



Independent Stock Idea

Intraday October 24, 2017

Cross Timbers Royalty Trust (CRT) Free Cash Flow

<i>Symbol</i>	CRT	<i>Ebitda Next Twelve Months ending 9/30/18 (US\$mm)</i>	9
<i>Rating</i>	Buy	<i>North American Natural Gas/Ebitda (%)</i>	48
<i>Price (US\$/sh)</i>	14.90	<i>Natural Gas and Oil Production/Ebitda (%)</i>	100
<i>Pricing Date</i>	10/24/17	<i>Adjusted Reserves/Production NTM</i>	9.0
<i>Shares (mm)</i>	6.00	<i>EV/Ebitda</i>	9.6
<i>Market Capitalization (US\$mm)</i>	89	<i>PV/Ebitda</i>	18.7
<i>Debt (US\$mm)</i>	0	<i>Undeveloped Reserves (%)</i>	0
<i>Enterprise Value (EV) (US\$mm)</i>	89	<i>Natural Gas and Oil Ebitda (US\$/mcf)</i>	4.09
<i>Present Value (PV) (US\$mm)</i>	174	<i>Present Value Proven Reserves(US\$/boe)</i>	42.17
<i>Net Present Value (US\$/unit)</i>	29	<i>Oil and Gas Ebitda Margin (%)</i>	68
<i>Debt/Present Value</i>	0.00	<i>Earnings Next Twelve Months (US\$/un)</i>	1.22
<i>McDep Ratio - EV/PV</i>	0.51	<i>Price/Earnings Next Twelve Months</i>	12
<i>Distribution Yield (%/year)</i>	8.2	<i>Distribution Next Twelve Months (US\$/sh)</i>	1.22
Note: Estimated cash flow and earnings tied to one-year futures prices for natural gas.			
Reported results may vary widely from estimates. Estimated present value per share revised only infrequently.			
Estimated present value presumes a long-term price for oil of US\$70 a barrel and natural gas, \$4.00 a million btu.			
For historical analysis of CRT since 2000 see www.mcdep.com/4crt.htm			

Summary and Recommendation

We recommend current purchase of the common units of **Cross Timbers Royalty Trust (CRT)** for full payout of free cash flow from high-quality oil and gas properties, currently at an 8% distribution yield. We see unlevered appreciation of 90% to Net Present Value (NPV) of \$29 a share from current stock price of \$15. Latest preliminary quarterly results confirm production of 0.69 billion cubic feet oil equivalent suggesting a flat trend for the next twelve months (see table [Operating and Financial Estimates](#) on page 2). Deductions of \$2.90 a thousand cubic feet oil equivalent (mcf) from price of \$5.50 yield cash distributions of \$2.60 a mcfe (\$0.25 a unit). Distribution may be \$2.70 a mcfe (\$1.22 a unit) for the year ahead. Long-life resources, higher long-term natural gas and oil price, and concentration on high margin Top Line volumes support the higher cash flow multiple built into NPV (see table [Present Value](#) on page 3). Looking more closely at operating trends, investors observe that natural gas volume appears to be on a gentle decline, while oil volume may be inclining (see charts [CRT Volume Trend](#) on page 3). A similar pattern plays out on a quarterly basis for CRT and four Income Payers (see charts [Quarterly Underlying Volume](#) on page 4). Monthly oil production ticked up in October (see charts [Monthly Underlying Volume](#) on page 5). Monthly results disclosed on October 20 also indicated that development costs on Oklahoma Bottom Line properties have been fully recovered and that those properties made a positive contribution to the monthly distribution declared in October. After several more months Texas Bottom Line properties should be contributing again as well. Meanwhile, in today's commodity price environment, investors seem increasingly focused on the payout of free cash flow. CRT and its four peers are the leaders in cash distributions (see Tables 1-4, [McDep Energy Stocks](#) on pages 6-9).

Kurt H. Wulff, CFA



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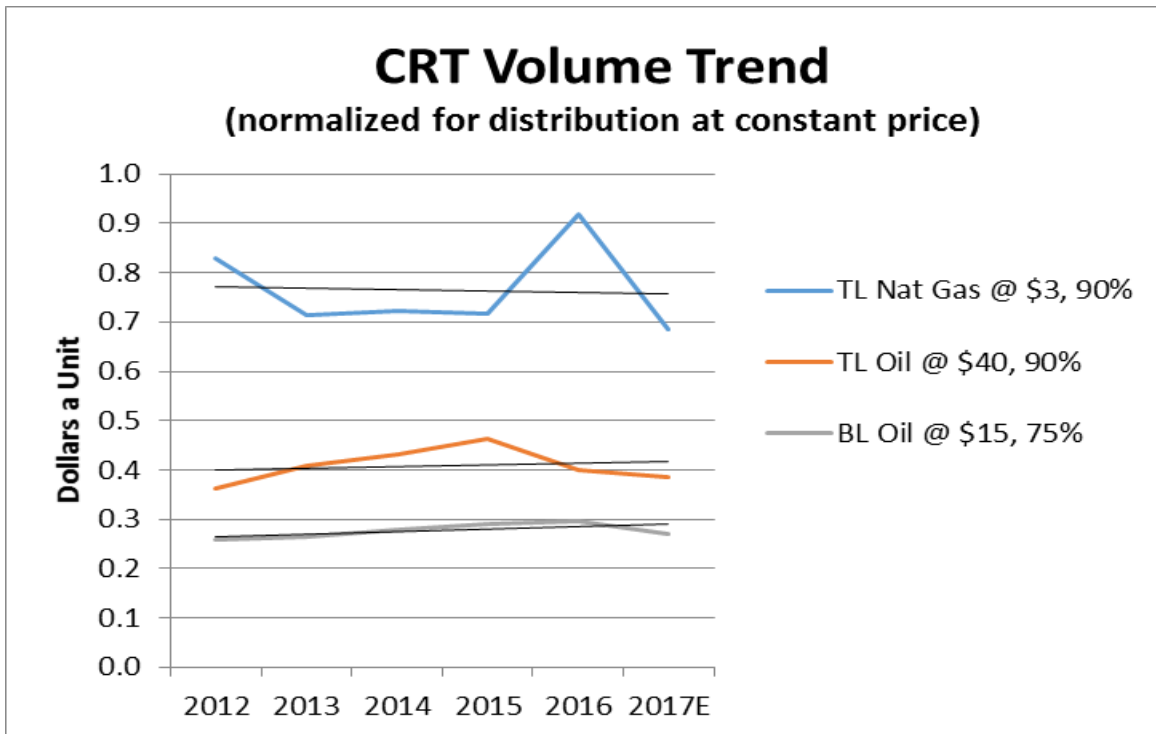
Cross Timbers Royalty Trust										
Next Twelve Months Operating and Financial Performance										
	Q3	Year	Q2	Q3E	Q4E	Year	Q1E	Q2E	Q3E	Next Twelve Months
	9/30/16	2016	6/30/17	9/30/17	12/31/17	2017	3/31/18	6/30/18	9/30/18	9/30/18
Volume										
Natural Gas (bcf)	0.40	2.05	0.38	0.39	0.36	1.55	0.36	0.34	0.34	1.40
Natural Gas (mmcf)	4.3	5.6	4.2	4.3	3.9	4.3	3.9	3.8	3.8	3.8
Days	91	366	90	91	92	365	92	90	91	365
Oil (mb)	55	225	51	50	55	209	56	54	57	222
Oil (mbd)	0.60	0.61	0.57	0.54	0.60	0.57	0.61	0.61	0.62	0.61
Days	92	366	89	92	92	365	92	89	92	365
Total (bcf)	0.73	3.40	0.69	0.69	0.69	2.81	0.69	0.67	0.69	2.74
Price										
Natural Gas (HH lagged three months)										
Henry Hub (\$/mmbtu)	1.95	2.28	3.32	3.18	2.99	3.12	3.04	3.26	2.96	3.07
Differential (%)	(72)	(55)	(30)	(31)	(30)	(31)	(30)	(30)	(30)	(30)
CRT (\$/mcf)	3.37	3.54	4.33	4.16	3.89	4.09	3.96	4.24	3.85	3.98
Oil (\$/bbl) (WTI lagged two months)										
WTI Cushing	46.80	41.85	51.41	46.78	49.64	49.49	51.71	52.19	52.22	51.44
CRT	42.02	38.12	47.81	43.75	47.15	46.00	49.12	49.58	49.61	48.87
Total (\$/mcf)	5.02	4.66	5.95	5.52	5.80	5.69	6.01	6.20	6.05	6.01
Revenue (\$mm)										
Natural Gas	1.33	7.25	1.65	1.62	1.40	6.35	1.41	1.46	1.33	5.59
Oil	2.31	8.58	2.44	2.19	2.60	9.62	2.74	2.70	2.82	10.86
Total	3.64	15.83	4.09	3.81	4.00	15.97	4.14	4.16	4.15	16.45
Cost (\$mm)										
Tax, transport & other	0.51	2.33	0.62	0.46	0.48	2.20	0.50	0.50	0.50	1.97
Production	0.97	4.46	1.04	0.83	0.83	3.77	0.83	0.81	0.82	3.28
Total	1.48	6.79	1.66	1.29	1.31	5.97	1.32	1.30	1.32	5.26
Cash flow (\$mm)										
Development	0.20	1.00	0.44	0.20	0.20	1.14	0.20	0.20	0.20	0.80
Excess or other	0.29	(0.38)	0.19	0.50	0.40	1.35	0.40	0.50	0.40	1.70
Net proceeds (\$mm)										
Royalty income (\$mm)	1.52	7.54	1.63	1.64	1.86	6.76	1.97	1.92	1.98	7.74
Royalty/Net proceeds	91%	90%	91%	91%	89%	90%	89%	89%	89%	89%
Administration & reserve	0.13	1.19	0.11	0.11	0.11	0.57	0.11	0.11	0.11	0.44
Distributable income (\$mm)										
Units (millions)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Royalty income (\$/unit)										
Natural Gas										
TL TX	0.02	0.10	0.02							
TL OK	0.02	0.10	0.03							
TL NM	0.10	0.63	0.13							
BL TX	-	-	-							
BL OK	-	-	-							
Oil										
TL TX	0.07	0.28	0.06							
TL OK	0.03	0.12	0.03							
TL NM	0.01	0.03	0.01							
BL TX	-	-	-							
BL OK	-	-	-							
Administration	0.01	0.06	0.02							
Reserve and other	0.02	0.12	(0.00)							
Distribution (\$/unit)	0.22	1.06	0.25	0.25	0.29	1.03	0.31	0.30	0.31	1.22



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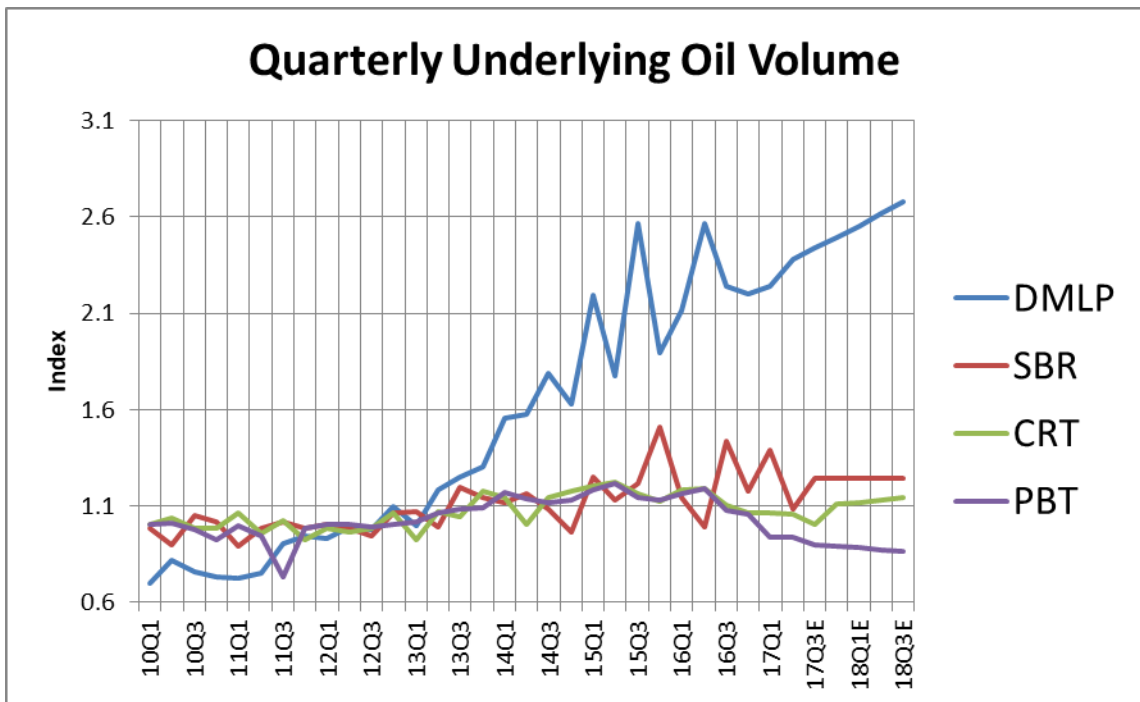
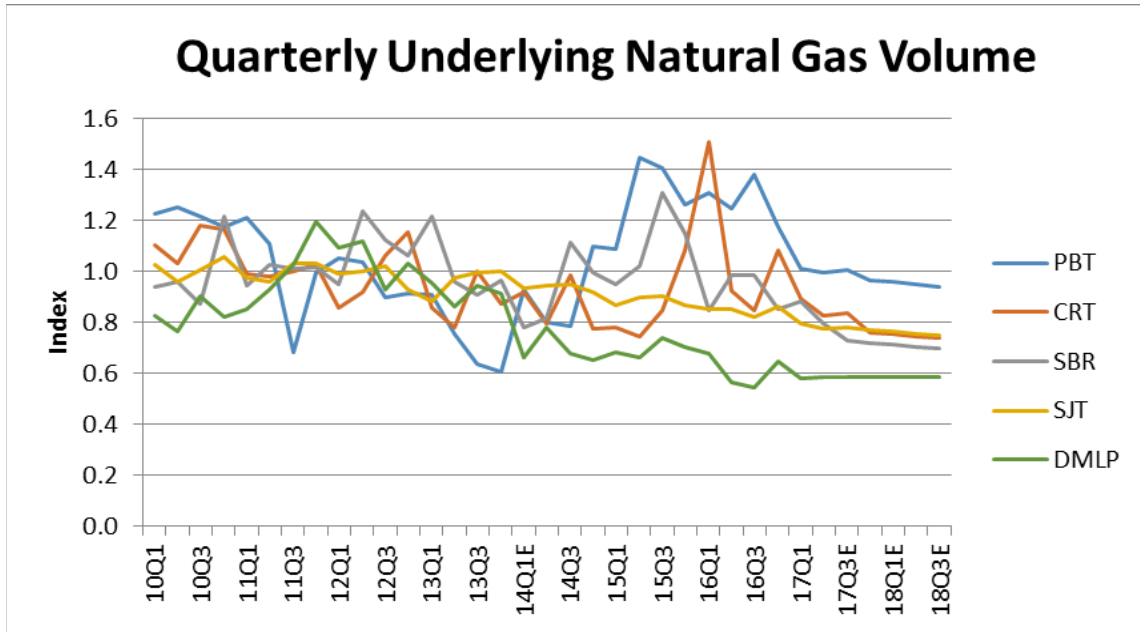
Cross Timbers Royalty Trust					
Functional Cash Flow and Present Value					
	<i>NTM Ebitda</i>	<i>Adjusted</i>	<i>PV/</i>	<i>Present</i>	
	<i>(US\$mm)</i>	<i>R/P</i>	<i>Ebitda</i>	<i>Value</i>	
				<i>(US\$mm)</i>	
Top Line Natural Gas	6	12.3	22.7	126	72%
Top Line Oil	2	6.8	17.1	30	17%
Bottom Line Oil	2	5.0	9.0	18	10%
	9	9.0	18.7	174	100%
Debt (US\$mm)					-
Net Present Value (US\$mm)					174
Shares (mm)					6
Net Present Value (US\$/sh)					29
NPV Approximation by Cash Flow Multiple Depending on Reserve Life (US\$/sh)					28
Top Line Approximation at 1.5 times Cash Flow Multiple Depending on Reserve Life					





Independent Stock Idea

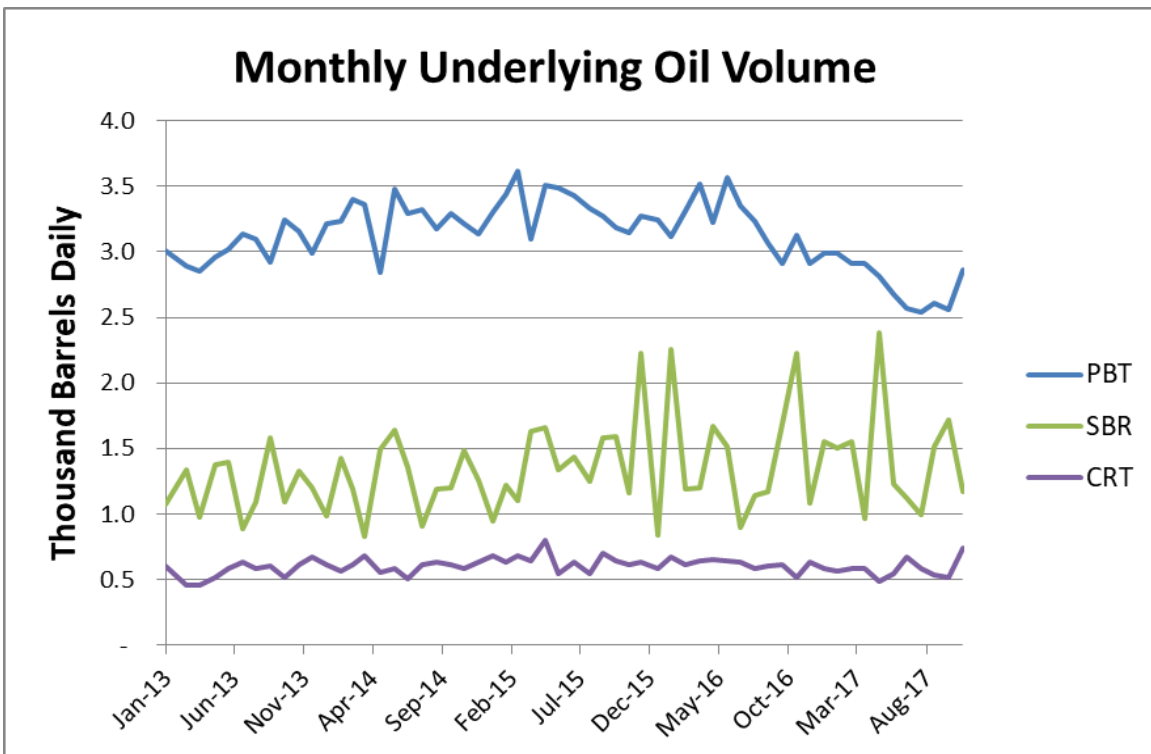
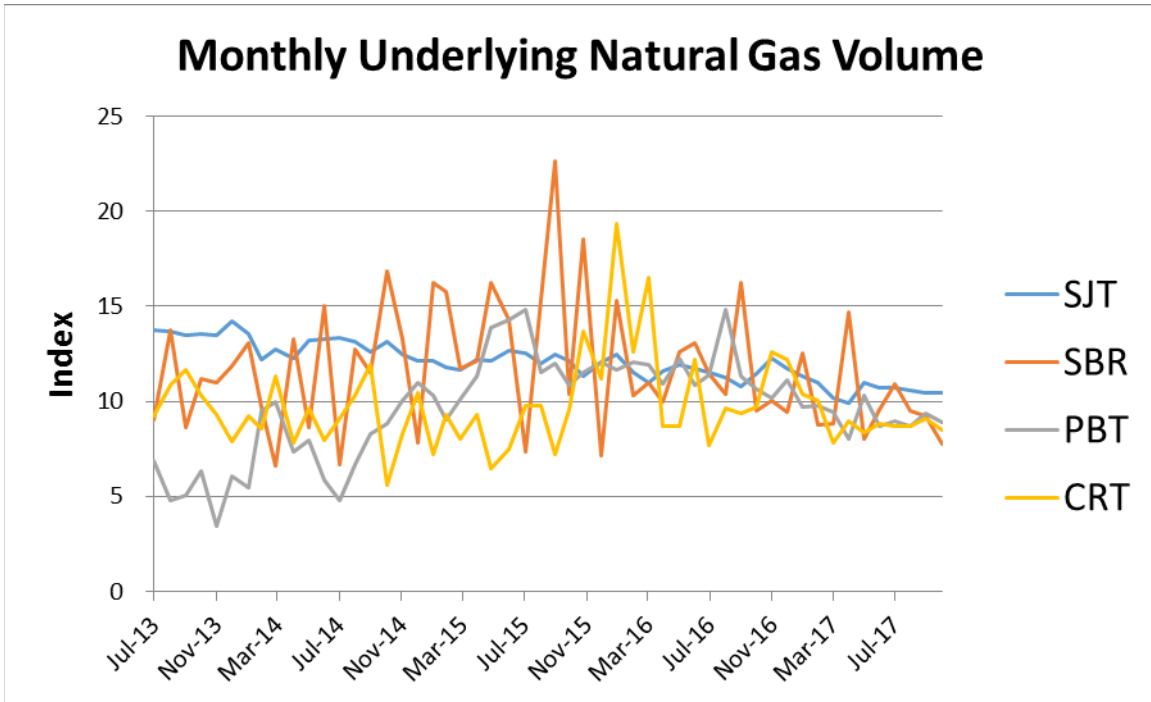
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Table 1
McDep Energy Stocks
Ranked by McDep Ratio

			Price (US\$/sh)	Market Cap (US\$mm)	Enterprise Value (\$mm)	EV/ Market Cap	EV/ Ebitda NTM	PV/ Ebitda NTM	Oil Prod'n/ PV (%)	Dist. Yield NTM (%)	McDep Ratio (EV/PV)
	Symbol/Rating		24-Oct 2017								
Global Integrated											
	Chevron Corporation	CVX	119.45	226,000	293,000	1.30	9.1	10.0	60	3.6	0.91
	Exxon Mobil Corporation	XOM	83.52	357,000	448,000	1.26	10.0	11.6	49	3.7	0.86
	Royal Dutch Shell	RDS-A B	61.54	255,000	382,000	1.50	7.4	8.9	51	6.1	0.83
	Total S.A.	TOT B	54.67	141,000	198,000	1.40	5.9	8.6	55	5.4	0.68
	<i>Total or Median</i>			979,000	1,321,000	1.35	8.2	9.4	53	4.5	0.85
Large Independent											
	EOG Resources, Inc.	EOG	96.86	56,100	63,300	1.13	11.5	10.2	86	0.7	1.12
	Pioneer Natural Resources	PXD	143.44	24,400	26,100	1.07	9.2	9.6	87	0.1	0.96
	Occidental Petroleum Corp.	OXY	65.35	50,100	62,900	1.26	10.5	11.7	80	4.7	0.89
	Devon Energy Corporation	DVN	34.78	18,400	26,400	1.44	8.1	9.7	62	0.7	0.83
	Marathon Oil Corporation	MRO B	13.71	11,650	18,800	1.61	9.4	11.6	79	1.5	0.81
	ConocoPhillips	COP B	50.81	63,000	87,000	1.39	9.2	11.4	69	2.1	0.80
	<i>Total or Median</i>			223,700	285,000	1.32	9.3	10.8	80	1.1	0.86
Small Independent											
	Cimarex Energy Company	XEC	115.01	11,000	12,400	1.13	10.7	11.1	63	0.3	0.96
	California Resources	CRC	9.86	400	6,400	15.3	10.0	12.6	89	-	0.79
	Continental Resources (32%)	CLR B	37.90	4,500	6,600	1.47	8.4	11.1	74	-	0.76
	Whiting Petroleum Corporation	WLL	4.77	1,700	5,300	3.07	5.9	11.2	92	-	0.53
	Range Resources	RRC B	18.47	4,500	8,900	1.97	8.1	16.4	31	0.4	0.49
	<i>Total or Median</i>			22,000	40,000	1.97	8.4	11.2	74	-	0.76
Income											
	San Juan Basin Royalty Trust	SJT	7.63	360	360	1.00	14.7	15.4	-	6.7	0.95
	Permian Basin RT	PBT	9.07	420	420	1.00	15.0	18.1	78	6.2	0.83
	Sabine Royalty Trust	SBR	41.00	600	600	1.00	17.4	25.4	59	5.8	0.68
	Dorchester Minerals, L.P.	DMLP B	14.55	470	470	1.00	10.2	16.9	72	9.4	0.61
	Cross Timbers Royalty Trust	CRT B	14.90	90	90	1.00	9.6	18.7	28	8.2	0.51
	<i>Total or Median</i>			1,900	1,900	1.00	14.7	18.1	59	6.7	0.68
Canada											
	EnCana Corporation	ECA	10.94	10,600	17,100	1.61	9.0	9.6	56	0.5	0.94
	Imperial Oil Limited (30%)	IMO	30.97	7,900	9,900	1.26	8.1	9.6	67	1.7	0.85
	Suncor Energy	SU B	33.11	55,100	73,500	1.33	8.2	10.3	84	3.1	0.80
	Cenovus Energy Inc.	CVE	9.60	11,800	22,000	1.87	6.5	10.9	83	1.7	0.59
	Birchcliff Energy Ltd.	BIREF B	3.98	1,100	1,700	1.56	5.8	11.5	30	2.0	0.51
	<i>Total or Median</i>			87,000	124,000	1.56	8.1	10.3	67	1.7	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 9/30/18.
 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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Table 2											
McDep Energy Stocks											
Production Operating Leverage											
Ranked by McDep Ratio											
			Price		Oil	Operating					
			(US\$/sh)		Equiv.	Expense	Ebitda	Ebitda	Oper Lev		
Symbol/Rating		24-Oct	Volume	Price	Fixed	Var.	NTM	NTM	Ebitda chg/	McDep	
B = Buy		2017	(mnboe)	(\$/boe)	(\$/boe)	(%)	(\$/boe)	(\$mm)	Price chg	Ratio	
Global Integrated (excl. Downstream)											
Chevron Corporation	CVX		119.45	873	38.61	11	14	22.10	19,300	1.50	0.91
Exxon Mobil Corporation	XOM		83.52	1,464	38.88	4	43	18.30	26,800	1.22	0.86
Royal Dutch Shell	RDS-A	B	61.54	1,292	37.53	6	13	26.50	34,232	1.23	0.83
Total S.A.	TOT	B	54.67	962	39.76	0	38	24.80	23,868	1.00	0.68
<i>Total or Median</i>										1.22	0.85
Large Independent (excl. Downstream)											
EOG Resources, Inc.	EOG		96.86	230	35.75	11	2	24.00	5,512	1.46	1.12
Pioneer Natural Resources	PXD		143.44	117	36.36	11	3	24.30	2,840	1.45	0.96
Occidental Petroleum Corp.	OXY		65.35	230	36.61	12	10	20.90	4,807	1.57	0.89
Devon Energy Corporation	DVN		34.78	184	26.90	10	5	15.50	2,855	1.65	0.83
Marathon Oil Corporation	MRO	B	13.71	130	28.48	11	7	15.40	2,006	1.71	0.81
ConocoPhillips	COP	B	50.81	439	35.47	8	16	21.70	9,523	1.37	0.80
<i>Total or Median</i>										1.52	0.86
Small Independent											
Cimarex Energy Company	XEC		115.01	71	26.19	6	15	16.20	1,157	1.37	0.96
California Resources	CLC		9.86	47	39.79	15	28	13.70	645	2.09	0.79
Continental Resources (32%)	CLR	B	37.90	33	31.63	3	14	24.20	787	1.12	0.76
Whiting Petroleum Corporation	WLL		4.77	47	33.60	9	16	19.10	907	1.47	0.53
Range Resources	RRC	B	18.47	133	17.40	8	6	8.30	1,105	1.96	0.49
<i>Total or Median</i>										1.47	0.76
Income											
San Juan Basin Royalty Trust	SJT		7.63	3	15.22	5	15	7.98	24	1.63	0.95
Permian Basin RT	PBT		9.07	1	32.20	10	7	19.84	28	1.50	0.83
Sabine Royalty Trust	SBR		41.00	1	30.77	2	11	25.43	34	1.08	0.68
Dorchester Minerals, L.P.	DMLP	B	14.55	2	31.84	7	10	21.76	46	1.32	0.61
Cross Timbers Royalty Trust	CRT	B	14.90	0	36.07	8	10	24.55	9	1.33	0.51
<i>Total or Median</i>										1.33	0.68
Canada (excl. Downstream)											
EnCana Corporation	ECA		10.94	113	29.76	12	3	16.76	1,893	1.72	0.94
Imperial Oil Limited (30%)	IMO		30.97	67	37.56	17	6	18.30	1,222	1.93	0.85
Suncor Energy	SU	B	33.11	283	47.71	22	4	23.68	6,699	1.93	0.80
Cenovus Energy Inc.	CVE		9.60	212	26.59	11	3	14.85	3,147	1.74	0.59
Birchcliff Energy Ltd.	BIREF	B	3.98	23	17.81	4	8	12.30	286	1.33	0.51
<i>Total or Median</i>										1.74	0.80

For historical research see www.mcdep.com



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Table 3											
McDep Energy Stocks											
Net Present Value Per Share											
Ranked by Reserve Life (Adjustd Resrvs/Prod NTM)											
			Price (US\$/sh)			Dividend		Down- stream/ PV	Proven Undev. Resrvs/ Prod	Adjustd Resrvs/ Prod NTM	Net Present Value (US\$/sh)
	Symbol/Rating		24-Oct 2017	Shares (mm)	Debt (\$mm)	NTM (\$/sh)	P/E NTM	(%)	(%)		
	B = Buy										
Global Integrated											
	Exxon Mobil Corporation	XOM	83.52	4,271	91,152	3.08	23	27	31	11.5	100.00
	Total S.A.	TOT	54.67	2,583	57,015	2.93	11	22	42	8.9	90.00
	Chevron Corporation	CVX	119.45	1,893	66,793	4.32	29	20	32	8.9	135.00
	Royal Dutch Shell	RDS-A	61.54	4,146	126,975	3.76	18	24	25	8.8	80.00
	<i>Median</i>									8.9	
Large Independent											
	ConocoPhillips	COP	50.81	1,237	24,405	1.06		-	20	10.3	68.00
	Occidental Petroleum Corp.	OXY	65.35	766	12,800	3.04	48	14	23	9.2	75.00
	Devon Energy Corporation	DVN	34.78	529	8,019	0.24	65	9	20	8.8	45.00
	Marathon Oil Corporation	MRO	13.71	850	7,129	0.20		-	39	8.6	19.00
	EOG Resources, Inc.	EOG	96.86	579	7,250	0.67		-	30	7.0	85.00
	Pioneer Natural Resources	PXD	143.44	170	1,700	0.08	45	-	7	6.0	150.00
	<i>Median</i>									8.7	
Small Independent											
	Range Resources	RRC	18.47	245	4,392	0.08	34	-	44	11.8	56.00
	Whiting Petroleum Corporation	WLL	4.77	363	3,589	-		-	53	11.7	18.00
	Continental Resources (32%)	CLR	37.90	119	2,124	-		-	59	11.4	56.00
	California Resources	CRC	9.86	42	6,000	-		-	29	10.3	50.00
	Cimarex Energy Company	XEC	115.01	95	1,442	0.32	27	-	21	6.1	120.00
	<i>Median</i>									11.4	
Income											
	Sabine Royalty Trust	SBR	41.00	15	-	2.36	17	-	4	12.3	60.00
	San Juan Basin Royalty Trust	SJT	7.63	47	-	0.51	15	-	-	10.2	8.00
	Permian Basin RT	PBT	9.07	47	-	0.56	16	-	12	9.4	11.00
	Cross Timbers Royalty Trust	CRT	14.90	6	-	1.22	12	-	-	9.0	29.00
	Dorchester Minerals, L.P.	DMLP	14.55	32	-	1.37	13	-	-	6.6	24.00
	<i>Median</i>									9.4	
Canada											
	Suncor Energy	SU	33.11	1,665	18,419	1.03	19	16	44	13.6	44.00
	Cenovus Energy Inc.	CVE	9.60	1,229	10,221	0.16		4	55	12.8	22.00
	Birchcliff Energy Ltd.	BIREF	3.98	268	601	0.08	19	-	69	12.4	10.00
	Imperial Oil Limited (30%)	IMO	30.97	255	2,041	0.51	12	32	23	9.2	38.00
	EnCana Corporation	ECA	10.94	973	6,457	0.06		-	43	5.5	12.00
	<i>Median</i>									12.4	
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 2017											
Ranked by Unlevered Total Return											
			Price	Price	Price	Cash	Equity	Unlevered			
			(\$/sh)	(\$/sh)	Change	Distrib.	Total	Debt	Return	McDep	
	Symbol/Rati		24-Oct	30-Dec	(%)	(%)	(%)	(\$/sh)	(%)	Ratio	
			2017	2016							
Global Integrated											
	Royal Dutch Shell	RDS-A B	61.54	54.38	13	5	18	31	12	0.83	
	Total S.A.	TOT B	54.67	50.97	7	3	10	22	7	0.68	
	Chevron Corporation	CVX	119.45	117.70	1	3	4	35	3	0.91	
	Exxon Mobil Corporation	XOM	83.52	90.26	(7)	2	(5)	21	(4)	0.86	
	<i>Median</i>				4		7		5	0.85	
Large Independent											
	ConocoPhillips	COP B	50.81	50.14	1	2	3	20	2	0.80	
	EOG Resources, Inc.	EOG	96.86	101.10	(4)	0	(4)	13	(3)	1.12	
	Occidental Petroleum Corp.	OXY	65.35	71.23	(8)	2	(6)	17	(5)	0.89	
	Marathon Oil Corporation	MRO B	13.71	17.31	(21)	1	(20)	8	(13)	0.81	
	Devon Energy Corporation	DVN	34.78	45.67	(24)	0	(24)	15	(18)	0.83	
	Pioneer Natural Resources	PXD	143.44	180.00	(20)	0	(20)	10	(19)	0.96	
	<i>Median</i>				(14)		(13)		(9)	0.86	
Small Independent											
	California Resources	CRC	9.86	21.29	(54)	-	(54)	142	(7)	0.79	
	Cimarex Energy Company	XEC	115.01	135.90	(15)	0	(15)	15	(14)	0.96	
	Continental Resources (32%)	CLR B	37.90	51.54	(26)	-	(26)	18	(20)	0.76	
	Range Resources	RRC B	18.47	34.36	(46)	0	(46)	18	(30)	0.49	
	Whiting Petroleum Corporation	WLL	4.77	12.02	(60)	-	(60)	10	(33)	0.53	
	<i>Median</i>				(46)		(46)		(20)	0.76	
Income											
	Permian Basin RT	PBT	9.07	7.71	18	6	23	-	23	0.83	
	San Juan Basin Royalty Trust	SJT	7.63	6.62	15	6	22	-	22	0.95	
	Sabine Royalty Trust	SBR	41.00	35.15	17	4	21	-	21	0.68	
	Dorchester Minerals, L.P.	DMLP B	14.55	17.55	(17)	5	(12)	-	(12)	0.61	
	Cross Timbers Royalty Trust	CRT B	14.90	17.97	(17)	4	(13)	-	(13)	0.51	
	<i>Median</i>				15		21		21	0.68	
Canada											
	Suncor Energy	SU B	33.11	32.69	1	1	3	11	2	0.80	
	EnCana Corporation	ECA	10.94	11.74	(7)	0	(7)	7	(4)	0.94	
	Imperial Oil Limited (30%)	IMO	30.97	34.76	(11)	1	(10)	8	(8)	0.85	
	Cenovus Energy Inc.	CVE	9.60	15.13	(37)	1	(36)	8	(23)	0.59	
	Birchcliff Energy Ltd.	BIREF B	3.98	7.01	(43)	1	(43)	2	(32)	0.51	
	<i>Median</i>				(11)		(10)		(8)	0.80	
	<i>Grand Median</i>				(11)		(10)		(7)	0.81	
	Natural Gas (\$/mmbtu)		2.97	3.74	(21)						
	Oil -West Texas Intermediate (\$/bbl)		52.07	53.72	(3)						
	Total Stock Market - U.S.	VTI	132.00	115.32	14						
	Developed Markets - ex US	VEA	43.94	36.54	20						
	Emerging Markets	VWO	44.48	35.78	24						
Source: McDep LLC, Yahoo, CME Group, Bloomberg											
For historical research see www.mcdep.com											



Independent Stock Idea

Intraday October 24, 2017

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