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INSIDE THIS ISSUE

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Venezuela's 1993 Budget Forecasts $15.70 per Barrel Crude Oil Price

CARACAS — The Venezuelan government presented the congress with a draft 1993 budget based upon an oil price of $15.70 per barrel and average exports of 2.075 million barrels per day.

Finance Minister Pedro Rosas Bravo told a news conference the 1993 budget estimated oil income for next year at 575 billion bolivars (about $6.7 billion), as opposed to the 486 billion budgeted in 1991, when oil prices were projected at $14.30/bbl and exports at 2.150 million b/d.

Venezuela's oil exports averaged 2.118 million b/d in 1991, at an average price of $15.92/bbl. The country's petroleum exports are generally $2.50/bbl below the price of the OPEC basket, which currently is about $19.50/bbl. In 1991, the basket was $18.57/bbl.

The draft budget proposal, which the congress must approve before Dec. 31, projects oil income as 52% of total government revenue, as opposed to the 72% it represented last year.

Rosas says the drop in the proportional value of oil income reflects the government's plan to gradually remove an 18% tax on petroleum exports, which should drop to 16% by next year.

That revenue will be replaced by greater income from customs collections and other tax sources, Rosas Bravo says.

—Edward Holland

IPAA Says U.S. Tax Break Could Increase Oil, Gas Drilling and Jobs

The elimination of the Alternative Minimum Tax on oil and gas producers will increase oil and gas drilling as well as spur industry employment in 1993, according to a membership survey conducted by the Independent Producers Association of America.

The tax relief package, included in the National Energy Bill, was signed by President Bush on Oct 24, and will become law effective Jan 1, 1993.

The IPAA, whose members produce 60% of the nation's gas and 41% of its oil, estimate the measure will save independent oil and gas producers $1.028 billion during the next five years.

"Everybody is making plans to go back to drilling because of the provision," said IPAA president Denise Bode, at an American Gas Association conference held in Chicago. "Because it affects 70% of the industry, it is going to increase across-the-board drilling for natural gas."

Roy Willis, vice president for government relations at IPAA says necessary rebuilding of the producing industry infrastructure will take time, but the projections for increased U.S. domestic oil and gas production and job creation, are realistic.

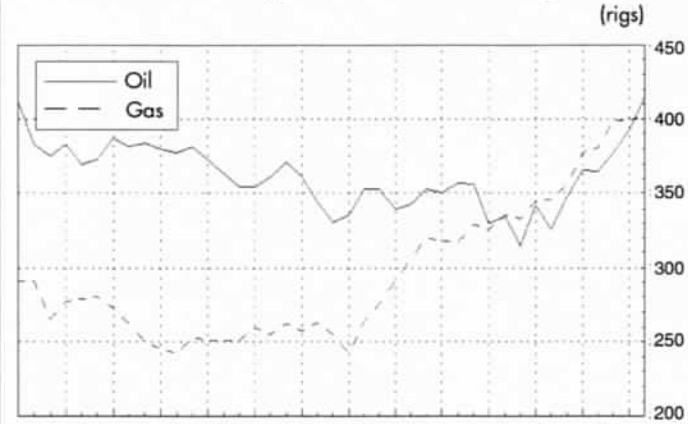
The Department of Energy estimates an additional 50,000 barrels of oil per day, or roughly the equivalent of 291 million cubic feet of natural gas per day will be produced by 2000 as a direct result of AMT's passage.

By 2010, DOE estimates the equivalent of an additional 75,000-100,000 b/d of oil, or 436.5-582 Mmcf/d of gas, will be produced as a result of the measure.

"We estimated between 25,000 and 30,000 new jobs each year will be created as a result of the tax break," says Scott Aspenshade,

(Continued on page two)

U.S. Oil and Gas Rig Count Shows Steady Increases



IPAA Says

(Continued from page one)

an economist with the IPAA. "The number of new wells that will be drilled is estimated between 4,800 and 6,850 during the first year."

Smaller independent oil and gas producers such as Houston-based Apache Corp., are among AMT's biggest fans. "The AMT will save the company an estimated $7 million in drilling taxes in 1993," says Apache's Jeanne Buchanan. Apache produces about 250 Mmcf/d. "We will be re-investing the savings," she says.

"We certainly look favorably upon the provisions in the National Energy Strategy concerning independent producers," says Ed Hall, company spokesman for Santa Fe Resources in Houston, an independent producer of 68,000 b/d and 145 Mmcf/d.

"The Alternative Minimum Tax was the only provision in the National Energy Bill that positively affected independent producers," Hall says.

Although larger independents welcome the AMT tax relief, most argue that other provisions stricken from the Energy Bill, such as access to Federal lands or the lifting of offshore leasing bans, would have better served U.S. production industry interests.

"In terms of material value to this company, AMT tax relief isn't that significant," said Paul Taylor, an official of Houston-based Anadarko Petroleum, a large independent oil and gas producer. "While it's very welcome, it's not going to turn around recent trends in U.S. exploration."

Anadarko estimates AMT tax relief will save its company $4 million, or about 2% of yearly drilling expenditures. Last year, Anadarko spent $164 million on natural gas and oil drilling. Anadarko produces about 410 million cubic feet of natural gas per day.

Taylor said AMT tax relief may affect Anadarko's tax situation differently because the company is larger and has been more active in drilling during the last couple years.

Opposition to the bill was led by Democratic Senator Bill Bradley, of New Jersey, sponsor of an amendment on the Senate floor to strike AMT relief from the bill. Bradley says the $1 billion would be better spent on crime, public infrastructure and transportation programs.

The Alternative Minimum Tax was radically changed with passage of the 1986 Tax Reform Act, which expanded AMT to eliminate the immediate tax benefits of ordinary business expenses and capital expenditures, IPAA says.

"They (the government) wouldn't allow you to take deductions for 'preference items,' such as depreciation of capital assets and non-salvageable expenses such as labor costs," Willis told *Bloomberg OBG*. "The net result of the change in the law is that the marginal tax rate for domestic producers grew to more than 70%, or twice the worldwide average for oil and gas extraction.

"In retrospect, we've seen an ironic result of the tax policy, in that the expenditures that were disallowed as tax deductions are the very kind of expenses needed to create jobs," Willis says. "So the AMT contributed to a massive decline in jobs in the U.S. oil and gas industry, specifically in the Midwest."

"The legislation still contains provisions against the 'zeroing out' problem," Willis says. "The only way a producer will get the benefit of tax reform is if he re-invests his income in drilling and creating new jobs."

—Brian Whary

Japanese Crude Oil Imports Rise 11.9%

TOKYO — Japanese crude oil imports totaled 21.47 million kiloliters, or 4.5 million barrels per day, in September, up 11.9% from September 1991, the Ministry of International Trade and Industry says.

The volume of crude oil processed in Japan in September rose 12.9% from a year earlier to 18.05 million kiloliters, for the 11th consecutive monthly rise, the ministry says.

Japan's production of combustible oils in September rose 12.3% from September 1991, to 17.03 million kiloliters, for the 12th consecutive month MITI says.

Imports of combustible oils as a whole declined 13% from a year ago to 2.12 million kiloliter, for the seventh consecutive month, the MITI says.

Domestic sales of combustible oils increased 6.1% in September to 17.11 million kiloliter, for the 11th consecutive month, says the ministry.

Imports of crude oil and sales of oil products are favorable despite the current flagging economy. The oil imports rose 4.1% in August and 8.4% in July, the MITI says.

—Kanna Takeuchi

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Publisher
Michael Bloomberg
Editor-in-Chief
Matthew Winkler (212) 318-2305
Executive Editor
Albert Bassano, Jr. (609) 497-3747
News Editors
Peter Elliot (609) 497-6514
Tom Myers (609) 497-6516
Senior Writer
Simon Walsh (202) 393-1024
Contributing Editors
Chris Bennett
Mike Krensavage Ken Miller
Steve Stroth Ed Vorman
International Markets
(44 71) 256-9010
Charles Birch
Lisa Wilson Samantha Zee
Asia/Pacific Markets
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Bloomberg Oil Buyer's Guide
Virginia Nafziger, Circulation Manager
100 Business Park Drive, P.O. Box 888
Princeton, N.J. 08542-0888
Telephone: (609) 497-3500
Fax: (609) 683-4960

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All sales questions should be addressed to Denise O'Hara in New York (212) 318-2231, Stuart Bell in London: + 44 71 256-9010, or Atsuko Takahashi in Tokyo, + 813 3578 1625. Subscription rates furnished upon request. Bloomberg Oil Buyer's Guide is published weekly.

Vincent Sgro Founder and Editor Emeritus

Interest Increases for Calendar 1993 Swaps

NEW YORK — Warm weather and abundant fuel oil supplies are breaking the link between 1% sulfur fuel oil swaps and natural gas swaps prices, allowing fuel oil prices to fall while natural gas prices continue to climb, brokers tell *Bloomberg OBG*.

November 1% sulfur residual fuel oil swaps prices on the U.S. East Coast are bid about \$17.60 per barrel and offered at \$17.85/bbl, down from \$18.10-\$18.15/bbl recently.

During the past few weeks, residual fuel has been closely tied to the natural gas market. Utilities, especially those in the northeast, switch between natural gas and 1% fuel oil when the price of one is more favorable. As a result, surging natural gas prices pulled fuel oil higher in the cash and swaps markets.

For now, oil traders operating in the absence of concern about colder weather and tight supplies, confront lower fuel oil swaps prices and diminished trade volume.

But in the natural gas sector, increasingly volatile prices are raising trader interest in over-the-counter natural gas swaps, brokers tell *Bloomberg OBG*.

The recent settlement value of the 1993 calendar swaps, based on the average of the New York Mercantile Exchange gas futures contracts, is \$1.877 per million British thermal units, up 1.8¢/MMBtu from the previous settlement price.

"Everything was up in the back months as a result of a very large swap hedged," says Mike Flett with Gerald Energy in New York.

Trading activity in calendar 1993 over-the-counter natural gas swaps has been "extremely good," says Paul Sward, a derivatives broker with First National Crude Oil Brokers in Connecticut. "Volume has been extremely good on my side of the (over-the-counter) market. We're seeing good support, with a large number of players getting involved."

The increased activity can be linked to the high volatility seen throughout the derivatives markets. Rising volatility leads to an increase in over-the-counter swaps because traders use them to hedge against volatility.

Recently, volatility for over-the-counter December at-the-money call gas options was bid at 50% and offered at 53%.

This is a strong level for a contract which expires in a few weeks, traders say. "This is for an implied period of about 21 days," says Sward. "Implied volatility will continue to march up."

The volatility of natural gas contracts and the average of the 1993 calendar swap is especially relevant to people who think it will be a cold winter and expect a supply shortage this year, says Tony Lerner, a broker with First National in New York.

On the Nymex, volatility recently approached 45% for at-the-money calls on the December natural gas options contract.

In a natural gas swap, once a differential to the Nymex has been agreed upon, say 5¢/MMBtu less than the December Nymex contract, the closing prices for the contract are averaged after the swap's expiration.

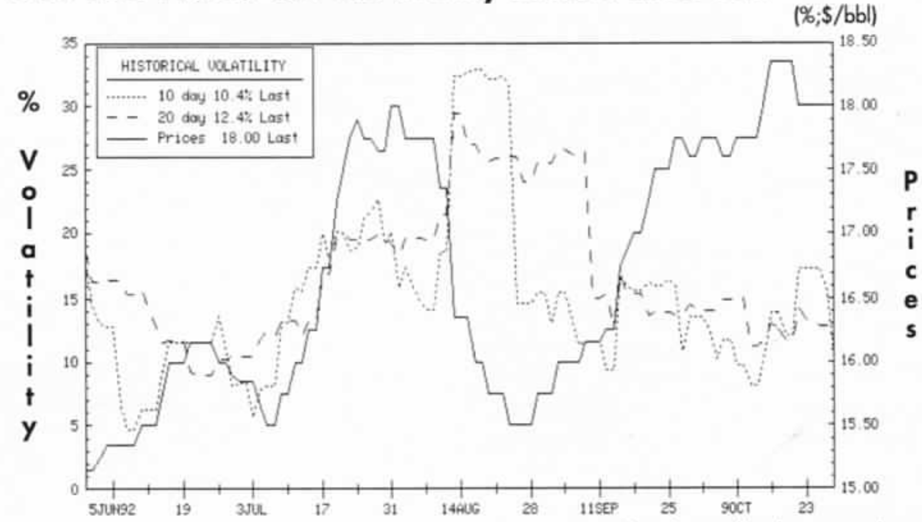
The discount for natural gas then is subtracted from the average, creating the fixed-price side of the swap. The other half of the average is a published natural gas price for the same time period.

At the end of the period for which the swap is made, traders settle the transaction by calculating the difference between the fixed price and the average of the published price for natural gas.

If the fixed price exceeds the average of the published daily quotes for the period, the buyer of the fixed portion gives the buyer of the flexible portion the difference between the two prices, and vice-versa.

—Diane Wilkoff

New York 1% Fuel Oil Price Volatility Levels at about 15%



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German August Oil Imports Increase 13%

ESCHBORN, Germany — German oil imports in August totaled 8.44 million metric tons, or about 2 million barrels per day, up 13% from 7.48 million tons in July, and up 7.87% from a year earlier, according to preliminary figures from the BAW federal economics office.

The price of oil imports fell to 219.67 deutschemarks (\$143.60) per ton in August from 249.47 marks a year ago, the BAW says.

Imports Rise, Costs Fall

Despite a rise in oil imports, the cost fell to 1.85 billion marks, some 157 million marks less than in August 1991.

From January to August, oil imports rose 12.18% to 65.59 million tons from 58.12 million tons in the year-ago period. The oil import bill rose to 14.96 billion marks from 14.57 billion.

Between January and August, Germany imported 10.9 million tons of oil from the Commonwealth of Independent States, 10.2 million tons from the U.K. and 9.2 million tons from Norway.

Germany also imported 7.5 million tons from Libya and 6.2 million tons from Saudi Arabia.

To convert tons to approximate barrels, multiply by 7.5.

—Nanna Hepke

Mexico, Libya, Brunei Adjust Contract Prices

LONDON — Mexico, Libya and Brunei are adjusting their contract prices for crude oil.

Petróleos Mexicanos, the state oil company of Mexico, has adjusted the price of Maya and Olmeca crude oils for lifted in November by U.S. customers, traders say.

For U.S. sales, Mexico uses a basket of spot U.S. crude and dated Brent prices plus U.S. Gulf fuel oil prices to establish a base formula. Mexican crudes for the U.S. market are expressed as a differential to the formula.

Separately, the National Oil Co. of Libya told term contract customers the price of its benchmark Es Sider crude oil and the heavier, lower gravity grades for November delivery will be increased 5¢ per barrel, refiners say.

"The increase in the heavier grades is probably reasonable in view of the relative shortage of similar grades in the Med(iterranean)," says a trader with ÖMV Trading Services in London.

"Es Sider and Brega are overpriced by 15¢ to 20¢/bbl," the trader says, referring to the assessed value by traders and refiners on the international spot market.

For its part, Brunei retroactively decreased the price of crude oil for October by 35¢/bbl. Provisional prices for November are $21.50/bbl for Seria and $21.40/bbl for Champion.

—Charles Birch

Latest Crude Differentials & Prices
($/bbl)

Mexico*	API	Nov.	Oct.
Isthmus	33°	-1.20	-1.20
Maya	22°	-2.25	-2.15
Olmeca	39°	-0.05	-0.20

* differentials to Mexican crude formulas

Libya*	API	Nov.	Oct.
Es Sider	36°	-0.45	-0.50
Brega	40°	+0.15	+0.15
Zueitina	42°	+0.15	+0.15
Sirtica	41°	+0.15	-0.15
Amna	36°	-1.30	-1.35
Sarir	36°	-1.20	-1.25

** differentials to dated Brent*

Brunei*	API	Oct.	Sept.
Seria Light	39	21.45	21.80
Champion	22	21.35	21.70

** outright prices*

Canadian September Product Sales Increase 2.3%

Sales of oil products in Canada increased by 2.3% in September from September of last year, preliminary statistics from Statistics Canada show.

The gains were led by increased sales of stove oil and light fuel oil which are used for heating purposes during the winter. Gasoline sales also showed increases, the StatsCan figures show.

In the period between January and September, total sales are up by 1.1% compared with the same period last year, with the largest increase seen in light fuel oil sales.

—Ian Clarke

Canadian Oil Product Sales
('000 cubic meters*)

Product	Sept. '92	Sept. '91	% Chg	Jan. - Sept. 1992	% Chg
Gasoline	2,856.0	2763.4	+3.4	25,021.7	+1.7
Stove Oil	50.7	45.1	+12.4	430.6	+1.7
Diesel	1,493.6	1,454.6	+2.7	11,787.4	-0.1
Light Fuel	331.5	303.5	+9.2	5,152.9	+27.4
Heavy Fuel	457.6	546.6	-16.3	6,027.8	+4.7
Total#	**6,700.4**	**6,552.7**	**+2.3**	**59,573.8**	**+1.1**

**To convert to barrels, multiply by 6.2898.*
#Includes LPG, naphtha, avgas and petrochemical feedstocks.

South Korea to Lend Refiners 15 Million Bbls

SEOUL — South Korea's government will lend 15 million barrels from its crude oil reserves to its five refiners to help them overcome financial difficulties, Energy Ministry officials say.

The state-run Korea Petroleum Development Corp. will release the oil to the refiners through early next year on the condition they replenish the crude by September, the officials say.

Yukong Ltd., South Korea's largest oil refiner, will receive 5.1 million bbls; Honam Oil Refinery Co., 4.36 million bbls; Kyung In Energy Co., 2.16 million bbls; Ssangyong Oil Refining Co., 1.68 million bbls, and Kukdong Oil Co., 1.6 million bbls.

Industry analysts say the extension of government's oil reserves may reduce the premium by 5 to 10 U.S. cents per barrel on Dubai crude prices. The refiners are expected to pay an extra premium when they replenish the crude next year.

South Korea regulates oil prices in order to stabilize domestic oil markets. In theory, the government's Petroleum Business Fund is supposed to compensate refiners' losses when their import prices of crude are higher than domestic prices.

Refiners haven't been fully compensated through the petroleum fund since last year because South Korea has been spending the money for long-term government projects.

Five refiners' losses unpaid by the government totaled 285.5 billion won, or about $365 million, at the end of August. These losses include 21.7 billion won during the Persian Gulf War in 1991, the Energy Ministry says.

—Lee Young-Ho

London's IPE Details Holiday Trading Hours

LONDON — The board of directors of London's International Petroleum Exchange says futures trading in refined products and Brent crude oil contracts will cease at 5:30 p.m. London time on Thursday, Nov. 26, and Friday, Nov. 27, because of Thanksgiving Day in the United States.

—Charles Birch

Trading during the Christmas period is as follows:

Thursday, Dec. 24
exchange closes at noon.
Friday, Dec. 25
exchange closed.
Monday, Dec. 28
exchange closed.
Thursday, Dec. 31
exchange closes at 12:30 p.m.
Friday, Jan. 1
exchange closed.

Interior Dept. Acts to Boost Offshore Output

WASHINGTON — The U.S. Interior Department's Minerals Management Service has proposed steps to increase oil and gas production on federal holdings, primarily on the Outer Continental Shelf.

The most significant change involves a redefinition of what constitutes deep water in future lease sales.

Currently, royalties on oil and gas produced from water depths of 400 meters or more are set at 12.5%, while royalties on resources recovered from depths of less than 400 meters are 16%.

The agency's proposal would set a royalty rate of 12.5% for all future leases in water depths of 200 meters or more. The change wouldn't apply to existing leaseholders.

The Minerals Management Service said the new deepwater definition would make it possible for offshore drillers to finance additional oil and natural gas production.

Offshore drilling currently is banned along most of the U.S. coastline, except for the central and western regions of the Gulf of Mexico and some areas of Alaska.

The redefinition is an administrative step the service can take on its own. "We don't need an act of Congress to do this," says Scott Sewell, the agency's director.

The department said it will seek alternative bidding systems for high-risk offshore drilling areas.

The MMS also said it would revise the royalty appeals process, define more clearly how companies can win refunds for overpayments, establish procedures for electronic data exchange and make other changes designed to increase oil production on land and offshore.

The MMS has the authority to implement all these changes.

Other proposed changes would require regulatory review. One proposal would encourage applications for reduced royalty rates on existing leases by publishing clear rules and procedures for the applications.

Sewell says the process for awarding reductions hasn't been established yet.

—Simon Walsh

Tanker Charter Tonnage Up 37% in Persian Gulf

Charter tonnage climbed 37% in the Persian Gulf this past week compared with the week before, increasing total worldwide volume, shipbrokers report.

Charterers last week took 65.2 million barrels of oil out of the gulf in 40 vessel, compared with the previous week's 47.7 million bbls in 28 ships.

Worldwide spot charters rose to 133.4 million bbls in 136 ships, compared with the previous week's 117.7 million bbls in 151 ships. A trend to larger tankers in the Persian Gulf raised the size of the average ship used.

Saudi Arabia signed the most charters for VLCCs, taking seven of the 2-million-bbl ships out of the gulf, up from one the previous week. One of the seven ships was headed to the U.S., while the others were chartered to the U.K./Continent or Red Sea.

The increased demand for VLCCs has allowed shipowners to raise rates to an average Worldscale 50 rate from WS45 the week before, while one VLCC owner in the Persian Gulf received WS54.5 for a voyage to Japan.

More than 80 VLCCs are expected to be available for spot charter by the end of November, says London shipbroker E.A. Gibson in its weekly tanker report. Shipbrokers agree this will make it difficult for shipowners to raise the rates further.

VLCC rates in the Persian Gulf are at their highest level since January.

The rates shipowners received for million-bbl tankers increased to an average WS67.5 rate from WS62.5, as eight of these ships were chartered out of the gulf, compared with one the previous week.

Exxon chartered two million-bbl tankers to the Mediterranean, one at WS67.5 and one at WS70.

Charterers took advantage of comparatively low rates offered by the million-bbl tankers in the gulf against the increasing rates of VLCCs.

Volume increased in West Africa to 20.6 million bbls in 20 ships from 12.3 million bbls in 14 ships the previous week.

Despite the use of three more million-bbl tankers than the week before, rates fell to WS60 from WS65 for million-bbl ships chartered to the U.S. Gulf as more ships were available for spot charter.

Activity plummeted for 80,000-deadweight-ton or about 600,000-bbl ships in the Med, as four tankers were chartered compared with 30 last week. The drop in demand was blamed in part on the use of three VLCCs and four million-bbl tankers in the Med, compared with none last week, depleting demand for the smaller ships.

With the lower activity, rates fell to an average WS85 from WS87.5 the previous week for the 80,000-DWT ships on cross-Mediterranean voyages. At WS85, owners can just cover operational costs, about $6,000 to $8,000 per voyage, without earning a profit.

This means rates can't fall much lower, unless the owners are willing to accept a loss, which hasn't happened yet, says Hans Peter Balk, a shipbroker at Frachtcontor Junge & Co. in Hamburg, Germany.

Activity also fell for 80,000-DWT ships in the U.K./Continent. Seven ships carried 3.7 million bbls, compared with 15 ships carrying 8.2 million bbls the prior week.

In the Caribbean, utilization of 70,000-DWT or about 520,000-bbl ships in the Caribbean fell to 13 ships carrying 6.9 million bbl of oil from 18 ships carrying 9.5 million bbls. Rates were unchanged.

Volume and rates were unchanged in the Far East and Red Sea.

—Randall R. Woodward

Refinery Production Scorecard

(Crude runs in million tons)

Country	Annual Capacity *	Latest Month	Monthly Runs	Year-to-Date Runs	% Capacity Utilization	Yearly % Chg.
Belgium	34	June	2.6	15.9	95.0	-3.3
France	85	Aug.	6.6	52.2	92.0	-0.8
Western Germany	89	July	8.4	56.4	109.0	+8.6
Eastern Germany	20	July	1.2	8.6	71.0	+1.2
Italy	117	June	7.8	45.1	79.0	+6.7
Netherlands	58	June	4.8	27.5	96.0	-2.7
Spain	62	July	4.8	32.1	89.0	+5.7
United Kingdom	90	July	7.7	52.7	101.0	-0.3
Japan	211	July	15.6	109.6	89.0	+5.1

*To convert into approximate thousands of barrels per day, multiply by 20. For U.S. refinery operations, please see page S6.

Phibro Energy Halts Russian Oil Exports

MOSCOW — Phibro Energy Inc. says its White Knights joint venture suspended Western Siberian oil exports because Russia hasn't granted a vital tax exemption.

Production of about 8,000 barrels per day continues at Raduzhny, but the partnership has halted exports because of a tax bill of about $2 million for recent shipments.

The crude is commingled with other crudes as part of Russia's Urals export blend.

Phibro, a 45% partner in White Knights, contends the venture is exempt from the export tax. A Russian commission charged with reviewing exemption applications has yet to grant any.

"The export tax is what's killing us," Michael N. Castellano, Phibro vice president and controller tells *Bloomberg OBG*. "The economic success of the venture is very dependent on getting our exemption from the export tax."

Proceeds from recent exports are being spent to further develop the project, although Phibro has halted its own investment until the export tax matter has been resolved, Castellano says.

Phibro has spent $116 million on the venture since it began last year. White Knights exported about 300,000 barrels in 1991 before the export tax of about $7 per barrel was imposed.

In June, the venture paid $2.6 million in taxes to export 430,000 bbls before the tax was lowered to about $4/bbl. Last month, about 1 million bbls were exported in three shipments.

The venture is expected to pay more than $2 million for those exports, although the money isn't due until next month, Peter Thoren, a Phibro attorney involved with the Russian negotiations tells *Bloomberg OBG*.

An exemption from the tax was adopted in July, but none has been issued, Thoren said. Phibro hopes to have its exemption before the first tax bill is due Nov. 6, he said.

The exemption applies to ventures registered with the government before Jan. 1, 1992, that are 30% foreign owned.

Thoren says Russian officials have indicated White Knights should qualify for the exemption, but a commission has yet to review its application.

—Steve Stroth

Dutch First-Half Net Product Exports Increase

Dutch domestic product deliveries and refinery runs fell in the first half of this year, but the importance of the Netherlands as a product exporter continues to grow.

First-half net product exports have grown from 320,000 barrels per day in the first half of 1990 to 443,000 b/d in 1991 and to 454,000 b/d this year.

Inland product deliveries were slightly lower for most products, with jet fuel and diesel as notable exceptions. Jet deliveries rose almost 12%, and diesel continued a record of steady growth (*see Table 1*). In a relatively flat market, unleaded gasoline continued to advance, reaching a 70% market share (*see Table 2*).

The large sales of marine bunker fuel, 5.7 million tons in the first half of this year, or about 210,000 b/d, should be added to the Netherlands demand picture.

Refinery input declined 2.7%, although supply needs were augmented by a drawdown of product inventories. The decrease in product imports compared to exports led to the increase in net exports (*see Table 3*).

Gasoil continues to account for almost half of Dutch net exports. Gasoline net exports, second in importance, totaled 125,000 b/d for the first half this year (*see Table 4*).

Refining yields have trended lower in gasoline and higher in fuel oil (*see Table 5*). As a result, the value of refining output is estimated to have decreased by about 25¢/bbl.

--Brooke Pietsch

Dutch First-Half Net Exports Exceed 450,000 b/d

Table 1
Inland Demand
(million tons)

	1990	1991	1992	Change '91 vs '90 Diff.	Pct.
LPG	1.34	1.32	1.37	0.05	3.4
Naphtha	1.62	1.44	1.40	-0.04	-2.9
Gasoline	1.74	1.78	1.74	-0.02	-1.1
Jet Kero	0.78	0.82	0.92	0.10	11.8
Auto Diesel	1.89	1.96	2.02	0.06	3.2
Heating Oil	0.88	1.03	0.95	-0.08	-7.8
Heavy Fuel	0.16	0.20	0.13	-0.07	-34.3
Other	1.65	2.00	1.92	-0.07	-3.7
Total	**10.05**	**10.52**	**10.44**	**-0.08**	**-0.8**

Table 2
Gasoline Sales by Grade
(% of market)

	1991	1992	June 1992
Leaded Premium	44.3	30.7	30.2
Unleaded			
Super Premium	13.6	14.6	14.6
Eurosuper	41.6	54.5	54.8
Other	0.3	0.3	0.3
Total	**100.0**	**100.0**	**100.0**

Table 3
Supply and Demand
(million tons)

	1990	1991	1992
Net Refinery Production	23.5	26.4	26.2
Product Imports	19.1	18.2	15.9
Stock, Statistical Diff.	0.1	0.1	1.1
Total Supply	**42.7**	**44.6**	**43.2**
Inland Deliveries	10.0	10.5	10.4
Product Exports	27.0	28.5	27.1
Bunkers	5.6	5.6	5.7
Total Demand	**42.7**	**44.6**	**43.2**

Table 4
First-Half Product Trade
(million tons)

	Imports	Exports	Net Exports
LPG	1.43	0.75	-0.68
Naphtha	3.75	4.52	0.77
Gasoline	2.25	5.00	2.74
Jet Kero	0.56	1.75	1.19
Gasoil	3.72	9.05	5.33
Hvy Fuel Oil	3.35	4.72	1.37
Other	0.80	1.30	0.50
Total*	**15.85**	**27.09**	**11.24**
Total*#	**640**	**1094**	**454**

**Totals calculated before rounding.*
#In thousands of barrels per day.

Table 5
First-Half Refining Output Value

Input		1990	1991	1992
Million Tons		25.3	28.3	27.9
'000 b/d		1,022	1,143	1,129
	Value $/t*	**1990 Pct. Yield**	**1991 Pct. Yield**	**1992 Pct. Yield**
LPG	165	2.7	3.2	2.6
Naphtha	175	6.6	6.4	6.3
Gasoline	205	17.7	17.0	16.4
Jet, Kerosene	180	9.3	8.7	8.4
Gasoil	165	28.0	29.8	30.2
Heavy Fuel	75	19.1	19.4	21.2
Other	230	9.6	8.8	8.7
Total	**---**	**92.9**	**93.2**	**93.7**
Output Value $/t---		151.5	150.8	149.7
Output Value $/b---		20.53	20.44	20.28

** Approximate wholesale value NW Europe.*

Atlantic Basin Crude: Perceived Ample Supply Pushes Prices Lower

LONDON — The perception that crude supplies are plentiful continues to exert downward pressure on Atlantic Basin crude prices. December Brent crude oil futures lost about 15 cents per barrel during the past week and more than $1 since the Oct. 9 high of $20.90/bbl.

Traders point to burgeoning OPEC production, the push by Iran and Kuwait to increase their output to the maximum and the possibility of renewed oil sales by Iraq.

"The outlook remains one of continued bearishness," a broker with Smith Barney says. "Each price fall results in an attempted recovery, but there's no doubt the trend is generally down."

Nor are traders encouraged by lackluster demand. General economic weakness appears to have restrained the customary winter upturn on both sides of the Atlantic, they say.

"Winter concerns are retreating as we enter November and focus trade on December or even January oil," says a broker with Mocatta.

Trans-Atlantic opportunities diminished as the premium of the U.S. benchmark crude, West Texas Intermediate, to Brent declined to less than $1.20/bbl.

Recent trans-Atlantic trades included cargoes of North Sea Brent and Ekofisk for U.S. and Canadian refiners, while West African shipments declined.

The underlying price weakness was barely halted by cutbacks in Brent Blend crude output and exports because of a fire in the gas-processing plant and gale-force winds.

"The market seemed to take the latest Brent loading stoppage in its stride," the Smith Barney broker says.

North Sea crude oil differentials against dated Brent were largely stable. High gasoil yield Flotta further improved about 5¢/bbl to minus 65¢/bbl, because of continued sporadic Russian Urals cargoes. A cargo of Urals achieved dated less 92¢/bbl delivered to Rotterdam, compared with a $1.10/bbl discount recently.

Typical recent sales of North Sea crudes to Northwest Europe included cargoes of Ekofisk, Forties, Brent, Flotta, Beryl, Statfjord and Gullfaks.

Crude supplies in the Mediterranean remain limited, especially sour, medium sulfur grades, traders say. Iranian Heavy was sold at a reduced discount to dated Brent of $1.85/bbl for Romania, f.o.b Egypt's Sidi Kerir terminal, while Urals cargoes were delivered to Austria and Italy at discounts of $1.05/bbl.

In other regional trades, a cargo of October Tunisian Zarzaitine was sold by state company ETAP at dated Brent plus about 51¢/bbl f.o.b, compared to plus 35¢/bbl the previous week and Algerian Saharan Blend at plus 73¢/bbl.

In West Africa, despite limited trade and reduced trans-Atlantic opportunities, crude differentials improved. Nigerian gasoil-yield Forcados was sold at a 63¢ premium, while light Brass River was sold at plus 84¢/bbl for Spain and 82¢/bbl for Chile.

U.S. Gulf refiners purchased cargoes of Nigerian Qua Iboe at dated plus 65¢/bbl and Angolan Palanca at parity to West Texas Intermediate on a delivered basis.

—Charles Birch

Cold Needed to Heat Up European Products

LONDON — The current weakness in physical oil product prices in Northwest Europe is likely to continue unless weather conditions deteriorate significantly, traders say.

"Unless we have an Antarctic spell of weather, the prices are going to keep falling," says a broker with Gerald Ltd. in London. "There's so much stuff in storage that it will have to get pretty cold to make any impression."

There are indications that the weather may become colder. Temperatures in the U.K. are 2°C below the normal October temperature of 10.7°C, a spokesman from the U.K. Meteorological Office says. That's the coldest October in 10 years, and temperatures are expected to continue to fall as colder weather from Scandinavia moves through Northwest Europe, he says. The drop in temperature should encourage householders to purchase gasoil for their domestic heating, traders say.

Water levels in the River Rhine have risen, enabling cheaper movement of refined products from the Amsterdam, Rotterdam and Antwerp region to inland Germany if demand increases.

"It's cold in Europe, and we expect higher demand for gasoil (heating oil) for domestic heating," says a trader with Mobil AG in Hamburg. "If this demand appears, we can fill it, now that Rhine levels have risen and barge freight rates have fallen."

Demand has increased for German winter-grade gasoil and is expected to continue to grow, although some traders are less optimistic that colder weather will solve all their problems.

Bad weather in the Black Sea has delayed shipments of Russian gasoil through the ports of Tuapse and Novorossiysk, causing loading delays and reducing shipments to the European market. Delays in obtaining Russian export licenses also are restricting supplies.

Russian gasoil is at a premium to French domestique grade because of its scarcity, although French grade prices received a slight boost from the lack of Russian supplies.

Mediterranean area buyers are looking for replacement product for the Russian gasoil in Greece and the East Mediterranean.

Prices for jet kerosene and naphtha are strong because annual refinery maintenance is limiting supplies on the market. Most demand is for small 10,000-15,000-ton cargoes.

In Northwest Europe, traders see strong demand for specific qualities of jet with a high flash point and for dual-purpose kerosene in Scandinavia.

Refinery outages in the Rotterdam area are limiting gasoline supply, pushing physical prices up, traders say. Trading for 91 regular unleaded and Eurograde remains steady in Northwest Europe. Demand for 92 regular leaded in the Mediterranean comes from Turkey and North Africa, where permissible lead contents are higher.

Demand was strong for Bunker C fuel oil in the ARA region, as prices in Rotterdam eased by $1-$2. Supply of high sulfur fuel oil is constrained because fewer refineries are operating. Heavy trading at the end of the month stemmed from traders selling positions they didn't own, in the hope that prices will decline, allowing them to purchase their requirements more cheaply in November, traders say.

ENEL, the Italian utility, announced tender requirements for 400,000 tons of 1% sulfur fuel, giving a boost to a quiet low sulfur market. Trading activity in the high sulfur cargo market was heavy because EDP, the Portuguese utility, issued tender requirements for 275,000 tons of 3.5% sulfur fuel, for November delivery.

—Lisa Wilson and Samantha Zee

Nymex Crude Futures Stage a Sudden Decline as Oversupply Looms

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Low Demand, High Inventories Depress U.S. Crude

Low demand and high inventories sent West Texas Intermediate prices into a tailspin, driving prices down to their lowest levels since May.

Increased output from OPEC, which is estimated to exceed the organization's production ceiling by up to one million barrels per day, and higher U.S. and European oil supplies have combined to drag WTI prices down by more than $1.50 per barrel since Oct. 9.

When prices slipped below $20.50/bbl in May, they bounced back on a late, non-seasonal surge for distillate fuel. Crude prices quickly recovered, peaking at about $23/bbl by the end of June, *Bloomberg Energy Service* figures show (*see chart*).

With December crude prices sinking and distillate demand lagging, fewer traders and refiners are holding to their earlier forecasts of rising crude prices through the fourth quarter.

Despite bouts of cold weather in the U.S. Northeast (New England and the Middle Atlantic States), prices for heating oil, the normal stalwart of the winter oil market, have mustered little strength.

Heating oil supply is crucial to the **Northeast**, because oil's share of the regional retail home heating market is 44%. These residential customers use 90% of all heating oil supplied to the U.S. market, the New York-based Petroleum Industry Research Foundation, Inc. tells *Bloomberg OBG*.

While there's been non-seasonal buying of gasoline, traders say higher prices for heating oil are imperative right now if December sweet crude prices are to trade significantly higher.

"It may seem like a small segment of the market, but when you're trading fourth-quarter (winter) oil there's an immense psychological importance to higher heating oil prices," a British Petroleum trader says.

Spot West Texas Intermediate traded last week in the $20.75-$21.00/bbl range, compared with $21.70-$22.00/bbl the previous week. New York's December light sweet crude contract fell to a low at $20.79/bbl as weak demand for heating oil and high stocks have slowed buyer interest in crude.

Midcontinent demand for December WTI is off to a slow start, although expected to increase as the trading month ages. Posted premiums for December WTI traded at the wellhead have declined as buyers have been dropped their bids as futures prices fell. December WTI is trading at its posting plus $1.30-$1.35/bbl, compared with posting-plus $1.37-$1.39/bbl at the outset of December trading.

December Midland Sweet began the trading period at parity to December sweet crude futures, but quickly fell to a discount of 2¢-4¢/bbl. Traders of Midland Sweet say it will take at least another week for a clearer price trend to develop, although they expect it to maintain a discount to WTI-Cushing as opposed to a premium.

December Midland Sour started the new trading month at sweet crude futures less $1.75-$1.80/bbl. Buyers were aggressive, and recent prices have been closer to sweet crude futures less $1.55-$1.65/bbl.

Traders say the sudden interest in Midland Sour stems from a lack of foreign substitutes, plus a lack of information on how much Gulf Coast Alaska North Slope will be offered for sale in December.

Traders also say producers of Sour, having seen November barrels fetch sweet crude futures less $1.30/bbl, are anxious to repeat those numbers for December.

Trading activity for December Light Louisiana Sweet is off to a moderate start, with trades of about 1,000 barrels per day being reported. December LLS is priced at about sweet futures plus 35¢-40¢/bbl. LLS prices began the month at sweet crude futures plus 40¢-45¢/bbl.

December Heavy Louisiana Sweet is trading at about December sweet crude futures less 25¢-35¢/bbl, or 5¢-15¢/bbl more than when trading began at sweet crude futures less 40¢/bbl. November Eugene Island was priced at sweet crude futures less $1.30-$1.40/bbl, although no trades have been confirmed, refiners say.

The higher prices quoted for December Midland Sour and West Coast ANS through the end of November are maintaining a floor under December Gulf Coast ANS cargoes. Recently, December ANS cargoes delivered to Gulf were priced at December sweet crude futures less $2.15-$2.35/bbl.

In the **Rockies**, prices for December Wyoming Sweet barrels weren't established yet. November trading closed at parity with November WTI to 10¢/bbl less.

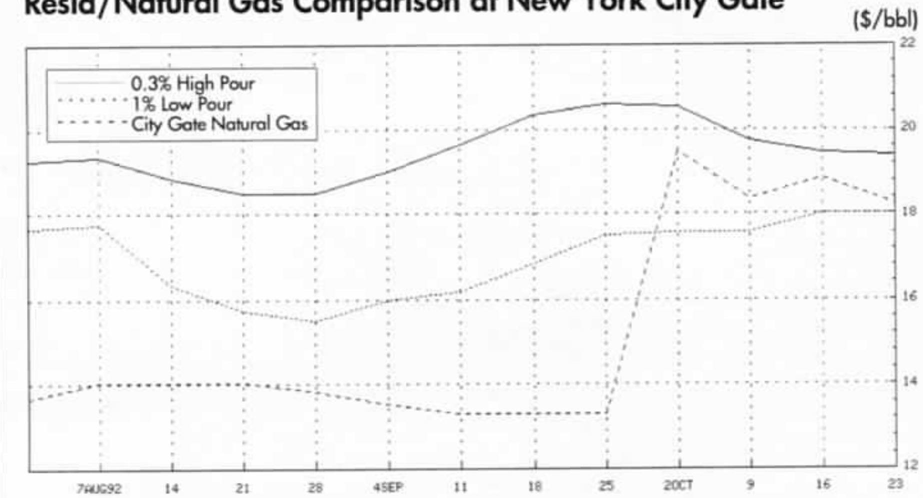
Prices for November Gulf Coast cargoes of Alaska North Slope aren't being quoted. The last representative prices from refiners for November Gulf Coast ANS were at about December sweet crude futures less $2.00-$2.15/bbl.

On the **West Coast**, British Petroleum, the largest supplier of ANS, sold a partial cargo of November ANS into a pipeline at about December sweet crude futures $2.50/bbl. BP says it's still offering November West Coast ANS at that price, although it wasn't yet quoting prices for December cargoes.

West Coast Line-63 barrels were less active at the start of December trading. Buyers of December Line-63 were at about December sweet crude futures less $4.40/bbl while seller ideas were closer to the Buena Vista posting plus $1.10-$1.15/bbl.

—Jay M. Amberg

Resid/Natural Gas Comparison at New York City Gate



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Heavy Fuel Prices Teeter on the Brink of Winter

Crumbling natural gas prices, limited market outlets and a rapid buildup in inventories are exerting downward pressure on heavy fuel markets at a time when prices usually move higher.

Price differentials which separate the cash values of the various sulfur grades are narrowing, and demand is weakening in almost all crude and products markets. These factors could end the momentum that has carried U.S. resid prices higher through much of 1992, traders tell *Bloomberg OBG*.

Marketers from Boston to Philadelphia, citing full storage facilities and little demand from the commercial-industrial sector, say bulk volume spot prices have peaked and should retreat over the next two weeks.

With Nymex West Texas Intermediate crude oil struggling to stay above $21 per barrel, prices for low sulfur resid are likely to fall 50¢ to $1/bbl in the next two weeks, traders say.

In the past two weeks, low sulfur spot cargo prices along the Eastern Seaboard for 0.3% through 1% sulfur grades eased by 50¢/bbl as a supply glut, especially of 0.3% sulfur quality, clogs storage facilities in New York.

Higher sulfur grades, currently in strong demand by New England utilities for November, also might be forced out of the market by an abundance of low-price Canadian and U.S. Gulf Coast natural gas.

In **New York**, 0.3% sulfur high pour, utility-spec (149,000 British thermal units per gallon minimum) cargoes sold for $19.40/bbl and $19.65/bbl, delivered during October.

Cargoes currently are offered from $19.25/bbl, with flexible delivery ranges during November. By comparison, natural gas is arriving at the city gate between $2.75-$2.90/MMBtu, equivalent to $17.29/bbl-$18.23/bbl for oil.

Low pour 0.3% sulfur (city-spec) fuel oil prices are under assault, as Gulf Coast refiners shun straight-run feedstock quality, while demand for barges lags in the harbor. Barge offers of $19.50/bbl, f.o.b, are generally ignored.

European traders, most of which are well-stocked with heavy fuel, say demand from British, French, Portuguese and Italian utilities may take up slack from the U.S. East Coast.

EDP, the Portuguese utility, seeks 270,000 tons of 3.5% sulfur fuel oil, delivered during November. There's also demand for this grade from the ships' bunker markets in Northwest Europe, and spot prices are up to $100/ton ($15.62/bbl) f.o.b Northwest Europe.

Traders on both sides of the Atlantic also are awaiting the Italian utility, ENEL's November spot tender which many feel could rescue near-term spot cargo prices.

In the Mediterranean, 1% sulfur cracked fuel trades within a $112 and $115/bbl, f.o.b range, for November delivery.

In **Houston**, sellers of 1% sulfur heavy fuel offer barges from $16.75/bbl, f.o.b. With diminished local outlets for product, bids are at least 25¢/bbl less than offers. Only the prospect of ENEL's tender is buoying sellers with Mediterranean-quality oil in their tanks.

In **Florida**, the state's largest utility, Florida Power & Light, has returned its Turkey Point IV nuclear unit to full power. FPL purchased 425,000 bbls of 0.7% sulfur, for November delivery, at about $18.20/bbl, a utility spokesman says.

In **Chicago**, city-gate natural gas is assessed at $2.40/MMBtu ($15.09/bbl oil equivalent) while delivered 1% sulfur fuel is priced at $18/bbl ($2.86/MMBtu gas equivalent), delivered from the U.S. Gulf.

In the **Mid Continent**, Canadian natural gas volume will increase by more than 300 million cubic feet per day on Nov. 1 as firm gas begins to pack the Northern Boarder Pipeline for delivery to the Ventura, Iowa hub, arriving at $1.50/MMBtu ($9.43/bbl).

In New York State, gas-on-gas competition could be fierce as the Iroquois Transmission System begins moving more than 600 million cubic feet of natural gas over the border Nov. 1.

This hasn't stopped at least one N.Y. State utility from tendering a 1.5% sulfur cargo for delivery in December. Traders expect the tender to be awarded on a market-indexed basis.

At least five buyers of 2.2% sulfur have entered the East Coast market for cargo volumes delivered to New England and Eastern Canada ports during November.

East Coast high sulfur spot cargo prices have risen more than $1.50/bbl during the past six weeks to a $16.50-$16.85/bbl trading range, still competitive with natural gas, traders say.

—Steve Decker

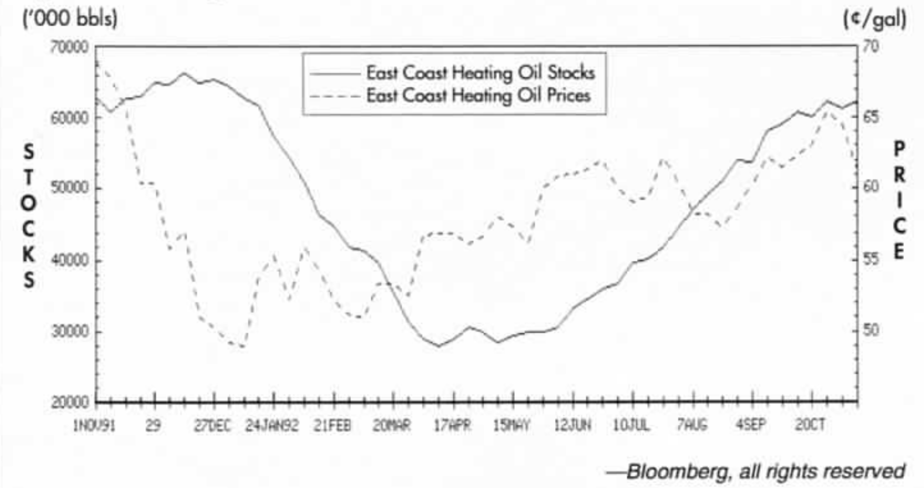
Mid-Continent No.6 Oil Rack Ranges

(prices effective October 29, 1992)

	¢/gal	% S
Chicago	42.86-44.05	1.0
Cleveland	42.86-44.05	1.0
Detroit	42.86-44.05	1.0
Milwaukee	40.48-41.37	2.0
Minn/St.Paul	41.67-42.71	1.5
Pittsburgh	42.86-44.05	1.0
St. Louis	40.48-41.37	2.0

Note: Prices are notional, based on Gulf Coast value plus freight.

Sparse Heating Oil Demand Boosts Stocks, Pressures Prices



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U.S. Heating Oil Lacks Support Despite Season

Increased refinery production and rising inventories of heating oil in the United States probably will outweigh any boost in demand generated by forecasts for colder weather, and that spells lower prices over the next few weeks, traders tell *Bloomberg OBG*.

The American Petroleum Institute's latest figures for the U.S. distillate supply show a week-to-week increase of 1.8 million barrels, baffling traders who were expecting a drop of up to one million barrels.

The API refinery production figures also were something of a surprise to the trade. Distillate output climbed 101,000 barrels per day on a rise of 0.8 percentage points to capacity utilization. Estimates had called for a drop of one percentage point.

Lagging demand for heating oil is credited with creating the contra-seasonal combination of rising inventories and falling cash prices *(see chart)*.

If National Weather Service forecasts for below-normal temperatures throughout most of the East Coast for this week prove true and if cool weather in Northwest Europe continues to preclude imports, heating oil prices might recover.

Bloomberg Energy Service calculations reveal a negative arbitrage of about 2.25¢/gal for the movement of heating oil from Northwest Europe to the East Coast.

Even if cooler weather does develop, traders expect light activity throughout this week. The New York Mercantile Exchange December contract becomes the spot month on Monday, and many traders will be departing their offices for the annual API convention in New York City, which begins on Sunday, Nov. 8.

Gasoline prices are likely to decline as decreases in U.S. supply and production were smaller than expected. Unleaded stocks dropped 783,000 bbls, according to API, while industry estimates had called for about a 2-million-bbl decrease.

Last week's increase in prompt regular unleaded gasoline prices is unlikely to continue. The strength was caused by a combination of buyers with immediate needs for non-oxygenated material and Gulf Coast refiners who converted too quickly to making heating oil, thereby cutting supplies of non-oxygenated gasoline.

Market players also know OPEC is overproducing and probably will continue to do so for the balance of the year. Iran's output target is 4 million b/d, 800,000 b/d more than its quota, while Kuwait expects to produce at least 1.5 million b/d by the end of the year, 400,000 b/d more than its September level.

On the **East Coast**, the non-oxygenated unleaded gasoline spot market barge and cargo trading linked to the November Merc contract is light because of volatility in the spread between the November and December contracts. When the November-December spread widened to about 3¢/gal at one point, most buyers pulled back to await Monday's switch to the December contract as the spot month.

Two part-cargoes of unleaded gasoline were sold in the Boston Bingo speculative market. A parcel for delivery by Nov. 5 sold for 4.20¢/gal more than the December contract, while a Nov. 5-15 delivery sold for December plus 4.45¢/gal.

A heating oil cargo for Nov. 1-15 delivery sold for 1¢/gal less than the December No. 2 contract. Second-half November heating oil vessels are discussed December minus 0.40¢-0.65¢/gal. Front-half December trading ranges December minus 0.25¢/gal to even.

Prompt non-oxygenated 93-octane premium unleaded is assessed at 9.95¢/gal more than the December unleaded contract, while 92-octane quality trades about 1¢/gal less than 93. Oxygenated premium is priced 3¢/gal more than non-oxygenated product. The oxy/non-oxy spread for regular unleaded is 3.25¢/gal.

Prompt 76-grade heating oil traded 0.95¢-1.00¢/gal less than the December No. 2 contract off the Colonial Pipeline. F.o.b 76-grade sold for December minus 1.20¢/gal.

On the **U.S. Gulf Coast**, a shortage of non-oxygenated gasoline is cited as the main reason for the surge in spot prices throughout November.

Gulf Coast refiners stepped up production of oxygenated gasoline to meet the Nov. 1 deadline imposed by the Clean Air Act for supplying 41 U.S. carbon monoxide non-attainment urban areas. The emphasis on oxy output over non-oxygenated gasoline resulted in supply shortages and higher prices for the latter.

Regular unleaded for pipeline loading Nov. 1-5 is trading about 3¢/gal more than the December Nymex, while Nov. 6-10 is discussed at 2.20¢/gal more than the print. End-November product is traded at 0.25¢/gal more than the screen. Any-month December unleaded is discussed at January Merc plus 1.5¢/gal.

November premium unleaded is evaluated at 3.25¢-3.50¢/gal more than the physical price of the regular unleaded.

Oxygenated gasoline is about 3.00¢-3.25¢/gal more than the non-oxygenated.

Heating oil for Nov. 1-5 loading traded at 2.95¢/gal less than the December futures contract, while Nov. 5-10 product is valued at Merc minus 2.90¢-3.00¢/gal. Any-November barrels sold at Dec. Merc less 2.75¢/gal.

November jet fuel trades at print level minus 1.25¢/gal with prompt discussion about 2.00¢/gal off the Merc.

In the **Midcontinent Group 3** spot market, a squeeze on October gasoline supply pushed November differentials higher. Prompt November regular unleaded is valued at about 4¢/gal more than the December Nymex, with any-month barrels trading at 1¢-1.25¢/gal more than the screen.

Premium unleaded for November delivery sold at 4¢/gal more than the spot price of regular unleaded.

Differentials for any-November heating oil remain steady, with discounts to the December print in the range of 1.75¢ to 2.00¢/gal. Nov. 1-10 heating oil is negotiated at about 0.5¢/gal less than the screen. Group jet fuel trade is assessed at 2.00¢-2.50¢/gal more than the physical price of the heating oil.

In **Chicago**, spot light product trade is characterized as lackluster. Regular unleaded gasoline for prompt November delivery is bid at 2.75¢/gal more than the December Nymex, while sellers offer 3¢/gal more. Nov. 10-20 barrels are valued at about 2.25¢/gal more than the Merc.

Buyers of Chicago heating oil delivered by Nov. 10 are bidding 2.50¢/gal off the December screen, while sellers ask Merc less 2.30¢/gal. Nov. 10-20 product sold at Dec. Nymex minus 2.30¢/gal.

West Coast marketers have mixed reactions to reports that the El Paso Refining Co. LP's 55,000 barrel-per day refinery will close in November after filing for bankruptcy. The El Paso refinery had been a large supplier of gasoline to the eastern leg of the Santa Fe Pipeline delivering product to Arizona and other southwest markets.

Unleaded regular spot prices appear to have little support over the near term, dropping between 2¢/gal last week.

Texaco brought several fire-damaged upgrading units back on line ahead of schedule, a development which threatens to add more gasoline to a market already grappling with oversupply.

In Los Angeles, buyers are scarce, sensing that spot prices will move lower before turning around. For first-cycle November delivery, sellers are offering unleaded regular from 58¢/gal.

In the San Francisco, where the oversupply-low demand situation is more acute, offers of 54¢/gal are countered from 53¢/gal, for prompt delivery.

Diesel prices are down another 1-2¢/gal for the week. In Los Angeles, prompt diesel trading ranges between 62¢/gal and 63¢/gal. In the Bay area, offers of 61¢/gal are still unattractive to first-cycle buyers.

—Steve Decker, Marc Donatiello, Amy Kosco, Diane Wilkoff

U.S. Distillate Supplies Grow, Market Awaits Winter

U.S. supplies of distillate fuel oil continue to grow, while sluggish demand and moderate weather are keeping prices from rising significantly, traders say.

For the week ended Oct. 23, the American Petroleum Institute says the nation's supply of distillate fuel increased by 1.5 million barrels to 133.2 million from 131.5 million a week ago.

In the Northeast (New England and Middle Atlantic States), where about 90% of the heating oil supplied by U.S. refiners is consumed, API's recent figures show refiners increased their daily output of distillate fuel by about 10,000 barrels per day to 440,000 b/d from 430,000 b/d last week *(see chart)*.

East Coast production of distillate fuel, which includes heating oil and diesel fuel, reached a seasonal peak on Oct. 9 when refiners in the area produced 504,000 b/d, significantly higher than last year's peak of about 430,000 b/d.

While moderate weather in the Northeast has kept consumer demand for heating oil in check, a recent forecast presented to the Winter Fuels Outlook Conference by John H. Lichtblau of the New York-based Petroleum Industry Research Foundation Inc. offers hope for marketers of heating oil.

After two straight years of decline, Lichtblau says total U.S. oil demand will increase about 1.5% this year. This increase is based on normal winter weather, compared with last year's warmer-than-normal season, and a modest economic recovery, compared with last year's 1.3% decline in the Gross Domestic Product.

In the Northeast, where 44% of residential units are heated by oil, Lichtblau sees normal degree days and the slow beginning of economic recovery raising demand for heating oil by about 4%-6% in the fourth quarter of 1991 and the first quarter of 1993 compared with comparable periods last year.

Under normal or moderately colder-than-normal weather conditions, the research foundation president says, the market won't have a problem supplying these increased volumes of heating oil. Lichtblau believes prices for heating oil will exceed 1991 levels because of higher crude costs and the increase in demand for distillate fuel oil.

In a worst-case scenario, if there is extremely cold weather, the demand for distillate fuel could receive a boost from lower stocks of natural gas.

Lichtblau told the winter-fuel conference that natural gas stocks at the start of the prime heating oil season (November-December) are forecast to be less than 1991 levels because of disruptions caused by Hurricane Andrew. The research foundation president says unused gas deliverability will mostly have disappeared by the first quarter of 1993.

"Thus, in any sustained severe cold spell interruptible gas consumers in the industrial and electric sectors are likely to switch to distillate fuels on a larger scale than in the past," Lichtblau says.

A situation like this could raise distillate prices during the winter months, traders say.

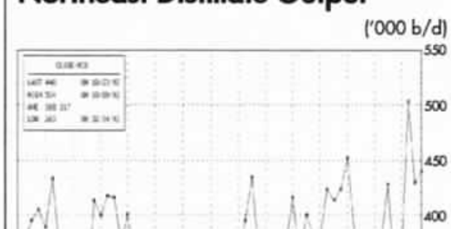
Lichtblau told members of the National Association of State Energy Officials that if there is an additional call for distillate supplies this winter, refiners should be in a better position to maximize distillate production because the mandatory addition of oxygenates (MTBE's) to gasoline this winter reduces the requirement for gasoline from refiners.

Gulf Coast refiners tell *Bloomberg OBG* that the addition of oxygenates, in many instances, actually reduces the need for some refineries to produce blending components, like toluene, reformate and xylenes, for gasoline production. This spare capacity could be used to refine incremental quantities of heating oil if winter demand exceeds current expectations.

Toluene, reformate and xylenes are produced in refineries and petrochemical plants for blending into finished gasoline.

—Jay M. Amberg

Northeast Distillate Output



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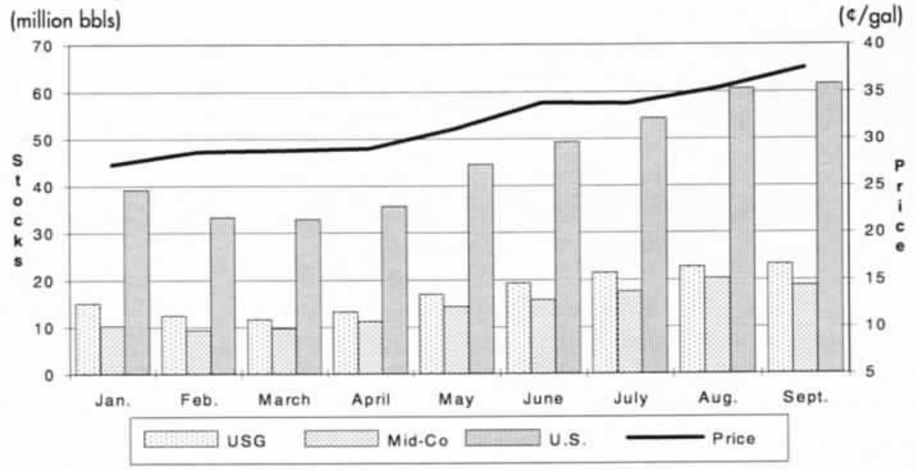
U.S. Propane Stocks Continue to Increase



—*Source: API, Bloomberg*

Spot Propane Prices Soften as Inventories Climb

Upon release of the September liquid gas inventory statistics by the American Petroleum Institute, buyers exited the market, weakening prices. The figures show national propane inventories up 1 million barrels from August, up 11.4 million bbls from year-ago levels.

Gulf Coast bids on October, November and December propane slipped about 0.5¢/gal to 32.75¢/gal, on release of the API figures. Sales were completed soon thereafter at 33¢/gal, where most analysts agree the prompt spot value remains. In mid-September, Belvieu propane commanded 39¢/gal.

"People are a little nervous about the number of (propane) barrels out there, and we haven't had any cold weather yet," says a marketer with Union Texas Petroleum Corp., Houston.

Industry analyst J. William Love, Jr., of Galveston, Texas, also expects lower prices for spot propane. "Continue to expect prices to move lower in response to higher inventory levels and a slackening of pet-chem demand," he said.

Love says the spot propane price should approximate 60% of the crude price. A current spot value of about $21.15 per barrel (for prompt West Texas Intermediate) would equal about 30.2¢/gal for propane in Mont Belvieu.

"The market is in a bearish phase," Love says. "Propane (prices) will continue to correct its ratio to crude oil toward its more normal 60% relationship."

Crop-drying demand in Conway had kept propane pipeline terminals operating for about 10 days at levels of intensity not seen in six or seven years. Yet spot wholesale prices held at about 30.5¢/gal since mid-month because the product had been pre-sold in previous months.

In fact, bulk-market quotes at Conway, Kans. took a momentary tumble in spite of a 1.4 million-barrel reduction in Midcontinent propane inventories. A few isolated sales were confirmed at 29.75¢/gal before some purchasing support drew the prompt values to 30¢/gal.

Most of the play on propane and ethane is trader-oriented, while chemical company customers are looking at ethane as a possible feedstock.

Naphtha is taking precedence over both ethane and propane as a chemical feedstock, with ethane slightly ahead of propane from an economic viewpoint, Love says. Propane use as a feedstock declined from 11.1 million bbls in July to about 9.3 million bbls in September, he says.

Spot ethane in Belvieu has remained in a 24-26¢/gal range on the Gulf Coast since summer's end for either purity or e-p mix. Petrochemical buying has been on a limited, though steady enough basis to maintain some price equilibrium, traders say.

Likewise, in Conway, e-p mix has kept to an 18-19¢/gal price since October.

Ethane stocks are lower by 1.2 million bbls nationally from the previous month, while 4.1 million bbls greater than one year ago. Most of the monthly drawdown came in the Gulf and Midwest, which reported 426,000 and 606,000 fewer barrels, respectively.

—Bill Barrett

Sullom Voe Fire Fails to Ignite Propane Prices

A fire in a gas-processing unit at the Shetland Islands terminal of Sullom Voe failed to give propane prices in **Northwest Europe** a boost, traders say. Instead, excess supply and a lack of demand continue push down prices for propane cargo deliveries between November and January.

Liquefied petroleum gas exports from Sullom Voe will be halted for up to eight weeks, taking as much as 65,000 tons of LPG out of the market.

The fire occurred Oct. 26 in the main gas separation unit at Sullom Voe, where the Brent and Ninian crude oil pipelines terminate. The unit separates gas from the crude streams.

"It's done little to correct the short-term overhang," says a trader with Imperial Chemical Industries Plc. "(The market) might tighten in December if we get some very cold weather."

Traders in the forward "flexi" market for propane delivered in Northwest Europe appear confident that supply will be sufficient to meet demand. Forward prices for December are down $2-$6 per ton to $212-$220/t delivered, while prices for January are down about $10/t to $225-$230/t.

Sellers of large cargoes of propane are finding few buyers. As a result, prices could decline this week to their value for petrochemicals manufacture, or about $170-$175/t, from their recent $190-$195/t. With winter and heating demand approaching, any such decline should be short-lived, traders say.

The large cargo butane market came to life with the first cargo traded in more than two months. A cargo of 8,500 tons was traded at $200/t delivered to the U.K. East Coast, traders say. That implies a term contract price for North Sea cargoes lifted in November of $180-$185/t. British Petroleum and Shell U.K. agree on monthly contract prices with their customers at the end of every month. Propane prices could be posted at $175-$180/t, traders say.

Trading in the **Mediterranean** is minimal, and prices at Lavera in southern France reflect movements in prices in Northwest Europe, brokers say.

In the **Persian Gulf**, market activity is confined to small parcels of propane for topping up contractual cargoes, traders say. These 2,000- to 5,000-ton parcels are trading at the Saudi government established price plus $35-$36/t, f.o.b the Persian Gulf.

By contrast, butane is virtually nonexistent. "There are no buyers, no sellers, there's no market," says a trader with Total SA in Paris. He expects trading to pick up during early November as Japanese buyers seek cargoes for arrival in December and January.

"The problem is it's not really winter yet in Japan, so there's not much demand," the Total trader says.

Separately, traders say Saudi Arabian Marketing & Refining Co. is expected to announce term contract prices for November of about $159/t for propane and $150/t for butane. That represents an increase of $6.50/t for propane and a decrease of $1.50/t for butane compared with Samarec's October prices.

In the petrochemical market in Northwest Europe, the continued weakness of propylene prices forced Norway's Statoil to close the Antwerp plant it operates jointly with Himont Inc. Statoil says the plant will be closed until at least the end of the year.

Traders say the restart is likely to be delayed until spring because of the high cost of propane, which is the plant's main feedstock. Propane prices traditionally are high in winter because of heating demand.

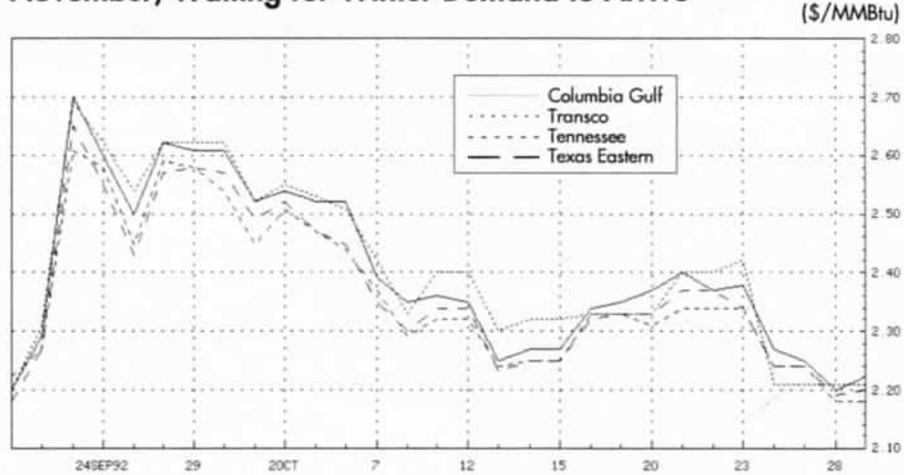
Spot propylene prices currently are about 400-420 deutschemarks per ton, or $260-$270/t, delivered in Northwest Europe. That compares with a high of $425-$430/t this summer, *Bloomberg Energy Service* figures show. Contract propylene prices are at about the same level as those in the spot market, traders say.

Ethylene prices also continue to decline, with spot cargoes discussed at $265-$275/t, down $10/t compared with recent prices. Contract prices have been settled at 625 marks per ton in continental Europe, or about $403/t.

Fears of a further decline in butadiene contract prices are unfounded, as prices in the United States are steady, traders say. Contracts for the fourth quarter continue to be discussed at about 1,650 French francs per ton.

—Ian Clarke

Spot Natural Gas Prices on U.S. Gulf Head Lower into November, Waiting for Winter Demand to Arrive



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November U.S. Gas Prices at Discount to October

HOUSTON— Spot prices for November natural gas delivered to Gulf Coast interstate pipelines have stumbled about 20 cents per million British thermal units since marketers began to assess monthly supply requirements a week ago, traders say.

As a result, November prices, at the low $2.20s/MMBtu on the Gulf, are now about 15-20 cents/MMBtu less than October's average, which is a seasonal aberration, traders say.

A perceived oversupply of gas and a lack of weather-related consumption have combined to crush the hopes of producers seeking to duplicate October's price peaks.

A trader with Gasmark Inc. in Houston says that November's anemic price performance thus far is a "reaction to the over-reaction we saw in October."

Several Gulf Coast pipelines experienced spot prices in the $2.60-$2.70/MMBtu range late in the month when cold weather fueled a buying frenzy as the November natural gas futures neared expiry.

"We never saw anything (in cash market supply negotiations) near the $2.49 that November futures expired at," says a marketing manager with Arkla Exploration Co., Houston.

Supply negotiations that found early buyer-seller agreement in the $2.35-$2.40/MMBtu range, now are shrouded by half-serious discussions in the $2.18-$2.23/MMBtu range, traders claim.

Prices are sliding and gas is readily available, traders said. Sales of 5 million to 10 million cubic feet per day have been confirmed into the Columbia Gulf Transmission pipeline in the $2.18-$2.20/MMBtu range, for delivery after Nov. 2.

Without winter's arrival relatively soon, traders see the trend continuing toward a potential $2.15/MMBtu market-bottom, although most see that possibility as remote, since winter heating demand eventually will kick in.

"We could still test $2.70 (per MMBtu), as we did in October, with some weather," says an optimistic Robert Markowitz of American Gas Marketing in Fairfield, Iowa.

Meanwhile, traders seek homes for the incremental gas volumes they still have to move, at reduced quotes. Most assessments on Gulf Coast pipelines track a $2.20-$2.25/MMBtu range, though lower prices are expected without the help of Mother Nature.

With temperatures in the 80s in Texas and Louisiana, there is no intrastate demand among utilities, traders say, freeing gas that otherwise would go to those markets for interstate commerce.

A trader with American Central Gas Co. in Houston, uses the supermarket analogy to describe current spot market activity:"It's like your mother doing the daily food shopping, buying just enough for that day and waiting for the sales (to purchase larger volumes)," he says.

Most traders believe prices will remain near their present levels. However, the instant cold weather appears, buyers will resurface and prices will run higher, they say.

—Bill Barrett

Suncor Retools Oilsands, Plans to Lay Off 400

CALGARY, Alberta — Suncor Inc. served notice Oct. 28 that it intends to lay off up to 400 workers at its site in northern Alberta while switching its oilsands mine from 25-year-old bucketwheels to giant trucks and shovels.

New leases from the Alberta government will give Suncor's revamped operation one billion barrels of bitumen, equal to a 50-year supply at current production rates.

"We expect to reduce our operating costs by $7 per barrel to about $12 per barrel," says President Rick George.

By 1994 Suncor expects to have eight 24-ton trucks at work in its mine, with others to be added later. Three shovels mining 7,500 tons per hour will load the trucks. This technology, developed for coal mining, will shave operating costs by $3 per hour, George says.

A new C$270-million (US$219 million) utilities plant, designed to meet environmental rules with a 75% reduction of sulfur dioxide output, will cut another $1.50/bbl.

Completion of the plant, which will burn coke and limestone to produce electricity and steam, is scheduled by 1996.

Canadian crude oil runs increased by almost 100,000 barrels per day during the week ended Oct. 20. The biggest increase was in the Atlantic Provinces where the Come-by-Chance refinery in Newfoundland resumed operation after its planned maintenance shutdown.

In the Atlantic Provinces, Irving Oil raised the retail price of gasoline by 7 cents to 57.9 cents per liter at its outlets in Fredericton. Marketers say it appears other companies will follow suit.

Ultramar Canada last week followed the lead of other companies in raising the price of furnace oil and diesel fuel to commercial accounts by 1¢/l.

The company also bumped up its cardlock prices for gasoline and diesel sold to transport trucks by 1¢/l.

In Quebec, the gasoline retail war, which saw prices as low as 47¢/l in some areas around Montreal, is over. Prices have jumped back up by as much as 12¢/l to the 60¢/l level.

The rack contract price for distillates dropped by one-third of a cent, while the price of 2% sulfur heavy fuel oil increased by 1¢/l.

In Ontario, retail gasoline prices remain depressed at around 49¢/l, off approximately 10¢/l from their normal levels. Some stations are even selling at 47¢/l, the lowest they've been since last April.

The rack contract price of No. 2 furnace oil has dropped 0.7 cents to 22.20¢ to 23.20¢/l because of the softening U.S. market, marketers said.

In the Prairies and British Columbia, retail gasoline prices recovered to normal levels in Edmonton and Calgary.

Imperial Oil said it has again decided to gear up two mothballed phases of its Cold Lake heavy oil operation, 120 miles northeast of Edmonton.

It's the second time Imperial has said it will kickstart its phases seven and eight at Cold Lake. Imperial expects to bring the two new phases on stream in the second quarter of 1993.

They will use steam to help the oil flow more smoothly, which will increase production by 19,000 b/d to about 104,000 barrels per day.

—Dann Rogers

Comparison of Heavy Fuel Oil and Natural Gas Costs

Oct. 27, 1992 (Can $ / MCF)

	Heavy Fuel Oil					Natural Gas		
	Sulfur Content	Rack Prices $/bbl	Rack Prices $/MCF	Bulk Contract	Import Price	Spot Gas City Gate	Transport Charge	Gross Cost
Toronto	1.5%	$24.00	$3.82	$3.58	$3.17	$1.75	$0.20 - 0.40	$1.95 - 2.15
Montreal	2.0%	$27.00	$3.82	$3.42	$3.17	$1.75	$0.60 - 0.80	$2.35 - 2.55

The prices represent 1.5% sulfur residual fuel for Toronto and 2% for Montreal. Bulk contract and import alternative prices exclude heating, storage and working capital costs. The Import alternative for Ontario is computed on the basis of a 50/50 mixture of 1.0% and 2.2% sulfur No. 6 oils ex-U.S. Gulf Coast. With city gate prices, customers must pay the gas distribution company a carriage cost which varies from 20¢-40¢/MCF in Ontario and 60¢-80¢/MCF in Quebec.

Canadian Crude Runs

('000 b/d)

	Week Ended 10/20/92	Avg YTD 1992	Avg YTD 1992	% Chg YTD
Atl Prov.	329.6	276.7	311.9	-11.0
Quebec	269.8	275.5	278.6	-1.0
Ontario	444.0	436.5	442.2	-1.0
Prairies	361.7	342.2	355.4	-3.0
B.C.	160.4	151.6	137.1	+10.0
Total	**1,566.8**	**1,482.5**	**1,525.3**	**-2.1**

Canadian Retail Pump Prices

Oct. 27, 1992(¢/liter)

	Regular Unlead. Inc. Taxes	Regular Unlead. Exc. Taxes	Auto. Diesel Inc. Taxes	Auto. Diesel Exc. Taxes	Auto. Prop.
St.John's, Nfld	59.9	32.9	67.3	43.3	46.5
Charlottetown	60.7	36.5	56.7	37.3	55.3
Halifax, NS	57.9	33.3	60.8	38.8	46.8
St. John, NB *	56.9	34.0	56.8	35.4	55.3
Quebec City	59.7	28.7	59.0	32.6	45.7
Montreal	59.4	28.4	57.0	30.8	47.8
Ottawa	56.6	29.7	53.8	32.0	35.4
Toronto	49.8	23.3	50.7	29.1	31.9
Winnipeg	53.9	31.4	47.2	29.2	28.9
Regina	53.9	28.9	51.6	31.2	32.5
Edmonton	49.3	28.6	36.5	21.1	21.4
Calgary	49.6	28.9	40.8	25.1	24.9
Yellow Knife	67.1	44.6	58.4	42.4	30.0
Vancouver	54.9	29.8	52.5	31.6	32.9
Canada Avg **	**54.1**	**28.0**	**52.7**	**29.9**	**30.9**

Source: Dept. of Energy, Mines and Resources
*Notes: * Full serve.*
*** Based on the relative weight of the 14 reporting cities.*

Canadian Crude Prices and Comparative World Crude Oils

Oct. 27, 1992 (U.S. $ / bbl)

	Bow River	Midale	Lloyd Blend	LSB	Mixed Blend Sweet
F.o.b IPL Term	18.98	20.92	19.00	23.45	24.81
In US $ @ 0.810	15.37	16.95	15.39	18.79	20.10
PL to Chicago	0.92	0.69	1.02	0.64	0.91
US Import Duty	0.02	0.02	0.01	0.02	0.02
Other Charges	0.17	0.17	0.16	0.17	0.17
C.i.f Chicago	**16.48**	**17.83**	**16.58**	**19.82**	**21.20**
Maya	16.65	n/c	16.65	n/c	n/c
ANS	19.53	19.53	n/c	n/c	n/c
WTI	n/c	n/c	n/c	21.56	21.56
Brent	n/c	n/c	n/c	21.59	21.59

Mixed Blend and Brent Crude Oils Compared

Oct. 27, 1992($U.S./bbl)

Brent f.o.b Sullom Voe	19.80	Mixed Blend f.o.b Edmonton	20.10
Freight to Portland, ME	0.75		
Insurance & loss	0.10		
Portland to Montreal	0.62	Pipeline to Montreal	1.26
C.i.f Montreal	**$21.27**	**C.i.f Montreal**	**$21.36**

Top 20 Who's Who in U.S. Crude Supply for August, 1992

(Compiled from API and DOE data; in b/d)

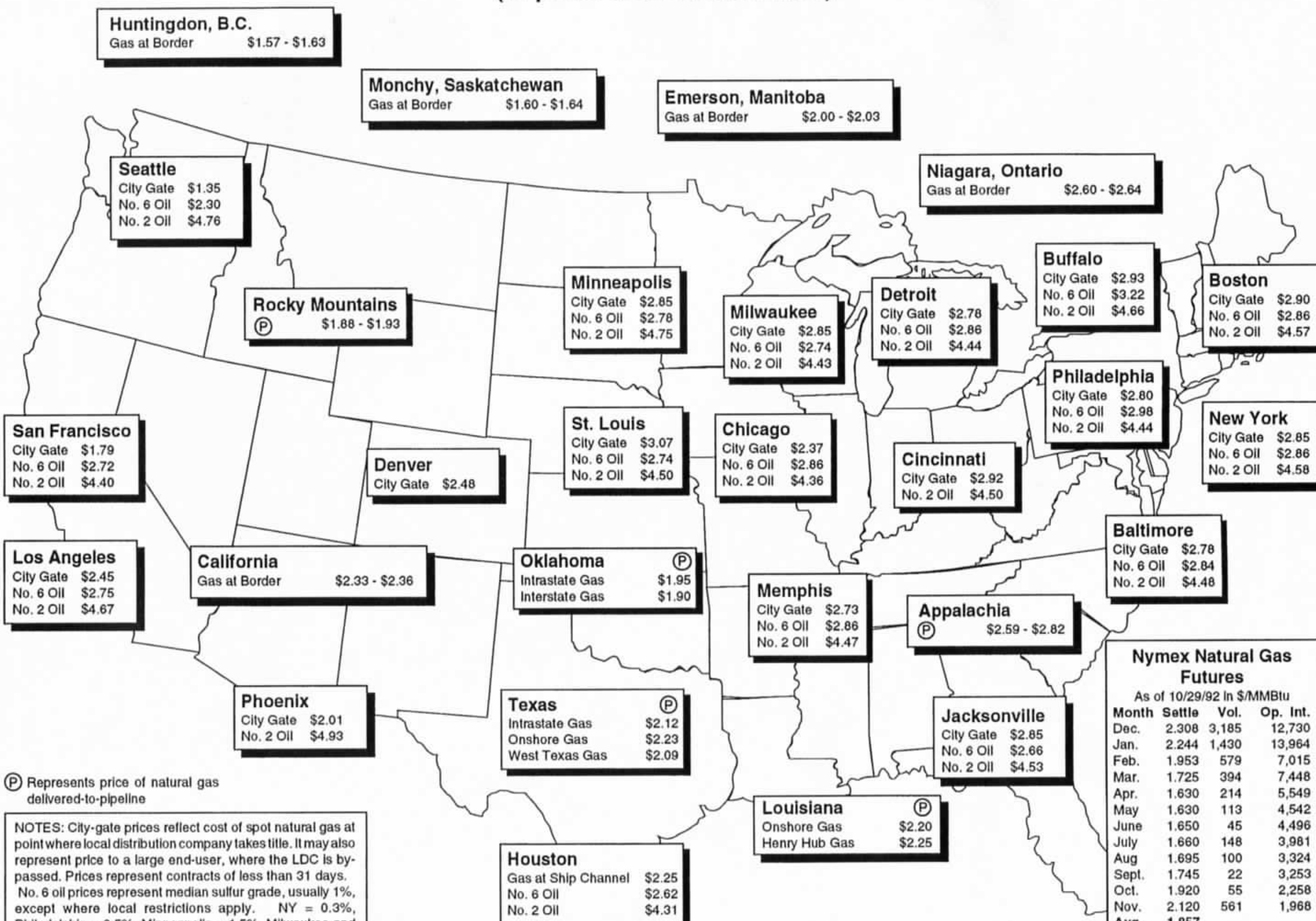
Country:	S.Arabia	Venezuela	Mexico	Nigeria	Canada	Angola	U.K.	Colombia	Norway	Gabon
Total b/d	1,488,832	885,380	822,735	795,124	713,408	384,478	281,512	158,998	134,288	128,061
Amoco	132,225	31,258	92,612	90,709	134,451	----------	----------	----------	----------	----------
Ashland	117,483	----------	----------	----------	39,516	----------	----------	----------	16,645	----------
BP	----------	----------	----------	286,096	4,677	80,612	----------	----------	33,870	----------
Carib. Pet	----------	44,258	----------	----------	----------	----------	----------	----------	----------	----------
Cenex	----------	----------	----------	----------	17,709	----------	----------	----------	----------	----------
Chevron	156,935	21,645	145,612	36,322	----------	6,354	----------	----------	----------	28,741
Citgo	----------	251,774	50,225	----------	----------	----------	----------	----------	----------	----------
Clark	----------	----------	29,967	----------	52,387	16,032	15,741	----------	----------	----------
Coastal	16,387	31,516	29,903	----------	----------	63,419	----------	----------	----------	----------
Conoco	----------	76,870	49,129	----------	38,483	----------	----------	11,709	----------	----------
Crown	----------	----------	----------	----------	----------	32,483	16,903	----------	----------	----------
D. Shamrock	----------	----------	----------	----------	----------	----------	34,548	----------	----------	----------
Enron	----------	----------	----------	----------	2,580	----------	----------	----------	----------	----------
Ergon	----------	11,193	----------	----------	----------	----------	----------	----------	----------	----------
Exxon	161,967	----------	17,806	62,612	12,967	----------	----------	----------	----------	51,096
Fina	----------	----------	16,870	----------	----------	----------	16,064	16,129	16,806	----------
Hess	60,967	----------	----------	----------	----------	61,322	----------	----------	----------	20,483
Hunt	10,000	7,903	11,290	----------	----------	----------	----------	----------	----------	----------
Kerr McGee	----------	----------	----------	----------	----------	45,677	----------	----------	----------	----------
Koch	----------	16,419	----------	----------	127,290	15,161	----------	----------	----------	----------
LL&E	----------	----------	----------	----------	14,806	----------	----------	----------	----------	----------
Laketon	----------	----------	----------	----------	1,387	----------	----------	----------	----------	----------
Lyondell	46,838	32,677	69,838	----------	----------	16,096	----------	----------	----------	----------
MG Refining	----------	----------	----------	15,225	----------	----------	----------	----------	----------	----------
Marathon	62,774	----------	29,000	----------	22,838	----------	15,548	----------	----------	----------
Mobil	36,516	63,225	122,774	12,645	104,903	----------	----------	----------	----------	----------
Montana	----------	----------	----------	----------	6,096	----------	----------	----------	----------	----------
Murphy	----------	----------	----------	----------	6,580	----------	----------	16,290	31,193	----------
North Ridge	----------	----------	----------	----------	290	----------	----------	----------	----------	----------
Phibro	16,129	----------	----------	----------	----------	47,322	----------	97,870	----------	27,741
Phillips	43,774	----------	----------	----------	----------	----------	54,967	----------	----------	----------
SPR	----------	----------	----------	----------	----------	----------	18,419	----------	----------	----------
Seaview	----------	39,806	----------	----------	----------	----------	----------	----------	----------	----------
Shell	33,064	----------	109,387	232,354	11,516	----------	----------	----------	----------	----------
Sound Ref.	----------	10,322	----------	----------	----------	----------	----------	----------	----------	----------
Star Ent.	526,870	46,774	----------	----------	----------	----------	----------	----------	----------	----------
Sun	66,903	44,516	48,322	59,161	5,967	----------	109,322	17,000	35,774	----------
Texaco	----------	10,903	----------	----------	13,225	----------	----------	----------	----------	----------
Total	----------	----------	----------	----------	9,354	----------	----------	----------	----------	----------
Trifinery	----------	12,838	----------	----------	----------	----------	----------	----------	----------	----------
U.S. Oil	----------	----------	----------	----------	5,516	----------	----------	----------	----------	----------
United Ref	----------	----------	----------	----------	64,709	----------	----------	----------	----------	----------
Uno-Ven	----------	131,483	----------	----------	16,161	----------	----------	----------	----------	----------

Country:	Congo	USA *	Egypt	Ecuador	Indonesia	Abu Dhabi	Trinidad	China	Cameroon	Algeria
Total b/d	106,353	105,451	103,289	93,289	71,677	68,838	54,064	52,064	45,386	44,773
Amoco	----------	----------	----------	----------	----------	----------	54,064	----------	----------	----------
Chevron	31,193	----------	----------	23,774	50,258	----------	----------	----------	----------	----------
Exxon	14,709	----------	----------	----------	----------	----------	----------	20,000	16,935	----------
Fina	----------	----------	----------	----------	21,419	----------	----------	----------	----------	----------
Hess	----------	105,451	----------	----------	----------	68,838	----------	----------	----------	----------
Kerr McGee	----------	----------	----------	----------	----------	----------	----------	----------	----------	7,967
Marathon	----------	----------	52,193	----------	----------	----------	----------	----------	----------	----------
Mobil	----------	----------	----------	12,258	----------	----------	----------	----------	----------	----------
Phibro	----------	----------	29,032	----------	----------	----------	----------	----------	----------	----------
Phillips	60,451	----------	----------	----------	----------	----------	----------	----------	----------	----------
Shell	----------	----------	----------	----------	----------	----------	----------	----------	28,451	36,806
Star Ent.	----------	----------	22,064	----------	----------	----------	----------	----------	----------	----------
Texaco	----------	----------	----------	----------	----------	----------	----------	10,935	----------	----------
Tosco	----------	----------	----------	45,645	----------	----------	----------	----------	----------	----------
Valero	----------	----------	----------	----------	----------	----------	----------	21,129	----------	----------
Wickland	----------	----------	----------	11,612	----------	----------	----------	----------	----------	----------

* Imports of U.S. crude are Alaska North Slope delivered to the Amerada Hess St. Croix refinery in the Caribbean.

Bloomberg Natural Gas / Petroleum Product Prices

(all prices are in U.S. $/MMBtu)



Ⓟ Represents price of natural gas delivered-to-pipeline

NOTES: City-gate prices reflect cost of spot natural gas at point where local distribution company takes title. It may also represent price to a large end-user, where the LDC is by-passed. Prices represent contracts of less than 31 days.
No. 6 oil prices represent median sulfur grade, usually 1%, except where local restrictions apply. NY = 0.3%, Philadelphia = 0.5%, Minneapolis = 1.5%, Milwaukee and St. Louis = 2.0%, Seattle = Bunker C, Los Angeles = LSWR.

Nymex Natural Gas Futures

As of 10/29/92 in $/MMBtu

Month	Settle	Vol.	Op. Int.
Dec.	2.308	3,185	12,730
Jan.	2.244	1,430	13,964
Feb.	1.953	579	7,015
Mar.	1.725	394	7,448
Apr.	1.630	214	5,549
May	1.630	113	4,542
June	1.650	45	4,496
July	1.660	148	3,981
Aug	1.695	100	3,324
Sept.	1.745	22	3,253
Oct.	1.920	55	2,258
Nov.	2.120	561	1,968
Avg.	1.857		
Totals		7,368	78,121