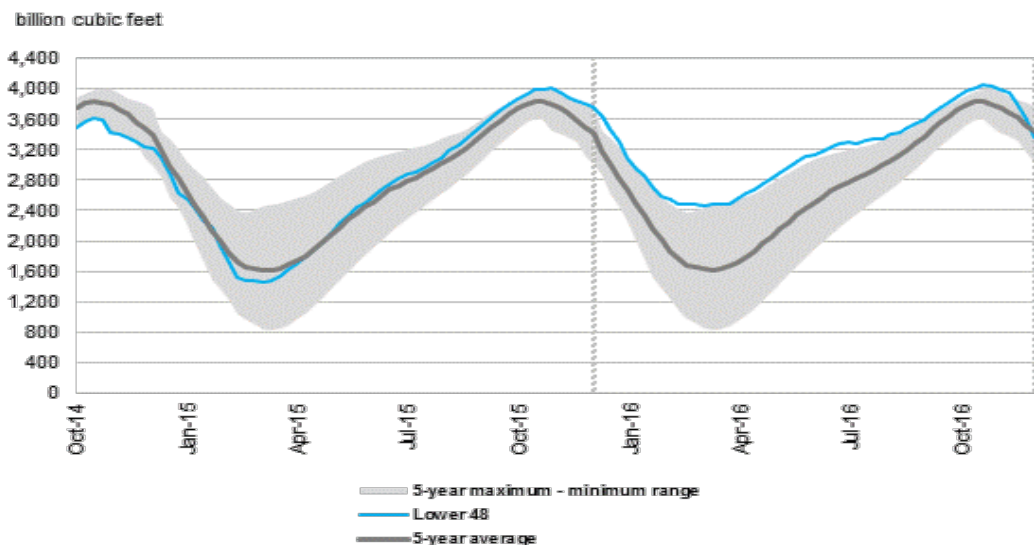


Natural Gas Storage Trend Reverses

Working gas in underground storage compared with the 5-year maximum and minimum



Source: U.S. Energy Information Administration

Summary and Recommendation

At the end of 2016 and the beginning of 2017 the telltale natural gas storage chart flashes a bullish price signal that is especially good news for natural gas buy recommendations **Range Resources (RRC)** and **Birchcliff Energy (BIREF)** as well as for income favorite **San Juan Basin Royalty Trust (SJT)**. Inventories that ran up to record high levels in the warm winter of 2015-2016 have plunged at a record rate in recent weeks (see blue line in chart above). On closing quotes for the year, equity prices are up a median 40%, including dividends, for the 24 oil and gas stocks in our coverage (see [Table 4](#) on page 5). Stock prices likely have further appreciation potential judging from past periods of favorable inventory patterns.

Besides recording full year 2016 performance, this special edition of *Meter Reader* recasts the information presented in regular valuation tables (see [Tables 1 New](#) to [3 New](#) on pages 2-4). Especially notable is a calculation of operating leverage in [Table 2 New](#). RRC's ratio of 1.77, for example, implies that a 1% change in weighted oil and gas price would translate to a 1.77% change in unlevered cash flow (Ebitda). If sustained on a long-term basis it could imply the same change in present value. Not counting other considerations, a stock with more operating leverage ought to go up more in a bullish environment and down more in a bearish environment. Just as with financial leverage we can attempt to neutralize the volatility of operating leverage by owning less of a high leverage stock and more of a low leverage stock. Quantifying operating leverage



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and financial leverage can be helpful among the many considerations in identifying money-making ideas.

Kurt H. Wulff, CFA

Table 1 New

McDep Energy Stocks
Ranked by McDep Ratio

		Price							Oil	Dist.	
		(US\$/sh)	Market	Enterprise	EV/	EV/	PV/	Prod'n/	Yield	McDep	
	Symbol/Rating	30-Dec	Cap	Value	Market	Ebitda	Ebitda	PV	NTM	Ratio	
		2016	(US\$m)	(\$mm)	Cap	NTM	NTM	(%)	(%)	(EV/PV)	
Global Integrated											
	Exxon Mobil Corporation	XOM	90.26	377,000	472,000	1.25	10.3	11.2	49	3.3	0.92
	Chevron Corporation	CVX	117.70	222,000	290,000	1.31	9.4	10.4	64	3.7	0.90
	Royal Dutch Shell	RDS-A B	54.38	216,000	357,000	1.66	7.0	9.1	56	6.9	0.78
	Total S.A.	TOT B	50.97	123,000	185,000	1.51	6.4	9.7	57	5.0	0.66
	<i>Total or Median</i>			938,000	1,304,000	1.41	8.2	10.0	56	4.3	0.84
Large Independent											
	EOG Resources, Inc.	EOG	101.10	55,400	62,600	1.13	13.4	13.2	86	0.7	1.16
	Devon Energy Corporation	DVN	45.67	24,100	35,000	1.45	12.5	10.7	60	0.5	1.01
	Occidental Petroleum Corp.	OXY	71.23	54,400	64,900	1.19	11.1	11.6	84	4.3	0.96
	Marathon Oil Corporation	MRO B	17.31	14,660	22,800	1.56	10.3	11.3	88	1.2	0.91
	ConocoPhillips	COP B	50.14	63,000	102,000	1.63	9.3	11.6	74	2.0	0.80
	<i>Total or Median</i>			211,600	287,000	1.45	11.1	11.6	84	1.2	0.96
Small Independent											
	Cimarex Energy Company	XEC	135.90	12,700	14,000	1.10	12.8	13.6	62	0.2	1.12
	Continental Resources (32%)	CLR B	51.54	6,100	8,300	1.36	12.2	10.9	71	-	0.94
	California Resources	CRC	21.29	900	7,100	7.97	10.1	14.3	87	-	0.86
	Whiting Petroleum Corporation	WLL	12.02	4,300	7,900	1.83	7.8	10.0	91	-	0.79
	Range Resources	RRC B	34.36	8,400	12,700	1.51	7.6	8.9	24	0.2	0.71
	<i>Total or Median</i>			32,000	50,000	1.51	10.1	10.9	71	-	0.86
Income											
	San Juan Basin Royalty Trust	SJT	6.62	310	310	1.00	11.7	20.0	-	11.6	0.83
	Dorchester Minerals, L.P.	DMLP B	17.55	540	540	1.00	11.6	15.8	72	7.8	0.73
	Permian Basin RT	PBT	7.71	360	360	1.00	9.7	15.6	77	9.6	0.70
	Cross Timbers Royalty Trust	CRT	17.97	110	110	1.00	9.7	13.8	29	9.4	0.62
	Sabine Royalty Trust	SBR B	35.15	510	510	1.00	8.3	10.0	56	8.6	0.59
	<i>Total or Median</i>			1,800	1,800	1.00	9.7	15.6	56	9.4	0.70
Canada											
	EnCana Corporation	ECA	11.74	11,400	18,000	1.58	10.8	9.8	59	0.5	1.10
	Imperial Oil Limited (30%)	IMO	34.76	8,900	11,300	1.27	8.5	9.1	62	1.3	0.93
	Cenovus Energy Inc.	CVE	15.13	12,600	16,600	1.32	7.2	9.0	81	1.0	0.80
	Suncor Energy	SU B	32.69	54,400	72,500	1.33	7.7	9.7	86	2.6	0.79
	Birchcliff Energy Ltd.	BIREF B	7.01	1,800	2,400	1.33	8.2	10.9	26	1.1	0.76
	<i>Total or Median</i>			89,000	121,000	1.33	8.2	9.7	62	1.1	0.80

EV = Enterprise Value = Market Cap and Debt; Ebitda = Earnings before interest, tax, depreciation, amort.
 Estimated Ebitda (cash flow) tied to NTM futures prices for oil and natural gas. NTM = Next Twelve Months ending 12/31/17.
 Estimated Present Value (PV) presumes a long-term price for oil of US\$70 a barrel and natural gas, \$4.00 a million btu.
 McDep Ratio = Market cap and Debt to present value of oil and gas and other businesses. For historical research see www.mcdep.com



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Table 2 New											
McDep Energy Stocks											
Production Operating Leverage											
		Price (US\$/sh)		Oil Equiv. Price (\$/boe)	Operating Expense Fixed Var. (\$/boe) (%)		Ebitda (\$/boe)	Ebitda (\$mm)	Oper Lev Ebitda chg/ Price chg	McDep Ratio	
Symbol/Rating	30-Dec	Volume	Price	Fixed	Var.	Ebitda	Ebitda	Oper Lev	McDep		
B = Buy	2016	(mmboe)	(\$/boe)	(\$/boe)	(%)	(\$/boe)	(\$mm)	Price chg	Ratio		
Global Integrated (excl. Downstream)											
Exxon Mobil Corporation	XOM	90.26	1,428	39.22	6 33	20.20	28,840	1.30	0.92		
Chevron Corporation	CVX	117.70	928	40.93	6 27	23.90	22,168	1.25	0.90		
Royal Dutch Shell	RDS-A B	54.38	1,322	36.31	2 25	25.30	33,450	1.08	0.78		
Total S.A.	TOT	50.97	852	51.28	0 56	22.60	19,260	1.00	0.66		
<i>Total or Median</i>									<i>1.17</i>	<i>0.84</i>	
Large Independent											
EOG Resources, Inc.	EOG	101.10	214	35.57	10 6	23.40	5,002	1.43	1.16		
Devon Energy Corporation	DVN	45.67	153	26.48	9 1	17.10	2,616	1.53	1.01		
Occidental Petroleum Corp.	OXY	71.23	255	37.09	6 22	22.90	5,843	1.26	0.96		
Marathon Oil Corporation	MRO B	17.31	137	32.07	13 9	16.10	2,212	1.81	0.91		
ConocoPhillips	COP B	50.14	568	33.05	6 23	19.30	10,953	1.31	0.80		
<i>Total or Median</i>									<i>1.43</i>	<i>0.96</i>	
Small Independent											
Cimarex Energy Company	XEC	135.90	63	28.40	6 15	18.20	1,141	1.33	1.12		
Continental Resources (32%)	CLR B	51.54	24	34.25	3 13	26.70	646	1.11	0.94		
California Resources	CRC	21.29	47	41.94	21 2	19.90	930	2.06	0.86		
Whiting Petroleum Corporation	WLL	12.02	42	38.82	9 15	24.00	1,002	1.38	0.79		
Range Resources	RRC B	34.36	121	19.05	8 3	10.40	1,258	1.77	0.71		
<i>Total or Median</i>									<i>1.38</i>	<i>0.86</i>	
Income											
San Juan Basin Royalty Trust	SJT	6.62	3	18.36	5 14	10.78	37	1.46	0.83		
Dorchester Minerals, L.P.	DMLP B	17.55	2	35.45	7 11	24.59	46	1.28	0.73		
Permian Basin RT	PBT	7.71	2	36.42	10 8	23.60	37	1.42	0.70		
Cross Timbers Royalty Trust	CRT	17.97	0	37.69	8 14	24.42	11	1.33	0.62		
Sabine Royalty Trust	SBR B	35.15	2	32.70	2 9	27.59	44	1.07	0.59		
<i>Total or Median</i>									<i>1.33</i>	<i>0.70</i>	
Canada (excl. Downstream)											
EnCana Corporation	ECA	11.74	109	26.80	11 2	15.30	1,673	1.72	1.10		
Imperial Oil Limited (30%)	IMO	34.76	68	37.29	14 10	19.60	1,326	1.71	0.93		
Cenovus Energy Inc.	CVE	15.13	111	32.45	11 2	20.82	2,302	1.53	0.80		
Suncor Energy	SU B	32.69	337	50.20	16 12	28.05	9,441	1.57	0.79		
Birchcliff Energy Ltd.	BIREF B	7.01	21	21.00	4 12	14.50	298	1.28	0.76		
<i>Total or Median</i>									<i>1.57</i>	<i>0.80</i>	
For historical research see www.mcdep.com											



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McDep Energy Stocks											
Net Present Value Per Share											
		<i>Price</i>						<i>Down-</i>	<i>Proven</i>	<i>Adjustd</i>	
		<i>(US\$/sh)</i>						<i>stream/</i>	<i>Undev.</i>	<i>Resrvs/</i>	
	<i>Symbol/Rating</i>	<i>30-Dec</i>	<i>Shares</i>	<i>Debt</i>	<i>NTM</i>	<i>P/E</i>	<i>PV</i>	<i>Resrvs</i>	<i>Prod</i>	<i>Net</i>	
	<i>B = Buy</i>	<i>2016</i>	<i>(mm)</i>	<i>(\$mm)</i>	<i>(\$/sh)</i>	<i>NTM</i>	<i>(%)</i>	<i>(%)</i>	<i>NTM</i>	<i>Value</i>	
										<i>(US\$/sh)</i>	
Global Integrated											
	Exxon Mobil Corporation	XOM	90.26	4,178	95,027	3.00	23	26	27	15.0	100.00
	Total S.A.	TOT	B 50.97	2,404	62,452	2.55	12	24	47	9.9	90.00
	Chevron Corporation	CVX	117.70	1,883	68,829	4.32	29	20	38	9.8	135.00
	Royal Dutch Shell	RDS-A	B 54.38	3,965	141,465	3.76	16	24	34	9.5	80.00
	<i>Median</i>									9.8	
Large Independent											
	Marathon Oil Corporation	MRO	B 17.31	847	8,158	0.20		-	27	12.6	20.00
	ConocoPhillips	COP	B 50.14	1,246	39,395	1.00		-	37	11.0	70.00
	Occidental Petroleum Corp.	OXY	71.23	764	10,500	3.04	65	9	21	8.9	75.00
	Devon Energy Corporation	DVN	45.67	548	7,151	0.24	93	10	18	8.4	45.00
	EOG Resources, Inc.	EOG	101.10	527	10,895	0.67	110	-	30	7.5	85.00
	<i>Median</i>									8.9	
Small Independent											
	California Resources	CRC	21.29	244	4,290	-		-	25	12.0	50.00
	Range Resources	RRC	B 34.36	42	6,200	0.08	48	-	46	11.9	56.00
	Continental Resources (32%)	CLR	B 51.54	93	1,287	-		-	57	11.4	56.00
	Whiting Petroleum Corporation	WLL	12.02	358	3,560	-		-	67	9.3	18.00
	Cimarex Energy Company	XEC	135.90	118	2,178	0.32	32	-	25	6.8	120.00
	<i>Median</i>									11.4	
Income											
	Sabine Royalty Trust	SBR	B 35.15	47	-	3.01	12	-	5	10.1	60.00
	San Juan Basin Royalty Trust	SJT	6.62	15	-	0.77	9	-	-	9.8	8.00
	Permian Basin RT	PBT	7.71	6	-	0.74	10	-	-	8.6	11.00
	Dorchester Minerals, L.P.	DMLP	B 17.55	31	-	1.37	16	-	-	7.4	24.00
	Cross Timbers Royalty Trust	CRT	17.97	47	-	1.69	11	-	-	7.1	29.00
	<i>Median</i>									8.6	
Canada											
	Imperial Oil Limited (30%)	IMO	34.76	255	2,398	0.44	12	37	12	33.0	38.00
	Suncor Energy	SU	B 32.69	1,665	18,032	0.86	17	14	46	20.7	44.00
	Cenovus Energy Inc.	CVE	15.13	833	4,012	0.15	263	9	30	16.2	20.00
	Birchcliff Energy Ltd.	BIREF	B 7.01	263	610	0.07	23	-	64	12.1	10.00
	EnCana Corporation	ECA	11.74	973	6,603	0.06	195	-	33	6.1	10.00
	<i>Median</i>									16.2	
P/E = Stock Price to Earnings. For historical research see www.mcdep.com .											



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Table 4										
McDep Energy Stocks										
Total Return Year-to-Date 2016										
Ranked by Unlevered Total Return										
			Price	Price			Equity	Unlevered		
			(\$/sh)	(\$/sh)	Price	Cash	Total	Total		
	Symbol/Rati		30-Dec	31-Dec	Change	Distrib.	Return	Debt	Return	McDep
			2016	2015	(%)	(%)	(%)	(\$/sh)	(%)	Ratio
Global Integrated										
	Chevron Corporation	CVX	117.70	89.96	31	5	36	37	25	0.90
	Exxon Mobil Corporation	XOM	90.26	77.95	16	4	20	23	15	0.92
	Royal Dutch Shell	RDS-A B	54.38	45.79	19	8	27	36	15	0.78
	Total S.A.	TOT B	50.97	44.95	13	6	19	26	12	0.66
	<i>Median</i>				17		23		15	0.84
Large Independent										
	EOG Resources, Inc.	EOG	101.10	70.79	43	1	44	13	37	1.16
	Devon Energy Corporation	DVN	45.67	32.00	43	1	44	21	27	1.01
	Marathon Oil Corporation	MRO B	17.31	12.58	38	2	39	10	22	0.91
	Occidental Petroleum Corp.	OXY	71.23	67.61	5	4	10	14	8	0.96
	ConocoPhillips	COP B	50.14	46.69	7	2	10	32	6	0.80
	<i>Median</i>				38		39		22	0.96
Small Independent										
	Continental Resources (32%)	CLR B	51.54	22.98	124	-	124	18	69	0.94
	Cimarex Energy Company	XEC	135.90	89.38	52	0	52	14	45	1.12
	Range Resources	RRC B	34.36	24.62	40	0	40	18	23	0.71
	Whiting Petroleum Corporation	WLL	12.02	9.44	27	-	27	10	13	0.79
	California Resources	CRC	21.29	23.30	(9)	-	(9)	148	(1)	0.86
	<i>Median</i>				40		40		23	0.86
Income										
	Dorchester Minerals, L.P.	DMLP B	17.55	9.89	77	9	86	-	86	0.73
	San Juan Basin Royalty Trust	SJT	6.62	4.14	60	6	66	-	66	0.83
	Permian Basin RT	PBT	7.71	5.06	52	8	60	-	60	0.70
	Cross Timbers Royalty Trust	CRT	17.97	13.01	38	8	46	-	46	0.62
	Sabine Royalty Trust	SBR B	35.15	26.26	34	7	41	-	41	0.59
	<i>Median</i>				52		60		60	0.70
Canada										
	Birchcliff Energy Ltd.	BIREF B	7.01	2.93	139	-	139	2	78	0.76
	EnCana Corporation	ECA	11.74	5.09	131	1	132	7	56	1.10
	Suncor Energy	SU B	32.69	25.80	27	4	30	11	21	0.79
	Cenovus Energy Inc.	CVE	15.13	12.62	20	1	21	5	15	0.80
	Imperial Oil Limited (30%)	IMO	34.76	32.52	7	1	8	9	6	0.93
	<i>Median</i>				27		30		21	0.80
	<i>Grand Median</i>				36		40		24	0.82
	Natural Gas (\$/mmbtu)		3.74	2.33	61					
	Oil - West Texas Intermediate (\$/bbl)		53.72	37.06	45					
	S&P 500		2,239	2,044	10					
	Developed Markets - ex US	VEA	36.54	36.72	(1)					
	Emerging Markets	VVO	35.78	32.71	9					
Source: McDep LLC, Yahoo, CME Group, Bloomberg										
For historical research see www.mcdep.com										



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Index of Recent Research				
<u>Date</u>	<u>Series</u>	<u>Symbol</u>	<u>Subject</u>	<u>Theme</u>
13-Dec	Meter Reader			Optimistic Outlook 2017
6-Dec	II	XOM, RDS, CVX, TOT		Total Return Upside
28-Nov	II	COP, DVN, EOG, MRO, OXY		Permian Players
22-Nov	II	CRT, DMLP, PBT, SBR, SJT		Income Payers Sparkle
15-Nov	Meter Reader			Growth, Inflation and Trump
9-Nov	ISI	ECA	Encana Corporation	Raise NPV to US\$10 from US\$6
31-Oct	ISI	SU	Suncor Energy Inc.	Raise NPV to US\$44 from US\$35
27-Oct	ISI	RRC	Range Resources	New Buy on Higher NPV of \$56
20-Oct	ISI	SJT	San Juan Basin Royalty Trust	Vote Proxy for Less Conflict, More Competence
18-Oct	ISI	CRC	California Resources	Option on Oil Price
14-Oct	ISI	CVX	Chevron	Oilier Global Integrated
11-Oct	Meter Reader			Canada Comeback
4-Oct	ISI	COP	ConocoPhillips	Pure Play Producer
24-Sep	ISI	SJT	San Juan Basin Royalty Trust	Rising for the Dead---Again
13-Sep	Meter Reader			Permian Surprises
6-Sep	ISI	DVN	Devon Energy	Raise NPV to \$45 from \$33 on Stress Test Success
30-Aug	ISI	SBR	Sabine Royalty Trust	Long-Life Top Line Cash Payer
21-Aug	ISI	BIREF	Birchcliff Energy	Canadian Independent Producer Transformed
17-Aug	ISI	SJT	San Juan Basin Royalty Trust	Preliminary Filing to Replace Trustee
16-Aug	Meter Reader			The Money Glut
11-Aug	ISI	XEC	Cimarex Energy	Raise NPV to \$120 from \$90
1-Aug	II	XOM, RDS, CVX, TOT		Real Return Standouts
1-Aug	ISI	WLL	Whiting Petroleum	Remove Buy Designation
22-Jul	II	CRT, DMLP, PBT, SBR, SJT		Income Payers in Uptrend
12-Jul	Meter Reader			Mid-Year Strategy
7-Jul	ISI	XOM	Exxon Mobil	Durable Real Return
22-Jun	ISI	BIREF	Birchcliff Energy	Half Billion Dollar Deal with Encana
21-Jun	ISI	SJT	San Juan Basin Royalty Trust	Record Administrative Costs
21-Jun	ISI	PBT	Permian Basin Royalty Trust	Raise Distribution to 9%
14-Jun	Meter Reader			Good Year for Oil and Gas
10-Jun	ISI	SU	Suncor Energy Inc.	Revitalized after Wildfire
7-Jun	ISI	WLL	Whiting Petroleum	Looking Up Again
23-May	ISI	DMLP	Dorchester Minerals, L.P.	Raise Distribution to 9%
17-May	ISI	COP	ConocoPhillips	Strategy Reset to Low Risk Value
12-May	ISI	BIREF	Birchcliff Energy	Record Low Operating Cost
10-May	Meter Reader			Value, Growth, Income and Momentum
9-May	ISI	RRC	Range Resources	Restore Net Present Value to \$42 a Share
26-Apr	ISI	CLR	Continental Resources	Disciplined Visionary
13-Apr	Meter Reader			Road to Profits
5-Apr	ISI	TOT	Total S.A.	Globally Diversified Income
22-Mar	II	CRT, DMLP, PBT, SBR, SJT		Income Payer Appreciation Potential 55%-110%
15-Mar	Meter Reader			Best Oil Outlook in Seven Years
7-Mar	II	COP, MRO, CLR, WLL		Buy Low
				MR = Meter Reader (published monthly on or about second or third Tuesday)
				ISI = Independent Stock Idea
				II = Industry Idea
				For historical research by stock, go to mcdep.com , click on Stock Ideas , click on stock by name.



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Disclaimer: This analysis was prepared by Kurt Wulff, Manager of McDep LLC. The firm used sources and data believed to be reliable, but makes no representation as to their accuracy or completeness. This analysis is intended for informational purposes and is not a solicitation to buy or sell a security. Past performance is no guarantee of future results.

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Certification: I, Kurt H. Wulff, certify that the views expressed in this research analysis accurately reflect my personal views about the subject securities and issuers. No part of my compensation was, is, or will be directly or indirectly related to the specific recommendations or views contained in this research analysis.

Research Methodology/Ratings Description: McDep LLC is an independent research originator focused on oil and gas stocks exclusively. The firm applies the forty years of experience of its analyst to estimate a present value of the oil and gas resources and other businesses of covered companies. That value is compared with a company's stock market capitalization and debt. Stocks with low market cap and debt relative to present value tend to outperform stocks with high market cap and debt relative to present value. Buy recommendations are expected to deliver a total return better than 7% per year above inflation.