Chapter 3

Discoveries of the 1990s: Were They Significant?

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Oil discoveries of the 1990s, ranging from 4 billion to 9 billion barrels (bbl) per year, were significant in location but less so in size. They were smaller in both size and number than in the past and are projected to supply only about 20% of consumption in 2005. To meet demand of 28 billion bbl of oil in 1999 and projected demand of 35 billion bbl of oil in 2010, new production must have originated not only from recent discoveries but also from other sources, including:

- pre-1990s discoveries made economic and accessible with new technology and with political rapprochement, including full development of existing reserves in the Middle East, especially in Iraq and Saudi Arabia
- the likelihood of a continuation of the recent trend toward increased annual discovery rates
- development of extra-heavy oil in Canada and Venezuela
- growth in gas-related liquids: condensate and natural gas liquids (NGLs), and gas converted to liquids
- continued technological advances to reduce costs and increase recovery rates in mature fields by identifying bypassed reserves

The outlook for long-term liquid supply shows strong growth from the mid-1990s to 2010, adding 25.4 million bbl per day (BOPD) to supply, of which 6.4 million BOPD was added between 1995 and 2000 (see Table 1).

Unless oil-demand growth slows because of replacement by natural gas and other energy sources, increased efficiencies, or some new technology, the other sources listed above will be called on to far exceed the production expectations for 2010 and to meet demand in 2020 that could exceed 40 billion bbl. This growth in supply is necessary to overcome significant declines in production, caused by resource constraint projected, for the United States and western Europe and increasing depletion rates in existing production in all areas.

Table 1. Forecast of World Petroleum Production Capacity (million bbl/day)*

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<th>1995</th>
<th>2000</th>
<th>2010</th>
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<td></td>
<td>72.9</td>
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*Source: Cambridge Energy Research Associates

ECONOMIC FRAMEWORK OF THE 1990s

The 1990s have been characterized by two complete "boom-and-bust"cycles resulting in five distinct price movements, each putting its stamp on exploration and production (E&P). After the invasion of Kuwait in 1990, companies and some Middle East countries moved to increase their productive capacity, resulting in a rapid increase in surplus capacity and low prices by late 1993 and early 1994. In a reaction to lower prices, companies reduced budgets, increased layoffs, and pulled back to focus on core areas. By the mid-1990s, surging demand