

DISCOVERY AND GEOLOGY OF THE POST GOLD DEPOSIT EUREKA COUNTY, NEVADA

G. C. Knutsen, 1 K. H. Bettles, 2 C. E. Sulfrian, 2 C. J. Zimmerman 1

Newmont Exploration Limited
Western States Minerals Corporation

Excerpted from AIME Preprint No. 87-86

Introduction

The Post deposit is located in the Bluestar-Goldstrike subdistrict and was discovered in 1982 by geologists working for the Western States Minerals Corporation as part of a continuing evaluation of their holdings. Anomalous gold was first detected in subdued outcrops which contained stibulte and hydrothermal-barite. The blind orebody was encountered in the first hole, which intersected 30 m of 7 ppm gold (100 ft @ 0.2 opt), beneath 76 m (250 ft) of barren rock.

Post averages two g/t (0.06 opt) gold and contains geological reserves of about 47 t (1.5 million troy ounces). Ownership of the orebody is divided between WSMC's lode claims and Newmont's TS Ranch.

Geology of the Post Deposit

Post is located immediately north of the Jurassic-Cretaceous Goldstrike stock, primarily in a sequence of allochthonous siliceous and carbonate rocks, including units of the Ordovician Vinini Formation.

Structural Setting

A north to north-northwest-trending structural zone, which penetrates the stock, continues into the Post deposit and is considered to be the main hydrothermal conduit for the orebody. The deposit near its southern terminus is controlled by structures and restricted to this feeder zone. Farther north, where the feeder system intersects ground fractured by northwest and northeast-striking faults, mineralization is penetrative into the complexly faulted arenaceous sequence.

Lithology

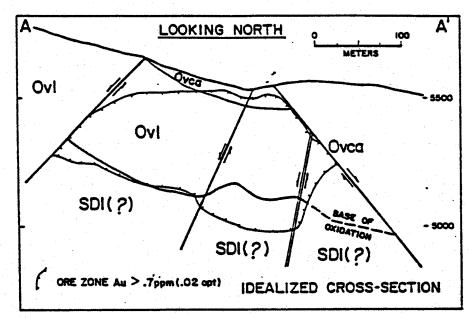
Within the 60 to 90 m (200-300 foot) thick interbedded arenaceous sequence, decarbonatized and argillized, silty and arenaceous limestones (OVss) are the preferred host to gold.

The arenaceous sequence is overlain by the very find-grained clastic rocks, including black chert and dark-colored siliceous argillites with shaley to silty interbeds. This chert-argillite sequence (OVca) hosts lesser gold values.

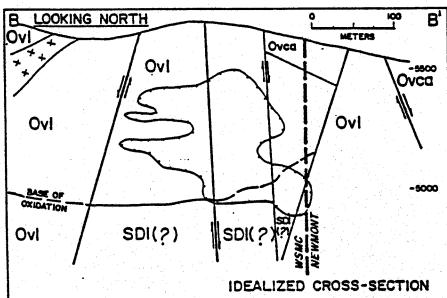
Limestones of the transitional and lower plate assemblages (OVIs and SDI, respectively) host relatively little ore, except where cut by faults and hydrothermally altered.

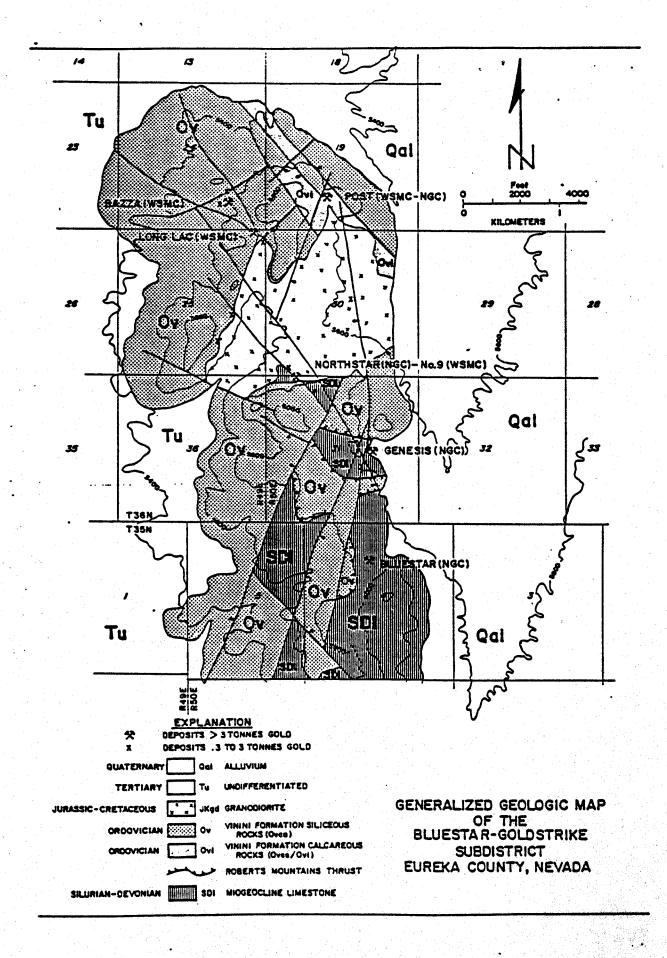
Alteration

Post is similar to most disseminated gold deposits along the Carlin Trend and is typified by argillic and silicic hydrothermal alteration. Alteration is both structurally controlled by high and low-angle faults, shear zones, and joints and lithologically controlled by favorable (permeable) sedimentary horizons.



Cross-sections of the Post ore body

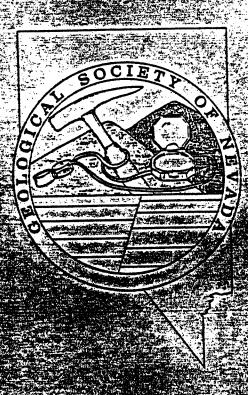




GEOLOGICAL SOCIETY OF NEVADA

1987 FIELD TRIP GUIDE BOOK

- NORTHERN CARLIN TREND
 - Bluestar, Genesis, Goldstrike/Post, Bootstrap & Dee Mines
- BIG SPRINGS



SPECIAL PUBLICATION 6

September 18-20, 1987