COMMONWEALTH	OF VIRGINIA W#: 5016 C#: 202
MAILING ADDRESS: DIVISION OF MIN B 3667 JAMES L. CALVE C Flottesville, VA 22903 WATER WELL C	NERAL RESOURCES OFFICE ADDRESS: ER, COMMISSIONER McCormick Road OMPLETION REPORT Charlottesville, Virginia
OWNER: County Board of Supervisors	Moiling Address:Montross, Va.
TENANT: Cople Primary School #1	Mailing Address:
DRILLER Sydnor Hydrodynamics	Mailing Address P.O. Box 27186, Richmond, Va. 23261
WELL LOCATION: CountyWestmoreland	Approx. 500 feet South (direction) of
	miles East (direction) of St. Rd. 626
(GIVE DIRECTION AND DISTANCE IN FEET OR MILES FROM T COUNTY HIGHWAY OR OTHER MAP.)	WO REFERENCE POINTS - ROADS, TOWNS, RIVERS, ETC ON
DATE STARTED: OCCODEL 24, 15//	SOO - 335 Gray clay, shells and sand
TYPE OF DRILL RIG USED: rotary	TOTAL DEPTH 500 feet (completed at 490')
WATER LEVEL: Standsfeet below has <u>NATURAL</u> flow of	surface <u>OR</u> yalo bas sand clay 450 500 Green sand clay gallons per minute.
YIELD TEST: Methodpump	HOLE SIZE: 15 inches from 0 to 65 feet
Drawdown _37 feet	inches from65 to500 feet
Rate75_ gal. per min.	inches fromtofeet
Duration <u>48</u> hrs., <u>     min</u> .	SCREEN SIZE: 6 inches from 465 to 480 feet
WATER ZONES: from tofeet	inches fromtofeet
fromtofeet	inches fromtofeet
fromtotofeet	CASE SIZE: 12 inches from 0 to 81 feet
WATER: ColorTaste	
OdorTempPF	<u>    6    inches  from  480  to  490   </u> feet
WELL TO SUPPLY: (check one) Home	GROUTING: Method
Farm Town SchoolX	Material Depth feet
IndustryOther	PUMP: Type
WATER ANALYSIS AVAILABLE:Yes X No	Capacitygal per min
DRILL CUTTINGS SAVED: Yes X No (DRILL CUTTINGS SHOULD BE COLLECTED AT IO FOOT OFFICE EXPRESS COLLECT. SAMPLE BAGS ARE FURNISH	Depth of intakefeet INTERVALS. THESE SAMPLES MAY BE SHIPPED TO THIS IED FREE OF CHARGE UPON REQUEST.)
R ARKS: "E-log by driller	
	(LOG OF WELL) OVER

ALBERT ALCORT LAB MINO MINO D

LOG FURNISHED BY: \_\_\_\_\_Sylvester Kyger

DATE:\_\_\_\_November 18, 1977

FROM         TO         (grade, cloy, etc., hordness, color, etc.)         (wifer, coving, shol, screen, sample, etc.)           0         5         10         White sand         11         1000000000000000000000000000000000000	DEP (fee	et)	TYPE OF ROCK OR SOIL PENE	TRATED	REMARKS
0         5         Red sandy clay         11 looks y kaird algo           10         20         Brown sand         asimu (sound)           10         20         Brown sand         asimu (sound)           30         40         Brown sand         asimu (sound)           315         240         Blue marl         asimu (sound)           135         240         Blue marl         asimu (sound)           247         300         Gray clay         Vietal (sound)           240         287         Gray clay         Vietal (sound)           335         338         Gray clay         Vietal (sound)           340         Blue marl         add (sound)         add (sound)           350         450         Bluck sand clay         Vietal (sound)           350         450         Bluck sand (sound)         fill           450         Bluck sand (sound)         fill (sound)         fill           450         Bluck sand (sound)         fill         fill           450         Bluck sand (sound)         fill         fill           46         6         fill         fill         fill           47         fill         fill         fill	FROM	то	(gravel, clay, etc., hardness, colo . BV . 22013.10M	r, etc.)	(water, caving, shot, screen, sample, etc.) rozivregus to break yinuoo
0       0       10       Weil standy Ukry         10       20       Brown and white clay       10       10         10       20       Brown and white clay       10       10         30       40       Brown and white clay       10       10       10         30       40       Brown and white clay       10       1	0	5	Pod candy clay		TENANT Cople Primary School #1
10       20       Brown and white clay       1000000000000000000000000000000000000	a. 22328:	7.5n <b>10</b> noi	White sand		DRULLER Sydnor Hydrodynamics
30       40       Brown sandy clayan       Rittle       50       <	10 20	20 30	Brown sand Brown and white clay	Ībrī	WELL A CONTROL CONTROL Westmorels
65       135       Blue marl       Blue marl       Blue marl         135       240       27       Gray marl       Gray marl         287       Gray clay, shells and sand       Gray clay, shells and sand       Gray clay, shells and sand         335       Gray clay, shells and sand       Gray clay, shells and sand       Gray clay, shells and sand         338       3380       Gray clay, shells and sand       Gray clay, shells and sand         338       3380       Gray clay, shells and sand       Gray clay, shells and sand         338       3380       Gray clay, shells and sand       Gray clay, shells and sand         338       3380       Gray sand       Gray clay, shells and clay       Gray clay, shells and clay         450       500       Green sand and clay       Green sand and clay       Green sand and clay         11       12       Green sand and clay       Green sand and clay       Green sand and clay         12       13       Green sand and clay       Green sand and clay       Green sand and clay         13       13       Green sand and clay       Green sand and clay       Green sand and clay         13       13       Green sand and clay       Green sand and clay       Green sand and clay         14       14	30 40sa	40 . 1965 - 2	Brown sand Brown sandy clay	а.	St. Rt. 202
240       207       303 and 12       TV21 bit       addoto         300       335       Gray clay, shells and sand       5421       addoto         338       350 scray clay, shells and sand       5421       addoto         330       350 scray clay, shells and sand       5421       addoto         350       Black sand clay       addoto       5421       addoto         450       500       Green sand and clay       addoto       addoto         900       addoto       Green sand and clay       addoto       addoto         901       addoto       Green sand and clay       addoto       addoto         901       addoto       addoto       addoto       addoto       addoto         901       addoto       addoto       addoto       addoto       addoto         901       addoto       addoto       addoto       addoto       addoto         901       addoto       addoto       addoto <t< td=""><td>65 135</td><td>135 240 287</td><td>Blue marl Blue marl and shells</td><td>T MDRT 23,0M</td><td>COME DIRECTLO AND CONTRACT OF AND CONTRACT OF CONTRACT.</td></t<>	65 135	135 240 287	Blue marl Blue marl and shells	T MDRT 23,0M	COME DIRECTLO AND CONTRACT OF AND CONTRACT OF CONTRACT.
1 335       338       T Gray clay for       yesdor       yesdor         336       136       136       136       136       136       136       136       136       136       136       100	240 287 300	300	Gray clay Gray clay, shells and sand	24, 1977	DATE STARTED: October
	335	338	Gray clay	rotary	TYPE OF DRILL RIG USED
Note       Nature       Litow       Nature       Science       Nature       Science       Science <thscience< th=""> <thscience< th="">       S</thscience<></thscience<>	350 350 450	450 500	Black sand clay Green sand and clay	walek 1881	WATER LEVEL: SHARK 13582"
16:LO TEST Marked Symp       HOLE SIZE 15 antes form       0 to 65 to 200 (0.1)         0 main       37 to       ant       11 antes to 100 (0.1)         0 main       72 gat set of       ant       11 antes to 100 (0.1)         0 main       72 gat set of       ant       10 antes to 100 (0.1)         0 main       72 gat set of       ant       10 antes to 10 (0.1)         0 main       72 gat set of       ant       10 antes to 10 (0.1)         0 main       6 main       65 to 460 (0.1)       10 (0.1)         10 main       10 antes to 10 (0.1)       10 (0.1)       10 (0.1)         10 main       10 antes       10 (0.1)       10 (0.1)       10 (0.1)         10 main       10 (0.1)       10 (0.1)       10 (0.1)       10 (0.1)         10 main       10 (0.1)       10 (0.1)       10 (0.1)       10 (0.1)         10 main       10 (0.1)       10 (0.1)       10 (0.1)       10 (0.1)         10 main       10 (0.1)       10 (0.1)       10 (0.1)       10 (0.1)         10 main       10 (0.1)       10 (0.1)       10 (0.1)       10 (0.1)         10 main       10 (0.1)       10 (0.1)       10 (0.1)       10 (0.1)         10 main       10 (0.1)       10 (0.				i o	A BILLEN ME HER .
Orderson 37       Left       11       Actend (from 56 to 600)       10.1         Bart 75       gas and no       SCREEN SIZE       6mates from 56       10.1         Automa 48	65	0	HOLE SIZE 15 with from .		Manual Property 231, 0731,
11317       72. qat sut on       30.00000000000000000000000000000000000	(). <u>.</u> 00	65 16 5	11 - m - 1 - m	The State	Ordwidown 37
48       htt,       no       SCREEN SIZE       6       helde from       55       16       65       16       160       160         14 TER_ZONCS: from       10       11       10       11       10       10       11       10       10       11       10       10       11       10       10       11       10       10       11       10       10       11       10       10       11       10       10       11       10       10       11       10       10       11       10       10       11       10       10       11       10       10       11       10       10       11       10       10       11       10       10       11       10	1990	·····		6.4	164 Point 75 104 946
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NATER Color       10       6       Numes here       9       6       1000       20       6       1000       20       1000	(es)			1991	
MATER Color         Fourthe         Fourthe         Fourthe         Faulthe	са ( <u>"""</u>	8 <sub>97</sub> 0	GASE SIZE 12 MURE TOW		no 1
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Fyrst       100       100       100         Indextry       000 million       200 million       100       100         ATER ANALYSIS AVAILABLE (Million       2 Million       000 million       100       100         ATER ANALYSIS AVAILABLE (Million       2 Million       000 million       100 million       100         ATER ANALYSIS AVAILABLE (Million       2 Million       100 million       100 million       100 million         MILL OUTTINGS SAVED       000 million       2 Million       000 million       100 million       100 million         MILL OUTTINGS SAVED       000 million       000 million       100 million       100 million       100 million         MILL OUTTINGS SAVED       000 million       100 million       100 million       100 million       100 million         MILL OUTTINGS SAVED       000 million       100 million       100 million       100 million       100 million         MILL OUTTINGS SAVED       100 million       100 million       100 million       100 million       100 million         MILL OUTTINGS SAVED       100 million       100 million       100 million       100 million       100 million         MILL OUTTINGS SAVED       100 million       100 million       100 million       100 million       100 million </td <td></td> <td></td> <td>DANS NEW BARRY DANS</td> <td></td> <td>WELL TO SUPPLY LEAKES ON HOUSE</td>			DANS NEW BARRY DANS		WELL TO SUPPLY LEAKES ON HOUSE
Indextry       00000       00000       00000       00000       000000         ATER ANALTSIS AVALABLE:Vel       X       Y       Coparity       VIII viii win         NLL OUTTINGS SAVED       Y       Y       Y       Y       Y         NLL OUTTINGS SAVED       Y       Y       Y       Y       Y       Y         NLL OUTTINGS SAVED       Y	1 to 1	100		X	Free Take \$2000
ATER ANALYSIS AVAILABLEYN: <sup>1</sup> NA CABLEYN: <sup>1</sup> NA Copacity VI wn Min Nill GUTTINGS SAVED fin <u>X</u> NG Denth of With a control of the second Natio Carrinos Shoula ne coulected ar in fun the second second of the second for the second fo					
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(Use additional forms if necessary)

# VIRGINIA DIVISION OF MINERAL RESOURCES Box 3667, Charlottesville, VA 22903

#### INTERVAL SHEET

Page 1	of l	Well Repository No.: W#: 5016 C#: 202
Date rec'	1: 1/31/76 Date Processed: 3/2/78	Sample Interval: from 0 to: 500
PROPERTY:	County Board of Supervisors	Number of samples: 50
COMPANY:	Sydnor Hydrodynamics	Total Depth: 500'
COUNTY:	Westmoreland	Oil or Gas: <u>Water</u> : Exploratory:

From-To	From-To	From-To	From-To	From-To
0 - 10	350 - 360	_	_	-
10 - 20	360 - 370	_	-	-
20 - 30	370 - 380	-	-	<u></u>
30 - 40	380 - 390	-	<u>_</u>	_
40 - 50	390 - 400	_	-	-
40 00	550 400			
50 - 60	400 - 410	-	-	-
60 - 70	410 - 420	-	-	-
70 - 80	420 - 430	-	-	
80 - 90	430 - 440	-	-	-
90 - 100	440 - 450		-	-
100 -110	450 - 460	-	-	-
110 - 120	460 - 470	-	-	-
120 - 130	470 - 480	-	-	
130 -140	480 - 490	-	-	-
140 - 150	490 - 500		-	. <del></del>
150 - 160	-	-	-	-
160 -170	-	-		-
170 - 180	-	-	. <del></del> )	-
180 - 190	-	-	-	-
190 - 200	-		-	-
200 - 210	<b>—</b> (*	-	-	-
210 - 220	-	-	-	-
220 - 230	<del></del>	-	-	-
230 - 240	-	-	-	-
240 - 250	-			-
250 - 260	-		-	-
260 - 270	-	-	-	-
270 - 280	- 1	-	-	-
280 - 290	-	-	Ξ.	-
290 - 300	-	-	-	-
300 - 310		-	-	-
310 - 320	-	-	-	-
320 - 330	-	-	-	-
330 - 340	-	-		-
340 - 350	-	-	<del></del>	-
Washed and un	washed samples			

OWNER:	County	Board of Supervisors
	(Cople	Primary School #1)
DRILLER:	Sydnor	Hydrodynamics
COUNTY:	Westmon	reland

W#: 5016 C#: 202 TOTAL DEPTH: 500' QUAD: Machodoc

#### GEOLOGIC LOG

Depth (feet)

- 0 10 Sand grayish orange; slightly clayey; medium to coarse grained, 10% granules; subangular to subrounded; moderately sorted; quartz; feldspar; some opaques.
- 10 20 Sand dark yellowish orange; slightly stained; coarse to very coarse grained, 3% granules; subrounded; moderately well sorted; quartz; feldspar; few opaques.
- 20 30 Sand dark yellowish orange; slightly to moderately stained; slightly clayey; coarse to very coarse grained, some medium grains, 7% granules; subrounded; moderately sorted; quartz; feldspar; few opaques.
- 30 40 Sand dark yellowish orange; slightly to moderately sorted; medium to coarse grained, few granules; subangular to subrounded; moderately well sorted; quartz; feldspar; some opaques.
- 40 50 Sand grayish orange; coarse grained to granular, some medium grains; subangular to rounded; moderately sorted; quartz; feldspar; few opaques; muscovite.
- 50 60 As above.
- 60 70 Sand light elive gray; abundant clay; fine grained, some medium grains; subangular to subrounded; well sorted; quartz; 2% ferricrete; few grains of feldspar; muscovite.
- 70 80 As above except fine to coarse grained; moderately sorted; 3% ferricrete.
- 80 90 Sand light olive gray; abundant clay; coarse grained to granular, some medium grains; subangular to subrounded; moderately sorted; quartz; some ferricrete; few opaques; muscovite.
- 90 100 Clay light olive gray; slightly silty; slightly sandy; fine grained to granular; subangular to subrounded; poorly sorted; quartz; some shell fragments, few fragments of ferricrete; glauconite; muscovite.
- 100 110 Coquina light gray; moderate sand; medium to coarse grained; subangular to subrounded; moderately well sorted; 85% limestone and shell fragments; quartz; some echinoid spines; few grains of glauconite.

OWNER: County Board of Supervisors - 2 -

## Depth (feet)

- 110 120 Clay olive light gray; moderate sand; fine to coarse grained, some granules; subangular to subrounded; moderately sorted, quartz; some black phosphatic material; few grains of glauconite; muscovite.
- 120 130 As above except light olive gray.
- 130 140 As above except slightly silty; slightly sandy.
- 140 150 Sand olive light gray; moderate clay; fine to medium grained, few granules; subangular to subrounded; moderately well sorted; quartz; 10% shell fragments; some black phosphatic material; gypsum; foram.
- 150 160 As above plus some coarse grains; 3% shell fragments; no foram.
- 160 170 Sand olive light gray; moderate clay; fine to medium grained; subangular to subrounded; moderately well sorted; quartz; 15% shell fragments; some black phosphatic material; few flakes of muscovite; gypsum.
- 170 180 As above except abundant clay; 7% shell fragments; 2% black phosphatic material; few bone fragments.
- 180 190 Sand olive light gray; abundant clay; fine grained; subangular to subrounded; well sorted; quartz; some shell fragments; few black phosphatic fragments; glauconite.
- 190 200 Clay light olive gray; slightly silty; moderate sand; fine grained; subangular to subrounded; well sorted; quartz; some shell fragments, few black phosphatic fragments.
- 200 210 Clay light olive gray; some quartz sand; few black phosphatic fragments; few shell fragments; few diatoms.
- 210 220 Clay light olive gray; slightly sandy; fine grained; subangular to subrounded; well sorted; quartz; few black phosphatic fragments.
- 220 230 As above plus few flakes of muscovite.
- 230 240 As above plus few shell fragments.
- 240 250 As above plus forams scarce (inc. Nonion).
- 250 260 Clay light olive gray; some quartz sand; few diatoms; forams scarce (inc. Textularia and Nonion).

260 - 270 As above except some diatoms.

OWNER: County Board of Supervisors - 3 -

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Depth (feet)

270 - 280 As above except no forams.

- 280 290 Clay light olive gray; slightly silty; few grains of quartz sand; few diatoms; forams scarce.
- 290 300 Sand olive light gray; medium to coarse grained; subangular to subrounded; moderately well sorted; quartz; 3% shell fragments; some black phosphatic material; few grains of glauconite, muscovite; forams rare (inc. Nonion).
- 300 310 Sand and coquina light olive gray; medium to coarse grained, some granules; subangular to rounded; moderately well sorted; 40% sandy limestone and shell fragments; quartz; 15% glauconite (black, green); 2% black phosphatic material; few grains of pyrite; forams (inc. Buccella and Robulus).
- 310 320 Sand and clay light olive gray; moderate clay; abundant sand; medium to coarse grained, some fine grains; subangular to rounded; moderately well sorted; quartz; 25% glauconite (black, green); 15% sandy limestone and shell fragments; forams scarce (inc. Buccella).
- 320 330 As above plus few black phsophatic fragments.
- 330 340 Sand light olive gray; medium to coarse grained; subangular to rounded; moderately well sorted; quartz; 10% glauconite; 3% shell fragments; few black phosphatic fragments; forams (inc. <u>Robulus</u> and <u>Buccella</u>).
- 340 350 As above except 15% glauconite, some ferricrete.
- 350 360 Sand olive light gray; medium to coarse grained, subangular to rounded; moderately well sorted; quartz; 25% glauconite; 2% sandy limestone and shell fragments; few grains of pyrite; muscovite.
- 360 370 Sand light olive gray; some stained grains; medium to coarse grained, few granules; subangular to rounded; moderately well sorted; quartz; 20% glauconite; some sandy limestone and shell fragments; few flakes of muscovite.
- 370 380 As above except some granules; 25% glauconite; 2% sandy limestone and shell fragments.
- 380 390 Sand light olive gray; medium grained, some coarse grains; subangular to rounded; well sorted; quartz; 35% glauconite; few shell fragments; muscovite.
- 390 400 As above except medium to coarse grained; moderately well sorted; some shell fragments.

OWNER: County Board of Supervisors - 4 - W#: 5016

Depth (feet)

400 - 410 As above except 40% glauconite.

- 410 420 As above.
- 420 430 Sand olive light gray; medium to coarse grained, few granules, few pebbles; subangular to rounded; moderately well sorted; 50% glauconite; quartz; some sandy limestone and shell fragments; few flakes of muscovite; pyrite.
- 430 440 As above except slightly clayey; 65% glauconite.
- 440 450 Sand olive light gray; slightly clayey; coarse to very coarse grained, some pebbles; subrounded to rounded; moderately well sorted; 60% glauconite; quartz; some sandy limestone and shell fragments; few flakes of muscovite; forams rare (inc. Cibicides).
- 450 460 Sand olive gray; medium grained, some coarse grains; rounded; well sorted; 80% glauconite; quartz; few shell fragments.
- 460 470 Sand olive light gray; medium to coarse grained, some pebbles; subrounded to rounded; moderately sorted; 65% glauconite; quartz; some sandy limestone and shell fragments.
- 470 480 Sand salt and pepper; some heavily stained grains; medium to coarse grained, some pebbles; subangular to rounded; moderately sorted; quartz; 40% glauconite; some shell fragments.
- 480 490 As above plus 5% granules; 2% sandy limestone and shell fragments.
- 490 500 As above plus few flakes of muscovite; forams rare (inc. Nodosaria).

Logged by: Michael T. Currie May 16, 1979

OWNER: County Board of Supervisors - 5 - W#: 5016 (Cople Primary School #1)

## GEOLOGIC SUMMARY

Depth (feet)	Thickness (feet)	Rock Unit	Time Rock Unit	
0- 60	60	Columbia Group	Pleistocene	
60-180	120	Choptank Formation Miocene		
180-300	120	Calvert Formation	Miocene	
300-500	200	Nanjemoy-Aquia Formations	Eccene-Cretaceous	

VIRGINIA DIVISION OF MINERAL RESOURCES David A. Hubbard, Jr., Geologist June 28, 1979