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This year we are celebrating EnCap's 25th anniversary. It is a time to reflect on the collective success of our remarkable team of investment professionals and the 200 plus portfolio companies that have been part of the EnCap family. We are proud of the top quartile returns we have consistently generated through multiple hydrocarbon price cycles, and we are most appreciative of the long standing and ongoing support of our 250 institutional partners. Our industry has evolved dramatically over the last 25 years, however, one thing has always remained the same: our people and their unwavering commitment to excellence.

Thank you to the members of the EnCap team, our investors, and the oil and gas management teams EnCap has backed since 1988.

Managing Partners: David B.Miller Gary R.Petersen D. Martin Phillips Robert L.Zorich



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L– R: Managing Partners Gary R. Petersen, D. Martin Phillips, Robert L. Zorich, and David B. Miller

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Central to EnCap's investment success is the ability to partner with the energy industry's most exceptional management teams. Over the past 25 years, EnCap has raised 17 institutional funds, managed more than \$18 billion and made investments in over 200 companies.

EnCap, as the industry's trusted private equity partner of choice, continues to benefit from the opportunity to re-back successful management teams, with repeat teams representing more than 50 percent of commitments made in our last several funds.

Since 2008, EnCap has sold 35 companies resulting in \$3.5 billion of distributed wealth to our management teams.

We look forward to the next 25 years and the opportunity to continue partnering with the industry's best management teams.

ENCAP INVESTMENTS L.P. Celebrating 25 years.

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SUPERSTARS IN PRIVATE EQUITY

Then opportunity, technology and oil and gas assets collide with capital and contacts, you get a very bright supernova. That's what happens when an oil and gas entrepreneur and a private-equity provider shake hands.

At any given time, as many as 300 or 350 E&P and midstream firms are being backed by private equity. All are charging along on some part of the spectrum, from the starting gate to a trading symbol on a stock exchange.

Numbers and data are always moving targets, but it is possible to estimate how vibrant the private-equity world is, and to what degree it considers oil and gas as a key investment theme.

According to Preqin, a database consul-

tancy on private equity, there are some 379 private-equity firms that will consider investing in the oil and gas industry in some way, whether upstream, midstream, technology or other. Of these, 106 have raised a fund with some exposure to oil and gas, raising an aggregate \$102 billion in the past decade.

To get even more specific, 90 of the 379 focus on oil and gas exclusively, or have it as one of their core strategies. Of these 90, some 52 have raised a fund specifically targeting oil and gas, and since 2003, those funds have totaled \$68.7 billion.

The Weidner Advisors' Private Capital Energy Index, which also includes private debt or mezzanine instruments as well as pure equity, tallied some \$41.9 billion available for energy investing at year-end 2012, the most in the past 10 years, out of \$66.4 billion in initial capital raised in that year.

However you slice it, plenty of private equity is looking for a home among the rigs and midstream facilities that abound throughout the U.S., and increasingly, in Canada and abroad.

The size of private-equity funds has grown considerably from early days in the late 1980s, when a \$300-million fund was considered substantial. Today, it is not uncommon for an upstream-dedicated fund to close at \$3- or \$4 billion.

The message is simple: Limited partners among the institutional-investor crowd love energy and the kinds of returns it can deliver.

This special report celebrates the ingenuity and drive of private-equity providers and the companies they have helped to achieve success.

> - Leslie Haines, Editor-in-chief, Oil and Gas Investor



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Exit strategies such as fixed time-frames or quick flips are giving way to other goals and return orientations.

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PRIVATE-EQUITY HISTORY

Gentlemen: Start Your Engines

Whatever the track conditions, private-equity players have fueled the E&P industry.

By Leslie Haines

il and gas companies need fuel to drill wells, acquire assets and ultimately, drive across the finish line to payout. That fuel is capital. Today, with the advent of expensive horizontal wells being drilled over vast acreage in the resource plays, the need for high-powered fuel is probably greater than ever before in the oil and gas industry's history. Fortunately, the providers of private equity have become more numerous, more structured and more sophisticated over the past 30 years—and the amount of capital they have to deploy is, by all accounts, substantial.

"The debate today among people wanting to start an oil and gas company is where to get the money, as there is such a staggering amount of it available. In the old days, there was no debate—you went to friends and family," says Jeffrey Harris, founder of Global Reserve Group LLC, and a former principal with Warburg Pincus LLC, one of the larger privateequity funds that invest in energy.

Indeed, various estimates say as much as \$60 billion

of private equity is available for energy, and at any given time, some 300 upstream companies are being backed by it.

The degree to which private-equity players look at oil and gas turns on the economic cycles in play at the time: inflation, availability of competing bank or mezzanine debt, interest rates, oil and gas prices, drilling costs, competition.

In the 1980s, institutional investors such as the Gillette pension fund, Aetna Life & Casualty and some college endowments became limited partners in one-off investments, but today, that has evolved. They have been attracted to the returns of the oil and gas industry for a long time. But in the earliest days, as is true today, oil and gas were considered riskier alternatives to mainstream investment choices. Then, oil and gas often took the form of one-off deals and opportunistic ideas. You had to know somebody.

Today, it's a different world. Institutions play a bigger role than ever before, investing directly, or more likely, via privateequity aggregators that have become big business in and of themselves—raising multibillion-dollar funds.

In turn, the aggregators deploy dollars into the upstream, oilfield services and midstream sectors. Intermediaries and advisors of all sizes also have emerged in the past decades; they marry the people with good E&P ideas with the people who have capital.

Large funds and specialist funds have changed their appetite

for risk over time, moving to exploration and international opportunity, such as when Warburg Pincus funded Kosmos Energy, an E&P focused on deepwater exploration offshore Africa.

It all started when institutional investors sought alternatives to stocks and bonds and real estate, and E&P firms sought outside capital beyond bank debt. Northwestern Mutual, the Milwaukee-based "Quiet Company" insurance giant, spent \$80 million in the mid-1970s on Gulf of Mexico lease sales. Aetna bought interests in onshore producing properties in that era as well, after some years of buying oil and gas equities and making loans to the oil patch. Pension funds such as that of GE also invested from time to time in private placements.

"If you go back far enough, when Wall Street firms were all partnerships, at Lehman Brothers in the 1950s and 1960s, there was a partner there who helped fund Kerr-McGee. But it was just taking opportunities as they came over the transom and putting in your own equity," recalls Mike McMahon, cofounder and managing director at Pine Brook, one of the large PE firms that today backs energy.

Several limited partnerships in that era were composed entirely of institutional investors and this arrangement became more common, especially when oil prices soared from 1975 to 1981. They even funded drilling, back when drilling was far riskier than it is today—no horizontal drilling, no 3-D seismic, no multistage fracturing. Unconventional resources were unheard of. What's a shale play?

In 1981, Oil and Gas Investor reported that pension funds seeking passive income were increasingly drawn to oil and gas. They would typically buy a note from an oil company, secure it with production, and get a royalty interest on the back end once the principal and interest was repaid. This debt with an equity kicker, or mezzanine, is still used today. Indeed, many of the current PE providers started by providing mezzanine capital, then over time they migrated to providing straight equity.

Passive investors-both individuals and institutions-in public and private drilling funds or joint ventures-funded about 22% of total U.S. onshore drilling expenditures from 1977 to 1981, according to data at the time.

"It was boom time in the oil patch, so there was a lot of pressure on institutions to invest directly in oil and gas, and to have an alternative to public securities in their portfolio," says McMahon. "It put energy on the radar screens of the LPs (limited partners)."

In 1981, Torch Energy Advisors served institutions by vetting their oil and gas opportunities and it managed their oil and gas portfolios, or raised funds from them to re-invest in the industry.

"So many people were running around going to these institutions, they felt they needed people with specific oil industry knowledge to advise them," says Mike Harvey, CEO of Stonegate Petroleum in Houston, who since the 1980s has accessed private equity several times, first for his employer, Roy Huffington, and in 1987 for his first start-up of many, GulfStar Petroleum.

Joint ventures take the headlines today, but they have always been a popular fuel for growing E&P companies. In 1983, Metropolitan Life Insurance Co. and New England Mutual put up \$234 million with Conoco, (a DuPont unit at the time), to explore in 14 states. Indeed, according to a survey by Lawrence Energy Associates and Arthur Andersen in 1983, direct institutional commitments to oil and gas (through production or drilling partnerships and joint ventures) surpassed \$1 billion for the first time.

Boom and bust

The 1980s were a volatile time, setting the stage for the need for private equity to join the race. In the early 1980s, inflation soared and interest rates rose to 18%. The Arab Oil Embargo—40 years ago this year—came into play. Oil prices were going to go to \$100 and beyond, the consensus said.

It didn't happen. A formerly robust U.S. rig count of more than 4,000 rigs plummeted and many oilpatch banks failed. Oil prices sunk to new lows. Investors lost a lot of money from their oily forays.

In 1983, a new way to offset these risks had arrived, when crude oil futures began trading on the New York Mercantile Exchange. Then in October 1987, the stock market crashed, complicating investment decisions and throwing the market into disarray.

Insurance companies had natural resource investing on their minds, as inflation was eating away at the returns of their traditional bond portfolios, recalls Bill Weidner of Weidner Advisors. They started taking direct working interests as a hedge.

"Many generalist equity firms started looking at oil and gas. At the time, I think TCW [Trust Co. of the West] and First Reserve Corp. offered debt with equity kickers. In fact many of the deals back then were mezzanine in nature. The banks were just gone," Weidner says.

"Everybody's thinking was colored by inflation. Mezzanine became very attractive to institutions."

Alas, as the bust lengthened through the 1980s, capital dried up. Natural gas was priced too low to be economic to drill. Clever new ideas began to emerge-they had to. This turmoil spawned new opportunities, as turmoil always does.

This was the era when private equity came to the fore in a new way. First Reserve Corp. was formed by Bill McCauley and John Hill, initially investing mostly in the service sector and later, moving into the upstream. In 1988, Ken Hersh, Gamble Baldwin and David Albin started Natural Gas Partners. Also in 1988, four commercial bankers formed EnCap Investments: Robert Zorich, Gary Petersen, David Miller and Marty Phillips.



Many observers cite Warburg, founded in the 1960s, as an early mover into funding start-up E&P companies, as opposed to placing growth capital with an established E&P. It had invested in old-style drilling funds in the early 1980s, but in 1988, it made what former principal Jeffrey Harris calls "the first traditional PE approach" by funding a start-up, Newfield Exploration Co. Harris, now with Global Reserve Group LLC, says, "It was really a launching point for structuring a way for PE to get into oil and gas in a new way."

When investment banker Howard Newman left Morgan Stanley & Co. to join Warburg and told Lionel Pincus what he wanted to do, Pincus said, "We don't invest in energy." But their first successful transaction was backing Newfield to build an E&P company, rather than just investing in a drilling fund.

What was it that these pioneers saw? They recognized that oil and gas is a capital-intensive business that devours capital. Returns can be hit or miss, but when the drill bit hits, you're in for the ride of your life.

Then too, when natural gas prices crashed and stayed low for several years, the so-called gas bubble, savvy institutions and E&P executives saw an opportunity to invest at the low point. Surely gas prices would rebound? They turned out to be right, even if it took longer than they expected.

A new wave

By the late 1980s, bigger, more structured groups were creating a new business model: aggregate capital from many institutions, manage oil and gas direct-equity investments for them, and use the money to grow new E&P companies. These specialized aggregators included EnCap, Warburg, First Reserve and NGP. Some were generalist, but the new, energy-dedicated firms also started around this time

One of Kayne Anderson's early energy investments was prescient: a midstream deal with Plains All-American Pipeline for \$56 million, in 1999. Today the investment is worth billions, says Bob Sinnott, CEO, Kayne Anderson Capital Advisors. Kayne has \$24 billion under management, with over \$20 billion of that in energy-including \$4.3 billion in upstream private equity.

"We started investing in oil and gas because it was 'niche-y' and a lot of smart people had left the industry after the tough 1980s," Sinnott recalls. Its first standalone energy fund was in 1998, for \$112 million. Since then, it has backed 90 companies, with about 45 E&Ps in the portfolio currently.

Its Energy Fund VI is \$1.6 billion, and "it's nearly all committed and we're only a year and a half into it," he says. Approximately 10 of the management teams it is backing today are repeat teams, another trend that has developed over the years.

Early on, Kayne backed legendary Calgary oilman Clayton Woitas to develop a shallow gas field in Saskatchewan. It backed equally legendary Dallas independent Bobby Lyle early in Lyco's foray into new ground-the Bakken shale in North Dakota.

"He would drill a well, go to his bank and get a loan against that well, then drill another. We gave him enough capital to accelerate what he was doing," Sinnott says.

Through the 1990s, the recession and the real estate bust



MILEPOSTS IN THE RACE

1983

Yorktown Partners LLC formed to focus on private equity and venture capital for the energy sector. First Reserve Corp. is formed. Since then, it has invested in approx. 450 energy-related companies.

Trust Co. of the West (TCW) formed (now called EIG), to invest in oil, gas, coal and other energy.

Trading in crude oil futures begins on Nymex.

1987

First Reserve diversifies beyond E&P to invest in service companies, eventually owning Dresser, for example.

1988

EnCap Investments LP formed. It has since funded more than 200 energy-related companies.

Natural Gas Partners formed. It has since funded more than 200 energy-related companies.

Trust Co. of the West closes TCW Oil & Gas Equity Fund with \$65 million.

White Deer Energy formed by Tom Edelman and Ben A. Guill to invest in middle-market E&P, energy service and infrastructure firms. It now manages \$2.2 B in two energy funds.

1990

Henry Hub natural gas futures begin trading on Nymex. Apollo Global Management LLC formed to invest in private equity and credit, across nine industries including energy.

1991

GE Energy Financial Services makes its first oil and gas investment. It has since invested more than \$3.9 B and loaned \$2.2 B for oil and gas reserves.

Cosco Capital Management LLC formed to source capital for E&Ps and analyze investments for institutions.

1992

EnCap Investments closes Secured Energy Investment Fund II with \$115 million, to provide non-recourse financing to oil and gas firms.

First Reserve Corp. closes Fund VI with \$161 million. PetroCap in Dallas forms to provide capital to smaller firms in the middle-market niche.

1993

Newfield Exploration Co., funded by Warburg Pincus, the University of Texas System, et al., goes public, becoming a "poster child" for successful exits for PE-backed firms. Warburg had funded the company in 1988.

1996

Energy Spectrum Partners LP launches with \$91 million to service the middle market. Since then it has

raised 6 funds totaling \$2.3 B. First Reserve opens a Houston office. The IPAA and Cosco begin private-equity conferences.

1998

Oil plunges below \$11 per barrel.

Kayne Anderson raises its first standalone energy fund. Lime Rock Partners formed and Fund I closes with \$100 million. It has since invested nearly \$5 B. Quantum Energy Partners formed. It has since raised \$6.5 B in equity and invests in the U.S. and abroad.

1999

The El Paso Corp. buys EnCap Investments, as integrated gas companies begin providing capital to the upstream sector

Kayne Anderson Capital Advisors LP makes its first midstream investment, in Plains All-American, for \$56 million.

2000

Riverstone Holdings LLC formed by former Goldman Sachs principals Greenhill Capital Partners formed.

2001

Enron Corp. files for bankruptcy, removing a source of funding for E&P firms through volumetric production payments from Enron and several of its peers. ArcLight Capital Partners LLC formed in Boston. Energy Capital Solutions founded in Dallas.

2002

ArcLight closes its first fund at \$950 million.

2003

Oil falls below \$25 per barrel on Nymex. The founders of EnCap Investments buy back their company from El Paso.

2004

Quantum closes on \$345 million. EnCap closes on \$825 million; First Reserve closes on \$2.3 B. **TCW Energy & Infrastructure** is investing Fund X with \$730 million of committed capital. NGP Capital Resources, an affiliate of NGP, goes public, raising \$240 million. Apollo also goes public. Denham Capital is formed.

2005

NGP Fund VIII closes on \$1.3 B and Riverstone on \$5B.

2006

EnCap closes on \$1.3 B and First Reserve on \$7.8 Billion. Cosco Capital Management's Private Capital Index reports \$19.9 B in funds active in 1H06, a 92% increase from 1H2005.

Lime Rock Partners IV closes at \$750 million. NGP Energy Management LP forms NGP Energy Infrastructure and Resources to invest in the midstream.

led to other changes. Insurance companies had to keep more capital in reserve, which tied up capital they might otherwise invest in oil and gas. The banking industry began to recover.

Firms flourished that made a business of advising institutions, such as RPI Institutional Services and Rimco (Resource Investors Management Co.). Choices now included assetbased lending, preferred and common stock, and direct JV participation in exploration and development drilling.

Fund-raisers moved down the balance sheet from notes to preferred equity to common stock. Credit became more available from the banks. Large pensions such as that of AT&T and GE started taking net profits interests at times, as a way to invest in oil and gas, yet retain their tax-exempt status.

The firms that traditionally supplied debt with equity kickers were joined by some big industrials, utilities and gas integrateds that saw opportunity in supplying capital to producers as well-Shell formed Shell Capital, Enron formed Enron Capital & Trade, Duke Energy began a producer financing unit, as did Tenneco Oil Co.

In the late 1980s, everyone ran escalated price decks, believing oil was headed to \$100 a barrel and that prices would go up forever. "If you were Rip van Winkle and went to sleep in 1988, then woke up 20 years later, oil was right where you thought it would be-but with some huge dips happening in between," says Weidner.

Investment thinking has changed over time. In the late 1980s, it seemed to be based on the thought that prices were going up, and a fear of inflation-oil and gas being a hedge against inflation. In the 1990s, it turned more on thinking that prices eventually revert to the mean—so if they go up, you'd better sell your assets.

"In the mid-90s, private equity really geared up and became a force in the market...it became a crucial element, an addition to the capital family that included public money, JVs, mezzanine...so people had to learn more about it," says Cameron O. Smith, founder of Cosco Capital Management, but today, an advisor to Warburg Pincus.

"Now, there's been a true cresting of knowledge and experience with private equity."

The flip to the future

The acquire-exploit-sell model was prevalent for E&P companies in the 1980s and early 1990s, but a typical hold period by their PE backers was five to seven years.

The time period to hold an investment shortened in the shale land grab frenzy from 2000 to 2008: the flip. E&P and private-equity executives really raced around the track in the 2000s, when, thanks to the advent of resource plays and the shale frenzy, acreage was king. What's more, oil prices rose significantly from 2000 to 2008 on the back of fast-paced Chinese oil demand and other factors.

Before the shales really took off in the mid-2000s, there was a fear of "peak oil" and the thought that the price of a barrel of oil had nowhere to go but up.

It became possible for an E&P company to get private equity from ever-larger funds, build an acreage position, drill a few wells, then flip it in less than two years and make three or four times its money. "A lot of the value was created not at the

drillbit, but at the exit," notes Scott Kessey of Kessey Capital, an intermediary and formerly a principal with Cosco Capital Management. "Buyers were paying big dollars, but you had to have developed premium assets that they wanted."

Until quite recently, institutions no longer feared inflation; the problem was, their returns have been too low in the bond market, so to a greater degree than ever before, they have allocated more capital to alternative investments such as oil and gas to bolster their portfolio returns.

The private-equity firms such as EnCap, Quantum Energy Partners and NGP have grown tremendously in size of funds and market reach; they really cannot be described as boutiques any longer. But new boutique firms still crop up frequently.

And, the biggest generalist PE funds in the world, funds such as KKR & Co. and Apollo Global Management, have entered the E&P and midstream spaces aggressively too, providing private equity in various ways.

Are the factors that have triggered huge inflows to private equity sustainable? What is the next shoe to drop? Knowledge and information have become somewhat commoditized, Weidner points out. It is harder for an E&P needing only \$10 million to obtain it through these large private-equity shops.

Will there be any consolidation among private-equity providers? Will there be fewer private-equity boutiques and more "supermarkets"?

Whatever the future holds, for right now private equity makes all kinds of sense, and for many reasons. It is plentiful like never before for E&Ps and midstream entrepreneurs, with many new PE providers racing on the deal-flow track.

Private equity seeks a home in oil and gas because returns are low elsewhere. Recent huge realized gains also make oil and gas attractive. Tight global oil productive capacity and huge Asian demand cause optimism on oil prices.

Sources say the vast number of drilling locations in the resource plays will demand increasing amounts of capital to be fully realized, some say as much as \$5 trillion over the next 20 years, so the demand for private equity looks to extend another 20 years and beyond.

"Because there is so much competition today, the natural extension is to do more exploration and more international transactions, as it's less competitive there-although it is riskier," says Harris.

"You're starting to see a fair amount of activity in South America and West Africa, or the deepwater Gulf of Mexico. If you have a very big fund to put to work, where can you go? You can't do \$20-million deals here and there. You've got to be in resource plays and deep water."

Money continues to flow into the energy space, and returns have been pretty good. There's more interest than ever before as limited partners want to get in on the renaissance in American energy.

McMahon sums it up well: "LPs are comfortable that energy is a good place to be. You can see that in the general-purpose funds that did not invest in energy...now they do. People are comfortable that you can recruit the right talent (to grow an energy company)."

2007

Quantum raises \$1.3 Billion, EnCap closes Fund VII at \$2.5 B and Riverstone closes on \$6 B.

Energy Spectrum Partners V closes on \$600 million, its 5th midstream fund.

Denham Capital is investing Fund IV of \$1.2 B.

ArcLight closes Fund IV at \$2.1 B, just 15 months after closing Fund III with a like amount.

2008

Oil hits \$100 per barrel on Nymex. Natural gas peaks at approx. \$13 per Mcf.

NGP raises \$4 B in Fund IX.

Apollo raises a \$14.7-B buyout fund.

Lehman Bros. collapses. Start of worldwide financial crisis.

2009

Natural gas falls below \$3 per Mcf.

PetroCap launches its first institutional fund, Falcon E&P Opportunities, with \$163 million.

Quantum raises \$2.5 B and First Reserve closes on \$9 B.

Trilantic Capital Partners is formed by former Lehman Bros. principals, with \$1.5 B.

Greenhill Capital Partners forms GCP Capital.

2011

EnCap closes on \$3.5 B and ArcLight Fund V closes at \$3.3 B.

The Energy & Infrastructure Group of TCW separates to become EIG Global Energy Partners LLC, providing mezzanine and private-equity funding. It closes Energy Fund XV at \$4.12 B with 817 LPs from 13 countries.

First Reserve raises \$1.2 B in its inaugural energy infrastructure fund.

ArcLight closes Fund V with \$3.3 B.

Stonepeak Infrastructure Partners formed.

2012

NGP closes on \$3.6 B and First Reserve on \$6 B. Kayne Anderson Energy Fund VI closes at \$1.6 B. The Carlyle Group acquires 47.5% of NGP Energy Capital Management.

An Apollo-led group buys El Paso's E&P arm for \$7.15 B to form EP Energy.

Blackstone has final close on \$2.5-B Blackstone Energy Partners, its first dedicated, energy-focused private-equity fund. Blackstone Capital Partners VI will invest alongside it.

Stellus Capital Management LLC formed to serve the middle market.

2013

EnCap closes on \$5 B. White Deer closes on its \$1.4-B Energy Fund II.

Riverstone raises \$7.7 B and files to raise a closed-end fund in Europe.

A Warburg Pincus, Yorktown et al. portfolio company, Antero Resources Corp., IPOs at \$1.5 B.





ACCESSING PRIVATE EQUITY

Pitch Perfect

These private-equity managers describe what they seek. Wise development trumps big acreage.

By Gregory DL Morris

n the past five years, private equity (PE) managers have made a great deal of money backing oil and gas teams as they built strong acreage positions through the first years of the unconventional resource bonanza. Today, these capital providers are seeking prudent and experienced operators to back that have tightly focused and efficient exploitation plans, more so than just thousands of potential well locations. It's about execution, cost reduction and achieving scale now.

With a consistent approach, Warburg Pincus

LLC always begins with the quality of the management team. "We don't feel that we have to be in any particular basin or play," says James Levy, managing director in the energy group of Warburg. "Instead, we focus on the fit between the strategy and the team, and on finding a team that has the capacity to build a durable business of meaningful scale.

"We believe this is increasingly important as exits become less certain. A team that can scale well can grow its business to the point of being self-funding-or becoming strategic to a wider spectrum of potential buyers."

Scale is not lacking at Warburg; its most recent fund totaled \$11.2 billion, making it one of the largest PE funds closed since the financial crisis. Given that firepower, it would make sense that individual energy investments would have to be on a comparable scale, but Levy maintains, "We have no fixed size for our investments. Instead, we like to focus on profit potential, looking for opportunities that have the potential to generate profits that will be meaningful-in the range of several hundreds of millions of dollars-in the context of our overall fund size."

Many PE firms prefer backing the same management teams on a repeat basis, and Warburg is no exception. "It is always attractive to back teams that have been winners for us in the past," says Levy. "It's basically doubling down on successful strategies. Our current investment in Laredo Petroleum Inc., for example, represents our third partnership with CEO Randy Foutch."

That said, Levy says Warburg is always open for new business. "In an average year, we will back between two and four new teams to launch new ventures. These teams come to us primarily from the large industry network we have built up over more than two decades of investing in the energy sector."

Apollo Global Management LLC, formed in 1990, is a value-oriented investor that invests in many industries, including energy. Its most recent private-equity fund, Fund VII,



was closed at \$15 billion, in which pension funds and sovereign wealth funds (SWFs) were among the investors. Within this fund, approximately 20% has been invested into natural resources deals.

"In addition to our flexibility around deal structure, we are also flexible in terms of deal size," says Greg Beard, senior partner and head of natural resources at Apollo Natural Resources. "Generally speaking our private-equity funds can invest from \$50 million to more than \$1 billion in a single operator."

It also has dedicated sector funds, with its natural resources fund closed in December 2012 at \$1.3 billion, and again pension funds, particularly state pensions, as well as SWFs, were among the investors.

"What we believe differentiates Apollo is our ability to invest across capital structures," Beard explains. "We can invest in equity, debt, or a customized structure. The same goes within the natural resources sector. In energy we invest upstream or midstream, as well as in services, coal, metals and agriculture."

Across the rest of the industry, Beard adds, "in onshore services we now have a surplus of capacity, but some bottlenecks remain." Regardless of the segment, he notes that in more than a few cases the operator's assessment of its capital structure need may warrant review. In all, Apollo stresses its breadth and depth, and not merely its wherewithal. "We operate an integrated investment platform, and we believe that



"The right time to enter is when we have enough downhole data to get comfortable with the reserve risk, but before the play has become overheated with acreage prices bid up to exorbitant levels." DAVID MILLER. **ENCAP INVESTMENTS**



"Teams need to be complete. They need all-stars at each position: finding oil, managing the business and controlling costs. And when you get to the exit time, the team needs to be able to deal with all potential markets, public or MLP or private equity." TONY WEBER, NATURAL GAS PARTNERS



"We focus on the fit between the strategy and the team, and on finding a team that has the capacity to build a durable business of meaningful scale. This is important as exit strategies become less certain." JAMES LEVY. WARBURG PINCUS LLC



is unique," says Beard. "We work across our platform to be a partner of choice as companies look to outside sources of debt and equity capital."

Under the ground, Apollo's approach is surprisingly conservative. "As a value-oriented investor, we are focused on downside protection, and we are aware that we are investing the money of pensions and other investors."

Smart money, not fast money

Formerly known as Kohlberg, Kravis Roberts & Co. LP, KKR is one of the most widely known PE firms in the country. It is no newcomer to the energy sector, having first invested in oil and gas in 1985, but that first foray became a test of fortitude straight out.

"KKR acquired half of Union Texas Petroleum from Allied Corp. just before the oil market collapsed," explains Jonathan Smidt. "We held that investment until the late 1990s. It was a lesson in patience and showed us early on that in the upstream sector, you really need to weather all the cycles, make sure you capitalize the business appropriately, and be patient."

Lessons learned, but KKR did not venture back into oil and gas until 2009. As if making up for lost time, Smidt says the early days of shale investing were heady.

"We invested \$330 million in East Resources in the Marcellus and made 4.7 times our money in a year, when East was sold to Shell Oil Corp. Then in 2010 we went to the Eagle Ford with Hilcorp Resources Holdings, and were able to likewise successfully monetize that within a year. We have been a lot more active since then." (Editor's note: The assets were sold for \$3.5 billion to Marathon Oil Co. in 2011.)

KKR invests in the upstream, midstream and oilfield services, midstream services and power. Smidt notes that "...our activities can range from mature companies like Samson Resources, to minority positions like we had in East Resources, to backing teams in Canada."

KKR has not yet backed a team a second time, partially because it hasn't been backing teams as long as others have, and it has longer time horizons and investment goals, but it is highly likely that its proven approach will play out as it has for so many others, allowing KKR to work with its successful teams a second or third time.

That status, as a well-established and well-funded investor but still on its first go-round with management teams, gives KKR a strong position, says Smidt.

"We have spoken to many teams that may be interested in adding a new PE partner, or may be looking for entirely new backing," he says.

"We make commitments in the range of \$200 million and above, and we cast our net wide: In North America we have offices in Houston, New York, and Menlo Park, California. We also have a team in Houston that supports all of our operating companies, and also a technical affiliate in Houston called RPM that is able to assist us in due diligence.'

When it comes to allocating capital, KKR's senior leadership team discusses themes and trends fitting existing operations and potential new investments as they present themselves.

"We spend some time on each potential investment, deciding where it goes. It may be brought in as an infrastructure

prospect, but once we have reviewed the risk profile, it may better fit a PE investment. We recently had an opportunity we were reviewing that started as a straight PE investment, a gas processing plant, but with firm take-or-pay contracts, it was a much lower risk profile and so fit better in infrastructure. Where we place investments is based on risk and not return."

Focus on risk management

EnCap Investments closed its 17th fund earlier this year. The firm is based in Houston and Dallas. "The driver for starting to market a new fund is determined by how much of the previous fund is committed," says David Miller, co-founder and principal.

"We typically have 75% to 80% of a fund committed before we launch our fundraising efforts for the next fund. Our says. While EnCap backs some teams repeatedly, there is a history has been to moderately increase the size of each sucstrong interest in fresh talent. cessive fund." In addition to its \$5-billion upstream fund, the ArcLight Capital's most recent fund was \$3.3 billion, raised ninth of that type, EnCap is working out of a \$1.75-billion in November 2011, of which about half has been committed. midstream fund managed by its affiliate, EnCap Flatrock The previous fund was \$2.2 billion. "We invest from the wellhead Midstream. to the wall socket," says Dan Revers, managing partner.

The operating model for both is virtually identical, according to Miller. "We focus on start-up or early-stage companies with management teams that have extensive industry experience and a proven record of value creation. It's also important that we be on the same page relative to risk management. In the upstream area, their growth strategy can be about lower-risk drilling or reserve acquisitions or a combination of the two. Most of our midstream companies are pursuing 'greenfield' infrastructure projects in the most active resource plays."

Half of the management teams EnCap backed in its last three upstream funds were teams it had backed successfully in earlier funds. "We backed them, they sell, and we turn around and back them again. Repeat management teams are a significant part of the EnCap franchise," says Miller enthusiastically. "In one case, we backed the same management team five times and have multiple teams we've supported three or four times. It's not unusual for a repeat team to move to a new basin, because the competitive dynamics have changed in the area where they were active previously."

Over the last decade, EnCap has moved from one economically advantaged resource play to the next, says Miller. "We've had a half-dozen teams in the Bakken, the Marcellus, and the Eagle Ford, among other plays."

However, EnCap is very particular about the timing of its portfolio companies' entry into a specific project. "The right time to enter is when we have enough down hole data to get comfortable with the reserve risk, but before the play has become over heated with acreage prices bid up to exorbitant levels.

SCOUTING REPORT

The Ideal Management Team Has:

Tight focus Alignment between team and strategy Ability and patience to build scale A deep bench (land, G&G, operations, financial) The right acreage, right prospects, right partners

A specific thesis on how to make money Something proprietary

There have been situations where we really like the prospective management team, but the entry price was too steep."

When EnCap makes a determination about an investment, Miller says the criteria are "first and foremost, people; second, projected economics in the context of our view of hydrocarbon prices; third, our assessment of the underlying risk; and fourth, do we believe the asset base the company is planning to assemble will be attractive to the buying universe."

EnCap generally has 20 to 25 separate investments in each fund. The recent average commitment per portfolio company is \$250 million. "Our capital is usually advanced incrementally over a two- to four-year period as the management team brings compelling opportunities to the table," Miller

> "In the current market environment we are investing heavily in midstream, including gathering, processing, transportation and storage in high growth areas such as the Midcontinent, Utica, Marcellus and Eagle Ford."

A great coach

An end goal in mind

ArcLight is also investing opportunistically upstream in these regions.

Revers says ArcLight likes to work with repeat investors, saying "if you make them money, there is no reason you can't get them back," as well as repeat management teams. That said, he notes that with both

investors and operating partners, "there is always some turn over, usually without prejudice. For example, if a given management team has been particularly successful

they may be able to source cheaper capital. Some investors also cycle out as LPs. In our most recent fund, we have several new investors."

The advantage to ArcLight's approach, Revers hastens to add, is that there is an abundance and variety of opportunity.

"The risk profile of a gas processing operation or pipeline in the Bakken is very different from the same type of asset in the Eagle Ford. In each case, you need to understand the producers' economics, and their netbacks, among other things.

In any integrated operation there is the question of the degree to which affiliates should do business with each other. "We don't seek out companies that have the potential to work together nor do we encourage that within our funds," says Revers. "We don't want to create too much correlated risk. Macro-economic cycles affect the sector broadly and we don't want to exacerbate that risk."

Another major concern is leverage. "A key risk factor



* PRIVATE EQUITY VOICES *

across the energy complex is high amounts of debt," Revers adds. "Managing around commodity cycles is challenging enough. You don't want to also have to manage around financial cycles too, as it increases the potential for binary outcomes." Typically ArcLight invests through partnerships or limited liability companies that allow for the flow-through of income directly to the funds, he notes.

"Raising money today we are the beneficiaries of 25 years of experience," says Tony Weber, partner with NGP, based in Dallas. "We get a lot of repeat investors among our LPs. Some investors have been with us for 20 or more years."

The same is true for teams NGP backs. "Repeat teams are about half of our business," says Weber, "both by count and by dollar amount. Clearly they dominate the landscape because you go back to the people who made you money." Those tend to be the teams that are deep up and down the line, not just one leader or visionary, plus a support group.

"Teams need to be complete," says Weber. "They need allstars at each position: finding oil, managing the business, and controlling costs. And when you get to the exit time, the team needs to be able to deal with all potential markets, public or MLP or private equity."

"Heeeeere's the Wind-up, aaaaaand..."

Advice to operators and management teams directly from top private-equity managers

GOOD PITCH

- Focus on your "edge" highlight the team's skills and strengths and how that guides your strategy.
- Your strategy should be focused on making money, not stuff.
- You should have the ability to communicate a succinct business plan.
- Demonstrate an understanding of economics.
- A good track record always helps. Be specific with key details.
- Articulate your ability to adapt to a changing market. What if the first project area does not work?
- Show your ability to identify risks to the business plan. Nothing is without risk in this business. We appreciate an open assessment of risks.

BAD PITCH

- If you can't write your strategy on the back of your business card, then you don't have one.
- Limited understanding of risk capital and pace of capital exposure.
- Long-winded.
- No ability to succinctly communicate message.
- Too project-oriented.
- Belief that there is no way the project will not work; that there is little or no risk.



JONATHAN FARBER CO-FOUNDER AND MANAGING DIRECTOR LIME ROCK PARTNERS

OUR OUTLOOK

With the advent of technology that can be used to overcome limited permeability, we feel like huge areas of the U.S. have been

opened up to exploitation, which wasn't the case even five years ago. There's been a fundamental revolution in the U.S. that has made it a very exciting place to invest in the last couple of years.

S. WIL VANLOH **CO-FOUNDER AND CEO QUANTUM ENERGY PARTNERS**

ON RESOURCE PLAYS

While the resource plays appear large from an areal extent, when you dig down into the numbers, typically only about 20% to 30% or less of the acreage is economic at



today's prices. So, investing behind best-in-class operators has never been more important.

But interestingly enough, when you think about it, the risk-return opportunity for investors in this [unconventional resource] space has gotten meaningfully better over the past five or six years. There is now a better understanding of EURs, IPs and drilling costs, and therefore, economics...We can intelligently put capital to work in this industry today.





GEORGE MCCORMICK MANAGING PARTNER **TPH PARTNERS**

ON CONVENTIONAL OPPORTUNITIES The big owners of acreage have too much inventory, and that is going to create opportunities. There are also basins in this country that are productive without any shale wells.

A barrel of conventional oil sells for exactly the same price as a barrel of shale oil, and can cost the same or less to get out of the ground. There will definitely be opportunities in acreage that will be coughed back up by the big guys in the coming years. There is also opportunity in overlooked conventional plays.

RUSSELL WEINBERG MANAGING PARTNER **ENERGY CAPITAL SOLUTIONS**

ON OBTAINING PRIVATE EQUITY

There is a lot more to the process than obtaining term sheets and shaking hands on a deal. We help management teams make things easy for the private-equity side of the



table by articulating use of proceeds clearly and modeling the economic outcome with well-supported assumptions. Management teams who present a strong, financially supportable business case, are prepared for due diligence and are ready to execute immediately, stand out to private equity.





The Pathway To Growth

Five executives detail how private equity has helped them to achieve success.

By Gary Clouser

he upstream industry is going through an unprecedented transition these days: although exploration risk associated with shale or unconventional development is declining-has nearly disappeared —the capital needed for such development has increased significantly. This combination is perfect for private-equity funds and E&P companies seeking dramatic, quick growth.

Conversely, the growth of the shale resources has also boosted some interest in conventional producing regions for contrarian investors, as the heightened focus on shale means some conventional resource assets are undervalued opportunities.

Private-equity funds focused on energy are seizing the day, and the entrepreneurs they back share the same goal: to build a company and create net asset value, then aim for a timely and lucrative exit.

Oil and Gas Investor asked the leaders of five E&P firms that have tapped private equity to discuss their experiences, including how private equity matched their companies' growth strategy. Here, they also offer helpful tips to other management teams

contemplating seeking private-equity funding. Participating companies include:

- Momentum Oil & Gas LLC
- (backed by Kayne Anderson Energy Funds); • Trail Ridge Energy Partners II LLC
- (backed by Trilantic Capital Partners and Riverstone Holdings);
- BlueStone Natural Resources II LLC (backed by Natural Gas Partners);
- Panther Energy Co. LLC (backed by Kayne Anderson); and
- PetroEdge Energy III LLC (backed by Post Oak Capital Partners and Goldman Sachs Asset Management).

Their stories are remarkably similar: management teams with an entrepreneurial spirit want to start a company and either acquire or drill wells, leading to dramatic, quick growth. Armed with an idea, a business plan and confidence in their abilities, these teams need huge amounts of capital, usually far exceeding what reserve-based loans would provide. They want a partner who shares their vision and confidence in the management team.



Momentum Oil & Gas LLC

Rusty Shepherd and Loren Long plan their careers with the same calculating approach that they learned as engineerscontinually take steps toward the ultimate objective, learn from all experiences, evaluate and execute.

"Our career paths and decisions all led to this," says Shepherd, who along with Long, co-founded Momentum Oil & Gas in January 2011 with an initial investment of \$50 million from Kayne Anderson Energy Fund. Each had over a decade of varied experience with several companies that had accessed private equity, before they became company owners.

"We didn't just wake up one day and say let's start a company," Shepherd says. "It didn't happen by accident. We both have an entrepreneurial spirit, and we both had worked for increasingly small companies, backed by private equity. We took on increasing responsibilities."

The pair met in 2000 when they were engineers at Anadarko Petroleum Corp. Soon, they began talking about someday starting their own company. Less than two years later, Long left Anadarko to join The Houston Exploration Co., a small public independent. He persuaded Shepherd to join him. Long left a few years later to join Redman Energy, a private-equity portfolio company.

The friends continued to talk about their long-term plans even as they joined two different private-equity backed companies. Shepherd joined Crimson Exploration Co. and Long went to Phoenix Exploration Co. But in late 2010, they determined it was the right time to start their own company. From their experiences, they knew that private equity would be their financing choice, as banks don't finance startup companies, Long says.

The pair knew their private-equity selection even before they launched their company. They had been talking with longtime friend David Iverson, of Kayne Anderson, who they had known for years. Iverson was familiar with the track records and resumes of Shepherd and Long, so putting the financial deal together was a matter of "sharpening the pencil," Shepherd says.

The first decision was how much money the start-up company would seek. A major factor was whether Shepherd and Long would initially prefer to manage assets and projects, or hire a lot of people. They opted for assets, determining they each had a "more technical mindset." Today, the Houstonbased company still has just seven employees-including Shepherd and Long.

"You want to bring into the company the right people at the right time, and you don't want people sitting around in anticipation of future company growth" says Long, who is president. Shepherd is the chairman and CEO.

Shepherd advises any start-up company to make certain capital commitments can meet the business plans. Long adds, Kayne Anderson has expressed a flexibility to step-up its financial commitment when appropriate.

After getting the financial commitment, Shepherd and Long went hunting for the next six months for the right properties, knowing they wanted to focus on Texas and Gulf Coast assets. Momentum then in May 2011 announced the acquisition of properties from Newfield Exploration Co. in

the Fashing Field for an undisclosed amount of money.

Long says, "At over 1 Tcf of cumulative gas production, Fashing is the crown jewel of the Edwards play in South Texas."

By January 2013, Momentum had gathered deep rights from other mineral rights owners bringing the leasehold to 24,000 gross acres. It plans to drill four horizontal Pearsall wells in the second half of 2013. The missing ingredient is long-term well performance data, although multiple operators are working the play.

Nevertheless, Shepherd isn't stressed. If you are comfortable with your strategy and ability to execute a plan, he says, the amount of stress in the earliest days of launching a business is minimal, as is the euphoria when you see the company grow.

"It is a process."



Rusty Shepherd Chairman and co-founder Loren Long President

MOMENTUM OIL & GAS LLC ...

Equity Backer: KAYNE ANDERSON ENERGY FUNDS Their Advice: "First, decide if you want to manage assets and projects, or a lot of people. Tailor your capital to your business plan."

Trail Ridge Energy II

Trail Ridge Energy Partners LLC, led by Ronald Wade, was formed in 2008 with a \$40-million equity commitment from Kayne Anderson Energy Fund. Its assets were sold to Ener-Vest in October 2011 for \$76 million.

Spurred by its success, Wade kicked off Trail Ridge II in March 2012 with seed capital of \$2.5 million from private investors. He then reorganized his management team and in April 2013, Trail Ridge II announced it had obtained an undisclosed amount of additional private equity from Trilantic Capital Partners and Riverstone Holdings.

Headquartered in Grapevine, Texas, the new E&P firm soon announced it had closed on 18,000 acres in the Midland Basin's Cline Shale oil play in eastern Scurry County, Texas.

Long before obtaining private equity for the original Trail Ridge company in 2008, Wade and company CFO, Chuck Cederberg, had acquired knowledge and expertise in dealing with private-equity firms. Wade was vice president, engineering for Redman Energy Corp., a private Houston-based



TRAIL RIDGE ENERGY PARTNERS II

...

Equity Backer: TRILANTIC CAPITAL PARTNERS, RIVERSTONE HOLDINGS Wade's Advice: "Plan to time your exit at peak value, but always be ready to sell. Developing the assets in a timely manner is critical to your business plan."

President and CEO

company, backed by private-equity firm, Natural Gas Partners. Cederberg was Redman's CFO. Prior to joining Redman in 2006, Wade was vice president, engineering/planning for Cordillera Energy Partners II based in Denver, backed by EnCap Investments.

Wade, now with over 30 years of industry experience behind him, says with success and experience, a management team going to the private equity sector for capital (even if the specific PE firm is not repeated), can garner more respect and deal-term flexibility than can a management team attempting to tap PE for the first time. An experienced team can negotiate better terms and has more flexibility on play types and geographic areas.

For first time management teams, Wade offers this caution: equity rates of return can consume significant percentages of net cash flow, so developing the assets in a timely manner is critical. Plus, Wade says, plan to time your exit at peak value, but always be ready to sell.

BlueStone Natural Resources II

John Redmond and private-equity firm Natural Gas Partners have been a team since 2003. NGP backed Redmond's first start-up, AXIO Natural Resources, in 2003. When that company was sold in 2006, Redmond launched another Tulsabased company, BlueStone Natural Resources Inc., with NGP as a \$40-million backer.

Even before launching his first company, Redmond was familiar with NGP through his

earlier five-year stint as engineering manager at Samson Resources. "My experience with Samson served me well in my search for a PE sponsor. NGP had many successful teams that were Samson alumni that opened the door for me."

In December 2011, BlueStone divested nearly 600 wells to Memorial Energy Partners. The original BlueStone still exists and has continued developing its 22,000 net acres in the Mossy Grove Field in Madison and Walker counties, East Texas. To date, BlueStone has drilled eight wells to the Buda Rose formation with encouraging results, Redmond says.

In February 2012, BlueStone II was formed with a \$115million equity commitment from management and NGP. The new company acquired BXP Partners II's holdings



in the Barnett shale and some of Anadarko Petroleum's South Texas assets. BlueStone II has completed \$250 million in acquisitions in South Texas and the Barnett shale and closed on 12 major transactions since its formation, bringing its proved reserves to more than 200 billion cubic feet equivalent.

The BlueStone entities have become some of the most active acquisition-focused companies in Texas, having closed more than 70 transactions since 2007.

"Our affiliation with our equity sponsor, Natural Gas Partners, has been a tremendous asset in facilitating our growth, both through acquisitions and through the drill bit. We will continue to

pursue property acquisitions in South Texas and the Barnett shale in an effort to build out our portfolio in these key areas," Redmond says.

"We are very much more acquisition-centric than drilling-centric. We feel like it's a good time to be buying in the gas market."

Private equity offers some distinct advantages to other forms of funding, he says. "As an engineer with an MBA, I felt that the partnership with an equity sponsor would serve to shore up parts of my background that were lacking, when I started my first company. The banking relationships, hedging proficiency and attention to financial compliance issues that NGP brought to bear, made the team much stronger."

CEO

BLUESTONE NATURAL RESOURCES II ...

Equity Backer: NATURAL GAS PARTNERS

Redmond's Advice: "E&P management teams should think beyond the term sheet when selecting a private-equity partner. The relationship with the equity sponsor is almost more important. A firm that allows you to do what you do best, and knows what they bring to the table, is vital."

Panther Energy II

Oklahoma oilman Berry Mullennix has sat in numerous meetings to discuss financing E&P companies. Before starting his first company in 1995, he worked for three years as an industry consultant/broker for investors and oil companies, consulting on numerous M&A opportunities and various strategies to finance the investment.

Mullennix is well-versed in negotiating debt and equity financing, including both short- and long-term debt instruments and various equity-type financings. Most recently, his project financing has included bank senior debt and private equity. Since 2002, funding of his companies has come mostly from private equity.



In 1995, Mullennix and his long-time business partner, Roy Grossman, formed Mannix Oil Co., a pioneer of horizontal coalbed methane development. The E&P was "bootstrapped" and used multiple financing methods including mezzanine, senior debt, private investors, volumetric production payments (VPP), and personal investment, Mullennix says.

Among banking relationships, Mullennix has worked with the Bank of Oklahoma, Bank of America, Texas Capital Bank and currently Compass Bank. Other lenders of mezzanine and VPP were Shell Capital and Duke Energy. The company has also used advisors, including: Evercore, Scotia Waterous and Cosco Capital Management. In 2001, Mannix Oil was sold to The Williams Cos. for \$36 million.

The following year, with backing from Kayne Anderson, Mullennix and Grossman formed Cannon Energy Co., the predecessor to Panther Energy Co. and its successor, Panther Energy II. Mullennix serves as president and CEO; Grossman is executive vice president and chief operating officer.

In 2004, Cannon Energy and Red Willow, an affiliate of the Southern Ute Indian Tribe, began a project in Lipscomb County, Texas, to explore the Atoka shale with horizontal drilling. The following year Mullennix and Grossman partnered





Berry J. Mullennix President and CEO

Rov H. Grossman Chief Operating Officer

PANTHER ENERGY CO. II

...

Equity Backer: KAYNE ANDERSON ENERGY FUNDS

Mullennix's Advice: "Think about long-term objectives before determining the type of funding source. Using bank debt and/or other conventional financing, if available, it may take longer to grow the company, but the owner can maintain control of the business. With private equity, the deal is usually much larger, management is part of an overall team, but the company gives up a majority share of the profits to the private-equity investor.

"PE-backed deals are typically larger and have the opportunity to generate significant profits within a few years, whereas debt-financed deals are typically smaller and take longer to generate significant profits.

"You have to decide early on if you want to own 100% of a smaller pie, or if you want a smaller percentage of a much larger pie."

directly with the Southern Ute Indian Tribe Growth Fund, and bought out the interests of Cannon Energy's PE backer, Kayne Anderson. The new company, named Panther Energy, is based in Tulsa. Red Willow continued with Panther as a working-interest partner.

Over the next few years, Panther Energy developed and sold assets, most notable to Brigham Oil in the Bakken shale in 2010 (\$39 million), Linn Energy in the Anadarko Basin in 2011 (\$220 million), SandRidge Energy in the Mississippi Lime in 2012 (undisclosed amount), and Midstates Petroleum Co. in the Anadarko Basin in 2013 (\$620 million).

The funding commitment from Southern Ute Indian Growth Fund was for seven years—longer than the typical three to five years most PE firms prefer, Mullennix says. The growth fund wanted the longer-term deal to ensure long-term stability.

Mullennix has only praise for the Southern Ute Indian Growth Fund. About a year ago, the fund alerted him that in the near future, it was going to focus on offshore investment opportunities. With that news in mind, his management team began looking for another PE backer to fund its newest company, Panther Energy II.

At press time, Panther had closed on up to a \$450-million commitment, again with Kayne Anderson. It will specialize in grassroots horizontal drilling of unconventional zones, and is looking for acreage, production or joint ventures, with a focus on the Midcontinent. It will look at other areas too, Mullennix says.

PetroEdge Energy III

Larry Richard and his partners-now on the third version of their company-are explorationists who acquire and develop acreage in unconventional, often unproven, areas. The risk associated with this strategy often eliminates collateral-backed financing, such as from banks and mezzanine funds, leading them to partner with PE providers instead.

With PE backing, Richard, along with his three partners-Larry Buchanan, executive vice president of operations; Jack Ward, EVP of exploration and production; and Mark Malinski, chief financial officer-have since 2004 successfully built and sold two E&P companies and established a track record in geologic assessment, drilling and completion of horizontal wells in shale plays.

In July 2013, they launched their third venture, PetroEdge III LLC. Richard, CEO and president of PetroEdge Resources and PetroEdge II, is now CEO and president of PetroEdge III. Prior to forming the first PetroEdge, the management team held senior positions at several leading companies including Halliburton, Pennzoil, Texaco, Shell, Petroleum Geo-Services and Southland Royalty.

Richard says the oil and gas industry is a relationship business, and with the experience of his team, one or more of the members knew someone in leading capital provider firms.

They formed PetroEdge Resources in 2004 to use horizontal drilling and fracing in conventional plays to increase production. They also aimed to find new horizons in unproven plays. Initially the company was backed by a high-net-worth family and some mezzanine financing, but soon more capital was needed and Richard hunted for private equity.



Left to right, Mark Malinski, Larry Richard, Larry Buchanan, John Ward

PETROEDGE Energy III ...

Equity Backer: POST OAK ENERGY CAPITAL, **GOLDMAN SACHS ASSET MANAGEMENT**

Richard's Advice: "In selecting a private equity partner, shared vision, strategies and exit plans are all essential. Recognize that your management and the private equity firm's management will become a team, so select a PE firm that you are comfortable with as teammates. Your agreed-upon exit strategies, benchmarks and timeframes need to remain among the best-kept secrets in the industry."

The team worked with an investment banking firm to assist in the search. After talking to about 20 PE companies, Richard and his team selected EnCap Investments.

In 2005, PetroEdge became one of the first companies to drill and complete wells in the Marcellus shale. By 2008, it had sold its assets to Quest Resources.

Richard's team, again with EnCap backing, then launched PetroEdge II, with a focus on northern West Virginia, to continue exploiting the Marcellus as it still offered premium reserves and favorable lease rates. Most PE backing is to finance one area and one play with a predetermined exit event, or benchmark, Richard says. In 2012, the company was sold to Statoil.

By then, Richard and his team were serial entrepreneurs. Richard says: "None of us were ready to retire. We love what we're doing and wanted to do it (develop and sell a company) again."

Now with a lot of success, the team had more leverage and flexibility when it sought a financial source; no investment banking firm was needed to help blaze the trail this time around. Although complimentary of EnCap, Richard's team announced a new deal: management, along with Post Oak Energy Capital and Goldman Sachs Asset Management, had committed \$100 million to launch PetroEdge III. The focus this time is the extension of the Eagle Ford shale northwest into Burleson and Brazos counties, Texas.









GENERALIST FUNDS

In The Hunt

Large private-equity firms are aiming their sights on the oil and gas industry.

By Gregory DL Moriss

common expression in East Texas is, "If you want to run with the big dogs, you've got to get off the porch." In the private-equity world, the situation is slightly reversed: Most of the largest generalist PE funds have had some upstream exposure through natural resources funds, but historically, the dedicated boutique shops took the lead in oil and gas.

That's changing. With the huge capital required by unconventional development, and thanks to the good returns available in energy lately, the big houses that invest in many industries have extended their focus to the oil and gas sector.

Of course, they tend to do bigger deals because they have the firepower. Witness the private-equity consortium led by KKR and Natural Gas Partners (NGP) that acquired Samson Investments for \$7.2 billion in 2011; or the one led by Apollo Global Management that acquired the upstream assets of El Paso Corp. to form EP Energy in 2012 (on trend to go public in the next few months).

In May 2013, The Carlyle Group said it had hired

six people to staff its new internationally flavored energy effort, focusing on investments in Europe and Africa.

For the most part, investors and operators say this is a good trend, but it has meant some changes to the way things have been done.

"The big New York firms have caught wind of the vitality and profitability in the upstream sector," says Tony Weber, partner with Dallas-based NGP, which is celebrating its 25th anniversary as an energy-dedicated private-equity firm.

"There is a modest amount of additional competition from that; we see them and we feel them, especially for operators seeking capital around \$500 million and higher. Our core size is below that, so there is usually no friction."

In a positive corollary to Gresham's Law, Weber says that in the oil and gas industry, "capital tends to find its way to the highest and best use. We, PE investors of all sizes, are dependent on management teams. They come to the universe of potential investors with their ideas and their opportunities, we pair up, and away we go."

Weber reiterates that regardless of the size of the



PE firm backing them, success in the sector is driven by the operators. "All of it, F&D costs, lease expenses, acquisition costs, and investors' expectations for return-all are driven by the management teams."

While acknowledging that some of the large PE firms have been active in energy for a long time, Weber notes that there are "fund managers in New York who have heard about shale, and are just now looking at EIA maps to find where the plays are. That is fine, people can drill and complete and frac and stim and have a high success rate, but not be very profitable. The question is not Where is the oil and gas; the question is, Can you recover it in a cost-effective way?"

There are just as many opportunities as constraints. Weber maintains that intimate knowledge of the operators is the key to success at NGP. "We don't use third-party agents. We raise our own capital, we find our own investment opportunities, and arrange our own exits. That level of control is important."

Patience and balance

In addition to new ventures, KKR has an established track record of investing in larger, mature companies. In 2010, it exited its 18-month investment in East Resources in the Marcellus shale, selling its stake to Royal Dutch Shell for \$4.7 billion.

One aspect of oil and gas investing to which KKR is attuned is the implication that increased capital focused on the sector begets higher acreage lease

rates and raises asset prices

overall. In that, partner

Jonathan Smidt says KKR

tries to strike a balance: it

is patient and looking for

opportunities where it can

differentiate itself. He also

notes that it takes a long-

term view when considering

the appropriate returns to

target for an investment.

Smidt prefers not to discuss specific holdings, but

notes that KKR is equally

comfortable with deals of



Jonathan Smidt, KKR

most sizes, majority or minority positions, even royalties.

"The MLPs have been very competitive lately for mature assets given where their yields are in the current low-interest rate environment," says Smidt. "However, these are long-lived assets that we are going to own for a long period of time, so we need to factor in the appropriate return we should be targeting over the life cycle...."

The big picture is that dozens, even hundreds of billions of dollars will be required to develop North America's unconventional resources. Says Smidt, "We are all going to be able to find places to deploy capital as long as we are patient and disciplined. I am bullish."

Smidt is also realistic. "We are going to see bubbles here and there, whether in acreage rates or cost of materials or technology. Specific plays will be bid up, but as a whole the long-term approach will succeed if we are able to be nimble in our re-evaluations and maintain our discipline."

Apollo Global Management invests in nine core industries, commodities being one of them.

"When I started in the industry nearly 15 years ago, I had to explain to some energy companies what private equity was and its value proposition," Greg Beard, senior partner and head of natural resources at Apollo, recalls, "even though many firms have been investing in the sector for a long time. Today, as an industry, PE has access to the premier platforms in the natural resources industry, and it has been responsible for helping to create dozens of public companies in the sector. This year is a prime example: people call it anything from a down year to a difficult year for investing, yet there have been tens of billions of dollars in PE investment in the sector."

That said, for all its size and scope, Apollo focuses on partnerships with the management teams it backs. "There probably is not any structure that we are not familiar with and are willing to work with—or at least discuss: PE, public markets, private or public debt, mezzanine structures, even royalties. As a firm we manage \$113 billion, and we are focused on growth."

"So far we are not seeing much competitive pressure from the really large PE funds," says Dan Revers, managing partner at Boston's ArcLight Capital. "Many producers or midstream operators need \$100 million to \$300 million or even less. The large PE funds have more of a corporate focus and want to write bigger checks. There is an enormous capital requirement for land and iron, but there are also needs for services and transportation."

Revers also notes that in the past, "some of the large funds tended to be fickle when it comes to energy. They are looking for the hot sector, and when they see returns in energy they invest. But when you are investing a \$10-billion fund, you need to write checks for \$500 million, and that is not always an easy fit in some upstream or downstream sectors."

Riverstone Holdings' co-founder David Leuschen thinks the increased capital available to the industry from the big private-equity players is a good thing for everyone. The senior

managing director, based in New York, says, "Even if that presents the possibility of more competition for any given investment, I am a loyal oil-and-gas guy, and I am thrilled to see the inflows to the benefit of the entire industry."

The other co-founder and senior managing director, Pierre F. Lapeyre, Jr., agrees and explains the firm's thinking on energy. "We don't think of ourselves really as a PE firm

investing in energy, but rather as industrialists working in the oil and gas sector. We don't think in terms of commodity prices and leverage, but rather in terms of operating partnerships and operational improvements."

The firm hedges a lot with its upstream interests, and in-

vests in the midstream sector as well. "We do more build-ups than buy-outs." About three-quarters of Riverstone's investments follow the pattern of marrying a proven operating team with an idea and a balance sheet.

Finally, the firm "has committed approximately \$22.8 billion to 102 investments in North America, Latin America, Europe, Africa and Asia." It has raised a total of approximately \$25 billion since being formed in 2000 by the former Goldman Sachs partners.

Unfazed through four phases

"Our LP base is typically large company and public pension funds, endowments, and foundations," says Carl Tricoli, managing partner and co-president with Denham Capital, based in Houston. Those investors seem to be pleased with the results, because over the nine years Denham has been in business, the renewal rate among LPs is around 90%.

"We are putting our sixth fund to work right now," says Tricoli. "It is a \$3-billion fund, and we invest in three vertical segments: energy, minerals, and power. Oil and gas generally are about 60% of the portfolio. We don't really do top-down investing or basin-specific investing, rather we look for opportunity sets. That could be front-end exploration, or acquire and exploit. After we have determined the strategy, we go find management teams to execute on it. Also, we don't like to have a lot of overlap within a basin or within a strategy."

Denham's approach allows it to remain nimble as unconventional development moves through its evolutionary stages. "It seems we have had four phases of the shale revolution. It had a long early development phase where (the late) George Mitchell and a few others were trying things in the Barnett, but the rest of the country was still conventional. Then George cracked the code and showed that it worked, so everyone else was trying to determine how replicable that was. That was the period of expansion into plays like the Haynesville and Fayetteville."

The industry's third phase has ended, the great land grab. "Once industry knew unconventional development would work in many places, it was off to the races. That is when PE really jumped in to help producers acquire acreage. Clearly that is over, and now we are into the fourth phase, digestion. Operators have more acres than they can say grace over and we are seeing everyone hard at work derisking and focusing their portfolios, developing their best options and packaging and selling the rest."

If anything, Tricoli suggests, PE participation in this fourth phase is even more important than the funding provided in the land grab, both in scope and in substance. "There is just an enormous amount of capital required now. People are not just selling lesser properties, they are selling non-core properties, which could be very high grade and be a great fit for someone else. We concentrate on the assets coming out, and back teams that can take advantage of that. There is a great deal of A&D these days because some assets are coming full circle. We can anticipate more M&A eventually, but for now it's all A&D."

Farming in

Macquarie Energy Capital is the oil and gas lending and in-



David Leuschen, Riverstone Holdings



BUYER KKR, NGP, Itochu et al.

SELLER Samson Investment Co.

> AMOUNT \$7.2 B

BUYER Apache Corp.

SELLER Cordillera Energy Partners III

> AMOUNT \$2.85 B

BUYER Apollo Global Mmgt./ Riverstone et al.

SELLER El Paso Corp. E&P unit

> AMOUNT \$7.15 B

BUYER GSO Capital et al.

SELLER Chesapeake Tonkawa LLC

> AMOUNT \$1.25 B

vesting business unit of Macquarie Bank Ltd., based in Sydney, Australia. Macquarie Energy Capital has offices in Houston, London, Calgary, Singapore and Sydney. A sister organization, Macquarie Capital, raises debt and equity directly.

"In Canada and internationally, oil and gas development is more equity-driven," says Paul Beck, head of Macquarie Energy Capital in Houston. His outfit provides classic project financing as well as equity and debt up and down the balance sheet. The approach in the U.S. is more debt-oriented, despite the \$60 billion or so in PE that is available.

One interesting new approach for some of the big funds, Beck notes, is farming in to mineral acreage. "We have seen several of them do it, most recently in the Eagle Ford."

With all the new interest, Beck wonders about some of the new money. "We have been in the energy sector worldwide for a long time. We have seen cycles. People have committed capital to the industry, but as they are actually spending it, there are commodity price cycles too. When prices drop, some people waiting to develop could run for the hills. At present all of the present participants are pretty steady, but we will have to see about newcomers."





MIDSTREAM INVESTING

Midstream Mojo

Private-equity players see huge midstream opportunities ahead.

By Chris Sheehan, CFA

nstitutional money is chasing midstream deals more vigorously than in prior years, and privateequity sponsors are in the thick of the hunt. They point to a number of factors that help them select seasoned midstream teams to back: an established track record, good upstream intelligence and a capacity to exercise patience, when appropriate.

They are funding attractive deals in a crowded field of capital providers, but there is plenty of opportunity ahead. One industry estimate suggests that over the next decade, as much as \$200- to \$300 billion of capital

will be needed to build new infrastructure to carry energy flowing from unconventional resource plays.

How far along is the midstream industry in relation to its projected long-term infrastructure needs? No-one knows for sure, but answers indicate the midstream build-out is "in the early innings," with the important qualifier that the construction period is likely to be measured in decades.

Bill Waldrip, managing partner and founder of San Antonio-based EnCap Flatrock Midstream, notes certain resource plays are still fairly early in

their development cycle, with potentially 20 to 30 years of drilling ahead. "And as long as wells are being drilled and new volumes are coming on, there are going to be midstream facilities that have to be built."

The traditional spend by the midstream segment, as a function of its upstream counterpart, has tended to be on the order of 15 cents to 35 cents for each dollar spent upstream, Waldrip says. With upstream capital expenditures at an annual run-rate of around \$150 billion, this indicates midstream capex of about \$20- to \$50 billion or more annually or \$200- to \$500 billion over a decade. Thus, an industry estimate of \$200- to \$300 billion in midstream

capex doesn't appear out of line, he says. EnCap Flatrock Midstream currently has commitments to 10 companies from two funds and is actively seeking additional management teams. Three of the firm's current commitments are to repeat management teams.

Waldrip notes that in between the firm's first and second funds, the composition of the U.S. rig count switched from favoring gas rigs by 3:1 to favoring oil rigs by roughly 3.5:1, and as a result "you're going to see a lot more midstream opportunities in crude oil and liquids. There are several exciting



Bill Waldrip, EnCap Flatrock Midstream

areas where we do not currently have a team at work, including the Bakken, Marcellus, Rockies and Canada."

With roughly a third of U.S. oil rigs now operating in the Permian Basin, "the Permian is going to continue to be a great source of midstream opportunity," says Billy Lemmons, also a managing director at EnCap Flatrock. "Obviously, the stacked-pay potential is a key driver. It takes different types of midstream facilities to handle different qualities of production. And while those different horizons present different challenges, they also present opportunities."

Of course, the Permian is but one of a number of basins with growing upstream volumes and thus, additional infrastructure needs. Others include the Bakken, Eagle Ford, Marcellus and Utica, with Lemmons drawing particular attention to the Utica.

"Because of its access to markets, and a tremendous lack of existing infrastructure in the area, I think it's a great opportunity that will require midstream dollars. We're starting to see the rig count climb in the area, and we're starting to see development of the Utica really kick in."

While focused on midstream opportunities, Waldrip and Lemmons emphasize the advantage of the firm's relationship



with EnCap Investments LP, with the latter offering EnCap Flatrock teams strategic insights into what is working upstream in terms of supply development.

"We have a great deal of institutional knowledge across the entire EnCap platform. For example: 'Things are working out well in West Texas in the emerging Bone Spring play,' and, 'Here are particular areas of the Utica where things are looking really good.'The upstream perspective we have on the emerging plays gives us a meaningful edge."

A changing deal pace

Midstream players, in contrast to some upstream counterparts, appear to have avoided significantly extended holding periods before executing an exit strategy. For EnCap Flatrock Midstream, the four portfolio companies it sold in 2012 dated back to 2009 vintage commitments, indicating a three-or four-year holding period and a relatively stable group of buyers for midstream assets. Holding periods and exit strategies may, however, vary from company to company.

Tom Whitener, president and a founding partner of Dallasbased Energy Spectrum Capital, says he expects the infrastructure build-out in the U.S. "is going to take decades," with occasional periods of both faster and slower growth.

"There will be times when the activity is surging, and then there will be a pullback, and it will go slower for a while," he says. "It's not going to be consistent."

How is that cyclicality showing up in current market conditions?

"Currently, we are in a bit of a deliberate phase with producers," says Whitener. "The pace of deals that are actually closing has slowed down considerably from a couple of years ago. Midstream solution decisions are taking longer than they used to with producers. They're progressing, but at a more deliberate pace."

Whitener cites several factors for the slowdown, including



Tom Whitener, Energy Spectrum Capital

drawn to midstream by attractive liquids economics, "there's not enough deal flow for all of the capital to find a home," says Whitener. And given fewer opportunities meeting targeted returns, his advice is to "be patient and disciplined," given a long-term outlook for the midstream sector that he believes "will be good, but won't always be consistent."

Energy Spectrum targets pre-tax internal rates of return in the mid-20's percent and a cash-on-cash return of at least 2:1. Whitener says its track record has been to deliver "those types of returns pretty consistently across the ebbs and flows" of market conditions since it closed its first fund-one of the first midstream funds-in 1996. The company is now on Fund VI, in which it raised assets of about \$1 billion. The fund targets lower middle market investments.

Energy Spectrum combines greenfield projects, as are typically needed in shale developments, with a "buy and build" strategy often involving underutilized assets with organic

SELECT MIDSTREAM INVESTMENTS				
PE SPONSOR	PORTFOLIO COMPANY	INVESTMENT SIZE MILLIONS	REGION	COMMENTS
EnCap Flatrock	Rangeland Energy II	\$200	Delaware Basin	Repeat Team. Colt Hub Sold For \$425 MM
EnCap Flatrock	Caiman Energy II	\$285	Utica Basin	Repeat Team. Caiman Energy I Sold For Approx. \$2.4 B
Energy Spectrum	Azure Midstream	\$100-150	E. Texas N. Louisiana	Third Commitment
Energy Spectrum	Frontier Midstream	\$100-150	Midcontinent Permian Basin	Third Commitment
ArcLight Capital	Toga Offshore	\$140	Gulf Of Mexico	Floating Production System
ArcLight Capital	Lonestar Midstream	\$500	Texas	Owns GP And LP Interests in JP Energy's MLP

weaker dry-gas prices, and a re-evaluation by E&Ps of their acreage holdings acquired in the Land Grab. But the more recent shift in economics favoring crude oil has also led producers to take their time before giving up the "optionality" on short-term takeaway alternatives, such as rail or pipe, if it involves a long-term acreage dedication and transportation contract. With the slower deal

flow, and greater capital

"It's very important to be a first mover in an area," says Whitener. "If you are, the barriers to entry for a competing system are pretty high." He says Energy Spectrum has a "deep bench" of management

growth potential. Projected returns on "buy and build" are

typically lower at the time of entry into a basin (e.g. high single

digit/low teens) and move higher as expansion opportunities

teams among its portfolio companies, pointing to five repeat management teams in Fund VI, of which two have received third commitments from Energy Spectrum. The holding period for investments by Energy Spectrum has averaged about 4.5 years. Although Energy Spectrum's Fund VI companies are all in the growth stage of their life cycle, one portfolio company from Fund V that is currently being divested is Hoover Energy Partners, which has established a good gas gathering, crude gathering and water disposal footprint in Reeves County, Texas.

ArcLight Capital, based in Boston, has a 10-year-plus track record of investing in energy, raising some \$10 billion across five funds since 2002. Historically, says co-founder Dan



are realized.

Revers, its portfolio has been comprised mainly of hard asset investments made opportunistically across the entire value chain-from "the wellhead to the wall socket"—with roughly a 2:1 weighting in power as compared to the midstream sector.

But it is the midstream sector that is set to capture the predominant weighting in ArcLight's latest fund, which is about half

Dan Revers, ArcLight Capital

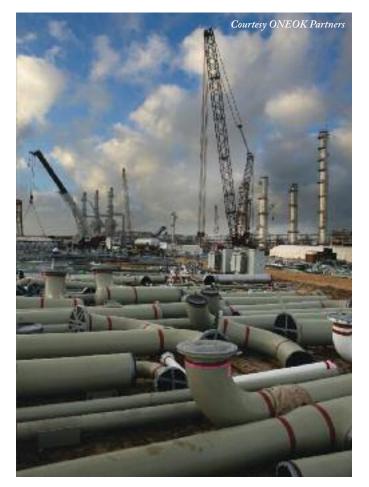
invested. It closed with \$3.3 billion in assets in late 2012. Upstream investments are expected to comprise a mid-teens percent of assets, but the lion's share of the balance will be made up by midstream, this time with a 2:1 margin in its favor over power.

"We see midstream as a really interesting opportunity," says Revers. "It's where the most growth is."

ArcLight is open to evaluating a more varied opportunity set than traditional onshore gathering and processing assets. In addition to power and upstream, for example, it has invested in offshore facilities in the Gulf of Mexico with LLOG Exploration Co. ArcLight affiliates have acquired a majority stake in, as well as provided construction financing for, a floating production system and export lines needed to develop deepwater discoveries by LLOG and others in the Mississippi Canyon area.

"Because offshore is viewed as a more risky venture, the risk/reward profile is a little bit better," says Revers. "It's less picked over than the onshore opportunities."

This is not to say onshore basins are out of favor. ArcLight entered the Arkoma Basin in 2006 through a pipeline venture serving the Woodford shale. In the Eagle Ford, it has a 50% stake in NET Midstream, which operates six intrastate gas pipelines



in Texas and recently struck a deal covering output from the Brasada processing plant owned by Anadarko Petroleum. NET Midstream also is building a 42-inch pipeline system to the Mexican border, anchored by a long-term agreement with Pemex.

Revers cites the advantage of transactions that are "created from whole cloth." With wider availability of private equity, being able "to create your own deal flow" often distinguishes traditional private-equity sponsors from other sources, such as larger infrastructure funds, which tend to bid at auction for largely predictable, lower risk, lower return assets, he says.

As an example, Revers points to announced plans for CenterPoint Energy, OGE Energy Corp. and ArcLight to combine assets to form a leading midstream partnership, which they will then take public. The public entity will be a master limited partnership (MLP) which holds the interstate pipeline and field services of CenterPoint and the midstream business of Enogex LLC. Enogex is 50%-owned by ArcLight and has assets in Oklahoma and the Texas Panhandle.

Given strong growth in the MLP sector, Revers notes, there is a much greater depth of buyers that now exists for midstream assets. This creates a market that is "extremely vibrant and probably the most efficient realization vehicle for midstream assets." The power sector, by contrast, lacks a similarly deep market for its assets, he adds.

Like others, Revers emphasizes the importance of intellectual capital gleaned from having upstream investments. "It gives you the required insights you need to make decisions between basins, and even where you invest within a given basin."



EXIT STRATEGIES

Taking Chips off the Table

Exit strategies such as fixed time-frames or quick flips are giving way to other goals and return orientations.

By Gregory DL Morris

n the end, oil and gas company founders and the private-equity providers that back them want to take their chips off the table and book a meaningful return. But as private-equity investors back some management teams on a repeating basis, and as they develop track records in certain basins and segments of the market, there is less emphasis on a fixed schedule for liquidating positions.

Another huge factor is that the buyer appetite is changing. The big acreage buyers of previous years already have plenty on their plate; some say they have

too much to digest. This makes selling a position being closed out a more complex affair than just hanging out a for-sale sign. Generally, when oil and gas assets are sold today, the acreage has to be more fully developed than it was just a few years ago, indicating a longer hold time for the PE firm.

For any given asset or group of assets, there are several different ways to exit an investment: an initial public offering (IPO), or a sale in the acquisition and divestiture (A&D) market, whether to a C-Corp, a master limited partnership or another PE-backed firm.

Because of Apollo Funds' multi-faceted approach and investment in many structural types, there is less pressure to tailor initial investments to a particular exit strategy. Quite the contrary, "we presume that we're going to be the last operator of any property," says Greg Beard, senior partner and head of natural resources at Apollo, an affiliate of Apollo Global Management LLC. "That investment approach imposes a great deal of discipline at the front end and through the life of the investment.

"Many PE firms have relied on the A&D market for monetizations. In the current environment, where companies are inventory-long, the buy-drill-flip strategy is challenged. Consequently, having access to large amounts of capital is critical to unlock the value in the underlying asset base," says Beard.

IPOs remain a viable option when the timing is right. Just recently, Apollo-backed and Permian-focused Athlon Energy Inc. went public, raising about \$360 million. It was formed in August 2010. Post-IPO, Apollo still owns 65.8%.

In some cases, the return comes not from a capital event, but from cash flow, explains Jonathan Smidt, partner at KKR. "In different contexts, we have very different holding periods. The average holding period for private equity over the life of our firm is about seven years. We target five years and when making new PE investments and when thinking about terminal values, we consider the likely interest rate environment at that

time and its impact on valuations."

Generalizing, KKR does not have an exit strategy so much as a return strategy. "We grapple with that. There are PE firms that have had quick wins, and we have had some ourselves," says Smidt.

"However, we are careful not to create the expectation of quick exits. In certain cases, a fixed investment time frame puts undue pressure on our management teams and their ability to realize value from their assets, and also could preclude us from investing in overlooked or undervalued assets because of the realistic period in which they are expected to become appropriately valued. As such some of our non-PE energy assets have longer lives than traditional PE assets." This means that KKR has bought natural gas assets, and is likely to again.

The unusual transactions, in Smidt's assessment, are where operators sell what seem to be prime positions in some plays to concentrate on other basins.

"For example, Carrizo Oil & Gas sold big chunks of its Barnett shale position to Atlas Energy and to KKR, and redeployed that capital. We are seeing more and more of that. Operators are moving into the execution phase, so the key is to be the low-cost producer, and if they know they cannot be that, for whatever reason, then they may look to exit positions that might seem prime, but they cannot develop them as economically as other assets in their portfolio."



Longer holding periods

"Historically, the holding period for our investments has been around three years," says David Miller, co-founder and managing partner of EnCap Investments LP, based in Houston and Dallas, "but we've had a number of deals extend out over five years before we exited. The timing of the sale of a portfolio company is principally about maximizing value, and our interests are very well aligned with management in that regard.

"The holding period is also influenced by the overall level of M&A activity in the industry, and what types of assets or properties buyers have an appetite for.

"Market dynamics have changed pretty dramatically in just the past 12 to 18 months," Miller says.

"Billions of dollars were spent by the majors and foreign national oil companies as they bought their way into the North American resource plays, and now many of the most active acquirers over the past five years are on the side lines." he observes. "That is evidenced by the fact that the aggregate dollar volume for M&A deals for 2013 is expected to be less than half what it has been in the three prior years."

Most of the remaining buyers are demanding that the assets they acquire have more fully delineated risks, with a larger component of proved developed reserves, Miller says. "That means drilling more wells and could potentially result in somewhat longer hold periods for private-equity investments."

EnCap is still selectively selling portfolio companies, but Miller notes that "the opportunity set is always evolving and the picture today and what it will be in three to four years are likely very different. For that reason, it is essential that both we and our portfolio company management teams be adaptable."

For Natural Gas Partners, an affiliate of NGP Energy Capital Management, the end game is triggered by a simple question: "Can we double it from here?" So says Tony Weber, partner with NGP, based in Dallas.

"If the answer is yes, and we do, then we ask, can we double it again? Whenever the answer is no, then the asset becomes a candidate for sale, but not necessarily at that moment. Today the industry is in search of yield, and the buyers have changed from what they were just a few years ago. People are tending to keep rate-of-return and cashflow assets, and are selling drilling sites and acres."

Another factor changing the scenario is that there has been a good deal of interest among foreign investors, and that will, in part, drive the market for everyone else, including PE, according to Rick Burdick, managing partner for international operations at the legal and advisory firm Akin Gump Strauss Hauer & Feld.

"The unconventional development looks like a big opportunity, and many offshore investors want to be involved," he says. "Some of that is strategic, interest in the resources themselves and some of it is driven by interest in acquiring the know-how. That is especially true of Chinese investors." Akin Gump advises on both sell side and buy side for transactions.

For Akin Gump's recent activity, Burdick says there has been more A&D than M&A, "as suits the industry right now." On exits Burdick notes, "We have seen more events where the strategy is to sell to another PE firm. It used to be either an IPO or a sale to a strategic buyer, or even serial recapitalizations. Now there is a lot more PE-to-PE. That really makes for interesting negotiations."

Focus on return, not timing

ArcLight Capital's limited partners (LPs) are focused on achieving an internal rate of return in the mid-teens to mid-20s. "The challenge on timing your exit strategy is to balance the internal rate of return goal with their multiple-of-capital goals," says Dan Revers, managing partner at the Boston firm.

"You can hold forever and get a high ROI, but very low IRR. Or you can flip an investment quickly, and achieve a higher IRR, but lower ROI. It is impossible to foresee what exit paths buyers are going to favor, so we plan multiple exit plans from day one."

Common exit paths for ArcLight assets include sales to C-corporations and MLPs, but the company may also recapitalize the portfolio company-or even break it apart to sell in packages.

"One thing I like about energy is that it provides multiple exit options," says Revers. "This is good because you never know what buyers want. Today everyone wants oil or wet gas, but several years ago everyone wanted dry gas. For a while everyone wanted to go offshore; now they want dry feet. Private-equity investors have to be nimble."

COMPANY/ PE SPONSOR	BUYER	AMOUNT (\$ Billions)
Cordillera Energy Partners III/EnCap	Apache Corp.	\$2.85
Dynamic Offshore/Riverstone	SandRidge Energy	\$1.275
Ute Energy LLC/Quantum Energy	Crescent Point Energy & Northern Ute Nation	\$1.0
Three Rivers Operating Co./Riverstone & Carlyle	Concho Resources	\$1.0
Paloma Partners II/EnCap	Marathon Oil	\$0.750
FLP Energy/Trilantic & Riverstone	NFR Energy	\$0.655
Eagle Energy Production/Riverstone	Midstates Petroleum	\$0.650

A key factor driving the market today, says Revers, is that "even the well-heeled operators have to make choices; they just have too many opportunities to fund and work through. The less-well capitalized are facing tougher realities and have to turn to the M&A market to fund their drilling requirements." Despite that reality, Revers says there are not many fire sales.

ArcLight is willing to consider breaking up a holding. "You have to think carefully about how to sell things. Sometimes you can get more for the sum of the parts than you can for the whole. If you get someone who wants just a piece of a system and is willing to pay a good price you don't have to worry about selling what is left over. Everyone likes bolt-on asset packages or small add-ons, so often you can find a nearby operator, even a small one, who's willing to pick up the odd pieces."

Trilantic Capital Partners has recently completed some rather large exits, including a \$655-million sale of TLP Energy LLC in December 2012, an Anadarko Basin company that Trilantic formed less than two years earlier, in August 2011, with management and co-investor First Reserve Corp.

Trilantic has approximately \$5.9 billion in capital commitments, of which about \$2 billion has been committed in the past few years, says Chris Manning, energy partner. The firm takes both control and minority positions at about the \$200-million level.

The strategy is that the whole can be greater than the sum of the parts, "when you are getting 640s at market rates," says Manning, "or acquiring small companies with production or acreage with upside. We have no standard timeline for selling assets. We have the flexibility to close out a position in as little as 18 months, or we can stay in for as long as 10 years if that's what the plan calls for."

Whenever the time does come, Manning says the exit can be a sale to management, or to another PE firm, or to an independent operator. IPOs are also feasible, but less frequent for Trilantic.

"We are very focused on being exit ready," he states. "We always have a data room ready."

Manning is quick to stress that there is never pressure on management to sell or prepare for a sale. "We work with management, and often they own a chunk of the equity, so they are always our partners, rather than our employees. Preparing for a sale is a discipline for all of us, not a threat from us to management. We don't want them to be nervous about a Sword of Damocles hanging over them. We just all want to be ready to take advantage of whatever the best opportunity is when the time is ripe.³

One aspect of that discipline for Trilantic, Manning adds, "is that we don't necessarily take the first offer. We have a goal for developing each asset or company in which we invest, and that includes the path to exit. We do auctions, we do IPOs, many options, but there is always a plan. If the market price on the table is not attractive to us, then we don't have to do anything."

"You just can't know for sure what is going to be hot when you are going to want to sell," says Tricoli, "so you just have to develop assets as best you can. In oil and gas there has always been an active A&D market, which has historically been more liquid

Preparing for a sale is a discipline for all of us. not a threat...

-Chris Manning, Trilantic Capital Partners

than the public markets. If your exit strategy is an IPO, that market can run very hot or very cold. But A&D is always open. Our preference is always to sell for cash, rather than an IPO."



Too much focus on exit strategies also tends to get in the way of acquiring and operating solid assets. "As you think about the vagaries of the market, the one constant is that if you have good properties, this gives you flexibility on buyers and on timing. As long as you don't have a lot of leverage, you can survive just about anything and sell when you want to, not when you have to."

"WHERE DO WE GET OFF?"

(The evolution of exit strategies over the past few years, as noted by top PE managers)

EXITS THEN

- Buyers are willing to pay for marginal development and PUDs.
- Buyers are willing to pay for upside potential
- Buyers believe plays are homogenous, and are happy to be in the area
- Infrastructure will follow naturally
- Known universe of buyers, reliable counterparties hungry for acres.
- Delineate, then sell to an independent

EXITS NOW

- Buyers will only pay for profitable development, or at least PDP assets
- Buyers expect upside for little or no additional expense.
- Buyers know even shales are highly variable, proximity is no guarantee of profitability. They are more educated on sweet spots of plays and variable economics within plays.
- Access to market for the hydrocarbons is essential.
- Fast-changing universe of buyers. Sellers have to plan for exit at entry and prepare for a wide range of exits (asset sales, IPOs, MLPs, recapitalizations).
- Begin development and sell to an MLP or resource fund, or pursue an IPO
- Larger focus on de-risked drilling and demonstrable well results
- Market will still pay up for drilling inventory but only if (i) it offers top quartile economics (40%+) and (ii) it has been substantially de-risked (many data points on production history).







The Players

n the following pages, some of the companies that provide private equity to the oil and gas industry tell their histories and share their strategies. They also comment on the trends and issues they see in the U.S. economy and in the energy industry in general; these perspectives color how they make investment decisions today.

Whatever the ups and downs of the economy and the oil and gas industry itself, nuances are always important, as is personal compatibility. As one provider has said, he prefers to invest with people with whom he feels comfortable entrusting his children. There needs to be a good match between those seeking capital and those who can provide it, in terms of shared thinking, alignment of financial interests and goals, and a common exit strategy.

Many companies think of their financial backers as true members of the team, providing business advice, contacts and deal flow in addition to capital.

The range of opportunities has changed significantly for private-equity players and the companies they back, especially thanks to the resource plays, which require more drilling dollars beyond the initial proving phase.

These profiles allow the reader to better understand the world of private equity, which is vast, colorful and varied—and ready to put its dollars to work.





Producing Results

When opportunity knocks, choosing a financial partner who seizes opportunity and understands risk is critical for success.

For over a decade, ArcLight has forged working partnerships with entrepreneurs, strategic players and financial institutions in the oil and gas production, midstream, and power generation sectors. We bring our partners more than just capital - we provide expertise, insight, operational capabilities and transparency.

Talk to us. Talk to our partners.

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POWER • MIDSTREAM • PRODUCTION

ARCLIGHT CAPITAL PARTNERS, LLC

ArcLight Capital Partners

ince 2001, ArcLight Capital Partners LLC has employed its Strategy of investing from the "wellhead to wall socket" across the entire value chain of the energy industry. Behind this strategy is the belief that the industry is highly integrated, and investing in one sector requires detailed understanding of the rest, says Dan Revers, managing partner and co-founder of ArcLight Capital.

"To effectively invest upstream, you

need to understand the midstream assets required to gather, process and transport the hydrocarbons and vice versa," Revers says. "Furthermore, power generation is directly affected by the production of natural gas, which is used to power a large

portion of the U.S. power fleet. We saw this convergence coming and thought if we raised a fund that could opportunistically invest across the entire value chain, we could consistently produce attractive, risk-adjusted returns."

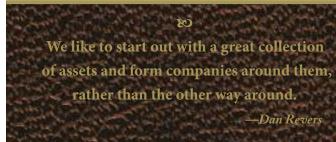
ArcLight was spun out of John Hancock Life Insurance Co., where Revers ran a portfolio of energy investments. Hancock was a cornerstone investor in ArcLight's Fund I, and has invested in several of the firm's follow-on funds.

ArcLight closed its first fund in 2002 with \$950 million in commitments. Its latest deal, Fund V, closed in 2011 with \$3.3 billion in commitments.

Since 2001, ArcLight's investment strategy has focused on hard assets across the entire energy value chain instead of the more common corporate focused, buyout approach.

"Underlying assets tend to retain value where corporate values can be fleeting," Revers says. "We like to start out with a great collection of assets and form companies around them, rather than the other way around."

ArcLight does not allocate fixed amounts of capital to specific sectors of the energy industry. Instead, the firm intends to put its money where it thinks it can find the best value. Its current focus encompasses midstream infrastructure in all of the major U.S. shale plays as well as the Gulf of Mexico. The firm prefers to invest in deals in the



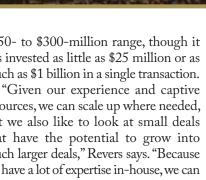
\$150- to \$300-million range, though it has invested as little as \$25 million or as much as \$1 billion in a single transaction.

resources, we can scale up where needed, but we also like to look at small deals that have the potential to grow into much larger deals," Revers says. "Because we have a lot of expertise in-house, we can evaluate smaller deals without drowning them in third-party due diligence costs."

leans-based LLOG Exploration LLC allowed ArcLight to showcase the experience and expertise its principals have developed over the past 25 years. The investment is being used to fund construction of an independent floating production system in the Mississippi Canyon area of the Gulf of Mexico. ArcLight's investment allowed LLOG to put its capital into the drill bit while creating a true partnership around the infrastructure.

"This deal took a full year to structure and negotiate," Revers says. "One of our strengths is the ability to create highlystructured investments around assets like these. We learned the techniques many years ago in the power business and were one of the first investors to employ them in midstream infrastructure assets. This was the first deal of its kind but we'd love to do more just like it."





-Dan Revers

A recent investment with New Or-



Insights with Carl Tricoli



Who:	Carl Tricoli Managing Partner and Co-President
Whati	Denham Capital
	Energy and resources-focused private equity firm with over \$7.3 billion in invested and committed capital
	50 partnerships in 9 years
Where:	Houston, Boston, London, São Paulo, Perth
How:	Meeting long-term objectives by applying deep operational and industry experience.

with a focus on shared success

What defines a great entrepreneur?

Successful entrepreneurs have an unwavering confidence in their vision combined with an incredible nimbleness and flexibility to adjust to real-time circumstances, so they're always figuring out what actually works.

You'll also find they have an ability to take in large amounts of data and complexity.

It is this constant energetic gathering of bits of information from which they derive some pattern that leads them to a new idea.

How do you recognize these characteristics when you're meeting with potential partners?

People think they want to be an entrepreneur, but what they really want is a job with upside. The real entrepreneur is the person who is willing to jump into the unknown. They don't want to talk about salary, benefits, what will happen if the business doesn't work - they only want to talk about what happens when it does work. The entrepreneur is looking for the big prize, ready to jump in the void...they have every confidence they will figure it out.

Yes - it's hugely important. They must have at least most of the team assembled. We want to evaluate the people they put around them because you can sense whether or not they will be a successful leader. Another thing we're looking for is someone who actually recognizes their own deficiencies and surrounds themselves with people who compliment their strengths and weaknesses.

If you're asking "Is this right for me?" it's probably not. An entrepreneur's drive and vision have always been in front of them. Anything they're doing now is leading them to the point where they can do something on their own.



Do you look for someone that already has a team put together?

Any last bits of advice for potential stars?

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CAPITAL SOLUTIONS FOR ENERGY ENTREPRENEURS

At Donovan Capital, we specialize in raising private capital for oil and gas companies.

Our expertise comes from more than 20 years of energy private equity and investment banking experiences with some of the largest names in the industry. This allows us to competitively access the private capital markets on our clients' behalf to secure the capital they need to grow.

We specialize in making complex deals simple. Where others see obstacles, we see solutions.



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Donovan Capital

Capital Solutions for Energy Entrepreneurs

Most oil and gas capital providers lend or invest money directly, why hire an advisor? Just as athletes need agents, oil and gas producers need capital advisors. At Donovan Capital, we specialize in raising private capital for oil and gas companies.

We know the market, but more importantly, we know who's investing in your space. Our principals have closed over \$11 billion in transactions, and capital providers continue to lean on us for new opportunities.

At Donovan Capital, we structure and negotiate the best deals for our clients. We cut through the red tape to avoid pitfalls typically associated with complex transactions.

Últimately, the service we provide as advisors gives our clients optionality and expediency, but most importantly, confidence in closing.

What sets Donovan Capital apart from others?

At Donovan Capital, our expertise comes from more than 20 years of energy private equity and investment banking experiences with some of the largest names in the industry. This allows us to competitively access the private capital markets on our clients' behalf to secure the capital they need to grow.

We have strong relationships with all of the energy capital providers and we specialize in making complex deals simpler; where others see obstacles, we see solutions.

Perhaps our greatest differentiator lies in the success of our clients. There is no better way to qualify Donovan Capital as your advisor than to call our clients for references.

What advice would you give to someone seeking capital? First, know your audience. Debt providers generally favor assets and collateral while equity providers tend to favor management teams. Be certain you have a compelling and distinct story around one or the other before you go to market.

Two, know which firms are actively investing and in what they are investing. This increases the number of offers your company receives, minimizes your company's execution risk and goes a long way towards maximizing your potential equity returns.

ß Ultimately, the service we provide as advisors gives our clients optionality and expediency, but most importantly, confidence in closing.

> Third, remember that there is no formula for raising capital for new ventures, and there is certainly no "silver bullet." The capital raising process will require flexibility and nimbleness to make it to final closing.

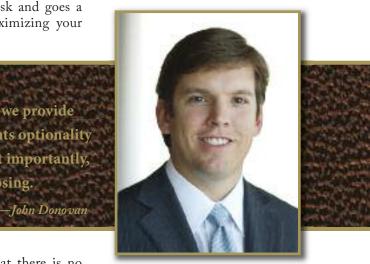
> Fourth, keep presentations short, be prepared to answer questions not outlined on paper and realize that from the moment you sit down, you are being evaluated.

> Finally, hire a qualified advisor like Donovan Capital, who can do all of this for you. At Donovan Capital, we have successfully navigated over 60 transactions from start to finish.

> Which comes first, investors or assets? This is a question we encounter frequently

and it can go both ways.

Generally speaking, startups have more success raising capital with an executed letter of intent (LOI) in hand. The challenge, however, is convincing a seller to provide exclusivity without capital in hand. Just get ready to run fast – an LOI with a 60-90 day exclusive and no money circled will require quick and decisive action.



Later-stage companies with existing assets and/or management, on the other hand, are better positioned to negotiate financing as long as the storyline is attractive. The capital markets are efficient so don't jump the gun if there is still shaping to be done.







When EnCap Investments was created 25 years ago, the firm's four managing partners saw opportunity in very uncertain economic times. What formed the basis of the decision to launch the firm?

Both public and private capital were extremely scarce after the collapse of oil and gas prices in the mid-1980s. However, we were aware of several hands-full of institutional investors, principally life insurance companies, that were still willing to entertain an oil and gas opportunity. When we formed EnCap in 1988, our business plan was to become a conduit between those institutional capital sources on one hand and oil and gas investments emanating

from the extensive industry contacts we had on the other. We began by forming a mezzanine fund to effectively provide "stretch" bank financing with a mid-teens return objective. We also formed a reserve acquisition fund to pursue attractive oil and gas acquisition opportunities targeting similar returns.

What drove your evolution from a firm focused on mezzanine debt and acquisition funds to private equity? In the late 1980s there were very few mezzanine players in the industry. Ten years later there were more than 30 mezzanine providers, which had the effect of driving returns down and credit risk up. Similarly, the reserve acquisition



Seated, L-R: Gary Petersen (managing partner), David Miller (managing partner), Marty Phillips (managing partner). Standing: Murphy Markham, Doug Swanson, Jason DeLorenzo, Jason McMahon. Bob Zorich (managing partner), Wynne Snoots, Sean Smith.

market was becoming increasingly competitive with new entrants significantly altering the risk-return equation. We believed that private equity would represent a superior value proposition, coupled with the fact that our interests would be better aligned with management teams, so we started our first private equity fund in 1994. In 2001, EnCap Fund III was the first fund to focus on backing start-up management teams that possessed deep experience and expertise in the oil and gas industry.

We believed that partnering with the premier teams in the industry and developing a relationship-driven model would create substantial value for our investors and management teams. Since inception, more than 95% of the \$18 billion of capital we have managed has been focused on backing start-up management teams and then re-backing many of those teams on the heels of successful exits.

How has the private-equity landscape shifted over the last 25 years and how has EnCap changed with it?

EnCap has consistently sought investment opportunities with the most attractive risk-reward profiles, and that has required that both we and our portfolio companies have the ability to adapt to changing market dynamics. During most of the 1990s, our portfolio companies largely pursued acquire-and-exploit growth strategies, which involved "buying right" from the majors and large independents, doing some lower risk development work on the acquired properties, and then selling to public E&P companies. However, around the turn of the century, that strategy became less attractive economically as the same people we were selling to, i.e., the small to mid-cap public E&P companies, began to compete with our portfolio companies for M&A deals. Fortunately

about that time natural gas prices, after languishing for over a decade, were approaching \$3.00 per MCF and along came something called the Barnett Shale. We did our first deal in the Barnett in 2000 and then proceeded to march from one economically-advantaged resource play to the next over the ensuing dozen or so years. Horizontal drilling and continued advances in completion technology led to further opportunity for our teams in both unconventional and conventional resource plays.

While many private equity firms were slow to respond to these new opportunities, EnCap embraced them. Since 2008, EnCap has sold close to 40 companies that were involved in various resource plays, resulting in gross sales proceeds of roughly \$20 billion and some \$8.5 billion of distributions to our institutional partners.

What are the key drivers of EnCap's success?

Consistency is the hallmark of EnCap's track record. Pregin's Global Private Equity Survey 2012 ranks EnCap as one of the most consistent private equity managers overall and the top manager in the oil and gas industry. In fact, EnCap is the only energy private equity firm that has had six consecutive topquartile funds. EnCap's funds have also substantially outperformed the S&P Energy Index and energy commodities over the life of the funds.

In total, EnCap has raised 17 institutional oil and gas investment funds aggregating more than \$18 billion. Over the past 25 years, EnCap has invested nearly \$10 billion in just over 200 companies. One hundred and fifty of those investments have been realized, resulting in returns that have consistently exceeded our targets of a 2.0x ROI and a 25% IRR.

Our ability to attract the highest quality management teams in the industry is central to our success. Over EnCap's long history, we have established a strong reputation as an innovative, value-added source of capital. This has allowed us to attract seasoned management teams with demonstrable track records of success and solid value creation strategies.

Certainly, one of our core strengths EnCap has consistently generated

is the experience and cohesiveness of our investment staff. EnCap's four founding partners have led EnCap since its inception and have a working relationship that spans almost 35 years. We also have a very deep "bench" with the six partners below the founders having an average of over 23 years of oil and gas industry experience and an average tenure with the firm of 14 years. superior returns across multiple hydrocarbon price cycles by applying a low-risk, disciplined philosophy that balances capital preservation and value creation. We ensure that our management teams focus on the most economically advantaged areas and strategies, adapt to changing market conditions, and build asset bases and opportunity sets that are attractive to the universe of buyers.

EnCap takes a rigorous approach to risk management. We monitor investments and market conditions closely and advance capital incrementally as management teams identify compelling opportunities and create value through the successful execution of their business plans.

What do you look for in a management team and what differentiates EnCap's value-added contributions to the teams in your portfolio?

We look for teams with a history of successful value creation grounded in strong technical and operational backgrounds. EnCap backs teams with an entrepreneurial mindset and a risk management philosophy that is consistent with ours. We also place the highest value on integrity, honesty and open communication. Today, with a \$5-billion upstream-focused fund and a \$1.75billion midstream fund via our partnership with Flatrock Energy Advisors, EnCap is strategically positioned to provide some of the largest equity

commitments in the industry to attract and support the best management teams.

What are the most attractive upstream opportunity sets today? From a big-picture perspective, both the upstream and midstream sectors are highly capital-intensive. The IEA estimates that approximately \$750 billion per year will be required worldwide to offset production declines and generate new reserves to meet increased long-term demand. We believe that in and of itself suggests there will continue to be significant investment opportunity.

The industry has seen a dramatic shift from vertical to horizontal drilling and the implementation of advanced completion technologies. These techniques were initially tested in emerging shale plays like the Barnett, Haynesville, Eagle Ford and the Bakken. More recent applications include conventional "tight rock" formations like the Granite Wash and the Permian Basin's Wolfcamp formation. Promising new plays like the Utica and the Cline Shale continue to emerge with current development activity focused on oil and liquids-rich areas with superior economics. Many areas consist of multiple hydrocarbon types and offer repeatable opportunities. Stacked pays offer substantial option value and the potential to exploit more mature areas through the application of modern technologies.

Our sense is the foremost opportunities continue to be centered in the economically-advantaged, lower-risk drilling plays. Broadly speaking, the M&A market for oil and gas assets appears to be intensely competitive, but we have had portfolio companies selectively identify and capture highly attractive reserve acquisitions in every fund and we believe that will continue to be the case.



EnCap Flatrock Midstream

Founded in 2008, EnCap Flatrock Midstream is entirely dedicated to providing private equity support to midstream management teams. The firm manages more than \$3 billion in private equity commitments from institutional investors. In 2012 four of EnCap Flatrock's portfolio companies realized more than \$3.5 billion in asset sales.

The energy industry continues to attract a record amount of capital. What is the midstream opportunity set – and will it last?

Midstream capital investment has always been directly linked to the recurring reinvestment requirements of the upstream side of the business. The North American upstream business will require approximately \$150 billion per year to replace and grow supply at a modest pace. For every dollar spent on the upstream side of the business there is a corresponding 15 to 30 cents that must be invested in midstream assets required to deliver product from the wellhead to market. It's one of the great things about being in the midstream business - even with fluctuations in upstream activity levels and commodities there's always a big playing field in our space. The size of the opportunity is not only recurring, it is large and will continue to grow as new wells are drilled across emerging resource plays where midstream infrastructure does not exist or legacy systems are both aging and insufficient to handle current and anticipated production volumes.

Our focus is usually close to the wellhead where the relationship between customers and midstream companies is most organic and we can generate attractive returns by backing early-stage companies. EnCap Flatrock's teams are focused on developing physical and contractual assets from the ground up and/or acquiring underdeveloped midstream assets to meet the needs of active producers in the most economically advantaged plays where we believe growth will occur.

There is a lot of capital focused on the midstream space because of its long-term potential and attractive returns. So yes, more than 100 years into the history of this industry we think the midstream investment opportunity will last.

What makes private-equity an attractive way to invest in the midstream sector?

Private equity is a growing and very important part of the overall balance sheet of the industry. For management teams and investors, midstream private equity provides a conduit to a different opportunity set than the public MLPs offer. The emergence of the independent, private equity-backed midstream operator has occurred alongside the emergence of new resource plays. Larger public companies are generally focused on near-term accretive cash flows. Our portfolio companies have the combination of agility, skillsets and capital structure needed to develop early-stage midstream opportunities in these plays. EnCap Flatrock backs seasoned teams that have an entrepreneurial mindset and the ability to execute quickly. These opportunities are usually closer to the wellhead and provide a different risk-reward equation, but one that is complementary to yield-focused MLPs. We like the role our portfolio companies play in the value chain. Once

our companies mature and develop strong growth platforms they become valuable to the larger public players in the space and become attractive acquisition targets.

By investing in management teams with industry experience rather than assets, EnCap Investments was a pioneer developer of private equity's "relationship" model. Is this your investment model?

Yes. At EnCap Flatrock it all starts with people and relationships. We are always actively looking for the very best midstream executives who are ready to run their own companies and realize the personal and financial rewards of their success. The midstream landscape is large enough for us to add talented groups right now in several great producing areas in North America where we have limited or no exposure. These include vast areas like the Rockies, Eagle Ford, Marcellus, the Bakken and Canada. In areas where we do have current teams operating we believe there are multiple opportunities for diverse business plans.

The teams we are fortunate to partner with are great competitors in the marketplace. We absolutely believe in their abilities to get deals done and execute. Our own team comes to work every day thinking about what we can do to help our portfolio companies be successful. Everything we do is grounded in this philosophy.

What do you look for in a management team?

We are looking for teams to become our partners that have vision and a sense of urgency that starts today seasoned executives with great track records of success and strong reputations for meeting the needs of their customers. Specifically, we look for cohesive teams that value teamwork, have strong technical and operational skills, a demonstrable record of value creation, a well-defined business plan, and an understanding of risk and midstream fundamentals that is aligned with ours. We also place the

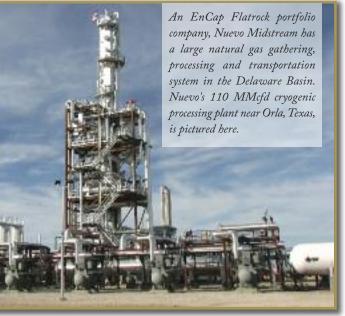
highest value on integrity, honesty and open communications.

We think of ourselves as "excellence accelerators" and look for outstanding executives that have a desire to work with an experienced value-added partner that is 100 percent dedicated to midstream. With combined strengths, game-changing contacts and advice, and deep industry experience we deliver more than capital for our management teams in good times and through complex challenges. We bring a unique and powerful set of skills: deep industry expertise, significant operational experience, outstanding technical skills, broad industry recognition and contacts along with financial sophistication and a formidable track record of successful private equity investing. EnCap Flatrock's three managing principals have worked together in the midstream sector for more than 30 years and we have an extremely talented and experienced investment staff dedicated to ensuring that our management teams have everything they need to succeed.

What are the other key components of your investment strategy? Our goal is simple. We want to be the

EnCap Flatrock Midstream's three managing partners L-R: Bill Waldrip, Dennis Jaggi and Billy Lemmons.

ENCAP FLATROCK MIDSTREAM



best possible equity provider in the midstream sector. The difference between the best and rest is enormous. We believe it comes down to putting outstanding people on the job and executing very well in a few key areas: people, supply and relationship management. That means partnering with top-tier teams in the most attractive supply areas, and then being the best partner we can be to help our teams be successful. We support our teams as they execute their business plans and strive to be as supportive as possible when opportunities and challenges arise.

One area we focus on is developing a deep understanding of market conditions as well as the geology and other factors that drive the upstream economics of every play where we have a team. Our relationship with EnCap Investments provides us with unique strategic insights on upstream development as well as the opportunity to work with their portfolio companies.





Consistently creating value for our clients

For the past 12 years, Energy Capital Solutions, LLC ("ECS") has been a leading investment banking firm focused on private capital raising and M&A advisory assignments for mid-size public and private energy companies. Allow us to show you how a deep and balanced understanding of the energy capital and M&A markets can help you obtain the best transaction outcome.



Energy Capital Solutions

n the unconventional-resource era, the oil and gas industry has created Lan ideal environment for privateequity investment, says Russell Weinberg, founder and managing director of Energy Capital Solutions in Dallas.

Greater leasehold, drilling and completion costs-along with higher predictability and lower risk-allow private equity with an appetite for scale to deploy large capital commitments with a reasonable rate of return.

"Everything is more expensive, but less risky," he concludes. "It is an excellent match."

To be sure, the industry has shifted to take advantage of the opportunities of unconventional resources, and if that also means attracting huge volumes of private equity, so much the better for operators and investors.Weinberg notes that many operators need assistance in communicating their capital requirements to potential investors.

"Operators need more capital today," he says, "and in being compelled to seek private equity, they are challenged to meet the expectations of those investors. We help management teams communicate their opportunities through detailed modeling and analysis of historical performance, demonstrating more transparent value creation."

That discipline in turn has revealed further opportunities. "We are serving more and more private-equity firms that are making room in their portfolios to pursue conventional development," says Scott Trulock, managing director.

"The emphasis is still very much on shale and liquids, but conventional development is still in the mix. We have seen the pendulum swing back a little from the one extreme."

Nuances like this illustrate why management teams seeking capital like to hire intermediaries. "We understand the entire private-equity universe, not

"In understanding both sides of the Weinberg founded ECS in 2001,

just the name brands," says Weinberg. table, we can articulate the operator's story in a way that is efficient and effective for the private-equity firms, and also help the management teams better understand the various funds' investment criteria, control provisions, and goals to assist them in selecting a good partner." and since then the firm has completed \$7.2 billion in transactions (136 deals), including \$3.8 billion of private capital

raised through 92 deals.

Weinberg has more than 24 years of investment banking experience including RBC Dain Rauscher Wessels and Thomson McKinnon.He has focused most of his career in covering primarily exploration and production companies and other energy-related companies.

Before joining ECS in 2003, Trulock was Russell Weinberg with Deutsche Bank Securities in the Energy, Power, and Chemicals Group. Previously, he was a chemical engineering consultant with Berwanger Inc., where he focused on refineries, petrochemical plants and midstream processing.

ECS' most recent closed transactions

include a \$200-million private equity placement for Excalibur Resources and a series of transactions for Le Norman Properties, including a \$350-million private-equity placement with Trilantic and First Reserve Corp. It also included a \$250 million, senior secured credit facility with Carlyle Energy Mezzanine Opportunities Fund.

The way that private-equity firms and the teams they back get to build longterm relationships, including multiple portfolio

company formation and divestiture cycles with the same team, is by working toward a foundation of common objectives.

"There is a lot more to the process than obtaining term sheets and shaking hands on a deal," says Weinberg.

"We help management teams make things easy for the private-equity side of the table by articulating the use of proceeds clearly and modeling the economic outcome with well-supported assumptions. We also work throughout the final documentation process to help teams understand potential pitfalls and



Scott Trulock

secure the best possible terms. The more efficient the process, the better for everyone.

"Management teams who present a strong, financially supportable business case, are prepared for diligence and are ready to execute immediately, stand out to private equity," Weinberg says.

"We help ensure client opportunities are communicated to decision-makers effectively and professionally from a business and technical perspective."





xperience, stability and longevity are terms often used to describe ✓ Dallas-based Energy Spectrum Capital. Two of the founders, Tom Whitener and Leland White, began their working relationship in 1974 at InterFirst Bank. A third founder, Jim Benson, joined them there in 1984. In 1987, all three departed InterFirst for Reid Investments, a boutique energy investment bank where they generated the idea for the first Energy Spectrum fund. A fourth founding partner, Jim Spann, joined the team in 1995, and together they raised the firm's first fund (along with two other partners no longer with the firm). Energy Spectrum Partners LP was launched in 1996 with \$91 million of committed capital from three pension funds. Since its founding, the firm has focused on providing lower middle market private equity for midstream companies, which was relatively unique in 1996. To date, the firm has raised six midstream private equity funds totaling \$2.3 billion.

"Our objective has always been to work with best-in-class management teams to build midstream businesses providing value-added services that are attractive to strategic buyers looking for quality assets with predictable cash flows," says Jim Benson, co-founder

and partner. "When we began in 1995, we determined there were several different groups focused on E&P, but there was a lack of midstream private equity focused on acquisition and greenfield opportunities," says Benson. "That was our focus. There was a definite need for midstream private equity but limited availability, so we decided that was a good way to differentiate ourselves."

As the first private equity fund focused on midstream, Energy Spectrum worked to enlighten an institutional investor community not yet familiar with the midstream space. "Everyone knew about upstream oil and gas and was comfortable investing in reserves and production, but when you talked to them about energy infrastructure, most institutional investors had not realized how private equity could be employed to build businesses around midstream assets," Benson says. "Our first fund only had three limited partners. That's grown significantly over the years. Today we have approximately 60 limited partners that invest with us."

The Energy Spectrum team was well-positioned to meet the capital needs of the midstream space. Their time as energy bankers and financiers involved many midstream investment opportunities, and they have all spent their entire careers focused on financing and investing in U.S. onshore energy. "But investing in the midstream space has its own unique challenges and opportunities that differ from investing in the E&P space," says Tom Whitener, co-founder and partner of Energy Spectrum.

"Challenges include a smaller (although still substantial) universe of potential deals when compared to upstream deals, and midstream opportunities are driven by the actions of oil and gas producers," Whitener says. Midstream companies exist to serve producer needs and rarely initiate new projects without signed producer contracts that provide the underpinnings to the projects and mitigate the risks. Conversely, focusing just on midstream has some advantages. As midstream management teams search for a knowledgeable financial partner, they recognize the value of Energy Spectrum's focus on midstream and years of experience in that specialty. This kind of "pure play" proficiency improves the likelihood of creating strong partnerships with management teams, as well as the probability of consistently strong investment performance.

"We've been doing this a long time, and we have a high level of expertise," says Whitener. "The founding partners



average more than 35 years of experience each. When a midstream team is attempting to form a new company and looking for a financial sponsor, they want an experienced partner who understands their business as well as they do and is not going to run for the exit the first time something goes the wrong way in the market. We have specialized in providing a high degree of service in the lower middle market of the midstream space, and we want to stay there."

Energy Spectrum's number one priority when looking at a potential investment is the people involved. "We firmly believe the management team has the biggest impact on whether or not an investment is successful," says Ben Davis, partner. "When we find an exceptional management team, we will consider backing them even if they don't already have a project."

After 17 years of investing in people, the team at Energy Spectrum has a good idea of what makes a good management team. Whitener believes there are three main aspects to a good team. "They must have a high level of technical expertise in building and operating midstream assets, they need to be good partners and view our relationship as a true partnership, and our philosophies on acquiring, managing, growing, and exiting midstream businesses need to be strongly aligned," he says. "We want to be treated as true partners and not just a financing source."

Energy Spectrum's values have earned repeat business from many of its management teams. Of the eleven teams it currently backs, five are teams



Mark Honeybone, Jim Spann, Leland White, Ben Davis, Jim Benson, Tom Whitener, Peter Augustini, Mike Mayon and Chandler Phillips

the firm has funded previously, including two teams with whom the firm is partnering for the third time.

A big part of building partnerships with each portfolio company is providing senior-level experience to help guide each company's team. "Of our nine deal guys, seven are partners, including four founding partners and three younger partners," Davis explains. "Each portfolio company typically works with an Energy Spectrum team of three, which usually includes a founding partner, a younger partner and one of our two senior associates. Our approach provides a senior level of attention for every deal." Once the firm has made an investment in a portfolio company, their strategy is one of empowerment rather than micro-management. "We don't tell them where they can or can't invest. We add value by steering opportunities their way, but we let them choose where to focus," Davis says. "Also, we don't

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ENERGY SPECTRUM CAPITAL

dictate when it's time to sell. In almost all cases, that is a mutual decision between Energy Spectrum and the portfolio company's management team."

The firm is now investing its sixth fund, Energy Spectrum Partners VI LP, which closed at just under \$1 billion. All of its investments are onshore in the U.S. and Canada. Jim Spann, cofounder and partner, says the firm chooses to keep its funds below \$1 billion for a reason. "We want to be able to invest in smaller deals that have strong growth potential," says Spann. "We see attractive opportunities at that end of the market, and it's relatively underserved. With a billion-dollar fund, we tend to keep our equity investment range from \$50 million to \$200 million, but we're willing to do a \$5 million deal that has the potential to expand. At the same time, we have the ability to step up and do a multi-hundred-million dollar investment when we see the right opportunity."





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Five States Energy Capital, LLC

n the early 1980s, Jim Gibbs saw many opportunities for acquiring Lunderpriced assets in the oil and gas industry. Keeping his investment focus on areas to which he could drive from his Dallas office in a day-Texas and the four states surrounding it-Five States Energy was born. Today, he is chairman of the company.

After 20 years of successful acquisition and development of oil and gas assets for its own account, Five States' investment focus expanded to include equity participation and mezzanine debt lending to other independent oil and gas producers.

"We got into mezzanine lending as another way to acquire interests in producing assets through an equity back-in," says Arthur Budge Jr., president and CEO of Five States. "We now use mezzanine as a method of acquiring interests in highquality assets."

Five States acquires oil and gas producing properties, including properties on which there is development potential. It also provides funding to independent producers needing capital for development projects. The third part of its strategy is to invest in local and regional midstream assets.

Five States raises capital through a network of individuals, family offices and fee-only advisors. The company's most recent fund—Five States Energy Capital Fund I, LLC-was Five States' 28th fund, and it was capitalized at \$106 million. Five States is now closing Five States Energy Capital Fund II, LLC with over \$100 million in investor equity. Investor retention is high; more than 70% of Five States' investors have been investing since the 1980s.

Five States focuses on quality projects, and for that reason, it does not finance management teams. "We are projectoriented," Budge says. "We use our technical expertise to choose opportunities for our investors, and we invest in the best assets we can find. We are income-focused, long-term investors, so we are not looking for liquidity events. If we do not have to sell, we do not want to. Our goal is to accumulate high-quality, long-lived producing oil and gas assets for income."

The current state of the industry is excellent for the type of investments Five States prefers to make, Budge says.

63 The industry expertise is there, the demand for capital is there and the opportunity for a solid return on capital is there. We plan on taking advantage of it.

> Many private independent producers need capital beyond their bank borrowing facility in order to take advantage of all their current opportunities. Five States focuses on oil and gas investments in the \$5- to \$100-million range in the Permian Basin, southeastern New Mexico, and the Midcontinent region. Five States also recently closed a mezzanine transaction in Appalachia.

> "We have not seen a better market since the late 1990s," says Budge. "Horizontal drilling is creating tremendous growth in this industry. The redevelopment of older, tight formations and the development of the shale plays will require a lot of capital. We would love to finance more natural gas investments because we like the value play. Some people are scared away from natural gas investments right now because they believe gas is several years from coming

back. However, we expect to see opportunities in acquiring producing gas properties."

À recent Five States mezzanine deal involved an \$18-million restructuring for a conventional gas operator in West Virginia and Ohio. The company needed capital to drill additional shallow conventional wells and acquire other conventional assets.

The lack of infrastructure near new development in the Permian Basin



counties of Crane and Pecos led Five States to invest \$17.5 million in a pipeline deal that closed in October 2012. The company built a 75-mile, 16-inch crude oil line that feeds into a much larger system.

"We expect to see a growing number of quality investment opportunities over the next several years," Budge says. "The industry expertise is there, the demand for capital is there and the opportunity for a solid return on capital is there. We plan on taking advantage of it."





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Holland Services

Tince Robert Gaudin founded Holland Services 35 years ago, he has been forming key partnerships throughout every facet of the E&P business. This history of developing strategic relationships, combined with Holland's ability to thoroughly evaluate the viability of potential assets, has made him a bit of a matchmaker in the industry.

"We provide land services for both mid-to-large-sized E&P companies, as well as private equity-sponsored companies, so we know what the sponsored companies' assets are," Gaudin, founder and CEO of Fort Worth, Texas-based Holland Services says. "We also work

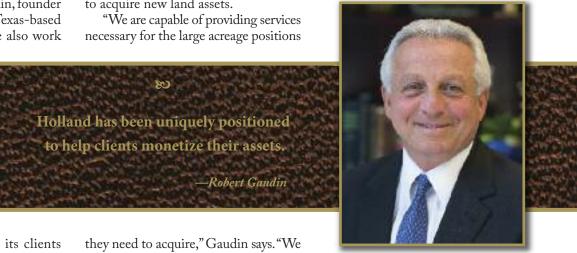
for large international companies that are the most likely buyers of those assets. So when it comes time to divest, we can often play matchmaker between the two. It's a niche that's been successful for us because we know who is looking to add to or divest of particular assets."

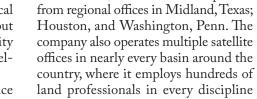
Holland Services offers its clients much more than a traditional land services company. The company is able to create virtual data rooms, handle the due diligence for acquisitions and represent assets during divestitures. Also, as an experienced asset manager, the Holland Services team is able to provide turn-key records maintenance and management, billing and accounting service expertise on behalf of its clients. These key services are not only critical to Holland's upstream E&P clients, but equally beneficial to private equity firms, trust managers, real estate developers and municipalities.

In the nearly four decades since Gaudin founded Holland Services, the E&P business has changed. No longer simply a business of exploration and wildcatting, Gaudin says the focus is rapidly expanding.

"Because of the progression towards more A&D work that we are seeing in the industry, Holland has been uniquely positioned to help our clients identify potential bolt-on opportunities, and assist them with monetizing their assets by qualifying their ownership to ensure a smooth transaction."

For a private-equity-backed organization, Holland's value can best be realized when the organization is first looking to acquire new land assets.





help them identify and quantify the ownership, help them prove that ownership and add value to it by acquiring additional assets that grow the base that was originally acquired. We then continue working with them all the way through their exit strategy, when we can help them get that product to market."

In addition to its headquarters in Fort Worth, Holland also operates that can be mobilized at a moment's notice, giving Holland the ability to handle any project of any size at any time. Its large, skilled base of landmen, along with its suite of sophisticated technology and its years of experience, make Holland Services a valuable partner.

"We continue to redefine the value a land service company brings to the E&P industry in the 21st century," Gaudin says. "Simply put, we are here to ensure our clients are able to monetize their assets, and we can help them every step of the way."



Kayne Anderson Capital Advisors, L.P.

How did Kayne Anderson Capital Advisors become involved in energy private equity? Kayne Anderson started investing in energy over 20 years ago when Bob Sinnott joined our firm. In the early days, all of our energy investments were done through the firm's hedge funds and were typically structured as preferred equity or convertible debt. Because we were so successful at it, our energy investments became a larger part of the funds and, in 1998, we decided to raise our first dedicated energy private-equity fund. We closed our first fund in August of that year for \$112 million and Bob Sinnott hired me to open the Houston office and build out a first-class energy team.

Since opening the Houston office in the summer of 1999, we have grown to 17 investment professionals solely focused on upstream private equity, raised more than \$4 billion in capital, made over 80 investments, and realized approximately 50 companies that have delivered excellent risk-adjusted returns to our investors.

In addition, our private-equity activities helped spawn Kayne's entrance into the midstream sector, where we now manage over \$16 billion in investments. All told, Kayne Anderson has over \$20 billion in energy assets under management with a team of over 35 professionals involved in the space.

What is your strategy?

To back quality basin-focused management teams, be a supportive partner to them, grow the companies profitably and eventually realize the assets at a significant profit. We are in the business of providing private equity for high-growth oil and gas and midstream companies. We do this by looking for strong management teams with proven track records or expertise. These management teams typically are oil and gas professionals from majors

and/or independents who have probably run a division.

Our typical commitment size is about \$100 million, although we can do larger. Because we have our own engineering and financial depth, we like our management teams to think of us as their partner "down the hall" making decisions collaboratively. We are returndriven, such that we are agnostic on conventional or unconventional assets; we are looking for profitable transactions that can deliver good results for our partners.

How has that strategy changed over time?

From inception, the strategy has been consistent in terms of our focus on middle market E&P opportunities. Though our fund sizes have increased across the board, which has been largely driven by the increased need for capital to develop fields horizontally, we have maintained our relative position in the middle of the private-equity E&P space.

Additionally, as a direct result of changes in the A&D market, we are anticipating spending more time and capital developing assets beyond their initial proof-of-concept phase. This will allow our portfolio companies to bring assets to market that are more developed, which should be attractive to a larger audience as opposed to just buyers of drilling inventories.

Where are you seeing opportunities today?

We continue to believe the best place to find oil and gas opportunities is where oil and gas has historically been produced, that is to say in the large basins and legacy fields. Today's technology is turning identified, but previously non-commercial, resources into viable development targets. The challenge is that the implementation of new technology does not automatically

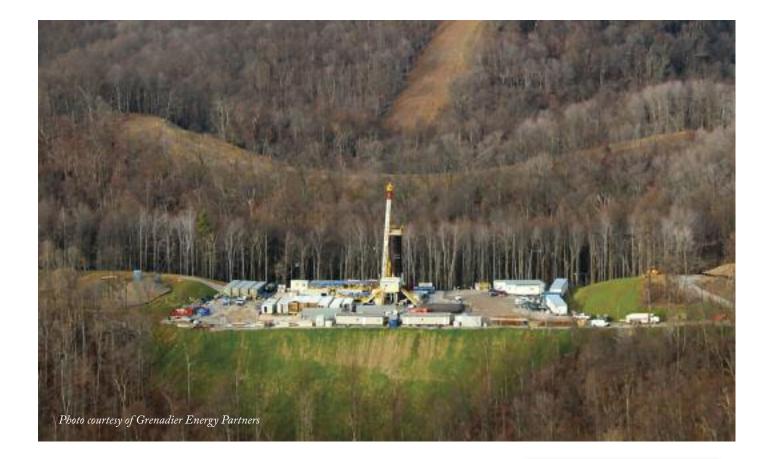
guarantee that every play will be an economic success, so it is important that our teams have a good understanding of the unique characteristics of each area, and a smart approach to testing the concept without exposing too much capital unnecessarily. Additionally, it is important that these assets have the necessary scalability and predictability for us to realize attractive returns.

What is unique about Kayne Anderson's approach to making energy investments?

We've historically combined heavy technical evaluation and sound financial assumptions to assess any set of assets we are considering for investment. That has served us well, and we expect it will continue to be important because the market has shifted from valuing the land grab to scrutinizing long-range development opportunities. It is this understanding of the subtleties that becomes much more important in determining what works and doesn't work within a set of assets.

What is it that allows you to work well with management teams?

The teams with which we partner successfully are most likely to have a similar construction, or at least similar technical aptitudes, to our deal teams (engineering and financial), so they are able to understand the technical challenges and opportunities within a set of assets. Like our teams, we like to dig deeply into the geology and production history to understand what's dictating success in the development plans, and our like-minded management teams appreciate the time and effort being offered to help develop their projects. We largely think of ourselves as part of the team trying, in collaboration with our companies, to come up with the best approach to crack the code.



How have you been able to generate strong deal flow for such an extended period of time? Strong deal flow is a byproduct of the success of our management teams. We encourage prospective teams to visit with our existing portfolio companies to ask how

we react not only when things go as expected, but more importantly, when we hit bumps in the road. With the increased emphasis on development, we know we'll encounter problems and management teams rightly want to know what they should expect when that happens. The positive feedback from existing portfolio companies, as well as the large number of repeat teams, goes a long way when others are considering partnering with Kayne Anderson.

3 Because we have our own engineering and financial depth, we like our management teams to think of us as their partner "down the hall," making decisions collaboratively.

Considering that the energy industry continues to evolve, what qualities are you looking for when considering future management teams? There are two key considerations when we back a management team. Do they have the ability to develop a play, not just de-risk it? And, are they adaptable? In our more than 20 years of investing in energy, we've found more often than not the difference ultimately in true success is the ability to adapt.

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At Line Rock Partners, we want to be investment partners with great oil and gas entrepreneurs, and we know that great entrepreneurs can choose whom they work with. Line Rock Partners is a creative private equity investment partner in building differentiated oil and gas businesses, side by side, with entrepreneurs every day. Since 1998 we have helped build high-growth E&P, service, manufacturing, and technology companies worldwide. From five offices on three continents, we bring our specialist finance and operating expertise, global presence, technology leadership, people-centered strategies, and patient hard work to help our investors and portfalio company partners profit from operational growth. With nearly \$4 billion under management, we are flexible partners, who work with—and support—companies through evolving markets. We know that your company is the most important thing to you and seek ways to add value and help accelerate growth over many years.



Lime Rock Partners

n 1998, Jonathan Farber and John Reynolds were equity research analysts at Goldman Sachs covering small, growth-oriented companies, when they saw an opportunity.

"Through the use of technology, these small companies were able to deliver growth for their shareholders," Farber says. "We felt like we could carry that theme into the private-equity context."

With that, Lime Rock Partners was formed, with an initial strategy that remains the same today: invest in global E&P and oil services, with a focus on backing quality management teams. The firm's Fund I was fully capitalized in 1998 at \$100 million. It is currently investing Fund VI, which capped out at \$825 million. Total funds raised are nearly \$5 billion.

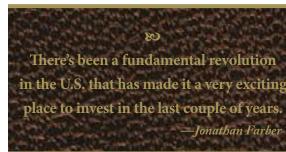
Unlike many private-equity firms, Lime Rock has had a

global focus from the beginning, although it has slowly evolved to include even more investments in North America as technology has improved. Its initial fund included investments in U.S. and Canadian producers, as well as a North Sea oil and gas company. Today, Lime Rock still looks to invest internationally, but there is a "higher bar" for those investments—now that so many exciting opportunities exist in the firm's own backyard, Farber says.

"With the advent of technology that can be used to overcome limited permeability, we feel like huge areas of the U.S. have been opened up to exploitation, which wasn't the case even five years ago," he says. "There's been a fundamental revolution in the U.S. that has made it a very exciting place to invest in the last couple of years."

As the price of drilling wells has changed, so has the firm's investment size. Today, the smallest commitment to a North American E&P team Lime Rock will consider is \$50 million. The firm is less inclined to do exploration deals, which is a result of its experience and developments in the industry.

One of the advantages of Lime Rock's global focus for its portfolio companies is the lack of competition they experience from other Lime Rockbacked portfolio companies. The firm never backs two companies in the same area. "If we have a company addressing a play in New Mexico, that will be the



only portfolio company we will back involved in that play," Farber says.

"We find that results in a much closer relationship with management teams. They never have to worry we have another company looking at the same assets because we don't have more than one company playing in the same sandbox."

Another aspect of Lime Rock's strategy is that it doesn't employ in-house technical teams because it doesn't want to impede its management teams' decisionmaking, Farber says. Instead, the firm focuses on assisting portfolio companies with long-term strategic decision-making, exit-planning and capital formation.

Lime Rock also maintains a longer investment period, which typically runs three-to five years, but has been as long as 12 years.

When Lime Rock is investing a fund, it focuses on management teams

that bring a strong knowledge of a play. This was exemplified with the firm's investment in Braden Exploration, which specialized in the northern part of the Barnett shale. Lime Rock's investment in Braden allowed the firm to realize an excellent return with a modest amount of capital.

Another recent investment is Endurance Resources LLC, a Dallasbased company with a position in the



Bone Spring oil play in New Mexico. With Lime Rock's \$100-million commitment, Endurance has acquired shallow production with underlying Bone Spring development potential, and it has already drilled several successful Bone Spring wells.





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NGP Energy Capital Management

The founders of NGP Energy Capital Management did not start out with the goal of being in business for 25 years and raising \$13 billion in committed capital.

It was 1988. After reading about the legendary money manager Richard Rainwater, Ken Hersh, co-founder and chief executive officer of what was soon to become NGP, approached him with an investment thesis based on a rebound in natural gas prices. Rainwater had already begun thinking about investing in this area.

"We thought natural gas prices post de-regulation were extraordinarily low-below replacement costs," Hersh says. "And we believed that by 1989 or 1990, there would be a dramatic rebound in prices."

Rainwater, Hersh and fellow cofounder David Albin secured NGP's first limited partner, Equitable Insurance Co., with an initial capital raise of



Tony Weber and Ken Hersh

\$100 million. Twenty-four months and five deals later, natural gas prices were already two years into their seven-year decline.

"The thesis was to take advantage of rising gas prices,"Hersh says. "What we didn't know at the time was that prices would decline for seven straight years."

Despite the downtick in prices, something extraordinary happened.

The NGP management team looked back at its first five deals and realized the investment strategy wasn't about a play on commodity prices. "A couple deals based on the gas price thesis went sideways," Hersh says. "But, we noticed we had a couple other transactions that did phenomenally well."

After careful examination, the team realized it was about putting capital behind management teams who were great money-makers, respected their financial partners, "were decent individuals whom we would trust with our kids," and who knew how to make money despite low prices.

"That was the light bulb moment," acknowledges Hersh. "We needed to find people-give them capital up fronthave them use our money to shop for deals and fund them as they needed it.

"That style of investing attracted the right entrepreneurs excited about getting a blank sheet of paper, with a capital commitment, and then going where they wanted to be. Creating this investment format unleashed the entrepreneurship in our industry."

Some 25 years, over 230 transactions, and \$13 billion of capital under management later, the fundamentals of NGP's "startup-buy-and-build" investment strategy remain the same.

Finding winners

The foundation of NGP's success is its ability to find and fund the winners. "The one thing NGP does better than anybody is give a young entrepreneur, geologist, or CEO a chance to prove themselves," says Tony Weber, NGP's senior managing director and chief operating officer. "Over the past five years we have made finding the next generation of energy entrepreneurs our priority."

First-time management sponsorship, in most cases, usually equates to smaller equity commitments. However, a hallmark at NGP has become, "feed the winners." Weber recalls a recent example, WildHorse Resources, which was a first-time team of young engineers.

"They started out with \$35 million in equity and were backed to acquire and exploit primarily gas assets in northcentral Louisiana. They did a terrific job-drilled, acquired and took on additional capital. We like to feed the winners. As a result, NGP has supported the WildHorse management team with an excess of \$400 million of capital. Today, about half the teams we invest in and half the capital we have invested are alongside management teams we have partnered with previously," Weber explains.

After teams prove themselves, the power of recycled management teams begins to take effect.

Aligning interests for profitability

From a structural standpoint, NGP prefers to own the same security as the management team it is partnered with. "In most cases, we want to be a commonequity holder right beside management," Weber says. "The traditional structure is for the guys we back to put up their capital alongside ours. If the company has success, management earns a nice share of the proceeds on the back end."

Weber says NGP focuses on return on investment (ROI) and internal rate of return (IRRs), describing this philosophy as a "packaged deal."

"We don't want to forsake ROI by getting a quick flip. We always ask the question: Can we double the value of the company from today? If we see the potential, we like to give it a try," says Weber.

Hersh believes one of the most valuable lessons Rainwater taught him was whether you own 1% or 99% of a company, it's important to remember that the company's management team doesn't work for NGP; NGP works for them!

"We help with strategy, financing, Hersh acknowledges the manage-

exits, negotiations, and execution-but we don't have engineers or tell our portfolio companies where to drill," Hersh says. "We rely on them. The right CEO welcomes that level of involvement and appreciates that NGP is not in their hair." ment teams NGP backs know more about the business than NGP does. "The best thing is for us to do our work on the front end, get comfortable with the team, pick people we trust, and then get out of their way," he says.

Hallmark deals

NGP has delivered some tremendous opportunities to its investors, to say the least. In 1996, for example, NGP led a recapitalization of Mesa Limited Partnership to save it from bankruptcy. NGP then brought in oil and gas veteran Ion Brumley to restore market credibility. Two years later, NGP merged Mesa with Parker and Parsley out of Midland, Texas. As a result, Scott Sheffield moved to Dallas to run the company, which was later renamed Pioneer Natural Resources.

"That deal was a key moment in NGP's life," Hersh recalls. "It was a large corporate transaction with high visibility. It was very complicated, structured as a preferred security with a rights offering that NGP, Richard Rainwater and co-investors underwrote and backstopped. We also led two public bond deals concurrent with closing."

Later, in 2005, NGP was one of the ground floor investors, along with Ray Davis and Kelcy Warren, in what is now known as Energy Transfer Partners. "Ray and Kelcy had \$50 million of assets in the company. We, along with our co-investors, put in additional capital and purchased a large Texas gathering system from Aquila in 2005. Through a series of mergers, capital markets transactions, acquisitions and good fortune it all worked. In the end, our \$37.5-million investment returned over \$1.0 billion within five years."

25th-year anniversary

Fast forward from 1988 to 2013 and our industry is still talking about "when natural gas prices come back."

Over its two and a half decades of history, NGP's culture and beliefs have paid dividends greater than returns paid from its financings. It has built a firm that can withstand the peaks and valleys of commodity prices and changed the way the world looks at the oil and gas business.

"Today it is widely accepted that getting an equity commitment from an investor and going out on your own and then hunting for assets to buy or lease has become an established career path," Hersh says. "That is one of my great satisfactions. We created an industry. Students now talk about graduating with a petroleum engineering degree, going to work for an independent, then going off on their own with an equity backer. You wouldn't have heard that in 1989."

Hersh believes the industry will continue to evolve and need outside capital. He is satisfied that NGP can play a meaningful role in an industry that requires almost \$100 billion per year of third-party financing.

"I can't predict the future. But if we keep our culture of innovation, I am very confident that with the skilled staff we have and our next generation of leaders, we will be celebrating NGP's 50-year anniversary."



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PetroCap Falcon Fund

allas-based PetroCap was founded in 1992 with an eve toward the little guy. The firm has found its niche doing smaller deals for the E&P industry, which it defines as those projects with a total capital budget of less than \$100 million—and it hasn't had trouble finding business in this corner of the industry.

"We believe this segment is underserved by capital providers, particularly with respect to development drilling capital," says Alec Neville, managing director. "This situation will only worsen as the shale plays accelerate their drilling."

PetroCap's strategy is to partner with operators through working interest participation in projects and acquisitions.

The firm launched its first institutional fund, Falcon E&P Opportunities Fund L.P., in 2009 with a capitalization of \$163 million.

For oil and gas producers, joining up with PetroCap is a true partnership, as all of the members of its team have experience in the arena of being an independent operator.

"Our team has a mix of technical, operating and financial skills, with the common denominator being experience with, and/or as, independent operators," Neville says. "We also have complete oil and gas accounting, regulatory and land staff to manage our interests and, in some cases, provide back office support for the project."

What is PetroCap's ideal partner? It is an existing operator with a project in a mature basin that has, or is close to having, current production with meaningful drilling ahead. The firm's average capital commitment is \$10- to \$50 million, which includes PetroCap's initial purchase of the working interest and its share of the development capital spending (capex).

"We like to own at least 51% of the working interest, but we don't want to operate," Neville says. "Our investment structure is simple and familiar to most people. Just like a typical industry joint venture, we sign a joint operating agreement (JOA) with our partner and have a side letter that describes the incentive compensation."

PetroCap looks to invest in both oil and natural gas ideas, though in 2012, most of its activity was gas-directed, Neville says. It invests in the Lower 48, onshore U.S. Its current portfolio includes projects in Texas, Oklahoma, Kansas and Wyoming. The firm is interested in all the major producing basins and regularly looks at opportunities in California, the Rockies and Appalachia.

Falcon Fund's partnership with BVX Operating was the first of its investments to go full-circle. The partnership began in mid-2011 as a Permian development project with some 25 barrels of oil equivalent per day from two wells. Through its partnership with PetroCap, BVX drilled an additional nine wells in 18 months and increased its production 16-fold. The company sold the majority of the assets at the end of 2012.

Another investment through the



purchase of promissory notes from two lenders. Shortly thereafter, PetroCap added assets in the same field (Hartshorne Field, which produces coalbed methane and is located in southeastern Oklahoma) from a sale by a public E&P company. Redbud now operates more than 400 wells with gross production of over 17 million cubic feet per day. The fund's most recent investment



Falcon E&P Opportunities Fund, L.P.



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is with Opus Operating out of Midland, Texas, pursuing a Wolfcamp project in Glasscock County.



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Stellus Capital Management LLC

ouston-based Stellus Capital Management LLC was formed in 2012 when the Direct Capital Unit was spun out of the D.E. Shaw Group, where it also previously operated as Laminar Direct Capital. The founding partners of Stellus saw an opportunity to fill a niche in the middle market, says Todd Overbergen, head of energy at Stellus and a founding partner.

"Our niche is the sub-\$100 million or middle market," he says. "We feel there is great need for capital that cannot easily be accessed from the billion-dollar private-equity firms."

The firm's private-equity strategy focuses on providing equity and equity-linked debt capital to small and middle-market energy companies. It's an area of the market the Stellus team has focused on since 2001, when they were together at Duke Capital Partners, a subsidiary of Duke Energy.

"The thing I find interesting about our end of the market is we really are not building companies per se, we're all about projects," Överbergen says. "We work with experienced people who have put together projects with some equity risk because they are in the early drilling stage."

Stellus's investment philosophy involves a strategy called "flexible capital." This philosophy allows the firm to match the risk and reward of each individual opportunity while meeting the individual needs of management teams and businesses seeking capital.

Over the past 10-plus years that the Stellus partners have worked together, they have invested more than \$5 billion in private credit and energy private-equity strategies, of which approximately \$2 billion has been in energy.

The firm focuses its investments on management teams with drill-ready projects that need a capital infusion and may also need strategic direction in building out a complete team, balance sheet management and exit strategies.

have the project drill-ready, they have some of their own capital in it, but they need some more development capital," Overbergen says. "That's where we come in. We help them develop the project and sell it." The Stellus team approaches its

COS Our niche is the sub-\$100 million or middle market. We feel there is great need for capital that cannot easily be accessed from the billion-dollar private-equity firms.

> investment process collaboratively and focuses on providing flexible structuring alternatives, straightforward discussions, efficient diligence processes and reliable execution. It prefers to focus on funding projects that are already in place.

> "We rarely do a blank-check deal," Overbergen says. "We're much more project-oriented and we build a structure around that. We can take \$30- to \$50 million and hopefully turn that into \$200- or \$250 million. We do find there's a ready market to sell that size asset. I think approximately 70% of all acquisition and divestiture transactions in the past three years were under \$250 million, according to RBC Richardson Barr."

> The firm's ideal investment size falls in the range of \$10- to \$50 million. Stellus prefers to work with experienced management teams and focuses

"By the time they come to us, they

on well-positioned North American onshore, upstream assets. While upstream is its primary focus, the firm's energy team also has substantial experience investing in oilfield services and equipment as well as midstream infrastructure and services, and it will opportunistically look for investments in these areas as well.

The investment timeframe for most of Stellus' investments usually falls within the two- to four-year timeframe, and it prefers to stick with resource







plays and lower-risk conventional development projects. The firm focuses on technical due diligence before it makes any investment.

"We do our technical due diligence on the front end, our dollars go in, and then eventually, we sell them to a buyer who has a cheaper cost of capital," Overbergen says.



www.stelluscapital.com

Investing in North American Middle Market ntrasti

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Stonepeak Infrastructure Partners

T tonepeak Infrastructure Partners has just closed its maiden fund at \bigvee \$1.65 billion, one of the larger closes for a first-time fund in recent times. It targets North American infrastructure and is particularly focused on midstream energy.

Stonepeak was formed in 2011 by Michael Dorrell and Trent Vichie, as a spin-out of Blackstone's infrastructure division. Stonepeak's successful fundraise signals a strong appetite among large institutional investors for the North American energy infrastructure sector.

In late September, the fund made its fourth investment, cherry-picking a key asset in one of the hottest segments: crude by rail. Stonepeak is the financial backer of Casper Crude to Rail, a project announced earlier this year by Cogent Energy Solutions, an established transloading operator, and Granite Peak Development, one of the major land owners in Wyoming.

Together they are building a unit-train loading facility along BNSF Railway's mainline at Granite Peak's logistics hub near Casper, Wyoming. Construction is just beginning, with completion targeted for next fall. The facility will be connected to Spectra Energy's Express Pipeline, and able to load multiple grades of crude, both heavy and light, while also providing blending on site. It will have on-site tank storage with an initial capacity of 750,000 barrels, expandable to more than 3 million barrels.

"This deal hit all our sweet spots," says Dorrell. "An A-plus team, strategic asset, contracted cash flows and real ability to grow the asset over time." Stonepeak targets middle-market opportunities, with typical check sizes of \$50- to \$300 million.

"Given our lower risk profile, Stonepeak is willing to trade off upside for increased downside protection, making us a differentiated source of capital for owners of midstream assets with a strong growth profile who want to keep more of that upside" says Dorrell. He continues, "In addition to providing midstream growth capital, we are ideal money for development teams who have plans to build an asset which is supported by a long-term volumetric contract."

The Casper rail terminal is not Stonepeak's only energy venture so far. Recently it was announced that Stonepeak is the equity backer of Magnolia



LNG facility being developed in the Port of Lake Charles, Louisiana. It is also backing Paradigm Energy Partners, which operates 450 miles of crude oil pipelines in the Eagle Ford shale, and is developing an oil gathering system in the Bakken shale.

When asked how Stonepeak finds deals, Dorrell says the firm focuses on relationship-driven deal origination. "We are incredibly proactive in our approach to deal origination." The firm has a vast network of industry contacts, part of which comes through its operating partners, Forrest Wylie (chairman and former CEO of Buckeye Pipeline) and Scott Hobbs (director of Buckeye, former CEO and president of Colorado Interstate Gas).

"Forrest's and Scott's years of operating experience lend a real credibility

to the firm." Stonepeak has further signaled its focus on the North American midstream sector with its recent hire of Paul Murdock, who brings a large midstream relationship network built over a 20-year private equity and investment banking career.

Having come out of a large, diversified fund group, Dorrell and Vichie are aware of how the presence of those big players is changing the nature of PE investment in energy.

"With a few exceptions, most of the big guys are focused on upstream. In midstream, it's hard to find a combination of a big deal with PE-type returns, which is what the big PE shops need. So for the most part we play in a different sandbox to the big guys. But you know what, as far as upstream is concerned, I was at the DUG Permian conference earlier this year, and in that basin alone, I have no idea where all the capital will come from. The capital requirements are staggering. I don't think the big PE shops are lacking for opportunity."



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TPH Partners is the private equity business of Tudor, Pickering, Holt & Co. TPH Partners Management, LLC is a relying advisor of TPH Asset Management, LLC



TPH Partners

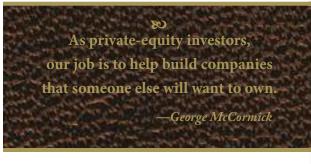
hen George McCormick, Curt Schaefer and their colleagues at TPH Partners saw the fund size of the major energy PE managers and the really big diversified PE companies moving to add dedicated funds in oil and gas, they realized that investing funds in the billions would require writing big checks to move the needle. "We went for the middle market, specializing in investments that don't receive as much attention," he says. "In baseball, it's called hit 'em where they ain't."

TPH Partners, the PE affiliate of Tudor, Pickering, Holt & Co., raised its first energy fund in 2008, investing in upstream, midstream, and oilfield services. That fund is fully invested, and the partners are in the process of investing their second fund. The average single investment is under \$50 million.

"We have found a very beneficial niche on the investment side, but we have also found demand from investors among the limited partner (LP) universe," says McCormick. "And there is no shortage of ways for us to put their money to work. There is a wealth of investment opportunity in our part of the market. Our origination efforts turn up way more ideas than we could ever say grace over, which is a high quality problem to have in this business."

He explains that to screen investments effectively "we need to walk into the room with an educated perspective on what we will see. We need granular, real-time insight on almost every material play in the Lower 48. Obviously, our robust deal flow and the knowledge, expertise and day to day business efforts of the energy professionals across our entire firm are critical to this effort." McCormick and his team are agnostic about commodities and conventional versus unconventional geologies, but they have very firm ideas about economics, assets and people.

"Networks and relationships are very powerful in this business," says McCormick. "It is essential that we partner with high quality people. Just as an example, the management team at our portfolio company Ingrain Inc. includes truly world-renowned expertise in several disciplines including the geosciences, microscopy and the physics of multi-phase fluid flows." In



terms of assets, TPH Partners knew about a year and a half ago that the strategy of exploration in ever-new shale plays was getting long in the tooth, he recalls. "Just as we started to think about raising our second fund, we realized that a lot of the money made by PE in recent years was not going to be repeated. The pace of new shale play discovery was declining and, importantly, the buyers for those lightly developed asset packages were disappearing."

Quite the opposite, McCormick suggests. "The big owners of acreage have too much inventory, and that is going to create opportunities. There are also basins in this country that are productive without any shale wells. A barrel of conventional oil sells for exactly the same price as a barrel of shale oil, and can cost the same or less to get out of the ground. Our partners at Principle Petroleum are a great example

of this thought process with their focus on the Big Horn Basin in Wyoming."

Which is not to say that TPH Partners eschews the shales. "There will definitely be opportunities in acreage that will be coughed back up by the big guys in the coming years. There is also opportunity in overlooked conventional plays."

"Ås private-equity investors, our job is to help build companies that someone else will want to own," says McCormick. With an eve to who those someone



elses will be, he notes the new sheriffs in town. "Clearly the serial acquirers of the last few years are full up. The two deep-pocketed groups today are the vield-oriented guys, the MLPs and the infrastructure and resource funds; and then also the larger private operators and larger PE-backed companies. This business continues to be quite fertile."



* PRIVATE EQUITY VOICES *

DAVID FOLEY CEO, BLACKSTONE ENERGY PARTNERS

ON INVESTING

Most people think of Blackstone as doing buyouts, taking public companies private. But about half of our capital is growth equity. We've put private equity into LLOG for

growth, into Cheniere Energy for brownfield LNG construction, and into Kosmos Energy for exploration.

Energy is a sector that has a combination of entrepreneurial spirit and it's pretty capital-intensive, with technical challenges and regulatory changes, so public markets are not always available. We'll take the long-term view. We'll mitigate the risk, alongside management; we don't just invest.

BOB SINNOTT CEO, KAYNE ANDERSON CAPITAL ADVISORS

ON THE HOLD PERIOD

A lot of the money that's most important goes out after the first four or five wells have been drilled, where the risk had been higher than later in the process. You sort of



have dissipated the risk by the time you have to expend the biggest amount of capital [for development]. E&P companies aren't as readily marketable as they used to be; the holding period is longer. A potential drill site isn't what it used to be because everybody's got lots of drill sites now in these resource plays. The longer you are in a field, the lower your finding costs become, so you're tempted to drill your own field anyway. You've got to prove your concept that much better, but that's usually not a bad thing.

ON CHANGES IN PRIVATE EQUITY

There's more expertise in the PE business than there used to be. A lot of firms used to hire outside consultants and now that knowledge is in-house. A lot of the larger PE funds have shown up.



MITCHELL L. SOLICH SR. MANAGING DIRECTOR SFC ENERGY PARTNERS

ON OUR FIRST DEAL

We formed SFCE I in 2007 and our first portfolio commitment was to Riley Ridge LLC in the initial amount of \$45 million. That grew to over \$70 million at the time the company was sold.

ON PRIVATE EQUITY'S FUTURE

We have a very robust outlook for the role of PE in the energy space for the next two-three years and beyond. PE is well suited to top-notch management teams who can deliver top-notch returns, and we look forward to being a good partner to many of those teams.

CARL TRICOLI

FOUNDER AND MANAGING PARTNER DENHAM CAPITAL MANAGEMENT

ON THE FIRST E&P COMPANY WE FUNDED

In 2006, we partnered with Alta Mesa Resources, a Gulf Coast-focused company. We expect our partnership to culminate in a



successful exit for all parties in the coming months.

ON CHALLENGES AHEAD

The oil and gas industry's resurgence over the last decade has renewed interest from dedicated oil and gas private-equity firms, and attracted the attention of new investors as well. This has resulted in increased competition for opportunities and people.



JIM GIBBS CHAIRMAN, FIVE STATES ENERGY COMPANY LLC

OUR OUTLOOK

Based on our experience, we expect to see a continuing expansion of private-equity's role in the next few years. Our clients, primarily independents, are becoming in-

creasingly aware of and knowledgeable about securing equity funding for projects. More individuals and small companies are looking to develop midstream assets, suitable for funding by private-equity providers.

MICHAEL E. MCMAHON CO-FOUNDER AND MANAGING DIRECTOR, PINE BROOK

ON THE VALUE-ADD OF PRIVATE EQUITY

How can even a big private-equity fund go toe-to-toe with a Shell or an Exxon? We are nimble. We are willing to go up the learning curve and see what works and what

an Exxon? We are go up the learning works and what

doesn't work, and we know how to stay one step ahead of the guys with the bigger checkbook.

That is the advantage of a PE-backed company. PE tends to be willing to take experimental, technical risk and be innovative in the field because we spread risk through our portfolio approach. We'll have winners and losers across the portfolio.

ON THE FUTURE

I would say we'll focus more on the classic exploration and production model. What you'll see, now that the land grab is over, is more focus on value creation through the drill bit and the production pump. If you look at even the biggest fields like the Eagle Ford or the Bakken, the recovery rates are still very low, in the range of 4% to 6%, so if you can get to 8% or 9%, you're in the hall of fame.







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The last 15 months have been the busiest in our history and we are not nearly done yet. We formed or invested in 12 new companies representing over \$2.4 billion in equity commitments. These investments spanned the energy industry covering the upstream, of service and midstream sectors. We are proud to partner with some of the finest entrepreneurs in the energy industry. Our sole objective is to help them build great energy companies. If you are an energy entrepreneur who is looking not just for capital but for a value-added partner, we would like to talk to you too.

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