

Nye County Early Warning Drilling Program

Summary Lithologic Log for NC-EWDP-2DB

Depth	Lithology	Description
0 1in:75ft		(0 to 260 feet [ft]) WELL-GRADED SAND WITH SILT AND GRAVEL (SW-SM): A thick SW-SM sequence predominates with varying amounts of sand, silt and gravel. Layers of well-graded sand (SW) are present from 20 to 40 ft and from 160 to 180 ft, with a marked absence of gravel in the former and presence of coarse sand and gravel in the latter. Thin clayey layers (SC and CL) are present from 200 to 203 ft and from 245 to 248 ft. The plasticity of fines is moderate. Gravels are volcanic in origin and subrounded to subangular. Sediment color ranges from very pale orange to pale yellowish brown (10YR 8/2-6/2) and pale brown to moderate brown (5YR 5/2-4/4). Weak cementation is present from 135 to 140 ft and from 160 to 165 ft. No reaction to 10 percent (%) hydrochloric acid (HCl) was observed. All samples were dry.
100		(260 to 615 ft) WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM): The interval consists primarily of a thick GW-GM sequence with varying amounts of sand and gravel. Silt increases with depth. A thin layer of sandy clay (CL) is present from 531 to 535 ft. A clayey gravel (GC) is present at base of unit from 601 to 615 ft. Plasticity of fines is moderate to high. Gravels are volcanic in origin and subrounded to subangular. Sediment color ranges from grayish orange to dark yellowish brown (10YR 7/4-4/2) to grayish red (10R 4/2). No cementation and no reaction to 10% HCl was observed. Samples were wet from 350 ft.
200		(615 to 670 ft) WELL-GRADED SAND WITH CLAY AND GRAVEL (SW-SC): SW-SC layers up to 20 ft thick predominate. Three thin layers of clean poorly-graded sand (SP) from 3 to 5 ft thick are present in the unit that displays a marked absence of gravels. Plasticity of fines is moderate to high. Gravels are volcanic in origin and subrounded. Sediment color is primarily pale yellowish brown (10YR 6/2) with some sections of grayish red (10R 4/2). No cementation and no reaction to 10% HCl was observed. All samples were wet.
300		(670 to 860 ft) LEAN CLAY (CL): A thick massive CL unit is present with a 10 ft silty layer (SM) at top and a 20 ft layer of lean clay with sand and gravel at the base. The upper 30 ft of unit from 670 to 700 ft contains fragments of well-indurated, yellowish brown (10YR 5/4) siltstone. The minor sand that is present in the unit is fine-grained and poorly graded. Fines have high plasticity. The minor gravels that are present are volcanic in origin and subrounded to subangular in shape. Sediment color ranges from pale yellowish brown (10YR 6/2) to yellowish gray (5Y 7/2) to light brown (5YR 6/4). No cementation was observed. Sediments reacted strongly to 10% HCl. All samples were wet.
400		(860 to 925 ft) CLAYEY GRAVEL WITH SAND (GC): A thick GC unit predominates. Gravel content increases downward and coarsens downward from 860 to 910 ft. From 910 to 925 ft there is a marked decrease in gravel content and increased clay content. Plasticity of clay is low from 860 to 910 ft, and moderate to high from 910 to 925 ft. Gravels are volcanic in origin and subrounded to subangular in shape. Sediment color ranges from pale red (10R 6/2) to moderate red (5R 5/4) to light gray (N6). No cementation was observed and sediments displayed a weak to moderate reaction to 10% HCl. All samples were wet.
500		(925 to 1,010 ft) OLDER ALLUVIUM/COLLUVIUM, OR VOLCANIC CONGLOMERATE: This is a coarse monolithic unit, possibly with cobble and boulder size clasts. Clast content increases from 50 to 90% from top to bottom of unit. Clay content increases from approximately 5 to 40% from 925 to 1,000 ft, and decreases back to approximately 5% from 1,000 to 1,010 ft. Clasts are volcanic in origin and subrounded to subangular from 925 to 1,000 ft, and become rounded in the basal layer from 1,000 to 1,010 ft. Color ranges from grayish red (10R 4/2) to moderate orange pink (10R 7/4). Induration is weak from 925 to 1,000 ft and strong from 1,000 to 1,010 ft. Reaction to 10% HCl varies from moderate to strong. All samples were wet.
600		(1,010 to 1,155 ft) INTERBEDDED SANDSTONE/SILTSTONE/CLAYSTONE: Unit is composed of thinly bedded (5 to 10 ft thick) sandstone, siltstone and claystone. Interbedding is interrupted by 2 sandstone layers: a dark reddish brown (10R 3/4) deeply weathered conglomeratic sandstone from 1,075 to 1,080 ft, and a massive reddish brown (10R 4/6) sandstone containing dendritic manganese oxide from 1,135 to 1,155 ft. Siltstone is finely laminated (2 to 5 mm). Colors alternate from moderate orange pink (10R 7/4) to grayish orange pink (10R 8/2) to pale greenish yellow (10Y 7/2). Sedimentary units are moderately to well indurated. A moderate to strong reaction to 10% HCl was observed from 1,080 to 1,155 ft. All samples were wet.
700		
800		
900		
1000		



