

COMMONWEALTH OF VIRGINIA  
DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

W-4813  
C-195

MAILING ADDRESS:  
Box 3667  
Charlottesville, VA 22903

DIVISION OF MINERAL RESOURCES  
JAMES L. CALVER, COMMISSIONER  
WATER WELL COMPLETION REPORT

OFFICE ADDRESS:  
McCormick Road  
Charlottesville, Virginia

OWNER: City of Suffolk #7 Mailing Address: 447 Market St. Suffolk, VA

TENANT: \_\_\_\_\_ Mailing Address: 3322 Cromwell

DRILLER: Layne-Atlantic Co. Mailing Address: Norfolk, VA 23509

WELL LOCATION: County Nansemond Approx. 0.7 ~~xxxx~~ miles N (direction) of  
Junction Rt. 58 and 10 and 1100 <sup>feet</sup> ~~xxxx~~ W (direction) of Rt. 10

(GIVE DIRECTION AND DISTANCE IN FEET OR MILES FROM TWO REFERENCE POINTS - ROADS, TOWNS, RIVERS, ETC. - ON COUNTY HIGHWAY OR OTHER MAP.)

DATE STARTED: 4/6/76 DATE COMPLETED: 5/31/76

TYPE OF DRILL RIG USED: \_\_\_\_\_ TOTAL DEPTH 1016 feet

WATER LEVEL: Stands 55.75 feet below surface OR  
has NATURAL flow of \_\_\_\_\_ gallons per minute.

YIELD TEST: Method \_\_\_\_\_  
Drawdown 142.50 feet  
Rate 2145 gal. per min.  
Duration 40 hrs., \_\_\_\_\_ min.

HOLE SIZE: 26 inches from 0 to 500 feet  
36 inches from 500 to 1016 feet  
\_\_\_\_\_ inches from \_\_\_\_\_ to \_\_\_\_\_ feet

SCREEN SIZE: 12 inches from 840 to 875 feet  
12 inches from 892 to 942 feet  
12 inches from 965 to 1005 feet

CASE SIZE: 20 inches from 0 to 500 feet  
12 inches from 500 to 1010 feet  
\_\_\_\_\_ inches from \_\_\_\_\_ to \_\_\_\_\_ feet

WATER ZONES: from \_\_\_\_\_ to \_\_\_\_\_ feet  
from \_\_\_\_\_ to \_\_\_\_\_ feet  
from \_\_\_\_\_ to \_\_\_\_\_ feet

WATER: Color \_\_\_\_\_ Taste \_\_\_\_\_  
Odor \_\_\_\_\_ Temp. \_\_\_\_\_ °F

GROUTING: Method \_\_\_\_\_  
Material \_\_\_\_\_ Depth \_\_\_\_\_ feet

WELL TO SUPPLY: (check one) Home \_\_\_\_\_  
Farm \_\_\_\_\_ Town XX School \_\_\_\_\_  
Industry \_\_\_\_\_ Other \_\_\_\_\_

PUMP: Type \_\_\_\_\_  
Capacity \_\_\_\_\_ gal per min  
Depth of intake \_\_\_\_\_ feet

WATER ANALYSIS AVAILABLE: Yes \_\_\_\_\_ No \_\_\_\_\_

DRILL CUTTINGS SAVED: Yes XX No \_\_\_\_\_

(DRILL CUTTINGS SHOULD BE COLLECTED AT 10 FOOT INTERVALS. THESE SAMPLES MAY BE SHIPPED TO THIS OFFICE EXPRESS COLLECT. SAMPLE BAGS ARE FURNISHED FREE OF CHARGE UPON REQUEST.)

REMARKS: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

# LOG

FURNISHED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

DEPTH (feet)		TYPE OF ROCK OR SOIL PENETRATED ( gravel, clay, etc., hardness, color, etc.)	REMARKS (water, caving, shot, screen, sample, etc.)
FROM	TO		
0	12	Clay	
12	22	Sand	
22	26	Coarse sand & shell	
26	50	Sandy clay	
50	65	Clay	
65	90	Clay & sand streaks	
90	130	Sandy clay	
130	201	Sand & clay streaks	
201	202	Rock	
202	210	Sand & Clay streaks	
210	221	Sandy clay	
221	250	Sandy clay	
250	272	Sand	
272	320	Clay & sand streaks	
320	382	Rock	
382	472	Hard clay	
472	530	Sandy clay	
530	565	Hard clay	
565	575	Sandy clay	
575	590	Coarse sand & clay streaks	
590	602	Sandy clay	
602	605	Coarse sand & clay streaks	
605	660	Hard clay	
660	680	Sand & clay streaks	
680	710	Hard clay	
710	725	Sandy clay	
725	770	Hard shale	
770	813	Sand & clay streaks	
813	835	Shale	
835	855	Coarse sand & shale streaks	
855	898	Sandy shale	
898	949	Coarse sand & shale streaks	
949	966	Shale	
966	1016	Sand & shale streaks	

(Use additional forms if necessary)

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

INTERVAL SHEET

Page 1 of 1 Well Repository No: C-195 W-4813  
 Date rec'd: 2/7/77 Date Processed: 7/17/77 Sample Interval: from:0to: 1115  
 PROPERTY: City of Suffolk #7 Number of samples: 98  
 COMPANY: Layne-Atlantic Co. Total Depth: 1016'  
 COUNTY: Nansemond (Suffolk) Oil or Gas: Water:X Exploratory:

From-To	From-To	From-To	From-To
-0	-250	500-510	750-760
-10	-260	510-520	760-770
-20	-270	520-530	770-780
-30	-290	530-540	780-790
-40	-300	540-550	-
-50	300-310	550-560	800-810
-60	310-320	560-570	810-820
-70	320-330	570-580	820-830
-80	330-340	580-590	830-840
-90	340-350	590-600	840-850
-100	350-360	600-610	850-860
-110	360-370	610-620	860-870
-120	370-380	620-630	-
-130	380-390	630-640	880-890
-140	390-400	640-650	890-900
-150	400-410	650-660	900-910
-160	410-420	660-670	910-920
-170	420-430	670-680	920-930
-180	430-440	680-690	930-940
-190	440-450	690-700	940-950
-200	450-460	700-710	950-960
-210	460-470	710-720	-
-220	470-480	720-730	970-980
-230	480-490	730-740	980-990
-240	490-500	740-750	990-1000
washed and unwashed samples			1000-1115

Owner: Township of Suffolk #1  
Driller: Layne-Atlantic  
County: Nansemond

W# 4813  
C# 195  
Total Depth: 1016  
Quad: Suffolk  
Elev: 57'

Depth  
(feet)

WELL LOG

- 0-10 Clay - grayish orange (10YR 7/4); abundant sand; fine to medium, subangular, moderate sorting.
- 10-20 Sand - grayish orange (10YR 7/4); medium to very coarse, subangular, moderate sorting; 20% very fine phosphate fragments; rose quartz.
- 20-30 Sand - grayish orange (10YR 7/4); sparse clay; fine to very coarse, subangular, moderate sorting; 20% very fine phosphate fragments; ostracods; rose quartz; iron oxide crusts.
- 30-40 Sand - light olive gray (5Y 6/1); moderate clay; very fine to medium, subangular, well sorted; 20% very fine phosphate fragments; ostracod; 45% shell fragments - Dentalium, Nucula proxima, Phacoides; iron oxide crusts.
- 40-90 Sand - light olive gray (5Y 6/1); 50% shell fragments - barnacle, snails, Turritella, Oliva, Terebra Gray, Drilla, Yoldia; sparse clay 40-60 and moderate from 60-90; very fine to medium, subangular, moderate sorting; 20% very fine phosphate fragments; echinoderm spines and plates; iron oxide worm tubes and fragments at 70-90.
- 90-110 Sand - light olive gray (5Y 6/1); 90% shell fragments; moderate clay; very fine, ~~fine~~ to medium, subangular, moderate sorting; 20% very fine phosphate fragments; echinoderm spines; reworked shell fragments and newer material; iron oxide worm tubes.
- 110-140 Sand, Glauconitic - light and dark green; 50% glauconite; sparse clay at 110-120 and very sparse thereafter; very fine to coarse, subangular, moderate sorting; shell fragments - 40% at 110-120, 15% at 120-130 and 20% at 130-140, Corbula, Nucula.
- 140-160 Sand, Shelly - light and dark gray; 50% shell fragments; moderate clay at 140-150, and sparse from 150-160; very fine to coarse, subangular, moderate sorting; 50% glauconite at 140-150 and 40% at 150-160; (sand is 50-40% glauconite and 50% quartz sand; rest is shell fragments).
- 160-170 Sand - light olive gray (5Y 6/1); very sparse clay; very fine to coarse, subangular, moderate sorting; 30% glauconite; 30% shell fragments; teeth; iron oxide crusts and fragments.

Depth  
(feet)

- 170-180 Sand - light and dark gray; 50% shell fragments; 50% glauconite; very sparse clay; ~~fine to coarse~~ very fine to coarse, subangular, moderate sorting; Turritella; iron oxide crusts and fragments.
- 180-190 Sand - light olive gray (5Y 6/1); very sparse clay; very fine to fine, subangular, well sorted; 10% fine glauconite; 5% shell fragments; echinoderm spines.
- 190-200 Sand - light olive gray (5Y 6/1); abundant clay; very fine to coarse, subangular, moderate sorting; 25% fine glauconite; 40% shell fragments; echinoderm spines.
- 200-210 Sand - light olive gray (5Y 6/1); 50% shell fragments; very fine to coarse, subangular, moderate sorting; 25% glauconite; madreporite.
- 210-230 Sand - light olive gray (5Y 6/1); abundant clay in clasts; very fine to coarse, subangular, moderate sorting; 10% glauconite; 20-30% shell fragments; vertebra; fine mica at 220-230.
- 230-260 Sand - light olive gray (5Y 6/1); abundant clay; very fine to coarse with rounded granules, subangular, moderate sorting; 5% glauconite at 230-240 and 8% at 240-260; 30% shell fragments at 230-240 and 20% at 240-260; fine mica.
- 260-280 Sand - light olive gray (5Y 6/1); sparse clay in clasts; very fine to coarse at 260-270 and very coarse at 270-280; subangular, moderate sorting; 8% glauconite/phosphate fragments; 10-30% shell fragments; forams - Robulus; teeth; coral; iron staining on the rounded pebbles.
- 280-290 Sand - light olive gray (5Y 6/1); very sparse clay; very fine to very coarse, subangular, moderate sorting; 10% glauconite/phosphate fragments; 3% shell fragments.
- 290-300 Sand - light olive gray (5Y 6/1); very fine to very coarse, subangular, moderate sorting; 10% glauconite/phosphate fragments; 1% shell fragments; very small teeth.
- 300- Sand, Glauconitic - light and dark gray; 90% medium to coarse brown and green glauconite; sparse clay; ~~fine to coarse~~ very fine to coarse, subangular, poorly sorted; echinoderm spines.

Owner: Township of Suffolk #1 -3-

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Depth  
(feet)

- 300-310 Sand - light olive gray (5Y 6/1); very sparse clay; very fine to granule, subangular, moderate sorting; 10% glauconite; few shell fragments; mica.
- 310-330 Sand, Glauconitic - light and dark green; 90% dark green glauconite; sparse clay; ~~moderate sorting~~ very fine to very coarse, subangular, moderate sorting; forams - Robulus; vertebra.
- 330-350 Sand, Glauconitic - light and dark green; 60% glauconite; very sparse clay; very fine to very coarse, angular and subangular, moderate sorting; ~~moderate sorting~~ forams - Nodosaria, Robulus; rare shell fragments at 340-350; shark teeth.
- 350-370 Sand, Glauconitic - light and dark green; 50% glauconite; sparse to moderate clay; ~~moderate sorting~~ very fine to very coarse, angular and subangular, moderate sorting; forams; pyrite; garnet.
- 370-400 Sand - light olive gray (5Y 6/1); moderate clay; very fine to very coarse, subangular, moderate sorting; 10% glauconite at 370-380 and 30% from 380-400; shell fragments - 3%-10%; quartzite fragments; madreporite; fine mica.
- 400-430 Sand - light olive gray (5Y 5/1); abundant clay; very fine to very coarse, subangular, moderate sorting; 20% glauconite at 400-410; 10% fine shell fragments at 400-410; fine mica.
- 430-440 Clay - olive gray (5Y 4/1); abundant sand; very fine to medium, subangular, well sorted; 10%+ glauconite; 1% fine shell fragments; fine mica.
- 440-450 Sand - olive gray (5Y 4/1); abundant clay; very fine to medium, subangular, well sorted; 10%+ glauconite; 1% fine shell fragments.
- 450-470 Clay - olive gray (5Y 4/1); abundant sand; very fine to medium with rounded granules, subangular, well sorted; 10%+ glauconite; 1% fine shell fragments.
- 470-490 Sand - light olive gray (5Y 6/1); medium to granule, subangular, moderate sorting; feldspar.
- 490-540 Sand - light olive gray (5Y 6/1); very sparse clay in sand clasts with sparse at 510-520; very fine to granule, subangular, moderate sorting; few glauconite/shell fragments; mackrel vertebra; mica; 510-540 - feldspar; fuschite mica at 520-530; small many-terminated red quartz nodules.

Depth  
(feet)

540-580 Sand - pale yellow brown (10YR 6/2); moderate clay; very fine to granule, subangular, with angular also from 550-580, moderate sorting; some contamination; oyster shells; lignite; feldspar; mica; pyrite; red quartz nodules; iron oxide worm tubes at 570-580.

580-610 Sand - yellowish gray (5Y 6/2); fine to very fine with some granules at 580-590 and medium to granule thereafter, subangular, moderate sorting; iron oxide tubes; feldspar; mica; garnet from 590-610.

610-670 Sand - light olive gray (5Y 7/1); fine to very coarse, with granules, subangular, moderate sorting; garnet; feldspar.

670-730 Sand - light olive gray (5Y 6/1); moderate clay; fine to very coarse at 670-680 and very fine to granule thereafter; subangular, moderate sorting; garnet; feldspar; mica in clay at 670-680; 1% rose quartz at 680-690; mica from 700-730.

690-700 No Sample.

730-770 Sand - light olive gray (5Y 6/1); sparse clay at 730-740 and very sparse from 740-770; very fine to granule at 730-740 and fine to granule thereafter; subangular, poor sorting at 730-740 and moderate from 740-770; glauconite/shell contamination; garnet; feldspar.

770-790 Sand - light olive gray (5Y 6/1); medium to very coarse, subangular, moderate sorting; garnet; feldspar.

790-800 No Sample.

800-820 Sand - light olive gray (5Y 6/1); coarse to very coarse, subangular, well sorted; garnet, feldspar.

820-870 Sand - light olive gray (5Y 6/1); fine to granule at 820-840; fine to very coarse at 840-850, very fine to very coarse at 850-870; subangular, moderate sorting; abundant garnet; feldspar.

870-880 No Sample.

880-890 Sand - light olive gray (5Y 6/1); fine to very coarse with large granules, subangular, moderate sorting; garnet; feldspar.

890-900 Sand - light olive gray (5Y 6/1); very sparse clay; fine to very coarse, subangular, moderate sorting; garnet; feldspar, mica.

Owner: Township of Suffolk #1 -5-

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Depth  
(feet)

900-910 Sand - light olive gray (5Y 6/1); very sparse clay; medium to granule, subangular, moderate<sup>sorting</sup>; garnet; feldspar.

910-920 Sand - light olive gray (5Y 6/1); medium to granule, subangular, moderate sorting; garnet; feldspar.

920-930 Sand - light olive gray (5Y 6/1); very sparse clay; medium to granule, subangular, moderate sorting; garnet; feldspar.

930-940 Sand - light olive gray (5Y 6/1); fine to granule, subangular, moderate sorting; garnet; feldspar.

940-960 Sand - light olive gray (5Y 6/1); very sparse clay; very fine to granule, subangular, moderate sorting; garnet; feldspar; mica.

960-970 No Samples.

970-980 Sand - light olive gray (5Y 6/1); medium to granule, subangular, moderate sorting; garnet; feldspar.

980-990 Sand - light olive gray (5Y 6/1); very sparse clay; very fine to granule, subangular, moderate sorting; garnet; feldspar; mica.

990-1000 Sand - light olive gray (5Y 6/1) very fine to granule, subangular, moderate sorting; garnet; feldspar.

1000-1015 Sand - light olive gray (5Y 6/1); very sparse clay; fine and medium to granule, subangular, moderate sorting; garnet; feldspar.

1015-1016 No Sample.

Logged by: J. K. Polzin  
December 12/15, 1980