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Abstract for GSN Symposium, 1990; later withdrawn and replaced by two other papers of lesser scope

Title: The Gold Deposits of the Pinon Range, Elko County, Nevada

Authors: Thoreson, R. F., Putnam, B. R., Henriques, E. Q. B., Nordquist, W., and Jackson, P.

The Pinon Range is located at the southern edge of the Carlin Trend 18 road miles south of Carlin, Nevada in Elko County.

The Pinon Range is host to numerous epithermal gold deposits which occur primarily in Upper Paleozoic clastic sedimentary rocks of the Antler Sequence. Mineral deposits within the Pinon Range include Rain, Emigrant Springs, Gnome, Southern Mineralized Zone, South Bullion (Trout Creek) and the Railroad Deposit.

The Rain mine is the only deposit in production at the present time. Gold in the Rain deposit is located in the hanging wall of the NW-trending Rain Fault. The surface expression of this structure was represented by a jasperoid that displayed intense brecciation, baritization, scattered gold mineralization and locally abundant concentrations of duessertite, hematite, jarosite, limonite, and alunite. Gold mineralization proximal to the Rain Fault forms a flat-lying, blanket-like orebody along the unconformable contact between the Mississippian Webb formation and the Devonian Devils Gate Limestone. The silicified and argillized siltstones and shales of the basal Mississippian Webb Formation are host to the gold mineralization at Rain. The gold

only slightly penetrates the footwall Devils Gate Limestones.

The Emigrant Springs Gold Deposit is located one and one half miles east of the Rain mine. The gold occurs in the footwall of a NNW-trending high angle structure and penetrates laterally along the unconformable contact between the Mississippian Webb Formation and the Devonian Devils Gate Limestone. Like Rain, the host rock for the gold mineralization is silicified and argillized Webb Formation. Gold mineralization on the Emigrant Springs deposit occurs at the surface.

The South Bullion/Trout Creek occurrence is hosted within fine-grained silicified siltstones and shales of the basal Mississippian Webb Formation which rest unconformably upon the Devonian Devils Gate Limestone. The mineralization mantles this stratigraphic unconformity with only very minor gold occurring within the underlying footwall limestones. The deposit is locally structurally controlled, and the bulk of the mineralization is a broad, blanket-like body of little variation over large distance. The setting is analogous to that at Newmont Gold Company's Rain and Emigrant Springs deposits situated 11 miles to the north.

The Railroad deposit is hosted within the basal silicified siltstones and shales of the Webb/Chainman formations. The deposit exhibits strong structural control, with only local broad lateral spread into the receptive strata. The occurrence is localized along a northwest-trending structure marked at the surface by a jasperoid outcropping.

ABSTRACT

TITLE: The Gold Deposits of the Pinon Range, Elko County, Nevada
Thompson R. F., Putnam, B. R., Henriques, E. Q. B., [redacted]
Marquest, W. and Jackson, P.

The Pinon Range is located at the southern edge of the Carlin Trend 18 road miles south of Carlin, Nevada in Elko, County.

The Pinon Range is host to numerous epithermal gold deposits which occur primarily in upper paleozoic clastic sedimentary rocks of the Antler Sequence. Mineral Deposits within the Pinon Range include Rain, Emigrant Springs, Gnome, Southern Mineralized Zone, South Bullion (Trout Creek), and the [redacted] Railroad Deposit.

The Rain mine is the only deposit in production at the present time. Gold in the Rain deposit is located in the hanging wall of the NW [redacted] trending Rain Fault. The surface expression of this structure was represented by a jasperoid [redacted] that displayed intense crecciation, barittization, scattered gold mineralization and locally abundant concentrations of cuessertite, hematite, arcsite, limonite, and alunite. Gold mineralization proximal to the Rain Fault forms a flat lying blanket-like orebody along the unconformable contact between the Mississippian Webb formation and the Devonian Devil's Gate limestone. The silicified and argillized siltstones, shales, and [redacted] of the basal Mississippian Webb formation are host to the gold mineralization at Rain. The gold only slightly penetrates the foot wall Devils Gate Limestones.

The Emigrant Springs Gold deposit is located one and one half miles east of the Rain mine. The gold occurs in the foot wall of a NNW-trending high angle structure and penetrates laterally along the unconformable contact between the Mississippian Webb formation and the Devonian Devils Gate limestone. Like Rain the host rocks for the gold mineralization is silicified and argillized Webb formation. Gold mineralization on the Emigrant Springs deposit occurs at the surface.

The South Bullion (Trout Creek) occurrence is hosted within fine grained silicified siltstones, shales, and [redacted] of the basal Mississippian Webb Formation which rest unconformably upon the Devonian Devils Gate Limestone. The mineralization mantles this stratigraphic unconformity, with only very minor gold occurring within the underlying footwall limestones. The deposit is locally structurally controlled, and the bulk of the mineralization is a broad blanket-like body of little variation over large distance. The setting is analogous to that at Newmont Gold Company's Rain and Emigrant Springs deposits situated 11 miles to the north.

The [redacted] Railroad deposit is hosted within the basal silicified siltstones and shales of the Webb/Chainman formation. The

deposit exhibits strong structural control, with only local broad lateral spread into the receptive strata. The occurrence is localized along a northwest tending structure marked at the surface by a jasperoid outcropping.

DRAFT

Gold Deposits of the Pinon Range, Elko County, Nevada

Thorson, R., Putnam, B.R., Henriques, E.Q.B., and Nordquist, W.

The Pinon Range is host to numerous epithermal gold deposits which occur primarily in upper Paleozoic sedimentary rocks. Of these, the South Bullion (Trout Creek) occurrence is hosted within fine grained silicified siltstones, shales and sedimentary breccias of the basal Mississippian Webb Formation which rests unconformably upon the Devonian Devils Gate Limestone. The mineralization mantles this stratigraphic unconformity, with only very minor gold occurring within the underlying footwall limestones. The deposit is locally structurally controlled, with the bulk of the mineralization is a broad blanket-like body of little variation over large distance. The setting is analogous to that at Newmont Gold Company's Rain and Emigrant Springs deposits situated 11 miles to the north.

The Railroad deposit is hosted within the basal siltstones and shales of the Chainman Shale (?). The deposit exhibits strong structural control, with only local broad lateral spread into the receptive strata. The occurrence is localized along a northwest-trending structure marked at the surface by a jasperoid outcropping.