



OWNER: Tidewater Memorial Hospital  
DRILLER: Douglas & Dickinson, Incorporated  
COUNTY: Essex

VDMR #1183  
WWCR #142  
TOTAL DEPTH: 601'

GEOLOGIC LOG

- 0-11 Sand - orange, medium to very coarse grained, rather poorly sorted, subangular to subrounded, slightly argillaceous, small amount granules, slightly arkosic, small amount fine grained glauconite, a few pelecypod fragments.
- 11-54 Sand - orange, fine to very coarse grained, poorly sorted, subangular to subrounded, slightly argillaceous, clay is variegated - greys, reddish browns, yellow, moderate amount small gravel (less than 10 mm), very ferruginous - ferrian and (manganese ?) nodules, crusts, and cement common, traces glauconite, muscovite, garnet, small amount weathered feldspar.
- 54-126 Clay - gray, mottled brown, very sandy, moderately ferruginous, very compact.
- 126-210 Clay - gray, moderately sandy.
- 210-225 Sand - greenish-gray, poorly sorted, subangular, slightly argillaceous - partially calcareous clay, abundant phosphate granules, small amount garnet, very abundant shell material pelecypods, echinoid spines, foraminifera, vertebrate bones (?).
- 225-245 *colv.* As above, but with small amount small gravel and trace of fibrous aragonite.
- 245-254 *nanj.* Sand - gray, medium to coarse grained, fairly well sorted, subangular to subrounded quartz sand with moderate amount fine to medium grained glauconite, very slightly argillaceous, shell fragments abundant - pelecypods, echinoid spines, foraminifera, bryozoans, worm borings.
- 254-336 Sand - dark gray, very fine to medium grained, poorly sorted glauconite (35-40%) and quartz (60-65%), very argillaceous, and muscovite, small amount small gravel, abundant shell material - pelecypods.
- 336-355 Clay - reddish-brown, mottled gray, very compact, very slightly sandy.
- 355-378 Sand - brown and black, fine to medium grained, well sorted glauconite (40-50%) and subangular to subrounded quartz (50-60%), slightly argillaceous.

- 378-451 No sample.
- 451-484 Clay - grayish-brown, compact, very sandy - sand is about 50% glauconite, 50% quartz, small amounts muscovite and phosphate.
- 484-489 Clay - greenish-gray and brick red, very sandy-sand is fine to coarse grained, poorly sorted, very glauconitic, very micaceous (muscovite), small amount phosphate and shell fragments.
- 489-504 No sample.
- 504-535 Sand - gray, medium to coarse grained, well sorted, angular to subangular, very slightly argillaceous, including scattered lumps of compact, brick-red clay, glauconite (5%  $\pm$ ), small amounts muscovite and garnet, moderately arkosic.
- 535-546 Sand - gray, similar to preceding sample, but more argillaceous.
- 546-563 Sand - gray, with violet cast, medium to very coarse grained, fairly well sorted, subangular, arkosic, slightly glauconitic (< 5%), very slightly argillaceous - clay occurs in brick-red lumps, small amounts muscovite, garnet, trace of tourmaline, uniserial foraminifera.
- 563-570 Sand - gray, with reddish cast, very argillaceous, sand is poorly sorted, subangular, moderately arkosic, and glauconitic (about 20%), clay is variegated-reds and grays, small amounts muscovite, garnet.
- 570-582 No sample.
- 582-630 Sand - gray, with reddish cast, very argillaceous, sand is poorly sorted, subangular, very glauconitic (50% +), moderately arkosic, clay is variegated-grays, browns, and reds, ferruginous-abundant, friable hematite (?), small amount muscovite, phosphate.
- 630-672 Clay - gray, with reddish cast, very sandy-sand is very glauconitic (about 50%), clay is variegated-reds, browns, grays, ferruginous-abundant, friable hematite, small amount phosphate.

GEOLOGIC SUMMARY

	<u>ROCK UNIT</u>	<u>AGE</u>
0-55	Columbia group	Quaternary
55-210 243	Calvert formation	Miocene
210-355	Nanjemoy formation	Eocene
355-450	Aquia formation	Paleocene-Eocene
450-672	Mattaponi formation	Upper Cretaceous- Paleocene

Virginia Division of Mineral Resources  
Robert H. Teifke, Geologist  
December 3, 1964

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