



Analysis of Oil and Gas Stocks
March 22, 2016

Income Payer Appreciation Potential 55-110% CRT, PBT, SBR, SJT, DMLP

Symbol/Rating	21-Mar 2016	Market Cap	Value (\$mm)	Present Value by Segment (%)				Dist. Yield	NTM (%)	McDep Ratio
				Price (US\$/sh)	EV/ Market	Enterprise Value	North Amer.	Rest of World		
				Natural Gas	Natural Gas	Oil Prod'n	Down- stream			
San Juan Basin Royalty Trust	SJT	5.12	1.00	240	100		-		4.5	0.64
Permian Basin RT	PBT	6.02	1.00	280	23		77		5.9	0.55
Cross Timbers Royalty Trust	CRT	15.88	1.00	100	52		48		7.6	0.55
Sabine Royalty Trust	SBR	B	32.20	1.00	470	38		62	6.7	0.54
Dorchester Minerals, L.P.	DMLP	B	11.43	1.00	350	23		77	8.0	0.48
<i>Total or Median</i>				1.00	1,400	38	62		6.7	0.55

Summary and Recommendation

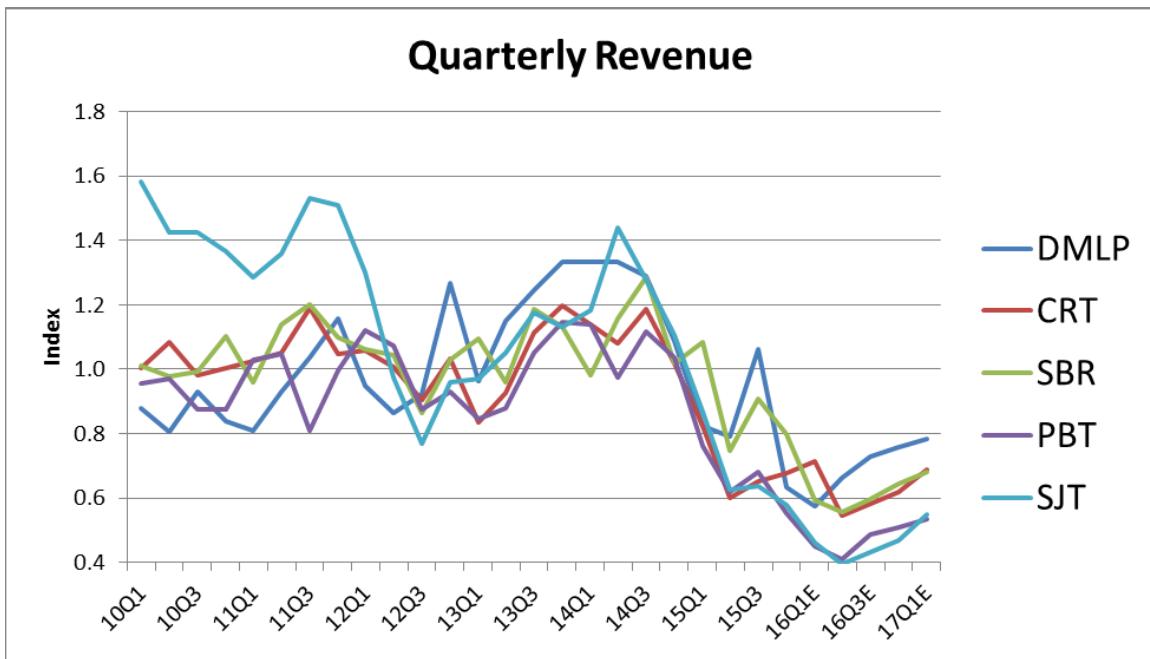
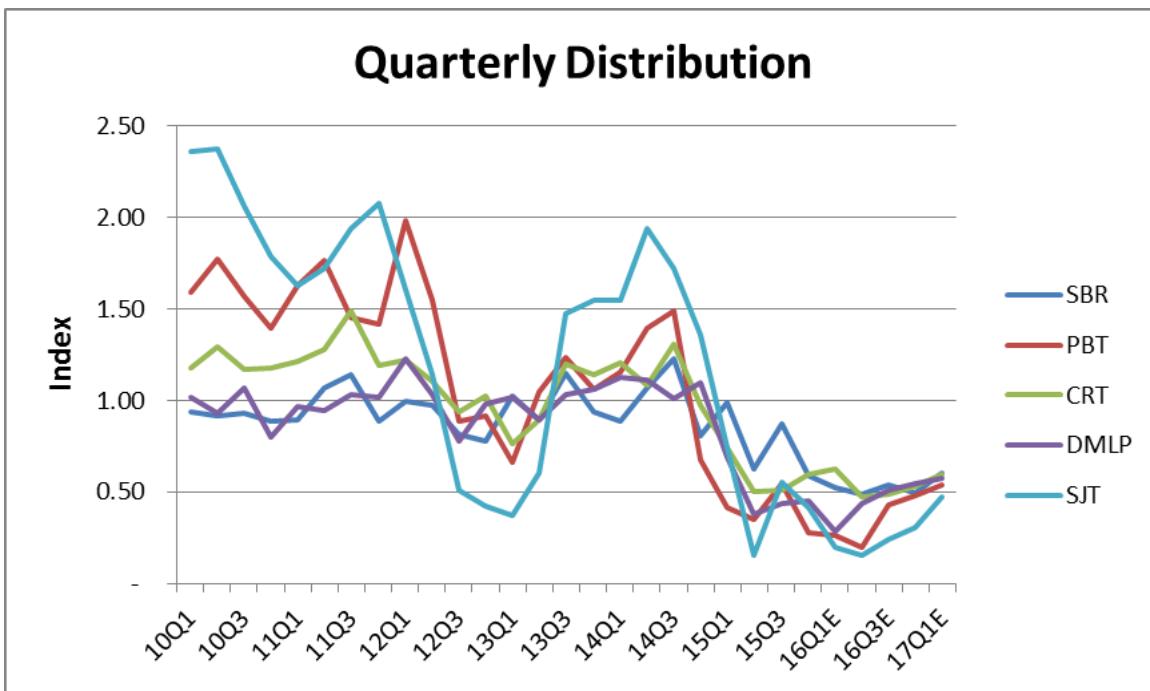
Seeing appreciation potential ranging from 55% to 110% over the next year or two, we like income payers **Cross Timbers Royalty Trust (CRT)**, **Permian Basin Royalty Trust (PBT)**, and **San Juan Basin Royalty Trust (SJT)** along with the current buy recommendations **Sabine Royalty Trust (SBR)** and **Dorchester Minerals, L.P. (DMLP)**. The two stocks with the lowest McDep Ratio, meaning most appreciation potential, get the buy designation. Stock prices go hand in hand with distributions which appear to be rising again after steep declines in the past year and a half (see chart Distribution on page 2). Rising revenues are behind rising distributions (see chart Revenue on page 2). While a gradual decline in production is normal for a long-life resource, signs of rising volume are a positive surprise (see chart Volume on page 3). Oil and gas prices drive wide variation in revenue around the volume trend (see chart Price on page 3). We take price from the futures market in making our estimates for the next twelve months. For cash derived from Top Line percentage of revenue arrangements, distribution responds directly to revenue. For cash derived from Bottom Line percentage of profits arrangements, distributions can rise rapidly from low levels with the operating leverage from revenue rising more than expense. SBR is exclusively a Top Line cash payer while SJT is exclusively a Bottom Line cash payer. DMLP, PBT and CRT are primarily Top Line cash payers with Bottom Line properties offering frosting on the cake when revenues exceed costs and capital investment again. Distribution estimates take account of latest disclosures including those made on March 21 for CRT, PBT and SJT (see tables Operating and Financial Estimates for five stocks on pages 4-8). Estimates of Present Value, the denominator of the McDep Ratio, take account of latest reserve estimates released February 18 through March 15 (see tables Present Value for each stock on pages 9-10). Valuation rankings allow comparison of Income Payers to all 24 stocks in our research (see Tables 1-4 on pages 11-14).

Kurt H. Wulff, CFA



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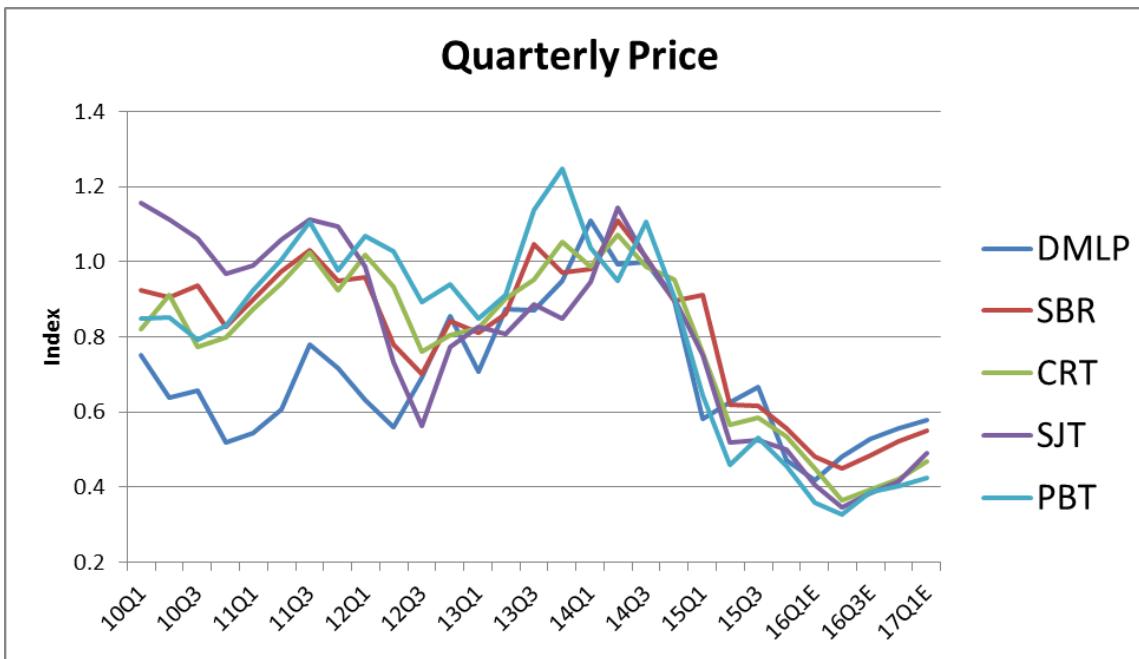
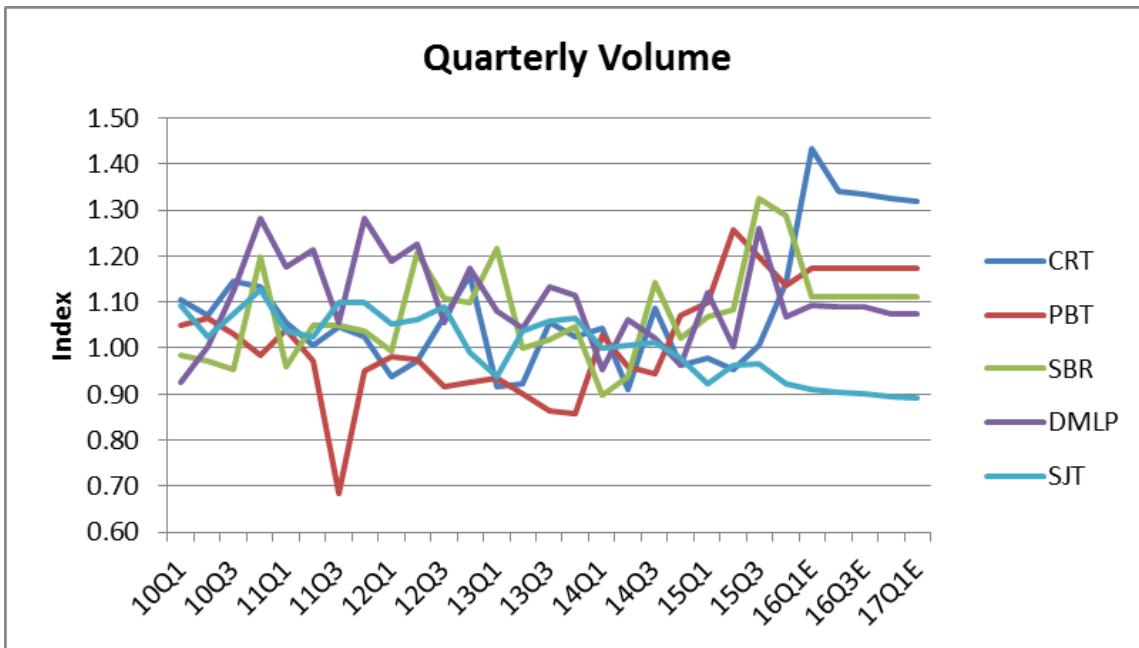
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Cross Timbers Royalty Trust Next Twelve Months Operating and Financial Performance										
	<i>Q1</i> 3/31/15	<i>Q4</i> 12/31/15	<i>Year</i> 2015	<i>Q1E</i> 3/31/16	<i>Q2E</i> 6/30/16	<i>Q3E</i> 9/30/16	<i>Q4E</i> 12/31/16	<i>Year</i> 2016	<i>Q1E</i> 3/31/17	<i>Next Twelve Months</i> 3/31/17
Volume										
Natural Gas (bcf)	0.37	0.51	1.62	0.71	0.64	0.63	0.64	2.62	0.63	2.54
Natural Gas (mmcfd)	4.0	5.5	4.4	7.7	7.0	7.0	6.9	7.2	6.9	6.9
Oil (mb)	60	56	233	59	57	58	57	232	58	231
Oil (mbd)	0.65	0.62	0.64	0.64	0.64	0.63	0.63	0.64	0.63	0.63
Total (bcf)	0.73	0.85	3.02	1.07	0.98	0.98	0.98	4.01	0.98	3.93
Price										
Natural Gas (HH lagged three months)										
Henry Hub (\$/mmbtu)	4.02	2.76	3.11	2.28	2.09	1.99	2.22	2.15	2.50	2.20
Differential (%)	(42)	(69)	(46)	(82)	(40)	(40)	(40)	(52)	(52)	(44)
CRT (\$/mcf)	5.69	4.67	4.53	4.15	2.93	2.79	3.11	3.27	3.81	3.16
Oil (\$/bbl) (WTI lagged two months)										
WTI Cushing	60.83	44.87	53.37	37.35	36.04	41.96	43.43	39.69	44.15	41.39
CRT	63.07	44.00	52.96	36.46	35.18	40.95	42.39	38.74	43.09	40.41
Total (\$/mcf)	8.08	5.73	6.52	4.79	3.96	4.23	4.50	4.38	5.00	4.42
Revenue (\$mm)										
Natural Gas	2.10	2.38	7.33	2.95	1.86	1.77	1.98	8.57	2.42	8.03
Oil	3.78	2.46	12.34	2.15	2.02	2.39	2.44	9.00	2.49	9.34
Total	5.88	4.85	19.67	5.10	3.88	4.16	4.42	17.57	4.91	17.37
Cost (\$mm)										
Tax, transport & other	0.74	0.74	2.71	0.71	0.54	0.58	0.62	2.46	0.69	2.43
Production	1.75	1.48	6.19	1.86	1.72	1.72	1.72	7.02	1.72	6.87
Total	2.49	2.22	8.90	2.58	2.26	2.30	2.34	9.48	2.40	9.31
Cash flow (\$mm)										
Development	0.65	0.37	2.70	0.30	0.30	0.30	0.30	1.20	0.10	1.00
Excess or other	(0.45)	(0.37)	(1.97)	(0.47)	(0.73)	(0.56)	(0.51)	(2.27)	(0.16)	(1.96)
Net proceeds (\$mm)	3.20	2.63	10.04	2.70	2.06	2.12	2.29	9.16	2.56	9.03
Royalty income (\$mm)	2.83	2.31	8.88	2.29	1.75	1.80	1.95	7.79	2.18	7.67
Royalty/Net proceeds	88%	82%	88%	85%	85%	85%	85%	85%	85%	85%
Administration	0.26	0.25	0.75	0.11	0.11	0.11	0.11	0.44	0.11	0.44
Distributable income (\$mm)	2.57	2.06	8.13	2.18	1.64	1.69	1.84	7.35	2.07	7.23
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	0.06	0.05	0.16	0.04	0.03	0.03	0.04	0.14	0.04	0.14
TL OK	0.05	0.04	0.19	0.04	0.03	0.03	0.04	0.14	0.04	0.14
TL NM	0.13	0.19	0.48	0.19	0.12	0.12	0.13	0.57	0.16	0.53
BL TX	-	-	-							
BL OK	0.00	-	0.00							
Oil										
TL TX	0.12	0.07	0.35	0.06	0.06	0.07	0.07	0.26	0.07	0.27
TL OK	0.06	0.03	0.22	0.04	0.04	0.04	0.04	0.16	0.04	0.16
TL NM	0.02	0.01	0.04	0.01	0.01	0.01	0.01	0.03	0.01	0.03
BL TX	-	-	-							
BL OK	0.03	-	0.03							
Administration	0.04	0.02	0.10	0.01	0.02	0.02	0.02	0.07	0.02	0.08
Distribution (\$/unit)	0.43	0.34	1.35	0.36	0.27	0.28	0.31	1.22	0.34	1.21



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Dorchester Minerals, L.P. Operating and Financial Performance										
	<i>Q1</i>	<i>Q4</i>	<i>Year</i>	<i>Q1E</i>	<i>Q2E</i>	<i>Q3E</i>	<i>Q4E</i>	<i>Year</i>	<i>Q1E</i>	<i>Next Twelve Months</i>
	3/31/15	12/31/15	2015	3/31/16	6/30/16	9/30/16	12/31/16	2016E	3/31/17	3/31/17
Volume										
Nat Gas (mmcfd) - Top Line	10.4	10.9	10.1	10.1	9.7	9.3	8.9	9.5	8.9	9.2
Nat Gas (mmcfd) - Btm Line	8.3	8.3	8.9	8.2	8.1	8.1	8.0	8.1	8.0	8.0
Oil (mbd) - Top Line	1.49	1.51	1.44	1.54	1.57	1.60	1.60	1.58	1.60	1.60
Oil (mbd) - Bottom Line	1.14	0.76	1.09	1.00	1.04	1.08	1.08	1.05	1.08	1.07
Total (bcfe)	3.1	3.0	12.5	3.1	3.1	3.1	3.0	12.2	3.0	12.2
Total (mmcfd)	34	33	34	34	34	33	33	33	33	33
Price										
Henry Hub (\$/mmbtu)	2.99	2.28	2.67	2.09	1.99	2.22	2.50	2.20	2.83	2.39
Top Line (\$/mcf)	2.66	1.86	2.30	1.71	1.63	1.82	2.04	1.79	2.31	1.95
Bottom Line (\$/mcf)	2.63	1.80	2.49	2.19	2.09	2.33	2.62	2.31	2.97	2.50
WTI Cushing (\$/bbl)	48.62	42.21	48.79	33.48	40.88	43.08	43.94	40.34	44.57	43.12
Top Line (\$/bbl)	43.26	38.82	42.23	30.13	36.79	38.78	39.54	36.38	40.12	38.81
Bottom Line (\$/bbl)	41.74	36.64	49.46	30.13	36.79	38.78	39.54	36.44	40.12	38.81
Total (\$/mcfe)	4.69	3.71	4.68	3.33	3.85	4.18	4.40	3.94	4.60	4.25
Revenue (\$mm)										
Natural Gas - Top Line	2.5	1.9	8.5	1.6	1.4	1.6	1.7	6.2	1.9	6.5
Oil - Top Line	5.8	5.4	22.1	4.2	5.3	5.7	5.8	21.0	5.9	22.7
Total - Top Line	8.3	7.3	30.6	5.8	6.7	7.3	7.5	27.3	7.7	29.2
Natural Gas - Bottom Line	2.0	1.4	8.1	1.6	1.6	1.7	1.9	6.9	2.2	7.4
Oil - Bottom Line	4.3	2.6	19.7	2.7	3.5	3.9	3.9	14.0	3.9	15.2
Total - Bottom Line	6.3	3.9	27.8	4.4	5.0	5.6	5.9	20.9	6.1	22.6
Total	14.5	11.2	58.5	10.2	11.7	12.9	13.4	48.1	13.8	51.8
Expense										
Operating, incl. Prod Tax	1.0	1.3	3.9	0.6	0.7	0.8	0.8	2.9	0.8	3.1
General and Administrative	1.3	1.5	5.0	1.5	1.5	1.5	1.5	5.9	1.5	5.9
General Partner	0.2	0.1	0.5	0.1	0.1	0.1	0.1	0.5	0.1	0.5
Unreported	5.8	3.9	26.8	3.5	3.5	3.5	3.5	14.0	3.5	14.0
Total	8.3	6.8	36.2	5.7	5.8	5.9	5.9	23.3	5.9	23.5
Ebitda										
Top Line	6.3	4.4	22.3	4.5	4.8	5.4	5.7	20.4	7.9	23.8
Bottom Line						1.1	1.6	4.5	2.0	6.4
Total Ebitda	6.3	4.4	22.3	4.5	5.9	7.0	7.5	24.9	7.9	28.3
Deprec., Deplet., & Amort.	2.5	2.2	10.1	2.5	2.5	2.5	2.4	9.9	2.4	9.8
Lease Bonus and Other	(0.2)	(0.6)	(0.7)					-		-
Ebit	4.0	2.8	12.9	2.0	3.5	4.5	5.0	15.0	5.5	18.5
Ebt	4.0	2.8	12.9	2.0	3.5	4.5	5.0	15.0	5.5	18.5
Net Income (\$mm)	4.0	2.8	12.9	2.0	3.5	4.5	5.0	15.0	5.5	18.5
Units (millions)	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7
Net Income Per Unit (\$)	0.13	0.09	0.42	0.07	0.11	0.15	0.16	0.49	0.18	0.60
Distribution - Cash Accounting (\$mm)										
Top Line Revenue	9.1	7.6	30.6	5.8	6.7	7.3	7.5	27.3	7.7	29.2
Bottom Line Net Revenue	2.5	0.7	4.0	-	1.1	1.6	1.8	4.5	2.0	6.4
Lease Bonus	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.4	0.1	0.4
Cash Expense	(2.3)	(2.0)	(7.9)	(2.0)	(2.0)	(2.0)	(2.0)	(8.0)	(2.0)	(8.0)
Distribution	9.4	6.4	26.9	3.9	5.9	6.9	7.4	24.1	7.8	28.1
Distribution Per Unit (\$)	0.31	0.20	0.87	0.13	0.19	0.23	0.24	0.79	0.26	0.91



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Permian Basin Royalty Trust										
Next Twelve Months Operating and Financial Estimates										
	<i>Q1</i>	<i>Q4</i>	<i>Year</i>	<i>Q1E</i>	<i>Q2E</i>	<i>Q3E</i>	<i>Q4E</i>	<i>Year</i>	<i>Q1E</i>	<i>Next Twelve Months</i>
	<i>3/31/15</i>	<i>12/31/15</i>	<i>2015</i>	<i>3/31/16</i>	<i>6/30/16</i>	<i>9/30/16</i>	<i>12/31/16</i>	<i>2016</i>	<i>3/31/17</i>	<i>3/31/17</i>
TOP LINE										
Volume										
Natural Gas (mmcfd)	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Oil (mbd)	0.90	0.86	0.90	0.82	0.82	0.82	0.82	0.82	0.82	0.84
Price (cash lagged two months)										
Natural Gas (\$/mcf)	6.29	4.37	5.07	3.56	3.10	3.35	3.63	3.41	4.31	3.55
Oil (\$/bbl)	59.38	44.28	51.34	36.39	35.11	40.88	42.31	38.70	43.02	39.41
Revenue (\$mm)										
Natural Gas	0.7	0.4	2.1	0.4	0.3	0.3	0.4	1.4	0.4	1.4
Oil	4.9	3.5	16.9	2.7	2.6	3.1	3.2	11.6	3.2	12.1
Total Revenue	5.6	3.9	19.0	3.1	2.9	3.4	3.6	12.9	3.7	13.5
Expense										
Operating	0.6		1.0					-		
Production & Property taxes	0.2	0.6	1.6	0.2	0.4	0.4	0.4	1.4	0.4	1.6
Total Expense	0.8	0.6	2.6	0.2	0.4	0.4	0.4	1.4	0.4	1.6
Ebitda	4.9	3.3	16.4	2.9	2.5	3.0	3.2	11.5	3.3	11.9
Ebitda times 95%	4.6	3.2	15.6	2.8	2.3	2.9	3.0	11.0	3.1	11.3
BOTTOM LINE										
Volume										
Natural Gas (mmcfd)	11.7	13.8	14.2	14.3	14.3	14.3	14.3	14.3	14.3	14.6
Oil (mbd)	2.48	2.37	2.43	2.50	2.50	2.50	2.50	2.50	2.50	2.46
Price (cash lagged two months)										
Natural Gas (\$/mcf)	3.92	2.46	2.85	1.97	1.71	1.85	2.01	1.89	2.38	1.95
Oil (\$/bbl)	57.13	44.04	50.46	33.89	32.70	38.07	39.40	36.04	40.06	38.12
Revenue (\$mm)										
Natural Gas	4.2	3.1	14.7	2.6	2.2	2.4	2.6	9.9	3.1	10.4
Oil	13.0	9.6	44.7	7.8	7.3	8.8	9.1	32.9	9.2	34.3
Total Revenue	17.2	12.7	59.5	10.4	9.5	11.2	11.7	42.7	12.3	44.7
Expense										
Operating	6.8	5.9	25.2	6.4	6.4	6.4	6.4	25.6	6.4	25.6
Production taxes	0.8	1.1	3.7	1.0	1.0	1.0	1.0	4.0	1.0	4.0
Total Expense	7.6	7.0	28.9	7.4	7.4	7.4	7.4	29.6	7.4	29.6
Ebitda	9.6	5.7	30.6	3.0	2.1	3.8	4.3	13.1	4.9	15.1
Development	7.6	6.9	23.7	2.6	1.3	1.3	1.3	6.5	1.3	5.2
(Ebitda-Dvlpmnt) times 75%	(0.9)	3.6	0.3	0.6	1.9	2.3	5.0	2.7	7.4	
Excess Costs	(0.9)	1.6					-		-	
CASH DISTRIBUTION										
Royalty Income (\$mm)										
Top Line	4.6	3.2	15.6	2.8	2.3	2.9	3.0	11.0	3.1	11.3
Bottom Line	-	(0.0)	2.2		0.1	1.9	2.3	4.2	2.7	6.9
Administration	0.5	0.3	1.8	0.5	0.4	0.4	0.4	1.7	0.4	1.6
Distributable Income (\$mm)	4.2	2.8	16.1	2.3	2.0	4.3	4.8	13.5	5.4	16.6
Units (millions)	47	47	47	47	47	47	47	47	47	47
Distribution (\$/unit)	0.09	0.06	0.34	0.06	0.04	0.09	0.10	0.30	0.12	0.36
Trailing Twelve Months	0.86	0.34		0.31	0.28	0.25	0.30		0.36	



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Sabine Royalty Trust										
Next Twelve Months Operating and Financial Performance										
										Next Twelve Months
	<i>Q1</i>	<i>Q4</i>	<i>Year</i>	<i>Q1E</i>	<i>Q2E</i>	<i>Q3E</i>	<i>Q4E</i>	<i>Year</i>	<i>Q1E</i>	
	3/31/15	12/31/15	2015	3/31/16	6/30/16	9/30/16	12/31/16	2016E	3/31/17	3/31/17
Volume										
Natural Gas (bcf)	1.66	2.00	7.66	1.75	1.73	1.73	1.75	6.95	1.75	6.95
Natural Gas (mmcfd)	18.0	21.8	21.0	19.0	19.0	19.0	19.0	19.0	19.0	19.0
Days	92	92	365	92	91	91	92	366	92	366
Oil (mmb)	0.136	0.164	0.551	0.138	0.137	0.137	0.138	0.549	0.138	0.549
Oil (mbd)	1.48	1.78	1.51	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Days	92	92	365	92	89	92	92	365	92	365
Total (bcfe)	2.48	2.99	10.97	2.58	2.55	2.55	2.58	10.25	2.58	10.25
Total (mmcfd)	26.9	32.5	30.0	28.0	28.0	28.0	28.0	28.0	28.0	28.0
Price (Henry Hub natural gas lagged three months; WTI Cushing oil, two months)										
Henry Hub (\$/mmbtu)	4.02	2.76	3.11	2.28	2.09	1.99	2.22	2.15	2.50	2.20
Differential (%)	(11)	11	(3)	-	-	-	-	(0)	-	(0)
Trust (\$/mcf)	4.44	2.46	3.21	2.28	2.09	1.99	2.22	2.15	2.50	2.20
WTI Cushing (\$/bbl)	60.83	44.87	53.37	37.35	36.04	41.96	43.43	39.69	44.15	41.39
Differential	(7.31)	(0.01)	(0.64)	-	-	-	-	(0.00)	-	(0.01)
Trust (\$/bbl)	68.14	44.89	54.01	37.35	36.04	41.96	43.43	39.70	44.15	41.41
Total (\$/bcfe)	6.72	4.11	4.96	3.55	3.35	3.60	3.84	3.58	4.06	3.71
Revenue (\$mm)										
Natural Gas	7.4	4.9	24.6	4.0	3.6	3.4	3.9	14.9	4.4	15.3
Oil	9.3	7.4	29.8	5.2	4.9	5.7	6.0	21.8	6.1	22.7
Total	16.6	12.3	54.3	9.1	8.5	9.2	9.9	36.7	10.5	38.0
Expense										
Tax and other	1.5	3.1	6.7	0.8	0.6	0.6	2.0	4.0	0.9	4.2
General and administrative	0.5	0.5	2.4	0.6	0.8	0.6	0.6	2.7	0.6	2.7
Total	2.1	3.6	9.1	1.4	1.4	1.3	2.6	6.7	1.6	6.8
Ebitda	14.5	8.7	45.2	7.7	7.1	7.9	7.3	30.0	8.9	31.2
Ebit	14.5	8.7	45.2	7.7	7.1	7.9	7.3	30.0	8.9	31.2
Ebt	14.5	8.7	45.2	7.7	7.1	7.9	7.3	30.0	8.9	31.2
Distributable Income (\$mm)	14.5	8.7	45.2	7.7	7.1	7.9	7.3	30.0	8.9	31.2
Units (millions)	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6
Per Unit (\$)	1.00	0.60	3.10	0.53	0.49	0.54	0.50	2.06	0.61	2.14



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Industry Idea

Analysis of Oil and Gas Stocks
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San Juan Basin Royalty Trust Next Twelve Months Operating and Financial Estimates										
	<i>Q1</i> 3/31/15	<i>Q4</i> 12/31/15	<i>Year</i> 2015	<i>Q1E</i> 3/31/16	<i>Q2E</i> 6/30/16	<i>Q3E</i> 9/30/16	<i>Q4E</i> 12/31/16	<i>Year</i> 2016E	<i>Q1E</i> 3/31/17	<i>Next Twelve Months</i> 3/31/17
Volume										
Natural gas (mmbtu)	7.9	7.9	32.0	7.8	7.6	7.7	7.7	30.9	7.7	30.7
Heat Content(btu/cf)	1,098	1,098	1,099	1,103	1,103	1,103	1,103	1,103	1,103	1,103
Natural gas (bcf)	7.2	7.2	29.1	7.1	6.9	7.0	7.0	28.0	6.9	27.8
Natural Gas (mmcfd)	78.3	78.2	79.8	77.0	76.6	76.3	75.9	76.5	75.5	76.1
Oil (mb)	0.01	0.01	0.0636	0.01	0.01	0.01	0.01	0.0507	0.01	0.05
Oil (mbd)	0.13	0.14	0.17	0.14	0.14	0.14	0.14	0.14	0.14	0.14
Total gas & oil (bcf)	7.3	7.3	29.5	7.2	7.0	7.1	7.1	28.3	7.0	28.1
Price										
Natural gas (\$/mmbtu) (Henry Hub lagged two months)										
Henry Hub (\$/mmbtu)	3.74	2.69	2.98	2.22	1.93	2.09	2.26	2.12	2.68	2.24
Differential (%)	18	26	22	27	27	27	27	27	27	27
Net to SJT (\$/mmbtu)	3.05	2.00	2.32	1.63	1.42	1.53	1.66	1.56	1.97	1.65
Natural gas (\$/mcf)	3.35	2.20	2.54	1.80	1.57	1.69	1.83	1.72	2.17	1.82
Oil (\$/bbl) (WTI Cushing lagged two months)										
WTI Cushing	60.83	44.87	53.37	37.35	36.04	41.96	43.43	39.69	44.15	41.39
SJT	47.53	46.25	47.00	32.89	31.74	36.95	38.24	34.95	38.87	36.45
Total gas & oil (\$/mcf)	3.40	2.26	2.61	1.84	1.61	1.74	1.88	1.77	2.22	1.86
Revenue (\$mm)										
Natural Gas	24.1	15.8	74.1	12.7	10.8	11.9	12.8	48.2	15.1	50.5
Oil	0.6	0.6	3.0	0.4	0.4	0.5	0.5	1.8	0.5	1.8
Total	24.7	16.4	77.1	13.2	11.2	12.3	13.3	49.9	15.6	52.4
Cost (\$mm)										
Severance tax	2.5	1.8	8.1	1.6	1.4	1.5	1.6	6.1	1.9	6.4
Operating	7.7	7.1	30.1	7.0	7.0	7.0	7.0	27.8	7.0	27.8
Total	10.2	8.9	38.2	8.6	8.3	8.5	8.6	33.9	8.9	34.2
Cash flow(\$mm)										
Development	4.7	1.5	12.8	0.6	0.6	0.6	0.6	2.3	0.6	2.3
Net proceeds (\$mm)										
Net proceeds (\$mm)	9.8	6.1	26.1	4.0	2.3	3.3	4.1	13.7	6.2	15.9
Royalty income (\$mm)										
Royalty/Net proceeds	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Administration	0.6	0.7	2.6	1.2	0.3	0.3	0.3	2.1	0.3	1.2
Distributable income (\$mm)										
6.8	3.8	17.0	1.8	1.4	2.2	2.8	8.2	4.3	10.7	
Units (millions)	46.6	46.6	46.6	46.6	46.6	46.6	46.6	46.6	46.6	46.6
Per unit	0.15	0.08	0.36	0.04	0.03	0.05	0.06	0.18	0.09	0.23



Industry Idea

Analysis of Oil and Gas Stocks
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Cross Timbers Royalty Trust				
Functional Cash Flow and Present Value				
				Present
	NTM Ebitda	Adjusted	PV/	Value
	(US\$mm)	R/P	Ebitda	(US\$mm)
Top Line Natural Gas	5	7.3	19.5	90
Top Line Oil	3	6.2	23.0	60
Bottom Line Oil	(1)	2.3	(33.4)	24
	7	6.0	26.7	174
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)				31
Top Line Approximation at 1.5 times Cash Flow Multiple Depending on Reserve Life				

Dorchester Minerals, L.P.				
Functional Cash Flow and Present Value				
				Present
	NTM Ebitda	Adjusted	PV/	Value
	(US\$mm)	R/P	Ebitda	(US\$mm)
<u>Top Line - Royalty Interests</u>				
North American Natural Gas	5	7.0	26.2	140
Oil	18	7.9	27.6	510
<u>Bottom Line - Net Profits Interests</u>				
North American Natural Gas	2	8.8	14.3	30
Oil	4	2.7	13.8	60
<u>Total Top and Bottom</u>				
North American Natural Gas	8	7.8	21.3	170
Oil	20	5.8	28.5	570
	28	6.9	26.4	740
Debt (US\$mm)				-
Net Present Value (US\$mm)				740
Shares (mm)				31
Net Present Value - Standard Estimate (US\$/sh)				24
NPV Approximation by Cash Flow Multiple Depending on Reserve Life (US\$/sh)				30
Top Line Approximation at 1.5 times Cash Flow Multiple Depending on Reserve Life				



McDEP LLC Industry Idea

Analysis of Oil and Gas Stocks
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Permian Basin 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>(US\$mm)</i>	
<u>Top Line - Royalty Interests (95% Underlying)</u>					
North American Natural Gas	1	6.3	26.2	30	6%
Oil	10	10.3	29.1	280	55%
	11	9.6	28.8	310	61%
<u>Bottom Line - Working Interests (75% Underlying)</u>					
North American Natural Gas	2	6.3	21.0	50	10%
Oil	8	10.3	19.1	150	29%
	10	8.3	19.5	200	39%
<u>Total Top and Bottom</u>					
North American Natural Gas	4	6.3	22.6	80	16%
Oil	17	10.3	24.6	430	84%
	21	8.6	24.3	510	100%
Debt (US\$mm)					-
Net Present Value (US\$mm)					510
Shares (mm)					46.6
Net Present Value (US\$/sh)					11
NPV Approximation by Cash Flow Multiple Depending on Reserve Life (US\$/sh)					11
Top Line Approximation at 1.5 times Cash Flow Multiple Depending on Reserve Life					

Sabine Royalty Trust					
Net 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>(US\$mm)</i>	
North American Natural Gas	13	6.9	26.3	330	38%
Oil	19	14.2	28.9	540	62%
	31	9.5	27.9	870	100%
Debt (US\$mm)					-
Net Present Value (US\$mm)					870
Shares (mm)					14.6
Net Present Value (US\$/sh)					60
Top Line Approximation at 1.5 times Cash Flow Multiple Depending on Reserve Life					72



McDep LLC Industry Idea

Analysis of Oil and Gas Stocks
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Table 1										
McDep Energy Stocks										
Enterprise Value, Segments, Yield and McDep Ratio										
Present Value by Segment (%)										
Price		North Amer.		Rest of World		Oil Prod'n		Dist. Yield		
(US\$/sh)		EV/		Enterprise		Natural Gas		NTM (%)		McDep Ratio
Symbol/Rating	21-Mar	Market Cap	Value (\$mm)	Natural Gas	Natural Gas	Oil Prod'n	Down-stream	NTM (%)	NTM (%)	McDep Ratio
		2016								
Global Integrated										
Exxon Mobil Corporation	XOM	83.62	1.26	441,000	6	13	61	21	3.5	0.87
Chevron Corporation	CVX	96.44	1.34	242,000	2	9	70	19	4.4	0.77
Royal Dutch Shell (BG pro forma)	RDS-A	B	49.05	1.64	320,000	2	17	56	26	7.7
Total S.A.	TOT	B	46.72	1.56	170,000		17	61	23	5.9
<i>Total or Median</i>				1.45	1,173,000			61	22	5.2
<i>Total or Median</i>										0.75
Large Independent										
EOG Resources, Inc.	EOG	75.96	1.17	48,500	8	3	89		0.9	1.01
Occidental Petroleum Corp.	OXY	70.67	1.18	63,800	3	1	86	9	4.2	0.95
Devon Energy Corporation	DVN	28.02	1.69	22,700	20		62	18	0.9	0.91
Marathon Oil Corporation	MRO	B	11.43	1.78	17,200	6	2	92		1.7
ConocoPhillips	COP	B	42.58	1.71	91,000	11	11	78		2.3
<i>Total or Median</i>				1.69	243,000	8		86		1.7
<i>Total or Median</i>										0.91
Small Independent										
Range Resources	RRC	32.93	1.56	8,600	60		40		0.2	1.18
Cimarex Energy Company	XEC	96.87	1.20	10,900	34		66		0.3	1.06
California Resources	CRC	1.48	13.63	7,800	10		90		-	0.85
Continental Resources (32%)	CLR	B	31.06	1.62	6,000	16		84		0.67
Whiting Petroleum Corporation	WLL	B	8.06	4.26	7,000	4		96		0.61
<i>Total or Median</i>				1.62	40,000	16		84		0.85
Income										
San Juan Basin Royalty Trust	SJT	5.12	1.00	240	100		-		4.5	0.64
Permian Basin RT	PBT	6.02	1.00	280	23		77		5.9	0.55
Cross Timbers Royalty Trust	CRT	15.88	1.00	100	52		48		7.6	0.55
Sabine Royalty Trust	SBR	B	32.20	1.00	470	38		62		6.7
Dorchester Minerals, L.P.	DMLP	B	11.43	1.00	350	23		77		8.0
<i>Total or Median</i>				1.00	1,400	38		62		6.7
<i>Total or Median</i>										0.55
Canada										
EnCana Corporation	ECA	5.98	2.52	12,900	50		50		1.0	1.00
Imperial Oil Limited (30%)	IMO	34.17	1.32	11,500	1		73	27	1.3	0.92
Suncor Energy	SU	27.76	1.41	61,800	-		84	16	3.2	0.84
Cenovus Energy Inc.	CVE	13.60	1.36	15,200	11		82	7	1.1	0.74
Birchcliff Energy Ltd.	BIREF	B	4.32	1.86	1,200	69		31		0.55
<i>Total or Median</i>				1.41	103,000			73		1.1
<i>Total or Median</i>										0.84
Estimated present value presumes a long-term price for oil of US\$70 a barrel and natural gas, \$4.00 a million btu.										
Estimated present value capped by unlevered cash flow multiple (EV/Ebitda)										
McDep Ratio = Market cap and Debt to present value of oil and gas and other businesses										
For historical research see www.mcdep.com										



McDep LLC Industry Idea

Analysis of Oil and Gas Stocks
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Table 2
McDep Energy Stocks
Net Present Value and McDep Ratio

	Symbol/Rating	Price		Net		Market Present Value (US\$/sh)	Debt/ Present Value	McDep Ratio
		(US\$/sh)	21-Mar 2016	Shares (mm)	Cap (US\$mm)			
		B = Buy						
Global Integrated								
Exxon Mobil Corporation	XOM	83.62	4,183	350,000	100.00	0.18	0.87	
Chevron Corporation	CVX	96.44	1,874	181,000	135.00	0.20	0.77	
Royal Dutch Shell (BG pro forma)	RDS-A	B	49.05	3,965	195,000	80.00	0.28	0.72
Total S.A.	TOT	B	46.72	2,329	109,000	90.00	0.23	0.63
<i>Total or Median</i>					835,000		0.21	0.75
Large Independent								
EOG Resources, Inc.	EOG	75.96	546	41,500	75.00	0.15	1.01	
Occidental Petroleum Corp.	OXY	70.67	766	54,100	75.00	0.14	0.95	
Devon Energy Corporation	DVN		28.02	478	13,400	33.00	0.37	0.91
Marathon Oil Corporation	MRO	B	11.43	845	9,660	20.00	0.31	0.70
ConocoPhillips	COP	B	42.58	1,244	53,000	80.00	0.28	0.66
<i>Total or Median</i>					171,700		0.28	0.91
Small Independent								
Range Resources	RRC	32.93	167	5,500	25.00	0.42	1.18	
Cimarex Energy Company	XEC	96.87	93	9,000	90.00	0.18	1.06	
California Resources	CRC		1.48	382	600	5.00	0.79	0.85
Continental Resources (32%)	CLR	B	31.06	118	3,700	56.00	0.26	0.67
Whiting Petroleum Corporation	WLL	B	8.06	204	1,600	30.00	0.47	0.61
<i>Total or Median</i>					20,000		0.42	0.85
Income								
San Juan Basin Royalty Trust	SJT		5.12	47	240	8.00	-	0.64
Permian Basin RT	PBT		6.02	47	280	11.00	-	0.55
Cross Timbers Royalty Trust	CRT		15.88	6	100	29.00	-	0.55
Sabine Royalty Trust	SBR	B	32.20	15	470	60.00	-	0.54
Dorchester Minerals, L.P.	DMLP	B	11.43	31	350	24.00	-	0.48
<i>Total or Median</i>					1,400		-	0.55
Canada								
EnCana Corporation	ECA		5.98	846	5,100	6.00	0.61	1.00
Imperial Oil Limited (30%)	IMO		34.17	255	8,700	38.00	0.22	0.92
Suncor Energy	SU		27.76	1,583	43,900	35.00	0.24	0.84
Cenovus Energy Inc.	CVE		13.60	825	11,200	20.00	0.19	0.74
Birchcliff Energy Ltd.	BIRFF	B	4.32	154	700	11.00	0.25	0.55
<i>Total or Median</i>					70,000		0.24	0.84

Estimated present value presumes a long-term price for oil of US\$70 a barrel and natural gas, \$4.00 a million btu.

Estimated present value capped by unlevered cash flow multiple (EV/Ebitda)

McDep Ratio = Market cap and Debt to present value of oil and gas and other businesses

For historical research see www.mcdep.com



Analysis of Oil and Gas Stocks
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Table 3
McDep Energy Stocks
Value Multiples and Dividend
Ranked by EV/Ebitda

		Price (US\$/sh)	Adjstd Resrvs/ Prod	PV/ Ebitda	EV/ Ebitda	P/E	Dividend NTM (\$/sh)
	Symbol/Rating	21-Mar B = Buy	2016	NTM	NTM	NTM	NTM
Global Integrated							
Exxon Mobil Corporation	XOM		83.62	13.8	11.4	9.9	23
Chevron Corporation	CVX		96.44	9.3	11.4	8.8	34
Royal Dutch Shell (BG pro forma)	RDS-A	B	49.05	9.4	10.5	7.6	26
Total S.A.	TOT	B	46.72	9.9	10.3	6.5	15
	<i>Median</i>				9.7	11.0	8.2
							25
Large Independent							
EOG Resources, Inc.	EOG		75.96	8.3	20.8	21.0	0.67
Occidental Petroleum Corp.	OXY		70.67	8.1	15.8	15.0	3.00
Devon Energy Corporation	DVN		28.02	9.3	16.0	14.5	66
Marathon Oil Corporation	MRO	B	11.43	13.1	16.7	11.7	0.20
ConocoPhillips	COP	B	42.58	11.3	17.7	11.7	1.00
	<i>Median</i>				9.3	16.7	14.5
							66
Small Independent							
Range Resources	RRC		32.93	14.6	23.1	27.3	0.08
Cimarex Energy Company	XEC		96.87	7.8	18.7	19.8	0.32
California Resources	CRC		1.48	11.2	17.8	15.2	-
Continental Resources (32%)	CLR	B	31.06	11.4	21.8	14.6	-
Whiting Petroleum Corporation	WLL	B	8.06	13.2	17.3	10.5	-
	<i>Median</i>				11.4	18.7	15.2
Income							
San Juan Basin Royalty Trust	SJT		5.12	10.0	30.0	19.2	22
Sabine Royalty Trust	SBR	B	32.20	9.5	28.0	15.0	15
Cross Timbers Royalty Trust	CRT		15.88	6.0	26.7	14.6	13
Permian Basin RT	PBT		6.02	8.6	24.4	13.4	17
Dorchester Minerals, L.P.	DMLP	B	11.43	6.9	26.0	12.4	19
	<i>Median</i>				8.6	26.7	14.6
							17
Canada							
Cenovus Energy Inc.	CVE		13.60	15.0	24.3	18.0	0.15
EnCana Corporation	ECA		5.98	8.4	17.1	17.1	101
Suncor Energy	SU		27.76	17.5	17.8	15.0	0.89
Imperial Oil Limited (30%)	IMO		34.17	29.0	13.8	12.8	23
Birchcliff Energy Ltd.	BIREF	B	4.32	15.6	17.1	9.4	-
	<i>Median</i>				15.6	17.1	15.0
							62
	<i>Grand Median</i>				11	18	15

EV = Enterprise Value = Market Cap and Debt; Ebitda = Earnings before interest, tax, depreciation and amortization; NTM = Next Twelve Months Ended March 31, 2017; P/E = Stock Price to Earnings; PV = Present Value of oil and gas and other businesses

For historical research see www.mcdep.com



Analysis of Oil and Gas Stocks
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Table 4
McDep Energy Stocks
Total Return Year-to-Date 2016
Ranked by Unlevered Total Return

		Price (\$/sh)	Price (\$/sh)			Equity Total	Unlevered Total		
	Symbol/Rat	21-Mar	31-Dec	Change	Cash Distrib.	Return	Debt (\$/sh)	Return (%)	McDep Ratio
		2016	2015	(%)	(%)	(%)			
Global Integrated									
Exxon Mobil Corporation	XOM	83.62	77.95	7	1	8	22	6	0.87
Chevron Corporation	CVX	96.44	89.96	7	1	8	33	6	0.77
Royal Dutch Shell (BG pro forma)	RDS-A	B	49.05	45.79	7	2	9	32	5
Total S.A.	TOT	B	46.72	44.95	4	1	5	26	3
	<i>Median</i>					7	8	6	0.75
Large Independent									
EOG Resources, Inc.	EOG	75.96	70.79	7	-	7	13	6	1.01
Occidental Petroleum Corp.	OXY	70.67	67.61	5	1	6	13	5	0.95
ConocoPhillips	COP	B	42.58	46.69	(9)	1	(8)	30	(5)
Marathon Oil Corporation	MRO	B	11.43	12.58	(9)	0	(9)	9	(5)
Devon Energy Corporation	DVN		28.02	32.00	(12)	0	(12)	19	(8)
	<i>Median</i>					(9)	(8)	(5)	0.91
Small Independent									
Range Resources	RRC		32.93	24.62	34	0	34	18	19
Continental Resources (32%)	CLR	B	31.06	22.98	35	-	35	19	19
Cimarex Energy Company	XEC		96.87	89.38	8	0	9	20	7
Whiting Petroleum Corporation	WLL	B	8.06	9.44	(15)	-	(15)	26	(4)
California Resources	CRC		1.48	2.33	(36)	-	(36)	19	(4)
	<i>Median</i>					8	9	7	0.85
Income									
San Juan Basin Royalty Trust	SJT		5.12	4.14	24	2	25	-	25
Cross Timbers Royalty Trust	CRT		15.88	13.01	22	3	25	-	25
Sabine Royalty Trust	SBR	B	32.20	26.26	23	2	24	-	24
Permian Basin RT	PBT		6.02	5.06	19	1	20	-	20
Dorchester Minerals, L.P.	DMLP	B	11.43	9.89	16	2	18	-	18
	<i>Median</i>					22	24	24	0.55
Canada									
Birchcliff Energy Ltd.	BIREF	B	4.32	2.93	47	-	47	4	21
EnCana Corporation	ECA		5.98	5.09	17	1	19	9	7
Cenovus Energy Inc.	CVE		13.60	12.62	8	1	9	5	6
Suncor Energy	SU		27.76	25.80	8	1	8	11	6
Imperial Oil Limited (30%)	IMO		34.17	32.52	5	0	5	11	4
	<i>Median</i>					8	9	6	0.84
Grand Median									
Natural Gas (\$/mmbtu)			1.82	2.33	(22)				
Oil -West Texas Intermediate (\$/bbl)			39.91	37.06	8				
S&P 500			2,052	2,044	0				

Source: McDep LLC, Yahoo, CME Group, Bloomberg

For historical research see www.mcdep.com



Analysis of Oil and Gas Stocks
March 22, 2016

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