

## ***Meter Reader***

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

December 28, 2004

# **Light Oil Volume Peak**

## **Summary and Recommendation**

The difference in price between Arab Light and Arab Heavy crude oil points to limited availability of raw material for clean energy at the same time environmental realities stimulate demand. Producers and refiners aiming to supply more clean energy have promising potential. Interviewed in the December 27 issue of *Barron's*, we picked Buy-recommended **ChevronTexaco (CVX)**, **ConocoPhillips (COP)**, **Burlington Resources (BR)**, **Encore Acquisition (EAC)** and **Canadian Oil Sands Trust (COSWF)** and panned Sell-recommended **Kinder Morgan (KMI, KMP, KMR)**.

## **Calling Saudi Arabia's Bluff**

**Q:** Can you give the relative meaning of the Saudi issue re heavy versus light, low sulfur?

**A:** We have stated that 2004 may have been the year that world production of light oil peaked. The price of Light, Sweet Crude Oil traded in the futures market hit a surprisingly high price of some \$55 a barrel. Presumably that should not have happened because Saudi Arabia repeatedly said, "Not to worry, we will just tap our spare capacity." In fact the spare capacity of light oil did not materialize. Instead the Kingdom offered heavy oil to an unenthusiastic market response.

Relative price action appears to support that tale. From *Bloomberg* we extracted the price of Arab Light and Arab Heavy for the past several years. For 2002-2003 the average difference in price of large cargos in the Middle East was a dollar a barrel. During 2004 the average widened to \$3 a barrel with the latest differences at \$5 (see chart [Arab Light/Heavy Crude Oil Pricing 2003-2004](#)). Though the price of Arab Light has declined from its high in August, the differential to heavy has increased since then.

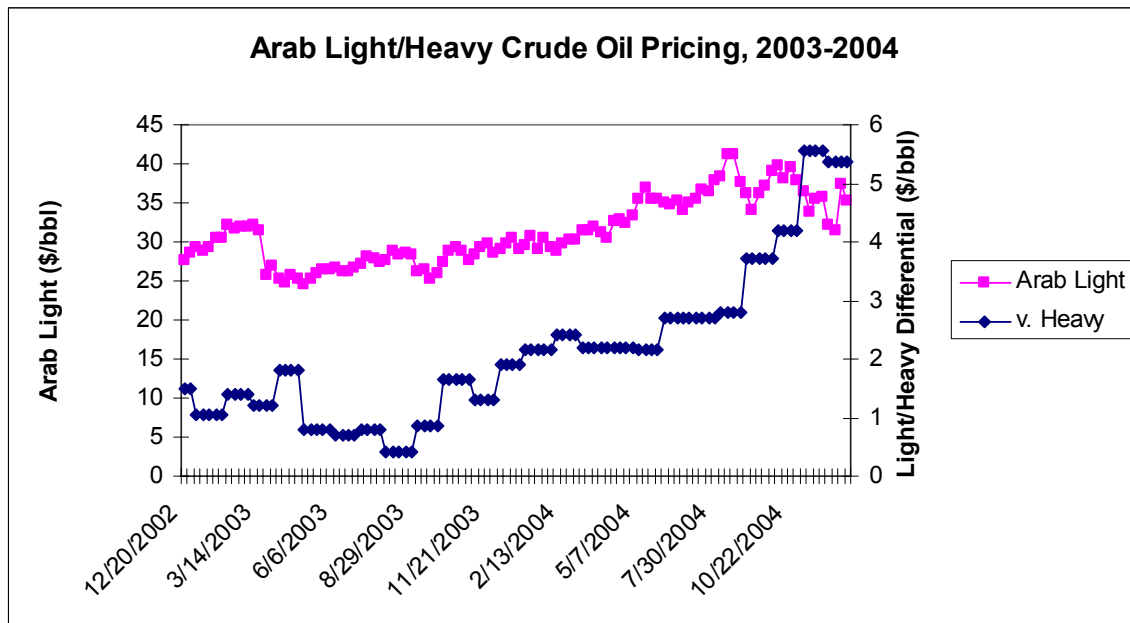
Both the Arab grades are heavy and sour compared to the benchmark Light, Sweet (West Texas Intermediate) at 40 degrees gravity and 0.3% sulfur. Arab Light is 32 degrees API gravity, 1.8% sulfur; and Arab Heavy is 27 degrees API gravity, 2.8% sulfur. High gravity, counter intuitively, means light. Obviously high sulfur is bad. As a result, the spread, or differential, widens further compared to Light, Sweet. That comparison is complicated by transportation cost because the pricing point for Arab crude is in the Middle East while the pricing point for Light, Sweet is Cushing, Oklahoma.

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Apparently new capacity for Arab Light has been inaugurated over the weekend. Whether that amount adds to existing capacity or merely replaces decline is not clear.

At its most basic, the Saudi issue implies that raw material for light, clean fuel is getting scarcer. Lighter means more hydrogen and less carbon. The products of combustion are more water vapor that is harmless and less carbon dioxide that may cause global warming. On the demand side we favor the most stringent environmental regulations that sound economics and sensible politics allow. That should mean relatively more demand for clean fuels.

Natural gas is the cleanest fuel widely available economically. Natural gas price should increase relative to crude oil price over time. Natural gas is nice to have in North America.

Light oil is nice to have anywhere, but it is becoming like natural gas in North America. It is a cleaner fuel, but we have already consumed much of the readily available quantities.

The next best things to natural gas in North America and light oil anywhere in the world are substitutes created by intensive processing and capital investment. Liquefied natural gas is the front-runner among substitutes for indigenous natural gas. More refining of heavier oil can produce a substitute for lighter oil. Oil sands in Canada are an example of abundant raw material that can be subjected to the most intensive refining to produce a light oil substitute.

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Indirectly, the light/heavy spread makes a favorable case for oil refining. The futures market does not seem to reflect much of that potential yet. Refiners have a long history of operating on razor-thin margins and there is not yet much confidence that the prospects of the business have improved. The prevalent worries remain that maybe the winter will be warm and the economy soft. Despite volatility, we also expect the refining operations of recommended producers to be rewarding to investors over time.

### **Six-Year Natural Gas Futures Approach 40-Week Average**

Tracking the average futures price for the next six-years we note that the current oil quote is above the 40-week average (see chart [Six-Year Commodity Price Meter](#)). The current natural gas quote is about on its 40-week average not shown on the chart.

We print the detailed result of our calculations for the record (see chart [Six-Year and One-Year Natural Gas and Oil Futures](#) ). We take monthly quotes that go into the calculation from [nymex.com](http://nymex.com).

### **Buy Recommended Stocks**

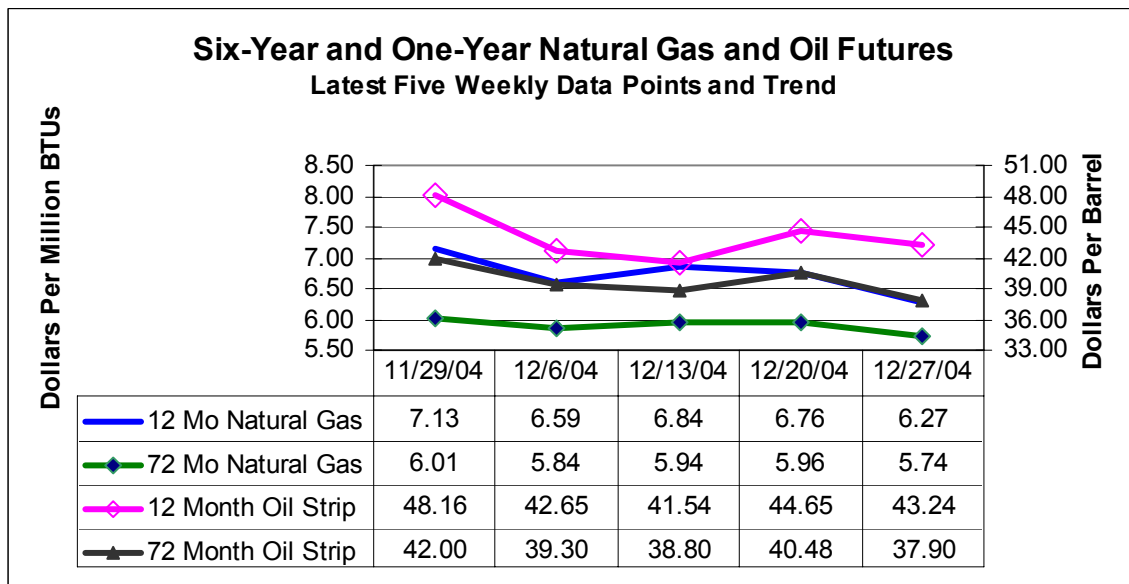
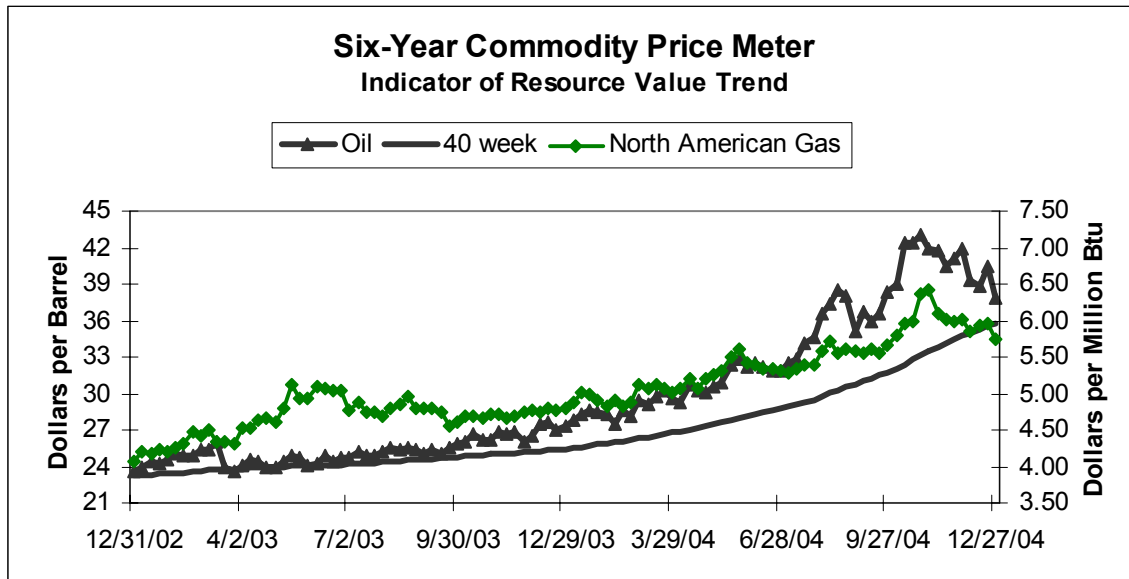
For recommendations and valuation measures, see tables [Rank by McDep Ratio](#) and [Rank by EV/Ebitda](#). Ebitda estimates are consistent with latest Next Twelve Months future prices. For recent single-stock research, see [Index of Stock Ideas](#).

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) 27-Dec 2004	Shares (mm)	Market Cap (\$mm)	Net Present Value (\$/sh)	Debt/ Present Value	McDep Ratio
<b>Mega Cap</b>								
Exxon Mobil Corporation	XOM	B3	50.88	6,508	331,000	50.00	0.07	1.02
Shell Transport and Trading Co. plc	SC	B3	51.27	1,587	81,000	51.00	0.17	1.00
BP plc	BP	B3	58.65	3,614	212,000	60.00	0.13	0.98
Total S.A.	TOT	B3	109.16	1,228	134,000	113.00	0.18	0.97
Royal Dutch Petroleum	RD	B1	56.97	2,021	115,000	60.00	0.17	0.96
ChevronTexaco Corporation	CVX	B1	52.01	2,126	111,000	62.50	0.13	0.85
<i>Total or Median</i>					984,000		0.15	0.98
<b>Producer/Refiners - Large Cap and Mid Cap</b>								
Kinder Morgan, Inc.	KMI	S2	72.46	125	9,040	20.00	0.74	1.68
Imperial Oil Limited (30%)	IMO	B3	57.10	107	6,100	58.00	0.10	0.99
Marathon Oil Corporation	MRO	B3	36.84	347	12,780	40.00	0.31	0.94
Norsk Hydro ASA	NHY	B1	78.20	254	19,870	90.00	0.18	0.89
ConocoPhillips	COP	B1	86.05	702	60,400	110.00	0.25	0.84
Suncor Energy	SU	B3	34.01	460	15,640	42.00	0.12	0.83
Petro-Canada	PCZ	B3	49.32	269	13,290	68.00	0.18	0.77
PetroChina Company Ltd (10%)	PTR	B2	53.52	176	9,410	82.00	0.06	0.67
Lukoil Oil Company	LUKOY	B2	117.50	209	25,000	208.00	0.06	0.59
<i>Total or Median</i>					172,000		0.18	0.84
<b>Independent Natural Gas and Oil - Large Cap and Mid Cap</b>								
XTO Energy Inc.	XTO	B1	34.78	273	9,480	38.00	0.19	0.93
CNOOC Limited (19%)	CEO	B2	54.55	78	4,260	59.00	-	0.92
Encana Corporation	ECA	B1	55.19	472	26,000	63.00	0.21	0.90
Unocal Corporation	UCL	B3	42.00	274	11,500	54.00	0.24	0.83
Occidental Petroleum Corp.	OXY	B3	57.54	403	23,200	75.00	0.17	0.81
Burlington Resources	BR	B1	42.63	395	16,800	58.00	0.14	0.77
Devon Energy Corporation	DVN	B3	38.50	500	19,300	55.00	0.22	0.77
Anadarko Petroleum Corp.	APC	B1	64.07	253	16,200	94.00	0.20	0.75
<i>Total or Median</i>					127,000		0.20	0.82
<b>Independent Natural Gas and Oil - Small Cap</b>								
Berry Petroleum Company	BRY	B2	47.16	22	1,050	43.00	0.06	1.09
Cimarex Energy Company	XEC	B2	37.33	43	1,600	38.00	0.00	0.98
Energy Partners Ltd.	EPL	B3	19.81	39	770	22.00	0.15	0.91
Encore Acquisition Company	EAC	B2	31.80	33	1,040	47.00	0.22	0.75
<i>Total or Median</i>					4,500		0.10	0.95
<b>Income</b>								
Kinder Morgan Energy Partners, L.P.	KMP	S3	44.50	145	6,450	15.00	0.52	1.95
Kinder Morgan Management, LLC	KMR	S3	40.75	55	2,240	15.00	0.52	1.83
Pengrowth Energy Trust	PGH		20.67	136	2,810	14.00	0.26	1.35
Enerplus Resources Fund	ERF		35.45	104	3,690	28.00	0.18	1.22
San Juan Basin Royalty Trust	SJT	H	29.44	47	1,370	27.00	-	1.09
Canadian Oil Sands Trust (US\$)	COSWF	B1	51.69	91	4,710	72.00	0.19	0.77
<i>Total or Median</i>					21,300		0.22	1.29

B1 = Buy full unlevered position, B2 = Buy half unlevered position, B3 = Alternative 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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#### Oil and Gas Producers

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

	Symbol/ Rating		Price (\$/sh) 27-Dec 2004	Adjstd Resrvs/ Prod NTM	PV/ Ebitda NTM	EV/ Ebitda NTM	P/E NTM	Divd or Distrib NTM (%)
<b>Mega Cap</b>								
BP plc	BP	B3	58.65	9.9	8.2	8.1	17	2.9
Exxon Mobil Corporation	XOM	B3	50.88	11.1	7.3	7.4	14	2.1
Total S.A.	TOT	B3	109.16	9.6	6.8	6.6	12	3.0
Shell Transport and Trading Co. plc	SC	B3	51.27	8.1	6.2	6.2	13	4.0
Royal Dutch Petroleum	RD	B1	56.97	8.1	6.2	5.9	12	4.2
ChevronTexaco Corporation	CVX	B1	52.01	11.4	6.4	5.4	10	3.1
	<i>Median</i>			9.7	6.6	6.4	12	3.0
<b>Producer/Refiners - Large Cap and Mid Cap</b>								
Kinder Morgan, Inc.	KMI	S2	72.46		8.3	13.9	18	3.1
Suncor Energy	SU	B3	34.01	18.4	9.6	8.0	18	0.6
Imperial Oil Limited (30%)	IMO	B3	57.10	11.3	7.2	7.1	13	1.3
Marathon Oil Corporation	MRO	B3	36.84	7.8	6.7	6.3	14	3.0
ConocoPhillips	COP	B1	86.05	11.9	6.5	5.5	9	2.0
Norsk Hydro ASA	NHY	B1	78.20	9.4	5.9	5.3	15	2.3
Petro-Canada	PCZ	B3	49.32	7.6	6.4	5.0	10	1.0
Lukoil Oil Company	LUKOY	B2	117.50	12.2	7.3	4.3	8	2.9
PetroChina Company Ltd (10%)	PTR	B2	53.52	13.3	6.1	4.1	8	4.4
	<i>Median</i>			11.6	6.7	5.5	13	2.3
<b>Independent Natural Gas and Oil - Large Cap and Mid Cap</b>								
XTO Energy Inc.	XTO	B1	34.78	11.7	7.0	6.5	12	0.6
Occidental Petroleum Corp.	OXY	B3	57.54	11.2	6.6	5.3	9	1.9
CNOOC Limited (19%)	CEO	B2	54.55	9.6	5.6	5.2	10	3.3
Burlington Resources	BR	B1	42.63	9.9	6.4	4.9	11	0.8
Unocal Corporation	UCL	B3	42.00	8.9	5.7	4.8	11	1.9
Anadarko Petroleum Corp.	APC	B1	64.07	10.9	6.2	4.6	10	0.9
Encana Corporation	ECA	B1	55.19	6.4	5.1	4.6	11	0.7
Devon Energy Corporation	DVN	B3	38.50	6.6	5.4	4.1	8	1.0
	<i>Median</i>			9.7	6.0	4.8	11	1.0
<b>Independent Natural Gas and Oil - Small Cap</b>								
Berry Petroleum Company	BRY	B2	47.16	12.5	7.0	7.7	16	1.0
Encore Acquisition Company	EAC	B2	31.80	11.9	8.1	6.0	12	-
Cimarex Energy Company	XEC	B2	37.33	5.2	4.4	4.3	13	-
Energy Partners Ltd.	EPL	B3	19.81	4.9	4.4	4.0	15	-
	<i>Median</i>			8.6	5.7	5.2	14	-
<b>Income</b>								
Kinder Morgan Energy Partners, L.P.	KMP	S3	44.50		8.0	15.6	21	6.6
Kinder Morgan Management, LLC	KMR	S3	40.75		8.0	14.6	19	7.2
San Juan Basin Royalty Trust	SJT	H	29.44	12.5	8.5	9.3	10	9.7
Canadian Oil Sands Trust (US\$)	COSWF	B1	51.69	20.0	11.8	9.1	12	3.2
Pengrowth Energy Trust	PGH		20.67	7.9	6.4	8.6	21	11.0
Enerplus Resources Fund	ERF		35.45	8.3	6.8	8.3	30	9.7
	<i>Median</i>			10.4	8.0	9.2	20	8.4

EV = Enterprise Value = Market Cap and Debt; Ebitda = Earnings before interest, tax, depreciation and amortization; NTM = Next Twelve Months Ended December 31, 2005; P/E = Stock Price to Earnings; PV = Present Value of oil and gas and other businesses

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#### **Index of Stock Ideas Recent Written Analyses**

<u>Date</u>	<u>Symbol</u>	<u>Stock</u>	<u>Theme</u>
27-Dec	PTR	PetroChina Company Limited	West to East Pipeline Flowing
22-Dec	RD	Royal Dutch Petroleum	Historic Streamlining
22-Dec	SC	Shell Transport & Trading Company, p.l.c.	Historic Streamlining
20-Dec	BP	BP p.l.c.	Cash Flows to Owners
9-Dec	SU	Suncor Energy Inc.	Raise Net Present Value to US\$42 a Share
8-Dec	CVX	ChevronTexaco Corporation	Mega Cap at a Discount
3-Dec	COSWF	Canadian Oil Sands Trust	After Hubbert's Peak
3-Dec	COP	ConocoPhillips	Connecting with Lukoil
29-Nov	XEC	Cimarex Energy Company	Timely Talent
26-Nov	XTO	XTO Energy Inc.	Twenty Per Cent per Year per Share
24-Nov	* APC	Anadarko Petroleum Corporation	Asset Upgrade
22-Nov	* EAC	Encore Acquisition Company	Opportunity in Hedging Impact
22-Nov	* MTR	Mesa Royalty Trust	Hugoton Predictability, San Juan Surprise
17-Nov	* TOT	Total S.A.	African Oil, European Refining
17-Nov	* UCL	Unocal Corporation	Incremental Production in 2005
15-Nov	* EPL	Energy Partners, Ltd.	Lowest Cash Flow Multiple
15-Nov	* OXY	Occidental Petroleum Corporation	Still Cheap
12-Nov	* CRT	Cross Timbers Royalty Trust	Low Risk, Long Life
9-Nov	* IMO	Imperial Oil Limited	Raise Present Value to US\$58 a Share
9-Nov	* DVN	Devon Energy Corporation	Large Cap Natural Gas
8-Nov	* BRY	Berry Petroleum Company	Smart Oil Contract
8-Nov	* PCZ	Petro-Canada	Looking for Long Life
5-Nov	* SJT	San Juan Basin Royalty Trust	High Winter Distributions Ahead
4-Nov	* ECA	EnCana Corporation	Bold Moves
3-Nov	* MRO	Marathon Oil Corporation	Lower Net Present Value to \$40 a Share
2-Nov	* XOM	Exxon Mobil Corporation	Raise Present Value to \$50 a Share
26-Oct	* KMP	Kinder Morgan Energy Partners, L.P.	Fallen Star
26-Oct	* KMI	Kinder Morgan Inc.	Fallen Star
26-Oct	* KMR	Kinder Morgan Management, LLC	Fallen Star
18-Oct	* NHY	Norsk Hydro ASA	High Cash Flow
11-Oct	* BR	Burlington Resources, Inc.	Natural Gas Sensitivity
11-Oct	* COSWF	Canadian Oil Sands Trust	Raise Present Value to US\$72 a Unit
11-Oct	* SJT	San Juan Basin Royalty Trust	Raise Present Value to \$27 a Unit
6-Oct	* COSWF	Canadian Oil Sands Trust	Ten Percent Holder Surfaces
5-Oct	* LUKOY	Lukoil Oil Company	SEC Standard Reduces Reserves
30-Sep	* COP	ConocoPhillips	Lukoil Investment Confirmed
30-Sep	* LUKOY	Lukoil Oil Company	ConocoPhillips Partner Confirmed
20-Sep	* LUKOY	Lukoil Oil Company	ConocoPhillips Partner
8-Sep	* CEO	CNOOC Ltd ADS	Higher Dividend, Higher Present Value

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

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