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STATE MINERAL PRODUCTION AT ALL TIME HIGH IN 1964

by

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The mineral industry of Washington showed new strength in several areas and reached an all-time high at an estimated value of $76.8 million in 1964, according to a report by the Washington Department of Conservation, Division of Mines and Geology. Mineral production figures compiled by the U.S. Bureau of Mines with the cooperation of the State agency showed an increase of $5.4 million (8 percent) over the previous year. Large production increases were recorded for zinc and lead in 1964, oil and gas exploration—especially in the offshore areas—was at a record high level, and the State's aluminum smelters operated at capacity.

Zinc and Lead Production Increases

Higher prices for zinc and lead stimulated increased exploration and production in Stevens and Pend Oreille Counties, even though mining operations at the Grandview and Mineral Right mines of American Zinc, Lead and Smelting Co. were closed down during the year because of exhaustion of minable ore reserves at these properties. More than offsetting these closures was the re-opening of the American Smelting and Refining Co.'s Van Stone mine in Stevens County. This open-pit mine, closed in 1957, when the price of zinc declined to a low level, re-opened in mid 1964 and provided employment for 50 men at the mine and the 1,000-ton-per-day mill. American Zinc, Lead and Smelting Co. continued exploration at the Anderson Ranch zinc-lead property in northern Stevens County, and during the year made preparation to operate the mine and mill at a rate of 1,000 tons of ore per day. Several other lead and zinc properties in Stevens and Pend Oreille Counties were under development or had records of small production.

Zinc production in the State in 1964 had a value of $7 million, almost equal to the record high of 1955 and 36 percent above the 1963 figure. Production volume increased 16 percent over that for 1963. Lead production value in 1964, at $1.7 million, was 45 percent greater than that for the previous year, and production volume increased 18 percent.

Washington Is a Leading Gold Producer

Washington continued as an important gold-producing state. The Knob Hill Mines, Inc. mine at Republic in Ferry County, and the L-D Mines, Inc. mine at Wenatchee in Chelan County were among the four or five largest lode gold mines in the United States.

Magnesium Minerals Production Also Increases

Production of the magnesium minerals magnesite and olivine increased 23 percent and 6 percent, respectively, over the 1963 totals. Washington led all other states in magnesite production, the total State output coming from the Red Marble quarry of Northwest Magnesite Co. near Chewelah, Stevens County. The crude ore is hauled 13 miles by aerial tram to a calcining plant, where dead-burned magnesite is produced for use as a refractory material in the steel industry.

The largest deposit of the highest grade olivine known in the United States is the "mountain of ore" that makes up the Twin Sisters Mountains in Whatcom and Skagit Counties. Olivine production in Washington increased 6 percent over 1963. As in previous years, Northwest Olivine Co. of Seattle, with its quarry and processing plant in Skagit County, was the leading producer. Smaller production was reported by Olivine Corp. of Bellingham, Pacific Olivine Co. of Seattle, and H. P. Scheel of Seattle. Most of the olivine mined by these companies was crushed and made into foundry sand for western markets.

New Cement Plants

Late in the year the Ideal Cement Co. announced plans to build a $20 million cement plant in Seattle. The annual productive capacity of the plant would be 2.5 million barrels. When in full operation, up to 100 additional employees may be required. In January 1965 Kaiser Cement & Gypsum Corp. announced it had leased a 20-acre property on the Duwamish Waterway in Seattle adjacent to the present plants of Kaiser Gypsum Co. and Glacier Sand & Gravel Co., subsidiaries of Kaiser Cement. The purposes for which the land will be used were not announced, but the lease requires that the company make improvements of at least $10 million value within 4 years.

Sand, Gravel, and Stone Production

There was no significant change in the combined output of sand and gravel and stone during 1964 as compared with 1963. Combined output for 1964 was estimated at 35.9 million tons valued at $37.0 million. State highway requirements and heavy construction projects were the main outlets for these commodities.

About 2 percent of the stone produced in Washington is utilized as building stone. A newcomer to the building stone industry in the Northwest is International Stone, Inc. of Spokane. The company has constructed a marble-faced tile and block plant at Newport, Washington to supply State and out-of-state demands. Stone Product Sales, Inc. of Spokane has been organized to act as sales agent for International Stone, Inc.

Aluminum Industry Flourishes

The aluminum industry in the State, responding to a strong market nationally, operated at a high rate of output. Production, actually above the published rated capacity, was 485,000 tons of metal valued at $230.8 million. This was only very slightly less than the record high of 1956 and was 14 percent greater than in 1963. One of the biggest industrial development news stories of the year was the announcement of plans of Intalco Aluminum Corp. to build a 73,000-ton per year aluminum plant at Bellingham. By year's end construction of the plant was already under way. Further evidence of growth of the industry was the reopening of the Tacoma primary aluminum reduction plant of Kaiser Aluminum and Chemical Corp. The plant had been closed since 1958. The Tacoma works has a rated capacity of about 41,000 tons per year and is expected to be producing at full capacity soon after the end of the year.

Offshore Oil Is the Big Prize

The "sleeping giant" with the potential of by far the greatest value of all possible industrial developments in the State, the oil industry, reached its greatest heights in exploration effort during the year. Most of the interest was in the offshore acreage offered for lease by the Federal government. On October 1, $7,764,928 was paid by seven companies for 27 parcels of ocean bottom totalling 155,420 acres lying from 3 to 20 miles off the Washington coast. The average bid of $49.96 per acre, well above the price paid earlier in the year for Federal lands

offshore from California, indicated the optimism of the bidders in this new area for oil search.

The Northwest's first offshore oil-test well was drilled by Union Oil Company of California in 1964 prior to the Federal land sale. This well was on State-owned offshore land about 2½ miles out in the ocean just north of the mouth of Grays Harbor. The photo shows the drilling rig and the "jack up" platform from which the drilling was done Travel to and from the platform was largely by helicopter. Although the well was unsuccessful and was plugged and abandoned, this did not discourage bidding on adjacent Federal land.

Geologic and geophysical evaluation of the Federal and State offshore lands was carried on at a brisk pace all during the summer months leading up to the Federal land sale. Successful bidders for land off the Washington coast were Pan American Petroleum Co., Atlantic Refining Co., Superior Oil Co., Standard Oil Co. of California, Union Oil Co. of California, and Shell Oil Co. It is expected that in 1965 one or more combines of these companies will put their money on the line and drill to test the oil production possibilities of the land they have acquired.

State Division of Mines and Geology

The State Division of Mines and Geology of the Department of Conservation conducted fundamental and applied research in 1964 to serve the mineral industries and the public in developing better knowledge of the geology and a more complete utilization of the mineral resources of the State.

Published during the year were f[redacted] reports on geology and mineral resources:

"Barite in Washington." $1.00

"Black Sand at Grays Harbor, Washington." 50 cents.

"Emplacement of the Twin Sisters Dunite, Washington." 25 cents.

"Preliminary geologic map of the Cumberland quadrangle, King County, Wash." $1.0

Biennial Report No. 10 of the Division of Mines and Geology, July 1, 1962 to June 30, 1964. Free.

These reports may be purchased from the Washington Department of Conservation, 335 General Administration Building, Olympia, Washington, at the prices indicated.