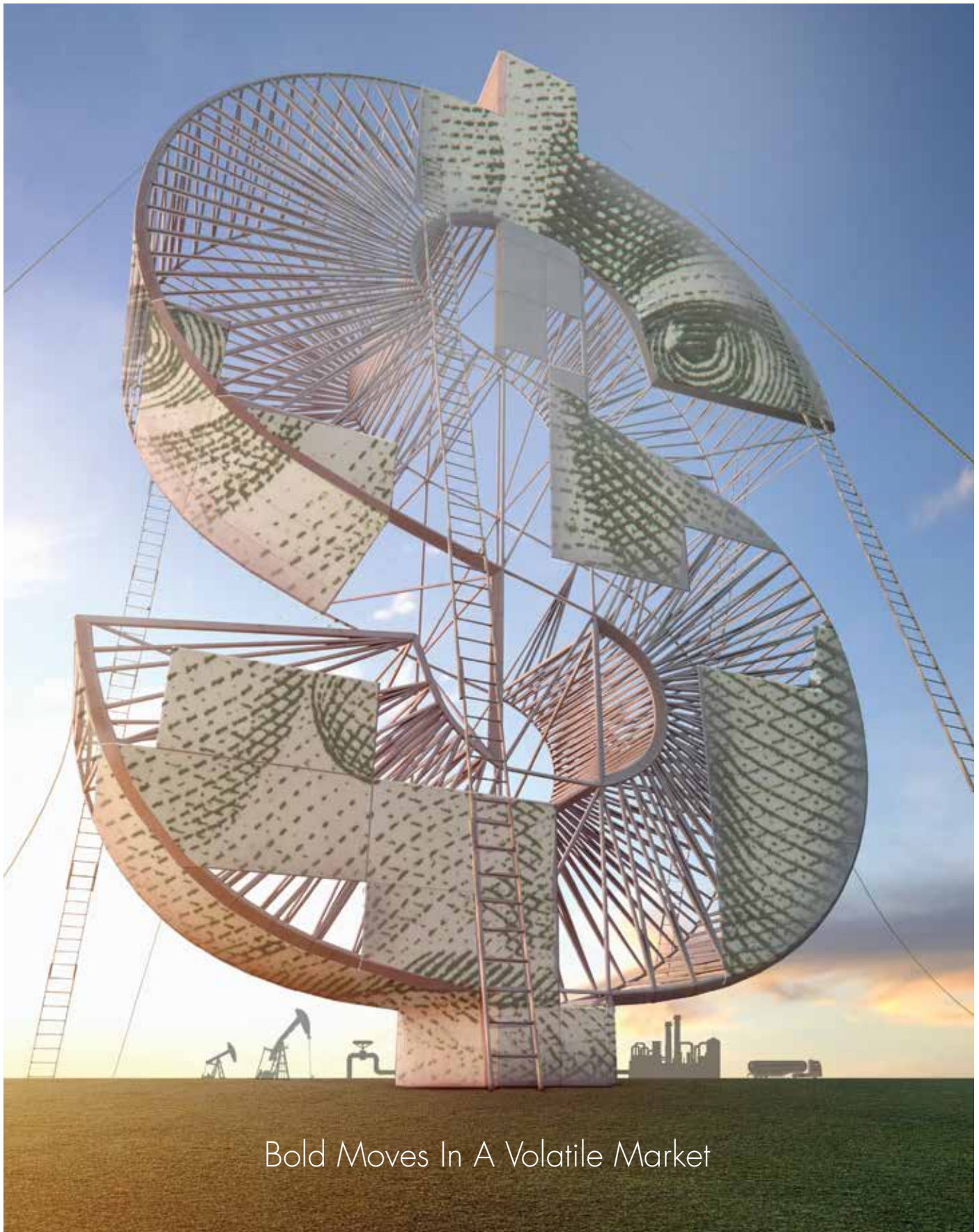


CAPITAL FORMATION 2019



Bold Moves In A Volatile Market

MAY 2019

A Supplement To
Oil and Gas
Investor














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 <p>Divestiture of 50% Ownership Interest in POGBY</p>  <p>\$1,530,000,000</p> <p>Exclusive Advisor</p> <p>Pending</p>	 <p>Advised on the Combination with</p>  <p>\$7,700,000,000</p> <p>Advisor</p> <p>February 2019</p>	 <p>Divestiture of Delaware Basin Water Infrastructure Assets</p>  <p>Up to \$325,000,000</p> <p>Financial Advisor</p> <p>December 2018</p>	 <p>Corporate Simplification</p>  <p>C\$22,730,000,000</p> <p>Financial Advisor</p> <p>December 2018</p>	 <p>Farm-out of Block 2 in Offshore Mexico</p>  <p>Undisclosed</p> <p>Exclusive Financial Advisor</p> <p>October 2018</p>	 <p>Advised on the Combination with</p>  <p>~C\$1,900,000,000</p> <p>Financial Advisor</p> <p>August 2018</p>
 <p>Advised on the Divestiture of Delaware Basin Assets to</p>  <p>\$544,500,000</p> <p>Exclusive Financial Advisor</p> <p>August 2018</p>	 <p>Acquisition of gathering and processing assets in the Delaware Basin as part of a \$1.75 billion transaction</p>  <p>\$250,000,000</p> <p>Exclusive Financial Advisor</p> <p>May 2018</p>	 <p>Advised on the Divestiture of 50% interest in Scarborough gas field to</p>  <p>\$744,000,000</p> <p>Exclusive Financial Advisor</p> <p>March 2018</p>	 <p>Advised on the Divestiture of Eagle Ford Assets to</p>  <p>\$765,000,000</p> <p>Exclusive Financial Advisor</p> <p>March 2018</p>	 <p>Advised on the Divestiture of Lower 48 Mineral Interests to</p>  <p>\$340,000,000</p> <p>Exclusive Financial Advisor</p> <p>November 2017</p>	 <p>Advised Veresen on the Acquisition by</p>  <p>C\$9,400,000,000</p> <p>Exclusive Financial Advisor</p> <p>October 2017</p>

Capital Markets

 <p>Senior Notes</p> <p>\$1,250,000,000</p> <p>Joint Bookrunner</p> <p>March 2019</p>	 <p>Senior Notes</p> <p>\$500,000,000</p> <p>Joint Bookrunner</p> <p>March 2019</p>	 <p>Senior Notes</p> <p>\$500,000,000</p> <p>Joint Bookrunner</p> <p>March 2019</p>	 <p>Senior Notes</p> <p>\$1,000,000,000</p> <p>Joint Bookrunner</p> <p>March 2019</p>	 <p>Senior Notes</p> <p>\$4,000,000,000</p> <p>Joint Bookrunner</p> <p>January 2019</p>	 <p>Senior Notes (Add-On)</p> <p>\$300,000,000</p> <p>Joint Bookrunner</p> <p>October 2018</p>
 <p>Senior Notes</p> <p>\$500,000,000</p> <p>Joint Bookrunner</p> <p>September 2018</p>	 <p>Senior Notes</p> <p>\$1,000,000,000</p> <p>Joint Bookrunner</p> <p>August 2018</p>	 <p>Senior Notes</p> <p>\$750,000,000</p> <p>Joint Bookrunner</p> <p>August 2018</p>	 <p>Senior Notes</p> <p>\$750,000,000</p> <p>Joint Bookrunner</p> <p>August 2018</p>	 <p>Secured Notes</p> <p>\$600,000,000</p> <p>Joint Bookrunner</p> <p>June 2018</p>	 <p>Has sold its shareholding in Canadian Natural Resources Limited</p>  <p>\$3,300,000,000</p> <p>Joint Bookrunner</p> <p>May 2018</p>

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Oil and Gas Investor

1616 S. Voss, Suite 1000
Houston, Texas 77057-2627
713-260-6400
Fax: 713-840-8585
HartEnergy.com

Editor-in-Chief

STEVE TOON
stoon@hartenergy.com

Executive Editor-at-Large

LESLIE HAINES
lhaines@hartenergy.com

Associate Managing Editor

BRANDY FIDLER
bfidler@hartenergy.com

Senior Financial Analyst

CHRIS SHEEHAN, CFA
csheehan@hartenergy.com

Midstream Editor-at-Large

PAUL HART
pdhart@hartenergy.com

Contributing Editors

ELLEN CHANG
GREGORY DL MORRIS

Creative Director

ALEXA SANDERS

Senior Graphic Designer

MAX GUILLORY

Senior Marketing Manager

TAMARA MURPHY
tmurphy@hartenergy.com

Production Manager

SHARON COCHRAN
scochrane@hartenergy.com

Ad Materials Coordinator

CAROL NUNEZ
cnunez@hartenergy.com

For additional copies of this publication,
contact customer service at 713-260-6442.
custserv@hartenergy.com

Vice President, Sales

DARRIN WEST
dwest@hartenergy.com

Director, Business Development

CHANTAL HAGEN
chagen@hartenergy.com

Publisher

KEVIN C. HOLMES
kholmes@hartenergy.com

HART ENERGY

EVENTS | MEDIA | RESEARCH | DATA

Vice President, Editorial Director

PEGGY WILLIAMS

Chief Financial Officer

CHRIS ARNDT

Chief Executive Officer

RICHARD A. EICHLER

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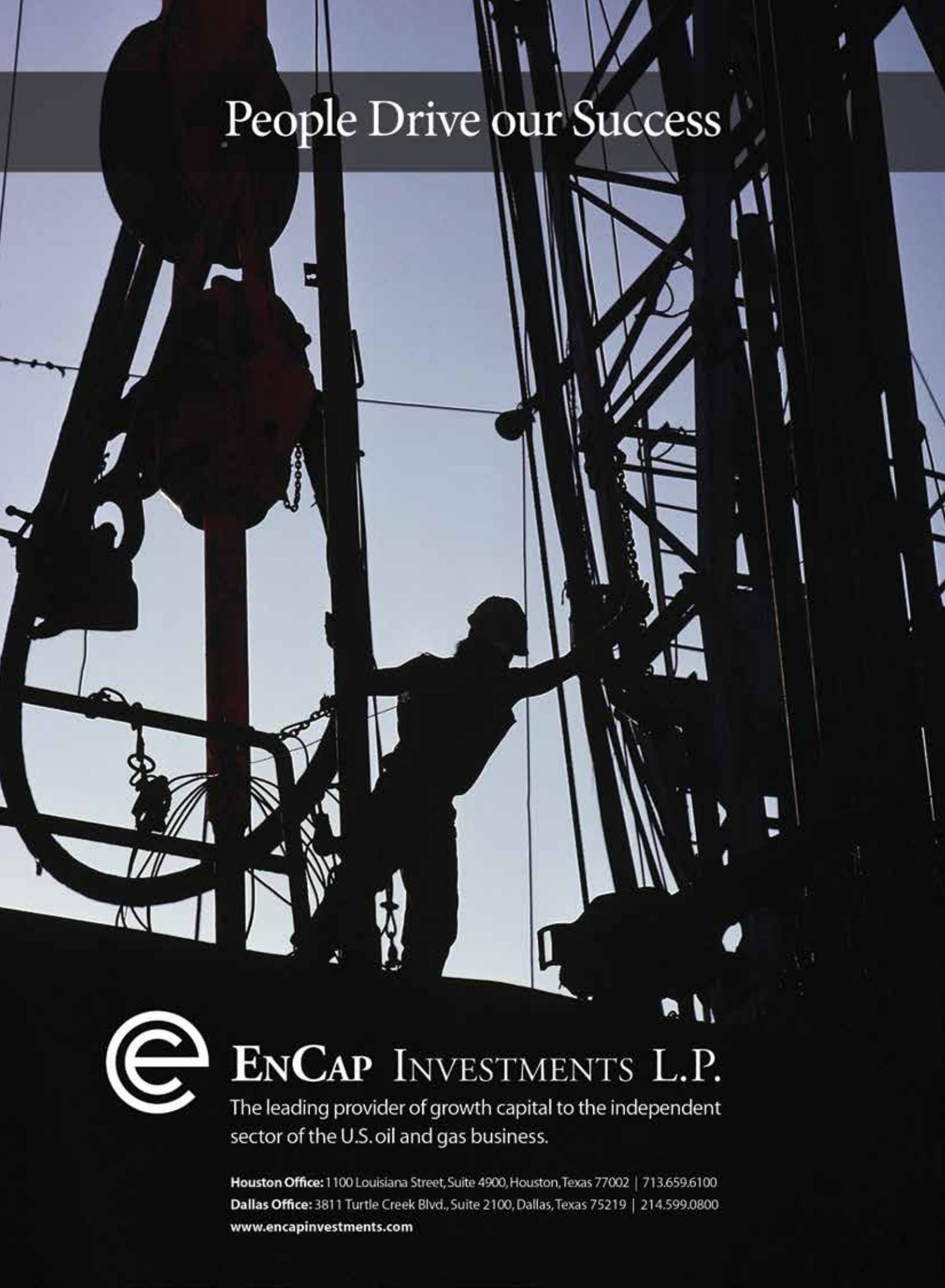
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A high-contrast, black and white silhouette of an oil rig worker. The worker is positioned in the lower center, reaching out towards the complex metal framework of the rig. The rig's structure, including various pipes, valves, and support beams, dominates the background and foreground, creating a dense, industrial scene. The sky is a uniform light gray, providing a stark contrast to the dark silhouette of the worker and the rig.

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TAPPING CAPITAL, OR TAPPING THE BRAKES

It's a given that the quality of the acreage and the quality of the management team still dominates all else in E&P deal-making, so pairing up with the appropriate capital provider and choosing the right financing structure follow from that truism.

But accessing capital today is not as easy as it once was. In every corner of the energy market, from commercial banks to private equity to the IPO scene, people have tapped the brakes.

For one thing, energy capital markets are in flux—some might even say distress. Investors in public markets have pulled back and clamped down on their wallets, demanding returns as well as growth. Equity and fixed income issuance was down significantly in 2018 and early 2019.

In the lower middle market arena, always the sector with the greatest need (but often, the greatest reward), financing a deal can be difficult to do and quite time-consuming. Private equity's cheery tone has changed as hold periods have become longer and exit strategies for portfolio companies are no longer a slam dunk. Even so, Parkman Whaling in Houston has estimated that at least \$30 billion of private equity rests on the sidelines, raised yet not deployed,

based on its survey of some 40 of the most-active PE firms in energy.

In light of these changes, alternative debt providers have stepped up to the plate in a bigger way to help E&P entrepreneurs advance their companies. This is good news for some E&Ps scrambling for capital.

Capital sources serving the lower middle market are alive and well, and indeed, can offer smaller E&P companies and start-ups a source of dollars used to buy and build an asset. Some of the providers of this type of capital admit that although it takes a lot of work to vet and close a deal, the rewards can be great, often yielding above-average returns. If deploying \$20 million, for example, it is easier to imagine closing a sale on those assets later on for \$100 million, for a good return, than it is to deploy \$200

million and imagine a large pay day later on.

In every case, patience and flexibility is the order of the day, and will remain so until commodity prices break to a higher level, which could re-establish greater confidence in capital sources and the E&P companies they serve.

—**Leslie Haines**, *Executive Editor-at-Large*



FURTHER INFORMATION

Since our last Capital Formation supplement in June 2018, we have also published these articles, which can be found at Hartenergy.com:

"Deal Flow Dilemma"

Why private equity exits have become a challenge. Aug. 2018

"High Yield Holds Its Ground"

Investment bankers discuss this form of capital. Aug. 2018

"Energy IPOs Continue Backlog"

Equity investors have grown wary. Nov. 2018

"Could Mezzanine Be Re-Emerging?"

Some mezzanine providers weigh in. Jan. 2019

"Small, Strategic Capital"

Three firms are profiled that serve small, or undercapitalized, teams. Jan. 2019

"Volatile But Range Bound"

Financiers comment on public capital deals and availability. March 2019



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CAPITAL MARKETS NEWS

In case you missed it

PREQIN SURVEY

Unlisted global natural resource assets under management have grown tremendously from \$175 billion at the end of 2009 to \$668 billion as of June 2018 (latest data available), according to **Preqin**, the research and data firm. It currently tracks over 1,100 fund managers in the space and over 3,800 active investors.

Energy dominates the industry, accounting for \$89 billion of the \$93 billion raised in 2018. This leaves room for other natural resource assets (metals and mining, water, timberland, agriculture and farmland) to grow, the firm said.

In November 2018, Preqin surveyed 400 investors as to their thoughts on 2019 and various asset classes. Most agreed that equity markets were at high levels and due for a correction, which did occur in the fourth quarter. They also said that since the outlook for the natural resources industry in 2019 is largely positive, they were ready to place capital with fund managers when attractive opportunities arise.

Some 88% of surveyed investors said they planned to increase or maintain their allocation to this asset class, a larger proportion than at the end of 2018.

"In private equity, high absolute and risk-adjusted returns are the priorities for investors ... and for hedge funds and natural resources, the primary motivations are diversification and low correlation with other asset classes," Preqin said.

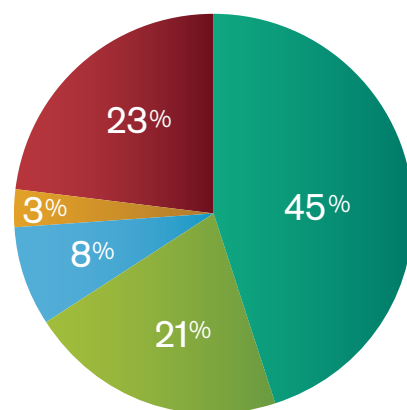
"Where an asset class had outperformed their expectations in recent years, most investors told us they



were looking to increase their allocations in 2019. Even for the asset classes that have demonstrated sub-par performance—namely natural resources and hedge funds—investors are still planning to increase their allocations in 2019."

Preqin said developed markets such as the U.S. will continue to dominate natural resources fundraising over 2019: 39% of investors plan to invest exclusively in developed markets and 20% will "predominantly employ this approach,

What will be the biggest impact of commodity price volatility at the end of 2018?



- 45% Inability to exit oil and gas investments through divestiture, merger or IPO
- 23% Consolidation in the oil and gas industry
- 21% Lack of access to capital for producers
- 8% No lasting impact
- 3% More oil and gas bankruptcies

Source: Haynes and Boone Spring 2019 Survey

but may also look for some exposure to emerging markets."

PRIVATE-EQUITY NEWS

In March, **Red Wolf Natural Resources LLC**, a newly formed exploration and production company in Oklahoma City, said it has partnered with **Pearl Energy Investments**, Houston, a private oil and gas investment firm with \$1.2 billion of assets under management. Red Wolf will pursue upstream development and acquisitions in the Midcontinent and select Rockies basins. Drew Deaton is CEO and Jeff Dahlberg is COO. They were recently active in the Denver-Julesburg and Anadarko basins, having previously worked together at Ward Energy Partners LLC.

Cavalcade Midstream LLC has been formed as a full-service midstream company, receiving a total equity commitment of \$150 million from **Pearl Energy Investments**, **Old Ironsides Energy** and **NGP**. Based in San Antonio, Cavalcade will provide tailored midstream solutions through greenfield development and strategic M&A, initially in the Permian Basin. Its three founding partners are Rich Reynolds, Hunter Thunell and Ross Dillon, who previously worked together at NuStar Energy LP.

In October 2018, Skip McGee's **Intrepid Financial Partners** hired an acquisitions and divestitures team based in Houston, led by Antonio (Tony) Fernandez, managing director. He was previously a senior A&D banker at J.P. Morgan, where he led numerous A&D projects across most major U.S. unconventional plays. Prior to that, he was at Jefferies. Robert Willis and Stevenson Bunn also joined, both coming from Apache Corp. The newly formed group sits within Intrepid's advisory business and

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GSO Capital Partners LP, the credit platform of Blackstone, has formed **Sequel Energy Group II LLC**, a private, Denver based oil and gas company. GSO and the current management team, led by industry veterans Doug York, Jeff Hemphill and Dave Kornder, formed Sequel Energy Group LLC in November 2016 with an initial capital commitment in excess of \$500 million. Over the past two years, Sequel I has successfully deployed this capital in four separate drilling joint venture transactions. Consistent with its current strategy, Sequel II will target structured investments in nonoperated oil and gas working interests in proven resource plays throughout North America. The additional \$500 million capital commitment from funds managed by GSO and the founding members of Sequel will bring combined committed capital to the Sequel platform to over \$1 billion.

Talara Capital Management LLC announced an equity infusion of \$75 million to form **Crescent Pass Energy LLC**, Spring, Texas, to pursue horizontal development primarily in the Cotton Valley in northeast Texas and northern Louisiana.

EnCap Investments LP provided an initial commitment of \$400 million to Fort Worth-based **Flat Creek Resources LLC**. Flat Creek's management team includes professionals with diverse industry experience at several companies including Black Mountain Oil & Gas and XTO Energy. Key members of the team include CEO Mike McCracken, CFO Chandler Quisenberry, vice president of geology

Rebecca Harrington, and vice president of land Mike Gregory. **EnCap Flatrock Midstream** has funded **Clear Creek Midstream LLC**, Houston, with a \$300 million commitment. Greenfield projects and acquisitions are on tap, led by founder and CEO Rick van Eyk.

Blackstone Energy Partners LP formed **Waterfield Midstream** for Permian Basin activity, with an initial commitment of \$500 million. It will develop greenfield facilities and acquire water infrastructure in the Permian, led by co-CEOs Scott Mitchell and Mark Cahill, formerly with Western Gas Partners.

In September, **Flywheel Energy LLC** received an equity commitment of \$700 million from the **Kayne Private Energy Income Funds** platform and members of Flywheel management. This was Kayne's second partnership with the Flywheel management team, following its original investment in 2017 (originally as Valorem Energy LLC). Concurrently, Flywheel acquired Southwestern Energy Co.'s natural gas properties and affiliated midstream business in the Fayetteville Shale for \$1.865 billion. The deal included 716 MMcf/d of net production from 4,033 producing wells across over 900,000 net acres. Flywheel's CEO is Justin Pope.

Cameron O. Smith has left his advisory role at Warburg Pincus in New York to create **Cosco Consulting LLC**. The latter will coordinate between SPACs that have raised funds and are looking for acquisitions with PIPEs (private investment in public equity), via an arrangement with full-service investment bank **Craig-Hallum Capital Group LLC**, based in Minneapolis.

Carnelian Energy Capital Management LP, Houston, pro-

moted Preston Powell to managing director and Matt Kelly to vice president. Powell joined Carnelian in 2015, most recently responsible for sourcing investments, transaction due diligence and execution and monitoring of active portfolio companies. Previously he was with Denham Capital Partners and the energy group of KKR & Co.

In November, Carnelian made equity commitments to **SandPoint Resources LLC** and **Veritas Permian II LLC**. Veritas, based in Midland and helmed by CEO Erik Hansen, will pursue opportunities in select domestic onshore basins, with an initial focus on non-operated Permian Basin assets. The Veritas team has a strong track record of value creation in the acreage acquisition space, most recently having built a large position in the core of the Midland Basin that led to a sale to Parsley Energy. The SandPoint team, helmed by CEO Hollis Sullivan, is based out of San Antonio and will look to capitalize on its A&D history in South Texas, mainly in the Eagle Ford.

Catena Resources LLC, San Antonio, closed an equity commitment from **Carnelian Energy Capital II LP**, a fund managed by **Carnelian Energy Capital Management LP**, Houston.





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Catena was co-founded by Jason Edwards and Vince Smith to pursue an A&D strategy in select unconventional resource plays across North America. Edwards and Smith bring a proven track record to Catena, having most recently worked together as key members at Forge Energy LLC prior to its sale to Oasis Petroleum Inc.

NEW PARTNERS

Haynes and Boone has promoted 11 attorneys to partner. In the Houston office, in energy, these included Austin Elam, Sameer Saxena and Katy Shurin. Elam chairs the oil and gas practice group and maintains a broad transactional energy practice with an emphasis on com-



plex upstream and midstream oil and gas transactions. Saxena is a member of the firm's energy, capital markets and securities, and M&A, practice groups and he concentrates on representing energy companies in a wide range of corporate transactions. Shurin is a member of the energy, power and natural resources practice and represents financial institutions, commodities trading companies, energy marketers, project developers and other energy companies. ■


For further information:

See HartEnergy.com and HartEnergy.com/sourcebook.

PRIVATE RAISES

No.	Company	Amount (\$MM)	Comments
1	Quantum Energy Partners	5750	Held its final closing of its latest fund, Quantum Energy Partners VII .
2	Blackstone Group LP	4500	The Wall Street Journal reported that the largest global private-equity firm by assets was planning in 2018 to hold a first close on more than half the \$4.5 billion it is seeking to raise for a third energy fund.
3	EnCap Flatrock Midstream	3250	Closed EnCap Flatrock Midstream Fund IV LP well above \$3-billion target, reaching its hard cap within six months. Total institutional capital commitments are nearly \$9 billion from a group of more than 300 investors spanning four funds.
4	Lime Rock	1400	Private equity investors in E&P and O&G closed Lime Rock Partners VIII LP , and an affiliated co-investment, at \$688 million in aggregate commitments. Including the June 2018 closing of Lime Rock Partners IV AF LP at \$1.9 billion, with \$741 million of new capital commitments, Lime Rock held a final close on \$1.4 billion in new capital commitments in 2018.
5	Tailwater Capital LLC	900	Closed Tailwater Energy Fund III at its hard cap and raised a \$100 million co-investment, bringing total commitments to \$1 billion. The fund will focus on acquiring and growing midstream assets and participate in nonoperated upstream opportunities.
6	Juniper Capital III LP	677.5	Closed Juniper Capital III LP fund at hard cap. The fund targets lower middle-market equity investments in private oil and gas companies located in the continental U.S.
7	Kimmeridge Energy Management Co.	650	Closed Kimmeridge Energy Fund IV at hard cap. The fund will support acquisition and development of unconventional assets in top-tier U.S. basins.
8	Scout Energy Partners	500	Closed Scout Energy Fund IV at its \$500 million hard cap.
9	Grey Rock Energy Partners	233	Closed Grey Rock Energy Fund III , which was oversubscribed. The entire Fund III was raised through institutions.
10	Black Bay Energy Capital LLC	224	Closed inaugural fund Black Bay Energy LP , exceeding its \$200-million target. Black Bay's investors include endowments, foundations, private pensions, fund of funds and family offices.
11	Rice Investment Group	200	Formed by principals behind Rice Energy Inc. to run a multi-strategy fund.
12	VIA Energy Opportunity III-A	30	Venture Investment Associates , a private-equity fund manager, closed a new energy fund targeting high-quality, stranded oil and gas assets. Investors include endowments, foundations and family offices.

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A photograph of an oil field at sunset. Several pumpjacks are visible, silhouetted against a bright, hazy sky with a low sun. The scene is bathed in the warm, golden light of the setting or rising sun.

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PRIVATE-EQUITY INVESTMENTS STALLING

The caution flag is out in what one provider calls a “super challenging” environment.

By Ellen Chang

Some private-equity investors are sitting on the sidelines when it comes to upstream investments as returns remain lukewarm and uncertainty about commodity prices tempers their enthusiasm.

Investors remained cautious when oil prices were volatile in second-half 2018, after hitting a high of \$75 a barrel (bbl), but dipping to a low of \$45/bbl on fears of global oversupply. Technology advancements such as enhanced completions, improved operations and better hydraulic fracturing applications have resulted in the resurgence of U.S. oil production.

“Some investors are waiting for prices to stabilize or drop further before making larger or long-term investments,” said Evan Turner, managing partner of Drillcore Energy Partners, a New York-based private-equity firm that was launched in 2017. It

targets oil and gas investments in unconventional shale plays in North America.

Some investors have opted to provide equity commitments, growth equity or creative drilling capital to upstream companies that are already in their portfolio, or that have an existing business with producing assets, rather than to a start-up E&P seeking assets, he said. Private-equity firms are shying away from bringing on new management teams at the moment.

Some management teams who are starting over after successful exits have chosen to switch from their original private-equity sponsor to a larger, more upstream-focused sponsor. For example, Massif Oil & Gas I LLC was a portfolio company of private-equity firm Castlelake LP, but in November 2018, Massif II was funded by Natural



"An inhospitable climate for exits is a problem."

Jonathan Farber,
Co-founder and a
managing director,
Lime Rock Partners

Gas Partners, Turner said. Massif focuses on the Powder River Basin.

Subpar returns for private-equity firms create an environment which is "super challenging," said Jonathan Farber, co-founder and a managing director of Lime Rock Partners, a Westport, Conn., private-equity firm. It has raised \$8.9 billion in private-equity funds and affiliated co-investment vehicles since 1998.

Drilling has shifted geographically in the U.S. In 2011, there were 219 U.S. counties which had drilling rigs running on them, he said. Today just half of the same counties are being actively drilled.

"The shale plays have such an incredible economic advantage relative to conventional drilling and geographically, the business is far more concentrated," Farber said. "That's pretty significant. Unless you're in one of those anointed places, it's really difficult to generate good returns."

Exits which are attractively valued are "hard to come by" and in the vast majority of conventional production, companies cannot find buyers, he said. "If a deal can be done, it's very basement-type pricing," Farber said.

The public markets have lost confidence in the energy sector. The hiatus has stretched to the IPO market; in the past two years, there have not been any exploration and production IPOs.

Public markets have typically led investors out of a slowdown in the past, but public investors are "extra skeptical that these companies can generate value," he said. Public market investors want exposure to better portfolio companies, but under the current market environment, it does not appear to be on the horizon.

Instead, investors remain wary of the claims made by the management teams of many E&P companies and want them to spend within their current cash flow, Farber said. "This has created an inhospitable environment in terms of exits for the companies," he said. "The public market simply isn't there and the private market is very selective."

Outside the fairway

Many private upstream operators are still seeking a combination of acquisition and development capital, but are not reaching their goals, Drillcore's Turner said.

"Often they are just outside of the target fairway of where most investors are willing or advised by outsource technical firms to go into, even though the operators often have producing properties with proven methods of capital realization from their own pockets," he said.

As a result, private-equity firms such as Drillcore Energy Partners have looked to take advantage of pipeline constraints in certain areas, such as West Texas in the Permian Basin, as well as oilfield services and equipment manufacturing companies. This strategy is more typical of generalist investors or industrial-focused private-equity sponsors or investment managers.

"We have even looked at some technology applications for big data in the energy sector as a secondary, opportunistic focus area that can be leveraged to enhance upstream operations," Turner said.

The overall outlook for the private-equity market for both private-equity firms and E&Ps seeking investments is "not great unless you are willing to actually fund and build and operate a company longer term," said Mark Tharp, managing director and group head of Dallas-based Orix Energy Capital. "The lack of liquidity will test all PE firms." Orix invests private-equity and debt in upstream and midstream companies in the U.S. and Canada.

Deal size varies

The typical deal size for an upstream company is \$50- to \$500 million for Orix, which only invests in companies or assets that have existing cash flow, while Lime Rock prefers investing \$50- to \$150 million per deal, but will fund up to \$600 million if it's a co-investment.

"Sometimes we will raise capital for specific deals, and we're not afraid to look at larger deals if the opportunity brings us there," Farber said.

Drillcore Energy Partners is an emerging manager and is in the fundraising process on select deals as an independent sponsor outside of a formal committed fund.

"We have gotten to the deal table on a number of select opportunities, including upstream-focused opportunities with existing production that are seeking acquisition and development capital through a variety of growth equity and creative financing structures, including in the Permian Basin (both Delaware and Midland basins), East Texas, Eagle Ford, Haynes-

ville, Powder River Basin and the D-J Basin,” said Turner.

The firm is also in discussions with its LP base and co-sponsors on a few different opportunities where Drillcore has exclusivity to ideas that are “truly off-market.”

“We look forward to getting to the finish line with them soon,” he said. “We ideally are seeking control-oriented opportunities where we can roll up our sleeves and apply our technical backgrounds in partnership with management teams, but we have been open to co-investments from a non-control perspective where we have some board presence.”

Lime Rock invested \$100 million in 2007 in CrownRock LP, a Midland, Texas-based oil and gas producer, through Lime Rock Partners IV LP. In June 2018, Lime Rock Partners raised a \$1.9 billion fund to purchase CrownRock LP, giving the company a valuation of \$5 billion.

“CrownRock has built a nearly 100,000-acre land position that is now producing more than 50,000 barrels of oil equivalent per day,” Farber said.

In December 2017, Lime Rock sold GEO-Dynamics Inc., a Millsap, Texas-based provider of oil and gas perforation systems and downhole tools in support of completion, intervention, wireline and well abandonment operations, to publicly held Oil States International Inc.

The deal was profitable and “generated an extremely successful return,” he said. “It’s harder to make money in oilfield services because much of the business has become highly commoditized and there is very little pricing leverage.”

The last three exits for Orix Energy Capital were all “great” since they were vintage deals from the 2015 to 2016 period when “very few people were putting capital to work,” Tharp said. “It was the heart of the downturn.”

Challenges facing PE

The ideal target threshold for Drillcore Energy Partners has not existed since the market has remained volatile the past few years, Turner said. “While the market has stabilized, you still have a price disconnect with what buyers are willing to pay and what sellers want for their company or a specific asset in their portfolio,” he said. “As such, you have a number of PE firms and their portfolio companies in a waiting pattern.”

Investors and companies do not want to buy conventional production assets, Lime Rock’s Farber said. “The private market is extra weak,” he said.

As the difficulties with exits continue in the current environment, PE firms and their portfolio companies are adopting other strategies.

Lime Rock’s strategy shifted five years ago to holding businesses longer and investing in various geographic regions instead of focusing on one state or basin, a concept “which has served us very well,” he said.

Back in 2010, the firm made a bet that the shale revolution was going to be “really profound in terms of long-term implications and we began focusing on that area,” Farber said. The private-equity firm began focusing on buying and developing positions in core shale acreage areas, which remains its focal point today.

While Lime Rock was offered good pricing for its initial E&P investments, it was still not the full price, so the firm came to the conclusion that a hold and drill strategy would be more profitable longer term, he said.

The firm also started adopting a strategy of acquiring mineral rights.



“Good portfolio managers should never bend the veracity of their underwriting standards.”

Mark Tharp,
Managing director,
Orix Energy Capital

Drillcore Energy Partners remains cautious on two fronts: about both the correct investment to make initially, and how to exit it at the right time and for the right multiple.

“As prices have been volatile due to supply and demand adjustments, we have been looking for the right oil and gas management team to partner with so we can buy producing assets or invest in a producing property alongside that team,” Turner said. “This would allow us to achieve a minimum target three times MOIC [multiple on invested capital] for our investments, underwritten at \$50 oil and \$2.50 gas.”

Another strategy the firm is considering is to look at pairing producing assets that may not be the main part of a larger company’s overall portfolio, that could be paired with a management team operating a nearby asset, or one that’s looking to expand or acquire an asset while also seeking acquisition and development capital.



"Drillcore Energy Partners remains cautious about the correct investment to make initially and how to exit it at the right time for the right multiple."

Evan Turner,
Managing director,
Drillcore Energy Partners

Midstream, mineral deals add spice

While oil prices remain range bound in the \$50s, private-equity firms are conducting deals in other parts of the sector. Orix, for one, conducts both midstream and mineral acquisition deals. "Our portfolio is made up of a diverse set of asset investments including midstream and, to a lesser extent, minerals," Tharp said.

Lime Rock does not invest in stand-alone midstream businesses, but will invest in midstream assets as part of building an E&P business in a given area, Farber said. However, Lime Rock has invested more money as a percentage of its funds in mineral rights than many other private-equity firms, he said.

A recent survey by Parkman Whaling of 40 private-equity providers indicated that fundraising remains a challenge because of such negative investor sentiment toward energy. Despite these current market conditions, this is a great environment to deploy non-bank loans on a secured basis with 8% to 13% cash-on-cash returns possible, Tharp said.

"I invest off the Orix balance sheet today, but I am considering third-party institutional capital," he said.

If the LPs are typically becoming more cautious, some firms might adopt more stringent underwriting criteria and a higher cost of capital for upstream start-ups. This sentiment does not apply to Orix though, because "good portfolio managers should never bend the veracity of their underwriting standards," Tharp said. "We certainly do not at Orix Energy Capital."

Drillinginfo Inc. said recently in a report that private-equity providers have throttled back on funding new E&Ps because exit strategies have been so tough recently. Additional private-equity firms are pulling funding to form teams without projects or assets to manage as a result, Tharp said.

The private-equity model appears to be changing—the old build-and-flip model is not a slam dunk anymore.

While it is unknown whether this is a temporary phenomenon or a really long-term sea change, the "ability for a PE firm and their management teams needs to focus on full-cycle returns that ultimately lead to free-cash-flow generation," Tharp said.

In recent years, it appears easier to build and sell a midstream entity than an E&P.

"For the very lucky few that can pull it off, that is true, but I am ultimately more bullish on the high-quality E&P names that have blue chip sponsors and superior operational and execution teams," Tharp said.

Adjustments are needed on the midstream side since the prior strategy of purchasing older pipeline infrastructure and renovating it was profitable, but today most of those opportunities have already been captured, Farber said.

Private-equity firms were able to generate a profit using that strategy in the past because they were operating in a low interest rate environment and capitalized at a low yield. As interest rates are expected to continue rising, the valuation arbitrage is not as obvious, he said.

The outlook

The near-term future depends on the results of the borrowing base redeterminations and oil and gas supply and demand imbalances that may affect the remainder of 2019, Turner said. "I believe you may see an improved outlook in the second half of the year."

What are the best opportunities for 2019 and into 2020 for private-equity providers and E&P companies? The continued divestiture of assets from mid-cap and large-cap companies and majors is a source of opportunity for private equity as the industry focuses on only the core basins with the lowest-cost breakevens, Farber said.

"This would create a lot of opportunity for lean PE-backed operating teams that understand how best to truly optimize costs and operations," he said. "And, midstream is not dead and so, there will be opportunities to invest in networks, pipelines and other assets," he added. "However, it will be harder to make money in that space now than in the past five years."

The global economy relies heavily on the use of crude oil and its products despite advancements in renewables and the electric vehicle industry, and will likely remain that way for the next three decades. "The world is using a lot of oil and will continue to use a lot of oil," Farber said. ■



\$2,500,000,000

Senior Secured Credit Facility

December 2018



\$1,000,000,000

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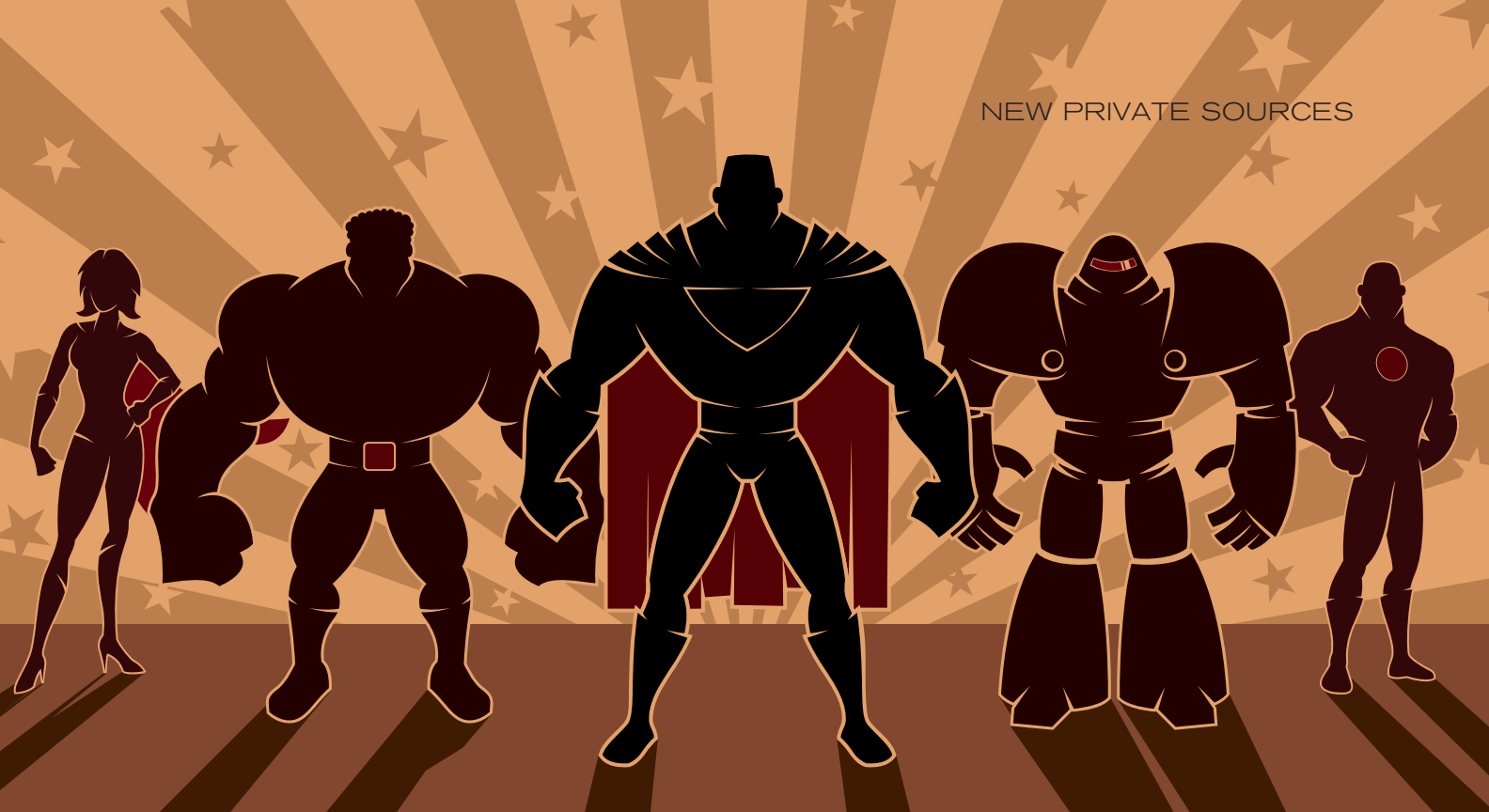
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RESCUE CAPITAL

With RBL lenders and public money fearing energy investments, a new force of private capital avengers is swooping in to rescue oil and gas operators.

By Steve Toon

As E&Ps adapt to a new environment born out of the downturn, so too must capital providers.

As the shale plays matured and operators ramped production, the resulting collapse in oil prices greatly grieved banks exposed to the volatility, causing many to flee the space, and government regulation to constrain those that remain. Likewise, public market investors—exasperated with shale producers’ recycling of all capital back into the ground with no return on investment—have pulled out of the sector for healthier returns elsewhere.

This flight of capital has created a giant sucking sound for operators seeking financial sustenance. The thing about that is, the need for oil and gas investment hasn’t gone away.

That opportunity is not lost on shrewd investors with knowledge of the space. As we know, a vacuum is soon filled, and astute private investors are stepping in to fill the void. Several such providers were featured at IPAA’s Private Capital Conference in Houston in January, and we profile a handful of those here.

The new bank

“Unitranche” is a term that has entered the lexicon for oil and gas players turning over rocks for capital. Simply, a unitranche replaces a bank loan and subordinate loans with a single senior-lien debt instrument having a blended rate. Madava Financial excels at this strategy.

“Traditional lenders are retreating from energy lending due to increased regulatory requirements and recent loan underperformance,” said Mark Green, president of Madava, while “significant ongoing capital” will be required to restructure the middle-market E&P industry and fund the next stages of M&A and development activities.

Madava, based in Houston, was formed in 2017 by Robb Turner, former senior partner with ArcLight Capital Partners, to provide capital alternatives to oil and gas producers via direct lending. In doing so, he identified what he believed to be a big dislocation in the energy capital markets.

The premise: More than \$300 billion of existing public and private debt is maturing in the next seven years, while \$76 billion has been reclassified



"The idea is to try and take the spot that banks used to try and stretch into. We believe there is a large and unique opportunity for 'non-bank banks' to finance the next wave of energy capital needs."

Mark Green,
President,
Madava Financial

since 2016 per new Office of the Comptroller of the Currency (OCC) lending regulations. Much of this will need new, non-bank financing.

Green, formerly with Wells Fargo, has seen this side play out first hand. Bank capital is becoming more difficult to access due to the 2016 OCC guidelines that "really narrowed the fairway," he noted, in terms of what the banks could do.

"The idea is to try and take the spot that banks used to stretch into. We believe there is a large and unique opportunity for 'non-bank banks' to finance the next wave of energy capital needs."

He calls it the "barbell effect." Senior-secured borrowing base facilities exist to fund one end of the capital structure barbell, and mezzanine and private-equity balance the other end—with unitranche in the middle. "The unitranche market, we've decided, is an underserved space. We view it as being wide open."

And in the current environment, unregulated capital is preferred, he noted. "The benefit we see is the quantity of debt that we can do, but also the ability to have a covenant package that is a little bit more flexible that doesn't have a six-month gun to your head as with banks."

Madava funds deals at \$200 million and below. A typical unitranche lending facility might advance 70% to 100% of PDP at PV-10 at Libor plus 500 to 800 basis points. All deals are hedged, "so hopefully we're taking the commodity risk out of it."

Customizing structures

Computer giant Michael Dell might have made his fortune in technology, but his private investment arm includes oil and gas as part of its strategy. MSD Partners LP was formed in 2009, an arm of MSD Capital with some \$15 billion under management, and has deployed more than \$1 billion in energy markets in the past three years.

The nature of the capital provides great optionality when it comes to investment choices.

"We have long-term and flexible capital," said Scott Segal, managing director of MSD Partners. "That means we aren't constrained in the ways others are constrained. We're not subject to rules-based investing. We aren't constrained by a specific leverage level. We can do vertical drilling plans and horizontal drilling plans. We can be broad in terms of the basins that we invest in."

Segal emphasized the fund does not take a one-size-fits-all approach to investments. Rather, the principals get to know the management team and the unique needs and constraints of their businesses.

"We look at every situation based on the merits of the situation. It's not based on a black box," Segal said.

Austin-based MSD considers upstream investments in both E&P and oilfield services, as well as midstream and power.

"We have the flexibility to do revolvers," Segal said. "We can do first-lien and delayed-draw capacity as an efficient way to drive growth capital. We've done second liens to supplement RBL financing. Clearly, my toolbox is very broad, and that is helpful in crafting solutions that work for management teams."

"My toolbox is very broad, and that is helpful in crafting solutions that work for management teams."

Scott Segal,
Managing director,
MSD Partners

Deal size might range from \$25- to \$500 million-plus, he said, and vary across all capital structures—no regulatory lending requirements affect the terms. Value assessment is situation specific, and the duration is flexible. "We were founded under the premise that we could be real long-term partners for businesses. And we have no layers of bureaucracy."

Examples of customized financing structures include:

Example 1: An E&P with a low-decline base targeted a new reservoir, but underperformed in the months after the acquisition, resulting in covenant violations. Bank lenders wanted an exit, and the company needed additional financing

to pursue low-risk drilling opportunities. MSD provided capital by purchasing debt from an existing bank lender, funding additional debt and investing in equity.

Example 2: A leveraged E&P was in need of additional financing to invest in production. MSD purchased an overriding royalty interest in the entire field and agreed to re-convey the asset once a stated return had been met. The solution provided the borrower flexibility—in a high commodity price environment the interest would be reconveyed quickly, and in a low commodity price environment the cash-flow requirements would be lower.

Example 3: An E&P with a mature production base needed financing for an acquisition but the reserve-based lending option was not available. MSD provided a first-lien term loan with delayed-draw capacity, providing firepower to continue acquiring other PDP assets. The term loan allowed the business to achieve sufficient scale and track record to ultimately access bank financing.

Example 4: A producer needed capital to fund an acreage acquisition, but existing equity was sensitive to dilution and debt couldn't finance the entire deal. The solution involved a combination of second-lien debt and convertible-preferred equity, and by providing delayed-draw capacity as part of the second lien, the company was able to access development capital.

Segal said, “We try to keep things pretty simple. Ultimately, we’re looking to help build a business with appropriate financing.”

“We have very, very flexible capital across a variety of different dimensions, the size of transactions, the nature of our capital base, the approach we have, how we look at each situation and our ability to think differently in terms of duration.”

Equity partners

Also a family office, PinHigh Capital Partners' investment criteria reads similarly to MSD's, but the key difference is in deal size. A typical deal will range between \$1- and \$10 million, but could go as high as \$50 million.

Another difference: Equity investments are preferred over debt, but not exclusively.

“We have complete flexibility,” said PinHigh partner Charlie Thompson. “We like to think of ourselves as disciplined value investors. We love cash flow and really don't like debt. We measure leverage through the cycle—we all know three times leverage at \$70 (WTI) gets ugly at \$40.”

PinHigh, based in Houston, was established two years ago with the mindset to invest in transactions that are too small for the private-





"The people we back are probably the most important consideration we evaluate. A not-so-good person can screw up a good idea, while a good person can make a sound but not unique idea work successfully."

Charlie Thompson,
Partner,
PinHigh Capital Partners

equity world. The group, including Steve Lindley and Farris Shenaq, places capital in E&P, oilfield services and downstream services and equipment. Favored regions include the Permian, Oklahoma, the Gulf Coast and Rockies.

Like the mantra in private-equity circles, the quality of the management team is the first filter PinHigh uses in evaluating an investment. Being able to clearly articulate a prior success is an advantage.

"The people we back are probably the most important consideration we evaluate," said Thompson. "A not-so-good person can screw up a good idea, while a good person can make a sound but not unique idea work successfully."

Alignment in the investment is a close second in priority.

"We like pure alignment. We're investing our own money and that of family and friends, and we want our partners to be in the same situation.

"We see a lot of groups looking to go off on their own, with a slight adjustment in salary and getting a lot of equity upside. We like a more rigorous alignment, as we don't feel management is really hurt if things don't work out, and we bear the brunt of the risk."

That said, PinHigh is aggressive in controlling investments or minority interests with strong governance rights. "We do control investments as well as minority deals," he said. "We will take direct working interests in assets if we have to."

PinHigh targets hold times of three to five years, but Thompson noted they have the flexibility to hold for longer if necessary.

Canaan Resource Partners Drilling Fund LP, under Oklahoma City-based Canaan Resource Partners, was formed in 2015 with the mission to fund development drilling in domestic,

onshore shale plays. The fund has made deal commitments exceeding \$800 million over the past two years, according to Johnnie Penton, Canaan general partner.

A typical deal size is \$3- to \$4 million per well, he said, and the investment can be cherry-picked: Canaan will invest in one well at a time, or a project. Its website touts a "compelling level of capital commitments available for deployment in an immediate time frame for projects at both modest and significant investment levels."

The fund can invest quickly, as decisions are based on a proprietary, data-driven predictive model.

"Our investment theme would be that shale plays began to become predictive under probabilistic modeling, and there will never be enough capital to complete the drilling," Penton said. "We can show up in real time and pay for drilling costs this afternoon on a deal you call us with this morning, without a bank or a board to seek permission from. And no debt; it's all equity."

Canaan is indifferent to oil or gas, he said, however, "we hedge 100% of all future production. We don't take price risk."



"Our investment theme would be that shale plays began to become predictive under probabilistic modeling, and there will never be enough capital to complete the drilling."

Johnnie Penton,
General partner,
Canaan Resource Partners

Independents will never have enough capital to drill out the leasehold that they have, he surmised. Of the top operators in the shale plays, Each of the top operators in the shale plays has 10 to 20 years of inventory, "so I'm not certain anyone needs more leases or more inventory to drill."

As a result of this inventory glut, the opportunity to provide capital will thrive for the next five to 10 years, he believes, or until consolidation occurs or majors take over the shale plays.

"Independents will forever be whipsawed by commodity price events," Penton said. "Desires to live within cash budget forecasts are what drive our deal flow." ■



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NEW CAPITAL VOYAGES

If willing to leave the harbor, a variety of credit solutions for upstream and midstream players lies beyond the horizon.

By Leslie Haines

Are you looking to advance your net asset value via development drilling, make an acquisition or need to refinance some existing debt? These credit providers demonstrated their capabilities when speaking at Hart Energy's Energy Capital Conference in Dallas in March.

The size of the private debt market continues to expand globally and the energy sector is frequently one of the industries it serves, with many customized, flexible solutions to choose: holdco notes, senior notes, preferreds, delayed draw loans, warrants and more. In some ways, a standard revolving credit or reserve-based loan seems almost passé.

"The holdco really took off in 2016 and it's an elegant solution. It's secured by the equity of the operating company itself, not at the operating or asset level, and doesn't share collateral with

the first lien that a bank has. It's pretty friendly to the E&P company," said panelist Jeff Bartlett, managing director, HPS Investment Partners.

Damon Putman, managing director, Angelo Gordon & Co., summed it up well for each of the speakers when he said, "We start where the banks stop and we end where private equity starts."

Indeed, there has been a sea change in the energy lending industry, Bartlett said. "I've never seen a time when our capital has been so needed. We used to be 'niche-y' but now we are not," he said, citing the tightening of commercial banks, which do not stretch as much as they used to. "Banks have a totally different appetite," which has opened up huge opportunities for the various "non-bank banks."

Today energy banks have rationalized how they view the world after suffering in the 2014-2017 downturn. "The [federal regulatory changes and

tightening] have thrown everything into turmoil,” Putman said. They basically want to fund only bigger, better, safer oil and gas entities and have less interest in second-lien deals, he explained.



“We start where the banks stop and we end where private equity starts.”

Damon Putman,
Managing director,
Angelo Gordon & Co.

Panelist Shalin Patel, research director for Blackgold Capital Management, agreed. He gave the example of an E&P company which last year acquired Eagle Ford assets from Pioneer Natural Resources. “Back in the day, this would have been funded by a senior revolver, but this time around, it was done with a second-lien term loan [by a non-bank bank].”

Flexibility reigns

Angelo Gordon manages \$32 billion in assets across a global footprint, providing credit solutions in real estate and energy. In the energy sector, which it entered in 2013, it will do second-lien loans, Drillco structures and “a lot of other possibilities,” Putman said. About 75% of its deals have been in the upstream space, although the



“If a company doesn’t have a quick exit, we can help them drill up their asset.”

Jeff Bartlett,
Managing director,
HPS Investment Partners

team does have expertise in, and do, midstream and oilfield services, he added. The energy team consists of 15 professionals who collectively have closed over 400 transactions in their careers.

Typical deal size ranges from \$50 million to “several hundred million.” It will partner with other capital providers, including investing alongside private-equity players.

Putman said at first Angelo Gordon avoided deals in the busy Permian Basin because “so much money was moving into that basin, we couldn’t get our heads around the risk-return.” But subsequently it has become more comfortable with the Permian and participated in some deals there in 2018.

It has closed over 20 financings in the past couple years. Of note, it led \$600 million of structured notes for Transocean Ltd., for the latter to build an ultra-deepwater drillship, which was the first of its kind for an offshore-construction-related deal. It also participated in a term loan for Liberty Oilfield Services.

For Appalachian player Rex Energy in early 2017, Angelo Gordon provided a delayed-draw term loan of \$300 million, bringing in two partners to help fund the deal. Rex’s bank group was in place but could not advance any more capital at the time.

“You draw down what you need as you need it. Every deal is unique and we try to tailor a solution for you,” he said.

There has been an increasing demand for Drillcos, noted Blackgold’s Patel. This is especially true as E&Ps need to drill out their acreage to a greater degree than in previous years rather than “flipping” it to a buyer on a tight time line.

Bigger is better

“We like to invest with larger companies that have a larger balance sheet, or that are more likely to use data analytics, or have access to lower service costs,” said Bartlett. “HPS does privately negotiated senior-secured loans, mezzanine and leveraged syndicated loans, and we do lot of business alongside private equity.”

HPS has the heft required to service energy. Founded in 2007, it has invested about \$17 billion in public credit and \$30 billion in private credit, serving the energy, power and real estate industries. With 129 investment professionals and 11 offices worldwide, it has an energy-focused office in New York, Houston and a small origination office in Dallas.

Since 2008 it has invested \$7.3 billion in energy, two thirds in the upstream and a third in midstream, with a small allocation to power. About a third is in the form of senior or reserve-based loans and the rest comprises structured solutions such as mezzanine and Drillcos—anything other than a standard RBL.

The typical deal minimum is \$50 million, but the firm will go up to \$750 million, with the “sweet spot” of \$50- to \$500 million. “If a company doesn’t have a quick exit, we can help them drill up their asset.”



Transitioning with the times

Blackgold Capital Management started in 2006 as a secondary credit player, investing in high-yield bonds and leveraged loans at a discount, but as energy has transitioned over the last decade, “We have also transitioned, allowing us to invest in term loans, club deals, distressed investments and we participated in preferred equity. We went from public to semi-private style investing,” said Patel.

The shift occurred in 2015, as Blackgold began to originate its own deals and provide acquisition financing, overrides and VPPs (volumetric production payments) and development capital in the form of term loans.

“We have a good assessment of where price risk is, we are active in public and private, and we do some midstream. We do focus on cash-flowing assets; we usually come in after the acreage has been leased up.”

Deal size ranges from \$50 million to \$300 million, or the company can team up with others for larger deals. One of Blackgold’s recent deals was to provide acquisition financing for a post-private-equity team that was buying a royalty package in the Northeast. It also has pro-

vided project financing for a frack sand plant in the Permian.



“We have transitioned, allowing us to invest in term loans, club deals, distressed investments and we participated in preferred equity. We went from public to semi-private style investing.”

Shalin Patel,
Research director,
Blackgold Capital Management

Patel said high yield is of no interest to the market unless a company is rated double B or higher, although that form of capital would be less expensive than some of the solutions offered by members of this panel. ■

Step Out. Take Control of Your Future.



L-R: Lotus Midstream CEO & Founding Partner Mike Prince, CFO Pete Gvazdauskas, COO & Founding Partner Jen Fontenot and CCO & Founding Partner Emily Baker.

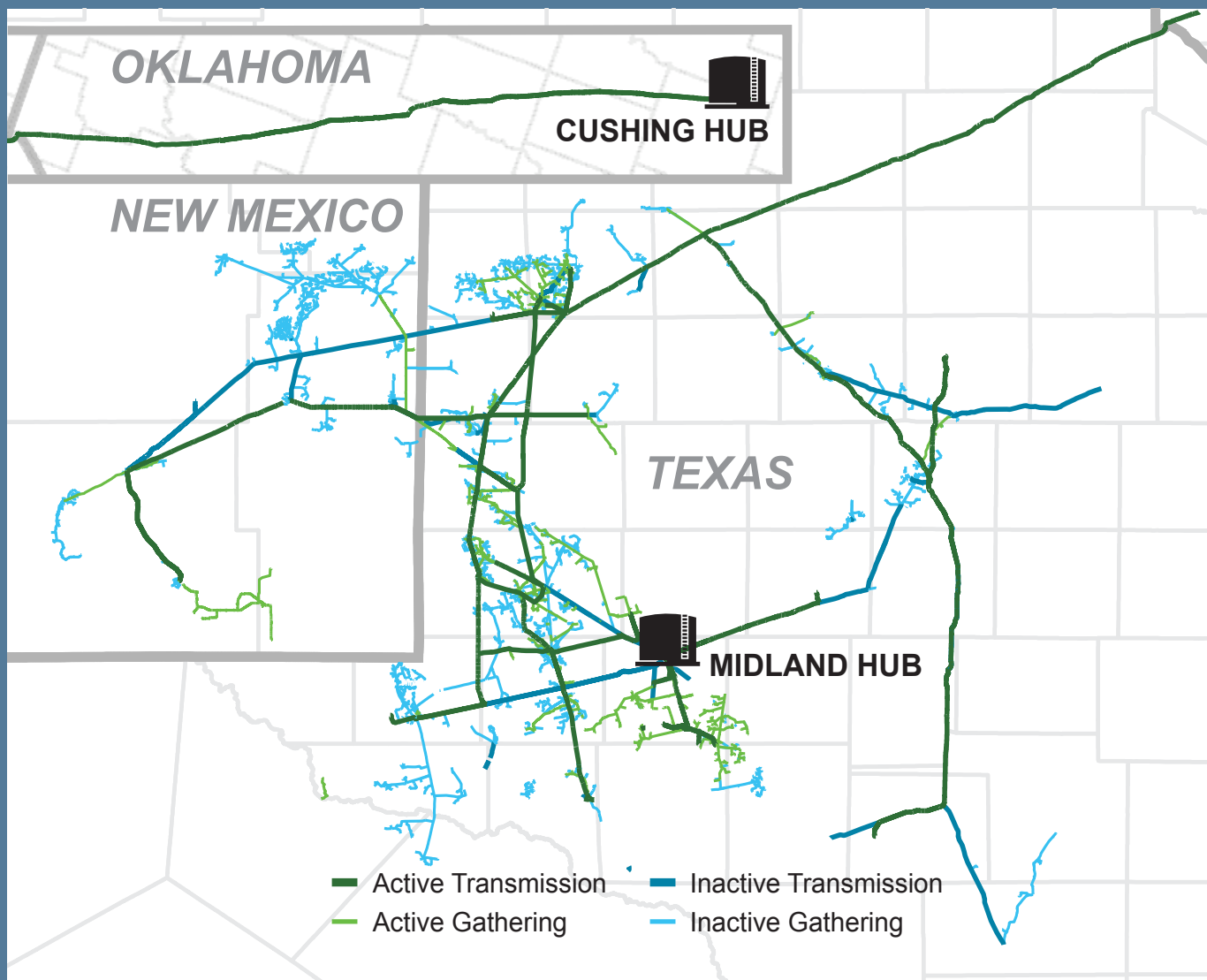
The Lotus Midstream Story.

EnCap Flatrock Midstream backed Lotus Midstream in February 2018 with an initial commitment of \$400 million. Six short months later and with our support, Lotus acquired the Centurion Pipeline System in a bundled \$2.6 billion deal with Occidental Petroleum that included Moda Midstream's acquisition of the Ingleside Energy Center. Two months later, Lotus entered into a joint venture with ExxonMobil and Plains All American to build the Wink to Webster pipeline to transport crude oil and condensate from the Permian Basin to Texas Gulf Coast markets.

Right People. Right Place. Right Capital.

A seasoned team with a successful track record, Lotus' three founders worked together for five years as key members of the business development team at Sunoco Logistics (now Energy Transfer). Recognized leaders in crude oil logistics, they saw an opportunity in the Permian and seized on it by developing a business plan and stepping out on their own to form Lotus.

Lotus had the right people and the right target. They turned to us for capital. "EnCap Flatrock is the best in the business—an experienced, strategic investor with an outstanding 11-year record of success and a vision that is aligned with ours," says Lotus CEO and Founder Mike Prince.



Centurion Pipeline System

Executing the Plan.

As we continue to work with the Lotus team, the company's assets have grown right alongside our commitment. The Centurion system is one of the largest gathering systems covering all major basins in the Permian with connectivity to Cushing and all major pipelines serving Houston, Nederland and Corpus Christi markets. It is also a future origin point for the Wink to Webster Pipeline. The future looks bright. Expansions to the Centurion footprint are underway and Lotus is bringing on new customers.



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BILLION-DOLLAR BABIES: MIDSTREAM RATES BIG BUCKS

A welter of large private-equity deals are going on in both hydrocarbons and water.

By Gregory DL Morris

Two big transactions in one week in the middle of March highlighted the size and scope of capital commitment in the North American midstream sector. In the larger and most recent, at press time, Equitrans Midstream Corp. paid \$1.03 billion for controlling stakes in two pipeline systems in Ohio and West Virginia from a fund managed by Morgan Stanley. Just five days earlier, TPG Capital acquired Goodnight Midstream LLC from Tailwater Capital LLC for \$930 million.

The two bookend deals clearly demonstrated that big coin was being committed not only for hydrocarbon gathering and processing in a legacy region, and also for the newest midstream segment—produced water management and disposal. Those large price tags show that capital investors are actively seeking size, scale, flexibility and a strong foundation of volume or acreage commitments.

“If you go with conventional wisdom,” said one source, “like dropping just another gathering and processing system into the Delaware Basin, sure, that makes sense. But at best, that is going to be

efficiently priced already. At worst, it is going to be bid up.”

Other deals so far this year underscore that philosophy. KKR got the year rolling by forming a Canadian midstream venture with SemGroup Corp. in January to combine the company’s existing Canadian operations with those of Meritage Midstream, which the joint venture (JV) bought in February from Riverstone for half a billion dollars. Blending the SemCAMS and Meritage businesses created a large midstream system in the core of the Alberta Montney.

In late February, Five Point Energy doubled down on its three-pipe JV with Matador Resources Co. in the northern Delaware Basin. The pair created San Mateo Midstream II (SMII), which, like its predecessor, will provide gas gathering and processing, crude gathering, and produced water gathering and disposal. Five Point and Matador own 49% and 51% of the JV, respectively. SMII will be operated by the existing San Mateo I team, and as was done with SMI, will actively seek third-party shippers.

In the Equitrans deal, its EQM Midstream Partners LP bought a 60% stake in Eureka Midstream Holdings and all of Hornet Midstream Holdings. Eureka is a 190-mile gathering header system in Ohio and West Virginia that connects both dry Utica and wet Marcellus production. Hornet is a 15-mile, high-pressure gathering system in West Virginia that connects to the Eureka system.

Coming of age

The TPG Capital deal was something of a coming-of-age moment for water midstream. “We started investigating water about five years ago,” said Chris Ortega, a partner at TPG Capital. “At the time, we could not find opportunities that had critical mass. It was mostly trucks running to saltwater disposal [SWD] wells. But we at TPG are thematic investors, certainly within energy. We saw the macro trends. The Permian is producing about 3 million barrels a day of oil and about 12 million barrels per day of water. We believe those ratios are only going to continue.”

TPG has more than \$103 billion of assets under management across a wide range of asset classes, including private equity, growth venture, real estate, credit and public equity. Existing shareholders, including management, will retain a significant minority interest in Goodnight.



“We are open-minded about acquisitions, but the attraction for us in Goodnight was the quality of the existing assets, contracts and team.”

*Chris Ortega,
Partner,
TPG Capital*

With additional growth equity and proceeds from committed debt financing, the company will have access to more than \$300 million of capital to fund continued expansion. The focus for growth will be organic, rather than acquisition, which follows naturally because the genesis of the deal was organic. Ortega and other TPG Capital energy managers had personal and professional connections to Goodnight and Tailwater managers through common investments.

Goodnight already has a network of more than 420 miles of dedicated produced water gathering

and transportation pipelines and more than 50 SWD wells. Goodnight gathers, transports and disposes of more than 350,000 barrels per day (bbl/d) of produced water from more than 800,000 dedicated gross acres. It is permitted for more than 1.4 MMbbl/d of disposal in the Permian, Bakken and Eagle Ford.

“We are open-minded about acquisitions, but the attraction for us in Goodnight was the quality of the existing assets, contracts and team. We really like our lie.” While acknowledging that an important growth driver in water midstream as an emerging segment has been independent producers divesting their operations, Ortega stressed great potential with bigger producers.

Farther down the road, Ortega sees the potential for water as a commodity in its own right, but for now he sees its role as the essential enabler of that production optimization. “There is some reuse for fracking, and we will facilitate that when your customers are interested. For now the focus is on moving large volumes of produced water to safe disposal and being careful that reinjection does not impinge on production.”

Ortega also lauded the Goodnight management team, led by CEO Patrick Walker.

The market is focused on big, robust, and flexible [operators] within upstream and hydrocarbon midstream as well. “For 10 or 20 years, we have seen private equity staking small producers. What is the differentiation, the competitive advantage of one more small operator now? What investors want now is quality and scale. When producers were delineating their first 100,000 acres in the Permian, they just needed connection. Now they are optimizing the entire shale sector. They need scale and quality.”

Both the TPG and KKR deals show that big private-equity shops are committed to the midstream. Brandon Freiman, partner and head of North American infrastructure at KKR, said, “We have been an active investor in Canadian energy for the last decade and are big believers in the Montney as a growing, low-cost gas play that is relevant on a global scale.”

KKR has invested about \$1 billion of equity during the past three years to build out gathering and processing infrastructure in the Montney through Veresen Midstream. Other KKR midstream investments include a sale-leaseback of offshore oil and gas infrastructure assets with Pemex in the Gulf of Mexico; a midstream JV with El Paso Corp. in the Uinta, Marcellus and Eagle Ford; a recent partnership with Williams to acquire \$1.2 billion of midstream assets in the Colorado D-J Basin; and a 23% interest in the

Colonial Pipeline Co., the largest refined products pipeline in North America.

Water has not been part of the mix, but that may change before too long. “We are spending time on water,” said Freiman. “We have not done anything in water midstream yet, but we have been involved in two of the three major municipal water public-private partnerships. We’re active in water, and we’re active in the midstream, so the intersection of the two just makes sense.”

Canadian potential

What made the most sense for the Montney moves was the outlook for Canadian gas. “Western Canada is producing 16 Bcf per day of gas,” Freiman noted. “While production is only growing modestly overall, that is the net result of significant growth from the Montney as legacy production declines. The bulk of the gas is still moved to the U.S. on TransCanada. Transport to the U.S. is sufficient today, but transport out of the congested areas in the Montney has been a constraint, which should be relieved in the next few years. And all of this is expected to change once the LNG projects off the west coast come on next decade.”

The Meritage deal brings in about 195 million cubic feet per day (MMcf/d) of gas processing, 101 miles of gas gathering pipelines, 38 miles of oil gathering pipelines and 18 miles of emulsion and gas lift pipelines (Patterson Creek facilities) in the liquids-rich Montney play. Additionally, a 200-MMcf/d gas processing expansion is currently under construction and expected to be in service by third-quarter 2019.

Development at Meritage is underpinned by a combination of area dedications and contracted minimum volume commitments with industry-leading producers. In addition, active drilling continues across these plays, and there is a significant inventory of drilled but uncompleted wells.

SemCAMS now has about 900 MMcf/d of gas processing between the existing SemCAMS and Meritage facilities. The Wapiti Plant came into service at the end of January 2019. The Smoke Lake Plant and Pipestone Pipeline are on track for completion later this year.

Total gas processing capacity will increase to 1.3 Bcf/d when all the projects are complete. Down the road are a proposed 280-MMcf/d Pipestone sour gas plant, 100,000-bbl/d Montney-to-market liquids pipeline and potential expansions at the Patterson Creek facility.

“Meritage and SemCAMS got into the Montney early,” Freiman explained. “As the play grew, production shifted to an area where SemGroup was well-positioned to capture the growth. We



“We have been an active investor in Canadian energy for the last decade and are big believers in the Montney as a growing, low-cost gas play that is relevant on a global scale.”

Brandon Freiman,
Partner and head of North
American infrastructure,
KKR

and Sem were both seeking opportunities in the area, and the two systems fit perfectly. A local investment bank introduced us.”

Meritage was the first of what is likely to be a roll-up strategy. “The purpose of SemCAMS was not just to buy Meritage,” said Freiman. “We have a shared vision of building a broader Canadian midstream enterprise, especially in the southern or Alberta Montney. There will be other opportunities. This is a very active, but fragmented area.”

SemGroup contributed the shares and assets of its Canadian subsidiary, SemCAMS, valued at C\$1.15 billion (US\$860 million), for C\$615 million (US\$460 million) in cash and 51% common equity in the JV. KKR contributed C\$515 million (US\$385 million) in cash for 49% of the common equity. KKR further contributed C\$300 million (US\$224 million) to acquire perpetual preferred equity. In addition, the JV established a C\$800 million (US\$598 million) underwritten bank credit facility.

Integrated approach to midstream

Funding for the San Mateo II venture is \$125 million from Five Point and \$25 million from Matador. The implied value of the San Mateo I assets and the associated gathering, processing and disposal agreements with Matador was about \$500 million at closing, including performance incentives. Funding for the SMI included an initial cash consideration of \$176.4 million by Five Point along with co-investors, with a subsidiary of Matador contributing the midstream assets.

The SMI parties have also committed to spend up to an additional \$150 million in aggregate to expand the JV’s midstream operations and asset base. In total, Matador has contributed

PHOTO COURTESY SAN MATEO MIDSTREAM



San Mateo Midstream handles gathering, processing and produced-water disposal in Eddy County, N.M., and Loving County, Texas.

\$358.5 million in total assets and cash to the JV. On its fourth-quarter conference call, Matador commented that it believes its 51% share in San Mateo I is worth at least \$500 million.

As the anchor customer on SMII, Matador has dedicated, under 15-year, fixed fee contracts, approximately 25,500 acres in northern Eddy County, N.M., as well as southern Eddy County near the Texas state line. SMII has already begun development and construction on a 200-million-cubic-feet-per-day gas processing plant and associated infrastructure, as well as crude gathering and produced water gathering and disposal infrastructure. The areas dedicated to SMII are some of the most prolific regions within the Delaware Basin.



"As long as you have the right team in place with the right expertise, then investment can proceed."

Karl Kuchel,
CEO,

Macquarie Infrastructure Partners

Five Point has been among the most active private-equity firms in treating oil, gas and water as all part of an integrated approach to midstream investing and development. Joseph Wm. Foran, chairman and CEO of Matador, seems to share the same perspective. In announcing SMII he did not differentiate. "San Mateo's ability to offer

midstream services across all three production streams—crude oil, natural gas and water—makes it one of the important midstream companies in the northern Delaware Basin. Five Point's financial and operational expertise has accelerated and heightened this success."

San Mateo II initially plans to build a cryogenic gas processing plant with up to 200 MMcf/d inlet capacity in Eddy County near SMI's existing Black River 260-MMcf/d processing complex. The new plant is expected to be operational in mid-2020. In addition to Matador, major customers on the SMI systems include Marathon and at least two other large producers.

SMII will also develop at least two produced water disposal wells and related commercial produced water disposal facilities, one each in the northern and southern production areas. Together they are expected to have as much as 80,000 bbl/d of water disposal capacity.

Further, there will be related crude, gas and produced water gathering infrastructure across the SMII area. That will include a large-diameter gas trunk line through the core of the northern Delaware Basin to connect the northern and southern tracts to the new processing plant.

Five Point's strategy is to acquire and develop in-basin assets and provide growth capital in the Permian Basin, Eagle Ford, Midcontinent and Rockies. Based in Houston, Five Point Energy manages more than \$2.5 billion of capital across multiple investment funds.

With the San Mateo model proven, Five Point is eager to ride the wave. "If Matador were to continue to add acres to commit, we absolutely would continue with SMIII and so on," said David N. Capobianco, CEO and managing partner. "The key is to have an anchor customer

and then add third-parties. That is where the real efficiency starts.” As with SMI, the infrastructure of SMII will cross the holdings of many producers (including more than 30 active drilling rigs).

“Given the large wells coming on in the Delaware, it makes no sense for a producer to build midstream to handle its peak production of oil, gas or water,” Capobianco explained. “The dense exploitation in the basin means it makes the most sense to use the same infrastructure across multiple producers. The backbones of our pipeline systems and processing plants are built to handle the peaks; we connect our customers to those backbones through a spider web of gathering lines.”

The ideal scenario for midstream would be “rolling peak production” from different producers. But Capobianco acknowledged “that happens sometimes, but less often than you would think.” Even with the best of intentions, and scheduling and communication among shippers and midstream operators, “the geophysical structures and depths determine the volumes of gas, oil and water. And those ratios are very different across the various formations and regions.”

A golden age

Whether discussing hydrocarbons or water, Capobianco believes that the industry will look back on this time as a golden age of midstream. “We have a unique set of circumstances coming together. There is a very constructive commodity market with oil in the mid-50s [\$ /bbl] and gas in the high twos [\$ /Mcf] and at the same time a substantially dislocated capital market. That is forcing E&P companies to live within their cash flow. There are some that are foregoing wells with internal rates of return of 40%, 50%, even 60%. They just don’t have the luxury of owning midstream assets, and especially not water.”

Ironically, “if commodity prices were to move higher,” Capobianco added, “that would mean more capital available to the upstream sector, which could deteriorate the opportunity set for the midstream.”

In September 2018, Macquarie Infrastructure Partners (MIP) committed up to \$500 million to Lagoon Water Solutions to support additional growth in the Stack, Scoop and other plays. Initial investment capital was focused on expanding Lagoon’s current assets to support existing long-term contracts secured with Anadarko Basin producers covering more than 200,000 acres. That gave Lagoon more than 350,000 bbl/d of water disposal capacity across 17 facilities and more than 150 miles of water gathering pipeline by the end of 2018.



“Given the large wells coming on in the Delaware, it makes no sense for a producer to build midstream to handle its peak production of oil, gas or water.”

David N. Capobianco,
CEO and managing partner,
Five Point Energy


MIP’s investment in Lagoon is not dissimilar to its other investments, said Karl Kuchel, CEO. In this case “we had a relationship with the founders of the business. When they were looking for a partner to provide expertise and capital to take the business to the next level, we were the one. Lagoon is primarily focused on the Anadarko and is investing in pipeline infrastructure for the safe and efficient disposal of produced water, replacing traditional trucking disposal.”

As much as the midstream sector has embraced the idea of three pipes in a ditch, there remains a fundamental difference for at least the near term because water is viewed as a byproduct as opposed to a true commodity like oil and gas. “There will be more and more opportunities to invest in water midstream,” said Kuchel. “That said, market participants will look at what investment model is most appropriate on a case-by-case basis. There are multiple discussions on what is the best model for produced water. The answer will depend on what the customer wants and if the economics make sense for all parties.”

The first clear step is to convert volumes carried by trucks to pipeline. “It is just like gathering and processing, but for water. If there can be dedicated acreage or wells, then building a water pipeline disposal system can make sense. There may also be investment opportunities to buy systems already built by producers. Again, same as G&P. This involves a discussion of whether the assets are core to the producer or not.”

Circling back to the idea of three pipes in a ditch, Kuchel noted that water midstream can be bundled, but does not have to be.

“It really depends on the experience and risk appetite of the infrastructure investor and being able to put a skilled management team in place. As long as you have the right team in place with the right expertise, then investment can proceed.” ■



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MEET ME IN THE MIDDLE

These capital providers believe in investing equity or debt in the lower middle market.

By Chris Sheehan, CFA

Capital sources serving the lower middle market are alive and well, attendees heard at Hart Energy's recent Energy Capital Conference in Dallas. In many cases they provide financing for projects overlooked by others—and these potentially earn above average returns. These capital sources can range from providing \$100 million or more on the high side, down to just a few million dollars on the low side.

These sponsors provided insights on how lower and middle market E&Ps can access energy capital:

- Juniper Capital LP, Houston: Funding from \$30 million up to \$100 million; equity generally staged-in over time.
- Vortus Investment Advisors LLC, Fort Worth, Texas: Funding from \$25 million up to \$100 million; \$50- to \$75 million is the “sweet spot.”
- Energy Trust Partners LP, Dallas: Latest five fund investments averaged \$40- to \$45 million, but can go higher/lower, e.g., down to \$25 million or, working with co-investors, up to \$100 million.
- Production Lending LLC, Houston: Specialty finance lender providing lines

of credit mainly from \$1 million up to \$10 million, for acquisitions or development drilling.

According to managing partner Edward Geiser, Juniper Capital has raised two funds: Juniper Capital II, which closed in October 2016 with commitments of \$500 million; and Juniper Capital III, which closed in February 2018 with commitments of \$677.5 million. The 13-member Juniper team has “skin in the game,” he noted, with more than \$65 million in general partner (GP) contributions to the two funds.

The Juniper funds are focused on upstream, onshore operations. If funding is to support an asset acquisition, the investment is typically predicated on further development of the asset. This should include an ability to demonstrate its production potential and the likelihood of a possible sale to a larger operator, typically a public company or larger private-equity-backed portfolio company, he said.

“We focus on the smaller end of the market because it is easier,” said Geiser. “It’s easier to get a meaningful and scalable position if you don’t have to put together 100,000 acres to make it meaningful to your fund size. If you can get a good

quality 15,000 to 25,000 acres and deploy \$50- or \$75 million of equity, it's easier to envisage a sale at \$150- to \$250 million, which would be a great multiple."

By contrast, he said, "If you're trying to deploy \$500 million per project, you would need to get an enormous acreage base. You would need to execute on a bigger drilling program, and ultimately your universe of buyers to generate that same multiple would be much smaller."

Geiser offered key criteria for those seeking capital. These included: a track record of successful execution in projects in which the GP has experience; building a "team that has a cohesive set of skills" in geology, land, drilling; and a tendency to be "realistic" and avoid using "overly optimistic type curves," recognizing that a base case is more likely to "get the deal over the finish line."



"In the smaller end of the market, it's easier to get a scalable position."

*Edward Geiser,
Managing partner,
Juniper Capital LP*

Partners in the Juniper team began working together more than 18 years ago, according to Geiser. The team includes professionals with expertise in engineering, finance, geology, hedging/trading and legal affairs.

Geiser pointed to the importance of an in-house technical team "so we can speak the same language with our operators. We truly do view it as a partnership; it's not a one-way street with us." While Juniper may provide input on type curves and maps, "we understand the teams that we work with are the experts, doing the work on a day-to-day basis. But we also want it to be a true partnership."

A funnel of opportunities

Vortus Investments is similarly focused on upstream onshore operations. According to managing partner and co-founder Brian Crumley, Vortus employs an "asset-focused investment strategy," in which it partners with operators who have existing assets held by "serial entrepreneurs." The latter "roll their equity" alongside Vortus, which primarily provides the development capital.

Vortus' focus on the lower middle market reflects its desire "to minimize capital competition" and to provide "development capital alongside its operators to change the character of the assets," said Crumley. By going to the "most underfunded transaction environment that is the most undervalued," he observed, "we're trying to maximize the funnel of opportunities, while maximizing the breadth of exit opportunities."

Assets under management by Vortus total about \$1 billion. Simply stated, he said, "We're looking for low-cost operators and control of our capital. The number one risk we're taking is execution and operational risk. And we can 'diligence' that risk by partnering with a low-cost operator that has a track record of success in those areas."

"When partnering with owner-operators, we have an identified asset, and that provides a physical path to value creation," Crumley continued. "We work a lot before we actually close the investment. We have a development plan that is stapled to our partnership agreement, so we're in agreement on how we're going to create value with the asset and on the capital commitment that we're providing. And that will also help us understand when it's the right time to exit."

The quality of the asset is, as an investment characteristic, hard to overstate, noted Crumley. "We really want the assets to drive the returns. Having investment characteristics in place, and not deviating from them, also helps us to invest on a repeatable basis through the cycles," he noted. After all, "the same rock characteristics exist whether oil is at \$100 or at \$30 or \$40 per barrel."

Vortus is looking for "private-equity-type returns," offered Crumley. "We're not looking for yield. We're reinvesting all the capital. You have to find an asset in the right time of its life cycle. That's what I meant earlier when I said changing the character of the asset," he elaborated. Vortus may "come back to the same management teams" considered earlier, looking for "the right risk-adjusted return," he said.

Since its founding in 2002, Energy Trust Partners has made 32 investments from funds serving the lower middle market, according to partner Chris Sears, CFA. The firm is now on its fifth fund, ETP Fund V, which closed in June 2018 with about \$370 million in commitments. As of early March 2019, ETP Fund V was roughly 60% committed, having made five investments.

From its inception, Energy Trust's philosophy has been to have a "lower middle market niche focus," said Sears. Not only is the lower middle market the "area of greatest need for equity capital," but it also represents the area of "highest inefficiency for capital allocation," he observed.

Typical firms in which it has invested may have two to five principals and a dozen employees.

Sears identified a couple of key factors for Energy Trust in its approach to the current market. One is applying modern technology, such as horizontal drilling and hydraulic fracturing, in areas known to have long-standing oil and gas reservoirs. Another is: “How much does it cost us to access the upside?”

Teams backed by Energy Trust are “finding niche plays in larger resources,” said Sears, citing operations in southeast New Mexico, western Oklahoma and the Eastern Shelf of the Permian Basin in West Texas. “We’re typically not paying lease bonuses that are more than a couple hundred dollars per acre across our entire portfolio of management teams,” he said.

As an example, Sears pointed to activity on the Eastern Shelf, where an Energy Trust portfolio company has invested with local operators and now has a scalable position with encouraging results. “It’s an exciting opportunity. We’ve drilled a couple of wells with very nice results, at 5,500 foot depths, and AFEs [authorization for expenditure] that are digestible. That’s what I call a niche play. And we have up to 30,000 gross acres now.”

In addition, Sears cited recent acquisitions that—but for recent weakness in the A&D market—would have been “too expensive for us to execute on.” The acquisitions involved “some pretty nice value buys” in the oil windows of the Eagle Ford and Utica plays. Undeveloped acreage in the Eagle Ford was purchased for a “couple of hundred dollars per acre,” he said.

In terms of working with prospective portfolio companies, Sears emphasized the importance of Energy Trust’s in-house technical team, led by engineer Damian Wells. Among others, “their expertise is critical to evaluating the teams when they walk in the door, to understanding what wells they’ve drilled, to looking at the frack record, and to underwriting the wells and the type curves.”

Specialty lending

“Micro E&P lending” is the specialty of Production Lending LLC, whose principals are Ryan Childs and Abhishek Kumar. Citing a desire to venture where capital is least available, the Houston-based firm looks to make secured loans to onshore operators in the \$1- to \$10 million range.

Although difficult to scale, plus time-consuming in terms of screening deals, the specialty lending sector offers “high return potential,” according to Production Lending.

“On the operator side, one of the biggest benefits is that you can acquire assets on a cash flow basis,

usually in the two to three times multiple range, sometimes even lower,” said Childs. “What that means for an operator is that you have the ability to retain much more upside than you would in targeting a more typical market transaction.”

Childs cited a case study involving an engineer who started buying assets, mainly from the major oil companies, which needed simple repairs to be brought back online. From the majors’ viewpoint, it was simply not worth their time to take a well from 4 barrels per day (bbl/d) up to 8 bbl/d, recalled Childs, but the engineer repeated similar purchases dozens of time.

From an initial borrowing of \$400,000, the loan grew to nearly \$3 million, but production has grown by more than 300%, while monthly cash flow has increased by nearly 400% to \$250,000, Childs said. Free cash flow, based on its current run-rate, stands at about \$5 million per year, according to Production Lending.



“When partnering with owner-operators, we have an identified asset, and that provides a physical path to value creation.”

Brian Crumley,
Managing partner and co-founder,
Vortus Investment Advisors LLC

Childs described as “challenging” the work involved in scaling up its activities, but said, “We don’t feel forced to go out and do every single deal we can. We can pick and choose our spots in terms of where we want to invest. We have very patient investors.”

Across the conference panel, are there specific basins that are viewed as being attractive?

Sears indicated Energy Trust’s assets were diversified, but “we’re focused not so much on basins as we are on well control.” Juniper Capital’s Geiser pointed to the Louisiana Austin Chalk, currently being tested by EOG Resources Inc. and ConocoPhillips Co., and the Powder River Basin, where operators are working to “crack the code.” Vortus’ Crumley cited as attractive parts of the Denver-Julesburg Basin, in spite of regulatory risk; the Eagle Ford, with its strong regional pricing; the multistack pay of the Arkoma; and the Permian, including minerals. ■

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CAPITAL MARKETS SHAKE-OUT

The flight of capital out of public equities and debt reveals a rare polar shift in investor sentiment. But for how long?

By Steve Toon

Oil and gas operators rely on public capital markets to fund development programs, growth and A&D, but the markets are locked tight: energy equities issuance is at its lowest point in 20 years, and the debt markets saw no issuances whatsoever in fourth-quarter 2018.

“We’re not in a great place with the equity capital markets right now,” said Steve Almrud, managing director for Barclays. “We haven’t seen a market like this since 1998.” Ah, yes, 1998—when the average price of crude sank to \$12 per barrel, and the internet tech boom sucked all the equity out of oil company stocks.

Almrud addressed an audience at the Society of Petroleum Engineers’ A&D Symposium in February, and not much has changed since. In 2014, he noted, \$54 billion in equity was issued in the natural resources space; in 2018, \$11 billion. “It reflects investors’ views of the natural resources and energy space, which has changed dramatically over the last three to four years,” he said.

By now, operators are all-too-aware of the capital flight. S&P 500 weighting to energy has

slipped from 15% to 5%, and the investor class has flipped from growth to value.

KeyBanc Capital Markets research analyst Leo Mariani, speaking at a NAPE event in February, said one of the clear things that’s been holding energy back is this continued narrative that oil demand growth is going to start to slide to the negative over the next several years.

“I personally think that’s a bit overblown, but it’s become pretty pervasive out there in the marketplace, and I think it’s certainly keeping a lot of energy investors on the sidelines.”

“Investors have choices,” said Chris Miller, managing director and head of North American energy investment banking at Citi. “All the money managers are benchmarking themselves against the S&P 500. It’s not about how you compete against other energy companies, but how you compete against other investment choices that investors have.” And at 5% weighting, “if I’m an investment manager, I don’t need to be in energy.”

Miller’s comments were directed to an audience at IPAA’s Private Capital Conference in January.

Free cash flow has become the mantra of



"We're not in a great place with the equity capital markets right now. We haven't seen a market like this since 1998."

Steve Almrud,
Managing director,
Barclays

investors still watching the energy space. Miller noted that in a 12-year window from 2006 to 2018, the industry destroyed some \$230 billion in capital with negative cash flow.

"This is the thing investors are hyper-focused on," he said. "Returns are hard to measure from company to company, but free cash flow is very easy to measure."

Long-only value investors drive the valuations, said Almrud. The good news: they still want E&P in the mix, but only three to five names and as a defensive measure, he said. Specifically, they're seeking companies with strong balance sheets, liquidity in the stock, typically \$10 billion or more of market capitalization, and that can generate free cash flow—and are not over-investing.

"The majors—for the first time in a long time—are trading at better multiples than large E&P companies," he said. "It comes back to what investors want."



"All the money managers are benchmarking themselves against the S&P 500. It's not about how you compete against other energy companies, but how you compete against other investment choices that investors have."

Chris Miller,
Managing director and head of
North American energy investment banking,
Citi

Value investors rather than growth investors are going to continue to dominate the landscape, Mariani predicts, and "to the extent energy companies can deliver what they want, then we'll see valuations improve in this sector."

With the greater push to capital discipline over the past year, even many small- to mid-cap companies will produce free cash flow in 2019, Mariani said, "certainly not something we're accustomed to. We're starting to see the industry adjust to the investor base that is out there."

Growth has become a bad word to oil and gas investors, but the truth is most investors still want growth, according to Citi's Miller. The caveat: "They don't want to see hyper growth—20% growth. It's not good for them because that means there's too much oil in the world and prices are going to be terrible."

"We're starting to see the industry adjust to the investor base that is out there."

Leo Mariani,
Managing director, equity research analyst,
KeyBanc Capital Markets

Instead, investors are comfortable with 5% to 10% growth, albeit finding the right balance of investor rewards with moderate growth can be like walking a tightrope, he said.

IPOs remain challenged and will be until commodity prices rise and stabilize.

"It's not a great surprise that there's not a lot of folks clamoring for new IPOs in the E&P sector," Mariani said. Since he spoke, oil has trended upward slightly, but still was about \$60 at this writing. With oil in the \$50s, he doesn't see tremendous appetite for IPOs. In the \$60s, "people would start to listen."

Miller said companies wanting to go public not only need to show investors free cash flow or a path to free cash flow, but also scale. Investors want to choose one large-scale company in a basin, not three. "Think about all the portfolio companies; there's going to be a lot of pressure to consolidate," he said. "You don't have many \$10 billion companies that are looking to go public."

And while the equity markets have created much angst, the debt capital markets have quietly dried up as well. Almrud noted the debt capital markets

were as closed as the equity markets during the entire fourth quarter, and only two midstream debt deals came to market during January.

“Right now it’s unclear if public debt markets will take a new deal,” he said. [While several midstream deals transacted since then, only one E&P did.] “There’s a lack of confidence that you’re going to be able to equitize anything you take on today, in two to five years from now. It causes people to be conservative with their balance sheets.”

Mariani believes the debt market will rebound ahead of equities.

“The debt side is not as sensitive because if you can underwrite 50 to 60 bucks [per barrel of crude], most of the debt investments will certainly pay off.

But on the equity side, it’s a lot more sensitive. I think you need to think about \$60 plus, to get investors to buy a lot more of these equity securities.

“We need oil and gas commodities to look better to get investors re-engaged in the sector.”

The sector is in dire need of a sector rotation, said Almrud. It happened after 1998 and can do so again.

“It happened because prices rebounded. We all focus on the near month for both oil and gas, and I think what we really need is a contango curve. That’s what investors are ultimately going to get comfortable with in terms of rewarding cash flow growth and, hopefully, multiple expansion.” ■

EQUITY TRANSACTIONS

Public and private deals \$20MM and above announced or closed March 2018 through February 2019.

Rank	Company	Exchange/Symbol	Amount (\$MM)	Comments
1	Diamondback Energy Inc.	NYSE: FANG	620	The Carlyle Group LP will fund \$620 million for development of Diamondback’s oil and gas assets in Pecos County, TX. Carlyle Energy Mezzanine Opportunities Fund II will finance up to 85% of the development program for five years.
2	NuStar Energy LP	NYSE: NS	590	Agreed to sell 23 million of Series D preferred units in a private placement, representing limited partner interests in the partnership, to funds managed by EIG Management Co. LLC and FS/EIG Advisor LLC , the adviser to FS Energy & Power Fund , plus \$10 million in common units to William E. Greehey, chairman of the board.
3	Spartan Energy Acquisition Corp.	NYSE: SPAQ.U	552	The special purpose acquisition company launched an IPO of shares priced at \$10 each. Citigroup Global Markets Inc. and Credit Suisse Securities (USA) LLC were joint book-running managers.
4	FourPoint Energy LLC	N/A	525	Quantum Energy Partners invested \$489 million, making it one of the largest unitholders. Existing equity holders also invested an additional \$36 million. Funds managed by GSO Capital Partners LP together with Quantum are now controlling members.
5	Waterfield Midstream LLC	N/A	500	Funds managed by Blackstone Energy Partners LP formed a greenfield full-cycle provider of water management services producers in the Permian Basin.
6	EagleClaw Midstream Services LLC	N/A	500	I Squared Capital committed cash and contributed its Delaware Basin midstream portfolio company, Pinnacle Midstream , and became a partner in BCP Raptor Holdco , the parent company for EagleClaw.
7	Tall City Exploration III LLC	N/A	500	Received a line of equity financing from Warburg Pincus .
8	Centennial Resource Development Inc.	NASDAQ: CDEV	491.3	Priced underwritten public offering of 25 million shares of Class A common stock. J.P. Morgan was underwriter.
9	Pure Acquisition Corp.	NASDAQ: PACQU	414	Special purpose acquisition company led by Jack D. Hightower closed IPO and is sponsored by an affiliate of HighPeak Energy Partners LP .
10	Energy Transfer Partners LP	NYSE: ETP	400	Priced a public offering of 16 million of its 7.625% Series D fixed-to-floating rate cumulative redeemable perpetual preferred units at a price of \$25 each. J.P. Morgan Securities LLC , Merrill Lynch, Pierce, Fenner & Smith Inc. , Morgan Stanley & Co. LLC , RBC Capital Markets LLC and Wells Fargo Securities LLC acted as underwriters.

Rank	Company	Exchange/Symbol	Amount (\$MM)	Comments
11	Flat Creek Resources LLC	N/A	400	Permian Basin-focused company, led by former Black Mountain and XTO executives, secured an initial commitment from EnCap Investments LP and management.
12	Viper Energy Partners LP	VNOM	304	Priced public offering of 9.5 million common units representing limited partner interests at a price of \$32 each. The offering represents a 1.5 million unit upside to originally proposed 8 million offering of common units.
13	Clear Creek Midstream LLC	N/A	300	Announced initial capital commitment from EnCap Flatrock Midstream to pursue greenfield projects across NA shale plays.
14	Ridge Runner Resources LLC	N/A	300	Newly formed Delaware Basin-focused E&P received a line of equity financing from funds affiliated with Warburg Pincus .
15	Silver Creek Midstream LLC	N/A	300	Tailwater Capital LLC increased its equity commitment from \$150 million, provided by both Tailwater Energy Fund III and limited partner co-investors, to support the buildout of its crude gathering system in the Powder River Basin.
16	Viper Energy Partners LP	NASDAQ: VNOM	281.3	Priced public offering of 9 million common units representing limited partner interests at a public offering price of \$31.25 each. UBS Investment Bank and Credit Suisse were joint book-running managers.
17	Callon Petroleum Co.	NYSE: CPE	259.6	Priced public offering of 22 million common shares. Proceeds will partially fund acquisition from Cimarex Energy Co. J.P. Morgan and Morgan Stanley were joint book-running managers.
18	New Fortress Energy LLC	NASDAQ: NFE	257.6	Priced IPO of 20 million Class A shares at \$14 each. Proceeds were to be used for construction of terminals and liquefaction facilities.
19	Getka Energy LLC	N/A	250	Recently formed crude oil logistics provider secured an initial equity commitment from EnCap Flatrock Midstream and management.
20	Matador Resources Co.	NYSE: MTDR	229.3	Offered 7 million common shares. The follow-on offering closed at a discount to the prior day closing price of about 3.1%. RBC Capital Markets was sole underwriter.
21	ProPetro Holding Corp.	NASDAQ: PUMP	229.2	Priced a public offering of 12 million common shares at \$19.10 each. Goldman Sachs & Co. LLC and Barclays Capital Inc. were joint book-running managers.
22	Carrizo Oil & Gas Inc.	NYSE: CRZO	218.5	Priced an offering of 9.5 million common shares at \$23 each. Proceeds to fund purchase of Delaware Basin assets from Devon Energy Corp.
23	Trace Midstream Partners LLC	N/A	200	Received equity commitments from Quantum Energy Partners , management and other private investors to pursue natural gas, crude and water midstream solutions in various basins throughout North America, focusing initially on the Eagle Ford Shale.
24	Berry Petroleum Corp.	NASDAQ: BRY	182	Closed IPO. The roughly 13 million share offering consisted of about 10.5 million primary shares and 2.5 million secondary shares offered by Berry and selling shareholders, respectively. The IPO was priced below the \$15 to \$17 expected offering range. Goldman Sachs & Co. , Wells Fargo Securities and BMO Capital Markets were lead book-running managers.
25	Artis Exploration Ltd.	N/A	180	Closed an investment from Warburg Pincus that will fund the company's accelerated development program.
26	Nine Energy Service Inc.	NYSE: NINE	161	Closed IPO of about 8 million common shares priced at \$23 each, which included about \$1 million shares sold upon underwriters exercising option to purchase additional shares. J.P. Morgan , Goldman Sachs & Co. LLC and Wells Fargo Securities were joint book-running managers and represented the underwriters. BofA Merrill Lynch and Credit Suisse also were joint book-running managers.

Rank	Company	Exchange/Symbol	Amount (\$MM)	Comments
27	Stronghold Energy II Holdings LLC	N/A	150	Newly formed Central Basin-focused E&P received equity from funds affiliated with Warburg Pincus .
28	Tellurian Inc.	NASDAQ: TELL	115	Closed public offering of 12 million common shares. Credit Suisse Securities (USA) LLC was the sole book-running manager for the offering, and Stifel, Cowen and Co. LLC , Seaport Global Securities LLC and Tuohy Brothers Investment Research Inc. were co-managers.
29	Northern Oil and Gas Inc.	AMEX: NOG	105	Offered common shares at one-tenth of one cent per share of par value. Stifel, Nicolaus & Co. Inc. was sole book-running manager.
30	DCP Midstream LP	NYSE: DCP	100	Priced a public offering of 4 million of 7.95% Series C fixed-to-floating rate cumulative redeemable perpetual preferred units at \$25 each.
31	PermRock Royalty Trust	NYSE: PRT	95	Priced IPO of 6.25 million trust units representing an approximate 51.4% beneficial interest at \$17 each. Boaz Energy II LLC , sponsor of the Trust, sold units being offered. Wells Fargo Securities , Goldman Sachs & Co. LLC , UBS Investment Bank , Deutsche Bank Securities , Jefferies , Stifel and Oppenheimer & Co. were joint book-running managers, with BB&T Capital Markets and Janney Montgomery Scott as co-managers.
32	Ring Energy Inc.	AMEX: REI	82	Priced an offering of about 6.164 million common shares with an 804,000-share greenshoe at \$14 per share. SunTrust Robinson Humphrey Inc. and Seaport Global Securities LLC were joint book-running managers. Capital One Securities Inc. , Euro Pacific Capital Inc. , Imperial Capital LLC , Ladenburg Thalmann & Co. Inc. , Northland Securities Inc. and Roth Capital Partners were co-managers.
33	Kosmos Energy Ltd.	NYSE: KOS	81.5	Priced a public offering of 15 million shares at a price of \$5.43 per share. Kosmos will not receive any of the proceeds from the sale, which was made by funds affiliated with Warburg Pincus LLC .
34	USA Compression Partners LP	NYSE: USAC	81	Priced an underwritten public offering of 5 million common units.
35	Crescent Pass Energy LLC	N/A	75	Received initial equity commitment from Talara Capital Management LLC to focus on horizontal development opportunities in East Texas and Northern Louisiana, with a primary focus on the liquids-rich Cotton Valley trend.
36	Winright Resource Holdings LLC	N/A	67	Midcontinent-focused E&P closed equity commitment from affiliates of North Hudson Resource Partners LP .
37	Kimbell Royalty Partners LP	NYSE: KRP	57	Priced public offering of 3 million common units representing limited partner interests at \$19 each.
38	Keane Group Inc.	NYSE: FRAC	56.6	Priced secondary offering of 5.25 million shares at \$10.77 per share. The offering was made by one its shareholders, Keane Investor Holdings LLC , with all proceeds distributed to Trican Well Services LP , which will no longer be a shareholder.
39	Halcón Resources Corp.	NYSE: HK	55.2	Priced 8 million common shares at \$6.90 each. J.P. Morgan was sole book-running manager.
40	Tellurian Inc.	NASDAQ: TELL	50	An affiliate of Bechtel Oil, Gas and Chemicals Inc. made a zero coupon preferred equity investment in Tellurian which has an implied common share price of \$8.16 per share.
41	Oasis Midstream Partners LP	NYSE: OMP	46	Sold 2.3 million common units, including the 15% overallotment, at \$20 per unit, a discount of more than 9% to the closing price. Proceeds will fund a portion of the \$250-million purchase of midstream assets from parent Oasis Petroleum Inc.
42	Cypress Energy Partners LP	NYSE: CELP	44	Closed placement of convertible preferred units to an affiliate.
43	Rosehill Resources Inc.	NASDAQ: ROSE	37.5	Priced offering of 6.15 million shares of Class A common stock for about \$37.5 million.
44	Contango Oil & Gas Co.	NYSE: MCF	30	Priced a follow-on offering of 7.5 million common shares at \$4 per share.

DEBT TRANSACTIONS

Public and private deals \$20MM and above announced or closed March 2018 through February 2019.

Rank	Company	Exchange/Symbol	Amount (\$MM)	Comments
1	Energy Transfer Partners LP	NYSE: ETP	3000	Priced 4.2% of senior notes due 2023; \$1 billion of 4.95% senior notes due 2028; \$500 million of 5.8% senior notes due 2038; and \$1 billion of 6% senior notes due 2048. Mizuho Securities USA LLC, MUFG Securities Americas Inc., SMBC Nikko Securities America Inc. and TD Securities (USA) LLC were joint book-running managers.
2	Enterprise Products Operating LLC	N/A	3000	Subsidiary of Enterprise Products Partners LP issued \$750 million of 3.5% senior notes due 2022, \$1 billion of 4.150% of senior notes due 2028, and \$1.25 billion of 4.8% senior notes due 2049.
3	EQT Midstream Partners	NYSE: EQM	2400	Priced a \$1 billion offering of 4.75% senior notes due 2023, \$850 million of 5.5% senior notes due 2028 and \$550 million of 6.5% senior notes due 2048. Merrill Lynch, Pierce, Fenner & Smith Inc.; Wells Fargo Securities LLC, Deutsche Bank Securities Inc., PNC Capital Markets LLC, Credit Suisse Securities (USA) LLC, J.P. Morgan Securities LLC, MUFG Securities Americas Inc., RBC Capital Markets LLC, Scotia Capital (USA) Inc., TD Securities (USA) LLC and U.S. Bancorp Investments Inc. were joint book-running managers for the offering. SMBC Nikko Securities America Inc., Citizens Capital Markets Inc., The Huntington Investment Co., and CIBC World Markets Corp. were co-managers.
4	BP Capital Markets America Inc.	N/A	2000	Subsidiary of BP Plc priced \$1 billion of 3.79% senior notes due 2024 and \$1 billion of 4.234% senior notes due 2028.
5	Kinder Morgan Inc.	NYSE: KMI	2000	Priced \$1.25 billion of 4.3% senior notes due 2028 and \$750 million of 5.2% senior notes due 2048.
6	Concho Resources Inc.	NYSE: CXO	1600	Priced offering consisting of \$1 billion of senior unsecured notes due 2028 and \$600 million of senior unsecured notes due 2048. BofA Merrill Lynch, J.P. Morgan and Wells Fargo Securities were joint book-running managers.
7	Schlumberger Ltd.	NYSE: SLB	1600	Priced \$750 million of 3.75% senior notes due 2024 and \$850 million of 4.3% senior notes due 2029.
8	Sabal Trail Transmission LLC	N/A	1500	Joint venture with Spectra Energy Partners LP owning 50%, NextEra Energy Inc. owning 42.5% and Duke Energy owning 7.5%, closed offering of senior notes issued in three tranches: US\$500 million principal amount of 4.246% senior notes due 2028, US\$600 million principal amount of 4.682% senior notes due 2038 and US\$400 million principal amount of 4.832% senior notes due 2048.
9	Targa Resources Partners	NYSE: NGLS-A	1500	Subsidiary of Targa Resources priced \$750 million of 6.5% senior notes due 2027 and \$750 million of 6.875% senior notes due 2029.
10	TransCanada PipeLines Ltd.	NYSE: TRP	1400	Subsidiary of TransCanada Corp. priced \$1.4 billion of senior notes in two tranches: \$400 million of 4.25% notes due 2028 and \$1 billion of 5.100% notes due 2049.
11	Chesapeake Energy Corp.	NYSE: CHK	1250	Priced \$850 million of 7% senior notes due 2024 issued at par and \$400 million of 7.5% senior notes due 2026. Goldman Sachs & Co. LLC, J.P. Morgan Securities LLC, Wells Fargo Securities LLC and MUFG Securities Americas Inc. were joint book-running managers.
12	ONEOK Inc.	NYSE: OKE	1250	Priced offering to sell senior notes, consisting of \$800 million of 10-year senior notes at a coupon of 4.55% and \$450 million of 30-year senior notes at a coupon of 5.2%. Citigroup, BofA Merrill Lynch, Mizuho Securities, Wells Fargo Securities, Deutsche Bank Securities, Goldman Sachs & Co. LLC, J.P. Morgan, Morgan Stanley, MUFG and TD Securities were joint book-running managers.
13	Western Gas Partners LP	NYSE: WES	1100	Priced senior notes via \$400 million and \$700 million offerings.

Rank	Company	Exchange/Symbol	Amount (\$MM)	Comments
14	Apache Corp.	NYSE: APA	1000	Priced an offering of 4.375% notes due 2028. BofA Merrill Lynch, Credit Suisse Securities (USA) LLC and J.P. Morgan Securities LLC were joint book-running managers.
15	Enable Midstream Partners LP	NYSE: ENBL	1000	Entered three-year unsecured term loan agreement with delayed-draw feature.
16	Occidental Petroleum Corp.	NYSE: OXY	1000	Priced 4.2% senior notes due 2048.
17	Targa Resources Partners LP	N/A	1000	Subsidiary of Targa Resources Corp. , priced senior unsecured notes due 2026 upsized from a previous \$750 million amount.
18	Transcontinental Gas Pipe Line Co.	N/A	1000	Priced senior notes through two tranches: \$400 million 4% senior notes due 2028; and \$600 million 4.6% senior notes due 2048.
19	Whiting Petroleum Corp.	NYSE: WLL	1000	Offered to exchange all of its outstanding, unregistered 6.625% senior notes due 2026, for new, registered 6.625% senior notes due 2026.
20	Comstock Resources Inc.	NYSE: CRK	850	Offered a private placement of senior unsecured notes due 2026.
21	Diamondback Energy Inc.	NYSE: FANG	750	Priced upsized offering of 4.750% senior notes due 2024.
22	Matador Resources Co.	NYSE: MTDR	750	Closed private offering of 5.875% senior unsecured notes due 2026.
23	Transocean Ltd.	NYSE: RIG	750	Priced 7.25% senior notes due 2025.
24	USA Compression Partners LP	USAC	750	Priced private placement of 6.875% senior unsecured notes due 2027.
25	USA Compression	NYSE: USAC	725	Priced 6.875% senior notes due 2026.
26	Pembina Pipeline Corp.	NYSE: PBA	700	Closed C\$400 million 4.02% senior notes due 2028 and C\$300 million 4.75% senior notes due 2048.
27	Antero Midstream Partners LP	AM	650	Priced private placement of \$650 million in aggregate principal amount of 5.75% senior unsecured notes due 2027.
28	Calfrac Holdings LP	N/A	650	Limited partnership offered senior notes due 2026 under a new indenture.
29	Salt Creek Midstream LLC	N/A	650	Announced close of a four-year term loan through Deutsche Bank .
30	Ascent Resources Utica Holdings LLC	LON: AST	600	Priced private offering of 7% senior unsecured notes due 2026.
31	Hilcorp Energy Co.	N/A	600	Priced 6.25% senior notes due 2028.
32	Weatherford International	NYSE: WFT	600	Priced 9.785% senior notes due 2025.
33	Colonial Pipeline Co.	N/A	550	Priced 4.25% senior notes due 2048.
34	Nabors Industries Ltd.	NYSE: NBR	521	Priced public offerings of 35 million common shares at \$7.75 each, and of 5 million of new 6% Series A mandatory convertible preferred shares at \$50 each. Morgan Stanley & Co. LLC and Citigroup Global Markets Inc. were book-running managers.
35	CNX Resources Corp.	CNX	500	Priced 7.25% senior notes due 2027.
36	Frontera Energy Corp.	FEC.TO	500	Opened public offering of unsecured senior notes due 2023.
37	Jagged Peak Energy LLC	NYSE: JAG	500	Priced private placement of 5.875% senior unsecured notes due 2026.
38	Magellan Midstream Partners LP	NYSE: MMP	500	Priced 4.85% senior notes due 2049.
39	Sequel Energy Group II LLC	N/A	500	Funds managed by GSO Capital Partners LP , the credit platform of Blackstone , and the founding partners of Sequel Energy Group, formed Sequel Energy Group II LLC.
40	SM Energy Co.	NYSE: SM	500	Priced an offering of 6.625% senior unsecured notes due 2027. BofA Merrill Lynch, Wells Fargo Securities, J.P. Morgan, Barclays, BBVA and RBC Capital Markets were joint book-running managers.

Rank	Company	Exchange/Symbol	Amount (\$MM)	Comments
41	Tallgrass Energy Partners LP	NYSE: TEP	500	Priced 4.75% senior notes due 2023.
42	Valero Energy Partners LP	NYSE: VLO	500	Priced 4.5% senior notes due 2028. Barclays Capital Inc., Credit Suisse Securities (USA) LLC, Mizuho Securities USA LLC, MUFG Securities Americas Inc., Citigroup Global Markets Inc., Merrill Lynch, Pierce, Fenner & Smith Inc., SMBC Nikko Securities America Inc. and SunTrust Robinson Humphrey Inc. were joint book-running managers.
43	Denbury Resources Inc.	NYSE: DNR	450	Closed private offering of new second-lien notes.
44	Hi-Crush Partners LP	NYSE: HCLP	450	Priced private placement of 9.5% senior unsecured notes due 2026.
45	Callon Petroleum Co.	NYSE: CPE	400	Priced an upsized private offering of 6.375% senior unsecured notes due 2026.
46	CNX Midstream Partners LP	NYSE: CNXM	400	Priced 6.5% senior notes due 2026.
47	Magnolia Oil & Gas Operating LLC	NYSE: MGY	400	Priced private offering of 6% senior unsecured notes due 2026.
48	Nine Energy Service Inc.	NYSE: NINE	400	Priced private offering of 8.75% senior unsecured notes due 2023.
49	Oasis Petroleum Inc.	NYSE: OAS	400	Offered private placement of senior unsecured notes due 2026.
50	WPX Energy Inc.	NYSE: WPX	400	Offered senior unsecured notes due 2026. Citigroup and BofA Merrill Lynch were lead book-running managers.
51	Vine Oil & Gas LP	N/A	380	Priced private offering of 9.75% senior unsecured notes due 2023.
52	KBR Inc.	NYSE: KBR	350	Priced private offering of 2.50% convertible senior notes due 2023.
53	Vantage Drilling International	OTC: VTGDF	350	Priced 9.250% senior secured first-lien notes due 2023 in a private placement.
54	DCP Midstream	NYSE: DCP	325	Priced add-on offering of 5.375% senior notes due 2025.
55	Blue Racer Midstream LLC	N/A	300	Priced offering of 6.625% senior notes due 2026.
56	Gastar Exploration Inc.	NYSE MKT: GST	300	Entered restructuring support agreement with the company's largest funded-debt creditors and largest common shareholders, with certain funds affiliated with Ares Management LLC .
57	Permian Production Partners LLC	N/A	300	Syndicated first-lien term loan with an interest rate of Libor plus 6% and expected maturity in May 2024. Jefferies was lead arranger and administrative agent.
58	KLX Energy Services Holdings Inc.	NASDAQ: KLXE	250	Priced 11.5% senior notes due 2025.
59	Matador Resources Co.	NYSE: MTDR	250	Offered senior unsecured notes due 2026 in a private placement.
60	Freeport LNG Development LP	N/A	225	Subsidiary priced 5.550% senior notes due 2039.
61	Halcón Resources Corp.	NYSE: HK	200	Priced additional 6.75% senior unsecured notes due 2025 in a private placement.
62	WildHorse Resource Development Co.	NYSE: WRD	200	Priced private placement of 6.875% senior notes due 2025.
63	Resolute Energy Corp.	NYSE: REN	75	Closed private offering of 8.5% senior notes due 2020.
64	Transocean Poseidon Ltd.	NYSE: RIG	50	Subsidiary of Transocean priced an offering of 6.875% senior secured notes due 2027.

FORTY UNDER 40

We invite you to **NOMINATE** those that are
MOVING INDUSTRY FORWARD

Oil and Gas Investor is now accepting nominations for the 2019 Forty-under-40 in Energy awards. We encourage you to nominate yourself or a colleague who exhibits entrepreneurial spirit, creative energy and intellectual skills that set them apart. Nominees can be in E&P, finance, A&D, oilfield service, or midstream. Help us honor exceptional young professionals in oil and gas.

NOMINEES
SHOULD
DISPLAY:



**A desire to find
new challenges**



**Leadership
initiative**



**Professional
excellence**



**Community
involvement**



**Creative
problem solving**



**Entrepreneurial
spirit**

Honorees will be profiled in a special report that ships with the November issue of *Oil and Gas Investor* and on HartEnergy.com.

**Deadline for
submissions is
June 3, 2019**

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Our readers may nominate colleagues (or themselves) using our web form.

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PRIVATE EQUITY'S ADVANTAGE

In a confused capital market, one midstream veteran credits private-equity backing with his firm's ongoing success.

Interview by Paul Hart

Catching Dave Presley, president and CEO of Tulsa, Okla.-based Frontier Energy Services LLC, for a conversation can prove hard to do. He's a busy guy these days. That's not unusual for midstream executives everywhere, of course, as the sector responds to the major challenge of getting the gathering, processing, transportation and storage assets in place that the oil and gas industry needs as the shale gale continues to blow.



With more than 40 years of experience in all phases of the energy business, Presley has led Frontier since the founding of its current iteration in 2002. His tenure has occurred as Frontier moved from a minor start-up to a significant, privately held player in the midstream sector, initially focused on natural gas. Frontier has gone on to expand operations into crude oil infrastructure in liquids-rich unconventional plays.

Its greatest success has come in the Permian's booming Delaware Basin, but Frontier also

has been active in the Midcontinent and Rocky Mountain regions.

Prior to organizing Frontier, Presley served as president and CEO of CMS Field Services Inc., a wholly owned subsidiary of CMS Energy Corp. Earlier, he founded and directed Heritage Gas Services LLC, Centennial Natural Gas Corp. and Colony Energy Corp.—a pioneer in wellhead-to-burner tip gas marketing.

Along with Presley, Frontier's executive team includes Robert Shain, COO; Ken Snyder, chief commercial officer; Kelly Wood, CFO; Kenny Benton, vice president of engineering; and Greg Lamberson, vice president of planning.

Private equity has funded Frontier's growth via a relationship with Dallas-based Energy Spectrum Capital, which has invested some \$3.5 billion in capital in multiple midstream operators and projects since its founding in 1995.

Given the unsettled nature of capital markets currently, Presley sees significant opportunities for private equity in the midstream. Midstream operators have billions of dollars worth of projects on the drawing board and funding those projects could be a challenge. *Advantage: Private equity.*

We spoke with him as he enjoyed a slow moment, sharing his views on the future of Frontier, midstream and the capital it will need as the nation expands into its new role as a worldwide energy provider.

Investor These are busy times in the midstream; how does the high volume of capital projects impact private-equity providers?

Presley Yes, there are many projects suited for private-equity-backed developers right now. Midstream opportunities, as always, follow active rigs. The basins with the most active rigs are the Permian, Niobrara, Scoop/Stack, Powder River, Bakken and Northeast.

Private-equity developers and their backers are lining up to compete for new crude oil gathering and transmission projects, as well as new natural gas gathering and processing projects in all of these basins. This high level of competition has shifted some of the risk from the producers to midstream developers, and extended the anticipated life cycle for private-equity midstream investments.

Investor Is there enough private-equity money available?

Presley Yes, certainly. Ramping volumes and successful midstream projects supporting those volumes have attracted an abundance of private equity in the energy midstream space in the past decade. Although there are many capital projects today and more coming, the supply of private equity for midstream projects far exceeds the available projects. We expect the supply of money to continue to exceed the available projects as our industry segment continues to mature.

Investor Wall Street isn't impressed with the energy business, overall, these days. Is that good or bad for private equity?

Presley Wall Street has become focused on publicly traded energy company cash flows. Cash generation is fundamental to all businesses, of course, whether they are publicly funded or privately funded. But private equity typically provides more flexibility than public funding, especially when investments require a few years to achieve positive cash flow.

"Teams bring life to ideas and projects by tapping relationships, evaluating economics, providing operational excellence and imparting wisdom to exit at the right time and at the right price."

So, it appears Wall Street analysts may have recently provided private equity an advantage over publicly traded companies. This cash flow focus may cause producers to shed midstream assets and invite more private equity to support them. If that trend continues, private-equity developers will see even more opportunity in the near future.

Investor Is that slowing opportunities for private-equity-financed firms to go public? When could that trend change?

Presley Private-equity developers typically try to monetize the value of their projects or assets by selling to "strategic" buyers. Strategic buyers are often publicly traded entities that want to grow their business by owning more market share or a greater footprint in a given basin.

Monetizing a private-equity investment with public stock, using an IPO, probably will not be as profitable for asset developers in the near term, as selling those assets directly to a strategic buyer. Wall Street attitudes cycle, like many other things,



PHOTO COURTESY FRONTIER ENERGY SERVICES LLC

The storage complex at Wink, Texas, provides a hub for the Delaware Basin's Alpha Crude Connector, developed by Frontier Energy Services LLC and subsequently sold to Plains All American Pipeline LP in 2017 for \$1.2 billion.

so eventually taking a private-equity-backed asset public may make sense again. But at this point it's hard to say when that will be.

Investor Suppose I'm a successful midstream executive and I'd like to strike out on my own. What should I do to get funding for my project idea?

Presley The most important thing for you in the early stages is to assemble a team, which includes your funding partner. Teams bring life to ideas and projects by tapping relationships, evaluating economics, providing operational excellence and imparting wisdom to exit at the right time and at the right price.

Your funding partner needs to be an integral part of your team. That's basic. A good funding partner will have experience and wisdom to empower the team without stepping on them. So, the short answer is to form your team first, then find a funding partner that fits your team.

We are fortunate to have that special combination of relationships, experience and wisdom within our team and our funding partner, Energy Spectrum, and we have enjoyed that relationship for almost 15 years through four successful development cycles. It has been a great relationship.

Frankly, I can say Frontier is proud to continue its legacy business with Energy Spectrum. Energy Spectrum has been an outstanding partner offering unwavering support and deep experience that has led to successful ventures year after year. We look forward to expanding on the momentum, to build assets that will result in continued success for our producers and partners.

Investor What's hot and what's not? Where are hot regions for the midstream now—that is besides the Permian, of course?

Presley There has been a lot of crude oil gathering and transmission, and natural gas gathering

and processing activity in the Scoop/Stack, Niobrara, Powder River, Northeast and some in the Haynesville. There is also a lot of activity involving export docks, storage, fractionation and water handling.

Investor How is the midstream changing within the Permian?

Presley Crude oil gathering and natural gas gathering and processing there have changed significantly. We are aggregating fewer and larger projects. These projects are multiwell pads instead of single wells.

Pipe diameters are larger because volumes come in large surges instead of steady streams over several years. Lateral lengths and completion intensity have increased substantially, creating higher-impact supply nodes on the gathering systems.

E&P technology is changing at increasing rates, requiring midstream developers to become better students of geology and reservoir engineering. Infrastructure is maturing, creating more efficiency, economy of scale, lower differentials and asset consolidation.

Investor The buildout on the coasts to support growing exports is changing the midstream business as well. How so?

Presley In order to continue growth of the U.S. energy sector, we have to create more capacity to export our production to the rest of the world. Pipelines are under construction between the oil patch and the coasts, generating more opportunity for new docks and more ships to reach foreign markets.

“Although there are many capital projects today and more coming, the supply of private equity for midstream projects far exceeds the available projects.”

These projects require economy of scale, long-term shipper commitments and a shift in flows. Large chunks of capacity will be introduced in lumpy step changes, while production fills that capacity gradually over time. We will soon enter a period of downstream capacity abundance, collapsing differentials and creating intense competition for field volumes. But we’re not there yet.

Investor Tell us about Frontier. You’re an established midstream player, so what’s changing?

“These are very busy times for the midstream sector.”

Presley Frontier is a team of 12 professionals with more than 200 years of combined experience in the midstream space, supported by Energy Spectrum. We have a balance of experienced veterans and several young, bright people developing our next midstream project.

We have successfully invested in excess of \$1.5 billion of capital in midstream projects, which includes approximately 1.5 Bcf/d (billion cubic feet per day) of natural gas gathering and processing capacity, more than 500 MMcf/d (million cubic feet per day) of natural gas treating, 300,000 barrels (bbl) of crude oil storage and in excess of 4,000 miles of crude oil and natural gas gathering and transmission pipelines. One of our most notable projects was a large crude oil gathering system in the northern Delaware Basin—Alpha Crude Connector (ACC).

ACC was developed and constructed in the early stages of maturity of horizontal technology in the Permian Basin. The bulk of the system lies in New Mexico. It was constructed across 500 miles of environmentally sensitive land, connected to multiple downstream pipelines, and has since grown with the addition of several producers. It sold within 14 months of the start of construction to Plains All American Pipeline, one of the biggest publicly held players in the midstream segment.

Investor Do you have any big picture projections on what the future holds for the midstream?

Presley These are very busy times for the midstream sector. Basin sweet spots on Tier 1 acreage will soon have more gathering and processing capacity than those areas need. Some midstream systems will be overbuilt and be candidates for consolidation, with resale to secondary buyers, and repurposing.

Private-equity-backed producers will focus on the fringes of these sweet spots, or Tier 2 acreage. Midstream developers will also migrate to Tier 2 acreage, as their assets mature and are sold to large, publicly traded midstream entities. Tier 2 acreage will present more risk for upstream and midstream developers, until the geology and reservoir engineering become well-defined.

U.S. upstream technology will migrate to other parts of the world, creating worldwide upstream and midstream opportunities and putting pressure on U.S. domestic developers to compete in the larger world market. ■

BUILDING BLOCKS OF A STRONGER OIL & GAS INDUSTRY

UNDISCLOSED	\$950 MILLION	\$66 MILLION	UNDISCLOSED	\$750 MILLION												
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\$28 MILLION	\$100 MILLION	UNDISCLOSED	\$322 MILLION	\$350 MILLION												
 VIKING MINERALS ASSET DIVESTITURE Financial Advisor	 LILIS ENERGY CONVERTIBLE PREFERRED STOCK Placement Agent	 PEARL ENERGY INVESTMENTS BUSINESS COMBINATION OF PORTFOLIO COMPANIES Valuation Analysis	 SRC ENERGY FOLLOW-ON OFFERING Co-Manager	 VIPER Energy Partners FOLLOW-ON OFFERING Co-Manager												
\$22 MILLION	UNDISCLOSED	UNDISCLOSED	UNDISCLOSED	UNDISCLOSED												
 Thunder Basin Resources PRIVATE PLACEMENT OF EQUITY Placement Agent	 PETROFLOW ENERGY SERVICES ASSET DIVESTITURE Financial Advisor	 BEE LINE COLORADO, LLC HAS DIVESTED ITS COLORADO MIDSTREAM ASSETS Financial Advisor	 CAMBRIDGE EXPLORATION HAS DIVESTED ITS COLORADO UPSTREAM ASSETS Financial Advisor	 EAGLE FORD MINERALS PLATFORM PRIVATE PLACEMENT OF EQUITY Financial Advisor												
ENERGY GROUP KEY STATISTICS		ENERGY GROUP AGGREGATE TRANSACTION VOLUME														
\$46.6 Billion Aggregate Transaction Volume since 2009 \$312 Million Average Transaction Size 156 Transactions Closed since 2009		<p>\$ in billions</p>  <table><thead><tr><th>Year</th><th>Aggregate Transaction Volume (\$ in billions)</th></tr></thead><tbody><tr><td>2010</td><td>\$1.9</td></tr><tr><td>2012</td><td>\$7.5</td></tr><tr><td>2014</td><td>\$30.8</td></tr><tr><td>2016</td><td>\$38.1</td></tr><tr><td>2019</td><td>\$46.6</td></tr></tbody></table>			Year	Aggregate Transaction Volume (\$ in billions)	2010	\$1.9	2012	\$7.5	2014	\$30.8	2016	\$38.1	2019	\$46.6
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2016	\$38.1															
2019	\$46.6															

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I = Investment banking
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To submit corrections or information, contact Steve Toon at stoon@hartenergy.com.



ABN AMRO Bank USA (I)

Darrell Holley
Managing Director-Global Head of
Oil & Gas
972-543-6404
darrell.holley@abnamro.com
5800 Granite Parkway, Ste. 265
Plano, TX 75024
Sectors: E&P, midstream

ACON Investments (P)

Mo Bawa
Partner
202-454-1100
mbawa@aconinvestments.com
1133 Connecticut Ave. NW, Ste. 700
Washington, DC 20036

Adya Partners LLC (A)

Vidisha Prasad
Managing Partner
917-514 2802
vidisha.prasad@adyapartners.com
2929 Westheimer Rd.
Houston, TX 77098
Sectors: E&P, midstream



Aegis Energy Advisors Corp. (I)

Garfield Miller
President
212-245-2552
gmiller@aegisenergy.com
708 Third Ave., 6th Fl.
New York, NY 10017
Sectors: E&P, Midstream, downstream

Alerian (A)

Kenny Feng
972-957-7700
kf@alerian.com
4925 Greenville Ave.,
Ste. 840
Dallas, TX 75206
Sectors: Midstream



Alinda Capital Partners LLC (P)

Chris Beale
203-930-3801
chris.beale@alinda.com
100 West Putnam Ave.
Greenwich CT 06830
Sectors: Midstream

Allegro Energy Capital Corp. (I, P)

James A. Hutchison
403-294-0002
info@energycapital.ca
Suite 960, 630 – 6th Avenue SW
Calgary, Alberta, Canada T2P 0S8
Preferred deal size: C\$20MM-
C\$500MM
Sectors: E&P, midstream

AltaCorp Capital (A, I)

Brian Heald
Managing Director, Investment
Banking
Head of Exploration & Production
403-539-8596
bheald@altacorpcapital.com
Suite 410, 585 8 Ave. SW
Calgary, AB T2P 1G1

Altira Group LLC (P)

Dirk McDermott
303-592-5500
dmcdermott@altiragroup.com
1675 Broadway, Ste. 2400
Denver, CO 80202



Preferred deal size: \$5MM-\$25MM
Sectors: Tech

Amegy Bank of Texas (C, I, M)

A. Steven Kennedy
Executive VP & Head
of Energy Banking
713-235-8870
steve.kennedy@amegybank.com
1717 West Loop South, 23rd Fl.
Houston, TX 77027
Preferred deal size: \$10MM-
\$50MM, up to \$300MM via
syndication
Sectors: E&P, midstream



Angelo Gordon & Co. (P, M)

Todd Dittmann
Managing Director
713-999-4320
tdittmann@angelogordon.com
712 Main St., 13th Fl.
Houston, TX 77002
Preferred deal size: \$50MM-750MM
Sectors: E&P, midstream, OFS, OEM,
downstream



Apollo Global Management LP (M, P)

Gregory A. Beard
Global Head of
Natural Resources
212-822-0750
gbeard@apollopl.com
9 West 57th St., 48th Fl.
New York, NY 10019
Preferred deal size: \$50MM-
\$100MM mezz; \$100MM-\$3B PE
Sectors: E&P, midstream, OFS,
downstream



Ara Partners Group (P)

Charles Cherington
 Managing Partner/Co-Founder
 713-337-9150
 charles@arapartners.com
 5300 Memorial Dr., Ste. 500
 Houston, TX 77007

Preferred deal size: \$10MM-\$100MM

Sectors: Tech

ARC Financial Corp. (P)

Rob Cook
 Managing Director
 403-292-0390
 rcook@arcfinancial.com
 4300, 400-3 Ave. SW
 Calgary, AL T2P 4H2

Preferred deal size: \$50MM-\$200MM

Arcadius Capital Partners (P)

Tym Tombar
 Managing Director
 713-437-5068
 ttombar@arcadiuscapital.com
 711 Louisiana St., Ste. 1400
 Houston, TX 77002

Preferred deal size: \$25MM-\$50MM

Sectors: E&P

ArcLight Capital Partners (P)

Daniel Revers
 Managing Partner
 & Founder
 617-531-6300
 drevers@arclightcapital.com
 200 Clarendon St., 55th Fl.
 Boston, MA 02116

Sectors: E&P, midstream

Ares Management LP (P)

Nate Walton
 Partner, Co-Head of North American
 Private Equity
 310-201-4100
 nwalton@aresmgmt.com
 2000 Avenue of the Stars, 12th FL.
 Los Angeles, CA 90067

Associated Bank (C)

Tim Brendel
 Head of Oil &
 Gas Banking
 713-588-8205
 timothy.brendel@associatedbank.com
 333 Clay St., Ste. 2823
 Houston, TX 77002

Sectors: E&P

Auria Capital (I)

Manfred Ernst
 Managing Director
 212-626-1433
 mernst@auriacap.com
 1120 Avenue of the Americas, 4th Fl.
 New York, NY 10036

Sectors: Midstream, renewables

**Bank of America Merrill Lynch (A, I)**

Bradley Hutchinson
 Managing Director
 713-759-2546
 b.hutchinson@baml.com
 1221 McKinney St.
 Houston TX 77010

Barclays (A, C, I, M, P)

Steve Almrud
 Managing Director
 713-401-6800
 steven.almrud@barclays.com
 Fullbright Tower
 1301 McKinney St., Ste. 400
 Houston, TX 77010

Sectors: E&P

Bay Capital Corp. (M)

Rob Lindermanis
 Owner
 832-980-8074
 robl@baycapcorp.net
 4400 Post Oak Pkwy., Ste. 2100
 Houston, TX 7727

Preferred deal size: up to \$75MM

Sectors: E&P

Bayou City Energy Management LLC (P)

William McMullen
 Founder &
 Managing Partner
 713-400-8200
 will@bayoucityenergy.com
 1201 Louisiana St., Ste. 3308
 Houston, TX 77002

Preferred deal size: \$5MM-\$50MM

Sectors: E&P

BB&T Capital Markets (C, I)

Bobby Kret
 VP Energy Group
 Corporate Banking
 Division
 333 Clay St., Ste. 4495
 Houston, TX 77002
 713-797-2137
 bobby.kret@bbandt.com

Preferred deal size: \$10MM+

Robert Birdsey
 Managing Director
 Energy Investment
 Banking
 804-782-8836
 rbirdsey@bbandt.com
 901 E. Byrd St., Ste. 500
 Richmond, VA 23219

Preferred deal size: \$10MM+

Sectors: E&P, midstream, utilities

BBVA Compass (C, I)

Blake Kirshman
 Head of Energy, Corporate &
 Investment Banking
 713-499-8676
 blake.kirshman@bbva.com
 2200 Post Oak Blvd., 17th Fl.
 Houston, TX 77056

Sectors: E&P, midstream

Benefit Street Partners (P)

Tim Murray
 Managing Director &
 Head of Energy Origination
 713-345-4610
 t.murray@benefitstreetpartners.com
 1401 McKinney St., Ste. 1650
 Houston, TX 77010

Preferred deal size: \$30-\$150MM

Sectors: E&P, midstream

**Blackgold Capital Management
(P, M)**

Adam J.H. Flikerski

Managing Partner

832-706-4874

AFlikerski@BlackGoldCap.com

The Redstone Building

109 North Post Oak Ln, Ste. 500

Houston, Texas 77024

Preferred deal size: \$50MM-
\$300MM

Sectors: E&P, OFS

The Blackstone Group (P)

Angelo Acconcia

Senior Managing

Director, Private Equity

212-538-5211

aconcia@blackstone.com

345 Park Ave., 43rd Fl.

New York, NY 10154

Sectors: E&P



BlueRock Energy Partners (M, P)

Stuart Rexrode

Managing Partner

281-376-0111 x305

srexrode@bluerockep.com

945 Bunker Hill, Ste. 325

Houston, TX 77024

Preferred deal size: \$5MM-\$25MM

Sectors: E&P



Bluffview Energy Capital (P)

Jay Mitchell

Managing Director

214-361-2278

Jay.mitchell@

bluffviewenergy.com

4925 Greenville Ave., Ste. 1102

Dallas, TX 75206

Preferred deal size: \$1MM-\$20MM

Sectors: E&P, midstream, OFS



Blum & Co. Inc. (I)

Robert Larson

Executive Vice President

281-687-0571

rlarson@blumandco.com

Sectors: E&P, midstream, OFS

BMO Capital Markets (I)

Jon Marinelli

Group Head, Investment

& Corporate Banking,

U.S. Energy

713-223-4400

Jon.marinelli@bmo.com

700 Louisiana St., Ste. 2100

Houston, TX 77002

Preferred deal size: \$50MM+

Sectors: E&P, midstream



BOK Financial (C)

Coy Gallatin

EVP & and Executive Director of

Energy Financial Services

713-870-0426

tgallatin@bokf.com

5 Houston Center

1401 McKinney, Ste. 1000

Houston, TX 77010

Sectors: E&P



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Bregal Energy (P)

Nathan Campbell
212-704-3000
nathan.campbell@bregalenergy.com
277 Park Avenue, 29th Fl.
New York, NY 10172
Sectors: E&P, Midstream

Brycap Investments Inc. (P)

Harrison Holmes
Vice President
469-248-3089
hholmes@brycap.com
2602 McKinney Ave., Ste. 200
Dallas, TX 75205
Preferred deal size: \$10-\$100MM
Sectors: E&P, midstream

BSI Energy Partners (P)

Jeff Katersky
303-800-5087
jkatersky@bsienergypartners.com
1746-F S. Victoria Ave., Ste. 382
Ventura, CA 93003
Preferred deal size: \$1MM-\$10MM
Sectors: E&P

**Cadent Energy Partners LLC (P)**

Paul G. McDermott
Managing Partner
mcdermott@cadentenergy.com
713-651-9700
1801 Patterson St.
Houston, TX 77007
Preferred deal size: \$25-\$75MM
Sectors: OFS/OEM

Canaan Resource Partners (P)

Johnnie Penton
Managing Partner
405-604-9300
john@crpok.com
1101 N Broadway Ave.,
Ste. 300
Oklahoma City, OK 73103
Sectors: E&P

**Capital One Securities (A, I)**

Pierre E. Conner III
Head of Research Sales & Trading

504-593-6108
pierre.conner@capitalone.com
909 Poydras St., Ste. 1000
New Orleans, LA 70112

Capital One Energy Banking (I, C, A)

Russell Johnson
Senior Managing Director
& Head of Energy Banking
713-435-5342
Russ.johnson@capitalone.com
1000 Louisiana St., Ste. 2950
Houston, TX 77002
Sectors: E&P, midstream, downstream, OFS

**Carlyle Group LP (P, M)**

Rahul Culas
Managing Director
& Co-Head of Energy
Credit Group
212-813-4564
rahul.culas@carlyle.com
520 Madison Ave.
New York, NY 10022
Sectors: E&P



Daniel East
Managing Director & Head of
Houston office for Energy Credit
Group
713-228-6202
daniel.east@carlyle.com
700 Louisiana St., Ste. 4250
Houston, TX 77002
Preferred deal size: \$100MM+
Sectors: E&P

Carnelian Energy Capital (P)

Tomas Ackerman
Partner
713-322-7310
tomas@carnelianec.com
2229 San Felipe, Ste. 1450
Houston, TX 77019
Preferred deal size: \$75MM
Sectors: E&P

Cascadia Capital LLC (I)

Jamie Boyd
Managing Director
206-436-2514

1000 2nd Ave., Ste. 1200
Seattle, WA 98104
Sectors: OFS, tech

Castlelake (P)

Luke Beltnick
Partner
612-851-3000
4600 Wells Fargo Center
90 South Seventh St.
Houston, TX 77019

Cathay Bank (C)

Dale Wilson
Senior Vice President
832-517-6151
Dale.wilson@cathaybank.com
9440 Bellaire Blvd., Ste. 118
Houston, TX 77036
Preferred deal size: up to \$35MM
Sectors: E&P, midstream

**CC Natural Resource Partners (A, I, P)**

Michael L. Chiste
214-758-0300
mchiste@ccnrp.com
5944 Luther Ln., Ste. 603
Dallas, TX 75225
Sectors: E&P, OFS/OEM, midstream

CCMP Capital Advisors LLC (P)

Will Jaudes
Managing Director
281-363-2013
will.jaudes@ccmpcapital.com
24 Waterway Ave., Ste. 750
The Woodlands, TX 77380
Preferred deal size: \$100MM+
Sectors: Downstream, OEM, tech

Challenge Group International LLC (A, I)

Andrew J. Martin
Managing Partner
832-724-3149
ajm@challengegrp.com
1300 Post Oak Blvd. #2400
Houston, TX 77056
Preferred deal size: \$1MM-\$10MM
Sectors: E&P, OFS, midstream

Chambers Energy Capital (I)

Phillip Pace
Partner
713-554-6773
info@chambersenergy.com
600 Travis St., Ste. 4700
Houston, TX 77002

**Chiron Financial LLC (I)**

Scott Johnson
Managing Director
713-929-9081
sjohnson@chironfinance.com
1301 McKinney St., Ste. 2800
Houston, TX 77010



Preferred deal size: \$20MM-\$500MM

Sectors: E&P, OFS, midstream, OEM

CIBC (A, I)

Jordan Horoschak
Managing Director – Energy
Investment Banking

713-452-1593
jordan.horoschak@cibc.com
1001 Fannin St., Ste. 4450
Houston, TX 77002
Sectors: E&P; OFS

Cibolo Energy Partners (P)

J.W. Sikora
Managing Partner
713-357-7570
jw@ciboloenergy.com
1455 W. Loop South,
Ste. 230
Houston, TX 77027



Sectors: E&P

CIT Energy Finance (C, I)

Mike Lorusso
Managing Director & Group Head
212-771-6002
Mike.Lorusso@cit.com
11 West 42nd St., 11th Floor
New York, NY 10036
Sectors: E&P

Citi (A, I, C)

Steve Trauber
Vice Chairman and
Global Head of Energy
713-821-4800
Stephen.trauber@citi.com
811 Main St., Ste. 3900
Houston, TX 77002
Sectors: E&P, OFS, downstream

**City Bank (C)**

Larry Sears
Sr. VP – Energy Banking
214-468-9060
lsears@city.bank
2525 McKinnon St.,
Ste. 100
Dallas, TX 75201
Preferred deal size: \$1.5MM-\$10MM
Sectors: E&P



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Comerica Inc. (C)

Mark Fuqua
EVP
214-462-4424
mfuqua@comerica.com
P.O. Box 650282
Dallas, TX 75265

Preferred deal size: \$10MM+

Sectors: E&P, midstream

**Community National Bank (C)**

Stewart Beall
Executive VP/CLO
432-262-1600
sbeall@cnbtx.com
401 W. Texas Ave.
Midland, TX 79701
Sectors: E&P

Coral Reef Capital (P)

Marceau Schlumberger
Managing Partner
646-599-9677
contact@coralreefcapital.com
45 Rockefeller Plaza, Ste. 2300
New York, NY 10111
Preferred deal size: \$25MM-\$75MM
Sectors: E&P, energy metals

**COSCO Consulting LLC (A)**

Cameron O. Smith
Manager
860-364-0069
cos@COSCO
ConsultingLLC.com
1 Great Elm Dr., Ste. 100
Sharon CT 06069
Preferred deal size: \$40MM-\$500MM
Sectors: E&P, midstream

**Cottonwood Venture Partners (P)**

Jeremy Arendt
Managing Partner
602-373-7477
4306 Yoakum Blvd., Ste. 300
Houston, TX 77006
Sectors: Tech

Cowen Securities LLC (I, P, M, A)

Matthew S. Rovelli
Managing Director and Head of
Energy Investment Banking

281-657-6801
matthew.rovelli@cowen.com
600 Travis St., Ste. 1970
Houston, TX 77002
Sectors: E&P, OFS, downstream

Credit Agricole (C, I)

Patrick de Talance
Managing Director/Head
713-890-8601
Patrick.detalance@ca-cib.com
1100 Louisiana St.
Houston, TX 77002

Credit Suisse Securities (USA) (I)

Tim Perry
Global Co-Head of
Oil & Gas
713-890-1400
timothy.perry@credit-suisse.com
700 Louisiana St.
Houston, TX 77002
Sectors: E&P, midstream, OFS, LNG

**Cresta Energy Capital (P)**

Chris Rozzell
Managing Partner
214-310-1087
8333 Douglas Ave.
Dallas, TX 75225
Sector: Midstream

Crestmark Bank (C)

Steve Hansen
SVP, West Division Sales Manager
713-628-0101
shansen@crestmark.com
5026 Inker St.
Houston, TX 77007
Sectors: OFS, E&P

Crestview Partners (P)

Adam Klein
Partner
212-906-0724
aklein@crestview.com
590 Madison Ave.,
36th Fl.
New York, NY 10022
Sectors: E&P, OFS

**CrossFirst Bank (C)**

Henry Smith
Energy Banker
918-497-5225
Henry.smith@crossfirstbank.com
7120 S. Lewis Ave.
Tulsa, OK 74136
Preferred deal size: \$5MM-\$35MM
Sectors: E&P

**CSG Investments Inc. (C, M)**

Hans Hubbard
Managing Director
713-353-4642
hhubbard@csginvestments.com
1200 Smith St.
Houston, TX 77005
Preferred deal size: 50MM-\$600MM
Sectors: E&P, midstream, OFS

**CSL Capital Management (P)**

Charlie Leykum
Managing Partner
281-407-0686
charlie@csleenergy.com
700 Louisiana St., Ste. 2700
Houston, TX 77002
Preferred deal size: \$10MM-\$50MM
Sectors: OFS/OEM

**Denham Capital Management (P)**

Jordan Marye
Managing Partner
713-217-2700
Jordan.marye@denhamcapital.com
700 Louisiana St., Ste. 3700
Houston, TX 77002
Preferred deal size: \$50MM-\$300MM
Sectors: E&P, midstream

**Development Capital Resources (M, P)**

Ronnie Scott
President & CEO
432-296-4693
rscott@dclrp.com

712 Main St., Ste. 2000
Houston, TX 77002
Preferred deal size: \$100MM-\$800MM
Sectors: E&P

DNB Bank (C, I)

Kelton Glasscock
Head of Energy, North America
832-214-5812
Kelton.glasscock@dnb.no
Three Allen Center
333 Clay St., Ste. 3950
Houston, TX 77002

Donovan Ventures LLC (A, P)

John W. Donovan Jr.
Founder
713-812-9887
jwd@dv-llc.com
2121 Sage Rd., Ste. 225
Houston, TX 77056
Preferred deal size: PE <\$10MM;
Advisory \$50MM-\$500MM
Sectors: E&P

Drillcore Energy Partners LLC (P)

Evan Turner
Managing Partner
203-822-3024
Evan.turner@drillcorePartners.com
600 Madison Ave., 20th Fl.
New York, NY 10022
Preferred deal size: \$25-\$250MM+
Sectors: E&P, midstream, OFS/OEM



East West Bank (C, I)

Christina Kitchens
Managing Director of
National Energy Finance
469-801-7367
christina.kitchens@eastwestbank.com
5001 Spring Valley Rd., Ste. 825W
Dallas, TX 75244
Preferred deal size: \$5MM-\$500MM
Sectors: E&P, midstream



Edge Natural Resources (P)

Roy Aneed
Partner
469-331-0123 x236
info@edgenr.com
5950 Berkshire Lane, Ste. 1000
Dallas, TX 75225
Preferred deal size: \$25MM-\$75MM
Sectors: E&P, OFS

EIG Global Energy Partners (M, P)

Richard Punches
Managing Director
713-615-7415
Richard.punches@eigpartners.com
333 Clay St., Ste. 3500
Houston, TX 77002
Preferred deal size: \$100MM-\$500MM
Sectors: E&P, midstream, power/renewables



EIV Capital LLC (P)

Greg Davis
713-401-9938
info@eivcapital.com
811 Louisiana St., Ste. 2540
Houston, TX 77002
Preferred deal size: \$20MM-\$100MM
Sectors: Midstream, downstream

EnCap Flatrock Midstream (P)

Bill Waldrip
Managing Partner
& Founder
210-494-6777
bw@efmidstream.com
1826 North Loop 1604 W, Ste. 200
San Antonio, TX 78248
Sectors: Midstream



EnCap Investments LP (P)

Murphy Markham
Managing Partner
214-599-0800
mmarkham@encapinvestments.com
3811 Turtle Creek Blvd., Ste. 2100
Dallas, TX 75219
Preferred deal size: \$300MM-\$500MM
Sectors: E&P, midstream



The Energy & Minerals Group (P)

Alexandra Holzer
713-579-5029
aholzer@emgtx.com
2229 San Felipe St., Ste. 1300
Houston, TX 77019
Preferred deal size: \$150MM-\$1B
Sectors: E&P, midstream

Energy Capital Partners (P, M)

Trent Kososki
Partner
713-496-3107
tkososki@ecpartners.com
1000 Louisiana St., Ste. 5200
Houston, TX 77002
Preferred deal size: \$25MM-\$1B
Sectors: Midstream, OFS, downstream, power/renewables

Energy Capital Solutions LP (A, I)

Russell Weinberg
Managing Director
214-219-8201
rweinberg@nrgcap.com
2651 N. Harwood St., Ste. 410
Dallas, TX 75201
Preferred deal size: \$20MM-\$1B
Sectors: E&P, midstream, OFS



Energy Special Situations Fund (P)

Jonathan S. Linker
Founder
713-869-0077
jlinker@essfunds.com
1801 Patterson St.
Houston, TX 77007
Sectors: E&P

Energy Spectrum Capital (P)

James P. Benson
Managing Partner
241-987-6103
jim.benson@energyspectrum.com
5956 Sherry Lane, Ste. 900
Dallas, TX 75225
Preferred deal size: \$5MM-\$50MM
Sectors: Midstream





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Energy Trust Partners (P)

Leland White
Founding Partner
214-987-6104
leland.white@
energyspectrum.com



5956 Sherry Lane, Ste. 900
Dallas, TX 75225

Preferred deal size: \$20MM-\$75MM

Sectors: E&P

Energy Value Fund LLC (P)

Bill Weidner
Principal
860-214-7813
bill@weidneradvisors.com
P.O. Box 1890



Kennebunkport, ME 04046

Preferred deal size: \$1MM-\$25MM

Sectors: E&P

Enstream Capital (A, I)

Daniel Mooney, CPA, CFA
Managing Director
214-468-0900
dmooney@
enstreamcapital.com



Preferred deal size: \$20MM-
\$200MM

Sectors: E&P, midstream

Entoro Capital LLC (A, I)

James C. Row, CFA
Managing Partner
713-823-2900
jrow@entoro.com
4900 Woodway Dr.,
Ste. 1100
Houston, TX 77056

**Eschelon Advisors (A, P)**

Thomas (Tom) Glanville
Managing Partner
713-201-7762
tsg@eschelonadvisors.com
2001 Kirby Dr., Ste. 1000
Houston, TX 77019



Preferred deal size: \$20MM+

Sectors: E&P, midstream, OFS, OEM,
tech, ownstream

EV Private Equity (P)

Matt Anstead
281-768-6722

ma@evde.com
10777 Westheimer, Ste. 1175
Houston, TX 77042
Sectors: OFS, Tech

Evercore (I, P)

Curtis Flood
Vice President
713-427-5706
Curtis.Flood@
Evercore.com



2 Houston Center, Ste. 1800
909 Fannin St.

Houston, TX 77010

Preferred deal size: \$50MM+

Sectors: E&P, midstream, OFS,
downstream

**Farlie Turner & Co. (I)**

Erik Rudolph
Managing Director
954-358-3800
erudolph@farlieturner.com
401 E. Las Olas Blvd., Ste. 2360
Fort Lauderdale, FL 33301
Sectors: OFS, midstream, downstream

FifthThird Bank (C)

Richard Butler
Corporate Banking Group Head –
Energy, Power and Utilities
713-401-6101
Richard.Butler@53.com
1001 Fannin St., Ste. 4750
Houston, TX 77002
Preferred deal size: \$10MM+
Sectors: E&P, midstream, downstream

**First Infrastructure Capital
Advisors LLC (P)**

Dan Shapiro
Managing Partner
713-337-7980
djs@firstinfracap.com
2800 Post Oak Blvd., Ste. 1950
Houston, TX 77056
Sectors: Midstream, downstream,
power

First Reserve (P)

Neil A. Wizel
Managing Director -
Houston
713-227-7890
nwizel@firstreserve.com
600 Travis St., Ste. 6000
Houston, TX 77002
Sectors: E&P, midstream, OFS/OEM,
downstream

**First Tennessee Bank (C)**

John Lane
Executive Vice President
832-839-5556
jblane@ftb.com
3009 Post Oak Blvd.,
Ste. 1210
Houston, TX 77056
Preferred deal size: \$10MM-\$75MM
Sectors: E&P, midstream

**Five Point Capital Partners (P)**

Matt Morrow
Managing Partner
713-351-0703
matt@fivepointcp.com
825 Town & Country Lane, Ste. 700
Houston, TX 77024
Sectors: Midstream

Five States Energy Capital (P)

Thomas Edwards
Business Development
Associate
972-860-1183
tedwards@fivestates.com
4925 Greenville Ave., Ste. 1220
Dallas, TX 75206
Preferred deal size: \$5MM-\$50MM
Sectors: E&P

**Frost Bank (C)**

Lane Dodds
Senior VP
713-388-7719
lane.dodds@frostbank.com
3707 Richmond Ave.
Houston, TX 77046
Preferred deal size: up to \$100MM
Sectors: E&P, midstream, OFS,
downstream

**Galway Capital LP (I, A)**

Hal Miller
Chairman
713-952-0186
hmiller@galwaygroup.com
3009 Post Oak Blvd., Ste. 950
Houston, TX 77056
Sectors: E&P, midstream, LNG

Glendale Energy Capital (P)

Brent Grundberg
Founder, Managing Partner
832-982-1100
bg@glendalecap.com
440 Louisiana St., Ste. 900
Houston, TX 77002
Preferred deal size: \$10MM-
\$200MM+
Sectors: E&P

Global Energy Capital (P)

Russell L. Sherrill
713-993-7222 x301
info@geclp.com
2415 W. Alabama St., Ste. 220
Houston, TX 77098
Preferred deal size: \$20MM+

Global Infrastructure Partners (P)

Jim Cleary
Managing Director
212-315-8100
jim.cleary@global-infra.com
1345 Ave. of the Americas
New York, NY 10105
Sectors: Midstream, power

GMP Securities (I)

Harris Fricker
CEO
416-367-8600
harrisf@gmpsecurities.com
145 King St. West, Ste. 300
Toronto, ON M5H 1J8

Goldman Sachs & Co (I, P)

Suhail Sikhtian
Co-Head of Global Natural Resources
713-276-3512
suhail.sikhtian@gs.com

1000 Louisiana St., Ste. 550
Houston, TX 77002

GSO Capital Partners (M, P)

Larry Tharp
Managing Director
713-358-1367
Larry.Tharp@gsocap.com
1111 Bagby St.,
Ste. 2050
Houston, TX 77002

**Guggenheim Partners (M, P)**

Mike Beman
Director
713-300-1333
Mike.Beman@
guggenheimpartners.com
1301 McKinney St.
Houston, TX 77002

**Haddington Ventures LLC (P)**

J. Chris Jones
Managing Director
713-532-7992
cjones@hvlvc.com
2603 Augusta, Ste. 900
Houston, TX 77057
Preferred deal size: \$20MM-\$70MM
Sectors: Midstream

Houlihan Lokey (A, I)

J.P. Hanson
Managing Director &
Head of Oil & Gas Group
832-319-5115
jphanson@HL.com
1001 Fannin St., 46th Fl.
Houston, TX 77002
Sectors: E&P, midstream, OFS,
downstream,

**HPS Investment Partners (M, P)**

Jeff Bartlett
Managing Director
713-650-4994
Jeff.Bartlett@
hpspartners.com
700 Louisiana St., Ste. 3850
Houston, TX 77002



Preferred deal size: \$50MM-
\$500MM

Sectors: E&P, midstream, OFS,
power/renewables

Hunt Energy Enterprises (P)

Victor Liu
President
214-978-6505
HEE@HuntEnergyEnterprises.com
1900 North Akard St.
Dallas, TX 75201
Sectors: Tech

Huntington Bank (I)

Stephen Hoffman
Managing Director - Energy Banking
617-316-8910
stephen.hoffman@huntington.com
1 International Place, Ste. 2310
Boston, MA 02110
Sectors: E&P, Midstream

**Iberiabank (C)**

Bryan Chapman
Market President-
Energy Lending
713-624-7731
bryan.chapman@
iberiabank.com
11 Greenway Plaza, Ste. 2900
Houston, TX 77046
Preferred deal size: \$10MM-\$35MM

**Imperial Capital (I)**

Kevin Andrews
Managing Director, Head of Energy
713-892-5614
kandrews@imperialcapital.com
1330 Post Oak Blvd., Ste. 2160
Houston, TX 77056

Independent Bank (C)

Bob Glosson
Senior Vice President, Energy
214-720-1211
bglosson@ibttx.com
2100 McKinney Ave., Ste. 1200
Dallas, TX 75201
Sectors: E&P, midstream, OFS

ING Capital LLC (C, I)

Charles Hall
Managing Director
713-403-2424
charles.hall@ing.com
1221 McKinney St. Ste. 3375
Houston, TX 77010

Intrepid Financial Partners (A, I, P)

Neil Chen
Vice President
646-979-3452
chen@intrepidfp.com
540 Madison Ave.
New York, NY 10022
Sectors: E&P, midstream

Intervale Capital (A, P)

Charles Cherington
Chairman
281-605-3900
charles@intervalecapital.com
1221 McKinney, Ste. 4100
Houston, TX 77010
Sectors: OFS/OEM

**IOG Capital LP (P)**

Michael T. Arnold
Vice President
214-272-2702
marnold@iogcapital.com
2911 Turtle Creek Blvd., Ste. 900
Dallas, TX 75219
Preferred deal size: \$50MM+
Sectors: E&P

**Janney Montgomery Scott LLC (I)**

Joseph Culley
SVP, Head of Capital Markets
215-665-6256
jculley@janney.com
1717 Arch Street
Philadelphia, PA 19103
Sectors: E&P, midstream, OFS, downstream

Jefferies (I)

Steve Straty
Head of Energy Corporate Finance

281-774-2145
sstraty@jefferies.com
3 Allen Center, 333 Clay St., Ste. 1000
Houston, TX 77002

Jefferson Capital Partners (P, M)

Joseph V. Truhe
Investment Manager
985-377-0001
jtruhe@jeffcap.com
#5 Sanctuary Blvd., Ste. 103
Mandeville, LA 70471
Sectors: OFS

Johnson Rice & Co. (I)

Joshua Cummings
Head-Energy Investment Banking
504-584-1247
cummings@jrco.com
639 Loyola Ave., Ste. 2775
New Orleans, LA 70113

JP Morgan (I)

Mike Lister
Group Head - Energy
Corporate Banking
214-965-2891
mike.lister@jpmorgan.com
2200 Ross Ave., 5th Floor
Dallas, TX 75201

**Juniper Capital (P)**

Richard K. Gordon
Partner
713-335-4715
rgordon@juncap.com
2323 S. Shepherd Dr., Ste. 1150
Houston, TX 77019
Preferred deal size: \$25MM-\$75MM

**Kayne Anderson Energy Funds (P)**

Chuck Yates
Managing Partner- Energy
Private Equity Activities
713-493-2000
cyates@kaynecapital.com
811 Main St., 14th Floor
Houston, TX 77002



Preferred deal size: \$50MM-\$200MM

Sectors: E&P, midstream, OFS

Kelso & Company (P)

Lynn Alexander
Managing Director, Investor Relations
212-350-7707
320 Park Ave., 24th Fl.
New York, NY 10022
Sectors: E&P, Midstream

Kessey Capital Partners LLC (A)

Scott Kessey
Managing director
713-385-8245
tpk@kesseycap.com
3016 Ella Lee Lane
Houston, TX 77019



Preferred deal size: \$25MM-\$50MM

KeyBanc Capital Markets (A, C, I)

Keith Buchanan
Managing Director, Head
of Oil & Gas Investment
Banking
713-221-3970
keith.buchanan@key.com
600 Travis St., Ste. 3100
Houston, TX 77002

**Kimmeridge Energy (P)**

Ben Dell
Managing Partner
646-517-7250
Ben.dell@kimmeridgeenergy.com
400 Madison Ave., Ste. 14C
New York, NY 10017
Preferred deal size: \$10MM-\$200MM

**King Capital Partners (P)**

Jill Crombie
Manager
214-360-7450
jill@kcptrs.com
8235 Douglas Ave., Ste. 525
Dallas, TX 75225
Sectors: E&P

KKR (P)

David C. Rockecharlie
Member & Head of Energy Real Assets

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+1 713 260 4620

713-343-5142

David.rockecharlie@kkcr.com

5051 Westheimer Rd., Ste. 300

Houston, TX 77056

Sectors: E&P, midstream, power/
renewables

KP Energy Management (P, M)

Michael R. Keener

713-410-0427

mike@kpenergy.net

940 Gemini, Ste. 200

Houston, TX 77058

Sectors: E&P, midstream, OFS



Ladenburg Thalman & Co. (I)

Barry Steiner

Managing Director

212-409-2000

bsteiner@ladenburg.com

277 Park Ave., 26th Floor

New York, NY 10172

Lazard Ltd. (A, I)

Kevin Bonebrake

Managing Director

713-236-4625

kevin.bonebrake@lazard.com

JPMorgan Chase Tower

600 Travis St., Ste. 3300

Houston, TX 77002

Legacy Texas Bank (C)

Chris Parada

Managing Director -

Head of Energy Finance

214-217-7084

chris.parada@

legacytexas.com

5949 Sherry Lane, Ste. 600

Dallas, TX 75225

Preferred deal size: \$5MM-\$40MM

Liberty Mutual (P)

Avtar Vasu

Executive Managing Director,

Head of Global Private Investments

857-224-7545

Avtar.vasu@lmi.com

175 Berkeley St., MS T22A

Boston, MA 02116

Sectors: E&P, midstream

Lime Rock Partners (P)

Jeffrey Scofield

Managing Director

713-292-9500

js@lrpartners.com

Heritage Plaza

1111 Bagby St., Ste. 4600

Houston, TX 77002

Preferred deal size: \$50MM-
\$150MM

Sectors: E&P, OFS



M1 Energy Capital Mgmt. (A)

Rich Bernardy

President

713-300-1422

rbernardy@mecapital.com

3701 Kirby Ave., Ste. 1086

Houston, TX 77098

Preferred deal size: \$10MM-
\$500MM

Macquarie Bank Ltd. (C, I, M)

F. Brady Parish Jr.

Head of U.S. Oil & Gas

713-275-6810

Brady.parish@macquarie.com

One Allen Center

500 Dallas St., Ste. 3300

Houston, TX 77002

**Macquarie Infrastructure and Real
Estate Assets (P)**

Paul Beck

Senior Managing Director

713-275-6201

paul.beck@

macquarie.com

Level 31, One Allen Center

500 Dallas Street,

Houston TX 77002



Madava Financial (P)

Mark Green

President

713-819-1410

mgreen@

madavafinancial.com

1000 Louisiana St., 69th Fl.

Houston, TX 77002

Preferred deal size: \$25MM-
\$100MM

Sectors: E&P, midstream



MC Credit Partners (P)

Jason Hicks

Managing Director

203-989-9700

2200 Atlantic St., Fifth Fl.

Stamford, CT 06902

Sectors: E&P

Mercer Capital (A)

Bryce Erickson

Senior Vice President

214-468-8411

ericksonb@mercercapital.com

12201 Merit Drive, Suite 480

Dallas, TX 75251

MetalMark Capital (P)

Greg Myers

Partner

212-823-1948

greg.myers@metalmarkcapital.com

1177 Ave. of the Americas, 40th Fl.

New York, NY 10036

Sectors: E&P, midstream, OFS

Mitchell Energy Advisors LLC (A, I)

Michael W. Mitchell

Senior Managing Director

469-916-7480

alopez@mitchellenergypartners.com

7515 Greenville Ave., Suite 905

Dallas, TX 75231

Sectors: E&P, midstream, OFS

Morgan Stanley (I)

Ryan P. Synnott

Managing Director

713-512-6633

Ryan.Synnott@morganstanley.com

600 Travis St., Ste. 3700

Houston, TX 77002

Morgan Stanley Energy Partners (P)

John Moon
Head of Morgan Stanley
Energy Partners
212-761-0591
john.moon@
morganstanley.com
JP Morgan Chase Tower
600 Travis St., Ste. 3700
Houston, TX 77002



Mountain Capital Management (P)

Sam Oh
Managing Director -
Head of Oil & Gas
713-357-9600
sam@mountainlp.com
811 Louisiana St., Ste. 2550
Houston, TX 77002



MSD Partners (P)

Scott Segal
Managing Director, Credit
(212) 303-1650
645 Fifth Ave., 21st Fl.
New York, NY 10022
Sectors: E&P, OFS, midstream

MUFG Union Bank (C, I)

Jamie Conn
Managing Director - Head of Oil &
Gas
713-655-3814
jamie.conn@uboc.com
1100 Louisiana St., Ste. 4850
Houston, TX 77002

Munich RE Reserve Financing Inc. (P)

Chad Mabry
Vice President
832-592-0085
Chad.mabry@mrtl.com
1790 Hughes Landing Blvd., Ste. 275
The Woodlands, TX 77380
Sectors: E&P
Preferred deal size: \$50MM
-\$250MM

Mutual of Omaha Bank (C)

Mike Turner
Market President, Houston
713-405-1570

mike.turner@mutualofomahabank.com
520 Post Oak Blvd., Ste. 700
Houston, TX 77027



Natixis Corporate & Investment Bank (C, I)

Tim Polvado
Head, Energy & Natural Resources,
Americas
713-495-1355
Tim.polvado@natixis.com
333 Clay St., Ste. 3900
Houston, TX 77002

NGP Energy Capital Management (P)

Tony Weber
Managing Partner
972-432-1440
tweber@ngptrs.com
5221 N. O'Connor Blvd.,
11th Floor
Irving, TX 75039
Sectors: E&P, midstream, OFS



NGP Energy Technology Partners (P)

Philip J. Deutch
Managing Partner
202-536-3920
inquiries@ngpetp.com
1750 K Street NW, Ste. 700
Washington, DC 20006
Sectors: OFS, tech, power/renewables

North Hudson Resource Partners (P)

Mark Bisso
Managing Partner
713-936-6560
mbisso@
northhudsonrp.com
600 Travis St., Ste. 4780
Houston, TX 77002
Sectors: E&P



Northland Capital Markets (I)

Adam B. Connors
Managing Director, Investment
Banking
949-600-4152

aconnors@
northlandcapitalmarkets.com
4100 MacArthur Blvd., Ste. 120
Newport Beach, CA 92660



OFS Energy Fund (P)

Bruce Ross
Managing Partner
(713) 580-2722
bross@ofsfund.com
6363 Woodway Dr., Ste. 900
Houston TX 77057
Preferred deal size: \$50MM+

Old Ironsides Energy (P)

Sean O'Neill
Managing Partner
617-366-2033
soneill@oldironsidesenergy.com
10 St. James Ave., 19th Floor
Boston, MA 02116

One Stone Partners LLC (P)

Bob Israel
Managing Partner
212-702-8670
ri@onestone-llc.com
730 5th Ave.
New York, NY 10019

OnyxPoint Global Management (P)

Shaia Hosseinzadeh
Managing Partner
212-235-2013
hosseinzadeh@opglp.com
One World Trade Center, 46th Floor
New York, NY 10007

Orion Energy Partners (P)

Ethan M. Shoemaker
Managing Director
832-390-2524
Ethan@OrionEnergyPartners.com
700 Louisiana St., Ste. 3950
Houston, TX 77002
Preferred deal size: \$25MM-
\$200MM
Sectors: Midstream, OFS, power

ORIX USA Capital (M, P)

Alicia Summers
Director
214-237-2267
1717 Main St., Ste. 1100
Dallas, TX 75201

Sectors: E&P, midstream, OFS, power/renewables

**Outfitter Energy Capital (P)**

George McCormick
Managing Partner
281-402-8185
gmccormick@outfitterenergy.com
711 Louisiana St., Ste. 2160
Houston, TX 77025

Sectors: E&P, midstream

**Parkman Whaling LLC (A, I)**

Darin S. Ackerman
Investment Banking-Energy
713-333-8400
info@parkmanwhaling.com
600 Travis St., Ste. 600
Houston, TX 77002

Pearl Energy Investments (P)

Billy Quinn
Managing Partner
214-308-5273
bquinn@pearl-energy.com
2100 McKinney Ave., Ste. 1675
Dallas, TX 75201

Preferred deal size: \$25MM-\$100MM

Sectors: E&P, midstream, OFS

**Pegasus Bank (C)**

Mynan Feldman
Executive Vice President, Energy
214-353-3070
mfeldman@pegasusbankdallas.com
5940 Forest Lane
Dallas, TX 75230

Preferred deal size: \$5MM-\$10MM+

**Pelican Energy Partners (P)**

Mike Scott
Managing Partner
713-559-7112
mscott@pep-lp.com
2050 W. Sam Houston Parkway S, Ste. 1550
Houston, TX 77042

Preferred deal size: \$10MM-\$30MM

Sectors: OFS/OEM

**Peters & Co. Ltd. (I)**

Christopher Potter
President/CEO
403-261-2206
cpotter@petersco.com
2300 Jamieson Place
308 Fourth Ave. SW
Calgary, Alberta T2P 0H7

Petrie Partners (A, I)

Andrew Rapp
Co-Founder
303-953-6768
andy@petrie.com
1144 Fifteenth St., Ste. 3900
Denver, CO 80202

Sectors: E&P, midstream, OFS

**Petro Capital Group (P)**

Collin Crist
Associate
214-572-2225
collin@pc-funds.com
3710 Rawlins St., Ste. 1000
Dallas, TX 75219

Preferred deal size: \$1MM-\$20MM

Sectors: E&P, OFS

Petro Capital Securities (I)

Trevor Cohen
Managing Director
214-572-0638
trevor@petro-capital.com
3710 Rawlins St., Ste. 1000
Dallas, TX 75219

Preferred deal size: \$25MM-\$500MM

Sectors: E&P, midstream, OFS, downstream, renewables

**PetroCap LLC (P)**

David Hopson
Partner
214-871-7967
dhopson@petrocap.com
3333 Lee Parkway, Ste. 750
Dallas, TX 75219

Preferred deal size: \$25MM-\$75MM

Sectors: E&P

**P.J. Solomon (A, I, C, M, P)**

George R. Ward
Managing Director, Head of Energy
346-571-1592
gward@pjsc.com
333 Clay St., Ste. 4340
Houston, TX 77002

Preferred deal size: \$100MM-\$1B

Sectors: E&P, midstream, OFS

**PinHigh Capital Partners (P)**

Charlie Thompson
713-457-2101
charlie@pinhighcap.com
3900 Essex Lane, Ste. 400
Houston, TX 77027

Preferred deal size: \$1MM-\$10MM

Sectors: E&P, OFS/OEM, downstream

**Pine Brook Road Partners (P)**

Rich Aube
Co-President
832-924-9950
raube@pinebrookpartners.com
1301 McKinney St., Ste. 3550
Houston, TX 77010

Sectors: E&P, midstream, OFS

**Platte River Equity (P)**

Peter Calamari
Managing Director
303-292-7300
info@platteriverequity.com
200 Fillmore St., Ste. 200
Denver, CO 80206

Sectors: E&P, OFS, Midstream

PNC Bank (C)

Tom Byargeon
Managing Director

713-658-3940
tom.byargeon@pnc.com
1200 Smith St., Ste. 830
Houston, TX 77002

Preferred deal size: \$75MM-\$2.5B
Sectors: E&P, midstream, OFS, downstream

Post Oak Energy Capital (P)

Clint Wetmore
Managing Director &
Founding Partner
713-554-9404
wetmore@
postoakenergy.com
34 S. Wynden Dr., Ste. 300
Houston, TX 77056
Sectors: E&P, midstream, OFS



PPHB (I)

Len Paton
Co-founder & Managing Partner
713-580-2710
lpaton@pphb.com
1900 Saint James Place, Ste. 125
Houston, TX 77056
Sectors: OFS/OEM

Production Lending (P)

Ryan Childs
Principal
978-828-1788
rw@productionlending.com
10497 Town and Country Way,
Ste. 700
Houston, TX 77024
Preferred deal size: \$1MM-\$5MM
Sectors: E&P

Premier Capital Ltd. (A)

J.W. Brown
General Partner
214-808-3540
jbrown@precap.com
3604 Potomac Ave.
Dallas, TX 75205
Preferred deal size: \$10MM-\$100MM

Prospect Capital Corp. (P)

John Barry
CEO
212-448-1858
jbarry@prospectstreet.com

10 East 40th St., 42nd Fl.
New York, NY 10016
Sectors: OFS/OEM

Prudential Capital Group (P)

Brian N. Thomas
Managing Director,
EFG Oil & Gas
214-720-6216
brian.thomas@
prudential.com
2200 Ross Ave., Ste.
4300 Dallas, TX 75201



Preferred deal size: Senior debt
\$10MM-\$300MM; Junior debt/equity:
\$10MM-\$50MM



Quantum Energy Partners (P)

Eric Nielsen
Managing Director-Business
Development
713-452-2050
enielsen@quantumep.com
1401 McKinney St., Ste. 2700
Houston, TX 77010
Preferred deal size: \$300MM-\$500MM
Sectors: E&P, midstream, OFS, renewables

Quintana Energy Partners (P)

Rogers Herndon
President & CEO
832-518-4094
rherndon@qeplp.com
1415 Louisiana St., Ste. 2900
Houston, TX 77002
Preferred deal size: \$10MM-\$125MM
Sectors: E&P, OFS



R.W. Baird (I, M)

T. Frank Murphy
Managing Director & Co-Head of
Energy Group
314-445-6532

fmurphy@rwbaird.com
8000 Maryland Ave.
St. Louis, MO 63105

Raymond James (I)

Michael P. Ames
Managing Director
713-278-5268
mike.ames@
raymondjames.com
5847 San Felipe, Ste. 1800
Houston, TX 77057



RBC Capital Markets (C, I)

Jim Allred
Head of U.S. Energy-Corporate
Banking
713-403-5641
jim.allred@rbccm.com
Williams Tower
2800 Post Oak Blvd., Ste. 3900 &
4325
Houston, TX 77056

Red Bird Capital (P)

Hunter Carpenter
Partner
214-238-4004
hcarpenter@
redbirdcap.com
667 Madison Ave., 16th Fl.
New York, NY 10065
Sectors: E&P, midstream, OFS



Regions Bank (C)

Brian D. Tate
Executive Managing
Director and EVP
Head of Energy &
Natural Resources Group
Regions Securities LLC
980-287-2811
brian.tate@regions.com
615 South College St., Ste. 400
Charlotte, NC 28202
Preferred deal size: \$100MM-\$2B
Sectors: E&P, midstream, downstream



Rice Investment Group (P)

Daniel Rice
Partner
Info@RiceInvestment
Group.com
102 East Main St.,



Second Story

Carnegie, PA 15106

Preferred deal size: \$1MM-\$40MM

Sectors: E&P, midstream, OFS, tech

Ridgemont Equity Partners (P)

John Shimp

Partner

704-944-0914

Jshimp@ridgemontep.com

150 North College St., Ste. 2500

Charlotte, NC 28202

Preferred deal size: \$25MM-\$125MM

Sectors: E&P

River Capital Partners (A, P)

Samuel P. McNeil Jr.

512-814-7411

smcneil@rc-advisors.com

Preferred deal size: \$10MM-\$200MM

Sectors: E&P, OFS, midstream, downstream, tech

Riverstone Holdings LLC (P)

John Lancaster Jr.

Managing Director-Energy Industry

212-993-0076

john@riverstonellc.com

712 5th Ave., Ste. 36

New York, NY 10019

Sectors: E&P, midstream, OFS, power/renewables

Rivington Holdings LLC (A, P)

Christopher R. Wagner

Managing Partner

713-750-0900

cwagner@rivingtoncap.com

609 Main St., Ste. 3900

Houston, TX 77002

Preferred deal size: \$50MM-150MM

Sectors: E&P

Rockland Capital Energy Investments LLC (P)

Scott Harlan

281-863-9000

info@rocklandcapital.com

24 Waterway Ave., Ste. 800

The Woodlands, TX 77380

Sectors: Midstream, power/renewables

Roth Capital Partners (I)

Alexander Montano

Managing Director

949-720-5770

amontano@roth.com

888 San Clemente Dr.

Newport Beach, CA 92660



Sage Road Capital (P)

Josh L. Batchelor

Managing Partner & Co-Founder

713-364-1400

info@sagerc.com

2121 Sage Rd., Ste. 325

Houston, TX 77056

Preferred deal size: \$20MM-\$50MM

Sectors: E&P

Sand River Capital Advisors LLC (P)

Jason Whitt

Managing Partner

432-848-3020

jason.whitt@sandriver.com

3300 North A St., Bldg. 2, Ste. 101

Midland, TX 70705

SCF Partners (I, P)

Andrew L. Waite

Co-President

713-227-7888

await@scfpartners.com

600 Travis St., Ste. 6600

Houston, TX 77002

Sectors: OFS, tech

Scotiabank (A, I, C)

Doug Reynolds

Managing Director &

Head-Corporate Banking

Energy

713-752-0900

douglas.reynolds@scotiabank.com

711 Louisiana St., Ste. 1400

Houston, TX 77002



Seaport Global Securities LLC (I)

Michael D. Bodino

Managing Director,

Investment Banking

817-771-5686

mbodino@

seaportglobal.com

8115 Preston Road, Ste. 415

Dallas, TX 75225



SFC Energy Partners (M, P)

Mitch Solich

Senior Managing Director

303-893-5007

msolich@sfcpartners.com

1225 17th St., Ste. 2575

Denver, CO 80202

Sectors: E&P



Simmons Energy (I)

A Division of Piper Jaffray

Damon Box

Managing Director, Energy Investment Banking

713-546-7224

damon.f.box@simmonspjc.com

609 Main St., Ste. 3800

Houston, TX 77002

Sectors: E&P, OFS

Spencer Rippstein

Managing Director, Head of

Midstream/Downstream

713-546-7326

spencer.w.rippstein@simmonspjc.com

609 Main St., Ste. 3800

Sectors: Midstream, downstream

Skyway Capital Markets (C)

Eric Alfuth

Managing Director-Head of Energy Group

813-210-9522

100 N. Tampa St., Ste. 3550

Tampa, FL 33602

Sectors: E&P

**Sprott Global Resources
Investment Ltd. (P)**

Rick Rule
Founder, Global Companies
800-477-7853

rrule@sprottglobal.com
1910 Palomar Point Way
Carlsbad, CA 92009

Preferred deal size: \$10MM-
\$100MM

Stellus Capital Management (P)

Todd A. Overbergen
Partner

713-292-5402

toverbergen@
stelluscapital.com

4400 Post Oak Parkway, Ste. 2200
Houston, TX 77027

Preferred deal size: \$30MM-
\$100MM



Stephens Group LLC (I, P)

Jim Jacoby
Managing Director

501-377-3401

jjacoby@stephensgroup.com

100 Morgan Keegan Dr., Ste. 500
Little Rock, AR 72202

Stephens Inc. (I)

Keith Behrens
Managing Director,
Group Head
Energy Investment

Banking Group
214-258-2762

keith.behrens@stephens.com
300 Crescent Court, Ste. 600
Dallas, TX 75201



Stifel Nicolaus & Co. (A, I, P)

Christian Gibson

Managing Director, Co-Head, Energy
Investment Banking

713-237-4515

Chris.gibson@stifel.com

1000 Louisiana St., Ste. 5250
Houston, TX 77002

Preferred deal size: \$50MM+
Sectors: E&P, OFS

**Stonepeak Infrastructure Partners
(P)**

Jack Howell

Senior Managing Director
713-345-1331

howell@stonepeakpartners.com
600 Travis St., Ste. 6290
Houston, TX 77002

Sectors: Midstream, power/
renewables

**SunTrust Robinson Humphrey
(A, I)**

Jim Warren

Managing Director, Head of Energy
Investment Banking

713-247-7602

Jim.warren@suntrust.com
333 Clay Street, 41st Floor
Houston, TX 77002



Tailwater Capital (P)

Edward Herring
Managing Partner

214-269-1183

eherring@

tailwatercapital.com

20121 McKinney Ave., Ste. 1250
Dallas, TX 75201

Sectors: Upstream, midstream



Talara Capital Management (P)

David Zusman

Managing Partner

713-437-3450

privatedeals@

talaracapital.com

712 Main St., Ste. 920
Houston, TX 77002

Preferred deal size: \$50MM-
\$150MM

Sectors: E&P



Texas Capital Bank (C, I)

Lester J.N. Keliher

Executive Vice President

469-399-8562

lester.keliher@

texascapitalbank.com



2000 McKinney Ave., Ste. 700
Dallas, TX 75201

Preferred deal size: \$10MM-\$1B

Sectors: E&P, midstream

TPG Capital (P)

Roman Batichev

212-601-4719

rbatichev@tpg.com

888 7th Ave., 35th Fl.

New York, NY 10106

Preferred deal size: \$300MM-
\$500MM

Sectors: E&P, midstream, OFS

**Trilantic Capital Management LP
(P)**

Glenn Jacobson

Partner

512-362-6252

gjacobson@trilantic.com

301 Congress Ave.,

Ste. 2050

Austin, TX 78701

Sectors: E&P, midstream



Tudor, Pickering, Holt & Co. (I)

Bobby Tudor

Chairman

713-333-7100

btudor@TPHco.com

1111 Bagby St., 49th Fl.

Houston, TX 77002



U.S. Bank (C)

Mark Thompson

Senior Vice President

303-585-4213

mark.thompson@

usbank.com

950 17th St., 4th Fl.

Denver, CO 80202

Preferred deal size: \$20MM-
\$150MM



UBS Investment Bank (I)

Miles Redfield
 Managing Director
 713-331-4685
 miles.redfield@ubs.com
 1000 Main St., Ste. 2750
 Houston, TX 77002

U.S. Capital Advisors LLC (I)

Managing Partner
 David King
 713-366-0530
 dking@uscallc.com
 4444 Westheimer Rd., Ste. G500
 Houston, TX 77027
Sectors: Midstream

**Varde Partners (P)**

Markus Specks
 Managing Director
 713-335-4470
 energy@varde.com
 609 Main St., Ste. 3925
 Houston, TX 77002
Sectors: Midstream

Vortus Investment Advisors (P)

Brian Crumley
 Managing Partner
 817-945-2400
 bcrumley@vortus.com
 407 Throckmorton St.,
 Ste. 560
 Fort Worth, TX 76102



Preferred deal size: \$50MM-\$75MM
Sectors: E&P

**Warburg Pincus LLC (P)**

Peter R. Kagan
 Managing Director & Head of Energy
 212-878-0600
 Peter.kagan@warburgpincus.com
 450 Lexington Ave.
 New York, NY 10017
Sectors: E&P, midstream, OFS,
 downstream, power/renewables

Waterous Energy Fund (P)

Michael Buckingham
 Managing Director
 281-822-5680
 Michael.buckingham@waterous.com
 Heritage Plaza
 1111 Bagby St., Ste. 2340
 Houston, TX 77002
Preferred deal size: \$200MM-
 \$400MM

Wells Fargo Energy Group (C)

Bart Schouest
 Executive VP &
 Group Head
 713-391-1850
 bart.schouest@
 wells Fargo.com
 1000 Louisiana St., Floor 12
 Houston, TX 77002



Chad Clark
 Managing Director, Midstream
 Team Lead
 214-397-1003
 chad.m.clark@wellsfargo.com
Sectors: Midstream

Wells Fargo Securities LLC (I)

Scott Warrender
 Managing Director & Group Head-
 E&P IB
 713-346-2823
 scott.warrender@wellsfargo.com
 1000 Louisiana St., 12th Fl.
 Houston, TX 77002

West Texas National Bank (C)

Sid Smith
 Senior Vice President Oil & Gas
 Lending
 432-685-6520
 smith@wtmb.com
 300 North Mariefeld, Ste. 100
 Midland, TX 79701

White Deer Energy (P)

Thomas Edelman
 Managing Partner
 713-581-6900
 tedelman@
 whitedeenergy.com
 700 Louisiana St., Ste. 204
 Houston, TX 77002



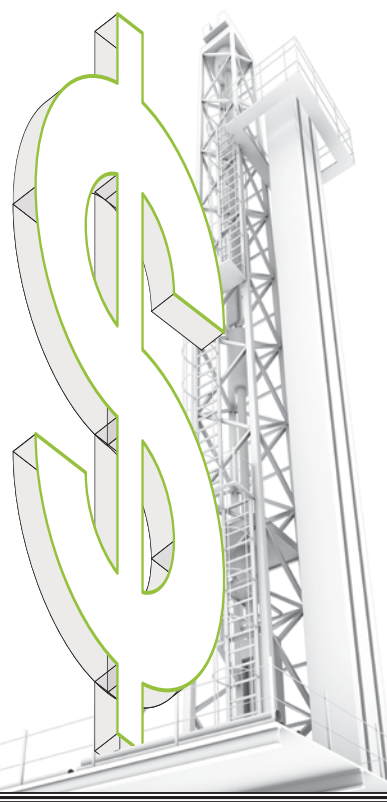
Preferred deal size: \$50MM-
 \$150MM

Wilcox Investment Bankers (I)

Jason Wilcox
 Founder & Managing Director
 972-691-2080
 jason@wilcoxinvestmentbankers.com
 106 N. Denton Tap Road,
 Ste. 210-218
 Coppell, TX 75019
Preferred deal size: \$20MM-
 \$200MM

**Yorktown Partners LLC (P)**

Peter Leidel
 Partner
 212-515-2113
 pleidel@
 yorktownenergy.com
 410 Park Ave., Ste. 1900
 New York, NY 10022
Preferred deal size: \$10MM-\$70MM
Sectors: Upstream, midstream



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Holley, Darrell	ABN AMRO Bank USA	McMullen, William	Bayou City Energy Management LLC	Segal, Scott	MSD Partners
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Israel, Bob	One Stone Partners LLC	Murphy, T. Frank	R.W. Baird	Solich, Mitch	SFC Energy Partners
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Johnson, Scott	Chiron Financial LLC	Oh, Sam	Mountain Capital Management	Synnott, Ryan P.	Morgan Stanley
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Lane, John	First Tennessee Bank	Rexrode, Stuart	BlueRock Energy Partners	Waldrip, Bill	EnCap Flatrock Midstream
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Markham, Murphy	EnCap Investments LP	Schlumberger, Marceau	Coral Reef Capital	Wilcox, Jason	Wilcox Investment Bankers
Martin, Andrew J.	Challenge Group International LLC	Schouest, Bart	Wells Fargo Energy Group	Wilson, Dale	Cathay Bank
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McCormick, George	Outfitter Energy Capital	Scott, Ronnie	Development Capital Resources	Yates, Chuck	Kayne Anderson Energy Funds
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 BBVA Compass
 BOK Financial
 Capital One Energy Banking
 Cathay Bank
 CIT Energy Finance
 Citi
 City Bank
 Comerica Inc.
 Community National Bank

Credit Agricole
 Crestmark Bank
 CrossFirst Bank
 CSG Investments Inc.
 DNB Bank
 East West Bank
 FifthThird Bank
 First Tennessee Bank
 Frost Bank
 Iberiabank
 Independent Bank
 ING Capital LLC
 KeyBanc Capital Markets
 Legacy Texas Bank
 Macquarie Bank Ltd.
 MUFG Union Bank
 Mutual of Omaha Bank
 Natixis Corporate & Investment Bank
 P.J. Solomon
 Pegasus Bank
 PNC Bank
 RBC Capital Markets
 Regions Bank
 Scotiabank
 Skyway Capital Markets
 Texas Capital Bank
 U.S. Bank
 Wells Fargo Energy Group
 West Texas National Bank

INVESTMENT BANKS

ABN AMRO Bank USA
 Aegis Energy Advisors Corp.
 Allegro Energy Capital Corp.
 AltaCorp Capital
 Amegy Bank of Texas
 Auria Capital
 Bank of America Merrill Lynch
 Barclays
 BB&T Capital Markets
 BBVA Compass
 Blum & Co. Inc.
 BMO Capital Markets
 Capital One Energy Banking
 Capital One Securities
 Cascadia Capital LLC
 CC Natural Resource Partners
 Challenge Group International LLC
 Chambers Energy Capital
 Chiron Financial LLC
 CIBC
 CIT Energy Finance
 Citi

Cowen Securities LLC
 Credit Agricole
 Credit Suisse Securities (USA)
 DNB Bank
 East West Bank
 Energy Capital Solutions LP
 Enstream Capital
 Entoro Capital LLC
 Evercore
 Farlie Turner & Co.
 Galway Capital LP
 GMP Securities
 Goldman Sachs & Co
 Houlihan Lokey
 Huntington Bank
 Imperial Capital
 ING Capital LLC
 Intrepid Financial Partners
 Janney Montgomery Scott LLC
 Jefferies
 Johnson Rice & Co.
 JP Morgan
 KeyBanc Capital Markets
 Ladenburg Thalman & Co.
 Lazard Ltd.
 Macquarie Bank Ltd.
 Mitchell Energy Advisors LLC
 Morgan Stanley
 MUFG Union Bank
 Natixis Corporate & Investment Bank
 Northland Capital Markets
 P.J. Solomon
 Parkman Whaling LLC
 Peters & Co. Ltd.
 Petrie Partners
 Petro Capital Securities
 PPHB
 R.W. Baird
 Raymond James
 RBC Capital Markets
 Roth Capital Partners
 SCF Partners
 Scotiabank
 Seaport Global Securities LLC
 Simmons Energy
 Stephens Group LLC
 Stephens Inc.
 Stifel Nicolaus & Co.
 SunTrust Robinson Humphrey
 Texas Capital Bank
 Tudor, Pickering, Holt & Co.
 U.S. Capital Advisors LLC
 UBS Investment Bank
 Wells Fargo Securities LLC
 Wilcox Investment Bankers

MEZZANINE

Amegy Bank of Texas
 Angelo Gordon & Co.
 Apollo Global Management LP
 Barclays
 Bay Capital Corp.
 Blackgold Capital Management
 BlueRock Energy Partners
 Carlyle Group LP
 Cowen Securities LLC
 CSG Investments Inc.
 Development Capital Resources
 EIG Global Energy Partners
 Energy Capital Partners
 GSO Capital Partners
 Guggenheim Partners
 HPS Investment Partners
 Jefferson Capital Partners
 KP Energy Management
 Macquarie Bank Ltd.
 ORIX USA Capital
 P.J. Solomon
 R.W. Baird
 SFC Energy Partners

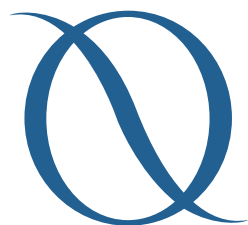
PRIVATE EQUITY

ACON Investments
 Alinda Capital Partners LLC
 Allegro Energy Capital Corp.
 Altira Group LLC
 Angelo Gordon & Co.
 Apollo Global Management LP
 Ara Partners Group
 ARC Financial Corp.
 Arcadius Capital Partners
 ArcLight Capital Partners
 Ares Management LP
 Barclays
 Bayou City Energy Management LLC
 Benefit Street Partners
 Blackgold Capital Management
 BlueRock Energy Partners
 Bluffview Energy Capital
 Bregal Energy
 Brycap Investments Inc.
 BSI Energy Partners
 Cadent Energy Partners LLC
 Canaan Resource Partners
 Carlyle Group LP
 Carmelian Energy Capital
 Castllake
 CC Natural Resource Partners
 CCMP Capital Advisors LLC

Cibolo Energy Partners
 Coral Reef Capital
 Cottonwood Venture Partners
 Cowen Securities LLC
 Cresta Energy Capital
 Crestview Partners
 CSL Capital Management
 Denham Capital Management
 Development Capital Resources
 Donovan Ventures LLC
 Drillcore Energy Partners LLC
 Edge Natural Resources
 EIG Global Energy Partners
 EIV Capital LLC
 EnCap Flatrock Midstream
 EnCap Investments LP
 Energy Capital Partners
 Energy Special Situations Fund
 Energy Spectrum Capital
 Energy Trust Partners
 Energy Value Fund LLC
 Eschelon Advisors
 EV Private Equity
 Evercore
 First Infrastructure Capital Advisors LLC
 First Reserve
 Five Point Capital Partners
 Five States Energy Capital
 Glendale Energy Capital
 Global Energy Capital
 Global Infrastructure Partners
 Goldman Sachs & Co
 GSO Capital Partners
 Guggenheim Partners
 Haddington Ventures LLC
 HPS Investment Partners
 Hunt Energy Enterprises
 Intervale Capital
 Intrepid Financial Partners
 IOG Capital LP
 Jefferson Capital Partners
 Juniper Capital
 Kayne Anderson Energy Funds
 Kelso & Company
 Kimmeridge Energy
 King Capital Partners
 KKR
 KP Energy Management
 Liberty Mutual
 Lime Rock Partners
 Macquarie Infrastructure and Real Estate Assets
 Madava Financial
 MC Credit Partners
 MetalMark Capital
 Morgan Stanley Energy Partners

Mountain Capital Management
 MSD Partners
 Munich RE Reserve Financing Inc.
 NGP Energy Capital Management
 NGP Energy Technology Partners
 North Hudson Resource Partners
 OFS Energy Fund
 Old Ironsides Energy
 One Stone Partners LLC
 OnyxPoint Global Management
 Orion Energy Partners
 ORIX USA Capital
 Outfitter Energy Capital
 P.J. Solomon
 Pearl Energy Investments
 Pelican Energy Partners
 Petro Capital Group
 PetroCap LLC
 Pine Brook Road Partners
 PinHigh Capital Partners
 Platte River Equity
 Post Oak Energy Capital
 Production Lending
 Prospect Capital Corp.
 Prudential Capital Group
 Quantum Energy Partners
 Quintana Energy Partners
 Red Bird Capital
 Rice Investment Group
 Ridgemont Equity Partners
 River Capital Partners
 Rivington Holdings LLC
 Rockland Capital Energy Investments LLC
 Sage Road Capital
 Sand River Capital Advisors LLC
 SCF Partners
 SFC Energy Partners
 Sprott Global Resources Investment Ltd.
 Stellus Capital Management
 Stephens Group LLC
 Stifel Nicolaus & Co.
 Stonepeak Infrastructure Partners
 Tailwater Capital
 Talara Capital Management
 The Blackstone Group
 The Energy & Minerals Group
 TPG Capital
 Trilantic Capital Management LP
 Varde Partners
 Vortus Investment Advisors
 Warburg Pincus LLC
 Waterous Energy Fund
 White Deer Energy
 Yorktown Partners LLC

This announcement appears as a matter of record only.



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Private equity fund focused on partnering with proven management teams that have a strong operational track record and sustainable competitive advantages within the upstream, midstream, oilfield services, energy technologies and renewable energy sectors.



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GLOBAL HEADQUARTERS

9 West 57th Street
New York, New York

Greg Beard

Private Equity

(212) 822-0750

HOUSTON OFFICE

700 Louisiana Street
Houston, Texas

Dan Vogel

Credit

(212) 822-0740