



2017 primed for growth after 117% surge in 2016 U.S. oil and gas M&A activity

White-hot Permian underpins last year's \$69 billion in upstream deals

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- 2016 tally of \$69 billion in 385 deals compares to \$32 billion in 285 deals in 2015 and \$85 billion in 437 deals in 2014.
- Texas' Permian region is most active with \$27 billion, split \$9 billion in traditional Midland subbasin and \$18 billion in emerging Delaware sub-basin.
- Permian buyers snap up more than 18,500 net drilling locations with PLS allocated value of \$19.7 billion implying a low cost to secure roughly 10.3 billion net barrels in future inventory at about \$1.90 per barrel.
- Range Resources' \$4.4 billion corporate buy of Memorial Resource Development in North Louisiana's Cotton Valley gas play is largest deal of the year.
- After a slow 2015, the Marcellus gas play recovered but remained a distant second with \$6.7 billion in deals.
- Though smaller in footprint than the Permian, Oklahoma's SCOOP/STACK play is also rapidly growing and ranks third at \$5.1 billion.
- Texas' Eagle Ford, Colorado's Niobrara and North Dakota's Bakken plays lag at \$2.9 billion, \$1.9 billion and \$2.1 billion, respectively, but are now recovering with higher pricing ahead.
- Gulf of Mexico particularly hard hit with just \$2.4 billion in deals, substantially all attributed to Anadarko Petroleum's \$2.0 billion buy of Freeport McMoRan's deepwater portfolio.
- Looking ahead, assets for sale remain at a high level, and equity capital via the public and private markets is readily available for strong buyers.
- PLS Inc. expects 2017 to be a strong year for continued M&A activity in the U.S.

PLS Inc. ("PLS"), a leading Houston-based oil and gas research firm, announces that merger and acquisition activity for the upstream energy sector in the United States more than doubled in 2016 to \$69 billion in 385 deals as the industry quickly adapted to securing Tier 1 drilling locations that are profitable in a \$50 oil price environment and buying existing production. The 2016 deal value compares to \$32 billion in 285 deals in 2015 and \$85 billion in 437 deals during the much higher-priced 2014 environment. Oil price accounts for much of the deal market volatility as it began descending from July 2014 highs of \$100-plus and accelerated in November 2014 when OPEC decided to open the taps to gain market share. This resulted in prices plummeting to a low of \$27 per barrel in February 2016. Two years after OPEC's attack on oil prices began, both OPEC and non-OPEC countries agreed to cut production beginning January 1, 2017 – a decision that is expected to boost oil prices this year.

PLS Managing Director Brian Lidsky said, "During the downturn, the industry focused on a trifecta of decreasing costs, increasing recoveries and capital discipline. Corporate strategies ran the gamut from Chapter 11 restructurings and exits to bold moves to secure large proven land inventory in anticipation of oil price recovery in 2017. Certainly, the Delaware basin portion of the Texas Permian region ranks as 2016's M&A play of the year as fresh equity capital poured into the area to buy Tier 1 acreage and production in areas like Reeves, Pecos and Loving counties, Texas to the tune of \$18.0 billion. The buying in the Delaware basin, perhaps best described as hand-to-hand combat, secured nearly 11,000 prime drilling locations with over six billion boe of net resource at a cost of about \$2.15/boe, excluding Apache's Alpine High discovery. Those buyers fortunate to be on the winning side should be positioned very well in a rising oil price environment."

Within the Permian region, PLS notes that buyers reported securing 18,500 drilling locations in multiple stacked pays including the Wolfcamp, Bone Springs, Spraberry and Cline benches. Using an average EUR of 800,000 boe and a 70% net revenue interest, this level of buying suggests that the industry purchased about 10.4 billion boe of future resources for about \$1.90 per boe on average. This is remarkable and bodes well for the future production growth coming from the region. In addition, much of the bought acreage is held by production and allows for paced drilling that can be throttled under different oil price environments. The breakeven economics of the vast majority of this acreage is well below \$40 per barrel.

As a further testament to the potential of the Delaware basin portion of the Permian, Apache Corp. unveiled a virgin resource play deemed the Alpine High, which is a combo Woodford/Barnett play in southern Reeves County. Apache quietly leased 20% of the county, or 307,000 net contiguous acres, at \$1,300 per acre (\$400 million) and reports a 20-year drilling inventory with individual well EURs of up to 2.7 million boe. Apache estimates 75 Tcf of rich gas and 3 billion barrels of oil in place. These numbers assume 2,000–3,000 locations and only a single landing zone in each of the Woodford and Barnett benches. Additional resource is possible with multiple landing zones in each of these benches.

Top 10 US Oil and Gas Deals in 2016

<u>Date</u>	<u>Buyer</u>	<u>Seller</u>	Value (\$B)	<u>Play</u>
		Memorial Resource		
05/16/16	Range Resources	Development	\$4.4	Cotton Valley
09/26/16	Rice Energy	Vantage Energy	\$2.7	Marcellus
09/06/16	EOG	Yates Petroleum	\$2.5	Delaware Unconv.
12/14/16	Diamondback	Brigham Resources	\$2.4	Delaware Unconv.
10/13/16	RSP Permian	Silver Hill Energy Partners	\$2.4	Delaware Unconv.
09/12/16	Anadarko	Freeport-McMoRan	\$2.0	Conventional
12/14/16	Gulfport Energy	Vitruvian Exploration II	\$1.9	SCOOP/STACK
10/31/16	Occidental	J Cleo Thompson et al	\$1.8	Delaware Unconv.
07/22/16	Riverstone; Silver Run	Centennial Resource Dev.	\$1.7	Delaware Unconv.
08/15/16	Concho Resources	Reliance Energy Partners	\$1.6	Midland Unconv.

Source: PLS Inc. Global M&A Database.

2016 in Review

In 2016, the oil and gas deal markets gained momentum throughout the year after oil prices set a clear bottom of \$26.19/bbl on February 11. Deal value soared 117% to \$69 billion versus \$32 billion in 2015 but fell shy of 2014's \$85 billion. Note, these deal values exclude large global deals like Shell/BG's \$83 billion deal in 2015 and Repsol/Talisman's \$13 billion deal in 2014.

Deal counts also surged 35% in 2016 to 385 deals versus 285 in 2015 but also fell shy of 2014's 437 deals. Note, these deal counts include deals where values are undisclosed by the buyer and seller.

Oil deals (those classified by PLS as > 70% oil) tallied \$29 billion versus \$10 billion in 2015 and \$33 billion in 2014. Gas deals (classified as > 70% gas) lagged oil and totaled \$18 billion versus \$7 billion in 2015 and \$30 billion in 2014. Deals with both oil and gas as a commodity mix reached \$22 billion in 2016 versus \$14 billion and \$21 billion in 2015 and 2014, respectively.

Deal Value (\$ billion) and Counts by Commodity

	2014		2015		2016	
	<u>Value</u>	Count	<u>Value</u>	Count	<u>Value</u>	Count
Oil	\$33.3	181	\$10.4	131	\$28.6	143
Oil + Gas	\$21.4	85	\$14.3	53	\$22.0	78
Gas	\$30.2	<u>171</u>	<u>\$7.0</u>	<u>101</u>	<u>\$18.1</u>	<u>164</u>
Total	\$84.9	437	\$31.7	285	\$68.6	385

Source: PLS Inc. Global M&A Database. Deal Counts include deals with undisclosed values.

Activity in the Delaware basin portion of the Permian region far surpassed all other plays tracked by PLS in 2016. The phenomenal growth in this area was driven by the ability to buy into prime Tier 1 stacked pay acreage largely held by production. The rapid advances in increasing EURs and decreasing costs proven in the Midland basin translated to the Delaware basin. With Tier 1 Midland basin land largely locked up by long-term players (much of it in 2014), buyers with readily accessible equity capital snapped up acreage in the Delaware basin, setting off a land rush. When ranked by plays, the Delaware basin's \$18.0 billion of deals in 2016 is second only to \$19.2 billion in conventional deals sold in 2014 and surpasses the \$14.8 billion in deals struck in the Midland basin when oil prices were much higher in 2014. Midland basin acreage continued to sell, but the \$9.1 billion tally reached only 50% of that in the Delaware basin. The next two most active areas were the Marcellus (\$6.7 billion), which recovered from a virtual stall in 2015, and the SCOOP/STACK play in Oklahoma (\$5.1 billion), which has been doubling each year since 2014.

A case study for the 2016 Delaware basin boom <u>is best illustrated by RSP Permian's acquisition</u> <u>presentation</u> issued on October 13, 2016. The \$2.4 billion cash and equity acquisition of private-equity backed Silver Hill Energy Partners brought RSPP 41,000 net acres (250,000 net effective acres) and 15,000 boe/d (69% oil, 17% NGLs, 14% gas) of production primarily in Loving County, Texas. The presentation's cover slide alone vividly showcases the stacked pay and its thickness in the Delaware basin versus the Midland basin. PLS calculates that this deal sold for \$48,000 per net acre (a high-water mark at the time) and \$1.0 million per drilling location (1,950 net locations). This compares to the Midland basin high-water market of \$59,000 per acre set in June 2016 when QEP Resources spent \$600 million in an expansion buy in Martin County. QEP bought 9,400 net acres and 1,400 boe/d from RK Exploration and 74 other private sellers and boosted QEP's drilling inventory by 413 net locations in four separate benches.

Deal Value (\$ billion) by Play

	<u>2014</u>	<u>2015</u>	<u>2016</u>	% of 2016
Delaware Unconventional	\$0.3	\$3.3	\$18.0	26%
Conventional Onshore	\$19.2	\$6.0	\$9.2	13%
Midland Unconventional	\$14.8	\$4.2	\$9.1	13%
Marcellus	\$7.7	\$0.7	\$6.7	10%
SCOOP/STACK	\$1.7	\$2.6	\$5.1	7%
Cotton Valley & Other	\$0.7	\$0.5	\$4.4	6%
Eagle Ford	\$7.9	\$0.6	\$2.9	4%
Haynesville	\$1.2	\$0.9	\$2.8	4%
Gulf of Mexico	\$6.0	\$0.3	\$2.4	4%
Niobrara	\$1.6	\$1.3	\$2.1	3%
Bakken	\$8.5	\$1.3	\$1.9	3%
Mississippi Lime	\$0.2	\$0.0	\$1.7	2%
Multiple Plays	\$9.4	\$5.7	\$1.0	2%
Barnett	\$0.2	\$0.0	\$0.9	1%
Utica	\$2.6	\$1.5	\$0.3	0%
Midcon Unconventional	\$2.5	\$1.7	\$0.2	0%
Coalbed Methane	\$0.5	\$1.1	\$0.0	0%
Total	\$84.9	\$31.7	\$68.6	100%

Source: PLS Inc. Global M&A Database

As measured by deal value, the trends in deal types (corporate, asset or JVs) have remained relatively consistent over the past three years. For the three-year period of 2014-2016, property deals have averaged 62% of the market while corporate deals have averaged 30%. The remainder deal types all account for less than 5%.

Deal Value (\$ billion) by Type

	<u>2014</u>	<u>2015</u>	<u>2016</u>	% of 2016
Property	\$55.8	\$18.5	\$41.1	60%
Corporate	\$23.7	\$8.8	\$23.3	34%
Acreage	\$3.9	\$1.3	\$2.2	3%
Royalty	\$0.3	\$0.1	\$1.2	2%
JV/Farm-out	<u>\$1.4</u>	<u>\$3.1</u>	<u>\$0.8</u>	<u>1%</u>
Total	\$84.9	\$31.7	\$68.6	100%

Source: PLS Inc. Global M&A Database.

Looking Forward

The oil and gas deal markets are well supplied with inventory, and capital is available for the right deal. Going into 2016, over \$100 billion of dry powder private equity capital was available. Much of this remains available and was supplemented, particularly in the last half of 2016, by a receptive Wall Street who quickly supported overnight secondary equity raises to fund the largest deals. In addition, PLS anticipates additional capital to come to the forefront as the IPO markets open up.

All eyes are on OPEC's anticipated production cuts beginning January 1, 2017, and their impact on oil prices. Pricing stability is a critical component to a healthy deal market while price shocks tend to keep players sidelined. That said, the industry has been through a significant deleveraging in the past two years via a combination of asset sales, Chapter 11 bankruptcies and a dramatic investment decrease. As prices recover, PLS expects the deal markets to continue to provide a significant growth platform for those buyers not able to capitalize on 2016's opportunities.

As drilling and oil prices pick up in the US, PLS expects the increases in EURs via longer laterals and increased proppant loading to continue to improve. PLS forecasts the deal markets to expand beyond the white-hot Permian to other prime oil resource plays including the Eagle Ford and Bakken. On the gas side, as LNG exports from the U.S. continue to increase, we expect additional deal activity to occur closer to the Gulf Coast and re-awaken activity in large plays like the Haynesville, Barnett and gas window of the Eagle Ford.

PLS will publish additional research in the coming days and weeks on the M&A and capital markets outlooks for 2017.

PLS Inc. is a leading Houston-based oil and gas information and advisory firm that specializes in insightful real-time research for a global client base of both industry and investment professionals. Flagship products include the <u>Global M&A Database</u>, <u>docFinder</u> and <u>Capitalize</u> along with specialty industry <u>reports</u>. PLS Inc., through its <u>PLS Energy Advisory Group</u>, is also a leading transaction firm and in 2016 closed over 35 oil and gas deals across the globe. For more information, contact Ali Rizvi at <u>ali@plsx.com</u> or call 713-600-0115. Media contact, Andrew Dittmar, M&A Analyst, PLS, <u>adittmar@plsx.com</u> or call 713-600-0124.

Source: PLS Inc