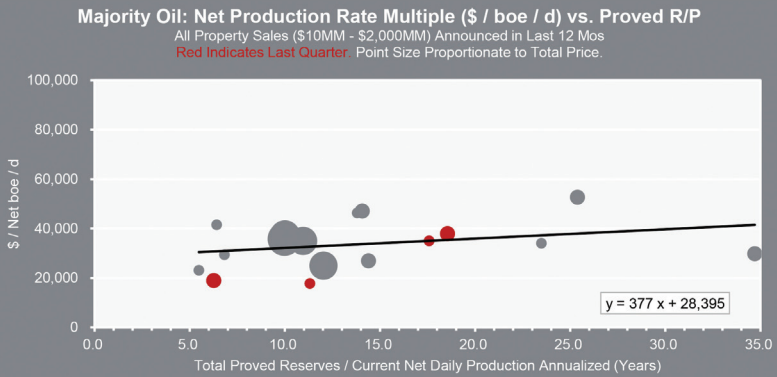
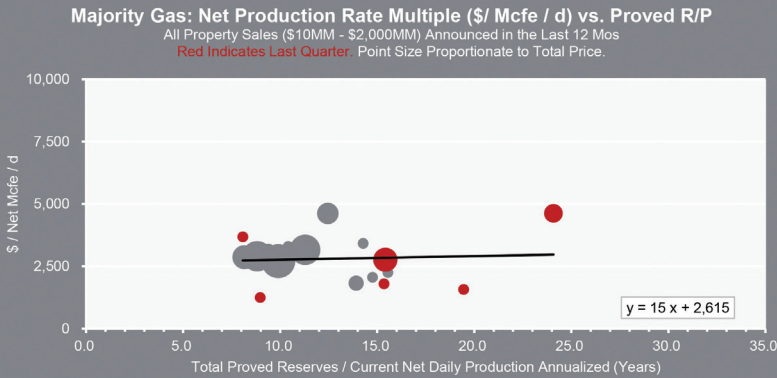


U.S. Upstream **M&A Activity Report**
First Quarter 2018

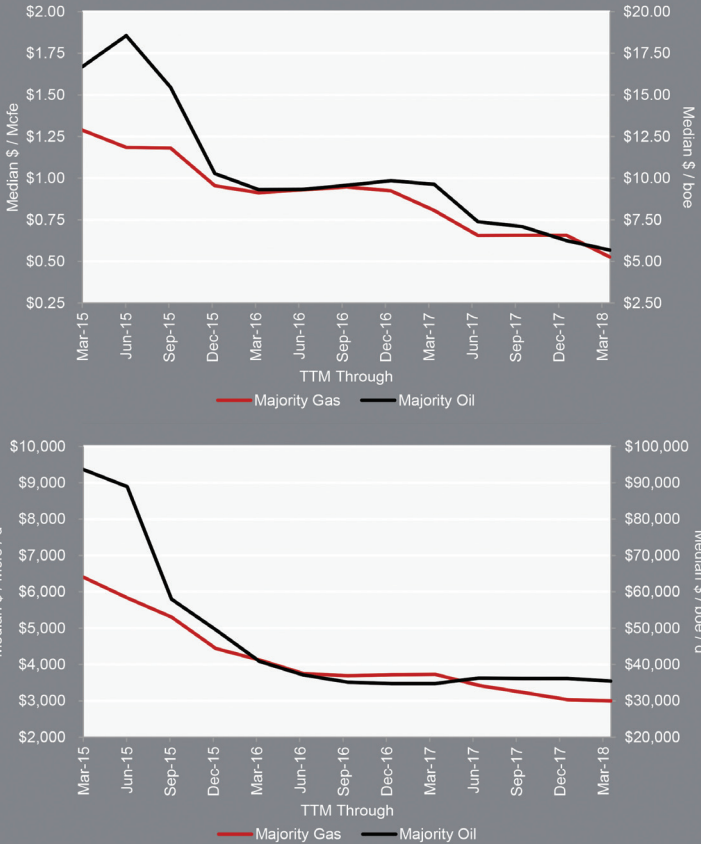


Proved R/P as Estimate of Asset Sale Price

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 \$34,050 per net Boe / d.



Select Current and Recent Transactions

Williston Energy Holdings LLC Sale of Non-Op Bakken Shale & Three Forks Properties Exclusive Divestiture Agent PSA Negotiations	COR COUNCIL OAK RESOURCES ~\$100MM Capital Commitment for STACK Drilling Program Financial Advisor Term Sheet Negotiations	Red Sky Resources II, LLC Sale of Non-Operated STACK & SCOOP Properties Exclusive Divestiture Agent Closing	UNDISCLOSED Sale of Operated Properties in the Haynesville / Bossier (De Soto and Sabine Parishes, LA) Exclusive Divestiture Agent April 2018
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E-Spectrum Advisors provides creative solutions that are best for you and your upstream business and can help in every aspect of the transaction process. Our capabilities include: raising capital, asset divestiture, acquisitions (buyside advisory), financial advisory, restructuring consultation and evaluation services and fairness opinions.

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

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Jeff Hawes - Associate | 214.417.3554

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Trailing Twelve Months March 2018

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 (MMcfe / d)	Net (\$ / Mcfe / d)	Value* (\$ / Mcfe / d)	Region	% Gas	Proved R/P	Oil **	Gas **
	3/14/18	XPR Resources LLC	Rex Energy Corp	17	17	NA	NA	8.2		2,098	APP (Marcellus)	100%	NA	59.77	2.92
	3/13/18	Rio Grande E&P	Amplify Energy Corp	20	20	52	0.38	16.0	1,250		South Texas	88%	9.0	59.69	2.91
	3/7/18	Fleur de Lis Energy LLC	Devon Energy	553	553	1,126	0.49	200.0	2,765		Barnett	81%	15.4	59.12	2.93
	1/24/18	El Dorado Resources Inc	SilverBow Resources Inc	35	35	28	1.25	9.5	3,684		STX (Eagle Ford)	57%	8.1	62.66	3.02
	2/12/18	Tanos Energy Holdings III LLC	WildHorse Resource Development Corp	217	217	412	0.53	46.9	4,627		N. Louisiana	96%	24.1	57.17	2.78
	2/6/18	Camino Natural Resources LLC	Chesapeake	170	40	NA	NA	9.0	4,444		SCOOP/STACK	70%	NA	60.79	2.84
	1/31/18	Diversified Gas & Oil Plc	CNX Resources Corp	85	85	383	0.22	54.0	1,574		APP (Marcellus)	99%	19.5	62.97	2.95
	1/31/18	Diversified Gas & Oil Plc	Lake Fork Resources LLC	95	95	296	0.32	52.8	1,799		APP (Marcellus)	99%	15.3	62.97	2.95
	12/21/17	Alta Resources LLC	Ultra Petroleum	115	115	NA	NA	30.0	3,833		APP (Marcellus)	100%	NA	57.17	2.63
	12/19/17	Scout Energy Partners	Linn Energy LLC	122	122	NA	NA	31.2	3,910		MC	>50%	NA	56.99	2.72
	12/14/17	FourPoint Energy LLC	EnerVest Management Partners	188	152	NA	NA	39.0	3,897		MC (Granite Wash)	60%	NA	56.55	2.73
	12/14/17	Undisclosed Buyer	Samson Resources II LLC	34	34	NA	NA	9.0	3,778		RM (Green River)	>50%	NA	56.55	2.73
	12/12/17	Banpu Public Co Ltd	Warren Resources Inc	105	105	292	0.36	57.5	1,826		APP (Marcellus)	100%	13.9	56.75	2.73
	12/11/17	Eclipse Resources	Travis Peak Resources LLC	94	20	NA	NA	6.5	3,001		APP (Utica)	100%	NA	57.63	2.81
	10/31/17	Hilcorp Energy Co	Anadarko	350	350	1,599	0.22	96.0	3,646		RM (Green River)	75%	45.6	54.04	2.96
	10/26/17	LOGOS Resources II LLC	WPX Energy Inc	169	169	NA	NA	73.0	2,315		RM (San Juan)	>50%	NA	52.67	2.97
	10/5/17	Banpu Public Co Ltd	Reliance Energy Limited; Carrizo	210	210	NA	NA	100.0	2,100		APP (Marcellus)	100%	NA	48.96	3.05
	10/4/17	Exaro Energy III LLC	Linn Energy LLC	200	200	226	0.88	66.0	3,030		RM (Green River)	70%	9.4	48.96	3.05
	9/29/17	Carbon Appalachian Co LLC	Undisclosed Seller	41	41	NA	NA	37.4	1,104		APP (Marcellus)	99%	NA	48.96	3.07
	9/18/17	Zarvona Energy LLC	Trinity River Resources LP	50	50	126	0.40	22.2	2,252		East Texas	51%	15.5	48.96	3.15
	9/6/17	Tellurian Inc	Rockcliff Energy II LLC	85	12	NA	NA	4.0	3,000		Haynesville Shale	100%	NA	49.26	3.07
	8/31/17	Ascent Resources	Carrizo	62	22	NA	NA	3.9	5,641		APP (Utica)	52%	NA	47.87	3.07
	8/15/17	Carbon Appalachian Co LLC	Undisclosed Seller	22	22	NA	NA	7.5	2,867		APP (Marcellus)	100%	NA	49.23	3.02
	8/8/17	Corterra Energy LLC	Continental Resources Inc	68	35	41	0.87	10.7	3,300		MC (Arkoma)	100%	10.4	50.00	2.97
	8/1/17	Rockcliff Energy II LLC	Samson Resources II LLC	525	525	NA	NA	90.0	5,833		Haynesville Shale	85%	NA	50.07	2.92
	7/27/17	Scout Energy Partners	ConocoPhillips	200	200	NA	NA	48.0	4,167		TX Panhandle	91%	NA	46.19	3.04
	7/24/17	Oak Ridge Natural Resources LLC	QEP Resources Inc	740	740	964	0.77	234.0	3,162		RM (Green River)	88%	11.3	46.69	3.01
	7/11/17	Undisclosed Buyer	Rice Energy Inc	175	175	NA	NA	76.0	2,303		Barnett	85%	NA	45.48	3.05
	7/1/17	AVAD Energy Partners	Anadarko Petroleum Corp	80	80	NA	NA	28.0	2,857		RM (Utah)	100%	NA	47.52	3.07
	6/29/17	Miller Thomson & Partners LLC	ConocoPhillips	305	305	300	1.02	66.0	4,621		Barnett	55%	12.5	44.44	3.11
	6/22/17	Foundation Energy Management LLC	Jones Energy	65	65	99	0.66	19.0	3,421		MC (Arkoma)	68%	14.3	43.72	3.02
	6/9/17	Caerus Oil and Gas LLC	EnCana	735	735	814	0.90	253.1	2,904		RM (Piceance)	95%	8.8	47.59	3.13
	5/23/17	Abraxas¹	Devon Energy	22	1	NA	NA	0.2	3,990		PER	91%	NA	52.14	3.32
	5/16/17	Banpu Public Co Ltd	LSB Industries Inc	16	16	33	0.49	6.0	2,708		APP (Marcellus)	100%	15.1	49.95	3.35
	5/5/17	Diversified Gas & Oil Plc	Titan Energy LLC	84	84	220	0.38	40.9	2,060		APP (Multiple)	96%	14.8	47.90	3.32
	5/2/17	HG Energy II LLC	Noble Energy	1,125	1,125	1,500	0.75	415.0	2,711		APP (Marcellus)	88%	9.9	50.18	3.31
	5/2/17	Jonah Energy LLC	Linn Energy LLC	582	370	384	0.96	129.0	2,868		RM (Green River)	80%	8.2	50.18	3.31
	4/3/17	Carbon Natural Gas Co	Undisclosed Seller	20	20	NA	NA	3.6	5,556		APP (Other)	92%	NA	51.55	3.29
Per Mcfe			Median				\$0.53			\$3,000					
			Simple Average				\$0.62			\$3,160					

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				
	3/28/18	Protege Energy III	Contango	21	5	NA	NA	0.1		37,967	STX (Eagle Ford)	95%	NA	62.19		\$2.88
	3/15/18	Sundance Energy	Pioneer; Reliance; Newpek LLC	222	61	66	\$3.38	1.8		34,006	STX (Eagle Ford)	72%	99.7	59.88		\$2.86
	2/26/18	Undisclosed Buyer	PDC	40	40	9	\$4.30	2.3		17,762	APP (Utica)	51%	11.3	61.20		\$2.84
	2/20/18	Luxe Energy II; Colgate Energy	Concho Resources Inc	280	33	NA	NA	1.0		33,577	PER	70%	NA	59.78		\$2.79
	2/14/18	Scout Energy Partners	Linn Energy LLC	120	120	14	\$8.30	6.3		18,968	PER	76%	6.3	58.49		\$2.75
	2/12/18	WildHorse Resource Development Corp	Hawkwood Energy Operating LLC	19	2	NA	NA	0.1		40,000	STX (Eagle Ford)	80%	NA	57.17		\$2.78
	2/8/18	Undisclosed Buyer	Eagle Energy Inc	27	27	NA	NA	1.0		26,970	STX (Eagle Ford)	>50%	NA	58.40		\$2.80
	2/6/18	Halcon Resources Corp¹	BTA Oil Producers LLC	104	8	NA	NA	0.2		35,000	PER	54%	NA	60.79		\$2.84
	2/6/18	Halcon Resources Corp	Shell	200	39	NA	NA	1.1		35,000	PER	54%	NA	60.79		\$2.84
	2/5/18	Enduring Resources IV LLC	WPX Energy Inc	700	700	NA	NA	22.6		30,973	Rockies	69%	NA	60.93		\$2.84
	2/1/18	ConocoPhillips	Anadarko	400	400	NA	NA	11.2		35,628	Alaska	>50%	NA	63.28		\$2.94
	1/31/18	Lilis Energy Inc	OneEnergy Partners LLC	65	17	NA	NA	0.4		40,000	PER	86%	NA	62.97		\$2.95
	1/29/18	Liberty Mutual Investments	ExL Petroleum Management LLC	207	71	NA	NA	2.0		35,550	PER	65%	NA	62.76		\$3.05
	1/25/18	Revolution Resources LLC	Gastar Exploration Inc	108	108	19	\$5.60	2.8		37,906	MC (Hunton)	77%	18.5	63.58		\$3.04
	1/16/18	Silverpeak Strategic Partners	Linn Energy LLC	132	53	NA	NA	1.5		36,579	Rockies	84%	NA	61.97		\$2.91
	1/9/18	Northwoods Energy LLC	SM Energy	500	65	NA	NA	2.2		29,768	Rockies	69%	NA	62.01		\$2.84
	1/5/18	Undisclosed Buyer¹	Centennial Resource Development Inc	141	8	NA	NA	0.2		32,298	PER	65%	NA	60.65		\$2.81
	1/2/18	Penn Virginia	Hunt Oil	86	66	12	\$7.17	1.9		35,027	STX (Eagle Ford)	86%	17.6	59.74		\$2.88
	12/20/17	Venado Oil & Gas LLC	Cabot	765	583	57	10.19	15.7		37,218	STX (Eagle Ford)	87%	10.0	57.17		2.63
	12/14/17	Axia Energy II	EP Energy Corp	180	50	NA	NA	1.5		33,580	Rockies	70%	NA	56.55		2.73
	12/12/17	EP Energy Corp	Carrizo	245	110	NA	NA	3.4		32,335	STX (Eagle Ford)	81%	NA	56.75		2.73
	12/11/17	Oasis Petroleum Inc	Forge Energy LLC	946	170	NA	NA	3.5		48,571	PER	78%	NA	57.63		2.81
	12/5/17	Bill Barrett Corporation	Fifth Creek Energy Co LLC	649	87	113	0.77	2.9		30,000	Rockies	88%	106.6	56.25		2.90
	11/28/17	Royale Energy	Sunny Frog Oil LLC	15	15	9	1.72	0.6		26,087	West Coast	100%	41.5	56.89		3.05
	11/27/17	Verdad Oil & Gas Corp	Carrizo	140	81	NA	NA	2.4		33,576	Rockies	84%	NA	56.87		2.95
	11/20/17	Finley Resources Inc	Bill Barrett Corporation	110	110	12	9.17	2.3		47,069	Rockies	93%	14.1	56.08		3.01
	11/20/17	Statoil	Earthstone Energy Inc	27	27	NA	NA	0.8		35,433	Bakken	82%	NA	56.08		3.01
	11/8/17	SRC Energy Inc	Noble Energy	608	103	18	5.69	4.1		25,000	Rockies	50%	12.0	56.82		3.06
	11/8/17	Exponent Energy III	Mid-Con Energy Partners LP	25	25	3	9.19	0.5		46,296	MC	100%	13.8	56.82		3.06
	11/1/17	Approach Resources Inc	Amistad Energy Partners	18	18	NA	NA	0.6		32,818	PER	51%	NA	54.12		2.94
	10/30/17	Rosehill Resources Inc¹	Whitehorse Energy LLC; Siltstone Resources II	78	1	NA	NA	0.0		28,250	PER	45%	NA	53.90		2.99
	10/23/17	Valorem Energy LLC	Linn Energy LLC	285	249	NA	NA	8.0		31,106	Bakken	79%	NA	52.08		3.08
	10/13/17	Perdure Petroleum LLC	Chaparral	170	170	72	2.35	5.7		29,825	MC	100%	34.7	52.69		3.03
	9/25/17	PDC	Bayswater Exploration & Production	210	70	NA	NA	2.2		31,918	Rockies	60%	NA	48.96		3.05
	9/20/17	Riverbend Oil & Gas LLC	Halcon Resources Corp	110	83	35	2.36	2.3		36,567	Bakken	88%	42.4	48.96		3.11
	9/14/17	Elk Petroleum Ltd	Resolute Energy Corporation	160	160	31	5.13	5.9		26,945	Rockies	95%	14.4	48.96		3.08
	8/15/17	RimRock Oil & Gas	Whiting Petroleum	500	280	NA	NA	7.8		35,979	Bakken	90%	NA	49.23		3.02
	7/31/17	Penn Virginia	Devon Energy	205	105	NA	NA	3.0		35,000	STX (Eagle Ford)	64%	NA	50.07		2.94
	7/26/17	QEP Resources Inc¹	JM Cox Resources LP; Alpine Oil	732	22	44	0.51	0.6		34,992	PER	71%	189.8	46.69		3.00
	7/11/17	Bruin E&P Partners LLC	Halcon Resources Corp	1,400	1,030	105	9.82	28.8		35,780	Bakken	90%	10.0	45.48		3.05
	6/28/17	Carrizo	ExL Petroleum Management LLC	648	280	32	8.75	8.0		35,000	PER	67%	11.0	44.44		3.11
	6/19/17	Oxy	Hess	600	600	NA	NA	8.2		73,171	PER	70%	NA	44.60		2.99
	6/12/17	Merit Energy Co	Titan Energy LLC	105	105	NA	NA	2.5		42,000	RM (Piceance)	92%	NA	46.97		3.12
	6/7/17	Bridge Energy LLC	Linn Energy LLC	100	100	18	5.68	1.9		52,632	West Coast	90%	25.4	46.61		3.10
	6/7/17	Multiple Buyers¹	Enduro Resource Partners LLC	50	3	0	11.81	0.1		29,412	PER	>50%	6.8	46.61		3.10
	6/1/17	Halcon Resources Corp	Occidental Petroleum Corp	88	32	NA	NA	0.8		40,000	PER	80%	NA	48.16		3.08
	5/30/17	Lonestar Resources Inc	Battlecat Oil and Gas LLC; Sanchez Energy Corp	117	82	NA	NA	2.1		40,156	STX (Eagle Ford)	89%	NA	49.18		3.19
	5/30/17	Denbury Resources Inc	Linn Energy LLC	72	72	18	3.97	2.1		34,048	Rockies	100%	23.5	49.18		3.19
	5/23/17	Berry Petroleum Co LLC	Linn Energy LLC	263	168	43	3.90	3.0		56,000	West Coast	100%	39.4	52.14		3.32
	5/11/17	WildHorse Resource Development Corp	Anadarko	625	303	NA	NA	7.6		40,000	STX (Eagle Ford)	89%	NA	49.06		3.42
	5/1/17	Centennial Resource Development Inc	GMT Exploration Co LLC	350	84	NA	NA	2.1		40,000	PER	77%	NA	50.18		3.31
	4/26/17	Resource Energy Partners LLC	Blue Ridge Mountain Resources Inc	35	35	3	11.57	1.5		23,133	Bakken	>50%	5.5	49.74		3.33
	4/17/17	Lime Rock Resources	Forge Energy LLC	119	71	NA	NA	1.9		37,526	PER	90%	NA	54.36		3.41
	4/4/17	Unit Corp	EOG	57	57	3	17.73	1.4		41,514	MC (Hoxbar)	73%	6.4	52.36		3.46
		Per boe	Median				\$5.68			\$35,433						
			Simple Average				\$6.51			\$36,163						