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PROBLEMS OF NONFERROUS METAL RESERVES

The rapid and extensive decline in nonferrous metal prices during the 4-month period, March through June of this year, has directed widespread attention to conditions in the domestic copper, lead, and zinc industries. The price changes, the demand situation, and the production, employment, and wage adjustments effected in the Tri-State district of southwestern Missouri, southeastern Kansas, and north-eastern Oklahoma and in the Western producing areas of New Mexico and Colorado were reviewed in a preceding article.* It was pointed out that the existing price levels seriously challenge continued metal mining and smelting operations in Tenth District areas which have heretofore been major contributors to the United States production of zinc, lead, and copper. At the same time, it is generally agreed that an ample supply of these metals is strategic to the national defense. This condition has raised the question as to whether some form of mine incentive aid is needed. To understand fully the problem and the long-range outlook for the nonferrous metal industries in these areas, it is necessary to consider the nonferrous metal reserves.

Because it is recognized that a major portion of the Tri-State output in recent years has been marginal ore, the Bureau of Mines has made extensive investigations of reserves in that region. These are a valuable indicator of the possibilities for future zinc and lead production. No comparable study of reserves has been made in either Colorado or New Mexico. Detailed reports on particular mining districts in Colorado, and more general ones on New Mexico, would indicate that the historical developments and current problems are common to all three areas. In both Western states there are a number of marginal mines, several old districts due for reappraisal, and numerous unexplored and undeveloped areas of copper, lead, and zinc mineralization. In Colorado, and to a lesser

extent in New Mexico, the occurrence of gold and silver in the crude ores is an important factor affecting the price at which known reserves may be recovered.

During the depression years, extremely low metal prices prevailed. Operators selectively mined their richer ores to maintain a minimum employment of labor and keep the mines open and drained, but many properties in the Tri-State district and in the West had to be abandoned and allowed to become flooded. As war demands rose, it was necessary to increase metals production. An increasing volume of crude ore was mined and, as the volume increased, the percentage of zinc and lead recovered declined progressively. In the Tri-State district these reached a minimum of 3.09 per cent in 1946 for zinc and lead concentrates combined. Since very little exploratory and development work was carried on during the depression because of the cost involved, and during the war years because of a shortage of manpower, a depletion of higher grade ores occurred in all areas from year to year. By 1943, the major portion of the Tri-State output was marginal ore.

Marginal production in the various mining districts would have been impossible during the war years had no subsidies been provided to the producers. When the subsidies were withdrawn in June, 1947, the number of active mines and mills dropped substantially. The Tri-State district was particularly hard hit and the number of mills dropped from 40 to 22. Operators again resorted to selective mining, further depleting reserves. With the high lead prices as an incentive, Tri-State metal recovery was raised through selective mining from 2.98 per cent for zinc and .46 per cent for lead concentrate in June, 1947, to 3.51 per cent for zinc and .79 per cent for lead concentrate by December, 1947. There was a decrease of 54 per cent in the tonnage of crude ore mined while the percentage of zinc recovered increased by 18 per cent and lead by 72 per cent over the 6-month period. This experience

*"The Nonferrous Metals," *Monthly Review*, September 30, 1949.

during a period in which prices were roughly comparable to those existing recently illustrates how reserves are reduced in grade by selective mining and indicates that, if it is continued long enough, many tons of the reserves eventually will be lost by becoming submarginal and below any conceivable economic recoverable value.

During 1948 production of crude ore was increased substantially in the West in response to the high metal prices which established a peak in November, 1948. Exploration and development work was stepped up considerably in Colorado and New Mexico and this put some old properties back into operation. In the Tri-State district, crude ore output was expanded somewhat late in the year and a number of mines were reopened. The extensive drop in metal prices from March through June of this year effected a sharp reverse in the upward trend of metal operations. Numerous operators shut down, while others turned to mining only the highest grade ores. Thus, the higher grade reserves are currently being depleted at an accelerated rate.

This problem of declining reserves is accentuated by the fact that, as reserves have been depleted over the past fifteen years, the cost per ton of crude ore handled has risen rapidly. In 1935, the estimated mining and milling cost per ton of crude ore in the Tri-State district was \$1.50. By 1945 it had risen to \$2.75 per ton, and in March, 1948, totaled about \$4.15 per ton. Before the war, labor accounted for about 55 per cent of production costs in the Western zinc-lead industry. Today labor costs equal about 70 per cent of total costs. In Colorado, labor costs per ton of ore produced have increased from \$3.00 a ton to over \$12.00 a ton during the period 1939 to 1948, inclusive. It is reported in New Mexico that wages and benefits have increased 100 per cent or more in many cases during the past four years while production per man-shift has steadily decreased until it is less than 50 per cent of prewar in all except the highly mechanized mines.

Rising costs during the war did not seriously reduce the quality of metal reserves, owing to a Government subsidy program. In February, 1942, the Government instituted a premium payment plan in order to stimulate increased metals production and this served to safeguard the quality of existing reserves by covering both the higher costs of marginal producers and the rising costs in the whole industry. United States subsidy payments to zinc, lead, and copper producers increased successively from \$3,309,000 in 1942 to \$90,754,000 in 1946, during which time the tonnage of crude ore handled stood at a high level. The expiration of premium payments in June, 1947, forced high-cost marginal operators to shut down, as already in-

dicated. From mid-1947, costs continued to rise at a rapid rate, as noted, but a shortage of the metals brought successive metal price increases during 1948 and these supported a high level of production and considerable exploration and development work as well.

Following the March break in the metal market, much exploration and development work was halted and operators sought to reduce costs in a number of ways. The working week was reduced from 48 hours to 40 hours, thus eliminating overtime pay, and new wage patterns were established. In the Tri-State district, wages are now about \$3.00 per day less than in March, ranging between \$8.00 and \$9.00 with a minimum \$8.00 level set by a sliding scale price agreement. No wage pattern has been adopted as yet by the Western metal industries and for this reason most zinc-lead producers in New Mexico are shut down. While the occurrence of gold and silver in the crude ores has enabled most major Colorado producers to continue operations, there is widespread concern over the abandonment of scheduled exploration and development programs.

It has been estimated that the bulk of the present known Tri-State reserves can be profitably mined with a price of 12 cents to 13 cents a pound for zinc. Cost adjustments are still being worked out in the Western states, but it is roughly estimated that a price of 11 cents to 12 cents a pound for zinc is necessary to support full-scale metal operations. The 17 $\frac{5}{8}$ cents price for copper and 15 $\frac{1}{8}$ cents price for lead which prevailed during August and most of September were generally considered satisfactory to the support of domestic operations, without selective mining.

The outlook for metal prices is somewhat clouded. Copper has remained firm at 17 $\frac{5}{8}$ cents for more than two months and production at this price approaches the early 1949 level. Zinc and lead appeared to have leveled off at 10 cents and 15 $\frac{1}{8}$ cents, respectively, late in the summer, but toward the end of September prices moved down again. By mid-October, the price of lead had dropped to 13 cents, East St. Louis, only 1 cent above the June low. Zinc declined from 10 cents to 9 $\frac{1}{4}$ cents, New York, but it is generally agreed that the lowered price is a result of the steel strike and, therefore, a temporary phenomenon. Many in the industry feel that the price of zinc would have risen above the 10-cent level late in the summer in the absence of indicated strikes in the steel, automobile, and coal industries. There is much zinc, both foreign and domestic, that can be recovered at 12 cents or 13 cents a pound, and for this reason a very high price for zinc is not expected in the near future. In the case of lead, the price outlook is less clear. It would appear that strikes and foreign cur-

rency devaluations are important factors in the decline of lead prices. Imports of copper, lead, and zinc rose rapidly during the war years and have remained at high levels compared to prewar. Foreign metals production has been increasing and the competition of foreign lead may affect domestic price levels.

The estimated zinc price of 12 cents to 13 cents a pound for Tri-State production and of 11 cents to 12 cents a pound for New Mexico and some districts in Colorado would allow the present known reserves of zinc to be recovered profitably, assuming present cost patterns. It would not, however, cover the costs of extensive exploration and development made vital by the depletion of domestic reserves over the past fifteen years. Similarly, recent market prices for copper and lead, while adequate for the support of current metal operations, are generally believed to be inadequate to supply funds for the development of new reserves and to attract the needed investment capital for such programs.

There are other factors beside price that affect the future development of metal reserves. In the Tri-State district, the distribution of milling facilities in relation to the location of known reserves does not allow the mills to operate at capacity. Therefore, the present estimated reserves could not be recovered in the shortest possible time even if other factors should favor this. The Picher field, involving portions of Oklahoma and Kansas, has 25 of the 43 mills. These represent 73 per cent of the available capacity in the district while the tributary ore reserves equal only 55 per cent of the total in the area. This leaves 18 mills in widely separated and distant areas of Missouri and Kansas to handle the remaining 45 per cent of the reserves. According to the United States Bureau of Mines, these 18 plants "are not evenly distributed in relation to known reserves, designed to treat the ores efficiently, or in line with the economic conditions of certain areas. The areas involving Oronogo, Webb City, and Duenweg have such large reserves that the available mills, even were they usable on such areas, could not handle them over a period of 48 years. The ore reserves still in the Lawton and Waco camps could not be handled with their available mills in 14 years. In order, therefore, to make these ores available in the next 5-year period, new and modern large-capacity units in line with the economic conditions prevailing in those camps would have to be provided. Other camps needing new plants to handle the available reserves are Crestline in Kansas and Joplin, Neck City, Alba, and Winchester camps in Missouri." If existing mill capacity could be operated full time and no new reserves were developed, the estimated 66,100,000 tons of crude ore

in the Tri-State area could be mined and treated by December, 1955, leaving the district depleted.

Mining of the known metal reserves depends in large part upon the continued drainage of water in the ore pits. Many, and in the Tri-State district nearly all, of the deposits occur below the natural level of ground water, and the water flowing into the mine openings must be continuously removed. In the Oklahoma-Kansas portion of the Tri-State district, 63 pumping plants were handling 36,610,800 gallons of water a day in May, 1947. In March, 1948, after premium payments had ceased, 39 pumping plants were handling 30,462,000 gallons each 24 hours. Thus, a total of 6,148,800 gallons of water was accumulating in the mine workings of the two states and will gradually encroach upon the active mining levels of the field and close them down, unless there is a resumption of pumping operations. Because of the enormously large areas open underground, and the miles of interconnected workings, the cost of draining the Oklahoma-Kansas section of the field, if pumps were shut down and the mines allowed to fill with water, would be so great that probably it could not be done, and the remaining reserves would be lost. The largest and most important section of the Tri-State district now under water is the Oronogo-Webb City-Duenweg area, and, according to an investigation of the Bureau of Mines conducted in 1946, it would require a capital investment of \$2,400,000 to dewater and provide transportation and milling facilities for this 14-square-mile reserve.

In Colorado, the future of the Leadville mining district, which ranked sixth among United States districts in metals production through 1940, is dependent on further development of the areas that have hitherto been the most productive and now are in large part under water. The value of gold, silver, copper, lead, and zinc produced in the district from 1859 to the present totals about 650 million dollars. During the late 1920's and early 1930's, depressed conditions caused many of the mines to be flooded. During World War II, a tunnel from the East Fork of the Arkansas River to Fryer, Carbonate, and Iron Hills, which would drain the eastern part of the district, was proposed and funds for it were appropriated by Congress. By June, 1945, the tunnel had been extended about 6,500 feet from the portal and had reached the border of the Fryer Hill area. In the meantime, the war had ended, however, and a further appropriation for the completion of the tunnel was not forthcoming. On October 12 of this year, the Bureau of Mines stated that drilling crews would be at work on the Leadville drainage tunnel within two or three weeks after the signing of the Interior Department appropriations bill. The bill carries \$250,000

cash and \$250,000 contract authority to continue work on the tunnel, and this will permit drilling an additional 2,600 feet, at which point the drainage job can be started. The Bureau of Mines engineers have estimated that draining by means of the tunnel should make another 3 million tons of lead-zinc ore available for mining. Costs of the tunnel are expected to be met by royalties on ore mined and tolls on ore handled. The western part of the Leadville district, however, is far less favorably situated with respect to drainage. Only a long tunnel, perhaps six miles, could lower the water enough to be an effective aid to mining, and the cost of this operation would be very large.

These examples show that the pumping and control of water are among the major problems of metal mining. In the Tri-State field the volume of water to be pumped is large, the cost is high, and the added expense for again draining a field where the pumps have been removed and the water level allowed to rise may become prohibitive. In the Western mountain districts the methods used to dewater are different but they also require heavy capital expenditures. The dewatering problem is further complicated by the fact that the minerals contained in the crude ores often become oxidized when exposed to the air and, if the mine is later flooded, this water may become highly acid and destructive to both pumping and mining equipment.

There is some question as to whether further exploration will bring out new reserves with better or equivalent metal content compared with present known domestic reserves. This is particularly true in the Tri-State district, although there are wide areas and long distances between the known producing camps in the field, in addition to the possible extensions of the outside boundaries of the field. Some of these areas have been drilled with negative results but many thousands of acres are as yet untouched by prospecting. Because no new or large deposits have been found in the Tri-State area since 1929, by the limited drilling that has been done, many of the larger mining operators have developed a pessimistic attitude. In the spring of 1948, not over 25 drills were working in the district. At one time during World War I from 800 to 1,000 drill rigs were prospecting in the Tri-State area. A vast accumulation of knowledge about the field exists and new methods of prospecting are now available. Their use should develop a new fund of information and better technique in the future. Tri-State crude ore reserves declined approximately 17 per cent over the 2-year period from January 1, 1944, to January 1, 1946, but they were subsequently increased by 32 per cent during the succeeding two years to a total of 66,100,000 tons

on January 1, 1948, reversing the downward trend. No figures are available on metal reserves in Colorado and New Mexico. In Colorado metal deposits are widely distributed. In New Mexico they are located almost wholly within the southwestern quarter of the state. Milling facilities for handling the complex Western ores have only recently been developed and for this reason a considerable amount of copper, lead, and zinc remains to be recovered by slag fuming plants at the older mine dumps. These dumps are also a useful indicator of the quality of the lower grade ores which remain to be worked in some of the older mining areas. In many districts, zinc predominates in the ore as the mining depth increases. In both states there are several old districts due for reappraisal and a number of unexplored and undeveloped areas of mineralization.

This discussion indicates the marginal nature of many metal mining operations, the increasingly heavy capital investment required in metal mining, and the possibilities of the loss of considerable metal reserves, owing to conditions and uncertainties existing within the nonferrous metal industries. As a result, extensive efforts have been made in recent months to enact some form of Governmental aid for the nonferrous metal industries. At the session of Congress just ended, particular attention was focused on the mine incentive payments plan bill, S.2105. This bill was passed by the Senate on October 6. It was the Government's proposal and was characterized as a national defense measure. The bill is designed to keep the domestic mining industry in sound condition by providing Government assistance for exploration and conservation of metal and mineral resources. The proposal in some ways resembles some of the farm price support programs in that mining companies which agreed to certain terms of the Interior Department would be assured that the Government would buy their output at specified maximum and minimum prices should they be unable to find a market elsewhere.

The bill would provide for the establishment of a Minerals Conservation Board, consisting of the Secretary of the Interior as the executive chairman, the Secretary of Defense, the Secretary of Commerce, and the Secretary of the Treasury. The Board would determine the amount of money to be allocated to the aid of exploration and to the aid of conservation, within an \$80,000,000 annual limitation. The Board would also determine the metals or minerals eligible for conservation or exploration aid, the maximum or minimum price which could be paid for the purchase of any metal or mineral for conservation, and the time limits within which contracts for aid for conservation would terminate. Any producer could file with the

secretary of the Board an application for financial aid in carrying out a specified project for exploration, or financial aid to conserve a deposit of ore or minerals. The secretary would have the authority to accept or approve the application, subject to the approval of the Board. Contracts entered into under the bill would be subject to a limitation of two years. No contracts would be entered into after the expiration of three years from the effective date of the act.

Exploration aid would be provided for exploration in the United States for unknown or undeveloped sources of metals or minerals, including extensions of known deposits and metallurgical research on processes for the production of such metals or minerals. Conservation aid within the meaning of the act would apply to production of ores or minerals from mines in the United States, or from tailings, dumps, slags, or residues of such mines, which the secretary determines would, in the absence of such aid, be discontinued or remain shut down under such circumstances that production probably "would not or could not be resumed promptly when needed for the national economy or security."

All metals or minerals purchased under the act would be delivered by the producer to the Administrator of General Services who would, before selling them in the open market, notify the Munitions Board of the inventory held by him and hold them for 60 days after such notification. Unless notified within 60 days to transfer the materials to the stockpile, the Administrator would be directed to sell them when open market prices would return to the Government at least the price paid by the Government for the metals or minerals, and only in such quantities as would not materially depress the market.

Several amendments to the bill have been proposed. One amendment offered, and adopted by the Senate but eliminated by the House Public Lands Committee, would provide in substance for the inclusion in contracts made by the Government with mining operators a provision for repayment of funds which might be advanced to assist in explorations, the liability for payment of such advanced amounts to be limited to a reasonable portion of profits accruing from production resulting from the particular explorations. The Board would determine the amount which might be paid to any producer or class of producers for exploration and the ratio which the Government's contribution for exploration should bear to the contribution of any producer for such exploration. Not offered in the Senate, but understood to be ready for submission in the House, is an amendment which would exempt the producer from payment of taxes on sums received from the Government for exploration and conservation projects. The House Public

Lands Committee added manganese, chromite, and mercury to the small mine provision of the Senate bill which specified only copper, lead, and zinc producers. In another amendment the Committee proposed that annual reports be made by the Secretary of the Minerals Conservation Board to the Congress.

The Senate mine subsidy bill S.2105 failed to pass the House by a two-thirds majority when brought up on a motion to suspend the rules on October 17. The vote was 176 for the motion and 118 against it. At adjournment, therefore, the bill was in the Rules Committee. It is pending on the House calendar with the necessary simple majority indicated when the bill is cleared by a House rule.

Spokesmen for the pro-subsidy mining interests do not appear to be too much in favor of the bill which has been substituted for their demand for direct incentive premium payments to marginal producers such as were used during the war period. Their proposal was introduced in the House in H.976 and in the Senate in S.240. Many men in the nonferrous metal industries are now backing the Senate bill S.2105 as "better than nothing." There is a considerably widespread opinion within the industry that a more favorable tax structure would prove an important incentive to metals exploration and development. The Senate committee, which reported the rewritten bill S.2105 on August 23, stated in its report that cogent evidence had been presented that tax allowances for exploration and development costs are an effective means of attracting much needed venture capital into mining. The report recommended that the appropriate Congressional committee undertake a study of the possibility of providing tax incentives for the domestic mining industry. In so doing, the committee said that it realized, however, the impossibility that any such action can be taken, or that its effects would be felt, in time to deal with the present emergency situation in respect to domestic sources of essential minerals and metals. The question of higher protective tariffs has also been raised and urged by various segments of the industry. The House passed the bill to continue the suspension of the import duty on ferrous and nonferrous scrap, with its Senate amendment to repeal the suspension of the 2-cent import tax on copper, but because of the short time remaining the bill was not brought up for debate in the Senate. The suspension of the lead tariff was allowed by Congress to expire on June 30.

The failure of Congress to reach a decision concerning aid for the nonferrous metal industries during the past session may have the effect of further postponing decisions within the zinc, lead, and copper industries. It is evident that Congress is aware of and sympathetic to the problems facing domestic

metal producers and of the threat of inadequate domestic reserves to meet a war emergency. It would appear, therefore, that the Senate mine subsidy bill S.2105 has a good chance of being enacted early in the next session. There is, however, an immediate question as to how long some marginal producers can continue operating. Relief in the form of substantial metal price increases does not appear to be likely soon, and the recent backslide of zinc and lead prices is further hampering the marginal producer who has readjusted his costs and scale of operations to the

limit. On the other hand, many question whether Government subsidization of the nonferrous metals is in the best interests of the nation, even though considerable low-grade ore reserves be lost and adequate domestic reserves to meet high-level war-time demands not be developed. Since existing conditions appear to require the abandonment of sizable nonferrous mining properties, it is indicated that some kind of national policy regarding the domestic zinc, lead, and copper industries will necessarily be evolved in the near future.

AGRICULTURAL AND BUSINESS CONDITIONS

AGRICULTURE

Crops The October 1 estimate of the United States Department of Agriculture places the 1949 United States corn crop at a little less than 3½ billion bushels. This is a decline of about 1 per cent from the September 1 estimate. The heavy windstorms which occurred over the western Corn Belt on October 9 and 10 will probably reduce the volume of corn harvested, as some local areas of Nebraska and Iowa have reported as high as half of the ear corn on the ground. The 1949 corn crop will be one of the largest of record, however, and the total production of corn in the Tenth Federal Reserve District will probably be the second largest of record. Stocks of old corn on farms in the District on October 1 were at one of the highest levels in history and were nearly double the average amount held on October 1 in the period 1938 through 1947. Reports from Nebraska indicate that 72 per cent of the old crop now stored on farms is either under seal or Government purchase contract. It is interesting to note that the relative increase in total corn production over the 1938-1947 average in the Tenth Federal Reserve District is greater than that for the nation as a whole. Nebraska, the principal corn state, shows an indicated October 1 production of 43 per cent above the state's 1938-1947 average.

Department of Agriculture corn estimates:

	Oct. 1 1949	Sept. 1 1949	Final 1948	Aver. '38-'47
	(In thousands of bushels)			
Colorado.....	17,160	16,445	14,804	13,902
Kansas.....	69,328	69,328	81,304	61,169
Missouri.....	177,612	177,612	201,110	128,558
Nebraska.....	257,740	257,740	252,468	180,307
New Mexico.....	2,096	2,096	1,890	2,474
Oklahoma.....	29,555	28,270	32,125	28,382
Wyoming.....	1,273	1,273	1,008	1,521
Seven states.....	554,764	552,764	584,209	416,313
United States.....	3,476,986	3,525,741	3,650,548	2,787,628

The Tenth Federal Reserve District states supply approximately 75 per cent of the nation's broomcorn tonnage. The Department of Agriculture's October

1 production estimates show the nation's production in 1949 at 43,000 tons, up tremendously over the 29,500 tons produced in 1948. Within the District, production in New Mexico and Colorado shows substantial gains over 1948, with lesser gains recorded in Oklahoma. At the present time it appears that Colorado will be the leading broomcorn producing state in the nation, as it was last year.

Wheat stocks on farms in Kansas on October 1 amounted to 41 per cent of the 1949 crop. This is less than the percentage on farms October 1, 1948, and less than the 1938-1947 average. National cotton production is estimated at 4 per cent above the 1948 level and more than one third above the 1938-1947 average. Production in Oklahoma in 1949 is estimated at 28 per cent above the 1948 production but 8 per cent below the average production in Oklahoma in the period 1938 through 1947.

Among the minor crops, peanuts in Oklahoma are down approximately one third from the 1948 production. Dry bean and sugar beet production in Wyoming and Colorado is somewhat larger than the production figures for 1948. Potato production in the Tenth District is down substantially from the production of 1948.

The lower range of Kansas City cash grain prices:

	Oct. 18 1949	Sept. 30 1949	Aug. 31 1949	Sept. 30 1948
No. 1 dk., hd. wheat, bu..	\$2.14½	\$2.19½	\$2.07½	\$2.18
No. 2 mixed corn, bu.....	1.10	1.20	1.22½	1.42
No. 2 white oats, bu.....	.69½	.69½	.65	.76
No. 2 rye, bu.....	1.35	1.38	1.28	1.50
No. 2 barley, bu.....	1.08	1.12	1.10	1.22
No. 2 white kaffir, cwt...	1.95	1.98	2.19	2.30

Grain marketing in the Tenth Federal Reserve District has shown a mixed trend over the period of the last nine months. Wheat marketing for the 9-month period January through September, 1949, is approximately one fourth less than that of 1948, but corn and oat marketings are one fourth greater. During September, the marketing of corn in the District was nearly 70 per cent greater than the amount

marketed in September, 1948. Part of this heavier sale of corn was undoubtedly motivated by a desire to make available additional storage space for the 1949 corn crop soon to be harvested.

Livestock Hog production in the United States has increased heavily during 1949. The pattern of hog marketing, moreover, has deviated somewhat from the normal trend this year. Spring pigs were marketed earlier this year and a larger than usual proportion of the hogs marketed was in the lower weight classes. At the six principal livestock markets of the Tenth Federal Reserve District, total hog marketings in the nine months January through September, 1949, were 10 per cent above the comparable period in 1948. However, September, 1949, was 42 per cent above September, 1948. Market receipts of cattle during the first nine months of the year were 8 per cent above the comparable period of the year before, while the receipts of calves were down 17 per cent. This condition may lend impetus to the feeling that the downswing of cattle numbers has come to an end. The Department of Agriculture indicated a slightly larger number of cattle on farms January 1, 1949, than on January 1, 1948.

The volume of marketing of both sheep and lambs in the District over the period of the first nine months is down substantially in relation to the comparable period of 1948. Reports from the principal livestock markets indicate that fewer ewe lambs are being sent to market than in the past several years. This may indicate that the downswing in sheep numbers may be halted and that sheep numbers have, during this year, reached their low point.

Top carlot livestock prices at Kansas City:

	Oct. 18 1949	Sept. 1949	Aug. 1949	Sept. 1948	Sept. 1947	Sept. 1946
	(In dollars per hundredweight)					
Beef steers.....	28.50	32.50	29.25	39.00	33.00	19.90
Stocker cattle.....	24.40	24.40	23.50	30.00	24.75	18.00
Feeder cattle.....	23.50	25.00	24.50	32.50	27.65	19.00
Calves.....	25.00	25.00	25.00	29.00	24.00	13.50
Hogs.....	18.50	22.75	23.60	30.00	31.00	15.95
Lambs.....	24.50	24.25	24.50	26.75	25.65	19.00
Slaughter ewes....	8.50	9.00	9.00	11.00	8.50	8.75

Cattle and Lamb Feeding The United States Department of Agriculture anticipates that the volume of livestock feeding in the winter of 1949 and the spring of 1950 will be as large as the record number fed last year or perhaps even larger. The heavy movement of feeder cattle into the Corn Belt in the middle and late summer was the largest on record. The early movement of cattle was initiated by the distress movement of feeder cattle from the drought areas of Montana and northeastern Wyoming, but this movement was followed by heavy shipments of cattle from the entire range area. The

earliness of shipments of feeder cattle was further evidenced by somewhat lower weights of cattle being moved into the Middle West. During the past several weeks there has developed additional demand for feeder and stocker cattle in the Middle West. Most of the cattle moving at the present time are of substantially heavier weights.

There will be fewer lambs available for feeding this winter than in the winter of 1948. Present indications are that there will be rather heavy feeding of lambs on wheat pasture in Texas and Oklahoma but somewhat less than the usual number of lambs will be fed in western Kansas. It is indicated that the western Kansas situation stems from an element of cautiousness on the part of feeders based upon the unhappy experiences of November, 1948, when unusually heavy storm losses were reported in the Kansas wheat pasture areas. Corn Belt lamb feeding is expected to be substantially above the 1948 level. Most of the feeder lambs arrived in the Corn Belt somewhat earlier than usual. This leads to the expectation that a large number of feeder lambs will be marketed from Corn Belt feed lots before January 1.

MEMBER BANK CREDIT

During the four-week period ended September 28, the net changes in the condition items of District member banks were small. The principal change was an increase in United States Government security holdings, amounting to 25 million dollars in reserve city banks and 11 million in country banks. The main source of funds for these investments on the part of the city banks was a reduction in reserve balances with the Federal Reserve Bank in connection with the lowering of member bank reserve requirements by the Board of Governors, the last of which decreases was effective September 1. The country bank increase in Government securities approximated the amount of funds available from a decrease in loan volume and a reduction in reserve balances with the Federal Reserve Bank.

Loan volume declined slightly during the month in both reserve city and country member banks in the District. The net decrease in total loan volume in the country banks resulted primarily from the repayment of Commodity Credit Corporation corn loans on September 1. The fact that the net decrease in country bank loan volume amounted to only 5 million dollars indicates a significant increase during the month in other loan categories, including consumer loans and Commodity Credit Corporation wheat loans.

The low point for loan volume among District member banks this year came at the end of May. Bank loans began to increase in June, particularly in the country banks, and showed sizable increases in both

SELECTED ITEMS OF CONDITION OF TENTH DISTRICT MEMBER BANKS

(In millions of dollars)

	ALL MEMBER BANKS			RESERVE CITY BANKS			COUNTRY BANKS		
	Sept. 28 1949	Aug. 31 1949	Sept. 29 1948	Sept. 28 1949	Aug. 31 1949	Sept. 29 1948	Sept. 28 1949	Aug. 31 1949	Sept. 29 1948
Loans and investments.....	4,397	4,373	4,209	2,402	2,383	2,231	1,995	1,990	1,978
Loans and discounts.....	1,515	1,528	1,468	827	835	837	688	693	631
U. S. Government obligations.....	2,476	2,440	2,364	1,358	1,333	1,201	1,118	1,107	1,163
Other securities.....	406	405	377	217	215	193	189	190	184
Reserve with F. R. Bank.....	721	756	902	438	465	537	283	291	365
Balances with banks in U. S.....	587	590	583	241	247	255	346	343	328
Cash items in process of collection.....	241	225	267	224	209	249	17	16	18
Gross demand deposits.....	5,005	5,002	5,045	2,787	2,790	2,767	2,218	2,212	2,278
Deposits of banks.....	803	791	804	746	736	745	57	55	59
Other demand deposits.....	4,202	4,211	4,241	2,041	2,054	2,022	2,161	2,157	2,219
Time deposits.....	678	674	666	362	360	357	316	314	309
Total deposits.....	5,683	5,676	5,711	3,149	3,150	3,124	2,534	2,526	2,587
Borrowings.....	6	7	7	5	4	6	1	3	1

groups of banks during July and August. The important factor in the increase in country bank loans has been Commodity Credit Corporation guaranteed loans on wheat, with the volume of such loans running in excess of a year ago. Such loans also have been a factor in the city bank loan increase of recent months. In addition, the recent period has been one of a seasonal increase in business loans in the city banks. However, the seasonal business loan increase has

been less than usual, particularly in the category of loans to millers and dealers for handling wheat. Consumer credit loans have been expanding in both classes of banks.

DEPARTMENT STORE TRADE

Dollar volume of sales at reporting department stores in this District in the first half of October was running about 13 per cent under that of a year ago, as compared with decreases of 4 per cent for September and 6 per cent for the first nine months of the year. However, it should be remembered that the October comparison is with a period last year that marked the peak of the whole postwar boom. Sales increased more than is usual from August to September, and the seasonally adjusted index of daily average sales rose from 299 per cent of the 1935-39 average in August to 311 per cent in September.

Inventories of department stores showed less than the usual increase during September, and the seasonally adjusted index of stocks declined from 264 per cent of the 1935-39 average at the end of August to 257 per cent at the end of September, but the volume of merchandise on order for future delivery continued to rise sharply. Stocks of merchandise on hand September 30 were 15 per cent less in value than a year ago, while outstanding orders were 3 per cent larger.

Department store sales and stocks in leading cities:

	BANK DEBITS		Change from '48	
	Sept. 1949	9 Mos. 1949	Sept. 9 Mos.	Sept. 9 Mos.
COLORADO	(Thousand dollars)		(Per cent)	
Colo. Springs.....	44,349	348,233	-9	-1
Denver.....	528,928	4,322,437	0	-1
Gr. Junction.....	14,512	118,228	+7	+5
Greeley.....	21,266	163,072	-8	-14
Pueblo.....	44,347	358,254	+10	+1
KANSAS				
Atchison.....	8,739	113,886	-37	-18
Emporia.....	9,587	85,373	-4	-4
Hutchinson.....	31,870	351,659	-21	-16
Independence.....	6,174	57,756	-7	-4
Kansas City.....	64,173	573,978	+2	+1
Lawrence.....	9,359	88,399	-6	-4
Parsons.....	7,403	64,095	-12	-12
Pittsburg.....	10,955	98,144	-2	-5
Salina.....	35,502	300,104	-3	-17
Topeka.....	87,749	805,152	+5	+4
Wichita.....	223,115	1,934,770	+4	-4
MISSOURI				
Joplin.....	24,193	227,283	-10	-4
Kansas City.....	996,321	8,941,886	-8	-7
St. Joseph.....	89,059	798,884	-9	-9
NEBRASKA				
Fremont.....	13,660	139,459	-11	-6
Grand Island.....	23,587	186,524	+5	-5
Hastings.....	11,843	113,217	-20	-15
Lincoln.....	75,035	674,834	-2	-3
Omaha.....	484,520	4,076,367	0	-4
NEW MEXICO				
Albuquerque.....	84,750	738,841	+14	+15
OKLAHOMA				
Bartlesville.....	124,286	1,171,485	+3	+26
Enid.....	29,815	304,952	-16	-20
Guthrie.....	3,950	37,176	-8	-4
Muskogee.....	23,357	202,240	-3	-4
Okla. City.....	296,694	2,670,955	-3	-1
Okmulgee.....	6,025	55,599	-2	-4
Ponca City.....	18,767	158,781	+15	-8
Tulsa.....	464,392	4,282,969	-14	-3
WYOMING				
Casper.....	27,349	243,737	-7	+6
Cheyenne.....	30,347	259,415	-2	+4
District, 35 cities..	3,975,978	35,068,144	-5	-3
U. S., 333 cities.....	101,080,000	911,214,000	-4	-1

	SALES		STOCKS	
	Sept. '49 comp. to Sept. '48	9 Mos. '49 comp. to 9 Mos. '48	Sept. 30, '49 comp. to Sept. 30, '48	Sept. 30, '49 comp. to Sept. 30, '48
	(Per cent increase or decrease)			
Denver.....	-6	-7	-9	
Pueblo.....	-19	-11	-14	
Hutchinson.....	-8	-4	+2	
Topeka.....	-1	-3	-12	
Wichita.....	-1	-1	-7	
Joplin.....	-6	-9	-11	
Kansas City.....	-7	-9	-15	
St. Joseph.....	+1	-7	*	
Lincoln.....	-9	-9	*	
Omaha.....	+8	+3	-48	
Oklahoma City.....	-2	-8	-20	
Tulsa.....	-4	-9	*	
Other cities.....	-8	-5	-16	
District.....	-4	-6	-15	

* Not shown separately but included in District total.