



2940-0112 LYNN

GEOLOGY

LYNN-RAILROAD MINERAL BELT

LEGEND





TERTIARY and QUATERNARY





-  Sediments and Volcanics
-  Extrusive and Intrusive Rhyolite

MESOZOIC

-  Granodiorite to Diorite

PALEOZOIC

-  Undifferentiated Mississippian to Permian
-  Siliceous Western Assemblage
-  Transitional Assemblage
-  Carbonate Eastern Assemblage

-  Gold Strike Mine
-  Gold Deposit
-  Thrust Fault
-  Normal Fault

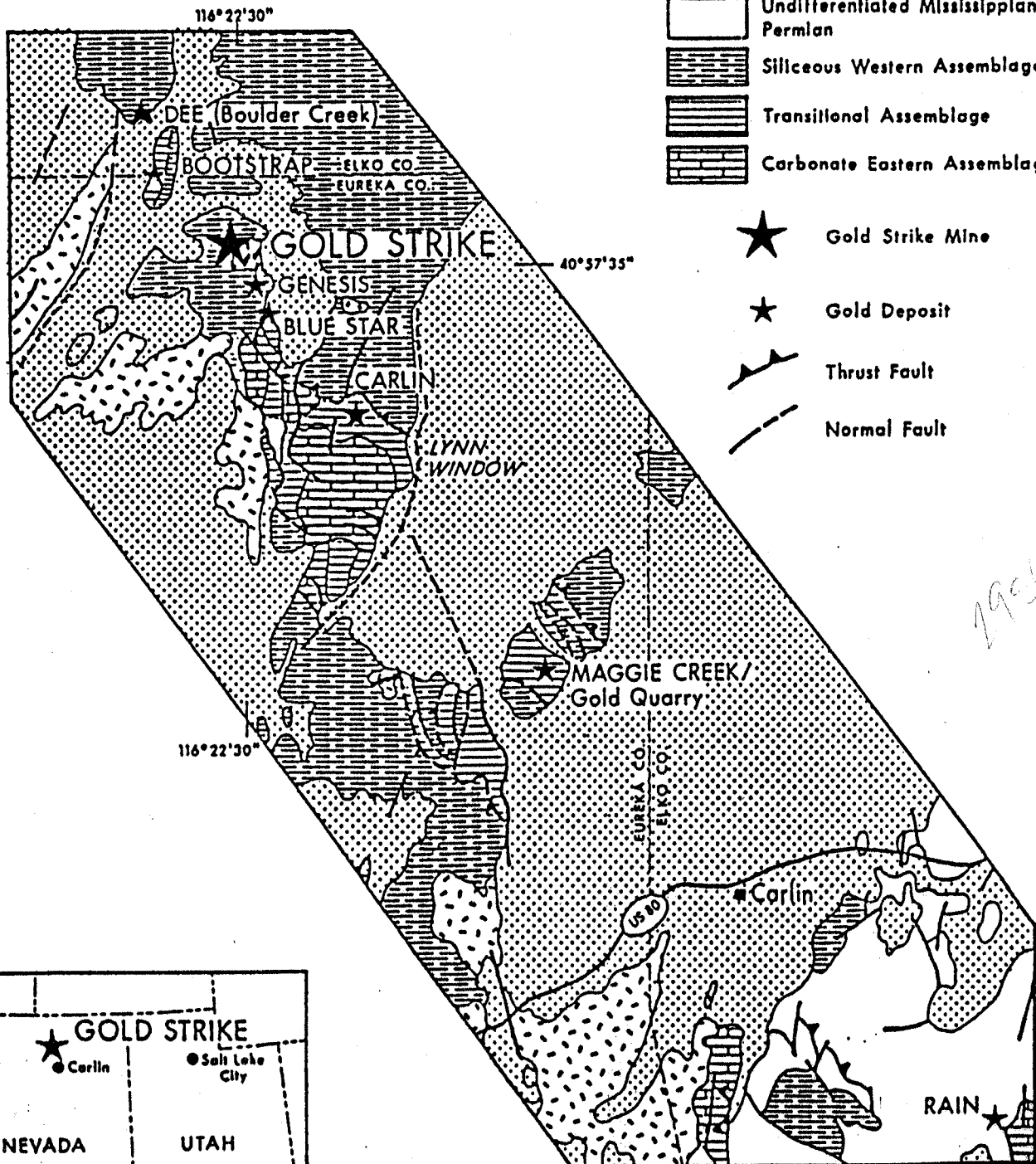


Figure 5 Geology Map

of unconsolidated Quaternary alluvium. Drilling in the area of the proposed mill and tailings facility has indicated that the area is underlain by thin veneers of alluvium overlying the Carlin Formation.

The major structural features are high-angle normal faults and low-angle thrust faults. There are three main high-angle normal fault trends, northwesterly, northeasterly and northerly. The rocks exposed in the mining area have been moderately to strongly fractured and brecciated by faulting. The Vinini Formation also is strongly folded in the vicinity of the faults.

2.1.2 Minerals

Gold mineralization has been known along the Lynn-Railroad mineral belt since 1907 when placer gold deposits were discovered along Lynn, Sheep, and Rodeo Creeks. More recently, disseminated gold deposits have become important in the mineral belt. There are eight such deposits including, from the northwest to southeast, the Dee (Boulder Creek), Bootstrap, Goldstrike, Genesis, Blue Star, Carlin, Maggie Creek/Gold Quarry, and Rain deposits (Figure 5).

At the Goldstrike Mine, gold and minor silver occur in the Vinini Formation, in granodiorite intrusives, and latite dikes. The ore bodies occur in isolated tabular to lensoidal deposits with apparent fault control. Individual deposits are separated from other deposits by barren rock or sub-economic mineralization, therefore the individual deposits have been mined in separate small open pits. Alteration includes argillization/sericitization and silicification and is much more extensive than the gold mineralization. The argillization has produced clay minerals predominated by kaolinite. The silicification has produced jasperoid that carries minor amounts of gold and silver.

The gold mineralization includes both oxide deposits and sulfide deposits. The deeper sulfide deposits are characterized by disseminated, gold-bearing pyrite and marcasite. The oxidized deposits are characterized by gold-bearing iron oxides and hydroxides which have been produced by the oxidation of sulfide deposits. The oxide deposits normally exist above the water table and extend to depths which vary from 300 to about 700 feet.

2.1.3 Seismicity

The project area is within a Zone 3 seismic zone according to the Uniform Building Code (1985). Specifically, the site is in a region of relatively low historic seismicity and lies within about 37 miles of a 1916 earthquake epicenter which registered