KEY TO SOIL SYMBOLS AND TERMS

Terms used in this report for describing soils according to their texture or grain size distribution are in accordance with the Unified Soil Classification System, as described in Technical Memorandum No. 3-357, Waterways Experiment Station, March 1953.

Gravel

Gravelly

Sand

Sandy

Silt

Silty

Clay

Clayey

Organic matter

Organic

Rock

Shale

Topsoil

Misc. Fill

Sample Recovered

Sample Not Recovered

TERMS DESCRIBING CONSISTENCY OR CONDITION

COARSE GRAINED SOILS (major portion retained on No. 200 sieve). Includes (1) clean gravels and (2) silty or clayey gravels and sands. Condition is rated according to relative density, as determined by laboratory tests.

Descriptive Term	Relative Density
Very loose	0 to 15%
Loose	15 to 40%
Medium dense	40 to 70
Dense	70 to 85%
Very dense	85 to 100%

FINE GRAINED SOILS (major portion passing No. 200 sieve). Includes (1) inorganic and organic silts and clays, (2) gravelly, sandy, or silty clays, and (3) clayey silts. Consistency is rated according to shearing strength, as indicated by penetrometer readings or by unconfined compression tests.

Descriptive Term	Unconfined Compression Strength, tons/sq.ft.
Very soft	less than 0.25
Soft	0.25 to 0.50
Firm	0.50 to 1.00
Stiff	1.00 to 2.00
Very stiff	2.00 to 4.00
Hard	4.00 and higher

SAMPLING RESISTANCE

15 – The number of blows (15) of a 140-pound hammer falling 30 inches used to drive a 2" O.D. split-barrel sampler for the last 12 inches of penetration.

50/2 – Number of blows (50) used to drive the split-barrel a certain number of inches (2).

P – Thin-wall tube sample.

P250 – Thin-wall tube pushed hydraulically, using a certain pressure (250 psi) to push the last 6 inches.

P_S/C – Denison or Pitcher-Type core-barrel sample.

BS/P_S – Piston sample.

A – Auger sample.

BX – Rock cored with BX core barrel, which obtains a 1.5/8" diameter core.

NX – Rock cored with NX core barrel, which obtains a 2.1/8" diameter core.

65% – Percentage (65) of rock core recovered.

LABORATORY TEST IDENTIFICATION

C – Consolidation and specific gravity tests performed.

D – Maximum & minimum density.

DS – Direct Shear test performed.

G – Specific gravity test performed.

K – Permeability test performed.

M – Mechanical (sieve or hydrometer) analysis performed.

T – Triaxial compression test performed.

U – Unconfined compression test performed.

W – Unit weight & natural moisture content determined.

X – Special tests performed - see Laboratory test results.

LOG of BORING No. ND-1

DATE 12-22-71 SURFACE ELEV. 337.1 LOCATION N 473,684 E 1,905,540

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	RQD	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		P		Very stiff dark brown micaceous fine sandy silty clay with rock fragments; CL (Residual Soil becoming Decomposed Rock)					
5		20			327.1				
10		P		Very dense brown micaceous medium to fine silty sand; SM (Decomposed Rock)		11.3			
		153/10"			317.1				
20		100%/NX	70%	White to black granite gneiss highly contorted banding badly broken zone from 28.2 to 33.0 ft.					
25		98%/NX	60%						
30		46%/NX	13%						
35					298.6				
40									

COMPLETION DEPTH 38.5' Water Depth 1.75 ft. / 5.75 ft. Date 1-20-72 / 3-3-72

SAMPLER 2 O.D. SPLIT BARREL SAMPLER

LOG of BORING No. ND-2

DATE 12-10-71 SURFACE ELEV. 410.3 LOCATION N 473,075 E 1,904,935

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		160	Very dense bluish gray to tan fine sandy silt with rock fragments, slight plasticity; ML (Decomposed Rock)		20.6			
5		144		403.8	18.9			
10								

COMPLETION DEPTH 6.5' Water Depth None Date 12-10-71

SAMPLER 2 O.D. SPLIT BARREL SAMPLER

LOG of BORING No. ND-3

DATE 12-10-71 SURFACE ELEV. 391.7 LOCATION N 473,287 E 1,905,297

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0								
		17	Dense bluish gray fine sandy silt becoming very dense decomposed rock; ML		22.9			
5		48	(Residual Soil)		5.6			
		91/7"			16.3			
10				378.2				
			Note: Drilled from 8'7" to 13'6" with rock bit to check soundness of rock					

COMPLETION DEPTH 13.5' Water Depth None Dry Date 12-11-71 3-1-72

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. ND-4

DATE 1-12-72 SURFACE ELEV. 335.1 LOCATION N 473,480 E 1,905,630

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	RQD	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0									
		P		Very stiff micaceous silty clay; CL					
5		20		(Residual Soil)					
10		P			325.1				
		80		Very dense dark brown and tan silty fine to medium sand; SM		18.6			C
						15.0			W
15				(Saprolite becoming Decomposed Rock)					T
		PS							
20		80/8"				10.1			C W
25		PS			309.1				
		100/1"		Sound blue-gray migmatite (varying from granite gneiss to diorite) slightly fractured except for highly fractured and broken zones from 31 to 32 ft. and from 39.4 to 39.6 ft.					
30		100%/NX	92%						
35		100%/NX	100						
40		100%/NX	92%		293.1				
45									

COMPLETION DEPTH 42.0' Water Depth 1.0' 2.9' Date 1-20-72 3-3-72

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. ND-5

DATE 12-8-71 SURFACE ELEV. 386.8 LOCATION N 473,600 E 1,906,090

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			Fill for drilling pad	384.8				
		22	Very stiff light brown fine sandy clayey silt, medium plasticity; ML (Saprolite)	381.8	17.8			
5		120/8"			10.0			
		100/3"	Very dense light brown silty clayey fine sand; SC/SM (Decomposed Rock)					
10				371.8				

Note: Drilled from 8'3" to 15'0" with rock bit to check soundness of rock

* Water observed seeping from hillside and saturating drilling pad

COMPLETION DEPTH 15.0' Water Depth 0 * Date 12-15-71

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. ND-6

DATE 12-7-71 SURFACE ELEV. 418.3 LOCATION N 473, 650 E 1,906,500

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		200/7"	Very dense light brown micaceous silty clayey fine sand; SC/SM (Decomposed Rock)	413.3	13.6			
5		100/0"	Very dense brown silty fine to coarse sand; SM (Decomposed Rock)	408.9	13.9			
		144/7"	Very dense tan silty fine sand; SM (Decomposed Rock)	405.9	4.5			
10		268/7"						
15								

Note: Fishtail bit refusal at 5'; used roller bit to advance hole below 5 ft.

* Water observed seeping from hillside and saturating drilling pad

COMPLETION DEPTH 12.4' Water Depth 0 * 3 ft. Date 12-15-71 1-20-72

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. ND-7

DATE 12-16-71 SURFACE ELEV. 423.9 LOCATION N 472,900 E 1,905,035

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	RQD	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		70 / 3"		Very dense red-brown and light gray silty fine sandy clay; CL (Decomposed Rock)	408.9	21.5			
		0%							
20		71 / 6"							
		0%		Decomposed friable grandodiorite with biotite mica					
40		0%							
		0%							
60		0%							
		0%							
80		0%							
		0%							
100		0%							
		5%		Quartz Inclusions encountered					
120		0%		Quartz inclusions encountered with some clay content					
		0%							
140		0%							
		8%							
160		72%		Yellow-green to gray green weathered seamy altered chlorite biotite schist	268.9				
		30%			259.7				
				Light gray to gray granite gneiss	254.6	0.41			W
		100%		Light gray to black chlorite biotite schist and granite gneiss/schist	247.9	0.53			*
180									

COMPLETION DEPTH 176.0' Water Depth _____ Date _____

SAMPLER 2" O.D SPLIT BARREL SAMPLER

* Sonic Velocity Tests on Rock Cores

LOG of BORING No. RND-8

DATE 2-29-72 SURFACE ELEV. 420.7 LOCATION N 473,038 E 1,905,164

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		34	Hard brown silty clay; CL (Residual Soil)	415.7				
5		44 / 6"	Very dense brown micaceous silty sand, slight plasticity; SM (Decomposed Rock)	408.7				
10		60 / 6"						
15		18% / NX	Highly fractured and weathered rock					
20		3% / NX						
25		4% / NX		393.7				
30								

COMPLETION DEPTH 27.0' Water Depth _____ Date _____

SAMPLER 2" O.D SPLIT BARREL SAMPLER

LOG of BORING No. RND-9

DATE 3-1-72 SURFACE ELEV. 407.0 LOCATION N 473,100 E 1,905,360

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			Very dense decomposed rock with occasional thin layers of hard rock at various elevations below 20 ft. depth; boring advanced with roller rock bit from 20 to 65 ft.					
10		80/2"						
20		30/0"						
30								
40								
50								
60				342.00				
70			*Field permeability tests run in this boring					

COMPLETION DEPTH 65.0' Water Depth * None Date 3-1-72 3-3-72

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. ND-11

DATE 1-12-72 SURFACE ELEV. 337.8 LOCATION N 473,310 E 1,905,740

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	RQD	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0				Fill for drilling pad	335.3				
				Very loose brown micaceous silty medium to fine sand; SM (Alluvium)	324.3				
20				Dense to very dense gray brown micaceous silty coarse to fine sand; SM (Saprolite)	303.8				
40		100%/NX	100%	Bluish gray unweathered sound granodiorite with veins of lighter minerals					
		100%/NX	100%						
		100%/NX	100%						
60		100%/NX	100%						
		100%/NX	100%						
80		100%/NX	100%						
		100%/NX	100%						
100		100%/NX	100%						
		100%/NX	100%						
120		100%/NX	100%						
		100%/NX	100%						
140		100%/NX	100%		191.3				
160									

COMPLETION DEPTH 146.6' Water Depth 0 ft. Date 1-24-72

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. ND-13A

DATE 2/23/72 SURFACE ELEV. 410.5 LOCATION N 473,328 E 1,906,119

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	RQD	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
10, 20, 30				Very dense decomposed rock					
					376.5				
40		NX 83%	22%	Highly fractured and weathered dark gray gneiss					
		NX 33%	0%						
		NX 40%	0%						
		NX 8.6%	0%	Granitic composition from 38.0' to 40.0'					
50		NX 4.6%	0%						
		NX 0%	0%						
60		NX 10%	0%	(contact uncertain)	346.5				
		NX 0%	0%	Highly fractured dark greenish-gray diorite with veins of lighter minerals					
70		NX 0%	0%	(contact uncertain)	337.5				
		NX 37%	0%	Highly fractured light gray gneiss	333.2				
80				NOTE: Loss of drill water from 34.0' to 61.0'					

COMPLETION DEPTH 77.3' Water Depth _____ Date _____

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. ND-13

DATE 2-16-72 SURFACE ELEV. 410.5 LOCATION N 473,400 E 1,906,100

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0, 5								
10		60/6"	Very dense decomposed rock					
15								
20		50/2"						
25								
30		50/1"		379.5				
			Fractured and partially friable rock	376.5				
35			*Field Permeability tests run in this boring					

COMPLETION DEPTH 34.0' Water Depth * Dry Date 3-6-72

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. ND-14

DATE 1-6-72 SURFACE ELEV. 426.4 LOCATION M 473, 420 E 1,906,310

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		P	Very dense light tan silty medium to fine sand with rock fragments; SM		9.0			
5		60/4"	increasing clay content with depth					
		PS 50/5"	(Decomposed Rock)		7.9			CWT
10								
		PS 60/3"			6.1			CWT
15		PS						
20				403.9				
25			Note: Drilled from 17'6" to 22'6" with rock bit to check soundness of rock					
30								
35								
40								

COMPLETION DEPTH 22.5' Water Depth 7.5 ft. Dry Date 1-20-72 3-6-72

SAMPLER 2" O.D SPLIT BARREL SAMPLER

LOG of BORING No. ND-15

DATE 12-6-71 SURFACE ELEV. 435.6 LOCATION N 473,444 E 1,906,501

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		23	Very stiff red-brown clay, high plasticity; CH		29.2	61	29	
5		38	(Residual Soil)	428.6	17.9			
		102	Very hard light brown fine sandy silty clay, medium plasticity; CL (Saprolite)	425.1	17.7			
10		35	Dense to very dense light brown fine sandy clayey silt, medium plasticity; ML		12.9	31	28	
15		37	(Saprolite)		19.9			
		70			7.6			
20		112		415.6	8.3			
25		183/7"	Very dense Decomposed Rock; ML	411.1	14.1	23	NP	

COMPLETION DEPTH 24.5' Water Depth Dry to 24 ft. Dry & Closed @ 10.5 ft. Date 12-15-71 1-20-72

SAMPLER 2" O.D SPLIT BARREL SAMPLER

None 3-7-72

LOG of BORING No. ND-16

DATE 12-10-71 SURFACE ELEV. 376.2 LOCATION N 472,940 E 1,905,475

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		50	Hard tan red-brown medium to fine sandy silty clay, medium plasticity; CL/CH (Residual Soil)	371.2	24.6 30.7			
5		130/11"	Very dense tan micaceous silty fine sand, low plasticity; SM (Decomposed Rock)	365.3	13.6			
10		140/11"			12.4			
15								

COMPLETION DEPTH 10.4' Water Depth Dry Date 12-10-71 3-8-72

SAMPLER 2" O.D SPLIT BARREL SAMPLER

LOG of BORING No. ND-17

DATE 1-19-72 SURFACE ELEV 343.2 LOCATION N 473,155 E 1,905,820

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			Fill for drilling pad	337.2				
10		P 29 P 90/10"	Very dense light blue gray and dark brown-gray medium to fine silty sand; SM (Saprolite)	313.2				
20		58 80						
30		125/10" 100/6"						
40		100/6" 100/3"	Very dense Decomposed Rock	287.2				
50		50%/NX						
60		38%/NX 87%/NX	Fresh to badly weathered broken and seamed, gray migmatite (granodiorite)	267.2				
70		68%/NX						
80			NOTE: Drilled from 47'3" to 56'0" with rock bit					
90								

COMPLETION DEPTH 76.0' Water Depth 4.0 ft. Date 1-19-71 3-8-72

SAMPLER: 2" O.D SPLIT BARREL SAMPLER

LOG of BORING No. ND-18

DATE 12-8-71 SURFACE ELEV. 401.2 LOCATION N 473,200 E 1,906,120

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		100/3"	Very hard light brown fine sandy clayey silt; ML		22.9			
5		149	becoming		11.1			
		100/5"	less sandy with depth;		15.5			
10			(Decomposed Rock)					
				388.2				
15			Note: Drilled from 8'3" to 13'0" with rock bit to check soundness of rock * Water observed seeping from hillside above drilling pad					

COMPLETION DEPTH 13.0' Water Depth 1.0 ft. * Date 12-15-71
SAMPLER 2" O.D SPLIT BARREL SAMPLER 5.5 ft. 3-7-72

LOG of BORING No. ND-19

DATE 12-8-71 SURFACE ELEV. 421.4 LOCATION N 473,230 E 1,906,510

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		170/7"	Light brown very hard fine sandy clayey silt, low plasticity; ML		11.5			
5		100/5"	(Decomposed Rock)		9.8			
		100/3"		413.4	10.8			
10			Very dense brown coarse to fine silty sand; SM (Decomposed Rock)					
				406.4				
15			Note: Drilled from 8'3" to 15'0" with rock bit to check soundness of rock					

COMPLETION DEPTH 15.0' Water Depth 6.25 ft. Date 12-15-71
SAMPLER 2" O.D SPLIT BARREL SAMPLER

LOG of BORING No. ND-20

DATE 1-17-72 SURFACE ELEV. 342.4 LOCATION N 472,966 E 1,905,912

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			Fill for drilling pad	339.4				
		2		337.4				
		16	Organic Clay	335.4				
10		21	Very loose gray silty sand; SM (Alluvium)	329.9				
		50 4"	Very stiff brown to bluish gray micaceous sandy silty clay; CL (Residual Soil)					
		132 10"						
20		85	Very dense brown micaceous silty sand; SM (Saprolite)	313.4				
30			Gray fresh to weathered granite gneiss with iron stains, highly fractured	305.4				
40			Migmatite (varying from granite gneiss amphibolite), highly fractured	279.4				
50			Sound granite gneiss	285.9				
60			Fractured migmatite (varying from amphibolite to granite gneiss), highly weathered in zones	274.6				

COMPLETION DEPTH 67.8' Water Depth 1.25 ft. Date 1-20-72
SAMPLER: 2" O.D SPLIT BARREL SAMPLER 0.5 ft. 3-9-72

LOG of BORING No. ND-21

DATE 2/18/72 SURFACE ELEV. 359.3 LOCATION N 472,850 E 1,906,560

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
		40	Very stiff red-brown silty clay; CL (Residual Soil)					
5		34						
				351.3				
10		37	Very dense brown micaceous Saprolite					
				345.3				
15		145	Very dense decomposed rock					
20								
25								
30								
35				323.3				
40			Intact rock - sound gray granite gneiss					
145				212.8				

COMPLETION DEPTH 146.5' Water Depth Date
SAMPLER: 2" O.D SPLIT BARREL SAMPLER

LOG of BORING No. ND-22

DATE 3/1/72 SURFACE ELEV. 416.4 LOCATION N 473,205 E 1,906,255

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
5			Stiff red-brown clay; CL (Residual Soil)					
10			becoming					
15			very dense sandy Saprolite	397.9				
20			Very dense decomposed rock					
25				387.6				
30			NOTE: Permeability tests run in this boring					

COMPLETION DEPTH 28.75' Water Depth 6.6' Date 3/14/72

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. ND-23

DATE 3/3/72 SURFACE ELEV. 398.4 LOCATION N 473,065 E 1,906,300

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
			NOTE: Boring advanced to 54.0' with fishtail bit. Permeability tests run in this boring;					

COMPLETION DEPTH 54.0' Water Depth Date

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. ND-24

DATE 3/6/72 SURFACE ELEV. 370.2 LOCATION N 472,920 E 1,906,350

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
			NOTE: Boring advanced to 29.0' with fishtail bit, and from 29.0' to 31.5' with roller rock bit. Intact rock encountered at 29.5'. Permeability tests run in this boring					

COMPLETION DEPTH 30.5' Water Depth 12.7' Date 3/14/72

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. ND-25

DATE 3/3/72 SURFACE ELEV. 353.1 LOCATION N 472,775 E 1,906,385

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
			NOTE: Boring advanced to 19.0' with fishtail bit, and with roller rock bit from 19.0' to 30.0'. Intact rock encountered at 30.0'. Permeability tests run in this boring					

COMPLETION DEPTH 30.0' Water Depth 6.0' Date 3/14/72

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. ND-26

DATE 2/23/72 SURFACE ELEV. 342.0 LOCATION N 473,079 E 1,905,699

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
			Fill for drilling pad	340.0				
5		4 2	Soft tan and gray micaceous clay, with roots; CL (Alluvium)	335.0				
10		2	Loose tan and gray silty fine sand; SM (Alluvium)	332.0				
		29	Very stiff tan and bluish gray clay; CL (Saprolite)	329.0				
15		19 20	Dense tan and gray silty medium to fine sand; SM (Saprolite)	322.0				
20		134	Very dense decomposed rock					
25								
50				288.0				
55			NOTE: Drilled from 20.5' to 54.0' with rock bit. *Piezometer installed at 54.0'					

COMPLETION DEPTH 54.0' Water Depth 14.1' * Date 3/3/72

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. ND-27

DATE April 17, 1974 SURFACE ELEV. 392.8 LOCATION Centerline Station 6 + 19

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE OR PERCENT RECOVERY	DESCRIPTION	ELEVATION
0				
10		89% NX 90% NX	(All surficial soils stripped for grout curtain construction), Casing set to 5 feet.	
20		3% NX		
30		4% NX	Highly weathered and fractured granodiorite with micaceous seams and layers. All intact joints and fractures filled with light brown to tan highly plastic silty clays.	
40		28% NX 28% NX 67% NX		
50		50% NX 8% NX		
60		24% NX 90% NX	Intact fresh rock at 59± feet.	328.9
70				
80				
90				

COMPLETION DEPTH 63.9' Water Depth --- Date April 17, 1974

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. ND-28

DATE April 16, 1974 SURFACE ELEV. 338.5 LOCATION Centerline Station 9 + 84

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE OR PERCENT RECOVERY	DESCRIPTION	ELEVATION
0				
10		23	Fill - red brown silty clay; CL	
				321.5
20		87	Very dense gray brown micaceous silty coarse to fine sand; SM (Saprolite)	
		58/11"		
30		10% NX		309.5
		20% NX		
40		18% NX	Fresh to highly weathered bluish gray broken and seamed granodiorite with veins of lighter minerals.	
		60% NX		
50		100% NX		
		100% NX		
60		100% NX		
		82% NX		
70		100% NX	Soft zone at 71.0 to 71.5 feet	
		100% NX		
80				259.4
			Note: Casing set at 29.3 feet	
90				

COMPLETION DEPTH 79.1' Water Depth --- Date April 17, 1974

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. ND-29

DATE Oct. 8, 1974 SURFACE ELEV. 415.6 ± LOCATION Centerline Station 14 + 41

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE OR PERCENT RECOVERY	DESCRIPTION	ELEVATION
0				
		0% NX	(All surficial residual soils stripped for grout curtain construction), Casing set to 5 feet.	
10		7% NX		
		0% NX		
20		0% NX		
		100/4"	Very dense highly decomposed rock with occasional thin layers of hard rock at various elevations but too thin to recover in NX-double tube core barrel.	
		0% NX		
30		3% NX		
		0% NX	Wash water indicates material becomes less micaceous with depth.	
40		0% NX		
		67% NX		
50		58% NX		
		0% NX		
60		0% NX		
		2% NX		
70				346.6
80				
90				

COMPLETION DEPTH 69' Water Depth Dry Date Oct. 8, 1974

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. ND-30

DATE Oct. 9, 1974 SURFACE ELEV. 424.0± LOCATION Centerline Station 16 + 21

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE OR PERCENT RECOVERY	DESCRIPTION	ELEVATION
0				
		120	(All surficial residual soils stripped for grout curtain construction), Casing set to 5 feet.	
		0% NX		
10		100/3"		
		59% NX		
		5% NX		
20		100/5"		
		33% NX		
		15% NX		
30		13% NX	Very dense highly decomposed rock with occasional thin layers of hard rock at various elevations but too thin to recover in NX-double tube core barrel.	
		0% NX		
40		18% NX		
		33% NX		
50		0% NX		
		0% NX		
60		0% NX		
		0% NX		355.0
70				

COMPLETION DEPTH 69.0' Water Depth Dry Date Oct. 9, 1974

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. ND-1/4

DATE 1-25-72 SURFACE ELEV. 335.0 LOCATION N 473,570 E 1,905,578

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		11	Dense to very dense organic gray to red-brown silty sand; SM	332.6				
		80/10"						
5		100/4"	Very dense decomposed rock					
				325.0				
10			Note: Drilled from 4' to 10' with rock bit					

COMPLETION DEPTH 10.0' Water Depth 0.1 ft. Date 3-8-72

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. ND-4/11

DATE 1-25-72 SURFACE ELEV. 335 LOCATION N 473,397 E 1,905,692

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			Fill for drilling pad	333.0				
		3 2 1	Organic silt and muck; OL (Alluvium)	329.0				
5		3 5 2 4	Very loose red-brown wet sandy silt/ silty sand; ML/SM (Alluvium)	321.5				
10		127/9" 100/3" 129	Very dense dark gray to black micaceous silty fine to medium sand; SM (Decomposed Rock)	312.0				
15								
20								
25			Note: Drilled from 17' to 23' with rock bit					

COMPLETION DEPTH 23.0 Water Depth 2 ft. Date 3-7-72

SAMPLER: 2" O.D SPLIT BARREL SAMPLER

LOG of BORING No. ND-11/17

DATE 1-24-72 SURFACE ELEV. 338 LOCATION N 473,230 E 1,905,754

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			Fill for drilling pad	335.0				
5		1/6" 3 1/6" 6 1 1 4	Soft red-brown to brown-gray organic sandy micaceous silt and clay; OL becoming loose gray coarse silty sand; organic; SM (Alluvium)	323.0				
10								
15		28						
20			Highly weathered and friable rock	317.0				
			Note: Drilled from 15'6" to 21'0" with fishtail bit					

COMPLETION DEPTH 21.0' Water Depth 3.1 ft. Date 3-7-72

SAMPLER: 2" O.D SPLIT BARREL SAMPLER

LOG of BORING No. ND-17/20

DATE 1/24/72 SURFACE ELEV. 340 LOCATION N 473,057 E 1,905,860

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		2	Fill for drilling pad	338.0				
		1/9"						
		1/9"	Very soft gray to brown sandy clayey organic silt with gravel inclusions with depth; OL					
5		3						
		25						
		100/4"						
		25	(Alluvium)	331.0				
		100/4"	Very dense decomposed rock (Saprolite)					
10		50/5"		328.5				
15			Note: Refused with fishtail bit at 11.5 ft.					

COMPLETION DEPTH 11.5' Water Depth 0.9 ft. Date 3-8-72

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. SD-1

DATE 12-17-71 SURFACE ELEV. 365.8 LOCATION N 472,228 E 1,906,615

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		P/300	Firm reddish brown medium to fine sandy silty clay, trace coarse sand, medium plasticity; CL					
5		7	(Colluvium)	357.8	14.5			
10		P/800	Hard brown coarse to fine sandy silty clay with trace of gravel, medium plasticity; CL					
		45	(Colluvium)	347.8	26.8			
15								
20		P/550	Very stiff brown micaceous medium to fine sandy clayey silt, trace coarse gravel, slight plasticity; ML (Saprolite)	343.8				
		21						
25		NX/87%	Coarse to medium grained salt and pepper colored granodiorite with quartzofeldspathic inclusions					80* 73
30		NX/100%						56*
35		NX/100%		328.8				100
			* Sonic Velocity Tests run on rock cores in laboratory					

COMPLETION DEPTH 37.0' Water Depth +0.5 ft. Artesian Date 1-19-72

SAMPLER 2" O.D. SPLIT BARREL SAMPLER Artesian 3-2-72

LOG of BORING No. SD-1A

DATE 12-13-72 SURFACE ELEV. 367.0 LOCATION N 472,170 E 1,906,585

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
		16	Medium dense micaceous brown and gray medium to fine silty sand, trace gravel; SM (Colluvium)	363.5	13.2			
5		18	Very stiff blue-gray-red fine to medium sandy clayey silt; ML (Colluvium)	361.5	29.9			
10		54	Very dense red-brown coarse to fine sand and silt with trace rock fragments; SM/ML		11.7			
		140/11"	(Saprolite becoming Decomposed Rock)	353.0	11.5			
15								

COMPLETION DEPTH 14.0' Water Depth _____ Date _____

SAMPLER 2 O.D. SPLIT BARREL SAMPLER

LOG of BORING No. SD-1B

DATE 12-22-71 SURFACE ELEV. 365.9 LOCATION N 472,218 E 1,906,629

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			Firm red-brown micaceous fine sandy clay, medium plasticity; CL (Colluvium)	360.9				
5			Firm bluish gray medium to fine sandy clay with trace coarse gravel, medium plasticity; CL (Colluvium)	353.9				
10			Very dense saprolite	350.9				
15								

COMPLETION DEPTH 15.0' Water Depth 2 ft. / 2 ft. Date 1-19-72 / 3-3-72

SAMPLER 2 O.D. SPLIT BARREL SAMPLER

LOG of BORING No. SD-2

DATE 11-30-71 SURFACE ELEV. 421.9 LOCATION N 472,548 E 1,906,784

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			Fill	419.9				
		19	Stiff-very stiff red-brown slightly micaceous clayey silt with root inclusions, medium to low plasticity; ML					
5		15	(Residual Soil)	413.9				
		14						
10		20	Medium dense to dense red-brown to tan micaceous fine sandy silt, slightly plastic; ML					
		22	(Residual Soil becoming Saprolite)					
15		24	becoming					
20		38	less plastic with depth					
		30	to					
25		50	dense to very dense tan-bluish gray fine sandy silt with trace rock fragments; ML					
30		72	(Saprolite becoming Decomposed Rock)					
		110						
35		115/7"		385.8				
40								
45								

COMPLETION DEPTH 36.1' Water Depth None Date 11-30-71

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. SD-3

DATE 11/30/71 SURFACE ELEV. 436.9 LOCATION N 471,808 E 1,906,461

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			Fill	435.4				
		32	Hard red-brown fine sandy silty clay, medium plasticity; CL		36.2			
5		36	(Residual Soil)	430.4	25.6			
		23			20.5			
10		15	Very stiff to hard red-brown to dark brown micaceous clayey silt, trace fine sand, slight plasticity; ML		17.6			
15		24	(Saprolite)		23.0			
		25	becoming		17.3			
20		36	dark gray and very hard with depth		16.3			
		34			22.9			
25		79		410.9	13.9			
30		100	Hard to very hard blue-gray to tan micaceous fine to coarse sandy clayey silt, trace fine gravel, slight plasticity; ML		14.5			
		45	(Saprolite)		20.3			
35		65			20.4			
		97/8"		398.9				
40			Very dense dark gray micaceous clayey silty sand, rock fragments; SM (Decomposed Rock)	397.7	8.8			

COMPLETION DEPTH 39.2' Water Depth None Date 12-1-71

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. SD-4

DATE 12-13-71 SURFACE ELEV. 406.8 LOCATION N 471,923 E 1,906,461

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		P 100/6"	Very hard dark gray fine sandy clayey silt; ML (Decomposed Rock)	402.7	5.8			
5								

COMPLETION DEPTH 4.1' Water Depth None Date 12-15-71

SAMPLER 2 O.D SPLIT BARREL SAMPLER

LOG of BORING No. SD-5

Sheet 1 of 2

DATE 12-22-71 SURFACE ELEV. 370.5 LOCATION N 472,115 E 1,906,725

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		P250	Stiff red-brown fine sandy silty clay, medium plasticity; CL (Colluvium)		17.5			
5		15		364.5	18.7 22.3 19.9	23	15	W C
		P800	Hard bluish gray fine sandy silt, medium plasticity; ML (Colluvium)		18.2	39	27	W C T
10		81			18.7 21.6 25.4			
		P1000		358.0				
		85	Very dense brown coarse to fine silty sand trace fine gravel (Decomposed Rock)	356.0	10.7			
15		70/3"	Very dense bluish gray micaceous coarse to fine silty clayey sand, trace fine gravel; SM/SC (Decomposed Rock)					
		80/2"		351.3				
20		85/2"	Very dense dark brown micaceous coarse to fine silty sand, trace fine gravel; SM (Decomposed Rock)					
		0%						
25		40/1"						
30								
				337.1				
35			See sheet 2 for log from 0' to 146'					
40								
45								

COMPLETION DEPTH 146.0' Water Depth +1.25' (Artesian) Date 2-14-72

SAMPLER 2 O.D SPLIT BARREL SAMPLER (Artesian) 3-3-72

LOG of BORING No. SD-5

Sheet 2 of 2

DATE 12-22-71 SURFACE ELEV. 370.5 LOCATION N 472, 115 E 1,906, 725

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	RQD	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0				See sheet 1 for Overburden Log					
20					337.1				
40		95%	61%	Migmatite and Diorite (Intact Rock)					
		100%	100%						
60		100%	100%						
		100%	98%						
		100%	97%						
80		100%	100%						
		100%	100%						
100		100%	100%						
		100%	100%						
120		100%	100%						
					241.1				
		100%	91%	Granite	237.5				
140		100%	90%	Diorite	224.5				
				Diameter of core = 1-7/8"					
160				Offset Boring: SD-5C — Undisturbed Sample: 9'-11.5'					

COMPLETION DEPTH 146.0' Water Depth ±1.25 ft. (Artesian) Date 2-24-72
SAMPLER 2" O.D. SPLIT BARREL SAMPLER Artesian 3-3-72

LOG of BORING No. SD-5B

DATE 2-9-72 SURFACE ELEV. 370.8 LOCATION N 472,122 E 1,906,725

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			Firm red-brown micaceous sandy silty clay, medium plasticity; CL (Colluvium)	365.8				
5		55	Very stiff gray silty clay, trace fine sand, medium plasticity; CL (Colluvium)	361.8				
10		*	Very dense gray silty coarse to fine sand and gravel; SM/GM (Colluvium)	356.3				
15		100 / 1½"	Very dense dark gray micaceous fine sandy silt, trace rock fragments; ML (Decomposed Rock)	350.0				
20			Bit refusal at 20.75'					
25			*Blow count not recorded					

COMPLETION DEPTH 20.8' Water Depth 1 ft. Date 2-24-72
SAMPLER 2" O.D. SPLIT BARREL SAMPLER 2.5 ft. 3-3-72

LOG of BORING No. SD-6

DATE 2-2-72 SURFACE ELEV. 409.7 LOCATION N 472,268 E 1,906,818

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0								
		94	Very dense multi-colored decomposed crystalline bedrock (Decomposed Rock)					
10		77						
20		60/6"						
30		60/3"						
40		60/3"		367.7				
		NX/40%	Migmatite of fine to medium grained diorite. Highly fractured and decomposed from 44' to 50' (Intact Rock)					RQD 28%
50		NX/36%		357.7				0%
60								

COMPLETION DEPTH 52.0' Water Depth Dry to 52 ft. Date 2-14-72

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. SD-7

DATE 1-3-72 SURFACE ELEV. 439.5 LOCATION N 472,425 E 1,906,941

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		P 37	Hard red-brown silty clay, medium plasticity; CL (Residual Soil)	435.2	37.3			
10		P 22	Very stiff brown micaceous clayey silt, trace fine to medium sand and fine gravel, slight plasticity to non-plastic; ML		18.0	43	40	
20		P 20	becoming Very hard with depth (Saprolite)		22.7	36	NP	
30		P 63			18.7			
		P 76	Very hard brown micaceous fine sandy clayey silt, slight plasticity; ML (Saprolite)	405.5	14.9			
40		C 100/6"		396.0				
50		C	Very dense brown-gray silty fine sand, trace clay; SM (Decomposed Rock)					
60		100/4"			11.6			
				372.5				
70			Intact Rock	370.5				

COMPLETION DEPTH 69.9' Water Depth None Date 1-4-72

SAMPLER 2" O.D. SPLIT BARREL SAMPLER Dry & Closed at 45 ft. 1-20-72

LOG of BORING No. SD-8

DATE 12-9-71 SURFACE ELEV. 378.6 LOCATION N 471,963 E 1,906,878

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		20	Stiff to very stiff red-brown to tan micaceous fine sandy silty clay, medium plasticity; CL		20.1			
5		11	(Colluvium)		23.2			
		18			28.8			
10		20			26.5			
				364.6				
15		14	Stiff red-brown to gray micaceous silty fine sandy clay, medium plasticity; CL (Colluvium)	362.1	23.0			
		7	Loose gray fine to coarse silty clayey sand; SC (Colluvium)	359.6	17.4			
20		37			15.4			
		100/3"	Dense to very dense brown micaceous coarse to fine silty sand, trace clay; SM		14.6			
25		100/4"	(Saprolite becoming Decomposed Rock)		16.5			
30								
35								
				338.6				
40		NX 52%	Fractured Rock					RQD 30%
45								

COMPLETION DEPTH 55.0' Water Depth * Date

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. SD-8 Continued

DATE 12-9-71 SURFACE ELEV. LOCATION N 471,963 E 1,906,878

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
45								
50			Intact Rock					
				323.6				
55								

* Water Depth — Date

5.5 ft. — 12-15-71
3.0 ft. — 1-19-72
1.7 ft. — 2-24-72

COMPLETION DEPTH 55.0' Water Depth * Date

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. SD-8B

DATE 2-1-72 SURFACE ELEV. 378.6 LOCATION N 471,983 E 1,906,874

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			Firm red-brown micaceous fine sandy clay, medium plasticity; CL (Colluvium)					
5			Contact Uncertain					
10		29	Very dense mottled red-brown and gray clayey coarse to fine sand becoming all gray with depth; SC (Colluvium)	363.6				
15								
20			Very dense brown silty coarse to fine sand; SM (Saprolite becoming Decomposed Rock)					
25		100/5"		352.6				
30			* Water Depth / Date: 1.5 ft. 2-1-72; 1.0 ft. 2-2-72; 1.25 ft. 2-14-72					

COMPLETION DEPTH 26.4 Water Depth * Date

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. SD-9

DATE 2/14/72 SURFACE ELEV. 377.1 LOCATION N 471,937 E 1,906,767

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		7	Organic debris & red-brown micaceous sandy silty clay, medium plasticity; CL (Colluvium)	374.6				
5		13	Medium dense red-brown clayey medium to fine sand; SC (Colluvium)	372.6				
		17	Stiff dark red-brown silty clay, trace fine sand, medium plasticity (Colluvium)	369.6				
10		55	Dense mottled gray and brown silty clay, trace medium to fine sand, medium plasticity; CL (Colluvium)	366.6				
		24	Very dense gray medium to fine sandy clay, clayey sand; CL/SC (Saprolite)	364.1				
15		47	Very dense gray clayey micaceous coarse to fine sand; SC (Saprolite becoming Decomposed Rock)					
		50/1"		358.5				
20			Offset Borings / Undisturbed Samples					
			SD-9B 4' - 6.5'		19.7, 26.4	38	26	T
			7' - 9.5'		22.2, 20.6	26	19	C, T, W
			10' -12.3'		11.5, 16.7, 13.8			C,T,W
			SD-9D 4' - 6.5'		19.7, 26.4, 22.4, 24.5, 24.3	31	20	C T
			12.5' - 15.0'			21	17	

COMPLETION DEPTH 18.6' Water Depth 2.5 ft. (piezometer at 16 ft.) Date 3-3-72

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. SD-1/5

DATE 1-26-72 SURFACE ELEV. 367.5 LOCATION N 472, 174 E 1,906,678

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		4	Loose brown red-brown fine sandy clayey silt; slight plasticity; ML (Colluvium)	364.5				
		7						
		34	Very stiff gray medium to fine sandy clay/clayey sand, CL/SC (Colluvium)					
5		66						
		34		359.5				
		29	Very dense decomposed and highly weathered crystalline rock					
10								
		21						
		49	(Saprolite becoming Decomposed Rock)					
15		100/5"						
20								
				342.5				
25			Bit refusal at 25'					

COMPLETION DEPTH 25.0' Water Depth +9" (Artesian) Date 2-14-72
SAMPLER 2" O.D. SPLIT BARREL SAMPLER Artesian 3-9-72

LOG of BORING No. SD-5/8

DATE 1-27-72 SURFACE ELEV. 375.2 LOCATION N 472,031 E 1,906,805

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		6	Very stiff red-brown micaceous clay trace fine sand, medium plasticity; CL (Colluvium)					
		20						
		20		370.2				
5		15	Medium dense to dense gray coarse to fine sandy clay and clayey sand, trace fine gravel; CL/SC (Colluvium)					
		13						
		12						
10		9						
		23						
		17		361.2				
15		12	Dense highly weathered crystalline rock (Saprolite)					
		48						
		32						
20		31						
25								
30								
35				335.2				
40			Boring terminated - no refusal					

COMPLETION DEPTH 40.0' Water Depth 3.0 ft. Date 2-14-72
SAMPLER 2" O.D. SPLIT BARREL SAMPLER 3.75 ft. 3-7-72

LOG OF TEST PIT NO. TP-S1

DATE 2-15-72 SURFACE ELEV. 372.8 LOCATION N 472,144 E 1,906,732

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			Red brown clay - Fill	372.3				
			Firm dark red-brown sandy clay, with roots, medium plasticity; CL (Colluvium)	365.8				
5								
			Very stiff micaceous gray sandy clay, medium plasticity; CL (Colluvium)	365.3				
10								

COMPLETION DEPTH 7.5' Water Depth 6 ft. Date 2-15-72

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG OF TEST PIT NO. TP-S2

DATE 2-15-72 SURFACE ELEV. 369.7 LOCATION N 472,142 E 1,906,694

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			Red-brown micaceous sandy clay fill	368.2				
			Brown medium to fine sandy clay, with roots & organic material, medium plasticity; CL (Colluvium)	364.7				
5								
			Mottled gray and brown medium to fine sandy clay, small roots, medium plasticity; CL (Colluvium)	359.2				
10								
15								

COMPLETION DEPTH 10.5' Water Depth 2.5' Date 2-15-72

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG OF TEST PIT NO. TP-S3

DATE 2-15-72 SURFACE ELEV. 377.2 LOCATION N 471,974 E 1,906,842

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			Red-brown clay, trace mica and fine sand, medium plasticity; CL (Alluvium)	373.2				
5			Mottled brown and tan clay, trace mica and fine sand, medium plasticity; CL (Colluvium)	368.2				
10			Mottled gray and red-brown clay, trace mica & fine sand, becoming all gray with depth, medium plasticity; CL (Colluvium)	367.2				

COMPLETION DEPTH 10.0' Water Depth 3.7' Date 2-18-72

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG OF TEST PIT NO. TP-S4

DATE 2-15-72 SURFACE ELEV. 376.0 LOCATION N 472,011 E 1,906,734

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			Red-brown clay & roots, medium plasticity CL (Colluvium)	374.5				
			Red-brown & tan silty medium to fine sand, trace roots; SM (Colluvium)	372.0				
5			Red-brown micaceous fine sandy clay, medium plasticity; CL (Colluvium)	370.0				
10			Mottled gray & brown fine sandy clay, becoming all gray with depth, medium plasticity; CL (Colluvium)	366.5				

COMPLETION DEPTH 9.5' Water Depth 4.5' Date 2-15-72

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG OF TEST PIT NO. TP-S5

DATE 2-15-72 SURFACE ELEV. 373.8 LOCATION N 471,953 E 1,906,724

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			Dark red-brown and tan medium to fine sandy clay with lenses and pockets of sand and gravel; CL (Colluvium)	369.8				
5			Very stiff to hard gray medium to fine sandy clay/clayey sand, trace gravel; CL/SC (Colluvium)	364.8				
10			Saprolite	363.8				

COMPLETION DEPTH 10.0' Water Depth Seepage from 4 to 9 ft. Date 2-15-72

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. ED-1

DATE 3-2-72 SURFACE ELEV. 427.9 LOCATION N 473,643 E 1,906,951

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		22	Very stiff to stiff red-brown silty clay occasionally sandy, high to medium plasticity; CL (Residual Soil)					
5		18						
		19		417.9				
10		15	Medium dense to dense tannish-green to bluish-gray micaceous silty sand; SM (Saprolite)					
15		31		410.4				
20		66	Very dense bluish-gray silty medium to fine sand with rock fragments; SM (Decomposed Rock)					
25		143/11"						
30								
45			Drilled from 26'11" to 55'0" with rock bit to check soundness of decomposed rock					
50								
55				371.9				

COMPLETION DEPTH 55.0' Water Depth None Date 3-10-72

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. ED-2

DATE 1-5-72 SURFACE ELEV. 418.2 LOCATION N 473,525 E 1,907,114

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		P	Hard to very stiff red-brown clayey silt, medium plasticity; MH/ML		27.3	47	36	U
					29.4			W
5		55	(Residual Soil)		41.4			
		P			50.8	60	51	U
					46.3			W
10		24		406.2	43.9			
		P	Stiff red-brown fine sandy clayey silt, medium to high plasticity; MH		59.7	65	58	U
					60.4			
15		16			45.8			C
						54	48	W
		P	(Residual Soil)					
20		16		397.2	43.4			
		P	Medium dense to tan micaceous fine sandy silt, low plasticity to non-plastic; ML					
25		25			32.1			
		P	(Saprolite)		36.7	45	NP	W
					37.3	40	NP	C
30		18			35.0			T
				386.2				
		P	Very dense tan silty fine sand, trace rock fragments; SM		19.8			
		60/4"	(Decomposed Rock)	384.2				
35								
40								

COMPLETION DEPTH 34.0' Water Depth Dry & Closed Date 1-20-72
SAMPLER 2" O.D. SPLIT BARREL SAMPLER @ 23.5 ft. None 3-10-72

LOG of BORING No. ED-3

DATE 12-23-71 SURFACE ELEV. 423.2 LOCATION N 473,407 E 1,907,277

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		P	Hard to stiff red-brown micaceous fine sandy silty clay, high to medium plasticity; CL/CH					
		51						
10		P	(Residual Soil)					
		19		407.2				
		P	Medium dense to dense micaceous red-brown to tan fine sandy clayey silt, low plasticity; ML					
20		13						
		P						
30		35	(Saprolite)					
		P			31.2			
		26		381.2				
40		P	Tan to gray micaceous fine sandy silt, increasing coarser sand content with depth; ML					
		26			26.6			
50		P	(Saprolite)	372.0				
		118	Dark gray to black silty medium fine sand, trace clay; SM		16.0			
		100/2½"	(Decomposed Rock)	365.0				
60								

COMPLETION DEPTH 58.2' Water Depth Dry & Closed Date 1-20-72
SAMPLER: 2" O.D. SPLIT BARREL SAMPLER @ 33.5 ft. None 3-10-72

LOG of BORING No. ED-4

DATE 2-10-72 SURFACE ELEV. 410.8 LOCATION N 473,647 E 1,907,203

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE		DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0				Hard red-brown silty clay becoming micaceous and sandy with depth, high to medium plasticity; CH/MH (Residual Soil)					
5									
10		54							
15					395.8				
		11		Loose to dense brown and gray micaceous silty fine sand; SM (Saprolite)					
20		10							
25		18							
30		35							
40		100/1"			372.8				
		92% RX	92%	Very dense decomposed rock	367.3				
45				Sound unweathered fine-grained hornblende diorite	362.3				
50				*Falling head permeability tests run in this boring					

COMPLETION DEPTH 48.5 Water Depth * Date 2-10-72

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. ED-5

DATE 2-14-72 SURFACE ELEV. 411.3 LOCATION N 473,403 E 1,907,025

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		4	Soft to firm red-brown silty clay/ clayey silt; CL/ML (Residual Soil)					
5		8		404.3				
		8	Medium dense to dense brown and gray micaceous sandy clayey silt; ML/MH (Residual Soil becoming Saprolite)					
10		P						
		10						
15		P						
		34		391.3				
20		52	Very dense brown micaceous silty fine sand; SM (Saprolite)					
25		56						
30		69		377.3				
35		80/6"	Very dense brown silty fine sand with rock fragments; SM (Decomposed Rock)					
40		80/2"	Drilled from 50'0" to 67'6" with rock bit; encountered refusal at 67'6" with rock bit					
45		100/2"		343.8				

COMPLETION DEPTH 67.5' Water Depth None Date 3-9-72

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. ED-6

DATE 2-15-72 SURFACE ELEV. 411.3 LOCATION N 473, 408 E 1,907,020

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			Soft to firm red-brown silty clay/ clayey silt; CL/ML (Residual Soil)	404.3				
5		P						
10		P	Medium dense to dense brown and gray micaceous sandy clayey silt; ML/MH (Residual Soil becoming Saprolite)	391.3				
15		P						
20		P						
25		P	Very dense brown micaceous silty fine sand; SM (Saprolite)	382.0				
30		P						
35								

COMPLETION DEPTH 29' 3" Water Depth None Date 3-9-72

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. WD-1

DATE 12-21-71 SURFACE ELEV. 411.7 LOCATION N 473 025 E 1,904,635

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		27	Very stiff micaceous fine sandy silty clay, high plasticity; CL/CH (Residual Soil)	401.7	40.3 37.4			
5		34			39.3 29.7			
10			Medium dense red-brown to tan micaceous medium to fine silty sand with rock fragments; slight plasticity; SM (Saprolite)	391.7	12.4 17.0			
15		40			27.1 29.8			
20		32	Dense to very dense light gray silty fine sand; SM (Saprolite becoming Decomposed Rock)	385.2	11.9 17.1			
25		138			7.5 9.4			
30								

COMPLETION DEPTH 26.5' Water Depth Date 12-21-71

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. WD-2

DATE 12-21-71 SURFACE ELEV. 411.7 LOCATION N 473,025 E 1,904,635

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			Hard red-brown micaceous fine sandy silty clay, high to medium plasticity; CL (Residual Soil)					
		79			29.7			
5		41			29.9			
				434.0				
			Hard to very stiff red brown micaceous fine sandy clayey silt, low plasticity; ML (Residual Soil)					
10		34			29.4			
					26.2			
		29			28.1			
					24.1			
15		21			23.8			
					22.6			
				426.0				
		21	Medium dense to dense brown micaceous fine sandy silt, slight plasticity; ML		21.6			
					28.4			
20		23	becoming		18.0			
					19.6			
		24	greenish gray and with rock fragments (Saprolite)		18.7			
25		43			23.2			
					27.2			
30		40			29.4			
					27.9			
		46		410.0				
35		56	Very dense gray micaceous medium to fine sand and silt with rock fragments; SM/ML (Saprolite)		20.8			
					9.4			
40		110		402.5	17.6			
					8.9			

COMPLETION DEPTH 39.5' Water Depth _____ Date 12-21-71

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. WD-5

DATE 12-14-71 SURFACE ELEV. 449.1 LOCATION N 472,805 E 1,903,995

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			Hard red-brown micaceous fine sandy silty clay, high to medium plasticity; CL					
		52			20.7			
5		38	becoming fine sandy clayey silt, low plasticity; ML (Residual Soil)		24.5			
				441.1				
10		61	Very dense to medium dense brown and blue gray silty medium to fine sand with rock fragments; SM (Saprolite)		14.9			
		23			18.7			
				435.6				
15		15	Medium dense brown dark brown micaceous medium to fine sandy silt; ML		20.1			
		22			32.2			
20		24	becoming more sandy with depth (Saprolite)		23.8			
		17			15.4			
25		22			24.1			
				420.1				
30		77	Very dense bluish gray silty medium to fine sand, slight plasticity; SM (Saprolite becoming Decomposed Rock)		16.5			
		81			11.6			
35		83			10.8			
		37			9.0			
40		141 10"		407.2	9.4			
45								

COMPLETION DEPTH 41.9' Water Depth _____ Date 12-14-71

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. RWD-5

DATE 2-28-72 SURFACE ELEV. 401.7 LOCATION W 473,124 E 1,903,935

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		25	Very stiff red-brown micaceous silty clay, high plasticity; CH (Residual Soil)	397.7				
5		20	Medium dense tan, brown and gray micaceous silty fine sand, slight plasticity; SM (Saprolite)					
		27						
10		21						
15		22						
		25						
20		21		379.7				
		44	Dense multi-colored micaceous silty medium to fine sand with rock fragments; SM (Saprolite)					
25		45						
30		42		370.7				
		139	Very dense blue-green silty sand with rock fragments; SM (Decomposed Rock)					
35		143 / 5"		365.3				
40								
45								

COMPLETION DEPTH 36.4' Water Depth _____ Date _____

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. WD-6

DATE 1-10-72 SURFACE ELEV. 443.0 LOCATION N 472,915 E 1,904,360

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		P	Hard red micaceous clayey silt, medium plasticity; MH (Residual Soil)		42.6 35.7	54	37	W U
5		43						
10				433.0				
		P	Medium dense to dense tan and gray micaceous silty sand, slight plasticity to non-plastic; SM (Saprolite)		35.4	37	NP	W
		15			17.7			S T
15								
		P						
20		34			32.2	36	NP	W T
25				417.0				
		P	Dense to very dense multi-colored micaceous silty sand; SM (Saprolite)					
30		42						
35		P 62						
40				403.0				
		P	Very dense multi-colored micaceous silty sand; SM (Decomposed Rock)					
		187 / 8"		399.4				
45								

COMPLETION DEPTH 43.6' Water Depth _____ Date 1-12-72

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. WD-7

DATE 12-14-71 SURFACE ELEV. 406.2 LOCATION N 472,945 E 1,904,700

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0								
		16	Very stiff red-brown micaceous fine sandy silty clay, medium plasticity; CL		30.7			
5		21	(Residual Soil)	398.7	29.9			
10		14	Stiff red-brown micaceous fine sandy clayey silt, low plasticity; ML/MH		24.5			
		11	(Residual Soil)	392.2	19.3			
15		20	Medium dense gray brown fine sandy silt, non-plastic; ML		27.4			
		23			15.7			
20		32	(Saprolite)		15.8			
			becoming					
25		27	slightly plastic with depth		30.5			
		31			24.0			
		100/2"	Decomposed Rock	378.2				
30				377.1				

COMPLETION DEPTH 29.1 Water Depth _____ Date 12-14-71

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. RWD-7

DATE 2-24-72 SURFACE ELEV. 400.3 LOCATION N 473,098 E 1,904,657

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0								
		4	Fill for drilling pad	396.3				
5		24	Medium dense to very dense brown and gray micaceous silty medium to fine sand with rock fragments; SM					
10		160						
		39	(Saprolite)					
15		38		383.3				
		100/3"	Very dense multi-colored decomposed rock					
20		100/4"		380.0				
25								

COMPLETION DEPTH 20.25' Water Depth _____ Date 2-24-72

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. WD-8

DATE 12-14-71 SURFACE ELEV. 392.7 LOCATION N 472,715 E 1,905,220

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0								
		P	Very stiff red-brown fine sandy silty clay, high plasticity; CH (Residual Soil)		41.2			W
					36.1	58	24	C
5					29.8			U
		17			27.2			
				382.7				
10		P	Hard tan fine sandy clayey silt; ML (Saprolite)		30.9	45	NP	W
		42			17.7			T
					26.0			
				377.7				
15		P	Light tan and bluish gray fragmented fine grained decomposed rock		5.7			
		NX			6.3			
				375.7	6.1			
20								

COMPLETION DEPTH 17.0' Water Depth _____ Date 12-14-71

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. WD-9

DATE 12-9-71 SURFACE ELEV. 386.9 LOCATION N 472,830 E 1,905,305

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0								
		30	Very stiff red-brown fine sandy silty clay, high plasticity; CH (Residual Soil)		27.1			
				381.9				
5		43	Very dense light brown silty clayey medium to fine sand with rock fragments; SM/SC (Saprolite becoming Decomposed Rock)		17.8			
		137			10.6			
10		150/11"		374.9	9.3			
15								

COMPLETION DEPTH 12.0' Water Depth _____ Date 12-9-71

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. WD-10

DATE 12-13-71 SURFACE ELEV. 368.7 LOCATION N 472,490 E 1,905,490

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		18	Stiff red-brown micaceous fine sandy silty clay, medium to high plasticity; CL/CH (Residual Soil)	363.7	21.7			
5		24	Very stiff red-brown micaceous clayey medium to fine sand; SC (Residual Soil)	357.7	18.3			
10		26			19.2			
		23	Medium dense light brown micaceous fine to medium sandy clayey silt, medium plasticity; ML (Saprolite)	351.7	19.5			
15		28			17.4			
		100	Very dense brownish gray micaceous fine sandy silt, slight plasticity; ML (Decomposed Rock)	344.9	15.4			
20		150/10"			18.1			
25		172/9"			15.1			

COMPLETION DEPTH 23.8' Water Depth _____ Date 12-13-71

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. WD-12A

DATE 2-22-72 SURFACE ELEV. 354.5 LOCATION N 472,744 E 1,905,414

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			Fill for drilling pad	346.5				
5								
10		P	Very dense blue-gray, tan and green micaceous silty medium to fine sand with rock fragments; SM (Decomposed Rock)					
		90						
15		100/4"						
20								
25		100/4"		328.2				
30								

COMPLETION DEPTH 26.3' Water Depth _____ Date _____

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. RWD-13

DATE 2-22-72 SURFACE ELEV. 403.6 LOCATION N 472,252 E 1,905,725

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		P	Dense red-brown micaceous silty fine sand; SM					
5		22	(Residual Soil to Saprolite)					
10		P		393.1				
		100/3"	Dense to very dense brown and gray micaceous silty medium to fine sand ; SM					
15		40	(Saprolite)					
20		P 30						
25		P 47						
30				369.6				
35		P 107	Very dense tan gray micaceous silty fine sand; SM					
40			(Decomposed Rock)					
		P 109						
45		149		357.1				

COMPLETION DEPTH 46.5' Water Depth _____ Date _____

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. WD-14

DATE 12-13-71 SURFACE ELEV. 400.9 LOCATION N 472,110 E 1,906,270

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		47	Very dense blue-gray and tan micaceous silty fine sand; SM		16.7			
			(Saprolite)					
5		100/2"	Very dense blue-gray Decomposed Rock		10.3			
10		178/9"			5.3			
15								

COMPLETION DEPTH 11.3' Water Depth None Date 12-13-71

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. RWD-14

DATE 2-17-72 SURFACE ELEV. 428.2 LOCATION N 472,252 E 1,905,981

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0								
		42	Hard to stiff red-brown silty clay, high to medium plasticity; CL/CH (Residual Soil)					
5		36						
10		24		417.7				
		21	Medium dense multi-colored micaceous silty medium to fine sand; SM (Saprolite)					
15		20						
20		24		405.7				
25		72	Very dense blue-gray-green micaceous silty sand with rock fragments, slight plasticity to non-plastic; SM (Dense Decomposed Rock)					
30		77						
35		50						
40		57		386.7				
45								

COMPLETION DEPTH 41.5' Water Depth _____ Date _____

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. SS-1

DATE 1-6-72 SURFACE ELEV. 440.6 LOCATION N 471,674 E 1,907,009

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0								
	P	32	Hard red-brown micaceous fine sandy clayey silt, medium plasticity; MH (Residual Soil)	435.3	38.5 35.9 31.9	55	43	U W
5								
10	P	16	Medium dense to dense tan micaceous fine sandy silt, slight plasticity; ML (Residual Soil becoming Saprolite)		24.6			
15								
20	P	26			22.0			
25	P	31		414.6				
30			Tan brown micaceous fine to medium sandy silt, slight plasticity to non-plastic; ML (Saprolite)		23.5			
35	P	36						
40		44		396.9				

COMPLETION DEPTH 43.75' Water Depth _____ Date 1-6-72

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. SS-3

DATE 2-29-72 SURFACE ELEV. 427.3 LOCATION N 471,450 E 1,907,009

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			Dense to very dense tan-brown micaceous silty medium to fine sand; slight plasticity to non-plastic; SM (Saprolite)					
10		25						
20		44						
30		35						
35				391.3				
40		160/5"	Very dense tan-green silty medium to fine sand with rock fragments; SM (Decomposed Rock)	386.1				
			*Field Permeability Tests run in this boring					

COMPLETION DEPTH 41.2 Water Depth * Date

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. SS-4

DATE 1-6-72 SURFACE ELEV. 420.8 LOCATION N 471,742 E 1,907,166

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		P	Medium dense to very dense red-brown to tan micaceous fine sandy silt, slight plasticity to non-plastic; ML (Saprolite)			40	NP	
		31			25.6			
10		P			31.1			
		19			24.0	40	NP	T
					19.9			W
20		P			26.9	31	NP	W
		32			19.8			T
25		P		392.2				
30		52	Very dense tan micaceous coarse to fine silty sand with rock fragments; SM (Decomposed Rock)		12.8			
35		119/9"		385.6				
40								

COMPLETION DEPTH 35.25' Water Depth Date 1-7-72

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. SS-5

DATE 2-16-72 SURFACE ELEV. 436.0 LOCATION N 471,619 E 1,907,323

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0								
5	P	51	Hard red-brown silty clay; CL					
			becoming					
10	P	9	firm red-brown micaceous clayey silt; MH (Residual Soil)		44.0	59	40	W U
15				419.0				
20	P	21	Medium dense to very dense tan-green-gray-white micaceous silty medium to fine sand, low to slight plasticity, and light red-brown highly micaceous clayey sandy silt; SM/ML (Saprolite)		24.5	42	NP	W U
25	P	33						
30								
35	P	66		392.5				
		132/9"	Very dense decomposed rock	395.3				
40								

COMPLETION DEPTH 38.7 Water Depth _____ Date 2-16-72

SAMPLER 2 O.D. SPLIT BARREL SAMPLER

LOG of BORING No. C-1

DATE 12-15-71 SURFACE ELEV. 429.1 LOCATION N 472,236 E 1,907,092

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0								
		14	Stiff red-brown micaceous fine sandy clayey silt, low plasticity; MH (Residual Soil)	424.6	31.0	56	50	
5		15	Medium dense to dense light brown to tan micaceous fine silty sand, slight plasticity to non-plastic; ML (Saprolite)		13.8	30	NP	
		15			17.9			
10		20			17.3	35	NP	
15		26			18.3			
		21			17.3	30	NP	
20		15			22.6			
		29			14.6	29	NP	
25		37			15.5			
30		67		399.1	19.9	32	NP	
		130	Very dense brown micaceous medium to fine silty sand with rock fragments; SM (Decomposed Rock)		18.0			
35		160/10"		392.8	14.7	26	NP	
40								

COMPLETION DEPTH 36.3 Water Depth _____ Date 12-15-71

SAMPLER 2 O.D. SPLIT BARREL SAMPLER

LOG of BORING No. C-2

DATE 12-15-71 SURFACE ELEV. 456.5 LOCATION N 472, 609 E 1,907,239

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT (1), %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		7	Firm to rd red-brown micaceous fine sandy silty clay, medium plasticity; MH		42.3			
		38			33.1	59	43	
		53			26.7			
10		37	(Residual Soil)		28.6	72	43	
		31			30.0			
		28		439.5	29.1	57	56	
20		24			33.9			
		23	Medium dense to dense tan to light brown micaceous fine sandy silt, slight to low plasticity; ML/MH		30.5	46	38	
		36			24.9			
30		31			22.7	37	NP	
		32	(Saprolite)		25.3	35	NP	
		46			30.2			
40		43			25.0	45	42	
		43		413.0	25.6			
		53	Very dense dark brown micaceous silty clayey fine to medium sand; ML		28.6			
		64			24.5			
50		55	(Saprolite)	403.5	21.0			
		69	Very dense tan micaceous fine sandy clayey silt; ML	399.0				
		158/10"	(Decomposed Rock)		20.2			
60								

(1) Average of two water content tests for each sample depth

COMPLETION DEPTH 57.5 Water Depth Dry and closed at 31 ft. Date 1-20-72

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. C-3

DATE 1-4-72 SURFACE ELEV. 437.0 LOCATION N 472, 982 E 1,907,386

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		P	Hard red brown fine sandy silty clay/ clayey silt, medium to high plasticity; CL/MH		25.0			
		35			22.9	49	20	W,U
					24.0	87	39	
			(Residual Soil)	427.0	33.6			
10		P						
		30	Very stiff to stiff red-brown micaceous fine sandy clayey silt, low plasticity MH		48.1	59	54	W
					34.7			U
20		P			44.7	53	49	W
		14						T
			(Residual Soil becoming Saprolite)	411.0				
		P						
30		17	Medium dense dark brown micaceous fine sandy clayey silt, slight to low plasticity; ML					
		P						
		25	(Saprolite)					
40		P						
		30						
50		P						
		27						
		100/1"		379.0				
60			Very dense dark brown fine silty clayey sand; SC					
			(Decomposed Rock)	369.0				
70								

COMPLETION DEPTH 68.0 Water Depth Date 1-5-72

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. C-4

DATE 2-28-72 SURFACE ELEV. 459.6 LOCATION N 472, 572 E 1,907,333

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		28	Stiff to hard red-brown silty clay, medium to high plasticity; CL					
		54						
10		48	(Residual Soil)	449.6				
		22						
		27	Medium dense to dense tan-red micaceous silty fine sand, slight to low plasticity; SM					
20		27						
		P						
		18	(Residual Soil becoming Saprolite)	432.6				
		P						
30		33	Dense to very dense tan-brown and gray micaceous silty medium to fine sand, slight plasticity to non-plastic; SM					
		P						
		40						
		P						
40		36	(Saprolite)					
		38						
		42						
50		64						
		80		401.6				
60		80/6"	Very dense brown and gray silty medium to fine sand; SM					
		100/3"	(Decomposed Rock)	394.4				
70								

COMPLETION DEPTH 65.25 Water Depth _____ Date _____

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. C-5

DATE 1-5-72 SURFACE ELEV. 427.2 LOCATION N 472, 162 E 1,907,280

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		P	Medium dense tan-brown micaceous medium to fine silty clayey sand, low plasticity to non-plastic; SM					
5		18	(Saprolite)		21.6	31	27	
		P						
10		19			35.7	35	25	T,W
					23.9	35	32	
		P						
15		23			25.0	35	30	
		P						
20		23			36.5	35	30	T
					23.0			W
		P		405.2	19.4	30	NP	
25		71	Very dense light tan micaceous medium to fine silty sand		18.0			
		P						
30		145	(Decomposed Rock)		16.1			
35				387.2				

COMPLETION DEPTH 40.0' Water Depth _____ Date 1-5-72

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. C-6

DATE 12-16-71 SURFACE ELEV. 461.0 LOCATION N 472,535 E 1,907,427

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0								
		53	Hard to very hard red brown micaceous fine sandy clayey silt, low to medium plasticity; MH		30.7 / 39.8 (1)			
5		108	(Residual Soil)	453.0	28.2 / 31.7	66	53	
		64			27.3 / 27.4			
10		55	Very hard to stiff red brown micaceous fine sandy clayey silt, medium to low plasticity; MH		28.4 / 28.7	60	46	
15		20	(Residual Soil becoming Saprolite)		31.4 / 32.1	50	43	
		33						
20		36			29.6			
				438.0	25.4			
		32	Dense light brown micaceous fine sandy silt slight plasticity to non-plastic; ML		32.5	45	NP	
25		39	(Saprolite)		24.4			
30		34		430.5	25.9	44	NP	
35			(1) Range of water contents on each sample as determined by 2 to 4 tests per sample					

COMPLETION DEPTH 30.5' Water Depth Dry and closed at 20 ft Date 1-20-72

SAMPLER 2" O.D SPLIT BARREL SAMPLER

LOG of BORING No. C-7

DATE 12-30-71 SURFACE ELEV. 432.2 LOCATION N 472,908 E 1,907,574

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0								
		49	Hard red brown fine sandy clayey silt, medium plasticity; MH		32.1			
5		43	(Residual Soil)		32.9	67	47	
		43			31.6			
10		30			30.6			
				418.2				
20		14	Medium dense tan micaceous fine sandy silt, slight plasticity to non-plastic; ML		25.2			
		15	(Saprolite)	412.2	25.2	40	39	
30		21	Dense blue gray micaceous fine sandy silt, non-plastic; ML		30.3			
		23			25.8 / 30.5	37	NP	
40		38	(Saprolite)	405.7	23.1			
50								

COMPLETION DEPTH 26.5' Water Depth Date 12-20-71

SAMPLER 2" O.D SPLIT BARREL SAMPLER

LOG of BORING No. C-8

DATE 12-22-71 SURFACE ELEV. 437.0 LOCATION N 472,945 E 1,907,475

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		BS*	Red brown fine sandy silty clay, high plasticity; CH with increasing silt content with depth; ML		28.2	70	32	M
5		BS	(Residual Soil)		25.3	66	26	M
10		BS			26.7	50	30	M
15		BS		420.0	18.2	31	21	M
20		BS	Light tan micaceous fine sandy clayey silt/silty clay, medium to high plasticity; CL/ML/MH becoming red brown then greenish gray with decreasing sand and clay with depth		24.3	47	32	M
25		BS			19.7	50	32	M
30		BS	(Saprolite)		21.9	57	33	M
35				402.0				
40			* Bag Sample					

COMPLETION DEPTH 35.0' Water Depth None Date 12-22-71
SAMPLER: 2" O.D. SPLIT BARREL SAMPLER Dry & Closed at 29.5 ft. 1-20-72

LOG of BORING No. C-9

DATE 12-21-71 SURFACE ELEV. 445.8 LOCATION N 472,755 E 1,907,405

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		BS*	Dark red-brown fine sandy silty clay, low plasticity; CL					
5		BS	becoming a lighter red-brown and increasing in silt content with depth; ML					
10		BS						
15		BS	(Residual Soil becoming Saprolite)					M
20		BS						
25		BS		420.8				
30		BS	Red-brown micaceous fine sandy clayey silt, high plasticity; MH becoming greenish brown in color					M
35		BS	(Saprolite)			74	46	
40		BS				65	43	
45			* Bag Sample	400.8				

COMPLETION DEPTH 45.0' Water Depth None Date 12-21-71
SAMPLER: 2" O.D. SPLIT BARREL SAMPLER Dry & Closed at 31 ft. 1-20-72

LOG of BORING No. C-10

DATE 12-21-71 SURFACE ELEV. 454.3 LOCATION N 472,385 E 1,907,260

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		BS*	Dark red-brown fine sandy clayey silt, high plasticity; MH					
5		BS	becoming a lighter red-brown with depth (Residual Soil)		21.2	69	46	M
10		BS			23.6	71	50	M
				439.3				
15		BS	Red-brown micaceous clayey silt, medium to high plasticity; MH		21.7	72	46	M
20		BS	(Saprolite)		25.1	70	55	M
25		BS			21.1	53	36	M
				424.3				
30		BS	Brown micaceous fine sandy silt, medium plasticity; ML with decreasing sand content with depth		15.8	40	31	M
35		BS	(Saprolite)		17.9	46	29	M
40		BS			17.0	40	26	M
				409.3				
45			* Bag Sample					

COMPLETION DEPTH 45.0' Water Depth None Date 12-21-71
SAMPLER 2" O.D. SPLIT BARREL SAMPLER Dry & closed at 34 ft. 1-10-72

LOG of BORING No. C-11

DATE 12-22-71 SURFACE ELEV. 428.8 LOCATION N 472,200 E 1,907,185

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		BS*	Dark red-brown fine sandy silty clay, low plasticity; CL (Residual Soil)	423.8				
5		BS	Tan micaceous fine sandy silt, low plasticity to non-plastic; ML					M
10		BS	Becoming greenish gray in color and increasing sand content with depth					
15		BS	(Saprolite)			41	NP	
20		BS				43	NP	M
				403.8				
25			* Bag Sample					
30								

COMPLETION DEPTH 25.0' Water Depth None Date 12-22-71
SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. WE-1

DATE 5/23/73 SURFACE ELEV. 367.4' LOCATION N 472,535 E 1,905,427

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			Fill for drilling pad					
5		4		361.4				
10		9	Loose to medium dense silty medium to fine sand, trace fine gravel; SM (Alluvium)					
15		21		350.4				
20		26						
25		53	Dense to very dense dark brown, gray-brown and multicolored silty medium to fine sand; SM (Saprolite)					
30		59		334.4				
35		144	Very dense decomposed migmatite (Decomposed Rock)					
40		5.0% NX						
45								

COMPLETION DEPTH 48.5' Water Depth dry before coring Date 5/23/73

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. WE-1

DATE 5/23/73 SURFACE ELEV. 367.4' LOCATION N 472,535 E 1,905,427

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
45		92	Same as above	318.9				
50								

COMPLETION DEPTH 48.5' Water Depth Dry before coring Date 5/23/73

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. WE-2

DATE 5/23-26/73 SURFACE ELEV. 364.9' LOCATION N 472,621 E 1,905,420

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			Fill for drilling pad	358.9				
5		2	Soft dark brown topsoil	356.9				
10		28	Dense light gray coarse to medium clayey sand, trace rock fragments; SC (Alluvium)	353.9				
15		5	Loose dark brown micaceous sandy silt; ML (Saprolite)	347.9				
20		32	Dense to very dense gray-brown very micaceous silty medium to fine sand and sandy silt; SM/ML (Saprolite)					
25		24						
30		38						
35		33		327.9				
40		57	Very dense black, gray-brown and multicolored silty medium to fine sand; SM (Decomposed Rock)					
45		54						

COMPLETION DEPTH 65.0' Water Depth 17.0 enc. Date 5/23/73

SAMPLER 3" O D SPLIT BARREL SAMPLER

LOG of BORING No. WE-2

DATE 5/23-26/73 SURFACE ELEV. 364.9' LOCATION N 472,621 E 1,905,420

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
45								
50		47	Same as above					
55		58						
60		88						
65		101		299.9				

COMPLETION DEPTH 65.0' Water Depth enc. 17' Date 5/23/73

SAMPLER 3" O D SPLIT BARREL SAMPLER

LOG of BORING No. WE-3

DATE 5/30/73 SURFACE ELEV. 365.2' LOCATION N 472,647 E 1,905,334

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			Fill for drilling pad					
5		10		358.2				
10		36	Dense gray-brown silty medium to fine sand; SM (Saprolite)					
15		27						
20		26						
25		33		338.2				
30		69	Very dense gray-brown micaceous silty fine sand; SM (Decomposed Rock)					
35		67						
40		61						
45		76						

COMPLETION DEPTH 55.0' Water Depth 11.5' enc. Date 5/30/73

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. WE-3

DATE 5/30/73 SURFACE ELEV. 365.2' LOCATION N 472,647 E 1,905,334

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
45								
50		41	Same as above					
55		52		310.2				

COMPLETION DEPTH 55.0' Water Depth 11.5' enc. Date 5/30/73

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. WE-4

DATE 5/31/73 SURFACE ELEV. 364.5' LOCATION N 472,759 E 1,905,468

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			Fill for drilling pad	356.5				
5								
10		18	Stiff red clayey sand; SC (Residual Soil)	350.5				
15		26	Very dense orange-brown clayey medium to fine sand, trace gravel; SC (Saprolite)	342.5				
20		62						
25		92/11"	Very dense dark gray-brown silty medium to fine sand; SM (Decomposed Rock)					
30		95/11"						
35		50/5"						
40		50/4"						
45		52/4"		320.7				

COMPLETION DEPTH 43.8' Water Depth dry Date 5/31/73

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. WE-5

DATE 6/1/73 SURFACE ELEV. 374.4" LOCATION N 472,667 E 1,905,545

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0								
5		68/9"	Very dense orange brown sandy clay and clayey sand; CL/SC (Saprolite)	367.4				
10		50/6"	Very dense gray-brown coarse to fine sand, trace rock fragments, occasionally silty (Decomposed Rock)					
15		83/9"						
20		50/3"						
25		83/10"						
30		36		344.4				
			NOTE: Topsoil and Residual Soil stripped					

COMPLETION DEPTH 30.0' Water Depth dry Date 6/1/73

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. WE-6

DATE 9/13/77 SURFACE ELEV. 417.5 LOCATION N472,613.73 E 1,905,388.38

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
45	PS-2 27"		COMPACTED SELECT FILL		20.1			
		81			21.2			
50					24.7	NP	NP	
		47						
55					22.1			
	PS-3 27"				27.8			
					28.7			
		50			26.7	NP	NP	G,M
60					31.2			C,W
					24.4			G
			French Drain consisting of Zone I and Zone II stone.	355.5				
65	PS-4 29"			352.0				
		75	Dense gray-green to gray-black decomposed granodiorite friable to silt and coarse to fine sand. (Saprolite)		35.3			
					20.9			
70	PS-5 18"				20.5			
					31.3			
					28.0			
		90			18.8	NP	NP	G,M
75								W,C
					23.1			
	PS-6 26"							G,M
					29.3			
80		78			33.9			
					23.5			
					24.1	NP	NP	
		130	Grading with occasional seams of white quartz.		28.8			
85					24.6			
	PS-7 16"				20.2			M
					29.5			
		90			28.9	NP	NP	G,M
90					19.7			W,C
					24.9			
					26.1			G
					30.7			M

COMPLETION DEPTH 139' Water Depth 58' Date 9/15/77

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. WE-6

DATE 9/13/77 SURFACE ELEV. 417.5 LOCATION N472,613.73 E 1,905,388.38

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0								
5		42						
					19.8			
10			Hard to very stiff red-brown fine sandy silt with trace to little mica and occasional trace of coarse to medium sand. (ML)					
15	PS-1 28"							
			COMPACTED SELECT FILL		19.9			
		71			21.4	NP	NP	G,M
20					19.5			W,C
					19.5	NP	NP	
25		32						
					25.6			G
30			Zone I and II Filter stone subgrade	387.5				
35		47		383.5				
					23.5			
40			Firm to very stiff red-brown to tan fine sandy silt with trace to little mica.					
45	PS-2 27"		COMPACTED SELECT FILL					

COMPLETION DEPTH 139' Water Depth 58' Date 9/15/77

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. WE-6

DATE 9/13/77 SURFACE ELEV. 417.5 LOCATION N472,613.73 E 1,905,388.38

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
90		95			30.7 21.8			M
				323.5				
		PS-8 4"	Dense to very dense gray-green and green-gray to white decomposed rock friable to coarse to fine sand and silt becoming more dense and less weathered with depth. (Decomposed Rock)		20.0 17.3			G
95		100 5"						
100		PIT-1 9"						
		100 5"			25.3			
105		PIT-2 22"						
		100 3"			21.7			
110		100 6"			24.6			
115		PIT-3 10"						
		107			21.6			
120		67			25.0 13.6			
125		PIT-4 15"						
		100 2"			14.3			
				288.5				
130		NX 100%	Dark to light gray fresh granodiorite with two slightly weathered seams at 133' and 135'.					
135								

COMPLETION DEPTH 139' Water Depth 58' Date 9/15/77

SAMPLER 2" O D SPLIT BARREL SAMPLER

LOG of BORING No. WE-6

DATE 9/13/77 SURFACE ELEV. 417.5 LOCATION N472,613.73 E 1,905,388.38

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
135		NX 100%						
				278.5				
140			Hole terminated at 139'.					
145			Note: One Casagrande Type piezometer was installed in this boring WE6-P1 Elev 306.2					

Legend:

PS-1 / 28" : 3" Piston Sample / 28" of recovery

PIT-1 / 9" : Pitcher Sample / 9" of recovery

COMPLETION DEPTH 139' Water Depth 58' Date 9/15/77

SAMPLER 2" O D SPLIT BARREL SAMPLER

LOG of BORING No. WE-7

DATE 9/23/77 SURFACE ELEV. 419.9 LOCATION N 472,565.39 E 1,905,500.45

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0								
5		35			19.7 21.5			
10								
15		35	Stiff to very stiff red-brown fine clayey sandy silt with trace to little coarse to fine sand and mica COMPACTED SELECT FILL		22.6 23.2			
20								
25		38						
30		43			21.6 27.3			
35	PS-1 16"	100 5"			24.0 23.5			
			Zone I and II Filter stone subgrade	383.9	24.3 2.2 24.0		G,W	
40	PS-2 27"	80	Stiff to very stiff red-brown fine sandy clayey silt with trace mica and medium sand COMPACTED SELECT FILL	379.9	21.9 22.1		W	
45	PS-3 27"				24.4 24.0 23.2			

COMPLETION DEPTH 101.25' Water Depth 55' Date 9/26/77

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. WE-7

DATE 9/23/77 SURFACE ELEV. 419.9 LOCATION N 472,565.39 E 1,905,500.45

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
45	PS-3 27"	76			23.2			
50	PS-4 27"	66	Stiff to very stiff red-brown fine sandy clayey silt with trace mica.		24.9 24.4 22.7			
55	PS-5 28"	66			26.8 24.9 24.0 22.1			W,C
60	PS-6 28"	42	Grading more brown		24.5 26.8 24.1			
65	PS-7 24"	32			30.0 24.5 25.3 21.4 30.0			
70	PS-8							
			French Drain consisting of Zone I and Zone II stone.	348.6				
75		54	Dense gray, tan and brown decomposed granodiorite rock friable to silt and coarse to fine sand. (Saprolite)	343.9	28.7			
80	PS-8A 25"	100 5"		337.4	26.1		W,G	
85		100 5"	(Decomposed Rock) Same as above but more dense.		26.6 21.2			
90	PS-9 3"							

COMPLETION DEPTH 101.25' Water Depth 55' Date 9/26/77

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. WE-7

DATE 9/23/77 SURFACE ELEV. 419.9 LOCATION N 472,565.39 E 1,905,500.45

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
90		PS-9 / 3"						
		100 / 3"			20.1			
95		100 / 4"	Becoming gray-brown and more dense with depth		17.1			
100		100 / 3"		318.6				
105			Note: Two Casagrande type piezometers were installed in this boring. WE7-P1 Elev. 325.6 WE7-P2 Elev. 347.1 Legend: PS-1 / 16" : 3" piston sample / 16" recovery					

COMPLETION DEPTH 101.25' Water Depth 55' Date 9/26/77

SAMPLER 2" O D SPLIT BARREL SAMPLER

LOG OF TEST PIT NO. TPW-1

DATE 10/16/75 SURFACE ELEV. 414.5 LOCATION N471, 965 E 1, 906, 031

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION
0			Uncontrolled fill and spoil materials*	
5				
10				
				403.5
			Tan, brown and black sandy silt to silty sand ** (Decomposed Rock)	
15				
19				397
			* This material to be removed prior to embankment construction	
			** Top of stratum ranges from 11 to 12.5 feet deep in test pit	

COMPLETION DEPTH 19 Water Depth None Date 10/16/75

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG OF TEST PIT NO. TPW-2

DATE 10/16/75 SURFACE ELEV. 414.9 LOCATION N 471, 949 E 1, 906, 029

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION
0			Red-Brown, yellow and tan sandy clayey silt with few rock fragments. (Sapprolite)	408.9
5			Tan, black and brown micaceous silty fine sand and sandy silt (Decomposed Rock)	400.9
10				
15			Green-gray and tan micaceous silt (Decomposed Rock)	400.0

COMPLETION DEPTH 14.9 Water Depth None Date 10/16/75

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG OF TEST PIT NO. TPW-3

DATE 10/16/75 SURFACE ELEV. 412.5 LOCATION N 971, 948 E 1, 906, 045

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION
0			Uncontrolled Fill *	410.00
5			Tan and black silty sand (Decomposed Rock)	405.5
10			Brown, Gray and Black micaceous sandy silt to silty sand (Decomposed Rock)	399.5
15			* To be removed prior to constructing embankment	

COMPLETION DEPTH 13.0 Water Depth None Date 10/16/75

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. Auger Boring F-1

DATE 9/18/75 SURFACE ELEV. _____ LOCATION Borrow Source F

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	% PASSING #200 SIEVE
0			RESIDUAL - Very stiff to hard dark red-brown silty clay					
5								
10					26.5			63
					23.9			37
15			TRANSITION - Dark red-brown micaceous clayey sandy silt grading from RESIDUAL TO SAPROLITE					
20					22.1			41
25					23.4			50
			SAPROLITE - Medium dense light red-brown micaceous sandy silt becoming variegated tan and gray-green below 30 feet ±		22.7			44
30								
					21.0			38
35								
40					20.1			31
45								

COMPLETION DEPTH 43.5 Water Depth -- Date 9/18/75

SAMPLER Auger Cuttings

LOG of BORING No. Auger Boring F-2

DATE 9/18/75 SURFACE ELEV. _____ LOCATION Borrow Source F

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	% PASSING #200 SIEVE
0								
5			RESIDUAL - Hard to very stiff red-brown clayey silt with sand becoming micaceous below 10'± grading to SAPROLITE					
10					27.4			61
15					26.1			51
20					27.6			43
25			SAPROLITE - Medium dense tan and pink micaceous sandy silt becoming variegated green-gray and tan sandy micaceous silt		25.4			48
30								
35					25.9			56
40					22.7			38
45								

COMPLETION DEPTH 43.5 Water Depth — Date 9/18/75

SAMPLER:

LOG of BORING No. Auger Boring F-3

DATE 9/18/75 SURFACE ELEV. _____ LOCATION Borrow Source F

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	% PASSING #200 SIEVE
0			RESIDUAL - Very stiff red-brown clayey silt becoming micaceous with depth and grading with fine sand					
5								
10								
15			TRANSITION Medium dense red-brown very fine sandy micaceous silt with trace of clay, grading from RESIDUAL to SAPROLITE		29.3			62
20					28.1			59
25			SAPROLITE - Medium dense tan to red-brown micaceous silty fine sand with trace medium sand becoming variegated gray to gray-green and tan with relic rock structure apparent		31.1			67
30								
35					30.7			64
40					30.5			63
45								

COMPLETION DEPTH 43.5 Water Depth -- Date 9/18/75

SAMPLER Auger Cuttings

LOG of BORING No. Auger Boring F-4

DATE 9/18/75 SURFACE ELEV. _____ LOCATION Borrow Source F

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	% PASSING #200 SIEVE
0			RESIDUAL - Hard to stiff red-brown clayey silt grading micaceous with depth					
5								
10								
15			SAPROLITE - Medium dense to dense red-brown slightly micaceous medium to fine sandy silt		29.2			78
20					23.4			
25					18.1			46
30			Grading to tan and more micaceous with depth		20.3			41
35					16.8			33
40					16.6			39
45								

COMPLETION DEPTH 43.5 Water Depth -- Date 9/18/76

SAMPLER Auger Cuttings

LOG of BORING No. F-5

Sheet 1 of 2

DATE 10/1/75 SURFACE ELEV. _____ LOCATION Borrow Source F

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION
0				
		21		
5		38	RESIDUAL - Stiff to hard dark red-brown sandy clayey silt with occasional tan silt seams and roots near the surface	
		57		
10		35		
		40		
15		25		
20		22	SAPROLITE - Medium dense light red-brown/red-brown micaceous sandy silt with trace clay. Relic rock structure apparent below 28 feet ±	
25		16		
30		20		
35		19		
40		24	SAPROLITE - Medium dense green-gray sandy silt and inclusion of pink micaceous sandy silt with occasional rock fragments	
45		24		

COMPLETION DEPTH 51' 6" Water Depth Dry Date 10/1/75

SAMPLER 3" O.D SPLIT BARREL SAMPLER

LOG of BORING No. F-5 (cont.)

Sheet 2 of 2

DATE 10/1/75 SURFACE ELEV. _____ LOCATION Borrow Source F

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION
45		24		
			Same as above	
50		31		
55				

COMPLETION DEPTH 51' 6" Water Depth Dry Date 10/1/75

SAMPLER: 3" O.D SPLIT BARREL SAMPLER

LOG of BORING No. F-6

Sheet 1 of 2

DATE 10/1/75 SURFACE ELEV. _____ LOCATION Borrow Source F

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION
0				
		44		
5		27	RESIDUAL - Very stiff to hard dark red-brown silty clay	
		33		
10		28	becoming	
		26	micaceous clayey sandy silt below 10 feet ±	
15		13		
			Transition from RESIDUAL to SAPROLITE	
20		22		
25		11		
30		18	SAPROLITE - Medium dense light red-brown micaceous sandy silt	
35		16	becoming	
			variegated tan and gray-green below 28 feet ±	
40		18		
45		17		

COMPLETION DEPTH 51' 6" Water Depth Dry Date 10/1/75

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. F-6 (cont.)

Sheet 2 of 2

DATE 10/1/75 SURFACE ELEV. _____ LOCATION Borrow Source F

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION
45		17		
50		31	Medium dense gray-yellow micaceous silt with decomposed rock fragments	
55				

COMPLETION DEPTH 51' 6" Water Depth Dry Date 10/1/75

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. F-7

DATE 9/30/75 SURFACE ELEV. _____ LOCATION Borrow Source F

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			RESIDUAL - [illegible] red-brown micaceous silty clay with trace sand					
		20	SAPROLITE - Medium dense red-brown micaceous silt with trace to little clay and fine sand					
5		16						
		20			30.1	53	45	G,M C,T X
10		21	SAPROLITE - Medium dense red-brown micaceous fine sandy silt					
		19	becoming					
15		23	decomposed rock					
20			Auger refusal at 18' Offset boring 10' NW to drill Boring F-7A					

COMPLETION DEPTH 18' Water Depth dry Date 9/30/75

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. F-7A

DATE 9/30/75 SURFACE ELEV. _____ LOCATION Borrow Source F

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0								
5								
10			Augered to 20' See log of F-7 for soil description					
15								
20		19						
25		25	SAPROLITE - Medium dense tan micaceous silt with some sand		20.8			G,M C,T X
30		20	becoming variegated tan, pink and brown micaceous sandy silt					
35		25						
40		77	Very dense buff-white silty sand (decomposed rock)					
			Auger refusal at 41' 6"					
45								

COMPLETION DEPTH 41' 6" Water Depth dry Date 9/30/75

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. F-8

DATE 10/1-2/75 SURFACE ELEV. _____ LOCATION Borrow Source F

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION
0				
		45	RESIDUAL - Very stiff red-brown micaceous silty clay with trace sand	
5		49		
		29		
10		30	SAPROLITE - Medium dense red-brown micaceous sandy silt with trace clay	
		24		
15		20		
20		17		
25		24	SAPROLITE - Medium dense red-brown and gray micaceous sandy silt becoming green-gray with more sand	
30		31		
35		24		
40		16		
45		22	SAPROLITE - Medium dense tan and brown micaceous sandy silt	

COMPLETION DEPTH 46'6" Water Depth dry Date 10/2/75

SAMPLER: 2" O.D SPLIT BARREL SAMPLER

LOG of BORING No. F-9

Sheet 1 of 2

DATE 10/1/75 SURFACE ELEV. _____ LOCATION Borrow Source F

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION
0				
		66		
5		31		
		53	RESIDUAL - Hard to very stiff red-brown clayey silt with sand becoming micaceous below approximately 8 feet becoming less stiff with depth and more sandy Grading to SAPROLITE	
10		36		
		37		
15		16		
20		15		
25		13	SAPROLITE - Medium dense tan and pink micaceous sandy silt	
30		20		
35		16		
40		19	SAPROLITE - Medium dense variegated green-gray and tan sandy micaceous silt	
45		18		

COMPLETION DEPTH 51'6" Water Depth dry Date 10/1/75

SAMPLER: 2" O.D SPLIT BARREL SAMPLER

LOG of BORING No. F-9 (cont.)

Sheet 2 of 2

DATE 10/1/75 SURFACE ELEV. _____ LOCATION Borrow Source F

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION
45		18	Same as above	
50		25		
55				

COMPLETION DEPTH 51'6" Water Depth dry Date 10/1/75

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. F-10

DATE 9/30/75 SURFACE ELEV. _____ LOCATION Borrow Source F

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION
0		48	RESIDUAL - Very stiff red-brown micaceous clayey sandy silt	
5		31		
		29	Medium dense red-brown to tan micaceous silt with trace fine sand. (Transition from RESIDUAL to SAPROLITE)	
10		28		
		24		
15		17	SAPROLITE - Medium dense red-brown and tan micaceous silt	
20		20	SAPROLITE - Medium dense tan micaceous sandy silt with relic rock structure apparent	
25		19		
30		24		
35		31		
40		28		
45		31		

COMPLETION DEPTH 46'6" Water Depth dry Date 9/30/75

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. F-11

DATE 10/2/75 SURFACE ELEV. _____ LOCATION Borrow Source F

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0								
		51	RESIDUAL - Very stiff red-brown sandy clayey silt					
5		51	becoming					
		34	micaceous with depth		23.6			M
10		38						
		18	Medium dense red-brown and yellow-tan micaceous silt with trace fine sand. (Transition from RESIDUAL to SAPROLITE)					
15		28						
20		19						
25		19	SAPROLITE - Medium dense variegated tan, red-brown and white micaceous sandy silt					
			becoming					
30		20	yellow-green/gray micaceous silt		26.4			M
35		23						
40		22	SAPROLITE - Medium dense tan and gray micaceous sandy silt					
45		24						

COMPLETION DEPTH 46' 6" Water Depth dry Date 10/2/75

SAMPLER: 2" O.D SPLIT BARREL SAMPLER

LOG of BORING No. F-12

Sheet 1 of 2

DATE 10/1/75 SURFACE ELEV. _____ LOCATION Borrow Source F

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION
0				
		56	RESIDUAL - Very stiff red-brown clayey silt	
5		60	becoming	
		60	micaceous and sandy with depth	
10		24	RESIDUAL - Medium dense red-brown very fine sandy micaceous silt with trace clay	
		30		
15		21	Grading more micaceous with depth	
			Grading to SAPROLITE	
20		13		
25		14		
30		20	SAPROLITE - Medium dense tan to red-brown micaceous silty fine sand with trace medium sand	
			becoming	
35		13	gray to gray-green and tan with relic rock structure apparent.	
40		21		
45		21		

COMPLETION DEPTH 51'6" Water Depth dry Date 10/1/75

SAMPLER: 2" O.D SPLIT BARREL SAMPLER

LOG of BORING No. F-12 (cont.)

Sheet 2 of 2

DATE 10/1/75 SURFACE ELEV. _____ LOCATION Borrow Source F

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION
45		21	Same as above	
50		15		
55				

COMPLETION DEPTH 51'6" Water Depth dry Date 10/1/75

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. F-13

Sheet 1 of 2

DATE 9/30/75 SURFACE ELEV. _____ LOCATION Borrow Source F

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0		26	RESIDUAL - Stiff red-brown clayey silt with little mica					
5		24						
		24						
10		17	Medium stiff/dense red-brown to tan clayey silt/fine sandy silt with mica. Grading from RESIDUAL to SAPROLITE		22.0	43	41	G,M X
		18						
15		13						
20		28	SAPROLITE - Medium dense to dense tan to red-brown micaceous very sandy silt					
25		16						
30		24						
35		19	SAPROLITE - Medium dense to dense tan, red-brown to gray micaceous fine sandy silt with relic rock structure apparent Grading more gray/white and coarser sand with depth					
40		25						
45		18						

COMPLETION DEPTH 51' 6" Water Depth dry Date 9/30/75

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. F-13 (cont.)

Sheet 2 of 2

DATE 9/30/75 SURFACE ELEV. _____ LOCATION Borrow Source F

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
45		18						
			Same as above					
50		33						
55								

COMPLETION DEPTH 51' 6" Water Depth dry Date 9/30/75

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. F-14

DATE 10/2/75 SURFACE ELEV. _____ LOCATION Borrow Source F

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION
0				
		13	RESIDUAL - Moderately stiff red-brown clayey silt with trace of fine sand and mica	
5		11		
		16	RESIDUAL - Medium dense to dense micaceous very fine sandy silt	
10		10		
		19		
15		11	Grading to SAPROLITE	
20		15		
			SAPROLITE - Medium dense yellow-green, gray, white and tan micaceous medium to fine sandy silt	
25		13		
30		21	Grading more sandy with depth	
			Relic rock structure more apparent with depth	
35		15		
40		24		
45		14		

COMPLETION DEPTH 46'6" Water Depth dry Date 10/2/75

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. F-15

Sheet 1 of 2

DATE 9/30/75 SURFACE ELEV. _____ LOCATION Borrow Source F

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0								
		49	RESIDUAL - Hard to stiff red-brown clayey silt grading micaceous with depth					
5		26						
		24						
10		25			23.4	47	36	M,X
		16						
15		19						
20		14	SAPROLITE - Medium dense to dense red-brown slightly micaceous medium to fine sandy silt					
25		24	Grading to tan and more micaceous with depth					
30		25						
35		23						
40		24			25.7			G,M T,X
			SAPROLITE - Dense variegated tan/gray medium to fine sandy silt with rock fragments. Relic rock structure apparent.					
45		27						

COMPLETION DEPTH 51' 6" Water Depth dry Date 9/30/75

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. F-15 (cont.)

Sheet 2 of 2

DATE 9/30/75 SURFACE ELEV. _____ LOCATION Borrow Source F

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
45		27						
			Same as above					
50		28						
55								

COMPLETION DEPTH 51' 6" Water Depth dry Date 9/30/75

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. F-16

Sheet 1 of 2

DATE 9/30/75 SURFACE ELEV. ____ LOCATION Borrow Source F

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION
0				
		53	RESIDUAL - Very stiff red-brown clayey silt with little mica	
5		32		
		36		
10		18	RESIDUAL - Stiff/dense red-brown clayey medium to fine sandy silt with little mica	
		18	SAPROLITE - Medium dense to dense tan micaceous fine sandy silt	
15		16		
20		21		
25		14		
30		28	Grading more sandy with depth	
35		28	Relic rock structure more apparent with depth	
40		25		
45		31		

COMPLETION DEPTH 51'6" Water Depth dry Date 9/30/75

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. F-16 (cont.)

Sheet 2 of 2

DATE 9/30/75 SURFACE ELEV. ____ LOCATION Borrow Source F

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION
45		31		
			Same as above	
50		32		
55				

COMPLETION DEPTH 51'6" Water Depth dry Date 9/30/75

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. TBG-2

Sheet 1 of 2

DATE 2/11/76 SURFACE ELEV. 418.8 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			RESIDUAL - Very stiff to hard dark red brown with tan mottling, sandy clayey silt					
5		47						
10		28		406.8				
15		20	SAPROLITE - Medium dense red-brown micaceous silty fine sand becoming more silty with depth becoming variegated with tan below 20 feet ±					M
20		26						M
25		26						
30		18						M
35		17						
40		14						M
45		14						

COMPLETION DEPTH 51.5' Water Depth N/A Date 2/11/76

SAMPLER 2" O.D SPLIT BARREL SAMPLER

LOG of BORING No. TBG-2 (cont.)

Sheet 2 of 2

DATE 2/11/76 SURFACE ELEV. 418.8 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
45		14	SAPROLITE - Medium dense gray-green micaceous sandy silt					
50		22		367.6				
55								

COMPLETION DEPTH 51.5' Water Depth N/A Date 2/11/76

SAMPLER 2" O.D SPLIT BARREL SAMPLER

LOG of BORING No. TBG-3

Sheet 1 of 2

DATE 2/11/76 SURFACE ELEV. 418.81 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			RESIDUAL - Stiff to very stiff red-brown silty clay/clayey silt, trace mica and fine sand					
5		18				51	27	
10		23						
				407.3				
			TRANSITION- Very dense red-brown micaceous clayey silt variegated with tan					
15		29						
				401.8		60	41	M
20		17	SAPROLITE - Medium dense red brown micaceous silty fine sand becoming more silty with depth becoming variegated tan and brown below 25 feet ±					
25		14				50	45	M
30		11						
35		12						
40		13						
			SAPROLITE - Medium dense gray micaceous sandy silt				M	
45		17						M

COMPLETION DEPTH 51.5' Water Depth N/A Date 2/11/76

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. TBG-3 (cont.)

Sheet 2 of 2

DATE 2/11/76 SURFACE ELEV. 418.81 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
45		17						
50		18	Same as above					M
				367.3				
55								

COMPLETION DEPTH 51.5' Water Depth N/A Date 2/11/76

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. TBG-5

Sheet 1 of 2

DATE 2/9/76 SURFACE ELEV. 434.21 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			RESIDUAL - Stiff dark red-brown fine sandy clayey silt, trace mica					
5		17			24.9	50	36	
10		19				54	32	
				421.2				
			TRANSITION - Very dense red-brown, with tan mottling, fine sandy silt, trace mica					
15		32		417.2				
20		28	SAPROLITE - Medium dense red-brown micaceous sandy silt becoming variegated tan and gray below 30 feet ±					
		BAG						
25		19						M
								M
30		16						
35		18						
		BAG						M
40		18	SAPROLITE - Medium dense light tan/ gray-white fine to medium silty sand					
45		16						

COMPLETION DEPTH 51.5' Water Depth N/A Date 2/9/76

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. TBG-5 (cont.)

Sheet 2 of 2

DATE 2/9/76 SURFACE ELEV. 424.21 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
45		16						
		BAG	Same as above					M
50		21		382.7				
55								

COMPLETION DEPTH 51.5' Water Depth N/A Date 2/9/76

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. TBG-7

Sheet 1 of 2

DATE 2/9/76 SURFACE ELEV. 397.69 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			RESIDUAL - Very stiff to hard dark red-brown silty clay/ clayey silt, trace coarse to fine sand					
5		40						
10		26		385.7				
			TRANSITION- Medium dense red-brown micaceous fine sandy silt variegated with tan					
15		16		380.7		44	42	M
			SAPROLITE - Medium dense red-brown micaceous sandy silt becoming variegated with tan below 30 feet ±					
20		13						
25		14						
30		18						
35		16						
40		21						
		BAG	SAPROLITE - Medium dense red-brown micaceous sandy silt becoming variegated tan and white below 40 feet ±					M
45		21						

COMPLETION DEPTH 51.5' Water Depth N/A Date 2/9/76

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. TBG-7 (cont.)

Sheet 2 of 2

DATE 2/9/76 SURFACE ELEV. 397.69 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
45		21	Same as above					
50		16		346.2				
55								

COMPLETION DEPTH 51.5' Water Depth N/A Date 2/9/76

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. TBG-8

Sheet 1 of 2

DATE 2/10/76 SURFACE ELEV. 438.75 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			RESIDUAL - Very stiff dark red-brown silty clay becoming micaceous clayey sandy silt below 5 feet ±					
5		46			28.2	65	33	M
				429.8				
10		30	SAPROLITE - Medium dense red-brown micaceous sandy silt becoming variegated with tan below 10 feet ±					
15		23			27.3			M
20		13						
25		16						
30		17						
35		18			22.3 37.1	35 66	27 54	M M
40		25	SAPROLITE - Medium dense red-brown fine to medium micaceous sandy silt					
45		27						

COMPLETION DEPTH 51.5' Water Depth N/A Date 2/10/76

SAMPLER 3" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. TBG-8 (cont.)

Sheet 2 of 2

DATE 2/10/76 SURFACE ELEV. 438.75 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
45		27	SAPROLITE - Medium dense red-brown micaceous sandy silt variagated with tan					
50		21		387.3				
55								

COMPLETION DEPTH 51.5' Water Depth N/A Date 2/10/76

SAMPLER 3" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. TBG-10

Sheet 1 of 2

DATE 2/10/76 SURFACE ELEV. 431.55 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0								
5		23	RESIDUAL - Very stiff dark red-brown fine sandy silty clay/clayey silt, trace mica		22.5	51	28	
10		30						
				418.6				
15		22	SAPROLITE - Medium dense dark red-brown micaceous sandy silt		20.3	45	36	
20		15	becoming					
25		18	more silty and variegated with tan below 20 feet ±					
30		16						
35		32			23.9	20	NP	M
40		22	SAPROLITE - Medium dense gray-green micaceous sandy silt					
45		24						

COMPLETION DEPTH 51.5' Water Depth N/A Date 2/10/76

SAMPLER: 2" O.D SPLIT BARREL SAMPLER

LOG of BORING No. TBG-10 (cont.)

Sheet 2 of 2

DATE 2/10/76 SURFACE ELEV. 431.55 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
45		24	Same as above					
50		23						
				380.1				
55								

COMPLETION DEPTH 51.5' Water Depth N/A Date 2/10/76

SAMPLER: 2" O.D SPLIT BARREL SAMPLER

LOG of BORING No. TBG-12

Sheet 1 of 2

DATE 2/9/76 SURFACE ELEV. 434.75 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			RESIDUAL - Very stiff to hard dark red-brown silty clay/ clayey silt, trace fine sand and mica					
5		52						
10		23		423.8				
			SAPROLITE - Medium dense red-brown micaceous fine sandy silt					
15		20				66	60	M
			becoming					
20		21	more micaceous and variegated with tan below 18 feet ±					
25		16			22.9			M
30		18			26.3	44	NP	M
		BAG						
35		18						
40		16						
		BAG						M
45		21						

COMPLETION DEPTH 51.5' Water Depth N/A Date 2/9/76

SAMPLER: 2" O.D SPLIT BARREL SAMPLER

LOG of BORING No. TBG-12 (cont.)

Sheet 2 of 2

DATE 2/9/76 SURFACE ELEV. 434.75 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
45		21						
			Same as above					
50		19		383.3				
55								

COMPLETION DEPTH 51.5' Water Depth N/A Date 2/9/76

SAMPLER 2 O.D SPLIT BARREL SAMPLER

LOG of BORING No. TBG-14

Sheet 1 of 2

DATE 2/10/76 SURFACE ELEV. 403.59 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			RESIDUAL - Stiff dark red-brown clayey silt, trace to little coarse to fine sand, trace mica					
5		19						
				394.6				
10		15	SAPROLITE - Medium dense red-brown micaceous fine sandy silt			35	NP	
15		12	becoming					
20		10	variegated with tan below 25 feet ±			52	42	M
25		11						
30		14						
35		15						
40		22	SAPROLITE - Medium dense light brown micaceous very fine sand					M,G
45		27						

COMPLETION DEPTH 51.5' Water Depth N/A Date 2/10/76

SAMPLER: 2" O.D SPLIT BARREL SAMPLER

LOG of BORING No. TBG-14 (cont.)

Sheet 2 of 2

DATE 2/10/76 SURFACE ELEV. 403.59 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
45		27	Grading more gray/white and more fine sand with depth					
50		43						
				352.1				
55								

COMPLETION DEPTH 51.5' Water Depth N/A Date 2/10/76

SAMPLER: 2" O.D SPLIT BARREL SAMPLER

LOG of BORING No. TBG-15

Sheet 1 of 2

DATE 2/10/76 SURFACE ELEV. 419.61 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			RESIDUAL - Very stiff dark red-brown clayey silt, trace fine sand					
5		26	becoming			53	41	
			micaceous fine sandy clayey silt					
10		26		406.6				
			SAPROLITE - Medium dense red-brown micaceous fine sandy silt					
15		18						M
20		18	becoming					M
		BAG	variegated tan and brown below 17 feet ±					
25		16						M
30		16						
35		23						M,G
		BAG						
40		20						M
45		33						

COMPLETION DEPTH 51.5' Water Depth N/A Date 2/10/76

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. TBG-15 (cont.)

Sheet 2 of 2

DATE 2/10/76 SURFACE ELEV. 419.61 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
45		33	Same as above					
50		23		368.1				
55								

COMPLETION DEPTH 51.5' Water Depth N/A Date 2/10/76

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. TBG-16

Sheet 1 of 2

DATE 2/10/76 SURFACE ELEV. 394.61 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			RESIDUAL - Medium dense red-brown fine sandy clayey silt, trace of mica					
5		14						
		BAG						M
				385.6				
10		14	SAPROLITE - Medium dense to dense red-brown micaceous fine sandy silt					
			becoming					
15		13	variegated with tan below 15 feet ±					
20		11						
			SAPROLITE - Medium dense to dense light gray micaceous fine sandy silt					
25		18						
			becoming					
		BAG	variegated tan and white below 25 feet ±					
30		14						M
			SAPROLITE - Medium dense to dense green-yellow micaceous sandy silt					
35		21						
40		24						
			Grading to decomposed rock					
45		30						

COMPLETION DEPTH 51.5' Water Depth N/A Date 2/10/76

SAMPLER: 2" O.D SPLIT BARREL SAMPLER

LOG of BORING No. TBG-16 (cont.)

Sheet 2 of 2

DATE 2/10/76 SURFACE ELEV. 394.61 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
45		30						
50		66	Decomposed rock at 50 feet ±					
				343.1				
55								

COMPLETION DEPTH 51.5' Water Depth N/A Date 2/10/76

SAMPLER: 2" O.D SPLIT BARREL SAMPLER

LOG of BORING No. TBG-17

DATE 2/10/76 SURFACE ELEV. 367.97 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			RESIDUAL - Stiff dark red-brown clayey silt with trace of mica					
5		21		350.0	25.9	48	33	
			TRANSITION - Medium dense red-brown to tan clayey silt/fine sandy silt with mica, grading from RESIDUAL to SAPROLITE	346.0				
10		10						
15		20	SAPROLITE - Medium dense to dense gray-green micaceous fine sandy silt					M
20		15	Grading with more gray/white and with coarser sand below 30 feet ±					
25		15						
30		14						
35		24						
		BAG						
40		22	Grading to decomposed rock					M
				324.0				
45		70	Decomposed rock	321.5				

COMPLETION DEPTH 46.5' Water Depth N/A Date 2/10/76

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. TBG-19

Sheet 1 of 2

DATE 2/11/76 SURFACE ELEV. 410.71 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0			RESIDUAL - Stiff red-brown silty clay with little fine sand and trace of mica					
5		23		402.7				
10		15	SAPROLITE - Medium dense red-brown micaceous fine sandy silt					
15		12	becoming					
			variegated tan and brown below 22 feet ±					
20		13						
25		12						
30		15						
			SAPROLITE - Medium dense light gray micaceous fine sandy silt					
35		18	becoming					
			variegated black and white below 42 feet ±					
40		13						
45		15						

COMPLETION DEPTH 51.5' Water Depth N/A Date 2/11/76

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. TBG-19 (cont.)

Sheet 2 of 2

DATE 2/11/76 SURFACE ELEV. 410.71 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
45		15						
			Same as above					
50		19						
				369.2				
55								

COMPLETION DEPTH 51.5' Water Depth N/A Date 2/11/76

SAMPLER: 2" O.D SPLIT BARREL SAMPLER

LOG of BORING No. TBG-20

Sheet 1 of 2

DATE 2/11/76 SURFACE ELEV. 392.11 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0								
5		24	RESIDUAL - Stiff to very stiff dark red-brown fine sandy clayey silt with trace of mica		23.4	53	31	
				382.1				
10		33	TRANSITION -Very stiff red-brown micaceous fine sandy silt, grading from RESIDUAL to SAPROLITE		29.8	69	44	
				378.1				
15		27	SAPROLITE - Medium dense to dense red-brown micaceous very fine sandy silt					
20		16						
25		20						
30		25	Grading more gray-green and finer sand with depth					M
35		14						
40		15						M
45		20						

COMPLETION DEPTH 51.5' Water Depth N/A Date 2/11/76

SAMPLER: 2" O.D SPLIT BARREL SAMPLER

LOG of BORING No. TBG-20 (cont.)

Sheet 2 of 2

DATE 2/11/76 SURFACE ELEV. 392.11 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
45		20						
			Same as above					
50		16		340.6				
55								

COMPLETION DEPTH 51.5' Water Depth N/A Date 2/11/76

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. TBG-23

Sheet 1 of 2

DATE 2/11/76 SURFACE ELEV. 441.85 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
0								
			RESIDUAL - Moderately stiff to stiff dark red-brown fine sandy silty clay					
5		13			25.2	53	23	
10		23		429.9	28.2	59	37	
			TRANSITION - Very stiff red-brown micaceous fine sandy silt, grading from RESIDUAL to SAPROLITE					
15		38		423.9				
			SAPROLITE - Medium dense to dense red-brown micaceous fine sandy silt					
20		22						
			becoming					
25		15	variegated tan and brown below 25 feet ±		34.0	50	51	M
30		20						
35		16						M
40		18	Grading more yellow-brown and more mica with depth					
45		14						

COMPLETION DEPTH 51.5' Water Depth N/A Date 2/11/76

SAMPLER 2" O.D. SPLIT BARREL SAMPLER

LOG of BORING No. TBG-23 (cont.)

Sheet 2 of 2

DATE 2/11/76 SURFACE ELEV. 441.85 LOCATION

DEPTH, FEET	SAMPLES	SAMPLING RESISTANCE	DESCRIPTION	ELEVATION	WATER CONTENT, %	LIQUID LIMIT, %	PLASTIC LIMIT, %	OTHER TESTS
45		14						
			Same as above					
50		12		390.4				
55								

COMPLETION DEPTH 51.5' Water Depth N/A Date 2/11/76

SAMPLER: 2" O.D. SPLIT BARREL SAMPLER

LOG of Test Pit No. TPG-4

DATE 2/11/76 SURFACE ELEV. 434.65 LOCATION

DEPTH, FEET	SAMPLES	BLOWS PER INCHES	DESCRIPTION	Elevation		Liquid Limit, %	Plastic Limit, %	Other Tests
0								
5		BAG	RESIDUAL - Stiff dark red-brown fine sandy clayey silt, trace mica			56	38	M,X G
10				421.7				
15								

COMPLETION DEPTH 13.0' WATER DEPTH N/A DATE 2/11/76

LOG of Test Pit No. TPG-9

DATE 2/11/76 SURFACE ELEV. 428.15 LOCATION

DEPTH, FEET	SAMPLES	BLOWS PER INCHES	DESCRIPTION	Elevation		Liquid Limit, %	Plastic Limit, %	Other Tests
0								
5			RESIDUAL - Stiff to very stiff red-brown silty clay/clayey silt, trace mica and fine sand					
				419.2				
10		BAG	TRANSITION - Very dense red-brown micaceous clayey silt variegated with tan			53	31	M,X G
				415.2				
15								

COMPLETION DEPTH 13.0' WATER DEPTH N/A DATE 2/11/76

LOG of Test Pit No. TPG-11

DATE 2/11/76 SURFACE ELEV. 414.35 LOCATION

DEPTH, FEET	SAMPLES	BLOWS PER INCHES	DESCRIPTION	Elevation		Liquid Limit, %	Plastic Limit, %	Other Tests
0								
5			RESIDUAL - Very stiff to hard dark red-brown sandy clayey silt					
10		BAG				52	38	M,X G
				402.4				
15								

COMPLETION DEPTH 12.0' WATER DEPTH N/A DATE 2/11/76

LOG of Test Pit No. TPG-18

DATE 2/11/76 SURFACE ELEV. 409.61 LOCATION

DEPTH, FEET	SAMPLES	BLOWS PER INCHES	DESCRIPTION	Elevation		Liquid Limit, %	Plastic Limit, %	Other Tests
0								
5			RESIDUAL - Stiff red-brown silty clay with little fine sand and trace of mica					
10		BAG				57	41	M,X G
				397.6				
15								

COMPLETION DEPTH 12.0' WATER DEPTH N/A DATE 2/11/76

LOG of Test Pit No. TPG-21

DATE 2/11/76 SURFACE ELEV. 390.81 LOCATION

DEPTH, FEET	SAMPLES	BLOWS PER INCHES	DESCRIPTION	Elevation		Liquid Limit, %	Plastic Limit, %	Other Tests
0								
5			RESIDUAL - Stiff to very stiff dark red-brown fine sandy clayey silt with trace of mica					
				380.8				
10		BAG	SAPROLITE - Medium dense to dense red-brown micaceous very fine sandy silt			NP	NP	M,X G
				377.8				
15								

COMPLETION DEPTH 13.0' WATER DEPTH N/A DATE 2/11/76

LOG of Test Pit No. TPG-22

DATE 2/11/76 SURFACE ELEV. 401.21 LOCATION

DEPTH, FEET	SAMPLES	BLOWS PER INCHES	DESCRIPTION	Elevation		Liquid Limit, %	Plastic Limit, %	Other Tests
0								
5			RESIDUAL - Stiff dark red-brown clayey silt, trace to little coarse to fine sand, trace mica					
10		BAG				NP	NP	M,X G
				389.2				
15								

COMPLETION DEPTH 12.0' WATER DEPTH N/A DATE 2/11/76

LOG of Test Pit No. TPG-24

DATE 2/11/76 SURFACE ELEV. 444.11 LOCATION

DEPTH, FEET	SAMPLES	BLOWS PER INCHES	DESCRIPTION	Elevation		Liquid Limit, %	Plastic Limit, %	Other Tests
0								
5			RESIDUAL - Moderately stiff to stiff dark red-brown fine sandy silty clay					
10				432.1				
		BAG	TRANSITION - Very stiff red-brown micaceous fine sandy silt			52	34	M,X G
15				429.1				

COMPLETION DEPTH 15.0' WATER DEPTH N/A DATE 2/11/76

LOG of Test Pit No. TPG-25

DATE 2/11/76 SURFACE ELEV. 432.65 LOCATION

DEPTH, FEET	SAMPLES	BLOWS PER INCHES	DESCRIPTION	Elevation		Liquid Limit, %	Plastic Limit, %	Other Tests
0								
5			RESIDUAL - Very stiff dark red-brown fine sandy silty clay/ clayey silt, trace mica					
10								
		BAG				46	33	M,X G
15				417.7				

COMPLETION DEPTH 15.0' WATER DEPTH N/A DATE 2/11/76