

## LOOKING FOR WAVES, MISSING THE TIDE !

### (THE LONG-TERM CASE FOR ENERGY)

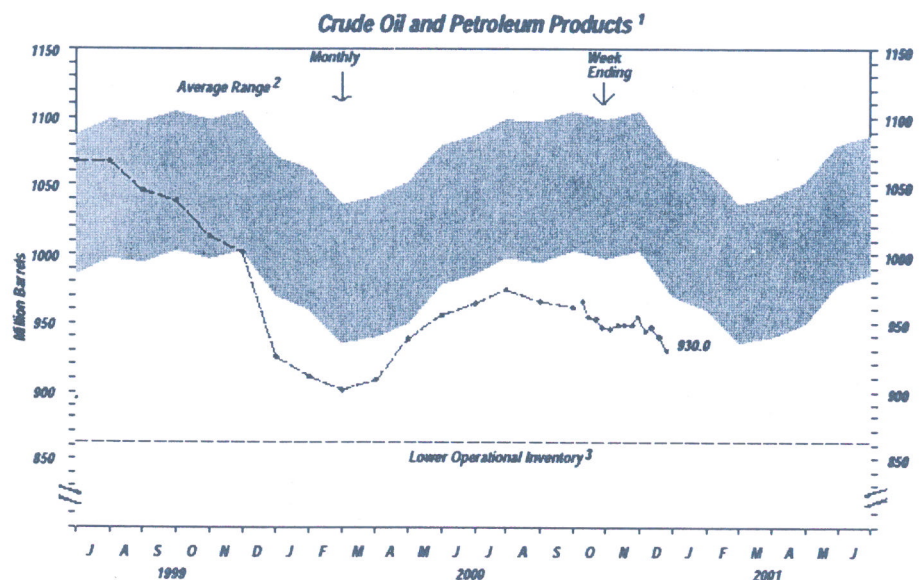
As we look back on the year 2000 for evidence of “*Missing the Tide,*” we do not have to go back far. The last six weeks have provided energy investors a great example of the difference between the long term (10+ years) energy cycles that we refer to as *Tides*, as opposed to the Wall Street focus on short term oscillations we call *Waves*. No fewer than three significant Street firms made major “calls” to exit energy in November and early December because of an economically derived expectation that crude prices were headed lower and thus the stocks must follow. In fact, there was a burst of energy stock selling from mid-November to mid-December as a result. (Those houses at least generated some commissions; even if they didn’t help their clients make good investment decisions!)

What was totally missing from the analysis was any recognition that oil prices back down to our target levels of \$22 to \$28 from \$34/barrel, and gas pricing down to \$3 to \$4 from \$9/MCF, would generate profitability and cash flow far higher than was captured in current stock prices. Implicit was a conviction that the experience of 2000 was an aberration, and that 1998/99 was normal as far as supply/demand and pricing was concerned, thus oil was headed for the teens and gas for \$2. While they spend their time trying to outguess *Wave* tops, we choose to watch the *Tide*. Our results, +82.3% in 1999 and +85.8% in 2000, suggest that our approach is the correct one!

### The Oil Picture - (Equilibrium Target Ranges - \$22 to \$28)

The fourth quarter of 2000 saw OPEC put all of its spare production back on line. Even Saudi Arabia began couching pronouncements on remaining spare capacity in terms of “*within six months we can raise production by x barrels.*” In other words, meaningful drilling, completion, and maintenance were necessary for additional oil to flow. Likewise, the oil production estimates for November show six of the ten members unable to meet current quotas and total OPEC supply was 200,000 B/D below their target. Including Iraq (to make the full 11 members) oil production actually fell in November from October!

Within the United States, the Department of Energy released the vaunted 30 million barrels of *Strategic Petroleum Reserve* oil and yet latest figures show crude



### “What Happen to SPR?”

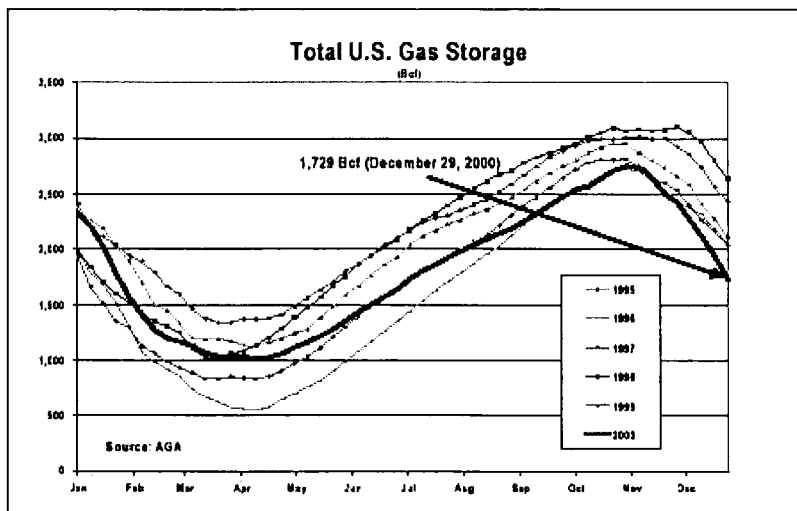
Note 1 – Source DOE Weekly Petroleum Status Report (Week of 12/29/00)

plus product inventories continuing the steady decline begun last July. With cold (and we do mean “cold”) weather now upon us, world demand jumps up to something near 79 million B/D, well above the current level of production even with Iraq at full capacity (approximately 3 million B/D). Therefore, inventories are still receding in the usual seasonal pattern from already extremely low levels. The difference between our bull case for oil versus the *Wave* toppers is the perception of what happens when temperatures moderate as we head into Spring.

Even in a world of more moderate economic growth (say 3% versus the near 5% in 2000) oil demand should grow. The International Energy Agency and Department of Energy both predict numbers in the +1% to +1.5% range. Our perception is that the world currently has virtually no spare capacity and any growth must be provided by new exploration and development. At the same time, as we have regularly documented, depletion is accelerating, making that a much harder task to achieve. With oil exploration expenditures still far below 1998 levels, in fact below early 1980s levels, the task is daunting. OPEC is absolutely in control of prices, and even modest production curtailments would suffice to hold prices in their desired \$22 to \$28 price band if commodity pit traders try to crash the price structure. In fact, the real question is can production grow enough to meet the projected 80 million B/D demand levels of winter 2001/02? Even if the economic outcome is more severe, and oil demand actually falls in 2001, a rarity, OPEC would need to produce at very high levels, 90% of capacity, to maintain adequate world supply. By the way, Iraq has been withholding about 1.5 million B/D since December 1, totaling 50 million barrels and offsetting the SPR release plus the last OPEC quota increase.

### **The Gas Picture - (Equilibrium Target Range - \$3 to \$4/MCF)**

Natural gas at \$10/MCF has made a few more believers for this half of the energy story. Normal (even colder than normal) weather has shown gas demand to be well above current supply. Prices have had to rise sufficiently to force substantial (estimated at 4 to 6 BCF/D) industrial gas demand to relinquish molecules to the household and electrical generating markets. Even so, natural gas storage is declining precipitously, well ahead of the main part of winter. Gas inventories at year-end were well below 2TCF – the lowest ever for this date by a large margin. Despite a gas-directed drilling level that was the highest in over 15 years by late 2000, production has barely begun to rise. The first nine months of the year saw gas output still falling, down .7% from 1999. At least something of an upturn seems to be in the cards, as the third quarter was up .6% from the second quarter. After declining three years in a row (1997-1999) gas output has hopefully seen a trough in early 2000 and will manage to be in plus territory by early 2001.



***Lowest Gas Storage Levels ever recorded, as of a year-end!***

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The *real gas problem* is that supply needs to grow greatly to avoid the crisis-like circumstances we are currently experiencing. Storage levels are dangerously low (*See Gas Storage Chart*). The gas needed to refill next summer is substantially greater than the amounts injected over the last several summers. To complicate matters, desperately needed electrical generating capacity coming on line in late 2000 and throughout 2001 is essentially all gas fired. This adds about 4% to gas demand on top of the already huge storage demand. Supply must grow more than 6% for a reasonable outcome with moderating prices. This is why we have argued that it will be at least 2002 before our equilibrium prices of \$3 to \$4 per MCF are likely to be realized.

The electricity connection mentioned above is important for more than just its impact on demand. With 20,000 megawatts of gas fired power added in 2000, 70,000 more coming onstream in the next 30 months, and virtually all of the nation's peaking power capacity gas fired, the price of electricity (in a now deregulated environment) will determine whether the generation market will pull gas away from other uses. At \$60 per megawatt (well below current prices), generators can profitably pay between \$5 and \$6 for gas, for example. Electricity demand will set gas prices at the margin in a generation capacity short world.

The growth in gas demand for electrical generating is not just a 2000/02 phenomenon. Gas-fired turbine capacity is sold out through 2004 and beyond, as utilities try to make up for a decade of under-investment in generating capacity. Gas-fired units are the quickest and environmentally cleanest units to build, so gas demand from this sector will continue to grow for years to come. The case for the incoming energy *Tide* is not about weather or supply disruptions such as OPEC; it is about 15 years of under-investment in supply, which must be offset by years of catch-up spending.

## The Service Sector

Capital spending by oil and gas companies in 2001 is currently budgeted to be up 20% versus 2000. This will not get the level back to where it was in 1998, when gas supply was already starting to fall because of rapid depletion. Even at the current capex level, rigs are sold out for both off- and on-shore. Day rates are moving back above the early 1997 highs, and pricing has firmed sharply on everything from drill pipe to compression. Profitability in this segment of the energy industry has just begun to turn up. Revenue growth of 20% per year, or more, is in store for years ahead, as the industry scrambles to rebuild the equipment and manpower that has disappeared from the sector since the last peak in 1982. To put the scope of the energy *Tide* in perspective, there are about 1,100 rigs running in the U.S. now; there were nearly 5,000 then. Fortunately, technology has improved the accuracy and the speed of drilling. Additionally, new completion techniques generate higher productivity for any given reservoir. We don't need to get back to 5,000 rigs, but we definitely need many more than the current level. We have a long way to go, and the industry needs much higher profitability to support the necessary growth.

## Infrastructure

The year 2000 showed us more than just the tight balance between energy supply and demand. To reiterate, we have underinvested in the supply chain for 15 years. Now we find that we are short of refining capacity (no new refineries built in a decade). We are short of oil tanker capacity (high scrappage of 1970's vintage ships required by environmental laws), with new builds well below requirements for at least two or three years. We are short pipeline capacity as deliverability of crude to inland refineries has faltered over the last year, delivery of products (gasoline in the mid-west for example) is clearly inadequate, and delivery of natural gas to California is a crisis. Finally, we are short of electrical generating capacity as regulatory (read deregulation) uncertainty and permitting have slowed construction. (Can you believe new permits have been rejected in California as recently as this past November?) None of this is a quick fix; it will take many years.

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## Long-Term Investment Strategy

Throughout this piece we have reiterated that 15 years of under-investment has left a mountain of rebuilding to accomplish in the supply chain for energy. Another way of stating the same thesis is that we have just started a new energy *Tide*, as we did in 1970. The third way of stating the same thing is to say that we have a unique long-term investment opportunity at hand, as returns for energy investments will be significantly superior to other sectors, just as they were during the last (1970-1982) energy *Tide*. Others keep getting caught up in short term commodity price volatility (*Waves on the Tide*) and fail to make the appropriate long-term sector bet because they are afraid of the spikes or feel that they have “missed the move.” We see price spikes as symptoms (like your temperature) showing the severity of the energy supply shortfall and indicating great urgency in putting capital to work in the sector. There has never been a better time to deploy intelligent Strategic Capital, as the energy sector goes through its *Tide*-driven consolidation, rationalization, and superior growth phase. Our returns of the last two years show the power of backing the right management teams (bottom up analysis) with the top down sector knowledge embedded in Moncrief Willingham Energy Advisers.

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