

Natural Gas Royalty Trusts

A Weekly Analysis

January 2, 2003

McDep Energy Income Ideas

Summary and Recommendation

Recommended **San Juan Basin Royalty Trust (SJT)** as well as **Cross Timbers Royalty Trust (CRT)** and **Hugoton Royalty Trust (HGT)** are the choicest income ideas in our research coverage offering near 11% distribution yields, reasonable value, no debt and no fees (see Tables MEII-1 and MEII-2). Buy recommended integrated oils, after lagging in stock price, offer even better value, near 4% yields, low debt and low fees. Buy recommended **Canadian Oil Sands Trust (COS_u.TO)** is a standout in value, distributes more than 5%, has low debt and no fees. The least attractive income stocks, High Greed Partnerships, are at the high end of the tables consistent with their high valuation risk. Those low quality investments also sport excess debt and, of course, as the name implies, pay high fees to general partners. Meanwhile, *Natural Gas Royalty Trusts* will continue in 2003 to have a fresh calculation weekly of Present Value and Next Twelve Months Distribution, but may not print the details every week for CRT and HGT.

Kurt H. Wulff, CFA

Natural Gas and Oil Futures

December 31, 2002

	2004	2005	2006	2007	2008	2009	Six Year
Natural Gas (\$/mmbtu)							
Year ending January	4.56	4.22	3.92	3.85	3.92	3.96	4.07
Light Sweet Crude Oil (\$/bbl)							
Year ending January	27.10	23.39	22.93	22.78	22.64	22.58	23.57
Natural Gas/Oil (6:1 = 1.0)							
Year ending January	1.01	1.08	1.03	1.01	1.04	1.05	1.04

Source: Nymex, FutureSource, wsj.com, McDep Associates

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Table EII-1
McDep Energy Income Ideas
Dividends, Debt and McDep Ratio

<i>Symbol/</i>	<i>Rating</i>	<i>Price</i> <i>(\$/sh)</i>	<i>Shares</i>	<i>Market</i>	<i>Div or</i>	<i>Debt/</i>	<i>McDep</i>	
		<i>31-Dec</i>	<i>(mm)</i>	<i>Cap</i>	<i>Distrib.</i>	<i>Present</i>	<i>Ratio</i>	
		<i>2002</i>		<i>(\$mm)</i>	<i>NTM</i>	<i>Value</i>		
					<i>(%)</i>			
High Greed Partnerships								
El Paso Energy Partners	EPN	S	27.84	57.0	1,590	9.7	0.64	2.43
Kinder Morgan Energy Partners, L.P.	KMP	S	35.00	135	4,740	7.0	0.47	1.79
Enbridge Energy Partners, L.P.	EEP	S	42.15	35.0	1,480	8.5	0.64	1.67
Kinder Morgan Management, LLC	KMR	S	31.59	39.5	1,250	7.7	0.47	1.66
Plains All Amer. Pipeline	PAA		24.40	50.0	1,220	8.8	0.49	1.56
Enbridge Energy Management, L.L.C	EEQ	S	37.50	9.0	340	9.6	0.64	1.56
Northern Border Partners	NBP		37.87	44.0	1,670	8.4	0.62	1.32
TEPPCO Partners, L.P.	TPP		27.75	50.0	1,390	8.6	0.56	1.25
AmeriGas Partners, L.P.	APU		23.85	49.4	1,180	9.2	0.51	1.15
Penn Virginia Res. Part, L.P.	PVR		20.62	15.3	320	9.7	-	1.14
Alliance Res. Part, L.P.	ARLP		24.22	15.9	390	8.3	0.45	1.12
<i>Total or Median</i>					15,600	8.6	0.51	1.56
U.S. Master Limiter Partnerships								
Enterprise Products Part (16%)	EPD		19.40	29	550	7.1	0.63	1.68
Dorchester Hugoton, Ltd.	DHULZ		14.47	10.7	155	10.6	(0.17)	1.28
Canadian Royalty Trusts								
Provident Energy Trust	PVX		6.86	63.5	440	20.9	0.24	1.28
Enerplus Resources Fund	ERF		17.75	75.0	1,330	13.2	0.16	0.99
Pengrowth Energy Trust	PGH		9.27	110.0	1,020	16.3	0.19	0.98
Canadian Oil Sands Trust (US\$)	COS_u.TO	B	24.35	57.3	1,400	5.3	0.13	0.66
<i>Total or Median</i>					4,200	14.7	0.17	0.98
U.S. Natural Gas Royalty Trusts								
Cross Timbers Royalty Trust	CRT		19.50	6.0	117	10.7	-	0.94
San Juan Basin Royalty Trust	SJT	B	13.70	46.6	640	11.4	-	0.81
Hugoton RoyaltyTrust (46%)	HGT		12.82	18.4	240	11.2	-	0.78
<i>Total or Median</i>					1,000	11.2	-	0.81
Additional McDep Recommendations								
Royal Dutch/Shell	RD	B	44.02	3,481	153,200	3.9	0.15	0.77
PetroChina Company Ltd (10%)	PTR	B	20.07	176	3,500	6.3	0.17	0.72
ChevronTexaco Corporation	CVX	B	66.48	1,062	70,600	4.2	0.17	0.72
Marathon Oil Corporation	MRO	B	21.29	310	6,600	4.3	0.37	0.70
<i>Total or Median</i>					234,000	4.3	0.17	0.72

Buy/Sell rating after symbol: B - Buy, N - Neutral, S - Sell

NTM = Next Twelve Months Ended December 31, 2003

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

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Table EII-2
McDep Energy Income Ideas
Distribution Validity, Fees and Cash flow Multiples

	<i>Symbol/</i>	<i>Rating</i>	<i>Price</i> <i>(\$/sh)</i> <i>31-Dec</i> <i>2002</i>	<i>Dist/</i> <i>Equity</i> <i>Ebitda</i>	<i>Mgt</i> <i>Fee</i> <i>(%)</i>	<i>Fin</i> <i>Fee</i> <i>(%)</i>	<i>EV/</i> <i>Ebitda</i> <i>NTM</i>	<i>PV/</i> <i>Ebitda</i> <i>NTM</i>
High Greed Partnerships								
El Paso Energy Partners	EPN	S	27.84	4.3	71	6	21.8	9.0
Kinder Morgan Energy Partners, L.P.	KMP	S	35.00	1.5	44	6	15.1	8.4
Enbridge Energy Partners, L.P.	EEP	S	42.15	2.2	21	6	15.0	9.0
Plains All Amer. Pipeline	PAA		24.40	1.7	9	6	14.1	9.0
Enbridge Energy Management, L.L.C	EEQ	S	37.50	2.2	21	6	14.0	9.0
Kinder Morgan Management, LLC	KMR	S	31.59	1.5	44	6	14.0	8.4
Northern Border Partners	NBP		37.87	1.4	8	6	11.9	9.0
TEPPCO Partners, L.P.	TPP		27.75	1.2	25	6	11.3	9.0
AmeriGas Partners, L.P.	APU		23.85	1.1	1	6	10.3	9.0
Penn Virginia Res. Part, L.P.	PVR		20.62	1.0	2	8	9.8	8.6
Alliance Res. Part, L.P.	ARLP		24.22	0.7	2	8	7.8	7.0
		<i>Median</i>					<i>14.0</i>	<i>9.0</i>
U.S. Master Limiter Partnerships								
Enterprise Products Part (16%)	EPD		19.40	1.8	10	6	15.2	9.0
Dorchester Hugoton, Ltd.	DHULZ		14.47	0.8	3		8.2	6.4
Canadian Royalty Trusts								
Canadian Oil Sands Trust (US\$)	COS_u.TO	B	24.35	0.4			7.4	11.2
Enerplus Resources Fund	ERF		17.75	0.8	10	6	6.4	6.5
Pengrowth Energy Trust	PGH		9.27	0.9	9	6	5.8	5.9
Provident Energy Trust	PVX		6.86	1.3	20	8	5.7	4.5
		<i>Median</i>					<i>6.1</i>	<i>6.2</i>
U.S. Natural Gas Royalty Trusts								
Cross Timbers Royalty Trust	CRT		19.50	0.9			8.7	9.3
San Juan Basin Royalty Trust	SJT	B	13.70	0.7			6.5	8.1
Hugoton RoyaltyTrust (46%)	HGT		12.82	0.7			6.4	8.2
Additional McDep Recommendations								
Royal Dutch/Shell	RD	B	44.02	0.2			6.6	8.6
ChevronTexaco Corporation	CVX	B	66.48	0.2			5.9	8.2
Marathon Oil Corporation	MRO	B	21.29	0.1			4.6	6.5
PetroChina Company Ltd (10%)	PTR	B	20.07	0.2			3.7	5.1
		<i>Median</i>					<i>5.2</i>	<i>7.3</i>

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Table SJT-1
San Juan Basin Royalty Trust
Present Value

Volume Decline (%/yr):	10	Price Escalation Post 2008 (%/yr):	2.3
Volume Enhancement (%/yr):	10	Discount rate (%/yr):	5.8
Capex/Cash Flow (%):	25	U.S. TIPS Inflation (%/yr):	1.5
Variable Cost (%):	12	U.S. 10 Year Yield (%/yr):	3.8
PV/Volume (\$/mcf):	1.40	PV/EBITDA 2003:	8.2

Year	Basic (bcf)	Volume Enhanced (bcf)	Total (bcf)	Price (\$/mcf)	Revenue (\$mm)	Fixed Cost (\$mm)	Var Cost (\$mm)	Cap Ex (\$mm)	Distribution (\$mm)	(\$/unit)	Tax Credit (\$/unit)	Disc Factor	Present Value (\$/unit)
Total 2003 through 2032; years ending on 12/31													
	318	244	562	3.84	2158	388	259	202	1309	28.09	0.00	0.60	16.90
2003	34.5	0.0	34.5	3.51	121.3	10.9	14.6	22.8	73.0	1.57	0.00	0.97	1.52
2004	30.9	3.5	34.4	3.67	126.0	13.0	15.1	24.5	73.4	1.58		0.92	1.45
2005	27.7	6.5	34.2	3.39	115.9	13.0	13.9	22.2	66.7	1.43		0.87	1.24
2006	24.8	9.3	34.0	3.27	111.3	13.0	13.4	21.2	63.7	1.37		0.82	1.12
2007	22.2	11.7	33.9	3.32	112.4	13.0	13.5	21.5	64.4	1.38		0.78	1.07
2008	19.9	13.9	33.7	3.36	113.4	13.0	13.6	21.7	65.1	1.40		0.73	1.03
2009	17.8	15.8	33.6	3.44	115.5	13.0	13.9	22.2	66.5	1.43		0.69	0.99
2010	15.9	17.5	33.4	3.52	117.7	13.0	14.1	22.6	67.9	1.46		0.66	0.96
2011	14.3	19.0	33.3	3.60	119.9	13.0	14.4	23.1	69.4	1.49		0.62	0.92
2012	12.8	17.0	29.8	3.69	109.9	13.0	13.2		83.7	1.80		0.59	1.05
2013	11.4	15.2	26.7	3.77	100.7	13.0	12.1		75.6	1.62		0.55	0.90
2014	10.2	13.7	23.9	3.86	92.3	13.0	11.1		68.2	1.46		0.52	0.77
2015	9.2	12.2	21.4	3.95	84.6	13.0	10.1		61.4	1.32		0.50	0.65
2016	8.2	11.0	19.2	4.04	77.5	13.0	9.3		55.2	1.18		0.47	0.55
2017	7.4	9.8	17.2	4.14	71.0	13.0	8.5		49.5	1.06		0.44	0.47
2018	6.6	8.8	15.4	4.23	65.1	13.0	7.8		44.3	0.95		0.42	0.40
2019	5.9	7.9	13.8	4.33	59.6	13.0	7.2		39.5	0.85		0.40	0.34
2020	5.3	7.0	12.3	4.43	54.7	13.0	6.6		35.1	0.75		0.37	0.28
2021	4.7	6.3	11.0	4.54	50.1	13.0	6.0		31.1	0.67		0.35	0.24
2022	4.2	5.6	9.9	4.64	45.9	13.0	5.5		27.4	0.59		0.33	0.20
2023	3.8	5.1	8.9	4.75	42.1	13.0	5.0		24.0	0.52		0.32	0.16
2024	3.4	4.5	7.9	4.86	38.6	13.0	4.6		20.9	0.45		0.30	0.13
2025	3.0	4.1	7.1	4.98	35.3	13.0	4.2		18.1	0.39		0.28	0.11
2026	2.7	3.6	6.4	5.09	32.4	13.0	3.9		15.5	0.33		0.27	0.09
2027	2.4	3.3	5.7	5.21	29.7	13.0	3.6		13.1	0.28		0.25	0.07
2028	2.2	2.9	5.1	5.34	27.2	13.0	3.3		10.9	0.23		0.24	0.06
2029	2.0	2.6	4.6	5.46	24.9	13.0	3.0		8.9	0.19		0.23	0.04
2030	1.8	2.3	4.1	5.59	22.8	13.0	2.7		7.1	0.15		0.21	0.03
2031	1.6	2.1	3.7	5.72	20.9	13.0	2.5		5.4	0.12		0.20	0.02
2032	1.4	1.9	3.3	5.85	19.2	13.0	2.3		3.9	0.08		0.19	0.02

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Table SJT-2
San Juan Basin Royalty Trust
Distributable Income

	<i>Q1</i>	<i>Q2</i>	<i>Q3</i>	<i>Q4E</i>	<i>Year</i>	<i>Q1E</i>	<i>Q2E</i>	<i>Q3E</i>	<i>Q4E</i>	<i>Next</i>
	<i>3/31/02</i>	<i>6/30/02</i>	<i>9/30/02</i>	<i>12/31/02</i>	<i>2002E</i>	<i>3/31/03</i>	<i>6/30/03</i>	<i>9/30/03</i>	<i>12/31/03</i>	<i>Twelve</i>
										<i>Months</i>
										<i>12/31/03</i>
Highlights										
Revenue (\$mm) (75%)	19.2	18.6	20.7	20.4	78.9	28.3	31.4	30.8	30.8	121.3
Cash flow (\$mm) (75%)	14.1	14.1	16.0	15.5	59.7	22.6	25.4	24.8	24.8	97.7
Per unit	0.30	0.30	0.34	0.33	1.28	0.49	0.55	0.53	0.53	2.10
Tax credit (\$mm)	0.5	1.4	1.9	1.9	5.6					
Per unit	0.01	0.03	0.04	0.04	0.12					
Distributable Income (\$mm)	3.5	9.0	12.2	11.6	36.3	18.2	18.6	18.1	18.1	73.0
Per unit	0.08	0.19	0.26	0.25	0.78	0.39	0.40	0.39	0.39	1.57
Units (millions)	46.6	46.6	46.6	46.6	46.6	46.6	46.6	46.6	46.6	46.6
Volume										
Natural gas (mmbtu)	12.5	12.0	11.6	12.4	48.5	12.2	11.8	12.2	12.2	48.4
Heat Content(btu/cf)	1,092	1,077	970	1,064	1,050	1,064	1,064	1,064	1,064	1,064
Natural gas (bcf)	11.5	11.1	12.0	11.6	46.2	11.5	11.1	11.5	11.5	45.5
Natural Gas (mmcf)	124.7	125.1	130.4	126.2	126.6	124.6	124.6	124.6	124.6	124.6
Days	92	89	92	92	365	92	89	92	92	365
Oil (mb)	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
Oil (mbd)	0.3	0.3	0.2	0.2	0.3	0.2	0.2	0.2	0.2	0.2
Total gas & oil (bcf)	11.6	11.3	12.1	11.7	46.8	11.6	11.2	11.6	11.6	46.0
Price										
Natural gas (\$/mmbtu) (Henry Hub lagged two months)										
Henry Hub (\$/mmbtu)	2.34	2.92	3.23	3.59	3.02	4.46	4.67	4.43	4.44	4.50
Differential (%)	14	31	28	40	30	32	25	25	25	27
Total	2.01	2.02	2.33	2.16	2.13	3.05	3.50	3.33	3.33	3.30
Natural gas (\$/mcf)	2.20	2.18	2.26	2.30	2.24	3.24	3.72	3.54	3.54	3.51
Oil (\$/bbl) (WTI Cushing lagged two months)										
WTI Cushing	19.56	23.80	26.49	28.96	24.70	28.97	30.42	27.63	25.70	28.18
SJT	15.78	19.14	21.95	24.00	20.10	24.01	25.20	22.89	21.29	23.33
Total gas & oil (\$/mcf)	2.20	2.19	2.28	2.32	2.25	3.25	3.73	3.54	3.54	3.51
Revenue (\$mm)										
Natural Gas	25.2	24.2	27.1	26.7	103.3	37.2	41.3	40.6	40.6	159.6
Oil	0.4	0.5	0.5	0.5	1.9	0.5	0.5	0.5	0.5	2.1
Total	25.6	24.8	27.6	27.2	105.2	37.7	41.8	41.1	41.1	161.7
Cost (\$mm)										
Severance tax	2.6	2.4	2.3	3.1	10.5	3.8	4.0	3.9	3.9	15.7
Operating	4.1	3.7	4.0	3.4	15.2	3.8	3.9	4.0	4.0	15.7
Total	6.7	6.0	6.3	6.5	25.6	7.5	7.9	8.0	8.0	31.4
Cash flow (\$mm)										
Development	11.3	3.4	2.1	4.7	21.5	5.4	8.5	8.3	8.3	30.4
Net proceeds (\$mm)										
Royalty/Net proceeds	7.5	15.4	19.2	16.1	58.2	24.8	25.4	24.8	24.8	99.9
Royalty income (\$mm)										
Royalty/Net proceeds	5.6	11.5	14.4	12.1	43.6	18.6	19.1	18.6	18.6	74.9
Administration	0.4	0.5	0.6	0.5	2.0	0.4	0.5	0.5	0.5	1.9
One-time	1.7	2.0	1.6		5.3					-
Distributable income (\$mm)										
Distributable income (\$mm)	3.5	9.0	12.2	11.6	36.3	18.2	18.6	18.1	18.1	73.0
<i>Modeling ratios</i>										
Severance tax/revenue	10.2%	9.5%	8.5%	11.5%	9.9%	10.0%	9.6%	9.6%	9.6%	9.7%
Operating cost (\$/mcf)	0.36	0.32	0.33	0.29	0.32	0.33	0.35	0.35	0.35	0.34

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Table SJT-3
San Juan Basin Royalty Trust
Monthly Declarations

	<i>Aug-02</i>	<i>Sep-02</i>	<i>Oct-02</i>	<i>Nov-02</i>	<i>Dec-02</i>	<i>Jan-03</i>	<i>Feb-03</i>	<i>Mar-03</i>
Distribution (\$/unit)								
Declared	0.08	0.10	0.12	0.04	0.09			
Projected						0.11	0.14	0.14
Volume								
Natural gas (mmbtu)	3.77	3.95	4.49	3.77	4.08	3.92	4.05	4.05
Heat Content(btu/cf)	807	1,068	1,084	1,064	1,043	1,050	1,050	1,050
Natural gas (bcf)	4.67	3.70	4.15	3.55	3.91	3.74	3.86	3.86
Natural Gas (mmcf)	156	119	134	118	126	125	125	125
Days	30	31	31	30	31	30	31	31
Price								
Natural gas industry quotes lagged two months (\$/mmbtu)								
Henry Hub Daily/Futures	3.22	2.99	3.09	3.55	4.12	4.03	4.76	4.59
San Juan Monthly Index	2.24	2.62	2.50	2.42	2.52	3.25	3.45	
SJT/Henry Hub	0.75	0.78	0.74	0.55	0.54	0.70	0.67	0.71
SJT/San Juan Index	1.08	0.89	0.91	0.81	0.89	0.87	0.92	
SJT (\$/mmbtu)	2.41	2.32	2.28	1.95	2.24	2.83	3.17	3.26
SJT (\$/mcf)	1.95	2.47	2.47	2.07	2.33	2.97	3.33	3.42
Revenue (\$mm)								
Natural Gas	9.1	9.1	10.2	7.3	9.1	11.1	12.9	13.2
Other	(0.2)	0.0	(0.1)	(0.0)	0.0	0.0	0.0	0.0
Cost (\$mm)								
Severance tax	0.8	0.9	0.9	0.7	1.5	1.1	1.3	1.3
Operating	1.6	1.3	1.1	1.8	0.5	1.3	1.3	1.3
Total	2.4	2.2	2.0	2.5	2.0	2.4	2.6	2.6
Cash flow (\$mm)	6.5	6.9	8.2	4.8	7.1	8.7	10.3	10.6
Development	1.0	0.5	1.0	2.1	1.6	1.8	1.8	1.8
Net proceeds (\$mm)	5.5	6.5	7.2	2.7	5.5	6.9	8.5	8.8
Royalty income (\$mm)	4.1	4.9	5.4	2.0	4.2	5.2	6.4	6.6
Royalty/Net proceeds	75%	75%	75%	75%	75%	75%	75%	75%
One time	0.6							
Distributable income (\$mm)	3.5	4.9	5.4	2.0	4.2	5.2	6.4	6.6
Units (millions)	46.6	46.6	46.6	46.6	46.6	46.6	46.6	46.6
Distribution (\$/unit)	0.08	0.10	0.12	0.04	0.09	0.11	0.14	0.14
<i>Latest Twelve Month Average</i>								
Heat Content(btu/cf)	1,059	1,059	1,057	1,054	1,050			
Natural Gas (mmcf)	124	123	125	125	127			
SJT/Henry Hub	0.73	0.73	0.74	0.71	0.72			
SJT/San Juan Index	0.87	0.87	0.87	0.86	0.88			
Other revenue	(0.0)	(0.0)	(0.0)	(0.0)	(0.2)			
Operating	1.3	1.3	1.3	1.3	1.3			
Development	2.5	2.4	2.2	2.0	1.8			
Severance tax/revenue	10.0%	9.8%	9.7%	9.6%	10.1%			

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