UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF MINERALS EXPLORATION
WASHINGTON 25, D. C.

GEOLOGICAL SURVEY

6384

MAR 7 1966

E. E. Lewis, Inc.
P. O. Box 1481
Grand Junction, Colorado

Re: OME-6384 (Gold-Silver)
E. E. Lewis, Inc.
Reesie, Jr., et al., Claims
LaPlata County, Colorado

Gentlemen:

Careful study of your application for financial assistance in exploring the referenced property and of other information available to us indicates that the probability of disclosing significant gold-silver ore reserves is not sufficiently promising to justify Government participation in the proposed exploration. Accordingly, we regret to inform you that your application for exploration assistance is denied.

Please accept our apology for the abnormal delay in reaching a decision on your proposed project. The delay was owing partly to a heavy backlog of applications and partly to the recent change in location of our field office and an accompanying loss of personnel.

Sincerely yours,

(Signed) FRANK E. JOHNSON

Frank E. Johnson
Chief, Office of
Minerals Exploration

cc to: Director's Reading File
Division File
Economic Geology File
OME File
OME Region III
OME Reading File
Mr. Salfridge
Mr. Smith
120M

HMSmith/gla 3-2-66

Denver Federal Center -- U. S. Geological Survey
Building 25 - Room 2284
Denver, Colorado 80225

February 25, 1966

Memorandum

To: Chief, OME

From: Field Officer, Region III

Subject: OME-6384 (Gold-Silver)
Bessie Jr. et al Claims
La Plata County, Colorado

Transmitted herewith is an original and two copies of a report of an on-site examination of the Bessie, Jr. claims, La Plata County, Colorado by R. L. Bolmer, Mining Engineer, U. S. Bureau of Mines, Denver, Colorado.

The examining engineer concludes that the Bessie, Jr. vein is not a simple a structure as indicated by the applicant and that much of the proposed work is not valid if the geologic structure is not solved more adequately. Considerable additional information is required before the exploration work as outlined in their proposed application is warranted. Some of the applicants proposed costs such as supervision, technical services, equipment rental, drift and raise timbering and significant material and supplies are quite high. Perhaps the applicant could provide the additional information or would be willing to perform the additional work required to more effectively evaluate the exploration portion of the property. If not then it must be assumed that the proposed exploration would not result in a significant discovery and thus does not meet the minimum requirements for financial assistance.

I concur with the conclusions and recommendations of the examining engineer and recommend that the application be denied without prejudice.

J. William Hasler

JWHasler/mc/2/25/66

cc: Chief OME
6384
Chron
Hasler

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF MINES

AREA V

BUILDING 20, FEDERAL CENTER
DENVER, COLORADO 80225

Mineral Resource Office

February 21, 1966

Memorandum Report

To: Chief, Office of Minerals Exploration
Geological Survey, Washington, D. C.

From: R. L. Bolmer, Mining Engineer
Bureau of Mines, Denver, Colo.

Subject: Field examination for OME-6384 (Gold-Silver), E. E. Lewis, Inc., Bessie Jr. claims, La Plata County, Colo.

The Bessie Jr. group of claims was examined July 31, 1965, in response to the subject application for exploration assistance in minerals exploration. Exploration of a purported extension of the productive Bessie G vein, by means of 1,750 feet of drifting and raising at an estimated cost of $115,877, is proposed in the application. The examination was made with Mr. Dudley L. Davis, an engineer and geologist of the applicant company.

Location of property

The five unpatented lode mining claims included in the application (Oro Verde, Blue Eagle, La Puerto al Oro, Bessie Jr., and Apache) are in unsurveyed sections 30-37N-10W and 25-37N-11W, NMPM, California Mining District, San Juan National Forest, La Plata County, Colo. This location falls in the rugged La Plata Mountains of southwestern Colorado, some 14 airline miles northwest of the regional commercial center of Durango. The contiguous group of claims lies at altitudes of 11,200 to 12,300 feet in Columbus Basin, a large cirque at the headwaters of the La Plata River. Access is by means of a county road that turns from U.S. Highway 160 about 10 miles west of Durango and follows the river northward for a distance of some 14 miles. Merely a rough mountain road exists in the upper reaches of the river, and the final 1-1/2-mile stretch into the basin proper is accessible only by Jeep.

Ownership of property

The five claims are held by possessory title by Charles C. Goulding of Durango and are recorded in Book 371, pages 338-42, of the records of La Plata County. On August 29, 1963, Goulding leased the five claims, with option to purchase, to Dow O. Hough. This lease and option is for a period of 7 years and calls for a royalty of 10 percent of the net value of any ore produced from the property. A minimum royalty of $500 a year is stipulated and all royalties in excess of this minimum are to apply on the purchase price of $24,000. Hough, on October 16, 1964, assigned his rights in the lease and option to E. E. Lewis, Inc., the applicant, for an overriding royalty of 3 percent beginning after the purchase price has been paid.

Existing development

The property in Columbus Basin is little developed except for the Red Dump adit and a few shallow surface prospects, all on the Blue Eagle claim. The Red Dump adit, at an altitude of 11,357 feet, evidently was driven a total distance of some 250 feet on a general course of about S 62° E. Two fairly recent prospects lie 100 to 150 feet south of this adit and some 250 to 350 feet higher on the basin slope. Other, apparently early-day prospects fall along the crest of the ridge marking the boundary of the basin, at altitudes in excess of 12,000 feet. An access road, now in poor repair, extends to the portal of the adit and to the lower prospects.

The property normally is inaccessible for 7 to 8 months of the year owing to the heavy snowfall in the basin. On the date of inspection, a large snowbank yet blocked the road in the floor of the basin. Access to the Red Dump adit also was blocked by the remains of another snowbank that virtually covered the portal and restricted the natural drainage of the still flooded underground workings.

The well-known Bessie G gold mine lies immediately east of the applicant's claim group, on the opposite side of the high ridge separating Columbus Basin from Heffernan Gulch in the headwaters of Junction Creek. The west end of the Bessie G claim abuts the east end of the Blue Eagle claim at, or very near, the crest of this ridge. Mine development consists of 3 adits extending westerly along the nearly vertical Bessie G vein, at altitudes of about 11,625, 11,700, and 11,775 feet. The westernmost development of the vein apparently does not extend beyond the crest of the ridge, if that far. An aggregate production of 710 short tons of largely handsorted ore, averaging 10.4 oz/T gold and 10.6 oz/T silver, has been recorded for the mine from 1887 through 1955. Total value of this production, at current metal prices, is about $269,000.

A straight-line projection of the development workings on the Bessie G vein, for a distance of some 1,100 feet to the western side of the ridge in Columbus Basin, would intersect the projected course of the Red Dump adit about 150 to 250 feet ahead of its present face. However, there is evidence that the Bessie G vein does not extend to the west side of the ridge, at least not on this projected straight line course.

Several other small mines and prospects occur along the east side of the ridge, on structures roughly paralleling the Bessie G vein. Very small, if any, production is reported for these early-day operations.

Description of deposit

The geology and ore deposits of the La Plata District are described by E. B. Eckel in Professional Paper 219, and only a few pertinent details of the immediate area involved in the application will be discussed.

Metamorphosed shales and sandstones of the Cutler formation (Permian) crop out in most of Columbus Basin. The overlying metamorphosed shales and mudstones of the Dolores formation (Jurassic) are exposed high on the eastern slopes of the basin and form the crest and eastern slope of the ridge between Columbus Basin and Heffernan Gulch. A large diorite stock intrudes the sediments near the head, or south end, of the basin; and a thick diorite-monzonite porphyry sill occurs in the upper strata of the Cutler formation (near the Cutler-Dolores contact).

Exposures of the porphyry sill are evident along the steep eastern slopes of the basin but its exact hanging and footwall contacts (and thus its true attitude) are largely obscured by slide rock and alpine vegetation. Apparently the sediments are upwarped against the intrusive stock at the head of the basin. Plate 2 of Professional Paper 219 shows Cutler strata dipping 54° northeasterly near the head of the basin but only 34° northeasterly lower in the basin. The Red Dump adit evidently falls somewhere between these two points. (The attitude, as well as the degree of discordance, of this massive sill in the vicinity of the adit is pertinent inasmuch as it is one of the targets of the proposed exploration program.)

There is little surface evidence of the structure on which the Red Dump adit might have been driven, and the underground workings were not accessible for examination. However, an examination of the dump indicates that at least some mineralized vein material (obviously quite narrow) was encountered. Selected specimens of this latter material assayed 0.12 oz/T gold and 5.21 oz/T silver.

The narrow, unmineralized shear zone (or zones) exposed in the two lower prospects is nearly vertical and strikes about due east.

According to Eckel: "The Bessie G vein strikes N 75 E and dips steeply toward the north. At its outcrop on the ridge above Columbus Basin it consists of a 2-foot to 3-foot shear zone along which the porphyry and red beds are altered and pyritized but which contains little or no quartz. Near the crest of the ridge the vein intersects a fissure of northwesterly trend, known as the Bessie G, and apparently stops."

Plate 2 of Eckel's paper indicates that the aforementioned "fissure of northwesterly trend" continues about 1/8 mile down the slope of Columbus Basin to a point on the outcrop of the porphyry sill where it, in turn, junctions with an east-west trending structure. This latter structure probably represents the Cleveland-Big Four vein, which can be traced on both sides of the ridge. The old topographic base used for Plate 2 reportedly was not too accurate, and some of Eckel's geology admittedly was generalized to fit this base. However, neither the main Bessie G vein nor any of the structures immediately associated with it, are shown extending southwesterly into Columbus Basin, to the proximity of the Red Dump adit.

The implication in the applicant's geologic report that either the Red Dump fissure or the shear zone exposed in the lower prospects represent the Bessie G vein is not verified by any factual evidence. A further statement therein, that the Bessie G vein merely changes strike from S 70° W to N 80° W and continues to become the Red Dump fissure, is equally unsubstantiated.

Proposed exploration

The applicant has proposed rather extensive and obviously high-cost exploration of the shear zone exposed in the two surface prospects south of the Red Dump adit, largely on the supposition that this structure represents the southwesterly extension of the productive Bessie G vein. Such exploration would be accomplished by extending the Red Dump adit some 250 feet southeasterly to the purported Bessie G shear zone and by drifting about 800 feet northeasterly along this zone to the property line.

The junction of the Red Dump fissure and the shear zone is considered favorable for mineral concentration and is one of the stipulated exploration targets. A 200-foot raise on the junction of these structures is proposed, if conditions warrant. However, the most promising location for finding ore along the shear zone, and the second stipulated exploration target, is where this structure cuts the massive porphyry sill. Two raises, each about 250 feet high, are proposed to test the zone in or adjacent to this sill.

In addition to the 1,700 feet of underground exploration, the proposed project calls for repair of the old access road in Columbus Basin, rehabilitation of the portal of the Red Dump adit, and construction of a shop-warehouse building at the site.

Estimated costs

The unit and total costs of the proposed project, as estimated by the applicant, are shown below. Detailed breakdowns of the estimated costs of drifting and raising are included in the application.

Proposed work	Units	Unit cost	Total cost
Drifting - untimbered	750 ft	$ 62.39	$47,468*
- timbered	300 ft	73.27	21,981
Raising - untimbered	200 ft	52.84	10,568
- timbered	500 ft	63.72	31,860
Road repair	59 dozer hrs	17.00	1,000
Adit rehabilitation	job	1,000.00	1,000
Surface building	job	2,000.00	2,000
Project total			$115,877**

* Should be $46,793
** Should be $115,202

The proposed road repair, adit rehabilitation, and surface construction are necessary, and the amounts estimated for such work are considered justified.

Drifting and raising costs in the remote area of the project are expected to be high but should not be as high as indicated. The estimated rates of advance, labor requirements, and wage scales are reasonable enough. However, some obvious reductions in cost are immediately apparent for such items as supervision and technical services, equipment rental, drift and raise timbering, and certain materials and supplies. A few of the latter items appear to have been duplicated. Also, the applicant's estimate shows no reduction for the salvage value of such nonexpendable items as track, pipe, and the surface building.

A detailed reestimate of the project costs is not being made for obvious reasons. Nevertheless, a cursory analysis of the costs itemized by the applicant indicates that the overall direct expense of driving both an untimbered drift and a timbered raise under the conditions anticipated should fall in the range of $50 to $55 a foot. Drift timbering, where needed, should not exceed $5 to $6 a foot.

Other considerations

Raising to a height of 200 feet on the junction of the Red Dump fissure and the shear zone appears to be impossible inasmuch as the surface is (according to the applicant's section) not more than 150 feet above the adit level at this location.

An aggregate of 500 feet of raising at other locations along the shear zone may not be warranted. Part of this proposed work might be better expended in exploring other splits and branches of the shear zone or in testing the walls for possible parallel structures.

Probably all the raise headings should be fully timberesupported.

Any exploration of the shear zone closer than 100 feet of the east end line of the applicant's property probably cannot be justified inasmuch as it would benefit the adjoining property.

The applicant is considered to be a reputable and experienced mining operator and should be able to carry out the proposed exploration program to a successful conclusion.

Conclusions and recommendations

Some exploration of the westerly extension of the Bessie G vein into Columbus Basin probably would be warranted providing such an extension could be substantiated and identified. However, virtually all available evidence indicates that this vein does not extend into the basin, at least not on a course that would identify it with the shear zone which the applicant proposes to explore. Without its more certain indentification as an extension of the Bessie G vein, the shear zone on the applicant's property must be considered just another of the numerous unmineralized or slightly mineralized structures in the area, and thus not worthy of exploration.

The ore mined to date on the Bessie G vein has occurred in very small high-grade pockets, and total production over the past 80 years has not exceeded a value of $269,000. The possibility of finding large ore shoots on the veins in this area is remote. Consequently, an exploration project of the magnitude proposed by the applicant probably cannot be justified.

The true attitude of the massive porphyry sill on the applicant's property is another unknown factor that makes the proposed exploration less attractive. It is possible that the shear zone does not penetrate this favorable host rock, at or near the adit level, within the boundaries of the property.

Perhaps the applicant could provide the additional information needed, or would be willing to perform the added work required, to more effectively evaluate the exploration potential of this property. If not, then it must be assumed that the proposed exploration would not result in a significant discovery and thus does not meet the minimum requirements for Government financial assistance.

Original signed by

R. L. Bolmer

cc: OME-WO
Docket OME-6384
OME chron file
M. H. Salsbury, B.M.
R. L. Bolmer, B.M.