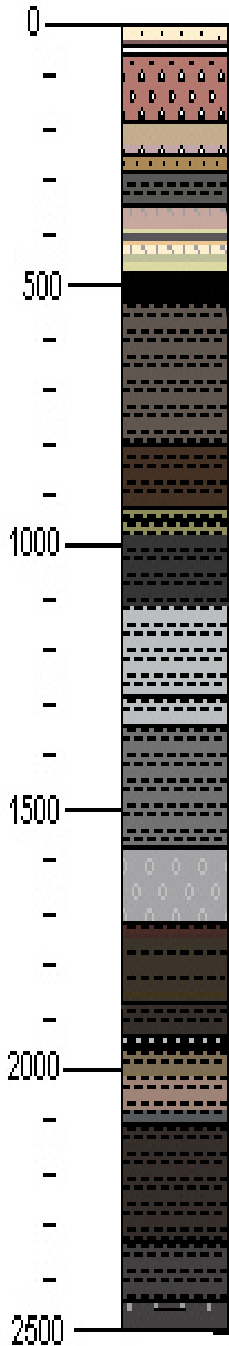


Land surface



0-251' Valley-fill - Alluvium - 0-185' Alluvium, poorly sorted, coarse gravels and sand, fan-deposits; 0-25' pale orange (10YR 8/2 dry), caliche covered clasts; 25-30' no sample; 30-40' grayish red (10R 4/2) to light brown (5YR 6/4); 40-45' no sample; 45-55' alluvium, as 30-40'; 55-65' no sample, 65-185' alluvium, gravel and sand, grayish red (10R 4/2) to light brown (5YR 6/4), poorly sorted; 185-200' alluvial sand, pale yellowish brown (10YR 6/2), poorly sorted; 200-205' alluvium, gravel and sand, caliche covered, pale orange (10YR 8/2); 205-210' no sample; 210-220' alluvium, gravel and sand, light brown (5YR 6/4); 220-225' no sample; 225-251' alluvial sand, pale yellowish brown (10YR 6/2), poorly sorted

251-343' Tertiary Sedimentary Rocks - 251-278' sandstone, lacustrine/fluviol, pale red (10YR 6/2), 10-20% mafics, tr. FeOx, poss. weathering surface; 278-295' sandstone, as 251-278', grayish orange (10YR 7/4), 1% volc. clasts; 295-343' siltstone, lacustrine, med. dark gray (N4), weakly calcareous, locally clayey

343-533 Tertiary Volcanics - 343-400' Ash Tuff, reworked, grayish orange pink (5YR 7/2) to pale orange (10YR 8/2), up to 5% qtz/sanidine phenos, 1% mafics, up to 20% volc. clasts, becomes yellowish-gray beyond 390'; 400-412' Ash Tuff, ash flow, med. dark gray (N4), 5% qtz/sanidine phenos, 1% mafics, up to 10% pumice, light gray (N7), unflattened; 412-419' Ash Tuff, ash flow, grayish orange (10YR 7/4), 5% biotite and mafics, 1% qtz/sanidine; 419-477' Tuff, ash, reworked, pale orange (10YR 8/2), 5-10% abraded biotite and mafics, 1-5% qtz/sanidine phenos, up to 20% volc. clasts, becomes grayish yellow green (5GY 7/2) 445-460', yellowish gray (5Y 7/2) 460-478'; 478-533' tuff, ash flow, black (N1), 20-30% pumice (pale orange (10YR 8/2)), 0-50% qtz/sanidine phenos, 0-10% mafics, unflattened pumice, pumice color becomes greenish yellow (10Y 8/2) beyond 505'

533-1285' Tertiary Sedimentary Rocks - 533-945' siltstones, calcareous, homogeneous, brownish gray (5YR 4/1) to med. dark gray (N4), locally clay-rich esp. 705-805', 805-920' color is darker, dusky brown (5YR 2/2) to med. dark gray (N4), some grayish olive (5Y 4/2); 945-1105' siltstones, lacustrine, noncalcareous, light olive gray (5Y 5/2) to grayish black (N2), locally clay beds to 1055', locally and tuff beds (light gray N8) beyond 980', fine sandstone beds beyond 1210'

1285-1870' Tertiary Mixed Sedimentary and Volcanic sequence - 1285-1340' siltstone/crystal tuff reworked, dk. gray to grayish-black (N3-N2), 2% white pumice and qtz frags. decreasing downhole, tr. vfg pyrite; 1340-1565' siltstone/sandstone, poss. reworked tuff, med gray (N5-N4), qtz. and fsp. crystals, tr. vfg pyrite, grain size is vfg sand to silt, local gray-black (N2) fragments to 1390', local grayish-yellow (5Y 8/4) tuff frags. beyond 1540' and cherty siltstone beds (N3) beyond 1520' 1565-1714' tuff, ash flow, light gray (N7), fine aphyric, local cherty beds? (N2), blebs of vfg pyrite 1714-1870' siltstone/tuff interbedded, yellowish brown (10YR 2/2) to brownish black (5YR 2/1) siltstones (1714-1739', 1785-1802', 1835-1839', 1854-1864'), laminated, locally 1% pyrite interbedded with crystal tuffs (1739-1785', 1802-1835', 1839-1854', 1864-1870'), medium gray (N5), 10-50% qtz/sanidine crystals, 5-10% hornblende/biotite crystals, local black (N1) lithic fragments

1870-2500' Tertiary Sedimentary Rocks - 1870-1925' siltstone, sandy, lacustrine, brownish black (5YR 2/1) to yellow brown (10YR 5/4); 1925-1932' siltstone as 1870-1925', clay-rich, light gray (N8); 1932-1945' siltstone, black (N1) to yell-brn (10YR 5/2); 1950-2000' siltstones, fine dark yell-brn (10YR 3/2) mixed with coarser pale yell-brn, becomes gray-brn (5R 3/2) beyond 1990', lt. gray tuff bed 1997-2000'; 2000-2085' sandy siltstone, pale brown (5YR 5/2) to gray and olive gray (5Y 6/1), partly calcareous; 2085-2100' siltstone w/ gray clay beds (N4); 2100-2320' siltstone and marl interbedded, lacustrine, brn-blk siltstone (5YR 2/1) ~60%, pale brown silty marl (5YR 5/2) ~40%, beyond 2235, color is dark gray (N3) and olive-gray (5Y 4/2); 2320-2430' siltstone, lacustrine, dark gray (N3) to yell-brn (10YR 6/2), weakly calcareous; 2430-2500' sandstone and lesser siltstone, med-dk. gray (N3-5), gradational upper contact with clay.

NC-EWDP-3D
SUMMARY LITHOLOGIC LOG