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Item 64

Figure 12. Geology of the Pinson Mine Area. After Kretschmer, (1986)

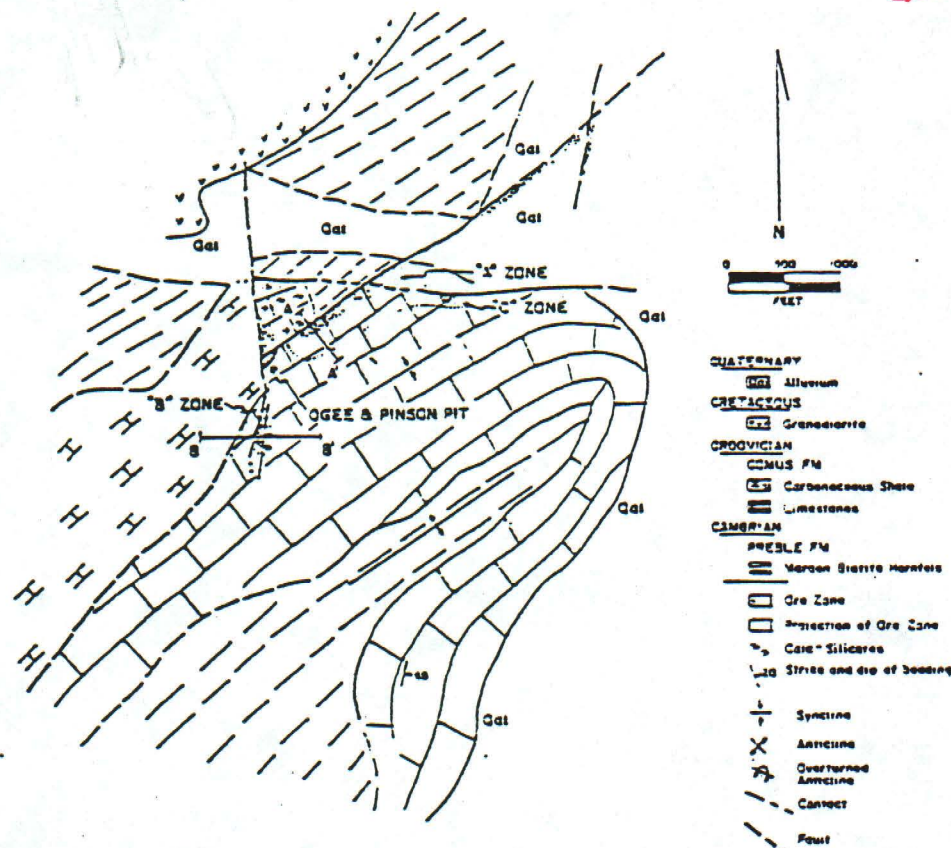
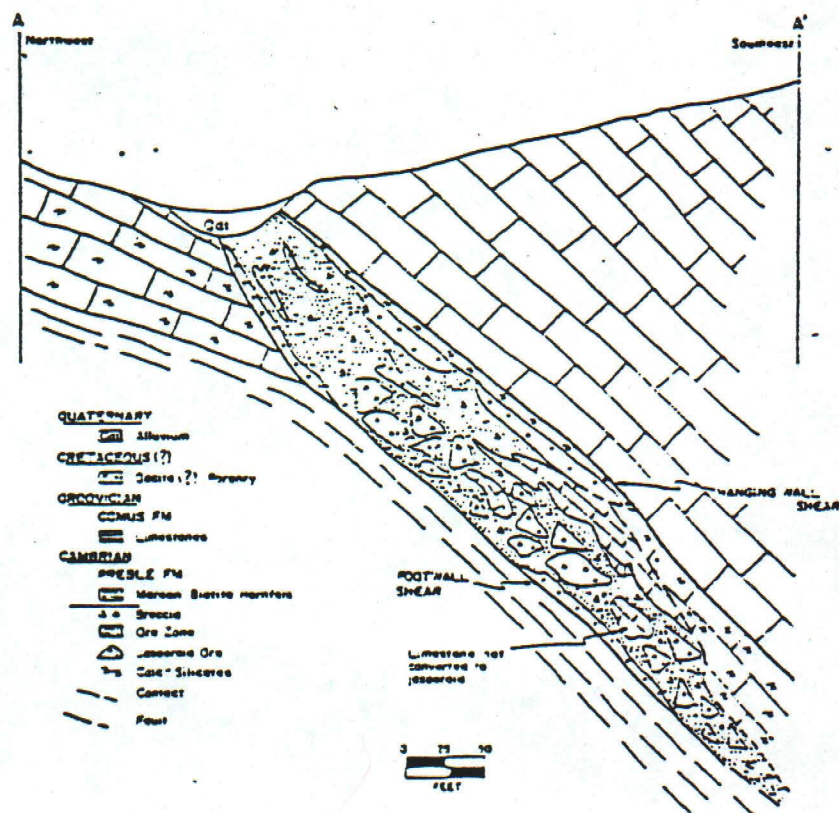


Figure 13. Cross section of the Pinson Ore Zone, "A" ore body. After Kretschmer, (1986)





205.5

EXIT 205 PUMPERNICKEL VALLEY. The Snowstorm Mountains, on the northeast skyline at about 9:00, are just north of the Midas gold district. The mountains are composed of a thick sequence of silicic volcanic flows, ash flows, and plugs associated with a volcanic province that extends north to the Idaho border.

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The open-pit mine and mill complex at Goldfields' CHIMNEY CREEK mine can be seen low in the distance at about 8:30, along the east edge of the Dry Hills. Announced mineable ore reserves are 22.55 million tons grading .078 opt gold. The higher grade portion of the deposit (6 million tons grading .18 opt gold) will be treated in a carbon-in-pulp mill at the rate of 704,000 tpy; lower grade ore will be heap-leached at the rate of 990,000 tpy (Engineering and Mining Journal 12-86).

The initial discovery of Chimney Creek was made by Goldfields' geologists John Zimmerman and Steve Brown who sampled subtly expressed mineralized jasperoid (.05 opt gold). No geologic information has been released but the deposit is believed to be a largely stratiform, disseminated ore body hosted in the Middle Pennsylvanian to Lower Permian Antler Peak Limestone. Ore is lithologically controlled by chemically favorable sandy carbonate to calcareous sandstone and siltstone units of the Antler Ls. The ore is strongly sanded; silicification is minor. Thin Cretaceous (?) granodiorite dikes and sills occur in the vicinity of the ore body. A wide fault zone, probably an en echelon strand of the Gatchell fault system, controls the mineralization. (Source: various bars throughout Nevada). Several smaller satellitic deposits are rumored to exist on Goldfields' large claim block.

Santa Fe has been drilling intensely with a large number of rigs in a one-square-mile area at RABBIT CREEK, about 2 miles south of Chimney. High-grade (in excess of 1 opt gold) intercepts are rumored, but the mineralization is believed to be deep and mostly sulfide. The deposit straddles the Goldfields' claim border and is an extension of blind mineralization discovered by Goldfields. The deposit appears to be more structurally controlled than Chimney Creek and is apparently hosted in the Ordovician Valmy Fm, which crops out both east and west of the alluviated area according to Wilden's (1964) geologic map (Source: Mining Record, June 8, 1988) (announced reserve: 2.23 million ounces).

The dumps at Gatchell and Pinson can be seen along the east flank of the Osgood Mountains at about 8:00. At PINSON gold mineralization occurs as fine disseminations in jasperoid and silicated limestone and siltstone of the Ordovician Comus Fm (fig. 12, 13). Mineralization occurs in a contact-metamorphic aureole adjacent to a Cretaceous granodiorite stock. Altered dikes and sills of intermediate composition are associated with the gold mineralization. A strand of the broad northeast-trending Gatchell fault system controls the mineralization, which is generally strongly structurally controlled, forming relatively narrow, steeply dipping ore bodies. Gold is generally submicroscopic, has a gold:silver ratio of 100:1, and occurs with silica and pyrite or iron oxides. Antimony, arsenic, and mercury, often with barium and fluorine, are important trace elements (Kretschmer, 1986). Four ore bodies (A, B, C, and Mag) have been developed. Proven and probable reserves (as of 12-31-85) were 4.84 million tons of ore grading .086 opt gold. (American Barrick Resources 1986 Annual Report)

The GETCHELL gold deposit (fig. 14) lies in a structurally prepared fault zone controlled by N10-15W Basin and Range faults dipping 40-75 degrees east. The fault zone runs along the east Flank of the Cretaceous granodiorite Osgood Stock, which intruded older, thrust-faulted, Paleozoic sedimentary rocks of the Preble, Comus and Valmy Formations. Contact metamorphism along the intrusive contact formed skarns and



# GEOLOGICAL SOCIETY OF NEVADA

## 1988 FALL FIELD TRIP GUIDE BOOK

### GOLD DEPOSITS OF NORTH CENTRAL NEVADA

Marigold

Cove

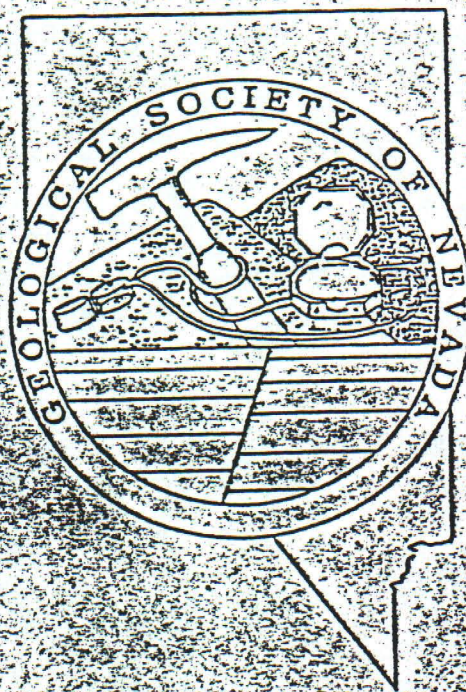
McCoy

Rain

~~Suprise~~

*Surprise*

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