



Hydrology adapted from Rush, 1974, and Scott, Smales, Rush and VanDenburgh, 1971

LITHOLOGIES

NN-1: Toquima Range Locality:

Ordovician-Cambrian shale and limestone, undifferentiated: Mainly phyllite, schist, argillite, and slate. (Divided into three subunits, designated by letters, from the basal subunit upward)

Subunit C: Mainly slate and chloritic schist with interbedded scattered quartzite, chert, limestone, and argillite beds; thickness at least 305 m (1,000 ft) (Kleinhampl and Ziony, written commun., 1978)

Subunit A: Mainly cordierite ("knotty") mica schist; grades laterally into fine-grained chloritic schist and phyllite; thickness about 244 m (800 ft) (Kleinhampl and Ziony, written commun., 1978)

NN-2: Hot Creek Range Locality

Eleana Formation: Siliceous, clastic, sedimentary rock; thickness about 457 m (1,500 ft) (Kleinhampl and Ziony, written commun., 1978)

Dunderberg Shale: Mainly fissile claystone, with minor amounts of calcareous shale and limestone as interbeds and lenses 8 to 15 cm (3 to 6 in.) thick; unit thickness from 152 to 244 m (500 to 800 ft) (Kleinhampl and Ziony, written commun., 1978)

NN-3: Southern Pancake Range Locality

Chainman Shale: Black, carbonaceous, fissile clay shale, with siliceous shale locally dominant; interbedded with some siltstone, limestone, and a little sandstone and conglomerate. The sandstone is very hard, and tough; the conglomerate forms massive beds as thick as 31 m (100 ft). Some limestone beds are dense, bituminous, and very fine grained; others are coarser grained; limestone beds rarely exceed 31 m (100 ft) in thickness (Kleinhampl and Ziony, written commun., 1978). No thickness available; inferred from Stewart (1962) to exceed 915 m (3,000 ft) in northern part of locality

NN-4: Southern White Pine Range Locality

Chainman Shale: Black, carbonaceous, fissile shale, with siliceous shale locally dominant, interbedded with some siltstone, limestone, and a little sandstone and conglomerate. The sandstone is tough and very hard; the conglomerate forms massive beds as thick as 31 m (100 ft). Some limestone beds dense, bituminous, and very fine grained, others coarser grained; beds rarely exceed 31 m (100 ft) in thickness (Kleinhampl and Ziony, written commun., 1978). Thickness of unit 431 m (1,415 ft) (Lumsden, 1963)

Dunderberg Shale: (Detailed description not readily available; following data inferred from various sources.)

Olive- to dark-gray fissile silty shale and mudstone with minor amounts of thinly interbedded calcareous shale, and limestone. Limestone beds may become more numerous toward top. (Kleinhampl and Ziony, written commun., 1978; Hose and Blake, 1976; Humphrey, 1960); thickness about 274 m (900 ft) (Lumsden, 1964)

Stoneberger Shale of Kay and Crawford (1964): Black argillite, interlayered with very thinly bedded quartzose siltstone, exposed thickness more than 305 m (1,000 ft) or more (Kay and Crawford, 1964)

NN-5: White River Valley Locality

Chainman Shale: Shale and siltstone, interbedded with fine- to medium-grained sandstone in the uppermost 91 m (300 ft) (Kleinhampl and Ziony, written commun., 1978); thickness, inferred from Kellogg (1963), might be about 305 m (1,000 ft)

NN-6: Quinn Canyon and Grant Ranges Locality

Chainman Shale: Mainly black, fissile shale, locally siliceous shale, with interbeds of siltstone, and with fine- to medium-grained sandstone layers in the uppermost 91 m (300 ft). Thickness inferred to be more than 152 m (500 ft) as it is known to be 431 m (1,415 ft) in the White Pine Range (Lumsden, 1964); in the Grant Range the undivided Chainman Shale and Diamond Peak Formation are from 198 to 427 m (650 to 1,400 ft) (Hyde and Huttrer, 1970)

EXPLANATION

- Locality boundary, approximate
- Locality extends into adjacent county; adjacent part shown on map of adjacent county
- Contact of exposed bedrock unit composed predominantly of clay-rich rock, with a dissimilar unit adjacent
- Fault; can constitute the contact of an exposed bedrock unit composed predominantly of clay-rich rock, with a dissimilar unit adjacent
- Location of reported thickness
- ★ County seat
- Town or village
- Ⓜ U.S. Interstate Highway, with designation
- Ⓝ U.S. Highway, with designation
- Ⓟ State Route, with designation
- General direction of ground-water flow
- Boundary of discharge areas

PLATE 5. --LOCALITIES OF EXPOSED CLAY-RICH BEDROCK IN NORTHERN NYE COUNTY, NEVADA, SUITABLE FOR FURTHER INVESTIGATION

SCALE 1:500,000

