

Research Department
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Pricing Alaskan Oil

With the impending opening of the trans-Alaska pipeline system, government and industry officials will soon have to make a number of important decisions regarding the pricing and marketing of North Slope oil. The Prudhoe Bay reserves—estimated to contain some 9.6 billion barrels of crude—are widely believed to offer the best hope of reversing the growing U.S. dependence on insecure foreign sources of oil. But important transportation and marketing problems must yet be solved if that oil is going to displace foreign oil in U.S. markets.

With all the past decade's problems now surmounted, North Slope oil should begin flowing into the 789-mile trans-Alaska pipeline at Prudhoe Bay next month. Oil should reach the southern terminus at Valdez in August, and should arrive at West Coast ports in September. From an initial 600,000 barrels/day, the flow of oil could reach 2.0 million b/d by 1985, if resources near the main Prudhoe Bay reserve are developed. Since U.S. imports of crude and refined products are currently running at almost 9.0 million b/d—approaching half of all U.S. petroleum consumption—North Slope production will not bring independence from foreign oil. But increased production from that source and from domestic offshore areas could help reverse the deteriorating trend of recent years.

West Coast surplus?

Because of their relative proximity to the Valdez terminal, West Coast refineries are the natural outlet for North Slope oil. Indeed, when Congress authorized pipeline construction in 1973, most experts expected that all of the North Slope oil would be required by refineries in Petroleum District V, which includes the five Pacific states plus Nevada and Arizona. But the OPEC-initiated price escalation reduced the projected growth in demand for petroleum products, so that some North Slope oil apparently will now be surplus to the needs of the West Coast region. Some idea of the magnitude of the 1978-85 surplus can be gained from examining the West Coast's present supply-demand position and the Federal Energy Administration's scenario for the future.

In 1976, the 48 oil refineries operating in District V utilized about 2.1 million barrels of crude oil daily—890,000 b/d from California, 173,000 b/d from Alaska, and the rest from Canada, Indonesia and other foreign sources. The Middle East supplied only about 380,000 b/d, mostly high-sulfur oil. The FEA expects West Coast refinery demand to increase from the present 2.1 million b/d to 2.9 million b/d by 1985. This would represent a 3½-percent annual rate of growth—below the 5-percent rate experienced over the 1968-73 period when the average

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price of oil was only one-fourth its current level. The FEA's supply-demand forecast for the 1980-85 period assumes that domestic oil prices will be deregulated in 1981, when present statutory controls expire, and reach an average of \$13 per barrel by 1985 (in 1975 dollars).

California production from all sources, including the Elk Hills Naval Petroleum Reserve, is expected to rise from the present 890,000 b/d to about 1.4 million b/d by 1985. If oil imports are reduced by two-thirds to 300,000 b/d over that period, the maximum amount needed to be filled from Alaskan sources by 1985 would be about 1.2 million b/d. But Alaskan production in 1985 should reach 2.0 million b/d, implying that markets would then have to be found elsewhere for some 800,000 b/d. More importantly, the surplus could reach 600,000 b/d as early as next year—even with foreign imports reduced by half—at presently projected levels of domestic production. Incidentally, this situation would help explain the Administration's just-announced plan to reduce Elk Hills production from 150,000 b/d to 90,000 b/d.

The FEA scenario assumes that the cost of North Slope oil to Western refineries will be less than the average cost of imported crude, providing the incentive for refineries to substitute North Slope oil for foreign oil. Still, imports would not be completely eliminated, because many refineries would not have the necessary desulfurization and other equipment required to convert North Slope crude into the "light"

products, such as gasoline, demanded in the West. And indeed, given the uncertainty surrounding the pricing of North Slope oil under present pricing regulations, some companies have been slow to make those necessary investments. The Administration has thus proposed a rebuilding program for West Coast refineries so that they could handle high-sulphur Alaskan crude—but has not indicated how the \$20-30 million cost of that changeover would be met.

Pricing issue

If imports are to be reduced, it is essential that the cost of North Slope oil to domestic refineries be less than that of foreign oil. But because of the higher transportation costs involved in piping North Slope oil to Valdez and then shipping it to West and Gulf Coast ports, Federal regulators have had considerable difficulty in determining how to handle North Slope oil under present pricing regulations, although they are expected to make their recommendations to Congress shortly. The issue is further complicated by the entitlements program, described below.

Congress has determined that domestic crude-oil prices generally should not be allowed to rise to the import (world market) level. The Energy Policy and Conservation Act of 1975 established an average ceiling price for first sales of domestically produced oil at the wellhead. This average consists of a "lower-tier" price of \$5.17/barrel for domestic oil from properties which began producing before 1972 and an "upper-tier" price of about \$11.64/barrel for "new" oil from

properties developed after 1972. In addition, refiners must pay an average current price of around \$14.00 per barrel for imported oil.

Under the present system of multi-tiered oil prices, some mechanism is essential to equalize the effective acquisition costs of oil obtained at different prices. Otherwise, wide disparities would exist in refiners' costs. Refiners having greater access to lower-priced oil would either reap substantial windfall profits or drive their higher-cost competitors out of business. The entitlements program was established to prevent such an eventuality. Under this system, refiners having large supplies of cheaper oil make cash payments to refiners who depend on more expensive oil, thus tending to equalize the effective acquisition cost of lower-tier, upper-tier and imported crude oil to the refiner.

Multi-tiered system

The start-up of North Slope oil production raises the question of how that oil should be treated under the present multi-tiered price and entitlements system. One option would be to grant North Slope oil the entitlement status of upper-tier or "new" oil. But North Slope producers claim that they could not operate profitably under such circumstances.

By the summer of 1977, foreign oil is expected to be selling at an average price of \$14.45 per barrel. The entitlements program affords users of foreign oil a \$2-3 per barrel higher entitlement credit than is available to users of upper-tier oil. To be competitive, North Slope producers therefore would have to sell

their oil on the West Coast for approximately \$11.50-12.50 per barrel. Subtracting transportation costs (about \$6 per barrel) would leave a wellhead price of only \$5.50-6.50 per barrel—too low to encourage further North Slope development.

For those reasons, the FEA is expected to recommend that North Slope oil be subject to the upper-tier price ceiling but treated as imported oil for entitlement purposes. This would allow North Slope producers to sell their oil on the West Coast for \$14.45 per barrel, permit users to obtain payments of \$2-3 per barrel under the entitlements program, and thereby allow North Slope producers to realize a wellhead price of \$7.50-8.50 per barrel. Users meanwhile would pay an effective price of \$11.50-12.50 per barrel. North Slope producers of course would prefer that the price of their oil be exempt from price ceilings altogether, and allowed to fluctuate freely in accordance with world market prices.

The outcome of the Alaskan oil pricing issue will be of vital importance to producers and refiners, and also to the Alaskan government. Alaskan officials want the highest wellhead price possible, because that price will help determine how much revenue the state receives from North Slope oil production as well as how much more oil is produced on the North Slope. That situation in turn will help determine the feasibility of building pipeline systems to carry surplus West Coast oil to other import-dependent regions.

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BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT (Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount Outstanding 4/20/77	Change from 4/13/77	Change from year ago	
			Dollar	Percent
Loans (gross, adjusted) and investments*	95,431	- 2,160	+ 7,327	+ 8.32
Loans (gross, adjusted)—total	72,594	- 1,166	+ 7,288	+ 11.16
Security loans	1,594	- 225	+ 380	+ 31.30
Commercial and industrial	23,544	- 129	+ 1,459	+ 6.61
Real estate	22,550	+ 128	+ 2,687	+ 13.53
Consumer instalment	12,682	+ 93	+ 1,721	+ 15.70
U.S. Treasury securities	9,409	- 1,075	- 697	- 6.90
Other securities	13,428	+ 81	+ 736	+ 5.80
Deposits (less cash items)—total*	95,330	- 776	+ 7,223	+ 8.20
Demand deposits (adjusted)	27,543	- 1,063	+ 3,150	+ 12.91
U.S. Government deposits	501	+ 201	- 252	- 33.47
Time deposits—total*	65,437	- 148	+ 3,956	+ 6.43
States and political subdivisions	5,509	+ 196	- 1,404	- 20.31
Savings deposits	31,926	- 140	+ 6,090	+ 23.57
Other time deposits†	25,918	- 112	- 542	- 2.05
Large negotiable CD's	9,390	- 114	- 2,052	- 17.93
Weekly Averages of Daily Figures	Week ended 4/20/77	Week ended 4/13/77	Comparable year-ago period	
Member Bank Reserve Position				
Excess Reserves (+)/Deficiency (-)	- 45	- 4	+ 68	
Borrowings	0	0	0	
Net free(+)/Net borrowed (-)	- 45	- 4	+ 68	
Federal Funds—Seven Large Banks				
Interbank federal fund transactions				
Net purchases (+)/Net sales (-)	+ 142	+ 1,468	+ 1,391	
Transactions with U.S. security dealers				
Net loans (+)/Net borrowings (-)	+ 283	+ 1,105	+ 288	

*Includes items not shown separately. †Individuals, partnerships and corporations.

Editorial comments may be addressed to the editor (William Burke) or to the author. . . .
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