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May 23, 1963

Mr. Paul C. Henshaw
Vice President, Exploration
Homestake Mining Company
100 Bush Street
San Francisco 4, California

Dear Paul:

Re: Gordon Lawrence claims
Cochise County, Arizona

On May 19, 1963, I examined the mineral showings of Gordon Lawrence, who resides at 1918 Tompkins Avenue, Douglas, Arizona. The property was presented to Breck Parker and referred to me for examination. It consists of five unpatented lode mining claims held by Gordon Lawrence and three associates and is situate about nine miles due east of Douglas and about 1½ miles north of the Arizona-Mexico boundary.

The area has been prospected by a few pits and shallow shafts. The Grand Arizona mine, from which small shipments of silver-copper ore may have been made around 1910, lies about one-half mile to the south.

Bedrock in this area consists of Cretaceous sediments intruded by sills of porphyritic rock of supposed Tertiary age. Volcanic rocks lie to the north, whereas the valleys to east and west are covered by alluvium.

The Cretaceous sediments consist of interbedded limestone and chert-argillite which dip westerly at varying angles. The porphyry appears to be in the form of several thick sills, one of which covers much of the property examined.

Mineralization occurs in a few thin zones one foot or less in width following the sedimentary bedding, or in segments of beds between steep fractures or faults. It consists mostly of glassy quartz associated with a brown-weathering carbonate. Chalcopyrite occurs in the quartz as small grains and patches, and much of this is oxidized to "copper pitch" in which tiny residual spots of chalcopyrite commonly remain. This is associated with specks and smears of chrysocolla, malachite and azurite. Where the chalcopyrite has been completely converted to "copper pitch" without associated green and blue copper-bearing minerals, the only evidence of its former presence is the "pitch", which resembles droplets of brown volcanic glass.

Unfortunately "copper pitch" and other evidences of copper mineralization are confined to small and scattered occurrences, and most of the exposed sediments are barren of white quartz and associated metallization. The dense silica in the chert-like argillite does not appear to be a product of mineralization, and chalcopyrite does not accompany it.

The porphyry presents a brown iron oxide wash on weathered surfaces, but the interior of the rock is rather fresh and unmineralized. It is not fractured or sheeted like a typical porphyry copper host, it shows no hydrothermal alteration, and it reveals no evidence of sulfides having been leached from it.

Nevertheless, Mr. Lawrence reports assays of a few tenths of one per cent of copper from surface samples of both the sediments and the porphyry in which no copper mineral, white quartz, nor iron oxide can be identified. This is puzzling because Lawrence appears to be a reliable person and he has employed a reputable assayer. His surface samples, however, come from an area only 15 miles distant and in the path of the prevailing wind from a copper smelting plant that has been active for about 60 years. Might this be a case of surface salting by smelter smoke?

The Lawrence property is interesting because its general features are similar to the geologic arrangement at the Pima deposit. However, the mineralization on these claims east of Douglas is weak and scattered. Although the better showings appear to dip westerly beneath the porphyry sill, the possibility of their spreading into a worthwhile deposit at depth appears to be remote.

Consequently my recommendation is that no further action be taken here.

Yours very truly

E. N. Pennebaker

ENP:mc

cc - Mr. Breck Parker

NANCO MINING CORP. Near Hilltop
Chiricahuas
Gerhardt, accountant Cochise Co.

Lucky Strike Chiricahuas Will carry

Nanco Mining Corp.
20600 Eureka Road
Suite 815
Taylor, Michigan 48180

unpatented
12± mining claims

Gerhardt on phone: McKenna on schedule
Old prod ± 200 tons
Old mine, recently re-opened
by Nanco Min Corp.
Shipped 1000 tons 100 on stockpile
@ 2.66 ± $/ton

Then mined another 1000 tons
Owners now out of money

5 openings.

McKenna says 8 oz./ton
Picked samples ?

1 Drft. 14×14
2 8×8

5 or 6 miles
Just below old Hilltop mine

El Tigre Mine