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**OPEC OIL IN A GLOBAL CONTEXT:
THE NEXT 10 YEARS**

Lecture delivered by

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If the past is prologue to the future, the events of the last several years do not bode well for OPEC. As we know, OPEC's production peaked in 1979, its export earnings peaked in 1980 and its official sales price in 1981. Ever since then it has been downhill for all three data. What is worse for OPEC, these developments went against the general global trend. During the past five years the world economy has grown modestly but steadily, so has non-oil energy consumption as well as the production and consumption of oil from non-OPEC sources. In a reverse way OPEC's current phase is almost as unique as that of the 1970's when its economies grew nearly twice as fast as those of the rest of the world. The two phases are of course related. In fact, they reflect a cause and effect relationship. However, what matters now to planners and strategists in business and government is not why OPEC's fortunes have declined so sharply since 1981 but where the organization is going from here or, to put it more bluntly, whether it will go anywhere or just wither away or collapse, as is frequently predicted these days.

We already know that OPEC production will decline again this year despite a likely very slight further increase in world* oil demand, following last year's 1 million B/D increase. OPEC was down by about 2 million B/D in the first quarter, while non-OPEC oil production was up by nearly 1 million B/D. If for the purpose of this discussion we accept the industry consensus

* All references in this paper to world economic and energy data exclude the Centrally Planned Economies (Soviet Bloc and China).

assumption that the current price structure will remain approximately intact with a slight downward tilt in nominal dollars during the next few years after which prices will roughly rise in line with inflation into the early 1990's, the factors which have depressed world requirements for OPEC oil in the first half of the 1980's will still be largely at work in the second half. The most hopeful thing for OPEC that can be said about the next few years under this assumption is that the situation is unlikely to get worse, i.e. the annual demand for OPEC oil will probably not go below 16.0-16.5 million B/D. In fact, it is more likely to be higher in the second half of the 1980's. But even by 1990 we do not expect crude production to return to what one might call OPEC's "comfort" level which would be around 22-23 million B/D under our price assumption. Let me briefly describe the reasons for this expectation.

On the supply side, non-OPEC oil supplies (including net imports from the Centrally Planned Economies) increased by 6.5 million B/D between 1979 and 1984, all of it displacing available OPEC oil. The increase from these sources has not yet ended. We know that North Sea production will be higher this year than last and that Canadian production is up. The same is true for the production in several non-OPEC developing countries. There are apparently no offsetting declines in any major producing area, with the notable exception of the Soviet Union whose exports should consequently drop slightly this year.

Interestingly, the 22% nominal and roughly 35% real price decline in the composite OPEC and world oil price since the Spring of 1981 has so far not halted the growth in non-OPEC

production. One reason could be that most of the decline has occurred in the last two years and thus has not yet affected drilling decisions. I believe a more important reason is that the present price is still high enough to make oil exploration and development drilling attractive in the areas where these operations are currently going on. Tax considerations certainly play a role in this. The higher the marginal tax rate the less of a given price decline has to be absorbed by the producer. In the North Sea countries, the U.S. and Canada, tax and royalty collectors have had to absorb the larger share by far of the price reductions. At the same time the U.K. and Canada have redesigned their oil tax and royalty regime for the specific purpose of making it less onerous to producers. The recent increases in U.K. and Canadian drilling activities suggest that these changes are having the intended effect.

Paradoxically, another production stimulating factor in countries such as the U.S. and Canada are the signals which the OPEC price reductions convey to oil producers. To the extent to which producers believe that further price reductions are more likely than price increases and no less likely than price maintenance, they have an incentive to maximize current output. The continuing high level of infill and shallow well drilling in the U.S. undoubtedly reflects in part this rationale. Finally there is the continuing underlying incentive of the major international oil companies, all of which are now net crude oil buyers, to find their own reserves and benefit from the economic

rent provided by OPEC rather than buy oil from OPEC at market prices and forego all economic rent.

However, all economic trends have their built-in correctives. Eventually these correctives reverse the trend. In the case of non-OPEC oil the reversal is likely to begin before the end of the current decade. It is worth recalling in this connection that the displacement of OPEC by non-OPEC crude since the late 1970's has been due primarily to the concurrence of several unique factors, namely the near simultaneous opening up of the three largest oil finds outside OPEC in the postwar period: the Alaskan North Slope, the North Sea and Mexico. In 1974 the first two of these were non-existent while Mexico's output of 640,000 B/D was not substantially above its average for the previous five years. By 1984 the three areas supplied a combined total of 8.2 million B/D of oil (including NGL's). Had these three extraordinary developments not occurred when they did, the history of OPEC from 1978 on would have been very different.

However, all three producing areas have now plateaued: Mexico at 3 million B/D in 1982, the North Slope at 1.7 million B/D also in 1982, and the North Sea at 3.7 million B/D this year. The North Sea is expected to enter its decline phase within one or two years, as U.K. production starts falling off, while North Slope production is forecast by the Alaskan state government to start declining by 1990. Only Mexico is expected to raise its output somewhat further over the next five to six years but much of the increase is likely to be consumed internally. Thus, the impact of the production from these three giants has now been

fully absorbed by OPEC. Within a few years their output should in fact start to decline modestly. Production increases can of course be expected from a number of other non-OPEC countries, such as Egypt, Brazil, Colombia, India and the West African countries. But there is nothing in sight which would compare even remotely with the developments of the 1970's.

Meanwhile, one very major producing area, the contiguous U.S., or "Lower-48", can be expected to resume its decline. Lower-48 crude production dropped by 26%, or from 9.4 to 7.0 million B/D, between 1970 and 1980 and then levelled off under the impact of a very sharp increase in drilling plus an acceleration of secondary recovery installations. But these actions did not stop the decline in the reserve/production ratio. In effect, most of these activities have been a form of current production maximization by borrowing from the future. But with a record low reserves/production ratio of eight years in the Lower-48 in 1983 the future is rapidly catching up. We believe that after 1987 when the newly discovered offshore California production will have come onstream, Lower-48 production will resume its long-term decline. For the oldest and most drilled-up oil region in the world this would be a natural development. However, the natural rate of decline might be slowed down by recent progress in recovery technology.

In another, very different major producing area, the Soviet Union, production has dropped slightly in 1984 for the first time since the end of World War II. On the basis of production data for the first quarter of 1985, a further production decline this

year is likely. It is not unreasonable to assume that over time these reductions will have some effect on exports to the West, particularly in view of Russia's growing foreign exchange earnings from natural gas exports.

Altogether, then, on the supply side of the world oil market the growing pressure on OPEC oil from non-OPEC sources should begin to subside within two or three years and reverse itself in the early 1990's. However, given our price assumptions and the industry's structure, there will still be an incentive to explore for and develop new oil reserves outside OPEC. Under optimistic success assumptions this could postpone the expected decline in non-OPEC production by several years.

Turning to the demand side, last year's 3% increase in world oil demand represented a trend reversal but not an unexpected one. World oil demand, after peaking in 1979, had been falling regularly from 1980 through 1983 but each year's decline was less than the previous one so that a turn-around was foreseeable. However, the magnitude of the turn-around was partly due to special non-recurrent circumstances. In the next five years we expect a modest 1% annual growth rate, about half that of total primary energy consumption. This should raise world consumption by about 3 million B/D between 1985 and 1990. The developing countries which last year accounted for 25% of world consumption are expected to grow at a faster rate and the industrial countries (OECD) at a slower one. The 1979-84 period, when OECD oil consumption fell by 17% while the developing countries'

consumption rose by 6.5%, illustrates the difference in the two groups' incremental oil requirements.

In Europe the principal reason for the expected very low growth rate is the continuing displacement of fuel oil by gas, coal and nuclear power. This will offset most of the oil demand growth in the transportation sector. European oil demand can be expected to be somewhat positively affected by the decline in the dollar exchange rate currently under way which will make oil cheaper in local currencies. However, given the relatively low short-term price elasticity of oil products demand, the impact is likely to be relatively small in the first 1-2 years of the decline. By contrast, the OPEC countries can expect to feel the full brunt of the reduced purchasing power of their oil exports almost immediately.

In the U.S. where the decline in fuel oil consumption is likely to level off after this year, the principal reason for the foreseen slow growth rate to 1990 (about 0.5%) is the continuing decline in gasoline requirements because of improvements in the fuel efficiency of automobiles. In Japan where oil demand should grow at nearly 1% a year to 1990, most products other than residual fuel oil are expected to participate in the growth.

The decline in world oil demand from 1979 to 1983 was due to a large extent to oil's displacement by other fuels in the stationary energy market of the industrial countries. The 4 million B/D worldwide drop in residual fuel oil demand reflects this fact. In the U.S., as pointed out, the displacement process should be largely completed this year; in Europe and the Far East it should end within 4-5 years. From then on oil's growth will

be determined largely by the fuel requirements of the world transportation sector. There are two positive aspects for oil producers to this prospect: transportation is a long term growth market and oil has no serious competition in providing all its fuel needs, now or in the foreseeable future. Only a sustained, substantial real oil price increase could change this. Absent such an increase, oil demand in the 1990's can be expected to grow at a somewhat faster rate than in the 1985-90 period. The growth should be particularly fast in the developing countries which must mechanize their transportation as a precondition to economic growth. In some of these countries the growth rate in total motor vehicle registration is quite impressive. In India, Korea, Taiwan and Chile, for instance, it ranged from 9% to 19% annually for the period 1979-83.

If our projections of an accelerated growth in world oil demand and decline in non-OPEC oil supplies after 1990 are both directionally correct, OPEC can be expected to return to its "comfort" level of 22-23 million B/D production by the mid-1990's. The organization's producing capacity may well be smaller by then because of a sustained decline in adequate maintenance, in view of the costs associated with it and the lack of economic incentive to do it. At the same time, a number of smaller OPEC members are likely to be at or near capacity by then, leaving the organization's spare producing capability in the hands of its major members, the principal Middle East producers and possibly Venezuela.

Needless to say, projections must not be confused with reality. Things could obviously develop quite differently, in either direction. OPEC's ability to control reality will remain quite limited for the foreseeable future. Yet, if it should cease altogether, that is, if OPEC should lose or abandon its remaining price administering function, its collective earnings would be substantially lower for quite some time. For while a price collapse would cause non-OPEC production to start declining within a year or two and cause the current fuel substitution process to reverse itself (oil would displace coal and gas), for a number of years the higher output volume would not make up for the lower price. To wit, 24 million B/D at \$13/Bbl brings in much less than 16 million B/D at \$27/Bbl; and \$13 is not the rock-bottom short-term equilibrium price in a free price fall.

There is a unique combination between price and volume which would optimize OPEC's revenue over time. It remains to be seen whether OPEC finds that combination and can make its members and the market accept it.