

Oil and Gas M&A Review – 2017

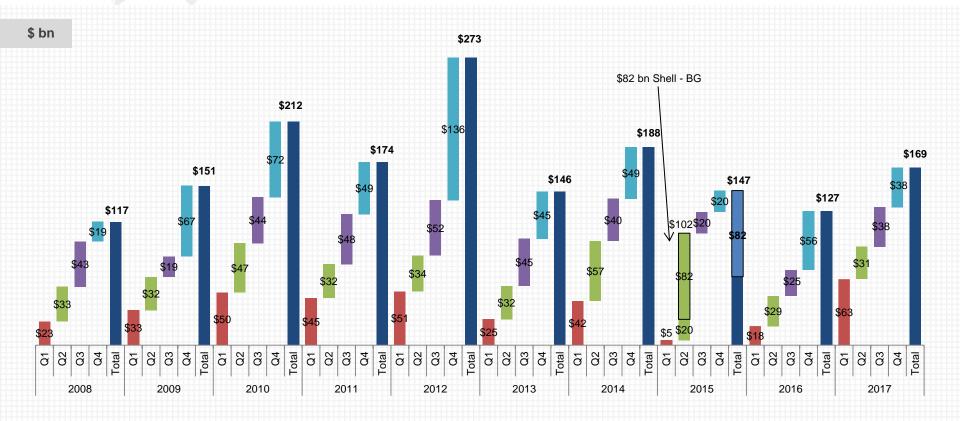
US Upstream M&A slows down during the year Canada and North Sea drive International M&A Next round of Private Equity-led deal making and consolidation on the horizon in US February 2018





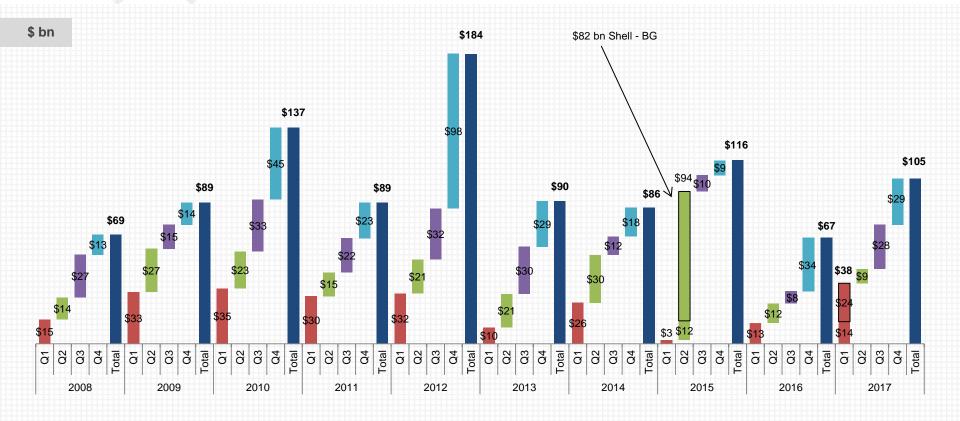
This document is a property of 1Derrick Ltd. References and citations to the document are encouraged but distribution or copying in any forms, in parts or full require permission from the owners. The information and analyses presented in this document are based on proprietary data, general industry and company research. The document is not intended to be used on a stand-alone basis but in combination with other material or in discussions and is subject to revisions. 1Derrick Ltd. is not responsible for actions taken based on information in this document. This report is for your information only and is not an offer to sell, or a solicitation of an offer to buy, the securities or instruments named or described in this report. The information in this report has been obtained or derived from sources believed by 1Derrick Ltd., to be reliable, but 1Derrick Ltd., does not represent that this information is accurate or complete. Any opinions or estimates contained in this report represent the judgment of 1Derrick Ltd., at this time, and are subject to change without notice.





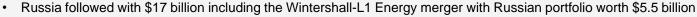


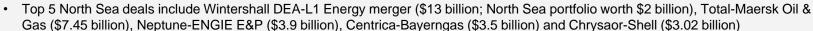
- 2017 Global Upstream M&A value at \$169 billion, rising back from the lows of 2015 and 2016
- · Robust first quarter driven by Permian deal making and Canadian oilsands transactions











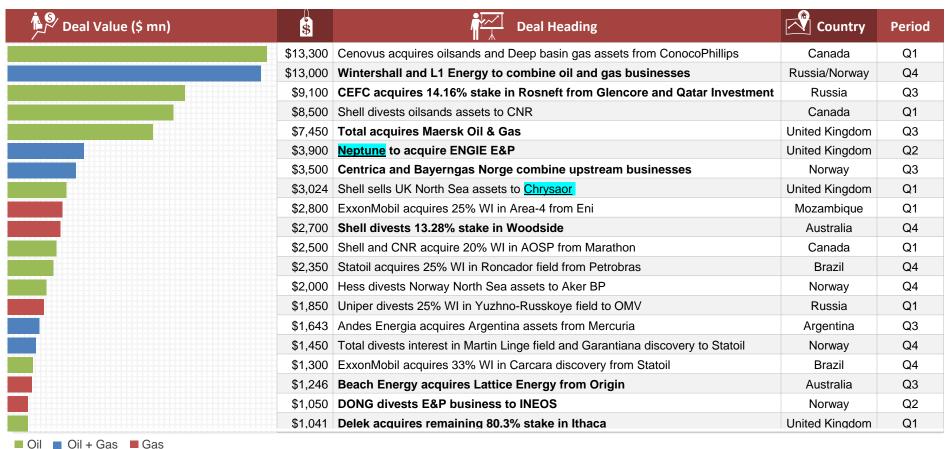
 North Sea saw two significant acquisitions by PE backed E&P companies. Neptune is backed by Carlyle and CVC Capital while Chrysaor is backed by Harbour Energy and EIG Global Partners. Both these transactions involved deal structures with payments contingent on oil prices, operational milestones and decommissioning liabilities



Note: Analysis excludes United States

Top 20 deals (excl. US): Canadian oilsands and North Sea portfolio deals dominate; Russia resurgent

Top 20 deals (excluding US) during 2017



Corporate M&A deals in bold

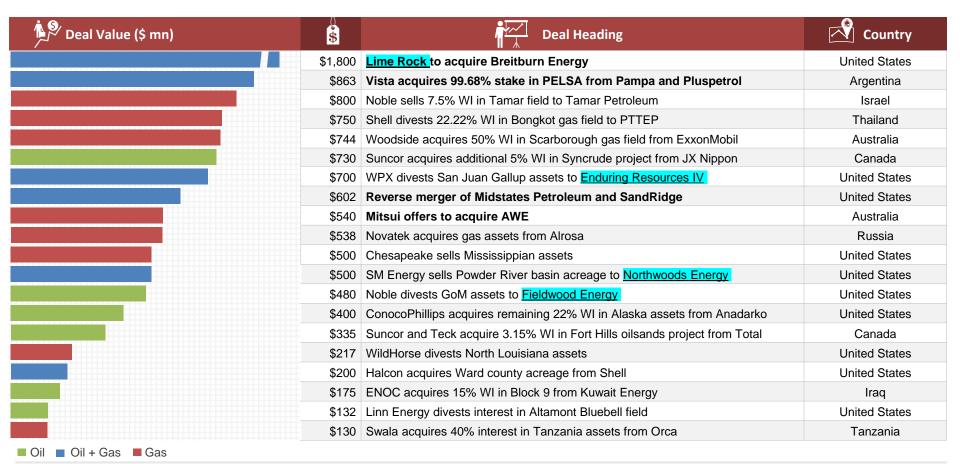
PE backed companies



- Top 20 deals in 2017 are all Mega deals, of which 9 are in North Sea and 3 in Canada
- Canadian oilsands dominated Q1-2017 M&A activity with three deals worth \$24 billion
- Further, Total, BP and Chevron are looking to divest their Canadian oilsands portfolios estimated to be valued at \$5 \$6 billion; Total sold 3.15% in Fort Hills oilsands project to Suncor and Teck Resources for \$343 million on Jan 3, 2018

Note: Mega deals valued >\$1 billion; Large deals valued between \$100 million to \$1 billion; Analysis excludes United States





Corporate M&A deals in bold

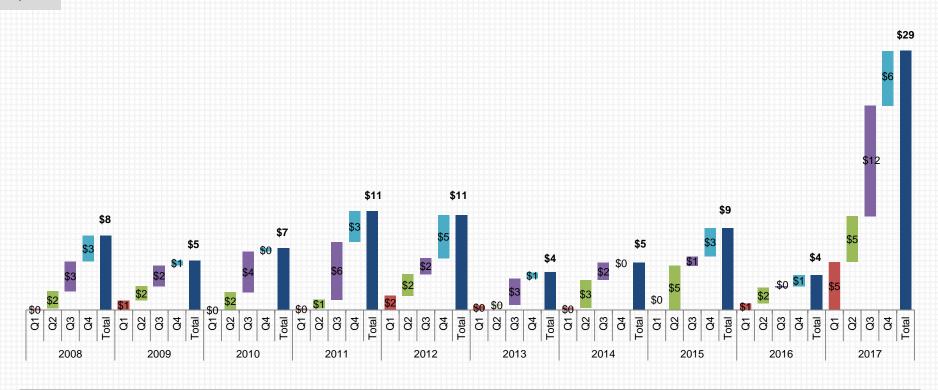
PE backed companies



- US deals dominate YTD-2018 M&A activity with ten deals worth \$5.5 billion, driven by four PE backed E&P/PE financier acquisitions worth \$3.5 billion
- All the four acquisitions by PE backed E&Ps/PE financiers were for conventional plays

Derrick

\$ bn





- 2017 North Sea M&A value at \$29 billion, peaked at more than seven times the 2016 annual M&A value which was a mere \$4 billion
- Q3 2017 North Sea M&A value surged on the back of Total-Maersk (\$7.45 billion) and Centrica-Bayerngas (\$3.5 billion) transactions
- Further consolidation and portfolio exits to drive M&A activity in North Sea, with an estimated \$7-\$8 billion worth of assets up for sale (Shell to divest Denmark North Sea and certain Norway North Sea assets; MOL to divest UK North Sea assets)

| Announce Date | Deal Heading | Country | \$ (\$ mn) | \$/2P BOE (ENT- Unadjusted) | \$/2P BOE (ENT- Adjusted) |
|------------------|--|-------------|---------------|-----------------------------------|---------------------------------|
| Feb-18 | Suncor acquires 17.5% WI in Fenja Development project from Faroe | Norway | \$55 | \$3.2 | \$3.2 |
| Jan-18 | Verus acquires 7.43% WI in Wytch Farm oil field from Ithaca for | UK | \$53 | \$16.2 | \$16.2 |
| Nov-17 | Total divests interest in Martin Linge field and Garantiana discovery to Statoil | Norway | \$1,450 | \$9.5 | \$9.5 |
| Nov-17 | BP divests interest in three UK North Sea fields to Serica | UK | \$397 | \$8.1 | \$8.1 |
| Nov-17 | Perenco acquires 33.8% WI in Wytch Farm oil field from Premier | UK | \$200 | \$13.4 | \$13.4 |
| Oct-17 | Hess divests Norway North Sea assets to Aker BP | Norway | \$2,000 | | \$4.3* |
| Aug-17 | Total divests remaining 15% WI in Gina Krog field to KUFPEC | Norway | \$317 | \$9.3 | \$9.3 |
| Aug-17 | Total acquires Maersk Oil & Gas | UK | \$7,450 | | |
| Jul-17 | Centrica and Bayerngas Norge combine upstream businesses | Norway | \$3,500 | | |
| Jul-17 | Shell divests 45% WI in Corrib gas project to CPPIB | Ireland | \$947 | \$15.8 | \$15.8 |
| Jul-17 | CPPIB sells 1.5% WI in Corrib gas project to Vermilion | Ireland | \$22 | \$11.1 | \$11.1 |
| Jul-17 | Premier and Perenco acquire 7.5% WI in Wytch Farm oil field | UK | \$30 | | |
| Jun-17 | CapeOmega acquires 39% WI in Brynhild field from Lundin | Norway | \$92 | \$54.2 | |
| Jun-17 | Total acquires option for 35% WI in FEL 2/14 from Providence and Sosina | Ireland | \$27 | | |
| May-17 | DONG divests E&P business to INEOS | Norway | \$1,050 | \$4.4 | \$4.4 |
| May-17 | Neptune to acquire ENGIE E&P | UK | \$3,900 | | |
| Apr-17 | Hague acquires Netherlands gas assets from Tullow | Netherlands | \$10 | | |
| Mar-17 | ExxonMobil divests operated Norway assets to Point Resources | Norway | \$1,000 | \$13.1 | \$13.1 |

^{*}Adjusted for the present value of tax credits (\$1,361 million)



| Announce Date | Deal Heading | Country | (\$ mn) | \$/2P BOE (ENT- Unadjusted) | \$/2P BOE (ENT- Adjusted) |
|------------------|---|---------|---------|-----------------------------------|---------------------------------|
| Mar-17 | Sterling divests UK and Netherlands operations to Oranje-Nassau | UK | \$163 | | |
| Feb-17 | Delek acquires remaining 80.3% stake in Ithaca | UK | \$1,041 | \$22.7 | \$22.7 |
| Jan-17 | Shell sells UK North Sea assets to Chrysaor | UK | \$3,024 | \$8.6 | \$8.6 |
| Jan-17 | BP sells 25% WI in Magnus oil field to EnQuest | UK | \$85 | \$5.3 | \$5.3 |
| Dec-16 | Delek acquires 13.18% stake in Faroe | Norway | \$53 | | |
| Dec-16 | Total sells offshore Norway assets to KUFPEC | Norway | \$300 | \$6.5 | \$6.5 |
| Nov-16 | OMV divests UK operations to Siccar Point | UK | \$875 | | |
| Aug-16 | Suncor acquires 30% WI in Rosebank project from OMV | UK | \$50 | | |
| Jul-16 | Faroe acquires interests in five North Sea fields from Dong | Norway | \$70 | \$3.5 | \$3.5 |
| Jun-16 | BP divests Norwegian subsidiary to Aker and Det Norske | Norway | \$1,146 | \$7.2 | \$7.2 |
| May-16 | Statoil divests 15% WI in Edvard Grieg field to Lundin | Norway | \$470 | ¢45.0 | \$14.1* |
| May-16 | Statoil acquires additional 1.2% stake in Lundin | Norway | \$68 | | |
| Apr-16 | Kerogen acquires 30% stake in Hurricane | UK | \$63 | | |
| Feb-16 | Zennor Petroleum acquires UK North Sea assets from First Oil | UK | \$47 | | |
| Feb-16 | Shell divests 7.59% WI in Maclure field | UK | \$24 | | |
| Jan-16 | Statoil acquires 11.93% stake in Lundin | Norway | \$539 | | |
| Jan-16 | E.ON divests UK North Sea assets to Premier | UK | \$120 | | |

^{*}Adjusted for the value of capex for 9% interest in the Edvard Grieg oil pipeline and 6% interest in the Utsira High gas pipeline



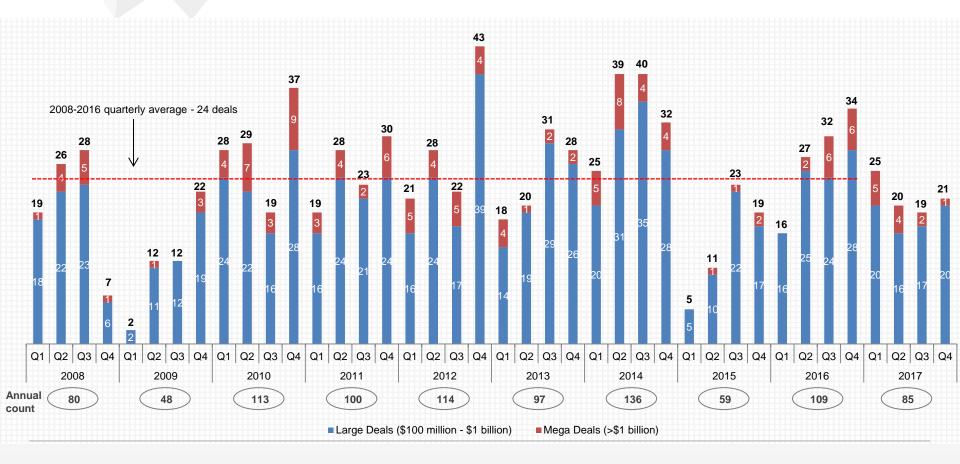
US Upstream M&A at \$64 billion Post Permania deal making slows down during Q3-Q4 2017





- 2017 US Upstream M&A deal value at \$64 billion, on the back of strong Q1 and Q2
- US Upstream M&A slowed down sharply to \$10 billion in Q3 and a mere \$8 billion in Q4
- Next round of M&A could be driven by the new capital being deployed by Private Equity Sponsors in US onshore plays







- Large and Mega deal counts in US were at 21 during Q4 and 19 during Q3
- Deal counts since Q2-2017 fall below the historic 2008-2016 quarterly average of 24
- Mega deals shrink from nine in H1-2017 to only three in H2-2017

Derrick

Top 20 deals in US during 2017



■ Oil ■ Oil + Gas ■ Gas

Corporate M&A deals in bold

PE backed companies

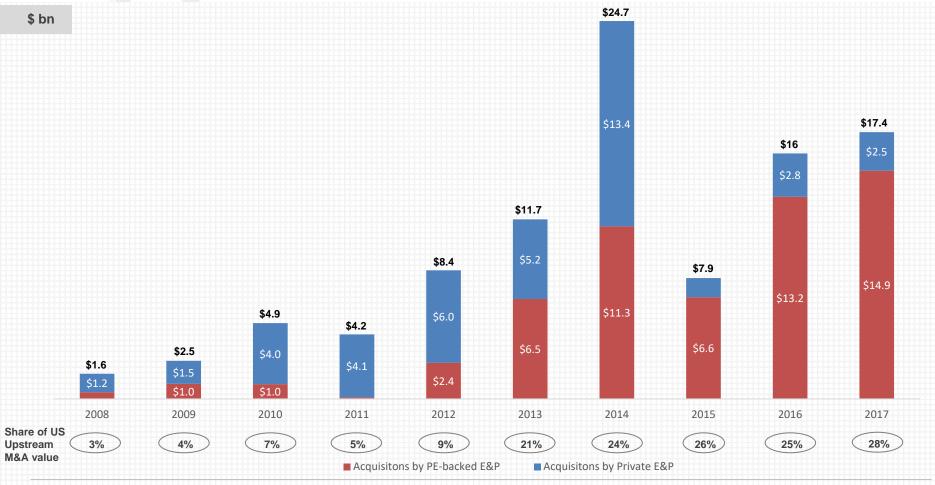


- 17 of the top 20 deals announced in 2017 were for resource plays
- PE-backed E&Ps accounted for 15 of the top 20 deals and 53% of the top 20 M&A value during 2017
- Permian deals dominated the first half of the year; 4 out of 12 Mega deals
- Top 3 deals announced during 2017 were corporate transactions

Note: Mega deals valued >\$1 billion; Large deals valued between \$100 million to \$1 billion



Private E&Ps curtail acquisitions after 2014 PE Backed E&Ps make up for the slack





- Buying by Privates Private E&P companies as well as PE backed E&P companies accounts for over 20% of the annual US M&A transactions since 2013. Share of Privates in 2017 was 28%
- Acquisitions by Private E&Ps touched a historic high of \$13.4 billion in 2014. During 2011-2014, Private E&Ps acquired assets worth \$28.7 billion
- US M&A could gain momentum with acquisitions by both PE backed and Private E&Ps
- PE backed E&Ps are looking to deploy fresh capital and Private E&Ps aiming to grow in a better oil price environment
- However, some of these Private E&Ps could opportunistically sell e.g. Bopco and RKI Exploration

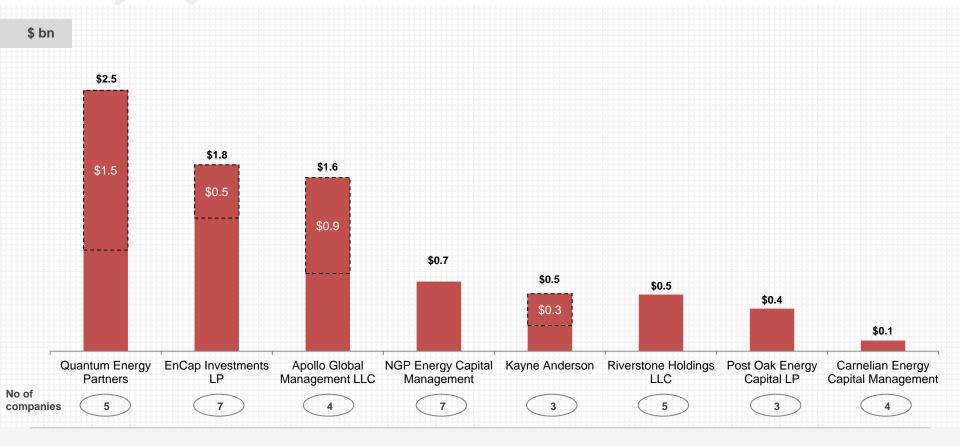


| Play | Buyer | Seller | Buyer PE Sponsor | | Deal Value (\$mn) |
|------------------------------------|-----------------------------|---------------------------|--|---------------|----------------------|
| | Sanchez; Gavilan Resources | Anadarko | Blackstone Group | | \$2,275 |
| | Venado Oil & Gas | SM Energy | Kohlberg Kravis Roberts & Co | | \$800 |
| Eagle Ford | Venado Oil & Gas | Cabot | Kohlberg Kravis Roberts & Co | | \$765 |
| | Hawkwood Energy | Halcon Resources | Warburg Pincus; Ontario Teachers' Pension Plan | | \$500 |
| | Vitruvian Exploration IV | Sanchez Energy | Quantum Energy Partners | | \$105 |
| | Bruin E&P | Halcon Resources | ArcLight Capital Partners | | \$1,400 |
| Bakken | RimRock Oil & Gas | Whiting Petroleum | Warburg Pincus | | \$500 |
| | Valorem Energy | Linn Energy | Kayne Anderson | | \$285 |
| | Hilcorp San Juan | ConocoPhillips | Carlyle Group | | \$2,700 |
| | Oak Ridge Natural Resources | QEP Resources | Kayne Anderson | | \$740 |
| Conventional | Jonah Energy | Linn Energy | TPG Capital; EIG Global Energy Partners | | \$582 |
| | Exaro Energy III | Linn Energy | Sageview Capital; Wells Fargo Energy Capital | | \$200 |
| | FourPoint Energy | EnerVest | EIG Global Energy Partners; Blackstone G Energy Partners; FS Investment | roup; Quantum | \$188 |
| Marcellus | HG Energy II | Noble Energy | Quantum Energy Partners | | \$1,125 |
| SCOOP/STACK | Chisholm Oil & Gas | Staghorn; Dorado E&P | Apollo Global Management | | \$625 |
| | Teton Range | Vitruvian Exploration III | Riverstone Holdings | | \$197 |
| Managa/Nighrara | Caerus Oil and Gas | EnCana | Oaktree Capital Management; Old Ironsides Energy | | \$735 |
| Mancos/Niobrara LOGOS Resources II | | WPX Energy | ArcLight Capital Partners | | \$169 |
| Haynesville | Rockcliff Energy II | Samson Resources II | Quantum Energy Partners | | \$525 |
| Permian | PetroLegacy Energy II | Pioneer | EnCap Investments | | \$266 |
| | | | | Total | ~\$15,000 |

| Play | Buyer | Seller | Seller PE Sponsor | Deal Value (\$mn) |
|-------------|--------------------------------|---|--|----------------------|
| | Parsley Energy | Double Eagle Energy Permian | Apollo Global Management; Post Oak Energy Capital; Magnetar Capital | \$2,800 |
| | Marathon | BC Operating and others | Quantum Energy Partners; Post Oak Energy Capital; Wells Fargo Energy Capital | \$1,100 |
| | Oasis Petroleum | Forge Energy | EnCap Investments; Pine Brook Partners | \$946 |
| Permian | WPX Energy | Panther Energy II; Carrier Energy Partners | Kayne Anderson; Riverstone Holdings | \$775 |
| i eiiilaii | Marathon | Black Mountain Oil & Gas and others | NGP Energy Capital Management | \$700 |
| | Carrizo | ExL Petroleum Management | Quantum Energy Partners | \$648 |
| | Lario Oil & Gas | Trail Ridge Energy II; Waveland Resource Partners | Trilantic Capital; Riverstone Holdings; Waveland Energy | \$345 |
| | Resolute Energy | CP Exploration II; PetroCap CPX | Post Oak Energy Capital; PetroCap Partners | \$160 |
| | Roan Resources | Linn Energy; Citizen Energy II | QuadTwo Capital Partners | \$2,000 |
| 00000/0740/ | Silver Run Acquisition Corp II | Alta Mesa Holdings | HPS Investment Partners; Bayou City Energy Management | \$1,419 |
| SCOOP/STACK | Chisholm Oil & Gas | Staghorn; Dorado E&P | EnCap Investments | \$625 |
| | Teton Range | Vitruvian Exploration III | Quantum Energy Partners | \$197 |
| Mayaallisa | Rice Energy | LOLA Energy | Denham Capital | \$180 |
| Marcellus | EQT | Ascent Resources | The Energy and Minerals Group | \$130 |
| Eagle Ford | Lonestar Resources | Battlecat Oil and Gas; Sanchez | Lime Rock Partners | \$117 |
| Niobrara | Bill Barrett Corporation | Fifth Creek Energy | NGP Energy Capital Management | \$649 |
| GoM | Stone Energy | Talos Energy | Riverstone Holdings; Apollo Global Management | \$1,597 |

Total

~\$15,000





- Quantum Energy committed over \$2.5 billion in capital to 5 new E&P companies. Of these, HG Energy II (Noble Energy, Marcellus, \$1.13 billion), Vitruvian Exploration IV (Sanchez, Eagle Ford, \$105 million) made their first big purchases in 2017
- Apollo Global Management committed over \$1.6 billion in capital to 4 new E&P companies. Chisholm Oil & Gas (Staghorn and Dorado, STACK, \$625 million) was the only entity to make its first purchase in Mar-2017
- Kayne Anderson committed over \$500 million to 3 new E&P companies. Of these, Valorem Energy (Linn Energy, Bakken, \$285 million) and Resource Rock Exploration (Devon Energy, Permian) made their first big purchases in 2017



Top 10 PE backed E&P companies (2017 start-ups) by equity commitment

| Portfolio company | PE Sponsor | Target Region | Equity Commitment (\$mn) |
|-----------------------------|--|---------------|--------------------------------|
| HG Energy II | Quantum Energy Partners | Eastern | \$1,500 |
| Encino Acquisition Partners | Canada Pension Plan Investment Board | | \$1,000 |
| Chisholm Oil & Gas | Apollo Global Management | Midcontinent | \$900 |
| ATX Energy Partners | Warburg Pincus; Yorktown Energy Partners; Pine Brook Partners | | \$780 |
| Admiral Permian Resources | Pine Brook Partners; Riverstone Holdings | Permian | \$600 |
| Silverback Exploration II | EnCap Investments | | \$500 |
| Vitruvian Exploration IV | Quantum Energy Partners | Gulf Coast | \$450 |
| QStar II | EnCap Investments | Permian | \$400 |
| Ameredev II | EnCap Investments | Permian | \$400 |
| Greylock Energy | ArcLight Capital Partners | Eastern | \$400 |



Private Equity 2017 Acquisitions

| Rank | Buyer PE Sponsor | Total Deal Value (\$mn) |
|------|--------------------------------|----------------------------|
| 1 | Carlyle Group | \$2,700 |
| 2 | Quantum Energy Partners | \$1,832 |
| 3 | ArcLight Capital Partners | \$1,569 |
| 4 | Kohlberg Kravis Roberts & Co | \$1,565 |
| 5 | Blackstone Group | \$1,276 |
| 6 | Kayne Anderson | \$1,025 |
| 7 | Warburg Pincus | \$827 |
| 8 | Apollo Global Management | \$699 |
| 9 | Old Ironsides Energy | \$405 |
| 10 | Oaktree Capital Management | \$368 |
| 11 | EIG Global Energy Partners | \$353 |
| 12 | EnCap Investments | \$323 |
| 13 | TPG Capital | \$291 |
| 14 | Ontario Teachers' Pension Plan | \$250 |
| 15 | Riverstone Holdings | \$197 |
| 16 | White Deer Energy | \$68 |
| 17 | Sageview Capital | \$60 |
| 18 | Wells Fargo Energy Capital | \$50 |
| 19 | Bayou City Energy | \$23 |
| 19 | HPS Investment Partners | \$23 |
| 21 | The Energy and Minerals Group | \$19 |

Private Equity 2017 Divestitures

| Rank | Seller PE Sponsor | Total Deal Value (\$mn) |
|------|-------------------------------|----------------------------|
| 1 | Apollo Global Management | \$1,732 |
| 2 | Quantum Energy Partners | \$1,480 |
| 3 | Riverstone Holdings | \$1,407 |
| 4 | NGP Energy Capital Management | \$1,402 |
| 5 | EnCap Investments | \$1,203 |
| 6 | Post Oak Energy Capital | \$1,181 |
| 7 | QuadTwo Capital Partners | \$1,000 |
| 8 | Magnetar Capital | \$933 |
| 9 | Bayou City Energy | \$780 |
| 10 | HPS Investment Partners | \$710 |
| 11 | Kayne Anderson | \$599 |
| 12 | Pine Brook Partners | \$481 |
| 13 | Wells Fargo Energy Capital | \$213 |
| 14 | EIG Global Energy Partners | \$183 |
| 15 | Denham Capital | \$180 |
| 16 | The Energy and Minerals Group | \$54 |
| 17 | Lime Rock Partners | \$30 |
| 18 | First Reserve | \$21 |
| 19 | Kohlberg Kravis Roberts & Co | \$19 |



Contact Us



