

OUTLOOK FOR GROWTH AND EXPANSION OF
THE IDAHO MINING INDUSTRY

by

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In just 35 years, the United States will likely have expanded its rate of consumption of mineral commodities threefold. In view of this, we cannot afford an "ailing" mineral industry now or in the future, particularly as our entire economy and standard of living are based solidly on mineral commodities. It is a pleasure to report that this research into the current status of the mining industry finds the "patient" healthy and growing. For the sake of the country, we can be glad that this is so, but we must take care to maintain this status in the future.

Statistics are generally to be avoided, but a few pertinent ones cannot be avoided here. Mineral production in Idaho in 1964 had a total value of about \$85.9 million, up four percent from 1963.

Higher metal prices account for most of the increase; production remained about the same. Silver, lead, and zinc provided about 66 percent of the total. Other commodities remained at about the same production levels; phosphate production, however, increased about 19 percent from 1963. These rises augur well for the future.

We may well begin our discussions by considering the Coeur d' Alene district, an historically important producer of lead, zinc and silver. First, a few words about metal prices. Based on talks presented on April 29, 1965, at the joint sessions of the Lead Industries Association and the American Zinc Institute, it appears that lead and zinc prices will remain firm for the foreseeable future. Consumption appears to be rising at a somewhat greater rate than in the past, and rising production should keep pace. Research is resulting in improved and partly new uses for both metals. One rather unusual application of zinc is worthy of special comment. Soluble zinc compounds have great value as fertilizers; this application alone will likely require substantial quantities of zinc in the future.

The \$1.29 price for silver has resulted in considerable increases in silver production. In spite of uncertainties in the future price pattern of silver caused by questions of national monetary policy that remain unresolved at this writing, the future industrial consumption rates alone may be higher than production. This makes a promising future for the silver producers of the Coeur d' Alene district.

The past year has witnessed great activity in the Coeur d' Alene district. The Bunker Hill Company sank an auxiliary shaft and continued work on the Bunker Hill-Crescent crosscut to join the main shafts in the two mines by a 17,000-ft. crosscut 400 ft. below sealevel. Deepening of the Crescent shaft was continued, and the Alhambra vein was opened on the 3,300 level. In April, 1965, 500 ft. of ore was exposed, assaying 75 to 100 ounces of silver per ton over a mineable width of about 5 ft. Further, Bunker Hill announced the beginning of construction on a new ammonium phosphate fertilizer plant in a joint venture with Stauffer Chemical Company.

Hecla Mining Company is continuing current projects and reports that the deeper-level development at the Silver Summit mine is of considerable interest. The winze was extended from the 3400 level to the 4000 level in 1964, and development work is now in progress on the 3600, 3800, and 4000 levels. The drift development to date on the 3600 level has shown considerable promise, and deeper work will add substantially to the Silver Summit mine reserves.

Sunshine Mining Company has been carrying on active development on the 4600 level. In April of this year, the work revealed the existence of a large body of rich ore. In early May, Sunshine Mining Company and the Bunker Hill Company announced that a plan for joint exploration in the west silver belt was under study.

The long-term lease recently negotiated between Asarco and Coeur d' Alene Mines Corporation began to bear fruit as Asarco announced plans in May to push work on the Coeur shaft as rapidly as possible to carry out the \$5 million exploration agreement. Day

Mines announced plans for several major exploration ventures in the Coeur d' Alene district. The Galena mine of Asarco continued major underground exploration and development.

With the opening of new ore bodies and the opening of a number of new exploration programs, the future for the Coeur d' Alene district looks very bright. Increased activity in metal-oriented mining and exploration in other parts of the state seems to reflect the same bright future. Clayton Silver Mines announced the discovery of a new vein that adds substantially to ore reserves of the Clayton mine. Pend Oreille Mines and Metals Co. announced its highest sales volume yet. Federal Resources Company continued successful operation of their properties in the Hailey region. Dow Chemical Corporation holds substantial leases in the thorium area in Lemhi County near Salmon, and plans to continue studies on the properties. Drilling exploration was reported to be in progress during the past year at the Peacock property and IXL mine in the Seven Devils region. With a rise in the price of mercury, operators of small mercury mines in the state are renewing mining activity. Perhaps the major dark spot in the current picture is in gold; the industry in Idaho remains in the doldrums.

Exploration activity appears to be at a high level. Sidney Mining Company has acquired a large group of claims in a virtually unexplored part of the Silver City area and plans to explore it further this summer. American Metal Climax, Inc., is planning some geological investigations in Idaho during 1965. Federal Resources Corporation has an active exploration program going in the southern

Idaho area. These are just a few items that have come to my direct attention.

The general picture in the non-metallics industries is quite as bright as that in the metallic industries. Phosphate of course remains the leader in the non-metallics field. And in the phosphate industry, we come first naturally to discuss the Simplot Company operations, which continue to expand with the expansion of the industry as a whole.

Simplot Company recently completed a multi-million dollar expansion program at the Minerals and Chemical Division's fertilizer plant west of Pocatello. Then in February of this year, the company announced a new \$9 million expansion program. Construction is starting on a new beneficiation plant at Conda which will be twice the size of the present plant, with plans to expand it as required. Several million dollars of additional manufacturing facilities for phosphate and ammonium fertilizers are being added to the Pocatello plant. When this expansion program is completed, the Pocatello complex will have a daily manufacturing capacity of 4,000 tons of chemicals and fertilizers. Noteworthy also is the completion last fall of a 150 ton-per-day anhydrous ammonia plant at the Pocatello complex.

Monsanto Company, another important operator in the Idaho phosphate industry, is in the process of enlarging three-fold the elemental phosphorous producing capacity of its Soda Springs plant. Two new electric furnaces are being added to the two already in operation at the plant. The total expansion plans call for the

expenditure of several million dollars. Most elemental phosphorous is used to produce phosphoric acid, a building block in many chemical compounds including industrial and food phosphates, agricultural chemicals, and detergents.

Other important elements of the Idaho phosphate industry merit discussion. El Paso Natural Gas Co. is constructing a phosphate fertilizer manufacturing plant at Conda to be in production in 1965. Food Machinery Corporation is increasing the capacity of its elemental phosphorus plant west of Pocatello. Kerr McGee have recently constructed a plant at Soda Springs that is recovering vanadium from the by-product ferrophosphorus produced in the electric furnaces.

Production of other non-metallic materials remains high. Important here are sand and gravel, lime, clay, garnet, and perlite. Noteworthy is the acquisition of leases by Sunshine Mining Company on large deposits of kyanite east of Kooskia, in Idaho County. Simplot Company and A. P. Green Company are both carrying on operations in clay deposits in Latah County. Anaconda Company did considerable work exploring the aluminum potential of the Latah County clays, but has lately withdrawn from the work. Generally speaking, we may expect to see substantial growth in non-metallics in the future.

Bright as the outlook for growth and expansion of the mining industry is, there are nevertheless cloudy spots in view. Such "spots" have to be evaluated; failure to do so would be incautious at best. These are times of increasing federal control; increasing federal control carries with it the element of growing restriction

on the mining industry. Such restriction tends to reduce efficiency of operation.

I see two major elements in growing governmental control that bode ill for the mining industry: 1) removal of public lands from entry for prospecting and mining, and 2) burgeoning regulations written by the agencies administering the public lands. The first of these has to do with the wilderness concept, wilderness areas, and the general growth of recreation activities in this country.

The Congress has enacted wilderness legislation establishing, in Idaho, the Selway-Bitterroot Wilderness Area, covering about 1.5 million acres. The legislation sets a 19-year limit on mineral exploration and entry for mining purposes within the wilderness. Very restrictive regulations surround such exploration and mining work; for instance, motorized vehicles may not be operated in the wilderness. Neither can they be operated in the primitive areas, which, in Idaho, cover nearly another 1.5 million acres. Thus, we are down to foot and horseback exploration--in the jet age.

The wilderness and primitive areas cover large parts of our least-explored country. Their mineral potential for the most part is unknown. While it is true that we are going to be able to carry out mineral potential evaluations, it is also true that we are going to have to do it in about the most expensive way possible. I leave you to draw your own conclusions as to the general advisability of such procedures and policies in a nation which bases its high standard of living on mineral resources and is indeed using them at ever-increasing rates. I suspect that it is not in

the long-term interest of the nation to make the discovery and extraction of even a part of its mineral resources extraordinarily difficult and costly.

In a different direction, I cannot refrain from a passing comment on wilderness areas generally. Wilderness areas are supposed to preserve wilderness values, in part for the recreational enjoyment of people. As it works out, the manner of preservation makes these areas inaccessible to all except a very few privileged persons. I wonder if this is really the desire of the populace. A few years ago, I prepared a geologic map of the Sawtooth Primitive Area and environs, covering some 700 square miles. I saw three people back in the mountains during one whole summer. During the same period, thousands of people registered at Redfish Lake, at the end of the road. In view of such considerations, wilderness seems unduly expensive if I view it as a taxpayer.

Now under consideration in the Congress is a Wild Rivers bill. This bill has the potential to enlarge substantially the areas covered by and administered under wilderness concepts. The wording in the measure seems rather vague in critical places. It appears that a Wild River area might include everything clear back to the watershed under the phrase "related land areas". Further, although the bill states that mining and certain other activities may be carried on, there is the further proviso that these activities must not be incompatible with wilderness values. I view it as possible, if not likely, that under this wording, administrative rules would be written that would make it at least as difficult

as it is in the present wilderness and primitive areas, if not moreso, to carry on mineral exploration and mining operations. Particularly in the Salmon River and the Clearwater River areas, large acreages of land exist about which little is known of the mineral potential.

The Wild River legislation should be so constructed that mining and other important commercial and recreational activity can be carried on under as near multiple-use concepts and as near to policies on other public lands as possible. This must not be construed as a special-interest plea for the mining industry. Rather, it is a plea for the nation to reaffirm its former understanding, in its own long-term interest, of the importance to its well-being of an abundant, continuing supply of mineral commodities which can be supplied only by a healthy mining industry.

It appears necessary to emphasize at this point that everything said about general inaccessibility of the wilderness areas to recreational activity will apply in equal force to the wild rivers. I hold that wilderness areas should be kept small and put in places where important economic resources do not exist. There they can fulfill their preservational, laboratory, and limited recreational functions, and remaining areas can be administered under liberal multiple-use policies.

The second major element of governmental control is that of evermore restrictive regulations promulgated by the various agencies administering the public lands. Exploration, location, patent, and mining activities have become far more difficult to carry on than

they were in the past. It is to be hoped that the Public Lands Review Commission will help bring about a return to the more sensible conditions of the past. Surely the intent of the Congress in passing the various statutes relating to use of the public lands was to promote, not restrict, mining operations, for one example. Space does not permit further exploration of this topic, yet its importance cannot be overemphasized.

Important to any industry are the research and service efforts of various organizations--private, state, and federal. On the state level in Idaho, the Idaho Bureau of Mines and Geology provides research and service--to the whole state and thereby to the mining industry. As a matter of public policy it appears desirable that the ratio of agency financing to production value for each industry should be reasonably uniform. Viewed in this manner, the Idaho Bureau of Mines and Geology has been seriously underfinanced for many years and has therefore not been providing the necessary level of research and service needed by the state and by industry. Efforts are underway to rectify this situation, and significant progress is being made.

The principal duty of the Idaho Bureau of Mines and Geology is to promote the orderly, efficient, and complete development of Idaho's mineral resources, including ground water. Under this function, the Bureau will begin this summer a geological, geochemical, and geophysical survey of the Selway-Bitterroot Wilderness Area in Idaho. This survey became necessary upon the passage of the wilderness legislation, in which a 19-year limit was placed for evaluation

of mineral potential and entry for mining purposes. Although the U.S. Geological Survey has legal responsibility for this work, it also has to do comparable work in the primitive areas before 10 years have passed. After 10 years, it has to report to the Congress on the mineral potential of the primitive areas before they are put under wilderness classification. Because of this work and because of limitations of funds and staff, the U. S. Geological Survey will not be able to complete the evaluation of wilderness areas until 20 years have passed. Clearly, it is imperative that the wilderness areas be studied early so that any important mineral deposits can be studied by industry before the lapse of the 19-year period. The state legislature, in a very far-sighted action, appropriated \$60,000 for the next biennium so that the Idaho Bureau of Mines and Geology can begin the evaluation. The total program will require nine years and will cost more than \$250,000.

Apart from its action on the wilderness exploration program, the legislature also increased the main operating budget of the Bureau, permitting a partial realization of the goal set out earlier. This action provides a modest expansion of the Bureau staff and of its various activities. More work is planned in mineral resource studies and in ground water. General or detailed suggestions with regard to the Bureau work are solicited and are always welcome. The more ideas we can gather, the better level of service we can provide.

In summary, I find a healthy, growing mining industry. Care needs to be taken that governmental controls not become too

restrictive. Services provided by the Idaho Bureau of Mines and Geology are growing in a modest way. On the whole, the outlook for the future is very encouraging.