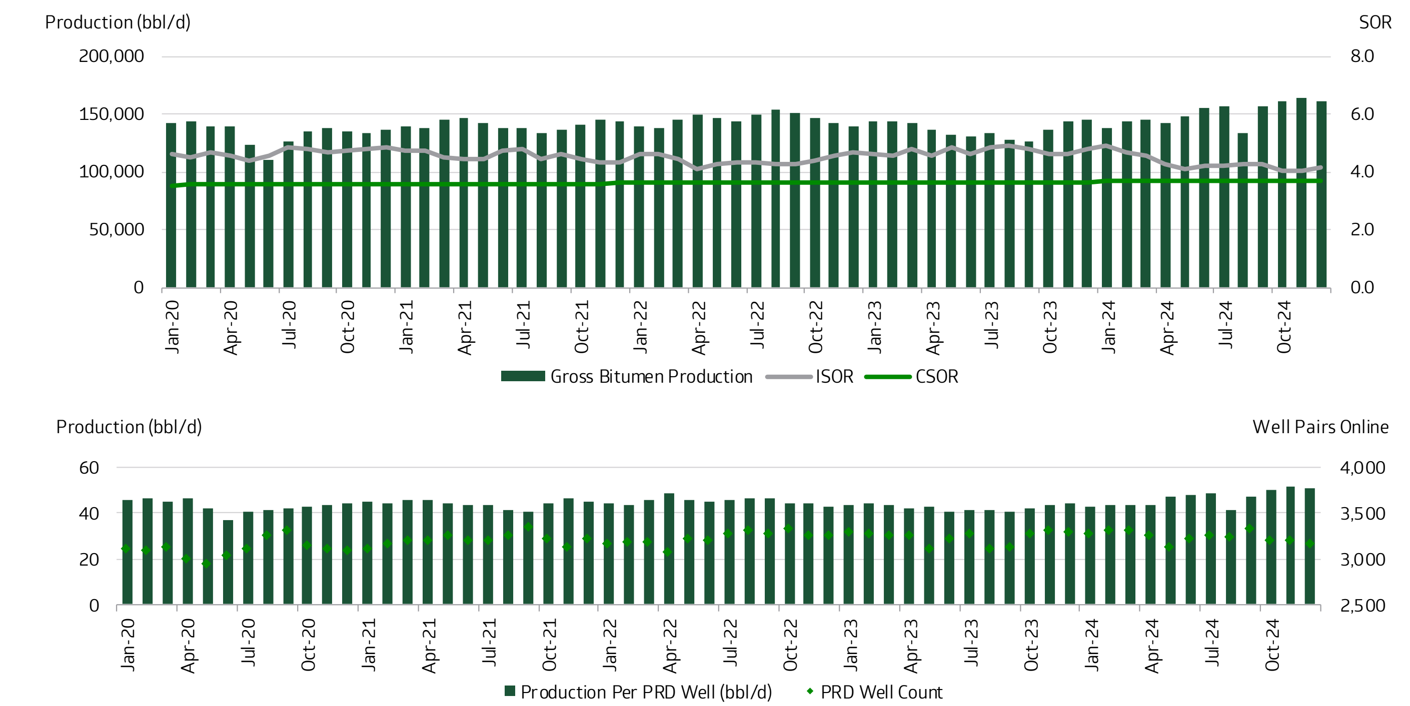
Source: geoSCOUT, Company reports, TD Cowen

Figure 26 - Performance History – Hangingstone Expansion – Greenfire Resources Ltd. (GFR-T; GFR-N)



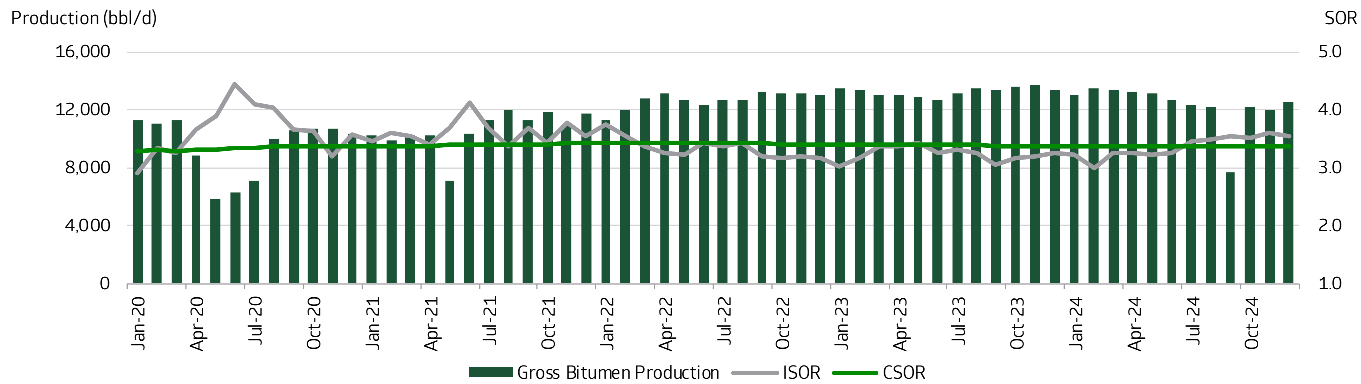
Source: geoSCOUT, Company reports, TD Cowen

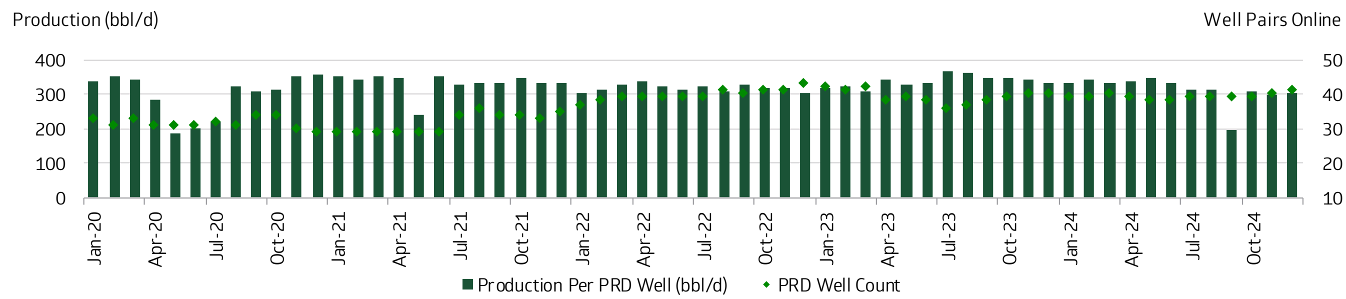
Figure 27 - Performance History – Cold Lake – Imperial Oil Ltd. (IMO-T)



Source: geoSCOUT, Company reports, TD Cowen

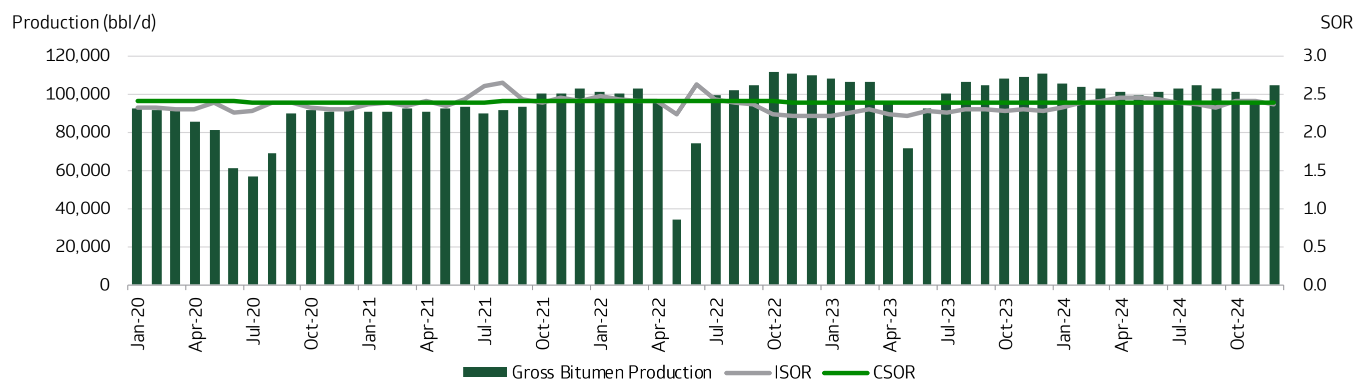
Figure 28 - Performance History – Onion Lake – International Petroleum Corp. (IPCO-T)

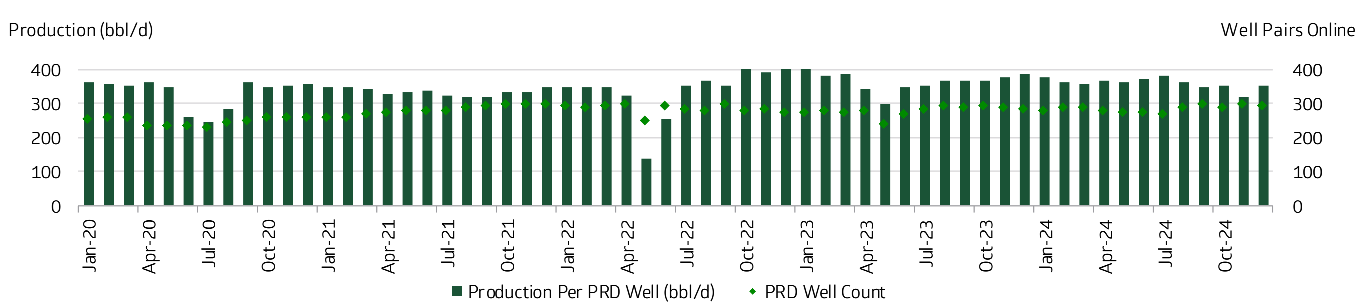




Source: geoSCOUT, Company reports, TD Cowen

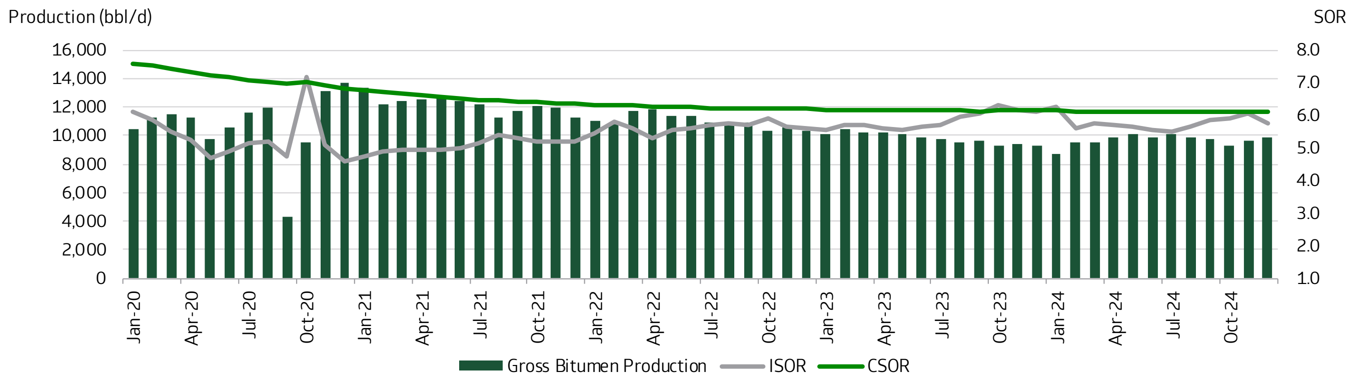
Figure 29 - Performance History – Christina Lake – MEG Energy Corp. (MEG-T)

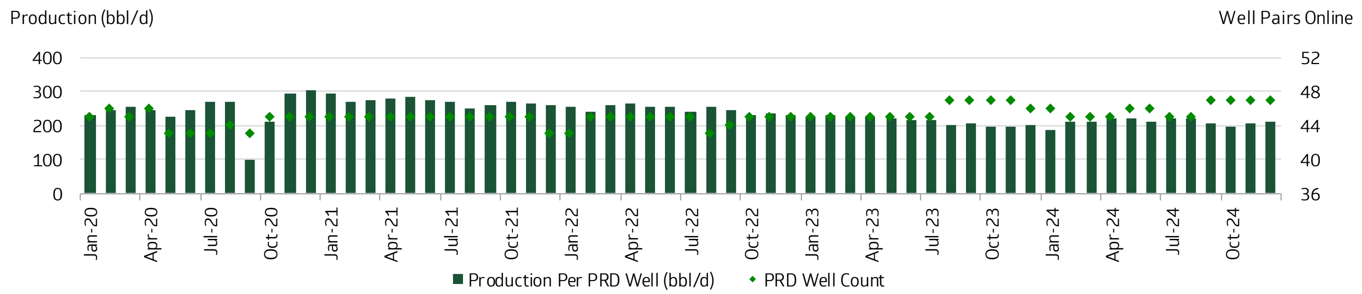




Source: geoSCOUT, Company reports, TD Cowen

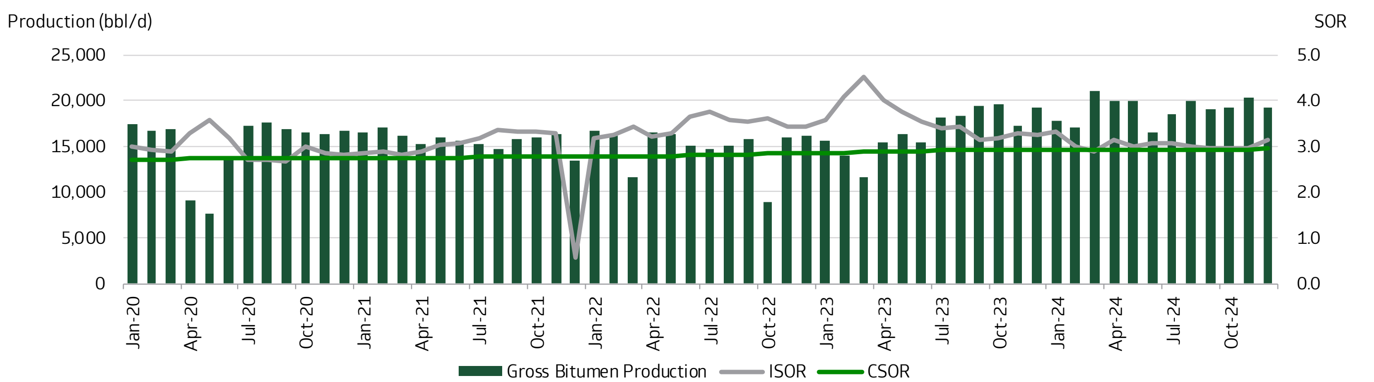
Figure 30 - Performance History – MacKay River – PetroChina Co. Ltd.

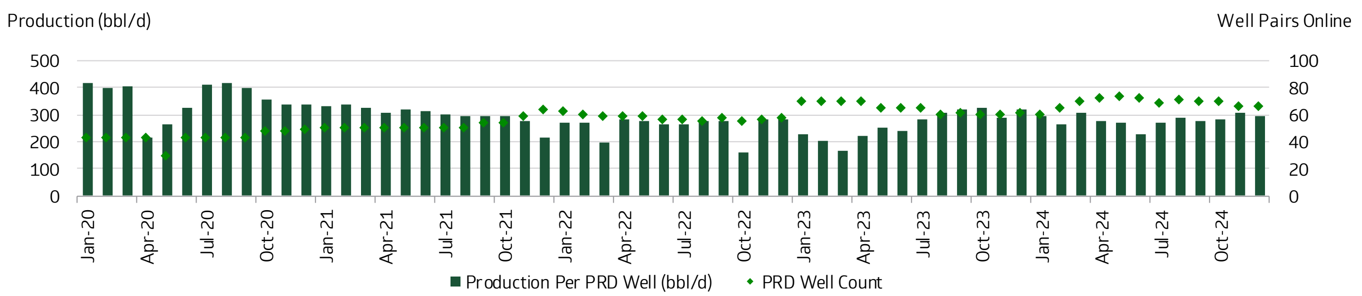




Source: geoSCOUT, Company reports, TD Cowen

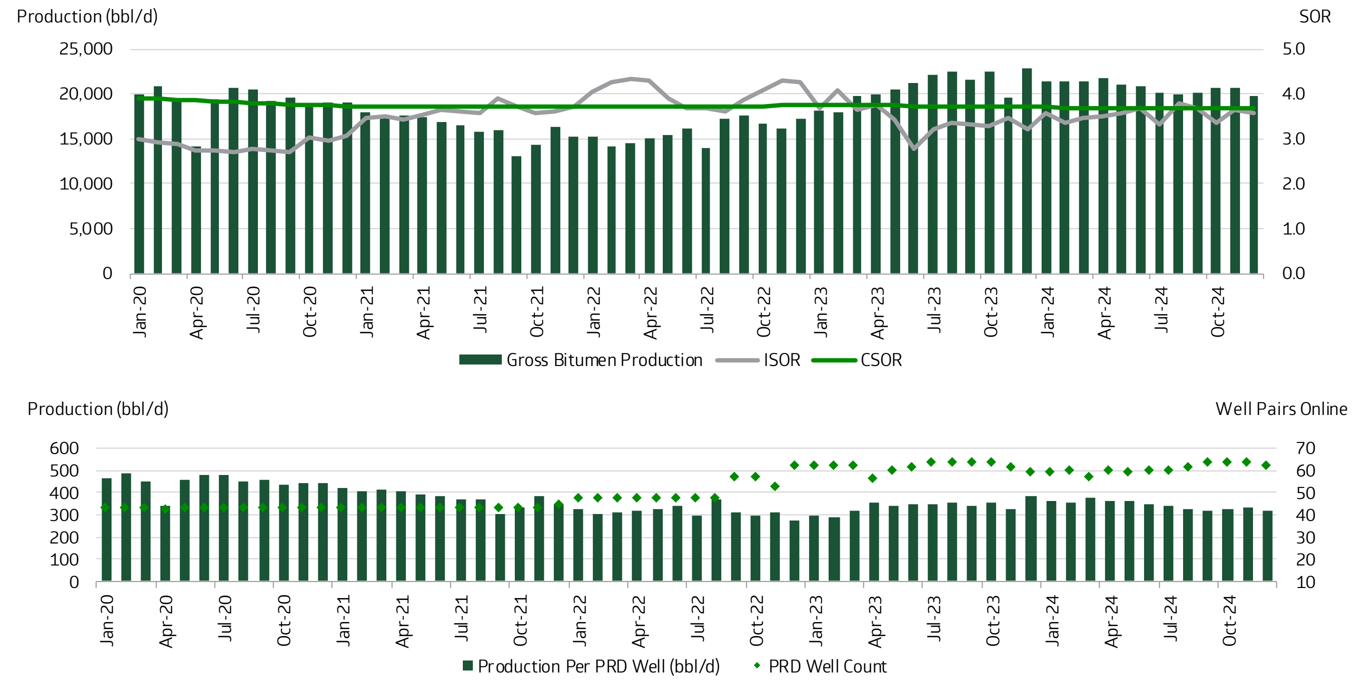
Figure 31 - Performance History – Lindbergh – Strathcona Resources, Ltd. (SCR-T)





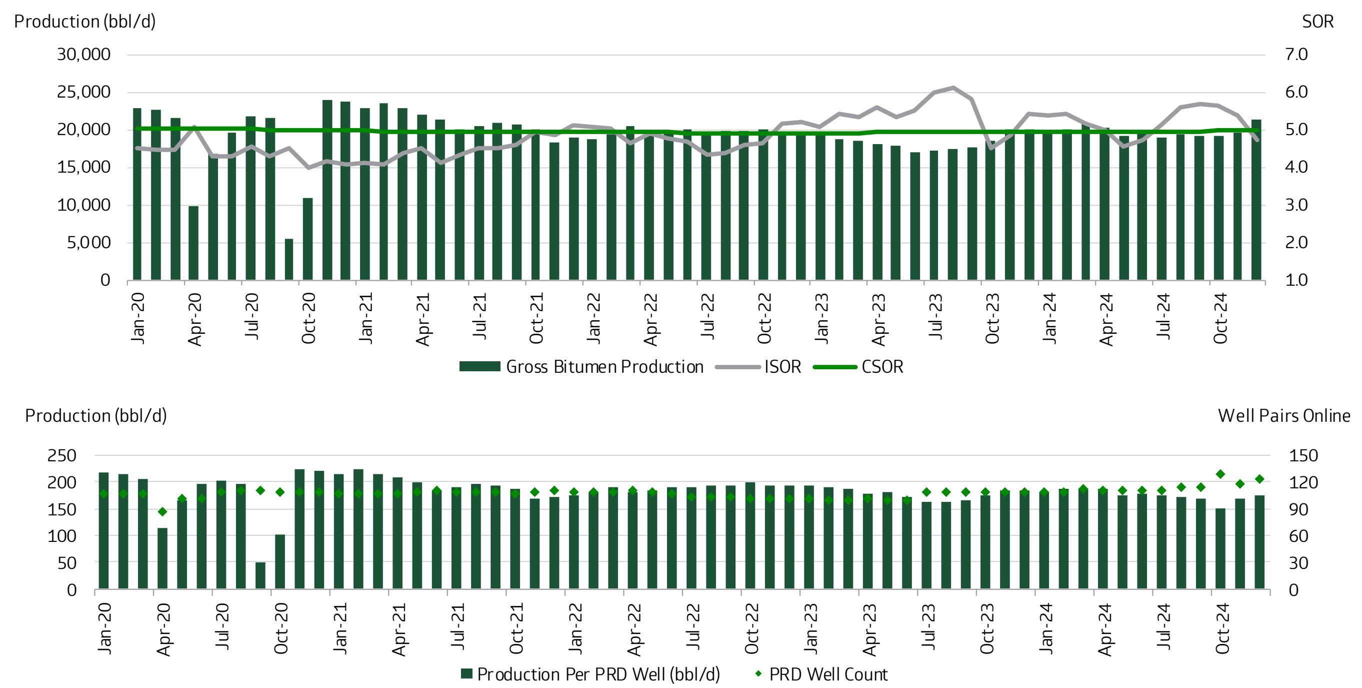
Source: geoSCOUT, Company reports, TD Cowen

Figure 32 - Performance History – Orion – Strathcona Resources, Ltd. (SCR-T)



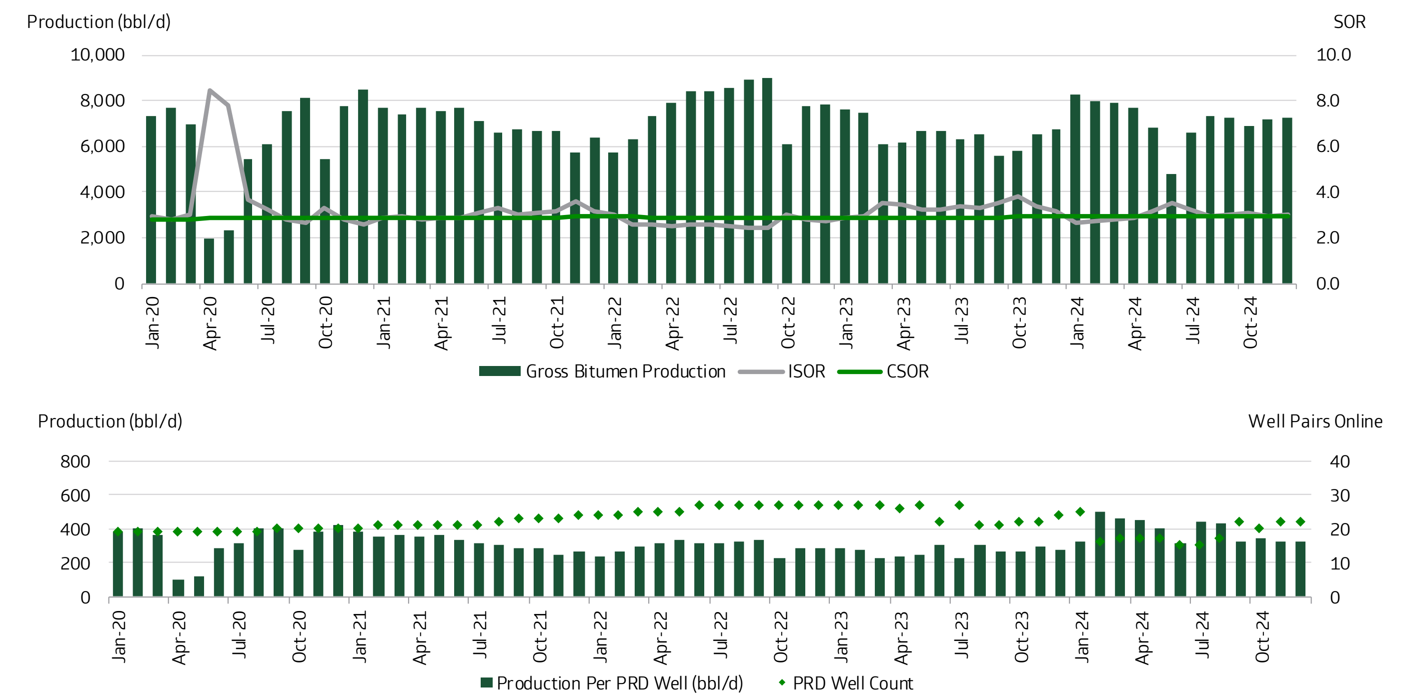
Source: geoSCOUT, Company reports, TD Cowen

Figure 33 - Performance History – Tucker – Strathcona Resources, Ltd. (SCR-T)



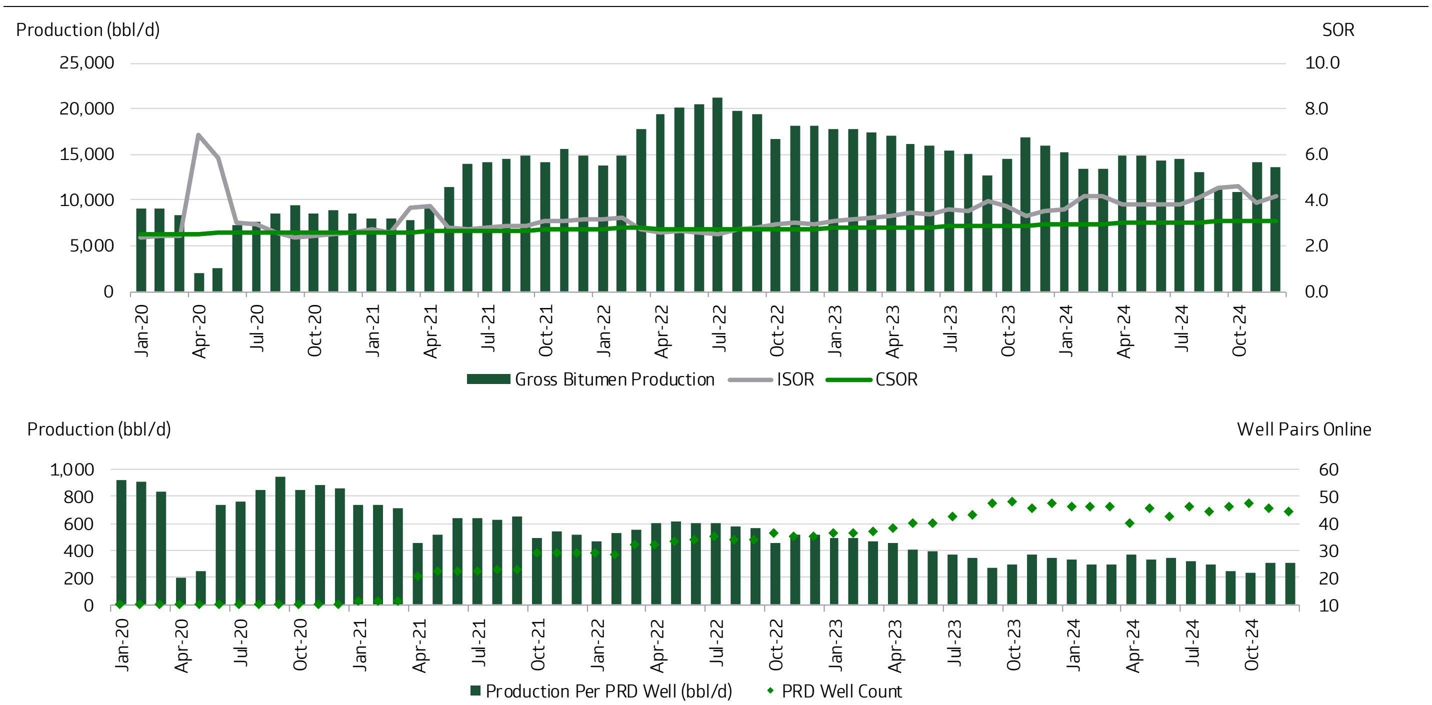
Source: geoSCOUT, Company reports, TD Cowen

Figure 34 - Performance History – Edam – Strathcona Resources, Ltd. (SCR-T)



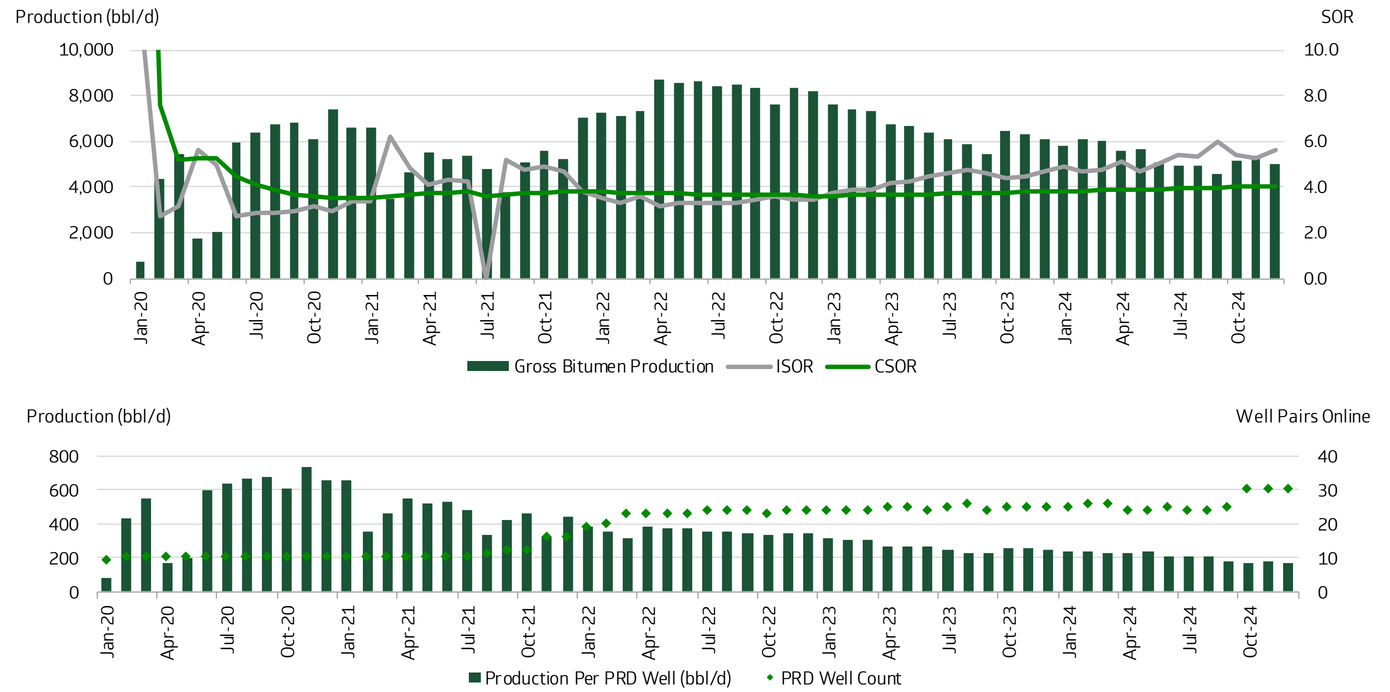
Source: geoSCOUT, Company reports, TD Cowen

Figure 35 - Performance History – Meota West – Strathcona Resources, Ltd. (SCR-T)



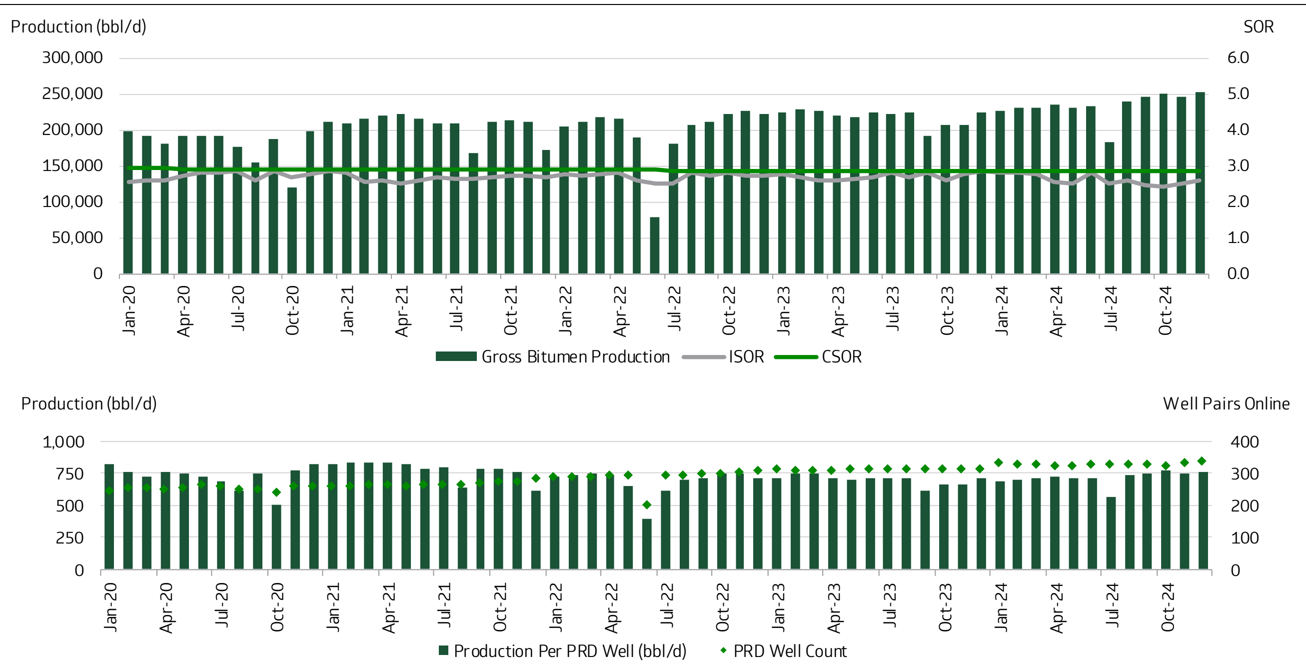
Source: geoSCOUT, Company reports, TD Cowen

Figure 36 - Performance History – Meota East – Strathcona Resources, Ltd. (SCR-T)



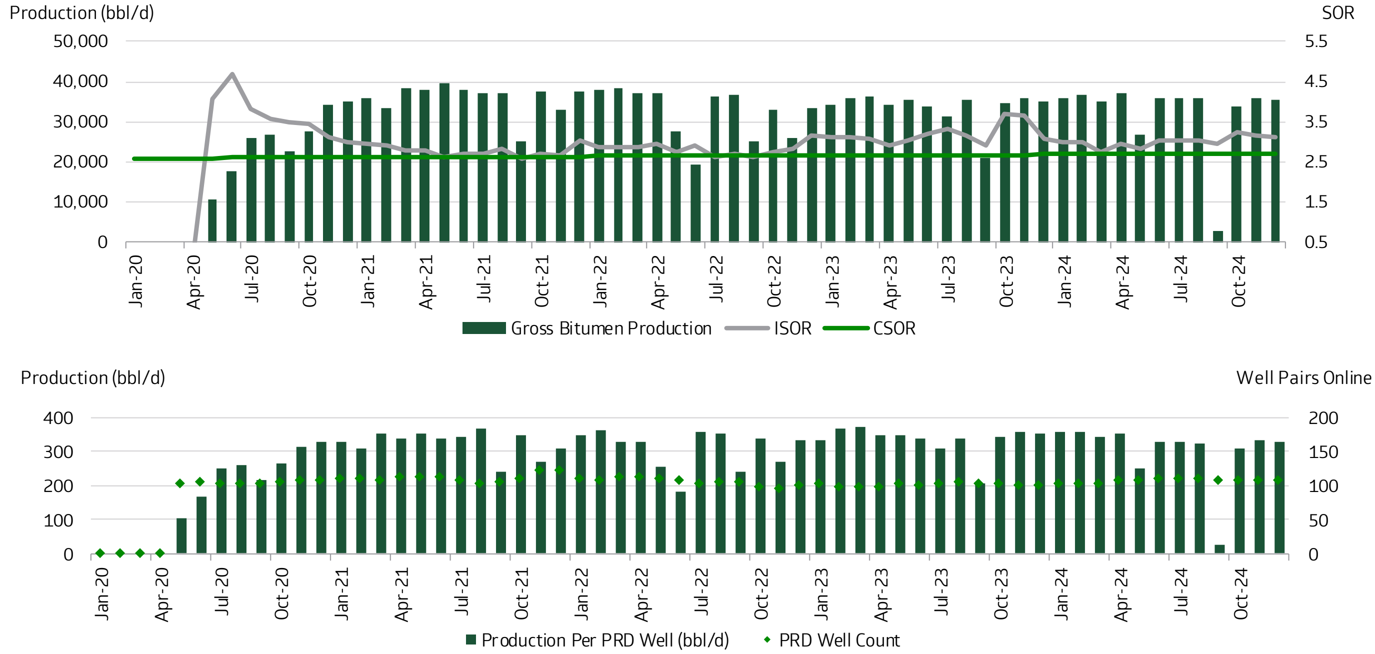
Source: geoSCOUT, Company reports, TD Cowen

Figure 37 - Performance History – Firebag – Suncor Energy Inc. (SU-T)



Source: geoSCOUT, Company reports, TD Cowen

Figure 38 - Performance History – MacKay River – Suncor Energy Inc. (SU-T)



Source: geoSCOUT, Company reports, TD Cowen

VALUATION METHODOLOGY AND RISKS

Valuation Methodology

Energy Producers:

Our target prices for the Canadian Integrateds, E&Ps and Energy Royalties are derived through a combination of: i) a multiple (based on historical trading ranges) applied to forward Debt Adjusted Cash Flow (DACF), and ii) a DCF-based Net Asset Value estimate (NAV).

Energy Producers - Seniors & Integrateds:

Our target prices for the Canadian Integrateds, E&Ps and Energy Royalties are derived through a combination of: i) a multiple (based on historical trading ranges) applied to forward Debt Adjusted Cash Flow (DACF), and ii) a DCF-based Net Asset Value estimate (NAV).

Investment Risks

Energy Producers:

Risks include: the loss of key employees, disappointing drilling results, volatile commodity prices, operating cost increases, capital cost overruns, product supply and demand, unplanned third-party infrastructure outages, financing/access to capital, government regulations, legislation, royalties, taxes, exchange rates, interest rates and environment and weather concerns.

Energy Producers - Seniors & Integrateds:

Risks include: the loss of key employees, disappointing drilling results, volatile commodity prices, operating cost increases, capital cost overruns, product supply and demand, unplanned third-party infrastructure outages, financing/access to capital, government regulations, legislation, royalties, taxes, exchange rates, interest rates and environment and weather concerns.

ADDENDUM

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Buy (1): The stock is expected to achieve total return of +15% or more over the next 12 months

Hold (2): The stock is expected to achieve a total return that falls between -10% to +15% over the next 12 months

Sell (3): The stock is expected to achieve a total return of -10% or below over the next 12 months

Suspended (4): Due to evolving circumstances and potential conflicts of interest, we can no longer generate what we consider a defensible rating at the current time

Assumption: The expected total return calculation includes annual return and forecasted dividend yield

Cowen and Company, LLC Equity Research Rating Definitions applicable from 6:00PM ET March 22, 2024

Buy (1): The stock is expected to achieve total return of +15% or more over the next 12 months

Hold (2): The stock is expected to achieve a total return that falls between -10% to +15% over the next 12 months

Sell (3): The stock is expected to achieve a total return of -10% or below over the next 12 months

Suspended (4): Due to evolving circumstances and potential conflicts of interest, we can no longer generate what we consider a defensible rating at the current time

Assumption: The expected total return calculation includes annual return and forecasted dividend yield

Cowen and Company, LLC Equity Research Rating Definitions applicable until 5:59PM ET March 22, 2024

Outperform (1): The stock is expected to achieve a total positive return of at least 15% over the next 12 months

Market Perform (2): The stock is expected to have a total return that falls between the parameters of an Outperform and Underperform over the next 12 months

Underperform (3): Stock is expected to achieve a total negative return of at least 10% over the next 12 months

Assumption: The expected total return calculation includes anticipated dividend yield

TD Securities, Inc. Equity Research Rating Definitions applicable from 6:00PM ET March 22, 2024

Buy (1): The stock is expected to achieve total return of +15% or more over the next 12 months

Hold (2): The stock is expected to achieve a total return that falls between -10% to +15% over the next 12 months

Sell (3): The stock is expected to achieve a total return of -10% or below over the next 12 months

Suspended (4): Due to evolving circumstances and potential conflict of interest, we can no longer generate what we consider a defensible rating at the current time.

Assumption: The expected total return calculation includes annual return and forecasted dividend yield

TD Securities, Inc. Equity Research Rating Definitions applicable until 5:59PM ET March 22, 2024

Action List Buy: The stock's total return is expected to exceed a minimum of 15% (with higher thresholds for less liquid, more risky securities) over the next 12 months and it is a top pick in the Analyst's sector.

Buy: The stock's total return is expected to exceed a minimum of 10% (with higher thresholds for less liquid, more risky securities) over the next 12 months.

Speculative Buy: The stock's total return is expected to exceed a minimum of 30% over the next 12 months (with higher thresholds for less liquid securities); however, there is material event risk associated with the investment that could result in a significant loss.

Hold: The stock's total return is expected to be between 0% and 10%, (with higher thresholds for less liquid, more risky securities) over the next 12 months.

Tender: Investors are advised to tender their shares to a specific offer for the company's securities or to support a proposed combination reflecting our view that a superior offer is not forthcoming.

Reduce: The stock's total return is expected to be negative over the next 12 months.

Suspended: Due to evolving circumstances, we can no longer generate what we consider a defensible target price and rating at the current time.

Under Review: Our rating is under review pending additional information and/or analysis. The prior rating should not be relied on.

Not Rated: We do not currently produce a recommendation and a target price on this security.

TD Cowen Equity Research Rating Distribution

Distribution of Ratings/Investment Banking Services (IB) as of 12/31/24

Rating	Count	Ratings Distribution	Count	IB Services/Past 12 Months
Buy	814	66.45%	301	36.98%
Hold	396	32.33%	99	25.00%
Sell	15	1.22%	3	20.00%

TD Cowen Equity Research Rating Distribution Table does not include any subject company for which the equity research rating is currently suspended.

If you are visually impaired and would like an audio file of this document, please email Equity Research Web help EquityResearchWebhelp@tdsecurities.com.

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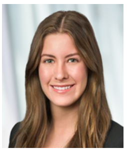
Menno Hulshof is a managing director and senior research analyst covering the Canadian energy sector. He first joined TD Cowen in 2003.



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