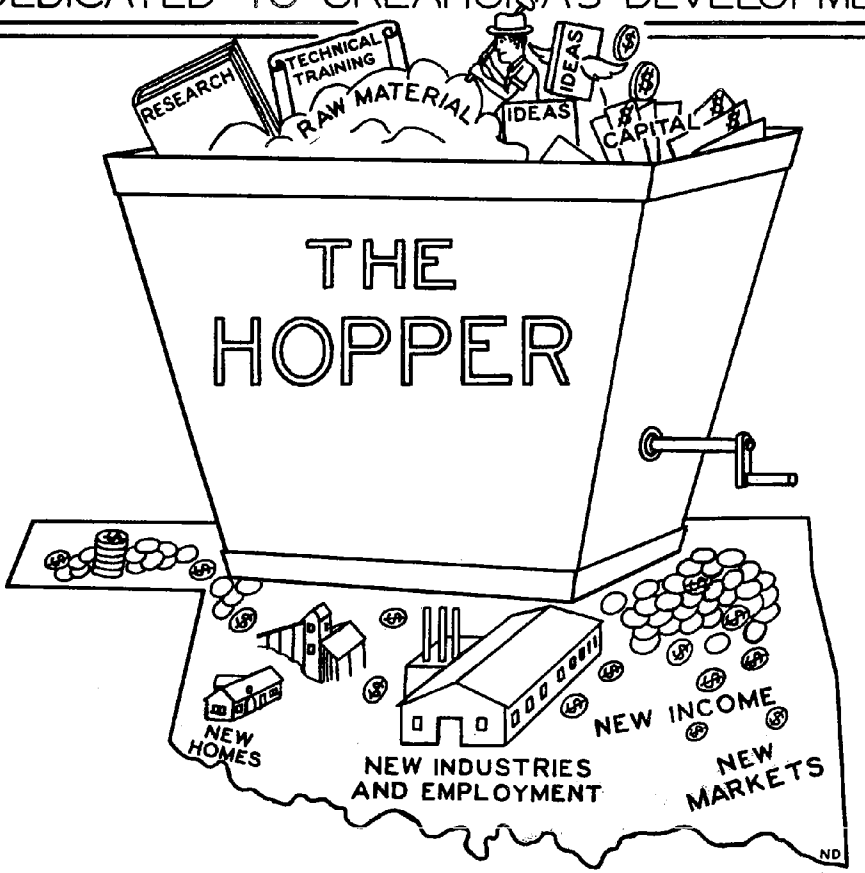
DEDICATED TO OKLAHOMA'S DEVELOPMENT



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DIVERSIFICATION IS TREND OF STATES NEW INDUSTRIES

Post-war industrial expansion in the Tenth Federal Reserve district, which includes Oklahoma, has shown a tendency toward diversification and in some lines has greatly exceeded the national averages, according to the December 31, 1952, issue of Monthly Review, published by Federal Reserve Bank of Kansas City.

Analyses of the district in comparison with national averages were made separately for the three mountain states; the three plains states of Oklahoma, Kansas, and Nebraska; and the Kansas City metropolitan area. In the three plains states, employment expansion from 1947 to 1950 was greatest in transportation equipment; stone, clay, and glass; and printing and publishing. Between 1950 and 1952, greatest employment expansion was also in transportation equipment, followed by ordnance, chemical products, and machinery. Important gains were made in apparel, instruments, fabricated metals, and electrical machinery.

Mention of Oklahoma's part in this expansion is made in connection with some types of industries for example, "**most of the employment gain in apparel was in Oklahoma and, to a lesser extent, in Kansas." and "**most of the increased employment in the fabricated metal industries reflected growth of light metal fabrication in Oklahoma." A big part of the expenditures for industrial construction from 1945 to 1950 in the three plains states was for increased petroleum refining capacity, primarily in Oklahoma and to some extent in Kansas. Two privately-financed rubber products plants were added in the district during the war -- the tire factory at Miami, Oklahoma, and a rubber belt plant at Lincoln Nebraska. Other new projects reported for the Grand

River Dam area include a chemical plant to produce fertilizer and two large new mills producing paper for gypsum wallboard.

Grain-milling capacity is reported as gaining slightly in the three plains states, although flour-milling capacity of the nation decreased in the period 1945-1951. Expansion in crude oil capacity of refineries in the United States was increased about 37 per cent between 1947 and 1952, but during the same period, capacity was increased by about 50 percent in Oklahoma and in Kansas, and about 90 percent in the Kansas City area. An attempt was made, through statistical analyses, to show something of the direction of new industrial expansion in the Tenth District. The following comments concerning this phase of the study are quoted from the resume and conclusions:

"The peacetime years since the end of World War II have been short and the economic conditions changing. The pent-up demands remaining from World War II had not been fully satiated when the Korean conflict began. Yet, throughout both periods into which the postwar years have been divided, the predominance of a few industries in the industrial growth of manufacturing employment may be noted. **Although a particular industry's growth in both postwar periods is meaningful, its expansion assumes added significance if it can be determined to have existed for some time. Those industries which exhibited a tendency toward growth both in the 1939-47 period, as indicated in the Census of Manufactures, and in the subsequent periods seem to merit designation as the leading elements of postwar expansion. In the plains states, the transportation equipment; fabricated metal products; stone, clay and glass products; and apparel industries represent, by this test, the direction of industrial expansion."

RICHARDS SPUR CRUSHED STONE FEATURED IN NATIONAL JOURNALS

"Nation's Outstanding New Crushed Stone Plant." This seems to be the consensus of opinion as expressed in full length articles appearing in two periodicals of national circulation that have come to our attention, that feature the crushed stone plant of Dolese Brothers Company at Richards Spur.

The article appearing in the January issue of Rock Products was written by Bror Norberg, Editor. Edward P. Larson is author of a full length article which appeared in Pit and Quarry for January. In both articles, the authors have featured the "Look ahead" planning of this plant, which they consider to be the most modern of its kind.

Under the leadership of Roger Dolese, President of the company, with home offices in Oklahoma City, it was decided to rebuild the screening and blending section, and to completely revamp the plant operations to meet present and future specification requirements. Rebuilding was necessary as a result of a fire which destroyed the whole screening and blending section in 1949.

The new plant is designed for a rated capacity of 750 tons per hour of crushed stone products. These products range from agricultural limestone and limestone dust to large sizes of crushed stone products. One of the features of this modern plant emphasized in both articles is the flexibility of the plant operation to blend sizes in proper proportion to meet the varied specifications now in use in this region, as well as adaptability to probable future specification requirements. Central panel-board control permits accurate proportion feeding from different bins to meet the specifications of any order.

A list of some of the features the authors point to as making this plant outstanding, include:

1. Safety features
2. Dust control with hydraulic collectors
3. Interlocking electrical controls throughout
4. Accurate blending to meet multiple specifications
5. Electrical controls for blending
6. Balanced production to minimize stockpiling
7. Electrical precipitators for control room
8. Design details to facilitate maintenance
9. Regulation of primary crusher output
10. Structural design

Safety controls were an important part of the basic planning of the plant. Interlocking electrical signal and control devices are designed to automatically stop operations when anything goes wrong and prevent inadvertent starting of machinery until difficulties are corrected and repair men are in the clear. The crushing and blending operations are completely serviced by a dust collector system which guards the health of employes against the hazards of dust and also protects machinery from excessive wear caused by dust.

The plant is located at the end of a ridge or hill of Arbuckle limestone where Dolese Bros. have been quarrying stone since 1907. Dolese Brothers Company was originally organized in Illinois by four brothers. Home office is now in Oklahoma City, and Roger Dolese is President of Dolese Brothers Company and also President of the Dolese Company. The two companies operate crushed stone plants, sand and gravel plants and, ready-mixed concrete plants in Kansas and Oklahoma. Oklahoma quarries and crushed stone plants, operated by Dolese Bros. Company, are located at Big Canyon, Rayford, Bromide, and Richards Spur.

FIRST OIL PRODUCTION FOR MC CURTAIN COUNTY

First commercial production of oil in the general area of southeast Oklahoma east of Atoka and Durant was discovered west of Idabel in McCurtain County. This is the first production for McCurtain County, and therefore adds another county to the long list of Oklahoma Counties that have oil production.

Discovery of the new pool was made in a well being drilled for water on the W. O. Harmon farm in sec. 5, T. 7 S., R. 23 E. Production was obtained at a depth of 325 feet. Initial production was estimated at about 25 barrels of 28.6 gravity oil. In southeastern Oklahoma, rocks of the Trinity group, the oldest cretaceous rocks of that region, overlap unconformably onto the much older Paleozoic formations of the Ouachita Mountains. Total thickness of all Cretaceous formations of that area is not very great.

Production is from the Paluxy sandstone of the Trinity group, and just below the Goodland limestone. The discovery is within the general region of southern McCurtain County classed in older Survey reports by C. W. Honess and others as being possible of commercial oil production from formations of Cretaceous age.

A short report by L.V. Davis is in preparation dealing with the structure and stratigraphy of the area in T. 7 S., R. 23 E., in which the pool is located. It probably will be issued as a mimeographed Mineral Report and should be available within the next few weeks. The report is possible because the discovery is in an area on which considerable progress has already been made on a program of geologic mapping and ground water investigations in southeastern Oklahoma.

PILOT PLANT TO PRODUCE ALUMINA FROM ANORTHOSITE

Of possible interest to Oklahoma is a current program of research on anorthosite as a source of alumina. The experimental plant at Laramie, Wyoming, is scheduled for operation this month, according to an article in Chemical and Engineering News, January 12, 1953. The Laramie pilot plant is designed to determine whether alumina can be produced from anorthosite at reasonable cost. It is reported as an important part of the U. S. Bureau of Mines program of seeking new sources of aluminum from domestic raw material sources.

During the war announcement was made of discovery of a process for obtaining alumina from anorthosite by a lime-soda-sinter process. At that time it was reported that the by-product was a suitable raw material for making cement.

Should the process prove to be economically feasible, it would make the large areas of anorthosite rocks of the Wichita Mountains a potential source of raw material for the industry. The Wichita Mountains contain one of the larger known reserves of anorthosite in North America.

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GEOLOGIC MAP PRINTING DETAILS TO BE DISCUSSED IN WASHINGTON

Dr. Hugh D. Miser, staff geologist of the U. S. Geological Survey, and Dr. William E. Ham, Acting Director, Oklahoma Geological Survey, are conferring in Washington with officials of the U. S. Geological Survey to work out plans for publishing the new geologic map of Oklahoma. Dr. Miser has been in Oklahoma the past 5 years compiling information for the new map. Compilation is about completed and ready for final drafting.

OKLAHOMA LEAD AND ZINC PRODUCTION FOR 1952 EXCEEDS OUTPUT OF 1951

The lead and zinc mining industry in the west central states of Missouri, Oklahoma, Kansas, and Arkansas produced approximately the same amount of recoverable lead and zinc in 1952 as in 1951, according to preliminary figures issued by the Amarillo office of the U.S. Bureau of Mines. Copper, lead and zinc began the year under government allocation and price control. Lead price dropped one cent to 18 cents on April 29 to mark the first down ward price revision in almost two years. This was the first indication that worldwide "scarce-buying" of metals was at an end.

The metal mining industry of the west central states began the year with all metals in urgent demand. This was a boon to mine operators in the important zinc producing Tri-State District, whose larger marginal ore reserves involved high operating costs.

Oklahoma continued as the leading zinc producer in the Tri-State with nearly 66 percent of the district's Production. However, as a result of lower prices, rate of production was curtailed during the second half of the year.

In a statistical table given with the preliminary release by the Bureau of Mines, Oklahoma production of lead and zinc is reported as follows:

	Lead		Zinc	
	Short tons	Value	Short tons	Value
1952	17,231	$5,513,920	59,839	$19,746,980
1951	16,575		53,450	

LIME PRODUCERS FIND BIGGEST MARKET IN INDUSTRIAL USERS

Construction industry is no longer the largest user of lime, although as recently as 40 years ago the greatest demand for lime was from the building trades. Only 27 percent of the lime now produced in the United States is used in the building industry, according to U. S. Bureau of Mines Information Circular 7651, and a recent article in Chemical and Engineering News.

Chemical and manufacturing industries are consuming about 67 percent of the United States output of lime, which is used in more types of process in industry than most any other single material.

Lime is made chiefly from such raw materials as limestone, dolomite, and shells. Magnesian lime is made from dolomite, and calcium lime from limestone and shells. Dolomite, a double carbonate of calcium and magnesium, is used in the manufacture of lime that is sold to users requiring or preferring lime of that kind and competes with high calcium lime for markets that have no preference.

Deposits of limestone or dolomite of sufficient purity for manufacturing high grade lime are not abundantly distributed. Limestone and, to a lesser extent, dolomite are rather widely distributed throughout the world, but most deposits are not suitable for making high grade lime. In Oklahoma, there are deposits of both limestone and dolomite of exceptionally high purity. Stone from the St. Clair limestone is being used for making high calcium lime at Sallisaw.

The trend in lime manufacture has been to fewer and larger plants. In 1910 there were more than a thousand lime plants in the United States. By 1950 there were only 168 lime plants, but annual production was more than twice that for 1910. In

Oklahoma, the history of the lime industry is similar to that of the rest of the country. One plant, that of the St. Clair Lime Company, Sallisaw, has a larger output than the combined output of several small plants in the state 40 years ago.

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GERMANIUM DEMAND STARTS SEARCH FOR NEW SOURCES

Reason for the urgent search for new sources of germanium is a fairly recent development in the electronics industry. Germanium is the key material in the new device and an expansion of demand for this purpose is expected. Although other companies are getting into production, present sources are not believed capable of supplying the anticipated demand. Some predictions are that in another three years demand will be about six times present production.

Eagle-Picher was a pioneer in recovering germanium from flue dusts and for a time the Henryetta plant was the only plant in the country producing appreciable amounts of the metal. If ash and stack dust from coal proves to be an economically feasible source, it is probable that Oklahoma will lose first place to the big coal-consuming centers.

It is of interest to note that investigations to date indicate the germanium is concentrated in about the lower three inches of the coal beds, regardless of total thickness of the beds. If that is so, the numerous thin coal seams in Oklahoma may provide an interesting field of study.

Oklahoma zinc ores may lose out to coal as the main source of germanium metal, if a research program of the U. S. Bureau of Mines proves fruitful. An article in Chemical Week for February 14, dis-

cusses the germanium problem and the program of the Bureau of Mines. It has been known that many coals contain an average of 0.001 percent, an amount so small that direct recovery of the metal from the coal itself would not be practical.

At the present time the Henryetta, Oklahoma, plant of Eagle-Picher is the most important source of germanium in this country. At Henryetta, germanium is a by-product of zinc smelting and reportedly is recovered at the rate of about 1 pound of germanium metal to 1,250 tons of zinc ore. Current market for germanium is about $350.00 per pound, and annual production for the United States is about 6,000 pounds -- 3 tons.

Recovery of germanium at Henryetta, and at other plants in the country, is through by-product methods. At Henryetta it is recovered from flue dusts, along with other minor metals that are present in the zinc ore of the Tri-State area as trace elements. Because of the minute amount present, the same general problem of recovering germanium applies to both the zinc ores and coals; that is it must be available as by-product from other basic uses of the source material. The Bureau of Mines is looking to the ash and flue dusts in the plants of large commercial and industrial users of coal, where the germanium of the coal may be concentrated and can be recovered. Present efforts are looking for a standard means of determining the germanium content of coal ash and flue dusts, collecting samples, and finding an economical method of recovering the germanium.