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## FEDERAL RESERVE BANK OF MINNEAPOLIS

MONTHLY



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### Member Bank EARNINGS AND PROFITS Higher in '54 Than '53

	1954	1953
Interest on investments....	\$ 37.5	\$ 35.8
Interest on loans.....	75.9	70.6
Other current earnings.....	23.4	21.2
Total current earnings.....	136.8	127.6
Current expenses .....	86.0	80.4
Net current earnings.....	50.8	47.2
Excess of other debits over other credits .....	1.9	5.1
Profits before income taxes	48.9	42.1
Income taxes .....	20.4	18.4
Net profits .....	28.5	23.7
Number of banks.....	473	472

Selected items  
from Ninth  
District  
Member Bank  
Earnings and  
Dividends Reports,  
in millions  
of dollars

ALTHOUGH district member banks paid out more for expenses and taxes in 1954 than in 1953, profits after taxes increased substantially at the same time. Larger earnings, chiefly from loans and from investments, permitted additional expenses and taxes to be absorbed without a reduction in profits. This information was disclosed by a tabulation of earnings and dividends reports submitted by member banks at the close of 1954.

The largest boost to earnings came from income on loans. This amount was up by 7.7 percent in 1954. Changes in earnings on loans, of course, occur in response to changes in the level of interest rates charged on loans, as well as in response to variations in the amount of loans outstanding. Since interest rates charged for loans — on the average — have been almost unchanged for more than two years, the gain in earnings from loans reflects an almost proportional gain in the average amount of loans outstanding during the year. At member banks outside the district, loans and earnings from loans increased,

percentagewise, by less than half the Ninth district gain.

In contrast to an increase in the amount of *commercial and industrial loans* at member banks in the Ninth district during 1954, member banks outside the district reported a net liquidation of such loans. This difference accounts for the fact that *total loans*, as well as *earnings from loans*, increased more in this district than elsewhere.

While average holdings of investment securities were up by 2.3 percent at district member banks in 1954, the amount of earnings from securities was up by 4.8 percent; this reflects a slight gain in the average rate of return earned on securities. The average amount of investments held by all district member banks in 1954 was \$40 million higher than in 1953. More than \$39 million of this gain represented larger holdings of U. S. government obligations.

Earnings from loans, investments and miscellaneous sources increased respectively by \$5.3 million, \$1.7 million, and \$2.2 million, so that total current earnings rose \$9.2 mil-

lion. Expenses were up by \$5.6 million, with the result that net current earnings rose \$3.6 million. Adding the most to current expenses were salaries and interest on time deposits, which were higher in 1954 than in 1953 by \$2.9 million and \$1.6 million respectively.

Other debits and credits to income result from "capital" transactions, such as sales of securities and adjustments for bad debts. Again in 1954 the debits from these transactions exceeded the credits, but by \$3.2 million less than in 1953. The reduction of these charges caused profits before taxes to rise \$6.8 million from 1953 to 1954, despite the fact that net current earnings rose by only \$3.6 million. Income taxes of \$20.4 million were reported by district member banks in 1954; this amount was \$2.0 million higher than in 1953.

Thus, profits after taxes moved up by \$4.8 million, despite higher taxes and higher current expenses — a result made possible by augmented earnings on loans and investments and by larger profits on the sale of securities. **END**



## District States Share in Continued Cattle Increase

U. S. farmers and ranchers increased their holdings of all cattle by 646,000 head during the year ending January 1, 1955, to complete the sixth successive year of build-up in the current cattle cycle. According to the U. S. Department of Agriculture's latest count of livestock on farms, there were 95,433,000 cattle and calves on farms and ranches this January 1 compared with 94,787,000 head a year ago—an increase of slightly less than 1 percent.

Ninth district farmers and ranchers contributed more than their share to this national increase, by increasing their herds 3 percent. (See charts.) All of the national rise in numbers was confined to the western and west north central areas. There were fewer cattle on farms in the southern and eastern states by about 2 percent.

Part of the increase in total cattle numbers is accounted for by the fact that 422,000 head additional cattle were on feed this January 1 compared with last year. Such cattle are destined for the slaughter market and while they will contribute to beef supplies during 1955, they do not constitute part of our breeding herds for the coming year. On the other hand, dairy cow numbers—which make up roughly a

fourth of the total cattle count—are down 275,000 head from last year. (Dairy numbers were down in each of the four district states also.) As a result, the net increase in beef cattle numbers, exclusive of cattle in feed lots, amounts to roughly 490,000 head, or about a 1 percent increase. This constitutes the basic beef-producing stock for the coming year, including both breeding herds and other cattle kept for growth and meat production purposes not already in feedlots and headed for slaughter.

District cattle producers had not increased their feedlot numbers in line with the 8-percent national increase. Minnesota farmers had only 1 percent more cattle on feedlots on January 1; in South Dakota the number was up 5 percent.

For the nation, the number of beef cows on farms increased about 2 percent during the year. District states increased their cow herds by significantly more than this percentage, however—the increase ranging from 7 to 10 percent.

### Compares with previous cycles

The build-up of cattle numbers to new record levels in the period since 1949 follows a pattern similar to previous cattle cycles. The three previous cattle cycles that have oc-

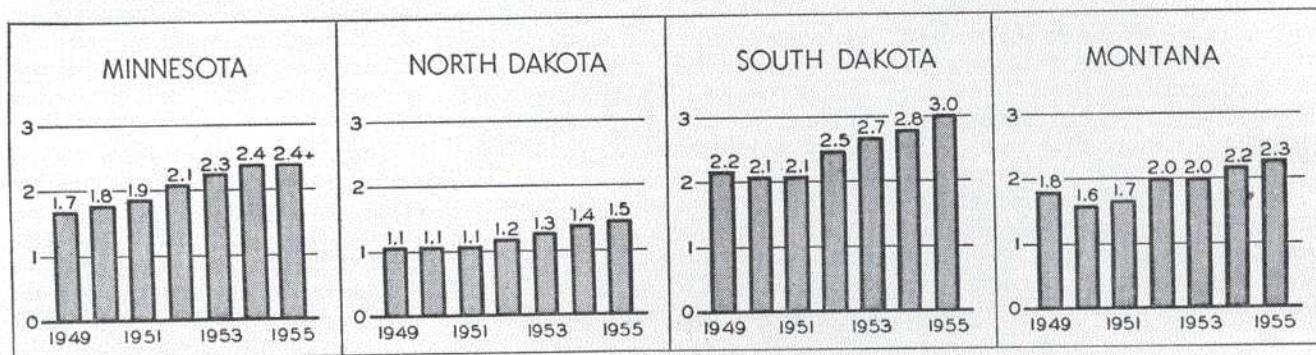
curred since 1900 have run the full cycle of build-up and liquidation in from 14 to 16 years. In two of those cycles the build-up period ran for six years; in the other it lasted seven years. The USDA's January 1 estimate marks the sixth full year of build-up for the present cycle.

The increase in cattle numbers was unusually rapid during 1951 and 1952, when close to 6 million head of beef cattle were added to herds each year. In contrast, the rate of increase has been very moderate over the past two years—measuring just a little better than 1 percent in 1953, and slightly less than 1 percent during 1954.

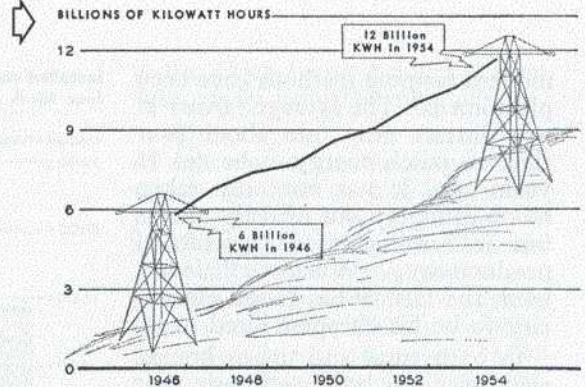
Similarity with past cycles offers little assurance that previous patterns will be followed from here on, however. Some livestock specialists have suggested that the rather sharp downturn and general liquidation that has typified previous cycles may not be forthcoming in this one. High incomes, rising population, and generally excellent demand for meat may encourage cattle raisers to hold numbers near the present level rather than liquidate. Such decisions in the past have been based largely on two things—price trends and feed supplies—and probably will be again.

In this regard, the continued build-up of cattle numbers in the Ninth District and in other western states reflects to some extent the relatively favorable moisture and feed position of farmers in these areas. Ability to maintain present numbers, or increase them in the future, will be closely related to the availability of feed. **END**

MILLIONS OF BEEF CATTLE AND CALVES IN THE NINTH DISTRICT STATES—JANUARY 1, BY YEARS







## ELECTRIC POWER

*generating capacity, both private and public, has shown substantial growth*

**G**ENERATING and transmitting of electric power is one of our fastest growing industries. In fact, power use in the Ninth district has doubled since the end of World War II, with both government and private industry playing important parts in the growth.

Investor-owned electric utilities have carried on record expansion programs in Ninth district states during this period, while at the same time, large generator installations were made at federal power plants along the Missouri River, and construction was undertaken on federal high-voltage transmission lines and substations.

### **Private utilities invest heavily**

The expansion programs of private companies, in many instances, reflect the large quantity of power distributed to municipal-owned utilities and cooperative associations as well as the increased demands by their own retail customers. Private companies are wholesaling an increasing quantity of power. Since they operate large thermo plants, they can wholesale power at a lower rate than it costs many municipal utilities and cooperatives to generate power in small plants.

In 1953, eight private companies operating in Minnesota, Montana, North Dakota, and South Dakota invested about \$81 million in new facilities. The 1954 figure was \$88 million. This investment exceeded the expenditures made by the Federal government on hydroelectric power development in those states. During the year ending June 30, 1954, the Federal government spent \$123 million on all types of resource development under the Mis-

souri Basin Program while appropriations made for the current fiscal year were about \$109 million.

Since the end of World War II, the investments made by investor-owned electric companies in the Upper Missouri basin has far exceeded the expenditures made by the Federal government to develop hydroelectric power sites. In the five years from 1950 to 1954 inclusive, the eight companies referred to above invested a total of \$388 million in new generating and transmitting facilities. In the next five years, from 1955 to 1959 inclusive, these companies propose to spend an even larger sum on their expansion programs.

### **Large federal power projects**

The Missouri Basin Development Program is boosting materially the installed generator capacity in the Upper Basin. Power plants at federal dams in Montana and North and South Dakota, which have been completed or are under construction, have a designed capacity of 1.8 million kilowatts. The installed capacity currently totals  $\frac{1}{2}$  million kilowatts.

To comprehend the large capacities that are being installed, the power plant at the Garrison Dam in North Dakota, one of the largest multiple-purpose projects on the Missouri River, has a designed capacity of 400,000 kilowatts which will be  $1\frac{3}{4}$  times the total generating capacity in the state in 1952. At the Gavins Point, Fort Randall, and Oahe Dams in South Dakota, the power plants will have a total capacity of 845,000 kilowatts which will be over four times the generating capacity installed in the state in 1952.

In the sale of power, the Bureau of Reclamation is required by Section 5 of the Flood Control Act of 1944 to give preference to public bodies and cooperatives. Only after all requirements of the preference-customers have been met, do the private power companies become eligible to buy power generated at federal power plants.

Since the power requirements of farmers will continue to grow rapidly, it now appears that nearly all of the firm power generated at the hydro plants will be used by farmers, and much of the secondary power available in the spring of the year will be used to pump water for irrigation after the proposed projects are completed.

### **Market seems insatiable**

The rapidly growing market for electric power focuses attention on how extensively it has penetrated the economy. Electricity has become the universal prime mover in manufacturing. Modern industrial methods are so completely dependent upon it that the kilowatt hours of energy used by industrial firms is an indicator of changes in industrial output over relatively short periods of time. Furthermore, new industrial methods such as automation, presently being introduced in many industries, continue to increase the use of electrical energy in the manufacture of industrial products.

The electrification of farms beginning in the latter '30s was a boon to the electric utility industry. After transmission lines were built into rural areas and farms were wired for electricity, the use of electrical energy grew at a faster rate on farms than in cities. The applications made of electricity in



modern farming methods have been phenomenal. The average farmer in this district now uses about four times as much energy as he did 15 years ago. It has not only taken much drudgery out of daily chores but it has increased agricultural productivity. When efficiently used, the farmer has found electricity to be his cheapest hired hand.

In both rural and urban homes, electricity has become a basic part of modern living.

### Hydro and thermo plants must be integrated

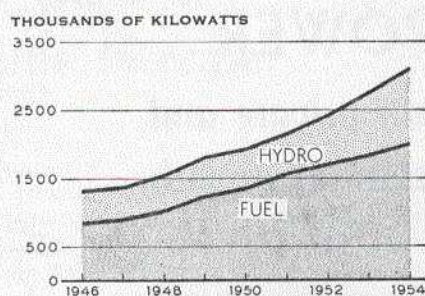
Of the known resources which can be used for the generation of electric power, only two—fuel resources and falling water—are now considered as practical for large scale developments. Research may bring other sources of power into the realm of practicability. At present, atomic energy appears promising with wind power and direct solar energy as other possibilities.

Only a part of the generating capacity at hydroelectric plants can be depended upon to produce *firm* power; that is, power available at all times. The remaining power, called *secondary* power, is available only in seasons of high water runoff. To economically use secondary power it is necessary to integrate the hydro plants with the thermo plants of municipal, cooperative, and private electric systems. For example, in years of average water flow in the Missouri River and principal tributaries, the output of large hydro plants in the spring and summer months will replace the output of thermo plants, while in other seasons the output of thermo plants will be required.

### Hydroelectric power site development

Private companies have developed hydroelectric power sites which they estimated would be profitable ventures. Since the latter thirties, the Federal government has expanded the hydroelectric power development in the Missouri Basin by building large dams which would be unprofitable for power alone but are feasible as multiple-purpose projects. It generally is

Installed capacity of electric generating plants, four Ninth district states, Dec. 31, 1946-1954.



Source: Federal Power Commission, Edison Electric Institute.

conceded that private interests cannot undertake these large water resource projects.

Power is an important phase of the Missouri Basin Development Program but the large multiple-purpose structures also are designed to control floods, provide water for irrigation, and stabilize the stream in the Missouri River to maintain a 9-foot navigation channel below Sioux City. Coordinating the generation of power at these structures with the other objectives of resource development places a still further limit on the generation of firm power. For instance, a compromise must be established between flood control and the generation of power. To provide flood control, the water level in the large reservoirs must be lowered about 20 percent in the autumn before the ice forms to have the necessary space for the spring floods. This reduced water level cuts down on the amount of power available.

### Thermo plants remain backbone of firm power

Despite the large installations at federal hydroelectric plants, most of the firm power will continue to be generated at thermo plants. Allowing for the rapid rise in electrical energy requirements, it is estimated that by 1970—with all of the federal hydro plants in operation—the Bureau of Reclamation, which sells all federal government power, will supply only about 18 percent of the total firm power demanded within the marketing areas of the Missouri River dams in Iowa, Minnesota, North Dakota, South Da-

kota, and Nebraska. This will amount to only 11 percent of the total firm power required in Minnesota, North Dakota, and South Dakota.

### Role of private and public power

The private and publicly-owned electric utilities, and the federal power installations in the Missouri Basin serve distinct phases of the steadily growing market for electricity in this district.

The private companies serve primarily the industrial, commercial, and residential customers in the cities. They also serve directly some farmer customers. With their large thermo generating plants, they wholesale large quantities of power to municipally-owned utilities and rural electric cooperatives.

The public-owned utilities, which include the municipally-owned and cooperative associations, serve mostly smaller cities and farmers. For some of them, the distribution of power to urban and rural customers has become their principal function.

In the Missouri Basin, the Bureau of Reclamation wholesales power from the federal power installation to preference-customers; namely, cooperatives and public bodies, and, if there is enough power, to private companies. Some private companies have contracts for secondary power.

The preference-customers are absorbing all of the firm power as it becomes available at the federal hydro plants. Already, rural electric cooperatives served by the Bureau of Reclamation anticipate a shortage of firm power by 1958 or 1959. As a result, two South Dakota cooperatives have requested Congress to appropriate funds for the construction of a large fuel-powered generating plant to provide more firm power.

Whether or not such a plant will be built remains to be seen. In any event, the output of hydro and thermo plants must be integrated to supply the growing appetite for electricity in the western half of this district.

END



## Shopping centers show rapid growth in Twin Cities area since 1950

A CENTURY or more ago, a town market place served the trade and shopping needs of most communities. A generation ago the general store provided a variety of wares, ranging from food staples to dry goods to minor hardware and patent medicines, all adequate for the needs of most families.

The modern "shopping center," an integrated cluster of stores de-

A limited number of copies of a report containing more detailed statistics on population growth and shopping centers in the Twin Cities area is available through the Research Department upon request.

signed to supply the needs, convenience and whim of car-borne customers, is but an elaboration of this same service on a much bigger scale. Each shopping center includes a variety of shops and service centers with some of the larger centers even housing (by choice) competing stores.

When present construction in the Twin Cities area is completed, an estimated \$40 to \$50 million will have been spent on some 3 dozen shopping centers of this type. Many of the area's major retail outlets are represented in at least one center.

The rapid movement of a relatively large number of people into suburban areas more or less distant from established shopping districts

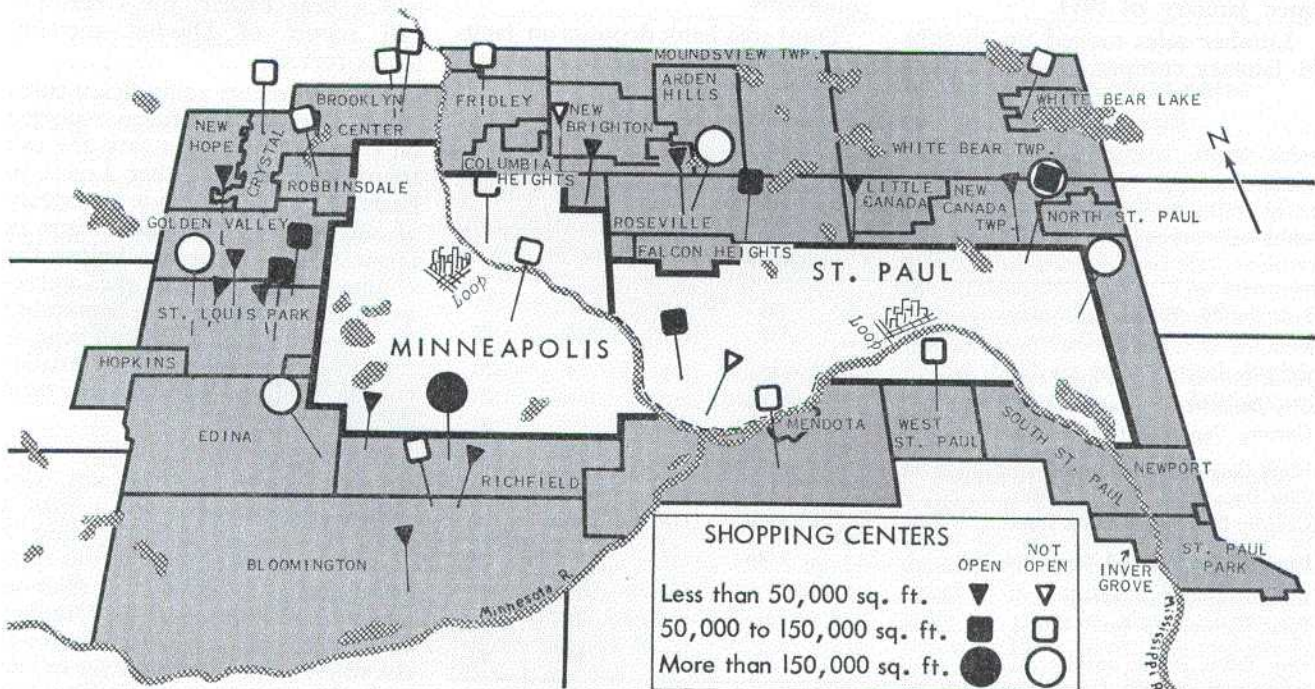
is the chief factor behind current ventures in suburban retailing.

Within the 200-plus square miles of area shown on the map below, reside one-sixth to one-fifth of all persons living in the Ninth federal reserve district. Between 1940 and 1950, population in this market area grew at a net rate of 15,000 persons each year. Since 1950 population has grown at a rate of nearly 34,000 persons a year. The significant feature of this growth is that the bulk of it has taken place in the suburban communities that ring the Twin Cities (shaded on the map below).

Shopping centers are a surprisingly recent phenomenon in this area. The earliest concerted effort at building took place in 1950. In fact, nearly half the centers indicated on the map, including most of the larger centers, are just now undergoing construction.

With nearly 3½ million square feet of floor space represented by shopping centers now open or underway in the Twin Cities area, it is quite plain that the movement towards "suburban living" is about to fashion a major change in retailing institutions.

END





## Indicators Reveal Early 1955 Off to Good Start

THE first 2 laps (January and February) of the 12-lap economic race in 1955 have now been covered, and the district's economic performance during part of this period is now measurable. The results look encouraging. At least, the new year is off to a fast start with bank debits (volume of checks written) in January at the highest level on record for that month.

Department store sales sprinted off at a near-record clip early in January but slowed down to a more moderate pace by mid-February. January sales were the highest since January of 1951.

Lumber sales moved up sharply in January compared with Decem-

ber and year-earlier figures. New construction, as evidenced by lumber sales and new building permits, suggests continued strong support in this part of the area's economy. The value of new building permits in January was more than twice that of January, 1954.

Current economic strength and vitality is indicated also by a contraseasonal increase in bank deposits during January. This, in turn, is a reflection of heavy crop and livestock marketings since the first of the year, as well as relatively favorable industrial and employment conditions.

Total area bank deposits on January 1 were the largest on record.

While bank loans to farmers and non-farmers were up at the year's beginning, they do not appear to be excessive or out of line with other bank assets.

The economic momentum of early 1955 will be felt in the district economy for several months, but if sustained recovery is to be achieved throughout the year, constant economic energy must be added to keep ahead of 1954. This would include such things as a large volume of agricultural production, increased activity in mining and oil development, sustained new construction activity, and an inclination on the part of consumers to spend at least as much of their income as they did last year.

### ► Banks increase farm debt over year ago, December report shows

Banks in the Ninth District had about 10 percent more non-real-estate loans outstanding to farmers on December 31, 1954, than they had a year earlier, the December call report of District member banks reveals.

This represents a significant turnabout from the condition reported on October 7. At that time the call report category, "Other Loans to Farmers," which is made up largely of short-term production loans to farmers, was 1 percent below the volume reported on the corresponding 1953 date of September 30. The June and April call reports for 1954 had also shown a smaller volume of farm loans of this type than during 1953.

The volume of real estate loans outstanding to farmers on December 31 was also higher than a year ago. Banks were lending 8 percent more for credit of this type to farmers on December 31 than on the same date in 1953. In October the volume loaned was 3 percent above 1953. These figures are in line with the greater amount of mort-

### Ninth District Business Indexes

(Adjusted for Seasonal Variations—1947-49 = 100)

	Jan. '55	Dec. '54	Jan. '54	Jan. '53
Bank Debits—93 Cities.....	136	136	122	122
Bank Debits—Farming Centers.....	137	139	126	125
Ninth District Dept. Store Sales.....	112p	113	104	103
City Department Stores Sales.....	114p	118	108	104
Country Department Store Sales.....	109p	105	98	102
Ninth District Dept. Store Stocks.....	115p	118	107	111
City Department Store Stocks.....	113p	119	107	109
Country Department Store Stocks.....	118p	116	108	113
Lumber Sales at Retail Yards (Bd. Ft.).....	112p	87	67	70
Miscellaneous Carloadings .....	97	103	98	100
Total Carloadings (excl. Misc.).....	84	81	75	81
Farm Prices (Minn. unadj.).....	77	75	93	93

p—preliminary



gage debt being loaned by all major lenders.

Banks are not generally considered a major source of long-term farm real-estate debt. However, they are the major source of short-term production credit extended to farmers. Thus, the sharp rise in non-real-estate loans to farmers compared with a year ago seems rather significant.

Commodity Credit Corporation loans held by banks on December 31 were just 68 percent of a year ago, reflecting a smaller amount of grain going under loan to the Commodity Credit Corporation. Substantial amounts of spring wheat harvested in the Ninth District sold for cash this fall rather than going under price support loan. In the corn producing areas, high moisture content of harvested corn has delayed the eligibility of corn for such loans and may have been a factor in the reduced volume of CCC loans extended by banks on December 31.

#### ► 1954 crops under loan

Less than half as much Ninth District wheat and corn had gone under government loan for price support purposes by January 15 of this year than was true a year ago. Despite the fact that the District's 421-million-bushel corn crop in 1954 was only 2 percent under the near-record crop of 1953, only 10 million bushels of Ninth District corn had moved into government price support positions by January 15 of this year, compared with 45 million bushels a year ago on that same date. Much of the corn crop in Minnesota and South Dakota has been high in moisture—too high to qualify under the loan program last year. Increased livestock feeding—both cattle and hogs—is probably diverting more corn to that use. And finally, many farmers did not comply with their corn acreage allotments and so are not eligible for price support loans.

Only 49 million bushels of wheat had moved under the government loan program as of January 15 in the Ninth District, compared with 103 million bushels a year ago. Much of

## HIGHLIGHTS FROM NATIONAL CONDITIONS . . . . .

Industrial production rose slightly further in January, and construction activity continued at record levels. Unemployment increased somewhat less than seasonally. Retail sales were maintained at exceptionally high levels. Prices of industrial materials continued to rise from mid-January to mid-February, and average prices of finished industrial goods and of farm products showed little change.

**Construction**—New construction work put in place in January increased slightly further to a seasonally adjusted annual rate of more than \$40 billion—one-sixth larger than a year earlier. Value of contract awards declined somewhat but was almost one-third larger than a year earlier and the largest for any January on record. The number of private housing units started in January was unusually large for winter, at a seasonally adjusted annual rate of over 1.4 million.

**Employment**—Labor market conditions changed little from mid-December to mid-January, after allowing for the usual sharp seasonal reductions in retail trade, federal post office activity, and construction and other outdoor activities. Seasonally adjusted employment in nonfarm establishments at 48.5 million in January was up about 500,000 from last summer's low, but it was about 1.4 million below the mid-1953 high. Unemployment increased by 500,000 to a total of 3.3 million early in January—a slightly less than normal seasonal increase.

*From the National Summary of Business Conditions prepared by Board of Governors of the Federal Reserve System, February 15, 1955.*

this decline reflects the 30-percent smaller production in the Ninth District during 1954, and also the fact that much spring wheat sold for cash because market prices were favorable in relation to the loan value.

#### ► Bank debits show marked increase

Business activity in January, following the Christmas shopping season, contracted less than it did a year ago. This fact is reflected in the large total of January debits reported by banks in this district. Compared with the total for a year ago, debits for January were up 11 percent, a decidedly larger increase than for any month in 1954. In the fourth quarter of 1954, debits were only 3 percent higher than in the same quarter of 1953.

#### ► Department store sales have held up well

District department store sales in January were approximately equal to the December sales, after an adjustment is made for the usual seasonal decline in sales that follows the Christmas month. The adjusted district index for both December and January was about 111 percent of the 1947-49 base period—higher than any month since January of 1951.

#### ► Furniture store sales strong

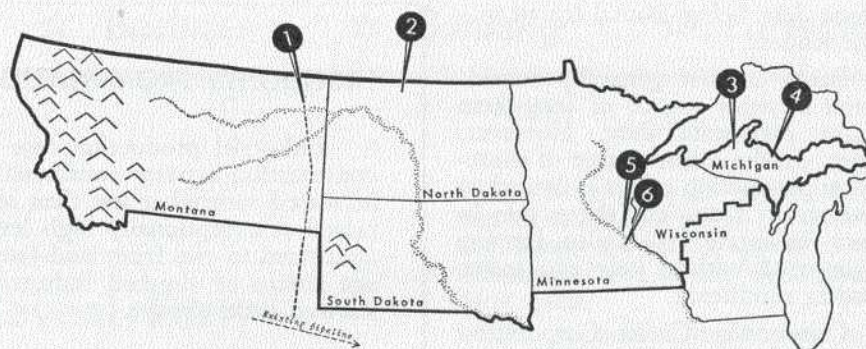
Sales at furniture stores, which often do not follow the trend of department store sales, were up noticeably in January. District sales were 13 percent above those for January, 1954. Both cash and credit sales increased by comparable percentages.

END



# ECONOMIC *Briefs*

## SIGNIFICANT HAPPENINGS IN THE NINTH DISTRICT



### 1 - Crude line from Montana set

A 450-mile crude oil pipeline from Poplar Field in eastern Montana, destined to link with existing pipeline systems in Wyoming, will be started as soon as weather permits. It will be built jointly by Shell Oil Company and Murphy Corporation at a cost of \$18 million and represents the first significant outlet for crude oil from the Montana portion of the Williston Basin. Upon completion of the 16-inch line late this year, eastern Montana crude will be moved into the Chicago and Wood River, Illinois, refining areas.

### 2 - New N. D. oil strikes significant

The best producing oil well in Bottineau County, North Dakota, was completed in January, flowing at a rate of 384 barrels a day through a quarter-inch pipe opening; while in mid-February a second, equally good "offset" well was brought in. The Bottineau area is of special interest because of its location on the relatively shallow eastern flank of the Williston Basin (production at 3,200 feet compared with 8,500 feet at Tioga).

Prior to the present successes by Ward-Williston Company in the North Westhope field, however, most wells in the area have been

marginal and disappointing. The new finds should encourage increased activity all along the eastern "flank."

### 3 - White Pine smelts first copper

Work on the White Pine copper development in Upper Michigan is virtually completed. White Pine Copper Company's new smelter was brought into operation January 13 and is now producing copper from "sulfide" ores mined south of the plant. Deposits there contain an estimated 309 million tons of ore, averaging 1.1 per cent copper. The project, begun in 1952, was financed by government loans totaling \$67 million and supplemented by \$13 million from Copper Range Company, parent company of White Pine Copper.

### 4 - Jet air base at Marquette

The Air Force has taken a 99-year lease on land in Marquette County, Michigan—presently Sawyer Airport—and is preparing plans for a \$12 million jet air base. When the base is completed (in two or three years), some 1,500 personnel will be assigned to the field. The annual payroll, military and civilian, is expected to exceed \$2 million a year.

### 5 - School bond approval given

Residents of Roseville, a suburb north of St. Paul, approved a \$1,540,000 bond issue on February 8, signaling "go-ahead" for construction of a \$960,000 junior high school. Also planned for this year are a \$120,000 eight-classroom addition at one school and a \$100,000 four-classroom and gymnasium addition at another.

Plans for 1956 include \$300,000 for school equipment, \$150,000 for a sewer system for the junior high school and \$60,000 for a four-classroom addition to a third school.

### 6 - \$15 million ammonia plant

Construction is expected to begin within 90 days on a \$15 million ammonia plant in the Pine Bend area south of St. Paul. Completion is scheduled for April, 1956.

The plant will have a daily production capacity of 200 tons of anhydrous ammonia, nitrate fertilizer and nitrogen solutions for agricultural and industrial use and will employ some 160 persons. The structure will adjoin Great Northern Oil Company's refinery (now under construction), and ammonia products will be manufactured from both natural gas and by-products of the refinery.