

INTERVAL SHEET

WWCR 145

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VDMR WELL NO.: Well No. 1198

Date 12/14/64

Sample Interval: from 0 to 600

PROP: H. C. Chandler
 (Oak Haven Subdivision)
 COMP: Mitchell's W & P Co.
 COUNTY: Chesterfield (Richmond)

Total Depth 600
 Oil _____ Gas _____ Water X Exploratory _____
 Cuttings X Core _____ Other _____

VDMR WELL NO: W-1198

From-To	From-To	From-To	From-To	From-To
0 - 10	335 - 345	-	-	-
10 - 20	345 - 360	-	-	-
20 - 30	360 - 370	-	No washed samples	-
30 - 40	370 - 380	-	-	-
40 - 50 *	380 - 390	-	-	-
50 - 60	390 - 400	-	-	-
60 - 100 *	400 - 410	-	-	-
100 - 110	410 - 420	-	-	-
110 - 120	420 - 430	-	-	-
120 - 130	430 - 440	-	-	-
130 - 140	440 - 450	-	-	-
140 - 150	450 - 460	-	-	-
150 - 160	460 - 470	-	-	-
160 - 170	470 - 480	-	-	-
170 - 180	480 - 490	-	-	-
180 - 190	490 - 500	-	-	-
190 - 200	500 - 510	-	-	-
200 - 210	510 - 520	-	-	-
210 - 220	520 - 530	-	-	-
220 - 230	530 - 540	-	-	-
230 - 240	540 - 550	-	-	-
240 - 250	550 - 560	-	-	-
250 - 260	560 - 570	-	-	-
260 - 270	570 - 580	-	-	-
270 - 280	580 - 590	-	-	-
280 - 290	590 - 600	-	-	-
290 - 300	-	-	-	-
300 - 312	-	-	-	-
312 - 324	-	-	-	-
324 - 335	-	-	-	-

* No sample

OWNER: H. C. Chandler
DRILLER: Mitchell's Well & Pump Company
COUNTY: Chesterfield

VDMR #1198
WWCR #145
TOTAL DEPTH: 600'

GEOLOGIC LOG

Columbia Group (0-40')

- 0-10 Sand - buff, very argillaceous, very fine to very coarse grained, poorly sorted, subangular to subrounded, small amount of epidote, small amounts of insect remains and plant material.
- 10-20 Clay - yellow, sandy, sand composed of quartz, decomposed biotite and very abundant, highly decomposed pink microcline, smaller amounts of chlorite, carbonate, and epidote.
- 20-30 As above.
- 30-40 As above - but with abundant, subrounded pebbles (up to 10 mm) of highly decomposed pink microcline.
- 40-50 No sample.

Petersburg Granite (50-600')

- 50-60 Granite - clear to yellow or orange (iron-stained) quartz, white to pink, weathered feldspar (microcline), abundant, biotite, partially altered to chlorite, moderate amount of magnetite (large crystals and small inclusions in quartz), some quartzite fragments and goethite (?) pseudomorphs after pyrite.
- 60-100 No sample.
- 100-110 Muscovite-Quartz Gneiss - muscovite and clear quartz equally abundant, microcline and biotite subordinate, pink garnet relatively abundant, much of the biotite altered to chlorite.
- 110-120 Microcline Granite - light gray, quartz clear to milky to pale yellow, feldspar white to gray microcline, minor muscovite and biotite, small amounts pink and orange garnet, traces of epidote and kyanite.

- 120-130 Biotite-Microcline-Gneiss - gray, quartz clear to milky, feldspar white to gray microcline, very abundant biotite and muscovite (biotite dominant), moderate amount pale green clay (appears to be alteration product of feldspar), some pink garnet.
- 130-140 As above.
- 140-150 As above.
- 150-160 As above.
- 160-170 Biotite-Muscovite Gneiss - quartz and microcline, very abundant biotite and muscovite in subequal amounts, moderate amount pale green clay.
- 170-180 Biotite - Microcline Granite - clear quartz, white microcline, abundant biotite and muscovite, moderate amount pale green clay (altered sodic plagioclase).
- 180-190 Microcline Granite - quartz, microcline, and some biotite, minor muscovite and plagioclase, traces of orange garnet and pyrite.
- 190-200 As above - but with less biotite.
- 200-210 Microcline Granite - quartz and microcline, minor biotite, muscovite, and plagioclase, traces of orange garnet and pyrite.
- 210-220 Biotite-Muscovite Gneiss - clear quartz and white microcline, very abundant biotite and muscovite, abundant pale green clay, trace of garnet.
- 220-230 As above.
- 230-240 Biotite-Microcline Granite - clear to milky to yellowish quartz and gray to white microcline, abundant biotite and somewhat smaller amount muscovite, small amounts of graphite and pyrite, abundant pale green clay (alteration product of sodic plagioclase).
- 240-250 Biotite-Microcline Granite - clear quartz and white to orange microcline, abundant biotite and minor muscovite, small amounts chlorite, pyrite, green epidote, sodic plagioclase.
- 250-260 As above - but without muscovite.

- 260-270 Biotite-Microcline Granite - clear quartz and white to orange microcline, abundant biotite, small amounts chlorite, pyrite, green epidote, sodic plagioclase.
- 270-280 As above.
- 280-290 As above.
- 290-300 Biotite-Microcline Granite - clear quartz and white to pink microcline, abundant biotite, small amount pyrite and chlorite, traces of epidote and zircon.
- 300-312 As above - but without pyrite.
- 312-324 Biotite Gneiss - clear quartz, white microcline, and biotite, trace of pyrite.
- 324-335 As above.
- 335-345 As above - but with less biotite.
- 345-360 Biotite-Microcline Granite - clear to milky quartz, white to pink microcline, and abundant biotite, moderate amount pale green clay, traces of pyrite and green epidote.
- 360-370 As above.
- 370-380 Microcline Granite - orange microcline, clear quartz, biotite in much smaller amount than in preceding samples, some chlorite (alteration product of biotite), small amount of green epidote.
- 380-390 Biotite-Microcline Gneiss - white and orange microcline, clear to white quartz, and very abundant biotite, moderately abundant chlorite, some green epidote, small amount pyrite.
- 390-400 Biotite-Microcline Granite - white and orange microcline, clear to white quartz, and abundant biotite, some chlorite, small amount of pale green clay, trace of pyrite.
- 400-410 Microcline Granite - orange microcline, clear quartz, abundant biotite, some chlorite, small amount green epidote.
- 410-420 As above.

- 420-430 Microcline Granite - orange to white microcline and clear quartz, abundant biotite, much altered to chlorite, small amount pale green clay, small amount pyrite, trace hornblende.
- 430-440 As above.
- 440-450 Microcline Granite - orange to white microcline and clear quartz, small amount of biotite, trace of pyrite.
- 450-460 As above.
- 460-470 Microcline Granite - mostly white, but some orange microcline, clear quartz, small amount biotite, trace of pyrite.
- 470-480 As above.
- 480-490 Microcline Granite - mostly white, but some orange microcline, clear quartz, small amount biotite, traces of pyrite, sphene, magnetite, and green epidote.
- 490-500 As above.
- 500-510 Biotite-Microcline Granite - white microcline and clear quartz, abundant biotite, traces of pyrite, sphene, and green epidote.
- 510-520 As above, but with more sphene.
- 520-530 As above - but with more sphene.
- 530-540 Biotite-Microcline Granite - white microcline and clear quartz, quartz veined with brown sphene and green epidote (sphene and epidote relatively abundant), green hornblende, apatite, and trace of pyrite.
- 540-550 As above.
- 550-560 Biotite-Microcline Granite - white microcline and clear quartz, quartz veined with brown sphene and green epidote (sphene and epidote relatively abundant), green hornblende, apatite, and trace of pyrite.
- 560-570 As above, but with less epidote.

OWNER: H. C. Chandler (Continued)

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570-580 Biotite-Microcline Gneiss - mostly white, but some orange microcline, clear quartz, very abundant, fresh biotite, relatively abundant sphene, traces of pyrite and green epidote.

580-590 As above - but with less biotite.

590-600 Microcline-Biotite Granite - white microcline and clear quartz, abundant biotite, small amounts pyrite and sphene.

GEOLOGIC SUMMARY

	<u>ROCK UNIT</u>	<u>AGE</u>
0-40	Columbia group	Quaternary
50-600	Petersburg granite	Paleozoic

Virginia Division of Mineral Resources
Robert H. Teifke, Geologist
January 5, 1965