In December 1986, the members of OPEC (apart from Iraq) agreed to re-establish a fixed price structure, effective February 1, 1987, and to set production quotas for 1987. A price of US\$18 per barrel, derived from a basket of seven crude oils, was set as the reference price for crude above 26° API. (Interestingly, this basket includes Mexican Isthmus crude together with six OPEC crude streams.) For the first six months of 1987, the OPEC production ceiling was set at 15.8 million barrels/day. Despite overproduction by several members, total output was held to approximately 16 million barrels/day in first-quarter 1987 as Saudi Arabia again adopted the role of swing producer. In third-quarter 1987, the production ceiling became 16.6 million barrels/day and in fourth-quarter 1987 it will rise to 18.3 million barrels/day. These targets are equivalent to an average 1987 production limit of 16.6 million barrels/day, down more than 2 million barrels/day from 1986 output. Iraq would not accept a quota smaller than Iran's and so did not sign the accord. It was allocated a quota amounting to 9.3% of the total OPEC allowable output.

Some producers barter oil for other goods. The Soviet Union, for example, trades armaments and other industrial goods to Middle Eastern and North African nations, taking crude oil in return. Part of this crude is then marketed by the Soviets to the West, to earn hard currencies. Over the first nine months of 1986, Soviet re-exports of OPEC crude to Western countries averaged nearly 400,000 barrels/day. Finland is used as the principal trade outlet for Soviet barter oil.

## C. World Petroleum Resources and Reserves

Petroleum resources are distributed irregularly over the globe. According to data compiled by Joseph Riva Jr. of the U.S. Congressional Research Service (Riva, 1987a), the world's total original endowment of recoverable, conventional light and medium crude oil is assessed at approximately 1,635 billion barrels. Of this amount, 32% has been consumed and roughly 30% remains to be discovered. The other 38% constitutes the world's present proved reserves of conventional light crude oil. Of the more than 1,100 billion barrels of light-medium crude oil yet to be consumed – that is, proved reserves plus undiscovered oil – 78% of this amount is calculated to lie in the Eastern Hemisphere.

In contrast, the principal deposits of heavy oils lie in the Western Hemisphere. The world's original endowment of recoverable heavy crude oil is estimated to have been about 608 billion barrels, of which 85% is considered to have been discovered but only 11% consumed. Of the 540 billion barrels of unconsumed heavy oil, 64% is believed to be located in the Western Hemisphere.

The world's total original endowment of recoverable natural gas has been estimated to contain an amount of energy equivalent to 1,897 billion barrels of oil, including a calculated 341 billion barrels of natural gas liquids. Roughly half of this resource is thought to have been discovered and about 14% consumed. Of the