COMMONWEALTH OF VIRGINIA

DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

MAILING ADDRESS:

DIVISION OF MINERAL RESOURCES ADDRESS:

Box 3667, University Sta. ottesville, Virginia

JAMES L. CALVER, COMMISSIONER

McCormick Road Charlottesville, Virginia

WATER WELL COMPLETION REPORT

etc.) (wates, caving, shot, screen, sample, etc.)			FROM TO
OWNER: Williamsburg-James City Co. Public	Mailing Address: P	O. Box 179-Willia	msburg, Va.
TENANT: Norge Elementary School	Mailing Address:	Norge, Virgini	a 2318
DRILLER: Sydnor Hydrodynamics Incorporated			Richmond, Va.
WELL LOCATION: County James City	Annual Control of the	an order annual management of the	(direction) of
Norge, Virginia and 1000	ft. miles West	(direction) of	Route 60
(GIVE DIRECTION AND DISTANCE IN FEET OR MILES FROM T	derivate source for	THE REPORT OF THE PARTY OF THE PARTY.	
DATE STARTED: September 27, 1966	the same of the sa	ED: October 14	
TYPE OF DRILL RIG USED: Rotary	and shells	TOTAL DEPTH_	301 feet
WATER LEVEL: Stands 121 feet below	surface OR	Gray clay Sticky gray cla	137 154 154 214
has <u>NATURAL</u> flows of_	gallons	per minuté. de	214 252
YIELD TEST: Method Submersible	HOLE SIZE:_	12 inches from 0	to301feet
Drawdown 4 feet		inches from	tofeet
Rate <u>50</u> gal. per min.		inches from	
Duration_8hrs.,min.	SCREEN SIZE:_	6inches from22	1 to261_feet
WATER ZONES: from 221 to 261 feet	_	inches from	tofeet
fromtofeet	-	inches from	tofeet
fromtofeet	CASE SIZE:_	6 inches from 0	to221_feet
WATER: Color Clear Toste OK	_	6 inches from 26	
Odor	- Table 1	inches from	tofeet
WELL TO SUPPLY: (check one) Home	GROUTING: M	ethod Gravity	
Farm Town School X	Material	ement/water_Depth	feet
IndustryOther	PUMP: Ty	p e	
WATER ANALYSIS AVAILABLE:Yes_X_No	Co	apacity	gal. per min
DRILL CUTTINGS SAVED: Yes_X No (DRILL CUTTINGS SHOULD BE COLLECTED AT 10 FOOT OFFICE EXPRESS COLLECT. SAMPLE BAGS ARE FURNISH	INTERVALS. THESE		
ARKS: Electric Log Ran 10-4-66 (Sydnor)		

ALMIDALV TEOG JARWHOM MOO
THEMPOLEVED DIMOMODE ON A HOLTAVERSHOO TO THEMTRAPSO
TRESPECTOR FURNISHED BY: Sydnor Hydrodynamics Inc. DATE: 10-18-66

By 3667, University Sta.

DEPTH (feet)		TYPE OF ROCK OR SOIL PENET	RATED
FROM	ТО	(gravel, clay, etc., hardness, color,	etc.) (water, caving, shot, screen, sample, etc.)
e in		1 1 N MAA MARKATA CONTRACTOR BUILDING	
	sin	Molling Address Norge, Virg	Schools Norge Elamentary School
0	1	Top soil	
V 15go			ILLER, Sydnor, Hydrodynamics Incorporated
9	19 24	Yellow and brown sand clay	LL LOCATION County Jagges Lasy
24	42	77-11	
42	62	Yellow clay Yellow clay and shells with so	Norge Virginia
62	72	Brown sand clay and shells	VE BIRECTION AND DISTANCE IN FEET OR MALES FROM
72	96	Blue clay and shells with some	SOUTY HIGHWAY OR OTHER MAR.)
96	101	Hard shell like rock with green	and black sand
101	114	Silty gray clay and shells	
114	137	Gray silty clay	PE OF DRILL RIG USED BOKKEY
137	154		ATER LEVEL Stands 121 cer below
154	214	Sticky gray clay	ATER LEVEL Stands 121 est below
214	252	Shells, green clay and fine san	d streaks
252	263	Coarse shell hed	
263	267	Shell rock	ELD TEST Melhod Submersible
267	290	Black sand, gray clay and shell	Is town to the last
290	301	Sticky dark gray clay	190 Land 100 March 100 Mar
B01	4)	most anion	Roya 50 gel per nin.
191_10	A 01 1 NO	SCREEN SIZE 6 (top)	Ouention B
ra l	1501	inot relial	TER ZONES: from 221 to 261 rear
131		monlesdan	1 0 0 1 mont
10 LS	La of La of	CASE SIZE & Inches, from J	test. ot most
(n) _6.75	1.1.2	Committee Irania	TER Color Clear Toste OK
iall			Odor Noze Temp
			1000
	V3	GROUTING Mathod Craw	LL TO SUPPLY (check one) Home
*9 t	.08dts	Moteria Person Language De	Form Town Joense X.
		PUMP: Type	lardus y 1 kushci
			THE PARTY OF THE P
m 100	100	Capacity	TER AWALYSIS AVAILABLE: YELL NO
re)			The King Special Special Control of the Control of
	T DATIONS		ILL, GUTTINGS SAVED. YES NO.
			FICE EXPRESS COLLECT SAMPLE BAGS WEE WINNING
			ARKS Elacytia Lag Ran 10-1-66 (Bydnar
	1- 0.60		

INTERVAL SHEET

WWCR - 156

Page 1 of 1

Date rec'd: November 21, 1966

PROP: Norge Elementary School

COMP: Sydnor Hydrodynamics Incorporated

COUNTY: James City (Norge)

VDMR Well No: 1754

Sample Interval: from 0 to 300

Number of samples: 30

Total Depth: 301'

Oil or Gas: Water: XExploratory:

	Fr	om-	-To		From-To	From-To	From-To
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			10				
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	10	-	20		.		-
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	50	-	60		ota - april		
	60		70		_	_ = ===================================	<u>-</u>
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	80	-	90			: =	
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	110	-	120			-	_
	120	-	130		_	:-	_
	130	\leftarrow	140			- , · ·	-
	140	-	150		1.15.	, <u>-</u>	
	150	_	160*		a. 📻		
	160	-	170*		_	_	_
	170	-	180*		-	_	1-2-11-3
	180	-	190#		-	E Same	-
	190	-	200*		-	=	-
	200	100	210*				
	210	Ξ.	220#		_		-
	220	_	230*			_	=
	230	_	240*		_	_	_
	240	-	250*		_	<u>-</u>	-
		Ú.					
	250		260*				
			270*		-	-	-
			280*		-	-	-
			290*		_	-	_
	7.5		300*		_	_	-
unwash				y	e decimalistic	a - Carty bed	

OWNER: Williamsburg-James City County Public Schools VDMR: 1754

feldspathic

(Norge Elementary School)

WWCR: 156

DRILLER: Sydnor Hydrodynamics, Inc.

TOTAL DEPTH: 301

COUNTY: James City (Norge)

GEOLOGIC LOG

Depth in feet

COLUMBIA GROUP (0-40t)

0-10			ly sorted and poorly trace of glauconite
10-20	п	= 11	
20-30	п	п	
30-40			layey; fine- to medium- ular to subrounded;

YORKTOWN FORMATION (40-1001)

40-50	moderately	yellowish-brown, clayey, medium-grained, sorted; trace of glauconite; 25-30% of pelecypod shell fragments	
50-60	u	TI .	
60-70	n	ii	
70-80	fine- to me to subroun	gray, slightly- to moderately-clayey, dium-grained, fairly well-sorted, subangul led; very slightly glauconitic; 15-20% of molluscan shell fragments	lar
80-90	II .	п	
90-100	u	ü	

CALVERT FORMATION (100-250t)

100-110	Sand - gray, with greenish cast, moderately clayey, fine-
	grained, well sorted, angular to subangular; slightly
	glauconitic and micaceous (muscovite); a few
	foraminifers; about 5% of sample is molluscan shell
	fragments

OWNER: Williamsburg-James City County Public Schools

#1754

OWNER:		entary School)	County Public Schools	#1754
120-130	Sand -	grained, well galuconitic ar	eenish cast, moderately c sorted, angular to subang ad micaceous (muscovite); about 5% of sample is mo	gular; slightly a few
130-140		TI.	n	
140-150	Sand a	to moderately to very fine-g	gray, with greenish cast, y-clayey; coarse-grained s grained sand; well sorted, onitic and micaceous	silt and fine-
150-160	Clay -		r, silty and sandy; sand is ed; a few shell fragments a a, Nonion)	
160-170		ii		
170-180	Sand -	rather poorly	r, clayey; medium= to coa -sorted and rounded; a ve d foraminifers	
180-190		11	п	
190-200		11	п	
200-210	Sand -	coarse-grain subrounded;	ayey (gray-brown clay); ned, moderately sorted, suclear quartz, with minor sell and bone; locally cemes	bangular to shell and
210-220		п	ri .	
220-230		п	TI .	
230-240		п	п	
240-250		ii	n	

OWNER: Williamsburg-James City County Public Schools (Norge Elementary School)

#1754

NANJEMOY FORMATION (250-280')

250-260	Limestone - light- to medium-gray, fossiliferous, cavernous, drusy; slightly sandy, pyritic or glauconitic; pelecypods and gastropods
260-270	tt tt
270-280	Limestone - moderately abundant matrix of drab clays; medium-grained, moderately sorted, rather poorly-

MATTAPONI FORMATION (280-300')

290-300

280-290	Sand - moderately abundant matrix of drab, gray to brown
	clay; medium-grained, moderately sorted; very
	galuconitic (slightly decomposed, autochthonous);
	a few shell fragments; foraminifers common

rounded; glauconitic

GEOLOGIC SUMMARY

	Rock Unit	Age	
0- 40'	Columbia Group	Pleistocene	
40-1001	Yorktown Formation	Late Miocene	
100-2501	Calvert Formation	Middle Miocene	
250-2801	Nanjemoy Formation	Middle Eocene	
280-3001	Mattaponi Formation	Paleocene	

Virginia Division of Mineral Resources Robert H. Teifke, Geologist July 30, 1970 (Revision) OWNER: Williamsburg-James City County Public Schools

VDMR: 1754

(Norge Elementary School)

WWCR: 156

DRILLER: Sydnor Hydrodynamics, Inc.

TOTAL DEPTH: 301'

COUNTY: James City (Norge)

GEOLOGIC LOG

Depth in feet

COLUMBIA GROUP (0-40')

0-10	Sand - orange-brown, clayey; poorly sorted and poorly rounded; slightly feldspathic; trace of glauconite
10-20	и и
20-30	п
30-40	Sand - tan, moderately clayey to clayey; fine- to medium- grained, well sorted, subangular to subrounded; feldspathic

YORKTOWN FORMATION (40-100')

40-50	Sand a		rish-brown, clayey, medium-grained, d; trace of glauconite; 25-39% of pod shell fragments	
50-60		II .	" ; locally , blue- gray.	
60-70		11	11 ; locally, blue-gray.	
70-80	Sand	- brownish-gray,	slightly- to moderately-clayey, grained, fairly well-sorted, subangular	
		to subrounded; v	ery slightly glauconitic; 15-20% of can shell fragments; dense, dkqrey, calcific sandstone present.	
80-90		ar .	· · ·	

11

CALVERT FORMATION (100-250')

11

100-110	Sand - gray, with greenish cast, moderately clayey, <u>fine</u> -grained, well sorted, angular to subangular; slightly
	glauconitic and micaceous (muscovite); a few
	foraminifers; about 5% of sample is molluscan shell
	fragments

110-120

90-100

	OWNER:	Williamsburg-James City County Public Schools #175 (Norge Elementary School)	4			
	120-130	Sand - gray, with greenish cast, moderately clayey, fine- grained, well sorted, angular to subangular; slightly galuconitic and micaceous (muscovite); a few foraminifers; about 5% of sample is molluscan shell				
		fragments				
	130-140	m m				
	140-150	Sand and Silt - light-gray, with greenish cast, slightly- to moderately-clayey; coarse-grained silt and fi to very fine-grained sand; well sorted, angular; slightly glauconitic and micaceous	ne-			
	150-160	Clay - greenish-gray, silty and sandy; sand is poorly so poorly rounded; a few shell fragments and foram (Siphogenerina, Nonion)				
	160-170	11 11				
	170-180	Sand - greenish-gray, clayey; medium- to coarse-grain rather poorly-sorted and rounded; a very few sh fragments and foraminifers				
	180-190	TT				
	190-200	II II				
	200-210	Sand - moderately clayey (gray-brown clay); medium - coarse-grained, moderately sorted, subangular subrounded; clear quartz, with minor shell and phosphatic shell and bone; locally cemented, cal foraminifers common	to			
	210-220	ir ir				
	220-230	11 11				
1	230-240	ti ti				
	240-250	11 11				

OWNER: Williamsburg-James City County Public Schools (Norge Elementary School) #1754

NANJEMOY FORMATION (250-280')

250-260	Limestone - light- to medium-gray, fossiliferous, cavernous,
	drusy; slightly sandy, pyritic, or glauconitic; pelecypods
	and gastropods; bio-fragmental

260-270

270-280 Limestone - moderately abundant matrix of drab clays;
medium-grained, moderately sorted, rather poorlyrounded; glauconitic

-MATTAPONI FORMATION (280-300')

280-290	Sand - moderately abundant matrix of drab, "gray to brown
	clay; medium-grained, moderately sorted; very galuconitic (slightly decomposed, autochthonous);
	a few shell fragments; foraminifers common; white ss to Is
	common

290-300

GEOLOGIC SUMMARY

	Rock Unit	Age
0- 40'	Columbia Group	Pleistocene
40-100'	Yorktown Formation	Late Miocene
100-2501	Calvert Formation	Middle Miocene
250-2801	Nanjemoy Formation	Middle Eocene
280-3001	Mattaponi Formation	Paleocene-

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