STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
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IRON

Many inquiries concerning location and characteristics of iron occurrences in the State have been received by the Department in recent months. Therefore the accompanying list was prepared to supply information on questions of this kind.

Editor

HELVETIA DEPOSIT — Washington County

Owner: Abe Zoller

Location: NW¼ sec. 2, T. 1 N., R. 2 W., about 1 mile northeast of Helvetia store, at end of road.

Description: Dense limonite outcrops on flank of low knob. Some ore occurs as float. Ore is apparently in horizontal bed, perhaps a foot thick. There are no known analyses, but specific gravity is determined by Rosenberg to be 3.76.

Informants: F. W. Libbey, verbal report, 1953
F. J. Rosenberg, verbal report, 1953

SCAPPOOSE DEPOSITS — Columbia County

Location: Numerous limonite deposits in area west of Scappoose.

Description: Several reports describe the properties. The following analysis is typical of much of the ore. Fe (dry) 49 to 58 percent, loss on ignition 14 percent, sulphur .025 percent, phosphorus .30 to .85 percent.

References: Williams, Ira A. and Parks, Henry M. - Limonite iron ores of Columbia County, Oregon: Oregon Bur. Mines Mineral Resources of Oregon, vol. 3, no. 3, May 1923.

Bell, L. Gordon - Preliminary report on laterite deposits and occurrences in the Portland region, Oregon: U.S. Geol. Survey Strategic Minerals Inv., July 1945.

Hotz, Preston E. - Iron ore deposit near Scappoose, Columbia County, Oregon: U.S. Geol. Survey Strategic Minerals Inv., unpub. ms., 1942.

Libbey, F. W., Lowry, Wallace D., and Mason, Ralph S. - Ferruginous bauxite deposits in northwestern Oregon: Oregon Dept. Geology and Min. Industries Bull. 29, 1945.

U.S. Bureau of Mines - Scappoose mine, Columbia County, Oregon: War Minerals Rept. 186, 1944.

Wilkinson, W. D., Lowry, W. D., and Baldwin, E. M. - Geologic Map of the St. Helens quadrangle, Oregon-Washington: Oregon Dept. Geology and Min. Industries Map, 1945.

Oregon Dept. Geology and Min. Industries - Oregon Metal Mines Handbook Bull. 14-D, Northwestern Oregon, p. 31-33, 1951.

Zapffe, Carl - Iron ores of the Pacific Northwest: Steel, vol. 114, Apr. 1944; Iron-bearing deposits in Washington, Oregon, and Idaho: Raw Materials Survey Resource Report No. 5, p. 55, 1949.

HUTCHISON FARM Washington County

Owner: Lawrence Hutchison ?

Location: SE¼ SW¼ sec. 1, T. 2 N., R. 3 W., just east of the Hutchison house and about 50 feet lower, on hillside.

Description: Fairly solid limonite outcrops on hillside, but areal extent is unknown. Length of exposure is about 40 feet. There are no analyses.

Reference: Libbey, F. W., Lowry, W. D., and Mason, R. S. - Ferruginous bauxite deposits in northwestern Oregon: Oregon Dept. Geology and Min. Industries Bull. 29, 1945. (Map of Hutchison-Nixon project in pocket.)

OSWEGO IRON MINE Clackamas County

Owner: Unknown

Location: On Iron Mountain south of Lake Oswego.

Description: Property has been idle for many years. It was formerly operated as an underground mine to supply iron ore to blast furnace at Oswego. Deposit depleted. Located on expensive residential property.

Reference: Williams, Ira A. and Parks, Henry M. - Limonite iron ores of Columbia County, Oregon: Oregon Bur. Mines Mineral Resources of Oregon, vol. 3, no. 3, May 1923.

TOLMAN IRON Gold Hill District Jackson County

Owner: C. A. C. Tolman, Gold Hill, Oregon

Location: SW¼ sec. 3, T. 36 S., R. 3 W., on ridge northwest of State Highway 234, and 2.1 miles north of the town of Gold Hill.

Description: Numerous cuts and an adit (now caved) expose nearly vertical zone in which magnetite and some hematite occur in a lime-igneous intrusive contact. Analysis (Hodge) gives: Fe 51.63 percent, phosphorus .060 percent. The ore occurs in discontinuous masses. Dip needle survey reported in second reference below.

References: Oregon Dept. of Geology and Min. Industries - Oregon Metal Mines Handbook, Bull. 14-C, vol. II, sec. 2, Jackson County, p. 113, 1943.

Hodge, Edwin T. - Available raw materials for a Pacific Coast iron industry, vol. 5, pt. 1, p. 58, U.S. Corps of Engineers, North Pacific Div., 1938.

EDWARDS RANCH Wheeler County

Owner: Fred W. Edwards, Fossil, Oregon

Location: S½ sec. 13?, T. 7 S., R. 21 E., approximately 2 miles south of Fossil, .85 mile of which is on the road to Antelope, and 1 mile to the west and south on the county road.

Description: Limonite float is scattered over one acre on west hillside, probably originating in bed several inches thick near the top of the slope. Areal extent has not been determined. Analysis gives: Fe 55.16 percent. Partially explored by bulldozer cut.

Reference: Oregon Dept. Geology and Min. Industries Mine Report File, Wheeler County.

FITZGERALD RANCH Wheeler County

Owner: Mark Fitzgerald, Mitchell, Oregon ?

Location: Sec. 9, T. 11 S., R. 20 E., on county road.

Description: Massive limonite is said to occur in two veins. Analysis gives: Fe 52.10 percent.

Reference: Oregon Dept. Geology and Min. Industries Mine Report File, Wheeler County.

TROUT CREEK LIMONITE Ashwood District Jefferson County

Owner: Unknown

Location: Sec. 28, T. 9 S., R. 16 E.

Description: Lavoy Swanson, Ashwood, submitted a sample of limonite for identification. It is said to occur as float over 80 acres. None was found in place. No analysis.

Reference: Letter in Oregon Dept. Geology and Min. Industries file from L. C. Swanson, May 24, 1952.

CURRY COUNTY DEPOSITS

Magnetite occurs in cemented black sand at Horse Sign Butte and in "boulder deposits" on Wake Up Riley Ridge and other localities. Black sand deposit contains about 0.5 percent vanadium (analysis by Department). Boulder deposits may contain copper minerals with small percentage of nickel and cobalt. No development of boulder deposits has been attempted because of probable limited individual extent.

References: Allen, J. E. and Lowry, W. D. - Horse Sign iron deposit: Oregon Dept. Geology and Min. Industries unpublished report, 1942.

Butler, G. M. and Mitchell, G. J. - Preliminary survey of the geology and mineral resources of Curry County, Oregon: Oregon Bur. Mines and Geology Mineral Resources of Oregon, vol. 2, no. 2, Oct. 1916.

HAMMOND BLACK SAND Clatsop County

Ownership: Clatsop County Bio-Products Laboratory, Point Adams Packing Company and others.

Location: South bank of Columbia near town of Hammond, approximately 10 miles west of Astoria in NW¼ sec. 9, T. 8 N., R. 10 W., and SW¼ sec. 5, T. 8 N., R. 10 W.

Description: Black sand containing as much as 40 percent magnetite occurs in a layer about 3 feet thick by 500 feet by 800 feet.

References: Kelly, J. V., Columbia River magnetite sands, Clatsop County, Oregon, and Pacific County, Washington, Hammond and McGowan deposits: U.S. Bur. Mines Rept. Inv. 4011, 1947.

Oregon Dept. Geology and Min. Industries - Oregon Metal Mines Handbook, Northwestern Oregon, Bull. 14-D, p. 25, 1952.

Zapffe, Carl - Iron bearing deposits in Oregon, Washington, and Idaho: Raw Materials Survey Resource Report no. 5, p. 44, 1949.

POWDER RIVER IRON Sparta District Baker County

Owner: Clyde Wilkins and others

Location: In the foothills bordering Powder River in Tps. 8 and 9 S., R. 44 E.

Description: Dark red to black, dense hematite occurs in a series of widely separated lenses or pods in schist and gabbro. Individual pod size varies from 3 to 5 feet in width, 30 to 70 feet in length. Typical analysis - 67.0 percent Fe, 1.0 percent TiO_2, 0.017 percent phosphorus, trace sulphur. Tonnage small.

References: Ross, C. P.- The geology of part of the Wallowa Mountains: Oregon Dept. Geology and Min. Industries Bull. 3, 1938.

Wagner, N. S. - Powder River Consolidated Mines Company : Oregon Dept. Geology and Min. Industries unpublished report, 1944.

SCHAFFER IRON Malheur County

Owner: Harry Schaffer, East Idaho Avenue, Ontario, Oregon

Location: Sec. 9, T. 16 S., R. 41 E., 12 miles from highway and railroad.

Description: Finely disseminated magnetite in siliceous rock matrix. Some pieces show copper staining. Grab sample assayed 49.72 percent Fe.

Reference: Wagner, Norman S. - Magnetite in Malheur County: Oregon Dept. Geology and Min. Industries unpublished report, January 1953.

EGGER MAGNETITE Greenback District Josephine County

Owner: O.& C. land

Location: Sec. 28, T. 33 S., R. 5 W., ½ mile from King Mountain road.

Description: Massive magnetite with some malachite along fractures. Analysis by Department gave Fe 50.11 percent, Cr_2O_3 0.9 percent, SiO_2 11.08 percent, Cu 1.20 percent.

Reference: Oregon Dept. Geology and Min. Industries SIR, Sherman Egger, Sept. 1951.

JOSEPHINE CREEK MAGNETITE Waldo District Josephine County

Owner: Unknown

Location: Josephine Creek

Description: Nodular magnetite found as result of placer operations.

Informants: Verbal reports from placer miners, etc.

MOSS MAGNETITE Illinois River District Josephine County

Owner: Ed Moss, c/o Don Barnes, 115 S.W. "H" Street, Grants Pass, Oregon.

Location: NW¼ sec. 3, T. 38 S., R. 9 W., ½ mile from Lower Illinois River road.

Description: Magnetite assaying Fe 66.12 percent, Ni 0.047 percent.

Reference: Oregon Dept. Geology and Min. Industries, SIR, Ed Moss, July 1951.

GILLIAM MAGNETITE Tiller-Drew District Douglas County

Owner: U.S. Forest Service

Location: Sec. 3, T. 31 S., R. 2 W., 1 mile from Tiller-Drew road.

Description: Massive black magnetite assaying 68.88 percent Fe.

Reference: Oregon Dept. Geology and Min. Industries, SIR, L. F. Gilliam, May 1951.

BULLIS HEMATITE Gold Beach District Curry County

Owner: Howard Bullis, Carpenterville, Oregon

Location: Sec. 33, T. 38 S., R. 14 W.

Description: Red hematite assaying 67.9 percent Fe_2O_3.

Reference: Oreg. Dept. Geology and Min. Industries, SIR, Howard Bullis, Sept. 1951.

AUMSVILLE LIMONITE Marion County

Owner: James E. Towle, Aumsville, Oregon

Location: Sec. 24, T. 8 S., R. 2 W., 1 mile north of Aumsville, Marion County.

Description: Limonite. Analysis shows Fe 51.32 percent, Al_2O_3 4.90 percent, SiO_2 3.44 percent, ignition loss 16.43 percent.

Reference: Libbey, F. W., Lowry, W. D., and Mason, R. S. - Ferruginous bauxite deposits in northwestern Oregon: Oregon Dept. Geology and Min. Industries Bull. 29, p. 81, 1945.

R.S.M.

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METAL PRICES

Metal prices for the week ending February 5 are given by E&MJ Metal and Mineral Markets as follows:

Copper, (domestic) 24½ cents per pound; (foreign) 34.792 cents. It is believed that the domestic price is certain to rise substantially higher between now and April 30, and most observers believe that the price could rise to 30 cents or more. Demand for copper continues active. Congress has approved suspension of the import duty on copper to June 30, 1954.

Lead, 13½ cents New York, and shows a downward revision of the domestic price, which was a reflection of an unsettled and lower London market.

Zinc, 11½ cents per pound East St. Louis. Demand for galvanizing grade has not met expectations and offerings of foreign metal have affected the market so that the price was lowered half a cent per pound on February 3. Price in London has also been weak and lower.

Quicksilver, $208-210, New York. Because of selling pressure, lower prices prevailed. Spot metal was obtainable at this price or $2 lower than in the preceding week. Nearby delivery metal is available at $205 and the market was weak.

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NEW ALUMINUM PLANTS FOR OREGON

An AP dispatch from Washington, D.C., under date of January 26, 1953, announced that Harvey Machine Company, Inc., of Torrance, California, announced plans to build a $20,000,000 rolling mill for the production of sheet, strip, and circular aluminum. The announcement said that the plant will be financed privately and will be erected at Torrance.

It has been announced also that the Defense Production Administration has granted a certificate of necessity to the Harvey Machine Company for the fast writeoff of the expense of building a new aluminum reduction plant at The Dalles, Oregon. The certificate involves $65,250,000 and permits Harvey to write off 85 percent of the cost of the new plant and facilities over a period of five years.

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OREGON NICKEL PROJECT

One of the most important events in Oregon mining history took place January 16 in Washington, D.C., when the Defense Materials Procurement Agency signed a contract with Hanna Coal and Ore Corporation and the Hanna Nickel Smelting Company, both subsidiaries of the M. A. Hanna Company, Cleveland, Ohio, for the production of nickel from Nickel Mountain near Riddle, Douglas County, southwestern Oregon. The contract calls for the production of from 95,000,000 to 124,000,000 pounds of nickel in ferronickel which will contain at least 25 percent nickel and not more than 75 percent iron. The Hanna Coal and Ore Corporation agrees to develop the mine on Nickel Mountain at its own expense to cost approximately $4,300,000. Ore from the deposit will be sold to the Government at $6 a ton. In turn, the Government will sell the ore to the Hanna Nickel Smelting Company at the same price and the smelting company will treat the ore in an electric furnace plant to produce the ferronickel. This plant will be located about 2 miles down the mountain from the mine and will consist reportedly of four primary furnaces, one refining furnace, and two auxiliary furnaces.

It was announced in the press on February 3 that according to H. L. Pierce, Vice President of Hanna Coal and Ore Corporation and of Hanna Nickel Smelting Company, a contract has been awarded to the Bechtel Corporation, San Francisco, to handle the design, engineering, and construction of the nickel smelting plant at Riddle.

The Hanna Smelting Company will use a patented process developed in France by the Societe D'Electro-Chimi, D'Electro Metallurgie et des Acieries Electrique D'Ugine. This process has been used in treating New Caledonia ores having characteristics similar to the nickel silicate ore on Nickel Mountain. The contract price is 79.39 cents per pound for the first 5,000,000 pounds of nickel produced in the ferroalloy and 60.5 cents per pound thereafter.

The Government agrees to advance $24,800,000 for construction of the smelter and related expenses. The contract includes rapid amortization of the facilities installed.

The importance of this development to Oregon cannot be overemphasized. Nickel is one of the most strategic of metals needed in national defense and Nickel Mountain contains by far the largest deposit of nickel ore known in the United States. Moreover, the economy of the State will be greatly benefited by this large production of new wealth.

F.W.L.

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NEW COMPANY TO BUILD METALLURGICAL PLANT IN OREGON

According to E&MJ Metal and Mineral Markets, the Apex Smelting Company of Chicago has announced the formation of National Metallurgical Corporation in which Apex and American Smelting and Refining Company each has a half interest. The National Metallurgical Corporation will construct and operate a pilot plant at Springfield, Oregon, for production of aluminum-silicon metal from clays. It is planned to have the plant in production by June 1 of this year. Officers are W. A. Singer, President; R. D. Taylor, Vice President; R. K. Beck, Vice President; L. Lippa, Secretary and Treasurer. Directors, including officers, are: Edgar L. Newhouse, Jr., Leo Halpern, James B. Wescott, Gordon W. Reed, Robert D. Bradford, and Oscar S. Straus.

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U.S. COURT OF CLAIMS - L-208 HEARINGS

Hearings started January 26 before Commissioner William E. Day of the U.S. Court of Claims, for the purpose of receiving evidence relating to the issuance of Order L-208 by the War Production Board, which summarily closed the nation's gold mines in October 1942.

The present action before the Court of Claims would have been limited to comparatively few mining companies, but under a bill sponsored by Senator Pat McCarran (Dem., Nev.) - Public Law 532, 82nd Congress, the Statute of Limitations was waived until July 14, 1953. All claims for damages, resulting from Order L-208, must be filed with the Court of Claims on or before that date.

Sixteen gold mining companies and individuals are joined in the present action. They are: Homestake Mining Company, South Dakota; Idaho-Maryland Mines Corporation, California; Central Eureka Mining Company, California; Alaska-Pacific Consolidated Mining Company, Alaska; Oro Fino Consolidated Mines, Inc., California; Bald Mountain Mining Company, Inc., South Dakota; Ace Dredging Company, California; Alabama-California Gold Mining Company, Inc., California; Ashland Mine, Inc., Nevada; Consolidated Chollar Gould and Savage Mining Company, Inc., Nevada; Edgecombe Exploration Company, Inc., Alaska; Ermont Mines, Inc., Montana; F. G. Gibson, California; Golden Eagle Mine, Nevada; Fred and Dora L. Lyman, Arizona; and Paul Nardin, Colorado.

The Homestake Mining Company is presenting the case for this group, but counsel for all other parties are present and will participate in the hearings at their discretion.

Shaw Livermore, an economist with WPB during World War II, was the first witness, testifying as to the materials control procedures and general policies of WPB, prior to the issuance of Order L-208.

Livermore's testimony, to parts of which strenuous objection was made by government counsel but overruled by Commissioner Day, clearly pointed up the fact that WPB was established and empowered solely to issue orders and administer controls directly affecting the manufacture and consumption of critical materials.

The next witness was Dr. Wilbur A. Nelson, who headed the WPB Mining Division at the time L-208 was issued, and administered the order for the Government. Nelson was on the stand for two days and presented testimony, again over strong objection from Government counsel, on the series of events leading up to and following the issuance of L-208. Many photostatic copies of WPB records were introduced in evidence, clearly corroborating Nelson's testimony to the effect that he did everything possible within his advisory position in WPB to prevent the issuance of the Gold Mine Closing Order.

Nelson further pointed out that, rather than a shortage in the supply of critical materials for defense, as stated in Order L-208, the true reason for the order was an erroneous belief by the Labor Division of WPB that over 10,000 gold miners would be released by the closing of the mines, and would gravitate to the copper mining industry. The testimony subsequently revealed that, as a manpower measure, the order was unenforceable and that no attempt was ever made to so enforce it, because no agency of the Government had the right or power to compel the transfer of labor from one industry to another; and it was further revealed by the Records Branch of WPB at a later date -- in pointing out specifically that L-208 was not achieving desirable results -- that not more than one hundred gold miners had gone into nonferrous mines and remained for more than a year.

Additional witnesses during the first week's hearings were Senator Francis Case (Rep., S.D.), former U.S. Senator Chan Gurney of South Dakota, and Guy N. Bjorge, Vice President of Homestake Mining Company.

Senators Case and Gurney were two of several members of Congress who had appeared before WPB in protest against L-208. They offered testimony to show that WPB had had sufficient reason to believe that L-208 could not relieve the manpower shortage in the copper mines, nor that it could appreciably affect the supply of critical materials for defense.

Bjorge testified as to the operation of the Homestake Mine prior to the closing order, and then pointed out that Homestake could have operated at a limited rate for the duration of the war, without experiencing such extensive damage, had their priority privileges simply been cancelled, in lieu of the outright closing order.

It is expected that the present hearings will be completed within two weeks. The evidence received by Commissioner Day will be presented to the Court of Claims later in the year, and the Court's ruling will determine the extent of government liability, if any, resulting from the issuance of L-208. If liability is found to exist, each claimant will then be required to establish the amount of damages.

(From: The American Mining Congress Bulletin Service, February 2, 1953.)

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NO SALE FOR OLD BONES

The market for fossil material, at least as far as most publicly supported museums are concerned, is practically nonexistent. The information comes from Dr. George Gaylord Simpson, Director of the Department of Geology and Paleontology of the American Museum of Natural History. Most museums, it seems, have limited funds for purchasing fossil material and many will not even accept fossils as a gift unless they are collected carefully and complete data are available concerning their occurrence and age.

Scientific-supply houses will buy fossils occasionally, but careful inquiry should be made before going to any great expense of collection. Dr. Simpson suggests that inexperienced collectors who find vertebrate fossils should get in touch with the nearest museum or paleontologist before attempting removal.

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"FREE" GOLD MARKETS

Pick's World Currency Report quoted on bar gold, free market, per fine ounce, as follows:

	Dec. 31	Jan. 31
New York, transit	$37.60	$37.85
Manila	37.80	41.10
Hong Kong	40.50	40.90
Bombay	43.00	47.35
Tangier	37.50	37.80
Beyrouth	37.55	37.90
Paris	39.30	38.95
Buenos Aires	39.75	40.50

(From: E&MJ Metal and Mineral Markets, February 5, 1953.)

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INDUSTRIAL MINERALS DIRECTORY PUBLISHED

A directory of Pacific Northwest industrial minerals producers has just been issued by the Raw Materials Survey, 701 Woodlark Building, Portland. Producers of thirty-three mineral commodities are listed in the Survey's Information Circular No. 8. Territory embraced in the canvass of producers includes British Columbia, Montana, Idaho, Washington, and Oregon. Twenty-one Oregon producers appear in the list which does not include producers of brick and sand and gravel.

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