

ALASKA LEGISLATURE SPECIAL COMMITTEE / SUBJECT FILES 86 / 2

424 SCOMM11 : INTERIM COMM. ON TAXATION & REVENUE 1975-76

It is clear that if a 7 percent return on the entire value of the pipeline is allowed, it will fare quite well when compared to the housing industry. It would also be doing quite well when compared to the still profitable western and southern railroads, the trucking industry, or airlines. Although the book returns on housing range from 8 to 18 percent, the cash flows generated make the investments attractive. The same is true of the pipeline investment. The following table presents a comparison of the net returns and cash flows which the pipeline would generate at net return rates of 8-25 percent.

Pipeline Equity Yields at Rates Similar
To Other Competitive Industries

(\$7.5 Billion Pipeline, 15% equity)

(in millions)

	<u>8% Equity Return</u>	<u>10% Equity Return</u>	<u>20% Equity Return</u>	<u>25% Equity Return</u>
Income	1,252 (\$2.86/bbl)	1,301 (\$2.97/bbl)	1,552 (\$3.54/bbl)	1,677 (\$3.82/bbl)
Expenses	200	200	200	200
Interest	<u>637</u>	<u>637</u>	<u>637</u>	<u>637</u>
Net Cash Flow	415	464	715	840
Depreciation	<u>215</u>	<u>215</u>	<u>215</u>	<u>215</u>
Taxable Income	200	249	500	625
Taxes (55% state and federal)	<u>110</u>	<u>137</u>	<u>275</u>	<u>344</u>
Net after Taxes	90	112	225	281
Cash Flow after Taxes	305	327	440	495
Net return to Equity	8%	10%	20%	25%
Cash return to Equity	27%	29%	39%	44%

It is clear that this pipeline, with a tariff between 3 and 4 dollars, would compare favorably with housing industry investments. The housing industry regularly attracts capital far in excess of \$30 billion per year.*

It has been suggested that the high risk of the pipeline merits the incentive of a high potential return. The project is certainly huge but no more risky than housing. The major portion of the construction costs and cost overruns have come since the Yom Kippur war and the subsequent embargo and higher oil prices. The probability that the value of oil will not be able to cover a tariff of \$3 to \$4 is nil, and a minimum demand for the pipeline's services is assured. The greatest risk is that the ICC may not be too generous in setting tariff limits or that excess capacity may force tariff charges down. This is no greater a risk than that posed by local utility regulators, zoning boards, building inspectors, or a collapse in the housing market.

There is simply no economic basis, either in theory or fact, to support the averaging of the production and transport costs and returns related to Prudhoe Bay. Indeed the facts show that the pipeline stands on its own as a sound investment, just as all transport systems must. It is a truism that no transport system will be developed unless there is something to transport. This fact does not mean that incomes should

* 1.2 million units at \$25,000 per unit is \$30,000,000,000 per year. This does not include additions or improvements to older units or mobile home construction.

be averaged. The Trans-Alaska pipeline is no different. The costs and returns of the production and transport activities related to Prudhoe Bay should not be combined. Conclusions drawn from such an averaging would be no more accurate than the conclusion that eastern coal mines are not profitable because the Penn Central loses money. Furthermore, when the returns to the pipeline are properly looked at it is evident that it is a highly productive investment on its own, as is the field itself.

CAPITAL AVAILABILITY FROM ALASKA OPERATIONS

(IN MILLIONS)

CURRENT TAX
STRUCTURE

TOTAL 2.6B

PROPOSED TAX
STRUCTURE

TOTAL 2.2B

PROPOSED TAX
STRUCTURE WITH
50% DEBT-EQUITY
RATIO

TOTAL 2.6B

PROPOSED TAX
STRUCTURE WITH
STATE GUARANTEE
OF LOANS

TOTAL 2.4B

PROPOSED TAX
STRUCTURE WITH
50% DEBT-EQUITY
RATIO AND LOAN
GUARANTEES

TOTAL 2.8B

STATE
UNDER-
WRITINGDEBT
FINANCINGCASH FROM
CAPITAL
RECOVERY
(DEPRECI-
ATION)NET PROFITS
AFTER
TAXES AND
DIVIDENDS

1,065
40% DEBT FINANCING
550 DEPRECIATION
985 NET PROFITS
PRUDHOE BAY 710
PIPELINE 250
OTHER 25

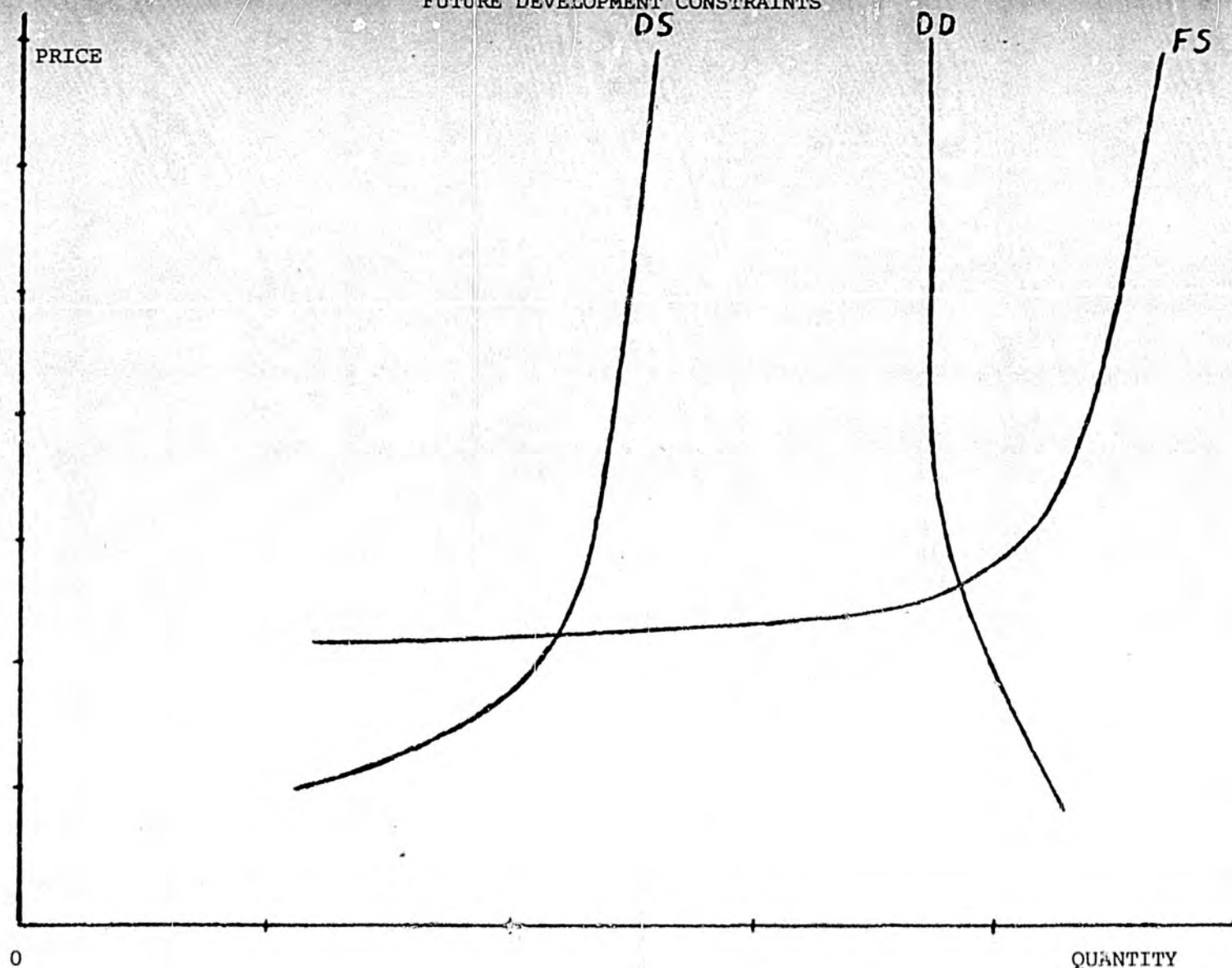
900
40% DEBT FINANCING
550 DEPRECIATION
750
PRUDHOE BAY 475
PIPELINE 250
OTHER 25

1,300
50% DEBT FINANCING
550 DEPRECIATION
750
PRUDHOE BAY 475
PIPELINE 250
OTHER 25

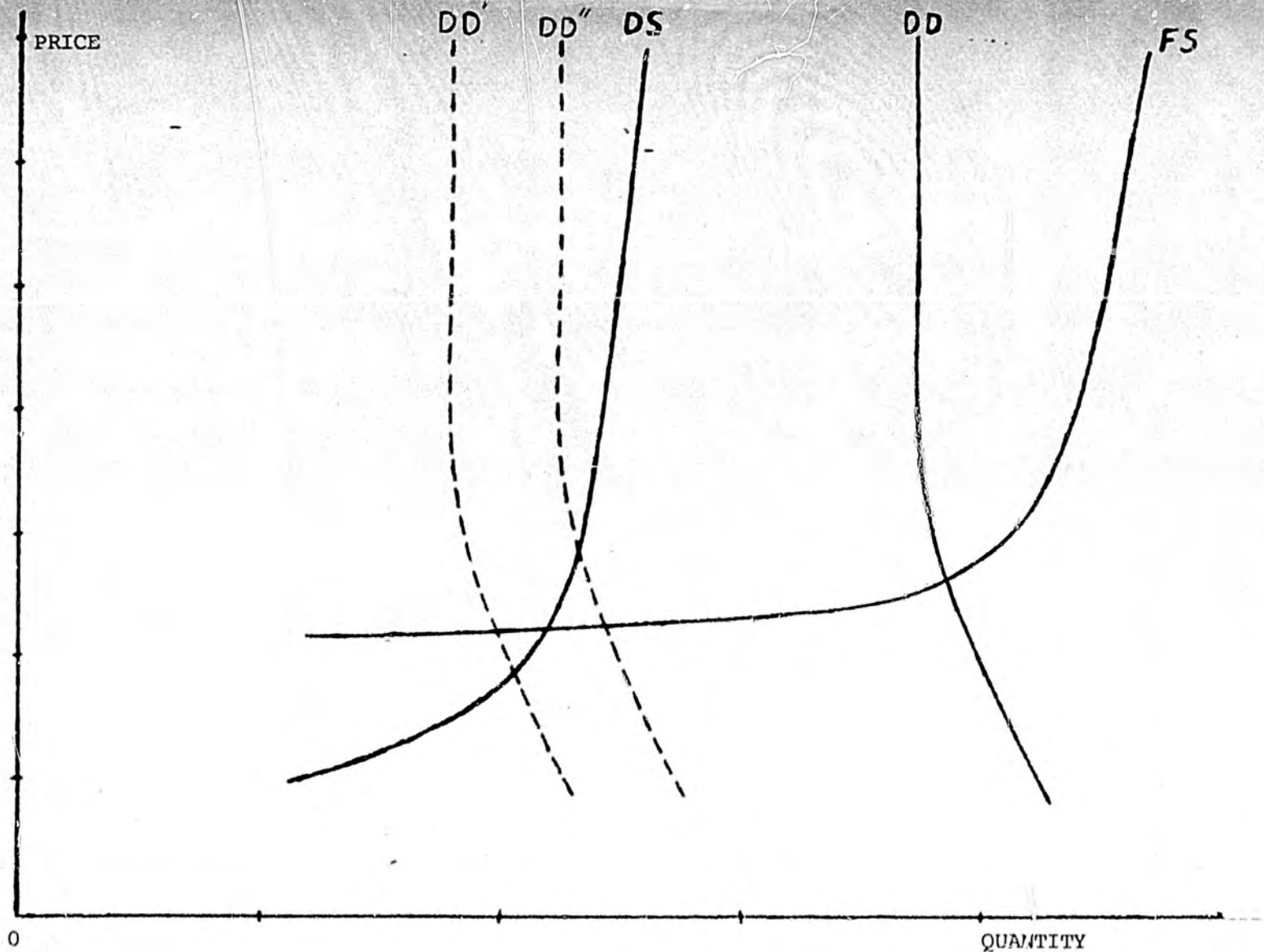
200 -- LOAN GUARANTEES
900
40% DEBT FINANCING
550 DEPRECIATION
750
PRUDHOE BAY 475
PIPELINE 250
OTHER 25

200 -- LOAN GUARANTEES
1,300
50% DEBT FINANCING
550
DEPRECIATION
750
PRUDHOE BAY 475
PIPELINE 250
OTHER 25

FUTURE DEVELOPMENT CONSTRAINTS

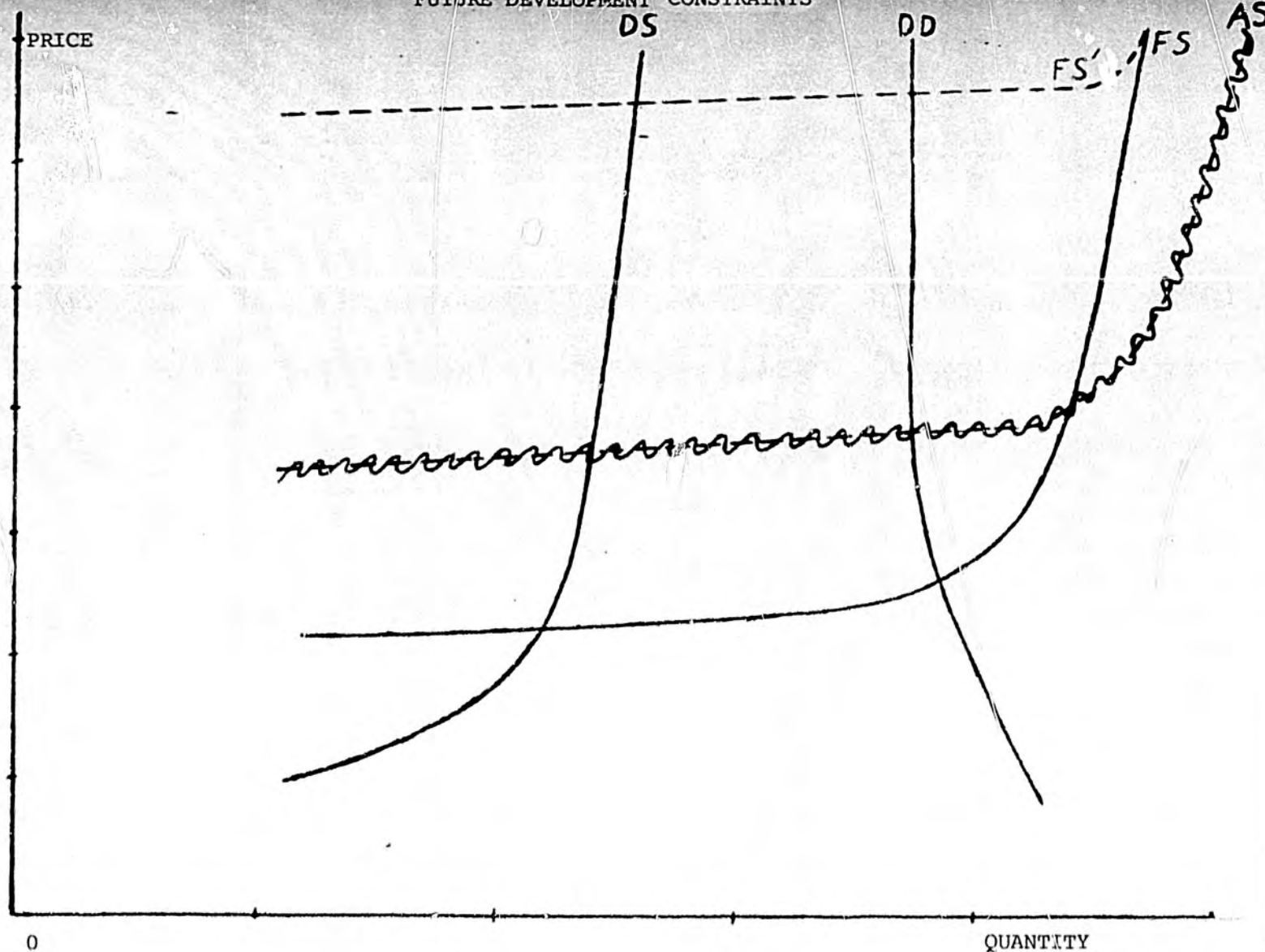


1. Domestic Demand (represented by line DD) varies little with price. Although people do buy less when oil prices go up, the amount consumed with very high prices (at the top of the line) is not much less than the amount consumed with very low prices (at the bottom of the line).
2. Domestic supply (DS) also varies little with price. Supplies may gradually increase as time passes and more investments are made. Over any short term (e.g., less than 2-3 years), however, supplies cannot be greatly increased even with very high prices (at the top of the DS line).
3. Foreign supplies (FS) are now necessary to fill the gap between domestic supply and demand. Until recently this was supplied at the fairly low prices indicated by the part of line FS that connects the domestic supply and demand lines.

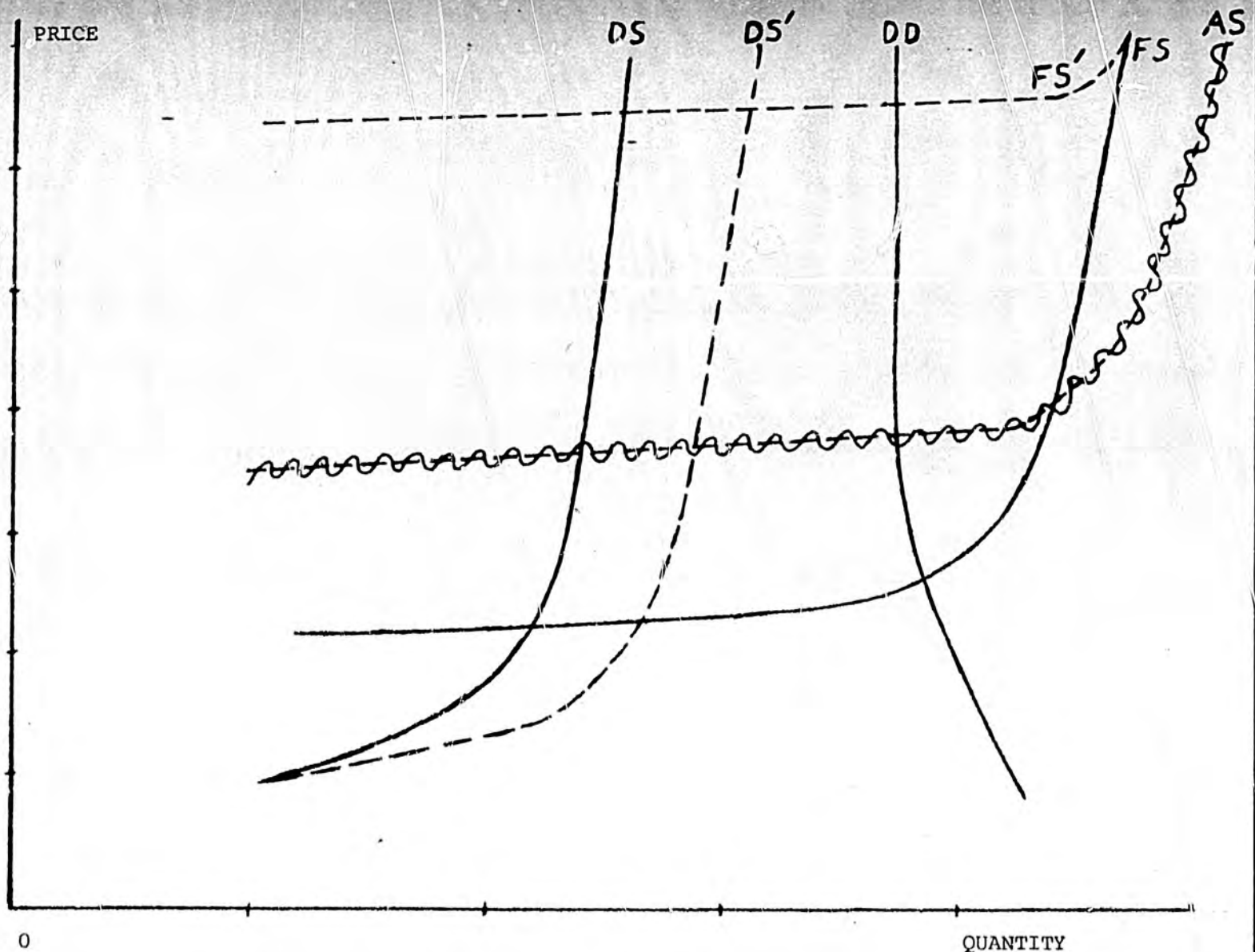


1. In the past (as recently as the early 60's), demand for oil could have been met by domestic supplies. When demand was at a level represented by DD', foreign supplies were imported for convenience or were refined and exported as finished products.
2. When demand was at a level represented by DD'', foreign supplies were imported because they were cheaper than potential domestic supplies.

FUTURE DEVELOPMENT CONSTRAINTS



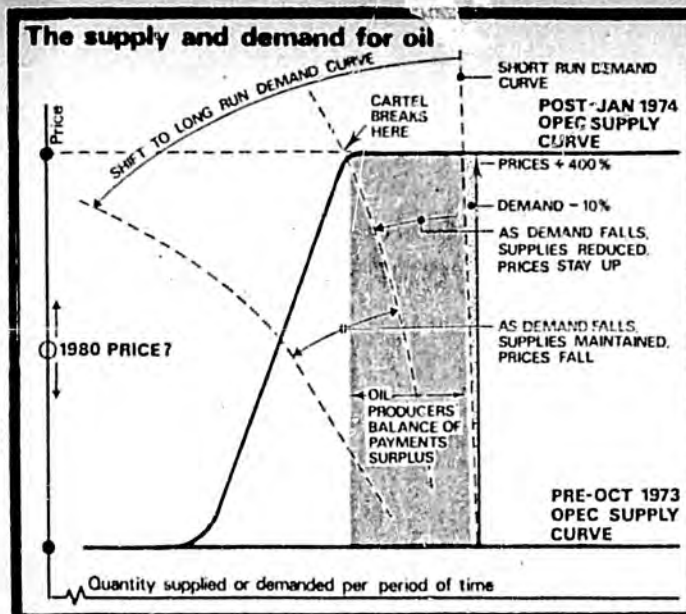
1. Alternate supplies (AS) could have filled the gap between domestic supply and demand, but foreign supplies were less expensive so foreign supplies were used instead.
2. Since domestic supply and demand do not change very much when prices rise, foreign suppliers could greatly increase their prices and still sell almost as much as before. Realizing this, they formed a cartel and posted an artificial price for oil. Foreign suppliers will supply as much (or as little) as consumers want to buy, but at the posted price shown by line FS'.



1. Domestic Demand (DD) varies little with price.
2. Domestic Supply (DS) also varies little with price.
3. Foreign Supplies (FS) are now necessary to fill the gap between domestic supply and demand.
4. Alternate Supplies (AS) could have filled the gap between domestic supply and demand.
5. Foreign Suppliers will supply as much or little as consumers want to buy, but at the posted price shown by line FS'.
6. Increased domestic oil supplies (DS') may result from increased investment. To protect itself, the oil industry must select investments which will still pay for themselves if and when the cartel's market power weakens. National policy will certainly protect alternate sources of energy, or at least provide a price floor which may give them a change to compete. Thus, long-term oil investment must be made in light of the long-term price outlook, not a temporary, artificial surge in prices.

FUTURE DEVELOPMENT CONSTRAINTS

Conclusion and graph from:
The Economist, "The Oil Story,"
 April 26, 1975, page 37.



It seems clear that by 1980 Britain will be able to get enough oil from the North Sea to supply its own oil needs and to start some exporting. But note:

- (1) Development of the North Sea involves a large claim on resources for investment (about \$15 billion or £6 billion to develop the 16 major British fields) before any oil is produced.
- (2) When in production, North Sea oil may cost about \$5-\$6 a barrel to produce, which is far above the production costs of Middle East oil.

The advantage of North Sea oil depends on oil prices remaining high. Will they?

The best way to consider prospects for Opec oil prices is to look at the shape of the supply and demand curves for oil, illustrated in our diagram.

Before the Yom Kippur war the supply of oil was very elastic at a low price (supply is elastic if a 1% rise in price causes more than a 1% increase in amount supplied, inelastic if it causes less than a 1% increase). After the war the oil supply curve was jacked up sharply (the supply curve "shifted"), but our guess is that it has not been raised over its whole length.

The reason is that among Opec countries are some with large populations and low incomes—such as Algeria, Iran, Iraq and Venezuela—which can spend all the money they earn from oil exports; and some with small populations and high average incomes—such as Kuwait—which can earn far more than they wish to spend. As demand for oil falls because of high prices and the appearance of substitutes,

countries like Kuwait will probably be very willing to cut output in order to keep up price. But countries with larger populations, and more need for money, will be less willing to agree to do so. They will be aware that by dropping the price from \$10 to \$9 a barrel they could undercut other Opec countries, and could sell at \$9 all they could produce of a commodity which costs them only a few cents a barrel. So we have assumed that there is a "kink" or "cartel-breaking point" in the supply curve, with potential production from the more heavily populated countries who want to keep up oil exports and spend what they earn, to the left of it. To the right of the kink is the production countries are willing to cut; most earnings from this at present go into the "unwanted" balance of payments surpluses of Saudi Arabia, Kuwait etc.

Now look at the demand curve. In the short run, over a year or two, it is highly inelastic (a 1% rise in price makes very little difference to the amount demanded). Even a 400% increase in the raw material price has cut demand by only 10% so far.

As time goes on and alternatives are produced, even though they may be quite expensive, the demand curve will shift to the left (and possibly change its slope). If it shifts far enough to the left, the inelastic section of the supply curve will be reached; the cartel could then break and prices crumble. But nobody can know exactly whether or when this will happen. How far, that is, a country like Saudi Arabia will be willing to shoulder the burden of production cuts while the main benefits from higher prices go to other producers.

NET RETURNS TO PRIVATE RESOURCE OWNERS IN THE STATE
 BASED ON \$12.00 OIL

20% ROYALTY
 CURRENT TAX
 STRUCTURE
 (IN THOUSANDS)

3.3 MILLION
190 - SEVERANCE TAX
290
STATE NET TAX
1,350
FEDERAL NET TAX
1,470
NET RETURN

20% ROYALTY
 PROPOSED TAX
 STRUCTURE

3.3 MILLION
190 SEVERANCE TAX
290
STATE NET TAX
710
EXCESS VALUE SURTAX
1,010
FEDERAL NET TAX
1,100
NET RETURN

26.6% ROYALTY-PRO-
 POSED TAX STRUCTURE
 4.4 MILLION

250
SEVERANCE TAX
390
STATE NET TAX
940
EXCESS VALUE SURTAX
1,350
FEDERAL NET TAX
1,470
NET RETURN

If Oil Sells For \$7 in 1976

<u>1000 b/d Well</u>	<u>Current Law</u>	<u>Proposed Law Book</u>	<u>Proposed Law cash basis (accounting for proposal's accelerated depreciation provisions)</u>
Price	\$7.00	\$7.00 + 0 "excess"	\$7.00 + 0 "excess"
Transport Costs	3.00	3.00	3.00
Royalty (1/6th)	.67	.67	.67
Producer's Severance Tax (.057)	.19	.19	.19
Operating Expense	.25	.25	.25
Capital Expense	<u>1.00</u>	<u>1.00</u>	<u>1.40</u>
Pre-tax net	1.89	1.89	1.49
State net tax	.18	.18(.04 deferred)	.14
State excess surtax	--	--	--
Federal net tax (.48% rate assumes U.S. & State capital treatment approximately equal)	<u>.82</u>	<u>.82</u> (.17deferred)	<u>.65</u>
Net to Producers	.89	.89	.70
Plus deferred taxes	.21	.21	
Plus accelerated dep.	—	—	<u>.40</u>
Net to Producers cash basis	1.10	1.10	1.10
Royalty Holders': Severance Tax	.04	.04	.04
State Net Tax	.06	.06	.06
Federal Net Tax	.27	.27	.27
Net	.30	.30	.30

If Oil Sells for \$12.00 in 1976

<u>1000 b/d Well</u>	<u>Current Law</u>	<u>Proposed Law Book</u>		<u>Proposed Law Cash Basis (accounting for proposal's accelerated depreciation provisions)</u>	
Price	\$7.00	\$7.00 + 5 "excess"		\$7.00 + 5 "excess"	
Transport Cost	3.00	3.00	--	3.00	--
Royalty (1/6th)	1.50	.67	.83	.67	.83
Producer's Severance Tax (.057)	.43	.19	.24	.19	.24
Operating Expense	.25	.25	--	.25	--
Capital Expense	<u>1.00</u>	<u>1.00</u>		<u>1.40</u>	
	5.82	1.89	3.93	1.49	3.93
State Net Tax	.55	.18	.37	.14	.37
State excess surtax	--	--	1.61	--	1.61
Federal Net Tax (48% rate assumes U.S. & State capital treatment approximately equal)	<u>2.53</u>	<u>.82</u>	<u>.94</u>	<u>.65</u>	<u>.94</u>
Net to Producers	2.74	1.90		1.71	
Plus deferred Taxes	---	.21		---	
Plus Accelerated Dep.	<u>---</u>	<u>---</u>		<u>.40</u>	
Net to Producers cash basis	2.74	2.11		2.11	
Royalty Holder's:					
Severance Tax	.09	.09		.09	
State Net Tax	.13	.13		.13	
Excess Surtax	--	.32		.32	
Federal Tax	.62	.46		.46	
Net	.66	.50		.50	

If Oil Sells for \$12.00 in 1977
(with wholesale index inflation of 6% annually)

		Proposed Law Cash Basis (accounting for proposal's accelerated depreciation provisions)	
1000 b/d Well	Current Law	Proposed Law Book	
Price	\$12.00	\$7.40+\$4.60 "excess"	
Transport Costs	3.00	3.00	
Royalty (1/6th)	1.50	.73	.77
Producer's Severance Tax (.057)	.43	.21	.22
Operating Expense	.25	.25	--
Capital Expense	<u>1.00</u>	<u>1.00</u>	<u>--</u>
	5.82	2.21	3.61
State Net Tax	.55	.21	.34
State Excess Tax	--	--	1.48
Federal Net Tax 48% rate assumes U.S. & State capital treatment approximately equal	<u>2.53</u>	<u>.96</u>	<u>.86</u>
Net to Producers	2.74	1.97	
Plus deferred taxes	--	.21	
Plus Accelerated Dep.	<u>--</u>	<u>--</u>	
Net to Producers cash basis	2.74	2.18	
Royalty Holder's:			
Severance Tax	.09	.09	
State Net Tax	.13	.13	
Excess Surtax	--	.29	
Federal Tax	.62	.47	
Net	.66	.52	

If Oil Sells for 13.50 in 1982 (2% inflation)
but Wholesale Index Inflation of 6% Annually

<u>1000 b/d Well</u>	<u>Current Law</u>	<u>Proposed Law Book</u>	<u>Proposed Law cash basis (accounting for proposal's accelerated depreciation provisions)</u>
Price	\$13.50	\$11.20 + 2.30 "excess"	\$11.20 + 2.30 "excess"
Transport Costs	4.00	4.00	4.00
Royalty (1/6th)	1.58	1.20 .38	1.20 .38
Producers Severance Tax (.057)	.45	.34 .11	.34 .11
Operating Expense	.35	.35	.35
Capital Expense	<u>1.30</u>	<u>1.30</u>	<u>1.80</u>
Pre-tax net	5.82	4.01 1.81	3.51 1.81
State net tax (.094)	.55	.38 .17	.33 .17
State excess surtax (.41)	--	-- .74	-- .74
Federal net tax (.48)	<u>2.53</u>	<u>1.74 .43</u>	<u>1.53 .43</u>
Net to Producers	2.74	2.36	2.12
Plus deferred taxes	--	.26	--
Plus accelerated dep.	<u>--</u>	<u>--</u>	<u>.50</u>
Net to Producers cash basis	2.74	2.62	2.62
Royalty Holders':			
Severance Tax	.09	.09	.09
State Net Tax	.14	.14	.14
Excess Surtax	--	.11	.11
Federal Tax	.65	.60	.60
Net	.70	.64	.64

Introduction

The wholesale liquor industry in Alaska is dominated by three firms: K & L Distributors, Alaska Distributors, and Odom Company. One of the unique characteristics of the three major groups is the out-of-state ownership and control of wholesale liquor even though some of the participating members are Alaskan corporations. K & L Distributors is controlled by the Levine Family of Bellevue, Washington, Alaska Distributors is controlled by Alex Shulman of Seattle, Washington and Odom Company is controlled by M. W. Odom of Seattle, Washington.

Details on the operations of the industry are contained in the attached report from staff researcher Janis C. Gull.

There are currently twenty-two (22) wholesale liquor licenses issued. Under current Alaska law, AS 04.10.110, a general wholesale license is required for each distributing point. As shown in the attached report three major firms have more than one (1) distributing point and are thus multiple licenses.

The taxes and license fees collected by the Department of Revenue for the past five years are:

<u>Fiscal Year</u>	<u>Gross Income</u>	<u>License Fees</u>	<u>Excise Tax</u>	<u>*Income Tax</u>
1975	\$41,162,932	\$81,850	\$6,598,213	\$72,834
1974	33,607,680	81,500	5,690,909	42,195
1973	31,426,323	80,200	5,234,678	52,042
1972	31,379,627	80,350	4,871,156	78,862
1971	30,816,351	80,600	4,936,399	46,045
1970				

* Furnished by the Department of Revenue based on four companies. Identities of the companies were not furnished.

Janis
3773

AG0 529839

West Coast Dist
Alaska Dist.
Odom
K&L
Amherst
etc.

SCOMM

#11:7



JUNEAU, ALASKA

Alaska State Legislature

Senate

January 27, 1975

The Honorable Jay Hammond
Governor of Alaska
Pouch A
Juneau, Alaska 99811

Dear Governor Hammond:

On several occasions the Legislature's oil and gas consultants have suggested that the state should thoroughly explore our corporate tax laws with regard to the oil and gas industry. The last session of the Legislature directed the Legislative Council, by House Concurrent Resolution 78, to perform a tax study including this, as well as other areas. You indicated in your budget message that your Administration was considering introducing legislation in the field of corporate tax revision specifically affecting the oil and gas industry.

To expedite the work of the Legislature and to coordinate legislative activities with your Administration, I am today appointing a special committee to examine all aspects of state tax structure, with special regard to the oil industry. Specifically, I am asking the Special Committee on Taxation and Revenue to review the following areas:

1. The corporate tax structure.
2. The corporate tax structure of the oil industry with particular emphasis on such things as percentage depletion allowance and investment tax credit.
3. The advantages and disadvantages of taxation of oil in place by elimination of the present exemption.

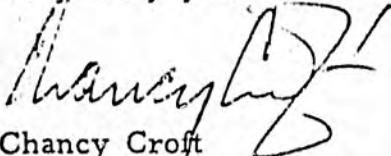
The Honorable Jay Hammond
January 24, 1975
Page Two

4. Possible revision of the severance tax law in light of increasing oil prices.
5. The difference between rates of taxation of oil and of gas.
6. Such other matters relating to taxation of the oil and gas industry in particular, and taxation in general, as it deems advisable.

The membership of the committee is: Senator John Huber of Fairbanks, Chairman; Senator Pat Rodey of Anchorage and Senator Joe Orsini of Anchorage, members. The Committee will coordinate its activities with the Chairman of the Senate Natural Resources and Senate Finance committees. In addition, it will meet with our oil and gas consultants and will meet with members of your Administration if you so desire. Obviously, a task of this magnitude will require cooperation between the Administration and the Legislature, and I would appreciate your extending to the Committee every consideration normally extended to standing committees of the Legislature.

A study of this type, if it is to be done with accuracy and thoroughness, will extend over a considerable period of time. However, I am asking the members of the Committee to expedite its work so that matters which could be considered at this Session of the Legislature will be ready for presentation to the Legislature by March 15, 1975. Those matters which the Committee cannot consider and report on during the First Session of the Ninth State Legislature will be coordinated with the Legislative Council for further analysis.

Very truly yours,


Chancy Croft
President of the Senate

January 30, 1975

The Honorable Chancy Croft
President of the Senate
Alaska State Legislature
Juneau, Alaska 99811

Dear Mr. President:

I applaud the appointment of the Special Committee on taxation and revenue. It is most crucial that the areas of concern you enumerated be thoroughly evaluated during this Session if possible.

Members of my Administration have been instructed to accord the Committee every cooperation.

Very truly yours,

Jay S. Hammond
Governor

BP:cw



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#11:8

Testimony given by Mr. Charles Naughten before House Resources Committee April 15, 1975 and before Senate Resources Committee on April 16, 1975

Unfortunately, , this is not a good afternoon.

I am Charles Naughten, Assistant Director of Natural Resources for Koniag Incorporated; present to express our views on H.B. 102.

We cannot live with the impact of this Bill if implemented in it's present language. We feel that it is in direct conflict with the Congressional Legislative intent in section 2(b) of ANSCA. Under this section, the Native people through an instrument of corporations, were to upgrade and maintain their socio-economic stature. An implementation of "102" would abort the very means allowing them to do this and also discourage them.

I will try to put light on the type of discouragement that could and very likely would precipitate as a result of tax on potential resources.

To illustrate, Chairman, I am a very young man, in thirty more years it is not inconceivable that I could be grossing 50 thousand annually. In other words have produced a little more than a half a million dollars in wages. At a 20 mill tax rate I would be required to pay over 11 thousand dollars above my present taxes this year, thats close to 3/4th of my present earnings in taxes alone. Therefore, the less I did the better off I would be. It would destroy my incentive to advance and the same analogy is true for the small corporations being taxed on their potential.

Unlike myself the corporations are still fetal and Koniags maturity depends upon it's ability to develop it's resources. For us there are no timber resources, doubtful economically feasible hard rock minerals and the fishing industry is becoming a regulatory abominable joke. Our only recourse is to rehabilitate our fisheries and develop our subsurface, particularly gas and oil.

Being taxed in our developmental stages, upon our potential returns, would within 3 years force our region into bankruptcy.

Because gas and oil are so important to our survival, and being taxed on our potential reserve will destroy us before we have a chance to grow. We definitely oppose it's enactment.

Koniag knows you will carefully consider these problems and thank you for this opportunity to be heard.



Chas Naughton

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#11:9

STATEMENT OF JOHN A. CARVER, JR., PROFESSOR
OF LAW AT THE UNIVERSITY OF DENVER COLLEGE
OF LAW, TO COMMITTEES OF THE ALASKA LEGIS-
LATURE CONSIDERING BILLS TO AMEND ALASKA
STATUTES, RESPECTING TAXATION OF OIL AND
GAS, JUNEAU, ALASKA, APRIL 15, 1975.

My name is John A. Carver, Jr., and I appear on behalf of BP Alaska, Inc. I am a law professor at the University of Denver College of Law, and reside at 5639 Montview Boulevard, Denver, Colorado, 80207. My professional background relevant to the Committee's inquiry today derives principally from my governmental service as Assistant Secretary and Under Secretary in the Department of the Interior (1961-1966) and as a member of the Federal Power Commission (1966-1972).

It is not my purpose to discuss the pending legislation in terms of the power of the Alaska legislature constitutionally to tax reserves in place on an ad valorem basis. I will point out flaws in the legislation proposed, not with the idea that these flaws are incapable of being remedied, but rather for the purpose of laying a foundation for discussion of the policy implication in national energy supply terms.

As the Committee well knows, section 6(b) of the Statehood Act gave Alaska the right to select lands already leased by the United States for oil and gas development, the state selection being made subject to the federal leases. Upon patent, Alaska takes the right, title and interest of the United States under the lease. Under the final proviso of section 6(b), which provides, "that nothing herein contained shall affect the continued validity of any such lease, permit, license, or contract or any rights arising thereunder," the rights of lessees cannot be diminished by the selection process. (Emphasis added.)

On their face the proposed measures seem to tax reserves underlying all Alaska-administered leases on the same basis, that is, without distinction based on whether the base fee interest was acquired under section 6(h) or under other selection procedures. The question I suggest is that a lessee from the federal government, when he acquired his lease with the federal government, acquired a "right" not to have the reserves taxed by the State of Alaska.

Should such a contention be sustained, Alaska, if it enacts one of these measures, would at best have a tax anomaly. The two classes of lessees being not substantially different, effort ought to be made not to adopt a scheme of taxation which has to be inequitably applied.

A roughly comparable dilemma, although not in the same direct legal terms, is presented when the State's right to select lands valuable for oil and gas not under lease or development contract by the United States is considered in the light of the provisions of section 28(b) of the Statehood Act, which amended 30 U.S.C. §191 to provide that 90% of the proceeds of federal oil and gas (and other) leases should be remitted to the State.

Alaska is the beneficiary of a 90% share of rentals, bonuses and royalties of federally leased public domain lands; it does not presently have a materially higher stake in the revenue derived from equivalent operations on the lands it selects. But

the clear and specific exemption of federal interests in the pending bill from an ad valorem reserve tax will result in differential treatment of the companies owning reserves.

The point is not that the State may not extend its tax this far and no further, but rather that the State should consider the policy consequences, and ask whether it wants business operations of its citizens, corporate or individual, taxed in this differential fashion, if other methods are available.

There is at least the potential of legal as well as policy problems in terms of what the Courts in the future may determine the Congress to have intended with respect to the Statehood Act's provision of 90% sharing and the right of state selection of already leased areas.

The interests of Alaska and the rest of the United States in these resources may require adjudication at some time in the future.

I was in the employ of the U. S. Senate as assistant to one of the Statehood Bill's chief sponsors, when the Statehood bill was enacted. I was closely involved with Alaska officials in working out the kinks and eliminating the frictions of implementing the provisions of the Statehood Act on a wide range of issues in the early 1960's. As I recall the problems we faced and the attitudes which prevailed in those days, much of Alaska was regarded as continuing to be peculiarly national, even after statehood. This was particularly true with respect to park and

wildlife policies. I confess that I do not recall that anyone in those days had the prescience to see how vital the vast oil and gas reserves of the North Slope might become to relieve our country from the stranglehold of a more than 40% dependence on foreign oil under cartelized prices." On the contrary, at about that time the big struggle on oil policy was between the consuming states which wanted access to "cheap" foreign oil, even at the expense of loss of much of our domestic productive capability.

Courts frequently take advantage of the hindsight available to them, and they perhaps would listen to the argument that the allocation of 90% of the proceeds of federal leases and 100% of the proceeds of federal leases taken over by the state should represent the outer limit of what Congress intended should be the division of the benefits of these resources between Alaska and the consuming areas of the country or between Alaska and the federal government.

A test of this proposition might be far off in judicial terms; nevertheless, it ought to be considered by the Alaska legislature in the process of determining whether to pass the reserve value tax measure initially.

It is demonstrable that a tax on reserves in advance of their production adds to the fixed costs of the recovery operation. In more "normal" times we might have dealt with this circumstance purely in terms of the cut-off point of economic feasibility of the particular project. Today, however, we must

see it more accurately in terms of a further charge upon the energy consumers, in this case the energy consumers of the rest of the United States. Given the high leverage of energy prices as additive to inflationary pressures, the question for the legislature is whether it should pioneer a program for this kind of tax on a nationally vital resource. When the oil finally moves, its cost and price will be augmented to the extent of this tax and the cost of carrying it. The potential of Alaska oil to put pressure on the OPEC cartel will be pro tanto reduced.

Bear in mind that I am not attacking the power or right of Alaska to tax. But taxes in advance of the stream of revenue from which they must be paid are like borrowings, equivalent to the sale of bonds secured by the stream of revenue. In exercising the policy choice to use the "pay-as-we-go" approach of these bills, rather than the "pay-as-you-go" approach of taxing only when the flow of revenue begins, the State is doing two things: It is shifting the cost of the "borrowing" to the lenders; and it is setting a precedent for financing governmental needs in resource-rich areas which if widely emulated would become nationally intolerable.

The first point becomes more clear if we think of how the cost of natural gas developments are treated. To the extent that gas reserves are owned by companies which market their gas under regulation by the FPC or by state regulatory

commissions or both, a tax on reserves might well be capitalized and added in to the company's rate base, upon which it would be permitted to earn a return in its rates as soon as such treatment was approved. This is a way of transferring the cost from investors or lenders to customers which is being increasingly utilized as the capital funds available in the money markets become scarcer and more expensive.

The company in such situations becomes a conduit between ratepayers in the Lower Forty-Eight and the State Treasury of Alaska. Consumers, already hard-pressed by rising energy costs, could be expected to question such a development, particularly if it showed signs of spreading to other producing states. The objectionable features of such a program would be emphasized: the potential for taxing the same reserves over and over again, the absence of theoretical limit on the amount of the tax burden, the transfer of risk to consumers, and the saddling of costs of government unfairly on this particular nationally-needed resource.

It would be only rank legal speculation to specify the possible legal arguments, but I should perhaps list one. What is the difference between this kind of ad valorem tax and those efforts, notably and universally unsuccessful, of producing states to use their police power to assure a preference to their own citizens of resources physically in their states? Is interstate commerce burdened less by a taxing measure of this kind than it is by a regulatory measure?

I have no doubt whatever about this Committee and the Alaska legislature being fully aware of the problems presented by these pending measures, and I am sure this thicket would not even be approached, much less entered, in the absence of extremely pressing circumstances.

It is the purpose of my presentation, in summary, to suggest that you take into account in your deliberations the fact that the whole country is in serious straits for lack of petroleum from domestic sources, and of natural gas generally, and that it would be folly to divide ourselves into producing and consuming blocs on the model of the international scene. In addition, serious thought must be given to internal inequities, as among lessees similarly situated except as to the identity of their lessors or the time of their leases, and to the possibility that the program might be found to be at odds with the revenue-sharing and state selection pattern of the Statehood Act.

The adoption by Alaska of a resource managing pattern similar in all important respects to that of the federal government--bonus leasing, size of royalty, and life-of-field terms--is in the spirit of constructive uniformity. It should not be lightly abandoned.

SCOMM

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TESTIMONY BY ARTIC SLOPE REGIONAL CORPORATION ON HOUSE BILL NO. 297
BEFORE HOUSE RESOURCES COMMITTEE

My name is Jacob Adams. I am appearing before the Committee on behalf of the Arctic Slope Regional Corporation in my capacity as Vice-President in charge of Land Selection and Conveyance.

As I testified before this Committee approximately three weeks ago, ASRC is strongly opposed to legislation which would impose a tax on proven oil and gas reserves. I am appearing before you again today to restate our continuing opposition to this type of tax for the reasons that I will state, and to ask that you attempt to satisfy the state's short-term cash needs by implementing any of the various alternatives that we and others have previously suggested.

Today, I would like to put my testimony in proper perspective by repeating what Oliver Leavitt, Treasurer, of ASRC, told the Senate Resources Committee at the conclusion of my recent testimony before that group regarding the proposed tax on oil and gas reserves. Arctic Slope Regional Corporation is a corporation "doing business for profit" in the State of Alaska. Like any corporation doing business in Alaska, we are and should be subject to taxation for the privileges and benefits afforded us by the Alaskan government. We will gladly pay taxes on any profits we realize - but we vigorously resist the enactment of a law that will require us to pay taxes on future revenue producing property years prior to the time that we will realize any cash return from the development and production of such properties. This is opressive taxation which would severely impede the growth and development of our corporation, and would

undoubtedly adversely affect the development and production of the oil and gas reserves on the North Slope of Alaska. Further, based on our evaluation of the possible cost that the proposed legislation could inflict upon us, we are seriously concerned as to whether or not we could continue to function as a viable corporation. I'm sure that it is not your intent to put us out of business or cripple our operations, but I'm also sure that you can appreciate our concern that we might be an unintended casualty of your efforts to ensure that the State's short term cash needs are satisfied.

Statements recently made before the legislature by Mr. Robert Paschall and Professor Griswold indicate that a tax on proven reserves would return annually to the State only \$100 - \$200 million. Since this will presumably be less than enough to meet the State's short-fall cash requirements, other avenues will have to be pursued. The various alternatives available in this regard were set forth in my earlier testimony, and have been stated and restated by others in their testimony. I suggest that it would be in the best interest of both the state, the Alaska business community and the Alaskan citizenry if the proposed oil in place tax legislation were abandoned and one of the following alternative courses of action were pursued:

- 1) Indirect borrowing against future oil and gas royalties though what is commonly known as an "ABC" type transaction. We understand that the Committee has already been provided with an explanatory memorandum and sample exhibits regarding this technique.

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- 2) Advance payment of severance taxes.
- 3) Sale of options to purchase state royalty gas and/or oil.
- 4) Issuance of revenue anticipation notes.
- 5) Sale of oil and gas leases.

Mr. Paschall, a California petroleum geologist, has testified that an ad valorem property tax has been used in his state for 60 years. He also predicted that such a tax applied to the Arctic Slope Regional Corporation's interest in the Kemik gas field would be approximately \$89,000 annually in contrast to the \$2.1 million tax which I previously estimated would be our liability.

Mr. Paschall is correct that California uses an ad valorem property tax approach to derive revenues from oil and gas interests. The tax is in lieu of severance tax. The net effect is approximately 7-8 percent of gross value which is comparable to the effect of severance tax in other oil producing states such as Texas or Oklahoma. 2
dmi

The mechanics of assessment of reserves in California cannot be, in our opinion, equitably applied to Alaska, especially in areas where there is no production history, such as in the Arctic.

Because of the long history of production in California and knowledge of specific reservoir characteristics, a reasonably accurate estimate of reserves can be made. This is not so in Alaska.

The only reserve estimates that can be made on fields such as Kemik or Gubik (which we have also selected) is a simple volumetric estimate that may prove to be much in error. We believe that the error would be on the high side or not in our favor since a volumetric method of

calculating reserves is generally optimistic.

*Paschall
noted general conservation*

The point to be made here is that an assessment of reserves based on estimates of recoverable oil and gas that are made from very little information and virtually no experience and will immediately invite challenge and litigation.

*✓
Nels*

Further, if the method of assessment (which is not spelled out in specific detail in this bill) provides only \$89,000 on an estimated value of \$106 MM, or \$100 MM tax on a \$5 MM assessed valuation of Prudhoe Bay, and the state will obviously still be cash deficient and will have to seek additional ways to raise revenues. This will only further complicate the states financing methodology.

*What about
revenue losses*

Finally, with all due respect to Mr. Paschall's expertise, I would like to point out that the determination of the fair market value of "proven" oil and gas reserves in Alaska will at best be a guessing game for some time to come. The very fact that the range of the possible annual tax cost upon Arctic Slope Regional Corporation could vary from \$89,000 to \$2.1 MM, depending on which assessment procedure you choose to employ, is as unsettling as it is uncertain and is clear evidence of the ambiguity and impracticality inherent in such a tax structure.

Nels

The legal morass that would undoubtedly evolve in administering its provisions prompt a suggestion that should you choose to enact such legislation, you might consider entitling it "The Attorneys Oil and Gas Annuity Bill."

*Paschall's
et al
Constitutionally*

Professor Griswold states that there would be "no constitutional problem by exempting Native interests from a tax on oil and gas reserves". We recall similar claims about the legality of the right-of-way leasing

act which caused a special session at taxpayers expense and was ultimately repealed.

I understand that if any portion of a law is found unconstitutional under Alaska law, the other provisions of a statute are not necessarily invalid and may apply. Thus, if a court were to find that excepting only native interests is unconstitutional and thereby strike that provision, ASRC or any other regional corporation's interest would be subject ✓ to the remaining provisions of the law or, in this case, be subject to an ad valorem tax.

We are not so naive or gullible to be lead down a path of roses only to get hung on a thorn bush.

We want to emphasize the impact of this tax on a net profits interest which is one of the most important provisions of several exploration agreements between regional corporations and various oil companies.

A simple definition of a net profits interest is a share of gross production from a property, measured by the net profits from the operations of the property.

In the case of the North Slope, net profits are determined by ascertaining the cumulative gross proceeds from all oil, gas and other substances produced, saved and sold and deducting from such gross proceeds, the cumulative total of all chargeable costs and expenditures incurred by the lessee pursuant to the net profits agreement. Chargeable costs and expenditures are specifically defined and included any cash considerations paid or to be paid pursuant.

to an exploration agreement including lease bonuses and rentals, proudction taxes and ad valorem taxes.

If a field is large and capable of reasonably rapid pay out, a 15 percent net profits interest is worth as much as a 45 percent working interest or perhaps even more.

A regressive tax - this ad valorem property tax - will prolong for years the time before our net profits become a reality. Moreover, a net profits interest is a property interest itself and therefore subject to an ad valorem tax, althou it is far beyond our knowledge as to ✓ how one would evaluate and as s the net profits interest before it actually materializes and produces income to ASRC.

As a fledgling corporation trying to provide financial benefits to thousands of native stockholders, we think this tax is very unfair and debilitating and therefore should not be enacted into law.

April 14, 1975

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Gasoline prices

(Suggested prices for major-brand regular)

	Price ex. tax 3-13-75	Pump price 3-18-75	Pump price 3-19-74
Albany	44.9	56.9	49.9
Albuquerque	42.4	53.4	48.9
Amarillo	40.1	49.1	41.9
Atlanta	43.6	55.1	49.2
Baltimore	41.9	54.9	48.9
Birmingham	41.9	53.9	47.9
Boston*	43.6	55.1	49.2
Buffalo	44.9	56.9	49.9
Charlotte	41.9	54.9	48.9
Cheyenne	44.9	55.9	49.9
Chicago*	43.6	56.6	50.4
Cleveland	42.9	53.9	47.9
Cerpus Christi	40.6	49.6	42.4
Dallas	40.6	49.6	42.4
Denver	43.9	54.9	49.9
Des Moines	43.0	54.0	49.9
Detroit	41.5	54.5	49.9
Fort Worth	40.6	49.6	42.4
Houston	40.6	49.6	42.4
Indianapolis	43.9	55.9	49.9
Jacksonville	41.9	53.9	47.9
Kansas City	43.4	54.4	49.9
Little Rock	41.5	53.0	48.9
Louisville	44.9	55.9	49.9
Los Angeles	40.5	51.5	50.5
Memphis	43.0	54.0	49.9
Miami	43.1	55.1	49.2
Milwaukee	43.9	54.9	48.9
Minn. St. Paul	44.0	55.0	50.9
Newark	45.1	56.1	50.2
New Orleans	40.9	52.9	46.9
New York*	45.9	58.9	52.9
Norfolk	41.1	54.1	48.2
Okla. City	42.4	53.0	48.9
Omaha	43.4	55.9	49.9
Philadelphia	41.9	54.9	47.9
Phoenix	43.6	54.6	50.9
Pittsburgh	41.9	54.9	47.9
Portland, Ore.	41.0	52.0	51.4
Salt Lake City	42.4	53.4	47.9
San Antonio	40.1	49.1	41.9
San Diego	41.5	52.5	50.3
San Francisco	41.5	52.5	51.0
Seattle	40.6	53.6	51.0
Spokane	40.7	53.7	52.1
Springfield, Ill.*	44.0	57.0	52.9
St. Louis	44.0	55.0	50.9
Tampa	43.1	55.1	49.2
Texarkana	40.1	49.1	41.9
Tulsa	42.4	53.0	48.9
Wichita	42.9	53.9	47.9
Wichita Falls	40.1	49.1	41.9
Week's avg.	42.46	53.78	48.48
Feb. avg.	42.24	53.55	45.73
Jan. avg.	41.87	53.18	45.73
1975 to date	42.16	53.48	
1974 to date	35.10	46.37	

+ Increase, - decrease from previous week. *Pump price includes local tax ranging from 0.5 to 2.0 cents/gal.

Refined-products prices

Following quotations are realistic spot prices for refined products moving intrastate on Tuesday of each week. They may differ from refiner's prices for branded products. They should not be considered as postings.

Light products are in cents per gallon. Residual prices are in dollars per barrel.

Gasoline

Mid-Continent (Group 3):

Regular (92 octane)	26.75-30.00
Premium (99 octane)	28.75-32.00

California (rack) Los Angeles:

Regular (91 octane)	26.00-31.50
Regular (95 octane)	27.10-32.50
Premium (100 octane)	28.40-33.50

Chicago:

Regular (94 octane)	27.50-32.50
Premium (100 octane)	30.00-35.00

Kerosine, distillate

Chicago:

Distillate No. 1	27.50-33.50
Distillate No. 2	26.50-32.00

Gulf Coast (cargoes):

Kerosine (42-43)	26.25-27.50
Distillate No. 2	26.00-27.00

Mid-Continent (Group 3):

Kerosine (42-44)	27.00-30.25
Diesel oil (58 d.i. & above)	26.50-29.00
Distillate No. 1	26.00-29.25
Distillate No. 2	24.50-26.75

New York Harbor (barges):

Kerosine (42-44)	28.05-32.00
Distillate No. 2	27.05-30.25
Diesel fuel (48-52 d.i.)	27.80

Residual fuel

Mid-Continent (Group 3):

No. 6 (max 1% S)	\$10.30
No. 6 (over 1% S)	\$ 9.30

Chicago:

No. 6 (max 1% S)	\$13.86
No. 5 (max. 1% S)	\$14.70

New York Harbor (barges):

No. 6 (max. 0.3% S)	\$12.83-14.13
No. 5 (0.3% S)	\$13.03-14.38

API imports of crude and products

(Thousands of barrels daily)

	DISTRICTS 1-4			DISTRICT 5			TOTAL U.S.		
	3-14 1975	3-7 1975	3-15 1974	3-14 1975	3-7 1975	3-15 1974	3-14 1975	3-7 1975	3-15 1974
Gasoline	200	115	158	10	5	10	210	120	168
Special Naphthas			32					3	32
Kerosine	5	3					5	3	
Distillate	108	135	251	5	5	10	113	140	261
No. 4 Fuel Oil	66	33	135				66	33	135
Residual	999	1,360	1,456	50	75	40	1,049	1,435	1,496
Jet Fuel (Naphtha)	25	25	9			8	25	25	17
Jet Fuel (Kerosine)	52	95	107	43	91	49	95	186	156
Asphalt	5	14	22				5	14	22
LP-Gas	104	112	132	13	24	20	117	136	152
Petrochem Feedstocks	17	15	16				17	15	16
Unfinished	43	26	91	20	5	14	63	31	105
Plant Condensate	88	58	94	5	5	10	93	63	104
Total Prod.	1,712	1,994	2,503	146	210	161	1,858	2,204	2,664
Canadian Crude	361	344	690	157	216	156	518	560	646
Other Foreign	2,311	2,365	1,336	496	313	435	2,807	2,678	1,971
Total Crude	2,072	2,709	2,026	653	529	591	3,325	3,238	2,617
Total imports	4,384	4,703	4,529	799	739	752	5,183	5,442	5,281

Worldwide crude-oil and gas production

OIL (1,000 b/d)	Jan.* 1975	Dec. 1974	12-month average				GAS (billion cubic ft)	
			Daily prod. 1974	Daily prod. 1975	Change from— Vol %		Jan. 75	Dec. 74
WESTERN HEMISPHERE								
Argentina	415	415	423	415	— 8	— 1.9	22.6	22.7
Bolivia	35	55	48	35	— 13	—27.1	11.2	12.8
Brazil	200	195	172	200	28	16.3	4.6	40.
Canada	1,587	1,700	1,823	1,587	— 236	—12.9	282.2	311.7
Chile	30	30	29	30	1	3.4	12.0	19.4
Colombia	160	165	186	160	— 26	—14.0	9.7	10.0
Ecuador	140	136	225	140	— 85	—37.8	0.2	0.2
Mexico	610	600	480	610	130	27.1	64.7	62.0
Peru	75	75	75	75			7.1	6.0
Trinidad	180	180	178	180	2	1.1	4.6	2.5
United States	8,637	8,645	8,907	8,637	— 270	— 3.0	1,831.3	2,011.2
Venezuela	2,748	2,832	3,288	2,748	— 540	—16.4	35.0	45.3
Total	14,817	15,023	15,834	14,817	—1,017	— 6.4	2,285.2	2,567.8
WESTERN EUROPE								
Austria	45	45	50	45	— 5	—10.0	5.2	4.9
Denmark	4	4	1	4	3	300.0		
France	25	26	24	25	1	4.2	23.3	34.6
West Germany	120	120	128	120	— 8	— 6.3	51.1	50.4
Italy	20	20	20	20			36.0	50.0
Netherlands	30	24	28	30	2	7.1	214.9	234.7
Norway	24	46	3	24	21	700.0		
Spain	30	30	44	30	— 14	—31.8		
United Kingdom	2	2	2	2			54.6	68.2
Yugoslavia	65	65	68	65	— 3	— 4.4	3.5	4.7
Total	365	381	368	365	— 3	— 0.8	388.6	447.0
MIDDLE EAST								
Abu Dhabi	770	1,222	1,220	770	— 450	—36.9		
Bahrain	66	67	70	66	— 4	— 5.7	0.2	0.1
Dubai	298	256	140	298	158	47.0		
Iran	5,544	5,915	6,103	5,544	— 559	— 9.2	64.4	76.2
Iraq	1,970	2,162	1,774	1,970	196	11.0	11.0	10.9
Israel	100	100	100	100			0.2	0.2
Kuwait	2,074	2,320	2,838	2,074	— 764	—26.9	7.0	0.1
Oman	290	282	299	290	— 9	— 3.0		
Qatar	514	519	518	514	— 4	— 0.8	0.1	0.1
Saudi Arabia	7,898	8,043	7,517	7,898	381	5.1		
Sharjah	60	60		60				
Syria	155	155	87	155	68	78.2		
Turkey	65	65	64	65	1	1.6		
Total	19,804	21,166	20,730	19,804	— 926	— 4.5	82.9	87.6
ASIA-PACIFIC								
Afghanistan							6.2	7.8
Australia	472	473	389	472	83	21.3	14.3	13.4
Burma	20	20	23	20	— 3	—13.0	0.7	0.6
Brunei-Malaysia	340	330	320	340	20	6.3	1.9	2.2
India	150	150	148	150	2	1.4	2.2	1.6
Indonesia	1,345	1,230	1,416	1,345	— 71	— 5.0	16.7	17.5
Japan	15	15	15	15			7.4	7.1
New Zealand							1.2	1.1
Pakistan	9	9	9	9			12.9	12.2
Taiwan	3	3	3	3			4.7	5.0
Total	2,354	2,230	2,323	2,354	31	1.3	68.2	68.5
AFRICA								
Algeria	800	800	1,150	800	— 350	—30.4	1.4	1.7
Angola	20	20	20	20			5.0	4.7
Cabinda	150	150	148	150	2	1.4		
Congo	35	35	33	35	2	6.1	0.6	0.6
Egypt	175	175	46	175	129	280.4	6.0	5.2
Gabon	190	190	156	190	34	21.8	1.4	1.5
Libya	970	975	1,912	970	— 942	—49.3	4.0	3.1
Morocco	1	1	1	1			0.1	2.5
Nigeria	1,984	2,063	2,198	1,984	— 214	— 9.7	8.8	6.1
Tunisia	105	105	70	105	35	50.0	6.2	6.4
Total	4,430	4,514	5,734	4,430	—1,304	—22.7	33.5	31.8
COMMUNIST								
China	1,300	1,300	1,160	1,300	140	12.1	14.9	15.6
Rumania	290	290	290	290			81.3	80.2
U.S.S.R.†	9,490	9,419	8,955	9,490	535	6.0	864.9	882.5
Other	110	110	110	110			35.0	44.6
Total	11,190	11,119	10,515	11,190	675	6.4	996.1	1,022.9
World Total	52,960	54,433	55,504	52,960	—2,544	— 4.6	3,854.5	4,165.0

*Figures adjusted. †Includes gas liquids. (Note: Thailand, Barbados and others under 500 b/d not included.)

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Bahrain	66	67	70	66	— 4	— 5.7	0.2	0.1
Dubai	298	256	140	298	158	47.0	...	...
Iran	5,544	5,915	6,103	5,544	— 559	— 9.2	64.4	76.2
Iraq	1,970	2,162	1,774	1,970	196	11.0	11.0	10.9
Israel	100	100	100	100	...	...	0.2	0.2
Kuwait	2,074	2,320	2,838	2,074	— 764	— 26.9	...	0.1
Oman	290	282	299	290	— 9	— 3.0	...	...
Qatar	514	519	518	514	— 4	— 0.8	0.1	0.1
Saudi Arabia	7,898	8,043	7,517	7,898	381	5.1	...	...
Sharjah	60	60	60	60	60	...	...	...
Syria	155	155	87	155	68	78.2	...	...
Turkey	65	65	64	65	1	1.6	...	...
Total	19,804	21,166	20,730	19,804	— 926	— 4.5	82.9	87.6
ASIA-PACIFIC								
Afghanistan	...	...	...	...	...	...	6.2	7.8
Australia	472	473	389	472	83	21.3	14.3	13.4
Burma	20	20	23	20	— 3	— 13.0	0.7	0.6
Brunei-Malaysia	340	330	320	340	20	6.3	1.9	2.2
India	150	150	148	150	2	1.4	2.2	1.6
Indonesia	1,345	1,230	1,416	1,345	— 71	— 5.0	16.7	17.5
Japan	15	15	15	15	...	...	7.4	7.1
New Zealand	...	...	...	...	...	...	1.2	1.1
Pakistan	9	9	9	9	...	...	12.9	12.2
Taiwan	3	3	3	3	...	...	4.7	5.0
Total	2,354	2,230	2,323	2,354	31	1.3	68.2	68.5
AFRICA								
Algeria	800	800	1,150	800	— 350	— 30.4	1.4	1.7
Angola	20	20	20	20	...	...	5.0	4.7
Cabinda	150	150	148	150	2	1.4	...	...
Congo	35	35	33	35	2	6.1	0.6	0.6
Egypt	175	175	46	175	129	280.4	6.0	5.2
Gabon	190	190	156	190	34	21.8	1.4	1.5
Libya	970	975	1,912	970	— 942	— 49.3	4.0	3.1
Morocco	1	1	1	1	...	...	0.1	2.5
Nigeria	1,984	2,063	2,198	1,984	— 214	9.7	8.8	6.1
Tunisia	105	105	70	105	35	50.0	6.2	6.4
Total	4,430	4,514	5,734	4,430	— 1,304	— 22.7	33.5	31.8
COMMUNIST								
China	1,300	1,300	1,160	1,300	140	12.1	14.9	15.6
Rumania	290	290	290	290	...	...	81.3	80.2
U.S.S.R.†	9,490	9,419	8,955	9,490	535	6.0	864.9	882.5
Other	110	110	110	110	...	...	35.0	44.6
Total	11,190	11,119	10,515	11,190	675	6.4	996.1	1,022.9
World Total	52,960	54,433	55,504	52,960	— 2,544	— 4.6	3,854.5	4,165.6

*Figures adjusted. †Includes gas liquids. (Note: Thailand, Barbados and others under 500 b/d not included.)

Gasoline prices

(Suggested prices for major-brand regular)

	Price ex. tax 3-18-75	Pump price 3-18-75	Pump price 3-19-74
Albany	44.9	56.9	49.9
Albuquerque	42.4	53.4	48.9
Amarillo	40.1	49.1	41.9
Atlanta	43.6	55.1	49.2
Baltimore	41.9	54.9	48.9
Birmingham	41.9	53.9	47.9
Boston*	43.6	55.1	49.2
Buffalo	44.9	56.9	49.9
Charlotte	41.9	54.9	48.9
Cheyenne	44.9	55.9	49.9
Chicago*	43.6	56.6	50.4
Cleveland	42.9	53.9	47.9
Corpus Christi	40.6	49.6	42.4
Dallas	40.6	49.6	42.4
Denver	43.9	54.9	49.9
Des Moines	43.0	54.0	49.9
Detroit	41.5	54.5	49.9
Fort Worth	40.6	49.6	42.4
Houston	40.6	49.6	42.4
Indianapolis	43.9	55.9	49.9
Jacksonville	41.9	53.9	47.9
Kansas City	43.4	54.4	49.9
Little Rock	41.5	53.0	48.9
Louisville	44.9	55.9	49.9
Los Angeles	40.5	51.5	50.5
Memphis	43.0	54.0	49.9
Miami	43.1	55.1	49.2
Milwaukee	43.9	54.9	48.9
Minn.-St. Paul	44.0	55.0	50.9
Newark	45.1	56.1	50.2
New Orleans	40.9	52.9	46.9
New York*	45.9	58.9	52.9
Norfolk	41.1	54.1	48.2
Okla. City	42.4	53.0	48.9
Omaha	43.4	55.9	49.9
Philadelphia	41.9	54.9	47.9
Phoenix	43.6	54.6	50.9
Pittsburgh	41.9	54.9	47.9
Portland, Ore.	41.0	52.0	51.4
Salt Lake City	42.4	53.4	47.9
San Antonio	40.1	49.1	41.9
San Diego	41.5	52.5	50.3
San Francisco	41.5	52.5	51.0
Seattle	40.6	53.6	51.0
Spokane	40.7	53.7	52.1
Springfield, Ill.*	44.0	57.0	52.9
St. Louis	44.0	55.0	50.9
Tampa	43.1	55.1	49.2
Texarkana	40.1	49.1	41.9
Tulsa	42.4	53.0	48.9
Wichita	42.9	53.9	47.9
Wichita Falls	40.1	49.1	41.9
Week's avg.	42.46	53.78	48.48
Feb. avg.	42.24	53.55	45.73
Jan. avg.	41.87	53.18	45.73
1975 to date	42.16	53.48	....
1974 to date	35.10	46.37	....

+ Increase, - decrease from previous week. *Pump price includes local tax ranging from 0.5 to 2.0 cents/gal.

Refined-products prices

Following quotations are realistic spot prices for refined products moving intrastate on Tuesday of each week. They may differ from refiner's prices for branded products. They should not be considered as postings.

Light products are in cents per gallon. Residual prices are in dollars per barrel.

Gasoline

Mid-Continent (Group 3):

Regular (92 octane)	26.75-30.00
Premium (99 octane)	28.75-32.00

California (rack) Los Angeles:

Regular (91 octane)	26.00-31.50
Regular (95 octane)	27.10-32.50
Premium (100 octane)	28.40-33.50

Chicago:

Regular (94 octane)	27.50-32.50
Premium (100 octane)	30.00-35.00

Kerosine, distillate

Chicago:

Distillate No. 1	27.50-33.50
Distillate No. 2	26.50-32.00

Gulf Coast (cargoes):

Kerosine (42-43)	26.25-27.50
Distillate No. 2	26.00-27.00

Mid-Continent (Group 3):

Kerosine (42-44)	27.00-30.25
Diesel oil (58 d.i. & above)	26.50-29.00
Distillate No. 1	26.00-29.25
Distillate No. 2	24.50-26.75

New York Harbor (barges):

Kerosine (42-44)	28.05-32.00
Distillate No. 2	27.05-30.25
Diesel fuel (48-52 d.i.)	27.80

Residual fuel

Mid-Continent (Group 3):

No. 6 (max 1% S)	\$10.30
No. 6 (over 1% S)	\$ 9.30

Chicago:

No. 6 (max 1% S)	\$13.86
No. 5 (max. 1% S)	\$14.70

New York Harbor (barges):

No. 6 (max. 0.3% S)	\$12.83-14.13
No. 5 (0.3% S)	\$13.03-14.38

API imports of crude and products

(Thousands of barrels daily)

	DISTRICTS 1-4			DISTRICT 5			TOTAL U.S.		
	3-14 1975	3-7 1975	3-15 1974	3-14 1975	3-7 1975	3-15 1974	3-14 1975	3-7 1975	3-15 1974
Gasoline	200	115	158	10	5	10	210	120	168
Special Naphthas	....	3	32	....	....	....	....	3	32
Kerosine	5	3	....	....	....	....	5	3	....
Distillate	108	135	251	5	5	10	113	140	261
No. 4 Fuel Oil	66	33	135	....	....	....	66	33	135
Residual	999	1,360	1,456	50	75	40	1,049	1,435	1,496
Jet Fuel (Naphtha)	25	25	9	....	....	8	25	25	17
Jet Fuel (Kerosine)	52	95	107	43	91	49	95	186	156
Asphalt	5	14	22	....	....	....	5	14	22
LP-Gas	104	112	132	13	24	20	117	136	152
Petrochem Feedstocks	17	15	16	....	....	....	17	15	16
Unfinished	43	26	91	20	5	14	63	31	105
Plant Condensate	88	58	94	5	5	10	93	63	104
Total Prod.	1,712	1,994	2,503	146	210	161	1,858	2,204	2,664
Canadian Crude	361	344	690	157	216	156	518	560	646
Other Foreign	2,311	2,365	1,336	496	313	435	2,807	2,678	1,971
Total Crude	2,672	2,709	2,026	653	529	591	3,325	3,238	2,617
Total imports	4,384	4,703	4,529	799	739	752	5,183	5,442	5,281

Fourth quarter trims '74 profits gain

Earnings of large oil firms top \$13.4 billion in 1974—up 39.8%—but last-quarter profits drop 7.7%. Most executives see delining profits in 1975 due to inflation and to adverse tax and pricing actions.

THE larger American oil companies enjoyed another good year for profits in 1974, but they encountered a set of unfavorable trends indicating that earnings have peaked and are trending down.

Many executives expect 1975 and beyond to be a period of declining earnings, with possible steep inroads from inflation and unfavorable tax and price actions by Government.

The Oil and Gas Journal's survey of leading companies reveals a much slower fourth quarter pulled down potential 1974 earnings for most of the firms. The relatively poorer fourth quarter came after a series of strong quarterly performances.

The down trend is due to declining international earnings, softer domestic demand with accompanying lower product prices, higher taxes, and rising costs. Earnings were bolstered by strong chemical business and better prices for crude oil and natural gas.

The Journal survey shows that the larger companies as a group earned more than \$13.4 billion in 1974, an increase of 39.8% over 1973. The same companies earned \$9.5 billion in 1973, up 54.7% from 1972.

Approximately one-half of the companies surveyed earned less in the last quarter of 1974 than in the last quarter of 1973. The quarterly earnings of the group were 7.7% less than

in 1973. One year ago, these companies were 68.8% ahead of the 1972 fourth quarter.

Downtrend. The outlook for 1975 U.S. oil earnings is fuzzy. Concern is rising over inflation, recession, and the likelihood of higher taxes.

Standard Oil Co. of California board chairman, H. J. Haynes, said his company's earnings outlook is clouded by inflation and by "uncertainties regarding the arrangements under which the company acquires oil from producing countries and the impact of tax changes under consideration by the U.S. and other governments."

"It is safe to say that we have crossed the profit peak and will be

The profits picture for 25 large U.S. oil companies

Company	1974			Thousands of dollars		4th quarter		
	Net profit*	% Change from 1973	% Change 1973 vs. 1972	Without LIFO change Net profit*	% Change from 1973	Net profit*	% Change from 1973	% Change 1973 vs. 1972
Exxon	\$3,140,000	+ 28.5	+ 53.3	\$3,140,000	+ 28.5	\$778,000	- 1.1	+ 69.0
Texaco†	1,586,441	+ 22.8	+ 45.4	1,783,141	+ 18.0	319,779	- 29.5	+ 70.1
Gulf	1,065,000	+ 33.1	+ 79.1	1,065,000	+ 33.1	185,000	- 19.6	+ 98.3
Mobil	1,040,100	+ 22.5	+ 46.8	1,040,100	+ 22.5	136,300	- 51.0	+ 68.2
California Standard†	970,000	+ 15.0	+ 54.2	1,220,000	+ 44.6	293,000	+ 3.5	+ 94.2
Subtotal	7,801,541	+ 25.3	+ 56.1	8,244,247	+ 32.4	1,712,078	- 15.3	+ 45.0
Indiana Standard	970,300	+ 89.8	+ 36.4	970,300	+ 89.8	174,800	+ 43.9	+ 52.7
Shell	620,000	+ 86.5	+ 27.7	620,500	+ 86.5	158,200	+ 99.3	- 1.5
Atlantic Richfield	474,605	+ 75.7	+ 40.3	474,605	+ 75.7	96,293	+ 5.7	+ 47.4
Phillips	425,700	+ 86.5	+ 55.3	429,700	+ 86.5	84,500	- 2.5	+127.6
Sun	378,000	+ 64.4	+ 48.4	378,000	+ 64.4	54,000	- 28.0	+ 59.6
Continental†	327,600	+ 35.0	+ 42.6	398,600	+ 64.2	61,800	- 30.8	+ 91.6
Tenneco	321,468	+ 39.6	+ 13.4	321,468	+ 39.6	76,459	- 5.5	+ 14.4
Union	288,000	+ 89.8	+ 47.8	288,000	+ 59.8	55,500	+ 8.8	+ 55.5
Occidental†	284,000	+256.1	+665.6	341,000	+327.5	NA	NA	NA
Getty‡	280,973	+108.1	+ 77.4	280,973	+108.1	58,618	+ 11.4	+115.0
Cities Service†	203,800	+ 50.3	+ 36.8	217,100	+ 60.1	46,400	+ 10.0	+ 49.8
Amerasia Hess	201,858	- 7.6	+177.3	204,858	- 7.6	67,806	- 35.1	+471.9
Marathon†	170,493	+ 31.8	+ 62.2	\$170,493	+ 31.8	40,917	- 27.6	+ 92.8
Ohio Standard	125,900	+ 69.9	+ 24.1	125,900	+ 69.9	28,600	+146.6	- 39.5
Kerr McGee‡	116,408	+ 85.3	+ 52.7	126,537	+146.1	30,952	+ 65.3	+ 69.2
Skelly	113,297	+157.6	+ 17.0	113,297	+157.6	35,530	+111.3	+ 31.3
Ashland†§	113,000	+ 34.1	+ 25.7	147,700	+ 73.3	38,600	+ 12.2	+ 52.2
American Petrofina||	86,683	+134.6	+104.6	86,683	+134.6	22,418	+ 34.0	+218.2
Murphy†	56,611	+ 37.4	+239.9	81,086	+ 67.3	13,010	- 6.8	+181.0
Clark†	<7,200>	-123.6	+265.6	12,300	- 59.7	<7,600>	-193.8	+140.8
Subtotal	5,565,996	+ 67.0	+ 51.9	5,786,100	+ 73.6	1,137,403	+ 6.7	+ 64.3
TOTAL	13,367,537	+ 39.8	+ 54.7	14,034,341	+ 46.8	2,849,482	- 7.7	+ 68.8

*Excludes nonrecurring gains and losses. †Adopted LIFO inventory accounting for domestic activities in 1974. ‡Includes Getty's share of Mission Corp. and Skelly Oil Co. §Marathon LIFO change not available. ¶Fiscal year ending Sept. 30 and first quarter. ||Includes revenue of Standard Ohio assets acquired July 1, 1973.

Non-Communist world well completions—1970-1973 (Continued)

Area	Total wells 1973	Total oil wells	Total gas wells	Total footage	Total wildcats 1973	Oil disc.	Gas disc.	Wildcat footage 1973	Total wells 1972	Total wildcats 1972	Total footage 1972	Total wells 1971	Total wells 1970
Netherlands-North Sea	16	0	4	201,000	13	0	3	163,306	18	11	186,000	20	12
Norway-North Sea	17	7	2	207,000	13	4	2	158,288	16	14	188,500	14	15
Spain	19	1	1	170,724	19	1	1	170,724	13	7	146,500	13	0
Spitzbergen	0	0	0	0	0	0	0	0	0	0	0	1	0
Svalbard	1	0	0	11,000	1	0	0	11,000	2	2	17,200	0	0
Sweden	20	0	0	78,000	20	0	0	78,000	20	20	54,000	4	0
Switzerland	1	0	0	3,872	1	0	0	0	0	0	0	0	0
U.K.	19	5	0	87,500	15	0	0	69,075	10	10	63,000	11	8
U.K.-North Sea	76	20	27	745,000	40	11	3	392,120	70	25	722,000	63	58
Total	400	69	137	3,616,218	217	21	25	2,118,626	459	210	4,062,377	418	362
NORTH AFRICA													
Algeria	83	70	10	815,000	13	0	0	165,000	80	10	765,000	109	115
Egypt	46	29	0	343,600	15	2	0	121,200	58	26	446,000	43	67
Libya	74	28	0	467,000	25	3	0	197,000	77	34	661,000	87	250
Morocco	4	0	1	33,667	4	0	1	33,667	7	7	34,238	9	1
Tunisia	15	6	0	135,509	9	0	0	79,545	18	12	175,536	16	6
Total	222	133	11	1,794,776	66	5	1	596,412	240	89	2,081,774	264	409
OTHER AFRICA													
Angola	31	18	1	220,177	8	2	0	71,370	34	15	270,988	55	37
Cameroon	3	1	0	18,723	3	1	0	18,723	5	5	31,736	2	6
Congo	17	14	1	45,378	4	1	1	30,778	43	7	116,358	16	9
Dahomey	2	0	0	14,100	2	0	0	14,100	1	1	5,680	0	4
Ethiopia	5	0	1	19,701	5	0	1	19,701	3	3	0	0	1
Equatorial Guinea	0	0	0	0	0	0	0	0	0	0	0	1	0
Gabon	44	30	2	347,578	15	3	1	124,547	36	17	267,671	36	26
Ghana	1	0	0	3,448	1	0	0	13,448	1	1	75	2	11
Ivory Coast	1	0	0	9,500	1	0	0	9,500	2	2	22,149	0	0
Kenya	0	0	0	0	0	0	0	0	0	0	0	2	1
Liberia	0	0	0	0	0	0	0	0	0	0	0	4	0
Malagasy	2	0	0	20,344	2	0	0	20,344	1	1	9,927	8	1
Mauritania	1	0	0	0	1	0	0	0	1	1	17,215	0	2
Mozambique	0	0	0	0	0	0	0	0	1	1	2,274	7	12
Nigeria	239	184	4	2,414,387	45	22	2	501,418	258	61	2,500,956	207	168
Port Guinea	1	0	0	8,850	1	0	0	8,850	0	0	0	0	0
Senegal	0	0	0	0	0	0	0	0	2	2	17,914	6	5
South Africa	18	0	0	78,582	18	0	0	78,582	10	10	99,451	16	15
Spanish Sahara	1	0	0	6,656	1	0	0	6,656	1	1	6,571	0	1
Togo	0	0	0	0	0	0	0	0	0	0	0	1	1
Zaire	9	6	0	63,476	5	2	0	36,868	6	6	71,821	4	0
Total	375	253	9	3,280,900	112	31	5	954,885	405	134	3,441,749	389	300
MIDDLE EAST													
Abu Dhabi	37	30	0	45,411	7	0	0	76,678	37	21	405,298	19	7
Cyprus	0	0	0	0	0	0	0	0	0	0	0	0	1
Dubai	18	14	0	170,595	1	1	0	13,300	16	0	167,953	7	0
Iran	81	57	5	741,000	18	4	3	231,000	61	2	287,432	104	44
Iraq	16	16	0	117,595	0	3	0	28,611	0	0	0	17	6
Israel	2	0	0	23,480	2	0	0	23,480	0	0	0	7	10
Jordan	0	0	0	0	0	0	0	0	0	0	0	3	1
Kuwait	0	0	0	0	0	0	0	0	2	0	24,381	8	13
Neutral Zone	13	13	0	84,667	0	0	0	0	9	0	44,550	12	23
Oman	49	49	0	211,456	0	0	0	0	56	16	257,654	0	27
Qatar	9	8	0	67,458	1	0	0	6,930	8	6	64,632	10	7
Saudi Arabia	323	177	0	2,763,588	3	3	0	25,668	178	6	1,522,968	56	43
Sharjah	2	2	0	29,071	0	0	0	0	2	1	19,611	2	0
Turkey	59	28	1	400,452	30	6	0	65,220	56	29	403,368	48	60
Total	609	394	6	5,049,733	65	17	3	470,887	425	81	3,197,847	293	254
FAR EAST													
Brunei	3	0	0	20,193	3	0	0	20,193	2	2	11,030	0	4
Burma	4	0	0	39,255	4	0	0	39,255	3	3	35,741	0	3
India	5	2	2	30,918	4	2	2	16,168	5	3	20,008	0	0
Indonesia	501	275	31	2,250,571	169	21	7	1,004,578	312	137	1,171,000	422	84
Japan	40	2	4	324,800	36	2	1	292,320	10	10	98,347	4	107
Korea	5	0	0	38,589	5	0	0	38,589	0	0	0	0	0
Khmer	0	0	0	0	0	0	0	0	1	1	7,997	0	0
Malaysia	14	5	0	136,668	11	2	0	107,378	20	20	141,066	12	14
Pakistan	2	0	1	16,053	2	0	1	16,053	8	8	51,802	4	7
Philippines	11	0	0	68,986	11	0	0	68,986	9	9	50,232	17	2
Taiwan	22	1	1	220,337	22	1	1	220,337	6	6	74,444	9	5
Thailand	8	1	1	61,667	8	1	1	61,667	6	6	40,147	1	0
Timor	0	0	0	0	0	0	0	0	3	3	16,173	3	4
Total	615	286	40	3,208,037	275	27	13	1,805,524	385	208	1,717,987	472	230
OCEANIA													
Australia-Papua-New Guinea	83	3	16	646,274	67	0	3	511,657	139	93	1,072,893	98	125
New Zealand	0	0	0	0	0	0	0	0	11	11	56,470	9	9
Total	83	3	16	646,274	67	0	3	511,657	150	104	1,059,363	107	134
NORTH AMERICA													
Canada	4,621	975	1,640	16,776,595	2,219	199	567	8,419,550	3,548	1,633	13,223,396	3,175	3,108
U.S.	27,602	9,902	6,385	138,937,944	7,466	619	900	44,776,906	28,755	7,539	138,285,876	25,851	28,120
Total	32,223	10,877	8,025	155,714,539	9,685	818	1,467	53,196,456	32,303	9,172	151,509,272	29,026	31,228
GRAND TOTAL	38,647	13,274	8,343	187,118,220	10,975	1,021	1,561	63,202,138	36,501	10,540	181,429,050	33,327	35,278

Non-Communist world well completions—1970-1973

Area	Total wells 1973	Total oil wells	Total gas wells	Total footage	Total wildcats 1973	Oil disc.	Gas disc.	Wildcat footage 1973	Total wells 1972	Total wildcats 1972	Total footage 1972	Total wells 1971	Total wells 1970
LATIN AMERICA													
Argentina	597	328	54	3,137,559	139	19	17	304,326	623	110	3,458,432	595	579
Bahamas	0	0	0	0	0	0	0	0	0	0	0	0	2
Barbados	0	0	0	0	0	0	0	0	0	0	0	2	0
Belize	3	0	0	14,664	3	0	0	14,664	5	5	23,907	0	0
Bolivia	14	8	2	90,689	4	1	2	30,390	14	8	189,294	18	33
Brazil	128	40	3	781,065	78	15	2	601,597	179	80	946,345	175	177
Chile	61	18	3	369,249	20	0	3	138,455	72	33	491,395	81	66
Colombia	46	27	3	366,513	20	2	3	209,703	56	20	423,860	71	58
Dominican Republic	0	0	0	0	0	0	0	0	0	0	0	0	2
Ecuador	58	49	0	529,672	8	2	0	66,888	59	20	459,993	81	37
Guatemala	0	0	0	0	0	0	0	0	1	1	11,781	0	0
Guyana	0	0	0	0	0	0	0	0	0	0	0	1	0
Honduras	3	0	0	31,940	3	0	0	31,940	3	3	24,952	1	0
Jamaica	0	0	0	0	0	0	0	0	1	1	7,608	0	1
Mexico	422	182	24	3,434,747	104	12	12	1,033,419	431	143	3,727,563	516	502
Nicaragua	0	0	0	0	0	0	0	0	0	0	0	3	8
Paraguay	0	0	0	0	0	0	0	0	6	6	21,232	11	0
Peru	89	66	0	789,332	31	15	0	376,418	117	25	696,151	121	135
Surinam	0	0	0	0	0	0	0	0	0	0	0	1	7
Trinidad-Tobago	212	175	10	955,622	15	3	5	113,860	196	23	837,678	220	135
Venezuela	427	366	0	3,306,691	63	33	0	546,031	371	64	3,038,490	464	589
Total	2,060	1,259	99	13,807,743	488	102	44	3,467,691	2,134	542	14,358,661	2,361	2,331
EUROPE													
Austria	74	29	24	454,332	21	2	4	182,181	74	21	401,339	53	60
Denmark-North Sea	4	0	0	36,000	4	0	0	36,000	3	1	10,800	3	3
Eire	4	0	1	37,000	4	0	1	37,000	3	3	32,780	3	0
France	14	4	1	174,720	11	2	0	137,284	27	11	162,248	11	17
Germany	47	3	20	463,045	22	1	3	201,202	48	26	513,095	62	59
Greece	3	0	0	27,500	3	0	0	27,500	2	2	12,745	1	2
Italy	35	0	11	445,110	24	0	4	389,391	77	43	843,170	94	89
Malta	1	0	0	7,250	1	0	0	7,250	3	3	25,000	1	0
Netherlands	49	0	46	466,285	5	0	3	49,305	73	12	684,000	64	39

(Continued on next page)

at a well in San Patricio County's White Point field. Mobil 1 Jones Unit in East White Point, 5 miles west of Portland, flowed 1,726 Mcfd and 144 bbl condensate daily on 14/64-in. choke from perforations at 12,215-12,318 ft.

A RECOMPLETION in South Texas opened a new gas sand for a new fault-block portion of East Jeffress field.

New well is in Hidalgo County, 5 miles southwest of McCook in Porcion 74, A-582. Well is the Coastal States Gas Co. 1 Castillo. Flow was 2,100 Mcfd and 14 bbl condensate daily from perforations at 11,145-11,472 ft in the Vicksburg Oligocene T, fault block A zone. Well originally paid at 12,043-12,130 ft in the Vicksburg-T sand.

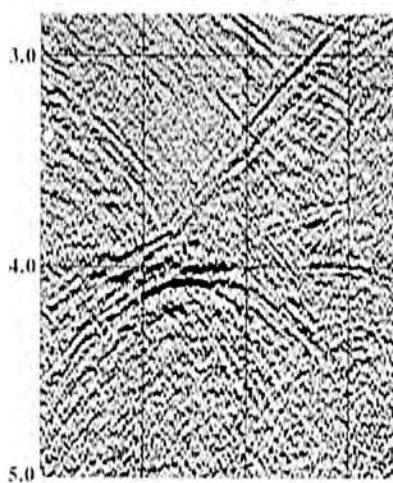
The second well in North Julian field, Kenedy County, is also a success. Richard E. Haas completed 2 Clark & Sain in the 9,300-ft Frio Oligocene pay. Flow was 860,000 cfd and 13 bbl condensate through 12/64-in. choke.

Pay is at 9,172-81 ft. Location is 1 mile east of the discovery well, completed late last year.

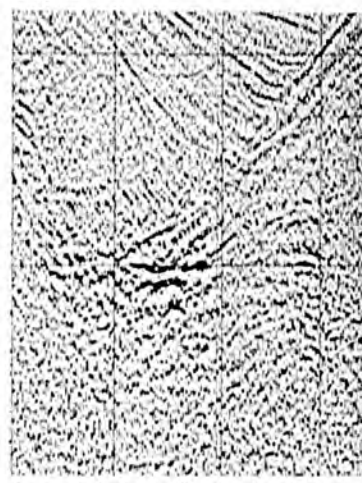
WAVE EQUATION MIGRATION

Digicon successfully applies the Claerbout wave equation to the migration of conventional CDP stacked exploration data. This advanced development is one example of Digicon's high

technology processing capability. Migration processing is available at any Digicon processing center: HOUSTON; SINGAPORE; and LONDON. You get more with Digicon.



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Table 19.--Profit record of 27 large U. S. oil companies,
first nine months of 1973 relative to 1972.

Company	Profits (\$1,000)*			
	9 Months 1974	% Change From 1973	3rd Qtr 1974	% Change From 1973
Exxon	2,280,000	+ 37.7	800,000	+ 25.4
Texaco	1,428,162	+ 70.2	378,391	+ 23.1
Mobil	903,800	+ 58.2	277,800	+ 20.2
Calif. Standard	877,736	+ 56.6	299,506	+ 32.6
Gulf	815,000	+ 43.0	275,000	+ 31.0
SUBTOTAL	6,304,698	+ 50.2	2,070,697	+ 25.9
Indiana Standard	795,500	+104.1	296,500	+101.3
Shell	462,300	+ 82.5	216,000	+158.4
ARCO	377,712	+111.6	144,042	+140.9
Conoco	329,800	+115.0	120,200	+121.8
Sun	323,848	+109.1	105,675	+ 84.5
Phillips	317,600	+121.1	112,900	+109.6
Occidental	247,209	+360.2	86,834	+297.3
Tenneco	245,007	+ 64.1	73,405	+ 37.8
Union	232,500	+ 80.1	79,900	+ 57.6
Getty†	222,355	+169.8	86,526	+171.9
Cities Service	168,400	+ 80.1	45,800	+ 75.5
Amerada Hess	134,052	+ 17.7	38,203	- 12.9
Marathon	129,576	+ 77.7	48,745	+ 49.9
Pennzoil	113,983	+ 95.7	33,703	+ 80.3
Sohio	97,000	+ 55.2	37,000	+105.6
Kerr-McGee	93,154	+111.2	32,153	+143.7
Ashland‡	78,700	+ 27.1	27,300	+ 14.2
Skelly	77,800	+155.2	31,100	+280.0
American Petrofina	64,265	+217.8	31,944	+247.6
Murphy	55,615	+ 60.8	12,189	- 19.7
Clark	19,165	- 14.5	<3,435>	-137.5
Commonwealth	12,910	- 23.8	<14,772>	-281.3
SUBTOTAL	4,598,451	+ 98.5	1,641,912	+ 95.5
TOTAL	10,903,149	+ 67.4	3,672,609	+ 49.8

*Excludes nonrecurring gains and losses. †Includes Getty's share in Mississin Corp. and Skelly. ‡Calendar-year basis.

Source: Oil and Gas Journal, November 11, 1974

Worldwide crude-oil and gas production

OIL (1,000 b/d)	Dec.* 1974	Nov. 1974	Daily prod. 1973	12-month Daily prod. 1974	average		GAS (billion cu ft)		
					Change from Vol	%	Dec. 1974	Nov. 1974	1974 Total
WESTERN HEMISPHERE									
Argentina	415.0	415.0	420.0	413.0	- 7.0	- 1.7	22.7	25.2	278.4
Bolivia	50.0	50.0	47.0	49.0	2.0	4.3	12.8	12.9	152.2
Brazil	195.0	195.0	166.0	179.0	13.0	7.8	4.0	4.2	47.3
Canada	1,700.0	1,468.0	1,727.0	1,690.0	-107.0	- 6.0	311.7	301.7	3,341.7
Chile	30.0	30.0	32.0	29.0	- 3.0	- 9.4	19.4	19.2	212.3
Colombia	165.0	165.0	195.0	173.0	- 22.0	-11.3	10.0	10.1	105.8
Ecuador	55.0	56.0	218.0	153.0	- 65.0	-29.8	0.2	0.3	5.3
Mexico	600.0	600.0	465.0	551.0	86.0	18.5	62.0	58.6	686.4
Peru	75.0	75.0	71.0	76.0	5.0	7.0	6.0	6.5	73.3
Trinidad	180.0	180.0	166.0	178.0	12.0	7.2	2.5	4.8	65.0
United States	8,645.0	8,647.0	9,187.0	8,812.0	-375.0	- 4.1	2,011.2	1,971.2	22,376.9
Venezuela	2,832.0	2,818.0	3,366.0	2,976.0	-390.0	-11.6	45.3	45.0	1,456.5
Total	14,942.0	14,699.0	16,130.0	15,279.0	-851.0	- 5.3	2,507.8	2,459.7	28,801.1
WESTERN EUROPE									
Austria	45.0	45.0	49.0	46.0	- 3.0	- 6.1	4.9	5.2	87.6
Denmark	4.0	4.0	4.0	3.0	- 1.0	-25.0	0	0	0
France	25.0	25.0	26.0	23.0	- 3.0	-11.5	34.6	32.3	303.6
West Germany	120.0	121.0	129.0	121.0	- 8.0	- 6.2	50.4	51.6	674.1
Italy	20.0	20.0	19.0	19.0	0	0	50.0	33.0	572.2
Netherlands	24.0	24.0	29.0	30.0	1.0	3.4	234.2	241.7	2,867.5
Norway	46.0	57.0	32.0	35.0	3.0	9.4	0	0	0
Spain	30.0	30.0	15.0	37.0	22.0	146.7	0	0	0
United Kingdom	2.0	2.0	2.0	2.0	0	0	68.2	71.1	1,207.2
Yugoslavia	65.0	65.0	67.0	67.0	0	0	4.7	5.2	54.6
Total	381.0	393.0	372.0	383.0	11.0	2.9	447.0	440.1	5,766.8
MIDDLE EAST									
Abu Dhabi	1,222.0	1,204.0	1,299.0	1,412.0	113.0	8.7	0	0	0
Bahrain	67.0	67.0	68.0	67.0	- 1.0	- 1.5	0.1	0.1	3.3
Dubai	256.0	268.0	220.0	239.0	19.0	8.6	0	0	0
Iran	5,915.0	6,015.0	5,860.0	6,026.0	166.0	2.8	76.2	75.4	906.2
Iraq	2,162.0	1,812.0	1,954.0	1,850.0	-104.0	- 5.3	10.9	11.1	129.3
Israel	100.0	100.0	88.0	100.0	12.0	13.6	0.2	0.2	4.2
Kuwait	2,320.0	2,546.0	3,024.0	2,546.0	-478.0	-15.8	0.1	0.1	1.6
Oman	282.0	281.0	293.0	290.0	- 3.0	- 1.0	0	0	0
Qatar	519.0	519.0	570.0	518.0	- 52.0	- 9.1	0.1	0.1	1.7
Saudi Arabia	8,043.0	8,818.0	7,607.0	8,481.0	874.0	11.5	0	0	0
Sharjah†	60.0	60.0	30.0	30.0	0	0	0	0	0
Syria	155.0	155.0	105.0	132.0	27.0	25.7	0	0	0
Turkey	65.0	65.0	67.0	65.0	- 2.0	- 3.0	0	0	0
Total	21,166.0	21,910.0	21,155.0	21,756.0	601.0	2.8	87.6	87.0	1,046.3
ASIA-PACIFIC									
Afghanistan							7.8	7.6	92.8
Australia	473.0	459.0	369.0	389.0	20.0	5.4	13.4	14.2	160.1
Burma	20.0	20.0	20.0	20.0	0	0	0.6	0.6	6.1
Brunei-Malaysia	330.0	330.0	320.0	328.0	8.0	2.5	2.2	0.9	5.1
India	150.0	150.0	147.0	149.0	2.0	1.4	1.6	1.4	18.5
Indonesia	1,230.0	1,250.0	1,324.0	1,396.0	72.0	5.4	17.5	18.2	160.8
Japan	15.0	15.0	14.0	15.0	1.0	7.1	7.1	7.2	95.5
New Zealand							1.1	1.1	13.2
Pakistan	9.0	9.0	9.0	9.0	0	0	12.2	14.0	141.9
Taiwan	3.0	3.0	2.0	3.0	1.0	50.0	5.0	4.2	46.2
Thailand	0.2	0.2	0.2	0.2	0	0	0	0	0
Total	2,230.2	2,236.2	2,205.2	2,309.2	104.0	4.7	68.5	68.3	740.2
AFRICA									
Algeria	800.0	800.0	1,090.0	986.0	-104.0	- 9.5	1.7	1.8	20.6
Angola	50.0	20.0	17.0	20.0	3.0	17.6	4.7	5.2	40.7
Cabinda	150.0	150.0	145.0	149.0	4.0	2.8	0	0	0
Congo	35.0	35.0	42.0	32.0	- 10.0	-23.8	0.6	0.7	6.1
Egypt	175.0	175.0	167.0	144.0	- 23.0	-13.8	5.2	4.6	49.7
Gabon	190.0	190.0	151.0	177.0	26.0	17.2	1.5	1.5	15.2
Libya	975.0	961.0	2,187.0	1,491.0	-696.0	-31.8	2.1	3.2	41.0
Morocco	1.0	1.0	1.0	1.0	0	0	2.5	1.8	29.0
Nigeria	2,063.0	2,238.0	2,056.0	2,256.0	200.0	9.7	6.1	5.0	60.0
Tunisia	105.0	105.0	82.0	88.0	6.0	7.3	6.4	2.9	20.7
Total	4,514.0	4,675.0	5,938.0	5,344.0	-594.0	-10.0	31.8	26.7	283.0
COMMUNIST									
China	1,200.0	1,200.0	1,060.0	1,200.0	140.0	13.2	15.6	14.8	187.5
Rumania	290.0	290.0	290.0	290.0	0	0	80.2	77.8	935.7
U.S.S.R.†	9,419.0	9,441.0	8,576.0	9,176.0	600.0	7.0	882.5	811.2	9,213.3
Other	110.0	110.0	100.0	110.0	10.0	10.0	44.6	41.2	500.8
Total	11,019.0	11,041.0	10,026.0	10,776.0	750.0	7.5	1,022.9	945.0	10,837.3
World Total	54,252.2	54,954.2	55,826.0	55,847.2	21.0	0.04	4,165.6	4,026.8	47,474.7

*Figures adjusted. †On stream July 1974. ‡Includes gas liquids.

Gasoline prices

(Suggested prices for major-brand regular)

	Price ex. tax 2-18-75	Pump price 2-18-75	Pump price 2-19-74
Albany	44.9	56.9	47.9
Albuquerque	42.4	53.4	47.9
Amarillo	40.1	49.1	39.9
Atlanta	42.1	53.6	46.4
Baltimore	41.9	54.9	46.9
Birmingham	41.9	53.9	45.9
Boston*	42.1	53.6	46.4
Buffalo	44.9	56.9	47.9
Charlotte	41.9	54.9	46.9
Cheyenne	44.9	55.9	46.9
Chicago*	43.6	56.6	48.4
Cleveland	42.9	53.9	45.9
Corpus Christi	40.6	49.6	41.1
Dallas	40.6	49.6	41.1
Denver	43.9	54.9	48.9
+ Des Moines	43.0	54.0	46.9
Detroit	41.5	54.5	47.9
Fort Worth	40.6	49.6	41.1
Houston	40.6	49.6	41.1
Indianapolis	43.9	55.9	47.9
Jacksonville	41.9	53.9	45.9
Kansas City	43.4	54.4	47.9
+ Little Rock	41.5	53.0	45.9
Louisville	44.9	55.9	47.9
- Los Angeles	40.7	51.7	44.3
+ Memphis	43.0	54.0	46.9
Miami	41.6	53.6	46.4
Milwaukee	43.9	54.9	46.9
+ Minn.-St. Paul	44.0	55.0	47.9
Newark	43.6	54.6	47.4
New Orleans	40.9	52.9	44.9
New York*	45.9	58.9	50.9
Norfolk	39.6	52.6	45.4
+ Okla. City	42.4	53.0	45.9
Omaha	43.4	55.9	47.9
Philadelphia	41.9	54.9	45.9
+ Phoenix	43.6	54.6	44.9
Pittsburgh	41.9	54.9	45.9
- Portland, Ore.	41.5	52.5	45.9
Salt Lake City	42.4	53.4	46.9
San Antonio	40.1	49.1	39.9
- San Diego	41.3	52.3	44.3
+ San Francisco	41.5	52.5	45.3
Seattle	40.8	53.8	46.1
+ Spokane	40.9	53.9	47.1
+ Springfield, Ill.*	44.0	57.0	49.9
+ St. Louis	44.0	55.0	47.9
Tampa	41.6	53.6	46.4
Texarkana	40.1	49.1	39.9
+ Tulsa	42.4	53.0	45.9
Wichita	42.9	53.2	45.9
Wichita Falls	40.1	49.1	39.9
Week's avg.	42.31	53.62	45.88
Jan. avg.	41.87	53.18	45.73
Dec. avg.	41.42	52.74	42.02
1975 to date	41.99	53.30	
1974 to date	34.43	45.70	

+ Increase, - decrease from previous week. *Pump price includes local tax ranging from 0.5 to 2.0 cents/gal.

Refined-products prices

Following quotations are realistic spot prices for refined products moving intrastate on Tuesday of each week. They may differ from refiner's prices for branded products. They should not be considered as postings.

Light products are in cents per gallon. Residual prices are in dollars per barrel.

Gasoline

Mid-Continent (Group 3):

Regular (92 octane)	26.75-30.00
Premium (99 octane)	28.75-32.00

California (rack) Los Angeles:

Regular (91 octane)	26.00-31.50
Regular (95 octane)	27.10-32.50
Premium (100 octane)	28.40-33.50

Chicago:

Regular (94 octane)	27.50-32.50
Premium (100 octane)	30.00-35.00

Kerosine, distillate

Chicago:

Distillate No. 1	27.50-33.50
Distillate No. 2	26.50-32.00

Gulf Coast (cargoes):

Kerosine (42-43)	27.25-28.75
Distillate No. 2	26.00-27.00

Mid-Continent (Group 3):

Kerosine (42-44)	28.00-30.25
Diesel oil (58 d.i. & above)	27.50-30.00
Distillate No. 1	27.00-29.75
Distillate No. 2	26.00-27.75

New York Harbor (barges):

Kerosine (42-44)	28.05-32.00
Distillate No. 2	25.35-30.25
Diesel fuel (48-52 d.i.)	27.80

Residual fuel

Mid-Continent (Group 3):

No. 6 (max 1% S)	\$10.30
No. 6 (over 1% S)	\$ 9.30

Chicago:

No. 6 (max. 1% S)	\$13.86
No. 5 (max. 1% S)	\$14.70

New York Harbor (barges):

No. 6 (max. 0.3% S)	\$12.95-14.13
No. 5 (0.3% S)	\$13.15-14.38

API imports of crude and products

(Thousands of barrels daily)

	DISTRICTS 1-4			DISTRICT 5			TOTAL U.S.		
	2-14	2-7	2-15	2-14	2-7	2-15	2-14	2-7	2-15
	1975	1975	1974	1975	1975	1974	1975	1975	1974
Gasoline	102	154	118	5	5		107	159	118
Special Naphthas	3						3		
Kerosine	3	5					3	5	
Distillate	167	190	234	5	5	10	172	195	244
No. 4 Fuel Oil	102	63	70				102	63	70
Residual	1,348	1,379	1,670	75	60	50	1,423	1,439	1,720
Jet Fuel (Naphtha)	25	40			5	6	25	45	6
Jet Fuel (Kerosine)	110	87	69	65	50	48	175	137	117
Asphalt	5		28				5		28
LP-Gas	122	136	137	22	21	13	144	157	150
Petrochem Feedstocks	15	17					15	17	
Unfinished	38	100	92	15		22	53	100	114
Plant Condensate	84	129	103	5	5	7	89	134	110
Total Prod.	2,124	2,300	2,521	192	151	156	2,316	2,451	2,677
Canadian Crude	401	543	646	192	142	160	593	685	806
Other Foreign	2,652	2,305	727	354	972	368	3,006	3,277	1,095
Total Crude	3,053	2,848	1,373	546	1,114	528	3,599	3,962	1,901
Total imports	5,177	5,148	3,894	738	1,265	684	5,915	6,413	4,578

Worldwide crude-oil and gas production

OIL (1,000 b/d)	Nov. 1974*	Oct. 1974	11-month average				GAS (billion cu ft)		
			Daily prod. 1973	Daily prod. 1974	Change from Vol %		Nov. 1974	Oct. 1974	Cum. 1974
WESTERN HEMISPHERE									
Argentina	415.0	415.0	420.0	413.0	- 7.0	- 1.7	25.2	26.4	255.7
Bolivia	50.0	50.0	47.0	49.0	2.0	4.3	12.9	13.4	139.4
Brazil	195.0	195.0	166.0	177.0	11.0	6.6	4.2	3.7	43.3
Canada	1,468.0	1,597.0	1,794.0	1,689.0	-105.0	- 5.9	301.7	291.7	3,030.0
Chile	30.0	30.0	32.0	29.0	- 3.0	- 9.4	19.2	20.1	192.9
Colombia	165.0	165.0	196.0	174.0	- 22.0	-11.2	10.1	9.7	95.8
Ecuador	56.0	95.0	216.0	162.0	- 54.0	-25.0	0.3	0.4	5.1
Mexico	600.0	600.0	464.0	547.0	83.0	17.9	58.6	58.9	624.4
Peru	75.0	75.0	70.0	76.0	6.0	8.6	6.5	6.6	67.3
Trinidad	180.0	180.0	165.0	178.0	13.0	7.9	4.8	5.0	62.5
United States	8,647.0	8,777.0	9,201.0	8,838.0	-363.0	- 3.9	1,971.2	1,911.2	20,365.7
Venezuela	2,805.0	2,810.0	3,365.0	2,986.0	-379.0	-11.3	45.0	45.0	1,411.2
Total	14,686.0	14,989.0	16,136.0	15,318.0	-818.0	- 5.1	2,459.7	2,392.1	26,293.3
WESTERN EUROPE									
Austria	45.0	45.0	49.0	46.0	- 3.0	- 6.1	5.2	4.9	82.7
Denmark	4.0	4.0	4.0	2.0	- 2.0	-50.0	0	0	0
France	25.0	25.0	26.0	24.0	- 2.0	- 7.7	32.3	18.6	269.0
West Germany	120.0	120.0	129.0	122.0	- 7.0	- 5.4	51.6	50.4	623.7
Italy	20.0	20.0	20.0	19.0	- 1.0	- 5.0	33.0	32.9	522.2
Netherlands	24.0	39.0	29.0	31.0	2.0	6.9	241.7	234.2	2,633.3
Norway	57.0	44.0	35.0	33.0	- 2.0	- 5.7	0	0	0
Spain	30.0	30.0	15.0	37.0	22.0	146.7	0	0	0
United Kingdom	2.0	2.0	2.0	2.0	.....	.....	71.1	69.9	1,139.0
Yugoslavia	65.0	65.0	67.0	67.0	.....	.....	5.2	4.7	49.9
Total	392.0	394.0	376.0	383.0	7.0	1.8	440.1	415.6	5,319.8
MIDDLE EAST									
Abu Dhabi	1,204.0	1,169.0	1,325.0	1,430.0	105.0	7.9	0	0	0
Bahrain	67.0	68.0	68.0	67.0	- 1.0	- 1.5	0.1	0.1	3.2
Dubai	268.0	262.0	227.0	248.0	21.0	9.3	0	0	0
Iran	6,015.0	5,720.0	5,841.0	6,036.0	195.0	3.3	75.4	74.2	830.0
Iraq	1,812.0	1,877.0	1,937.0	1,821.0	-116.0	- 6.0	11.1	11.2	118.4
Israel	100.0	100.0	92.0	100.0	8.0	8.7	0.2	0.2	4.0
Kuwait	2,546.0	2,060.0	3,067.0	2,567.0	-500.0	-16.3	0.1	0.1	1.5
Oman	281.0	280.0	292.0	291.0	- 1.0	- 0.3	0	0	0
Qatar	520.0	525.0	580.0	519.0	- 61.0	-10.5	0.1	0.1	1.6
Saudi Arabia	8,818.0	9,052.0	7,699.0	8,522.0	823.0	10.7	0	0	0
Sharjah†	60.0	60.0	.....	17.0	.....	.....	0	0	0
Syria	155.0	155.0	104.0	130.0	26.0	25.0	0	0	0
Turkey	65.0	65.0	67.0	65.0	- 2.0	- 3.0	0	0	0
Total	21,911.0	21,393.0	21,299.0	21,813.0	514.0	2.4	87.0	85.9	958.7
ASIA-PACIFIC									
Afghanistan	0	0	0	0	0	0	7.6	7.8	85.0
Australia	459.0	465.0	369.0	381.0	12.0	3.3	14.2	15.6	146.7
Burma	20.0	20.0	20.0	20.0	.....	.....	0.6	0.6	5.5
Brunei-Malaysia	365.0	365.0	318.0	341.0	23.0	7.2	0.9	0.8	2.9
India	150.0	150.0	147.0	149.0	2.0	1.4	1.4	1.5	16.9
Indonesia	1,135.0	1,250.0	1,317.0	1,386.0	69.0	5.2	18.2	17.1	143.3
Japan	15.0	15.0	14.0	15.0	1.0	7.1	7.2	7.1	88.4
Pakistan	9.0	9.0	9.0	9.0	.....	.....	14.0	13.9	129.7
Taiwan	3.0	3.0	2.0	3.0	1.0	50.0	4.2	4.3	41.2
Thailand	0.2	0.2	0.2	0.2	.....	.....	0	0	0
Total	2,156.2	2,277.2	2,196.2	2,304.2	108.0	4.9	68.3	68.7	659.6
AFRICA									
Algeria	900.0	900.0	1,107.0	1,045.0	- 62.0	- 5.6	1.8	1.7	18.9
Angola	20.0	20.0	17.0	20.0	3.0	17.6	5.2	5.1	36.0
Cabinda	150.0	150.0	144.0	149.0	5.0	3.5	0	0	0
Congo	35.0	35.0	41.0	35.0	- 6.0	-14.6	0.7	0.6	5.5
Egypt	175.0	175.0	178.0	141.0	- 37.0	-20.8	4.6	4.7	44.5
Gabon	190.0	190.0	146.0	177.0	31.0	21.2	1.5	1.5	13.7
Libya	961.0	1,069.0	2,226.0	1,539.0	-687.0	-30.9	3.2	3.1	37.9
Morocco	1.0	1.0	1.0	1.0	.....	.....	1.8	1.9	26.5
Nigeria	2,300.0	2,325.0	2,036.0	2,280.0	244.0	12.0	5.0	4.7	53.9
Tunisia	105.0	105.0	82.0	86.0	4.0	4.9	2.9	3.0	14.3
Total	4,837.0	4,970.0	5,978.0	5,473.0	-505.0	- 8.4	26.7	26.3	251.2
COMMUNIST									
China	1,200.0	1,200.0	1,060.0	1,200.0	140.0	13.2	14.8	15.6	171.9
Rumania	290.0	290.0	290.0	290.0	.....	.....	77.8	77.9	855.5
U.S.S.R.†	9,441.0	9,369.0	8,558.0	9,158.0	600.0	7.0	811.2	808.4	8,365.4
Other	110.0	110.0	100.0	110.0	10.0	10.0	41.2	38.7	456.2
Total	11,041.0	10,969.0	10,008.0	10,758.0	750.0	7.5	945.0	940.6	9,849.0
World Total	55,023.2	54,992.2	55,993.2	56,049.2	56.0	0.1	4,026.8	3,929.2	43,331.6

*Figures adjusted. †On stream July 1974. ‡Includes gas liquids.

*Figures adjusted. †On stream July 1974. ‡Includes gas liquids.

Gasoline prices

(Suggested prices for major-brand regular)

	Price ex. tax 1-21-75	Pump price 1-21-75	Pump price 1-22-74
Albany	44.9	56.9	49.9
Albuquerque	42.4	53.4	43.9
+ Amarillo	40.1	49.1	39.9
Atlanta	42.1	53.6	45.4
Baltimore	41.9	54.9	48.9
Birmingham	41.9	53.9	47.9
Boston*	42.1	53.6	45.4
Buffalo	44.9	56.9	49.9
Charlotte	41.9	54.9	48.9
Cheyenne	44.9	55.9	49.9
Chicago*	43.6	56.6	50.4
Cleveland	42.9	53.9	47.9
+ Corpus Christi	40.6	49.6	39.9
+ Dallas	40.6	49.6	39.9
Denver	43.9	54.9	48.9
Des Moines	41.0	52.0	43.9
Detroit	41.5	54.5	49.9
+ Fort Worth	40.6	49.6	39.9
+ Houston	40.6	49.6	39.9
Indianapolis	43.9	55.9	49.9
Jacksonville	41.9	53.9	47.9
Kansas City	43.4	54.4	47.9
Little Rock	39.5	51.0	42.9
Louisville	44.9	55.9	49.9
Los Angeles	40.7	51.7	43.9
Memphis	41.0	52.0	43.9
Miami	41.6	53.6	45.4
Milwaukee	43.9	54.9	48.9
Minn.-St. Paul	42.0	53.0	44.9
Newark	43.6	54.6	46.4
New Orleans	40.9	52.9	46.9
New York*	45.9	58.9	52.9
Norfolk	39.6	52.6	44.4
Okla. City	41.8	52.4	42.9
Omaha	43.4	55.9	49.9
Philadelphia	41.9	54.9	47.9
Phoenix	43.9	54.9	44.9
Pittsburgh	41.9	54.9	47.9
Portland, Ore.	41.9	52.9	44.1
Salt Lake City	42.4	53.4	46.9
+ San Antonio	40.1	49.1	39.9
San Diego	41.3	52.3	43.9
San Francisco	41.4	52.4	44.9
Seattle	40.5	53.5	45.9
Spokane	40.5	53.5	46.9
Springfield, Ill.*	42.0	55.0	46.9
St. Louis	43.9	54.9	48.9
Tampa	41.6	53.6	45.4
+ Texarkana	40.1	49.1	39.9
Tulsa	40.4	51.0	42.9
Wichita	42.9	53.9	47.9
+ Wichita Falls	40.1	49.1	39.9
Week's avg.	42.06	53.37	45.86
Dec. avg.	41.42	52.74	42.02
Nov. avg.	41.11	52.42	40.35
1975 to date	41.81	53.12	
1974 to date	34.39	45.67	

+ Increase, - decrease from previous week. *Pump price includes local tax ranging from 0.5 to 2.0 cents/gal.

Refined-products prices

Following quotations are realistic spot prices for refined products moving intrastate on Tuesday of each week. They may differ from refiner's prices for branded products. They should not be considered as postings.

Light products are in cents per gallon. Residual prices are in dollars per barrel.

Gasoline

Mid-Continent (Group 3):

Regular (92 octane)	26.75-30.00
Premium (99 octane)	28.75-32.00

California (rack) Los Angeles:

Regular (91 octane)	25.00-31.50
Regular (95 octane)	26.10-32.50
Premium (100 octane)	27.40-33.50

Chicago:

Regular (94 octane)	27.50-32.50
Premium (100 octane)	30.00-35.00

Kerosine, distillate

Chicago:

Distillate No. 1	27.50-33.50
Distillate No. 2	26.50-32.00

Gulf Coast (cargoes):

Kerosine (42-43)	29.00-31.00
Distillate No. 2	28.00-29.00

Mid-Continent (Group 3):

Kerosine (42-44)	28.00-30.25
Diesel oil (58 d.i. & above)	27.50-30.00
Distillate No. 1	27.00-29.75
Distillate No. 2	26.00-27.75

New York Harbor (barges):

Kerosine (42-44)	28.05-32.00
Distillate No. 2	25.35-30.25
Diesel fuel (48-52 d.i.)	27.80

Residual fuel

Mid-Continent (Group 3):

No. 6 (max 1% S)	\$10.30
No. 6 (over 1% S)	\$ 9.30

Chicago:

No. 6 (max. 1% S)	\$13.86
No. 5 (max. 1% S)	\$14.70

New York Harbor (barges):

+ No. 6 (max. 0.3% S)	\$13.03-14.13
+ No. 5 (0.3% S)	\$13.25-14.38

API imports of crude and products

	(Thousands of barrels daily)								
	DISTRICTS 1-4			DISTRICT 5			TOTAL U.S.		
	1-17 1975	1-10 1975	1-18 1974	1-17 1975	1-10 1975	1-18 1974	1-17 1975	1-10 1975	1-18 1974
Gasoline	138	142	116	5	5		143	147	116
Special Naphthas									
Kerosine	6	5	4				6	5	4
Distillate	370	260	358	5	5	10	375	265	368
No. 4 Fuel Oil	87	67	75				87	67	75
Residual	1,721	1,856	1,586	60	60	100	1,781	1,916	1,686
Jet Fuel (Naphtha)	40	40	11	5	5	7	45	45	18
Jet Fuel (Kerosine)	63	69	110	55	57	60	118	126	170
Asphalt	6	8	28				6	8	28
LP-Gas	135	131	98	22	23	12	157	154	110
Petrochem. Feedstocks	15	15					15	15	
Unfinished	107	45	102		25	32	107	70	134
Plant Condensate	64	77	96	5	5	6	69	82	102
Total Prod.	2,752	2,715	2,584	157	185	227	2,909	2,900	2,811
Canadian Crude	498	328	696	184	192	157	682	520	853
Other Foreign	2,623	2,234	1,199	497	440	119	3,120	2,674	1,318
Total Crude	3,121	2,562	1,895	681	632	276	3,802	3,194	2,171
Total Imports	5,873	5,277	4,479	838	817	503	6,711	6,094	4,982

Total wells drilled in the United States*—December 1974†

State-district	Data compiled by API							Total exploratory wells†				
	Total completions							Oil‡	Gas§	Dry holes	Total wildcats	Footage
	Oil‡	Gas§	Dry holes	Total wells	Total footage	Total wells all types‡	Total footage‡					
Alabama	1	2	6	9	78,129	9	78,129	...	1	5	6	48,254
Alaska	5		1	6	54,356	6	54,356	1		1	2	18,541
Onshore	3		1	4	40,739	4	40,739	1		1	2	18,541
Offshore	2			2	13,617	2	13,617					
Arkansas	18	4	27	41	217,984	41	217,984	...	1	9	10	66,934
California	222	11	38	27	700,544	322	771,273	6	2	27	35	210,002
North	1	8	19	28	154,236	28	154,236		2	14	16	87,878
Central Coastal	29		1	30	112,204	32	120,430	4		1	5	31,012
East central	186	2	18	206	396,984	251	436,815	2		12	14	91,112
South	2			2	7,487	5	29,359					
Offshore	4	1		5	29,633	6	30,433					
Colorado	17	19	45	81	491,127	81	491,127		2	30	32	184,020
Florida			2	2	19,008	2	19,008			1	1	6,646
Illinois	72	2	87	161	404,640	170	420,340	5	1	35	41	113,871
Indiana	10	2	18	30	48,733	30	48,733	1		10	11	21,169
Kansas	85	34	111	230	735,899	253	777,591	9	7	59	75	262,895
Kentucky	9	7	24	40	58,535	43	63,283	1		12	13	17,888
Louisiana	87	66	143	296	2,353,464	324	2,370,954	4	14	69	87	879,269
North	36	19	43	98	433,188	125	444,840	1	3	22	26	196,336
South	39	36	82	157	1,507,158	157	1,507,158	3	11	38	52	603,873
Offshore	12	11	18	41	413,118	42	418,956			9	9	79,060
Michigan	10	9	18	37	185,625	37	185,625	5	3	15	23	108,916
Mississippi	3	6	26	35	242,437	35	242,437	1		24	25	196,717
Missouri	7		2	9	5,636	59	8,995			2	2	4,868
Montana	10	36	57	113	294,727	113	294,727	2	5	44	51	142,702
Nebraska	2		18	20	99,213	20	99,213	2		12	14	66,408
New Mexico	41	31	21	93	527,560	93	527,560	2	3	14	19	142,292
East	32	11	17	60	398,238	60	398,238	2	3	12	17	132,344
West	9	20	4	33	129,322	33	129,322			2	2	9,948
New York	28	43	33	104	288,276	111	297,658		19	28	47	185,852
North Carolina			1	1	5,348	1	5,348			1	1	5,348
North Dakota	8		9	17	107,368	17	107,368	3		8	11	61,824
Ohio	60	142	25	227	920,717	227	920,717	3	29	4	36	159,790
Oklahoma	181	86	138	405	2,087,201	416	2,114,650	8	3	34	45	289,545
Pennsylvania	38	44	5	87	212,486	88	214,416	1	3	4	8	21,453
South Dakota			1	1	2,342	1	2,342			1	1	2,342
Tennessee	11	3	12	26	40,749	26	40,749	3	3	11	17	26,994
Texas	367	183	312	862	4,428,245	902	4,521,237	28	65	184	277	1,708,273
Dist. 1	14	10	9	33	118,490	34	120,395		5	8	13	59,302
Dist. 2	9	35	31	75	440,844	75	440,844	2	18	19	39	238,182
Dist. 3	53	17	31	101	561,140	101	561,140	7	11	18	36	304,111
Dist. 4	26	39	36	101	606,476	101	606,476	6	7	18	31	165,526
Dist. 5	4	4	8	16	84,711	17	85,825		2	5	7	29,501
Dist. 6	7	5	16	28	170,392	32	190,302		1	9	10	55,050
Dist. 7B	27	10	62	99	345,022	105	354,155	1		34	35	152,410
Dist. 7C	18	22	22	62	307,365	62	307,365	2		14	16	71,837
Dist. 8	76	10	10	96	615,241	105	638,382	2	4	7	13	132,984
Dist. 8A	56		15	71	395,222	89	431,961			8	8	73,809
Dist. 9	72	20	46	138	463,991	139	465,041	8	12	26	46	229,696
Dist. 10	5	6	15	26	187,417	26	187,417		2	7	9	80,371
Offshore		5	11	16	131,934	16	131,934	3	11	14	14	115,494
Utah	6	5	7	18	134,903	18	134,903	1	2	5	8	54,719
Virginia		17		17	85,571	17	85,571		6		6	31,443
West Virginia	8	38	10	56	180,849	58	180,849		2	7	9	36,496
Wyoming	41	1	64	106	678,221	108	679,961	5	1	48	54	383,917
Gulf of Mexico—Northern			3	3	19,199	3	19,199			3	3	19,199
Total—Dec. 1974	1,339	791	1,274	3,404	15,707,092	3,629	15,994,303	91	172	707	970	5,478,587
Total—Nov. 1974	1,088	626	1,053	2,767	11,794,937	2,906	12,027,247	58	82	582	722	3,930,077
Total 1974	12,718	7,200	11,930	31,848	151,651,515	33,070	154,236,372	813	1,186	6,761	8,760	51,069,932
Total 1973	9,902	6,385	10,305	26,592	131,391,452	27,602	138,937,944	619	900	5,947	7,466	44,776,906

*Does not include miscellaneous drilling not related to oil and gas exploration and production. †Covers reports of completed or abandoned wells received by the API during the period from Nov. 23, 1974, through Dec. 27, 1974. ‡Includes multiple completion wells which produce gas from one or more zones but oil from at least one zone. A multiple completion well is counted as one well. §Includes multiple completion wells that produce gas from all zones. A multiple completion well is counted as one well. Gas wells also include so-called condensate wells. ¶Exploratory wells include: new-field wildcats, new-pool wildcats, deeper-pool tests, shallower-pool tests and outpost (extension) tests. ||Includes 63 strat tests and 162 service wells, 12,679 and 274,532 ft, respectively.

Offshore bidding seminars slated

A SERIES of seminars will be held in February by ECON Inc. of New Jersey.

This series on offshore oil bidding will be held in the Royal Orleans Hotel in New Orleans on Feb. 13, the Houston Oaks on Feb. 18, and at the Dallas Hilton on Feb. 20. Meetings begin at 9 a.m. Contact John Andrews at 609-924-8778, ECON, Princeton, N.J.

MAPS

TWO oil and gas field maps of two of the country's most active drilling areas have been updated.

Map. 43, "Southeast United States Map Showing Jurassic Trend" and Map 2, "Official Oil and Gas fields of Oklahoma and Texas Panhandle" are available from E. C. Jacobson Co., 315 Mayo Bldg., Tulsa 74103. These maps show oil fields in green, gas fields in red with official names. Also shown are counties, county seats, township and range.

OKLAHOMA

ANOTHER field has been tapped in Central Oklahoma's busy Canadian County.

New area was found by Samedan Oil Co. at 1 Johnson estate in S $\frac{1}{2}$ N $\frac{1}{2}$ S $\frac{1}{2}$ NW 26-11n-10w. Flow was 3,912 Mcfd through 11/64-in. choke and 4 $\frac{1}{2}$ bbl oil in 8 hr. Pay is from the Morrow Pennsylvanian through perforations at 12,314 ft. Open flow was 6,000 Mcfd.

In another important Oklahoma development, Helmerich & Payne will drill north of its Arbuckle Cambro-Ordovician discovery in Beckham County. This western area well will be the 1 Cupp-1 in S $\frac{1}{2}$ S $\frac{1}{2}$ NE SW 22-10n-26w.

IRAN

ON p. 140 of the Dec. 30, 1974, issue of the Journal, the cumulative production figure for Lapco's Sassan field in Iran should read 313,623,494 bbl rather than 102,556,000 bbl.

This changes total Iranian cumulative to 18,972,000,310 bbl rather than 18,760,932,816 bbl.

This announcement is neither an offer to sell nor the solicitation of an offer to buy any of these securities. The offering is made only by the Prospectus.

\$50,000,000

Houston Natural Gas Corporation

9 $\frac{3}{4}$ % Sinking Fund Debentures due February 1, 1995

Price 100%

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January 22, 1975

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	Nov. 10-14	Calgary
Economic Eval.	Mar. 24-28	Denver
	May 12-16	Calgary
	Oct. 13-17	Denver
Res. Engr. I	Oct. 20-31	Denver
Res. Engr. II	Nov. 3-14	Denver
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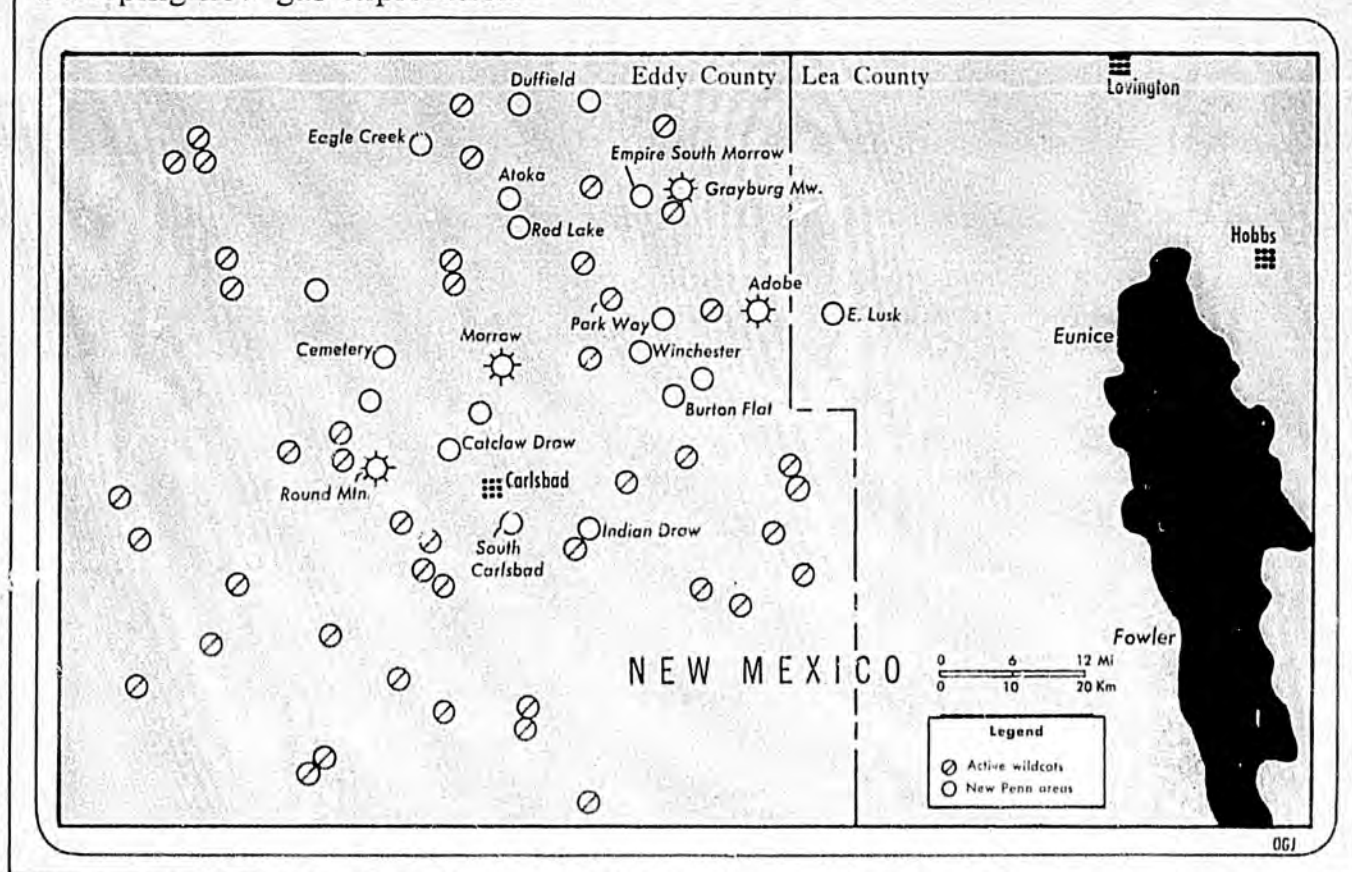
Total wells drilled in the United States*—November 1974†

Data compiled by API

State-district	Total completions						Total exploratory wells‡					
	Oil‡	Gas§	Dry holes	Total wells	Total footage	Total wells all types||	Total footage||	Oil‡	Gas§	Dry holes	Total wildcats	Footage
Alabama		2	4	6	54,599	6	54,599			2	2	20,555
Arkansas	7	3	11	21	113,061	21	113,061			5	5	26,323
California	101	6	29	136	358,600	164	388,956	1	3	24	28	131,368
North		6	14	20	115,612	20	115,612		3	12	15	88,618
Central Coastal	10		2	12	41,271	14	44,343			2	2	8,625
East Central	77		13	90	164,639	116	191,923	1		10	11	34,125
South	9			9	20,928	9	20,928					
Offshore	5			5	16,150	5	16,150					
Colorado	10	15	31	56	349,087	56	349,087	3	4	24	31	189,560
Florida			2	2	25,684	2	25,684			2	2	25,684
Illinois	31		52	83	207,357	87	215,217	2		21	23	60,876
Indiana	15	1	25	41	76,744	42	78,814	2		15	17	35,648
Kansas	102	16	130	248	736,551	276	771,940	8	3	62	73	283,038
Kentucky	23	6	45	74	102,012	80	109,007	1	1	22	24	33,125
Louisiana	59	44	95	198	1,261,221	201	1,271,427	1	3	58	62	471,740
North	32	32	49	113	476,336	115	477,806	1	3	28	32	164,026
South	15	4	30	49	459,982	49	459,982			17	17	197,777
Offshore	12	8	16	36	324,903	37	333,639			13	13	109,937
Michigan	13	4	14	31	162,221	34	171,406	6	3	7	16	85,907
Mississippi	4	1	24	29	228,820	29	228,820	2		15	17	129,641
Missouri			4	4	9,992	13	11,640			4	4	9,992
Montana		21	36	57	143,375	57	143,375		7	28	35	97,339
Nebraska	2		17	19	95,738	19	95,738	1		15	16	78,228
Nevada			1	1	11,000	1	11,000			1	1	11,000
New Mexico	30	29	17	76	359,551	76	359,551	3	2	13	19	88,131
East	24	9	11	44	234,003	44	234,003	2	2	8	12	67,137
West	6	20	6	32	125,548	32	125,548	1		5	6	20,994
New York	21	43	6	70	170,537	75	177,577					
North Dakota	1		9	10	76,007	10	76,007			8	8	56,592
Ohio	69	130	24	223	895,585	224	895,795		2	7	9	40,406
Oklahoma	90	46	75	211	1,093,840	224	1,123,983	4	5	18	27	164,004
Pennsylvania	103	67	9	179	369,277	202	411,838	2	5	5	12	39,091
Tennessee	3	3	5	11	17,144	11	17,144	1	2	4	7	11,017
Texas	352	121	334	807	4,112,389	821	4,157,446	19	33	185	237	1,504,909
Dist. 1	37	21	28	86	329,874	91	340,858	2	9	19	30	137,446
Dist. 2	6	14	26	46	282,334	47	289,342	1	7	18	26	170,307
Dist. 3	33	6	33	72	443,682	72	443,682	2	1	23	26	209,861
Dist. 4	11	17	15	43	252,735	43	252,735		5	10	15	101,577
Dist. 5	2		11	13	79,407	13	79,407			8	8	63,202
Dist. 6	3	12	8	23	204,137	23	204,137		2	7	9	91,741
Dist. 7B	24	14	82	120	385,120	120	385,120	2	4	36	42	155,156
Dist. 7C	26	15	31	72	401,975	72	401,975	4		16	20	95,529
Dist. 8	91	9	26	126	727,809	128	733,474	3	3	10	16	167,268
Dist. 8A	54		13	67	383,205	71	398,764	2		8	10	67,877
Dist. 9	52	5	39	96	307,298	98	313,139	2		14	16	80,093
Dist. 10	13	8	15	36	260,482	36	260,482	1	2	9	12	110,521
Offshore			7	7	54,331	7	54,331			7	7	54,331
Utah	3		7	10	49,758	10	49,758			6	6	27,853
Virginia		8		8	37,230	8	37,230					
West Virginia	33	58	9	100	277,259	100	277,259	1	7	2	10	33,943
Wyoming	16	2	36	54	391,163	55	394,753	1	2	27	30	264,972
Gulf of Mexico—Northern			2	2	9,135	2	9,135			2	2	9,135
Total—Nov. 1974	1,088	626	1,053	2,767	11,794,937	2,906	12,027,247	58	82	582	722	3,930,077
Total—Oct. 1974	1,131	551	1,241	2,923	14,080,534	3,054	14,392,760	67	93	661	821	4,779,364
Cum. 1974	11,379	6,409	10,656	28,444	135,944,423	29,441	138,242,069	722	1,014	6,054	7,790	45,531,345
Cum. 1973	8,805	5,535	9,134	23,474	118,185,567	24,438	120,422,776	558	744	5,269	6,571	

*Does not include miscellaneous drilling not related to oil and gas exploration and production. †Covers reports of completed or abandoned wells received by the API during the period from Oct. 26, 1974, through Nov. 22, 1974. ‡Includes multiple completion wells which produce gas from one or more zones but oil from at least one zone. A multiple completion well is counted as one well. §Includes multiple completion wells that produce gas from all zones. A multiple completion well is counted as one well. Gas wells also include so-called condensate wells. ¶Exploratory wells include: new-field wildcats, new-pool wildcats, deeper-pool tests, shallower-pool tests and outpost (extension) tests. ||Includes 24 strat tests and 115 service wells, 8,102 and 224,208 ft., respectively.

Sweeping new gas exploration



No letup signs seen for Eddy County drilling

THE standard industry symbol for showing an active gas well or gas field is colored red.

Eddy County and adjoining Southeast New Mexican areas on the activity maps these days are nearly covered with red ink. Not since the early days of the Permian basin oil and gas industry has this corner of the Southwest seen so much action. The accompanying map tells the story with its multitude of drilling sites and new Pennsylvanian areas. Only Eddy is discussed here, but the adjoining Lea and Chaves areas are also quite busy. Wildcat symbols are the only ones shown on this map. It would be impossible to dot all of the active field wells in the area.

From Chaves County. Although Chaves County is not shown on this map, it lies just to the north of Eddy County.

The southern portion of this New Mexico area is also in on the gas ex-

ploration. Depco, Inc. 1 Toles-Federal, a 9,300-ft wildcat in southeastern Chaves, 10 miles east of Lake Arthur, was recently completed as a Morrow Pennsylvanian gas discovery. Flow was 1,612 Mcfd with gas-liquid ratio of 22,000:1. New strike is in 25-15s-27e, 1½ miles southeast of Atoka gas at Buffalo Valley. Perforations were made at 8,930-38 ft.

From Chaves County the drilling swath moves into Eddy County. Many discoveries have been made in recent months. Some of the newer ones include Tenneco Oil Co.'s 1 Federal Com. "33," the second well and ¾-mile south extension to Grayburg Morrow field. This Morrow gas area is 5 miles southwest of Loco Hills town. Flow was 15,408 Mcfd from perforations in the Morrow at 10,761-10,804 ft. Well is in 33-17s-29e.

Another well is Adobe Oil Co. 1 Hannafin State Com., a workover well 12 miles southeast of Loco Hills town

in eastern Eddy. Flow was 572,000 cu ft from Morrow perforations at 11,719-12,225 ft. This well is 3 miles northwest of dual Strawn oil and Morrow gas production in Lusk field.

Monsanto Co. 1 Round Mountain is a new gas discovery for Eddy in 28-21s-25e. Flow here was 1,859 Mcfd from the Morrow through perforations at 10,358-59 ft.

To prolific Lea County. The Southeast New Mexico Pennsylvanian gas play has also popped up in Lea County, the prolific area where most of New Mexico's oil production lies.

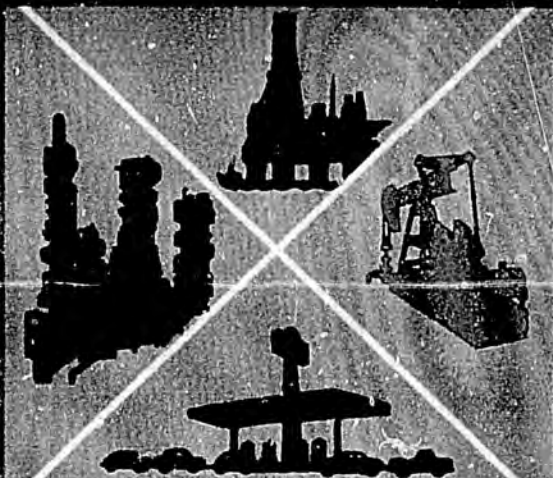
There are several wildcats drilling for Morrow gas in the western part of the county that are not shown on the map. But the area from Carlsbad northeast in Eddy County is where most of the action is concentrated. This Pennsylvanian program has been under way several years, but the big push was in 1974. And, there are no signs of any letup in 1975.

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AS A UNIT IN THE ORIGINAL DOCUMENT.

FORECAST/REVIEW

AN OIL & GAS JOURNAL SPECIAL REPORT

Uncertainties plague '75 outlook for oil



AMERICANS face some hard decisions early in the new year on their consumption of petroleum products—decisions which make the outlook for demand highly uncertain.

The Ford Administration has made it clear that some form of restriction on consumption will be imposed to reduce the nation's use of high-cost imported oil and products. The most often mentioned goal is a reduction of 1 million b/d.

But just what form the restriction on consumption will take is not clear. Reports have mentioned higher tariff on imports, compulsory allocations, high taxes on crude or products especially on gasoline, or even gasoline

rationing.

It's also not clear what base period will be used for the reduction—whether the cutback will be from 1974 actual import levels or the expected 1975 levels.

Turnaround? The base period used will determine the severity of the impact on the nation's economy.

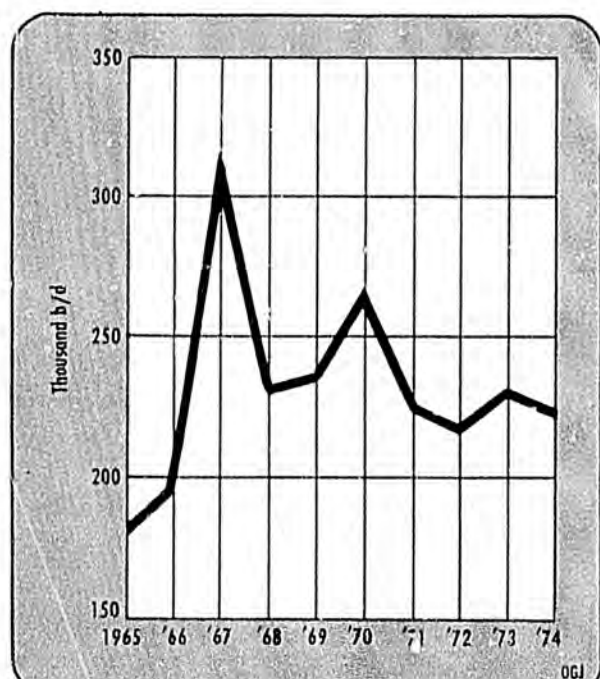
The normal outlook is for petroleum demand in this country to turn upward again in 1975 after a historic decline in 1974. But since domestic production of oil and gas will continue to drop, the nation must rely more heavily on imports of high-priced crude and products this year to fill the gap.

This means that a 1-million-b/d cut-

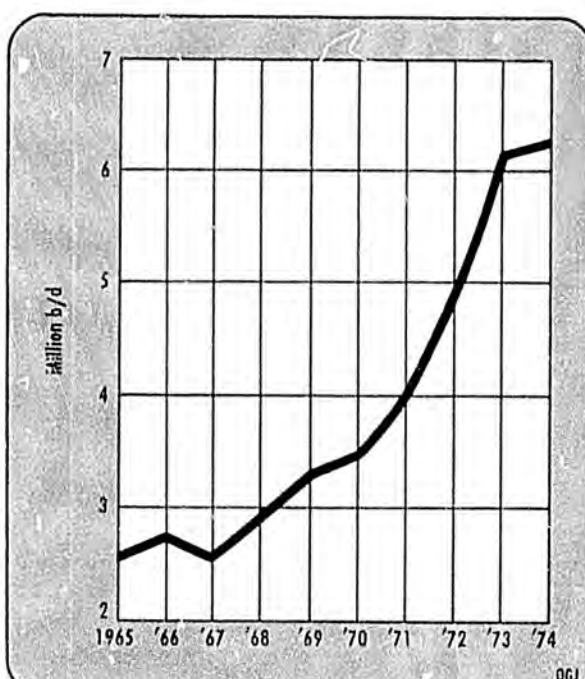
back from the 1974 import levels actually will represent a 1.4-million-b/d reduction from the expected 1975 import volumes. This would wipe out any growth in demand for 1975 and return consumption near the 1971 levels. But if the reduction is taken from anticipated 1975 levels, the actual impact would amount to only about 710,000 b/d less than in 1974.

In either case, the reduction would force considerable belt tightening throughout the economy. Motorists and householders would be faced with higher prices for the gasoline and heating oils they will be allowed to use. Industries and businesses where energy is an important item would find their

Exports turn down



Total imports level



costs increased. The result would be further disruptions to an economy which is torn between an inflation or recession scenario.

What to expect. The uncertainty of governmental action makes any forecast of 1975 supply-demand for petroleum a hazardous exercise.

Journal editors believe that total domestic demand for 1975 would average 17,035,000 b/d or 1.8% higher than last year without giving consideration to federal compulsory conservation measures.

This would represent a turnaround from 1974 when demand averaged 16,735,000 b/d, a 3.1% decline from 1973 and the first time since World War II that petroleum demand has failed to show an increase. The decline reflected the tail end of the Arab embargo on oil shipments to this country and the effect of soaring prices for imported oil and products.

With ample crude oil now available on world markets—if buyers are willing or able to pay the high prices—Journal editors feel that demand will recover slightly from 1974 levels.

Oil economists last October, in estimating this turnaround, forecast a 4% gain for demand in 1975 over 1974, but economic events since have prompted most of them to pare this estimate sharply. The continuing slump in new auto sales, failure of housing to increase, growing numbers of unem-

ployed, and the deepening of depressing factors throughout the economy make about a 2% gain in demand more probable. Winter weather so far also has not been as severe as anticipated thus keeping consumption of heating oils lower than expected.

But even this 1.8% growth will be reversed if the administration imposes some form of compulsory conservation of energy.

More problems. As for individual products, no shortages are anticipated under normal considerations, but 1975 probably will be far from normal.

Government policy could scramble the outlook. Federal policy, for example, likely will emphasize reducing the volume of imported products over crude since they are more expensive than crude oil and would represent greater dollar savings. Also, policy for domestic consumption likely will emphasize reduction in the use of gasoline.

This double policy poses problems for the petroleum industry. Refiners will need the imported crude to operate their plants at necessary capacities, but they also will still need to import a heavy volume of residual particularly and in some cases middle distillates. The residual-making capacity of domestic refiners is limited. Also, refiners in processing a barrel of crude are forced by the nature of their plant arrangements to make

from 40-45% gasoline, even while maximizing output of middle distillates or residual. If gasoline consumption thus is severely restricted, refiners may find themselves with gasoline overflowing storage and unable to sell it.

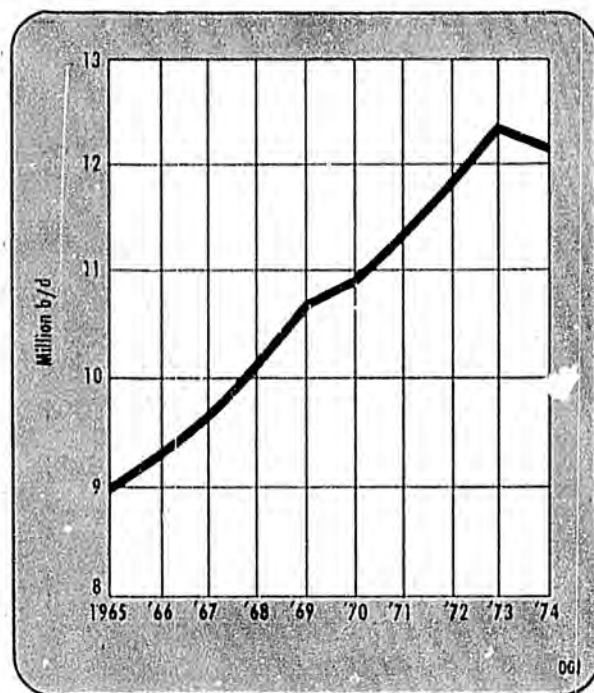
A look at '74. The year 1974 closed after setting historical trends under pressure from the Arab embargo, government regulations, and price changes throughout the petroleum industry.

Preliminary calculations indicate that supply exceeded demand in the U.S. during 1974. This allowed for some stock building to occur, with the possible exception of distillate and kerosine inventories. Estimates are 16,960,000 b/d for demand and 17,245,000 b/d for supply. These estimates yield reductions of 3.1% and 2.2%, respectively, when compared with 1973.

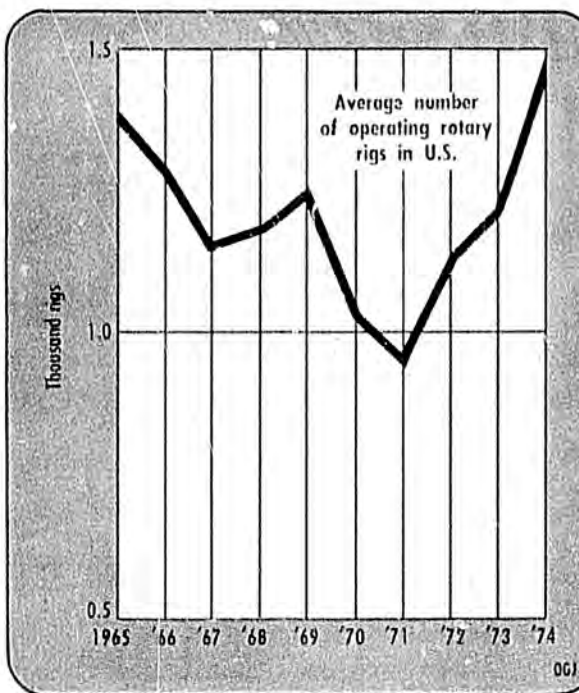
The supply came from domestic production of 10,495,000 b/d, including 8,800,000 b/d of crude and condensate and 1,695,000 b/d of natural-gas liquids. Imports added another 6,275,000 b/d, with crude shipments averaging 3,500,000 b/d and products 2,775,000 b/d.

Demand for the major products included gasoline consumption of 6,560,000 b/d, jet fuels 980,000 b/d, distillates 3,060,000 b/d (including kerosine), and residual 2,665,000 b/d. Do-

Crude runs break upward trend



U.S. rig activity revives



mestic demand totaled 16,735,000 b/d with exports of 225,000 b/d during the year.

A look at '75. Imports and governmental involvement are the key questions that are currently unresolved for the 1975 outlook.

Many analysts are adopting a "wait and see" attitude in hopes that Washington policies will be more clearly defined before they settle on a forecast for 1975. However, most industry economists are predicting that normal demand will range from zero growth to a high of about 3%.

Journal editors are forecasting gasoline demand will average 6,625,000 b/d during 1975. This 1.0% increase over 1974 fails to bring gasoline demand back to the level reached in 1973. The major consideration influencing gasoline demand is the sales of new autos. Presently, new-car sales are very depressed. Sales closely follow auto production which closed the year 1974 down 24%. This factor may be tempered somewhat by recreational gasoline use. Drivers are becoming more accustomed to the current price level of motor gasoline and are expected to drive more unless new restraints are imposed.

Jet fuels are expected to increase by 1.1% over the calculated level for 1974. This increase puts aviation fuels back at their 1971 level of consumption. U.S. airline activity was at one

of its lowest levels for both passenger and freight service in the month of November. Slight strength began to show in December air traffic, and some restoration of flights is expected during 1975.

Heating oils. The cold winter that was expected to force distillate demand up so far has failed to materialize. Even so, distillate demand (including kerosene) is forecast at 3,140,000 b/d. This is a relatively healthy increase of 2.6% in comparison with 1974. Continued declines in natural-gas production are expected to contribute to this increase. Factors which tend to moderate distillate demand include price-induced conservation measures being put to use by homeowners and businesses and the sluggish economy.

Residual-fuel-oil demand for 1975 is projected to increase 2.8% after decreasing 4.6% during 1974. This will place residual consumption at an average of 2,740,000 b/d for 1975 or about 75,000 b/d over calculated 1974 levels. The shortage of natural gas also is exerting an upward force on residual consumption.

Other product categories—liquefied gases, petrochemical feedstocks, lubricants, asphalt, petroleum coke, etc.—are expected to increase about 2.5% in 1975. This level of demand would be 3,540,000 b/d, up 70,000 b/d from the calculated consumption in 1974.

Exports are projected by the Jour-

nal to decrease by 10,000 b/d, a decline of 4.4% from 1974. This is expected to happen as some suppliers with long-term contracts for primary products allow their contracts to expire. Most of the exports in this category are prohibited in the U.S. because of environmental considerations. Coke accounts for over 50% of the exports from the U.S.

Lubricants are the other major segment of the exports.

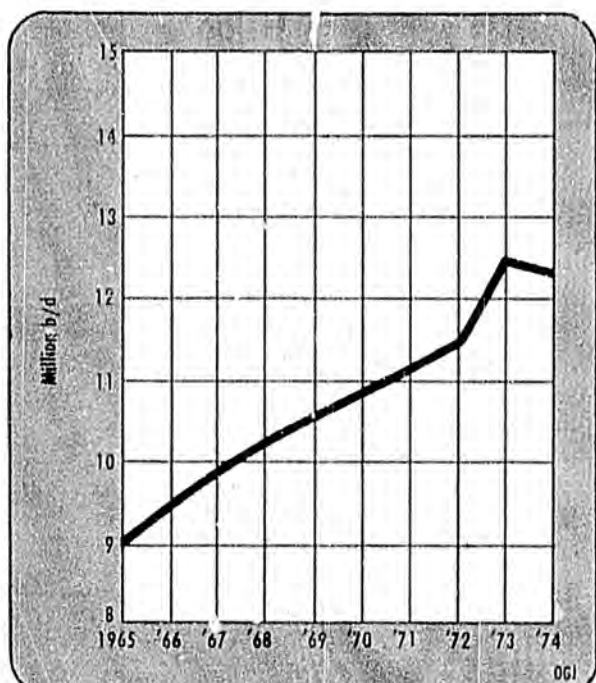
Rely on imports. The big supply question for 1975 is the same as it was in 1974—the level of imports.

The Journal forecast counts on the import level to reach an average of 6,675,000 b/d, including 3,800,000 b/d of crude and 2,875,000 b/d of refined products and unfinished petroleum. This import level will satisfy demand as well as allow for a small buildup in inventories.

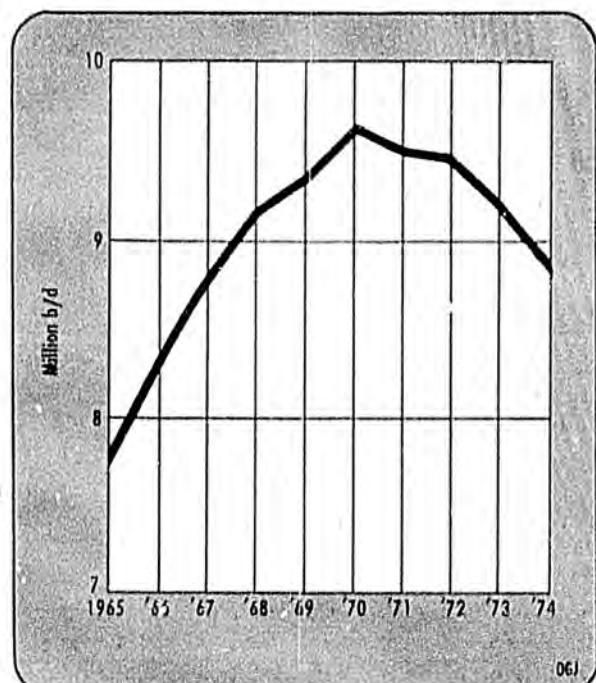
Crude production in the U.S. is expected to continue its decline in 1975 but at a slower rate than in 1974. Production should average 8,550,000 b/d in 1975. This level of production is 2.8% less than in 1974. The decline between 1974 and 1973 amounted to 4.2%.

The lag time between increased drilling activities and the corresponding increase in crude-production rates has been longer than most industry analysts foresaw. It appears that the slowing decline rate is significant and

New U.S. crude supply



Crude production declines



Journal forecast: supply and demand

	(Thousands of Barrels Daily)					
	Forecast Preliminary	1974	% Change	1973	1972	1971
Domestic Demand						
Motor Gasoline	6,625	6,560	+1.0	6,673	6,376	6,014
Dist. 1-4	5,665	5,610	+1.0	5,702	5,439	5,145
Dist. 5	960	950	+1.0	971	937	869
Naphtha Jet	205	200	+2.5	217	242	249
Dist. 1-4	143	140	+2.1	152	156	164
Dist. 5	62	60	+3.3	65	86	85
Kerosine Jet	785	780	+0.6	833	803	743
Dist. 1-4	560	560		594	568	524
Dist. 5	225	220	+2.3	239	235	219
Other Kerosine	165	160	+3.1	216	234	249
Dist. 1-4	155	152	+2.0	212	230	244
Dist. 5	10	8	+25.0	4	4	5
Distillate	2,975	2,900	+2.6	3,080	2,913	2,694
Dist. 1-4	2,705	2,635	+2.7	2,770	2,641	2,428
Dist. 5	270	265	+1.9	310	272	266
Residual	2,740	2,665	+2.8	2,794	2,529	2,232
Dist. 1-4	2,320	2,255	+2.9	2,373	2,208	1,936
Dist. 5	420	410	+2.4	421	321	296
LP-Gas and LRG	1,400	1,370	+2.2	1,121	1,118	1,011
Dist. 1-4	1,338	1,310	+2.1	1,064	1,057	949
Dist. 5	62	60	+3.3	57	61	62
Misc. Product Demand	2,140	2,100	+1.9	2,333	2,164	2,033
Dist. 1-4	1,820	1,785	+2.0	2,078	1,918	1,796
Dist. 5	320	315	+1.6	255	246	237
Total Domestic Demand	17,035	16,735	+1.8	17,267	16,379	15,225
Dist. 1-4	14,706	14,447	+1.8	14,945	14,217	13,186
Dist. 5	2,329	2,288	+1.8	2,322	2,162	2,039
Exports	215	225	-4.4	229	223	224
Dist. 1-4	120	130	-7.7	129	135	134
Dist. 5	95	95	0	100	88	90
Total Demand	17,250	16,960	+1.7	17,496	16,602	15,449
Dist. 1-4	14,826	14,577	+1.7	15,074	14,352	13,320
Dist. 5	2,424	2,383	+1.7	2,422	2,250	2,129
Supply						
Crude and Lease Cond.	8,550	8,800	-2.8	9,187	9,441	9,463
Dist. 1-4	7,485	7,723	-3.1	8,065	8,289	8,270
Dist. 5	1,065	1,077	-1.1	1,122	1,152	1,193
NGL and Other HC	1,670	1,695	-1.5	1,738	1,744	1,692
Dist. 1-4	1,637	1,661	-1.4	1,702	1,703	1,644
Dist. 5	33	34	-2.9	36	41	48
Imports Crude	3,800	3,500	+8.6	3,244	2,216	1,681
Dist. 1-4	2,964	2,730	+8.6	2,434	1,553	1,169
Dist. 5	836	770	+8.6	810	663	512
Products & Unfinished	2,875	2,775	+3.6	2,957	2,525	2,245
Dist. 1-4	2,670	2,575	+3.7	2,775	2,368	2,095
Dist. 5	205	200	+2.5	182	157	150
Processing Gain, Losses, Etc.	495	475	+4.2	505	444	439
Dist. 1-4	410	390	+5.1	409	357	353
Dist. 5	85	85	0	96	87	86
Total Supply	17,390	17,245	+0.8	17,631	16,370	15,520
Dist. 1-4	15,166	15,079	+0.6	15,385	14,270	13,531
Dist. 5	2,224	2,166	+2.7	2,246	2,100	1,989
Stock Change	140	285	-50.9	135	232	71
Dist. 1-4	340	502	-32.3	176	82	211
Dist. 5	200	217	-7.8	41	150	140
Crude Runs to Stills	12,250	12,150	+0.8	12,431	11,730	11,199
Dist. 1-4	10,400	10,306	+0.9	10,456	9,872	9,457
Dist. 5	1,850	1,844	+0.3	1,975	1,858	1,742

that 1976 may well see a stable if not increasing U.S. crude-production rate.

Natural-gas liquids continued a decline pattern similar to crude oil. Natural-gas liquids is projected to equal 1,670,000 b/d in 1975. This decline is 25,000 b/d from 1974. Once again the production is still declining but at a slower rate than in the past. A decline rate of 1.5% as compared with a reduction of 2.5% between 1973 and 1974.

Including a processing gain of 495,000 b/d, up 4.2% from the expected level of 1974, total supply should come to 17,390,000 b/d in 1975. This would allow for a small stock buildup over the course of the year. Crude runs to stills are projected to increase by about a percentage point and average 12,250,000 b/d during 1975.

A look back. The U.S. petroleum industry closed out 1974 with some cause for optimism in a period checked with

pessimism. The disastrous shortages planned for by many turned into rather small losses viewed on an annual basis.

A quick rundown (for details see following tables) shows:

- Crude production declined 4.2% to average 8,800,000 b/d compared with 1973's average of 9,187,000 b/d. Two of the five districts were gainers. District 1 netted an increase of 10.1% or 11,000 b/d. District 4 showed a gain of 23,000 b/d, a 3.4% gain. Colorado, Montana, and Utah increased production with Wyoming holding about the same. The three biggest producers maintained their rank—Texas, Louisiana, and California.

- Marketed production of natural gas slid downward to average 61.1 billion cfd, a 1.5% decrease. Exports also declined to a level of 2.7 billion cfd.

- Refiners averaged running 12,150,000 b/d of crude compared with 12,431,000 b/d in 1974. Their plants operated at 82.1% of capacity as reported by the American Petroleum Institute.

- Crude imports into the U.S. set record levels during 1974. Total preliminary crude imports equal 3,500,000 b/d. Two of the traditionally large importers cut back their exports of crude to the U.S. substantially. Canada reduced crude exports to the U.S. by 136,000 b/d, a cut of about 14%. Calculated figures for Venezuela show a reduction of 43,000 b/d or 13%. The biggest increases in U.S. crude imports came from Nigeria and Iran. These countries showed gains of 207,000 b/d and 319,000 b/d respectively.

- Refined product imports declined during 1974. Gasoline nearly doubled in volume imported. The reductions occurred in the distillate and residual categories. Total product imports fell by 182,000 b/d, a reduction of about 6%.

- Rotary-rig activity was outstanding during 1974. The U.S. level of activity reached proportions not seen since 1963. California, Kansas, New Mexico, Oklahoma, Texas, and Wyoming all showed large gains in the average rotary-rig activity. Canadian rig activity declined during the year. The average rig activity fell by 25 rigs from the year previous. A decrease of 14% for the year.

- Refined product, natural-gas liquid, and crude stocks all increased during 1974. Gasoline stocks increased by 8,963,000 bbl or 4.2% during the

year. Residual inventories added 8,300,000 bbl and crude stocks increased 15.5% to a total of 267,100,000 bbl, up 24,622,000 bbl from ending inventory level of 1973.

• The results of the continuing U.S. inflation and the rise in world oil prices are clearly reflected in the wholesale price index which jumped by about 23 points during the year. The crude-oil and refined-products price indices increased by 41 points and 91 points, respectively.

Gain in drilling. Drillers completed an estimated 33,373 wells including 9,335 wildcats, during 1974, drilling 158,401,000 ft of hole. These are preliminary estimates which if proved correct represent a 20.9% gain in completions and a 25% increase in wildcats over 1973.

A Journal survey, meanwhile, indicates oil operators plan to drill an estimated 35,503 wells this year, including 10,483 wildcats, and 171,774,000 ft of hole. This would be a 6.4% gain for total wells, a 12.3% gain for wildcats, and an 8.4% gain in footage drilled, all above the very good 1974 achievement.

The 35,503-well estimate for 1975 drilling is believed approaching capacity of the domestic drilling industry. It will require extremely efficient use of existing equipment if the goal is achieved.

Over the next few years, availability of rigs is expected to be the limiting factor in how fast drilling can be expanded. The 1974 activity and the forecast work in 1975 both are above previous estimates of industry capability.

Active rotary rigs in 1974 averaged 1,471 with the highest number of rigs at work in any one week totaling 1,664. Some observers believe that the industry must average over 1,600 rigs at work this year to achieve the forecast goal.

Texas, as usual, was by far the leader in new drilling last year with 10,309 well completions including 3,435 wildcats. The surprise, however, was the strong showing in some other states. Kansas, for instance, was in second place with 3,066 completions and 986 wildcats, ahead of Oklahoma with 3,063 completions and 391 wildcats and Louisiana with 3,001 completions and 834 wildcats.

Other leading drilling states included California with 1,993 completions and 233 wildcats; New Mexico with 1,138

completions and 218 wildcats; Ohio with 1,785 completions and 148 wildcats; Pennsylvania with 1,327 completions and 105 wildcats; and Wyoming with 1,072 completions and 453 wildcats.

Drilling plans for 1975 indicate nearly all the leading states will see even increased activity. Texas, for example, expects a program of 10,952 wells, Louisiana 3,387, Kansas 3,117, California 2,199, New Mexico 1,237, Oklahoma 3,147, Wyoming 1,147, and Pennsylvania 1,281.

All in all, the drilling segment of the oil industry should experience a busy time in the months ahead. This doesn't mean all is rosy. Operators must worry about enough rigs, tubular goods, and drilling sites and whether Congress will knock out the props by repealing percentage depletion, changing the expensing of intangible costs, or impose more severe price controls on crude oil.

Role of imports. Despite Project Independence, the nation's dependency on petroleum from abroad has remained roughly unchanged from 1973's figure of about 40% of U.S. oil demand. But the so-called security of imports has declined slightly.

A special study of imports during June-October period last year made by Petroleum Industry Research Foundation Inc. (Pirinc) noted that imports from the Arab nations have increased 3.5% and now account for 8.2% of total U.S. oil demand. This compares with 7.7% a year earlier. Imports from non-Arab Eastern Hemisphere sources, particularly Iran and Nigeria, have increased much more and now account for one-third of total U.S. oil imports compared with one-fourth a year ago.

This dependency on Eastern Hemisphere oil actually is greater when imports of products are examined. Export refineries in Canada, the Caribbean, and Europe use a certain amount of Arab crude oil to make the products which they ship to America. Pirinc estimated that the total direct and indirect dependency on Arab oil is equal to nearly 11% of total U.S. oil demand.

These increases in dependency on Eastern Hemisphere oil have been made at the expense of so-called more secure Western Hemisphere petroleum. Imports of crude and products from Canada, Venezuela, and the Caribbean have all declined signifi-

cantly both in volume and as a percentage of total imports. Historically these imports have been considered politically and strategically more secure than those from the Eastern Hemisphere. This means that the reduction in U.S. oil demand and imports since the embargo has not made the nation less vulnerable to foreign oil interruptions than a year ago.

The Pirinc study also noted that imports of products are declining more than crude. All refined products during the study period showed declining imports from a year earlier with the principal decline occurring in residual, which dropped 18%.

Part of this decline was due to stepped-up production at U.S. refineries of residual fuel which may have increased by as much as 20%. An equally important reason was the declining fuel-oil demand by U.S. electric utilities due in part to a leveling off in power generation this year. Coal and nuclear's share in power generation increased at the expense of oil. As a result, residual-fuel-oil demand by utilities declined significantly.

Imports of gasoline and light fuel oil declined from all sources for two principal reasons: (1) foreign prices of these products have been higher than domestic prices in 1974, and (2) there now is sufficient domestic refining capacity to meet virtually all gasoline demand and a large share of distillate requirements. This is due to a combination of decreased demand and an increase in domestic refining capacity.

Pirinc concluded, however, that any significant volumetric decline in oil imports in 1975 is most unlikely to be achieved without forceful mandatory restrictions or large additional excise taxes.

The current comfortable supply position thus should not lead to complacency. Shell economists, for instance, warn in a special report that if energy-saving measures are abandoned in the face of apparent adequate supply, another crisis could easily be in the making. The report urges the adoption of national policies to cushion the effect of short-term fluctuations in supply including a mechanism for consuming countries to share shortages, greater reserve storage capacity, and better political relations with oil-producing countries. In the meantime, the nation must start moving on long-term solutions to energy supply and demand.

U.S. production of crude oil and lease condensate

	(Thousands of barrels daily)											Total 1859-1973
	1974*	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	
District I:												
Fla., N.Y., Pa., W.Va.	120	109	66	36	31	29	28	31	32	32	30	2,090,420
Total District I	120	109	66	36	31	29	28	31	32	32	30	2,090,420
District II:												
Illinois	77	82	96	107	120	139	154	162	169	175	192	3,011,833
Indiana	13	14	17	18	21	21	24	28	31	30	31	447,266
Kansas	173	181	202	215	232	243	258	272	284	287	290	4,629,330
Kentucky	23	24	26	29	32	35	38	43	49	53	54	623,633
Michigan	48	40	36	33	32	33	35	37	39	40	43	639,653
Nebraska	18	20	24	28	31	33	36	37	38	47	52	350,455
North Dakota	54	55	56	59	60	62	68	69	74	72	70	436,377
Ohio	25	24	22	23	27	30	30	27	30	35	43	800,932
Oklahoma	485	523	567	584	613	616	611	632	615	557	555	11,191,736
Other	2	2	2	2	1	2	3	1	1	1		9,348
Total District II	918	965	1,048	1,098	1,169	1,214	1,257	1,308	1,330	1,297	1,330	22,140,563
District III:												
Alabama	35	33	27	21	20	21	21	20	22	22	23	1,185,3
Arkansas	45	49	51	50	49	49	53	58	65	71	73	1,397,833
Louisiana	2,050	2,256	2,455	2,562	2,485	2,314	2,233	2,122	1,848	1,630	1,502	15,660,381
Gulf Coast	1,990	2,146	2,334	2,438	2,355	2,181	2,094	1,971	1,699	1,478	1,356	+
Rest of state	60	110	121	124	130	133	139	151	149	152	146	+
Mississippi	140	154	167	176	178	176	160	157	151	154	155	1,514,217
New Mexico	265	276	302	324	351	354	351	346	340	327	311	3,173,954
Texas	3,450	3,546	3,565	3,351	3,424	3,156	3,097	3,067	2,898	2,742	2,704	39,447,383
Gulf Coast	790	793	716	654	694	631	609	591	539	515	524	+
West Texas	1,795	1,829	1,769	1,646	1,634	1,497	1,453	1,427	1,352	1,262	1,212	+
East Texas field	190	207	211	186	199	159	145	142	124	111	119	+
Rest of state	675	717	869	865	897	869	890	907	883	854	849	+
Total District III	5,985	6,314	6,567	6,484	6,507	6,070	5,915	5,770	5,324	4,946	4,768	61,345,621
District IV:												
Colorado	102	100	90	75	68	78	87	93	92	92	95	1,067,231
Montana	95	94	93	95	104	120	132	66	97	90	84	864,166
Utah	108	87	71	65	64	64	64	65	66	69	78	494,284
Wyoming	395	396	386	405	439	424	394	373	368	379	379	3,939,117
Total District IV	700	677	640	640	675	686	677	628	623	630	636	6,364,798
District V:												
Alaska	195	199	202	218	229	202	181	80	39	31	30	626,197
Arizona	2	2	3	3	5	7	9	8				15,922
California	880	921	951	982	1,020	1,028	1,026	984	945	867	820	16,784,056
Coastal region	208	216	212	237	222	180	176	191	190	182	178	+
Los Angeles region	345	363	389	392	430	465	453	380	340	296	279	+
San Joaquin Valley	327	342	350	353	368	383	397	413	416	389	363	+
Nevada					1	1	1	1	1	1		2,949
Total District V	1,077	1,122	1,156	1,203	1,254	1,238	1,217	1,073	986	899	850	17,429,124
U.S. Total	8,800	9,187	9,477	9,451	9,636	9,237	9,094	8,810	8,295	7,804	7,614	109,370,526

*Preliminary †Thousands of barrels. ‡Not available.

Supply and demand of crude in the U.S.

	(Thousands of barrels daily)												
	1974*	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964	1963	1962
SUPPLY:													
Crude imports	3,500	3,244	2,222	1,681	1,324	1,409	1,290	1,128	1,225	1,238	1,199	1,131	1,126
Crude production	8,800	9,187	9,477	9,463	9,637	9,238	9,095	8,810	8,295	7,804	7,614	7,542	7,332
Total new supply	12,300	12,431	11,699	11,144	10,961	10,647	10,385	9,938	9,520	9,042	8,813	8,673	8,458
DEMAND:													
Crude refinery runs	12,150	12,432	11,731	11,199	10,870	10,629	10,312	9,815	9,444	9,043	8,807	8,687	8,410
Crude transfers	17	19	12	17	14	14	14	12	12	13	12	11	14
Crude exports	3	2	1	1	14	4	5	73	4	3	4	5	5
Crude loss	12	13	13	12	11	11	11	9	10	10	10	10	9
Total crude demand	12,182	12,466	11,757	11,299	10,909	10,658	10,342	9,909	9,470	9,069	8,833	8,713	8,438
Stock change	+118	-35	-58	-46	+31	-11	+43	+29	+50	-27	-20	-40	+20

*Preliminary.

Rotary-rig activity by states

	Peak No.	Low No.	Average rig activity									
			1974	1973	1972	1971	1970	1969	1968	1967	1966	1965
Alabama	18	7	12	13	15	8	7	6	3	2	2	1
Alaska	14	3	9	5	5	5	14	28	20	21	13	6
Inland	9	2	6	4	4	5	12	18	3	5	5	3
Offshore	5	0	3	1	1	0	2	10	17	16	8	3
Arkansas	21	13	18	15	15	15	13	16	7	8	10	11
Arizona	2	1	1	2	1	1	0	2	1	3	1	1
California	85	53	72	51	46	46	52	78	87	83	79	89
Inland	82	51	70	49	45	40	42	61	65	67	70	83
Offshore	4	1	2	2	1	6	10	17	22	16	9	6
Colorado	60	33	46	42	35	30	25	23	17	16	16	19
Florida	12	6	7	9	19	11	4	1	1	2	2	4
Georgia	3	0	0	1	0	0	0	0	0	0	0	0
Idaho	1	0	0	1	0	0	0	0	0	0	0	0
Illinois	12	1	7	6	14	13	14	17	22	30	30	24
Indiana	3	0	1	0	1	1	1	1	2	3	5	5
Iowa	1	0	0	1	0	1	0	0	0	0	1	0
Kansas	55	35	44	28	24	29	30	38	35	41	55	70
Kentucky	4	0	2	1	2	2	1	2	5	9	13	12
Louisiana	224	186	203	205	214	194	204	230	233	235	256	270
North	34	23	29	23	19	16	12	19	19	20	23	30
Inland waters	68	49	58	55	54	50	57	57	64	66	72	72
South	65	39	49	56	59	54	56	69	59	58	63	73
Offshore	77	57	67	71	82	74	79	85	91	91	98	95
Maryland	0	0	0	0	1	0	0	1	1	0	4	2
Michigan	32	12	24	20	17	12	11	10	10	10	9	11
Mississippi	33	23	29	29	17	39	43	40	36	33	34	35
Missouri	2	0	0	1	0	0	0	0	0	0	1	0
Montana	37	10	24	19	20	17	17	31	34	22	24	26
Nebraska	11	3	7	5	6	5	6	10	5	5	8	10
Nevada	3	0	1	0	0	1	0	0	2	1	1	2
New Mexico	94	67	79	62	55	47	40	64	68	56	60	65
New York	10	2	7	1	0	1	0	0	1	1	1	1
North Carolina	1	0	0	0	0	0	0	0	0	0	0	0
North Dakota	19	5	12	10	7	9	9	12	13	11	12	12
Ohio	44	18	30	36	22	17	24	22	22	18	14	22
Oklahoma	173	121	146	115	90	90	98	120	106	101	141	163
Oregon	0	0	0	0	0	0	0	0	0	0	1	1
Pennsylvania	19	9	14	11	8	9	9	7	5	7	10	9
South Dakota	2	0	1	1	1	1	2	1	1	0	0	2
Tennessee	2	0	0	0	0	1	2	1	0	1	1	0
Texas	612	423	508	376	322	291	302	322	329	340	387	425
Gulf Coast	161	97	128	109	91	79	73	77	88	90	103	112
Offshore	29	17	21	9	6	5	6	10	6	7	8	5
North	90	45	67	22	16	15	17	25	25	28	31	34
Panhandle	44	24	35	23	22	16	19	19	20	21	23	25
East	68	24	45	30	26	23	25	37	34	36	38	40
West Central	81	55	62	82	71	76	77	74	67	67	82	102
West	172	135	150	101	90	77	85	80	89	91	102	107
Utah	50	33	42	38	34	17	12	12	12	15	14	14
Virginia	3	0	2	1	0	1	1	0	0	0	0	1
Washington	0	0	0	0	0	0	0	0	0	1	1	0
West Virginia	30	1	16	20	16	17	16	18	16	15	19	24
Wyoming	140	87	107	70	60	45	71	81	56	44	48	50
Total U.S.	1,664	1,350	1,471	1,194	1,087	976	1,028	1,194	1,150	1,134	1,273	1,387
Canada West	268	57	151	175	148	120	131	149	150	144	156	163
Canada East	6	1	3	4	4	4	3	2	1	1	1	2

Grand Total 1,820 1,419 1,625 1,373 1,239 1,100 1,162 1,345 1,301 1,279 1,430 1,552
 Source: Hughes Tool Co. Note: Peak and low figures may not add to totals.

Drillers sank more wells than

Well forecast for 1975

State	1974 estimate			1975 forecast			Total footage 1975 (1,000 ft)	Change from 1974 Total wells
	Total wells 1974	Total wildcats 1974	Total footage (1,000 ft)	Total wells 1975	Wildcat wells 1975	Field wells 1975		
Alabama	95	54	880	124	68	56	1,119	+ 29
Alaska	32	10	224	119	47	72	834	+ 87
Arizona	11	5	73	8	8	0	53	- 3
Arkansas	300	85	1,596	306	87	219	1,613	+ 6
California	1,993	233	5,115	2,199	288	1,911	5,650	+ 206
Onshore	1,923	227	4,911	2,117	281	1,836	5,428	+ 194
Offshore	70	6	204	82	7	75	222	+ 12
Colorado	823	344	4,982	901	389	512	5,425	+ 78
Florida	48	36	583	96	75	21	1,181	+ 48
Georgia	5	5	30	0	0	0	0	- 5
Idaho	2	2	9	0	0	0	0	- 2
Illinois	740	204	1,826	773	211	562	1,932	+ 33
Indiana	403	176	634	407	191	216	641	+ 4
Iowa	2	2	3	0	0	0	0	- 2
Kansas	3,066	986	8,953	3,117	1,017	2,100	9,102	+ 51
Kentucky	734	201	1,164	766	206	560	1,215	+ 32
Louisiana	3,001	834	22,453	3,387	1,095	2,292	25,560	+ 386
North	1,217	235	4,514	1,326	241	1,085	4,918	+ 109
South	1,091	402	11,357	1,168	467	701	12,159	+ 77
Offshore	693	197	6,582	893	387	506	8,483	+ 200
Maryland	2	2	13	0	0	0	0	- 2
Michigan	390	235	1,932	526	315	211	2,605	+ 136
Mississippi	463	291	3,802	534	341	193	4,386	+ 71
Missouri	55	22	69	24	16	8	30	- 31
Montana	648	368	2,026	691	375	316	2,218	+ 43
Nebraska	228	161	1,175	262	234	28	1,352	+ 34
Nevada	2	2	18	4	4	0	36	+ 2
New Mexico	1,138	218	6,228	1,237	248	989	6,831	+ 99
East	771	181	4,860	862	176	686	5,433	+ 91
West	367	37	1,368	375	72	303	1,398	+ 8
New York	311	0	440	327	14	313	463	+ 16
North Carolina	10	10	38	0	0	0	0	- 10
North Dakota	134	73	1,043	198	136	62	1,542	+ 64
Ohio	1,785	148	7,418	1,765	152	1,613	7,335	- 20
Oklahoma	3,063	391	16,837	3,147	447	2,700	17,299	+ 84
Pennsylvania	1,327	105	2,826	1,281	117	1,164	2,728	- 46
South Dakota	10	10	61	17	12	5	102	+ 7
Tennessee	110	75	176	112	77	35	178	+ 2
Texas	10,309	3,435	54,175	10,952	3,667	7,285	58,007	+ 643
District 1	616	242	2,308	593	201	392	2,228	- 23
District 2	741	450	4,375	866	499	367	5,113	+ 125
District 3	956	467	6,110	876	411	465	5,782	- 80
District 4	989	560	6,409	1,024	572	452	6,635	+ 35
District 5	141	80	773	147	86	61	785	+ 6
District 6	315	123	2,146	386	142	244	2,598	+ 71
District 7-B	1,313	465	4,287	1,390	482	908	4,565	+ 77
District 7-C	1,096	206	6,263	1,174	220	954	6,435	+ 78
District 8	1,439	167	8,747	1,498	212	1,286	9,108	+ 59
District 8-A	938	144	4,951	1,140	247	893	5,880	+ 202
District 9	1,103	289	3,327	1,023	296	727	3,119	- 80
District 10	502	98	3,174	520	112	408	3,167	+ 18
Offshore	160	144	1,305	315	187	128	2,592	+ 155
Utah	187	55	1,532	212	61	151	1,796	+ 25
Virginia	52	2	249	48	6	42	229	- 4
West Virginia	822	102	2,400	816	97	719	2,375	- 6
Wyoming	1,072	453	7,418	1,147	487	660	7,937	+ 75
Total U.S.	33,373	9,335	158,401	35,503	10,488	25,015	171,774	+ 2,130
Canada	4,552	1,270	15,630	3,881	727	3,154	12,996	- 671
West	4,290	1,247	15,065	3,616	725	2,893	12,594	- 672
Alberta	3,735	1,018	12,852	3,211	576	2,635	11,049	- 524
B.C.	163	74	865	129	28	101	685	- 34
Manitoba	47	16	154	45	20	25	147	- 2
North-Arctic	56	54	470	22	22	0	185	- 34
Saskatchewan	289	85	724	211	79	132	528	- 78
East	262	23	565	263	2	261	402	+ 1
Offshore	23	23	213	2	2	0	18	- 21
Ontario	239		352	261	0	261	384	+ 22

considered in early-year planning

PRELIMINARY estimates of 1974 total well completions in the U.S. show that the industry drilled more wells than it has previously planned earlier in the year.

Total well completions for the year 1974 are estimated at 33,373, compared to the 32,616 earlier reported. The year's total wells included 9,335 wildcat completions. Total footage drilled in 1974 is estimated at 158,401,000 ft. The complete listing of 1974 well completions in all categories will be published by the API and printed in The Journal later in the quarter.

The outlook is very good for 1975. The industry looks for 35,503 wells to be drilled. This is an increase of 6.4% over 1974. Total wildcat completions for 1975 will near 10,488, up 12.4% over 1974. Total footage drilled in 1975 should reach 171,774,000 ft, up 8.2% over last year. The 1975 well count will include 25,015 field-development wells.

A comprehensive Journal survey of operators throughout the oil kingdom covered nearly 9,500 wells for 1974. The top 20 companies in the nation plan to drill 7,488 wells this year compared to 6,823 in 1974. The accompanying table notes the data for past years. Notice that 1975 will be the biggest year listed on this table.

Nearly every state shows an increase in total drilling. Only Arizona, Georgia, Idaho, Iowa, Maryland, Ohio, Virginia, and West Virginia expect fewer well completions. Largest well increases are in California, up 206, Louisiana, up 386, and Texas, up 643.

The bright drilling picture in the U.S. for 1974 was bolstered by the high number of rotary rigs working in various areas. This rig count will increase the 1975 count also. Not since the 1950's has the Anadarko basin of western Oklahoma and the Texas Panhandle seen such a flurry of drilling action. Most of the wells are looking for and are finding new gas reserves. Some of this success is in and around older producing areas, while other good news is being made in wildcat operations in newer areas.

The impact of the price increase for gas and oil is very evident throughout Oklahoma well drilling slated to increase by 84 wells.

The top 20 company scores

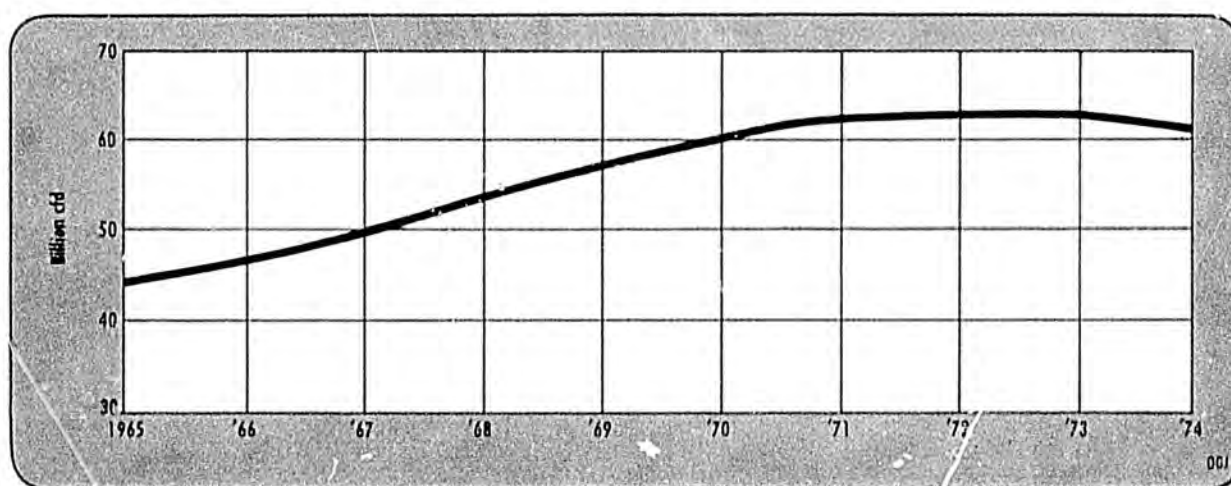
State	1975 Fore- cast	Total wells				Wildcats	
		1974	1973	1972	1971	1974	Fore- cast 1975
Alabama	26	13	21	36	23	6	11
Alaska	92	21	21	15	31	6	32
Arizona	0	1	0	10	2	1	0
Arkansas	18	24	15	20	30	9	5
California	1,112	1,053	567	839	1,431	53	59
Onshore	1,070	1,011	562	827	1,388	53	53
Offshore	42	42	5	12	43	0	6
Colorado	314	312	54	228	225	33	43
Florida	13	6	36	64	32	6	13
Georgia	0	2	2	0	0	2	0
Idaho	0	2	4	0	0	2	0
Illinois	41	68	88	39	84	12	7
Indiana	16	28	1	1	1	0	0
Kansas	209	212	60	322	50	14	23
Kentucky	1	4	3	20	3	0	0
Louisiana	1,332	1,021	862	1,156	1,044	222	241
North	274	159	66	82	166	22	18
South	477	467	471	491	507	46	53
Offshore	581	395	305	583	371	154	170
Maryland	0	0	0	0	0	0	0
Michigan	305	207	117	135	51	134	186
Mississippi	49	37	39	75	128	16	26
Missouri	0	1	8	0	0	1	0
Montana	62	41	34	50	40	12	30
Nebraska	8	3	3	6	7	0	0
Nevada	4	2	0	1	2	1	4
New Mexico	307	304	154	223	171	32	42
East	231	205	139	164	132	28	27
West	76	99	15	59	39	4	15
New York	14	50	4	9	2	0	0
North Carolina	0	3	0	0	2	3	0
North Dakota	22	30	11	13	19	4	6
Ohio	2	2	5	8	5	0	0
Oklahoma	375	470	223	291	326	36	74
Oregon	0	0	1	0	0	0	0
Pennsylvania	114	224	41	14	11	15	20
South Dakota	6	2	1	1	0	2	3
Tennessee	2	1	0	0	0	1	2
Texas	2,506	2,146	1,547	2,138	1,686	216	321
District 1	201	147	104	113	24	10	10
District 2	64	57	66	54	52	11	14
District 3	175	119	175	262	263	8	27
District 4	139	155	250	264	295	8	20
District 5	18	18	6	6	9	9	8
District 6	60	34	33	43	51	3	9
District 7-B	27	14	32	22	23	1	5
District 7-C	193	229	93	52	52	20	20
District 8	666	661	389	635	526	35	58
District 8-A	597	317	230	361	294	6	25
District 9	60	186	35	238	32	3	6
District 10	108	114	110	54	40	12	17
Offshore	198	95	24	34	25	90	102
Utah	138	149	100	10	41	23	14
Virginia	2	1	0	0	0	1	2
Washington	0	0	0	3	0	0	0
West Virginia	54	83	22	35	28	12	12
Wyoming	344	300	112	330	223	36	71
Total U.S.	7,488	6,823	4,156	6,203	5,696	911	1,247

Marketed production of natural gas

	(Million cubic feet per day)									
	1974*	Actual 1973	1972	1971	1970	1969	1968	1967	1966	1965
Alaska	390	359	344	333	306	139	47	40	29	20
Arkansas	340	432	456	473	497	464	428	319	296	227
California	1,200	1,231	1,335	1,678	1,778	1,857	1,953	1,866	1,965	1,809
Colorado	370	377	320	297	290	325	332	320	326	346
Kansas	2,420	2,447	2,436	2,425	2,466	2,420	2,283	2,389	2,322	2,174
Louisiana	21,750	22,582	21,843	22,142	21,338	19,802	17,530	15,664	13,967	12,238
Michigan	110	122	94	70	106	99	111	92	105	95
Mississippi	225	273	285	325	345	360	369	382	381	457
Montana	150	154	92	90	117	113	53	71	99	77
Nebraska	10	17	10	10	16	19	22	23	27	29
New Mexico	3,425	3,339	3,332	3,199	3,121	3,118	3,181	2,925	2,770	2,568
Oklahoma	4,850	4,852	4,950	4,614	4,370	4,175	3,800	3,871	3,318	3,619
Texas	23,525	23,326	23,720	23,427	22,898	21,516	20,479	19,697	19,165	18,181
Utah	135	117	108	116	117	128	126	134	144	196
W. Virginia	570	572	589	641	664	635	647	579	585	568
Others	1,650	1,854	1,817	1,785	1,628	1,538	1,431	1,412	1,396	1,340
TOTAL	61,120	62,048	61,731	61,625	60,057	56,708	52,792	49,784	46,895	43,944
Volume Change	<928>	317	106	1,568	3,349	3,916	3,008	2,889	2,951	1,467
Percent Change	<1.5>	0.5	0.2	2.6	5.9	7.4	6.0	6.2	6.7	3.5
Imports	2,650	2,830	2,793	2,562	2,249	1,986	1,781	1,545	1,285	1,252
Exports	250	211	214	219	191	140	256	225	155	65

*Preliminary.

Marketed gas output stays level



U.S. employment, earnings, and price indices

	1974*	1973	1972	1971	1970	1969	1968	1967	1966	1965
U.S. Employment (000's)										
All manufacturing	19,835	19,820	18,933	18,529	19,349	20,167	19,781	19,447	19,214	18,062
Petroleum refining	150	147	151	152	154	145	150	148	148	148
Petroleum and natural gas production	279	264	262	262	270	280	276	276	282	287
Average Hourly Earnings										
All manufacturing	\$4.28	\$4.07	\$3.81	\$3.56	\$3.36	\$3.19	\$3.01	\$2.83	\$2.72	\$2.61
Petroleum refining	5.92	5.54	5.25	4.82	4.49	4.23	3.94	3.77	3.60	3.47
Petroleum and natural gas production	4.98	4.47	3.97	3.75	3.57	3.43	3.22	3.03	2.87	2.74
Price Indices (1967 = 100)										
Wholesale price index	157.7	134.7	119.1	113.9	110.4	106.5	102.5	100.0	99.8	96.6
Crude oil price index	174.4	133.2	116.1	111.1	108.9	105.8	100.7	100.0	98.6	97.9
Refined products price index	220.3	128.7	108.9	106.8	101.1	99.6	98.1	100.0	97.4	93.8

*Preliminary

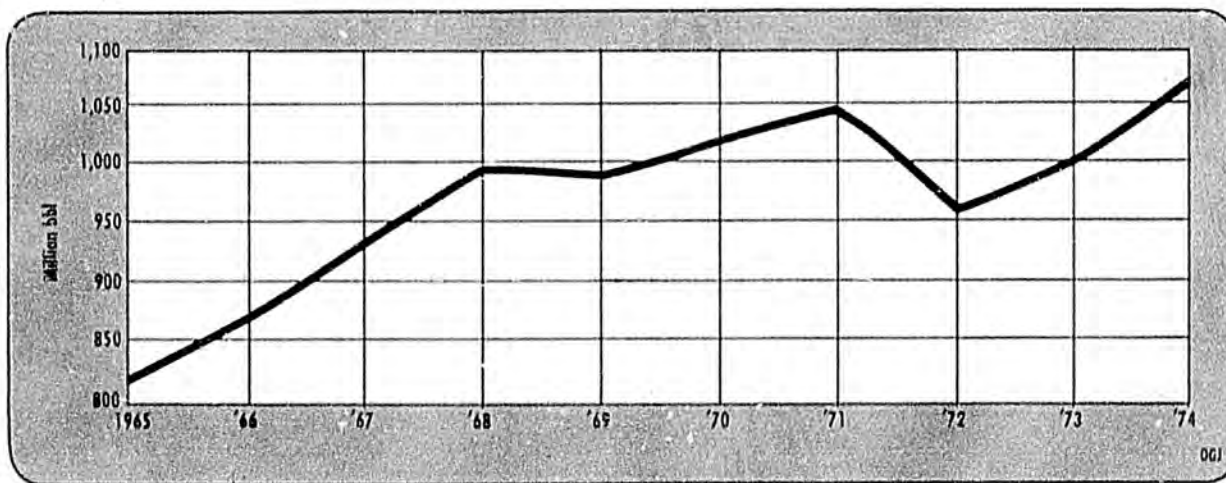
Source: U.S. Department of Labor, Bureau of Labor Statistics, Employment and Earnings. U.S. Department of Commerce, U.S. Bureau of Mines.

Refinery runs by districts

(Thousands of barrels daily)

	% of capacity	1974*	% of total	1973	1972	1971	1970	1969	1968	1967	1966	1965	1964
East Coast	80.7	1,246	10.7	1,327	1,161	1,181	1,147	1,252	1,176	1,145	1,143	1,089	1,106
Appalachian: Dist. 1	76.9	166	1.4	174	161	150	143	57	127	122	116	111	106
Total Dist. 1	80.2	1,412	12.1	1,501	1,322	1,331	1,290	1,309	1,303	1,267	1,259	1,200	1,212
Appalachian: Dist. 2	90.6	58	0.4	55	54	55	60	63	59	60	78	101	101
Ill., Ind., Ky.	83.6	2,152	18.2	2,267	2,134	2,054	1,995	1,868	1,830	1,778	1,731	1,632	1,579
Minn., Wis., Oak.	73.2	218	2.0	242	228	217	200	198	185	164	162	153	147
Okla., Kan., Mo.	88.8	920	7.4	921	904	904	899	884	885	847	818	759	744
Total Dist. 2	84.3	3,340	28.0	3,485	3,320	3,230	3,154	3,013	2,959	2,849	2,789	2,645	2,571
Texas:													
Inland	81.5	418	3.4	427	416	401	395	388	371	350	340	321	316
Gulf Coast	83.5	2,867	22.4	2,782	2,635	2,523	2,450	2,407	2,359	2,283	2,185	2,116	2,088
Louisiana Gulf	85.9	1,633	13.4	1,664	1,604	1,377	1,317	1,285	1,214	1,101	979	911	853
N. La.-Ark.	72.3	154	1.1	135	132	148	154	145	142	135	128	126	123
New Mexico	56.3	59	0.4	46	45	42	41	39	37	34	34	32	30
Total Dist. 3	53.4	5,131	40.7	5,054	4,832	4,491	4,357	4,264	4,123	3,903	3,666	3,506	3,410
Total Dist. 4	76.4	415	3.3	415	398	405	393	385	366	344	338	330	319
Total Dist. 5	77.8	1,844	15.9	1,976	1,858	1,742	1,676	1,658	1,567	1,452	1,392	1,362	1,295
Total U.S.	82.1	12,150	100.0	12,431	11,730	11,199	10,870	10,629	10,318	9,815	9,444	9,043	8,807

Total stocks head upward



Refined product, natural-gas-liquid, and crude stocks

(Thousands of barrels)

Refined product stocks	1974*	1973	1972	1971	1970	1969	1968	1967	1966	1965
Gasoline	222,380	213,417	217,149	223,771	214,348	217,392	211,526	207,715	194,177	183,058
Motor	218,600	209,478	212,894	219,352	209,255	211,199	204,496	199,790	186,393	174,717
Aviation	3,780	3,939	4,255	4,419	5,093	6,193	7,030	7,925	7,784	8,341
Special naphtha	4,800	4,521	5,232	5,384	6,193	6,292	5,829	5,742	5,583	6,209
Kerosine	14,500	21,022	19,111	24,438	27,848	26,780	23,480	25,008	24,004	24,080
Distillate	202,400	196,461	154,319	190,622	195,271	171,714	173,158	159,674	154,096	155,407
Residual	61,780	53,480	55,216	59,681	53,994	58,395	65,359	65,597	61,196	56,214
Kerosine jet fuel	24,400	22,945	19,346	20,747	20,989	19,517	15,373	13,174	12,139	10,361
Naphtha jet fuel	5,660	5,599	6,147	6,990	6,621	8,556	8,904	9,023	7,235	8,388
LRG	7,900	7,719	7,781	7,361	5,645	5,050	4,373	14,925	14,336	13,665
Unfinished oils	109,960	99,154	94,761	100,574	98,989	97,819	93,399	90,201	89,535	88,609
Other refined prod.	51,220	52,298	49,279	51,203	43,152	43,125	46,725	48,340	43,350	44,197
Total product stocks	705,000	676,616	628,341	690,771	673,059	654,640	648,126	629,339	595,651	580,188
Nat.-gas-liquids stk.	98,000	94,106	79,238	93,528	68,435	60,256	77,253	62,969	40,423	35,867
Crude stocks	267,100	242,478	246,395	259,648	276,367	265,227	272,193	248,970	238,391	220,289
Total stocks	1,070,100	1,013,200	953,974	1,043,947	1,017,861	980,123	997,572	941,338	874,465	836,344

*Preliminary. Includes LRG for chemical use previously reported in petrochemical feedstocks.

Crude imports by origin

	1974*	1973	1972	1971	1970	1969	1968	1967	1966	1965
	(Thousands of barrels daily)									
Bolivia	8	2	...	2	2	15.3	18.8	19.2	3.4	...
Chile	...	...	...	1	...	4.7	...	...	...	...
Colombia	...	2	5	9	20	42.6	32.7	32.5	39.5	41.7
Ecuador	60	47	...	...	...	...	...	...	...	...
Mexico	1	1	...	...	...	1.0	...	...	...	6.9
Trinidad	65	60	24	...	...	...	5.4	3.5	...	...
Venezuela	302	345	256	303	268	306.1	343.5	359.1	403.9	432.5
Latin America total	436	457	285	315	290	369.7	400.4	414.3	446.8	481.1
Algeria	203	120	87	13	6	1.0	5.3	4.0	3.8	8.9
Angola	50	48	16	4	...	...	...	...	...	...
Congo	4	...	...	...	...	...	...	...	...	...
Egypt	10	15	8	19	21	40.5	29.5	3.6	2.3	2.4
Gabon	30	...	...	...	...	...	...	...	...	...
Libya	5	133	110	53	47	133.9	113.6	41.9	69.0	41.6
Nigeria	655	448	244	95	48	49.2	8.6	3.9	11.3	14.5
Tunisia	5	18	7	...	...	...	...	...	...	...
Africa total	962	782	472	184	122	224.6	157.0	53.4	86.4	67.4
Kuwait	2	42	36	29	33	34.4	43.3	18.8	26.1	55.4
Saudi Arabia	338	462	174	115	17	34.7	51.8	81.3	125.4	132.2
Neutral Zone	...	...	...	...	23	43.5	29.4	11.0	19.3	26.7
Iran	535	216	136	106	33	41.9	57.8	65.2	84.5	78.5
Iraq	...	4	4	11	...	...	...	4.7	25.9	15.6
Qatar	7	7	3	...	...	0.5	...	...	0.5	11.9
Israel	...	1	...	...	...	...	...	...	...	...
United Arab Emirates	80	71	74	80	63	13.8	15.3	5.3	13.1	13.8
Middle East total	962	803	427	341	169	168.8	197.6	186.3	294.8	334.1
Canada	865	1,001	856	721	672	557.0	462.9	412.1	347.1	295.2
Far East	275	201	167	117	70	88.4	72.6	61.7	49.9	60.7
Total crude	3,500	3,244	2,207	1,678	1,323	1,408.5	1,290.5	1,127.8	1,225.0	1,238.5

*Preliminary

Imports of refined products

	1974*	1973	1972	1971	1970	1969	1968	1967	1966	1965
	(Thousands of barrels daily)									
Gasoline	195	132	68	59	67	62.2	59.0	42.7	48.1	37.1
Kerosine	3	2	1	1	4	2.6	0.5	0.1	0.6	0.3
Jet-fuel kerosine	160	167	162	150	125	110.7	85.8	73.8	51.4	36.9
Jet-fuel naphtha	30	36	33	30	19	14.1	19.4	14.9	34.4	45.2
Distillate	255	380	182	153	147	139.4	131.5	50.7	37.9	35.7
Residual	1,676	1,827	1,746	1,583	1,528	1,264.7	1,120.0	1,084.3	1,032.3	944.1
Unfinished oils	140	137	125	124	108	106.2	80.2	96.2	96.5	92.3
Other	1316	1276	1215	1145	97	57.5	52.9	45.9	46.9	37.7
Total U.S.	2,775	2,957	2,532	2,245	2,095	1,757.4	1,549.3	1,408.6	1,348.1	1,229.3

*Preliminary. †Includes plant condensate 1974, 103; 1973, 103; 1972, 86; 1971, 36.

Exports of refined products—and crude

	1974*	1973	1972	1971	1970	1969	1968	1967	1966	1965
	(Thousands of barrels daily)									
Gasoline	4	5	2.6	4.5	3.8	6.7	5.7	18.8	15.9	17.6
Distillate	3	9	3.3	7.6	2.5	3.1	4.2	11.7	12.0	10.0
Residual	12	25	33.0	36.2	54.2	46.3	54.7	60.1	35.3	40.8
Lubricants	35	35	41.1	43.4	44.1	44.9	49.2	51.2	46.9	45.7
Coke	115	96	85.1	74.0	83.7	63.1	53.3	44.6	39.6	32.4
Asphalt	1	1	0.9	0.8	1.0	1.3	1.2	1.3	1.3	1.1
LP-gas	25	27	31.4	25.7	27.3	35.1	29.0	25.4	22.4	20.6
Other refined products	27	31	24.8	30.6	28.6	28.2	28.8	21.3	21.0	14.7
Crude	3	2	0.5	1.4	13.6	3.9	4.9	72.7	4.0	3.0
Total U.S.	225	231	222.7	224.2	258.8	232.6	231.0	307.1	198.4	185.9

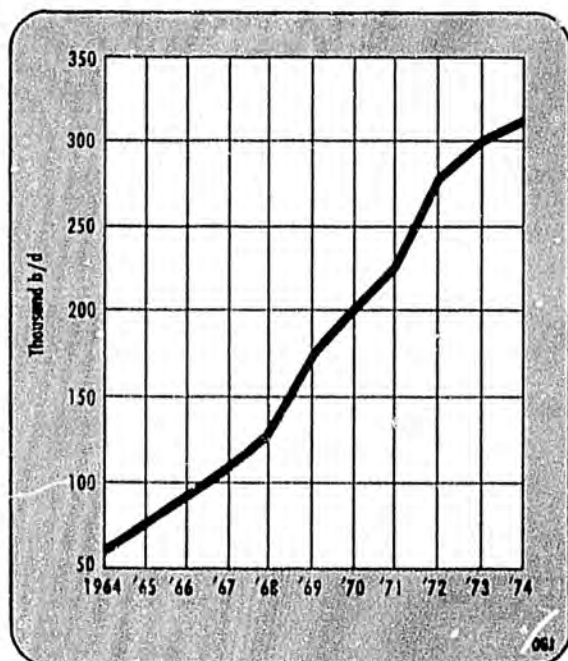
*Preliminary

Production of natural-gas liquids, liquefied refinery gases

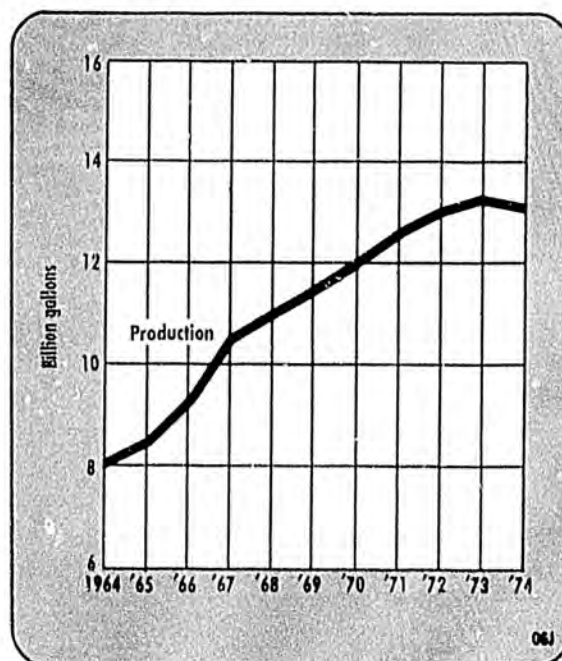
	(Thousands of barrels daily)									
	1974*	1973	1972	1971	1970	1969	1968	1967	1966	1965
Ethane (from gas processing)	315	296	276	221	201	173	125	101	82	73
LP-gases:										
Propane	570	583	587	581	555	535	504	465	409	372
Butane	240	243	242	243	239	237	216	207	192	170
Butane-propane mix	10	10	10	11	16	16	34	42	36	24
Isobutane	90	92	92	88	84	74	81	80	73	67
Total LP-gases	910	928	931	923	894	862	835	794	710	633
Natural gasolines†	400	443	427	453	452	423	404	382	356	356
Finished product and others‡	60	70	81	96	113	117	140	132	136	119
Total natural-gas liquids	1,685	1,737	1,715	1,693	1,660	1,575	1,504	1,409	1,284	1,181
Liquefied refinery gas¶	348	350	332	331	319	313	323	306	291	293
Ethane (from refineries)	25	25	25	25	26	25	25	25	25	25
Total all products	2,058	2,112	2,072	2,049	2,005	1,913	1,827	1,715	1,575	1,474

†Includes isopentane. ‡Includes plant condensate. ¶LRG figures, 1968 and earlier, include ethane. *Preliminary.

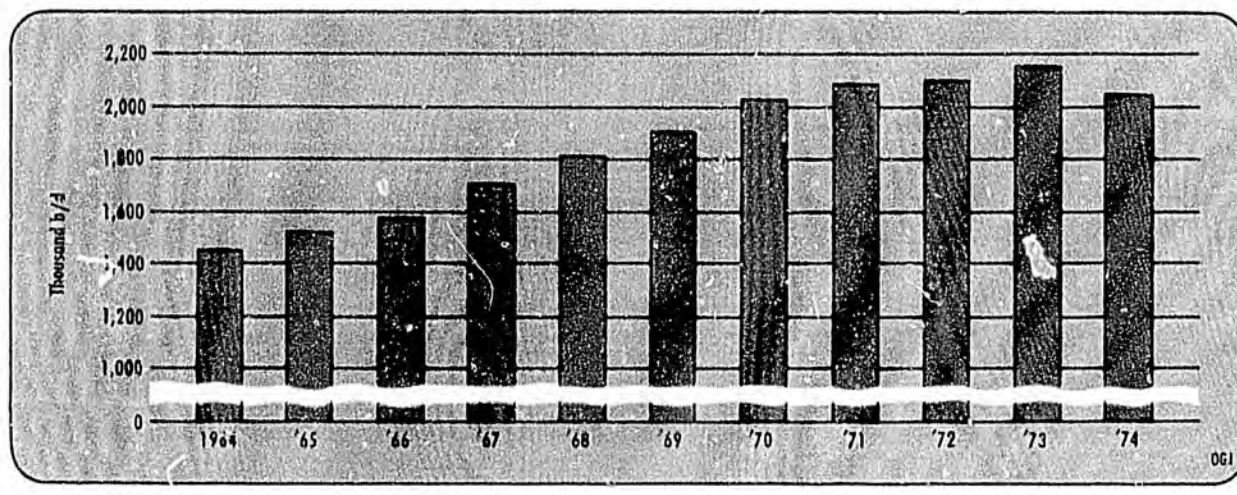
Ethane production rising



Total propane



Total production of NGL and LRG





WITH U.S. oil reserves on the rapid decline and demand on the rise, American geologists are in the field in ever increasing numbers. Many areas of the

Here are the big U.S. reserves

MOST of the crude-oil production in the U.S. comes from the nation's giant oil fields. These fields lie in many states with Texas having the most. California and Louisiana are also great storehouses of oil.

Alaska's Prudhoe Bay field, not yet on stream, is one of the largest with

reserves at from 10 to 20 billion bbl or more.

Newest field to pass the 1 billion-bbl production mark in the country is Oklahoma's Sho-Vel-Tum.

To be included on this select list of U.S. oil fields, a pool must have an ultimate reserve of 100,000,000 bbl or

more. Many of the fields on the listing are of 1920-30 vintage, the golden years of U.S. oil production. Some of these fields are still producing respectable amounts of oil each year.

Figures are in thousands of barrels. Only crude oil is figured into this reserve tabulation.

State	Field	1974 prod.	1,000 bbl Cum. prod.	Est. reserves	Est. No. wells
ALABAMA					
	Citronelle	4,866	112,122	37,877	416
ALASKA					
	Granite Point	4,233	56,131	34,321	25
	McArthur River	39,191	253,387	136,748	52
	Middle Ground Shoal	9,033	87,695	97,000	33
	Prudhoe Bay	2,181	6,674	*	3
	Swanson River	9,741	154,297	51,197	42
*Reserves estimates range from 10 to 20 billion bbl.					
APPALACHIAN					
	Alleghany	400	166,400	1,415	2,100
	Bradford	2,600	658,695	19,774	17,300
ARKANSAS					
	Magnolia	446	152,870	7,130	56
	Schuler and East	613	105,736	4,264	108
	Smackover	2,860	508,507	21,493	2,611
CALIFORNIA					
SAN JOAQUIN VALLEY					
	Belridge South	8,544	194,803	77,900	2,667
	Buena Vista	4,003	617,240	32,427	1,137
	Coalinga	6,483	632,952	65,887	2,219
	Coalinga Nose	3,504	432,473	30,959	74
	Coles Levee North	1,218	140,848	12,766	116
	Cuyama South	1,471	208,617	11,002	135
	Cymric	2,919	131,500	24,405	746
	Edison	1,206	113,339	12,500	527
	Elk Hills	789	283,788	1,031,000	93

State	Field	1974 prod.	1,000 bbl Cum. prod.	Est. reserves	Est. No. wells
	Fruitvale	1,016	101,817	11,400	349
	Greeley	677	107,973	3,100	47
	Kern Front	3,235	134,691	30,300	952
	Kern River	26,765	635,757	850,000	4,531
	Kettleman North Dome	643	452,104	3,756	129
	Lost Hills	2,165	119,092	21,700	1,149
	McKittrick	6,538	206,314	43,022	952
	Midway Sunset	4,920	1,197,423	420,191	6,027
	Mount Poso	2,527	168,357	20,620	498
	Rio Bravo	170	113,139	1,731	48
COASTAL AREA					
	Cat Canyon East and West	6,064	174,126	48,100	590
	Dos Cuadras	14,990	102,488	73,247	123
	Elwood	40	103,266	479	12
	Orcutt	1,776	148,789	13,035	176
	Rincon	3,319	123,549	20,209	312
	San Ardo	12,877	274,160	103,800	913
	Santa Ynez*				
	Santa Maria Valley	3,558	159,363	26,612	214
	South Mountain	1,640	130,617	16,142	441
	Ventura	11,393	793,393	83,500	809
*1-3 billion bbl					
LOS ANGELES BASIN					
	Beverly Hills	4,656	78,334	31,384	128
	Brea Olinda	3,388	343,585	24,212	721
	Coyote East	674	98,135	5,300	67
	Coyote West	2,143	232,141	18,361	161
	Dominguez	1,110	258,272	10,162	131
	Huntington Beach	19,035	923,820	118,800	1,118
	Inglewood	3,588	296,656	25,100	432
	Long Beach	2,598	878,213	20,605	733
	Montebello	558	184,500	5,120	178
	Richfield	1,476	164,852	16,372	304



nation, once overlooked, will get a close investigation by earth scientists.

State	Field	1974 prod.	1,000 bbl Cum. prod.	Est. reserves	Est. No. wells
	Santa Fe Springs	753	600,697	11,218	242
	Seal Beach	1,236	187,989	11,900	176
	Torrance	2,747	182,332	17,591	364
	Wilmington	65,382	1,681,810	697,935	2,335

COLORADO

Rangely	20,284	513,615	158,379	369
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FLORIDA

Jay	33,166	75,383	237,617	85
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ILLINOIS

Clay City	2,713	307,937	17,063	2,138
Dale	389	100,403	4,597	495
Lawrence	812	362,201	4,600	2,631
Loudon	2,693	363,553	21,447	1,234
Main	870	223,974	2,100	3,101
New Harmony	1,380	155,355	14,645	980
Salem	2,783	355,773	14,227	1,228

KANSAS

Bemis-Shutts	1,933	218,408	16,592	925
Chase-Silica	1,185	250,429	9,571	1,033
Eldorado	1,085	279,932	10,068	760
Hall-Gurney	1,821	127,244	12,756	1,175
Kraft-Prusa	866	117,824	7,176	590
Trapp	1,332	207,023	12,977	919

LOUISIANA, ONSHORE

Avery Island	1,252	78,808	31,192	38
Bay DeChene	5,464	74,815	52,165	80
Bay St. Elaine	4,804	143,406	56,494	95
Bayou Sale	2,793	145,141	29,859	91
Black Bay West	7,068	91,538	58,462	145
Calliou Island	18,023	516,898	183,102	361
Cote Blanche Island	6,982	78,996	51,004	58
Delta Farms	916	110,053	9,947	41
Garden Island Bay	8,403	174,829	81,508	249
Golden Meadow	2,256	115,299	19,701	207
Grand Bay	3,934	152,533	52,467	161
Hackberry East	1,753	93,492	16,508	85
Hackberry West	2,944	117,896	22,104	158
Iowa	1,250	92,363	7,637	37
Jennings	280	111,689	3,311	84
Lafitte	5,727	212,532	45,463	244
Lake Barre	4,613	170,632	49,369	119
Lake Pelto	3,110	100,747	34,253	66
Lake Salvador	1,662	75,472	34,528	50

State	Field	1974 prod.	1,000 bbl Cum. prod.	Est. reserves	Est. No. wells
	Lake Washington	6,488	198,674	76,326	144
	Leeville	2,419	125,226	24,774	92
	Paradis	4,057	103,213	26,131	75
	Quarantine Bay	3,523	149,648	35,352	122
	Romere Pass	2,218	80,347	24,653	37
	Timbalier Bay	7,985	234,619	192,126	355
	Venice	4,400	158,185	46,815	115
	Vinton	2,994	122,886	17,114	177
	Weeks Island	6,446	200,175	89,825	82
	West Bay	6,679	176,543	63,457	198
	W. Cote Blanche Bay	7,880	147,316	102,684	322

LOUISIANA, NORTH

Caddo-Pine Island	3,348	313,014	26,986	7,370
Delhi	6,583	165,956	44,044	105
Haynesville (Ark., La.)	1,644	171,874	13,126	190
Homer	318	92,227	8,005	153
Rodessa, (La., Tex.)	351	175,474	4,526	145

LOUISIANA, OFFSHORE

Bay Marchand Blk. 2 (Incl. onshore)	32,632	429,534	220,466	293
Eugene Island Blk. 126	4,429	89,207	35,803	53
Eugene Island Blk. 175	8,059	37,300	82,700	76
Eugene Island Blk. 276	4,687	46,769	118,231	60
Eugene Island Blk. 330	19,747	40,488	190,754	120
Grand Isle Blk. 16	13,156	211,052	138,948	92
Grand Isle Blk. 43	20,999	163,669	206,403	230
Grand Isle Blk. 47	3,972	65,069	34,931	71
Main Pass Blk. 35	2,155	79,768	20,232	77
Main Pass Blk. 41	10,396	144,519	135,481	100
Main Pass Blk. 69	7,973	191,010	68,990	132
Main Pass Blk. 306	5,573	31,942	118,058	134
Ship Shoal Blk. 204	5,732	27,140	77,860	58
Ship Shoal Blk. 207	6,223	44,419	130,581	53
Ship Shoal Blk. 208	10,559	92,506	132,494	86
South Marsh Island Blk. 73	5,020	40,848	64,152	37
South Pass Blk. 24 (Incl. onshore)	15,223	371,476	118,524	436
South Pass Blk. 27	11,568	258,826	126,074	342
South Pass Blk. 62	6,446	48,402	141,598	64
South Pass Blk. 65	10,105	46,193	143,807	62
Timbalier Bay Blk. 21	9,449	159,698	100,111	221
West Delta Blk. 30	22,586	312,462	137,538	216
West Delta Blk. 58	10,035	38,091	111,909	81
West Delta Blk. 73	7,654	128,219	146,781	96

MISSISSIPPI

Baxterville	6,853	167,013	67,987	198
Heidelberg	5,039	115,229	34,771	263
Tinsley	2,543	196,017	23,983	184

MONTANA

Bell Creek	9,345	68,819	47,126	228
Cut Bank	3,189	138,439	58,718	839
Pine	2,904	78,601	21,416	112

NEW MEXICO

Caprock and East	484	92,810	7,190	614
Denton	1,561	124,675	15,325	188
Empire Abo	12,267	111,171	88,829	251
Eunice	4,079	126,215	31,776	806
Hobbs	4,722	221,451	33,232	412
Maljamar	5,854	104,105	60,895	819
Monument	387	210,412	29,588	114
Vacuum	13,152	274,986	125,014	972

NORTH DAKOTA

Beaver Lodge	3,117	78,510	21,506	138
Tioga	953	56,253	29,480	215

OKLAHOMA

Allen	2,540	126,921	13,079	1,500
Avant	360	106,602	2,398	645

State	Field	1974 prod.	1,000 bbl Cum. prod.	Est. reserves	Est. No. wells
	Bowlegs	1,665	158,492	6,508	175
	Burbank	3,685	504,039	36,961	1,070
	Cement	1,280	140,236	14,764	1,465
	Cushing	2,965	463,182	21,818	1,700
	Earlsboro	620	216,424	3,576	200
	Edmond West	625	155,147	4,853	450
	Eola-Robberson	3,720	107,977	32,023	485
	Fitts	2,565	150,873	12,127	635
	Glenn Pool	1,980	309,421	10,579	1,035
	Golden Trend	8,135	402,011	97,989	1,200
	Healdton	7,575	294,240	25,760	1,460
	Hewitt	6,595	218,986	31,014	1,180
	Little River	330	159,901	5,099	165
	Oklahoma City	2,000	733,896	16,104	265
	Postle	6,780	70,560	60,102	285
	Seminole Greater	1,010	199,456	10,544	255
	Sho-Vel-Tum	34,250	1,002,456	247,544	8,040
	Sooner Trend	9,810	199,414	50,586	2,975
	St. Louis	1,100	216,145	8,855	610
	Tonkawa	275	135,212	1,788	205

TEXAS

District 1					
	Darst Creek	1,731	141,384	18,616	864
	Luling-Branyon	1,345	147,162	12,838	1,403
District 2					
	Greta All	4,476	116,951	43,049	191
	Lake Pasture	4,439	65,537	44,112	212
	Refugio All	314	95,160	4,840	67
	Tom O'Connor	25,667	496,410	203,590	830
	West Ranch	14,560	76,469	298,531	624
District 3					
	Anahuac	8,949	248,759	106,241	234
	Barbers Hill	497	124,529	10,471	100
	Conroe	21,737	540,659	134,341	588
	Dickinson-Gillock	1,839	107,953	42	70
	Goose Creek & East	760	130,749	9,551	221
	Hastings E&W	27,912	502,991	172,009	439
	High Island all	1,204	130,859	19,141	98
	Hull-Merchant	1,521	193,909	11,091	385
	Humble all	1,473	161,839	28,161	413
	Magnet Withers all	3,025	80,931	44,069	286
	Old Ocean	577	121,307	8,693	37
	Oyster Bayou	5,520	94,837	51,667	35
	Raccoon Bend	2,002	91,721	33,279	135
	Sour Lake	925	117,386	7,614	334
	Spindletop	171	153,741	3,259	72
	Thompson all	16,319	370,071	129,929	305
	Tomball	2,932	103,647	32,217	216
	Webster	24,762	412,958	162,042	148
	West Columbia	1,018	157,514	12,486	193
District 4					
	Aqua Dulce-Straiton	2,122	138,000	32,000	393
	Borregas all	2,072	108,293	26,707	502
	Kelsey all	2,125	107,518	42,482	344
	Plymouth	802	116,718	8,282	103
	Seeligson all	2,453	263,203	61,797	433
	Tijerina-Canales-Blucher	3,867	100,528	64,472	182
	White Point East	909	99,681	10,319	154
District 5					
	Mexia	129	107,353	2,647	97
	Powell	92	130,063	937	37
	Van and Van Shallow	16,264	419,384	130,616	427
District 6					
	East Texas	72,312	4,241,715	1,758,285	13,360
	Fairway	13,741	123,703	76,234	97
	Hawkins	39,630	535,697	289,303	464
	Neches	4,819	60,132	39,868	166
	Quitman all	3,360	80,205	29,469	246
	Talco	3,773	237,534	32,466	608
District 7-B					
	Eastland County	241	120,482	12,410	294
	Stephens County	1,877	169,155	18,002	558

State	Field	1974 prod.	1,000 bbl Cum. prod.	Est. reserves	Est. No. wells
District 7-C					
	Big Lake	500	124,664	10,336	101
	McCamey	794	124,089	5,911	884
	Pegasus	2,568	113,008	26,992	181
District 8					
	Andector	6,538	128,037	56,963	93
	Block 31	6,267	143,861	46,139	120
	Cowden North	14,954	276,820	48,180	1,042
	Cowden South, Foster Johnson	16,714	299,613	100,387	1,310
	Dollarhide	5,843	150,205	59,795	147
	Dune	7,448	126,476	73,524	899
	Emma & Triple N	1,993	96,694	18,306	259
	Fullerton all	6,756	238,417	61,583	579
	Goldsmith all	17,431	578,658	96,342	2,761
	Hendrick	654	252,215	2,785	196
	Howard Glasscock	6,902	310,153	64,847	1,892
	Tatan East	4,197	86,412	38,588	873
	Jordan	3,426	102,424	27,576	336
	Kermitt	934	112,374	17,626	469
	Keystone	5,101	272,902	47,098	792
	McElroy	11,820	309,518	50,482	1,970
	Means all	6,644	146,249	63,751	376
	Midland Farms all	6,396	176,039	48,961	337
	Penwell	1,485	84,967	15,033	472
	Sand Hills	5,092	189,105	55,895	1,069
	Shafter Lake	2,325	72,033	27,967	436
	TLX all	3,656	236,342	28,658	730
	Waddell	2,788	81,605	28,395	425
	Ward South	546	96,643	3,357	472
	Ward Estes North	6,170	310,174	64,826	1,966
	Yates	18,192	605,446	994,556	584

District 8-A					
	Anton	7,443	78,354	31,646	177
	Anton Irish	4,800	73,727	41,112	146
	Cogdell Area	10,237	187,918	132,082	386
	Diamond M	6,864	197,028	77,972	461
	Kelly-Snyder	76,433	616,472	491,640	680
	Levelland	12,391	232,508	92,492	1,617
	Prentice	5,932	93,846	46,154	308
	Russell all	2,697	112,041	22,959	224
	Salt Creek	13,093	126,663	103,337	119
	Seminole all	20,102	219,347	95,653	375
	Slaughter	47,033	595,465	194,535	2,526
	Spraberry Trend	18,190	379,633	130,367	3,669
	Wasson all	86,784	703,095	629,453	2,117
	Welch	6,160	88,531	61,469	391

District 9					
	Archer County	2,640	238,970	20,411	4,119
	Cooke County	2,106	94,713	18,642	1,981
	KMA	2,051	167,376	17,624	399
	Walnut Bend	4,711	101,145	38,855	278
	Wichita County	4,787	504,852	41,675	6,875
	Wilbarger County	1,976	159,717	21,112	1,782
	Young County	1,563	142,237	19,666	2,483

District 10					
	Panhandle	12,347	1,283,585	131,415	10,268

UTAH

	Greater Altamont	21,898	46,197	228,435	223
	Greater Aneth	7,927	259,554	55,558	403
	Greater Red Wash	3,364	90,433	46,541	215

WYOMING

	Elk Basin (Wyo.-Mont.)	8,887	448,442	69,759	255
	Garland	3,441	112,260	25,863	207
	Grass Creek	2,764	140,295	24,605	248
	Hamilton Dome	4,454	218,253	35,527	246
	Hilgert	7,358	48,299	85,552	165
	Lance Creek	348	104,632	2,359	44
	Lost Soldier	3,425	141,618	23,659	62
	Oregon Basin	11,354	240,315	79,651	321
	Salt Creek	13,284	542,518	82,113	1,329

Source of U.S. Imports

(Average in 1,000 b/d)

Country of origin	Jan.	Feb.	Mar.	Apr.	May	June	6-month average	Percent of total
Crude oil								
Algeria				77	264	303	108	3.2
Bahamas	74	17	61	87	94	150	81	2.4
Canada	1,044	907	900	947	1,015	841	943	28.3
Ecuador	95	63	90	122	82	89	90	2.7
Indonesia	147	237	216	313	188	237	222	6.6
Iran	265	288	434	479	609	434	420	12.6
Netherlands Antilles	43	30	78	72	122	420	128	3.8
Nigeria	321	367	579	431	716	677	517	15.5
Saudi Arabia				122	304	377	135	4.1
Trinidad	61	57	56	113	146	147	97	2.9
Tunisia	1			27	83	37	25	0.8
Venezuela	473	372	398	407	357	399	401	12.0
Virgin Islands	19	25	18	66	63	42	39	1.2
Others	146	92	78	140	267	47	129	3.9
Total	2,689	2,455	2,908	3,402	4,310	4,200	3,335	100.0
Refined oil								
Algeria				63	17	10	15	0.6
Bahamas	143	167	214	165	130	122	157	6.5
Canada	228	229	209	191	205	120	197	8.2
Italy	109	146	136	90	105	63	108	4.5
Netherlands Antilles	608	638	442	386	404	124	432	17.9
Nigeria	21	31	29	10	3	37	22	1.0
Trinidad	117	119	201	146	200	171	160	6.6
Venezuela	768	793	781	625	480	436	646	26.3
Virgin Islands	443	359	275	243	276	354	325	13.5
Others	319	307	273	431	255	510	348	14.4
Total	2,756	2,789	2,560	2,350	2,075	1,947	2,410	100.0
Total petroleum								
Algeria				140	281	313	123	2.1
Bahamas	217	184	275	252	224	272	238	4.1
Canada	1,272	1,136	1,109	1,138	1,220	961	1,140	19.8
Ecuador	95	63	90	122	82	89	90	1.6
Indonesia	158	292	224	321	196	243	238	4.1
Iran	278	296	452	507	616	468	437	7.6
Italy	121	146	143	90	105	81	114	2.0
Netherlands Antilles	651	668	520	458	526	544	560	9.8
Nigeria	342	398	608	441	719	714	539	9.4
Saudi Arabia				139	312	427	147	2.6
Trinidad	178	176	257	259	346	318	257	4.5
Tunisia	1			27	83	37	25	0.4
Venezuela	1,241	1,165	1,179	1,032	837	835	1,047	18.2
Virgin Islands	642	384	293	309	339	396	364	6.3
Others	429	336	318	518	499	449	426	7.5
Total	5,445	5,244	5,468	5,753	6,385	6,147	5,745	100.0

Source: Federal Energy Office estimates.

OGJ

Revised drilling forecast for 1974—U.S. and Canada

State	First half estimate—5 mos. actual				1974 12 mos. forecast				All wells change from '73
	Total comp.	Wildcats	Field wells	Total ft (1,000 ft)	Total wells	Wildcats	Field wells	Total ft (1,000 ft)	
Alabama	69	41	28	645	140	36	54	1,278	+ 38
Alaska	7	2	5	57	38	15	23	361	+ 3
Arizona	10	5	5	69	15	10	5	104	+ 7
Arkansas	145	38	107	795	329	169	160	1,939	+ 37
California	704	94	610	2,479	1,652	230	1,422	5,342	327
Onshore	668	86	582	2,400	1,561	214	1,347	5,051	+ 299
Offshore	36	8	28	79	91	16	75	291	+ 28
Colorado	455	163	292	1,821	925	427	498	3,702	+ 85
Florida (9 offshore last '73)	38	21	17	462	87	62	25	1,058	+ 20
Georgia	5	5	0	30	6	6	0	36	+ 3
Idaho	9	9	0	72	11	11	0	88	+ 5
Illinois	290	66	224	697	621	197	424	1,436	+ 10
Indiana	145	66	79	222	285	130	155	437	+ 26
Kansas	1,329	379	950	4,035	2,789	965	1,824	8,467	+ 675
Kentucky	328	94	234	553	702	171	531	1,184	+ 41
Louisiana	1,359	255	1,104	10,184	3,225	865	2,360	25,559	+ 285
North	513	54	459	1,730	1,014	142	872	3,419	+ 179
South	449	129	320	4,686	1,222	412	810	12,753	+ 31
Offshore	397	72	325	3,768	989	311	678	9,387	+ 75
Maryland	2	2	0	16	2	2	0	16	+ 1
Michigan	127	81	46	627	317	181	136	1,566	+ 36
Mississippi	223	157	66	1,791	500	347	153	4,016	+ 139
Missouri	11	11	0	10	12	12	0	11	+ 3
Montana	260	154	106	847	789	437	352	2,571	+ 142
Nebraska	94	61	33	498	210	140	70	1,112	+ 47
Nevada	1	1	0	7	2	2	0	14	+ 2
New Mexico	517	111	406	3,099	1,139	286	853	6,823	+ 41
East	363	85	278	2,213	789	211	578	4,809	+ 200
West	154	26	128	886	350	75	275	2,014	+ 159
New York	138	7	131	212	162	18	144	249	+ 1
North Carolina	10	10	0	38	11	11	0	42	+ 11
North Dakota	52	30	22	319	126	67	59	868	+ 2
Ohio	881	89	792	3,492	1,782	180	1,602	7,064	+ 278
Oklahoma	1,473	189	1,284	8,484	3,121	420	2,701	17,977	+ 718
Oregon	0	0	0	0	0	0	0	0	- 3
Pennsylvania	531	32	499	1,023	1,079	78	1,001	2,458	- 63
South Dakota	3	2	1	24	8	6	2	63	- 14
Tennessee	47	28	19	77	101	59	42	165	+ 1
Texas	4,976	1,563	3,413	26,024	10,323	3,353	6,970	54,570	+ 1,829
District 1	347	117	230	1,394	719	240	479	2,888	+ 198
District 2	341	182	159	1,917	728	400	328	4,093	+ 248
District 3	419	217	202	2,779	980	520	460	6,500	+ 146
District 4	460	189	271	2,987	961	419	542	6,240	+ 203
District 5	72	38	34	403	152	82	70	851	+ 67
District 6	140	53	87	919	331	120	211	2,172	+ 16
District 7-B	756	245	511	2,539	1,426	508	918	4,789	+ 521
District 7-C	429	95	334	2,475	844	184	660	4,710	- 25
District 8	693	66	627	4,401	1,460	162	1,298	9,579	+ 82
District 8-A	438	78	360	2,113	896	166	730	4,322	- 79
District 9	505	145	360	1,521	1,048	264	784	3,085	+ 140
District 10	261	36	225	1,586	536	75	461	3,258	+ 142
Offshore	115	102	13	990	242	213	29	2,083	+ 170
Utah	95	26	69	902	225	89	136	2,023	+ 29
Virginia	30	1	29	138	36	7	29	166	+ 27
West Virginia	308	50	258	1,007	787	109	678	2,451	+ 86
Wyoming	404	211	193	2,725	1,059	499	560	6,617	+ 139
Total U.S.	15,076	4,054	11,022	73,481	32,616	9,647	22,969	161,833	5,014
Canada	1,708	775	933	6,902	3,364	1,368	1,996	11,675	- 1,541
Western	1,616	768	848	6,717	3,253	1,358	1,895	11,393	- 1,486
Alberta	1,390	638	752	5,602	2,890	1,184	1,706	9,728	- 891
B.C.	127	57	70	596	166	72	94	873	+ 1
Manitoba	3	3	0	5	11	7	4	18	- 5
Northern	48	47	1	373	60	59	1	440	- 41
Saskatchewan	48	23	25	141	126	36	90	334	- 550
Eastern Offshore	7	7	0	75	10	10	0	110	- 20
Ontario	85		85	110	101		101	172	- 30
Eastern	0	0	0	0	0	0	0	0	- 5

How gasoline prices fared in 52 cities

(First half average of major-brand regular in ¢/gal)

	Price ex. tax		Pump price	
	1974	1973	1974	1973
Albany	41.1	27.9	53.1	39.9
Albuquerque	39.4	26.9	50.4	37.9
Amarillo	34.2	24.9	43.2	33.9
Atlanta	37.9	26.1	49.4	37.6
Baltimore	38.7	26.1	51.7	39.1
Birmingham	38.6	25.9	50.6	37.9
Boston*	37.9	26.1	49.4	37.6
Buffalo	41.1	27.4	53.1	39.4
Charlotte	38.6	25.9	51.6	38.9
Cheyenne	33.3	27.1	44.3	39.1
Chicago*	40.7	27.4	53.7	40.4
Cleveland	39.6	26.9	50.6	37.9
Corpus Christi	34.7	24.2	43.7	33.2
Dallas	34.7	24.2	43.7	33.2
Denver	41.1	27.4	52.1	38.4
Des Moines	37.9	26.9	48.9	37.9
Detroit	38.9	25.4	51.9	38.4
Fort Worth	34.7	24.2	43.7	33.2
Houston	36.0	24.2	45.0	33.2
Indianapolis	40.8	26.2	52.8	38.2
Jacksonville	38.6	25.7	50.6	37.7
Kansas City	40.5	26.6	51.5	37.6
Little Rock	36.4	24.4	47.9	35.9
Louisville	41.8	27.4	52.8	38.4
Los Angeles	38.1	25.5	49.1	36.5
Memphis	37.9	25.7	48.9	36.7
Miami	37.4	25.4	49.4	37.4
Milwaukee	40.6	27.0	51.6	38.0
Minn.-St. Paul	38.9	27.9	49.9	38.9
Newark	39.4	27.9	50.4	38.9
New Orleans	27.6	24.4	49.6	36.4
New York*	42.6	28.9	55.6	41.9
Norfolk	35.4	23.7	48.4	36.7
Oklahoma City	39.3	26.3	49.9	36.9
Omaha	40.3	26.9	52.8	39.4
Philadelphia	38.6	25.9	50.6	37.9
Phoenix	38.3	27.0	49.3	38.0
Pittsburgh	38.6	25.9	50.6	37.9
Portland, Ore.	39.0	26.2	50.0	37.2
Salt Lake City	39.1	25.7	50.1	36.7
San Antonio	34.2	24.2	43.2	33.2
San Diego	37.8	26.3	48.8	37.3
San Francisco	38.8	26.2	49.8	37.2
Seattle	37.3	25.3	50.3	38.3
Spokane	37.8	24.9	50.8	37.9
Springfield, Ill.*	38.9	26.9	51.9	39.9
St. Louis	40.8	27.7	51.8	38.7
Tampa	37.4	25.4	49.4	37.4
Texarkana	34.2	23.8	43.2	32.8
Tulsa	37.3	25.8	47.9	36.4
Wichita	39.6	26.2	50.6	37.2
Wichita Falls	34.2	24.0	43.2	33.0

Avg. for 6 months 38.30 26.02 49.58 37.27

*Pump price includes local tax ranging from 0.5 to 2.0¢/gal. †Jan. through June, not column totals.

OGJ

Foreign posted crude prices

(Prices effective July 1, 1974)

	\$/bbl
Algeria:	
All 44.00°-44.09°	16.216
Libya:	
All 40.00°-40.09°	15.768
Nigeria:	
All 34.00°-34.09°	
Bonny	14.691
Forcados	14.691
All 27.00°-27.09°	
Bonny	14.481
Middle East, Persian Gulf:	
Arabian, 34.00°-34.09°	
Ras Tanura	11.651
Arabian, 31.00°-31.09°	
Ras Tanura	11.561
Iranian, 34.00°-34.09°	
Kharg Island	11.875
Iranian, 31.00°-31.09°	
Kharg Island	11.635
Kuwait, 31.00°-31.09°	
Mina al Ahmadi	11.545
Oman, 34.00°-34.09°	
Mina al Fabal	12.298
Qatar, 40.00°-40.09°	
Um Said	12.414
Qatar, 36.00°-36.09°	
Halul Island	12.013
Iraq, 35.00°-35.06°	
Khor al Amaya	11.671
Abu Dhabi, 37.00°-37.09°	
Das Island	12.086
Abu Dhabi, 39.00°-39.09°	
Jebel Dhanna	12.636
Abu Dhabi, 40.00°-40.09°	
Zakum	12.563
Middle East, E. Mediterranean:	
Arabian, 34.00°-34.09°	
Sidon	13.647
Iraq, 36.00°-36.09°	
Tripoli & Banias	No posted price
Far East:	
Brunei, Seria Light 36°	
Lutong, Sarawak	No posted price
Malaysia (Sarawak)	
Lutong, Sarawak (various)	12.60
Indonesia (all crude)	12.60
Canada: (Canadian dollars)	
Leduc-Woodbend (Alberta)	6.70
Redwater (Alberta)	6.58
Weyburn (Sask.)	6.17
Boundary Lake (B.C.)	6.12
South America:	
Bolivia (various)	16.00
Ecuador, 28.00°-28.09°	
Esmeraldas	13.70
Venezuela, includes \$1.9086/bbl freight premium, excludes low-sulfur premiums ranging up to \$1.05/bbl, posted price	
15°	13.0458
20°	13.3457
25°	14.1792
30°	14.4928
35°	14.8064
40°	15.1201

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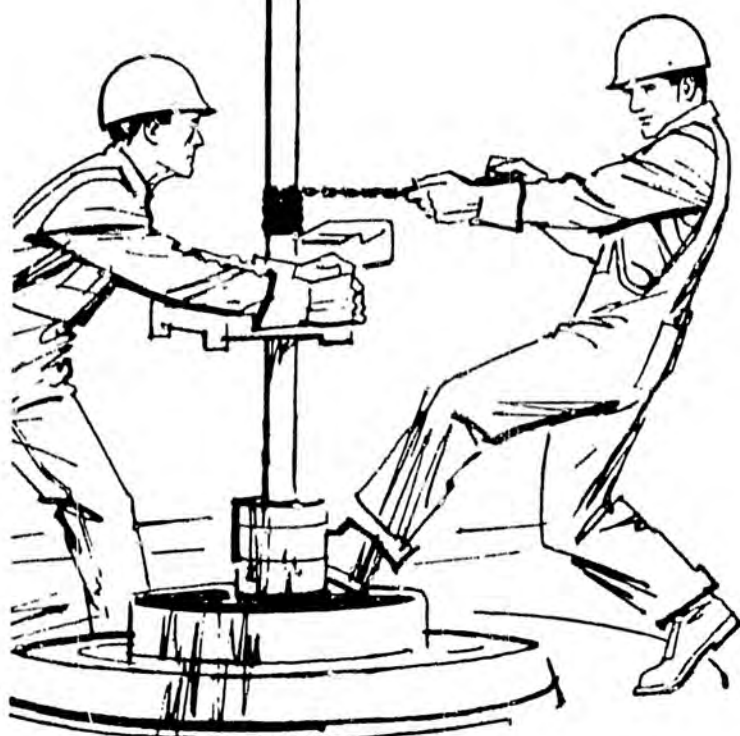
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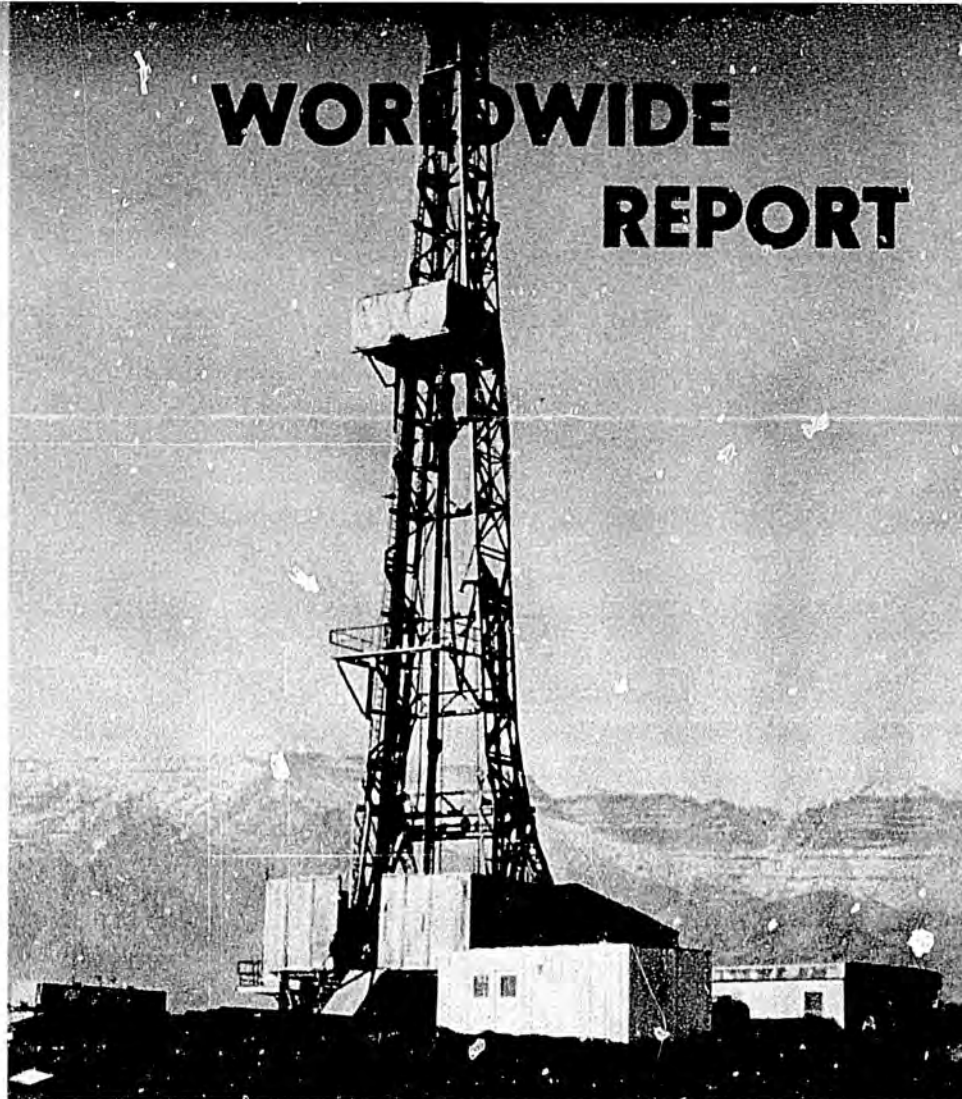
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NATIONAL Iranian Oil Co. is directing a major drilling program at proving up gas reserves for a gas-injection program that will peak at 13 billion cfd. This rig is working in mountainous Central Iran.

WORLDWIDE REPORT



Changes restructuring worldwide oil

FRANK J. GARDNER
International Editor

1974 WILL be remembered as the year of earthquake change in the structure and operational procedures of the oil industry.

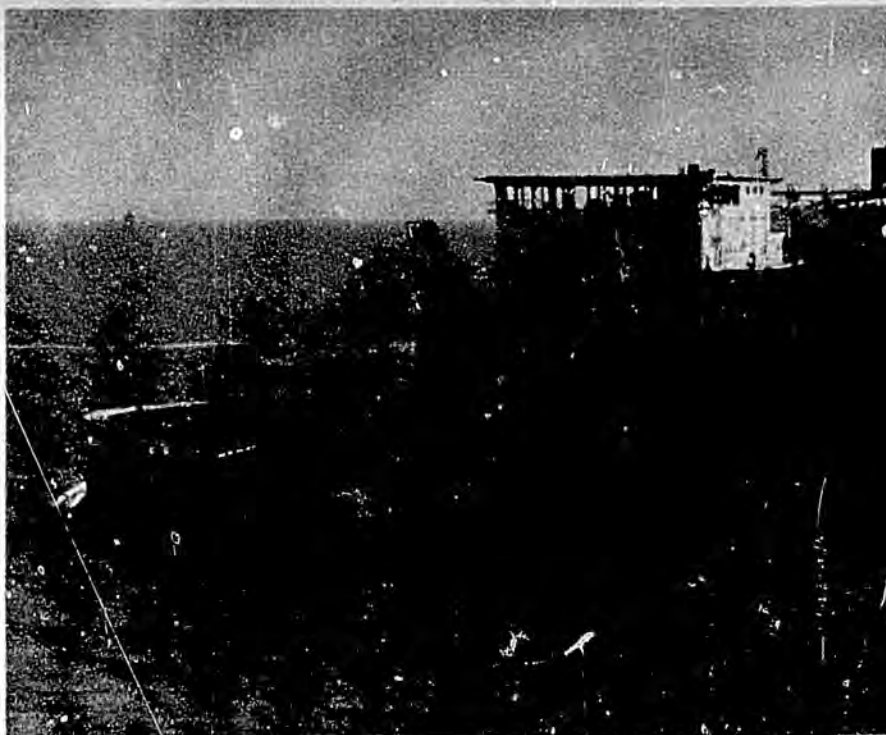
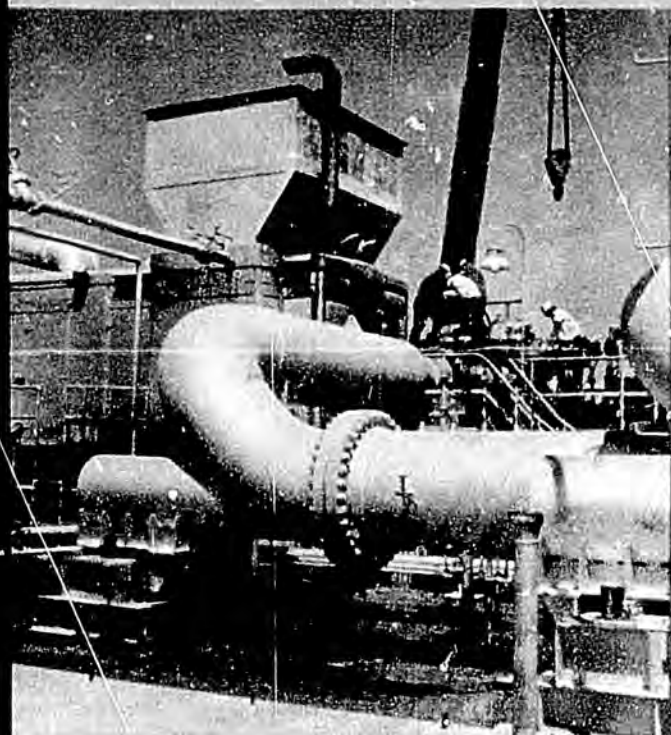
It marked the transfer of power from the international oil companies to the producing-country governments. The year saw the economies of many consuming countries threatened as their oil bills mounted due to the politically controlled crude prices. And it saw the Organization of Petroleum Exporting Countries (OPEC) ascend to new heights in world power as oil prices continued to increase.

The effects of the unilateral OPEC price boosts, which continued throughout the year without letup, are just beginning to be felt. Their full impact will descend on the world economy in 1975, when international payment balances are totted up.

Through all the price pressure, Saudi Oil Minister Yamani emerged as the spokesman for those in the producing nations who were promoting a decrease in crude prices.

At the turn of the year, the Arab members of OPEC began to relax the embargoes and production cutbacks they had imposed after the war of October, 1973. But the Dec. 23 announcement of yet-higher crude prices—128% higher, to be exact—stunned industrial (and non-industrial) countries.

There followed many weeks of government-to-government oil-barter deals. It was every country for itself as the major powers dispatched their ministers to the Middle East to court the Arabs' favor.



WATER injection, via this pump station (left) and others like it, helps maintain the amazing productive muscle of Saudi Arabia's giant Ghawar

oil field, the world's biggest. Ghawar produced 4.6 million b/d during the first 6 months from 375 wells, hitting 9.96 billion bbl cumulative—

Britain, France, West Germany, Italy, Spain, and the developing countries sent their diplomats to secure their future supplies of oil. In return, they were peddling rice, steel, cement, rubber, plastics, fibers, arms, entire refineries and petrochemical complexes.

Had they not been still locked out by the Arab embargo, the U.S. and Holland might also have joined the parade to the Middle East.

Some impressive deals were sealed, but few have come to full fruition. France made a \$2-billion arms-for-oil pact with the Saudis, and a \$5-billion

10-year contract with Iran, the biggest and most important agreement ever reached between an oil-producer and a consumer country. It involved an exchange for crude of nuclear power plants (first in the Middle East), pipelines, refineries, gas-liquefaction plants, methane tankers, and a petrochemical complex.

The hand of the French then turned to Libya and signed a similar deal, said to be about equal to that with Iran.

Britain made a \$275-million bargain with Iran, trading manufactured goods for 37 million bbl of Iranian crude.

Italy jumped into the play and traded a broad spectrum of industrial goods and tanker-construction promises for 220 million bbl of Libyan oil. Japan promised a \$1-billion loan to the Iraqis for industrial projects in return for 650 million bbl of crude over the next 10 years.

Ironically, neither trading side was certain it could fulfill the terms of the agreements. The materials offered the producing nations were often in short supply at home in the industrial countries, while the producers were far from certain how much crude they'd be lifting under the participa-

Refining capacity gains in non-Communist world

REFINING capacity in non-Communist countries outside the U.S. and Canada will be just over 40 million b/d on Jan. 1, 1975, according to the Journal's detailed world-wide survey.

The 40.3-million-bbl/d compares with 38.3 million b/d on Jan. 1, 1974, for a 5.2% growth. Projected crude capacities for the next two years are 41.5 million b/d on Jan. 1, 1976, and 42.9 million b/d on Jan. 1, 1977.

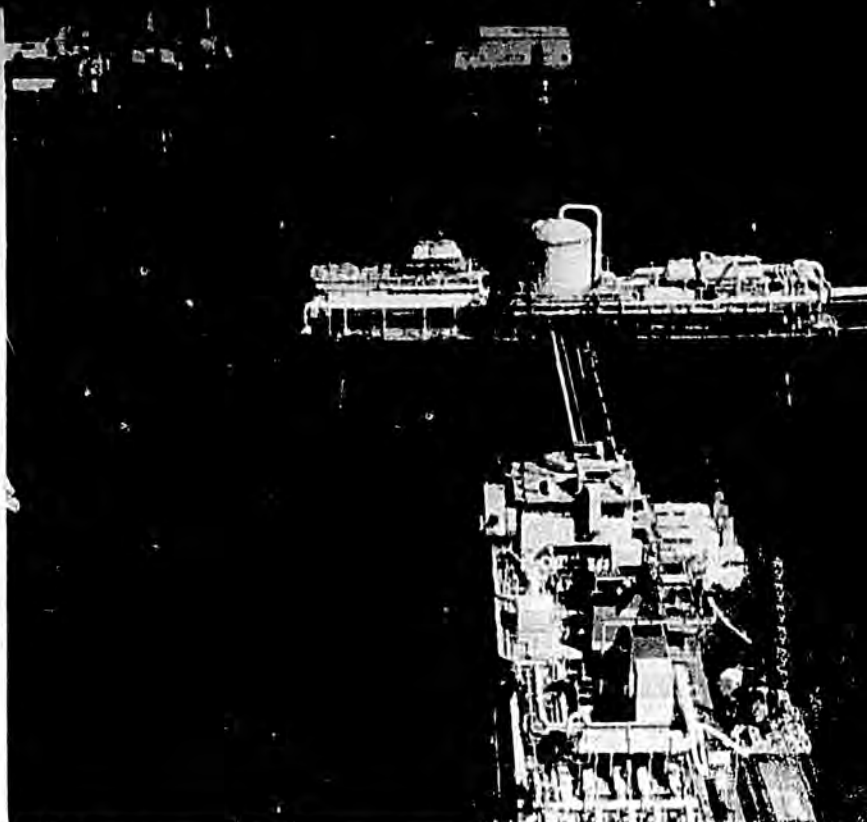
Biggest increases in crude capacity the past year came in western Europe, where a 650,000-b/d gain was chalked

up. The Asia-Pacific area increased crude capacity by just over 460,000 b/d, while the increase in the Middle East was just under 400,000 b/d.

Catalytic cracking capacity in non-Communist countries outside the U.S. and Canada will stand at 2.36 million b/d on Jan. 1, 1975. This is a slight increase over the 2.33 million b/d figure on Jan. 1, 1974. The next two years should see small additions, to 2.41 and 2.48 million b/d on Jan. 1, 1976 and Jan. 1, 1977.

Catalytic-reforming capacity for this part of the world stood at 3.57 million b/d at the beginning of 1974, and will be 3.77 million b/d on Jan. 1, 1975. Reforming capacity should increase to 3.89 and 4.17 million b/d at the beginnings of 1976 and 1977.

Hydroprocessing has shown good growth in these countries, and increased growth is anticipated. Capacity this coming Jan. 1 will be 11.3 million b/d, up from the 10.6-million-b/d figure of a year ago. The first of 1976 and 1977 should see combined hydroprocessing capacity grow to 11.6 and 11.9 million b/d.



also a world record. At center, ARCO-lipco group's big 1-million-bbl crude-storage barge, ARCO Ardjuna, nears completion of its second

year of operation off Java. At right new waterflood plant (upper left in photo) will boost oil flow from Fateh field off Dubai.

tion pacts that were then in force.

To remedy this, the Middle East states launched a campaign to increase their participation percentages. One by one throughout the year, they succeeded in boosting the old 25% share to 35, 55, and finally 60% which is now standard in all the gulf states. Today, this too is fading, as the 100% takeover is in fashion, and there's little doubt that in 1975, following the Saudis' lead, nearly all OPEC members will take over full control.

Auctions fall. Parallel with the participation campaigns, several OPEC states decided to offer their much-

wanted crude at public auctions. Such public sales at the height of the late-1973 supply crisis had fetched as much as \$20/bbl in Libya, Iran, and Nigeria.

But by February, crude prices had peaked, frozen, and started a slow decline. Some of the buyers at the 1973 auctions found themselves stuck with \$17-20 oil that now was selling far lower. Some canceled the sales outright, while others solved the problem by simply not picking up the loot.

As a result of new buyer caution, the Arab auctions of spring, 1974, failed miserably. All had demanded at least the posted price, but bids at

that level were few and far between. Kuwait got a top \$9/bbl bid. Abu Dhabi drew few bidders and postponed its auction, as did Qatar.

At last, in mid-March, the embargo on the U.S. was lifted, but Denmark and Holland remained on the Arab black list. Crude markets began a slow return to normal, if total confusion can be called normal. The embargo on Holland was to remain until July.

At the same time, OPEC decided the time had come to freeze prices. Saudi Arabia, Abu Dhabi, and Qatar dropped 40¢ off the Arab marker crude in early November and jumped

Capacity (1,000 b/cd) January 1, 1975				
Crude oil capacities	1-1-74	1-1-75	Projected 1-1-76	1-1-77
Asia-Pacific	8,933	9,397	9,600	9,900
Africa	1,092	1,245	1,500	1,800
Middle East	2,882	3,281	3,600	4,000
Latin America	7,266	7,635	8,000	8,400
Western Europe	18,110	18,758	18,800	18,800
Sub total	38,283	40,276	41,500	42,900
U.S. and Canada	15,171	17,323	18,000	18,500
Total, non-Communist	53,454	57,599	59,500	61,400

Capacity (1,000 b/cd) January 1, 1975				
Catalytic cracking	1-1-74	1-1-75	Projected 1-1-76	1-1-77
Asia-Pacific	515	539	560	590
Africa	60	61	63	65
Middle East	108	119	130	150
Latin America	636	649	660	675
Western Europe	1,010	990	1,000	1,000
Sub total	2,329	2,358	2,413	2,480
U.S. and Canada	4,940	5,109	5,200	5,300
Total, non-Communist	7,269	7,467	7,613	7,780

Capacity (1,000 b/cd) January 1, 1975				
Catalytic reforming	1-1-74	1-1-75	Projected 1-1-76	1-1-77
Asia-Pacific	850	909	1,000	1,100
Africa	139	156	180	200
Middle East	168	195	210	240
Latin America	329	283	300	330
Western Europe	2,088	2,226	2,300	2,300
Sub total	3,574	3,769	3,990	4,170
U.S. and Canada	3,568	3,809	4,000	4,200
Total, non-Communist	7,142	7,578	7,990	8,370

Capacity (1,000 b/cd) January 1, 1975				
Hydroprocessing	1-1-74	1-1-75	Projected 1-1-76	1-1-77
Asia-Pacific	3,309	3,490	3,600	3,800
Africa	259	307	350	390
Middle East	552	586	620	650
Latin America	1,377	1,415	1,500	1,600
Western Europe	5,067	5,470	5,500	5,500
Sub total	10,563	11,268	11,570	11,940
U.S. and Canada	6,897	7,554	8,000	8,500
Total, non-Communist	17,460	18,822	19,570	20,440

Worldwide oil at a glance

Country	Production		Reserves	Production		No.	Consumption		
	1973	1974		1973	1974		1973	1974	1975
ASIA-PACIFIC									
Afghanistan	85,000*	3,530	15	0.2*		11	722,176	137,550	159,850
Australia	2,300,000	38,000	373	370.6	0.7	1	30,450		1,620
Bangladesh		10,000				3	123,200		5,700
Brunei-Malaysia	2,500,000	22,000	519	327.0	0.6	2	28,300	2,000	
Burma	65,000	150	595	23.0					
China Republic (Taiwan)	15,000	1,000	60	3.3		1	244,100	9,040	20,800
Guam						1	29,500		
India	834,000	2,500	1,500	149.0	0.7	10	555,100	32,100	26,658
Indonesia	15,000,000	15,670	2,710	1,457.0	10.0	8	427,700	19,500	23,000
Japan	30,000	1,700	1,044	12.3		45	5,133,840	307,030	527,550
Khmer Republic						1	12,540		1,800
Korea, South						3	425,000		27,700
New Zealand	75,000*	5,000†	4	3.8	- 5.0	1	54,000		18,000
Okinawa (R.I.)						3	212,000		12,000
Pakistan	28,700	16,000	16	7.1	-16.5	3	79,210		2,500
Philippines						4	274,000	24,600	34,960
Singapore						5	845,650		20,000
Sri Lanka						1	34,400		3,400
Thailand	115,000	1,000	25	0.2		4	166,200	7,000	23,900
Vietnam, South†									
Total Asia-Pacific	21,047,700	115,880	6,861	2,353.5	4.2	107	9,397,360	530,820	909,438
*Condensate †Revised ‡Oil or gas discovered but not developed									
EUROPE									
Austria	182,000	953	1,271	47.0	- 6.0	1	220,000	16,300	23,000
Belgium						8	866,700	64,800	95,100
Cyprus						1	15,000		2,740
Denmark	247,000	500	6	4.0		3	220,000		36,700
Finland						2	196,000	32,000	25,800
France	142,000*	5,800	295	20.2	-19.2	24	3,341,600	189,900	439,930
Germany, West	550,000	11,473	2,699	125.4	- 6.9	33	2,986,723	126,550	363,520
Greece†						4	411,000		22,000
Ireland†						1	56,000		13,200
Italy-Sicily	750,000	12,000	111	18.3	- 9.4	34	3,952,660	268,500	387,370
Netherlands	250,000	94,800	347	27.4	- 2.1	7	1,840,700	75,000	164,800
Norway	7,300,000	24,700	6	30.0	200.0	3	168,000		18,500
Poland**									
Portugal						2	110,000	12,000	15,600
Romania**									
Spain	293,000	600	24	38.0	90.0	9	1,165,000		136,700
Sweden						5	248,000		47,300
Switzerland						2	138,000		23,600
United Kingdom	15,700,000	50,000	57	1.9	22.6	20	2,782,980	205,300	410,010
Yugoslavia	400,000	2,000	1,100	69.0	- 2.8				
Total Europe	25,814,000	202,826	5,916	301.2	3.0	159	18,718,363	990,350	2,225,870
*Includes 76 million bbl condensate †Oil or gas discovered but not developed **Not included in non-Communist total									
MIDDLE EAST									
Abu Dhabi	30,000,000	200,000	160	1,750.0	34.5				
Bahrain	336,000	6,600	211	68.0		1	250,000	34,200	15,200
Dubai	2,420,000	1,500	45	232.0	28.9				
Iran	66,000,000	330,000	369	6,128.0	0.6	5	789,000	36,000	60,665
Iraq	35,000,000	27,500	156	1,829.3	2.0	7	168,500		5,000
Israel	2,200	20	25	100.8*	-11.8	2	201,000		24,500
Jordan						1	21,223	4,403	
Kuwait	72,800,000†	32,000	692	2,600.0	- 7.4	5	646,000		19,600
Lebanon						2	53,500	7,250	7,300
Neutral Zone	17,300,000	7,500	449	485.4	- 4.3				
Oman	6,000,000	2,100	61	257.0	- 0.7				
Qatar	6,000,000	8,000	81	546.0	5.4	1	6,800		1,300
Saudi Arabia	164,500,000	55,000	670	8,400.0	11.7	3	610,300	8,210	20,490
Sharjah	1,500,000	1,500	3	50.0	100.0				
South Yemen (Aden)						1	169,100		9,000
Syria	1,500,000†	700	123	119.0	7.2	1	49,690		2,620
Turkey	500,000	250	313	65.3	0.5	4	315,500	28,600	29,660
Total Middle East	403,850,200	672,670	3,358	22,670.8	7.0	33	3,280,613	118,663	195,335
*Includes captured Sinai fields †Revised									

AFRICA
Algeria
Angola-Cabinda
Congo Republic
Dahomey*
Egypt
Ethiopia*
Gabon
Ghana*
Ivory Coast
Kenya
Liberia
Libya
Malagasy
Morocco
Mozambique*
Nigeria
Rhodesia
Senegal
Sierra Leone
Sudan
Tanzania
Tunisia
Union of S. Africa*
Zaire†
Zambia

Total Africa

WESTERN HEMISPHERE

Antigua
Argentina
Bahamas
Barbados
Bolivia
Brazil
Chile
Colombia
Costa Rica*
Cuba
Dominican Republic
Ecuador
El Salvador
Guatemala*
Honduras
Jamaica
Martinique
Mexico
Netherlands Antilles
Nicaragua
Panama
Paraguay
Peru
Puerto Rico
Trinidad & Tobago
Uruguay
Venezuela
Virgin Islands
United States
Canada

Total W. Hemisphere

Total Non-Communist

Communist World

Total World

RESERVE (1,000 bbl)			OIL PRODUCTION		SEVERING			
1,000 bbl	1,000 bbl	1,000 bbl	Estimated 1974	% change from 1973	No.	Crude	Severing	1,000 bbl
7,700,000	229,000	826	888.8	-19.2	4	115,335		30,500
1,175,000	1,400	181	161.5	6.9	2	35,680		1,800
4,874,000	1,000	52	51.2	12.0				
3,700,000	3,500	437	118.3	-42.8	1	18,000		
1,750,000	7,000	137	182.0	20.1	1	14,430		1,890
					1	17,000		2,000
					1	28,000		6,500
					1	42,940		4,420
					1	48,000		4,000
					1	11,000		2,000
26,600,000	26,500	979	1,700.0	-21.6	6	76,400		8,000
450	24	22	0.9		1	15,000		2,200
					2	58,550	3,660	7,580
20,900,000	45,000	1,088	2,300.0	15.0	1	17,000		2,500
					1	60,000		6,500
					1	(not operating—not included in total)		
					1	15,000		1,320
					1	10,000		
					1	22,000		2,000
					1	16,100		4,200
1,100,000	1,500	55	85.0	3.5	1	25,000		3,300
500,000	50				5	397,100	57,400	56,700
					1	16,150		2,700
					1	24,620		5,600
68,299,450	314,974	3,777	5,487.7	-7.2	40	1,083,305	61,660	155,710

*Oil or gas discovered, but not developed. †To go on production in 1976 at 25,000 b/d.

2,346,000	7,500	4,095	422.0		1	16,000		2,000
					14	720,718	101,185	51,370
25,000		8	0.3	100.0	1	500,000		
250,000	11,000	281	47.5	-5.0	5	3,000		
775,000	914	1,247	172.2	1.2	10	961,800	183,000	21,000
200,000	2,800	316	28.6	-15.9	3	123,500	26,300	10,000
900,000	4,000	2,078	169.7	-16.0	6	172,100	48,500	2,000
					1	11,000		1,500
					3	121,970	14,570	11,700
					2	45,500		7,000
2,500,000†	5,000	843	232.0	12.5	4	44,350		
					1	14,000		2,600
					2	24,800		5,500
					1	14,000		1,800
					1	32,600		3,000
					1	10,400		2,500
13,582,000	15,000	3,201	513.5	17.1	6	760,000	109,000	35,300
					2	900,000	35,000	15,000
					1	13,200		2,600
					1	100,000		7,500
					1	5,000		
2,500,000	5,000	2,422	69.7	-1.3	5	129,600	25,960	1,760
					3	283,800	47,800	75,500
2,500,000	6,000	3,020	181.3	9.9	2	461,000	26,500	27,000
					1	43,000	4,000	3,000
15,000,000*	43,000	12,450	3,025.0	-10.0	12	1,531,715	46,589	20,600
					1	590,000		
35,299,839	250,000	504,000	8,945.0	-2.9	247	14,216,287	4,156,720	3,022,235
9,400,000	52,500†	21,202	1,682.0	-6.5	42	1,877,550	399,150	309,090
85,277,839	402,714	555,263	15,488.8	-1.7	381	23,752,390	5,224,274	3,641,555

*Oil or gas discovered, but not developed. †Revised. **Does not include Orinoco heavy oil belt's estimated 700 billion bbl. †Does not include Arctic gas.

604,297,189	1,709,064	575,175	46,382.0	2.0	720	56,232,031	6,933,167	7,127,908
**111,400,000	846,000†		10,390.0	7.5				
715,697,189	2,555,064		56,722.0	3.0				

**Including Russia 83.4 billion, Mainland China 25 billion, others 3 billion. †Including Russia 812 trillion, Mainland China 25 trillion, Hungary 5 trillion, others 6 trillion.

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royalties to 20% and taxes to 85%. Net effect was a 55¢/bbl hike in average cost/bbl to the companies. Other OPEC nations voted at the December meeting in Vienna to join the three gulf states at the higher prices.

Solutions. What hope is there that the world can free itself of its OPEC chains? There are those who contend that crude prices can only continue in the ascendancy. Others differ. There are as many opinions as there are interviewees.

But there is hope. And it's a long-term proposition. But hope there is. The obvious solution, of course, is to find crude sources outside the OPEC orbit. Ironically, much of the relief to non-Communist consuming countries will come from big communist sources.

OPEC has three big markets—western Europe, Japan, and the U.S. And each of the three has something going for it in the way of new, non-OPEC sources.

Western Europe pins much of its hopes, of course, on the North Sea, provided the government politicians will stand aside and let it develop. Conservative sources now see at least a 42-billion-bbl ultimate reserve for the sea. Less conservative ones peg it as high as 79-138 billion. Only time will tell.

But western Europe has yet another ace—Russia. Production there overtook the U.S. in latter 1974, making the Soviet Union the world's biggest producer with an average daily output of 9.4 million bbl in October, up 7% above 1973. Almost all of the gain has come from the western Siberian oil fields, where the Soviets are developing new production at a feverish pace. One field—Samotlor—produces more than half of all western Siberian crude. In mid-November, its output was 1.5-million b/d, 39% more than at the beginning of the year. This gives some idea of the pace of Russian development.

Russia is scoring natural-gas production gains that are every bit as important as her crude increases. During the first 10 months of 1974, gas output jumped 10% over the same time slot in 1973.

The Soviets have discovered that oil and gas is big business. And they're making money at it. Oil and gas sales have bailed the big country out of a deepening foreign-exchange crisis and



NEW 132,000-b/d refinery for Total Raf. Nederland N.V. at Vlissingen, Netherlands, helped boost western Europe crude capacity this year.

delivered a 1973 surplus of more than 260-million rubles. That's \$359 million or £149 million.

Current oil reserves in the Soviet Union are estimated at 83.4-billion bbl, compared to 80 billion at the beginning of the year. Its gas reserves are set at a whopping 812-trillion cu ft, according to Soviet officials—that's 3.5 times Algeria's reserve, and 2.5 times those of Iran.

Russia must sell her oil and gas, and she eyes western Europe as a principal buyer. Already availability of new Russian gas supplies has disrupted the 1972 Eurogas agreement to supply Algerian gas to France, Belgium, West Germany, Austria, and Switzerland.

The Soviet Union, then, is western Europe's second big hope for oil and gas outside the OPEC circle.

Japan, too. OPEC's third-largest market also is vulnerable. In this instance, the two communist superpowers promise to sweep Japan completely out of the OPEC orbit in the years ahead.

Russia is building both a railway and a 620-mile big-inch pipeline from the Tyumen oil fields of western Siberia to her Pacific coast, where vast

amounts of crude will be made available to Japan and other Pacific markets, including the U.S.

More importantly, Mainland China, already providing nearly 200,000 b/d to Japan, is expected to have at least 2 million b/d available for export by 1980, and, according to Japanese oil officials, the Chinese expect to be producing, and exporting most of, 8 million b/d in the mid-1980's. That would put it in a class with Saudi Arabia.

The Chinese, like the Russians, have discovered that oil and gas is big business.

U.S. doubtful. OPEC's largest marketplace, the United States, could also find relief from OPEC sources, although total relief is more doubtful.

Its greatest hopes of course, are offshore and the closed-in giant fields on Alaska's North Slope. The sparsely explored regions of Alaska's slope holds vast undiscovered reserves, and when the Alyeska pipeline is finished, these will be uncovered at a rapid rate. Plans now call for the line to bring 1.2 million b/d by late 1977.

Higher crude prices have stimulated the search for oil and gas in the Lower 48 as well. Active rigs in the U.S.

during the first 9 months of this year were up by 26%, an indication that U.S. oilfinders have gone back to work in earnest.

Other forces. There are other, less tangible, forces eroding the OPEC image.

One is the very ubiquity of oil in the earth. Experience of the past few decades proves that oil and gas can and will be found in many parts of the world previously unsuspected as major sources. The North Sea is only one fantastic example of this. Reserves may not be as enormous as those of the Middle East, but 42-million bbl of oil is not to be sneezed at.

And another important discovery to watch is Mexico's Reforma trend in the southern states of Tabasco and Chiapas. Pemex has declined to officially estimate the reserves in Reforma, but some observers feel the find could be one of the giants of North America.

Another force at work is the improved technology that is constantly thrust into our oil-finder's hands. Their success ratios in the North Sea, the South American countries, and other parts of the world are enviable.

Prices a question. With so many forces working against it, OPEC may not be able to long afford the luxury of the attitudes displayed all this year.

International oil consultant Samuel Nakasian summed up the situation most succinctly when he told a New York seminar in mid-November:

"Fairly soon, OPEC must come to the realization that having achieved the discipline of its members to establish high price levels, it has also triggered the competition of new oil and gas supplies and other energy sources. At some point in the near future OPEC must consider whether its self-interest may not best be served by lowering prices in order to decelerate the development of competing sources of energy."

Abbreviations used with the refining tabulations (All figures in barrels per calendar day.)

All figures are
as of 1-1-75

Cracking processes:

FCC—Fluid cat cracking
TCC—Thermofor cat cracking
HD—Houdrflow cat cracking

Hydroprocessing:

DHC—Distillate hydrocracking
RHC—Residual hydrocracking
HDT—Catalytic hydrotreating
HDS—Catalytic hydrodesulfurization

Other processing:

A—Asphalt
Alky—Alkylation
C—Coking (I/d)
L—Lube manufacture

P—Polymerization
V—Vacuum distillation
W—Waxes

CALENDAR DAY FIGURES reported in this survey are refiners' averages for how many barrels each day a refinery unit yields on the average, including downtime used for turnarounds. These figures are what refiners actually run in a year, divided by 365. (Stream day figures represent the potential a refinery unit can yield when running full capacity).

Worldwide refining

WORLDWIDE REFINING	Company and refinery location	Crude	Catalytic cracking	Catalytic reforming	Hydro- processing	Other processing
ALGERIA	Sonatrach:					
	Arzew	54,600	.....	16,000	1,000 HDT	10,300 V, 1,500 L, 1,300 A
	El Borma	600	.....	.....	.....	.....
	Hassi Messaoud	3,135	.....	.....	.....	.....
	Maisin Carree	57,000	.....	14,500	.....	.....
	Total	115,335	.....	30,500	1,000	.....
ANGOLA	Cabinda Gulf, Cabinda	2,800	.....	.....	.....	.....
	Companhia de Petróleos de Angola (SARL), Luanda	32,880	.....	1,800	5,850 HDS	1,800 V
	Total	35,680	.....	1,800	5,850	.....
ANTIGUA	West Indies Oil Co. Ltd., St. John's	16,000	.....	2,000	7,500 HDS	1,500 V, 750 A
ARGENTINA	Astrasur, Refinerías Pata- gónicas de Petróleo SA, Comodoro Rivadavia, Chu- but	6,800	.....	.....	.....	4,800 V, 5,300 A
	Destilería Argentina de Petróleo SA, Lomas de Zamora	1,800	.....	.....	.....	1,200 V, 500 L
	Esso SAPA, Campana	91,900	17,600 FCC	8,000	.....	49,700 V, 1,300 L, 500 C
	Galván	17,000	.....	.....	.....	.....
	Ragor SAIC, Quilmes	600	.....	.....	.....	.....
	Refinería de Petróleo la Isaura SA, Bahía Blanca	12,580	.....	.....	.....	.....
	Shell Compañía Argentina de Petróleo SA, Buenos Aires	115,000	21,000 FCC	9,000	25,000 HDT	.....
	Yacimientos Petrolíferos Fiscales:					
	Campo Durán	28,305	.....	.....	.....	.....
	Dock Sud	5,975	.....	.....	.....	1,572 V
	El Centauro, Tierra del Fuego	189	.....	.....	.....	.....
	La Plata	289,000	44,973 FCC	17,185	3,800 HDT 9,435 HDS	64,158 V, 1,673 Alky, 3,450 L
	Luján de Cuyo	113,200	17,612 FCC	17,185	2,516 HDS	650 C, 9,230 A
	Plaza Huincul	5,032	.....	.....	.....	59,577 V, 1,000 C
	San Lorenzo	33,337	.....	.....	.....	9,435 V, 1,190 A
	Total	720,718	101,185	51,370	40,751	.....
AUSTRALIA	Amoco Australia Pty. Ltd., Bulwer Island	58,000	8,600 FCC	5,300	1,400 HDT 7,500 HDS	14,500 V, 1,400 Alky, 1,200 A
	Ampol Refineries Ltd., Lytton	60,000	19,000 FCC	13,000	.....	26,000 V, 2,500 Alky, 1,500 P
	Australian Oil Refining Pty. Ltd., Kurnell	132,000	36,100 FCC	26,600	.....	48,500 V, 3,200 Alky, 2,800 P
	Kurnell (lube refinery) .....	.....	.....	.....	6,500 HDT	7,100 V, 3,600 L
	BP Australia Ltd., Westernport	57,000	.....	18,000	15,300 HDT	3,150 V, 1,000 A
	BP Refinery (Kwinana) Pty., Kwinana	103,070	14,850 FCC	18,450	13,050 HDT 7,650 HDS	40,500 V, 2,200 L, 700 A
	Petroleum Refineries Australia Pty. Ltd., Adelaide	46,500	.....	11,500	35,000 HDS	2,500 V, 2,600 A
	Altona	98,600	24,000 FCC	26,000	33,000 HDT 10,000 HDS	22,000 V, 2,000 Alky, 3,000 A
	Shell Refining (Australia) Pty. Ltd., Clyde	55,000	17,000 FCC	18,000	22,000 HDT 6,000 HDS	.....
	Geelong	92,000	18,000 FCC	17,000	36,000 HDT 11,000 HDS	.....
	Total Refineries Australia Ltd., Matraville	20,000	.....	6,000	4,300 HDT 11,000 HDS	12,000 V, 1,700 A
	Total	722,170	137,550	159,850	219,700	.....
AUSTRIA	OMV AG, Schwechat	220,000	16,300 FCC	23,000	26,000 HDT 24,000 HDS	46,000 V, 2,300 L, 5,850 A
	Total	220,000	16,300	23,000	50,000	.....
BAHAMAS	Bahamas Oil Refining Co., Freeport	500,000	.....	.....	.....	.....
BAHRAIN	Bahrain Petroleum Co. Ltd., Awali	250,000	34,200 FCC	15,200	61,700 HDS	164,000 V, 1,300 P, 2,400 A

WORLDWIDE REFINING	Company and refinery location	Crude	Catalytic cracking	Catalytic reforming	Hydro- processing	Other processing
BANGLADESH	Eastern Refinery, Chittagong	50,450		1,620	2,410 HDS	
BARBADOS	Mobil Oil Barbados Ltd., Bridgetown	3,000				400 A
BELGIUM	SAB Albatros, Antwerp	60,000		10,700	14,300 HDS	
	Anglo-Belge des Petroles SA, Antwerpen-Kiel	4,900				
	Belgian Shell NV, Ghent	9,400				
	Esso Belgium NV, Antwerp	93,000	10,000 FCC	8,000	17,800 HDT 23,000 HDS	32,000 V, 20,500 A
	NV Societe Industrielle Belge des Petroles SA, Antwerp	321,400	54,800 FCC	28,400	55,800 HDT 53,900 HDS	117,200 V, 4,300 Alky, 1,560 P, 11,300 A
	Raffinerie Belge de Petroles, Antwerp	98,000		19,000	27,000 HDT 10,000 HDS	14,000 V, 9,200 A
	SA Chevron Belgium, Feluy	140,000		11,500	11,500 HDT 23,000 HDS	85,000 V, 9,000 A
	Texaco Belgium NV, Ghent	140,000		17,500	46,000 HDT	
	Total	866,700	64,800	95,100	282,300	
BOLIVIA	Yacimientos Petroliferos Fiscales Bolivianos:					
	Camiri	1,500				
	Cochahamba	16,500				500 L
	Sanandita	500				
	Santa Cruz	3,000				
	Sucre	4,000				
	Total	25,500				
BRAZIL	Petróleo Brasileiro SA:					
	Betim, Minas Gerais	60,500	13,000 FCC			29,000 V, 2,200 A
	Canoas, Rio Grande do Sul	60,500	13,000 FCC			29,000 V, 1,400 A
	Capuava, Sao Paulo	33,000	14,000 TCC			15,000 V
	Cubatao, Sao Paulo	175,000	45,000 FCC	10,500		95,000 V, 600 C, 3,600 A
	Duque de Caxias, Rio de Janeiro	197,000	35,000 FCC	10,500		82,000 V, 4,500 L, 2,200 A
	Mataripe, Bahia	77,000	22,000 FCC			41,000 V, 2,900 L, 1,400 A
	Paulina, Sao Paulo	330,000	39,000 FCC			82,000 V, 4,000 A
	Paredao, Manaus	10,000	2,000 FCC			3,000 V, 1,000 A
	Refinaria de Petróleo Ipiranga SA, Rio Grande	9,300				1,000 A
	Refinaria de Petróleos de Manguinhos SA, Rio de Janeiro	9,500				
	Total	961,800	183,000	21,000		
BRUNEI	Sarawak Shell Berhad, Lutong	60,000				
BURMA	Myanma Oil Corp., Chauk	6,800				2,700 V, 50 (t/d) W
	Syriam	21,500	2,000 TCC			2,300 V, 700 L, 50 C
	Total	28,300	2,000			
CHILE	Empresa Nacional del Petróleo, Concepción	72,000	14,300 FCC	4,000		38,000 V
	Concón	50,000	12,000 FCC	6,000		24,000 V, 1,100 Alky, 1,200 A
	Magallanes	1,500				
	Total	123,500	26,300	10,000		
CHINA (TAIWAN)	Chinese Petroleum Corp., Kaohsiung	244,100	9,040 TCC	20,800	22,600 HDT 22,600 HDS	3,160 V, 810 Alky, 4,100A
	Total	244,100	9,040	20,800	45,200	
COLOMBIA	Colombian Petroleum Co., Tibú, North Santander	3,000				
	Empresa Colombiana de Petróleos, Barrancabermeja	110,000	35,000 FCC	2,000		55,000 V, 2,500 Alky, 3,300 L, 1,300 W, 3,500 A, 30,000 V, 3,500 P
	Cartagena	50,000	13,500 FCC			
	International Petroleum (Colombia) Ltd., La Dorada	5,600				