

1955

ARCHIVES

MONTANA BUSINESS

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Vol. 7 No. 1
January 1955

SCHOOL OF BUSINESS ADMINISTRATION MONTANA STATE UNIVERSITY

TOURISM—MONTANA'S THIRD INDUSTRY

3 Million Visitors — \$87 Million

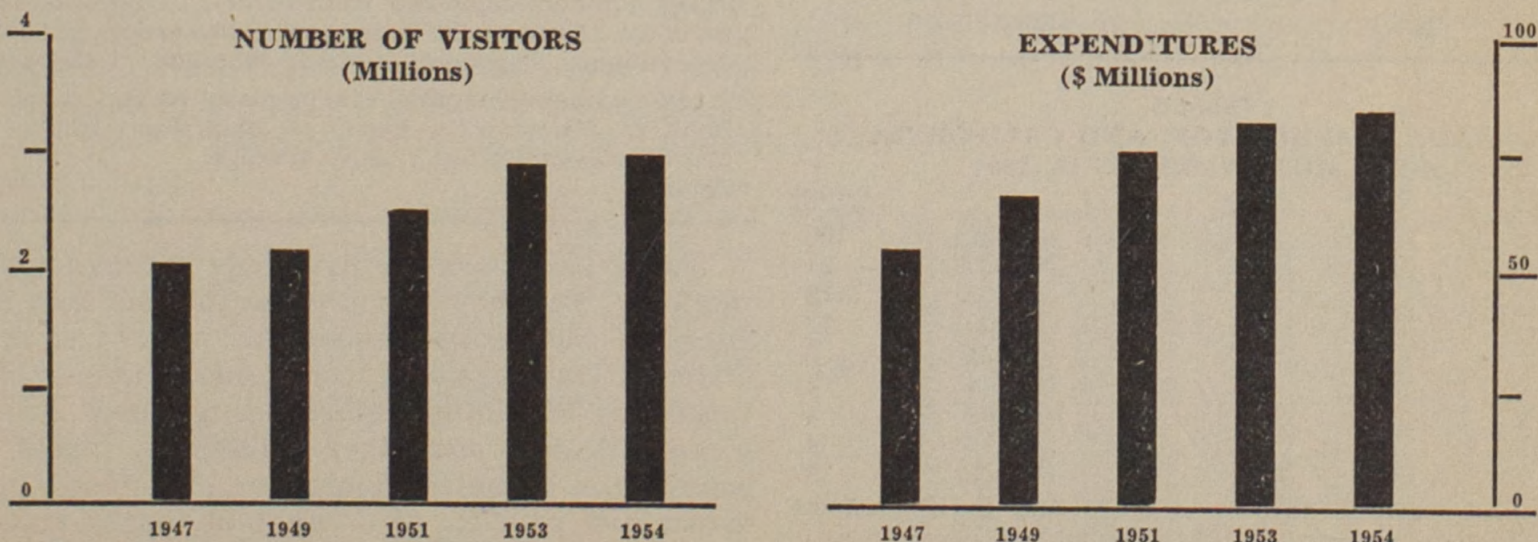
Over 3 million people visited Montana in 1954, and they spent almost \$87 million.¹ This sizeable sum again places tourism as the state's third ranking industry, behind agriculture and mining.

The postwar expansion of the tourist business in Montana has been rapid, although it slowed down between 1953 and 1954. Because Canadian visitors entering through U. S. Customs stations were included in the Highway Commission's report for the first time in 1954, comparisons of the total number of tourists (3,038,000) and total expenditures (\$86,980,000) with previous years are not valid. In the chart below, the increases as a result of the inclusion of Canadian tourists entering through U. S. Customs stations have been estimated and removed from the 1954 data, making possible comparison among the various years.

¹Estimates. The data in this article came from two reports issued by the Advertising Office, Montana Highway Commission: **The Montana Tourist Survey, 1954**, and **1954 Port of Entry Annual Report**.

The tourist season in Montana is generally considered to run from around the first of June through the Labor Day weekend in September. During this period, the Highway Commission operates port of entry greeter stations at the state borders. Questionnaire cards are handed out at the stations to obtain information about the tourist's stay in Montana. According to the cards returned, the average tourist party in Montana in the summer of 1954 numbered 3.2 persons and spent 4.3 days in the state. This is about a day less than visitors were staying in 1949 and 1951. (See Table 1.) As a result, average expenditures per person and per party while in Montana were lower than in those years. This was true also in 1953. Extra effort expended in publicizing local attractions and keeping visitors in the state longer would pay off handsomely. For example, using Table 1 as a basis, if every tourist in Montana in 1954 had stayed one additional day, the average expenditure per person would have been \$35.30 instead of \$28.63, and total tourist expenditures in the state would have been \$107,244,000 instead of \$86,980,000.

MONTANA'S GROWING TOURIST BUSINESS



Source: Advertising Office, Montana Highway Commission.

MONTANA BUSINESS

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THEODORE H. SMITH, Dean

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HAROLD J. HOFLICH, Director

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KAY KLAMPE, Statistical Clerk

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MONTANA BUSINESS INDEXES

(1935-39=100)

Year and Month	Nonagr. Employment ¹	Car-loadings ²	Elec. Power Consumption ³	Gen. Store Sales ⁴	Bank Debts ⁵
1935	—	110.0	93.7	92.0	92.4
1936	—	96.6	105.2	100.0	99.4
1937	—	105.0	109.3	102.6	106.5
1938	—	85.9	85.5	99.7	95.5
1939	100.0	102.5	106.3	106.0	106.2
1940	105.6	109.8	133.8	111.7	115.4
1941	110.2	122.2	151.2	119.8	134.5
1942	113.8	135.0	165.8	126.5	141.8
1943	112.7	143.8	185.2	126.6	164.9
1944	111.3	150.5	175.4	147.1	178.6
1945	111.3	141.8	157.7	159.5	198.1
1946	123.7	119.9	155.3	215.3	252.2
1947	134.0	131.2	169.7	248.1	300.4
1948	140.9	125.0	178.4	270.9	337.5
1949	142.4	122.3	190.2	266.3	344.6
1950	144.4	130.9	201.9	272.5	381.4
1951	146.4	139.0	206.1	282.5	415.8
1952	150.5	142.6	229.4	298.5	423.7
1953	151.7	150.5	252.7	290.5	420.1
1953—					
October	156.6	202.9	258.5	328.3	477.8
November	153.9	196.5	265.4	341.1	475.4
December	153.0	160.7	270.6	460.6	432.2
1954—					
January	144.3	135.2	258.6	182.7	411.1
February	143.1	140.2	241.8	194.3	397.7
March	144.3	126.1	227.6	205.9	394.0
April	147.0	130.8	238.0	278.7	402.4
May	150.6	142.5	232.4	295.1	397.4
June	155.8	148.8	237.9	272.9	433.9
July	155.4	143.2	223.6	277.2	429.3
August	155.8	157.3	198.3	312.7	449.1
September	149.3	128.8	127.7	312.7	487.5
October	148.2 ⁶	164.6	162.4	343.2	509.9
November	150.1	172.9	245.1	356.1	502.8

Table 1
AVERAGE NUMBER IN PARTY,
DAYS SPENT IN STATE, AND EXPENDITURES,
MONTANA TOURISTS, 1949, 1951, 1953, and 1954

	1949	1951	1953	1954
Average number in party	3.1	3.2	3.3	3.2
Average days spent in state	5.4	5.2	4.2	4.3
Average expenditure per person per day	\$5.70	\$5.70	\$6.75	\$6.66
Average expenditure per person per stay	\$30.77	\$30.20	\$28.35	\$28.63
Average expenditure per party per stay	\$95.39	\$96.64	\$93.57	\$92.48

Source: Advertising Office, Montana Highway Commission.

Almost everyone benefits from tourist travel in Montana. The American Automobile Association has established a pattern of the way in which the typical tourist divides his expenditures for various items. Using the association figures, a breakdown of tourist expenditures in Montana is possible:

Meals	\$25,220,000
Transportation	18,260,000
Lodging	17,400,000
Retail purchases	15,660,000
Amusement	6,090,000
Admission to travel attractions	4,350,000
Total	\$86,980,000

Table 2
CANADA, WASHINGTON, AND CALIFORNIA
SEND MOST VISITORS IN 1954

Place of Origin	Number of Cars	Percent of Total
Total	305,532	100
Canada	65,656	21
Washington	39,675	13
California	35,983	12
Minnesota	16,331	5
Idaho	13,074	4
Oregon	12,668	4
Illinois	12,183	4
Other	109,962	36

Note: Cars counted at port of entry and U. S. Customs stations during period June 12 to September 6.

Source: Advertising Office, Montana Highway Commission.

¹Index numbers computed from estimates of Unemployment Compensation Commission of Montana. Estimates include all full- and part-time wage and salary workers who worked or received pay during the pay period ending nearest the 15th of the month.

²Index numbers computed from reports of Board of Railroad Commissioners of the State of Montana, comprising total carloadings of freight loaded at Montana points. Daily average.

³Index numbers computed from kilowatt hour sales of Montana Power Co., Montana-Dakota Utilities Co., Pacific Power and Light Co., Bonneville Power Administration, and the Bureau of Reclamation to commercial and industrial users for consumption within Montana, reduced to hourly average kilowatt hours per month.

⁴Index numbers computed from reports of Federal Reserve Bank of Minneapolis, based on dollar sales of 80 to 89 department and general stores in Montana. Daily average.

⁵Index numbers computed from reports of Federal Reserve Bank of Minneapolis, based on data from banks in 16 Montana communities. Daily average.

⁶Revised.

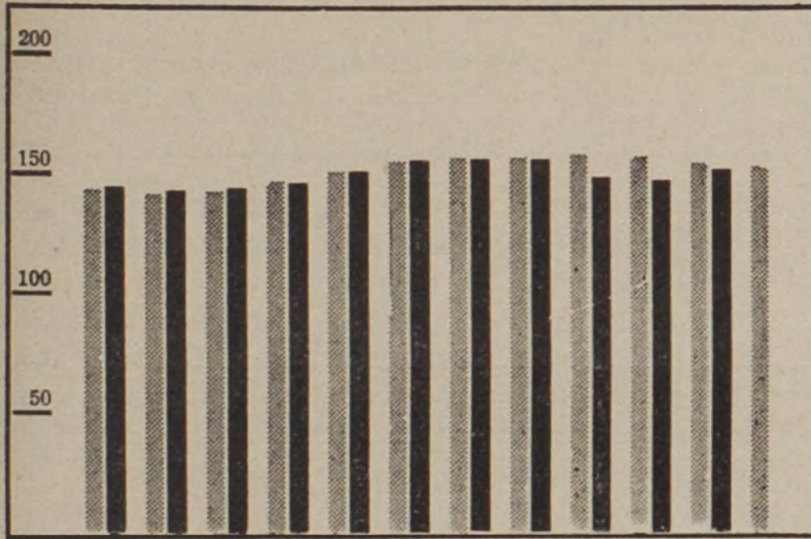
The figures above are given only as rough approximations. Yet they reemphasize the fact that many types of businesses—restaurants, drive-ins, service stations, transportation companies, motels, hotels, resorts, retail clothing stores, drug stores, drinking places, theaters and other amusement places, museums, and organized tours, for example — enjoy substantial benefits as a result of tourist travel in the state. Some are dependent almost exclusively

Monthly Indexes of Montana Business Activity, 1953-54¹

1935-39=100

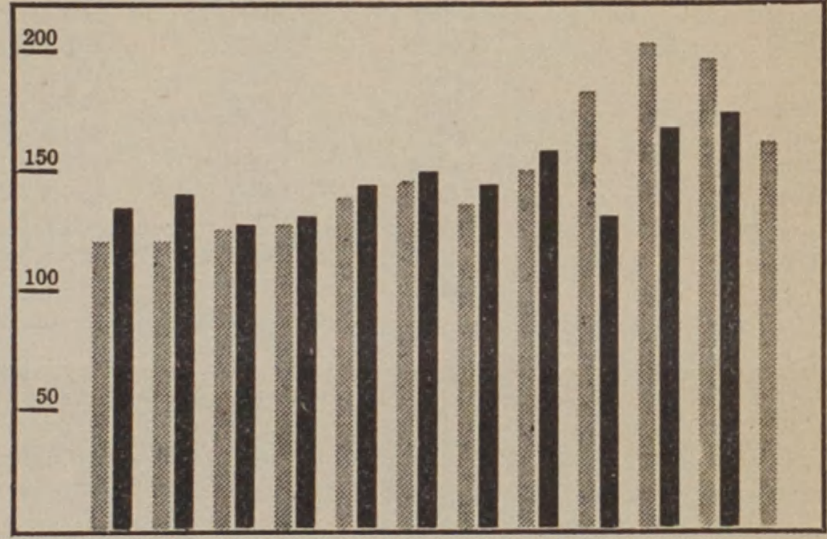
1953 1954

NONAGRICULTURAL EMPLOYMENT (1939=100)



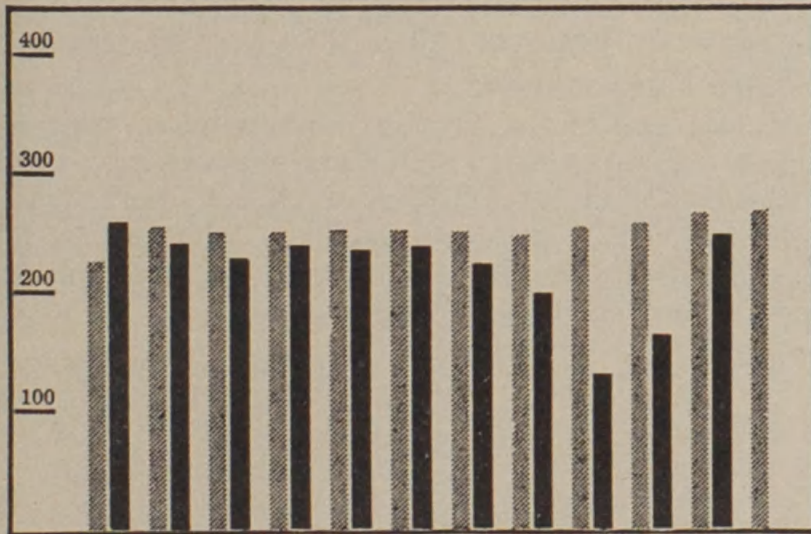
Jan. Feb. Mar. April May June July Aug. Sept. Oct. Nov. Dec.

CARLOADINGS



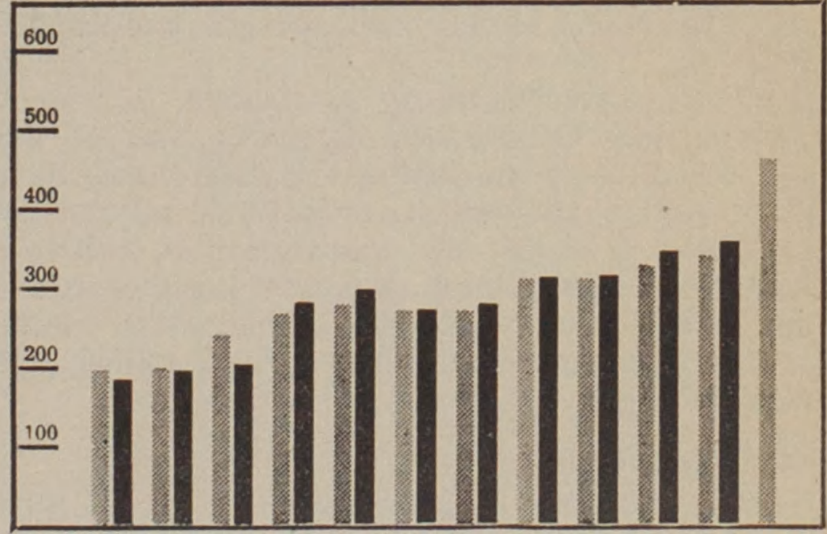
Jan. Feb. Mar. April May June July Aug. Sept. Oct. Nov. Dec.

ELECTRIC POWER CONSUMPTION



Jan. Feb. Mar. April May June July Aug. Sept. Oct. Nov. Dec.

GENERAL STORE SALES



Jan. Feb. Mar. April May June July Aug. Sept. Oct. Nov. Dec.

¹See table on page 2 for explanatory footnotes.

BANK DEBITS



Jan. Feb. Mar. April May June July Aug. Sept. Oct. Nov. Dec.

upon the vacation trade. The number of jobs created and the indirect benefits from tourist expenditures in the state are not easily measured, but it is evident that Montana's stake in the tourist business is high.

Taxwise, the state also benefits. The Montana Highway Commission estimates that tourists in the state in 1954 paid \$1,869,000 in gasoline taxes. When matched with Federal highway aid on a 57 percent Federal—43 percent state basis, tourist gasoline tax revenue last year made possible \$4,346,000 worth of highway construction.

Where They Came From

Almost half of Montana's 1954 tourists came from

RETAIL FOOD PRICE INDEX, MONTANA

(May 1950=100)

	All food	Meats, poultry & fish	Dairy products
1953—			
November	112.1	104.0	114.3
December	112.2	105.5	113.8
1954—			
January	113.5	108.8	113.0
February	114.6	111.1	113.0
March	113.8	109.4	111.7
April	114.7	109.7	109.1
May	116.7	111.8	106.5
June	118.9	111.6	104.3
July	120.8	111.5	106.9
August	118.2	108.0	104.8
September	113.2	103.4	104.8
October	113.7	104.0	107.3
November	108.4	98.3	107.3
December	108.0	97.9	108.2

Source: Computed from reports of the Montana Department of Labor and Industry.

Canada and the states of Washington and California, according to counts of cars taken at port of entry and U. S. Customs stations during the summer months, Canada accounted for 21 percent of all out-of-state cars, followed by Washington (13 percent) and California (12 percent). Five percent of cars from outside Montana were licensed in Minnesota and 4 percent each in Idaho, Oregon, and Illinois. (Table 2.)

Not all visitors came by automobile, of course. The Highway Commission estimates that of the 3,038,000 non-residents visiting the state during 1954, approximately 15 percent, or 456,000, arrived by plane, bus, or train. No information is available concerning these visitors, or concerning those traveling by automobile during the spring, fall or winter months when the port of entry greeter stations are not operating.

Why They Came

Glacier National Park continues to be the outstanding tourist attraction in Montana. In 1954, more than 608,000 persons (including Montanans) visited the park. Officials state that 20 percent of the visitors were Canadians. In 1952, 650,000 persons entered Glacier Park and in 1953 there were 633,000 visitors. Unseasonably wet weather in August is given as a reason for the 1954 decline. With the number of visitors declining two years in a row, however, Montanans concerned with vacation travel

ESTIMATED CASH RECEIPTS FROM FARM MARKETINGS IN MONTANA, FIRST TEN MONTHS, 1953 AND 1954

(thousands of dollars)

	First 10 Months		Percent Change
	1953	1954	
Livestock and products	110,658	112,789	1.9
Crops	169,813	133,614	-21.3
Total	280,471	246,403	-12.1

Source: U. S. Department of Agriculture, Agricultural Marketing Service.

DAILY AVERAGE PRODUCTION OF SELECTED MINERALS IN MONTANA, 1935-39 AND 1953 AND 1954

	1935-39	1953	1954
Copper (short tons) ¹	329.8	252.8	194.8
Zinc (short tons) ¹	121.9	261.5	199.2
Lead (short tons) ¹	51.1	65.0	48.0
Silver (fine ounces) ¹	31,398.0	21,790.1	16,692.5
Gold (fine ounces) ¹	651.7	80.7	73.1
Crude oil (thousands of barrels) ²	14.9	32.3	38.3

¹Daily average production computed from reports of U. S. Bureau of Mines.

²Daily average production computed from reports of the Oil and Gas Conservation Commission of Montana. First eleven months only for 1953 and 1954.

in the state should give thought to the increased promotion of Glacier Park as a tourist attraction.

Yellowstone Park is also a major drawing card for tourists, with over 1,300,000 visitors in 1954, but its location is not so advantageous as that of Glacier from the standpoint of attracting visitors to Montana.

The state has many other attractions which bring tourists and which are deserving of increased promotion: fine fishing streams and lakes, Virginia City, Lewis and Clark Caverns, and the Custer Battlefield, to name a few.

Some travelers come to visit friends or relatives. Many merely drive through the state with other final destinations. A sizeable number travel in or through the state for business rather than personal reasons.

Where They Stayed

Motels appear to be the most popular type of tourist accommodation. Of those responding to the Highway Commission's questionnaire, 59 percent reported they had stayed in motels. Thirteen percent stayed with friends and relatives, 12 percent camped, and 11 percent stayed in hotels.

By MAXINE JOHNSON

MONTANA BUSINESS

Bureau of Business
and Economic Research
Montana State University
Missoula, Montana

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MONTANA BUSINESS

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BUREAU OF BUSINESS
ECONOMIC RESEARCH

SCHOOL OF BUSINESS ADMINISTRATION MONTANA STATE UNIVERSITY

YEAR ENDS ON OPTIMISTIC NOTE

The year 1954 ended in a rather widespread spirit of optimism as to the state of the economy. The dire predictions made a year ago regarding the course of business in the United States have failed to materialize and the national economy appears to be in the midst of a healthy recovery from the mild recession which began in the latter part of 1953. This means continued markets for Montana's raw materials — its metals, lumber, and agricultural products — and suggests that Montana businessmen can also face the new year with confidence.

Effects of the recent decline in business activity were felt less in Montana than in some of the more industrialized areas of the nation. Other factors, however, combined to make 1954 a rather spotty business year in the state, somewhat less prosperous than at least the preceding two years. On the agricultural scene, crop acreage restrictions and less favorable growing conditions than in the record-setting 1953 resulted in a considerably reduced wheat crop, and cash receipts from agricultural marketings dropped 12 percent below 1953. Metal production might have ended the year only slightly below 1953 (in response to reduced demand) had the mines not been shut down for 53 days in August, September, and October, because of a labor dispute. This was largely responsible for declines of from 23 to 26 percent in yearly production of copper, lead, and zinc. Oil production on the other hand, increased 18 percent over 1953.

Despite strikes in the mining, lumber and construction industries and a sharp curtailment in the number of railroad workers due to technological changes, total nonagricultural employment averaged only 1 percent below 1953 and the rate of unemployment was lower than the national average.

In Montana, as in the United States as a whole, the consumer was the stellar performer in 1954. While

spending by government and business declined, he maintained his expenditures and by the latter part of the year was increasing them. As an indication of retail trade volume in the state, department store dollar sales are estimated to have been equal to those of 1953.¹ After getting off to a slow start, sales during October-December were higher than any other fourth quarter in history. Department stores in western Montana—showing the effect of the strikes—did not fare so well, with an estimated decline of about 6 percent in total dollar volume for the year. This was offset by increased sales in the eastern part of the state.

The volume of bank debits in 18 Montana cities set a new record and was 5 percent above 1953. Again, eastern Montana cities offset declines in three western Montana towns—Anaconda, Butte, and Deer Lodge.

Two Years in Brief

MONTANA

	1953	1954	Percent Change
Nonagricultural employment (thousands of workers)	154.4	152.4	- 1
Freight carloadings (thousands of carloads)	418.2	405.6	- 3
Electric power production (thousands of KWHs)	3,719	4,273	+15
Crude oil production (millions of barrels)	11.9	14.1	+18
In millions of dollars:			
Value of production—copper, lead, zinc, silver, and gold	75.2	58.5	-22
Cash income from farm marketings	377.3	331.5	-12
Building permits issued—10 cities	17.8	25.4	+42
Department store sales	17.6	17.6	—
Department store inventories	4.7	4.3	- 9
Bank debits—18 cities	3,511	3,681	+ 5
Bank deposits, December 31	569.7	590.2	+ 4

¹The index of daily department store sales (see table on page 2) shows a slight increase over 1953.

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1937	100.0	105.0	109.3	102.6	106.5
1938	100.0	85.9	85.5	99.7	95.5
1939	100.0	102.5	106.3	106.0	106.2
1940	105.6	109.8	133.8	111.7	115.4
1941	110.2	122.2	151.2	119.8	134.5
1942	113.8	135.0	165.8	126.5	141.8
1943	112.7	143.8	185.2	126.6	164.9
1944	111.3	150.5	175.4	147.1	178.6
1945	111.3	141.8	157.7	159.5	198.1
1946	123.7	119.9	155.3	215.3	252.2
1947	134.0	131.2	169.7	248.1	300.4
1948	140.9	125.0	178.4	270.9	337.5
1949	142.4	122.3	190.2	266.3	344.6
1950	144.4	130.9	201.9	272.5	381.4
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November	151.6	179.8	245.1	356.1	502.8
December	151.6	155.0	248.7	519.7	475.2

¹See January issue for explanatory footnotes.

Employment Remains at High Level

Unusual circumstances combined to keep 1954 nonagricultural employment below the level of the past two years. The decline in average monthly employment was small, around 2,000 (1 percent) less than the record set in 1953, and occurred in three major industry groups: manufacturing, mining, and transportation and other utilities. Work stoppages in the smelters and the mines—idling approximately 10,000 workers from late August until mid-October—were chiefly responsible for the decline in manufacturing and mining, while the conversion from steam to diesel locomotives resulted in reductions in train crews, shop and roundhouse men, and maintenance workers in the railroad industry. Decreased traffic resulting from the cessation of hostilities in Korea also affected railroad employment. Labor disputes in the western Montana lumber industry and at the site of the construction of the aluminum plant at Columbia Falls also curtailed employment during the spring and summer.

Comparative figures by industry groups for 1953 and 1954 are:

	Average Monthly Employment ¹	
	1953	1954
Total nonagricultural employment	154,400	152,400
Manufacturing	18,400	17,400
Mining	11,600	10,600
Construction	9,200	9,600
Transportation and other utilities	23,400	21,800
Wholesale and retail trade	39,300	39,400
Finance, insurance, and real estate	4,900	5,100
Services	19,600	19,500
Government	28,000	29,000

Although employment declined only slightly in Montana in 1954, the number of applicants for jobs at employment service offices indicated that unemployment was higher than any year since 1950. The growth in the labor force and less migration to out-of-state industrial centers account for most of the rise in unemployment.

¹Unemployment Compensation Commission of Montana.

Construction Activity Increases Over 1953

Nationally and in Montana, construction activity continued at a fast pace in 1954. Several large projects were in process in the state, including work on Tiber Dam on the Marias River, the Anaconda Aluminum Company plant at Columbia Falls, the Billings-to-Spokane and the Laurel-to-Glendive oil pipelines, a Montana Power Company power line from Anaconda to Billings, and airbase construction at Great Falls, as well as a number of commercial and school buildings throughout the state. The value of building permits issued in 10 Montana cities¹ in 1954 totalled 42 percent more than in 1953 and was higher than in any postwar year.

The high level of building activity resulted in a 4 percent gain in construction employment over 1953, but the number of workers was still lower than during the period 1949-1952 when such major projects as Hungry Horse and Canyon Ferry dams were underway.

The outlook for the construction industry during

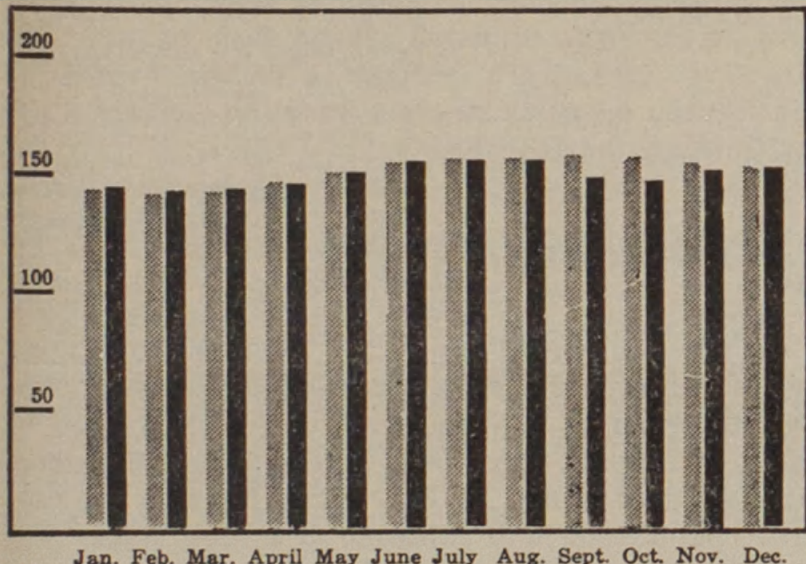
¹Anaconda, Billings, Bozeman, Butte, Great Falls, Helena, Kalispell, Malta, Miles City, and Missoula. Permits for building within city limits only.

Monthly Indexes of Montana Business Activity, 1953-54¹

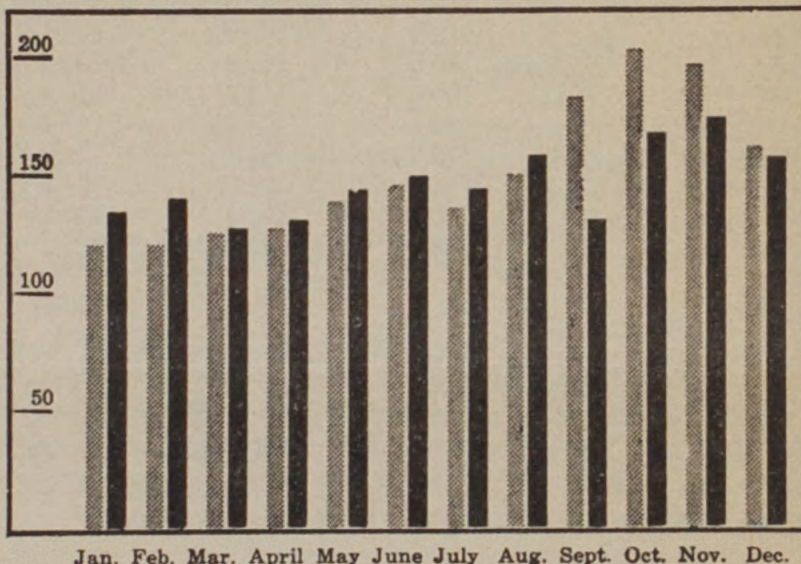
1935-39=100

1953 1954

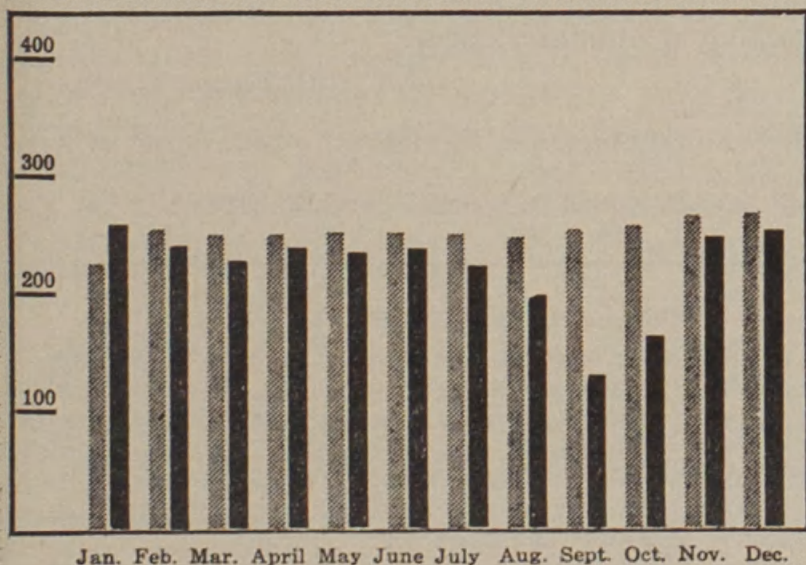
NONAGRICULTURAL EMPLOYMENT
(1939=100)



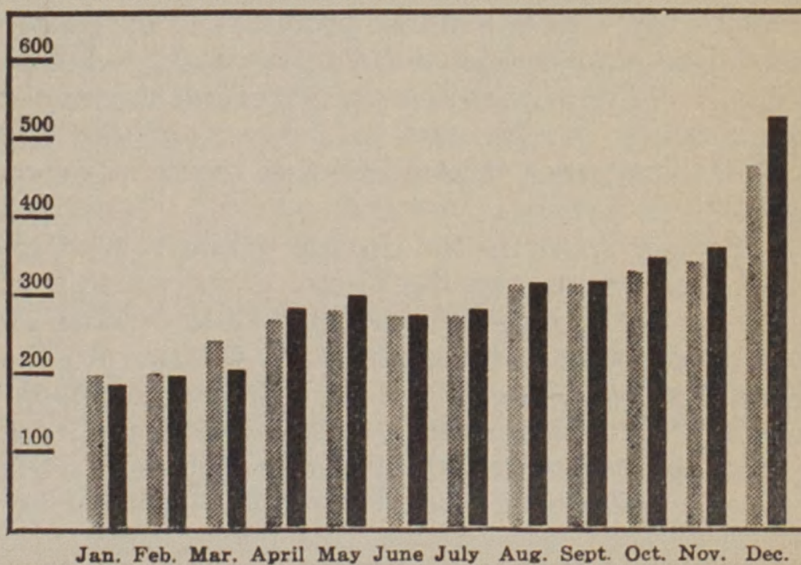
CARLOADINGS



ELECTRIC POWER CONSUMPTION



GENERAL STORE SALES



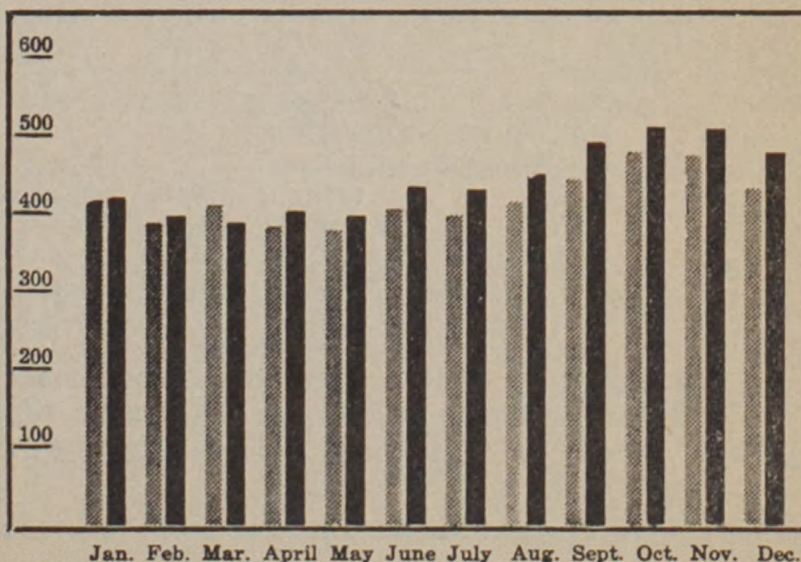
¹See January issue for explanatory footnotes.

the coming year is good. Among the projects getting underway or anticipated (in addition to those named above) are a \$3.5 million life insurance building in Helena, a \$9 million Air Force fighter-interceptor base near Glasgow, a new lumber mill to be built by the J. Neils Lumber Company at Troy (annual capacity 50 million board feet) and more new schools and commercial buildings.

Metal Production Declines; Oil Output Continues to Climb

The year ended on an optimistic note for the state's metal mining industries. Demand for copper, lead, and zinc was strengthening and the outlook for 1955 appeared favorable. Copper prices advanced 3 cents last month, to 33 cents per pound. This was the first

BANK DEBITS



RETAIL FOOD PRICE INDEX, MONTANA
(May 1950=100)

	All food	Meats, poultry & fish	Dairy products
1953—			
December	112.2	105.5	113.8
1954—			
January	113.5	108.8	113.0
February	114.6	111.1	113.0
March	113.8	109.4	111.7
April	114.7	109.7	109.1
May	116.7	111.8	106.5
June	118.9	111.6	104.3
July	120.8	111.5	106.9
August	118.2	108.0	104.8
September	113.2	103.4	104.8
October	113.7	104.0	107.3
November	108.4	98.3	107.3
December	108.0	97.9	108.2
1955—			
January	109.7	100.6	108.6

Source: Computed from reports of the Montana Department of Labor and Industry.

increase in nearly two years. Zinc and lead sales have increased recently and there are some predictions of price increases for these metals.

This situation is a pleasant contrast to that prevailing through most of 1954. The effect of the depressed national metal market was felt in the state last year, particularly during the early months. From January through July, copper and lead production ran slightly below 1953, and zinc production was down substantially. In August, the federal government stepped up purchases of zinc and lead for its stockpiling program, and some improvement in price was soon noted.

The major factor in the decline in the year's production, of course, was the 53-day strike which shut down the Butte mines from August 23 to October 15. As a result, output of copper, lead, and zinc for the year was substantially below 1953. (See table below.) Despite a 23 percent decline between 1953 and 1954, copper output compared favorably with all other postwar years except 1952. Montana's lead production last year, however, was the lowest since 1938 and zinc output was the smallest since 1949.

	PRODUCTION ¹		Percent Change
	1953	1954	
Copper (short tons)	77,617	59,800	-23.0
Lead (short tons)	19,949	14,738	-26.1
Zinc (short tons)	80,271	61,142	-23.8
Gold (fine ounces)	24,768	22,440	- 9.4
Silver (fine ounces)	6,689,556	5,124,000	-23.4

	VALUE OF PRODUCTION ¹ (thousands of dollars)		Percent Change
	1953	1954	
Copper	\$44,552	\$35,521	-20.3
Lead	5,227	4,009	-23.3
Zinc	18,462	13,574	-26.5
Gold	887	785	-11.5
Silver	6,054	4,638	-23.4

Oil production in eastern Montana increased for the fourth successive year with an output of 14.1 million barrels. This represented an increase of 18 percent over 1953.

¹U. S. Bureau of Mines.

Smaller Production Brings Further Decline in Agricultural Income

The decline in business activity last year had little effect on Montana agriculture. Demand for farm products continued high and the "adjustment" in agricultural prices seemed largely completed by 1954. Less favorable weather conditions and reduced acreage, however, resulted in a crop harvest considerably smaller than the unusually large 1953 output. The effect on agricultural income is clearly evident in the figures on cash receipts from farm marketings for the first ten months.¹

	January-October		Percent Change
	1953	1954	
Livestock and products	\$110,658,000	\$112,789,000	+ 1.9
Crops	169,813,000	133,614,000	-21.3
Total	\$280,471,000	\$246,403,000	-12.1

Despite heavy marketings this year, the total number of cattle in the state increased 6 percent during 1954 to reach an all-time high of 2,441,000 head on January 1, 1955. Beef cow numbers rose 8 percent during the year, to 1,130,000, indicating that the beef cattle population will continue at a high level. The number of stock sheep on Montana ranches is estimated at 1,606,000, the same as on January 1, 1954.

The total value of all livestock and poultry in the state is estimated at \$284.6 million, up 9 percent from the first of January 1954.²

By MAXINE JOHNSON

¹Agricultural Marketing Service, U. S. Department of Agriculture.

²Montana Crop and Livestock Reporting Service.

New Trade Association Directory

The Bureau has just published a revision of the Montana Trade Association Directory which was first issued last year. The 1955 edition lists 44 trade associations in the state, with names and addresses of officers. Copies may be obtained without charge by writing to the Bureau of Business and Economic Research, Montana State University, Missoula, Montana.



MONTANA BUSINESS

Bureau of Business
and Economic Research
Montana State University
Missoula, Montana

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BUREAU OF BUSINESS
ECONOMIC RESEARCH

SCHOOL OF BUSINESS ADMINISTRATION MONTANA STATE UNIVERSITY

MONTANA'S MINERAL INDUSTRIES, 1954

The total value of minerals produced in Montana in 1954 is estimated at slightly over \$123 million.¹ Although this figure represents a 6.9 percent decline from 1953, it still is among the highest in the state's history. The 1954 results are particularly gratifying in view of the difficulties which beset the industry during the year, among them a weakening in demand for most metals during the early months and a labor dispute which shut down the Butte mines for 53 days.

The question of tariffs versus stockpiling of metals appears to have been settled in favor of stockpiling, and federal government purchases last year played an important role in keeping the mining industry on an even keel. With these programs still in effect and with the industrial demand for minerals increasing, the prospect is for continued high production in the state during 1955.

Copper ranks first in value of production

Despite a 23 percent decline in production as compared with 1953, copper maintained its first place position among Montana minerals in terms of value

¹Preliminary estimate by Montana Bureau of Mines and Geology. See table on page 3.

This article is based chiefly on the U. S. Bureau of Mines report, "The Mineral Industry of Montana," Area Report B-33.

of production. (See table on page 3.) The 59,800 tons produced last year were valued at \$35.5 million.

Although 1954 copper output was below 1953 and 1952 (the year the Greater Butte Project was put into production), it exceeded all other postwar years. Chief factors in the decline were the strike which shut down the Butte mines from mid-August to October 13 and the voluntary curtailment of production in the early months of the year, when it appeared that supplies of copper might exceed the demand.

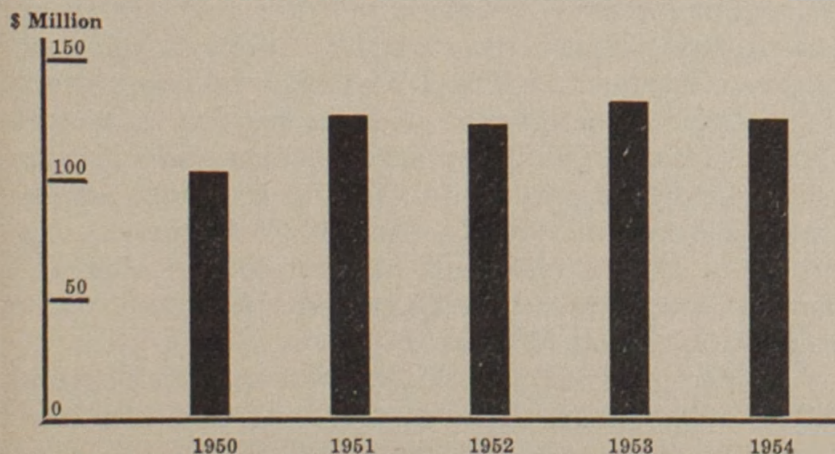
After getting off to a slow start, demand for copper gradually increased. A tight supply situation developed in the final quarter as a result of strikes at major operations in the United States and Chile. In January 1955 the domestic price advanced to 33 cents per pound.

Lead and zinc output down

Lead production decreased 26 percent in 1954, to the lowest level since 1938, and zinc output was the lowest since 1949, with a 24 percent decrease from 1953. Value of lead produced in the state amounted to \$4 million, while zinc, which exceeded copper in value in 1951 (\$31 million), was down to \$13 million.

The Butte strike plus the closing of two mines there, the Badger State and the Travona, which produced manganese ore containing lead and zinc, were the principal factors in the decline. About 78 percent of total state lead production was mined in Silver Bow County and 89 percent of the zinc. Producing

VALUE OF TOTAL MINERAL
PRODUCTION, MONTANA, 1950-1954



Source: Table on page 3.

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THEODORE H. SMITH, Dean

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properties outside the county included the Jack Waite mine, Sanders County, and the Algonquin and Scratch Awl mines in Granite County. Lead and zinc were recovered from smelter slag at the East Helena fuming plant. In addition some lead ore was shipped from the Mike Horse mine, Lewis and Clark County, which had been closed since 1952.

Both lead and zinc faced declining demand and weak prices as 1954 opened, but by the end of the year consumption was on the rise and prices were firmer. Zinc consumption, harder hit than lead, was especially affected by decreased activity in the steel and brass industries. Government stockpiling was an important factor in maintaining production and strengthening prices.

Long-term decline in gold and silver continues

Gold production in Montana continued the steady decline in process since 1947 (except for a nominal gain in 1953) and silver output was the smallest in eight years.

The decrease in gold production between 1953 and 1954 was the result of decreased ore output from the Butte copper and lead-zinc mines. Production outside Silver Bow County increased slightly, with shipments from Jefferson, Broadwater, Beaverhead, and Missoula counties.

About 90 percent of the silver produced in the state came from Silver Bow County, as a byproduct from the Butte copper and lead-zinc ores. Major producer outside the county was Trout Mining Division, American Machine and Metals Company's Algonquin property in Granite County.

Montana loses position as chief manganese producer

For the first time since 1916, Montana failed to retain its position as the nation's leading producer of manganese ore, falling behind Nevada.

Montana's production of manganese ore and concentrates (35 percent or more Mn) declined to 49,000

MONTANA BUSINESS INDEXES

(1935-39=100)

Year and Month	Nonagr. Employment	Car-loadings	Elec. Power Consumption	Gen. Store Sales	Bank Debits
1935	—	110.0	93.7	92.0	92.4
1936	—	96.6	105.2	100.0	99.4
1937	—	105.0	109.3	102.6	106.5
1938	—	85.9	85.5	99.7	95.5
1939	100.0	102.5	106.3	106.0	106.2
1940	105.6	109.8	133.8	111.7	115.4
1941	110.2	122.2	151.2	119.8	134.5
1942	113.8	135.0	165.8	126.5	141.8
1943	112.7	143.8	185.2	126.6	164.9
1944	111.3	150.5	175.4	147.1	178.6
1945	111.3	141.8	157.7	159.5	198.1
1946	123.7	119.9	155.3	215.3	252.2
1947	134.0	131.2	169.7	248.1	300.4
1948	140.9	125.0	178.4	270.9	337.5
1949	142.4	122.3	190.2	266.3	344.6
1950	144.4	130.9	201.9	272.5	381.4
1951	146.4	139.0	206.1	282.5	415.8
1952	150.5	142.6	229.4	298.5	423.7
1953	151.5	150.5	252.7	290.5	420.1
1954	150.1	146.0	220.1	293.4	441.0
1953—					
December	153.6	160.7	270.6	460.6	432.2
1954—					
January	144.0	135.2	258.6	180.9	411.1
February	142.8	140.2	241.8	192.5	397.7
March	144.5	126.1	227.6	203.8	394.0
April	148.0	130.8	238.0	275.7	402.4
May	152.4	142.5	232.4	292.2	397.4
June	157.5	148.8	237.9	270.2	433.9
July	158.4	143.2	223.6	274.4	429.3
August	158.4	157.3	198.3	309.4	449.1
September	149.5	128.8	127.2	309.5	487.5
October	147.5	164.6	162.4	339.5	509.9
November	149.6	179.8	245.1	352.4	502.8
December	147.9	155.0	248.7	514.4	475.2
1955—					
January	141.1	151.0	253.6	200.9	483.1

NOTE: 1953 and 1954 employment indexes revised. 1954 general store sales index revised. See January issue for explanatory footnotes.

ESTIMATED CASH RECEIPTS FROM FARM MARKETINGS IN MONTANA, 1953 AND 1954

(thousands of dollars)

	1953	1954	Percent Change
Livestock and products	150,860	156,358	3.6
Crops	221,295	211,620	-4.4
Total	372,155	367,978	-1.1

Source: U. S. Department of Agriculture, Agricultural Marketing Service.

tons in 1954, 56 percent below 1953 and well below all other recent years. The 1954 production represents shipments of manganese nodules by the Anaconda Copper Mining Company and battery-grade manganese concentrates by Trout Mining Division, American Machine and Metals, Inc., at Philipsburg. Approximately 5,300 tons of manganiferous ores and concentrates (less than 35 percent Mn) were also shipped by Trout Mining Division.

The Anaconda Copper Mining Company's Travona mine in Butte was closed during the year, with high operating costs and declining sales due to lower

MONTANA'S MINERAL PRODUCTION, 1950-1954

— VALUE OF PRODUCTION —

Product	Unit	— PRODUCTION —					(Thousands of dollars)				
		1950	1951	1952	1953	1954 ¹	1950	1951	1952	1953	1954 ¹
Metals:											
Chrome ore conc., Short tons		—	—	—	26,089	123,000	—	—	—	870	4,000
Copper, Short tons		54,478	57,406	61,948	77,617	59,800	22,663	27,785	29,983	44,552	35,521
Gold, Fine ounces		51,764	30,502	24,161	24,768	22,440	1,812	1,068	846	867	785
Lead, Short tons		19,617	21,302	21,279	19,949	14,738	5,297	7,370	6,852	5,227	4,009
Manganese ore, Short tons		131,201	100,562	100,070	113,429	49,000	(2)	(2)	(2)	(2)	(2)
Manganiferous ore, Short tons		6,810	7,598	9,357	5,598	5,300	(2)	(2)	(2)	(2)	(2)
Silver, 000 fine ounces		6,591	6,394	6,138	6,690	5,125	5,965	5,787	5,555	6,054	4,638
Zinc, Short tons		67,678	85,551	82,185	80,271	61,142	19,221	31,141	27,285	18,462	13,574
Nonmetals:											
Coal, 000 short tons		2,520	2,345	2,070	1,868	1,400	5,861	6,168	5,815	4,880	3,640
Fluorspar, Short tons		41	—	16,160	5,932	(3)	(2)	—	(2)	(2)	(2)
Natural gas, Million cu. ft.		39,186	36,424	28,714	27,368	30,000	2,077	2,003	1,752	1,700	1,850
Petroleum, 000 barrels		8,109	8,958	9,576	11,920	14,195	20,430	21,249	21,635	26,020	31,230
Phosphate rock, 000 long tons		210	304	332	(3)	(3)	1,496	2,353	2,621	(2)	(2)
Sand & gravel, 000 short tons		9,044	9,583	6,766	6,153	(3)	5,140	6,202	3,580	2,953	(2)
Stone, 000 short tons		919	871	690	803	(3)	949	986	793	1,125	(2)
Undistributed:⁴							12,478	13,465	15,202	19,633	24,000
Total							103,389	125,577	121,919	132,343	123,247

¹Preliminary estimates, subject to revision.

²Included with "undistributed."

³Not available.

⁴Includes antimony conc. (1951, 1953-4), barite (1951-4), cement, clay, gem stones (1950), gypsum, lime, natural gas liquids, pyrite, sodium sulfate (1951), talc, tungsten concentrate (1951, 1953-4), vermiculite, and minerals indicated by (2) above.

Sources: U. S. Bureau of Mines, Montana Bureau of Mines and Geology. Petroleum figures for 1954 revised in view of later data released by Montana Oil and Gas Conservation Commission.

priced manganese ores on the market given as factors in the shutdown.

The federal government maintains stockpile depots at Butte and Philipsburg. Shipments of ore to the stockpiles are not included in state production figures until the ore is removed for commercial use. In 1954, 59,000 dry short tons valued at nearly \$1.2 million were shipped to the Butte and Philipsburg depots from Beaverhead, Granite, Jefferson, Missoula, Powell, and Silver Bow counties.

Chromium production in full swing at Mouat

Production of chrome ore concentrate from Montana's Mouat mine last year amounted to 123,000 tons, with a value of \$4 million. Total United States production is estimated at 160,000 tons, indicating the importance of the Mouat mine as a domestic producer.

Production of chromite concentrates is a relatively new mining activity in Montana. During World War II, the Benbow and Mouat mines in Stillwater County were operated for a short time as foreign supply lines were disrupted. When imported chromite ore again became available in 1943, the Montana mines were shut down. In 1953, the American Chrome Company began operation of the Mouat mine under a government contract calling for delivery of 900,000 tons of concentrate to federal stockpiles by 1961.

The U. S. Bureau of Mines estimates that chromite deposits in Stillwater County amount to 80 percent of all known reserves in North America. High production costs make operation of the mines economically unjustifiable were it not for chrome's import-

ance to national defense as an essential metal. Whether utilization of the Montana deposits can be continued upon the expiration of American Chrome's government contract depends upon the successful development of lower-cost production techniques and profitable new end products.

Tungsten production increases

Montana became an important producer of tungsten in 1954 as development of the Ivanhoe (Brown's Lake) mine in Beaverhead County continued. Minerals Engineering Company of Grand Junction, Colorado, operates the Ivanhoe mine and a mill near Glen, Montana. Scheelite concentrates are shipped to Salt Lake City for final treatment. Ore reserves at the mine are estimated at 829,000 tons and the concentrator plant is currently being expanded to increase capacity from 12,000 to 20,000 tons per month.

In Granite County, Sunshine Mining Company made a trial shipment of ore from its Storm Lake exploration project late in the year. Other developments are in process in Madison and Deer Lodge counties.

No production data are available for Montana. Total national output of tungsten concentrates, however, reached an all-time high in 1954, stimulated by favorable prices paid by the government under its Domestic Tungsten Program.

Petroleum production up 75% since 1950

Fastest-growing of Montana's major mineral industries is petroleum. Production in 1954, estimated

RETAIL FOOD PRICE INDEX, MONTANA

(May 1950=100)

	All food	Meats, poultry & fish	Dairy products
1954—			
January	113.5	108.8	113.0
February	114.6	111.1	113.0
March	113.8	109.4	111.7
April	114.7	109.7	109.1
May	116.7	111.8	106.5
June	118.9	111.6	104.3
July	120.8	111.5	106.9
August	118.2	108.0	104.8
September	113.2	103.4	104.8
October	113.7	104.0	107.3
November	108.4	98.3	107.3
December	108.0	97.9	108.2
1955—			
January	109.7	100.6	108.6
February	108.6	101.7	106.5

Source: Computed from reports of the Montana Department of Labor and Industry.

at 14.2 million barrels, was 19 percent higher than in 1953 and 75 percent above 1950. Value of petroleum production is set at \$31 million, second only to copper.

Four fields in Montana accounted for over one-half of total state production: Poplar Field in the Williston Basin and three old, established fields, Cut Bank, Elk Basin, and Kevin-Sunburst.

Field	1954 Production (barrels)
Poplar	3,009,000
Cut Bank	2,575,000
Elk Basin	1,643,000
Kevin-Sunburst	1,204,000

While experts agree that the discovery of the Williston Basin in 1951 has made Montana a potential major oil producer, the state as yet accounts for less than 1 percent of total national production. Development of the Basin is proceeding at a relatively slow pace with exploration and production limited by a lack of satisfactory markets. Refineries tend to be located near the market areas for their products, because it is cheaper to ship crude oil than refined products. With limited local markets, Basin oil must be moved to the large refining centers in the Midwest or the Pacific Coast regions. The most economical means of transportation, of course, is by pipeline, and these the Basin lacks. The development of a pipeline system will probably be a slow process. Productive capacity in the fields must be proved, adequate markets must be assured, and financial details arranged.

The first significant outlet for Montana crude from the Williston Basin will be a 450-mile 16-inch pipeline from the Poplar Field to Wyoming. The line, being built by Shell Oil Company and Murphy Corporation at a cost of \$18 million, will link with existing pipeline systems in Wyoming and make it possible for Montana crude to be moved into the Chicago, Illinois, refining area. Construction will begin this spring.

Phosphate rock output continues to expand

Phosphate rock production has increased rapidly in recent years. Output in 1953 and 1954 is believed to have exceeded 400,000 tons, or about twice the 1950 production, with a value of over \$3 million. The new Victor Chemical Works elemental phosphorus plant at Silver Bow has been an important factor in the increase. Victor produces rock at the Maiden Rock and Canyon Creek mines some 30 miles south of Butte for use in its Silver Bow plant.

The other major producer in Montana is the Montana Phosphate Products Co., a subsidiary of Consolidated Mining and Smelting Company of Trail, B. C. Production from the Garrison district, Powell County, is shipped to Consolidated's fertilizer and chemical plant at Trail.

The Anaconda Copper Mining Company obtains phosphate rock for its fertilizer plant from the company-owned mines at Conda, Idaho.

Other mining activity

In other areas of mining activity in the state, coal production decreased for the tenth consecutive year, to approximately 1.4 million tons. Since 1949, output has declined about 50 percent. Fluorspar shipments from the Crystal Mountain deposits east of Darby in Ravalli County to the Geneva, Utah, plant of the U. S. Steel Company continued, although at a lower rate than in 1953.

The open-pit vermiculite mine of the Zonolite Company at Libby continued to be the leading domestic producer. A new \$400,000 processing plant to enable utilization of low-grade rock was completed during the year.

Although uranium exploration activity continued in the state, with numerous reports of radioactive occurrences, no major strikes occurred.

Barite was produced near Greenough, about 30 miles east of Missoula, and talc was produced in the Beaverhead-Madison County area and shipped to out-of-state grinding plants.

BY MAXINE JOHNSON



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SCHOOL OF BUSINESS ADMINISTRATION MONTANA STATE UNIVERSITY

RECENT CHANGES IN MONTANA'S POPULATION

By W. Gordon Browder, Chairman
Department of Sociology and Anthropology

- Montana population increased over 6 percent between 1950 and 1954.
- State population estimated at 628,000 as of July 1, 1954.
- Largest gains are registered by people of 65 years and older.
- Children and youths are increasing at a high rate.
- Montana appears to be losing people in the productive group 18 to 64 years of age.

Two recent releases by the United States Bureau of the Census¹ provide interesting and helpful information on the population of Montana. According to the latest estimates of the Census Bureau, the population of the state as of July 1, 1954, was 628,000. This represents an increase of 6.3 percent since the last Federal census of April 1, 1950, and the rate of increase is considerably greater than during the period 1940 to 1950. During this decade, the population of Montana increased from 559,456 to 591,024, a change of 31,568, or 5.6 percent. The total increase between April 1, 1950, and July 1, 1954, is estimated to be about 37,000.

While this substantial growth in the state's people is most encouraging, examination of changes by

¹Estimates of the Civilian Population by States, by Broad Age Groups, July 1, 1953. Series P-25, No. 106. Provisional Estimates of the Population of States, July 1, 1954. Series P-25, No. 108.

TABLE 1

ESTIMATED PERCENT CHANGE IN CIVILIAN POPULATION, BY AGE GROUPS, FOR MONTANA, ELEVEN WESTERN STATES, AND THE UNITED STATES, APRIL 1, 1950, TO JULY 1, 1953

Age Group	Montana	Eleven West-ern States ¹	United States
Total	3.4	10.1	4.3
Under 5	9.3	16.7	7.9
5-17	12.5	20.9	13.0
18-64	-2.5	5.6	0.1
65 and over	12.4	9.7	8.6

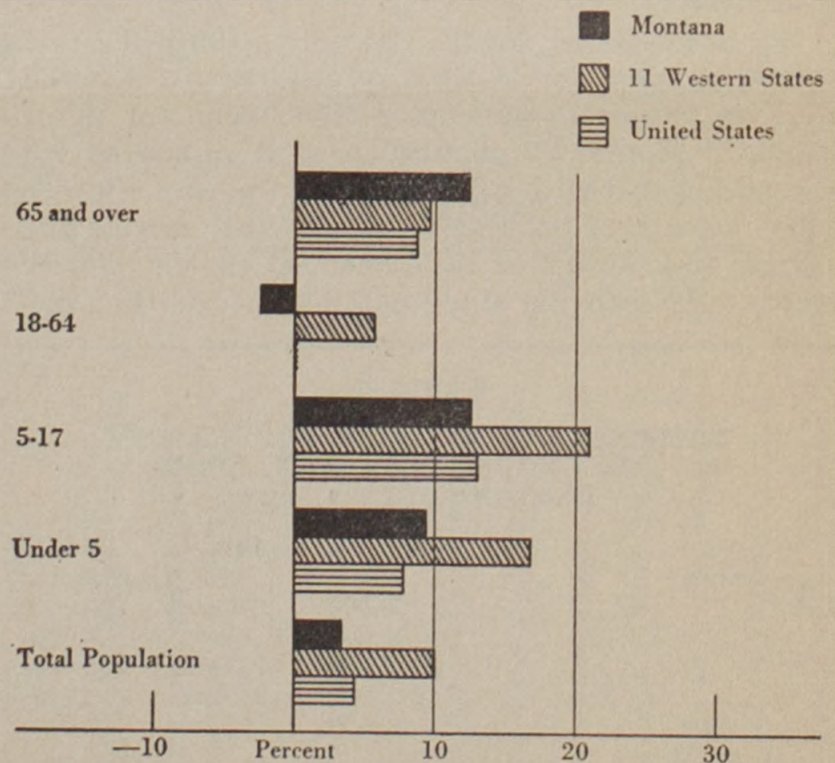
¹Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, California.
Source: U. S. Bureau of the Census.

broad age groups reveals very uneven rates of change. The Bureau of the Census has prepared estimates of the civilian population of the United States and the individual states according to broad age groups as of July 1, 1953. According to these estimates, the greatest gain in the population of Montana is occurring among people aged 5 to 17; the next largest percentage gain is in the age group 65 and over; children under five years of age increased substantially; and the group 18 to 64 years of age decreased during the three-year period.

Table I shows how Montana compares with the nation and with 11 western states with respect to

CHART 1

POPULATION CHANGES IN MONTANA, THE UNITED STATES, AND ELEVEN WESTERN STATES, BY AGE GROUPS, APRIL 1, 1950, TO JULY 1, 1953



Source: U. S. Bureau of the Census.

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(1935-39=100)

Year and Month	Nonagr. Employment ¹	Car-loadings ²	Elec. Power Consumption ³	Gen. Store Sales ⁴	Bank Debts ⁵
1935	100.0	110.0	93.7	92.0	92.4
1936	105.6	96.6	105.2	100.0	99.4
1937	110.2	105.0	109.3	102.6	106.5
1938	113.8	85.9	85.5	99.7	95.5
1939	112.7	102.5	106.3	106.0	106.2
1940	111.3	109.8	133.8	111.7	115.4
1941	111.3	122.2	151.2	119.8	134.5
1942	123.7	135.0	165.8	126.5	141.8
1943	134.0	143.8	185.2	126.6	164.9
1944	140.9	150.5	175.4	147.1	178.6
1945	142.4	141.8	157.7	159.5	198.1
1946	144.4	119.9	155.3	215.3	252.2
1947	146.4	131.2	169.7	248.1	300.4
1948	150.5	125.0	178.4	270.9	337.5
1949	151.5	122.3	190.2	266.3	344.6
1950	151.5	130.9	201.9	272.5	381.4
1951	150.1	139.0	206.1	282.5	415.8
1952	150.1	142.6	229.4	298.5	423.7
1953	150.1	150.5	252.7	290.5	420.1
1954	150.1	146.0	220.1	293.4	441.0
1954—					
January	144.0	135.2	258.6	180.9	411.1
February	142.8	140.2	241.8	192.5	397.7
March	144.5	126.1	227.6	203.8	394.0
April	148.0	130.8	238.0	275.7	402.4
May	152.4	142.5	232.4	292.2	397.4
June	157.5	148.8	237.9	270.2	433.9
July	158.4	143.2	223.6	274.4	429.3
August	158.4	157.3	198.3	309.4	449.1
September	149.5	128.8	127.2	309.5	487.5
October	147.5	164.6	162.4	339.5	509.9
November	149.6	179.8	245.1	352.4	502.8
December	147.9	155.0	248.7	514.4	475.2
1955—					
January	141.1	151.0	253.6	200.9	483.1
February	140.7	140.9	269.0	194.3	424.3

changes in total population and population by broad age groups. Table 2 gives the actual figures for Montana.

These figures reveal that Montana compares favorably with the nation in rate of total increase in population, but that both the state and the nation are increasing at a much slower rate than the rapidly growing western region. Montana is gaining young children at a faster rate than the nation, but at a slower rate than the West as a whole. In the school-age group of people 5 to 17 years of age Montana is gaining at about the same rate as the nation, but again the western region is gaining much faster. In the economically productive group of persons between 18 and 64 years of age, the West is showing a substantial increase, the nation as a whole is gaining very slightly, while Montana is actually losing people in this group. Chart I presents these comparisons graphically.

While the Bureau of the Census cautions that these estimates may not be strictly accurate in all cases, they do appear to indicate certain trends of significance in Montana's population as it compares with the nation and with other parts of the country. The rapid growth of population in the West is well illustrated; the Census of 1950 revealed the far western states to be growing at a much higher rate than most

TABLE 2

ESTIMATES OF CIVILIAN POPULATION BY AGE GROUPS, MONTANA, APRIL 1, 1950, AND JULY 1, 1953

Age Group	April 1, 1950	July 1, 1953	Change 1950-1953
Total	589,000	609,000	20,000
Under 5	69,000	75,000	6,000
5-17	127,000	143,000	16,000
18-64	343,000	335,000	-8,000
65 and over	51,000	57,000	6,000

Source: U. S. Bureau of the Census.

¹Index numbers computed from estimates of Unemployment Compensation Commission of Montana. Estimates include all full- and part-time wage and salary workers who worked or received pay during the pay period ending nearest the 15th of the month.

²Index numbers computed from reports of Board of Railroad Commissioners of the State of Montana, comprising total carloadings of freight loaded at Montana points. Daily average.

³Index numbers computed from kilowatt hour sales of Montana Power Co., Montana-Dakota Utilities Co., Pacific Power and Light Co., Bonneville Power Administration, and the Bureau of Reclamation to commercial and industrial users for consumption within Montana, reduced to hourly average kilowatt hours per month.

⁴Index numbers computed from reports of Federal Reserve Bank of Minneapolis, based on dollar sales of 80 to 89 department and general stores in Montana. Daily average.

⁵Index numbers computed from reports of Federal Reserve Bank of Minneapolis, based on data from banks in 16 Montana communities. Daily average.

other regions. This was particularly true of the Pacific Coast states.

The bulk of Montana's population increment is among children under five, youths 5 to 17 years, and persons 65 years and older. The large middle group of people between 18 and 64 years appears to be decreasing in Montana. This is especially signifi-

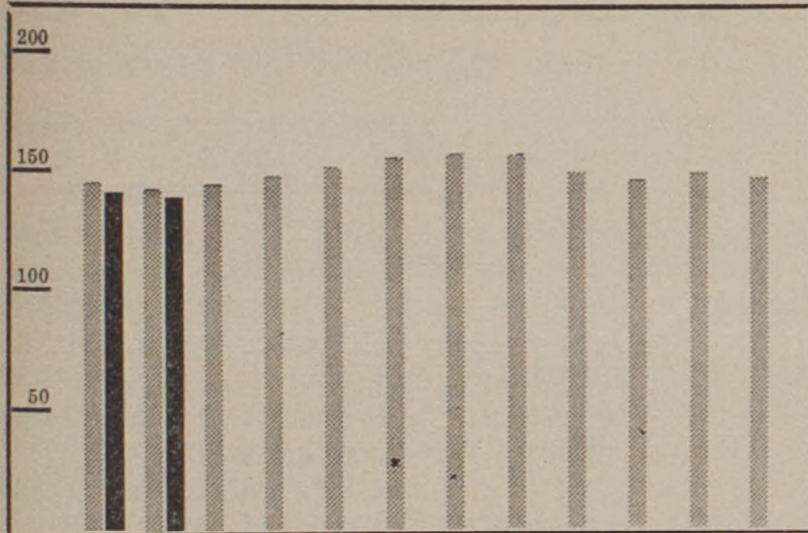
Monthly Indexes of Montana Business Activity, 1954-55¹

1935-39=100

1954
1955

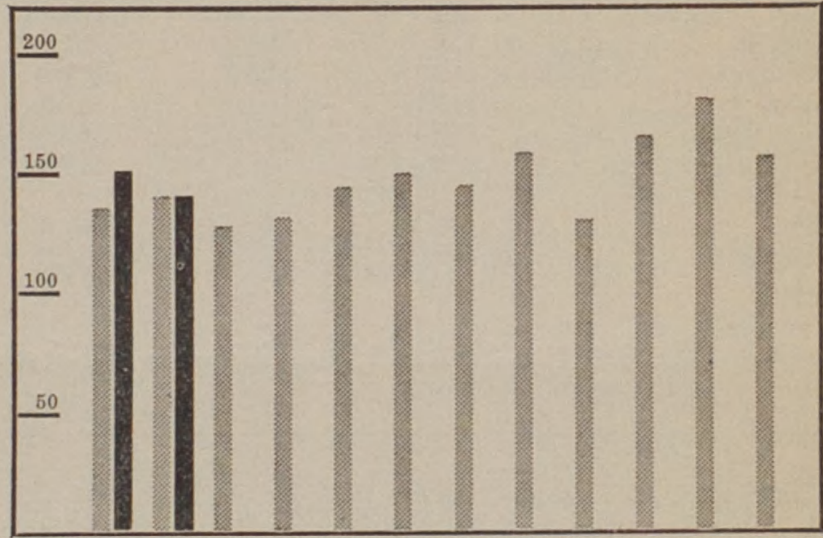
1954
1955

NONAGRICULTURAL EMPLOYMENT (1939=100)



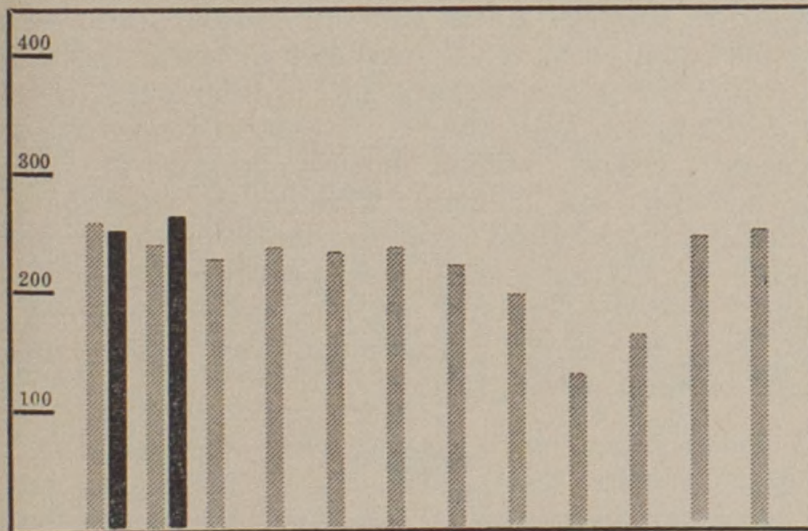
Jan. Feb. Mar. April May June July Aug. Sept. Oct. Nov. Dec.

CARLOADINGS



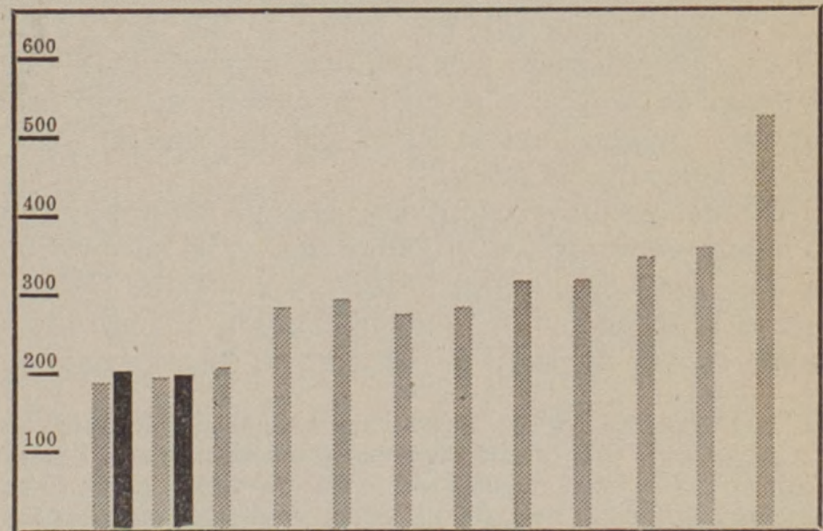
Jan. Feb. Mar. April May June July Aug. Sept. Oct. Nov. Dec.

ELECTRIC POWER CONSUMPTION



Jan. Feb. Mar. April May June July Aug. Sept. Oct. Nov. Dec.

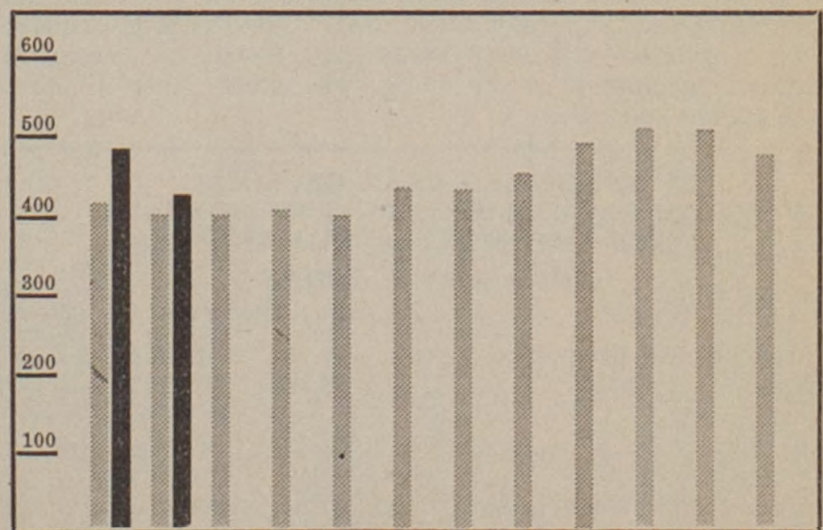
GENERAL STORE SALES



Jan. Feb. Mar. April May June July Aug. Sept. Oct. Nov. Dec.

¹See table on page 2 for explanatory footnotes.

BANK DEBITS



Jan. Feb. Mar. April May June July Aug. Sept. Oct. Nov. Dec.

cant in view of the fact that this group represents the available labor force in the state. The obvious reason for the decline in the group is out-migration which takes people in the economically productive years away from the state. Unless a reversal of this trend takes place, or at least until Montana retains more persons in this middle group, we can expect the state's population to continue heavily weighted in the direction of the very young and those over 65.

The pattern of population development revealed here is likely to result in the emergence and intensification of three types of problems. The most obvious of these is related to the failure of that portion of the population (age group 18 to 64 years) from which the productive labor force is drawn to keep pace with

RETAIL FOOD PRICE INDEX, MONTANA

(May 1950=100)

	All food	Meats, poultry & fish	Dairy products
1954—			
February	114.6	111.1	113.0
March	113.8	109.4	111.7
April	114.7	109.7	109.1
May	116.7	111.8	106.5
June	118.9	111.6	104.3
July	120.8	111.5	106.9
August	118.2	108.0	104.8
September	113.2	103.4	104.8
October	113.7	104.0	107.3
November	108.4	98.3	107.3
December	108.0	97.9	108.2
1955—			
January	109.7	100.6	108.6
February	108.6	101.7	106.5
March	107.4	98.9	108.2

Source: Computed from reports of the Montana Department of Labor and Industry.

other groups. As has been pointed out, this is due to the large number of persons in this age bracket lost to the state through migration. It appears that a considerable portion of this migrant group is composed of young adults. While it is not the purpose of this report to analyze causes of out-of-state migration, it is probable that this loss is due to the lack of extensive employment opportunity in commerce and industry in Montana, and to changes in agricultural practices which have reduced the demand for year-round agricultural labor.¹

Another result of population change is already felt in many communities in Montana. The proportion of children has increased steadily since the Second World War, and with the continuation of high birth rates, shows no signs of decline in the immediate

¹Since the number of employed persons in Montana continues to increase, it may be inferred that the loss indicated by the census estimates is inconsistent with the actual labor force situation in the state. A number of factors might account for this discrepancy. The census estimates are based on civilian population only; this excludes about 4,000 persons in military and other non-civilian categories, most of whom are in the 18-64 age group. If an increasing proportion of this age group is entering employment, it is quite possible that employment figures could rise while the population in the age group is actually declining. Finally, it is possible that a relatively greater error may have been made in estimating change in the 18-64 year group than in other age groups reported.

ESTIMATED CASH RECEIPTS FROM FARM MARKETINGS IN MONTANA, FIRST TWO MONTHS, 1954 AND 1955

(thousands of dollars)

	First Two Months 1954	1955	Percent Change
Livestock and products	17,704	17,451	-1.4
Crops	46,399	40,177	-13.4
Total	64,103	57,628	-10.1

Source: U. S. Department of Agriculture, Agricultural Marketing Service, "The Farm Income Situation," April 1955.

DAILY AVERAGE PRODUCTION OF SELECTED MINERALS IN MONTANA, 1935-39 AND FIRST TWO MONTHS, 1954 AND 1955

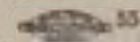
	1935-39	First Two Months 1954	1955
Copper (short tons) ¹	329.8	255.6	249.8
Zinc (short tons) ¹	121.9	262.9	231.8
Lead (short tons) ¹	51.1	63.0	53.3
Silver (fine ounces) ¹	31,398.0	22,761.6	18,960.2
Gold (fine ounces) ¹	651.7	83.9	80.4
Crude oil (thousands of barrels) ²	14.9	33.4	44.2

¹Daily average production computed from reports of U. S. Bureau of Mines.

²Daily average production computed from reports of the Oil and Gas Conservation Commission of Montana.

future. The result is a mounting pressure on services and facilities for children and youths. Most communities in the state are familiar with problems of overcrowded schools, needs for expanded educational plant and equipment, and shortage of qualified teachers. The need for protective and recreational services for children is likewise increasing.

The third point of significance indicated by recent population trends is related to the increasing proportion of older people. While this is not peculiar to Montana, any more than the increasing child population is peculiar to any one state, it merits consideration because of the greater increase for Montana than for other western states and the United States as a whole. Just as material increases in the proportion of children in a population create problems connected with education and other child-centered services, so does an increase in older people emphasize the need for services and facilities directed to this group. Since Montana is not retaining its young adult and middle population groups, a larger proportion of the state's people is moving into the older age groups, and problems of an aging population will become more pressing in the future.



MONTANA BUSINESS

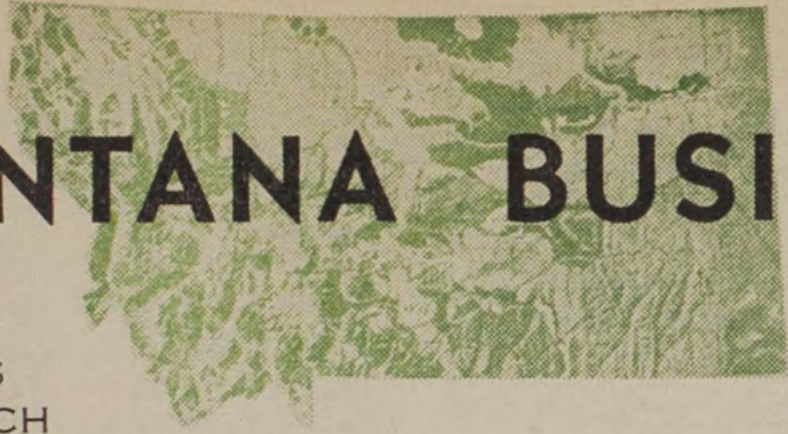
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1955



MONTANA BUSINESS



BUREAU OF BUSINESS
ECONOMIC RESEARCH

Vol. 7 No. 5
May 1955

SCHOOL OF BUSINESS ADMINISTRATION MONTANA STATE UNIVERSITY

FIRST QUARTER RESULTS ENCOURAGING

- Montana department store sales up 7 percent in first quarter over January-March 1954
- Bank debits show gain of 11 percent over first 3 months of last year
- Nonagricultural employment slightly below same months last year
- Prospects for construction good
- Copper, crude oil output increase 4 and 26 percent

With the year well underway, the national economy is continuing the rapid recovery in progress since last fall. Led by three major industries—automobile, construction, and steel—business activity in the nation so far this year has been about on a level with the all-time record set in 1953.

National developments have been reflected in an improved business situation in Montana during the first quarter, compared with the first three months of 1954. Dependent upon national markets as an outlet for its raw materials, the state has an important stake in the maintenance of a high level of industrial activity on a national scale.

Interest now centers on the national outlook for the second half of 1955, with widely divergent opinions being advanced. Some businessmen and econo-

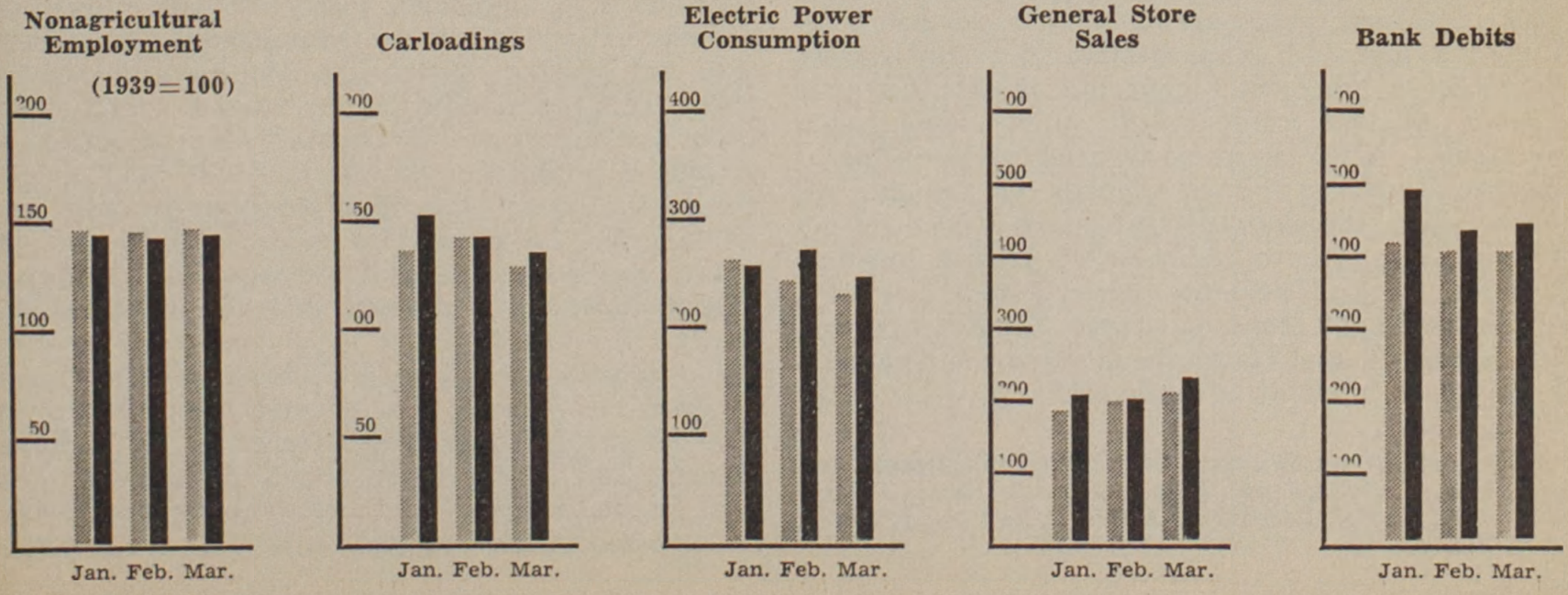
mists feel that the upswing has been too rapid and that the higher it goes the greater will be the let-down. Others feel that there are offsetting factors, notably consumer demand and business capital investments, which will sustain business activity at a high level even though the important automobile, construction, and steel industries fail to keep up the present pace. It is generally agreed that automobile production is almost certain to decline. The current production rate is well in excess of sales and at some point in the near future, whether because of labor difficulties, inventory adjustments, or model changeovers, output is likely to decline. Any setback in auto production will obviously cut considerably into steel output. A slackening in home building also seems probable. Housing construction is running at well over twice the rate of family formation, although housing demand shows a surprising amount of basic strength. The current high birth rate combined with high incomes and easy mortgage credit has created a demand for better and larger homes, but the industry is vulnerable to a decline in income or a tightening of credit.

If some decline occurs in these three basic industries, the question is whether strengths in other seg-

INDEXES OF MONTANA BUSINESS ACTIVITY

1935-39=100

1954 1955



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BUREAU OF BUSINESS AND ECONOMIC RESEARCH

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ments of the economy, particularly consumer markets and business capital investments, will be sufficient to offset them. Consumers on the whole appear to be confident and optimistic. The annual survey of consumer finances, sponsored by the Federal Reserve Board, indicates that consumption expenditures this year will exceed 1954. Capital expenditures by business are also expected to advance, although little change is foreseen in the rate of government spending. Probably a reasonable expectation is that 1955 will be a good, if not a record, year on the national level, with the possibility of some decline during the third quarter, followed by an upturn later in the year.

Montana, which felt the recent decline less than some other, more industrialized areas, has also experienced less of a recovery during the past three months. Comparisons this time of year between the state and the nation are difficult, because Montana, with its rather severe winters, experiences a greater seasonal decline during the first quarter than does the United States as a whole. Business conditions in the state have been good, however, in most respects better than a year ago, although below the record 1953. Montana consumers have indicated their willingness to buy, with January-March department store dollar sales 7 percent higher than during the first quarter of 1954, compared to an 8 percent gain nationally. With the price level about the same as last year, a larger volume of goods sold is indicated. Bank debits (checks written against depositors' accounts), also a good indicator of general business activity, were 11 percent higher than in January-March 1954 in 19 Montana cities.¹ For 338 reporting cities in the United States, the increase was 8 percent.

Partly as a result of unfavorable weather, non-

MONTANA BUSINESS INDEXES¹

(1935-39=100)

Year and Month	Nonagr. Employment	Car-loadings	Elec. Power Consumption	Gen. Store Sales	Bank Debits
1935		110.0	93.7	92.0	92.4
1936		96.6	105.2	100.0	99.4
1937		105.0	109.3	102.6	106.5
1938		85.9	85.5	99.7	95.5
1939	100.0	102.5	106.3	106.0	106.2
1940	105.6	109.8	133.8	111.7	115.4
1941	110.2	122.2	151.2	119.8	134.5
1942	113.8	135.0	165.8	126.5	141.8
1943	112.7	143.8	185.2	126.6	164.9
1944	111.3	150.5	175.4	147.1	178.6
1945	111.3	141.8	157.7	159.5	193.1
1946	123.7	119.9	155.3	215.3	252.2
1947	134.0	131.2	169.7	248.1	300.4
1948	140.9	125.0	178.4	270.9	337.5
1949	142.4	122.3	190.2	266.3	344.6
1950	144.4	130.9	201.9	272.5	381.4
1951	146.4	139.0	206.1	282.5	415.8
1952	150.5	142.6	229.4	298.5	423.7
1953	151.5	150.5	252.7	290.5	420.1
1954	150.1	146.0	220.1	293.4	441.0
1954—					
February	142.8	140.2	241.8	192.5	397.7
March	144.5	126.1	227.6	203.8	394.0
April	148.0	130.8	238.0	275.7	402.4
May	152.4	142.5	232.4	292.2	397.4
June	157.5	148.8	237.9	270.2	433.9
July	158.4	143.2	223.6	274.4	429.3
August	158.4	157.3	198.3	309.4	449.1
September	149.5	128.8	127.2	309.5	487.5
October	147.5	164.6	162.4	339.5	509.9
November	149.6	179.8	245.1	352.4	502.8
December	147.9	155.0	248.7	514.4	475.2
1955—					
January	141.1	151.0	253.6	200.9	483.1
February	140.7	140.9	269.0	194.3	424.3
March	141.7	133.3	245.2	226.5	432.2

¹See April issue for explanatory footnotes.

agricultural employment in Montana thus far has been slightly below the corresponding months of 1954. Nationally, by March nonagricultural employment had climbed a little above March 1954, while in Montana poor weather helped to keep the employment level below last year. Wages and salaries in the state have increased, however, and the outlook for employment during the summer months is good.

Construction activity in the state is expected to continue at a high level this year, with numerous commercial and public projects scheduled or underway and housing construction continuing at a good pace. This combined with the national construction boom also augurs well for the state's lumber industry.

Copper production during the first quarter exceeded the January-March 1954 output by 4 percent, while crude oil production recorded a 26 percent gain over the same months last year. Lead and zinc output, however, declined 5 and 8 percent respectively.

One important segment of the Montana economy—agriculture—has not participated to any extent in the general upswing. Prices received by Montana farmers and ranchers are about the same as last year, as are the prices paid for production and family living items. Cash receipts from agricultural market-

¹Anaconda, Billings, Bozeman, Butte, Cut Bank, Deer Lodge, Glasgow, Glendive, Great Falls, Harlowton, Havre, Helena, Kalispell, Laurel, Lewistown, Malta, Miles City, Missoula, and Sidney.

ings for January and February 1955 were 10 percent below January-February 1954, although receipts for these two months cannot be considered as indicative of agricultural income for the year.

Employment Hampered By Weather, Slightly Lower Than Last Year

The number of wage and salary workers employed in Montana's nonagricultural industries during the first quarter of this year was slightly below January-March 1953 and 1954. All nonagricultural employment except government¹ declined by about 900 workers, or less than 1 percent, from the first quarter of 1954.

The first quarter is typically a period of high seasonal unemployment in Montana as winter weather hampers lumber and construction activity and as the trade and service industries undergo regular seasonal declines. The number of workers employed declined by 18,200 from August 1954 to February 1955. Employment in the state usually increases steadily from February, the low month, till August, when the peak is reached. This year late winter storms have resulted in smaller-than-usual gains in employment. The increase in employed workers from February to March 1955 was only 1,000 compared to a gain of 1,700 from February to March 1954 and an average increase for the past five years of 1,550. Preliminary estimates indicate that unseasonable weather in April further slowed the back-to-work movement. The number of persons seeking work at State Employment Service offices during January-March was slightly higher than last year, averaging over 12,000.

Average employment for the first quarters of 1954 and 1955, by major industry groups, provide interesting comparisons:

Industry Group	First Three Months		Change
	1954	1955	
Total	146,500	143,700	-2,800
Total, except government	117,600	116,700	- 900
Manufacturing	16,600	17,400	800
Mining	11,900	11,300	- 600
Contract construction	6,900	6,500	- 400
Transportation and utilities	21,600	20,500	-1,100
Trade	37,000	37,100	100
Finance, insurance, & real estate	4,900	5,100	200
Services	18,600	18,700	100
Government	28,900	27,000	-1,900 ¹

¹Not a valid comparison due to a change in method of estimating.

Source: Unemployment Compensation Commission of Montana.

The decline in construction employment is largely due to inclement weather conditions during the month of March. With a substantial backlog of con-

struction projects, employment may be expected to increase rapidly with improving weather. It is estimated that work on the new airbase at Glasgow will require from 300 to 500 workers, and that Tiber Dam will again employ 400 to 500 workers. The completion this summer of the Anaconda Aluminum Company plant at Columbia Falls, however, will release a large number of construction workers in that area.

The sizeable decrease in transportation and utilities is of a permanent nature—the result of the transition from coal to diesel oil by the interstate railroads. Mining employment is said to have declined because of a shortage of qualified miners.

Helping to offset these declines was an increase of 800 workers employed in the state's manufacturing industries, particularly in smelting and refining. Further substantial increases in manufacturing employment should occur later this year as the aluminum plant at Columbia Falls is put into production and as aluminum roller mills are added to Anaconda's Great Falls smelter. It is expected that an operating force of from 500 to 600 workers will be required at Columbia Falls and that approximately 200 workers will be added at Great Falls.

Moderate increases over last year in numbers of workers occurred in the finance and trade and service industries.

Average weekly earnings of manufacturing employees in March were estimated at 8 percent above March 1954; weekly wages of mine workers increased 5 percent over the same period. In both cases, higher hourly rates and longer hours accounted for the increase.

Construction Outlook Good

Although hampered by severe weather in March and April, the outlook for the construction industry during the coming months appears to be good. Unfortunately no complete data on volume of construction in the state are available. Miscellaneous reports, however, indicate that housing, commercial, and public construction will maintain high rates of activity this summer.

Among the major projects underway or scheduled for an early start are a \$700,000 shopping center at Great Falls; a new \$3.5 million life insurance building at Helena; two bank buildings and an oil company building at Billings, each at a cost in excess of \$1 million; a 450-mile crude oil pipeline from the Poplar Field to Wyoming; a new lumber mill at Troy; new construction at Montana State College at Bozeman and Montana State University at Missoula; a \$2.5 million high school at Missoula; resumption of construction at Tiber Dam on the Marias River; the new airbase at Glasgow; and numerous highway and bridge projects.

Copper, Crude Oil Production Show Gains

Copper production in Montana for the first three months of this year was 4 percent over the corres-

¹Government employment is omitted because of a change by the Unemployment Compensation Commission in the method of estimating it. The sharp decline shown in the table is chiefly attributable to the change in method rather than to an actual slash in the number of employees.

RETAIL FOOD PRICE INDEX, MONTANA

(May 1950=100)

	All food	Meats, poultry & fish	Dairy products
1954—			
March	113.8	109.4	111.7
April	114.7	109.7	109.1
May	116.7	111.8	106.5
June	118.9	111.6	104.3
July	120.8	111.5	106.9
August	118.2	108.0	104.8
September	113.2	103.4	104.8
October	113.7	104.0	107.3
November	108.4	98.3	107.3
December	108.0	97.9	108.2
1955—			
January	109.7	100.6	108.6
February	108.6	101.7	106.5
March	107.4	98.9	108.2
April	108.6	100.4	105.8

Source: Computed from reports of the Montana Department of Labor and Industry.

ponding period of 1954, the highest level since World War II. A tight national supply situation has encouraged producers to increase their output. The domestic copper price advanced from 33 to 36 cents per pound in March. Mine production of copper in the United States is expected to increase substantially this year unless hampered by strikes or other unforeseen developments, and some authorities expect that as the supply situation eases the price may decline.

The Anaconda Copper Mining Company's annual report disclosed that a new ore body which may prove to be a major low-grade open pit copper mine has been discovered at Butte. A comprehensive exploration and development program is underway and sufficient work has been done to indicate a potential ore reserve of approximately 100 million tons, the report said.

Despite an active demand nationally for lead and zinc, production in Montana declined 5 and 8 percent respectively from the January-March 1954 level. Gold and silver production also decreased.

The production of crude oil in Montana averaged 44,300 barrels per day during January-March of this year, or 26 percent above the corresponding months of 1954. Largest producing field was the Poplar, with 25 percent of total production.

Little Change in Agricultural Situation

Nationally and in Montana, the agricultural segment of the population has not shared in the recovery movement. Average prices received by Montana farmers and ranchers for all commodities on March 15 were about the same as a year ago, with the index at 89 (1947-49=100). The index of prices paid for family living and farm production stood at 117, also little changed from last year.

Total cash receipts from farm marketings in the state during January-February were 10 percent below January-February 1954. Receipts from live-

DAILY AVERAGE PRODUCTION OF SELECTED MINERALS IN MONTANA, 1935-39 AND FIRST THREE MONTHS, 1954 AND 1955

	1935-39	First Three Months 1954	Months 1955
Copper (short tons) ¹	329.8	247.1	257.4
Zinc (short tons) ¹	121.9	251.8	231.6
Lead (short tons) ¹	51.1	60.5	57.5
Silver (fine ounces) ¹	31,398.0	22,913.6	18,385.1
Gold (fine ounces) ¹	651.7	84.5	80.4
Crude oil (thousands of barrels) ²	14.9	35.2	44.3

¹Daily average production computed from reports of U. S. Bureau of Mines.

²Daily average production computed from reports of the Oil and Gas Conservation Commission of Montana.

stock showed a 1 percent decline and crop receipts were down 13 percent. Cash receipts for these two months are not, of course, indicative of agricultural income for the year.

Nationally, the United States Department of Agriculture expects some decline in agricultural gross income this year. Total volume of marketings in the United States are expected to be somewhat smaller and prices a little lower. Farm production costs may also decline slightly, but the chances are that the decline will not fully compensate for the expected decline in gross income.

In Montana, livestock marketings will be heavy this year with record numbers of cattle on ranches in the state. Prices are expected to be about the same as in 1954. It is too early for predictions as to the total state wheat crop this year, with spring wheat seeding not yet completed. The Montana Crop and Livestock Reporting Service reports, however, that the winter wheat outlook was very favorable as of May 1, with prospects of a record crop. Prices for the 1955 wheat crop will be supported at 82½ percent of the parity price, to be set at the beginning of the 1955-1956 marketing year, but not less than a national average of \$2.06 per bushel. The national average for the 1954 crop was \$2.24 determined on a basis of 90 percent of parity as of July 1, 1954.

BY MAXINE JOHNSON



MONTANA BUSINESS

Bureau of Business
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Montana State University
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MONTANA BUSINESS

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ECONOMIC RESEARCH

Vol. 7 No. 6
June 1955

SCHOOL OF BUSINESS ADMINISTRATION MONTANA STATE UNIVERSITY

MONTANA'S CHANGING AGRICULTURE

Preliminary reports of the 1954 Census of Agriculture indicate that—

- Size of ranches in Montana is continuing to increase; number of ranches is declining
- More farm equipment is being used
- Most Montana ranchers own or are buying their ranches
- Living standards are improving rapidly

Much publicity is currently being given to industrial change—to new methods of technology, new products, and other developments. Less attention has been devoted to the rapidly-changing aspects of agriculture. Because of the agricultural nature of Montana's economy, these changes are probably of more immediate significance to the state than are the new developments in industry. Every year, Montana farmers and ranchers apply new crop and livestock practices; use more trucks and tractors and other farm equipment, more chemicals, fertilizers, and drugs; and consume more electric power. In addition to the rapid technological progress, other changes are occurring. The size of farm and ranch units has continued to increase, a trend in progress since 1925, and the standard of living of rural families has also shown great improvement.

Larger ranches create more stability . . .

Since original acreages under the homestead laws proved too small for profitable farming in Montana, the size of farm and ranch units has been increasing. Between 1925 and 1950, the average size of unit in the state increased from 698 acres to 1,689 acres. During the same period, the total number of farms and ranches declined from 46,904 to 35,085. Since 1950, the trend toward fewer and larger units has continued. Preliminary reports of the 1954 Census of Agriculture, available now for 13 Montana counties, confirm this. (Table 1.) The number of farms and ranches in these counties (Glacier, Golden Valley, Granite, Jefferson, Lincoln, Mineral, Missoula, Musselshell, Petroleum, Pondera, Sanders, Treasure, and Wheatland) has declined 6 percent

since 1950, date of the previous agricultural census. The increases in average size of farm or ranch in 12 of these counties ranged from 5 percent in Jefferson County to 58 percent in Glacier County; only in Wheatland did the average size decrease (1 percent).¹

The figures on average size tend to obscure the many very small operations in the state and those which are only part-time farms. Also, not all of the increase was due to consolidation of units; in some instances acreage not previously incorporated in farms and ranches was added.

The growth in size of units has been made possible by the increased mechanization of agricultural operations, replacing hand labor and the horse, which, except for pleasure purposes, is rapidly disappearing from the scene. The rate of increase in mechaniza-

¹These figures, and others quoted from the 1954 Census of Agriculture, are preliminary and subject to revision. The 13 counties cited are not necessarily representative of the entire state insofar as degree of change is concerned, but they are undoubtedly typical with respect to direction of movement.

Table 1

NUMBER OF FARMS AND RANCHES, AND AVERAGE SIZE OF FARM AND RANCH, 13 MONTANA COUNTIES, 1950 AND 1954

County	Number of Farms and Ranches		Average Size of Farms and Ranches (acres)		
	1950	1954	1950	1954	% change
Glacier	452	385	2,257	3,555	58
Golden Valley	225	197	3,072	3,338	9
Granite	190	181	1,621	1,886	16
Jefferson	281	274	1,369	1,441	5
Lincoln	396	387	270	307	14
Mineral	94	85	324	393	21
Missoula	594	642	482	618	28
Musselshell	309	259	3,260	4,321	33
Petroleum	160	140	3,354	4,940	47
Pondera	688	696	1,187	1,278	8
Sanders	712	591	561	839	50
Treasure	163	148	2,965	3,253	10
Wheatland	192	201	4,425	4,370	- 1

Source: 1954 Census of Agriculture, preliminary reports.

MONTANA BUSINESS

June 1955

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THEODORE H. SMITH, Dean

BUREAU OF BUSINESS AND ECONOMIC RESEARCH

Member, Associated University Bureaus of Business and Economic Research

HAROLD J. HOFLICH, Director

MAXINE JOHNSON, Research Associate

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MONTANA BUSINESS INDEXES

(1935-39=100)

Year and Month	Nonagr. Employment ¹	Car-loadings ²	Elec. Power Consumption ³	Gen. Store Sales ⁴	Bank Debts ⁵
1935	—	110.0	93.7	92.0	92.4
1936	—	96.6	105.2	100.0	99.4
1937	—	105.0	109.3	102.6	106.5
1938	—	85.9	85.5	99.7	95.5
1939	100.0	102.5	106.3	106.0	106.2
1940	105.6	109.8	133.8	111.7	115.4
1941	110.2	122.2	151.2	119.8	134.5
1942	113.8	135.0	165.8	126.5	141.8
1943	112.7	143.8	185.2	126.6	164.9
1944	111.3	150.5	175.4	147.1	178.6
1945	111.3	141.8	157.7	159.5	198.1
1946	123.7	119.9	155.3	215.3	252.2
1947	134.0	131.2	169.7	248.1	300.4
1948	140.9	125.0	178.4	270.9	337.5
1949	142.4	122.3	190.2	266.3	344.6
1950	144.4	130.9	201.9	272.5	381.4
1951	146.4	139.0	206.1	282.5	415.8
1952	150.5	142.6	229.4	298.5	423.7
1953	151.5	150.5	252.7	290.5	420.1
1954	150.1	146.0	220.1	293.4	441.0
1954—					
March	144.5	126.1	227.6	203.8	394.0
April	148.0	130.8	238.0	275.7	402.4
May	152.4	142.5	232.4	292.2	397.4
June	157.5	148.8	237.9	270.2	433.9
July	158.4	143.2	223.6	274.4	429.3
August	158.4	157.3	198.3	309.4	449.1
September	149.5	128.8	127.2	309.5	487.5
October	147.5	164.6	162.4	339.5	509.9
November	149.6	179.8	245.1	352.4	502.8
December	147.9	155.0	248.7	514.4	475.2
1955—					
January	141.1	151.0	253.6	200.9	483.1
February	140.7	140.9	269.0	194.3	424.3
March	141.7	133.3	245.2	226.5	432.2
April	145.7	136.1	254.4	303.8	425.2

tion has perhaps slackened in recent years, but it has by no means ceased. Looking again at the preliminary 1954 data for the 13 counties mentioned above, one finds that the number of trucks on farms and ranches in those counties increased 29 percent in the four-year period 1950 to 1954. At the same time, the number of tractors increased an amazing 41 percent. (Table 2.) In per-farm figures—an unrealistic average, but indicative of the rate of increase—there were in 1950 .98 trucks and 1.01 tractors per farm or ranch and in 1954, 1.35 trucks and 1.51 tractors.

On the whole, the increased size of farm and ranch units has resulted in a more stable agriculture, as some of the marginal operators have been weeded out and farms and ranches have been combined into more efficient units. The increase in size over the years has been accompanied by improved methods of farming. A large proportion of Montana farmers and ranchers are keeping pace with new developments in agricultural science. The application of scientific soil management, use of new crop varieties better adapted to Montana's climate, control of diseases and pests, and improvement in livestock quality, has placed the state's agricultural industry on a much sounder basis. Adverse weather conditions or low prices can still bring hardship,

Table 2

NUMBER OF AUTOMOBILES, TRUCKS, AND TRACTORS ON FARMS AND RANCHES, 13 MONTANA COUNTIES, 1950 AND 1954

	— Total Number —			Number per Percent Farm/Ranch	
	1950	1954	Increase	1950	1954
Automobiles	3,938	4,654	18	.88	1.11
Trucks	4,353	5,636	29	.98	1.35
Tractors	4,483	6,328	41	1.01	1.51

Counties: Glacier, Golden Valley, Granite, Jefferson, Lincoln, Mineral, Missoula, Musselshell, Petroleum, Pondera, Sanders, Treasure, Wheatland.

Source: 1954 Census of Agriculture, preliminary reports.

¹Index numbers computed from estimates of Unemployment Compensation Commission of Montana. Estimates include all full- and part-time wage and salary workers who worked or received pay during the pay period ending nearest the 15th of the month.

²Index numbers computed from reports of Board of Railroad Commissioners of the State of Montana, comprising total carloadings of freight loaded at Montana points. Daily average.

³Index numbers computed from kilowatt hour sales of Montana Power Co., Montana-Dakota Utilities Co., Pacific Power and Light Co., Bonneville Power Administration, and the Bureau of Reclamation to commercial and industrial users for consumption within Montana, reduced to hourly average kilowatt hours per month.

⁴Index numbers computed from reports of Federal Reserve Bank of Minneapolis, based on dollar sales of 80 to 89 department and general stores in Montana. Daily average.

⁵Index numbers computed from reports of Federal Reserve Bank of Minneapolis, based on data from banks in 16 Montana communities. Daily average.

but the better-managed, economic-sized ranch units are in a much stronger position today than in earlier years.

... and some new problems

Other consequences of the increase in size of ranches have had less favorable repercussions. There are those who fear that the continuing increase in

size of ranch and in capital investment required may lead to more and more corporate farming enterprises and fewer family-operated units, a development generally considered as socially undesirable. With larger acreages, the amount of costly equipment needed, and the high operating costs, it is becoming increasingly difficult for interested individuals to acquire the capital required to enter the farming or ranching business. Not many years ago, in Montana's pioneer era, land was free or nearly so, and capital requirements for buildings and equipment were small. With hard work and frugality one might get a start in ranching. Life was frequently harsh, but many succeeded in building up profitable operations. Today the initial high investment is a difficult obstacle for many persons. Among established ranch families with several children, the question of who should continue the operation of the ranch and what opportunities can be provided for the others frequently arises. The result is that the rural population continues to decline, with rural families and especially rural youth moving to Montana's towns and cities, or in many cases out of the state. In addition to the loss of rural population among farm operators and their families, as farm mechanization increases the need for hired farm labor declines, releasing additional workers who must be absorbed in the nonagricultural labor force. No current, rural-farm population figures are available, but between 1940 and 1950, rural-farm population in Montana declined from 176,000 to 136,000—23 percent. There is little doubt that the decline in rural-farm population is still in progress. To keep these people in the state, opportunities in nonagricultural occupations must be provided for them. Available evidence indicates that a considerable amount of Montana's loss of population through out-migration in the past two decades has occurred among rural residents.

Proportion of ranch tenancy low

As recently as 1940, 28 percent of all Montana farms and ranches were occupied by tenants. One of the encouraging signs to come from the 1950 Census of Agriculture was the fact that the tenancy rate had dropped to 15 percent for the state as a whole, with 85 percent of farms and ranches either fully or partly owned by the operators. (Table 3.) As preliminary reports of the 1954 Census become available, there appears to have been little change in the ownership pattern. The proportion of tenancy in the 13 counties for which data are available, slightly lower than for the state as a whole in 1950, showed no change in 1954. There were somewhat fewer ranches fully owned by the operator and more which were only partly owned.

Managerial ability assumes new importance

One of the less obvious changes taking place in the field of agriculture is the increasing complexity of profitable ranch management. It used to be said that if a person couldn't do anything else he

could farm. Today the successful ranch operator needs a wide variety of skills—technical, financial, and economic. In the past few years, with lower agricultural prices and high operating costs, managerial ability has become more important than ever. To maintain a competitive position the ranch operator must keep abreast of new and more efficient methods of production. The large investment required for land and buildings, equipment, and other productive assets, plus the necessity of adequate working capital, make financial ability a prime requisite. On the economic side, a knowledge of prices and markets and an understanding of changing economic conditions are important.

The factors which have contributed to the increasing significance of management practices will undoubtedly become more important in the future. Thus the premium placed on managerial skills and adaptability will become even greater. Ranchers are going to have to continue looking for better ways of doing things if they are to keep up in the race.

Standard of living improves . . .

Not the least of the changes which are occurring in Montana agriculture is the tremendous increase in the standard of living which has been in progress over the past two decades. Modern ranch homes today compare favorably with those in the city and many, although not all, rural families enjoy most of the conveniences available to urban residents. The rapidity of the change is remarkable; as recently as 1940, for example, only 28 percent of Montana

Table 3
FARMS AND RANCHES BY TENURE OF OPERATOR, ALL MONTANA COUNTIES, 1950, AND 13 MONTANA COUNTIES, 1950 AND 1954
(percent of total)

	All Montana Counties		13 Montana Counties ¹	
	1950		1950	1954
Full owners	46		50	47
Part owners	39		38	40
Managers	— ²		— ²	1
All tenants	15		12	12
Total	100		100	100

¹For names of counties, see Table 2.

²Less than 1 percent.

Source: 1950 Census of Agriculture and 1954 Census of Agriculture, preliminary reports.

Table 4
NUMBER OF FARMS AND RANCHES WITH TELEPHONES, ELECTRIC POWER, PIPED RUNNING WATER, AND HOME FREEZERS, 13 MONTANA COUNTIES, 1950 AND 1954

	Number		Percent of Total Increase (1954)	
	1950	1954		
Telephones	1,144	1,589	39	38
Electricity	3,074	3,715	21	89
Piped running water	— ¹	2,322	— ¹	67
Home freezers	641	1,899	196	45

¹Not available

Counties: See Table 2.

Source: 1954 Census of Agriculture, preliminary reports.

RETAIL FOOD PRICE INDEX, MONTANA

(May 1950=100)

	All food	Meats, poultry & fish	Dairy products
1954—			
April	114.7	109.7	109.1
May	116.7	111.8	106.5
June	118.9	111.6	104.3
July	120.8	111.5	106.9
August	118.2	108.0	104.8
September	113.2	103.4	104.8
October	113.7	104.0	107.3
November	108.4	98.3	107.3
December	108.0	97.9	108.2
1955—			
January	109.7	100.6	108.6
February	108.6	101.7	106.5
March	107.4	98.9	108.2
April	108.7	100.4	106.9
May	108.0	99.6	105.4

Source: Computed from reports of the Montana Department of Labor and Industry.

farms and ranches were wired for electricity; just 17 percent had telephones. The improvement in rural living standards is still in progress, as evidenced by the figures in Table 4. In the relatively short space of four years, from 1950 to 1954, in the 13 counties for which census data are now available, the number of ranches with telephones increased 39 percent; with electricity, 21 percent; and with home freezers, 196 percent. Further progress, of course, is both possible and desirable. Although 89 percent of the farms and ranches in the 13 counties enumerated had electric power in 1954, only 67 percent, or two-thirds, had piped running water, and 38 percent had telephones.

The number of automobiles on farms and ranches in the same counties increased 18 percent between 1950 and 1954. (Table 2.)

... and dependence upon others increases

Accompanying the higher standard of living enjoyed by rural families is a much greater degree of dependence upon others. In the pioneer days, practically everything used for family living and farm production was produced on the ranch. In recent years, farmers and ranchers have become progressively better customers for local business firms. Today many food items and much of the clothing formerly produced on the ranch are purchased in town. The electrification of most ranches in the state opened up a large market for home appliances. As communication and transportation improved, increased contact with towns and cities resulted in rural people wanting — and getting — many of the conveniences formerly common only in urban areas, in the meanwhile becoming more dependent upon outside sources for goods and services. All of these changes have made rural life easier and much more pleasant; they have also vastly increased the money expenditures necessary for rural family living.

In the realm of farm production, off-the-ranch pur-

DAILY AVERAGE PRODUCTION OF SELECTED MINERALS IN MONTANA, 1935-39 AND FIRST FOUR MONTHS, 1954 AND 1955

	1935-39	First Four Months	
		1954	1955
Copper (short tons) ¹	329.8	246.2	262.4
Zinc (short tons) ¹	121.9	248.0	228.0
Lead (short tons) ¹	51.1	58.6	56.8
Silver (fine ounces) ¹	31,398.0	21,252.0	18,545.3
Gold (fine ounces) ¹	651.7	86.3	77.5
Crude oil (thousands of barrels) ²	14.9	35.6	44.3

¹Daily average production computed from reports of U. S. Bureau of Mines.

²Daily average production computed from reports of the Oil and Gas Conservation Commission of Montana.

chases have also expanded greatly. Items such as seed and feed or feed supplements are increasingly supplied by outside sources. The use of fertilizers and chemicals and drugs (new and improved products of which are being constantly developed) has grown tremendously in recent years as agriculture becomes more and more scientific in its methods. Farm equipment has come to constitute a larger proportion of the total ranch investment. Production has increased and become more efficient, but cash outlays are necessarily larger, creating a demand on the part of farmers and ranchers for more short-term credit and increasing their reliance on their local bank. The volume of short-term non-real estate loans by Montana banks to ranchers has increased substantially in recent years.

The outlook: promising

Despite the difficulties which have beset Montana agriculture in the past, progress has been rapid. As the new Census of Agriculture reports are released, we may expect that they will confirm the impression that improvement in living standards and production is still underway, contributing to the stability of the agricultural sector of the state and to its ability to solve present problems and weather any future temporary setbacks.

—BY MAXINE JOHNSON



MONTANA BUSINESS

Bureau of Business
and Economic Research
Montana State University
Missoula, Montana

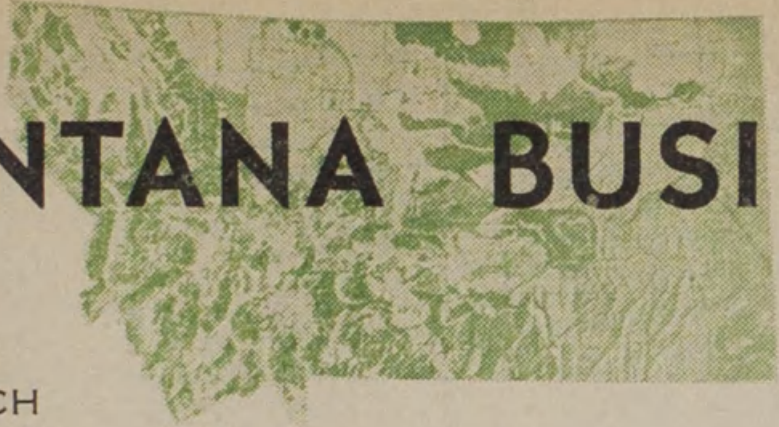
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1955

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MONTANA BUSINESS



BUREAU OF BUSINESS
ECONOMIC RESEARCH

Vol. 7 No. 7
July 1955

SCHOOL OF BUSINESS ADMINISTRATION MONTANA STATE UNIVERSITY

BUSINESS IMPROVES IN 1955

The business recovery in Montana which was apparent in results for the first quarter of 1955 gathered momentum during April and May. Non-farm employment, which had been lagging, finally made a slightly better than seasonal gain in May. Unfavorable weather impeded construction activity, but the outlook for the year remained most favorable. Department store sales showed surprising strength, running well ahead of last year all through the first five months of 1955, partly because more goods were sold on credit. Bank debits continued to set new records. One of the most significant gains was in copper production, which was at the highest level since World War II. Petroleum output again showed substantial increases.

The agricultural sector of the economy did not appear to be sharing in the general recovery movement, with cash receipts for the first four months of the year nearly 10 percent under last year. There are two factors, however, which should make up at least part of this deficiency as the year progresses. In the first place, prices of both livestock and crops have increased gradually during the first six months of the year. Furthermore, the July 1 crop forecast indicates substantially heavier crops this year than in 1954.

Employment lags slightly through April, but exceeds last year in May

During the first four months of 1955 the number of workers employed in the state's nonagricultural industries lagged slightly behind the same months of last year. In May, however, all nonagricultural employment except government¹ exceeded May 1954

¹Government employment is omitted because of a change in the method of estimating by the Unemployment Compensation Commission.

by about 300 workers. The following figures for 1954 and 1955 show estimated numbers of workers in nonfarm employment:

Total, except			
Government	1954	1955	Net Change
January	118,100	116,600	-1,500
February	116,600	116,400	-200
March	118,000	117,100	-900
April	121,400	120,500	-900
May	125,700	126,000	+300
Total, including			
Government			
May	155,100	154,100	-1,000 ¹

These estimates show a better January to May gain this year than last, and preliminary estimates indicate a strengthening of this trend in June. A continuation of the upward swing could result in higher average employment this year than in 1954.

The April to May seasonal expansion occurred principally in contract construction, with 2,600 more men employed. The increase would have been greater with more favorable weather conditions. Other substantial gains were in lumber and timber products, 900; retail trade, 700; and services, 500.

Comparison of employment levels for May with those of a year ago reveals increases of 400 in manufacturing, 400 in trade, and 400 in finance, insurance and real estate. Transportation employment declined 600 and mining 300.

While only a few more workers were employed in nonfarm jobs in May than a year earlier, many were more fully employed at better wages. Because of increases in the work week and in hourly earnings, average weekly earnings expanded from \$78.25 to \$81.93 in manufacturing, from \$81.13 to \$83.71 in mining, and from \$74.70 to \$79.07 in transportation and utilities (not including railroads).²

Despite the lag in nonagricultural employment this year, reports from the State Employment Service indicate that unemployment is moderately be-

¹Not a valid comparison. The apparent sharp decline is attributable largely to the change in the method of estimating government employment.

²Preliminary estimates of Unemployment Compensation Commission of Montana.

NO AUGUST ISSUE

Because of the temporary closing of the University Press, Montana Business will not be published in August. The next issue will appear in September.

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(1935-39=100)

Year and Month	Nonagr. Employment	Car-loadings	Elec. Power Consumption	Gen. Store Sales	Bank Debits
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1938		85.9	85.5	99.7	95.5
1939	100.0	102.5	106.3	106.0	106.2
1940	105.6	109.8	133.8	111.7	115.4
1941	110.2	122.2	151.2	119.8	134.5
1942	113.8	135.0	165.8	126.5	141.8
1943	112.7	143.8	185.2	126.6	164.9
1944	111.3	150.5	175.4	147.1	178.6
1945	111.3	141.8	157.7	159.5	198.1
1946	123.7	119.9	155.3	215.3	252.2
1947	134.0	131.2	169.7	248.1	300.4
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1955—					
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February	140.7	140.9	269.0	194.3	424.3
March	141.7	133.3	245.2	226.5	432.2
April	145.7	136.1	254.4	303.8	425.2
May	151.4	152.2	255.2	306.9	466.0

¹See June issue for explanatory footnotes.

low last year. On May 25 the number of active job applicants was 5,565 compared to 6,191 in May 1954. It appeared from field office reports that June and July employment levels also would be lower than in the same months of last year.

Construction prospects continue favorable

From February through April construction activity in the state ran a little behind the same three months last year but in May appeared to be about the same as in May 1954. This generalization is supported by the estimates of numbers employed in contract construction during the first five months of 1954 and 1955:

	Jan.	Feb.	March	April	May
1954	6,500	6,800	7,500	8,300	10,100
1955	6,600	6,500	6,500	7,500	10,100

An indication of the volume of construction planned is furnished by the following building permit valuations in ten Montana cities:¹

	Jan.-May 1954	Jan.-May 1955
Anaconda	\$ 215,440	\$ 316,040
Billings	5,362,420	4,363,600
Bozeman	239,950	283,950
Butte	391,350	421,960
Great Falls	1,526,200	2,485,780
Helena	1,566,420	727,740
Kalispell	90,080	430,540
Malta	244,950	123,200
Miles City	181,380	372,640
Missoula	986,050	694,760
Total	\$10,804,240	\$10,220,210

These building permit figures are far from complete, representing only construction planned within the corporate limits of ten Montana cities. Nevertheless, they do furnish significant evidence that the planned volume of construction is holding up very well this year, with the value of permits in ten im-

¹Federal Reserve Bank of Minneapolis.

portant communities during January-May being only slightly below the same period last year.

Although building activity in May probably equalled that of May 1954, it should be noted that a good many construction projects were delayed by adverse weather this May. This will mean correspondingly higher activity during the summer months.

Department store sales still climbing

The dollar sales of Montana's department and general stores steadily expanded during the first five months of this year. For every month during January-July 1955 daily average sales exceeded those of the corresponding month of 1954. In April and May all-time records were set for those months, with sales 10 percent and 5 percent respectively above April and May 1954. For the entire five months period this year, dollar sales were nearly 8 percent greater than during the same period in 1954. With the price level about the same, it may be concluded that the physical volume of sales was roughly 8 percent greater in January-May 1955.

With employment a little behind last year, at least through April, it is interesting to speculate why general store sales increased so markedly. Two

probable factors should be mentioned, but others doubtless were present. For one thing, as noted above, many workers were receiving more money per week than in 1954, because of a longer work week and higher hourly earnings. Thus, purchasing power was relatively higher than the employment figures would indicate.

Furthermore, the increase in sales in 1955 probably was financed to an increasing extent by credit. Credit statistics for Montana are not available, but there is abundant evidence of substantial increases in the volume of credit, especially consumer installment credit, in the nation as a whole and in the Ninth Federal Reserve District. According to Federal Reserve reports, in the Minneapolis District total department store sales in May 1955 were 3 percent higher than in May 1954. Cash sales, however, were down 2 percent while charge sales were up 4 percent, and instalment sales were 10 percent greater than a year earlier. At the end of May 1955 the volume of ordinary charge accounts was only one percent higher than a year earlier but instalment accounts were up 38 percent. Similar developments in Montana would account for a significant share of the expansion in sales.

Bank debits reach new peaks

Bank debits (charges against depositors' accounts, principally checks) in 19 Montana cities¹ continued to expand as each month during January-May reached an all-time peak for that particular month. May debits were 17 percent greater than in May 1954. The aggregate for the five months exceeded the same period in 1954 by 11 percent.



Bank debits, reflecting the activity of bank accounts, generally are considered to be fairly satisfactory indicators of business activity. It is interesting therefore that bank debits are so much higher during 1955, as compared to 1954, than such significant indexes as nonagricultural employment and general store sales. In several earlier periods, the high increase in bank debits was caused in large part by inflation. This is not true of 1955. One reason for the relatively heavy increase this year is the greater use of credit, most of which results in a proportionate increase in bank deposits which are then drawn upon to swell bank debits. Any increased use of bank deposits for speculative purposes also would boost debits without a like increase in such indicators as employment and retail trade. Some distortion may be caused by the fact that the debits of the smaller country banks are not included.

The greatest percentage increase in January-May 1955 bank debits over January-May 1954 occurred in Kalispell with a growth of 31 percent, followed by

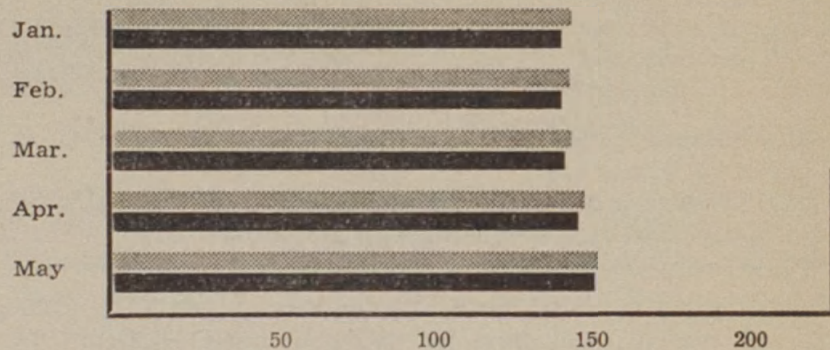
¹Anaconda, Billings, Bozeman, Butte, Cut Bank, Deer Lodge, Glasgow, Glendive, Great Falls, Harlowton, Havre, Helena, Kalispell, Laurel, Lewistown, Malta, Miles City, Missoula and Sidney.

INDEXES OF MONTANA BUSINESS ACTIVITY

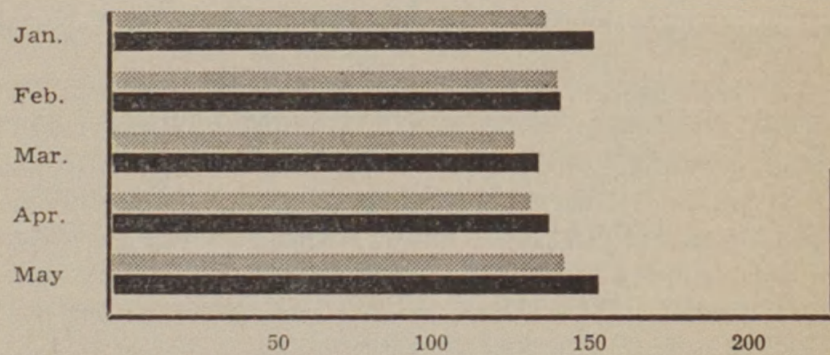
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1954 
1955 

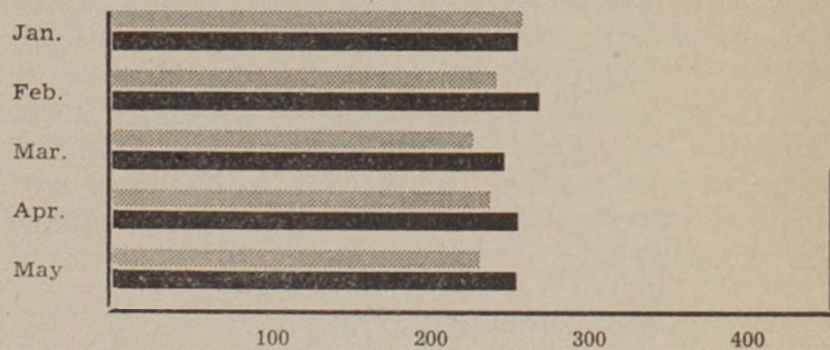
NONAGRICULTURAL EMPLOYMENT



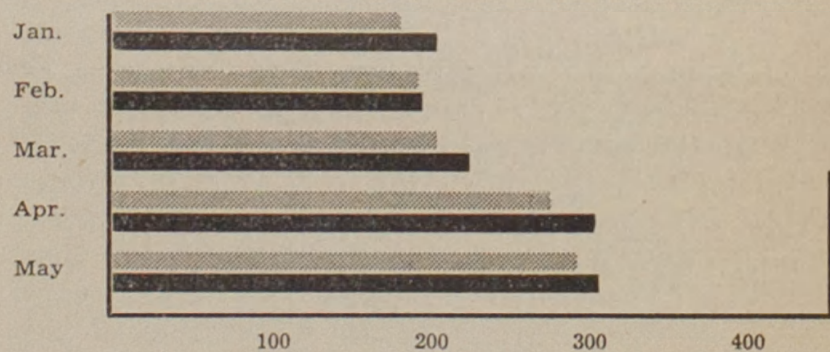
CARLOADINGS



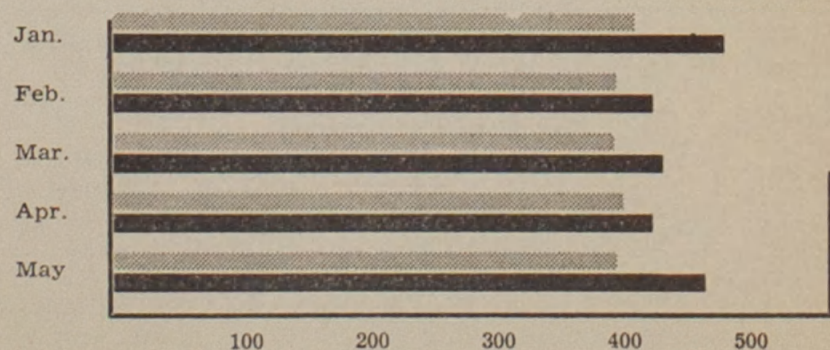
ELECTRIC POWER CONSUMPTION



GENERAL STORE SALES



BANK DEBITS



DAILY AVERAGE PRODUCTION OF SELECTED MINERALS IN MONTANA, 1935-39 AND FIRST FIVE MONTHS, 1954 AND 1955

	1935-39	First Five Months	
		1954	1955
Copper (short tons) ¹	329.8	247.0	267.0
Zinc (short tons) ¹	121.9	253.0	229.6
Lead (short tons) ¹	51.1	58.6	57.1
Silver (fine ounces) ¹	31,398.0	21,279.9	18,355.0
Gold (fine ounces) ¹	651.7	85.3	77.8
Crude oil (thousands of barrels) ²	14.9	36.1	43.9

¹Daily average production computed from reports of U. S. Bureau of Mines.

²Daily average production computed from reports of the Oil and Gas Conservation Commission of Montana.

Missoula with 21 percent, Bozeman 18 percent, Helena 15 percent, Havre 13 percent, and Billings 12 percent.

Copper and petroleum output up

Montana copper production in the first five months of 1955 was 8 percent above the same period in 1954 and at the highest level since 1945. The May output topped that of May 1954 by 14 percent. Nationally, the copper shortage persisted through May, in spite of higher output and the release of tonnage by the government. The domestic price had advanced in March from 33 to 36 cents per pound.

The demand for zinc and lead also continued strong but production in Montana was 9 and 3 percent respectively below that of January-May 1954. Gold and silver production were also down.

The production of crude oil from Montana fields continued to expand in 1955. The total output of more than 6.6 million barrels during the first five months was 22 percent above the corresponding period last year.

Farm income down but crop prospects favorable

Montana farmers' and ranchers' cash receipts in the first four months of 1955 totaled approximately \$89.5 million, 9.5 percent less than in the same months of last year. Dollar receipts from the sale of crops were down 11.7 percent while livestock receipts were 5.3 percent lower. A slightly greater decline in physical volume is indicated, since prices of all farm products averaged slightly lower than in 1954. During January-April 1955 the average price of all crops was 4.4 percent higher than during the same months of 1954, while livestock and livestock products prices averaged about 2 percent lower.

ESTIMATED CASH RECEIPTS FROM FARM MARKETINGS IN MONTANA, FIRST FOUR MONTHS, 1954 AND 1955

	First Four Months		Percent Change
	1954	1955	
Livestock and products	33,852	32,049	- 5.3
Crops	65,062	57,452	- 11.7
Total	98,914	89,501	- 9.5

Source: U. S. Department of Agriculture, Agricultural Marketing Service.

RETAIL FOOD PRICE INDEX, MONTANA

(May 1950=100)

	All food	Meats, poultry & fish		Dairy products
1954—				
June	118.9	111.6	104.3	
July	120.8	111.5	106.9	
August	118.2	108.0	104.8	
September	113.2	103.4	104.8	
October	113.7	104.0	107.3	
November	108.4	98.3	107.3	
December	108.0	97.9	108.2	
1955—				
January	109.7	100.6	108.6	
February	108.6	101.7	106.5	
March	107.4	98.9	108.2	
April	108.7	100.4	106.9	
May	108.0	99.6	105.4	
June	106.8	102.2	105.8	

Source: Computed from reports of the Montana Department of Labor and Industry.

According to the July 1 crop report¹ it is anticipated that Montana farmers will produce 11 percent more of the state's 12 major crops in 1955 than in 1954, and 20 percent more than the 1944-1953 ten-year average. Prospects are said to be exceptionally good in nearly all sections of the state.

The total 1955 wheat crop is forecast at 89,115,000 bushels. This is 16 percent above last year, but 22 percent below the 1953 bumper harvest. The spring wheat crop is expected to be 48,963,000 bushels, 14 percent higher than last year. Winter wheat is forecast at 40,152,000, nearly 20 percent over 1954. Prospects are generally good for feed grain and hay. While sugar beet prospects are said to be promising in most sections, the 1955 forecast is for 662,000 tons, 3 percent less than in 1954. The beet acreage is about 9 percent smaller this year.

¹Agricultural Marketing Service, U. S. Department of Agriculture.

—H.J.H.



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BUREAU OF BUSINESS
& ECONOMIC RESEARCH

SCHOOL OF BUSINESS ADMINISTRATION MONTANA STATE UNIVERSITY

Forces of climate and custom cause wide

Seasonal Fluctuations in Employment in Montana

Last month, in August, total nonagricultural employment in Montana reached 164,000¹, up 20,800 from February of this year, when only 143,200 persons were at work in the state's nonagricultural industries. From now until next February, employment can be expected to decline. This familiar pattern of seasonal fluctuation in employment in the state occurs regularly each year.

Montana nonagricultural employment more seasonal than national.

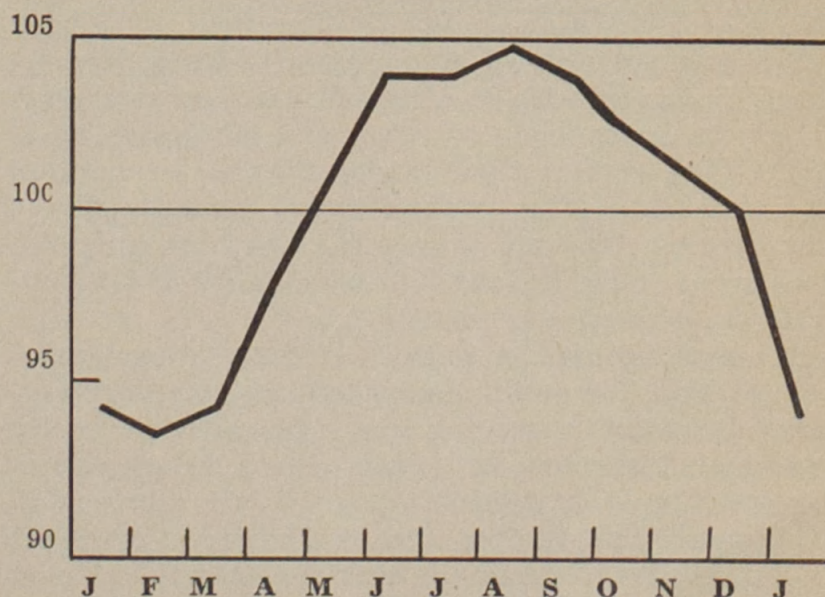
Seasonal variation in business and industrial activity is primarily the result of the forces of climate and custom. Lumber, outdoor construction, and agriculture exemplify climate or weather-controlled industries. Retail trade is an example of an industry in which seasonal fluctuations are largely the result of custom. Although custom, insofar as it affects employment, is pretty much the same throughout the United States, climate shows wide variation. Montana's climate, subject to greater extremes and longer and more severe winters than in many areas, contributes to a greater seasonality of employment in the state than in the United States as a whole.

The chart on this page pictures the typical pattern of seasonal fluctuation in nonagricultural employment in Montana during the past seven years, 1948-1954². Other factors affect the level of employment, and have affected it during this period: irregular fluctuations, such as strikes or catastrophes; fluctuations in business activity known as business cycles;

and long-term movement or trend (upward in the case of employment in Montana and the United States). These factors have been removed in the computation of the index shown in the chart, leaving only the fluctuations which occurred as a result of the seasonal demand for labor. This pattern is typical of the fluctuations in employment which can be anticipated each year, with minor variations in timing and amplitude, until such time as the industrial makeup of the state is significantly altered. It occurs in prosperity as well as depression and irrespective of whether the long-term tendency in total employment is upward or downward.³

³The seasonal pattern for nonagricultural employment in Montana for 1948 through 1954 shows practically no variation from the pattern for an earlier period, 1940-1941 and 1946-1949, which was published by the Bureau in *The Economy of Montana*.

TYPICAL SEASONAL INDEX OF NONAGRICULTURAL EMPLOYMENT IN MONTANA
1948-1954



Source: Based on data from Unemployment Compensation Commission of Montana.

¹Preliminary estimate by Unemployment Compensation Commission of Montana.

²Agricultural employment is also highly seasonal. The lack of monthly data for the state precludes its inclusion in a seasonal index. Even a casual observer of the agricultural scene is aware, however, that with increased mechanization of farms and ranches the demand for seasonal workers is being substantially reduced.

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Low occurs in February, high in August . . .

During the years 1948 through 1954, the typical seasonal variation in nonagricultural employment in Montana has ranged from an index of 93.3 in February to a high of 104.5 in August. With 100 equal to average monthly employment, this means that employment typically varies from 6.7 percent below the average in February to 4.5 percent above the average in August. In terms of numbers of workers, these percentage figures represent a variation of from 10,000 below the average to 6,900 above, or a typical seasonal increase of 16,900 workers from February to August for the period under consideration. As employment increases in the state, the seasonal fluctuation in number of workers will also increase, although the percentage variation will tend to remain about the same, unless, as noted above, a significant change in the industrial structure of the state should occur.

. . . with major industrial groups revealing varying seasonal patterns.

Seasonal patterns of employment among the various industry groups in Montana vary considerably. Some industries, such as retail and wholesale trade and mining employ their largest number of workers at times when other industries are curtailing their employment. Without these variations from the more common pattern, the over-all seasonality of employment would be much greater.

In **metal mining**, the pattern is in direct contradiction to that for total nonagricultural employment. The high point in mining employment is generally reached in February or March, when most other employment is in a decline, and the low point is in September. The fluctuations are chiefly the result of changes in the supply of miners rather than in the demand for workers. As the weather improves in the spring, workers begin to drift away from the

MONTANA BUSINESS INDEXES

(1935-39=100)

Year and Month	Nonagr. Employment ¹	Car-loadings ²	Elec. Power Consumption ³	Gen. Store Sales ⁴	Bank Debts ⁵
1935		110.0	93.7	92.0	92.4
1936		96.6	105.2	100.0	99.4
1937		105.0	109.3	102.6	106.5
1938		85.9	85.5	99.7	95.5
1939	100.0	102.5	106.3	106.0	106.2
1940	105.6	109.8	133.8	111.7	115.4
1941	110.2	122.2	151.2	119.8	134.5
1942	113.8	135.0	165.8	126.5	141.8
1943	112.7	143.8	185.2	126.6	164.9
1944	111.3	150.5	175.4	147.1	178.6
1945	111.3	141.8	157.7	159.5	198.1
1946	123.7	119.9	155.3	215.3	252.2
1947	134.0	131.2	169.7	248.1	300.4
1948	140.9	125.0	178.4	270.9	337.5
1949	142.4	122.3	190.2	266.3	344.6
1950	144.4	130.9	201.9	272.5	381.4
1951	146.4	139.0	206.1	282.5	415.8
1952	150.5	142.6	229.4	298.5	423.7
1953	151.5	150.5	252.7	290.5	420.1
1954	150.1	146.0	220.1	293.4	441.0
1954—					
June	157.5	148.8	237.9	270.2	433.9
July	158.4	143.2	223.6	274.4	429.3
August	158.4	157.3	198.3	309.4	449.1
September	149.5	128.8	127.2	309.5	487.5
October	147.5	164.6	162.4	339.5	509.9
November	149.6	179.8	245.1	352.4	502.8
December	147.9	155.0	248.7	514.4	475.2
1955—					
January	141.1	151.0	253.6	200.9	483.1
February	140.7	140.9	269.0	194.3	424.3
March	141.7	133.3	245.2	226.5	432.2
April	145.7	136.1	254.4	303.8	425.2
May	151.4	152.2	255.2	306.9	466.0
June	157.8	142.7	265.6	292.0	474.0
July	159.5	152.1	246.5	305.5	452.0

¹Index numbers computed from estimates of Unemployment Compensation Commission of Montana. Estimates include all full and part-time wage and salary workers who worked or received pay during the pay period ending nearest the 15th of the month. 1939=100.

²Index numbers computed from reports of Board of Railroad Commissioners of the State of Montana, comprising total carloadings of freight loaded at Montana points. Daily average.

³Index numbers computed from kilowatt hour sales of Montana Power Co., Montana-Dakota Utilities Co., Pacific Power and Light Co., Bonneville Power Administration, and the Bureau of Reclamation to commercial and industrial users for consumption within Montana, reduced to hourly average kilowatt hours per month.

⁴Index numbers computed from reports of Federal Reserve Bank of Minneapolis, based on dollar sales of 80 to 89 department and general stores in Montana. Daily average.

⁵Index numbers computed from reports of Federal Reserve Bank of Minneapolis, based on data from banks in 16 Montana communities. Daily average.

mines to take jobs above ground, especially on farms and ranches. This movement continues through the summer until September, when haying and harvest are generally completed, after which the miners begin to go underground again for the winter.

Contract construction is the most seasonal of any industry group, with weather the chief determinant. Virtually all activity, with the exception of indoor work, comes to a halt during the winter months. The pattern is similar to that of all nonagricultural industries combined, except that, percentagewise, the fluctuations are greater.

Because of the importance of the lumber and food products industries in the state, **manufacturing** employment in Montana shows considerable seasonal variation. Other manufacturing industries, petroleum refining, smelting, printing and publishing, provide steady year-around employment for most of their workers, but their stabilizing influence is offset by lumbering and food processing. Lumber is one of the most seasonal industries in the state. Logging operations are handicapped by winter snows, when the workers cannot get around in the forests, and by the thawing of ice and snow and rains which make roads in the timber areas impassable in the spring. Many of the small lumber mills cease operation entirely in the winter and spring when logging stops. The larger mills, however, accumulate a supply of logs in the summer and fall and operate fairly steadily throughout the year. The seasonal pattern of Montana's food products industries is dominated by the presence of beet sugar refining and fruit and vegetable canning. Employment in these plants is concentrated in the late summer and fall, with the peak generally occurring in October.

Custom, and, to some extent, climate exert influence on the employment pattern of **retail and wholesale trade** establishments. Employment is lowest in February, when aggregate purchasing power is generally lower as a result of seasonal layoffs in other industries and the weather is apt to be inclement. Later in the year, three distinct peaks in employment are reached, the first in April or May, to accommodate Easter shoppers; the second in August at the peak of the tourist season; and the highest, of course, in December as Christmas shopping reaches its climax. Although percentagewise the fluctuation in trade employment is smaller than in some other industry groups, the heavy concentration of workers (around 25 percent of total nonagricultural employment) greatly increases its significance.

Except for hotels and motels, the **service industry** group (including also professional, personal, and business services, auto and repair services, motion pictures and amusements) provides quite steady year-around employment. Hotels and motels, of course, employ more workers during the summer tourist season. The **finance, insurance, and real estate** institutions of the state also exhibit little seasonality of employment. **Government** employment, an important factor in Montana, second only to retail and wholesale trade in number of employees, is the least seasonal of any major nonagricultural group. An increase in post office workers in December to handle

the Christmas mail accounts for the only significant variation.

Seasonal unemployment cannot be eliminated . . .

Many of the seasonal jobs in Montana are performed by seasonal workers, especially students, who want work only in the summer, and housewives, who may work only during the canning season in a fruit or vegetable processing plant or during the Christmas rush in a retail store. These people enter the labor force on a temporary basis and return to other occupations, such as study or housekeeping. In timber areas, some workers combine the operation of small farms or ranches with work in forest industries. While the amount of seasonal unemployment is, therefore, not so great as might be imagined, the seasonal nature of so much of the work in Montana does create rather serious problems for the state and for particular areas. Because of the concentration of the lumber industry in western Montana, for example, unemployment is severe in the winter and early spring months, particularly in Flathead, Lake, Sanders, and Lincoln counties. As a result, business activity in general slackens during these months.

On a statewide basis, the Unemployment Compensation Commission of Montana must be prepared for regular, although predictable, heavy claims for unemployment during the winter and spring. In recent years, the number of claimants in the month of February has averaged close to 10,000, most (but not all) of whom were seasonally unemployed. The payment of unemployment insurance is a factor in maintaining purchasing power during the winter and spring months, but it also increases the cost of unemployment insurance to Montana employers, particularly in those industries where seasonal unemployment is concentrated.

One can only speculate on the effect of the seasonal aspect of employment on the size of the state's labor force. It is an established fact, however, that Montana is losing population in the productive age groups, 18 to 64, and it may reasonably be assumed that the desire for steady, year-round jobs is a factor in causing some of these persons to look for employment in other states.

. . . but new industry could lessen its impact on the state's economy.

Up till now, no way of altering the weather has been discovered. What other possibilities exist, then, for lessening seasonal unemployment in Montana? Some improvement might be made with more careful planning by businesses. New products for sale or manufacture might be added to fill in the seasonal slack. Although steps such as these are undoubtedly feasible in some lines of trade and manufacturing, the elimination of seasonal unemployment in industries such as construction and lumbering, where

RETAIL FOOD PRICE INDEX, MONTANA

(May 1950=100)

	All food	Meats, poultry & fish	Dairy products
1954—			
August	118.2	108.0	104.8
September	113.2	103.4	104.8
October	113.7	104.0	107.3
November	108.4	98.3	107.3
December	108.0	97.9	108.2
1955—			
January	109.7	100.6	108.6
February	108.6	101.7	106.5
March	107.4	98.9	108.2
April	108.7	100.4	106.9
May	108.0	99.6	105.4
June	107.2 ¹	102.2	105.8
July	108.4	102.1	104.8
August	106.7	98.9	105.2

¹Revised.

Source: Computed from reports of the Montana Department of Labor and Industry.

weather conditions are the dominant factor, is virtually impossible. These industries are nevertheless eminently desirable and basic to Montana's economy. Therefore, a reasonable objective would seem to be the expansion of the state's nonseasonal industries or a broadening of the state's economic structure with new industries of a nonseasonal nature, thereby lessening the degree of total seasonal unemployment. Some expansion has occurred in recent years in such manufacturing industries as oil refining and smelting and refining of nonferrous metals, which exhibit little seasonality. Other industries providing year-round jobs, such as real estate, finance, and insurance institutions and some service industries have also steadily increased their number of employees. Any significant increase in their relative importance, however, must wait for a larger industrial and population base in the state. So again the question of industrial expansion in Montana arises.

From the point of view of alleviating seasonal unemployment, not all manufacturing industries are equally desirable. In their efforts to attract new industries, Montana communities might well consider the seasonal pattern of the industries under consideration in relation to the existing employment fluctuations in their localities. A plant which would merely intensify the problems of seasonal unemployment which already exist may prove in the long run to be more of a liability than an asset. On the other

ESTIMATED CASH RECEIPTS FROM FARM MARKETINGS IN MONTANA, FIRST SIX MONTHS, 1954 AND 1955 (thousands of dollars)

	First Six Months		Percent Change
	1954	1955	
Livestock and products	46,823	46,931	0.2
Crops	87,159	68,235	- 21.7
Total	133,982	115,166	- 14.0

Source: U. S. Department of Agriculture, Agricultural Marketing Service.

DAILY AVERAGE PRODUCTION OF SELECTED MINERALS IN MONTANA, 1935-39 AND FIRST SEVEN MONTHS, 1954 AND 1955

	1935-39	First Seven Months	
		1954	1955
Copper (short tons) ¹	329.8	241.7	258.4
Zinc (short tons) ¹	121.9	245.3	233.8
Lead (short tons) ¹	51.1	57.0	57.6
Silver (fine ounces) ¹	31,398.0	20,610.1	18,816.5
Gold (fine ounces) ¹	651.7	85.3	79.0
Crude oil (thousands of barrels) ²	14.9	37.8	43.5

¹Daily average production computed from reports of U. S. Bureau of Mines.

²Daily average production computed from reports of the Oil and Gas Conservation Commission of Montana

hand, if the labor demands of a plant providing only seasonal employment occur at a time when other employment is declining, or if a supply of seasonal labor (such as students or housewives) is readily available, such an operation might be a welcome addition to the community.

Most communities would naturally prefer plants providing steady, year-round employment. Montana's new aluminum plant, happily situated in Flathead County, where the predominance of the lumbering industry has long created a seasonal unemployment problem, is an example of the type of nonseasonal industry which the state needs. This plant will employ an estimated 450 workers on a year-round basis and will contribute to the stability of employment in the Columbia Falls locality.

—By MAXINE JOHNSON

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SCHOOL OF BUSINESS ADMINISTRATION MONTANA STATE UNIVERSITY

PERSONAL INCOME IN MONTANA—1954

- Total personal income in Montana in 1954—\$1,070 million.
- Per capita personal income—\$1,729.

Total personal income in Montana last year passed the billion dollar mark for the fourth consecutive year. The 1954 income figure—\$1,070 million—was 1 percent lower than in 1953, but higher than any other year.

Montana's per capita income last year is estimated at \$1,729, slightly below the preceding three years, 1951 to 1953. Among the 11 western states, Montana ranked 6th in per capita income and among the 48 states, 20th.

The personal income data presented in this article were prepared by the Office of Business Economics of the U. S. Department of Commerce and represent a completely revised series of estimates from 1929 to 1954, replacing the old state income payment series. The new personal income estimates conform with the United States personal income series included in

the Department of Commerce's national income and product accounts. State personal income is defined as the current income received by residents of a state from all sources, inclusive of transfers from government and business but exclusive of transfers among persons. It is measured before deduction of income and other direct personal taxes, but after deduction of individuals' contributions to social security, government retirement, and other social insurance programs. While cash income makes up the bulk of the total—more than 95 percent on a national basis—personal income also includes several types of nonmonetary income, or income in kind. Two major items of income in kind included in state personal income, but not in the earlier state income payment series, are the net rental value of owner-occupied dwellings and the value of food and clothing furnished members of the armed forces.¹

¹For other changes in definition and a more complete discussion of the new estimates, see "Survey of Current Business", September 1955, p. 12.

Table 1
TOTAL PERSONAL INCOME AND PER CAPITA
PERSONAL INCOME, MONTANA, 1929-1954

Year	Total Income (Millions of Dollars)	Per Capita Income (Dollars)	Percent Mont. of U. S. Per Capita Income	Year	Total Income (Millions of Dollars)	Per Capita Income (Dollars)	Percent Mont. of U. S. Per Capita Income
1929	312	595	85	1942	467	896	99
1930	271	503	81	1943	545	1,128	102
1931	207	383	72	1944	550	1,168	98
1932	182	337	84	1945	568	1,191	97
1933	162	299	80	1946	657	1,278	102
1934	197	361	85	1947	772	1,457	111
1935	260	473	100	1948	866	1,598	113
1936	264	477	89	1949	791	1,390	101
1937	284	513	90	1950	955	1,602	107
1938	284	514	98	1951	1,038	1,756	106
1939	294	530	95	1952	1,058	1,763	102
1940	318	570	96	1953	1,084	1,768	99
1941	388	715	99	1954	1,070	1,729	98

Source: U. S. Department of Commerce, Office of Business Economics.

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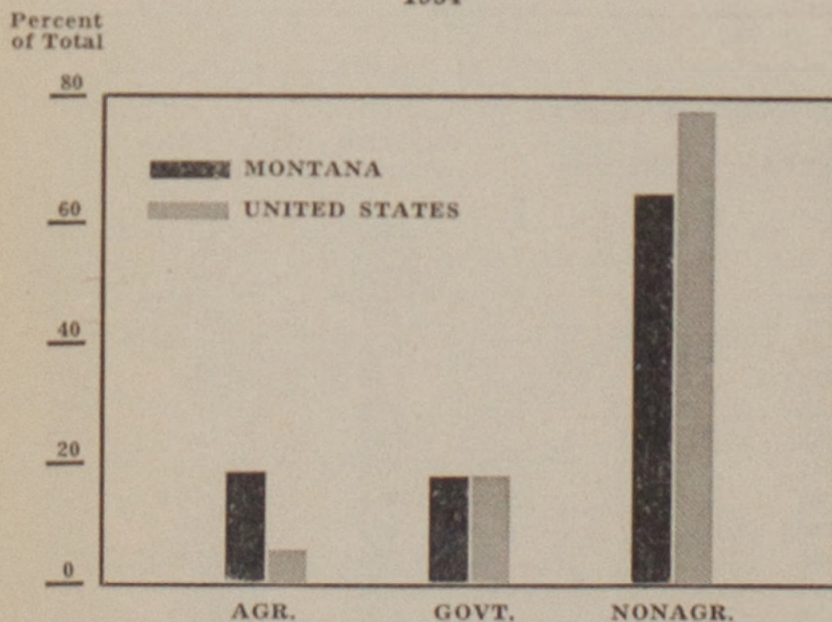
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Total personal income declines slightly in 1954

The effect of the business decline which occurred in 1954 is evident in total personal income figures for both Montana and the United States. In the case of Montana, the steady increase in progress since 1949 was halted, as a slight decline, from \$1,084 million in 1953 to \$1,070 million in 1954 (1 percent) occurred. For the United States as a whole, the expansion in personal income continued, but at a reduced rate, as the 1954 figure showed only a 1 percent gain over 1953, compared to increases of from 6 to 12 percent for the other years since 1949.

Table 1 presents the revised estimates of total personal income in Montana since 1929. Over the 25-

Figure 1
MAJOR SOURCES OF PERSONAL INCOME, MONTANA AND THE UNITED STATES, 1954



Source: U. S. Department of Commerce, Office of Business Economics.

MONTANA BUSINESS INDEXES

(1935-39=100)

Year and Month	Nonagr. Employment ¹	Car-loadings ²	Elec. Power Consumption ³	Gen. Store Sales ⁴	Bank Debits ⁵
1935	—	110.0	93.7	92.0	92.4
1936	—	96.6	105.2	100.0	99.4
1937	—	105.0	109.3	102.6	106.5
1938	—	85.9	85.5	99.7	95.5
1939	100.0	102.5	106.3	106.0	106.2
1940	105.6	109.8	133.8	111.7	115.4
1941	110.2	122.2	151.2	119.8	134.5
1942	113.8	135.0	165.8	126.5	141.8
1943	112.7	143.8	185.2	126.6	164.9
1944	111.3	150.5	175.4	147.1	178.6
1945	111.3	141.8	157.7	159.5	198.1
1946	123.7	119.9	155.3	215.3	252.2
1947	134.0	131.2	169.7	248.1	300.4
1948	140.9	125.0	178.4	270.9	337.5
1949	142.4	122.3	190.2	266.3	344.6
1950	144.4	130.9	201.9	272.5	381.4
1951	146.4	139.0	206.1	282.5	415.8
1952	150.5	142.6	229.4	298.5	423.7
1953	151.5	150.5	252.7	290.5	420.1
1954	150.1	146.0	220.1	293.4	441.0
1954—					
August	158.4	157.3	198.3	309.4	449.1
September	149.5	128.8	127.2	309.5	487.5
October	147.5	164.6	162.4	339.5	509.9
November	149.6	179.8	245.1	352.4	502.8
December	147.9	155.0	248.7	514.4	475.2
1955—					
January	141.1	151.0	253.6	200.9	483.1
February	140.7	140.9	269.0	194.3	424.3
March	141.7	133.3	246.6	226.5	432.2
April	145.7	136.1	256.1	303.8	425.2
May	151.4	152.2	257.5	306.9	466.0
June	157.8	142.7	267.8	292.0	474.0
July	159.5	152.1	258.0	305.5	452.0
August	161.1	164.7	300.0	328.2	491.9

¹Index numbers computed from estimates of Unemployment Compensation Commission of Montana. Estimates include all full and part-time wage and salary workers who worked or received pay during the pay period ending nearest the 15th of the month. 1939=100.

²Index numbers computed from reports of Board of Railroad Commissioners of the State of Montana, comprising total carloadings of freight loaded at Montana points. Daily average.

³Index numbers computed from kilowatt hour sales of Montana Power Co., Montana-Dakota Utilities Co., Pacific Power and Light Co., Bonneville Power Administration, and the Bureau of Reclamation to commercial and industrial users for consumption within Montana, reduced to hourly average kilowatt hours per month. Figures from March 1955 revised, to include sales to Anaconda Aluminum Co.

⁴Index numbers computed from reports of Federal Reserve Bank of Minneapolis, based on dollar sales of 80 to 89 department and general stores in Montana. Daily average.

⁵Index numbers computed from reports of Federal Reserve Bank of Minneapolis, based on data from banks in 16 Montana communities. Daily average.

year period, personal income in Montana has increased 243 percent, compared to a gain of 233 percent nationally. Since 1950, however, total income has increased more slowly in Montana than in the United States, 12 compared to 27 percent. The explanation undoubtedly lies chiefly in the sharp decline in agricultural income in Montana since 1952, although the national decline in nonagricultural activity in 1954 also affected the state.

Agriculture continues as important source of income

A comparison of three major sources of personal income—agricultural, government, and nonagricultural income—in Montana and the United States in 1954 emphasizes again the greater importance of agriculture to the state. (Figure 1.) Whereas agricultural income accounted for 18 percent of total personal income in Montana last year, it made up only 5 percent of national personal income.¹ Non-farm income, on the other hand, accounted for 78 percent of the total nationally and only 64.5 percent in the state. The significance of income from government disbursements in both areas was considerable, amounting to 17 percent of the total. Thus in 1954, income from government disbursements in Montana was almost equal to total agricultural income. Dollar figures for Montana are:

	(millions)
Farm income	\$ 197
Government income disbursements	183
Private nonfarm income	690
	<hr/>
	\$1,070

¹Agricultural income is slightly understated in the Office of Business Economics' estimates because it does not cover individuals' receipts of farm interest or dividends. These items are included in "property income."

A more detailed breakdown of sources of income in Montana and the United States last year appears in Table 2. In addition to the greater dependence upon agriculture (evidenced in farm wage and salary payments and farm proprietors' income), mining and transportation were also more important sources of income in the state than in the United States. Manufacturing, of course, supplied a much smaller proportion of total income in Montana.

Comparison with previous years is not possible, since revised data by source of income have been released only for 1954.

State ranks well in per capita income

Per capita personal income provides the most useful basis for geographic or temporal comparisons, because it eliminates differences in population as a factor. Per capita income in 1954 declined both in Montana and the United States. The Office of Business Economics estimates average income per person in the United States last year at \$1,770 (1 percent below 1953) and in Montana at \$1,729 (2 percent below 1953).

Starting with a considerably lower per capita income in 1929, a more rapid increase in Montana enabled the state to overtake and substantially exceed the national figure during the years after World War II. In 1943 and from 1946 through 1952, with agricultural income high, Montana's per capita income exceeded the national. In 1953 and 1954, it was slightly lower than United States per capita

Table 2

MAJOR SOURCES OF PERSONAL INCOME, MONTANA AND THE UNITED STATES, 1954

	Montana		United States			Montana		United States	
	Millions of Dollars	Percent of Total	Millions of Dollars	Percent of Total		Millions of Dollars	Percent of Total	Millions of Dollars	Percent of Total
Wages and salaries ¹	614	57	614	68	Other labor income ²	19	2	19	2
Farms	40	4	40	1	Proprietors' income ³	273	26	273	13
Mining	48	4	48	1	Farm	157	15	157	4
Contract construction	46	4	46	4	Professional	17	2	17	2
Manufacturing	76	7	76	23	Business	99	9	99	7
Wholesale & retail trade	123	11	123	12	Property income ⁴	122	11	122	12
Finance, insurance, & real estate	17	2	17	3	Transfer payments ⁵	59	6	59	6
Transportation	76	7	76	4	Less: Personal contributions for social insurance	17	2	17	2
Communications & public utilities	22	2	22	2	Total personal income	1,070	100	1,070	100
Services	50	5	50	6					
Federal government, civilian	32	3	32	3					
Federal government, military	18	2	18	3					
State & local governments	65	6	65	5					

¹Includes commissions, tips, bonuses and the value of payments in kind, before deductions for social security, union dues, or other purposes.

²Includes employer contributions to private pension, health, and welfare funds; compensation for injuries; pay of military reservists; directors' fees; and several other minor items.

³Net business earnings of owners of unincorporated enterprises.

⁴Includes rental income of persons, dividends, and personal interest income.

⁵Includes government transfers (old-age and survivors insurance benefits, unemployment benefits, pensions under public employee retirement systems, direct relief, and pension, disability and related payments to former members of the military establishments) and business transfers (corporate gifts to nonprofit institutions, cash prizes, and consumer bad debts).

Source: U. S. Department of Commerce, Office of Business Economics.

RETAIL FOOD PRICE INDEX, MONTANA
(May 1950=100)

	All food	Meats, poultry & fish	Dairy products
1954—			
September	113.2	103.4	104.8
October	113.7	104.0	107.3
November	108.4	98.3	107.3
December	108.0	97.9	108.2
1955—			
January	109.7	100.6	108.6
February	108.6	101.7	106.5
March	107.4	98.9	108.2
April	108.7	100.4	106.9
May	108.0	99.6	105.4
June	107.2	102.2	105.8
July	108.4	102.1	104.8
August	106.7	98.9	105.2
September	108.6	102.2	104.3

Source: Computed from reports of the Montana Department of Labor and Industry.

income, principally as a result of shrinking agricultural income. No separate data are available as to per capita income in the agricultural and nonagricultural segments of the economy, but it is probable that a comparison of per capita income among non-agricultural workers in Montana and the United States in 1953 and 1954 would put the state in a more favorable position.

The per capita income figures quoted above and in Table 1 make no allowance for changes in the purchasing power of the dollar. If the data as given are deflated by the national Consumers' Price Index, a rough measure of the change in "real" income over the period is possible.¹

Per Capita Income in 1947-1949 Dollars

	1929	1954	Percent Change	1950	1954	Percent Change
Montana	\$812	\$1,506	85	\$1,558	\$1,506	-3
United States	959	1,542	61	1,450	1,542	6

Over the 25-year period, 1929-1954, Montana's per capita personal income increased approximately 85 percent in terms of constant 1947-49 dollars, greatly reducing the spread between the state and the United States as a whole, where the increase was only 61 percent. Between 1950 and 1954, however, Montana per capita income failed to keep pace with the rapid rise in prices which occurred as a result of the

¹No price index for Montana is available.

Table 3

**PER CAPITA INCOME IN THE ELEVEN
WESTERN STATES, 1954**

Nevada	\$2,414	Colorado	\$1,686
California	2,162	Arizona	1,582
Washington	1,949	Utah	1,483
Wyoming	1,779	Idaho	1,433
Oregon	1,757	New Mexico	1,387
Montana	1,729		

Source: U. S. Department of Commerce, Office of Business Economics.

**DAILY AVERAGE PRODUCTION OF SELECTED
MINERALS IN MONTANA, 1935-39 AND FIRST EIGHT
MONTHS, 1954 AND 1955**

	1935-39	First Eight Months	
		1954	1955
Copper (short tons) ¹	329.8	232.9	257.2
Zinc (short tons) ¹	121.9	233.7	226.1
Lead (short tons) ¹	51.1	55.6	56.0
Silver (fine ounces) ¹	31,398.0	19,797.1	18,649.6
Gold (fine ounces) ¹	651.7	82.9	79.4
Crude oil (thousands of barrels) ²	14.9	38.1	43.3

¹Daily average production computed from reports of U. S. Bureau of Mines.

²Daily average production computed from reports of the Oil and Gas Conservation Commission of Montana

Korean War. In terms of constant 1947-49 dollars per capita personal income in the state declined 3 percent between 1950 and 1954, as opposed to a 6 percent increase in national per capita income.

Among the 48 states, Montana ranked 20th in per capita income in 1954. Several heavily-industrialized middle eastern and midwestern states, the three Pacific Coast states, and Nevada and Wyoming surpassed Montana. Compared with most agricultural states, Montana appears to rank very well, with a per capita income higher than that of Kansas, Nebraska, Iowa, Wisconsin, the Dakotas, and Idaho. Per capita income in the southern states ranged down to only \$874 in Mississippi, or approximately one-half the Montana figure.

Table 3 shows per capita income figures for the 11 western states. Montana ranked sixth in this group.

—BY MAXINE JOHNSON

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Montana State University
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MONTANA BUSINESS

BUREAU OF BUSINESS
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Vol. 7 No. 10
November 1955

SCHOOL OF BUSINESS ADMINISTRATION MONTANA STATE UNIVERSITY

BUSINESS SETS NEW RECORDS IN 3rd QUARTER

With business at record-breaking levels in the third quarter and optimism (with but few exceptions) the spirit of the day, the predictions made last winter as to the course of the economy in 1955 now seem overly cautious and conservative. The resounding recovery from the 1954 recession, both nationally and statewide, has been truly remarkable, and there seems little doubt that enough steam has been generated to make the present (fourth) quarter at least as prosperous as the third. Personal income is high, consumers are spending freely, and the Christmas buying season now getting underway adds further impetus.

A hasty qualification, particularly with respect to Montana, is necessary. The statements above apply, of course, to the nonagricultural sector of the economy. The aura of prosperity does not extend to agriculture, where for the third successive year income has been declining. Thanks to excellent growing conditions in the state this year, however, the situation is better than it might have been. Harvesting of the second largest wheat crop in history—approximately 28 percent larger than in 1954—will bolster total income for the year, even though support prices are below last year. Wheat is the most important single commodity produced by Montana farmers and ranchers, accounting for approximately 50 percent of gross agricultural income in 1953 and 1954.

One of the most gratifying features of the Montana economy during the past three years has been the ability of the nonagricultural sector to offset the decline in agricultural income to the extent that it has. In view of the greater importance of agriculture in the state as compared to the nation, the fact that Montana has managed to keep pace with the national economy bears witness to the strength of its non-agricultural sector.

The year 1955 did not start out auspiciously. In Montana, nonagricultural employment was depressed and — hampered by late spring storms —

stayed generally below 1953 and 1954 levels until June, when an unusually large increase suddenly set a new record for that month—a process repeated each month of the third quarter. Active demand for Montana's major nonagricultural commodities—lumber, metals, and petroleum—provided the basis for the employment increase. Substantial gains also occurred in the trade and finance industries.

With more people at work and incomes rising, consumers in Montana, as in other parts of the United States, embarked on a giant spending spree. At the end of August, 29 percent more new cars had been sold in the state than during January-August 1954. Department store sales for January-September 1955 were 8 percent above the same months in 1954, while September sales exceeded any previous September. As has been the case nationally, instalment credit played a major role in the expansion of sales.

With a record Christmas season in prospect, business in Montana should continue good through the remainder of the year. Some seasonal decline will occur in employment, perhaps more than usual in view of the unusually cold weather in November. When final results for the year are in, however, there is no doubt that 1955 will have been a much better business year in Montana than had been anticipated. It is too early to predict whether this happy condition will continue through 1956. On the national level, there is a serious question as to whether the automobile and construction industries can maintain the lively pace of 1955. A decline in the national rate of residential building this fall has already resulted in a rather sharp drop in lumber prices, an important factor in western Montana.

The current rates of inventory accumulation and credit expansion have also been under scrutiny as possible future sources of trouble. As one forecaster has put it, 1956 is going to be born with a silver spoon in its mouth and may have trouble living up to its destiny.

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MAXINE JOHNSON, Research Associate

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164,000 employed in August

Employmentwise, Montana remained comparatively unaffected by the recent mild recession until the fall of 1954. The downward tendency was accelerated by a labor dispute which idled approximately 10,000 mine and smelter employees from late August till mid-October, with repercussions in trade and service industries in the areas affected. Employment levels in the state for the remainder of the year continued below those of 1952 and 1953. During the early months of 1955, nonagricultural employment in Montana continued depressed. Throughout the first quarter, total nonagricultural employment averaged about 2 percent (2,700 workers) below January-March 1954. Unemployment was higher than in any year since 1950, but considerably below that year's level. A rapid increase in employment during May and June resulted in a record number of workers employed in June, as compared with any previous June. Each of the third quarter months—July, August, and September—also established a new record. The seasonal high (as well as the highest monthly employment ever recorded in Montana) occurred in August when 164,000 persons were at work in nonagricultural occupations in the state. As of September 15, 163,000 were employed.

Probably the best comparison of employment conditions in major industry groups in the third quarters of 1954 and 1955 is afforded by the August figures.¹

	August		Change
	1954	1955	
Total nonagricultural employment	161,400	164,000	2,600
Manufacturing	19,700	21,000	1,300
Mining	11,100	10,900	- 200
Construction	12,500	12,400	- 100
Transportation and utilities	22,600	22,800	200
Trade	40,700	41,400	700
Finance	5,200	5,600	400
Services	21,000	20,700	- 300
Government	28,600	29,200	600

¹Unemployment Compensation Commission of Montana.

MONTANA BUSINESS INDEXES

(1935-39=100)

Year and Month	Nonagr. Employment ¹	Car-loadings ²	Elec. Power Consumption ³	Gen. Store Sales ⁴	Bank Debits ⁵
1935	—	110.0	93.7	92.0	92.4
1936	—	96.6	105.2	100.0	99.4
1937	—	105.0	109.3	102.6	106.5
1938	—	85.9	85.5	99.7	95.5
1939	100.0	102.5	106.3	106.0	106.2
1940	105.6	109.8	133.8	111.7	115.4
1941	110.2	122.2	151.2	119.8	134.5
1942	113.8	135.0	165.8	126.5	141.8
1943	112.7	143.8	185.2	126.6	164.9
1944	111.3	150.5	175.4	147.1	178.6
1945	111.3	141.8	157.7	159.5	198.1
1946	123.7	119.9	155.3	215.3	252.2
1947	134.0	131.2	169.7	248.1	300.4
1948	140.9	125.0	178.4	270.9	337.5
1949	142.4	122.3	190.2	266.3	344.6
1950	144.4	130.9	201.9	272.5	381.4
1951	146.4	139.0	206.1	282.5	415.8
1952	150.5	142.6	229.4	298.5	423.7
1953	151.5	150.5	252.7	290.5	420.1
1954	150.1	146.0	220.1	293.4	441.0
1954—					
September	149.5	128.8	127.2	309.5	487.5
October	147.5	164.6	162.4	339.5	509.9
November	149.6	179.8	245.1	352.4	502.8
December	147.9	155.0	248.7	514.4	475.2
1955—					
January	141.1	151.0	253.6	200.9	483.1
February	140.7	140.9	269.0	194.3	424.3
March	141.7	133.3	246.6	226.5	432.2
April	145.7	136.1	256.1	303.8	425.2
May	151.4	152.2	257.5	306.9	466.0
June	157.8	142.7	267.8	292.0	474.0
July	159.5	152.1	258.0	305.5	452.0
August	161.1	164.7	300.0	328.2	491.9
September	159.8	179.7	350.2	353.4	536.6

¹Index numbers computed from estimates of Unemployment Compensation Commission of Montana. Estimates include all full and part-time wage and salary workers who worked or received pay during the pay period ending nearest the 15th of the month. 1939=100.

²Index numbers computed from reports of Board of Railroad Commissioners of the State of Montana, comprising total carloadings of freight loaded at Montana points. Daily average.

³Index numbers computed from kilowatt hour sales of Montana Power Co., Montana-Dakota Utilities Co., Pacific Power and Light Co., Bonneville Power Administration, and the Bureau of Reclamation to commercial and industrial users for consumption within Montana, reduced to hourly average kilowatt hours per month. Figures from March 1955 revised, to include sales to Anaconda Aluminum Co.

⁴Index numbers computed from reports of Federal Reserve Bank of Minneapolis, based on dollar sales of 80 to 89 department and general stores in Montana. Daily average.

⁵Index numbers computed from reports of Federal Reserve Bank of Minneapolis, based on data from banks in 16 Montana communities. Daily average.

The large increase in manufacturing employment was the result of substantial gains in lumber and primary metals (smelting and refining of nonferrous metals). Both industries operated at near capacity through the third quarter of 1955. The opening of the new aluminum plant at Columbia Falls added several hundred new employees in primary metal refining.

Booming retail sales are reflected in an increase of 700 employees from August 1954 to August 1955 in trade industries. Finance, insurance, and real estate, smallest of the major industry groups, has continued its rapid growth in employment with a gain of 400 workers over August 1954.

Despite intensive recruiting efforts, hard-rock miners have been in short supply, with the result that August 1955 employment in mining was about 200 below the corresponding month last year. The principal operators in the state switched from a five- to six-day work week in June as metal demand increased.

Government figures for the two years are not strictly comparable because of a new method of reporting this year which reflects more of the seasonality inherent in its employment.

Higher hourly earnings and a longer work week have been the rule for most nonagricultural employees this year, resulting in rather substantial weekly pay increases. Comparative figures on average weekly earnings in August 1954 and 1955 in three major industry groups are:²

	August 1954	August 1955
Manufacturing	\$81.52	\$86.62
Mining	82.83	96.23
Transportation & utilities, except railroads	78.51	82.35

Montanans spend freely, as retail sales increase

Once again the consumer has played a leading role in promoting increased business activity. With money in his pockets, or with "easy credit terms" readily available, and a plentiful supply of new automobiles, television sets, and other appliances from which to choose, he increased his purchases of durable goods substantially. New automobiles proved particularly attractive to Montanans, as to most other Americans, this year. During January-August, 29 percent more new passenger cars were sold in the state than in the same months last year.³

Dollar sales of Montana department stores at the end of September were running 8 percent above the first nine months of 1954, and September sales exceeded any other September on record.

Available evidence indicates that, as in the United States as a whole, expanding credit has played an important role in increasing consumer expenditures in Montana. On June 30, 1955, the value of retail auto instalment paper held by Montana banks exceeded the June 30, 1954, level by 15 percent. The increase in total automobile credit, including that carried by finance companies and dealers, may well be greater than 15 percent. Although no data are available for the state alone, department store instalment credit outstanding in the Ninth Federal Reserve District⁴ has been running from 30 to 40 percent

²Ibid.

³Montana Automobile Dealers Association.

⁴Includes Montana, North Dakota, South Dakota, Minnesota, and parts of Michigan and Wisconsin.

above last year. Recently there has been much discussion on the national level as to whether the volume of consumer instalment credit is too high. It would seem that the same questions could be applied to the situation in Montana.

Bank debits set new record

Further evidence of the rapid tempo of business in Montana is provided by data on bank debits. Combined bank debits (checks written against depositors' accounts) in twenty cities of the state during the first three quarters were the highest of any similar period. Debits for September exceeded any other month on record. If the seasonal pattern runs true to form, October (generally the highest month of the year with respect to bank debits) will have set another new record.

The increase has been well distributed throughout the state, with the exception of Laurel, where January-September 1955 debits were the same as January-September 1954, and Livingston, where a decline of 1 percent occurred. Kalispell, feeling the effect of the new aluminum plant at nearby Columbia Falls, recorded a 25 percent gain over the first nine months of 1954. Missoula had an increase of 19 percent, Butte 15 percent, and Lewistown 11 percent.

Copper production up; lead, zinc down

A sore spot in 1954, due to an unfavorable metal market and a seven-week labor dispute, the position of Montana's metal mining industry has been much improved in 1955. Demand for most major metals has been strong this year. This is especially true of copper, Montana's leading metal. With an erratic world supply situation resulting in the highest copper prices since the Civil War, production of the red metal in the state increased substantially. Output during January-July 1955 was 7 percent above the same period last year. At the end of September, production was estimated at 26 percent above the first nine months of 1954. Much of this increase was due to the fact that little or no production occurred from August 23 to mid-October 1954 because of the strike.

Although demand for copper remains strong, considerable opposition to its present high price (43c per pound) is being voiced by important consumers, some of whom are working toward the use of aluminum as a substitute.

A program to greatly increase production from its Butte copper mines was recently announced by the Anaconda Company. A proposed new shaft would reach down below the Kelly shaft level to higher-copper-content areas of the lower levels. Company officials state that the cheaper mining methods now available may also be employed in the future to exploit low-grade zinc deposits at Butte.

The output of lead and zinc has been below 1954 levels most of the year. A comparison of the first

RETAIL FOOD PRICE INDEX, MONTANA

(May 1950=100)

	All food	Meats, poultry & fish	Dairy products
1954—			
September	113.2	103.4	104.8
October	113.7	104.0	107.3
November	108.4	98.3	107.3
December	108.0	97.9	108.2
1955—			
January	109.7	100.6	108.6
February	108.6	101.7	106.5
March	107.4	98.9	108.2
April	108.7	100.4	106.9
May	108.0	99.6	105.4
June	107.2	102.2	105.8
July	108.4	102.1	104.8
August	106.7	98.9	105.2
September	108.6	102.2	104.3
October	107.9	98.1	105.0

Source: Computed from reports of the Montana Department of Labor and Industry.

seven months, January-July, shows a decline of 7 percent for zinc and 2 percent for lead. At the end of September, zinc production was up 7 percent and lead, 6 percent—again because of the mines shutdown in August-October 1954.

Oil output continues to increase

Crude oil production is continuing its steady increase and this year is running at a rate approximately twice that of 1950. The increase during the first three quarters over January-September 1954 amounts to 12 percent. With the completion of the new crude oil pipeline to Wyoming, it is hoped that production can be further expanded. The major problem of the eastern Montana oilfields, of course, has been one of access to markets.

Agriculture remains a dark spot

While prosperity has become the keynote in the nonagricultural sector, the position of agriculture—and particularly that of the livestock segment of the industry—has continued to weaken. On the basis of the first eight months, 1955 will probably be the fourth successive year in which agricultural income in Montana has declined. Prices this fall have been lower than last. Over-all operational costs, on the other hand, are slightly higher and some further increases are anticipated. Estimates for January-August show total cash receipts down 7 percent from the corresponding months of 1954:⁵

	First Eight Months 1954	1955	Percent Change
	(thousands of dollars)		
Livestock and products	69,290	67,884	- 2
Crops	103,893	92,760	-11
Total	173,183	160,644	- 7

The figures through August do not show the effect of this year's bumper wheat crop, the second largest of record. With wheat prices supported under the price support program (although at a lower level

⁵U.S. Department of Agriculture, Agricultural Marketing Service.

DAILY AVERAGE PRODUCTION OF SELECTED MINERALS IN MONTANA, 1935-39 AND FIRST NINE MONTHS, 1954 AND 1955

	1935-39	First Nine Months 1954	1955
Copper (short tons) ¹	329.8	207.7	260.9
Zinc (short tons) ¹	121.9	210.1	224.8
Lead (short tons) ¹	51.1	51.3	54.4
Silver (fine ounces) ¹	31,398.0	17,867.9	18,856.6
Gold (fine ounces) ¹	651.7	77.1	79.0
Crude oil (thousands of barrels) ²	14.9	38.2	42.8

¹Daily average production computed from reports of U. S. Bureau of Mines.

²Daily average production computed from reports of the Oil and Gas Conservation Commission of Montana

than last year), later data on cash receipts from crops should show substantial increases. As Montana's most important single agricultural commodity wheat in 1953 and 1954 accounted for approximately 50 percent of total cash receipts.

Barley and oat production also showed sizable increases over last year, as a result of expanded acreage and higher yields. Preliminary estimates of 1955 production of Montana's major crops are:⁶

All wheat	97,615,000 bushels
Barley	41,160,000 bushels
Oats	14,965,000 bushels
All hay	3,163,000 tons

Cattle production is also up this year, but little cause for optimism exists in the industry. Prices are lower and profit margins tighter. Marketing was slow in the early fall, due to good grazing conditions and reluctance of ranchers to sell at offered prices. Volume of sales increased in October and November and prices were weakened further. With abundant supplies of feed grain available at lower prices than last year, more cattle are in feedlots. This will mean heavier than usual marketings during the winter months.

⁶Ibid.

—By MAXINE JOHNSON



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SCHOOL OF BUSINESS ADMINISTRATION MONTANA STATE UNIVERSITY

MONTANA RESOURCES

Montana has a total area of 147,148 square miles, making it the third largest state in the union, and a population of some 640,000, ranking it 46th in population density, with an average of approximately four persons per square mile. Despite its areas of mountainous terrain and wasteland, the state obviously has space to spare—no overcrowded cities or miles of traffic jams in Montana. It is also generously endowed with natural resources, particularly mineral, timber, power, and agricultural resources, which could support a considerably larger population.

The statement is sometimes made that Montanans do not want to see their resources developed and new industries established. It is true that few Montanans would wish to see their state heavily industrialized and over-crowded, although this possibility appears remote at the present time. On the other hand, the need for additional industry to add diversification to the Montana economy and to provide adequate employment opportunities for the normal population growth is generally recognized. New industries are necessary merely to maintain the present level of prosperity and to provide opportunities for the growing numbers of young people who will soon be entering the labor force as a result of the high birth rates of the 1940s. The majority of Montanans recognize this and many are working actively toward the attraction of desirable new industries.

Montanans are generally good salesmen for their state. Some of the most taciturn can become eloquent in describing its scenic beauty and pleasant way of life; however, the extent of Montana's natural resources are not always so obvious. Since one of the first requisites of a good salesman is to know his "product" well, this brief survey may serve as a reminder of the scope of Montana's resources and production and the potentialities as yet undeveloped.

A quick inventory of resources reveals, for example, that the state can claim huge mineral reserves, including the largest known deposits of chromite, manganese, and vermiculite in the United

States, hundreds of millions of tons of phosphate rock, and over 200 billion short tons of coal; an estimated 56 billion board feet of live saw timber; installed hydroelectric power capacity which places it ninth among the states, with huge resources as yet undeveloped; and approximately 14 million acres of cropland and 45 million acres of pasture.

Productionwise, in 1954 among the 48 states Montana ranked

- 1st in zinc, chromium, and vermiculite
- 2nd in manganese
- 4th in phosphate rock
- 5th in copper
- 9th in hydroelectric power
- 2nd in wheat
- 3rd in barley

Huge Mineral Resources

The abundance of mineral resources makes "The Treasure State" an apt description of Montana. Total value of mineral production in the state since 1951 has averaged over \$125 million per year.¹

Copper, zinc, and oil currently make up about two-thirds of the total value of Montana's mineral production. Lead is produced as a by-product of zinc mining. The production of gold, the discovery of which brought many settlers to the state, is relatively unimportant today. Silver also is declining in importance, being produced mostly as a by-product from copper and lead-zinc ores. With the development of cheap underground block caving methods at Butte, the long-term outlook for copper and zinc production appears excellent. With tremendous reserves, Butte will be a leading mining center for many years to come, and earlier predictions of its deterioration into a deserted mining camp now seem ridiculous.

Varying estimates have been made of the extent of petroleum reserves in Montana. Most are in the nature of guesses, since exploration of the state's oil fields are not complete. Nevertheless, Montana

¹The March 1955 issue of *Montana Business* includes a table which gives production and value of minerals for 1950-1954.

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(1935-39=100)

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1936		96.6	105.2	100.0	99.4
1937		105.0	109.3	102.6	106.5
1938		85.9	85.5	99.7	95.5
1939	100.0	102.5	106.3	106.0	106.2
1940	105.6	109.8	133.8	111.7	115.4
1941	110.2	122.2	151.2	119.8	134.5
1942	113.8	135.0	165.8	126.5	141.8
1943	112.7	143.8	185.2	126.6	164.9
1944	111.3	150.5	175.4	147.1	178.6
1945	111.3	141.8	157.7	159.5	198.1
1946	123.7	119.9	155.3	215.3	252.2
1947	134.0	131.2	169.7	248.1	300.4
1948	140.9	125.0	178.4	270.9	337.5
1949	142.4	122.3	190.2	266.3	344.6
1950	144.4	130.9	201.9	272.5	381.4
1951	146.4	139.0	206.1	282.5	415.8
1952	150.5	142.6	229.4	298.5	423.7
1953	151.5	150.5	252.7	290.5	420.1
1954	150.1	146.0	220.1	293.4	441.0
1954—					
September	149.5	128.8	127.2	309.5	487.5
October	147.5	164.6	162.4	339.5	509.9
November	149.6	179.8	245.1	352.4	502.8
December	147.9	155.0	248.7	514.4	475.2
1955—					
January	141.1	151.0	253.6	200.9	483.1
February	140.7	140.9	269.0	194.3	424.3
March	141.7	133.3	246.6	226.5	432.2
April	145.7	136.1	256.1	303.8	425.2
May	151.4	152.2	257.5	306.9	466.0
June	157.8	142.7	267.8	292.0	474.0
July	159.5	152.1	258.0	305.5	452.0
August	161.1	164.7	300.0	328.2	491.9
September	159.8	179.7	350.2	353.4	536.6
October	157.6		380.0	360.4	554.1

is known to have large oil resources, perhaps in the neighborhood of a billion barrels.

Although most widely known for its copper, lead, zinc, gold, silver, and oil, the state has many other mineral resources. Some are already making important contributions to Montana's prosperity; others will no doubt see future development. The list which follows includes only some of the more prominent and promising minerals in the state. Many others are also present, although not necessarily in commercial quantities, and others will undoubtedly yet be discovered.

Barite. Barite occurs in several spots in Montana and is currently being mined near Greenough in Missoula County. A processing plant is located at the mine and both crushed and ground barite are produced. Barite is used in paint pigments, chemicals, and as an adulterant or filler in products such as rubber and paper.

Cement Rock. Limestone and shales suitable for cement manufacture are present in vast quantities. Only one cement plant is located in the state, however, at Trident in Gallatin County.

Chromite. The Moutat mine in Stillwater County is producing chromite concentrates under a government contract. Last year, this mine produced over three-fourths of the total United States output. The U. S. Bureau of Mines estimates that chromite deposits in Stillwater County amount to 80 percent of all known reserves in North America. High production costs would make operation of the mines economically unjustifiable were it not for chrome's importance to national defense as an essential metal.

Coal. Tremendous reserves of coal, virtually untouched, are present in Montana. The U. S. Geological Survey estimated the state's coal resources at 222 billion tons in 1949. Practically all of this is located in eastern Montana and is subbituminous coal or lignite. Production in the state has been declining

¹Index numbers computed from estimates of Unemployment Compensation Commission of Montana. Estimates include all full and part-time wage and salary workers who worked or received pay during the pay period ending nearest the 15th of the month. 1939=100.

²Index numbers computed from reports of Board of Railroad Commissioners of the State of Montana, comprising total carloadings of freight loaded at Montana points. Daily average.

³Index numbers computed from kilowatt hour sales of Montana Power Co., Montana-Dakota Utilities Co., Pacific Power and Light Co., Bonneville Power Administration, and the Bureau of Reclamation to commercial and industrial users for consumption within Montana, reduced to hourly average kilowatt hours per month. Figures from March 1955 revised, to include sales to Anaconda Aluminum Co.

⁴Index numbers computed from reports of Federal Reserve Bank of Minneapolis, based on dollar sales of 80 to 89 department and general stores in Montana. Daily average.

⁵Index numbers computed from reports of Federal Reserve Bank of Minneapolis, based on data from banks in 16 Montana communities. Daily average.

since the war, amounting to only 1.4 million tons in 1954.

Flourspar. Flourspar, used in the ceramic and steel industries, has been reported in several locations in Montana. Production at the present time comes only from the Crystal Mountain deposits near Darby in Ravalli County.

Gypsum. Very little gypsum is produced in Montana, although deposits run into millions of tons. The bulk of the gypsum produced comes from Fergus County and is used in the Trident cement plant.

Manganese. Until Nevada took over in 1954, Montana was the leading manganese producer in the United States. Battery manganese has been produced at Philipsburg since before World War II. During the war production of high grade manganese was begun at Butte and at Philipsburg. Government stockpile depots are still maintained at the two towns.

Phosphate rock. Enormous reserves of phosphate rock suitable for use by the fertilizer industry and additional huge reserves of lower grade material suitable for elemental phosphorus exist in the state. Phosphate rock is mined in the Garrison area for shipment to a Trail, B.C., fertilizer plant. Rock for the Anaconda fertilizer plant comes from Idaho. The Victor Chemical Works elemental phosphorus plant uses rock from Beaverhead County.

Talc. A large volume of readily available talc exists in Montana. In 1954 it was produced in the Beaverhead-Madison County area and shipped to out-of-state grinding plants.

Tungsten. Montana became an important producer of tungsten in 1954, with the development of the Ivanhoe Mine in Beaverhead County.

Vermiculite. Montana is the leading producer of vermiculite in the United States by virtue of the Zonolite Company's operation at Libby. Other deposits are also known to be located in the state, in Ravalli, Madison, and Hill counties.

56 Billion Board Feet of Saw Timber

One-fourth of Montana (over 22 million acres) is classified as forest land. Seventy percent of the forest land is rated as "commercial"; that is, suitable and available, now or prospectively, for timber production for industrial use. Estimated total volume in Montana's commercial forests is 56 billion

board feet. About one-half of this is Douglas fir and larch; other important species are ponderosa pine, spruce, and lodgepole pine. (Table 1.) The annual cut of lodgepole and spruce in the state could be substantially increased. In addition, there are large areas of dead timber which can be utilized and large amounts of wood residue from logging and milling operations suitable for various forest products. Recently, plans for a plywood plant which would utilize waste wood were announced for Missoula. A small plant of the same type is already in operation in Polson. Other lumber products industries frequently mentioned as possibilities for Montana are hardwood, pulp, and paper.

Vast Power Potential

The most superficial survey of Montana's resources would not be complete without mention of hydroelectric power. Practically all of the power generated in Montana is hydroelectric; the state has vast potentialities as yet undeveloped. Plans and proposals by both private and public agencies indicate that further development will take place in the near future. The availability of low-cost electric power has played an important role in attracting two new industries to the state—elemental phosphorus and aluminum.

59 Million Acres in Farms and Ranches

Altogether, Montana has approximately 59 million acres in farms and ranches, of which about 14 million acres are classified as cropland and 45 million acres as pasture. In 1954, the state produced 76.6 million bushels of wheat, slightly below the previous 10-year average but ranking second only to Kansas as the nation's leading producer. (Table 2.) Preliminary estimates of the 1955 wheat crop are placed at 97.6 million bushels, second highest on record. Montana is also an important producer of barley (ranking 3rd among the states in 1954); mustard seed (1st); flaxseed (5th); and sugar beets (8th). The total value of all main crops produced in the state in 1954 is estimated at \$279.7 million.

TABLE 1
VOLUME OF LIVE SAW TIMBER,
MONTANA, 1949

Species	Millions of Board Feet	Percent of Total
Douglas fir	15,359	27.5
Western larch	11,760	21.0
Ponderosa pine	10,969	19.6
Spruce	6,953	12.4
Lodgepole pine	6,947	12.4
Western white pine	1,119	2.0
Cottonwood	677	1.2
White bark and limber pine	628	1.1
Alpine fir	610	1.1
Grand fir	393	0.7
Western red cedar	356	0.6
Miscellaneous ¹	189	0.3
Total	55,960	100.0

¹Includes aspen, birch, box elder, green ash, willow, elm, western hemlock.

Source: U. S. Forest Service, Northern Rocky Mountain Forest and Range Experiment Station, Missoula, Montana.

TABLE 2
MONTANA'S MAJOR CROPS

Crop	Unit	1944-1953		1954 ¹	
		Average	Prod.	Value	Rank
		(000)	(000)	(000)	(Prod.)
All wheat	bu.	80,013	76,557	\$159,557	2
Winter wheat	bu.	28,107	33,605	67,210	9
Spring wheat	bu.	51,906	42,952	92,347	2
Barley	bu.	16,861	33,332	28,999	3
Oats	bu.	11,307	11,151	7,248	23
Corn	bu.	2,698	2,813	4,501	36
Flaxseed	bu.	728	670	1,876	5
Mustard seed	lbs.	—	11,510	570	1
Potatoes	bu.	2,410	2,401	3,962	23
Sugar beets	tons	709	687	7,900	8
All hay	tons	2,574	2,863	58,692	14
Alfalfa hay	tons	1,118	1,348	—	14
Wild hay	tons	680	654	—	5

¹Preliminary

Source: Agricultural Marketing Service, U. S. Department of Agriculture.

RETAIL FOOD PRICE INDEX, MONTANA

(May 1950=100)

	All food	Meats, poultry & fish	Dairy products
1954—			
October	113.7	104.0	107.3
November	108.4	98.3	107.3
December	108.0	97.9	108.2
1955—			
January	109.7	100.6	108.6
February	108.6	101.7	106.5
March	107.4	98.9	108.2
April	108.7	100.4	106.9
May	108.0	99.6	105.4
June	107.2	102.2	105.8
July	108.4	102.1	104.8
August	106.7	98.9	105.2
September	108.6	102.2	104.3
October	107.9	98.1	105.0
November	105.1	93.7	105.4

Source: Computed from reports of the Montana Department of Labor and Industry.

Montana is also widely known as a livestock state, ranking 9th in the number of beef cattle (2.4 million) behind several midwestern corn states and Texas, Oklahoma, and South Dakota, and 4th in the number of sheep (1.7 million) on its ranches in 1955. The combined total value of sheep and cattle in Montana was estimated at \$273.9 million on January 1, 1955.

Much progress has been made in methods of agricultural production in recent years, resulting in greater efficiency, higher yields, and increased ability to withstand the hazards of unfavorable weather conditions. Further advancement will undoubtedly be made. As a result, the agricultural sector of Montana's economy represents a growing market for such products as fertilizers and chemicals. Although fertilizer is now being produced in the state, there appear to be possibilities for expansion. It is also possible that some agricultural chemicals could be produced.

Food processing plants based on the state's agricultural industry currently make up an important segment of manufacturing in the state. With the exception of beet sugar and flour, however, most of the products are for local consumption only and further expansion will be largely dependent upon population growth.

TABLE 3

EDUCATION OF MONTANA AND UNITED STATES POPULATION OVER 25 YEARS OF AGE, 1950

Years of School Completed	Montana	United States (Percent of Total)
Elementary school		
8 years or less	42.6	46.9
High school		
1 to 3 years	15.1	16.9
4 years	23.0	20.2
College		
1 to 3 years	10.7	7.2
4 years	6.1	6.0
Not reported	2.5	2.8
Median years completed	10.2	9.3

Source: U. S. Bureau of Census, 1950 Census of Population.

DAILY AVERAGE PRODUCTION OF SELECTED MINERALS IN MONTANA, 1935-39 AND FIRST TEN MONTHS, 1954 AND 1955

	First Ten Months		
	1935-39	1954	1955
Copper (short tons) ¹	329.8	190.4	258.9
Zinc (short tons) ¹	121.9	196.1	222.6
Lead (short tons) ¹	51.1	47.4	53.7
Silver (fine ounces) ¹	31,398.0	16,520.5	18,713.2
Gold (fine ounces) ¹	651.7	72.7	80.4
Crude oil (thousands of barrels) ²	14.9	38.1	42.4

¹Daily average production computed from reports of U. S. Bureau of Mines.

²Daily average production computed from reports of the Oil and Gas Conservation Commission of Montana.

And an Alert and Energetic Population

Natural resources are of little use unless combined with the most important of all resources—men and women and their skills and activities. Montana has only a small population and labor force, but its people are energetic, adaptable, and better educated (in terms of number of years of school completed) than the population of the United States as a whole. The proportion of Montanans over 25 years of age who have completed high school and of those who have had some college work is substantially above that of the total United States citizenry in the same age groups. (Table 3.)

It is unfortunately true that Montana is losing a substantial portion of its human resources to other areas. Unlike natural resources, human beings are mobile and tend to move where their skills and abilities are most fully utilized. Thus in three short years, between 1950 and 1953, Montana's population in the productive age groups 18 to 64 declined 2.5 percent compared to a gain of 5.6 percent in those age groups in the eleven western states as a whole. The answer, of course, is to provide more and better employment opportunities in Montana through development of resources and industry.

—By MAXINE JOHNSON



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