EXPLANATION

Qal

(Pleistocene?) Thin, bouldery, stabilized talus sheets and cones of angular basaltic andesite fragments mantling the summit of Black Mountain

Tba

(Miocene) Medium-to-dark-gray, fine grained sparsely porphyritic hornblende andesite; underlying Black Mountain

Tws

(Miocene) Thin bedded tuffaceous and diatomaceous, weakly cemented fine silty sandstone

Tts

(Oligocene) Singatse Tuff. Coarse grained, hornblende-biotite quartz latite crystal tuff consisting of a multiple ash flow cooling unit in the Wassuk Range

Ttm

(Oligocene) Micky Pass Tuff. Light pinkish red to medium reddish brown, pumaceous crystal-rich ash-flow tuff

Kqm

(Cretaceous) Homogenous, medium-grained, equigranular to serrate sodic biotite quartz monzonite which forms the bulk of the Bald Mountain pluton and core of the Gray Hills of the Schurz quadrangle

Kqmp

(Cretaceous) Medium-gray to pale greenish gray porphyritic quartz monzonite. The rock is very distinctive and contains up to 2 inch K-feldspar phenocrysts with smaller plagioclase and biotite phenocrysts in a fine grained matrix of feldspar and quartz

Jgdp

(Jurassic) Granodiorite porphyry dikes (Dilles, 1984)

Jqma

(Jurassic) Aplite and leucocratic graphic quartz monzonite (Dilles, 1981)

Jqmp

(Jurassic?) Quartz monzonite dikes of the Yerington Batholith (Dilles, 1981)

Jd

(Jurassic?) Altered-metamorphosed intrusions of dacite to quartz latite composition; alteration varies from moderate to intense quartz-sericite with stockwork veining and 0-5 pyrite. The rock is highly iron oxide stained.

Jmgr

(Jurassic) Dark greenish gray quartz diorite gradational to Jgr with moderate propylitic alteration. Dump material from the Lincoln adit also displays the altered-metamorphosed texture and contains epidote, chlorite, and secondary biotite. Veins cutting this rock contain a core of epidote, quartz, and feldspar with occasional chlorite and carbonate along selvages. Tourmaline was also noted. Numerous hand samples contain massive magnetite and disseminated pyrite. This rock type is part of the Bald Mountain Pluton of the Schurz quadrangle

Jgr

(Jurassic) Medium-gray to greenish gray, equigranular, medium grained granodiorite and lesser quartz diorite. This rock type as with Jdi in the area mapped also has minor to intense alteration-metamorphism overprint. Alteration is propylitic (epidote-chlorite-calcite-magnetite-quartz) over extensive areas, phyllic (quartz-sericite-pyrite) in local areas, argillic (especially underground) local intense albitization of plagioclase, and potassic (secondary biotite and minor K-feldspar) in local areas. Pyrite and chalcopyrite occasionally occur in veins or disseminations. This rock is also part of the Bald Mountain Pluton and considered by Dilles (1981) to be part of the Yerington Batholith

Jdi

(Jurassic?) Represents a series of rock types of complex interrelationships that consist of diorite, quartz diorite, quartz monzodiorite, and granite or more, only. All rock types display alteration-metamorphism textures which include propylitic (chlorite-epidote), phyllic (sericite-pyrite-iron oxide) albitization of plagioclase, and potassic (secondary biotite-K-feldspar). Metamorphism is evident by granoblastic recrystallization of interstitial quartz, and plagioclase, along with graphic-myrmekitic intergrowths in plagioclase. Pyrite occurs locally and iron oxide staining is minor compared to the Trefe unit. No alteration zoning or patterns have been determined. Cutting Jdi are mafic and aplite dikes, and minor tourmaline cemented breccia has been found as float. A uranium-lead-date of 230 M.Y. has recently been obtained by Dilles (1984) on SW Corner, Sec. 18, T. 13 N., R. 28 E. This suggests that all the metadiorites are Late Triassic in age

Trefe

(Triassic?) Extreme quartz-sericite-pyrite-iron oxide altered volcanics and lesser amounts of Jdi and Jgr. In many cases alteration has completely obliterated original textures except for a few relict phenocrysts. Argillic, propylitic, and albitization alteration is also present in local areas. Pyrite was the dominant sulfide introduced (up to 7 percent) along with magnetite and minor chalcopyrite in some areas. Most of the sulfides and magnetite have been oxidized to iron oxide. Overall, the alteration represents phyllic alteration common in porphyry copper deposits.

Tra

(Triassic) Pale bluish to greenish gray, and greenish black, porphyritic fine grained meta-andesite flows with minor interstratified sedimentary unit

Tre

(Triassic) Metamorphosed intermediate volcanics and shallow intrusives ranging in composition from latite to rhyolite; minor interstratified sedimentary units

Trl

(Triassic) Gray to grayish white marble occurs only in two small outcrops in map area. The northernmost exposure contains chalcopyrite in veins and along bedding

Major fault, dashed where uncertain
Ball on down-thrown block

Minor fault

Major vein, dashed where uncertain

60 Strike and dip of minor vein

Vertical vein

Geologic contact, dashed where uncertain

50 Strike and dip of bedding

65 Strike and dip of flow banding or foliation

10 Strike and dip of joint

Shaft

Adit with projection to surface of underground workings

Dozer trench

Prospect pit

Jeep road or dozer cut

52 Petrographic sample locality

N

0 500 1000 FEET

Adapted from Bingler (1978), Holt (1967), Dilles (1981), and USBM, 1983

PLATE 23. – Geology, structure, and petrographic sample locations for the Black Mountain and Big Twenty Prospects, Walker River Indian Reservation, Nevada

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