INTERVAL SHEET

age 1			VDMR WEI	LL NO.:_	963	w w	CR 136	
Date3-19-64			Sample 1	Interval	from_	0	to_62	27
PROP: Everett L. Go	oddard		Total De	epth	659			
COMP: Douglas & Dic	kinson		Oil	_Gas	Water	X	Explorate	ory
COUNTY: Northumber! (Callao)	land		Cuttings	SX_	Core	Oth	ner	-
VDMR WELL NO: V	V-963 From-To	From-T	0	From	n-To		From-	То
	0.01			No Was	hed Sam	ples		
-	0-21	-				-L-z	-	
-	21-42	· —		,	-		_	
-	42-63	-		*	-		-	
<u> </u>	63-84	_			_		_	
-	84-105	i -		,	-		-	
_	105-12/						_	
	105-126	_					_	
	126-147						_	
	147 - 168						_	
	168-189	_						
	189-210						_	
	210-231	124					_	
	231 - 252 252 - 273							
		_			_		_	
	273-294	_			_		_	
	294-315							
	315-336	-			_		_	
	336-357	-			_		_	
	357 - 378	_			_		_	
	378 -399	_			_		_	
	399-420	_			_		_	
	,,,							
_	120-441	_			_		_	
	441-462 No Sample	-			-		_	
	162-483				_		_	
	183-504	_			_			
	504-525	_			_		_	
	704 323							
- 5	525-546	-					-	
	546-567	-			_		_	
	67 -585	-			-		-	
	85-606	-			_		_	
	06-627	-			-		-	
	27 650 No Sample							

OWNER: E. L. Goddard

DRILLER: Douglas & Dickinson, Inc. COUNTY: Northumberland (Callao)

VDMR: 963 WWCR: 136 TOTAL DEPTH: 659

GEOLOGIC LOG

COLUMBIA GROUP (0-21*)

0-21 Sand and Gravel — tan, medium to coarse grained, rounded to subrounded quartz pebbles, considerable clay, feldspar, common

YORKTOWN FORMATION (21-41')

21-41 Sandy clay — light olive-gray, 15% rounded to subrounded quartz pebbles (up to 15 mm), some iron oxide staining, minor mica; shell fragments

CALVERT FORMATION (42-252')

42-63	Clay - purple-gray, trace of sand, compact and uniform			
63-84	Clay and Silt — purple-gray, quartz pebbles, mica and glauconite shell fragments (trace); vivianite			
84-105	with a few rounded pebbles up to 12 mm			
105-126	" slightly sandy			
126-147	Clay - Silt — light olive-gray to light tan, locally calcareous, indurated, white; moderately sandy; glauconite (trace)			
147-168	Silt - greenish-brown, moderately clayey, slightly glauconitic			
168-189	Clay — greenish-brown, slightly silty, very diatomaceous; forams present			
189-210	Clay - greenish-gray, moderately diatomaceous			
210-231	п п			
231-252	" small amounts shell and clear quartz sand			
CHICKAHOMINY FORMATION (252-294t)				

252-273 Sand — clear, generally coarse quartz in brown clay; abundant (10%) shell; traces phosphorite and glauconite; trace of pyrite

627-659

No sample

273-294	Sand — pale-olive to gray, coarse to medium grained, clear quartz-sand with shell and limestone fragments, and minor phosphorite					
NANJEMOY F	PRMATION (294-441°)					
294-315	Limestone — arenaceous (brown-sand); bioclastic					
315-336						
336-357	Sand — pale-olive to tan, predominantly bioclasts, subordinately brown-sand					
357-378	Sand — tan, medium grained, very minor pyrite; bioclastic brown-sand					
378-399	Sand — dark brown, very coarse; minor glauconite, very minor pyrite					
399-420	й п					
420-441	some olive colored sand					
MATTAPONI FORMATION (441-546†)						
441-462	No sample					
462-483	Clayey Sand — dark olive, almost completely glauconite, calcareous, sorted and polished quartz					
483-504	Sand — 50% glauconite, 50% quartz, calcareous, iron oxide staining					
504-525	with slight variation in percentages					
525-546	Nodozaria common; some feldspar					
PATUXENT F	ORMATION (546-627°)					
546-567	Sand — coarse to very coarse, feldspathic and glauconitic; garnet common					
567-585	considerable mottled clay matrix					
585-606	feldspathic, slightly glauconitic					
606-627	very feldspathic					

GEOLOGIC SUMMARY

	ROCK UNIT	AGE
0-21	Columbia Group	Pleistocene
21-41	Yorktown Formation	Late Miocene
41-252	Calvert Formation	Middle Miocene
252-294	Chickahominy Formation	Late Eocene
294-441	Nanjemoy Formation	Middle Eocene
441-546	Mattaponi Formation	Paleocene
546-627	Patuxent Formation	Early Cretaceous

Virginia Division of Mineral Resources Revised by: Robert H. Teifke, Geologist October 1967