Promising Returns in Natural Gas Trusts and Partnerships

Summary and Conclusion

Through direct participation in natural gas production, trusts and partnerships offer high current income with inflation protection and tax advantage. Four stocks, **San Juan Basin Royalty Trust (SJT)**, **Dorchester Hugoton, Ltd. (DHULZ)**, **Hugoton Royalty Trust (HGT)**, and **Cross Timbers Royalty Trust (CRT)**, range from 1.0 to 0.6 on the comparison of current market value to present value of future cash flow (see Table TP-1, McDep Ratio tab, Rank0128.xls file). A McDep ratio of 1.0 implies an internal rate of return of 8 percent per year. In comparison, U.S. Treasury Inflation Protected Securities (TIPS), fully subject to federal income tax, are priced at an internal rate of return of about 6.4 percent per year, including an estimated inflation adjustment of 2.1 percent per year. Conservative investors might view natural gas trusts and partnerships as bond substitutes, while aggressive investors might view the securities as participation in potential volume or price surprise.

The stocks have expected Dynamic Distribution Yields of 8 to 13 percent in the year ahead. On a taxable equivalent basis to new purchasers, look for 12 to 22 percent (see Table TP-2). Dynamic Distribution Yield compares recent unit price to expected distributions for the next twelve months assuming natural gas price related to recent natural gas futures quotes.

Suppose natural gas price were to jump $1.00 an mcf above projected levels? That would add 48% to the present value of San Juan Basin Royalty Trust. Suppose Dorchester Hugoton could stem decline completely instead of partially with the capital outlays projected? That would add 27% to present value for the partnership. Valuation is sensitive to projections and it is hard to know how future relationships will work out, but we believe the base case has validity, particularly in relative terms. Finally, the two more undervalued trusts, Hugoton Royalty Trust and Cross Timbers Royalty Trust, have in common a sponsor, **Cross Timbers Oil Company (XTO)**. While that should be a positive factor it may also be a market overhang because the oil company owns units of both trusts that are for sale at some point.

Control of Reinvestment Can Be an Advantage

In the 1990's it was better to be invested in a long life royalty trust than in an independent oil and gas company. For example, San Juan Basin Royalty Trust gave unitholders a total return of some 11% a year during the past decade, perhaps 16% a year taxable equivalent, while the best independent producers delivered less. **Apache Corporation (APA)**, **Anadarko Petroleum (APC)** and Enron Oil & Gas, now **EOG Resources (EOG)**, gave stockholders total returns of 9%, 7% and 4% respectively. The main distinguishing characteristic is that the high payout of trusts and partnerships gives investors the option of how the cash flow from oil and gas production is reinvested.

Instead of automatically dedicating cash flow to finding and developing new reserves, trust and partnership investors can reinvest in units or anything else they choose.

In hindsight we know that investing in new oil and gas reserves by independent producers was an uneconomic activity toward the end of the last century. That very lack of success should drive the management of operating companies to limit new commitments to more profitable projects. Such judicious restraint may have the further effect of tightening supply and firming commodity price. Any improvement in commodity price benefits trust and partnership unitholders also.

McDep Ratio Reflects Long-Term Outlook

Ultimately the most comprehensive valuation measures incorporate discounting and rate of return. One would not buy a bond exclusively on the basis of its coupon. One would need to know how long coupons would be paid and their present value when discounted at a market interest rate. Similarly we project the future distributions of a trust or partnership and calculate present value.

The McDep Ratio simply compares market value with calculated present value. The name comes from Mc for market cap and De for debt that forms the numerator of the ratio. The last letter, p, is for present value that forms the denominator of the ratio. The lower the ratio the greater the potential investment opportunity.

While an important historical contribution of the McDep Ratio has been to put debt in perspective, the trusts and partnership on this web site have no debt. As a result the trusts and partnership are more conservative investments than stocks of companies with similar assets. In fact investors could finance some of their commitment to the trusts and partnership with debt and incur no more risk than already may be the case in the stocks of independent producers that finance operations partially with debt, as is typically the case. Alternatively, investors could own larger positions in the trusts and partnership before incurring as much financial risk as in normal positions in independent producers.

Dynamic Distribution Yield Reflects Near-Term Outlook

Although it is not a complete valuation measure, Dynamic Distribution Yield can be determined with more objectivity than present value of all future cash flow. We call it Dynamic because it is continually updated to be forward looking to the next year of twelve monthly distributions or four quarterly distributions as the case may be. Moreover the Dynamic Distribution is derived from financial models that incorporate the latest disclosures of operations and future price as determined in the commodity markets. The financial models also include assumptions of reinvestment and the corresponding effect on decline rate.

Choosing our words carefully, we are differentiating Distribution Yield from dividend yield. Being an order-of-magnitude higher, Distribution Yield does not last forever. In contrast the dividends paid by blue chip companies are deliberately restrained so as to be sustainable indefinitely at a growing level.

Sensitivity Characterizes Opportunities and Risks

Being concentrated on long-life natural gas, each of the trust and partnership entities exhibits similar sensitivity to price, volume and discount rate. Cross Timbers Royalty Trust's value is somewhat less sensitive to changes in assumptions because its economic interest is mostly free of cost obligation. At the other extreme, Hugoton Royalty Trust's value is somewhat more sensitive to changes in assumptions because its costs are higher than those for San Juan Basin Royalty Trust and Dorchester Hugoton.

The factor that will most determine relative performance of the stocks is natural gas production volume. We make different assumptions about how fast existing volume will decline and how effective capital or development spending will be in adding new volume.

Each of the entities is modeled and discussed separately (see Group Documents, Tables Category and Text Category).

Kurt H. Wulff
January 29, 2000
781-237-3401

Table TP-1
Natural Gas Trusts and Partnership
McDep Ratio: Price to Asset Value

	Symbol	Price ($/un) 28-Jan 2000	Units (mm)	Market Cap ($mm)	Debt ($mm)	Net Asset Value ($/unit)	McDep Ratio
San Juan Basin Royalty Trust	SJT	10.00	46.6	470	-	10.10	0.99
Dorchester Hugoton, Ltd.	DHULZ	8.88	10.7	95	-	11.40	0.78
Hugoton RT (42.5%)	HGT	8.75	17.0	149	-	12.60	0.69
Cross Timbers Royalty Trust	CRT	11.13	6.0	67	-	17.00	0.65

Note: Asset value is tied to a set of assumptions believed to be consistent for one entity relative to another and to closing natural gas futures prices as of the latest week. Volume surprise and price surprise could lead to different asset value.

Table TP-2
Natural Gas Trusts and Partnership
Dynamic Distribution Yield
Estimates for Twelve Months Ended January 2001

	Symbol	Price ($/un) 28-Jan 2000	Distribution ($/unit) Cash	Distribution ($/unit) Taxable Equivalent	Distribution Yield (Percent) Cash	Distribution Yield (Percent) Taxable Equivalent
Dorchester Hugoton, Ltd.	DHULZ	8.88	0.72	1.09	8.1	12.3
San Juan Basin Royalty Trust	SJT	10.00	0.80	1.72	8.0	17.2
Hugoton RT (42.5%)	HGT	8.75	1.07	1.67	12.2	19.1
Cross Timbers Royalty Trust	CRT	11.13	1.41	2.42	12.7	21.8

Table CRT-1
Cross Timbers Royalty Trust
Present Value

Volume Decline (%/yr):	9	Price Escalation (%/yr):	3
Volume Enhancement (%/yr):	7	Discount rate (%/yr):	8

Year	Natural Gas Volume Basic (bcf)	Enhanced (bcf)	Total (bcf)	Price ($/mcf)	Revenue ($mm)	Oil Net ($mm)	Distribution ($mm)	Distribution ($/unit)	Tax Credit ($/unit)	Disc Factor	Present Value ($/unit)
Total 2000 through 2029	33	30	63	3.26	206	19	224	37.38	0.51	0.45	17.00
1999	3.2		3.2	1.97	6.3	0.2	6.6	1.09	0.17		
2000	2.9	0.3	3.2	2.29	7.4	1.1	8.5	1.41	0.17	0.96	1.52
2001	2.7	0.5	3.1	2.36	7.4	1.7	9.1	1.51	0.17	0.89	1.50
2002	2.5	0.6	3.1	2.43	7.5	1.6	9.1	1.52	0.17	0.82	1.39
2003	2.3	0.8	3.1	2.51	7.7	1.5	9.2	1.53		0.76	1.17
2004	2.1	0.9	3.0	2.58	7.8	1.4	9.2	1.53		0.71	1.08
2005	1.9	1.1	3.0	2.66	7.9	1.3	9.2	1.54		0.65	1.01
2006	1.7	1.2	2.9	2.74	8.0	1.3	9.3	1.54		0.61	0.94
2007	1.6	1.3	2.9	2.82	8.1	1.2	9.3	1.55		0.56	0.87
2008	1.5	1.4	2.8	2.91	8.2	1.1	9.3	1.55		0.52	0.81
2009	1.3	1.4	2.8	2.99	8.3	1.0	9.4	1.56		0.48	0.75
2010	1.2	1.5	2.7	3.08	8.4	1.0	9.4	1.57		0.45	0.70
2011	1.1	1.6	2.7	3.18	8.5	0.9	9.4	1.57		0.41	0.65
2012	1.0	1.6	2.6	3.27	8.7	0.8	9.5	1.58		0.38	0.60
2013	1.0	1.6	2.6	3.37	8.8	0.7	9.5	1.58		0.35	0.56
2014	0.9	1.7	2.6	3.47	8.9	0.7	9.5	1.59		0.33	0.52
2015	0.8	1.5	2.3	3.57	8.3	0.7	9.0	1.50		0.30	0.46
2016	0.7	1.4	2.1	3.68	7.8	0.5	8.3	1.38		0.28	0.39
2017	0.7	1.3	1.9	3.79	7.4	0.3	7.6	1.27		0.26	0.33
2018	0.6	1.2	1.8	3.91	6.9	0.1	7.0	1.17		0.24	0.28
2019	0.6	1.0	1.6	4.02	6.5	-0.1	6.5	1.08		0.22	0.24
2020	0.5	1.0	1.5	4.14	6.1		6.1	1.02		0.21	0.21
2021	0.5	0.9	1.3	4.27	5.7		5.7	0.96		0.19	0.18
2022	0.4	0.8	1.2	4.40	5.4		5.4	0.90		0.18	0.16
2023	0.4	0.7	1.1	4.53	5.1		5.1	0.85		0.16	0.14
2024	0.4	0.7	1.0	4.66	4.8		4.8	0.80		0.15	0.12
2025	0.3	0.6	0.9	4.80	4.5		4.5	0.75		0.14	0.11
2026	0.3	0.5	0.9	4.95	4.2		4.2	0.70		0.13	0.09
2027	0.3	0.5	0.8	5.10	4.0		4.0	0.66		0.12	0.08
2028	0.3	0.4	0.7	5.25	3.7		3.7	0.62		0.11	0.07
2029	0.2	0.4	0.6	5.41	3.5		3.5	0.58		0.10	0.06

Table CRT-2
Cross Timbers Royalty Trust
Distributable Income Model

	Year 1998	*Q1 3/31/99*	*Q2 6/30/99*	*Q3 9/30/99*	*Q4E 12/31/99*	*Year 1999E*	*Q1E 3/31/00*	*Q2E 6/30/00*	*Q3E 9/30/00*	*Q4E 12/31/00*	*Year 2000E*
Highlights											
Tax credit ($mm)											
Per unit	0.20	0.04	0.04	0.04	0.04	0.17	0.04	0.04	0.04	0.04	0.17
Distributable Income ($mm)	6.93	1.44	1.17	1.66	2.28	6.55	2.03	2.16	2.17	2.13	8.48
Per unit	1.15	0.24	0.20	0.28	0.38	1.09	0.34	0.36	0.36	0.36	1.41
Units (millions)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Volume											
Natural Gas (bcf)	3.50	0.92	0.82	0.94	0.92	3.59	0.91	0.88	0.88	0.88	3.56
Natural Gas (mmcfd)	9.6	10.0	9.1	10.3	10.0	9.8	9.9	9.8	9.7	9.6	9.8
Days	365	92	90	91	92	365	92	90	91	92	365
Oil (mb)	392	88	87	79	83	337	82	79	79	80	320
Oil (mbd)	1.08	0.96	0.98	0.86	0.90	0.92	0.9	0.9	0.9	0.9	0.88
Days	365	92	89	92	92	365	92	90	91	92	365
Total (bcf)	5.86	1.45	1.34	1.41	1.42	5.61	1.40	1.36	1.36	1.36	5.48
Price											
Natural Gas											
Henry Hub ($/mmbtu)		1.87	1.89	2.27	2.66	2.17	2.36	2.57	2.51	2.54	2.50
CRT ($/mcf)	2.03	1.73	1.79	2.02	2.30	1.97	2.16	2.37	2.31	2.34	2.29
Oil ($/bbl)											
WTI Cushing		12.25	14.67	18.57	22.59	17.02	26.06	26.92	24.92	23.33	25.31
CRT	13.40	10.44	12.28	20.34	20.59	15.74	24.06	24.92	22.92	21.33	23.32
Total ($/mcf)	2.11	1.73	1.89	2.48	2.70	2.20	2.81	3.00	2.84	2.77	2.85
Revenue ($mm)											
Natural Gas	7.11	1.59	1.46	1.89	2.12	7.06	1.97	2.09	2.04	2.07	8.17
Oil	5.26	0.92	1.07	1.61	1.70	5.31	1.97	1.98	1.82	1.70	7.47
Total	12.37	2.51	2.53	3.50	3.82	12.36	3.94	4.07	3.86	3.77	15.64
Cost ($mm)											
Tax, transport & other	1.19	0.23	0.40	0.48	0.51	1.62	0.59	0.59	0.55	0.51	2.24
Production	2.58	0.57	0.63	0.60	0.62	2.42	0.61	0.60	0.60	0.60	2.40
Total	3.78	0.80	1.02	1.08	1.13	4.04	1.21	1.19	1.14	1.11	4.64
Cash flow ($mm)	8.59	1.71	1.50	2.43	2.69	8.32	2.73	2.88	2.71	2.66	10.99
Development	1.14	0.36	0.08	0.18	0.18	0.80	0.18	0.18	0.18	0.18	0.72
Excess	(0.52)	(0.30)	(0.06)	(0.07)		(0.43)					-
Recovery of excess	0.02	0.01	0.14	0.10	0.39	0.63	0.19	0.19			0.38
Net proceeds ($mm)	7.94	1.64	1.35	2.22	2.12	7.33	2.36	2.51	2.53	2.48	9.89
Royalty income ($mm)	7.08	1.48	1.21	1.70	2.32	6.71	2.07	2.20	2.21	2.17	8.64
Royalty/Net proceeds	89%	90%	90%	76%	110%	92%	87%	87%	87%	88%	87%
Administration	0.15	0.04	0.04	0.04	0.04	0.16	0.04	0.04	0.04	0.04	0.16
Distributable income ($mm)	6.93	1.44	1.17	1.66	2.28	6.55	2.03	2.16	2.17	2.13	8.48
Modeling ratios											
Tax and other/oil revenue	0.23	0.25	0.37	0.30	0.30	0.31	0.30	0.30	0.30	0.30	0.30
Production exp ($/bbl)	6.58	6.48	7.20	7.56	7.50	7.17	7.50	7.50	7.50	7.50	7.50
Accounting items											
Interest on excess costs	0.01	0.02	0.02	0.01	0.01	0.06					
Cumulative excess costs	0.51	0.83	0.77	0.76	0.38	0.38					

Table DHULZ-1
Dorchester Hugoton, Ltd.
Present Value

Volume Decline (%/yr):	11		Price Escalation (%/yr):	3
Volume Enhancement (%/yr):	8		Variable Cost (%):	13
Capex/Cash Flow (%):	15		Discount rate (%/yr):	8

Year	Volume Basic (bcf)	Volume Enhanced (bcf)	Total (bcf)	Price ($/mcf)	Revenue ($mm)	Fixed Cost ($mm)	Var Cost ($mm)	Cap Ex ($mm)	Cash Flow ($mm)	Cash Flow ($/unit)	Disc Factor	Present Value ($/unit)
Total 2000 through 2029												
	65	44	108	3.57	387	60	50	26	250	23.32	0.49	11.40
1999	6.8		6.8	2.25	15.3	2.5	2.0	0.4	10.4	0.97		
						Working Capital			9.0	0.84	1.00	0.84
2000	6.8	-0.7	6.1	2.57	15.7	2.0	2.0	0.4	11.2	1.05	0.96	1.01
2001	6.0	-0.1	5.9	2.65	15.7	2.0	2.0	1.7	9.9	0.92	0.89	0.82
2002	5.4	0.4	5.8	2.73	15.9	2.0	2.1	1.8	10.0	0.93	0.82	0.77
2003	4.9	0.8	5.7	2.81	16.0	2.0	2.1	1.8	10.1	0.94	0.76	0.72
2004	4.4	1.2	5.6	2.89	16.1	2.0	2.1	1.8	10.2	0.95	0.71	0.67
2005	4.0	1.5	5.5	2.98	16.3	2.0	2.1	1.8	10.3	0.96	0.65	0.63
2006	3.6	1.8	5.3	3.07	16.4	2.0	2.1	1.8	10.4	0.97	0.61	0.59
2007	3.2	2.0	5.2	3.16	16.5	2.0	2.1	1.9	10.5	0.98	0.56	0.55
2008	2.9	2.2	5.1	3.25	16.6	2.0	2.2	1.9	10.6	0.98	0.52	0.51
2009	2.6	2.4	5.0	3.35	16.7	2.0	2.2	1.9	10.6	0.99	0.48	0.48
2010	2.4	2.5	4.9	3.45	16.8	2.0	2.2	1.9	10.7	1.00	0.45	0.44
2011	2.1	2.6	4.7	3.56	16.8	2.0	2.2	1.9	10.8	1.00	0.41	0.41
2012	1.9	2.7	4.6	3.66	16.9	2.0	2.2	1.9	10.8	1.01	0.38	0.38
2013	1.7	2.8	4.5	3.77	17.0	2.0	2.2	1.9	10.9	1.01	0.35	0.36
2014	1.6	2.8	4.4	3.89	17.0	2.0	2.2	1.9	10.9	1.02	0.33	0.33
2015	1.4	2.5	3.9	4.00	15.7	2.0	2.0		11.6	1.08	0.30	0.33
2016	1.3	2.2	3.5	4.12	14.4	2.0	1.9		10.6	0.98	0.28	0.28
2017	1.1	2.0	3.1	4.25	13.3	2.0	1.7		9.6	0.89	0.26	0.23
2018	1.0	1.8	2.8	4.37	12.2	2.0	1.6		8.7	0.81	0.24	0.19
2019	0.9	1.6	2.5	4.50	11.3	2.0	1.5		7.8	0.73	0.22	0.16
2020	0.8	1.4	2.2	4.64	10.4	2.0	1.3		7.0	0.65	0.21	0.14
2021	0.7	1.3	2.0	4.78	9.6	2.0	1.2		6.3	0.59	0.19	0.11
2022	0.7	1.1	1.8	4.92	8.8	2.0	1.1		5.7	0.53	0.18	0.09
2023	0.6	1.0	1.6	5.07	8.1	2.0	1.1		5.1	0.47	0.16	0.08
2024	0.5	0.9	1.4	5.22	7.5	2.0	1.0		4.5	0.42	0.15	0.06
2025	0.5	0.8	1.3	5.38	6.9	2.0	0.9		4.0	0.37	0.14	0.05
2026	0.4	0.7	1.1	5.54	6.3	2.0	0.8		3.5	0.33	0.13	0.04
2027	0.4	0.6	1.0	5.71	5.8	2.0	0.8		3.1	0.29	0.12	0.03
2028	0.4	0.6	0.9	5.88	5.4	2.0	0.7		2.7	0.25	0.11	0.03
2029	0.3	0.5	0.8	6.05	5.0	2.0	0.6		2.3	0.21	0.10	0.02

Table DHULZ-2
Dorchester Hugoton, Ltd.
Income Model

	Year 1998	*Q1 3/31/99*	*Q2 6/30/99*	*Q3 9/30/99*	*Q4E 12/31/99*	*Year 1999E*	*Q1E 3/31/00*	*Q2E 6/30/00*	*Q3E 9/30/00*	*Q4E 12/31/00*	*Year 2000E*
Highlights											
Revenue ($mm)	15.37	3.06	3.51	4.34	3.85	14.8	3.77	3.70	3.74	3.91	15.1
Cash flow ($mm)	11.02	2.09	2.35	3.25	2.76	10.4	2.80	2.73	2.77	2.95	11.2
Per unit	1.03	0.19	0.22	0.30	0.26	0.97	0.26	0.25	0.26	0.27	1.05
Earnings ($mm)	9.01	1.60	1.89	2.77	2.28	8.5	2.37	2.30	2.34	2.52	9.5
Per unit	0.84	0.15	0.18	0.26	0.21	0.80	0.22	0.21	0.22	0.23	0.89
Distribution ($mm)	7.74	1.93	1.93	1.93	1.93	7.7	1.93	1.93	1.93	1.93	7.7
Per unit	0.72	0.18	0.18	0.18	0.18	0.72	0.18	0.18	0.18	0.18	0.72
Units (millions)	10.74	10.74	10.74	10.74	10.74	10.7	10.74	10.74	10.74	10.74	10.7
Volume											
Natural gas (bcf)											
Oklahoma	5.74	1.42	1.33	1.40	1.32	5.5	1.24	1.24	1.24	1.23	4.9
Kansas	1.70	0.35	0.34	0.33	0.31	1.3	0.29	0.29	0.29	0.29	1.2
Total	7.44	1.76	1.67	1.72	1.63	6.8	1.53	1.53	1.53	1.52	6.1
Natural Gas (mmcfd)	20.4	19.6	18.4	18.7	17.7	18.6	17.0	16.8	16.7	16.5	16.7
Days	365	90	91	92	92	365	90	91	92	92	365
Price											
Natural gas											
Henry Hub ($/mmbtu)		1.79	2.22	2.52	2.45	2.24	2.55	2.50	2.53	2.67	2.56
Oklahoma ($/mcf)	2.11	1.77	2.15	2.60	2.44	2.24	2.54	2.49	2.52	2.66	2.55
Kansas ($/mcf)	2.22	1.85	2.26	2.68	2.52	2.32	2.62	2.57	2.60	2.74	2.63
Total ($/mcf)	2.14	1.79	2.17	2.62	2.46	2.25	2.56	2.51	2.53	2.68	2.57
Revenue ($mm)											
Natural Gas											
Oklahoma	12.11	2.50	2.87	3.63	3.22	12.2	3.14	3.08	3.12	3.27	12.6
Kansas	3.77	0.64	0.76	0.88	0.78	3.1	0.77	0.76	0.76	0.80	3.1
Other	0.23	0.05	0.05	0.05	0.05	0.2	0.05	0.05	0.05	0.05	0.2
Production payment (ORRI)	(0.73)	(0.14)	(0.17)	(0.22)	(0.20)	(0.7)	(0.20)	(0.19)	(0.19)	(0.20)	(0.8)
Total	15.37	3.06	3.51	4.34	3.85	14.8	3.77	3.70	3.74	3.91	15.1
Cost ($mm)											
Operating	3.54	0.79	0.96	0.90	0.90	3.5	0.78	0.78	0.78	0.77	3.1
General and administrative	0.53	0.14	0.13	0.14	0.14	0.5	0.14	0.14	0.14	0.14	0.6
Management	0.49	0.12	0.12	0.13	0.13	0.5	0.13	0.13	0.13	0.13	0.5
Other	(0.22)	(0.06)	(0.05)	(0.08)	(0.08)	(0.3)	(0.08)	(0.08)	(0.08)	(0.08)	(0.3)
Total	4.35	0.98	1.16	1.09	1.09	4.3	0.97	0.97	0.97	0.96	3.9
Cash flow ($mm)	11.02	2.09	2.35	3.25	2.76	10.4	2.80	2.73	2.77	2.95	11.2
Depletion, deprec. & amort.	2.02	0.49	0.46	0.48	0.48	1.9	0.43	0.43	0.43	0.42	1.7
Earnings ($mm)	9.01	1.60	1.89	2.77	2.28	8.5	2.37	2.30	2.34	2.52	9.5
Capital expenditures ($mm)	1.14	0.04	0.05	0.21	0.06	0.4	0.10	0.10	0.10	0.10	0.4
Modeling ratios											
Prod pay/revenue	4.6%	4.3%	4.5%	4.9%	5.0%	4.7%	5.0%	5.0%	5.0%	5.0%	5.0%
Operating cost ($/mcf)	0.48	0.45	0.57	0.52	0.55	0.52	0.51	0.51	0.51	0.51	0.51
Depletion ($/mcf)	0.27	0.28	0.28	0.28	0.29	0.28	0.28	0.28	0.28	0.28	0.28

Table HGT-1
Hugoton Royalty Trust
Present Value

Volume Decline (%/yr):	10	Price Escalation (%/yr):	3
Volume Enhancement (%/yr):	8	Variable Cost (%):	16
Capex/Cash Flow (%):	24	Discount rate (%/yr):	8

Year	Basic (bcf)	Volume Enhanced (bcf)	Total (bcf)	Price ($/mcf)	Revenue ($mm)	Fixed Cost ($mm)	Var Cost ($mm)	Cap Ex ($mm)	Distribution ($mm)	Distribution ($/unit)	Tax Credit ($/unit)	Disc Factor	Present Value ($/unit)
Total 2000 through 2029													
	300	314	614	3.32	2040	312	326	210	1192	29.80	0.06	0.42	12.60
1999	29.2		29.2	2.16	63.1	10.9	10.1	9.1	33.1	0.83	0.02		
2000	29.2	2.5	31.7	2.36	74.6	10.4	11.9	9.6	42.7	1.07	0.02	0.96	1.05
2001	26.3	4.8	31.1	2.43	75.3	10.4	12.1	12.7	40.2	1.00	0.02	0.89	0.91
2002	23.9	6.8	30.7	2.50	76.6	10.4	12.3	13.0	41.0	1.03	0.02	0.82	0.86
2003	21.7	8.5	30.3	2.57	77.9	10.4	12.5	13.2	41.8	1.05		0.76	0.80
2004	19.8	10.1	29.9	2.65	79.2	10.4	12.7	13.5	42.6	1.07		0.71	0.75
2005	18.0	11.5	29.4	2.73	80.4	10.4	12.9	13.7	43.4	1.09		0.65	0.71
2006	16.3	12.7	29.0	2.81	81.6	10.4	13.1	14.0	44.2	1.10		0.61	0.67
2007	14.8	13.7	28.6	2.90	82.8	10.4	13.2	14.2	45.0	1.12		0.56	0.63
2008	13.5	14.7	28.2	2.98	84.0	10.4	13.4	14.4	45.7	1.14		0.52	0.59
2009	12.3	15.4	27.7	3.07	85.2	10.4	13.6	14.7	46.5	1.16		0.48	0.56
2010	11.2	16.1	27.3	3.16	86.3	10.4	13.8	14.9	47.2	1.18		0.45	0.53
2011	10.1	16.7	26.8	3.26	87.4	10.4	14.0	15.1	47.9	1.20		0.41	0.49
2012	9.2	17.2	26.4	3.36	88.6	10.4	14.2	15.4	48.6	1.22		0.38	0.46
2013	8.4	17.6	25.9	3.46	89.7	10.4	14.4	15.6	49.4	1.23		0.35	0.44
2014	7.6	17.9	25.5	3.56	90.8	10.4	14.5	15.8	50.1	1.25		0.33	0.41
2015	6.9	16.1	23.0	3.67	84.4	10.4	13.5		60.5	1.51		0.30	0.46
2016	6.3	14.5	20.8	3.78	78.5	10.4	12.6		55.6	1.39		0.28	0.39
2017	5.7	13.0	18.8	3.89	73.0	10.4	11.7		50.9	1.27		0.26	0.33
2018	5.2	11.7	16.9	4.01	67.9	10.4	10.9		46.6	1.17		0.24	0.28
2019	4.7	10.6	15.3	4.13	63.1	10.4	10.1		42.6	1.07		0.22	0.24
2020	4.3	9.5	13.8	4.25	58.7	10.4	9.4		38.9	0.97		0.21	0.20
2021	3.9	8.6	12.5	4.38	54.6	10.4	8.7		35.5	0.89		0.19	0.17
2022	3.6	7.7	11.2	4.51	50.8	10.4	8.1		32.2	0.81		0.18	0.14
2023	3.2	6.9	10.2	4.65	47.2	10.4	7.6		29.3	0.73		0.16	0.12
2024	2.9	6.2	9.2	4.79	43.9	10.4	7.0		26.5	0.66		0.15	0.10
2025	2.7	5.6	8.3	4.93	40.8	10.4	6.5		23.9	0.60		0.14	0.08
2026	2.4	5.0	7.5	5.08	38.0	10.4	6.1		21.5	0.54		0.13	0.07
2027	2.2	4.5	6.8	5.23	35.3	10.4	5.7		19.3	0.48		0.12	0.06
2028	2.0	4.1	6.1	5.39	32.8	10.4	5.3		17.2	0.43		0.11	0.05
2029	1.8	3.7	5.5	5.55	30.5	10.4	4.9		15.3	0.38		0.10	0.04

Table HGT-2
Hugoton Royalty Trust
Distributable Income Model

	Q1 *3/31/99*	*Q2* *6/30/99*	*Q3* *9/30/99*	*Q4E* *12/31/99*	*Year* *1999E*	*Q1E* *3/31/00*	*Q2E* *6/30/00*	*Q3E* *9/30/00*	*Q4E* *12/31/00*	*Year* *2000E*
Highlights										
Revenue ($mm) (80%)	9.4	16.6	16.8	20.4	63.1	17.9	19.5	18.6	18.6	74.6
Cash flow ($mm) (80%)	5.1	11.1	11.5	14.5	42.3	12.4	13.9	13.1	13.1	52.6
Per unit	0.13	0.28	0.29	0.36	1.06	0.31	0.35	0.33	0.33	1.31
Tax credit ($mm)	0.2	0.2	0.2	0.2	0.8	0.2	0.2	0.2	0.2	0.8
Per unit	0.01	0.01	0.01	0.01	0.02	0.01	0.01	0.01	0.01	0.02
Distributable Income ($mm)	3.6	8.8	8.5	12.2	33.1	10.0	11.4	10.7	10.7	42.7
Per unit	0.09	0.22	0.21	0.30	0.83	0.25	0.28	0.27	0.27	1.07
Units (millions)	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
Volume										
Natural Gas (bcf)	5.5	9.6	9.5	9.6	34.2	9.4	9.3	9.3	9.2	37.2
Natural Gas (mmcfd)	89.0	107.6	103.4	104.2	102.1	103.4	102.4	101.4	100.4	101.9
Days	62	89	92	92	335	91	91	91	91	365
Oil (mb)	66	115	104	104	389	101	101	101	100	403
Oil (mbd)	1.1	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Days	62	96	92	92	342	90	91	92	92	365
Total (bcf)	5.9	10.3	10.1	10.2	36.5	10.0	9.9	9.9	9.8	39.6
Price										
Natural Gas (HH lagged two months)										
Henry Hub ($/mmbtu)	1.78	1.89	2.27	2.66	2.18	2.36	2.57	2.51	2.54	2.50
HGT ($/mcf)	2.00	2.00	2.01	2.42	2.12	2.11	2.32	2.26	2.29	2.24
Oil ($/bbl) (WTI Cushing lagged two months)										
WTI Cushing	11.90	14.67	18.57	22.59	17.39	26.06	26.92	24.92	23.33	25.31
HGT	10.86	13.64	18.18	21.59	16.51	25.06	25.92	23.92	22.33	24.31
Total ($/mcf)	1.99	2.02	2.07	2.49	2.16	2.23	2.45	2.36	2.38	2.36
Revenue ($mm)										
Natural Gas	11.0	19.1	19.1	23.2	72.5	19.9	21.7	20.9	21.0	83.5
Oil	0.7	1.6	1.9	2.2	6.4	2.5	2.6	2.4	2.2	9.8
Total	11.7	20.7	21.0	25.5	78.9	22.4	24.3	23.3	23.2	93.3
Cost ($mm)										
Tax, transport & other	1.4	2.1	2.1	2.5	8.2	2.2	2.4	2.3	2.3	9.3
Production	2.3	2.9	2.8	3.0	11.0	2.9	2.9	2.9	2.8	11.5
Overhead	1.6	1.7	1.8	1.7	6.9	1.7	1.7	1.7	1.7	6.7
Total	5.3	6.8	6.6	7.3	26.1	6.9	7.0	6.9	6.8	27.5
Cash flow ($mm)	6.4	13.9	14.4	18.2	52.9	15.6	17.3	16.4	16.4	65.7
Development	2.0	2.8	3.7	2.8	11.3	3.0	3.0	3.0	3.0	12.0
Net proceeds ($mm)	4.5	11.1	10.7	15.3	41.6	12.6	14.3	13.4	13.4	53.7
Royalty income ($mm)	3.6	8.9	8.5	12.3	33.2	10.0	11.5	10.7	10.7	43.0
Royalty/Net proceeds	80%	80%	80%	80%	80%	80%	80%	80%	80%	80%
Administration	0.0	0.0	0.0	0.1	0.2	0.1	0.1	0.1	0.1	0.3
Distributable income ($mm)	3.6	8.8	8.5	12.2	33.1	10.0	11.4	10.7	10.7	42.7
Modeling ratios										
Tax and other/revenue	12%	10%	10%	10%	10%	10%	10%	10%	10%	10%
Production cost ($/mcf)	0.39	0.29	0.28	0.29	0.30	0.29	0.29	0.29	0.29	0.29
Overhead cost ($/mcf)	0.28	0.17	0.17	0.17	0.19	0.17	0.17	0.17	0.17	0.17

Note: The trust was formed on December 1, 1998. Also there is a two month lag between actual and reported production. As a result, the first quarter of operations includes only the two months of December 1998 and January 1999.

Table SJT-1
San Juan Basin Royalty Trust
Present Value

Volume Decline (%/yr):	9	Price Escalation (%/yr):	3
Volume Enhancement (%/yr):	7	Variable Cost (%):	12
Capex/Cash Flow (%):	24	Discount rate (%/yr):	8

Year	Basic (bcf)	Volume Enhanced (bcf)	Total (bcf)	Price ($/mcf)	Revenue ($mm)	Fixed Cost ($mm)	Var Cost ($mm)	Cap Ex ($mm)	Distribution ($mm)	Distribution ($/unit)	Tax Credit ($/unit)	Disc Factor	Present Value ($/unit)
Total 2000 through 2029													
	309	260	569	3.00	1710	224	205	184	1097	23.54	0.48	0.42	$\boxed{10.10}$
1999	30.3		30.3	1.76	53.2	7.1	6.4	7.9	31.8	0.68	0.16		
2000	27.8	1.1	28.9	2.11	61.0	7.5	7.3	9.0	37.2	0.80	0.16	0.96	0.92
2001	25.3	3.0	28.3	2.18	61.6	7.5	7.4	11.2	35.5	0.76	0.16	0.89	0.82
2002	23.2	4.7	27.9	2.24	62.6	7.5	7.5	11.4	36.2	0.78	0.16	0.82	0.77
2003	21.3	6.3	27.5	2.31	63.6	7.5	7.6	11.6	36.9	0.79		0.76	0.60
2004	19.5	7.6	27.2	2.38	64.6	7.5	7.7	11.8	37.5	0.80		0.71	0.57
2005	17.9	8.8	26.8	2.45	65.5	7.5	7.9	12.0	38.2	0.82		0.65	0.54
2006	16.4	9.9	26.4	2.52	66.5	7.5	8.0	12.2	38.8	0.83		0.61	0.50
2007	15.1	10.9	26.0	2.60	67.4	7.5	8.1	12.4	39.4	0.85		0.56	0.47
2008	13.8	11.7	25.5	2.68	68.3	7.5	8.2	12.6	40.0	0.86		0.52	0.45
2009	12.7	12.4	25.1	2.76	69.3	7.5	8.3	12.8	40.7	0.87		0.48	0.42
2010	11.6	13.1	24.7	2.84	70.2	7.5	8.4	13.0	41.3	0.89		0.45	0.39
2011	10.7	13.6	24.3	2.92	71.1	7.5	8.5	13.2	41.9	0.90		0.41	0.37
2012	9.8	14.1	23.9	3.01	72.0	7.5	8.6	13.4	42.5	0.91		0.38	0.35
2013	9.0	14.5	23.5	3.10	72.9	7.5	8.7	13.6	43.1	0.92		0.35	0.33
2014	8.2	14.9	23.1	3.19	73.8	7.5	8.9	13.8	43.7	0.94		0.33	0.31
2015	7.6	13.5	21.1	3.29	69.4	7.5	8.3		53.6	1.15		0.30	0.35
2016	6.9	12.3	19.2	3.39	65.2	7.5	7.8		49.9	1.07		0.28	0.30
2017	6.4	11.2	17.6	3.49	61.3	7.5	7.4		46.5	1.00		0.26	0.26
2018	5.8	10.2	16.0	3.60	57.6	7.5	6.9		43.3	0.93		0.24	0.22
2019	5.4	9.3	14.6	3.70	54.2	7.5	6.5		40.2	0.86		0.22	0.19
2020	4.9	8.4	13.4	3.81	50.9	7.5	6.1		37.4	0.80		0.21	0.17
2021	4.5	7.7	12.2	3.93	47.9	7.5	5.7		34.7	0.74		0.19	0.14
2022	4.1	7.0	11.1	4.05	45.0	7.5	5.4		32.2	0.69		0.18	0.12
2023	3.8	6.4	10.2	4.17	42.3	7.5	5.1		29.8	0.64		0.16	0.10
2024	3.5	5.8	9.3	4.29	39.8	7.5	4.8		27.6	0.59		0.15	0.09
2025	3.2	5.3	8.5	4.42	37.4	7.5	4.5		25.5	0.55		0.14	0.08
2026	2.9	4.8	7.7	4.55	35.2	7.5	4.2		23.5	0.50		0.13	0.07
2027	2.7	4.4	7.1	4.69	33.1	7.5	4.0		21.7	0.46		0.12	0.06
2028	2.5	4.0	6.4	4.83	31.1	7.5	3.7		19.9	0.43		0.11	0.05
2029	2.3	3.6	5.9	4.98	29.2	7.5	3.5		18.3	0.39		0.10	0.04

Table SJT-2
San Juan Basin Royalty Trust
Distributable Income Model

	Year 1998	*Q1 3/31/99*	*Q2 6/30/99*	*Q3 9/30/99*	*Q4E 12/31/99*	*Year 1999E*	*Q1E 3/31/00*	*Q2E 6/30/00*	*Q3E 9/30/00*	*Q4E 12/31/00*	*Year 2000E*
Highlights											
Revenue ($mm) (75%)	54.3	12.1	10.8	13.0	17.4	53.2	14.5	15.7	15.3	15.4	61.0
Cash flow ($mm) (75%)	39.9	8.8	7.5	9.9	13.4	39.6	11.1	12.2	11.8	11.9	47.0
Per unit	0.86	0.19	0.16	0.21	0.29	0.85	0.24	0.26	0.25	0.26	1.01
Tax credit ($mm)	7.8	1.9	1.4	1.9	2.3	7.5	1.9	1.4	1.9	2.3	7.5
Per unit	0.17	0.04	0.03	0.04	0.05	0.16	0.04	0.03	0.04	0.05	0.16
Distributable Income ($mm)	29.6	6.8	5.9	7.8	11.3	31.8	8.6	9.7	9.4	9.5	37.2
Per unit	0.64	0.15	0.13	0.17	0.24	0.68	0.19	0.21	0.20	0.20	0.80
Units (millions)	46.6	46.6	46.6	46.6	46.6	46.6	46.6	46.6	46.6	46.6	46.6
Volume											
Natural gas (mmbtu)											
Conventional		7.3	7.4	5.5	6.7	26.9	6.5	6.3	6.4	6.4	25.7
Coal Seam		3.7	3.8	3.3	3.5	14.4	3.5	3.4	3.4	3.4	13.8
Total		11.0	11.2	8.8	10.3	41.3	10.1	9.7	9.9	9.8	39.4
Conventional (btu/cf)		1,194	1,196	1,006	1,159	1,142	1,142	1,142	1,142	1,142	1,142
Coal Seam (btu/cf)		881	881	881	881	881	881	881	881	881	881
Natural gas (bcf)											
Conventional		6.1	6.2	5.5	5.8	23.5	5.7	5.6	5.6	5.6	22.5
Coal Seam		4.2	4.3	3.8	4.0	16.4	4.0	3.9	3.9	3.9	15.6
Total	41.5	10.3	10.5	9.3	9.8	39.9	9.7	9.4	9.5	9.4	38.1
Natural Gas (mmcfd)	113.7	112.4	118.4	100.6	106.7	109.4	105.6	104.6	103.5	102.5	104.1
Days	365	92	89	92	92	365	92	90	92	92	366
Oil (mb)	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1
Oil (mbd)	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Days	366	92	89	92	92	364	92	90	92	92	366
Total gas & oil (bcf)	42.0	10.4	10.6	9.4	9.9	40.4	9.8	9.5	9.6	9.5	38.5
Price											
Natural gas ($/mmbtu) (Hubs lagged two months)											
Henry Hub ($/mmbtu)		1.87	1.89	2.27	2.66	2.17	2.36	2.57	2.51	2.54	2.50
Blanco Hub ($/mmbtu)		1.78	1.68	2.02	2.46	1.98					
SJT Conventional		1.48	1.29	2.09	2.27	1.75	1.96	2.17	2.11	2.14	2.09
SJT Coal Seam		1.38	1.20	1.65	2.13	1.58	1.76	1.97	1.91	1.94	1.89
Total		1.45	1.26	1.93	2.22	1.69	1.89	2.10	2.04	2.07	2.02
Natural gas ($/mcf)											
Conventional		1.77	1.54	2.11	2.63	2.00	2.24	2.48	2.40	2.45	2.39
Coal Seam		1.22	1.06	1.45	1.88	1.39	1.55	1.74	1.68	1.71	1.67
Total	1.72	1.54	1.34	1.84	2.32	1.75	1.95	2.18	2.11	2.15	2.10
Oil ($/bbl) (WTI Cushing lagged two months)											
WTI Cushing		12.25	14.67	18.57	22.59	17.02	26.06	26.92	24.92	23.33	25.31
SJT	13.29	9.65	12.72	15.71	17.50	13.99	22.06	22.92	20.92	19.33	21.30
Total gas & oil ($/mcf)		1.54	1.35	1.85	2.33	1.76	1.97	2.20	2.12	2.16	2.11
Revenue ($mm)											
Natural Gas - Conventional		10.8	9.6	11.5	15.2	47.1	12.8	13.8	13.5	13.6	53.7
Coal Seam		5.2	4.6	5.5	7.6	22.8	6.2	6.7	6.6	6.6	26.1
Total	71.2	16.0	14.1	17.0	22.8	69.9	19.0	20.5	20.1	20.2	79.8
Oil	1.1	0.2	0.2	0.3	0.4	1.1	0.4	0.4	0.4	0.4	1.6
Total	72.3	16.1	14.4	17.3	23.2	71.0	19.4	20.9	20.5	20.6	81.4
Cost ($mm)											
Severance tax	7.5	1.7	1.5	1.8	2.4	7.3	2.0	2.2	2.1	2.1	8.4
Operating	11.6	2.8	2.8	2.2	2.9	10.8	2.6	2.5	2.6	2.5	10.3
Total	19.1	4.5	4.3	4.0	5.3	18.1	4.6	4.7	4.7	4.7	18.7
Cash flow ($mm)	53.3	11.7	10.0	13.3	17.9	52.8	14.8	16.2	15.8	15.9	62.7
Development	12.8	2.3	3.0	2.7	2.6	10.6	3.0	3.0	3.0	3.0	12.0
Net proceeds ($mm)	40.4	9.4	7.1	10.5	15.3	42.3	11.8	13.2	12.8	12.9	50.7
Royalty income ($mm)	30.3	7.0	5.3	7.9	11.5	31.7	8.8	9.9	9.6	9.7	38.0
Royalty/Net proceeds	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%	75%
Administration	0.7	0.3	0.2	0.1	0.2	0.8	0.2	0.2	0.2	0.2	0.8
One-time			0.9			0.9					-
Distributable income ($mm)	29.6	6.8	5.9	7.8	11.3	31.8	8.6	9.7	9.4	9.5	37.2
Modeling ratios											
Severance tax/revenue	10.3%	10.3%	10.2%	10.4%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%	10.3%
Operating cost ($/mcf)	0.28	0.27	0.27	0.24	0.29	0.27	0.27	0.27	0.27	0.27	0.27