

321

Item 6

FEDERAL EMERGENCY ADMINISTRATION OF PUBLIC WORKS
SUMMARY REPORT ON LOAN APPLICATION

Docket No. _____

State Nevada

Applicant Consolidated Coppermines Corporation

Classification (municipality, private corporation, etc.) Private Corporation

Applicant's representative (name and address) J. B. Haffner, General Manager,
Consolidated Coppermines Corporation, Kimberly, White Pine County, Nev.

Population of community, 1910 210 1920 459 1930 1007

Loan requested \$7,000,000 Loan recommended \$7,000,000

Grant requested None Grant recommended None

Type of security First mortgage on all assets of applicant corporation.

Terms of loan 20 years with permission to extend to 30 years

Type of project Ore concentrating plant and smelter

Project location Kimberly, White Pine County, Nevada

Description of project Concentrator, smelter, power plant, water and
transportation systems, lime quarry, town improvements and additions.

Total estimated cost \$6,984,236.53

Detailed estimated cost (see sheet 2).

Estimated cost of material \$4,486,916.39 Labor \$1,934,749.14

Work can commence at once and finish in about 18 months

Estimated number of men to be employed 860 for 18 months

Conditions, if approved—or Reasons for disapproval (see sheet 3).

Additional comments (see sheet 4).

Application approved or disapproved (insert applicable word in space at left and sign at right):

Approved: by R. H. Haffner State Engineer.

Approved by J. B. Haffner, Chairman State Advisory Board.

by _____ Preliminary Examining Board.

by _____ Director of Legal Division.

by _____ Director of Financial Division.

by _____ Director of Engineering Division.

by _____ Director of Housing Division.

by _____ Technical Board of Review.

by _____ Deputy Administrator.

by _____ Administrator.

DATE April 19, 1934

SUMMARY REPORT ON LOAN APPLICATION—Sheet 2

DOCKET No. _____

ESTIMATED COST OF PROJECT

The following are the estimated costs of the project:

Land, rights of way, and easements.....	None
Construction (subdivide into principal sections or classes of work).	
Labor.....	\$1,197,749.14
Material.....	3,579,916.39
	\$4,777,665.53
Engineering.....	190,959.00
Legal, administration, and other overhead charges.....	221,612.00
Interest during construction.....	150,000.00
Other items (list).....	
Additional Mine Equipment.....	360,000.00
Repair Parts.....	170,000.00
Working Capital.....	1,114,000.00
Total cost.....	\$6,984,236.53
To be furnished by applicant.....	0
Net amount of loan (including grant).....	\$7,000,000.00

The cost of labor and materials will be approximately..... \$4,777,665.53

NOTE.—If the estimated cost of project exceeds the amount of the loan, the source of additional funds and the allocation thereof to the project should be explained.

DATE April 19, 1934**SUMMARY REPORT ON LOAN APPLICATION—Sheets 3 and 4**

Note.—Sheets number 3 and 4 will in all cases be prepared in typewriting to suit the particular case. This printed form is prepared merely to show the form of standard conditions and the form in which this portion of the report will be prepared.

DOCKET No. _____

CONDITIONS

The above-described loan is made subject to the following conditions:

STANDARD CONDITIONS:

1. The applicant shall enter into a contract with the Administrator, satisfactory to Counsel for the Administration, providing for the sale of bonds or other obligations of the applicant to the United States and embodying in detail the terms of the loan, subject to the approval of the engineering, legal, and financial advisers of the Administration.
2. Such contract shall comply with the provisions of title II of the National Industrial Recovery Act and with all rules and regulations prescribed by the President and by the Administrator for the administration of such Act.

(The above standard conditions, applying to all loans, should be followed by such special conditions as may be necessary.)

SPECIAL CONDITIONS:

3.

NO SPECIAL CONSIDERATION

4.

Etc.

or

REASONS FOR DISAPPROVAL

FEDERAL EMERGENCY ADMINISTRATION OF PUBLIC WORKS

STATE OF NEVADA DIVISION

Engineer's Reference No. Rev. P.P. 22
Application Received Dec. 22, 1933
Date of Report April 12, 1934
Docket No. _____

I. APPLICANT

Corporate name and address:

The exact corporate title of the applicant is
"Consolidated Coppermines Corporation". Address:
180 Broadway, New York City; mine office, Kimberly,
White Pine County, Nevada.

Classification:

Private Corporation.

Correspondent:

J. B. Haffner, General Manager,
Consolidated Coppermines
Corporation, Kimberly, White
Pine County, Nevada.

Applicant's Attorneys:

George B. Thatcher, Reno
National Bank Building,
Reno, Nevada; and
Joseph B. Cotton, 225 Broadway,
New York City, General Counsel.

Applicant's Engineer:

J. B. Haffner, General Manager,
Consolidated Coppermines
Corporation, Kimberly, White
Pine County, Nevada.

The Population of Kimberly, White Pine County, Nevada:

<u>1910</u>	<u>1920</u>	<u>1930</u>	<u>1934</u>
210	459	1007	160 (est.)

II. LOAN REQUESTED

\$7,000,000, for which the revised application offers as security by first mortgage:

- (1) The plant built with the proceeds of the loan.**
- (2) The site of such plant.**
- (3) The mining claims, situated in the Robinson Mining District, White Pine County, Nevada, containing the estimated 35,000,000 tons of merchantable ore to be mined therefrom and treated in said plant.**

I am assured, however, by the corporation's president, that the entire properties of the applicant in White Pine County will be pledged as security if the Government so requests. This will consist of:

(a) All buildings, dwellings, and property of any and all kinds owned by applicant in the Town of Kimberly, White Pine County, Nevada, including land on which said town is located.

(b) All and every mining claim, land and property, real estate and improvements, including all movable and fixed machinery, power plants, hoisting plants and other equipment thereon.

Period of loan 20 years, with permission to extend to 30 years.

III. LOAN RECOMMENDED

\$7,000,000, without grant.

Grant: As this is a private project, it is not eligible for a grant.

Type of obligation:

Contract to pay twenty cents (20¢) per ton on all ore taken from the applicant's mines, as extracted and treated, until all of the principal shall have been paid. The term of the loan will be twenty (20) years, with the privilege of extension for an additional ten years if the estimated 35,000,000 tons of merchantable ore shall not be exhausted at the

Type of obligation (cont'd.)

end of twenty years, or if for any other reason the Government should deem such extension desirable. In addition to principal and interest payments, the applicant also agrees to pay twenty-five percent (25%) of all net profits toward extinguishing the obligation. Security will be First Mortgage on applicant's assets, approximately \$53,000,000.

Schedule of Maturities:

The minimum monthly payment on the principal shall not be less than \$19,500, or a sum which would repay the loan in 30 years, regardless of the tonnage mined and milled. No limit shall be placed on larger sums which may be paid. The applicant is willing to make such payments when and as desired by the Government.

The interest upon the loan will be paid concurrently with principal payments, or at such times as the Government may require in the contract. Non-payment of principal or interest on date or dates when same is due shall not be considered as constituting a default for a period of one year following the date of such first non-payment.

IV. PROJECT

Type: Ore concentrating plant and smelter.

Location: Kimberly, White Pine County, Nevada.

Description:

Concentrator, smelter, power plant, water and transportation systems, lime quarry, town improvements and additions.

Estimated cost:

Total, \$6,984,236.53. Material, \$4,486,916.59; Labor, \$1,934,749.14; Engineering, Legal, Administrative and Interest, \$562,571.

Work Schedule:

Work can be started at once on approval of loan and project and be completed in about eighteen (18) months.

Employment:

860 men for 18 months (average).

V. ENGINEERING CONSIDERATIONS

Applicant:

The "Consolidated Coppermines Corporation" was organized under the General Corporation Law of the State of Delaware and the date of incorporation was July 24, 1922. It is engaged in the business of mining and reducing copper-bearing ores at Kimberly, White Pine County, Nevada, in the Robinson Mining District.

Present works:

A map of the extensive mine holdings of the applicant is attached to the application as Exhibit No. 1 and large photographs marked Exhibits VI to X, inclusive, give a graphic view of the surface equipment.

The value of the present works, excluding the developed ore, depends upon the operation of the mine and plant and ability to sell the copper produced. The existing works, which include a power plant, three mine hoisting plants over deep shafts, one of which has a capacity of 10,000 tons per 16 hours, the substantial Town of Kimberly with administration buildings, shops, warehouses, water supply system, etc., represent an expense of \$4,000,000 or more, and have such a value while the applicant is a going concern. With the mines closed structures and main workings have but small value, and at a forced sale would bring very little money. There would be no demand for the dwellings, which are occupied only when the mines are being worked. They may be considered integral with the mines; valuable when operating, valueless when the mines are idle.

The corporation owns, in the Robinson Mining District, White Pine County, Nevada, 277 patented mining claims and 65 unpatented mining claims, comprising over 4,800 acres. In addition, it owns over 5,000 acres of ranch lands as well as two valuable water rights.

The activities of the corporation since 1925 are particularly noteworthy. Through the purchase and location of mining property in the district, the corporation consolidated its previous extensive holdings. An intensive drilling and prospecting campaign has definitely proven the existence of upwards of 35,000,000 tons of ore, and geological studies point to important additions to this already proven tonnage. From the standpoint of developed ore reserves, and probable additions to ore reserves, the property ranks among the greatest in the country.

The corporation has carried on an intensive development and construction program, employing at times as many as 1,000 men. Two previously existing mining plants were rehabilitated and modernized.

At the Morris Brooks mining plant the shaft and underground development work were put in first class condition, and much new development work performed. The plant was completely modernized and electrical equipment for hoisting, hauling and all general mine service was purchased and installed. Approximately 2,000,000 tons of ore were mined from this mine after its rehabilitation, and substantial profits were realized from the mining and treatment of such ores.

The Alpha mine was unwatered and existing workings put in good state of repair. The shaft is large, 1800 feet in depth, and designed to mine the higher grade ores known to exist in territory adjacent to the shaft. The plant was modernized; complete electrical equipment for hoisting, pumping, haulage and general mine service was purchased and installed. The cost of rehabilitating and equipping the Morris Brooks and Alpha plants amounted approximately to three quarters of a million dollars.

A new and large shaft was sunk on the Emma Nevada claim for the purpose of mining the very large tonnages of ore developed by churn drilling in that particular territory. The shaft and certain vital parts of the underground workings were concreted in order to eliminate future repairs and to insure uninterrupted operations. The entire equipment of the plant is new, modern in every respect, and electrically operated. The hoisting plant of Nordberg-Westinghouse design is capable of handling 10,000 tons per day with two working shifts of 8 hours each, and with minor additions to the equipment for power, compressed air and haulage, the entire plant will be capable of handling such a tonnage. The hoisting plant is provided with automatic safety devices to guard against and prevent any and all accidents in the operation of the equipment.

The equipment for underground haulage, for pumping and for all general mining purposes is designed to meet adequately and satisfactorily the requirements placed upon it by the mining and development operations. A Diesel power plant of 1800 h.p. capacity was installed to augment the previously available power. A complete distributing system for electric power with ample transformer and line capacity was installed. From the Emma Nevada shaft approximately 2,000,000 tons have been mined and results from these mining operations check closely with the expected performance, both as to

costs of operation, and with the computation of tonnages and grade as made by the engineers. The cost of the Emma Nevada plant, with its shaft and principal workings, amounted to approximately \$2,500,000.00.

Other industrial facilities necessary for the carrying on of mining operations, such as shops, warehouses, local transportation equipment, etc. were provided. Modern housing facilities for employees, married as well as single, were erected, and mess halls were erected and operated for the convenience of unmarried employees. Hospital services were provided for employees and their families, and assistance was extended in providing recreational arrangements and activities for the employees. The entire cost of the above mentioned exploration, development and construction has been paid for out of the earnings from the corporation's mining operations in the district.

The majority of the ores are classed as low grade ores, requiring cheap mining and treatments, and arrangements for the handling of large daily tonnages, in order to earn profits. The proposed ore treatment plant will cause the lower grade ores to be of commercial value, and thus add materially to present existing natural resources. The erection and operation of the proposed ore treatment plant will provide immediate and lasting employment for a large number of men, and substantially assist in the speedy recovery of prosperity in the district and State.

The corporation is pledging all of its developed and proven ore, as well as the plant built with the proceeds of this loan, as security. In case the administration should desire additional security, the directors of the corporation have expressed their willingness to pledge any and all of the entire assets of the corporation as security.

Description of project:

The project consists of building and equipping a complete plant for the treatment of ores produced by the mines of the company. The ores in general are of the type known as low grade porphyry copper ores, chiefly valuable for the copper they contain, although large bodies of high grade ore also exist, but all of the ores also contain gold and silver values. The proposed plant has a crushing unit in which the ore from the mines is crushed; a concentrating mill, in which the ore is finely ground and the valuable mineral content, called "concentrates", is separated from the worthless gangue or enclosing rock by the flotation

process, in which the ground ore mixed with water is fed through machines which form a froth to which the valuable minerals adhere and are floated off and saved, while the valueless portion of the ore is discarded and transported to waste dump. The valuable "concentrates" compose about 1/20th of the original mass. These concentrates are next fused with fluxes in a smelter in which the valueless portion is removed as a molten material called "slag" and metallic copper is recovered, containing also metallic gold and silver. This is called "blister copper" and is sent to refineries on the Atlantic Coast where by electrolytic treatment the gold and silver are separated from the copper and this final treatment produces copper, gold and silver in marketable form.

As described in the application, the treatment plant consists of two large major items which are its concentrating mill and the smelter. Necessary adjuncts will include a water supply system, a power plant, a transportation system for ore and supplies, shops, a limestone quarry for flux, additional quarters for millmen, smeltermen and miners, and a hospital.

The ores of the corporation have heretofore been treated on a custom basis, at cost plus a profit to the company doing the work. The Nevada Consolidated Copper Company, now owned by Kennecott Copper Corporation, operating in the same district with its own concentrator and smelter at McGill have been doing this work for Consolidated Coppermines Corporation for 11 years.

Production of the corporation's ores is now limited to 5,500 tons per day by present treatment facilities and contract with the Nevada Consolidated Copper Company. The cost of hauling 25 miles to mill and smelter and the treatment charges have prohibited the mining of great quantities of low grade ore which can be mined at a substantial profit under the proposed new setup. It has therefore been necessary to selectively mine only the better grade ores, which increased the cost of mining, reduced the profits and has to some extent resulted in intermittent operation. Thus a large tonnage of ore will be conserved that would be lost under the present procedure.

The proposed plant has been designed for a capacity of 8,000 tons of ore per day, more than 2,800,000 tons per year. Detailed study by the corps of engineers, both resident and special, employed by the corporation, have determined this to be the proper capacity based on known ore reserves and probable life of the mine and plant. However, the plant is so designed that if future ore development and market conditions become favorable the capacity can be doubled by the addition of other units without undue

cost or change in the original 8,000 ton unit. In general, the plant is designed in 2000 ton units, and will operate economically at any multiple of this unit.

A very thorough investigation of the proposed project has been made by the applicant. Complete plans and estimates have been prepared by engineers and metallurgists at a cost stated to be about \$35,000. Some of the general assembly drawings are included with the application, in order that the project may be thoroughly understood. Detail drawings will be sent on request, as required. Approximately 200 drawings have been prepared to date.

The mines of the applicant are located in the Robinson Mining District of White Pine County, Nevada. They have been the center of a mining community for thirty years, which steadily grew, employed labor on an increasing scale and made increasing production until the slump in copper. In 1928 and 1929 about 1,000 men were employed by the applicant alone in mining and construction. The total production of applicant has been approximately \$25,000,000 in copper, gold and silver. Mine development has been carried well in advance of ore production needs, as is customary in sound operations. Proven reserves of 35,000,000 tons of concentrating ore have been blocked out. In addition to this there is a large tonnage of higher grade ore which will be sent to the smelter without concentrating. In addition to proven ore the applicant has large quantities of probable ore with which the operation may be indefinitely prolonged beyond the computed time. It is the history of porphyry copper ore bodies that they produced much more ore than initial operations indicated.

Although the price of copper at this date, eight and one-half cents per pound, is very low, and if it does not increase will result in the continued shut-down of many American mines, a price of eight and one-half cents per pound will enable the mines of the applicant to operate at a profit after paying capital and interest charges on the requested loan. Although this profit will be small, it will be the means of employment and happiness for several thousand people who, directly or indirectly, will be employed as a result of the operation.

A plant commensurate with the proven ore reserves is all that is necessary to bring about a renewal of prosperity in Eastern Nevada and a resumption of this great industry. The construction of the plant will require an army of men for 18 months, after

which the laborers will not be entirely disbanded, for large numbers will find employment in the mines, and in the mill and smelter they have helped to build.

Cost of Project:

Estimates of costs for the proposed project were completed in 1931, and are set forth on pp. 13-15 of the application. Although conditions have changed, it is believed that increased labor costs will be offset by decreased supply and equipment costs. Total estimated costs are summed up as follows:

1. Preliminary expenses -----	None
2. Land, rights of way, easements, etc. --	None
3. Construction costs:	
Labor -----	\$1,197,749.14
Supplies -----	<u>3,579,916.59</u>
	\$4,777,665.53
4. Additional mine equipment -----	360,000.00
5. Repair parts -----	170,000.00
6. Working capital -----	1,114,000.00
7. Engineering -----	190,959.00
8. Legal, Administrative & other overhead	221,612.00
9. Interest during construction -----	<u>150,000.00</u>
Grand Total -----	\$6,984,236.53

Item 6, Working Capital, needs explanation. After the new plant goes into operation, 4 full months will elapse before the first refined copper will be produced ready for sale. Figuring 6000 tons of ore per day, producing 20 pounds of copper per ton equals 3,600,000 lbs. of copper per month or 14,400,000 lbs. per 4 months. At a production cost of 8¢ per lb., \$1,152,000 will be required to run the project that long. In addition, one to two months more will be required before the copper is marketed and money in bank. The item has been covered by less money by the applicant, and may be apportioned 50% labor and 50% supplies.

Schedule of funds required:

\$200,000 monthly for each of the first six (6) months after the loan is granted; \$350,000 per month for each of the next ensuing twelve (12) months; \$400,000 for each of next succeeding four (4) months.

Objections:

There are no objections. On the contrary, all of the people in Nevada desire this project.

Status of project:

In 1930 the applicant decided to design its own treatment plant. A corps of designing engineers, metallurgical engineers and draughtsmen, from 6 to 8 men, were occupied over one year on this job at a cost of about \$35,000. The work was completed to a point

where railroad construction, ditching for a 20-mile pipe line, and foundation grading and excavating could be started at once. Decision as to particular makes of equipment can be made without delay, and an uninterrupted schedule of construction will result. Notwithstanding its magnitude, the complete program can be finished in eighteen months after funds are available.

Technical soundness:

The plans are as sound as engineering skill, experience and money can make them. As stated under Status of Project, a corps of engineers, familiar with every detail of present concentrator and smelter practice worked on them for a year. So far as this office is able to check the plan in general no flaws or errors are apparent.

Financial soundness of the Project:

It is the opinion of the State Engineer that the loan is financially sound to a high degree. There is no question involved as to the value and the quantity of ore. It has been blocked out by deep drill holes, by shafts, and by many drifts and other workings underground. Widely known mining engineers and geologists have been employed for years carrying on this work. More than thirty-five millions of tons of ore are in a great deposit awaiting removal. How much more there may be is not known, and does not figure in this project. The great assets of the company, its extensive mines, mining plant, concentrating plant and smelter, all of which will be pledged as security if desired, are ample from every point of analysis. Ability to offer such security, and the willingness to do so are unusual in commercial enterprises.

Referring to the copper costs as set forth in Exhibit A, 1927 to 1932 inclusive, it is to be noted that active mining operations were resumed by the corporation toward the end of the year 1926. During the following two or three years the existing mines of the corporation were rehabilitated and a new mining plant was erected, so that the stated copper costs for these years are not truly representative of normal operation. During 1930 operations were more normal, although production was restricted to 5000 tons per day. Therefore, an analysis of the copper costs for 1930, subject to allowances to be brought about by the proposed plant, is herewith submitted.

The copper costs for 1931 are also fairly representative when properly adjusted similarly to those of 1930. However, as curtailment of operations was commenced in 1931 and such curtailment was continued into 1932 when operations were completely suspended it is clear that the copper costs for 1932 are not representative.

Following is a reconciliation of Consolidated Coppermines 1930 cost of copper with future costs as estimated:

10.7¢ Cost per pound of recovered copper in 1930
(See Exhibit A)
1.75¢ Book charge for amortizing deferred development
already paid for.

8.95¢ Net 1930 cost.

1.75 Eastern Freight and refining charges.

7.20¢ 1930 cost less deferred development charges and eastern charges.

This 7.20¢ cost was realized on ore returning 24.8 pounds of copper per ton. Future ores yielding 20 pounds of copper would on the 1930 basis give a cost of $\frac{24.8}{20} \times 7.20$, or 8.93¢.

8.93¢
.50 Future actual development expenditures at 10¢ per ton or .5¢ per pound of copper.
1.75 Eastern freight and refining on blister copper.

11.18

2.90 Savings to be effected as follows:

Present transportation of ore charge by Nevada Consolidated Copper Co. is 21¢.	
Future cost will be 4¢, saving per ton ore -----	17¢
Milling profit paid Nev. Con. -----	15¢
Smelting profit paid Nev. Con. -----	05¢
Reduced costs because of increased tonnage and better metallurgy -----	16¢
Amortization charges paid Nev. Con. -----	05¢
	58¢
58¢ per ton equals 2.9¢ per lb. of copper.	

8.28
2.00 Gold and silver credit (40¢ per ton ore)

6.28
1.70 Capital and Interest charge on loan

7.98 Total Cost of Copper per pound, future.

The Capital and Interest charge is computed as follows:

Interest, \$7,000,000 @ 4%, equals \$280,000 annually.
Assuming 6000 tons per day production or approximately
2,000,000 tons per year, the interest charge will be
280,000 or 14¢ per ton.
2,000,000

Capital payments at 20¢ per ton will add 20¢, making
a total of 34¢ per ton.

Recoverable copper is 20 lbs. per ton, hence
34 equals 1.7¢ per lb. of copper produced.
20

VI. PLANNING CONSIDERATIONS

Conformity with comprehensive city, regional or State plan.

The project, being private, is not a part of any municipal or State plan. The town of Kimberly, which is a part of the physical assets of the applicant, normally has a population in excess of 1000, (1007 in 1930), and has been laid out to permit of expansion upon economical and sanitary lines as required. The population of Kimberly will undoubtedly be more than doubled for many years to come when this project is approved.

Upon the approval of the code for copper mining by the administration, the project will become a part of a national plan for the preservation of the copper industry of the United States.

Metropolitan or regional significance:

The project will profoundly benefit the whole State of Nevada by the employment it will give to many hundreds, and through the general increase in the valuation of taxable property. The present tax rate is \$24.80 per \$1000 (including \$1.50 special school tax). The completed plant and mine valuation for taxation purpose will be about \$5,500,000. The increase in taxable property should bring the rate down to about \$22.50, which would make the annual tax \$125,000. With a small increase in the price of copper, the bullion tax will add to State revenue. Assuming copper at 12¢, or 4¢ profit, production of 2,000,000 tons of ore per year or 40,000,000 lbs. of copper, the tax on \$1,600,000 profit at 2½¢ equals \$36,000.

Priority of projects:

No other projects have been submitted from this district. The bonding power of the county will not be affected as the loan will be repaid from mine revenues.

Sequence: Not applicable.

Regenerative character:

Business conditions throughout all Nevada will be improved as a result of this operation. The great continuing labor feature of the project will assure steady prosperity in eastern Nevada.

Competitive character:

Under the proposed copper code, destructive competition will be largely eliminated and bring about greater stability in the copper industry.

A proposed code is published in full in the Congressional Record Appendix of March 19, 1934, under "Remarks of Hon. Henry F. Ashurst of Arizona in the Senate of the United States," pp. 4969-4986.

Permanence:

The project is the final answer to a specific need and is in no sense a palliative. The life of the project cannot be definitely measured in terms of years, beyond the 13 to 15 year period the known ore reserves will require for treatment in a plant treating 8000 tons of ore per day when in operation. If the proposed plant should not be enlarged, it is probable that with additional reserves of ore which will be developed it will operate for 30 years or longer.

Continuing costs:

The outlays required for continued operation and maintenance are included in the stated costs, and are absorbed in the computed cost per pound of copper produced. There are substantial reasons for assuming that costs will be still further reduced due to improvements in mining and metallurgy.

Changes in community:

The location of electrochemical industries at Boulder Dam may ultimately result in Ely blister copper being shipped there for refining. Such a contingency would justify the construction of a railroad between Ely and Picche, about 100 miles over level

terrain, in order to complete rail connections to Boulder Dam. At present blister copper from Ely is refined in the East, whence much of it finds its way back to western and Oriental markets via an expensive cross-continent backhaul.

Copper products and refined copper would be produced at Boulder Dam for shipment to all Western and Pacific Coast points and to Oriental markets. Almost unlimited cheap power from Boulder Dam would make possible the electrification of the new branch railroad from Ely, and a refinery at the damsite. A great volume of gold, silver, lead, zinc and tungsten ores would also be shipped to Boulder Dam from all over the intermountain area. The metals would be refined by electrochemical and electric furnace methods with electric power lower in price than elsewhere in the United States. The cheap power and available nearby markets will assure the success of the transportation system, the refineries for base and precious metals, and electric furnaces for ferro-tungsten, ferro-manganese, ferro-silicon and calcium carbide.

However, the success of the proposed project is not dependent upon such a community or manufacturing change. The project will succeed financially under the present method of shipping all blister copper to the Atlantic seaboard for refining. The considerable gold and silver content of the ore and the simplicity and ease of its metallurgical treatment place the applicant in a stronger position than most of the large copper companies of the United States.

General: Although this project may be classed as mining and ore reduction, it is very far removed from ordinary mining. It is a great commercial enterprise having a high factor of financial safety. This may be the only project of its kind in the United States presented to the examining board, and for that reason will probably present unfamiliar aspects. The Administrator may consider it to be a plan to finance an ordinary mining venture, which is far from being the case. The ore reserves have been carefully determined at a cost of \$750,000, and the value of this developed ore has been definitely established. There is nothing speculative about it. The developed ore is a positive asset, safer security than next season's agricultural crops, which may fail; or buildings or bridges, which may be destroyed by flood or fire. Nothing can destroy this proven ore in place, which, if not mined, will be secure until the end of time.

When operations reach a peak, more than 1000 men will be employed directly on the construction of the project, and the same number will be continuously employed when all the construction work has been completed, for the purpose of operating the mines, concentrating mill and smelter.

It is a matter of grave concern to us all as to how men will be employed when all the P.W.A. construction projects cease. Few of the projects offer a continuing future labor feature of any immediate importance. The Grand Coulee power project in the State of Washington will cost \$55,000,000 or more and employ 4000 men during construction, but when completed, this great army will be dismissed to search for new employment. The same is true of countless smaller projects, such as new roads, schools, bridges and municipal waterworks. At Boulder Dam a great effort is being made to get electrochemical industries established before the complete collapse of Las Vegas that will inevitably follow the vanishing of the present dam construction payrolls. Nevada has great natural mineral resources, including the copper mines here considered, but the establishing of electrochemical industry cannot be done in time to combat the great problem of unemployment.

When the Consolidated Coppermines project is completed it will result in the continued immediate employment of a number equal to those that were employed upon the construction work, which will be a perfect consummation of what the Administrator desires.

Gold Production: During the year 1930 the ores mined by the corporation yielded .013 ounces of recovered gold per ton. Operating at the capacity of the proposed plant or in excess of 2,800,000 tons per year, there would be a gold production of about 36,000 ounces annually, which, at \$35 per ounce, will add \$1,260,000 to the income.

The above gold income may easily be raised to one and one half million dollars by the treatment of additional gold bearing siliceous fluxing ores owned by the corporation. The company owns substantial siliceous gold ore mines in the adjoining Lane City area which have heretofore been extensively mined by lessees. Under the new plan the applicant will operate these mines.

Additional income, not included in applicant's estimates, will be derived from the treatment of custom ores in the district, obtained from mines not owned by the applicant.

The project has my approval in its general and economic aspects, based on my careful study and best judgment.

VII. LABOR AND MATERIAL CONSIDERATIONS

Character of labor provided:

Of the large number of men employed during construction, about 50% will be skilled and 50% unskilled. Upon completion, the proportion will remain about the same.

Unemployment in district involved:

We are advised by William Royle, Director of Nevada State Employment Service, that there are now 560 unemployed in White Pine County, of which 501 are men and 59 are women. The figures will be increased about 200 upon the closing of the Civil Works Administration. The project contemplates the immediate employment of more men than this.

The Nevada State Board of Charities and Public Welfare gives the following statement of expenditures for relief in White Pine County from June 1, 1933 to February 28, 1934:

Work Relief-----	\$8,315.34
Direct Relief -----	23,623.47
Administrative -----	<u>1,451.94</u>
Total -----	\$33,390.75

Incidence of material orders:

So far as possible, supplies for the project will be purchased in Nevada. Salt Lake City, Denver and San Francisco will be called upon for most of the highly specialized concentrating and smelting equipment. The manufacturing of the great lots of machinery will employ more than 1000 men for about a year, and greatly help in relieving unemployment in manufacturing centers where it will be built.

VIII-A. FINANCIAL CONSIDERATIONS

Brief history of applicant and business:

The applicant was incorporated in Delaware in 1922 and was a consolidation of a number of predecessor companies which began about the year 1900.

The mines are located in the Robinson mining district of White Pine County, Nevada, and are the center of a large and extensive mining community. For thirty years the district has been a center of great employment and activity. The peak of employment by the applicant was reached in 1928 and 1929, when 1000 men were on the payroll. In all, the mines of the applicant

have produced copper, gold and silver to the value of \$25,000,000, and have developed advance reserves of more than 35,000,000 tons of concentrating ore, and in addition, a substantial tonnage of higher grade ore which will be smelted without concentrating.

An accurate history of the applicant and business is detailed in the application, accompanied by numerous exhibits.

Capitalization:

The capitalization of the company consists of common stock; 1,600,000 shares of a par value of \$5 being authorized, of which 1,424,611 shares are issued and outstanding as of February 1, 1934. Practically all of the shares were issued at the time of incorporation in 1922. There are no other classes of stock and no funded debt. The present capitalization plus the proposed loan of \$7,000,000, will make a total capitalization of \$15,000,000. Other details are given on page 17 of the application under VI, Financial Data.

Financial Condition

Balance sheets, profit and loss statements, analyses of surplus accounts, for the last three or more fiscal years are set forth in full in the application.

These statements were obtained from Barrow, Wade, Guthrie & Co., and Price, Waterhouse & Co., Accountants and Auditors, New York City.

Description of security offered:

The value of the ore as security will depend upon the market price of copper. With copper at 15¢, production cost 8¢, net profit 7¢, the 35,000,000 tons of ore, which will produce 700,000,000 lbs. of copper, is worth \$49,000,000. Placing the present equipment and the proposed new plant at an assessed valuation of only \$4,000,000, the security would amount to \$53,000,000.

Evidence to support such a valuation is based upon the history of the mines and corporation, and a study of the copper industry.

In addition to the assets of the company pledged as security, the company will agree to pay twenty-five percent (25%) of all net earnings toward the liquidation of the proposed loan. This 25% is in addition to the sums to be paid for capital and interest.

It is proposed to make payments on the principal of the loan at the rate of twenty cents (20¢) per ton of ore mined and treated, at which rate the loan will be extinguished before the 35,000,000 tons of proven ore is extracted.

Management:

Following is a list of applicant's officers, including the information desired under (a), (b), (c):

		<u>Stock</u>
R. W. Higgins,	Duluth, Minn. Director & President	22,600
C. K. Blandin,	St. Paul, Minn. Director & Vice President	17,000
Thomas Bardon,	New York, N.Y. Director & Treasurer	5,000
George S. Brown,	Reno, Nevada. Director	500
Joseph B. Cotton,	Duluth, Minn. Director	22,285
E. L. Derby, Jr.,	Ishpeming, Mich. Director	500
William S. Gordon,	New York, N. Y. Director	823
Robert D. Hoffman,	New York, N. Y. Director	400
Edwin O. Holter,	New York, N. Y. Director	1,500
Earl E. Hunner,	Duluth, Minn. Director	3,300
Mack C. Lake,	Duluth, Minn. Director	500
Norman E. LaMond,	New York, N. Y. Director	1,000
Carleton E. Merritt,	Duluth, Minn. Director	11,778
Howard D. Smith,	San Francisco, Calif. Director	10,500
E. J. McDonald,	New York, N. Y. Secretary	500
J. B. Haffner,	Kimberly, Nevada. General Manager	1,240

A professional biography of J. B. Haffner is given in the application, Exhibit No. 2, p.1.

President R. W. Higgins:

Prominent business man of Duluth. General Manager, Kelley-Hew-Thomas Co., wholesale hardware; Director in copper and iron mining companies.

Treasurer, Thomas Bardon:

New York. Director and officer of copper, gold and iron mining companies.

General Counsel and Director, Joseph B. Cotton:

One of best known mining attorneys in country; Director in various mining companies.

Director, Earl B. Hunner:

Prominent engineer, manager, of mining operations for M. A. Hanna Co., iron mines.

Most of the other officers and directors are connected with reputable mining enterprises and other large businesses.

Financial Soundness of the Loan:

The loan is financially sound because of the large ore reserves which have been blocked out and valued. The care and skill with which the engineering and metallurgical studies have been made thoroughly justify such a conclusion. The valuable assets offered as security provide a wide margin of safety.

IX-A LEGAL CONSIDERATIONS

Applicant:

The exact corporate title of the applicant is "Consolidated Coppermines Corporation." Address: 120 Broadway, New York City. Mine office: Kimberly, White Pine County, Nevada. It was incorporated under the General Corporation Law of the State of Delaware, July 24, 1922. It is a private corporation. The capitalization consists of 1,600,000 shares of common stock of a par value of \$5.00, of which 1,424,611 shares are issued and outstanding, February 1, 1934.

Project: The project is described in detail in the application. No approvals, permits or franchises are necessary from the Government or State for its operation, and no legal phases or litigation is in progress or contemplated which will affect the applicant's ability to construct and operate the project.

Loan and Security:

All of the property is owned by applicant and is not encumbered by any lien or mortgage. Authority to borrow the money is vested in and has been passed by the board of directors.

The amount of loan requested is \$7,000,000, secured by first mortgage on all property owned by the applicant, if such a total of security be deemed necessary by the Government.

Miscellaneous:

The legal considerations have been analyzed by the applicant's attorneys, who are of recognized high standing. No difficulties of a legal nature are anticipated. It is the opinion of the Engineer that the loan clearly comes within the provisions of the Federal Emergency Administration of Public Works Act.

Eligibility:

When the possibility of a loan from Public Works Administration for this project became known, the applicant at considerable expense began the preparation of his application. The officials and directors of the company were called together and the mine staff of engineers began the task, which was too lengthy to be completed quickly. However, a preliminary application was sent in to Nevada Public Works Administration in order to protect priority and be on file while the work of detailing a more complete application went on.

The Engineer advised the applicant that more security would be required than that offered in the original application, which was agreed to.

The applicant's General Manager, made a trip to Washington where he held conferences with Nevada's Congressional representatives, and with Administrator Ickes concerning the project. Under the circumstances all this consumed time, and when orders came from the Administrator to decline further applications and send in reports on all applications on hand, Consolidated Coppermines had not completed this preliminary work. However, the attitude of the Administrator toward delayed applications as stated at the Los Angeles conference (P.W. 7779 - page 3) by Colonel Waite gives assurance of its consideration. In addition to this, the great value of the project to Nevada, probably as great as that of all other projects combined, is a sound reason for its eligibility for a loan from Public Works Administration.

Legal Conditions:

The proposed project, notwithstanding its magnitude, is very simple from a legal standpoint. Detailing the assets of the applicant, for mortgage purposes will apparently be the greatest task. There are no peculiarities of local law which will affect the project or loan.

X. CONCLUSIONS AND RECOMMENDATIONS

The economic and social value of the project has been sufficiently covered in the body of the application and report. Continuous employment to approximately 1000 men is assured, and many more will be indirectly employed to serve the laborers and the large mine and plant. The continuing labor feature is of greatest importance, and is largely lacking in many P.W.A. projects. Continued employment of labor is the only remedy for the depression. With this project permanent employment of much labor is essential to successful operation.

There are no unusual or difficult engineering or legal features connected with the project. The financial setup as proposed is simple.

As a check for all purposes, it is suggested that the proposed project be examined by the U. S. Bureau of Mines, and that representatives of the Bureau examine the property independently. The large loan and great importance to Nevada will fully justify such an examination.

XI. CONDITIONS

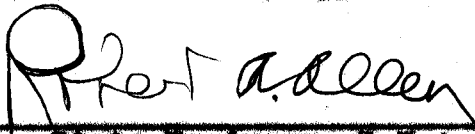
The applicant shall enter into a contract with the Administrator, satisfactory to Counsel for the Administration, providing for the sale of bonds or other obligations of the applicant to the United States and embodying in detail the terms of the loan, subject to the approval of the engineering, legal and financial advisers of the Administration.

Such contract shall comply with the provisions of Title II of the National Industrial Recovery Act and with all rules and regulations prescribed by the President and by the Administrator for the administration of such Act.

The report and recommendations above are based on information furnished and representations made by the applicant and an examination of the statements as they appear in the application and supporting data.

XII. The application is hereby approved.


XIII.



State Engineer, P.W.A., Nevada

XIV. Recommendation as made by the State Engineer,
P.W.A., is concurred in by the State Advisory
Board.

XV.



Chairman, State Advisory Board
-25-

EXHIBIT "A"

TO ACCOMPANY STATE ENGINEER'S REPORT

CONSOLIDATED COPPERMINES CORPORATION

Kimberly, Nevada.

SUMMARY OF COPPER COSTS, 1927 - 1932

(Separate computations of Concentrating
and Smelting Ores)

EXHIBIT "C"

TO ACCOMPANY STATE ENGINEER'S REPORT
STATEMENT OF TONNAGE MILLED AND SMELTED
by
NEVADA CONSOLIDATED COPPER COMPANY
and
CONSOLIDATED COPPERMINES CORPORATION
McGill, Nevada.

STATEMENT OF TONNAGE MILLED AND SMELTED BY NEVADA

CONSOLIDATED COPPER COMPANY

AND COPPERMINES PROPORTION OF TOTAL

<u>Dry Tons to Concentrator</u>	<u>June to December</u>				
	<u>1926</u>	<u>1927</u>	<u>1928</u>	<u>1929</u>	<u>1930</u>
Nev. Cons. Ores	2711234	3945450	4026175	5041699	2769471
Coppermines' Ores	<u>208143</u>	<u>600502</u>	<u>941942</u>	<u>1033042</u>	<u>1076005</u>
Total	2919377	4545952	4968117	6074741	3845476
% Cons. Copper- mines' Ores	7.1297	13.2096	18.9597	17.0055	27.9811
<u>Tonnage to Smelter</u>					
N. C. Tonnage	292391	349179	360673	356923	230300
C. C. Tonnage	<u>25971</u>	<u>90460</u>	<u>55809</u>	<u>82959</u>	<u>103431</u>
Total	318362	439639	416482	439912	333731
% Cons. Copper- mines' Ores	8.1577	20.5760	13.4001	18.8649	30.9923

SUMMARY

Dry Tons Milled -- June, 1926 to December, 1930

Nev. Cons. Ores	18494029	82.7338%
Coppermines' Ores	<u>3839634</u>	<u>17.2662%</u>
Total	22333663	100.0000%

Dry Tons Smelted - June, 1926 to December, 1930

Nev. Cons. Ores	1589466	81.5895%
Coppermines' Ores	<u>358660</u>	<u>18.4105%</u>
Total	1948126	100.0000%

This is a copy of Exhibit F-157 in suit of Nev. Con. Copper Co.

vs.

Consolidated Coppermines Mining Co., May 7th, 1931.

EXHIBIT "B"

TO ACCOMPANY STATE ENGINEER'S REPORT

CONSOLIDATED COPPERMINES CORPORATION

Kimberly, Nevada.

STATEMENT OF PRODUCTION, 1927 - 1932

CONSOLIDATED COPPERMINES CORPORATION
KIMBERLY, NEVADA

Copper Costs - Years 1927 to 1932 Inc.

Smelting Ores

	<u>1927</u>		<u>1928</u>		<u>1929</u>		<u>1930</u>		<u>1931</u>		<u>1932</u>		<u>Total</u>	
	Amount	Cost Lb. Cu.	Amount	Cost Lb. Cu.	Amount	Cost Lb. Cu.	Amount	Cost Lb. Cu.	Amount	Cost Lb. Cu.	Amount	Cost Lb. Cu.	Amount	Cost Lb. Cu.
<u>Mining</u>	114790.39	.0300	28242.29	.0278	254481.84	.0687	358502.64	.0571	7135.57	.0526	None		763152.73	.0510
<u>General Expense-Maintenance.</u>	19015.34	.0050	3768.16	.0037	38862.82	.0105	65540.01	.0104	1559.54	.0115	"		128744.88	.0086
<u>Transportation - Treatment</u>														
Transportation Ore	11687.20	.0030	4313.80	.0043	9364.00	.0025	12996.00	.0021	248.80	.0018	"		38609.80	.0026
Smelting - Including Profit	127497.50	.0333	46225.00	.0455	212313.07	.0574	274776.41	.0438	5346.05	.0395	"		666178.03	.0445
N.C.Plant Depreciation					6086.27	.0016	5382.30	.0008			"		11474.57	.0008
Transportation Bullion	20089.00	.0052	5735.59	.0057	21913.91	.0059	37539.91	.0060	786.48	.0058	"		86064.89	.0058
Refining	43801.88	.0114	11498.15	.0113	41909.84	.0113	71220.13	.0113	1536.68	.0113	"		169966.68	.0113
Total	203075.58	.0529	67772.54	.0668	291587.09	.0787	401920.75	.0640	7938.01	.0584			972293.97	.0650
<u>Amortisation Deferred Develop.</u>	95830.00	.0250	25379.03	.0250	92544.02	.0250	109904.47	.0175	2374.62	.0175	"		326032.14	.0218
Gross Cost	432711.31	.1129	125162.02	.1233	677475.78	.1829	935867.87	.1490	19006.74	.1400	"		2190223.72	.1464
<u>Dry Tons Ore</u>	50997		18480		40507		54849		1015		"		165858	
<u>Returnable Product</u>														
Copper	3833200		1015161		3701760		6280256		135692		"		14966069	
Gold	391.651		110.085		284.657		342.125		4.799		"		1133.317	
Silver	1114.06		479.98		1146.46		1048.32		20.09		"		3808.91	

CONSOLIDATED COPPERMINES CORPORATION

Kimberly, Nevada

Statement of Production - Years 1927 to 1932 Inc.

	Concentrating Ores							Smelting Ores							Total
	Dry Tons	Cu.	Au.	Ag.	Cu.	Au.	% Recovery	Dry Tons	Cu.	Au.	Ag.	Cu.	Au.	% Recovery	
1927	600501	1.443	.021	.055	91.43	69.55	71.34	50997	4.158	.0077	.0230	95	100	95	
1928	941942	1.340	.020	.063	85.56	65.05	58.87	18491	3.145	.0060	.0273	95	100	95	
1929	993078	1.111	.017	.043	87.19	66.98	65.63	39625	4.988	.0069	.0298	95	100	95	
1930	1062439	1.411	.018	.048	92.91	70.31	63.65	52238	6.268	.0059	.0200	95	100	95	
1931	615934	1.358	.020	.048	94.03	66.21	65.00	1015	7.037	.0047	.0208	95	100	95	
1932	73752	1.323	.019	.052	93.89	64.69	57.39								

Net Production - Years
1927 to 1932 Inc.

Dry Tons Ore	4322524	165858	4488382
Copper	97633667	14966069	112599736
Gold	56269.045	1133.317	57402.362
Silver	136661.55	3808.91	140470.46

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CONSOLIDATED COPPERMINES CORPORATION

KIMBERLY, NEVADA

Copper Costs - Years 1927 to 1932 Inc.

	<u>1927</u>		<u>1928</u>		<u>1929</u>		<u>1930</u>		<u>1931</u>		<u>1932</u>		<u>Total</u>	
<u>Concentrating Ores</u>	<u>Amount</u>	<u>Cost Lb.Cu.</u>	<u>Amount</u>	<u>Cost Lb.Cu.</u>	<u>Amount</u>	<u>Cost Lb.Cu.</u>	<u>Amount</u>	<u>Cost Lb.Cu.</u>	<u>Amount</u>	<u>Cost Lb.Cu.</u>	<u>Amount</u>	<u>Cost Lb.Cu.</u>	<u>Amount</u>	<u>Cost Lb.Cu.</u>
<u>Mining</u>	389873.49	.0259	708920.78	.0345	973968.47	.0512	636719.69	.0242	281874.44	.0188	65722.53	.0378	3057079.40	.0313
<u>General Expense-Mtnce.</u>	31977.25	.0020	76324.65	.0037	79876.69	.0042	73936.14	.0028	60166.39	.0040	28420.34	.0163	350701.46	.0036
<u>Transportation - Treatment</u>														
Transportation Ore	127300.80	.0085	199389.60	.0097	218406.20	.0115	223256.40	.0085	130475.00	.0087	15679.00	.0090	914507.00	.0094
Milling - Including Profit	382192.20	.0254	601138.48	.0293	606349.65	.0319	650619.00	.0247	361663.17	.0242	43111.78	.0265	2648074.28	.0271
Smelting	178507.06	.0119	198412.21	.0097	231158.80	.0121	269244.36	.0102	151495.89	.0101	22805.82	.0131	1051624.14	.0108
N. C. Plant Depreciation			15517.66	.0008	157956.39	.0083	48136.74	.0018					221610.79	.0023
Transportation Bullion	79381.40	.0053	123232.89	.0060	114675.77	.0060	156882.89	.0060	84429.11	.0037	10707.44	.0062	569308.50	.0058
Refining	172072.92	.0114	232600.78	.0113	215450.50	.0113	298593.46	.0113	167069.34	.0112	19237.17	.0111	1105024.17	.0113
Total	939454.38	.0625	1370291.62	.0668	1543997.31	.0811	1646732.85	.0625	895131.51	.0599	114541.21	.0659	6510148.88	.0669
<u>Amortisation Deferred Devel.</u>	376459.08	.0250	513402.72	.0250	475748.59	.0250	460758.68	.0175	261448.45	.0175	30454.78	.0175	2118272.30	.0216
Gross Cost	1737764.20	.1154	2688939.77	.1300	3073591.06	.1615	2818147.36	.1070	1498620.79	.1002	239138.86	.1375	12034202.04	.1234
Dry Tons Ore	600501		941942		1030591		1059804		615943		73752		4322524	
<u>Returnable Product</u>														
Copper	15058363		20536108		19029943		26329067		14939913		1740273		97633667	
Gold	9486.145		12528.457		11654.140		13574.022		8125.052		901.229		56269.045	
Silver	24247.98		33032.34		27830.10		31087.64		18390.78		2072.71		136661.55	

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