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GOLD PRODUCTION IN WESTERN STATES

According to an estimate just released by the U.S. Bureau of Mines, Albany, Oregon, gold production in Oregon during 1952 totalled 5,509 fine ounces valued at $192,815. This is considerably less than any annual production ever before reported excepting the two years 1943 and 1944 when gold mining was stopped by the destructive War Production Board Order L-208. If the buying power of the gold is taken into consideration, the value of Oregon production for 1952 is especially insignificant compared to the buying power of the gold produced in other low-production years such as from 1874 to 1888, 1908 to 1912, and 1921 to 1933. At all other times, annual production has been well over a million dollars and in 1940 production was valued at almost $4,000,000.

Most of Oregon's gold production in recent years has come from placer mining, especially dredging. In 1952, 83 percent of value of production came from the operation of Powder River Dredging Company in Sumpter Valley, Baker County. This is the only gold-dredging operation left in the State. Two lode mines, the Buffalo mine near Granite in Grant County and the Champion mine operated by Harold E. L. Barton, lessee, in the Bohemia District, Lane County, produced a small amount of gold from ore shipped to smelters. Gold produced from the small lode mining operations amounted to 9 percent of the total. A very small proportion of the gold produced from placer mines came from hydraulic operations which worked during periods of high water and when placering was not prohibited by orders of the Rogue River Coordination Board.

Oregon, because of its lack of base metal mines which would produce by-product gold, is the most glaring example of the depressed state of gold mining in the United States. California, which produced 1,455,671 ounces in 1940 and 253,553 ounces in 1952, also shows a large decline. Alaska produced 755,970 ounces in 1940 and 289,272 ounces in 1950, the latest year for which production figures are available. South Dakota is in a class by itself among gold-producing states because of the great Homestake mine. South Dakota produced 586,662 ounces in 1940 and 567,996 ounces in 1950. The other gold-producing states rely on by-product gold from base metal mines to maintain gold production. Even so, Colorado's gold production declined from 367,336 ounces in 1940 to 116,503 ounces in 1951, while production of base metal ores was constantly increasing. In 1951 approximately 50 percent of the gold production in Colorado came from base metal ores. In Arizona gold production in 1940 was 294,807 ounces, in 1950 it was 118,313 ounces. Practically all of the gold comes from base metal ores, mainly copper (in 1950 67 percent of the gold came from copper ores and 20 percent from zinc-lead ores) and the decline in gold production came despite greatly increased copper production. In 1940 Arizona produced 281,169 tons of copper, in 1950 403,301 tons. There was a 60 percent decrease in the quantity of gold and a 43 percent increase in the quantity of copper produced. This difference is, of course, due to the declining average gold value of the base metal ores.

Other western states show a similar decline in value of gold production and an increase in base metal production from which the gold is largely derived. Utah and Washington are exceptions. Both show an increase in gold production for the 1940-1950 decade. The increase in Utah is due to greater copper production at the Utah Copper mine. In Washington a new gold mine, the Gold King at Wenatchee, accounted for the increase, although the Holden copper-zinc mine remained the largest Washington gold producer in 1950.

All gold-producing nations of the world except the United States (excluding the Soviet Union whose policy is unknown) have thought it wise to encourage gold mining in their respective countries either by some type of subsidy as in Canada or by allowing their

nationals to sell gold in the free market. In addition, these countries have increased the value of their gold by devaluing their currencies. Only the United States has seen fit to restrict gold production because of the government fixed price of $35.00 an ounce in the face of greatly increased operating costs. Outside of South Dakota, gold mining in this country which is not tied in with production of other metals is rapidly becoming a thing of the past.

F.W.L.

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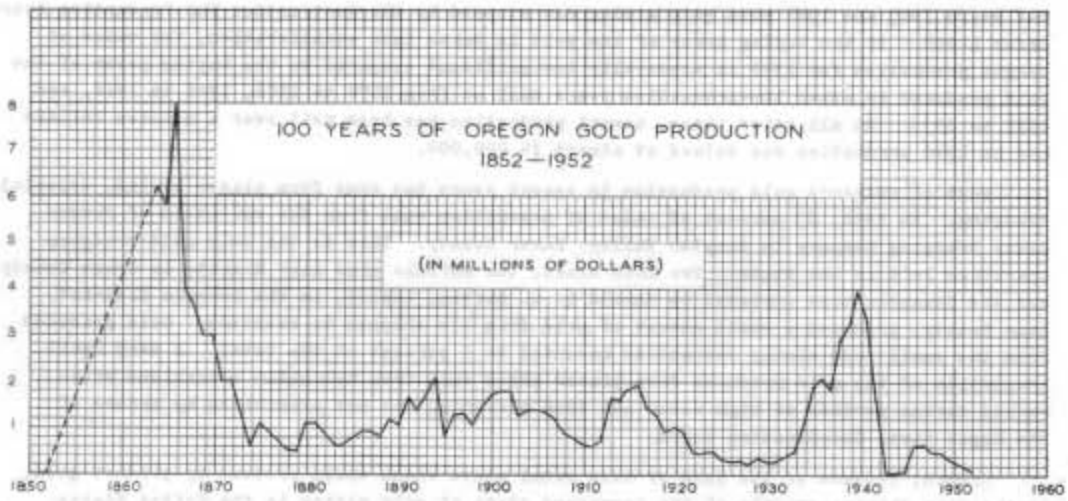

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MINING LAW REVISION

As reported in the American Mining Congress Bulletin Service, the Hope Bill (H.R. 5358) sponsored by the U.S. Forest Service, which would give to the Forest Service complete control of the surface of mining claims in National Forests, is being considered by the Agricultural Committee even though the Interior and Insular Affairs Committee is usually supposed to have jurisdiction over public-land law matters.

The Hope Bill contains all the specifications for control of mining claims which have been promoted in the past by the U.S. Forest Service and Bureau of Land Management. The Forest Service has alleged that such control is necessary in the interests of better administration of timber cutting programs as well as recreational and grazing programs, and it appears that finding and developing new ore deposits are of little significance compared to these other National Forest features. Some day lack of developed mineral deposits may lose us a war and minerals do not grow on trees.

The writer believes that public opinion to promote the Forest Service views has been wrongly influenced by the series of articles which have appeared over the past few years in periodicals and newspapers. The authors used "facts" supplied by the Forest Service. Clearly they showed little or no knowledge of mining or the great need for this country to develop ore deposits. These articles have a germ of truth but are highly exaggerated, inflamatory in character, and contain some statements of very doubtful accuracy. They obviously were planned and timed to promote changes in the mining laws along the lines of the Hope Bill, with only lip service to the development of mineral resources.

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PETROLEUM REPORT

The Independent Petroleum Association of America has just published a comprehensive report by the Western Hemisphere Oil Study Committee of the Association entitled "Petroleum in the Western Hemisphere." A large number of people connected with the oil industry made up the Oil Study Committee. The contents include reports on statistics, government policies and laws, conclusions and recommendations as well as statements on productive capacity and reserves, supply and demand, and a summary of production and reserves in producing and non-producing countries.

Some very interesting comparative statistics concerned with production and reserves are tabulated. The figures are somewhat startling to anyone who has had little or no direct connection with production of petroleum. For example, in 1900 production of crude oil in the western hemisphere amounted to 178,000 barrels. In 1950 this production had increased to 7,425,000 barrels. As is generally known, by far the largest production in the western hemisphere is in the United States where in 1951 the total production amounted to 6,149,000 barrels or 72.5 percent of the total of the western hemisphere. The growth in production of crude oil in Canada has been tremendous but the large increase has occurred only in the past 25 years and largely in the past 5 or 6 years. Twenty-five years ago Canadian production was only 1,000 barrels daily and production remained less than 10,000 barrels through 1937. In 1946 production was 21,000 barrels. In 1951 production was 129,000 barrels. Production is mainly from the two provinces of Alberta and Saskatchewan, with Alberta furnishing about 95 percent of the total.

Reserve estimates provide interesting statistics also. Oil reserves in the United States have greatly increased over the past years despite the large increase in annual production and consumption. It was estimated on January 1, 1952, that the United States reserves amounted to 32.2 billion barrels. (In the 1920's it was estimated that oil reserves in the United States amounted to about 20 billion barrels.) In Venezuela reserves are estimated at 10 billion barrels and the Middle East 51.8 billion barrels. All other areas, including Russia, are estimated at 12.4 billion barrels. Broken down into hemispheres, known reserves are: western hemisphere, 46.2 billion barrels, and eastern hemisphere, 60.2 billion barrels, with a total of 106.4 billion barrels.

Natural gas reserves in the United States have also increased substantially. For example, at the end of 1945 estimated proved reserves amounted to 147.8 trillion cubic feet. In 1951 the proved reserves were estimated at 193.8 trillion cubic feet.

A pertinent quotation from a report by the American Association of Petroleum Geologists is included. This is from the A.A.P.G. February 1951 bulletin which presented a symposium on the "Possible Future Petroleum Provinces of North America" as follows:

> "Nine years have passed since the 1941 symposium. In those nine years our outlook has grown both geographically and geologically. The 1941 volume, for example, contained no mention of the Continental Shelf and no suggestion of the importance of reefs; it gave little consideration to possibilities in deeper strata in geologic basins already productive in upper beds; and it considered no possibilities deeper than 15,000 feet.
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> "These limitations were due to no lack of mental reach; they reflected the 1941 state of knowledge and of physical techniques. To cite a single example, the deepest well theretofore drilled had stopped at 15,004 feet, and no well had produced oil or gas from below 14,000 feet. Since that time several wells have been drilled below 15,000 feet, one to 20,520 feet; two wells are producing from depths below 15,000 feet; the Continental Shelf is producing oil off California, Texas, and Louisiana; reefs have become prolific producers; and important production has been developed in deeper beds in basins that formerly produced mainly from shallower formations. Our concept of where to find oil and gas has both widened and deepened."

The Oil Study Committee's report is especially valuable because it supplies up-to-date authoritative information to people who may not be directly connected with the oil industry.

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NEW BAUXITE OCCURRENCE

Ferruginous bauxite has been found in a dragline trench in the Clackamas River about a hundred yards from its junction with the Willamette and half a mile north of Oregon City. The dragline is operated by the Oregon City Sand and Gravel Company. The occurrence is under water at present and below the gravel of the river bed. When the bucket of the dragline reaches a certain depth in the trench, it brings out pieces of the bauxite. Under present stream conditions, the trench is continually being refilled with gravel.

Some pieces of the bauxite show the typical red oölitic texture. Other pieces are oölitic but are gray in color resembling some of the material found at Estacada, Clackamas County. The oölites are all strongly magnetic. Other pieces which come up with the oölitic material consist of massive tan and buff-colored clay. It appears unlikely that the bauxite could have traveled 20 to 25 miles down the river from Estacada without being crushed into bits. When the time of low water comes, the Department will investigate the occurrence further.

Analyses of specimen samples were as follows:

	Al_2O_3	Fe_2O_3	SiO_2
Gray oölitic	36.88%	31.30%	13.96%
Red oölitic	34.68	29.40	12.14
Massive buff clay	32.84	21.49	32.88

The occurrence was called to the Department's attention by Mr. Murray R. Miller, Oregon City.

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PROSPECTING COURSE OFFERED

The School of Mineral Engineering, University of Washington, will again offer the short course for prospectors commencing in the fall quarter. This course is available to all persons past high school age who may be interested in mining, and it does not require admission to the University.

The course offers instruction in mineral identification, prospecting methods, mining law, elementary geology, and related subjects of importance to prospectors.

Registration fee for the course is $10, and instruction commences October 1. Applicants should register at the University during the preceding week. Further information may be obtained from the Director of the School of Mineral Engineering, University of Washington, Seattle 5, Washington.

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STUDENT FIELD WORK

The Field Geology class of Oregon State College, under Dr. W. D. Wilkinson, is now mapping in the Mitchell quadrangle. Dr. Wilkinson has directed a class of geology students in the John Day and Mitchell areas each summer since World War II.

Geological field work by students under Dr. Bressler of the University of Oregon has been done in the vicinity of the Cornucopia gold mine, Baker County, during the past two or three weeks.

It is reported that a party of geology students from the University of Washington, under Dr. George E. Goodspeed, will also work this summer in the vicinity of the Cornucopia mine.

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TELEGRAM FROM SENATOR CORDON RECEIVED JULY 24, 1953

SENATE JUST APPROVED HR 2824 EXTENDING MINERALS PROGRAMS INCLUDING CHROME IN FORM IT WAS REPORTED BY SENATE INTERIOR AND INSULAR AFFAIRS COMMITTEE.

DREDGE DISMANTLED

Porter and Company's electric bucketline dredge which operated in the Granite area of Grant County, Oregon, for many years and finally on Crane Creek is being dismantled. It probably will be moved to Idaho.

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HAMLIN COPPER PROSPECT ROAD

Wesley and Russell Hassett, Box 38, Murphy Stage Road, Grants Pass, Oregon, and J. E. Hamlin, Route 3, Box 388, also Grants Pass, are building a road to the Hamlin prospect on Taylor Creek, Onion Mountain, western Josephine County. A tunnel to crosscut ore exposed in a shallow cut has been started. In 1949 Hamlin and Baker built a 1000-foot tramway from the mine up a steep slope to a truck road. The road being built to the mine will eliminate the need for the tramway. The Strategic Minerals Corp., Ltd., of Medford leased the mine in April 1951 and shipped two carloads of ore to the Tacoma Smelter.

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HIGH WATER BRIDGE ON ILLINOIS RIVER, JOSEPHINE COUNTY, OREGON

The Bureau of Public Roads is building for the Forest Service a reinforced concrete bridge across the Illinois River near the mouth of Josephine Creek. The location is the same as the old high water bridge which was washed out several years ago. Four of the old bridge piers have been raised 12 feet and are being used in the new structure. The new bridge will be 40 feet above low water and will be 62 feet longer than the old structure. It is 16 feet in width and will have a steel center span. Hamilton & Thoms are the contractors. The bridge will be valuable to provide access to a large area south of the Illinois River and to the upper Chetco River.

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EGGERS AND TYCER CHROMITE MILL

The chromite mill at French Flat near Takilma, formerly owned and operated by Rice Brothers, has been purchased by Eggers and Tycer, O'Brien. A jaw crusher has been installed. The chrome ore being milled is hauled from the old Chollard mine. Eggers and Tycer have enlarged the Chollard glory hole and have repaired and extended the haulage tunnel. Considerable milling ore, including some highgrade, is exposed both in the glory hole and the tunnel.

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ORE BUYER WILL VISIT GRANTS PASS

Mr. Dave Somerville, ore buyer for the Tacoma Smelter, will be in Grants Pass on August 3 and 4, 1953. Appointments to see Mr. Somerville may be made with Dave White, in charge of the office of the Department at 239 S.E. "H" Street, Grants Pass.

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GRANTS PASS PURCHASING DEPOT PROGRESS

With the advent of good weather, shipments of chrome to the Grants Pass purchasing depot have steadily increased. It is said that receipts so far this year are nearly 2½ times the amount received over a comparable period in 1952.

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FERROCHROME PLANT FOR SPOKANE

According to the U.S. Bureau of Mines, Pacific Northwest Alloys, Inc., has leased part of the government-owned Mead magnesium plant at Spokane to produce ferrochrome. The company will spend nearly 1½ million dollars in additions and alterations to adapt the plant to treat low-grade chrome ore.

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ACCELEROGRAPH INSTALLED IN STATE OFFICE BUILDING

An accelerograph, or strong-motion seismograph, has been installed in the basement of the State Office Building in Portland by the Seismological Field Survey of the U.S. Coast and Geodetic Survey. The instrument was developed by the U.S. Coast and Geodetic Survey with the assistance of Dr. Frank Wenner of the Bureau of Standards and consists of three instruments which respond directly to earthquake motion (accelerometers) a starting device, a camera recorder, a time-marking clock, a lamp and optical system, various relays and electrical circuits, and a light-tight covering case. It is powered by storage batteries to guard against interruption of the record due to local power failure during a large earthquake. A signal box which will indicate when the instrument has operated and count the number of operations is installed in an adjacent office. Recording is made on photographic paper.

Normally the instrument will remain inactive until disturbed by an earthquake of about intensity IV on the Modified Mercalli Scale. Should such a disturbance occur, the starting device simultaneously starts the motor-driven camera recorder, the time-marking clock, and turns on the lamp. The instrument will operate for about 70 seconds and, if the disturbance has ceased, will stop. Should the disturbance continue for longer than 70 seconds, the instrument will automatically re-cycle and continue to record without interruption for another 70 seconds. The camera is loaded with enough photographic paper for about seven of these operations.

The accelerometers, which are set at right angles to each other to record both components of horizontal motion and the vertical component, also, are a form of torsion pendulum. Each pendulum carries a small mirror which reflects the image of the filament of the lamp back to the paper in the recorder camera through an optical system to give a trace of any motion of the pendulum.

The starting device is a pendulum which carries a platinum cone separated from a platinum ring by an air gap. Small motions, such as caused by traffic or other artificial vibrations, will cause no contact between the cone and ring but when the motion is sufficient, as in an earthquake, a contact will be made and the electrical circuits will start the cycle described earlier.

This instrument is the only one of its kind in the State. There are similar installations at Tacoma, Olympia, and Seattle in Washington. The Tacoma and Seattle accelerographs were put in service just prior to the disastrous April 13, 1949, earthquake in the Puget Sound area. Installation of the accelerograph in the State Office Building is the result of joint cooperative efforts by the U.S. Coast and Geodetic Seismological Survey, the Secretary of State, the Structural Engineers Association of Oregon, Pacific Telephone & Telegraph Company, and the State Department of Geology. The Department has agreed to service the installation periodically.

Accelerographs should not be confused with seismographs which operate continuously and record minute earth tremors often transmitted many thousands of miles from their source.

R.S.M.

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A RECORD FOR DOUGLAS COUNTY

According to the Grants Pass Courier, on June 25 a mortgage for $24,800,000 was recorded by the Federal government in the Douglas County Court House, Roseburg, Oregon. This mortgage covers a loan to the Hanna Nickel Smelting Company and has to do with a contract by the company to supply the government with ferronickel obtained by treatment of the Nickel Mountain nickel ores. Terms call for the liquidation of the loan by June 30, 1962.

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LIMESTONE PROJECT

The Morrison-Knudsen Company has moved in equipment west of Durkee, Baker County, Oregon, and is preparing to quarry limestone at a large deposit. Large-scale testing work will be done to determine suitability of the stone for sugar mills in southeastern Oregon and southwestern Idaho.

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