INTERVAL SHEET

)		WWCR 131
Page	1	VDMR WELL NO.: Well No. 1181
Date	11/13/64	Sample Interval: from 21 to 646
PROP:	Locksley Hall Estates ${}^{\#}\!$	Total Depth 777
COMP:	Douglas & Dickinson, Inc.	OilGasWaterX_Exploratory
	Northumberland (Sunnybank) WELL NO: W-1181	Cuttings <u>X</u> CoreOther
From-To	From-To 0-21 No sample	From-To From-To From-To
-	21 - 42	630 - 646
-	42 - 63	646 - 777 No sample

	21 - 42	030 - 040	- · · · · · · · · · · · · · · · · · · ·
<ul> <li>Acceleration</li> </ul>	42 - 63	646 - 777 No sample	
-	63 - 84	-	
-	84 - 105		
	105 - 126	_	
	105 120		No washed samples
	126 - 147		
	147 - 168		
		-	-
-Carton and a	168 - 189		-
	189 210		-
-	210 -231		
	221 - 252		
	231 - 252		-
비행 이 같은 것이 많이 했다.	252 - 273		
	273 294		
	294 315		
	315 336		
	515 550		
-	336 - 357		
Constant and the second	357 - 378	Contraction of the second	-
	378 399		
	399 420		-
	420 - 441		-
-	441 - 462		
	462 - 483		
-	483 504 504 525		· · · · · · · · · · · · · · · · · · ·
-	504 525		
	504 525		
	525 546		
-	546 - 567		· · · · · · · · · · · · · · · · · · ·
	567 - 589		Contraction of the second
<ul> <li>TOPE - 105 STOP</li> </ul>	589 - 610		
-	610 616		-
-	-		
	616 630		

OWNER: Locksley Hall Estates #2 DRILLER: Douglas & Dickinson, Inc. COUNTY: Northumberland VDMR: 1181 WWCR: 131 TOTAL DEPTH: 777<sup>1</sup>

## GEOLOGIC LOG

0-21 No sample

COLUMBIA GROUP (21-421)

21-42

Sand - yellow-buff, fine to medium grained, well sorted, subangular, slightly argillaceous, moderately arkosic, moderately ferruginous, moderate amount granules

YORKTOWN FORMATION (42-84<sup>1</sup>)

42-63 Sand - brown, very fine to very coarse grained, poorly sorted, subangular to subrounded, argillaceous, small amount granules, moderately ferruginous, slightly arkosic and micaceous (muscovite), shell material very abundant - pelecypods

63-84 Clay - gray, very sandy, sand is poorly-sorted, micaceous (muscovite), slightly ferruginous and glauconitic, small amounts garnet, epidote, and feldspar, abundant shell fragments, in part chitino-phosphatic pelecypods

## CALVERT FORMATION (84-315<sup>1</sup>)

84-105	Sand	- brownish-gray, very fine to fine grained, well-sorted, angular to subangular, argillaceous, moderately ferruginous and micaceous (muscovite), very slightly glauconitic, abundant shell fragments, in part chitino-phosphatic pelecypods
105-126	Sand	<ul> <li>greenish-gray, fine grained, very well-sorted, angular to subangular, moderately argillaceous, moderately micaceous, slightly ferruginous and glauconitic, shell fragments moderately abundant, pelecypods</li> </ul>
126-147	Clay	<ul> <li>gray, slightly sandy and micaceous, trace of glauconite, small amount shell fragments - pelecypods</li> </ul>
147-168	Clay	<ul> <li>gray, mottled brown, slightly sandy-sand is localized in aggregates bound by ferruginous clay, small amount shell fragments - pelecypods</li> </ul>
168-189	Clay	- gray, slightly sandy, small amount shell fragments, pelecypods
189-210	Clav	- gray, moderately sandy, very small amount shell fragments

OWNER: Locksley Hall Estates \*2

- 210-231 Clay brownish-gray, very sandy; sand is very fine-grained, very well sorted, small amount of phosphate, very small amount shell fragments
- 231-252 Sand brownish-gray, very fine-grained, very well-sorted, angular to subangular, very argillaceous, slightly ferruginous, glauconitic, micaceous, very small amount of phosphate, small amount shell material; pelecypods, echinoid spines, foraminifera
- 252-273 Clay gray, slightly sandy, very small amount shell fragments
- 273-294 Clay gray, trace of sand
- 294-315 Clay gray, slightly sandy

CHICKAHOMINY FORMATION (315-399<sup>1</sup>)

- 315-336 Sand gray, very poorly sorted, angular, very argillaceous, moderate amount shell fragments, much of which is chitino-phosphatic; clear quartz in brownish clay
- 336-357 Sand gray, medium grained, fairly well sorted, angular to subangular, moderately argillaceous, shell fragments very abundant, including much chitino-phosphatic material; pelecypods and oysters; clean; clear quartz and shell
- 357-378 Sand gray, poorly sorted, angular to subrounded, slightly argillaceous, small amount garnet and fine grained glauconite, trace of pyrite, clean, clear quartz and shell; large amount shell fragments, pelecypods, echinoid spines, foraminifera, moderate amount of phosphate, much of it in form of shell fragments
- 378-399 Sand gray, poorly sorted, angular to subangular, very (calcareous) argillaceous, moderately glauconitic, traces of muscovite and columnar aragonite, abundant foraminifers and shell fragments, pelecypods, scaphopods, echinoid spines, small amount phosphate (nodular)

NANJEMOY FORMATION (399-504<sup>1</sup>)

399-420 Sand - dark, brownish-gray, medium to coarse grained, well sorted glauconite (25-35%) and medium to very coarse grained, subangular to subrounded quartz (65-75%), slightly argillaceous, much of "glauconite" is goethite-limonite after glauconite, much of quartz is iron-stained, scattered shell fragments, trace of phosphate OWNER: Locksley Hall Estates #2

- #1181
- 420-441 Sand brownish-gray, medium to coarse grained, well sorted glauconite (about 10%) and medium to very coarse grained, subangular to subrounded quartz (about 90%), slightly argillaceous, characteristics of glauconite and quartz as defined for preceding sample, moderate amount shell fragments, trace of phosphate

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- 441-462 Sand brownish-gray, medium to very coarse grained, rather poorly sorted, subangular to subrounded quartz (80-90%), and glauconite (10-20%), slightly argillaceous, moderate amount phosphate nodules, small amount pyrite, small amount shell material; pelecypods, echinoid spines, bryozoans
- 462-483 Sand dark, brownish-gray, medium to coarse grained, fairly well sorted glauconite (about 50%) and coarse to very coarse grained, subangular to subrounded quartz (about 50%), slightly argillaceous, a few pelecypods, bryozoans, and uniserial foraminifera

483-504

MATTAPONI FORMATION (504-616<sup>1</sup>)

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- 504-525 Sand black, medium to coarse grained, well sorted, black glauconite (about 90%), coarse to very coarse grained, subangular to subrounded, green and yellow quartz, slightly argillaceous, very small amounts shell material and phosphate
- 525-546 Sand black, medium grained, very well sorted, black glauconite, slightly argillaceous, very small amount quartz, a few uniserial foraminifera
- 546-567 Sand dark gray, predominantly poorly sorted, black to green glauconite, quartz sand subordinate, very argillaceous, compact gray clay, small amounts phosphate, pyrite, muscovite, and shell material - echinoid spines, worm burrows, pelecypods
- 567-589 Clay gray, compact, very sandy, glauconite dominant in sand fraction, small amount muscovite, a few shell fragments
- 589-610 Sand dark gray, fine to medium grained, fairly well sorted, glauconite (80-85%) and more poorly sorted quartz (15-20%), moderately argillaceous, small amount garnet, moderate amount coarse pelecypod fragments, a few fish teeth, and uniserial foraminifera