UNITED STATES
DEPARTMENT OF INTERIOR
OSCAR L. CHAPMAN—SECRETARY

DEFENSE MINERALS ADMINISTRATION

Report by Examination Team
Region II

DMA-783—Last Chance Consolidated Mines, Inc.

Stevens County, Washington

M. R. Klepper, Geologist
U. S. Geological Survey

R. N. Roby, Mining Engineer
U. S. Bureau of Mines

June 21, 1951

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EXAMINATION REPORT

Last Chance Consolidated Mines, Inc.

DMA Docket No. 785 Stevens County, Wash.

M. R. Klepper USGS
R. E. Roby USBM

RECOMMENDATIONS

The examination team recommends that a government loan in the amount of $375,000 be denied.

APPLICANT

The applicant is the Last Chance Consolidated Mines, Inc., 405 Realty Building, Spokane, Wash. The property is the Black Rock, Great Western, and Last Chance Groups, in Stevens County, Wash.

LOCATION OF THE DEPOSIT

The Last Chance Consolidated Group is in secs. 23, 24, and 25, T. 39 N., R. 40 E., Northport district, Stevens County, Wash.

OWNERSHIP

The claims and their owners as reported by the county assessor and county auditor, Stevens County, Wash., are as follows:

Claim		Owner	Address
Iron Dike Survey	No. 1016A	H. S. Grannis	Duluth, Minn.
Great Western	do	Last Chance Cons.	Spokane, Wash.
Empire	do	do	do
Iron Point	do	do	do
Last Chance	do	do	do
Morning Fraction	do	do	do
Morning Lode Fraction	do	do	do
Last Chance Mill Site	No. 1016B	do	do
Great Western	do	do	do

Deeded Land		Owner	Address
E1/2, NW1/4, sec. 24, T. 39 N., R. 40 E.		Wm. Saigman	c/o Last Chance Cons.
W1/2, SW1/4	do	(Wm. Saigman	do
		(Roy Maki	Northport, Wash.
E1/2, SE1/4, sec. 23, T. 39 N., R. 40 E.		Roy Maki	do
NW1/4, NW1/4, sec. 25, T. 39 N., R. 40 E.		L. C. Cons.	Spokane, Wash.
SW1/4, NW1/4	do	Wm. Saigman	c/o Last Chance Cons.
W1/2, SE1/4, NW1/4	do	do	do
NW1/4, SW1/4	do	do	do
W1/2, NE1/4, SW1/4	do	do	do
W1/2, SE1/4, SW1/4	do	do	do

The Last Chance Consolidated Mines, Inc. has a lease on all of the foregoing property that they do not own.

HISTORY

Production from the Last Chance mine as indicated by available records of settlement sheets was at least 7,100 tons that averaged about 60 percent lead and 10-11 percent zinc.

Estimate of production from the Great Western mine is $30,000. Smelter records showing metal content are not available.

Production from the Black Rock mine has been estimated by Scughland at $250,000.

DESCRIPTION OF THE PROPOSAL

The proposal is to reclaim dump ore, extract filling from old stopes, and mole ore from walls of old workings. This ore is to be treated by flotation and gravity in the existing Last Chance mill after making necessary repairs, additions, and alterations.

It is contended that, as a result of mining low-grade ore from the walls of old workings, extensions of new ore shoots may be found.

No definite targets for new ore shoots were presented except a tentative proposal to drive a 600-foot crosscut from the face of the No. 4 Last Chance adit to cut the Great Western vein 500 feet below the Great Western adit.

TECHNICAL FEASIBILITY

Reserves And Grade

The tonnage and grade of dump ore on the property of the Last Chance Consolidated Mines, Inc. is as follows:

Dump	Est. Tons	Percent Lead	Percent Zinc
Black Rock shaft	1,400	-	7.0
Great Western adit	3,600	0.18	4.5
Great Western Glory Holes	440	1.2	6.6
Ronka Shaft	175	.4	7.7
Ronka Shaft (high grade)	15	7.3	36.6
Upper Last Chance (Glory Hole)	2,025	5.1	5.7
Last Chance Adit No. 2	1,225	4.6	3.5
Last Chance Mill (Jig Tails)	1,600	4.6	7.0
Total and weighted average.	10,440	2.34	5.51

In addition to the above dumps, there is perhaps 1,500 or 2,000 tons of ore of probable similar grade on the dumps at the No. 4 Last Chance adit. The No. 4 adit dumps were not included in the estimate because of their inaccessibility. There is no road between this adit and the mill, and the terrain is extremely precipitous. Ore was formerly transported from this adit to the mill by a tramway that no longer exists.

The ore is a mixture of sulfides, carbonates, silicates, and sulphates. The Black Rock dump ore consists principally of zinc carbonate and silicates; the other dumps contain appreciable amounts of sulfides.

The jig tails milled in 1948-49 made up the last ore mined during former operations and presumably came from the lowest workings. This ore would have contained more sulfides than the dumps now remaining at the upper workings.

Mining Methods and Costs

The ore would be reclaimed from the dumps by slusher and ramp or by a small mechanical shovel. Approximately 7,000 tons of the dump ore would have to be hauled 3 miles to the mill. Two miles of the road from the dumps to the highway has a grade that averages 12 percent and is very narrow; the road for much of this distance is a dug-way in solid rock, the cost of which

would be prohibitive to widen. The average cost of .4 per ton to haul the ore to the mill, as made by Houghland, is probably low.

Milling Methods and Costs

The ore would be milled by both flotation and gravity methods. The cost of $3.50 per ton probably is realistic.

Economic Considerations

The dumps as sampled averaged 7.65 percent combined lead and zinc. However, the grade probably could be brought to 10 percent combined metal by some sorting while loading.

Results of current ore dressing tests indicate that only a poor recovery of the contained lead and zinc can be made because of the high percentage of carbonate minerals present in the ore.

Ore recovered from old fill and from walls of old stopes would also be oxidized and would contain a large percentage of carbonate minerals. No ore was encountered in the No. 4 Last Chance adit. Raises were driven 40 feet to reach the bottom of the Last Chance ore shoot.

DISCUSSION OF THE PROPOSAL

Because of the refractory nature of the oxidized ore on the dumps and ore from old workings, it is doubtful if a milling operation would be profitable.

It is also thought that there is not sufficient evidence of ore in the lower workings of the Great Western mine to justify the expense of establishing a mining plant at the No. 4 Last Chance adit and driving 600 feet to the Great Western vein.

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TECHNICAL FEASIBILITY

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Milling Methods and Costs

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Economic Considerations

The dumps as sampled averaged 7.05 percent combined lead and zinc. However, the grade probably could be brought to 10 percent combined metal by some sorting while loading.

Results of current ore dressing tests indicate that only a poor recovery of the contained lead and zinc can be made because of the high percentage of carbonate minerals present in the ore.

Ore recovered from old fill and from walls of old stopes would also be oxidized and would contain a large percentage of carbonate minerals. No ore was encountered in the No. 4 Last Chance adit. Raises were driven 50 feet to reach the bottom of the Last Chance ore shoot.

DISCUSSION OF THE MODEL

Because of the refractory nature of the oxidized ore on the dumps and ore from old workings, it is doubtful if a milling operation would be profitable.

It is also thought that there is not sufficient evidence of ore in the lower workings of the Great Western mine to justify the expense of establishing a mining plant at the No. 4 Last Chance adit and driving 800 feet to the Great Western vein.