STATE DEPARTMENT OF GEOLOGY AND MINERAL INDUSTRIES
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STRATEGIC MINING INDUSTRY THREATENED

An important and perhaps disquieting development is taking shape in the domestic mining industry. As the difficulties connected with mining nonferrous metals increase, experienced mining companies are giving more attention to opportunities in the non-metallics field.

Lead and zinc mines are shutting down all over the West and even in the Tri-State field only the very low-cost operations can continue at a profit under present conditions. Operating costs have continually increased since the end of World War II whereas the market price for lead and zinc has weakened to a point that makes mining unprofitable for all except low-cost mines. Foreign mines can produce more cheaply than our own because of lower labor costs, higher grade ore, currency depreciation, and financial assistance by our own government under the Marshall and Point Four programs. Because of these conditions foreign lead-zinc mines are able to operate profitably at a price that makes our mines submarginal. In addition these foreign mines can supply our peacetime needs if not a pound of either metal is produced in the United States.

Copper appears to be in a more favorable position marketwise than lead and zinc. However some experts believe that the price is likely to decline in the not very distant future. The government has contracts with several copper companies to take their production at plus 30 cents a pound. This factor will serve to influence the domestic market price now and during the life of the contracts. All of the major copper companies have low-cost domestic operations but with any substantial decline in the market price any higher cost mines of these companies would be curtailed or shut down. Several of the large copper companies have low-cost foreign operations which could continue to produce to capacity if the world price declines.

Domestic aluminum production has been in an exceptionally favorable position ever since the process for reducing aluminum oxide to metal was invented in this country. The industry has grown tremendously in the last twenty years and more than tripled in the 1940-1950 decade. There has been little competition in world markets because of the favorable competetive position of the domestic industry. Only during the last two or three years has there been any foreign competition for the American industry. Recently Great Britain has bought cheap aluminum from Canada and has been able to compete in fabricated and semi-fabricated materials in this country.

Quicksilver mining in this country is only a small remnant of what it was in World War II. The world quicksilver market is closely controlled by Spanish and Italian producers. Overnight they can reduce the price to a figure that would make all domestic operations unprofitable. This condition places quicksilver mining in the United States on a hand-to-mouth basis with domestic operators unable to plan ahead. Thus the quicksilver mining industry is in an unhealthy, even precarious, position. No forward planning for exploration can be done with assurance without government backing.

As for gold, the plight of the domestic miner is well known. He gets nothing but sympathy from our government and is evidently considered to be expendable. It is devoutly to be hoped that from the standpoint of the general welfare and not merely from that of the gold miner's, the Treasury doesn't take seriously gratuitous advice given by a prominent radio commentator recently to the effect that the Secretary should buy and store uranium as the standard of our money rather than gold. The commentator didn't state how it should be stored - whether as ore, metal, isotopes, or bombs - or indeed how international settlements could be made with it.

Let us turn to nonmetallics and view the characteristics that make them attractive to the frustrated metal miner. Speaking generally, these minerals are low-priced materials and their production is similar to a manufacturing operation. Transportation is a critical factor of cost and they are, with some exceptions, consumed within a rather localized market area. There is little competition from imports or worry over tariffs. To a great extent the deposits may be developed on or near the surface in large deposits so that they are not subject to the vicissitudes and uncertainties of underground metal mining operations. The primary problem usually is one of merchandising and the principal operating requirements are business ability and experience. Price fluctuations are not likely to be violent or abrupt and the producer is much closer to his consuming customer than is the metal miner who is usually dependent on a smelter for his market.

The following statistics show the increase in value of nonmetallics produced in the United States during the decade 1940-1950 and point to the growing interest of large mining companies in the nonmetals group.

Value of Domestic Mineral Production in Millions of Dollars
(U.S. Bureau of Mines Minerals Yearbook)

	Total	Metals	Nonmetals (excl. fuels)	Nonmetals (incl. fuels)	Fuels
1940 . .	5,582.5	1,677.7	824.6	3,904.8	3,080.2
1950 . .	11,855.0	1,351.0	1,823.0	10,504.0	8,681.0

There is danger to national security in the picture as presented. Metals are the backbone of national defense. Some nonmetals such as mica and quartz crystal (strategic quartz crystal is a monopoly of the Brazilian Government) enter directly into national defense needs, but on the whole nonmetals are only indirectly connected to those needs. Excepting aluminum, nonferrous metals production has been on the decline in the past few years and if the trend continues our national defense will be jeopardized. If in the future the increase in production of nonmetals is obtained at the expense of metals production, the condition will be serious even though the figures for total value of mineral production may show a steady increase. We can't fight an all-out war successfully with nonmetals or with metals that must be imported.

F.W.L.

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BABYFOOT CHROME MINE

Exploration at the Babyfoot chromite mine in NW¼ sec. 30, T. 38 S., R. 9 W., Curry County, Oregon, was renewed this summer. Two bodies of chromite, 16 inches and two feet wide respectively, separated by 16 inches of serpentine were exposed in a bulldozer cut. In 1951 and 1952 some exploration was done at this property and some chromite was produced. The chromite stringers occur at the base of a small serpentinized ultrabasic sill and lie parallel to a footwall of argillite and metavolcanic rock striking N. 15° W. and dipping 68° E. They are separated by 16 inches of serpentine. Samples obtained by a Department geologist gave returns as follows:

16-inch body, Cr_2O_3, 45.90% Fe, 10.89%
24-inch body, Cr_2O_3, 52.30 Fe, 10.44

The Babyfoot mine is on the north side of Babyfoot Creek at an approximate elevation of 3600 feet. It is 0.8 mile west of Onion Camp, which is 41 miles southwest of Grants Pass via the Redwood Highway and Josephine Creek road to Days Gulch road over Fiddler Mountain. Ray Wilder, Art Wheeler, Jack Wheeler, and Doug Little of Selma, Oregon, are leasing the property from the Chetco Mining Company.

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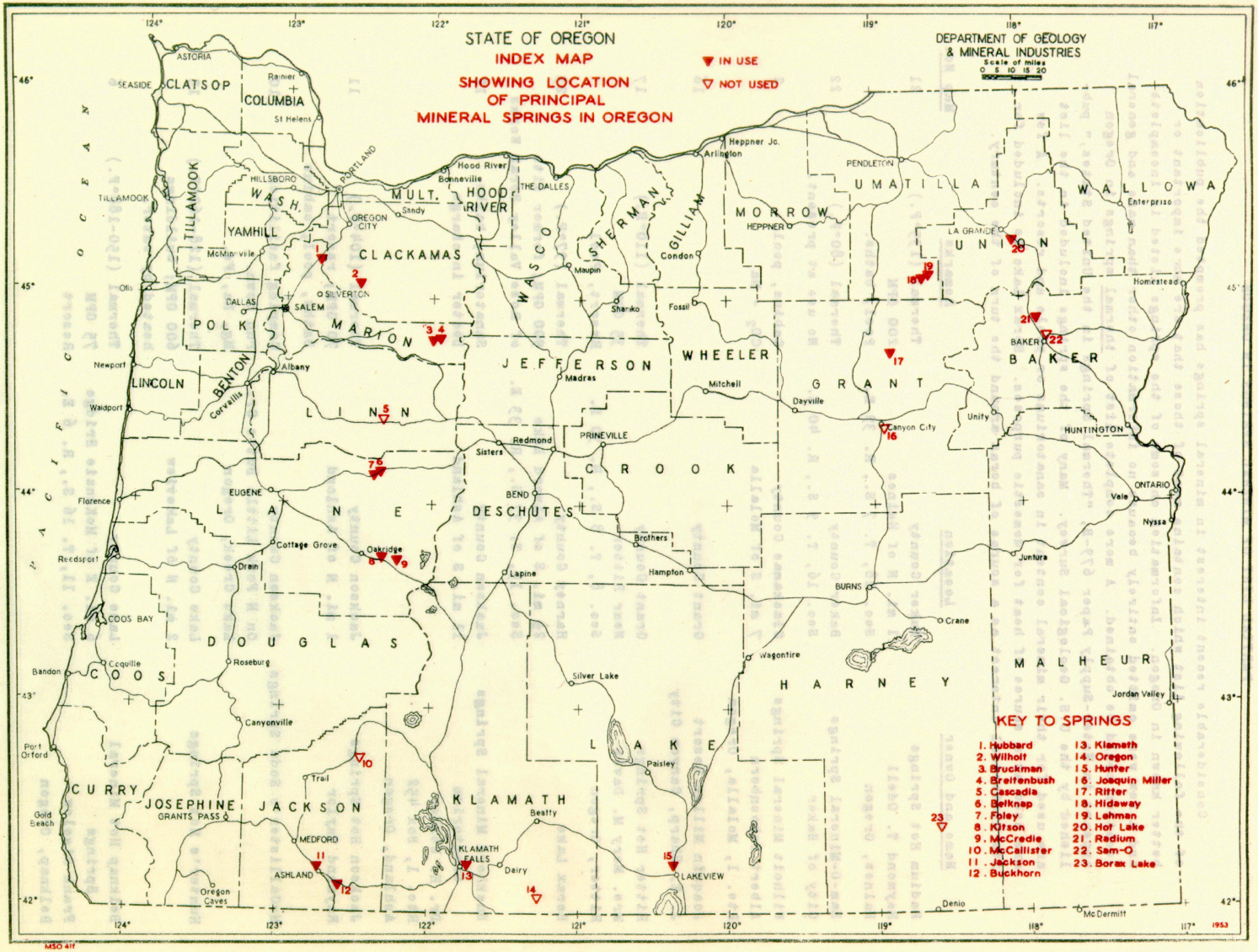
PARTIAL LIST OF MINERAL SPRINGS IN OREGON

Considerable recent interest in mineral springs has prompted the publication of the following list which contains most of those that are more important or better known in Oregon. Information on some of the springs listed is incomplete and a few were omitted entirely because no information other than name and general location could be obtained. A more complete list of thermal springs in Oregon appears in Water-Supply Paper 679-B, "Thermal Springs in the United States," published by the U.S. Geological Survey. Many of the springs included in the list are used for their mineral content in sanatoriums or pools and resorts. A few are used as a source of heat for domestic purposes. Borax Lake is included for its historical interest as a source of borax around the turn of the century.

Name and Owner	Location	Remarks	Map No.
Radium Hot Springs Raymond T. Odell Haines, Oregon	Baker County 1 mi. N of Haines Sec. 28, T. 7 S., R. 39 E.	Thermal (135°F.) 200 GPM Pool, baths.	21
Sam-O-Mineral Springs City of Baker	Baker County Sec. 16, T. 9 S., R. 40 E.	Thermal (80°F.) No use at present.	22
Wilhoit Mineral Springs Albert Schoenborn Rte. 1, Molalla, Oregon	Clackamas County 7 mi. S of Molalla	Cabins, pool CO_2 - Na	2
Joaquin Miller Resort J. E. Sharp, Canyon City	Grant County		16
Ritter Hot Springs Mrs. Mary M. Davis Ritter, Oregon	Grant County Near Ritter Sec. 8, T. 8 S., R. 30 E.	Thermal (110°F.) 35 GPM Resort, Pool	17
Borax Lake	Harney County 2½ mi. S of Alvord Lake Sec. 15, T. 37 S., R. 33 E.	Thermal (97°F.) 900 GPM; former site of Rose Valley Borax Works	23
Buckhorn Mineral Springs Sanatorium Dr. H. Wexler Rte. 1, Box 452 Ashland, Oregon	Jackson County 11 mi. S of Ashland	Sanatorium, baths Doctor in charge	12
Jackson Hot Springs Raymond Taylor	Jackson County 1 mi. N of Ashland	Thermal (104°F.) 70 GPM; resort Baths, pool, cabins	11
McCallister's Soda Springs	Jackson County On N Fork Little Butte Cr. Lake Creek, Oregon	Camping facilities run down. Mg, Na, Fe.	10
Hunter's Hot Springs	Lake County 2 mi. N of Lakeview	Thermal (128-162°F.) 600 GPM; buildings heated by water.	15
Belknap Hot Mineral Springs Frank Bigelow Belknap, Oregon	Lane County 6 mi. E of McKenzie Bridge Sec. 11, T. 16 S., R. 6 E.	Thermal (150-188°F.) 75 GPM Resort	6


STATE OF OREGON
INDEX MAP
SHOWING LOCATION
OF PRINCIPAL
MINERAL SPRINGS IN OREGON
▼ IN USE
▽ NOT USED
DEPARTMENT OF GEOLOGY
& MINERAL INDUSTRIES
Scale of miles
0 5 10 15 20
KEY TO SPRINGS
1. Hubbard
2. Wilhoit
3. Bruckman
4. Breitenbush
5. Cascadia
6. Belknap
7. Foley
8. Kitson
9. McCredie
10. McCallister
11. Jackson
12. Buckhorn
13. Klamath
14. Oregon
15. Hunter
16. Joaquin Miller
17. Ritter
18. Hidaway
19. Lehman
20. Hot Lake
21. Radium
22. Sam-O
23. Borax Lake
OCEAN
PACIFIC
CLATSOP
COLUMBIA
TILLAMOOK
WASH.
MULT.
CLACKAMAS
HOOD RIVER
WASCO
SHERMAN
GILLIAM
MORROW
UMATILLA
WALLOWA
UNION
BAKER
YAMHILL
POLK
MARION
JEFFERSON
WHEELER
GRANT
LINCOLN
BENTON
LINN
CROOK
LANE
DESCHUTES
DOUGLAS
COOS
CURRY
JOSEPHINE
JACKSON
KLAMATH
LAKE
HARNEY
MALHEUR
ASTORIA
SEASIDE
Rainier
St Helens
PORTLAND
Hood River
Bonneville
THE DALLES
Heppner Jc.
Arlington
PENDLETON
HILLSBORO
TILLAMOOK
OREGON CITY
Sandy
McMinnville
Otis
DALLAS
SALEM
SILVERTON
Maupin
Condon
Shaniko
Fossil
HEPPNER
LA GRANDE
Enterprise
Homestead
BAKER
Newport
Albany
Corvallis
Madras
Mitchell
Dayville
Canyon City
Unity
HUNTINGTON
Waldport
Redmond
Sisters
PRINEVILLE
Florence
EUGENE
BEND
ONTARIO
Vale
Nyssa
Cottage Grove
Oakridge
Brothers
Juntura
Reedsport
Drain
Lapine
Hampton
BURNS
COOS BAY
Crane
Roseburg
Wagontire
Bandon
Coquille
Silver Lake
Jordan Valley
Canyonville
Port Orford
Trail
Paisley
Gold Beach
GRANTS PASS
Beatty
MEDFORD
KLAMATH FALLS
Dairy
ASHLAND
LAKEVIEW
Oregon Caves
Denio
McDermitt
124°
123°
122°
121°
120°
119°
118°
117°
46°
45°
44°
43°
42°
1953
MSO 4if

Name and Owner	Location	Remarks	Map No.
Foley's Hot Springs	Lane County 4½ mi. SE of Mckenzie Bridge Sec. 28, T. 16 S., R. 6 E. McKenzie Bridge, Oregon	Thermal (162-174°F.) 25 GPM Resort	7
Kitson Hot Springs Wm. H. Cash Oakridge, Oregon	Lane County 7 mi. SE of Oakridge Sec. 6, T. 22 S., R. 4 E.	Thermal (112°F.) 35 GPM Resort, baths Attendant	8
McCredie Hot Mineral Springs James T. Lackey McCredie Springs	Lane County 11 mi. E of Oakridge Sec. 36, T. 21 S., R. 4 E.	Thermal (hot) 20 GPM Resort	9
Cascadia Mineral Springs Administered by State Highway Dept.	Linn County At Cascadia	Former resort Picnic facilities only	5
Breitenbush Hot Springs E. C. Kennedy Detroit, Oregon	Marion County 12 mi. NE of Detroit Sec. 20, T. 9 E., R. 7 E.	Thermal (140-198°F.) 900 GPM Resort	4
Bruckman's Breitenbush Springs M. D. Bruckman Breitenbush, Oregon	Marion County	Thermal (124-194°F.) Hotel, baths, attendant Pool	3
Hubbard Mineral Springs (Sunrise Mineral Springs Sanatorium) A. C. McCoy, Box 242 Hubbard, Oregon	Marion County	Resort, baths Attendant	1
Klamath Hot Springs Mrs. Blanch Petroff 350½ Martin Street Klamath Falls, Oregon	Klamath County	Thermal (185°F.) 150 GPM Pool, baths Masseurs	13
Oregon Hot Springs Walter Smith Rte. 1, Box 90 Bonanza, Oregon	Klamath County 10 mi. SE of Bonanza Sec. 10, T. 40 S., R. 13 E.	Thermal (148°F.) 35 GPM Sanatorium (not in operation - 1953)	14
Hidaway Springs	Umatilla County 7 mi. SW of Lehman Hot Spring Sec. 16, T. 5 S., R. 33 E.	Thermal (hot) Private	18
Lehman Hot Springs Resort J. Vandelaar Ukiah, Oregon	Umatilla County 50 Mi. S. of Pendleton Sec. 1, T. 5 S., R. 33 E.	Thermal (scalding) 75 GPM Resort, pool	19
Hot Lake Sanatorium and Resort Dr. A. J. Roth LaGrande, Oregon	Union County 10 mi. SE of LaGrande T. 4 S., R. 39 E.	Thermal (180°F.) Bathing	20

R.S.M.

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WAR EAGLE QUICKSILVER MINE

James H. Holtzclaw, Jesse A. Holtzclaw, and S. A. Edwards are cleaning out the lower tunnel on the War Eagle Claim and plan to do further exploration as mining equipment is obtained. A small retort consisting of three 1-foot by 8-foot tubes and smaller condenser pipes has been built and a small amount of mercury has been produced.

The War Eagle claim is located in the NE¼ sec. 17, T. 34 S., R. 2 W., Jackson County, on the south side of Mill Hollow approximately 1 mile west of Evans Creek road. This mine was first discovered in 1916 and quicksilver has been produced at various times since. The ore in the workings occurs in a fault zone that cuts through the Applegate (May Creek) schists with a strike of N. 70° W. and dips 75° NE to vertical. The fault zone contains brecciated chalcedony and schist fragments cemented by marcasite. Cinnabar occurs in the matrix of the breccia and in the clay gouge.

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CANADIAN JOHNS-MANVILLE COMPANY

The Canadian Johns-Manville Company has optioned some claims on Josephine Creek between Days Gulch and Fiddler Gulch in sec. 36, T. 38 S., R. 9 W., Josephine County, and began exploration in September of a chrysotile asbestos occurrence. These claims are owned by George C. Foster, Box 152, Kerby, Oregon. Several diamond-drill test holes are planned. The Medford Drilling Company, owned by Ray Hageman, Medford, is drilling the test holes; John Gill is the geologist supervising the exploration.

The claims containing asbestos were originally part of the old Bear or Dixie placer mine. Foster discovered asbestos on one claim in a tunnel dug along the contact of moderately indurated Quaternary gravels with the underlying serpentine. The purpose of the tunnel was to mine gold which is usually concentrated at the base of the gravels. Chrysotile veins were first observed 70 feet from the portal. A zone approximately 6 feet wide containing asbestos veins with various attitudes is exposed in the face of the 147-foot tunnel.

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NOONDAY (THOMPSON) MINE

Earle N. Young, 514 N.W. 2nd Street, Grants Pass, Oregon, has shipped some copper concentrates to the American Smelting and Refining Company smelter at Tacoma, Washington. Approximately 23 tons of ore from the Noonday (Thompson) mine produced 6350 pounds of concentrates. The ore was concentrated in the mill at the Homa mine two miles southeast of Rogue River and was bagged and shipped by auto freight to Tacoma. The Noonday mine is located in sec. 10, T. 32 S., R. 10 W., Coos County, Oregon, on the west fork of Cow Creek. Young and two partners of Garibaldi, Oregon, are the owners. Young plans to do more work at the mine in the Spring of 1954.

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EASTERN OREGON MINING NEWS

Crushing facilities of the Harney Concrete and Tile Company of Burns are being moved from the company's pumice pits to a new location on a rail siding in Burns to facilitate aggregate shipments. Some improvements are being built into the plant as a result of the move. Mr. Robbins, the owner, reports that production from the company's pits included a large yardage of pit run material during the past season. This special pit run production was made for the Hines Lumber Company and was used as ballast on their railroad bed. Some was also spread in test strips on the logging company's trucking roads.

The Harney Concrete and Tile Company originally produced a block aggregate for use in its own block plant in Burns but has since expanded to make aggregate shipments to other block manufacturers in Eastern Oregon and Idaho.

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Burt Hayes is milling his fifth and final shipment of chrome ore for the current season in his new mill on Dog Creek, near John Day, Grant County. This mill, the construction of which is still unfinished, was rushed into shape during the summer to handle newly developed ore from the old Haggard and New mine. Concentration ratio is approximately 2 to 1 to give a concentrate carrying around 47 percent Cr_2O_3 with a 2.8 to 1 chrome-iron ratio. Nearly 200 tons will have been milled when the current stockpile is depleted. Enough ore is reportedly in sight in the mine to operate the mill throughout most of the 1954 season.

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Thirty tons of John Day chrome ore - 15 tons from the Chambers mine and 15 from the Iron King - are to be used in a test run of ferro chrome in the U.S. Bureau of Mines laboratory, Albany, Oregon. The ore was donated by Mr. Clint Haight, Jr., owner of the properties, and was trucked to a temporary storage place in Canyon City by John Day Chamber of Commerce. Mr. Hundhausen of the Bureau of Mines supervised the sampling and loading of the ore which will be shipped from Canyon City to Albany.

Arrangements for this test were first made at a meeting sponsored by the John Day Chamber of Commerce last July and attended by representatives of the U.S. Bureau of Mines, the U.S. Geological Survey, and the Oregon Department of Geology and Mineral Industries.

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Incorporation has recently been completed for the John Day Mining Company organized by Mr. F. A. Neuman and Associates of John Day. Mr. Neuman holds a lease on the Dry Camp chromite property and is mining from the upper pit. Arrangements have been made to process the ore in the mill owned by the Tri-County Mining Company. Ore from the lower pit on the Dry Camp property was mined on a sub-lease basis by the Zanetti Brothers of Wallace, Idaho, during the past summer. This ore was milled in the Tri-County mill under an operating agreement with that company. The John Day Mining Company is planning to operate throughout the winter if possible.

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Discovery of a new vein was recently made on the hill directly above the old Standard workings on Dixie Creek, Grant County, Oregon. Values are in copper and gold. A 17-ton test shipment to the Tacoma smelter was made on the strength of initial assays and an access road is being rushed to completion in order that development can be carried on throughout the winter. The work is being done by Ray Summers of Canyon City, Oregon. Plans are to continue exploration by drifting.

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ORE.-BIN PRICE ADVANCED

Beginning January 1, 1954, subscription to the Ore.-Bin will be raised from 40 cents to 50 cents a year because of increased costs. Only one-year subscriptions will be accepted.

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ATTORNEY GENERAL RULES THAT STATE MUST RESERVE MINERALS

Mineral rights to federal lands ceded to the State of Arizona by a Congressional Act of 1925 must be reserved to the state upon sale to private ownership. So ruled Ross F. Jones, attorney general, in an opinion given W. W. Lane, state land commissioner.

The act of 1925 granted federal land to the state for the purpose of supporting common and public schools. Failure to provide reservation of the minerals, said the opinion, could result in forfeiture of the lands to the federal government.

However, the attorney general said, a different situation exists with regard to lands granted the state under the enabling act. Mineral rights in such lands pass with the land to the buyer and may not be reserved. (From Pay Dirt, Phoenix, Arizona, November 20, 1953.)

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GOLD PRODUCTION

The U.S. Bureau of Mines and American Bureau of Metal Statistics report total world gold production in 1952 as 34,200,000 fine ounces. Included in the total were the following most important producers (with production in fine ounces): the United States including Alaska, 1,927,000; Canada, 4,419,570; Mexico, 459,370; USSR (estimate), 9,500,000; Philippines, 469,408; Union of South Africa, 11,818,681; Gold Coast, 715,036; Belgian Congo, 368,769; Southern Rhodesia, 496,731; and Commonwealth of Australia, 980,435.

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CHROMITE

According to the U.S. Bureau of Mines, consumption of chromite in August 1953 reached a record high. The consumption was 130,520 short tons which, for metallurgical grade, represented a 15-percent gain compared to July and was 3 percent above the former record set in May 1953. Refractory and chemical grades climbed 19 percent and 4 percent respectively.

During August, Montana entered the production picture. California, Montana, and Oregon shipped 5,066 short tons as compared with 3,771 short tons in July. Domestic shipments for 1951, 1952, and 1953 to August 1 were 7,056; 21,304; and 18,617 short tons respectively.

Imports of chromite during august totaled 207,471 short tons. Metallurgical grade comprised 63 percent of this total and came from Turkey (42 percent), Southern Rhodesia (17 percent), Union of South Africa (16 percent), Philippines (9 percent), Yugoslavia (4 percent), Pakistan (4 percent), Cuba (3 percent), Sierra Leone (3 percent), New Caledonia and Iran, the remaining 2 percent. Refractory chromite was shipped by the Philippines (86 percent), Cuba (6 percent), India (4 percent), Union of South Africa and Southern Rhodesia, the remaining 4 percent. All chemical grade chromite was shipped by the Union of South Africa.

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U.S. DEPLETES MINERAL RESOURCES SAYS WORMSER

Felix Wormser, Assistant Secretary of the Interior for Mineral Resources, outlined for the Conference of Chemical Economics the important relationship of the mineral and chemical industries.

Mr. Wormser told the conference, held at the Shoreham Hotel in Washington, D.C., that "we have been using up our great store of mineral wealth much faster than any other world power" and that there has been a ". . .shift in the position of the U.S. from self-sufficiency to substantial dependence on imports."

Mr. Wormser said that "the mineral industries supply essential raw materials (and many materials of construction) for the chemical industries. At the same time chemistry is vital in the conversion of mineral raw materials into useful products and chemical engineering is becoming increasingly important in mineral production. Thus we have a mutual interest that makes meetings of this kind worthwhile and I am especially pleased to have this opportunity to discuss our field of work with you.

"Sometimes we are apt to take mineral supply for granted and to assume that because mineral raw materials have been available abundantly in the past, especially in times of peace, we need not be concerned about the future. As a consequence, we have allowed matters to drift and now find ourselves facing an uncertain future in world affairs with many serious problems related to mineral supply still unsolved.

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"Time does not permit an exhaustive analysis of the reasons for the shift in the position of the U.S. from self-sufficiency to substantial dependence on imports in some commodities, but I believe it is fair to say that one of the principal causes is that the national policies over the past 20 years have created a discouraging outlook for the profitable investment of capital in the exploration and development of mineral resources. As a consequence, these essential preliminary steps in maintaining a healthy domestic mineral economy have not been taken, and our ability to expand output has been affected adversely. . ." (E&MJ Metal and Mineral Markets,11/19/53)