1960 0001

(37) Item 2

NW-31-8
Cu, Ag, Au,
Geothermal Resources

Mining District: GENOA DISTRICT
(Copper, Silver, Gold, Geothermal Steam)

T. 13 N., R. 19 E.
Carson City County, Nevada
USGS Dayton 15-min. quadrangle (1956) and Freel Peak 15-min. quadrangle (1956)

GENERAL BACKGROUND

The Genoa district is located immediately west of the town of Genoa on the east slope of the Sierra Nevada. The bulk of the area is just outside the Pine Nut resource area and in the Toiyabe National Forest.

The district was first organized in the early 1860's. Copper, silver, and gold showings were prospected but without any subsequent production. In the 1920's development work was initiated on several old prospects but was suspended soon thereafter. There is no recorded production for the district.

Small placer gold deposits occur in the Genoa area. An unknown but presumably small amount of gold was reportedly produced when the placer deposits were prospected in 1916 (4).

South of the town of Genoa, at Walley's Hot Springs, water temperatures range from 136-180 degrees F. The entire area is within a region considered prospectively valuable for geothermal steam by the U. S. Geological Survey.

GEOLOGICAL AND TECHNICAL DATA

The oldest rocks in the area are metamorphic roof pendants of Triassic and Jurassic age. These older rocks have been intruded by granitic rocks of the Sierra Nevada batholith. These two rock types presumably underlie the alluvium of Carson Valley to the east.

Mineralization is confined to fissures and veins in the metamorphic rocks and along intrusive contacts with the granitic rocks. Chalcopyrite, gold, silver, and secondary copper minerals reportedly occur in a gangue of quartz, epidote, garnet, actinolite, and tourmaline(3).

The placer gold deposits occur in Tertiary river gravels (4).

The hot springs in the area are intimately associated with the Sierra Nevada frontal fault system. This structure forms the conduit that taps a deep-seated "geothermal reservoir" of which Walley's Hot Springs is but a surface manifestitation. The presence of the hot springs along this frontal fault indicates comparatively recent movement along the fault.

Bennett, May 1973

POTENTIAL FOR DEVELOPMENT

It is unlikely that the portion of the Genoa District within the planning unit will be the site of significant minerals production in the future.

Although the temperatures at Walley's Hot Springs are somewhat low for consideration as a source of geothermal steam, higher temperature waters may exist in the areas which heretofore have not been discovered. Additionally, new processing technology (binary systems) may enable lower temperature geothermal reservoirs to be exploited in the future. Hence the future potential for geothermal development is considerably greater than that for metals production in the district.

COMPANIES AND CLAIMANTS ACTIVE IN AREA

1. WALLY HOT SPRING
   Savage Constr. Co.
   Box 970
   Carson City, Nev.
   (40 acre placer)

SELECTED REFERENCES

1. Godwin, et. al.: Classification of Public Lands Valuable for Geothermal Steam and Associated Geothermal Resources. USGS Circular 647, 1974.

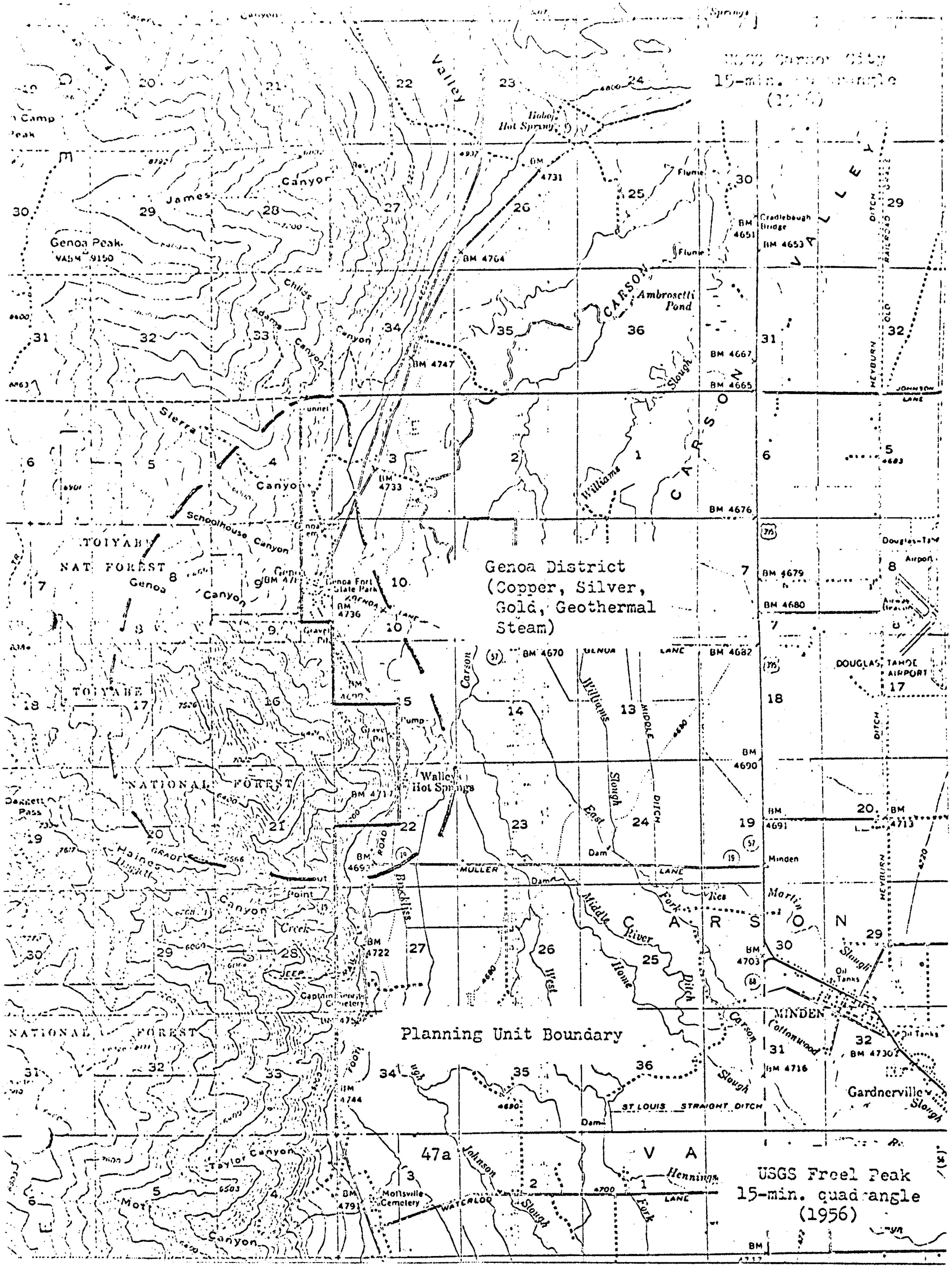
2. Moore: Geology and Mineral Deposits of Lyon, Douglas, and Ormsby Counties, Nevada; Nev. Bur. Mines Bull. 75, 1969. (Includes geologic map of area)

3. Overton: Mineral Resources of Douglas, Ormsby, and Washoe Counties; Univ. of Nev. Bull. 9, 1947.

4. Vanderburg: Placer Mining in Nevada ; Univ. of Nev. Bull. 4, 1936.

FIELD EXAMINATION

Bennett, Jan. 1972 (Walley's Hot Springs)

 15-min.
Genoa District
(Copper, Silver,
Gold, Geothermal
Steam)
Planning Unit Boundary
USGS Freel Peak
15-min. quadrangle
(1956)
Genoa Peak
Toiyabe Nat. Forest
National Forest
Carson Valley
Minden
Gardnerville
Douglas-Tahoe Airport
Walley Hot Springs
Hobo Hot Springs
Genoa Fort State Park
Mottsville Cemetery
Ambrosetti Pond
James Canyon
Sierra Canyon
Schoolhouse Canyon
Genoa Canyon
Haines Canyon
Taylor Canyon
Muller Lane
Genoa Lane
Johnson Lane
Waterloo Lane
St Louis Straight Ditch
47a

Taken from:

Mineral Resources Inventory and Analysis

of the

Pine Nut Planning Unit

Carson City District
Nevada and California

By

R. E. Bennett

1973

see Douglas County - general
Item 15
for preface & general background information