Adapting through transition: building US E&Ps for the future

TCU/NAPE Business School Case Study – January 2022

Introduction

The US energy landscape is changing profoundly. Energy transition pressures from regulators and consumers are colliding with new capital allocation frameworks. Traditional oil and gas producers are having to factor this into their business planning. Never have oil prices been so high with investment in new wells so low. And never has terminal value risk and concerns of oil demand destruction impacted long-term business models so much.

Energy transition

Energy transition is front of mind for a wide portion of the energy-consuming population and its stakeholders.

- EV popularity is growing. Ford introduced its new Lightening F-150 EV last summer, only to double its 2023 production target a few months later.
- Over $40 billion of assets under management are aligned with the Net Zero Asset Manager's Initiative.
- The Biden Administration is making carbon policy a center piece of its agenda. Washington has brought forward new methane proposals that would impact field operations for hundreds of Lower 48 E&Ps.
- Carbon intensity is now tracked as a key benchmarking metrics across peer companies and GHG emissions are a driver in A&D transactions too.

Capital controls on oil and gas

Energy investors are pushing for direct change in investment intensity. Because of uncertain demand for fossil fuels decades into the future, "terminal value risk" is a meaningful consideration for financial stakeholders today. Markets are reflecting this risk by pushing E&Ps to increase cash returns instead of reinvesting cash flow into new wells, even at elevated oil prices. This has resulted in historically low reinvestment rates, just 1/3 of what they were in 2018.

Background references:

- https://www.ft.com/content/a8d72d4d-09b1-47fb-bb6c-3c314770f1c1
- https://www.wsj.com/articles/shale-drillers-may-spend-more-but-dont-expect-a-bonanza-even-at-80-oil-11634042534
- http://kimmeridge.com/wp-content/uploads/2020/02/Preparing-the-EP-Sector-for-the-Energy-Transition-A-New-Business-Model.pdf

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Challenges for US onshore producers in 2022

These two overarching forces – spending restraint and energy transition market trends - have sped up business model evolution in the US shale sector.

Four substantial issues E&P boards and executive teams face today are listed below. They are key elements of this case competition. Understand each of the four in their entirety. *(More on this below for the case competition deliverable.)*

1. **Capital discipline** – Since its inception, the shale business model always had a high reinvestment rate. Across the sector, companies routinely spent 120% of cash flow from operations. Some companies spent even more. Going into 2020, operators were slowly starting to spend less to bring that percentage down, but the 2020 price crash forced spending cuts deeper than anyone imagined.

Fig. 1 - Halliburton's quarterly North American revenues: E&P spending hasn't rebounded

Segment and Geographic Results

Millions of dollars

Revenue	Q119	Q219	Q319	Q419	Q120	Q220	Q320	Q420	Q121	Q221	Q321	2019	2020	YTD 2021
By segment results:														
Completion and Production	$ 3,662	$ 3,805	$ 3,506	$ 3,058	$ 2,962	$ 1,672	$ 1,574	$ 1,810	$ 1,870	$ 2,048	$ 2,136	$ 14,031	$ 7,839	$ 6,054
Drilling and Evaluation	2,075	2,125	2,044	2,133	2,075	1,524	1,401	1,427	1,581	1,659	1,724	8,377	6,606	4,964
Total	$ 5,737	$ 5,930	$ 5,550	$ 5,191	$ 5,037	$ 3,196	$ 2,975	$ 3,237	$ 3,451	$ 3,707	$ 3,860	$ 22,408	$ 14,445	$ 11,018
By geographic region:														
North America	$ 3,275	$ 3,327	$ 2,949	$ 2,333	$ 2,460	$ 1,049	$ 984	$ 1,238	$ 1,404	$ 1,569	$ 1,615	$ 11,884	$ 5,731	$ 4,588
Latin America	587	571	608	598	516	346	380	426	535	534	624	2,364	1,668	1,693
Europe / Africa / CIS	748	823	831	883	831	691	649	642	634	679	676	3,285	2,813	1,989
Middle East / Asia	1,127	1,209	1,162	1,377	1,230	1,110	962	931	878	925	945	4,875	4,233	2,748
Total	$ 5,737	$ 5,930	$ 5,550	$ 5,191	$ 5,037	$ 3,196	$ 2,975	$ 3,237	$ 3,451	$ 3,707	$ 3,860	$ 22,408	$ 14,445	$ 11,018

Operating Income/(Loss)	Q119	Q219	Q319	Q419	Q120	Q220	Q320	Q420	Q121	Q221	Q321	2019	2020	YTD 2021
Completion and Production	$ 368	$ 470	$ 446	$ 387	$ 345	$ 159	$ 212	$ 282	$ 252	$ 317	$ 322	$ 1,671	$ 995	$ 891
Drilling and Evaluation	123	145	150	224	217	127	105	117	171	175	186	642	569	532
Corporate and other	(65)	(65)	(60)	(65)	(60)	(50)	(42)	(49)	(53)	(58)	(50)	(255)	(201)	(161)
Impairments and other charges	(61)	(247)	-	(2,198)	(1,073)	(2,147)	(133)	(446)	-	-	(12)	(2,506)	(3,799)	(12)
Total	$ 365	$ 303	$ 536	$ (1,652)	$ (571)	$ (1,911)	$ 142	$ (96)	$ 370	$ 434	$ 446	$ (448)	$ (2,436)	$ 1,250
CAPEX	$ 437	$ 408	$ 345	$ 340	$ 213	$ 142	$ 155	$ 218	$ 104	$ 191	$ 188	$ 1,530	$ 728	$ 483
DDA	416	420	417	372	348	251	230	229	226	223	224	1,625	1,058	673

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24
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The massive reduction in 2020 and 2021 capex may have had a silver lining though. Companies are now running their businesses in a different fashion. Reinvestment rates have plummeted to 60% or less. And by not increasing capital budgets, US E&Ps are generating free cash flow and earning back investor trust. Debt is being paid back aggressively and new dividend policies have been enacted to help placate shareholders. If anything, a "champagne problem" is emerging. What should US E&Ps do with all the cash? Should it be directed to non-oil and gas investments in green energies?

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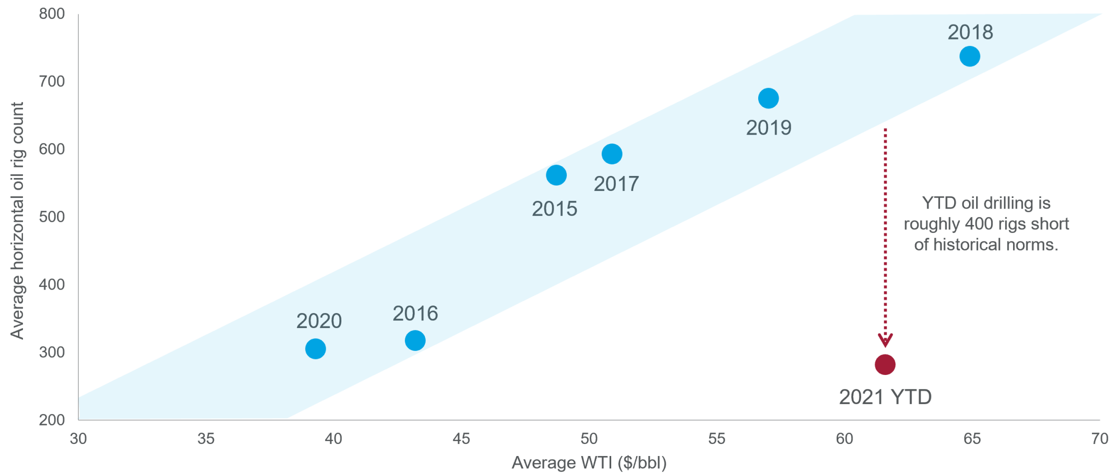
Fig. 2 – Wood Mackenzie 2021 rig count characterization

Americas upstream transition: 5 topics to impact BD

woodmac.com

The lack of response to rising prices is a paradigm shift for tight oil

A look back at history shows us how unique this moment is – never before has tight oil investment been so low with prices so high.



Source: Wood Mackenzie Insight US tight oil's uncharacteristic response to rising prices; rig data from Baker Hughes

17

2. **Improving ESG standards –** Every industry is working to improve its environmental, social, and governance (ESG) standards. Consumer habits – and investor preferences - as a derivate of that are the driving forces. Firms like Blackrock are committing to integrating environmental considerations into their investment processes. Close to US$50 trillion of global assets under management are aligning their investing decisions with businesses that embrace net zero ambitions.

   For upstream companies, the ESG focus today is largely on the E (environment), although the S and G are seeing positive changes too. But the challenge is that the easy – and cheap – changes toward environmental stewardship don't move the needle too much. We see that in the timeframes operators are sharing with regard to emissions reductions. Ambitious targets have long timeframes.

   But using greenhouse gas emissions as just one example, E&Ps will have to change their operations significantly (i.e. electrify field operations) to truly improve their environmental profile. The E&P sector is already facing an uphill battle with societal pressures to reduce carbon emissions, so failing to deliver on ESG improvements only makes the challenge harder.

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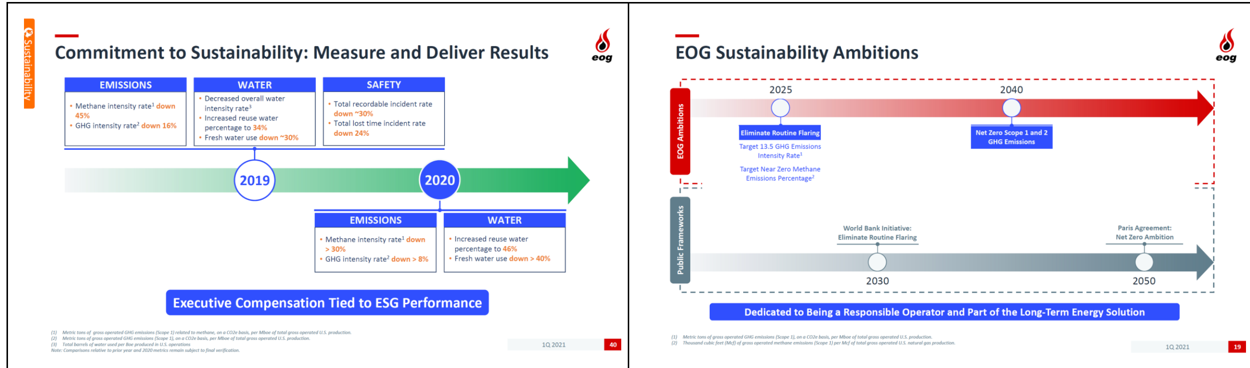
Fig 2. – EOG's ESG ambitions



3. **Navigating regulatory changes –** A 60 day pause on Federal leasing was instituted in the President's first day in office. That has since expired, but operators with leases on DOI land have concerns about current permits being extended if needed. Other stakeholders are awaiting permitting changes that relate to flora and fauna on federal lands.

   The EPA has drafted new methane regulations that would increase monitoring requirements and impose fees for non-compliance. These are changes producers should welcome because they provide additional incentives to align producers, investors, and regulators.

   Pipeline permitting is becoming more challenging too. Projects in the US Northeast are delayed. Some are being cancelled. This changes pricing dynamics and will force Marcellus producers to reevaluate the risk of concentrated assets bases.

   - https://www.wsj.com/articles/biden-to-suspendnew-federal-oil-and-gas-leasing-11611672331
   - https://www.csis.org/analysis/biden-makes-sweeping-changes-oil-and-gas-policy
   - **EPA's November 2021 proposal:** https://www.epa.gov/system/files/documents/2021-11/2021-oil-and-gas-proposal.-overview-fact-sheet.pdf
   - **Royalty rates -** https://www.axios.com/biden-interior-department-oil-gas-leasing-federal-lands-increase-rates-7674ffc8-9f03-4712-bed4-8567c36b0b3d.html

4. **Participating in strategic M&A –** All of the aforementioned challenges mean that E&Ps need to be in a position of strength going into uncertain times. M&A is a tool being used to do that.

   Larger companies with more diverse asset bases can generate additional cash flow if the combined company undertakes a capital budget less than the sum of its parts. Additionally, a combined firm can reduce G&A expenses, and large buyers can improve their ESG metrics if they purchase a company with very low flaring (as an example).

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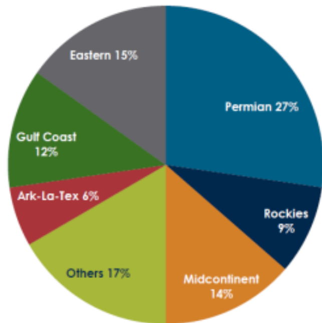
Fig 3. – M&A trends and statistics

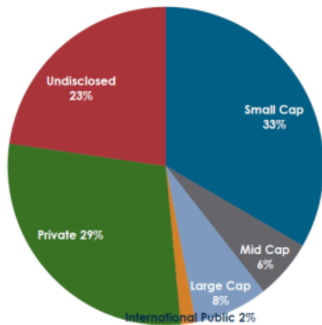
Upstream Deal Activity* (November 2019 – November 2020)

*Deal Activity includes Corporate & Asset-level transactions that are greater than $10 MM in transaction value.

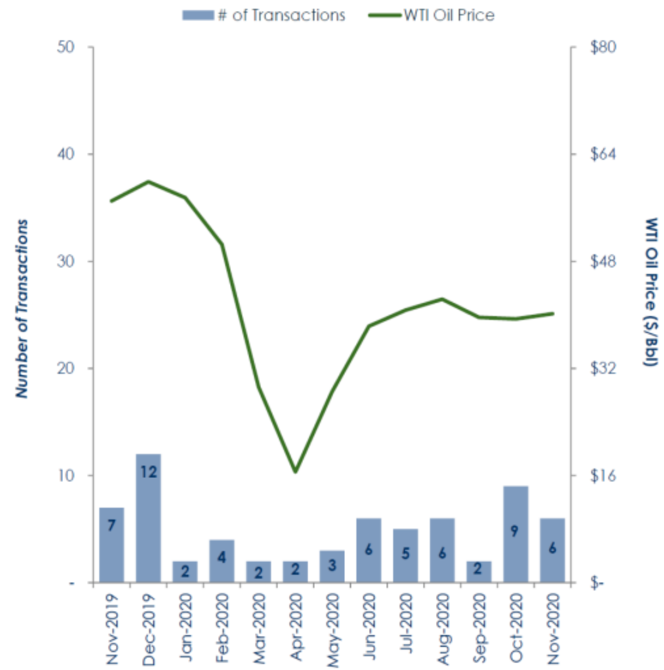
LTM Transactions By Region[1]



LTM By Buyer Type[1]



Number of Transactions by Month and Avg. WTI Oil Price ($/bbl)



(1) Calculated as percentage of total LTM transaction count (number of transactions, not dollar value); LTM transaction count excludes transactions with undisclosed transaction value.
Source: Enverus as of 11/20/20.

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ConocoPhillips' purchase of Shell's Permian assets in Q3 2021 is an example of opportunistic M&A that worked for both buyer and seller. See the next day market reaction for both parties.
https://static.conocophillips.com/files/resources/transaction-announcement-and-market-update.pdf

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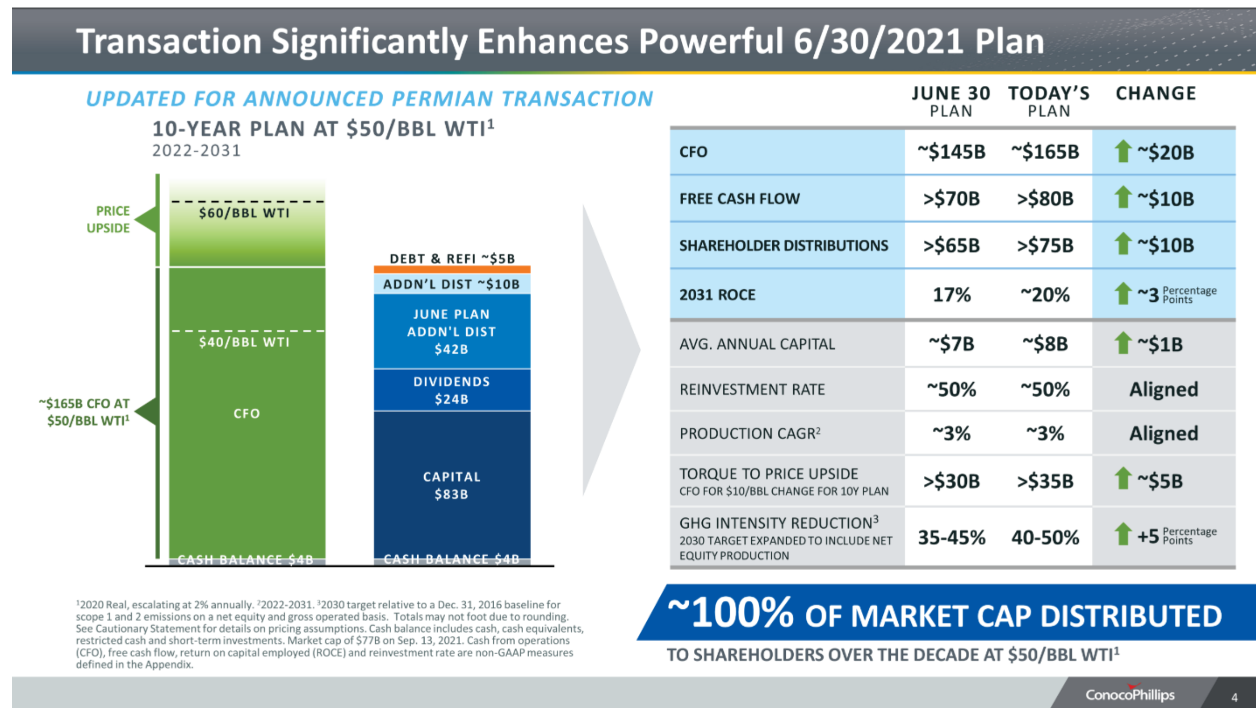
Figure 4: ConocoPhillips purchase of Shell's Permian assets

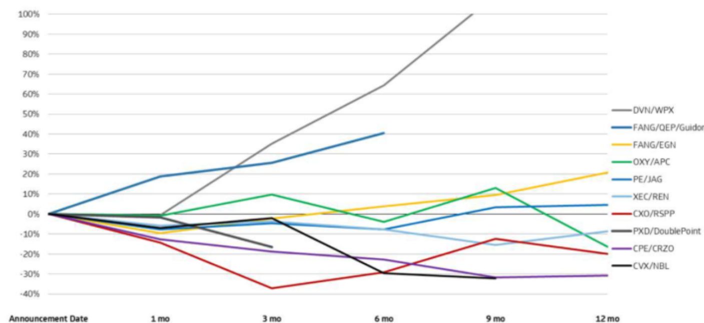


But not every potential deal is easy to execute. Stakeholders must be aligned on fair value, but varying price outlooks mean this isn't always easy. And additionally, not every deal is welcomed by investors. This adds trepidation for would-be buyers and sellers. See the market reaction the Callon and Carrizo merger compared to the combination of Devon and WPX, as two examples.

Figure 5: Cowen deal analysis

Stock Performance of Buyers

- We have noticed a trend when select public acquirors have been rewarded by market outperformance following their deals that used to be nearly impossible to find.
- While other factors are at play, we believe significant outperformance for FANG-led deals along with DVN demonstrate a changing mentality in public markets, though we still note that the majority of deals shown below have resulted in under-performance to the XOP in the 12 months following deal announcements of between -10-30%.



Source: Cowen and Company, Bloomberg

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Business Case Deliverable

- Rank the four business priorities (1-4) outlined above in order of importance for US E&Ps.
- A ranking of 1 indicates utmost significance to shareholders. A ranking of 4 represents the least critical issue. What challenge should Boards and C-suites attack first and why? How? Provide robust supporting arguments utilizing real industry examples, operational analysis, and financial data.
- Prepare a maximum of 12 PowerPoint slides to present your argument. Each team member must present.
- Your ranking must be extremely clear and well researched, covering examples from at least 3 different US-focused E&P companies.

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