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To: John Schilling

From: H. F. Bonham, Jr.

Subject: Gabbs Valley Range SE 1/4 T9N, R34E

Memorandum
UNIVERSITY OF NEVADA
Reno, Nevada

Date: May 22, 1975

Several prospect pits, adits and inclines, one incline 200+' area bisected by State Route 23 (Gabbs Highway).

Main rock type is hornblende, biotite, diorite, abundant chloritized hornblende and biotite, abundant plagioclase, minor quartz, some K-spar but does not seem abundant away from veins. Magnetite, apatite, epidote, some sparse disseminated pyrite.

Prominent joint system and banding about N30W 20-25 SE dip banding is 1/4 to one inch layers of bleached feldspar. Chloritized mafics and epidote (sample). One prominent vein and dike (?) about same trend as banding. Surface rock is bleached and iron stained with quartz veining and sericite. Altered and brecciated zone is 2-5' wide. Incline sunk on this zone (north side of highway). Part of rock in vein zone may be dike - much more abundant K-spar (predominant) and more abundant quartz plus less abundant mafics (chloritized and epodotized) some of this alteration may be due to K-metasomatism of diorite but more abundant quartz suggests some of it is a quartz monzonite or granite dike intruding diorite. Diorite is definitely cut by aplite dikes (commonly 1"-2").

Vein quartz in altered zone comes from underground workings and contains abundant tourmaline and pyrite, and some galena, specularite, molybdenite, chalcopyrite and sparse sphalerite and tetrahedrite(?). Oxidation products include ferromolybdenum nearby (south side of highway) is an altered (iron oxide, sericite, quartz) area bounded on north side by a high-angle fault, which appears to be a small intrusive cutting the diorite (sample). The rock is brecciated and silicified but appears to be a more silicic rock and not just altered diorite.