

## **Refining and Natural Gas Event**

### **Summary and Recommendation**

Aside from the regrettable human tragedy, Hurricane Katrina appears to have stronger short-term investment implications for refining and natural gas than for oil production. One-year futures prices are up 37%, 13% and 2% respectively for the N.Y Harbor refining crack, Louisiana natural gas and Light, Sweet crude oil compared to three weeks ago. Buy-recommendations **Marathon Oil (MRO)**, **Encana (ECA)** and **Canadian Oil Sands Trust (COSWF)** are concentrated most on refining, natural gas and oil respectively. While nearly all buy recommendations are concentrated on one or more of those three businesses, we would skew portfolio representation to natural gas, non-U.S. domicile and lower McDep Ratios. Refining margins may be temporarily high, natural gas appears underpriced and crude oil seems likely to continue its upward price trend as long as economic growth continues. The median buy recommendation seems priced for long-term oil at about \$42 a barrel while the futures price for delivery over the next six years is about \$64.

### **Oil Contained within the Price Channel**

Thanks to the pending release of oil from strategic storage, the temporary crude oil supply disruption caused by Hurricane Katrina did not send price above the channel between a lower bound of the 40-week moving average and an upper bound of 1.35 times the moving average (see chart [Oil One-Year Futures Strip](#)). Oil and economic activity grow together. Gradually rising price encourages efficient allocation of resources.

While oil price continues to trend upward, the current price already implies strong investment returns for buy recommendations. The denominator of the McDep Ratio presumes a long-term real oil price of \$50 a barrel.

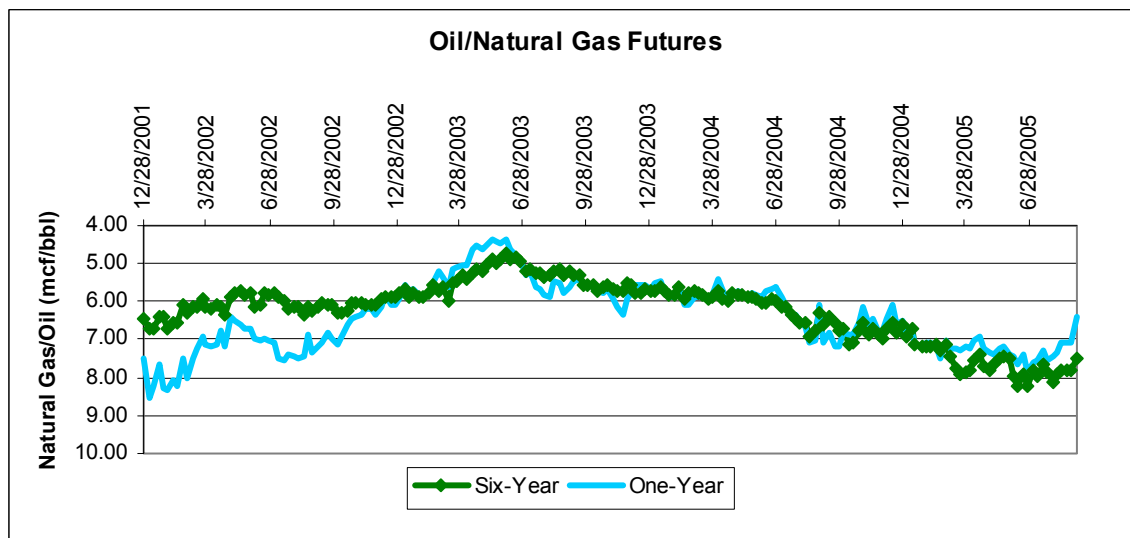
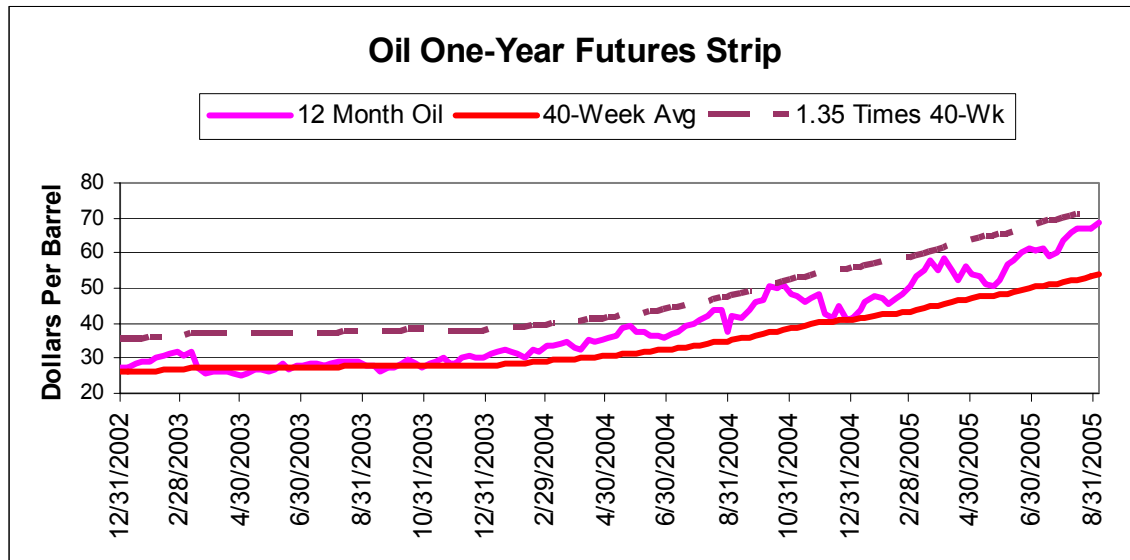
### **Natural Gas Narrows Price Gap**

Natural gas supply interruptions caused by Hurricane Katrina cannot be made up with the release of crude oil from strategic storage. As a result, one-year natural gas price moved up from about 7.5:1 to 6.5:1 compared to oil (see chart [Oil/Natural Gas Futures](#)). Normal market conditions should take natural gas price to 5:1 for the next several years and higher ultimately.

## Meter Reader

*A Weekly Analysis of Energy Stocks Using the McDep Ratio*

September 6, 2005



### No U.S. Strategic Storage for Refined Products

Retail gasoline price jumped some \$0.50 a gallon to more than \$3.00 after Hurricane Katrina sidelined some refining capacity and shut down some interstate product pipelines that did not have back-up electrical power. The one-year futures are up just \$0.13 a gallon in three weeks suggesting that \$3.00 a gallon retail gasoline is temporary.

A 7% increase in one-year gasoline price in three weeks and a 6% increase in one-year heating oil translate to a 37% widening in the refining margin. The popular 3-2-1 margin presumes that three barrels of crude oil are refined to two barrels of gasoline and one

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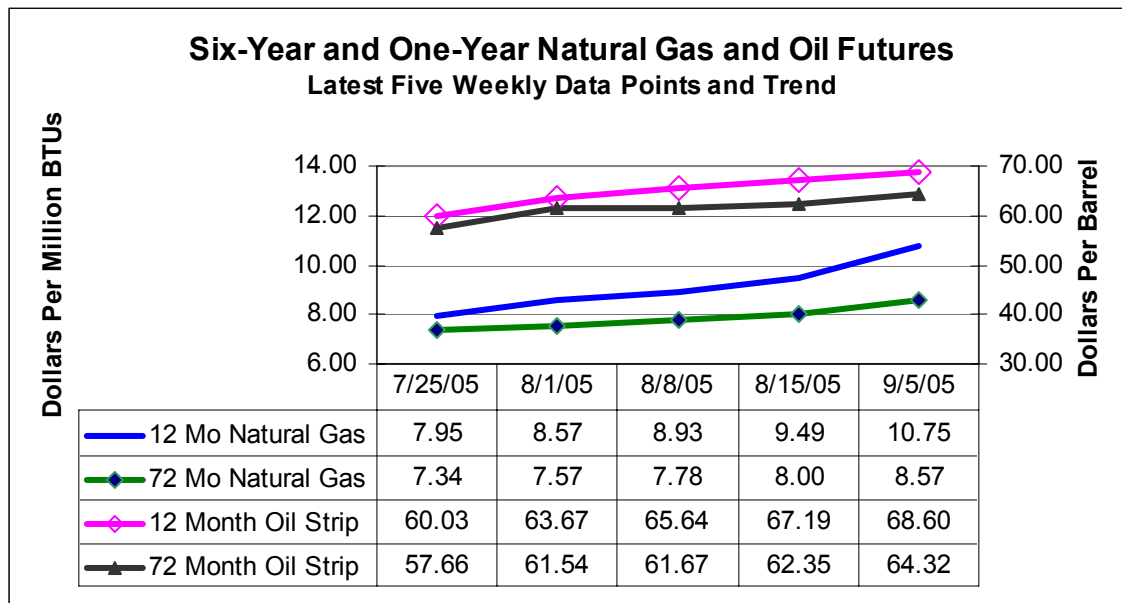
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barrel of heating oil. The difference in price for two-thirds of a barrel of gasoline and one-third of a barrel of heating oil compared to a barrel of crude oil has widened to almost \$16 a barrel.

In contrast, present value in the denominator of the McDep Ratio assumes a long-term refining margin of \$10 a barrel. Since that is only about \$0.24 a gallon, it is apparent that a small change in gasoline or heating oil price relative to crude oil can have a magnified profit impact. While the temporary gains of the past few days may fade, enough of the increase may stick to make the recommended Mega Caps and Producer/Refiners as attractive for refining as for oil and natural gas.



### Estimate Cash Flow for Next Twelve Months Ending September 30, 2006

Though we say next twelve *months* we choose the time period to match the end of the nearest calendar quarter. With the current quarter now mostly history the NTM period begins with the next quarter. The practical justification for the time period stems from our interest in royalty trusts that pay monthly distributions. An investor in a royalty trust is interested primarily in how much income is likely in the year ahead and how long it will last. As an example of the combined impact of higher natural gas futures and the change in time period, the estimated annual income for **San Juan Basin Royalty Trust (SJT)** jumped to \$4.71 a unit for a distribution yield of 10.3%.

Kurt H. Wulff, CFA

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#### Oil and Gas Producers Rank by McDep Ratio: Market Cap and Debt to Present Value

	Symbol/ Rating		Price (\$/sh) 2-Sep 2005	Shares (mm)	Market Cap (\$mm)	Net Present Value (\$/sh)	Debt/ Present Value	McDep Ratio
<b>Mega Cap</b>								
Total S.A.	TOT	B	136.18	1,182	161,000	160.00	0.13	0.87
BP plc	BP	B	69.80	3,545	247,000	82.00	0.10	0.87
Exxon Mobil Corporation	XOM	B	60.68	6,370	387,000	74.00	0.04	0.83
Royal Dutch Shell plc	RDS-A	B	66.45	3,372	224,000	84.00	0.09	0.81
Chevron Corporation	CVX	B	62.30	2,256	141,000	90.00	0.12	0.73
<i>Total or Median</i>					<i>1,160,000</i>		<i>0.10</i>	<i>0.83</i>
<b>Producer/Refiners - Large Cap and Mid Cap</b>								
Kinder Morgan, Inc.	KMI	S2	96.63	123	11,900	20.00	0.76	1.93
Imperial Oil Limited (30%)	IMO	B	102.43	104	10,610	84.00	0.09	1.20
Marathon Oil Corporation	MRO	B	65.07	367	23,880	65.00	0.27	1.00
Petro-Canada	PCZ	B	83.79	263	22,040	84.00	0.19	1.00
Suncor Energy	SU	B	59.00	461	27,200	68.00	0.10	0.88
Norsk Hydro ASA	NHY	B	108.80	251	27,310	130.00	0.13	0.86
Lukoil Oil Company	LUKOY	B	49.80	830	41,000	65.00	0.02	0.77
ConocoPhillips	COP	B	66.77	1,419	94,700	100.00	0.15	0.72
PetroChina Company Ltd (10%)	PTR	B	81.81	176	14,380	120.00	0.01	0.68
<i>Total or Median</i>					<i>273,000</i>		<i>0.13</i>	<i>0.88</i>
<b>Independent Natural Gas and Oil - Large Cap and Mid Cap</b>								
Encana Corporation	ECA	B	49.61	892	44,300	51.00	0.16	0.98
Burlington Resources	BR	B	74.99	385	28,900	86.00	0.09	0.88
CNOOC Limited (29%)	CEO	B	73.63	119	8,780	84.00	0.01	0.88
XTO Energy Inc.	XTO	B	39.30	372	14,630	48.00	0.17	0.85
Devon Energy Corporation	DVN	B	60.74	471	28,600	86.00	0.15	0.75
Occidental Petroleum Corp.	OXY	B	84.37	406	34,300	120.00	0.11	0.74
Anadarko Petroleum Corp.	APC	B	91.75	238	21,800	140.00	0.11	0.69
<i>Total or Median</i>					<i>454,000</i>		<i>0.12</i>	<i>0.86</i>
<b>Independent Natural Gas and Oil - Small Cap</b>								
Berry Petroleum Company	BRY	B	60.90	23	1,370	65.00	0.10	0.94
Encore Acquisition Company	EAC	B	33.53	49	1,660	50.00	0.17	0.73
Energy Partners Ltd.	EPL	B	25.32	41	1,030	38.00	0.17	0.73
Cimarex Energy Company	XEC	B	41.86	85	3,560	64.00	0.12	0.70
<i>Total or Median</i>					<i>7,600</i>		<i>0.15</i>	<i>0.73</i>
<b>Income</b>								
Kinder Morgan Energy Partners, L.P.	KMP	S3	51.81	157	8,140	15.00	0.55	2.10
Kinder Morgan Management, LLC	KMR	S3	48.45	56	2,690	15.00	0.55	2.00
Pengrowth Energy Trust	PGH		23.75	153	3,630	20.00	0.17	1.16
San Juan Basin Royalty Trust	SJT		45.58	47	2,120	40.00	-	1.14
Penn West Energy Trust	PWTFF	B	29.30	174	5,090	28.00	0.15	1.04
Enerplus Resources Fund	ERF		42.26	105	4,430	42.00	0.13	1.01
Canadian Oil Sands Trust (US\$)	COSWF	B	103.90	93	9,650	136.00	0.12	0.79
<i>Total or Median</i>					<i>35,800</i>		<i>0.15</i>	<i>1.14</i>

B = Buy, S2 = Short half unlevered position, S3 = Short quarter unlevered position

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

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September 6, 2005

#### Oil and Gas Producers

#### Rank by EV/Ebitda: Enterprise Value to Earnings Before Interest, Tax, Deprec.

	Symbol/ Rating		Price (\$/sh) 2-Sep 2005	Adjstd Resrvs/ Prod NTM	PV/ Ebitda NTM	EV/ Ebitda NTM	P/E NTM	Divd or Distrib NTM (%)
<b>Mega Cap</b>								
Exxon Mobil Corporation	XOM	B	60.68	11.5	6.7	5.5	10	1.9
Total S.A.	TOT	B	136.18	9.2	6.1	5.3	9	2.5
BP plc	BP	B	69.80	9.4	5.5	4.8	8	3.1
Chevron Corporation	CVX	B	62.30	9.3	5.8	4.3	7	2.9
Royal Dutch Shell plc	RDS-A	B	66.45	7.2	5.0	4.1	7	3.5
		<i>Median</i>		9.3	5.8	4.8	8	2.9
<b>Producer/Refiners - Large Cap and Mid Cap</b>								
Kinder Morgan, Inc.	KMI	S2	96.63		8.1	15.7	23	3.1
Suncor Energy	SU	B	59.00	18.1	8.4	7.4	15	0.3
Imperial Oil Limited (30%)	IMO	B	102.43	10.5	6.0	7.2	12	0.8
Petro-Canada	PCZ	B	83.79	5.9	4.8	4.7	8	0.8
Norsk Hydro ASA	NHY	B	108.80	8.2	5.2	4.4	10	3.0
ConocoPhillips	COP	B	66.77	11.2	5.6	4.0	6	1.9
Marathon Oil Corporation	MRO	B	65.07	7.1	3.9	3.9	5	1.7
PetroChina Company Ltd (10%)	PTR	B	81.81	13.9	5.6	3.8	8	4.6
Lukoil Oil Company	LUKOY	B	49.80	19.8	4.8	3.7	6	2.0
		<i>Median</i>		10.9	5.6	4.4	8	1.9
<b>Independent Natural Gas and Oil - Large Cap and Mid Cap</b>								
Encana Corporation	ECA	B	49.61	7.2	5.3	5.2	10	1.2
Burlington Resources	BR	B	74.99	9.9	5.6	4.9	10	0.5
XTO Energy Inc.	XTO	B	39.30	11.3	5.6	4.8	8	0.5
CNOOC Limited (29%)	CEO	B	73.63	9.4	4.8	4.2	7	3.1
Occidental Petroleum Corp.	OXY	B	84.37	11.3	5.6	4.1	7	1.5
Anadarko Petroleum Corp.	APC	B	91.75	12.5	5.7	4.0	7	0.8
Devon Energy Corporation	DVN	B	60.74	7.3	4.0	3.0	5	0.5
		<i>Median</i>		10.4	5.6	4.3	8	1.0
<b>Independent Natural Gas and Oil - Small Cap</b>								
Berry Petroleum Company	BRY	B	60.90	11.0	5.1	4.8	12	0.8
Encore Acquisition Company	EAC	B	33.53	14.7	6.5	4.7	10	-
Cimarex Energy Company	XEC	B	41.86	7.5	4.3	3.0	6	-
Energy Partners Ltd.	EPL	B	25.32	4.9	3.1	2.2	5	-
		<i>Median</i>		9.2	4.7	3.9	8	-
<b>Income</b>								
Kinder Morgan Energy Partners, L.P.	KMP	S3	51.81		8.2	17.3	28	6.0
Kinder Morgan Management, LLC	KMR	S3	48.45		8.2	16.4	26	6.4
San Juan Basin Royalty Trust	SJT		45.58	11.9	7.9	9.0	10	10.3
Canadian Oil Sands Trust (US\$)	COSWF	B	103.90	20.0	9.1	7.2	8	1.6
Pengrowth Energy Trust	PGH		23.75	7.4	4.8	5.6	7	9.8
Enerplus Resources Fund	ERF		42.26	9.4	5.2	5.3	7	8.4
Penn West Energy Trust	PWTFF	B	29.30	8.0	4.4	4.6	7	9.0
		<i>Median</i>		9.4	7.9	7.2	8	8.4

EV = Enterprise Value = Market Cap and Debt; Ebitda = Earnings before interest, tax, depreciation and amortization; NTM = Next Twelve Months Ended September 30, 2006; P/E = Stock Price to Earnings; PV = Present Value of oil and gas and other businesses

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#### Index of Recent Research

##### Stock Ideas

<u>Date</u>	<u>Symbol</u>	<u>Stock</u>	<u>Theme</u>
30-Aug	CEO	CNOOC Ltd	Independent Producer with Income
28-Aug	PTR	PetroChina Company Limited	Income Stock
21-Aug	PTR	PetroChina Company Limited	Understated Natural Gas Resources
18-Aug	SJT	San Juan Basin Royalty Trust	Sharp Stock Price Drop
17-Aug	CVX	Chevron Corporation	Astute Acquisition
16-Aug	EPL	Energy Partners, Ltd.	Denali 2006
15-Aug	XEC	Cimarex Energy Company	\$Billion Cash Flow for Small Cap NG Producer
11-Aug	PWTF	Penn West Energy Trust	Undiscovered by U.S. Investors
11-Aug	* SU	Suncor Energy Inc.	Oil Price and Operating Reliability
11-Aug	* KMx	Kinder Morgan	Canada May Block KM-Terasen Deal
8-Aug	* TOT	Total S.A.	Oil Sands Oui!
3-Aug	* DVN	Devon Energy Corporation	Raise Net Present Value to \$86 a Share
2-Aug	*	26 Stocks - Single Issue Statistics	Raise Net Present Value to \$xx a Share
28-Jul	* EAC	Encore Acquisition Company	HPAI Incline
27-Jul	* NHY	Norsk Hydro ASA	Norsk Natural Gas
27-Jul	* BP	BP p.l.c.	Steady-State Growth
26-Jul	* OXY	Occidental Petroleum Corporation	Back in Libya
22-Jul	* PCZ	Petro-Canada	Approaching Par
22-Jul	* MRO	Marathon Oil Corporation	Raise Net Present Value to \$45 a Share
22-Jul	* IMO	Imperial Oil Limited	Syncrude Boost
22-Jul	* COSWF	Canadian Oil Sands Trust	Distribution Capability Blossoming
20-Jul	* XTO	XTO Energy Inc.	Simpson Sense
14-Jul	* RD	Royal Dutch Petroleum	Frontier Challenge
6-Jul	* COSWF	Canadian Oil Sands Trust	Free (Cash Flow) at Last
29-Jun	* LUKOY	Lukoil Oil Company	Profits and Taxes Rising
1-Jun	* XOM	Exxon Mobil Corporation	Nice Return for Low Risk
31-May	* ECA	EnCana Corporation	Clean Fuel Supplier
31-May	* BR	Burlington Resources, Inc.	Clean Fuel Supplier
31-May	* APC	Anadarko Petroleum Corporation	Clean Fuel Supplier
20-May	* COP	ConocoPhillips	Raise Net Present Value to \$140 a Share
5-May	* BRY	Berry Petroleum Company	Oil in the Kitty Litter

##### Meter Reader - A Weekly Analysis

6-Sep		Refining and Natural Gas Event
16-Aug	*	Energy Policy Act of 2005
9-Aug	*	Comparables
2-Aug	*	Raise Present Value for \$50 Oil
25-Jul	*	Strong Trends
19-Jul	*	An Incentive, Not a Tax

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

Also see

**U.S. Natural Gas Royalty Trusts - A Weekly Analysis, and Single-Trust Analyses**

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