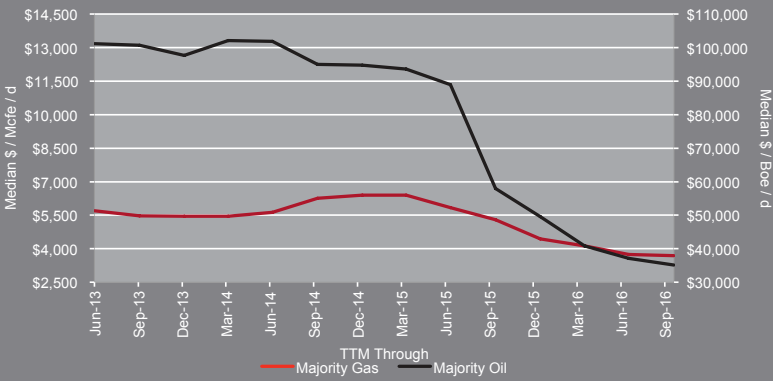
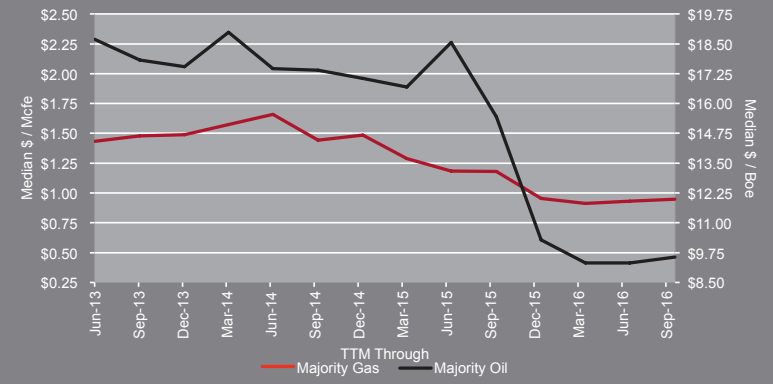
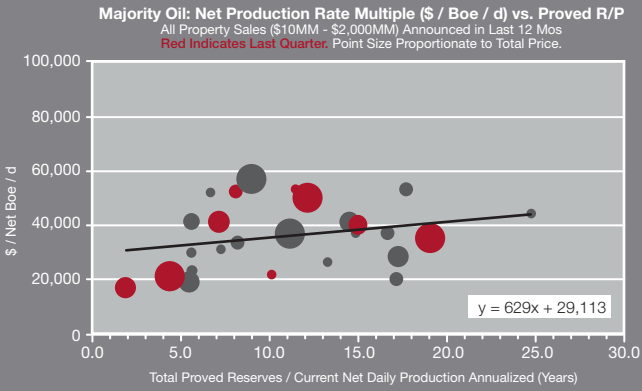
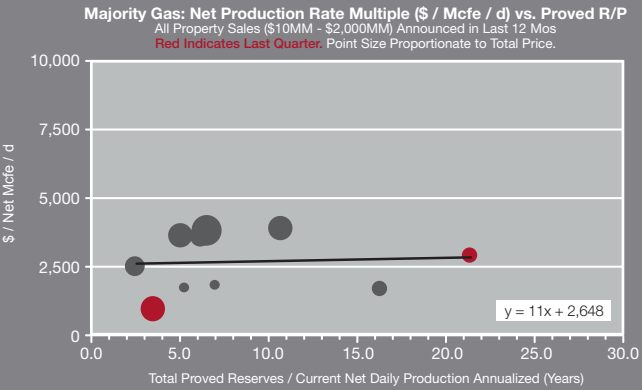


U.S. Upstream **M&A Activity Report**
Third Quarter 2016



Proved R/P as Estimate of Asset Sale Price

Why does one property sell for \$40,000 per net Boe / d and another for \$140,000 per net Boe / d? Using statistical analysis, E-Spectrum Advisors has identified a positive correlation between Proved R/P and dollar paid per daily unit of net production.

R is defined as Total Net Proved Reserves. **P** is defined as Current Net Daily Production Annualized. As indicated in the data table, most reserve information is taken from buyers' press releases.

For example, using the oil chart and formula above, one can see that a majority-oil transaction with an R/P of 15 years could sell on **average** for \$38,548 per net Boe / d.



E-Spectrum Advisors provides advisory services to upstream companies in the oil and gas industry. With a team of specialized advisors and engineers, we know every situation is unique, especially during challenging times, which is why we provide creative solutions that are best for you and your business and can help in every aspect of the transaction process.

- Raising capital
- Acquisitions (buyside advisory)
- Restructuring consultation
- Asset divestiture
- Financial advisory
- Evaluation services and fairness opinions

To learn more about E-Spectrum Advisors, visit www.energyspectrumadvisors.com or contact:

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MAJORITY GAS ALL U.S. FROM \$10 MILLION TO \$2 BILLION

Announced	Date	Buyer	Seller	Total Price* (\$MM)	Reserve Price (\$MM)	Proved Reserves (Bcfe)	Value* (\$ / Mcfe)	Production (Mmcf/ d)	Net (\$ / Mcfe / d)	Value* (\$ / Mcfe / d)	Region	Proved R/P		Oil **	Gas **
												% Gas			
	9/9/16	Total	Chesapeake	420	420	486	0.86	390.0		1,077	Barnett	96%	3.4	48.44	3.04
	8/2/16	Jones Energy	EOG	27	27	NA	NA	5.1		5,314	MC (SCOOP/STACK)	62%	NA	42.81	3.06
	8/2/16	Undisclosed Buyer¹	Continental Resources Inc	281	16	NA	NA	3.3		4,697	MC (SCOOP/STACK)	68%	NA	42.81	3.06
	7/14/16	International Western Petroleum Corp	Undisclosed Seller	10	10	NA	NA	5.3		1,964	GC Onshore	95%	NA	48.68	3.04
	7/1/16	CPP WI Holding Co LLC	HRG Group Inc	145	145	387	0.37	48.6		2,984	Multiple	85%	21.8	50.72	3.14
	6/20/16	Undisclosed	Memorial Production Partners LP	19	19	26	0.75	10.0		1,910	RM (WY & CO)	76%	7.0	50.03	2.93
	6/6/16	Tecolote Energy LLC	Devon Energy Corp.	525	525	522	1.01	132.0		3,977	ETX (Haynesville)	70%	10.8	51.30	2.84
	6/6/16	Sheridan Production Partners	Devon Energy Corp.	310	310	186	1.67	84.0		3,690	MC (Anadarko)	>50%	6.1	51.30	2.84
	5/3/16	Undisclosed	Synergy Resources Corp.	27	6	NA	NA	1.2		4,841	RM (Niobrara)	64%	NA	45.82	2.66
	5/2/16	EQT Corporation	Statoil	407	187	NA	NA	50.0		3,751	APP (Marcellus)	100%	NA	46.68	2.64
	4/28/16	Triumph Energy Partners LLC¹	Range Resources Corp.	75	21	NA	NA	5.0		4,229	MC (SCOOP/STACK)	83%	NA	48.06	2.68
	4/20/16	White Star Petroleum LLC	Devon Energy Corp.	200	200	66	3.03	76.8		2,604	MC	70%	2.4	45.77	2.57
	4/20/16	GR Woodford Properties LLC	PetroQuest Energy	18	18	19	0.95	10.0		1,800	MC (Woodford)	>50%	5.2	45.77	2.57
	3/18/16	Covey Park Energy LLC	EP Energy LLC	420	420	205	2.05	113.0		3,717	ETX (Haynesville)	100%	5.0	43.08	2.38
	2/22/16	Tug Hill Inc	Gastar Exploration Inc	80	80	89	0.90	NA		NA	APP (Marcellus)	100%	NA	37.35	2.16
	2/15/16	Undisclosed	Range Resources Corp	112	112	NA	NA	22.0		5,090	APP (Marcellus)	100%	NA	36.52	2.31
	2/8/16	Terra Energy Partners LLC	WPX Energy Inc	910	820	NA	NA	500.0		1,640	RM (Niobrara)	100%	NA	36.46	2.44
	12/31/15	Undisclosed	ConocoPhillips	770	770	471	1.63	198.0		3,889	Multiple	86%	6.5	41.24	2.53
	12/30/15	Lilis Energy Inc	Brushy Resources Inc	16	16	NA	NA	2.8		5,804	PER	53%	NA	40.46	2.44
	12/17/15	Laramie Energy II LLC	Oxy	158	158	541	0.29	89.0		1,770	RM (Piceance)	100%	16.6	40.25	2.18
Per Mcfe				Median Simple Average			\$0.95	\$3,690							
							\$1.23	\$3,284							

MAJORITY OIL ALL U.S. FROM \$10 MILLION TO \$2 BILLION

Announced	Date	Buyer	Seller	Total Price* (\$MM)	Reserve Price (\$MM)	Proved Reserves (Mmboe)	Value* (\$ / Boe)	Production (Mboe / d)	Net (\$ / Boe / d)	Value* (\$ / Boe / d)	Region	Proved R/P		Oil **	Gas **
												% Oil			
	9/20/16	Undisclosed Buyer	Abraxas	13	13	NA	NA	0.1		89,041	GC Onshore	87%	NA	46.23	3.18
	9/12/16	Anadarko	Freeport-McMoRan Inc	2,000	1,700	126	13.50	80.0		21,250	GOM	80%	4.3	42.81	3.09
	9/1/16	Callon¹	Plymouth Petroleum LLC	327	92	12	7.54	2.3		40,000	PER	87%	14.5	45.65	3.04
	8/29/16	EnVen Energy Ventures	Shell	425	425	17	24.57	25.0		17,000	GOM	86%	1.9	49.56	3.09
	8/27/16	Torrent Oil LLC	Linc Energy Ltd	38	38	6	6.08	1.7		21,853	GC Onshore	91%	9.8	50.24	3.09
	8/23/16	PDC¹	Kimmeridge Energy	1,505	245	NA	NA	7.0		35,000	PER	65%	NA	50.56	3.01
	8/18/16	Undisclosed Buyer	Continental Resources Inc	222	103	NA	NA	2.8		36,850	Bakken	82%	NA	50.89	2.99
	8/15/16	Parsley Energy LP¹	BTA Oil Producers LLC	400	9	NA	NA	0.3		34,407	PER	68%	NA	48.48	2.95
	8/15/16	Concho Resources Inc¹	Reliance Energy Inc	1,625	500	43	11.63	10.0		50,000	PER	67%	11.8	48.48	2.95
	8/8/16	SM Energy¹	Rock Oil Company LLC	980	176	NA	NA	4.9		35,918	PER	77%	NA	45.95	3.06
	8/3/16	Protege LLC; Undisclosed Buyer	Newfield Exploration	390	390	NA	NA	12.7		30,709	STX (Eagle Ford)	51%	NA	43.93	3.13
	8/1/16	Undisclosed Buyer	SM Energy	173	173	10	18.16	3.3		52,273	Bakken	87%	7.9	44.66	3.15
	7/29/16	Extraction Oil & Gas	Bayswater Exploration & Production LLC	420	420	26	16.16	10.2		41,148	RM (Niobrara)	73%	7.0	44.13	3.13
	7/28/16	Mid-Con Energy Partners LP	Undisclosed Seller	20	20	2	13.00	0.4		52,989	PER	99%	11.2	44.13	3.13
	7/28/16	Cornerstone Petroleum Resources LLC	Rimrock Resource	38	15	NA	NA	0.5		28,571	MC (SCOOP/STACK)	55%	NA	44.13	3.13
	7/28/16	Rimrock Resource¹	Merit Energy	150	62	NA	NA	2.1		29,524	MC (SCOOP/STACK)	55%	NA	44.13	3.13
	7/27/16	Four Corners Petroleum	Whiting Petroleum	300	300	120	2.49	8.6		34,884	PER	99%	38.3	44.85	2.99
	7/25/16	Royale Energy	Matrix Oil Corp	42	42	12	3.40	NA		NA	Multiple	>50%	NA	46.15	3.03
	7/13/16	Laredo Petroleum Inc¹	McClure Oil Co Inc	125	10	NA	NA	0.3		32,133	PER	55%	NA	47.68	3.04
	7/12/16	Diamondback Energy¹	Luxe Energy LLC	560	38	NA	NA	1.0		38,080	PER	89%	NA	49.79	3.04
	7/10/16	Antero Resources Corp¹	Statoil	108	6	NA	NA	0.5		12,000	APP (Marcellus)	53%	NA	48.16	3.09
	7/6/16	Silver Run Acquisition Corp¹	Centennial Resources Development LLC	1,735	253	49	5.20	7.2		35,100	PER	82%	18.5	50.07	3.08
	6/30/16	Angelus Private Equity Group LLC	Samson Oil & Gas Limited	15	15	1	11.42	0.7		22,866	Bakken	88%	5.5	52.29	3.10
	6/21/16	QEP Resources, Inc.¹	RK Petroleum Corp.; Undisclosed	600	52	76	0.68	1.4		37,029	PER	75%	NA	51.43	3.03
	6/20/16	Marathon Oil Corp.¹	PayRock Energy LLC	888	168	NA	NA	8.6		19,558	MC (SCOOP/STACK)	60%	NA	50.03	2.93
	6/20/16	Undisclosed	Energren	552	256	55	4.66	9.0		28,450	PER	61%	16.7	50.03	2.93
	6/20/16	Undisclosed	Memorial Production Partners LP	37	37	3	12.06	1.2		31,167	PER	99%	7.1	50.03	2.93
	6/15/16	Pioneer Natural Resources Co.¹	Devon Energy Corp.	435	35	NA	NA	1.0		34,750	PER	70%	NA	49.84	2.91
	6/15/16	Undisclosed	Devon Energy Corp.	423	423	43	9.84	22.0		19,227	PER	65%	5.4	49.84	2.91
	6/14/16	Lime Rock Resources	Natural Resource Partners LP	116	116	10	11.54	3.5		33,647	Bakken	88%	8.0	50.47	2.93
	6/14/16	Campbell Development Group LLC	Rex Energy Corp.	40	40	3	11.76	1.7		23,529	East Region (IL, IN, KY)	100%	5.5	50.47	2.93
	5/27/16	Undisclosed	Arsenal Energy Inc.	34	34	7	5.05	0.8		44,194	Bakken	95%	24.0	50.86	2.70
	5/26/16	Undisclosed	Mid-Con Energy Partners LP	18	18	3	5.60	0.7		26,399	MC (Hugoton)	99%	12.9	50.91	2.62
	5/25/16	New Emerald Holdings LLC	Emerald Oil Inc.	73	73	NA	NA	5.7		12,837	Bakken	95%	NA	50.92	2.62
	5/5/16	Newfield Exploration Co.¹	Chesapeake Energy Corp.	470	50	NA	NA	3.8		13,158	MC (SCOOP/STACK)	55%	NA	46.15	2.67
	5/2/16	Synergy Resources Corp.¹	Noble Energy, Inc.	505	76	NA	NA	2.4		31,596	RM (Niobrara)	52%	NA	46.68	2.64
	5/2/16	Undisclosed	Bill Barrett Corp.	30	30	2	15.00	1.0		30,000	RM (Uinta)	63%	5.5	46.68	2.64
	4/29/16	EnerVest Management Partners Ltd.	GulfTex Energy LLC; BlackBrush Oil & Gas LP	1,175	781	44	17.83	13.7		56,820	STX (Eagle Ford)	85%	8.7	48.06	2.68
	4/25/16	Centennial Resources Development LLC¹	Caird Energy LLC; Undisclosed	44	9	NA	NA	0.3		35,210	PER	73%	NA	45.12	2.62
	4/19/16	Callon Petroleum Co.¹	BSM Energy LP, Crux Energy LP, Zaniah Energy LP	301	58	NA	NA	1.9		29,878	PER	82%	NA	44.20	2.57
	4/11/16	Merit Energy	Marathon	870	768	NA	NA	16.5		46,546	RM (WY)	96%	NA	43.56	2.42
	4/4/16	Argent Energy Inc.	BXP Partners IV LP	46	46	NA	NA	3.0		15,193	Multiple	65%	NA	39.28	2.45
	4/1/16	Parsley Energy LP¹	Riverbend Permian LLC; Undisclosed	215	39	NA	NA	1.1		35,455	PER	84%	NA	40.46	2.43
	3/29/16	Titanium Exploration Partners LLC	Vanguard Natural Resources LLC	280	280	NA	NA	8.0		35,000	MC (Woodford)	>50%	NA	41.54	2.42
	3/11/16	Parsley Energy LP	Anadarko; Undisclosed	144	56	NA	NA	1.2		46,750	PER	87%	NA	42.38	2.32
	2/10/16	Zarvona Energy LLC	Anadarko	105	105	NA	NA	4.4		23,772	GC Onshore	53%	NA	34.36	2.37
	1/27/16	Carrier Energy Partners II LLC	AWE	199	153	24	6.29	4.1		37,093	STX (Eagle Ford)	69%	16.1	37.28	2.41
	1/18/16	Silver Hill Energy Partners II LLC	Concho Resources Inc	290	103	5	20.62	2.5		41,248	PER	>50%	5.5	33.68	2.38
	1/18/16	Carrier Energy Partners II LLC	Empyrean Energy Plc	62	46	7	7.05	1.3		37,088	STX (Eagle Ford)	69%	14.4	33.68	2.38
	1/14/16	Concho Resources Inc.	Jetta Operating Co. Inc.	360	149	19	8.03	3.6		41,250	PER	>50%	14.1	35.50	2.42
	1/5/16	Samson Oil & Gas Limited	Oasis Petroleum Inc	17	17	10	1.73	0.7		22,917	Bakken	89%	36.2	40.47	2.52
	12/31/15	Texegy LLC	Swift Energy	49	49	NA	NA	1.1		43,959	GC Onshore	57%	NA	41.24	2.53
	12/15/15	Talara Capital Management LLC	Caza Oil & Gas Inc	46	46	8	5.77	0.6		78,856	PER	75%	37.4	41.65	2.16
	12/9/15	Parsley Energy LP¹	PCORE Exploration & Production LLC	149	51	NA	NA	1.0		51,400	PER	84%	NA	42.09	2.34
	12/7/15	Devon Energy¹	RKI Exploration and Production LLC	600	210	NA	NA	7.0		30,000	RM (Niobrara)	85%	NA	42.60	2.34
	12/6/15	Devon Energy¹	Felix Energy LLC	1,900	300	NA	NA	9.0		33,333	Multiple	70%	NA	44.54	2.41
	11/9/15	Scout Energy Group II LP	Parallel Energy Trust	110	110	33	3.33	5.4		20,243	MC	67%	16.6	47.75	2.52
	11/3/15	Memorial Production Partners LP	SP Beta Holdings LLC	101	101	12	8.47	1.9		53,053	CA	100%	17.1	51.11	2.51
	10/15/15	Lime Rock Resources	Oxy	600	600	NA	NA	17.0		35,294	Bakken	91%	NA	49.28	2.73
	10/8/15	Canada Pension Plan; The Broe Group	EnCana	900	900	97	9.30	24.5		36,784	RM (Niobrara)	60%	10.8	51.90	2.76
	10/6/15	RSP Permian Inc	Wolfberry Partners Resources LLC	137	137	NA	NA	1.9		72,105	PER	76%	NA	51.14	2.73
	10/6/15	Undisclosed	Penn Virginia	13	13	1	21.85	0.3		52,000	STX (Eagle Ford)	90%	6.5	51.14	2.73
Per Boe				Median			\$9.57	\$35,147							
				Simple Average			\$10.52	\$37,371							