GEOLOGIC MAP OF THE
WILLOW CREEK RESERVOIR SE QUADRANGLE,
ELKO, EUREKA, AND LANDER COUNTIES, NEVADA

The Middle Tuffs and Tuffaceous Sedimentary Rocks

The middle tuff unit (Ttsm) is composed of fine-grained, massive to thinly bedded tuffs, which are interbedded with tuffaceous sedimentary rocks. The thickness of the middle tuff unit is at least 50 meters. The tuffs are comprised of 75% SiO2, Na2O+K2O=7.7%. The unit was named informally and comprises 11 volume percent of the rock and includes sanidine, opaque iron-oxide mineral phenocrysts in a sanidine-rich groundmass. Chlorite and carbonate alteration, especially of the mafic minerals, are evident. The total thickness of the middle tuff unit varies from 2 to 10 meters.

The Upper Tuffs and Tuffaceous Sedimentary Rocks

The upper tuff unit (Ttsu) consists of fine-grained, massive to thinly bedded tuffs, which are interbedded with tuffaceous sedimentary rocks. The thickness of the upper tuff unit is at least 50 meters. The tuffs are comprised of 75% SiO2, Na2O+K2O=7.7%. The unit was named informally and comprises 11 volume percent of the rock and includes sanidine, opaque iron-oxide mineral phenocrysts in a sanidine-rich groundmass. Chlorite and carbonate alteration, especially of the mafic minerals, are evident. The total thickness of the upper tuff unit varies from 2 to 10 meters.

Sedimentary Units

The sedimentary units contain mostly reworked ash. In the south-central part of the quadrangle, leucocratic lacustrine sediments with diagenetic chert are evident. Thickness at least 50 m.

The Middle Tuff Unit

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