APPENDIX 2F

GEOTECHNICAL REPORT - REACTOR BORINGS. JULY 1974

The information contained in this appendix was not revised, but has been extracted from the original FSAR and is provided for historical information.

GEOTECHNICAL REPORT

REACTOR BORINGS

SEABROOK STATION, NEW HAMPSHIRE

Submitted to

YANKEE ATOMIC ELECTRIC CO.

GEOTECHNICAL ENGINEERS INC.
1017 Main Street
Winchester, Massachusetts 01890

July 31, 1974

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1.0 INTRODUCTION

1.1 Purpose

An excavation approximately 150 feet in diameter and 70 feet deep will be required for each of the two proposed reactors at Seabrook Station.

To design the side slopes of the excavation and to estimate the quantity of excavation, it is necessary to determine the frequency and orientation of fractures in the rock. For this purpose inclined borings were made around the perimeter of each of the two proposed excavations. The core was oriented and the orientation of joints, slickensided surfaces, and foliation was determined.

1.2 Scope

Four inclined borings were made around the perimeter of each proposed reactor excavation. The borings ranged in length from 165 to 169 feet, and in inclination from 39° to 41.5°, measured from vertical. (The bottom of a 165-foot-long boring inclined at 40° is at a vertical difference in elevation of 126 feet below the ground surface.)

2.4 Orientation Data

Core was oriented from near the rock surface to the bottom of the hole, with three exceptions: Boring E2-11 in which orientation starts at 63 ft (inclined length) below the rock surface; Boring E2-17 in which orientation terminates at 65 ft (inclined length) in a borehole that was 165 ft long; and Boring E2-15 in which orientation terminates at 42 ft (inclined length) in a borehole that was 165 ft long.

Appendix II is a summary of all the orientation data, and Appendix III contains polar equal area stereo net projections for the features oriente in each borehole.

Fig. 1 is a plot of generalized dip and strike data for joints in each of the borings.

Fig. 2 is a plot of generalized dip and strike data for foliation. As shown on the individual boring logs in Appendix I, the rock at the two reactor sites does not exhibit much foliation.

Fig. 3 is a plot of generalized dip and strike data for slickensided surfaces.

Fig. 4 is a contoured plot of the projections of poles for 230 joints measured in the core from borings at Reactor 1; Fig. 5 is a contoured plot of the projections of poles for 93 joints in Reactor 2; and Fig. 6 is a contoured plot of the projections of poles for 114 slickensided surfaces in Reactor 2.

Fig. 4 shows that there are two dominant sets of fracture surfaces at Reactor No. 1 with strikes and dips roughly as follows (listed in order of decreasing frequency of occurrence):

N30E, 40NW
N40E, 60SE

Figs. 5 and 6 show that there are three dominant sets of fracture surfaces at Reactor No. 2, with strikes and dips roughly as follows (listed in order of decreasing frequency of occurrence):

N30E, 30 NW
N45E, 55SE
N15W, 60 SW

Revised August 5, 1974

TABLES

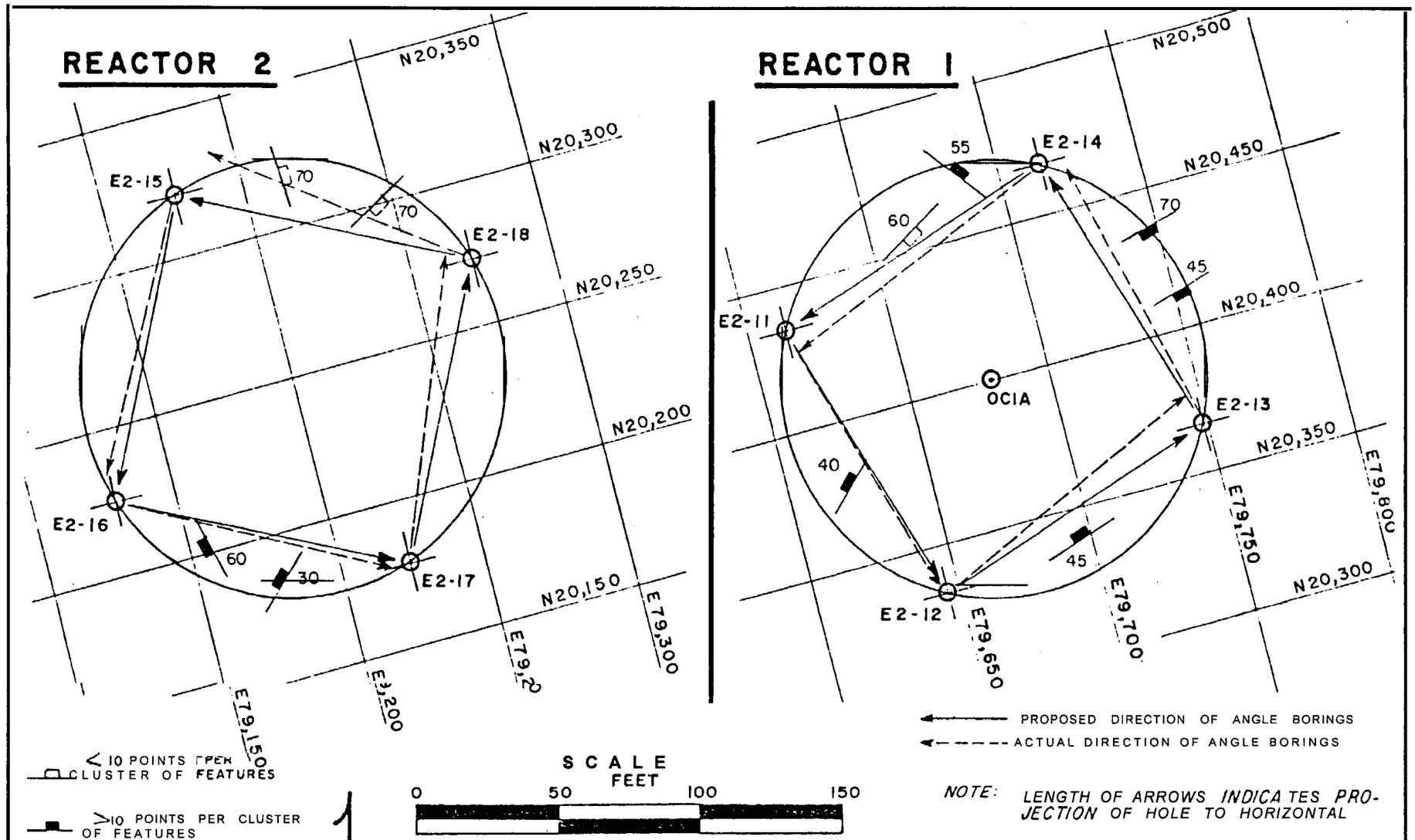
TABLE 1

ZONES ORIENTED IN REACTOR BORINGS

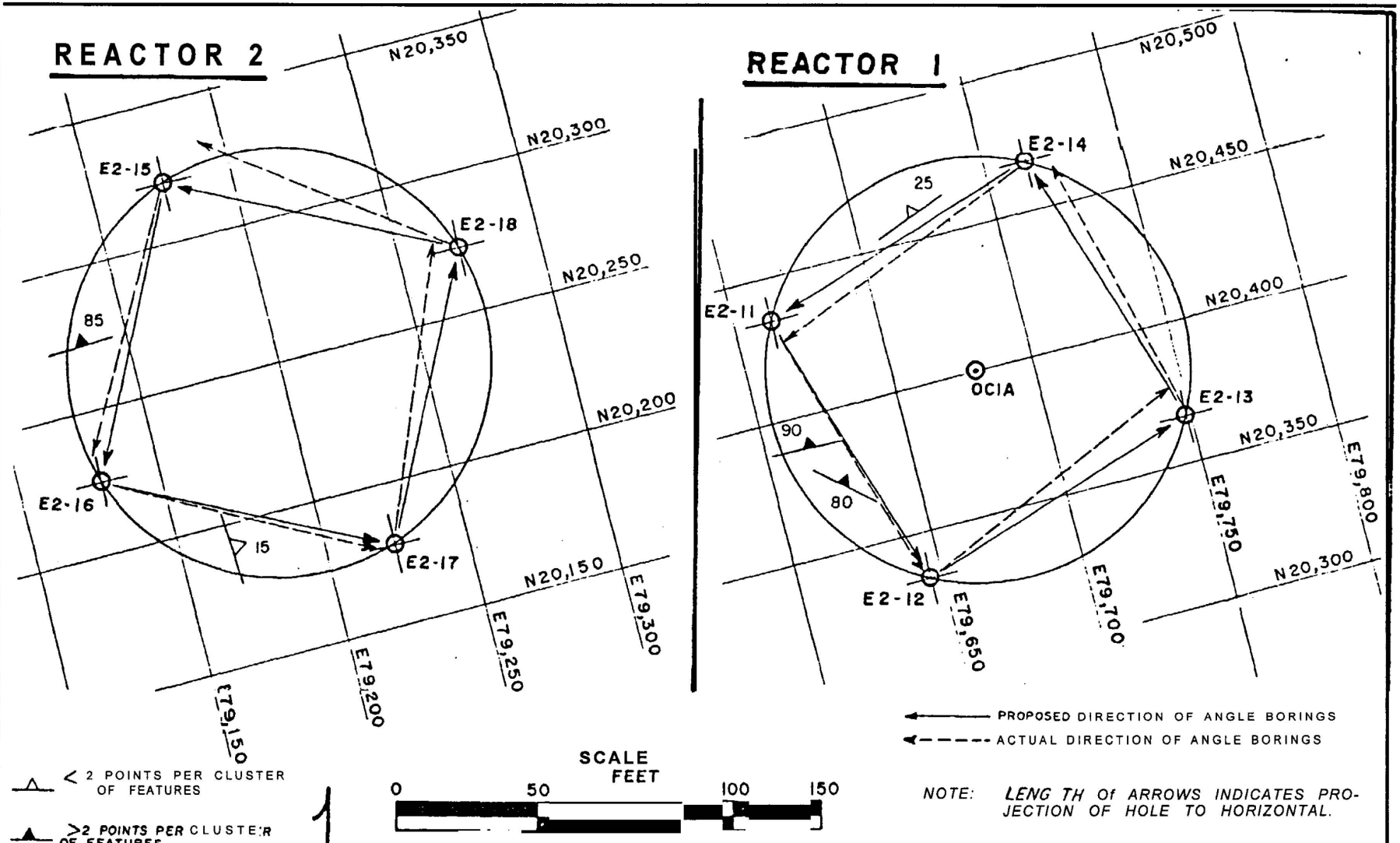
Reactor No.	Boring No.	Length of Boring* (feet)	Inclination of Boring Measured From Vertical	Length Oriented* (feet)	Vertical Depth to Top of Rock (feet)
1	E2-11	168.0	40°	63-168	13.5
1	E2-12	165.7	41°	13.8-165.7	0.7
1	E2-13	169.0	41°	22-169	0.0
1	E2-14	166.0	41.5°	11-166	2.2
2	E2-15	165.0	41.5°	13.5-42	8.6
2	E2-16	165.1	41°	18-165	7.1
2	E2-17	165.0	41°	22-65	14.3
2	E2-18	168.0	39°	15.5-168	10.8

*Measured along inclined axis of borehole.

FIGURES



YAN K EE ATOMIC	SEABROOK STATION	PLAN OF REACTOR SITES
GEOTECHNICAL ENGINEERS, INC.		SHOWING GENERALIZED DIP & STRIKE OF JOINTS
WINCHESTER, MASSACHUSETTS	PROJECT 7206	JULY 1974 FIG. I



< 2 POINTS PER CLUSTER OF FEATURES

>2 POINTS PER CLUSTER OF FEATURES

OVERCORE BORING

ANGLE BORING

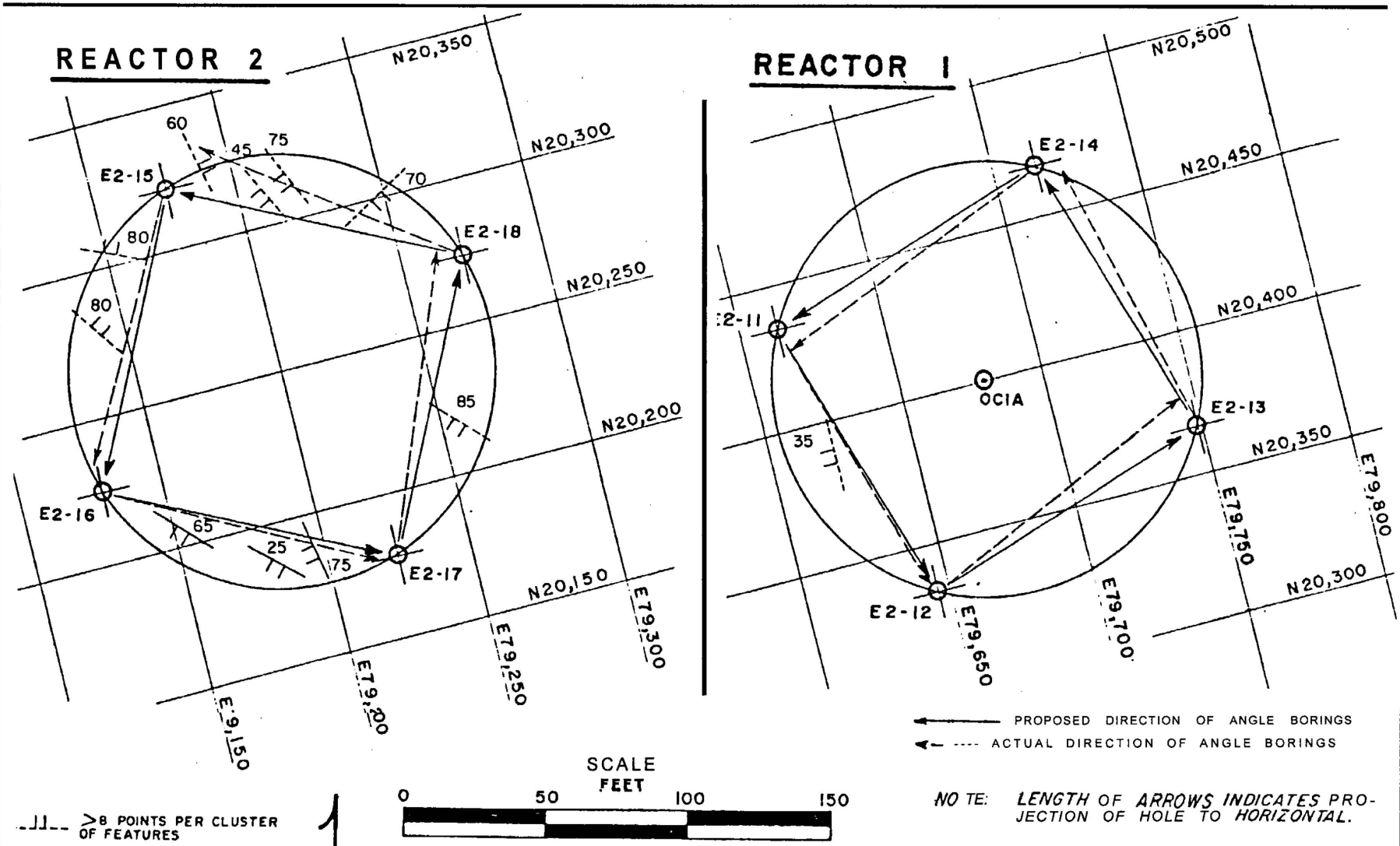
N

SCALE FEET

0 50 100 150

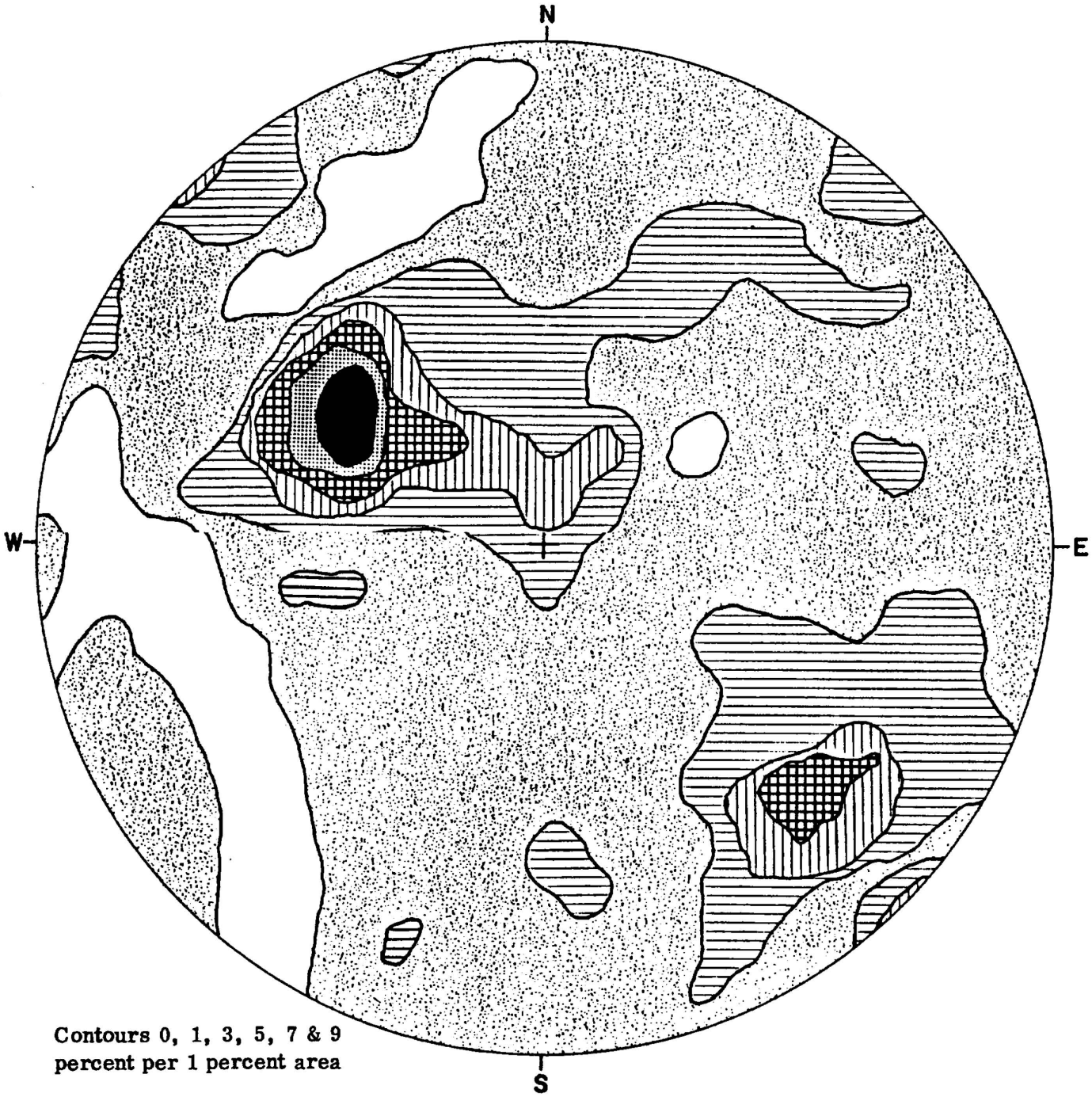
NOTE: *LENGTH OF ARROWS INDICATES PROJECTION OF HOLE TO HORIZONTAL.*

YANKEE ATOMIC	SEABROOK STATION	PLAN OF REACTOR SITES
GEOTECHNICAL ENGINEERS, INC. WINCHESTER, MASSACHUSETTS	PROJECT 7286	SHOWING GENERALIZED DIP & STRIKE OF FOLIATIONS
		JULY 1974 FIG. 2



NOTE: LENGTH OF ARROWS INDICATES PROJECTION OF HOLE TO HORIZONTAL.

YANKEE ATOMIC GEOTECHNICAL ENGINEERS, INC WINCHESTER. MASSACHUSETTS	SEABROOK STATION PROJECT 7266	PLAN OF REACTOR SITES SHOWING GENERALIZED DIP & STRIKE OF SLICKENSIDED SURFACES JULY 1974 FIG. 3



Seabrook No. 7286

0%

0% to 1%

1% to 3%

3% to 5%

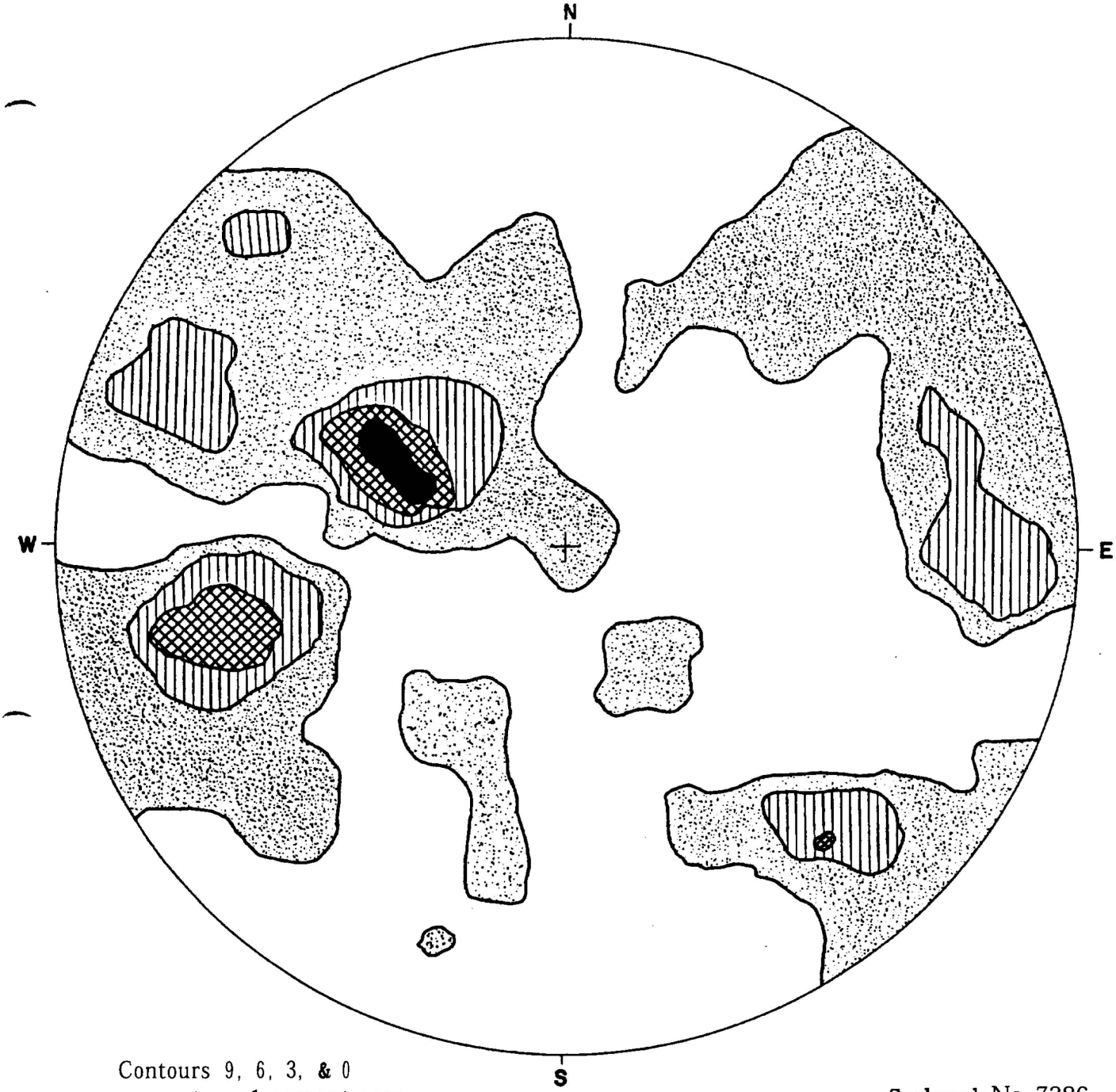
5% to 7%

7% to 9%

9% to 11%

Contoured Equal Area Upper Hemisphere Polar Projection of Poles to 230 Joints In Reactor 1; Borings **E2-11,** 12, 13 & 14

Fig. 4



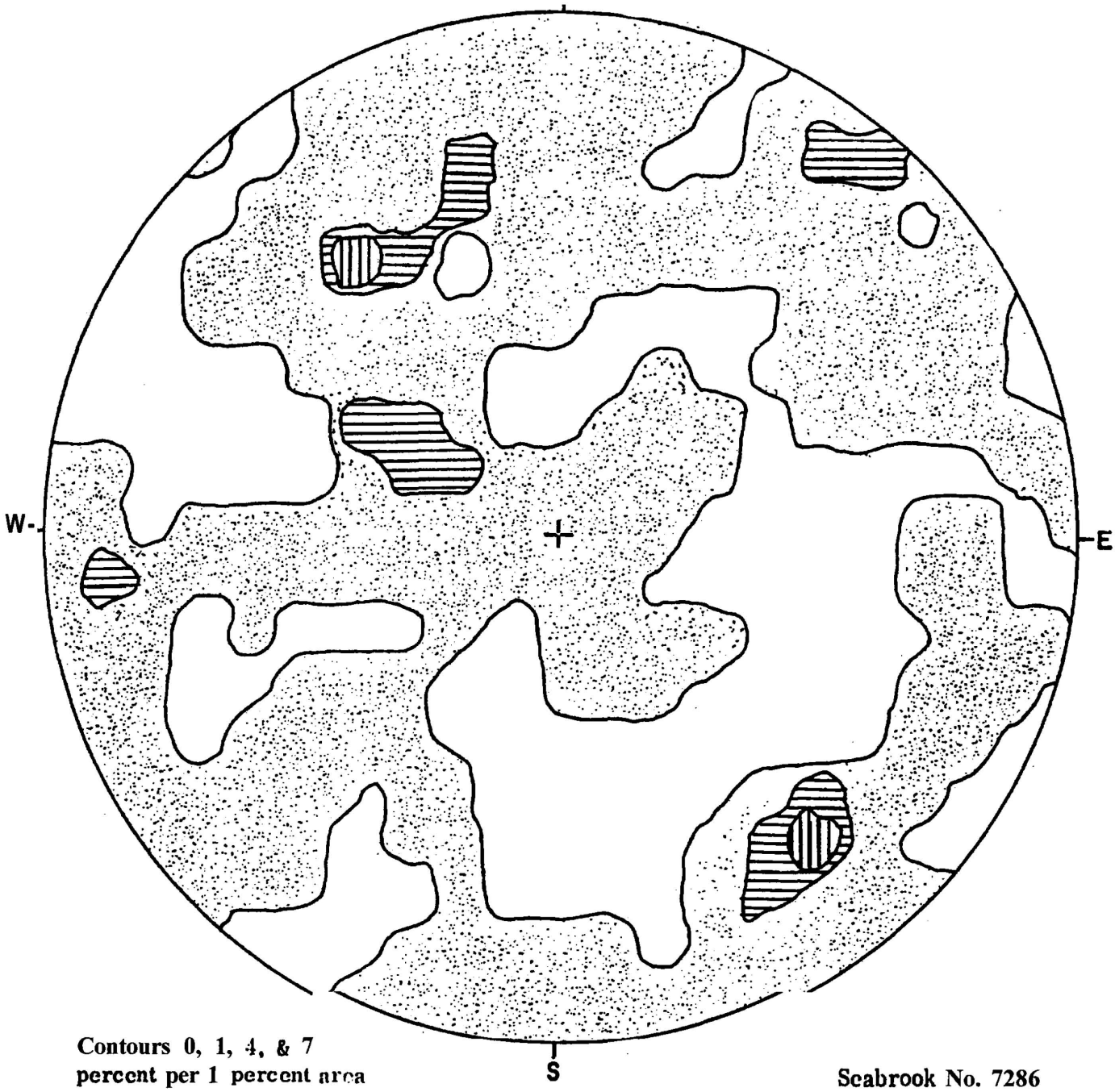
Contours 9, 6, 3, & 0
percent per 1 percent area

Seabrook No. 7286

0% | 0% to 3% | 3% to 6% | 6% to 9% | 9% to 11%

Contoured Equal Area Upper Hemisphere Polar Projection of Poles to 93 Joints In Reactor 2; Borings E2-15, 16, 17, 18.

Fig. 5



0% 0% to 4% 4% to 7% 7% to 9%

Contoured Equal Area Upper Hemisphere Polar Projection of Poles to 114 Slickensided Surfaces in Reactor 2; Borings E2-15, 16, 17, & 18.

Fig. 6

APPENDIX I

APPENDIX I

Boring Logs

Note: All holes are angle holes. Depths are measured along core axis. Inclinations of holes are measured from vertical.

BORING LOCATION N20115, E79611, Plant Site INCLINATION 10° BEARING S31E DATE START/FINISH June 20, 1971 / June 27, 1971

CASING ID 3 in. CORE SIZE 2-1/8 - 1 7/8 in. TOTAL DEPTH 168.6 ft. DRILLED BY American Drilling & Boring Co.; L. Capone

GROUND EL (MSL) 25.0 ft DEPTH TO WATER DATE 9.7 ft. June 21, 1971 LOGGED BY Soil - L. Toll, Rock - J. R. Hand

EL. MSL ft	Sample Depth ft	Type and No.	N or Rec.	Rate of Adv. min/ft	Water Content %	Graphic	Pressure Test Step psi	Computed k cm/sec	Strike, Dip F = Foliation J = Joint C = Contact B = Bedding	Core Breaks	Soil and Rock Descriptions (Weathering, defects, etc.)		(Type, texture, mineralogy, color, hardness, etc.)
25.0									S = Slickensid.				
					2)								
				11				TOP	OF TILL				
	6.5	SS-1	100										
		SS-2	99										
	10	SQ-3	10										
		SQ-4	31										
	17.7	SQ-5	57					TOP	OF ROCK				
	20	SQ-6	76		5[illegible]						1.5' core lost; Rusty stain; Rusty stain	Fresh internally. Some minor rusty staining on joints and partings. Not chloritic.	Diorite. Medium fine grained, medium dark gray. Massive texture.
0	30	SQ-7	100		93						Minor rusty		
	40	SQ-8	100		91						Minor rusty	Fresh and hard. Drills well. Most joints and partings are clean. Not chloritic.	Pegmatite; Diorite. Predominantly medium-fine grained, medium dark gray with occasional medium coarse quartz diorite.
	50	SQ-9	100		91								
-20	60	SQ-10	100		74						Solid core	Fresh and hard. Drills very well. Joints and partings clean. Not chloritic. Most partings break across core.	Diorite. Fine to medium fine grained, medium dark gray. Massive texture.
		SQ-11	100		99				N21E, 43NW	J			
	70	SQ-12	100		97				N15E, 69NW	J			Diorite. Medium-fine grained, medium gray. Massive.
		SQ-13	100		76				N13E, 53NW	J	Minor chlorite; Slight rusty	Fresh and hard. Joints and partings generally clean. Some minor chlorite on joints and partings in diabase.	Fused intrusive contact; 74.8'; Diabase. Fine to medium-grained, dark greenish gray. Locally calcitic.
		SQ-14	100		00				N12W, 50NW; N86E, 69NW	S; J			
	80	SQ-15	100		00				N15W, 62SW	S			
-40		SQ-16	100		00				N17W, 19SW	S			Fused contact; 83.1'
		SQ-17	100		74				N11W, 40NW	J	Write	Fresh and hard. Joints and partings generally clean. Diabase broken on calcite veining.	Diorite. Medium-fine grained, medium gray. Massive.
	90	SQ-18	100		98				N65W, 55NE	J			
		SQ-19	100		00								Diorite. Medium-fine, massive. Becoming gneissoid foliated toward base.
		SQ-20	100		00								
	100	SQ-21	100		95				N15E, 72SE; N55E, 76NW	C; C			Fused; Diabase, fine calcitic - calcite veining; Fused
		SQ-22	100		00				N52E, 68NW	J			
-60	110	SQ-23	100		92				N34E, 48NW; N27W, 72NE; N65W, 55SW	J; J; J		Fresh and hard. Joints and partings clean. Not chloritic.	Diorite. Mixed fine-grained dark gray and medium-coarse grained medium gray. Gneissoid. Predominantly fine-grained.
		SQ-24	100		87								
	120	SQ-25	100		00								
		SQ-26	100		00				N25E, 96NW	J		Fresh and hard. Drills well.	Foliated texture; Diorite. Predominantly fine grained, medium dark gray. Gneissoid at top of section.
		SQ-27	100		00				N75E, 82NW	S			
	130	SQ-28	100		00				N31E, 19NW; N33E, 36NW	J; J			
-80		SQ-29	100		17				N10E, 41NW	J			
	140	SQ-30	10		0				N71W, 61NE	S			
		SQ-31	99		95				N11E, 10NW; N31E, 22NW	J; J	Vuggy-slight wx; Minor chlorite; Core lost	Locally vuggy. Slightly wx. 2' core lost 38-40'. Chips look OK.	Welded breccia
	150												

LEGEND

N - Standard penetration resistance, blows/ft
Rec - Length recovered/length cored, %
RQD - Length of sound core 4 in. and longer/length cored, %
S - Split spoon sample ▽ Groundwater
U - Undisturbed samples
S - Shelby tube N - Denison
F - Fixed piston P - Pitcher
O - Osterberg G - GEI
D - Drilling break k - Coefficient of permeability
wx - Weathered, weathering

NOTES

1) - Washed through soil 0 - 6.5 ft. No samples taken.
2) - No clays present; therefore no water contents determined.

x - Oriented core

SEABROOK STATION

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

YANKEE ATOMIC ELECTRIC COMPANY

united engineers

Date: July 11, 1971 Project 7286

PAGE 1 of 2 LOG OF BORING B2-11

GEOTECHNICAL ENGINEERS INC

BORING LOCATION N20135, E79611; Plant Site INCLINATION 10° BEARING S33E DATE START/FINISH June 20, 1974 / June 27, 1974

CASING ID 3 in. CORE SIZE 2-1/8 - 1-7/8 in. TOTAL DEPTH 168.0 ft DRILLED BY American Drilling & Boring Co.; T. Canning

GROUND EL (MSL) 25.0 ft DEPTH TO WATER DATE 9.7 ft June 21, 1974 LOGGED BY Soil - K. Polk; Rock - J. R. Rand

EL. MSL ft	SAMPLE Depth ft	Type and No.	N or Rec.	RATE OF ADV. min/ft	WATER CONTENT or RQD %	Graphic	PRESSURE TEST gpm/psi	Computed k 10^{-4} cm/sec	STRIKE, DIP F = Foliation J = Joint C = Contact B = Bedding S = Slickenside	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.)	(Type, texture, mineralogy, color, hardness, etc.)
					0	100					CONTINUED FROM PREVIOUS PAGE	
	146	NQ-30	100		100				N27E, 32NW J		Slight wx	Diorite. Mixed fine and medium coarse grained textures. Locally gneissoid.
	150	NQ-31	100		100				N26E, 28NW J		Slight wx Solid core; Fresh and hard. Drills well. Partings are clean.	
		NQ-32	100		100				N63W, 25NE F		Solid core	
100	160	NQ-33	100		100				N18W, 71NE J		Fresh and hard. Drills well. Joints and partings are clean.	Diorite. Predominantly fine, medium dark with patches of coarse quartz diorite.
		NQ-34	97		93				N30E, 75NW J			
	168								N50W, 43NE F			
								BOTTOM	OF BORING			

LEGEND

N - Standard penetration resistance, blows/ft
Rec - Length recovered/length cored, %
RQD - Length of sound core 4 in. and longer/length cored, %
S - Split spoon sample ▽ Groundwater
U - Undisturbed samples
S - Shelby tube N - Denison
F - Fixed piston P - Pitcher
O - Osterberg G - GEI
D - Drilling break k - Coefficient of permeability
wx - Weathered, weathering

NOTES

SEABROOK STATION
PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
YANKEE ATOMIC ELECTRIC COMPANY
united engineers & constructors inc.

Date: July 11, 1974 Project 7286

PAGE 2 of 2 LOG OF BORING E2-11

GEOTECHNICAL ENGINEERS INC

BORING LOCATION N20334, E79612; Plant Site | INCLINATION 11 | BEARING N66E | DATE START/FINISH June 10, 1971 / June 13, 1974

CASING ID 3 in. | CORE SIZE 2-1/8 - 1-7/8 in. | TOTAL DEPTH 165.5 ft | DRILLED BY American Drilling & Boring Co. - A. Whitaker

GROUND EL (MSL) 21.5 ft | DEPTH TO WATER/DATE -7.1 ft June 13, 1971 | LOGGED BY Soil - L. Doll, Rock - L. R. Rand

EL. MSL ft	Sample Depth ft	Type and No.	N or Rec.	Rate of Adv. min/ft	Water Content or RQD %	Graphic	Pressure Test psi	Computed k 10^{-4} cm/sec	Strike, Dip (F = Foliation, J = Joint, C = Contact, B = Bedding; S = Slickensided)	Core Breaks	Soil and Rock Descriptions (Weathering, defects, etc.)		(Type, texture, mineralogy, color, hardness, etc.)
21.5									TOP OF ROCK				
		NX-1	100	2	16					Rusty	Fresh to slightly wx internally. Joints and partings have rusty coatings. Not chloritic.		Diorite. Predominantly medium coarse grained, medium gray with occasional local fine-grained patches.
		NX-2	95	3	0					Rusty			
	10	NX-3	100	3	46					Rusty			
		NX-4	100	3	25					Rusty			
		NQ-5	81	3	43				21	Rusty			
	20	NQ-6	100	4	82				N18E, 43NW J North, 21W J	Slight wx	Fresh and hard. Partings show powdery or rusty staining. Not slickensided.		Diorite. Predominantly fine grained, medium dark gray. Locally coarse-grained and locally foliated.
		NQ-7	98	4	44				N17E, 47NW J	Minor rusty			
0									N73W, 15NE J	Slight wx			
	30	NQ-8	100	5	68				N41W, 67NE J	D			
										Slight wx Minor rusty			
		NQ-9	100	4	97				N23E, 47NW J	Extreme wx-crumbly			
	40	NQ-10	100	4	98				N73W, 82SW J		Fresh and hard. Drills well. Joints and partings are clean. Not chloritic.		Diorite. Predominantly fine-grained, medium dark gray with occasional patches of coarse quartz diorite.
		NQ-11	100	5	89				N63W, 37SW J	D			
										D			
									N12E, 67NW J				
	50	NQ-12	100	5	92				N63E, 15NW J	Slight wx			
20									N10E, 16NW J		Fresh and hard. Drills very well. Some local minor rusty stains on partings. Not slickensided.		Diorite. Mixed fine-grained medium dark gray diorite and coarse-grained light gray quartz diorite.
		NQ-13	100	6	90				N35E, 52NW J				
	60	NQ-14	98	16	89				N31E, 13NW J N51E, 37NW J	Minor rusty			
		NQ-15	100	20	100					5' solid piece			
	70	NQ-16	100	15	92					Vuggy-Slight wx	Fresh and hard. Drills well. Some slight rusty staining on some partings. Not slickensided.		
		NQ-17	100	8	85				N26W, 86NE J				
40									N75W, 55SW J	Rusty stain			Diorite. Predominantly fine-grained, medium dark gray with local zones of medium coarse quartz diorite.
	80	NQ-18	100	8	92				N19W, 81SW J N81E, 55SE J	Rusty stain			
		NQ-19	100	4	83				N26E, 65NW J			Fused crinlets	
									N35E, 45NW C		Generally fresh. Local wx and rusty staining (93 to 107' core may be mixed up - box knocked over in field).	Diabase	
	90	NQ-20	100	6	64					Rusty Severe wx			
		NQ-21	100	5	89							Diabase Slightly bleached	
	100	NQ-22	100	6	25					Rusty Rusty			Diorite. Predominantly fine-grained, dark to medium gray. Some saussuritization of feldspars.
60		NQ-23	100	6	90				N28W, 43SW J	Moderate wx			
									N26E, 37NW J	D	Fresh and hard. Drills very well. Partings not slickensided. Show only very minor wx effects.		Diorite. Fine-grained, medium dark gray. Small white phenocryst speckling.
	110	NQ-24	100	8	100				N65W, 67SW J	D			
		NQ-25	97	5	94				N36E, 45NW J				
									N35E, 44NW J	D		Fused crinlets	
	120	NQ-26	100	4	90					Rusty	Fresh and hard. Drills well. Joints and partings are clean. Not chloritic.		Diorite. Mixed fine grained dark gray to medium coarse medium gray quartz diorite. Predominantly fine-grained.
		NQ-27	97	5	75								
80	130	NQ-28	100	6	95				N15E, 12NW J				
		NQ-29	100	6	100				N45E, 12NE J				
	140	NQ-30	94	6	94					D	Fresh and hard. Joints and partings clean. Not chloritic.		Diorite. Predominantly fine-grained, medium dark gray.
									N35E, 42NW J N75E, 73SE J	D			
	165.5	NQ-31	95	6	75								

LEGEND

U - Standard penetration resistance, blows/ft
Rec - Length recovered/length cored, %
RQD - Length of sound core 4 in. and longer/length cored, %
S - Split spoon sample
Groundwater
U - Undisturbed samples
S - Shelby tube N - Denison
F - Fixed piston P - Pitcher
O - Osterberg G - GEI
D - Drilling break k - Coefficient of permeability
wx - Weathered, weathering

NOTES

1) - Washed through soil 0-1 ft. No samples taken.

2) - This is only a partial list of dip and strike data.

SEABROOK STAT10 N

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

YANKEE ATOMIC ELECTRIC COMPANY

united engineers

Date: July 11, 1971 | Project 7286

PAGE 1 of 2 | LOG OF BORING B-10

GEOTECHNICAL ENGINEERS INC

BORING LOCATION N20331, E79612, Plant Site INCLINATION 10° BEARING N66E DATE START/FINISH June 10, 1974 / June 18, 1974

CASING ID 3 in. CORE SIZE 2-1/8 - 1-7/8 in. TOTAL DEPTH 165.5 ft DRILLED BY American Drilling & Boring Co., A. Whitaker

GROUND EL (MSL) 21.5 ft DEPTH TO WATER DATE 7.1 ft June 17, 1974 LOGGED BY Soil - K. Polk; Rock - L. R. Rand

EL. MSL ft	SAMPLE Depth ft	Type and No.	N or Rec.	RATE OF ADV. min/ft	WATER CONTENT or RQD %	Graphic	PRESSURE TEST gpm psi	Computed 10^{-4} k cm/sec	STRIKE, DIP F - Foliation J - Joint C - Contact B - Bedding S - Slickenside	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.)	(Type, texture, mineralogy, color, hardness, etc.)
											CONTINUED FROM PREVIOUS PAGE	
	117.5											
	150	NQ-32	100	6	52				N25E, 37NW J		Driller mislatched	
100		NQ-33	100	6	100				N25E, 26NW J		Fresh and hard. Drills very well. Joints and partings are clean. Not chloritic.	Diorite. Fine grained, medium dark gray. Massive texture.
	160	NQ-34	93	6	93						Solid core	
	165.5	NQ-35	100	1	100						Solid core	
								BOTTOM	OF BORING			

LEGEND

N - Standard penetration resistance, blows/ft
Rec - Length recovered/length cored, %
RQD - Length of sound core 4 in. and longer/length cored, %
S - Split spoon sample ▽ Groundwater
U - Undisturbed samples
S - Shelby tube N - Denison
F - Fixed piston P - Pitcher
O - Osterberg G - GEI
D - Drilling break k - Coefficient of permeability
vx - Weathered, weathering

NOTES

SEABROOK STATION
PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
YANKEE ATOMIC ELECTRIC COMPANY
united engineers

Date: July 11, 1974 Project 7286

PAGE 2 of 2 LOG OF BORING [illegible]

GEOTECHNICAL ENGINEERS INC

BORING LOCATION N20[illegible], E20715; [illegible] Site INCLINATION 41° BEARING N30W DATE START/FINISH June 20, 1971 / July 1, 1971

CASING ID 3 in. CORE SIZE 1-7/8 - 2-1/8 in. TOTAL DEPTH 169.0 ft. DRILLED BY American Drilling & Boring Co. A. Whitaker

GROUND EL (MSL) 30.5 ft DEPTH TO WATER DATE [illegible] ft June 21, 1971 LOGGED BY Sol - K. Folk Rec - J. R. Rand

EL. MSL ft	Depth ft	Sample Type and No.	N or Rec.	RATE OF ADV. min/ft	WATER CONTENT %	Graphic	RQD %	Pressure (psi) Gauge	Computed k in cm/sec	Strike, Dip F = Foliation J = Joint C = Contact B = Bedding	Core Breaks	Soil and Rock Descriptions (Weathering, defects, etc.)	(Type, texture, mineralogy, color, hardness, etc.)
10.5										S - Slickensided			
		NX-1	88	3.0	12					21		Rusty staining	Slightly wx to about 8' and fresh and hard below. Not chloritic.	Diorite. Mixed fine-grained, medium dark gray diorite with patches of medium to medium-coarse quartz diorite.
		NX-2	72	1.0	0							Slight wx		
		NX-3	100	5.0	13							Rusty staining Moderate wx		
	10	NX-4	100	5.0	96							Rusty	Fresh and hard. Slight rusty staining on joints. Not chloritic or slickensided.	
		NX-5	100	4.0	85							Slight rusty Slight rusty		Diorite. Mixed fine-grained dark gray diorite in medium coarse, medium gray quartz diorite.
												Slight rusty		
	20	NX-6	100	4.0	100									
		NQ-7	75	5.0	46					N83E, 28NW J		Slight rusty		
										N10F, 58SF J		Slight rusty		
		NQ-8	93	7.0	13							Moderate wx		
										N15E, 75SE J		1' core lost	1' zone of moderate wx. Core lost.	
	30	NQ-9	100	9.0	92									
										Horiz. J		Slight wx		
										N30E, 83SE J		Slight wx		
		NQ-10	100	12.0	80								Fresh and hard. Some joints and partings show minor powdery to rusty surface wx effects. Not chloritic.	Diorite. Mixed fine-grained, dark gray diorite in medium to medium-coarse, medium gray quartz diorite.
										N32F, 67SE J		Slight wx		
	40	NQ-11	100	14.0	100							D		
		NQ-12	100	15.0	83					N65E, 27NW J		Slight wx		
		NQ-13	100	16.0	100									
										N25F, 67SE J				
	50	NQ-14	97	18.0	83					N55E, 85SE J		Slight wx	Fresh and hard. Some joints and partings show very minor powdery surface wx effects. Not chloritic.	Diorite. Mixed fine-grained, dark gray diorite in medium coarse to coarse, medium gray quartz diorite. Predominantly fine-grained.
										N55E, 17SE J		Slight wx		
		NQ-15	100	1.0	83					N28E, 25NW		Slight rusty		
	60	NQ-16	100	5.0	98							D Slight wx		
										N25E, 61SE J				
										N35E, 66SE J		Slight wx		
		NQ-17	100	6.0	92							Slight wx		
										N90W, 39SW J				
	70	NQ-18	97	9.0	88					N35W, 63NE J		Moderate wx	Fresh and hard. Local thin zones of moderate to severe wx on closely spaced joints. Not chloritic.	Diorite. Mixed fine-grained, dark gray diorite in medium-coarse, medium gray quartz diorite. Medium coarse textures predominate.
										N55E, 7NW J				
		NQ-19	98	2.0	87					N53E, 81SE J		Minor vuggy		
	80	NQ-20	97	5.0	83					N16E, 86NW J		Severe wx		
										N80E, 30SE J		Moderate wx		
		NQ-21	100	20.0	97									
										N83E, 52SE J		Slight wx	Fresh and hard. Drills well. Some thin wx zones on joints or partings as shown. Not chloritic.	Quartz diorite. Medium-coarse grained, medium gray with occasional patches of included fine-grained diorite.
	90	NQ-22	100	4.0	80							Moderate wx		
		NQ-23	98	6.0	98									
										N15E, 21NW J				
										N16F, 58SE J				
	100	NQ-24	100	8.0	93					N15E, 87NW J		Slight wx		
										N15W, 57NE J				
		NQ-25	100	9.0	88									
										N21E, 88NE J			Fresh and hard. Some minor local rusty staining on some joints. Not chloritic.	
	110									N35E, 88SF J		Rusty stain		Diorite. Mixed fine-grained, dark gray in medium coarse, medium gray quartz diorite.
		NQ-26	100	8.0	100					North, 36W J				
										N19E, 86SE C				
		NQ-27	100	5.0	67					N67W, 83SW J		Minor rusty		Diabase inclusion
		NQ-28	100	10.0	75							Slight wx		Quartz diorite.
	120									N15W, 17NE J			Fresh and hard. Some minor wx and rusty staining.	Diabase
		NQ-29	97	4.0	63					N70E, 23NW J				Diorite. Medium-grained medium gray.
										N50W, 30NE J		Minor rusty		
		NQ-30	100	5.0	83									
										N16W, 41NE				Fused contact (broken)
										N60W, 54NE J				
	130									N56E, 83NW S				Diabase. Dark gray
		NQ-31	100	6.0	54									
										N15F, 35SE J				Fused contact
										East, 9NE J				
		NQ-32	98	6.0	65					N50E, 18NW J		Minor rusty		Diorite. Medium-coarse grained, medium gray.
	140									N31E, 42NE J		Slight wx	Fresh and hard. Local slight to severe wx [illegible] joints.	
		NQ-33	98	6.0	60					N28F, 30SE J		Moderate wx		Somewhat porphyritic.

LEGEND

N - Standard penetration resistance, blows/ft
Rec - Length recovered/length cored, %
RQD - Length of sound core 4 in. and longer/length cored, %
S - Split spoon sample ▽ Groundwater
U - Undisturbed samples
S - Shelby tube N - Denison
F - Fixed piston P - Pitcher
O - Osterberg G - GEI
D - Drilling break k - Coefficient of permeability
wx - Weathered, weathering

NOTES

1) No clay samples present; therefore no water contents were determined.

2) This is only a partial list of dip and strike data.

x - Oriented core

SEABROOK STATION

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

YANKEE ATOMIC ELECTRIC COMPANY

united engineers

Date: July 10, 1971 Project 7286

PAGE 1 of 2 LOG OF BORING 12-13

GEOTECHNICAL ENGINEERS INC

BORING LOCATION N20365, E79745, Plant site INCLINATION 11° BEARING N30W DATE START/FINISH June 20, 1974 / July 3, 1974

CASING ID 3 in. CORE SIZE 1-7/8 - 2-1/8 in. TOTAL DEPTH 169.0 ft DRILLED BY American Drilling & Boring Co.; A. Whitaker

GROUND EL (MSL) 30.5 ft DEPTH TO WATER DATE -13.0 ft June 21, 1974 LOGGED BY Soil - K. Polk, Rock - J. R. Rand

EL. MSL ft	SAMPLE Depth ft	Type and No.	N or Rec.	RATE OF ADV. min/ft	WATER CONTENT or RQD %	Graphic	PRESSURE TEST gpm/psi	Computed k 10^{-1} cm/sec	STRIKE, DIP F - Foliation J - Joint C - Contact B - Bedding S - Slickenside	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.)	(Type, texture, mineralogy, color, hardness, etc.)
						100					CONTINUED FROM PREVIOUS PAGE	
	144								N22E, 45SE J		Slight wx	Fresh and hard. Some minor wx effects and rusty staining on joints. Veining Diorite. Medium-grained medium gray. Somewhat porphyritic.
		NQ-34	95	3.0	25				N46E, 69SE J		Rusty	
	150								N56E, 79NW J		Severe wx	
		NQ-35	100	4.0	33				N30E, 81SE J		Rusty stain	
									N38E, 46SE J		Rusty stain	
		NQ-36	100	6.0	85				N89E, 86SE J		Vuggy	
									N49E, 66SE J		Minor rusty	
	160	NQ-37	100	7.0	83				N55E, 63SE J		Slight wx	
									N67E, 76SE J			
		NQ-38	93	8.0	87						Slight wx	
	169							BOTTOM	OF BORING			

LEGEND

N - Standard penetration resistance, blows/ft
Rec - Length recovered/length cored, %
RQD - Length of sound core 4 in. and longer/length cored, %
S - Split spoon sample ▽ Groundwater
U - Undisturbed samples
S - Shelby tube N - Denison
F - Fixed piston P - Pitcher
O - Osterberg G - GEI
D - Drilling break k - Coefficient of permeability
wx - Weathered, weathering

NOTES

SEABROOK STATION
PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
YANKEE ATOMIC ELECTRIC COMPANY
united engineers

Date: July 11, 1974 Project 7286

PAGE 2 of 2 LOG OF BORING E2-13

GEOTECHNICAL ENGINEERS INC

BORING LOCATION N28167, E29713; Plant Site INCLINATION 11.5° BEARING S55W DATE START/FINISH June 6, 1971 / June 19, 1971

CASING ID 3 in. CORE SIZE 2-1/8 - 1-7/8 TOTAL DEPTH 166.0 ft DRILLED BY American Drilling & Boring Co.; T. Canning

GROUND EL (MSL) [illegible] ft DEPTH TO WATER DATE [illegible] ft [illegible] June 11, 1971 LOGGED BY Soil - L. L. Pell; Rock - J. R. Hasel

EL. MSL ft	SAMPLE Depth ft	Type and No.	N or Rec.	RATE OF ADV. min/ft	WATER CONTENT or RQD %	Graphic	PRESSURE TEST Gage PSI	Computed k 10^{-4} cm/sec	STRIKE, DIP F = Foliation J = Joint C = Contact B = Bedding S = Slickensided	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.)		(Type, texture, mineralogy, color, hardness, etc.)
29.9													
	0.0	3)			2)				TOP OF ROCK				
		NX-1	100	3.8	21				D		Rusty staining	Generally fresh and hard internally. Joints and partings have thin minor rusty staining. Closely spaced joints and partings.	Diorite. Mixed fine-grained, dark gray diorite and medium to coarse quartz diorite.
	10	NX-2	100	4.1	33						Vuggy		
		NQ-3	90	2.1	23				N65E, 13NW J		Minor rusty staining		
20		NQ-4	93	1.8	27				N53W, 88SE J; N11E, 69SE J; N73W, 72NE J				
	20	NQ-5	90	2.4	30						Rusty staining	Subject to slight to moderate wx although generally hard between joints and partings. Rusty staining on joints. Not slickensided.	
		NQ-6	79	2.9	17								Diorite. Mixed coarse and fine.
		NQ-7	68	2.7	11								
	30	NQ-8	100	4.5	11				N28E, 67SE J				
		NQ-9	83	4.1	0						Vuggy		Pegmatite. Quartz-feldspar. Light tannish and gray-white.
		NQ-10	39	2.5	0								
0		NQ-11	97	1.1	60							Fresh and hard. Partings clean.	
	40	NQ-12	100	4.4	90				N22E, 53SE J; N60W, 69NE J; N13E, 10NW J		Slight wx		Diorite. Mixed fine, dark gray and coarse quartz diorite.
		NQ-13	100	5.2	92				N 3W, 67NE J			Fresh and hard. Drills well. Partings generally clean. Not slickensided.	Diorite. Mixed fine-grained, dark gray diorite in coarse-grained quartz diorite.
	50	NQ-14	100	6.2	87				N57W, 41NE J		Slight rusty		
		NQ-15	98	5.5	92				N30E, 35NW J		Moderate wx	Fresh and hard with thin local rusty stained areas and some local moderate wx. Not slickensided.	Diorite. Predominantly medium grained, spotted dark mafic quartz diorite with some local fine grained, medium dark gray diorite.
	60	NQ-16	100	5.6	77				N65W, 14NE J		Moderate wx		
-20									N56E, 12SE J; N30E, 30NW J		Minor rusty; Minor rusty		
	70	NQ-17	100	6.4	83				N15E, 85NW C		Rusty stain-moderate wx		
		NQ-18	100	6.3	65				N 5E, 49SE J; N60E, 55SE J		Slight wx		
		NQ-19	100	3.6	32				East, 77S J; N15W, 12SW J		Rusty stain; Slight wx; Rusty stain	Fresh and hard. Partings subject to rusty stains. Not slickensided.	Diorite. Fine-grained, medium dark gray with small phenocryst spotting. Some thin fused veinlets.
	80	NQ-20	100	1.8	71								
		NQ-21	100	5.5	80				N10W, 87NE J				
		NQ-22	97	4.8	62				N 6E, 61SE J; N11E, 77SE J		Minor rusty		
-40		NQ-23	89	2.7	0						Minor rusty		
		NQ-24	100	5.0	14				N10E, 68SE S		Minor rusty; Minor rusty; Minor rusty; Minor rusty		
		NQ-25	95	5.3	81								
	100	NQ-26	100	4.8	67				N78E, 10NE J; N75E, 18NW J		Slight wx	Fresh and hard. Some minor wx effects on partings. No chlorite. Not slickensided.	Diorite. Fine-grained, dark gray with small phenocrysts spotting. Contains pyrrhotite.
		NQ-27	94	5.0	75				N73E, 16NW J; N26E, 38NW J; N50E, 62SE J		Pyrite		Diabase intrusion
	110	NQ-28	100	5.4	82				N20W, 67NE J; N22W, 58W J			Fresh and hard. Drills well. Joints and partings are clean.	Diorite. Predominantly fine-grained medium dark gray with patches of medium coarse quartz diorite.
-60		NQ-29	98	5.7	85								
	120	NQ-30	100	6.0	81								
		NQ-31	100	5.4	100								
		NQ-32	98	6.7	98								
	130	NQ-33	100	4.6	53				N10E, 22NW J; N55E, 69SE J; N63E, 72SE J			Fresh and hard. Joints and partings are clean. Not chloritic.	Diorite. Mixed fine grained, medium dark gray diorite with occasional patches of medium coarse quartz diorite.
		NQ-34	74	5.7	94								
	140												

LEGEND

N - Standard penetration resistance, blows/ft
Rec - Length recovered/length cored, %
RQD - Length of sound core 4 in. and longer/length cored, %
S - Split spoon sample ▽ Groundwater
U - Undisturbed samples
S - Shelby tube N - Denison
F - Fixed piston P - Pitcher
O - Osterberg G - GEI
D - Drilling break k - Coefficient of permeability
wx - Weathered, weathering

NOTES

1) - This is only a partial list of dip and strike data.
2) - No clays present, therefore no water contents were determined.
3) - Washed through soil 0-3 ft. No samples taken.

x - Oriented core

SEABROOK STATION

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

YANKEE ATOMIC ELECTRIC COMPANY

united engineers

Date: July 2, 1971 Project 7285

PAGE 1 of 2 LOG OF BORING 1-11

GEOTECHNICAL ENGINEERS INC

BORING LOCATION 8201-2, 12971L, Plant Site DECLINATION 11.5° BEARING S55W DATE START/FINISH June 6, 1971 / June 10, 1971

CASING ID 3 in. CORE SIZE 2-1/8 to 1 7/8 in. TOTAL DEPTH 166.0 ft. DRILLED BY American Drilling & Boring Co. - J. Canning

GROUND EL (MSL) [illegible] ft DEPTH TO WATER DATE [illegible] ft June 11, 1971 LOGGED BY Sol. E. L. Pell - Rec. L. R. Rand

EL. MSL ft	SAMPLE Depth ft	Type and No.	N or Rec.	RATE OF ADV. min/ft	WATER CONTENT or RQD %	Graphic	PRESSURE TEST Gem psi	Computed k 10^{-4} cm/sec	STRIKE, DIP F = Foliation J = Joint C = Contact B = Bedding	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.)	(Type, texture, mineralogy, color, hardness, etc.)
									S = Shear zone		CONTINUED FROM PREVIOUS PAGE	
	130											
	140	NQ-35	100	10.5	82				N71W, 25NE J	D		
-80		NQ-36	98	2.0	98					D		
									N63W, 60NE J	D		
										Slight wx	Fresh and hard. Joints and partings clean. Not chloritic.	Diorite. Predominantly fine-grained medium dark gray with patches of medium coarse quartz diorite.
		NQ-37	100	2.0	93				N19E, 62SE J			
	150								N31E, 70SE J			
									N61W, 54NE J			
		NQ-38	98	3.1	98				N65E, 18NW S	D		
									N55E, 29NE J			
	160	NQ-39	100	3.3	93							
		NQ-40	98	3.2	98				N25W, 20SW J			
	166											
								BOTTOM	OF BORING			

LEGEND

N - Standard penetration resistance, blows/ft
Rec - Length recovered/length cored, %
RQD - Length of sound core 4 in. and longer/length cored, %
S - Split spoon sample ▽ Groundwater
U - Undisturbed samples
S - Shelby tube N - Denison
F - Fixed piston P - Pitcher
O - Osterberg G - GEI
D - Drilling break k - Coefficient of permeability
wx - Weathered, weathering

NOTES

SEABROOK STATION

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

YANKEE ATOMIC ELECTRIC COMPANY

united engineers

Date: July 2, 1971 Project: 7386

PAGE 2 of 2 LOG OF BORING [illegible]

GEOTECHNICAL ENGINEERS INC

BORING LOCATION N20321, E79179; Plant Site INCLINATION 41.5° BEARING S10 W DATE START/FINISH June 3, 1974 / June 5, 1974

CASING ID 3 in. CORE SIZE 2-1/8 - 1-7/8 in. TOTAL DEPTH 165.0 ft DRILLED BY American Drilling & Boring; A. Whitaker

GROUND EL (MSL) 11.5 ft DEPTH TO WATER DATE ft June 1, 1974 LOGGED BY Soil K. Polk, Rock J. R. Rand

EL. MSL ft	SAMPLE Depth ft	Type and No.	N or Rec.	RATE OF ADV. min/ft	WATER CONTENT or RQD %	Graphic	PRESSURE TEST gpm/psi	Computed k 10^{-1} cm/sec	STRIKE, DIP F = Foliation J = Joint C = Contact B = Bedding S = Slickenside	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.)		(Type, texture, mineralogy, color, hardness, etc.)	
13.9		1)					on							
	10							TOP	OF ROCK					
	11.5								2)		Rusty	Generally fresh and hard internally. Some minor chlorite on joints and partings.	Foliated quartzite	Diorite. Mixed fine-grained foliated diorite (?) or quartzitic schist and medium coarse quartz diorite.
0		NQ-2	81	5.0	0				N85W, 80NE S		Rusty			
		NQ-3	100	6.0	37				N74W, 35NE J		Rusty			
	20								N58E, 19NW S		Minor chlorite			
		NQ-4	100	6.0	8						Minor chlorite			
		NQ-5	100	6.0	42				N75E, 82NW J N69E, 83NW J		Severe wx	Ionable.	Foliated quartzite(?)	
	30	NQ-6	100	3.0	48				N88E, 82NW S		Minor chlorite	Fresh and hard. Joints and partings clean. Some minor chlorite.		Diorite. Fine-grained dark gray locally resembles quartzite with zones of medium coarse quartz diorite.
		NQ-7	100	3.0	99				N80E, 35E J N83E, 39NW S		Chips D			
	40	NQ-8	100	3.0	57				N50W, 85NE S		Minor chlorite			
-20		NQ-9	100	3.0	73									
	50	NQ-10	100	3.0	67						Slight wx	Fresh and hard. Joints or partings not chloritic.		Diorite (?) to dioritized quartzitic schist (?). Fine to medium grained, medium dark gray feldspathic rock.
	60										Moderate wx	Fresh and hard. Joints and partings not notably chloritic.		Diorite. Medium, medium gray.
		NQ-11	100	4.0	67									
-40	70	NQ-12	98	4.0	73									Metaquartzite (?). Fine grained, medium dark gray, fairly weak foliated.
	80	NQ-13	100	4.0	73						Minor chlorite Pyrite	Fresh and hard. Some joints or partings show minor chlorite.	Pyrite Welded breccia	Metaquartzite (?). Schist. Fine-grained medium dark gray. Locally well foliated.
	90										Chlorite Polished-conchoidal			
-60		NQ-14	100	5.0	49								2.7'	Fused contact
	100	NQ-15	98	5.0	72						Minor chlorite	Fresh and hard. Some joints or partings have minor chlorite sur- [illegible] chlorite development.		Diorite. Predominantly granodiorite, saussuritized feldspars. Medium-coarse grained. Local pathces of fine-grained diorite (?) or quartzite(?). Locally foliated.
	110										Minor chlorite Slight wx Minor chlorite			
		NQ-16	94	5.0	65						1' core unaccounted for	Fresh and hard. Joints and partings locally show minor chloritic surfaces.		Metaquartzite (?) or diorite (?). Fine-grained, medium dark gray. Generally foliated rock.
-80	120	NQ-17	100	4.0	80						Minor chlorite Minor chlorite Minor chlorite			
	130	NQ-18	102	5.0	80									
	140													

LEGEND

N - Standard penetration resistance, blows/ft
Rec - Length recovered/length cored, %
RQD - Length of sound core 4 in. and longer/length cored, %
S - Split spoon sample ▽ Groundwater
U - Undisturbed samples
S - Shelby tube N - Denison
F - Fixed piston P - Pitcher
O - Osterberg G - GEI
D - Drilling break k - Coefficient of permeability
wx - Weathered, weathering

NOTES

1) - Washed through soil 0 - 11.5 ft. No soil samples taken.

2) - This is only a partial list of dip and strike data. Orientation discontinued at 42 ft.

x - Oriented core

SEABROOK STATION

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

YANKEE ATOMIC ELECTRIC COMPANY

united engineers & constructors inc

Date: July 2, 1974 Project 7286

PAGE 1 of 2 LOG OF BORING E2-15

GEOTECHNICAL ENGINEERS INC

BORING LOCATION N20321, E79179, Plant Site INCLINATION 11.5° BEARING S10°W DATE START/FINISH June 3, 1974 / June 5, 1974

CASING ID 3 in. CORE SIZE 2-1/8 - 1-7/8 in. TOTAL DEPTH 165.0 ft DRILLED BY American Drilling & Boring; A. Whitaker

GROUND EL (MSL) +13.9 ft DEPTH TO WATER DATE ft June 1, 1974 LOGGED BY Soil - K. Polk, Rock - J. R. Rand

EL. MSL ft	SAMPLE Depth ft	Type and No.	N or Rec.	RATE OF ADV. min/ft	WATER CONTENT or RQD %	Graphic	PRESSURE TEST gpm/psi	Computed k 10^{-1} cm/sec	STRIKE, DIP F = Foliation J = Joint C = Contact B = Bedding S = Slickenside	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.)		(Type, texture, mineralogy, color, hardness, etc.)
											CONTINUED FROM PREVIOUS PAGE		
	140										Minor chlorite	Fresh and hard. Drills well. Some minor smooth chlorite development on some joints or partings.	Metaquartzite (?) Fine-grained medium dark gray locally feldspathized. Local vague banding or foliation.
-100		Q-1	95	5.0	81								
	150										Minor chlorite		
		Q-2	104	5.0	76						Chlorite	Fresh and hard. Some thin chlorite on joints as shown.	Metaquartzite (?). Fine-grained, medium dark gray vaguely foliated.
	160	Q-2	101	3.0	75								
	165										Chlorite		
								BOTTOM	OF BORING				

LEGEND

N - Standard penetration resistance, blows/ft
Rec - Length recovered/length cored, %
RQD - Length of sound core 4 in. and longer/length cored, %
S - Split spoon sample ∇ Groundwater
U - Undisturbed samples
S - Shelby tube N - Denison
F - Fixed piston P - Pitcher
O - Osterberg G - GEI
D - Drilling break k - Coefficient of permeability
wx - Weathered, weathering

NOTES

SEABROOK STATION
PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE
YANKEE ATOMIC ELECTRIC COMPANY
united engineers & constructors inc.
a subsidiary of Raytheon Company

Date: July 2, 1974 Project 7286

PAGE 2 of 2 LOG OF BORING E2-15

GEOTECHNICAL ENGINEERS INC

BORING LOCATION N20227, E29130, Plant Site | INCLINATION 11° | BEARING S78°E | DATE START/FINISH May 20, 1971 / May 29, 1971

CASING ID 3 in. | CORE SIZE 2-1/8 in. - 1-7/8 in. | TOTAL DEPTH 165.2 ft | DRILLED BY American Drilling & Boring Co.; A. Whitaker

GROUND EL (MSL) 12.6 ft | DEPTH TO WATER DATE [illegible] ft [illegible] | LOGGED BY Soil - S. L. Poli; Rock - J. R. Hand

EL. MSL ft	Sample Depth ft	Sample Type and No.	Sample N or Rec.	RATE OF ADV. min/ft	WATER CONTENT %	Graphic	Pressure Test gpm psi	Pressure Test Computed k 10^{-4} cm/sec	STRIKE, DIP F = Foliation J = Joint C = Contact B = Bedding S = Slickensides	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.)		(Type, texture, mineralogy, color, hardness, etc.)
12.6													
	1)				2)								
+10	0.5	NX-1	12/60						TOP OF ROCK		Cored fill and boulders.		
	10										Minor rusty		
		NX-2	83	4.0	60				3)		Slight wx	Fresh and hard. Local slight surface wx effects. Rust on joints and partings.	Diorite. Mixed fine-grained medium dark gray and medium-coarse grained medium gray. Moderate saussuritization of feldspars. Fine-grained rock is magnetic.
		NX-3	59	1.0	15						1' core lost		
0									N36E, 28NW J		Minor rusty		
	20	NQ-4	88	1.0	12				N 5W, 85SW S		D		
									N18W, 58SW J		Minor rusty		
		NQ-5	100	3.0	41				N15W, 64SW J				
	30	NQ-6	96	3.0	0				N15W, 64SW J		Slight wx	Fresh and hard. Only minor surface powdery wx effects on joint and parting surfaces. Magnetic.	Welded breccia
									N21W, 68SW J				
		NQ-7	100	2.0	68				N 8W, 17SW J				Diorite. Fine grained, medium dark gray. Generally massive texture. Magnetic (apparently disseminated pyrrhotite).
-20									N46W, 30NE F				
	40	NQ-8	100	3.0	60								
									N11W, 83SW J				
		NQ-9	100	4.0	68				N67E, 38NW J				
									N13E, 69NW J		Vuggy		
		NQ-10	100	3.0	40				N14E, 61NW S			Fresh and hard. Only minor powdery wx effects on joints and partings. Magnetic. Appears to be finely disseminated. Pyrrhotite.	
	50								N70E, 16NW J				
									N16E, 81NW J				Diorite. Fine-grained, medium dark gray. Magnetic. Locally well foliated.
		NQ-11	98	3.0	45				N15E, 78SE S				
-40									N27E, 77NW J				
	60	NQ-12	100	3.0	80				N51E, 47NW S				
		NQ-13	100	1.0	15								
											Slippery-on foliation		
		NQ-14	100	4.0	83							Fresh and hard. Drills very well. Joints and partings show only minor surface wx effects. Magnetic.	Diorite (?). Fine-grained, medium dark gray. Somewhat resembles impure quartzite. Pyrrhotite disseminated.
	70												
		NQ-15	100	1.0	70								
-50									N31E, 28NW J				
		NQ-16	100	1.0	83				N20E, 73NW J				
	80								N19E, 37NW J				Medium-grained, greenish gray diorite. Moderate saussuritization.
									N26E, 38NW J				
		NQ-17	98	6.0	88								
									K22E, 31NW J				
		NQ-18	98	6.0	60				N55W, 82NE J			Fresh and hard. Drills well. Joints and partings are generally clean. Minor surface wx effects.	
	90												
		NQ-19	69	6.0	52								
											Chips		
-60									N20E, 33NW S		Mistakch		Bleached
		NQ-20	100	4.0	89								Diorite. Fine to medium fine-grained, medium dark gray. Magnetic feldspars moderately saussuritized.
	100												
									N53E, 68NW J		D		
									N12E, 28SE J				
		NQ-21	100	4.0	82				N 5W, 60SW S		Slight wx	Fresh and hard. Drills fairly well. Local slight surface wx effects on some joints.	
									N11W, 85SW S				
	110												
		NQ-22	100	4.0	75				N25W, 81SW S				
									N36E, 50NW S		Slight wx		Diorite. Fine to medium fine grained, medium dark gray. Locally quartzose. Magnetic.
		NQ-23	98	1.0	58								
									N23E, 32NW J		Minor vuggy		
-100													Bleach
		NQ-24	100	4.0	65				N29E, 72NW J				
	120								N25E, 35NW J			Fresh and hard. Slight wx effects on joints. Moderate wx 136.7 to 137.1'.	
									N35E, 22NW S				Diorite. Fine to medium fine grained, medium dark gray. Massive. Disseminated pyrrhotite. Magnetic.
		NQ-25	100	5.0	48						Slight wx		
									N30E, 21NW J				
									N61E, 56SW S				
		NQ-26	100	1.0	73				N35W, 77SW J				
	130										Minor chlorite		
									K23W, 76SW S				
		NQ-27	100	3.0	57				N35E, 35NW J				
											Slight wx		
-120											Slight wx		
		NQ-28	100	2.0	0						Moderate wx	Fresh and hard, except soft, severe wx at 138-138.7'. Minor chlorite on some joints	
	140								K21E, 30NW S		Severe wx		
									N23E, 15NW S		Pyrite		
		NQ-29	100	3.0	50				N30E, 43NW S		Vuggy		Diorite. Fine grained medium dark gray. Generally massive. Locally foliated. Magnetic.
	165.2												

LEGEND

N - Standard penetration resistance, blows/ft
Rec - Length recovered/length cored, %
RQD - Length of sound core 4 in. and longer/length cored, %
S - Split spoon sample
U - Undisturbed samples
Groundwater
S - Shelby tube | N - Denison
F - Fixed piston | P - Pitcher
O - Osterberg | G - GEI
D - Drilling break
wx - Weathered, weathering
k - Coefficient of permeability

NOTES

1) - Washed through soil 0-5 ft. No sample taken.

2) - No clays sampled; therefore no water contents were determined.

3) - This is only a partial list of dip and strike data.

x - Oriented core

SEABROOK STATION

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

YANKEE ATOMIC ELECTRIC COMPANY

united engineers

Date: June 28, 1971 | Project 7286

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GEOTECHNICAL ENGINEERING

BORING LOCATION N202227, E79130; Plant Site INCLINATION 41° BEARING S78°E DATE START/FINISH May 20, 1971 / May 29, 1971

CASING ID 3 in. CORE SIZE 2-1/8 - 1-7/8 in. TOTAL DEPTH 165.2 ft DRILLED BY American Drilling & Boring Co.; A. Whitaker

GROUND EL (MSL) 16.[illegible] ft DEPTH TO WATER DATE 2.[illegible] ft May 29, 1971 LOGGED BY Soil [illegible]

EL. MSL ft	SAMPLE Depth ft	Type and No.	N or Rec.	RATE OF ADV. min/ft	WATER CONTENT or RQD %	Graphic	PRESSURE TEST gpm psi	Computed k 10^{-4} cm/sec	STRIKE, DIP F = Foliation J = Joint C = Contact B = Bedding	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.)	(Type, texture, mineralogy, color, hardness, etc.)
											CONTINUED FROM PREVIOUS PAGE	
	145.2	NQ-30	100	1.0	32				N10E, 68NW S N82E, 77NW S		Minor chlorite	Foliated
	150	NQ-31	100	1.0	82				N27W, 90SW S N81W, 56NE S		D	
-120									N59W, 53NE S		Pyrrhotite Fresh and hard. Excellent drilling.	
	160	NQ-32	100	4.0	92						D	Welded breccia Diorite. Medium-fine grained, medium dark gray. Massive. Magnetic.
		NQ-33	100	1.0	100				N10W, 72SW S		Bleached	
	165.2							BOTTOM	OF BORING			

LEGEND

N - Standard penetration resistance, blows/ft
Rec - Length recovered/length cored, %
RQD - Length of sound core 4 in. and longer/length cored, %
S - Split spoon sample ▽ Groundwater
U - Undisturbed samples
S - Shelby tube N - Denison
F - Fixed piston P - Pitcher
O - Osterberg G - GEI
D - Drilling break k - Coefficient of permeability
WX - Weathered, weathering

NOTES

SEABROOK STATION

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Date: June 28, 1971 Project 7286

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GEOTECHNICAL ENGINEERS INC

BORING LOCATION N20117, E79221, Plant Site INCLINATION 41° BEARING 86.5E DATE START/FINISH May 30, 1971 / June 5, 1971

CASING ID 3 in. CORE SIZE 1.7/8 in. TOTAL DEPTH 165.0 ft DRILLED BY American Drilling & Boring, T. Canning

GROUND ELEV MSL [illegible] ft DEPTH TO WATER DATE [illegible] ft June 5, 1971 LOGGED BY [illegible], L. Pol; Rec. J. R. Reed

EL. MSL ft	SAMPLE Depth ft	Type and No.	N or Rec.	RATE OF ADV. min/ft	WATER CONTENT %	Graphic	PRESSURE TEST Slug psi	Computed k 10^{-4} cm/sec	STRIKE, DIP F = Foliation J = Joint C = Contact B = Bedding	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.)	(Type, texture, mineralogy, color, hardness, etc.)
					100				S = Slickenside		CONTINUED FROM PREVIOUS PAGE	
-100	135	NQ-26	98	2.5	81						Minor chlorite	
	140											
	150	NQ-27	100	2.9	75						Slight wx Polish Polish Pyrite	Fresh and hard. Conchoidal and fused polished surfaces on some joints as shown. Metaquartzite (?). Feldspathized. Fine to medium grained, medium gray. Only vague local foliation.
	160	NQ-28	89	2.5	25							
-120	165	NQ-29	100	3.0	55							
								BOTTOM	OF BORING			

LEGEND

N - Standard penetration resistance, blows/ft
Rec - Length recovered/length cored, %
RQD - Length of sound core 4 in. and longer/length cored, %
S - Split spoon sample ▽ Groundwater
U - Undisturbed samples
S - Shelby tube N - Denison
F - Fixed piston P - Pitcher
O - Osterberg G - GEI
D - Drilling break k - Coefficient of permeability
wx - Weathered, weathering

NOTES

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GEOTECHNICAL ENGINEERS INC

BORING LOCATION N20270, E70272 (Plant Site) INCLINATION 30° BEARING N65.5W DATE START/FINISH May 22, 1971 / May 28, 1971

CASING ID 3 in. CORE SIZE 1-7/8 in. TOTAL DEPTH 168.0 ft DRILLED BY American Drilling & Boring Co. - T. Canning

GROUND EL (MSL) 11.9 ft DEPTH TO WATER DATE 23 in. ft May 24, 1971 LOGGED BY Soil - K. Polk, Rock - J. H. Rand

EL. MSL ft	Sample Depth ft	Sample Type and No.	Sample N or Rec.	Rate of Adv. min/ft	Water Content %	Graphic	Pressure Test gpm/psi	Pressure Test Computed k 10^{-4} cm/sec	Strike, Dip F = Foliation J = Joint C = Contact B = Bedding S = Slickensided	Core Breaks	Soil and Rock Descriptions (Weathering, defects, etc.)		(Type, texture, mineralogy, color, hardness, etc.)
+14.9													
▽		31			21								
	10												
	14.0								TOP OF ROCK				
		NQ-1	100	1.7	23						Slight wx	Fresh. Some slight wx on closely-spaced joints. Joints have minor chloride coatings.	Diorite (?). Fine-grained medium dark gray. Looks somewhat like quartzite. Magnetic.
		NQ-2	100	2.0	0								
0	20	NQ-3	100	1.9	14				N28W, 50SW S		Slight wx Rock broken on close chlorite coated joints.		
		NQ-4	100	2.1	10						Minor to moderate chlorite on joints		
		NQ-5	100	2.2	0								
	30	NQ-6	100	1.5	0						Powdery wx	Fresh, intermittent slight to moderate wx on joint zones. Some minor bleaching. Minor rust. Magnetic.	Mixed fine quartzose diorite. Medium dark gray. May be meta-quartzite (?). Rock is magnetic. Apparently disseminated pyrrhotite.
		NQ-7	100	3.8	17						Slight to moderate wx - stained		
		NQ-8	100	3.9	53				N53E, 25SE J				
		NQ-9	100	1.3	0						Slight wx		
	40	NQ-10	95	1.5	36				N 5E, 73SE J N55E, 25SE J		Chips - moderate wx		
		NQ-11	100	1.1	39						Slight wx		
-20		NQ-12	100	2.7	67				N30W, 72NE J		Minor chlorite		
									N87E, 86SE S				
	50	NQ-13	100	2.3	67				N25E, 81SE J N10W, 41SW S		Slight rusty	Fresh and hard. Not affected by wx. Joints and partings are not slickensided. Minor powdery wx effects only on joints.	(?)Quartzite. Fine-grained medium gray, locally feldspathized to medium coarse-grained, medium light gray quartz diorite(?)
		NQ-14	98	2.6	67				N 8W, 69SW S				Feldspathized
											D		
	60	NQ-15	100	3.5	33				N50W, 87NE S				Feldspar Porphyroblasts
									N63W, 71NE S				
		NQ-16	100	2.9	62				N61E, 80SW		Minor chlorite	Fresh and hard internally. Some local slight to moderate wx. No rust.	Diorite. Mixed fine-grained medium-dark gray diorite and medium to medium coarse grained diorite. Feldspars show saussuritization. Magnetic.
		NQ-17	100	3.4	65				N45E, 85NW J				
-40	70	NQ-18	100	3.5	69				N55W, 61SE J		Slight wx		
									N11W, 68NE J		Slight wx		
		NQ-19	92	3.5	71				N20W, 66NE S		Chips-moderate wx Slight chlorite		
	80	NQ-20	50	3.1	0						Chips - 2.2' core lost - rock looks OK. No chlorite 2' core lost	Rock which was recovered is fresh and hard.	
		NQ-21	46	3.0	0						Chips-chlorite		
		NQ-22	78	3.4	0						Chloride	Fresh internally. Cut by closely-spaced chloride coated joints. (See Boring E2-1.)	Diorite. Fine-grained, medium dark gray. Locally medium-coarse grained, saussuritized. Magnetic.
	90	NQ-23	100	*	0						Chips		
		NQ-24	100	3.3	12								
		NQ-25	100	3.2	26								
-60		NQ-26	100	3.0	31						Chloride-Slight-mod. wx		
	100	NQ-27	100	3.5	12						Chips-chloride		Diorite. Fine to medium fine grained medium dark gray. Magnetic. Slight greenish tinge.
		NQ-28	92	3.0	31						coated joints	Fresh and hard. Chloride-coated joints 102.0' to 105.6'. Joints and partings generally fresh.	
	110	NQ-29	100	3.0	72								
		NQ-30	100	3.2	80						Pyrite		
	120	NQ-31	100	3.7	68							Fresh and hard. Drills well. No chlorite on joints. Joints and partings show only minor surface wx effects.	Diorite. Mixed fine-grained medium gray diorite and medium coarse grained medium gray quartz diorite. Magnetic disseminated pyrrhotite local 1-2" feldspar porphyroblasts.
-80									N37W, 44SW S				
		NQ-32	100	4.0	67				N 11°, 76SE J				
									N11W, 67NE J				
	130	NQ-33	100	3.6	85				N61E, 1NW S				
		NQ-34	100	5.9	90								
									N77W, 50NE S				
		NQ-35	87	4.9	12				N54E, 68SE J				
	140	NQ-36	100	6.0	50							Fresh and hard. Most joints are clean. Local minor chloride partings.	Diorite. Fine-grained, medium dark gray. Massive. Magnetic. Disseminated pyrrhotite.
									N32W, 50NE S		Vertical joint		
									N19E, 61SE S				
		NQ-37	100	1.5	67				N15E, 25NW S				
	149										Slight wx		Feldspathized

LEGEND

N - Standard penetration resistance, blows/ft
Rec - Length recovered/length cored, %
RQD - Length of sound core 4 in. and longer/length cored, %
S - Split spoon sample ▽ Groundwater
U - Undisturbed samples
S - Shelby tube N - Denison
F - Fixed piston P - Pitcher
O - Osterberg G - GEI
D - Drilling break k - Coefficient of permeability
wx - Weathered, weathering

NOTES

1) - Roller bitted from 11.0 ft to 15.5 ft.
2) - No clays sampled; therefore no water contents were determined.
3) - Washed through soil 0-14 ft. No samples taken.

* - Not available.
x - Oriented core

SEABROOK STATION

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Date: July 1, 1971 Project 7286

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GEOTECHNICAL ENGINEERS INC

BORING LOCATION N20270, E72272 ; Plant Site INCLINATION 39 BEARING N68.5W DATE START/FINISH May 22, 1971 / May 28, 1971

CASING ID 3 in. CORE SIZE 1-7/8 in. TOTAL DEPTH 168.0 ft DRILLED BY American Drilling & Boring Co., T. Canning

GROUND EL (MSL) 11.7 ft DEPTH TO WATER DATE 29 in. ft May 24, 1971 LOGGED BY S.J. K. Poff, R. L. B. Ried

EL. MSL ft	SAMPLE Depth ft	Type and No.	N or Rec.	RATE OF ADV. mm/ft	WATER CONTENT %	Graphic or RQD	PRESSURE TEST psi	Computed k 10^{-1} cm/sec	STRIKE, DIP F = Foliation J = Joint C = Contact B = Bedding	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.)		(Type, texture, mineralogy, color, hardness, etc.)
									S = Shrinkage		VARIETY OF FINE FOLIATED GNEISS		
-100	118												
	150	NQ-38	100	5	87				30E, 28NW J		Minor chlorite		
									13W, 66NE J		Minor chlorite		
		NQ-39	100	0	25				5 9W, 46NE S		Pyrite		
									52E, 60SE S		Chlorite		
	160	NQ-40	97	8	80				35E, 72SE S				
									36W, 53SW S		Pyrite	Fresh and hard. Some chlorite and pyrite on joints.	Diorite. Fine-grained, medium dark gray. Massive. Magnetic.
									50E, 67SE J				
		NQ-41	99	0	100				77W, 52SW J		Pyrite		
	168										Pyrite		
								BOTTOM	OF BORING				

LEGEND

N - Standard penetration resistance, blows/ft
Rec - Length recovered/length cored, %
RQD - Length of sound core 4 in. and longer/length cored, %
S - Split spoon sample ▽ Groundwater
U - Undisturbed samples
S - Shelby tube N - Denison
F - Fixed piston P - Pitcher
O - Osterberg G - GEI
D - Drilling break k - Coefficient of permeability
wx - Weathered, weathering

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Date July 1, 1971 Project 7286

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GEOTECHNICAL ENGINEERS INC

APPENDIX I I

Project Seabrook
Project No. 7286

Boring No. E2-11

Ground Elevation (MSL) = + 25.0

Type of Feature

Feature Depth	Strike	Dip	Joint	Foliation	Slickensided Surface	Contact	Remarks
66.1	N21E	43MW	X				
70.2	N15E	64NW	X				
74.0	N13E	53NW	X				
75.9	N67W	45NE	X				
76.0	N12W	50SW			X		
76.1	N80w	70NE			X		
77.0	N30W	69SW			X		
78.5	N86E	67NW	X				
81.1	N15W	62NW			X		
a2.9	N39E	15NW			X		
83.0	N45E	84NW			X		
84.0	N17W	49sw			X		
85.1	N50E	7SE	X			X	Diabase over Diorite
87.0	N14W	4osw	X				
87.4	N65E	80NW	X				
88.5	N65W	55NE	X				
99.3	N45E	72SE				X	Diorite over Diabase
99.9	N30E	75NW			X		
100.6	N55E	76NW				X	Diabase over Diorite
103.1	N50W	25SW	X				
105.5	N52E	68NW	X				
108.1	N35E	45NW	X				
108.9	N85E	86NW		X			
110.9	N38E	48NW	X				
110.9	N10E	85SE	X				
111.0	N50E	81NW	X				
111.1	N50E	81NW	X				
111.2	N50E	81NW	X				
112.0	N27W	72NE	X				
113.1	N65E	90NW	X				
113.4	N50E	53NW	X				
113.5	N15W	55NE	X				
114.0	N65W	55SW		X			
121.5	N75E	90NW		X			
123.5	N75E	89NW		X			
124.8	N75E	82NW					
129.3	N34E	19NW	X				
129.8	N29E	40NW	X				
129.9	N82E	37NW	X				
131.1	N33E	36NW	X				
133.1	N15E	50NW	X				
133.1	N15E	50NW					
133.2	N30W	75NE					
133.5	N25E	37NW	X				
134.5	N40E	41NW	X				
135.2	N43E	80NW	X				

Project Seabrook
Project No. 7286

Boring No. E2-11

Ground Elevation (MSL) = + 25.0

Type of Feature

Feature Depth	Strike	Dip	Joint	Foliation	Slickensided Surface	Contact	Remarks
137.5	N74W	61NE			X		
142.8	N44E	40NW	X				
143.3	N25E	40NW	X				
143.6	N47E	46NW	X				
143.8	N30E	45NW	X				
144.2	N25E	36NW	X				
144.8	N30E	45NW	X				
144.9	N20E	45NW	X				
145.4	N70W	80NE		X			
146.0	N31E	22NW	X				
147.4	N27E	32NW	X				
148.5	N70E	90NW		X			
149.6	N70W	71NE		X			
152.0	N26E	28NW	X				
154.4	N85E	70NW		X			
155.3	N63W	25NE		X			
158.2	N35E	41NW	X				
159.0	N18W	70NE	X				
161.0	N85W	16NE	X				
162.0	N30E	75NW	X				
163.1	N25E	45NW	X				
163.9	N70W	15NE	X				
164.8	N50W	43NE					

Boring No. E2-12

Project Seabrook
Project No. 7286

Ground Elevation (MSL) = t 21.5

Feature Depth	Strike	Dip	Type of Feature: Joint'	Foliation	Slickensided Surface	Contact	Remarks
19.2	N18E	43NW	x				
19.8	N17E	46NW	X				
20.2	Horizontal		X				
21.2	North	21w	X				
21.9	N35E	25SE		X			
23.0	N23W	39SW	X				
24.0	N17E	47NW	X				
24.4	N50E	61SE	X				
25.1	Horizontal		X				
25.8	N38W	73NE	X				
27.1	N73W	15NE	X				
29.0	N41W	67NE	X				
35.1	N23E	47NW	X				
40.0	N73W	82SW		X			
44.3	N63W	37SW	X				
48.9	N12E	67NW	X				
50.4	N63E	45NW	X				
53.3	N40E	46NW	X				
57.3	N38E	52NW	X				
59.4	N34E	43NW	X				
60.0	N8W	79NE	X				
61.5	N51E	37NW	X				
75.0	N26W	86NE	X				
77.0	N75W	55SW	X				
77.5	N9E	48NW	X				
77.6	N9E	48NW	X				
82.0	N19W	81 SW	X				
82.4	N41E	40NW	X				
83.0	N81E	55SE	X				
85.7	N26E	65NW	X				
89.0	N35E	45NW				X	Diabase Dikelet
89.1	N35E	45NW	X			X	Diabase Dikelet
103.9	N28W	43sw	X				
108.0	N26E	37NW	X				
111.9	N65W	67SW	X				
114.3	N36E	45NW	x				
119.5	N35E	44NW	X				
119.6	N35E	44NW	X				
119.7	N60E	22NW	X				
132.1	N15E	12NW	X				
133.0	N40E	43NW	X				
136.0	N45E	12NE	X				
143.1	N35E	42NW	X				
143.9	N55E	50SE		X			
144.9	N75E	73SE		X			
153.7	N25E	37NW	X				
156.8	N25E	26NW	X				

Project Seabrook
Project No. 7286

Boring No. E2-13

Ground Elevation (MSL) = + 30.5

Type of Feature

Feature Depth	Strike	Dip	Joint	Foliation	Slickensided Surface	Contact	Remarks
23.6	N83E	28NW	X				
25.3	N40E	58SE	X				
28.7	N15E	75SE	X				
34.0	Horizontal		X				
34.5	N25E	12SE	X				
35.1	N30E	83SE	X				
35.7	N35E	22sw	X				
38.3	N32E	67SE	X				
39.2	N5W	31NE	X				
44.2	N65E	27NW	X				
49.5	N25E	67SE	X				
50.8	N34E	30SE	X				
50.9	N29E	51SE	X				
51.8	N55E	85SE					
52.5	N55E	11SE	X				
55.9	N28E	25NW	X				
62.8	N28E	64SE	X				
63.0	N32E	60SE	X				
64.3	N35E	66SE	X				
67.0	N79W	39sw	X				
70.5	N35W	63NE	X				
70.8	N40W	54NE	X				
76.8	N55E	7NW	X				
77.0	N50E	4NW	x				
77.3	N52E	22NW	X				
78.7	N53E	84SE	X				
81.2	N46E	86NW	X				
82.0	N67E	75SE	X				
83.8	N80E	30SE	X				
89.5	N83E	52SE	X				
90.3	East	58S	X				
98.8	N45E	21NW	X				
99.3	N51E	65SE	X				
100.6	N46E	58SE	X				
101.7	N23E	39sw	x				
102.8	N45E	87NW	X				
105.0	N15W	57NE.	X				
108.4	N21E	88SE	x				
110.4	N35E	88SE	X				
112.5	North	36W	X				
115.3	N19E	86SE				X	Diabase over Diorite
117.3	N67W	83SW	X				
117.8	Horizontal		X				
118.2	N40E	N40E				X	Diorite over Diabase
118.3	N45W	N40E				X	Diabase over Diorite
120.1	N30E	N45W	X				

Project Seabrook
Project No. 7286

Boring No. E2-13

Ground Elevation (MSL) = + 30.5

Type of Feature

Feature Depth	Strike	Dip	Joint	Foliation	Slickensided Surface	Contact	Remarks
121.8	N30E	38SE	X				
123.0	N70E	23NW		X			
123.7	N80W	37NE	X				
125.0	N50W	30NE	X				
125.4	N44E	57SE	X				
128.0	N16W	44NE	X				
129.3	N68W	54NE	X				
131.3	N56E	83NW				X	Diorite over Diabase
131.6	N15W	19%	X				
131.7	N45E	76SE	X			X	Diabase over Diorite
132.8	N60E	44SE	X				
134.1	N45E	35SE	X				
135.0	N42E	37SE	X				
136.3	East	8NE	X				
136.8	N38E	73SE	X				
138.0	N50E	18NW	X				
139.3	N35E	43SE	X				
140.5	N31E	42SE	X				
142.4	N28E	30SE	X				
142.5	N40E	46NW	X				
145.0	N22E	45SE	X				
145.2	N22E	45SE	X				
149.7	N46E	63SE	X				
150.0	N34E	34SE	X				
150.5	N21E	73SE	X				
151.3	N56E	79NW	X				
151.7	N26E	48SE	X				
153.0	N30E	81SE	X				
154.7	N26E	78SE	X				
154.9	N38E	46SE	X				
157.4	N89E	86SE	X				
158.0	N75W	72SW	X				
159.9	N49E	66SE	X				
162.3	N55E	63SE	X				
163.7	N60E	70SE	X				
165.5	N67E	76SE	X				

Project Seabrook
Project NO. 7286

Boring No. E2-14

Ground Elevation (MSL) = + 29.9

Type of Feature

Feature Depth	Strike	Dip	Joint	Foliation	Slickensided Surface	Contact	Remarks
11.8	N65E	43NW	X				
12.0	N65W	77SW	X				
13.6	N83W	88NE	X				
13.8	N70W	42NE	X				
13.9	N70W	42NE	X				
14.5	N44E	69SE	X				
15.8	N37E	67SE	x				
16.5	N73W	72NE	X				
28.9	N28E	67SE	X				
29.0	N85E	26NW	X				
42.2	N22E	53SE	X				
43.2	N87E	37NW	X				
44.0	N60W	69NE	X				
46.0	N43E	40NW	X				
50.8	N3W	67NE	X				
51.8	N57W	71NE	X				
53.2	N57W	41NE	X				
58.9	N30E	35NW	X				
62.5	N65W	14NE	X				
63.8	N71W	52NE	X				
65.3	N50E	42St	X				
65.4	N75E	38SE	X				
66.7	N42W	50NE	X				
67.0	N30E	30NW	X				
70.0	N45E	85NW				X	Diorite over Diabas
70.8	N30W	21NE	X				
72.9	N5E	49SE	X				
73.5	N43W	68NE	X				
74.6	N60E	55SE	X				
78.2	East	77s	X				
80.0	N15W	42SW	X				
80.2	N70E	12NW	X				
80.4	N49E	33NW	X				
iM.2	N46W	87NE	X				
85.0	N34W	82SW	X				
87.5	N6E	64SE	X				
87.8	N48W	14NE	X				
88.2	N3W	89NE	X				
89.3	N11E	77SE	X				
89.6	N65E	86SE	X				
94.3	N10E	68SE					
94.6	N59E	59SE					
99.3	N78E	40SE	X				