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Mud Springs (or Medicine Springs) district covers the northern end of the Medicine Range in the area between Delcer Buttes and Ruby Valley.

Lead-silver ore was discovered in the district in 1910, and the first production was recorded in 1915. A small tonnage of ore was treated at a mill at Medicine Springs during 1950-51, but no production has been recorded from the district since 1956. There are several groups of mining claims in the district, and there may be current exploration activity. No work was in progress at the time of this examination, however.

Rocks exposed in the northern Medicine Range are mainly Permian limestones-dolomite, and siltstones. These rocks are similar in many ways to older Paleozoic rocks which are known to be favorable host rocks for disseminated gold deposits elsewhere within Nevada.

The Permian sediments are cut by many normal faults that strike north to northeast. Rocks in the blocks between the steep faults dip gently northeast or northwest. Mineralization in the district appears to be related to veins which occupy the north-trending structures. The limestone adjacent to the veins is usually iron-stained, and is laced by numerous small quartz and calcite veins. The ore minerals are galena, sphalerite and lead and zinc carbonates and sulfates. The major gangue mineral is white, crystalline barite.

Only two locations within the district have workings extensive enough to have had even moderate production, the Silver Butte Mine, and the mine at sample location 044.

Geochemical results from samples taken in the district show silver values associated with lead, zinc, strontium, barium. Some samples also showed anomalous arsenic, antimony, and cadmium. Gold was not detected in any of the samples taken.

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