

Natural Gas Royalty Trusts

A Weekly Analysis

February 6, 2003

When Will We See Sell Signals?

Summary and Recommendation

Amidst continuing good news for natural gas producers, there appears to be further upside eventually in stock price for units that offer an indicated distribution yield for the next twelve months around 13%. The main industry specific question boils down to whether six-year natural gas futures are a reasonable indication of what the actual trend in natural gas price will be. Our opinion for now is that a wider premium to oil would be reasonable and that six-year oil currently at about \$25 a barrel is cheap (see table below). Looking back over three years, estimated Next Twelve Months Distributions and estimated Present Value reached a cyclical peak in January 2001, four months before natural gas royalty trust stock prices peaked in May 2001 (see charts). We would be surprised if our estimates, which depend on natural gas futures, give a lead as long as four months on any possible future stock price decline from any new peak. Nonetheless, there is little sign of decline yet. Meanwhile even though there were some good trades to be made two years ago, those who held pat are looking all right, too.

Kurt H. Wulff, CFA

Natural Gas and Oil Futures

February 5, 2003

	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>	<i>2008</i>	<i>2009</i>	<i>Six Year</i>
Natural Gas (\$/mmbtu)							
Year ending February	5.14	4.42	4.05	3.93	4.04	4.07	4.27
Light Sweet Crude Oil (\$/bbl)							
Year ending February	29.94	25.12	24.03	23.83	23.68	23.60	25.03
Natural Gas/Oil (6:1 = 1.0)							
Year ending February	1.03	1.06	1.01	0.99	1.02	1.03	1.02

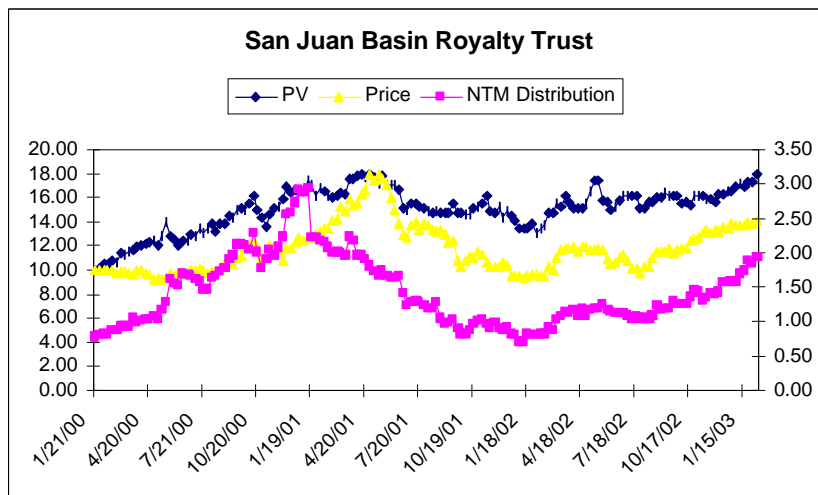
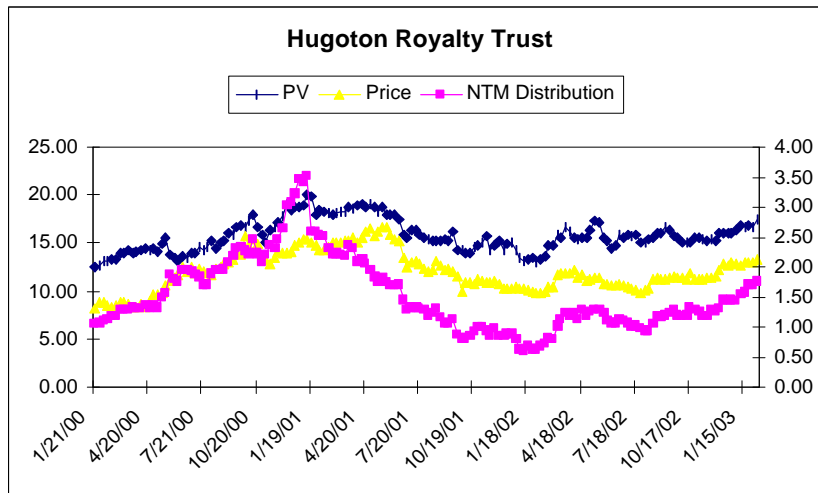
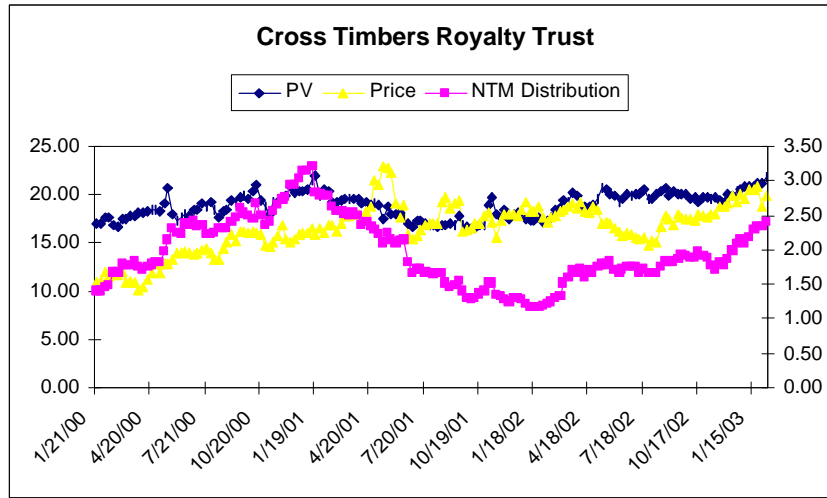
Source: Nymex, FutureSource, wsj.com, McDep Associates

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

	Symbol/ Rating		Price (\$/sh) 5-Feb 2003	Shares (mm)	Market Cap (\$mm)	Div or Distrib. NTM (%)	Debt/ Present Value	McDep Ratio
High Greed Partnerships								
El Paso Energy Partners	EPN	S	31.36	57.0	1,790	8.6	0.64	2.65
Kinder Morgan Energy Partners, L.P.	KMP	S	35.31	141	4,980	7.1	0.47	1.80
Enbridge Energy Partners, L.P.	EEP	S	43.95	35.0	1,540	8.2	0.64	1.71
Kinder Morgan Management, LLC	KMR	S	31.81	39.5	1,260	7.9	0.47	1.67
Plains All Amer. Pipeline	PAA		24.75	50.0	1,240	8.7	0.49	1.58
Enbridge Energy Management, L.L.C	EEQ	S	38.00	9.0	340	9.5	0.64	1.56
Northern Border Partners	NBP		38.02	44.0	1,670	8.4	0.62	1.32
TEPPCO Partners, L.P.	TPP		29.42	50.0	1,470	8.2	0.56	1.29
Penn Virginia Res. Part, L.P.	PVR		23.00	15.3	350	8.7	-	1.28
AmeriGas Partners, L.P.	APU		24.81	49.4	1,230	8.9	0.51	1.17
Alliance Res. Part, L.P.	ARLP		24.29	15.9	390	8.2	0.45	1.12
<i>Total or Median</i>					16,300	8.4	0.51	1.56
U.S. Master Limiter Partnerships								
Enterprise Products Part (16%)	EPD		19.01	29	540	7.3	0.63	1.67
Dorchester Minerals, L.P.	DMLP		14.30	27.0	386	11.0	-	1.23
Canadian Royalty Trusts								
Provident Energy Trust	PVX		7.25	63.5	460	19.8	0.24	1.34
Enerplus Resources Fund	ERF		19.06	75.0	1,430	12.3	0.16	1.05
Pengrowth Energy Trust	PGH		9.69	110.0	1,070	15.6	0.19	1.02
Canadian Oil Sands Trust (US\$)	COS_u.TO	B	23.26	57.3	1,330	5.5	0.13	0.63
<i>Total or Median</i>					4,300	13.9	0.17	1.03
U.S. Natural Gas Royalty Trusts								
Cross Timbers Royalty Trust	CRT		19.92	6.0	120	12.1	-	0.92
San Juan Basin Royalty Trust	SJT	B	14.09	46.6	660	13.7	-	0.79
Hugoton RoyaltyTrust (46%)	HGT		13.30	18.4	250	13.3	-	0.77
<i>Total or Median</i>					1,030	13.3	-	0.79
Additional McDep Recommendations								
PetroChina Company Ltd (10%)	PTR	B	21.48	176	3,800	5.9	0.17	0.76
Royal Dutch/Shell	RD	B	41.50	3,481	144,400	4.1	0.15	0.74
Marathon Oil Corporation	MRO	B	22.01	310	6,800	4.2	0.37	0.72
ChevronTexaco Corporation	CVX	B	65.07	1,062	69,100	4.3	0.17	0.71
<i>Total or Median</i>					224,000	4.2	0.17	0.73

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 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>5-Feb</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	31.36	4.3	71	6	23.9	9.0
Kinder Morgan Energy Partners, L.P.	KMP	S	35.31	1.5	46	6	15.6	8.7
Enbridge Energy Partners, L.P.	EEP	S	43.95	2.2	21	6	15.4	9.0
Kinder Morgan Management, LLC	KMR	S	31.81	1.5	46	6	14.5	8.7
Plains All Amer. Pipeline	PAA		24.75	1.7	9	6	14.2	9.0
Enbridge Energy Management, L.L.C	EEQ	S	38.00	2.2	21	6	14.0	9.0
Northern Border Partners	NBP		38.02	1.4	8	6	11.9	9.0
TEPPCO Partners, L.P.	TPP		29.42	1.2	25	6	11.6	9.0
Penn Virginia Res. Part, L.P.	PVR		23.00	1.0	2	8	11.0	8.6
AmeriGas Partners, L.P.	APU		24.81	1.1	1	6	10.6	9.0
Alliance Res. Part, L.P.	ARLP		24.29	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		19.01	1.8	10	6	15.0	9.0
Dorchester Minerals, L.P.	DMLP		14.30	0.9	3		8.2	6.6
Canadian Royalty Trusts								
Canadian Oil Sands Trust (US\$)	COS_u.TO	B	23.26	0.4			7.1	11.2
Enerplus Resources Fund	ERF		19.06	0.8	10	6	6.8	6.5
Provident Energy Trust	PVX		7.25	1.3	20	8	6.0	4.5
Pengrowth Energy Trust	PGH		9.69	0.9	9	6	6.0	5.9
		<i>Median</i>					<i>6.4</i>	<i>6.2</i>
U.S. Natural Gas Royalty Trusts								
Cross Timbers Royalty Trust	CRT		19.92	0.9			7.9	8.6
Hugoton RoyaltyTrust (46%)	HGT		13.30	0.8			5.8	7.6
San Juan Basin Royalty Trust	SJT	B	14.09	0.8			5.7	7.3
Additional McDep Recommendations								
Royal Dutch/Shell	RD	B	41.50	0.2			6.3	8.6
ChevronTexaco Corporation	CVX	B	65.07	0.2			5.8	8.2
Marathon Oil Corporation	MRO	B	22.01	0.1			4.4	6.2
PetroChina Company Ltd (10%)	PTR	B	21.48	0.2			3.9	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):	1.49	PV/EBITDA 2003:	7.4

Year	Basic (bcf)	Enhanced (bcf)	Total (bcf)	Price (\$/mcf)	Revenue (\$mm)	Fixed Cost (\$mm)	Var Cost (\$mm)	Cap Ex (\$mm)	Distribution (\$/unit)	Disc Factor	Present Value (\$/unit)	
Total 2003 through 2032; years ending on 12/31												
	318	243	561	4.06	2280	388	274	211	1408	30.22	0.59	17.90
2003	34.9	0.0	34.9	4.01	140.0	10.9	16.8	22.5	89.8	1.93	0.97	1.87
2004	31.2	3.5	34.7	3.92	136.2	13.0	16.3	26.7	80.1	1.72	0.92	1.58
2005	27.9	6.6	34.5	3.55	122.4	13.0	14.7	23.7	71.0	1.52	0.86	1.32
2006	25.0	9.3	34.3	3.37	115.5	13.0	13.9	22.2	66.5	1.43	0.82	1.16
2007	22.3	11.8	34.1	3.39	115.5	13.0	13.9	22.2	66.5	1.43	0.77	1.10
2008	20.0	14.0	33.9	3.46	117.2	13.0	14.1	22.5	67.6	1.45	0.73	1.05
2009	17.8	15.9	33.7	3.55	119.7	13.0	14.4	23.1	69.2	1.49	0.68	1.02
2010	15.9	17.6	33.5	3.65	122.2	13.0	14.7	23.6	70.9	1.52	0.65	0.98
2011	14.3	19.0	33.3	3.75	124.7	13.0	15.0	24.2	72.6	1.56	0.61	0.95
2012	12.7	17.0	29.8	3.85	114.5	13.0	13.7		87.8	1.88	0.57	1.08
2013	11.4	15.2	26.6	3.95	105.2	13.0	12.6		79.5	1.71	0.54	0.93
2014	10.2	13.6	23.8	4.06	96.6	13.0	11.6		72.0	1.54	0.51	0.79
2015	9.1	12.2	21.3	4.17	88.7	13.0	10.6		65.0	1.40	0.48	0.67
2016	8.1	10.9	19.0	4.28	81.4	13.0	9.8		58.6	1.26	0.46	0.57
2017	7.3	9.7	17.0	4.40	74.8	13.0	9.0		52.8	1.13	0.43	0.49
2018	6.5	8.7	15.2	4.52	68.6	13.0	8.2		47.4	1.02	0.41	0.41
2019	5.8	7.8	13.6	4.64	63.0	13.0	7.6		42.5	0.91	0.38	0.35
2020	5.2	6.9	12.1	4.77	57.9	13.0	6.9		37.9	0.81	0.36	0.29
2021	4.6	6.2	10.9	4.89	53.1	13.0	6.4		33.8	0.72	0.34	0.25
2022	4.2	5.6	9.7	5.03	48.8	13.0	5.9		29.9	0.64	0.32	0.21
2023	3.7	5.0	8.7	5.16	44.8	13.0	5.4		26.4	0.57	0.30	0.17
2024	3.3	4.4	7.8	5.30	41.1	13.0	4.9		23.2	0.50	0.29	0.14
2025	3.0	4.0	6.9	5.45	37.8	13.0	4.5		20.2	0.43	0.27	0.12
2026	2.7	3.5	6.2	5.59	34.7	13.0	4.2		17.5	0.38	0.25	0.10
2027	2.4	3.2	5.5	5.75	31.9	13.0	3.8		15.0	0.32	0.24	0.08
2028	2.1	2.8	5.0	5.90	29.2	13.0	3.5		12.7	0.27	0.23	0.06
2029	1.9	2.5	4.4	6.06	26.9	13.0	3.2		10.6	0.23	0.21	0.05
2030	1.7	2.3	4.0	6.23	24.7	13.0	3.0		8.7	0.19	0.20	0.04
2031	1.5	2.0	3.5	6.39	22.6	13.0	2.7		6.9	0.15	0.19	0.03
2032	1.4	1.8	3.2	6.57	20.8	13.0	2.5		5.3	0.11	0.18	0.02

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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	30.7	39.0	35.7	34.6	140.0
Cash flow (\$mm) (75%)	14.1	14.1	16.0	15.5	59.7	24.6	32.3	29.3	28.2	114.3
Per unit	0.30	0.30	0.34	0.33	1.28	0.53	0.69	0.63	0.61	2.45
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	19.5	25.3	22.9	22.1	89.8
Per unit	0.08	0.19	0.26	0.25	0.78	0.42	0.54	0.49	0.47	1.93
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	4.73	5.73	5.08	4.93	5.12
Differential (%)	14	31	28	40	30	31	25	25	25	26
Total	2.01	2.02	2.33	2.16	2.13	3.27	4.30	3.81	3.69	3.76
Natural gas (\$/mcf)	2.20	2.18	2.26	2.30	2.24	3.47	4.57	4.06	3.93	4.00
Oil (\$/bbl) (WTI Cushing lagged two months)										
WTI Cushing	19.56	23.80	26.49	28.96	24.70	29.55	33.65	31.43	29.15	30.94
SJT	15.78	19.14	21.95	24.00	20.10	24.48	27.88	26.04	24.15	25.62
Total gas & oil (\$/mcf)	2.20	2.19	2.28	2.32	2.25	3.48	4.58	4.06	3.93	4.01
Revenue (\$mm)										
Natural Gas	25.2	24.2	27.1	26.7	103.3	40.3	51.4	47.1	45.6	184.4
Oil	0.4	0.5	0.5	0.5	1.9	0.5	0.6	0.6	0.5	2.3
Total	25.6	24.8	27.6	27.2	105.2	40.9	52.0	47.7	46.2	186.7
Cost (\$mm)										
Severance tax	2.6	2.4	2.3	3.1	10.5	4.1	5.0	4.6	4.4	18.1
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	8.9	8.6	8.5	34.2
Cash flow (\$mm)										
Development	11.3	3.4	2.1	4.7	21.5	6.1	8.6	7.8	7.5	30.0
Net proceeds (\$mm)	7.5	15.4	19.2	16.1	58.2	26.7	34.4	31.2	30.1	122.5
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	19.5	25.3	22.9	22.1	89.8
<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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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	0.15
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	5.41	6.13
San Juan Monthly Index	2.50	2.42	2.52	3.25	3.45	4.14	3.27
SJT/Henry Hub	0.74	0.55	0.54	0.71	0.67	0.69	0.59
SJT/San Juan Index	0.91	0.81	0.89	0.88	0.93	0.90	1.10
SJT (\$/mmbtu)	2.28	1.95	2.24	2.85	3.20	3.74	3.60
SJT (\$/mcf)	2.47	2.07	2.33	3.12	3.36	3.92	3.78
Revenue (\$mm)							
Natural Gas	10.2	7.3	9.1	11.6	13.2	15.5	13.5
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	2.6
Cash flow (\$mm)	8.2	4.8	7.1	9.0	10.5	12.5	10.7
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	10.9	9.1
Royalty income (\$mm)	5.4	2.0	4.2	4.7	6.7	8.1	6.8
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	6.8
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	0.15
<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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