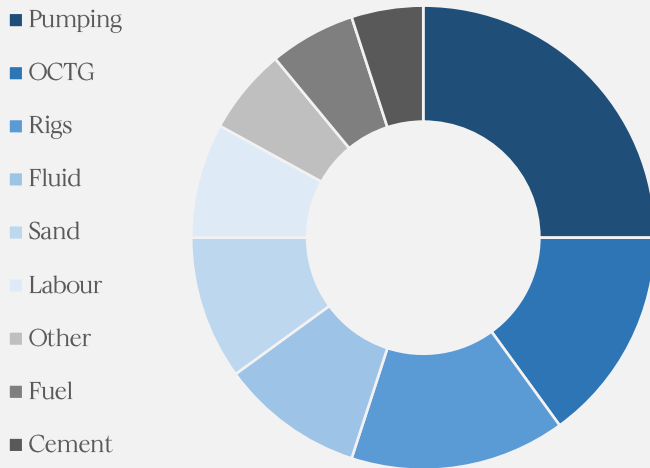


Daily Thought

Inflation Easing – August 31st, 2023

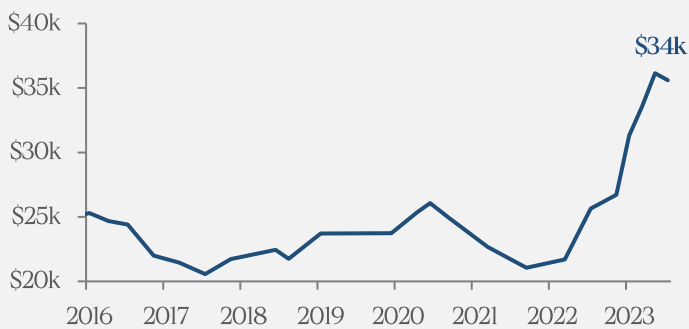
(Fig. 1) Example Shale Well AFE



(Fig. 2) Drill Pipe Short Ton Price



(Fig. 3) Permian High Spec Rig Day Rates



Source: Bloomberg, Company Reports, HTM Analysis

Today we look at oilfield inflation in the United States. While this has been the topic-de-jour over the past few years, inflation is starting to abate on a y/y basis, and we think should continue to flatten given our drilling activity outlook. Mainly, wages, pressure pumping, and drill pipe expenditures have begun to steady. A typical AFE is ~15% drill pipe, which has halved off its 2022 highs, and hot rolled steel is back at 2019 prices, which typically leads tubular goods pricing. We'd expect further price softening of tubular goods through the end of the year (slower than YTD, though). On drilling day rates, which make up 10-20% of an AFE - well, they remain stubbornly high, and while there is no good live fixture data for onshore drilling (like there is offshore), industry whispers, and quarterly filings can to some extent shed some light on high-spec day rates. We piece together that rates are down slightly so far in 2023 and flattening. We'd expect more of the same with shale oriented rig day rates given OFS discipline thus far, with risk they soften due to continued rig drops (though given our rig outlook, don't see that as a robust case).

Daily Pricing & Week on Week Benchmark Chg.

CAD Priced Liquids

Condy | \$107.45 (+4.2%)
 Synthetic | \$113.45 (+3.0%)
 WCS | \$86.93 (+2.5%)

USD Priced Liquids

Bonny Lt. | \$86.73 (-1.7%)
 LLS | \$83.93 (+2.4%)
 MEH | \$83.18 (+2.4%)
 NYMEX | \$81.63 (+3.5%)
 WTI FOB | \$80.65 (+2.2%)

CAD Priced Gas

AECO | \$2.73 (+0.2%)
 Alliance | \$2.92 (+8.6%)
 Empress | \$2.70 (-0.4%)
 Station 2 | \$2.84 (+8.1%)

USD Priced Gas

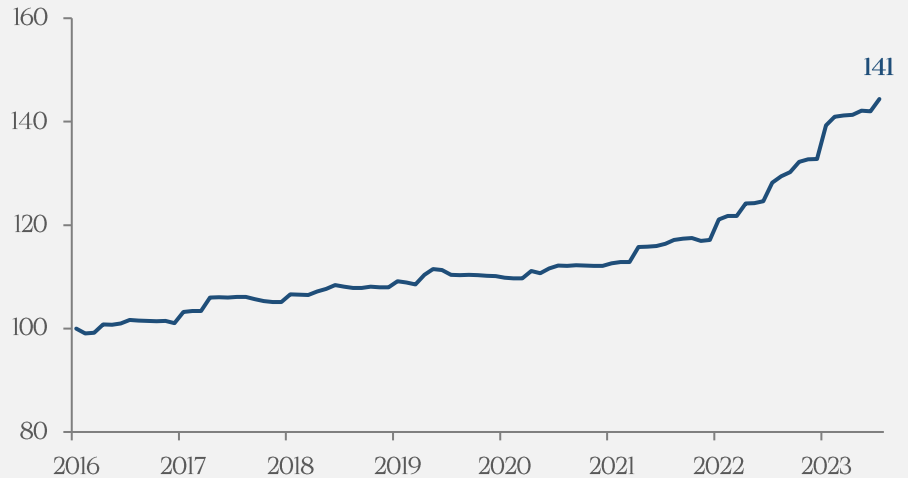
Dawn | \$2.26 (-2.6%)
 Houston | \$2.40 (-2.4%)
 Malin | \$3.03 (+28.6%)
 PG&E | \$4.78 (+7.5%)
 SoCal | \$6.45 (+68.7%)
 Waha | \$2.25 (+9.0%)

Cement is the weak spot for inflation, with PPI among US cement producers gapping higher into the new year, and showing no signs of stopping (some rock quarries globally have shuttered, putting pressure on cement mix worldwide). While cement makes up ~5% of an AFE, we see it having an outsized contribution to cost inflation in the coming months.

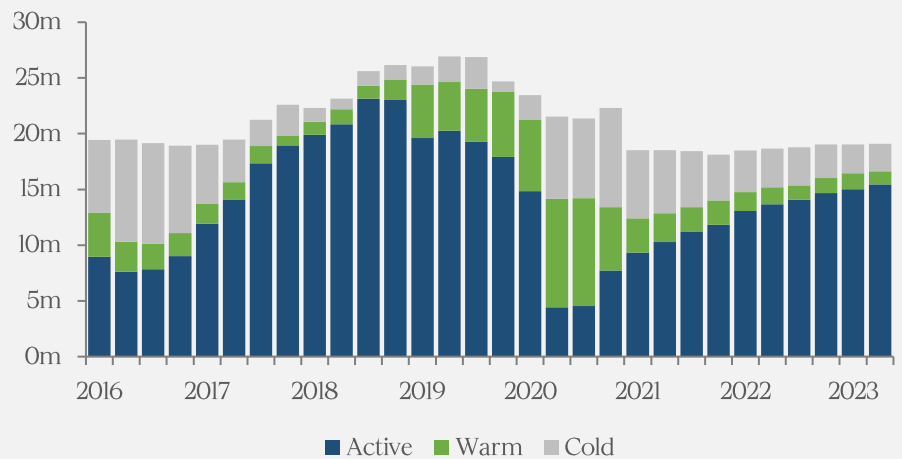
Pressure pumping (aka. hydraulic fracturing) makes up the majority of an AFE, with 20-30% of spending going towards the pressure pumpers. Given the much lower completions rate in shale basins, we see some room for pressure pumping costs to come down, but note that the market is still not exactly loose when it comes to pressure pumping horsepower (though not exactly tight either) and given oil price, could see an increase in frac spreads, and tighten the market slightly. On pressure pumping costs, we see them sliding marginally into the third quarter, though regaining some ground in 2024.

Finally, oil and gas hourly earnings have stalled out year to date, with ~\$43/hr being

(Fig. 4) Cement Producer PPI (Indexed to 100 at 2016)

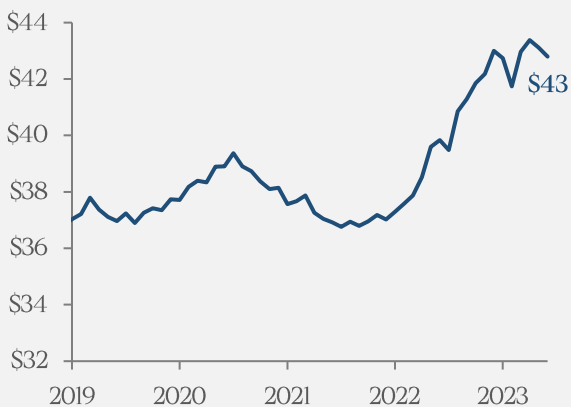


(Fig. 5) US Pressure Pumping Marketed Horespower



Source: Bloomberg, Company Reports, HTM Analysis

(Fig. 6) Oil & Gas Hourly Earnings



Source: Bloomberg, HTM Analysis

the apparent sweet spot given the marginally looser labor market compared to 2022. Overall, sand prices have moderated (should be reflected in coming quarters), tubular goods have softened, and we don't see huge pricing power among pumpers and rigs. The only inflation we see (cement, fuel, drilling fluid) make up ~20% of an AFE. With CPI-ish inflation (4% y/y) expected for 20% of the AFE (80bps contribution), we see lower steel prices offsetting cement, fuel, and fluid inflation and then some. Overall, from 2022 to 2023, we'd expect to see deflation in the 700-1,000bps range across our US E&P coverage universe. If drilling is to materially pickup in the second half of the year (which is not something we expect to happen), then we would forecast deflation at 300-500bps owing to pumping, and directional, which we'd expect to be the swing inflation attributable go forward.