

INTERVAL SHEET

WWCR 197

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VDMR Well No.: 1414

Date 11/15/65

Sample Interval: from 0 to 360

PROP: Clay Mill School #1

Total depth 360

COMP: Falwell Well Corp.

Oil  Gas  Water  Exploratory

COUNTY: Halifax (Clay's Mill)  
VDMR Well No: W-1414

Cuttings  Core  Other

WASHED SAMPLES

From-To	From-To	From-To	From-To	From-To
-	-	0 - 10	300 - 310	No Sample
-	-	10 - 20	310 - 320	-
-	-	20 - 30	320 - 330	-
-	-	30 - 40	330 - 340	-
-	-	40 - 50	340 - 350	-
-	-	50 - 60	350 - 360	-
-	-	60 - 70	-	-
-	-	70 - 80	-	-
-	-	80 - 90	-	-
-	-	90 - 100	-	-
-	-	100 - 110	-	-
-	-	110 - 120	-	-
-	-	120 - 130	-	-
-	-	130 - 140	-	-
-	-	140 - 150	-	-
-	-	150 - 160	-	-
-	-	160 - 170	-	-
-	-	170 - 180	-	-
-	-	180 - 190	-	-
-	-	190 - 200	-	-
-	-	200 - 210	-	-
-	-	210 - 220	-	-
-	-	220 - 230	-	-
-	-	230 - 240	-	-
-	-	240 - 250	-	-
-	-	250 - 260	-	-
-	-	260 - 270	-	-
-	-	270 - 280	-	-
-	-	280 - 290	-	-
-	-	290 - 300	-	-

OWNER: Halifax County Schools  
(Clay's Mill School #1)  
DRILLER: Falwell Well Corp.  
COUNTY: Halifax (Clay's Mill)

VDMR Well # 1414  
WWCR Well # 197  
TOTAL DEPTH : 360

GEOLOGIC LOG

0-10 Saprolitic Gneiss - medium-brown, pale-orange and white, very-coarse-grained; quartz, feldspar, biotite; minor clays and iron oxide.

10-20 As above

20-30 As above

30-40 As above

40-50 As above

50-60 Augen Gneiss - medium-gray, medium-to very-coarse-grained; quartz, andesine, biotite, microcline, garnet; minor muscovite; trace pyrite and zircon; augen are irregularly shaped and probably porphyroblastic.

60-70 As above - less augen structure minor chlorite.

70-80 As above - more augen structure less chlorite.

80-90 Biotite Augen Gneiss - medium-gray and white, very-coarse-grained; oligoclase, biotite, quartz, muscovite; trace pyrrhotite, apatite, hornblende, calcite.

90-100 As above - slightly more hornblende, trace of weathering stain.

100-110 Biotite Gneiss - medium-gray and white; medium-to coarse-grained; quartz, oligoclase, andesine, biotite; minor muscovite, hornblende, epidote; trace pyrrhotite and calcite.

110-120 As above

120-130 As above - minor very-fine-grained crush-rock; the plagioclase augen are partially altered to sericite.

130-140 As above - more fine-grained matrix; minor epidote.

140-150 Augen Gneiss - medium-gray, medium-to very coarse-grained; quartz, biotite, plagioclase, muscovite; minor hornblende, pyrite; trace garnet and calcite.

150-160 As above - more hornblende.

OWNER: Halifax County Schools (Clays Mill School #1)

#1414

- 160-170 Hornblende Gneiss and Biotite Gneiss - very-dark-green and medium-gray and white; coarse-to very-coarse grained; interbedded; quartz, biotite, oligoclase, andesine, microcline, muscovite; minor apatite and garnet; a few fragments are over 90% hornblende with minor quartz and altered feldspar.
- 170-180 As above
- 180-190 As above
- 190-200 As above - fewer hornblende rich areas; minor chlorite and epidote.
- 200-210 As above - minor weathering stain.
- 210-220 As above - minor medium-gray, muscovite-rich-gneiss with augen of microcline.
- 220-230 As above - no muscovite rich gneiss.
- 230-240 As above
- 240-250 As above - minor sericite rich gneiss.
- 250-260 As above
- 260-270 As above - more garnet less sericite.
- 270-280 As above
- 280-290 As above - more hornblende.
- 290-300 Biotite Augen Gneiss - medium-gray with white; fine-to coarse-grained, cataclastic; feldspar and quartz augen and garnet porphyblasts in a matrix of biotite, quartz, feldspar, hornblende, muscovite, chlorite, and pyrite; minor hornblende gneiss.
- 300-310 No Sample
- 310-320 Biotite Augen Gneiss - medium-dark-gray and white; coarse-grained matrix of biotite, quartz and feldspar with porphroblastic augen (5 to 10 mm) of quartz and feldspar; minor dark-green hornblende gneiss with epidote, pyrite and garnet. Alteration of the biotite augen gneiss in well defined zones which transect the foliation. The feldspar and quartz are sericitized and the biotite altered to chlorite. On the border of the zone, feldspar augen occurred that were heavily sericitized within the zone and unaltered outside of it. The zone appears to be controlled by minute fractures.

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- 320-330 Cataclastic Augen Chlorite Gneiss - medium-green-gray, with pink; medium-to coarse-grained, massive matrix of chlorite feldspar and quartz; minor epidote, biotite and hornblende; augen of quartz, feldspar and muscovite; feldspar is oligoclase and microcline with associated calcite. This material is apparently an alteration product of the above biotite gneiss.
- 330-340 Biotite Gneiss and Chlorite Gneiss - a mixture of the above two levels.
- 340-350 Hornblende Gneiss and Biotite-Chlorite Gneiss - hornblende gneiss: black and white, very-coarse-grained; hornblende, calcic-oligoclase, quartz, epidote and minor pyrite; biotite-chlorite gneiss: medium-dark-gray, medium-grained; biotite, chlorite, quartz and feldspar; rounder augen of quartz and irregular porphyroblastic augen of microcline and oligoclase.
- 350-360 As above - less biotite-chlorite gneiss.

GEOLOGIC SUMMARY

0-360 Biotite Gneiss and Hornblende Gneiss.

The biotite gneiss appears to be a granitized phase of the hornblende gneiss; the chloritic and sericitic portions are probably due to later fracturing, distortion, and recrystallization.

Virginia Division of Mineral Resources  
Hollis N. Walker, Geologist  
November 29, 1965