THE ORE.-BIN

Volume XVII

1955

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OREGON'S MINERAL INDUSTRY FOR 1954

By
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Total value of Oregon's mineral production for 1954 has not yet been released by the U.S. Bureau of Mines. The 1953 total is given in an advance summary by the Bureau as $24,118,000. This is $2½ million less than the total for 1952 and nearly $4½ million less than the 1951 production. The reduced values for 1952 and 1953 reportedly reflect the smaller amounts of sand, gravel, and stone used in road building and hydroelectric projects. It seems likely that the 1954 total will not differ greatly from the 1953 estimate.

Nonferrous metal production in the State in 1954 was small but interest in the search for metals was greater than it has been for some time. Gold mining, the whipping boy of the metals field, suffered another setback in Oregon when the Powder River Dredging Company suspended operations in August. Total gold production for 1954 was $228,900 but future production will probably dwindle to only a few thousand dollars a year. On the brighter side of the metals picture, 1954 saw production of ferronickel by the Hanna Nickel Smelting Company at Riddle and silicon metal from National Metallurgical's pilot plant at Springfield. Several new chrome deposits were found in southwest Oregon and deliveries to the Grants Pass Government purchasing depot showed no signs of slackening. Prospecting for quicksilver was accelerating toward the end of the year and many known properties were being reappraised. Interest in uranium was mounting even though commercial quantities have yet to be found. Reportedly, several parties are making aerial and field reconnaissance surveys in eastern Oregon. Investigations of diatomite deposits were made by large out-of-state mining companies. Two new limestone operations, both in eastern Oregon, began producing. On the whole, construction continued at a consistent level compared to 1953 which meant a good, if decreased, demand for sand, gravel, stone, and portland cement.

Total amount of government land leased in Oregon for oil and gas exploration is well over a million acres. Most of this has been leased since July 1954. This indicates that the next few years may show a real effort on the part of the major oil companies to determine if oil and gas occur in the State in commercial quantities.

Metallics

Gold, silver, copper, lead, and zinc

Gold mining, once the pride of Oregon's mineral industry, suffered an almost fatal blow in 1944 with the closing of the Powder River Dredging Company operation near Sumpter, Baker County. Total gold production for the year was approximately one-twentieth of the 1940 record high of over $4 million when there were 304 producing properties in the State. The Powder River Dredging Company's bucket-line dredge, which has been operating almost continuously, except for the World War II years, since June 1935, was the last of the six bucket-line dredges that were operating in 1940. The virtual end to gold mining in the State can be attributed to War Production Board Order L-208 which closed all gold mining operations for the duration of World War II and to the fact that the cost of producing gold since 1940 has more than doubled while the price received by the miner remains at the 1934 price of $35.00 an ounce.

Gold production in the State is now wholly dependent on the few small placer operations, mainly in Josephine and Jackson counties, which mine when water is available and the small lode mines of Grant County. The Buffalo mine near Granite, presently operated by the Boaz Mining Company, continues to be the most consistent producer of the lode mines. It employs six to eight men and maintains operations throughout the winter, during which time concentrates are stockpiled. At the Pyx mine, also in eastern Grant County, considerable exploration was carried on by the Greenhorn Mountain Development Company in 1954. A 25-ton test mill was erected and some production was made before shutting down for the winter. The small amount of silver produced ($12,906) resulted from production of gold and other nonferrous metals.

Copper, lead, and zinc output in 1954 was very small and came principally from the smelting ore shipped from the Buffalo mine. The Standard mine on Dixie Creek in Grant County continued exploration work started in late 1953. Some spectacular cobalt ore was found along with continued good showings of copper ore. Granby Consolidated Company of Canada tentatively completed a diamond-drilling program of the Turner-Albright copper mine in the Waldo mining district of Josephine County. The Rowley copper mine in the Tiller-Drew mining district of southern Douglas County was examined by a Nevada mining company. The State's total copper production amounted to four tons and was valued at $2,376.

Chromite

Mining and prospecting for chromite showed a healthy increase this past year, proving that, given the proper incentive, domestic production can be achieved and new prospects found. A preliminary estimate by the U.S. Bureau of Mines credits Oregon with approximately 10,000 short tons produced during the year valued at nearly $785,000. This figure represents an increase of more than 66 percent compared to 1953. During 1954 California produced an estimated 28,800 short tons valued at $2,347,000, an increase of approximately 13 percent compared to 1953. Ore produced from both states was shipped to the Government purchasing depot at Grants Pass.

Fifteen chrome concentrating mills operated during the year. Twelve of the mills are in southwestern Oregon and three in the John Day area of Grant County. Four of the mills were completed in 1954.

Some low-grade deposits which were active in 1953 shut down but new discoveries more than offset the closures. Notable among the new discoveries was a high-grade deposit on Red Mountain south of Ashland which began shipping 50 percent ore late in the year and the opening up of a new ore body at the Oregon Chrome mine on the Illinois River.

At Coquille, Coos County, Pacific Northwest Alloys, Inc., started to upgrade stockpiled chromite sand concentrates produced during World War II. The upgraded material will

be treated in the company's plant at Meade, Washington, to make low-carbon ferrochrome. Reportedly, Mineral Sands Company of Lansing, Michigan, will build and operate a plant for treating chromite sands on coastal land leased from Coos County.

The 38,800 short tons of Oregon and California chromite delivered to the Government purchasing depot in 1954 brings the cumulative total since the inception of the chrome-buying program to 94,800 short tons or 84,644 long tons (final figures have not been released). This is 42 percent of the total of 200,000 long tons to be brought under the program which expires in 2½ years. It is difficult to understand why such a short period and low tonnage buying program was set up by the Government as it only encourages surface prospecting. Exploration programs undertaken to prove tonnages of chrome sufficient for substantial plants are not warranted as the termination of the program would come before capital expenditure could be returned.

Mercury

Mercury mining was decidedly on the upswing in late 1954 and indications are that in 1955 Oregon's many known deposits will be viewed with more interest than has been shown since World War II. The prime reason for the renewed activity was the increase in price, from $187 per 76-pound flask in January to a high of $325 in October, and a year-end price of $322. Another factor was the announcement by General Services Administration of a Government purchase program for mercury in which 125,000 flasks of domestic mercury will be purchased at a guaranteed price of $225 per flask. The guaranteed price will be in effect until December 31, 1957. How successful the Government purchase plan will be remains to be seen for not one flask has been purchased to date. The major mercury producers are quick to point out that, considering the increased cost in production, the $225 Government price is not much better than the average 1938 price of $75½ per flask.

The increased price came just early enough in the year to keep the State's mercury production from collapsing altogether. Total estimated production for 1954 is 500 flasks, a decrease of more than 20 percent from 1953. The decrease is largely the result of the closure from February to June of the Bonanza mine near Sutherlin, Douglas County. Minor production came from the Towner and Maury Mountain mines in Crook County.

Cordero Mining Company installed a small furnace at its Horse Heaven mine in Jefferson County in December to treat broken ore left in the mine when a fire caused a shutdown of the property in December 1944. Activity was reported at the Mother Lode mine in Crook County where the Canyon Creek Mining Company developed some ore and reconditioned a Herreshoff furnace leased from the Ochoco Mining Company. Exploration at the Roba-Westfall mine on Murderers Creek in western Grant County was partly financed by a $20 thousand DMEA loan. The Glass Buttes property in northeastern Lake County was reported to have been leased by Kennametal Corporation.

Nickel

The outstanding development in Oregon's mineral industry in 1954 was the completion of the Hanna nickel smelter near Riddle, Douglas County, in southwestern Oregon. Mining of the nickel silicate ore body on Nickel Mountain was started late in May, and in July the first ferronickel ingots were poured. This project which involved an expenditure of about $35 million is the first commercial production of nickel from domestic ore in the United States.

Ore is mined from an open pit located near the summit of Nickel Mountain and crushed in an adjacent plant. From the crusher the ore is carried on a 1½-mile aerial gravity tramway to the smelting plant at the base of the mountain. In 1954 three furnaces were put into operation at the smelter. Permanent employees total nearly 300.

During the year the U.S. Bureau of Mines published results of electric smelting tests on nickel laterite from Red Flat, Curry County, and indicated that mining and smelting of the ore was technically feasible. The Bureau also conducted field investigations of nickel laterite in Josephine and Curry counties and the adjoining area in northern California. The State Department of Geology and Mineral Industries cooperated with the Bureau in the Oregon part of this investigation.

Iron

The Orr Engineering and Chemical Company mined and processed a small amount of limonite at Scappoose, Columbia County. Their product was used in desulphurizing manufactured gas at the Portland Gas and Coke Company plant in Portland. The Orr plant also produced mineral stock feed and mineral pigment.

Aluminum and bauxite

National Metallurgical Corporation's electric smelting pilot plant for the production of aluminum-silicon alloy was completed at Springfield, Lane County, early in 1954. Silicon metal and some aluminum-silicon were produced. Raw materials used for the two products were silica from the Bristol Silica Company, Rogue River, and clay from near Laws, California. Harvey Machine Company purchased the Government's alumina-from-clay plant in Salem and early in July reported that research on processes for the production of alumina from Salem Hills bauxite was successful. Reportedly a pilot plant is to be built.

The Department of Geology and Mineral Industries continued field exploration of high-iron bauxite deposits, particularly in the Salem area where considerable hand augering was done and some of the area was topographically mapped. A preliminary report on the work was issued in September and final results will be published in 1955. Bauxite occurrences at Estacada, Park Place, and Gladstone in Clackamas County were inspected and sampled.

Nonmetallics

Sand, gravel, and crushed stone

Concrete aggregate supplied by approximately forty sand and gravel operators in the Willamette Valley constituted the bulk of the State's production of this commodity. Sand and gravel is by far the largest source of mineral wealth in the State, totaling $14,647,000 in 1953, the latest year for which figures are available. The growing demand for closer tolerance in aggregate size made it desirable for some plants to install more elaborate crushing and sizing equipment.

Building and monumental stone

Pacific Cut Stone Company continued mining of rhyolite tuff at its Willowdale quarry in northern Jefferson County. A quarry gang saw was installed during the year to increase production, all of which was shipped to Seattle. Joe Marsden quarried and sawed basalt at the Rocky Butte quarry in Portland, and A. Faoro & Son operated the Carver quarry in Clackamas County. D. A. Temple expanded operations at his Pine Grove tuff quarry in Wasco County by setting up auxiliary plants to shape rough quarry blocks at Grants Pass, Oregon, and Vancouver, Washington. The Northwest Granite Company at Haines, Baker County, which has been furnishing finished monumental stone from its granite quarry near Haines for over 40 years, continued its normal production.

Clay

One of Oregon's oldest industries, the manufacture of clay brick and tile, continued production at about the same rate as the past few years. According to an estimate by the U.S. Bureau of Mines, combined production of clay for brick and tile and shale for lightweight aggregate is expected to be nearly the same as in 1953 when 232,000 short tons were

produced. A total of eighteen brick and tile plants were in operation. In addition, Pacific Stoneware imported some out-of-state clay for the manufacture of stoneware at its plant in Portland.

Diatomite

The Great Lakes Carbon Company, Dicalite Division, plant at Lower Bridge, Deschutes County, operated at capacity during the year. An excellent paper describing the history, geology, mining, and products of this operation was presented at the American Institute of Mining and Metallurgical Engineers 1954 Pacific Northwest Metals and Minerals Conference by D. F. Dyrsmid. Publication will probably be in one of the A.I.M.E. technical journals. Investigation and exploration which culminated in large-scale leasing and locating was done by several large mining companies in central and southeastern Oregon. A new company, Malheur Wunder Earth, Inc., is reported to have obtained control of approximately 3400 acres of land in the Harper-Westfall area of northern Malheur County.

Lightweight aggregates

Although there were few new developments in the lightweight aggregates field during the year, production increased slightly and the industry entrenched itself more firmly as a supplier to the building and construction industries. Expanded shale was produced by two concerns in the Portland area, while four pumice producers in central Oregon were active. Smithwick Concrete Products quarried shale near Vernonia and shipped to Portland for furnacing. Empire Building Materials quarried and fired shale near Sunset Tunnel in Washington County. Both companies manufactured blocks and other precast units and supplied bulk aggregate. Shipments have been made as far as Edmonton, Canada.

In the Bend area Cascade Pumice Company and Central Oregon Pumice Company were active during the year. Deschutes Concrete Pumice Company mined lump pumice for their own block manufacture but shipped no bulk pumice. Harney Concrete Tile Company at Burns and Western Pumice Sand Company of Klamath Falls, both pumice producers, continued operations. Volcanic cinders were used extensively for highway ballast throughout central Oregon by the State Highway Commission. The cinders were obtained from State-owned pits. A minor amount of cinders was also supplied for block manufacture by some of the pumice producers.

Limestone

The State's three cement plants produced at capacity during 1954. Construction activity maintained a level comparable to 1953 and indications point to a continuing high demand for cement.

National Industrial Products Company, after a successful exploration plan started in 1953, set up a crushing and screening plant at Nelson on Burnt River, Baker County, and began supplying high-grade limestone, mainly to the Boise, Idaho, area. By late 1954 production was about fifteen railroad cars a day. A crew of approximately twenty-five is employed. The Chemical Lime Company, Baker, made a test shipment to the sugar plant at Nyssa in December. The company's quarry is at the head of Marble Creek, Baker County. This is a new operation and marks the reopening of a deposit that has been closed for many years. Oregon Portlant Cement Company's operation at Lime, Baker, County, completed installation of a belt conveyor between newly opened quarries and the plant. The Ideal Cement Company started trucking limestone from its Marble Mountain quarry in Josephine County to its plant at Gold Hill as the result of cessation of operations of the C. & O. C. Railroad. Pacific Carbide and Alloys Company continued to quarry at the Black Marble deposit near Enterprise, Wallowa County. Some of their production reaches the agstone market in the Willamette Valley.

Agstone was produced in Polk County at Dewitt's quarry and the Oregon Portland Cement Company's deposit. Limestone from the latter also goes to the company's cement plant in Oswego. Agricultural limestone used in the State during the year is estimated to be 50,000 tons, a little less than was spread in 1953.

Perlite

There was no production of perlite in Oregon in 1954. The claims controlled by the Northwest Perlite Corporation near Sheaville, Malheur County, were successfully explored by diamond drilling and, reportedly, a large tonnage was indicated.

Silica

The Bristol Silica Company, Rogue River, was the sole producer of silica in the State. To meet the increasing demand for their high purity product, the company completed installation of a new rod mill, extra screening capacity, and a washing plant this past year. Investigations into the possibilities of opening a new quarry in Stevens County, Washington, were also conducted. Mr. F. I. Bristol, owner of the company, reported that Northwest metallurgical plants used his silica in the manufacture of silicon metal, ferrosilicon, and silicon carbide. A new market for crushed silica for roofing granules was developed. As in the past, a major consumer was the refractory brick trade. Catalytic silica for the petrochemical industry, ferroalloy plants, and miscellaneous users accounted for the remainder of the output.

Oil and gas

In 1954 five new test drillings were started for oil and gas in Oregon. Two of these were in Douglas County and three were in northern Malheur County. Oil Developers, Inc., (Community Oil and Gas Company) Scott No. 1 was the deepest test in Douglas County and was reportedly at 3600 feet by late December. El Paso Natural Gas Company's test near Double Mountain south of Vale was drilling below 6600 feet at year's end and had become the deepest Oregon drilling east of the Cascade Mountains. Drilling at the other two sites in Malheur County was suspended pending developments, and drilling at the second well in Douglas County was sporadic.

Continued surface exploration and interest in both eastern and western Oregon by major and minor oil companies, large and small independent concerns, and individuals have resulted in extensive leasing activity. Total government land now under lease for oil and gas exploration in the State is in excess of a million acres, most of which has been leased since July 1954.

All oil and gas drilling in the State must now be done according to rules of the oil and gas conservation law passed by the 1953 Legislature and administered by the Department. Miscellaneous Paper No. 4, issued by the Department, contains the rules and regulations which were adopted after public hearings had been held.

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IDAHO HAS NEW DREDGING LAW

Idaho's new dredging law, passed as an initiative at the November 2 election, was put into effect December 1954 by official proclamation of Governor Len Jordan, according to the Wallace Miner. Under the new law, regulation of dredge mining is transferred from the State Mine Inspector to the State Board of Land Commissioners. Dredge mining is defined by the law as placer mining operations to recover minerals with the use of a dredge boat or sluice washing plant, whether fed by a bucket line, dragline, or other supply capable of moving 500 cubic yards of earth per day.

The new law requires operators to obtain a permit to dredge and to post a bond. The application fee for the permit is $50 for each 50 acres or fraction thereof, and the required surety bond is $300 for each acre. The bond is to insure smoothing of dredged lands and restoration of streams to original courses, both of which are required by the law. If water used in mining flows into a stream, settling ponds must be constructed "to reasonably clarify" the water before discharge into the stream. Periodic inspections of dredge operations are to be made by the Land Board and the cost is to be paid by the permittee. Permits to dredge are not transferable and owners of land to be dredged must give their approval to the application.

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MINING NEWS

Eastern Oregon

The Burt Hayes interest in the Haggard and New chromite mine near John Day has been purchased by C. G. Cafarelli, Salt Lake City, and J. J. Kinsella, Belview, Idaho. Mr. Kinsella is in charge of operations on the property. Future plans call for enlargement of both mining and milling capacity although the old Hayes mill is still being used at present. Mr. Hayes reopened the Haggard and New, an old property, in the spring of 1953 and except for a few weeks during the worst of winter has been a consistent shipper. The ore has milled about 2 to 1 to yield a concentrate averaging nearly 50 percent Cr_2O_3 with a 2.95 to 1 chrome-iron ratio.

Mr. Hayes was the first operator to ship chromite concentrates from the John Day area to the Grants Pass purchasing depot under the present chrome purchasing program. His first concentrates came from ore from the Dry Camp property on Indian Creek, Grant County. The Dry Camp claims have since been controlled by several parties. Present operator is the John Day Mining Company.

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The Chemical Lime Company of Baker delivered a test shipment of crushed limestone to the Amalgamated Sugar Company's plant at Nyssa, Oregon, in December 1954. The rock originated from the Chemical Lime Company's property at the head of Marble Creek and was handled through a temporary crushing plant set up on property owned by the company near Wingville. The Marble Creek deposit was a source of burned lime during the early days of Baker's history and the present shipment represents the first production from the property since the early operators suspended activity.

Southwestern Oregon

The McTimmonds brothers of Grants Pass uncovered a new massive chromite body on claims they were leasing on Red Mountain about 12 miles southwest of Ashland, Jackson County. During the latter part of 1954 they shipped 18 tons of lump chrome which averaged better than 51 percent chromic oxide. Their latest shipment assayed 55.57 percent chromic oxide with a chrome-iron ratio of 3.92 to 1 and brought $165.28 per ton at the buying station in Grants Pass. The ore is unusual in that fractures in the massive chromite are coated with malachite, a hydrous copper carbonate.

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Tulare Bros. Mining Company of Gold Hill has leased the Wonder group, Daily Dozen group, Roy Jackson group, Bowser properties, and the White claims from J. R. Holman, Walter B. Freeman, and LaVern Twombley. The chrome properties are located on Chetco Divide in Curry County. Holman and associates developed the Wonder property during the summer of 1954 and erected an 80-ton mill.

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Wesley Pieren and Antone J. Nielsen of the Evergreen Mining Company started the latter part of December to strip overburden with a bulldozer prior to placering for gold on Galice and North Fork creeks. The company holds six claims on North Fork Creek and eight on Galice Creek in T. 35 S., R. 8 W., Josephine County.

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M. W. Parker, Grants Pass, has set up a stone-sawing and finishing plant in Grants Pass to supply the local demand. Rough blocks of varicolored volcanic tuff are supplied by D. A. Temple from the Rainbow Rock quarry near Pine Grove, Wasco County.

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McKAY ESTABLISHES OFFICE OF MINERALS MOBILIZATION

Interior Secretary Douglas McKay established an Office of Minerals Mobilization (OMM) within the Interior Department on January 14, according to an announcement in the January 17 American Mining Congress Bulletin. This was in accord with the recommendation of the President's Cabinet Committee on Minerals Policy that the Interior Department should establish closer contact with the mineral industry to aid in government policy making. The new office will be responsible to Felix Wormser, Assistant Secretary for Mineral Resources, and will be staffed by 37 people in the next fiscal year.

According to an Interior Department statement, OMM will have, among others, the following functions with respect to strategic and critical metals and minerals:

Gathering and evaluating data as to productive capacity and supplies from both domestic and foreign sources.

Recommending establishment, or modification, of expansion goals and programs, including financial incentives and aids for overcoming shortages.

Recommending programs, including legislation, to maintain an adequate minerals, metals, and fuels mobilization base.

Formulating foreign mineral exploration and development programs.

Assisting the Office of Defense Mobilization in plans for stockpiling of strategic and critical materials.

The Defense Minerals Exploration Administration (DMEA) will not be affected by formation of the new group, and the General Services Administration (GSA) will continue handling procurement, it was reported.

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MINERAL INDUSTRIES CENSUS UNDER WAY

The 1954 census of the nation's mineral industries, the first since 1939, is being conducted jointly by the U.S. Bureau of Census and the U.S. Bureau of Mines. The Census Bureau's survey, formerly conducted every 5 years, was interrupted by World War II and by the failure on the part of Congress to provide funds during postwar years. Census forms will be sent out this month to some 40,000 establishments in the mineral industries. The forms will request information to cover the Bureau of Mines' annual canvas of minerals output together with the Census Bureau's survey of employment, equipment, expenditures, and other items related to mineral production. The two agencies are coordinating their programs in such a way as to avoid duplication of effort on the part of the mineral industries canvassed.

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FUELS VOLUME PUBLISHED BY BUREAU OF MINES

The U.S. Bureau of Mines Minerals Yearbook, published in one volume since 1936, has grown to such proportions that a three-volume division has been initiated for the 1952 edition. In this new arrangement, volume I is made up of the chapters on mineral commodities, both metals and nonmetals; volume II is devoted to the mineral fuels; and volume III is made up of chapters covering salient mineral statistics on each of the 48 States, Alaska, and the Territories. The change from a one-volume to a three-volume presentation was made necessary by the difficulties in binding and the inconvenience in handling so thick a book. Volume II, the first of the three parts to be published, contains chapters on coal and related products, petroleum and related products, and helium. It is for sale now by the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C., for $2.25 cloth bound. Volumes I and III will be published later but publication date has not been announced.

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