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Item

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RUTH MINE - NEVADA CONSOLIDATED. Paul Hett, Sup't.

GEOLOGY

Gradual gradation from ore to pre-porphyry - do not recognize 2 different intrusives - bottom of high grade (chalcocite) ore chutes contain turquoise and rounded white nodules - talcose - called "cannon balls".

NORTHUMBERLAND MINE - 80 mi. NE of Tonopah - J.C.Perkins, Sup't.

GEOLOGY

Granodiorite intruding shale and quartzite. Lower pit - carbonaceous shale quartzite and granite are mineralized - latter is soft altered. Average value \$6 Au - some scorodite. Gold is extremely fine - does not pan. Anderson - Caltech. made thin section of \$8.75 ore - showed no free gold at 10,000 M Extraction 80-85%

BELMONT MINE

GEOLOGY

Early silver camp - steep-dipping quartz veins in limestone and shale - veins parallel to bedding in most cases worked to 500' - majority of ore values in chlorides near the surface.

COPPER CANYON MINE - SW of Battle Mountain.

GEOLOGY

Breccia pipe in quartzite conglomerate cut by numerous fissures - latter were stoped in early days for gold and copper - soft oxidized ore. Mine developed to primary chalcopyrite and pyrite in breccia - 500,000 tons blocked out 1-2% Cu, .1 No gold associated with chalcopyrite. Monzonite plug on ridge above mine. Diorite and porphyry dikes in ore body. Some pyrrhotite.

INDEPENDENCE MINE - Wilson & Brogle - west of Copper Canyon near Greenan Placers.

GEOLOGY

Steep-dipping fracture zone - average width 5' - irregular bodies of soft oxidized gold silver ore - country rock - shale, quartzite and silicified shale. Shaft down 200' - have shipped 9 cars of ore - average \$42.00. Silver-gold ratio about 2 to values erratic - ore does not pan free gold - contains as much as 15% As.- some Bismuth - small pockets of primary arsenopyrites occur. Apparently post mineral fracturing and faulting has allowed free circulation of surface waters creating open spaces or caves - partly filled with extremely soft residual ore enriched by removal of valueless material.