Form 4

48103

STATE OF MARYLAND
DEPARTMENT OF GEOLOGY, MINES AND WATER RESOURCES
The Johns Hopkins University
BALTIMORE 18, MARYLAND

PG-Cf 53

PG 48103

APPLICATION FOR PERMIT TO DRILL WELL

An application must be submitted and permit received before drilling a well

Owner Area Development Corporation

Street or R F. D. c/o Levitt & Sons, Inc.

Post Office Levittown, New Jersey

Driller Sydnor Pump & Well Company, Inc.

Street or R. F. D.
Post Office P. O. Box 1476, 1305 Brook Road
Richmond, Virginia

Date July 26, 1962

Quantity of Water Needed (G. P. M.)

Use for Water Formation Test Boring T

Approximate Depth of Well (feet) 1200 ft.

Method of Drilling to be used rotary R

Location of Well

County Prince George, Maryland

Nearest Town Collington Station

Distance from Town adjoins above

Direction from Town West

Description of Location of Well

(This information should be definite enough to permit locating well on a county map)

3600' due north of
Near what road Washington Annapolis Expressway

On which side of road 2000' due east of Pope's
(North, East, South, West)
Creek Branch, Pennsylvania

Distance from road

PERMIT TO DRILL WELL

(Permit to be returned to Driller)

NOT TO BE FILLED IN BY DRILLER

Permit No. 48103

Samples of Cuttings Required by Department {Yes / No}

Owner Requires Permit to Appropriate Water {Yes / No}

Owner Has Permit to Appropriate Water {Yes / No}

The applicant is herewith granted a permit to d well subject to the conditions stipulated.

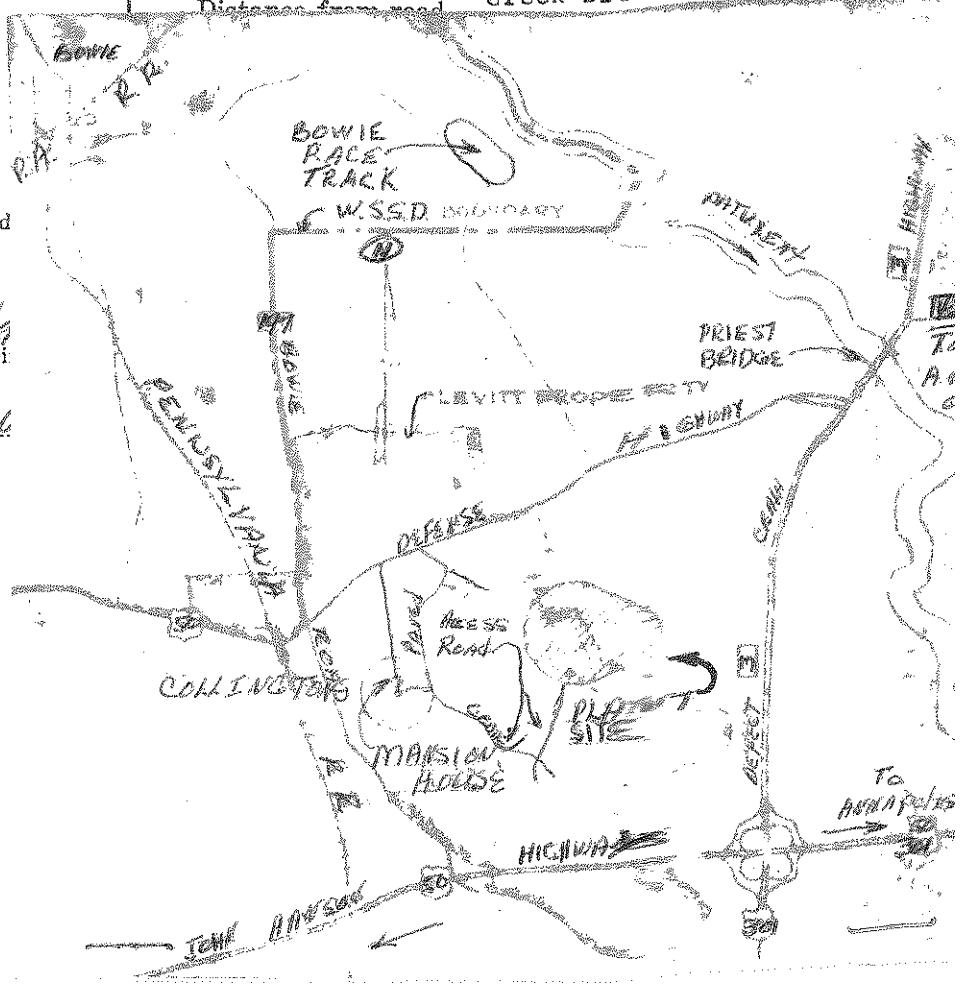
Joseph L. Singewald
Di

Date July 27, 196

Special conditions that may apply:

Test Well Only

Ø12762



WELL LOG

LEGGETTE, BRASHEARS & GRAHAM
CONSULTING GROUND-WATER GEOLOGISTS
551 FIFTH AVENUE
NEW YORK

DESCRIPTION	THICKNESS (FEET)	DEPTH (FEET)
Topsoil and brown clay	12	12
Silt and clay, brown, gravel and some very fine to very coarse sand, some ironstone concretions	7	19
Silt and very fine to fine sand, greenish gray, glauconitic, some ironstone concretions	9	28
Sand, medium to fine, brown	11	39
Clay, silt and very fine to medium sand, dark gray, appears to have some glauconite	21	60
Clay, grey and very fine to fine grey sand, some lignite	16	76
Sand, fine to medium, grey	25	101
Sand, medium, some coarse and some fine, grey with a few orange grains, a few thin clay streaks	25	126
Sand, medium to fine, grey	14	140
Sand, coarse to very coarse, some medium, grey	11	151
Sand, fine to medium, some very fine, grey	25	176
Sand, very coarse to fine, light grey, some orange grains	8	184
Clay, red and very coarse to fine sand, grey	42	226
Clay, dark grey and some red, some sand	50	276

OWNER: Levitt & Sons, Inc.

LOCATION: Water Plant
Belair, Md.

WELL NO.: Probe hole for proposed PW-4

DATE COMPLETED: August 22, 1962

DRILLING COMPANY: Sydner Pump and Well Co., Inc.

DRILLING METHOD: Standard rotary

SAMPLING METHOD: Ditch from 0 to 701'
Ditch and core from 701-1172½'

SAMPLES EXAMINED BY: S. I. Streusberg

REFERENCE POINT: Land surface

ELEVATION OF R. P.: 114.4 feet above MSL

CASING: 9 7/8-inch rotary hole

SCREEN: TYPE:

DIAM.: SLOT NO.

SETTING:

PUMPING TEST: DATE:

DURATION:

STATIC WATER LEVEL:

PUMPING WATER LEVEL:

YIELD:

REMARKS: Depth intervals and part of description from drillers' log from 0 to 701 feet. Static water level in Aquia formation at time of drilling was about 15 to 20 feet below land surface. Electric log by Sydner Pump & Well Co., Inc. run to 1170 feet on August 22, 1962.

(continued)

WELL LOG

LEGGETTE, BRASHEARS & GRAHAM
CONSULTING GROUND-WATER GEOLOGISTS
551 FIFTH AVENUE
NEW YORK

(2)

DESCRIPTION	THICKNESS (FEET)	DEPTH (FEET)
Same as above	18	294
Sand, coarse to medium and some clay, red	7	301
Sand, fine to very coarse, brown, little gravel, few ironstone concretions, drilled soft	23	324
Same as above with hard streaks	4	328
Clay, red and dark gray and fine to coarse sand	59	387
Clay, red, very coarse to fine brownish red sand and some gravel, many ironstone concretions, streaky	14	401
Clay, red and streaks of sand	5	406
Sand, very coarse to fine, brownish red, little gravel, a few streaks of clay and little lignite	32	438
Silt and very fine sand, brown	13	451
Same as above	8	459
Sand, medium to fine, some coarse, some very coarse, tan, some lignite and ironstone concretions, drilled soft	12	471
Same as above with some gravel, drilled hard	3	474
Clay, silt and fine to coarse sand, red	37	511
Sand, coarse to fine, tan, a little lignite, some ironstone concretions	17	528
Clay, red and fine to medium sand	29	557

OWNER: Levitt & Sons, Inc.

LOCATION: Water Plant Selair, Md.

WELL NO.: Probe hole for proposed PW-4 (continued)

DATE COMPLETED:

DRILLING COMPANY:

DRILLING METHOD:

SAMPLING METHOD:

SAMPLES EXAMINED BY:

REFERENCE POINT:

ELEVATION OF R. P.:

CASING:

SCREEN:- TYPE:

DIAM.: SLOT NO.

SETTING:

PUMPING TEST:- DATE:

DURATION:

STATIC WATER LEVEL:

PUMPING WATER LEVEL:

YIELD:

REMARKS:

(continued)

WELL LOG

LEGGETTE, BRASHEARS & GRAHAM
CONSULTING GROUND-WATER GEOLOGISTS
551 FIFTH AVENUE
NEW YORK

(3)

DESCRIPTION	THICKNESS (FEET)	DEPTH (FEET)
Sand, very coarse to medium, some fine,		
tan, and some gravel, much iron		
oxide	8	565
Sand and clay, hard streaks, drilled		
like rock	5	570
Sand, fine to medium, some coarse, tan,		
and a little gravel, a little lig-		
nite, a few pieces of pyrite and		
some iron oxide	10	580
Clay and silt, brownish red and some		
very fine to fine sand	21	601
Same as above with less sand	25	626
Clay and silt, red	31	657
Sand and clay streaks	8	665
Same as above	5	670
Sand, medium, much coarse, some very		
coarse and some gravel at the top		
and much fine at the bottom, tan,		
a little iron oxide at the bottom	17	687
Silt and very fine sand, reddish brown	18	705
Clay, brick red and gray, some silt in		
places, a few thin indurated zones	83	788
Clay, brick red and gray and streaks		
of fine to very fine gray sand and		
silt	5	793
Clay, brick red, gray, brown and		
mustard	64	857

OWNER: Levitt & Sons, Inc.

LOCATION: Water Plant Belair, Md. Probe hole for proposed PW-4 (continued)

WELL NO.:

DATE COMPLETED:

DRILLING COMPANY:

DRILLING METHOD:

SAMPLING METHOD:

SAMPLES: EXAMINED BY:

REFERENCE POINT:

ELEVATION OF R. P.:

CASING:

SCREEN:- TYPE:

DIAM.: SLOT NO.

SETTING:

PUMPING TEST:- DATE:

DURATION:

STATIC WATER LEVEL:

PUMPING WATER LEVEL:

YIELD:

REMARKS:

(continued)

WELL LOG

LEGGETTE, BRASHEARS & GRAHAM
CONSULTING GROUND-WATER GEOLOGISTS
551 FIFTH AVENUE
NEW YORK

(4)

DESCRIPTION	THICKNESS (FEET)	DEPTH (FEET)
Sand, fine, silt and clay, brown	4	861
Clay, drilled tough	6	867
Sand, fine to medium, some silt and some clay, yellowish brown, micaceous, drilled like sand is tightly packed	6	873
Clay, grey, brownish red and brick red, very tough	33	906
Clay, reddish brown, much silt and much fine sand, micaceous, streaky	8	914
Silt, very fine sand and clay, brownish red, micaceous, streaky	9	923
Sand, fine to very fine, silt and clay, brownish red, micaceous	6	929
Silt, clay and very fine sand, reddish brown and grey, micaceous, packed tight, drilled like thin indurated zones at the bottom	11	940
Clay, silt and some very fine sand, dark grey, micaceous, some lignite, drilled like thin indurated zones at the top, possibly microfossils at the base	21	961
Sand, medium, gravel and streaks of dark grey silt and clay, a little lignite	5	966
Clay, grey, light red, mustard and brick red, very hard	7	973

OWNER: Levitt & Sons, Inc.

Water Plant
Belair, Md.

LOCATION:

WELL NO.: Probe hole for proposed PW-4

DATE COMPLETED: (continued)

DRILLING COMPANY:

DRILLING METHOD:

SAMPLING METHOD:

SAMPLES: EXAMINED BY:

REFERENCE POINT:

ELEVATION OF R. P.:

CASING:

SCREEN:- TYPE:

DIAM.: SLOT NO.

SETTING:

PUMPING TEST:- DATE:

DURATION:

STATIC WATER LEVEL:

PUMPING WATER LEVEL:

YIELD:

REMARKS:

(continued)

WELL LOG

LEGGETTE, BRASHEARS & GRAHAM
CONSULTING GROUND-WATER GEOLOGISTS
551 FIFTH AVENUE
NEW YORK

(5)

DESCRIPTION	THICKNESS (FEET)	DEPTH (FEET)
Sand, medium, some gravel and a few white clay lumps, at the top sand contains much coarse and some very coarse grains and at the bottom much fine sand is present, drilled like streaks of clay are present from 973' to 976'	20'	993'
Clay, varicolored, brick red, brown, mustard and grey, extremely tough, a few thin indurated zones	19'	1013'
Clay, silt and very fine to fine sand, reddish brown and grey, some mica	20	1033
Sand, fine to very fine, silt and some clay, light grey, micaceous, slightly lignitic at the bottom	9	1042
Clay, varicolored, grey, brick red, mustard, brown and heliotrope, some very coarse sand imbedded in clay, extremely tough	36	1078
Sand, fine, silt and some clay, white, much medium sand at the top, much very fine sand and some medium sand at the bottom	9	1087
Clay, silt and very fine to fine sand, purple, micaceous, possibly some microfossils	11	1098
Silt, very fine sand and clay, light		

(continued)

Owner: Levitt & Sons, Inc.

Water Plant
Belair, Md.

Location:

Well No.: Probe hole for proposed well.
(continued)

Date Completed:

Drilling Company:

Drilling Method:

Sampling Method:

Samples: Examined By:

Reference Point:

Elevation of R. P.:

Casing:

Screen: Type:

Diam.: Slot No.

Setting:

Pumping Test: Date:

Duration:

Static Water Level:

Pumping Water Level:

Yield:

Remarks:

WELL LOG

LEGGETTE, BRASHEARS & GRAHAM
CONSULTING GROUND-WATER GEOLOGISTS
551 FIFTH AVENUE
NEW YORK

(6)

DESCRIPTION	THICKNESS (FEET)	DEPTH (FEET)
gray, micaceous, very lignitic,		
some pyrite	6	1104
Sand, medium to fine, some coarse,		
silt and clay, white, some mica,		
drilled like clay streaks in sand		
from 1110' to 1115'	11½	1115½
Sand, very coarse to coarse, gravel		
and considerable white silt and clay	3½	1119
Clay and silt, brown, very micaceous,		
very little lignite	13	1132
Clay, silt and fine to coarse sand		
white, very little gravel, drilled		
like indurated or gravel zone at		
1132'	5	1137
Sand, medium to fine, some coarse,		
considerable silt, white, some		
gravel at bottom	9	1146
Clay and silt, dark gray, some mica	4	1150
Sand, medium, some fine, little silt,		
gray, some mica, some streaks of		
lignite	1	1151
Gravel consisting mainly of milky		
quartz, sand, medium to fine at the		
top and coarse to very coarse at		
the bottom, some silt and clay, gray	11½	1162½
Granite, highly weathered at the top and		
only partially weathered at the		

OWNER: Levitt & Sons, Inc.

Water Plant
Belair, Md.

LOCATION:

WELL NO.: Probe hole for proposed PW-4 (continued)

DATE COMPLETED:

DRILLING COMPANY:

DRILLING METHOD:

SAMPLING METHOD:

SAMPLES: EXAMINED BY:

REFERENCE POINT:

ELEVATION OF R. P.:

CASING:

SCREEN: TYPE:

DIAM.: SLOT NO.

SETTING:

PUMPING TEST: DATE:

DURATION:

STATIC WATER LEVEL:

PUMPING WATER LEVEL:

YIELD:

REMARKS:

(continued)

WELL LOG

LEGGETTE, BRASHEARS & GRAHAM
CONSULTING GROUND-WATER GEOLOGISTS
551 FIFTH AVENUE
NEW YORK

(7)

DESCRIPTION	THICKNESS (FEET)	DEPTH (FEET)
bottom, drilled progressively		
harder at depth, contains quartz,		
white and light green feldspar		
mostly weathered to clay, biotite		
and other black minerals	10	1172½

OWNER: Levitt & Sons, Inc.

Water Plant
Belair, Md.

LOCATION:

WELL NO.: Probe hole for proposed PW-4 (continued)

DATE COMPLETED:

DRILLING COMPANY:

DRILLING METHOD:

SAMPLING METHOD:

SAMPLES: EXAMINED BY:

REFERENCE POINT:

ELEVATION OF R. P.:

CASING:

SCREEN: TYPE:

DIAM.: SLOT NO.

SETTING:

PUMPING TEST: DATE:

DURATION:

STATIC WATER LEVEL:

PUMPING WATER LEVEL:

YIELD:

REMARKS:

Form 5

STATE OF MARYLAND

DEPARTMENT OF GEOLOGY, MINES AND WATER RESOURCES

The Johns Hopkins University
BALTIMORE 18, MARYLAND

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WELL COMPLETION REPORT

This report must be submitted within 30 days after completion of the well

1273

WELL DESCRIPTION

Permit Number 48103

Name of Owner

Area Development Corp.

WELL LOG

State the kind of formations penetrated, their depth, their thickness, and if water-bearing

CASING AND SCREEN RECORD

State the kind and size of casing, liner, shoe, screen, and other accessories (if no casing used, give diameter of well)

	FEET from	to	DIAM. (inches)	FEET from	to
Fill-in & brown clay	0-	12			
Iron crust, brown sand	12-	19			
Blue clay	19-	28			
Fine brown sand	28-	39			
Gray silty sand	39-	60			
Clay & sand streaks	60-	76			
Fine gray sand	76-	101			
Fine, gray sand; few thin clay streaks	101-	126			
Fine gray sand	126-	140			
Gray sand, some coarse	140-	151			
Fine gray sand	151-	184			
Reddish clay with sand	184-	294			
Sand	294-	301			
Brown sand	301-	324			
Brown sand, hard streaks	324-	328			
Hard red sand clay	328-	387			
Red clay, thin clay streaks	387-	401			
Red clay, streaks of sand	401-	406			
Sand, few streaks of clay	406-	438			
Brown clay	438-	459			
Brown sand, soft	459-	471			
Hard brown sand	471-	474			
Hard silty brown clay-	474-	511			
Brown sand	511-	528			
Hard brown silty clay	528-	557			
Brown sand	557-	565			
Mixture of sand and clay, hard	565-	570			
Brown sand	570-	580			
Hard silty sand clay	580-	601			
Hard silty brown clay	601-	657			
Thin streaks of sand & clay	657-	665			
Sand & clay streaks	665-	670			
Brown sand	670-	687			
Silty brown clay	687-	710			
Hard gray clay	710-	720			
Mixed colors of hard clay	720-	748			
Light gray, silty clay	748-	754			
Hard mixed colors of clay	754-	765			
Hard rock	765-	766'6"			
Gray silty clay	766'6"-	788			
Fine, gray sand and mica, some clay binder	788-	790			
Fine gray sand & mica	790-	793			
Mixed colors of clay	793-	803			
Extra hard clay	803-	814			

(con't on back)

PUMPING TEST

Hours Pumped

Type of Pump Used

Pumping Rate
Gallons per Minute

WATER LEVEL

Distance from land surface to water:

Before Pumping ..... Ft.

When Pumping ..... Ft.

APPEARANCE OF WATER

Clear

Cloudy

Taste

Odor

Height of Casing Above Land Surface none Ft.

PUMP INSTALLED

Type

Capacity

Gallons per Minute

Gallons per Hour

Pump Column Length ..... Ft.

REMARKS

Test Hole

Well Was Completed

Date August 24, 1962

Well Driller Sydnor Pump & Well Co. In

Signature

(con't from front)

Mixed colors of clay	814- 820
Red & brown clay	820- 857
Brown sand clay	857- 861
Hard clay	861- 867
Fine brown sand, some clay binder	867- 873
Mixed colors of hard clay	873- 900
Hard brown clay	900- 906
Sand or sand clay	906- 909
Hard brown silty clay & mica	909-914
Sand	914- 916
Silty brown clay	916- 923
Fine silty brown sand clay, some mica	923- 929
Hard silty brown clay	929- 932
Rock, hard & rough	932- 934
Fine silty gray sand clay	934- 938
Rock, hard & rough	938- 938'8"
Hard gray clay, streaks of rock	938'8"- 945
Dark gray clay	945- 961
Sand	961- 965
Hard mixed colors of clay	965- 976
Brown sand	976- 990
Brown sand, gravel and some clay binder	990- 994
Hard mixed colors of clay	994-1000
Hard mixed colors of clay	1000-1015
Silty hard clay	1015-1033
Fine gray sand clay	1033-1042
Mixed colors of clay	1042-1077
Fine gray sand, some clay binder	1077-1080
Fine gray sand, some clay	1080-1087
Purple silty clay	1087-1098
Silty sand clay	1098-1108
Fine silty sand clay	1108-1115
Coarse sand	1115-1119
Tough gray silty clay	1119-1120
Tough gray silty clay	1120-1132
Gray sand clay	1132-1137
Gray and brown sand	1137-1146
Gray clay	1146-1150
Fine gray sand, some silt & mica	1150-1151
Hard gravel, sand & some clay binder in streaks	1151-1159
Hard gravel	1159-1162'6"
Rock	1162'6"-1170
Rock	1170-1172'6"