

STATE OF OREGON
DEPARTMENT OF GEOLOGY & MINERAL INDUSTRIES
PORTLAND, OREGON

THE ORE.-BIN

VOL. 10 NO. 12 PORTLAND, OREGON

December 1948



Permission is granted to reprint information contained herein. Any credit given the Oregon State Department of Geology and Mineral Industries for compiling this information will be appreciated.

STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
Head Office: 702 Woodlark Building, Portland 5, Oregon

State Governing Board

Niel R. Allen, Chairman, Grants Pass
E. B. MacNaughton Portland
H. E. Hendryx Baker
F. W. Libbey, Director

Staff

Hollis M. Dole Geologist
L. L. Hoagland Assayer & Chemist
C. W. F. Jacobs Ceramist
Ralph S. Mason Mining Engineer
T. C. Matthews Spectroscopist
M. L. Steere Geologist
R. E. Stewart Geologist
D. J. White Geologist

Field Offices

2033 First Street, Baker
N. S. Wagner, Field Geologist

714 East "H" Street, Grants Pass
Harold D. Wolfe, Field Geologist

A REVIEW OF OREGON MINING IN 1948¹

by
F. W. Libbey²

Introduction

Metal mining in Oregon has remained static during 1948 while nonmetals continued to be in large demand especially those nonmetallic minerals used in construction. Total value of production has increased substantially because of this demand.

Metals

Gold

There has been no increase in gold mining throughout the year. In fact, there are fewer dredges operating now than during 1947 (4 against 12); they are all in eastern Oregon. None of the gold lode mines which closed down because of war conditions has resumed production except the Buffalo mine in eastern Grant County. Here high-grade ore is sorted for shipment and the lower grade milled. When a car of Buffalo concentrates is shipped, the high-grade is included in the car. A small amount of exploration work has been done at three or four gold properties in southern Oregon. Twenty hydraulic mines operated when water was available.

The Legislature which meets in January will probably have a bill or bills presented designed to regulate surface mining under the theory that surface mining destroys agricultural land. It seems doubtful if bills of this kind will be passed. Under the present sad conditions in gold mining, gold dredging operators cannot stand regulation which will increase costs. It would be the last straw, and they would say to the chrome and quick-silver miners "move over."

Chrome

One chrome mine which is located on the Illinois River in Josephine County of southwestern Oregon attempted to operate during the first six months of the year. After struggling with rising costs and a low price, the mine closed down in June and pulled out its equipment. About 10,000 tons of metallurgical grade chrome was mined from this property during World War II. Considering the strategic nature of chrome, it would seem to be the part of wisdom for the Government stockpiling agency to contract for this chrome

¹Paper presented at annual meeting of Northwest Mining Association, Spokane, Washington, December 3, 1948.

²Director, Oregon Department of Geology and Mineral Industries.

at a price which would allow production and development in order to keep the mine active and to help build up the chrome stockpile which everybody knows is much too low for comfort in these uncertain times. However, the owner of the property could get no satisfaction from Washington concerning a contract. The underground workings in serpentine will not stay open very long in the absence of repair work. This means that should an emergency come, this property will require complete new reopening because we all know that in the event of war, as in the past, Government authorities would be frantically looking for domestic chrome production.

Mercury

In considering the mercury situation, there is some interest in the fact that one Oregon quicksilver mine, the Bonanza, continues to produce. This mine was one of the large producers during World War II. It is running its furnace about 12 days each month. Part of the ore is coming from development work. Production is at the rate of about 100 flasks a month. Now that nearly all of the country's quicksilver mines have been forced to close down, foreign metal will take over the domestic market. Then, of course, the cartel-controlled European quicksilver will go up in price. There has been a slight strengthening in the market price of quicksilver in the past two weeks and it may be that the rise has begun.

Copper, lead, and zinc

A small amount of new activity has been in evidence during the past summer in some southern Oregon and western Cascade mining properties. These mines, with the exception of the Ruth zinc mine in the North Santiam area, were all originally opened up because of gold values at or near the surface. Sulphides came in a short distance below the surface along with a reduction in gold and silver values. Generally speaking, copper, lead, and zinc are more important than gold in these properties at the present market prices for metals. Some underground work is being done at the Ruth mine but the greatest amount of activity is in the Bohemia district of southern Lane County southeast of Cottage Grove. Here a flotation mill built during World War II by the H and H Mining Company has been put into operation by the owner of the Champion mine, Fred Bartells. The mill treats ore from three properties, the Champion, Musick, and Helena.

Bauxite

Alcoa Mining Company has continued to drill and sample high-iron bauxite deposits in northwestern Oregon, mainly in Columbia County. Churn drilling was discontinued and auger hole drilling has been stepped up to sample areas between churn drill holes. It is impossible now to state whether or not the recently discovered bauxite deposits in Clackamas County are of importance in the picture. Sampling of the original discovery shows high silica material, also relatively high alumina. It may very well be that areal extent of the Clackamas County deposits will prove to be much less than in counties farther west and north.

Nonmetallics

Perlite

Dant & Russell, Inc., has continued to expand its operations. Output has been nearly all for plaster sand. This sand was used in plastering the new Equitable and Oregonian buildings in Portland and its use resulted in a very large saving in weight of the buildings. Recently the company has announced that it will build a \$1,000,000 plant at the mine located on the Deschutes River in southern Wasco County. This new plant will consist of furnacing units and an addition to the present mill. Possibly an acoustical tile plant will be built also. The improvements at the mine will include new homes for employees and installation of new water and sewage systems.

Pumice

The demand for pumice has continued excellent throughout the year. Production in 1947 was 33,250 tons valued at \$111,400. In 1948 production was greater but no definite estimates have been made. There has been some restriction of output due to scarcity of railroad cars. Central Oregon pumice is shipped to western Oregon, parts of western Washington, and into California. There seems to be no doubt that light-weight building blocks have come to stay. When building materials are in greater supply and competitive conditions return, some producers of the less desirable materials will be forced out of business.

Haydite

This light-weight material obtained by heating suitable clay or siltstone in a kiln is produced in one plant near Portland. The product is reported to be excellent as a light-weight aggregate.

Other construction materials

Sand, gravel, and crushed rock continue to be produced in relatively large quantities. In value this production amounts to nearly half of the total production of the State. Portland cement plants are running at capacity. There is apparently a shortage of portland cement in the Northwest, and because of the big construction program planned by the Corps of Engineers, this shortage is likely to become acute in the next year or two, unless there is a big increase in capacity started very shortly.

Gemstones

One of Oregon's profitable industries which receives little notice in the industrial world is the collection and cutting of agate and similar material. The business has grown by leaps and bounds during the last few years. It is impossible to obtain accurate estimates of value of production since the business is conducted both by hobbyists and commercial lapidary shops. The uncut material collected could be valued in many thousands of dollars. Value of the cut material would be in the hundreds of thousands of dollars.

Mining Regulations on O and C Lands

The so-called Oregon and California Railroad revested lands comprise 2,500,000 acres located west of the Cascades. They were incorporated in the public domain in 1916. From 1916 to August 1937 there was no question concerning the application of the United States mining laws to these lands the same as other public land. In August 1937 Congress passed a law establishing a program of sustained yield of timber on these lands. No mention was made in the law about application of the mining laws. However, the Secretary of the Interior in a formal interpretation of the law prohibited mineral entry and location on these lands and declared that all mining claims located after August 28, 1937, would be invalid. It is not difficult to explain the Secretary's position, as interested persons know that the Interior Department's desire has been and is to replace the mining laws with a leasing system on public land. The Department hoped to gain a foothold by establishing a leasing system on O and C land. In Oregon there was a ground swell of feeling at the injustice of the Secretary's interpretation. This feeling finally resulted in passage of Public Law 477 last April which reopened these lands to mineral entry and location. At the request of the Bureau of Land Management there was inserted in the law an innocent-sounding provision, requiring that copies of location notices as well as records of assessment work be filed in the U.S. District Land Office. This is, of course, in addition to filing under State law. To implement the law the Bureau of Land Management issued regulations which, of course, have the effect of law, establishing rules governing filing of location notices in the District Land Office. One rule is that in filing a location notice, if the claim is on surveyed land and the notice does not include a description of the claim by legal subdivisions,

the copy of the location notice must be accompanied by a letter giving legal descriptions. If the location is on unsurveyed land, and the copy of the location notice does not show the land located as connected by course and distance to the nearest corner of the public land surveys and does not give the probable legal subdivisions affected if the lands were surveyed, the copy of the notice must be accompanied by a statement giving that information or satisfactory reasons for not doing so. Who is to decide whether or not the reasons are "satisfactory"? The Land Office, of course. Will the claim owner be able to find out from the Land Office whether or not his reasons are "satisfactory"? Possibly he will, but it is easy to imagine the difficulties confronting the prospector in trying to get this information from the Land Office. Will the Land Office inform a potential claim jumper whether or not a claimant has filed a "satisfactory" statement? The effect of these regulations will be to cloud the title on many mining locations and will be a further obstacle in the way of the legitimate prospector in Oregon.

Every informed person knows that the country needs positive action in the way of encouraging mineral exploration. Several things are needed including rational tax laws, but from a "grass roots" standpoint ways should be found to encourage prospecting and discourage claim squatting. The mining industry should for once act as a unit in cooperation with federal departments that have to do with public lands so that there may be agreement in possible additions or changes in the mining laws and administrative regulations in order to give definite encouragement to prospecting and discovery. Congress would then be advised properly on how to proceed. This cooperation could be effected best probably by working through the Minerals Advisory Committee of the Department of the Interior, but in any event there should be action and soon.

OIL PROSPECTING

Those who believe that Oregon has been adequately tested for oil and gas possibilities and therefore that the chances of finding oil and gas are nil should read two papers presented at the meeting of the Pacific Section, American Association of Petroleum Geologists, held in Pasadena, October 28 and 29, 1948. One of these papers entitled "Recent Developments in the Salinas Valley" by R. R. Thorup, consultant, King City, California, presents the case of a long search for oil in the Salinas Valley. His abstract reads as follows:

"The discovery of oil in the Upper Miocene by the Texas Company at San Ardo in November 1947, culminated 47 years of unsuccessful exploration and 91 dry holes. In the ensuing ten months (to October 1948) an additional 38 wells have been drilled. These include three discoveries, 19 producing wells, 15 dry holes, and four wells currently drilling. . . .

"Three different pools have been discovered and oil sands recently encountered by the Cleveland Oil Company north of San Ardo indicate the probability of a fourth pool. Oil sands on both sides of the King City fault suggest that the time of original accumulation was pre-King City fault."

Mr. Thorup makes the additional comment in a personal communication:

"The discovery of oil in the Salinas Valley should be an object lesson for all those who would condemn a sedimentary basin strictly on the basis of a large number of dry holes drilled in the area, because that in itself is not enough evidence. All the ideas have to be thoroly tested before one can say the basin contains no oil. Practically all of the pre-discovery drilling had been based on the anticlinal theory, which in this area has so far failed to pay off. It was not until exploration was started in another part of the valley, with different geologic conditions, that oil was found in commercial quantities. So the history of drilling in this valley should serve as a warning to some, and a ray of hope to others, that oil can still be found in areas where numerous dry holes have been drilled."

The other paper, entitled "Russell Ranch Oil Field" by Mason L. Hill, geologist with the Richfield Oil Corporation, Bakersfield, California, discusses the recent discovery of two oil pools in Cuyama Valley. This is an excellent example of how an area containing rich accumulations of oil may lie practically unnoticed for years even in a highly petroliferous province like southern California where, during the past three quarters of a century, hundreds of geologists have been engaged in an intensive search for oil and gas. The abstract of Mr. Hill's paper reads as follows:

"The Cuyama Valley, lying in the Coast Ranges midway between the San Joaquin and Santa Maria districts, was established as a commercial oil producing province by the completion of Richfield Oil Corporation's Russell No. 28-5, on June 13, 1948. This new field is known as the Russell Ranch oil field. It is situated in the western portion of the valley and is producing from Lower Miocene sands on fault closures. Previously less than a dozen holes and one small producer from Upper Miocene sand (Norris Oil Company's Cuyama No. 2) had been drilled in the valley.

"Geologically the Cuyama Valley, between the Caliente and San Rafael uplifts, comprises granitic basement and Cretaceous to Pliocene strata folded and faulted in ESE trends. Eocene strata are present only in the eastern part of the valley, the Oligocene (?) is a red bed facies, 5000 feet of Lower Miocene sands pinch out southwestward, marine Miocene shales and sands grade eastward into red beds and the Pliocene strata are entirely non-marine.

"Initial production of the discovery well, Richfield Oil Corporation's Russell No. 28-5, was 508 barrels per day, flowing, 38° gravity oil, from the interval 2970-3360 feet. This interval is Lower Miocene and has been designated the Dibblee zone. Five days later another pool was established two and one-quarter miles to the northwest by completion of Richfield Oil Corporation's Anderson No. 37-30, flowing 3041 barrels per day, 33.5° gravity oil, from the interval 2800-3019 feet, also Lower Miocene. The former, named the Russell area, had on October 1, 1948, eight completed wells with initial rates to 2500 barrels per day, and maximum sand interval of 350 feet. The latter, designated Whiterock area, had nine completed wells with initial rates to 4000 barrels per day, and maximum sand interval of 480 feet. Also, on October 1, 1948, the Russell Ranch field had eight active development wells, while eight wildcats were drilling at locations as far as nine miles from production."

CHROME ORE PRICE

According to the West Coast edition of Iron Age, issue of December 9, 1948, the Chromium Iron and Smelting Company is offering \$21 a gross ton for chrome ore delivered at the Grants Pass, Oregon, area on Highway 199. Minimum specifications call for 45 percent Cr₂O₃ and 2.5 to 1 chrome-iron ratio. This company is treating chrome ore at Meade, Washington, in electric furnaces used during the war for the production of ferro-silicon.

NEW ENGINEERING FIRM ESTABLISHED

Ivan Bloch and Associates, consultants for the Pacific Northwest and Alaska, announce opening of offices at 621 Park Building, Portland, Oregon. Mr. Bloch, formerly in charge of the Market Development Section of Bonneville Power Administration, includes in the field covered by his consultation service raw materials, power and fuels, water, labor, plant sites, transportation, and market surveys, as well as analyses of area and community development.

MERCURY CARTEL JUMPS PRICE

The Wall Street Journal, issue of December 22, 1948, under a London date line carries the announcement that the European-controlled mercury cartel has boosted the price of the metal \$14 a flask at Spanish and Italian ports. The cartel, called Mercurio Europeo, is a combination of Italian and Spanish producers and this set-up absolutely controls the price of quicksilver. The announcement states that the steep advance came as a complete surprise to the trade, even though a rise of some sort has been expected. The cost to United States consumers will jump from \$78 to about \$92 a flask owing to \$19.25 tariff plus freight and insurance.

Beginning just before World War II the United States quicksilver industry was built up to a point where it could supply domestic demands. The incentive was a market price which allowed producers a profit. At first this price was governed by supply and demand when European quicksilver was cut off. Later the Government established a ceiling of \$196 a flask and bought domestic production at that price, at the same time urging operators to produce at maximum capacity. Even before the end of the war when Spanish quicksilver became available, Government buying of domestic quicksilver stopped and the industry was told in effect to shift for itself. It then had to compete not only with cheap European labor and a cartel-controlled price but also had to buck a policy in this country which favored importing cheap foreign quicksilver. The Army did its part in kicking the domestic industry in the teeth by bringing in and dumping large quantities of Japanese quicksilver.

The inevitable results were foretold many times by people who knew the score. The price which had been \$196 a flask when domestic supplies were needed for prosecution of the war finally settled down to \$78-80 a flask where it has remained for a year or so. This price is the equivalent of about \$56 in Europe, the price established by the cartel. Domestic mines operated at a loss for a while but nearly all of them finally gave up the ghost. Only two mines, the Sonoma in California and the Bonanza in Oregon, are producing at present.

S. H. Williston, Vice-President of Cordero Mining Company which operated one of the largest quicksilver mines of the country during the last war, summed up the situation in a talk at the American Mining Congress in San Francisco last September when he said: "The quicksilver industry has fewer mines in operation at the present time than at any time since 1849, and the current rate of production is now below that of the depression years of 1932 and 1933. After October 1, 1948, with the closing of the nation's largest producer, domestic production will be below the 6000 flasks per year of 1921 and 1922 and at the lowest level since the metal was first mined in this country in 1849. After October 1, 1948, we must count on importing over eighty-eight percent of our domestic requirements."

The cheap price set by the cartel and high operating costs in this country have worked according to the cartel's plan. Domestic production has been rendered inconsequential and now the price of the metal has been increased to a point which is just below that which would warrant reopening United States mines. This is the culmination of the post-war throttling of our quicksilver industry.

All of this would not be so very important to the country as a whole if quicksilver were not an essential war mineral. It takes time to reopen mines and build up production. In an emergency we must now depend upon foreign quicksilver.

F. W. L.

MINERALOGY TAUGHT

Mr. Harold D. Wolfe, field geologist of the Department stationed at Grants Pass, is teaching a class in rock and mineral identification organized among members of the Grants Pass Mineral Society. A course in general geology will also be given.

CLEARING HOUSE

CH-104:

Mr. Tom Aten, General Delivery, Newport, Oregon, wishes to obtain somebody with a car to help with prospecting and treasure hunting. Mr. Aten states that he has a "doodle bug" metal locator, good camping and mining outfit, and is a member of the United Prospectors (Sourdough) Union, card no. 316.

INDEX TO ORE.-BIN, Volume X, 1948

- Activity in Little North Santiam area (X:10;72)
 AIME Industrial Minerals Conference (X:2;15)
 Allen reappointed, Niel (X:3;20)
 Assessment work (X:6;46)
 Assessment exemption, Would extend (X:5;39)
 Bauxite discovery, New (X:9;63-65)
 Bibliography for uranium prospectors, Short (X:11;84)
 Biennial report (X:11;82)
 Brick works, Two Multnomah County (X:11;79-81)
 Ceramic materials, Specifications for (X:10;73-76)
 Champion passes, Art (X:11;83)
 Chemical warfare on insects (X:4;31)
 Chinese shovel (Mining relic) (X:10;78)
 Chrome mine resumes production, Oregon (X:2;13)
 Chrome ore price (X:12;89)
 Clearing house (X:2;16), (X:6;46), (X:10;79), (X:12;90)
 Dantore plant on Deschutes River, New (X:10;76)
 Dredge resumes at Sumpter (X:8;62)
 Dredge leaves state, Southern Oregon (X:3;20)
 Earthquake felt at Klamath Falls at noon December 25, 1947 (X:7;50)
 Earthquakes predict future mountain peaks (X:4;30)
 Fertilizer shortage (X:4;30)
 Fissionable material discovery claims (X:8;60)
 Flame retardants, New (X:8;61)
 "From the Ground Up" (X:11;84)
 Gallium (X:9;70)
 Geology extension classes (X:10;77)
 Gold placers, Oregon's (X:6;41-45)
 Gold, "Free market" prices of (X:1;7)
 Grant County mining area described (X:8;56)
 Industrial Minerals Conference (X:5;40)
 Light metals and Northwest power (X:2;16)
 Limestone exploration, southern Oregon (X:2;13)
 Map of Oregon (X:7;52)
 Mapping, Coast Range (X:8;62)
 Mapping, Oregon topographic (X:3;23)
 Mercury cartel jumps price (X:12;90)
 Mercury situation, The domestic (X:3;17-20)
 Metal markets (X:4;29), (X:5;39), (X:10;76)
 Metal mining in Oregon, 1947, Preliminary report on (X:1;8)
 Metals, Demand for continues strong (X:2;15)
 Microfossil report published (X:6;46)
 Mineralogy taught (X:12;90)
 Mining in 1948, A review of Oregon (X:12;85-88)
 Mining news (X:7;50)
 Mining notes, Oregon (X:4;30), (X:10;68), (X:11;83)
 Mining records - and you, A story about (X:8;58-60)
 New Department geologist (X:11;82)
 New engineering firm (X:7;52; New engineering firm established (X:12;89)
 New Oregon mineral (X:6;46)
 Nickel-bearing laterite areas of southwestern Oregon (X:5;33-38)

Nickel and cobalt in vegetation (X:9;68)
Nonferrous metal markets (X:3;24)
Nonferrous metals (X:1;6)

O & C bill reported favorably, Ellsworth's (X:2;15)
O & C lands (X:4;25)
O & C lands bill passed by House (X:3;24)
O & C lands, Filings on (X:8;55-56), (X:9;70)
O & C lands, Map of (X:2;14)
O & C lands, Recent mining regulations on unwise (X:9;66-67)
O & C mining claim filing confusion (X:7;49) (X:8;56-57)
Oil prospecting (X:12;88-89)
Oil well at Ocean City, Washington (X:4;31)
Old AIME map (X:9;67)
Oregon Academy of Science, Annual meeting of (X:1;8)
Oregon land offices consolidated into one, Three (X:7;52)
Oregon 1947 mineral production reaches new high (X:7;50)
Oregon's mining industry (X:2;9-13)
Oregon Steel changes hands (X:11;82)

Pat on the back, A (X:11;82)
Perlite as filter aid (X:2;16)
Perlite production substantial, Oregon (X:2;13)
Petroleum demand (X:8;62)
Platinum, High consumption of in 1947 (X:1;7); Platinum upped, Price of (X:4;32)
Polk County geology described (X:5;40)
Prospecting with a gold pan (X:6;47-48)

Radioactive mineral deposits on public domain (X:10;78)
Release from Congressman Ellsworth's office (X:8;56)
Rights of miners to use of surface of mining claims (X:9;69)

Safety pamphlet (X:6;46)
Seismograph station at Oregon State College (X:7;51-52)
Snake River passage (X:1;1-6)
Soil samples, New method of obtaining undisturbed (X:3;21-22)
Soils and plants as prospecting aids (X:8;61)
Stockpiling from abroad is planned, Further (X:11;83)
Strategic critical goods (X:9;69)
Strategic metals industries, Status of the (X:10;71-72)
Strategic stock pile, Government (X:7;54)
Sumpter Valley dredge sold (X:2;15)

Theses and other unpublished reports in Department library (X:3;22)
Throwaway rock bit (X:4;28)
Trauerman addresses Security Administrations (X:7;54)

Uranium discoveries (X:11;82)
Uranium ore, Higher price and bonus offered for (X:4;29)
Uranium prospectors, Short bibliography for (X:1;84)

When will supply lines be cut? (X:4;32)

INDEX

to

The Ore.-Bin

Vols. I - X (1939 - 1948)

and

Press Bulletins

Nos. 1 - 14 (1937 - 1938)

State of Oregon
Department of Geology and Mineral Industries

1949

INDEX TO ORE.-BIN
Vols. I - X
and Press Bulletins* Nos. 1 - 14

- Abbreviations, some mineral industry (II:10;71)
Access road applications, new form (V:8;50)
Accident rate, Coos Bay mine (VII:10;64)
AIME
 Industrial Minerals Conference (X:2;15) (X:5;40)
 Trip to Baker (I:7;45-46)
- Alaskite (II:3;17)
Alcoa West Coast fabrication plant (II:1;3) (IX:12;100)
Alkalies, Rare (V:5;29-34)
Allen reappointed, Niel (X:3;20)
Almeda and Silver Peak mines of southwestern Oregon, A reconnaissance between (IX:12;95-100)
Alumina (V:4;23)
 Bauxite (See: Bauxite)
 High-alumina clay deposit near Castle Rock, Washington (VII:1;3)
 " " " " " Molalla, Oregon (VI:10;70)
 Northwest source of, vital (VI:10;65-67)
 Oregon reserves extensive (VII:4;27-28)
 Salem plant (VIII:6;43)
- Aluminizing (II:10;71-72)
Aluminum (VI:4;23) (IX:6;50)
 Alcoa plant (II:1;3) (IX:12;100)
 Dust treatment for silicosis (VI:9;63-64)
 From clay (I:4;30-32) (V:8;47-50)
 Northwest (IX:11;92-93)
 Prefabs (VIII:11;84)
 Primer (VIII:4;25-28)
 Streak test for (V:4;23-24)
 Uses, Notes on (II:2;13)
 War (V:1;1)
- American Mining Congress (II:10;72) (III:9;98) (III:10;106-107) (VIII:6;44)
Anderson, Richard J. (Portland engineer at mineral conference) (IX:11;94)
Annual number, 1939 (II:3)
Antimony (VI:4;23)
 Ore buyers (IV:4;31)
 Oregon (VI:10;70)
 Progress reports (V:2;10) (V:2;12)
 War uses (V:1;1)
- Asbestos (PB 8;3-4) (PB 13;2)
 List of users (VIII:2;11)
 Substitute brake lining (II:5;40)
- Assay laboratories, Report for 1938-39 (II:1;7-8)
Assays
 "Eye ball" (VIII:9;67)
 Requirements for (PB 1;3)
- Assessment work
 Federal moratorium on (PB 5;2)
 History of legislation (IX:7;56-57)
 Military service (II:11;77) (II:12;84-85) (III:1;3-4)
 Notices (I:8;57) (II:6;43-44) (IV:4;37) (IV:5;43, 48-49) (IV:6;54) (V:5;28) (VIII:3;23)
 (VIII:5;38) (IX:1;8) (IX:5;38) (X:5;39) (X:6;46)

*Press Bulletins indicated by "PB."

Association of American State Geologists (VIII:3;24)
 Atomic Energy Act of 1946, The (IX:1;1-7)
 Atomic planning (VII:10;59)
 Atoms and things (II:7;49-50); Reprinted (VII:8;49-50)
 Auger-hole prospecting (VI:12;77-81)

Baker County development (VIII:7;49)
 Baker office conducts mining school (I:4;30)
 Barite, list of users (VIII:2;12)
 Battery, Miracle, uses mercury (VII:2;15)
 Bauxite (VIII:4;26)

- Alumina (See: Alumina)
- Exploration, Oregon (VIII:10;75)
- Ferruginous in Washington County (VII:1;1-3)
- Found near Salem (VII:5;33-34)
- New discovery (Clackamas County) (X:9;63-65)
- Reserves (VI:10;65-67) (VII:4;27-28)

Beaver money and an Oregon mint (VIII:9;68)
 Bentonite (I:12;82)

- Component of new plastic (IX:8;65)
- List of users (VIII:2;12)

Beryl saleable at Metals Reserve depots (V:8;52)
 Beryllium (I:5;37-39) (I:10;69)

- Jackson County deposit, None found by State Department in (V:5;34)

Bibliography

- Short, for uranium prospectors (X:11;84)
- New geology (IX:11;91)

Birch Creek cinder occurrence (VIII:8;53-54)
 Bismuth (VI:3;15-20)
 Black sands (II:3;22-24)

- Beach survey (II:5;41) (II:6;45) (III:8;85)
- Chromite (See: Chromite)
- Chromite in marine sands (IV:1;8)
- Humphreys spiral gravity concentrator (V:10;61-63)
- Krome, Inc. (IV:3;19)
- State may lease chrome sands (IV:6;55)

Bonneville Dam drill records (III:5;59)
 "Booming" suspended on waters of Rogue River (II:6;43)
 Borax (III:58-59)
 Boron and farm crops (I:6;41-42)
 Bottlenecks (IV:4;30-31)
 Brake lining, Asbestos substitute developed for (II:5;40)
 Brick

- And tile (IV:9;85)
- Building (III:10;100-103)
- Oregon brick and tile dealers, 1941 (III:10;102-103)
- Two Multnomah County works (X:11;79-81)

Buffalo mine (VIII:10;76)
 Building block

- Boom (IX:2;11-15)
- List of manufacturers (IX:2;14-15)

Building materials (II:5;40)

Cadmium (IV:10;89-91)
 Calcite (Iceland spar) (V:6;36-40)
 Caesium (V:5;29-34)
 California Division of Mines, New chief (IX:4;36)
 Canada seeks way out of exchange troubles (IX:12;100)
 Carbon
 Activated from Texas lignite (VI:7;51-52)
 Monoxide again (V:6;35)
 Carborundum (IX:5;41)
 Cement (II:3;17)
 Clinker grinding aids (II:5;39)
 Copper-bearing (II:4;32)
 New unit triples output (IX:7;54)
 Ceramics (V:9;53-56)
 Modern tools of research (VIII:5;31-36)
 Nepheline syenite used for (II:3;17)
 Specifications for materials (X:10;73-76)
 Testing (VII:10;60-64)
 What's in a glaze? (VI:2;7-12)
 Champion passes, Art (X:11;83)
 Chemical warfare on insects (X:4;31)
 Chemistry (Microchemistry in research and industry) (VI:5;29-36)
 "Chico-Pan," The (IX:5;42)
 Chinese shovel (Mining relic) (X:10;78)
 Chromite
 And mercury (IX:7;57)
 An immediate national need (IV:1;1)
 Computing a chromium to iron ratio (IV:1;5-7)
 Chemicals discussed (VI:8;57-58)
 Humphreys spiral gravity concentrator (V:10;61-63)
 How and where to look for in Oregon (IV:1;2-3)
 Krome, Inc. (IV:3;19)
 Marketing (III:6;69) (III:9;91-93) (IV:1;4)
 Low-grade (IV:12;104)
 Metals Reserve buying
 Buying chromite in small lots (IV:3;23-24)
 Chrome and manganese specifications (IV:1; supplement) (IV:6;56-59)
 Retail chromite stockpile (IV:6;52)
 Mining activity (VI:6;43)
 Negotiations with Government officials in Washington on (IV:2;12-16)
 Ore price (X:12;89)
 Ore investigation (II:8;58-59)
 by U.S. Bureau of Mines in Central Oregon (I:7;44)
 by U.S. Geological Survey in Southwestern Oregon (III:3;32)
 Oregon ores concentrated by U.S. Bureau of Mines (IX:12;101)
 Production set-up (IV:2;10-12)
 Progress report 1943 (V:2;8)
 Research equipment at O.S.C. (III:3;33-34)
 Stockpile buying (see Metals Reserve above)
 Union of South Africa (II:4;33) (IX:2;17)
 What are some of the mining and marketing problems? (IV:1;3-4)
 What is it and how is it recognized? (IV:1;1)
 Chromium, War uses (V:1;1)
 Claims, How many can one locate? (PB 6;5)
 Location chart (II:8;61); Filings on (IX:6;49)
 Clapper, Ray (In Appreciation) (VI:2;12-14)

Clay

Aluminum from (I:4;30-32) (V:8;47-50)
List of users (VIII:2;12)
Molalla, Oregon, Geologic report on high alumina deposit near (VI:10;70)
Progress report (V:2;11)
Spectrographic analyses of Oregon (VII:5;34)

Coal

Allocations (IV:4;37)
Briquets without binder (VIII:10;75)
Coming era (VI:4;25-28)
Controlled gasification of underground (IX:7;55)
Coos Bay, Testing (PB 13;1-2) (I:3;22) (PB 12;3)
Coos Bay mine accident rate (VII:10;64)
Investigation by U.S. Bureau of Mines (IV:8;79)
Lands, Locating of (II:7;53)
Low temperature carbonization of (II:5;37-38)
Pipeline for (II:8;56)
Progress report (V:2;11)
Sampling (I:3;22) (I:5;35) (I:6;42-43)
Shortage (VI:6;44)
Use of for Oregon army cantonments (IV:6;53)
Utilization (V:8;52)
" of lignite (I:7;48)

Cobalt (I:10;70) (II:3;19) (IV:12;100-103)
Cobalt and nickel in vegetation (X:9;68)
Columbia River area, Partial list of users of industrial minerals (VIII:2;11-15)
Colorado River, Greatest earth mover (IV:5;43)
Columbium and tantalum (V:3;16-20)
Concrete (II:3;18)
Lightweight aggregates for (IX:5;42)

Copper

Bonneville cable (II:5;40)
Content of certain Oregon mine waters (VIII:12;85-87)
Cross currents in (III:11;110)
Import tax suspended (IX:3;28) (IX:6;50)
New type (II:4;32)
Progress report (V:2;10) (V:2;13)
Prices for (IV:1;9) (IV:3;22-23) (V:5;34) (IX:5;41)
War uses (V:1;2)

Cow Lakes lava field (IX:10;77-80)
Crescent City harbor improvement (I:6;43)
Critical materials (VI:4;28) (X:9;69)
Cuffry County has new mineral society (IX:12;101)

Defense progress (III:11;119)
Department notes (III:8;80) (IV:8;80) (V:1;3) (V:6;40) (V:9;59-60) (IX:1;8)
Department personnel (I:8;56) (I:12;78) (II:6;43) (II:6;45) (II:8;60) (II:11;79) (VI:5;36)
(VI:10;70) (VIII:4;30) (IX:8;59) (IX:8;66) (IX:9;74) (IX:11;94) (X:11;82)
Diamond (VI:1;1-5)
Borts (II:3;17)
Cutting largest (III:6;65-66)
Industrial (III:6;68)
Diamond drilling, Blast hole (VI:5;36)
Diatomite (II:11;78) (V:2;14) (VIII:1;1-7)
List of users (VIII:2;13)
Dolomite, (list of users) (VIII:2;13)

Domestic mineral reserves (VI:4;21-25)

Dredging

- Becke-Hopkins (III:4;51)
- In 1939 (II:3;20-21)
- Interim Committee hearings on (IX:7;57) (IX:9;74)
- Resurfacing model (I:6;40-41)
- Willows growing on dredged land (III:8;88)

Drilling (II:3;20)

- Blast hole (VI:5;36); Throwaway rock bit for (X:4;28)

Dry ice industry in the Pacific Northwest, The (VI:11;71-76)

Earthquake

- Klamath Falls (X:7;50)
- Predict future mountain peaks (X:4;30)
- Seismograph station at O.S.C. (X:7;51-52)

Electric "eye and ear" control (II:5;39)

Electric light bulbs, High efficiency of (II:1;5)

Electrostatic separation of minerals (I:2;14-19) (II:3;21)

Eocene age assigned shales at Toledo, Oregon (VIII:12;88)

Energy, Sources of in U.S. (IX:11;91)

Engineering firms established (X:7;52) (X:12;89)

Eruptions, fissure, near Bend (I:1;5)

Eugene silica foundry sand (VII:2;9-15)

Explosives license (IV:4;37)

Federal agencies in Oregon, Work of (II:3;24-25)

Federal Government regulations and the small mine operator (V:9;57-59)

Federal taxation of mineral enterprise (VIII:6;39-41)

Feldspar

- List of users (VIII:2;13)
- To extinguish magnesium incendiary bombs (IV:8;77-79)

Ferruginous bauxite (See: bauxite)

Fertilizer

- Brought to Northwest (II:12;85)
- Serpentine - superphosphate (VII:5;29-31)
- Shortage (X:4;30)

Field surveys, Progress of (II:6;44-45) (II:7;50)

Fish experiments (PB 5;2)

Fissionable material discovery claims (X:8;60)

Flame retardants, New (X:8;61)

Flood control, Washington (I:9;60)

Flotation process, New uses for (I:4;33)

Fluorescent light mineralogy (IV:10;86-88); erratum (IV:11;93)

Fluorspar (VI:6;37-43)

Fossils

- And the course of human thought (VIII:3;19-23)
- Called "bugs" (VIII:10;69-74) (VIII:11;77-83)
- Will tell (VII:12;73-79)
- Why study (VII:8;47-48)

Foundry sand, Eugene silica (VII:2;9-15)

Freight rates slashed (II:7;53)

Gallium (I:10;67-68) (X:9;70)

Garnet

- Abrasive (II:3;17)
- Sand in sawing stone (III:6;68)

Gas and oil prospecting in Oregon (IX:11;90-91)

- (See: Oil; Petroleum)

Geology extension classes (X:10;77)

Geology, Plain (VII:11;67-70)

Gem stones

- Domestic production (III:8;89)
- In 1944 (VII:6;38-40); In 1945 (VIII:8;59-60)
- Mining (IX:7;51-54)

Geochemical prospecting (VIII:12;87-88)

Geographic names, Oregon (VIII:4;30)

Geologic map advisory committee (VIII:1;10)

Geological quiz (VII:6;35-38)

Geophysical work (IV:6;55)

- Department in cooperation with U.S. Geol. Survey (II:5;41) (III:8;84-85) (IV:6;55)
- U.S. Geol. Survey develops magnetometer (VIII:6;41)

Glaciers

- Mt. Hood's vanishing (VIII:9;61-65)
- Melting uncovers silver (VIII:11;84)

Glass (II:11;76)

- Houses (PB 14;4-5)
- Wool (II:3;17)

Glaze, What's in a? (VI:2;7-12)

Gold

- Amalgamation of placer gold (IX:5;42) (Letter to Editor) (IX:6;48)
- Bearing on ownership of our "useless" stocks at Fort Knox (VI:9;62-63)
- Bricks (II:8;56)
- Bullion, values of units (I:5;37)
- Dredging (See: Dredging)
- Gold is where you find it (poem) (II:11;80)
- Has it lost usefulness as money metal? (V:4;21-22)
- Justice for miners (VII:12;80)
- Netherlands gold and silver (IX:5;41)
- Oregon's placers (X:6;41-45)
- Oregon production (I:4;29) (VIII:11;84) (IX:11;93-94)
- Oregon progress report (V:2;11) (V:2;13)
- Pan, Prospecting with a (X:6;47-48)
- Panning for (PB 7;1-5)
- Philippine, and the black market (IX:8;62)
- Placers and placer mining
 - Federal mining law publications (I:4;32)
 - Gold amalgamation (IX:5;42)(Letter to Editor)(IX:6;48)
 - Historical notes (VII:9;53-55)
 - New portable machine (II:6;46)
 - News of southern Oregon (IX:11;92)
 - Oregon's (X:6;41-45)
 - Panning for gold (PB 7;1-5)
 - Prospecting with a gold pan (X:6;47-48)
- Prices (VII:11;72) (IX:7;58)
- Value of gold (VIII:3;24)
- Illicit trade in gold thrives on inflation (VIII:8;60)
- "Free market" prices of gold (X:1;7)

Gold (cont.)

Priorities (See: Priorities)

Production and marketing of (VI:9;59-60)

Recovery, Methods of (I:10;68-69)

Restrictions

Dealings in gold further restricted (IX:11;89)

Mine closing order (IV:11;92-94)

Mines affected by preference rating order P-56 amended (IV:3;21)

Mines may operate under P-100 (IV:4;37)

Mining machinery frozen (IV:12;105)

Switzerland removed controls from (IX:1;8)

Willow Creek Mines, Malheur County in 1868 (Historical Notes) (VII:9;53-55)

Granite (crushed), list of users (VIII:2;13)

Grants Pass quadrangle, Some geological aspects of the (IX:6;43-48)

Grubstake, loans (PB 4;3) (PB 5;1)

Hardness of minerals (II:10;73)

Hearings on small mine loans (IV:6;55)

Hendryx reappointed (IX:3;28)

Highlights of 1940 (III:1;2)

Historical notes (VII:9;53-57)

Homestead, So you want a (VIII:7;48)

Humphreys spiral gravity concentrator (V:10;61)

Iceland spar (V:6;36-40)

Industrial Minerals Conference (X:2;15) (X:5;40)

Industrial minerals in the lower Columbia River area, Partial list of users (VIII:2;11-15)

Institute of Northwest Affairs (I:8;56)

Interim Committee hearings on dredging (IX:7;57) (IX:9;74)

Insulation, House (II:1;3-4)

Iron (VI:4;23)

Progress report (V:2;10)

Sponge (V:7;41-45)

War uses (V:1;2)

Klamath fault exposed (II:9;67)

Ladoo, R. B. (Prominent scientist on industry study) (VIII:7;49)

Laterite (See: Bauxite; Nickel)

Latin Americas, Our relations with the (III:3;28-31) (III:4;39-45)

Laurium, The mines of (IX:11;87-89)

Lava

Cow Lakes field (IX:10;77-80)

Fissure eruptions near Bend (I:1;15)

Lead (II:3;19) (VI:4;23)

War uses (V:1;2)

Leasing policy, Interior Department clings to (IX:2;18)

Leasing bill, Mineral (VI:7;48-51)

Lightweight aggregates

Bloated volcanic ash and tuff (VIII:6;42-43)

For concrete (IX:5;42)

Pumice (IX:4;29-34)

Light metals and Northwest power (X:2;16)

Lime

List of users (VIII:2;14)
Producers of burned (IX:8;65)

Limestone

Agricultural (IX:1;10)
Calcareous tufa (Warm spring dome in Snake River canyon) (II:4;29)
Deposits in Oregon (V:10;64-67)
Interesting deposits (Eastern Oregon) (I:9;60)
List of users (VIII:2;14)
Principal uses of (V:10;68)
Progress report (V:2;11) (V:2;13)
Southern Oregon exploration (X:2;13)

Liming materials used in 1942 (Agricultural) (V:12;82-83)

Lithium (V:5;29-34)

Useful compounds (VIII:4;29)

Loans, Hearings on small mines set (IV:6;55)

Magnesite (List of users) (VIII:2;14)

Magnesium (II:3;19) (VI:4;23)

Incendiary bombs (IV:8;77-79)

Metal (IV:2;17) (V:4;25)

Northwest (IX:11;92-93)

Permanente Metals Corp. (VI:1;4-6)

War uses (V:1;2)

Manganese (II:3;19)

Domestic (VI:4;22)

Metals Reserve buying specifications (IV:1;supplement) (IV:3;22) (IV:6;56-59)

Neotocite (Unusual manganese mineral found in Oregon) (IV:5;44)

New electrolytic alloys (II:6;46)

Production of (II:7;51)

Progress report (V:2;10)

Purchases (II:5;39)

Rhodochrosite needed (IV:12;104)

Sheep Mountain concentration tests (IX:12;101)

Survey (III:8;83-84)

War uses (V:1;2)

Mansfieldite (New Oregon mineral) (X:6;46)

Mapping

Coast Range (X:8;62)

Oregon topographic (I:3;24) (III:8;87-88) (X:3;23)

Progress of geologic in Oregon (I:7;45) (II:3;21-22) (II:6;44-45) (II:7;50) (III:8;86-87)
(VIII:1;10)

40 years of in Oregon (III:12;122-123)

U.S. Geol. Survey (I:3;23) (I:5;35) (II:3;24-25) (III:8;86) (IX:6;49)

Maps reproduced

Almeda and Silver Peak mines, Geology of the area in the vicinity of (IX:12;96)

Axford-Hunt perlite deposit (IX:8;60)

Bauxite area in Clackamas County (X:9;64)

Cow Lakes lava field (IX:10;77)

Glaciers of Mt. Hood, Plan map of (VIII:9;62)

Mineral localities (II:8;62)

Nickel-bearing laterite areas of S.W. Oregon (X:5;34-36)

Maps reproduced (cont.)

O&C lands (VI:7;47) (VIII:5;37) (X:2;14) (X:4;27)
Oregon 1870, Map of (X:7;53)
Placer mining areas of S.W. Oregon (X:6;46a); of N.E. Oregon (X:6;46b)
Red Flat area, Curry County (IX:3;20)
Vale salt project (IX:9;68)

Maps described

Geology of Northwest Oregon (U.S. Geol. Survey Prelim. Map 42) (VII :12;79)
Old A.I.M.E. map (X:9;67)
Oregon 1870 (X:7;52)

Marble, Wallowa black (PB 13;5) (PB 14;3-4)

Mercury (quicksilver)

Bonanza mines (II:8;56) (IX:12;101)
Cartel jumps price (X:12;90)
Domestic situation (X:3;17-20)
Flask of (II:7;51-52)
Fungicide (I:2;11)
Italian (VIII:1;9-10)
Production statistics (I:10;67) (II:3;19) (II:11;77) (II:12;84) (III:1;2) (III:2;26)
(III:3;32) (III:5;57) (III:6;65) (III:7;78) (III:11;118)(III:12;124-125) (VI:1;6)
(VI:6;44) (VI:7;46) (VI:9;64) (VI:10;68) (VI:11;76) (VI:12;84) (VII:1;8)
(VII:2;16) (VII:4;28) (VII:9;57-58) (VII:10;66) (VIII:2;17-18)
Progress report (V:2;9-10) (V:2;12)
Spanish (IX:1;10)
Tax, Pittman amendment to excess profits (II:10;72)
U.S. Geol. Survey bulletins (IV:4;39) (IV:6;54)
War uses (V:1;2)

Mercury and chromite (IX:7;57)

Metal

Demand for high (IX:12;102)
High prices (IX:1;9)

Metal markets (II:2;13) (III:6;69) (IX:1;9) (IX:3;28) (IX:5;41) (IX:9;75)/(X:1;6)
(X:5;39) (X:10;76) (X:3;24) (X:4;29)

Metal mining in Oregon, Preliminary report on for 1947 (X:1;8)

Metallurgical reports (I:9;62-63)

Metals

Demand for continues strong (X:2;15)
Foreign countries (III:4;46-50)
Production in Oregon (III:7;70-74) (X:1;8)
Production, domestic and world (III:4;47-48)
Strategic, Main war uses of the fifteen most (V:1;1-3)

Metals Reserve buying (See: Chromite; Manganese)

Meteorites

Port Orford (PB 9;3) (VII:7;46)
Simple test for (I:2;11-12)

Mica (list of users) (VIII:2;14)

Microchemistry in research and industry (VI:5;29-36)

Miner - finish, Small (V:11;69-74)

Mineral

Domestic reserves (VI:4;21-25)
Exhibit by Department at San Francisco fair (II:5;41) (II:5;41) (II:7;52) (II:8;60)
Fiber (Germany) (II:5;40)
Hardness of (II:10;73)
Industry, abbreviations (II:10;71)
Industry, Oregon (V:2;7-8)

Mineral (cont.)

Land title (VIII:9;67)
Leasing bill (VI:7;48-51)
New (mansfieldite) (X:6;46); (shortite) (I:9;59)
Notes (U.S. Bur. Mines) (II:8;59-60)
Producers - Attention (I:4;27)
Production
 Oregon (I:1;2-5) (III:1;2) (III:7;70-74) (VI:10;67) (X:7;50)
 Restrictions on by WPB (V:11;74-75)
 U.S. (I:2;12-13)
Products brought into Oregon (III:5;54-55)
Reserves, Domestic (VI:4;21-25)
Resources (Historical notes) (VII:9;53-57)
Separation, electrostatic (I:2;14-19)
Wool (II:1;4-5) (II:3;17)

Minerals in the body (II:3;25-27)

Minerals, Surplus (VII:10;65)

Mineralogy taught (X:12;90)

Mines

Assessment work (See: Assessment work)
Importance of new (VIII:9;67)
List of mines in Oregon (I:4;27)
Oregon output soars (II:9;63-64)
Priorities (See: Priorities)
Sampling (paper by O.S.C.) (IV:5;49)
Surveys voted for Oregon (IV:6;55)
Taxation (See: Taxation)
Waters, Copper content of (VIII:12;85-87)

Mining

Claims

O and C lands (See: O and C lands)
Filings (Only few days left) (IX:6;49)
Location chart (II:8;61)
How many can one locate? (PB 6;5)
Rights of miners to use of surface of (X:9;69)
Course restored to O.S.C. (IV:2;10)
Geology of Oregon (II:3;21-22)
Industries (VIII:8;54-56)
Industry, Oregon (X:2;9-13)

Labor

Essential to war program (IV:10;88-89)
Frozen (IV:9;81-82)
News number for 1940 (III:2;9-25)
Regulations (I:4;32)
 Early Oregon (VII:5;31-33)
Review of Oregon, in 1948 (X:12;85-88)
Records - and you, A story about (X:8;58-60)
School, New (VIII:12;88)
What's new in (I:8;50-56)

Mining and geological societies meet (II:9;67)

Mining and mail (VIII:9;66)

Miscellaneous articles on education

It is just not so (VII:4;23-27)
Plain geology (VII:11;67-70)
Seed corn of scientific progress (VII:7;41-43)

Miscellaneous articles - general
 Cockeyedeas (IV:12;98-100)
 Mining and mail (VIII:9;66)
 My dream house (II:2;9-13)
 Our relations with the Latin Americas (III:3;28-31) (III:4;39-45)
 Seventy-five years ago (III:6;67-68)
 They said (V:11;75-76)

Miscellaneous mining articles
 Heard over the Director's transom (I:10;66-67)
 Mines of Laurium, The (IX:11;87-89)
 One man's opinion (IV:7;60-64)
 Rover, move over (IV:5;40-43)
 Small miner - finish (V:11;69-74)
 Somewhere in the Peruvian Andes (II:9;64-66)
 Two prospectors (V:5;27-28)
 What's new in mining (I:8;50-56)

Miscellaneous stories
 Another tall tale of a sourdough (VI:3;20)
 Doc, a tale of the North Country (V:8;51)
 Doc Yak (VI:8;58)
 Past tents No. 1 - Murder in the meadow (V:12;83-84)
 Pioneers, The (VI:10;69)
 Tale of a rock hound (III:5;56-57) (III:7;75-77)

Miscellaneous war articles
 Ain't it wonderful? (IV:3;19-20)
 This Christmas (V:12;76a)
 Timing and bull (III:6;63-65)
 Well, what are we going to do about it? (III:12;121)

Molybdenum (VI:4;22)
 Content of scheelite (IV:8;76-77)
 Production (II:3;19)
 War uses (V:1;3)

Monazite (III:9;93-94) (III:12;125-128)
 Monetary standard, Post-war (V:10;63)
 Montana mining industry (VII:11;71-72)
 Montana Mining Association adopts resolutions (IX:8;66)
 Mt. Hood's vanishing glaciers (VIII:9;61-65)
 Museum Foundation lectures (IX:9;74)

National defense (II:8;56)
 National picture, The (VIII:8;56-58)
 Nelson, Dewitt Clinton (Oregon's oldest practicing engineer passes) (VII:7;46)
 Neotocite (IV:6;56-59)
 Newberry Crater, Deschutes County, Withdrawal of lands in (VIII:1;8)
 Nepheline syenite (II:3;17)
 Nickel (VI:4;22)
 And cobalt in vegetation (X:9;68)
 Nickel Mountain survey (III:9;90-91)
 Progress report (V:2;10)
 U.S. Geol. Survey Bull. 931-I (Abstract) (IV:4;38)
 War uses (V:1;3)

Nickel-bearing laterite
 Areas of southwestern Oregon (X:5;33-38)
 Red Flat, Curry County, Oregon (IX:3;19-27)

Nitrates (III:10;107-109)

Nixon, Earl K., joins Freeport Sulphur Company (VI:4;28)

Nonmetallics

Activities in, Malheur County, Oregon (VIII:5;38)

Market (II:1;6)

Oregon's 1946 production (IX:5;37-38)

Oregon contracts, 1940 (III:4;45)

Survey (PB 13;4-5) (II:12;84)

Industrial study (VIII:7;49)

Northwest Mining Association, Declaration of policy (VI:12;82-84)

O and C lands (Chronological)

1944

Mineral rights in revested lands (VI:7;45-47)

Mineral leasing bill (VI:7;48-51)

Mineral discovery hamstrung in western Oregon (VI:8;53-54)

S. 1982 (VI:8;54-55)

Mining laws in bill (VI:12;82)

1945

(VII:11;72)

1946

(VIII:5;36)

1947

Sustained yield of timber of (IX:8;63-64)

Legislation (IX:8;65)

1948

Ellsworth's bill reported favorably (X:2;15)

Bill passed by House (X:3;24)

HR 5049 (X:4;25-26)

Mining claim filing (X:7;49) (X:8;55-56) (X:8;56-57) (X:9;70)

Recent mining regulations on unwise (X:9;66-67)

Oil prospecting (X:12;88-89)

Arabian (VI:8;55)

In Oregon (IX:11;90-91)

Petroleum (See: Petroleum)

Texas Company oil test progress (VIII:10;75) (IX:1;10) (IX:1;10) (IX:2;16) (IX:3;28)

Well at Ocean City, Washington (X:4;31)

World production of crude, 1940 (III:9;98)

Oregon Academy of Science (VII:1;7) (VIII:2;16-17) (X:1;8)

Oregon

Academy of Science (VII:1;7) (VIII:2;16-17) (X:1;8)

Federal agencies in, Work of (II:3;24-25)

Geological Survey (III:8;86)

Geographic names (VIII:4;30)

Gold, silver, copper, lead, and zinc (IX:11;93-94)

Historical notes (VII:9;53-57)

Land offices consolidated into one (X:7;52)

Mapping (See: Mapping)

Metal production (III:7;70-74) (X:1;8)

Mineral industry (V:2;7-8)

Mineral production (I:1;2-5) (III:1;2) (III:7;70-74) (VI:10;67) (X:7;50)

Mines, List of (I:4;27)

Mines output soars in (II:9;63-64)

Mining arrives (II:10;69-71)

Mining geology of (II:3;21-22)

Mining industry (X:2;9-13)

Oregon (cont.)

Mining regulations, Early (VII:5;31-33)
Mining review of, in 1948 (X:12;85-88)
Nonmetallics, 1946 production (IX:5;37-38)
Products brought into (III:5;54-55)
Progress report (V:2;8-14)

Oregon Mining Association (VI:12;81)

Oregon State College

Field Camp (IX:6;49)
Mining course restored to (IV:2;10)
Mining professor leaves (VIII:7;49)

Oregon Steel changes hands (X:11;82)

Ores, New tests for essential (V:4;23-24)

Paint pigment shipped (VII:9;57)

Paleontology, a practical science (IV:5;44-46)

See: Fossils

Pat on the back (X:11;82)

Perlite

Another deposit in Oregon (IX:8;60-62)
As filter aid (X:2;16)
Lady Frances mine in commercial production (IX:4;36)
New plant on Deschutes River (X:10;77)
Oregon production substantial (X:2;13)
Oregon report (IX:1;7)

Petroleum

Demand (X:8;62)
Oil (See: Oil)
Soap from (IX:2;16)
Supplies and hydrogenation (V:12;77-82)

Permanente Metals Corporation magnesium and associated plants (VII:1;4-6)

Philippine gold and the black market (IX:8;62)

Pillow shaker (V:3;15-16)

Pioneers, The (VI:10;69)

Placers (See: Gold)

Platinum (II:3;16)

Consumption of in 1947 (X:1;7)
Metals (IV:11;94-97)
Prices (VIII:9;65) (X:4;32)

Portland Gas & Coke Company (III:5;53)

Portland Cement Company award (II:6;44)

Port Orford meteorite (PB 9;3) (VII:7;46)

Powder metallurgy (I:3;25-26)

Power cable, Longest (III:5;59)

Priorities (IV:8;80)

Change scheduled in applying blanket ratings (IV:4;36)
Federal Government regulations and the small mine operator (V:9;57-59)
Gold and silver mines, Order P-56, amended (IV:3;21-22)
Gold mines may operate under P-100 (IV:4;37-38)
Manufacturers of mining equipment (III:9;99)
Metal mines, preference ratings P-56 as of March 2, 1942 (IV:5;46)
Mining priorities (IV:6;52-53)
Quotas under P-56 (IV:4;36)
Schedule "A" ratings on machines (IV:3;28-29)

Progress reports

(PB 2;2-4) (PB 3;2-3)
Eastern Oregon (V:2;12-14); Western Oregon (V:2;8-11)

Prospecting (II:3;20)

Auger-hole (VI:12;77-81)
With a gold pan (X:6;47-48)

Prospector, The (a poem) (I:4;28)

Prospector's course (VII:10;65) (VIII:2;17) (VIII:12;87)

Prospectors, Two (V:5;27-28)

Publications loaned to Department (PB 3;1)

Public domain (VIII:6;44) (IX:5;41) (IX:9;76)

Policy of Northwest Mining Association (IX:4;36)

Pumice (V:2;14)

Lightweight aggregate, The (IX:4;29)

Producers (VIII:9;68) (VIII:10;76) (IX:2;18)

Users, List of (VIII:2;14)

Pyrite (II:3;18)

Quartz

Crystals (V:2;14)

Fused (VIII:7;45-48)

Users, List of (VIII:2;15)

Quicksilver (See: Mercury)

Radioactive mineral deposits on public domain (VII:10;59) (X:10;78)

Radium, Canada's great mine (I:7;47)

Rare alkalis (V:5;29-34)

Regulations

And the small mine operator, Federal Government (V:9;57-59)

Early Oregon mining (VII:5;31-33)

Resolutions (IX:8;66)

Rhodochrosite needed (IV:12;104-105)

Rhodonite (V:4;24)

Rights of miners to use of surface of mining claims (X:9;69)

Road, New application forms for access (V:8;50)

Rock crystal wanted (V:2;14)

Rocky Mountain spotted fever (I:7;48-49)

Rogue River

"Booming" suspended (II:6;43)

Coordination Board active (I:5;36)

Mining closure order (IX:1;8)

Reconnaissance geology of the lower (VIII:7;50-51)

Rubber (II:4;30); Synthetic (VI:8;56-57)

Rubidium (V:5;29-34)

Ruzicka wood-coke process (II:4;28-29)

St. Johns Bridge (VIII:7;51)

Salt

Brine (Vale, Oregon) (IX:9;67-73)

Pioneer Oregon industry (I:7;46)

Study of deposits (I:2 ;10-11)

Salting (IV:9;82-85)
 Sand (See: Black sand)
 Sand and gravel producers in the State of Oregon (IX:10;81-86)
 Sand, Eugene silica foundry (VII:2;9-15)
 Safety pamphlet (X:6;46)
 Scheelite (V:4;24)
 Molybdenum content of (IV:8;76-77)

Scientists, Shortage of (IX:10;80)
 Scientific progress, Seed corn of (VII:7;41-43)
 Seismograph station at Oregon State College (X:7;51-52)
 Serpentine - superphosphate fertilizer (VII:5;29-31)
 Sea water (III:9;94-95)
 Shortages (VI:8;55-57)
 Metal and mineral in national defense (III:10;103-106) (VI:8;55-56)
 Scientists (IX:10;80)
 Steel (V:3;20)

Shorttite, a new mineral (I:9;59)

Silica
 Bristol Silica Company (I:2;10)
 Eugene foundry sand (VII:2;9-15)
 Progress report (V:2;11)
 Sand, List of users (VIII:2;15)

Siliceous ores wanted (I:9;58) (IX:7;57)

Silicones (VII:1;6-7)

Silicosis (I:5;39)
 Aluminum dust treatment for (VI:9;63-64)

Silver (I:8;56)
 At 90.5 cents (VIII:8;60)
 Britain needs (V:4;26)
 Cans instead of tin cans (PB 14;6)
 Mines affected by preference rating order P-56 (IV:3;21)
 Progress report (V:2;13)
 War uses (V:1;3)

Silver Peak, Reconnaissance between Almeda and (IX:12;95-100)

Sink-and-float process (I:1;6-8)

Snake River canyon, A warm springs dome in (II:4;29)

Snake River passage (IV:7;65-70); reprinted (X:1;1-6)

Soap from petroleum (IX:2;16)

Sodium chloride brine occurrence near Vale, Oregon (IX:9;67-73)

Soda ash, Use of, instead of manganese (I:9;61)

Soil samples, New method of obtaining undisturbed (X:3;21-22)

Soils and plants as prospecting aids (X:8;61)

Southwestern Oregon Minerals Association (III:12;123)

Spanish quicksilver (IX:1;10)

Spectrographic analyses (II:4;30-32) (IV:4;32-35) (IV:5;47-48)
 Of Oregon clays (VII:5;34)

Spectrograph, Department (III:8;86) (IX:5;39-40)

Sponge iron (V:7;41-45)

Steel shortage (V:3;20)
 Uses, Notes on (II:2;13)

Stockpiling (III:7;79) (VII:3;17-20) (VIII:8;55) (VIII:8;58) (X:7;54) (X:11;83)

Stone, cleaning (PB 13;3-4)

Strategic minerals (I:11;71-75) (II:8;57) (III:3;34-36, 37) (III:4;38)
Excess profits tax on (III:8;88-89)
Fifteen most important, Main war uses of (V:1;1-3)
Hearing (III:8;80-83)
Legislation (I:6;42)
List of (II:8;57) (IV:7;70-71) (VII:3;21)
Oregon's place with (I:3;23)
Shortages (III:10;103-106) (VI:8;55-56)
Specifications and bids (I:12;79-80)
Stockpiling (See: Stockpiling)
What we are doing (III:8;80)
When will supply lines be cut? (X:4;32)

Strategic critical goods (X:9;69)
Strategic metals industries, Status of the (X:10;71-72)
Strayer, Senator W. H. (VIII:10;75)
Streak tests (V:4;23-24)
Sumpter Valley narrow gauge abandoned (VIII:11;84)
Supply lines, When will they be cut? (X:4;32)
Surplus minerals (VII:10;65)
Surveys (See: Mapping; Geophysical work)
Switzerland removed controls from gold (IX:1;8)

Talc (III:7;77-78)
Users, List of (VIII:2;15)

Tantalum, Columbium and (V:3;16-20)
Taxation of mines (IV:8;72-76) (IV:9;80-81)
Federal taxation of mineral enterprise (VIII:6;39-41)
Graph (IV:8;80)
Pittman amendment to excess profits (II:10;72)
Post war (VI:9;60-61)
Strategic mineral (III:8;88-89) (IV:9;80-81)
Release brakes on mining industry (VIII:6;39-41)

Theses and other unpublished reports in Department library (X:3;22)
Throwaway rock bit (X:4;28)
Tile (See: Brick and tile)
Tidal waves (U.S. Geological Survey develops instrument) (VIII:6;41)
Tin (II:1;6) (II:12;81-83) (VI:4;21)
In Oregon (I:5;34)
Lets stick to facts (III:12;120-121)

Titanium (V:1;4-6)
Toledo formation, Eocene age assigned to (VIII:12;88)
Tourmaline (V:4;24)
Trauerman addresses Security Administrators (X:7;54)
Truck transportation (II:6;45-46)
Tungsten
Progress report (V:2;13)
War uses (V:1;3)

Unit odds and ends (measurements) (VII:3;22)
Uranium (VII:8;50-52) (VIII:1;10)
Discoveries (X:11;82)
Discovery claims (X:8;60)
Higher price and bonus offered for ore (X:4;29)

Uranium (cont.)

On public domain (VII:10;59) (X:10;78)
Short bibliography for prospectors (X:11;84)

U.S. Bureau of Mines

Establishes new station at Pullman (I:9;60)
New Chief Metallurgist at Albany (IX:2;17)
Supervisor dies at Denver (IX:6;49)
Working in Central Oregon (I:7;44-45)

U.S. Geological Survey (III:8;86)

Develops instrument (magnetometer) (VIII:6;41)
New Chief Topographic Engineer (IX:6;49)
See: Mapping; Geophysical work

Vanadium (II:3;20)(VI:4;22)

By-product (I:3;25)
War uses (V:1;3)

Volcanic ash and tuff, bloated (VIII:6;42-43)
Volcanic cinders (Birch Creek cinder occurrence (VIII:8;53-54)

Washington fuel report issued (IX:4;36)

Washington, University of

Annual Mining Institute (VI:12;82)
Prospector's course (VIII:2;17) (VIII:12;87)

Weed killer (24-D) (IX:4;34-35)

Western States Mining Conference (VI:9;59-62) (VIII:5;38)

Willamette Valley survey (II:5;41)

Wood-coke process, Ruzicka (II:4;28-29)

War Production Board revises mineral policy (V:11;74-75)

X-ray machines, Super (II:4;33)

Zinc (II:3;16) (VI:4;23)

Electrolytic (II:5;61)
Investigation of sources (III:8;84)
Smelter in Pacific Northwest (IV:6;52)
War uses (V:1;3)

Zircon and zirconium (III:11;111-117)

The ORE.-BIN
State of Oregon
DEPARTMENT OF GEOLOGY & MINERAL INDUSTRIES
702 Woodlark Bldg., Portland 5, Oregon
POSTMASTER: Return Postage Guaranteed

Sec. 562, P. L. & R.

