

# CurveAlpha's 2025 Volatility Related E&P Valuation Surprises

Probable events that the E&P Market  
is assigning too low a probability to

12/15/2024

# E&P MISPRICINGS BY M&A BUYER OR SELLER HAS HIGH PROBABILITY OF CONTINUING

Q1 2024

*“ I don’t need CurveAlpha to tell me that OXY is Buying Short Duration Assets”*

*“Yes, you do! OXY has Negative WTI Asymmetry & needs to do Volatility Accretive M&A to avoid significantly Underperforming the WTI Strip (3Y)”*

Q4 2024

*OXY Underperforming WTI Strip (3Y) by approx. 20%*

E&P	YTD
CNX	85%
CRK	82%
AR	39%
GPOR	32%
SPY	28%
EXE	26%
E/W NG Index	20%
EQT	16%
MGY	16%
RRC	14%
SU.CAD	13%
XOM	8%
CRGY	8%
GSCI	7%
DEC	6%
NOG	6%
NG Strip (3Y)	6%
XLE	4%
PR	4%
EOG	3%
FANG	2%
SM	2%
CVX	0%
MTDR	-1%
NG Vol	-2%
WTI Strip (3Y)	-2%
CTRA	-3%
XOP	-3%
WTI Vol	-3%
SHEL	-6%
HES	-6%
CNQ	-6%
E/W Large Cap Index	-7%
OVV	-9%
COP	-14%
BP	-18%
E/W Small Cap Index	-19%
OXY	-22%
DVN	-28%
CHRD	-30%
CIVI	-33%
APA	-39%
BRY	-42%

# 2024 E&P Valuation Observations

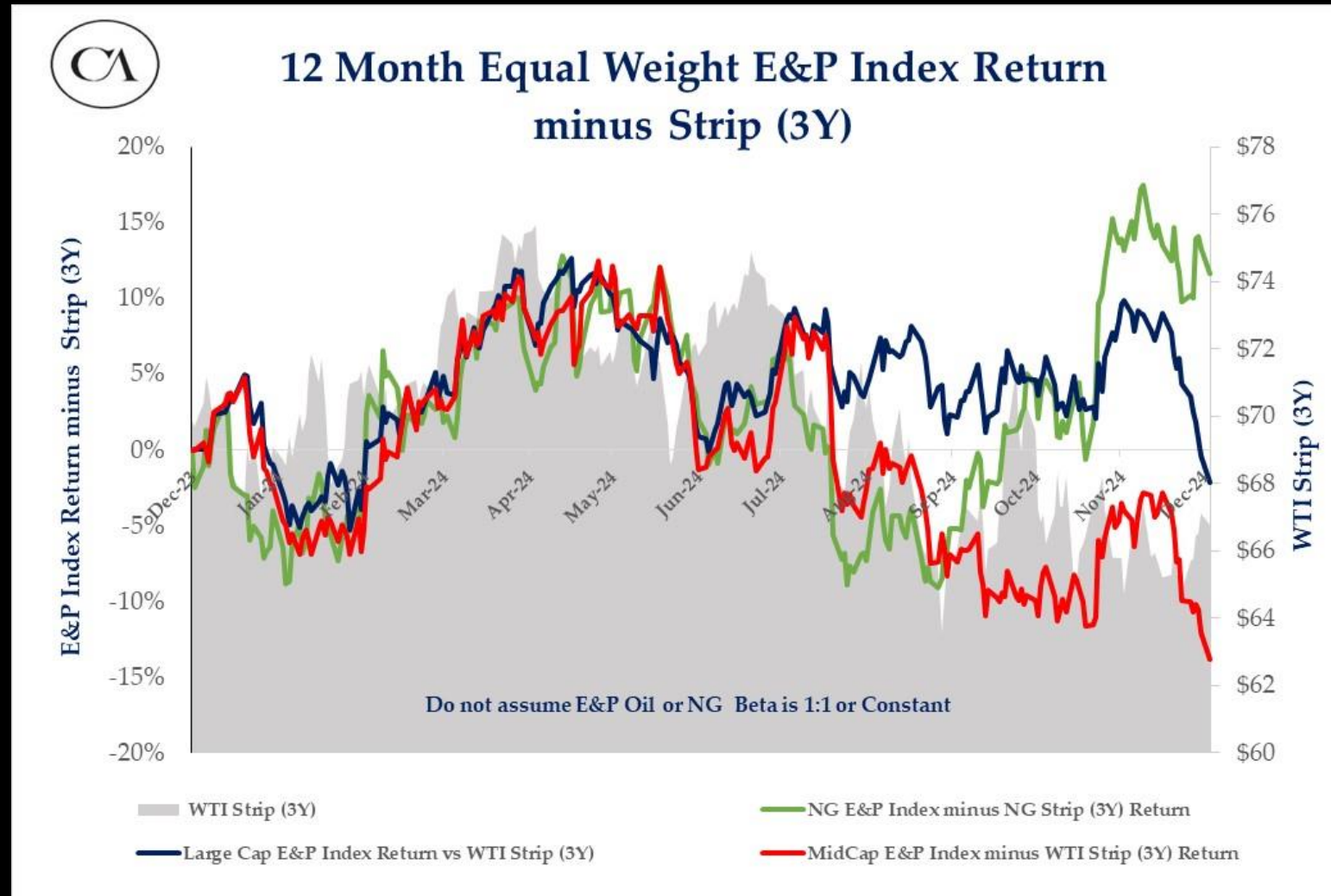
- If you are going Buy or Sell Tier 2, you can not get the Options Valuation wrong
- If you are Buying Tier 1, the Options Valuation & Payment Vehicle/Exchange Ratio matter. You are still making an O&G Volatility Wager
- If you are changing “Duration”, you cannot get the Options Valuation wrong
- Paying with Stock doesn't mean Mispricing the Volatility Exposure becomes irrelevant
- There isn't a M&A Buyer or Seller on previous page that Priced O&G Volatility attractively & did poorly

# Top 5 Probable E&P Valuation Surprises in 2025

E&P Investing is about Pricing the Assumed O&G Volatility Exposure

1. **CA's Mid Cap E&P Index Valuation is Facing an Uphill Battle.** The "Time Decay" of the Options to Drill will become more apparent as each year passes. The 2.5% FCF Yield pick up vs Large Cap seems attractive, but not enough for the Probable Oil Volatility Exposure. If significant Oil Volatility materializes, the probability of buying Mid Cap at significantly better terms -10 to 20% vs WTI Strip (3Y) - & with much *lower* Oil Price Dependency is high
2. **CA's NG E&P Index. The "Easy Money" was likely made in 2024.** Probability of outperforming the NG by 10%+ is much lower than many believe. NG tends to be volatile & +/- \$.50 Shift in Strip (3Y) has big impact on E&P Sensitivity
3. **CA's Large Cap E&P Index Fails to Outperform the WTI Strip (3Y) for a 2<sup>nd</sup> Year in a row.** The EV/EBITDA, FCF Yld, ROCE or P/NAV is not attractive enough given the location on the S-Curve. The Asymmetry from Probable Oil Volatility is Negative, which requires a higher level of compensation. If we are wrong, it's probably not by much & Oil Volatility will be lower than expected. If Oil Volatility occurs during the year, Large Cap Index can easily Underperform the WTI Strip (3Y) by 10 to 20%
4. **E&P Credit Spreads are Priced for Perfection & too little O&G Volatility.** Oily E&P Spreads have little room for improvement but will widen significantly if the WTI Strip were to shift lower by \$5+. NG Credit is worse, Volatility Adjusted Credit Spreads are approx. 0%. A potentially important M&A consideration

# All Strategic E&P Transactions Contain Embedded O&G Volatility Bets



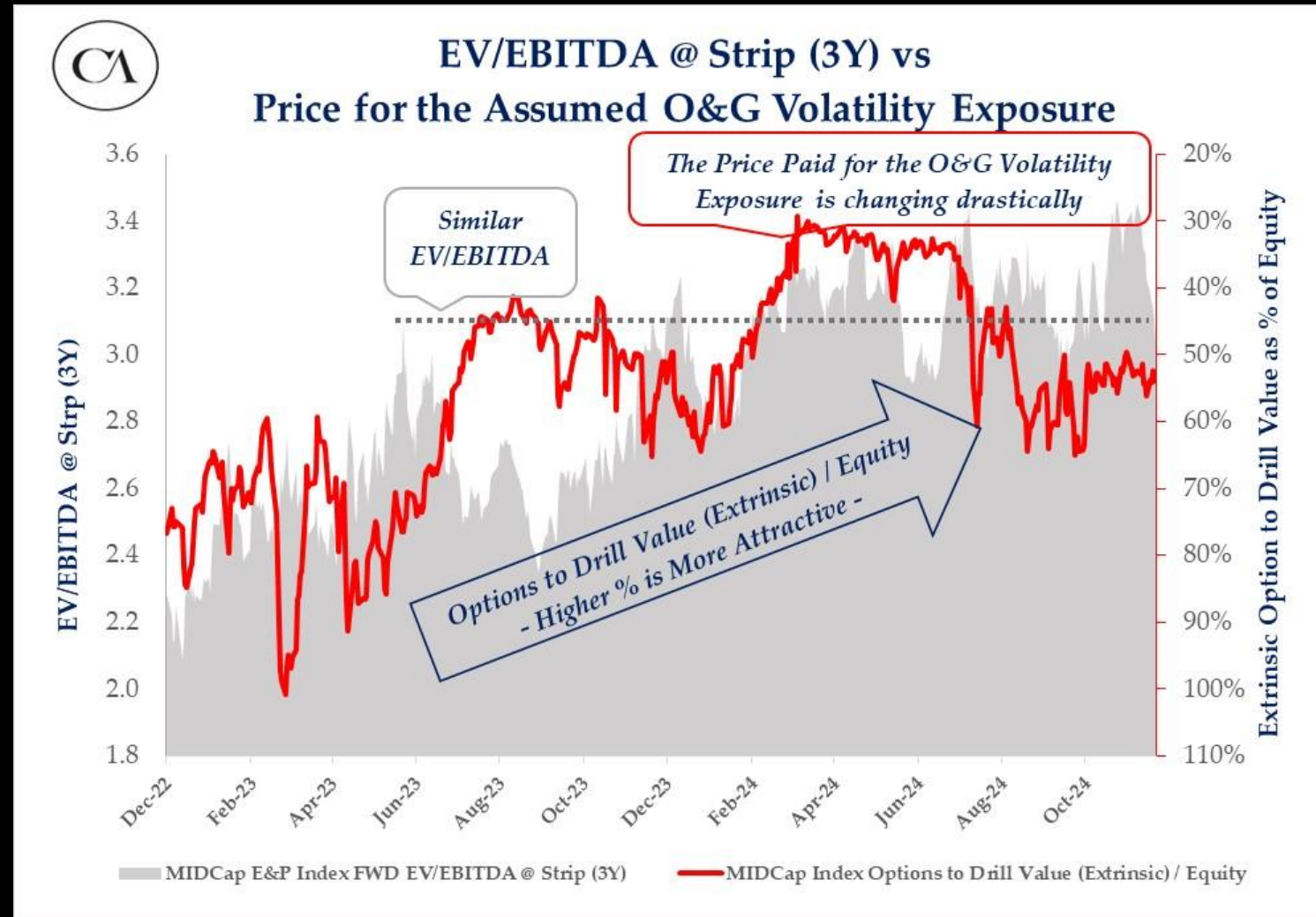
# Other Probable E&P Surprises in 2025

E&P Investing & Outperforming O&G Curve is becoming more Difficult

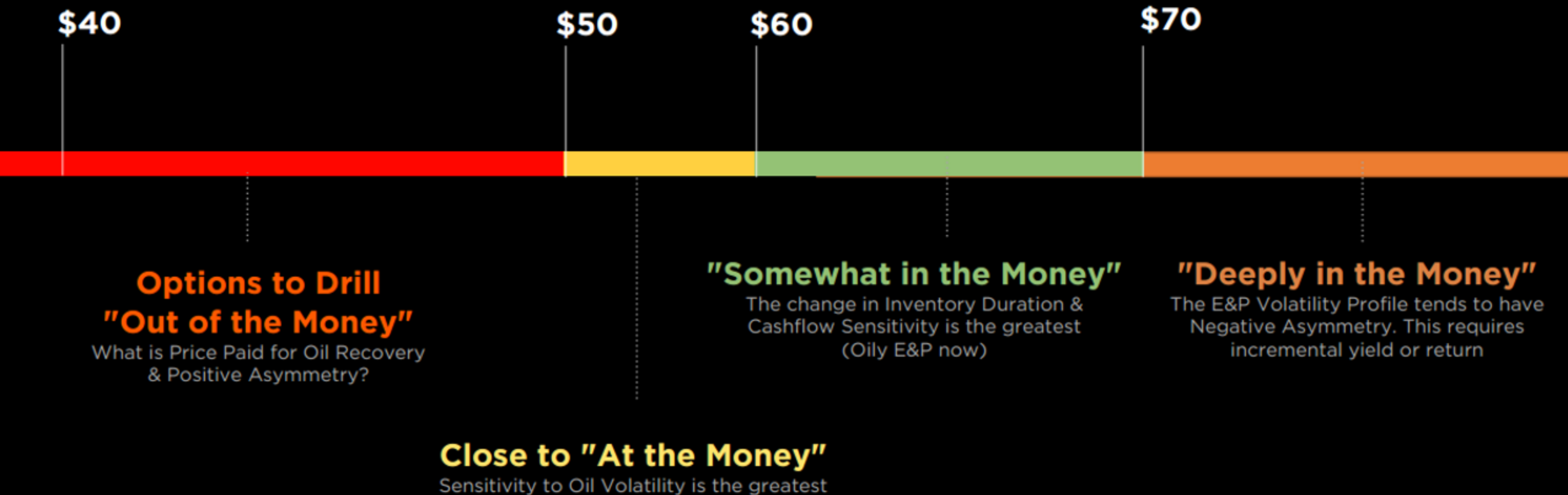
- ***A handful of influential E&P Investors abandon the FCF Yield & EV/EBITDA Valuation Metrics for a more accurate Volatility Adjusted Valuation.*** Change is caused by frustration that Traditional Valuation Metrics don't correlate with Returns & the Institutional knowledge of knowing how to Price Assets that have Price Dependency & changing "Durations"
- ***M&A. The difference between Winners vs Losers & Buyer vs Seller will be big and similar to 2024.*** M&A Advisors continue to focus on Per Share Accretion, so in 70% of Deals either Buyer or Seller will make a significant O&G Volatility Pricing Error. Patience & Volatility Analysis in M&A will likely be difference between winning & losing
- ***Distressed E&P Co's will increasingly look at taking advantage of the Production vs Options to Drill Arbitrage*** vs selling at a low Valuation and to establish a Valuation Floor vs the O&G Curve
- ***Energy Weight as % of S&P. Most Probable is to stay within the 3 to 5% Range.*** The Industry has been calling for this to go to 10%. Very difficult to do when the Extrinsic Value of the Options to Drill is not 50% of the Equity Price
- ***The Price Paid for the E&P Volatility Wager is Worth > than the Change in O&G Price.*** Pick your E&P Index
- ***Long/Short E&P Equity Managers Continue to Struggle,*** as E&P Sectors oscillate between being rich & cheap vs the Underlying O&G Strip on a Volatility Adjusted Basis



# Traditional Valuation Metrics Mask the Embedded Volatility Wager. Causing Valuation Error



# The O&G Volatility Exposure is always important, but for different reasons





# Nov '23. Probable E&P Valuation Surprises in 2024

## 2024 Report Card

On Tue, Nov 21, 2023 at 3:22 PM Henricus van der Lee <[hcvanderlee@curvealpha.com](mailto:hcvanderlee@curvealpha.com)> wrote:

- “2024 E&P Preview: In 2024 it’s probably going to be difficult to outperform the WTI Strip (3Y). Oily E&P is priced for too little WTI Volatility, given where we are sitting on the S Curve”
- “In addition, Tier 2 Inventory is coming to a theatre near you. Those who modify their “Duration” and or Misprice the higher Assumed Oil Volatility Exposure, will feel the Pain in Mark to Market Repricing”
- “Good luck to all those rushing into M&A. Many Per Share Accretive Deals, will not be Accretive from a Volatility Adjusted Valuation Perspective. The latter translates into Underperforming the Oil Curve, as Oil Risk is taken *Inefficiently*. Buyer & Seller be aware. What to Pay, When to Pay, How to Pay”
- “Ironically, NG E&P is the exact *opposite story*. Positive Asymmetry @ attractive Pricing”. FCF Yield @ Strip (3Y) Volatile, but Volatility Exposure Tradeoff is well worth it”
- “CurveAlpha’s Incremental Value. When & Why Traditional & Options Based Valuations Diverge”

# Why O&G Producers Hire CurveAlpha

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1. Can't afford not to know when Traditional & Options Based Valuation Metrics Diverge
2. Understand & Quantify the Embedded O&G Volatility Wager of a Strategic Transaction
3. Focus on Transactions that are Accretive on Both Per Share & Volatility Adjusted Valuation Basis
4. Identify O&G Wagers with Good Odds & Risk with Poor Odds
5. Understanding the Importance of Outperforming the Underlying O&G Curve
6. No Black Box. Well Established Options Pricing Methodology using your own Well Data
7. Scenario Analysis made Easy & Understandable
8. 1-Day Volatility "Boot Camp" or M&A Case Studies for C-Suite & Board

# CurveAlpha

The Oil & Gas Volatility Exposure Experts

*Same Data, Different Insights*