




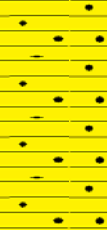



Summary Lithologic Log for NC-EWDP-22PC

Depth	Lithology	Description
1 in:55ft		
		(0 to 460 feet [ft]) FOR SUMMARY LITHOLOGIC INFORMATION, SEE RID 5472 (SUMMARY LITHOLOGIC LOG FOR NC-EWDP-22SA) DRILLED AT THE SAME SITE.
500		<p>(460 to 501.4 ft) INTERBEDDED WELL-GRADED GRAVEL WITH SILT AND SAND (GW-GM), POORLY GRADED GRAVEL WITH SILT AND SAND (GP-GM) AND SILTY SAND WITH GRAVEL (SM): Interval of interbedded well- and poorly graded gravels with silt and sand (GW-GM and GP-GM) with a thick interval of predominantly silty sand with gravel (SM). The thick interval of silty sand with gravel (SM) occurs from 468.1 to 481.1 ft bgs, and includes a bed of clayey sand with gravel (SC). Gravel-rich intervals include beds of silty gravel with sand (GM) and silty clayey gravel with sand (GC-GM); and lesser intervals of silty sand with gravel (SM) and silty clayey sands with gravel (SC-SM). Plasticity of fines ranges from low to moderate with highly plastic fines noted from 463.7 to 464.2 ft. Gravel clasts are volcanic in origin and subangular from 460 to 484.6 ft and generally subrounded from 484.8 to 501.4 ft. Sediment color is generally light brown (5YR 4/6) with sections of yellowish brown (10YR 4/3) and yellowish orange (10YR 6/3) colors. No cementation or reaction to 10% hydrochloric acid (HCl) is observed. Samples were moist from 460 to 471.4 ft and wet beyond 471.4 ft.</p>
600		<p>(501.4 to 554.5 ft) CLAYEY GRAVEL WITH SAND (GC) GRADING TO CLAYEY SAND WITH GRAVEL (SC) CONTAINING THICK INTERBEDS OF SILTY SAND WITH GRAVEL (SM) AND POORLY GRADED SAND WITH SILT AND GRAVEL (SP-SM): Thick fining downward interval of predominantly clayey gravel with sand (GC) in the upper section grading downward into predominantly clayey sand with gravel (SC) in the lower section. Interval contains several thick interbeds of silty sand with gravel (SM) and poorly graded sand with silt and gravel (SP-SM). Interval also contains lesser beds of poorly graded gravels and sands with silt and clay (GP-GM, GP-GC and SP-SC), well-graded gravel with clay and sand (GW-GC), and well-graded sand with silt and gravel (SW-SM). The interval is defined by the first appearance of clayey gravels. Fines range from low to moderate plasticity except for two sections with no plasticity from 521.0 to 521.8 ft and from 547.5 to 552.8 ft. Gravel clasts are volcanic in origin and generally subrounded except for subangular clasts are observed from 522.7 to 526.5 ft. Colors range from predominantly light brown (5YR 5/6) to red (2.5YR 5/8), light red (2.5YR 6/8), yellowish red (5YR 5/8), reddish yellow (5YR 6/6), and yellowish brown (7.5YR 5/6). No cementation is observed from 501.4 to 536.6 ft. Weak cementation is observed from 536.6 to 554.5 ft. No reaction to 10% HCl is observed. All samples were wet.</p>
700		<p>(554.5 to 571.3 ft) WELL-GRADED GRAVEL WITH CLAY AND SAND (GW-GC): Thin interval of well-graded gravel with clay and sand (GW-GC) with interbeds of poorly graded gravel with silt and sand (GP-GM), well-graded sand with silt and gravel (SW-SM), well-graded gravel with silt and sand (GW-GM) and clayey gravel with sand (GC). Plasticity of fines ranges from none to low. Gravel clasts are volcanic in origin and subrounded. Colors range from light brown (5YR 5/6) to red (2.5YR 5/8). Weak cementation is observed. No reaction to 10% HCl is observed. All samples were wet.</p>
800		<p>(571.3 to 623 ft) SILTY GRAVEL WITH SAND (GM) INTERBEDDED WITH SILTY SAND WITH GRAVEL (SM): Thick interval of predominantly silty gravel with sand (GM) interbedded with silty sand with gravel (SM). Interval also contains lesser beds of well-graded gravel with silt and sand (GW-GM), poorly graded sand with silt and gravel (SP-SM), clayey gravel with sand (GC) and well-graded sand with silt and gravel (SW-SM). Interval is defined by the predominance of silt over clay in the fines fraction. Fines are generally non-plastic except from 600.3 to 606.3 ft and 611.8 to 615.4 ft where fines have low plasticity. Gravel clasts are volcanic in origin and subrounded. Colors range from brown (7.5YR 5/6) to reddish brown (5YR 5/4) and to reddish brown (2.5YR 5/4). Cementation varies from weak to moderate, predominantly as thin cemented layers. No reaction to 10% HCl is observed. All samples were wet.</p>
900		<p>(623 to 632.1 ft) CLAYEY GRAVEL WITH SAND (GC): Thin interval consisting exclusively of clayey gravel with sand (GC). Plasticity of fines varies from none to low to moderate. Gravel clasts are volcanic in origin and subrounded. Colors range from reddish brown (5YR 5/6) to reddish yellow (5YR 6/6). Sediments are noncemented except for an interval with weak cementation observed from 623 to 623.7 ft. No reaction to 10% HCl is observed. All samples were wet.</p>
1000		<p>(632.1 to 747.4 ft) CLAYEY SAND WITH GRAVEL (SC): Thick interval of predominantly clayey sand with gravel (SC) locally with beds of clayey gravel with sand (GC). This thick sequence of clayey sand includes an interval from 673.2 to 688.1 ft of clayey and silty gravels with sand (GC and GM) with lesser silty clayey sand with gravel (SC-SM). Plasticity of fines varies from moderate to high with local zones of low to no plasticity from 661.2 to 699.2 ft and from 707.0 to 715.6 ft. Gravel clasts are volcanic in origin and generally subrounded from 632.1 to 684.2 and subangular from 684.2 to 747.4 ft. Colors range from brown (7.5YR 5/4) to reddish yellow (5YR 6/6), to yellowish brown (5YR 5/8), and to reddish brown (2.5YR 5/6). Sediments are noncemented except for weakly cemented zones from 641.6 to 652.8 ft and 661.2 to 668.0 ft. No reaction to 10% HCl is observed. All samples were wet.</p>
1100		<p>(747.4 to 763.0 ft [Total Depth]) SILTY SAND WITH GRAVEL (SM): Interval of predominantly silty sand with gravel (SM) with a bed of clayey gravel with sand (GC) and a bed of silty clayey sand with gravel (SC-SM). Fines plasticity ranges from moderate to low. Gravel clasts are volcanic in origin and generally subangular. Color ranges from reddish yellow (5YR 6/6) to reddish brown (5YR 5/4). Sediments are noncemented. No reaction to 10% HCl is observed. All samples were wet.</p>