# Geologic Map of the C-N Lake Quadrangle, Catron County, New Mexico.

By

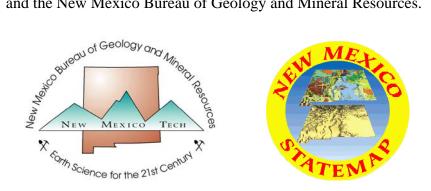
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## New Mexico Bureau of Geology and Mineral Resources Open-file Digital Geologic Map OF-GM 218

### Scale 1:24,000

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The views and conclusions contained in this document are those of the author and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the U.S. Government or the State of New Mexico. Geologic mapping by C. A. Ferguson and G. R. Osburn, 2011 C-N Lake beach ridges from unpublished mapping of R. Weber, 1978 San Augustin Lake beach ridges, mapped by Ferguson and Osburn, 2011 Charles A. Ferguson 119 North Fork Road, Centennial, WY 82055-0070 wamego\_kid@hotmail.com G. Robert Osburn Farth and Planetary Science Department Washington

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**H** Man-made deposits (Holocene) – Earthen dams for tanks along active gulleys or valleys.

**Qy** Active alluvium (Holocene) - Active and recently active alluvium, typically incised <1m.

**Qe** Eolian deposits (Quaternary) – Deposits consist of active and vegetated dunes (fine to medium-grained sand) and silt (loess).

Qc Colluvium and other slope deposits (Quaternary)

**Qpy Pluvial and lacustrine deposits (Quaternary)** – Deposits are locally mantled with eolian sand.

**Qbm** Baymouth bar deposits (Quaternary) – Sand and gravel composed mostly of sub-angular to sub-rounded pebbles and cobbles with sparse well-rounded pebbles.

**Qf1** Alluvial fan and piedmont deposits (Quaternary) - Deposits are typically incised <5m. Clasts are derived from a local source.

**Qfo** Older alluvial fan and piedmont deposits (Quaternary) – Deposits typically incised >5m. Clasts are derived from a local source.

**QT** Older alluvium and piedmont deposits (Miocene – Quaternary) - containing clasts of rhyolitic ignimbrite, felsic, intermediate, and mafic lava, the mafic lava probably derived from the Luera Mts range crest ~5km to the south. Thickness: 0-100m.

**Tvc** Volcaniclastic conglomerate (Oligocene – Miocene) – Conglomerate containing boulders and cobbles of rhyolitic and dacitic lava, felsic ignimbrite, and mafic lava. Thickness: 0-50m.

**Tsc** South Canyon Tuff (Oligocene) – Rhyolitic ash-flow tuff containing 4-30% phenocrysts of plagioclase, sanidine, quartz, and biotite. Lithic-lapilli are generally <5%, and pumice lapilli 5-25%. Thickness: 0 - 50m.

**Tb Basalt (Oligocene)** – Vesicular basalt containing < 10% phenocrysts of plagioclase, olivine, and pyroxene.

**Tvp** Vicks Peak Tuff (Oligocene) – Densely welded rhyolitic ash-flow tuff containing 1-15% phenocrysts, chiefly sanidine up to 4mm, lesser plagioclase up to 2mm, and sparse pyroxene, hornblende, and biotite <2mm. The tuff contains 2-25% strongly flattened pumice lapilli up to 1m long, and sparse <10cm lithic lapilli. The tuff is typically light gray and the pumice lapilli are commonly recessive on weathered surfaces. Thickness: up to 90m.

**Tj La Jencia Tuff (Oligocene)** – Densely welded rhyolitic ash-flow tuff containing 2-10% phenocrysts of sanidine (1-4mm) and plagioclase (1-2mm), and minor biotite, pyroxene, and hornblende, and quartz. The tuff is generally light to dark gray and contains 5-15% strongly flattened pumice lapilli up to 1m long, and up to 5% lithic lapilli. Thickness: up to 120m.

**Tvo** Older volcaniclastic conglomerate (Oligocene) – Conglomerate principally containing boulder and cobbles of the dacitic lava (Td). Thickness: 0-30m.

**Tba** Basaltic andesite lava (Oligocene) – Phenocryst-poor ash-flow tuff containing < 5% mafic lava containing less than 5% <3mm plagioclase, pyroxene and/or hornblende. Unit is interbedded with the Hells Mesa, Blue Canyon, and Rock House Canyon tuffs.

**Thm Hells Mesa Tuff (Oligocene)** – Densely welded phenocryst-rich rhyolitic to trachytic ash-flow tuff containing 20-35% phenocrysts of plagioclase ( $\leq$ 3mm), sanidine ( $\leq$ 3mm), quartz ( $\leq$ 4mm), hornblende ( $\leq$ 2mm), and biotite ( $\leq$ 2mm). The tuff is reddish brown to orange in color and contains sparse lithic lapilli and generally <10% pumice lapilli <10cm long. Thickness: 0-25m.

**Tbc\*** Blue Canyon Tuff (Oligocene) – Moderately phenocryst-rich ash-flow tuff containing 10-20% 1-4mm plagioclase, and abundant 1-3mm biotite. Thickness: 0-50m.

**Trh\* Rock House Canyon Tuff (Oligocene)** – Phenocryst-poor mafic lava containing less than 5% < 3mm feldspar phenocrysts, and a trace of mafics. Thickness: 0-50m.

\*on cross-section only