COMMONWEALTH OF VIRGINIA

DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

Box 3667

MAILING ADDRESS: DIVISION OF MINERAL RESOURCES

JAMES L. CALVER, COMMISSIONER

OFFICE ADDRESS: McCormick Road Charlottesville, Virginia

(LOG OF WELL) OVERSwearingen 1/11/77

W# 4764

C# 90

Charlottesville, VA 22903 WATER WELL COMPLETION REPORT _____ Mailing Address: King George, Virginia OWNER: King George County TENANT: Bayberry Estates Well #3 ___ Mailing Address:___ ____ Mailing Address Box 498, Warsaw, Va. DRILLER: Douglas Drilling Co., Inc. WELL LOCATION: County King George Approx. 1000 feet XXXX __(direction) of eray - sandy mossy graffed av intersection of Routes 301 & 1101 —(direction) of — (GIVE DIRECTION AND DISTANCE IN FEET OR MILES FROM TWO REFERENCE POINTS - ROADS, TOWNS, RIVERS, ETC. - ON COUNTY HIGHWAY OR OTHER MAP.) DATE COMPLETED: November 18, 1976 DATE STARTED:__ TYPE OF DRILL RIG USED: Rotary TOTAL DEPTH_ WATER LEVEL: Stands 64 feet below surface OR was about - vary has NATURAL flow of ____ gallons per minute. YIELD TEST: Method 15 HP test pump above ber 1 HOLE SIZE: 11 ½ inches from 0 to 50 $8\frac{1}{2}$ inches from 50 to 310 feet 204 Drawdown ___ _ feet wolley save 5-7/8 inches from 310 to 676 feet Nazira Rate 137 gal. per min. Duration 48 hrs., min. inches from to WATER ZONES: from 641 to #30SU 3 inches from 641 to 671 feet from Just soud toosed all the feet ye Lo vogas mulbar - minche sofrom _____to___ Ofeet nd brown waxed CASE SIZE: 6 inches from 0 to 310 feet Lay - water, corespon STANDARD 3 _inches from 302 to 641 feet WATER: Color___ SCHEDULE 3 inches from 671 to 676 feet 40 BLACK Odor ____Temp. ____ T & C WELL TO SUPPLY: (check one) Home GROUTING: Method _____ tremmie pipe Material neat cement Depth 50 feet Farm _____ Town ____ School ___ TEST Industry Other subdivision PUMP: Type Myers submersible SC5 1500 AAA6 WATER ANALYSIS AVAILABLE: Yes ______No __X ______ gal per min office with this neport. 295 Yes_X_No_ Depth of intake _ DRILL CUTTINGS SAVED: (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. This is a CLASS II TYPE B Well of construction and materials as per specifications of Virginia Health Department publication "Drilled Wells for Public Water Supply" dated 9 Feb 1970. Drill Cutting Samples delivered to VSWCB, Water Sample for chemical analysis delivered to Va Health Dept Div of Sanitary Engineering, and copies of this report sent to them and owner.

OF 40 THEORY OF CONSTRUCTION OF THE STATE OF FURNISHED BY:____

| DE P | et) | TYPE OF ROCK OR SOIL PENETRATED | REMARKS |
|------------|------------|---|--|
| FROM | TOlone | (gravel, clay, etc., hardness, color, etc.) | (water, caving, shot, screen, sample, etc. |
| 0 | 10 | ton a goody ton older and southed | ENANT Bayberry Estates Well #3 |
| | 20 | tan - sandy tan clay and gravel | Douglas Drilling Co., Inc. |
| 10 | 35 | tan - sticky tan clay | H1018 |
| 20 | 1111122 | gray - firm gray clay | ELE LOGATION Carety Ming George |
| 35 | 45 | gray - sandy messy gray clay | ntersection of Routes 301 & 1101. |
| 45 | 57 | dark gray - black sandy clay with shell tr | ace |
| 57 | 58 | hard material | 1 TAM STRIU HO YEWHOLF YTHUS |
| 58 | 68 | blue - firm blue clay | WE STARTED' |
| 68 | 140 | gray - gray black sandy clay with shell, i | ncreasingly sandy |
| 140 | 150 | red - soft sticky red clay | AT Alama North JEVRJ RETA |
| 150 | 245 | gray - black sandy clay with varying % she | eri, sand, cray |
| 245 | 265 | multicolor - red, olive, light brown, ligh | |
| 265 | 285 | brown, red - medium brown and red sands wi | th a little clay |
| 285 | 295 | multicolor - tan, gray, white, yellow slig | htly sandy clays |
| 295 | 325 | gray - firm sticky tough gray clay | The state of the s |
| 325 | 520 | multicolor - clays: yellow, tan, light gra pink and brown mixed, varying | |
| 520 | 550 | gray - slightly sandy gray clay, varying 5 | fine sand, red trace |
| 550 | 570 | gray/blue - fine sandy clay | ATER CONES: 1 542 |
| 570 | 595 | blue/brown - medium sandy clay, a little c | coarse free sand |
| 595 635 | 635 675 | blue/brown - smooth or slightly sandy blue fine, medium, and coarse sand with varying % clay - water, | s in layered formation |
| 675 | 676 | gray - firm clay XXAI8 04 | 10 (11) 21 - 11 |
| me) | D 177 D | 0 & T | owa" rab0 |
| | e pipe | CROWTING WAINS THERMINE | SLL TO SUPPLY Lines one Home |
| nel lac | 50 | TOTAL DEPTH 676' BAYBERRY ESTATES WEI | Farm Tawn Dehnel |
| | | | |
| AAA 008 | Nle SC5 L | Drill Cuttings delivered to VSWCB Richmond | office with this report. |
| P 16 1994 | 295 | Water Sample gallon delivered to VHD - Div office with this report. | Sanitary Engineering, Richmond |
| 200 | 1 01000-2 | Copy of this report delivered to Owner; Ki | |
| | | | 20A+ 3049A40 (03 1310 02299A3 00193 |
| to eno | pecificat | Well of construction and materials as per s | This is a CLASS II TYPE I |
| eb 1970 | dated 9 F | ion "Drilled Wells for Public Water Supply" | rginia Health Department publica: |
| | d becent. | VSVCB, Water Sample for chemical analysis de | till Cutting Samples delivered to |
| - 1 | | ring, andecopies of this report sent to them | and the Name Day of Residence Decidence |

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

INTERVAL SHEET

C-90

| Page 1 | 6 | of | 1 | | | Well R | epository No | 0.: | W-4764 | |
|------------|----|----------|---|--------------------|----------|--------|----------------------|------|--------|--------|
| Date rec'd | i: | 01/11/77 | 7 | Date Processed: | 06/16/77 | Sample | <pre>Interval:</pre> | from | 0 | to:676 |
| PROPERTY: | | | | County tates #3 | | Number | of samples | : 6 | 5 | |

COMPANY: Douglas Drilling Company Total Depth: 676'

COUNTY: King George (Owens) Oil or Gas: Water: X Exploratory:

| From-To | From-To | From-To | From-To | From-To |
|-----------|------------------|----------------|--------------|-----------------|
| 0 - 10 | 315 - 325 | 630 - 641 | _ | |
| 10 - 21 | 325 - 336 | 641 - 652 | _ | - |
| 21 - 31 | 336 - 346 | 652 - 663 | _ | _ |
| 31 - 42 | 346 - 357 | 663 - 674 | _ | = |
| 42 - 52 | 357 - 367 | 674 - 676 | _ | _ |
| | 30, | 071 070 | | |
| 52 - 63 | 367 - 378 | - | - | - |
| 63 - 73 | 378 - 388 | - | _ | - |
| 73 - 84 | 388 - 399 | - | | - |
| 84 - 94 | 399 - 409 | - | - | _ |
| 94 - 105 | 409 - 420 | - | - | (=) |
| | | | | |
| 105 - 115 | 420 - 430 | -) | = | - |
| 115 - 126 | 430 - 441 | - | - | - |
| 126 - 136 | 441 - 451 | - | - | y _ 2 |
| 136 - 147 | 451 - 462 | , | = | 7- |
| 147 - 157 | 462 - 472 | | - | - |
| | | | | |
| 157 - 168 | 472 - 483 | - | - | = |
| 168 - 178 | 483 - 493 | - | - | N-2 |
| 178 - 189 | 493 - 504 | = | - | (III) |
| 189 - 199 | 504 - 514 | _ | - | _ |
| 199 - 210 | 514 - 525 | - | - | = |
| | | | | |
| 210 - 220 | 525 - 535 | - | - | 8 - |
| 220 - 231 | 535 - 546 | (= | _ | - |
| 231 - 241 | 546 - 556 | . = | - | _ |
| 241 - 252 | 556 - 567 | - | - | - |
| 252 - 262 | 567 - 577 | - | - | - |
| | | | | |
| 262 - 273 | 577 - 588 | = | - | - |
| 273 - 283 | 588 - 598 | = | | - |
| 283 - 294 | 598 - 609 | - | = | _ |
| 294 - 304 | 609 - 619 | - | - | - |
| 304 - 315 | 619 - 630 | - | - | |

Owner: Bayberry Estates #3
Driller: Douglas Drilling Company

County: King George (Owens)

W# 4764 C# 90

Total Depth: 676' Quad: Dahlgren Elev: 15'

| | ETEA: 12 |
|-----------------|---|
| Depth (feet) | WELL LOG |
| 0-20 | Gravel - mixed colors; medium to pebble (25 mm), subangular to rounded, poorly sorted; sparse clay at 10-20'. |
| 2 10 –42 | Clay - light olive gray (5 Y 6/1); sparse sand; medium to pebble, sub-angular to rounded, poorly sorted; rare glauconite at 31-42'; wood fragments. |
| 42-63 | Sand - light olive gray (5 Y 6/1); abundant clay; fine to small pebbles, subangular and rounded, poorly sorted; 45% glauconite; 3% - 1% shell fragments; mica. |
| 63-84 | Sand, glauconitic - olive gray (5 Y 4/1); 50% glauconite; abundant clay; fine to medium, subangular, well sorted; 5% fine shell fragments; mica. |
| 84-94 | Gravel, glauconitic - olive gray (5 Y 4/1); 50% glauconite; abundant clay; fine to rounded pebble (30 mm), subangular, poorly sorted; bone fragments; 10% fine shell fragments - Venicardia. |
| 94-126 | Sand - olive gray (5 Y 4/1); abundant clay; fine to granule with rounded pebbles at 115-126's, subangular, moderate sorting; 40% glauconite/bone fragments; 10% shell fragments. |
| 126-136 | Clay - grayish orange pink (5 YR 7/2); clay in 2 types of clasts - 1 type pure clay and 1 with sand/glauconite - olive gray (5 Y 4/1); abundant sand fine to granule, subangular, poorly sorted; 40% glauconite in clay only; rare shell fragments; mica. |
| 136-147 | Clay - moderate reddish brown (10 R $4/6$) and gray in bands; fine to granule, subangular, few grains poorly sorted; rare glauconite, in bands throughout gray clay; mica. |
| 147-168 | Sand - olive gray (5 Y 4/1); abundant clay; fine to very coarse, subangular, moderate sorting; 40% glauconite; 30% fine shell fragments - <u>Turritella</u> ; some pinkish clay from above layers. |
| 168-178 | Gravel - olive gray (5 Y $4/1$); abundant clay; fine to very coarse, subangular, moderate sorting; 40% glauconite; 30% fine shell fragments. |
| 178-231 | Sand, glauconitic - olive gray (5 Y 4/1); 50% glauconite; abundant clay; fine to very coarse with some granules at 189-199' and rounded pebbles at 210-221'; subangular, moderate sorting; 10% shell fragments until 221-231' where it's 3%. |
| 231-252 | Sand - dark yellowish brown (10 YR 4/2); sparse clay; medium to very |

Sand - dark yellowish brown (10 YR 4/2); sparse clay; medium to very coarse, subangular and angular, moderate sorting; 30% glauconite; rare

shell fragments; iron oxide staining on grains.

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W# 4764

C# 90

Depth WELL LOG

(feet)

- 252-262 Sand light olive gray (5 Y 4/2); moderate clay; medium to very coarse, angular and subangular, moderate sorting; 40% glauconite.
- 262-283 Sand dark yellowish brown (10 YR 5/4); sparse to moderate clay; medium to very coarse, subangular and angular; 10% glauconite.
- 283-294 Sand dark yellowish brown (10 YR 5/4); sparse clay; medium to coarse, subangular and angular, well sorted; 30% glauconite.
- 294-315 Clay pale yellowish brown (10 YR 6/2); sparse sand fine to medium, subangular, well sorted; rare glauconite; ochre.
- 315-357 Clay pale yellowish brown (10 YR 6/2); abundant sand fine to coarse, subangular, well sorted; rare glauconite, 1-3% at 336-346'; ochre, increasing at 336-346'.
- 357-367 Clay yellowish gray (5 Y 8/1) and light olive gray (5 Y 6/1) clay is zoned yellow, gray, white, light brown, ochre and red from 357-441; moderate sand from to coarse, subangular, moderate sorting; rare glauconite.
- 367-420 Clay yellowish gray (5 Y 8/1); moderate sand fine to coarse, subangular, moderate sorting; rare glauconite; pale yellow brown (10 YR 6/2) at 388-397' along with yellowish gray.
- 420-430 Clay yellowish gray (5 Y 8/1); abundant sand, fine to coarse, subangular, moderate sorting; rare glauconite.
- 430-451 Clay grayish orange pink (5 YR 7/2); abundant sand fine to coarse, sub-angular, moderate sorting; rare glauconite.
- 451-462 Clay grayish orange pink (5 YR 7/2); moderate sand -fine to coarse, sub-angular, moderate sorting; rare glauconite.
- Clay pale yellowish brown (10 YR 6/2) and fragments of above color; moderate sand fine at 462-472 and fine to medium, subangular, well sorted at 462-472 and moderate thereafter; rare glauconite.
- 493-504 Clay light yellowish brown (10 YR 6/4); abundant sand fine to coarse, subangular, moderate sorting; clay streaked white, pink, ochre.
- 504-525 Clay pale yellowish brown (10 YR 6/2); moderate sand fine to coarse, subangular, moderate sorting; very rare weathered glauconite.
- 525-567 Clay very pale yellowish brown (10 YR 7/2); moderate sand, very fine to medium, subangular, moderate sorting; mica muscovite and fuschite.

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County: King George (Owens)

Total Depth: 676'

Quad: Dahlgren

Elev: 15'

WELL LOG Depth (feet) 567-598 Clay - moderate yellowish brown (10 YR 5/4); abundant sand -fine to coarse, subangular, moderate sorting; biotite, muscovite. 598-607 Clay - light olive gray (5 Y 6/1); moderate sand, fine to medium, subangular, moderate sorting. 607-641 Clay - yellowish gray (5 Y 6/2); abundant sand; fine to medium, subangular, moderate sorting. 641-674 Sand - light olive gray (5 Y 7/1); sparse clay from 652-663' on; fine to coarse, angular, well sorted; feldspar; rose quartz. 674-676 Clay - yellowish gray (5 Y 7/2); very sparse sand; fine to very coarse, subangular, poorly sorted.

> Logged by: J. K. Polzin October 28, 1980