BUSINESS REVIEW

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THE SECOND TIME AROUND

And there she blows! The excitement of a gusher permeated the atmosphere as "black gold" sprayed high in the air. Oil! Money! Rapid profit realization!

Unless prolific reserves existed in this newly developed field, production rapidly diminished, and wells that initially proved exciting and profitable were soon abandoned. Little did the men who founded the petroleum industry realize that significant amounts of oil remained underground after abandonment — amounts well in excess of those originally recovered. However, new fields were easily discovered, and new reserves were exploited without difficulty; so, why worry about the oil which remained after initial production? Costs of finding new fields were much less than the expenses necessary to extract all possible oil from the existing field, even if technological skills and knowledge had been available.

In the very early history of the petroleum industry, technological understanding was almost limited to the basic geological principle of oil recovery — namely, that recovery of oil results from penetrating a reservoir in which oil is under pressure, with the pressure forcing the oil to the surface through the well. Oilmen soon began to learn, however, that gushers resulted in an inappropriate loss of basic reservoir energy and have steadily worked toward conservation of this inherent force.

After the flush of new fields and easy discoveries passed, the industry recognized that, in many instances, recovery of the remaining oil would be economically feasible, especially considering the advancing cost associated with discovering new reserves.

FEDERAL RESERVE BANK OF DALLAS
DALLAS, TEXAS

While a significantly smaller amount of natural reservoir energy currently is being wasted, recovery of all or a major portion of the originally existing oil still is difficult. For various reservoirs, estimates of remaining oil, after primary energy has been depleted, range from about 33 percent to as high as 95 percent of the original oil in place.

Petroleum producers also learned that preventive action (i.e., avoidance of wasteful recovery practices and inordinate loss of primary energy) is often better than remedial action. In many cases today, fluids are injected to augment existing reservoir energy prior to the time of depletion, a procedure which prevents early declines in output and frequently expands total recovery. The prevention of rapid exhaustion of primary energy forces from oil reservoirs by liquid or gas injection is known as pressure maintenance.

A significant number of existing reservoirs, however, have little natural energy remaining to force oil to the producing wells economically. Most of the wells in such reservoirs were shut down long ago, but some of these abandoned reservoirs are capable of yielding large quantities of oil at current-day costs if fluids are injected to sweep the remaining oil from the porous spaces of the reservoirs. This process of producing oil by means of artificial stimulation after the natural energy has been exhausted is called secondary recovery. More recently developed methods, such as the use of solvents and the application of heat, can be used to yield even more of the remaining oil and are known as tertiary recovery. The following discussion will be primarily concerned with secondary and tertiary recovery (the remedy), rather than pressure maintenance (the preventive).

Reserves Available from Secondary Recovery

With domestic consumption of petroleum products advancing, the long-term supply of crude oil is an important consideration in the energy balance of the Nation. The magnitude of proved or known reserves of

METHODS OF SECONDARY RECOVERY

Secondary recovery methods involve the injection of fluids under pressure into the reservoir to move the remaining oil to the producing wells. The choice of the injection fluid depends on the physical conditions of the reservoir, the type of oil it contains, and the availability of the injection fluids. Natural gas, as an example, may possibly be used in areas where it is readily available and physical conditions are appropriate for its use. However, natural gas is an important and valuable product, and only about 10 percent of the natural gas produced in the Nation is being used for repressuring purposes.

A very favorable condition for the primary production of oil is found when strong natural water pressure exists, such as in many fields located in east Texas. However, if the natural water drive was initially weak or has been diminished as a consequence of prior oil recovery, water injection might enhance production significantly. When water injection is used, both water and oil are recovered, with the oil gradually decreasing as a proportion of the mixture and the water increasing, until an economic production limit is reached because of insufficient oil recovery.

The rate at which water is pumped into a reservoir has become a matter of continual discussion. Many feel that a rapid injection rate will provide as much additional oil production as a slower rate does. However, proponents for slower injection maintain that a rapid rate permits recovery only in the highly permeable formations of the reservoir while the oil located in the less permeable areas remains virtually intact after completion of the flood. They contend that, if the injection rate were reduced, water would enter the less penetrable structures of the reservoir and displacement would occur in areas of both high and low permeability.

A recent survey indicates that recovery after primary and commonly used secondary techniques (gas or water injection) have been employed averages only 40 to 60 percent of total original oil. Frequently, the injection fluid does not reach all areas of the reservoir, and considerable quantities of oil may still be left in place; in addition, oil may remain in areas through which injection fluids have passed. The situation is similar to an individual's attempt at a cleaning process without the aid of some soap or detergent. To facilitate this "cleaning" of a reservoir, an oilman uses as his "soap" various fluids that are miscible with oil, including such fluids as propane or butane; alcohol, carbon dioxide, and foam are also being considered as injection materials. After the miscible fluid injection, water or gas may be used to follow the solvents to producing wells; subsequently, the combination of oil and solvent is recovered and can then be separated. Following the recovery of the oil and solvent combination, a bank of solvents alone flows to the well; these may also be recovered and used again as injection fluid. This type of recovery is known as miscible displacement.

Finally, thermal methods, involving combustion of some of the hydrocarbons in the reservoirs or the injection of hot fluids, have been tested; and under certain conditions, these operations are advantageous. When thermal methods are used, heat creates the energy for displacement of the oil. The use of miscible materials and thermal action is not economically feasible in many cases today, but technological advances likely will result in greater efficiency for the newer methods in the future.

crude oil, recoverable at or about current cost, is a key indicator in assessing the future availability of this resource. Recent estimates of crude oil reserves in the Nation indicate the availability of about 35 billion barrels; more than two-thirds of these known reserves are located in the southwestern states of Louisiana, Oklahoma, New Mexico, and Texas, with somewhat less than 45 percent of the national total accounted for by Texas.

OIL RESOURCES, JANUARY 1, 1960

Four Southwestern States and United States

(In millions of barrels)

Area	IOCC[1] proved reserves as of 1/1/60	Additional reserves recoverable by conventional gas and water injection under conditions existing as of 1/1/60	Estimated additiona reserves physically recoverable by known improved recovery methods
Louisiana	4,275	2,730	1,659
New Mexico	887	996	3,984
Oklahoma	1,459	1,369	4,540
Texas	15,528	4,958	16,046
Total	22,149	10,053	26,229
United States	30,970	14,822	44,013

[1] Interstate Oil Compact Commission.
SOURCE: Paul D. Torrey, "Evaluation of United States Oil Resources as of January 1, 1960," *The Oil and Gas Compact Bulletin*, June 1960.

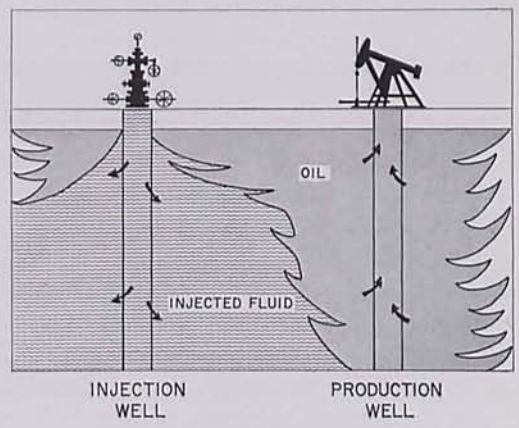
While current reserve estimates undoubtedly will be augmented by new discoveries and expansion in known fields, new reserves may be steadily more difficult and more expensive to find. On the other hand, a recent study indicates that secondary recovery by gas and water injection could provide an additional 15 billion barrels of crude oil in the Nation. Other methods, such as miscible displacement, thermal recovery, and the like, might yield an additional 45 billion barrels. Thus, by secondary and, perhaps, tertiary recovery, proved reserves could be expanded to 2½ times the current estimate of 20 billion barrels in the Southwest; and in the Nation, the use of secondary and tertiary recovery methods may increase reserves about threefold. Within the Southwest, as the accompanying table shows, most of the additional recovery is expected in Texas, but significant advances are also foreseen for the other oil-producing southwestern states.

Impact of Regulatory Decisions on Secondary Recovery

Crude oil production in the Southwest, regardless of the type of recovery, is greatly influenced by rulings of the state conservation commissions. The conservation agency in each of the major southwestern producing states maintains close supervision over the volume of crude oil production. For example, the Texas Railroad Commission assigns a Maximum Efficient Rate (MER) of production, or a depth-acreage yardstick, to each new oil field in the State. In other words, the MER for a particular field is the output under which there will be a minimum waste of oil when the wells are operating each day in the month. In order to equate crude oil production in Texas with planned consumption, the commission first determines the demand for Texas crude during the coming month and then calculates the number of days each field may operate. While the procedures of the various southwestern regulatory agencies differ, the net result is a proration of the allowable among the oil fields and then among the individual wells in a field.

Most regulatory agencies have determined that secondary recovery projects are a means of conserving the scarce natural resource and have adopted policies designed to encourage such projects. In Texas, secondary recovery operations are encouraged by the exemption of stripper well production, which includes some secondary recovery projects, from shutdown days. For April 1962, the Texas allowable schedule was established at 8 producing days, while stripper wells were allowed to produce throughout the entire month. The exemption applies even after secondary recovery techniques have expanded output per well to a level in excess of the stripper well stage. A pressure maintenance project applicable to other than stripper pools, on the other hand, is usually subject to shutdown days, as specified monthly. In early 1961, only about 60 percent of total Texas output came from prorated wells that were subject to shutdown days.

RECOVERY OF CRUDE OIL BY FLUID INJECTION



In New Mexico, secondary recovery project allowables are determined by such factors as the number and size of tracts upon which injection wells are located, but the allowables do not fluctuate each month. Pressure maintenance allowables are geared directly to the allowable for primary production and fluctuate monthly with market demand. No differentiation is made between secondary recovery and pressure maintenance in Louisiana or Oklahoma.

A second area of concern to regulatory authorities in dealing with secondary recovery projects is the problem of unitization. Since oil reservoirs and, thus, reserves are not neatly located according to ownership boundaries, effective secondary recovery operations often require a cooperative plan among the operators and lessors whose properties are involved. In many cases, a cooperative plan results in a unitized operation, which is regarded as "a project for the management, operation, and development of a single unit area of two or more leases overlaying a common source of supply, or portion thereof, without regard to lease boundaries within the unit area, and for the sharing of the obligations, benefits, and production on a fair and equitable basis" (R. Robert Huff, "Bone Up on the Legal Tools," *The Oil and Gas Journal,* April 14, 1958).

One of the complex problems of establishing a large secondary recovery operation is acquiring agreement to unitize from all interested parties. Unitization has grown despite objections on the part of some lessors and operators who maintain that the sharing of reserves is inappropriate. The conservation commissions of Oklahoma and Louisiana may require, after a certain percentage of the interested parties have voluntarily agreed, that an area be unitized; but in Texas and New Mexico, the commissions may only approve unitization after a voluntary agreement has been reached.

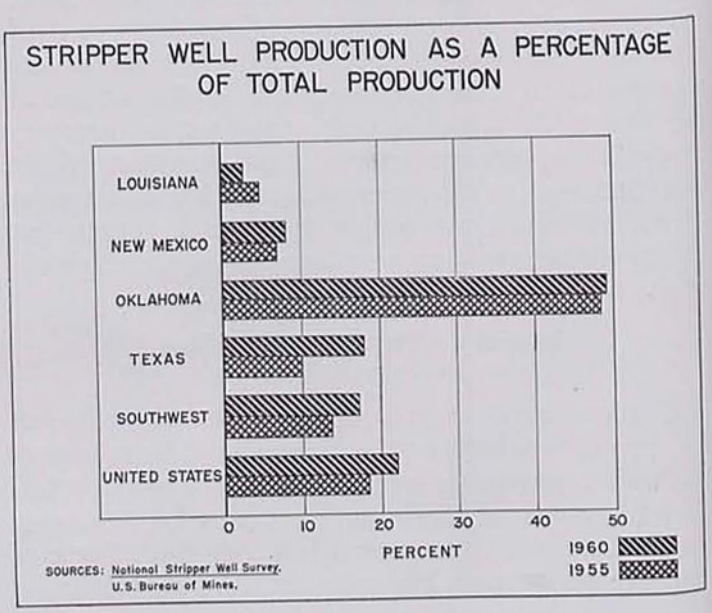
Growth of Secondary Recovery Operations

Only 5 years after oil was first produced in Pennsylvania, a patent was issued for a process involving the use of air pressure to supplement natural reservoir energy; elsewhere, attempts were made to move oil to the producing wells by the application of a partial vacuum. Although these efforts were not highly successful, various currently used secondary recovery methods began in the early days of the industry. An artificial gas drive was employed in Venango County, Pennsylvania, in 1890; and the first gas injection project in Texas was begun in the Petrolia Field, Clay County, in 1926. Waterflood operations commenced in the middle thirties in Texas and Oklahoma.

For more than a decade, most of the secondary recovery attempts in the southwestern states were merely experimental; but during and after World War II, petroleum demand expanded substantially, and the industry made every attempt to provide new supplies. Encouraged by a few successful ventures prior to the war, operators began to use secondary recovery techniques to expand output, and this trend has accelerated.

By mid-1947, about 75 waterflood projects had been initiated in Texas; and by 1957, about one-third of all Texas output was at least partially dependent on some form of fluid injection. A Texas Railroad Commission survey indicates that over 1,300 secondary recovery and pressure maintenance projects were begun between 1952 and 1959, with about one-third of these being started in 1958 and 1959. Waterflood operations accounted for about 30 percent of total production in Oklahoma during 1960. In Louisiana and New Mexico, secondary recovery operations are important but, with oil being developed largely in the postwar period in these states, have yielded a smaller portion of total crude oil output than in the older producing areas.

Secondary recovery projects are fairly well scattered throughout the Southwest. Louisiana's secondary recovery and pressure maintenance projects are distributed throughout the State, with some form of fluid injection even being used offshore. Secondary recovery operations also are widespread in the producing areas of Oklahoma, New Mexico, and Texas.



One of the largest secondary recovery projects of recent time involves the Spraberry Trend Area of Midland, Glasscock, Upton, and Reagan Counties in west Texas, the initial investment costs for which have been estimated at $85 million. The Texas Railroad Commission indicates that 375 new injection programs were approved in 1960, resulting in the expansion of reserves by more than 600 million barrels. About one-fourth of this gain in reserves has been attributed to two separate projects in the Spraberry Trend Area. Effectual large water injection projects associated with both pressure maintenance and secondary recovery operations, such as those in the 130,000-acre East Texas Field and the 50,000-acre project in the SACROC unit of the Kelly-Snyder Field, have been established. Yet, the success of these larger projects does not minimize the importance of small-scale operations, which comprise by far the greater number of projects being carried on in the Southwest.

An accurate measure of the importance of secondary and tertiary recovery is especially difficult because of the close technical similarity between secondary (and tertiary) recovery and pressure maintenance operations. There is not always common agreement as to the precise dividing line between these operations. While various definitions of secondary recovery, tertiary recovery, and pressure maintenance may differ somewhat from those employed in this article, several petroleum authorities have commented that a reservoir using fluid or other forms of energy injection is classified as a secondary recovery operation if the injection occurs after production from the wells has been depleted to such an extent that well rates have declined to the stripper well stage. All stripper well production is not obtained by secondary recovery techniques, but, because of the highly restricted nature of the initial output from stripper wells, a significant portion of current production from these wells likely is secondary recovery. Therefore, the general magnitude of secondary recovery operations may be inferred from statistics relating to stripper well activity. The principal qualification to this use of stripper well data comes from the fact that, with severely restrictive prorationing, there is an incentive to develop secondary recovery projects and the shallow, low-yield wells.

Crude oil produced from stripper well fields located in the four southwestern states rose about 45 percent between 1954 and 1960 to a level of 286 million barrels and accounted for almost one-fifth of total crude oil production in the area and one-half of total stripper well production in the United States. About 60 percent of the 1960 regional output came from Texas, with Oklahoma contributing most of the remaining portion.

STRIPPER WELL PRODUCTION, 1945, 1950, AND 1955-60

Four Southwestern States and United States

(In thousands of barrels)

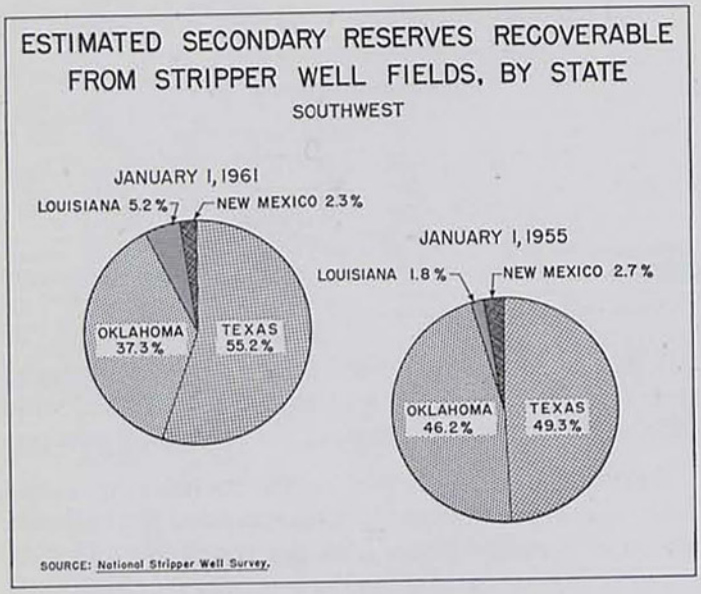
Area	1945	1950	1955	1956	1957	1958	1959	1960
Louisiana	7,863	9,826	13,726	14,169	13,530	12,424	12,358	11,750
New Mexico	3,400	4,704	5,889	5,557	6,644	5,860	2,387	8,970
Oklahoma	71,168	46,981	98,563	82,169	92,102	86,273	91,329	95,054
Texas	38,225	102,745	104,831	122,881	102,341	145,502	160,551	170,275
Total	120,656	164,256	223,009	224,776	214,617	250,059	266,625	286,049
United States	231,689	375,551	463,702	485,637	474,919	511,842	533,470	574,151

SOURCE: *National Stripper Well Survey.*

During the 1954-60 period, the increase in southwestern stripper well production exceeded the national advance, partially because of the restrictive effect of prorationing upon southwestern primary output and, in contrast, a lack of prorationing in several producing states outside the region. Moreover, in older producing areas in other parts of the country, numerous wells had reached the stripper well stage and, thus, were already subject to secondary recovery methods at the beginning of the period. In these areas with older fields, such as Illinois and Kentucky, a substantial portion of total existing reserves in 1954 was located in stripper well fields, and almost all output came from stripper wells in 1954 and 1960 as well. Stripper well production accounted for about 66 percent of Kansas output in 1960, with the portion approaching one-half in Oklahoma. Currently, less than 10 percent of total crude oil recovery is contributed by stripper well production in more recently developed petroleum areas, such as Louisiana and New Mexico.

Acreage allotted to stripper well activity doubled in the Southwest during the 1954-60 period, while the acreage in the Nation rose about 1.5 times. In 1960, about 3.7 million acres in the region contained stripper well fields, representing about one-half of the national acreage figure.

The number of stripper wells also advanced more rapidly in the Southwest than in the United States during the same period, with the region's portion increasing from 35 percent to 43 percent of the national total. The number of Texas stripper wells rose about 65 percent between 1954 and 1960 to a level of almost 91,000 wells, which is more than one-half of the southwestern stripper well total. Percentagewise, the largest gain occurred in New Mexico; but, in terms of the actual number of wells, the increase was only one-tenth as large as



in Texas. A more modest percentage gain was recorded in Oklahoma, but the State ranked second to Texas in the number of actual wells.

Total reserves in southwestern stripper well fields declined about 250 million barrels during the 1954-60 period to a level of 3.8 billion barrels, with reserves recoverable by secondary methods being reduced to 1.5 billion barrels. Despite the decline, secondary reserves in southwestern stripper well fields comprised about 7 percent of total crude oil reserves in the Southwest at the beginning of 1961. During the same period, total stripper well reserves in the Nation expanded to about 8.1 billion barrels, but secondary reserves decreased. The reduction in secondary reserves in the Southwest and in the Nation reflects increasing output by injection techniques.

Economic Implications of Secondary Recovery

Secondary recovery operations have become especially important as the cost of finding and developing new reserves has increased. A recent survey indicates that the average total cost of finding, developing, and producing oil rose from $0.51 in 1936 to $2.03 in 1952 and, subsequently, to $2.96 in 1959. Thus, over the 23-year period, the average total cost of recovering oil rose about six times. The cost of finding oil during the 1936-59 period increased from $0.06 to $1.40, or 25-fold, while developing and producing costs both increased only about three times. Perhaps more than any other factor, the fact that finding costs have advanced quite significantly heavily influences the economics of secondary recovery.

Nevertheless, a pertinent consideration in assessing the economics of secondary recovery operations is the cost of recovering oil through injection methods. Several estimates have been made of development (or investment) cost and lifting (or operating) cost, but these estimates are based on conditions existing in a given area at a certain time. As an example, one survey indicates that the investment cost for an economically sound waterflood should not exceed $1 per barrel of oil to be recovered, and another study finds that these costs may range between $1,500 and $5,000 an acre. Operating costs have been estimated to be between 50 cents and $1 per barrel of oil produced.

While these data may apply to a specific situation, it is not feasible to extend their application to secondary recovery operations in general. An analysis of the economics of secondary recovery brings to light many variables that tend to distort an average. For example, a very economical secondary recovery operation may take place when original wells can be employed, without significant modification, to produce the oil derived through secondary recovery. When these wells are available, the cost of secondary recovery is significantly reduced; and the relatively low cost of such operations tends to distort the average cost for all secondary (or tertiary) recovery. Consequently, it seems more advantageous to consider several of the factors affecting the economics of secondary recovery, rather than offer averages which do not represent a true picture of the cost of secondary recovery operations.

Measuring the value of a secondary recovery project should include such considerations as: the cost of acquiring the producing properties, the cost of reworking producing and injection wells, the cost of surface equipment required for the operation, the depth of the oil-bearing formation, the type of inherent drive responsible for the primary production, the thickness and permeabilities of the productive formation, the amount and viscosity of the remaining oil, and the cost and availability of injection fluids. For example, many of the economically sound waterfloods have been developed for reservoirs in which the primary energy was the expansion of gas dissolved in the oil; as a result, plentiful oil could be recovered by the injection of cheap, readily available water.

When conditions are feasible for fluid injection, substantial output advances are likely to result. For example, wells in the Salem Field in Marion County, Illinois, averaged less than 5 barrels daily prior to

waterflooding; but after the initiation of injection, production has advanced more than threefold and is expected to rise to a daily average of 40 barrels per well. A similar situation prevailed in the North Burbank Field in Osage County, Oklahoma, where average well production was expanded four times in a period of 8 years as a result of fluid injection.

While secondary recovery operations provide a source of revenue for the petroleum industry and a greater energy supply for the consuming public, the additional production has also benefited the economy of the Southwest in general. Older producing areas where primary output was virtually exhausted, such as Eastland County in north-central Texas and Ward County in west Texas, are being revitalized; and the renewed production has boosted labor income, increased employment opportunities, and provided new profits for the operators. Moreover, landowners have benefited from enlarged royalty payments, and there has been an increased demand for the goods and services of the contract driller and the manufacturer and distributor of oil well supplies.

As an indirect consequence of this activity, retail sales have expanded, and taxes on oil produced by secondary recovery have supported state revenues. For example, though the number of producing days allowed by the Texas conservation agency declined almost 50 percent between 1955 and 1960, total output decreased about 10 percent and the amount of revenue received from the oil production tax declined only 4 percent. The relatively small reduction in state tax receipts from petroleum production taxes can be attributed to some changes in tax measures and to the support to total production provided by increasing output from stripper wells and secondary recovery projects. However, it should be recognized that some stripper well and secondary recovery output merely supplanted primary output which was restricted by shutdown days.

Outlook

The first time around, the industry succeeded in producing substantial amounts of oil, but considerable quantities remained even after areas were abandoned. Production resulting from secondary recovery efforts has enhanced fuel supplies for the consumer, expanded revenues for the petroleum industry, and stimulated the southwestern economy. The outlook for enlarged secondary recovery operations in both the Southwest and the Nation is favorable. Significant reserves remain to be recovered by water or gas injection, and additional oil is likely to be produced as other recovery techniques are developed and proved economical. With primary output severely restricted and with finding costs advancing markedly, there is an automatic stimulus to secondary recovery operations for even short-term profit. However, while secondary recovery activity likely will advance further in the foreseeable future, the use of recovery techniques for pressure maintenance perhaps will be more important in the long run. The fuel user, the industry, and the producing areas will share in the benefits from this increased recovery.

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General Economist

BUSINESS REVIEW

BUSINESS, AGRICULTURAL, AND FINANCIAL CONDITIONS

The Texas industrial production index rose to 178 in February from the revised level for January and remained significantly above a year ago. Nonagricultural employment in the five southwestern states advanced during February to a record for the month. The value of construction contracts in the five states increased slightly during January but was below the year-earlier level.

Department store sales in the Eleventh Federal Reserve District in February rose 8 percent above February 1961, establishing a new dollar-volume record for the month. The monthly index of sales, adjusted for seasonal variations, rose from 172 percent of the 1947-49 average in January to 183 in February, compared with 170 in February 1961.

Daily average crude oil production in the District was little changed during February but declined moderately in early March. Crude oil runs to District refinery stills expanded in February and early March, and drilling activity strengthened.

New car sales registered in four major Texas markets in February were virtually unchanged from January and were 38 percent above February 1961.

Farming activities made fair progress throughout most of the District during March, although some areas need rain. Cotton planting is slightly behind a year ago, and Panhandle wheat is in need of moisture. Cold nights have slowed growth of spring vegetables and melons in south Texas. Cattle movement from Plains wheat pastures has been heavy; good calf and lamb crops are in prospect for the District.

Loans, investments, demand deposits, and time deposits all moved higher at the District's weekly reporting member banks in the 4 weeks ended March 14. Total reserves of the District member banks declined somewhat during February and early March.

Department store sales in the Eleventh Federal Reserve District in February rose 8 percent above February 1961, establishing a new dollar-volume record for the month. Normally, daily average sales at department stores in this District are expected to decline about 5 percent from January to February but, this year, showed a contraseasonal increase of 1 percent for the period, which partially offset the effect of a fewer number of trading days. (Total sales for February's 24 business days were 6 percent less than in January, in which there were 26 business days.) Sales continued above a year ago in early March, but the rate of gain was slight, amounting to only 1 percent in the 2-week period ended March 10.

As it makes allowances for seasonal variations and differences in the number of trading days, the season-

DEPARTMENT STORE SALES

(Percentage change in retail value)

Area	February 1962 from January 1962	February 1962 from February 1961	2 months, 1962 from 1961
Total Eleventh District	—6	8	8
Corpus Christi	3	7	6
Dallas	—4	6	6
El Paso	—4	—2	0
Fort Worth	—7	8	11
Houston	—15	11	12
San Antonio	—6	10	7
Shreveport, La.	—9	15	15
Waco	0	13	10
Other cities	0	9	8

INDEXES OF DEPARTMENT STORE SALES AND STOCKS

Eleventh Federal Reserve District

(1947-49 = 100)

Date	SALES (Daily average) Unadjusted	SALES (Daily average) Seasonally adjusted	STOCKS (End of month) Unadjusted	STOCKS (End of month) Seasonally adjusted
1961: February	127	170	173r	179r
December	317	185	175	188
1962: January	136	172	173	197
February	138	183	188p	194p

r — Revised.
p — Preliminary.

ally adjusted index of department store sales is a most significant indicator for comparisons. In the District, the index rose from 172 percent of the 1947-49 average in January to 183 in February, compared with 170 in February 1961. Cumulated sales for the first 2 months of 1962 were 8 percent above the same period in 1961.

New car sales registered in four major Texas markets in February were virtually unchanged from January and were 38 percent above February 1961. February new car registrations exceeded those of a year earlier by 44 percent in Houston and 41 percent in San Antonio. Fort Worth and Dallas showed year-to-year increases of 37 percent and 29 percent, respectively.

Land preparation and crop planting throughout a large part of the District were delayed by dry soils during the first part of March; however, snow and rain at midmonth provided beneficial moisture. The cold weather brought a general frost southward into the Winter Garden area of Texas and near-freezing temperatures into the Lower Valley, resulting in some damage to cotton, corn, and sorghums. The Panhandle area failed to receive mid-March precipitation, and small grains are growing slowly; drying winds continue to hinder development of the wheat crop.

There is sufficient moisture to enable most southwestern farmers to plant this year's crops, although surface soils are quite dry in a few sections. Cotton planting in the District is slightly behind a year ago; seeding is more than 90 percent complete in the Lower Valley of Texas and is about one-third finished in the Coastal Bend.

Sorghum drilling is more than one-tenth complete in the District and is virtually finished in the Lower Valley. Some Coastal Bend sorghums are up to good stands, and a few plants have emerged in the Blacklands. Planting of this year's corn crop is behind the 1961 schedule, as farmers in the Blacklands and south-central Texas delayed seeding until moisture was received.

CITRUS FRUIT PRODUCTION

(In thousands of boxes)

State and crop	Indicated 1961-62	1960-61	Average of 10 seasons ended 1950-59
ARIZONA			
Oranges	1,500	1,160	1,113
Grapefruit	2,400	2,260	2,585
LOUISIANA			
Oranges	255	275	167
TEXAS			
Oranges	2,200	3,500	1,660
Grapefruit	2,600	6,800	2,970

SOURCE: United States Department of Agriculture.

CASH RECEIPTS FROM FARM MARKETINGS

(Dollar amounts in thousands)

Area	1961	1960	Percent change
Arizona	$ 451,460	$ 435,554	4
Louisiana	399,877	371,251	8
New Mexico	252,941	236,006	7
Oklahoma	682,489	693,769	—2
Texas	2,326,396	2,277,014	2
Total	$ 4,113,163	$ 4,013,594	2
United States	$34,754,471	$34,013,666	2

SOURCE: United States Department of Agriculture.

Panhandle wheat is in need of precipitation to maintain the condition of the crop. A well-established root system has kept grazed-over wheat in good condition in many areas of the Texas Plains. Some wheat in the Blacklands is in the boot stage. Green-bug infestations have built up in some sections of the Plains and Blacklands and damaged small grains.

Growth of spring vegetables and melons in south Texas has been slowed by cold nights. Frost damaged stands of watermelons, cucumbers, and cantaloupes in all south Texas areas except the Lower Rio Grande Valley. Rains delayed watermelon planting in central and east Texas; however, planting of potatoes has been active on the High Plains. The onion crop in north Texas is making fair progress, and transplanting is under way on the High Plains.

As of March 1, citrus fruit output in Texas for the 1961-62 season is placed at 4.8 million boxes, or less than one-half both the forecast prior to the January freeze and the previous season's production. Compared with 1960-61, the outturn of oranges is estimated to be down 37 percent, and the grapefruit crop is expected to be 62 percent lower.

Movement of cattle off Plains wheat pastures was heavy during March, especially from fields intended for harvest this year. A good demand for cattle, inadequate wheat growth, and the possibility of avoiding "wheat poisoning" of the animals also accelerated the movement. Goat clipping has progressed rapidly in the Edwards Plateau, Cross Timbers, and Blacklands counties of Texas; and early sheep shearing has been under way in the Plateau and Trans-Pecos areas. Calving, lambing, and kidding have made good progress; and losses of newborn animals generally have been light. Good calf and lamb crops are in prospect for the District.

Cash receipts from farm marketings in the five District states during 1961 totaled $4.1 billion, or 2 percent larger than in 1960. Cash receipts were above the 1960 level in each of the District states except Oklahoma. Receipts from crop marketings were 2 percent higher in 1961, and those for livestock and livestock products were 3 percent above the previous year. Higher average prices contributed to the advance in cash receipts. Prices received by Texas farmers and ranchers for all farm products in 1961 averaged 4 percent above a year earlier. Crop prices were 6 percent higher, while those for livestock and livestock products were up 2 percent.

Loans and time deposits increased at the Nation's weekly reporting member banks during the 4 weeks ended March 7; however, investments and demand deposits declined. The gain in time deposits exceeded $1 billion, or considerably more than usual. The money market was firm throughout the period, and Federal funds traded at rates ranging from 2½ percent to 3 percent on all but a few days. Treasury bill rates have been under some downward pressure in recent weeks. The market bid rate on 91-day Treasury bills, which closed at 2.73 percent on February 7, reached a high of 2.84 percent on February 15 but declined to 2.72 percent on March 16.

Partially reflecting a feeling of uncertainty regarding the business outlook and a growing belief that interest rates will not rise substantially in the near future, the market for intermediate- and long-term Government securities displayed a cautious tone, but prices moved generally higher. The market absorbed two Treasury refunding operations during February with no apparent difficulty. Holders of $11.7 billion of maturing securities were allowed the option of exchanging for a 1-year certificate or a 4½-year note; almost $11.4 billion of the maturing securities was exchanged for the new issues. An advance refunding was also carried out, and approximately $5.1 billion of the $18.8 billion of outstanding securities maturing from 1964 through 1972 was turned in for new securities maturing from 1971 through 1998. Despite some occasional short periods of weakness, the corporate and municipal bond markets demonstrated considerable strength during the past few weeks. Commercial banks continued to be large purchasers of municipal securities, and, as the spread between corporate bonds and long-term Governments narrowed, some switching was evident.

CONDITION STATISTICS OF WEEKLY REPORTING MEMBER BANKS IN LEADING CITIES

Eleventh Federal Reserve District

(In thousands of dollars)

Item	Mar. 14, 1962	Feb. 14, 1962	Mar. 15, 1961
ASSETS			
Commercial and industrial loans	[1]1,773,882	1,762,179	1,561,149
Agricultural loans	48,377	47,000	35,169
Loans to brokers and dealers for purchasing or carrying:			
U. S. Government securities	15,274	15,274	51,276
Other securities	59,424	58,702	26,783
Other loans for purchasing or carrying:			
U. S. Government securities	2,667	4,421	7,161
Other securities	[1]172,328	172,033	202,019
Loans to domestic commercial banks	96,738	99,517	83,890
Loans to foreign banks	201	229	28
Loans to other financial institutions:			
Sales finance, personal finance, etc.	[1]83,758	81,486	92,469
Savings banks, mtge. cos., ins. cos., etc.	[1]161,280	161,181	127,679
Real-estate loans	249,268	245,396	214,207
All other loans	[1]786,967	765,596	796,861
Gross loans	3,450,164	3,413,014	3,198,691
Less reserves and unallocated charge-offs	63,228	62,726	57,756
Net loans	3,386,936	3,350,288	3,140,935
Treasury bills	123,989	163,222	92,471
Treasury certificates of indebtedness	86,415	66,150	27,083
Treasury notes and U. S. Government bonds, including guaranteed obligations, maturing:			
Within 1 year	256,235	211,442	177,015
After 1 but within 5 years	719,336	798,589	778,341
After 5 years	385,931	348,459	370,082
Other securities	451,509	426,871	403,726
Total investments	2,023,415	2,014,733	1,848,718
Cash items in process of collection	598,162	561,317	546,139
Balances with banks in the United States	525,148	470,238	531,315
Balances with banks in foreign countries	2,154	2,379	2,100
Currency and coin	58,797	57,659	53,099
Reserves with Federal Reserve Bank	553,979	548,832	573,656
Other assets	199,036	210,290	189,996
TOTAL ASSETS	7,347,627	7,215,736	6,885,958
LIABILITIES AND CAPITAL ACCOUNTS			
Demand deposits			
Individuals, partnerships, and corporations	3,093,821	3,071,694	2,988,334
Foreign governments and official institutions, central banks, and international institutions	2,512	3,120	87,140
United States Government	59,722	76,636	244,668
States and political subdivisions	251,425	263,214	
Banks in the United States, including mutual savings banks	1,154,873	1,114,987	1,121,504
Banks in foreign countries	14,689	14,175	13,821
Certified and officers' checks, etc.	57,621	43,454	74,655
Total demand deposits	4,634,663	4,587,280	4,530,122
Time and savings deposits			
Individuals, partnerships, and corporations			
Savings deposits	876,598	859,834	1,306,681
Other time deposits	653,896	642,235	
Foreign governments and official institutions, central banks, and international institutions	3,006	3,005	14,907
U. S. Government, including postal savings	6,617	6,967	274,567
States and political subdivisions	332,263	327,885	
Banks in the United States, including mutual savings banks	5,722	4,278	9,326
Banks in foreign countries	2,200	2,200	
Total time and savings deposits	1,880,302	1,846,404	1,605,481
Total deposits	6,514,965	6,433,684	6,135,603
Bills payable, rediscounts, etc.	112,100	59,700	87,000
All other liabilities	93,645	96,879	90,058
Capital accounts	626,917	625,473	573,297
TOTAL LIABILITIES AND CAPITAL ACCOUNTS.	7,347,627	7,215,736	6,885,958

[1] Because of reclassifications, these data are not strictly comparable with year-earlier data.

NOTE. — As a result of changes in call report instructions, additional information is available, effective April 26, 1961, on the deposit structure of member banks. Comparable year-earlier figures will be shown when they become available.

Loans, investments, demand deposits, and time deposits all moved higher at the District's weekly report-

ing member banks in the 4 weeks ended March 14. Cash accounts and total assets also increased.

Gross loans (excluding interbank loans) rose $39.9 million at the weekly reporting member banks in the District, with virtually the entire gain occurring in consumer-type loans and commercial and industrial loans. There was a noticeable expansion in loans to firms engaged in services; modest gains were recorded in loans to construction, durable goods manufacturing, and transportation, communication, and other public utilities concerns. Loans to nondurable goods manufacturing firms and trade concerns declined. In the comparable period of 1961, gross loans expanded $66.9 million; however, a substantial portion of the gain was accounted for by loans for purchasing or carrying securities. If the effects of this loan category are eliminated, the gain is approximately the same in both years.

Total investments at the District weekly reporting member banks advanced $8.7 million during the 4 weeks. Non-Government security holdings expanded more than usual, while investments in Government securities declined. The net reduction in Government security holdings was not large, and the changes within such holdings largely reflected the effects of maturity shifts and the participation by District banks in recent Treasury financings. In the comparable period last year, total investments declined $18.1 million, as holdings of both Government and non-Government securities moved to lower levels.

Demand deposits advanced $47.4 million at the District weekly reporting member banks, primarily because the increases in demand deposits of individuals, partnerships, and corporations and demand deposits of banks in the United States were only partially offset by the reductions in United States Government demand deposits and demand deposits of states and political subdivisions. Time and savings deposits rose $33.9 million, which is substantially more than usual. The principal gain occurred in time deposits of individuals, partnerships, and corporations, while the other time deposit categories showed smaller increases or were virtually unchanged.

Total reserves declined somewhat at the District member banks in the 4 weeks ended March 7, as there were small reductions in reserves of both reserve city banks and country banks. Excess reserves were lower at both types of banks. Free reserves, on the other hand, increased at reserve city banks but declined at country banks, reflecting a sharp reduction in borrowings by reserve city banks.

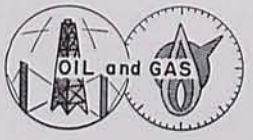
RESERVE POSITIONS OF MEMBER BANKS

Eleventh Federal Reserve District

(Averages of daily figures. In thousands of dollars)

Item	4 weeks ended Mar. 7, 1962	5 weeks ended Feb. 7, 1962	4 weeks ended Mar. 1, 1961
RESERVE CITY BANKS			
Total reserves held	588,957	599,089	564,481
With Federal Reserve Bank	549,738	557,702	526,085
Currency and coin	39,219	41,387	38,396
Required reserves	583,133	591,610	556,312
Excess reserves	5,824	7,479	8,169
Borrowings	854	5,829	786
Free reserves	4,970	1,650	7,383
COUNTRY BANKS			
Total reserves held	551,933	560,099	522,297
With Federal Reserve Bank	449,155	451,687	424,702
Currency and coin	102,778	108,412	97,595
Required reserves	486,642	487,689	447,824
Excess reserves	65,291	72,410	74,473
Borrowings	528	289	344
Free reserves	64,763	72,121	74,129
ALL MEMBER BANKS			
Total reserves held	1,140,890	1,159,188	1,086,778
With Federal Reserve Bank	998,893	1,009,389	950,787
Currency and coin	141,997	149,799	135,991
Required reserves	1,069,775	1,079,299	1,004,136
Excess reserves	71,115	79,889	82,642
Borrowings	1,382	6,118	1,130
Free reserves	69,733	73,771	81,512

District participation in the Treasury financing operations conducted in February was relatively small. District investors purchased only $54.7 million, or less than 1 percent, of the securities in the Treasury's $11.7 billion refunding offer. In the Treasury's $18.8 billion advance refunding operation, District investors exchanged around $148.2 million, compared with total exchanges of about $5.2 billion in the Nation. As in the Nation, however, District interest centered in the 4's of 1971, almost $91.0 million of which was taken by District participants. Approximately $12.4 million was exchanged for the 4's of 1980, and $20.8 million and $24.1 million were turned in for the 3½'s of 1990 and 1998, respectively.



District crude oil production, at 3,052,500 barrels daily, was little changed during February but declined moderately in early March. Daily average output in the District during April is expected to rise slightly because of the shorter month, even though Texas and Louisiana have retained their March allowable schedules for April and New Mexico has reduced the top unit oil allowable in the southeastern part of the State. Crude oil runs to District refinery stills rose in February and early March, and drilling activity strengthened. Total well completions advanced 9 percent during the 4 weeks ended March 3, and total footage drilled expanded slightly. The number of rotary rigs active in

NATIONAL PETROLEUM ACTIVITY INDICATORS

(Seasonally adjusted indexes, 1957-59 = 100)

Indicator	February 1962p	January 1962p	February 1961
CRUDE OIL RUNS TO REFINERY STILLS (daily average)	109	104	107
DEMAND (daily average)			
Gasoline	112	103	106
Kerosene	109	111	104
Distillate fuel oil	103	109	95
Residual fuel oil	90	99	98
Four refined products	104	105	100
STOCKS (end of month)			
Gasoline	103	103	105
Kerosene	135	124	128
Distillate fuel oil	118	117	113
Residual fuel oil	81	84	85
Four refined products	105	104	105

p — Preliminary.
SOURCES: American Petroleum Institute.
United States Bureau of Mines.
Federal Reserve Bank of Dallas.

the District during February declined fractionally from the month-earlier level.

New supplies of crude oil in the Nation were virtually unchanged in February, as a moderate reduction in crude oil imports offset a fractional increase in domestic output. A slight rise in crude oil demand during the month resulted in an 800,000-barrel reduction in crude oil inventories. In early March, inventory liquidation continued, with both domestic output and new foreign supplies decreasing moderately. Crude oil demand also declined, as several major oil companies lowered their crude oil runs to refinery stills from record or near-record levels.

Moderate temperatures in parts of the Nation in early February resulted in a contraseasonal increase in gasoline consumption for the month, while light and heavy fuel oil demand declined more than seasonally. The seasonally adjusted index of demand for the four major products decreased 1 point to 104 percent of the 1957-59 base. Seasonally adjusted stocks of the four refined products rose slightly, paced by increases in kerosene and distillate fuel oil stocks. Wholesale prices of refined oil products, as reported by the United States Bureau of Labor Statistics, declined 2 percent during February and were 5 percent below the same month in 1961.

In early March, however, refined product markets strengthened. Gasoline demand rose more than expected, kerosene and distillate fuel oil consumption did not decline as much as anticipated, and heavy fuel oil demand advanced contraseasonally. Total stocks of the four refined products, which normally show little change in March, were 6 percent below the month-earlier level on March 9, with light fuel oil stocks accounting for most of the decrease. Heating oil prices firmed in mid-March; gasoline prices generally strengthened, but there were price reductions at the retail level in some parts of the Nation. Heavy fuel oil prices in mid-March were steady, following a period of discounting earlier in the month.

The seasonally adjusted Texas industrial production index advanced 1 point in February to a level of 178 and was 8 points above February 1961. Widespread and significant production gains in durable goods manufacturing over the reduced January level offset declines in nondurable goods manufacturing and mining. The most notable changes during February were the decreases in petroleum and coal products and crude petroleum production and the increases in the output of fabricated metals, transportation equipment, furniture and fixtures, and stone, clay, and glass products.

Nonagricultural employment in the five southwestern states advanced in February to a level of 4,462,500 workers, a record for the month and almost 2 percent above the year-earlier total. Slight declines in the number of mining and trade workers during the month were offset by gains in all the other sectors, with transportation and public utilities and construction employment showing the greatest percentage increases. The rise in manufacturing employment also was noteworthy. Compared with February 1961, the only decrease occurred in transportation and public utilities employment. Government employment advanced slightly more than 3 percent; service, finance, and manufacturing employment also registered important gains.

Totaling 189,900 workers, unemployment in Texas in February was 5.4 percent of the labor force — sig-

INDUSTRIAL PRODUCTION

(Seasonally adjusted indexes, 1947-49 = 100)

Area and type of index	February 1962p	January 1962	December 1961	February 1961
TEXAS				
Total industrial production	178	177	179r	170
Total manufactures	227	222	225	213
Durable manufactures	271	251	266	248
Nondurable manufactures	206	209	207	196
Mining	131	133	135	129
UNITED STATES				
Total industrial production	174	173	174	155
Total manufactures	173	171	173	152
Durable manufactures	179	177	180r	153
Nondurable manufactures	171	170	171r	156
Mining	130	131	133	127
Utilities	325	322	315r	292r

p — Preliminary.
r — Revised.
SOURCES: Board of Governors of the Federal Reserve System.
Federal Reserve Bank of Dallas.

NONAGRICULTURAL EMPLOYMENT

Five Southwestern States[1]

Type of employment	Number of persons			Percent change Feb. 1962 from	
	February 1962e	January 1962	February 1961r	Jan. 1962	Feb. 1961
Total nonagricultural wage and salary workers	4,462,500	4,450,000	4,382,700	0.3	1.8
Manufacturing	775,600	772,000	756,900	.5	2.5
Nonmanufacturing	3,686,900	3,678,000	3,625,800	.2	1.7
Mining	241,600	241,800	239,300	—.1	1.0
Construction	278,700	275,500	274,000	1.2	1.7
Transportation and public utilities	389,600	384,200	392,500	1.4	—.7
Trade	1,063,000	1,067,100	1,055,600	—.4	.7
Finance	223,700	222,800	218,200	.4	2.5
Service	602,800	602,200	587,300	.1	2.6
Government	887,500	884,400	858,900	.4	3.3

[1] Arizona, Louisiana, New Mexico, Oklahoma, and Texas.
e — Estimated.
r — Revised.
SOURCES: State employment agencies.
Federal Reserve Bank of Dallas.

nificantly improved from both January and a year earlier, when the rates were 6.0 percent and 6.7 percent, respectively. Insured unemployment in the State in the week ended March 14, 1962, totaled 75,055, which is the lowest level of the year and 16 percent fewer than in the comparable week last year.

VALUE OF CONSTRUCTION CONTRACTS

(In millions of dollars)

Area and type	January 1962p	December 1961	January 1961
FIVE SOUTHWESTERN STATES[1]	274	270	350
Residential building	129	120	125
Nonresidential building	75	85	92
Public works and utilities	70	65	135
UNITED STATES	2,658	2,712	2,485
Residential building	1,190	1,125	974
Nonresidential building	853	883	813
Public works and utilities	615	704	698

[1] Arizona, Louisiana, New Mexico, Oklahoma, and Texas.
p — Preliminary.
NOTE. — Details may not add to totals because of rounding.
SOURCE: F. W. Dodge Corporation.

The value of construction contracts in the five southwestern states increased slightly in January 1962 to total $274 million but was 22 percent below the all-time high for the month reached a year earlier. Increases in the value of residential building and public works and utilities contracts during January offset a decline in nonresidential contracts. Significant year-to-year declines in nonresidential building and public works and utilities more than counterbalanced a slight gain in residential building.

ELEVENTH FEDERAL RESERVE DISTRICT

Dallas Head Office Territory
Houston Branch Territory
San Antonio Branch Territory
El Paso Branch Territory

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

(Dollar amounts in thousands)

Area	Debits to demand deposit accounts[1]	Percent change from		Demand deposits[1]	Annual rate of turnover		
	February 1962	Jan. 1962	Feb. 1961	Feb. 28, 1962	Feb. 1962	Jan. 1962	Feb. 1961
ARIZONA							
Tucson	$ 313,541	—19	47	$ 156,781	24.4	29.9	18.6
LOUISIANA							
Monroe	80,345	—23	12	53,031	18.2	22.0	16.3
Shreveport	286,683	—27	—9	200,856	18.0	24.4	19.8
NEW MEXICO							
Roswell	47,833	—17	16	37,689	15.1	17.8	13.2
TEXAS							
Abilene	108,835	—14	20	75,666	17.3	19.9	16.6
Amarillo	225,654	—13	15	118,210	22.6	25.0	19.9
Austin	259,407	—2	22	156,535	19.4	19.6	17.2
Beaumont	169,265	—15	14	110,172	18.6	21.6	17.2
Corpus Christi	197,794	—13	9	117,688	20.2	23.2	20.2
Corsicana	15,690	—25	8	20,071	9.4	11.9	8.8
Dallas	3,436,337	—15	25	1,282,467	31.8	35.3	29.3
El Paso	339,554	—12	16	199,176	21.2	24.5	19.0
Fort Worth	751,118	—21	7	386,717	23.3	28.4	22.6
Galveston	86,322	—20	4	67,339	15.8	19.8	16.1
Houston	2,682,797	—18	13	1,413,301	22.9	26.6	21.7
Laredo	28,000	—16	12	24,757	13.7	16.3	13.7
Lubbock	220,236	—36	6	134,549	19.2	29.8	20.8
Port Arthur	61,173	—6	—4	45,845	16.1	17.4	17.3
San Angelo	49,979	—20	3	49,500	12.0	14.9	12.6
San Antonio	619,266	—13	9	399,216	18.6	20.9	18.0
Texarkana[2]	21,471	—14	9	17,278	14.9	17.2	13.3
Tyler	87,749	—14	14	61,813	16.8	18.6	15.4
Waco	108,008	—11	13	73,808	17.6	19.9	16.4
Wichita Falls	107,652	—22	0	96,685	13.2	16.1	13.2
Total—24 cities	$10,304,709	—17	16	$5,299,150	23.4	27.1	21.7

[1] Deposits of individuals, partnerships, and corporations and of states and political subdivisions.

[2] 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 $46,875,000 for the month of February 1962.

CONDITION OF THE FEDERAL RESERVE BANK OF DALLAS

(In thousands of dollars)

Item	Mar. 14, 1962	Feb. 14, 1962	Mar. 15, 1961
Total gold certificate reserves	603,142	625,656	696,485
Discounts for member banks	895	355	200
Other discounts and advances	3,651	2,811	522
U. S. Government securities	1,155,533	1,144,923	1,088,617
Total earning assets	1,160,079	1,148,089	1,089,339
Member bank reserve deposits	927,980	942,726	936,191
Federal Reserve notes in actual circulation	830,002	836,632	810,082

DAILY AVERAGE PRODUCTION OF CRUDE OIL

(In thousands of barrels)

Area	February 1962p	January 1962p	February 1961	Percent change from January 1962	Percent change from February 1961
ELEVENTH DISTRICT	3,052.5	3,069.1	3,017.8	—0.5	1.1
Texas	2,641.7	2,656.9	2,624.7	—.6	.6
Gulf Coast	487.6	489.1	469.6	—.3	3.8
West Texas	1,199.2	1,205.8	1,185.0	—.5	1.2
East Texas (proper)	134.5	136.0	150.2	—1.1	—10.5
Panhandle	104.6	106.6	105.1	—1.9	—.5
Rest of State	715.7	719.6	714.8	—.5	.1
Southeastern New Mexico	274.9	276.3	261.8	—.5	5.0
Northern Louisiana	135.8	135.9	131.3	—.1	3.4
OUTSIDE ELEVENTH DISTRICT	4,398.4	4,341.6	4,277.7	1.3	2.8
UNITED STATES	7,450.9	7,410.7	7,295.5	.5	2.1

p — Preliminary.

SOURCES: American Petroleum Institute.
United States Bureau of Mines.
Federal Reserve Bank of Dallas.

CONDITION STATISTICS OF ALL MEMBER BANKS

Eleventh Federal Reserve District

(In millions of dollars)

Item	Feb. 28, 1962	Jan. 31, 1962	Mar. 1, 1961
ASSETS			
Loans and discounts	5,588	5,559	5,024
United States Government obligations	2,890	2,887	2,691
Other securities	984	995	897
Reserves with Federal Reserve Bank	961	920	915
Cash in vault[e]	159	162	142
Balances with banks in the United States	1,083	1,152	1,131
Balances with banks in foreign countries[e]	3	3	2
Cash items in process of collection	657	610	624
Other assets[e]	309	361	278
TOTAL ASSETS[e]	12,634	12,649	11,704
LIABILITIES AND CAPITAL ACCOUNTS			
Demand deposits of banks	1,214	1,277	1,221
Other demand deposits	7,015	7,062	6,676
Time deposits	3,135	3,053	2,678
Total deposits	11,364	11,392	10,575
Borrowings[e]	72	51	36
Other liabilities[e]	126	134	118
Total capital accounts[e]	1,072	1,072	975
TOTAL LIABILITIES AND CAPITAL ACCOUNTS[e]	12,634	12,649	11,704

e — Estimated.

GROSS DEMAND AND TIME DEPOSITS OF MEMBER BANKS

Eleventh Federal Reserve District

(Averages of daily figures. In millions of dollars)

Date	GROSS DEMAND DEPOSITS Total	Reserve city banks	Country banks	TIME DEPOSITS Total	Reserve city banks	Country banks
1960: February	7,620	3,640	3,980	2,145	1,089	1,056
1961: February	7,828	3,805	4,023	2,670	1,366	1,304
October	8,174	4,069	4,105	2,788	1,398	1,390
November	8,322	4,058	4,264	2,806	1,409	1,397
December	8,505	4,179	4,326	2,839	1,421	1,418
1962: January	8,584	4,179	4,405	2,990	1,508	1,482
February	8,234	3,965	4,269	3,107	1,577	1,530

BUILDING PERMITS

Area	NUMBER Feb. 1962	NUMBER 2 mos. 1962	VALUATION (Dollar amounts in thousands) Feb. 1962	VALUATION 2 mos. 1962	Percent change Feb. 1962 from Jan. 1962	Percent change Feb. 1962 from Feb. 1961	Percent change 2 months, 1962 from 1961
ARIZONA							
Tucson	731	1,547	$ 3,355	$ 6,080	23	—34	—37
LOUISIANA							
Shreveport	282	536	1,255	2,424	7	—33	—73
TEXAS							
Abilene	126	268	2,073	5,018	—30	52	19
Amarillo	271	472	2,538	4,953	5	—16	—7
Austin	345	660	5,820	10,190	33	52	21
Beaumont	269	502	1,982	2,732	64	15	41
Corpus Christi	322	578	2,325	3,848	53	98	38
Dallas	1,990	3,532	13,458	26,492	3	1	—25
El Paso	491	861	4,570	7,566	53	—58	—54
Fort Worth	538	947	2,952	5,587	12	—3	9
Galveston	231	434	600	4,741	—86	20	63
Houston	1,453	2,781	23,764	64,589	—42	72	23
Lubbock	202	451	2,725	6,209	—22	—35	—15
Midland	116	246	643	2,045	—54	—62	—31
Odessa	91	176	691	1,867	—41	—49	—8
Port Arthur	151	256	422	777	19	—43	—40
San Antonio	1,300	2,226	4,142	9,995	—29	—4	22
Waco	218	396	698	1,482	—11	—15	—25
Wichita Falls	148	233	1,031	2,537	—32	—30	—48
Total—19 cities	9,275	17,102	$75,044	$169,132	—20	3	10


FEDERAL RESERVE BANK OF DALLAS
DALLAS, TEXAS