0450 0021

(228) Item 21

PROPERTY NAME: Sterling Mine

OTHER NAMES:

MINERAL COMMODITY(IES): Au

TYPE OF DEPOSIT: Disseminated gold

ACCESSIBILITY:

OWNERSHIP: Saga Exploration Co. (Greg Austin)

PRODUCTION:

HISTORY: Discovered in 1980 by Cordex exploration (J. Livermore, W. Delamare) Delamaire

County: Nye

Mining District: Bare Mountain

AMS Sheet: Death Valley

Quad Sheet: Bare Mtn. 15'

Sec. 5? , T 13S , R 48E?

Coordinate (UTM):

North 4|0|7|5|8|0|0 m

East 0 5 |3|1|9|0|0 m

Zone 11

DEVELOPMENT: Shallow inclined shaft (approx. due S), operated by trackless vehicles; Ambrose open pit about 0.3km to the south. Heap-leach pads near mine and an alluvial fan to the east.

ACTIVITY AT TIME OF EXAMINATION: Limited mining underground; striping wast at open pit.

GEOLOGY: Disseminated Au mineralization(free, microscopic gold) occurs along a thrust fault between upper plate siltstone and lower plate dolomite. The mine geologist calls the upper plate Johnnie Fm and the lower Bonanza King. The Southern Nye County NBMG Bulletin calls the rocks Wood Canyon and Bonanza King (upper and lower plate respectively). The ore body or bodies occur mainly in the siltstones just above the thrust ~~fan it~~ fault. Ore shoots? appear to rake down dip of the thrust (south), which is 5-10° near the surface and up to 20° in the deeper workings. These shoots? are apparently controlled by lateral or strike-slip faults in the upper plate. These lateral faults are high angle, trend N-S, and may be related to the trust faulting. Later (tertiary?) high angle, N-S normal ~~fan it~~ fault; of minor displacement have white (calcite along them (often banded), open cavities, and may have acted as feeders for hydrothermal solutions, which deposited Au and altered the siltstone of the upper ~~plate~~ plate fm. Hydothermal breccias are common in the ore zones.

The altereation in the ore consists of kaolinite, halloysite, alunite, limonite, jarosite. Fluorite is locally present, also calcite. Stibnite seen at one small spot; cerrussite at at another locality. The Au is very fine-grained; ore below ~~.1~~ 0.1 oz/ton is not mined; grades ore generally 0.5-1 oz, can be up to 4 oz/ton. Ag is very low in the ore. The ore runs in the thousands of ppm As, 100's of ppm Sb, and as high as 5000 ppm Hg. Rocks are silicified below the ore. The ore zone can be as thick as 20m and as wide as 25m; the average thickness is 5m.

Mineralization in the Ambrose open pit is similar although not well understood. It is associated in part with a N-S lateral? fault in siltstone above the thrust fault a short distance. Lead may be anomalous in the ore; the ore is almost all oxidized - a few sulfides present locally. The alunite is fine-grained and could be supergene. The deposit is essentially blind, especially the underground one. Heap leaching of ore, 75-90% recovery.

REMARKS: Photo G821-11? Ambrose open pit, #12 heap leach pads on the alluvial fan. Samples 376,377.

Geology (cont.). A few small pods of galena were found in the underground workings; some pyrite may also be present locally. Some workings about 300-400m NNW of the incline shaft are reported to be high in silver (They were not visited)

REFERENCES: USGS G.Q. 157, NBMG Bull. 77.

EXAMINER: L.J. Garside & J.V. Tingley; mine tour with Joseph Marr DATE VISITED: 25 Mar 82