QUADRANGLE AND PART OF THE TOGNINI SPRING QUADRANGLE, WHITE PINE

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Chainman Shale (Upper and Lower Mississippian) Generally forms poor Mch Chainman Snale (Upper and Lower Interstone along Mooney Basin and outcrops of shale, siltstone, and thin-bedded limestone along Mooney Basin and in central part of map area. Limestone is micritic and characteristically dark gray on fresh surfaces. Upper part is predominantly poorly exposed grayish-green to black carbonaceous shale with sandstone beds and lenses increasing upward in the section. Black shale exposed

grained, thin- to thick-bedded limestone characterized by abundant crinoid stem fragments and black chert. Forms regular bedding that includes resistant 2-5 cm chert layers. Commonly replaced by moderate-red to very light gray jasperoid; silicified crinoid fragments visible in many jasperoids. Crops out along Mooney Basin and in central part of map area. Labeled Mij on east side of map area where unit is massive hill of jasperoid. Contact with underlying Pilot Shale is sharp. Thickness uncertain because of silicification and

Pilot Shale (Lower Mississippian and Upper Devonian) Slope-forming, poor MDp outcrops of platy, dark-yellowish-orange calcareous siltstone that contains interbedded thin-bedded micritic limestone. Crops out along Mooney Basin and in central part of map area. In many places silicified. Pinches and swells and folds between more competent limestones of the Guilmette Formation and the Joana Limestone. Lower contact with Guilmette Formation is brecciated and silicified. Thickness uncertain due to deformation

Guilmette Formation (Upper and Middle Devonian) Cliff-forming, massive to Dg Guilmette Formation (opper and missis 2000) thick- and thin-bedded, fine-grained, medium-gray to medium-dark-gray limestone in eastern part of the map area. Laminated in places, and contains algal structures. Interbedded laminated dolomite and limestone near base. Jasperoid present at top of the unit. Correlative with Devils Gate Limestone and upper part of the Nevada Formation of Nolan and others (1956), Laminated dolomite interbedded with limestone in central part of map area, Lower contact gradational; however, contact typically covered. Thickness uncertain due to breccia and fault zones parallel or nearly parallel to bedding; estimated to be about

Upper member Ledge- and slope-forming, thin-bedded dolomite characterized by distinctive alternating grayish black to black and light brownish gray and light gray laminations. Lower contact placed where laminated dolomite

Lower member Cliff- and ridge-forming, light-brownish-gray, medium- to coarse-grained, sugary, thick-bedded and commonly laminated, dolomite. corresponds with grain size and color change. Thickness variable from 300 to 600 feet (90

Sevy Dolomite (Lower Devonian) Slope- and saddle-forming, uniform, very light gray to white, very fine grained, thin- to medium-bedded, laminated dolomite with floating frosted sand grains and fine-grained sandstone lenses in upper part. Exposed in the southeast part of map area. Lower contact, transitional over about 10 feet (3 m), placed at change of slope and change to uniform very light gray to white color. Varies from

ish Haven Dolomite, lower part (Upper Ordovician) Ledge-forming, thin- to Ofh thick-bedded, fine- to medium-grained, fetid, pale-brown dolomite containing abundant black chert lenses and fossil fragments. Chert is moderate red to black on the surface and gray to black on fresh surfaces, and is along bedding. Mapped as separate unit only in southern part of map area; elsewhere included in DOd. Upper contact gradational, but

Eureka Quartzite (Upper and Middle Ordovician) Thick-bedded to massive, ross-bedded, fine-grained, distinctive vitreous quartzite. White, weathers grayish pink. To the south of map area (Nutt, 2000) and at the most southern part of the map area, undeformed sequences are about 230 feet (70 m) thick. In the map area, many exposures are tectonically brecciated and thinned, and in places form discontinuous boudins between

Informally named upper unit Mapped where present between middle member and overlying Eureka Quartzite. Ledge-forming, thin-bedded, fossiliferous, silty limestone. Upper contact sharp and placed at base of prominent cliff of

Informally named middle unit Slope- and ridge-forming, thin-bedded, light-

Informally named lower unit Ledge-, cliff-, and slope-forming, thin- to thick-

dark grav, medium-grained limestone including sparse silty or sandy detritus. is absent north of Big Bald Mountain. Lower contact commonly tectonically brecciated.

gray, fine- to medium-grained, thick- to thin-bedded limestone containing black

relatively uniform, medium-blue-gray, fine- to medium-grained limestone. The

Secret Canyon Shale (Middle Cambrian) Shale, siltstone, and limestone. silty limestone with inches-thick siltstone interbeds; silt decreases upward. Near top, includes

Geddes Limestone (Middle Cambrian) Poorly exposed, thin-bedded, general carbonaceous silty limestone along west edge of Big Bald Mountain and best

Eldorado Formation (Middle Cambrian) Moderate-light-gray to moderate-

Sample location for isotopic geochronologic determination