



Analysis of Oil and Gas Stocks
July 22, 2016, Intraday

Income Payers in Uptrend CRT, PBT, SBR, SJT, DMLP

Symbol/Rating		Price (US\$/sh)	EV/ Market	Enterprise Value (\$mm)	Present Value by Segment (%)				Dist. Yield	NTM (%)	McDep Ratio
					North Amer.	Rest of World	Oil Prod'n	Down- stream			
					2016	Cap	Natural Gas	Natural Gas			
San Juan Basin Royalty Trust	SJT	6.82	1.00	320	100		-		7.5	0.85	
Cross Timbers Royalty Trust	CRT	18.54	1.00	110	57		43		7.6	0.64	
Permian Basin RT	PBT	7.02	1.00	330	23		77		9.2	0.64	
Dorchester Minerals, L.P.	DMLP	B	14.83	1.00	460	28	72		7.9	0.62	
Sabine Royalty Trust	SBR	B	35.38	1.00	520	38	62		7.2	0.59	
<i>Total or Median</i>				1.00	1,700	38	62		7.6	0.64	

Summary and Recommendation

Recent oil and gas prices and stock prices confirm an uptrend we believe can continue for income payers **Cross Timbers Royalty Trust (CRT)**, **Permian Basin Royalty Trust (PBT)**, and **San Juan Basin Royalty Trust (SJT)** along with current buy recommendations **Sabine Royalty Trust (SBR)** and **Dorchester Minerals, L.P. (DMLP)**.

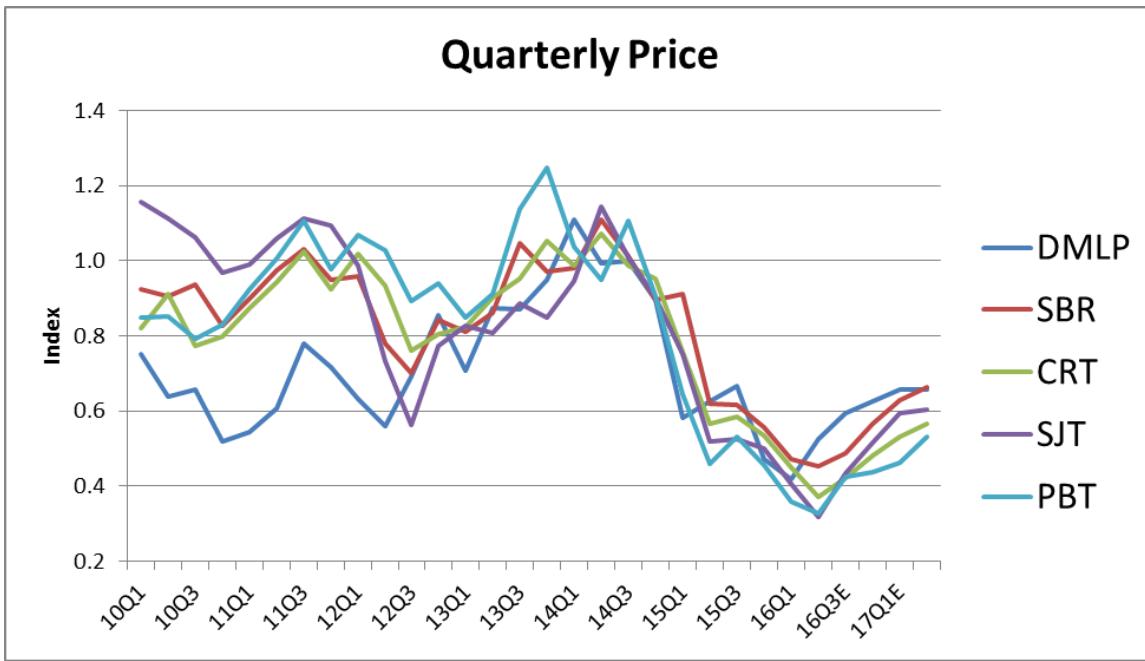
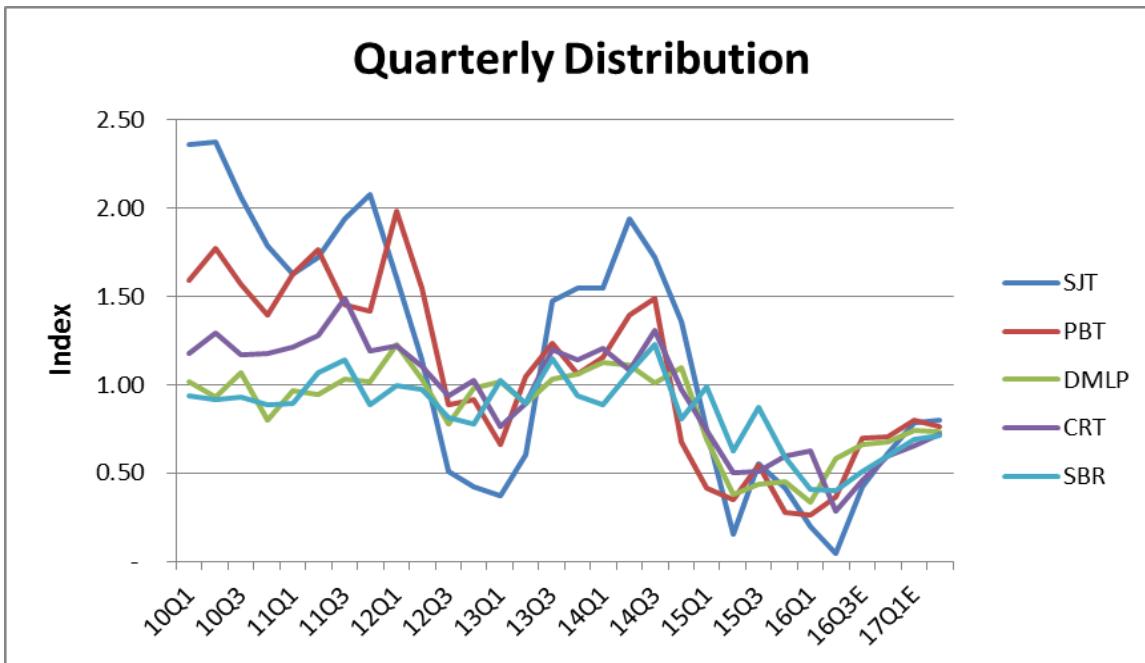
Oil and gas price trends as reflected in the futures market translate to rising future distributions (see chart Distribution on page 2). Top Line percentage of revenue arrangements were the safest in resisting the decline of the past two years. Bottom Line percentage of profits arrangements demonstrated more volatility. SBR is exclusively a Top Line cash payer while SJT is exclusively a Bottom Line cash payer. DMLP, PBT and CRT are largely Top Line cash payers, but also have Bottom Line properties. After diverging in the exaggerated downtrend for oil and gas price, distributions are likely to converge again as oil and gas prices approach more normal levels. Distribution estimates take account of latest monthly declarations for CRT, PBT, SJT and SBR. On a quarterly rather than monthly schedule, DMLP declared on July 21 a second quarter distribution of \$0.26 a unit compared to our estimate of \$0.23 (see tables Operating and Financial Estimates for five stocks on pages 3-7). Valuation rankings allow comparison of Income Payers to all 24 stocks in our research (see Tables 1-3 on pages 8-10). Income Payers are our top performing group for 2016 with a median unlevered total return of 47% (see Table 4 on page 11).

Kurt H. Wulff, CFA



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Cross Timbers Royalty Trust Next Twelve Months Operating and Financial Performance										
	<i>Q2</i>	<i>Year</i>	<i>Q1</i>	<i>Q2E</i>	<i>Q3E</i>	<i>Q4E</i>	<i>Year</i>	<i>Q1E</i>	<i>Q2E</i>	<i>Next Twelve Months</i>
	6/30/15	2015	3/31/16	6/30/16	9/30/16	12/31/16	2016	3/31/17	6/30/17	6/30/17
Volume										
Natural Gas (bcf)	0.34	1.62	0.71	0.43	0.55	0.55	2.24	0.55	0.55	2.20
Natural Gas (mmcfd)	3.8	4.4	7.7	4.7	6.0	6.0	6.1	6.0	6.0	6.0
Oil (mb)	59	233	59	58	58	57	232	57	56	228
Oil (mbd)	0.66	0.64	0.64	0.63	0.63	0.62	0.63	0.62	0.62	0.62
Total (bcf)	0.70	3.02	1.07	0.78	0.89	0.89	3.63	0.89	0.89	3.57
Price										
Natural Gas (HH lagged three months)										
Henry Hub (\$/mmbtu)	2.99	3.11	2.28	2.09	1.95	2.80	2.28	2.98	3.32	2.76
Differential (%)	(31)	(46)	(82)	(35)	(35)	(35)	(50)	(50)	(50)	(44)
CRT (\$/mcf)	3.91	4.53	4.15	2.81	2.63	3.77	3.43	4.48	5.00	3.97
Oil (\$/bbl) (WTI lagged two months)										
WTI Cushing	51.06	53.37	37.35	36.66	47.20	46.61	41.95	48.51	49.85	48.04
CRT	49.87	52.96	36.46	32.35	44.84	44.28	39.44	45.60	46.86	45.39
Total (\$/mcf)	6.14	6.52	4.79	3.96	4.51	5.15	4.63	5.68	6.06	5.35
Revenue (\$mm)										
Natural Gas	1.35	7.33	2.95	1.21	1.43	2.08	7.68	2.47	2.76	8.75
Oil	2.94	12.34	2.15	1.88	2.59	2.51	9.13	2.61	2.64	10.34
Total	4.29	19.67	5.10	3.09	4.02	4.60	16.81	5.08	5.39	19.09
Cost (\$mm)										
Tax, transport & other	0.60	2.71	0.83	0.43	0.56	0.64	2.47	0.71	0.76	2.67
Production	1.53	6.19	1.37	1.00	1.15	1.15	4.67	1.15	1.14	4.59
Total	2.13	8.90	2.20	1.44	1.71	1.79	7.14	1.86	1.90	7.26
Cash flow (\$mm)										
Development	1.15	2.70	0.39	0.39	0.10	0.10	0.98	0.10	0.10	0.40
Excess or other	(1.05)	(1.97)	(0.51)	(0.01)	0.27	0.23	(0.02)	0.42	0.43	1.35
Net proceeds (\$mm)	2.06	10.04	3.02	1.28	1.94	2.47	8.72	2.69	2.96	10.07
Royalty income (\$mm)										
Royalty/Net proceeds	1.85	8.88	2.71	1.09	1.71	2.18	7.68	2.37	2.61	8.86
Administration & reserve	0.11	0.75	0.53	0.11	0.11	0.11	0.86	0.11	0.11	0.44
Distributable income (\$mn)	1.74	8.13	2.18	0.98	1.60	2.07	6.82	2.26	2.50	8.42
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	0.16	0.02	0.02	0.02	0.03	0.10	0.03	0.04	0.12
TL OK	0.04	0.19	0.03	0.02	0.02	0.03	0.10	0.03	0.04	0.12
TL NM	0.08	0.48	0.29	0.08	0.09	0.14	0.60	0.16	0.18	0.58
BL TX	-	-	-							
BL OK	-	0.00	-							
Oil										
TL TX	0.09	0.35	0.06	0.05	0.07	0.07	0.26	0.07	0.08	0.30
TL OK	0.07	0.22	0.03	0.03	0.05	0.04	0.16	0.05	0.05	0.18
TL NM	0.01	0.04	0.01	0.01	0.01	0.01	0.04	0.01	0.01	0.04
BL TX	-	-	-				0.01	0.01	0.02	
BL OK	-	0.03	-		0.02	0.03		0.03	0.03	
Administration	0.01	0.10	0.04	0.06	0.02	0.02	0.13	0.02	0.02	0.08
Distribution (\$/unit)	0.29	1.35	0.36	0.16	0.27	0.34	1.14	0.38	0.42	1.40



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Dorchester Minerals, L.P. Operating and Financial Performance										
	<i>Q2</i>	<i>Year</i>	<i>Q1</i>	<i>Q2E</i>	<i>Q3E</i>	<i>Q4E</i>	<i>Year</i>	<i>Q1E</i>	<i>Q2E</i>	<i>Next Twelve Months</i>
	6/30/15	2015	3/31/16	6/30/16	9/30/16	12/31/16	2016E	3/31/17	6/30/17	6/30/17
TOP LINE										
Volume										
Natural Gas (mmcfd)	8.7	10.1	9.4	9.0	8.6	8.3	8.8	8.3	8.0	8.6
Oil (mbd)	1.36	1.44	1.56	1.59	1.62	1.62	1.60	1.66	1.69	1.62
Price										
Henry Hub (\$/mmbtu)	2.66	2.67	2.09	1.95	2.80	2.98	2.46	3.32	3.05	2.76
WTI Cushing (\$/bbl)	57.94	48.79	33.47	45.66	46.18	47.89	43.30	49.50	50.35	47.31
Natural Gas (\$/mcf)	2.31	2.30	1.80	1.68	2.41	2.57	2.10	2.86	2.63	2.38
Oil (\$/bbl)	50.07	42.23	29.90	40.79	41.26	42.78	38.78	44.55	45.32	42.35
Revenue (\$mm)										
Natural Gas	1.8	8.5	1.5	1.4	1.9	2.0	6.8	2.2	1.9	7.4
Oil	6.2	22.1	4.2	5.9	6.2	6.4	22.7	6.7	7.0	25.2
Total Revenue	8.0	30.6	5.8	7.3	8.1	8.4	29.5	8.9	8.9	32.6
Expense (allocated)										
Ebitda	1.3	5.2	1.4	1.4	1.4	1.4	5.5	1.4	1.4	5.5
BOTTOM LINE										
Volume										
Natural Gas (mmcfd)	9.4	8.9	9.1	9.0	8.9	8.8	9.0	8.8	8.7	8.9
Oil (mbd)	0.77	1.09	0.98	1.02	1.06	1.06	1.03	1.10	1.14	1.06
Price										
Natural Gas (\$/mcf)	2.56	2.49	2.10	1.96	2.81	2.99	2.47	3.34	3.07	2.78
Oil (\$/bbl)	53.65	49.46	30.83	42.06	42.54	44.11	40.06	44.55	45.32	43.32
Revenue (\$mm)										
Natural Gas	2.2	8.1	1.7	1.6	2.3	2.4	8.1	2.7	2.4	9.0
Oil	3.8	19.7	2.7	3.9	4.1	4.3	15.1	4.5	4.7	16.8
Total Revenue	5.9	27.8	4.5	5.5	6.4	6.7	23.2	7.1	7.2	25.8
Expense (allocated)										
Partnership	1.0	4.1	1.1	1.1	1.1	1.1	4.3	1.1	1.1	4.3
Net Profits Interests	1.7	6.9	2.2	2.3	2.4	2.4	9.2	2.5	2.6	9.5
Total Expense	2.7	11.0	3.3	3.3	3.4	3.4	13.5	3.5	3.6	13.7
Ebitda										
Development	3.3	16.8	1.2	2.2	3.0	3.3	9.7	3.6	3.5	12.1
NET INCOME										
Top Line	6.7	25.4	4.4	5.9	6.7	7.0	24.0	7.5	7.5	27.1
Bottom Line	0.2	1.0	0.0	0.9	1.7	2.0	4.6	2.3	2.2	6.9
Lease Bonus and Other	0.9	3.5	0.7	0.7	0.7	0.7	2.6	0.7	0.7	2.6
Deprec., Deplet., & Amort.	2.3	10.1	2.2	2.2	2.3	2.2	9.0	2.2	2.2	8.9
Total Net Income	3.7	12.9	1.5	5.2	6.8	7.4	20.9	8.2	8.1	27.6
Units (mm)	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7	30.7
Net Income Per Unit (\$)	0.12	0.42	0.05	0.17	0.22	0.24	0.68	0.27	0.27	0.90
DISTRIBUTION										
Top Line Revenue	6.8	30.6	5.8	5.8	7.8	8.0	27.4	8.5	8.5	30.1
Bottom Line Net Revenue	0.4	4.0	0.5	2.3	2.8	3.1	8.6	3.4	3.3	11.5
Lease Bonus and Other	0.0	0.2	0.2	1.5	0.1	0.1	1.9	0.1	0.1	1.8
Cash Expense	(2.1)	(8.2)	(2.0)	(1.7)	(1.7)	(2.0)	(7.4)	(2.0)	(2.0)	(7.4)
Distribution	5.1	26.6	4.5	7.9	9.0	9.2	30.6	10.0	9.9	36.1
Distribution Per Unit (\$)	0.17	0.87	0.15	0.26	0.29	0.30	1.00	0.33	0.32	1.18



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Permian Basin Royalty Trust Next Twelve Months Operating and Financial Estimates										
	<i>Q2</i>	<i>Year</i>	<i>Q1</i>	<i>Q2E</i>	<i>Q3E</i>	<i>Q4E</i>	<i>Year</i>	<i>Q1E</i>	<i>Q2E</i>	<i>Next Twelve Months</i>
	6/30/15	2015	3/31/16	6/30/16	9/30/16	12/31/16	2016	3/31/17	6/30/17	6/30/17
TOP LINE										
Volume										
Natural Gas (mmcfd)	1.2	1.1	1.1	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Oil (mbd)	0.96	0.90	0.82	0.86	0.84	0.83	0.84	0.83	0.81	0.83
Price (cash lagged two months)										
Natural Gas (\$/mcf)	5.17	5.07	3.56	2.99	3.55	4.26	3.59	4.91	5.00	4.42
Oil (\$/bbl)	46.96	51.34	36.39	31.94	41.12	40.61	37.52	42.26	43.43	41.83
Revenue (\$mm)										
Natural Gas	0.5	2.1	0.4	0.3	0.3	0.4	1.4	0.5	0.4	1.6
Oil	4.0	16.9	2.7	2.4	3.2	3.1	11.5	3.2	3.1	12.6
Total Revenue	4.5	19.0	3.1	2.7	3.5	3.5	12.8	3.7	3.6	14.3
Expense										
Operating	0.5	1.0					-			
Production & Property taxes	0.2	1.6	0.2	0.6	0.4	0.4	1.5	0.4	0.4	1.6
Total Expense	0.6	2.6	0.2	0.6	0.4	0.4	1.5	0.4	0.4	1.6
Ebitda	3.9	16.4	2.9	2.2	3.1	3.1	11.3	3.3	3.2	12.7
Ebitda times 95%	3.7	15.6	2.8	2.1	3.0	2.9	10.7	3.1	3.0	12.0
BOTTOM LINE										
Volume										
Natural Gas (mmcfd)	15.9	14.2	14.3	13.7	14.0	13.7	13.9	13.7	13.4	13.7
Oil (mbd)	2.52	2.43	2.50	2.53	2.50	2.45	2.49	2.40	2.35	2.43
Price (cash lagged two months)										
Natural Gas (\$/mcf)	2.61	2.85	1.97	1.71	2.04	2.44	2.04	2.82	2.87	2.53
Oil (\$/bbl)	46.31	50.46	33.89	32.97	42.46	41.93	37.82	43.63	44.85	43.18
Revenue (\$mm)										
Natural Gas	3.7	14.7	2.6	2.1	2.6	3.1	10.4	3.6	3.4	12.7
Oil	10.4	44.7	7.8	7.4	9.8	9.5	34.4	9.6	9.4	38.2
Total Revenue	14.0	59.5	10.4	9.5	12.4	12.5	44.8	13.2	12.8	50.9
Expense										
Operating	6.9	25.2	6.4	4.9	5.0	5.0	21.3	5.0	5.0	20.0
Production taxes	0.6	3.7	1.0	1.0	1.0	1.0	4.0	1.0	1.0	4.0
Total Expense	7.5	28.9	7.4	5.9	6.0	6.0	25.3	6.0	6.0	24.0
Ebitda	6.5	30.6	3.0	3.6	6.4	6.5	19.5	7.2	6.8	26.9
Development	2.7	23.7	2.6	(0.1)	-	2.4	-	-	-	-
(Ebitda-Dvlpmnt) times 75%	2.9	3.6	0.3	2.8	4.8	4.9	12.8	5.4	5.1	20.2
Excess Costs	2.5	1.6	0.3	0.5	-	0.8	-	-	-	-
CASH DISTRIBUTION										
Royalty Income (\$mm)										
Top Line	3.7	15.6	2.8	2.1	3.0	2.9	10.7	3.1	3.0	12.0
Bottom Line	0.4	2.2		2.3	4.8	4.9	12.0	5.4	5.1	20.2
Administration	0.6	1.8	0.5	0.7	0.7	0.7	2.6	0.4	0.4	2.2
Distributable Income (\$mm)	3.5	16.1	2.3	3.7	7.0	7.1	20.1	8.1	7.7	30.0
Units (millions)	47	47	47	47	47	47	47	47	47	47
Distribution (\$/unit)	0.08	0.34	0.06	0.08	0.15	0.15	0.44	0.17	0.17	0.64
Trailing Twelve Months	0.64		0.31	0.60	0.35	0.44		0.56		0.64
Ebitda Margin - Top	82%	83%	89%	71%	82%	82%	81%	86%	85%	84%
Ebitda Margin - Bottom	44%	49%	26%	33%	48%	48%	40%	52%	51%	50%
Days in Quarter	89	365	92	89	92	92	365	92	89	365
Henry Hub (\$/mmbtu)	2.79	2.98	2.22	1.93	2.29	2.75	2.30	3.17	3.23	2.86
WTI Cushing (\$/bbl)	51.06	53.37	37.35	36.66	47.20	46.61	41.95	48.51	49.85	48.04



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Sabine Royalty Trust Next Twelve Months Operating and Financial Performance										
	Q2 6/30/15	Year 2015	Q1 3/31/16	Q2E 6/30/16	Q3E 9/30/16	Q4E 12/31/16	Year 2016E	Q1E 3/31/17	Q2E 6/30/17	Next Twelve Months 6/30/17
Volume										
Natural Gas (bcf)	1.74	7.66	1.48	1.71	1.71	1.73	6.64	1.73	1.71	6.89
Natural Gas (mmcfd)	19.3	21.0	16.1	18.8	18.8	18.8	18.1	18.8	18.8	18.8
Days	90	365	92	91	91	92	366	92	91	366
Oil (mmb)	0.119	0.551	0.124	0.137	0.137	0.138	0.535	0.138	0.137	0.549
Oil (mbd)	1.34	1.51	1.35	1.50	1.50	1.50	1.47	1.50	1.50	1.50
Days	89	365	92	89	92	92	365	92	89	365
Total (bcfe)	2.45	10.97	2.22	2.53	2.53	2.56	9.85	2.56	2.53	10.19
Total (mmcfd)	27.4	30.0	24.2	27.8	27.8	27.8	26.9	27.8	27.8	27.9
Price (Henry Hub natural gas lagged three months; WTI Cushing oil, two months)										
Henry Hub (\$/mmbtu)	2.99	3.11	2.28	2.09	1.95	2.80	2.28	2.98	3.32	2.76
Differential (%)	(9)	(3)	4	(12)	-	-	(2)	-	0	(0)
Trust (\$/mcf)	3.26	3.21	2.18	2.33	1.95	2.80	2.32	2.98	3.32	2.77
WTI Cushing (\$/bbl)	51.06	53.37	37.35	36.66	47.20	46.61	41.95	48.51	49.85	48.04
Differential	2.21	(0.64)	1.14	3.41	4.39	4.33	3.25	-	-	2.18
Trust (\$/bbl)	48.85	54.01	36.21	33.25	42.81	42.28	38.70	48.51	49.85	45.86
Total (\$/bcfe)	4.68	4.96	3.47	3.37	3.63	4.17	3.67	4.63	4.94	4.34
Revenue (\$mm)										
Natural Gas	5.7	24.6	3.2	4.0	3.3	4.9	15.4	5.2	5.7	19.1
Oil	5.8	29.8	4.5	4.5	5.8	5.8	20.7	6.7	6.8	25.2
Total	11.5	54.3	7.7	8.5	9.2	10.7	36.1	11.9	12.5	44.2
Expense										
Tax and other	1.5	6.7	0.9	1.0	1.1	1.3	4.4	1.1	1.5	5.0
General and administrative	0.8	2.4	0.8	0.5	0.6	0.6	2.5	0.6	0.5	2.3
Total	2.3	9.1	1.7	1.5	1.7	1.9	6.9	1.7	2.0	7.3
Ebitda	9.2	45.2	6.0	7.0	7.5	8.8	29.3	10.2	10.5	36.9
Ebit	9.2	45.2	6.0	7.0	7.5	8.8	29.3	10.2	10.5	36.9
Ebt	9.2	45.2	6.0	7.0	7.5	8.8	29.3	10.2	10.5	36.9
Distributable Income (\$mm)	9.2	45.2	6.0	7.0	7.5	8.8	29.3	10.2	10.5	36.9
Units (millions)	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6	14.6
Per Unit (\$)	0.63	3.10	0.41	0.40	0.51	0.60	1.93	0.70	0.72	2.53



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San Juan Basin Royalty Trust Next Twelve Months Operating and Financial Estimates										
	<i>Q2</i>	<i>Year</i>	<i>Q1</i>	<i>Q2E</i>	<i>Q3E</i>	<i>Q4E</i>	<i>Year</i>	<i>Q1E</i>	<i>Q2E</i>	<i>Next Twelve Months</i>
	6/30/15	2015	3/31/16	6/30/16	9/30/16	12/31/16	2016E	3/31/17	6/30/17	6/30/17
Volume										
Natural gas (mmbtu)	8.0	32.0	7.8	7.7	7.8	7.7	31.0	7.7	7.7	30.9
Heat Content(btu/cf)	1,100	1,099	1,103	1,107	1,107	1,107	1,106	1,107	1,107	1,107
Natural gas (bcf)	7.2	29.1	7.1	6.9	7.0	7.0	28.0	7.0	6.9	27.9
Natural Gas (mmcf/d)	81.3	79.8	77.0	76.8	76.4	76.1	76.6	75.7	75.3	75.9
Days	89	365	92	90	92	92	366	92	92	368
Oil (mb)	0.02	0.0636	0.02	0.02	0.02	0.02	0.0649	0.02	0.02	0.06
Oil (mbd)	0.19	0.17	0.18	0.18	0.18	0.17	0.18	0.17	0.17	0.17
Total gas & oil (bcf)	7.3	29.5	7.2	7.0	7.1	7.1	28.4	7.1	7.0	28.3
Price										
Natural gas (\$/mmbtu) (Henry Hub lagged two months)										
Henry Hub (\$/mmbtu)	2.79	2.98	2.22	1.93	2.29	2.75	2.30	3.17	3.23	2.86
Differential (%)	23	22	27	33	25	25	27	25	25	25
Net to SJT (\$/mmbtu)	2.16	2.32	1.63	1.29	1.72	2.06	1.68	2.38	2.42	2.14
Natural gas (\$/mcf)	2.38	2.54	1.80	1.43	1.90	2.28	1.85	2.63	2.68	2.37
Oil (\$/bbl) (WTI Cushing lagged two months)										
WTI Cushing	51.06	53.37	37.35	36.66	47.20	46.61	41.95	48.51	49.85	48.04
SJT	37.20	47.00	27.54	27.03	34.80	34.37	30.92	35.75	36.74	35.41
Total gas & oil (\$/mcf)	2.43	2.61	1.83	1.47	1.96	2.33	1.90	2.68	2.73	2.42
Revenue (\$mm)										
Natural Gas	17.2	74.1	12.7	9.9	13.4	16.0	52.0	18.3	18.6	66.3
Oil	0.6	3.0	0.5	0.4	0.6	0.6	2.0	0.6	0.6	2.3
Total	17.8	77.1	13.2	10.3	14.0	16.5	54.0	18.9	19.1	68.5
Cost (\$mm)										
Severance tax	1.9	8.1	1.6	1.2	1.7	2.0	6.5	2.3	2.3	8.2
Operating	7.9	30.1	7.0	6.4	6.4	6.4	26.3	6.4	6.4	25.8
Total	9.8	38.2	8.6	7.7	8.1	8.4	32.8	8.7	8.7	33.9
Cash flow (\$mm)										
Development	5.0	12.8	0.6	0.3	0.3	0.3	1.4	0.3	0.3	1.1
Net proceeds (\$mm)	3.0	26.1	4.0	2.4	5.6	7.9	19.8	9.9	10.1	33.5
Royalty income (\$mm)										
Royalty/Net proceeds	2.3	19.6	3.0	1.8	4.2	5.9	14.9	7.4	7.6	25.1
Administration	0.8	2.6	1.2	1.3	0.3	0.3	3.2	0.3	0.3	1.2
Distributable income (\$mm)										
Units (millions)	1.4	17.0	1.8	0.4	3.9	5.6	11.7	7.1	7.3	23.9
Per unit	0.03	0.36	0.04	0.01	0.08	0.12	0.25	0.15	0.16	0.51



Analysis of Oil and Gas Stocks
July 22, 2016, Intraday

Table 1										
McDep Energy Stocks										
Enterprise Value, Segments, Yield and McDep Ratio										
					Present Value by Segment (%)					
		Price			North Amer.	Rest of World			Dist. Yield	
		(US\$/sh)	EV/	Enterprise						
Symbol/Rating		22-Jul	Market	Value	Natural Gas	Natural Gas	Oil Prod'n	Down-stream	NTM (%)	McDep Ratio
			2016	Cap (\$mm)						
Global Integrated										
Exxon Mobil Corporation	XOM	93.84	1.24	486,000	7	15	55	23	3.2	0.95
Chevron Corporation	CVX	105.44	1.33	263,000	2	11	68	19	4.1	0.83
Royal Dutch Shell	RDS-A	B	54.85	1.65	335,000	1	17	44	37	6.9
Total S.A.	TOT	B	47.27	1.54	171,000		22	55	23	5.7
<i>Total or Median</i>				1.44	1,255,000			55	23	4.9
Large Independent										
Devon Energy Corporation	DVN	37.41	1.61	29,700	25		65	9	0.6	1.08
EOG Resources, Inc.	EOG	80.43	1.17	51,300	10	2	88		0.8	1.06
Occidental Petroleum Corp.	OXY	75.37	1.17	67,100	3	2	85	10	4.0	1.00
Marathon Oil Corporation	MRO	B	14.29	1.56	18,900	9	2	89		1.4
ConocoPhillips	COP	B	40.72	1.78	90,000	11	15	74		2.5
<i>Total or Median</i>				1.56	257,000	10		85		1.4
Small Independent										
Cimarex Energy Company	XEC	117.71	1.11	12,200	32		68		0.3	1.27
Range Resources	RRRC	41.35	1.44	9,900	70		30		0.2	0.99
Continental Resources (32%)	CLR	B	45.01	1.43	7,600	20		80		-
California Resources	CRC	11.65	16.33	7,400	10		90			0.83
Whiting Petroleum Corporation	WLL	B	8.13	2.01	6,200	6		94		-
<i>Total or Median</i>				1.44	43,000	20		80		-
Income										
San Juan Basin Royalty Trust	SJT	6.82	1.00	320	100		-		7.5	0.85
Cross Timbers Royalty Trust	CRT	18.54	1.00	110	57		43		7.6	0.64
Permian Basin RT	PBT	7.02	1.00	330	23		77		9.2	0.64
Dorchester Minerals, L.P.	DMLP	B	14.83	1.00	460	28		72		7.9
Sabine Royalty Trust	SBR	B	35.38	1.00	520	38		62		7.2
<i>Total or Median</i>				1.00	1,700	38		62		7.6
Canada										
EnCana Corporation	ECA	8.12	2.24	15,400	43		57		0.7	1.13
Imperial Oil Limited (30%)	IMO	31.62	1.35	10,900	1		70	29	1.4	0.87
Suncor Energy	SU	27.11	1.36	61,200	-		84	16	3.3	0.82
Cenovus Energy Inc.	CVE	13.97	1.33	15,300	10		82	8	1.1	0.75
Birchcliff Energy Ltd.	BIREF	B	6.71	1.60	1,700	74		26		-
<i>Total or Median</i>				1.36	105,000			70		1.1
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			Debt/ Present Value	McDep Ratio
		(US\$/sh)	Market Cap	Present Value	Debt/ Present Value	Debt/ Present Value		
		22-Jul B = Buy	Shares (mm)	(US\$mm)	(US\$/sh)	(US\$/sh)		
Global Integrated								
Exxon Mobil Corporation	XOM	93.84	4,178	392,000	100.00	0.18	0.95	
Chevron Corporation	CVX	105.44	1,870	197,000	135.00	0.21	0.83	
Royal Dutch Shell	RDS-A	B	54.85	3,701	203,000	80.00	0.31	0.78
Total S.A.	TOT	B	47.27	2,350	111,000	90.00	0.22	0.63
					903,000		0.21	0.80
Large Independent								
Devon Energy Corporation	DVN	37.41	492	18,400	33.00	0.41	1.08	
EOG Resources, Inc.	EOG	80.43	547	44,000	75.00	0.15	1.06	
Occidental Petroleum Corp.	OXY	75.37	763	57,500	75.00	0.14	1.00	
Marathon Oil Corporation	MRO	B	14.29	845	12,080	20.00	0.29	0.80
ConocoPhillips	COP	B	40.72	1,245	51,000	70.00	0.31	0.71
					183,000		0.29	1.00
Small Independent								
Cimarex Energy Company	XEC	117.71	93	11,000	90.00	0.13	1.27	
Range Resources	RRC	41.35	167	6,900	42.00	0.30	0.99	
Continental Resources (32%)	CLR	B	45.01	118	5,300	56.00	0.26	0.85
California Resources	CRC		11.65	38	500	50.00	0.78	0.83
Whiting Petroleum Corporation	WLL	B	8.13	380	3,100	25.00	0.25	0.49
					27,000		0.26	0.85
Income								
San Juan Basin Royalty Trust	SJT	6.82	47	320	8.00	-	0.85	
Cross Timbers Royalty Trust	CRT	18.54	6	110	29.00	-	0.64	
Permian Basin RT	PBT		7.02	47	330	11.00	-	0.64
Dorchester Minerals, L.P.	DMLP	B	14.83	31	460	24.00	-	0.62
Sabine Royalty Trust	SBR	B	35.38	15	520	60.00	-	0.59
					1,700		-	0.64
Canada								
EnCana Corporation	ECA	8.12	850	6,900	6.00	0.63	1.13	
Imperial Oil Limited (30%)	IMO	31.62	255	8,100	38.00	0.22	0.87	
Suncor Energy	SU	27.11	1,665	45,100	35.00	0.22	0.82	
Cenovus Energy Inc.	CVE		13.97	825	11,500	20.00	0.19	0.75
Birchcliff Energy Ltd.	BIREF	B	6.71	153	1,000	11.00	0.27	0.72
					73,000		0.22	0.82
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)	Adjustd Resrvs/	PV/ Ebitda	EV/ Ebitda		Dividend
	Symbol/Rating		22-Jul B = Buy	Prod NTM	Ebitda NTM	Ebitda NTM	P/E NTM	NTM (\$/sh)
Global Integrated								
Exxon Mobil Corporation	XOM		93.84	13.7	12.4	11.8	29	3.00
Chevron Corporation	CVX		105.44	9.3	11.6	9.6	37	4.28
Royal Dutch Shell	RDS-A	B	54.85	8.9	8.6	6.7	15	3.76
Total S.A.	TOT	B	47.27	9.8	10.5	6.6	13	2.70
	<i>Median</i>				9.6	11.1	8.2	22
Large Independent								
Devon Energy Corporation	DVN		37.41	9.2	15.9	17.1		0.24
EOG Resources, Inc.	EOG		80.43	8.1	14.5	15.3		0.67
Occidental Petroleum Corp.	OXY		75.37	8.2	13.8	13.8		3.00
Marathon Oil Corporation	MRO	B	14.29	13.2	16.0	12.7		0.20
ConocoPhillips	COP	B	40.72	11.4	14.9	10.6		1.00
	<i>Median</i>				9.2	14.9	13.8	
Small Independent								
Range Resources	RRC		41.35	14.4	20.1	19.9		0.08
Cimarex Energy Company	XEC		117.71	7.4	13.7	17.4		0.32
Continental Resources (32%)	CLR	B	45.01	11.4	17.7	15.1		-
California Resources	CRC		11.65	11.4	13.1	10.9		-
Whiting Petroleum Corporation	WLL	B	8.13	13.5	14.2	7.0		-
	<i>Median</i>				11.4	14.2	15.1	
Income								
Sabine Royalty Trust	SBR	B	35.38	9.5	23.7	14.0	14	2.53
San Juan Basin Royalty Trust	SJT		6.82	9.9	15.1	12.9	13	0.51
Dorchester Minerals, L.P.	DMLP	B	14.83	6.8	18.8	11.6	16	1.18
Cross Timbers Royalty Trust	CRT		18.54	6.6	17.9	11.4	13	1.40
Permian Basin RT	PBT		7.02	8.6	17.1	10.9	11	0.64
	<i>Median</i>				8.6	17.9	11.6	13
Canada								
EnCana Corporation	ECA		8.12	5.4	11.5	13.1		0.06
Birchcliff Energy Ltd.	BIREF	B	6.71	15.1	15.3	11.0		-
Cenovus Energy Inc.	CVE		13.97	16.9	13.6	10.3		0.15
Imperial Oil Limited (30%)	IMO		31.62	27.7	11.5	10.0		0.43
Suncor Energy	SU		27.11	22.3	11.8	9.7		0.90
	<i>Median</i>				16.9	11.8	10.3	
	<i>Grand Median</i>				11	14	12	

EV = Enterprise Value = Market Cap and Debt; Ebitda = Earnings before interest, tax, depreciation

and amortization; NTM = Next Twelve Months Ended June 30, 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

Symbol/Rati		Price	Price	Cash	Distrib.	Equity	Unlevered	McDep		
		(\$/sh)	(\$/sh)			Total	Total			
		22-Jul	31-Dec	Change	(%)	(%)	Debt	Return		
		2016	2015				(\$/sh)	(%)	Ratio	
Global Integrated										
Exxon Mobil Corporation	XOM	93.84	77.95	20	2	22	23	17	0.95	
Chevron Corporation	CVX	105.44	89.96	17	2	20	35	14	0.83	
Royal Dutch Shell	RDS-A	B	54.85	45.79	20	4	24	36	13	0.78
Total S.A.	TOT	B	47.27	44.95	5	3	8	26	5	0.63
	<i>Median</i>					18	21	14	0.80	
Large Independent										
EOG Resources, Inc.	EOG	80.43	70.79	14	0	14	13	12	1.06	
Occidental Petroleum Corp.	OXY	75.37	67.61	11	2	14	13	12	1.00	
Devon Energy Corporation	DVN	37.41	32.00	17	1	18	23	10	1.08	
Marathon Oil Corporation	MRO	B	14.29	12.58	14	1	14	8	9	0.80
ConocoPhillips	COP	B	40.72	46.69	(13)	1	(12)	32	(7)	0.71
	<i>Median</i>					14	14	10	1.00	
Small Independent										
Continental Resources (32%)	CLR	B	45.01	22.98	96	-	96	19	52	0.85
Range Resources	RRRC		41.35	24.62	68	0	68	18	39	0.99
Cimarex Energy Company	XEC		117.71	89.38	32	0	32	13	28	1.27
California Resources	CRC		11.65	23.30	(50)	-	(50)	181	(6)	0.83
Whiting Petroleum Corporation	WLL	B	8.13	9.44	(14)	-	(14)	8	(7)	0.49
	<i>Median</i>					32	32	28	0.85	
Income										
San Juan Basin Royalty Trust	SJT		6.82	4.14	65	2	67	-	67	0.85
Dorchester Minerals, L.P.	DMLP	B	14.83	9.89	50	4	53	-	53	0.62
Cross Timbers Royalty Trust	CRT		18.54	13.01	43	4	47	-	47	0.64
Permian Basin RT	PBT		7.02	5.06	39	2	41	-	41	0.64
Sabine Royalty Trust	SBR	B	35.38	26.26	35	3	38	-	38	0.59
	<i>Median</i>					43	47	47	0.64	
Canada										
Birchcliff Energy Ltd.	BIREF	B	6.71	2.93	129	-	129	4	54	0.72
EnCana Corporation	ECA		8.12	5.09	60	1	60	10	20	1.13
Cenovus Energy Inc.	CVE		13.97	12.62	11	1	11	5	8	0.75
Suncor Energy	SU		27.11	25.80	5	2	7	10	5	0.82
Imperial Oil Limited (30%)	IMO		31.62	32.52	(3)	1	(2)	11	(2)	0.87
	<i>Median</i>					11	11	8	0.82	
	<i>Grand Median</i>					18	21	14	0.82	
Natural Gas (\$/mmbtu)			2.77	2.33	19					
Oil -West Texas Intermediate (\$/bbl)			43.96	37.06	19					
S&P 500			2,172	2,044	6					

Source: McDep LLC, Yahoo, CME Group, Bloomberg

For historical research see www.mcdep.com



Analysis of Oil and Gas Stocks
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