

# BOE Report Weekly Round-up

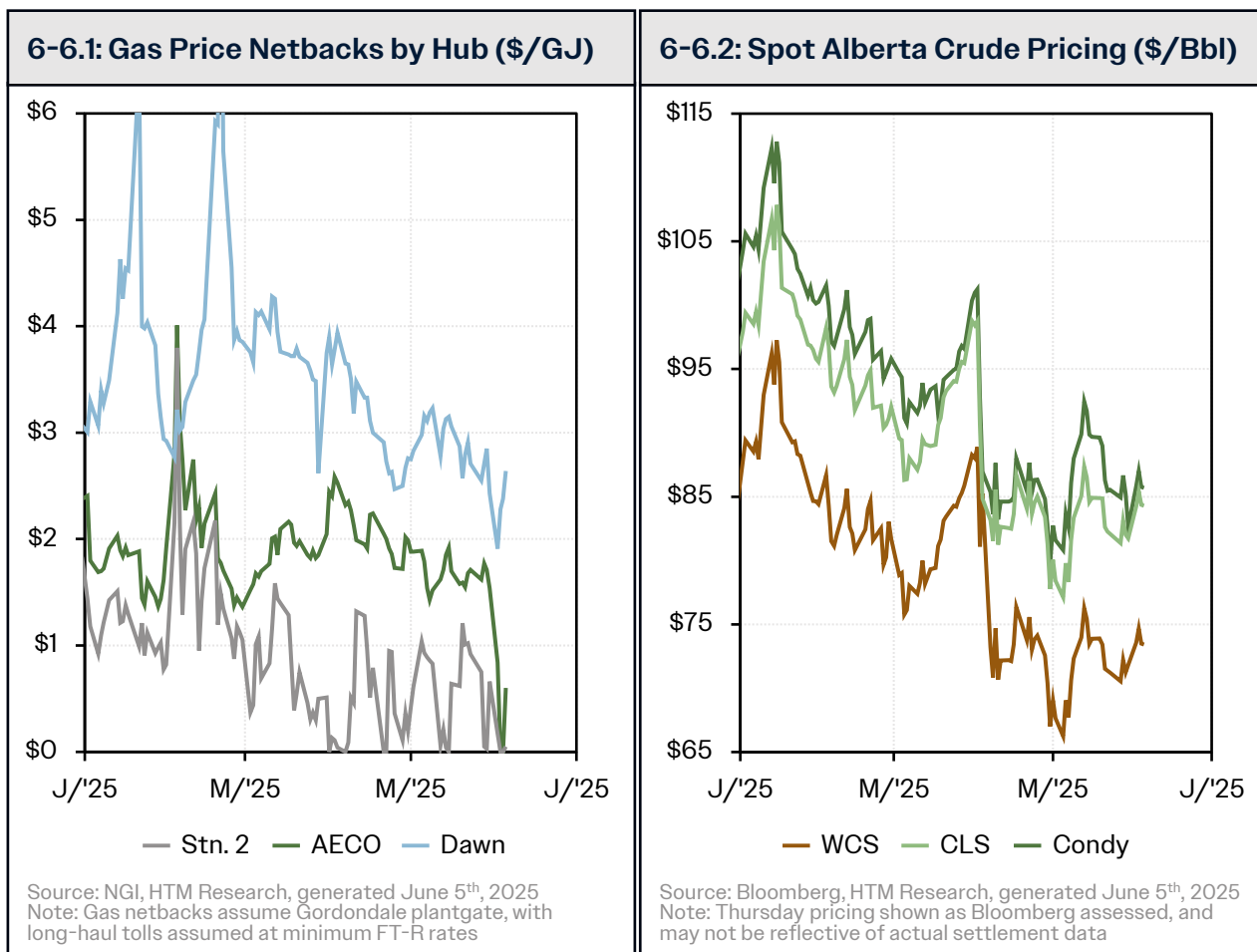
June 6<sup>th</sup>, 2025

Despite the quality of the WCSB's unconventional resource, it can be easy to forget how nascent the Montney and Duvernay are. It was just 5 years ago when the average cost to drill and complete a well in the play averaged ~\$6-7MM. Today, the cost of a Montney well pushes \$9-10MM+. Some of that is attributable to inflation; though a meaningful part of the capital cost escalation has been operators dialing in completions and spacing to optimize long-term F&D costs, single-well economics, pad-level rates of return, and asset development configurations. Put another way – more money, buys more sand, makes big wells, stock price go up.

As the understanding of various plays, phase windows, and geologies have evolved, so have productivity assumptions; and usually upwards. But we think that some companies are now implying inventory figures that are far too optimistic. A real issue begins when operators start to increase completion size, but don't work through the impact of cannibalized inventory. Operators can't load more sand *and* model the same half-length growth (i.e. assume there will be no new communication problems). Similarly, operators can't scale single well EURs, not change spacing, and assume their resource in place can support their implied recovery factors. None of this is helped by the fact that benches are often chosen by sequence markers, rather than modelled flow units – something we disagree with.

In our work, we've identified more than a half-dozen E&Ps that have flawed publicly disclosed inventory numbers. For example, we are comfortable stating very confidently, that Advantage will be unable to economically codevelop 4 intervals of the Montney at Progress. Good asset? Yup. 4 benches? Nope.

Encana began developing their Cutbank Ridge asset with Permian-style density shortly after the US shale boom; drilling wells as tight as 25 acres. That's nearly 50 wells per section! Results have been extremely poor (as expected). Inside, we look at historical development density, and what we can learn from the Tower area of the Montney.



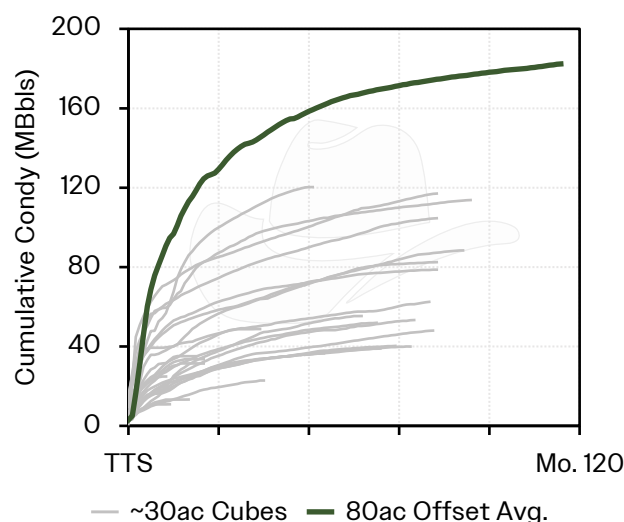
# Canada's Dominator Development – Ovintiv Tower

In 2019, Concho Resources, a Permian-focused large-cap brought online their [Dominator pad](#). This project was drilled at almost 50 wells per section and spaced meaningfully tighter than anything in the area. When the newswire hit that Concho's Dominator pad had missed expectations so badly it would impact full-year results; the stock fell 22%, evaporating US\$4.4Bn in market cap (that situation sounds oddly familiar...)

What we find interesting is that noted Canadian patriot Doug Suttles had drilled a Dominator pad of his own two years earlier (for the record, that means we invented insulin **and** downspacing until IRRs are negative). In 2017, Encana began drilling cubes at Tower, where their Montney sports >300m of gross thickness, so naturally they decided to downspace from 4 wells per section to 40. but unlike shale plays; the Montney's tight siltstone layers, *for the most part* lack any robust compartmentalization. As such, it went poorly, with wells across the Montney B through C essentially behaving as one bench while Encana tried to drill it as four. What is notable, is that every study pad has an EUR of ~1MMBbls of condensate, but the EUR/acre values vary wildly. We want to see EUR/acre increase as a proxy for increased recovery factors in similar/offsetting acreage. While the data in this specific study is noisy enough that it may not be statistically significant to prove downspacing *can't* work, it does show that 2-bench development can produce oil EUR/acre results are equal-to or better-than cube developments; and maximizing marginal return on benches comes from 1-bench-to-2-bench, not 2-bench-to-cube.

On the following page, we show a map of certain Encana Cube development trials, along with 2-bench and single-bench control pads by offset operators.

## 6-6.3: Encana Tower Cube Results



Source: HTM Energy Research, generated June 5<sup>th</sup>, 2025

## 6-6.4: Encana Investor Presentation Slide

### DEVELOPING THE CUBE Montney Cube






- Multiple proven Montney benches on ECA lands
- New Dawson South 4-well pad confirming expectations
  - Averaged >525 bbls/d liquids and >2,600 BOE/d IP30
  - Expect additional up-side with implementation of advanced completions
- Starting to flow the Tower North cube with 28 wells in 5 benches
- Tower South cube currently drilling 20 wells in 4 benches
- 2017 Montney cube developments will flow to new plants, on track for Q4 2017 start-up
- Montney cubes utilize multiple rigs and frac crews
- Pacesetter Q2 Montney cube <\$3.5 MM D&C cost for 9,000' lateral

Source: Company Reports via Bloomberg, accessed June 5<sup>th</sup>, 2025

### 28 Well Tower Cube Development



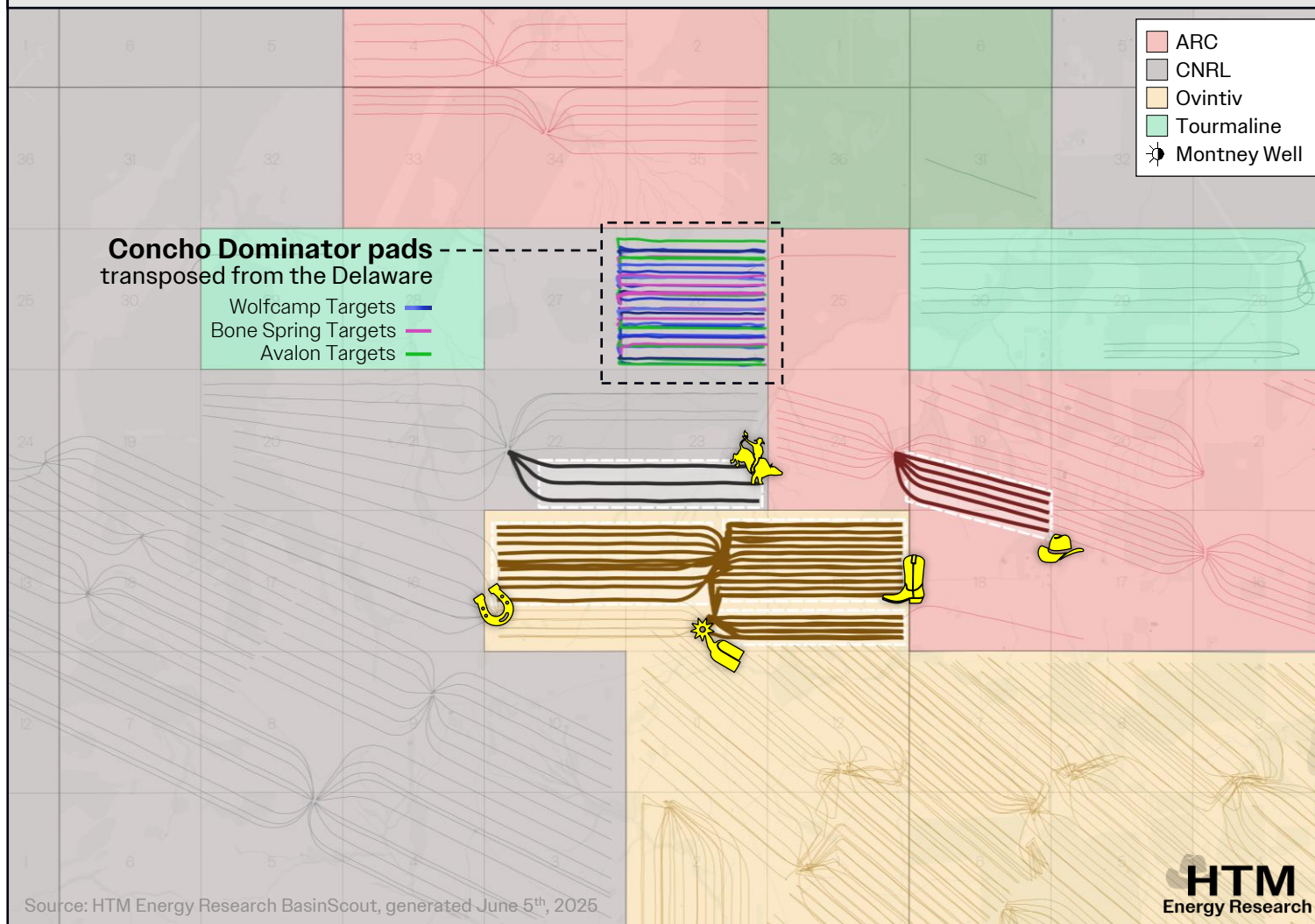
## 6-6.5: Ovintiv Tower Development Density Data Table

	Pad	Drainage (acres)	Wells in Study	DSU (acres)	Pad EUR (Raw Gas, Bcf)	Pad EUR (Condy, MBbls)	EUR/acre (Sales, MBOE)	C <sub>5</sub> EUR/acre (Condy, MBbls)	F&D Cost (\$/BOE, Adj.)
	ARC Dawson 08-24S 2-Bench	235	5	~50	15.5	970	15.3	<b>4.2</b>	<b>\$7.20</b>
	CNRL Septimus 05-22W 1-Bench	345	3	~115	15.2	840	10.4	<b>2.5</b>	<b>\$5.40</b>
	Encana Tower 02-14E Cube	180	9	~20	21.8	980	27.1	<b>5.4</b>	<b>\$9.50</b>
	Encana Tower 10-14E Cube	470	17	~30	26.2	1,050	12.4	<b>1.9</b>	<b>\$13.60</b>
	Ovintiv Tower 10-14W Cube	580	10	~60	28.1	1,080	10.5	<b>2.3</b>	<b>\$10.70</b>

Source: HTM Energy Research BasinScout, generated June 5<sup>th</sup>, 2025

Note: F&D costs shown adjusted to 2017 D&C costs for 10-14W for sake of comparison; sales EURs are modelled to adjusted for plant recoveries

## 6-6.6: Ovintiv Tower Development Density Study Area Map



# Liquids Behavior Suggest Upspacing Can Deliver Improved IRRs

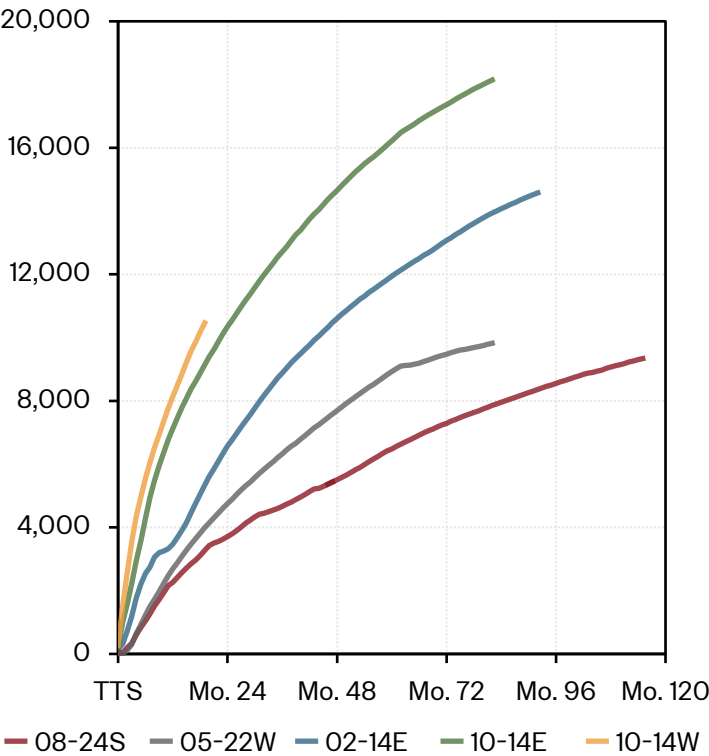
When they said that the US was coming to Canada – we thought juicy M&A premiums and a more active exploration scene – we didn’t think it meant downspacing until wells produce 1,050Btu/scf gas. The results of Encana’s downspacing can be called many things – ‘successful’ is not one of them. With so much inventory in Canada, we’re so extremely weary of companies that are overestimating their location counts – there’s just no need to; and E&Ps risk delivering long-term results as seen below – especially production from the heavy hydrocarbon stream (i.e. condy).

Incremental wells on the Tower cubes did add raw gas volumes but failed to add meaningfully to condensate recoveries. On a condensate EUR per acre (a proxy for OOIP recovery efficiency), ARC’s 2-bench design to the north beat all but one of the Encana/Ovintiv pads. We see this phenomenon over and over throughout the Montney.

Thus, we think folks should generally accept that the liquids-rich Alberta Montney is at best 2-bench play with very few exceptions. Or even better, no more than 2 benches should ever be fully underwritten outside of the Pipestone core, and certain parts of deep Kakwa. For some companies, this will mean a grueling adjustment of their previously messaged inventory figures. Now, we’re biased, but anything short of a full subsurface model that drives reserve estimates and economics would leave room for error when appreciating who holds the inventory – but at the very least divide acres by locations to gut-check implied DSUs! Then, discerning readers may be wondering if this means we also disagree with Ovintiv’s assessment they can find 300 more location on the assets they acquired from Paramount in 2024. Excellent thought. We do. Ovintiv’s implied 85 acre spacing across the ~74,000 net undeveloped acres they acquired is untenable if not ludicrous. Perhaps we need to seal the borders to stop the flow of dangerous 85-acre-DSU-related ideas from the Denver office!

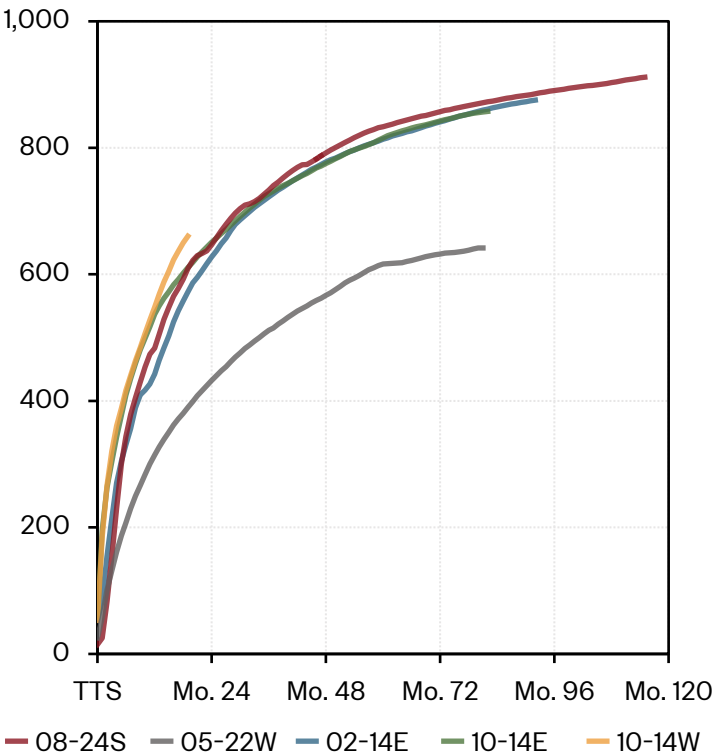
Even while we appreciate that larger companies with a lower IRR hurdle and cost of capital can afford to trade F&D for higher capital investibility, but if we’re being honest, does Ovintiv have a lower cost of capital than average? We’d prefer operators that err on the side of ‘too-wide’ spacing, and slowly work their way in supported by data; rather than the opposite, with hundreds of millions potentially torched in the process.

6-6.7: Study Area Pad Total Cume Gas (MMcf)



Source: HTM Energy Research BasinScout, generated June 6<sup>th</sup>, 2025  
Note: Certain individual wells have been adjusted for runtime

6-6.8: Study Area Pad Total Cume Condy (MBbls)



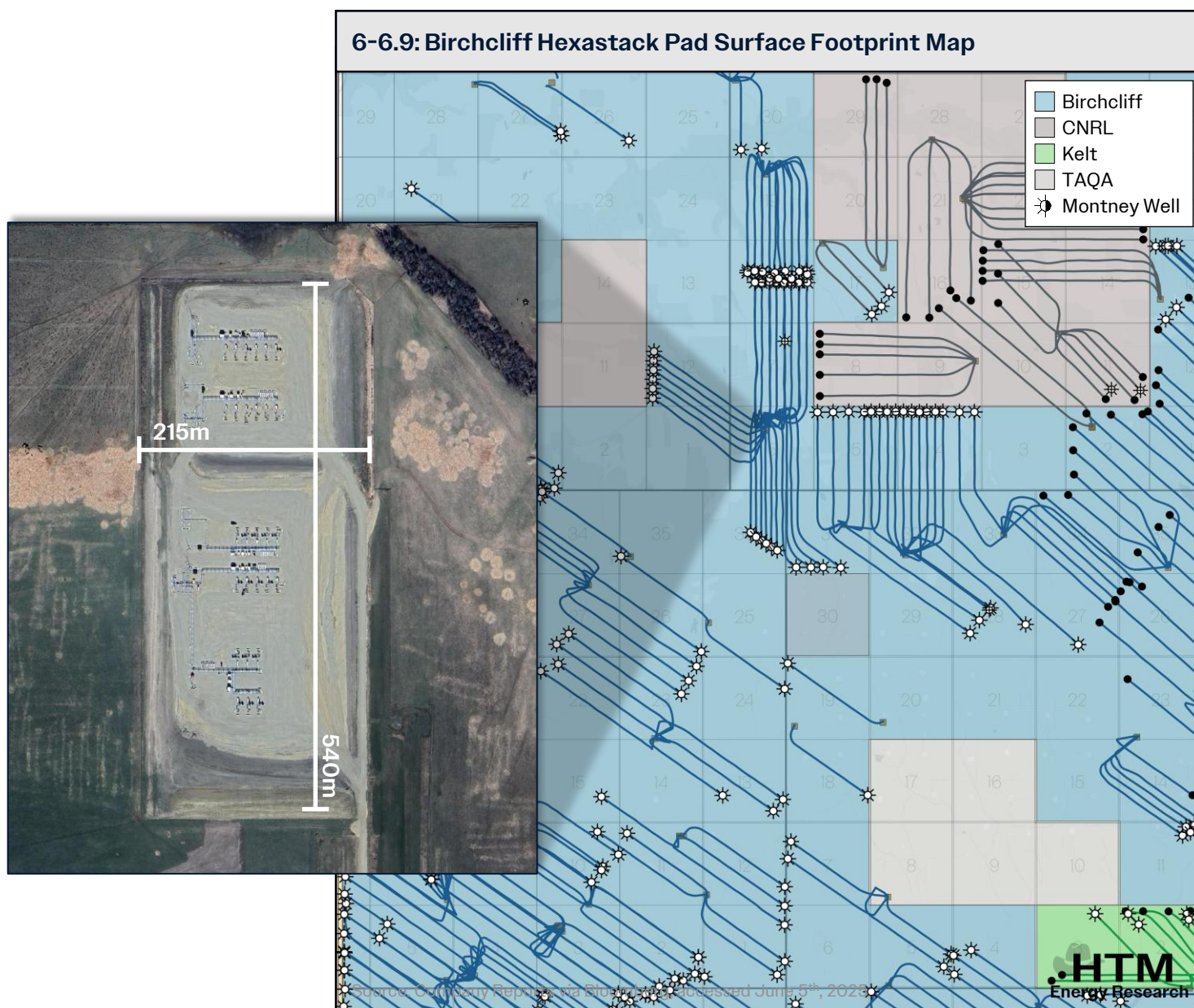
Source: HTM Energy Research BasinScout, generated June 6<sup>th</sup>, 2025  
Note: includes wellhead condensate, light oil, and plant pentanes



# Development Density is Great, but Operators Must be Careful

Development density can be a phenomenal thing in unconventional plays. For example, Birchcliff's Hexastack pad which is home to 28 producing wells and over 65km of lateral length! But the Hexastacks were spaced far too tight, both horizontally and vertically. Even when Birchcliff was drilling wells here for <\$5MM, F&D costs still map to >\$1.50/Mcfe from the Hexastacks. CNRL's wider spaced wells directly to the east (SEC 8 & 9) will deliver HTMe F&D costs of ~\$0.95/Mcfe. Birchcliff has since switched to higher intensity completions, and wider spacing throughout their Pouce Coupe asset, which delivered their best-ever set of TILs in 2024, with F&D costs below \$1.00/Mcfe (compared to their 3yr reserve auditor average of ~\$1.90/Mcfe), though these wells were in the Lower Montney to the south in the higher-pressure lean gas window.

Birchcliff had one of the biggest inventory adjustments, going from "7,423 potential net future horizontal drilling locations identified" in 2022, to an undisclosed unbooked number today. Though, we estimate that while their location count may be down as much as 80%, their recoverable resource over the lifetime of their assets is down much less, according to our OGIP modelling under their run-rate completion. Fortunately for the company, Birchcliff had not made lofty production promises backstopped by faulty inventory, and have done well with their new completion design.



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