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OREGON MINERAL PRODUCTION IN 1960

By
Ralph S. Mason*

Oregon's mineral industry produced its second highest value of raw minerals in 1960. Following a nation-wide economic trend during the year, the industry was off approximately $3 million from last year's record-breaking high of $49.8 million, according to preliminary estimates made by the U. S. Bureau of Mines. The heavy construction commodities, crushed stone and sand and gravel, reflected construction lag and were responsible for most of the change from last year. Metal mining, aside from nickel, was quiet. The state's only uranium mine and one of the two mercury producers shut down. Industrial mineral products showed both gains and losses as compared to the previous year. Cement production was up 12 percent while clays declined 15 percent and diatomite 3 percent. Pumice and volcanic cinders were up 9 percent and stone and sand and gravel were off 11 percent. Building stone activity was greatly increased over 1959.

Two major tests for oil were conducted during the year. Construction of a natural gas pipeline from Camas, Washington, to Eugene, Oregon, provided the area with an important raw material basic to many industrial operations. A second pipeline extending from Alberta, Canada, to California was started late in the year. The line will make natural gas available to such points as Bend, Klamath Falls, Medford, and the Rogue River Valley. Pacific Power and Light Company conducted by-product tests on its Eden Ridge coal in Coos County. Pacific has been exploring the feasibility of using the coal, which occurs in several nearly horizontal seams, in a mine-mouth steam plant for base-load power with a hydro facility on the South Fork of the Coquille River for supplying peaking capacity.

The electro-process metal industry in the state continued its rapid growth and integration. Increased primary aluminum production facilities were being constructed at an existing plant at The Dalles and plans for an additional aluminum smelter in the Northwest were announced. Production of ferro-nickel at the Riddle smelter exceeded that of any previous year. The state's refractory metals industry added greatly to its capacity to refine and fabricate a growing list of space-age metals, and one company installed a new research laboratory. Employment in the mining and metallurgical industries rose to a new high and revenue derived from mineral and oil and gas leases on public land in the state amounted to just under a quarter million dollars.

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Metals

Exotic metals

Nearly 900 employees are engaged in the production of exotic metals at two plants in Albany. These are Wah Chang Corporation and Oregon Metallurgical Corporation. Wah Chang, starting from scratch in 1956, now has a completely integrated processing plant for various reactive metals such as zirconium, hafnium, columbium, and tantalum. A 22-inch hot rolling mill and a 20-inch cold mill were added to the plant facilities during the year. The plant also is equipped with a 750-ton forging press, an electron-beam melting furnace, a rod mill, and a million-dollar foil mill. Some of the zirconium foil produced at the plant eventually ends up in photographers' flashbulbs. Most of Wah Chang's output is used in atomic reactors, space-age applications where resistance to heat plus lightness in weight is important, or in the chemical processing, electronics, or surgical fields. Wah Chang established a research center at its plant to investigate the many problems connected with the beneficiation, reduction, fabrication, and utilization of the new metals they handle. Stephen Yih, manager of Wah Chang's Albany operations, was elevated to the presidency of the firm January 1, 1961.

Oregon Metallurgical Corporation continued to expand and diversify. Titanium and zirconium ingot capacity was more than doubled during the year. Furnaces for melting refractory metals and increased production capacity for vanadium reduction were added to the plant. Development of spin-casting techniques for tungsten-base alloys and vacuum-arc melted castings of molybdenum and vanadium were also reported by the company.

Mercury

Most of the mercury produced in Oregon in 1960 came from the Bretz mine in southwestern Harney County, operated by the Arentz-Comstock Mining Venture of Salt Lake City, Utah. Installation of a furnace at the Mother Lode mine in the Ochoco district of Crook County was completed, and minor production was reported by its operator, Werdenhoff Mining Company of Seattle. The Quartz Mountain quicksilver deposit in western Lake County, which has been operated by Western Minerals Company of Lakeview for the past few years, terminated its lease to the property in December. A considerable yardage of crushed rock from the quarry was sold to the county for road metal during the year.

Exploration at two mercury prospects was carried on with the aid of federal Office of Minerals Exploration cooperative contracts. Work at the Oregon Cinnabar Mines, Inc., Big Muddy Cinnabar prospect in eastern Jefferson County was terminated before completion of the $48,000 project. Drilling was started late in the year by A. O. Bartell at the Nisbet mine in Clackamas County. Government cooperation in the $14,920 program was 50 percent. At year's end there were no new OME applications pending.

Cinnabar has been discovered on nine claims owned by Robert Hulin on Cave Creek, a tributary to Burnt River, in Baker County. Hulin made the original discovery in 1959.

David Chase, Medford, moved his 10-ton Gould rotary quicksilver furnace from the Bonita mine to the War Eagle property where the upper and lower workings were opened up. Small amounts of ore were mill tested during the year.

The Steelhead quicksilver mine, Jackson County, was drilled, and the management indicated that it would be put into operation at an unannounced date. The Bonanza mine, an important mercury producer for many years, closed down in October. The mine is located east of Sutherlin, Douglas County, and is owned by Bonanza Oil & Mine Corporation. Field work for the department's state-wide survey of all known mercury occurrences was finished, and preparation of the manuscript is nearly complete.

Nickel

Hanna Mining Company reported a record-breaking production of 22,228,720 pounds of nickel at its Riddle smelter in Douglas County. The nickel was reduced from 1.1 million tons of crude ore obtained from the open pit mine on Nickel Mountain above the smelter. Numerous minor technological improvements to the smelting operation contributed to the increased nickel production, which was almost one million pounds greater than in 1958, the previous highest year.

Uranium

Bear Creek Mining Corporation leased a uranium prospect on Bear Creek in Crook County from Sage Hollow Mining Corporation early in the year. The company opened a pit 60 feet deep and mined approximately 100 tons of ore. A total of 63 tons was shipped to the Lakeview Mining Company mill at Lakeview

during the summer. The property was returned to Sage Hollow late in the year.

Lakeview Mining Company abandoned the open-pit mining operation at the White King mine, Lake County, early in 1960 after switching over from an underground system to stripping late in 1959. The property was given back to the owners in August and leased in October by Vance Thornburg. Shipments from the Apex mine in Nevada were treated at the Lakeview mill, and 180 tons of ore from the Lucky Lass mine adjacent to the White King were also shipped to the mill. The Lakeview mill shut down in November after exhausting a stockpile of White King ore.

Lakeview Mining has a contract with the Atomic Energy Commission extending through November 30, 1963. There remained approximately 805,000 pounds of U_3O_8 to be delivered between July 1, 1960, and April 1, 1962, at a fixed unit price of $9.27 per pound for company-controlled ores. Post-1962 quantity contracted for is 766,000 pounds of U_3O_8 at a unit price of $8.00 per pound. Total cost of the remaining contract quantity from July 1, 1960, is approximately $13,600,000.

A detailed study of the uranium occurrences and regional geology in the Lakeview area was continued by the department during the year.

Copper

Two carloads of copper-bearing ore from the Copper Eagle (Brass Ledge) mine near Galice, Josephine County, were shipped to the Tacoma Smelter by Harry Comers of Grants Pass. A long-term study of the environment of copper mineralization in the state was initiated by the department. The project includes geologic mapping, petrography, and geochemical prospecting. A U. S. Geological Survey Open File Report, "A Preliminary Report on the Copper-Bearing Deposits of the Quartzburg District, Grant County, Oregon," was released and a copy placed in the department's Portland library.

Aluminum

Harvey Aluminum's reduction plant at The Dalles, originally designed for 54,000 tons of primary aluminum annually, produced nearly 60,000 tons during 1960. Additional smelting capacity under construction during the year will increase the plant capacity 25 percent when it is placed on stream early in 1961. Billet casting, heat treatment, and other facilities were also being installed.

Exploration for ferruginous bauxite in the Salem Hills area of Marion County and in Washington and Columbia counties was continued by a major aluminum company. Of particular interest to land owners in these areas was an article which appeared in the August issue of Engineering & Mining Journal describing the results of strip-mining bauxite in Hawaii. It was discovered that if the first foot of topsoil was removed and saved and then replaced after the ore had been mined, up to ten times as much grass could be grown. It was also found that the bare subsoil when properly prepared and fertilized made an excellent soil and produced much heavier crops than the original soil. The similarity between Hawaiian and Oregon bauxites makes the test results of far more than academic interest. Through the courtesy of the McGraw-Hill Publishing Company, the entire article "Mined Out Land Brought Back to Life", was reprinted in the September issue of the Ore.-Bin.

Gold

Approximately 70 percent of the gold produced in Oregon in 1960 came from small, seasonally active placers. In southwestern Oregon, 29 placers were in operation during the winter and spring. Equipment used included hydraulic giants, draglines, bulldozers, power shovels, front-end loaders, and one skin-diving outfit. An article, "Gold Placer Mining in Southwestern Oregon," appeared in the August Ore.-Bin.

Intermittent development and exploration work were carried on at several gold mines and prospects in southwestern Oregon, including the Eureka, Greenback, Reno, Snow Bird, Warner, and M. C.

The Star Mining Company, Haines, Baker County, completed a test run late in the year at its Chloride mine in the Rock Creek area. A truck-mounted mill on a large semi-trailer is a unique feature of the operation.

Some of the best fishing in eastern Oregon is in the old dredge ponds near John Day in Grant County and Sumpter in Baker County. The State Game Commission has stocked many of these ponds with legal-length fish of a type which thrives in that particular environment. The dredged ground also provides excellent though unlikely cover for deer. Hunters "in the know" have favored these areas for many years.

At the Buffalo mine in the Granite district of eastern Grant County work on driving a lower adit 250 feet below the present workings was continued. The adit is intended to tap several mineralized veins which

have been worked in the upper levels. Production at the Buffalo dates back to the turn of the century, and although records are incomplete, approximately $1 million in gold is estimated to have come from the mine.

Some of Oregon's Minerals at a Glance
(Preliminary figures)

	1959	1960
Clays	$ 308,000	$ 260,000
Gold	24,000	24,000
Mercury	278,000	100,000
Nickel	1/	1/
Pumice & volcanic cinder	1/	430,000
Sand and gravel	15,506,000	14,000,000
Silver	2/	2/
Stone	16,126,000	15,000,000
Undisclosed*	18,607,000	17,775,000
Total 3/	$49,842,000	$46,469,000

1/ Figure withheld to avoid disclosing individual company confidential data.
2/ Less than $500.
3/ Total adjusted to eliminate duplicating value of clays and stone; 1959 total revised.
* Asbestos, carbon dioxide, cement, copper (1960), diatomite, gem stones, iron ore 1959, lime, uranium, and figure indicated by footnote 1/.

The old Ibex mine in the Cracker Creek district, Baker County, was reopened and sampled by the Regal Mining Company, Ltd., of Vancouver, British Columbia. A sampling of the bedrock along the west bank of Pine Creek about 6 miles above Halfway in Baker County, was conducted by the McDonald brothers on ground owned by Milton Steinmetz. Kenneth Watkins of Emerald Empire Mines, Corvallis, shipped a truckload of gold ore from the Cinderella mine in the Blue River district of Lane County to the Tacoma Smelter in November. The ore came from a shallow trench along a newly discovered outcrop.

Considerable interest in gold was stimulated at the 1960 AIME Metals and Minerals Conference held in Portland in April. The all-day session was devoted to a thorough discussion of the role played by gold in the economy by a group of nationally recognized authorities. Copies of the papers and a transcript of the discussions were incorporated into a single publication, "Gold and Money Session", and distributed by the department.

Industrial Minerals

Building Stone

Production of Oregon building stones took a big step forward in 1960. No less than 19 quarries were in operation, some of them on a two-shift basis to keep up with the heavy demand. Production of stone was reported from 12 counties, and development work carried on during the summer by various individuals indicated that several other operations would be under way in 1961. A large percentage of the stone quarried in the state was shipped to out-of-state markets, with western Canada and southern California accounting for a considerable portion of the movement. Stones produced from Oregon quarries included dark red scoria from Tetherow Butte in Deschutes County, a nearly pure white rhyolite from Lake County, a gaily banded tuff from Wasco County, a bright green tuff from Crook County, and numerous others having a wide assortment of colors, textures, and markings. A field survey of more than 30 building stone quarries was made during the year by the department, the results of which are to be published in 1961.

Several quarries in the state produced aggregate for the popular built-up roofs. Opalite from a cinnabar mine in Lake County, white marble from a quarry in Josephine County, and brick-red scoria from a volcanic cone in the Bend area of central Oregon are representative of material sold for this purpose during the year. A new development in the construction of this type of roof was the use of a much wider range of sizes of the aggregate. Lumps measuring several inches across are used to "dress up" the base course of finer aggregate. Production of roof rock could expand considerably, since there are many rocks suitable for this purpose and they can often be produced from waste material resulting from the shaping of regular-sized blocks.

The Northwestern Granite Company plant at Haines, Baker County, was levelled by fire in July. Northwestern had produced monumental stone at this site for at least 50 years.

Sand and gravel

An estimated 15.5 million tons of sand and gravel were produced in the state last year. In recognition of the two-edged problem of the steadily increasing use of sand and gravel in construction in urban areas coupled with the rapid spread of urban areas over these deposits, the department began a long-range study of the Willamette Valley in 1960. In cooperation with the Mid-Willamette Valley Planning Commission, the

initial phases of the study were made in the Salem area. Factors such as sources of new material, rate of use, production costs, quantities available, and depletion rates of sources presently operated will be included in the study. When completed, the survey will have mapped the location of potential sources of supply and outlined some of the essential economic elements. This information will enable the Planning Commission to take steps well in advance to protect the deposits and urban areas from each other, recognizing that neither can exist alone.

Gem stones

An agate-cutting sawmill capable of slabbing logs of petrified wood 19½ inches thick and 8 feet long was built by Henry Bauman of Bend. The mill has two 24-inch, water-cooled saws mounted one above the other. Cutting rate depends on the hardness and thickness of the "wood" and ranges from 6 to 12 inches per hour. Crook County, which has been making a play for the rockhound over the past few years, reaped an estimated half million dollars in 1960, according to estimates by the Crook County Chamber of Commerce. The Chamber, in cooperation with local groups, has located numerous agate deposits, published maps, and given wide publicity to the wealth of gems to be found in the area.

Lightweight aggregates

Production of pumice by long-established operators in Deschutes County increased nearly 10 percent over the preceding year. A slight decrease in the production of expanded shale was reported by two plants in Washington County. Use of expanded shale as a pozzolanic additive for cements in the John Day Dam marked the first time that this material has been employed for other than lightweight aggregate production. The use of lightweight aggregates in pre-stressed concrete construction continued to expand, but regular sand and gravel aggregates also made inroads into the pre-stressed field. The recently developed "Lin Tee", which combines the functions of a beam and subfloor in one pre-stressed unit, was employed extensively by local structural engineers. The beams used either lightweight or regular aggregates.

Enough lightweight expanded-shale blocks were used in the Lloyd Center, a $90 million shopping area completed in Portland last fall, to build a wall 8 inches thick, 4 feet high, and 50 miles long.

Boron

Interest in the sodium borate deposits in the Alvord Lake area of Harney County was evidenced by the 45 apparently valid prospecting permits for sodium on file in the U. S. Land Office at Portland. Approximately 96,000 acres are covered by these leases. In addition, permits for nearly 12,000 acres were being applied for in Lake County, which adjoins Harney County on the west. Drilling was conducted by several firms in Harney County during the past several years. In 1960, Boron Incorporated drilled several deep holes east of Fields. A report on the geology and history of the Alvord Lake area was published in the October issue of the Ore.-Bin; it included analyses of seven boron samples collected from hot springs in the area.

Natural gas

Oregon, long deprived of the benefits to be derived from natural gas, will shortly have it available in almost unlimited quantities. First distribution of natural gas in the state was in the Portland area, the Willamette Valley, and along the pipeline through northeastern Oregon. The gas came from the Four Corners area of the Southwest via the 22-inch El Paso Natural Gas Company line completed in 1956. The latest pipeline system was started in the last quarter of 1960 and when completed will extend from Alberta, Canada, to San Francisco and cross the state near Madras, Redmond, Bend, and Klamath Falls. The cities of Prineville and of Medford, Ashland, and other Rogue River valley points would also be served by the pipeline. (See map in August, 1960, Ore.-Bin.)

Diatomite

A. M. Matlock, Eugene, explored and stripped a diatomite deposit in the Silver Lake area of Lake County. Plans for the erection of a processing plant at Silver Lake early in 1961 were announced. The Dicalite Department of the Great Lakes Carbon Corporation continued operation of its quarry and processing plant at Lower Bridge in northern Deschutes County. Great Lakes acquired the property from the Dicalite Company in 1944. However, first production from the property dates back 40 years.

Perlite

The Paisley perlite deposit in central Lake County was explored by A. M. Matlock, who made plans for erecting a crushing and screening plant.

Bentonite

Central Oregon Bentonite Company produced 1500 tons of ground bentonite for sealing stock ponds and irrigation canals, as a binder for feed pellets, and for oil-well drilling muds and foundry-sand facings. The company quarry is located in the Camp Creek district, Crook County.

Silica

Bristol Silica Company was forced to abandon its plant at Rogue River, Jackson County, by the relocation of U. S. Highway 99. A new plant 3 miles west of Gold Hill was constructed, and operations were nearly back to normal at the end of the year. Activity at the Quartz Mountain silica deposit in Douglas County was confined to further sampling and exploration of the huge deposit located about 35 miles east of Roseburg. A report on the geology of the deposit was published in the November, 1960, Ore.-Bin.

Asbestos

Nicolet Asbestos Mines, Ltd., of Montreal, Canada, drilled the Foster asbestos property on Josephine Creek, Josephine County. The drilling failed to show the presence of sufficient ore for a commercial body.

Western Chemical & Manufacturing Company erected a small processing plant at the Oregon Asbestos mine near Mt. Vernon in Grant County. The property has produced intermittently since it was first developed in 1915.

Vinyl acetate

Pacific Carbide & Alloys Company went on stream with its vinyl acetate plant in North Portland in August. Annual capacity of the plant is five million pounds. Vinyl acetate is used in paints, phonograph records, acetates, floor tiles and other products. Acetylene gas from Pacific's carbide plant next door, plus acetic acid, are the raw materials used in the process.

Coal

Sixty tons of coal from Eden Ridge in southern Coos County were shipped to the Colorado School of Mines for testing in June. Pacific Power & Light Company has been exploring the feasibility of a mine-mouth steam generation plant to supply base-load power at Eden Ridge for several years. A relatively small high-head hydro plant using water impounded behind a dam on the upper South Coquille River is also being considered as an adjunct to supply peaking capability. Both the steam and hydro plants would be located in the same general area.

Soda ash

Studies to determine the feasibility of erecting a soda-ash processing plant at Alkali Lake in Lake County were made by A. M. Matlock and associates in 1960. The lake has been the subject of numerous investigations over the years. Solid masses of soda ash occur in crater-like "potholes" which cover a considerable area. The "lake" is actually a playa and is dry the greater part of each year.

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LEGISLATIVE COMMITTEES

Oregon Senate Natural Resources Committee: Andrew J. Naterlin, Chairman (Newport); Francis W. Ziegler, Vice Chairman (Corvallis); Vernon Cook (Troutdale); Loyd M. Key (Milton-Freewater); Walter C. Leth (Salem); E. D. Potts (Grants Pass); and Daniel A. Thiel (Astoria).

Oregon House Natural Resources Committee: Clinton P. Haight, Jr., Chairman (Baker); Sidney Leiken, Vice Chairman (Roseburg); Carl Back (Port Orford); Sidney Bazett (Grants Pass); Leon S. Davis (Hillsboro); Douglas E. Heider (Salem); Tom Monaghan (Milwaukie); Juanita N. Orr (Lake Grove); and Robert F. Smith (Burns).

U. S. Senate Committee on Interior and Insular Affairs: Anderson, Chairman (N. M.); Jackson (Wash.); Bible (Nev.); Carroll (Colo.); Church (Ida.); Gruening (Alas.); Moss (Utah); Long (Hawaii); Burdick (N. D.); Metcalf (Mont.); Hickey (Wyo.); Dworshak (Ida.); Kuchel (Calif.); Goldwater (Ariz.); Allott (Colo.); Fong (Hawaii); and Miller (Iowa).

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OIL AND GAS EXPLORATION IN 1960

By

V. C. Newton*

The department issued seven new drilling permits during the year to oil companies and individuals who were willing to venture "risk capital" to look for oil in Oregon. Three of the drillings were deep tests and four were shallow tests. As of December 31, 1960, Oregon was still a nonproducing state. However, one test is still being drilled (Humble Oil & Refining Company's "Leavitt, et al. No. 1") near Lakeview, and hopes are still high as long as the bit is turning.

Compared to past activity, this year has been above average for oil and gas exploration in Oregon. The total footage drilled was greater than in most years, and interest was expressed over widespread areas.

Eastern Oregon

Pan American Petroleum Company drilled a shallow gas test in Idaho just east of the Oregon border near the little town of Sheaville, Malheur County, Oregon. The well was abandoned at a depth of 1182 feet, and reportedly nothing of interest was found. The drilling was encouraging to Oregon, however, as it indicated a continuing interest in gas prospects of the continental Tertiary sediments in the Snake River downwarp of northern Malheur County.

Central Oregon

At year's end, Humble Oil & Refining Company was still actively exploring production possibilities of Mesozoic-Paleozoic marine sediments believed to lie beneath the Tertiary volcanics in central Oregon. Drilling in this region is deep and expensive and requires detailed geologic investigations over a wide area before the geology can be extrapolated from beneath the volcanic cover.

Western Oregon

More drilling was done in the Tertiary marine basin of western Oregon than anywhere else in the state. Ross Mitchell & Associates, a local group, explored for shallow production south of the city of Dallas, Polk County, in the summer months without success. Numerous showings of gas in water wells and old test drillings have spurred "wildcatters" to continue to search the area. Reserve Oil & Gas Company, San Francisco, drilled a fairly deep test north of Dallas in May and was apparently discouraged after finding the sedimentary section thinner than expected.

Footage Chart by Years

Year	Total Footage Drilled
1956	9,458'
1957	29,024
1958	17,113
1959	5,192
1960	22,802

The Shell Oil Company offered to lease the entire submerged lands of the state in November, setting off a great deal of controversy concerning offshore development of oil and gas. Subsequently, the state's Attorney General ruled that there were no provisions in Oregon law for leasing these lands. Governor Mark O. Hatfield instructed that legislation be prepared for introduction in the present session of the Legislature to allow for offshore leasing. Shell's definite offer to spend money to explore offshore has called industry's attention to a whole new area in Oregon for investigation. The large area included in this first proposal may indicate that the odds against finding commercial quantities of oil or gas are believed to be high.

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Forecast

The department still takes the optimistic view on Oregon's oil and gas prospects even though drilling in the sedimentary marine basins has not been especially encouraging. Minor shows of petroleum have been encountered in recent drillings, and porous sand bodies have been found in the Tertiary marine sediments of northwestern Oregon. Holes drilled so far in the Mesozoic-Paleozoic marine basins in central Oregon have shown that several thousand feet of unmetamorphosed section exist and could have productive horizons. Not nearly enough geology or drilling have been done in the state to rule out the possibilities for commercial accumulations of oil and gas.

Private industry has proved time and again the existence of commercial oil fields in areas considered to have few possibilities. It is to industry's credit, moreover, that new oil reserves beyond the expectancy predicted by the "experts" have been maintained. As long as the incentive to look for oil is continued, Oregon has hope.

Oil and Gas Permits Issued in 1960

Permit No.	Company	Lease Name	County	Location	Depth	Status
38	Reserve Oil & Gas Co.	Roy-L&G Bruer No. 1	Polk	NE¼ sec. 31 T. 6 S., R. 4 W.	5,549'	Abandoned 7- 6-60
39	Ross Mitchell & Associates	Bliven No. 2	Polk	SE¼ sec. 10 T. 8 S., R. 5 W.	430'	Abandoned 7-12-60
40	John T. Miller	Sullenger No. 1	Polk	NE¼ sec. 18 T. 8 S., R. 5 W.	710'	Abandoned 6-28-60
41	Ross Mitchell & Associates	Bliven No. 3	Polk	SE¼ sec. 10 T. 8 S., R. 5 W.	580'	Abandoned 7-13-60
42	Humble Oil & Refining Co.	Thomas Creek Unit, Block III, No. 1	Lake	NE¼ sec. 18 T. 36 S., R. 18 E.	12,093'	Abandoned 10-25-60
43	Ross Mitchell & Associates	Bliven-Adams No. 4	Polk	NW¼ sec. 15 T. 8 S., R. 5 W.	340'	Abandoned 7-27-60
44	Humble Oil & Refining Co.	Leavitt et al. No. 1	Lake	NE¼ sec. 2 T. 40 S., R. 20 E.	3,100'	Drilling

Suspended Wells Abandoned

Permit No.	Company	Lease Name	County	Location	Depth	Date
1	W. F. Kernin	D. Coon No. 1	Douglas	Sec. 30 T. 28 S., R. 6 W.	152'	6-17-60
8	Riddle Gas & Oil Producers	Dayton No. 1	Douglas	Sec. 34 T. 30 S., R. 6 W.	1,370'	8-23-60
33	Riddle Gas & Oil Producers	Aikins No. 1	Douglas	Sec. 30 T. 27 S., R. 6 W.	480'	8-29-60
34	Linn County Oil Development Co.	Barr No. 1	Linn	Sec. 32 T. 11 S., R. 1 W.	4,529'	9-13-60
36	Oregon Oil & Gas Co.	Roberts No. 1	Lincoln	Sec. 25 T. 10 S., R. 8 W.	2,630'	6-17-60
- -	Northwestern Oils, Inc.	Morrow No. 1	Jefferson	Sec. 18 T. 12 S., R. 15 E.	3,300'	12-19-60

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MINERAL POLICY PROPOSAL INTRODUCED

Senators Allott (Colo.), Bennett (Utah), and Bartlett (Alaska) have co-sponsored a bill (S.210) which would declare it to be the continuing policy of the federal government " to foster and encourage (1) the development of an economically sound and stable domestic mining and minerals industry, (2) the orderly development of domestic mineral resources and reserves necessary to assure satisfaction of industrial and security needs, and (3) mining, mineral, and metallurgical research to promote the wise and efficient use of our mineral resources."

The bill would require the Secretary of Interior to carry out this policy "in such programs as may be authorized by law." He would also be required to report annually to Congress on the state of the domestic mining and minerals industry and submit recommendations for legislation to carry out this policy. A similar measure was introduced in the last Congress and passed the Senate but was not acted upon by the House.

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OREGON ACADEMY OF SCIENCE TO MEET IN PORTLAND

The 19th annual meeting of the Oregon Academy of Science will be held in Portland at the University of Oregon Medical School, 3181 S. W. Jackson Park Road, on Saturday, February 25, 1961. The Geology-Geography Section, with Herbert G. Schlicker as chairman, will hold morning and afternoon sessions at 10:15 A.M. and 2:30 P.M. respectively. Ten papers covering a broad range of geological subjects will be presented. Department staff members presenting papers are Len Ramp, Richard Bowen, Norman Wagner, and Howard Brooks. In the evening Dr. Ewart M. Baldwin will give an illustrated talk on East Pakistan at Portland State College, Room 53 State Hall, at 7:30 P.M.

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NEW MERCURY REDUCTION PLANTS

San Francisco (McGraw-Hill News Bureau): Two large mercury reduction plants designed by Gordon I. Gould Co., San Francisco, will go onstream later this year in Spain and Yugoslavia. Both are rotary kiln-type plants.

The Yugoslavian plant is now being constructed in Italy, and will go into service at the Idrija Mine. It will have a capacity of 250 metric tons of ore per day, and will feature the largest single mercury furnace ever built, according to the designer.

A similar but smaller plant is being built at La Esperanza Mine near Mieres, in northern Spain, for Astur-Belga De Minas, S. A. It will have a capacity of 150 mtpd.

The Gould firm in recent years has designed complete mercury plants for use in Italy, The Philippines, and Japan. Gould notes that in recent years a majority of its mercury plant design work has been done for foreign customers, because a poor price-cost relationship and lower-grade ores at home are retarding U. S. mercury development. (From E&MJ Metal & Mineral Markets, January 26, 1961.)

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BUREAU OF MINES ISSUES NEW INDEX

Recently made available by the U. S. Bureau of Mines is List of Publications Issued by the Bureau of Mines from July 1, 1910, to January 1, 1960, with Subject and Author Index, by Hazel J. Stratton. This valuable and much-needed index supersedes all previous indexes of the Bureau's publications. The 826-page paperbound book is priced at $4.25 and may be purchased from the Superintendent of Documents, Washington 25, D. C.

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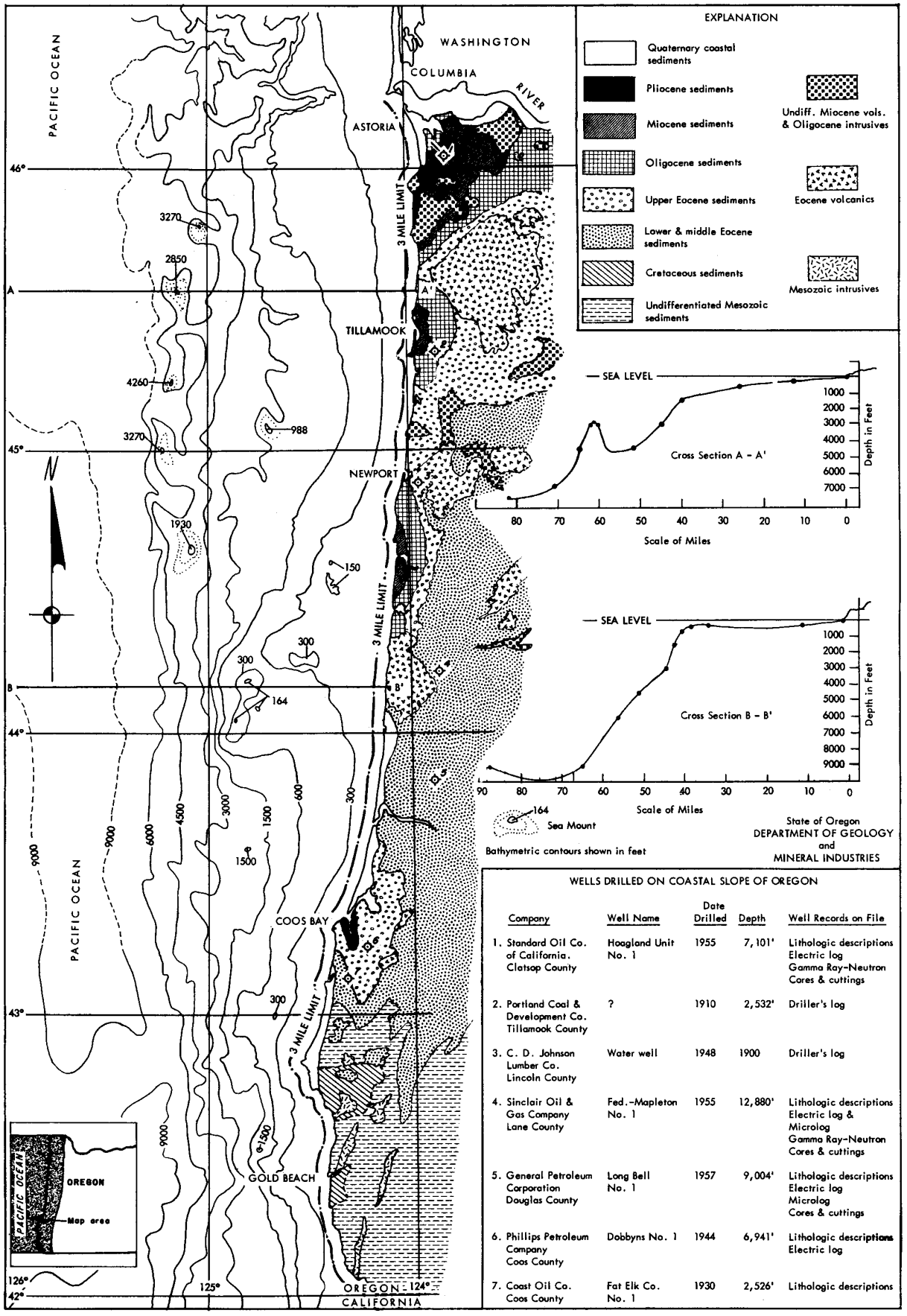
SUBMARINE TOPOGRAPHY AND COASTAL GEOLOGY OF OREGON



State of Oregon
DEPARTMENT OF GEOLOGY
and
MINERAL INDUSTRIES

WELLS DRILLED ON COASTAL SLOPE OF OREGON

Company	Well Name	Date Drilled	Depth	Well Records on File
1. Standard Oil Co. of California. Clatsop County	Hoagland Unit No. 1	1955	7,101'	Lithologic descriptions Electric log Gamma Ray-Neutron Cores & cuttings
2. Portland Coal & Development Co. Tillamook County	?	1910	2,532'	Driller's log
3. C. D. Johnson Lumber Co. Lincoln County	Water well	1948	1900	Driller's log
4. Sinclair Oil & Gas Company Lane County	Fed.-Mapleton No. 1	1955	12,880'	Lithologic descriptions Electric log & Microlog Gamma Ray-Neutron Cores & cuttings
5. General Petroleum Corporation Douglas County	Long Bell No. 1	1957	9,004'	Lithologic descriptions Electric log Microlog Cores & cuttings
6. Phillips Petroleum Company Coos County	Dobbyns No. 1	1944	6,941'	Lithologic descriptions Electric log
7. Coast Oil Co. Coos County	Fat Elk Co. No. 1	1930	2,526'	Lithologic descriptions

DATA ON OREGON'S OFFSHORE

A map of Oregon's coastal and offshore lands is presented here in response to the interest shown in this subject in recent months. The generalized geology on the map has been compiled from published material and from unpublished work for the State Geologic Map. The bathymetric contours and the two cross-sections are based on the International Map of the World. The drilling information is from the department records, and only those wells considered significant are mentioned. Additional drilling records are available from the department.

Accompanying the map are references on Oregon geology and a list of nautical charts. Most of the detailed geologic maps may be purchased from the U. S. Geological Survey. Unpublished theses are on file in the department's offices and at the universities or colleges where they were submitted for advanced degrees. Charts may be obtained from the U. S. Coast and Geodetic Survey or local marine outfitting establishments.

All lands within the 3-mile limit belong to the State of Oregon. A recent opinion by the Attorney General ruled that the state has no authority to lease such lands. However, legislation which will give the State Land Board the authority to lease is being prepared for presentation at the current session of the legislature. Lands beyond the 3-mile limit belong to the federal government and are leased through the U. S. Bureau of Land Management.

As yet 600 feet (100 fathoms) is the maximum water depth in which a drilling has been made. Offshore drilling is done by one of three methods: (1) by directional drilling from the shore, (2) by means of towers or man-made islands in shallow water, or (3) by specially constructed drilling ships in deeper water. At the present time wells are being drilled off the shores of Texas, California, and Louisiana.

NAUTICAL CHARTS ALONG OREGON COAST

C & GS Chart No.	Title	Scale	Price
5052	San Francisco to Cape Flattery (A Sailing chart showing generalized shoreline, soundings, and topography.)	1:1,200,000	$ 1.00
5021	Monterey Bay to Coos Bay	1:811,980	1.00
5022	Cape Blanco to Cape Flattery (Sailing charts with more detail on shoreline, soundings, and coastal topography.)	1:736,560	1.00
5702	Trinidad Head to Cape Blanco	1:196,948	1.00
5802	Cape Blanco to Yaquina Head	1:191,730	1.00
5902	Yaquina Head to Columbia River (General charts for coastwise navigation. Considerable detail on shoreline and off-shore topography.)	1:185,238	1.00

Harbor charts at various scales larger than the above are available of the following areas: Columbia River, Nehalem River, Tillamook Bay, Netarts Bay, Depoe Bay, Yaquina Bay, Siuslaw River, Umpqua River, Coos Bay, Coquille River, Port Orford to Cape Blanco, Cape Sebastian to Humbug Mountain, and Pyramid Point to Cape Sebastian.

Charts may be obtained at the following places:

Astoria: Englund Marine Supply, Foot of 15th St.
Coos Bay: Independent Stevedore Co., Inc.
Newport: Englund Marine Supply Co., 252 Bay Blvd.
North Bend: Oregon Pacific Co., Inc.

Portland:
U. S. Coast and Geodetic Survey District Office
314 U. S. Court House, 620 S. W. Main St.
Frank H. Parks, 213 S. W. Washington St.
Portland Instrument Co., 334 S. W. 5th Ave.

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