

Confidential

2017 Y/E U.S. Oil & Gas Upstream M&A Review & Outlook

- **\$67.1 B in total upstream deals down slightly** vs. \$69.7 B in 2016.
- **Permian Basin is 2017's most active region** with \$24.3 B (70% in the Delaware).
- **EQT's acquisition of Rice Energy in the Marcellus** is the largest deal of the year (\$8.2 B).
- **Returning interest in conventional assets**, accounting for 20% of deal value.
- **Oil prices trend upwards in late 2017**, a potential catalyst for future deal flow.
- **Global M&A Upstream saw 875 deals** worth \$161 B incl \$32 B in Canada & \$61 B overseas.

Andrew Dittmar – Senior Analyst, adittmar@plsx.com

Brian Lidsky – Managing Director, blidsky@plsx.com

Ali Rizvi – SVP, Business Development, ali@plsx.com

2017 Transformative Deals of the Year

Market Themes & Observations

2017

US Perspective (Setting the Stage Looking Back)

1. **Permian A&D peaked in Q1 17** after \$74 billion of frenzied buying over 4 years.
2. **M&A markets impacted by “show me” mood** after ponying up for massive land inventory grab.
3. **March 2017, the worm turns on US Oil Storage** having now drawn down 117 MMbbls (or 22%) from peak of 535 MMbbls.
4. **Oil storage now just 35 MMbbl**, higher than before Thanksgiving Day 2014.
5. **Marcellus driven Appalachia** production up 3.1 Bcf/d (14%) in 2017 to 26 Bcf/d.
6. **Permian drillers in early innings** of exploiting the pancake layers of hydrocarbons.
7. **Private exits? Oil legends Bass & Yates** sell to Exxon (\$5.6 B) and EOG (\$2.4 billion), respectively.
8. **Follows Clayton Williams exit to Noble Energy** for \$3.2 B unlike EOG & Exxon, Noble has already sold nonstrategic assets
9. **Pace of bankruptcies peaked in 2016** while survivors obeyed the discipline of debt rules.
10. **OFS companies enabled industry to survive** with discounts & pricing flexibility but their (deserved) time will come.
11. **Since Trump inauguration in November 2016**, US equity markets up a remarkable 44%!
12. **All eyes on per rig shale productivity adds** – are there signals that sweet spots getting drilled up (Bakken, Marcellus) – is there line of sight?
13. **Henry Hub gas priced linked LNG gaining ground** against global LNG including new (oil linked) supplies from Asia, Australia.
14. **Demand rules both domestically and overseas** and is trending up with recovering economies.

Full Year Top Takeaways

2017

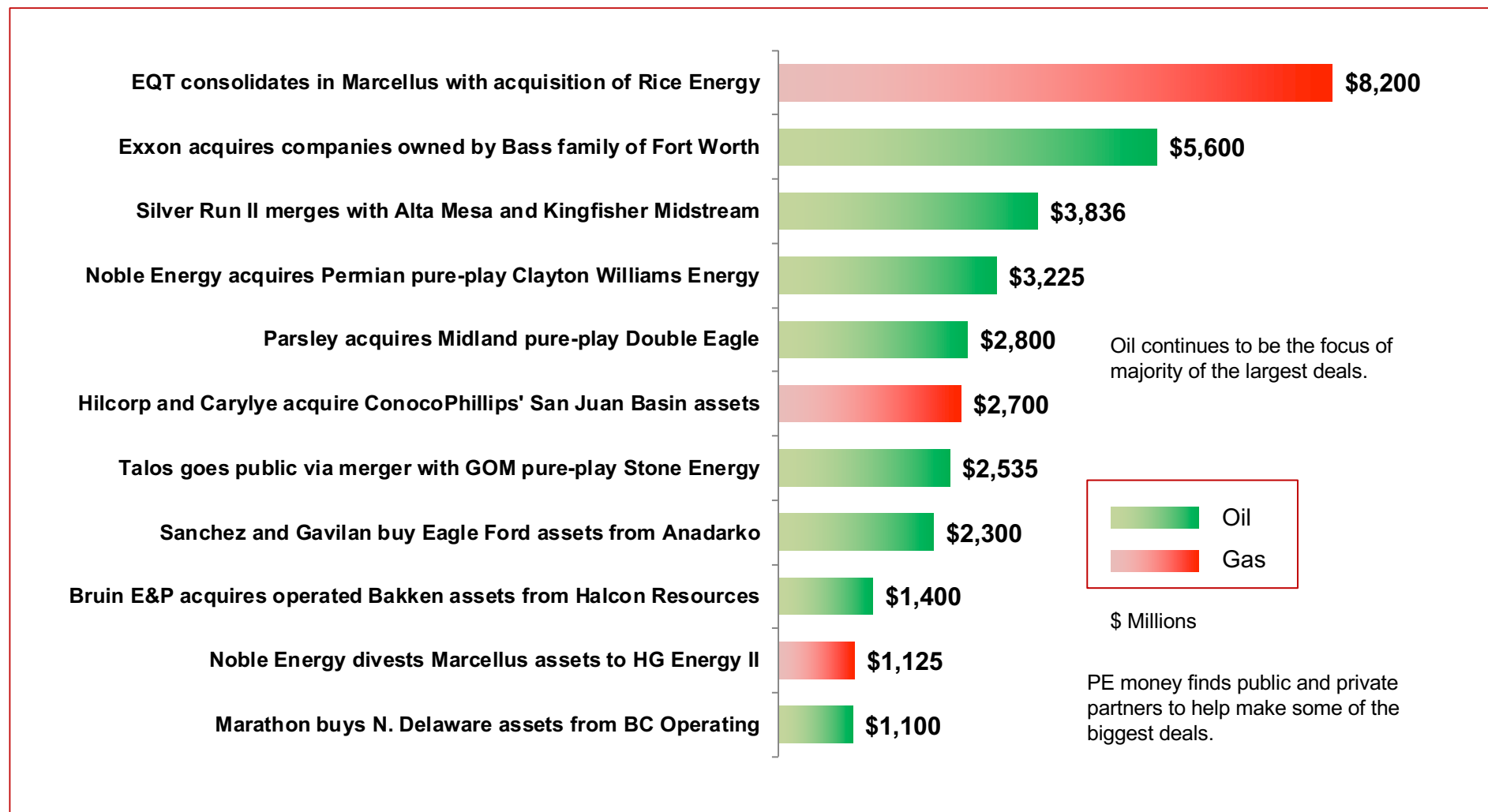
Publics turn to execution and PE buying accelerates

1. **\$67.1 B in 2017 deals, just off the pace of \$69.7 B in 2016.** While well up from the \$32.3 B in 2015, dealmaking value has yet to return to the high oil price era of 2014 (\$98 B in deals).
2. **484 total deal count (including undisclosed value) in 2017** is recent high, beating not only the 414 deals reported in 2016 but even the 450 deals reported in 2014.
3. **\$24.3 B worth of Permian A&D in full year 2017** (\$16.8 B in Delaware & \$6.8 B in Midland, remainder waterflood or CBP) with three-quarters of deal value occurring during 1Q17.
4. **Marcellus consolidation (particularly EQT/Rice merger) makes Eastern region** second most active for value at \$11.9 B (\$11.1 B is Marcellus deals). Marcellus was one of the first plays to see push for consolidation.
5. **Rockies finishes the year strong to take third at \$11.1 B** with a number of notable deals in the DJ Basin. Early in 2018, the region's activity has expanded to include the Powder River Basin.
6. **Delaware and Midland unconventional capture 25% and 10% of total deal value respectively.** Permian still active later in the year, but focused on acreage swaps and portfolio optimization rather than big entries.
7. **Maturing Eagle Ford (\$5.9 B in deals) and up and coming STACK/SCOOP (\$5.1 B) take 4th and 5th place** respectively among unconventional plays for full year 2017.
8. **\$13 B in “conventional assets” changed hands in 2017**, up slightly from \$11 B in 2016 & reaching 20% of the years total value. Many of the legacy assets were bought by PE firms looking to capitalize on rising prices.
9. **Companies now looking to execute on acquisitions.** Less new basin entry and more in-basin consolidation could help and drive better shareholder returns, particularly in the Permian and Marcellus.
10. **\$161 B in global upstream deals transacted during 2017** with \$25 B in deals during 4Q17.
11. **Globally upstream accounted for 39% of total “energy sector” deals**, more than any other energy sector. Power and utilities took second place with 28% of value.

U.S. Deals over \$1.0 B in 2017

2017

Permian and Marcellus consolidation drives many of 2017's largest deals



Top 10 U.S. deals total \$35 billion or 52% of the market.

U.S. Acreage Valuation Across Unconventional Plays

2017

Deals > \$500 MM during 2017 – Very few deals break \$5,000/acre mark outside of Permian

Date	Buyers	Sellers	Value (\$MM)	US Play	Oil/Gas	\$/Daily BOE	\$/Acre	Oil Strip	Gas Strip
08/15/17	RimRock	Whiting	\$500	Bakken	Oil	\$39,600	\$6,469	\$48.17	\$3.03
07/11/17	Bruin E&P	Halcon	\$1,400	Bakken	Oil	\$39,600	\$2,419	\$45.77	\$2.98
12/11/17	Oasis	Forge	\$946	Delaware Unconv.	Oil	\$39,060	\$39,867	\$56.83	\$2.79
06/28/17	Carrizo	ExL	\$648	Delaware Unconv.	Oil	\$27,990	\$25,721	\$45.05	\$3.09
03/21/17	Marathon Oil	Black Mountain	\$700	Delaware Unconv.	Oil	\$31,200	\$34,376	\$49.91	\$3.29
03/09/17	Marathon Oil	BC Operating	\$1,100	Delaware Unconv.	Oil	\$30,540	\$18,394	\$51.69	\$3.20
01/26/17	Public	Jagged Peak	\$545	Delaware Unconv.	Oil	\$35,990	\$44,097	\$54.91	\$3.48
01/24/17	Halcon	Samson Exploration	\$705	Delaware Unconv.	Oil	\$33,540	\$27,125	\$55.00	\$3.39
01/17/17	ExxonMobil	Bass Family	\$5,600	Delaware Unconv.	Oil	\$33,400	\$19,995	\$55.34	\$3.47
01/16/17	Noble Energy	Clayton Williams	\$3,225	Delaware Unconv.	Oil	\$33,400	\$32,268	\$55.34	\$3.47
01/12/17	WPX	Carrier; Panther II	\$775	Delaware Unconv.	Oil	\$29,500	\$32,224	\$55.28	\$3.35
12/20/17	Venado	Cabot	\$765	Eagle Ford	Oil	\$41,490	\$1,773	\$56.73	\$2.72
05/11/17	WildHorse	Anadarko; KKR	\$625	Eagle Ford	Oil	\$33,330	\$3,354	\$48.65	\$3.37
01/24/17	Hawkwood	Halcon	\$500	Eagle Ford	Oil	\$37,800	\$3,394	\$55.00	\$3.39
01/12/17	Sanchez; Gavilan	Anadarko	\$2,300	Eagle Ford	Oil	\$24,900	\$2,102	\$55.28	\$3.35
01/03/17	Venado	SM	\$800	Eagle Ford	Oil	\$22,487	\$0	\$56.26	\$3.62
08/01/17	Rockcliff Energy	Samson Resources II	\$525	Haynesville	Gas	\$17,550	\$1,246	\$50.49	\$2.93
06/19/17	EQT	Rice	\$8,200	Marcellus	Gas	\$17,940	\$9,126	\$45.90	\$3.09
05/02/17	HG Energy II	Noble Energy	\$1,125	Marcellus	Gas	\$16,265	\$0	\$49.78	\$3.30
02/08/17	EQT	Stone Energy	\$527	Marcellus	Gas	\$17,400	\$5,524	\$54.09	\$3.39
07/26/17	QEP	JM Cox et al.	\$732	Midland Unconv.	Oil	\$36,312	\$51,341	\$49.13	\$3.01
06/19/17	Concho	Occidental	\$600	Midland Unconv.	Oil	\$34,060	\$40,147	\$45.90	\$3.09
02/07/17	Parsley	Double Eagle	\$2,800	Midland Unconv.	Oil	\$33,400	\$36,511	\$54.96	\$3.30
12/05/17	Bill Barrett	Fifth Creek	\$649	Niobrara	Oil	\$36,960	\$6,662	\$56.55	\$2.92
11/08/17	SRC Energy	Noble Energy Inc	\$568	Niobrara	Oil	\$22,500	\$16,945	\$56.92	\$3.06
08/16/17	Silver Run II	Alta Mesa; et al.	\$3,836	SCOOP/STACK	Oil	\$38,170	\$14,472	\$48.32	\$3.02
03/29/17	Chisholm Oil & Gas	Staghorn	\$613	SCOOP/STACK	Oil	\$32,300	\$9,738	\$49.72	\$3.35
Total			\$41,309			\$30,988	\$17,974	\$52.11	\$3.20

*Excludes pure royalty deals & drillcos

U.S. M&A - Looking Forward

2018

10 quick points to ponder in 2018



1. **Expect Consolidation within plays** driven by scale and efficiencies, continued drive to increase Tier 1 acreage.
2. **Expect Privates and PE Backed firms** to be active but selective. There is significant dry powder in search of PDP underpinned assets with horizontal exploitation and focused areas of interest.
3. **Publics largely on sidelines.** Public company focus will be on turning inventory to cash flowing assets. Likely trend to continue shedding non-core assets.
4. **Oil and gas prices poised to be up versus 2017.** This should bode well for increased industry cash flow and increased A&D valuations.
5. **Expect further refinement of stacked pay** to increase economic value of existing inventory.
6. **Look for recent companies who emerged** from Ch 11 to seek liquidity via mergers.
7. **Look for more gas-oriented transactions** closer to Gulf Coast underpinned by growing demand (LNG, PetroChemicals).
8. **Expect announcements of new plays** as technology is applied to legacy rocks (Austin Chalk, Powder River Basin)
9. **Should oil prices hold** or go north, expect more IPOs.
10. **Look for transformative buys** among Super-Independents and Majors as they repair portfolio damage after 3 years of severe exploration cuts.

Quarterly

4Q 2017 U.S. Oil & Gas Upstream M&A Review

- **\$9.9 B in total upstream deals down slightly** vs. \$11.9 B in 3Q 2017 and up from record \$25.9 B in 4Q 2016.
- Private Equity stepping in on the buy-side in a large way (47% of market)
- DJ Basin/Niobrara consolidates (30% of market)
- A single large deal in Delaware Basin (Oasis buys Forge for \$946 MM)
- Production multiples close quarter at \$50,000 per daily barrel and \$3,000 per daily MCF

4Q17 Top Takeaways – A Look at the Last 90 Days of 2017

QTR

Rockies region heats up for deals

1. **\$9.9 B in deals reported in 4Q17, 4th sequential quarterly drop in value** since high of \$25.9 B in 4Q16.
2. **115 reported deals in 4Q17; bringing 2017 total to 484 deals** (beating recent high of 450 deals in 2014).
3. **Rockies region is most active in 4Q17** with several large deals (and one terminated) in the DJ Basin.
4. **Conventional assets make strong showing in 4Q17** with \$4.2 B in deals, making up 42% of deal value. Rising prices could make PDP deals more attractive to potential buyers.
5. **Niobrara top unconventional play with \$1.6 B in deals** after only ~\$300 MM of deals in 3Q17. One of the few basins with significant consolidation in 4Q17.
6. **\$1.3 B in Delaware during 4Q17**, mostly from Oasis' \$946 MM purchase of Forge Delaware assets.
7. **Maturing Eagle Ford (\$1.0 B in deals) takes third place among U.S. shale**, with a late push from Venado's \$765 MM acquisition of Cabot's Eagle Ford assets.
8. **Marcellus has \$400 MM of 4Q17 deals, up slightly from \$300 MM in 3Q17** but far behind 2Q17's 9.6 B when EQT bought Rice Energy.
9. **Midland Basin reported \$100 MM in deals, the lowest since oil crash**; however may not reflect activity in the basin as many established operators using acreage swaps rather than acquisitions to block up leases.
10. **STACK/SCOOP falls after gaining momentum in 3Q17** but deals remain inconsistent.
11. **Wall Street more skeptical of deals late in the year**, capped by Carl Icahn's successful opposition to SandRidge's Bonanza Creek acquisition.
12. **Active P/E buyers have stepped up, increasing their share of acquisitions** to 47% of value in 4Q17 up from 42% in 3Q17 and only 11% in 1Q17.

4Q17 Noteworthy Trends of the Fourth Quarter

Market Themes & Observations

QTR

Private Equity Supports Buying –

- **Venado (KKR) buys Cabot's STX Eagle Ford assets for \$765 MM**
 - Gets 15,656 boe/d 3Q17 volumes plus 74,500 net acres in the black oil window in Frio & Atascosa Cos.
 - \$649.6 MM paid for PDP and \$115.4 MM remainder implies \$1,800/acre for operated position.
 - E&Ps are stepping further out and testing Tier 2 or Tier 3 acreage with knowhow and latest technology.
- **Talos (Apollo & Riverstone) going public via reverse merger w/ Stone to form new \$2.5 B Gulf of Mexico pure-play**
 - Fields include Amberjack & Pompano (Stone) and Ewing Bank 305 & Phoenix/Tornado (Talos); all offshore Louisiana
 - 47,000 boe/d 2017E pro-forma volumes and 135 MMboe proved (70% oil, 74% deepwater).
 - \$2.54 B pro-forma EV implies \$53,900/daily boe and \$18.78/boe.
 - Tough GOM market, low prices and left over Macondo fears have limited current operators but new company will have scale, a high performing technical team and a strong balance sheet.

Permian Deal Flow Has One Noteable Transaction–

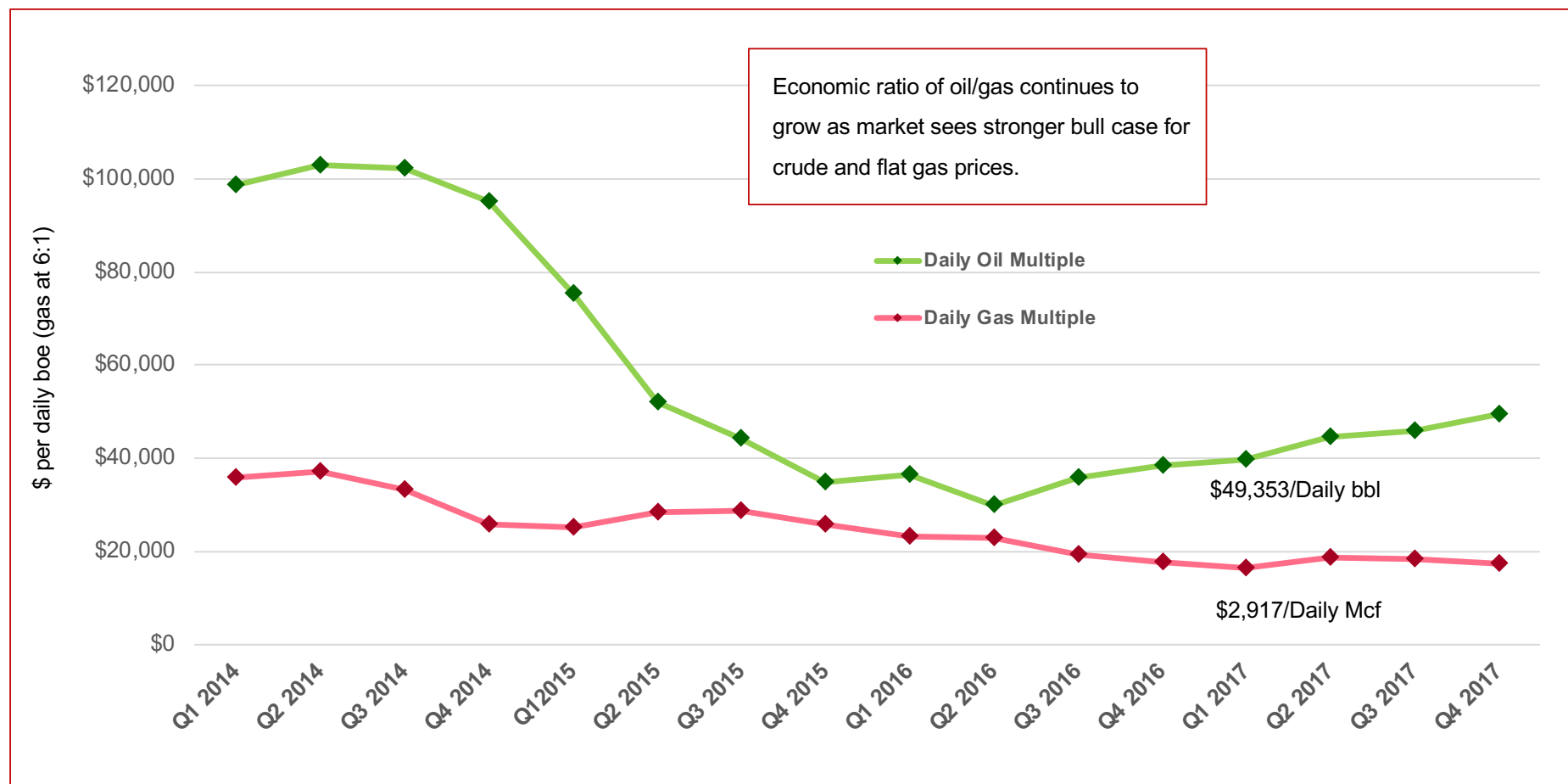
- **Oasis acquires Delaware Basin assets from Forge Energy for \$946 MM**
 - 20,300 net acres (avg. 76% WI in core leases) in black oil window south central Delaware acreage.
 - Metrics of \$39,900/net acre net of PDP. Viewed as high by some but Permian still takes big spending to get it.
 - Deal more than doubles Oasis' 483 Williston locations w/ 507 new Delaware locations bought at \$1.6 MM each.
 - Forge sponsored by repeat Permian player EnCap; Encap also monetized major investments in Double Eagle, Ameredev, Silverback & Qstar.

DJ Basin Consolidation –

- **SRC significantly expands core DJ area with \$608 MM Noble Energy buy**
 - Strong follow up to SRC's establishment of Greely Crescent area in May 2016 via \$505 MM acquisition from Noble.
 - Provides scale as a DJ pure play and led by President and CEO Lynn Peterson (built Bakken-focused Kodiak Oil & Gas and sold to Whiting for \$6 B in July 2014).
- **Bill Barrett merges with NGP's Fifth Creek to form new DJ Basin pure-play**
 - Transaction creates DJ Basin pure-play with sufficient critical mass to access capital markets.

Production Valuation Benchmarks

Current multiples are \$49,353/bbl for Oil & \$2,917/Mcf for Gas — a 17:1 economic ratio



Notes:

Quarterly benchmarks derived from standard criteria from US M&A Database.

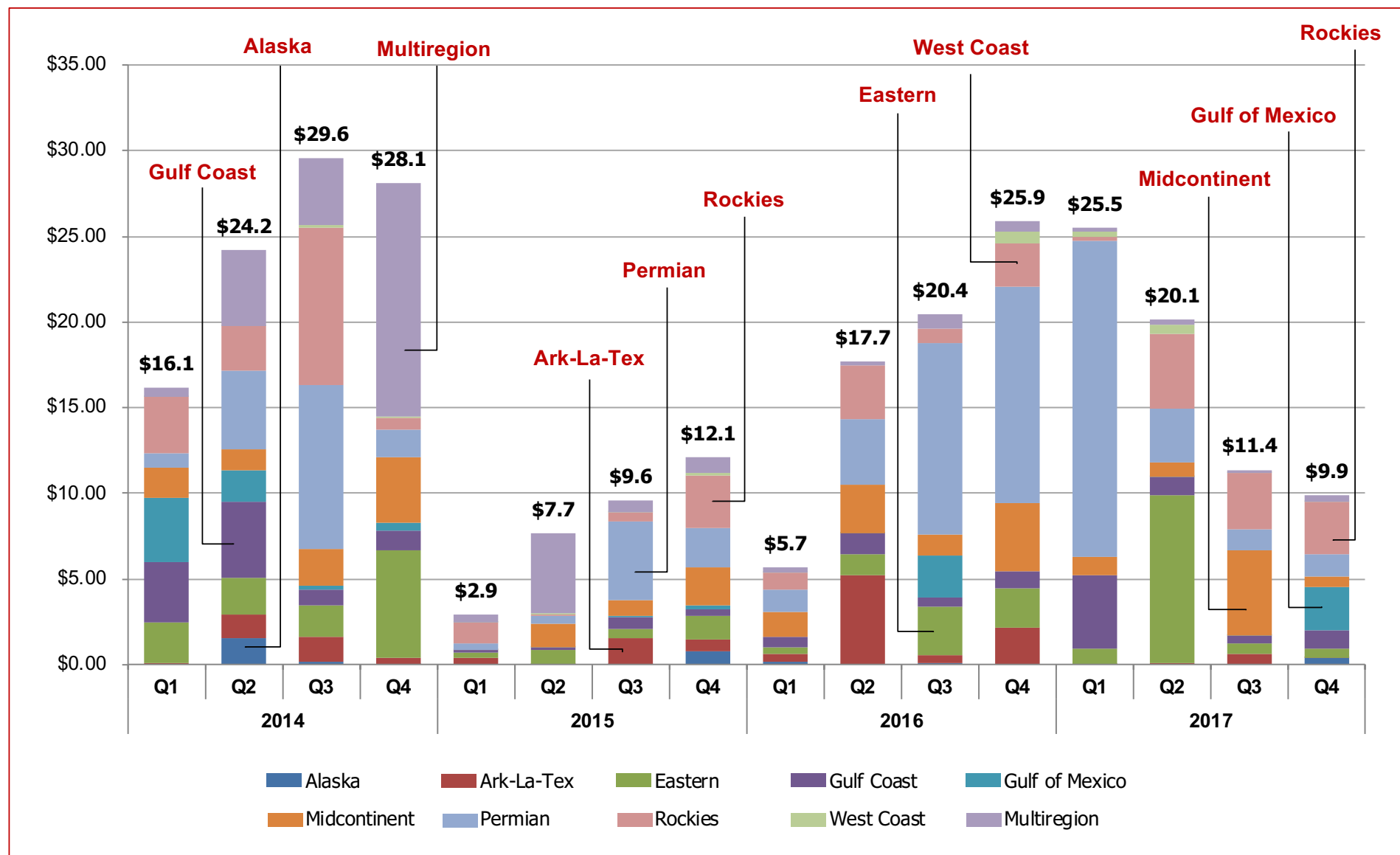
a. Conventional Deals >70% oil or > 70% gas.

b. Trailing 6 months

c. Deal Value > \$10 million

Deal Value by Region Since January 1, 2014 (Quarterly Analysis)

Rockies notch \$3.1 B in 4Q17 value, keeping momentum from last two quarters



U.S. Deal Value & Count by Region (Quarterly Analysis)




Deals counts show geographic diversity, but most big deals concentrated in a couple of plays

Deal Values (\$B) 2014							2015							2016								2017							
Region	Q1	Q2	Q3	Q4	YE Total	% of Total	Q1	Q2	Q3	Q4	YE Total	% of Total	Q1	Q2	Q3	Q4	YE Total	% of Total	Q1	Q2	Q3	Q4	YE Total	% of Total					
Alaska	\$0.0	\$1.5	\$0.1	\$0.0	\$1.6	2%	\$0.0	\$0.0	\$0.0	\$0.8	\$0.8	3%	\$0.2	\$0.0	\$0.1	\$0.0	\$0.2	0%	\$0.0	\$0.0	\$0.0	\$0.4	\$0.4	1%					
Ark-La-Tex	\$0.1	\$1.4	\$1.5	\$0.4	\$3.4	3%	\$0.4	\$0.0	\$1.5	\$0.6	\$2.5	8%	\$0.5	\$5.2	\$0.5	\$2.1	\$8.3	12%	\$0.0	\$0.1	\$0.6	\$0.0	\$0.7	1%					
Eastern	\$2.4	\$2.1	\$1.9	\$6.3	\$12.7	13%	\$0.3	\$0.9	\$0.6	\$1.4	\$3.1	10%	\$0.4	\$1.2	\$2.8	\$2.4	\$6.8	10%	\$0.9	\$9.8	\$0.7	\$0.5	\$11.9	18%					
Gulf Coast	\$3.5	\$4.5	\$0.9	\$1.1	\$10.0	10%	\$0.1	\$0.1	\$0.7	\$0.4	\$1.4	4%	\$0.6	\$1.2	\$0.5	\$1.0	\$3.3	5%	\$4.3	\$0.8	\$0.5	\$1.0	\$6.7	10%					
Gulf of Mexico	\$3.7	\$1.8	\$0.2	\$0.5	\$6.2	6%	\$0.0	\$0.0	\$0.0	\$0.2	\$0.3	1%	\$0.0	\$0.0	\$2.4	\$0.0	\$2.4	3%	\$0.0	\$0.0	\$0.0	\$2.5	\$2.6	4%					
Midcontinent	\$1.8	\$1.2	\$2.1	\$3.8	\$8.9	9%	\$0.0	\$1.3	\$0.9	\$2.2	\$4.5	14%	\$1.5	\$2.8	\$1.3	\$4.0	\$9.5	14%	\$1.0	\$0.9	\$4.9	\$0.6	\$7.5	11%					
Permian	\$0.9	\$4.6	\$9.6	\$1.6	\$16.6	17%	\$0.3	\$0.5	\$4.6	\$2.3	\$7.7	24%	\$1.3	\$3.8	\$11.2	\$12.6	\$29.0	42%	\$18.4	\$3.1	\$1.5	\$1.3	\$24.3	36%					
Rockies	\$3.3	\$2.6	\$9.2	\$0.7	\$15.8	16%	\$1.2	\$0.1	\$0.6	\$3.1	\$4.9	15%	\$1.0	\$3.1	\$0.8	\$2.5	\$7.4	11%	\$0.3	\$4.4	\$3.4	\$3.1	\$11.1	17%					
West Coast	\$0.0	\$0.0	\$0.2	\$0.0	\$0.2	0%	\$0.0	\$0.0	\$0.0	\$0.1	\$0.1	0%	\$0.0	\$0.0	\$0.0	\$0.7	\$0.7	1%	\$0.3	\$0.5	\$0.0	\$0.0	\$0.8	1%					
Multi Region	\$0.5	\$4.5	\$3.9	\$13.7	\$22.5	23%	\$0.5	\$4.7	\$0.7	\$0.9	\$6.8	21%	\$0.3	\$0.2	\$0.9	\$0.6	\$2.0	3%	\$0.2	\$0.2	\$0.3	\$0.4	\$1.1	2%					
Total	\$16.1	\$24.2	\$29.6	\$28.1	\$98.0	100%	\$2.9	\$7.7	\$9.6	\$12.1	\$32.3	100%	\$5.7	\$17.7	\$20.4	\$25.9	\$69.7	100%	\$25.5	\$19.8	\$11.9	\$9.9	\$67.1	100%					

Deal Count*	2014						2015						2016						2017					
Region	Q1	Q2	Q3	Q4	YE Total	% of Total	Q1	Q2	Q3	Q4	YE Total	% of Total	Q1	Q2	Q3	Q4	YE Total	% of Total	Q1	Q2	Q3	Q4	YE Total	% of Total
Alaska		2	3	1	6	1%			3	2	5	2%			1		1	0%				1	1	0%
Ark-La-Tex	4	7	4	10	25	6%	3	4	7	4	18	6%	4	6	4	10	24	6%	5	9	7	10	31	6%
Eastern	10	8	9	6	33	7%	3	6	2	4	15	5%	7	7	5	11	30	7%	12	15	10	9	46	10%
Gulf Coast	19	21	22	13	75	17%	12	14	12	11	49	17%	15	14	15	19	63	15%	19	11	24	18	72	15%
Gulf of Mexico	8	4	6	4	22	5%	1	1	3	3	8	3%	2	5	4	2	13	3%	1	1	8	1	11	2%
Midcontinent	26	20	18	19	83	18%	3	18	7	17	45	15%	15	24	12	22	73	18%	22	16	29	24	91	19%
Permian	15	18	21	19	73	16%	8	5	17	24	54	18%	10	29	32	32	103	25%	45	35	22	20	122	25%
Rockies	17	19	28	22	86	19%	19	11	16	24	70	24%	11	31	12	22	76	18%	11	19	19	24	73	15%
West Coast	2	2	4	1	9	2%	2	1	1	3	7	2%	4			2	6	1%	4	5	1	1	11	2%
Multi Region	11	10	7	10	38	8%	2	8	6	6	22	8%	5	11	4	5	25	6%	6	8	5	7	26	5%
Total	112	111	122	105	450	100%	53	68	74	98	293	100%	73	127	89	125	414	100%	125	119	125	115	484	100%

Permian and MidCon deal counts reflect plenty of wheeling and dealing.

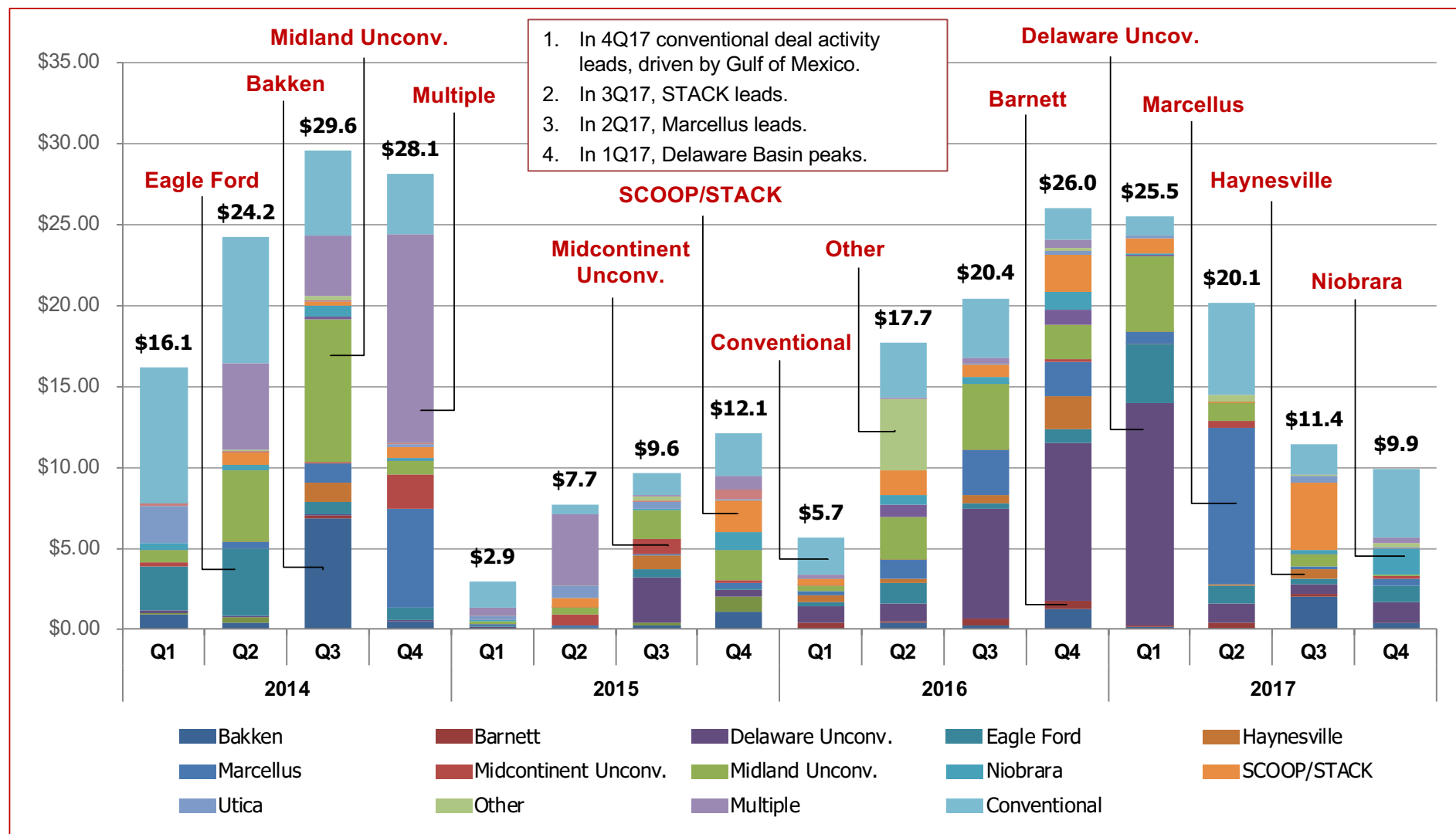
* Deal Count includes deals with undisclosed value.

 Highest result for the time period.

Total U.S. Deal Value by Play (Quarterly Analysis)



Marcellus, STACK & Conventional have all led quarterly deals since Permian cooled in Q1 2017



Over \$30 B sold in the Delaware Basin from 3Q16 to 1Q17 before a remarkable fall off.
 Conventional assets average \$3.5 B per quarter and total \$56 B over the last 4 years.


U.S. Deal Value By Play (Quarterly Analysis)

Top unconventional play has changed each quarter of 2017



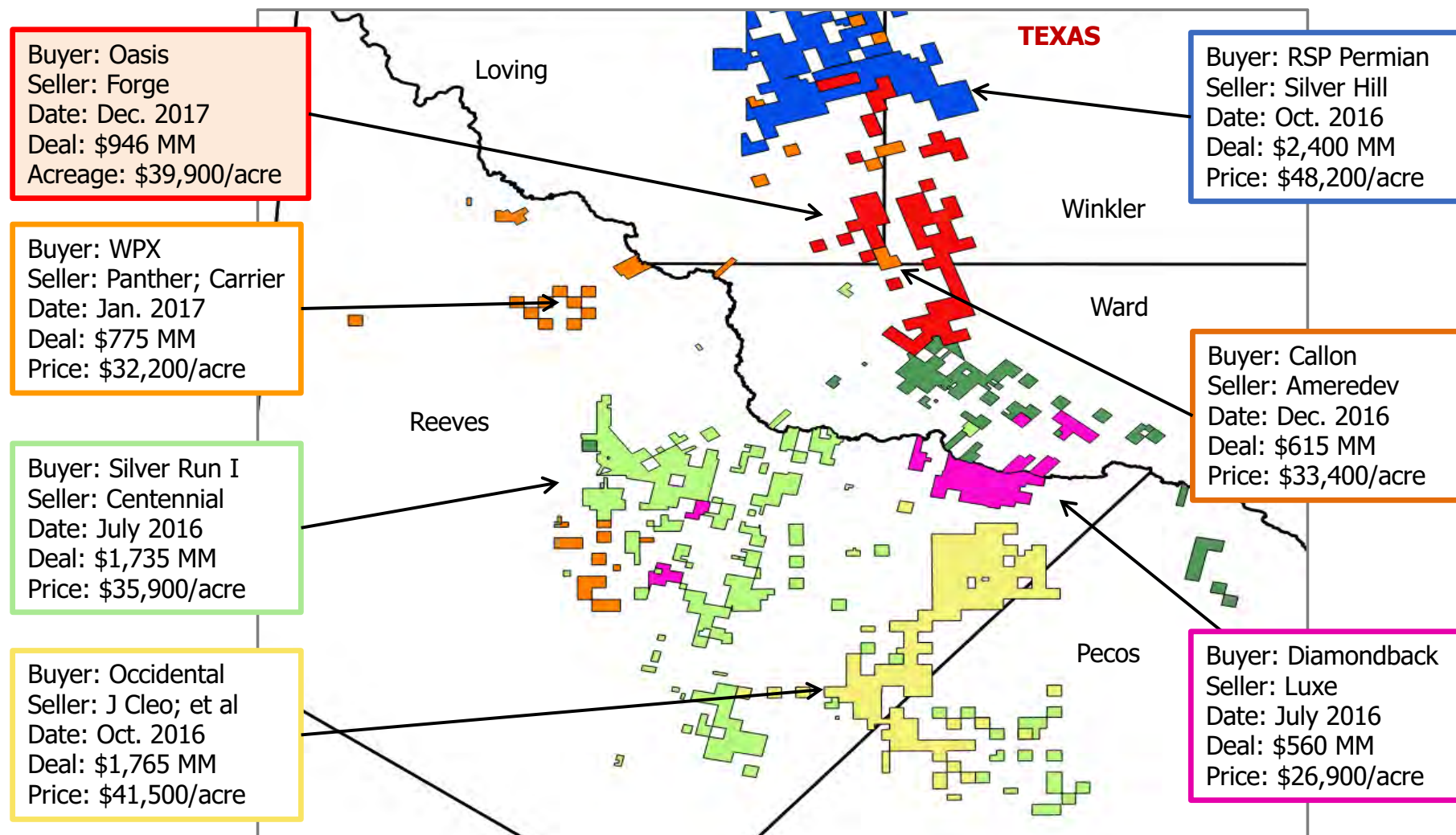
Play	2014						2015						2016						2017					
	Q1	Q2	Q3	Q4	YE Total	% of Total	Q1	Q2	Q3	Q4	YE Total	% of Total	Q1	Q2	Q3	Q4	YE Total	% of Total	Q1	Q2	Q3	Q4	YE Total	% of Total
Bakken	\$0.9	\$0.3	\$6.8	\$0.4	\$8.5	9%	\$0.0	\$0.0	\$0.2	\$1.1	\$1.3	4%	\$0.0	\$0.4	\$0.2	\$1.2	\$1.9	3%	\$0.2	\$0.0	\$2.0	\$0.4	\$2.6	4%
Barnett	\$0.0	\$0.0	\$0.2	\$0.0	\$0.2	0%	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0%	\$0.4	\$0.0	\$0.4	\$0.5	\$1.3	2%	\$0.1	\$0.3	\$0.2	\$0.0	\$0.5	1%
CBM	\$0.1	\$0.4	\$0.0	\$0.0	\$0.5	0%	\$0.0	\$0.0	\$0.2	\$1.0	\$1.2	4%	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0%	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0%
Delaware Unconv.	\$0.1	\$0.1	\$0.0	\$0.1	\$0.4	0%	\$0.1	\$0.0	\$2.8	\$0.4	\$3.3	10%	\$1.0	\$1.2	\$6.8	\$9.8	\$18.7	27%	\$13.7	\$1.2	\$0.6	\$1.2	\$16.8	25%
Eagle Ford	\$2.7	\$4.1	\$0.8	\$0.8	\$8.4	9%	\$0.1	\$0.0	\$0.5	\$0.1	\$0.6	2%	\$0.3	\$1.2	\$0.4	\$0.8	\$2.7	4%	\$3.7	\$0.8	\$0.4	\$1.0	\$5.9	9%
Haynesville	\$0.0	\$0.0	\$1.2	\$0.0	\$1.2	1%	\$0.0	\$0.0	\$0.9	\$0.0	\$0.9	3%	\$0.4	\$0.3	\$0.5	\$2.1	\$3.2	5%	\$0.0	\$0.1	\$0.6	\$0.0	\$0.7	1%
Marcellus	\$0.0	\$0.5	\$1.2	\$6.1	\$7.7	8%	\$0.1	\$0.1	\$0.1	\$0.4	\$0.7	2%	\$0.2	\$1.2	\$2.8	\$2.1	\$6.3	9%	\$0.8	\$9.6	\$0.3	\$0.4	\$11.1	17%
Midcontinent Unconv.	\$0.3	\$0.0	\$0.1	\$2.1	\$2.5	3%	\$0.0	\$0.7	\$0.9	\$0.1	\$1.7	5%	\$0.0	\$0.0	\$0.0	\$0.1	\$0.2	0%	\$0.0	\$0.4	\$0.0	\$0.2	\$0.6	1%
Midland Unconv.	\$0.7	\$4.4	\$8.9	\$0.9	\$14.8	15%	\$0.2	\$0.4	\$1.8	\$1.8	\$4.2	13%	\$0.4	\$2.6	\$4.0	\$2.2	\$9.2	13%	\$4.7	\$1.1	\$0.9	\$0.1	\$6.8	10%
Mississippian Lime	\$0.0	\$0.0	\$0.2	\$0.0	\$0.2	0%	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0%	\$0.0	\$0.8	\$0.0	\$0.9	\$1.7	2%	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0%
Niobrara	\$0.4	\$0.3	\$0.6	\$0.2	\$1.6	2%	\$0.0	\$0.0	\$0.1	\$1.1	\$1.3	4%	\$0.0	\$0.6	\$0.4	\$1.1	\$2.1	3%	\$0.1	\$0.0	\$0.3	\$1.6	\$2.0	3%
SCOOP/STACK	\$0.0	\$0.8	\$0.3	\$0.7	\$1.7	2%	\$0.0	\$0.6	\$0.0	\$1.9	\$2.6	8%	\$0.4	\$1.6	\$0.8	\$2.3	\$5.1	7%	\$0.9	\$0.0	\$4.1	\$0.1	\$5.1	8%
Utica	\$2.3	\$0.0	\$0.0	\$0.2	\$2.6	3%	\$0.2	\$0.7	\$0.4	\$0.1	\$1.5	5%	\$0.0	\$0.0	\$0.0	\$0.2	\$0.3	0%	\$0.1	\$0.0	\$0.4	\$0.1	\$0.6	1%
Powder River Unconv.	\$0.2	\$0.1	\$0.1	\$0.0	\$0.4	0%	\$0.0	\$0.0	\$0.1	\$0.6	\$0.7	2%	\$0.0	\$0.0	\$0.0	\$0.0	\$0.1	0%	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	0%
Other	\$0.0	\$0.0	\$0.2	\$0.0	\$0.2	0%	\$0.0	\$0.0	\$0.3	\$0.0	\$0.4	1%	\$0.0	\$4.4	\$0.0	\$0.2	\$4.6	7%	\$0.1	\$0.5	\$0.1	\$0.2	\$1.0	1%
Multiple	\$0.0	\$5.4	\$3.7	\$12.9	\$22.0	22%	\$0.5	\$4.4	\$0.1	\$0.8	\$5.8	18%	\$0.2	\$0.0	\$0.3	\$0.5	\$1.1	2%	\$0.0	\$0.0	\$0.0	\$0.4	\$0.4	1%
Conventional	\$8.3	\$7.8	\$5.3	\$3.8	\$25.1	26%	\$1.6	\$0.6	\$1.3	\$2.7	\$6.2	19%	\$2.4	\$3.4	\$3.7	\$1.9	\$11.3	16%	\$1.1	\$5.7	\$1.9	\$4.2	\$13.0	19%
Total	\$16.1	\$24.2	\$29.6	\$28.1	\$98.0	100%	\$2.9	\$7.7	\$9.6	\$12.1	\$32.3	100%	\$5.7	\$17.7	\$20.4	\$26.0	\$69.7	100%	\$25.5	\$19.8	\$11.9	\$9.9	\$67.1	100%

Play	2014						2015						2016						2017					
	Q1	Q2	Q3	Q4	YE Total	% of Total	Q1	Q2	Q3	Q4	YE Total	% of Total	Q1	Q2	Q3	Q4	YE Total	% of Total	Q1	Q2	Q3	Q4	YE Total	% of Total
Unconventional Total	\$7.8	\$16.5	\$24.3	\$24.4	\$72.9	74%	\$1.3	\$7.1	\$8.3	\$9.4	\$26.1	81%	\$3.3	\$14.3	\$16.7	\$24.1	\$58.4	84%	\$24.4	\$14.2	\$9.9	\$5.7	\$54.1	81%
Conventional Total	\$8.3	\$7.8	\$5.3	\$3.8	\$25.1	26%	\$1.6	\$0.6	\$1.3	\$2.7	\$6.2	19%	\$2.4	\$3.4	\$3.7	\$1.9	\$11.3	16%	\$1.1	\$5.7	\$1.9	\$4.2	\$13.0	19%
Total	\$16.1	\$24.2	\$29.6	\$28.1	\$98.0	100%	\$2.9	\$7.7	\$9.6	\$12.1	\$32.3	100%	\$5.7	\$17.7	\$20.4	\$26.0	\$69.7	100%	\$25.5	\$19.8	\$11.9	\$9.9	\$67.1	100%

 Highest result for the time period.

Delaware Basin: Oasis, Latest Company to Commit to Delaware Basin

Buyers paid aggressively for Tier 1 acreage at \$32,200-\$48,200 per acre

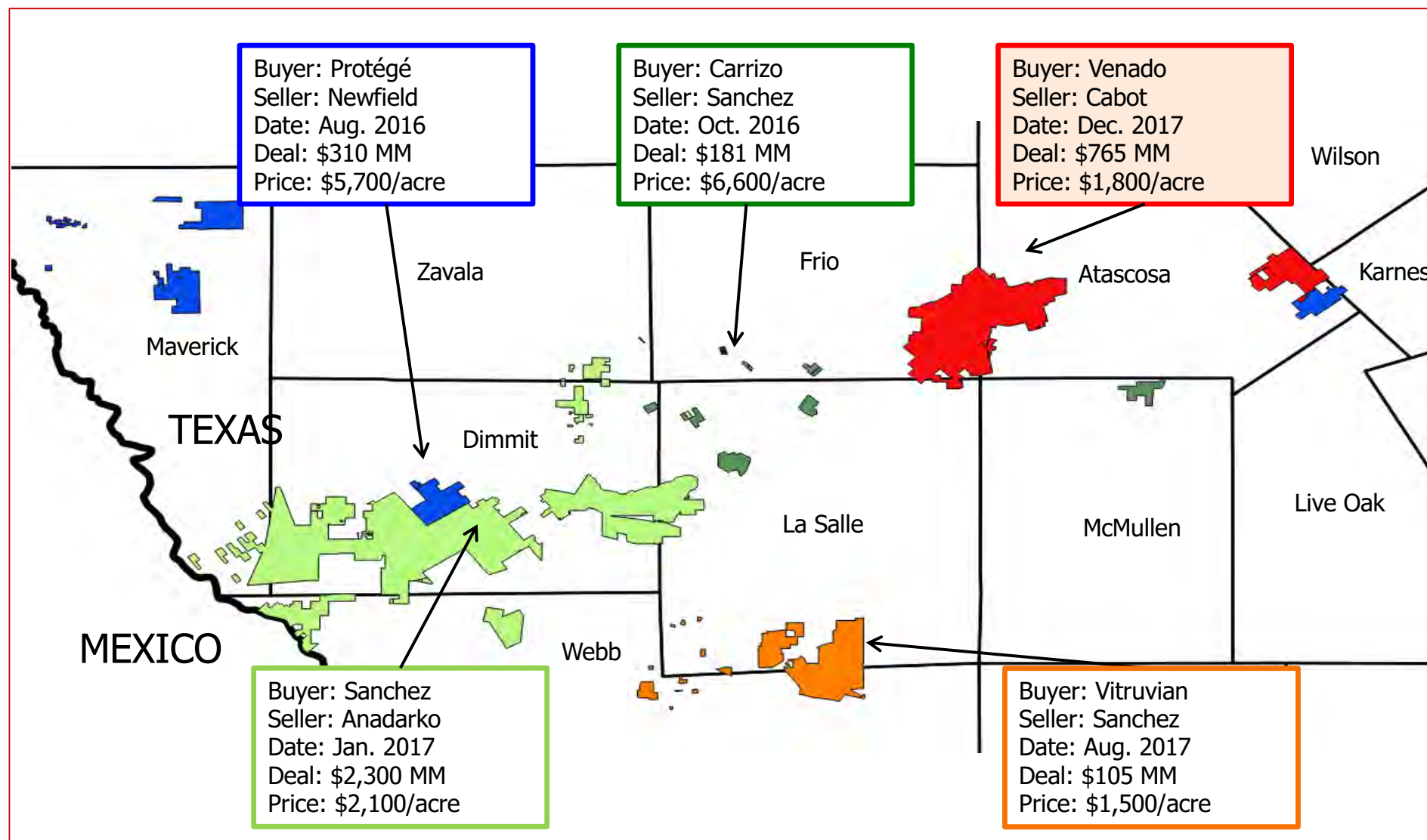


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Eagle Ford: Venado Makes the Last Big Deal of 2017, buys Cabot \$765 MM



In typical PE money move, KKR-backed Venado buys tier 2 acreage to test play extent with modern tech



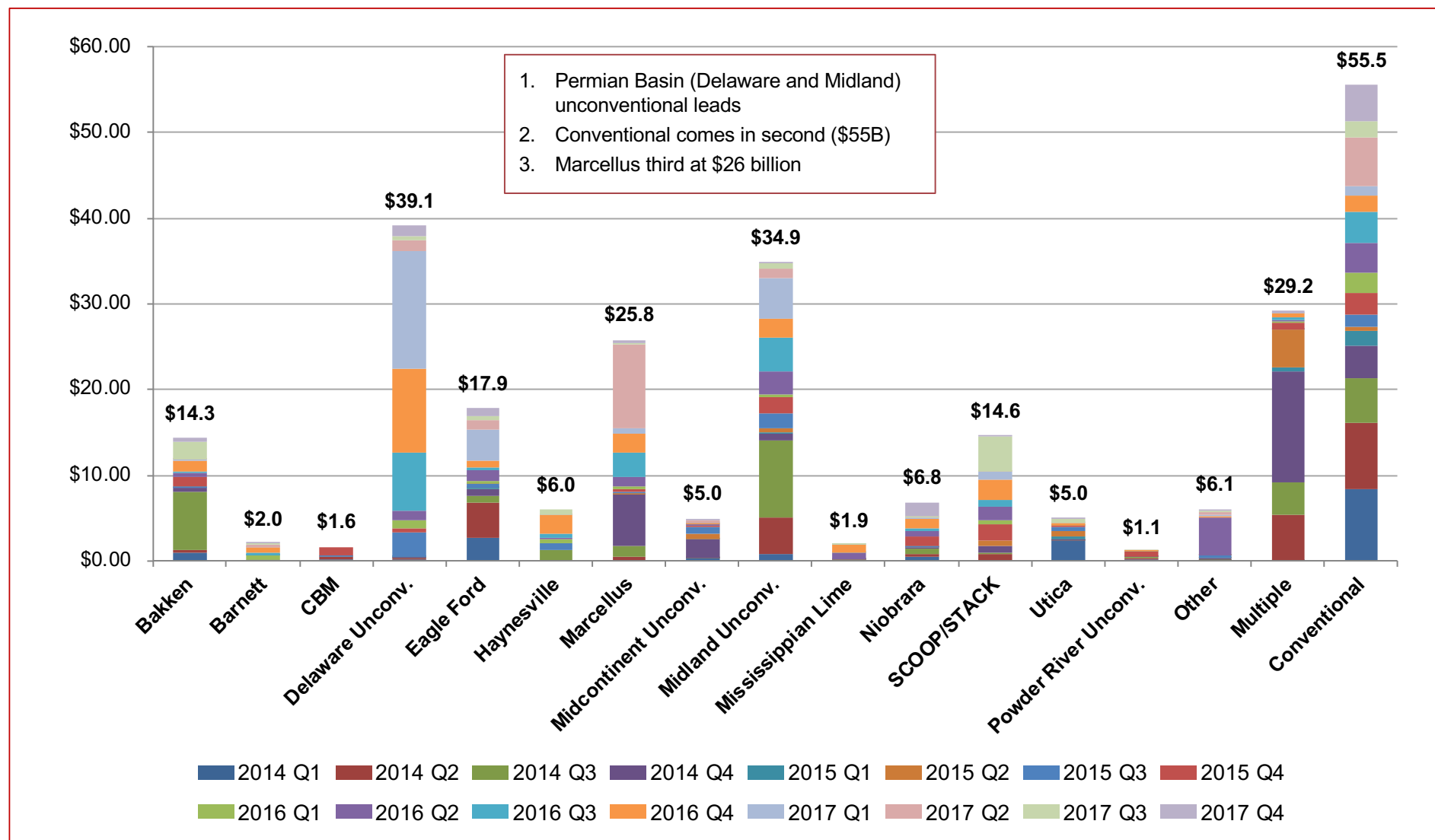
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Total Value by Play Last 4 Years

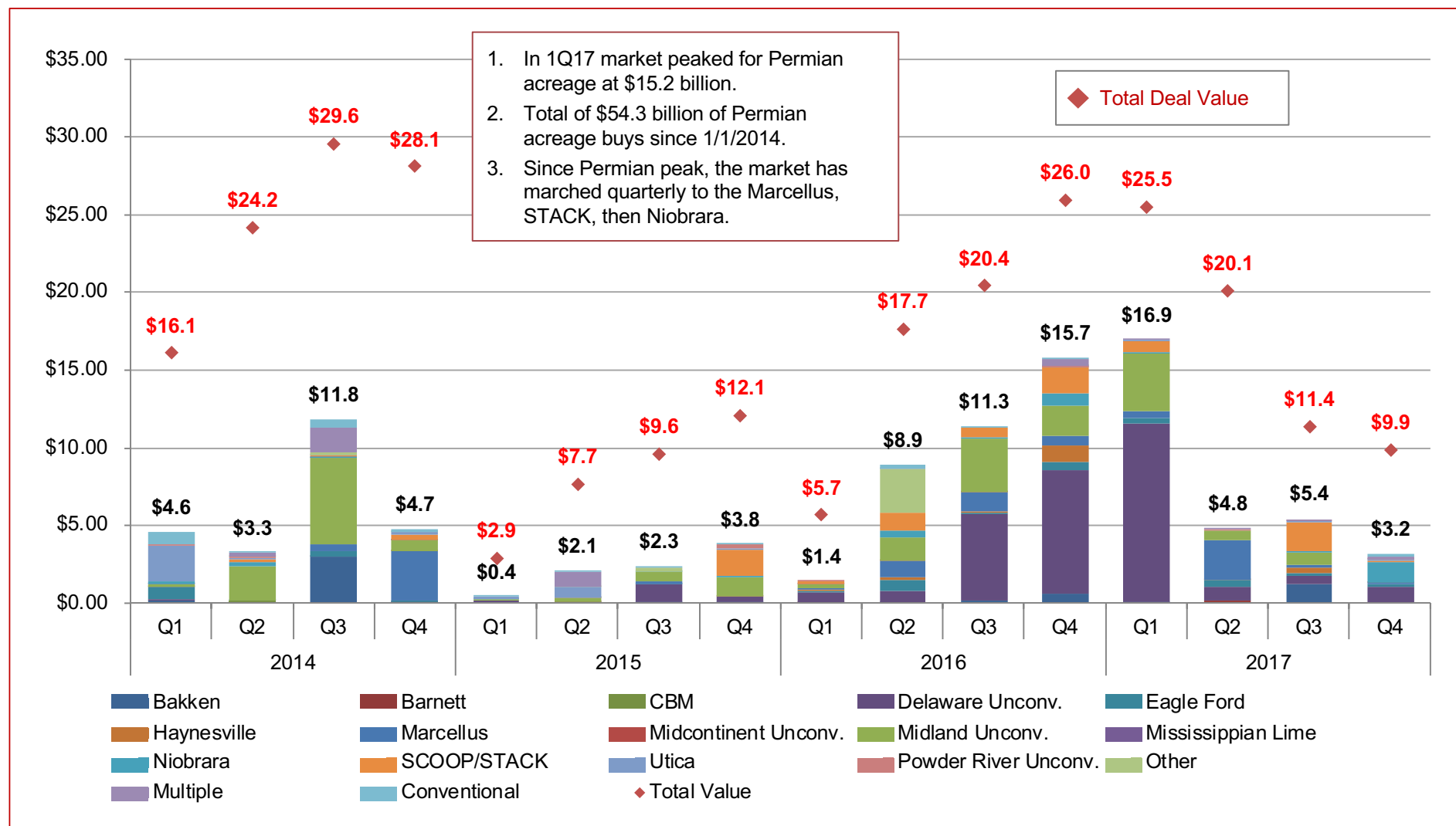
Delaware and Midland unsurprising 1 and 2 in unconventional value



U.S. Acreage Value by Play vs. Deal Value (Quarterly Analysis)



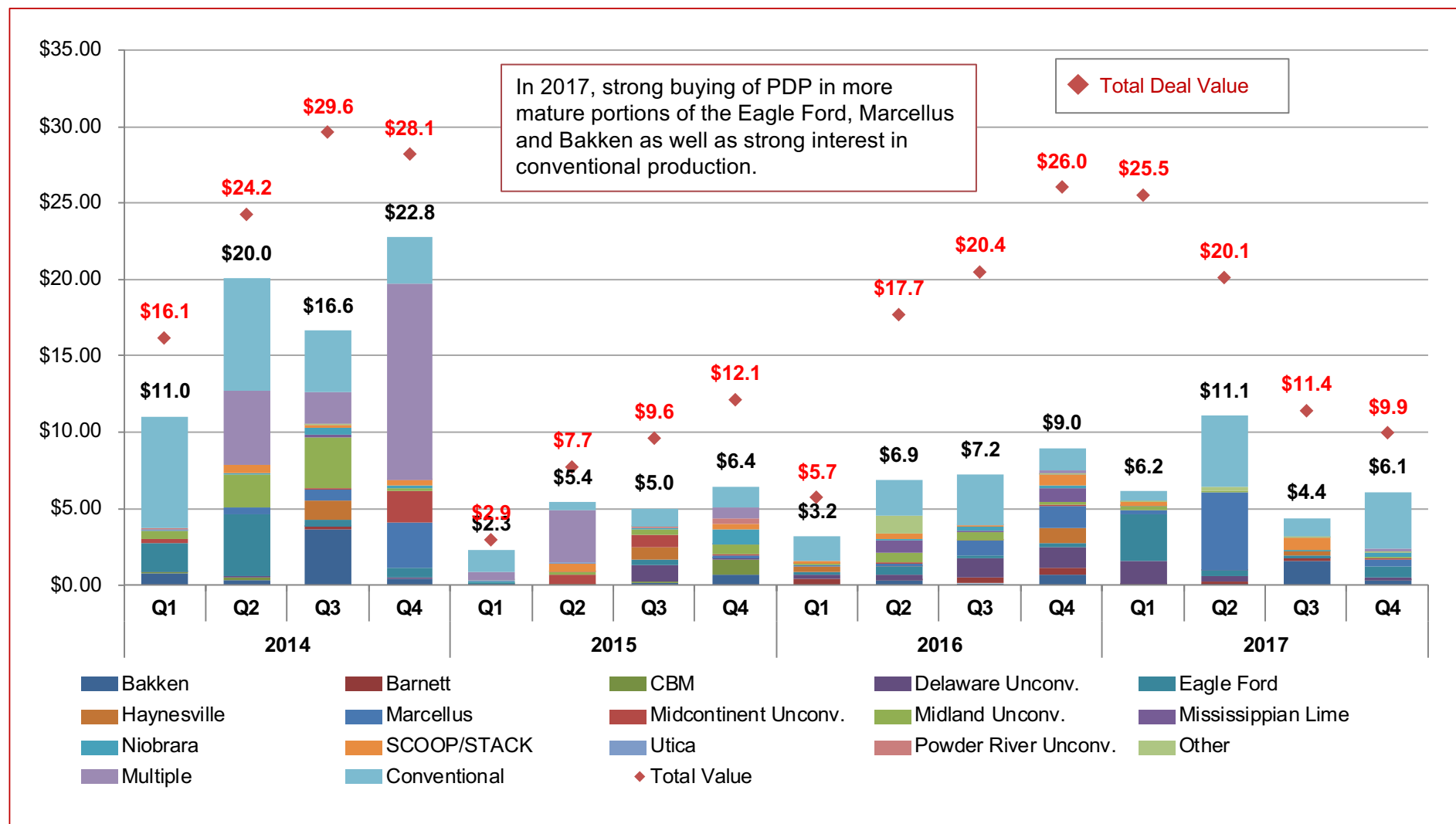
Retreat of Permian deals reflected in dramatic drop of money paid for acreage



Value allocated to land generally averaged 15-30% prior to Permian boom
 Acreage value hit high of over 60% total deal value during peak of Permian land rush.

U.S. PDP Value by Play vs. Total Deal Value (Quarterly Analysis)

Rising crude prices boosts interest in PDP/cash flowing assets

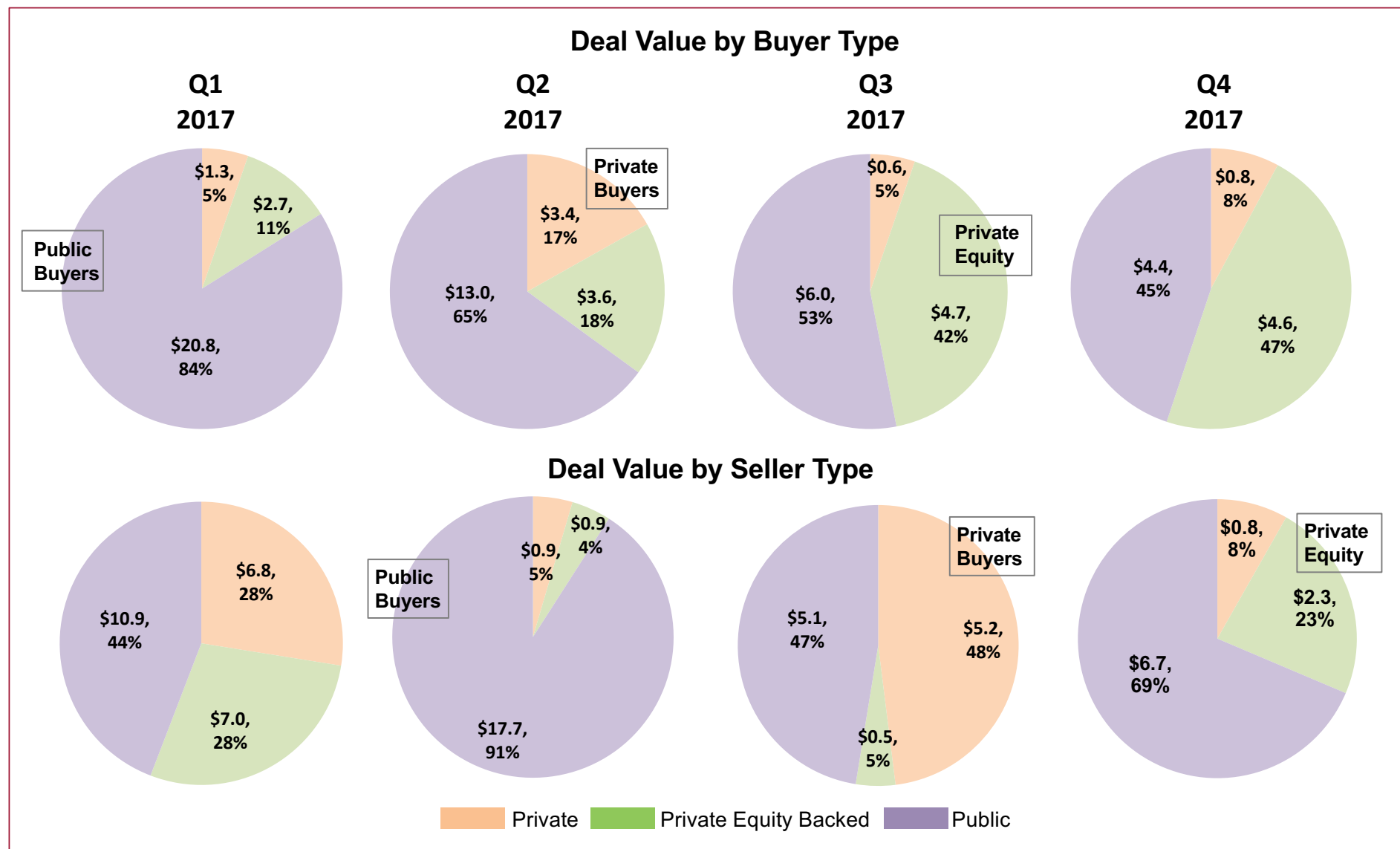


PDP value increased as more and higher value reserves change hands.
Rising price environment encourages buyers to snap up PDP.

2017 U.S. Deal Values By Buyer/Seller Peer Groups



After steadily increasing share of buying, PE buyers pass public companies in acquisition value



\$ In Billions



2017 Y/E Global M&A Review & Outlook

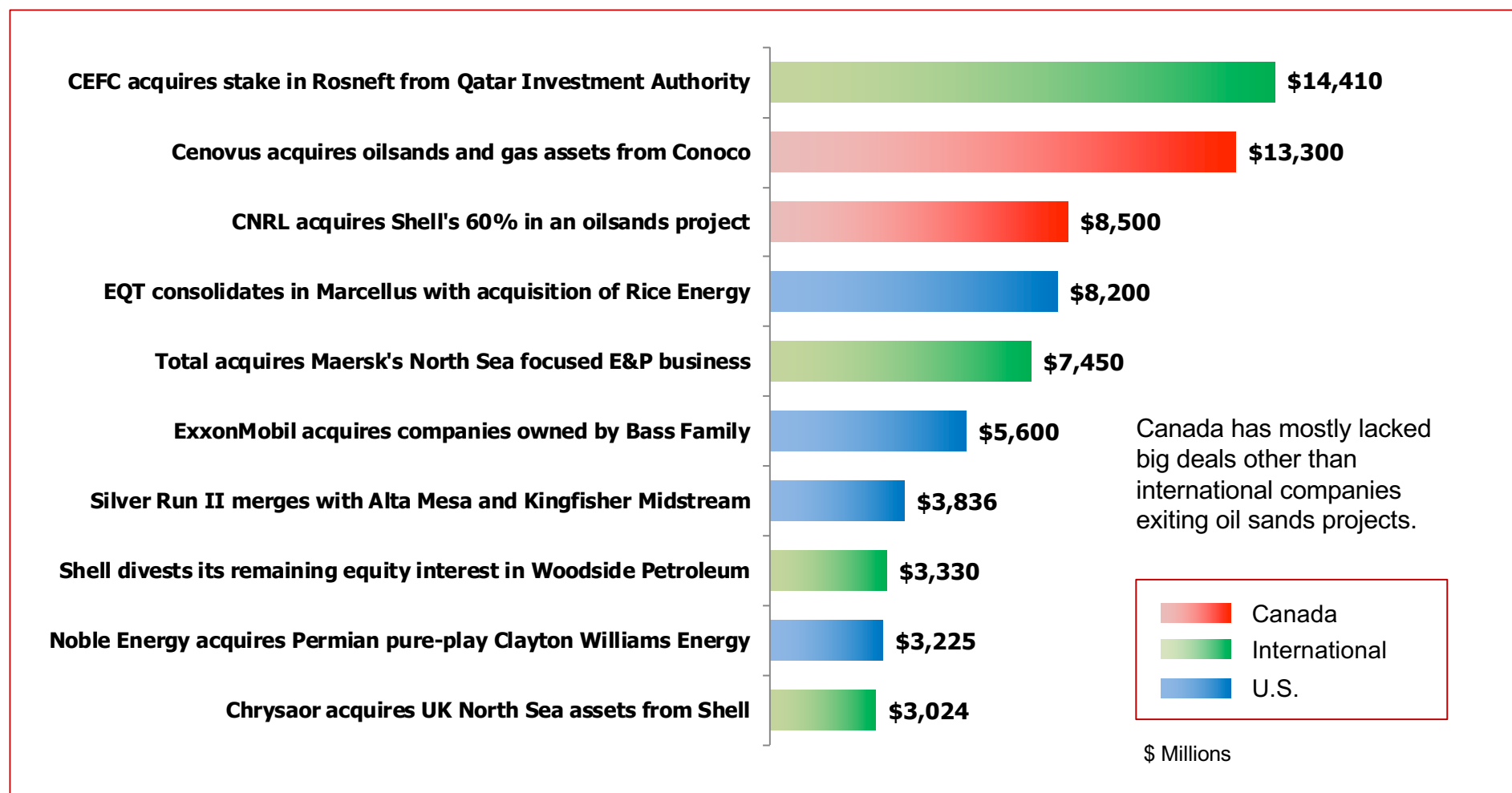
- **\$161 B** in 2017 global upstream deal value up from \$142 B in 2016
- **U.S. leads all regions at \$67 B**, but international closed the gap with \$61 B
- **Canada reported \$32 B**
- **Largest deals come from U.S corporate consolidation**, Canadian oilsands and international spin-outs
- **Buyers show strong preference for home region** to reduce geopolitical risk
- **\$413 B in global deals** across all energy sectors incl upstream, oilfield services, midstream, downstream & power/utilities

1. **More dependence on commodity traders** for financing global oil production by cash-strapped countries as banks, traditionally the lenders, have become less willing to extend conventional credit.
2. **Private equity stepping in overseas** especially in North Sea as reflected by CVC Capital & Neptune Point, EIG & Chrysaor, HitecVision & Point Resources.
3. **Exploration lives on.** Exxon Mobil strikes gold in Guyana
4. **The majors are taking Senegal-Mauritania**, offshore NW Africa seriously with BP, Exxon & Total all taking positions in the region.
5. **Mexico's liberalization pays off w\ major finds** for Talos, ENI and BP/Bridas JV.
6. **Petrobras continues to recover from fallout** over the Car Wash scandal and price collapse. Could emerge as a leaner, better run company.
7. **Barents Sea exploration really disappointed in 2017**, with a big campaign by Statoil falling flat.
8. **Global discoveries at their lowest level since 1940s**, but North American shale continues to shine with frackers getting more sophisticated in their completion techniques -- you see this especially in renewed interest in the Haynesville, DJ Basin, Eagle Ford.
9. **Huge amounts of LNG coming on stream** from projects in Australia, Yamal-Nenets and the US, which is putting pressure on traditional big producer Qatar. This market is also switching from one in which buyers of LNG have much more power, making the spot market more important.
10. **Environmental creep.** Some banks and sovereign funds starting to vilify fossil fuels;
11. **Oil-driven Norwegian wealth fund dropping all oil and gas stocks**, World Bank stopping upstream funding, no more shale or oil sands financing from BNP Paribas.
12. **Operationally technology evolves and expands.** Comfort with digital technology in the field leading to investments and experiments with blockchain technology across companies' operations.

Top 10 Global Upstream Deals

2017

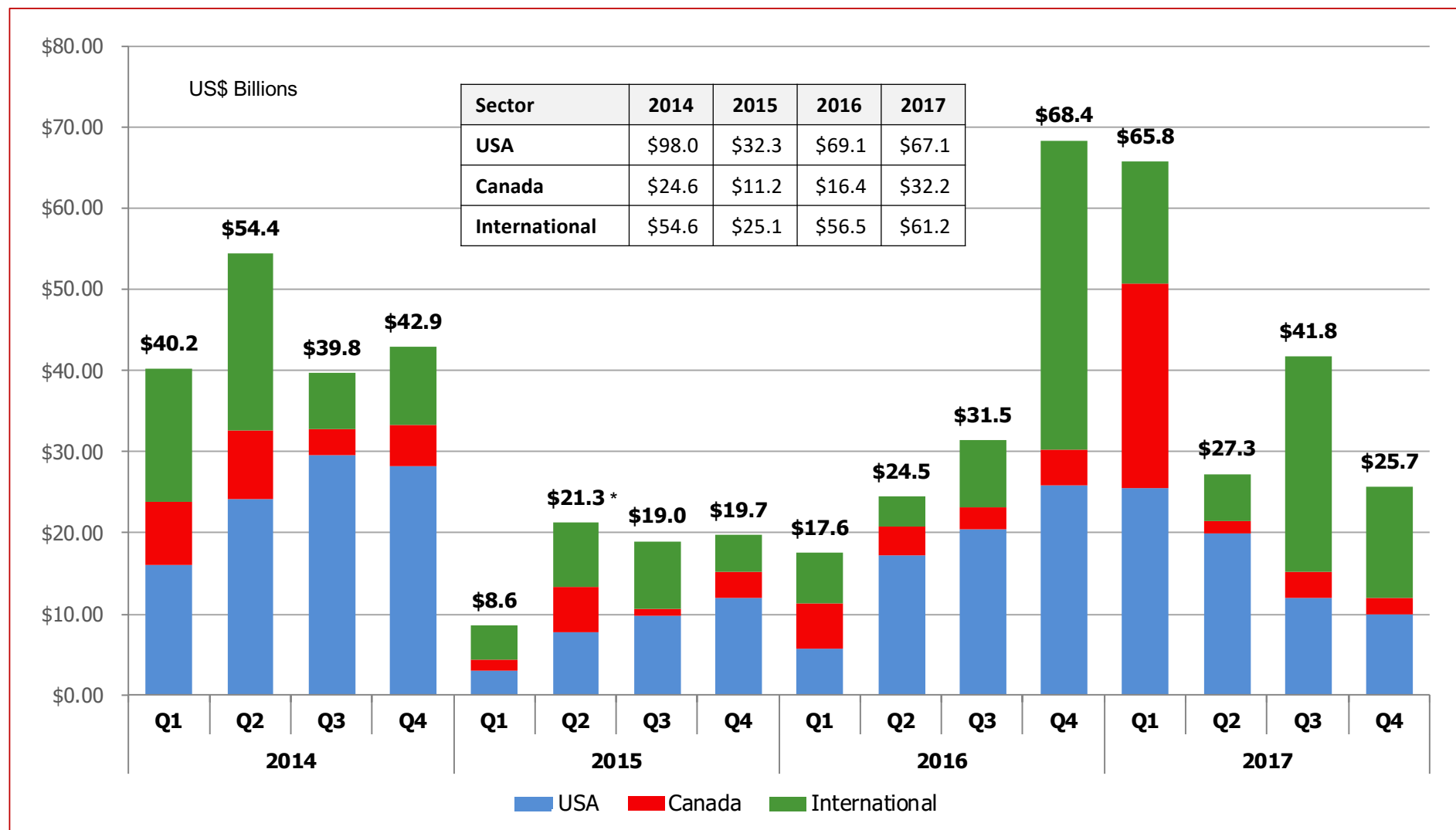
Top international deals driven by corporate sales and North Sea acquisitions



Top 10 global deals total \$71 billion or 44% of the total market

Global Upstream Deal Value (Quarterly Analysis)

Peaked at \$67.1 B in 1Q17 with strong showing across U.S., Canada & International

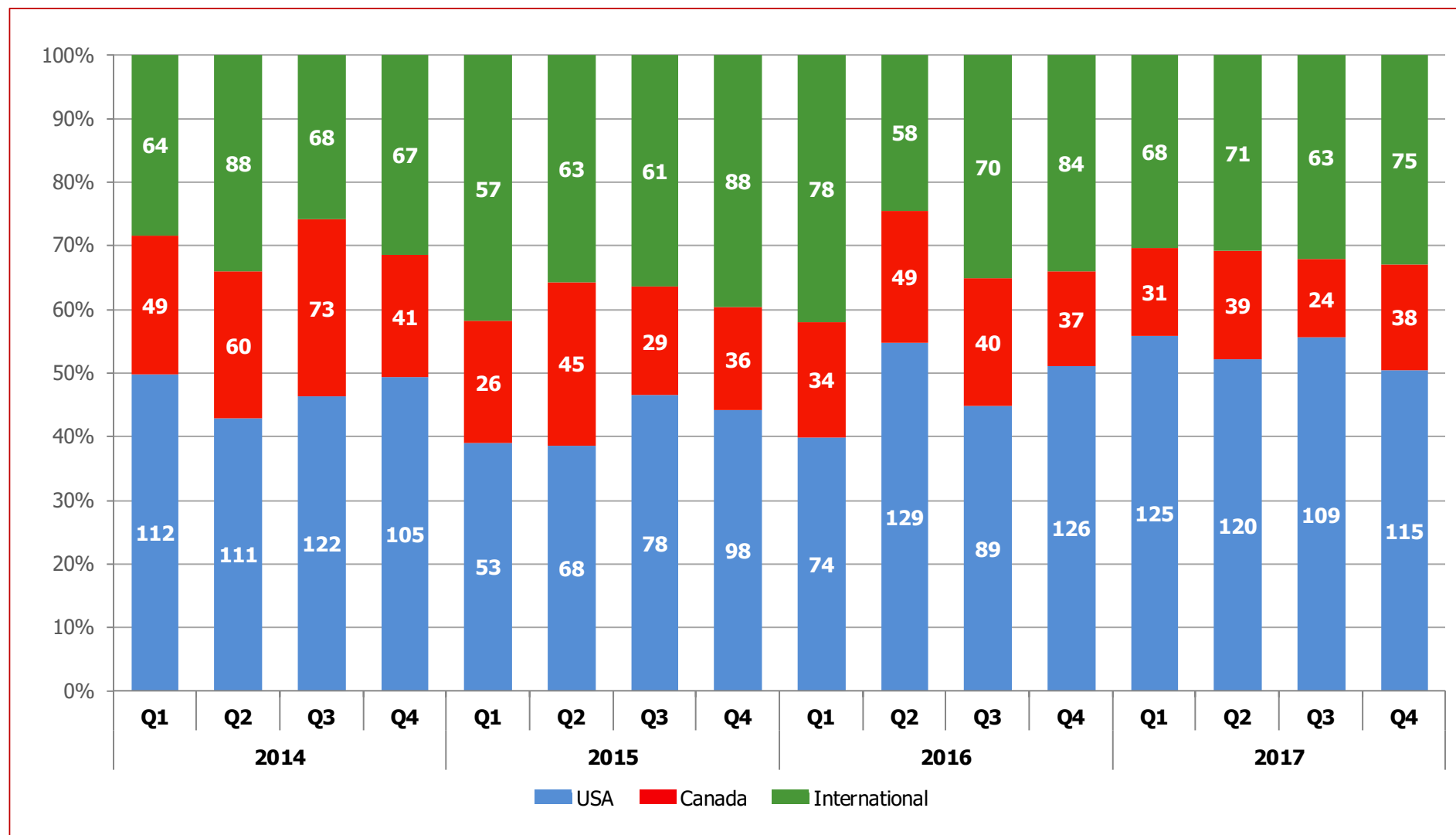


*Excludes \$82 B Shell/BG merger in 2Q 2015

Global Upstream Deal Counts (Quarterly Analysis)



International deal count actually slightly increases, even as value falls 40% vs. 3Q17



Deal Value & Deal Counts Across Energy Sectors (Quarterly Analysis)

\$412 Billion transacted in 2017 across Global Upstream, Midstream, Downstream, OFS & Power/Utilities



Deal Values (\$B) 2014							2015							2016							2017						
Sector	Q1	Q2	Q3	Q4	YE Total	% of Total	Q1	Q2	Q3	Q4	YE Total	% of Total	Q1	Q2	Q3	Q4	YE Total	% of Total	Q1	Q2	Q3	Q4	YE Total	% of Total			
Upstream USA	\$16.1	\$24.2	\$29.6	\$28.1	\$98.0	24%	\$2.9	\$7.7	\$9.8	\$12.0	\$32.3	8%	\$5.7	\$17.7	\$20.4	\$25.9	\$69.7	14%	\$25.5	\$19.8	\$11.9	\$9.9	\$67.1	16%			
Upstream Canada	\$7.8	\$8.4	\$3.3	\$5.1	\$24.6	6%	\$1.4	\$5.7	\$0.9	\$3.2	\$11.2	3%	\$5.6	\$3.7	\$2.7	\$4.4	\$16.4	3%	\$25.3	\$1.6	\$3.3	\$2.0	\$32.2	8%			
Upstream Intl.	\$16.3	\$21.8	\$6.9	\$9.6	\$54.6	13%	\$4.3	\$90.7	\$8.3	\$4.5	\$107.8	28%	\$6.3	\$3.7	\$8.4	\$33.1	\$51.5	11%	\$15.5	\$5.8	\$26.7	\$13.7	\$61.6	15%			
Midstream	\$7.4	\$12.2	\$83.7	\$26.9	\$130.3	32%	\$59.1	\$34.1	\$28.6	\$15.8	\$137.7	35%	\$17.7	\$4.4	\$62.6	\$61.2	\$145.8	30%	\$26.5	\$18.1	\$7.9	\$7.0	\$59.5	14%			
Downstream	\$5.1	\$12.0	\$26.9	\$7.5	\$51.5	13%	\$8.1	\$7.3	\$8.7	\$7.3	\$31.4	8%	\$5.1	\$3.6	\$7.8	\$26.1	\$42.6	9%	\$7.6	\$11.7	\$3.0	\$16.7	\$39.1	9%			
OFS	\$8.5	\$10.2	\$11.3	\$3.2	\$33.2	8%	\$3.3	\$5.2	\$18.7	\$3.2	\$30.4	8%	\$17.0	\$8.3	\$5.1	\$37.3	\$67.6	14%	\$9.1	\$7.8	\$10.9	\$10.6	\$38.3	9%			
Power & Utilities	\$0.3	\$10.7	\$0.1	\$5.4	\$16.5	4%	\$0.0	\$0.6	\$25.4	\$11.9	\$37.9	10%	\$29.6	\$23.4	\$27.9	\$11.4	\$92.3	19%	\$14.4	\$6.4	\$52.6	\$41.2	\$114.6	28%			
Total	\$61.4	\$99.5	\$161.8	\$85.9	\$408.7	100%	\$79.2	\$151.2	\$100.4	\$58.0	\$388.8	100%	\$86.9	\$64.8	\$134.8	\$199.3	\$485.8	100%	\$123.8	\$71.3	\$116.2	\$101.1	\$412.4	100%			

Deal Count* 2014							2015							2016							2017						
Sector	Q1	Q2	Q3	Q4	YE Total	% of Total	Q1	Q2	Q3	Q4	YE Total	% of Total	Q1	Q2	Q3	Q4	YE Total	% of Total	Q1	Q2	Q3	Q4	YE Total	% of Total			
Upstream USA	110	111	122	105	448	30%	53	68	79	97	297	25%	73	129	90	125	417	25%	125	119	125	115	484	25%			
Upstream Canada	49	60	73	41	223	15%	26	45	29	36	136	12%	34	49	40	37	160	10%	31	39	39	39	148	8%			
Upstream Intl.	64	88	68	67	287	19%	57	62	62	88	269	23%	78	58	70	84	290	17%	69	68	70	76	283	15%			
Midstream	27	16	23	25	91	6%	24	24	23	24	95	8%	19	14	29	26	88	5%	20	34	24	29	107	6%			
Downstream	17	25	39	34	115	8%	34	42	36	41	153	13%	50	45	23	43	161	10%	37	46	47	64	194	10%			
OFS	71	74	79	82	306	21%	50	40	47	45	182	16%	52	57	49	64	222	13%	80	76	71	81	308	16%			
Power & Utilities	4	4	3	6	17	1%	2	6	8	26	42	4%	85	70	76	102	333	20%	89	101	94	94	378	20%			
Total	342	378	407	360	1,487	100%	246	287	284	357	1,174	100%	391	422	377	481	1,671	100%	451	483	470	498	1,902	100%			

* Deal Count includes deals with undisclosed value.

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