VDMR Well No. 2100
County: King and Queen

Well: KQ-2
Property: Fred Howe
Driller: Norfolk and Western Railway
Location: 2.0 miles SE of Newton on Rte. 14
77° 06' 30" W, 37° 53' 30" N
Elevation: 140 feet
Total Depth: 185.5 feet
Started drilling: November 1966 Completed drilling: November, 1966
Sample description by: R. H. Teifke, Virginia Division of Mineral Resources, April, 1968

GEOLOGIC LOG*

Depth in feet	
	COLUMBIA GROUP (0'-30'+)
10	Sand – abundant matrix of orange-brown and light-gray clays; fine- to coarse-grained, poorly sorted, variably rounded; slightly feldspathic in coarse grades
20	Sand – brown, very slightly clayey, 10% granules and a few rounded pebbles up to 15 mm; medium- to very coarse-grained, fairly well-sorted, sub-rounded to rounded; very slightly feldspathic; accessory fine-grained magnetite
30	Sand and gravel – moderately abundant matrix of tan, orange-brown, and blackish-brown clays; 20% fine (up to 15 mm), well-rounded quartz gravel; 70% very fine- to very coarse-grained, poorly-sorted, angular to rounded sand; coarse grades are slightly feldspathic; a few grains of decomposed glauconite

VDMR Well No. 2100

CALVERT FORMATION (30'+-~~170'+~~ 168')

40	Clay – brownish-gray, locally yellow, slightly sandy; a few small rounded pebbles; sand is fine- to very fine-grained, well sorted, angular; traces of muscovite, glauconite, hornblende
50	"
60	Clay – greenish-gray, locally yellow, sandy; sand is fine-grained, well-sorted, angular; slightly micaceous
70	Sand – abundant matrix of greenish-brown clay, locally yellow; fine-grained, very well-sorted, angular; greenish to yellowish quartz; abundant anhydrite pseudomorphs after gypsum
80	" trace of anhydrite pseudomorphs after gypsum
90	" abundant anhydrite pseudomorphs after gypsum
100	" trace of anhydrite pseudomorphs after gypsum
110	" trace of diatoms
120	Clay – greenish-brown, very silty, very slightly sandy; sand is very fine-grained, very well-sorted angular; anhydrite pseudomorphs after gypsum are common; minor muscovite and bone phosphorite; a very few echinoid spines; small foraminifers common, but not abundant (Nonion, Lagena, Textularia, Uvigerina)
130	Clay – greenish-brown, very slightly sandy; sand is fine- to very fine-grained, well-sorted, angular; trace of bone phosphorite; a few echinoid spines and foraminifers including Bulimina and Siphogenerina
140	Clay – brown, silty, slightly sandy; sand is very fine-grained, very well-sorted, angular; a few anhydrite pseudomorphs after gypsum, and scraps of bone phosphorite; a few echinoid spines and foraminifers

VDMR Well No. 2100

150	Clay – brown, sandy; sand is fine- to very fine-grained, well-sorted, angular; 5% bone phosphorite; a few foraminifers
160	Clay – brown, moderately sandy; sand is 90% fine- to very fine-grained, well-sorted, angular, and 10% coarse-grained, subrounded; 10% of total sand fraction is bone phosphorite; a few foraminifers; trace of diatoms
170	"

NANJEMOY FORMATION (~~170'+-185.5'~~ 168 – 186')

179-181	Sand – moderately abundant matrix of greenish-gray clay; 60% very fine-grained angular quartz, 20% fine-grained medium-green glauconite; well-sorted; muscovite common, traces of shell and anhydrite pseudomorphs after gypsum
181-182	No sample
182-185.5	Sand – moderately abundant matrix of drab clay; 60% fine- to very fine-grained, angular quartz, 20% fine- to medium-grained, dark- to medium-green glauconite; minor muscovite

GEOLOGIC SUMMARY

	Rock Unit	Age
0-30+	Columbia Group	Pleistocene
30+-~~170+~~ 168	Calvert Formation	~~Middle~~ Miocene
168 ~~170+-185.5~~ 186	Nanjemoy Formation	~~Middle~~ Eocene

* The use of the lithologic term, "clay" includes all size ranges of particles less than 1/16 mm.

R. N. Troxler
3/7/72