

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF CONSERVATION AND ECONOMIC DEVELOPMENT

MAILING ADDRESS:

DIVISION OF MINERAL RESOURCES

OFFICE ADDRESS:

B. 3667
Charlottesville, VA 22903

JAMES L. CALVER, COMMISSIONER

McCormick Road
Charlottesville, Virginia

WATER WELL COMPLETION REPORT

OWNER: Hercules, Inc. #4 Mailing Address: Franklin, VA

TENANT: _____ Mailing Address: _____

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

WELL LOCATION: County Southampton Approx. _____ feet miles _____ (direction) of _____
Franklin and _____ miles _____ (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 STARTED: April 1969 DATE COMPLETED: June 1969

TYPE OF DRILL RIG USED: _____ TOTAL DEPTH 760 feet
completed at 705'

WATER LEVEL: Stands 78'5" feet below surface OR
has NATURAL flow of _____ gallons per minute

YIELD TEST: Method _____
Drawdown 60' 9" feet
Rate 1100 gal. per min.
Duration 24 hrs., _____ min.

HOLE SIZE: 20 inches from 0 to 370 feet
12 inches from 331 to 705 feet
_____ inches from _____ to _____ feet
SCREEN SIZE: * inches from _____ to _____ feet

WATER ZONES: from _____ to _____ feet
from _____ to _____ feet
from _____ to _____ feet
CASE SIZE: _____ inches from _____ to _____ feet

WATER: Color _____ Taste _____
Odor _____ Temp. _____ °F
_____ inches from _____ to _____ feet
_____ inches from _____ to _____ feet

WELL TO SUPPLY: (check one) Home _____
Farm _____ Town _____ School _____
Industry _____ Other _____
GROUTING: Method _____
Material _____ Depth _____ feet

WATER ANALYSIS AVAILABLE: Yes _____ No _____
PUMP: Type _____
Capacity _____ gal per min
Depth of intake _____ feet

DRILL CUTTINGS SAVED: Yes _____ 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: *Screens - 12" at 380-420; 495-540; 560-600; 635-655; 695-700.

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	1	Top soil	
1	12	Red and gray sand	
12	30	Shell, blue clay and silt	
30	42	Blue clay, shell and silt	
42	75	Hard shell, slow and rough	
75	121	Coarse sand, black clay, wood	
121	195	Medium white sand with streaks of black clay and wood	
195	218	Multi-colored clay, slow drilling	
218	290	Sand chalky clay, some red	
290	340	Multi-colored clay mixed with coarse sand	
340	420	Multi-colored clay, mostly black coarse sand and gravel	
420	440	Black and gray clay with medium to coarse sand, gravel, slow drill	
440	479	Multi-colored clay, sticky green, gravel and medium sand	
479	550	Coarse sand, gravel with streaks multi-colored clay, mostly chalky	
550	627	Coarse sand, gravel, mixed with chalky clay, rough drilling	
627	659	Multi-colored sandy clay	
659	680	Medium gray sand	
680	682	Hard clay, very slow drilling	
682	699	Coarse sand and gravel with streaks of clay	
699	725	Multi-colored clay, very slow	
725	753	Gravel, coarse sand, multi-colored clay, rough drilling	
753	760	Rough drilling	

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

INTERVAL SHEET

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Well Repository No.: C-399
 W-4232

Date rec'd: 7/18/74 Date Processed: 7/24/75

Sample Interval: from 5 to: 758

PROPERTY: Hercules, Inc.

Number of samples: 88

COMPANY: Layne Atlantic

Total Depth: 760'

COUNTY: Southampton (Franklin)

Oil or Gas: Water: XX Exploratory:

From-To	From-To	From-To	From-To	From-To
8-15	236-247	511-518	-	-
15-25	247-257	521-531	-	-
30-34	257-268	531-539	-	-
34-44	268-278	539-542	-	-
44-53	278-289	542-550	-	-
53-55	289-300	550-552	-	-
55-59	300-310	552-557	-	-
59-64	310-320	557-563	-	-
64-65	320-332	563-573	-	-
-59-69	332-342	573-584	-	-
66-69	342-353	584-594	-	-
69-79	353-363	-	-	-
74-75	363-374	594-605	-	-
77-79	374-384	605-615	-	-
79-89	384-395	615-626	-	-
89-100	392-395	626-636	-	-
100-110	395-405	636-647	-	-
110-121	405-416	647-657	-	-
121-131	416-426	657-669	-	-
131-142	426-433	669-679	-	-
142-152	433-435	679-690	-	-
152-163	435-437	690-700	-	-
163-173	437-443	700-705	-	-
173-184	443-450	705-711	-	-
184-194	450-458	711-721	-	-
194-205	458-468	721-732	-	-
200-205	468-479	732-742	-	-
205-215	479-489	742-753	-	-
215-226	489-500	753-758	-	-
226-236	500-511	-	-	-

All intervals have both washed and unwashed samples.

Owner: Hercules #4
Driller: Layne Atlantic '68
County: Southhampton

W# 4232
C# 399
Total Depth: 760'
Quad: Courtland
Elev: 6'

Depth
(feet)

WELL LOG

- 0-5 No Sample.
- 5-15 Sand - grayish yellow (5Y 9/4); no clay; sparse silt; medium to coarse grained, subangular, well sorted; quartz.
- 15-25 Sand - yellowish gray (5Y 7/2); sand clasts; fine to medium, subangular, well sorted; quartz; shell fragments; feldspar; forams - Robulus, Lagena Sulcata, Textularia Globigerina, Discorbis, Gyroidina; ostracod.
- 25-30 Sand - color as above; medium to very coarse, subangular, few granules, moderate sorting; quartz; 10% fine shell fragments; coral; forams - Textularia, Gyroidina, Robulus, Globigerina, Bucella, Discorbis, Nonion Mediocostatus.
- 30-34 Sand - light olive gray (5Y 6/1); moderate sand in clasts; fine and coarse, subangular, moderate sorting; quartz; 10% shell fragments; echinoderm spines; forams - Bucella.
- 34-44 Sand - as above; light olive gray (5Y 5/2); 15% shell fragments; iron; 20% very fine black glauconite.
- 44-53 Sand - as above, except: very fine to coarse grained; 20% shell fragments; forams.
- 53-55 Sand - salt and pepper; slight clay in clasts; 40% very coarse sand with shell fragments; 60% fine, subangular sand and black glauconite (glauconite is 50% of that mixture); poorly sorted; quartz; chert; garnet; tooth and bone fragments; foram - Nonion.
- 55-59 No Sample.
- 59-64 Sand - greenish black (5GY 2/1); very slight clay in clasts; slight silt; sand - 90% dark green/black glauconite and 10% quartz; medium to very coarse, subangular, some granules, poorly sorted; quartz; 10% shell fragments; forams - Guttulina, Textularia, Nonion; ostracod.
- 64-65 Sand - color as above; moderate clay, some in clasts, slight silt; very slight quartz sand; sand, coarse to very coarse, subangular, poorly sorted; 90% dark green/black glauconite; 10% quartz; 15% shell fragments; forams - Globigerina, Nonion; bone and teeth fragments.

Owner: Hercules #4

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W# 4232

C# 399

Depth
(feet)

65-66 No Sample.

66-69 Sand - as above, except: very sparse shell fragments; no forams.

66-74 No Sample.

74-75 Sand - as at 77-79; except: sand is 50% dark glauconite; coarse to very coarse grained quartz; muscovite.

77-79 Sand - light olive gray (5Y 5/2); moderate clay in small clasts; sparse silt; medium to granule, subangular, moderate granules, poor sorting; quartz; 10% fine black glauconite; 20% shell fragments; feldspar; garnet; chert; lignite.

79-89 Sand - color as above; very sparse clay in clasts; very sparse silt; medium to very coarse, subangular, moderate sorting; quartz; 20% fine black glauconite; very sparse shell fragments.

89-100 Sand - as at 79-89, except: no clay; 10% fine glauconite; mica.

100-110 Sand - as above; medium- to coarse-grained.

110-120 Sand - as above, except: medium- to very coarse.

121-131 Sand - as above, except: 25% glauconite; rare shell fragments.

131-142 Sand - light olive gray (5Y 5/2); moderate clay, few in small clasts; sparse silt; fine to coarse, subangular, some granules, poorly sorted; quartz; 25% glauconite; lignite; muscovite; common shell fragments.

142-152 Sand - as above, except: medium-grained; moderately well sorted; 20% glauconite.

152-163 Sand - light olive gray (5Y 5/2); sparse clay; medium-grained, subangular; few very coarse; well sorted; quartz; 5% glauconite; 1% muscovite mica; few shell fragments.

163-173 Clay - light olive gray (5Y 5/2); sparse sand, very fine to medium, subangular, some granules, poorly sorted; quartz; 3% glauconite; 1% muscovite; feldspars; iron; shell fragments; wood.

173-184 Clay - as above.

184-194 Clay - as above.

Depth
(feet)

- 194-205 Clay - as above, except: abundant sand.
- 205-215 Clay - moderate yellowish brown (10YR 5/4); sparse sand; fine, coarse to very coarse, subangular, some granules, poorly sorted; quartz; 20% charred wood; 3% muscovite mica; iron.
- 215-226 Clay - as above; 15% wood.
- 226-236 Sand - pale yellowish brown (10YR 6/2); slight clay in clasts; moderate silt; fine to very coarse, subangular, few granules, moderate sorting; quartz; wood; mica; feldspar.
- 236-247 Sand - as above; some granules.
- 247-257 Sand - as above, except: fine to granule sized; no wood.
- 257-268 Sand - as above, except: medium to small pebble.
- 268-277 Sand - as above, except: moderate silt; very coarse; well sorted.
- 277-289 Sand - as above, except: slight clay in clasts; medium to very coarse; moderate sorting; rare muscovite and feldspar.
- 289-300 Sand - as above.
- 300-310 Sand - as above.
- 310-320 Sand - as above, except: moderate sand, some in clasts; shell fragments.
- 320-332 Sand and Clay - color as above; abundant clay, some clasts; moderate silt; sand, medium to coarse, subangular, some granules, poorly sorted; quartz; 1% muscovite; wood.
- 332-342 Sand and Clay - as above.
- 342-353 Sand - color as above; sand as above; garnet chips.
- 353-363 Sand - as above.
- 363-374 Sand - light olive gray (5Y 5/2); abundant clay of 2 colors, in clasts; sand, medium to coarse, subangular, some granules, poorly sorted; quartz; 1% muscovite.

Depth
(feet)

374-384	Sand - pale yellowish brown (10YR 6/2); slight clay in clasts; medium to granule, subangular, poorly sorted; quartz; 1% muscovite.
384-395	Sand - as above, except: 1% glauconite; feldspar; garnet.
395-405	Sand - as above; medium to very coarse; some granules.
405-416	Sand - as above.
416-426	Sand - as above, except: moderate clay in clasts.
426-433	Clay - light olive gray (5Y 6/1); clay in clasts; slight sand; medium to very coarse, subangular; poorly sorted; quartz; muscovite.
433-435	Sand - pale yellowish brown (10YR 6/2); abundant clay clasts; medium to coarse, subangular, moderately sorted; quartz; 1% mica; feldspar.
435-437	Sand - as above; moderate clay in clasts.
437-443	Sand - as above; moderate clay; medium to very coarse; iron; wood.
443-450	Clay - color as above - slight sand; medium to very coarse, subangular, poor sorting; quartz; 1% mica; wood; garnet chips.
450-458	Clay - as above; moderate sand; rare glauconite; rare pebbles.
458-468	Sand - color as above; abundant clay in clasts; sand, medium to coarse, subangular, some granules, moderately sorted; quartz; some muscovite; wood.
468-479	Sand - as above, except: moderate clay, rare clasts; poorly sorted; very sparse mica; wood.
479-489	Sand - as above, except: moderate clay; sand medium to very coarse, some granules.
489-500	Sand - as above, except: few, large grey clay clasts; sand, moderately sorted.
500-511	Sand - as above, except: small clasts of clay.
511-518	Sand - as above, except: moderate clay in clasts.
518-521	No Sample.

Depth
(feet)

- 521-531 Sand - as above, except: moderate clay; saprolitic feldspar.
- 531-539 Sand - as above, except: coarse to granule.
- 539-542 Sand - as above, except: magnetite.
- 542-550 Sand - as above, except: sparse clay in small clasts.
- 550-552 Sand - as above, except: abundant clay in clasts; sand, medium to very coarse grained, some granules.
- 552-557 Sand - as above, except: moderate clay.
- 557-563 Clay - yellowish gray (5Y 7/2); clay in abundant, large clasts; slight silt; abundant sand and pebbles, medium to very coarse, subangular, some pebbles, poorly sorted; quartz; rare muscovite; common saprolitic feldspar.
- 563-573 Sand - color as above; moderate clay, few small clasts; coarse to very coarse, subangular, few very coarse and angular, some granules, moderate sorting; quartz; saprolitic feldspar.
- 573-584 Sand - as above, except: sparse clay; moderately well sorted.
- 584-594 Sand - as above, except: sand, in clasts, fine to very coarse, few granules, poorly sorted.
- 594-605 Sand - as above, except: medium to very coarse, moderate sorting.
- 605-615 Sand - as above, except: moderate clay in clasts of red, and orange.
- 615-626 Sand - as above, except: abundant clay in large clasts.
- 626-636 Sand - as above, except: slight clay in clasts.
- 636-647 Sand - as above, except: coarse to very coarse.
- 647-657 Sand - as above, except: abundant clay in clasts; poor sorting, some pebbles.
- 657-669 Sand - as above, except: abundant clay of various colors in large clasts.
- 669-679 Sand - pale yellowish brown (10YR 6/2); abundant clay in clasts; slight silt, abundant sand; medium to very coarse, subangular, some granules, poor sorting; quartz; magnetite.

Owner: Hercules #4

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W# 4232

C# 399

Depth
(feet)

679-690	Sand - as above, except: moderate clay, some clasts.
690-700	Sand - as above.
700-705	Sand - as above.
705-711	Sand - as above, except: very sparse clay; 40% small pebbles.
711-721	Clay and pebble sand - as above, except: abundant clay in clasts, various colors - white, reds, browns; sand as above; 20% pebbles.
721-732	Sand - as above, except: moderate clay; no pebbles, some granules.
732-742	Sand - as above, except: abundant clay, some in clasts; sand, medium to granule.
742-753	Sand - as above, except: no clay; slight silt; 40% pebbles; microcline feldspar.
753-758	Sand - as above, except: few pebbles; sand, medium to granule.
758-760	No Sample.

Logged by: J. K. Polzin