Bldg. 20, Denver Federal Center
Denver, Colo. 80225

February 4, 1965

Memorandum

To: George C. Selfridge, Chief
Division of Exploration Operations
Washington, D. C. 20240

From: Acting Field Officer, OME, Region III

Subject: Report of Examination
OME-6399
Sil-Bak Corporation
Silver Balls Mine
Clear Creek County, Colorado

Attached is the subject Report of Examination by R. G. Shabe, Mining Engineer.

The Field Examiner recommends that the application for OME assistance be denied. I concur in this recommendation.

ORIGINAL SIGNED BY

Hugh M. Connors

UNITED STATES
DEPARTMENT OF THE INTERIOR
STEWART L. UDALL, SECRETARY

OFFICE OF MINERALS EXPLORATION

REPORT OF EXAMINATION BY R. G. RAABE
REGION III

OME-6399

Sil-Bak Corporation

Griffith Mining District

Clear Creek County, Colorado

Silver

Engineering and Geologic Report

by

R. G. Raabe

February 3, 1965

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GMR-6399

SIL-RAK CORPORATION
GRIFFITH MINING DISTRICT
CLEAR CREEK COUNTY, COLORADO

By R. G. Raabe

INTRODUCTION AND SUMMARY

On December 18, 1964, the Sil-Rak Corporation, 726 South Main Street, Decatur, Illinois, applied for GMR assistance to explore for silver in the Silver Belle Mine, Griffith Mining District, Clear Creek County, Colorado. The project consists of 825 feet of drift, raise, and winze at an estimated cost of $86,187.50. Government participation at 75 percent would be $64,640.63.

The property was visited on January 20, 1965, in company with Theodore Rakhen commissioned by Sil-Rak Corporation to supervise the proposed work, and Hugh M. Connors, Acting Field Officer, GMR, Region III.

The proposed silver exploration is planned to test several structures exposed in the Silver Belle workings by drifting, raising, and sinking.

The Georgetown area was noted for the mining of high grade silver ores in the 1880's. Several properties near the Silver Belle produced appreciable tonnages before the turn of the century. The chief characteristic of these deposits, besides precious metal content, is their narrow width and habit of pinching out at shallow depth. Most ore in the district was taken within 400 feet of the surface.

Structures intersected in the Silver Belle adit are 100 to 300 feet below the surface, the best possible position in regard to depth, but they are either barren or very weakly mineralized.

In view of the habit of ore occurrence in the district, i.e., the best ore is in the uppermost 400 feet of a vein with the surface portion being the richest, the Silver Belle workings must be considered discouraging. The possibility of finding ore bodies large enough to be significant is poor and denial of the application under GMM-6399 is recommended.

ACKNOWLEDGMENTS

Data on the property was furnished by the applicant which included three letter reports by D. R. Williamson, Project Engineer, Colorado School of Mines Research Foundation, Inc.

The writer has drawn freely from Federal, State, and other publications and from unpublished data in files of the Bureau of Mines.

LOCATION, TOPOGRAPHY, AND CLIMATE

The Silver Belle property, Griffith mining district, is in sec 5, T 4 S, R 74 W, Clear Creek County, Colorado. The property is accessible via U.S. 6, one mile north of Georgetown, then one-eighth mile west on a gravel road. The adit and compressor house are visible from the highway. The property is two miles northeast of the famous Silver Plume mining district.

Topography is rugged and mountainous - the average altitude of the area is about 10,000 feet and many mountains in the area exceed 11,000 feet. The Silver Belle portal, near the base of Democrat Mountain in Clear Creek valley, is about 8,500 feet in altitude.

Vegetation adjacent to the Silver Belle property is sparse and consists of scattered low shrubs and a few trees. The average annual

precipitation at Georgetown and in the valleys, which are usually free from snow much of the winter, is 19.5 inches - snow line on the higher mountains most of the year.

HISTORY AND PRODUCTION

Although considerable production of silver-bearing galena and blende ores from nearby mines, mostly during the late 1880's, is a matter of record, there has been no production, present or past, from the Silver Belle property.

About 500 feet north of the Silver Belle portal another adit, approximately 50 feet higher, is roughly parallel to the Silver Belle workings. The adit has been variously known as the Georgetown, Clara B., Commonwealth and Lupton tunnel. This property has a recorded production for the years 1920 through 1937 of only 1,664 tons (U.S. Bureau of Mines Statistics). However, the average grade of the ore was 470.34 oz. of silver and 0.11 oz. of gold per ton with minor base metals. During one year, 1937, 1,000 tons (60 percent of total production) was taken from a small pocket - the average grade of this ore, in silver, was 655.50 oz. per ton.

Since November 1963, the initial 190 feet of Silver Belle crosscut adit was opened and rehabilitated by the applicant and approximately 800 feet of additional crosscutting and drifting was accomplished. The purpose of this work was to intersect and drift on several veins or structures projected from the surface. The applicants consider this work to be in a prime area for exploration because of its proximity to the Commonwealth-Lupton workings and a 200-foot shaft on the Nuckols vein. High

grade silver was reported to have been taken from the shaft during the early days of mining.

OWNERSHIP

The Silver Belle property, referred to by the applicants as the Silver Belle mine, originally consisted of 11 claims (6 patented and 5 unpatented), and 190 feet of crosscut adit, referred to in the application as tunnel. The Silver Belle was acquired by Mr. Theodore Bakken when the property was sold for delinquent taxes.

On November 9, 1963, Bakken entered into a lease and/or purchase option with the Sil-Bak Corporation, and on November 5, 1964, the Corporation acquired 25 percent ownership in the property from Bakken by Quit Claim Deed.

PRESENT STATUS

Exploration and Development

The Silver Belle property has been explored by 190 feet of a westward-trending crosscut adit (opened and rehabilitated by the applicant), extending this adit northwest 500 feet to intersect a structure called the Cross vein, and finally drifting north on the structure about 300 feet to intersect the Buckeye vein. Several structures intersected by this work are plotted on the applicant's map with the proposed additional exploration (see attached map).

No ore has been exposed and the structures encountered, to date, show little promise a significant discovery will be made.

Mining Equipment

Included among several items of mining equipment the Sil-Bak Corporation has on hand at their property are two 125 cfm compressors and a wooden compressor building, two 45 lb. jack-leg drills, two 1-ton mine cars, one 600 lb. stoper, and a mucking machine.

GEOLOGY AND ORE DEPOSITS

Rocks exposed at the Silver Belle property reflect the main rock types of the district, i.e., Precambrian crystalline rocks of the Idaho Springs formation and the Silver Plume granite with attendant dikes and stocks of several rock types. Tertiary dikes, common throughout the district, are probably present but were not noted during the examination.

Ore deposits of the district are confined to fissure veins of essentially two types; pyritic gold veins and the silver-lead-zinc veins characteristic of properties adjacent to the Silver Belle. The silver-lead-zinc ores range in grade from about 20 to several hundred ounces of silver to the ton. The associated base metals vary from 2 to 5 percent in lead and from 4 to 40 percent in zinc - the gold content averages between 0.01 to 0.21 ounces per ton.

In the Georgetown area the most favorable wall rock is granite and porphyry - schist is usually unfavorable. Some ore shoots in the district have been relatively large extending 600 to 1,500 feet in depth. However, in general, veins in the district are characteristically narrow (1-3 feet) and the ore bodies become smaller, less continuous, and deficient in silver with depth. As a rule the best ore is in the uppermost 400 feet

of a vein with the surface portion being the richest. Base metal mineralization may extend considerably below 500 feet, but is usually low grade with respect to silver.

Most high grade ore in the district has been taken within 200 feet of the surface. The long adits or tunnels, common in the district, have encountered mainly barren unmineralized lodes beneath the well-mineralized, shallow, near-surface deposits. The proximity of the known shoots to the surface with almost no mineralization at a depth of a few hundred feet suggest the ores were deposited by descending surface waters.

PROPOSED EXPLORATION

The applicant proposes to explore the Silver Belle property by 825 feet of drift, 400 feet of raise, and 25 feet of winze. This work is proposed to be done in eleven different working places, viz., 5 drifts, 5 raises, and 1 winze (see attached map). The applicant estimates the cost of this work to be $86,187.50, or $68.95 per foot, of which Government participation at 75 percent would be $64,640.63.

The exploration plan appears to be one whereby the applicant, not having a good exploration target, is willing to drive on any fracture, fault, or vein in the hope of finding ore. The two strongest structures exposed within the workings, Cross vein and Nuckols vein, show only scattered and weak mineralization - their potential as ore producers is not good. The Christmas vein, reported to be "high grade" by the applicant, has even less potential.

The Cross vein averages about 2 feet in width and consists essentially of quartz, feldspar, carbonate, and gouge - locally, scattered weak sulfide mineralization is discernible.

The Nuckols vein is a quartz-carbonate-gouge stringer about 1-3 inches in width with a dark colored mineral, possibly a sulfide, locally filling minute fractures. The Nuckols vein was sampled underground (NOR #1) and on the surface (NOR #2) (see attached map). The sample at the surface, cut about 50 feet north of the Nuckols shaft, is 1.5 feet wide consisting of iron oxide stained gouge - no sulfides were visible. At the surface the dip of the vein is vertical - the strike length, except in the shaft area, is concealed by overburden.

The samples have been sent to the Salt Lake City Metallurgy Research Center to be assayed for gold, silver, lead, and zinc. The results are not yet known, however, it is felt they will not materially influence the recommendations in this report.

The applicant's plan and method of conducting the exploration appears to be based more on hope than sound mining and geological principles.

CONCLUSIONS AND RECOMMENDATIONS

The geologic probability for a significant discovery of ore on the Silver Bells property is poor.

A lack of ore near the surface and at a depth of a few hundred feet would virtually eliminate any property in this district for serious exploration consideration. Most mines in the district produced the best

values in the upper portion of their veins. These surficial deposits gradually diminished to low-grade mineralization with a few hundred feet (200-400) of sinking.

The applicant has proposed to drive on several structures intersected in the workings in the hope of finding ore (see attached map). None of these structures are promising and it appears the applicant is willing to drift on any structure regardless of the geologic probability of finding ore. Further, these structures are 100 to 300 below the surface - the best possible zone in which to expect ore mineralization. In this district where every known ore body is a relatively near-surface deposit that diminished in grade or pinched out a few hundred feet in depth the chances of success for the Silver Belle exploration project are almost nonexistent.

Denial of the application under OMR-6399 is recommended.

SIL-BAK INC.
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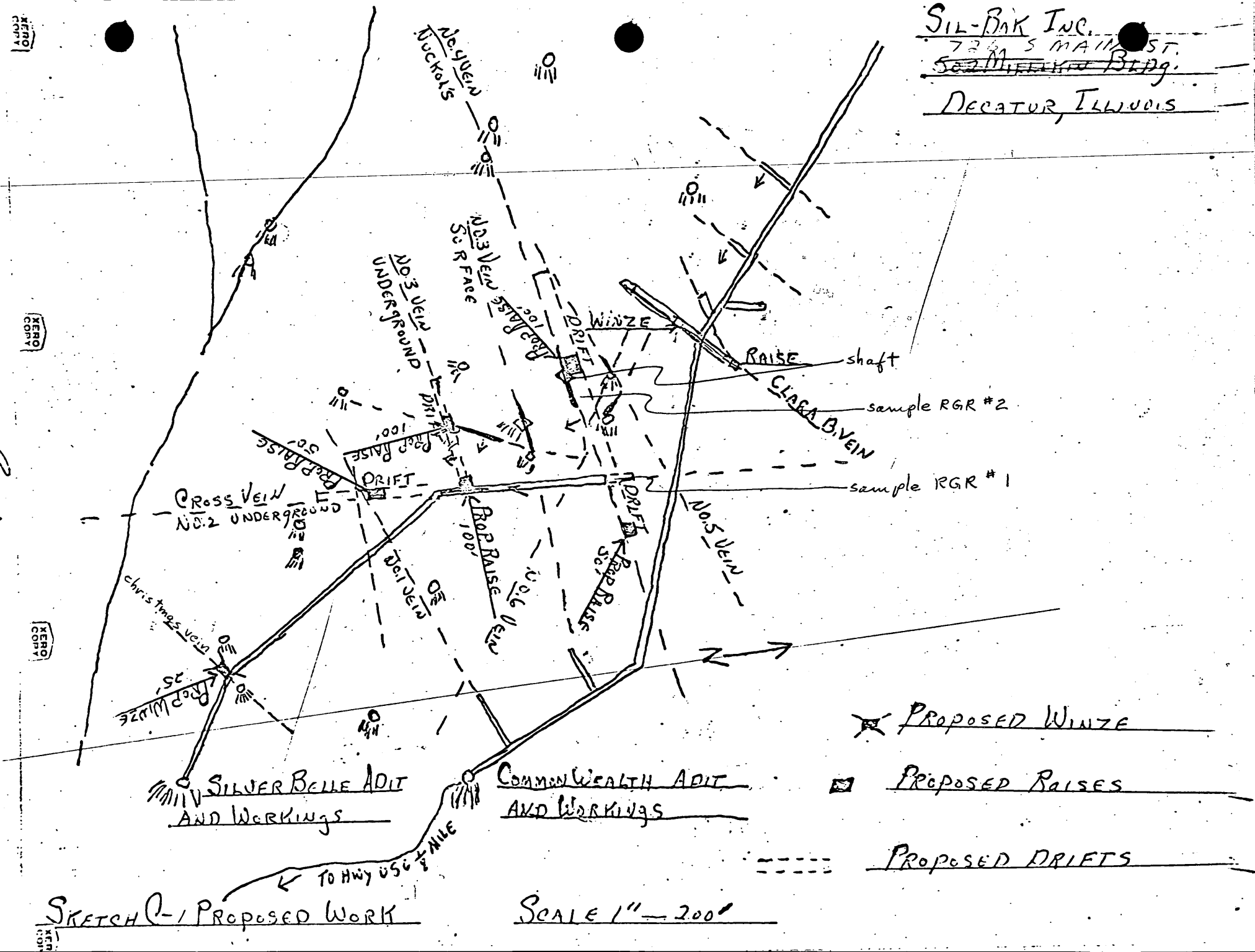
~~Sea Milling Bldg.~~
DECATUR, ILLINOIS



SKETCH C-1 PROPOSED WORK

SCALE 1" = 200'