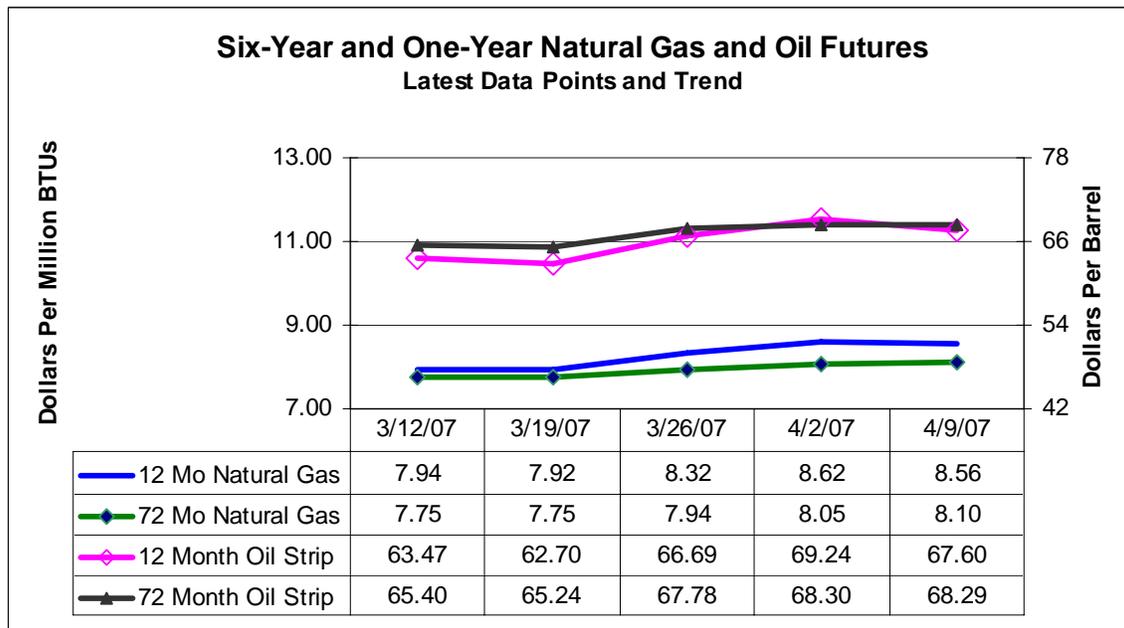


## Practical Carbon Economics

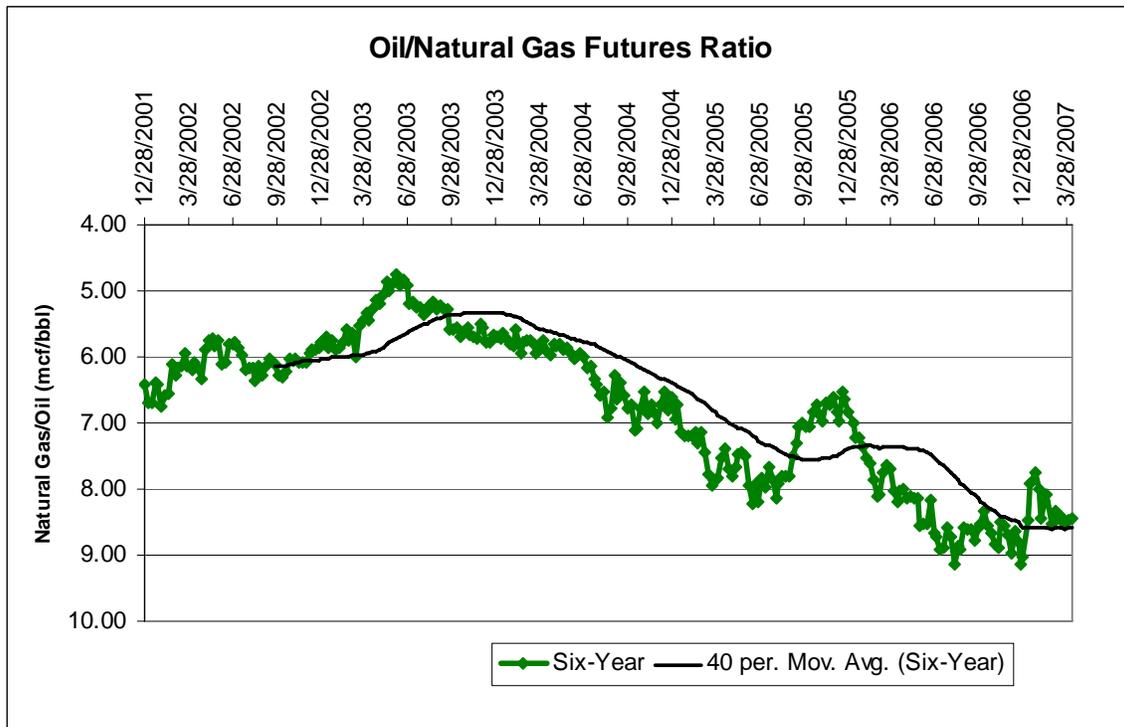
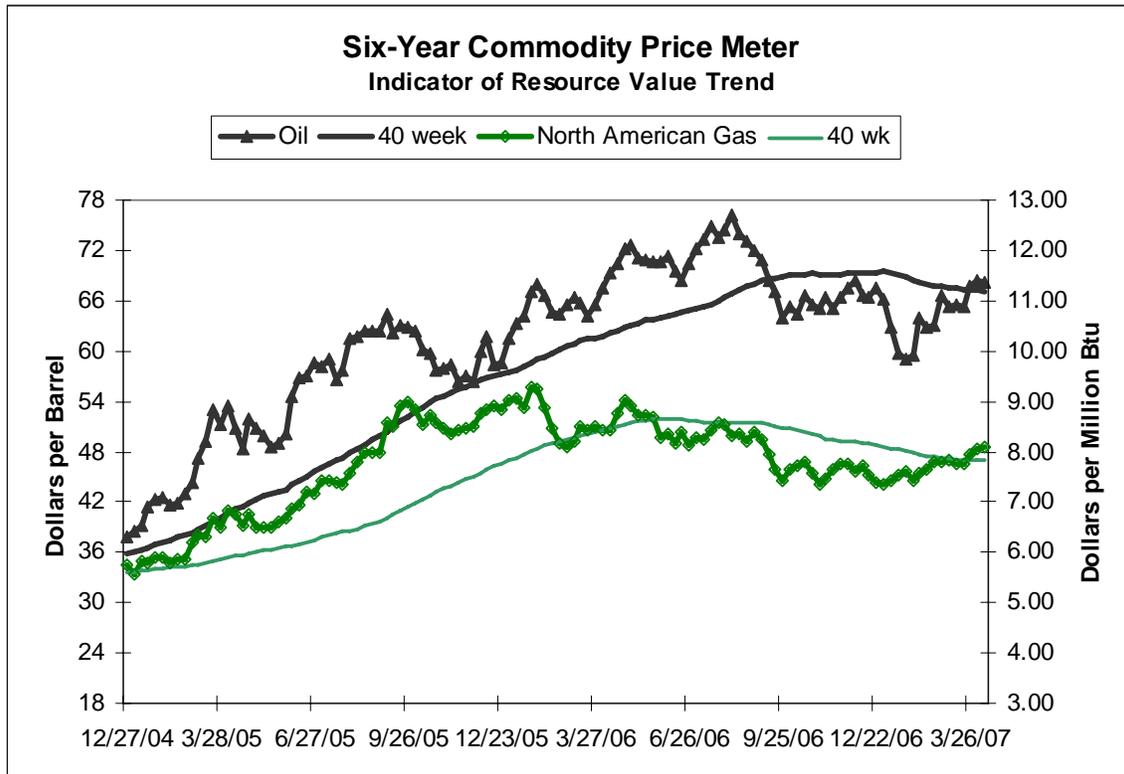
### Summary and Recommendation

Buy-recommendations **Imperial Oil (IMO)**, **Petro-Canada (PCZ)**, **Suncor (SU)**, **Encana (ECA)** and **Canadian Oil Sands Trust (COSWF)** among other oil sands and heavy oil producers are likely to overcome any probable penalty as a result of global warming concerns. Alberta Premier Ed Stelmach’s proposed reduction of 12% in carbon dioxide emissions would cost perhaps \$0.20 a barrel according to our rough calculations (see *Royalty Trust Weekly*, March 23, 2007). A clean air act that cleared a vote in a House of Commons committee in Ottawa would include a tax on emissions that might amount to \$0.60 a barrel initially as we understand it. Press reports suggest that final action in Canada’s parliament may trigger an election to replace the current government. From a practical point of view, as long as the world gets a large portion of its energy from burning coal, currently about a third, the restrictions on sources of refined oil products ought to be moderate. Meanwhile the renewed uptrend in six-year price of oil and natural gas as well as the ratio of natural gas price to oil continues by the 40-week average measure (see charts).

Kurt H. Wulff, CFA



Historical independent energy investment analysis by Kurt Wulff doing business as McDep Associates is posted at [www.mcdep.com](http://www.mcdep.com). Analyses are prepared from sources and data believed to be reliable, but no representation is made as to their accuracy or completeness. Mr. Wulff is not paid by covered companies. Neither he nor his spouse trade a subject stock within a week before or after a change in rating.



Historical independent energy investment analysis by Kurt Wulff doing business as McDep Associates is posted at [www.mcdep.com](http://www.mcdep.com). Analyses are prepared from sources and data believed to be reliable, but no representation is made as to their accuracy or completeness. Mr. Wulff is not paid by covered companies. Neither he nor his spouse trade a subject stock within a week before or after a change in rating.

**Oil and Gas Producers - Rank by McDep Ratio**

	Symbol/ Rating		Price (US\$/sh) 9-Apr 2007	Shares (mm)	Market Cap (US\$m)	Net Present Value (US\$/sh)	Debt/ Present Value	McDep Ratio
<b>Mega Cap</b>								
Exxon Mobil Corporation	XOM	B	76.80	5,816	447,000	82.40	0.04	0.93
Total S.A.	TOT	B	70.03	2,288	160,000	80.00	0.14	0.89
BP plc	BP	B	64.84	3,268	212,000	80.00	0.17	0.84
Chevron Corporation	CVX	B	75.49	2,206	167,000	92.00	0.09	0.84
Royal Dutch Shell plc	RDS-A	B	66.60	3,171	211,000	84.00	0.14	0.82
Gazprom (50%)	OGZPY	B	40.95	2,849	116,700	56.00	0.07	0.75
ConocoPhillips	COP	B	68.42	1,672	114,000	100.00	0.20	0.75
<i>Total or Median</i>					<i>1,428,000</i>		<i>0.14</i>	<i>0.84</i>
<b>Producer/Refiners - Large Cap</b>								
Kinder Morgan, Inc.	KMI	S	106.80	133	14,240	33.00	0.76	1.53
Imperial Oil Limited (30%)	IMO	B	38.26	289	11,050	37.00	0.07	1.03
Marathon Oil Corporation	MRO	B	101.93	352	35,880	110.00	0.12	0.94
Norsk Hydro (pro forma)	NHY	B	32.95	1,229	40,500	38.00	0.20	0.89
PetroChina Company Ltd (10%)	PTR	B	117.91	181	21,340	140.00	0.06	0.85
Petro-Canada	PCZ	B	39.75	498	19,800	49.00	0.19	0.85
Suncor Energy	SU	B	76.58	461	35,310	95.00	0.07	0.82
Lukoil Oil Company	LUKOY	B	83.00	835	69,000	110.00	0.02	0.76
<i>Total or Median</i>					<i>247,000</i>		<i>0.10</i>	<i>0.87</i>
<b>Independent Natural Gas and Oil - Large Cap</b>								
XTO Energy Inc.	XTO	B	56.00	371	20,780	60.00	0.14	0.94
CNOOC Limited (34%)	CEO	B	88.30	140	12,350	98.00	-	0.90
Encana Corporation	ECA	B	51.91	806	41,900	65.00	0.13	0.83
EOG Resources	EOG	B	74.39	247	18,300	92.00	0.05	0.82
Anadarko Petroleum Corp.	APC	B	44.47	464	20,600	75.00	0.44	0.77
Occidental Petroleum Corp.	OXY	B	49.68	853	42,400	69.00	0.09	0.74
Devon Energy Corporation	DVN	B	72.95	448	32,700	115.00	0.14	0.69
<i>Total or Median</i>					<i>189,000</i>		<i>0.13</i>	<i>0.82</i>
<b>Independent Natural Gas and Oil - Small Cap</b>								
Berry Petroleum Company	BRY	B	30.80	45	1,370	44.00	0.22	0.77
Energy Partners Ltd.	EPL	B	17.87	40	710	31.00	0.26	0.68
Encore Acquisition Company	EAC	B	25.70	54	1,380	48.00	0.23	0.64
Cimarex Energy Company	XEC	B	37.11	84	3,120	68.00	0.09	0.59
<i>Total or Median</i>					<i>6,600</i>		<i>0.23</i>	<i>0.66</i>
<b>Income</b>								
Kinder Morgan Energy Partners, L.P.	KMP	S	55.26	171	9,430	15.00	0.54	2.25
Kinder Morgan Management, LLC	KMR	S	53.05	62	3,270	15.00	0.54	2.18
Pengrowth Energy Trust	PGH		16.54	241	3,990	17.00	0.26	0.98
Enerplus Resources Fund	ERF		41.78	123	5,140	47.00	0.11	0.90
Penn West Energy Trust	PWE	B	29.45	240	7,050	36.00	0.15	0.84
San Juan Basin Royalty Trust	SJT	B	31.30	47	1,460	40.00	-	0.78
Canadian Oil Sands Trust	COSWF	B	24.59	479	11,780	35.00	0.08	0.73
Hugoton Royalty Trust	HGT	B	24.55	40	980	34.00	-	0.72
<i>Total or Median</i>					<i>43,100</i>		<i>0.13</i>	<i>0.87</i>

B = Buy, S = Sell, H = Hold

Present Value = Shares times Net Present Value divided by (1-Debt/Present Value).

Debt = Present Value times Debt/Present Value

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

Historical independent energy investment analysis by Kurt Wulff doing business as McDep Associates is posted at [www.mcdep.com](http://www.mcdep.com). Analyses are prepared from sources and data believed to be reliable, but no representation is made as to their accuracy or completeness. Mr. Wulff is not paid by covered companies. Neither he nor his spouse trade a subject stock within a week before or after a change in rating.

**Oil and Gas Producers - Rank by EV/Ebitda**

	Symbol/ Rating		Price (US\$/sh) 9-Apr 2007	Adjustd Resrvs/ Prod NTM	PV/ Ebitda NTM	EV/ Ebitda NTM	P/E NTM	Divd or Distrib NTM (%)	
<b>Mega Cap</b>									
Gazprom (50%)	OGZPY	B	40.95	24.0	8.6	6.4	10	0.2	
Exxon Mobil Corporation	XOM	B	76.80	11.5	6.3	5.9	10	1.7	
BP plc	BP	B	64.84	9.8	6.8	5.7	10	3.6	
Total S.A.	TOT	B	70.03	9.6	6.2	5.5	9	3.6	
Chevron Corporation	CVX	B	75.49	10.0	6.0	5.0	9	2.8	
Royal Dutch Shell plc	RDS-A	B	66.60	7.4	5.4	4.4	8	4.3	
ConocoPhillips	COP	B	68.42	10.8	5.7	4.3	7	2.4	
	<i>Median</i>				10.0	6.2	5.5	9	2.8
<b>Producer/Refiners - Large Cap</b>									
Kinder Morgan, Inc.	KMI	S	106.80		8.9	13.7	21	3.3	
Suncor Energy	SU	B	76.58	18.3	11.3	9.2	17	0.4	
Imperial Oil Limited (30%)	IMO	B	38.26	13.2	8.1	8.3	14	0.7	
PetroChina Company Ltd (10%)	PTR	B	117.91	15.2	7.5	6.4	13	3.9	
Marathon Oil Corporation	MRO	B	101.93	8.3	5.9	5.5	10	1.3	
Lukoil Oil Company	LUKOY	B	83.00	18.1	6.5	4.9	8	1.5	
Norsk Hydro (pro forma)	NHY	B	32.95	8.6	5.4	4.9	9	2.5	
Petro-Canada	PCZ	B	39.75	6.5	5.2	4.4	8	1.1	
	<i>Median</i>				13.2	7.0	5.9	12	1.4
<b>Independent Natural Gas and Oil - Large Cap</b>									
XTO Energy Inc.	XTO	B	56.00	12.3	7.7	7.2	13	0.9	
Anadarko Petroleum Corp.	APC	B	44.47	10.3	7.6	5.9	8	1.6	
EOG Resources	EOG	B	74.39	9.7	7.2	5.9	14	0.5	
Encana Corporation	ECA	B	51.91	9.2	6.8	5.6	11	1.5	
CNOOC Limited (34%)	CEO	B	88.30	11.1	5.9	5.3	10	3.8	
Occidental Petroleum Corp.	OXY	B	49.68	11.9	7.0	5.2	10	1.8	
Devon Energy Corporation	DVN	B	72.95	9.1	6.8	4.7	9	0.8	
	<i>Median</i>				10.3	7.0	5.6	10	1.5
<b>Independent Natural Gas and Oil - Small Cap</b>									
Berry Petroleum Company	BRY	B	30.80	10.3	9.4	7.2	13	1.0	
Encore Acquisition Company	EAC	B	25.70	15.0	8.4	5.4	22	-	
Cimarex Energy Company	XEC	B	37.11	8.1	6.1	3.6	8	0.4	
Energy Partners Ltd.	EPL	B	17.87	5.2	4.3	3.0	-	-	
	<i>Median</i>				9.2	7.3	4.5	13	0.2
<b>Income</b>									
Kinder Morgan Energy Partners, L.P.	KMP	S	55.26		7.8	17.5	43	6.0	
Kinder Morgan Management, LLC	KMR	S	53.05		7.8	17.0	41	6.3	
San Juan Basin Royalty Trust	SJT	B	31.30	9.8	10.5	8.3	10	10.1	
Canadian Oil Sands Trust	COSWF	B	24.59	22.0	11.1	8.1	11	7.4	
Pengrowth Energy Trust	PGH		16.54	7.4	7.3	7.2	22	15.7	
Hugoton Royalty Trust	HGT	B	24.55	13.1	9.5	6.9	9	10.6	
Enerplus Resources Fund	ERF		41.78	9.0	6.8	6.2	11	10.4	
Penn West Energy Trust	PWE	B	29.45	7.5	7.1	6.0	11	12.0	
	<i>Median</i>				9.4	7.8	7.6	11	10.3

EV = Enterprise Value = Market Cap and Debt; Ebitda = Earnings before interest, tax, depreciation and amortization; NTM = Next Twelve Months Ended March 31, 2008; P/E = Stock Price to Earnings; PV = Present Value of oil and gas and other businesses

Historical independent energy investment analysis by Kurt Wulff doing business as McDep Associates is posted at [www.mcdep.com](http://www.mcdep.com). Analyses are prepared from sources and data believed to be reliable, but no representation is made as to their accuracy or completeness. Mr. Wulff is not paid by covered companies. Neither he nor his spouse trade a subject stock within a week before or after a change in rating.

**McDep Energy Portfolio  
Composite of Buy Recommendations**

	Symbol	Price	Portfolio Weight		Non-U.S. HQ (%)	North Amer. Natural Gas (%)	Rest of World Natural Gas (%)	Oil Prod'n (%)	Down-stream (%)	McDep Ratio
		(US\$/sh)	9-Apr 2007	Equity (%)		EV (%)	Amer. Natural Gas (%)			
<b>Mega Cap</b>										
Exxon Mobil Corporation	XOM	76.80	3.1	2.8		0.2	0.5	1.3	0.8	0.93
Total S.A.	TOT	70.03	2.8	2.8	2.8		0.8	1.2	0.8	0.89
BP plc	BP	64.84	1.3	1.4	1.4	0.1	0.2	0.7	0.4	0.84
Chevron Corporation	CVX	75.49	5.9	5.6		0.4	0.4	3.3	1.5	0.84
Royal Dutch Shell plc	RDS-A	66.60	2.7	2.8	2.8	0.1	0.5	1.1	1.1	0.82
Gazprom	OGZPY	40.95	9.0	8.5	8.5		6.7	1.8		0.75
ConocoPhillips	COP	68.42	4.8	5.6		1.0	0.4	3.0	1.2	0.75
<b>Producer/Refiners - Large Cap</b>										
Imperial Oil Limited	IMO	38.26	1.5	1.4	1.4	0.1		1.0	0.3	1.03
Marathon Oil Corporation	MRO	101.93	1.4	1.4		0.1	0.1	0.5	0.6	0.94
Norsk Hydro (pro forma)	NHY	32.95	2.6	2.8	2.8		0.7	1.0	1.1	0.89
PetroChina Company Ltd.	PTR	117.91	3.0	2.8	2.8		0.2	2.4	0.2	0.85
Petro-Canada	PCZ	39.75	1.3	1.4	1.4	0.2	0.0	0.9	0.2	0.85
Suncor Energy	SU	76.58	1.5	1.4	1.4	0.1		1.3	0.1	0.82
Lukoil Oil Company	LUKOY	83.00	6.4	5.6	5.6			4.2	1.4	0.76
<b>Independent Natural Gas and Oil - Large Cap</b>										
XTO Energy Inc.	XTO	56.00	2.8	2.8		2.0		0.8		0.94
CNOOC Limited	CEO	88.30	3.3	2.8	2.8		0.3	2.5		0.90
Encana Corporation	ECA	51.91	5.5	5.6	5.6	4.1		1.1	0.4	0.83
EOG Resources	EOG	74.39	6.2	5.6		4.2	0.4	1.0		0.82
Anadarko Petroleum Corp.	APC	44.47	1.4	2.8		1.5		1.2	0.1	0.77
Occidental Petroleum Corp	OXY	49.68	2.9	2.8		0.4	0.0	2.1	0.3	0.74
Devon Energy Corporation	DVN	72.95	5.2	5.6		3.1		2.5		0.69
<b>Independent Natural Gas and Oil - Small Cap</b>										
Berry Petroleum Company	BRY	30.80	1.2	1.4		0.3		1.1		0.77
Energy Partners Ltd.	EPL	17.87	1.0	1.4		0.8		0.7		0.68
Encore Acquisition Compæ	EAC	25.70	2.1	2.8		0.8		2.1		0.64
Cimarex Energy Company	XEC	37.11	2.8	2.8		1.9		0.9		0.59
<b>Income</b>										
Penn West Energy Trust	PWE	29.45	4.1	4.2	4.2	1.4		2.8		0.84
San Juan Basin Royalty Tr	SJT	31.30	6.6	5.6		5.6				0.78
Canadian Oil Sands Trust	COSWF	24.59	5.9	5.6	5.6			5.6		0.73
Hugoton Royalty Trust	HGT	24.55	1.6	1.4		1.4				0.72
<b>Portfolio Composite</b>			<b>100</b>	<b>100</b>	<b>49</b>	<b>30</b>	<b>11</b>	<b>48</b>	<b>11</b>	<b>0.78</b>
	Canada				20					
	Russia				14					
	Europe				10					
	China				6					

Historical independent energy investment analysis by Kurt Wulff doing business as McDep Associates is posted at [www.mcdep.com](http://www.mcdep.com). Analyses are prepared from sources and data believed to be reliable, but no representation is made as to their accuracy or completeness. Mr. Wulff is not paid by covered companies. Neither he nor his spouse trade a subject stock within a week before or after a change in rating.

**Index of Recent Research****Stock Ideas**

<u>Date</u>	<u>Symbol</u>	<u>Stock</u>	<u>Theme</u>
30-Mar	CEO	CNOOC Ltd	New Oil Price and Stock Price Momentum
29-Mar	COP	ConocoPhillips	Largest North American Natural Gas Producer
29-Mar	IMO	Imperial Oil Limited	Upgrade to Buy on Oil Price Momentum
23-Mar	* SJT	San Juan Basin Royalty Trust	Planetary Emergency
23-Mar	* HGT	Hugoton Royalty Trust	Planetary Emergency
20-Mar	PTR	PetroChina Company Limited	Government Takes Gains
2-Mar	* COSWF	Canadian Oil Sands Trust	New Twelve Month Volume High
2-Mar	* EPL	Energy Partners, Ltd.	Another Tough Year in 2006
1-Mar	* BRY	Berry Petroleum	Light Oil Irony
28-Feb	* PWE	Penn West Energy Trust	Lower Net Present Value to \$36 a Unit
20-Feb	* NHY	Norsk Hydro ASA	Raise NPV to \$36 a Share
16-Feb	* XEC	Cimarex Energy Company	Dry Spell
16-Feb	* ECA	EnCana Corporation	Home-Grown, Clean Energy in the Stock Market
15-Feb	* EAC	Encore Acquisition	Reduce NPV to \$48 a Share
15-Feb	* TOT	Total S.A.	Thank You, Thierry Desmarest
14-Feb	* XTO	XTO Energy Inc.	The Trend Goes On
13-Feb	* OGZPY	Gazprom	Enlightened Self Interest
7-Feb	* DVN	Devon Energy Corporation	Current Favorite Large Cap Independent
7-Feb	* APC	Anadarko Petroleum Corporation	Avarice in Algiers
6-Feb	* BP	BP p.l.c.	Difficult Execution
5-Feb	* CVX	Chevron Corporation	Momentum despite Chavez
2-Feb	* MRO	Marathon Oil Corporation	Emphasis on Refining
1-Feb	* EOG	EOG Resources Inc.	Reserves Up Ten Percent in 2006
1-Feb	* XOM	Exxon Mobil Corporation	Raise Present Value to a Half Trillion Dollars
1-Feb	* RDSA	Royal Dutch Shell plc	Reserves and Earnings Ahead
26-Jan	* SU	Suncor Energy Inc.	Committed to 500,000 Barrels Daily
26-Jan	* OXY	Occidental Petroleum Corporation	Largest Oil Independent
26-Jan	* PCZ	Petro-Canada	Volume Corner Turned
18-Jan	* KMx	Kinder Morgan	Good Bye KMI
12-Jan	* LUKOY	Lukoil Oil Company	Downside Oil Price Protection

**Meter Reader - A Weekly Analysis**

10-Apr		Practical Carbon Economics
3-Apr		Ultimate Carbon Economics
27-Mar	*	Hu Jintao Visits Vladimir Putin
20-Mar	*	Refined Oil Products Price Points Up

**Natural Gas and Oil Royalty Trusts - A Weekly Analysis**

6-Apr		Smoothing Reserve and Volume Disclosures
30-Mar		Funny Thing about Price Momentum
23-Mar	*	Planetary Emergency
16-Mar	*	Sincere Flattery

\* Archived on [www.mcdep.com](http://www.mcdep.com)

Historical independent energy investment analysis by Kurt Wulff doing business as McDep Associates is posted at [www.mcdep.com](http://www.mcdep.com). Analyses are prepared from sources and data believed to be reliable, but no representation is made as to their accuracy or completeness. Mr. Wulff is not paid by covered companies. Neither he nor his spouse trade a subject stock within a week before or after a change in rating.