



Well: Skeet Rock Dam Site, hole 5  
Farm:  
Driller: Adams and Henry (U. S. Corps of Engr., contractor)  
Location: Haysi quadrangle - approximate UTM, 378650 m. E and  
4119870 m. N; about 2.5 miles southeast of Skeetrock and  
4.5 miles northwest of Haysi; also just east of the mouth of  
Lower Twin Branch along the Pound River.  
Elevation: 1450.00 feet  
Total depth: 98.99 feet  
Started drilling: 1/13/39 Completed drilling: 1/16/39  
Sample description by: R. S. Good, Virginia Division of Mineral Resources,  
2/23/67.  
References: U. S. Engineer Office, Huntington, W. Va., Report of Core  
Boring, 1/17/39 and map of proposed Skeetrock dam site, preliminary  
site survey.

#### GEOLOGIC SUMMARY

Depth (feet)	Thickness (feet)	Formation (and remarks)
0.0-5.3	5.3	Overburden.
5.3-6.9	1.6	No core.
6.9-99.0	92.1	Norton Formation: composed of siltstones and sandstones that contain siderite-bearing laminae and carbonaceous layers. About 12 feet of siliceous limestone and a minor amount of calcareous siltstone occur between 71.6 <sup>1</sup> and 84.0 <sup>1</sup>

County: Dickenson  
VDMR Well No. 1820

## GEOLOGIC LOG

Depth (feet)	Thickness (feet)	Description
0.0-5.3	5.3	Overburden
5.3-6.9	1.6	Lost core
6.9-15.0	8.1	Sandstone: light gray, medium-grained (0.25 to 0.5 mm), massive; subangular quartz, 70 to 85 percent; feldspar, 5 to 15 percent; silica cement, 10 percent; illite, siderite, and carbonaceous material, up to 2 percent; siltstone fragments at 11.4'
15.0-15.4	0.4	No core
15.4-28.0	12.6	Sandstone: similar to interval 6.5' to 15.0'; medium-grained (0.1 to 0.25 mm); black, vitreous coal stringers, chips, and grains, 2 percent
28.0-30.0	2.0	Sandstone: similar to interval 15.4' to 28.0'; coal material, 2 to 5 percent
30.0-33.0	3.0	Sandstone and siltstone: gray sandstone laminae 2 to 5 mm thick (a few 10 mm thick) alternately layered with black siltstone laminae 1-2 mm thick
33.0-34.9	1.9	Sandstone: light gray, 2 to 5 percent scattered carbonaceous material; thin black carbonaceous siltstone at 34.9'
34.9-71.6	36.7	Siltstone: dark gray; dark brown siderite-bearing laminae 5-10 mm thick
71.6-75.4	3.8	Calcareous siltstone: gray, massive
75.4-84.0	8.6	Siliceous limestone: dark gray, alternate laminae of limestone and siltstone (less than 0.5 mm thick); brown siderite-bearing layers; below 77.4' the major constituent is calcite with lesser amounts of quartz and minor amounts of muscovite, plagioclase, and chlorite.

County: Dickenson  
VDMR Well No. 1820

Depth (feet)	Thickness (feet)	Description
84.0-93.5	9.5	Siltstone: dark gray with 5-10 mm thick siderite-bearing laminae
93.5-94.6	1.1	Sandstone: light gray, massive, quartzitic subgraywacke
94.6-99.0	4.4	Siltstone: dark gray, indistinctly varved, with 5-10 mm thick siderite-bearing laminae; thin limestone laminae occur between 98.2'-98.3'

County: Dickenson  
VDMR Well No. 1820

Depth (feet)	Thickness (feet)	Description
84.0-93.5	9.5	Siltstone: dark-gray with 5-10-mm thick siderite-bearing laminae
93.5-94.6	1.1	Sandstone: light-gray, massive, quartzitic subgraywacke
94.6-99.0	4.4	Siltstone: dark gray, indistinctly varved, with 5-10 mm-thick siderite-bearing laminae; thin limestone laminae occur between 98.2'-98.3'

County: Dickenson  
VDMR Well No. 1820

## GEOLOGIC LOG

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71.6-75.4	3.8	Calcareous siltstone: gray, massive
75.4-84.0	8.6	Siliceous limestone: dark gray, alternate laminae of limestone and siltstone (less than 0.5 mm thick); brown siderite-bearing layers; below 77.4' the major
<del>84.0-93.5</del>	<del>9.5</del>	<del>Siltstone: dark gray with 5-10 mm thick siderite-bearing laminae</del>

County: Dickenson  
VDMR Well No. 1820

Depth (feet)	Thickness (feet)	Description
75.4-84.0 (Cont.)	8.6	constituent is calcite with lesser amounts of quartz and minor amounts of muscovite, plagioclase, and chlorite.
84.0-93.5	9.5	Siltstone: dark gray with 5-10 mm thick siderite-bearing laminae.
93.5-94.6	1.1	Sandstone: light gray, massive, quartzitic subgraywacke.
94.6-99.0	4.4	Siltstone: dark gray, indistinctly varved, with 5-10 mm thick siderite-bearing laminae; thin limestone laminae occur between 98.2'-98.3'.



UNITED STATES ENGINEER OFFICE  
 HUNTINGTON, W. VA.  
 OPERATION DIVISION  
 SURVEYS SECTION

Date 1 - 17 - 39

REPORT OF CORE BORING

Sheet 1 of 4

Project Skeet Rock Dam Site, Pound River, Virginia. UDMR Well No. 1820

Hole No. 5 Dia. 2 1/8" Location Center line Sta. 7+18.77

Date started 1 - 13 - 39 Completed 1 - 16 - 39

Driller Adams and Henry Inspector Hobart G. Warren

Type of drilling equipment used U. S. Government Core Drill.

From Elev.	<u>1450.00</u>	To Elev.	<u>1430.00</u>	on this page.	
Elev. of top of Hole	<u>1450.00</u>	Plan depth of Hole	<u>-----</u>		
Elev. of top of rock	<u>1444.70</u>	Total overburden drilled	<u>5.30</u>		
Elev. bottom of hole	<u>1351.01</u>	Total rock drilled	<u>93.69</u>		
Elev. of ground water	<u>None</u>	Total rock recovered	<u>91.59</u>		
Elev. of water lost	<u>1444.00</u>	Total depth of Hole	<u>98.99</u>		
Elev. water regained	<u>None</u>	Deviation from plan depth	<u>---</u>		
Number of Core Boxes	<u>5</u>				

DETAIL OF LOG

Depth	Elev.	Scale	Legend	Material Classification	Drilling Time Min./Ft.	Box No.	Remarks
0.00	1450.00			Top of Hole.			
3.00	1447.00			Silt, clay and gravel.	1:00		Sample #1
5.30	1444.70			Top of Rock.			
	1444.00		Loss 1.57				Water Loss
	1443.13						Loss 1.57
				Coarse, grey sandstone.	2:05	1	
	1435.00						
	1434.57		Loss 0.43				Loss 0.43
15.82	1434.14						Change
				Fine grained, light grey sandstone.	1:25	1	
	1430.00						Bottom of sht.

Submitted \_\_\_\_\_  
 Engineer

Approved \_\_\_\_\_  
 Major, Corps of Engineers,  
 Chief, Operation Division.



UNITED STATES ENGINEER OFFICE  
HUNTINGTON, W. VA.  
OPERATION DIVISION  
SURVEYS SECTION

Date 1 - 17 - 39

REPORT OF CORE BORING

Sheet 2 of 4

Hole No. 5 From El. 1430.00 To El. 1402.00 on this page.

DETAIL OF LOG

Depth	Elev.	Scale	Legend	Material Classification	Drilling Time Min./Ft.	Box No.	Remarks
	1430.00						
				Fine grained, light grey sandstone.	1:25	1	
	1424.20						Bottom box #1
						2	
27.96	1422.04						Change
				Medium hard, grey sandstone, few coal partings.	1:20	2	
34.94	1415.06						Change
						2	
				Hard, dark grey, sandy shale.	2:55		
	1405.19						Bottom box #2
						3	
	1402.00						Bottom of sht.

Submitted \_\_\_\_\_

Engineer

Approved \_\_\_\_\_

Major, Corps of Engineers,  
Chief, Operation Division.



UNITED STATES ENGINEER OFFICE  
 HUNTINGTON, W. VA.  
 OPERATION DIVISION  
 SURVEYS SECTION

Date 1 - 17 - 39

REPORT OF CORE BORING

Sheet 3 of 4

Hole No. 5 From El. 1402.00 To El. 1374.00 on this page.

DETAIL OF LOG

Depth	Elev.	Scale	Legend	Material Classification	Drilling Time Min./Ft.	Box No.	Remarks
	1402.00						
				Hard, dark grey, sandy shale.	2:55	3	
54.13	1395.87						Change
						3	
	1386.05			Medium hard, dark grey shale.	3:40		Bottom box #3
						4	
71.61	1378.39						Change
				Hard, dark grey, sandy shale.	3:30	4	
	1374.00						Bottom of sht.

Submitted

Approved

Engineer

Major, Corps of Engineers,  
 Chief, Operation Division.



UNITED STATES ENGINEER OFFICE  
HUNTINGTON, W. VA.  
OPERATION DIVISION  
SURVEYS SECTION

Date 1 - 17 - 39

REPORT OF CORE BORING

Sheet 4 of 4

Hole No. 5 From El. 1374.00 To El. 1351.01 on this page.

DETAIL OF LOG

Depth	Elev.	Scale	Legend	Material Classification	Drilling Time Min./Ft.	Box No.	Remarks
	1374.00						
						4	
	1366.84						Bottom box #4
				Hard, dark grey shale.		5	
93.50	1356.50						Change
94.60	1355.40			Hard, grey sandstone, heavily laminated with shale.	0:10	5	Change
				Hard, dark grey, sandy shale.	0:25	5	
98.18	1351.82						Change
98.99	1351.01			Medium hard, grey shale.	0:15	5	Bottom of Hole

Submitted

Approved

Engineer

Major, Corps of Engineers,  
Chief, Operation Division.



## Description

5.3

Overburden.

1.6

Lost core.

8.1

Sandstone: light gray, medium-grained (0.25 to 0.5 mm), massive; subangular quartz, 70 to 85 percent; feldspar, 5 to 15 percent; silica cement, 10 percent; illite, siderite, and carbonaceous material, up to 2 percent; siltstone fragments at 11.4.'

0.4

No core.

12.6

Sandstone: similar to interval 6.5' to 15.0'; medium-grained (0.1 to 0.25 mm); black, vitreous coal stringers, chips, and grains, 2 percent.

2.0

Sandstone: similar to interval 15.4' to 28.0'; coal material, 2 to 5 percent.

3.0

Sandstone and siltstone: gray sandstone laminae 2 to 5 mm thick (a few 10 mm thick) alternately layered with black siltstone laminae 1-2 mm thick.

1.9

Sandstone: light gray, 2 to 5 percent scattered carbonaceous material; thin black carbonaceous siltstone at 34.9.'



36.7 Siltstone: dark gray; dark brown siderite-bearing laminae 5-10 mm thick.

3.8 Calcareous siltstone: gray, massive.

8.6 Siliceous limestone: dark gray, alternate laminae of limestone and siltstone (less than 0.5 mm thick); brown siderite-bearing layers; below 77.4' the major



Number pages 2, 3, etc

place on each page

County: DICKENSON

UDMR Well No. 1820

Well: Skeet Rock Dam Site, hole 5

Farm:

Driller: Adams and Henry (U.S. Corps of Engr., contractor)

Location: Haysi quadrangle - <sup>approximate</sup> UTM 379350 m. E and

4119870 m. N; about 2.5 miles southeast of Skeetrock and ~~at~~ 4.5 miles northwest of Haysi; also just east of the mouth of Lower Twin Branch along the Pennel River.

Elevation: 1450.00 feet

Total depth: 98.99 feet

Started drilling: 1/13/39

Completed drilling: 1/16/39

Sample description by: R.S. Good, Virginia Division of Mineral Resources, 2/23/67. <sup>Huntington, W.Va.</sup>

References: U.S. Engineer Office, Report of Core Boring, 1/17/39 and map of proposed Skeetrock dam site, preliminary site survey.

### GEOLOGIC SUMMARY

Depth (feet)	Thickness (feet)	Formation (and remarks)
0.0- 5.3	5.3	Overburden
5.3- 6.9	1.6	No core
6.9- 99.0	92.1	Norton Formation: composed of siltstones and sandstones that contain siderite-bearing laminae and carbonaceous layers. About 12 feet of siliceous limestone and a minor amount of calcareous siltstone occur between 71.6' and 84.0'



Well No. : ~~Sheet Rock Dam, Hole No. 5~~ County: ~~Dickenson~~  
 Farm: ~~John F. Flanagan Dam~~ VDMR Well No. 1820  
 Driller: Adams and Henry (U.S. Corps. of Engineers - contractor)  
 Inclination: vertical  
 Elevation: 1450.0  
 Total Depth: 99.0  
 Date Started: 1/13/39  
 Date Completed: 1/16/39  
 Sample Description by: R. S. Good February 23, 1967

All caps → GEOLOGIC LOG ← line all times

Depth (ft.)	Thickness (ft.)	Description
0-5.3	5.3	Overburden
5.3-6.9	1.6	Lost core
6.9-15.0	8.1	Sandstone: light gray massive, <sup>even</sup> <sup>grained</sup> medium <sup>grained</sup> ( $\frac{1}{4}$ - $\frac{1}{2}$ mm) quartzitic subgray wacke, <sup>containing</sup> 70-85% subangular quartz, 5-15% feldspar, 10% silica cement with < 2% scattered mica (illite), siderite, carbonaceous material. Siltstone fragments at 11.4'
15.0-15.4	0.4	<del>lost</del> No core
15.4-28.0	12.6	Sandstone: similar to 6.9'-15.0', light gray but finer grained ( $\frac{1}{8}$ - $\frac{1}{4}$ mm) and characterized by <sup>sporadically</sup> <del>scant</del> (2%), <del>chaotically</del> distributed, black, vitreous, coal stringers, chips, and grains.



28.0-30.0	2.0	Sandstone as in 15.4'-28.0', but with 2-5% coal material
30.0-33.0	3.0	Sandstone and siltstone: varved black (siltstone) and gray (sandstone). The sandy laminae are <sup>thick with a few that are</sup> 2-5 mm <del>thick</del> 10 mm thick; the silty laminae are 1-2 mm thick.
33.0-34.9	1.9	Sandstone: light gray, quartzitic subgraywacke with 2-5% <sup>scattered</sup> carbonaceous material. Black carbonaceous siltstone at 34.9'.
34.9-71.6	36.9	Siltstone: dark gray with dark brown <sup>bearing</sup> siderite <del>bands</del> <sup>laminar</sup> 5-10 mm thick.
71.6-75.4	3.8	Calcareous siltstone: gray, massive
75.4-84.0	8.6	Siliceous limestone: dark gray, massive <sup>in appearance</sup> , but <sup>microscopically</sup> thinly varved <sup>(2 1/2 mm)</sup> siltstone and limestone with brown siderite-bearing layers; <sup>from a depth at 77.4'</sup> <del>ray shows</del> the major constituent <sup>is</sup> calcite with lesser amounts of quartz and <sup>minor</sup> <del>5-10%</del> amounts of muscovite, plagioclase, and chlorite.
84.0-93.5	9.5	Siltstone: dark gray with 5-10 mm thick siderite <del>bands</del> -bearing laminae.
93.5-94.6	1.1	Sandstone: light gray, massive, quartzitic subgraywacke.



94.6-99.0 4.4 Siltstone: dark gray, ~~fairly~~ faintly  
<sup>indistinctly</sup> Varved, with <sup>5-10 mm thick</sup> siderite <sup>bearing</sup> <sup>laminar</sup> thin  
 limestone laminae <sup>occur between</sup> ~~from~~ 98.2' - 98.3'

### GEOLOGIC SUMMARY

Depth (ft.)	Thickness (ft.)	Description	Age
0-5.3	5.3	Overburden	
5.3-6.9	1.3	Lost core	
6.9-15.0	28.1	Norton formation: quartzitic <sup>subgraywacke</sup> <del>light gray</del>	Pennsylvanian
15.0-15.4	0.4	Lost core <sup>carbonaceous (1-5%) near</sup>	
15.4-30.0	14.6	Norton formation: quartzitic subgraywacke with 1-5% carbonaceous detritus	
30.0-33.0	3.0	Norton formation: varved subgraywacke and siltstone	"
33.0-34.9	1.9	Norton formation: quartzitic subgraywacke with carbonaceous detritus.	"
34.9-71.6	36.7	Norton formation: <sup>dark gray</sup> siltstone	"
71.6-75.4	3.8	Norton formation: calcareous siltstone	"
75.4-84.0	8.6	Norton formation: siliceous limestone	"
84.0-93.5	9.5	Norton formation: siltstone with siderite bands	"