

INTERVAL SHEET

WWCR 1389

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VDMR Well No.: Well No. 1389

Date 10/8/65

Sample Interval: from 0 to 416

PROP: M. A. Perry

Total depth 416

COMP: Sydnor Pump & Well Co.

Oil  Gas  Water  Exploratory

COUNTY: King George (Igo)

Cuttings  Core  Other

VDMR Well No: W-1389

| From-To             | From-To | From-To | From-To | From-To |
|---------------------|---------|---------|---------|---------|
| 0 - 25              | -       | -       | -       | -       |
| 25 - 41             | -       | -       | -       | -       |
| 41 - 56             | -       | -       | -       | -       |
| 56 - 71             | -       | -       | -       | -       |
| 71 - 86             | -       | -       | -       | -       |
| 86 - 101            | -       | -       | -       | -       |
| 101 - 116           | -       | -       | -       | -       |
| 116 - 126           | -       | -       | -       | -       |
| 126 - 131           | -       | -       | -       | -       |
| 131 - 146           | -       | -       | -       | -       |
| 146 - 161           | -       | -       | -       | -       |
| 161 - 176           | -       | -       | -       | -       |
| 176 - 191           | -       | -       | -       | -       |
| 191 - 211           | -       | -       | -       | -       |
| 211 - 226           | -       | -       | -       | -       |
| 226 - 241           | -       | -       | -       | -       |
| 241 - 256           | -       | -       | -       | -       |
| 256 - 271           | -       | -       | -       | -       |
| 271 - 286           | -       | -       | -       | -       |
| 286 - 301 No sample | -       | -       | -       | -       |
| 301 - 316           | -       | -       | -       | -       |
| 316 - 331           | -       | -       | -       | -       |
| 331 - 348           | -       | -       | -       | -       |
| 348 - 363           | -       | -       | -       | -       |
| 363 - 371           | -       | -       | -       | -       |
| 371 - 386           | -       | -       | -       | -       |
| 386 - 401           | -       | -       | -       | -       |
| 401 - 416           | -       | -       | -       | -       |
| -                   | -       | -       | -       | -       |

OWNER: Mitchell A. Perry  
DRILLER: Sydnor Pump & Well Co. Inc.  
COUNTY: King George (Igo)

W-1389  
C-65  
TOTAL DEPTH: 416'

GEOLOGIC LOG

Columbia Group (0-25')

0-25 Sand - orange, slightly argillaceous; fine-grained, well-sorted, angular to subangular; small amount of feldspar; scattered muscovite flakes and fragments of carbonaceous matter

CALVERT FORMATION (25-130')

25-41 Sand and Clay- light-gray; clay and very fine-grained, well-sorted, angular quartz sand in subequal amounts; diatomaceous

41-56 As above

56-71 Clay - light-gray, slightly silty; diatomaceous

71-86 Sand - gray, argillaceous; very fine-grained; well-sorted, angular; small amount of phosphorite; accessory tourmaline; slightly to moderately diatomaceous

86-101 Clay - gray, slightly silty; slightly diatomaceous; trace of glauconite

101-116 Clay - gray, slightly silty, trace of sand; moderately diatomaceous; trace of glauconite

116-126 Sand - gray, moderately argillaceous; very fine-grained, well-sorted, angular; 1-5 percent fine- to medium-grained glauconite, scattered flakes of muscovite, and traces of phosphorite, pyrite, and zircon; trace of diatomaceous material

126-131 Clay - light-gray, slightly silty and sandy; sand slightly glauconitic and micaceous (muscovite); slightly diatomaceous

NANJEMOY FORMATION (130-147') Top of formation defined on basis of other information.

131-146 Sand - gray, with greenish cast, slightly argillaceous; very fine-grained, well-sorted, angular quartz (about 80 percent) and fine- to medium-grained glauconite (about 15 percent); small amounts of phosphorite, muscovite; small amount chalky shell fragments

MATTAPONI FORMATION (147-316') Top of formation defined on basis of other information.

146-161 Sand - grey, with greenish cast, moderately argillaceous; very fine-grained, fairly well-sorted, angular; about 10 percent fine-grained glauconite; moderately micaceous (muscovite); very small amounts phosphorite and pyrito-carbonaceous material; about 5 percent chalky shell debris

- 161-176 Sand - gray, with greenish cast, moderately argillaceous; very fine-grained, fairly well-sorted, angular; about 10 percent fine-grained glauconite; moderately micaceous (muscovite); very small amounts phosphorite and pyrito-carbonaceous material; about 10 percent shell debris (chalky); a few foraminifera
- 176-191 Sand - gray, slightly silty; very fine- to coarse-grained (skewed coarse), rather poorly sorted, angular to subrounded; clear quartz with 15 to 20 percent coarse-grained, dark-gray, platy, carbono-phosphorite; traces of light-green, weathered glauconite, muscovite, and pyrite; small amount of chalky shell debris and a few foraminifers
- 191-211 Sand - gray, slightly argillaceous; very fine-grained, well-sorted, angular; small amounts glauconite; muscovite, and coarse-grained, dark-gray, platy phosphorite; scattered chalky shell fragments (pelecypods, and a few worm tubes); scattered foraminifers
- 211-226 As above
- 226-241 Sand - gray, slightly argillaceous; very fine- to very coarse-grained, poorly sorted, angular to subrounded; slightly glauconitic; 5-10 percent coarse-grained, dark-gray, platy carbono-phosphorite; small amount muscovite; about 5 percent chalky shell fragments, mostly pelecypods, but some gastropods (mostly Turritella), scaphopods, and worm tubes; a few foraminifera
- 241-256 Sand and Shell - gray, slightly argillaceous; shell debris (35 to 40 percent) consists of pelecypods and gastropods (mostly Turritella); sand (60-65 percent) very fine- to very coarse-grained, poorly sorted, angular to well-rounded; glauconite (about 25 percent of sand) and phosphorite (about 5 percent of sand); slightly micaceous and pyritic; a few foraminifera
- 256-271 Sand and Shell - gray, moderately argillaceous; 25 - 30 percent chalky shell fragments; sand (70 - 75 percent) very fine- to very coarse-grained, poorly sorted, variably rounded; slightly glauconitic (about 5 percent); small amount of platy, dark-gray, carbono-phosphorite; very slightly micaceous (muscovite); a few foraminifera and ostracods
- 271-286 As above
- 286-301 No sample
- 301-316 Sand - brownish-gray, slightly argillaceous; fine- to coarse-grained, poorly sorted, angular to subrounded; glauconite (about 20 percent), platy carbono-phosphorite (3-5 percent); slightly micaceous (muscovite); trace of garnet; moderate amounts of earthy limonite and hematite; 5 - 10 percent chalky shell fragments, including Turritella, and a few plant fragments

## TRANSITIONAL BEDS (316-386')

- 316-331 Sand - brown, slightly silty and argillaceous; slightly glauconitic and arkosic (2-3 percent each of fresh glauconite and white microcline); small amounts of platy phosphorite, muscovite, and chalky shell fragments
- 331-348 As above
- 348-363 Sand - gray, very argillaceous (clay is variegated in browns, tans, and grays); sand fine- to medium-grained, fairly well-sorted, angular to subrounded; moderately arkosic (weathered white microcline); traces of platy phosphorite, glauconite, muscovite, and shell fragments
- 363-371 As above
- 371-386 As above - but more poorly sorted

## PATUXENT FORMATION (386-416')

- 386-401 Sand - brown, argillaceous; fine- to coarse-grained, moderately sorted, subangular to subrounded; arkosic (white, weathered potash-feldspar); traces of glauconite and muscovite; some hyacinth quartz
- 401-416 Sand - brownish-gray; medium- to coarse-grained, moderately sorted, subangular to subrounded; arkosic (white microcline), slightly glauconitic; small amounts platy phosphorite, hematite, magnetite, pyrite, muscovite, and garnet

GEOLOGIC SUMMARY

|         | <u>Rock Unit</u>    | <u>Age</u>                  |
|---------|---------------------|-----------------------------|
| 0-25    | Columbia Group      | post-Miocene                |
| 25-130  | Calvert Formation   | Miocene                     |
| 130-147 | Nanjemoy Formation  | Eocene                      |
| 147-316 | Mattaponi Formation | Paleocene - Late Cretaceous |
| 316-386 | Transitional Beds   | Late Cretaceous             |
| 386-416 | Patuxent Formation  | Early Cretaceous            |

Virginia Division of Mineral Resources  
Robert H. Teifke, Geologist  
November 3, 1965

Robert H. Teifke  
March 1, 1972