A Weekly Analysis of Energy Stocks Using the McDep Ratio January 6, 2004

Up Oil 20%

Summary and Recommendation

When a few of our recommended stocks reached our limiting McDep Ratio of 1.2 last week we decided that the case was stronger for lowering the McDep Ratio than for dropping our recommendation of promising stocks. As a result we have raised estimates of present value, the denominator of the McDep Ratio, by about 20% for almost all of our covered issues. In some respects the current situation reminds us of the presidential election year in 1972 when many thought the economy was being stimulated to help reelect Mr. Nixon. That was followed by "The Energy Shortage of 1973" as our piece read thirty-one years ago this month. While that period ended badly, that need not be the case in 2005 or thereafter. In any event we think the strength in energy pricing has further to go. Large cap independent producers remain among our low McDep Ratio recommendations including **Encana (ECA)**, **Burlington Resources (BR)** and **Anadarko (APC)**.

The Futures Market Appears to be Lagging

Since October 2004, a gap has developed between the energy futures market and the stock market for royalty trusts that offer the purest stock market representation of future natural gas production (*Natural Gas Royalty Trusts*, November 26, 2003). We resolve that dilemma today by taking the side of royalty trust investors. We now take royalty trusts to be the rough standard of value at a McDep Ratio near 1.0 and revise estimates of all energy stocks accordingly. In the updated relationship, the unlevered multiple of present value to cash flow is equal to 0.4 time adjusted reserve life plus 3.3. For small cap producers, adjusted reserve life explains 70% of our estimate of present value and 50% of the market cash flow multiple, EV/Ebitda.

PetroChina Remains a Buy

Steep gains in stock price for **PetroChina (PTR)** got our attention at the turn of the year. As the McDep Ratio exceeded 1.2 we noted the low cash flow multiple and the long reserve life and concluded that valuation was not excessive. New investors can hedge the risk by limiting PTR to the one-half unlevered position we have suggested in the McDep Energy Portfolio. Investors who once had a half position and now have three times that, might trim back to a full position.

Kurt H. Wulff, CFA

A Weekly Analysis of Energy Stocks Using the McDep Ratio January 6, 2004

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

| | | | Price (\$/sh) | | Market | Net Present | Debt/ | |
|------------------------------------|--------|-------|--------------------------|--------|-----------------------|----------------|---------|-----------|
| | Symbol | / | (5/3n) 5 - Jan | Shares | магке <i>і</i> Сар | Value | Present | МсДер |
| | - | ating | 2004 | (mm) | (\$mm) | (\$/sh) | Value | Ratio |
| Mega Cap | 10 | uung | 2004 | (mm) | (\$mm) | (ψ/3π) | raine | Rano |
| Exxon Mobil Corporation | XOM | | 41.58 | 6,652 | 277,000 | 41.00 | 0.08 | 1.01 |
| Total S.A. | TOT | | 95.46 | 1,261 | 120,400 | 105.00 | 0.16 | 0.92 |
| BP plc | BP | | 49.90 | 3,682 | 184,000 | 60.00 | 0.13 | 0.85 |
| Royal Dutch/Shell | RD | В | 53.53 | 3,473 | 186,000 | 65.00 | 0.16 | 0.85 |
| ChevronTexaco Corporation | CVX | В | 87.55 | 1,064 | 93,200 | 115.00 | 0.17 | 0.80 |
| Total or Median | | 2 | 07.00 | 1,00. | 861,000 | 110.00 | 0.16 | 0.85 |
| Producer/Refiners - Large Cap and | | p | | | 001,000 | | 0.10 | 0.02 |
| Kinder Morgan, Inc. | KMI | S | 58.79 | 124 | 7,310 | 14.00 | 0.80 | 1.64 |
| Imperial Oil Limited (30%) | IMO | ~ | 46.46 | 111 | 5,160 | 43.00 | 0.12 | 1.07 |
| Murphy Oil Corporation | MUR | | 64.55 | 93 | 5,990 | 62.00 | 0.20 | 1.03 |
| Petro-Canada | PCZ | | 51.59 | 265 | 13,670 | 54.00 | 0.12 | 0.96 |
| PetroChina Company Ltd (10%) | PTR | В | 62.10 | 176 | 10,920 | 65.00 | 0.09 | 0.96 |
| ENI S.p.A. | E | 2 | 98.52 | 755 | 74,400 | 108.00 | 0.16 | 0.93 |
| Valero Energy Corporation | VLO | | 47.00 | 120 | 5,630 | 55.00 | 0.42 | 0.92 |
| OAO Lukoil | LUKOY | 7 | 95.00 | 210 | 20,000 | 105.00 | 0.10 | 0.91 |
| Suncor Energy | SU | - | 25.70 | 475 | 12,210 | 30.00 | 0.12 | 0.87 |
| Petroleo Brasileiro S. A. | PBR | | 32.40 | 1,096 | 35,500 | 40.00 | 0.28 | 0.86 |
| ConocoPhillips | COP | В | 67.25 | 680 | 45,800 | 88.00 | 0.33 | 0.84 |
| Marathon Oil Corporation | MRO | В | 34.08 | 310 | 10,560 | 47.00 | 0.27 | 0.80 |
| Norsk Hydro ASA (49%) | NHY | В | 65.45 | 126 | 8,240 | 95.00 | 0.19 | 0.75 |
| Total or Median | | 2 | 00.10 | 120 | 255,000 | , | 0.19 | 0.92 |
| Independent Natural Gas and Oil | | | | | , | | **** | · · · · - |
| Pogo Producing Company | PPP | | 49.55 | 64 | 3,170 | 50.00 | 0.10 | 0.99 |
| Occidental Petroleum Corp. | OXY | | 43.70 | 391 | 17,100 | 50.00 | 0.26 | 0.91 |
| CNOOC Limited (19%) | CEO | В | 43.12 | 78 | 3,370 | 48.00 | - | 0.90 |
| Apache Corporation | APA | | 81.56 | 162 | 13,200 | 94.00 | 0.19 | 0.89 |
| XTO Energy Inc. | XTO | В | 28.43 | 186 | 5,300 | 33.00 | 0.19 | 0.89 |
| Canadian Natural Resources Limited | CNO | | 55.17 | 137 | 7,560 | 72.00 | 0.34 | 0.84 |
| Pioneer Natural Resources Company | PXD | | 32.75 | 119 | 3,900 | 45.00 | 0.26 | 0.80 |
| Unocal Corporation | UCL | | 37.40 | 273 | 10,200 | 52.00 | 0.28 | 0.80 |
| Encana Corporation | ECA | В | 41.29 | 470 | 19,400 | 56.00 | 0.19 | 0.79 |
| Anadarko Petroleum Corp. | APC | В | 52.55 | 251 | 13,200 | 76.00 | 0.26 | 0.77 |
| Burlington Resources | BR | В | 56.33 | 201 | 11,300 | 80.00 | 0.21 | 0.76 |
| Devon Energy | DVN | | 58.40 | 241 | 14,100 | 90.00 | 0.30 | 0.76 |
| Total or Median | | | | | 122,000 | | 0.23 | 0.82 |
| Service | | | | | | | | |
| Baker Hughes Inc. | BHI | | 32.65 | 336 | 11,000 | 30.00 | 0.07 | 1.09 |
| Halliburton Company | HAL | | 26.12 | 435 | 11,400 | 28.00 | 0.28 | 0.95 |
| Schlumberger Ltd. | SLB | | 55.51 | 585 | 32,500 | 60.00 | 0.17 | 0.94 |
| Total or Median | | | | | 55,000 | | 0.17 | 0.95 |

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

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

A Weekly Analysis of Energy Stocks Using the McDep Ratio January 6, 2004

Table 1-2
Energy Producers
Rank by EV/Ebitda: Enterprise Value to Earnings Before Interest, Tax, Deprec.

| | | | Price | | | Div | idend or | |
|------------------------------------|---------|------|---------|-------|-------------|-----|-----------|--------|
| | | | (\$/sh) | EV/ | EV/ | Dis | tribution | PV/ |
| | Symbol/ | | 5-Jan | Sales | Ebitda | P/E | NTM | Ebitda |
| | Ra | ting | 2004 | NTM | NTM | NTM | (%) | NTM |
| Mega Cap | | _ | | | | | | |
| Exxon Mobil Corporation | XOM | | 41.58 | 1.2 | 7.9 | 15 | 2.4 | 7.8 |
| Total S.A. | TOT | | 95.46 | 1.3 | 7.9 | 15 | 3.7 | 8.5 |
| BP plc | BP | | 49.90 | 0.9 | 7.2 | 15 | 3.1 | 8.5 |
| Royal Dutch/Shell | RD | В | 53.53 | 1.1 | 6.9 | 16 | 3.8 | 8.1 |
| ChevronTexaco Corporation | CVX | В | 87.55 | 0.9 | 5.9 | 11 | 3.3 | 7.4 |
| Median | | | | 1.1 | 7.2 | 15 | 3.3 | 8.1 |
| Producer/Refiners - Large Cap and | Mid Cap | | | | | | | |
| Kinder Morgan, Inc. | KMI | S | 58.79 | 3.0 | 12.7 | 18 | 2.7 | 7.7 |
| Imperial Oil Limited (30%) | IMO | | 46.46 | 1.4 | 8.0 | 16 | 1.4 | 7.4 |
| Murphy Oil Corporation | MUR | | 64.55 | 1.6 | 7.7 | 19 | 1.2 | 7.5 |
| Suncor Energy | SU | | 25.70 | 2.8 | 7.4 | 14 | 0.6 | 8.4 |
| Valero Energy Corporation | VLO | | 47.00 | 0.3 | 6.3 | 9 | 1.0 | 6.9 |
| ENI S.p.A. | E | | 98.52 | 1.6 | 5.8 | 12 | 4.5 | 6.3 |
| ConocoPhillips | COP | В | 67.25 | 0.7 | 5.8 | 9 | 2.6 | 6.9 |
| PetroChina Company Ltd (10%) | PTR | В | 62.10 | 3.1 | 5.7 | 12 | 3.3 | 5.9 |
| Marathon Oil Corporation | MRO | В | 34.08 | 0.4 | 5.5 | 12 | 2.9 | 6.9 |
| Petro-Canada | PCZ | | 51.59 | 1.7 | 5.1 | 15 | 0.6 | 5.3 |
| OAO Lukoil | LUKOY | | 95.00 | 1.0 | 5.0 | 9 | 2.7 | 5.5 |
| Norsk Hydro ASA (49%) | NHY | В | 65.45 | 0.9 | 4.4 | 12 | 2.4 | 5.9 |
| Petroleo Brasileiro S. A. | PBR | | 32.40 | 1.7 | 4.2 | 5 | 3.1 | 4.9 |
| Median | | | 52 | 1.6 | 5.8 | 12 | 2.6 | 6.9 |
| Independent Natural Gas and Oil | | | | | | | | *** |
| CNOOC Limited (19%) | CEO | В | 43.12 | 5.0 | 6.3 | 12 | 3.7 | 7.0 |
| XTO Energy Inc. | XTO | В | 28.43 | 4.3 | 5.7 | 10 | 0.1 | 6.4 |
| Pioneer Natural Resources Company | | _ | 32.75 | 3.8 | 5.4 | 14 | - | 6.7 |
| Occidental Petroleum Corp. | OXY | | 43.70 | 2.5 | 5.2 | 9 | 2.4 | 5.8 |
| Anadarko Petroleum Corp. | APC | В | 52.55 | 3.7 | 5.2 | 9 | 1.1 | 6.7 |
| Encana Corporation | ECA | В | 41.29 | 2.5 | 5.1 | 12 | 0.7 | 6.6 |
| Unocal Corporation | UCL | _ | 37.40 | 2.4 | 5.1 | 11 | 2.1 | 6.3 |
| Apache Corporation | APA | | 81.56 | 3.5 | 4.9 | 10 | 0.6 | 5.5 |
| Burlington Resources | BR | В | 56.33 | 3.5 | 4.9 | 10 | 1.1 | 6.4 |
| Canadian Natural Resources Limited | | _ | 55.17 | 3.3 | 4.7 | 10 | 0.8 | 5.6 |
| Pogo Producing Company | PPP | | 49.55 | 2.9 | 4.2 | 10 | 0.4 | 4.2 |
| Devon Energy | DVN | | 58.40 | 2.8 | 4.1 | 7 | - | 5.4 |
| Median | | | 30.10 | 3.4 | 5. <i>I</i> | 10 | 0.8 | 6.4 |
| Service | | | | 5.7 | 5.1 | 10 | 0.0 | 0.7 |
| Baker Hughes Inc. | BHI | | 32.65 | 2.2 | 11.9 | 30 | 1.4 | 11.0 |
| Halliburton Company | HAL | | 26.12 | 1.0 | 11.6 | 24 | 1.9 | 12.1 |
| Schlumberger Ltd. | SLB | | 55.51 | 2.8 | 10.0 | 34 | 1.4 | 10.7 |
| Median | | | 33.31 | 2.2 | 11.6 | 30 | 1.4 | 11.0 |
| Meatan | | | | 2.2 | 11.0 | 30 | 1.7 | 11.0 |

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

A Weekly Analysis of Energy Stocks Using the McDep Ratio January 6, 2004

Table 1-3
Energy Producers
Determinants of Present Value

| | | | NG & O Prod/ | N. Am. Gas/ | Adjusted Reserves/ | PV/ | | McDep Ratio |
|-------------------------------------|---------|-------|-----------------|----------------|-----------------------|--------|------|----------------|
| | Symbol/ | | Ebitda | Ebitda | Prod | Ebitda | EV/ | 5-Jan |
| | Ra | iting | (%) | (%) | NTM | NTM | Mcfe | 2004 |
| Mega Cap | | | | | | | | |
| Total S.A. | TOT | | 80 | 1 | 9.3 | 8.5 | 1.74 | 0.92 |
| Royal Dutch/Shell | RD | В | 74 | 5 | 9.7 | 8.1 | 1.27 | 0.85 |
| BP plc | BP | | 80 | 13 | 10.3 | 8.5 | 1.46 | 0.85 |
| ChevronTexaco Corporation | CVX | В | 78 | 12 | 10.5 | 7.4 | 0.98 | 0.80 |
| Exxon Mobil Corporation | XOM | | 71 | 11 | 11.1 | 7.8 | 1.52 | 1.01 |
| Median | | | <i>78</i> | 11 | 10.3 | 8.1 | 1.46 | 0.85 |
| Producer/Refiners - Large Cap and M | id Cap | | | | | | | |
| Valero Energy Corporation | VLO | | - | - | | 6.9 | | 0.92 |
| Kinder Morgan, Inc. | KMI | S | - | - | - | 7.7 | | 1.64 |
| Petro-Canada | PCZ | | 82 | 24 | 7.2 | 5.3 | 1.21 | 0.96 |
| Murphy Oil Corporation | MUR | | 93 | 30 | 7.3 | 7.5 | 3.49 | 1.03 |
| Norsk Hydro ASA (49%) | NHY | В | 66 | - | 8.9 | 5.9 | 0.25 | 0.75 |
| Marathon Oil Corporation | MRO | В | 74 | 27 | 9.0 | 6.9 | 1.02 | 0.80 |
| Petroleo Brasileiro S. A. | PBR | | 93 | - | 9.9 | 4.9 | 0.85 | 0.86 |
| ENI S.p.A. | E | | 56 | - | 9.9 | 6.3 | 0.77 | 0.93 |
| Imperial Oil Limited (30%) | IMO | | 72 | 19 | 10.2 | 7.4 | 1.39 | 1.07 |
| ConocoPhillips | COP | В | 74 | 17 | 11.2 | 6.9 | 0.88 | 0.84 |
| PetroChina Company Ltd (10%) | PTR | В | 78 | - | 16.0 | 5.9 | 1.05 | 0.96 |
| Suncor Energy | SU | | 93 | 9 | 19.0 | 8.4 | 0.97 | 0.87 |
| OAO Lukoil | LUKOY | | 48 | - | 20.0 | 5.5 | 0.07 | 0.91 |
| Median | | | 74 | - | 9.9 | 6.9 | 0.97 | 0.92 |
| Independent Natural Gas and Oil | | | | | | | | |
| Pogo Producing Company | PPP | | 100 | 36 | 5.8 | 4.2 | 2.45 | 0.99 |
| Canadian Natural Resources Limited | CNQ | | 100 | 51 | 7.2 | 5.6 | 1.41 | 0.84 |
| Devon Energy | DVN | | 100 | 68 | 7.5 | 5.4 | 1.59 | 0.76 |
| Apache Corporation | APA | | 100 | 46 | 8.1 | 5.5 | 1.91 | 0.89 |
| Unocal Corporation | UCL | | 100 | 35 | 8.4 | 6.3 | 1.55 | 0.80 |
| Encana Corporation | ECA | В | 98 | 72 | 9.0 | 6.6 | 1.20 | 0.79 |
| XTO Energy Inc. | XTO | В | 100 | 88 | 9.5 | 6.4 | 2.08 | 0.89 |
| Anadarko Petroleum Corp. | APC | В | 100 | 60 | 10.1 | 6.7 | 1.33 | 0.77 |
| Pioneer Natural Resources Company | PXD | | 100 | 66 | 10.3 | 6.7 | 1.24 | 0.80 |
| Burlington Resources | BR | В | 100 | 73 | 10.4 | 6.4 | 1.21 | 0.76 |
| CNOOC Limited (19%) | CEO | В | 100 | - | 10.7 | 7.0 | 1.93 | 0.90 |
| Occidental Petroleum Corp. | OXY | | 90 | 19 | 10.9 | 5.8 | 1.43 | 0.91 |
| Median | | | 100 | 56 | 9.3 | 6.4 | 1.49 | 0.82 |

A Weekly Analysis of Energy Stocks Using the McDep Ratio January 6, 2004

Table 2-1
Independent Natural Gas and Oil Producers - Small Cap
Rank by McDep Ratio: Market Cap and Debt to Present Value

| | | | Price (\$/sh) | | Market | Net Present | Debt/ | |
|--------------------------------------|---------|------|------------------|--------|---------|----------------|---------|-------|
| | Symbol/ | | 5-Jan | Shares | Сар | Value | Present | МсДер |
| | • | ting | 2004 | (mm) | (\$mm) | (\$/sh) | Value | Ratio |
| | Tu | iing | 2007 | (mm) | (ψιπιπ) | (φ/31ι) | ranc | Runo |
| Short Life | | | | | | | | |
| Spinnaker Exploration Company | SKE | | 32.86 | 33.9 | 1,110 | 28.00 | 0.08 | 1.16 |
| Southwestern Energy Company | SWN | | 24.45 | 36.0 | 880 | 21.00 | 0.28 | 1.12 |
| Energy Partners Ltd. | EPL | В | 14.29 | 39.2 | 560 | 15.00 | 0.18 | 0.96 |
| Western Gas Resources | WGR | | 47.56 | 37.0 | 1,760 | 50.00 | 0.17 | 0.96 |
| Newfield Exploration Company | NFX | | 44.84 | 56.0 | 2,510 | 52.00 | 0.24 | 0.90 |
| Chesapeake Energy Corporation | CHK | | 13.74 | 220 | 3,020 | 18.00 | 0.35 | 0.85 |
| Stone Energy Company | SGY | | 43.78 | 26.6 | 1,170 | 58.00 | 0.23 | 0.81 |
| Westport Resources Corporation | WRC | | 31.02 | 68.0 | 2,110 | 42.00 | 0.22 | 0.80 |
| Range Resources Corporation | RRC | | 10.30 | 57.0 | 590 | 15.00 | 0.32 | 0.79 |
| Cimarex Energy Company | XEC | В | 27.15 | 42.0 | 1,140 | 35.00 | 0.00 | 0.78 |
| Denbury Resources Inc. | DNR | | 13.68 | 55.7 | 760 | 20.00 | 0.25 | 0.76 |
| Forest Oil Corporation | FST | | 29.51 | 49.0 | 1,450 | 45.00 | 0.30 | 0.76 |
| The Houston Exploraton Company | THX | | 37.60 | 31.0 | 1,170 | 55.00 | 0.13 | 0.72 |
| St. Mary Land and Exploration Compar | r SM | | 29.25 | 29.0 | 850 | 43.00 | 0.12 | 0.72 |
| Total or Median | | | | | 19,100 | | 0.23 | 0.80 |
| Long Life | | | | | | | | |
| Ultra Petroleum Corp. | UPL | | 25.43 | 78.0 | 1,980 | 16.00 | 0.08 | 1.54 |
| Unit Corporation | UNT | | 23.50 | 43.7 | 1,030 | 22.00 | 0.02 | 1.07 |
| Penn Virginia Corporation | PVA | | 58.85 | 9.1 | 540 | 56.00 | 0.17 | 1.04 |
| Berry Petroleum Company | BRY | | 20.64 | 22.1 | 456 | 22.00 | 0.12 | 0.95 |
| Quicksilver Resources Inc. | KWK | | 33.00 | 23.0 | 760 | 37.00 | 0.25 | 0.92 |
| Swift Energy Company | SFY | | 18.10 | 27.4 | 500 | 22.00 | 0.37 | 0.89 |
| Evergreen Resources, Inc. | EVG | | 32.95 | 44.0 | 1,450 | 42.00 | 0.12 | 0.81 |
| Magnum Hunter Resources, Inc. | MHR | | 9.77 | 68.0 | 660 | 15.00 | 0.38 | 0.78 |
| Encore Acquisition Corp. | EAC | В | 24.32 | 30.3 | 738 | 33.00 | 0.13 | 0.77 |
| Vintage Petroleum, Inc. | VPI | | 12.31 | 63.0 | 780 | 27.00 | 0.32 | 0.63 |
| Total or Median | | | | | 8,900 | | 0.15 | 0.90 |
| Micro Cap | | | | | | | | |
| Abraxas Petroleum Corporation | ABP | | 1.64 | 35.8 | 59 | 1.00 | 0.84 | 1.11 |
| Purcell Energy, Ltd. (US\$) | PEL.TO | | 2.01 | 48.0 | 96 | 2.80 | 0.28 | 0.79 |

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

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

A Weekly Analysis of Energy Stocks Using the McDep Ratio January 6, 2004

Table 2-2
Independent Natural Gas and Oil Producers - Small Cap
Rank by EV/Ebitda: Enterprise Value to Earnings Before Interest, Tax, Deprec.

| | | | Price | | | Di | vidend or | |
|--------------------------------------|---------|------|---------|-------|--------|-----|------------|--------|
| | | | (\$/sh) | EV/ | EV/ | Di | stribution | PV/ |
| | Symbol/ | | 5-Jan | Sales | Ebitda | P/E | NTM | Ebitda |
| | Ra | ting | 2004 | NTM | NTM | NTM | (%) | NTM |
| Short Life | | | | | | | | |
| Western Gas Resources | WGR | | 47.56 | 0.8 | 9.3 | 20 | _ | 9.7 |
| Southwestern Energy Company | SWN | | 24.45 | 3.5 | 6.2 | 12 | _ | 5.6 |
| Spinnaker Exploration Company | SKE | | 32.86 | 4.7 | 5.3 | 15 | _ | 4.6 |
| Energy Partners Ltd. | EPL | В | 14.29 | 3.0 | 4.7 | 19 | - | 4.9 |
| Chesapeake Energy Corporation | CHK | | 13.74 | 3.4 | 4.5 | 9 | 0.9 | 5.4 |
| Stone Energy Company | SGY | | 43.78 | 3.2 | 4.4 | 10 | - | 5.4 |
| Denbury Resources Inc. | DNR | | 13.68 | 2.9 | 4.3 | 7 | - | 5.6 |
| Cimarex Energy Company | XEC | В | 27.15 | 3.3 | 4.2 | 10 | - | 5.4 |
| Forest Oil Corporation | FST | | 29.51 | 3.1 | 4.2 | 7 | - | 5.5 |
| Westport Resources Corporation | WRC | | 31.02 | 3.2 | 4.2 | 11 | _ | 5.2 |
| Range Resources Corporation | RRC | | 10.30 | 3.2 | 4.0 | 7 | 0.4 | 5.1 |
| Newfield Exploration Company | NFX | | 44.84 | 2.8 | 4.0 | 9 | _ | 4.4 |
| St. Mary Land and Exploration Compan | y SM | | 29.25 | 2.6 | 3.9 | 10 | 0.3 | 5.5 |
| The Houston Exploraton Company | THX | | 37.60 | 2.4 | 2.9 | 6 | - | 4.0 |
| Median | ı | | | 3.1 | 4.3 | 10 | - | 5.4 |
| Long Life | | | | | | | | |
| Ultra Petroleum Corp. | UPL | | 25.43 | 13.3 | 17.5 | 30 | - | 11.3 |
| Quicksilver Resources Inc. | KWK | | 33.00 | 5.5 | 8.3 | 15 | - | 9.0 |
| Berry Petroleum Company | BRY | | 20.64 | 3.8 | 8.1 | 17 | 2.1 | 8.5 |
| Evergreen Resources, Inc. | EVG | | 32.95 | 5.4 | 7.2 | 12 | - | 8.9 |
| Unit Corporation | UNT | | 23.50 | 3.2 | 7.1 | 17 | - | 6.7 |
| Penn Virginia Corporation | PVA | | 58.85 | 3.6 | 6.4 | 14 | 1.5 | 6.2 |
| Swift Energy Company | SFY | | 18.10 | 4.0 | 6.0 | 15 | - | 6.8 |
| Magnum Hunter Resources, Inc. | MHR | | 9.77 | 3.3 | 5.1 | 10 | - | 6.5 |
| Encore Acquisition Corp. | EAC | В | 24.32 | 3.6 | 5.0 | 10 | - | 6.4 |
| Vintage Petroleum, Inc. | VPI | | 12.31 | 2.2 | 3.9 | 8 | 1.5 | 6.1 |
| Median | ı | | | 3.7 | 6.8 | 15 | - | 6.7 |
| Micro Cap | | | | | | | | |
| Abraxas Petroleum Corporation | ABP | | 1.64 | 7.6 | 12.1 | | - | 10.9 |
| Purcell Energy, Ltd. (US\$) | PEL.TO | | 2.01 | 3.7 | 5.0 | 10 | - | 6.4 |

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

A Weekly Analysis of Energy Stocks Using the McDep Ratio January 6, 2004

Table 2-3
Independent Natural Gas and Oil Producers - Small Cap
Determinants of Present Value

| | | | NG & O Prod/ | N. Am. Gas/ | Adjusted Reserves/ | PV/ | 1/5/ | /0 <i>4</i> |
|---------------------------------------|---------|------|-----------------|----------------|-----------------------|--------|-------|-------------|
| | Symbol/ | | Ebitda | Ebitda | Production | Ebitda | EV/ | McDep |
| | - | ting | (%) | (%) | NTM | NTM | Mcfe | Ratio |
| | Ru | ung | (>0) | (70) | 11111 | 11 111 | Micje | Runo |
| Short Life | | | | | | | | |
| Spinnaker Exploration Company | SKE | | 100 | 83 | 4.3 | 4.6 | 6.05 | 1.16 |
| Newfield Exploration Company | NFX | | 100 | 85 | 5.2 | 4.4 | 2.96 | 0.90 |
| The Houston Exploraton Company | THX | | 100 | 94 | 5.2 | 4.0 | 2.57 | 0.72 |
| Energy Partners Ltd. | EPL | В | 100 | 65 | 5.5 | 4.9 | 2.87 | 0.96 |
| Cimarex Energy Company | XEC | В | 100 | 79 | 6.2 | 5.4 | 2.80 | 0.78 |
| Stone Energy Company | SGY | | 100 | 68 | 7.1 | 5.4 | 2.47 | 0.81 |
| St. Mary Land and Exploration Company | y SM | | 100 | 67 | 6.8 | 5.5 | 1.94 | 0.72 |
| Chesapeake Energy Corporation | CHK | | 100 | 91 | 7.8 | 5.4 | 2.34 | 0.85 |
| Westport Resources Corporation | WRC | | 100 | 73 | 7.8 | 5.2 | 2.22 | 0.80 |
| Western Gas Resources | WGR | | 61 | 61 | 7.9 | 9.7 | 3.05 | 0.96 |
| Southwestern Energy Company | SWN | | 89 | 75 | 8.4 | 5.6 | 2.86 | 1.12 |
| Range Resources Corporation | RRC | | 100 | 79 | 8.6 | 5.1 | 1.96 | 0.79 |
| Forest Oil Corporation | FST | | 100 | 78 | 8.7 | 5.5 | 1.87 | 0.76 |
| Denbury Resources Inc. | DNR | | 100 | 52 | 8.9 | 5.6 | 1.76 | 0.76 |
| Median | | | | 76 | 7.4 | 5.4 | 2.52 | 0.80 |
| Long Life | | | | | | | | |
| Penn Virginia Corporation | PVA | | 78 | 64 | 9.4 | 6.2 | 1.58 | 1.04 |
| Unit Corporation | UNT | | 63 | 56 | 9.5 | 6.7 | 2.90 | 1.07 |
| Magnum Hunter Resources, Inc. | MHR | | 100 | 71 | 10.0 | 6.5 | 1.74 | 0.78 |
| Swift Energy Company | SFY | | 100 | 33 | 11.1 | 6.8 | 1.43 | 0.89 |
| Encore Acquisition Corp. | EAC | В | 100 | 21 | 12.0 | 6.4 | 1.49 | 0.77 |
| Ultra Petroleum Corp. | UPL | | 100 | 96 | 14.5 | 11.3 | 4.48 | 1.54 |
| Berry Petroleum Company | BRY | | 100 | - | 14.6 | 8.5 | 0.99 | 0.95 |
| Vintage Petroleum, Inc. | VPI | | 100 | 31 | 15.9 | 6.1 | 0.61 | 0.63 |
| Evergreen Resources, Inc. | EVG | | 100 | 100 | 17.2 | 8.9 | 1.67 | 0.81 |
| Quicksilver Resources Inc. | KWK | | 100 | 88 | 18.5 | 9.0 | 1.44 | 0.92 |
| Median | | | | 60 | 13.2 | 6.7 | 1.54 | 0.90 |
| Micro Cap | | | | | | | | |
| Purcell Energy, Ltd. (US\$) | PEL.TO | | 100 | 79 | 6.4 | 6.4 | 1.49 | 0.79 |
| Abraxas Petroleum Corporation | ABP | | 100 | 79 | 11.7 | 10.9 | 2.88 | 1.11 |