

SEABROOK UPDATED FSAR

APPENDIX 2D

GEOLOGIC BEDROCK LOGS OF BORING IN THE SITE AREA

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

APPENDIX 2D

LIST OF BORINGS DONE FOR SEABROOK STATION
(Reference Section 2.5.1.2. and Figures 2.5.9)
and 2.5.14)

A number of boring programs have been done for various purposes at and near the **Seabrook** Station site. The list in this appendix is meant to serve as an index for these borings.

Some of the logs of these borings are included in this appendix. Other logs can be found in one of three locations:

1. Miscellaneous Site Area Borings, **Seabrook** Station: PSNH Site Document Control Center, Seabrook, N.H.
2. **Seabrook** Station Geotechnical Report - Circulating Water Tunnels, Vols. 1 and 2: Geotechnical Engineers, Inc., Winchester, Mass., June, 1974
3. **Seabrook** Station Geotechnical Reports - Intake Tunnel Extension: Geotechnical Engineers, Inc., Winchester, Mass., September, 1975

An entry in this table for each boring, notes the location of its log.

LIST OF BORINGS DONE FOR
SEABROOK STATION

<u>Boring No.</u>	<u>Purpose</u>	<u>Location/ Coordinates</u>	<u>Ground Elevation</u>	<u>Soil Bored (Ft)</u>	<u>Total Depth (Ft)</u>	<u>Date Completed</u>	<u>Reference</u>	<u>Remarks</u>
A-1	Old Cooling System Design	Hampton Beach State Park	Beach	49'	49'	9 Nov '68	1	Auger Boring
A-2	Old Cooling System Design	Hampton Beach State Park	Beach	48.5'	48.5'	9 Nov '68	1	Auger Boring
A-3	Old cooling System Design	Hampton Beach State Park	Beach	53'	53'	11 Nov '68	1	Auger Boring
A-4	Old Cooling System Design	Hampton Beach State Park	Beach	56'	56'	11 Nov '68	1	Auger Boring
A-5	Old Cooling System Design	Hampton Beach State Park	Beach	56'	56'	9 Nov '68	1	Auger Boring
A-6	Old Cooling System Design	Hampton Beach State Park	Beach	56'	56'	14 Nov '68	1	Auger Boring
A-7	Old Cooling System Design	Hampton Beach State Park	Beach	56'	56'	14 Nov '68	1	Auger Boring
A-8	Old Cooling System Design	Hampton Beach State Park	Beach	56'	56'	15 Nov '68	1	Auger Boring
A-9	Old Cooling System Design	Hampton Beach State Park	Beach	56'	56'	25 Nov '68	1	Auger Boring
A-10	Old Cooling System Design	Hampton Beach State Park	Beach	56'	56'	15 Nov '68	1	Auger Boring
A-11	Old Cooling System Design	Hampton Beach State Park	Beach	56'	56'	15 Nov '68	1	Auger Boring
A-12	Old Cooling System Design	Hampton Beach State Park	Beach	56'	56'	15 Nov '68	1	Auger Boring
A-14	Old Cooling System Design	Hampton Beach State Park	Beach	56'	56'	15 Nov '68	1	Auger Boring
A-15	Old Cooling System Design	Hampton Beach State Park	Beach	56'	56'	15 Nov '68	1	Auger Boring

<u>Boring No.</u>	<u>Purpose</u>	<u>Location/ Coordinates</u>	<u>Ground Elevation</u>	<u>Soil Bored (Ft)</u>	<u>Total Depth (Ft)</u>	<u>Date Completed</u>	<u>Reference</u>	<u>Remarks</u>
A-16	Old Cooling System Design	Hampton Beach State Park	Beach	56'	56'	11 Nov '68	1	Auger Boring
A-17	Old Cooling System Design	Hampton Beach State Park	Beach	56'	56'	11 Nov '68	1	Auger Boring
A-18	Old Cooling System Design	Hampton Beach State Park	Beach	56'	56'	11 Nov '68	1	Auger Boring
A-19	Old Cooling System Design	Hampton Beach State Park	Beach	56'	56'	14 Nov '68	1	Auger Boring
A-20	Old Cooling System Design	Hampton Beach State Park	Beach	56'	56'	14 Nov '68	1	Auger Boring
A-21	Old Cooling System Design	Hampton Beach State Park	Beach	56'	56'	14 Nov '68	1	Auger Boring
AIT-1	Intake Tunnel	20546N 80140E	+11.4	17.0	315.0	7 Sept '73	2	
AIT-2	Alternate Tunnel Align- ment	20211N 81372E	+ 5.1	8.5	300.0	19 Oct '73		
AIT-3	Alternate Tunnel Align- ment	19848N 82720E	- 0.2	32.5	292.0	23 Oct '73		
AIT-4	Alternate Tunnel Align- ment	19556N 83798E	+ 5.2	64.0	290.0	14 Nov '73		
AIT-5	Alternate Tunnel Align- ment	19327N 84663E	- 2.2	95.0	279.0	9 Nov '73	2	
AIT-6	Alternate Tunnel Align- ment	19117N 85438E	+ 2.8	148.5	291.0	29 Oct '73	2	

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AIT-7	Alternate Tunnel Align- ment	18908N 86222~	- 2.4	132.0	270.0	04 Sept '73	2	
AIT-8	Alternate Tunnel Align- ment	18663N 87143E	-15.0	83.0	268.0	14 Sept '73	2	
AIT-11	Alternate Tunnel Align- ment	18221N 88746E	+ 9.0	6.0	6.0	08 Nov '73	2	Boring Abandoned
AIT-12	Alternate Tunnel Align- ment	18144N 89012E	+13.5	138.5	272.8	24 Oct '73		
AIT-13	Alternate Tunnel Align- ment	17981N 89610E	+10.3	125.0	275.0	03 Oct '73		
AIT-15	Alternate Tunnel Align- ment	17730N 90526E	- 8.6	71.5	238.0	01 Oct '73	2	
AIT-16	Alternate Tunnel Align- ment	17537N 91267E	-14.1	62.5	231.5	11 Oct '73	2	
AIT-17	Intake Tunnel	17366~ 91907E	-24.1	42.5	216.3	06 Oct '73	2	
AIT-18	Alternate Tunnel Align- ment	17182N 92577E	-26.2	45.0	272.0	13 Sept '73	2	
AIT-20	Alternate Tunnel Align- ment	17158N 92663E	-36.3	49.5	81.0	14 Sept '73	2	
AIT-22	Alternate Tunnel Align- ment	171958 92527E	-32.1	36.5	204.5	22 Sept '73	2	

<u>Boring No.</u>	<u>Purpose</u>	<u>Location/ Coordinates</u>	<u>Ground Elevation</u>	<u>Soil Bored (Ft)</u>	<u>Total Depth (Ft)</u>	<u>Date Completed</u>	<u>Reference</u>	<u>Remarks</u>
AIT-24	Alternate Tunnel Align- ment	17105N 91945E	-35.6	65.0	65.0	17 Oct '73	2	
AIT-24A	Alternate Tunnel Align- ment	17084N 92927E	-35.6	99.0	198.8	22 Oct '73	2	
AIT-25	Alternate Tunnel Align- ment	16996N 93261E	-37.1	24.0	199.3	25 Oct '73	2	
AIT-26	Intake Tunnel	17146N 89283E	+10.6	67.0	347.8	15 Apr '74	2	Boring Inclined 40°
AIT-27	Alternate Tunnel Align- ment	17223N 90217E	- 7.7	80.0	245.3	01 Mar '74	2	
AIT-28	Alternate Tunnel Align- ment	17254N 90887E	-12.8	80.5	233.0	16 Feb '74	2	
AIT-29	Alternate Tunnel Align- ment	17318N 91383E	-18.2	20.0	230.0	19 Feb '74	2	
AIT-30	Alternate Tunnel Align- ment	17394N 92288E	-29.9	46.0	57/9	22 Feb '74	2	Boring Inclined 38°
AIT-30A	Alternate Tunnel Align- ment	17394N 92288E	-29.5	46.5	221.3	26 Feb '74	2	
AIT-31	Alternate Tunnel Align- ment	17054N 89238E	i-10.7	69.0	346.0	29 Apr '74	2	

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<u>Boring No.</u>	<u>Purpose</u>	<u>Location/ Coordinates</u>	<u>Ground Elevation</u>	<u>Soil Bored (Ft)</u>	<u>Total Depth (Ft)</u>	<u>Date Completed</u>	<u>Reference</u>	<u>Remarks</u>
AIT-32	Alternate Tunnel Align- ment	16918N 90562E	-12.4	59.0	240.0	15 Mar '74	2	
AIT-33	Alternate Tunnel Align- ment	16840N 91054E	-14.4	80.0	162.0	05 Mar '74	2	
AIT-33A	Alternate Tunnel Align- ment	16839N 91054E	-14.4	80.0	241.0	12 Mar '74		
AXT-34	Alternate Tunnel Align- ment	16780N 91515E	-19.6	59.0	230.0	05 Mar '74	2	
AIT-35	Alternate Tunnel Align- ment	16770N 925783	-33.5	30.0	45.5	28 Mar '74	2	
ATT-36	Alternate Tunnel Align- ment	16912N 93045E	-39.1	55.4	69.5	27 Mar '74	2	
AIT-37	Alternate Tunnel Align- ment	16766N 930423	-34.3	17.5	30.5	26 Mar '74	2	
AIT-38	Intake Tunnel Extension	17491N 93300E	-41.2	43.0	212.0	24 June '75	3	
AIT-39	Intake Tunnel Extension	17552N 93840E	-42.1	51.0	195.0	16 June '75	FSAR Appendix 2D	
AIT-39A	Intake Tunnel Extension	17566N 93938E	-39.3	57.0	220.0	29 July '75	3	
AIT-40	Intake Tunnel Extension	17575N 94040E	-40.5	78.0	234.0	14 June '75	3	
AIT-41	Intake Tunnel Extension	17597N 94240E	-37.3	75.0	202.0	19 June '75	3	

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AIT-41A	Intake Tunnel Extension	17500N 94234E	-38.9	62.0	219.0	19 July '75	3	
AIT-42	Intake Tunnel Extension	17909N 97006E	-40.8	52.0	214.0	26 June '75		
AIT-43	Intake Tunnel Extension	17762N 95707E	-48.9	51.0	218.0	16 July '75	3	
AIT-44	Intake Tunnel Extension	17816N 96156E	-51.3	49.0	219.0	12 Aug '75	3	
AIT-45	Intake Tunnel Extension	17901N 969003	-62.8	36.0	191.0	09 July '75	3	
AIT-45A	Intake Tunnel Extension	17893N 96810E	-58.3	38.0	186.0	23 July '75	3	
AIT-45B	Intake Tunnel Extension	17880N 96696E	-54.5	37.0	193.0	24 July '75		
AIT-45C	Intake Tunnel Extension	17865N 966011	-58.3	38.0	194.0	08 Aug '75	3	
AAIT-19	Alternate Tunnel Align- ment	17179N 92412E	-31.8	46.0	210.0	25 Jan '74	2	
AAIT-20	Intake Tunnel	17446N 92908E	-38.7	44.0	210.8	12 Feb '74	2	
AAIT-23	Intake Tunnel	17405N 9270713	-33.8	46.5	210.0	23 Jan '74	2	
AAIT-24	Alternate Tunnel Align- ment	16663N 922213	-27.6	23.0	53.5	01 Feb '74	2	

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AAIT-26	Alternate Tunnel Align- ment	16834N 92976E	-38.8	50.0	210.1	14 Feb '74	2	
ADT-1	Discharge Tunnel	20436N 80175E	+12.1	9.5	300.0	07 Sept '73	2	
ADT-2	Discharge Tunnel and Intake Tunnel	201668 80848~	+07.2	15.0	300.0	05 Oct '73	2	
ADT-3	Intake Tunnel	19853N 81686E	+05.4	31.5	300.0	27 Nov '73	2	
ADT-4	Intake Tunnel	195398 82461E	- 0.7	43.5	271.0	09 Oct '73	2	
ADT-5	Intake Tunnel	19279N 83172E	+ 4.2	54.0	271.0	15 Oct '73	2	
ADT-5A	Intake Tunnel	19129N 83560E	+ 5.2	90.5	292.5	19 Dec '73	2	
ADT-6	Alternate Tunnel Align- ment	19052N 842423	- 0.8	100.0	342.0	30 Aug '73	2	
ADT-7	Intake Tunnel	19002N 83901E	- 4.1	108.0	297.0	11 Oct '73	2	
ADT-7A	Intake Tunnel	18853N 84280E	- 3.7	99.0	287.0	14 Jan '74	2	
ADT-8	Intake Tunnel	18717N 84599E	+ 1.1	101.0	256.0	24 Sept '73	2	
ADT-9	Alternate Tunnel Align- ment	18313N 86427~	- 1.5	110.0	323.0	20 Aug '73	2	
ADT-10	Intake Tunnel	18410N 85422~	- 0.3	105.0	280.0	28 Nov '73	2	

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ADT-10A	Intake Tunnel	182698 85784E	+ 0.1	121.5	275.0	04 Feb '74	2	
ADT-11	Intake Tunnel	18128N 86125E	- 0.5	93.0	298.7	02 Oct '73	2	
ADT-11A	Intake Tunnel	17951N 86601E	- 1.8	64.3	270.0	16 Jan '74	2	
ADT-12	Intake Tunnel	17781N 87059E	-10.3	103.5	240.3	18 Sept '73	2	
ADT-12A	Intake Tunnel	176628 87344E	-13.5	41.0	260.0	26 Dec '73	2	
ADT-13	Intake Tunnel	17458N 87897E	- 8.5	18.8	228.0	29 Sept '73	2	
ADT-14	Discharge Tunnel and Intake Tunnel	17161N 88821E	+13.2	25.5	288.0	29 Nov '73	2	Boring Inclined 17°
ADT-15	Discharge Tunnel	16941N 89285E	+ 7.7	47.0	240.0	04 Nov '73	2	
ADT-16	Discharge Tunnel	16553~ 90235E	- 9.1	38.0	243.6	14 Nov '73	FSAR Appendix 2D	
ADT-16A	Discharge Tunnel and Fault investigation	16571N 90280E	- 4.0	33.5	240.3	07 Jan '74	FSAR Appendix 2D	
ADT-16B	Discharge Tunnel and Fault investigation	16545N 90185E	- 8.3	36.3	240.0	14 Jan '74	FSAR Appendix 2D	
ADT-16C	Discharge Tunnel and Fault investigation	16493N 90257E	- 5.5	23.0	238.5	17 Jan '74	FSAR Appendix 2D	
ADT-16D	Discharge Tunnel and Fault investigation	16660N 902198	- 7.8	38.0	241.4	14 Nov '74	FSAR Appendix 2D	

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ADT-17	Discharge Tunnel	16213N 91109E	-14.8	102.3	260.8	06 Oct '73	2	
ADT-17A	Discharge Tunnel	16110N 91380E	-17.7	88.0	225.0	12 Dec '73	2	
ADT-18	Discharge Tunnel	15967N 91745E	-24.0	45.5	225.0	10 Nov '73	2	
ADT-19	Discharge Tunnel	15718N 92402E	-23.5	6.5	197.2	05 Nov '73	2	
ADT-20	Discharge Tunnel	15462~ 93063E	-40.6	10.0	175.1	07 Nov '73	2	
ADT-21	Discharge Tunnel	15208N 93723E	-51.6	43.0	190.3	04 Dec '73	2	
ADT-22	Discharge Tunnel	19904N 94492E	-55.4	54.0	179.9	28 Nov '73	2	
ADT-23	Discharge Tunnel	14879N 94561E	-58.6	41.0	72.5	01 Dec '73	2	
ADT-25	Discharge Tunnel	14931N 94418E	-54.5	59.0	92.0	30 Nov '73	2	
ADT-27	Discharge Tunnel	14637~ 947523	-59.0	10.0	170.0	12 Apr '74	2	
ADT-28	Discharge Tunnel	14526N 94809E	-65.4	12.0	165.0	11 Apr '74	2	
ADT-29	Discharge Tunnel	14374N 949151	-47.0	0.0	180.7	11 Apr '74	2	
ADT-30	Discharge Tunnel	14144N 95021E	-63.8	23.0	164.3	05 Apr '74	2	
ADT-31	Discharge Tunnel	13891~ 95151E	-53.6	0.5	91.2	21 Mar '74	2	
ADT-31A	Discharge Tunnel	13926N 95150E	-57.3	0.0	167.8	25 Mar '74	2	

<u>Boring No.</u>	<u>Purpose</u>	<u>Location/ Coordinates</u>	<u>Ground Elevation</u>	<u>Soil Bored (Ft)</u>	<u>Total Depth (Ft)</u>	<u>Date Completed</u>	<u>Reference</u>	<u>Remarks</u>
ADT-32	Discharge Tunnel	14862N 94622E	-58.8	27.0	169.8	07 Dec '73	2	
ADT-33	Discharge Tunnel and Intake Tunnel	20175N 80459E	+ 9.4	16.6	368.5	79 Mar '74	2	Boring Inclined 33°
ADT-34	Discharge Tunnel	19977N 81201E	+ 5.3	19.0	368.0	20 Mar '74	2	Boring Inclined 34°
ADT-35	Discharge Tunnel	19608N 81992B	- 3.0	40.5	40.5	26 Feb '74	2	
ADT-35A	Discharge Tunnel	19631N 81974E	- 2.3	37.5	300.0	07 Mar '74	2	
ADT-36	Discharge Tunnel	19364N 82706E	- 3.1	4.0	289.7	20 Mar '74	2	
ADT-37	Discharge Tunnel and Intake Tunnel	18947N 83394E	+ 5.3	84.0	354.0	22 Apr '74	2	Boring Inclined 33°
ADT-37A	Discharge Tunnel	18969N 83729E	+ 5.1	-----	-----	15 Mar '74	2	Boring Abandoned
ADT-37B	Discharge Tunnel	18963N 83740E	+ 4.0	118.0	350.0	12 Apr '74	2	Boring Inclined 31°
ADT-38	Discharge Tunnel	18962N 84445E	- 1.0	78.0	198.0	23 Apr '74	2	
ADT-39	Discharge Tunnel	18470N 85030E	- 1.5	102.0	280.5	19 Feb '74	2	
ADT-40	Discharge Tunnel and Intake Tunnel	17384N 88389E	+12.4	52.0	360.0	26 Apr '74	2	Boring Inclined 37°
ADT-41	Discharge Tunnel	17974N 86307E	- 1.3	60.0	275.0	21 Feb '74	2	
ADT-42	Discharge Tunnel	17616N 87273E	-13.5	40.0	260.0	29 Jan '74	2	

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ADT-43	Discharge Tunnel	18275N 85525E	+ 0.3	106.0	276.0	08 Mar '74	2	
B-1	W of Turbine Bldg. II	20440N 78830E	+19.2	22.5	99.3	15 Oct '68	1	
B-2	SW Trench, S of' Containment I	20180N 79650E	+14.1	3.9	155.0	29 Oct '68	1	
B-3	~ 200' N of Turbine Bldg. I	21020N 793503	+ 5.5	32.5	100.0	06 Nov '68	1	
B-4	N of Site	22100N 78900E	+ 4.4	40.0	140.0	27 Nov '68	1	
B-5	S of Cooling Tower - Marsh	19900N 79300E	+12.7	13.0	33.0	02 Dec '68	1	
B-6	S of Site in Marsh (?)	19800N 79600E	+ 4.4	32.5	54.9	14 Dec '68	1	
B-J	W side Waste Process Bldg.	20200N 79400E	+12.2	14.0	34.5	18 Dec '68	1	
B-8	N of EFP Bldg. I	20520N 796208	+30.9	04.2	25.3	21 Dec '68	1	
B-9	E of Turbine Bldg. I	20700N 79670E	+20.9	04.0	28.0	31 Dec '68	1	
B-10	Approximately 100' NE of Turbine Bldg. I	20980N 797603	+ 6.7	31.0	51.3	08 Jan '69	1	
B-11	Approximately 250' E of Turbine Bldg. I	21010N 80120E	+ 5.4	35.8	59.6	18 Jan '69	1	
B-12	N of Pumphouse	20750N 79960E	+12.8	-----	-----	-----	1	No Log
B-13	N of EFP Bldg. II	20380N 79180E	+15.4	11.0	31.0	20 Mar '69	1	

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<u>Boring No.</u>	<u>Purpose</u>	<u>Location/ Coordinates</u>	<u>Ground Elevation</u>	<u>Soil Bored (Ft)</u>	<u>Total Depth (Ft)</u>	<u>Date Completed</u>	<u>Reference</u>	<u>Remarks</u>
B-14	SE Corner Admin. Bldg.	20500N 79330E	+18.1	8.0	28.0	19 Mar '69	1	
B-15	Heater Bay I	20740N 79480E	+18.0	11.0	31.0	13 Mar '69	1	
B-16	Fire Protection Water Tanks	20780N 78440E	+17.6	52.5	72.2	20 Feb '69	1	
B-17	N end of Site	21400N 78900E	+16.2	60.0	160.0	12 Mar '69	1	
B-18	~ 325' W of Turbine Bldg. II	20460N 78330E	+20.7	22.5	42.5	14 Feb '69	1	
B-19	N end of Site	21350N 78900E	+15.9	47.0	67.0	26 Mar '69	1	
B-20	N end of Site	21325N 78900E	+ 6.4	34.0	100.0	28 Mar '69	1	
B-21	N end of Site	21800N 78900E	+ 9.4	50.0	150.0	31 Jan '69	1	
B-22	NW of Turbine Bldg. II	20630N 78900E	+11.4	2.5	68.5	08 Apr '69	1	
B-23	N end of Site	21600N 78900E	+10.2	76.0	176.0	18 Feb '69	1	
B-24	N end of Site	21200N 78920E	+12.4	21.0	121.0	24 Feb '69	1	
B-25	SW Trench S of Containment I	20200N 79770E	+18.5	9.0	20.0	24 Jan '69	1	
B-26	Just SW of SW Pumphouse	203208 79920E	+24.1	3.0	23.0	23 Jan '69	1	
B-27	Shaft Transition Area	20570N 80070E	+15.6	6.0	26.0	20 Jan '69	1	

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B-28	Center Turbine Bldg. II	20580N 79070E	+19.0	4.0	23.8	11 Feb '69		
B-29	Approximately 250' E of Turbine Bldg, I	20830N 80240E	+ 5.8	42.6	62.5	24 Jan '69		
B-30	W side Control Bldg. II	20270N 78970E	+18.5	7.0	27.0	10 Mar '69		
B-31	Containment I NE quadrant	20440N 79720E	+29.9	3.0	23.0	13 Mar '69		
B-32	NW of Turbine Bldg. II	20680N 78750E	+19.0	9.3	29.8	24 Feb '69		
B-33	Approximately 50' N of Rubine Bldg. I	20920N 79470E	+10.0	18.0	37.8	29 Jan '69		
B-34	Approximately 200' N of Admin. Bldg.	21010N 79210E	+06.3	49.6	69.8	05 Feb '69		
B-35	Approximately Center Turbine Bldg. I	20650N 79540E	+21.5	2.5	41.5	12 Mar '69		
B-36	SE Corner of Turbine Bldg. I	20540N 79575E	+27.4	2.0	67.5	02 Apr '69		
B-37	Containment I NW quadrant	20420N 79625E	+24.4	6.0	46.5	19 Mar '69		
B-38	NE of Containment I CW Trench	20550N 79750E	+32.6	2.3	150.0	13 Mar '69		
B-39	E of Containment I	20455N 797803	+31.9	1.5	70.5	28 Mar '69		
B-40	E of Turbine Bldg. I	20680N 79700E	+26.2	2.5	66.5	24 Mar '69		

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<u>Boring No.</u>	<u>Purpose</u>	<u>Location/ Coordinates</u>	<u>Ground Elevation</u>	<u>Soil Bored (Ft)</u>	<u>Total Depth (Ft)</u>	<u>Date Completed</u>	<u>Reference</u>	<u>Remarks</u>
B-41	NE of Containment I CW Trench	20580N 79825E	+27.6	6.8	67.6	18 Mar '69	1	
B-42	N end of Site	21300N 78900E	+14.3	44.0	164.0	20 Mar '69	1	
B-43	N end of Site	21300N 78550E	+26.2	39.0	59.0	17 Mar '69	1	
B-44	N end of Site	21450N 78380E	+23.2	77.0	100.0	01 Mar '69	1	
B-45	N end of Site	21500N 78500E	+21.1	94.5	114.5	08 Apr '69	1	
B-46	N end of Site	21630N 78500E	+13.3	77.0	99.3	23 Apr '69	1	
B-47	N end of Site	20840N 79740E	+12.2	8.5	28.5	24 July '69	1	
B-48	NE quadrant Turbine Bldg. I	20800N 79600E	+13.2	5.5	26.0	25 July '69	1	
C-1	Old Cooling System Design	21060N 80350E	+ 4.9	22.0	22.0	27 Jan '69	1	
c-2	Old Cooling System Design	21050N 80850E	+ 4.2	50.0	50.0	30 Jan '69	1	
c-3	Old Cooling System Design	21830N 81000E	+ 4.7	50.0	50.0	28 Jan '69	1	
c-4	Old Cooling System Design	21020N 81350E	+ 4.0	50.0	50.0	31 Jan '69	1	
c-5	Old Cooling System Design	22570N 81620E	+ 4.5	33.0	33.0	28 Jan '69	1	
C-6	Old Cooling System Design	20990N 81850E	+ 4.8	50.0	50.0	03 Feb '69	1	

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<u>Boring No.</u>	<u>Purpose</u>	<u>Location/ Coordinates</u>	<u>Ground Elevation</u>	<u>Soil Bored (Ft)</u>	<u>Total Depth (Ft)</u>	<u>Date Completed</u>	<u>Reference</u>	<u>Remarks</u>
c-7	Old Cooling System Design	22300N 82557E	+ 4.9	50.0	50.0	14 Feb '69	1	
C-8	Old Cooling System Design	20990N 82330E	+ 4.8	50.0	50.0	04 Feb '69	1	
c-9	Old Cooling System Design	21900N 83450E	+ 4.5	50.0	50.0	13 Feb '67	1	
C-10	Old Cooling System Design	20850N 82835E	+ 4.3	50.0	50.0	05 Feb '69	1	
c-11	Old Cooling System Design	21200N 84150E	+ 4.5	50.0	50.0	13 Feb '69	1	
c-12	Old Cooling System Design	20675N 83230E	+ 4.0	50.0	50.0	15 Feb '69	1	
c-13	Old Cooling System Design	20500N 84870E	+ 4.5	50.0	50.0	12 Feb '69	1	
c-14	Old Cooling System Design	20450N 83275~	+ 4.0	50.0	50.0	12 Feb '69	1	
c-15	Old Cooling System Design	19800N 85580E	+ 0.4	50.0	50.0	18 Feb '69	1	
C-16	Old Cooling System Design	19930N 85860E	+ 2.1	----	----	-----	1	No Log
c-17	Old Cooling System Design	19540N 86050E	+ 2.6	50.0	50.0	20 Feb '69	1	
C-18	Old Cooling System Design	19200N 86450E	-----	50.0	50.0	19 Mar '69	1	
c-19	Old Cooling System Design	18890N 86840E	-----	50.0	50.0	19 Mar '69	1	
c-20	Old Cooling System Design	18590N 87230E	0.0	50.0	50.0	20 Mar '69	1	

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<u>Boring No.</u>	<u>Purpose</u>	<u>Location/ Coordinates</u>	<u>Ground Elevation</u>	<u>Soil Bored (Ft)</u>	<u>Total Depth (Ft)</u>	<u>Date Completed</u>	<u>Reference</u>	<u>Remarks</u>
c-21	Old Cooling System Design	18250N 87600E		50.0	50.0	17 Mar '69		
c-22	Old Cooling System Design	18000N 880403	+16.2	50.0	50.0	13 Feb '69	1	
C-23	Old Cooling System Design	17800N 88500E	+14.0	50.0	50.0	17 Feb '69	1	
c-24	Old Cooling System Design	17600N 88950E	+14.0	50.0	50.0	18 Feb '69	1	
C-25	Old Cooling System Design	17410N 89400E	+10.0	50.0	50.0	03 Apr '69	1	
C-26	Old Cooling System Design	17750N 87760E	0.0	50.0	50.0	20 Mar '69	1	
c-27	Old Cooling System Design	20178N 841708	+ 4.0	50.0	50.0	08 Feb '69		
C-28	Old Cooling System Design	20020N 84560E	+ 3.9	50.0	50.0	06 Feb '69	1	
C-29	Old Cooling System Design	19745N 85000E	+ 4.0	50.0	50.0	07 Feb '69	1	
c-30	Old Cooling System Design	19520N 85520E	+ 2.9	50.0	50.0	17 Feb '69	1	
c-31	Old Cooling System Design	19290N 85950E	+ 2.3	50.0	50.0	21 Feb '69	1	
C-32	Old Cooling System Design	20970N 80470E	+ 5.1	30.5	43.0	06 Mar '69	1	
c-33	Old Cooling System Design	20850N 807808	+ 3.6	30.5	30.5	24 Mar '69	1	
c-34	Old Cooling System Design	20750N 81000E		44.0	44.0	24 Mar '69	1	

Boring No.	Purpose	Location/ Coordinates	Ground Elevation	Soil Bored (Ft)	Total Depth (Ft)	Date Completed	Reference	Remarks
c-35	old Cooling System Design	20640N 81305E	+ 4.3	38.0	38.0	11 Mar '69	1	
C-36	Old Cooling System Design	20800N 80500E	+ 4.5	10.0	15.0	09 Mar '69	1	
c-37	Old Cooling System Design	20710N 80740E	+ 4.3	2.0	07.0	10 Mar '69	1	
C-38	Old Cooling System Design	20540N 80930E	+ 5.2	16.5	18.5	10 Mar '69	1	
c-39	Old Cooling System Design	20530N 81200E	+ 4.0	30.0	30.0	11 Mar '69	1	
c-40	Old Cooling System Design	20480N 81700E	+ 4.8	44.4	44.4	03 Apr '69	1	
c-41	Old Cooling System Design	20350N 816503	+ 4.7	35.0	35.0	03 Apr '69	1	
C-42	Old Cooling System Design	20290N 81160E	+ 4.6	30.0	30.0	04 Apr '69	1	
c-43	Old Cooling System Design	20110N 82620E	+ 4.5	30.0	30.0	04 Apr '69	1	
c-44	Old Cooling System Design	20050N 83000E	+ 3.8	32.0	32.0	28 Mar '69	1	
c-45	Old Cooling System Design	19920N 83095E	+ 2.1	34.0	34.0	28 Mar '69	1	
C-46	Old Cooling System Design	19830N 83320E	+ 4.0	33.3	33.3	31 Mar '69	1	
c-47	Old cooling System Design	19740N 83550E	+ 4.0	43.0	43.0	31 Mar '69	1	
c-48	Old Cooling System Design	19650N 83800E	+ 4.1	50.0	50.0	01 Apr '69	1	

<u>Boring No.</u>	<u>Purpose</u>	<u>Location/ Coordinates</u>	<u>Ground Elevation</u>	<u>Soil Bored (Ft)</u>	<u>Total Depth (Ft)</u>	<u>Date Completed</u>	<u>Reference</u>	<u>Remarks</u>
c-49	Old Cooling System Design	19550N 84020E	+ 4.0	50.0	50.0	02 Apr '69	1	
c-50	Old Cooling System Design	20290N 828853	+ 3.9	31.0	31.0	02 Apr '69	1	
c-51	Old Cooling System Design	20050N 83150E	+ 3.7	15.0	20.0	Apr '69	1	
c-52	Old Cooling System Design	19960N 83380E	+ 4.0	21.0	21.0	26 Mar, '69	1	
c-53	Old Cooling System Design	19860N 83600E	+ 4.0	36.6	36.6	26 Mar '69	1	
c-54	Old Cooling System Design	19780N 83820E	+ 4.0	50.0	50.0	01 Apr '69	1	
c-55	Old Cooling System Design	19780N 83050E	+ 3.8	40.0	40.0	27 Mar '69	1	
C-56	Old Cooling System Design	19690N 83260E	+ 4.1	38.0	38.0	27 Mar '69	1	
c-57	Old Cooling System Design	19350N 844853	+ 0.5	50.0	50.0	27 Mar '69	1	
C-58	Old Cooling System Design	19180N 84950E	+ 0.1	50.0	50.0	27 Mar '69	1	
c-59	Old Cooling System Design	19000N 85420E	+ 0.5	50.0	50.0	26 Mar '69	1	
C-60	Old Cooling System Design	18820N 85860E	+ 3.8	50.0	50.0	25 Mar '69	1	
C-61	Old Cooling System Design	18510N 86290E	-----	50.0	50.0	25 Mar '69	1	
C-62	Old Cooling System Design	18350N 86800E	0.0	50.0	50.0	24 Mar '69	1	

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<u>Boring No.</u>	<u>Purpose</u>	<u>Location/ Coordinates</u>	<u>Ground Elevation</u>	<u>Soil Bored (Ft)</u>	<u>Total Depth (Ft)</u>	<u>Date Completed</u>	<u>Reference</u>	<u>Remarks</u>
c-63	Old Cooling System Design	18200N 87280E	0.0	50.0	50.0	24 Mar '69		
C-64	Old Cooling System Design	17900N 88270E	+17.8	50.0	50.0	31 Mar '69		
C-65	Old Cooling System Design	17700N 88730E	+13.7	50.0	50.0	01 Apr '69	1	
C-66	Old Cooling System Design	17500N 89180E	+13.3	38.0	38.8	01 Apr '69	1	
C-67	Old Cooling System Design	19845N 82000E	+ 4.5	31.0	31.0	11 Apr '69	1	
C-68	Old Cooling System Design	19650N 82440E	+ 3.9	39.6	32.6	11 Apr '69		
C-69	Old Cooling System Design	19345N 83130E	+ 4.1	39.9	39.9	09 Apr '69		
c-70	Old Cooling System Design	19125N 835953	+ 4.0	50.0	50.0	09 Apr '69		
c-71	Old Cooling System Design	19780N 81370E	+ 4.7	40.5	40.5	22 July '69	1	
C-72	Old Cooling System Design	19550N 81890E	+ 3.6	52.0	52.0	18 July '69		
c-73	Old Cooling System Design	19480N 82310E	+ 4.8	52.0	52.0	21 July '69	1	
c-74	Old Cooling System Design	19140N 82640E	- 4.4	42.8	42.8	16 July '69	1	
c-75	Old Cooling System Design	18620N 82810E	- 3.0	52.0	52.0	15 July '69	1	
C-76	Old Cooling System Design	18460N 83240E	- 1.0	52.0	52.0	15 July '69		

Boring No.	Purpose	Location/ Coordinates	Ground Elevation	Soil Bored (Ft)	Total Depth (Ft)	Date Completed	Reference	Remarks
C-77	Old Cooling System Design	18690N 83650E	- 1.0	52.5	52.5	14 July '69	1	
C-78	Old Cooling System Design	18910N 840503	- 1.0	52.0	52.0	11 July '69	1	
DI-1	SW Trench, between Units I & II	79373E 20092N	+ 9.8	16.5	124.0	04 Dec '72	FSAR Appendices 2D and 2J	
DI-3	SW of Containment II	793103 20218N	+14.0	11.0	65.50	04 Dec '72	" "	
DI-4	(E of) Fuel Storage Bldg. II	79278E 20122N	t11.4	15.5	170.00	27 Nov '72	" "	
DI-5	SW Trench N of Cooling Tower	792503 20027N	t16.6	15.3	65.4	24 Nov '72	" "	
DI-6	S of Primary Auxiliary Bldg. II	79156E 20054N	+19.2	11.5	33.0	27 Nov '72	" "	
D 1 - 7	Fuel Storage Bldg. II, center	79110E 20192N	i-14.3	14.5	118.7	11 Nov '72	" "	
DI-8	Center of Contain- ment II	79213E 20245~	+15.9	9.0	29.5	05 Dec '72	" "	
DI-9	Primary Auxiliary Bldg. II	79060E 20083N	+20.8	1.5	24.5	28 Nov '72	" "	
DI-10	Primary Auxiliary Bldg. II	79088E 20189N	+19.2	8.0	112.00	06 Dec '72	" "	
DI-11	WSFPC II, N end	791163 20276N	+13.8	11.5	65.0	07 Dec '72	" "	
DI-12	Tank Farm II	78963E	+23.9	6.5	29.5	29 Nov '72	" "	
D2-1	DG Bldg. II	20111N 78896E	t21.2	6.0	31.0	06 Dec '72	" "	
D2-3	N of DG Bldg II	20234N 78829E 20360 N	+19.4	25.2	60.0	26 Nov '72	" "	

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<u>Boring No.</u>	<u>Purpose</u>	<u>Location/ Coordinates</u>	<u>Ground Elevation</u>	<u>Soil Bored (Ft)</u>	<u>Total Depth (Ft)</u>	<u>Date Completed</u>	<u>Reference</u>	<u>Remarks</u>
D2-4	Just W of Unit II	78800E 20264N	+16.7	19.0	171.0	24 Nov '72	FSAR Appendices 2D and 2J	
D2-5	Just W of Unit II	78775E 20167N	+16.5	6.5	65.0	01 Dec '72	" " "	
D2-7	Just W of Unit II	78730E 20283N	+16.7	24.5	125.0	28 Dec '72	" " "	
E1-1	Containment I, Center	79677E 20398N	+28.9	0.0	150.1	26 Dec '72	" " "	
E1-2	Control Bldg. I, Center	79500E 20450N	+21.4	6.5	27.2	12 Dec '72	" " "	
E1-3	W side DG Bldg. I	79350E 20400N	+15.2	16.5	42.0	13 Dec '72	" " "	
E1-4	Fuel Storage Bldg. I, Center	79698E 20297N	+20.2	1.5	105.0	19 Dec '72	" " "	
E1-5	Center of Primary Auxiliary Bldg.	79551E 20296N	+16.0	6.5	108.0	19 Dec '72	" " "	
E1-6	N end of Waste Process Bldg.	79400E 20300N	+14.3	1.5	24.0	19 Dec '72	" " "	
E2-1	Containment II, Center	79201E 20247N	+15.9	6.5	159.2	13 Dec '72	" " "	
E2-2	NE of Containment II	79272E 20355N	+13.7	11.5	32.5	14 Dec '72	" " "	
E2-3	W side of Turbine Bldg. II	79002E 20409N	+19	35.0	52.0	04 Dec '73	1	
E2-4	E side of Turbine Bldg. II	79170E 20508N	+18	5.0	26.0	05 Dec '73	1	
E2-5	NE quad Contain- ment II	79212E 20277N	+18	8.0	97.8	29 Apr '74	1	
E2-6	SW corner of PAB I	79551E 20203N	+12	16.9	42.5	06 May '74	1	
E2-7	N end of PAB I	795523 20374N	+17	13.5	115.2	13 May '74	1	

<u>Boring No.</u>	<u>Purpose</u>	<u>Location/ Coordinates</u>	<u>Ground Elevation</u>	<u>Soil Bored (Ft)</u>	<u>Total Depth (Ft)</u>	<u>Date Completed</u>	<u>Reference</u>	<u>Remarks</u>
E2-8	SE corner of Cooling Tower	79370E 19997N	+10	7.0	70.0	08 May '74	1	
E2-9	S of Unit I	79568E 20115N	+9	15.0	70.0	01 May '74	1	
E2-10	S of Unit I	79580E 20060N	+8	7.0	70.0	03 May ' 14	1	
E2-11	Containment I Perimeter	20435E 796118	+25.0	17.7	168.0	27 June '74	FSAR Appendix 2F	Boring Inclined About 40°
E2-12	Containment I Perimeter	20334E 79642 N	+21.5	1.0	165.5	18 June '74	" "	Boring Inclined About 40°
E2-13	Containment I Perimeter	20365E 79745N	+30.5	0.0	169.0	03 July '74	" "	Boring Inclined About 40°
E2-14	Containment I Perimeter	20467E 79713N	+29.9	3.0	166.0	19 June '74	" "	Boring Inclined About 40°
E2-15	Containment II Perimeter	20321E 79179 N	+13.9	11.5	165.0	05 June '74	" "	Boring Inclined About 40°
E2-16	Containment 11 Perimeter	20227N 79130E	+16.8	9.5	165.2	29 May '74	FSAR Appendix 2F	Boring Inclined About 40°
E2-17	Containment II Perimeter	20117N 79224E	+13.3	19.0	165.0	05 June '74	FSAR Appendix 2F	Boring Inclined About 40°
E2-18	Containment II Perimeter	20270N 79272E	+14.9	14.0	168.0	28 May '74	FSAR Appendix 2F	Boring Inclined About 40°
E2-27	N side of Cooling Tower	79158 E 19990 N	+19	2.5	79.8	15 May '74	1	
E2-28	S side of Cooling Tower	79180E 19930N	+18	1.0	101.8	16 May '74	1	

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<u>Boring No.</u>	<u>Purpose</u>	<u>Location/ Coordinates</u>	<u>Ground Elevation</u>	<u>Soil Bored (Ft)</u>	<u>Total Depth (Ft)</u>	<u>Date Completed</u>	<u>Referenced</u>	<u>Remarks</u>
F-1'	Alternate Tunnel Align- ment	17600N 86700E	- 3.0	9.5	9.0	17 Apr '73	2	
F-1A	Alternate Tunnel Align- ment	17600N 86694E	- 3.0	15.0	143.8	25 Apr '73	2	
F-2	Alternate Tunnel Align- ment	19189N 86875E	- 1.4	13.8	264.4	15 May '73	2	
F-3	Alternate Tunnel Align- ment	19374N 88446E	+ 9.4	87.5	298.8	07 June '73	2	
F-4	Alternate Tunnel Align- ment	18311N 88393E	+16.8	135.3	329.6	02 July '73	FSAR Appendix 2D	
F-5	Alternate Tunnel Align- ment	18332N 884303	+15.7	121.3	319.5	31 July '73	2	
F-6	Alternate Tunnel Align- ment	18450N 87945E	- 1.5	124.2	339.0	09 Aug '73	2	
G-1	Fuel Oil Storage Tank	29690N 78370E	+17.3	16.5	16.5	30 Sept '74	FSAR Appendix 21	
G-2	Settling Basin Inlet	21380N 78900E	+15.9	14.5	14.5	01 Oct '74	FSAR Appendix 21	

<u>Boring No.</u>	<u>Purpose</u>	<u>Location/ Coordinates</u>	<u>Ground Elevation</u>	<u>Soil Bored (Ft)</u>	<u>Total Depth (Ft)</u>	<u>Date Completed</u>	<u>Reference</u>	<u>Remarks</u>
G-3	Settling Basin Outlet	21717N 78949E	+ 9.4	34.8	34.8	01 Oct '74	FSAR Appendix 21	
G-4	Settling Basin	215718 78992E	+ 9.6	22.5	22.5	03 Oct '74	" "	
G-5	Site Retaining Wall	20969N 79525E	+ 7.8	9.7	09.7	03 Oct '74	" "	
G-6	Site Retaining Wall	20949N 79349E	+ 8.2	19.5	19.5	03 Oct '74	" "	
G-7	Site Retaining Wall	20932N 79175E	+ 8.6	23.2	23.2	03 Oct '74	" "	
G-8	Site Retaining Wall	21006N 79107E	+ 7.3	19.0	19.0	07 Oct '74	" "	
G-9	Concrete Seawall	20123N 79720E	+ 9.5	10.5	25.5	09 Oct '74	" "	
G-10	Concrete Seawall	20083N 78587E	+ 7.9	.6.5	22.0	08 Oct '74	" "	
G-11	Concrete Seawall	20042N 79455E	+ 6.8	15.9	31.0	10 Oct '74	" "	
G-12	Revetment Seawall	19898N 78500E	+ 7.2	11.0	11.0	10 Oct '74	" "	
G1	Falling Head Permeability	21882N 782913	+16.4	----	----	-----	FSAR Appendix 21	No Log
G2	Falling Head Permeability	21412N 77959E	+25.4	74.0	84.0	27 Jan '69	" "	
G3	Falling Head Permeability	20436N 77489E	+35.4	11.0	21.0	19 Feb '69	" "	
G4	Falling Head Permeability	19989N 77116E	+30.1	5.0	15.0	20 Feb '69	" "	
G5	Falling Head Permeability	19200N 76420E	+40.4	65.0	78.0	04 Mar '69	" "	

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<u>Boring No.</u>	<u>Purpose</u>	<u>Location/ Coordinates</u>	<u>Ground Elevation</u>	<u>Soil Bored (Ft)</u>	<u>Total Depth (Ft)</u>	<u>Date Completed</u>	<u>Reference</u>	<u>Remarks</u>
PF-3	Portsmouth Fault Investigation	Greenland, NH	+61.8	40.0	50.0	30 July '74	FSAR Appendix	2C
PF-3A	Portsmouth Fault Investigation	Greenland, NH	+61.8	80.0	204.3	08 Aug '74	" "	"
SRF-1	Scotland Rd Fault Investigation	Newbury, MA	+18.1	13.0	79.0	06 Dec '73	" "	"
SRF-2	Scotland Rd Fault Investigation	Newbury, MA	+17.6	50.5	77.5	10 Dec '73	" "	"
SRF-3	Scotland Rd Fault Investigation	Newbury, MA	+17.9	42.0	95.0	19 Dec '73	" "	"
SRF-4	Scotland Rd Fault Investigation	Newbury, MA	+17.6	60.0	96.0	03 Jan '74	" "	"
SRF-5	Scotland Rd Fault Investigation	Newbury, MA	+17.6	34.0	197.7	08 Jan '74	" "	" Boring Inclined 45°
SRF-6	Scotland Rd Fault Investigation	Newbury, MA	+17.8	53.0	58.0	08 Jan '74	" "	"
SRF-7	Scotland Rd Fault Investigation	Newbury, MA	+17.5	65.5	255.0	18 Jan '74	" "	" Boring inclined 45°
SRF-8	Scotland Rd Fault Investigation	Newbury, MA	+17.6	49.0	172.0	19 Feb '74	" "	"
SRF-9	Scotland Rd Fault Investigation	Newbury, MA	+17.8	57.0	118.3	03 Jan '74	" "	"

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 93.2'

Logged By: J. R. Rand 7/10/72

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0'			
10'			
20'			
22.5'			OLDER-FOLiated GRANITE 22.5' top of Rock
Breaks in chips to 1' pieces			Diabase - Dark-grey, fine-grained with dark green phenocrysts
CHIPS			
Breaks in 1' to 1.5' pieces			
PITTED			
VERY MINOR RUST			
40'			
Breaks @ .2' to 1' pieces			
50'			
Breaks @ .2' to 1' pieces			
60'			
Breaks @ .2' to 1.5' pieces			
70'			
80'			

Rock is fresh
minor rusty
staining locally
on joints

Ditto Fresh
Rock

All joints @
Low angle

Ditto Fresh
Rock

HIGH ANGLE (65°)
JOINTS AT 1' to 2'
INTERVALS

Rock Fresh
as above
Rust is rare.
but some
joints are stained

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 152.5'

Logged By: J. R. Rand 7/10/72

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
70'			
Breaks @.3'to2' intervals	Rock is fresh. Only very minor slight staining on joints	50°	15' VEIN RELICT BANDING AFTER META-SEDIMENTS Diorite, fine-grained, medium light grey, with local zones of coarser-grained feldspathic rock
80'			
Breaks @.3'to2' intervals	Rock is fresh Minor locally rusty on some joints		EGMATITE Medium-coarse grained Diorite
90'			
100'			
Breaks @.5'to1.5' intervals	Rock is fresh through out. Only occasional minor staining on joints Rock not closely jointed. No slickensides		Diorite, massive dark grey medium-fine grained with local zone of coarser- grained light grey porphyritic Diorite Occasional feldspathic veining
110'			
120'			
Breaks @ Chips to 2' pieces	Rock is fresh Minor rusty staining on some joint surfaces.		Diorite, dark grey, fine- grained, with occasional coarse grained light grey zones
130'			
140'			
Breaks @.4'to2' pieces	Rock is fresh		Predominantly fine-grained Diorite
150'			
			Bottom Of Hole

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 125'

Logged By: J. R. Rand 12/11/72

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0'			
10'			
20'			
25'			25' Top
30'	70° joint JOINTS AT 20° TO 40° DIPS AT 3" TO 1' INTERVALS	Rock is fresh, only minor staining locally on joints	Diabase dike, very fine-grained, very dark grey to sub black
40'	CHIPS ROCK IS MODERATELY WEATHERED, SOFTENED ON JOINTS		30° contact, intrusive, welded Quartz diorite, medium coarse- grained with fine-grained diorite inclusions
50'	CHIPS Core is broken to chips through-out	Rock does not appear highly weathered, but is apparently weakened somewhat, drills very poorly	10° contact, welded, intrusive Diabase dike, very fine-grained sub black green olivine speckled
60'	Core is broken on low angle 20° to 30° joints	Rock is fresh	DIABASE DIKE Quartz diorite, medium coarse grained with local bands of finer grained diorite giving a broad foliated effect. Steeply dipping foliation as shown.
70'	MINOR VUGS ON JOINTS 70° JOINT MINOR RUST		FINER GRAINED
80'			65° intrusive contact Diabase dike, very fine- grained sub black with local white speckling

PROJECT SEABROOK

STATION

HOLE LOCATION Center of Unit #1

ELEVATION 23.9'

BEARING

INCLINATION

DEPTH 150.1'

Logged By: J. R. Rand

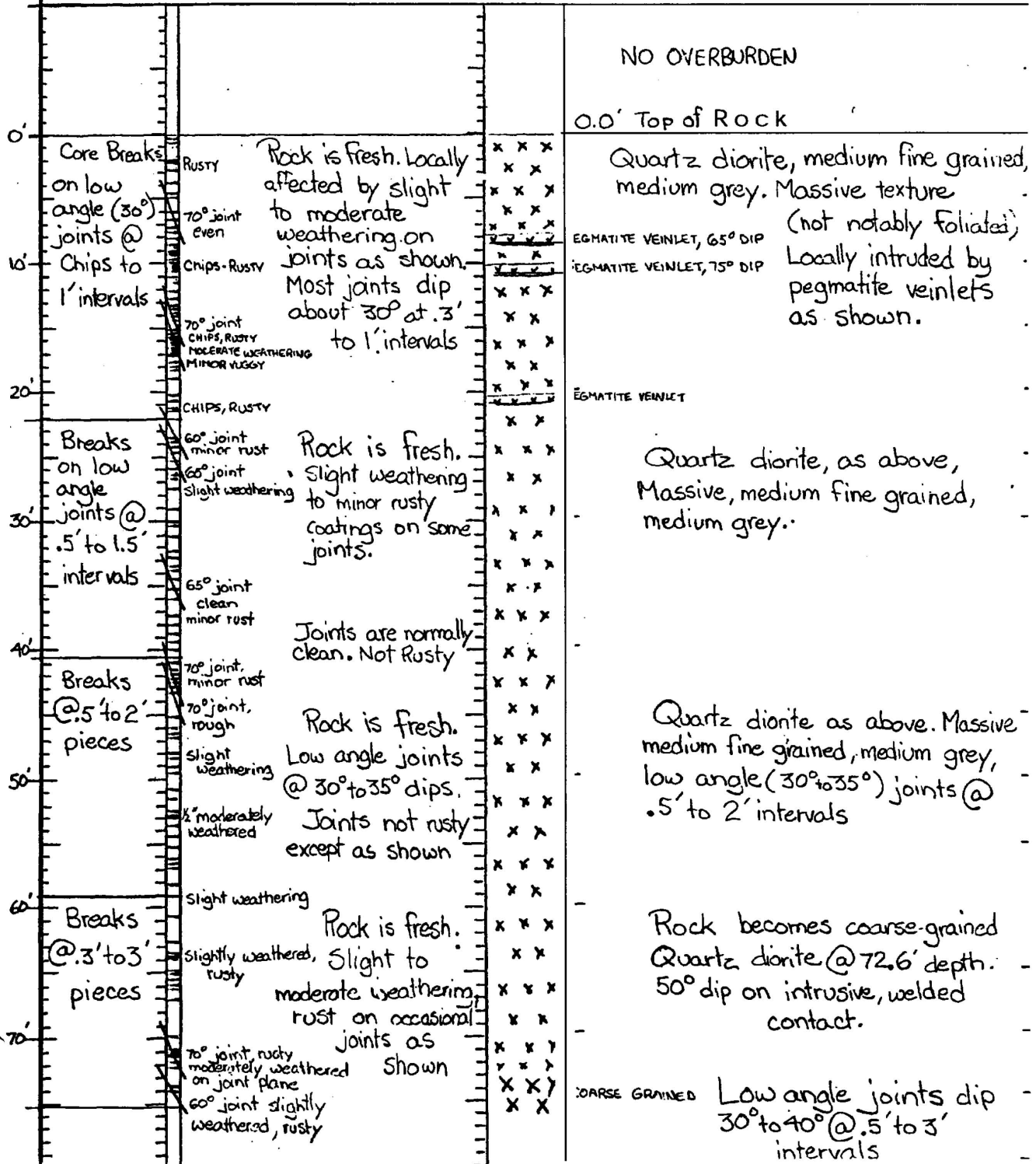
12/26/12

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES



PROJECT SEABROOK

STATION

HOLE LOCATION SITE #2 - 79.350 E 20.400 N

ELEVATION 15.2'

BEARING

INCLINATION

DEPTH

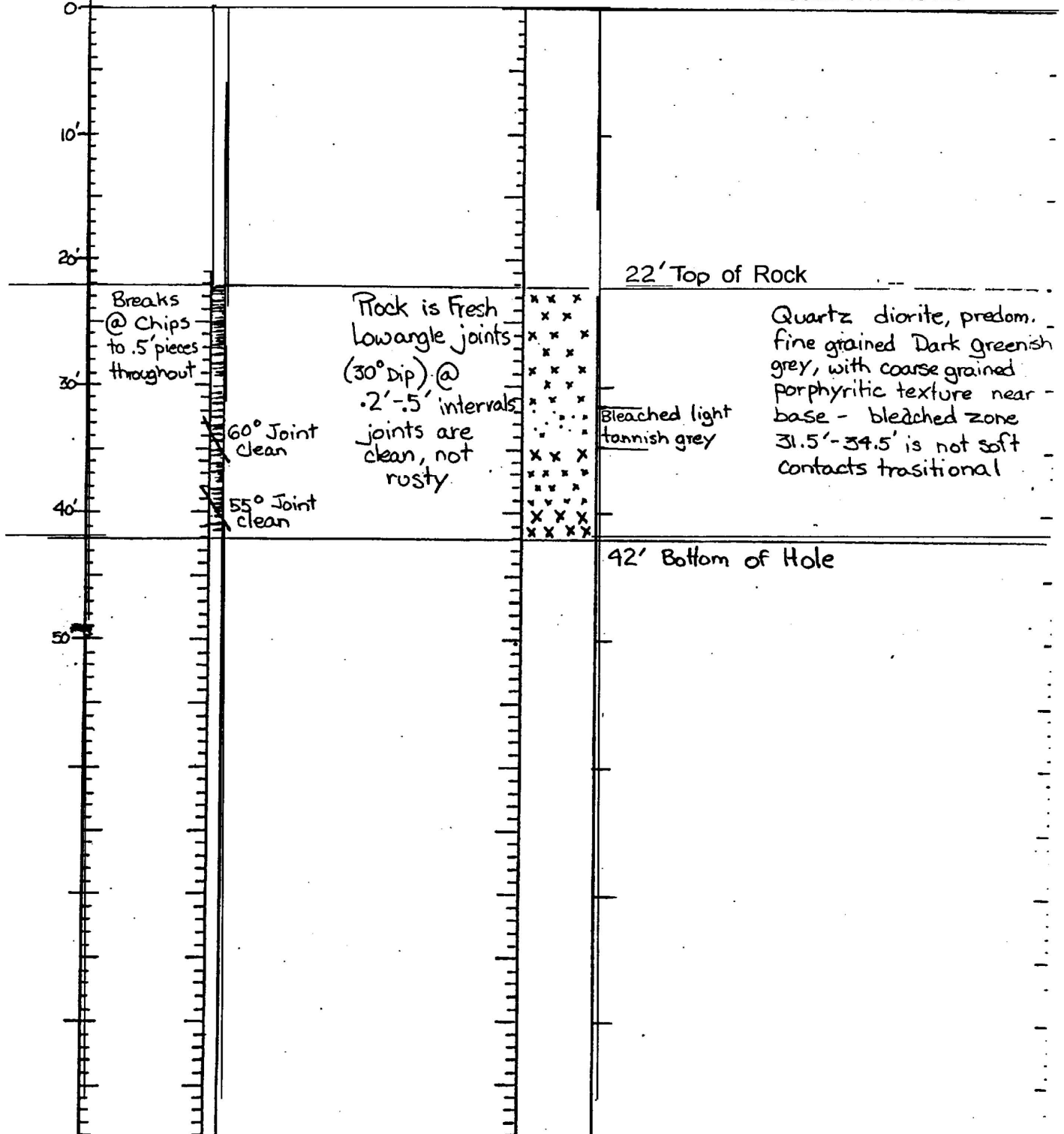
Logged By: J. R. Rand 12/27/72

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES



PROJECT SEABROOK

STATION

DDH K-1

PAGE \ of 2

HOLE LOCATION

ELEVATION 15.9'

BEARING

INCLINATION

DEPTH 159.2'

Logged By: J. R. Rand 12/12/72

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0'			9' top of Rock
10'	60° joint 85° joint minor rust 80° joint minor rust	Rock is fresh throughout - minor rusty staining on joint surfaces to about 18' depth	Quartz Diorite - medium-fine grained, medium grey. Vague foliation @ high angle (80° ± DIP)
20'	70° joint clean		
30'	60° joint 65° joint 65° joint 70° joint	Rock is fresh breaks on 30°-40° joints with a few 60°-70° joints. Not rusty on joints.	Quartz Diorite, as above - foliation more prominent @ 30°-70° Dips but variable in direction. Finer grained medium-dark grey diorite patches enclosed in medium fine-grained matrix.
40'	70° joint pyrite smear DRILLER	Rock is fresh, no rust. Rock breaks on 30°-40° joints @ 6" to 12" intervals good drilling.	Quartz diorite, as above. Becoming a little coarser-grained with depth. Less obviously foliated, more massive texture.
50'	70° joint pyrite smear		
60'	70°-75° joint 65° joint	Rock is fresh High angle jointing becoming more closely spaced @ 2'-4' intervals in hole - joints are wavy but smooth. Pyrite coatings	Quartz diorite, as above, becomes finer grained, foliated - some tendency to break along smooth foliation planes.
70'	65° joint 65° joint smooth		
80'			

BORING LOCATION		N16545, E90185: Offshore		INCLINATION Vertical		BEARING		DATE START/FINISH		Jan. 8, 1974 / Jan. 14, 1974	
CASING ID		3 in.		CORE SIZE		1-7/8 in.		TOTAL DEPTH		240.0 ft	
DRILLED BY		Warren George, Inc.; P. Schaeble, J. Harris									
GROUND EL (MSL)		ft -5.3		DEPTH TO WATER/DATE		Tidal ft /		LOGGED BY		Sofl - K. Polk; Rook - J. R. Rand	

E L MSL ft	SAMPLE Depth ft	Type No.	N or Rec.	RATE OF ADV. in./ft	WATER CONTENT %	OR RQD Graphic	PRESSURE psi	TEST Computed 10 ⁻⁴ 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.)	
-8.3												
-10												
-20												
-36.3												
-40												
-46												
-60												
-70												
-80												
-90												
-100												
-110												
-120												
-130												
-140												
-150												
-160												
-170												
-180												
-190												
-200												
-210												
-220												
-230												
-240												
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-990												
-1000												

NOTES

1) No samples taken.

2) Roller bit to 38.0 ft.

3) NC clays present; therefore no water contents were determined.

4) Drill time for entire boring from 8 to 15 minutes per foot.

5 - Oriented core

SEABROOK STATION

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

YANKEE ATOMIC ELECTRIC COMPANY

United Engineers a construction firm

Date: April 11, 1974

Project 7286

PAGE 1

LOG OF BORING - ADT-16R

[illegible]

BORING LOCATION N16493. E90257; Offshore INCLINATION Vertical BEARING _____ DATE START/FINISH Jan. 14, 1974 Jan. 17, 1974											
CASING 3 in.		CORE SIZE 1-7/8 in.		TOTAL DEPTH 238.5 ft		DRILLED BY Warren George, Inc.; P. Schaeble, J. Harris					
GROUND EL (MSL) - 9.5 ft		DEPTH TO WATER/DATE _____		Tidal ft /		LOGGED BY Soil - K. Polk; Rock - J. R. Rand					
EL ft	SAMPLE Depth ft	Type No	N or Rec.	RATE OF ADV. in./ft	WATER CONTENT %	or RQD %	PRESSURE TEST		STRIKE, DIP F = Folliation J = Joint C = Contact B = Bedding	CORE CREAS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.) (Type, texture, mineralogy, color, hardness, etc.)
							APP psi	Computed 10 ⁻⁴ cm/sec			
5.5					2)				S = Slickenside		
10					None						
20											
24											
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236											
238											

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 = O.D. = Groundwater
U = Undisturbed sample

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 O-33'. No samples taken.

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

3 = Oriented core.

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

united engineers
a subsidiary of Newcomb Company

Date: April 17, 1974 Project 7286

PAGE 2 1 of LOG OF BORING AUT 16C

BORING LOCATION <u>N16493, E30257; Offshore</u>		INCLINATION <u>Vertical</u>		BEARING <u></u>		DATE START/FINISH <u>Jan. 14, 1974</u> , <u>Jan. 17, 1974</u>	
CASING ID <u>3 in.</u>		CONC SIZE <u>1-7/8 in.</u>		TOTAL DEPTH <u>238.5</u> ft		DRILLED BY <u>Warren George, Inc.; P. Schasible, J. Harris</u>	
GROUND EL (MSL) <u>-5.5</u> ft		DEPTH TO WATER/DATE <u>Tidal</u> ft / <u></u>		LOGGED BY <u>Soil - K. Polk Bock - J. R. Rand</u>			

EL. MSL ft	SAMPLE Depth ft	Type No.	N or Rec.	RATE OF ADV. min/ft	WATER CONTENT %	OR RQD Graphic	PRESSURE TEST Computed 10 ⁻⁴ 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.)	
CONTINUED FROM PREVIOUS PAGE											
143.6	NQ-28	100	10.0	82				N82E, 22SE S		Joints and partings not slickensided.	Diabase. Fine-grained, dark gray. Grades to medium-grained at 145'. Becomes white feldspar speckled at 151'.
150	NQ-30	98	8.8	95				N20E, 56SE J N59W, 52NE J N69E, 33SE J		Feldspar specks throughout	
160	NQ-31	100	9.4	37				N50W, 43NE J N65W, 69NE F		Fresh and hard. Drills well. Joints and partings locally show striations, minor slickensides.	Diabase. Fine-grained, dark gray.
160	NQ-32	100	9.0	73					Striated		Open contact dips 38°
170	NQ-33	100	8.2	82					Striated		Diabase. Fine-grained, medium gray. Quartzose diabase inclusion is irregular, fused.
180	NQ-34	100	9.0	65						Fresh and hard. Drills very well. Joints and partings fresh.	166.9' Fused contact dips 70°
180	NQ-35	100	7.2	87				N53E, 20SE J N39W, 57NE S			Diabase. Fine-grained, dark gray with calcite phenocrysts 183' to 186'.
180	NQ-36	100	8.5	79				N26E, 66NW J N26E, 64NW J		Open joint Calcite coated	Calcite speckling
190	NQ-37	100	9.6	98				N54W, 62NE S		Fresh and hard. Drills well. Some striated chlorite on joints and partings.	Diabase, as above.
200	NQ-38	100	8.2	80				N58W, 44NE J N83W, 58SW J N71E, 43SW J		Chlorite	Open contact dips 14°
200	NQ-39	100	9.5	47				N 4W, 18NE J N41E, 35NW J		Chlorite Slippery	Pegmatite
200	NQ-40	100	9.7	50				N44W, 84NE J N63W, 55SW F		Chlorite	Diabase. Fine-grained, medium dark gray quartzose. Fairly well foliated throughout.
210	NQ-41	100	8.9	23					Rough Irregular joints		Pyrite
210	NQ-42	100	9.0	45				N45E, 73NW J N32E, 34SE J N16E, 30SE J N63E, 35SW J N62W, 43SW J		Calcite, pyrite on foliation	Prominent pyrite mineralization with calcite. Fused breccia at 208.8-210.4'.
220	NQ-43	100	9.1	58				N58E, 19NW C		Fresh and hard. Minor surface wx effects on partings.	Fused contact dips 5°
220	NQ-44	98	9.7	90				N83W, 10NW J			Brown chert some. Not bleached.
230	NQ-45	100	8.6	82				N78E, 65SE J N17E, 41SE S		Striated Slickensided	Diabase. Fine at top.
230	NQ-46	100	9.5	90				N53W, 70NE J N46E, 45SE J		Fresh and hard. Drills very well. At 235.5' becomes bleached gradually.	Diabase. Medium-fine grained, dark gray with hair-line calcite veinlets.
240	NQ-47	93	9.1	93				N 1E, 34NE J		Calcite lined	235.5' Rock gradually becomes bleached, transitional contact bleach over .8' core
BOTTOM OF BORING											

LEGEND

N - Orientation of penetrations, etc. (see notes, etc.)

Reo - Length recovered/length cored, %

RQD - Length of sound core 4 in. and longer/length cored, %

S - Split spoon sample

U - Undisturbed samples

S - Shelby tube

F - Fixed piston

O - Osterberg

D - Drilling break

wx - Weathered, weathering

N - Denison

P - Pitcher

G - GEI

k - Coefficient of permeability

NOTES


I - Oriented core.

x - Oriented core.

SEABROOK STATION

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

YANKEE ATOMIC ELECTRIC COMPANY

 **United Engineers**

Date: April 17, 1974 Project 7286

PAGE 2 of 2 LOG OF BORING ADT 16C

BORING LOCATION <u>N16600, E90219; Offshore</u>		INCLINATION <u>Vertical</u>		BEARING _____		DATE START/FINISH <u>Nov. 10, 1974</u> / <u>Nov. 14, 1974</u>	
CASING ID <u>3 in.</u>		CORE SIZE <u>1-7/8 in.</u>		TOTAL DEPTH <u>341.4</u> A		DRILLED BY <u>Warren George, Inc.; P. Schaeble, J. Harris</u>	
GROUND EL. (MSL) <u>-7.8 ft</u>		DEPTH TO WATER/DATE <u>Tidal</u>		ft / _____		LOGGED BY <u>Soil - K. Polk Bock - J. R. Rapd</u>	

EL. MSL ft	SAMPLE Depth ft	Type No.	N or Rec.	RATE OF ADV. min/ft	WATER CONTENT %	or RQD Graphic	PRESSURE TEST APM psi	COMPUTED 10 ⁻⁴ k cm/sec	STRIKE, DIP F = Foliation J = Joint C = Contact B = Bedding	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc., (Type, texture, mineralogy, color, hardness, etc.))	
10					2) None						
20											
30											
35.0											
40		NQ-1	88	7.0	19					Minor polish	Fresh and hard. Closely spaced high-angle joints. Joints are polished at 42.3' and 44.5'.
45		NQ-1	88	7.0	46					Minor polish	
50		NQ-1	88	5.0	52					Vertical joint	
55		NQ-1	88	6.0	48						
60		NQ-1	82	5.0	53						
65		NQ-1	98	7.0	35						
70		NQ-1	88	6.0	76					Polished slickensides at 70.1'	Fresh and hard. Drills well. Polished surface shiny at 70.1'.
75		NQ-1	99	6.0	79						
80		NQ-1	88	6.0	74						
85		NQ-1	88	6.0	79						
90		NQ-1	.00	6.0	79						
95		NQ-1	97	7.0	67					Pyrite-minor polish	
100		NQ-1	96	8.0	62					Smooth joints	Fresh and hard. Not bleached. Joints are characteristically planar. Smooth locally show high polish.
105		NQ-1	100	8.0	88					55° joints-high polish-smooth 65° joints-smooth 65° joints-smooth	
110		NQ-1	100	1.0	33					Vertical joint	
115		NQ-1	100	8.0	80					Chlorite	Thin chlorite coating on non-polished joints.
120		NQ-1	100	8.0	72					Calcite filling	Fresh, hard. Not bleached. Some smooth joints. Not highly polished.
125		NQ-1	100	8.0	27					Minor polish	

NOTES

1) - Washed through soil O-38". No samples taken.

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

X - Oriented core.

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

 Date: April 16, 1974 Project 7286

PAGE 1 of 2
LOG OF BORING A B T 160

BORING LOCATION		INCLINATION		BEARING		DATE START/FINISH		
N16600, E90219; Offshore		Vertical				Nov. 10, 1974 / Nov. 14, 1974		
CASING ID		CORE SIZE		TOTAL DEPTH		DRILLED BY		
3 in.		1-7/8 in.		241.4 ft		Warren George, Inc.; P. Schaeble, J. Harris		
GROUND EL. (MSL)		DEPTH TO WATER/DATE		Tidal		LOGGED BY		
-7.8 ft				ft /		Soil K, Pout: Rock - J. R. Rand		
FL. EQL	DEPTH	SAMPLE	RATE OF ADV.	WATER CONTENT	OR RQD	PRESSURE TEST	STRIKE, DIP	SOIL AND ROCK DESCRIPTIONS
ft	ft	Type and No.	N or Rec.	%	Graphic	psi k 10 ⁻⁴ cm/sec	F = Foliation J = Joint C = Contact B = Bedding S = Slickenside	(Weathering, defects, etc., (Type, texture, mineralogy, color, hardness, etc.)
CONTINUED FROM PREVIOUS PAGE								
146.5		NQ-19	100	7.0	63		N76W, 67NE S	Fused contact dips 56°
150		NQ-20	100	9.0	85		N64W, 52NE J	Diabase. Fine-grained, dark gray with fine calcite specks scattered throughout.
160		NQ-21	100	9.0	66		N38W, 24SW J	
170		NQ-22	100	9.0	93		N88E, 32SE J	
180		NQ-23	98	9.0	72		N48E, 13NW J	
190		NQ-24	100	9.0	92		N88E, 13NW J	
200		NQ-25	100	9.0	57		N55E, 24NW J	
210		NQ-26	100	10.0	41		N 6W, 23NE J	
220		NQ-27	100	10.0	48		N47E, 18SE J	
230		NQ-28	100	12.0	21		N 8W, 30NE J	
240		NQ-29	98	11.0	72		N62E, 22SE J	
250		NQ-30	100	10.0	66		N34W, 72SW J	
260		NQ-31	98	13.0	78		N48E, 69NW C	
270		NQ-32	100	12.0	87		N34E, 37SE F	
280		NQ-33	9	12.0	86		N33E, 40SE S	
290		NQ-34	100	15.0	54		N90E, 23S J	
300		NQ-35	100	14.0	48		N15E, 16NW J	
310		NQ-36	100	12.0	41		N52E, 57NW S	
320		NQ-37	100	12.0	46		N87W, 49NE J	
330		NQ-38	100	12.0	17		N70E, 14NW J	
340		NQ-39	100	12.0	17		N55W, 18NE J	
350							N24E, 75NW C	
360							N66W, 60NE F	
370							N65W, 63NE S	
380							N15E, 45SE F	
390							N38W, 65W J	
400							N37W, 41NE F	
410							N80W, 70NE J	
420							N34E, 56NW J	
430							N56W, 52NE J	
440							N62W, 58SW F	
450							N18E, 50SE J	
460							N21E, 45SE J	
470							N33E, 42SE J	
480							N56E, POSE J	
490							N57E, 71SE J	
500							N18E, 57NW J	
510							N21E, 52SE F	
520							N56W, 50NE J	
530							N11W, 68NE J	
540							N35E, 69NW J	
BOTTOM OF BORING								

NOTES

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 sample

S - Shelby tube N - Densicon
F - Fixed piston P - Pitcher
O - Osterberg G - GEI

b - Drilling break k - Coefficient of permeability
Wx - Weathered, weathering

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

united engineers
a subsidiary of American Corporation

Date: April 18, 1974 Project: 7286

PAGE 2 of 2 LOG OF BORING ADT16D

BORING LOCATION <u>Offshore N17552, F33840</u>		INCLINATION <u>Vertical</u>		B E A R I N G		DATE START/FINISH <u>June 15, 1915</u> / <u>June 16, 1975</u>	
CASING ID <u>3-6 in.</u>		CORE SIZE <u>1-7/8 in.</u>		TOTAL DEPTH <u>195.3 ft</u>		DRILLED BY <u>Warren George Inc.; J. Johnston, P. Scheable</u>	
GROUND EL. <u>-42.4 ft</u>		DEPTH TO WATER/DATE <u>Tidal</u>		ft /		LOGGED BY <u>Soil/Rack - F. X. Bellini</u>	

EL. ft	SAMPLE			RATE OF ADV. min/ft	WATER CONTENT %	or RQD Graphic	PRESSURE TEST		STRIKE, DIP F = Foliation J = Joint C = Contact S = Slitkenskides	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.) (Type, texture, mineralogy, color, hardness, etc.)	
	Depth ft	Type and No.	N or Rec.				gpm psi	Computed - 4 k cm/sec				
CONTINUED FROM PREVIOUS PAGE												
157.0	145.2	NQ-11	96	4	93				80° J		R-36 (broke)	Bleach-
				4					48° F		R-34 (broke)	ing
				4					40° F		Fresh, hard, drills very	Quartzite, as above, but show
				5					52° F		well. Minor, healed faults	ing generally; minor bleaching,
				5					35° F		at 150.0, 151.5, 152.0 and	heavy where indicated.
				5					80° J		154.5 ft.	
200	180	NQ-12	100	5	82						No slicks	Bleach-
				5								ing
				5								Weak
				5								gneissosity
				5								Sheared?
				5								Bleaching
				5								155.0
		NQ-13	100	10	0		6.8	0.45	90° J		Chips	R-53
				6			172.4		80° J		Fresh, hard, jts. generally	Bleach-
				6							sl wx to clean, some local-	ing
				6							ized zones of very broken	black, fine grained near con-
				6							rock. R-53	tacts, fine to med. grained
		NQ-14	92	5	55				60° J		Sl wx	Bleach-
				5								ing
				5								near center. Internal contacts
				5								suggest composite origin.
				5								Locally bleached to light brown
				5								or tan.
		NQ-15	100	6	20				65° J		Sl wx	Internal
				6					80° J			contact
				6					90° J			
				6					65° J			
				6					80° J			
		NQ-16	99	5	75				63° J			
				4					70° J			
				4					80° J			
				4					40° C			
				5								
		NQ-17	100	5	59				53° J			
				5								
				5								
				5								
157.0	156.3											
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
 U - Undisturbed samples

S - Shelby tube
 F - Fixed piston
 O - Osterberg

D - Drilling break
 wx - Weathered, weathering

N - Denison
 P - Pitcher
 G - GEI

k - Coefficient of permeability

NOTES

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

united engineers & CONSULTANTS INC.
a subsidiary of Raytheon Company

Date: August 6, 1975 Project 7286

PAGE 2 of 2 LOG OF BORING AFT-39

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION 15.9'

BEARING

INCLINATION

DEPTH 159.2'

Logged By: J. R. Rand

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
80'			
90'	70° jt.	Rock is fresh - high angle smooth wavy jointing is closely spaced - frequently on foliation planes but cross-cutting foliation also - pyrite coating on joint planes - slickenside	Quartz diorite medium-fine grained, medium grey, foliated
	Core ground in soft zone		HIGH ANGLE FABRIC 70°-90° DRILL - NO RUST OR GOUGE - PYRITE ON SLIP PLANE
100'	70°-90° smooth jt.	Some joints are slickenside	Breccia-welded
110'	70° jt. smooth	Rock is fresh - tends to break up on drilling in zones where Biotite rich - local slickenside striations on joints joints run @ various orientations	Quartz diorite as above
	CHIPS - soft core ground		Breccia welded
120'	65° jt. smooth	Apparent fault zone - polished slickenside in Biotite - rock soft not rusty, no gouge	Quartz diorite, fine grained, medium grey, locally with foliation @ 45°-60° usually steep foliation - in apparent fault zone @ 122'-123.5', rock is polished with slickenside @ various angles
	High angle joints on weak zone		FAULT-WELDED
130'	85°-90° jt.	Slickenside zone does not appear open or subject to groundwater movement	Quartz diorite, fine grained, medium-dark grey - resembles "granitized" meta-quartzite - well foliated throughout @ 40°-60° dips
	Most breaks @ 30°-45° dips		Rock parts (joints) on foliation were somewhat micaceous
140'	Breaks on low angle (45°) joints @ 6" to 2' intervals	Rock is fresh - some joints show smearing or slickensides joints commonly @ 45° dip on foliation planes	Quartz diorite - coarser grained - foliated @ 50°
150'			
160'	.3' to 1' intervals	Rock is Fresh	
		60°	welded breccia
		50°	
159.2'			Bottom of hole

PROJECT SEABROOK

STATION

HOLE LOCATION 20.355 N 79.275 E

ELEVATION

BEARING

INCLINATION

DEPTH

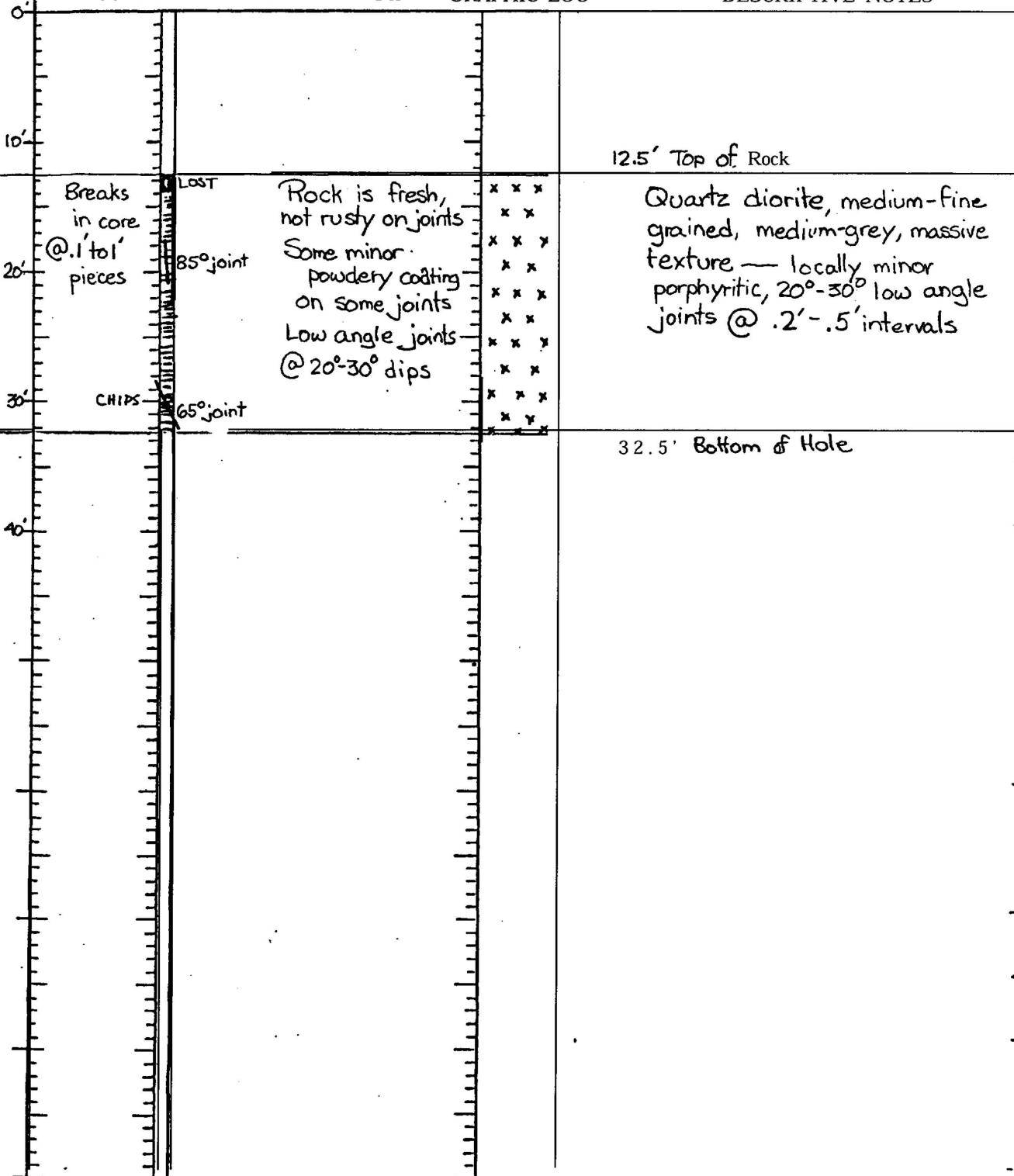
Logged By: J. R. Rand 12/26/72

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES



PROJECT SEABROOK NUCLEAR STATIONHOLE LOCATION Hampton Harbor

ELEVATION _____

BEARING vertical

INCLINATION _____

DEPTH 143 10

Wx = weathered, wrathering

Logged By: J.R. Rand
5 '16 '73

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0'			UNCONSOLIDATED OVERBURDEN
10'			
15'			15' TOP OF ROCK
BOX 1 15'-36'	Rusty joint-70° Slightly weathered Rusty slight to moderate weathering on joints 75° rough joint. 1/4" rust joint adjacent to joints	ROCK IS ESSENTIALLY FRESH, WITH MINOR RUSTY COATINGS ON PARTINGS, AND LOCALLY SLIGHT TO MODERATE WEATHERING	QUARTZ DIORITE, INTERMIXED FINE-GRAINED DARK GREY DIORITE ENCLOSED IN MATRIX OF MEDIUM-COARSE GRAINED LIGHT GREY QUARTZ DIORITE.
BOX 2 36'-54'	straight joint, rust on joint minor rusty minor rusty 7 d cont. noxious core broken by roller for storage Minor rusty Minor rusty	ROCK IS FRESH-MINOR RUSTY SEAMS ON PARTINGS AS SHOWN	LOCALLY FOLIATED. FOLIATION AT ABOUT 45° DIP NEAR TOP, GOING TO 50° AS SHOWN
BOX 3 54'-74'	30° joints - minor rusty	ROCK IS FRESH-MINOR RUSTY STAINING LOCALLY AS SHOWN ON JOINT SURFACES	WELDED OR FUSED CONTACTS THROUGHOUT
70'	60° Rough joint - Minor rusty		AMPHIBOLITIC - MASSIVE, MEDIUM-COARSE, DARK GREENISH GREY CRYSTALLINE
80'			QUARTZ DIORITE, DARK GREY FINE-GRAINED DIORITE IN MEDIUM COARSE LIGHT GREY QUARTZ DIORITE MATRIX

JUNE 1973

PROJECT SEABROOK NUCLEAR STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH

J.R. Rand

Logged By: 5/16/73

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
70'			
Box 4 74'-94'	Minor rust Slight rock weathering		QUARTZ DIORITE AS ABOVE, GRADING TO MEDIUM GRAINED SUB-MASSIVE QUARTZ-DIORITE WITH SCATTERED FELDSPAR SPECKLING LOCALLY IS SLIGHTLY FOLIATED
80'	Minor rust stain		
90'	Rock is FRESH WITH SOME MINOR RUSTY STAINING AS SHOWN		
Box 5 94'-114'	Rough 70° joint Minor rust		COARSE GRAINED SUB-MASSIVE QUARTZ DIORITE, FELDSPAR SPECKLING BECOMES PROMINENT
100'	Driller break Minor rust		
110'	112" SLIGHT ROCK WEATHERING. MINOR VUGGY TEXTURE		QUARTZ DIORITE, INTERMIXED FINE DIORITE IN MEDIUM-COARSE QUARTZ DIORITE MATRIX
Box 6 114'-133'10"	Smooth Rusty Chips - rusty Chips		
120'	Rock is NOTABLY VUGGY - BREAKS ON CHLORITE- RICH HIGH ANGLE PARTINGS		ROCK APPEARS CHLORITE-RICH, AND IS WEAKENED BY JOINTING AND MODERATE WEATHERING
130'	Minor rusty 60° joint		QUARTZ DIORITE, INTERMIXED FINE DIORITE AND MEDIUM- COARSE QUARTZ DIORITE MATRIX
Box 7 133'10" - 143'10"	Minor rusty stain Slight vug development on joint		TENDS TO MEDIUM-FINE GRAINED ROCK TOWARDS BASE
140'			
150'	① SAMPLES FOR PHYSICAL TESTING: GEOTECHNICAL ENGINEERS INC. 5/23/73		143'10" BOTTOM OF HOLE

JUNE 1973

PROJECT SEABROOK NUCLEAR STATION

HOLE LOCATION Hampton Harbor

ELEVATION

BEARING Vertical

INCLINATION

DEPTH 264 5

Logged By: J.R. Rand
5/14/73

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
130'			UNCONSOLIDATED OVERBURDEN
140'			138' TOP OF ROCK
Box 1 138'-158'	at 55° to 75° dips at 6° to 2° 110° sp. m.	NOTE: CROSS-HATCH MARKS IN "CONDITION" COLUMN EQUAL MEASURED BREAKS, JOINTS OR PARTINGS IN CORE	SCHIST, FELDSPATHIC, WITH DISSEMINATED BIOTITE VAGUELY FOLIATED SOMEWHAT MASSIVE MEDIUM-GRAINED TEXTURE. MEDIUM DARK GREY COLOR. MINERALS ARE NOT SUBJECT TO WEATHERING EFFECTS. FOLIATION SENSE IS AROUND 40° DIP
Box 2 158'-178.5'	Chips 25% fine wavy	ROCK ESSENTIALLY FRESH FROM TOP DOWN- HIGH ANGLE JOINTS AND LOW ANGLE PARTINGS SHOW MINOR RUSTY STAINING. GENERALLY SHOW STRIATED SUR- FACES BUT ARE NOT POLISHED. PYRITE DOTTINGS ON STRIATED SURFACES ARE NOT POLISHED	ROCK BREAKS <u>ACROSS</u> FOLIATION. FOLIATION DIPS ABOUT 60°, BUT IS NOT PROMINENT EXCEPT LOCALLY.
Box 3 178.5'-198.5'	Chips-minor wavy	ROCK IS ESSENTIALLY FRESH. MINOR LIGHT GREENISH-GREY POWDER COATING ON JOINTS AND PARTINGS PARTINGS DIP ROUGHLY 30°, WHILE JOINTS DIP AT VARIOUS ORIENTATIONS AT 55° TO 70°	Sarrots locally SCHIST, FELDSPATHIC, MEDIUM-GRAINED, SUB-MASSIVE TEXTURE, WITH LOCAL ZONES OF PROMINENT HIGH-ANGLE FOLIATION. STRIATED CHLORITE RICH JOINT SURFACES ARE <u>COMMON</u> AND ARE MODERATELY <u>SLIPPERY</u> .
190'			
200'			

JUNE 1374

PROJECT SEABROOK NUCLEAR STATION

HOLE LOCATION _____ ELEVATION _____

BEARING _____ INCLINATION _____ DEPTH _____

J.R. Rand
Logged By: 5/14/73

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
190'			
200'	Box 4 198.8' - 216'	Rock is essentially fresh. Joints have minor staining and pyrite crusts. Joints are striated, with chlorite partings dip 30°-40° across foliation. Joints are not notably rust-stained.	SCHIST FELDSPATHIC, AS ABOVE. POSSIBLY A LITTLE COARSER-GRAINED THAN ABOVE.
210'			
220'	Box 5 216' - 236'	Rock is fresh. Chlorite-rich partings are slippery, but are coated with pyrite and/or powder and do not show recent slippage.	BECOMING MOTTLED WITH BIOTITE KNOTS AND MASSES ENCLOSED IN FELDSPATHIC MATRIX. CONTORTED FOLIATION. (META-VOLCANIC UNIT?)
230'			
240'	Box 6 236' - 253"	Rock is fresh. Joints and partings are locally quite slippery, striated.	SCHIST, AS ABOVE, BECOMING MORE MORE BIOTITE-RICH, FINER-GRAINED BELOW 227'. HIGHLY CONTORTED FOLIATION, BUT RESISTANT TO BREAKING.
250'			
260'	Box 7 255' 3" - 264' 5"	Rock is fresh. Partings are slippery.	SCHIST, FELDSPATHIC, BIOTITE-RICH, HIGHLY CONTORTED FOLIATION. MEDIUM-TO MEDIUM-FINE GRAINED, MEDIUM-DARK GREY. CHLORITE AND PYRITE ON JOINTS.
270'			
		① SAMPLES FOR PHYSICAL TESTING - GEOTECHNICAL ENGINEERS INC. 5/23/73	264' 5" BOTTOM OF HOLE

JUNE 1973

BORING LOCATION N1831 INCLINATION V e r t i c a l BEARING _____ DATE START/FINISH June 8, 1973 / July 2, 1973									
CASING D 5 in. to 4 in. to 3 in.			CORE SIZE 2-1/8 in.		TOTAL DEPTH 339.6 ft		DRILLED BY American Drilling and Boring, T. Paquette		
GROUND EL. (MSL) 16.9 ft			DEPTH TO WATER/DATE 15.2 ft / July 2, 1973		LOGGED BY Soil - K. Polk; Rock - J. R. Rand				

EL. MSL ft	SAMPLE Dep h ft	Type N No.	RATE OF AD. min/ft	WATER CONTENT		or RQD %	PRESSURE TEST		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.)
				%	Graphic		gpm psi	Computed k 10 ⁻⁴ cm/sec			
16.9		A1							S = Slickenside		Brown fine to medium sand with gravel pieces up to 4" in size (Fill). Light brown medium sand. Clean: uniform: subrounded mains
		A2									
10		S3	6								Similar to Sample A2, but brown.
0		S4	41								Light brown fine to medium sand. Clean: uniform.
-20		S5	69								Similar to Sample S4.
		S6	34								Light brown medium sand. Clean: uniform: subrounded grains: contains a trace of coarse sand and fine gravel.
-30		S7	52								Similar to Sample S6.
-20		S8	54								Similar to Sample S6.
-40		S9	57								Similar to Sample S6.
		S10	60								Gray fine to medium sand. Clean; uniform: subrounded grains with a trace of coarse sand.
-50		S11	74								Gray fine sand. Clean: uniform: contains one 10 mm size grave, and a few black silty sand layers 4 mm thick.
-40		S12	80								Similar to Sample S10, but contains a 15 mm thick layer of gray-brown silty sand having a slight organic odor.
-60		S13	58								Similar to Sample S10.
		S14	29								Similar to Sample S10, but gray-brown.
		S14A	15						TOP OF CLAY		Gray fine to medium sand. Clean; uniform.
-70		S15	11	43.3							Gray silty clay. Soft; medium plasticity and sensitivity; contains several silt and silty fine sand layers up to 75 mm thick and one 20 mm thick black organic silt layer. Silt and fine sand layers give a very fast reaction to shaking test.
-60		S16	1	48.2							Gray silty clay. Very soft to soft; medium to high plasticity; medium sensitivity: contains a few fine sand lenses up to 8 mm thick. s_u (tor) = 0.13-0.15 tsf
-80		S17	0	41.9							Similar to Sample S16. s_u (tor) = 0.11 tsf
		S18	0	44.6							Similar to Sample S16. s_u (tor) = 0.16-0.18 tsf
-90		S19	0	36.8							Similar to Sample S16. s_u (tor) = 0.18 tsf
-80		S20	0	36.7							Similar to Sample S16. s_u (tor) = 0.19-0.21 tsf
-100		S21	0	34.3							Similar to Sample S16. s_u (tor) = 0.20 tsf
		S22	0	34.2							Similar to Sample S16. s_u (tor) = 0.17-0.19 tsf
-110		S23	0	28.8							Similar to Sample S16. s_u (tor) = 0.33-0.30 tsf
-100		S24	0	34.8							Similar to Sample S16. s_u (tor) = 0.19 tsf
-120		S25	0	30.9							Similar to Sample S16. s_u (tor) = 0.16-0.18 tsf. (Lost 20 cu. ft mud @ 125 ft)
		S26	102								Gray silty gravelly fine to medium sand. Widely graded; contains angular gravel pieces up to 15 mm in size. Possible till material. 128'10" May be top of rock.
-130		NX-1	100	0							Chips - moderate wx. May be boulder in roller till bit, no recovery 129'6" 135'4" Top of good rock.
									TOP OF ROCK		
-120		NX-2	97	4.1	67						Fairly fresh. Slight wx ten- Minor rust decay in feldspar, and locally powdery on joints. Schist, gneissic. Medium to medium coarse grained, medium gray. Not prominently foliated. Feldspathic.

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 S - Shelby tube F - Fixed piston O - Osterberg D - Drilling break wx - Weathered, weathering N - Denison P - Pitcher G - GEI k - Coefficient of permeability	NOTES A - Auger sample 1) s_u (tor) = Shear strength measured with Torvane.	SEABROOK STATION PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE YANKEE ATOMIC ELECTRIC COMPANY Date: October 4, 1973 Project 7286 PAGE 1 of 2 LOG OF BORING F4
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BORING LOCATION N18311, E88393;				INCLINATION Vertical		B E A R I N G		DATE START/FINISH June 8, 1973 / July 2, 1973	
CASING ID 5 in. to 4 in. to 3 in.				CORE SIZE 2-1/8 in.		TOTAL DEPTH 329.6 ft		DRILLED BY American Drilling and Boring, T. Paquette	
GROUND E L (MSL) 16.8 ft				DEPTH TO WATER/DATE 15.2 ft / July 2, 1973		LOGGED BY Soil - K. Polk; Rock - J. R. Rand			

DEPTH ft	SAMPLE Type N and or NO. Rec.	RATE OF AD. in./ft	WATER CONTENT %	OR QD	PRESSURE TEST 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.)	
130	NX-3 106	2.6	64					Chips No rusty staining. Most partings cut across foliation-dip 20°-35°. Many low-angle partings are smooth.	
140	NX-4 99	2.7	35					Chips- Fairly fresh. May be slight angular wx of feldspars. Partings are powdery, but not rusty.	As above. gneissic schist. Medium grained, weakly foliated.
150	NX-5 100	2.4	43					Dips NE? Angular chips- Even joints intersect zone of intersect- at about 90° ing smooth even joints Rock slightly Becomes moderately weathered, vuggy.	
160	NX-7 93	5.4	25					Chips Weathered, moderate Extreme wx- to extreme wx at dis- sandy continuous intervals as Moderate- severe wx shown. Not rusty. Ex- treme wx-decomposed to soft granular, un- consolidated. Rock crumbles at extreme wx; is sectile, soft at severe wx.	173' Approx contact depth-dip 45° Extreme wx of diabase just below contact Diabase. Dark gray, fine-grained, with scattered dark green olivine specking. Olivine wx to tan speckling. Massive texture. Note Rock appears to be closely jointed, but does not show evidence of shearing. Joints frequently at 80°, suggesting 80° dip on dike
170	NX-8 82	2.5	0					Chips Extreme wx Chips-moderate to severe wx Chips Extreme wx-crumbles Chips Extreme wx-crumbly, earthy material, black Earthy Chips Chips decomposed earthy material.	
180	NX-9 110	4.5	0					Chips Weathered throughout, moderate to extreme, but predominately severe to extreme, soft rock chips to crumbly decomposed earthy material.	Quartz-feldspar veining
190	NX-10 61	8.9	3					Chips Slightly to moderately wx.	
200	NX-11 63	5.8	0					Chips Moderately to extremely wx-locally occurs as crumbly, earthy material, dis- about 5' Extreme wx, continuously separated by chips of moderately wx rock.	203'8" Fused contact, appears to be sub-vertical. Schist, gneissic, feldspathic medium to medium-coarse grained, medium gray, not sheared.
210	NX-12 95	5.7	10					Chips Extreme wx Becomes less wx-slight to moderate wx. Some rusty stain on joints.	212.5' Quartz feldspar in contact zone. (Actual contact not seen-may be a foot or two lower.) Diabase. Dark gray to buff-black. Fine-grained.
220	NX-13 102	3.4	42					Chips Apparently cut by closely-spaced high-angle joints. Not apparently broken by shearing.	
230	NX-14 35	4.9	0					Chips Locally fresh internally, but subject to moderate wx on joints.	
240	NX-15 74	5.5	0					Chips Locally fresh internal, but subject to moderate to moderately severe wx on joints.	Diabase, as above. Fairly fresh. Olivines not discolored except locally.
250	NX-16 67	8.3	0					Chips-10" core lost Chips-10" core lost Chips-fairly fresh Chips-moderately wx Chips-internally Fairly fresh to slightly wx. Conchoidal slickensided surfaces locally. Chlorite concentrations(?)	Diabase. Locally has angular feldspathic inclusions.
260	NX-17 50	8.0	0					Chips-fairly fresh Chips-moderately wx Chips-internally Fairly fresh to slightly wx. Conchoidal slickensided surfaces locally. Chlorite concentrations(?)	
270	NX-18 11	12.0	0					Chips-fairly fresh Chips-internally Fairly fresh internally, except locally goes to moderate to extreme wx.	Diabase. Dark gray, fine-grained. Olivine crystals fairly prominent.
280	NX-19 7	12.0	0					Chips-fairly fresh Chips-internally Fairly fresh internally, except locally goes to moderate to extreme wx.	
290	NX-20 45	12.0	0					Chips-fairly fresh Chips-internally Fairly fresh internally, except locally goes to moderate to extreme wx.	
300	NX-21 70	10.7	9					Chips-fairly fresh Chips-internally Fairly fresh internally, except locally goes to moderate to extreme wx.	
310	NX-22 93	9.0	0					Chips-fairly fresh Chips-internally Fairly fresh internally, except locally goes to moderate to extreme wx.	
320	NX-23 100	7.3	0					Chips-fairly fresh Chips-internally Fairly fresh internally, except locally goes to moderate to extreme wx.	
330	NX-24 100	8.3	57					Chips-fairly fresh Chips-internally Fairly fresh internally, except locally goes to moderate to extreme wx.	
340	NX-25 42	7.0	0					Chips-fairly fresh Chips-internally Fairly fresh internally, except locally goes to moderate to extreme wx.	
350	NX-26 95	7.2	62					Chips-fairly fresh Chips-internally Fairly fresh internally, except locally goes to moderate to extreme wx.	
360	NX-27 86	8.3	17					Chips-fairly fresh Chips-internally Fairly fresh internally, except locally goes to moderate to extreme wx.	
370	NX-28 87	7.0	0					Chips-fairly fresh Chips-internally Fairly fresh internally, except locally goes to moderate to extreme wx.	
380	NX-29 67	6.0	0					Chips-fairly fresh Chips-internally Fairly fresh internally, except locally goes to moderate to extreme wx.	
390	NX-30 100	8.0	0					Chips-fairly fresh Chips-internally Fairly fresh internally, except locally goes to moderate to extreme wx.	
400	NX-31 87	9.0	16					Chips-fairly fresh Chips-internally Fairly fresh internally, except locally goes to moderate to extreme wx.	
410	NX-32 165	8.0	0					Chips-fairly fresh Chips-internally Fairly fresh internally, except locally goes to moderate to extreme wx.	
420	NX-33 100	5.2	30					Chips-fairly fresh Chips-internally Fairly fresh internally, except locally goes to moderate to extreme wx.	
430	NX-34 60	8.2	0					Chips-fairly fresh Chips-internally Fairly fresh internally, except locally goes to moderate to extreme wx.	
440	NX-35 59	7.7	14					Chips-fairly fresh Chips-internally Fairly fresh internally, except locally goes to moderate to extreme wx.	
450	NX-36 100	12.0	0					Chips-fairly fresh Chips-internally Fairly fresh internally, except locally goes to moderate to extreme wx.	
460	NX-37 57	12.0	0					Chips-fairly fresh Chips-internally Fairly fresh internally, except locally goes to moderate to extreme wx.	
470	NX-38 71	12.0	0					Chips-fairly fresh Chips-internally Fairly fresh internally, except locally goes to moderate to extreme wx.	

NOTES

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

S - Shelby tube N - Denison
F - Fixed piston P - Pitcher
O - Osterberg G - GEI

D - Drilling break k - Coefficient of permeability
wx - Weathered, weathering

SEABROOK STATION
PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

YANKEE ATOMIC ELECTRIC COMPANY
United Engineers & Constructors Inc.
A Subsidiary of American Company

Date: October 4, 1973 Project 7281

PAGE 2 of 3 LOG OF BORING F4



GEOTECHNICAL ENGINEERS INC

BORING LOCATION <u>N16553, E90235; Offshore</u>				INCLINATION <u>Vertical</u> BEARING _____		DATE START/FINISH <u>Nov. 10, 1973 / Nov. 14, 1973</u>			
CASING ID <u>3 in.</u>		CORE SIZE <u>1-7/8 in.</u>		TOTAL DEPTH <u>243.6</u> ft		DRILLED BY <u>Warren George, Inc., P. Schaeble, J. Harris</u>			
GROUND EL. (MSL) <u>-9.1</u> t		DEPTH TO WATER/DATE <u>Tidal</u> ft / -		LOGGED BY <u>Soil - K. Polk; Rock - J. R. Rand</u>					
EL. MSL	DEPTH	SAMPLE	RATE OF ADV.	WATER CONTENT	OR RQD	PRESSURE TEST	STRIKE, DIP	SOIL MD ROCK	DESCRIPTIONS
ft	ft	Type and No.	min/ft	%	Graphite	SPM per 10' cm/sec	J = Joint C = contact B = Bedding	(Weathering, defects, etc.,)	(Type, texture, mineralogy, color, hardness, etc.)
-9.1		S1	33		2)		S = Slickenside		Light gray fine sand. Uniform; clean.
		S2	51		None				Gray medium to coarse sand. Uniform; clean; subangular to subrounded grains.
-20	-10	S3	145						Gray-brown gravelly sand. Widely graded; slightly silty; subangular to subrounded grains; contains several gravel pieces up to 25 mm in size.
	-20	S4	67						Similar to S3, but sand is mostly fine to medium grained.
	-20	S5	69						Light gray fine to medium sand. Uniform; clean.
	-20	S6	65						Similar to Sample S5.
-36.0	-30	S7	86/8				TOP OF TILL		Brown silty sandy gravel. Widely graded; fines are nonplastic; angular to subangular grains; contains gravel pieces up to 30 mm in size.
	-30	S7A	87						Light gray gravelly very silty fine sand. Uniform; fines nonplastic; contains several angular gravel pieces up to 15 mm in size.
-41.7	-30	S8	123				TOP OF ROCK		Similar to Sample S7A, but contains gravel pieces up to 35 mm in size.
	-40	NQ-1	83	0.0	29				Minor wx
	-40	NQ-2	97	6.0	50				Hard, but is affected throughout by slight to moderate bleaching (presume hydrothermal). Joints show minor wx effects. Bleaching does not seem to degrade rock strength.
	-50	NQ-3	94	5.0	49			Talc	42.1' Diorite. Fine-grained. Fused contact dips 55°
	-50	NQ-4	102	5.0	55			Pyrite	46.8' Diabase. Greenish tan, bleached.
	-60	NQ-5	100	4.0	85				Diorite. Fine-grained medium tannish-gray. Moderately bleached. Quartz diorite.
	-60	NQ-6	99	6.0	97				44.0' Fused intrusive contact
	-70	NQ-7	100	5.0	81				Bleached Diabase. Bleached at top. Dark gray below.
	-70	NQ-8	100	6.0	96				Fused contact dips about 65°
	-80	NQ-9	100	1.0	99				Diorite. Fine-grained, medium tannish gray. Some minor bleaching.
	-80	NQ-10	100	5.0	70				Diorite (?) or feldspathized quartzite (?). Fine-grained, quartzose, prominent foliation showing high, but quite variable dips.
	-90	NQ-11	100	5.0	50				Diorite. Quartzose and locally foliated. Fine-grained, medium gray. Local minor bleaching.
	-100	NQ-12	98	5.0	97				111.4' Contact dips about 25°
	-110	NQ-13	100	1.0	85				Bleached Diabase. Fine-grained, grades to dark gray below bleached zone.
	-120	NQ-14	100	3.0	83				117.6' Diorite. Fine-grained, medium dark gray. Irregularly foliated throughout.
	-130	NQ-15	98	5.1	88				Fused, welded breccia
	-140	NQ-16	98	5.1	88				
	-140	NQ-17	98	5.1	88				
	-140	NQ-18	98	5.1	88				
	-140	NQ-19	98	5.1	88				
	-140	NQ-20	98	5.1	88				
	-140	NQ-21	98	5.1	88				
	-140	NQ-22	98	5.1	88				
	-140	NQ-23	98	5.1	88				
	-140	NQ-24	98	5.1	88				
	-140	NQ-25	98	5.1	88				
	-140	NQ-26	98	5.1	88				
	-140	NQ-27	98	5.1	88				
	-140	NQ-28	98	5.1	88				
	-140	NQ-29	98	5.1	88				
	-140	NQ-30	98	5.1	88				
	-140	NQ-31	98	5.1	88				
	-140	NQ-32	98	5.1	88				
	-140	NQ-33	98	5.1	88				
	-140	NQ-34	98	5.1	88				
	-140	NQ-35	98	5.1	88				
	-140	NQ-36	98	5.1	88				
	-140	NQ-37	98	5.1	88				
	-140	NQ-38	98	5.1	88				
	-140	NQ-39	98	5.1	88				
	-140	NQ-40	98	5.1	88				
	-140	NQ-41	98	5.1	88				
	-140	NQ-42	98	5.1	88				
	-140	NQ-43	98	5.1	88				
	-140	NQ-44	98	5.1	88				
	-140	NQ-45	98	5.1	88				
	-140	NQ-46	98	5.1	88				
	-140	NQ-47	98	5.1	88				
	-140	NQ-48	98	5.1	88				
	-140	NQ-49	98	5.1	88				
	-140	NQ-50	98	5.1	88				
	-140	NQ-51	98	5.1	88				
	-140	NQ-52	98	5.1	88				
	-140	NQ-53	98	5.1	88				
	-140	NQ-54	98	5.1	88				
	-140	NQ-55	98	5.1	88				
	-140	NQ-56	98	5.1	88				
	-140	NQ-57	98	5.1	88				
	-140	NQ-58	98	5.1	88				
	-140	NQ-59	98	5.1	88				
	-140	NQ-60	98	5.1	88				
	-140	NQ-61	98	5.1	88				
	-140	NQ-62	98	5.1	88				
	-140	NQ-63	98	5.1	88				
	-140	NQ-64	98	5.1	88				
	-140	NQ-65	98	5.1	88				
	-140	NQ-66	98	5.1	88				
	-140	NQ-67	98	5.1	88				
	-140	NQ-68	98	5.1	88				
	-140	NQ-69	98	5.1	88				
	-140	NQ-70	98	5.1	88				
	-140	NQ-71	98	5.1	88				
	-140	NQ-72	98	5.1	88				
	-140	NQ-73	98	5.1	88				
	-140	NQ-74	98	5.1	88				
	-140	NQ-75	98	5.1	88				
	-140	NQ-76	98	5.1	88				
	-140	NQ-77	98	5.1	88				
	-140	NQ-78	98	5.1	88				
	-140	NQ-79	98	5.1	88				
	-140	NQ-80	98	5.1	88				
	-140	NQ-81	98	5.1	88				
	-140	NQ-82	98	5.1	88				
	-140	NQ-83	98	5.1	88				
	-140	NQ-84	98	5.1	88				
	-140	NQ-85	98	5.1	88				
	-140	NQ-86	98	5.1	88				
	-140	NQ-87	98	5.1	88				
	-140	NQ-88	98	5.1	88				
	-140	NQ-89	98	5.1	88				
	-140	NQ-90	98	5.1	88				
	-140	NQ-91	98	5.1	88				
	-140	NQ-92	98	5.1	88				
	-140	NQ-93	98	5.1	88				
	-140	NQ-94	98	5.1	88				
	-140	NQ-95	98	5.1	88				
	-140	NQ-96	98	5.1	88				
	-140	NQ-97	98	5.1	88				
	-140	NQ-98	98	5.1	88				
	-140	NQ-99	98	5.1	88				
	-140	NQ-100	98	5.1	88				
	-140	NQ-101	98	5.1	88				
	-140	NQ-102	98	5.1	88				
	-140	NQ-103	98	5.1	88				
	-140	NQ-104	98	5.1	88				
	-140	NQ-105	98	5.1	88				
	-140	NQ-106	98	5.1	88				
	-140	NQ-107	98	5.1	88				
	-140	NQ-108	98	5.1	88				
	-140	NQ-109	98	5.1	88				
	-140	NQ-110	98	5.1	88				
	-140	NQ-111	98	5.1	88				
	-140	NQ-112	98	5.1	88				
	-140	NQ-113	98	5.1	88				
	-140	NQ-114	98	5.1	88				
	-140	NQ-115	98	5.1	88				
	-140	NQ-116	98	5.1	88				
	-140	NQ-117	98	5.1	88				
	-140	NQ-118	98	5.1	88				
	-140	NQ-119	98	5.1	88				
	-140	NQ-120	98	5.1	88				
	-140	NQ-121	98	5.1	88				
	-140	NQ-122	98	5.1	88				
	-140	NQ-123	98	5.1	88				
	-140	NQ-124	98	5.1	88				
	-140	NQ-125	98	5.1	88				
	-140	NQ-126	98	5.1	88				
	-140	NQ-127	98	5.1	88				
	-140	NQ-128	98	5.1	88				
	-140	NQ-129	98	5.1	88				
	-140	NQ-130	98	5.1	88				
	-140	NQ-131	98	5.1	88				
	-140	NQ-132	98	5.1	88				
	-140	NQ-133	98	5.1	88				
	-140	NQ-134	98	5.1	88				
	-140	NQ-135	98	5.1	88				
	-140	NQ-136	98	5.1	88				
	-140	NQ-137	98	5.1	88				
	-140	NQ-138	98	5.1	88				
	-140	NQ-139	98	5.1	88				
	-140	NQ-140	98	5.1	88				
	-140	NQ-141	98	5.1	88				
	-140	NQ							

[illegible]

BORING LOCATION <u>N18571 BEARING: Offshore</u>		INCLINATION <u>Vertical</u>		DATE <u>START/FINISH</u> <u>Jan. 4, 1974 / Jan. 7, 1974</u>	
CASING ID <u>3 in.</u>		CORE SIZE <u>1-7/8 in.</u>		TOTAL DEPTH <u>240.3</u> <u>R</u>	
DRILLED BY <u>Warren George, Inc. P. Schaeble, J. Harris</u>					
GROUND EL. (MSL) <u>4.0</u>		DEPTH TO WATER/DATE <u>Tidal</u> <u>N</u>		LOGGED BY <u>1</u> <u>1</u> <u>2</u>	

EL. MSL	Depth	Type	N or Rec.	RATE OF ADV. min/ft	WATER CONTENT %	or RQD	PRESSURE TEST	STRIKE, DIP	SOIL AND ROCK DESCRIPTIONS
-4.0									
-10									
-20									
-30									
-33.5									
-40									
-45									
-50									
-55									
-60									
-65									
-70									
-75									
-80									
-85									
-90									
-95									
-100									
-105									
-110									
-115									
-120									
-125									
-130									
-135									
-140									
-145									
-148.3									

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 sample S - Shelby tube F - Fixed piston O - Osterburg D - Drilling break wx - Weathered, weathering N - Dantson P - Pitcher G - GEI k - Coefficient of permeability	NOTES 1) Washed through soil to 33.5 ft. No sample taken. 2) Roller bit to 34.8 ft. 3) No clays present, therefore, no water contents were determined. 4) Drilling rates for NQ-4 through NQ-13 are 8 to 7 minutes per ft. 5) Drilling rates for NQ-14 through NQ-37 are 5 to 10 minutes per ft.	SEABROOK STATION PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE YANKEE ATOMIC ELECTRIC COMPANY  Date: <u>January 14, 1974</u> Project <u>7188</u> PAGE <u>1</u> of <u>2</u> LOG OF BORING <u>ADT 16A</u>
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BORING LOCATION N16571, E90280; Offshore INCLINATION Vertical BEARING DATE START/FINISH Jan. 4, 1974 / Jan. 7, 1974

CMWG ID 3 m. CORE SIZE 1-7/8 in. TOTAL DEPTH 240.3 ft DRILLED BY Warren George, Inc.; P. Schaeble, J. Harris

GROUND EL (MSL) -4.0 ft DEPTH TO WATER/DATE Tidal ft / LOGGED BY Soll, K. Polk; Rock - J. R. Rand

EL. MSL	Depth	Type	N or Rec.	RATE OF ADV. in./hr	WATER CONTENT %	or RQD	PRESSURE TEST	STRIKE, DIP	SOIL AND ROCK DESCRIPTIONS	
										Graphic
MSL	100	NQ-17	100	94				N18W, 28SW J	Fresh and hard. Drills very well. Joints and partings are fresh, not slickensided.	Orient Diorite. Fine-grained, gray quartzose. Irregularly foliated throughout.
150	100	NQ-18	100	1100				N45W, 27SW J		
160	100	NQ-19	100	1100				N60W, 25SW J		
180	62	NQ-20	62	92				N25W, 56NE J	Fresh and hard. Drills well. Joints and partings clean. Tends locally to part on high-angle foliation.	Diorite. Fine-grained, dark gray. Irregularly foliated throughout.
190	85	NQ-21	85	85				N61W, 35SW J		
200	98	NQ-22	98	94				N84E, 67SE F		
210	100	NQ-23	100	100				N11W, 18SW S		
230	100	NQ-24	100	97				N23E, 50SE F	Foliation	Minor Diorite. Coarse-grained, light greenish gray granodiorite. Some minor hydrothermal alteration
240	100	NQ-25	100	100				N47E, 76SE F		
260	100	NQ-26	100	100				N25E, 76SE J	Shows minor greenish hydrothermal bleaching. Hard.	Diorite(?) Fine-grained, medium dark gray. May be quartzite(?)
270	100	NQ-27	100	100				N SE, 34NW J		
280	100	NQ-28	100	100				N50W, 26NE J	On foliation	Coarse Veined contact 'dips 60'
290	100	NQ-29	100	100				N74W, 60NE J		
300	100	NQ-30	100	100				N11E, 11NW J	Fresh and hard. Bleached locally hydrothermally. Joints and partings are not slickensided.	Diabase. Fine grained, bleached. Bleaching dips out at about 166.3'
310	100	NQ-31	100	100				N 6W, 24NE J		
320	100	NQ-32	100	100				N21E, 20NW J	Grout	Bleach
330	100	NQ-33	100	100				N71W, 37NE J		
340	100	NQ-34	100	100				N36W, Vert. J	Fresh and hard. Drills well.	Bleached
350	100	NQ-35	100	100				N 9W, 63NE		
360	100	NQ-36	100	100				N19E, 53SE F	Locally bleached (hydrothermal alteration) but is not materially softened.	Bleached
370	100	NQ-37	100	100				N35E, 60NE F		
380	100	NQ-38	100	100				N36W, 52SW F	Fresh	Bleached
390	100	NQ-39	100	100				N 1W, 51SW F		
400	100	NQ-40	100	100				N49W, 29SW J	Fresh and hard.	Bleached
410	100	NQ-41	100	100				N35E, 24NW J		
420	100	NQ-42	100	100				N86E, 27SE J	Fresh and hard.	Bleached
430	100	NQ-43	100	100				N59W, 58NE C		
440	100	NQ-44	100	100				N33W, 36SW J	Fresh and hard.	Bleached
450	100	NQ-45	100	100				N SE, 68SE J		
460	100	NQ-46	100	100				N55E, 73NW J	Fresh and hard.	Bleached
470	100	NQ-47	100	100				N57E, 50SE J		
480	100	NQ-48	100	100				N34E, 49SW C	Fresh and hard.	Bleached
490	100	NQ-49	100	100				N76E, 62SE J		
500	100	NQ-50	100	100				N71E, 65SE J	Fresh and hard.	Bleached
510	100	NQ-51	100	100						
520	100	NQ-52	100	100					Fresh and hard.	Bleached
530	100	NQ-53	100	100						
540	100	NQ-54	100	100					Fresh and hard.	Bleached
550	100	NQ-55	100	100						
560	100	NQ-56	100	100					Fresh and hard.	Bleached
570	100	NQ-57	100	100						
580	100	NQ-58	100	100					Fresh and hard.	Bleached
590	100	NQ-59	100	100						
600	100	NQ-60	100	100					Fresh and hard.	Bleached
610	100	NQ-61	100	100						
620	100	NQ-62	100	100					Fresh and hard.	Bleached
630	100	NQ-63	100	100						
640	100	NQ-64	100	100					Fresh and hard.	Bleached
650	100	NQ-65	100	100						
660	100	NQ-66	100	100					Fresh and hard.	Bleached
670	100	NQ-67	100	100						
680	100	NQ-68	100	100					Fresh and hard.	Bleached
690	100	NQ-69	100	100						
700	100	NQ-70	100	100					Fresh and hard.	Bleached
710	100	NQ-71	100	100						
720	100	NQ-72	100	100					Fresh and hard.	Bleached
730	100	NQ-73	100	100						
740	100	NQ-74	100	100					Fresh and hard.	Bleached
750	100	NQ-75	100	100						
760	100	NQ-76	100	100					Fresh and hard.	Bleached
770	100	NQ-77	100	100						
780	100	NQ-78	100	100					Fresh and hard.	Bleached
790	100	NQ-79	100	100						
800	100	NQ-80	100	100					Fresh and hard.	Bleached
810	100	NQ-81	100	100						
820	100	NQ-82	100	100					Fresh and hard.	Bleached
830	100	NQ-83	100	100						
840	100	NQ-84	100	100					Fresh and hard.	Bleached
850	100	NQ-85	100	100						
860	100	NQ-86	100	100					Fresh and hard.	Bleached
870	100	NQ-87	100	100						
880	100	NQ-88	100	100					Fresh and hard.	Bleached
890	100	NQ-89	100	100						
900	100	NQ-90	100	100					Fresh and hard.	Bleached
910	100	NQ-91	100	100						
920	100	NQ-92	100	100					Fresh and hard.	Bleached
930	100	NQ-93	100	100						
940	100	NQ-94	100	100					Fresh and hard.	Bleached
950	100	NQ-95	100	100						
960	100	NQ-96	100	100					Fresh and hard.	Bleached
970	100	NQ-97	100	100						
980	100	NQ-98	100	100					Fresh and hard.	Bleached
990	100	NQ-99	100	100						
1000	100	NQ-100	100	100					Fresh and hard.	Bleached
1010	100	NQ-101	100	100						
1020	100	NQ-102	100	100					Fresh and hard.	Bleached
1030	100	NQ-103	100	100						
1040	100	NQ-104	100	100					Fresh and hard.	Bleached
1050	100	NQ-105	100	100						
1060	100	NQ-106	100	100					Fresh and hard.	Bleached
1070	100	NQ-107	100	100						
1080	100	NQ-108	100	100					Fresh and hard.	Bleached
1090	100	NQ-109	100	100						
1100	100	NQ-110	100	100					Fresh and hard.	Bleached
1110	100	NQ-111	100	100						
1120	100	NQ-112	100	100					Fresh and hard.	Bleached
1130	100	NQ-113	100	100						
1140	100	NQ-114	100	100					Fresh and hard.	Bleached
1150	100	NQ-115	100	100						
1160	100	NQ-116	100	100					Fresh and hard.	Bleached
1170	100	NQ-117	100	100						
1180	100	NQ-118	100	100					Fresh and hard.	Bleached
1190	100	NQ-119	100	100						
1200	100	NQ-120	100	100					Fresh and hard.	Bleached
1210	100	NQ-121	100	100						
1220	100	NQ-122	100	100					Fresh and hard.	Bleached
1230	100	NQ-123	100	100						
1240	100	NQ-124	100	100					Fresh and hard.	Bleached
1250	100	NQ-125	100	100						
1260	100	NQ-126	100	100					Fresh and hard.	Bleached
1270	100	NQ-127	100	100						
1280	100	NQ-128	100	100					Fresh and hard.	Bleached
1290	100	NQ-129	100	100						
1300	100	NQ-130	100	100					Fresh and hard.	Bleached
1310	100	NQ-131	100	100						
1320	100	NQ-132	100	100					Fresh and hard.	Bleached
1330	100	NQ-133	100	100						
1340	100	NQ-134	100	100					Fresh and hard.	Bleached
1350	100	NQ-135	100	100						
1360	100	NQ-136	100	100					Fresh and hard.	Bleached
1370	100	NQ-137	100	100						
1380	100	NQ-138	100	100					Fresh and hard.	Bleached
1390	100	NQ-139	100	100						
1400	100	NQ-140	100	100					Fresh and hard.	Bleached
1410	100	NQ-141	100	100						
1420	100	NQ-142	100	100					Fresh and hard.	Bleached
1430	100	NQ-143	100	100						
1440	100	NQ-144	100	100					Fresh and hard.	Bleached
1450	100	NQ-145	100	100						
1460	100	NQ-146	100	100					Fresh and hard.	Bleached
1470	100	NQ-147	100	100						
1480	100	NQ-148	100	100					Fresh and hard.	Bleached
1490	100	NQ-149	100	100						
1500	100	NQ-150	100	100					Fresh and hard.	Bleached
1510	100	NQ-151	100	100						
1520	100	NQ-152	100	100					Fresh and hard.	Bleached
1530	100	NQ-153	100	100						
1540	100	NQ-154	100	100					Fresh and hard.	Bleached
1550	100	NQ-155	100	100						
1560	100	NQ-156	100	100					Fresh and hard.	Bleached
1570	100	NQ-157	100	100						
1580	100	NQ-158	100	100					Fresh and hard.	Bleached
1590	100	NQ-159	100	100						
1600	100	NQ-160	100	100					Fresh and hard.	Bleached
1610	100	NQ-161	100	100						
1620	100	NQ-162	100	100					Fresh and hard.	Bleached
1630	100	NQ-163	100	100						
1640	100	NQ-164	100	100					Fresh and hard.	Bleached
1650	100	NQ-165	100	100						
1660	100	NQ-166	100	100					Fresh and hard.	Bleached
1670	100	NQ-167	100	100						
1680	100	NQ-168	100	100					Fresh and hard.	Bleached
1690	100	NQ-169	100	100						
1700	100	NQ-170	100	100					Fresh and hard.	Bleached
1710	100	NQ-171	100	100						
1720	100	NQ-172	100	100					Fresh and hard.	Bleached
1730	100	NQ-173	100	100						
1740	100	NQ-174	100	100					Fresh and hard.	Bleached
1750	100	NQ-175								

PROJECT SEABROOK

STATION

HOLE LOCATION 20.300 N 79.700 E

ELEVATION 20.2 '

BEARING

INCLINATION

DEPTH

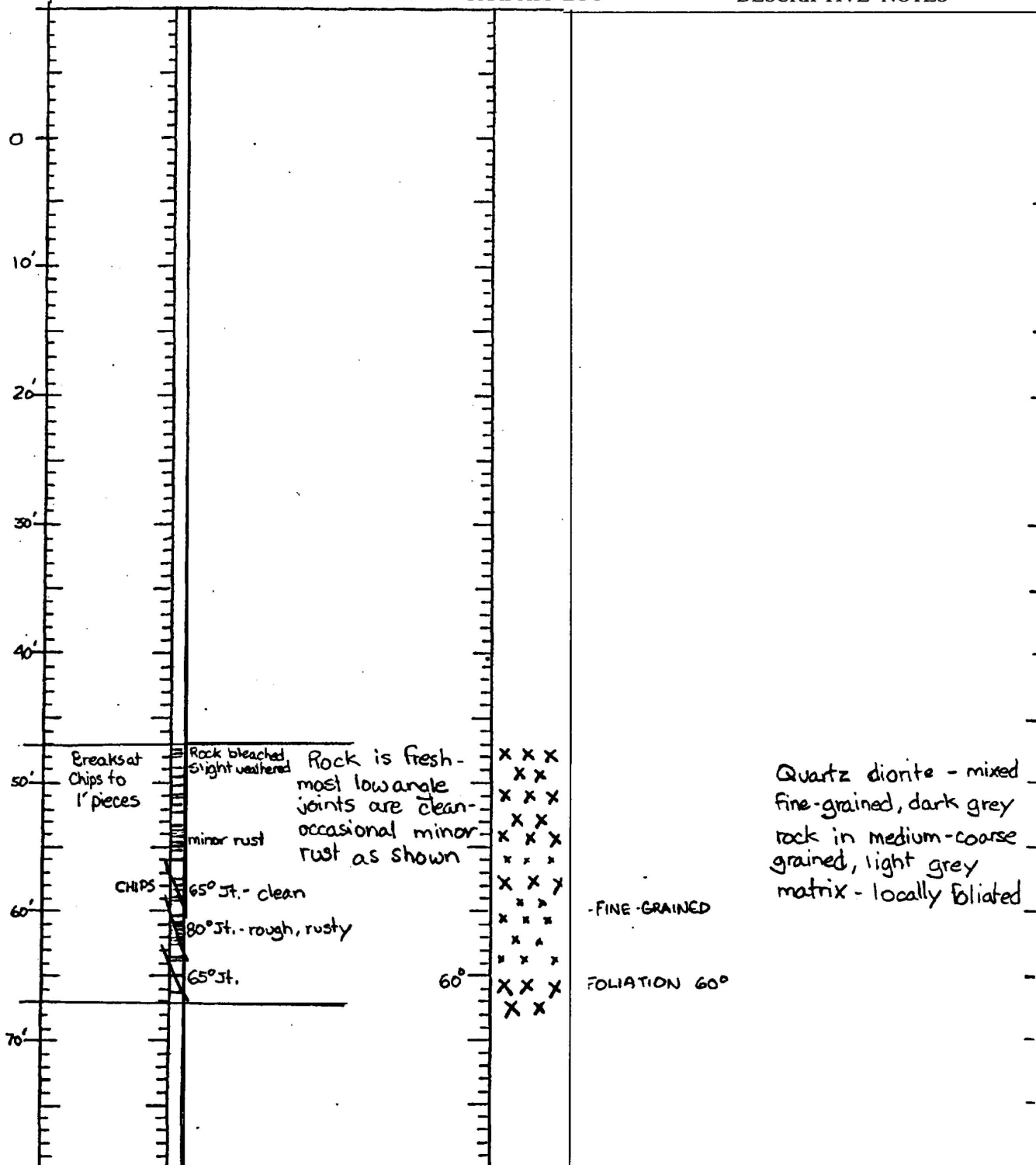
Logged By: J. R. Rand 12/26/72

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES



PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION 20.2'

BEARING

INCLINATION

DEPTH

Logged By: J. R. Rand 12/27/72

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0			
CHIPS Breaks @.2' to 2.5' pieces	CHIPS RUSTY 70°-90° ROUGH Jt. 30° Jt. Clean	Rock is fresh below 7' depth - Some minor rust on some joints - low angle joints dip @ 30°-45° at various orientations	Boulders 5' Top of rock Quartz Diorite, mixed fine-grained dark grey and coarse grained light grey matrix - locally foliated at 55°-60° Dips
10'			
Breaks @.3' to 2.2' pieces	minor rust 70° Jt. on foliation - slight weathered, rusty	Rock is fresh - minor rusty staining on some joints, as noted Low angle joints dip 30° @ .5' to 2' intervals	Quartz Diorite, mixed fine- and coarse-grained types foliated - foliation dips 30°-50° variable
20'			
	minor rust on Jt.		
30'			
40'			
50'			
60'			

PROJECT SEABROOK STATION _____DDH E1-4PAGE 3 of 3

HOLE LOCATION _____

ELEVATION 20 2'

BEARING _____ INCLINATION _____

DEPTH _____

Logged By: J. R. Rand 12/26/72

	CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
60'				
70'	Breaks @ .5' to 2' pieces	Low- angle jts. @ 35°-40° DIP	Rock is fresh- good drilling-No high angle joints-35°-40° joints @ 1'-2' intervals-joints are not rusty	Quartz diorite, foliated, mixed fine grained dark-grey and medium- coarse lighter grey matrix- foliation 50°-60° dip
80'				
90'	Breaks @ .3' to 1.5' pieces		Rock is fresh- not rusty on joints-low angle joints dip 10° 30°	Quartz diorite, fine- grained to 98'. Predominantl coarse-grained below.
100'		Rough uneven 65° Jt.		
110'				0.5' Bottom of Hole

PROJECT SEABROOK

STATION

DDH E1-5

PAGE 1 of 2

HOLE LOCATION 20.300 N 79.550 E

ELEVATION 16.0'

BEARING

INCLINATION

DEPTH

Logged By: J. R. Rand 12/26/72

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0'			8' Top of Rock
10'	60°-70° joints rusty CHIPS Break @ chips to 1' pieces	Rock is fairly fresh internally - rusty coatings on joint planes - rock moderately weathered to 11.5' - most joints Dip 50° or steeper	Quartz diorite - mixed fine grained, dark grey and lighter grey as shown
20'	70° Joint rusty 55° Joint clean Rusty Chips		
30'	Rock breaks in Rusty Chips to 35.8'	Rock is fairly fresh internally - high angle joints are rust coated - locally moderate weathering of rock in joint zones	Quartz diorite, mixed fine grained, dark grey and coarse grained. lighter grey matrix - 35°-40° low angle joints @ .5' to 1' intervals
40'	Rock breaks in 1' to 1.5' pieces 60° joint clean	Rock is fresh - low angle joints @ 35°-40° @ various orientations	
50'	Breaks @ .1' to 2' pieces 60° Joint set rusty 75° smooth clean joint	Rock is fresh - joints are clean - low angle joints (15°-35° Dips) are @ 1' to 4' intervals	Quartz diorite, mixed fine grained, dark grey and coarse-grained. lighter grey rock types. Rock is only vaguely foliated - predominantly coarser grained matrix rock.
60'			
70'			
80'			

PROJECT SEABROOK

STATION

DDH E1-5

PAGE 2 of 2

HOLE LOCATION

ELEVATION 16.0'

BEARING

INCLINATION

DEPTH

Logged By: J. R. Rand 12/26/72

	CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
50'				
60'				
70'	Breaks @ .3' to 1.5' pieces	70° rough joint clean		
80'				
90'	Breaks @ .1' to .2' pieces	50° joint on foliation 60° joint 65° joint		
100'	Breaks @ .3' to 4' pieces			
110'				
120'				

Rock is fresh
low angle joints
@ 25° to 40°
@ .5' to 2'
intervals

Quartz diorite - mixed
fine grained, dark grey and
coarse grained lighter grey
matrix.

Rock is fresh
low angle joints
@ 5° - 30°, most
5° - 10° dips

Quartz diorite, mixed
fine and coarse-grained
rock types

Rock is fresh
low angle joints
clean, dip 5° - 30°
(average 5° - 10°)
No Rust

Quartz diorite, mixed
fine-grained and coarse
grained as shown

108' Bottom of hole

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 67.5'

Logged By: J. R. Rand 7/11-12/72

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0'			
			DIORITE BOULDERS
			6.9' Top of Rock
10'			FINE
Breaks @ Chips to 2' pieces			Diorite, mixed fine-grained dark-grey and coarse-grained light-grey. Coarse grained predominates
20'			fine
Chips			
30'			fine
Breaks @ Chips to .8' pieces			Diorite, mixed fine-grained dark-grey and coarse-grained light-grey types as shown
ruggy, decomposed on 55° joints, severely weathered			
Chips, rusty			Diorite
Rock is fairly fresh internally, except as shown. joints (50°-70°) @ 1' to 4' intervals			
40'			fine
Breaks @ .1' to 1.5' pieces			Coarse
Rusty			fine
50'			coarse
Chips			
Rock is fresh, only very minor rusty stains locally on joints. joints @ 30°-40°			
60'			fine
Breaks @ .3' to 1.8' pieces			Coarse
Rock is fresh, No rust on joints			fine
70'			fine
			Mixed fine and coarse diorite
			67.5' Bottom of Hole

PROJECT SEABROOK

STATION

DDH B- 42

PAGE 1 of 3

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 164.4'

Logged By: J. R. Rand 7/10/72

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES

0'

10'

20'

30'

40'

50'

60'

70'

80'

Chips
to .3'
piecesBreaks
@ .1' to .8'
intervalsminor
rusty
stains
on
jointsModerately weathered
bleached brecciated rock,
small bright green
specks. Appears to be
same rock as belowRock is fresh,
with local minor
weathering of feldspar
phenocrysts. Joints
show minor rusty
staining. Jointing
@ 1' intervals

Top of Rock 44'

breccia

veining

Apparently a weathered Diorite(?)
Locally shows fine angular
(cemented) breccia textureFine grained, massive,
medium grey, locally speckled
diorite, with prominent feldspar
quartz veining at high angles.
Diabasic(?)Rock becomes diabasic,
Dark-grey, fine-grained with
dark green phenocrysts

PROJECT SEABROOK STATION DDH 3-42 PAGE 3 of 3

HOLE LOCATION ELEVATION

BEARING INCLINATION DEPTH 164.4'

Logged BY: J. R. Rand

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
130'			
140'			
150'			
160'			
170'			

139.3'

1' to .8' pieces

Broken @ Chips to .4' pieces

.5' to 1.3' pieces

pyrite on joint

Rock slightly weathered

Rock is slightly weathered throughout minor bleaching, rusty staining or powdering on joints. Diabase bleached to brown

No slickensides

55°

55°

Diabase, aphanitic

Impure quartzite schist, feldspathization (minor)

Fine grained, light grey rock

164.4' Bottom of Hole

PROJECT SEABROOK STATION _____DDH B-48

PAGE | of |

HOLE LOCATION _____

ELEVATION _____

BEARING _____

INCLINATION _____

DEPTH 28.5 '

Logged By: J. R. Rand 7/11/72

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0'			
10'			
20'			
30'			

Rock breaks @ .1' to 2' pieces

minor rusty

75° joint

chips

Rock is fresh Very minor (calcite?) coating on some joints. Mostly not rusty.

3.5' Top of Rock

ne Diorite, mixed fine-grained, dark-grey and coarse-grained light-grey

Rock is predominantly fine-grained diorite

28.5' Bottom of Hole

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 24'

Logged By: J. R. Rand 12/11/72

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0'			
10'			
20'			TOP OF ROCK 18'
CHIPS	most joints low angle at 20°-30°	Rock is fairly fresh throughout	Diorite, fine-grained Dark grey, massive - closely joined at 3" to 1' intervals
	60° Jt.	locally minor softened on joint surfaces	joints have slickenside-like smearing with chlorite development = <u>slippery</u>
CHIPS	50° Jt. - minor slicks - chlorite		
30'			
CHIPS	80°-90° Jt. with slicks, chlorite dev't. high angle curved joints - chlorite dev't. throughout on joints		
40'			
CHIPS		Rock is fairly fresh but locally shows vug development on joints and in ph...	Diorite, fine-grained, Dark grey as above massive
	(driller) vugs		
50'			
	(driller) vugs		
60'			
	CORE Breaks at 6" to 2' intervals on low angle joints @ 20°-30° dips	ROCK IS FRESH	Diorite, fine-grained, Dark grey, massive - locally speckled with whitish, rounded phenocrysts
70'			
80'			DIABASE DIKE

PROJECT SEABROOK

STATION

DDH D1-1

PAGE 2 of 2

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 124'

Logged By: J. R. Rand 12/4/72

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
70'			
Low Angle Joints form core breaks			Diabase dike
			17.9' 80° intrusive, chilled tight contact
Chlorite development			Quartz diorite, fine grained, medium grey
70° vein, Filled			← May be a faulted contact (?)
Joints are low angle 65° joint			Rock becomes medium-coarse grained
chips 45° joint			Quartz diorite, intermixed coarse- and fine rock types.
60° joints			77.6' Apparent fault zone, softened by weathering but not rusty or slicken sided. 45° dip
Core breaks on wide-spaced joints			Quartz diorite, massive texture, medium coarse grained, not foliated, medium grey.
driller breaks			
Joints are low angle at 20° average dip			
driller breaks			
124' Bottom of Hole			

Rock is fresh

Rock is fresh, except at 97.6' to 98.8' where softened on fault zone. Zone is soft but not apparently open.

Rock is fresh. Breaks on low angle joints as shown. No rust. Joints show minor pyrite smear.

PROJECT SEABROOK STATION

DDH D1-3

PAGE 1 of 1

HOLE LOCATION

ELEVATION

BEARING INCLINATION

DEPTH 65.5'

Logged By: J

R. Rand 12/11/72

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES

0

10'

20'

30'

40'

50'

60'

70'

Most joints
are 20°-30°
dips

Chips

Chips
85° joint

85°-90°
joint

70° joint,
flat, not
smooth

35°-90° joint,
pyrite
chips

vuggy vein,
not open
65° joint on
foliation.

Joints are
20°-30° dips
@ 1'-2' intervals.
70° joint,
smooth

70°-90° joint
with chlorite
65° joint

Rock is fresh.

Minor rusty
stains locally
on joints

Rock is fresh, No
rust on joints. Joints
show frequent
pyrite coatings.
Rock chips in
area of high biotite
or chlorite content.

Rock is fresh,
not rusty
on joints.

Rock is fresh,
joints locally
slippery due to
chlorite, not
slickensided.

x x x

x x x

x x x

x x x

x x x

x x x

x x x

x x x

x x x

x x x

x x x

x x x

x x x

x x x

x x x

11' Top of Rock

Quartz diorite, fine grained
dark grey. Locally with
irregular foliation.

Quartz diorite, as above

high chlorite content
very fine-grained, possible diabase dike

Quartz diorite, predominantly
fine-grained, medium grey.
biotite knots Foliated. Foliation varies
in dip and strike.

coarser grained

felded breccia, tight, 75° foliation

65.5' Bottom of Hole

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 169'

Logged By: J. R. Rand 11/24/72

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
70'			
80'			
Core broken as shown	chips 65° joint set minor chlorite 70° joint, minor crusting, no rust Some pyrite cement 70° joint irregular 70° joint	Rock is fresh throughout No rust or weather stains	Medium coarse quartz diorite Diorite, fine grained, dark grey. Local coarser grained zones
90'			
100'			
Core broken as shown	60° joint, minor coating, smooth sub-vertical joint 70° joint smooth, clean	Rock is fresh, minor manganese and pyrite smearing on some joints	Diorite, predominantly fine- grained, dark grey. Some minor local coarser-grained patches. Rock is fresh throughout
110'			
120'			
Core broken as shown	65° joint 70° joint, smooth, clean 75° joint, smooth, clean 70° joint	Rock is fresh, Core is broken closely on 30° joints and occasional 70°-75°. Some manganese and pyrite on joints. Sharp angular breaks	Diorite, fine-grained, dark-grey. Quite massive texture with local foliation ghosts. Rock is fresh, closely jointed at .2' to 1' intervals at varying attitudes and bearings of dip
130'			
140'			
Core broken as shown	45° joint, minor stains 70° joint, clean	Rock is fresh throughout 30° dipping joints are characteristic. Some manganese and pyrite staining on joints.	Diorite, fine grained, dark grey, locally vaguely foliated. Rock is fresh, not weathered throughout.
150'			