



DRILLING AHEAD

High E&P spending levels replace US production and boost reserves

John Kennedy, Contributing Editor

EXPLORATION AND development spending in North America, up a phenomenal 72% in 2000, is likely to continue to increase in 2001 and into 2002.

That's a conclusion of the 2001 edition of Andersen's Global E&P Trends.

"This year's report reflects the boom the oil and gas industry has experienced over the past 18-24 months and the action of the global energy industry to vigorously and efficiently react to marketplace changes and opportunities," said **Victor A Burk**, Managing Partner of the **Andersen** energy and utilities industry practice.

North American activity remains relatively high and a continued increase is expected, said Mr Burk. "There ... is renewed interest among the majors and independents in exploration and production investments in North America."

More good news is that high spending levels increased reserves in the US and more than replaced production through drilling. Reserve replacement costs in the US were trimmed by 6% to \$4.79/boe; finding and development costs dropped 2% to \$5.27/boe, including revisions.

Outside the US, reserve replacement costs increased 10% to \$4.15/boe and finding and development costs gained 11% to \$4.13/boe, according to the report.

CAPITAL SPENDING

The Andersen survey reports that worldwide upstream capital spending in 2000, which amounted to 58% of pretax operating cash flow, increased 30% to \$124 billion. Property acquisition was the category with the largest gain, increasing 41% to \$43 billion. E&D spending rose 24% to \$81 billion.

Total upstream spending in North America jumped dramatically, with a 116% increase to \$70 billion in 2000. But total spending outside North America slipped 14% to \$54 billion.

High natural gas and crude prices drove

upstream spending in North America, said Mr Burk.

US upstream capital spending more than doubled to \$56 billion in 2000, according to the Andersen survey. But that included a fourfold rise in unproved property acquisition costs; exploration and development spending jumped 49%.

Proved property acquisition cost more than tripled to \$27.8 billion, according to the survey, with transactions by **BP** totaling \$9.2 billion; **Phillips Petroleum Co**, \$5.2 billion; and **Occidental Petroleum Corp**, \$3.7 billion. Those 3 firms accounted for more than three fourths of the activity.

MONEY WELL SPENT

As is always hoped, increased exploration and development activity brought increases in reserves. US oil reserves increased 19% and natural gas reserves gained 18%. Worldwide, oil reserves increased 7% and gas reserves, 9%.

New gas discoveries and reserve extensions added more than 36 tcf of reserves worldwide, said the Andersen report.

For only the second time in 5 years, survey companies replaced more than 100% of US production through the drill bit—130% of oil production and 128% of gas production.

From all sources—including extensions and discoveries, improved recovery, revisions of previous estimates and purchases and sales of reserves—the companies replaced 301% of US oil production and 255% of their gas production.

That brought the 5-year replacement averages to 159% for oil and 139% for gas.

Worldwide in 2000, companies replaced 96% of oil production and 133% of gas production by drilling. From all sources worldwide replacement rates were 186% for oil and 233% for gas.

It is important to remember that the survey data do not include national oil companies, which own the bulk of world oil and gas reserves.



CAPITAL WIRELINES

Drill pipe components should be excluded from import limitations

Brian T Petty, Senior Vice President-Government Affairs

ITC 201 INVESTIGATION (Washington, DC)—IADC is supporting an effort launched by drill pipe manufacturer **Grant Prideco** to exclude drill pipe components from possible steel import restrictions resulting from the Bush Administration's pursuit of ways to help the domestic US steel industry. The following is a letter from Grant Prideco CEO **Curtis Huff**, joined by IADC and several drilling contractors:

"The undersigned and attached signatures represent the largest drill pipe manufacturer and the largest contract drillers and distributors of drill pipe in the United States. We understand that at the request of the President, the **International Trade Commission** instituted a Section 201 investigation into steel imports into the United States to determine whether any rise in imports has resulted in serious damage to the US steel industry. We also understand that the scope of this investigation covers imports of drill pipe into the United States (including the green tubes and tool joints utilized to manufacture drill pipe). The purpose of this letter is to express our opposition to the 201 investigation to the extent it would limit in any way the quality and supply of drill pipe to the contract drilling industry. Any such limitations would adversely affect our nation's ability to safely drill oil and gas wells and increase our dependence on foreign oil.

"Drill pipe is the principal mechanical tool (other than the rig) used to drill an oil and gas well.... An average drilling rig has an inventory of 10,000 to 25,000 feet of drill pipe Almost all drill pipe utilized in the United States is manufactured domestically by US companies. These manufacturers source raw materials (green drill pipe tubes and tool joints) from outside the United States. Green drill pipe is sourced primarily from foreign mills for quality reasons so that manufacturers can produce drill pipe exceeding American Petroleum Institute (API) standards. Tool joints are sourced from foreign sources primarily for quality reasons but also because of limited domestic capacity.

"The oil and gas industry regularly requires drill pipe exceeding API standards because of changes in drilling that have occurred during the past five years. The wells that are drilled in the United States, both onshore and offshore, have become deeper and more complex; and they are subject to increasingly harsh and corrosive environments. A drill pipe failure could put human life at risk and have catastrophic environmental consequences. As a result, drillers put an increasing emphasis on the quality of drill pipe and the connecting tool joints. In most instances, this requires that the steel tubes utilized to manufacture drill pipe be sourced from foreign mills that can consistently manufacture to extremely high quality standards.

"A 201 investigation into drill pipe is inconsistent with the President's domestic energy policy. Our country needs a strong domestic oil and gas industry. Our nation's energy crisis is real. All long term predictions show severe shortages, especially if drilling operations remain stagnant or are curtailed. Limiting the ability of domestic drillers to obtain high quality drill pipe would adversely affect our ability to drill oil and gas wells. It would reduce the number of wells that could be drilled, risk the safety of our drilling operations, increase the costs to consumers and make us less competitive with foreign suppliers. We do not believe that imports of green drill pipe tubes and tool joints into the United States by domestic drill pipe manufacturers have had any adverse impact on the domestic steel industry. The volumes are too small to affect the steel industry.

"In summary, our nation needs a strong domestic oil and gas industry. We are dependent upon the drilling industry's ability to drill deeper, more complex wells that can operate safely in harsh and corrosive environments. We need the highest quality drill pipe and tool joints for these wells. We ask that you terminate the 201 investigation into drill pipe (including green drill pipe and tool joints)." ■

The survey does represent the US and international exploration and production industry by analyzing 155 publicly traded companies with proved oil and natural gas reserves of more than 5 million equivalent bbl of oil. The group accounts for about 87% of total US crude oil and natural gas liquids reserves, and 68% of US gas reserves. It includes 34 companies headquartered outside the US.

GLOBAL EXPLORATION

IHS Energy Group reports that new field wildcat drilling outside North America bounced back from a 1999 low of 629 wells to a completion rate of 826 wells.

That is still less than any other year during the 1990s, said the IHS World Petroleum Trends Report 2001. It estimates that wildcat drilling discovered some 14.3 billion bbl of liquids in 2000, a 10% decline from 1999.

The report notes, however, that the total in both 1999 and 2000 is skewed by the giant Kashagan-East field discovery offshore Kazakhstan. With Kashagan West, the two fields could contain up to 10 billion bbl of oil, but not all that reserve is included in this year's report.

Gas discoveries in 2000 added an estimated 87 tcf, according to the IHS report, compared with 108 tcf discovered in 1999.

IHS estimates remaining proven liquid reserves at 1,100 billion bbl, down from 1,207 billion bbl at the end of 1991, a 41-year supply at current consumption rates. And although gas production has increased almost twice as fast as oil production, reserves have remained constant at about 5,876 tcf, a 64-year supply.

Overall exploration success rate was 38% in 2000, according to IHS, close to the 10-year average. Average discovery size was 93 million boe, well above the 10-year average of 73 million boe.

THE USUAL CAVEAT

In forecasting a continued spending increase, Andersen's Burk adds, "...we can be virtually certain these trends do not signal the beginning of a period of predictability in energy markets...."

In the past year, we've seen yet another instance of how quickly the market can work.

Drilling activity has been strong, particularly in North America. Demand projections tell us there is still much more drilling needed.

But energy markets will always be cyclical and competition intense. Remembering that—and shaping strategy accordingly—is the key to long term success for any company. ■