Meter Reader A Weekly Analysis of Energy Stocks Using the McDep Ratio February 5, 2008



Buy PetroChina

Summary and Recommendation

We reinstate our buy recommendation on **PetroChina (PTR)** on the basis of a low McDep Ratio in New York of 0.83, which is less than half the McDep Ratio in Shanghai of 1.89. Such a gap in valuation will likely close eventually with the Shanghai price underperforming and the New York price outperforming. Since mid December when we raised estimates of Present Value, the denominator of the McDep Ratio, PetroChina in New York has roughly aligned with buy-recommended **ExxonMobil (XOM)** (see chart). An optimist might wonder if the confidence of Chinese investors in supporting premium valuations in their local market might ultimately pull up valuations in markets outside of China. At the same time, acute energy shortages in the face of price controls ought to encourage a more positive economic policy towards Chinese oil companies. For now we suggest a half unlevered weighting for PTR stock in the illustrative McDep Energy Portfolio (see page 4). For more analysis see *Stock Idea*, <u>PetroChina</u>, January 30, 2008.

McDep Ratio in Shanghai 3.10 2.60 2.10 1.60 1.60 1.10 0.60 10/5/07 11/5/07 12/5/07 1/5/08 McDep Ratio in Shanghai PTR Shanghai PTR Shanghai PTR New York XOM

Kurt H. Wulff, CFA

N.B. The regular chart of six-year and one-year oil and natural gas futures appears on the last page of this weekly analysis.

Source: Bloomberg, McDep LLC

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| Oil and Gas Producers - Rank by McDep Ratio | | | | | | | | |
|--|-----------|-------|-----------|--------|-------------|--------------|---------|--------|
| | | | | | | | | |
| | | | Price | | | Net | | |
| | | | (US\$/sh) | | Market | Present | Debt/ | |
| | Symbol/ | | 4-Feb | Shares | Cap | Value | Present | McDep |
| | ~ | ating | 2008 | (mm) | (US\$mm) | (US\$/sh) | Value | Ratio |
| Mega Cap | | | 2000 | () | (0.5¢.1111) | (0.50, 5.17) | , | 111110 |
| Petrobras | PBR | | 113.89 | 2,200 | 250,560 | 122.00 | 0.09 | 0.94 |
| Exxon Mobil Corporation | XOM | В | 85.41 | 5,454 | 466,000 | 102.00 | 0.05 | 0.84 |
| BP plc | BP | B | 64.41 | 3,177 | 205,000 | 84.00 | 0.17 | 0.81 |
| Total S.A. | TOT | B | 73.85 | 2,273 | 168,000 | 100.00 | 0.13 | 0.77 |
| Gazprom (50%) | OGZPY | B | 51.30 | 2,945 | 151,100 | 72.00 | 0.06 | 0.73 |
| Chevron Corporation | CVX | B | 82.02 | 2,206 | 181,000 | 117.00 | 0.08 | 0.72 |
| Royal Dutch Shell plc | RDS-A | B | 71.51 | 3,125 | 223,000 | 104.00 | 0.00 | 0.72 |
| ConocoPhillips | COP | B | 79.76 | 1,612 | 129,000 | 124.00 | 0.18 | 0.71 |
| Total or Median | 001 | | .,,,,,, | 1,012 | 1,774,000 | 12.100 | 0.10 | 0.75 |
| Producer/Refiners - Large Cap | | | | | 1,771,000 | | 5.10 | 5.75 |
| Imperial Oil Limited (30%) | IMO | В | 51.42 | 275 | 14,110 | 48.00 | 0.07 | 1.07 |
| PetroChina Company Ltd (14%) | PTR | B | 155.50 | 275 | 39,840 | 190.00 | 0.07 | 0.83 |
| Suncor Energy | SU | B | 96.48 | 473 | 45,640 | 122.00 | 0.03 | 0.81 |
| Marathon Oil Corporation | MRO | H | 48.93 | 713 | 34,890 | 68.00 | 0.18 | 0.77 |
| StatoilHydro ASA (29%) | STO | B | 27.46 | 928 | 25,480 | 41.00 | 0.10 | 0.71 |
| Petro-Canada | PCZ | B | 46.15 | 489 | 22,570 | 72.00 | 0.12 | 0.69 |
| Lukoil Oil Company | LUKOY | B | 72.00 | 826 | 59,000 | 134.00 | 0.13 | 0.55 |
| Total or Median | LUKOT | | 72.00 | 020 | 242,000 | 134.00 | 0.02 | 0.33 |
| Independent Natural Gas and Oil - Large Cap 242,000 0.08 0 | | | | | | | | 0.77 |
| CNOOC Limited (34%) | CEO | Н | 157.97 | 149 | 23,580 | 125.00 | _ | 1.26 |
| Encana Corporation | ECA | В | 68.55 | 756 | 51,800 | 75.00 | 0.18 | 0.93 |
| XTO Energy Inc. | XTO | B | 53.53 | 489 | 26,160 | 63.00 | 0.10 | 0.88 |
| EOG Resources | EOG | B | 90.67 | 247 | 22,400 | 106.00 | 0.06 | 0.86 |
| Occidental Petroleum Corp. | OXY | B | 69.24 | 833 | 57,700 | 86.00 | 0.06 | 0.82 |
| Anadarko Petroleum Corp. | APC | B | 59.75 | 468 | 28,000 | 82.00 | 0.00 | 0.81 |
| Canadian Natural Resources | CNQ | B | 66.91 | 539 | 36,100 | 99.00 | 0.19 | 0.74 |
| Devon Energy Corporation | DVN | B | 87.32 | 450 | 39,300 | 139.00 | 0.19 | 0.68 |
| Total or Median | Dill | | 01.52 | 450 | 285,000 | 137.00 | 0.14 | 0.84 |
| Independent Natural Gas and Oil - | Small Car |] | | | 205,000 | | 0.10 | 0.07 |
| Berry Petroleum Company | BRY | В | 38.78 | 45 | 1,750 | 50.00 | 0.21 | 0.82 |
| Encore Acquisition Company | EAC | B | 32.96 | 54 | 1,790 | 60.00 | 0.21 | 0.62 |
| Cimarex Energy Company | XEC | B | 42.13 | 84 | 3,540 | 76.00 | 0.09 | 0.59 |
| Energy Partners Ltd. | EPL | B | 12.36 | 32 | 390 | 38.00 | 0.34 | 0.55 |
| Total or Median | | | 12.50 | 52 | 7,500 | 50.00 | 0.25 | 0.55 |
| Income | | | | | 7,500 | | 0.25 | 0.07 |
| Kinder Morgan Energy Partners, L.P. | кмр | S | 57.86 | 179 | 10,380 | 17.00 | 0.56 | 2.06 |
| Kinder Morgan Management, LLC | KMR | S | 54.48 | 64 | 3,490 | 17.00 | 0.56 | 1.97 |
| Pengrowth Energy Trust | PGH | 5 | 17.45 | 247 | 4,310 | 19.00 | 0.30 | 0.94 |
| San Juan Basin Royalty Trust | SJT | В | 37.19 | 47 | 1,730 | 40.00 | | 0.94 |
| Penn West Energy Trust | PWE | B | 26.98 | 280 | 7,550 | 37.00 | 0.28 | 0.93 |
| Canadian Oil Sands Trust | COSWF | B | 37.71 | 479 | 18,060 | 45.00 | 0.28 | 0.81 |
| Enerplus Resources Fund | ERF | 5 | 40.78 | 129 | 5,280 | 52.00 | 0.03 | 0.85 |
| Hugoton Royalty Trust | HGT | В | 25.76 | 40 | 1,030 | 34.00 | 0.15 | 0.81 |
| Total or Median | 101 | D | 25.70 | 40 | 51,800 | 54.00 | 0.19 | 0.70 |
| B = Buy, S = Sell, H = Hold | | | | | 51,000 | | 0.19 | 0.09 |
| Present Value = Shares times Net Present Value divided by (1-Debt/Present Value). | | | | | | | | |
| Debt = Present Value times Debt/Present Value | | | | | | | | |
| McDep Ratio = Market cap and Debt to present value of oil and gas and other businesses | | | | | | | | |
| MCDep Kano = 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 | | | | | | | | |
|---|-------------|-------|-----------|-------------|-------------|----------|-----|---------|
| | | | | | | | | |
| | | | Price | Adjustd | DIV | | | Divd or |
| | | | (US\$/sh) | Resrvs/ | <i>PV</i> / | EV/ | | Distrib |
| | Symbol/ | Ļ | 4-Feb | Prod | Ebitda | Ebitda | P/E | NTM |
| | Ra | ting | 2008 | NTM | NTM | NTM | NTM | (%) |
| Mega Cap | | | | | | | | |
| Petrobras | PBR | | 113.89 | 9.8 | 9.6 | 9.0 | 17 | 1.5 |
| Gazprom (50%) | OGZPY | В | 51.30 | 24.6 | 10.3 | 7.5 | 13 | 0.8 |
| Exxon Mobil Corporation | XOM | В | 85.41 | 12.0 | 7.0 | 5.9 | 10 | 1.6 |
| BP plc | BP | В | 64.41 | 10.0 | 6.8 | 5.5 | 9 | 4.0 |
| Total S.A. | TOT | В | 73.85 | 9.6 | 6.5 | 5.1 | 8 | 3.7 |
| Chevron Corporation | CVX | В | 82.02 | 10.1 | 6.5 | 4.7 | 8 | 2.8 |
| ConocoPhillips | COP | В | 79.76 | 10.6 | 6.3 | 4.5 | 7 | 2.1 |
| Royal Dutch Shell plc | RDS-A | В | 71.51 | 8.1 | 6.0 | 4.3 | 8 | 4.5 |
| Median | ı | ļ | | 10.1 | 6.7 | 5.3 | 9 | 2.4 |
| Producer/Refiners - Large Cap | | ļ | | | | | | |
| Suncor Energy | SU | В | 96.48 | 23.8 | 11.1 | 9.0 | 16 | 0.4 |
| Imperial Oil Limited (30%) | IMO | В | 51.42 | 14.1 | 7.6 | 8.1 | 13 | 0.7 |
| PetroChina Company Ltd (14%) | PTR | В | 155.50 | 15.0 | 7.6 | 6.3 | 12 | 3.2 |
| Marathon Oil Corporation | MRO | Η | 48.93 | 8.9 | 6.3 | 4.9 | 8 | 2.0 |
| StatoilHydro ASA (29%) | STO | В | 27.46 | 7.7 | 6.2 | 4.4 | 9 | 6.1 |
| Petro-Canada | PCZ | В | 46.15 | 6.9 | 5.8 | 4.0 | 9 | 1.1 |
| Lukoil Oil Company | LUKOY | В | 72.00 | 18.4 | 6.9 | 3.8 | 6 | 2.2 |
| Median | | | | 14.1 | 6.9 | 4.9 | 9 | 2.0 |
| Independent Natural Gas and Oil - Large Cap | | | | | | | | |
| XTO Energy Inc. | XTO | В | 53.53 | 11.1 | 8.7 | 7.7 | 15 | 0.9 |
| CNOOC Limited (34%) | CEO | Η | 157.97 | 9.8 | 5.8 | 7.3 | 13 | 2.2 |
| Encana Corporation | ECA | В | 68.55 | 8.9 | 7.2 | 6.7 | 13 | 1.2 |
| EOG Resources | EOG | В | 90.67 | 9.0 | 7.6 | 6.6 | 16 | 0.4 |
| Canadian Natural Resources | CNQ | В | 66.91 | 8.2 | 8.7 | 6.4 | 12 | 0.5 |
| Anadarko Petroleum Corp. | APC | В | 59.75 | 11.4 | 7.4 | 6.0 | 14 | 1.2 |
| Occidental Petroleum Corp. | OXY | В | 69.24 | 11.6 | 6.6 | 5.4 | 10 | 1.4 |
| Devon Energy Corporation | DVN | В | 87.32 | 8.9 | 7.6 | 5.2 | 10 | 0.6 |
| Mediar | | | | 9.4 | 7.5 | 6.5 | 13 | 1.0 |
| Independent Natural Gas and Oil - Sr | | | | | | | | |
| Berry Petroleum Company | BRY | В | 38.78 | 9.9 | 7.4 | 6.1 | 10 | 0.8 |
| Encore Acquisition Company | EAC | В | 32.96 | 14.4 | 7.6 | 5.2 | 13 | - |
| Cimarex Energy Company | XEC | В | 42.13 | 7.9 | 6.4 | 3.8 | 9 | 0.4 |
| Energy Partners Ltd. | EPL | В | 12.36 | 6.0 | 5.5 | 3.0 | | - |
| Mediar | ı | | | 8.9 | 6.9 | 4.5 | 10 | 0.2 |
| Income | | | | | | | | |
| Kinder Morgan Energy Partners, L.P. | KMP | S | 57.86 | | 7.8 | 16.2 | 30 | 6.4 |
| Kinder Morgan Management, LLC | KMR | S | 54.48 | | 7.8 | 15.5 | 28 | 6.8 |
| San Juan Basin Royalty Trust | SJT | В | 37.19 | 10.3 | 11.6 | 10.7 | 13 | 7.7 |
| Canadian Oil Sands Trust | COSWF | В | 37.71 | 23.2 | 10.8 | 9.1 | 11 | 8.8 |
| Hugoton Royalty Trust | HGT | В | 25.76 | 13.6 | 10.9 | 8.2 | 12 | 8.6 |
| Pengrowth Energy Trust PGH | | | 17.45 | 7.4 | 6.8 | 6.4 | 16 | 15.1 |
| Enerplus Resources Fund ERF | | | 40.78 | 9.7 | 7.9 | 6.4 | 10 | 12.0 |
| Penn West Energy Trust PWE | | В | 26.98 | 7.4 | 6.0 | 4.8 | 12 | 14.7 |
| Median | | | 10.0 | 7.9 | 8.7 | 13 | 8.7 | |
| EV = Enterprise Value = Market Cap an | | | | | | | | |
| and amortization; NTM = Next Twelve | | | | 1, 2008; P/ | E = Stock I | Price to | | |
| Earnings; PV = Present Value of oil and | gas and oth | ner b | usinesses | | | | | |

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| McDep Energy Portfolio | | | | | | | | | | |
|-------------------------------|-------------|------------|----------|-----------|---------|-------------|-------------|------------|------------|-------|
| | | Compos | ite of E | Buy Rec | omme | ndations | 5 | | | |
| | | | | | | | | | | |
| | | | | | | North | Rest | | | |
| | | Price | | | Non- | Amer. | of World | | | |
| | | (US\$/sh) | | o Weight | U.S. | Natural | Natural | Oil | Down- | |
| | | 4-Feb | Equity | EV | HQ | Gas | Gas | Prod'n | stream | McDep |
| | Symbol | 2008 | (%) | (%) | (%) | (%) | (%) | (%) | (%) | Ratio |
| Mega Cap | | | | | | | | | | |
| Exxon Mobil Corporation | XOM | 85.41 | 3.5 | 3.1 | | 0.2 | 0.4 | 1.9 | 0.6 | 0.84 |
| BP plc | BP | 64.41 | 2.9 | 3.1 | 3.1 | 0.3 | 0.3 | 2.1 | 0.5 | 0.81 |
| Total S.A. | TOT | 73.85 | 3.1 | 3.1 | 3.1 | | 1.0 | 1.6 | 0.6 | 0.77 |
| Gazprom | OGZPY | 51.30 | 10.2 | 9.4 | 9.4 | | 6.2 | 3.2 | | 0.73 |
| Chevron Corporation | CVX | 82.02 | 3.3 | 3.1 | | 0.1 | 0.2 | 2.2 | 0.7 | 0.72 |
| Royal Dutch Shell plc | RDS-A | 71.51 | 3.2 | 3.1 | 3.1 | 0.1 | 0.4 | 1.7 | 1.0 | 0.72 |
| ConocoPhillips | COP | 79.76 | 5.5 | 6.3 | | 0.9 | 0.5 | 3.5 | 1.4 | 0.71 |
| Total or Median | | | 32 | 31 | | | | | | 0.73 |
| Producer/Refiners - Large (| | | | | | | | | | |
| Imperial Oil Limited | IMO | 51.42 | 1.4 | 1.3 | 1.3 | 0.1 | | 1.0 | 0.2 | 1.07 |
| PetroChina Company Ltd (14 | | 155.50 | 1.7 | 1.6 | 1.6 | - | 0.1 | 1.4 | 0.1 | 0.83 |
| Suncor Energy | SU | 96.48 | 1.3 | 1.3 | 1.3 | 0.0 | | 1.1 | 0.1 | 0.81 |
| StatoilHydro ASA | STO | 27.46 | 1.5 | 1.6 | 1.6 | | 0.6 | 1.0 | - | 0.71 |
| Petro-Canada | PCZ | 46.15 | 1.2 | 1.3 | 1.3 | 0.1 | 0.0 | 0.9 | 0.2 | 0.69 |
| Lukoil Oil Company | LUKOY | 72.00 | 7.1 | 6.3 | 6.3 | | | 4.7 | 1.6 | 0.55 |
| Total or Median | | | 14 | 13 | | | | | | 0.76 |
| Independent Natural Gas an | | | | | | | | | | |
| Encana Corporation | ECA | 68.55 | 3.6 | 3.8 | 3.8 | 2.5 | | 1.0 | 0.3 | 0.93 |
| XTO Energy Inc. | XTO | 53.53 | 4.5 | 4.7 | | 3.5 | | 1.2 | | 0.88 |
| EOG Resources | EOG | 90.67 | 6.9 | 6.3 | | 4.7 | 0.2 | 1.3 | | 0.86 |
| Occidental Petroleum Corp. | OXY | 69.24 | 3.5 | 3.1 | | 0.4 | 0.0 | 2.5 | 0.2 | 0.82 |
| Anadarko Petroleum Corp. | APC | 59.75 | 2.3 | 3.1 | | 1.7 | | 1.4 | 0.1 | 0.81 |
| Canadian Natural Resources | CNQ | 66.91 | 1.4 | 1.6 | 1.6 | 0.4 | | 1.1 | | 0.74 |
| Devon Energy Corporation | DVN | 87.32 | 5.9 | 6.3 | | 3.3 | | 3.0 | | 0.68 |
| Total or Median | | | 28 | 29 | | | | | | 0.82 |
| Independent Natural Gas an | nd Oil - Sı | nall Cap | | | | | | | | |
| Berry Petroleum Company | BRY | 38.78 | 1.4 | 1.6 | | 0.4 | | 1.2 | | 0.82 |
| Encore Acquisition Company | EAC | 32.96 | 2.1 | 3.1 | | 0.5 | | 2.6 | | 0.68 |
| Cimarex Energy Company | XEC | 42.13 | 3.2 | 3.1 | | 2.1 | | 1.0 | | 0.59 |
| Energy Partners Ltd. | EPL | 12.36 | 0.7 | 1.6 | | 0.8 | | 0.8 | | 0.55 |
| Total or Median | | | 7 | 9 | | | | | | 0.64 |
| Income | | | | | | | | | | |
| San Juan Basin Royalty Trust | | 37.19 | 7.4 | 6.3 | | 6.3 | | | | 0.93 |
| Canadian Oil Sands Trust | COSWF | 37.71 | 5.6 | 5.0 | 5.0 | (0.5) | | 5.5 | | 0.85 |
| Penn West Energy Trust | PWE | 26.98 | 1.9 | 2.5 | 2.5 | 0.8 | | 1.7 | | 0.81 |
| Hugoton Royalty Trust | HGT | 25.76 | 3.7 | 3.1 | | 3.1 | | | | 0.76 |
| Total or Median | | | 19 | 17 | | | | | | 0.83 |
| Portfolio Composite | | | 100 | 100 | 45 | 32 | 10 | 50 | 8 | 0.75 |
| Canada | | | | 17 | | | | | | |
| Russia | | | | 16 | | | | | | |
| Europe | | | | | 11 | | | | | |
| China | | | | | 2 | | | | | |
| | | | | | | | | | | |
| Note: Percentages in the Port | folio Weig | ght - EV c | olumn co | orrespond | to unle | vered posit | ions rangin | g from tri | ple at 9.6 | % |
| to four-tenths at 1.3% | | <u> </u> | | | | F - Ste | | | | |

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Index of Recent Research

Stock Ideas

| Date | Symbol | <u>Subject</u> | <u>Theme</u> |
|--------|---------|----------------------------------|---|
| 1-Feb | CVX | Chevron Corporation | Oil Concentration Rewarded |
| 1-Feb | XOM | Exxon Mobil Corporation | Global Energy Leader |
| 1-Feb | IMO | Imperial Oil Limited | Long-Term Canadian Oil Money Maker |
| 31-Jan | PCZ | Petro-Canada | Facing Oil Sands Investment Decision |
| 31-Jan | MRO | Marathon Oil Corporation | Downstream Surprise |
| 31-Jan | RDSA | Royal Dutch Shell plc | Downstream Offset |
| 31-Jan | COSWF | Canadian Oil Sands Trust | Distribution Nearly Doubles in Two Quarters |
| 30-Jan | PTR | PetroChina Company Limited | Cheap in New York, Dear in Shanghai |
| 29-Jan | CEO | CNOOC Ltd | Volume Gains Expected in 2008 |
| 29-Jan | OXY | Occidental Petroleum Corporation | Crude is King |
| 23-Jan | COP | ConocoPhillips | Cool under Fire |
| 22-Jan | SU | Suncor Energy | Oil Sands for Taxable Investors |
| 17-Jan | KMP | Kinder Morgan | Energy Infrasturcture Fee Machine |
| 11-Jan | * HGT | Hugoton Royalty Trust | Insider Buying (Income Weekly) |
| 6-Jan | * SJT | San Juan Basin Royalty Trust | \$18 a Million Btu for LNG |
| 14-Dec | * LUKOY | Lukoil Oil Company | Our Favorite Russian Oil Stock |
| 6-Dec | * OGZPY | Gazprom | Natural Gas Price Marching Up |
| 28-Nov | * CNQ | Canadian Natural Resources | New Buy Recommendation |
| 11-Nov | * PBR | Petrobras | Energy Mega Cap |
| 9-Nov | * PWE | Penn West Energy Trust | Light Oil Consolidator |
| 8-Nov | * PBR | Petrobras | Bonanza Offshore Brazil |
| 7-Nov | * XEC | Cimarex Energy Company | Timely Turn to Oil |
| 7-Nov | * DVN | Devon Energy Corporation | Oil Strength, Natural Gas Potential |
| 7-Nov | * EPL | Energy Partners, Ltd. | Management Scales Back |
| 7-Nov | * TOT | Total S.A. | Global Natural Gas Competitor |
| 6-Nov | * APC | Anadarko Petroleum Corporation | Natural Gas Resource Value |
| 1-Nov | * CNQ | Canadian Natural Resources | Heavy Oil, Natural Gas and Oil Sands |
| 31-Oct | * EAC | Encore Acquisition | Oil with Income Alternative in Encore Energy Partners |
| 31-Oct | * BRY | Berry Petroleum | Plans Master Limited Partnership (MLP) |
| 30-Oct | * NHY | Norsk Hydro ASA | Real Growth in Materials |
| 29-Oct | * EOG | EOG Resources Inc. | Natural Gas Sleeper |
| 29-Oct | * STO | StatoilHydro ASA | Shtokman Partner |
| 25-Oct | * ECA | EnCana Corporation | Political Cloud over Canada |
| 23-Oct | * XTO | XTO Energy Inc. | Raise Net Present Value to \$75 A Share |
| 23-Oct | * BP | BP p.l.c. | Lower Net Present Value to \$75 A Share |
| | | | |

Meter Reader

| 5-Feb | Weekly | Buy PetroChina |
|----------|--------|--|
| 29-Jan | Weekly | Buy Large Cap Natural Gas |
| 22-Jan * | Weekly | Small Caps on Sale |
| 15-Jan * | Weekly | Price Momentum in Six-Year Natural Gas |

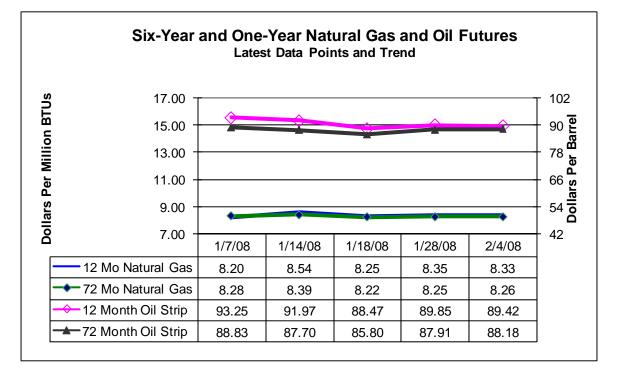
Oil and Gas Income Stocks (previously Natural Gas and Oil Royalty Trusts)

| 4-Feb | Weekly | Canada Tax Developments |
|----------|-----------------------|----------------------------------|
| 25-Jan | Weekly | False Alarm |
| 20-Jan * | Weekly | Thriving in Debt-Stressed Market |
| 11-Jan * | Hugoton Royalty Trust | Insider Buying |

* Archived on www.mcdep.com

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Disclaimer: T his analysis was prepared by Kurt Wulff, Manager of McDep LLC as of January 1, 2008. Previously Mr. Wulff was doing business as McDep Associates. The firm used sources and data believed to be reliable, but makes no representation as to their accuracy or completeness. This analysis is intended for informational purposes and is not a solicitation to buy or sell a security. Past performance is no guarantee of future results.

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Certification: I, Kurt H. Wulff, certify that the views expressed in this research analysis accurately reflect my personal views about the subject securities and issuers. No part of my compensation was, is, or will be directly or indirectly related to the specific recommendations or views contained in this research analysis.

Research Methodology/Ratings Description: McDep LLC is an independent research originator focused on oil and gas stocks exclusively. The firm applies the forty years of experience of its analyst to estimate a present value of the oil and gas resources and other businesses of covered companies. That value is compared with a company's stock market capitalization and debt. Stocks with low market cap and debt relative to present value tend to outperform stocks with high market cap and debt relative to present value. Buy recommendations are expected to deliver a total return better than 7% per year above inflation. Hold recommendations assume the attributes of the underlying business are reflected in the current price of the stock. Sell recommendations are expected to deliver a total return less than inflation.