

OIL AND GAS WELL  
SUMMARY REPORT

API No. 45-023-20439-00-03 VDMR Well  
Rep. No. W-6631  
DMQ File No. BT-1

Operator COLUMBIA GAS TRANSMISSION CORPORATION  
Farm TREDEGAR COMPANY  
Co. Well No. 20750-TPI

County BOTETOURT Quadrangle EAGLE ROCK - 7½'  
Location (UTM) N4,172,260; E607,590 UTM Zone 17  
(Lat. and Long.) \_\_\_\_\_

Field \_\_\_\_\_ Province VALLEY AND RIDGE

Elev. (specify) 1505.84' GR. TD 9219' Form. at TD COPPER RIDGE DOLOMITE  
INITIAL FLOW - \_\_\_\_\_ Age CAMBRIAN

Date compl. or abandoned DECEMBER 18, 1981

Result DRY HOLE; PLUGGED AND ABANDONED

Gas Shows 2360' TO 2478'; 2529' TO 2594'; 3346' TO 3498'; 4444' TO 4633'; 4618' TO 5122'  
Gas Pays 5122' TO 5897'

Main Production \_\_\_\_\_ Prod. Form. \_\_\_\_\_  
Age \_\_\_\_\_

Treatment: ACIDIZED TRENTON LIMESTONE FROM 4400' TO 5500' WITH 465 BARRELS WITH NITROGEN. FINAL FLOW 21.9 MCF-PLUGGED. FRACTURED TUSCARORA SANDSTONE FROM 3358' TO 3398' WITH 900 BARRELS OF SAND LADEN FLUID, 95,000 POUNDS OF 20/40 SAND. NO FLOW OF GAS.

Initial Production \_\_\_\_\_  
FINAL FLOW - 21,900 CU. FT.

Oil shows \_\_\_\_\_

Water FW X at 2550' at \_\_\_\_\_ at \_\_\_\_\_  
SW \_\_\_\_\_ at \_\_\_\_\_ at \_\_\_\_\_ at \_\_\_\_\_

Coal \_\_\_\_\_

Plat X Plotted X Completion Report X

Drillers Log X Geologic Log \_\_\_\_\_

Samples X Interval Sheet X

Sample Interval 0' to 9210'

Remarks \_\_\_\_\_

Geophysical Logs S.P. \_\_\_\_\_ Res \_\_\_\_\_ Gamma X Neutron X

Density X Sonic X Other CONTINUOUS DIPMETER; TEMPERATURE;  
PERFORATING RECORD; DUAL INDUCTION; FRACTURE IDENTIFICATION

**Stratigraphic Data Source**

Formation	Top	Datum (Subsea)	Thickness
W-0031			
HT-1			
EAGLE ROCK - 7M			
HTM Zone 17			
VALLEY AND RIDGE			

**Remarks**

**References**

Released to Open File: Completion MARCH 18, 1982

Samples YES

(Note: UTM measurements in meters, all others in feet)

Commonwealth of Virginia  
DEPARTMENT OF LABOR AND INDUSTRY  
Division of Mines  
Big Stone Gap, Virginia

~~XXXXXXXXXX~~  
NOTICE OF INTENTION TO DRILL ~~XXXXXXXX~~ GAS WELL  
~~XXXXXXXX~~

(One copy of this report and three identical copies of a plat or map, on a scale not smaller than 400 feet to the inch, and showing information required by Section 45-114, Code of Virginia, 1950, must be submitted to the Division of Mines, and copies sent by registered mail to all persons defined in above law, prior to obtaining a permit to drill.)

TO: DIVISION OF MINES  
BIG STONE GAP, VIRGINIA

Charleston, W. Va.

Place

August 11, 19 81

Date

Gentlemen:

The undersigned proposes to begin as soon as a permit therefor is obtained from the Division of Mines, to drill, ~~XXXXXXXXXXXXXXXXXXXX~~ (strike out two) a well for oil or gas on the Tredegar Company Farm, comprising 8,886 acres, in the Fincastle District of Botetourt County, Virginia, having the fee title thereto, or as the case may be, under grant or lease dated 3/2/79, made by Tredegar Co. to Columbia Gas Transmission and recorded on the -- day of --, 19 -- in the office of the County Clerk for said County in Book 252, page 583.

The proposed location of the well, as shown on the attached plat or map, is about 5,450 feet South of 37° 42' 30" and about 8,600 feet West of 79° 45' 00".

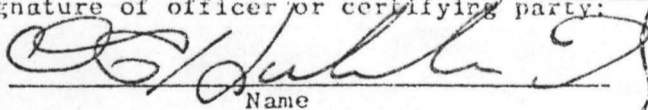
It is proposed to drill this well to a depth of about 8000 feet. Samples or cuttings therefrom will be available for examination by a member of the staff of the Virginia Geological Survey. Cuttings will be furnished the Survey.

A plat or map, in triplicate, on a scale not smaller than 400 feet to the inch, showing the proposed location of the well and other information, required in Section 45-114, Code of Virginia, 1950, is attached hereto. Copies of the plat and notice of intention to drill, redrill or deepen the aforementioned well have been sent to all interested persons as required by Section 45-114, above cited, as follows (List names and mail address of each. Use back of sheet if additional space is required):

1. Tredegar Company, P. O. Box 1398, Richmond, Va. 23211
2. Owens - Illinois, P. O. Box 1035, Toledo, Ohio 43666
3. \_\_\_\_\_
4. \_\_\_\_\_
5. \_\_\_\_\_
6. \_\_\_\_\_

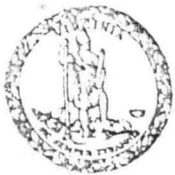
Very truly yours,

Signature of officer or certifying party:

  
Name  
Senior Vice President  
Title

Columbia Gas Transmission Corporation  
Drilling Company or Operator  
P. O. Box 1273  
Street Address  
Charleston, W. Va. 25325  
City or Town, and State

File B.T-1 Date Received August 13, 1981 Well No. 20750-T



COMMONWEALTH OF VIRGINIA

DIVISION OF MINES AND QUARRIES  
DEPARTMENT OF LABOR AND INDUSTRY

BIG STONE GAP, VIRGINIA

~~REEXAM~~

APPLICATION FOR PERMIT TO DRILL ~~OR~~ GAS WELL

~~REEXAM~~

(Required by Section 45-115, Code of Virginia, 1950. To be accompanied by Permit fee of twenty-five dollars and bond and surety therefor, as specified by Section cited. To be submitted in duplicate, one copy to be returned to applicant after action by Division of Mines and Quarries.)

TO: DIVISION OF MINES AND QUARRIES  
BIG STONE GAP, VIRGINIA

Charleston, W. Va.

Place

August 11, 1981

Date

Gentlemen:

The undersigned hereby makes application for a Permit to drill, ~~re-drill, or deepen~~ (strike out two) a well for oil or gas on the Tredegar Company Farm, comprising 8,886 acres, in the Fincastle District of Botetourt County, Virginia, having the fee title thereto, or as the case may be, under grant or lease dated 3-2, 19 79 made by Tredegar Company to Columbia Gas Transmission Corporation and recorded on the -- day of --, 19 -- in the office of the County Clerk for the said County in Book 252 page 583.

The proposed location of the well is shown on a location plat or map submitted to the Division of Mines and Quarries, by the undersigned, together with Notice of Intention to Drill, ~~Re-examine~~ ~~Reopen~~ a Well for ~~Oil or~~ Gas (Form 2) on the 11th day of August, 19 81.

The proposed well will be known as Well No. 20750-T of Columbia Gas Transm. Corp. (company, etc.) It is proposed to drill this well to a depth of about 8,000 feet.

The proposed location is about 889 feet distant from the nearest property or lease line; about -- feet distant from the nearest mining opening, or quarry (strike out words not applicable); and/or about none feet distant from the nearest drilling, abandoned, producing, or applied for (strike out words not applicable) oil or gas (strike out words not applicable) well.

There is enclosed herewith a certified check or U. S. Postal Money Order, in the amount of twenty-five (\$25.00), payable to the Treasurer of Virginia, covering fee for a Permit to Drill a Well for Oil or Gas, as required by Section 45-115, Code of Virginia, 1950.

Bond and surety therefor to insure compliance with the provisions of Chapter 8, Title 45, Code of Virginia, 1950, for this well, in the amount of \$ 11,000 is submitted herewith of (give status of) Policy No. 907352

Correspondence regarding this well should be addressed to Mr. James L. Weekley  
P. O. Box 1273, Charleston, W. Va. 25325.

Signature of officer or certifying party.

[Signature]  
Name  
Senior Vice President  
Title

Very truly yours,

Columbia Gas Transmission Corporation  
Drilling Company or Operator  
P. O. Box 1273  
Street  
Charleston  
City of Town  
West Virginia 25325  
State

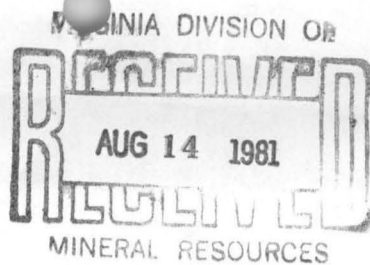
Space below this line is for the use of the Board only.  
ACTION OF DIVISION OF MINES AND QUARRIES

Received on August 13, 19 81.  
Approved and Permit (No. 439) granted on August 24, 19 81.  
Denied \_\_\_\_\_  
Reasons for denial \_\_\_\_\_

DIVISION OF MINES AND QUARRIES  
By B. J. [Signature] State Oil and Gas Inspector  
Title

File No. BT-1 Well No. 20750-T Permit No. 439

Commonwealth of Virginia  
DEPARTMENT OF LABOR AND INDUSTRY  
Division of Mines  
Big Stone Gap, Virginia



DM

~~XXXXXXXXXX~~  
NOTICE OF INTENTION TO DRILL ~~XXXXXXXX~~ GAS WELL  
~~XXXXXXXXXX~~

(One copy of this report and three identical copies of a plat or map, on a scale not smaller than 400 feet to the inch, and showing information required by Section 45-114, Code of Virginia, 1950, must be submitted to the Division of Mines, and copies sent by registered mail to all persons defined in above law, prior to obtaining a permit to drill.)

TO: DIVISION OF MINES  
BIG STONE GAP, VIRGINIA

Charleston, W. Va.

Place

August 11, 19 81

Date

Gentlemen:

The undersigned proposes to begin as soon as a permit therefor is obtained from the Division of Mines, to drill, ~~XXXXXXXXXXXXXXXXXXXX~~ (strike out two) a well for oil or gas on the Tredegar Company Farm, comprising 8,886 acres, in the Fincastle District of Botetourt County, Virginia, having the fee title thereto, or as the case may be, under grant or lease dated 3/2/79, made by Tredegar Co. to Columbia Gas Transmission and recorded on the - - day of - -, 19 - - in the office of the County Clerk for said County in Book 252, page 583.

The proposed location of the well, as shown on the attached plat or map, is about 5,450 feet South of 37° 42' 30" and about 8,600 feet West of 79° 45' 00".

It is proposed to drill this well to a depth of about 8000 feet. Samples or cuttings therefrom ~~will~~ be available for examination by a member of the staff of the Virginia Geological Survey. Cuttings ~~will~~ be furnished the Survey.

A plat or map, in triplicate, on a scale not smaller than 400 feet to the inch, showing the proposed location of the well and other information, required in Section 45-114, Code of Virginia, 1950, is attached hereto. Copies of the plat and notice of intention to drill, redrill or deepen the aforementioned well have been sent to all interested persons as required by Section 45-114, above cited, as follows (List names and mail address of each. Use back of sheet if additional space is required):

- 1. Tredegar Company, P. O. Box 1398, Richmond, Va. 23211
- 2. Owens - Illinois, P. O. Box 1035, Toledo, Ohio 43666
- 3. \_\_\_\_\_
- 4. \_\_\_\_\_
- 5. \_\_\_\_\_
- 6. \_\_\_\_\_

Very truly yours,

Signature of officer or certifying party:

Name

Senior Vice President

Title

Columbia Gas Transmission Corporation  
Drilling Company or Operator

P. O. Box 1273

Street Address

Charleston, W. Va. 25325

City or Town, and State

File \_\_\_\_\_ Date Received \_\_\_\_\_ Well No. 20750-T

(To be filled in by Division of Mines)

COMMONWEALTH OF VIRGINIA DEPARTMENT OF LABOR AND INDUSTRY

(To be filled in by Division of Mines)

BOTETOURT

County

FINCASTLE

District

EAGLE ROCK

Quadrangle

BT-1

File

DIVISION OF MINES

BIG STONE GAP, VIRGINIA

DEEPENED OIL AND GAS WELL COMPLETION REPORT ABANDONMENT

Well No. 20750-T

Permit No. 439

County Code 023

Well Classification NFW

(This report and a copy of electrical log, if made, must be submitted to the Division of Mines within 30 days after abandonment or completion of well, as required by Section 45-113, Code of Virginia, 1950.)

Company Columbia Gas Transmission Corporation Address P.O. Box 1273, Charleston, WV 25325

Farm Tredegar Company Acres 8,886

County Bottetourt District Fincastle

Well No. (Company) 20750-TPI Elevation (ground surface) 1505.84 ft.

Location: (Give direction and distance in feet from two (2) map coordinates (Latitude and Longitude) shown on location plat or map previously filed with the Division of Mines or shown on quadrangle topographic map of area.)

5450 feet South of 37° 42' 30" and 3500 feet East of 79° 47' 30"

Surface of tract is owned in fee simple by Owens-Illinois

Address P.O. Box 1035, Toledo, Ohio

Mineral rights are owned by Tredegar Company

Address P.O.Box 1398, Richmond, Va.

Location made by Ogdgen Escavating

Drilling commenced August 25, 1981 Drilling contractor Delta Drilling Company

Drilling completed October 28, 1981 Address Tyler, Texas

Well completed as gas well on Plugged and Abandoned

Well abandoned at 0 feet on December 18, 1981 : Reason DRY HOLE

Well plugged on December 18, 1981 Affidavit filed , 19

Total depth 9219 feet. Steel line measurement feet.

Commenced producing on , 19

Oil Well Initial production, NA Barrels per day.

Stimulation Record

Breakdown Pressure psi; Average Injection Pressure psi;

Average Injection Rate BPM; Instant Shut-in Pressure psi;

Min. Shut-in Pressure psi;

Final Production Barrels per day.

Gravity and grade of oil

Oil pays at (1) feet to feet. Oil shows at (1) feet to feet.

(2) feet to feet. (2) feet to feet.

(3) feet to feet. (3) feet to feet.

(4) feet to feet. (4) feet to feet.

Main production at feet to feet. (5) feet to feet.

Gas Well Gaged /10ths. Water in inch.

Initial open flow, gas: /10ths. Mercury in inch.

Volume 0 Mcf.; Rock Pressure 0 lbs. hrs.

Stimulation Record No. 1 - Acidized Trenton Limestone from 4400-5500' with 465 Bbls. with Nitrogen. Final open flow 21.9 Mcf - Plugged.

No. 2 - Fractured Tuscarora Sandstone from 3358-3398' with 900 Bbls. Sand laden fluid, 95,000# 20/40 sand. No flow of gas.

Breakdown Pressure #1 - 900 #2- 2000 psi; Average Injection Pressure #1 2540 #2 2875 psi;

Average Injection Rate #1 18 #2 18 BPM; Instant Shut-in Pressure #1 1500 #2 3400 psi;

Min. Shut-in Pressure #1 1100 #2 2800 psi.

Final Openflow Trenton 21.9 Mcf.; Rock Pressure 275 Tbg. 650 Csg. lbs. 60 hrs.

Gas pays at (1) feet to feet. Gas shows at (1) 2360 feet to 2478 feet.

(2) feet to feet. (2) 2529 feet to 2594 feet.

(3) feet to feet. (3) 3346 feet to 3498 feet.

(4) feet to feet. (4) 4444 feet to 4633 feet.

Main production feet to feet. (5) 4618 feet to 5122 feet.

Additional shows on Log

Fresh water at (1) 2550 feet, - GPM; (2) feet, GPM; (3) feet, GPM.

Salt water at (1) feet; (2) feet; (3) feet; (4) feet.

Coal: from feet inches to feet inches; from feet inches to feet inches; from feet inches, to feet inches.

CASING AND TUBING

PACKERS OR BRIDGE PLUGS

Table with columns for Casing and Tubing (Size, Used in Drilling, Left in Well, Perforated) and Packers or Bridge Plugs (Kind, Size, Set at). Includes rows for Baker plugs and Liners.

Casing Cemented: 20 inch. from 103 feet to Surface Date 8-26-81
13 3/8 inch. from 1330 feet to Surface Date 8-31-81
9 5/8 inch. from 3498 feet to 2350 Date 10-29-81

Remarks: (Shut down, depths, dates; fishing jobs, depths, dates; caving; other notes)
9 5/8" 2 stage cement. 2nd Stage from 1260' to surface
5 1/2" set at 4398' cement from 4400 to 3800' cut and pulled 3900'
5 1/2" set at 3278' cement from 3278 to 2820' cut and pulled 2648'
Lost bearing out of 12 1/4" bit - recovered all bearings. Well Plugged and Abandoned 12/18

Samples or cuttings will be available for examination by a member of the Virginia Geological Survey Yes (Yes) (No)
Will be furnished the Virginia Geological Survey upon request Yes (Yes) (No), if sacks for same are furnished by the Survey Yes (Yes) (No)

Electrical log made Yes or not made (check which.)
Copy furnished herewith or will be submitted on or by , 19
Depths

To operator requests that information given herein and log or logs be kept confidential for a period of ninety day after completion of the well covered by this report (Yes) (No)

# LOG

Furnished by \_\_\_\_\_ Date \_\_\_\_\_

Compiled by \_\_\_\_\_ Date \_\_\_\_\_

GEOLOGIC AGE	FORMATION	GENERAL LITHOLOGY	COLOR	TOP (feet)	BOTTOM (feet)	THICKNESS (feet)	REMARKS OIL, GAS WATER DEPTHS SHUT DOWN FISHING, ETC.
	Sandstone & Shale			0	1318		
	Sandstone			1318	1368		
	Shale with Lime & Sand Stringers			1368	2185		
<i>Millboro 2004</i> Devonian	Oriskany	SS		2185	2198	13'	
"	Licking Creek	LS		2198	2288	90'	
"	Healing Sprs.	SS		2288	2315	27'	
"	New Creek	LS		2315	2352	37'	
Silurian	Keyser Fm.			2352	2478	126'	Show gas
"	Tonoloway	LS		2478	2667	189'	Show gas
"	Keefer	SS		2667	3091	424'	Water @ 2550'
"	Cacapon	SS		3091	3346	255"	
"	Tuscarora	SS		3346	3618	272'	Show gas
Ordovician	Martinsburg	SH		3618	4328	710'	
"	Eggleston	LS		4328	5122	794'	Show gas
"	Edinburg FM.			5122	5897	775'	Show gas
"	Lincolnshire			5897	6882	985'	
"	New Market	LS		6882	6980	98'	
"	Beekmantown	Dol.		6980	8298	1318'	
Cambrian	Copper Ridge	Dol.		8298	T.D.	912+	

THIS FORM MUST BE SIGNED BY AUTHORIZED PERSON:

*J. Weckley*

Latitude 37° 42' 30"

6,000

# TREDEGAR COMPANY (MINERAL)

## 20750-T

### OWENS - ILLINOIS (SURFACE)

No. 31 LOCUST STAKE, TOP OF RIDGE  
NORTH OF PATH, SOUTH OF TIMBER  
ROAD DOUBLE WHITE OAK WITNESS  
(PAINTED)

No. 30 STAKE, NORTH SIDE RIDGE  
ABOUT 0.60 CHAINS FROM TOP,  
CHESTNUT OAK & PINE WITNESS

### OWENS - ILLINOIS

No. 32 STAKE IN STONE  
PILE, TOP OF RIDGE  
PINE WITNESS RED PAINT

No. 33 LOCUST STAKE IN STONE PILE  
BLACK WALNUT WITNESS

No. 34 STONE PILE SOUTH  
OF ROAD, WEST BANK OF  
MILL CREEK

MILL CREEK

"I, the undersigned, hereby certify that this map is correct to the best of my knowledge and belief and shows all the information required by the rules and regulations of the oil and gas section of the mining laws of VIRGINIA  
Minimum degree of accuracy is one part in 200

- New Location
- Storage
- Drill Deeper
- Abandonment
- Re-Drill/Fracture

Signed Lloyd C. Hart

LAND SURVEYOR LIC. No. 99 W.VA.

Company COLUMBIA GAS TRANS. CORP.  
 Address BOX 1273 CHARLESTON W. VA.  
 Farm TREDEGAR COMPANY  
 Lease 184324 Acres 8,886  
 Well Farm No. 1 Ser. No. 20750-T  
 Elevation-Spirit Level 1505.84'  
 Quadrangle EAGLE ROCK, VA.  
 Township or District FINCASTLE  
 County BOTETOURT  
 Sec., Lot, Qr. \_\_\_\_\_ T \_\_\_\_\_ R \_\_\_\_\_  
 Coordinates LAT: 37° 41' 36" LONG: 79° 46' 47"  
 File No. \_\_\_\_\_ Dwg. No. \_\_\_\_\_  
 Date 6-3-81 Scale 1" = 400'

FORM 1495 CE 4 CSD  
(REV. 3-79)

COLUMBIA GAS SYSTEM  
COLUMBIA GAS TRANSMISSION CORPORATION

### WELL LOCATION MAP STATE OF VIRGINIA

(+) Denotes Values of Well On  
United States Topographic Maps

Scale 15'  7-1/2'

Longitude 79° 45' 00"

5,450'



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

INTERVAL SHEET

Page 1 of 5

Well Repository No.: W- 6631

Date rec'd:                      addition:  
 Date Processed: 6/7/83

Sample Interval: from 0 to: 9210

PROPERTY: Tredegar Company #20750-T

Number of samples: 661

COMPANY: Columbia Gas Transmission Corp.

Total Depth: 9219'

COUNTY: Botetourt

Oil or Gas: X Water: Exploratory:

From-To	From-To	From-To	From-To	From-To
0-10	-	-	-	-
10-20	-	-	-	-
20-30	-	-	-	-
30-40	-	-	-	-
40-50	-	-	-	-
50-60	-	-	-	-
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	-	-	-	-

Washed samples

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

INTERVAL SHEET

Page 2 of 5

Well Repository No.: W- 6631

Date rec'd: Date Processed: 5/18/83

Sample Interval: from 500 to: 9210

PROPERTY: Tredegar Company (#20750-T)

Number of samples: 661

COMPANY: Columbia Gas Transmission Corporation

Total Depth: 9219'

COUNTY: Botetourt

Oil or Gas: X Water: Exploratory:

From-To	From-To	From-To	From-To	From-To
500 - 530	1400 - 1430	2100 - 2110	2400 - 2410	2700 - 2710
530 - 560	1430 - 1460	2110 - 2120	2410 - 2420	2710 - 2720
560 - 590	1460 - 1490	2120 - 2130	2420 - 2430	2720 - 2730
590 - 620	1490 - 1520	2130 - 2140	2430 - 2440	2730 - 2740
620 - 650	1520 - 1550	2140 - 2150	2440 - 2450	2740 - 2750
-----	1550 - 1580	2150 - 2160	2450 - 2460	2750 - 2760
680 - 710	1580 - 1610	2160 - 2170	2460 - 2470	2760 - 2770
710 - 740	1610 - 1640	2170 - 2180	2470 - 2480	2770 - 2780
-----	1640 - 1670	2180 - 2190	2480 - 2490	2780 - 2790
770 - 800	1670 - 1700	2190 - 2200	2490 - 2500	2790 - 2800
800 - 830	1700 - 1730	2200 - 2210	2500 - 2510	2800 - 2810
830 - 860	1730 - 1760	2210 - 2220	2510 - 2520	2810 - 2820
860 - 890	1760 - 1790	2220 - 2230	2520 - 2530	2820 - 2830
890 - 920	1790 - 1820	2230 - 2240	2530 - 2540	2830 - 2840
920 - 950	1820 - 1850	2240 - 2250	2540 - 2550	2840 - 2850
950 - 980	1850 - 1880	2250 - 2260	2550 - 2560	2850 - 2860
980 - 1010	1880 - 1910	2260 - 2270	2560 - 2570	2860 - 2870
1010 - 1040	1910 - 1940	2270 - 2280	2570 - 2580	2870 - 2880
1040 - 1070	1940 - 1970	2280 - 2290	2580 - 2590	2880 - 2890
1070 - 1100	1970 - 2000	2290 - 2300	2590 - 2600	2890 - 2900
1100 - 1130	2000 - 2010	2300 - 2310	2600 - 2610	2900 - 2910
1130 - 1160	2010 - 2020	2310 - 2320	2610 - 2620	2910 - 2920
1160 - 1190	2020 - 2030	2320 - 2330	-----	2920 - 2930
1190 - 1220	2030 - 2040	2330 - 2340	-----	2930 - 2940
1220 - 1250	2040 - 2050	2340 - 2350	2640 - 2650	2940 - 2950
1250 - 1280	2050 - 2060	2350 - 2360	2650 - 2660	2950 - 2960
1280 - 1310	2060 - 2070	2360 - 2370	2660 - 2670	2960 - 2970
1310 - 1340	2070 - 2080	2370 - 2380	2670 - 2680	2970 - 2980
1340 - 1370	2080 - 2090	2380 - 2390	2680 - 2690	2980 - 2990
1370 - 1400	2090 - 2100	2390 - 2400	2690 - 2700	2990 - 3000

Washed samples

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

INTERVAL SHEET  
Continued

Page 3 of 5

Well Repository No.: W- 6631

From-To	From-To	From-To	From-To	From-To
3000 - 3010	4450 - 4460	4850 - 4860	5250 - 5260	5650 - 5660
3010 - 3020	4460 - 4470	4860 - 4870	5260 - 5270	5660 - 5670
3020 - 3030	4470 - 4480	4870 - 4880	5270 - 5280	5670 - 5680
3030 - 3040	4480 - 4490	4880 - 4890	5280 - 5290	5680 - 5690
3040 - 3050	4490 - 4500	-----	5290 - 5300	5690 - 5700
3050 - 3060	4500 - 4510	4900 - 4910	5300 - 5310	5700 - 5710
3060 - 3070	4510 - 4520	4910 - 4920	5310 - 5320	5710 - 5720
3070 - 3080	4520 - 4530	4920 - 4930	5320 - 5330	5720 - 5730
3080 - 3090	4530 - 4540	4930 - 4940	5330 - 5340	5730 - 5740
3090 - 3100	4540 - 4550	-----	5340 - 5350	5740 - 5750
3100 - 3110	4550 - 4560	4950 - 4960	-----	5750 - 5760
3110 - 3120	4560 - 4570	4960 - 4970	-----	5760 - 5770
3120 - 3130	4570 - 4580	4970 - 4980	-----	5770 - 5780
3130 - 3140	4580 - 4590	4980 - 4990	-----	5780 - 5790
3140 - 3150	4590 - 4600	4900 - 5000	5390 - 5400	5790 - 5800
3150 - 3160	4600 - 4610	5000 - 5010	5400 - 5410	5800 - 5810
3160 - 3170	4610 - 4620	5010 - 5020	5410 - 5420	5810 - 5820
-	4620 - 4630	5020 - 5030	5420 - 5430	5820 - 5830
-----	4630 - 4640	5030 - 5040	5430 - 5440	5830 - 5840
-	4640 - 4650	5040 - 5050	5440 - 5450	5840 - 5850
1100 feet missing	4650 - 4660	5050 - 5060	5450 - 5460	5850 - 5860
-	4660 - 4670	5060 - 5070	5460 - 5470	5860 - 5870
-	4670 - 4680	5070 - 5080	5470 - 5480	5870 - 5880
4280 - 4290	4680 - 4690	5080 - 5090	5480 - 5490	5880 - 5890
4290 - 4300	4690 - 4700	5090 - 5100	5490 - 5500	5890 - 5900
4300 - 4310	4700 - 4710	5100 - 5110	-----	5900 - 5910
4310 - 4320	4710 - 4720	5110 - 5120	5510 - 5520	5910 - 5920
4320 - 4330	4720 - 4730	5120 - 5130	5520 - 5530	5920 - 5930
4330 - 4340	4730 - 4740	5130 - 5140	5530 - 5540	5930 - 5940
4340 - 4350	4740 - 4750	5140 - 5150	5540 - 5550	5940 - 5950
4350 - 4360	4750 - 4760	5150 - 5160	5550 - 5560	5950 - 5960
4360 - 4370	4760 - 4770	5160 - 5170	5560 - 5570	5960 - 5970
4370 - 4380	4770 - 4780	5170 - 5180	5570 - 5580	5970 - 5980
4380 - 4390	4780 - 4790	5180 - 5190	5580 - 5590	5980 - 5990
4390 - 4400	4790 - 4800	5190 - 5200	5590 - 5600	5990 - 6000
4400 - 4410	4800 - 4810	5200 - 5210	5600 - 5610	6000 - 6010
4410 - 4420	4810 - 4820	5210 - 5220	5610 - 5620	6010 - 6020
4420 - 4430	4820 - 4830	5220 - 5230	5620 - 5630	6020 - 6030
4430 - 4440	4830 - 4840	5230 - 5240	5630 - 5640	6030 - 6040
4440 - 4450	4840 - 4850	5240 - 5250	5640 - 5650	6040 - 6050

Washed samples

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

**INTERVAL SHEET**  
**Continued**

Page 4 of 5

Well Repository No.: W- 6631

From-To	From-To	From-To	From-To	From-To
6050 - 6060	6450 - 6460	6850 - 6860	7250 - 7260	7650 - 7660
6060 - 6070	6460 - 6470	6860 - 6870	7260 - 7270	7660 - 7670
6070 - 6080	6470 - 6480	6870 - 6880	7270 - 7280	7670 - 7680
6080 - 6090	6480 - 6490	6880 - 6890	7280 - 7290	7680 - 7690
6090 - 6100	6490 - 6500	6890 - 6900	7290 - 7300	7690 - 7700
6100 - 6110	6500 - 6510	6900 - 6910	7300 - 7310	7700 - 7710
6110 - 6120	6510 - 6520	6910 - 6920	7310 - 7320	7710 - 7720
6120 - 6130	6520 - 6530	6920 - 6930	7320 - 7330	7720 - 7730
6130 - 6140	6530 - 6540	6930 - 6940	7330 - 7340	7730 - 7740
6140 - 6150	6540 - 6550	6940 - 6950	7340 - 7350	7740 - 7750
6150 - 6160	6550 - 6560	6950 - 6960	7350 - 7360	7750 - 7760
6160 - 6170	6560 - 6570	6960 - 6970	7360 - 7370	7760 - 7770
6170 - 6180	6570 - 6580	6970 - 6980	7370 - 7380	7770 - 7780
6180 - 6190	6580 - 6590	6980 - 6990	7380 - 7390	7780 - 7790
6190 - 6200	6590 - 6600	6990 - 7000	7390 - 7400	7790 - 7800
6200 - 6210	6600 - 6610	7000 - 7010	7400 - 7410	7800 - 7810
6210 - 6220	6610 - 6620	7010 - 7020	7410 - 7420	7810 - 7820
6220 - 6230	6620 - 6630	7020 - 7030	7420 - 7430	7820 - 7830
6230 - 6240	6630 - 6640	7030 - 7040	7430 - 7440	7830 - 7840
6240 - 6250	6640 - 6650	7040 - 7050	7440 - 7450	7840 - 7850
6250 - 6260	6650 - 6660	7050 - 7060		7850 - 7860
6260 - 6270	6660 - 6670	7060 - 7070	7460 - 7470	7860 - 7870
6270 - 6280	6670 - 6680	7070 - 7080	7470 - 7480	7870 - 7880
6280 - 6290	6680 - 6690	7080 - 7090	7480 - 7490	7880 - 7890
6290 - 6300	6690 - 6700	7090 - 7100	7490 - 7500	7890 - 7900
6300 - 6310	6700 - 6710	7100 - 7110	7500 - 7510	7900 - 7910
6310 - 6320	6710 - 6720	7110 - 7120	7510 - 7520	7910 - 7920
6320 - 6330	6720 - 6730	7120 - 7130	7520 - 7530	7920 - 7930
6330 - 6340	6730 - 6740	-	7530 - 7540	7930 - 7940
6340 - 6350	6740 - 6750	"wet hole"	7540 - 7550	7940 - 7950
6350 - 6360	6750 - 6760	"wet - hole"	7550 - 7560	-
6360 - 6370	6760 - 6770	"wet - hole"	7560 - 7570	7960 - 7970
6370 - 6380	6770 - 6780	"wet - hole"	7570 - 7580	7970 - 7980
6380 - 6390	6780 - 6790	"wet - hole"	7580 - 7590	7980 - 7990
6390 - 6400	-	"wet - hole"	7590 - 7600	7990 - 8000
6400 - 6410	6800 - 6810	"wet - hole"	7600 - 7610	8000 - 8010
6410 - 6420	6810 - 6820	"wet - hole"	7610 - 7620	8010 - 8020
6420 - 6430	6820 - 6830	7220 - 7230	7620 - 7630	8020 - 8030
6430 - 6440	6830 - 6840	7230 - 7240	7630 - 7640	8030 - 8040
6440 - 6450	6840 - 6850	7240 - 7250	7640 - 7650	8040 - 8050

Washed samples

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

**INTERVAL SHEET**  
**Continued**

Page 5 of 5

Well Repository No.: W- 6631

From-To	From-To	From-To	From-To	From-To
8050 - 8060	8450 - 8460	8850 - 8860	-	-
8060 - 8070	8460 - 8470	8860 - 8870	-	-
8070 - 8080	8470 - 8480	8870 - 8880	-	-
8080 - 8090	8480 - 8490	8880 - 8890	-	-
8090 - 8100	8490 - 8500	8890 - 8900	-	-
8100 - 8110	8500 - 8510	8900 - 8910	-	-
8110 - 8120	8510 - 8520	8910 - 8920	-	-
8120 - 8130	8520 - 8530	8920 - 8930	-	-
8130 - 8140	8530 - 8540	8930 - 8940	-	-
8140 - 8150	_____	8940 - 8950	-	-
8150 - 8160	_____	8950 - 8960	-	-
8160 - 8170	8560 - 8570	8960 - 8970	-	-
8170 - 8180	8570 - 8580	8970 - 8980	-	-
8180 - 8190	8580 - 8590	8980 - 8990	-	-
_____	8590 - 8600	8990 - 9000	-	-
_____	8600 - 8610	9000 - 9010	-	-
8210 - 8220	8610 - 8620	9010 - 9020	-	-
8220 - 8230	8620 - 8630	9020 - 9030	-	-
8230 - 8240	8630 - 8640	9030 - 9040	-	-
8240 - 8250	8640 - 8650	9040 - 9050	-	-
_____	8650 - 8660	9050 - 9060	-	-
8260 - 8270	8660 - 8670	9060 - 9070	-	-
8270 - 8280	8670 - 8680	9070 - 9080	-	-
8280 - 8290	8680 - 8690	9080 - 9090	-	-
8290 - 8300	8690 - 8700	9090 - 9100	-	-
8300 - 8310	8700 - 8710	_____	-	-
8310 - 8320	8710 - 8720	9110 - 9120	-	-
8320 - 8330	8720 - 8730	9120 - 9130	-	-
8330 - 8340	8730 - 8740	9130 - 9140	-	-
8340 - 8350	8740 - 8750	9140 - 9150	-	-
8350 - 8360	8750 - 8760	9150 - 9160	-	-
8360 - 8370	8760 - 8770	9160 - 9170	-	-
8370 - 8380	8770 - 8780	9170 - 9180	-	-
8380 - 8390	8780 - 8790	9180 - 9190	-	-
8390 - 8400	8790 - 8800	9190 - 9200	-	-
8400 - 8410	8800 - 8810	9200 - 9210	-	-
8410 - 8420	8810 - 8820	_____	-	-
8420 - 8430	8820 - 8830	-	-	-
8430 - 8440	8830 - 8840	-	-	-
8440 - 8450	8840 - 8850	-	-	-

Washed samples