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ON INSIDE PAGES

✓ Technique of Oil Production Loans

✓ Less Buoyancy In Demand Becomes Evident

ACCORDING TO U. S. CENSUS DATA

Mortgaged Montana Farms at Record Low

Debt per mortgaged farm is rising, but it is low in relation to cash farm income and land values

IN SPITE of the price-cost squeeze that Montana farmers understand so well, there is at least one small part of their costs that stands out like a green oasis in the desert—namely, farm mortgage costs.

Not only are interest rates less compared with pre-war or even 1945, but also the outstanding volume of this debt is much below pre-war. In fact, Montana farm mortgage debt today is less than half what it was in the early 1930's, and it is less than a third the volume outstanding at the peak during the 1920's.

One must not overlook, however, the fact that farm mortgage debt for Montana after reaching a low point at the end of World War II has risen steadily in the past seven years. A further fact worthy of consideration is that the general level of farm costs in this period has risen 62 per cent.

Analysis Shows Four Aspects to Situation

Making an analysis of certain aspects of the Montana farm mortgage debt situation is of particular interest for several reasons:

1) The dollar volume of debt is small in relation to pre-war levels;

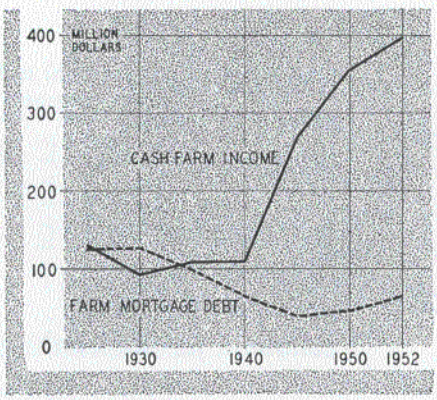
2) Debt costs (interest rates) are substantially lower on the average compared with the decades of the 1920's and 1930's;

3) Fewer farms are mortgaged;

4) The ratio of debt to value of real estate is near a record low of 30 years or more.

Furthermore, the ratio of cash farm income to farm mortgage debt in recent years has been at an unusually favorable level in spite of recent declines in prices of farm commodities. In 1952, for example, total cash farm income was nearly four times that of 1940. On the other hand, farm mortgage debt in 1952 actually was less compared with 1940. (See chart on this page.)

FARM MORTGAGE DEBT AND CASH FARM INCOME IN MONTANA, 1925-1952



Source: USDA Agricultural Finance Review, USDA Farm Income Situation.

It is recognized, however, that farm real-estate mortgage debt in Montana is only a part of the farmer's debt picture. Many farmers, particularly the younger ones, carry not only long-term real-estate debt, but also substantial amounts of short-term production debts secured by chattel mortgages on crops and livestock.

Trends in Montana farmers' short-term debt definitely are not as favorable as the farm real-estate debt picture.

It has been estimated that expenditures for production have more than trebled over pre-war levels. Short-term production debt has shared in this development. In fact, this type of debt has approximately trebled, even since 1945. It now exceeds the total volume of real-estate debt, which is a new phenomenon in Montana agricultural credit.

Some of these short-term debts are now being refunded into long-term debts—which is what usually happens when the farmer's economic position becomes less favorable.

Continued on Page 67

WILLISTON BASIN PROGRESS PROMPTS INTEREST

Technique of OIL PRODUCTION LOANS

FINANCIAL relations between banks and the "oil business"—a new thing to most Ninth district bankers—are already coming in for attention here in view of the great potential of the Williston oil basin.

There is every reason to believe that the oil development, now in its third successful year, will become an important economic factor in the Ninth district and a leading source of revenue for many Montana and Dakota communities.

Obviously there are many ways in which an oil development affects banks and banking. However, only a few aspects of "oil financing"—the loaning of money for oil industry operations—will be considered in this study.

The major class of oil financing carried on by commercial banks is the so-called "oil production loan," in which oil properties actually producing are pledged as security. In effect the loan is backed by oil in the ground.

Proceeds may be used for any number of purposes, but usually they go into the development of other oil properties. The great bulk of oil loans as such are made to "independent" oil producers*, since major oil companies tend to use the public sale of stocks or debt paper to cover their capital needs.

Appraisal First Step

The first (and probably most important) step in making an oil production loan is **appraisal** of the property to determine its value as collateral. A simplified illustration of the appraisal procedure is given in the diagram below.

To begin with, petroleum engineers make an estimate (for bank loan purposes) of the amount of oil that can be recovered from the property through existing wells. Only properties actually producing are eligible as collateral, and usually two or more completed wells are required as a safeguard in the event of mechanical failure of one of them. (So much the better if properties in different fields are represented in the collateral.)

Oil production loans are not made on prospective or even "proven" acreage, no matter how promising this may be, though some of the "proven" acreage not drained by a well may be tossed in as extra collateral.

* "Independents" produce about 38 per cent of the country's annual crude oil output and drill about three-fourths of the new wells completed each year.

The engineering work covers quite a number of technical items: a detailed analysis of past output, drilling completion records, well logs and other technical data, plus actual field tests on the oil wells themselves. Careful appraisal work can come up with fairly accurate projections in spite of the inherent difficulties.

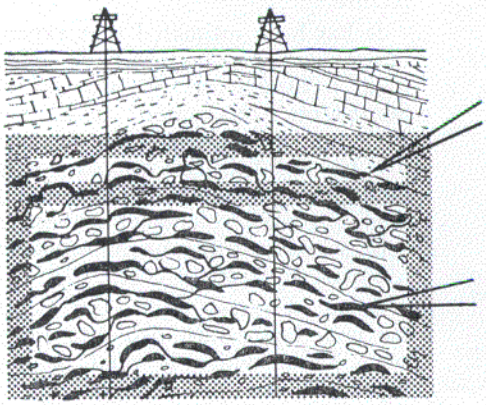
Estimated output is then scheduled over expected life of the wells (by months or by years, depending on the bank's practice). This supplies the banker with an estimate, for example, of the amount of oil that can be produced in August this year as well as the amount likely to be produced in August five years from now.

In working out such a schedule, proration regulations and other laws affecting the rate of oil removal must be considered, in addition to the inevitable decline in productivity that oil properties experience.

Today's Worth Calculated

Once production is scheduled, it is translated into monthly income to the operator. Current market conditions are used in placing a value on the unproduced oil. That is, a certain crude oil may be given today's price of, say, $2.50 a barrel to arrive at an estimate of gross future income. The

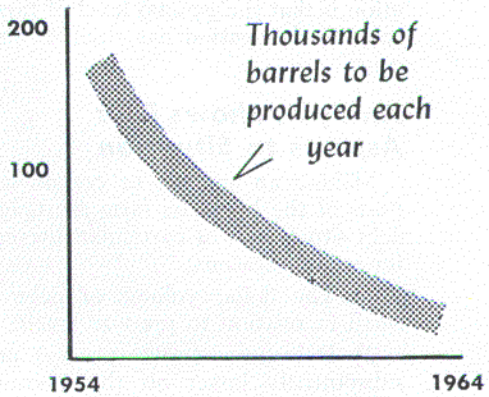
1. Engineers determine how much oil can be recovered...



100,000 barrels belong to royalty holders

700,000 barrels belong to the producer (this oil is collateral for the loan)

2. ...and how fast it will be recovered



price is usually net of "per barrel" taxes which are deducted by the pipeline or oil purchasing company before making payment to the producer.

From these figures, anticipated costs of getting the oil out of the ground are deducted to obtain net income. The producer will be expected to repay his debt by monthly instalments out of this net income. Operating costs are normally a small percentage of output value on a good property.

Up to this point, the dollar value placed on the property is stated in terms of **future** income. In order to arrive at its present worth, the future income expected from the property is discounted at the going rate of interest.

A property yielding $1.5 million over the life of operations may be "worth" from the standpoint of income only around $1.2 million today, since the smaller sum now placed in an investment of comparable risk could produce an identical $1.5 million income over the same period. (Actual selling price on today's market will be somewhat less than the discounted income figure.)

The property appraisal is concluded with an estimate of the present worth of the collateral, and is then used as a basis for judging the loan.

Several Rules Applied In Judging Oil Loans

The borrower's credit standing and other usual criteria are considered in determining the soundness of the proposed loan, but in addition there are several rules of thumb used by most bankers.

Maximum Loan Value—One rule quite generally applied is that the amount of the loan should not exceed 50 per cent of the present worth of the property as appraised. This is to provide a margin of safety against contingencies (such as price declines and errors of estimate) during the period of repayment.

Other limitations on the maximum size of a particular loan may be applied. For example, the loan should not exceed, say, 25 per cent to 33 per cent of the operator's net future income. Again, the loan per barrel of oil underground should not exceed about one-fourth the price of a barrel of that oil on the current market.

Repayment Period—The loan is usually set so that it will be paid out of production income over a period of 2 to 3 years. Banks do not normally make oil loans in excess of 4 years, and experience has shown that most loans, even when set for 36 months, are re-negotiated before a year has passed.

A typical independent is perpetually drilling new wells, finding more oil, and requiring additional capital to carry on expansion. Changes in production allowables affect his income. Hence his financial needs change rapidly, and frequent resetting is the rule.

Follow-up engineering studies are continually made on many properties in anticipation of subsequent loans.

Oil reserves underground at the end of the loan repayment period should be at least 50 per cent of initial reserves—otherwise the banker begins to assume the producer's risk.

Size of Instalments—Another consideration is that the size of the monthly repayment is such as to leave the operator enough income to cover his taxes and "out-of-pocket" expenses. The operator is allowed to retain perhaps 20 to 25 per cent or more of his net income for such purposes.

In the illustration below, a repayment figure of $200,000 a year during the first few years might be satisfactory, but the third or fourth year's net income would not permit such a rate of repayment.

Setting a repayment schedule must take into consideration the declining ability to repay experienced by every oil property. Therefore the

3. 700,000 barrels belonging to producer are then translated into net income

Year	Estimated Production in Bbls.	Gross income at $2.50 a Bbl.	Net income after operating costs
1954	124,000	$ 310,000	$ 285,000
1955	110,000	275,000	250,000
1956	96,000	240,000	215,000
1957	84,000	210,000	185,000
....	.....	.....	.....
10-year total	700,000	$1,750,000	$1,500,000

Discounted at going interest rate (5%)

4. Tomorrow's income is reduced to worth today

Present worth
$ 271,320
226,750
185,760
152,070
.....
$1,242,620

Estimated worth of collateral; loan should not exceed 50% of this

monthly repayment is usually not a fixed instalment, but rather a fixed minimum plus a percentage of the operator's net income.

In the illustration, a $500,000 36-month loan (including interest) with successive yearly payments totalling $190,000, $170,000 and $140,000 respectively would meet these tests.

Legal Work Involved

Considerable legal work is required along with the engineering appraisal. Title questions are often involved. It must be determined that the producer actually has clear title to the oil he proposes to use as security, that his oil lease is valid, and that royalty claims against production are not conflicting.

A number of standard forms are usually signed and recorded after the engineer, the lawyer, and the banker conclude their examinations and satisfactory terms are worked out. These include:

1) The **note** specifying the amount of debt and terms of repayment.

2) The **mortgage deed,** which in effect gives the lender the right to seize the property in event of default. A "working interest" in oil properties is created for the producer through a lease entitling him to seven-eighths of the oil he produces.

This interest is generally treated at law as an interest in real estate and, as such, the usual real estate law applies. The deed contains much of the language of an ordinary real estate mortgage plus some special provisions relating specifically to oil and gas. A chattel mortgage can be taken on surface equipment.

3) **Assignment of runs,** which assigns to the bank the producer's share in oil production. This can be incorporated into the mortgage deed.

4) **Division order,** an agreement directing the pipeline or oil-purchasing company to make future payments direct to the bank. The bank receiving the payment applies a portion of it against the loan and credits the remainder of it to the borrower's account.

In some cases this instrument may be taken but not used—the producer makes a regular monthly payment and some paper work is eliminated.

The foregoing description has covered some of the major elements of an oil production loan. Experience has evolved fairly standardized procedures, although variations are evident from bank to bank. Oil-lending banks have maintained considerable flexibility in applying these rules to the needs of a particular customer.

There are other ways in which commercial banks directly finance oil industry operations (such as loans on tax transactions, inventories, equipment, or completed contracts) but in dollar volume oil production loans to independent producers are by far the major items.

Large, Costly, Involved

In practice the oil production loan is a highly involved and technical undertaking, requiring specialized engineering, legal, and banking advice. Costs of making such a loan are high, and the sums dealt with are correspondingly large.

A typical loan might run about $300,000, with many ranging as high as $1 million. (Some banks do not handle loans under $100,000 unless as a special favor to a customer.)

Because of the cost and size of such loans, the great bulk of them are made by large banks with specialized oil loan departments. Much oil lending is done in Southwest oil centers such as Dallas, Houston and Tulsa. Chicago and New York banks also do a very substantial business.

In some of the specializing banks, oil loans may comprise 40 per cent of the total loan portfolio and account for as much as half of the bank's earnings.

Some banks that do not have a petroleum engineering staff of their own employ an outside consultant for appraisal work, while many non-oil banks participate by holding portions of large loans negotiated through the oil banks.

Most oil loans are held by commercial banks, although insurance companies have become increasingly active in the field, and, in addition to making direct loans, have participated in loans originated by oil banks (particularly on longer maturities).

Volume Here Awaits Independents, Pipelines

It is generally believed that loans on oil production in the Williston basin will be relatively slow in developing, for the following reasons:

First, most of the development to date has been the work of major oil companies, and a large portion of the total acreage is under lease to them. These companies ordinarily secure operating funds through the money market. However, independents' activity is expected to increase substantially as the development continues.

Furthermore, marketing difficulties for the new fields will retard development and add uncertainty to prices and production. For example, high transportation costs in the Williston basin have required most of its production to be sold in the neighborhood of $1.70 to $2.00 a barrel.

Since it will take a number of years before pipeline facilities will be available to handle any substantial production from the Williston basin, its development as a loan source will be gradual at best.

Of course, experience with production over a long period is highly desirable in appraisal work.

As the development reaches a mature status, however, oil loans on production in this section of the country will become more important. To many of the independents who will be operating here, the Williston basin will be only one of several areas in which they do business. Some will likely continue to headquarter in the Southwest, retaining their established banking connections. Some may eventually center their operations in this district.

Experience of the Southwest has been that very few small banks, even those in oil towns, hold any part of oil production loans. Loan inquiries received by these banks are usually referred to other larger banks. However, medium- or large-size banks, equipped either to handle or participate in oil loans, have profitably added them to their portfolios.

This type of lending has proven as sound as any other kind of business loan. Although oil production loans have never been tested by a period of declining prices*, loss experience on well-managed loans made in accordance with established procedures has been negligible. END

* It was only with the advent of proration and improved engineering techniques during the Thirties that lenders were able to develop the oil production loan as it is known today.

Less Buoyant Demand Becomes Evident

ALTHOUGH most statistical series indicate the maintenance of business activity at full-production levels, some show signs of a slight sag. They do not clearly indicate, however, that a sizeable downturn is in sight.

It has been reported that the gross value of all goods and services produced in the nation in the second quarter of this year at $372 billion was over $10 billion larger than in the preceding quarter and $27 billion larger than a year ago, at annual rates.

After allowance for the usual seasonal slackening, industrial activity has continued exceptionally high into the third quarter. Unemployment in July was the lowest for any July since the war. Gradually rising rates of pay with well-nigh full employment has resulted in a continued upward movement of total personal income, despite a decline in farm income.

Analysts of the business scene recently have pointed to the jump in business inventories, a drop in output of durable household goods, and falling farm prices—each indicating a somewhat less buoyant demand for goods. Also a rise in saving is related to this development.

Particularly interesting to observers of business trends in the Ninth district is the report that in only four states had income payments declined in 1952 over 1951 and that three of these were Ninth district states. Doubtless this development was attributable to the decline in prices for livestock and to poor harvests in some areas.

In two states of this district the agricultural component of income payments declined by 37 per cent and 38 per cent in 1952 compared with the previous year.

Also reflecting trends adversely affecting the farmers' position was the report that the farmers' share of the consumer's food dollar has continued to fall. Whereas in 1946 that share averaged 52 cents, it recently has dropped to 44 cents, a postwar low.

Also, reports of Ninth district bank debits, while higher than a year ago, have shown this year a lesser rise than in any other Federal Reserve district.

BUSINESS

▶ *Although starts may be down in second half, residential building has held up well*

Residential building continues to be an important prop to high employment and the large volume of business transacted, even though the seasonal rise in new housing starts was less in the first half of this year than it was a year ago.

Many observers of building activity have estimated that the nation's new housing starts for 1953 will exceed one million. Such a total augurs another good building year.

Figures on housing starts are not available by Federal Reserve districts, but data on contracts awarded is a good indicator of the trend in residential building. In the Ninth district, dollar amount of contracts awarded for residential building in the first four months of this year was materially above the amount awarded for the same months of last year.

In May, a contra-seasonal trend reduced the total to last year's figure, and in June the amount awarded fell below last year's total. However, in July the amount awarded again was larger than a year ago with an increase of approximately one-fourth over the July 1952 total.

MORE HOUSES PLANNED

Even though there has been a slowing down in residential building, most builders expect to keep busy the latter part of this year. Interviews with a number of builders in Minneapolis and its suburbs indicated that most of them plan to start more houses in the coming months. Many of them expect to complete the shell of houses in the late fall for finishing during the winter.

Residential builders interviewed were about equally divided between those who plan to build more and those who plan to build fewer houses this year than they built in 1952. Large and small operators were found in both categories.

Many small builders have been operating cautiously. More of them have been doing custom work for the owner or have had buyers sign purchase contracts before they start building.

In areas of new industrial developments, such as the Williston basin and regions of low-grade iron ore and copper ore development, the demand for new houses has remained strong.

Outside of these areas, especially in many smaller cities, residential building has declined significantly, indicating that the supply of houses gradually has caught up with the demand. For the past several years, the rate of house building in these communities has outstripped the rate at which households have been formed.

▶ *Lending institutions are holding more mortgage loans*

Lending institutions have had a steady demand for mortgage loans during this building season. The increase in rents following decontrol has caused some tenants to seek mortgage loans for the purchase of houses. This has not increased the volume of business perceptibly, however.

The number of applications made for FHA loans in this district has been up materially from a year ago and more of such loans have been made. However, some lending institutions hold a large portfolio of both FHA and GI loans and, therefore, have become more selective in accepting new loans.

For instance, a few institutions in the Twin Cities require a down payment of 20 or 25 per cent and limit the maturity of the loans to 20 years. Other institutions restrict such loans to their established customers.

The mortgage portfolios of all lending institutions have grown in the past year. For example, a representative sample of commercial banks in this district at the middle of August were holding mortgage loans totaling 11 per cent more than were held at the same time last year.

Commercial and industrial building has expanded

The monthly amount of contracts awarded for commercial and industrial building in this district indicates that more of it is being undertaken as the year progresses. In the first half of the year, the amount of contracts awarded in each month with the exception of April fell below the comparable 1952 monthly total, but in July the amount of awards was over three times the year-ago total.

Loan officers of lending institutions also reported a strong demand for mortgage loans from commercial and industrial firms.

Sales volume at department stores in July equaled a year ago

Department store sales held up well in July. For the district, sales were about equal to last year's receipts.

In northeastern Minnesota, sales were up by 25 per cent. The increase reflects largely the slump in 1952 sales which was caused by the steel strike.

A significant part of consumer income in many communities of this district, of course, is derived directly or indirectly from farm income. Thus far the decline in farm income has not affected department store sales materially. In most agricultural areas, sales have remained close to last year's receipts. END

Ninth District Business Indexes

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

	July '53	June '53	July '52	July '51
Bank Debits—93 Cities*	128	127	124	119
Bank Debits—Farming Centers*	124	122	118	116
Ninth District Dept. Store Sales#	105p	106	104	102
City Department Store Sales#	110p	110	108	103
County Department Store Sales#	97p	99	98	100
Ninth District Dept. Store Stocks#	123p	114	108	124
City Department Store Stocks#	125p	116	107	128
Country Department Store Stocks#	119p	112	109	118
Lumber Sales at retail yards (Bd. Ft.)	80p	79	91	91
Miscellaneous Carloadings	104	104	99	107
Total Carloadings (excl. Misc.)	99	101	47x	99
Farm Prices (Minn. unadj.)	95	96	103	105

p — preliminary x Steel strike

* The definition of bank debits was revised March 1, 1953, to exclude debits to major U. S. government accounts and to time deposit accounts. Comparable data for previous years are estimated. Index numbers for the years 1943 to date are available from the Research department, Federal Reserve Bank of Minneapolis, on request.

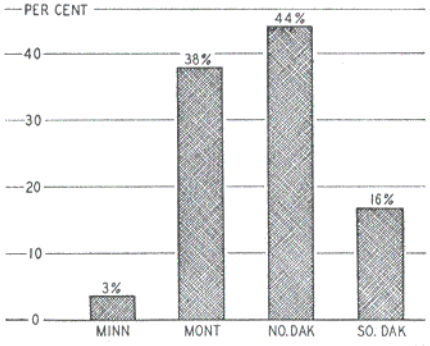
A review of the seasonal factors has resulted in some revisions in the adjusted index numbers for recent years. A tabulation of these data from 1946 to date is available from the Research department, Federal Reserve Bank of Minneapolis, on request.

FARMING

Wheat quotas bring problems

A number of problems are introduced with voting of quotas, which will cut approximately 4½ million acres from the Ninth district's 1953 wheat acreage of 22½ million acres.

PER CENT OF TOTAL CASH FARM INCOME DERIVED FROM WHEAT IN 1951



Source: Farm Income Situation—June-July 1952.

What will be done with the idle wheat acres? In the eastern sections of the district no serious problem is presented. More corn, soybeans, or other crops will be grown in place of the wheat which may yield equivalent incomes.

In the western Dakotas and Montana, the problem is different. Crops such as barley and flax may be substituted, but much of this land may not return as much income per acre as would be derived from wheat.

Furthermore, a shift of excess wheat acreage into other crops may produce surpluses in these other crops.

Member bank farm loans are below last year

The postwar rise in the district's short-term farm production credit apparently was arrested and turned back during the past fiscal year.

At least, the $153 million of outstanding member bank loans to farmers (other than real estate) in the district on June 30 was almost 6 per cent below that of a year earlier. This is exclusive of CCC guaranteed loans, which are much higher compared with last year.

CCC guaranteed loans in member banks on June 30 were over $11 million compared with only $1.3 million outstanding on June 30, 1952.

Much more grain was put under price support in the fiscal year just ended because market prices were substantially below support levels; also because 1952 grain quality was excellent compared with the previous year, when much grain could not qualify for support loans.

The outstanding volume of farm real estate loans in member banks of the Ninth district, at $23 million on June 30, was almost exactly the same as a year earlier.

Rust shatters durum wheat prospects

Conditions in late July and early August this year have been ideal for the development of rust. High humidity, heavy dews, and southerly

winds have brought about the heaviest rust epidemic since 1935.

Damage has been particularly severe in durum wheat growing areas of the district, but all of the late planted small grains have been hard hit.

Almost all of the United States durum wheat is produced in the Ninth district, with by far the largest amount in central and north-central North Dakota. The crop in this area is currently expected to be about 47 per cent of normal.

Because durum wheat will be in such extremely short supply this year, its price is high in relation to other wheats. A year ago August 20 the margin between ordinary protein spring wheat and durum wheat was $.46 per bushel. On August 20, 1953, the price spread was $1.37.

▶ *Half of U. S. flax may come from North Dakota*

North Dakota farmers planted a record acreage to flax this year—nearly 2½ million acres. Total U. S. flax acreage is only 4.6 million acres.

From this total acreage, 42 million bushels of flax may be produced, according to the August 1 estimate of the U. S. Department of Agriculture.

North Dakota alone is expected to harvest 21 million bushels, or 50 per cent of the total.

The four Ninth district states of Minnesota, Montana, North Dakota, and South Dakota may produce over 40 million bushels of flax this year, or 95 per cent of total production.

END

BANKING

▶ *Taxes, expenses, and profits all up at district member banks in first half*

Despite income taxes in the first half of this year amounting to 10 per cent more than for the same period last year, district member banks indicated — in their first-half earnings and dividends reports — that profits after taxes gained 13 per cent over the 1952 period.

Almost all of this year's additional profits were paid out to stockholders, with the result that retained profits in the first half of this year were only slightly larger than in the same period a year ago.

All types of expense were larger this year than last, with the largest absolute gains reported for wages and salaries, interest on time deposits, and interest on borrowings.

Interest on borrowings increased from $60,000 last year to $441,000 this year. While part of this increase resulted from higher interest rates on loans to banks, most of it represents more borrowing by banks.

More than 90 per cent of the interest on borrowings paid by district member banks in the first half of this year represents interest on loans granted by the Federal Reserve Bank of Minneapolis.

The average rate of interest paid by district member banks to time depositors also increased somewhat from last year. With average time deposits outstanding approximately 8 per cent larger this year than last, interest paid on these accounts jumped 17 per cent.

ASSETS EARNING HIGHER RATE

But district bankers were on the receiving end of higher interest rates, too. A higher rate of return on both loans and investments was primarily responsible for the favorable earnings record accomplished during the first half despite the larger expenses already mentioned. Less important was a minor shift from relatively low-yielding investments to higher yielding loans.

The average rate of return on total loans at district member banks

Assets and Liabilities of Member Banks in the Ninth Federal Reserve District

(Figures as of the last Wednesday of the month, in millions of dollars)

ITEM	All Member Banks		City Banks (weekly reporting)		Country Banks (non-weekly reporting)	
	July 29, 1953	Change Since June 24, 1953	July 29, 1953	Change Since June 24, 1953	July 29, 1953	Change Since June 24,1953
Loans and discounts	1,372	+ 25	669	+ 17	703	+ 8
U. S. Gov't obligations	1,480	+ 86	557	+ 58	923	+ 28
Other securities	310	— 5	149	— 7	161	+ 2
Cash and due from banks	886	— 7	465	— 11	421	+ 4
Other assets	38	— 1	17	+ 1	21	— 2
Total assets	4,086	+ 98	1,857	+ 58	2,229	+ 40
Due to Banks	333	— 8	292	— 9	41	+ 1
Other demand deposits	2,407	+ 94	1,141	+ 67	1,266	+ 27
Total demand deposits	2,740	+ 86	1,433	+ 58	1,307	+ 28
Time deposits	1,027	+ 9	263	+ 1	764	+ 8
Total deposits	3,767	+ 95	1,696	+ 59	2,071	+ 36
Borrowings	23	+ 1	18	— 1	5	+ 2
Other liabilities	38	— 2	25	....	13	— 2
Capital funds	258	+ 4	118	....	140	+ 4
Total Liabilities and Capital Accounts	4,086	+ 98	1,857	+ 58	2,229	+ 40

While the asset and liability items of city (reporting) banks are taken from balance sheets which these banks submit on Wednesday every week, the amounts of these items for country (non-reporting) banks are taken from a variety of sources.

Country banks submit reports showing the amount and composition of earning assets on the last Wednesday of each month. Reserves, cash, bank balances, and deposit amounts are taken from reports submitted for computing reserve requirements.

Other assets and liabilities (except borrowing) together with capital accounts are extrapolated from call reports. Borrowings by country banks are taken from the books of this bank and as such, do not include possible other borrowings.

climbed from 4.86 per cent to 5 per cent between the first halves of this year and last. The average yield on holdings of government securities—which make up the bulk of commercial bank investments — rose from 1.74 per cent to 2 per cent during the same period.

For the nation, the average return on loans tends to decline from country banks to reserve city banks to central reserve city banks. The average return on loans at all member banks in this district is higher than the average for all member banks in the nation but lower than the average for all country member banks in the nation.

▶ *Investment purchases boosted government balances at member banks*

At the end of July, deposits and earning assets of member banks in all district states except North Dakota were larger than at the end of June.

Largest gains occurred at the city banks, which reported deposits up by $59 million during the period. This compares with an increase of $19 million for the same period last year.

Country bank deposits increased by $36 million, which is about the same amount of increase reported by these banks for July last year.

Deposits and holdings of U. S. government securities at both city and country banks increased more in July than in any other month this year. This is partly because much of the deposit increase represents credits to Treasury tax and loan balances which were made in payment for the Treasury's 2½ per cent tax anticipation certificates of indebtedness dated July 15. Allotments of said obligations in the Ninth district amounted to $131.8 million.

CONSUMER LOANS UP

City banks added $17 million to their loan accounts during July in contrast to additions of $6 million in July last year. A large part ($12 million) of the July increase took place in the category of loans made up mostly of loans to consumers.

Time deposits at the city banks were up by $1 million compared to a gain of $3 million July last year. Other funds made available to these banks included the proceeds of additional borrowings, which amounted to $7 million.

At the country banks during July, loans and time deposits each increased by $8 million, which is about the same amount of increase reported in July a year ago. Not since January have time deposits gained so much at the country banks.

Because of a reduction in reserve requirements on July 1 for country banks and on July 9 for reserve city banks, the required reserve balances for district member banks were lower at the end of July than at the beginning, despite larger deposit liabilities.

END

MORTGAGED MONTANA FARMS AT RECORD LOW

Continued from Front Page

In most instances, however, the farmer is benefited by consolidation of debts in one place where they may be serviced more efficiently. The trend in this direction, therefore, is not a new nor an alarming one—at least at this time.

Farms Fewer, but Larger

Perhaps one reason for the unusually favorable trend in the farm-mortgage debt situation during the past decade in Montana is that many farm units have been consolidated into larger, more efficient units. Furthermore, Montana agriculture, which is largely wheat and livestock, has experienced many prosperous years since the drouth of the 1930's.

Many farmers have found it possible to reduce or pay off the old mortgage debt and many have been loath to "plaster" the farm again with a new mortgage even though short-term production debts have been mounting at an ever-increasing rate.

In this connection it is significant that in 1930 over half of all Montana farms were covered by a mortgage. By 1940, about 43 per cent were mortgaged, and in 1950 the percentage was only 31. (See chart on "Proportion of Montana Farms with Real Estate Mortgages.")

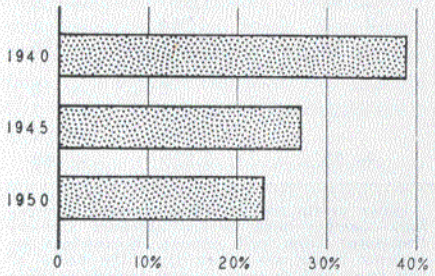
A much smaller proportion of Montana farms are now mortgaged even though there were 7,000 fewer farm units in Montana in 1950 compared with 1940.

Since Montana farms are now much larger (average farm size has increased more than 50 per cent in acreage since 1940), compared with other recent census periods, it is logical to assume that the average real-estate debt per farm would also be larger. It is, but not as much as might be expected.

Year	Avg. Debt per Farm
1930	$5,136
1935	4,757
1940	3,644
1945	3,953
1950	5,766
1952	6,000 Est.

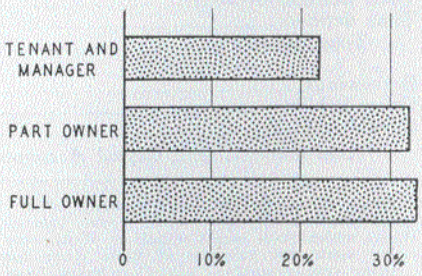
The 1952 average debt per mortgaged farm of approximately $6,000 might even be considered surprisingly low when measured in current terms of size of farms, capital invest-

RATIO OF MORTGAGE DEBT TO VALUE OF MORTGAGED MONTANA FARMS, 1940-45-50



Source: U. S. Census.

PROPORTION OF MONTANA FARMS WITH MORTGAGES, BY TENURE OF OPERATOR, 1950



Source: U. S. Census.

ment, annual farm income, and farm land values.

Owner Equity Is High

As might be expected, the asset value of Montana farms increased tremendously during World War II and its postwar period, because of the general inflationary trends. This, together with an actual decline in real-estate debt, has acted to reduce sharply the ratio of real-estate debt to farm value.

Census data for Montana on this topic are available only since 1940, but during the decade of the 1940's the ratio of mortgage debt to value of mortgaged farms dropped from 39 per cent in 1940 to only 23 per cent in 1950.

With the decline in debt and the increase in farm size and value, it is not surprising that owners' equity in mortgaged farms has increased substantially. Actually, the average equity in 1950, at $14,456, was approximately 3½ times the 1940 figure of $4,361.

Since 1950, Montana farm mortgage debt has increased several million dollars, while farm real-estate values have declined slightly. This tends, of course, to increase the ratio of debt to value. (See chart on "Ratio of Mortgage Debt to Value of Mortgaged Montana Farms.")

Full-Owner-Operated Farms Most Mortgaged

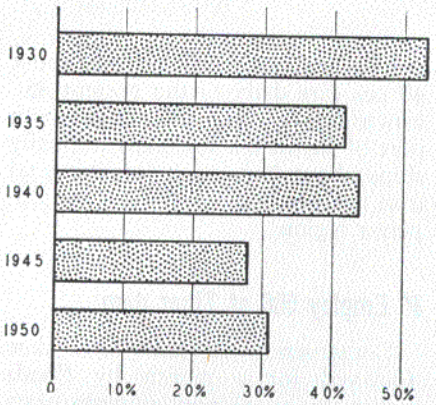
Most Montana farms are owner-operated. In fact, 85 per cent of Montana's 35,000 farm units were owner-operated in full or in part in 1950. This, perhaps, is the highest percentage of farm ownership in Montana census history. It reflects a basically healthy economic situation not only for agriculture but also for Montana communities.

Some farmers, particularly the younger ones just getting started, often have to rent for a few years, but sooner or later most of them acquire either part- or full-ownership in their farms. (Part ownership means that the farmer owns part of the land he operates and that he is the lessee of additional acres.)

The acquisition of ownership, however, usually means debt involvement. This observation is supported by census data showing that a much larger proportion of full-owner-operated farms carry mortgages than do the farms that are tenant operated.

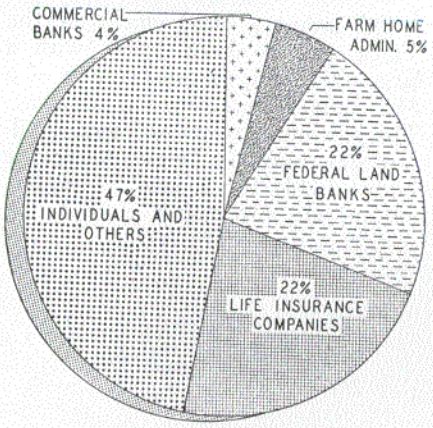
In fact, about one-third of all owner- or part-owner-operated Montana farms carried a real-estate mortgage in 1950 compared with only about 22 per cent of tenant-operated farms with mortgages. (See chart on "Proportion of Montana Farms with Mortgage, by Tenure of Operator in 1950.")

PROPORTION OF MONTANA FARMS WITH REAL ESTATE MORTGAGES, 1930-1950



Source: U. S. Census.

PROPORTION OF MONTANA FARM MORTGAGES HELD BY DIFFERENT LENDING AGENCIES IN 1952



Source: USDA Agricultural Finance Review.

Commercial Banks Own Small Share of Mortgages

The latest information available on the Montana farm mortgage debt situation indicates that commercial banks in 1952 held only 4 per cent of the total.

Individuals, such as retired farmers and businessmen, held the bulk of these mortgages with 47 per cent. The Federal Land bank and life insurance companies each held 22 per cent. (See chart on "Proportion of Montana Farm Mortgages Held by Different Lending Agencies.") END

ECONOMIC *Briefs*

SIGNIFICANT HAPPENINGS IN THE NINTH DISTRICT

✓ Big corn pack under way

Sweet corn packing got under way during the past weeks at Minnesota's 27 operating canneries, which include some of the world's largest. About 12,000 plant workers and 3,000 field workers are required during the brief season that will last until frost.

Minnesota and Wisconsin are the leading states in this industry. Last year, Minnesota canners put up 6.5 million cases of corn, while Wisconsin's output was 7.6 million.

✓ Authorize work on power line

A $400,000 appropriation by Congress authorized initial work on power transmission lines from the Fort Randall-Garrison dam power system into western Minnesota. When completed the 210-mile line from Big Bend, South Dakota, to Granite Falls, Minnesota, will cost an estimated $15 million.

✓ New mine expands ore output

Opening this month of Pickands-Mather's new open-pit Fortune Lake mine near Crystal Falls will add about 40 ore cars daily to the present 450 cars a day reaching the ore shipping port of Escanaba. Escanaba normally ships about 7 per cent of the total iron ore production of the Lake Superior region.

✓ Employ 500 at Tiber dam

Construction on the Tiber dam (delayed for a month by floods earlier this year) now employs nearly 500 persons. Some 600 persons are living at the site, although peak activity has yet to be reached. About $2.5 million was spent on the Marias river project during the past fiscal year.

✓ Tioga enjoys oil prosperity

Oil industry employment in the Tioga area is about 1,500, with a large share due to construction of a $10 million gas gathering pipeline. The pipeline network will gather oil-well gas from the Tioga and Beaver Lodge fields for a new $7 million natural gas processing plant to be constructed at Tioga.

Propane, butane, natural gasoline, sulfur, and dry natural gas will be produced.

Assessed valuation in the rapidly growing town has doubled during the past year.

✓ Butte to build new schools

School bonds of a Butte school district totalling $2,950,000 were sold by trustees to help finance construction of grade and junior high schools. Purchasers were two Minneapolis and Chicago brokerage firms bidding 3.75 per cent interest.

✓ Area firms get military orders

In a contract with Federal Cartridge corporation, Minneapolis, the government has ordered $14.7 million worth of small arms ammunition to be made at the Twin Cities arsenal, New Brighton.

The Air Force has placed a $16.8 million order for electronic automatic pilots (that will take two years to complete) with the Minneapolis-Honeywell Regulator company.