

Ni31-7

West of Cannon Lab, CMS, Lewes, DE

Geothermal drilling project hole

9/6/78

DESCRIPTIVE LOG

Drilling started 6 Sept., 1978

Datum: KB, approx. 8' above l.s.

Ditch samples from shale shaker, *driller collected bagged samples*

Surface casing to 120'.

Log by Woodruff, Talley, Benson.

DGS # 80930 - 81008
(122-972')

<u>Depths</u>	<u>Description</u>
388-418	silt, clayey, with some sand.
418-436	silt, dark greenish gray, abundant shell material, fairly easy drilling.
436-448	silt and clay, dark greenish gray, harder drilling with some string chatter. Driller's sampling technique poor and not representative of 10' intervals.
448-478	sand, fine to very coarse, silty, and shell hash.
478-488	silt, dark greenish gray with abundant shells, some sand, harder drilling; good samples. 30 feet in 13 minutes.
488-508	same as above, except easier drilling and sandier below about 500'.

Core attempt 508-533, <10 feet recovery; DGS sample from core catcher, probably about 532-533' according to coring engineer.

Core - sand, v.f., with some silt, dark greenish gray several thin semiconsolidated zones, no macro or micro fossils present in section examined.

2nd core attempt 533-558, 21 ft recovery. DGS sample from core catcher: sand, v.f. and silt, dark greenish gray. Echinoid spines, shell fragments abundant, some benthonic forams.

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<u>Depth</u>	<u>Description</u>
562-592	sand, fine, lt. brown, well sorted, shell fragments, occasional clay ball.
592-607	sand, fine, well sorted, lignitic, and clay balls, brown.
607-622	sand, fine to med. shells abundant, occasional indurated sandstone.
622-652	sand, v. f., grading to silt, some clay.
652-682	sand, fine to med., shelly, glauconitic, some clay balls, some indurated sand in small pieces.
682-697	Silt, clayey to clay, silty, dk. gray.
697-712	drills like sand, string chatters, returns poor.
712-726	sand, very fine and clay, silty, gray.
726-736	drills like sand, string chatters.
736-742	silt, clayey, gray with some coarse sand.
742-772	string chatters, returns - clay, silty, dk. gray.
772-802	clay, gray, silty with occasional indurated sandstone fragments.
802-832	clay, gray, silty, some shell fragments.
832-844	clay, silty, gray, to silt, clayey, drilling slow.
844-862	silt, glauconitic, thin layer of sand or shell about 845'.
862-892	clay, gray to silt, clayey.
892-922	same as above.
922-952	silt, brownish, gray, glauconitic and clay, silty brownish gray.
952-982	silt, brownish gray, glauconitic and clay, silty, occasional pieces of sandstone.

982 TD

Core attempt 985-1010:

recovery about 2': clay, greenish gray, sandy and silty, glauconitic, probably from about 985'. Small piece of brown silt left in core barrel after liner recovered (appears to be Miocene?).

Core attempt 1010-1035.

Recovery about 5': same as above core, both cores appear to be Piney Point or equivalent.

→ apparently, the opinion of the coring engineer was that 1010-1015' was core in some attempt. remained in bottom of core barrel; no recovery from 1015-1035'

CC sample #24760
1009-1010'
Also sample from drill bit @ 1010' = #24761
Sample #24762
CC @ 1015'