

Copper
Copper King
MR54-2

Application For Loan
under
The Defense Production Act

Containing information requested in
bulletin issued by Regional Director.
Bureau of Mines, Region IV, Denver,
Colorado.

Answers To Questions

Question #1. The Copper King Mine.

Located in the Silver Crown Mining District.
Sections 25 & 36, Twn. 14N, R 70 W. Laramie
County, Wyoming

There is no present operating company.

The Copper King Mine and adjacent areas are
held by long term lease by Mr. Harry Ferguson,
Box 621, Cheyenne, Wyoming, and Patrick W.
Dinneen, 3716 Warren Avenue, Cheyenne, Wyoming.

Associated are the following:

Mr. J.H. Rodgers, Boulder, Colorado

Mr. C. R. Boyle, Boulder, Colorado.

#2. There are no records of past production.

The mine was located first in 1883. A shaft
130' deep was sunk on the main mineralized zone.
Drifts were driven on the 80' and 130' levels
from this shaft amounting to about 300' in all.
Tunnels were driven into the hill at various
points within a one mile radius of the shaft,
the total amount of tunnel work being about
800'. It is assumed that all of this work was
done looking for high grade ore; it is the pres-
ence of copper showings in all of these scattered
workings that has caused the above group to be
interested in the property.

Question #3 A loan is requested to do the following work.

- A. Diamond Drilling of the known mineralized structures.
 - B. Depending on the results of "A", a further loan will be requested to develop ore and provide a mill.
1. Estimated cost of the proposed diamond drilling is, including logging of cores and assaying, \$80,000.00.
 - a. The planned drilling totals approximately 16,000 ft.
 - b. Estimated contract cost is \$4.25 per foot.
 2. Estimated cost of developing ore, including equipment is \$448,000.00.
 3. Estimated cost of mill ready for operation, including water supply, is \$1,000,000.00.
- #4. a. Maps are attached.
- b. No equipment is available or owned by the group. Electric power, Public Service Co., is available within one mile of the property.
 - c. Equipment required depends on the results of the exploratory work. In the mind of the writer a 1000 ton per day operation may become feasible. Should this be the case, complete equipment for both the mine and the mill will be required.

Question #3. Continued.

Part d. There are no employees at present.

- e. It is assumed that the diamond drilling can be done under the supervision of the U.S. Geological Survey or The Bureau of Mines and that contracts may be let to the major drilling companies. In the event of an operation a complete crew will have to be found. The writer believes that men can be found locally.
- f. The ore will be milled on the property in a company owned mill. The milling process will be a simple bulk flotation of chalcopyrite with a probable concentration ratio of 30 into 1. Concentrates will be shipped to a Utah Smelter. The mill will be built in the best place suitable to the entire operation. There are several good millsites in the immediate vicinity of the present shaft. Some water is available in Crow Creek within 1 mile of the mine. Additional water can be developed in tertiary sandstone beds 1500' E of the mine.
- g. The planned operation is to mill 1000 tons per day.

Estimated production is:

Copper	11,000 lbs. per day.
Gold	60 ozs. per day.
Silver	100 ozs. per day.

Question #3 Continued.

Part h. Time required for above work.

Diamond Drilling: Time required for completion will depend upon the number of machines placed on the job. An average of 25' per shift per machine may be used as a basis. The weather permits year round work.

Nine months to twelve months is the estimated time required to place a 1000 ton plant in operation; together with enough ore developed to assure continuous operation.

- i. The mine is accessible at all times of the year. It is located 22 miles west of Cheyenne, Wyoming and is within one mile of a good county road.
- j. The minimum grade of ore expected to be shown by the diamond drilling is:

Copper	0.60% per ton.
Gold	0.06% per ton, by ozs.
Silver	0.10 ozs. per ton.

If copper were 25¢ per pound for a period of five years of operation, the writer believes that the investment can be returned and a profit realized.

Question #4

Ore Reserves:

- A. Measured Ore. There is no measured ore.
- B. Indicated ore. The indicated ore is considered to be in a zone approximately 200' wide by 400' long. See map "A". This area will provide over 600,000 tons per 100' in depth. This ore is indicated by diamond drill holes and by sampling on the 80' and 130' levels.

Question #4. Continued.

Part B. Indicated Ore. Continued.

(See attached drill logs and the copy of the Report on the Arizona Mine, (correct name is Copper King) by C.E. Jamison, 1912)

It is believed by the writers that a higher average grade for the whole structure will result from new drilling pointed mainly across the structure instead of vertically in the structure as are the present holes. A portion of the recommended drilling is in the area of the present holes.

- C. Inferred Ore. No figures can be given as to grade and tonnage of inferred ore. On map "B" are shown additional structures of geologic character similar to the indicated ore zone and in which we have seen definite showings of copper, i.e. Chalcopyrite, Bornite and Malachite. The size and value of these structures can only be determined by diamond drilling and a portion of the planned drilling is intended to explore these structures. It will be noted that these structures extend East and West for over 2000', it is believed that some portion of this may be mineralized to the same extent in size and grade as the indicated ore zone.

Question #5. Reports are attached.

Question #6. Of the above mentioned group, two members have had mining experience.

Question #6. Continued.

Mr. J.H. Rodgers is a Mining Geologist. His experience includes the favorable development of large tonnage mines in North America and management of mines in Mexico.

Mr. C.R. Boyle has been active in the mining industry for 20 years. He is a licensed engineer in the State of Colorado. His experience includes engineering work, successful operation of mines and mills and examination of mining properties.

#7. All data are included.

#8. Several companies, among them A. S. & R., Kennecott Copper Co., and New Jersey Zinc have examined the property in the last 12 years. They have evidently felt that the ore is too marginal in grade, although most of them have expressed some regard for the mineralization.

Submitted by C.R. Boyle
(copy)
Licensed Mining Engineer

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