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OREGON'S MINERAL INDUSTRY IN 1951

By

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Introduction

As in former years, sand and gravel and crushed rock headed the list of industrial minerals in importance. Limestone and portland cement, clay, perlite, pumice, expanded shale, diatomite, silica, gem stones, and coal comprised the balance of the nonmetallics industry in the State with their value in the approximate order given. Chrome and quicksilver have again entered the mining picture. Gold production is still fading away. Potential copper and zinc mines are not receiving the attention that is warranted.

According to an estimate by the U. S. Bureau of Mines, value of mineral production for 1950 amounted to approximately $21\frac{1}{2}$ million as shown on page 3. Probably the value in 1951 was about the same.

Nonmetallics

Sand, gravel, and crushed rock

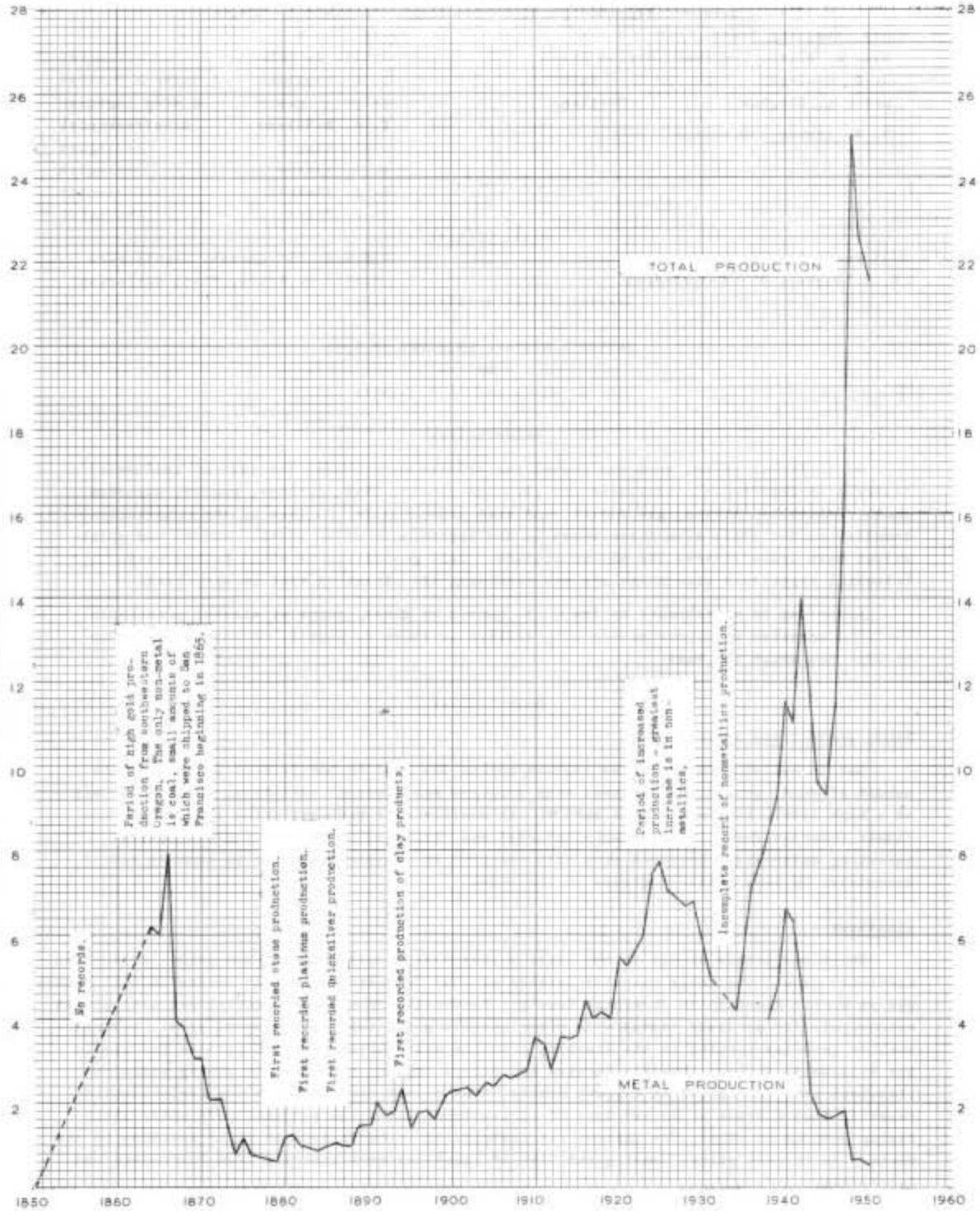
Due to building restrictions imposed during the year by the federal government the amount of sand, gravel, and crushed rock produced was somewhat curtailed. Production was at a high level, however, due in part to the considerable yardages going into large monolithic concrete dams. Considerable interest was displayed during the year in natural cementing materials. Research work into the problem of securing pozzolan cements was undertaken by some research groups in the State.

Limestone

There was little change in the State's limestone industry during the year. Production continued at all the large quarries located at Lime in Baker County, at Dallas in Polk County, and at Marble Mountain in Josephine County. Production from these quarries was used almost exclusively for portland cement with minor amounts going into agricultural uses. Several smaller quarries located in the Roseburg area and near Dallas produced agstone for use in the Willamette Valley. Pacific Carbide and Alloys Company continued to quarry their own limestone near Enterprise in Wallowa County. The Production and Marketing Administration reported that a total of 49,106 tons of agricultural limestone was purchased under their liming program in 1951. The agstone was distributed to farms located in 17 counties in the State. As in past years, small quantities of limestone were imported from Washington and California.

OREGON MINERAL PRODUCTION

(IN MILLIONS OF DOLLARS)



Clay

Nineteen brick and tile plants were active throughout the year. Some producers reported considerable competition from other building materials such as precast masonry units, but in general the demand was good. Continuing efforts by the Department to find a suitable white paper coating clay have not been successful so far.

Mineral Production in Oregon in 1950

Mineral	Quantity	Value
Clays (except for cement) thousand short tons	112	$ 91,000
Coal (thousand short tons)	1	8,000
Copper (short tons)	19	8,000
Gold (troy ounces)	11,058	387,000
Lead (short tons)	17	5,000
Mercury (flasks, 76 pounds)	5	1/
Perlite (short tons)	17,397	70,000
Pumice and pumicite (short tons)	79,653	321,000
Sand and gravel (thousand short tons)	8,200	8,168,000
Silver (thousand troy ounces)	14	12,000
Stone 2/ (thousand short tons)	3,837	5,559,000
Zinc (short tons)	21	6,000
Undistributed: Asbestos, carbon dioxide (natural), cement, diatomite, gem stones, lime, quartz, stone (dimension and crushed granite)	---	6,907,000
Total	---	$21,542,000

1/Less than $500.

2/Excludes dimension stone and crushed granite which are included in "undistributed."

Perlite, pumice, and expanded shale

Lightweight aggregates have become firmly entrenched as standard building materials, and the production of the various lightweight materials continued at a brisk pace. Pumice producers have shifted the emphasis of their production from concrete block aggregate to such items as plaster sand, florist bedding material, poultry litter, and monolithic aggregate. Several of the producers have constructed efficient screening, crushing, and drying plants and are concentrating on the production of material rigidly adhering to specifications. The net result of this change in the type of products manufactured is an increase in value per unit over the previous year. In 1949 the average value per cubic yard of pumice produced was $1.63 as compared to a value of $2.24 per cubic yard for 1950. The trend in production of higher priced pumice products will probably continue. One producer in the central Oregon area has produced a light cinder aggregate which is almost as light as pumice but much stronger. The cinders are separated with air, the heavier fractions being used as a driveway road metal. About the same quantity of perlite plaster aggregate was produced by Dant and Russell, Inc., Dantore division, as in 1950.

The expanded shale industry, which is centered in Portland, enjoyed a considerable increase in production during the year, with a large percentage of the finished material moving out of the State to markets as far distant as British Columbia, Montana, and eastern

Washington. The improvements in flow sheets at both of the expanding plants permitted greater efficiencies which enabled a considerably greater production without installation of additional kiln capacity. Total value of expanded shale produced in the State during the year approached the half-million dollar mark.

Diatomite

The production of diatomite remains, as it has for many years, in the hands of one producer, the Great Lakes Carbon Corporation. From its plant at Lower Bridge in northern Deschutes County, products are shipped all over the country for use by chemical and construction industries.

Silica

Production of silica by the Bristol Silica Company at the town of Rogue River in Jackson County constitutes the only producing source of this commodity in the State. The company crushes both quartz and granite. All of the granite and a small amount of quartz are sold for poultry grit. Quartz is also shipped for use in metallurgical industries and for special purposes.

Coal

Production of coal in the Coos Bay area of southwestern Oregon continues on a very modest scale. The South Slough mine continued operations during the year but the output was for local consumption only.

Gem stones

Popularity of semiprecious gems kept the gem collectors, lapidarists, and hobbyists active during the year. The industry is characterized by numerous individual operators who collect, cut, and polish quartz-family minerals which are found in abundance in the central and eastern parts of the State. Some operators are engaged in the work on a part-time basis while a few maintain year-round activity. Value of stones produced annually in the State has been estimated to be as high as one million dollars.

Metallics

Gold, silver, copper, lead, and zinc

Production from lode mines in the State accounted for only a small fraction of the declining gold production during the year. One bucketline dredge and numerous small hydraulic operations accounted for the bulk of production. One bucketline dredge owned by Porter & Company finished dredging on Crane Creek in Grant County in July. The company was reported to be considering dismantling the boat and shipping it to Idaho.

Some work was done at the Ruth zinc mine in Marion County, and a small amount of prospecting was done at copper, lead, and zinc deposits in the Bohemia district of Lane County as well as in some other parts of western Oregon.

Mercury

In response to the large increase in the price of quicksilver early in 1951 the Bonanza quicksilver mine in Douglas County reopened in April. The property has been in steady production ever since, and additional ore reserves have been developed as a result of exploration work conducted on the 500- and 600-foot levels in the mine. The Bonanza was the only large producer in the State during the year, with an estimated production valued at roughly $250,000. One prospect in central Oregon retorted and sold a few flasks. Quicksilver prices fluctuated slightly after reaching the $220 per flask level about the middle of the year, reaching a high of $227 at one time. Price quoted for the week ending January 5, 1952, was $208 to $211 per flask depending upon the quantity.

A new quicksilver prospect was found in southern Grant County and was under development at the end of the year.

Chromite

The big news in southwestern Oregon was the establishment of a government chrome purchasing depot. Largely as a result of concentrated effort by mining groups in the area, the General Services Administration set up this depot at Grants Pass on August 3, 1951. Shipments to the stockpile have come from many mines in southwestern Oregon and northern California, but tonnage figures of ore received are "restricted." A price schedule based on ore assaying 48 percent Cr_2O_3 and having a 3.0 to 1 chrome-iron ratio at $115 per long dry ton was set up. Payments on a sliding scale depending on the chrome content and the chrome-iron ratio range from $67 for ore assaying 42 percent Cr_2O_3 with a 2.0 to 1 chrome-iron ratio to $167 a ton for 56 percent Cr_2O_3 ore having a 3.5 to 1 chrome-iron ratio.

Limonite

An industry new to Oregon was started early in the year when the Orr Chemical and Engineering Company began producing activated limonite at its Scappoose plant. The plant prepares a finely ground limonite obtained from a deposit near at hand. Activated limonite is used as a sulphur scrubber by the Portland Gas & Coke Company in its Linnton generator. Approximately 1,000 tons of Scappoose limonite was shipped to Emeryville, California, for the production of pigment.

Exploration

Alcoa Mining Company has continued to explore ferruginous bauxite deposits in Columbia and Washington counties although on a greatly reduced scale.

Hanna Development Company, an affiliate of M. A. Hanna Company, has been exploring the nickel deposit on Nickel Mountain, near Riddle in southwestern Douglas County, Oregon, during 1951. Churn drilling, bulldozing, and some underground work were done. Values are in garnierite, a nickel silicate.

The U. S. Bureau of Mines did some exploration work in the nickel laterite on Woodcock Mountain in Josephine County. Work included bulldozing and auger-hole drilling.

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NEW CHROME CONCENTRATOR

A new mill for concentration of chromite is reported under construction on Hardscrapple Creek east of O'Brien in southern Josephine County. Rice Brothers, general contractors of Marysville, California, are constructing the mill and will operate it in conjunction with A. W. Waite. Concentrating ore will be hauled to the plant from several properties in southwestern Oregon and northern California. Milling equipment will include a ball mill, jigs, and tables. Reported capacity is 300 tons per day.

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NEW MERCURY PRODUCER

Laurence Roba, Canyon City, Oregon, is reported to have shipped a number of flasks of quicksilver from his recently discovered property near Murderers Creek in southern Grant County. Retort Capacity is said to be about 10 tons of ore per day.

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NEW SAMPLING EQUIPMENT INSTALLED AT CHROME DEPOT

According to the Grants Pass Courier the government chrome depot on the Redwood Highway near Grants Pass is completing installation of new sampling equipment including small crusher, rolls, vibrating screen, and electric drying oven. The personnel at the depot consists of Dan Beyer, manager; Harold Deming, sampler; M. M. McClelland, inspector; Lawrence Bryant, clerk; and Bill Mason, heavy-equipment operator. Practically all of the chrome mines have been closed because of heavy snow but the depot has received several shipments of concentrates in the last few weeks.

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BRISTOL SILICA COMPANY MAKES NEW PRODUCTION ARRANGEMENTS

Harbison-Walker Company, large, well-known refractories concern, has entered into an arrangement with Bristol Silica Company for joint operation of the Bristol silica quarry in Jackson County. The Bristol Silica Company will continue to quarry quartz in order to supply its crushing plant at the town of Rogue River from which shipments are made for poultry grit and for metallurgical and other special uses. Harbison-Walker will also quarry quartz and ship to a plant in the San Francisco Bay area where silica brick will be made.

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OIL TEST ABANDONED

Lile No. 1 oil test drilled by the Union Oil Company of California in Coles Valley northwest of Roseburg has been abandoned at 7,002 feet. It is reported that further study of the general area will be made by the company.

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MINING LAW BULLETIN ISSUED

"Mining Laws of the State of Oregon" - a bulletin in its third edition (revised) - has just been issued by the State Department of Geology and Mineral Industries. This new edition of the Department's Bulletin No. 1 contains some additional material on federal mining regulations and brings the record of laws affecting assessment work up to and including the assessment year 1950-1951. The bulletin also contains the State's oil and gas law enacted by the 1949 Legislature. The Department has sold more than 3500 copies of Bulletin No. 1 since publication of the first edition in 1937.

Bulletin No. 1, third edition (revised), may be obtained from the Portland office of the Department at 1069 State Office Building, or from the field offices at Baker and Grants Pass. Price postpaid, 40 cents.

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BASIC MATERIALS LIST

The Defense Production Administration has issued a revised "List of Basic Materials and Alternates" to serve as a guide to industry and the Government in purchasing materials and in the use of alternates and substitutes for materials that are scarce. . . .The list classifies approximately 400 items into three groups: Group I - materials in insufficient supply to meet defense and civilian demands; Group II - materials in approximate balance for defense and civilian demand; and Group III - materials in fairly good supply.

Group I includes aluminum, beryllium, copper, lead, magnesium, selenium, titanium, tin, zinc, platinum, cobalt, columbium, molybdenum, nickel, tantalum, tungsten, asbestos, beryl ore, bort, acid grade fluorspar, graphite, kyanite, mica (muscovite), rare earths, sulphur, sulphuric acid, talc, and certain types of steel and chemicals.

Listed in Group II as being in approximate balance with demand are antimony, bismuth, cadmium, calcium, germanium, chromium, manganese, vanadium, titanium pigments, corundum, diatomite, metallurgical fluorspar, artificial graphite, magnesite, mica (phlogopite), quartz crystals, ground talc, and refractories of high alumina, magnesite, silicon carbide, and sillimanite.

DPA said that in fair to good supply are mercury, gold, palladium, rhodium, silver, boron, tellurium, ferrotitanium, zirconium, certain gray iron castings, soda ash, bentonite, celestite, ball and china clays, diatomite, emery, feldspar, flint, Fuller's earth, garnet, pumice, pyrophyllite, refractories of dolomite, fire clay and silica, rutile, topaz, tripoli, and zircon.