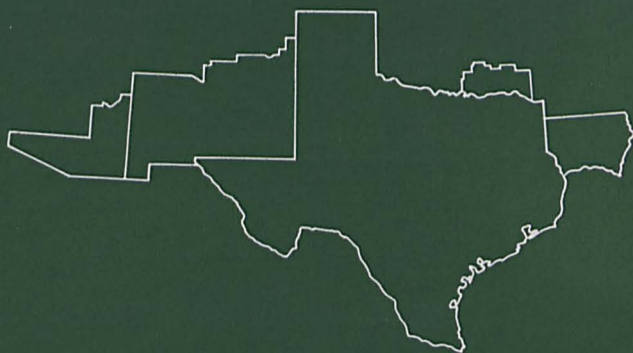


*contract drilling  
in the southwest*

# *business review*



*april 1963*

**FEDERAL RESERVE  
BANK OF DALLAS**

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# *contract drilling in the southwest*

Much of the glamour of the petroleum industry is found in the discovery of new reserves. In addition to being an indispensable element of crude oil and natural gas mining, the drilling function is a key exploratory tool. The presence of oil and gas in an area may be suspected on the basis of geological or geophysical inference, but the drilling of a well in the new area is necessary to substantiate actual occurrence; these exploratory wells are referred to as wildcats. During 1962, around one-fifth of all wells completed in the four southwestern states of Louisiana, New Mexico, Oklahoma, and Texas were wildcat completions.

On occasion, a producing company — or several producing companies in combination — will drill wells solely to reveal information about the basic geology of an area. Current production in such a case is not the primary consideration. When a wildcat well indicates oil and gas are present, additional wells are required to develop the producing property. Although wildcat drilling is quite important, developmental drilling, once reserves have been proved, represents the major portion of the drilling activity in the Southwest.

## *the market for contract drillers in the southwest*

Contractors currently drill most wells in both the Southwest and the Nation, and only a limited amount of drilling is carried on by drilling rigs and crews of the producing firms. The level of drilling operations is closely related to petroleum demand and the price of crude oil. Similarly, the number of gas well completions is related to the demand for natural gas and natural gas prices. Drilling activity in

the Southwest is a reflection of the producers' markets for oil and gas. The level of drilling required by producers reflects the market for the drilling contractors' services.

Total southwestern well completions expanded 35 percent between 1951 and 1956 to a new high of almost 36,000 wells, partly reflecting additional domestic petroleum needs generated by the Suez crisis. Texas completions accounted for 60 percent of the 1956 southwestern total. In the Nation, well completions rose only about one-fourth during the period but were at a record level of almost 59,000 wells in 1956.

Since 1956, however, requirements for domestic crude oil have declined, and drilling activity has generally receded in both the Southwest and the Nation. The number of new holes completed in the Southwest decreased about 30 percent to 25,618 wells in 1962, and the number of national wells declined 20 percent to 46,000 wells. Similar trends were observed during this 7-year period in each of the four southwestern states except Louisiana, where well completions rose slightly. A portion of the Louisiana increase can be attributed to expanded offshore drilling operations. It also should be noted that Louisiana crude oil production has increased appreciably during this time.

Although he does not know precisely whether oil or gas will result from the drilling operations, a producer may know that the local area generally yields either mostly oil or mostly gas. Last year, about 50 percent of all wells completed in the Southwest produced crude oil, compared with 60 percent in 1956.

Although a smaller percentage of total completions in the Southwest yielded natural gas during 1962, the ratio of gas well completions to total completions has trended upward. Increased emphasis upon natural gas completions has helped to sustain drilling activity in the Southwest. The actual and relative increases in gas well completions partially reflect greater consumer demand for natural gas.

Total footage drilled in the Southwest rose to almost 160 million feet in 1956 — the peak year — but declined one-fifth between 1956 and 1962 to nearly 130 million feet. About one-half of the southwestern footage last year was drilled in Texas, with Louisiana contributing an additional 25 percent. In the Nation, footage decreased from the 1956 level of 235 million feet to about 200 million feet in 1962.

The reduction in footage drilled during the past decade was, for the most part, somewhat less than the decline in well completions. Thus,

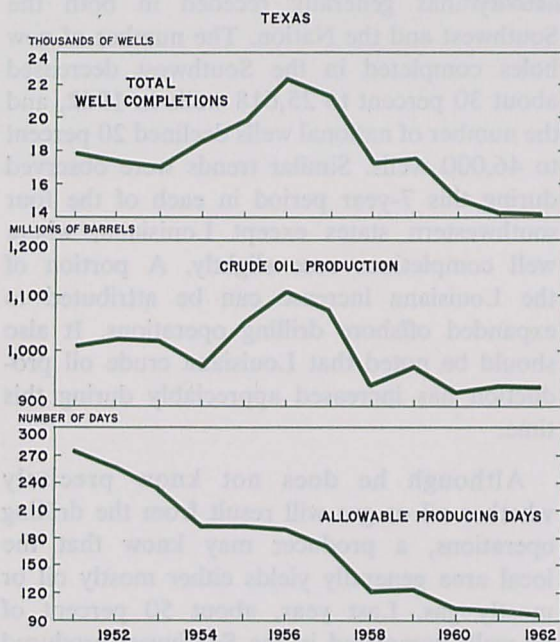
the average depth drilled per well trended upward from 1951 through 1962, both in the Southwest and in the Nation. Southwestern wells in 1951 averaged 4,491 feet; in 1962, this average rose to 5,047 feet. Within the region, the average depth was greatest last year in Louisiana (7,092 feet), while Texas wells averaged about 4,700 feet. In the Nation, all wells drilled averaged 4,309 feet in 1962, compared with 3,843 feet in 1951.

### services of drilling contractors

A mid-1962 survey by *The Oil and Gas Journal* shows that, currently, fewer than 5 percent of all wells being completed in the Nation are drilled by tools belonging to the company which will operate the wells. Drilling contracting has developed principally because of the cost economies realized by petroleum producers under this system. The drilling rig (the mechanical apparatus required to accomplish the drilling function) is a heavy, cumbersome piece of equipment to transport. Varying depths create a need for rigs with a range of capacities. If a producer's reserves were concentrated geographically and at approximately the same depth levels, he might perform the drilling operation with his own men and equipment. However, the producing operations of most oil companies are fairly widespread, and exploration efforts extend to almost all parts of the world. It would be to the producer's advantage, therefore, to acquire a drilling contractor for a south Texas operation, as an example, and another contractor for drilling in southeastern New Mexico, rather than attempt to transport the rig from one area to another.

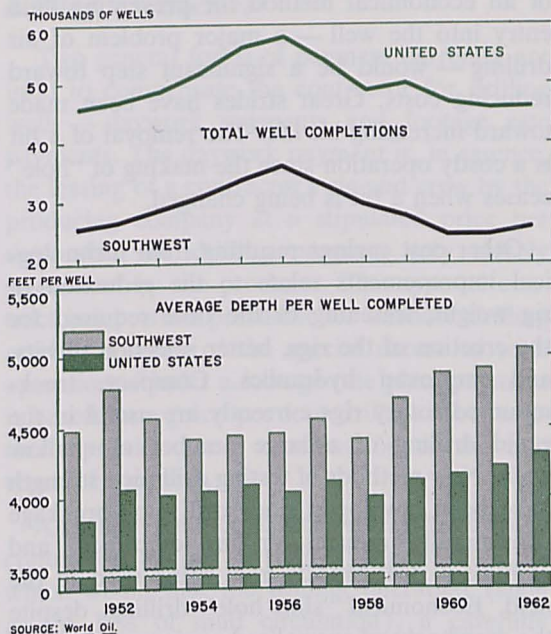
As an additional consideration, drilling requirements differ among localities. Equipment specifications differ significantly between deep-water, offshore developments and shallow, inland operations. The drilling contractors can supply the particular needs of the producers by making available equipment that is oriented to

### WELL COMPLETIONS AND CRUDE OIL PRODUCTION



SOURCES: Texas Railroad Commission,  
U.S. Bureau of Mines,  
World Oil.

## DRILLING ACTIVITY



tating motion of a drilling bit, and rock cuttings are removed by the circulation of a fluid — drilling mud. The mud also serves to seal off extraneous fluids, to lubricate the bit, and to help prevent caving of the penetrated formation. The drilling mud is usually a complex mixture of natural clays, chemicals, and water. Careful control of its physical and chemical characteristics is essential for effective drilling.

Technological developments, such as the use of air and gas as drilling fluids, have increased drilling efficiency. The fact that the number of wells drilled per rig in the United States rose 13 percent between 1957 and 1962 and footage drilled per rig expanded one-fourth reflects, in part, the increase in drilling efficiency. In addition, since contractors, in many cases, drill deeper holes and save the time required to relocate the rig, equipment is being utilized more effectively.

Drilling with air or gas, rather than using a lubricating liquid, has yielded excellent results

the requirements of a given area. More than one-half of all southwestern contractors are located in Texas.

The contract driller's product is a well, and his equipment is designed specifically for creating his product. Almost all revenues earned by the driller are generated by the drilling service. Ordinarily, the drilling contractor's operations are closely guided by the producer's specifications, and the contractor normally does not construct roads to the well site, supply the drilling mud, or analyze the hole that is being drilled. Most often, these additional services are provided directly by the producing operator or by a third party hired by the producer.

In certain cases, the drilling contractor accepts a turn-key contract, under which he performs all or nearly all of the services necessary for a particular well. In one turn-key operation, for example, the contract driller — in addition to drilling an 8,000-foot well — provided roads to the well location, drilling mud, testing and cementing services, and casing for a total price of \$100,000. The total price for just drilling the well at the average 1961 rate of \$4.32 per foot would have been about two-thirds less, but the producer also would have to pay the cost of completing and equipping the well.

### *drilling techniques*

While drilling involves a combination of art and science, the trend in drilling activity in recent years has been toward a more scientific approach, and drilling techniques have improved appreciably. The Chinese are reported to have drilled brine wells prior to 200 B.C., using primitive cable tool-type equipment and achieving depths of 3,500 feet. The cable tool method is still utilized in the Southwest, principally for shallow completions, but most wells now being completed in the area are drilled by rotary-type equipment. The hole is made by the ro-

in certain parts of the region, but perfection of an economical method for preventing fluid entry into the well — a major problem of air drilling — would be a significant step toward reducing costs. Great strides have been made toward increasing bit life. The removal of a bit is a costly operation since the making of “hole” ceases when a bit is being changed.

Other cost savings resulting from technological improvements relate to the reduction of rig weight, lessening of the time required for the erection of the rigs, better selection of bits, and improved hydraulics. Compact, truck-mounted rotary rigs currently are useful in the rapid drilling of a large number of shallow wells. New methods of testing drill pipe strength have been developed since drill pipe breakage substantially reduces drilling efficiency, and aluminum drill pipe is now being used in the field. Economical “slim hole” drilling, despite the drawbacks of specialized equipment requirements and rapid bit deterioration, is becoming more frequent.

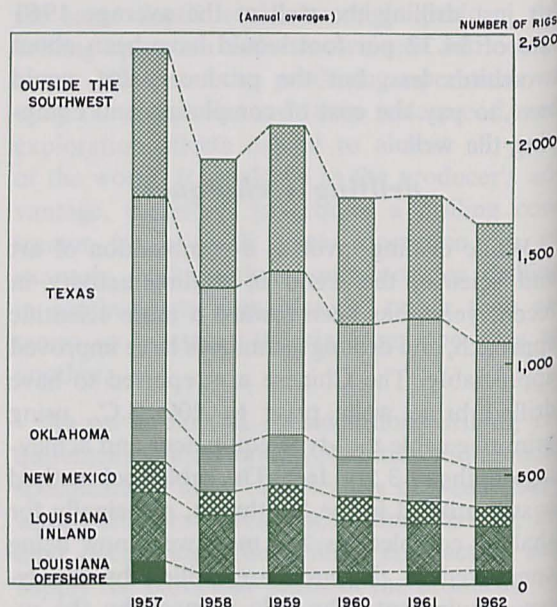
### *economic aspects*

Drilling contractors generally operate in a highly competitive market. A large number of firms provide comparatively homogeneous services, and firms may enter the industry with less difficulty than is encountered in many other industries. Over two-thirds of the drilling contractors own 10 or fewer rigs, although each rig represents a sizable investment. Technological know-how has developed principally from years of experience, and most long-term equipment financing has been acquired from the equipment supplier. In a sense, however, some of the contractors operate in a less competitive market than others. Offshore equipment requirements isolate contractors who offer marine drilling services from their land counterparts; and the need for more costly equipment, plus specialized training, tends to restrict entry into certain areas. Nevertheless, bidding is highly competitive for the most part.

In a competitive market, profits may accrue from (1) cost-saving efficiencies, (2) external influences which increase demand, or (3) a combination of these. Until 1956, the expanded consumption of domestic crude oil enhanced the demand for new well completions and, hence, drillers' services. Since then, there has been little demand stimulus of this nature in many parts of the Nation. Drilling firms have attempted to compensate for this decline and to expand returns by more careful planning and prudent cost-accounting procedures.

A practice typical of firms in several other industries, below-cost pricing may be an effective way for a firm to expand returns if a contractor makes such bids only on occasion. Usually, however, the revenues from a below-cost job at least cover out-of-pocket costs and yield some support to overhead. If the driller is able to make most of his contracts for amounts which are at or above total cost, occasional below-cost pricing might be worthwhile. Problems arise when a driller consistently bids below cost and has insufficient funds to

### ACTIVE ROTARY RIGS



SOURCE: The Oil and Gas Journal.

replace obsolete or deteriorated equipment. It is not abnormal for contractors to continue drilling operations by "cannibalizing" idle equipment, but this practice is self-limiting. One such situation may be cited where a contractor owning 17 rigs has been stripping 7 to keep 10 operating.

Recently published studies by trade sources indicate that, partly because of insufficient returns, the number of drilling contractors in the United States declined sharply from 1,216 in 1957 to slightly below 900 in 1962. As another indication of the financial difficulties of some contractors, the number of advertisements in business and trade publications for equipment liquidations has expanded substantially, with much of this equipment being sold to the remaining contractors.

### *cost of drilling and equipping southwestern wells*

Producing companies' total expenses for drilling and equipping southwestern wells expanded sixfold between 1939 and 1958, but the increase between 1954 and 1958 was only 12 percent. While similar trends were observable in the Nation, the advance was somewhat less because of the smaller average well depth. Within the four southwestern states, the greatest increase in producers' outlays for drilling and equipping wells during the 1954-58 period was recorded in Louisiana, principally as a result of expanded marine drilling activity. In 1958, producers' outlays per well and per foot in Louisiana were three times greater than the southwestern average.

Producers' expenses incurred in New Mexico during 1958 were slightly higher than the average for the four-state area, primarily because of deep well completions. On the other hand, expenses for completions in Texas were somewhat lower, and Oklahoma costs were significantly smaller. The national average cost borne by the producer per well in 1958 was only 80 percent as large as the southwestern average.

### *producers' payments to drilling contractors*

Two general forms of payment currently are used to compensate the contractor for drilling wells — daywork payments and footage rate payments. The daywork payment is, in essence, the leasing of a contractor's rig and crew by the producing company at a stipulated price per day, with the drilling program very closely supervised by the producer. This type of contract has become prevalent for offshore drilling activity because of the special nature of such operations. Under a footage rate plan, payment is based on a price per foot drilled. Most contracts provide for a combination of the two types of payment.

Although some contracts protect the drilling contractor against certain types of hazards which would halt the drilling operation (such as the loss of mud circulation), a carefully calculated daywork contract ordinarily gives the driller more assurance of an adequate return than does a footage agreement by reducing risks. A footage rate payment, on the other hand, may yield greater returns than a day rate payment if the contractor does not experience any unusual difficulties; in addition, there is greater incentive for the rapid completion of wells.

Over two-thirds of total contract driller receipts in the United States are based on the footage rate method. According to the American Association of Oilwell Drilling Contractors, average daywork payments for the Nation have trended upward. Footage rates, on the other hand, generally have declined. The average payment to southwestern drillers was \$3.88 per foot in 1962, compared with \$4.51 per foot in 1957.

There are variations in footage rates paid within the Southwest, due to such factors as differences in geological formations, depth requirements, and location of well sites. Average contract footage prices in 1962 ranged from

**AVERAGE FOOTAGE RATE PAYMENTS TO  
DRILLING CONTRACTORS, 1957-62**

(In dollars per foot)

Area	1957	1958	1959	1960	1961	1962
North Louisiana .....	4.55	4.08	4.45	3.66	4.60	4.19
South Louisiana						
Land .....	4.40	3.88	3.82	4.06	3.87	3.57
Inland Waters .....	4.25	3.80	3.75	3.53	3.75	3.35
Offshore .....	12.00	11.95	9.94	9.11	8.90	—
Oklahoma, except Panhandle .....	4.74	4.18	4.75	4.41	4.49	3.69
Oklahoma and Texas Panhandles .....	5.15	4.80	4.44	4.21	4.03e	4.22e
Texas						
Upper Gulf Coast .....	3.18	3.39	3.57	3.24	3.75	3.39
Middle Gulf Coast .....	2.67	2.50	2.65	2.88	3.52	3.18
Lower Gulf and Southwest .....	3.04	3.02	2.91	2.87	3.12	3.04
South Central .....	3.93	3.86	3.62	2.89	2.83	4.37
West Central .....	3.54	3.43	3.51	3.12	4.61	4.40
North and North Central .....	3.18e	2.87e	3.09e	3.56e	3.38	3.50
East .....	3.78	3.83	4.67	4.70	4.55	4.35
West Texas and East New Mexico .....	6.00	5.35	5.49	5.67	5.06e	5.24e
SOUTHWEST AVERAGE .....	4.51	4.20	4.33	4.10	4.32	3.88

e — Estimated.

SOURCE: American Association of Oilwell Drilling Contractors.

about \$3.00 per foot for wells drilled in southwest Texas to almost \$5.25 per foot in west Texas and southeastern New Mexico. West Texas footage prices ranged from less than \$3.00 per foot on wells of 3,500-foot depths to \$6.00 or \$7.00 for 10,000-foot wells and considerably higher for wells deeper than 12,000 feet.

Payment to the contractor represents only about 40 percent of the total expenses incurred by producing companies for drilling and completing wells. The Independent Petroleum Association of America index of daywork payments to contractors rose in 1961 to 110 percent of the 1959 base. This increase partly reflects expensive marine drilling operations, for which daywork payment contracts are prevalent. On the other hand, the index of footage rate payments for 1961 stood at 100, or unchanged from 2 years earlier. Indexes of certain other expenses incurred directly by the producing company for the drilling and equipping of wells during 1961 were above the footage rate index. Producers' outlays for road and site

preparation, as an example, stood at 104 percent; transportation expenses, at 108 percent; and the cost of logs, at 115 percent.

***drilling contractors' expenses***

During the 1957-61 period — when day rates expanded but footage charges showed fluctuating rates of change — the wholesale price indexes of most major items used by drilling contractors rose. Significant advances were recorded for such equipment as portable rigs and draw works, but there were declines for rock bits, rotary tables, and drill collars. Rock bits are an item of expense, but most other items in this group may be classified as capital expenditures for contractors. Outlays of this nature for southwestern firms primarily engaged in drilling oil and gas wells totaled \$78 million in 1958, or significantly below the 1954 level of \$113 million. One-half of such total capital spending in the Southwest during 1958 was by Louisiana firms, partly because of the high-cost equipment for offshore operations. An additional one-third of the southwestern equipment outlays was by Texas contractors.



Capital spending by southwestern drillers accounted for 15 percent of their total outlays in 1958. Another major cost incurred by the drilling contractors, comprising one-third of total expenses, was wages paid to production workers. In 1958, drilling firms in the region employed 36,039 production workers, or 16 percent fewer than in 1954. A further reduction has occurred since 1958 because of the decline in drilling activity.

A driller, derrickman, motorman, and two floormen comprise a normal rig crew. A rig normally is operated on a 24-hour basis by three separate crews. A "tool pusher" is a key person in drilling operations and ordinarily is responsible for the supervision of three operating crews. Most drilling contractors retain tool pushers on their payrolls regardless of the work load, while less essential crewmen are not retained when contract jobs are unavailable. Because of frequent layoff periods between jobs in recent years, the industry has been faced with the problem of maintaining a sufficient supply of well-trained employees. Some contractors have increased wages to compete more effectively in the labor market, and improved work schedules and shorter workweeks have sometimes been granted as an added inducement.

### *offshore drilling activity*

Marine drilling activity in the Southwest dates back to 1910, when the first overwater drilling structure was erected in Caddo Lake (along the Texas-Louisiana border). One of the areas of enlarged contract drilling in recent years is offshore drilling. It was in the mid-1950's that this activity assumed importance in the Gulf of Mexico, principally off the Louisiana coast.

Marine operations present special problems to the contract driller. Knowledge of offshore techniques is required, and several pieces of specialized equipment are needed. In the shallow waters of inland bay areas, barges have been used to support the drilling rig; but elab-

orate drilling vessels and platforms are becoming more prominent as operations move into deeper waters. These drilling vessels usually cost several million dollars. One major detriment to rapid offshore development is the financing requirement.

Despite heavy drilling costs, caused in part by the necessity of drilling in water 200 or more feet deep, producers are prone to develop offshore areas because prolific reserves may be found with less exploration costs than in most inland areas and producing offshore wells are given special allowables to compensate somewhat for the higher cost.

### *contract drilling and the southwestern economy*

The petroleum industry has been a major factor in southwestern economic development, and contract drilling has played an important role in the growth of the industry. Obviously, production of petroleum is impossible without first drilling and completing wells. Drilling activity generates income for the contract driller and his employees, and a substantial part of this income is spent, taxed, or saved in the Southwest. In addition, drilling equipment and supply industries have developed in the area to service the needs of the drilling contractor. On occasion, the stimulus that drilling brings to a particular locale may exceed the boost received from subsequent production. Such a situation is dependent upon the location of the owners of the producing property, the rate of production, and the number and depth of wells drilled. If producers and leaseholders are located elsewhere, funds earned from producing properties would have little impact. Of course, if the well is a dry hole, the drilling operation is the only economic stimulus. Dry holes accounted for almost 4 out of every 10 holes drilled in 1962.

The importance of the contract drilling industry may be expressed in terms of the number

of production workers and man-hours. Since 1954, around one-fourth of all production workers in the oil and gas industry, both in the Southwest and in the Nation, have been engaged in drilling wells; and almost 20 percent of the man-hours expended in the entire industry have been used for this purpose. Thus, the contract drilling industry has provided employment to a substantial number of workers. Following the peak years of drilling activity, however, the number of workers employed by contract drillers has declined. In Texas, oil and gas mining employment decreased significantly from 1956 through 1962 and declined as a portion of total nonagricultural employment during the period.

One of the most meaningful concepts in measuring the relative economic importance of contract drilling as a segment of the petroleum industry is value added in mining. This measure — as defined by the U. S. Bureau of the Census — “is obtained by subtracting the costs of supplies, minerals received for preparation, purchases for resale, purchased fuels and electric energy, contract work, and purchased machinery from the value of shipments and receipts plus capital expenditures.” During recent years, about 7 percent of the southwestern petroleum industry’s value added in mining has been attributed to contract drilling, and a similar relationship is observable for the Nation. Within the four major oil-producing states of the Southwest, contract drilling as an element of petroleum activity has been relatively more important, in terms of value added, in Oklahoma and Louisiana than in New Mexico and Texas. This fact may be explained partly by the large number of comparatively shallow wells being drilled in Oklahoma and the extensive offshore drilling activity in the Louisiana Gulf Coast area.

### *conclusions*

Drilling operations — and, hence, the demand for contract drillers — are closely related

to petroleum demand. During the Suez crisis, domestic crude oil requirements rose substantially, output increased significantly, and the number of wells advanced to a record level. In recent years, however, domestic petroleum demand has expanded at a slower rate, imports have increased, and drilling activity in the Southwest and in the Nation has been adjusted downward. Rigorous competition has reduced the number of firms and the number of employees engaged in contract drilling, both in the Southwest and in the Nation; however, technological improvements have increased the efficiency of the surviving firms.

As long as crude oil production in the Southwest is severely limited, the incentive to drill likely will be reduced. A recent survey indicates that producing companies plan to complete somewhat fewer wells in 1963 than was the case in 1962. Under the current regulatory and tax laws, a few types of drilling, nevertheless, are likely to continue being attractive. The anticipation of acquiring potentially large pools of oil in offshore areas probably will encourage further marine drilling. Even though the costs and risks of this type of drilling are great, the rewards, theoretically at least, are much larger.

Shallow drilling in marginal areas, with the relatively lower cost requirements, is likely to be sustained. Developmental drilling to enlarge or tap existing pools and for secondary recovery operations should provide some steady employment, though the volume may diminish over a period of time unless extensive new reserves are discovered. One encouraging factor in the drilling picture is the fact that producers in the Southwest and in the Nation plan to increase wildcat completions this year by 7 percent.

SANFORD R. SINGER  
General Economist

## *district highlights*

Total bank credit expanded at the weekly reporting member banks in the Eleventh Federal Reserve District during the first quarter of 1963, but the gain did not equal that recorded for the comparable period of 1962. Loans adjusted moved lower this year, primarily reflecting a reduction in commercial and industrial loans in response to weakness in loans to commodity dealers, mining and construction firms, and businesses providing services. Government security holdings rose less than in the preceding year, and there was a noticeable tendency to lengthen maturities. Investments in non-Government securities expanded but by a substantially smaller amount than in the previous year. Time deposits grew at a slower rate this year, but demand deposits declined less than usual.

Texas industrial production expanded 2 points during February, the largest gain in 6 months. The index, at 114 percent of the 1957-59 average, approached the record September 1962 level. Similar to national output, Texas industrial production has shown little change during the past 6 months. The February increase in Texas output was broadly based, with all major categories advancing, and the index was 2 percent above a year ago.

Based on March 1 planting intentions of farmers, seedings of 1963 crops in the District are indicated to be slightly below last year. The survey was made during the signup period for the 1963 feed grain and wheat programs, and intentions to plant corn, sorghums, spring barley, and spring wheat may be altered as a result of growers' decisions concerning participation in these programs. District farmers indicated that they plan to seed nearly 8 million acres of cotton this year, or 9 percent less than in 1962. A reduction in cotton acreage allotments accounts for the lower intended acreage

devoted to the crop. Sorghum producers, however, plan to seed 7.8 million acres, reflecting a 5-percent gain over a year ago. This increase is largely the result of reductions in cotton and corn acreages. Acreage seeded to corn in the District continues the longtime downtrend, with intended plantings down one-tenth from last year. Rice allotments remain virtually unchanged for 1963, and Louisiana and Texas growers indicate plantings of 975,000 acres this year, or about the same as in 1962.

Each year, the Federal Reserve Bank of Dallas furnishes its member banks a statement of operating ratios computed from data obtained from reports of condition and reports of income and dividends. The 1962 statement indicates that net current earnings as a percentage of total assets advanced slightly, despite a substantial increase in interest paid on time and savings deposits. Total expenses rose from 70.2 percent to 70.9 percent of operating revenue, but total earnings on assets advanced from 4.27 percent to 4.41 percent.

The increase in total operating expenses largely reflected greater interest costs, resulting from higher rates of interest paid on time and savings deposits and an increase in time deposits relative to total deposits. The average interest rate paid on time and savings deposits rose from 2.61 percent to 2.94 percent, and these deposits advanced from 20.36 percent to 22.94 percent of total deposits.

District member banks tended to channel their funds into higher-earning types of assets in 1962. Loans (net) as a percentage of total assets increased from 37.94 percent to 38.69 percent; and other securities, largely municipal bonds, advanced from 11.37 percent to 11.56 percent of assets. Shifts also occurred between various loan categories, as banks allocated a

higher proportion of their resources to real estate and consumer-type loans. Primarily reflecting this redistribution of funds, the average rate of return on loans rose from 7.08 percent in 1961 to 7.23 percent in 1962. The rate of interest earned on Government securities advanced from 3.37 percent to 3.49 percent, as issues having longer maturities constituted a higher proportion of bank portfolios.

A comparison of the operating ratios of various sizes of banks reveals that banks having average deposits of \$10 million to \$25 million recorded the greatest improvement in the ratio of net current earnings to total assets. The smallest banks, those with deposits of \$500,000 and under, and the largest banks, those having deposits in excess of \$100 million, experienced the greatest declines in this ratio.

***new  
member  
banks***

The Highland Lakes National Bank, Kingsland, Texas, a newly organized institution located in the territory served by the San Antonio Branch of the Federal Reserve Bank of Dallas, opened for business March 9, 1963, as a member of the Federal Reserve System. The new member bank has capital of \$100,000, surplus of \$100,000, and undivided profits of \$50,000. The officers are: Chester A. Barnett, President; W. F. "Woody" McCasland, Executive Vice President and Cashier; M. F. "Tex" Wright, Vice President; and Mrs. Mildred Bizzell, Assistant Cashier.

The Trinity National Bank of Dallas, Dallas, Texas, a newly organized institution located in the territory served by the Head Office of the Federal Reserve Bank of Dallas, opened for business March 15, 1963, as a member of the Federal Reserve System. The new member bank has capital of \$300,000, surplus of \$300,000, and undivided profits of \$150,000. The officers are: Walter Monroe, Jr., Chairman of the Board; Griffiths C. Carnes, President; C. L. Dunlap, Vice President (Inactive); and Hershhal H. Massey, Jr., Vice President and Cashier.

The First National Bank of Hurst, Hurst, Texas, a conversion of the Hurst State Bank, Hurst, Texas, located in the territory served by the Head Office of the Federal Reserve Bank of Dallas, opened for business April 1, 1963, as a member of the Federal Reserve System. The new member bank has capital of \$250,000, surplus of \$225,000, and undivided profits of approximately \$65,200. The officers are: Stuart Lydick, Chairman of the Board; Zach M. Gilliland, President; Hans Mueller, Vice President; Charles M. Sisk, Vice President; Richard Taylor, Assistant Vice President; Don Lovett, Cashier; Ronald Baron, Assistant Cashier; and Ray Jones, Assistant Cashier.

***new  
par  
banks***

The American Bank and Trust Company, Shreveport, Louisiana, an insured nonmember bank located in the territory served by the Head Office of the Federal Reserve Bank of Dallas, was added to the Par List on its opening date, March 25, 1963. The officers are: Ira E. Moss, President; W. O. Lacy, Vice President; and Donald C. Moseley, Vice President and Cashier.

The Allen State Bank, Allen, Texas, an insured nonmember bank located in the territory served by the Head Office of the Federal Reserve Bank of Dallas, was added to the Par List on its opening date, April 1, 1963. The officers are: A. L. Geer, Chairman of the Board; Dudley Robertson, President; Oscar E. Lynge, Vice President; and Scotty Cawthon, Cashier.

**STATISTICAL SUPPLEMENT**

to the

***BUSINESS REVIEW***

April 1963



**FEDERAL RESERVE BANK  
OF DALLAS**

**CONDITION STATISTICS OF WEEKLY REPORTING MEMBER BANKS IN LEADING CITIES**

Eleventh Federal Reserve District

(In thousands of dollars)

Item	Mar. 20, 1963	Feb. 20, 1963	Mar. 21, 1962
<b>ASSETS</b>			
Commercial and industrial loans.....	1,817,423	1,809,290	1,764,631
Agricultural loans.....	50,090	50,599	50,558
Loans to brokers and dealers for purchasing or carrying:			
U. S. Government securities.....	20,274	10,274	30,204
Other securities.....	49,752	47,959	60,248
Other loans for purchasing or carrying:			
U. S. Government securities.....	2,081	2,113	2,673
Other securities.....	219,552	208,299	172,205
Loans to domestic commercial banks.....	88,965	83,713	72,102
Loans to foreign banks.....	2,433	1,359	229
Loans to other financial institutions:			
Sales finance, personal finance, etc.....	99,734	96,721	83,728
Savings banks, mtge. cos., ins. cos., etc.....	209,794	210,603	161,984
Real estate loans.....	289,104	289,357	249,282
All other loans.....	859,763	841,589	785,271
Gross loans.....	3,708,965	3,651,876	3,433,115
Less reserves and unallocated charge-offs..	69,035	68,952	63,211
Net loans.....	3,639,930	3,582,924	3,369,904
Treasury bills.....	174,697	162,837	120,954
Treasury certificates of indebtedness.....	98,170	135,831	78,912
Treasury notes and U. S. Government bonds, including guaranteed obligations, maturing:			
Within 1 year.....	103,159	152,398	254,855
After 1 but within 5 years.....	690,449	647,284	718,625
After 5 years.....	530,422	521,967	392,747
Other securities.....	548,474	538,854	465,039
Total investments.....	2,145,371	2,159,171	2,031,132
Cash items in process of collection.....	609,800	570,979	602,146
Balances with banks in the United States.....	540,939	489,102	536,712
Balances with banks in foreign countries.....	4,623	4,955	2,265
Currency and coin.....	59,128	59,892	57,942
Reserves with Federal Reserve Bank.....	568,193	555,913	588,107
Other assets.....	224,403	228,633	195,353
<b>TOTAL ASSETS.....</b>	<b>7,792,387</b>	<b>7,651,569</b>	<b>7,383,561</b>
<b>LIABILITIES AND CAPITAL ACCOUNTS</b>			
<b>Demand deposits</b>			
Individuals, partnerships, and corporations....	3,104,584	3,022,028	3,073,573
Foreign governments and official institutions, central banks, and international institutions..	5,973	3,784	2,536
U. S. Government.....	126,634	131,191	152,785
States and political subdivisions.....	284,612	291,840	254,508
Banks in the United States, including mutual savings banks.....	1,119,742	1,070,017	1,121,869
Banks in foreign countries.....	15,307	14,617	13,458
Certified and officers' checks, etc.....	51,509	52,384	47,702
Total demand deposits.....	4,708,361	4,585,861	4,666,431
<b>Time and savings deposits</b>			
Individuals, partnerships, and corporations			
Savings deposits.....	1,027,746	1,017,380	879,746
Other time deposits.....	829,964	804,680	659,244
Foreign governments and official institutions, central banks, and international institutions..	1,512	1,510	3,006
U. S. Government, including postal savings..	6,277	6,287	6,617
States and political subdivisions.....	342,532	329,662	333,008
Banks in the United States, including mutual savings banks.....	4,762	4,763	5,816
Banks in foreign countries.....	2,350	2,350	2,200
Total time and savings deposits.....	2,215,143	2,166,632	1,889,637
Total deposits.....	6,923,504	6,752,493	6,556,068
Bills payable, rediscounts, etc.....	104,090	115,455	116,500
All other liabilities.....	105,542	123,906	86,997
Capital accounts.....	659,251	659,715	623,996
<b>TOTAL LIABILITIES AND CAPITAL ACCOUNTS.....</b>	<b>7,792,387</b>	<b>7,651,569</b>	<b>7,383,561</b>

**CONDITION OF THE FEDERAL RESERVE BANK OF DALLAS**

(In thousands of dollars)

Item	Mar. 20, 1963	Feb. 20, 1963	Mar. 21, 1962
Total gold certificate reserves.....	576,541	572,790	645,333
Discounts for member banks.....	2,050	250	2,495
Other discounts and advances.....	1,710	0	3,651
U. S. Government securities.....	1,256,072	1,249,478	1,159,944
Total earning assets.....	1,259,332	1,249,728	1,166,090
Member bank reserve deposits.....	929,765	921,852	982,908
Federal Reserve notes in actual circulation....	884,501	880,680	829,387

**RESERVE POSITIONS OF MEMBER BANKS**

Eleventh Federal Reserve District

(Averages of daily figures. In thousands of dollars)

Item	4 weeks ended Mar. 6, 1963	5 weeks ended Feb. 6, 1963	4 weeks ended Mar. 7, 1962
<b>RESERVE CITY BANKS</b>			
Total reserves held.....	584,163	598,811	588,957
With Federal Reserve Bank....	544,193	555,613	549,738
Currency and coin.....	39,970	43,198	39,219
Required reserves.....	579,761	594,020	583,133
Excess reserves.....	4,402	4,791	5,824
Borrowings.....	9,612	7,100	854
Free reserves.....	-5,210	-2,309	4,970
<b>COUNTRY BANKS</b>			
Total reserves held.....	544,741	549,752	551,933
With Federal Reserve Bank....	432,880	432,198	449,155
Currency and coin.....	111,861	117,554	102,778
Required reserves.....	495,741	496,868	486,642
Excess reserves.....	49,000	52,884	65,291
Borrowings.....	1,037	356	528
Free reserves.....	47,963	52,528	64,763
<b>ALL MEMBER BANKS</b>			
Total reserves held.....	1,128,904	1,148,563	1,140,890
With Federal Reserve Bank....	977,073	987,811	998,893
Currency and coin.....	151,831	160,752	141,997
Required reserves.....	1,075,502	1,090,888	1,069,775
Excess reserves.....	53,402	57,675	71,115
Borrowings.....	10,649	7,456	1,382
Free reserves.....	42,753	50,219	69,733

**GROSS DEMAND AND TIME DEPOSITS OF MEMBER BANKS**

Eleventh Federal Reserve District

(Averages of daily figures. In millions of dollars)

Date	GROSS DEMAND DEPOSITS			TIME DEPOSITS		
	Total	Reserve city banks	Country banks	Total	Reserve city banks	Country banks
1961: February...	7,828	3,805	4,023	2,670	1,366	1,304
1962: February...	8,234	3,965	4,269	3,107	1,577	1,530
September.....	8,194	4,096	4,098	3,357	1,666	1,691
October.....	8,337	4,170	4,167	3,398	1,688	1,710
November.....	8,370	4,113	4,257	3,435	1,701	1,734
December.....	8,496	4,180	4,316	3,497	1,718	1,779
1963: January...	8,711	4,234	4,477	3,602	1,771	1,831
February.....	8,354	4,007	4,347	3,706	1,811	1,895

**CONDITION STATISTICS OF ALL MEMBER BANKS**

Eleventh Federal Reserve District

(In millions of dollars)

Item	Feb. 27, 1963	Jan. 30, 1963	Feb. 28, 1962
<b>ASSETS</b>			
Loans and discounts.....	6,127	6,091	5,588
U. S. Government obligations.....	2,960	2,912	2,890
Other securities.....	1,187	1,173	984
Reserves with Federal Reserve Bank.....	903	936	961
Cash in vault.....	173	175	159
Balances with banks in the United States.....	1,101	1,099	1,083
Balances with banks in foreign countries.....	5	2	3
Cash items in process of collection.....	677	606	657
Other assets.....	367	413	309
<b>TOTAL ASSETS.....</b>	<b>13,500</b>	<b>13,407</b>	<b>12,634</b>
<b>LIABILITIES AND CAPITAL ACCOUNTS</b>			
Demand deposits of banks.....	1,250	1,274	1,214
Other demand deposits.....	7,104	7,092	7,015
Time deposits.....	3,741	3,639	3,135
Total deposits.....	12,095	12,005	11,364
Borrowings.....	104	102	72
Other liabilities.....	159	168	126
Total capital accounts.....	1,142	1,132	1,072
<b>TOTAL LIABILITIES AND CAPITAL ACCOUNTS.....</b>	<b>13,500</b>	<b>13,407</b>	<b>12,634</b>

e — Estimated.

**BANK DEBITS, END-OF-MONTH DEPOSITS  
AND ANNUAL RATE OF TURNOVER OF DEPOSITS**

(Dollar amounts in thousands)

Area	Debits to demand deposit accounts <sup>1</sup>			Demand deposits <sup>1</sup>			Annual rate of turnover	
	February 1963	Percent change from		Feb. 28, 1963	Feb. 1963	Jan. 1963		Feb. 1962
		Jan. 1963	Feb. 1962					
ARIZONA								
Tucson.....	\$ 360,719	-10	15	\$ 158,024	26.9	28.4	24.4	
LOUISIANA								
Monroe.....	77,362	-31	-4	57,647	16.6	22.9	18.2	
Shreveport.....	326,347	-15	14	191,068	21.1	24.6	18.0	
NEW MEXICO								
Roswell.....	52,019	-15	9	37,163	16.7	19.0	15.1	
TEXAS								
Abilene.....	99,823	-15	-8	69,993	17.0	19.3	17.3	
Amarillo.....	226,409	-17	0	122,788	21.7	25.2	22.6	
Austin.....	291,416	-3	12	169,916	21.1	21.4	19.4	
Beaumont.....	159,801	-17	-6	107,575	17.9	21.1	18.6	
Corpus Christi.....	202,992	-8	3	113,693	21.1	22.4	20.2	
Corsicana.....	17,169	-22	9	21,015	9.7	12.1	9.4	
Dallas.....	3,289,547	-19	-4	1,268,650	30.7	35.4	31.8	
El Paso.....	331,422	-17	-2	212,446	19.8	24.2	21.2	
Fort Worth.....	753,247	-18	0	391,937	22.9	27.5	23.3	
Galveston.....	79,494	-21	-8	60,429	15.5	19.2	15.8	
Houston.....	2,859,795	-19	7	1,477,703	23.3	27.2	22.9	
Laredo.....	32,273	-15	15	25,242	15.2	17.5	13.7	
Lubbock.....	237,589	-39	8	133,429	20.6	32.3	19.2	
Port Arthur.....	59,247	-12	-3	41,752	16.6	18.4	16.1	
San Angelo.....	51,334	-20	3	45,904	13.2	16.0	12.0	
San Antonio.....	667,831	-16	8	410,679	19.2	21.7	18.6	
Texarkana <sup>2</sup> .....	23,817	-22	11	18,436	15.5	19.7	14.9	
Tyler.....	88,228	-20	1	65,049	16.4	19.6	16.8	
Waco.....	116,538	-13	8	75,393	18.7	21.5	17.6	
Wichita Falls.....	113,928	-17	6	100,138	13.6	16.1	13.2	
Total—24 cities.....	\$10,518,347	-18	2	\$5,376,069	23.4	27.4	23.4	

<sup>1</sup> Deposits of individuals, partnerships, and corporations and of states and political subdivisions.  
<sup>2</sup> These figures include only two banks in Texarkana, Texas. Total debits for all banks in Texarkana, Texas-Arkansas, including one bank located in the Eighth District, amounted to \$50,749,000 for the month of February 1963.

**DEPARTMENT STORE SALES**

(Percentage change in retail value)

Area	February 1963 from		2 months, 1963 from 1962
	January 1963	February 1962	
Total Eleventh District.....	-12	-1	3
Corpus Christi.....	-2	-5	-2
Dallas.....	-10	-1	2
El Paso.....	-9	3	6
Houston.....	-17	-1	1
San Antonio.....	-15	1	7
Shreveport, La.....	-20	-2	6
Waco.....	-5	0	3
Other cities.....	-7	0	4

**INDEXES OF DEPARTMENT STORE SALES AND STOCKS**

Eleventh Federal Reserve District

(1957-59 = 100)

Date	SALES (Daily average)		STOCKS (End of month)	
	Unadjusted	Seasonally adjusted	Unadjusted	Seasonally adjusted
1962: February.....	80	110	104r	110r
September.....	109	113	117	110
October.....	102	100	127	113
November.....	126	109	128	112
December.....	193	111	103	111
1963: January.....	83	107	99	113
February.....	80	109	105p	112p

r — Revised.  
p — Preliminary.

**NONAGRICULTURAL EMPLOYMENT**

Five Southwestern States<sup>1</sup>

Type of employment	Number of persons			Percent change Feb. 1963 from	
	February 1963p	January 1963	February 1962r	Jan. 1963	Feb. 1962
Total nonagricultural					
wage and salary workers..	4,638,100	4,631,200	4,535,100	0.1	2.3
Manufacturing.....	801,100	801,400	787,700	.0	1.7
Nonmanufacturing.....	3,837,000	3,829,800	3,747,400	.2	2.4
Mining.....	238,100	239,300	243,900	-.5	-2.4
Construction.....	300,300	301,200	296,200	-.3	1.4
Transportation and public utilities.....	392,800	381,800	390,100	2.9	.7
Trade.....	1,101,300	1,110,500	1,078,300	-.8	2.1
Finance.....	234,400	233,300	225,200	.5	4.1
Service.....	647,200	646,800	622,900	.1	3.9
Government.....	922,900	916,900	890,800	.7	3.6

<sup>1</sup> Arizona, Louisiana, New Mexico, Oklahoma, and Texas.

p — Preliminary.

r — Revised.

SOURCE: State employment agencies.

**INDUSTRIAL PRODUCTION**

(Seasonally adjusted indexes, 1957-59 = 100)

Area and type of index	February 1963p	January 1963	December 1962	February 1962
TEXAS				
Total industrial production.....	114	112	112r	111
Manufacturing.....	129	127	127	122
Durable.....	122	121	122	117
Nondurable.....	134	132	131	126
Mining.....	94	93	93	96
UNITED STATES				
Total industrial production.....	119	119	119	116
Manufacturing.....	120	119	120	116
Durable.....	119	119	119	115
Nondurable.....	120	120	121	117
Mining.....	102	103	103	104
Utilities.....	139	138	136	129

p — Preliminary.

r — Revised.

SOURCES: Board of Governors of the Federal Reserve System, Federal Reserve Bank of Dallas.

**BUILDING PERMITS**

VALUATION (Dollar amounts in thousands)

Area	NUMBER				Percent change		
	Feb. 1963	2 mos. 1963	Feb. 1963	2 mos. 1963	Feb. 1963 from		2 months, 1963 from 1962
					Jan. 1963	Feb. 1962	
ARIZONA							
Tucson.....	565	1,126	\$ 1,783	\$ 4,310	-29	-47	-29
LOUISIANA							
Shreveport....	205	416	1,772	2,824	68	41	17
TEXAS							
Abilene.....	107	194	1,634	2,804	40	-21	-44
Amarillo.....	269	496	3,359	6,688	1	32	35
Austin.....	314	637	11,776	19,858	46	102	95
Beaumont.....	249	461	707	1,614	-22	-64	-41
Corpus Christi..	260	536	1,901	3,523	17	-18	-8
Dallas.....	1,928	3,823	35,602	54,885	85	165	107
El Paso.....	391	694	2,780	4,625	51	-39	-39
Fort Worth.....	491	928	3,099	8,412	-42	5	51
Galveston.....	106	221	614	1,617	-39	2	-66
Houston.....	1,456	2,743	18,452	37,413	-3	-22	-42
Lubbock.....	162	338	2,201	12,601	-79	-19	103
Midland.....	114	201	1,488	2,579	36	31	26
Odessa.....	71	139	805	1,682	-8	16	-10
Port Arthur.....	106	179	317	827	-38	-25	6
San Antonio....	1,065	2,108	4,315	10,125	-26	4	1
Waco.....	208	423	941	4,979	-77	35	36
Wichita Falls..	101	210	989	3,944	-67	-4	55
Total—19 cities..	8,168	15,873	\$94,535	\$185,310	4	26	10

## VALUE OF CONSTRUCTION CONTRACTS

(In millions of dollars)

Area and type	February 1963p	January 1963	February 1962	January—February	
				1963p	1962
<b>FIVE SOUTHWESTERN STATES<sup>1</sup></b>					
Residential building.....	397	317	328	710	601
Nonresidential building....	171	136	142	307	271
Public works and utilities...	133	95	107	227	181
	94	86	79	176	149
<b>UNITED STATES</b>					
Residential building.....	2,917	2,779	2,749	5,682	5,396
Nonresidential building....	1,214	1,250	1,192	2,461	2,378
Public works and utilities...	1,005	1,016	893	2,015	1,744
	698	514	664	1,205	1,274

<sup>1</sup> Arizona, Louisiana, New Mexico, Oklahoma, and Texas.

p — Preliminary.

NOTE: — Details may not add to totals because of rounding.

SOURCE: F. W. Dodge Corporation.

## DAILY AVERAGE PRODUCTION OF CRUDE OIL

(In thousands of barrels)

Area	February 1963p	January 1963p	February 1962	Percent change from	
				January 1963	February 1962
<b>ELEVENTH DISTRICT</b>					
Texas.....	3,013.6	2,917.8	3,052.5	3.3	-1.3
Gulf Coast.....	2,597.9	2,509.8	2,641.7	3.5	-1.7
West Texas.....	487.8	475.2	487.6	2.7	.0
East Texas (proper).....	1,163.3	1,125.4	1,199.2	3.4	-3.0
Panhandle.....	112.7	105.1	134.5	7.2	-16.2
Rest of State.....	104.3	101.4	104.6	2.9	-3
Southeastern New Mexico..	729.7	702.7	715.7	3.8	2.0
Northern Louisiana.....	275.3	269.0	274.9	2.3	.1
	140.4	139.0	135.8	1.0	3.4
<b>OUTSIDE ELEVENTH DISTRICT</b>					
UNITED STATES.....	4,398.1	4,346.7	4,398.4	1.2	.0
	7,411.7	7,264.5	7,450.9	2.0	-.5

p — Preliminary.

SOURCES: American Petroleum Institute.

U. S. Bureau of Mines.

Federal Reserve Bank of Dallas.

## CASH RECEIPTS FROM FARM MARKETINGS

(Dollar amounts in thousands)

Area	1962	1961	Percent change
Arizona.....	\$ 507,263	\$ 466,571	9
Louisiana.....	429,668	403,437	7
New Mexico.....	264,744	240,441	10
Oklahoma.....	645,737	679,915	-5
Texas.....	2,423,129	2,396,445	1
Total.....	\$ 4,270,541	\$ 4,186,809	2
United States.....	\$35,749,027	\$35,242,975	1

SOURCE: U. S. Department of Agriculture.

## NATIONAL PETROLEUM ACTIVITY INDICATORS

(Seasonally adjusted indexes, 1957-59 = 100)

Indicator	February 1963p	January 1963p	February 1962
<b>CRUDE OIL RUNS TO REFINERY</b>			
STILLS (Daily average).....	111	106	108
<b>DEMAND (Daily average)</b>			
Gasoline.....	112	111	108
Kerosene.....	145	136	128
Distillate fuel oil.....	126	112	115
Residual fuel oil.....	107	95	93
Four refined products.....	116	109	107
<b>STOCKS (End of month)</b>			
Gasoline.....	104	106	104
Kerosene.....	112	119	122
Distillate fuel oil.....	99	111	105
Residual fuel oil.....	87	92	76
Four refined products.....	100	106	102

p — Preliminary.

SOURCES: American Petroleum Institute.

U. S. Bureau of Mines.

Federal Reserve Bank of Dallas.