

Meter Reader

A Weekly Analysis of Energy Stocks Using the McDep Ratio

June 6, 2006

Raise Long-Term Oil Price to \$60 a Barrel

Summary and Recommendation

Net present value (NPV) increases more than 20% for buy-recommended **Imperial Oil (IMO)**, **Suncor (SU)** and **Canadian Oil Sands Trust (COSWF)** as we raise long-term real price to \$60 a barrel from \$50 for light, sweet crude oil. NPV increases a median 9% for buy recommendations as we make no change in long-term natural gas price of \$10 a million btu and long-term refining margin of \$10 a barrel. Estimated present value of conventional oil production increases 20% in the U.S., Canada and Europe and 10% in most other countries where government take rises faster than oil price. We don't raise values in Russia at this time and we write off values in Venezuela and Ecuador. In a few cases we have adjusted value outside of oil production for recent performance. Six-year futures for oil of \$71 a barrel partly ratify our long-term oil price. We continue to see a trend to natural gas price at oil divided by five, but six-year futures have natural gas price at oil divided by more than eight. Thus, the long term may be a bit further away leaving our natural gas price for NPV estimates at oil divided by 6. Current one-year futures for refining crack at more than \$12 a barrel partly ratify our long-term margin estimate. McDep Ratios that range from 0.6 to 1.2 imply attractive investment potential.

Most Price Leverage in Oil Sands

The recent acquisition of Blackrock Ventures for more than US\$2 billion by the Royal Dutch Shell (RDS-A) affiliate, Shell Canada, put higher values on undeveloped underground oil sands. Though our new estimates will be refined with time, we add present value proportionately more than price for Canadian producers. The value of mineable oil sands also rises more than price, but less than underground, or *in situ*, oil sands.

Net Present Value Affected by Financial Leverage

Companies with similar changes in business value may have different percentage changes in NPV depending on each company's amount of debt. Yet debt levels are not high for oil producers compared to the increasing value of oil production. As a result the highest gainers in NPV tend to be those stocks concentrated on oil production in Canada, the U.S., China and Norway (see table [Change in Net Present Value](#)).

Present Value Approximated with Cash Flow Multiple

The mechanics of the analysis involve detailed projections of cash flow for the next twelve months taking into account historical results for the past few years for each stock. The Present Value cash flow multiple depends on reserve life in the same fashion as the discounted present value of future cash flow increases with the life of a project at a declining rate (see table [Present Value by Line of Business](#)). The multiples are generally consistent with a real discount rate of 7% a year applied to constant real price and costs.

Kurt H. Wulff, CFA

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Oil and Gas Producers Change in Net Present Value (NPV)

	Symbol/ Rating		Price	Net Present Value		
			(\$/sh) 5-Jun 2006	New (\$/sh)	Old (\$/sh)	Change (%)
Mega Cap						
Total S.A.	TOT	B	64.79	80.00	80.00	-
Gazprom (50%)	OGZPY	B	43.80	56.00	56.00	-
ConocoPhillips	COP	B	62.54	96.00	95.00	1
Chevron Corporation	CVX	B	59.35	88.00	85.00	4
BP plc	BP	B	70.82	80.00	77.00	4
Royal Dutch Shell plc	RDS-A	B	65.59	84.00	80.00	5
Exxon Mobil Corporation	XOM	B	60.05	78.00	74.00	5
<i>Total or Median</i>						4
Producer/Refiners - Large Cap and Mid Cap						
Kinder Morgan, Inc.	KMI	S2	101.00	33.00	33.00	-
Lukoil Oil Company	LUKOY	B	80.00	110.00	110.00	-
Marathon Oil Corporation	MRO	B	77.00	86.00	75.00	15
Petro-Canada	PCZ	B	45.30	49.00	42.00	17
PetroChina Company Ltd (10%)	PTR	B	105.49	140.00	120.00	17
Norsk Hydro ASA	NHY	B	28.06	31.00	26.00	19
Imperial Oil Limited (30%)	IMO	B	36.68	37.00	30.00	23
Suncor Energy	SU	B	80.98	95.00	75.00	27
<i>Total or Median</i>						17
Independent Natural Gas and Oil - Large Cap and Mid Cap						
XTO Energy Inc.	XTO	B	40.69	52.00	52.00	-
EOG Resources	EOG	B	62.92	92.00	90.00	2
Anadarko Petroleum Corp.	APC	B	49.09	86.00	80.00	8
Encana Corporation	ECA	B	50.58	55.00	51.00	8
Devon Energy Corporation	DVN	B	56.08	102.00	94.00	9
Occidental Petroleum Corp.	OXY	B	97.40	138.00	120.00	15
CNOOC Limited (29%)	CEO	B	74.73	98.00	84.00	17
<i>Total or Median</i>						8
Independent Natural Gas and Oil - Small Cap						
Cimarex Energy Company	XEC	B	39.16	68.00	64.00	6
Energy Partners Ltd.	EPL	B	20.33	32.00	29.00	10
Berry Petroleum Company	BRY	B	30.74	39.00	32.50	20
Encore Acquisition Company	EAC	B	25.91	54.00	45.00	20
<i>Total or Median</i>						15
Income						
Kinder Morgan Energy Partners, L.P.	KMP	S3	46.55	15.00	15.00	-
Kinder Morgan Management, LLC	KMR	S3	43.36	15.00	15.00	-
San Juan Basin Royalty Trust	SJT	B	37.11	40.00	40.00	-
Pengrowth Energy Trust	PGH		23.49	20.00	18.00	11
Enerplus Resources Fund	ERF		56.20	47.00	42.00	12
Penn West Energy Trust (US\$)	PWTFF	B	39.99	39.00	33.00	18
Canadian Oil Sands Trust (US\$)	COSWF	B	31.41	35.00	27.20	29
<i>Total or Median</i>						11

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Present Value by Line of Business

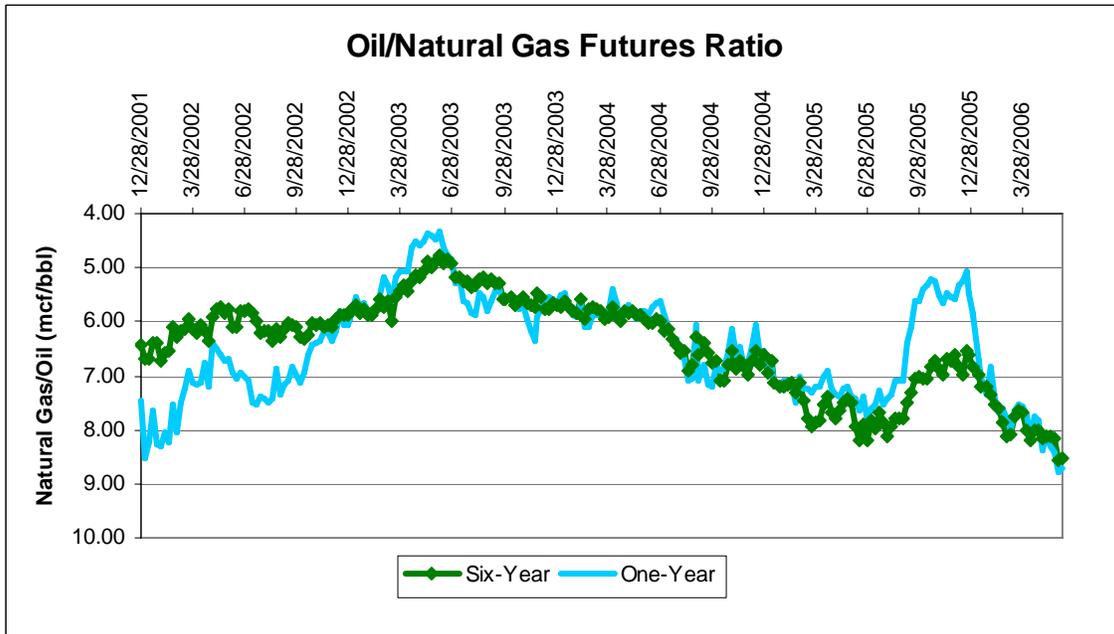
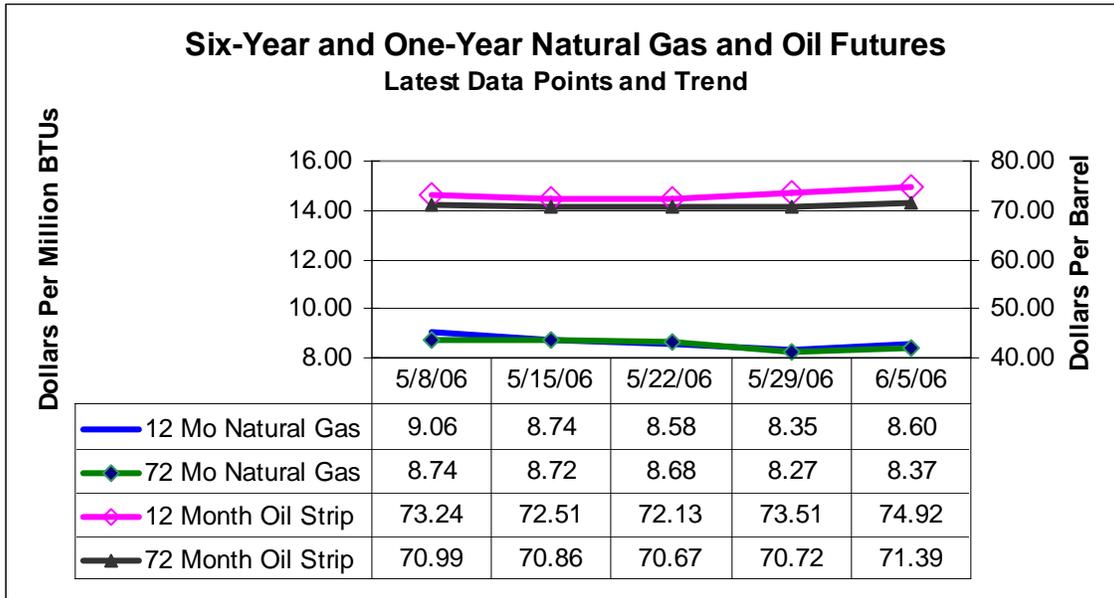
		North American	Rest of World					
		Natural Gas	Natural Gas	Oil Production PV/ Ebitda	PV (US\$mm)	Downstream PV/ Ebitda	PV (US\$mm)	Total
		(US\$mm)	(US\$mm)					
Mega Cap								
BP plc	BP	23,000	36,000	5.8	158,000	6.5	105,000	322,000
ConocoPhillips	COP	34,000	20,000	4.9	99,000	6.3	56,000	209,000
Chevron Corporation	CVX	14,000	21,000	4.9	127,000	6.0	58,000	220,000
Gazprom	OGZPY		325,000					325,000
Royal Dutch Shell plc	RDS-A	10,000	55,000	4.4	119,000	6.2	120,000	304,000
Total S.A.	TOT		59,000	4.9	91,000	7.3	65,000	215,000
Exxon Mobil Corporation	XOM	40,000	110,000	5.2	204,000	6.2	145,000	499,000
	<i>Total or Median</i>							2,094,000
Producer/Refiners - Large Cap and Mid Cap								
Imperial Oil Limited	IMO	3,500		8.8	28,500	6.2	8,000	40,000
Lukoil Oil Company	LUKOY			6.6	69,700	4.0	23,400	93,100
Marathon Oil Corporation	MRO	4,600	2,500	4.2	14,500	4.6	17,000	38,600
Norsk Hydro ASA	NHY		11,500	4.7	17,400	4.9	16,400	45,300
Petro-Canada	PCZ	6,000	1,100	5.4	19,300	6.2	4,500	30,900
PetroChina Company Ltd	PTR		21,000	6.0	218,000	5.9	22,000	261,000
Suncor Energy	SU	1,500		8.5	43,000	6.8	2,700	47,200
	<i>Total or Median</i>							556,100
Independent Natural Gas and Oil - Large Cap and Mid Cap								
Anadarko Petroleum Corp.	APC	25,000		5.3	19,300			44,300
CNOOC Limited	CEO		4,300	4.1	36,000			40,300
Devon Energy Corporation	DVN	31,500		5.6	20,200			51,700
Encana Corporation	ECA	44,000		5.6	10,800			54,800
Occidental Petroleum Corp.	OXY	9,000	900	5.8	50,600	5.0	6,200	66,700
EOG Resources	EOG	18,300	1,800	4.1	3,300			23,400
XTO Energy Inc.	XTO	19,000		4.0	3,800			22,800
	<i>Total or Median</i>							304,000
Independent Natural Gas and Oil - Small Cap								
Berry Petroleum Company	BRY	300		6.6	1,820			2,120
Encore Acquisition Company	EAC	900		8.4	2,970			3,870
Energy Partners Ltd.	EPL	850		5.0	750			1,600
Cimarex Energy Company	XEC	4,300		5.5	2,030			6,330
	<i>Total or Median</i>							13,920
Income								
Canadian Oil Sands Trust (US\$)	COSWF			10.9	18,000			18,000
Enerplus Resources Fund	ERF	3,100		6.8	3,390			6,490
Pengrowth Energy Trust	PGH	1,600		5.9	2,180			3,780
Penn West Energy Trust (US\$)	PWTFF	3,300		7.7	7,500			10,800
San Juan Basin Royalty Trust	SJT	1,860						1,860
	<i>Total or Median</i>							40,930

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

	Symbol/ Rating		Price (\$/sh) 5-Jun 2006	Shares (mm)	Market Cap (\$mm)	Net Present Value (\$/sh)	Debt/ Present Value	McDep Ratio
Mega Cap								
BP plc	BP	B	70.82	3,420	242,000	80.00	0.15	0.90
Total S.A.	TOT	B	64.79	2,336	151,000	80.00	0.13	0.83
Royal Dutch Shell plc	RDS-A	B	65.59	3,268	214,000	84.00	0.10	0.80
Gazprom (50%)	OGZPY	B	43.80	2,833	124,100	56.00	0.02	0.79
Exxon Mobil Corporation	XOM	B	60.05	6,126	368,000	78.00	0.04	0.78
ConocoPhillips	COP	B	62.54	1,693	106,000	96.00	0.22	0.73
Chevron Corporation	CVX	B	59.35	2,224	132,000	88.00	0.11	0.71
<i>Total or Median</i>					<i>1,337,000</i>		<i>0.11</i>	<i>0.79</i>
Producer/Refiners - Large Cap and Mid Cap								
Kinder Morgan, Inc.	KMI	S2	101.00	135	13,640	33.00	0.75	1.51
Imperial Oil Limited (30%)	IMO	B	36.68	299	10,970	37.00	0.08	0.99
Petro-Canada	PCZ	B	45.30	520	23,560	49.00	0.18	0.94
Norsk Hydro ASA	NHY	B	28.06	1,251	35,090	31.00	0.14	0.92
Marathon Oil Corporation	MRO	B	77.00	367	28,260	86.00	0.18	0.91
Suncor Energy	SU	B	80.98	461	37,340	95.00	0.07	0.86
PetroChina Company Ltd (10%)	PTR	B	105.49	178	18,760	140.00	0.05	0.77
Lukoil Oil Company	LUKOY	B	80.00	830	66,000	110.00	0.02	0.73
<i>Total or Median</i>					<i>234,000</i>		<i>0.11</i>	<i>0.92</i>
Independent Natural Gas and Oil - Large Cap and Mid Cap								
Encana Corporation	ECA	B	50.58	865	43,800	55.00	0.13	0.93
XTO Energy Inc.	XTO	B	40.69	370	15,060	52.00	0.16	0.82
CNOOC Limited (29%)	CEO	B	74.73	119	8,910	98.00	-	0.76
Occidental Petroleum Corp.	OXY	B	97.40	431	42,000	138.00	0.11	0.74
EOG Resources	EOG	B	62.92	246	15,500	92.00	0.03	0.69
Anadarko Petroleum Corp.	APC	B	49.09	464	22,800	86.00	0.10	0.61
Devon Energy Corporation	DVN	B	56.08	449	25,200	102.00	0.11	0.60
<i>Total or Median</i>					<i>173,000</i>		<i>0.11</i>	<i>0.74</i>
Independent Natural Gas and Oil - Small Cap								
Berry Petroleum Company	BRY	B	30.74	45	1,380	39.00	0.17	0.82
Energy Partners Ltd.	EPL	B	20.33	40	820	32.00	0.19	0.71
Cimarex Energy Company	XEC	B	39.16	85	3,330	68.00	0.08	0.61
Encore Acquisition Company	EAC	B	25.91	54	1,390	54.00	0.25	0.61
<i>Total or Median</i>					<i>6,900</i>		<i>0.18</i>	<i>0.66</i>
Income								
Kinder Morgan Energy Partners, L.P.	KMP	S3	46.55	166	7,730	15.00	0.56	1.93
Kinder Morgan Management, LLC	KMR	S3	43.36	58	2,510	15.00	0.56	1.84
Enerplus Resources Fund	ERF		56.20	123	6,920	47.00	0.11	1.18
Pengrowth Energy Trust	PGH		23.49	161	3,780	20.00	0.15	1.15
Penn West Energy Trust (US\$)	PWTFF	B	39.99	244	9,750	39.00	0.12	1.02
San Juan Basin Royalty Trust	SJT	B	37.11	47	1,730	40.00	-	0.93
Canadian Oil Sands Trust (US\$)	COSWF	B	31.41	464	14,580	35.00	0.10	0.91
<i>Total or Median</i>					<i>47,000</i>		<i>0.12</i>	<i>1.15</i>

B = Buy, S2 = Short half unlevered position, S3 = Short quarter unlevered position, H = Hold
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) 5-Jun 2006	Adjstd Resrvs/ Prod NTM	PV/ Ebitda NTM	EV/ Ebitda NTM	P/E NTM	Divd or Distrib NTM (%)
Mega Cap								
Gazprom (50%)	OGZPY	B	43.80	20.0	9.2	7.3	12	0.5
BP plc	BP	B	70.82	9.3	6.2	5.6	9	3.2
Exxon Mobil Corporation	XOM	B	60.05	11.4	6.3	4.9	8	2.1
Total S.A.	TOT	B	64.79	9.4	5.8	4.8	8	3.2
Royal Dutch Shell plc	RDS-A	B	65.59	7.3	5.4	4.3	8	3.9
ConocoPhillips	COP	B	62.54	12.1	5.7	4.1	6	2.3
Chevron Corporation	CVX	B	59.35	11.0	5.3	3.8	6	3.5
		<i>Median</i>		<i>11.0</i>	<i>5.8</i>	<i>4.8</i>	<i>8</i>	<i>3.2</i>
Producer/Refiners - Large Cap and Mid Cap								
Kinder Morgan, Inc.	KMI	S2	101.00		8.6	13.0	20	3.5
Imperial Oil Limited (30%)	IMO	B	36.68	9.4	7.7	7.7	13	2.4
Suncor Energy	SU	B	80.98	18.2	8.3	7.2	13	0.3
Petro-Canada	PCZ	B	45.30	6.9	5.6	5.3	10	0.8
Norsk Hydro ASA	NHY	B	28.06	7.8	5.3	4.8	11	13.0
PetroChina Company Ltd (10%)	PTR	B	105.49	14.8	6.2	4.7	9	4.0
Marathon Oil Corporation	MRO	B	77.00	8.3	4.6	4.2	7	1.7
Lukoil Oil Company	LUKOY	B	80.00	19.0	5.7	4.2	6	1.5
		<i>Median</i>		<i>9.4</i>	<i>5.9</i>	<i>5.1</i>	<i>10</i>	<i>2.0</i>
Independent Natural Gas and Oil - Large Cap and Mid Cap								
XTO Energy Inc.	XTO	B	40.69	12.1	7.4	6.0	11	0.5
Encana Corporation	ECA	B	50.58	8.6	6.0	5.6	12	0.8
EOG Resources	EOG	B	62.92	9.6	6.7	4.7	10	0.4
Occidental Petroleum Corp.	OXY	B	97.40	10.4	5.8	4.3	7	1.5
Anadarko Petroleum Corp.	APC	B	49.09	12.4	6.9	4.3	7	1.5
Devon Energy Corporation	DVN	B	56.08	8.6	6.1	3.7	7	0.8
CNOOC Limited (29%)	CEO	B	74.73	10.0	4.4	3.4	6	3.4
		<i>Median</i>		<i>10.0</i>	<i>6.1</i>	<i>4.3</i>	<i>7</i>	<i>0.8</i>
Independent Natural Gas and Oil - Small Cap								
Berry Petroleum Company	BRY	B	30.74	10.5	6.7	5.5	17	2.0
Encore Acquisition Company	EAC	B	25.91	14.4	8.1	4.9	9	-
Cimarex Energy Company	XEC	B	39.16	7.2	5.7	3.5	7	0.4
Energy Partners Ltd.	EPL	B	20.33	5.0	3.9	2.8	11	-
		<i>Median</i>		<i>8.9</i>	<i>6.2</i>	<i>4.2</i>	<i>10</i>	<i>0.2</i>
Income								
Kinder Morgan Energy Partners, L.P.	KMP	S3	46.55		8.3	16.0	28	7.0
Kinder Morgan Management, LLC	KMR	S3	43.36		8.3	15.2	26	7.5
San Juan Basin Royalty Trust	SJT	B	37.11	13.5	10.7	9.9	11	8.9
Canadian Oil Sands Trust (US\$)	COSWF	B	31.41	25.1	10.9	9.9	13	6.0
Enerplus Resources Fund	ERF		56.20	9.4	7.0	8.3	16	8.1
Pengrowth Energy Trust	PGH		23.49	7.5	6.5	7.4	13	11.5
Penn West Energy Trust (US\$)	PWTFF	B	39.99	7.9	6.8	6.9	10	9.2
		<i>Median</i>		<i>9.4</i>	<i>8.3</i>	<i>9.9</i>	<i>13</i>	<i>8.1</i>

EV = Enterprise Value = Market Cap and Debt; Ebitda = Earnings before interest, tax, depreciation and amortization; NTM = Next Twelve Months Ended June 30, 2007; 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-May	KMx	Kinder Morgan	Buyout Bailout
29-May	COSWF	Canadian Oil Sands Trust	Minimal Startup Delay Assessed
26-May	EPL	Energy Partners, Ltd.	Offers to Buy Stone Energy
24-May	LUKOY	Lukoil Oil Company	Oil for Russia, Natural Gas for Export
19-May	COSWF	Canadian Oil Sands Trust	Expansion Startup Caution
18-May	OGZPF	Gazprom	Shtokman Delayed
16-May	OXY	Occidental Petroleum Corporation	Ecuador Expropriates
10-May	PWTFF	Penn West Energy Trust	Sleeping Seal
10-May	EPL	Energy Partners, Ltd.	Back on Track
10-May	BRY	Berry Petroleum	Debt for the Future
8-May	XEC	Cimarex Energy Company	Seasonality Exaggerated
8-May	EOG	EOG Resources Inc.	Seasonality Exaggerated
5-May	* SU	Suncor Energy Inc.	Retaking the Oil Sands Lead
5-May	* RDSA	Royal Dutch Shell plc	Tighter Markets and Cost Pressures
5-May	* TOT	Total S.A.	Spinoff and Split Ahead
3-May	* EAC	Encore Acquisition Company	Lower NPV to \$45 a Share
3-May	* DVN	Devon Energy Corporation	Barnett Bargain
3-May	* IMO	Imperial Oil Limited	Oil Sands and Arctic Natural Gas
1-May	* CVX	Chevron Corporation	India Opportunity, Venezuela Risk
28-Apr	* APC	Anadarko Petroleum Corporation	Large Cap Resource Target
28-Apr	* MRO	Marathon Oil Corporation	Oil Sands Link
28-Apr	* XOM	Exxon Mobil Corporation	Low Risk, High Return
28-Apr	* NHY	Norsk Hydro ASA	Earnings Blowout
27-Apr	* COP	ConocoPhillips	Strong Cash Flow and Value
27-Apr	* ECA	EnCana Corporation	Natural Gas at Present Value
26-Apr	* PCZ	Petro-Canada	Understated Oil Sands
26-Apr	* BP	BP p.l.c.	Understated Russian Resource
26-Apr	* CEO	CNOOC Ltd	Burst of Cash Flow
21-Apr	* XTO	XTO Energy Inc.	Distributing Royalty Trust Units
21-Mar	* PTR	PetroChina Company Limited	Growing Pains
20-Mar	* SJT	San Juan Basin Royalty Trust	Upgrade to Buy

Meter Reader - A Weekly Analysis

6-Jun		Raise Long-Term Oil Price to \$60 a Barrel
30-May	*	Downstream Design
23-May	*	Caracas USA
16-May	*	Natural Gas for Transportation

Natural Gas and Oil Royalty Trusts - A Weekly Analysis

2-Jun		Raise Long-Term Oil Price to \$60 a Barrel
26-May	*	Roll Forward
19-May	*	Buy Low
12-May	*	Hugoton Handover

Industry Ideas

15-Feb	*	Presentation Slides	Russian Natural Gas, Canadian Tar Sands
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