

Monthly Review

OF THE FEDERAL RESERVE BANK OF MINNEAPOLIS

District economic situation reassuring

Most of the Ninth district's economic measurements have registered moderately on the plus side in recent weeks. The economy, after a side-wise movement earlier in the year, seems now to be pointed for another good summer season—perhaps as good or better than last year.

One current development that is tending to generate economic optimism is the very favorable beginning of the new crop season. Seeding of wheat and other grains was completed this spring under especially promising soil and moisture conditions. A week or two of dryness followed but in mid-May a general and heavy rainfall over almost the entire district gave a big boost to early season crop prospects. Barring unusually adverse weather, there is enough moisture now available to carry the district's principal small grain crops to the jointing stage. The real test—temperatures and rainfall during the July and early August periods—will determine crop abundance.

The mid-May rainfall also stimulated range and pasture grass to lush growth, which is a fact of particular interest to the livestock grower. Good pasture and range conditions have added to the already firm demand for livestock. Livestock prices, particularly stockers, feeders and breeding livestock, are at sharply higher levels than at this same date a year ago. The prices are a reflection of good grass prospects in the Ninth district as well as in former drouth areas of the Southwest.

Discount policy: 1914-1939

A brief review of the first quarter-century of discount experience at the Federal Reserve Bank of Minneapolis . . . see page 5.

Looking at the region's nonfarm economy, possibly the 'weakest' spot continues to be centered in new residential construction. Here the total dollar value is down 19 percent in April compared with April a year earlier. A gain of 19 percent in non-residential construction during April compared with April of 1956 has largely offset this decline, however.

The downward adjustment in home building is due in part to the relative scarcity of mortgage funds and to stricter terms for mortgage loans. Interest rates are higher, too (except G.I. loans) which discourages some borrowing. The continued low vacancy rates, however, do indicate that a strong potential demand for housing exists.

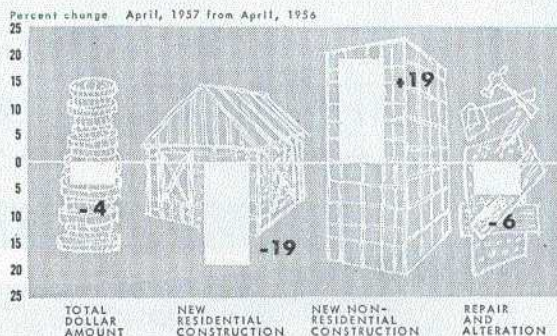
Both wholesale and consumer prices are at advanced levels from a year earlier, with gains in excess of 3 percent for each price index during the most recent 12-month period. Since February, divergent price movements have appeared, with wholesale prices stable while consumer prices rose.

Unemployment, although currently at a relatively small figure, is above that of a year ago. But total employment shows further gains, reflecting growth in the labor force. The record number of employed are working at record high wage rates. This has stimulated a high rate of spending. Department store sales and bank debit figures were maintained at, or increased to, new high peaks in recent weeks. Iron ore mining is active. A net increase in ore output this season over 1956 has been forecast by some observers.

Still a further indication of high level economic production is the demand for commercial and industrial loans. These loans have registered a steady increase in recent weeks, showing a confident attitude on the part of businessmen about the business outlook. There are few signs at present that bank loans are being used to build up inventories.

Tight credit, as well as large borrowings at the Federal Reserve Bank of Minneapolis in recent weeks are, of course, reflections of the heavy credit demands in relation to the limited supply of funds available. If credit were made easily available

Change in building permit valuations, April 1956-57



at a time when the country's resources are near full employment, as they are at present, then the result might easily be sharp price inflation. Restraining inflation in the interest of stable economic growth continues to be necessary.

The following selected topics describe particular aspects of the district's current economic scene:

EMPLOYMENT CONTINUES HIGH

District nonfarm employment set a new record in the first four months of this year. The high employment was traced in a significant measure to a large output of industrial products, extensive stripping operations in preparation for a large iron ore shipping season, and a large volume of nonresidential construction.

Especially in Minnesota and Montana, manufacturing firms have been the principal source of new jobs. In the manufacture of machinery, both electrical and nonelectrical, and transportation equipment, employment has expanded rapidly over the past year. The additional workers hired in these industries have more than offset the reduced employment in saw and planing mills, and in plywood, sash and door plants in a few areas of the district. This drop in employment has been due to the smaller number of houses being built.

The growth in April employment, in a large

measure, reflects the beginning of the seasonal rise in industrial employment. The gains in employment in the construction field were less than in former years; this was due, only in part, to the cutback in residential building.

CURRENT BANKING DEVELOPMENTS

In the first four months of 1957 the deposits of district member banks fell by \$140 million while their earning assets declined by \$43 million. A \$46 million decline was registered by other assets, such as balances due from other banks. In part, district member banks have accommodated the deposit outflow by borrowing at the Federal Reserve. As mentioned elsewhere on this page, such borrowings have grown since the first of the year.

BALANCE SHEET CHANGES AT DISTRICT MEMBER BANKS

(millions of dollars)

1956	Loans	Investments	Deposits
January	+ 7	—49	— 81
February	+24	—21	— 44
March	— 3	—36	— 9
April	+15	+19	+ 6
Total	+43	—87	—128
1957			
January	—62	—18	—160
February	— 2	—25	— 25
March	+41	—25	— 6
April	+16	+32	+ 51
Total	— 7	— 36	—140

In contrast to the early months of last year when \$43 million of loans was added to member bank portfolios, loans were reduced \$7 million in the same period this year. A \$13 million increase of loans at country banks was more than offset by a reduction of \$20 million at city banks. Securities owned by country and city banks dropped by \$13 million and \$23 million respectively. The total of loans and investments at country banks was thus unchanged at the end of April from four months previous while at the city banks the total was down by \$43 million.

Both city and country banks experienced a deposit outflow in the period but \$117 million of this outflow was concentrated at the city banks, with country bank deposits down by \$23 million. The behavior of deposits thus imposed a lesser need to liquidate assets at country banks than at city banks.

BORROWING AT FED STILL RISING

The volume of borrowing at the Federal Reserve Bank of Minneapolis continued to rise in April and May as it has in other recent months. In January and February borrowings averaged somewhat less than a year ago while in March and April the average was somewhat more than a year ago. For the entire four-month period average borrowings this year were almost exactly the same as in the comparable period last year.

AVERAGE DAILY BORROWING AT FEDERAL RESERVE

(millions)

	1957	1956
January	18.0	27.2
February	31.6	47.0
March	51.2	43.5
April	54.6	40.4

In the first half of May borrowings averaged \$65.2 million, well above any previous month in 1957. This figure represents approximately 15 percent of required reserves for all district member banks. In early May Reserve City banks were borrowing about a third of their required reserves from the Fed while country banks were borrowing about 3 percent of required reserves.

NONRESIDENTIAL BUILDING HAS LEVELED OFF IN DISTRICT

Although employment in the construction field was high during the winter, the usual spring expansion has been delayed. This has been reflected in the valuation of building permits authorized

and the amount of contracts awarded, which did not increase in the latter part of the winter. In fact, the total valuation of permits issued for all types of building except residential, in both February and March, was approximately equal to the total issued in January. Not until April did the valuation of permits for nonresidential building rise. The total exceeded by 19 percent the year-ago figure. Even so, the valuation of permits issued in the first four months still is down 6 percent from a year ago in the Ninth district.

The amount of contracts awarded reveals a similar picture. The amount awarded in January was above a year ago, but in both February and March the amount was below the year-ago total.

The levelling off of construction indicators may be signaling the beginning of a slower pace in plant and equipment expansion. Nevertheless, there is no evidence of a drastic drop in these expenditures. According to the McGraw-Hill survey, business executives in 1957 plan to spend 12 percent more than in 1956.

CAR REGISTRATIONS UP IN MAY

A point of considerable interest in the current business picture in the Ninth Federal Reserve district is the sales trend for new automobiles. After a fairly strong start in January, which resulted from a backlog of orders for new models, the new-car market dipped below year-ago levels.

As a result, first quarter sales in this district were considered to be somewhat disappointing. Despite this fact, aggregate sales for the first three months were 9 percent larger than for the similar period last year.

As we progress to more recent months, the sales pattern becomes more favorable. New-car registrations for April are difficult to evaluate because dealers in Minnesota customarily register their entire inventory of cars in their own name. For this reason, the trend of sales during the early part of May is of considerable interest. In the Minneapolis-St. Paul area, the number of new cars

registered during the first 15 days of the month was up substantially from a year ago.

To some extent, this rise reflects major promotional efforts on the part of dealers and, therefore, may not be typical of the experience throughout the remainder of the district.

AREA STORE SALES UP

The change in the date of Easter, which was on April 21 this year and on April 1 last year, has made it difficult to compare the year-to-year changes in the sales of department and general stores during the important spring buying season.

April figures this year were buoyed up by the later date of Easter, and March figures were depressed. Now that data for both months are available, it is enlightening to make a two-month comparison. The March-April 1957 sales compare with the similar period in 1956 as follows:

Minnesota	+3%
Montana	+3%
North Dakota	+9%
South Dakota	-4%
Wisconsin-Michigan*	+2%
Ninth District	+2%

The most notable variations are evident for the two Dakotas, with North Dakota showing a 9 percent increase and South Dakota a 4 percent decrease. In South Dakota the lack of moisture during last year's growing season depressed farm income. This undoubtedly has much to do with the lower level of sales in this state. The strong showing in North Dakota is closely related to the level of nonfarm activity in Grand Forks and Minot. In these two centers, March-April sales were up 21 percent and 5 percent respectively. Construction operations at new air base sites are a primary source of increased activity in each of these centers.

The year-to-date total for department store sales in the district compares favorably with last year, with sales for the first four months exceeding a year ago by 3 percent.

*Ninth District Portion

mercial credits by establishing a central pool of reserves into which these credits could be exchanged. It is significant to note that, "... each member bank *shall be* accommodated with due regard ..." (see (2) above) thus connoting, according to some observers, the existence of a *right* rather than a privilege. A significant clarification of this concept did not occur until 1933.

The 'real bills doctrine' constituted the basic framework upon which these discount provisions were formulated; it was mainly concerned with the appropriate amount of money and credit needed for the accommodation of business. Thus the doctrine stated that a central bank would facilitate the flow of an optimum amount of credit by discounting certain types of commercial paper eligible for discounting. Speculative credit was thereby excluded. Paper would have to arise from business transactions involving a productive or marketing process. Such a policy by the central bank would supposedly provide business with 'the right amount' of short-term self-liquidating credit for maximum economic production and would enable the banks to restore the necessary degree of liquidity to their portfolios. From this doctrine arose the concept of 'eligible paper' which played such a significant role during the first 20 years of Federal Reserve operations.

Another interesting observation concerning the original act of 1913 involves the absence of any mention of powers over required reserve ratios, open-market operations, and selective credit controls. Although these instruments of credit control are deemed to be of crucial importance today, only the discount rate was originally provided as a means of such control. This situation can be largely explained by the general inclination to rely upon 'automatic' credit controls, primarily gold flows and real bills.

Given this background of the origin of the discount mechanism, the remainder of this article is devoted to a discussion of the significance of discounting in the Ninth district during the period 1913-1939. To facilitate such a review, this period

is divided into four parts on the basis of comparability of prevailing economic conditions.

1914-1921—war, boom and reaction

The Federal Reserve System was still a fledgling when the United States entered World War I. The Minneapolis bank had devoted its first years to acquainting district bankers with the purposes and the potential of the System, including explanations of the usefulness of the discount mechanism. The country banks steadily increased their use of this source of liquid funds. In 1916, the Federal Reserve Act was amended to permit member banks to borrow funds for 15-day periods on the basis of their promissory notes, secured by eligible paper or U. S. government securities. The significance of this amendment soon became obvious.

The Ninth district was dynamically affected by the declaration of war in April 1917. As grain prices were driven upwards, farming was given a sharp stimulus. Acreage expanded rapidly. (In 1917 over 1 million additional acres were planted in North Dakota alone.) Industry was booming, due to contracts for war materials and rising consumer demands. Here was the Federal Reserve's first chance to prove its mettle under battle conditions. Pressures on the banking system arising from Liberty Loan drives, heavy crop movements, etc., resulted in a surge in discounting during 1918. The discounting accommodations provided the district banks with the necessary liquidity and helped to maintain financial stability in the face of a multitude of wartime uncertainties and disruptive influences.

Really severe monetary strains hit the Ninth district in 1920. The previous year had seen a sharp rise in loans by the Minneapolis bank to other Federal Reserve banks as these districts experienced shortages of liquid funds for post-war conversion projects. This flow of funds was reversed in 1920 as a sharp drop in farm prices plunged the Ninth district into a sudden agricul-

tural crisis. Particularly as a result of delayed crop movements, very heavy credit demands confronted district bankers. Crops were generally good in 1920, but a shortage of boxcars and dissatisfaction with the substantially lower level of prices then prevailing resulted in delayed marketings. Credit conditions were strained further by large deposit withdrawals. For example, 35 member banks in larger cities experienced a 29 percent deposit loss between March and December of 1920.

District bankers sought additional reserves by selling securities and reducing loans, but their primary source of liquidity proved to be the central bank's discount window. Bills discounted increased by 81 percent from 1919 to 1920. Discount rates rose sharply from 5 to 7 percent in early 1920 as a reflection of the stringent credit conditions. Seventy percent of the district's member banks were accommodated with Fed credit during the year. Non-member banks were also aided as large amounts of credit (extended originally to large city correspondent banks) were re-loaned to those banks which did not have access to the discount window. The volume of bills discounted equalled 156 percent of average required reserves for district member banks.

An amendment to the Federal Reserve Act in 1920 permitted each Federal Reserve to adopt a progressive discount rate schedule designed to penalize those member banks that sought more than their 'just share' of reserve bank credit. Progressive rates were established by four banks during 1920 and 1921 with highly controversial results. Although it appears that these progressive rates did have the effect of restricting excessive discounting in some instances, certain banks in agricultural sectors were penalized very severely when deposit losses forced them to discount extensively. Since no special provision for deposit outflows had been established, large borrowers were usually penalized regardless of their circumstances. This use of the price mechanism as a credit rationing device reinforced the prevailing

attitude that the Federal Reserve was more or less obliged to discount the paper offered by member banks. The Agricultural Credits Act of 1923 repealed the authorization for progressive discount rates.

A recovery from the recession took place in the latter part of 1921, although serious distress remained in many agricultural areas. Discounting activity continued at a high level until late in the year when a reduction in discount rates signalled an easing in credit conditions in this district.

1922-1927—stability

These five years were normal and stable only in the sense that no severe, sudden shocks were experienced on a general economic level. Commercial and industrial activity recovered from the 1920 crisis and proceeded to new high levels. Agriculture staged a recovery through 1924 in the Ninth district and then was depressed again. Farmers' cash receipts at marketing terminals in 1926 were 25 percent below such receipts in 1924. Since the over-all economy of the district tended to reflect the agricultural situation with a lag of six months to a year, 1926 and early 1927 were depressed in terms of general economic activity.

Although the levels of discount activity during this period were far below those of 1919-1921, all was not well in the financial community. In response to soaring wartime prices, district grain farmers had vastly expanded land under cultivation and had made other capital expenditures to increase their production. The purchases were made with the aid of mortgage loans based on war-inflated land values. In addition, many new banks were authorized without sufficient capital or an established community need. This semi-speculative spree of bank expansion created a weak and vulnerable layer of commercial banks. The legacy came home to roost during the 1920's.

Many country banks which had loaded up with farm mortgages discovered that these assets were not only illiquid but greatly over-valued as the

agricultural depression lingered on. Since most of this paper was not 'eligible' for discounting, the Federal Reserve was unable to provide the liquidity needed. However, the most liberal discount policy could not have compensated for grossly over-valued loans, when such loans are made on a long-term basis. As a result, large numbers of commercial banks were faced with illiquidity and/or insolvency, and over a thousand district banks were closed between 1922 and 1927 of which about one-fourth were member banks. 'Normalcy' and 'new era' were terms with an ironic ring for many district bankers. The easing of credit demands resulted in a lowering of discount rates from $5\frac{1}{2}$ to $3\frac{1}{2}$ percent during the period.

1928-1933—another boom, crash and panic

An upward surge in discount activity occurred in 1928 and 1929. These two years showed increases of 133 percent and 350 percent respectively in bills discounted compared to 1927. An important factor stimulating this rise was the general improvement in business activity in the district. Bank debits and iron ore shipments hit new highs in 1929. In addition, speculative interest in securities pushed call money rates up to extremely high levels and thus induced money flows to eastern financial centers. In response, by May of 1929 the Minneapolis bank had raised the discount rate from $3\frac{1}{2}$ percent to 5 percent.

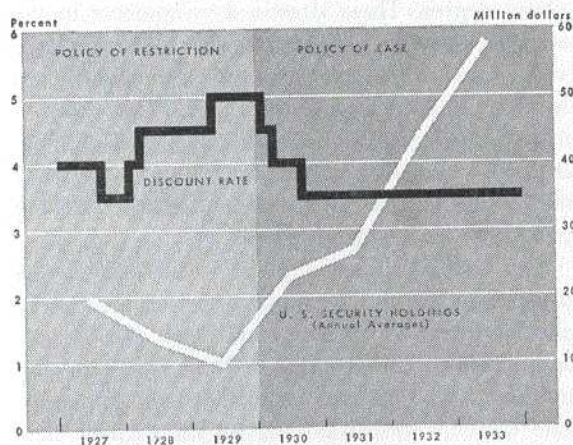
The stock market crash in October ushered in a three-year period of widespread disaster for the Ninth district. Agriculture had not recovered from the early postwar drop in prices, and now it was struck with a series of new body blows. Compared to the preceding year, farm income in 1930, 1931 and 1932 declined by 21 percent, 37 percent and 34 percent respectively. The declines were due to a combination of crop failures and sharp reductions in the prices of farm products. District farm income in 1932 was the lowest since

1912. Land values fell significantly, and bank mortgage portfolios were impaired to an additional degree. These drastic developments in the farm sector had major repercussions on commerce and industry in the district; the nationwide slump in production reinforced this trend. Financial conditions reached a critical state by the end of 1932. In that year alone, all district banks lost \$221 million in deposits with country banks suffering the greatest losses relatively.

The Federal Reserve System in this period was using the discount mechanism in an attempt to alleviate these distressing conditions. The Minneapolis bank had acted quickly in 1930 as the downturn in economic activity became apparent. The discount rate was reduced three times that year, from 5 percent to $3\frac{1}{2}$ percent, in an attempt to ease credit strains and encourage business recovery. However, discounting activity fell to relatively low levels during 1930 and 1931 as the economic situation failed to improve. A sharp upsurge in discounting took place in 1932 and early 1933 as a final wave of distress hit the district's banks. This crisis was ignited by the public's loss of confidence in the banking system and the subsequent large currency withdrawals (which many district banks were ill-prepared to meet); in addition, the previously mentioned crop failure aggravated the already precarious situation. Emergency legislation in 1932 permitted the Federal Reserve to accept collateral for discounts which had not previously been 'eligible'; it constituted another step in the divorcement of discount policy from the 'real bills doctrine.'

Included in this legislation was the authorization given to the central bank permitting the use of government securities as collateral for Federal Reserve notes. The way was now paved for an expansion in open market operations which would aid in promoting easier credit conditions. It was recognized that discount policies and open market operations were complementary and both should be directed towards the same objective. The holdings of government securities by the Minneapolis

Discount rates and open market operations Ninth district, 1927-1933



Reserve bank were reduced by 50 percent between 1927 and 1929 to offset the flow of speculative credit. This policy was reversed as the economic depression set in, and securities were purchased in large amounts during 1930 and 1931. When the previously mentioned legislation liberalized collateral requirements, the Fed's ability to hold Governments was greatly expanded. Purchases on the open market by the Reserve bank increased rapidly. Average holdings by the Minneapolis bank rose from \$27 million in 1931 to \$58 million in 1933. As part of the System's credit policy, this large injection of liquid reserves aided the banks in meeting the liquidity crisis of 1932-33.

The slow recovery—1934-1939

The last six years of the 1930's was a period involving a sharp but limited recovery from the chasm of 1932-1933. In the three-year period following the low point in 1932, district farm income rose by 80 percent, and bank deposits increased by over \$200 million. Nevertheless, economic activity remained relatively depressed and unemployment was a serious problem. After 1935 there was a gradual but faltering improvement in conditions. Federal Reserve policy sought to stimulate further recovery by increasing the availability of

funds and reducing the interest cost of borrowing. The Minneapolis bank reduced the discount rate from 3½ percent to 2 percent during 1934-35 and then to 1½ percent in 1937 in an attempt to ease credit conditions. However, discount activity dropped off rapidly after 1933 and was of negligible importance during the rest of the decade.

The decline in discounting resulted from the existence of two complementary factors which together produced great ease in the money and credit markets. Dismal business prospects greatly restricted the demand for loans over broad sectors of the Ninth district (and nationally as well). Total loans increased by only \$58 million (19 percent) between 1933 and 1939 and thus exerted little pressure on the reserve positions of district member banks. On the supply side, bank reserves increased from an average of \$47 million in 1933 to \$136 million in 1939. A significant part of this increase resulted from gold inflows from abroad due to such factors as devaluation and war scare. Thus the supply of loanable funds was vastly increased while the demand for loans continued to be depressed. As a result of this situation, banks found little occasion to resort to discounting as a means of acquiring additional reserves.

Conclusion—discounting, 1914-1939

In looking back over the first 25 years of discount operations in the Ninth Federal Reserve district certain developments appear especially significant.

(1) Although the concept of discounting based upon 'real bills' had been widely acclaimed when the Federal Reserve System was originally established, it proved to be inadequate during the next 20 years. The policy did not prevent the use of bank credit in feeding speculative booms nor in aiding inflationary pressures. In addition, 'real bills' proved inadequate as a source of liquidity when the commercial banks were in distress.

(2) Banking legislation in 1933 and 1935 greatly strengthened the control of the Federal

Reserve in the sphere of discounting. In particular, these laws emphasized that discounting was a privilege of member banks, not a right. This legislation also greatly increased the ability of the central bank to meet a major liquidity crisis by permitting the use of any assets deemed 'satisfactory' as collateral for loans to member banks. Thus, the Federal Reserve bank was given the power to convert all member bank assets into liquid reserves if necessary and therefore to counteract any over-all liquidity crisis.

(3) Although the banking structure has been greatly strengthened through legislation, the need for 'good bankers' remains of crucial importance. The period 1920-1933 illustrates the consequences of unsound banking practices aggravated by economic distress. Even the liquidity powers mentioned previously would have been unable to offset inflated bank portfolios based on exaggerated valuations of property and earnings potential. Sound bankers are a necessary though perhaps not always a sufficient condition for sound banks.

GOOD YEAR EXPECTED IN IRON ORE

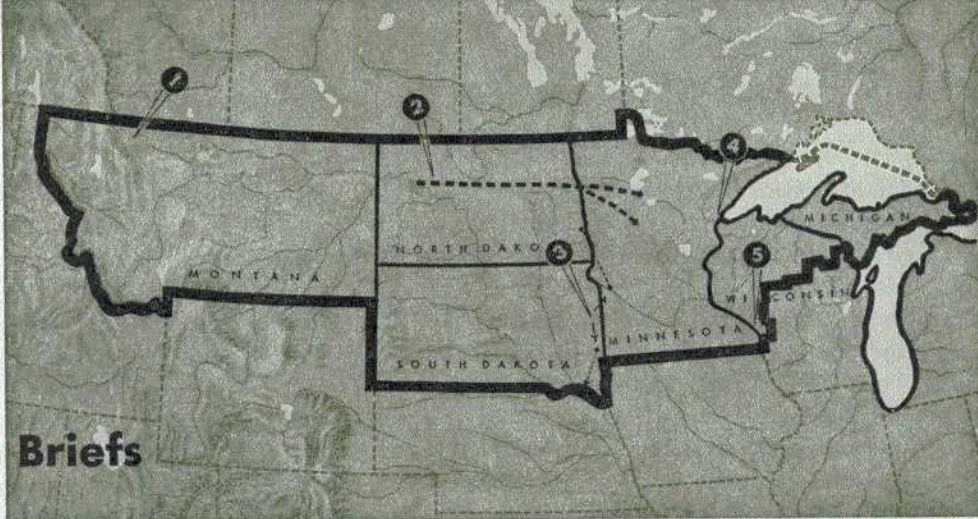
The iron ore movement from the Lake Superior region in April fell below expectations. The ore shipped aggregated 3,986,614 gross tons compared with 5,674,112 gross tons in April 1956. This represents a decrease of nearly one-third, but it was more than was shipped in both April 1955 and April 1954.

Inclement weather delayed ore shipments this year. The navigation season was opened a few days later than in 1956. The first ore carrier arrived at Escanaba, Michigan on April 1, and at Duluth and Two Harbors, Minnesota, on April 9. At the western end of Lake Superior, ore shipments were hampered during April by low temperatures. In the Duluth-Superior area on several days when the temperature fell as low as 6° above zero, the ore had to be steamed to permit dumping from railroad cars into dock pockets and into lake freighters. An ice jam in Whitefish Bay at the eastern end of Lake Superior blocked for a time the movement of all vessels in that area. Even after the ice jam was penetrated by ice-breakers, the ice still hampered navigation in the latter part of April.

The general opinion among the iron ore company officials is that 1957 will be another year of

high activity in the mining region. The movement of ore out of the Lake Superior region is not expected to be a record breaker, but it may exceed the tonnage shipped in the strike-interrupted 1956 season. The Oliver Iron Mining Division of the U. S. Steel Corporation, the largest producer of iron ore in this region, has announced plans to ship ore and concentrates in excess of 35 million tons. This compares with 29 million tons shipped in 1956.

In addition to large stripping operations in preparation for the ore movement season, most ore producers have expanded the capacity of their equipment for the beneficiation of low grades of ore. Ore concentrates from 'new' sources are on the verge of large-production tonnage. The Reserve Mining Company's new taconite concentrating and agglomerating plant at Silver Bay on the north shore of Lake Superior was operating at capacity during the winter months. It is safe to assume that the company will exceed its 1956 output. The Erie Mining Company's taconite plant at Hoyt Lakes will be completed in time for test operations late in the year. On the Marquette range on the Upper Michigan peninsula, the Cleveland-Cliffs Iron Company is constructing extensive plants for the beneficiation of low-grade Jasper ores.



Economic Briefs

1. Texas Co. to close Montana refinery

The Texas Company will close its 8000-barrel-a-day oil refinery at Sunburst, Montana when the construction of a new refinery at Ancortes, Washington is completed. The oil firm is negotiating for the sale of the Sunburst plant. If no sale is made the refinery will be dismantled.

Texaco has offered to transfer the 105 Sunburst workers and their families to the new operation. Since Sunburst has a population of less than 900 the transfers could affect possibly half the town's population.

2. G. N. considers Williston to Minn. pipeline

Great Northern Railway is looking into the feasibility of building a crude oil pipeline from the Williston basin to Duluth-Superior and Minneapolis-St. Paul. At present there is no pipeline which brings crude oil into Minnesota from the Montana or Dakota portions of the Basin. Routing would follow Great Northern's right of way.

The cost of the proposed pipeline is estimated at \$20-25 million. A decision by Great Northern is expected by August.

3. District power line contracts awarded

The Department of the Interior has awarded a \$4.5 million contract to build two Reclamation Bureau power lines to North Dakota, South Da-

kota and western Minnesota. One power line will run 67 miles from Utica Junction, South Dakota (near the Gavins Point dam) to Sioux Falls. The other will run 165 miles from Fargo, North Dakota to Granite Falls, Minnesota.

4. Duluth port bills signed

Three bills authorizing construction of a \$10 million St. Lawrence seaway port at Duluth were signed by Minnesota's Governor Freeman. Under the measures the state contributes \$5 million, with a like amount raised in Duluth and St. Louis county.

The approval of the port bills brings the expenditure of public funds in the next few years in the Duluth area to \$50 million for projects such as the port construction, bridges, highways and educational buildings.

5. Trane Co. engineering center completed

A new, 65,000-square-foot technical engineering center costing over \$1 million has just been completed by Trane Company at La Crosse, Wisconsin. The single-story building has provisions for a second-floor addition as the need arises.

Construction was started on the engineering center last spring. The project is part of a \$12-million building and expansion program the firm has planned for the 1956-57 period.