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ENERCOM®

Energy Industry Data & Trends

THE STATE OF THE INDUSTRY: The OIL & GAS CONFERENCE® 23

August is a busy time for those of us at EnerCom. With the 23rd edition of the annual The Oil & Gas Conference® (TOGC) in the books, we are looking forward to the fourth quarter of the year.

The Oil & Gas Conference offers us unique insight into the minds of both the investment community and the companies producing oil and natural gas in North America and abroad. We hosted more than 2,000 people and heard from more than 91 companies over the four-day event. The messages we heard this year were primarily focused on aspects of operations, as issues such as sand and takeaway were prominent.

While oil companies were focused on addressing these aspects of the business, gas producers were focused directly on winning over investors. The oil and gas investment space is shifting, a trend that has had a noticeable impact both on the demographics of TOGC and the content of company presentations. We heard investors and presenting companies alike make mention of the crowd appearing younger overall, with presenters adding that this also means they are working harder to educate investors with less background in the energy space.

In this Report – KEY SUMMARY POINTS:

- Investors are interested in in-basin sand
- Sand providers can entirely supply the Permian with local sand, but some companies have different needs
- Private firms made a strong showing, with a larger than usual share of presentations
- Private companies have accumulated major positions in several basins, and are looking for an exit
- Natural gas producers are hoping to win over skeptical investors on the strength of recent results
- Permian takeaway constraints dominated conversations, and will continue to do so for at least 12 months
- Oil and gas solutions are on the way, but water needs are just as important
- Investors are moving back into oil and gas, based on shifts in attendees
- Investors are becoming younger, companies must educate a new crowd
- Investor outreach is directly targeting generalists, which hold a growing share of E&P companies
- The Powder River Basin was discussed at length by private and public companies as well as presenting analysts

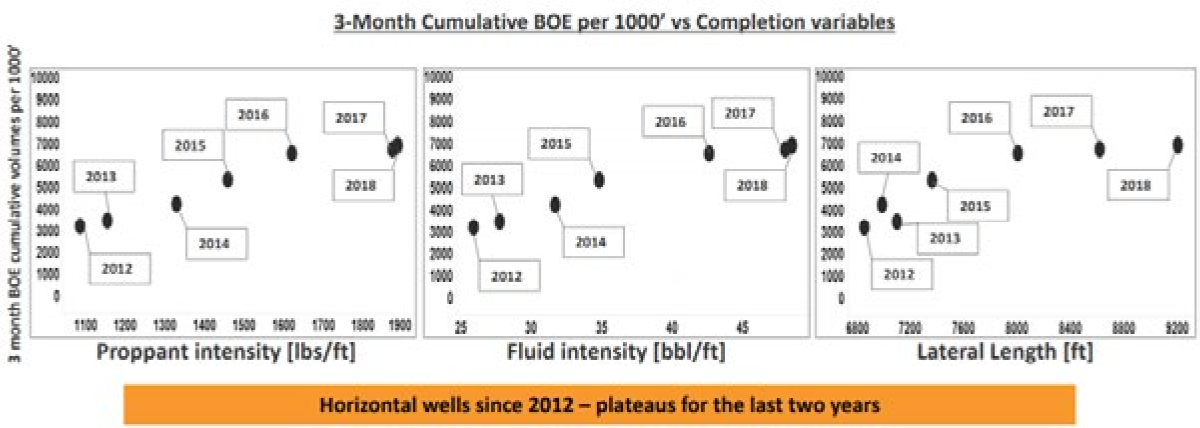
In-basin sand a key concern

Frac sand was an important topic at the conference, with companies and investors addressing the availability and quality of sand.

Numerous Permian companies, for example, were asked about the rise in the use of in-basin sand. The soaring activity in the Permian in early 2017 overwhelmed the supply of frac sand, particularly the traditional Northern White type of sand. Sand costs rose rapidly, and the difficulty of transporting sand from mines in the Northern U.S. to the Permian increased costs further.

Midland Basin Completions Trends

Source: Flotek Energy



Sand providers responded to this opportunity by opening numerous mines in and near West Texas, which greatly simplifies the transportation of sand from the mine to the well. Sand produced in Texas is typically not as robust as sand from Wisconsin, and will crush at lower pressure, but companies were willing to accept this drawback to secure a reliable source of inexpensive proppant.

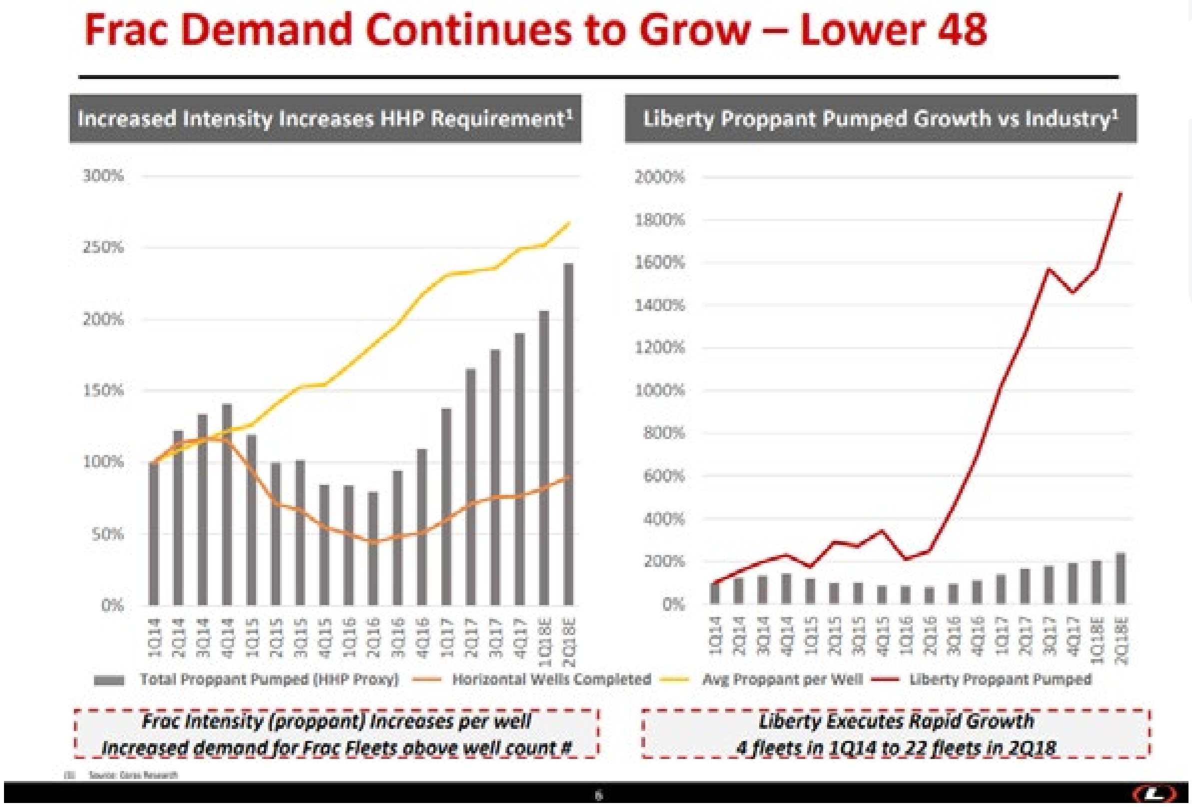
Some companies, such as Pioneer Natural Resources, are taking this process one step further, cutting out the middleman. This trend is not confined to the Permian, as WildHorse Resource Development recently purchased its own sand mine, which it will use to supply its ongoing drilling in the Eagle Ford.

Developing In-Field Sand Mine

Source: WildHorse Resource Development

Investors are now assessing the results of this push for in-basin sand. Questions in company breakout sessions addressed the different facets of the shift. Sand was one of the most popular topics in the breakouts, with nearly every Permian company and many firms active in other basins fielding sand-related questions.

Liberty Oilfield Services, as a major frac company operating in the Permian, has a firsthand view of the shift toward in-basin sand. While sand usage has increased significantly in the Permian and throughout the country, Liberty estimates the recently opened and incoming mines will be able to supply all operations in the Permian with locally-sourced sand. Companies are also firming up their transport logistics, ensuring sand is delivered on time.



Frac Demand Growth

Source: Liberty Oilfield Services

The dilemma of sand quality is less easily answered, however, with significant divergence in views. Some companies have reported no difference in performance between local sand and Northern White, while others have experienced fracture closure problems. Some companies still use Northern White sand, in different amounts and portions of the job. One Permian company, for example, reported it has begun using Northern White in the final portion of a frac job, thus ensuring that the proppant closest to the well is strongest.

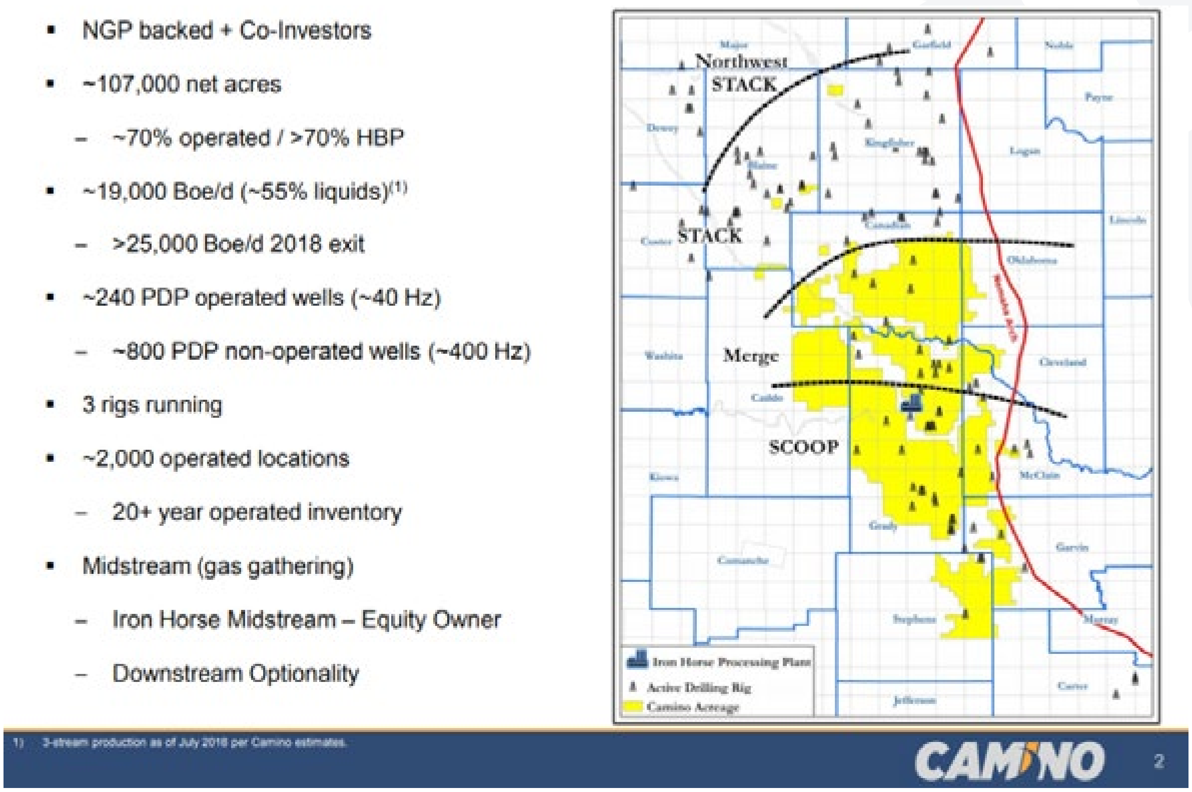
This difference in sand usage between companies is likely to remain. The need for stronger sand is at least partially dependent on how deep the target formation is, and all else being equal a deeper target will require more robust sand. A company's acreage position, then, has a significant effect on its sand needs.

The art of the exit

Private companies made a strong showing at TOGC 23, as 16 different privately-held firms gave presentations. This is one of the highest proportions of private companies at TOGC in recent years, and these presenters include some of the largest private players in major basins.

Felix Energy, for example, has quietly built a very large position in the Delaware Basin, at the very heart of U.S. oil and gas. Felix is the largest private Delaware Basin operator, with 60,000 net acres in the core of the play in a mostly contiguous position. Felix has built extensive midstream infrastructure to support this acreage, and with six active drilling rigs the company is targeting a 2018 exit rate of over 30 MBOEPD.

Camino Natural Resources has built a similarly large position in the SCOOP/STACK, and reports it is the largest private company in the SCOOP/STACK/Merge. Camino holds 107,000 net acres in the play, primarily in the SCOOP and Merge, where it is currently producing 19 MBOEPD.

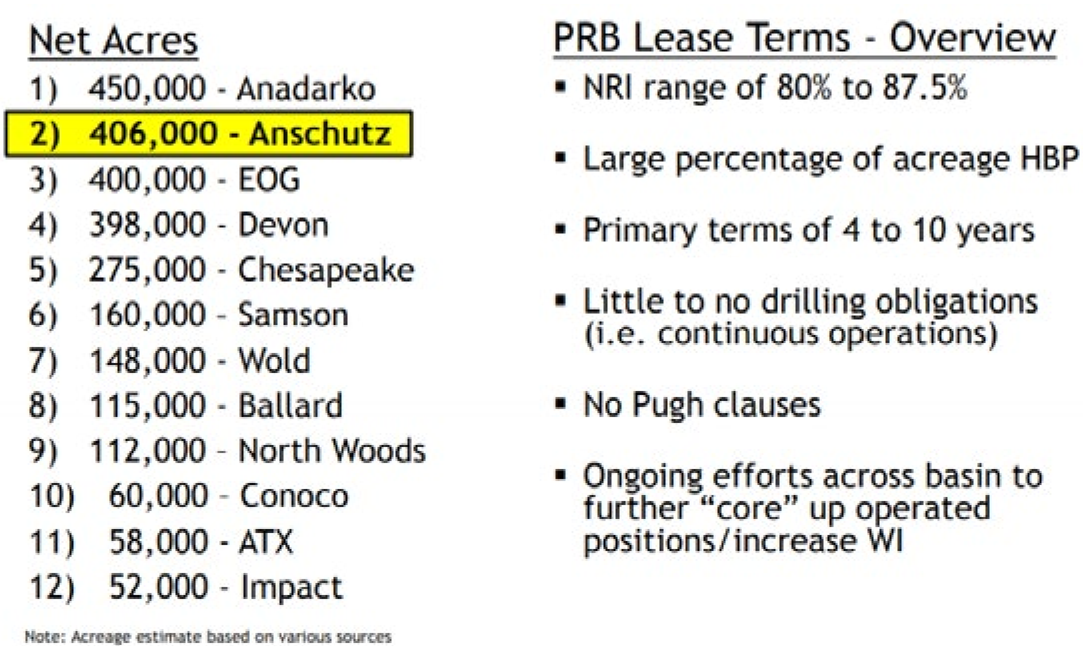


Camino Overview

Source: Camino Natural Resources LLC

Both of these companies have accumulated their positions over a remarkably brief period of time, as Felix was formed in late 2015 and Camino was formed in 2016.

Anschutz Exploration is in an even more prominent position in the Powder River Basin, as its 406,000 acres makes it the largest private company in the basin and the second-largest acreage holder overall. While Anschutz has accumulated its acreage over a much longer period than Felix or Camino, it is in a commanding position in the play.



Powder River Basin Landholders

Source: Anschutz Exploration Corporation

Many private presenters have built large positions in their basins and are now looking at exit options.

Of these, the most obvious potential M&A target is Felix Energy. With a large contiguous position in the core of the Delaware and established operations, the company appears to be an ideal target for one of the major Permian players.

The recent surge of M&A activity in the Permian suggests this is a major possibility, as several comparable companies have been purchased in recent months. Concho and Diamondback have each made deals larger than $9 billion, purchasing RSP Permian and Energen, respectively. Oasis' purchase of Forge Energy in late 2017 is also relevant, as the acreage Oasis acquired was near Felix's holdings, though not as developed. Diamondback's recent acquisition of Ajax is also comparable, as Ajax was a well-established private company with supporting midstream assets, though the acreage is in the Midland basin.

Felix Energy and Recent Comparable Permian M&A Transactions

Source: EnerCom Analytics

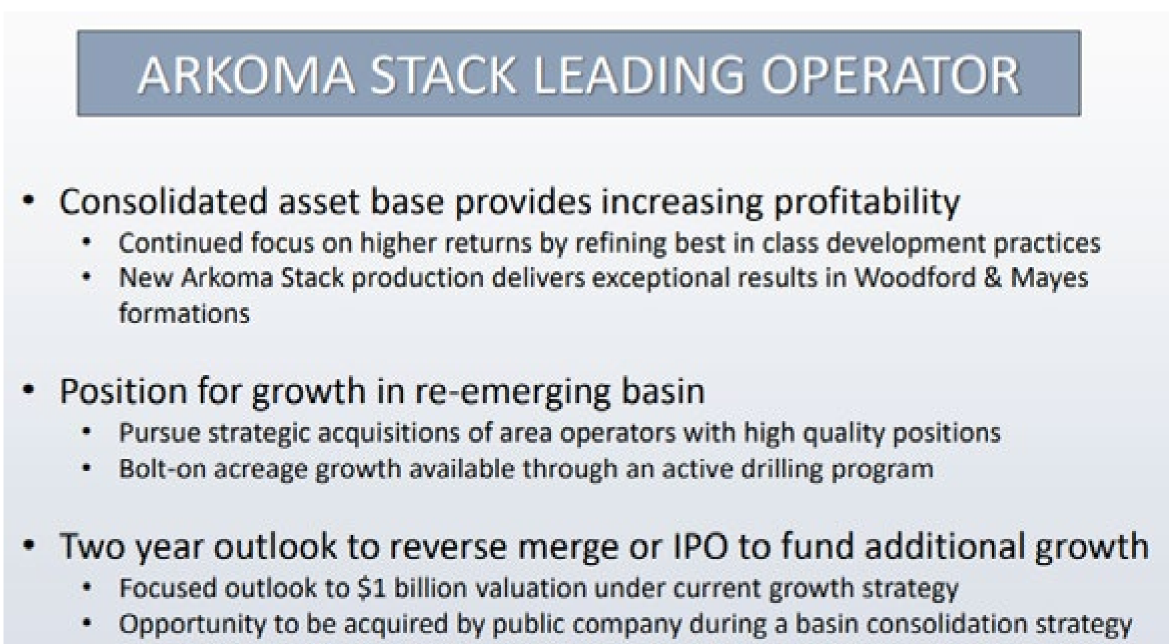
	FANG-EGN	CXO-RSPP	FANG-Ajax	OAS-Forge	Felix at Average Adjusted Acreage Valuation
Acreage	89,000	92,000	25,500	20,300	60,000
Production (MBOEPD)	90.4	56	12.1	3.5	23
Value/Acre	$103,371	$103,261	$48,824	$46,601	$55,640
Adjusted Value/Acre	$67,820	$81,957	$32,216	$40,567	
Total Value	**$9.2 Billion**	**$9.5 Billion**	**$1.245 Billion**	**$946 Million**	**$4.14 Billion**

While Felix's most likely exit path appears obvious, other companies may pursue different options. Several of these private companies are eyeing public markets, though the current environment is not entirely conducive to new IPOs. The IPO market, which was discussed in July's Monthly Trends Report, is currently in a lull with only a handful of new oil and gas firms this year. A shift in this environment would likely prompt several major private oil and gas companies to begin the IPO process.

While many private companies that are preparing an exit do not directly discuss their plans in investor presentations, Canyon Creek Energy is less coy about its goals. The company specifically mentioned its ambition to tap public markets within two years during its presentation at TOGC 23. While the company's precise exit method is not certain, an IPO, reverse merger and M&A were all mentioned.

Canyon Creek Energy Corporate Overview

Source: Canyon Creek Energy



Natural gas is not a four-letter word

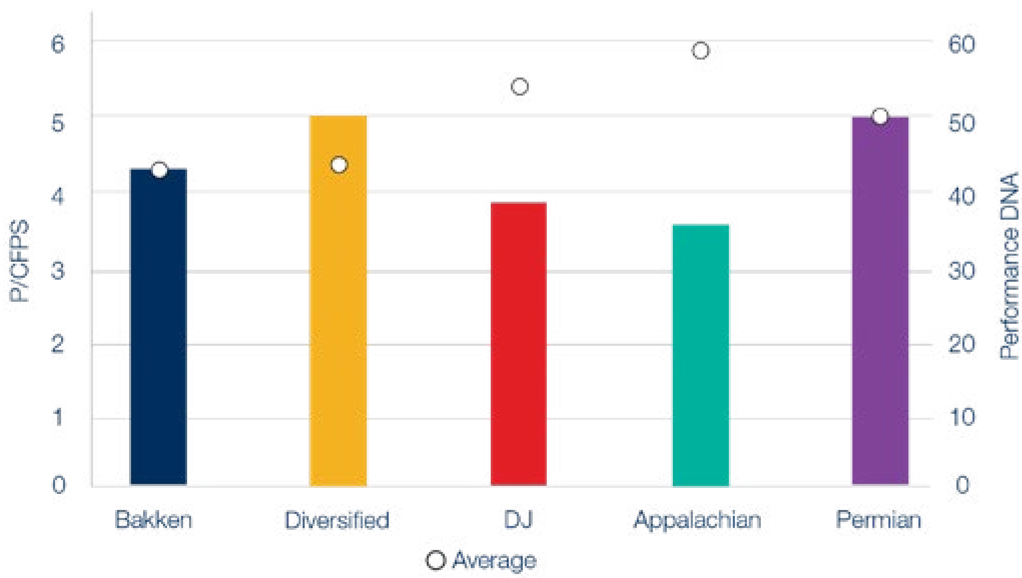
Natural gas producers are facing a unique challenge, according to presenters Range Resources and Cabot Oil & Gas. The midstream constraints that have hounded Marcellus producers are at long last being relieved as new pipeline projects have come online and others are in progress. After dealing with a problem that has plagued the Marcellus for years, however, CEOs must now deal with the problem of skeptical investors.

Cabot CFO and EVP Scott Schroeder described the problem nicely, saying "The challenge we have is convincing all of you and others that natural gas is not a four-letter word… If I was selling widgets with these kind of metrics people would be lining up to buy shares."

Natural gas, and the Marcellus in particular, do appear to be out of favor with investors based on the results of June's Monthly Trends Report, which examined how companies are currently valued. This analysis identified a value disconnect in natural gas companies, particularly in Appalachia. IR teams at Cabot and other natural gas producers hope to resolve this disconnect, convincing investors that natural gas can be just as economically attractive as oil.

Basin P/CFPS and Average Performance DNA

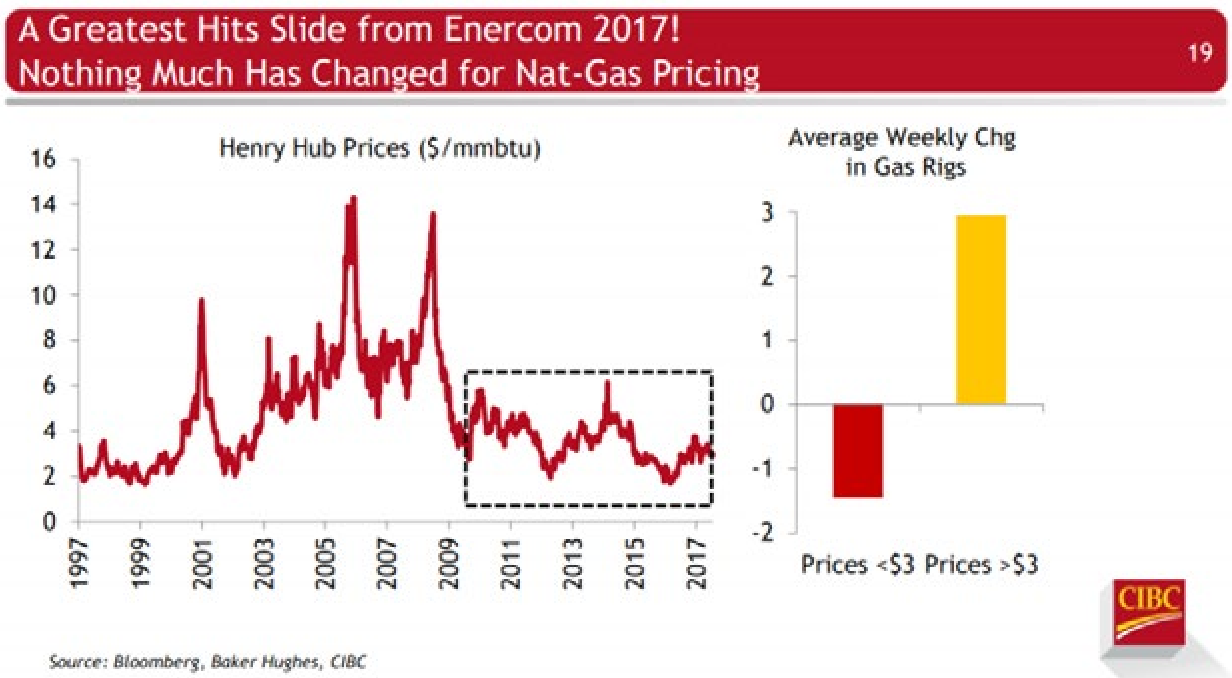
Source: EnerCom Analytics



Investors may not be able to hope for sustained higher gas pricing, however, according to another conference presenter, CIBC Capital Markets' Avery Shenfeld. According to Shenfeld, natural gas prices "are not going anywhere in a hurry. This is because in the natural gas world for North America we have what economists call a perfectly elastic supply curve."

Natural Gas Pricing

Source: CIBC



Operators in the Marcellus, Haynesville and other major gas basins have become so good at producing gas, and respond to increasing prices so quickly, that supply rapidly catches up with demand growth. While brief demand shocks are certainly possible, abundant supply has prevented significant sustained increases in gas price for the near future.

Takeaway constraints dominate midstream conversations

As might be expected, midstream discussions at TOGC centered around the Permian, where takeaway constraints have rapidly become a fact of life. Pipeline capacity is limited for both gas and oil, and differentials are blowing out. Plains All American, a member of Monday's Midstream Panel, estimated oil takeaway will be constrained for the next 12-15 months. Plains will play a major role in relieving the constriction, as the company has three large pipelines announced or under construction.

Gas takeaway is similarly constrained, with flaring the only option for many producers until pipeline capacity catches up. Significant amounts of money are going up in smoke in the meantime. Permian operators flared an estimated 320 MMcf/d in Q2, or nearly $1 million in gas per day.

While these difficulties will by no means prevent production growth in the Permian, takeaway constraints are expected to cause a noticeable slowdown. Plains commented "We do see a case with completion cadence being muted at least through most of 2019." This sentiment was echoed by a recent report from Westwood Global Energy Group, which estimated $1.4 billion in completions CapEx will be delayed or reallocated as a result of the pipeline slowdown.

Blue Racer Midstream SVP Marc Halbritter offered an outside perspective on the Permian troubles, as Blue Racer is active in Appalachia. To Halbritter, the Permian "reminds me a lot of where we were three or four years ago." This does not mean it will take three or four years to relieve the constraints, but the current balance of production and takeaway is reminiscent of the situation in Appalachia.

The Permian does have one advantage in terms of new pipeline prospects, the basin is far less developed than the Northeast. Halbritter commented “in the 1930’s and 40’s lots of pipelines were built in the Northeast. Today, what used to be farmland is now a residential subdivision with old pipes running through them. Even if you try to run parallel it’s a challenge.”

Water takeaway equally important

Oil and gas are not the only takeaway constraints affecting operations in the Permian, however, as Goodnight Midstream’s Patrick Walker explained. Water disposal is an overlooked but tremendously important part of production operations. Goodnight reports that the largest single expense associated with operating wells is dealing with produced water, making up roughly 40% of LOE costs.

In the Permian, unlike the Williston or Eagle Ford, wells produce significantly more water than oil meaning disposal volumes are robust. The massive growth in oil output the Permian is experiencing implies an even more massive increase in water production from the basin.

Expected production growth in the next ten years requires significant increases in oil takeaway capacity. However, pipelines that are in progress will be able to support this growth, for a CapEx of about $8 billion. Building water takeaway and disposal capacity for this oil production could be significantly more expensive, at over $12 billion for new disposal facilities. Other estimates range even higher, as IHS predicts $22 billion in spending on Permian water disposal over the next five years.

Goodnight emphasized the importance of water handling by outlining the consequences of a lack of takeaway. Unlike gas, if water handling is not available a producer must shut down the well. As Walker put it “you can’t flare water.”

For E&P companies operating in the Permian, investors are primarily concerned with how firms have prepared or responded to the takeaway constraints, and every presenting company operating in the basin made this a key point of their presentation. Those that anticipated the takeaway difficulties consistently emphasized that fact, advertising their prescience. Those that didn’t already have solutions in place when differentials began to grow are playing defense, outlining how they will soon be in an ideal position.

Investor base is shifting, the younger crowd is growing

There were many new faces among the investors at this year’s conference, and investors that had sat out the past two years are returning and were actively pursuing one-on-one meetings with presenting companies. This is good news for the energy industry, as some level of confidence in the space may be growing. EnerCom’s Monthly Trends Report in April examined the shifts in E&P investing extensively.

In addition to the return of sidelined investors, the demographics of investors are changing. TOGC attendees are getting younger, a trend that has been noticed by several long-term attendees.

Discussions with companies have reinforced this, as some E&P firms have noticed a shift in the buyside. For example, one of our presenting companies mentioned that, as demographics on the buyside grow younger, the company is having to familiarize those less familiar with conventional assets.

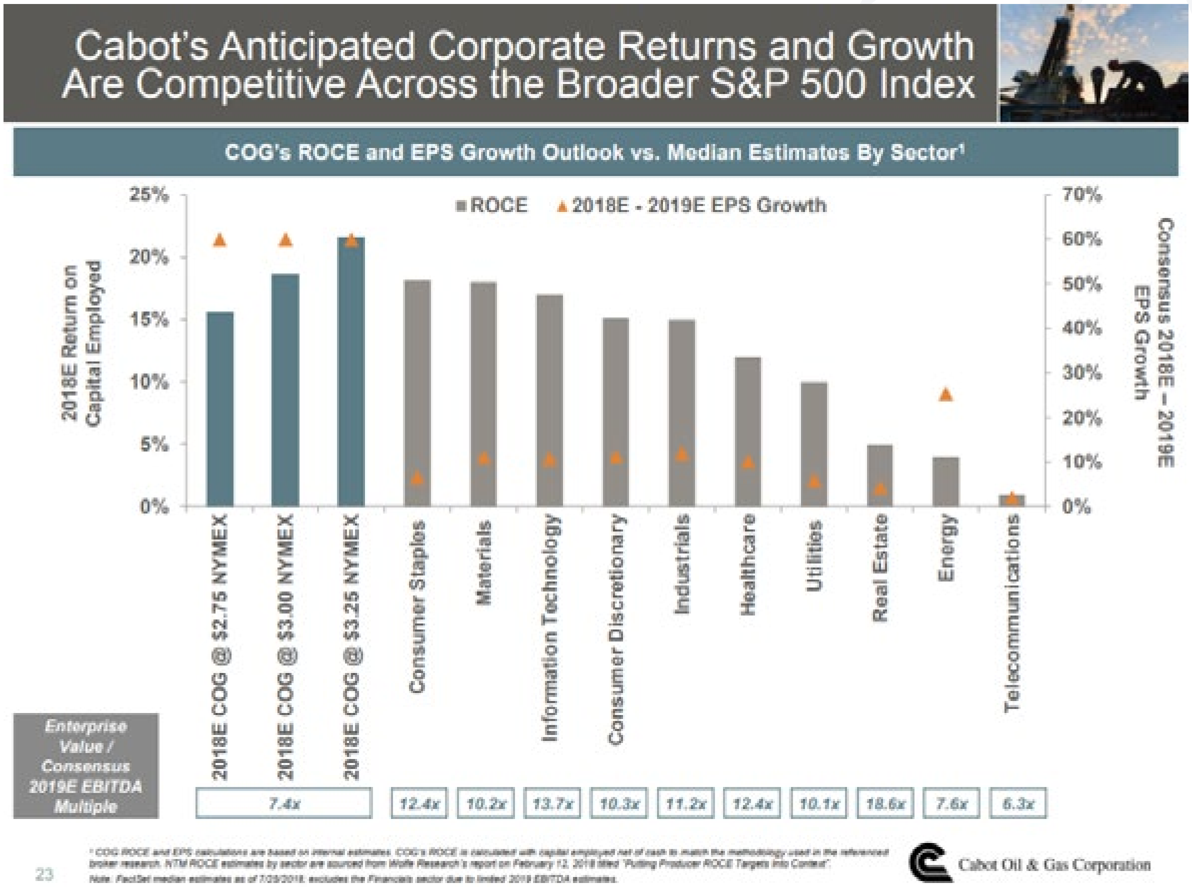
With the last decade being dominated by the shale revolution, many newer members of the investment community have little context in which to examine a company that owns conventional assets. Because of the shift, the company is also having to play the role of educator on conventional assets as well as a spokesman for its own assets.

Targeting the generalists

Oil and gas firms are constantly adapting their investor outreach, seeking to satisfy evolving sentiment and reach new investors. Cabot is framing its pitch to investors in a new light, one not seen in most oil and gas firms. While independents commonly compare various metrics to other oil and gas producers, this is typically the only style of comparison given. Cabot, by contrast, has compared several metrics to different sectors in the overall S&P 500 index. Cabot's return on capital employed, estimated earnings per share growth and EV/expected 2019 EBITDA appear very competitive with other sectors of the economy.

Cabot Compared to Broader S&P 500 Index

Source: Cabot Oil & Gas



This is a direct outreach to generalist investors, which have taken an increasing share in many oil and gas firms. Discussions with money managers have suggested the share of dedicated energy investors in oil and gas firms has fallen significantly since the downturn, with generalists taking up the slack. Generalists now account for an estimated 13% of investment in E&P firms, compared to energy-specific investors at roughly 6%. According to Schroeder, Cabot's metrics pose "a question to a generalist that says 'maybe I need to explore this a little more' because Cabot has set itself apart in the S&P."

Powder River Basin poised for major growth

The Powder River Basin was a major theme in TOGC, with several presenters highlighting the opportunity in the area. Private firms such as Anschutz and Samson Resources were echoed by public companies including EOG and analysts such as BTU Analytics in identifying the PRB as a major upcoming growth area. Watch this space for more information on the emerging play, as EnerCom's upcoming September Monthly Trends Report will dive into the state and prospects of the PRB.

A Word of Thanks

Thank you again for putting your trust in ENERCOM. Please do not hesitate to contact us with questions or additional needs. And, remember that you can get frequent updates and analysis on Oil & Gas 360® at **www.OAG360.com**

Many thanks to all who attended TOGC. Presentation webcasts can be found at **www.theoilandgasconference.com/schedule-webcasts/**