

Meter Reader

A Weekly Analysis of Energy Stocks Using the McDep Ratio

March 13, 2003

Buy a Mid Cap Natural Gas and Oil Producer

Summary and Recommendation

Among 8 mid cap natural gas and oil producers, recommended overseas stocks, **PetroChina (PTR)** and **CNOOC Limited (CEO)** and a recommended U.S. natural gas stock, **XTO Energy (XTO)** offer low McDep Ratios, low or moderate debt, and long life. Applying the same updating to mid cap producers that we applied a week ago to small caps, we raise our estimate of present value as much as 29% on a levered basis and an average of about 10% on an unlevered basis. In uncertain times we are paying close attention to trends in the bond market, particularly for the new class of Treasury Inflation Protected Securities (TIPS). A steeply declining trend in real yield seems to point to difficult business conditions and more inflation than appears to be widely acknowledged. We believe that our recommended energy stocks can perform positively in that case. Buy and sell recommendations are ranked in our regular format (see Table 1-1, 1-2, 2-1, 2-2, 3-1, 3-2).

Hot TIPS

Treasury Inflation Protection Securities are climbing to new highs in price and falling to new lows in real yield almost daily for most of the past year. The economic implications may be pleasant or unpleasant depending on how one is positioned. At the same time the trend of the recent past may not be the trend of the near future. Nonetheless the trend is proceeding quite strongly currently (see Chart). As an example of the return delivered by the lowest risk investment security we know, the Ten-Year Inflation Indexed Note (TIIN) auctioned by the Treasury near a price of 100 two years ago with a 3.5% real yield is now priced at about 115. That price has to be further multiplied by the consumer price index increase since then which takes the adjusted price to almost 120. Interest payments have exceeded 7% since then for a cumulative total return of 27% in little more than two years.

Have TIPS been so hot they have to cool off? Perhaps. Even so the trend may continue. We think that over the next few years we may see the real yield go negative and stay negative for a while. Our historical analysis of a few weeks ago suggests that that happened both in the decade after 1929 and the decade after 1966, the two previous stock market peaks comparable to 2000 (see *Meter Reader*, February 13, 2003).

A negative real yield is already the case for shorter maturities. We have no quote for three months inflation expectations, but the consumer price index was up 2.6% in January

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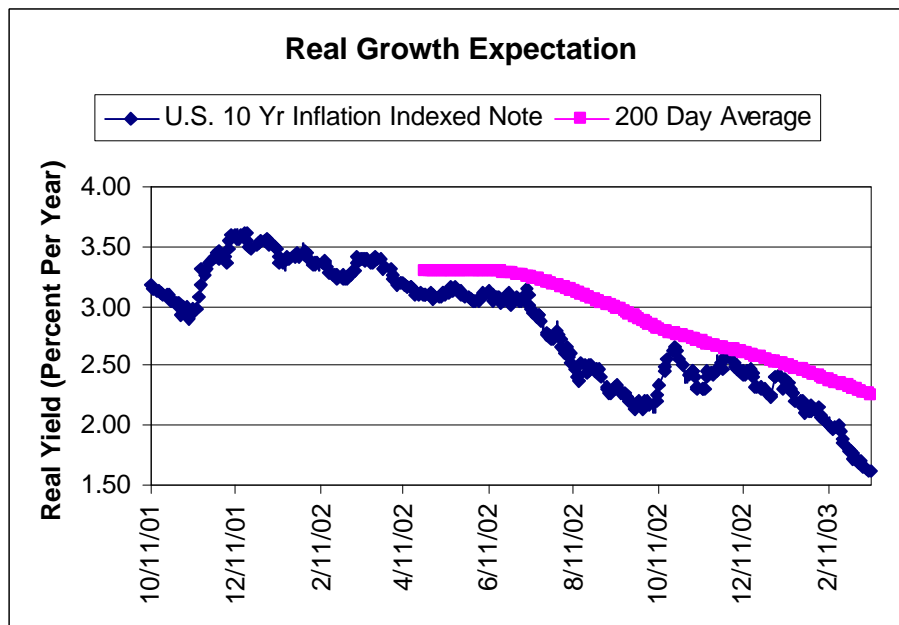
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over the previous year. Compare that to the three months Treasury bill yield of 1.1% and we see that the short-term real yield is a negative 1.5% per year.

The real yield on the TIIN that matures four years from now has dropped to less than 0.4%. The implicit zero real yield crossover point has probably reached three years and may be on trend to surpass ten years.



A negative real yield ahead implies more profits on TIPS and by extension, we believe, energy producer stocks. Natural gas and oil production is one of the most attractive industries in which to earn a real return in tough times, in our opinion.

Scary Treasury Note

Though it looked like the yield on the Ten-Year Treasury Note (TN) was leveling out it has instead confirmed its falling trend with a new low in recent days (see Chart). The trend is scary because we have to go back the 1930s to find a time when interest rates were this low and falling. The implication is that economic activity is collapsing. Activity may not actually collapse because the Federal government will likely intensify its attempts at monetary and fiscal stimulus.

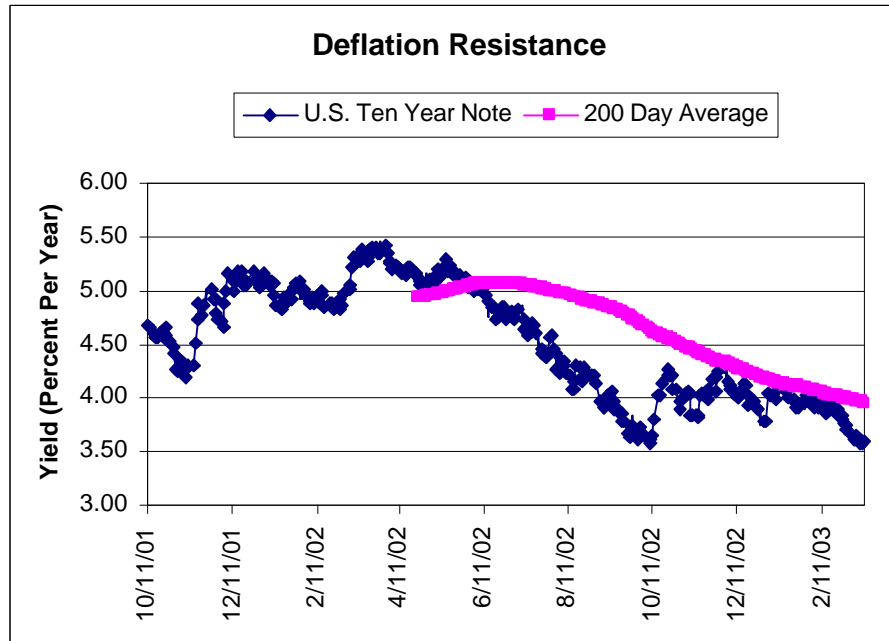
The downtrend in TN yield does not appear to be as strong as the downtrend in TIIN real yield. The equivalent TN yield went to near 1% per year in the 1930s and is apparently near zero in Japan today. The TN yield is unlikely to become negative, as might be the case for the TIIN real yield.

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Recently declining TN yields imply high risks for stocks with high debt as in the energy infrastructure field. Already half of the 12 infrastructure stocks in our mid cap coverage have essentially failed as evidenced by high ratios of debt and single digit stock prices (see Table M-1, M-2). The risks are especially high for the remaining issues where valuation is high along with debt and where management appears to have resorted to deception to disguise its true financial picture.

Inflation Amidst Deflation

Inflation is benign, isn't it? Perhaps. In a low return environment, even the 2.6% per year increase in the CPI in January is hardly benign. Average inflation for the past 90 years is over 3% per year. Periods of higher rates of inflation followed the government stimulus administered after the stock market peaks in 1929 and 1966. We are not into high rates yet after the historic stock market peak of 2000, but it is not too soon to prepare for it. Bond investors seem to see inflation coming as evidenced by the difference between the nominal yield on TN and the real yield on TIIN (see chart).

Market expectations of about 2% per year inflation are still quite low in historical context. Ten-year forward inflation peaked at about 6% per year a decade after 1929 and at 9% per year less than a decade after 1966. The decade following 2000 seems likely to be a period of rising forward inflation expectations. The real yield on TIPS and I-bonds

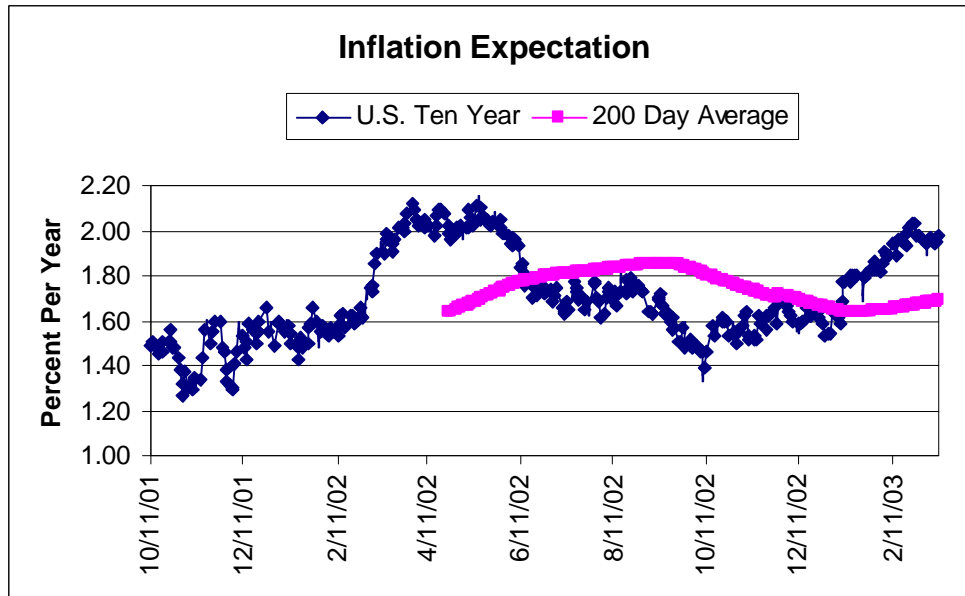
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protects against inflation. We think energy producer investments can provide similar protection and potentially a higher real return.



XTO Energy “Knocking the Cover Off the Ball”

That was the response we got from a buy-side energy analyst when we brought up the name of our recommended mid cap natural gas producer. Applying the approach described last week for small cap producers we raise our estimate of present value per share of XTO by 23% to \$32 per share from \$26.

CNOOC Buying Stake in World’s Largest Recent Oil Discovery

Our recommended Chinese producer, CEO, diversifies further outside China with an attempted purchase of 8.33% of the Kashagan field in the Caspian Sea where reserves may be 13 billion barrels. The \$615 million purchase is subject to being matched by one or more of the existing owners that include recommended **Royal Dutch (RD)** (16.67%) and recommended **ConocoPhillips (COP)** (8.33%).

Giant fields are the choicest assets in energy. Long life assets are likely to be particularly valuable as the world may move into a more inflationary environment eventually. The main offset is that the Kazakhstan government has negotiated a larger than normal share of the economic reward because the field is so large.

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We raise our present value per share of CEO by 6% to \$35 per share from \$33 per share. The new estimate of present value is little more than 5 times cash flow.

PetroChina (PTR) Reaping Potentially Large Cash Flows

We raise our present value per share of our recommended Chinese integrated producer by 10% to \$33 per share from \$30 per share. The new estimate of present value is only 3.5 times cash flow. That is such a low multiple that our cash flow estimate could be wide of the mark and the stock would still look undervalued. Or, the company could be under undisclosed political pressure to make some investments it would otherwise not make and there would still be value left over for investors.

Our main interest in PTR is to participate in the conversion of the Chinese economy to natural gas such as occurred in the U.S. 40 to 60 years ago and in Europe 20 to 40 years ago. At the same time China's economic growth remains strong and its use of oil products supplied by PetroChina and others is growing rapidly as well.

Our cash flow estimates take financial results of last year as a base and project results for the next twelve months ending June 30, 2004 using futures prices for crude oil and refined products. While a lot could happen that would cause those results not to materialize, we think the rationale has been borne out so far. There are many hard working people in China who want a better life and we are hopeful that investors who provide capital to Chinese companies will get a reasonable share of the benefits to all.

Canadian Mid Cap Producers Doing Well

Life is good for well-managed **Petro-Canada (PCZ)**, **Suncor (SU)** and **Imperial Oil (IMO)**. We boost estimates of present value per share 23%, 29% and 9% respectively. The companies share exposure to long life oil resources in a safe country. PCZ's earlier acquisition of international resources from the German company, Veba, also appears to have been timely. SU is a corporate equivalent of our recommended **Canadian Oil Sands Trust (COS_u.TO)** and in fact was the pioneer in what is now a profitable business and important supplier to the U.S. IMO is the well-oiled **ExxonMobil (XOM)** affiliate that has been a money machine for a long time providing reliable energy for North America. IMO and PCZ are partners of COS in the Syncrude oil sands project.

Kurt H. Wulff, CFA

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Table L-1
Mega Cap and Large Cap Energy Companies
Rank by McDep Ratio: Market Cap and Debt to Present Value

| | Symbol/ Rating | Price (\$/sh) 12-Mar 2003 | Shares (mm) | Market Cap (\$mm) | Net Present Value (\$/sh) | Debt/ Present Value | McDep Ratio |
|----------------------------------|------------------------|------------------------------------|----------------|-------------------------|------------------------------------|---------------------------|----------------|
| Mega Cap | | | | | | | |
| Exxon Mobil Corporation | XOM | 34.06 | 6,787 | 231,000 | 37.00 | 0.09 | 0.93 |
| BP plc | BP | 37.25 | 3,735 | 139,000 | 52.00 | 0.14 | 0.76 |
| TotalFinaElf S.A. | TOT | 61.92 | 1,317 | 81,500 | 90.00 | 0.15 | 0.74 |
| Royal Dutch/Shell | RD B | 37.50 | 3,473 | 130,000 | 60.00 | 0.18 | 0.69 |
| ChevronTexaco Corporation | CVX B | 63.00 | 1,062 | 66,900 | 101.00 | 0.17 | 0.69 |
| | <i>Total or Median</i> | | | 648,000 | | 0.15 | 0.74 |
| Energy Infrastructure | | | | | | | |
| Southern Company | SO | 28.32 | 701 | 19,900 | 23.90 | 0.47 | 1.10 |
| Duke Energy Corporation | DUK | 13.25 | 822 | 10,900 | 15.00 | 0.73 | 0.97 |
| American Electric Power Co. Inc. | AEP N | 21.51 | 326 | 7,000 | 27.40 | 0.74 | 0.94 |
| Enel S.p.a. (32%) | EN | 27.76 | 388 | 10,800 | 32.70 | 0.39 | 0.91 |
| Dominion Resources | D | 54.16 | 269 | 14,600 | 76.20 | 0.45 | 0.84 |
| Exelon Corporation | EXC N | 48.05 | 323 | 15,500 | 70.80 | 0.45 | 0.82 |
| El Paso Corporation | EP N | 4.36 | 590 | 2,600 | 20.00 | 0.66 | 0.73 |
| | <i>Total or Median</i> | | | 61,000 | | 0.56 | 0.88 |
| Natural Gas and Oil | | | | | | | |
| Encana Corporation | ECA B | 32.95 | 470 | 15,500 | 38.00 | 0.27 | 0.90 |
| Occidental Petroleum Corp. | OXY | 29.31 | 380 | 11,200 | 35.00 | 0.36 | 0.90 |
| AOO Lukoil | LUKOY | 60.75 | 299 | 18,200 | 70.00 | 0.08 | 0.88 |
| Devon Energy | DVN | 48.79 | 163 | 8,000 | 65.00 | 0.42 | 0.86 |
| Burlington Resources | BR B | 46.56 | 202 | 9,400 | 60.00 | 0.26 | 0.83 |
| Anadarko Petroleum Corp. | APC | 43.83 | 258 | 11,300 | 60.00 | 0.25 | 0.80 |
| ConocoPhillips | COP B | 49.72 | 680 | 33,800 | 75.00 | 0.36 | 0.79 |
| ENI S.p.A. | E | 66.19 | 776 | 51,400 | 90.00 | 0.17 | 0.78 |
| Unocal Corporation | UCL | 25.23 | 245 | 6,200 | 40.00 | 0.37 | 0.77 |
| Marathon Oil Corporation | MRO B | 22.48 | 310 | 7,000 | 40.00 | 0.37 | 0.72 |
| Petroleo Brasileiro S. A. | PBR N | 14.76 | 1,086 | 16,000 | 30.00 | 0.27 | 0.63 |
| | <i>Total or Median</i> | | | 173,000 | | 0.32 | 0.79 |
| Service | | | | | | | |
| Baker Hughes Inc. | BHI | 28.53 | 339 | 9,700 | 25.00 | 0.09 | 1.13 |
| Halliburton Company | HAL | 19.20 | 434 | 8,300 | 22.00 | 0.25 | 0.90 |
| Schlumberger Ltd. | SLB | 37.50 | 581 | 21,800 | 44.00 | 0.22 | 0.88 |

Buy/Sell rating after symbol: B - Buy, N - Neutral, S - Sell

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

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Table L-2
Mega Cap and Large Cap Energy Companies
Rank by EV/Ebitda: Enterprise Value to Earnings Before Interest, Tax, Deprec.

| | Symbol/ Rating | Price (\$/sh) 12-Mar 2003 | EV/ Sales NTM | EV/ Ebitda NTM | P/E NTM | Dividend or Distribution NTM (%) | PV/ Ebitda NTM | |
|----------------------------------|-------------------|------------------------------------|---------------------|----------------------|------------|---|----------------------|------|
| Mega Cap | | | | | | | | |
| Exxon Mobil Corporation | XOM | 34.06 | 1.2 | 8.2 | 17 | 2.7 | 8.9 | |
| BP plc | BP | 37.25 | 0.9 | 6.5 | 14 | 3.9 | 8.6 | |
| ChevronTexaco Corporation | CVX | B | 63.00 | 0.9 | 5.7 | 12 | 4.4 | 8.2 |
| Royal Dutch/Shell | RD | B | 37.50 | 0.9 | 5.4 | 10 | 5.0 | 7.8 |
| TotalFinaElf S.A. | TOT | | 61.92 | 1.0 | 5.3 | 11 | 4.9 | 7.3 |
| | <i>Median</i> | | | 0.9 | 5.7 | 12 | 4.4 | 8.2 |
| Energy Infrastructure | | | | | | | | |
| Southern Company | SO | | 28.32 | 3.4 | 9.9 | 16 | 4.7 | 9.0 |
| Duke Energy Corporation | DUK | | 13.25 | 2.3 | 9.3 | 9 | 8.3 | 9.6 |
| American Electric Power Co. Inc. | AEP | N | 21.51 | 0.5 | 8.5 | 7 | 11.2 | 9.0 |
| Enel S.p.a. (32%) | EN | | 27.76 | 2.2 | 8.2 | 34 | 5.8 | 9.0 |
| Dominion Resources | D | | 54.16 | 3.2 | 7.6 | 11 | 4.8 | 9.0 |
| Exelon Corporation | EXC | N | 48.05 | 2.2 | 7.4 | 11 | 3.7 | 9.0 |
| El Paso Corporation | EP | N | 4.36 | 2.1 | 5.6 | 2 | 20.0 | 7.7 |
| | <i>Median</i> | | | 2.2 | 8.2 | 11 | 5.8 | 9.0 |
| Natural Gas and Oil | | | | | | | | |
| ConocoPhillips | COP | B | 49.72 | 0.7 | 5.8 | 9 | 3.2 | 7.4 |
| ENI S.p.A. | E | | 66.19 | 1.4 | 5.2 | 10 | 5.6 | 6.7 |
| Encana Corporation | ECA | B | 32.95 | 2.2 | 5.1 | 10 | 0.8 | 5.7 |
| Burlington Resources | BR | B | 46.56 | 3.6 | 4.9 | 10 | 1.2 | 5.8 |
| Anadarko Petroleum Corp. | APC | | 43.83 | 3.4 | 4.8 | 8 | 0.9 | 6.0 |
| Occidental Petroleum Corp. | OXY | | 29.31 | 2.2 | 4.6 | 6 | 3.5 | 5.1 |
| Marathon Oil Corporation | MRO | B | 22.48 | 0.4 | 4.3 | 7 | 4.1 | 6.0 |
| Unocal Corporation | UCL | | 25.23 | 2.0 | 4.1 | 7 | 3.2 | 5.4 |
| Devon Energy | DVN | | 48.79 | 2.7 | 4.1 | 6 | - | 4.8 |
| OAOLukoil | LUKOY | | 60.75 | 1.6 | 3.6 | 7 | 1.8 | 4.1 |
| Petroleo Brasileiro S. A. | PBR | N | 14.76 | 1.3 | 3.1 | 4 | 9.2 | 4.9 |
| | <i>Median</i> | | | 2.0 | 4.6 | 7 | 3.2 | 5.7 |
| Service | | | | | | | | |
| Baker Hughes Inc. | BHI | | 28.53 | 2.0 | 12.2 | 34 | 1.6 | 10.8 |
| Halliburton Company | HAL | | 19.20 | 1.0 | 8.1 | 17 | 2.6 | 9.0 |
| Schlumberger Ltd. | SLB | | 37.50 | 2.1 | 7.9 | 28 | 2.0 | 8.9 |

EV = Enterprise Value = Market Cap and Debt; Ebitda = Earnings before interest, tax, depreciation and amortization; NTM = Next Twelve Months Ended March 31, 2004; P/E = Stock Price to Earnings; PV = Present Value of oil and gas and other businesses

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|--|---------------------------|--|------------------------|----------------------------------|--|------------------------------------|------------------------|
| Energy Infrastructure | | | | | | | |
| <i>Kinder Morgan Energy Partners, L.P.</i> | <i>KMP S</i> | <i>36.18</i> | <i>141</i> | <i>5,100</i> | <i>14.00</i> | <i>0.47</i> | <i>1.83</i> |
| <i>Kinder Morgan Management, LLC</i> | <i>KMR S</i> | <i>32.00</i> | <i>40</i> | <i>1,300</i> | <i>14.00</i> | <i>0.47</i> | <i>1.67</i> |
| <i>Kinder Morgan, Inc.</i> | <i>KMI S</i> | <i>43.05</i> | <i>123</i> | <i>5,300</i> | <i>14.00</i> | <i>0.80</i> | <i>1.41</i> |
| <i>Constellation Energy Group</i> | <i>CEG</i> | <i>26.07</i> | <i>164</i> | <i>4,300</i> | <i>20.00</i> | <i>0.69</i> | <i>1.10</i> |
| <i>Williams Companies</i> | <i>WMB</i> | <i>3.68</i> | <i>521</i> | <i>1,900</i> | <i>1.00</i> | <i>0.97</i> | <i>1.07</i> |
| <i>Dynegy Inc.</i> | <i>DYN</i> | <i>2.13</i> | <i>418</i> | <i>900</i> | <i>1.00</i> | <i>0.94</i> | <i>1.07</i> |
| <i>AES Corporation</i> | <i>AES</i> | <i>3.00</i> | <i>543</i> | <i>1,600</i> | <i>1.00</i> | <i>0.98</i> | <i>1.05</i> |
| <i>Calpine Corporation</i> | <i>CPN N</i> | <i>2.55</i> | <i>375</i> | <i>1,000</i> | <i>1.00</i> | <i>0.97</i> | <i>1.04</i> |
| <i>Sempra Energy</i> | <i>SRE</i> | <i>22.57</i> | <i>207</i> | <i>4,700</i> | <i>24.30</i> | <i>0.64</i> | <i>0.98</i> |
| <i>CMS Energy Corporation</i> | <i>CMS</i> | <i>3.56</i> | <i>137</i> | <i>500</i> | <i>8.70</i> | <i>0.90</i> | <i>0.94</i> |
| <i>Mirant Corporation</i> | <i>MIR</i> | <i>1.19</i> | <i>413</i> | <i>500</i> | <i>4.00</i> | <i>0.86</i> | <i>0.90</i> |
| <i>Valero Energy Corporation</i> | <i>VLO</i> | <i>39.85</i> | <i>114</i> | <i>4,500</i> | <i>50.00</i> | <i>0.50</i> | <i>0.90</i> |
| <i>Total or Median</i> | | | | <i>31,600</i> | | <i>0.83</i> | <i>1.06</i> |
| Natural Gas and Oil | | | | | | | |
| <i>Murphy Oil Corporation</i> | <i>MUR</i> | <i>41.70</i> | <i>93</i> | <i>3,900</i> | <i>41.00</i> | <i>0.24</i> | <i>1.01</i> |
| <i>Petro-Canada</i> | <i>PCZ</i> | <i>35.22</i> | <i>264</i> | <i>9,300</i> | <i>38.00</i> | <i>0.20</i> | <i>0.94</i> |
| <i>Imperial Oil Limited (30%)</i> | <i>IMO</i> | <i>31.80</i> | <i>114</i> | <i>3,600</i> | <i>36.00</i> | <i>0.12</i> | <i>0.90</i> |
| <i>XTO Energy Inc.</i> | <i>XTO B</i> | <i>25.39</i> | <i>127</i> | <i>3,200</i> | <i>32.00</i> | <i>0.25</i> | <i>0.84</i> |
| <i>Suncor Energy</i> | <i>SU</i> | <i>17.52</i> | <i>448</i> | <i>7,900</i> | <i>22.00</i> | <i>0.22</i> | <i>0.84</i> |
| <i>CNOOC Limited (19%)</i> | <i>CEO B</i> | <i>27.17</i> | <i>78</i> | <i>2,120</i> | <i>35.00</i> | <i>-</i> | <i>0.78</i> |
| <i>Norsk Hydro ASA (49%)</i> | <i>NHY</i> | <i>37.57</i> | <i>126</i> | <i>4,800</i> | <i>60.00</i> | <i>0.26</i> | <i>0.72</i> |
| <i>PetroChina Company Ltd (10%)</i> | <i>PTR B</i> | <i>20.69</i> | <i>176</i> | <i>3,600</i> | <i>33.00</i> | <i>0.15</i> | <i>0.69</i> |
| <i>Total or Median</i> | | | | <i>38,400</i> | | <i>0.21</i> | <i>0.84</i> |
| Coal Producers (Small Cap) | | | | | | | |
| <i>Penn Virginia Res. Part, L.P.</i> | <i>PVR</i> | <i>23.35</i> | <i>15</i> | <i>400</i> | <i>18.00</i> | <i>-</i> | <i>1.31</i> |
| <i>Consol Energy Inc.</i> | <i>CNX</i> | <i>15.77</i> | <i>79</i> | <i>1,300</i> | <i>5.00</i> | <i>0.88</i> | <i>1.25</i> |
| <i>Peabody Energy</i> | <i>BTU</i> | <i>27.75</i> | <i>55</i> | <i>1,500</i> | <i>18.00</i> | <i>0.75</i> | <i>1.14</i> |
| <i>Alliance Res. Part, L.P.</i> | <i>ARLP</i> | <i>22.48</i> | <i>16</i> | <i>400</i> | <i>20.00</i> | <i>0.45</i> | <i>1.07</i> |
| <i>Arch Coal</i> | <i>ACI</i> | <i>19.10</i> | <i>48</i> | <i>900</i> | <i>18.00</i> | <i>0.61</i> | <i>1.02</i> |
| <i>Massey Energy</i> | <i>MEE</i> | <i>8.83</i> | <i>75</i> | <i>700</i> | <i>18.00</i> | <i>0.37</i> | <i>0.68</i> |
| <i>Total or Median</i> | | | | <i>5,200</i> | | <i>0.53</i> | <i>1.10</i> |

Buy/Sell rating after symbol: B - Buy, N - Neutral, S - Sell

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

Italicized issues are subject to, or sponsor, deceptive compensation arrangements that threaten value and financial viability, in our opinion.

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Table M-2
Mid Cap Energy Companies
Rank by EV/Ebitda: Enterprise Value to Earnings Before Interest, Tax, Deprec.

| | | | Price (\$/sh) | EV/ Sales | EV/ Ebitda | P/E | Dividend or Distribution | PV/ Ebitda |
|-------------------------------------|-------------------|----------------|------------------|--------------|---------------|-----|-----------------------------|---------------|
| | Symbol/ Rating | 12-Mar 2003 | NTM | NTM | NTM | NTM | (%) | NTM |
| Energy Infrastructure | | | | | | | | |
| Kinder Morgan Energy Partners, L.P. | KMP | S | 36.18 | 3.3 | 15.9 | 19 | 6.9 | 8.7 |
| Kinder Morgan Management, LLC | KMR | S | 32.00 | 3.0 | 14.5 | 16 | 7.8 | 8.7 |
| Kinder Morgan, Inc. | KMI | S | 43.05 | 3.1 | 11.8 | 13 | 1.4 | 8.4 |
| Calpine Corporation | CPN | N | 2.55 | 1.8 | 10.7 | | | 10.2 |
| Constellation Energy Group | CEG | | 26.07 | 2.8 | 10.0 | 10 | 3.7 | 9.2 |
| Williams Companies | WMB | | 3.68 | 1.9 | 9.7 | | - | 9.0 |
| Dynegy Inc. | DYN | | 2.13 | 0.2 | 9.6 | | - | 9.0 |
| AES Corporation | AES | | 3.00 | 2.8 | 9.4 | | | 9.0 |
| Sempra Energy | SRE | | 22.57 | 2.5 | 8.8 | 8 | 4.4 | 9.0 |
| CMS Energy Corporation | CMS | | 3.56 | 1.2 | 8.5 | 2 | 20.2 | 9.0 |
| Mirant Corporation | MIR | | 1.19 | 0.4 | 8.1 | 1 | - | 9.0 |
| Valero Energy Corporation | VLO | | 39.85 | 0.3 | 5.1 | 6 | 1.0 | 5.6 |
| | <i>Median</i> | | | 2.2 | 9.6 | 9 | 2.5 | 9.0 |
| Natural Gas and Oil | | | | | | | | |
| Suncor Energy | SU | | 17.52 | 2.6 | 5.7 | 9 | 0.7 | 6.8 |
| Murphy Oil Corporation | MUR | | 41.70 | 1.0 | 5.2 | 11 | 1.9 | 5.2 |
| XTO Energy Inc. | XTO | B | 25.39 | 3.7 | 5.1 | 8 | 0.2 | 6.1 |
| Imperial Oil Limited (30%) | IMO | | 31.80 | 1.1 | 5.0 | 8 | 1.7 | 5.6 |
| CNOOC Limited (19%) | CEO | B | 27.17 | 3.2 | 4.1 | 8 | 2.3 | 5.3 |
| Petro-Canada | PCZ | | 35.22 | 1.3 | 3.8 | 7 | 0.8 | 4.0 |
| Norsk Hydro ASA (49%) | NHY | | 37.57 | 0.7 | 2.5 | 4 | 3.8 | 3.5 |
| PetroChina Company Ltd (10%) | PTR | B | 20.69 | 1.3 | 2.4 | 4 | 11.2 | 3.5 |
| | <i>Median</i> | | | 1.3 | 4.6 | 8 | 1.8 | 5.2 |
| Coal Producers (Small Cap) | | | | | | | | |
| Consol Energy Inc. | CNX | | 15.77 | 2.0 | 12.2 | 36 | 3.6 | 9.7 |
| Penn Virginia Res. Part, L.P. | PVR | | 23.35 | 8.7 | 11.2 | 13 | 8.6 | 8.6 |
| Peabody Energy | BTU | | 27.75 | 1.6 | 10.2 | 23 | 1.4 | 9.0 |
| Arch Coal | ACI | | 19.10 | 1.5 | 9.2 | 107 | 1.2 | 9.0 |
| Alliance Res. Part, L.P. | ARLP | | 22.48 | 1.2 | 7.5 | 19 | 8.9 | 7.0 |
| Massey Energy | MEE | | 8.83 | 1.0 | 6.1 | 221 | 1.8 | 8.9 |
| | | | | 1.6 | 9.7 | 30 | 2.7 | 8.9 |

EV = Enterprise Value = Market Cap and Debt; Ebitda = Earnings before interest, tax, depreciation and amortization; NTM = Next Twelve Months Ended March 31, 2004; P/E = Stock Price to Earnings; PV = Present Value of oil and gas and other businesses

Italicized issues are subject to, or sponsor, deceptive compensation arrangements that threaten value and financial viability, in our opinion.

Analyses are prepared from original sources and data believed to be reliable, but no representation is made as to their accuracy or completeness. Independent energy investment analysis by Kurt Wulff doing business as McDep Associates is posted at www.mcdep.com. Mr. Wulff is not paid by covered companies. He and his spouse do not sell short nor act contrary to a buy or sell rating except for tax loss purposes. 9

Meter Reader

A Weekly Analysis of Energy Stocks Using the McDep Ratio

March 13, 2003

Table S-1
Small Cap Energy Companies
Rank by McDep Ratio: Market Cap and Debt to Present Value

| | Symbol/ Rating | | Price (\$/sh) 12-Mar 2003 | Shares (mm) | Market Cap (\$mm) | Net Present Value (\$/sh) | Debt/ Present Value | McDep Ratio |
|-----------------------------------|-------------------|---|------------------------------------|----------------|-------------------------|------------------------------------|---------------------------|----------------|
| Energy Infrastructure | | | | | | | | |
| El Paso Energy Partners | EPN | S | 30.34 | 57.0 | 1,730 | 10.60 | 0.60 | 1.76 |
| Enbridge Energy Partners, L.P. | EEP | S | 44.51 | 35.0 | 1,560 | 14.90 | 0.64 | 1.72 |
| Enterprise Products Part (16%) | EPD | | 20.06 | 28.5 | 570 | 6.70 | 0.63 | 1.72 |
| Enbridge Energy Management, L.L.C | EEQ | S | 39.20 | 9.0 | 350 | 14.90 | 0.64 | 1.59 |
| Plains All Amer. Pipeline | PAA | | 24.24 | 50.0 | 1,210 | 11.60 | 0.49 | 1.55 |
| TEPPCO Partners, L.P. | TPP | | 29.88 | 50.0 | 1,490 | 17.70 | 0.56 | 1.30 |
| Northern Border Partners | NBP | | 36.70 | 44.0 | 1,610 | 20.40 | 0.62 | 1.30 |
| AmeriGas Partners, L.P. | APU | | 24.00 | 49.4 | 1,190 | 18.30 | 0.51 | 1.15 |
| Western Gas Resources | WGR | | 32.06 | 33.7 | 1,080 | 37.60 | 0.29 | 0.89 |
| <i>Total or Median</i> | | | | | 10,800 | | 0.60 | 1.55 |
| Natural Gas and Oil | | | | | | | | |
| Provident Energy Trust | PVX | | 7.98 | 63.5 | 510 | 6.00 | 0.22 | 1.26 |
| Dorchester Minerals, L.P. | DMLP | | 14.65 | 27.0 | 396 | 13.00 | - | 1.13 |
| Unit Corporation | UNT | | 20.07 | 43.6 | 880 | 18.00 | 0.04 | 1.11 |
| Pogo Producing Company | PPP | | 38.72 | 64.5 | 2,500 | 38.00 | 0.22 | 1.01 |
| Quicksilver Resources Inc. | KWK | | 23.48 | 20.4 | 480 | 25.00 | 0.35 | 0.96 |
| Enerplus Resources Fund | ERF | | 18.83 | 75.0 | 1,410 | 20.00 | 0.15 | 0.95 |
| Pengrowth Energy Trust | PGH | | 9.99 | 110.0 | 1,100 | 11.00 | 0.16 | 0.92 |
| Newfield Exploration Company | NFX | | 32.88 | 51.7 | 1,700 | 40.00 | 0.31 | 0.88 |
| Southwestern Energy Company | SWN | | 12.60 | 36.0 | 450 | 17.00 | 0.30 | 0.82 |
| Penn Virginia Corporation | PVA | | 36.34 | 9.0 | 330 | 45.00 | 0.06 | 0.82 |
| Encore Acquisition Corp. (25%) | EAC | | 17.72 | 7.0 | 124 | 24.00 | 0.19 | 0.79 |
| Stone Energy Company | SGY | | 32.53 | 26.5 | 860 | 46.00 | 0.27 | 0.79 |
| Swift Energy Company | SFY | | 9.00 | 27.2 | 250 | 16.00 | 0.43 | 0.75 |
| Magnum Hunter Resources, Inc. | MHR | | 5.49 | 69.0 | 380 | 11.00 | 0.45 | 0.72 |
| Forest Oil Corporation | FST | N | 20.56 | 48.2 | 990 | 35.00 | 0.33 | 0.72 |
| Spinnaker Exploration Company | SKE | | 17.40 | 33.8 | 590 | 25.00 | - | 0.70 |
| Canadian Oil Sands Trust (US\$) | COS_u.TO | B | 23.42 | 76.8 | 1,800 | 45.00 | 0.15 | 0.59 |
| <i>Total or Median</i> | | | | | 14,800 | | 0.22 | 0.82 |
| Natural Gas Royalty Trusts | | | | | | | | |
| Cross Timbers Royalty Trust | CRT | | 19.35 | 6.0 | 116 | 20.30 | - | 0.95 |
| San Juan Basin Royalty Trust | SJT | B | 14.72 | 46.6 | 690 | 17.30 | - | 0.85 |
| Hugoton RoyaltyTrust (46%) | HGT | | 13.97 | 18.4 | 260 | 16.90 | - | 0.83 |
| Micro Cap | | | | | | | | |
| Energy Partners Ltd.(30%) | EPL | B | 10.70 | 8.3 | 88 | 12.00 | 0.34 | 0.93 |
| Abraxas Petroleum Corporation | ABP | | 0.81 | 30.0 | 24 | 2.00 | 0.72 | 0.83 |
| Purcell Energy, Ltd. (US\$) | PEL.TO | N | 2.01 | 26.6 | 53 | 2.80 | 0.28 | 0.79 |

Buy/Sell rating after symbol: B - Buy, N - Neutral, S - Sell

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

Italicized issues are subject to, or sponsor, deceptive compensation arrangements that threaten value and financial viability, in our opinion.

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Meter Reader

A Weekly Analysis of Energy Stocks Using the McDep Ratio

March 13, 2003

Table S-2
Small Cap Energy Companies
Rank by EV/Ebitda: Enterprise Value to Earnings Before Interest, Tax, Deprec.

| | Symbol/ Rating | Price (\$/sh) 12-Mar 2003 | EV/ Sales NTM | EV/ Ebitda NTM | P/E NTM | Dividend or Distribution NTM (%) | PV/ Ebitda NTM | |
|-----------------------------------|-------------------|------------------------------------|---------------------|----------------------|------------|---|----------------------|-----|
| Energy Infrastructure | | | | | | | | |
| El Paso Energy Partners | EPN | S | 30.34 | 8.7 | 15.8 | 37 | 8.9 | 9.0 |
| Enbridge Energy Partners, L.P. | EEP | S | 44.51 | 2.0 | 15.5 | 33 | 8.1 | 9.0 |
| Enterprise Products Part (16%) | EPD | | 20.06 | 1.7 | 15.5 | 27 | 6.9 | 9.0 |
| Enbridge Energy Management, L.L.C | EEQ | S | 39.20 | 1.9 | 14.3 | 29 | 9.2 | 9.0 |
| Plains All Amer. Pipeline | PAA | | 24.24 | 0.2 | 14.0 | 20 | 8.9 | 9.0 |
| TEPPCO Partners, L.P. | TPP | | 29.88 | 1.0 | 11.7 | 16 | 8.0 | 9.0 |
| Northern Border Partners | NBP | | 36.70 | 6.7 | 11.7 | 14 | 8.7 | 9.0 |
| AmeriGas Partners, L.P. | APU | | 24.00 | 1.6 | 10.4 | 23 | 9.2 | 9.0 |
| Western Gas Resources | WGR | | 32.06 | 0.6 | 6.4 | 13 | - | 7.1 |
| | <i>Median</i> | | | 1.7 | 14.0 | 23 | 8.7 | 9.0 |
| Natural Gas and Oil | | | | | | | | |
| Unit Corporation | UNT | | 20.07 | 3.5 | 7.7 | 18 | - | 7.0 |
| Dorchester Minerals, L.P. | DMLP | | 14.65 | 6.0 | 7.3 | 9 | 12.3 | 6.5 |
| Quicksilver Resources Inc. | KWK | | 23.48 | 4.0 | 5.6 | 9 | - | 5.8 |
| Enerplus Resources Fund | ERF | | 18.83 | 4.2 | 5.4 | 8 | 14.5 | 5.7 |
| Pengrowth Energy Trust | PGH | | 9.99 | 3.4 | 5.0 | 9 | 18.9 | 5.4 |
| Provident Energy Trust | PVX | | 7.98 | 3.4 | 4.7 | 8 | 18.0 | 3.7 |
| Pogo Producing Company | PPP | | 38.72 | 3.0 | 4.6 | 11 | 0.3 | 4.5 |
| Swift Energy Company | SFY | | 9.00 | 3.1 | 4.6 | 9 | - | 6.1 |
| Encore Acquisition Corp. (25%) | EAC | | 17.72 | 3.1 | 4.5 | 9 | - | 5.7 |
| Forest Oil Corporation | FST | N | 20.56 | 2.9 | 4.5 | 10 | - | 6.2 |
| Canadian Oil Sands Trust (US\$) | COS_u.TO | B | 23.42 | 2.7 | 4.4 | 4 | 5.7 | 7.4 |
| Southwestern Energy Company | SWN | | 12.60 | 2.2 | 4.3 | 7 | - | 5.3 |
| Penn Virginia Corporation | PVA | | 36.34 | 2.3 | 4.2 | 10 | 2.5 | 5.2 |
| Magnum Hunter Resources, Inc. | MHR | | 5.49 | 2.5 | 4.1 | 6 | - | 5.6 |
| Stone Energy Company | SGY | | 32.53 | 2.3 | 3.0 | 5 | - | 3.8 |
| Newfield Exploration Company | NFX | | 32.88 | 2.3 | 2.9 | 5 | - | 3.3 |
| Spinnaker Exploration Company | SKE | | 17.40 | 2.0 | 2.3 | 7 | - | 3.3 |
| | <i>Median</i> | | | 3.0 | 4.5 | 9 | - | 5.6 |
| Natural Gas Royalty Trusts | | | | | | | | |
| Cross Timbers Royalty Trust | CRT | | 19.35 | 5.3 | 7.2 | 8 | 13.2 | 7.5 |
| San Juan Basin Royalty Trust | SJT | B | 14.72 | 4.7 | 5.8 | 7 | 14.4 | 6.8 |
| Hugoton RoyaltyTrust (46%) | HGT | | 13.97 | 3.9 | 5.1 | 7 | 14.6 | 6.2 |
| Micro Cap | | | | | | | | |
| Abraxas Petroleum Corporation | ABP | | 0.81 | 4.6 | 6.2 | | - | 7.5 |
| Purcell Energy, Ltd. (US\$) | PEL.TO | N | 2.01 | 3.2 | 4.2 | 8 | - | 5.4 |
| Energy Partners Ltd.(30%) | EPL | B | 10.70 | 2.5 | 4.0 | | - | 4.3 |

EV = Enterprise Value = Market Cap and Debt; Ebitda = Earnings before interest, tax, depreciation and amortization; NTM = Next Twelve Months Ended December 31, 2003; P/E = Stock Price to Earnings; PV = Present Value of oil and gas and other businesses

Italicized issues are subject to, or sponsor, deceptive compensation arrangements that threaten value and financial viability, in our opinion.

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