

Meter Reader

A Weekly Analysis of Energy Stocks Using the McDep Ratio

February 22, 2005

Wall of Worry

Summary and Recommendation

As more investors seem interested in buy-rated energy stocks, we reconsider the potential worries. World growth may stop, a large new supply of cheap, clean energy may be discovered, the dollar may become good as gold, inflation may end, environmental controls may end or the world may send more troops to the Middle East. Those worries, deliberately overstated by us, touch on the major economic, monetary, environmental and security factors that influence the outlook for energy investment. Weighing the positives and negatives every day in the futures market, commodity investors conclude increasingly that the average price of oil for the next six years will be higher than previously expected. Similarly we expect stock market investors to conclude increasingly that stock prices for recommended natural gas and oil producers should be higher than previously quoted.

Demand and Supply at Sharp Price Inflection

Energy demand and economic growth are linked. ExxonMobil Downstream Chief Edward Galante last week contrasted more rapid growth in developing countries with slower growth in developed countries. We believe in economic growth for billions of hard-working people who want a better life.

On the supply side, the world has reached the daily limits of conventional light, sweet oil production. There are vast quantities of stranded natural gas overseas to be liquefied, and oil sands to be refined in Canada as well as in Venezuela. With sufficient money, time and security, supply can be expanded.

Oil Possibly Better Than Money

The twin deficits, fiscal and trade, point to more dollar devaluation. Yet foreign central banks apparently support the currency by holding U.S. Treasury debt. Perhaps a better investment for those countries might be in oil and gas supply since the same countries that hold the largest amount of dollars are dependent upon energy imports.

Maybe low long-term interest rates are pointing to a world recession instead of simply being driven down by central bank reserves. In that event, oil and gas producers may not suffer as much as the economy in general because energy is still a vital commodity that we need every day. Moreover, the producers we recommend have little or no debt to leverage stock price downward and threaten financial failure in a recession.

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Environmental Tradeoffs May Stimulate Economic Activity

We believe every person should be able to use as much energy as he or she can afford subject to doing no unacceptable damage to the environment. The stricter we are in applying environmental standards within the bounds of political reason, the better natural gas and oil look as energy sources. Stated another way, as long as we use coal anywhere in the world, natural gas and oil looks cheap from an environmental point of view.

Nonetheless having grown up in a state without any natural gas or oil resources, we are sympathetic to the substitution of money and machinery to produce clean energy from less desirable raw material. We would put more of that effort into liquefied natural gas and more intensive refining of oil than in coal. Finally, an environmental investment boom could stimulate economic growth.

Let Peace Break Out

Did we go to war in Iraq for oil or democracy? Instead should President Bush take the passive approach of President Carter? As it turns out, the price of oil went up coincident with the policies of both presidents.

Consider an alternative idea that the too-low price of oil may be one of the issues that works against the U.S. in the Middle East. You could say that democratic consuming countries have supported dictatorships that helped keep the price of oil too low as long as possible. Resentment against the dictatorships may stem in part from a perception that the natural resources of the region are being exploited without fair compensation to the people that live in the region.

If we are at war in Iraq for democracy, as we hope is the case, will a democracy bring us cheap oil? It may in the sense that it may take less military spending to keep oil flowing. Otherwise, a democratic government may seek more compensation rather than less for its resource. Then it becomes a question of underlying market forces. There is a long-term price of oil that balances demand and supply. No one knows what that price is, but we think a price that rises at a fast, but reasonable, pace gets us there.

Continuous Analysis

There appears to be a strong trend of gradually rising long-term expectations in the oil futures market (see chart [Oil Six-Year Futures Strip and 40-Week Average](#)). The latest long-term quote is close to breaching the high of \$43.13 reached on October 25, 2004. The average oil price for the next six years in the futures market is \$42.91 a barrel (see chart [Latest Five Weekly Data Points and Trend](#)). A McDep Ratio of 1.0 implies a stock price consistent with \$40 oil constant real.

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A regular weekly table offers valuation perspective by the McDep Ratio that depends in part on our analysis of value (see table [Rank by McDep Ratio](#)). A second weekly table offers valuation perspective by the cash flow multiple without our interpretation (see table [Rank by EV/Ebitda](#)). By adding a column on adjusted reserve life we provide a clue to whether the cash flow multiple is at an appropriate level.

Besides the weekly *Meter Reader* we update most of our single stock analyses at least once a quarter (see [Index of Recent Research](#)). Also we have a weekly analysis of *U.S. Natural Gas Royalty Trusts* with related single trust analyses.

Growth with Inflation Protection and Deflation Resistance

Investment in oil and gas producers offers attractive growth, strong inflation protection and moderate deflation resistance. Growth of oil production may be reasonable while growth in financial value makes it more attractive. Inflation protection is oil's strong suit. For more deflation resistance, we like the addition of Treasury Inflation Protected Securities to natural gas and oil investments in a conservative portfolio.

One of the seldom mentioned features of TIPS is deflation resistance. The principal of TIPS cannot go down below face value. Newly issued TIPS, because they are priced near face value, offer the most deflation resistance.

While the inflation protection feature has worked partially, it only covers consumer price inflation. The popular CPI index has missed measuring asset inflation, and its measurement of consumer price has been dampened by quality and substitution adjustments. Nonetheless, we think that TIPS are still better than straight Treasury bonds in portfolio combination with natural gas and oil.

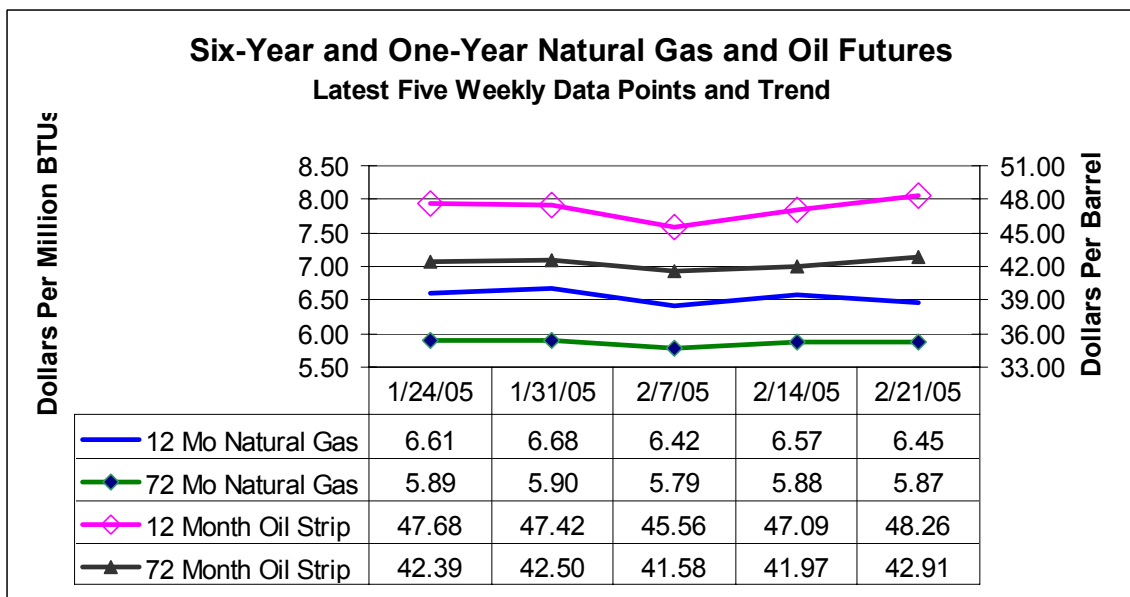
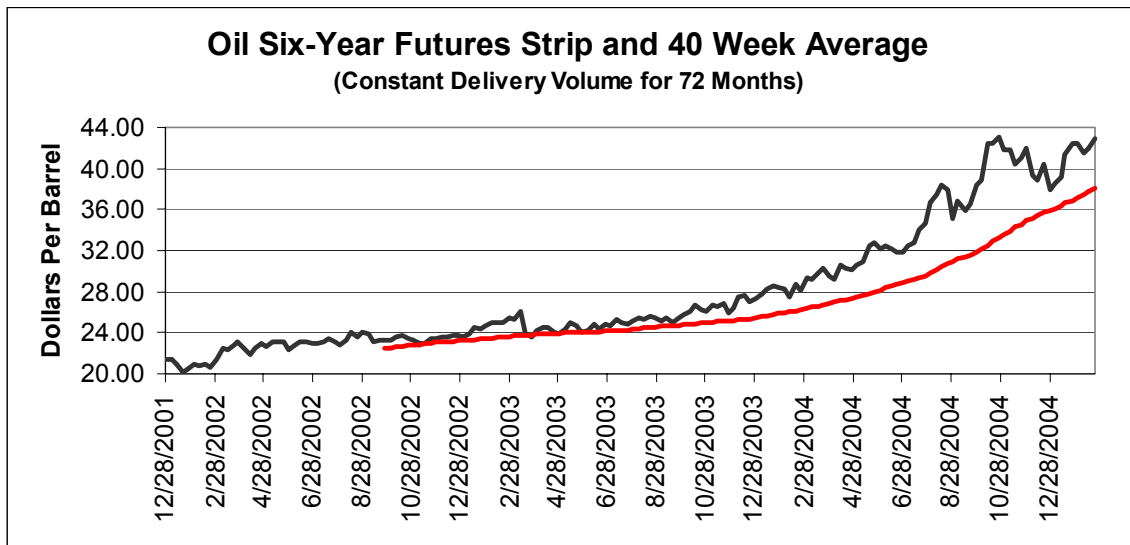
TIPS are best held in a tax-deferred or tax exempt account because the high rate of current income taxation applies to the inflation adjustment. I-Bonds, subject to a purchase limit of \$30,000 a year per person, require no payment of income tax until they are redeemed. Like the reverse of a fixed rate mortgage, individuals can keep the I-bonds if the thirty-year fixed real rate is advantageous and redeem them without penalty after an initial period if a better thirty-year fixed real rate is available.

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) 18-Feb 2005 | Shares (mm) | Market Cap (\$mm) | Net Present Value (\$/sh) | Debt/ Present Value | McDep Ratio |
|--|-------------------|----|------------------------------------|----------------|-------------------------|------------------------------------|---------------------------|----------------|
| Mega Cap | | | | | | | | |
| Exxon Mobil Corporation | XOM | B | 59.41 | 6,461 | 384,000 | 54.00 | 0.07 | 1.09 |
| Shell Transport and Trading Co. plc | SC | B | 55.76 | 1,587 | 89,000 | 55.90 | 0.16 | 1.00 |
| BP plc | BP | B | 63.20 | 3,601 | 228,000 | 64.00 | 0.12 | 0.99 |
| Total S.A. | TOT | B | 115.35 | 1,228 | 142,000 | 120.00 | 0.16 | 0.97 |
| Royal Dutch Petroleum | RD | B | 61.68 | 2,016 | 124,000 | 66.00 | 0.16 | 0.94 |
| ChevronTexaco Corporation | CVX | B | 59.73 | 2,123 | 127,000 | 76.00 | 0.10 | 0.81 |
| <i>Total or Median</i> | | | | | <i>1,094,000</i> | | <i>0.14</i> | <i>0.98</i> |
| Producer/Refiners - Large Cap and Mid Cap | | | | | | | | |
| Kinder Morgan, Inc. | KMI | S2 | 78.45 | 125 | 9,810 | 20.00 | 0.74 | 1.77 |
| Imperial Oil Limited (30%) | IMO | B | 68.90 | 105 | 7,270 | 64.00 | 0.11 | 1.07 |
| Marathon Oil Corporation | MRO | B | 44.53 | 347 | 15,470 | 42.00 | 0.30 | 1.04 |
| ConocoPhillips | COP | B | 106.25 | 706 | 75,000 | 128.00 | 0.22 | 0.87 |
| Norsk Hydro ASA | NHY | B | 82.61 | 254 | 20,990 | 101.00 | 0.16 | 0.85 |
| Petro-Canada | PCZ | B | 55.34 | 264 | 14,620 | 70.00 | 0.17 | 0.83 |
| Suncor Energy | SU | B | 38.01 | 460 | 17,480 | 54.00 | 0.09 | 0.73 |
| PetroChina Company Ltd (10%) | PTR | B | 59.90 | 176 | 10,530 | 94.00 | 0.05 | 0.65 |
| Lukoil Oil Company | LUKOY | B | 130.25 | 209 | 27,000 | 208.00 | 0.03 | 0.64 |
| <i>Total or Median</i> | | | | | <i>198,000</i> | | <i>0.16</i> | <i>0.85</i> |
| Independent Natural Gas and Oil - Large Cap and Mid Cap | | | | | | | | |
| XTO Energy Inc. | XTO | B | 41.68 | 280 | 11,670 | 45.00 | 0.16 | 0.94 |
| Encana Corporation | ECA | B | 63.50 | 472 | 30,000 | 77.00 | 0.18 | 0.86 |
| Unocal Corporation | UCL | B | 52.30 | 271 | 14,200 | 65.00 | 0.21 | 0.85 |
| CNOOC Limited (19%) | CEO | B | 55.04 | 78 | 4,300 | 67.00 | - | 0.82 |
| Occidental Petroleum Corp. | OXY | B | 67.87 | 406 | 27,600 | 87.00 | 0.15 | 0.81 |
| Burlington Resources | BR | B | 48.28 | 391 | 18,900 | 67.00 | 0.12 | 0.75 |
| Devon Energy Corporation | DVN | B | 43.62 | 500 | 21,800 | 63.00 | 0.16 | 0.74 |
| Anadarko Petroleum Corp. | APC | B | 70.25 | 246 | 17,300 | 113.00 | 0.14 | 0.67 |
| <i>Total or Median</i> | | | | | <i>146,000</i> | | <i>0.15</i> | <i>0.82</i> |
| Independent Natural Gas and Oil - Small Cap | | | | | | | | |
| Berry Petroleum Company | BRY | B | 56.35 | 22 | 1,260 | 50.00 | 0.05 | 1.12 |
| Energy Partners Ltd. | EPL | B | 24.54 | 39 | 970 | 24.00 | 0.24 | 1.02 |
| Cimarex Energy Company | XEC | B | 37.84 | 43 | 1,620 | 44.00 | 0.00 | 0.86 |
| Encore Acquisition Company | EAC | B | 39.04 | 33 | 1,270 | 57.00 | 0.19 | 0.74 |
| <i>Total or Median</i> | | | | | <i>5,100</i> | | <i>0.12</i> | <i>0.94</i> |
| Income | | | | | | | | |
| Kinder Morgan Energy Partners, L.P. | KMP | S3 | 46.31 | 150 | 6,950 | 15.00 | 0.52 | 2.01 |
| Kinder Morgan Management, LLC | KMR | S3 | 42.25 | 56 | 2,380 | 15.00 | 0.52 | 1.88 |
| Pengrowth Energy Trust | PGH | | 22.23 | 136 | 3,020 | 16.00 | 0.24 | 1.30 |
| Enerplus Resources Fund | ERF | | 37.92 | 104 | 3,940 | 32.00 | 0.16 | 1.15 |
| San Juan Basin Royalty Trust | SJT | | 34.70 | 47 | 1,620 | 30.00 | - | 1.16 |
| Canadian Oil Sands Trust (US\$) | COSWF | B | 64.10 | 91 | 5,850 | 94.00 | 0.15 | 0.73 |
| <i>Total or Median</i> | | | | | <i>23,800</i> | | <i>0.20</i> | <i>1.23</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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Oil and Gas Producers

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

| | Symbol/ Rating | | Price (\$/sh) 18-Feb 2005 | Adjstd Resrvs/ Prod NTM | PV/ Ebitda NTM | EV/ Ebitda NTM | P/E NTM | Divd or Distrib NTM (%) |
|--|-------------------|----|------------------------------------|----------------------------------|----------------------|----------------------|------------|----------------------------------|
| Mega Cap | | | | | | | | |
| Exxon Mobil Corporation | XOM | B | 59.41 | 11.2 | 6.7 | 7.3 | 13 | 1.8 |
| BP plc | BP | B | 63.20 | 9.4 | 6.6 | 6.5 | 13 | 3.2 |
| Total S.A. | TOT | B | 115.35 | 9.6 | 6.6 | 6.4 | 11 | 2.7 |
| ChevronTexaco Corporation | CVX | B | 59.73 | 11.7 | 7.5 | 6.1 | 11 | 2.7 |
| Shell Transport and Trading Co. plc | SC | B | 55.76 | 7.6 | 5.6 | 5.6 | 12 | 3.6 |
| Royal Dutch Petroleum | RD | B | 61.68 | 7.6 | 5.6 | 5.3 | 11 | 3.8 |
| | <i>Median</i> | | | 9.5 | 6.6 | 6.2 | 12 | 3.0 |
| Producer/Refiners - Large Cap and Mid Cap | | | | | | | | |
| Kinder Morgan, Inc. | KMI | S2 | 78.45 | | 7.5 | 13.3 | 17 | 3.6 |
| Imperial Oil Limited (30%) | IMO | B | 68.90 | 10.6 | 7.3 | 7.8 | 14 | 1.0 |
| Suncor Energy | SU | B | 38.01 | 18.4 | 9.9 | 7.2 | 16 | 0.5 |
| Marathon Oil Corporation | MRO | B | 44.53 | 7.9 | 5.9 | 6.1 | 12 | 2.5 |
| Petro-Canada | PCZ | B | 55.34 | 7.6 | 6.1 | 5.0 | 10 | 0.9 |
| Norsk Hydro ASA | NHY | B | 82.61 | 8.9 | 5.6 | 4.8 | 12 | 2.1 |
| ConocoPhillips | COP | B | 106.25 | 10.5 | 5.3 | 4.6 | 7 | 1.6 |
| PetroChina Company Ltd (10%) | PTR | B | 59.90 | 13.3 | 6.6 | 4.3 | 9 | 3.9 |
| Lukoil Oil Company | LUKOY | B | 130.25 | 12.2 | 4.5 | 2.9 | 5 | 2.6 |
| | <i>Median</i> | | | 10.5 | 6.1 | 5.0 | 12 | 2.1 |
| Independent Natural Gas and Oil - Large Cap and Mid Cap | | | | | | | | |
| XTO Energy Inc. | XTO | B | 41.68 | 11.6 | 7.4 | 7.0 | 14 | 0.5 |
| Burlington Resources | BR | B | 48.28 | 9.8 | 7.1 | 5.3 | 13 | 0.7 |
| Occidental Petroleum Corp. | OXY | B | 67.87 | 11.3 | 6.4 | 5.2 | 9 | 1.6 |
| Unocal Corporation | UCL | B | 52.30 | 8.5 | 5.5 | 4.7 | 10 | 1.5 |
| Encana Corporation | ECA | B | 63.50 | 6.8 | 5.4 | 4.7 | 11 | 0.6 |
| CNOOC Limited (19%) | CEO | B | 55.04 | 9.6 | 5.6 | 4.6 | 8 | 3.3 |
| Anadarko Petroleum Corp. | APC | B | 70.25 | 11.9 | 6.8 | 4.6 | 9 | 1.0 |
| Devon Energy Corporation | DVN | B | 43.62 | 7.9 | 5.9 | 4.3 | 11 | 0.9 |
| | <i>Median</i> | | | 9.7 | 6.1 | 4.7 | 11 | 1.0 |
| Independent Natural Gas and Oil - Small Cap | | | | | | | | |
| Berry Petroleum Company | BRY | B | 56.35 | 11.9 | 6.1 | 6.8 | 16 | 0.9 |
| Encore Acquisition Company | EAC | B | 39.04 | 15.6 | 8.0 | 5.9 | 13 | - |
| Energy Partners Ltd. | EPL | B | 24.54 | 5.3 | 4.0 | 4.0 | 15 | - |
| Cimarex Energy Company | XEC | B | 37.84 | 5.2 | 4.7 | 4.0 | 11 | - |
| | <i>Median</i> | | | 8.6 | 5.4 | 5.0 | 14 | - |
| Income | | | | | | | | |
| Kinder Morgan Energy Partners, L.P. | KMP | S3 | 46.31 | | 7.6 | 15.4 | 20 | 6.3 |
| Kinder Morgan Management, LLC | KMR | S3 | 42.25 | | 7.6 | 14.3 | 18 | 6.9 |
| San Juan Basin Royalty Trust | SJT | | 34.70 | 12.5 | 9.9 | 11.4 | 13 | 7.7 |
| Canadian Oil Sands Trust (US\$) | COSWF | B | 64.10 | 20.0 | 10.8 | 7.9 | 9 | 2.5 |
| Enerplus Resources Fund | ERF | | 37.92 | 8.3 | 6.8 | 7.8 | 18 | 9.0 |
| Pengrowth Energy Trust | PGH | | 22.23 | 7.9 | 6.0 | 7.7 | 15 | 10.1 |
| | <i>Median</i> | | | 10.4 | 7.6 | 9.7 | 16 | 7.3 |

EV = Enterprise Value = Market Cap and Debt; Ebitda = Earnings before interest, tax, depreciation and amortization; NTM = Next Twelve Months Ended March 31, 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

| <i>Date</i> | <i>Symbol</i> | <i>Stock</i> | <i>Theme</i> |
|-------------|---------------|---|---|
| 18-Feb | EAC | Encore Acquisition Company | Raise Net Present Value to \$57 a Share |
| 17-Feb | APC | Anadarko Petroleum Corporation | Raise Net Present Value to \$113 a Share |
| 17-Feb | XTO | XTO Energy Inc. | Raise Net Present Value to \$45 a Share |
| 14-Feb | TOT | Total S.A. | Raise Net Present Value to \$120 a Share |
| 10-Feb | UCL | Unocal Corporation | Raise Net Present Value to \$65 a Share |
| 9-Feb | EPL | Energy Partners, Ltd. | South Timbalier Thrill |
| 7-Feb | IMO | Imperial Oil Limited | Raise Net Present Value to US\$64 a Share |
| 7-Feb | DVN | Devon Energy Corporation | Raise Net Present Value to \$63 a Share |
| 7-Feb | BRY | Berry Petroleum Company | A Touch of Glamour |
| 3-Feb | SJT | San Juan Basin Royalty Trust | Real Value with Income |
| 1-Feb | PCZ | Petro-Canada | Raise Net Present Value to US\$70 a Share |
| 31-Jan | XOM | Exxon Mobil Corporation | Raise Net Present Value to \$54 a Share |
| 31-Jan | COSWF | Canadian Oil Sands Trust | Raise Net Present Value to US\$94 a Share |
| 31-Jan | MRO | Marathon Oil Corporation | Raise Net Present Value to \$42 a Share |
| 26-Jan | XEC | Cimarex Energy Company | Magnum Hunter Acquisition Adds Value |
| 26-Jan | OXY | Occidental Petroleum Corporation | Raise Net Present Value to \$87 a Share |
| 25-Jan | ECA | EnCana Corporation | Raise Net Present Value to US\$77 a Share |
| 19-Jan | * KMP | Kinder Morgan Energy Partners, L.P. | Energy Houdini |
| 19-Jan | * KMI | Kinder Morgan Inc. | Energy Houdini |
| 19-Jan | * KMR | Kinder Morgan Management, LLC | Energy Houdini |
| 13-Jan | * NHY | Norsk Hydro ASA | Oil, Natural Gas and Aluminum |
| 12-Jan | * LUKOY | Lukoil Oil Company | Profits Advance |
| 7-Jan | * BR | Burlington Resources, Inc. | Royalty Trust Candidate |
| 29-Dec | * LUKOY | Lukoil Oil Company | After Yukos |
| 29-Dec | * CEO | CNOOC Ltd | Natural Gas Progress |
| 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 | * COP | ConocoPhillips | Connecting with Lukoil |
| 29-Nov | * XEC | Cimarex Energy Company | Timely Talent |

Meter Reader - A Weekly Analysis

| | | |
|--------|---|---|
| 15-Feb | | Just Buy |
| 8-Feb | * | Happy Birthday to Meter Reader |
| 1-Feb | * | Downstream Compensation |
| 25-Jan | * | Raise Present Value to \$40 Oil Constant Real |

* Archived on www.mcdep.com

Also see

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

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