

Energy Trusts and Partnerships

Summary and Recommendation

- ◆ High Greed Partnerships Not a Good Deal
- ◆ Canadian Royalty Trusts fill a niche if restrained on debt and fees
- ◆ U.S. Natural Gas Royalty Trusts efficient for investor, but remain small

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The slide above is from a presentation printed separately under the same date. The rest of *Natural Gas Royalty Trusts* this week includes customary tables.

Kurt H. Wulff, CFA

Natural Gas and Oil Futures

January 29, 2003

	2004	2005	2006	2007	2008	2009	Six Year
Natural Gas (\$/mmbtu)							
Year ending February	5.04	4.34	3.97	3.87	3.93	3.98	4.19
Light Sweet Crude Oil (\$/bbl)							
Year ending February	29.25	24.68	23.70	23.51	23.36	23.28	24.63
Natural Gas/Oil (6:1 = 1.0)							
Year ending February	1.03	1.06	1.01	0.99	1.01	1.03	1.02

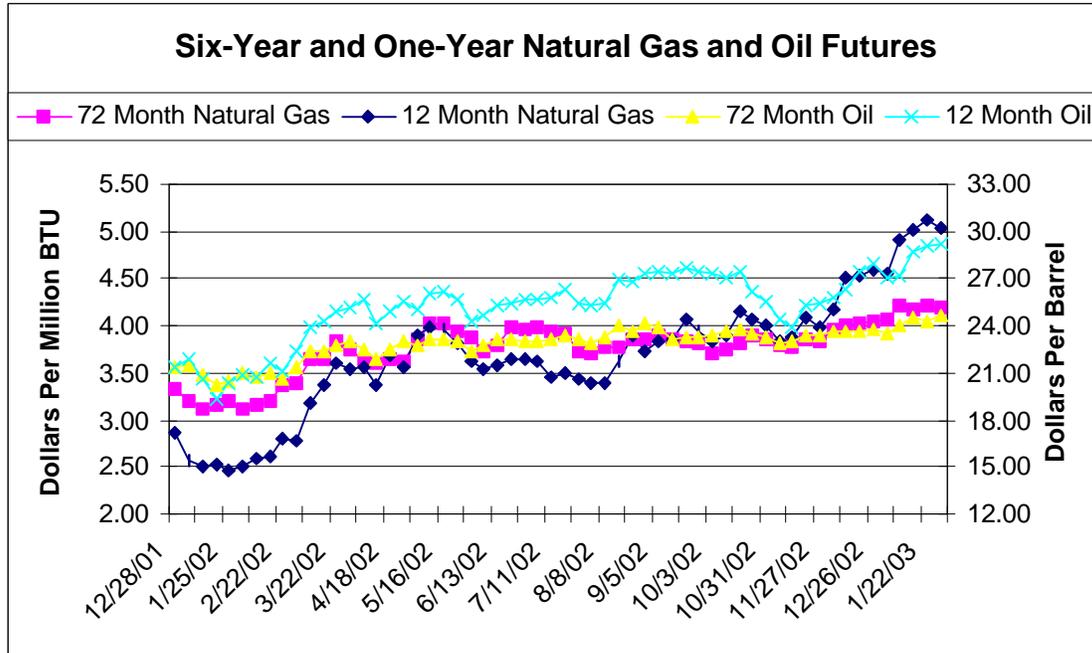
Source: Nymex, FutureSource, wsj.com, McDep Associates

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Natural Gas Royalty Trusts

A Weekly Analysis

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A Weekly Analysis

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

Symbol/ Rating		Price (\$/sh) 29-Jan 2003	Shares (mm)	Market Cap (\$mm)	Div or	Debt/	McDep	
					Distrib. NTM (%)	Present Value		Ratio
High Greed Partnerships								
El Paso Energy Partners	EPN	S	30.65	57.0	1,750	8.8	0.64	2.61
Kinder Morgan Energy Partners, L.P.	KMP	S	36.75	141	5,190	6.8	0.47	1.85
Kinder Morgan Management, LLC	KMR	S	33.95	39.5	1,340	7.4	0.47	1.75
Enbridge Energy Partners, L.P.	EEP	S	44.55	35.0	1,560	8.1	0.64	1.72
Plains All Amer. Pipeline	PAA		26.44	50.0	1,320	8.1	0.49	1.65
Enbridge Energy Management, L.L.C	EEQ	S	38.15	9.0	340	9.4	0.64	1.56
Northern Border Partners	NBP		38.00	44.0	1,670	8.4	0.62	1.32
Penn Virginia Res. Part, L.P.	PVR		23.56	15.3	360	8.5	-	1.31
TEPPCO Partners, L.P.	TPP		29.09	50.0	1,450	8.3	0.56	1.28
AmeriGas Partners, L.P.	APU		24.60	49.4	1,220	8.9	0.51	1.17
Alliance Res. Part, L.P.	ARLP		24.66	15.9	390	8.1	0.45	1.13
<i>Total or Median</i>					16,600	8.3	0.51	1.56
U.S. Master Limiter Partnerships								
Enterprise Products Part (16%)	EPD		18.95	29	540	7.3	0.63	1.67
Dorchester Hugoton, Ltd.	DHULZ		16.49	10.7	177	9.3	(0.17)	1.49
Canadian Royalty Trusts								
Provident Energy Trust	PVX		7.12	63.5	450	20.2	0.24	1.32
Pengrowth Energy Trust	PGH		10.00	110.0	1,100	15.1	0.19	1.04
Enerplus Resources Fund	ERF		18.71	75.0	1,400	12.5	0.16	1.03
Canadian Oil Sands Trust (US\$)	COS_u.TO	B	24.74	57.3	1,420	5.2	0.13	0.67
<i>Total or Median</i>					4,400	13.8	0.17	1.04
U.S. Natural Gas Royalty Trusts								
Cross Timbers Royalty Trust	CRT		18.75	6.0	113	12.4	-	0.89
San Juan Basin Royalty Trust	SJT	B	13.91	46.6	650	13.4	-	0.80
Hugoton RoyaltyTrust (46%)	HGT		13.06	18.4	240	13.0	-	0.78
<i>Total or Median</i>					1,000	13.0	-	0.80
Additional McDep Recommendations								
Royal Dutch/Shell	RD	B	41.35	3,481	143,900	4.1	0.15	0.74
PetroChina Company Ltd (10%)	PTR	B	20.20	176	3,600	6.3	0.17	0.73
ChevronTexaco Corporation	CVX	B	65.30	1,062	69,400	4.3	0.17	0.71
Marathon Oil Corporation	MRO	B	21.28	310	6,600	4.3	0.37	0.70
<i>Total or Median</i>					224,000	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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Natural Gas Royalty Trusts

A Weekly Analysis

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Table MEII-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>29-Jan</i> <i>2003</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	30.65	4.3	71	6	23.4	9.0
Kinder Morgan Energy Partners, L.P.	KMP	S	36.75	1.5	46	6	16.1	8.7
Enbridge Energy Partners, L.P.	EEP	S	44.55	2.2	21	6	15.5	9.0
Kinder Morgan Management, LLC	KMR	S	33.95	1.5	46	6	15.2	8.7
Plains All Amer. Pipeline	PAA		26.44	1.7	9	6	14.8	9.0
Enbridge Energy Management, L.L.C	EEQ	S	38.15	2.2	21	6	14.0	9.0
Northern Border Partners	NBP		38.00	1.4	8	6	11.9	9.0
TEPPCO Partners, L.P.	TPP		29.09	1.2	25	6	11.5	9.0
Penn Virginia Res. Part, L.P.	PVR		23.56	1.0	2	8	11.2	8.6
AmeriGas Partners, L.P.	APU		24.60	1.1	1	6	10.5	9.0
Alliance Res. Part, L.P.	ARLP		24.66	0.7	2	8	7.9	7.0
		<i>Median</i>					<i>14.0</i>	<i>9.0</i>
U.S. Master Limiter Partnerships								
Enterprise Products Part (16%)	EPD		18.95	1.8	10	6	15.0	9.0
Dorchester Hugoton, Ltd.	DHULZ		16.49	0.8	3		9.5	6.4
Canadian Royalty Trusts								
Canadian Oil Sands Trust (US\$)	COS_u.TO	B	24.74	0.4			7.5	11.2
Enerplus Resources Fund	ERF		18.71	0.8	10	6	6.7	6.5
Pengrowth Energy Trust	PGH		10.00	0.9	9	6	6.1	5.9
Provident Energy Trust	PVX		7.12	1.3	20	8	5.9	4.5
		<i>Median</i>					<i>6.4</i>	<i>6.2</i>
U.S. Natural Gas Royalty Trusts								
Cross Timbers Royalty Trust	CRT		18.75	0.9			7.6	8.6
Hugoton RoyaltyTrust (46%)	HGT		13.06	0.8			5.9	7.6
San Juan Basin Royalty Trust	SJT	B	13.91	0.8			5.9	7.3
Additional McDep Recommendations								
Royal Dutch/Shell	RD	B	41.35	0.2			6.3	8.6
ChevronTexaco Corporation	CVX	B	65.30	0.2			5.8	8.2
Marathon Oil Corporation	MRO	B	21.28	0.1			4.3	6.2
PetroChina Company Ltd (10%)	PTR	B	20.20	0.2			3.7	5.1
		<i>Median</i>					<i>5.1</i>	<i>7.2</i>

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Table SJT-1
San Juan Basin Royalty Trust
Present Value

Volume Decline (%/yr):	11	Price Escalation Post 2008 (%/yr):	2.7
Volume Enhancement (%/yr):	10	Discount rate (%/yr):	6.0
Capex/Cash Flow (%):	25	U.S. TIPS Inflation (%/yr):	1.9
Variable Cost (%):	12	U.S. 10 Year Yield (%/yr):	4.0
PV/Volume (\$/mcf):	1.44	PV/EBITDA 2003:	7.4

Year	Volume		Total (bcf)	Price (\$/mcf)	Revenue (\$mm)	Fixed Cost (\$mm)	Var Cost (\$mm)	Cap Ex (\$mm)	Distribution (\$/unit)	Disc Factor	Present Value (\$/unit)	
	Basic (bcf)	Enhanced (bcf)										
Total 2003 through 2032; years ending on 12/31												
	318	243	561	3.95	2219	388	266	205	1359	29.17	0.59	17.30
2003	34.9	0.0	34.9	3.89	135.7	11.0	16.3	21.8	86.7	1.86	0.97	1.81
2004	31.2	3.5	34.7	3.85	133.9	13.0	16.1	26.2	78.6	1.69	0.92	1.55
2005	27.9	6.6	34.5	3.47	119.8	13.0	14.4	23.1	69.3	1.49	0.86	1.28
2006	25.0	9.3	34.3	3.32	113.8	13.0	13.7	21.8	65.3	1.40	0.81	1.14
2007	22.3	11.8	34.1	3.30	112.7	13.0	13.5	21.5	64.6	1.39	0.77	1.07
2008	20.0	14.0	33.9	3.37	114.3	13.0	13.7	21.9	65.7	1.41	0.72	1.02
2009	17.8	15.9	33.7	3.46	116.6	13.0	14.0	22.4	67.2	1.44	0.68	0.99
2010	15.9	17.6	33.5	3.55	119.0	13.0	14.3	22.9	68.8	1.48	0.64	0.95
2011	14.3	19.0	33.3	3.65	121.4	13.0	14.6	23.5	70.4	1.51	0.61	0.92
2012	12.7	17.0	29.8	3.74	111.4	13.0	13.4		85.1	1.83	0.57	1.05
2013	11.4	15.2	26.6	3.84	102.3	13.0	12.3		77.0	1.65	0.54	0.89
2014	10.2	13.6	23.8	3.94	93.9	13.0	11.3		69.6	1.49	0.51	0.76
2015	9.1	12.2	21.3	4.05	86.1	13.0	10.3		62.8	1.35	0.48	0.65
2016	8.1	10.9	19.0	4.16	79.1	13.0	9.5		56.6	1.21	0.45	0.55
2017	7.3	9.7	17.0	4.27	72.6	13.0	8.7		50.8	1.09	0.43	0.47
2018	6.5	8.7	15.2	4.38	66.6	13.0	8.0		45.6	0.98	0.40	0.39
2019	5.8	7.8	13.6	4.50	61.1	13.0	7.3		40.8	0.88	0.38	0.33
2020	5.2	6.9	12.1	4.62	56.1	13.0	6.7		36.4	0.78	0.36	0.28
2021	4.6	6.2	10.9	4.74	51.5	13.0	6.2		32.3	0.69	0.34	0.23
2022	4.2	5.6	9.7	4.87	47.2	13.0	5.7		28.6	0.61	0.32	0.20
2023	3.7	5.0	8.7	5.00	43.4	13.0	5.2		25.2	0.54	0.30	0.16
2024	3.3	4.4	7.8	5.13	39.8	13.0	4.8		22.0	0.47	0.28	0.13
2025	3.0	4.0	6.9	5.27	36.5	13.0	4.4		19.1	0.41	0.27	0.11
2026	2.7	3.5	6.2	5.41	33.5	13.0	4.0		16.5	0.35	0.25	0.09
2027	2.4	3.2	5.5	5.55	30.8	13.0	3.7		14.1	0.30	0.24	0.07
2028	2.1	2.8	5.0	5.70	28.2	13.0	3.4		11.8	0.25	0.22	0.06
2029	1.9	2.5	4.4	5.85	25.9	13.0	3.1		9.8	0.21	0.21	0.04
2030	1.7	2.3	4.0	6.00	23.8	13.0	2.9		7.9	0.17	0.20	0.03
2031	1.5	2.0	3.5	6.16	21.8	13.0	2.6		6.2	0.13	0.19	0.03
2032	1.4	1.8	3.2	6.33	20.0	13.0	2.4		4.6	0.10	0.18	0.02

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Natural Gas Royalty Trusts

A Weekly Analysis

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Table SJT-2
San Juan Basin Royalty Trust
Distributable Income

	Q1	Q2	Q3	Q4E	Year	Q1E	Q2E	Q3E	Q4E	Next Twelve Months
	3/31/02	6/30/02	9/30/02	12/31/02	2002E	3/31/03	6/30/03	9/30/03	12/31/03	12/31/03
Highlights										
Revenue (\$mm) (75%)	19.2	18.6	20.7	20.4	78.9	30.6	36.4	34.7	34.1	135.7
Cash flow (\$mm) (75%)	14.1	14.1	16.0	15.5	59.7	24.5	29.9	28.4	27.8	110.5
Per unit	0.30	0.30	0.34	0.33	1.28	0.52	0.64	0.61	0.60	2.37
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	19.4	23.4	22.2	21.7	86.7
Per unit	0.08	0.19	0.26	0.25	0.78	0.42	0.50	0.48	0.47	1.86
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	12.3	11.9	12.3	12.3	49.0
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	11.6	11.2	11.6	11.6	46.1
Natural Gas (mmcf)	124.7	125.1	130.4	126.2	126.6	126.2	126.2	126.2	126.2	126.2
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	11.7	11.4	11.7	11.7	46.6
Price										
Natural gas (\$/mmbtu) (Henry Hub lagged two months)										
Henry Hub (\$/mmbtu)	2.34	2.92	3.23	3.59	3.02	4.71	5.35	4.94	4.85	4.96
Differential (%)	14	31	28	40	30	31	25	25	25	26
Total	2.01	2.02	2.33	2.16	2.13	3.26	4.01	3.70	3.64	3.65
Natural gas (\$/mcf)	2.20	2.18	2.26	2.30	2.24	3.46	4.26	3.94	3.87	3.88
Oil (\$/bbl) (WTI Cushing lagged two months)										
WTI Cushing	19.56	23.80	26.49	28.96	24.70	29.54	33.23	30.70	28.38	30.46
SJT	15.78	19.14	21.95	24.00	20.10	24.48	27.53	25.44	23.52	25.22
Total gas & oil (\$/mcf)	2.20	2.19	2.28	2.32	2.25	3.47	4.27	3.94	3.87	3.89
Revenue (\$mm)										
Natural Gas	25.2	24.2	27.1	26.7	103.3	40.2	47.9	45.7	44.9	178.7
Oil	0.4	0.5	0.5	0.5	1.9	0.5	0.6	0.6	0.5	2.2
Total	25.6	24.8	27.6	27.2	105.2	40.8	48.5	46.3	45.4	181.0
Cost (\$mm)										
Severance tax	2.6	2.4	2.3	3.1	10.5	4.1	4.7	4.4	4.4	17.6
Operating	4.1	3.7	4.0	3.4	15.2	4.0	3.9	4.1	4.1	16.1
Total	6.7	6.0	6.3	6.5	25.6	8.1	8.6	8.5	8.4	33.7
Cash flow (\$mm)										
Development	11.3	3.4	2.1	4.7	21.5	6.1	8.0	7.6	7.4	29.0
Net proceeds (\$mm)	7.5	15.4	19.2	16.1	58.2	26.6	31.9	30.2	29.6	118.3
Royalty income (\$mm)										
Royalty/Net proceeds	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Administration	0.4	0.5	0.6	0.5	2.0	0.5	0.5	0.5	0.5	2.0
One-time	1.7	2.0	1.6		5.3					-
Distributable income (\$mm)	3.5	9.0	12.2	11.6	36.3	19.4	23.4	22.2	21.7	86.7
<i>Modeling ratios</i>										
Severance tax/revenue	10.2%	9.5%	8.5%	11.5%	9.9%	10.1%	9.6%	9.6%	9.6%	9.7%
Operating cost (\$/mcf)	0.36	0.32	0.33	0.29	0.32	0.34	0.35	0.35	0.35	0.35

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Natural Gas Royalty Trusts

A Weekly Analysis

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Table SJT-3
San Juan Basin Royalty Trust
Monthly Declarations

	<i>Oct-02</i>	<i>Nov-02</i>	<i>Dec-02</i>	<i>Jan-03</i>	<i>Feb-03</i>	<i>Mar-03</i>	<i>Apr-03</i>
Distribution (\$/unit)							
Declared	0.12	0.04	0.09	0.10			
Projected					0.14	0.17	0.16
Volume							
Natural gas (mmbtu)	4.49	3.77	4.08	4.07	4.14	4.14	3.74
Heat Content(btu/cf)	1,084	1,064	1,043	1,092	1,050	1,050	1,050
Natural gas (bcf)	4.15	3.55	3.91	3.73	3.94	3.94	3.56
Natural Gas (mmcf)	134	118	126	124	127	127	127
Days	31	30	31	30	31	31	28
Price							
Natural gas industry quotes lagged two months (\$/mmbtu)							
Henry Hub Daily/Futures	3.09	3.55	4.12	4.03	4.76	5.33	5.06
San Juan Monthly Index	2.50	2.42	2.52	3.25	3.45	4.14	4.50
SJT/Henry Hub	0.74	0.55	0.54	0.71	0.67	0.70	0.75
SJT/San Juan Index	0.91	0.81	0.89	0.88	0.93	0.90	0.84
SJT (\$/mmbtu)	2.28	1.95	2.24	2.85	3.20	3.71	3.77
SJT (\$/mcf)	2.47	2.07	2.33	3.12	3.36	3.89	3.96
Revenue (\$mm)							
Natural Gas	10.2	7.3	9.1	11.6	13.2	15.3	14.1
Other	(0.1)	(0.0)	0.0	0.1	(0.1)	(0.1)	(0.1)
Cost (\$mm)							
Severance tax	0.9	0.7	1.5	1.2	1.3	1.6	1.4
Operating	1.1	1.8	0.5	1.5	1.3	1.3	1.3
Total	2.0	2.5	2.0	2.7	2.6	2.8	2.7
Cash flow (\$mm)	8.2	4.8	7.1	9.0	10.5	12.4	11.3
Development	1.0	2.1	1.6	2.7	1.7	1.7	1.7
Net proceeds (\$mm)	7.2	2.7	5.5	6.3	8.9	10.7	9.6
Royalty income (\$mm)	5.4	2.0	4.2	4.7	6.7	8.1	7.2
Royalty/Net proceeds	75%	75%	75%	75%	75%	75%	75%
One time							
Distributable income (\$mm)	5.4	2.0	4.2	4.7	6.7	8.1	7.2
Units (millions)	46.6	46.6	46.6	46.6	46.6	46.6	46.6
Distribution (\$/unit)	0.12	0.04	0.09	0.10	0.14	0.17	0.16
<i>Latest Twelve Month Average</i>							
Heat Content(btu/cf)	1,057	1,054	1,050	1,050			
Natural Gas (mmcf)	125	125	127	127			
SJT/Henry Hub	0.74	0.71	0.72	0.70			
SJT/San Juan Index	0.87	0.86	0.88	0.89			
Other revenue	(0.0)	(0.0)	(0.2)	(0.1)			
Operating	1.3	1.3	1.3	1.3			
Development	2.2	2.0	1.8	1.7			
Severance tax/revenue	9.7%	9.6%	10.1%	10.1%			

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