11/26/79

Mike Nobel-Platts - LJJG's PIRINC card
Charles Hartman - Texaco - LJJG's PIRINC card
Rick Spreyer - LJJG's PIRINC card
Bill Finger - "Note"
Mr. Watterson - Chevron - "Note"

Eugene Wilson - """"
Richard Hallwell - """
Jerry Evander - ""
Sue Colee - ""
Ben Cooper - ""

"Resor in Texaco (Re Watterson) - ?"
Manager's resign - 11/27 here
Pedry Salton - 11/27

Roger Williams - 11/29
INFLATION IN ENERGY:
AN EXAMINATION OF THE INTERNATIONAL OIL MARKET EFFECTS ON DOMESTIC PETROLEUM PRICES

NOVEMBER, 1979
MEMORANDUM FOR ALFRED E. KAHN
FROM: TERENCE L. O'ROURKE
SUBJECT: A POLICY TO REDUCE INFLATION IN OIL PRICES

The principal points in the attached report, "INFLATION IN ENERGY: An Examination of the International Oil Market Effects on Domestic Petroleum Prices," are:

o Federal policy must assure generally equal access to foreign oil, at roughly equal prices, among domestic refiners before any attempt to reduce inflation in domestic oil prices and profits can be successful.

o The bulk of foreign oil traded in international markets and imported into the United States is controlled by a handful of major international companies. Other companies buy all or most of their foreign oil from them. In recent months, as the world oil supplies became tight, these major companies reduced their third-party sales to other companies in order to meet their own needs and/or divert supplies to take advantage of high spot market prices. At the same time, they greatly expanded their mark-ups on remaining third-party sales. Their customers who were cut back were driven into very thin spot markets for oil where they bid up prices to extraordinary levels. They imported this oil at vastly inflated prices into the United States where it has had the double impact of driving up prices for both domestic crude oil and refined products.

o In past months, those few major companies who control the bulk of foreign oil moving in world commerce were able to reap immense profits, because: (1) they were assured of adequate supplies, as a result of the control they exercise; (2) they purchased their crude oil supplies at the lowest prices and often resold a portion of it at vastly inflated mark-ups in the limbo of international markets; and (3) they sold their refined products at market prices which reflected the costs of refiners who were buying crude oil at the highest prices.
These circumstances were the result of a continuing two-tier international market structure. The lower tier is occupied by those few major companies with the greatest access to foreign oil at the lowest costs, and the second tier is occupied by the remaining companies with much less access to foreign oil and at much higher costs. Due to the inelasticity of demand for petroleum, the cost of oil to the second tier companies generally establishes the prices for refined products, creating a wide margin for immense profits for the major companies. The oil producing countries point to the high prices and profits of these oil companies as justification for further increases in their oil prices, creating a vicious spiral of ever-inflating oil prices.

Had the combinations of cost and access among oil companies over the past several months been more balanced, oil prices and profits would not have risen as much, and the rate of inflation around the world and the United States would have been significantly less, particularly in the prices of heating oil, gasoline and diesel fuel.

Presently, the Council on Wage and Price stability (COWPS) is reviewing oil company data collected by the Department of Energy. The purpose is to analyze and verify oil company submissions to COWPS filed for the first program year. This COWPS review could result in amendments to tighten the second year standards, closing some of the existing loopholes and eliminating ambiguities. However, it is not within the scope of the existing COWPS program to prevent the inflation in domestic petroleum prices caused by the structure of the international oil market.

To eliminate this cause of inflation, there are three options which we should consider:

1. Cooperate with Other Consuming Nations to Restrain Rising Prices. American and European energy and economic experts recommend this approach. Most recently, the focus has been on controlling the Rotterdam spot market.

2. Exercise Federal Authority to Purchase and Import Crude Oil and Petroleum Products. This option would eliminate the middleman role of major oil companies. It would emphasize nation-to-nation models but would not necessarily terminate the role of private companies in the international market.
3. Amend the Entitlements and Crude Oil Allocation Programs. This would generally equalize the price of and access to both foreign and domestic crude oil for U.S. refiners.

Any one of the three options would establish the base upon which to build an anti-inflation program to slow unnecessary increases in oil prices and profits.

Recommendation:

I recommend Option 3. However, prior to taking such a step, the Federal Government should seek to achieve the same ends, i.e., equal access and equal cost, through negotiations with the major companies. A Federal Government induced realignment of access to foreign oil would be consistent with the voluntary anti-inflation program, and would provide the basis for a successful effort to reduce inflation in oil prices.

I also recommend the adoption of more restrictive anti-inflation petroleum price standards, specifically for heating oil, gasoline and diesel fuel. These product price standards should be scheduled to phase out concurrently with domestic crude oil price controls in October 1981.
INFLATION IN ENERGY:
AN EXAMINATION OF THE INTERNATIONAL OIL MARKET EFFECTS ON DOMESTIC PETROLEUM PRICES

NOVEMBER, 1979
| TEXT - INFLATION IN ENERGY: An Examination of the Information Oil Market Effects on Domestic Petroleum Prices | 1 |
| SUPPORTING NOTES | 12 |
| APPENDIX A | A-1 |
| APPENDIX B | B-1 |
| APPENDIX C | C-1 |
| APPENDIX D | D-1 |
INFLATION IN ENERGY:
An Examination of the International Oil Market Effects on Domestic Petroleum Prices

The rise in world prices was triggered earlier this year by the temporary cessation of production and exportation of Iranian crude oil. This interruption of Iranian output disrupted the normal flow and availability of crude oil to the industrialized nations, including the United States. The upshot was a tightness in world oil supply. This tightness was heightened by uncertainty over when Iranian production would be resumed and at what level it would be sustained. Thus, the instability in world oil markets that lead to higher prices was generated initially by two factors: (1) tightness of supply; and (2) uncertainty over the duration of that tightness.

In time, a third factor was added as improvements in supply conditions proved inadequate to relieve the tightness, although Iranian production resumed at reduced levels and Saudi Arabia increased its output temporarily, by one million barrels per day. This third factor was the growing number and severity of ruptures in normal oil supply channels. These ruptures were created by oil companies, large and small, as they jockeyed to assure adequate crude supplies for their refineries and/or to take full advantage of opportunities to reap the profits of rising oil prices. Some oil producing nations, including Iran, saw an opportunity in this further instability to increase their profits, too, and added a fourth factor. They began to alter the patterns of distribution of their output and to threaten production cutbacks. The added instability created by their actions allowed
them to demand and to get large premiums above official OPEC prices for their crudes, as well as other concessions, from the companies and countries most desperate for supplies.\textsuperscript{11}

\textbf{Elasticity, Dependence and Access}

While these four factors were responsible for the instability in world oil prices, primary responsibility for the magnitude of the price increases was attributable to the inelasticity of demand for oil in the short run.\textsuperscript{12} With the tightness in supply, the primary basis for competition in oil markets shifted from price to supply.\textsuperscript{13} Access became primary; price became secondary. The results were a dramatic increase and an unprecedented range in world oil prices.\textsuperscript{14} Excluding prices for U.S. price-controlled crudes, prices in October 1979 ranged from the official OPEC prices based on $18 per barrel for Saudi Arabian marker crude to $36 and more per barrel for crude oil sold on spot markets.\textsuperscript{15}

Beyond the inelasticity of short run demand, the wide range in crude oil prices reflected the range of dependence among refiners on foreign crude oil, and it reflected the wide differences in their independent access to it, i.e., their varying abilities to obtain crude oil directly from producing governments especially at competitive prices.\textsuperscript{16} These three elements -- elasticity, dependence and access -- interacted to shape competitive conditions in world oil markets during the months following the interruption of Iranian production, and they are the keys to understanding the nature of the rise in oil prices and profits in that period.

Differences in dependence and access among oil companies determined the size and distribution of profits among them. It was virtually axiomatic that the companies
with the least dependence and the greatest access to foreign crude supplies reaped the largest profits. But their profits would not have been nearly as large if other companies were not especially dependent on foreign crude oil, with little or no competitive access to it.\textsuperscript{17} It was these latter companies' great dependence and greatly limited access, coupled with the inelasticity of demand for oil around the world that accounted for the tremendous rise in oil prices and consequently the immense increases in some oil companies' profits.

Had the combinations of dependence and access been more balanced among oil companies, oil prices and profit would not have risen as much, and the rate of inflation around the world and in the United States would have been significantly less.

**Prices and Profits**

Companies with the least access paid the highest prices in the wide range of prices for foreign crude oil to feed their refineries; and, due to the inelasticity of demand, their costs plus a healthy margin generally determined price levels in oil product (e.g., gasoline and heating oils) markets. Oil product prices in spot markets generally justified the purchase of even the highest-prices crudes.\textsuperscript{18} These circumstances alone guaranteed vast profits to companies with access to adequate foreign crude for their refineries on a steady basis and at lower prices.\textsuperscript{19} But, other circumstances offered them large profit opportunities, too.

One such circumstance was that companies with the least access also looked to companies with the most access to supply them with foreign oil.\textsuperscript{20} This was because
companies with access lifted the bulk of the crude oil output of the producing countries, and at the best prices. This arrangement was the legacy of the historical relationships these companies enjoyed with the producing countries under which they at one time produced and marketed those countries' crude oil production as concessionaires. A somewhat analogous relationship exists today, although the current relationship is vastly more favorable to the producing countries than the one in the past. This relationship gives these few companies access to such large amounts of crude oil that, after they set aside enough to meet their own requirements, they normally have substantial amounts left over for sale in third-party transactions to the highest bidders. In recent months such sales produced massive profits. Adding to these profits were sales of crude supplies which these companies owned outright, such as their U.S. crude oil production, and which lessened their dependence on supplies purchased from producing countries.

The highest bidders for this third-party crude were most often those companies with the least access and the greatest dependence, followed by those companies with successively less dependence and greater access. There were dozens of companies competing for these supplies, and these companies were especially willing to pay very high prices for this crude oil so long as they could sell the products refined from it at a profit. Some were even willing to buy the crude even if no profit were to be had, just to tie-up a supply and gamble that, if they kept their refineries running, crude prices would go down or product prices would go up, independently of the other.
Shutting down their refineries really was not an option to these refiners. That likely would be terminal. Even reduced operating levels were dangerous because refineries normally become unprofitable at operating levels below about 70 percent of capacity, but, they produce significant economies of scale at or near full capacity. These economies made even modestly crude-short refiners willing to pay top prices for crude oil in the short run and accounted for much of the upward pressure on product prices over the last several months.27

These economics also made refiners frantic when, as supplies tightened, their crude supplies were withdrawn by suppliers. Their panic often incited them to wild bidding for potential supplies to replace those they lost.28 Some companies with crude oil to sell quickly recognized that the market became more volatile and incited higher bids when crude supplies were shifted from buyer to buyer. Some shifts would be a natural phenomenon in a tight crude market anyway. Some producing countries also saw the advantage in this agitation and began inciting higher bids for portions of their output through threatened and actual shifts in the distribution of their crudes.29

A number of refiners, deprived of a portion of their crude and with no alternate supply, bought products in spot markets to meet their customers needs, rather than lose market share.30 This also played to the hands of some companies selling druce oil in third-party transactions. As supplies tightened, selling companies withdrew some of their crude from third-party sales, diverting it to their own refineries.31 In doing so, they also made the rising refining margin on these supplies. Sometimes
they even sold the products to the refiners from whom they diverted the crude, or they sold it to the customers whom these refiners could no longer supply. Withdrawing the crude from the third-party market, of course, further tightened this supply, and crude-short refiners and their unsatisfied customers -- frantically searching for alternative supplies -- pushed up crude and product prices still more.32 It was a vicious spiral for companies without access and an increasing bonanza for those with access.

Consumers offered little resistance to higher and rising prices, too. Generally they were either panicked or resigned. In most cases, they were willing to literally line up and pay whatever price was demanded for whatever supply they were allowed. This was especially true for lighter products such as gasoline and heating oil. Large consumers also paid high and rising prices for their product supplies, although their supplies frequently were provided under contract. But, sometimes contract commitments went unfulfilled at least in part, while supplies were diverted to other buyers at spot prices, often as a matter of equity or special need. Sometimes suppliers simply did not have the product to deliver. Supply contracts also provided for substantial price increases based on escalation clauses which tied increases in contract prices to increases in market prices for crude or products.33 Thus, consumers had little on which to base resistance to rising prices.

In sum, market conditions over the past several months offered companies with the greatest access to foreign crudes and the least dependence on it, numerous
opportunities to make unprecedented profits. The market also provided unusual opportunities for such companies to use their special access as leverage to boost their profits even more. The outcome, of course, can be seen in the recent reports of third-quarter earnings. These reports show that, while almost all oil companies did well, those with the greatest access to foreign crudes did best.34

Government Impact

Two U.S. Government programs mitigated the impact of rising world oil prices on U.S. consumers, by reducing the leverage of the companies with the greatest access to lower-priced foreign crude oil. These programs did this by reducing the cost of crude and the uncertainty over its availability to the most vulnerable U.S. refiners. As a result, overall product prices were held below levels they would have achieved otherwise, and additional profits were denied to the companies. The broader effect, of course, was to dampen the general rise in inflation. The fact that similar programs were not in force in other countries gives credence to the claims of some companies that they made higher profits overseas.35

These two programs were the Department of Energy's (DOE) entitlements program and its crude oil allocation program. The allocation program acted to give small U.S. refiners access to lower-priced foreign crude, because they had little or no independent access to it. It did this by requiring the companies with independent access to make limited supplies available to those refiners and at roughly the prices the companies paid for it themselves. The net effect was to make these small refiners
more competitive, since the basis of competition had shifted to access, i.e., supply, and to dampen product price rises by reducing the level of turmoil and supply uncertainty in oil markets.\textsuperscript{36}

The entitlements program has less impact on market conditions, because it was not designed to modify differences in the prices of foreign crude oil to U.S. refiners. It was designed to eliminate differences in domestic crude prices to U.S. refiners. Implicit in its design and function is the assumption that imported crude prices to U.S. refiners fall within a narrow range. Thus, it operates only on the weighted average cost of foreign oil to refiners which it accepts as a given. Nevertheless, even by operating only on average foreign crude cost, it narrowed the range of these costs to U.S. refiners and dampened somewhat the rise in oil prices and profits.\textsuperscript{37}

The anti-inflation guidelines of the Council on Wage and Price Stability (COWPS) may have had some psychological impact on companies and thus influenced the rise in oil prices. More likely, the only consideration the companies gave the guidelines were accounting considerations, which were dictated by the public need to demonstrate compliance with COWPS standards. A large part of the companies' profits derived from U.S. consumers were beyond the reach of COWPS anyway. These profits were kept out of reach through sales of crude oil and products, at greatly inflated prices and profits, in the limbo of the international market place where U.S. refiners and others bought these supplies, booked them into the U.S. at the very high costs they paid, and sold them to U.S. consumers at a profit. Also, through the
manipulation of inventories and purchases of high-cost crude and products near the end of test quarters, most companies, large and small, were able to demonstrate compliance.\footnote{38}

What made the DOE programs effective, on the other hand, was that they gave access to companies who did not have it. The allocation program did this directly and the entitlements program did this indirectly. By narrowing the range of total crude costs among U.S. refiners, the entitlements program transferred some of the benefits of access to lower-cost foreign oil from the companies with access to it. Its effect was similar to that of the allocation program, except that it did not actually provide a supply of crude. On a broader base, these programs prevented some further increases in overall inflation due to rising oil prices, although here their impact was less than optimum because either their scope was limited, the allocation program, or their primary thrust was directed at another problem, the entitlements program.

Further Government Policy

In considering what steps might be taken next to slow inflation in oil prices, the Federal Government should weigh the lessons learned so far this year about the operation of oil markets during times of physical shortage and should consider the experience over the past several months with the operation of the DOE programs discussed above. The primary lesson learned, of course, is that short of abundant supplies, roughly equivalent access to lower-priced crude, or its benefits, is fundamental to competition in oil markets. In fact it is
the only basis on which any reasonable level of price
stability can be achieved under tight supply conditions.
Thus, no major effort to reduce inflation in oil prices
can be successful in times of tight or tenuous supply,
unless it begins with a market where competition is based
on roughly equivalent access to crude oil at roughly
equivalent prices to all refiners.

DOE's entitlements and allocation programs as they
are now constructed are limited efforts toward establishing
such a base. A comprehensive crude allocation program
theoretically would achieve it. But, experience has
proved that such a program is impractical and highly
disruptive to oil supply logistics and markets. Conse-
quently, another means would have to be found to achieve
this base, without the monumental shuffle of crude supplies
a comprehensive allocation program would entail. One
way of course is to establish a program that spreads
just the benefits of access and lower cost, equally among
U.S. refiners. The entitlements program already does
this in the case of U.S. crudes. It could be modified
to do the same in the case of imported crudes. To remove
the stigma of subsidizing foreign crude costs with lower
priced domestic crude under the entitlements program,
the cost of foreign crudes and the costs of domestic
crudes might be equalized separately.39

Once refiners have generally equal access to both
foreign and domestic crudes at generally the same cost,
competitive pressures will shift to profit margins, over
which companies have substantial discretion. They have
little discretion over non-crude costs, such as processing
cost, and differences in these costs among refiners are
nominal, particularly in tight or balanced supply situations
when profit margins are large. Because the difference
in refining costs between the least and most efficient refineries is relatively small, margins will be the focal point of competition. However, there is no guarantee that in times of tight supply, oil prices will not inflate dramatically due to the inelasticity of demand, even under conditions of equal access at equal cost. Equal access at equal cost will only provide a base for possible government actions to hold down prices without squeezing the returns and threatening the livelihoods of refiners who otherwise would not have access to lower-cost oil, and without threatening the loss of product supplies to these refiner customers.

Gasoline, Heating Oil and Diesel Fuel

In fashioning an anti-inflation effort on an equal access/equal cost base, the Federal Government would likely achieve the most success with the least market intervention by concentrating their effort on the prices of those products that typically are most susceptible to inflation, i.e., motor gasoline, heating oils (distillates) and diesel fuel. The prices for these products are most susceptible to rapid increases because the bulk of their sales are in small amounts and to consumers who virtually have no basis on which to resist higher prices. While the current anti-inflation standards might be retained, tighter standards might be evolved for prices of these products and be given greater emphasis. These product price standards should be scheduled to phase out concurrently with domestic crude oil price controls in October 1981.