



NOBLE CAPITAL MARKETS NEWSLETTER

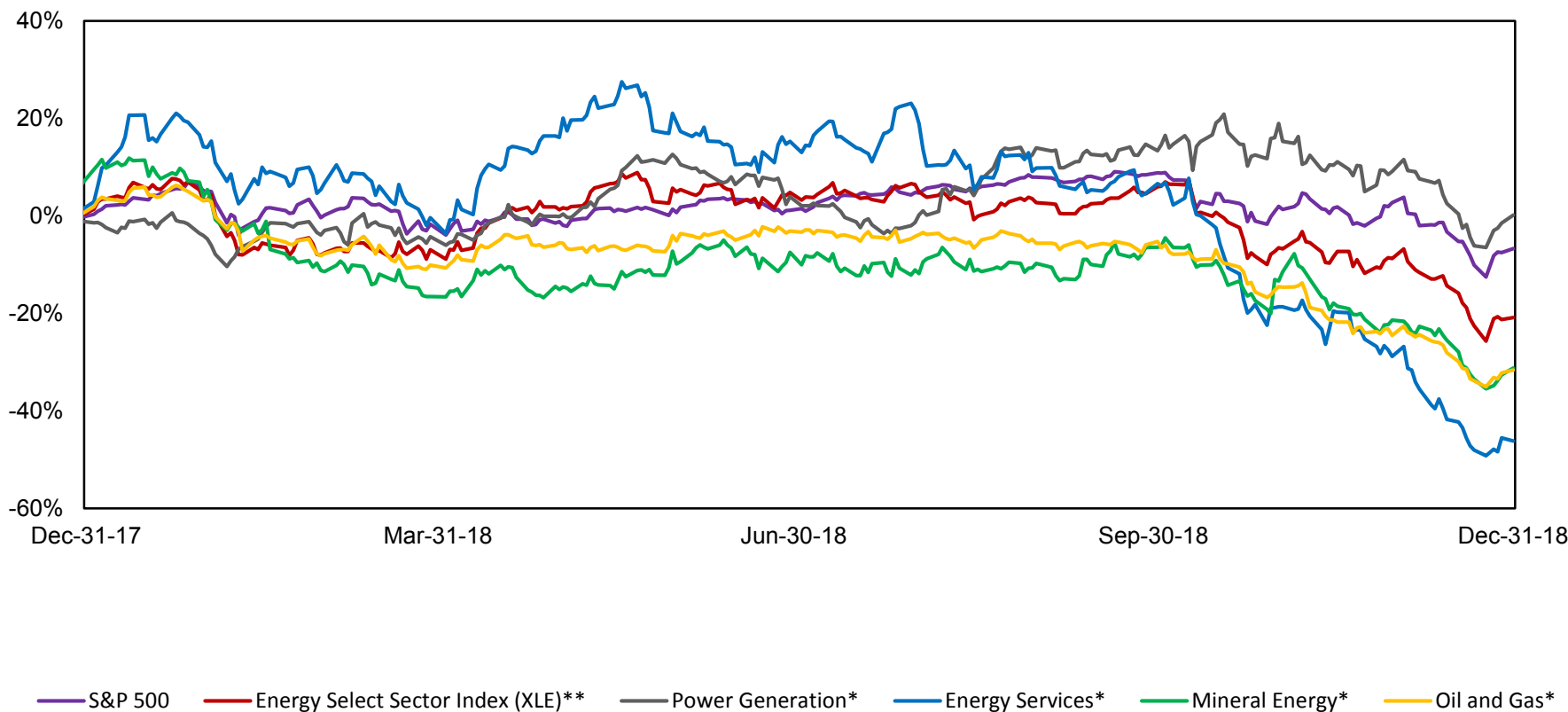
ENERGY

QUARTERLY REVIEW Q4 2018



ENERGY SECTOR NEWSLETTER

ENERGY SECTOR LTM EQUITY PERFORMANCE



* Noble Proprietary Sector (index composed of companies in the comparable table)
** Energy Select Sector SPDR ETF (refer to disclosure section for more information)

Source: Capital IQ as of 12/31/2018

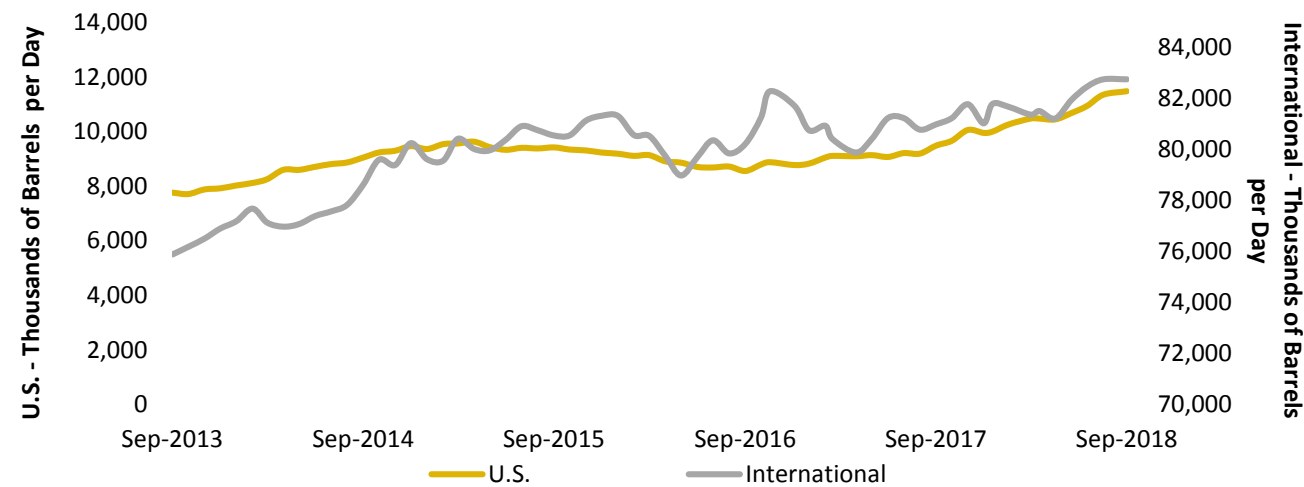
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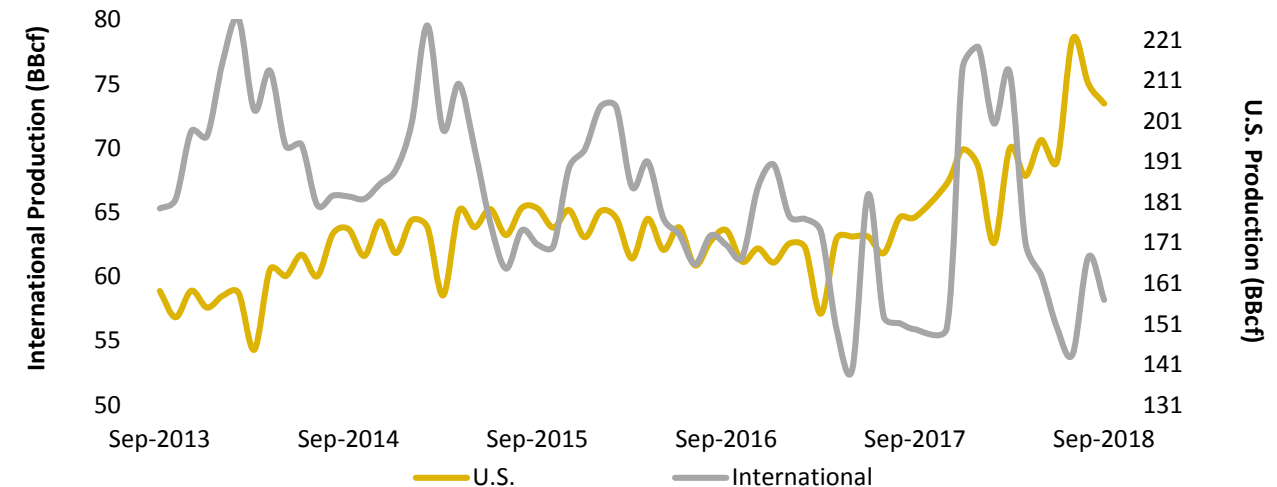


ENERGY FUNDAMENTAL DATA

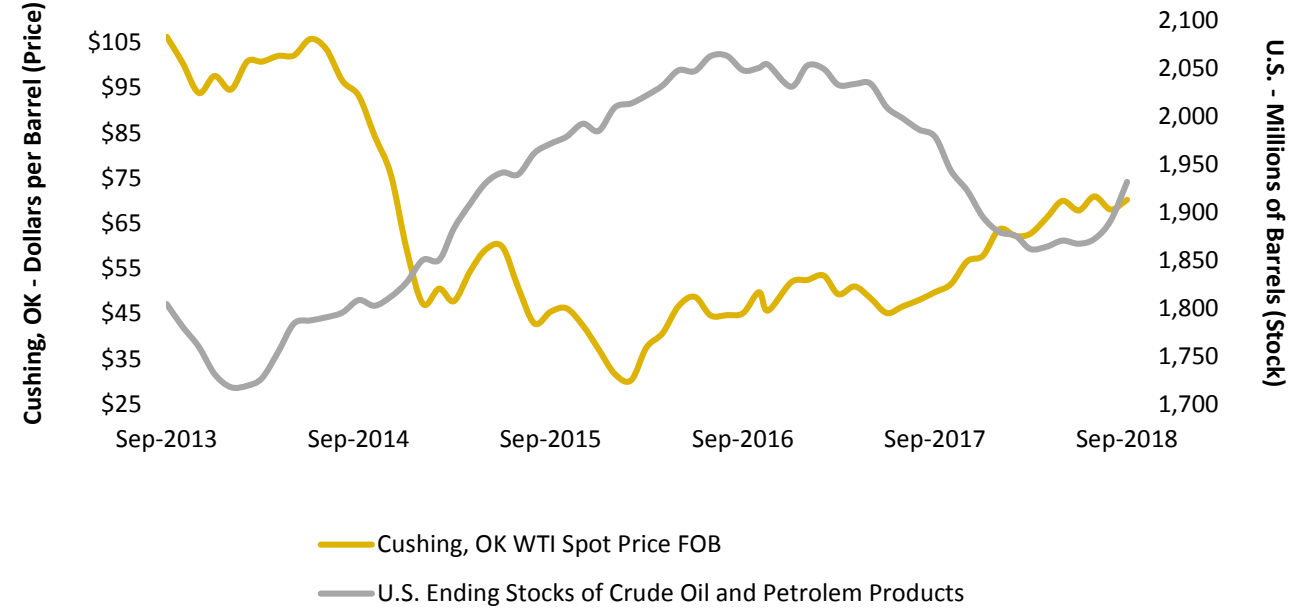
CRUDE OIL PRODUCTION



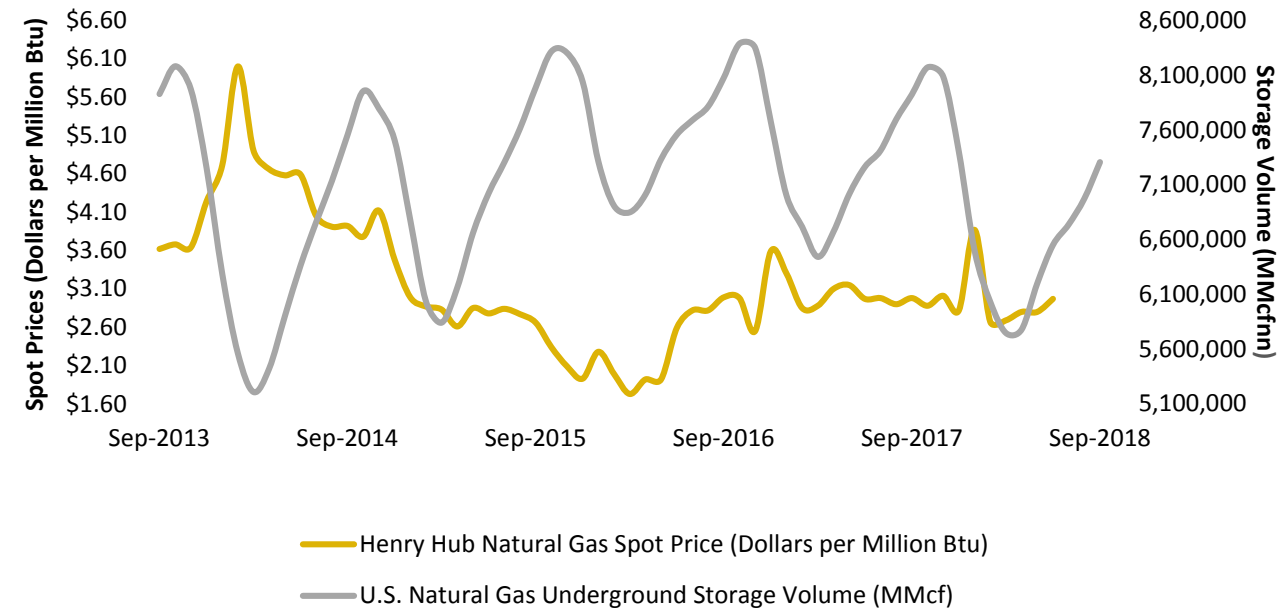
NATURAL GAS PRODUCTION

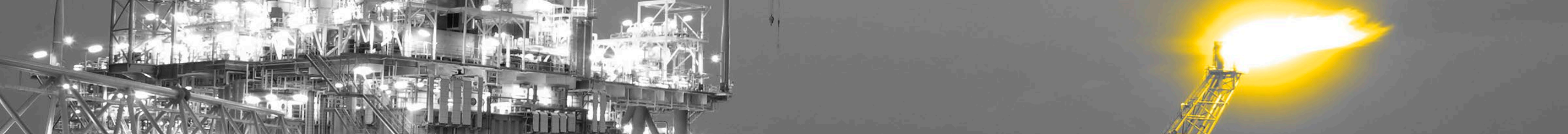


STOCK VS. PRICE



STORAGE VS. PRICE





ENERGY INDUSTRY OUTLOOK

INDEPENDENT EXPLORATION AND PRODUCTION

Exploration and production stocks (as measured by the XLE) declined 24% in the December quarter on the heels of a 21% decline in crude oil (WTI) prices. Much of the drop in the XLE and oil prices came during the month of December in response to growing investor worry over global economic conditions. The decline in the energy sector surpassed a 14% in the S&P Composite Index and declines in other commodities and commodity stocks indices.

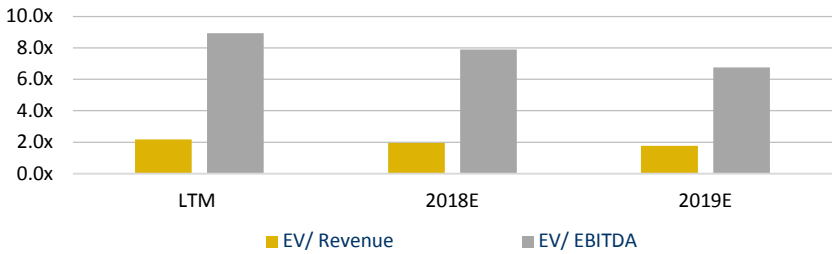
With the decline, oil prices broke through the \$45 per barrel, which we view as the bottom of a \$45-\$70 trading range. The decline came despite efforts by OPEC during the quarter to control output to raise pricing. As we have said in the past, we believe OPEC’s impact on oil prices has diminished in recent years and has been replaced by domestic onshore producers.

At current prices, we expect domestic producers to announce 2019 capital expenditure budgets that show a reduction in drilling. Unless there are further signs of a global economic meltdown, we believe oil prices (and energy stocks) should begin to bottom out. We favor companies that maintain strong balance sheets, have a large hedge position and low operating costs to weather the next few quarters, and have large acreage under control allowing the companies to react quickly should prices improve.

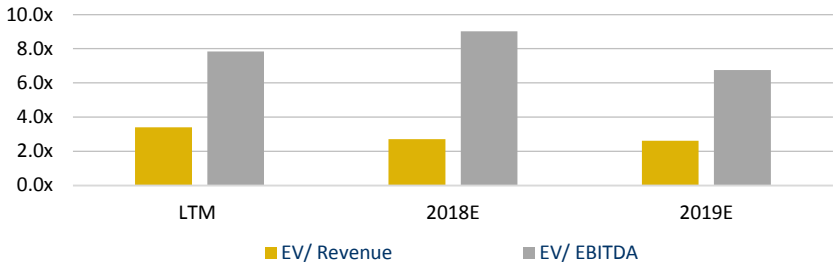
Source: Capital IQ as of 12/31/2018; Michael Heim



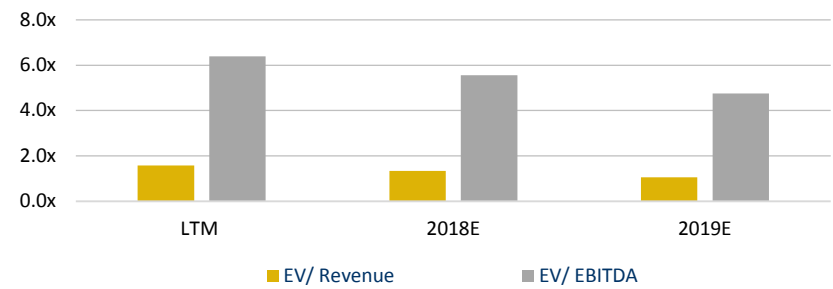
OIL AND GAS MULTIPLES



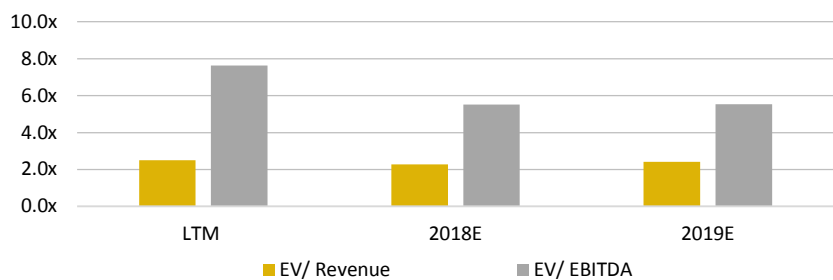
POWER GENERATION MULTIPLES



ENERGY SERVICES MULTIPLES



MINERAL ENERGY MULTIPLES



Source: Capital IQ as of 12/31/2018



OIL & GAS

COMPARABLE TABLES

Exploration and Production Index

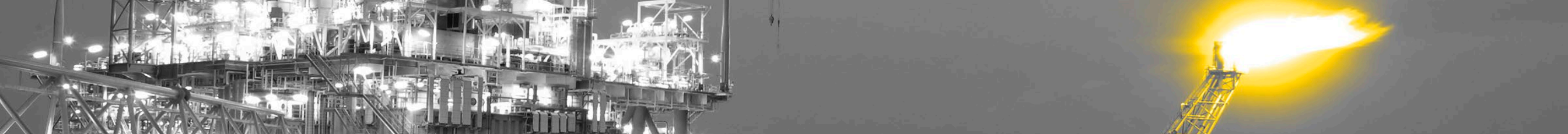
	TICKER	CHANGE IN STOCK PRICE		SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN	
		3-MONTH	12-MONTH						REVENUES (\$M)	EBITDA (\$M)	LTM	2018E	2019E	LTM	2018E	2019E		
Lilis Energy, Inc.	AMEX:LLEX	(72%)	(73%)	\$1.37	22%	99	166	337	56	(3)	6.0x	4.3x	2.6x	NM	9.4x	4.7x	NM	
Approach Resources, Inc.	NasdaqGS:AREX	(61%)	(71%)	\$0.87	21%	80	379	458	120	54	3.8x	3.8x	3.8x	8.5x	7.4x	6.8x	45%	
Journey Energy Inc.	TSX:JOY	(21%)	1%	\$1.42	56%	56	95	141	84	17	1.7x	NM	NM	8.4x	NM	NM	20%	
BNK Petroleum Inc.	TSX:BKX	(28%)	(35%)	\$0.24	35%	55	30	81	24	9	3.4x	NM	NM	9.3x	NM	NM	37%	
Torchlight Energy Resources, Inc.	NasdaqCM:TRCH	(41%)	(58%)	\$0.56	38%	40	15	53	1	(3)	NM	NM	NM	NM	NM	NM	NM	
Jericho Oil Corporation	TSXV:JCO	(30%)	(53%)	\$0.30	22%	39	-	36	-	(2)	NM	NM	NM	NM	NM	NM	NM	
											Mean	3.7x	4.0x	3.2x	8.7x	8.4x	5.7x	34%
											Median	3.6x	4.0x	3.2x	8.5x	8.4x	5.7x	37%

Midstream Index

	TICKER	CHANGE IN STOCK PRICE		SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN	
		3-MONTH	12-MONTH						REVENUES (\$M)	EBITDA (\$M)	LTM	2018E	2019E	LTM	2018E	2019E		
PBF Logistics LP	NYSE:PBFX	(7%)	(4%)	\$20.10	89%	911	567	1,629	268	176	6.1x	5.9x	5.5x	9.3x	11.0x	9.6x	NM	
Dorian LPG Ltd.	NYSE:LPG	(27%)	(29%)	\$5.83	66%	322	727	1,000	46	59	NM	6.6x	6.4x	NM	NM	NM	NM	
USD Partners LP	NYSE:USDP	8%	(7%)	\$10.45	87%	278	200	474	114	52	4.2x	4.0x	3.6x	9.2x	9.1x	7.6x	NM	
American Midstream Partners, LP	NYSE:AMID	(52%)	(77%)	\$3.03	20%	163	1,105	1,503	792	51	1.9x	1.8x	1.8x	NM	8.0x	7.6x	6%	
Sanchez Midstream Partners LP	AMEX:SNMP	(76%)	(85%)	\$1.72	13%	27	182	556	71	25	7.8x	NM	NM	NM	7.5x	7.4x	35%	
Southcross Energy Partners, L.P.	NYSE:SXE	(62%)	(87%)	\$0.22	10%	18	525	548	621	60	0.9x	NM	NM	9.1x	NM	NM	10%	
											Mean	4.2x	4.6x	4.3x	9.2x	8.9x	8.1x	17%
											Median	4.2x	5.0x	4.6x	9.2x	8.5x	7.6x	10%

Last twelve months (LTM) are as of Q3 2018

Source: Capital IQ as of 12/31/2018



OIL & GAS

COMPARABLE TABLES

Refining and Marketing Index

	TICKER	CHANGE IN STOCK PRICE		SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN	
		3-MONTH	12-MONTH						REVENUES (\$M)	EBITDA (\$M)	LTM	2018E	2019E	LTM	2018E	2019E		
Par Pacific Holdings, Inc.	NYSE:PARR	(30%)	(26%)	\$14.18	66%	663	395	970	3,195	131	0.3x	0.3x	0.2x	7.4x	7.0x	4.9x	4%	
Clean Energy Fuels Corp.	NasdaqGS:CLNE	(34%)	(15%)	\$1.72	42%	350	239	353	339	42	1.0x	1.1x	1.1x	8.5x	6.1x	7.9x	12%	
Sprague Resources LP	NYSE:SRLP	(46%)	(40%)	\$14.49	50%	329	616	926	3,623	106	0.3x	0.2x	0.2x	8.7x	8.1x	7.1x	3%	
Trecora Resources	NYSE:TREC	(44%)	(42%)	\$7.80	50%	190	106	294	279	25	1.1x	1.0x	0.9x	11.7x	11.6x	6.8x	9%	
Calumet Specialty Products	NasdaqGS:CLMT	(65%)	(71%)	\$2.21	25%	170	1,740	1,858	3,533	198	0.5x	0.6x	0.6x	9.4x	6.5x	6.6x	6%	
											Mean	0.6x	0.6x	0.6x	9.1x	7.9x	6.7x	7%
											Median	0.5x	0.6x	0.6x	8.7x	7.0x	6.8x	6%

Retail and Commerce

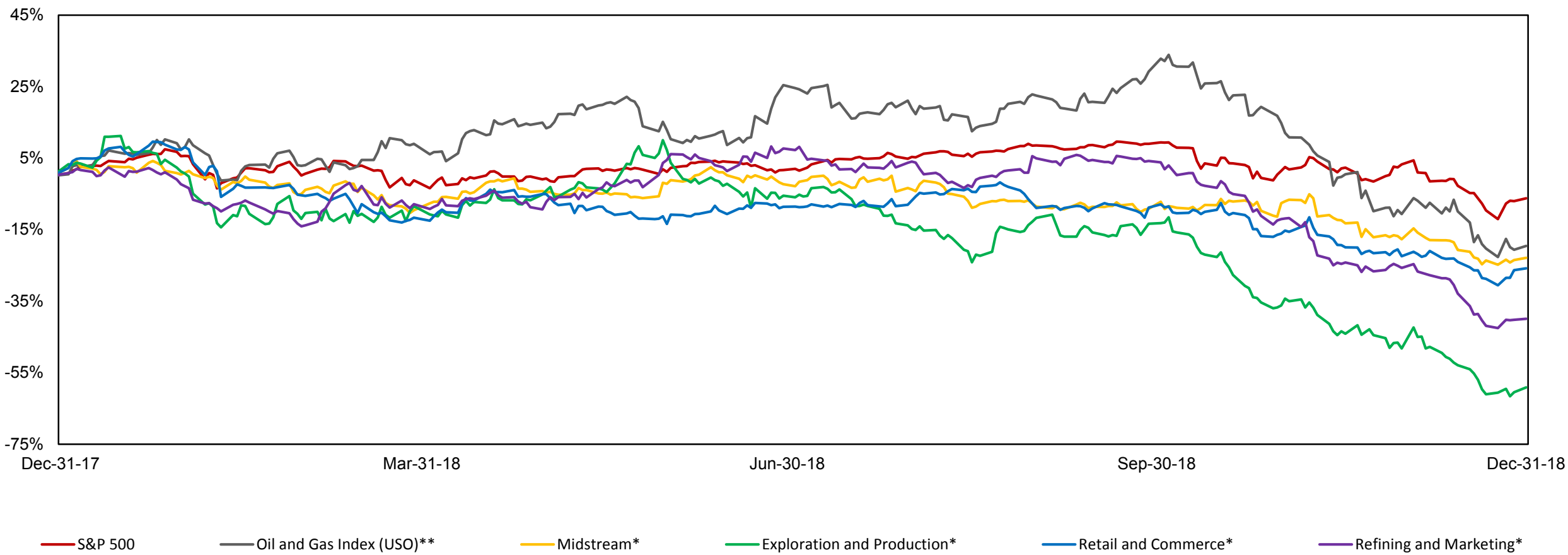
	TICKER	CHANGE IN STOCK PRICE		SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN
		3-MONTH	12-MONTH						REVENUES (\$M)	EBITDA (\$M)	LTM	2018E	2019E	LTM	2018E	2019E	
Superior Plus Corp.	TSX:SPB	(28%)	(25%)	\$7.09	52%	1,241	1,306	2,445	2,018	267	1.2x	0.9x	0.7x	9.2x	6.8x	5.2x	13%
NGL Energy Partners LP	NYSE:NGL	(17%)	(32%)	\$9.59	54%	1,187	2,532	4,018	22,173	346	0.2x	0.2x	0.2x	NM	8.8x	7.8x	2%
Global Partners LP	NYSE:GLP	(10%)	(2%)	\$16.30	77%	550	1,466	2,070	11,799	198	0.2x	0.2x	0.2x	10.4x	9.6x	9.2x	2%
Star Group, L.P.	NYSE:SGU	(4%)	(13%)	\$9.34	84%	493	101	578	1,678	93	0.3x	NM	NM	6.2x	NM	NM	6%
CrossAmerica Partners LP	NYSE:CAPL	(22%)	(40%)	\$14.16	57%	488	540	1,024	2,355	88	0.4x	0.4x	0.4x	NM	9.3x	8.7x	4%
										Mean	0.5x	0.4x	0.4x	8.6x	8.6x	7.7x	5%
										Median	0.3x	0.3x	0.3x	9.2x	9.0x	8.3x	4%

Last twelve months (LTM) are as of Q3 2018

Source: Capital IQ as of 12/31/2018

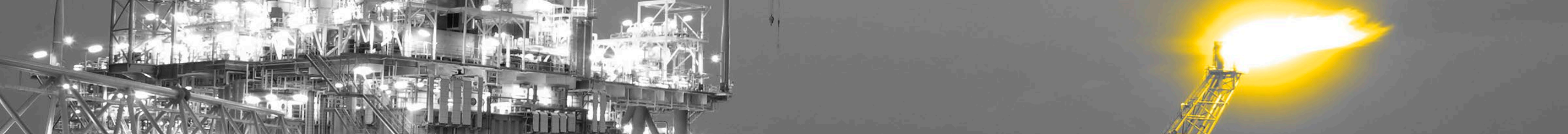


OIL & GAS LTM EQUITY PERFORMANCE
(NOBLE INDEX SELECTION)



* Noble Proprietary Sector (index composed of companies in the comparable table)
** SPDR S&P Oil & Gas Exploration & Production ETF (refer to disclosure section for more information)

Source: Capital IQ as of 12/31/2018



OIL & GAS

YTD GLOBAL M&A ACTIVITY

Date	Buyer	Seller	Transaction Value (\$M)	EV/Revenue	EV/EBITDA
11/01/2018	First Reserve Corporation	Blue Racer Midstream, LLC	1,500.0	-	-
10/10/2018	International Petroleum Corporation (TSX:IPCO)	BlackPearl Resources Inc.	543.37	4.32	22.38
09/23/2018	Evergrande Group Limited	Xinjiang Guanghui Industry Investment (Group) Co., Ltd.	974.22	0.86	9.96
09/04/2018	Flywheel Energy, LLC	DeSoto Gathering Company, L.L.C./SWN Production (Arkansas), LLC	2,303.0	-	-
08/22/2018	Santos Limited (ASX:STO)	Quadrant Energy Australia Limited	1,980.0	2.41	-
08/21/2018	Mapleleaf Midstream, LLC	BridgeTex Pipeline Company LLC	1,438.0	-	-
08/14/2018	Diamondback Energy, Inc. (NasdaqGS:FANG)	Energen Corporation	9,239.41	7.35	11.92
08/09/2018	NuVista Energy Ltd. (TSX:NVA)	Cenovus Pipestone Partnership	479.39	-	-
08/06/2018	Kosmos Energy Ltd. (NYSE:KOS)	Deep Gulf Energy LP/Deep Gulf Energy II, LLC/Deep Gulf Energy III, LLC	1,220.35	-	-
08/01/2018	Energy Transfer LP (NYSE:ET)	Energy Transfer Operating, L.P.	69,264.24	2.09	10.85
07/26/2018	BP American Production Company	Petrohawk Energy Corporation	10,500.0	-	-
06/29/2018	Boardwalk GP LP	Boardwalk Pipeline Partners, LP	5,299.14	5.26	8.32
06/18/2018	Baytex Energy Corp. (TSX:BTE)	Raging River Exploration Inc. (TSX:RRX)	1,413.62	4.33	6.31
06/06/2018	Global Infrastructure Partners	EnLink Midstream Partners, LP/EnLink Midstream, LLC/Enlink Midstream Manager, LLC	3,125.0	-	-
05/30/2018	Superior Plus Energy Services, Inc.	NGL Propane, LLC	900.0	-	10.59
05/29/2018	-	Trans Mountain Pipeline ULC/Trans Mountain Pipeline L.P/Kinder Morgan Canada Inc.	3,457.1	-	-
05/21/2018	700 Universe, LLC	Pivotal Utility Holdings, Inc.	530.0	-	-
05/17/2018	Enbridge Inc. (TSX:ENB)	Enbridge Energy Management, L.L.C.	988.1	-	-
05/17/2018	Enbridge Inc. (TSX:ENB)	Spectra Energy Partners, LP	3,289.02	13.53	19.62
05/17/2018	Enbridge Inc. (TSX:ENB)	Enbridge Income Fund Holdings Inc. (TSX:ENF)	3,621.78	15.02	-
05/17/2018	The Williams Companies, Inc. (NYSE:WMB)	Williams Partners L.P.	10,469.71	7.04	14.08
05/17/2018	Enbridge (U.S.) Inc.	Enbridge Energy Partners, L.P.	15,262.76	7.52	11.16
05/16/2018	Cheniere Energy, Inc. (AMEX:LNG)	Cheniere Energy Partners LP Holdings, LLC	579.85	30.41	-
05/14/2018	Sichuan Liming Energy Development Co., Ltd.	AAG Energy Holdings Limited (SEHK:2686)	479.04	5.17	6.33
05/10/2018	Shell Midstream Partners, L.P. (NYSE:SHLX)	Amberjack Pipeline Company LLC	1,220.0	8.23	9.41
05/09/2018	ArcLight Capital Partners, LLC	Midcoast Operating, L.P.	1,120.0	-	-
04/30/2018	Marathon Petroleum Corporation (NYSE:MPC)	Andeavor	35,536.0	0.924	12.71
04/26/2018	EQM Midstream Partners, LP (NYSE:EQM)	Rice Midstream Partners LP	2,786.8	8.66	11.14
04/16/2018	Vermilion Energy Inc. (TSX:VET)	Spartan Energy Corp.	1,111.22	3.73	6.36
04/09/2018	Morgan Stanley Infrastructure Inc.	Brazos Midstream Holdings, LLC	1,750.0	-	-
03/28/2018	Concho Resources Inc. (NYSE:CXO)	RSP Permian, Inc.	9,627.0	11.93	17.84
03/26/2018	Tallgrass Equity, LLC	Tallgrass Energy Partners, LP	3,273.15	6.37	6.86
03/20/2018	Magnolia Oil & Gas Corporation (NYSE:MGY)	EnerVest's South Texas Division	2,420.0	-	-
02/12/2018	Suncor Energy Inc. (TSX:SU)	Syncrude Canada Ltd.	730.0	-	-
02/08/2018	NuStar Energy L.P. (NYSE:NS)	NuStar GP Holdings, LLC	782.39	15.17	-
02/08/2018	Wolf Midstream Inc.	Access Pipeline Inc.	1,038.86	-	-
02/07/2018	Tallgrass Equity, LLC	Tallgrass Development, LP	644.8	-	-
01/29/2018	Mitsui & Co., Ltd. (TSE:8031)	AWE Limited	533.33	8.08	28.09
01/20/2018	Oil and Natural Gas Corporation Limited (NSEI:ONGC)	Hindustan Petroleum Corporation Limited (NSEI:HINDPETRO)	9,248.18	0.476	6.79
01/17/2018	Y.H.K. Investment Limited Partnership	Equital Ltd. (TASE:EQTL)	4,358.26	5.51	6.84
		Mean		7.6x	11.9x
		Median		6.4x	10.7x

Source: Capital IQ as of 12/31/2018



POWER GENERATION

COMPARABLE TABLES

Renewable and Cleantech Index

	TICKER	CHANGE IN STOCK PRICE		SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN
		3-MONTH	12-MONTH						REVENUES (\$M)	EBITDA (\$M)	LTM	2018E	2019E	LTM	2018E	2019E	
Renewable Energy Group, Inc.	NasdaqGS:REGI	(11%)	118%	\$25.70	79%	959	208	955	2,070	301	0.5x	0.4x	0.4x	3.2x	8.0x	7.1x	15%
Green Plains Inc.	NasdaqGS:GPPE	(24%)	(22%)	\$13.11	60%	543	1,389	1,876	3,953	127	0.5x	0.5x	0.5x	14.7x	15.4x	8.4x	3%
Polaris Infrastructure Inc.	TSX:PIF	(16%)	(46%)	\$7.55	36%	118	160	232	66	56	3.5x	3.4x	3.0x	4.1x	3.9x	3.5x	NM
Pacific Ethanol, Inc.	NasdaqCM:PEIX	(55%)	(81%)	\$0.86	18%	39	235	240	1,576	9	0.2x	0.2x	0.2x	NM	NM	3.6x	1%
Synthesis Energy Systems, Inc.	NasdaqCM:SES	(67%)	(72%)	\$0.79	20%	9	5	9	1	(7)	6.7x	NM	NM	NM	NM	NM	NM

Mean	2.3x	1.1x	1.0x	7.3x	9.1x	5.7x	6%
Median	0.5x	0.4x	0.4x	4.1x	8.0x	5.3x	3%

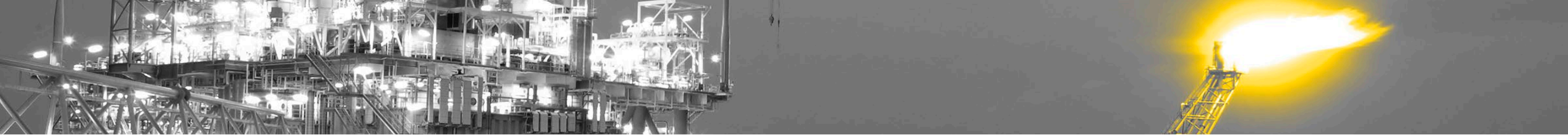
Utilities and Independent Power Producers Index

	TICKER	CHANGE IN STOCK PRICE		SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN
		3-MONTH	12-MONTH						REVENUES (\$M)	EBITDA (\$M)	LTM	2018E	2019E	LTM	2018E	2019E	
RGC Resources, Inc.	NasdaqGM:RGCO	12%	11%	\$29.96	96%	240	70	310	64	19	4.8x	4.7x	4.5x	16.6x	16.2x	15.2x	29%
Atlantic Power Corporation	TSX:ATP	1%	(9%)	\$2.17	67%	237	736	1,063	312	123	3.4x	3.8x	3.2x	8.6x	5.9x	5.9x	NM
Genie Energy Ltd.	NYSE:GNE	12%	38%	\$6.03	68%	162	3	125	288	32	0.4x	NM	NM	3.9x	NM	NM	11%
Spark Energy, Inc.	NasdaqGS:SPKE	(10%)	(40%)	\$7.43	56%	100	133	362	1,008	98	0.4x	0.4x	0.3x	3.7x	4.7x	3.4x	10%
Maxim Power Corp.	TSX:MXG	(14%)	(27%)	\$1.59	58%	85	-	38	8	(10)	4.9x	2.1x	2.5x	NM	NM	NM	NM
Etrion Corporation	TSX:ETX	(5%)	5%	\$0.21	68%	55	185	221	18	8	12.2x	9.1x	8.9x	NM	NM	NM	NM

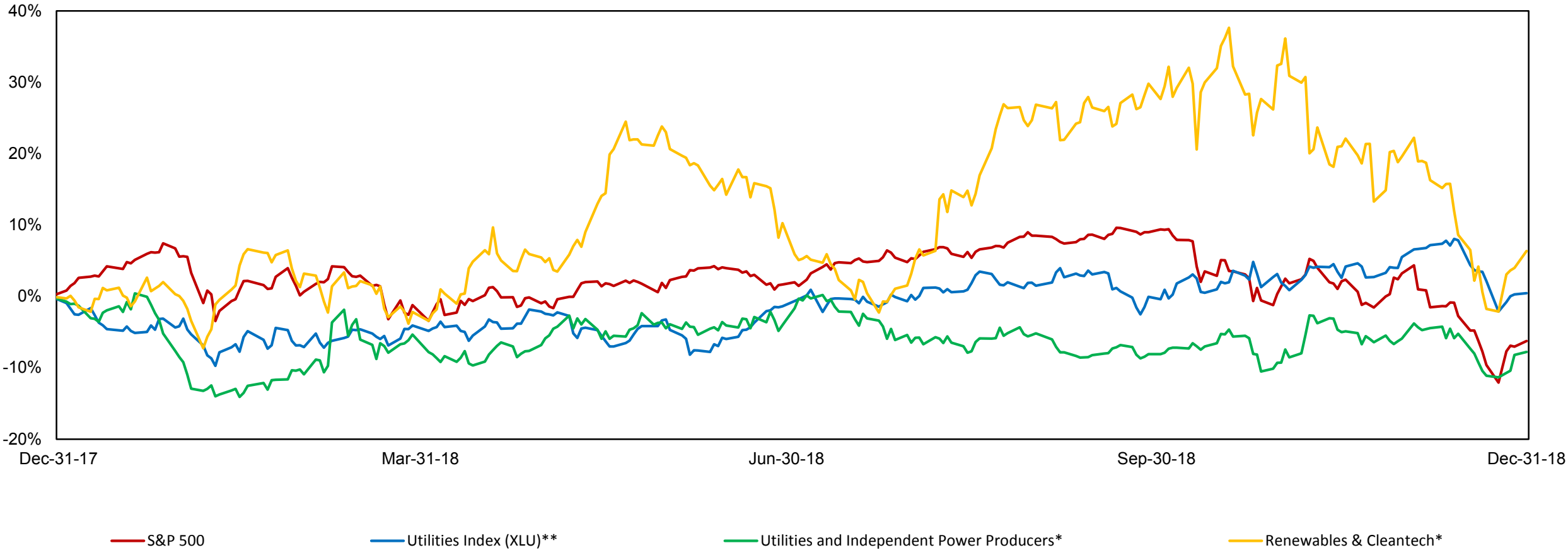
Mean	4.4x	4.0x	3.9x	8.2x	8.9x	8.2x	17%
Median	4.1x	3.8x	3.2x	6.3x	5.9x	5.9x	11%

Last twelve months (LTM) are as of Q3 2018

Source: Capital IQ as of 12/31/2018



POWER GENERATION LTM Equity Performance



* Noble Proprietary Sector (index composed of companies in the comparable table)
** SPDR S&P Utilities ETF (refer to disclosure section for more information)

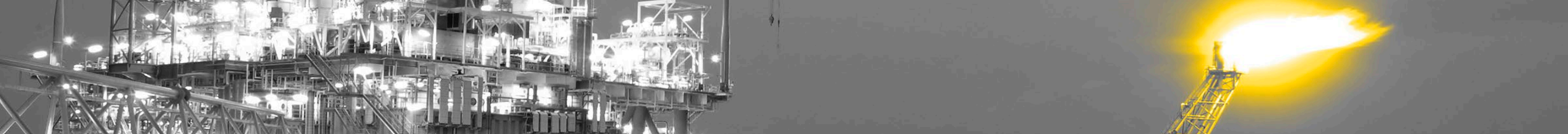
Source: Capital IQ as of 12/31/2018

POWER GENERATION

YTD GLOBAL M&A ACTIVITY

Date	Buyer	Seller	Transaction Value (\$M)	EV/Revenue	EV/EBITDA
10/16/2018	Drax Smart Generation Holdco Limited	ScottishPower Generation Limited	928.07	-	20.22
10/08/2018	Ørsted A/S (CPSE:ORSTED)	Deepwater Wind, LLC	510.0	-	-
10/02/2018	General Electric Company (NYSE:GE)	Interests in Energy Joint Ventures Renewables, Grid and Nuclear	2,999.54	-	-
09/20/2018	Consolidated Edison Development, Inc.	Sempra Solar Holdings, LLC	2,116.0	-	-
07/26/2018	Fondi Italiani per le Infrastrutture SGR SpA	RTR	1,516.21	-	10.0
06/29/2018	Samsung Asset Management Co., Ltd.	Dunkerque LNG SAS	763.62	-	-
05/31/2018	Sembcorp Industries Ltd (SGX:U96)	UK Power Reserve Limited	451.85	4.25	-
04/18/2018	TOTAL S.A. (ENXTPA:FP)	Direct Energie Société Anonyme	633.9	1.31	18.13
04/18/2018	TOTAL S.A. (ENXTPA:FP)	Direct Energie Société Anonyme	2,893.37	1.3	17.98
04/17/2018	Fluxys Belgium SA (ENXTBR:FLUX);	DESFA S.A.	660.41	-	4.58
04/17/2018	Enel Brasil Investimentos Sudeste, S.A.	Eletropaulo Metropolitana Eletricidade de São Paulo S.A.	2,982.5	0.748	10.29
04/04/2018	-	Mytrah Energy Limited	1,265.0	2.31	7.69
04/02/2018	Atlas Renewable Energy	Vega Solar 6, S.A.P.I. de C.V.	1,300.0	-	-
03/23/2018	Elia System Operator SA (ENXTBR:ELI)	Eurogrid International CVBA/SCRL	1,221.47	-	-
03/11/2018	E.ON Verwaltungs SE	innogy SE (DB:IGY)	2,232.3	0.941	9.26
03/01/2018	-	Snowy Hydro Limited	5,478.22	3.07	11.1
02/27/2018	ContourGlobal plc (LSE:GLO)	Acciona Termosolar S.A.U.	1,210.67	6.73	8.99
02/22/2018	CVC Capital Partners Limited; Corporación Financiera Alba	Naturgy Energy Group, S.A. (BME:NTGY)	4,701.63	1.66	10.3
02/07/2018	Global Infrastructure Partners	Clearway Energy Group LLC	1,348.0	-	-
02/07/2018	TerraForm Power, Inc. (NasdaqGS:TERP)	Saeta Yield, S.A.	3,222.05	7.3	9.71
02/05/2018	Capital Dynamics, Inc.	8point3 Energy Partners LP	1,681.75	23.45	16.93
12/26/2017	China Southern Power Grid International (HK) Co., Limited	Transelec S.A.	1,300.0	15.56	19.55
12/21/2017	Adani Transmissions Limited (BSE:539254)	Adani Electricity Mumbai Ltd.	2,937.27	-	-
12/06/2017	Datang International Power Generation Co., Ltd. (SEHK:991)	Datang Hebei Power Generation Co., Ltd.	671.63	-	-
12/06/2017	Datang International Power Generation Co., Ltd. (SEHK:991)	Datang Anhui Power Generation Co., Ltd.	1,179.91	-	-
12/06/2017	Datang International Power Generation Co., Ltd. (SEHK:991)	Datang Heilongjiang Power Generation Co., Ltd.	2,519.16	-	-
11/23/2017	Alinta Energy	Loy Yang B Power Station Pty. Ltd.	914.91	-	-
11/01/2017	Algonquin Power & Utilities Corp. (TSX:AQN)	Atlantica Yield plc (NasdaqGS:AY)	622.6	8.3	11.92
10/30/2017	Innervex Renewable Energy Inc. (TSX:INE)	Alterra Power Corp.	759.05	10.61	30.96
10/30/2017	Vistra Energy Corp. (NYSE:VST)	Dynegy Inc.	11,088.15	2.11	10.36
10/26/2017	CELSIA S.A. E.S.P. (BVC:CELSIA)	Empresa de Energia del Pacifico S.A. E.S.P. (BVC:EPSA)	1,243.93	19.6	53.55
10/25/2017	Public Sector Pension Investment Board; Global Infrastructure Partners	Vena Energy	5,000.0	-	-
09/26/2017	Fortum Participation Limited	Uniper SE (XTRA:UN01)	12,899.23	0.143	13.06
08/28/2017	Enel Chile S.A. (SNSE:ENELCHILE)	Enel Generación Chile S.A. (SNSE:ENELGXCH)	2,672.38	3.4	9.01
08/18/2017	Canada Pension Plan, Access Industries, Inc.; Energy Capital	Calpine Corporation	17,337.72	2.16	11.02
07/10/2017	Evergy, Inc. (NYSE:EVERG)	Great Plains Energy Incorporated	16,385.24	3.64	8.83
03/31/2017	China Gezhouba Group Overseas Investment Co., Ltd	Sistema Produtor São Lourenço S.A.	920.27	2.17	12.8
01/25/2017	AltaGas Ltd. (TSX:ALA)	WGL Holdings, Inc.	6,647.41	2.83	15.25
01/23/2017	State Grid Brazil Power Participações Ltda.	CPFL Energias Renováveis S.A. (BOVESPA:CPRE3)	1,074.46	6.79	10.65
09/09/2016	Equinor ASA (OB:EQNR)	Scira Offshore Energy Limited	739.94	-	-
		Mean		5.7x	14.5x
		Median		3.1x	11.0x

Source: Capital IQ as of 12/31/2018



ENERGY SERVICES

COMPARABLE TABLES

Oilfield Services Index

	TICKER	CHANGE IN STOCK PRICE		SHARE PRICE	% OF	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN	
		3-MONTH	12-MONTH		52 WEEK HIGH				REVENUES (\$M)	EBITDA (\$M)	LTM	2018E	2019E	LTM	2018E	2019E		
Tidewater Inc.	NYSE:TDW	(39%)	(22%)	\$19.13	53%	695	443	676	339	(29)	2.0x	1.7x	NM	NM	NM	8.6x	NM	
Newpark Resources, Inc.	NYSE:NR	(34%)	(20%)	\$6.87	59%	624	188	760	903	94	0.8x	0.8x	0.7x	NM	6.9x	5.6x	10%	
Hi-Crush Partners LP	NYSE:HCLP	(67%)	(67%)	\$3.58	22%	361	445	630	897	260	0.7x	0.7x	0.8x	2.4x	2.9x	4.5x	29%	
ION Geophysical Corporation	NYSE:IO	(67%)	(74%)	\$5.18	16%	73	121	165	163	17	1.0x	0.9x	0.7x	9.7x	4.2x	2.3x	10%	
Hornbeck Offshore Services, Inc.	NYSE:HOS	(76%)	(54%)	\$1.44	23%	54	1,084	1,030	215	23	4.8x	4.8x	3.7x	NM	NM	NM	11%	
Emerge Energy Services LP	NYSE:EMES	(61%)	(79%)	\$1.54	15%	48	200	245	375	63	0.7x	0.7x	0.8x	3.9x	4.7x	4.4x	17%	
Key Energy Services, Inc.	NYSE:KEG	(82%)	(82%)	\$2.07	11%	42	244	243	521	24	0.5x	0.5x	0.4x	NM	NM	5.0x	NM	
											Mean	1.5x	1.5x	1.2x	5.3x	4.7x	5.1x	15%
											Median	0.8x	0.8x	0.8x	3.9x	4.4x	4.8x	11%

Drillers Index

	TICKER	CHANGE IN STOCK PRICE		SHARE PRICE	% OF 52 WEEK HIGH	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN	
		3-MONTH	12-MONTH						REVENUES (\$M)	EBITDA (\$M)	LTM	2018E	2019E	LTM	2018E	2019E		
Ensign Energy Services Inc.	TSX:ESI	(27%)	(32%)	\$3.51	45%	551	597	1,087	836	134	1.3x	1.0x	0.9x	8.1x	4.6x	4.1x	16%	
Precision Drilling Corporation	NYSE:PDS	(50%)	(42%)	\$1.74	42%	510	1,314	1,675	1,131	255	1.5x	1.1x	1.0x	6.6x	4.9x	3.9x	23%	
Independence Contract Drilling, Inc.	NYSE:ICD	(37%)	(22%)	\$3.12	57%	236	69	302	105	17	2.9x	2.2x	1.1x	NM	10.3x	3.5x	16%	
AKITA Drilling Ltd.	TSX:AKT.A	(35%)	(49%)	\$2.98	36%	119	58	165	66	(12)	2.5x	1.2x	0.7x	NM	NM	4.6x	NM	
Pioneer Energy Services Corp.	NYSE:PES	(58%)	(60%)	\$1.23	19%	96	464	508	575	80	0.9x	0.9x	0.8x	6.3x	6.0x	5.2x	14%	
Western Energy Services Corp.	TSX:WRG	(48%)	(67%)	\$0.33	23%	30	174	193	186	25	1.0x	0.8x	0.8x	7.7x	5.7x	4.6x	13%	
											Mean	1.7x	1.2x	0.9x	7.2x	6.3x	4.3x	16%
											Median	1.4x	1.0x	0.9x	7.2x	5.7x	4.4x	16%

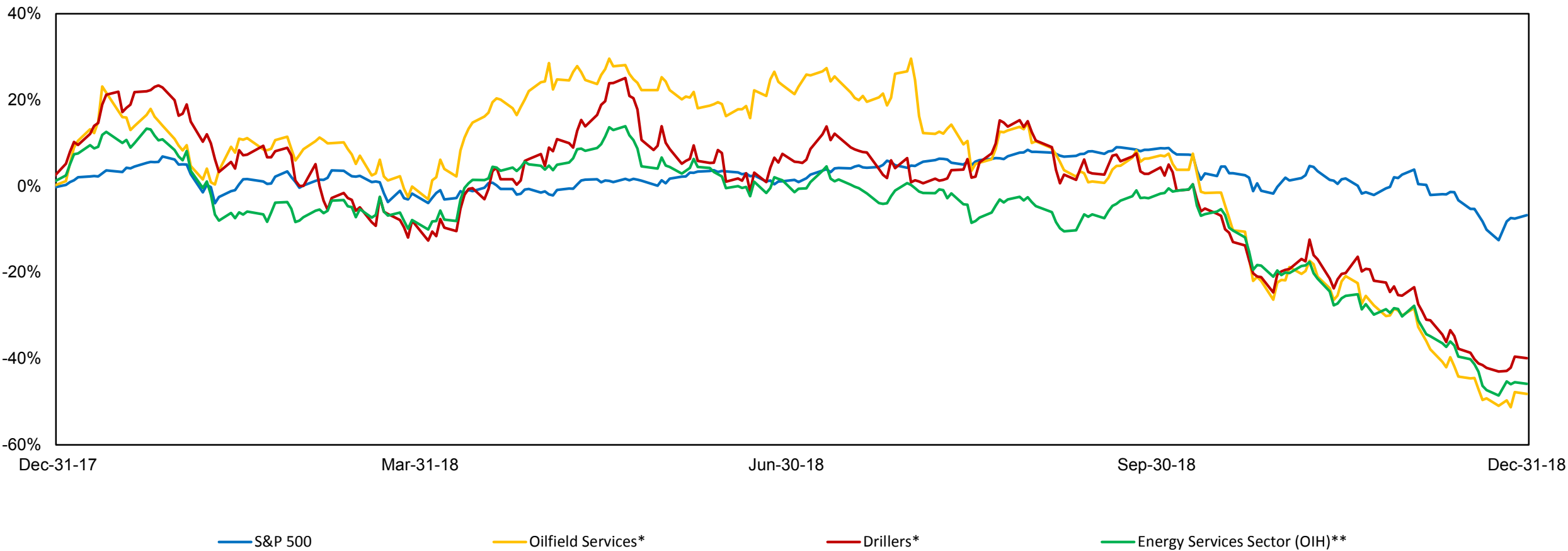
Last twelve months (LTM) are as of Q3 2018

Source: Capital IQ as of 01/04/2019



ENERGY SERVICES LTM EQUITY PERFORMANCE

(NOBLE INDEX SELECTION)



* Noble Proprietary Sector (index composed of companies in the comparable table)
** SPDR S&P Oil & Gas Equipment & Services ETF (refer to disclosure section for more information)

Source: Capital IQ as of 12/31/2018

ENERGY SERVICES YTD GLOBAL M&A ACTIVITY

Date	Buyer	Seller	Transaction Value (\$M)	EV/Revenue	EV/EBITDA
12/13/2018	Mistras Group, Inc. (NYSE:MG)	Onstream Pipeline Inspection Ltd.	142.12	5.32	-
11/16/2018	Forbes Energy Services, LLC	Cretic Energy Services, LLC	67.5	-	-
11/12/2018	Tallgrass Energy, LP (NYSE:TGE)	NGL Water Solutions Bakken, LLC	91.0	-	-
11/02/2018	Petrobras Argentina S.A.	Bolland y Cia. S.A.	126.08	-	-
10/30/2018	Magseis Fairfield ASA (OB:MSEIS)	WGP Group Ltd/Seismic Technologies Business of Fairfield	298.09	-	-
10/29/2018	Enservco Corporation (AMEX:ENSV)	Adler Hot Oil Service, LLC.	12.5	0.676	4.31
10/22/2018	KLX Energy Services LLC	Motley Services LLC	148.2	1.5	5.55
10/15/2018	The Carlyle Group L.P. (NasdaqGS:CG)	EnerMech Limited	591.58	1.68	13.95
10/15/2018	Nine Energy Service, Inc. (NYSE:NINE); Nine Energy Canada Inc.	Magnum Oil Tools International, LTD	536.94	5.97	23.35
10/05/2018	Nuverra Environmental Solutions, Inc. (AMEX:NES)	Clearwater Solutions, LLC	41.9	-	-
09/04/2018	Transocean Ltd. (NYSE:RIG)	Ocean Rig UDW Inc.	3,323.79	3.66	7.4
09/04/2018	Altamont Capital Partners	100% of The Bayou Companies, LLC	50.0	-	-
08/21/2018	Tekmar Group plc (AIM:TGP)	Subsea Innovation Limited	5.14	2.0	-
08/20/2018	High Arctic Energy Services Inc (TSX:HWO)	Powerstroke Well Control Ltd	7.19	-	-
07/26/2018	BT Investment Pte. Ltd.	CH Offshore Ltd (SGX:C13)	14.67	7.28	-
07/23/2018	Hi-Crush Partners LP (NYSE:HCLP)	FB Industries Inc.	58.88	-	-
07/19/2018	Independence Contract Drilling, Inc. (NYSE:ICD)	Sidewinder Drilling, LLC	303.16	2.63	45.09
07/17/2018	Centerbridge Partners, L.P.	Seitel, Inc.	292.02	3.05	4.12
07/16/2018	Tidewater Inc. (NYSE:TDW)	Gulfmark Offshore, Inc.	433.34	3.75	-
07/13/2018	Vertex Resource Group Ltd. (TSXV:VTX)	Three Star Trucking Ltd.	13.8	-	-
06/21/2018	TWMA Group Ltd.	Dynamic Oilfield Services, Inc	13.25	-	-
06/05/2018	AKITA Drilling Ltd. (TSX:AKT.A)	Xtreme Drilling Corp.	160.94	2.84	162.39
05/03/2018	Petroalanza International Ltd.	Lupatech OFS S.A.S.	1.65	-	-
04/16/2018	Daseke Companies, Inc.	Aveda Transportation and Energy Services Inc. (TSXV:AVE)	117.68	0.675	8.66
03/29/2018	Public Joint Stock Company "Chelyabinsk Pipe-Rolling Plant"	OOO RIMERA-Service	93.31	-	-
03/26/2018	AMOS Group Limited (SGX:RF7)	Amos International Holdings Pte. Ltd.	33.09	0.77	33.34
03/15/2018	Haimo Technologies Group Corp. (SZSE:300084)	Xi'An Sitan instruments CO.,LTD	13.29	3.37	11.89
03/05/2018	Oceaneering International, Inc. (NYSE:OII)	Ecosse Subsea Systems Limited	69.34	1.79	7.14
03/01/2018	Subsea 7 S.A. (OB:SUBC)	Siem Offshore Contractors GmbH	109.72	1.01	-
02/28/2018	Oil States International, Inc. (NYSE:OIS)	Falcon Flowback Services, LLC	85.0	-	-
02/22/2018	STEP Energy Services Ltd. (TSX:STEP)	Tucker Energy Services Holdings, Inc.	275.0	-	-
02/21/2018	Borr Drilling Limited (OB:BDRILL)	Paragon Offshore Ltd.	220.2	-	-
02/14/2018	TETRA Technologies, Inc. (NYSE:TTI)	Swiftwater Energy Services, LLC	81.89	-	-
02/07/2018	BNN Water Solutions, LLC	Buckhorn Energy Services, LLC	95.0	-	-
01/30/2018	-	Sino Geophysical Co., Ltd (SZSE:300191)	54.17	73.97	-
01/17/2018	-	GI Technologies Group Co., Ltd. (SZSE:300309)	78.07	13.24	27.06
01/17/2018	MATRRIX Energy Technologies Inc. (TSXV:MXX)	D2 Drilling Inc.	2.56	-	-
01/12/2018	-	Crescent Services, LLC	7.3	-	-
01/02/2018	Archrock, Inc. (NYSE:AROC)	Archrock Partners, L.P.	1,987.17	4.31	10.46
01/02/2018	Chart Industries, Inc. (NasdaqGS:GTLS)	Skaft Cryogenics, Inc.	12.5	-	-
Mean				7.0x	26.1x
Median				2.9x	11.2x

Source: Capital IQ as of 12/31/2018



MINERAL ENERGY

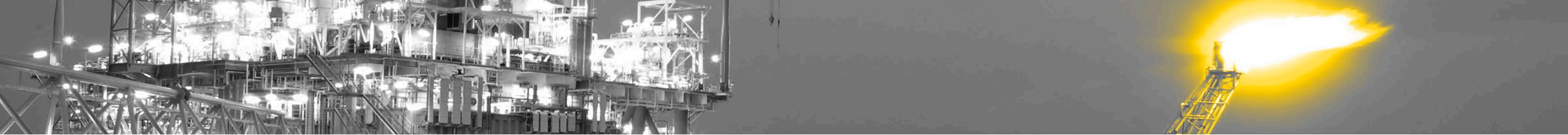
COMPARABLE TABLES

Mineral Energy Index

	TICKER	CHANGE IN STOCK PRICE		SHARE PRICE	% OF	MARKET CAP (\$M)	TOTAL DEBT (\$M)	ENT. VALUE (\$M)	LTM		EV / REVENUE			EV / EBITDA			EBITDA MARGIN	
		3-MONTH	12-MONTH		52 WEEK HIGH				REVENUES (\$M)	EBITDA (\$M)	LTM	2018E	2019E	LTM	2018E	2019E		
Foresight Energy LP	NYSE:FELP	(12%)	(20%)	\$3.50	76%	510	1,449	1,916	1,083	351	1.8x	2.1x	1.7x	5.5x	6.6x	5.8x	32%	
Energy Fuels Inc.	AMEX:UUUU	(13%)	59%	\$2.85	70%	258	17	238	33	(15)	7.3x	5.4x	4.6x	NM	NM	NM	NM	
Fission Uranium Corp.	TSX:FCU	(25%)	(36%)	\$0.40	44%	192	NM	175	NM	(4)	NM	NM	NM	NM	NM	NM	NM	
Ur-Energy Inc.	TSX:URE	(20%)	(5%)	\$0.65	55%	104	16	108	24	7	4.6x	2.8x	4.2x	14.6x	7.3x	NN	31%	
Corsa Coal Corp.	TSXV:CSO	(51%)	(67%)	\$0.53	23%	51	37	123	294	65	0.4x	0.5x	0.4x	1.9x	2.4x	3.4x	22%	
Cloud Peak Energy Inc.	NYSE:CLD	(84%)	(92%)	\$0.37	6%	28	407	325	843	71	0.4x	0.4x	0.4x	4.6x	3.0x	5.1x	8%	
											Mean	2.9x	2.2x	2.3x	6.6x	4.8x	4.8x	24%
											Median	1.8x	2.1x	1.7x	5.0x	4.8x	5.1x	27%

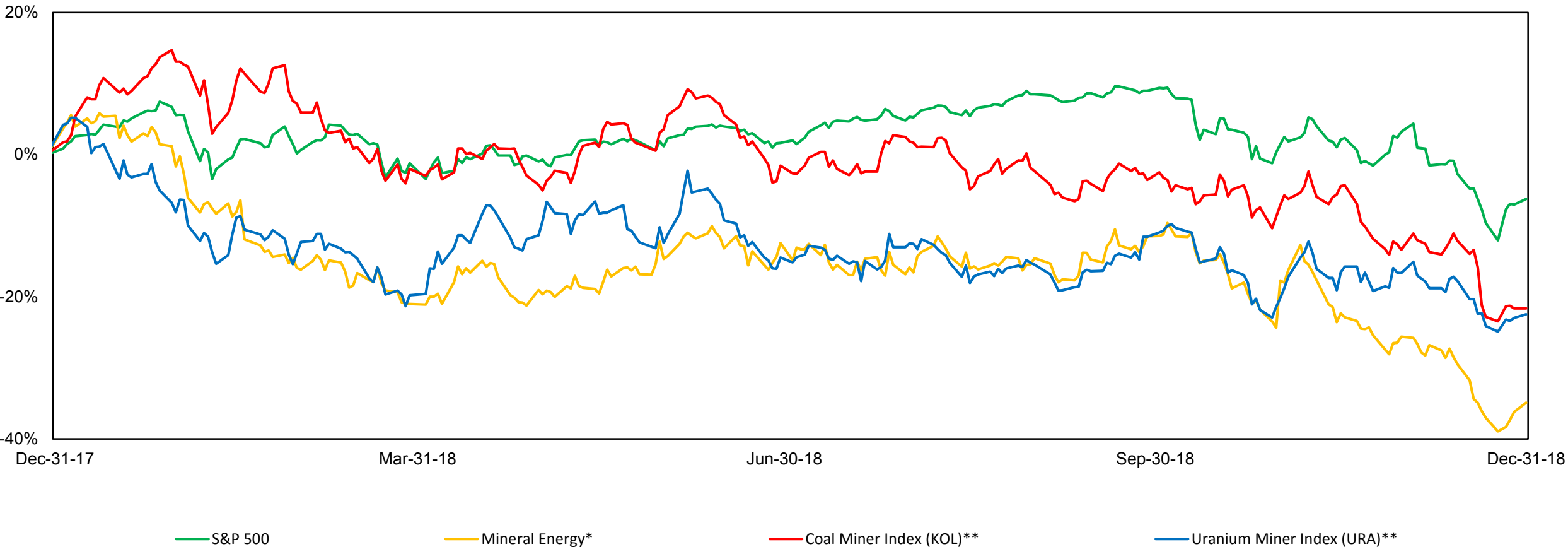
Last twelve months (LTM) are as of Q3 2018

Source: Capital IQ as of 12/31/2018



MINERAL ENERGY LTM EQUITY PERFORMANCE

(NOBLE INDEX SELECTION)



* Noble Proprietary Sector (index composed of companies in the comparable table)
** VanEck Vectors Coal ETF (refer to disclosure section for more information)

Source: Capital IQ as of 12/31/2018



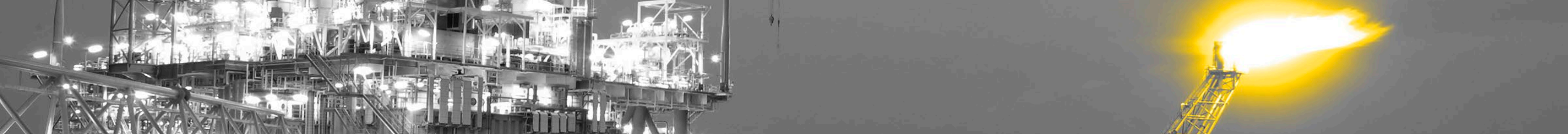
MINERAL ENERGY

YTD GLOBAL M&A ACTIVITY

Date	Buyer	Seller	Transaction Value (\$M)	EV/Revenue	EV/EBITDA
10/03/2018	-	URU Metals Limited (AIM:URU)	-	-	-
08/01/2018	Paladin Energy Limited (ASX:PDN)	Summit Resources Limited	5.78	-	-
06/27/2018	Canyon Coal (Pty) Ltd	Kangra Coal Proprietary Limited	40.0	-	-
06/13/2018	-	Vimy Resources Limited (ASX:VMY)	-	-	-
05/07/2018	Azarga Uranium Corp. (TSX:AZZ)	URZ Energy Corp.	13.38	-	-
04/23/2018	Green Thumb Industries Inc. (CNSX:GTII)	Bayswater Uranium Corporation	-	-	-
02/14/2018	Global X Management Company LLC; Global X Funds	Mega Uranium Ltd. (TSX:MGA)	0.036	-	-
02/08/2018	enCore Energy Corp. (TSXV:EU)	Metamin US Inc.	0.163	-	-
01/24/2018	Redveyd, OOO	Krasnobrodskiy Yuzhny Llc	-	-	-
		Mean		NM	NM
		Median	-	NM	NM

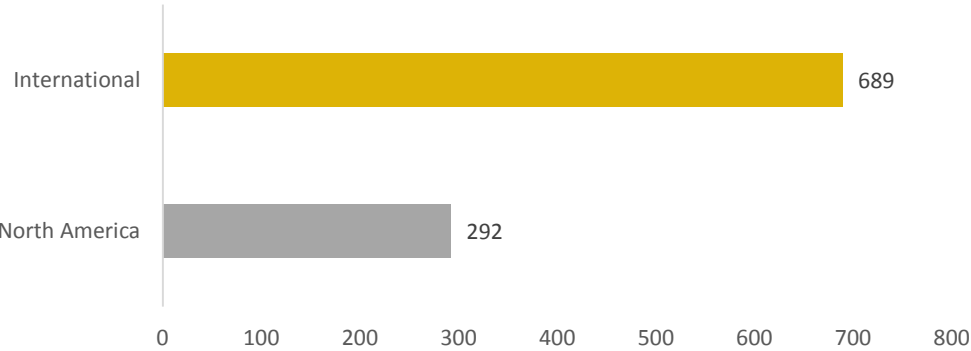
Last twelve months (LTM) are as of Q3 2018

Source: Capital IQ as of 12/31/2018

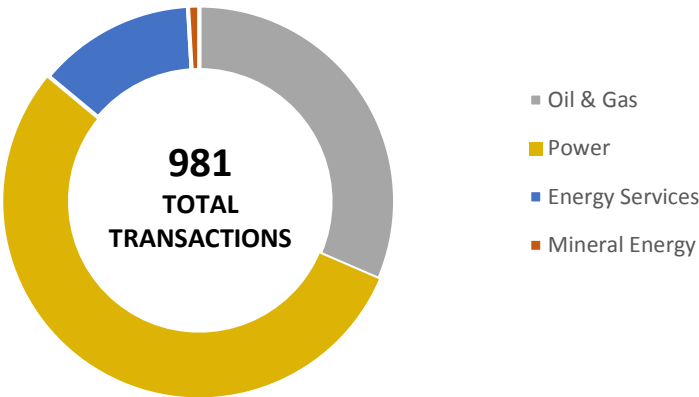


LTM ENERGY INDUSTRY M&A SUMMARY

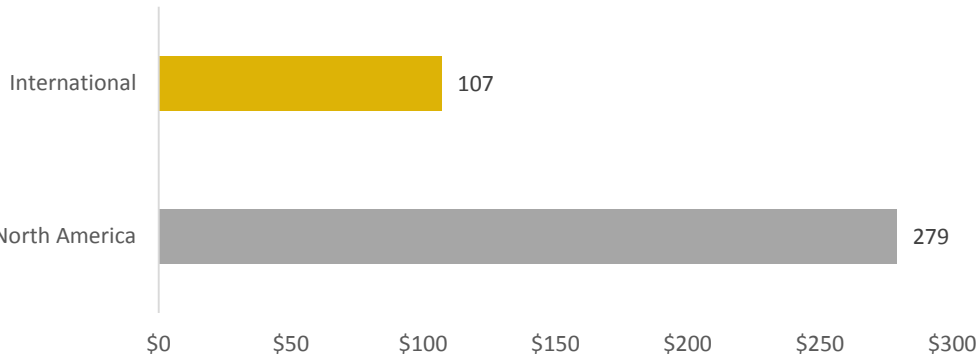
NORTH AMERICA VS INTERNATIONAL
TOTAL TRANSACTIONS *(Number of transactions)*



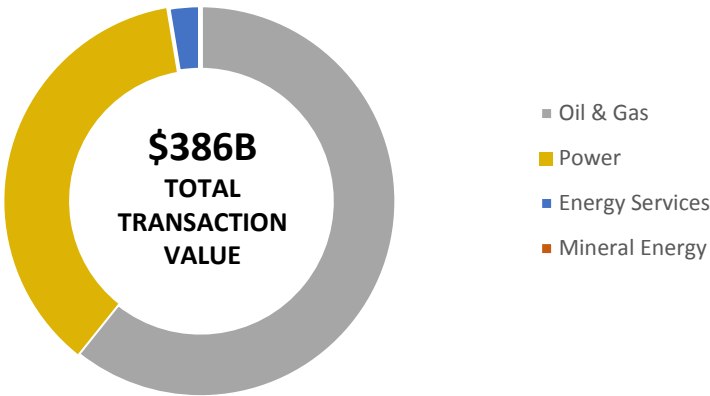
DEAL VALUE PER SECTOR
(Number of transactions)



NORTH AMERICA VS INTERNATIONAL
TOTAL TRANSACTIONS *(Values in \$B)*



TOTAL TRANSACTION VALUE



Source: Capital IQ as of 12/31/2018



NOBLE QUARTERLY HIGHLIGHTS

Lonestar Resources US (NASDAQ:LONE)

Industry: Energy – Exploration and Production

Lonestar Resources US is an oil and gas exploration and production company based in Fort Worth, Texas. The Company's primary focus is in the exploration, production, and acquisition of unconventional oil and gas reserves in the Eagle Ford Shale. Lonestar has a footprint of over 63,000 acres spread across the Western Eagle Ford, Central Eagle Ford, and Eastern Eagle Ford regions.

4th Quarter News Highlights:

- **12/19/2018** – Hedge Position: The Company entered into NYMEX swaps for the first quarter of 2019 of 15,000 Mcf/d at an average price of \$3.78 per MMBTU. Lonestar currently has a WTI swap position totaling 6,000 bbl/d at an average price of \$53.88.
- **11/19/2018** – Sooner Acquisition: Lonestar extended their Eagle Ford position by acquiring 2,706 acres for \$38.7 MM. Sooner currently produces 800 boe/d from 20 wells and has proven reserves of 13.7 MMBOE.



InPlay Oil Corp. (TSX:IPO)

Industry: Energy – Development and Production

InPlay Oil Corp. is a growth-oriented light oil development and production company based in Calgary, Alberta. InPlay's primary focus is on large oil in place pools with low recovery factors, low declines, and long life reserves targeting the Cardium Formation in Alberta. Core projects are focused on light oil production and development in the prolific Willesden Green and Pembina basins. They also projects in the Duvernay and Mannville formation. The Company owns nearly 100,000 net acres.

4th Quarter News Highlights:

- **12/28/2018** – Undervalued: On an EV/NPV basis, InPlay is deeply undervalued relative to its peers. The Company currently boasts a NPV of \$3.80/share and the company traded at a deep discount of \$0.83 CAD on this day.
- **11/12/2018** – Capital Expenditures: InPlay plans to deploy the majority of its remaining budgeted development capital in the fourth quarter of 2018 into its Willesden Green area.



Rosehill Resources Inc. (NASDAQ:ROSE)

Industry: Energy – Exploration and Production

Rosehill Resources Inc. is an oil and gas exploration and production company based in Houston, Texas. The Company's primary focus is in the growing production and reserves in the core of the Delaware Basin, through drilling and bolt-on acquisitions. Rosehill has a footprint of over 11,000 acres spread across the Northern and Southern Delaware Basin.

4th Quarter News Highlights:

- **12/20/2018** – 2019 Guidance: Rosehill Resources announced production guidance for 2019 of 20 – 21.5 Mboe/D. The Company estimated 2019 adjusted EBITDAX of \$210-\$230 million, up over 20% compared to midpoint of 2018 guidance.
- **11/08/2018** – The Company announced Q3 results with average production of 19,750 net boe/d. Rosehill announced adjusted EBITDAX of \$56.7 million, an increase of 15% over Q2'18.



Source: Company Press Releases

$$R + (e^2 + p^2) = \text{NF}$$

NOBLE CAPITAL MARKETS

NOBLE CAPITAL MARKETS

NOBLE CAPITAL MARKETS is a research-driven investment and merchant bank focused on small cap, emerging growth companies in the healthcare, technology, ENERGY and natural resources sectors. That's what we are. Who we are is what makes us different.

Our people are talented, dedicated, experienced professionals who come together with a common cause; advising on long-term client solutions by employing innovative, collaborative and responsive strategies. We're passionate and personable. We approach things from our clients' perspective.

We know that developing lasting relationships is reliant upon putting our clients' interests before ours. We understand the impact of our services. Insightful advisory and effective capital procurement can change lives. Empowering our clients to create employment, engineer technological and medical breakthroughs, producing products and services that lay the foundation for the future. For more than 30 years these have been our guiding principles. While much has changed over the three decades since we began, these core values and our reputation have not. Our clients must know what to expect from us. Then we can strive to exceed expectations.

A SIMPLE FORMULA OUR VALUE PROPOSITION.

It starts with research With a fundamental belief that information guides the management process, NOBLE understands that there is no short-path to success. With this as a solid foundation, apply experience and execution delivered by people with passion. This is our formula to add value to your creation.

Research + Experience & Execution + People with Passion = Value

FULL-SERVICE INVESTMENT BANK

- Established 1984.
- Private firm, employee owned.
- Built on commitment to provide value and support for our clients.

FOCUSED INSTITUTIONAL SALES AND TRADING

- Seasoned sales and sales trading team.
- Long standing relationships with premier growth- focused investors.

INVESTMENT BANKING COMMITMENT

- Proven track record.
- Senior level attention to every client and transaction.
- Ability to deliver complete "mind share" of NOBLE on all transactions.

RESEARCH DRIVEN CAPITAL MARKETS PLATFORM

- Experience team of Research Analysts covering approximately 100 companies.
- Focus on Technology, Media, Healthcare and Natural Resources.
- Strong Institutional Sponsorship.

$$R + (e^2 + p^2) = \gamma f$$

INVESTMENT BANKING

Our investment banking team, together with our well-recognized equity research analysts and the equity capital markets group, provide our clients with fundamental capital markets advisory and support - prior, during and most importantly, after a transaction. NOBLE's investment banking team works closely with the management and Board of our corporate clients in order to fully understand operational and financial objectives. With this knowledge our banking team will develop an efficient and effective advisory program which offers a variety of services including:

EQUITY CAPITAL MARKETS

- Secondary and Follow-on Offerings
- Registered Direct Offerings
- Initial Public Offerings
- At the market Offerings (ATM's)
- PIPEs/Private Sale Offerings

DEBT CAPITAL MARKETS

- Senior Debt
- Mezzanine
- Convertible Debt
- Bridge Financings

ADVISORY SERVICES

- Merger & Acquisitions
- Fairness Opinions
- Valuation Services

SELECT NATURAL RESOURCES TRANSACTIONS

 SAILFISH <small>ROYALTY CORP.</small> (TSX-V: FISH)	 ORCHLIGHT <small>ENERGY</small> (TRCH)	 SIERRA METALS	 MARLIN <small>GOLD MINING LTD.</small> (MLN)	 SES <small>SYNTHESIS ENERGY SYSTEMS</small> (SYM)	 AVINO SILVER & GOLD MINES LTD. (ASM)	 PETROSHARE (PRHR)
Restructuring Advisory	Advisory	\$55,000,000	Advisory	Advisory	\$800,000	\$4,600,000
Fairness Opinion	Corporate Advisory	At-The-Market Offering (ATM) Agent	Corporate Advisory	Corporate Advisory	Private Placement of Registered Securities Sole Placement Agent	Initial Public Offering (IPO) Lead Underwriter
						
August 2018	March 2018	October 2017	February 2017	January 2017	March 2016	November 2015

$$R + (e^2 + p^2) = \pi$$

VALUATION SERVICES

NOBLE's Valuation and Advisory Services team specializes in providing business and intangible asset valuations, fairness opinions, financial and strategic analysis, and transaction support services covering a broad spectrum of industries and situations from early stage, middle market and Fortune 500 companies and capital market constituents. NOBLE's team is made up of professionals with numerous accreditations and bring excellence in accounting, taxation, and financial due diligence to provide companies with valuation advice for a multitude of purposes.

Valuation – NOBLE's professionals have significant experience in the valuation of privately owned and public businesses across a wide range of industries. We perform an extensive analysis of the business as well as evaluate industry trends and various other factors in order to inform our clients as to the likely range of value they can expect. Our services are characterized by intellectual and analytical rigor and our conclusions are backed by thorough documentation.

Chief Accounting Officers, Corporate Controllers, CFOs, and Corporate Boards rely on Noble's experienced valuation professionals to produce sophisticated, supportable, and timely valuations to assist in complying with financial reporting requirements, including:

- Purchase price allocation and fresh start accounting
- Goodwill and long-lived asset impairment testing
- Tangible asset valuation
- Fair Value measurement of financial assets & liabilities

Opinions - Whether our clients are looking to fulfill their fiduciary duties, mitigate risk or determine corporate value, we are there throughout the transaction process to offer objective advice based on rigorous analysis. We work on behalf of boards of directors, investors, trustees and other corporate leaders to advise and provide opinions on a wide range of transactions.

We have advised Corporate Boards, special transaction committees, independent trustees, management and other fiduciaries of middle market public and private companies on the financial aspects of a transaction. Our independent advice withstands scrutiny from shareholders, bondholders, the SEC, IRS, or counterparties to a transaction

MERCHANT BANKING

Our Principal Investment focus is primarily on private and small-cap public (\$10mill to \$50mill market caps) companies in industries within NOBLE's research verticals. Investments are made directly by NOBLE and its affiliates and may also involve syndicate participants. We work to identify those companies with game-changing or superior products and technologies that have management teams with proven track-records of success. NOBLE structures investments to meet a company's capital needs whether its growth capital, liquidity or debt repayment. Capital commitment ranges from \$200k to \$2million principal and \$2million above with syndicate.

The scope of our Merchant Banking activities includes:

- Targeting domestic companies within our areas of focus and expertise
- Analyzing a company's opportunities and assessing its risks within their respective industry
- Structuring, negotiating and executing the transaction
- Work in assessing the appropriate time and manner in which to harvest the investment

NOBLE's Merchant Banking Team works continuously with our portfolio companies to assist the management team and Board of Directors to create value and grow their businesses to facilitate long-term shareholder value. Through our extensive sector research coverage, institutional investor non-deal road shows, equity conferences and market making, we blend a powerful mix of capital markets acumen to procure success.

$$R + (e^2 + p^2) = \gamma f$$

INVESTMENT BANKING TEAM

Richard Giles, Managing Director

rgiles@noblecapitalmarkets.com – 617.692.9346

- Joined NOBLE in 2010 as Head of the Technology, Media & Telecommunications Investment Banking Group
- 25 years of investment banking experience.
- Executed more than 100 M&A and capital raising transactions totaling \$10+ billion
- Former head of Stifel Nicolaus' Technology Group.
- Former head of A.G. Edwards' Emerging Growth Group and member of Investment Committee for A.G. Edwards Capital
- A.B. Harvard College; M.B.A., Harvard Business School

Francisco Penafiel, Managing Director

fpenafiel@noblecapitalmarkets.com – 561.994.5740

- Executed M&A and capital raising transactions totaling over \$1 billion dollars in value
- 7 years of sell side equity research experience, covering enterprise & infrastructure software, business services, media, communications, and banks
- 6 years of portfolio managing experience
- Manage the business development efforts in LATAM for NOBLE
- Engineering, IT & Statistics, Escuela Superior Politecnica (Guayaquil, Ecuador); M.S. Economics, Florida Atlantic University

Juan Arvelo, Director

jarvelo@noblecapitalmarkets.com – 561.994.5731

- More than 18 years of corporate finance and capital markets experience, with a special focus on M&A, restructuring and capital raising transactions.
- Previous Director at Enkeros Investments and Activa Capital Markets
- Former CFO of LS Energia
- Main focus in the QSR, financial institutions and energy sectors
- Managed corporate finance and recoveries division at PricewaterhouseCoopers (PwC)
- B.S. Economics UCAB; M.S. Finance IESA; MBA Babson College

Joseph Hain - Director

jhain@noblecapitalmarkets.com – 561.999.2265

- Prior experience holding senior positions at Robotti & Company, Wynston Hill Capital, SternAegis Ventures, WestPark Capital, and Tejas Securities
- Experience working with institutional, retail and HNW clients
- B.S. SUNY Albany with concentration in Biology, Chemistry, and Physics
- Holds various FINRA licenses

Brittnee Fatigate, Analyst

bfatigate@noblecapitalmarkets.com – 561.999.2264

- Joined Noble Capital Markets in January 2017
- Has completed multiple M&A and capital raising assignments, accounting for nearly \$150 million+ of transaction value
- Held previous position as an accounting assistant at a privately held manufacturing company
- B.S. Finance, Florida Atlantic University

Adam Carey, Analyst

acarey@noblecapitalmarkets.com – 561.998.5482

- Joined Noble Capital Markets in October 2018
- Previously worked as a private equity analyst at Northern Capital Partners
- B.S. Finance and Applied Economics, University of Minnesota, Twin Cities

$$R + (e^2 + p^2) = \text{tr}$$

SALES & TRADING

Dan Pollitt

Head of Institutional Equity Trading

dpollitt@noblecapitalmarkets.com – 561.998.5483

Vincent Gioeni

Director of Institutional Sales

vgioeni@noblecapitalmarkets.com – 561.998.5473

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NOBLE CAPITAL MARKETS

225 NE Mizner Boulevard, Suite 150

Boca Raton, Florida 33432

Phone: 561-994-1191

Fax: 561-994-5741

www.nobleresearch.com

