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Item 42

M E M O R A N D U M

March 26, 1982

TO: M. J. Mackenzie
FROM: M. K. Boots
RE: NEVADA FIELD TRIP MARCH 1-5, 1982

Fred Warnaars and Tony Greenish organized this trip. Jean Lawler and Dean Ayres from EPRCO were also present.

Mines visited included Cortez, Gold Acres, Sterling, Round Mountain and Borealis. Brief inspections of Goldfield, Tonopah and Virginia City (Comstock) workings were also made.

Overall, the close association of "hot springs" with "Carlin type" gold deposits is striking, and definitely not coincidental! A very sound case can be made that "Carlin type" mineralization represents the roots or feeder systems of higher level "hot spring" type deposits.

CORTEZ: Reserves originally 3.4 MT at 0.29 oz./T Au
Production was 3.4 MT at 0.26 oz/T Au

Apart from the features described in publications the following was noted.

- a) Strong post depositional weathering (oxidation) is present.
- b) Not one quartz vein was seen.
- c) Silica soaking (jasperoids) were poorly developed, although silicification to a lesser degree was present.
- d) Carbonate veining was in open (post ore) fractures.

- e) The host rock (laminated silty dolomitic limestone) originally contained approximately 0.5% pyrite.
- f) The 34 m.y. old rhyolitic sill had a hornfels contact, however alteration was post intrusion, with the contact strongly altered to pale green clays.
- g) Hypogene alteration (oxidation-leaching) was fracture and fault controlled.
- h) One of the old pits is currently being filled by "hot spring" water which carries high Au and Hg values.

Nearby, another deposit of the same type, known as Horse Canyon (5.0 MT at undisclosed grade) is soon to be put into production.