



Meter Reader

A Monthly Analysis of Oil and Gas Stocks

April 11, 2017

IPAA Ideas

	Symbol/Rating		Price	Market	Enterprise	EV/	EV/	PV/	Oil	Dist.	McDep
			(US\$/sh)								
			2017	(US\$mm)	(\$mm)	Cap	NTM	NTM	(%)	(%)	(EV/PV)
Marathon Oil Corporation	MRO	B	16.56	14,030	21,800	1.56	9.8	11.1	90	1.2	0.88
Continental Resources (32%)	CLR	B	46.75	5,500	7,600	1.38	10.6	10.6	74	-	0.88
ConocoPhillips	COP	B	50.15	63,000	99,000	1.58	9.3	11.6	73	2.1	0.80
Suncor Energy	SU	B	31.36	52,300	69,400	1.33	7.8	10.1	86	3.0	0.77
Royal Dutch Shell	RDS-A	B	53.42	212,000	346,000	1.63	6.6	8.7	50	7.0	0.77
Birchcliff Energy Ltd.	BIREF	B	5.98	1,600	2,200	1.35	7.5	11.2	33	0.9	0.67
Total S.A.	TOT	B	51.59	126,000	186,000	1.48	6.1	9.2	53	5.1	0.67
Range Resources	RRC	B	29.88	7,300	11,800	1.61	8.6	10.4	31	0.3	0.65
Sabine Royalty Trust	SBR	B	37.35	550	550	1.00	10.5	11.1	59	7.0	0.62
Cross Timbers Royalty Trust	CRT	B	16.04	100	100	1.00	14.1	15.2	28	10.2	0.55

Summary and Recommendation

North American oil and gas producers are competing vigorously to provide economically priced energy to fuel the global economy. That was the overriding message we take from the 23rd annual Oil and Gas Investment Symposium in New York held by the Independent Petroleum Association of America on April 3-4, 2017. Optimistic and patient we look for moderately higher oil and gas price to reward producers and investors without penalizing consumers. We are also optimistic about global stock markets. We like gold and cash for protection and flexibility to act on opportunity. Since only two of our covered companies participated in the conference, we discuss highlights from presentations by a dozen companies starting in the Permian Basin and working north through Oklahoma and North Dakota to Canada. Though we think positively about most of the companies, we have not done the valuation work to express an investment opinion on stocks not in our current coverage. We end the discussion with the only McDep stocks that were part of the conference, **California Resources (CRC)** and **Whiting Petroleum (WLL)**. Our regular valuation tables update important statistical measures for ten buy recommendations and 14 additional stocks in 5 groups (see [Tables 1-4](#) on pages 13 to 16).

Permian Production Potential

The only large cap company at the IPAA conference, **Pioneer Natural Resources (PXD)** presents an outlook so strong that it may be too good to be achieved as described. The new enthusiasm started with horizontal drilling beginning in 2011 (see chart [Permian Basin Horizontals](#) on page 5). During the next six years, tight oil production increased about 200,000 barrels daily (bd) a year. PXD sees current production in the basin of 2 million bd growing at 300,000 bd a year to reach 5 million bd by 2025 (see slide [Poised](#)



McDEP
LLC

Meter Reader

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April 11, 2017

for Long-Term Growth on page 5). Of that target, PXD would produce 20% or one million bd (see slide Pioneer's 10-Year Vision on page 6). Of course it all depends on price. When oil price temporarily collapsed in 2014-15, the trend was interrupted in late 2016. Meanwhile, the resumed growth in rig count suggests that the Delaware portion of the Permian is pulling ahead of the Midland portion where PXD has most of its land (see slide Drilling Rig Additions on page 6).

The core of the Midland Basin runs through Howard County where we see McDep covered companies **Encana (ECA)** and **Occidental Petroleum (OXY)** active in the area detailed by **SM Energy (SM)** in its IPAA show (see slide Howard County Operators on page 7). Similarly, courtesy of **Callon Petroleum (CPE)**, we see McDep company **Cimarex (XEC)** well-represented in the Delaware Basin around Reeves County (see slide Delaware Basin on page 7). Thanks to **Matador Resources (MTDR)** we see acquisitions in the Northern Delaware highlighted for McDep companies **EOG Resources (EOG)**, **ExxonMobil (XOM)** and **Marathon Oil (MRO)** (see slide Significant Transactions on page 8).

Most of the large producing fields historically are on the Central Basin Platform (CBP) between the Delaware on the west and the Midland on the east. Yet, little of the exciting new horizontal drilling has taken place in the old areas where stocks that derive much of their current value include OXY, **Permian Basin Royalty Trust (PBT)**, **Dorchester Minerals (DMLP)**, **Cross Timbers Royalty Trust (CRT)** and **Sabine Royalty Trust (SBR)**. Several companies including **Camber Energy (CEI)** are pursuing a Residual Oil Zone (ROZ) play among other techniques to find more oil on the CBP (see slide ROZ on page 8). The ROZ lies above a water layer and below the oil layer. After carefully threading a horizontal well through the thin ROZ, operators produce the water until oil can be recovered.

Top Line Permian Player

Like the four of our Income Payers mentioned above, **Panhandle Oil and Gas (PHX)** Top Line properties, particularly mineral rights, on the CBP as well as elsewhere in the area (see slide Permian Basin Mineral Acreage on page 9). After his presentation, chief executive Paul Blanchard patiently explained to us how a mineral owner might negotiate a Top Line royalty interest, lease bonus and an option to participate in a Bottom Line working interest. In contrast to Income Payers in our coverage, PHX reinvests its cash flow rather than distribute it to owners.

Cana, Scoop and Stack Merge

A few years ago, Cimarex and Devon Energy (DVN) partnered in developing the Cana play mostly in Canadian County Oklahoma. **Continental Resources (CLR)**, fringe player in Cana, found profitable horizontal oil in the SCOOP play in Grady County and to the southeast. East of Cana and north of SCOOP, the next hot area was the STACK play in Kingfisher and adjacent counties. Now, **Jones Energy (JONE)** tells investors that it is betting on the Merge area (see slide STACK/SCOOP/Merge on page 9). The name could describe how the three plays are merging in area or it could describe how the Meramec and Osage formations merge to the south of STACK.

Hope for Hugoton Royalty Trust

For most of its life, we have covered **Hugoton Royalty Trust (HGT)**. Though we discontinued coverage in 2014 after a period of favorable performance, clients may still own it. We believed that fracking upside was always possible, but did not have much to cite concretely. Now, we see that the STACK play is expanding into Major County where the trust has major natural gas production in the Ringwood, Northwest Okeene and Cheyenne Valley fields. Major County abuts Kingfisher County on **Gastar (GST)**'s map (see slide Mid-Continent STACK Operator on page 10). **Sandridge (SD)** is more explicit about the trend (see slide STACK Activity Moving Northwest on page 10).

Small Company Achieves Bakken Results

Chief Executive Bob Watson has been building **Abraxas (AXAS)** for some twenty years that we have known him. It has been a bootstrap process starting with full use of debt to today where the capital structure has more equity balance and the company can readily finance expensive horizontal wells. Still one might ask if a small company can compete with larger players. The company's results in the Bakken demonstrate that it can (see slide Catalyst \$2 on page 11). Mr. Watson explained to investors how AXAS was able to get favorable results with more use of diverters, molecular devices that direct sand to the most promising segments to be fraced. A backlog of Bakken production coming on this year points to a bump in AXAS oil volume in 2017 and 2018.

North to the Montney

Adding diversity to the IPAA conference Canadian independent **RMP Energy (RMP.TO)** highlights activity in the Montney trend for shale growth (see slide Mid-



Meter Reader

A Monthly Analysis of Oil and Gas Stocks
April 11, 2017

Montney Oil Fairway on page 11). McDep stock **Birchcliff Energy (BIREF)** has some exposure near RMP.

Magnified Upside in California Resources

CRC was one of just two McDep stocks at IPAA this year. Management highlighted exceptional value at higher oil price that is overlooked because of an exceptional debt load (see slide Reserves Value on page 12). For perspective, the McDep estimate for Enterprise Value at \$70 oil is about \$8 billion. For the number to be as high as \$18 billion suggested by interpolating between \$65 and \$75 Brent oil price, stock price would be \$280 a share. That is more upside than we can see for any stock in our coverage. So far management has been able to preserve upside without issuing new equity. Astutely, the company gives up some unproved reserve value in a recent deal for drilling dollars and a share in the new production.

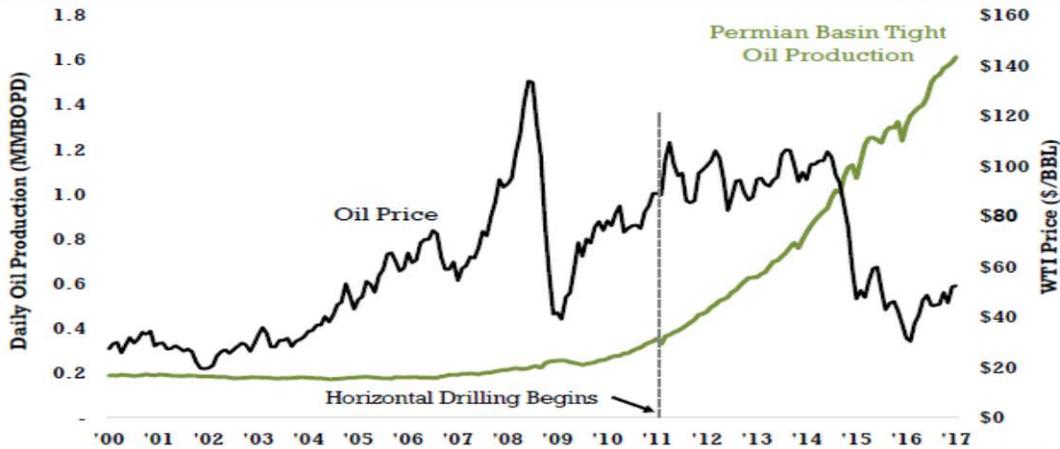
Debt Reduction at Whiting

WLL was the other stock in our coverage represented at the conference. In this case, management reduced risk by reducing debt and giving up equity (see slide 42% Debt Reduction on page 12). The choice was probably necessary under recent market conditions because the company's production is mostly shale oil which can decline quite rapidly. The stock appears undervalued in a positive oil price scenario, but vulnerable to lower oil price. We think it is a "hold" for upside, but not an official buy because of high risk.

Kurt H. Wulff, CFA

PERMIAN BASIN HORIZONTALS ARE A GAME CHANGER

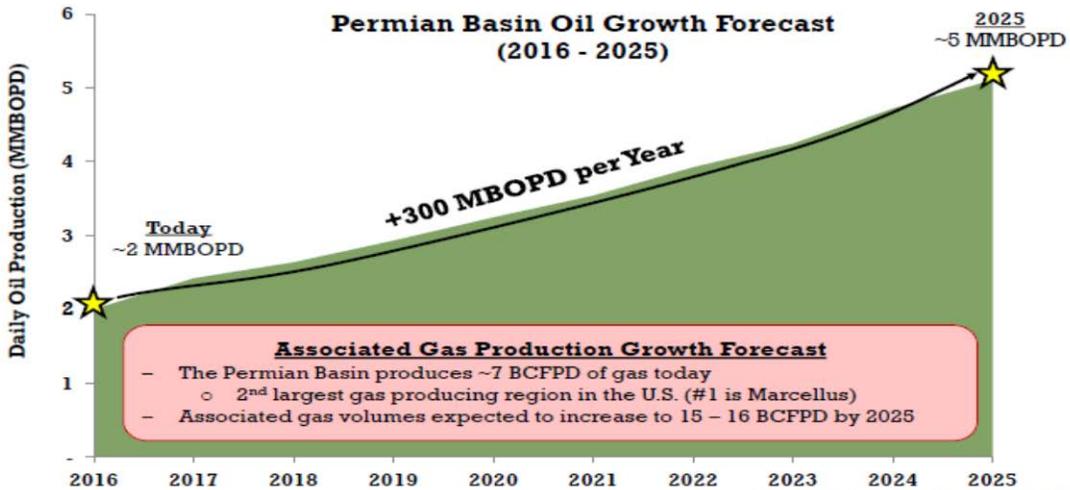
The Permian Basin has produced >35 BBOE in the past 90 years with an estimated >150 BBOE recoverable resource remaining



Source: Production data from EIA (U.S. tight oil production – selected plays) through Jan. 2017; historical WTI price from EIA. PIONEER NATURAL RESOURCES | 31

PERMIAN BASIN POISED FOR LONG-TERM GROWTH

The Permian Basin will drive long-term U.S. oil production growth



Source: P2D Internal Forecast. PIONEER NATURAL RESOURCES | 40



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A Monthly Analysis of Oil and Gas Stocks
April 11, 2017

PIONEER'S 10-YEAR VISION

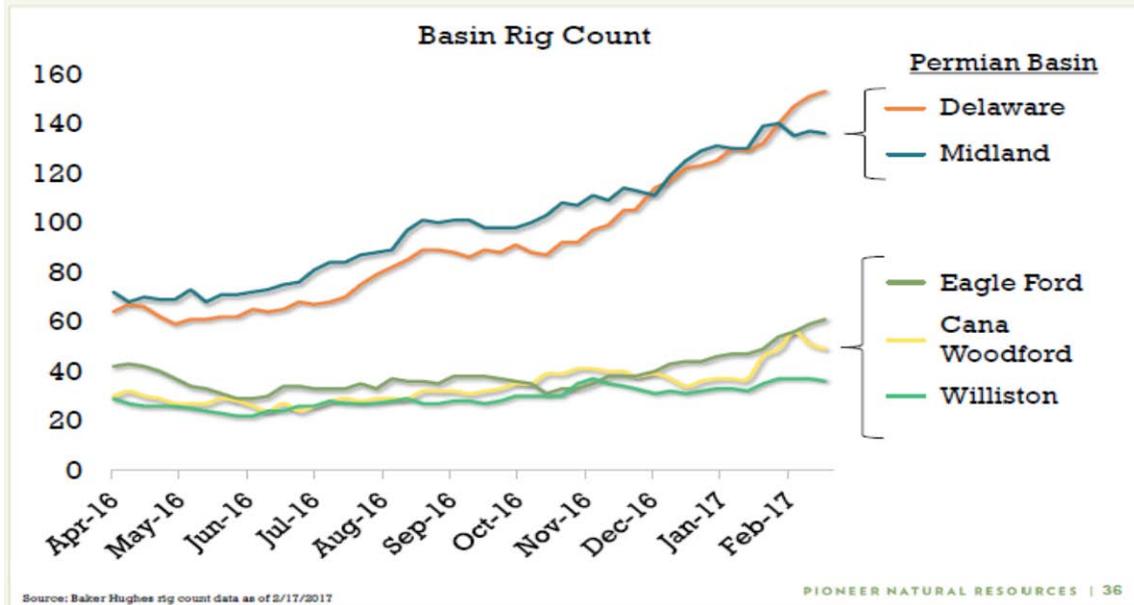
1,000,000 IN 10

- **Targeting to grow production to 1 MMBOEPD in 2026**
 - Reflects organic compound annual production growth of 15%+ drilling high-return wells
 - Growth driven by world-class Spraberry/Wolfcamp asset
 - Vertical integration and technology enhancements support execution
- **Financial expectations:**
 - Spend within cash flow in 2018; free cash flow positive thereafter
 - Grow cash flow at a compound annual rate of >20%
 - Protect cash flow with an active derivatives program
 - Maintain net debt to cash flow below 1.0x
 - Improve corporate returns

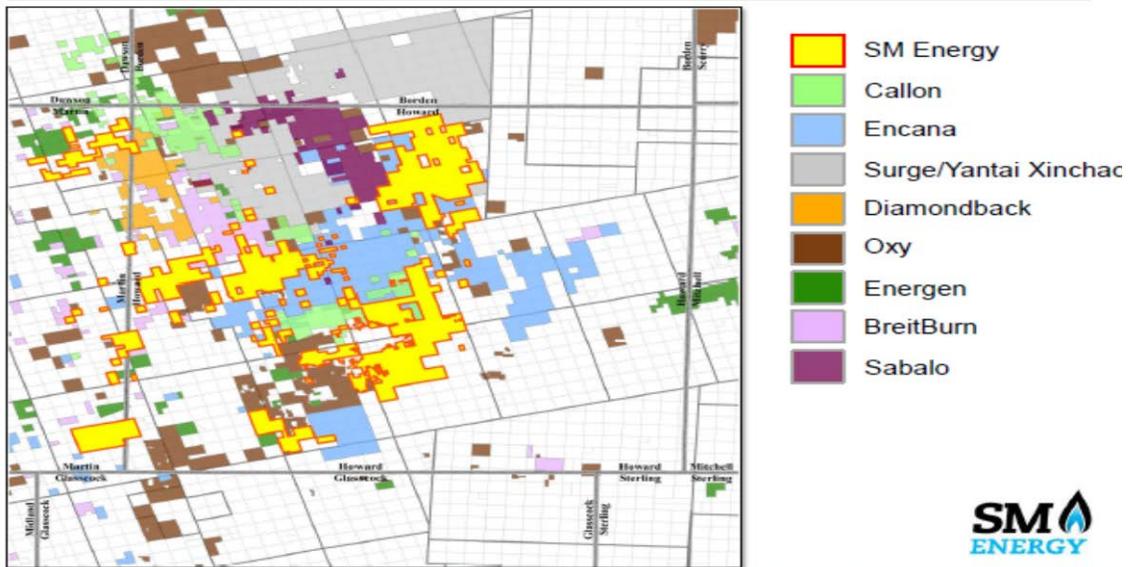
Forecast based on \$55/BBL oil price and \$3/MCF gas price

PIONEER NATURAL RESOURCES | 7

DRILLING RIG ADDITIONS DIRECTED TO PERMIAN

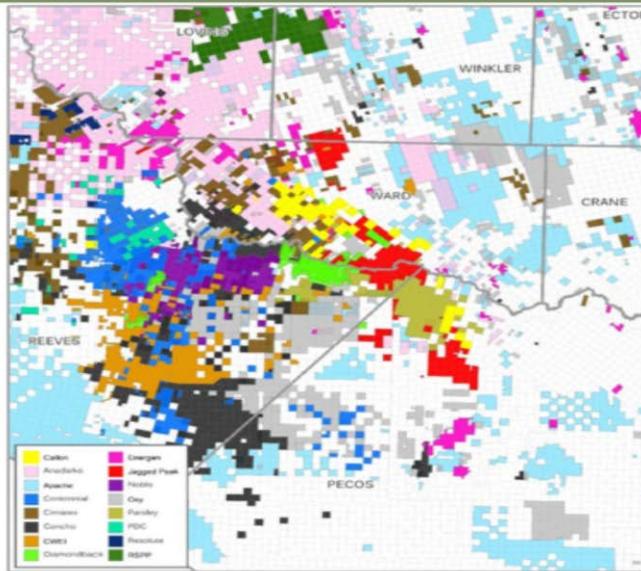


Howard County Operators

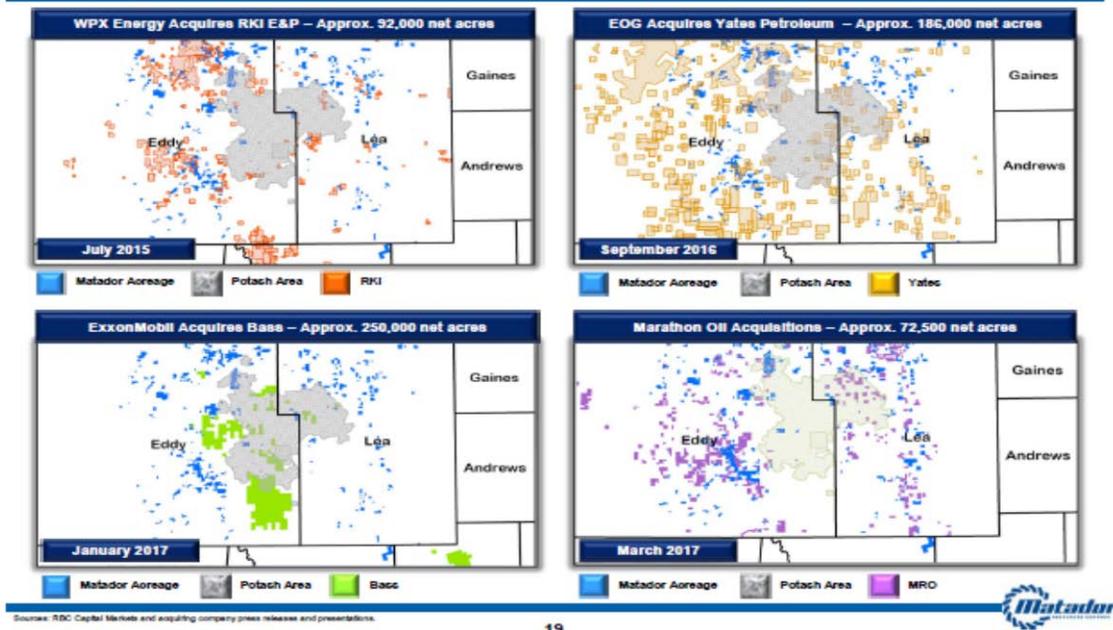


Delaware Basin Acquisition

- Contiguous position in core of Southern Delaware Basin oil window
 - 16,688 net acres
 - ~80% operated
 - ~84% working interest in operated acres
 - Established SWD and gathering systems
 - Cash payouts of 1-2 years on delineated locations
- October 2016 net production of over 1,900 Boepd (71% oil)
 - Relatively mature profile
 - Legacy Third Bone Spring and Wolfcamp horizontal wells
- "Delineated" targets
 - "Upper" Wolfcamp A (~150' feet below 3BS/WCA contact)
 - Lower Wolfcamp A
 - Wolfcamp B
 - 3rd Bone Spring
- Increasing industry focus and testing
 - 2nd Bone Spring Shale
 - Wolfcamp C
 - Other Bone Spring Sands and Avalon intervals



Significant Transactions in Northern Delaware Basin Since Matador/HEYCO Merger in February 2015 – Over 600,000 Net Acres



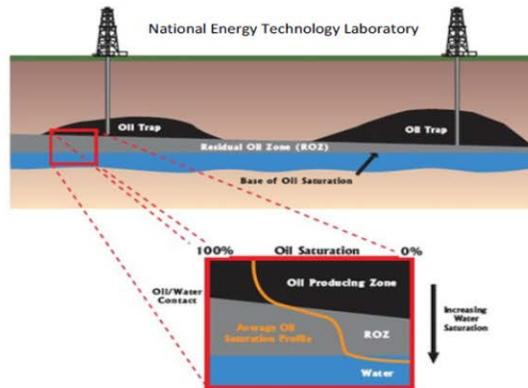
Horizontal San Andres - The ROZ Concept

As a simplified explanation, dewatering occurs in formations with relatively high water saturations (>50%).

Oil and gas resides in pore spaces of conventional subsurface rock formations and occupies the smaller pores because the rock is oil wet.

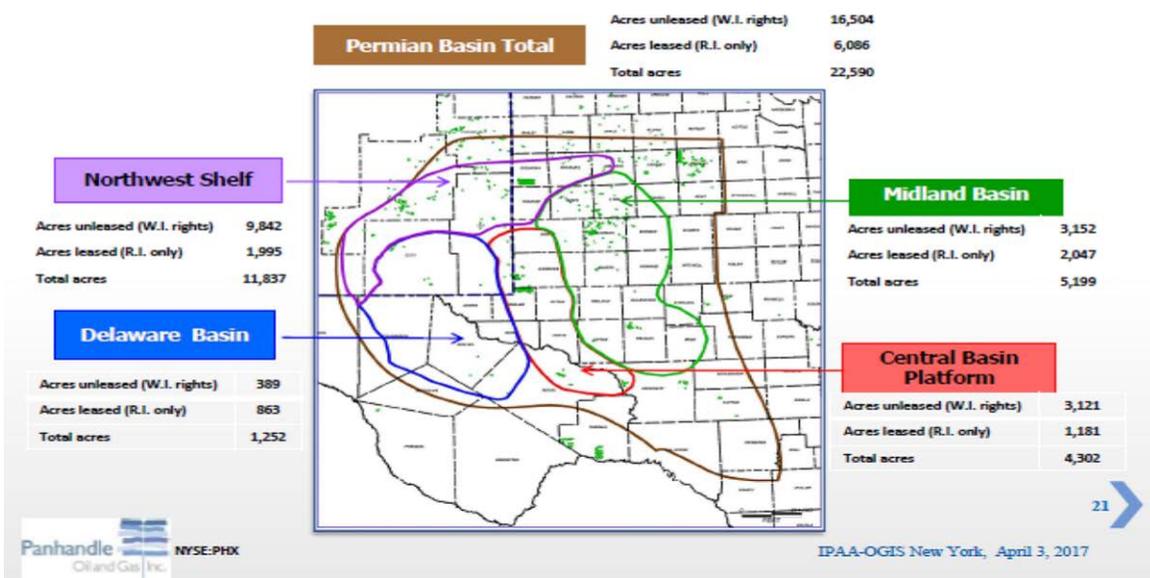
By producing the water (dewatering), the pressure is lowered, causing the hydrocarbon to expand and transition from a residual state to a mobile state, allowing for commercial production.

This concept is now used in the Mid-Continent to produce large quantities of oil and gas from the Hunton formation, and has recently been applied with increasing success to the San Andres formation in West Texas.



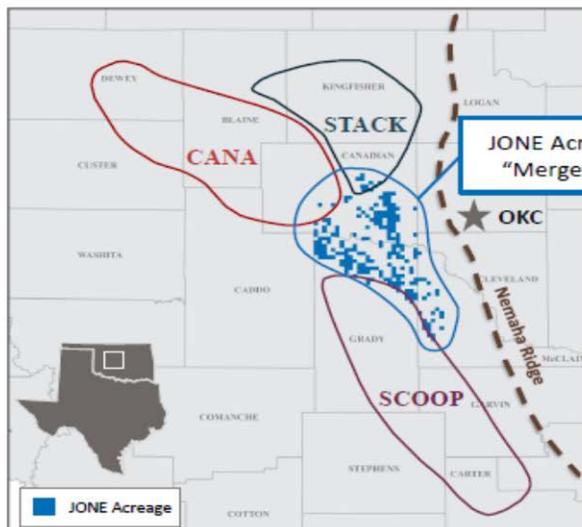
Additional Information: residualoilzones.com
Melzer Consulting

Permian Basin Mineral Acreage

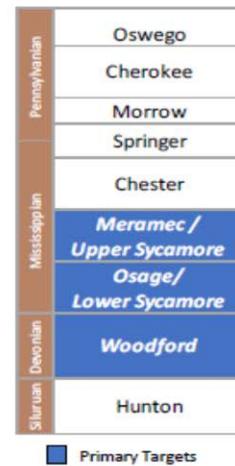


Industry View of STACK/SCOOP/Merge Play

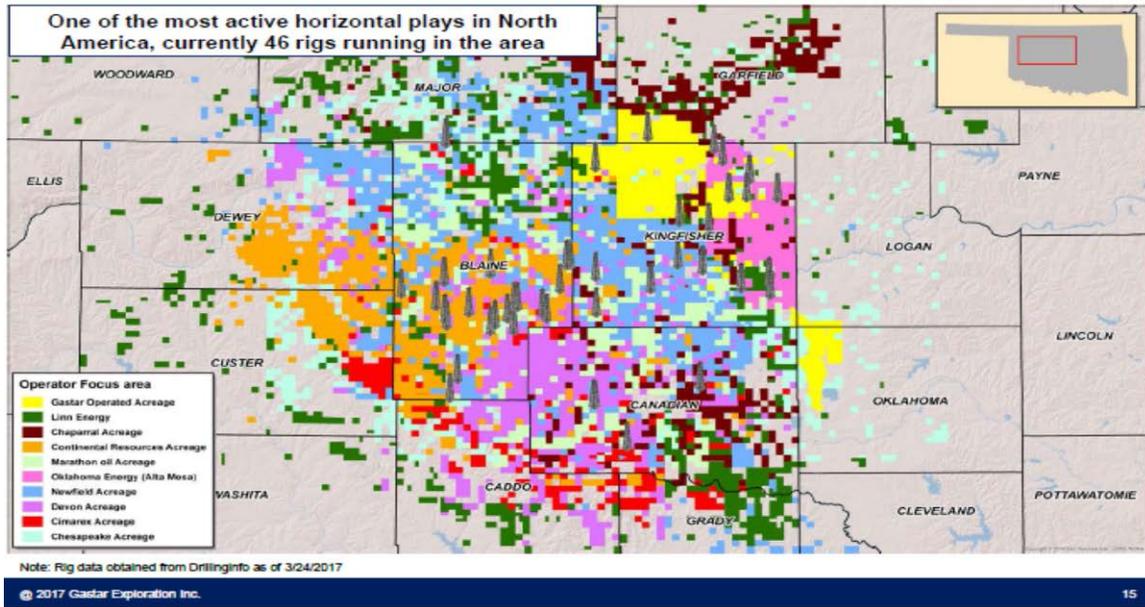
- Play boundaries follow geography, not rock quality



Stratigraphic Column

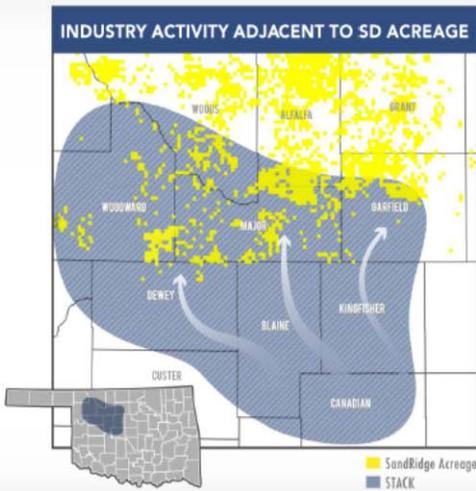


Mid-Continent STACK Operator Map



STACK Activity Moving Northwest

Increasing activity supports enthusiasm around Major, Woodward, and Garfield Co. NW STACK



Industry activity has been converging on existing SD acreage with prominent operators seeing encouraging results:

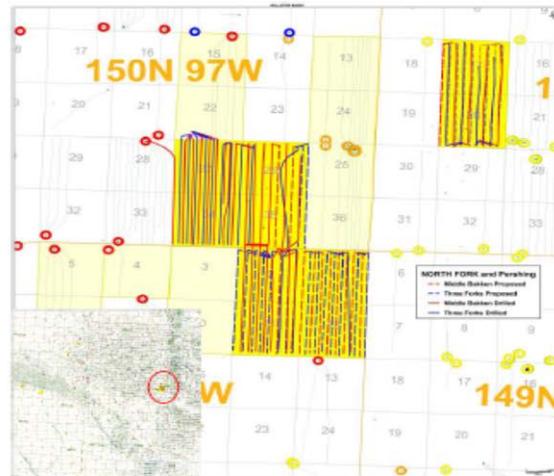
- Multiple operators with NW STACK Meramec and Osage results
- 17 rigs currently running
- Over 50 producing wells in Major, Woodward, and Garfield
- More than 100 permitted wells in Major, Woodward, and Garfield

Catalyst #2

Bakken / Three Forks

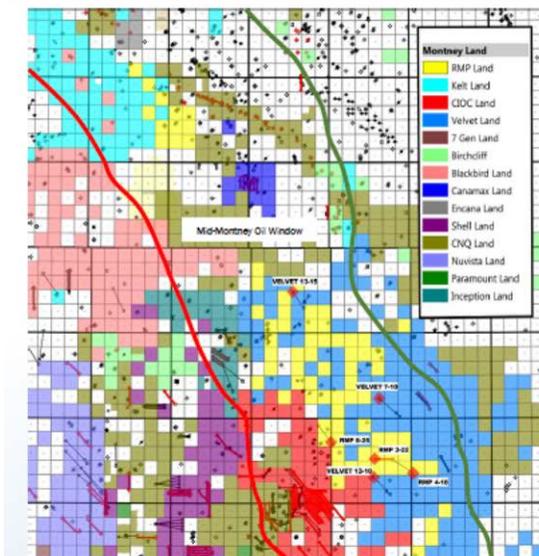


- 4,013 net HBP acres located in the core of the Williston Basin in McKenzie County, ND – de-risked Bakken and Three Forks
 - 37 operated completed wells
 - 4 operated wells waiting on completion
 - 1 non-operated well waiting on completion
 - Estimated 53 additional operated wells at 660-1,320 foot spacing
- Stenehjem 10H-15H Completions
 - 64.2% net revenue interest
 - 30-day MB average rate⁽¹⁾ 1,226 boepd
 - 30-day TF average rate⁽¹⁾ 1,059 boepd
- Stenehjem 6H-9H
 - Four well pad drilled and waiting on completion
 - May 2017 completion date scheduled
 - 62.0% net revenue interest
- Yellowstone 2H-4H
 - Preparing to mobilize rig and spud three well pad
 - 42.7% net revenue interest
- Five gross non-operated wells planned for 2017
 - 9-36% working interest
 - Operator testing three mile laterals



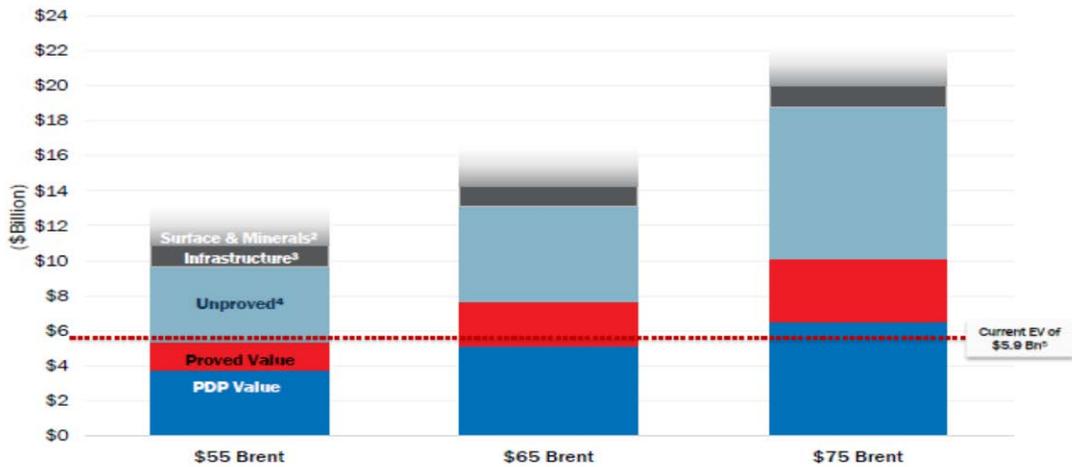
(1) The 30-day average rates represent the highest 30 days of production and do not include the impact of natural gas liquids and shrinkage at the processing plant and include flared gas.

Mid-Montney Oil Fairway



- Significant activity in the mid-Montney oil fairway.
- Large acreage positions are currently being evaluated and delineated by area operators.
- Potential for extensive, scalable resource throughout the fairway.
- Infrastructure build-out underway.
- Notable increase in recent land sale bids.

Reserves Value¹ In Excess EV



¹⁻² See endnotes in the Appendix.



IPAA 23rd Annual OGIS | 22

42% Debt Reduction Achieved



Maturity	Rate	Debt at 3-31-2016	First Exchange ⁽¹⁾	Second Exchange ⁽²⁾	Ultimate Balance
2018 ⁽³⁾	6.5%	\$350	\$(49)	\$(26)	\$0
2019	5.0%	\$1,100	\$(97)	\$(42)	\$961
2020	1.25%	\$1,250	\$0	\$(688)	\$562
2021	5.75%	\$1,200	\$(152)	\$(174)	\$874
2023	6.25%	\$750	\$(179)	\$(163)	\$408
Bond Total		\$4,650	\$(477)	\$(1,093)	\$2,805
Bank Debt⁽⁴⁾		\$1,000			\$500
Pro-Forma Total Debt		\$5,650	\$(477)	\$(1,093)	\$3,305

42% Reduction

- (1) Total of \$477 million converted to equity by May 18, 2016.
 (2) Total of \$1,093 million converted to equity by December 19, 2016. Following conversions, 362,013,928 shares were outstanding.
 (3) On February 2, 2017 Whiting redeemed all of the outstanding \$275 million of 6.5% Senior Subordinated Notes due 2018 with proceeds from the sale of Whiting's North Dakota Midstream assets.
 (4) Bank debt of \$500 million as of 2/2/2017. Reduction in bank debt reflects \$300 million proceeds from the North Ward Estes sale, \$150 million of operating cash flow in excess of capital expenditures and \$375 million of proceeds from the North Dakota midstream asset sale, of which \$275 million were used to redeem all of the outstanding 2018 Senior Subordinated Notes.



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Table 1
McDep Energy Stocks
Ranked by McDep Ratio

			Price (US\$/sh)	Market Cap (US\$m)	Enterprise Value (\$mm)	EV/ Market Cap	EV/ Ebitda NTM	EV/ Ebitda NTM	Oil Prod'n/ PV (%)	Dist. Yield NTM (%)	McDep Ratio (EV/PV)
	Symbol/Rating		10-Apr 2017								
Global Integrated											
	Exxon Mobil Corporation	XOM	83.13	347,000	439,000	1.26	9.7	11.2	50	3.6	0.86
	Chevron Corporation	CVX	109.43	207,000	277,000	1.34	8.8	10.3	64	3.9	0.85
	Royal Dutch Shell	RDS-A B	53.42	212,000	346,000	1.63	6.6	8.7	50	7.0	0.77
	Total S.A.	TOT B	51.59	126,000	186,000	1.48	6.1	9.2	53	5.1	0.67
	<i>Total or Median</i>			892,000	1,248,000	1.41	7.7	9.8	52	4.5	0.81
Large Independent											
	EOG Resources, Inc.	EOG	98.57	55,900	63,000	1.13	11.6	12.0	86	0.7	1.14
	Devon Energy Corporation	DVN	43.06	22,700	31,000	1.37	12.4	10.9	63	0.6	0.97
	Marathon Oil Corporation	MRO B	16.56	14,030	21,800	1.56	9.8	11.1	90	1.2	0.88
	Occidental Petroleum Corp.	OXY	64.14	49,000	61,700	1.26	10.2	11.5	85	4.7	0.88
	ConocoPhillips	COP B	50.15	63,000	99,000	1.58	9.3	11.6	73	2.1	0.80
	<i>Total or Median</i>			204,600	277,000	1.37	10.2	11.5	85	1.2	0.88
Small Independent											
	Cimarex Energy Company	XEC	119.38	11,400	12,700	1.12	10.8	12.3	63	0.3	0.99
	Continental Resources (32%)	CLR B	46.75	5,500	7,600	1.38	10.6	10.6	74	-	0.88
	California Resources	CRC	15.71	700	6,900	10.39	8.4	12.9	88	-	0.83
	Whiting Petroleum Corporation	WLL	9.63	3,500	7,000	2.04	7.1	10.1	93	-	0.70
	Range Resources	RRC B	29.88	7,300	11,800	1.61	8.6	10.4	31	0.3	0.65
	<i>Total or Median</i>			28,000	46,000	1.61	8.6	10.6	74	-	0.83
Income											
	San Juan Basin Royalty Trust	SJT	7.57	350	350	1.00	14.3	22.9	-	9.4	0.95
	Permian Basin RT	PBT	10.21	480	480	1.00	8.1	14.8	78	6.8	0.93
	Dorchester Minerals, L.P.	DMLP	17.50	540	540	1.00	12.1	16.7	76	7.5	0.73
	Sabine Royalty Trust	SBR B	37.35	550	550	1.00	10.5	11.1	59	7.0	0.62
	Cross Timbers Royalty Trust	CRT B	16.04	100	100	1.00	14.1	15.2	28	10.2	0.55
	<i>Total or Median</i>			2,000	2,000	1.00	12.1	15.2	59	7.5	0.73
Canada											
	EnCana Corporation	ECA	12.02	11,700	18,300	1.57	10.7	9.6	56	0.5	1.12
	Imperial Oil Limited (30%)	IMO	30.95	7,900	9,900	1.26	8.5	10.0	63	1.4	0.85
	Suncor Energy	SU B	31.36	52,300	69,400	1.33	7.8	10.1	86	3.0	0.77
	Birchcliff Energy Ltd.	BIREF B	5.98	1,600	2,200	1.35	7.5	11.2	33	0.9	0.67
	Cenovus Energy Inc.	CVE	11.26	9,400	13,400	1.43	6.3	9.7	81	1.3	0.65
	<i>Total or Median</i>			83,000	113,000	1.35	7.8	10.0	63	1.3	0.77

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 3/31/18.

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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Symbol/Rating		10-Apr	2017	(mmboe)						
B = Buy										
Global Integrated (excl. Downstream)										
Exxon Mobil Corporation	XOM		83.13	1,504	38.76	7 35	18.20	27,375	1.38	0.86
Chevron Corporation	CVX		109.43	894	39.07	8 22	22.50	20,121	1.36	0.85
Royal Dutch Shell	RDS-A	B	53.42	1,356	36.66	2 24	25.70	34,845	1.08	0.77
Total S.A.	TOT	B	51.59	902	37.86	0 39	23.10	20,846	1.00	0.67
<i>Total or Median</i>									1.22	0.81
Large Independent										
EOG Resources, Inc.	EOG		98.57	217	35.48	10 6	23.40	5,068	1.43	1.14
Devon Energy Corporation	DVN		43.06	163	26.15	9 3	16.40	2,678	1.55	0.97
Marathon Oil Corporation	MRO	B	16.56	146	31.07	13 9	15.30	2,231	1.85	0.88
Occidental Petroleum Corp.	OXY		64.14	278	35.92	8 17	21.80	6,067	1.37	0.88
ConocoPhillips	COP	B	50.15	564	32.69	6 24	18.90	10,661	1.32	0.80
<i>Total or Median</i>									1.43	0.88
Small Independent										
Cimarex Energy Company	XEC		119.38	67	28.07	6 15	17.90	1,201	1.34	0.99
Continental Resources (32%)	CLR	B	46.75	27	33.67	3 14	26.10	710	1.11	0.88
California Resources	CRC		15.71	46	40.70	15 21	17.30	795	1.87	0.83
Whiting Petroleum Corporation	WLL		9.63	48	35.10	9 16	20.60	989	1.44	0.70
Range Resources	RRC	B	29.88	128	19.09	8 0	11.00	1,406	1.73	0.65
<i>Total or Median</i>									1.44	0.83
Income										
San Juan Basin Royalty Trust	SJT		7.57	3	18.05	5 13	10.64	34	1.47	0.95
Permian Basin RT	PBT		10.21	1	33.20	10 2	22.52	34	1.44	0.93
Dorchester Minerals, L.P.	DMLP		17.50	2	32.00	7 10	21.89	44	1.32	0.73
Sabine Royalty Trust	SBR	B	37.35	1	30.51	2 9	25.67	38	1.08	0.62
Cross Timbers Royalty Trust	CRT	B	16.04	0	36.76	8 10	25.15	12	1.32	0.55
<i>Total or Median</i>									1.32	0.73
Canada (excl. Downstream)										
EnCana Corporation	ECA		12.02	119	27.36	11 7	14.36	1,712	1.77	1.12
Imperial Oil Limited (30%)	IMO		30.95	68	35.25	14 11	17.30	1,169	1.81	0.85
Suncor Energy	SU	B	31.36	352	47.69	18 9	25.32	8,915	1.71	0.77
Birchcliff Energy Ltd.	BIREF	B	5.98	22	20.01	1 29	13.20	291	1.08	0.67
Cenovus Energy Inc.	CVE		11.26	115	30.45	11 2	18.72	2,145	1.59	0.65
<i>Total or Median</i>									1.71	0.77
For historical research see www.mcdep.com										



Meter Reader

A Monthly Analysis of Oil and Gas Stocks
April 11, 2017

Table 3
McDep Energy Stocks
Net Present Value Per Share
Ranked by Reserve Life (Adjustd Resrvs/Prod NTM)

			Price (US\$/sh)	Shares	Debt (\$mm)	Dividend NTM (\$/sh)	P/E NTM	Down- stream/ PV (%)	Proven Undev. Resrvs (%)	Adjustd Resrvs/ Prod NTM	Net Present Value (US\$/sh)
	Symbol/Rating	10-Apr 2017		(mm)							
	B = Buy										
Global Integrated											
Exxon Mobil Corporation	XOM		83.13	4,176	91,439	3.00	22	28	31	11.2	100.00
Total S.A.	TOT	B	51.59	2,433	60,788	2.63	12	23	42	9.6	90.00
Chevron Corporation	CVX		109.43	1,890	69,941	4.32	26	19	32	9.2	135.00
Royal Dutch Shell	RDS-A	B	53.42	3,965	133,961	3.76	15	24	25	8.4	80.00
	<i>Median</i>									9.4	
Large Independent											
Marathon Oil Corporation	MRO	B	16.56	847	7,811	0.20		-	24	12.2	20.00
ConocoPhillips	COP	B	50.15	1,246	36,350	1.06		-	25	9.2	70.00
Devon Energy Corporation	DVN		43.06	527	8,317	0.24	86	9	20	9.2	45.00
Occidental Petroleum Corp.	OXY		64.14	764	12,700	3.04	52	9	23	8.9	75.00
EOG Resources, Inc.	EOG		98.57	567	7,107	0.67	121	-	30	7.5	85.00
	<i>Median</i>									9.2	
Small Independent											
Range Resources	RRC	B	29.88	244	4,483	0.08	20	-	44	12.3	56.00
Continental Resources (32%)	CLR	B	46.75	118	2,097	-		-	59	11.4	56.00
California Resources	CRC		15.71	42	6,200	-		-	29	10.6	50.00
Whiting Petroleum Corporation	WLL		9.63	358	3,579	-		-	53	9.5	18.00
Cimarex Energy Company	XEC		119.38	95	1,321	0.32	28	-	21	6.4	120.00
	<i>Median</i>									10.6	
Income											
Sabine Royalty Trust	SBR	B	37.35	15	-	2.62	14	-	4	11.2	60.00
San Juan Basin Royalty Trust	SJT		7.57	47	-	0.71	11	-	-	9.9	8.00
Permian Basin RT	PBT		10.21	47	-	0.69	15	-	13	9.4	11.00
Cross Timbers Royalty Trust	CRT	B	16.04	6	-	1.63	10	-	-	7.5	29.00
Dorchester Minerals, L.P.	DMLP		17.50	31	-	1.31	16	-	-	6.9	24.00
	<i>Median</i>									9.4	
Canada											
EnCana Corporation	ECA		12.02	973	6,629	0.06		-	43	5.2	10.00
	<i>Median</i>									13.1	
P/E = Stock Price to Earnings. For historical research see www.mcdep.com .											



Meter Reader

A Monthly Analysis of Oil and Gas Stocks
April 11, 2017

Table 4										
McDep Energy Stocks										
Total Return Year-to-Date 2017										
Ranked by Unlevered Total Return										
			Price (\$/sh)	Price (\$/sh)	Price Change (%)	Cash Distrib. (%)	Equity Total Return (%)	Unlevered Total Return (\$/sh) (%)		
	Symbol/Ratio		10-Apr 2017	30-Dec 2016						McDep Ratio
Global Integrated										
Total S.A.	TOT	B	51.59	50.97	1	1	2	25	2	0.67
Royal Dutch Shell	RDS-A	B	53.42	54.38	(2)	2	(0)	34	(0)	0.77
Chevron Corporation	CVX		109.43	117.70	(7)	1	(6)	37	(5)	0.85
Exxon Mobil Corporation	XOM		83.13	90.26	(8)	1	(7)	22	(6)	0.86
	<i>Median</i>				(4)		(3)		(2)	0.81
Large Independent										
ConocoPhillips	COP	B	50.15	50.14	0	1	1	29	0	0.80
EOG Resources, Inc.	EOG		98.57	101.10	(3)	0.2	(2)	13	(2)	1.14
Marathon Oil Corporation	MRO	B	16.56	17.31	(4)	0	(4)	9	(3)	0.88
Devon Energy Corporation	DVN		43.06	45.67	(6)	0	(6)	16	(4)	0.97
Occidental Petroleum Corp.	OXY		64.14	71.23	(10)	1	(9)	17	(7)	0.88
	<i>Median</i>				(4)		(4)		(3)	0.88
Small Independent										
California Resources	CRC		15.71	21.29	(26)	-	(26)	147	(3)	0.83
Continental Resources (32%)	CLR	B	46.75	51.54	(9)	-	(9)	18	(7)	0.88
Range Resources	RRC	B	29.88	34.36	(13)	0	(13)	18	(8)	0.65
Cimarex Energy Company	XEC		119.38	135.90	(12)	0	(12)	14	(11)	0.99
Whiting Petroleum Corporation	WLL		9.63	12.02	(20)	-	(20)	10	(11)	0.70
	<i>Median</i>				(13)		(13)		(8)	0.83
Income										
Permian Basin RT	PBT		10.21	7.71	32	2.7	35	-	35	0.93
San Juan Basin Royalty Trust	SJT		7.57	6.62	14	2.4	17	-	17	0.95
Sabine Royalty Trust	SBR	B	37.35	35.15	6	1.5	8	-	8	0.62
Dorchester Minerals, L.P.	DMLP		17.50	17.55	(0)	1.4	1	-	1	0.73
Cross Timbers Royalty Trust	CRT	B	16.04	17.97	(11)	1.3	(9)	-	(9)	0.55
	<i>Median</i>				6		8		8	0.73
Canada										
EnCana Corporation	ECA		12.02	11.74	2	0	3	7	2	1.12
Suncor Energy	SU	B	31.36	32.69	(4)	1	(3)	10	(3)	0.77
Imperial Oil Limited (30%)	IMO		30.95	34.76	(11)	0	(11)	8	(9)	0.85
Birchcliff Energy Ltd.	BIREF	B	5.98	7.01	(15)	0	(14)	2	(11)	0.67
Cenovus Energy Inc.	CVE		11.26	15.13	(26)	0	(25)	5	(19)	0.65
	<i>Median</i>				(11)		(11)		(9)	0.77
	<i>Grand Median</i>				(6)		(6)		(4)	0.84
Natural Gas (\$/mmbtu)										
			3.24	3.74	(13)					
Oil -West Texas Intermediate (\$/bbl)										
			53.13	53.72	(1)					
Total Stock Market - U.S.	VTI		121.03	115.32	5					
Developed Markets - ex US	VEA		39.01	36.54	7					
Emerging Markets	VVO		39.78	35.78	11					
Source: McDep LLC, Yahoo, CME Group, Bloomberg										
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Meter Reader

A Monthly Analysis of Oil and Gas Stocks
April 11, 2017

Index of Recent Research				
<i>Date</i>	<i>Series</i>	<i>Symbol</i>	<i>Subject</i>	<i>Theme</i>
30-Mar	ISI	CVE	Cenovus Energy	Buying Out 50% Partner
30-Mar	ISI	COP	ConocoPhillips	Selling Canada
27-Mar	ISI	TOT	Total S.A.	Most Undervalued Global Integrated
21-Mar	ISI	CRT	Cross Timbers Royalty Trust	Top Line Value with Bottom Line Option
14-Mar	Meter Reader			Extra Inventory
3-Mar	ISI	DMLP	Dorchester Minerals, L.P.	Shale Oil Royalties Rising
26-Feb	II	CLR, CRC, RRC, WLL, XEC		Small Cap Producers Rising Again
21-Feb	ISI	MRO	Marathon Oil	A Third, a Third, a Third
14-Feb	Meter Reader			Non-U.S. Buys at Low McDep Ratio
6-Feb	ISI	COP	ConocoPhillips	Steady Volume
3-Feb	ISI	RDS	Royal Dutch Shell	BG Paying Off
1-Feb	ISI	XOM	Exxon Mobil	Looking to New Leader
30-Jan	ISI	CVX	Chevron	LNG and Permian Positives
17-Jan	Meter Reader			Buy Stocks with Low McDep Ratio
31-Dec	Meter Reader		Year-End Special with New Tables	Natural Gas Storage Trend Reverses
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 from 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
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.				



Meter Reader

A Monthly Analysis of Oil and Gas Stocks
April 11, 2017

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