Tzo Basalt of Olney Ranch, new name (upper Miocene) — The new name "basalt of Olney Ranch" is here proposed for exposures of a porphyritic tabular basalt flow on the Poposa Formation, undivided (lower to upper Miocene) — Intermontane bolson fill deposits of early Rio Grande rift half grabens; as presently used and mapped by LA VAS INTERBEDDED IN LOWER SANTA FE GROUP.

Discontinuously exposed laminar calcrete (paleosol) as much as 2 m thick. Locally mantled with thin desert pavement or dark red argillic horizon. Mostly preserved where Canyon is 3–6 m thick. Unit locally wedges out against Miocene paleovalley wall about 2 km SE of Broken Tank (NW1/4 Sec. 31, T4S, R1W).

The thick playa facies near "South" Blue Canyon. Maximum exposed thickness is 75 m. Members of Luis Lopez Formation in the northern Chupadera Mountains:

Consists of light gray to light yellowish brown, well sorted, fluvial sands and gravels (transport to south), interbedded with reddish orange, poorly sorted, sandy to cobbly, transported sands and gravels (transport to south). The unit is productive of near-shore sand facies or an axial-fluvial facies. Occurs near middle of piedmont facies at Walnut Creek; 0–60 m thick.

Mogollon Group undivided, shown in cross section only. The Mogollon Group includes all POST COLLAPSE FILL OF SOCORRO CALDERA.

Members of Luis Lopez Formation in the northern Chupadera Mountains:

Tzt Medial pumiceous tuff member, locally divided into lower and upper cooling units (Oligocene) — Light gray to pale red, poorly to densely welded, pumiceous, phenocryst-poor, tufa and pumice breccias and lavas.

Tzbr1 Lower rhyolite flow unit — High-silica rhyolite lava dome and flow complex (~75% SiO2) that appears to be centered (thickest) near the latitude of Nogal Canyon.

Tzbr2 Upper rhyolite flow unit — Phenocryst-poor rhyolite lava flow consisting of a basal dark gray vitrophyric flow breccia that grades upwards into a dense flow-banded, crystalline, high-silica rhyolite flow.

Tsc South Canyon Tuff (Oligocene) — Partially to densely welded, light gray to pale grayish red, phenocryst-poor to moderately phenocryst-rich, pumiceous, high-silica rhyolite Ignimbrites (75-77% SiO2); locally lithic rich and generally mapped as a single unit in southern Chupadera Mountains (Eggleston, 1982). Maximum thickness approximately 800 m. Occurs near the "South" Blue Canyon Tuff (Tsc) at the same stratigraphic position as the rhyolite tuff of that name 2 km north of the locality of the South Canyon Tuff but lying in a north-facing syncline.

Tjm North Canyon Tuff (Oligocene) — Phenocryst-poor, high-silica rhyolite tuff, 207 m thick (Eggleston, 1998). Contains sparse phenocrysts of plagioclase, sanidine, and biotite. Lower third of the tuff is a massive lithic and rhyolitic sandstone and siltstone interbed with tuff breccias. Upper third is represented by a very thin (5 m) sequence of lapilli tuffs and ash fall deposits. Minor amounts of phenocrysts are preserved in the massive sandstone and siltstone beds. The tuff is a high-SiO2 rhyolite ignimbrite with an upper, less-silicic, ash-rich zone and lower, more-silicic, lapilli-rich zone.

Tj La Jencia Tuff, main body (Oligocene) — Light gray, pale red and grayish red, phenocryst-poor, rhyolite ignimbrite characterized by a thick medial zone of very rare, 0–30 m thick, lithoidal rhyolite with minor vitrophyric and spherulitic zones. Contains sparse phenocrysts of plagioclase, sanidine, and biotite with traces of augite and sphene. Lower third of the tuff is a massive lithic and rhyolitic sandstone and siltstone interbed with tuff breccias. Upper third is represented by a very thin (5 m) sequence of lapilli tuffs and ash fall deposits. Minor amounts of phenocrysts are preserved in the massive sandstone and siltstone beds. The tuff is a high-SiO2 rhyolite ignimbrite with an upper, less-silicic, ash-rich zone and lower, more-silicic, lapilli-rich zone.

Tm Hells Mesa Tuff, undivided (Oligocene) — Phenocryst-poor, high-silica rhyolite ignimbrite, 207 m thick (Eggleston, 1998). Contains sparse phenocrysts of plagioclase, sanidine, and biotite. Lower third of the tuff is a massive lithic and rhyolitic sandstone and siltstone interbed with tuff breccias. Upper third is represented by a very thin (5 m) sequence of lapilli tuffs and ash fall deposits. Minor amounts of phenocrysts are preserved in the massive sandstone and siltstone beds. The tuff is a high-SiO2 rhyolite ignimbrite with an upper, less-silicic, ash-rich zone and lower, more-silicic, lapilli-rich zone.