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PARTNERING FOR GROWTH

rowth might not be a word we've heard much in the past two years as the upstream sector has had other goals in mind. But with each passing day, unsustainably low commodity prices and cautious levels of drilling activity foretell a strong recovery to come. When that happens, more capital partners will saddle up as E&P companies hit the trail again with growth on their minds.

Capital is not a restraint to most E&Ps' plans. At press time, the sector was on pace to raise more public equity than in the prior year. A&D activity was beginning to percolate. Some private equity fund providers were getting ready to raise new funds.



Markets seem relatively calmer than they were, and "calm breeds confidence, which breeds deals," said Osmar Abib, Credit Suisse's global head of oil and gas investment banking.

In the past two years, the capital markets raised money to help strengthen balance sheets, a process that is ongoing. However, capital providers are eager to finance bolt-on acquisitions and back strategic buyers who are acquiring large private E&Ps. Preferred stock and convertible bonds are also available, and there is growing talk of IPOs by year-end.

Macquarie Capital's Paul Beck, head of upstream capital, noted that nonpublic, nonconforming deal structures are geared these days to "dislocated" situations.

Through thick and thin and over many decades, the people who provide capital to the oil and gas industry have stuck to their guns: They will open their checkbooks for the right deal at the right time with the right partners—and in the right play. We hope this special report will give you insights into what the capital providers think about the industry's future, when they believe the timing will be right to more fully engage, and how they differentiate themselves.

> - Leslie Haines, Executive editor-at-large, Oil and Gas Investor

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MACRO OUTLOOK

Compass Points

Experts weigh in on OPEC, falling costs, commodity prices and other factors pointing to industry results through year-end and into 2017.

Compiled by Oil and Gas Investor

hat is the direction of oil markets, OPEC production, winter weather and capital markets? Many competing and contrasting factors are in play.

For at least a year, West Texas Intermediate has hovered between \$45 and \$49/bbl. But at press time, the 12-month strip broke above \$50 in a steady rise since OPEC announced its intent to discuss production cuts at talks in Vienna in late November. Meanwhile the EIA, IEA and OPEC continue to tweak their predictions about global oil demand and the extent to which U.S. production will or won't decline in the face of a slower drilling pace—albeit one that is gradually picking up again. By the first week in October, the EIA said, Lower 48 production had fallen to 8 MMbbl/d, down by more than 620,000 bbl/d from a year earlier. Meanwhile, experts foresee rising natural gas prices through this winter. Here is what some analysts were saying at press time this fall.

Deutsche Bank on OPEC

The historic OPEC action to cut oil production to 32.5 MMbbl/d is the first reduction since 2008 and would lower 2017 production by 1.1 MMbbl/d from our assumptions. Agreed on the sidelines of the International Energy Forum in Algiers, indications are that the agreement may follow the outline of an Algerian proposal for a 1.6% reduction from the Jan.-Aug. averages for all member countries, apart from Libya, Iran and Nigeria. Under this proposal, Iran would be permitted to raise production only up to 3.7 MMbbl/d, a small increment from its reported August production of 3.64 MMbbl/d.

Since the precise country-level production quotas will not be decided until the 30 November OPEC ordinary meeting, countries may not act to reduce output until December. Individual country quotas have not been used since the 17 December 2008 Oran Agreement.

Morgan Stanley analyst Evan Calio on E&P reaction to OPEC

U.S. E&Ps won by delivering the highest rate of positive change of any oil producer anywhere in the world. They optimized capital allocation, squeezed efficiencies and cost savings at every level of the value chain, and simultaneously delivered steady well performance improvements across all liquids plays.

Key macro question now shifts to whether the production cap indicates OPEC's willingness to continue to cut volumes to cede ground to U.S. shale into the upcycle. It should prove critical to balancing supply and demand, in light of U.S. producers' stated ability to grow at \$50/bbl and grow fast at \$60/bbl.

Key question on a more micro level is to what extent E&P managements will remain disciplined in a re-ramp, to preserve efficiencies and balance sheets. We think efficiencies will be more sustainable than the Street expects, both because downcycle operating performance has set a new benchmark of what's possible, and because of another imminent step change as the Stack and Delaware plays enter full pad development.

S&P Global Ratings on operating cash costs

One way to track the dramatic upheaval that has swept through the U.S. E&P industry since 2014 is by measuring changes in the total cash cost of finding, extracting, developing and producing a barrel of oil equivalent (boe). S&P Global Ratings estimates that the current breakeven total cash cost for oil and gas production is about \$30/boe, down from over \$36/boe in 2014.

Based on a 55%-45% average natural gas-oil production split, and assuming an average gas price of \$3/MMBtu, we estimate that the U.S. E&P industry currently needs a \$45/bbl wellhead oil price to cover its total cash costs, on average. When including average interest expense, the required wellhead oil price jumps to over \$55/bbl (although interest expense varies greatly by company).

Credit Suisse analyst James K. Wicklund on oil service costs

Surprise, surprise. We had dinners with the CEOs of the two largest oilfield service companies on back-to-back nights (one by surprise). Both agree on three points: 1) that industry fundamentals are very tough in many markets; 2) although the North American (NAM) rig count has picked up significantly, business has yet to do the same in NAM; and 3) the 50%-60% 'structural' cost savings E&Ps claim to have gained from service cost deflation must soon reverse.

What's hot? The North American completions market. While we were not surprised that most of the excitement from our trip centered on this market, we noticed a reasonable uptick in optimism from companies up and down the supply chain (manufacturers, service providers and sand miners) and investors alike. Today, business is still a grind ... however, the quarter when many companies will break even (EBITDA) in NAM is coming soon. Frack fleets have begun to go back to work slowly (Weatherford has added three fleets since the end of June), and sand companies are seeing selective pricing increases.

The EIA's 2015 Natural Gas Annual Report on U.S. gas supply

Producers achieved record U.S. natural gas production for the fifth consecutive year in 2015, and the U.S. saw record consumption for the sixth consecutive year.

Domestic dry natural gas production of 27.1 Tcf (or 74.1 Bcf/d) in 2015 was 4.5% above the 2014 level. For the third consecutive year, Pennsylvania saw the largest total gain in annual production, increasing from 11.56 Bcf/d in 2014 to 13.04 Bcf/d in 2015. Production in Ohio increased the most, percentage-wise, of any state, for the second consecutive year. Ohio dry natural gas production rose more than 99%, from 1.31 Bcf/d in 2014 to 2.62 Bcf/d in 2015.

Deliveries to consumers of natural gas in 2015 rose to a record level of 25.1 Tcf, or 68.6 Bcf/d, an increase of 2.8% from 2014 deliveries.

Deliveries to the electric power sector increased 18.7% in 2015 to a record level of 26.5 Bcf/d. However, there were decreases in deliveries to the residential, commercial and industrial sectors, which dropped by 9.4%, 7.7% and 1.5%, respectively, from 2014.

Simmons & Co./Piper Jaffray on natural gas prices

The short-term gas outlook remains positive while the long term might be fraying along the edges. Gas in storage is currently 2.6% above the prior year and 6.5% above the five-year average. We expect gas in storage to move ... below the five-year average by late November. This supports higher prices currently on the forward curve: December 2016 to February 2017 Nymex at \$3.25/MMBtu. We continue to believe that with early cold weather, prompt month gas prices could overshoot to the upside.

Despite the positive short-term news, the surprising news of an OPEC cut sent a shiver through the gas market. If an OPEC cut leads to U.S. oil production ramping faster and harder than currently expected, the result could be a larger gas supply response, thereby dampening the long-term (12-plus months) outlook.



Barclays Research on oil markets

We maintain our constructive view on the oil markets next year and expect that stock draws during the upcoming winter season will support physical oil market fundamentals, irrespective of any decision [by OPEC] in November in Vienna. We expect that prices will rise to the low-\$50 range in Q4 2016.

Prognostications of OPEC's death are premature, and the group re-emerged in Algiers. This was a face-saving measure, but the real test will come in Vienna. Current projections indicate that if OPEC produces at the high end of the band, stocks will still build. In addition, if further restraint is needed due to lower demand, or a return in supply from Nigeria or Libya, an agreement may prove far more difficult than the benign band it is proposing.

Barclays on natural gas

The key takeaway from this summer should be that longer-term structural shifts in the gas market suggest a more constructive picture for natural gas prices going into 2017.

Tudor, Pickering, Holt & Co. on exploration atrophy

Seemingly lost in the oil macro conversation is the reality of an industry that has clearly lost its mojo from a conventional exploration standpoint. Although wildcat results won't impact reserves and production this year or next, the global backlog of significant developable discoveries is thinning. Compounding the medium- to longer-term challenges is a systemic de-emphasis on exploration—either via significant category budget cuts or an outright jettisoning of "prospecting" programs, as we have seen from some large deepwater players.

Hard to see how "lower for longer" persists when the overwhelming proportion of the global production base is conventional, maturing and declining ... and with 100% organic replacement proving to be a mighty struggle. Similarly hard to see the exploration atrophy arresting any time soon as long as the collective view regarding the path to valuation nirvana is "all shale, all the time."

Bloomberg on producer hedging

Independent oil companies are using the post-OPEC rally to hedge their price risk for next year, banks and consultants said, a trend that's likely to be viewed with concern from Saudi Arabia and Venezuela. The clamor to hedge could translate into higher U.S. oil production next year.

Shale firms in particular would enjoy extra income to pay for additional drilling.

U.S. independent oil companies have hedged only 16% of their price exposure for 2017, compared with 39% for the rest of this year [as of early October], according to Tudor, Pickering, Holt & Co. "We expect hedge book conversations to tick up during the next round of quarterly conference calls," it said in a note to clients. ■







PRIVATE EQUITY TRENDS

Private Equity Remains Bullish

Big funds are still looking for high-quality vintage assets.

By Gregory DL Morris

s we head into the third year of depressed global oil prices, private equity (PE) investors have clearly not lost their faith in the independent upstream sector. While 2016 has seen significantly less total capital raised than in 2015,

the big funds have been able to raise big money, into the billions of dollars in some cases.

Investors have also been willing to allocate capital to managers with a track record who are raising new funds. In terms of assets, managers say that the lower-for-longer theme for oil and gas prices has finally forced some high-quality assets onto the market. Most are excited that having survived two rough years, costs are wrung out, and prime acres are becoming available. No one is calling a bottom, but they are saying this is a good time to invest.

By all accounts, Apollo Global Management has raised the largest dedicated energy PE fund so far this year. Apollo Natural Resources Partners II (ANRP II) had a goal of \$2.8 billion in capital commitments and is

reckoned to have moved beyond \$3 billion.

Greg Beard, senior partner and head of natural resources for Apollo Global Management, declined to comment on the exact size, but did note that, "ANRP II is ending up larger than anticipated, which is surprising because most follow-on funds in the industry are smaller than their predecessors. I think that speaks to two things. One is the interest of capital in the energy sector, and the other is the confidence in our long track record through all parts



"We believe the environment is really attractive right now," said Greg Beard, senior partner and head of natural resources, Apollo Global Management.

of the energy cycle."

Regardless of the final dollar count, ANRP II will be a 2016 vintage. Closing was expected at press time.

While greater size reflects overall interest in the sector, the cross section of limited partners indicates the nature of that interest from the investing community. The participants in ANRP II are mostly the same major investors as in ANRP I, with a select few new majors and many new supporting investors.

When Apollo began raising ANRP II, it was quickly taken as an indication that a major PE firm thought the time was ripe to get back in. Beard does not disagree that there are plentiful opportunities, but he cautioned against reading too much into the timing.

"ANRP I was fully commit-

ted. That vintage was a tough one, but we were able to do a good job of investing. We believe the environment is really attractive now."

Apollo has already committed \$800 million out of ANRP II and has about half a dozen other opportu-

nities under consideration. And while the general investment approach for ANRP II is similar to ANRP I, there is a new wrinkle: distressed debt, not out of a sub-fund but as part of the deployment.

"We anticipate deploying a few hundred million from ANRP II into a handful of select debt securities," said Beard, "and probably end up owning the equity."

Southern hospitality

Sam Oh, a veteran of large PE and investment banking houses, went out on his own in February with the founding of Mountain Capital Management in Houston. The firm wrote its first check in August, \$145 million to Compass Production Partners LP, a gas producer in the Cotton Valley that also has a small oil play in the Permian Basin. Mountain Capital is still raising funds, but Oh would not comment on that or a close date other than to say he hopes to put a bow on Fund I by the end of the year.

"We have a broad mandate across North America," Oh said. "In this vintage we are particularly intrigued with what could be called a broad stretch of the southern U.S. from the Permian through Texas and even some of the Midcontinent to where Compass is."

Oh likes both the economics in some of those plays as well as the proximity to the Gulf Coast, where demand for both oil and gas is growing steadily.

"Based on my experience, I have a strong view of logistics," Oh said. "Midstream has made a lot of progress [in adding long-haul capacity and connections], and we will see more of that, but some of the complications we have seen recently show that it can be a long wait sometimes to get some basins fully connected."

Mountain Capital is likely to make six or eight investments in the range of \$50 million to \$150 million across that southern tier. The thesis behind investing in the current environment, Oh explains, is that "in terms of pure deal flow and opportunity set there are fewer GPs looking in that segment. That is a bit ironic, because the small-cap end of the market generates the lion's share of the number of deals.

"As the GPs grow bigger and the number of them grows smaller, the smaller end of the market gets overlooked."

Denham Capital Management was one of the early investors to recognize that development technology and the overall decrease in cost of services had rewritten the equations for the Haynesville Shale and other basins. "One of our portfolio company partners, Covey Park Energy out of Dallas, has made a major series of acquisitions from independents like EP Energy and Penn Virginia in the



"As the GPs grow bigger and the number of them grows smaller, the smaller end of the market gets overlooked," said Sam Oh, founder, Mountain Capital Management.



"The market right now is coming out of a period of dormancy and much of the industry is shuffling assets and areas of focus," said Jordan Marye, partner, Denham Capital Management.

Haynesville," said Jordan Marye, partner. "We are excited to build out those assets and bring them to scale. The Haynesville represents an opportunity to create lowcost natural gas molecules as compared to other basins."

The rehabilitation of the Haynesville is remarkable. Not too long ago it was the poster child for uneconomical drygas plays.

"In the last 24-plus months there has been a real revolution in terms of completion design in the Haynesville," noted Marye.

"That, plus lower overall services costs, means that finding and development costs are now on the order of 60 cents an Mcf. That is compared to \$1.50 or \$2/Mcf two or three years ago. That is a fundamental change in the Haynesville that creates an economic opportunity on par with that in the Marcellus or Eagle Ford."

A more competitive molecule

That rapid turn of events—in technology, technique and costs—now informs Denham's investment thesis. "There are probably a lot of those situations out there currently and as time goes on," said Marye. "One of our jobs is to identify them. We and Covey Park spotted the Haynesville a while ago, and we've built a large company around that idea."

Even if rocks and crews and costs are similar elsewhere on the continent, one irreproducible advantage of the Haynesville is its proximity to the Gulf Coast. That is not just for existing infrastructure and demand, but also for the burgeoning growth in petrochemicals, fertilizers and LNG.

The American Chemistry Council, trade association for the petrochemical industry, has estimated that its members plan \$164 billion in new capacity over the next few years, primarily polymers and methanol, mostly for export, and concentrated in the Gulf Coast.

"Proximity to the Gulf Coast and low transportation costs are definitely an advantage in the Haynesville," Marye

said. "There are probably more economical wells when measured at the wellhead, but once gas is delivered to the sales point, the Haynesville is just a more competitive molecule."

Denham's investment approach is the middle market, \$50 million to \$500 million in equity, which translates



to operations with an enterprise value of \$100 million to \$1 billion. The

firm is investing out of Fund VI, which was closed in 2012 at \$3.6 billion. That fund has a broad mandate in upstream and midstream, as well as mining and power.

Denham is also investing out of a new fund strictly for upstream and midstream opportunities. It is, in effect, the firm's seventh fund, but will be called simply the Denham Oil & Gas Fund.

"The market right now is coming out of a period of dormancy and much of the industry is shuffling assets and areas of focus," said Marye.

"Many operations still have too much debt and/or do not have access to enough capital or operational scale to say grace over all their assets. That means we are starting to see one of the more active deal markets in a long time. To that end, we see a lot of ideas, but we don't do a lot of deals. Our job is to pick through those opportunities in a methodical and discerning way and only do the things we are fully convicted by. That is our edge."

One of the newest portfolio companies for Denham Capital Management is WhiteWater Midstream, which was formed in

"The core plays are still commanding good prices, and in the past six months we have seen more of those come on the market."

-Christopher Manning

midsummer 2016. Denham holds 85% and Ridgemont Equity Partners the remainder.

"We are focused 50-50 on transmission and processing," said Christer Rundlof, CEO of WhiteWater.

"We would be excited to announce a project by year-end but understand these things take time. In transmission we are looking for debottlenecking opportunities. In the last few years there have been a lot of projects to turn pipes around and add new long-haul capacity. Now the attention is turning to the next set of bottlenecks that those projects created.

"We are not competing with the big guys on long-haul projects; our focus is on \$50 million to \$200 million equity investments. We would lead these projects with engineering and execution expertise in-house."

Portfolio with a purpose

"In this low-commodity-price environment, we are looking for regions with a price advantage," said Christopher Manning, managing partner of Trilantic North America and chairman of Trilantic Energy Partners. "The Haynesville and Cotton Valley have had a renaissance. A lot of people were negative on those plays, but lately you see some large players getting back in."



"There has been some rationalization of management groups. The late-comers are mostly shaken out. Current activity levels are picking up, but we still do not have a fully functioning market. That said, there are clearly projects that are economic, and those projects are getting done. I expect that in the next 12 to 18 months we will see a more normal state of activity in the industry."

3

—David Capobianco

In April, Trilantic North America invested \$300 million into a total \$375 million investment in Indigo Minerals LLC, which has producing properties and undeveloped acreage in the core of the Cotton Valley and Haynesville, a total of about 160,000 net acres in northwest Louisiana and East Texas, in addition to a significant portfolio of minerals and leasehold interests across 15 states.

Indigo is the tenth-largest private producer of natural gas in the U.S. with year-end SEC proved reserves of 1.27 Tcf. The other investors included Yorktown Partners, Ridgemont Equity Partners and The Martin Companies.

Overall, Trilantic North America's portfolio has been textbook diversification: a big presence in the Marcellus and Utica; two operators in the Permian Basin, which is large enough that they don't compete; operations in the Midcontinent Scoop/Stack plays; a nonoperator in Alberta, and a water management firm.

This portfolio has been built with a purpose, according to Manning. "They are diversified across niches and geography, but are all low-cost operators. Even within low-cost basins they are low-cost operators."

He added that they are all at different cycles in the holding pattern—which brings in the challenge of a lower-for-longer commodity price cycle in energy exit strategies.

"Every time we put capital to work, whether it is in wells or infrastructure, we are looking to make 2x or 3x our money," Manning said.

"At \$80 a barrel, we can get 3x to 4x. At \$40 a barrel we might be looking at a modeled return of 2.5x. Even then we still aim to sell at the point in the life cycle when we can't do any more with the asset. If we have selected well, a mid-20s gross IRR is still a nice return."

That said, there are greater opportunities these days to buy and sell high-grade assets. "The core plays are still commanding good prices, and in the past six months we have seen more of those come on the market," Manning said. "Back in the spring of 2015, we mostly saw unattractive stuff."

Today's business climate has also been something of a test for management teams, not just assets.

"In this price environment, so few things really work that it helps if a team comes to us with assets that generate a return. We have been able to build businesses from scratch, combining our experience with their execution. Building a business in today's environment is something we are very excited about.

Wringing out costs

This year was not yet a week old when midstream-focused Five Point Capital Partners formed and funded WaterBridge Resources with an equity commitment of up to \$200 million from its Midstream Fund II and its affiliates. WaterBridge was created to develop, acquire and manage water infrastructure for upstream producers and is pursuing brownfield and greenfield development and acquisition opportunities in conventional and emerging resource plays throughout North America.

"Over time, we expect a convergence of the water management and traditional midstream industries," said David N. Capobianco, CEO and managing partner at Five Point.

"When gathering lines are put in as resources are developed in new fields, multiple pipes will be laid in the same ditch: water, gas and oil. We see water as a full-cycle business, supplying source water to a field for fracking, gathering flowback and produced water, filtering and treating as much water as possible for reuse and injecting remaining water into disposal wells.

"If you have a lease operating expense of \$10 or \$12 a barrel, and \$2.50 or \$3.50 of that is water handling and disposal, getting water costs down to \$1.50 a barrel is a major reduction in costs and increase in profitability."

In the core gathering and processing side of the midstream, the recent consolidation among the largest operators has created opportunities for smaller and midsized companies, Capobianco explained.

"We seek to exploit this seam in the market. Our strategy is to buy and build in-basin assets that larger players are not focused on today.

"Our portfolio companies build infrastructure to connect producers to longer-haul pipelines, which will bring their commodities to end markets. By replacing trucks with permanent infrastructure, we improve netbacks for producers while also improving service and reliability."







ALTERNATIVE FINANCING

Doors Opening Again For Capital

For upstream and midstream companies, equity, lending and mezzanine capital are coming back as markets accept a new normal.

By Gregory DL Morris

It is easier to hear doors slam than it is to hear them open slowly. That is precisely the situation in capital formation for the independent upstream sector in North America. When the price of oil plunged two years ago, doors closed on most forms of equity and debt other than private equity. It was widely feared that the spring 2015 bank redeterminations would see widespread defaults and forced sales.

But a funny thing happened on the way to the guillotine. The redeterminations came and went without much trouble, even later, in fall 2015 and spring 2016. Similarly, mezzanine lending evolved to structures that more closely matched producers' needs for operational expenditures, rather than capital expenditures. Public and private debt markets, and even public equity, started to reopen slowly and quietly.

That is especially true for operators in the upstream or midstream that have tactical advantages: a modest-scale project that is remunerative at today's prices, low existing debt and an experienced management team.

The most recent evidence that capital markets of all types are open for good guys with good plans for good rocks is the oversubscription of Targa Resources Partners LP's offering of senior unsecured notes. After being announced at \$800 million, the offering was bumped to around a billion dollars; half due in 2025 and the other half in 2027. The 2025 also markets natural gas liquids, oil, refined products, coal and power. This marketing operation underpins the hedging functions that support Macquarie's RBL business, as well as price risk management needs of all hydrocarbon

notes accrue interest at 5.125% a year; the '27 notes at 5.375%. Both tranches were priced at par. The offering was expected to close early in October.

"What gets things going is lower volatility, some relative calm or stability," said Osmar Abib, global head of oil and gas investment banking for Credit Suisse.

"Last year's indicators were volatile, so it has been very difficult to project longer-term. It seems capital markets are now feeling that crude is moving within a tighter range. Leveraged finance activity is picking up; M&A is also picking up. But we are not seeing highly leveraged M&A deals."

However, there are lots of conversations about M&A in the oil and gas sector, said Abib. "Capital is not a constraint. We have not seen more company deals so far because operators have good access to capital and strong valuations. For both public and private markets, many operators are diversified, whereas buyers generally prefer pure plays. Markets have become relatively calm-and calm breeds confidence, which breeds deals."

That assertion is supported by activity at other institutions engaged in the upstream sector. "We remain active in all financing areas: reserve-based lending [RBL], mezzanine, equity and other structures," said Paul Beck, global head of upstream capital, Macquarie Energy Capital. "Our RBL facilities are slanted to our price-risk management capabilities."

Public debt and equity are handled out of Houston and New York by the Energy Capital advisory group that provides investment banking services including mergers, acquisitions and divestitures.

Beck reports that mezzanine lending also is alive and well. "Nonpublic, nonrevolver, nonconforming structures are geared these days to dislocated situations. Those are necessary because in the classic project finance world, things are very

different with the current price curve. Many projects are just uneconomical at today's prices."

Asset pricing remains aggressive

"Traditional A&D markets are going strong," said Beck. "We are also a very active hydrocarbon marketer." Moving about 9 Bcf/d in volume, Macquarie is the largest nonproducer gas marketer, and in the top three overall. The firm



Markets have become relatively calm—and calm breeds confidence, which breeds deals, said Osmar Abib, global head of oil and gas banking, Credit Suisse.



"All options are open across the board, but they are not wide open," said Macquarie Capital's Paul Beck.

producers and consumers.

Beck believes that the recent increase in A&D activity is not just trading cards around the table but actually developing value, even from the rationalization of larger companies. "No one is buying assets without the objective of developing new wells," he said. "If you look at asset pricing, it has remained very aggressive in some basins. The assumption in the Permian and in central Oklahoma is that those properties will be developed."

Taking the broader view of alternative financing, Beck said, "All options are open across the board, but they are not wide open. Lenders and investors alike are looking for two things: First, good areas with positive returns that can see accretive development. The other is a producing company that does not have too much leverage. Those less-levered companies are consistently getting access to capital."

Lenders and investors are insisting on a minimum 20% to 25% IRR on drilling, he added.

Beck is also sanguine about growth. "People are talking about upside," he said. "No one is willing to predict when prices might rise, but they know that this remains a structurally cyclical business. We have a new normal for the time being. Everyone keeps working to find good opportunities and make them work as best we can. Definitely people are coming to us with some projects that work today."

There are several reasons why no one is willing to call a turn in demand, not the least of which is recent experience that seems to have prices bumping along the bottom.

"It has been an enigma how slowly U.S. production has been declining," Beck reflected. "No one really understands why decline curves are not falling

off faster than they are. Also, internationally, Russia, Saudi Arabia, Iran and Iraq are still developing at a very fast pace."

Seeing plenty of opportunities

Opportunities also abound for small-cap alternative funding, with BlueRock Energy Partners providing capital, said Stuart Rexrode, managing partner-but that does not automatically translate into done deals.





"In some ways this is a great time in the cycle for us," he said, "because there are many projects for which other alternatives are no longer open, or that may have been bankable before but are not now, so we are seeing a lot of potential projects."

On the flip side, however, a good number of those projects are acquisitions for which the bid-offer spread is still wide. "In some cases, even if the buyer is willing to stretch

on the acquisition price to get a deal done, we just cannot get the math to work for us," Rexrode noted, "at least not yet. So, yes, we are seeing lots of opportunities. And we are excited about the modest upturn in pricing lately. Many transactions may become viable for us if that continues."

Houston-based BlueRock is a project finance firm that normally funds projects at \$25 million and smaller. "We need proved, developed, producing assets with a robust development upside," Rexrode explained. "There has to be production and a plan to grow."

The firm is different from most mezzanine shops in that those typically offer secured loans with a significant equity kicker. BlueRock becomes a temporary partner through a nonrecourse production payment, structured as a temporary override. It is a rate-of-return financing structure whereby the override is returned to the E&P client once the contractual return has been achieved.

Thus, Blue Rock is essentially a temporary partner.

Rexrode said the model dates back through three predecessor firms to the mid-1990s so is time-tested, and proving to be propitious in a lower-for-longer commodity cycle. "We only get paid if the producer gets paid," he emphasized. "If production and pricing results are favorable, we get our return sooner. If not, we are partners for longer, but in any case, producers are not giving away their upside forever."

Writing nonrecourse, nonguarantee checks means that BlueRock's security is its due diligence. "My partners are engineers," said Rexrode. "We do our own evaluations rather than relying on third parties. We tend to focus on conventional projects, because resource development typically



For BlueRock Energy Partners to fund an E&P, there has to be existing production and a firm plan to grow it, said principal Stuart Rexrode.

requires much larger checks than we write. We have done business all over the lower 48 states, but we see most activity close to home: Texas, Oklahoma and Kansas."

BlueRock has several transactions pending involving packages of stripper wells. "They are solid, low-decline properties, but the seller is divesting noncore operations at an attractive price for the buyer. We see development potential in the form of, maybe recompletions, waterflood and optimization of lease operating expenses. In the past, reservebased lending might have worked for those, but today banks are just not going to get there."

Given the longevity of the model, Rexrode added that BlueRock has partner/clients "all over the price curve. We have clients we closed business with at \$60 a barrel and a few at \$100. Clearly those clients are not as healthy as they were at higher prices, but we understand the issues that face producers because

we are industry players ourselves.

"The point is that our clients are still sitting on good assets, and it is in our best interest to keep our operators producing the asset. We try to be very flexible, and the structure does not lead to foreclosure. We are not loan-to-own."



CAPITAL MARKETS

Massive Call on Equity Ahead

Between balance sheet repair, drilling budgets and a possible Saudi IPO, operators ought to stock up now.

By Leslie Haines

rilling fewer wells today will bump up against rising global energy demand later, and fixing that supply crunch will require more rigs getting back to work. At the same time, E&P companies need to be sure they have enough capital to execute their business plans, strengthen their balance sheets or pay promised dividends.

The answer is accessing more equity. In fact, "equitize" is the new verb making the rounds in the oil and gas community.

"We think going forward the most important thing for any operator is how to fund your business plan. There is going to be less debt available and it's going to cost more, so debt is not the answer you had over the last decade. It's going to have to be equity capital-and I would argue that's going to be limited as well," said Steve Trauber, vice chair of Citi and head of the firm's global energy investment banking group.

Speaking at Hart Energy's 15th Annual A&D Strategies and Opportunities Conference in Dallas, Trauber warned that the call on equity capital looks to be increasing soon, and by a lot.

"We're north of 400 U.S. rigs now, going to 650 or even 1,000 by the end of 2018. That's an increase of 400 rigs and \$400 million of capital per rig for one year, in 2018, or \$40 billion of capital that's going to be required, just for the U.S. onshore. Globally, it's \$150 billion. If you think about it, which capital markets are you going to access for that?"

Trauber warned the oil and gas sector needs even more capital. "Let me ask you this: if Saudi Aramco goes public with \$100 billion of equity, where is that capital going to come from? It's not just out there sitting on the sidelines; it's got to come from somewhere.

"And finally, I've got a list of 20-25 names in the upstream that we expect to at least look at going public in the next 12 to 18 months; that's a lot of equity capital going to Aramco and IPOs that's got to come from somewhere. We can talk about private equity having \$100 or

\$150 billion of firepower, but we'll need more than that.

"This is where the average rock star banker says, 'No problem; I can deliver that for you.' Well, I would challenge that." Trauber said he expects four or five upstream IPOs could hit the market by year-end. At press time, a Denver company, Extraction Oil & Gas LLC, did go public, raising more than \$600 million.

In the meantime, investors are still focused heavily on balance sheet repair, increasing corporate liquidity and the ratio of net debt to EBITDA.

Bakken Mid-Con YTD 2016 Equity Proceeds (\$MM) Diversified 21% D-J \$7,475 4% Permian Appalachia 43% 26% \$4,110 \$2,119 \$2,497 \$2,179 \$1,463 \$1,465 \$185 \$972 \$1,449 \$93 \$173 \$704 \$2,359 \$764 \$302 \$1,931 \$56 \$1,841 \$427 \$243 \$704 \$728 Jan '16 Mar '16 May '16 Jun '16 Jul '16 Feb '16 Apr '16 Aug '16 Mid-Con Permian Appalachia D-J Diversified Bakken

Source: Citi, Dealogic, FactSet

The correlation of equity values to production growth has dissipated a bit as stockholders now look for strong balance sheets. Therefore, companies that can issue equity are doing so. In fact, year to date, E&P equity issuance has been strong and looks likely to surpass that of 2015.

Two E&Ps have issued high yield debt this year, a sign that that market is reopening to oil and gas stories. Since

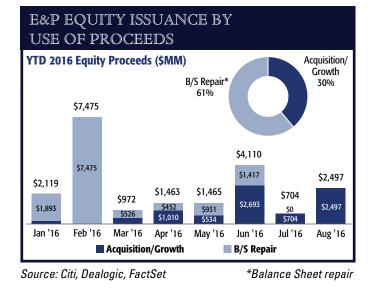
> March 2016, the energy high yield secondary market has had one of its strongest runs in history, up more than 30%, with the highest-quality credits (the top third) substantially outperforming, Trauber said. Since April, eight midstream companies, two E&Ps and two service companies have accessed high yield. "Bought" bond deals are now being offered to the higher quality credits as well.

> Acquisition funding makes up about a third of the use of proceeds from equity issuance year to date, and almost half of that has been for deals in the Permian Basin.

> "The risk of drilling a well has gone down dramatically but I would argue the risk in the sector is only going up," Trauber said. "How do you fund growth in energy demand going forward? I think the way to protect yourself is to strengthen your balance sheet. Don't let your strategy be held hostage by

not having access to that capital. It will not be there for everybody who needs it, so you need to take the first-mover advantage."

Trauber said Citi tends to be very bullish, seeing \$50-\$60 with the potential for price spikes. "We think the lack of investment in 2014, '15 and '16-and probably in '17—will create a massive contraction in the supply curve. Where is oil going to be in 2022 or 2023? Our outlook requires increased drilling."





With less debt available, equity capital will be in greater demand, but also limited, said Steve Trauber, Citi's vice chairman and global head of energy investment banking.

E&P EQUITY ISSUANCE BY BASIN -

WHERE CAPITAL IS GOING



INVESTMENT BANKING TRENDS

Creative Capital Markets Still Eye Öil and Gas

E&Ps wanting to add equity to their balance sheets or fund acquisitions find Wall Street has the welcome mat out and dollars ready.

By Chris Sheehan, CFA

rom severe stress in the first quarter of 2016 to relatively buoyant capital markets recently albeit restricted largely to issuers in select basins—the recovery in capital markets for energy has been remarkable. First raising money to bolster balance sheets for established producers, capital markets have broadened to financing bolt-on acquisitions by E&Ps as commodity markets hit bottom and gradually moved higher over the course of 2016. Issuance of common



equity is now being supplemented by convertible bonds and preferred stock and, in some cases, high yield debt.

In addition, the initial public offering (IPO) market is opening up after a two-year hiatus. Permian producers are preparing SEC filings to go public while prior registration statements are being updated by E&Ps in the Niobrara and Marcellus plays. Noble Midstream Partners LP, which had a prior registration on hold, made it to the finish line with an IPO priced above the offering range in September.

"We've seen an amazing recovery in the sector in the last six months," said Tim Perry, Credit Suisse Group's co-head of oil and gas investment banking in the Americas. Following a commodity recovery starting in late March, capital markets have strengthened to the point that Credit Suisse predicts several energy IPOs by year-end.

"Oil and gas investors are making money, which is very good for the industry and something that we haven't had for a long time," said Nathan Craig, managing director in investment banking at J.P. Morgan.

"And underpinning all of this is the phenomenal technological advancement that has occurred in the industry over the last six months, making an increasing numbers of basins and some historically more 'fringe' parts of plays work at sub-\$50 oil and sub-\$3 natural gas."

The post-Labor Day equity calendar confirmed an increasingly healthy capital market for oil and gas producers with \$1 billion and \$2 billion equity offerings by Encana Corp., based in Calgary, and Houston-based Anadarko Petroleum Corp., respectively.

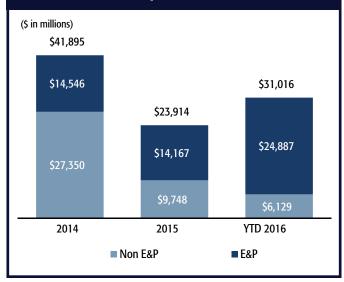
Taking advantage of the recent appetite for Permian Basin exposure, Encana raised gross proceeds of \$1 billion through a 107-million share offering. Roughly half of the proceeds are earmarked for a 2017 capital program that includes a twofold increase in the number of Permian wells being brought on line in 2017 versus 2016. Remaining proceeds will be used to strengthen the balance sheet.

The offering was led by Credit Suisse Securities (Canada) and J.P. Morgan.

After reaching a \$2 billion deal to buy deepwater Gulf of Mexico assets from Freeport McMoran Oil & Gas, Anadarko raised net proceeds of \$2.16 billion through the sale of 40.5 million shares. The financing was viewed very positively, as the acquisition was projected to generate \$3 billion in incremental Gulf of Mexico free cash flow over the next five years at current strip pricing, enabling Anadarko to accelerate investment in its key onshore Delaware and Denver-Julesburg basin assets.

The transaction would double Anadarko's ownership in its offshore Lucius Field to approximately 49%, and increase its "unmatched inventory of low-cost, subsea tieback opportunities," said CEO Al Walker. Sole underwriter for the offering was J.P. Morgan Securities LLC.

U.S. OIL & GAS EQUITY ISSUANCE



Source: Credit Suisse

Also in September, Noble Midstream Partners LP (NYSE: NBLX) launched its IPO, a spinoff from Noble Energy Inc. that issued 14.375 million units at \$22.50/unit. This was above the expected price range of \$19-\$21/unit. The closing price was over \$26/unit for each of the first three days of trading. The offering size means some 39% of units outstanding are now in public hands.

Combo offerings, converts gain favor

A trend finding renewed favor in capital markets of late is the use of common equity combined with an issue of convertible notes or convertible preferred stock. This is most typically used to provide E&Ps with acquisition financing. Recent examples include issues by SM Energy Co., PDC Energy Inc., and Jones Energy Inc.

In each of these cases, the original common equity offering size was expanded. However, the greater surprise has tended to be in the investor receptivity of new convertible issuance, both as regards the terms themselves (e.g. coupon, conversion premium) and overall appetite for convertible paper.

For example, SM Energy's offering of 5-year convertible senior notes was initially set at \$100 million, but upsized to \$150 million (and finally \$172.5 million with exercise of the full overallotment option.) Initial price talk was for a coupon of 1.75%-2.25% and a conversion premium of 30%-35%. However, final terms included a lower coupon, at 1.5%, and a conversion premium of 35%, at the high end of the range, versus the company's concurrent common equity offering price.

Likewise, with PDC Energy, a similar convertible senior note offering was initially set at \$100 million, but upsized to \$175 million (and finally \$200 million with the overallotment option). Final terms included a still lower coupon, at 1.125%, while the conversion premium was also set at 35% versus PDC Energy's concurrent common equity offering price.

In both instances, the purpose of these issues was to finance substantial acquisitions in the Permian Basin: a \$980 million acquisition in the case of SM Energy; and cash consideration of \$915 million as part of an overall purchase price of \$1.5 billion in the case of PDC Energy.

While the upstream industry has tended to use convertible instruments somewhat sparingly, it has at times combined common and convertible issues to have the added firepower to make acquisitions that are of significant size relative to the issuer, observed J.P Morgan's Craig. "Historically, the convert market hasn't been substantially tapped by upstream companies," said Craig. "Usually, as well as in these cases, it's been tapped in conjunction with a significant acquisition, where issuers often want to tap both the common and convert markets to maximize proceeds and access two distinct investor bases."

In the past, continued Craig, upstream CFOs have not wanted to complicate their balance sheets. "But given that recent terms have been so attractive, it's something they may want to consider. Increasingly, you could see CFOs start to sharpen their pencils and look at exactly what the terms are and just how converts compare to a straight high yield bond."

And, certainly, with a dearth of paper until recently, there appears to be no shortage of demand across the spectrum of potential buyers.

"The convert market has been eager for new paper," commented Craig. "There are lots of convert investors, hedge funds and long-only investors that want to play the energy space. I think a lot of covert investors understand the growth story that comes with an acquisition, and are ready to put money to work. We'll see more opportunity for that as larger acquisitions come to fruition."

Moreover, since corporate merger and acquisition (M&A) activity is subdued at best, financing for asset acquisitions by E&Ps is in steady demand.

Without much corporate M&A, "buyers are participating in asset M&A," said Craig. "The equity markets have been applauding bolt-on type acquisitions in plays like the Permian, and the markets are choosing the champions. They're expecting some of the players to continue to consolidate and block up acreage, and the market recognizes the benefits or synergies of doing so."

Credit Suisse's Perry sees convertibles as an attractive tool for helping finance acquisitions, but notes that the broad industry trend to lower leverage levels will mean most companies will likely be content to continue issuing common equity—in some cases, even in excess of what would historically have been considered conservative levels.

"There's been so little issuance of convertible and high yield debt over the last two years that there's a lot of pent-up demand for those instruments," said Perry. "While relatively few companies have come to market to date, perhaps we'll see more going forward when they see how well the previous issues have gone. We feel that there's a strong potential market out there."

However, while varied capital sources may be available, including convertible or high yield markets, many E&Ps "want to de-lever," observed Perry.

Whereas acquisitions may have traditionally been financed by 50% equity and 50% debt in former times, he observed, "the new rule is to do it 100% with equity." And E&Ps that earlier may have had 25%-50% outstanding on their revolvers, leaving 50%-75% available, are tending to "have zero outstanding on their revolvers and perhaps cash on their balance sheet." With asset acquisitions likely to happen with some frequency through year-end, some E&Ps are even issuing equity beyond their immediate needs, according to Perry.

"You're also seeing people wanting to de-lever through acquisitions. They're funding 100% of the acquisition price with equity, and in certain cases they're even funding over 1x times and up to 1.5x the acquisition price. They're doing an equity raise not simply to pay down debt related to an acquisition, but also to de-lever through it. Post-transaction they're going to be less levered than pre-transaction."

Diamondback Energy Inc. offers an example of an E&P "over-equitizing" to keep debt low, noted Perry. In accessing the equity market to put cash on the balance sheet, the company is pre-funding a potential outspend and thus keeping net debt (debt less cash) low via a proactive strategy, he said.

"Overall, the industry wants to wants to run on 2x debt-to-EBITDA on an unhedged basis," said Perry. "The industry is moving towards that level, but most companies are still above it. Companies are aiming to de-lever so that they have a capital structure that allows them to work at \$45-\$50 oil, not at \$75 oil."

Credit Suisse has been a predominant force in the sheer number of equity offerings it has led in the energy sector. Is market access expected to broaden to include a wider range of E&Ps?

"I think smaller companies definitely have access to the market," said Perry. "What's most important is not so much their size, but where their acreage is—is it in the core of the core? And, secondly, do they have a capital structure that, post-transaction, is viable through the cycle.

"There's still a lot of mid- and small cap companies that haven't accessed the market, and there's probably now availability to those companies who didn't have it 6-12 months ago."

Renewed basin focus

There's no doubt that investor interest has generally been confined to acreage located in the right places, and that's been a relatively small number of counties in the United States, said Perry. "If you have acreage in those areas, you absolutely can raise capital—and, frankly, you can do it relatively easily," he said.

With a growing number E&Ps preparing to go public, is the market ready for IPOs?

"We see two to three companies coming to market with an IPO before year-end, and we expect strong investor demand," said Perry. Subject to market conditions and SEC approval, likely timing is after Labor Day and before Thanksgiving.

On the M&A front, are the change-of-control covenants written into bond issues still holding back activity by requiring bonds trading at a steep discount to be redeemed at par? "As the bond market has recovered, that's going to help corporate M&A. But while we expect to see some more corporate M&A than in the recent past, I wouldn't necessarily say that the M&A market is going to be hot. I think it's going to be moderate."

Addressing access to traditional banking financing via reservebased lending, J.P. Morgan's Craig described the market as "choppy" and available on a "case-by-case basis." However, bank financings to fund major acquisitions are possible, he said, citing the acquisition by Terra Energy Partners LLC of Piceance Basin assets for \$910 million in cash. J.P. Morgan provided bank financing for the latter in conjunction with private equity sources led by Warburg Pincus LLC. ■







Partners, Choices and Tactics

s the oil and gas industry approaches a safe harbor from the stormy seas of the past few years, access to capital will be ever more important. E&P companies hope to unfurl their sails in the new year, when commodity prices are expected to rise. They stand ready to complete the plentiful DUCs held in inventory, ramp up drilling or acquire assets.

Year to date, most E&Ps have been inching toward a higher spend, adding a rig here and there. Private equity players have made initial commitments to start-ups in another sign of returning optimism.

The capital markets are mostly open for companies that need to shore up their balance sheets, pay down debt or make accretive deals. The equity markets are particularly robust. Energy capital formation on Wall Street slowed a bit in 2015 but it has led issuances in 2016 as commodity prices have rebounded from the low in February 2106. Through early October, companies had issued \$23 billion of public equity versus about \$19 billion the year before. And at press time, Extraction Oil & Gas, Denver, raised \$633 million in an IPO. On the other side of the balance sheet, debt holders have been working through negotiations with endangered companies, and the industry appears to be righting its ship.

The good news is that today, effective capital solutions come in many shapes and sizes: public and private equity placements for common, preferred and/or convertible offerings; senior and subordinated debt; mezzanine deals; and drillco and joint venture structures.

It's our pleasure to present this annual supplement, which we view as a forum for readers to learn more about the capital providers standing ready to finance the oil and gas industry.

-Leslie Haines

Apollo Global Management LLC

pollo Global Management LLC's (together with its consolidated subsidiaries, "Apollo") integrated investment platform enables the firm to consider its investments from every angle. Whether the situation involves senior debt, mezzanine, private equity, royalties or joint ventures, Apollo's broad investment mandate gives it the flexibility it needs to create effective capital solutions that best meet the needs of a particular management team or opportunity.

"We believe our integrated platform distinguishes us among our peers," said Greg Beard, global head of natural resources at Apollo. "Our approach allows any Apollo group to come up with creative ways to help management teams meet their objectives. We try to solve the problem from the customer's perspective instead of focusing on a particular bucket of capital we manage."

Apollo has been actively investing across the energy industry since 2001. During this period, it has been one of the most active private equity managers, facilitating nearly \$10 billion in natural resources equity investments from the funds it manages.

In 2012, the firm hired accomplished industry veterans Jeff Bartlett and Craig Fox to build its energy mezzanine business. Since then, funds managed by Apollo have committed more than \$1 billion of illiquid mezzanine and structured equity investments.

Apollo also has one of the largest alternative credit platforms, with total credit assets under management of \$134 billion (as of June 30, 2016), and credit funds managed by Apollo have invested approximately \$8 billion since 2010 in liquid energy credit opportunities. Most recently, in April 2015, Apollo raised more than \$1 billion for an energy opportunity fund.

Finally, the firm is focused on building a joint venture investment



APOLLO GLOBAL MANAGEMENT

business and certain of its funds have been active buyers of oil and gas royalties over the past several years.

While Apollo invests across the natural resources space, its primary focus has been and will continue to be on the upstream sector.

"The need for capital driven by the shale revolution requires trillions of dollars to drill low-risk manufacturing-type wells," Beard said.

"Public companies tend to focus on just a few basins, so they have plenty of noncore assets to divest. There seem to be relatively few buyers other than private equity-backed companies for such assets. But we are frequently able to buy them for less than 2x cash flow, which would not be possible under normal market conditions."

Apollo's broad investment mandate has allowed the firm to invest in a variety of companies across a wide array of situations. Funds managed by Apollo, for example, purchased the distressed debt of TXU and helped restructure the company.

Apollo's private equity funds acquired EP Energy out of the El Paso sale, backing the existing management team to steer the company to a liquids-based growth plan and a subsequent IPO in February 2014.

Apollo's funds also invest in traditional private equity-backed asset build-ups like Athlon Energy, where Apollo invested over \$350 million in approximately four years and made over 7x its money.

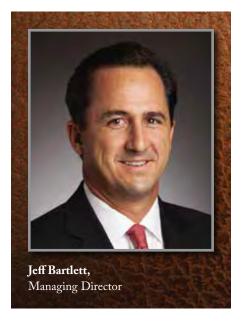
"Apollo partners with world-class management teams to seek out assets with a value focus," said Jeff Bartlett, managing director, Apollo Energy Credit.

"We typically back teams with decades of experience in low-cost basins, adhering to Apollo's particular focus on value rather than growth investments, a strategy that has been a hallmark of the firm's investment success throughout its 26-year history."

Apollo's private equity deals typically range in size from \$100 million to more than \$1 billion, while on the



Greg Beard, Global Head of Natural Resources



credit side the firm focuses on investments from approximately \$20 million to \$250 million. Funds managed by Apollo also buy royalties of every size and make joint venture investments of up to \$500 million. In addition to its more than \$4 billion in natural resource focused private equity commitments, Apollo also draws from its \$18 billion private equity buyout fund, of which it expects to invest up to 30 percent in natural resources. The firm scours the world for the best opportunities, though it now believes that the most attractive risk-adjusted energy investments reside in North America.

As Apollo continues to deploy assets from its current private equity and credit funds, the firm is experiencing an increased investor interest in its joint venture deals thanks to lower OFS costs combined with an improving commodity price environment.

"We are witnessing an abundance of conventional assets for sale at reasonable prices given the challenging circumstances for the upstream MLPs that historically were the natural buyers," Bartlett said.

"As a result, we are identifying more opportunities to provide mezzanine acquisition financing to support equity sponsors in those markets."

Regardless of the type of investment, Apollo continues to view opportunities differently than most firms. "Instead of looking at the highest growth opportunities, we tend to look at things that are underappreciated, undervalued or highly complex," Beard said.

"We like businesses and assets that are out of favor. Our access to capital, the depth of our team and our integrated platform all combine to make Apollo a powerful and effective investment partner across the global energy space."





The Unique Capital Partner for Small Producers

BlueRock is like you, and we want to be your partner. We provide more capital than banks, our deal structure is non-recourse, and our approach is a lower cost alternative to selling down working interest equity. This combination is unique to BlueRock and provides clients with the ability to retain significantly more upside in their projects. Our passion is helping small producers grow. Let us help you.



- Investment size between \$1MM and \$20MM
- Client retains upside and control of project
- No 3rd party engineering reports required
- No personal, corporate guarantees or board seats required
- Investment team made up of engineers, geologists and financial professionals
- Simple deal structure and reporting
- Repeatable and expandable
- Favorable tax and accounting treatment may apply



Contact Stuart Rexrode (281) 376-0111 Ext 305 srexrode@bluerockep.com



reduces the providing growth capital to small and medium independent E&P companies, and it doesn't intend to stop.

Typically, Houston-based BlueRock provides capital to producers for reserve-based acquisitions and monetizations, coupled with associated production enhancement and/or development drilling.



"The second piece of this equation is essential, because our advance rates, required rates of return, and structure allow for significant value credited to the upside in the project," explained Stuart Rexrode, managing partner. In the past, BlueRock closed on transactions as small as \$1 million; however, the target market has shifted recently to deals in the \$5 million to \$20 million range.

BlueRock Energy Partners calls itself the unique capital providers for small producers. "As an alternative finance company, our structure provides much greater flexibility than a traditional RBL banking facility," Rexrode said.

"There are significant differences in how we calculate our advance rate and how we structure our transaction. Whether we are financing an acquisition, refinancing bank debt, or simply providing drilling funds, our clients maximize the funding capacity in the project, while avoiding the high cost of equity."

From a structuring standpoint, BlueRock provides the growth capital for clients, in return for a financial production payment, structured as a temporary overriding royalty interest, until a contractual rate of return is achieved. Once the rate of return is met, the temporary ORRI is conveyed back to the client, and enced in the last 20 years, and our business model has both survived and thrived through them all. Lots of singles and doubles!" said Rexrode. "That's what differentiates us from other capital providers."

Last fall and into 2016, in the falling commodity price environment, BlueRock provided a California-based independent \$11 million to refinance existing senior bank debt, primarily backed by long-life, low decline production in the western U.S., and an additional \$2 million for the frack completion of 16 wells in the Texas Panhandle.

"We understand our clients' obstacles because we have lived them ourselves."

3

-Stuart Rexrode

BlueRock may retain a small permanent override in the project. The results of a sound upside development plan should be sufficient to pay the transaction off within four to six years, including Blue Rock's contractual rate of return.

"It is non-recourse, non-covenant; no personal guarantees or board seats are required; and you maintain your interests, upside and control in the project," Rexrode said. "The level of cash flow and value you ultimately receive is far greater than if you sold down your working interest to a typical industry partner. To achieve our return, we take production, reserves and price risk right alongside the producer."

BlueRock's partners include reservoir engineers and finance professionals, all having extensive industry experience. "We understand our clients' obstacles because we have lived them ourselves. This is the third major downturn we have experiThe structure was a non-recourse, term override production payment tailored to the client's cash flow needs. The production payment applies to both the existing production as well as the newly completed Texas production, and will be in place until BlueRock achieves a 15% rate of return, whereby BlueRock will subsequently earn a 1% permanent override upon payout.

BlueRock's structure was ideal for the client to refinance existing debt and provide critical growth capital to meet drilling obligations, with the client still retaining the ultimate upside in the project.



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ENERGY COMES IN MANY FORMS

Human ingenuity and individual determination made this industry great. That same spirit and energy is also what makes working with us unique. Our team of trusted advisors and industry veterans offers you insights and tailored financial solutions so that you can navigate the complexities of today and stay focused on the opportunities of tomorrow.

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EAST WEST BANK

"Who is East West Bank?" East West Bank, one of Forbes' Best Banks in America, is headquartered in Pasadena, California, and is in the top 30 U.S. public banks by asset size and market cap. While East West Bank is relatively new to the industry, the Energy Finance team is comprised of experienced and wellversed energy lending professionals ready to serve the always dynamic industry. As a well-capitalized commercial bank, East West Bank deploys capital effectively to energy firms needing senior secured financing solutions.

In addition to the Forbes ranking, East West Bank has been recognized in numerous ways as a top-tier financial institution. It is one of the very few U.S.based banks with a full-service banking license in China. As the premier financial bridge connecting the world's two largest economies, East West Bank offers unparalleled services to help businesses thrive domestically and connect with opportunities across the Pacific.

East West Bank has quickly made a name for itself in the energy industry with an exceptional commitment to excellence and responsiveness. The comprehensive team based in Texas includes bankers, petroleum engineers, energy underwriters and "on the ground" experienced credit decisionmakers – a true devotion to servicing the industry in the right way.

To learn more about East West Bank's Energy Finance division, please contact 469.801.7368,

energy@eastwestbank.com, or any of its relationship managers listed here.

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Clients

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Accolades

THE DALLAS 500 MOST POWERFUL BUSINESS LEADERS, D CEO, 2016 AND 2017 WHO'S WHO IN ENERGY, DALLAS BUSINESS JOURNAL, 2013 THROUGH 2016 20 UNDER 40 IN ENERGY FINANCE LIST, OIL AND GAS INVESTOR, 2014 BEST BANKS IN AMERICA, FORBES, 2010 THROUGH 2016

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EIV Capital LLC

IV Capital, based in Houston, is an energy private investment firm focused on providing growth equity capital to small and mid-cap North American energy companies. EIV invests primarily in the midstream sector, and also considers investments further downstream and in midstream-related oilfield services. Since its founding in 2009, EIV has made over \$350 million of investments.

Experienced, Entrepreneurial Team

Collectively, the EIV investment team has 200+ years of experience investing in and operating energy companies, with a diverse array of backgrounds including operational, entrepreneurial, commercial and financial. Due to this EIV's differentiating experience is best illustrated through a case study of one of its initial investments, one that it successfully executed in-house. In early 2011, Brent and WTI oil prices diverged sharply, with Brent surging to approximately \$100/bbl while WTI lingered around \$80/bbl. Many in the industry attributed this spread to geopolitical tensions, most notably the Arab Spring. However, EIV's team identified the cause of the dichotomy: insufficient infrastructure to move rising U.S. crude production to market.

In an effort to take advantage of this anomaly, EIV leased a terminal with a barge dock and installed truck unloading stations. Then, the team bought oil in Oklahoma, trucked it to the terminal, loaded it onto barges at Tulsa's Port of Catoosa on the Verdigris River to the table and help its partners execute their business plans.

Focused Investment Strategy

EIV invests the majority of its capital in traditional midstream businesses, such as transportation, logistics and processing. The firm also pursues opportunities within oilfield services, targeting post-completion, midstream-related oilfield service opportunities. In addition, EIV considers niche investments in the downstream and power sectors, including expanded uses of natural gas opportunities such as landfill gas-to-energy or gas-toliquids projects.

EIV's equity investments range from \$20 million to \$80 million, although EIV is willing to invest a smaller amount if the opportunity



broad assortment of experience, EIV is able to quickly understand a potential partner's business, identify possible challenges and identify a pathway to avoid them. Throughout an investment's lifecycle, these backgrounds also allow EIV to provide valuable, practical solutions and advice to its partners based upon first-hand, personal experience. [™]EIV feels we're attractive partners to entrepreneurial management teams because of our experience starting, operating, growing and exiting our own companies. We work collaboratively with our partners, supporting them as they successfully grow their companies."

> —**Patti Melcher** Managing Partner

and sold it directly to Louisiana refineries, capturing the arbitrage. EIV also put in place a hedging program to protect its investment.

This project took just three or four months to implement: a demonstration of EIV's ability to quickly convert insight into tangible results. The project helps demonstrate why EIV can be seen not just as a source of capital, but as a partner that can bring experience intrigues the team or a larger amount with co-investment from its current limited partners. Focusing on investments of this size allows EIV to see many niche opportunities and focus on what the firm does best: helping businesses grow into stable, profitable enterprises with steady cash flows that are attractive to potential acquirers.

EIV sees small and nimble as an advantage, both in investment size and

EIV CAPITAL LLC

"We focus on supporting entrepreneurs in the lower, middle-market midstream space because it's what we enjoy. Even in an environment like we are in today, plenty of high-quality opportunities exist to improve and grow midstream infrastructure throughout the United States."

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—**David Finan** Partner

investment quantity. EIV only targets eight to twelve investments per fund allowing its small, experienced, operationally-focused investment team to spend more time with its partners. Many other forms of institutional capital aren't committed to devoting as much time and attention to each investment, but EIV believes its investment team should be available as a resource and sounding board for its entrepreneurial partners throughout the investment lifecycle.

Due to their size, potential EIV portfolio companies may not have a full suite of upper-level management as smaller executive teams help keep costs down. This is another reason for EIV's concentrated investment focus, the firm wants to be available to support entrepreneurs and their executive teams allowing them to focus on what they do best.

Importance of People

Although there may not always be a full suite of senior executives, EIV firmly believes that partnering with the right people is key to delivering successful results. The most important part of every EIV partnership is the people.

For that reason, EIV seeks to partner with motivated, ethical and experienced partners and enjoys getting to know its partners on a personal and professional level both prior to and during the partnership. Establishing these personal relationships early on creates a culture encouraging open dialogue and regular communication, which allows EIV and its partners to collaborate to avoid potential pitfalls and quickly act on growth opportunities.

The current market environment has created a unique opportunity for both first-time and serial entrepreneurs to identify inefficient or underutilized assets and work with capital providers, such as EIV, to enhance midstream operations and improve service to customers while driving returns.

Current Opportunity Set

Despite the current commodity price environment, EIV has not changed its fundamental strategy: to partner with high-quality management teams to pursue business plans based on solid operating fundamentals and strong customer relationships requiring longterm service. Plenty of these opportunities still exist, despite oil and gas prices, as companies continue to need capital to fund growth opportunities.

Furthermore, many alternative forms of capital, such as traditional lenders, are hesitant to deploy capital in today's environment. The majority of capital sources that remain active today are focused solely on the best, large-scale assets in the most premium locations.

These factors have created significant opportunities, particularly for smaller capital projects within the



lower, middle-market space. In-fill midstream opportunities are developing in maturing unconventional plays and high-quality opportunities are being overlooked purely because of size. Producers still need good service and the opportunity exists to structure investments in both mature basins and out-of-favor locations that generate attractive returns.

As most of EIV's investment opportunities are sourced through the investment team's personal and professional networks, EIV continues to evaluate a substantial number of high-quality opportunities and is excited to partner with knowledgeable management teams to deploy capital in the current environment.





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Industry Coverage

Energy & Power Investment Banking Group

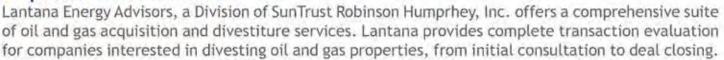
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Acquisition & Divestiture



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For more information, please visit **www.lrpartners.com** or contact Will Franklin, J McLane, Jeffrey Scotield, or James Wallis at **713.292.9500**.



Lime Rock Partners

In 1998, Lime Rock Partners was founded by John Reynolds and Jonathan Farber while they were in their late twenties. Eighteen years later, Reynolds and Farber still lead the investment efforts alongside young leaders who have risen through the ranks of the firm. In the firm's Houston office, managing directors Will Franklin, J Mc-Lane, Jeff Scofield and James Wallis lead U.S. E&P and oilfield service deal sourcing and partnerships. All began at the firm as associates. Townes Pressler leads the effort to help portfolio company teams accelerate growth.

What differentiates Lime Rock from other veteran North American E&P capital providers is its selectivity, creativity and partnership. As McLane explained, "As we invest in both E&P and oilfield service, and also outside North America, we are not seeking to back five new E&P teams every year. We usually back about one new team a year."

What is the Lime Rock Partners team looking for? McLane said, "A recent study calculated that there are 120 private equity-backed E&P teams in the U.S. with \$12 billion of capital commitments—but without any assets. We want to back teams that have a high chance of success. That means: First, differentiated access to assets and, second, a technical edge in developing them."

This selectivity is enhanced by Lime Rock Partners' strategy of avoiding putting teams in direct competition with each other—chasing the same type of asset in the same area at the same time.

Lime Rock's current roster of partners includes: CrownQuest Operating, approaching 10 years of developing assets in the Midland Basin with Lime Rock through the CrownRock vehicle; Endurance Resources in the Delaware Basin; Vantage Energy in the Marcellus Shale; San Jacinto Minerals in the Marcellus; Arena Energy in the Gulf of Mexico Shelf; Imaginea Energy Corp., Calgary, active in Western Canada; Capstone Natural Resources II, active on the Central Basin Platform in the Permian Basin; Battlecat Oil & Gas LLC in the Eagle Ford Shale; and Augustus Energy Partners II in the Rockies.

Lime Rock also stresses its creativity in putting deals together. "We are looking to help our investors and entrepreneurs achieve their goals," Scofield said. "That means not stamping deals out from a template. Our last four E&P deals have been notable for their variety: a carve-out The team seeks to be an exceptional partner to its portfolio companies. "That begins with us and our companies," Wallis said, "and with understanding where we can contribute—in financing, deal sourcing, exits, industry relationships, and helping our companies better understand the macro trends affecting the business. It also means trusting our teams in drilling and completion decisions.

"But the partnership isn't just a two-way street. One of our great joys is to bring all of our E&P teams together to discuss their challenges and opportunities, and one of the most

"...if you're not looking forward to talking to your investment partner weekly—and daily during some periods—you've probably chosen the wrong source of capital."

8

-Jeff Scofield

team of young entrepreneurs from a bigger E&P company; an overriding royalty interest purchase—alongside Lime Rock Resources—from a team we've worked with in the past; a new entity put together for a quick asset purchase by an existing team; and a second strategy developed by an existing team for which we raised a very large co-investment pool."

McLane added, "With so many of the best acreage positions identified and already locked up by well-capitalized companies, we suspect that multiple strategies or assets led by creative teams will likely be a large part of E&P investing going forward."

Total capital commitments raised by Lime Rock have exceeded \$7 billion. The Lime Rock Partners team has made over 85 investments over the last 18 years. interesting parts of the job is to introduce our E&P teams to oilfield service companies in our portfolio and broader network with interesting technologies and perspectives."

Scofield added, "And we try to always have fun with the entrepreneurs we work with, because if you're not looking forward to talking to your investment partner weekly—and daily during some periods—you've probably chosen the wrong source of capital."

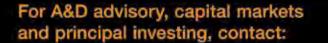




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earl Energy Investments is a Dallas-based oil and gas investment firm focused on private investments in the small- to mid-cap North American upstream, midstream and services sectors. The firm was founded in July 2015 and closed its inaugural fund at a hard-cap of \$500 million on September 30, 2015.

Pearl's investment strategy is simple: leverage the team's deep-rooted relationships in the energy industry to partner with best-in-class management teams pursuing attractive risk-reward opportunities. Pearl focuses on investments requiring between \$25 million and \$75 million of equity capital.

Pearl was founded by industry veterans Billy Quinn and Chris Aulds, who have more than 50 years of combined experience in the energy business. Together, they provide a unique combination of investment, operational and commercial expertise as well as an extensive network in the industry.

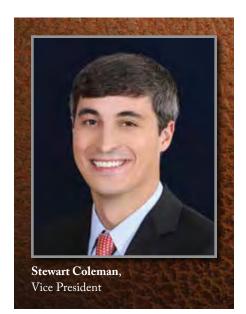
Billy is a former co-managing partner of Natural Gas Partners with more than 20 years of energy private equity experience. Chris has over 30 years of operating experience and was a co-founding member of two highly successful midstream companies, Crosstex Energy Services and TEAK Midstream.

What is Pearl's unique niche? We believe Pearl can invest to achieve superior risk-adjusted returns by partnering with the management teams of small- to mid-cap companies, and that this space has an outsized number of opportunities with asymmetric risk-return profiles.

How many management teams does Pearl hope to back?

Pearl has the luxury of being highly selective, given we will likely





only partner with 10 to 12 management teams in each fund. We purposefully sized our fund and target equity commitment amount to allow us to exclusively pursue the highest-conviction investments in each basin and avoid having competing portfolio companies.

Additionally, we have organized ourselves internally to add meaningful value beyond capital to our portfolio companies. Our lean team structure enables Pearl to be a nimble, fast-moving partner and avoid the lengthy, often bureaucratic processes of larger firms.

Furthermore, the diverse backgrounds of our investment professionals in finance, investing and operations allow us to serve not only as a valuable financial resource, but on the operational and technical front as well. Ultimately, we believe the team's complementary skill sets enhance our ability to work successfully with management teams in all stages of a portfolio company's development.

Pearl prides itself on being a true partner that has a differentiated ability to execute quickly, both during the initial process of backing a team and in working together to build a company and create value.

During the initial evaluation process, we believe it is extremely important to truly get to know our potential partners, and vice versa. This ensures we are both in alignment from a strategic, philosophical and cultural perspective. Management teams have the unique opportunity to meet every member of the Pearl team during the evaluation process.

What is the typical composition of a management team in Pearl's portfolio?

First and foremost, Pearl is in the business of partnering with entrepreneurial management teams that have complementary backgrounds and share a capitalistic mindset. This type of leadership produces successful companies focused on disciplined, strategic execution with a creative outlook on industry dynamics.

When we think about complementary backgrounds, we look for teams who have clearly demonstrated technical and deal flow competitive advan

PEARL ENERGY INVESTMENTS

tages that they will leverage in their targeted region of expertise. Advantages in deal flow generation stem from a business development effort that is differentiated through proprietary relationships and local market knowledge.

In terms of structure, Pearl pursues teams built to be appropriately lean for the equity commitment size and strategy, with the ability to grow over time as necessary through asset capture and development.

Does Pearl have a geographic, basin, or commodity focus? Pearl's investment strategy is driven by partnering with best-inclass owner-managers. As opposed to a top-down, macro driven approach, Pearl employs a more opportunistic strategy of backing teams who have focused business plans that leverage their demonstrated competitive advantages in a particular geographic area.

Importantly, Pearl does not believe in "stacking" teams on top of one another. We prefer to back one team in a given basin, unless there is meaningful differentiation with respect to strategy, stage of the company's life cycles, or geographic focus within larger basins.

When Pearl backs a management team, we make a commitment to be a true partner and work collaboratively with our portfolio companies to evaluate opportunities, make strategic decisions, and execute investment realizations.



Does Pearl require a client team to have an asset-in-hand to make an investment?

The short answer is no. Pearl's investment philosophy is "management team first." We will continue to make line-of-equity commitments to high-quality teams with differentiated and complementary skillsets and attractive business plans. However, when a team does have an asset-in-hand or a line-of-sight on actionable deal flow, we use it as an opportunity to explore our alignment on valuation and the team's strategy with regard to exploitation and development of specific assets.

We also proactively leverage our internal industry networks to generate additional deal flow for Pearl portfolio companies. Your concluding remarks? We are proud of the progress

we have made in our first year and could not be more excited to be in business with several top tier management teams, all of whom have already begun to capture and develop assets in their target geographies.

Pearl is well-positioned, and is fortunate to have a substantial amount of "dry powder" remaining at an exciting point in the cycle. Our intention is to remain disciplined, to continue to make smart investments and to establish long-term, successful partnerships with best-inclass management teams.

PEARL ENERGY INVESTMENTS

www.pearl-energy.com

"Pearl is well-positioned, and is fortunate to have a substantial amount of 'dry powder' remaining at an exciting point in the cycle."

8

-Chris Aulds, Partner





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- Junior capital: second lien, mezzanine and non-control equity investment capacity
- Energy infrastructure project finance, joint venture financing and equity participation capabilities
- Ability to accommodate long-term investment horizons

Typical Investment Size

- Senior Debt
- Mezzanine Debt \$1
- * Equity
- \$10-\$50 million \$10-\$50 million

\$10-\$250 million

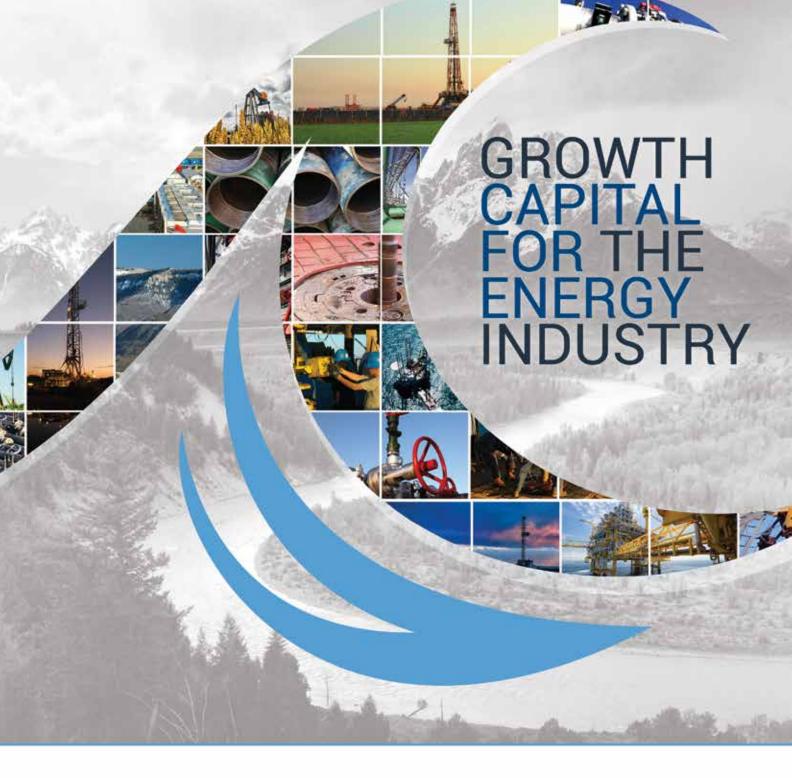
Issuer Benefits

- Single-source financing relationship, which allows for post-closing continuity
- Ability to provide both debt and equity capital in the same transaction
- Broad investment interest allows participation in project, joint venture and structured financings
- Ability to evaluate and structure transactions on either an asset or cash flow basis

Scale and Commitment

- * A team of 12 experienced investment professionals
- Average tenure of investment staff is 15 years
- \$6.3 billion investment portfolio as of 3/31/16
- Committed capital through all market cycles
- Debt and equity appetite in excess of \$1 billion annually

			Private Equity
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Edward Herring Managing Partner



300 Crescent Court, Suite 200 Dallas, TX 75201 Phone: 214.269.1183 info@tailwatercapital.com Jason Downie Managing Partner

Tailwater Capital LLC

ailwater Capital LLC is a highly specialized middle market private equity firm focused exclusively on the energy sector. Edward Herring and Jason Downie, the firm's two managing partners, cofounded Tailwater Capital in 2013 to be the preferred source of private equity capital for oil and gas entrepreneurs. Today, Tailwater manages \$1.7 billion in committed capital deployed across four funds, targeting midstream and nonoperated working interest upstream opportunities.

With a well-established track record consisting of more than 55 transactions in the upstream and midstream sectors worth \$11 billion, Tailwater believes that alignment of interests and a longterm partnership approach are two essential ingredients for creating value.

"Edward and I co-founded Tailwater in January 2013 after focusing on energy investing at a large generalist private equity firm together and have collectively been working together for over 18 years," said Downie.

"We learned that a 'one-size-fits-all' approach to private equity often risks falling short of achieving goals, particularly in the dynamic energy sector. As a result, we take the time to understand what is important to the management team, and structure our investments to address their needs while providing our investors exceptional returns. Aligning interests from the start eliminates friction, makes for a more motivated team and builds value for everyone. That makes Tailwater Capital a preferred source of private equity capital for leading energy entrepreneurs."

The firm's midstream strategy is concentrated on teams with projects for de-bottlenecking areas where production growth is outpacing the existing infrastructure. If operators are expected to continue drilling in an area at prevail-



- Edward Herring, Managing Partner



ing commodity prices, then the chances are high there will be a long-term need for midstream solutions.

On the upstream side, Tailwater prefers to invest in nonoperated working interests. The firm can manage risk by building a diversified portfolio of interests while maintaining investment selectivity and flexibility along the way. "This two-pronged strategy, midstream and upstream, provides our investors with complementary strategies and provides us a strong and sustainable competitive advantage," explained Downie.

Herring described Tailwater's strategy this way: "Some of our best investments have come to us at a very early stage, and we don't want to say 'no' to a good idea just because it doesn't fit a certain template. If a team is in the right basin and their project can generate good economic returns with an interesting value proposition, then we want to look at it.

"Oftentimes we find that if one producer has a problem that's not being met by a large MLP or a service provider, then other producers are probably having the same problem. As a result, what originally looked like a small midstream project can become a large business if you are creative."

By design, Tailwater has a higher concentration limit, meaning it can invest in multiple projects with the same team. Instead of funding six teams with six projects, Tailwater has the ability to cultivate multiple projects behind the same team and feels that flexibility can lead to better returns for investors and management teams.

"With this approach, our teams can be collaborative and not feel like they are competing with Tailwater's other portfolio companies. That's different than other shops, and it improves our ability to establish alignment from the beginning," explained Herring. "We view trust, transparency and partnership as core to all of our deals. ■



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