S	VDMR WELL NO. 0198
Sheet No.	Sample Interval 5-653
PROP: TOWN OF WARSAW #1	Total Depth ?
OMP: MITCHELL'S WELL & PUMP COUNTY: RICHMOND	OilGasWaterExploratory_
VDMR WELL NO: 0198	Cuttings Core Other

From-To	From-To WASHED	From-To	From-To	From-To
5-27	PLOATED		-	
27-58	5-27		-	
58-130	27-58			in the state of
130-175	58-130		-	-
175-219	130-175		-	
219-266	175-219	-	-	
266-271	219-266	- 1	- 1	
271-285	266-271			
285-287	271-285	_	-	•
287-290	285-287	-		-
290-350	287-290	_	-	
350-392	290-350	-	-	-
392-530	350-392	-		
530-560	392-530			
560-622	530-560	-		-
622-638	560-622	-	-	-
638-653	622-638			
Q -	638-653	-	F .	

OWNER: DRILLER: COUNTY: Town of Warsaw

Mitchell Well and Pump Richmond Co. (Town of Warsaw) WWCR # 1 Depth:653'

VDMR # 0198

SAMPLE EXAMINATION . (washed)

0-57	Sand and clay, yellow to ten
57-260	Clay, brownish pink, slightly micaceous and sandy. Few shell fragments 130 to 170°
260-270	Clay, brown, soft, sandy, abundant shell fragments
270-282	Sand, quartz, fine to medium grained, dirty with abundant shells
282-285	Limestone, gray-brown, dense, very sandy, argillaceous, glauconitic, pyritic.
285-290	Clay, brown, marly, glauconitic, pyritic
290-350	Sand, quartz and glauconite, fine grained, subangular
350-380	Clay, brown, soft, slightly calcareous, glauconitic, sandy with few shell fragments
380-530	Clay, tan, brown, and pink, soft, calcareous, glauconitic, sandy, micaceous. Few shell fragments.
530-560	Clay, brown, firm, sandy
560-638	Sand, quartz, tan, very fine grained, silty, micaceous with tan clay cement. Becomes fine grained to gravel size towards base with mica and feldspar.
638-653	Clay, tan, sandy, soft.

GEOLOGIC SUMMARY

Pleistocene	Columbia Group.	Surface-57'
∠ Miocene	Chesapeake Group.	57-282
⊬ Eocene	Pamunkey Group.	282-530
Paleo-Cret	Mattaponi Fm.	530-T.D.

VIRGINIA DIVISION OF MINERAL RESOURCES William Dudley, Geologist October 1958

Prop: Town of Warsaw Contractor: Mitchell Well and Pump

<u>Interval</u>	PLEISTOCENE Description_ COLUMBIA GROUP
0-57	sand and clay, yellow to tan
	MI OCENE CHESAPEAKE GROUP
57-260	clay, brownish pink, slightly micaceous and sandy. Few shell fragments 130 to 170°
260-270	clay, brown, soft, sandy/ Abundant shell fragments
270-282	sand, quartz, fine to medium grained, dirty with abundant shells.
282-285	EOCENE PAMUNKEY GROUP limestone, gray-brown, dense, very sandy, argillaceous, glauconitic, pyritic
285-290	clay, brown, marly, glauconitic, pyritic
290-350	sand, quartz and glauconite, fine grained, subangular
350-380	clay, brown, soft, slightly calcareous, glauconitic, sandy with few shell fragments
380-530	clay, tan, brown and pink, soft, caleareous, glauconitic, sandy, micaceous. Few shell fragments
530-560	PALEOCENE-UPPER CRETACEOUS MATTAPONI FM clay, brown, firm, sandy
560-638	sand, quartz, tan, very fine grained, silty, micaceous with than clay cement. Becomes fine grained to gravel size towards base with mica and feldspar
638-653	clay, tan, sandy, soft.

Pleistocene
Miocene
Eocene
Paleo-Cret

SUMMARY Colombia Gp.
Chesapeake Gp.
Pamunkey Gp.
Mattaponi Fm.

Surface-57' 57-282 288-530 530-T.D.