

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

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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>
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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<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-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	-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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<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-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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<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>
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 Nou '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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<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-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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<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-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 ⁰
ADT-34	Discharge Tunnel	19977N 81201E	+ 5.3	19.0	368.0	20 Mar '74	2	Boring Inclined 34 ⁰
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 ⁰
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 ⁰
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 ⁰
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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<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-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	

<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-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	

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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-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	t 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-40	Old Cooling System Design	19650N 83800E	+ 4.1	50.0	50.0	01 Apr '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-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		

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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-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	
D1-1	SW Trench, between Units I & II	79373E 20093N	+ 9.8	16.5	124.0	04 Dec '72	FSAR Appendices 2D and 2J	
D1-3	SW of Containment II	793103 20218N	+14.0	11.0	65.50	04 Dec '72	" "	
D1-4	(E of) Fuel Storage Bldg. II	79278E 20122N	+11.4	15.5	170.00	27 Nov '72	" "	
D1-5	SW Trench N of Cooling Tower	792503 20027N	+16.6	15.3	65.4	24 Nov '72	" "	
D1-6	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	+14.3	14.5	118.7	11 Nov '72	" "	
D1-8	Center of Contain- ment II	79213E 20245~	+15.9	9.0	29.5	05 Dec '72	" "	
D1-9	Primary Auxiliary Bldg. II	79060E 20083N	+20.8	1.5	24.5	28 Nov '72	" "	
D1-10	Primary Auxiliary Bldg. II	79088E 20189N	+19.2	8.0	112.00	06 Dec '72	" "	
D1-11	WSFPC II, N end	791163 20276N	+13.8	11.5	65.0	07 Dec '72	" "	
D1-12	Tank Farm II	78963E 20111N	+23.9	6.5	29.5	29 Nov '72	" "	
D2-1	DG Bldg. II	78896E 20234N	+21.2	6.0	31.0	06 Dec '72	" "	
D2-3	N of DG Bldg II	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 '74	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 II 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 88430E	+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	2I

<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>
OC1A	Containment I	20413N 79671E	+28.0	0.2	46.6	03 July '73	FSAR Appendix 2H	Overcore Hole
P1	Old Cooling System Design	Offshore	- 2.0	42.0	42.0	28 May '69	1	
P2	Old Cooling System Design	Offshore	- 9.0	37.5	36.5	11 June '69	1	
P3	Old Cooling System Design	Offshore	-12.0	74.5	74.5	14 June '69	1	
P4	Old Cooling System Design	Offshore	-15.0	14.1	14.1	04 June '69	1	
P5	Old Cooling System Design	Offshore	-23.0	24.8	24.8	10 June '69	1	
P6	Old Cooling System Design	Offshore	-31.5	48.0	48.0	10 June '69	1	
P7	Old Cooling System Design	Offshore	-38.5	25.0	25.0	15 June '69	1	
P8	Old Cooling System Design	Offshore	-44.0	46.0	46.0	10 June '69	1	
P9	Old Cooling System Design	Offshore	-40.0	17.0	17.0	11 June '69	1	
P10	Old Cooling System Design	Offshore	-40.0	21.0	21.0	15 June '69	1	
P11	Old Cooling System Design	Offshore	-19.0	18.5	18.5	14 June '69	1	
PF-1	Portsmouth Fault Investigation	Greenland, NH	+79.1	0.5	267.0	21 Mar '74	FSAR Appendix 2C	Boring Inclined 48°
PF-2	Portsmouth Fault Investigation	Greenland, NH	+62.0	65.0	271.0	24 July '74	FSAR Appendix 2C	Boring Inclined 40°

CONTINUED: Page 26

<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 99.2'

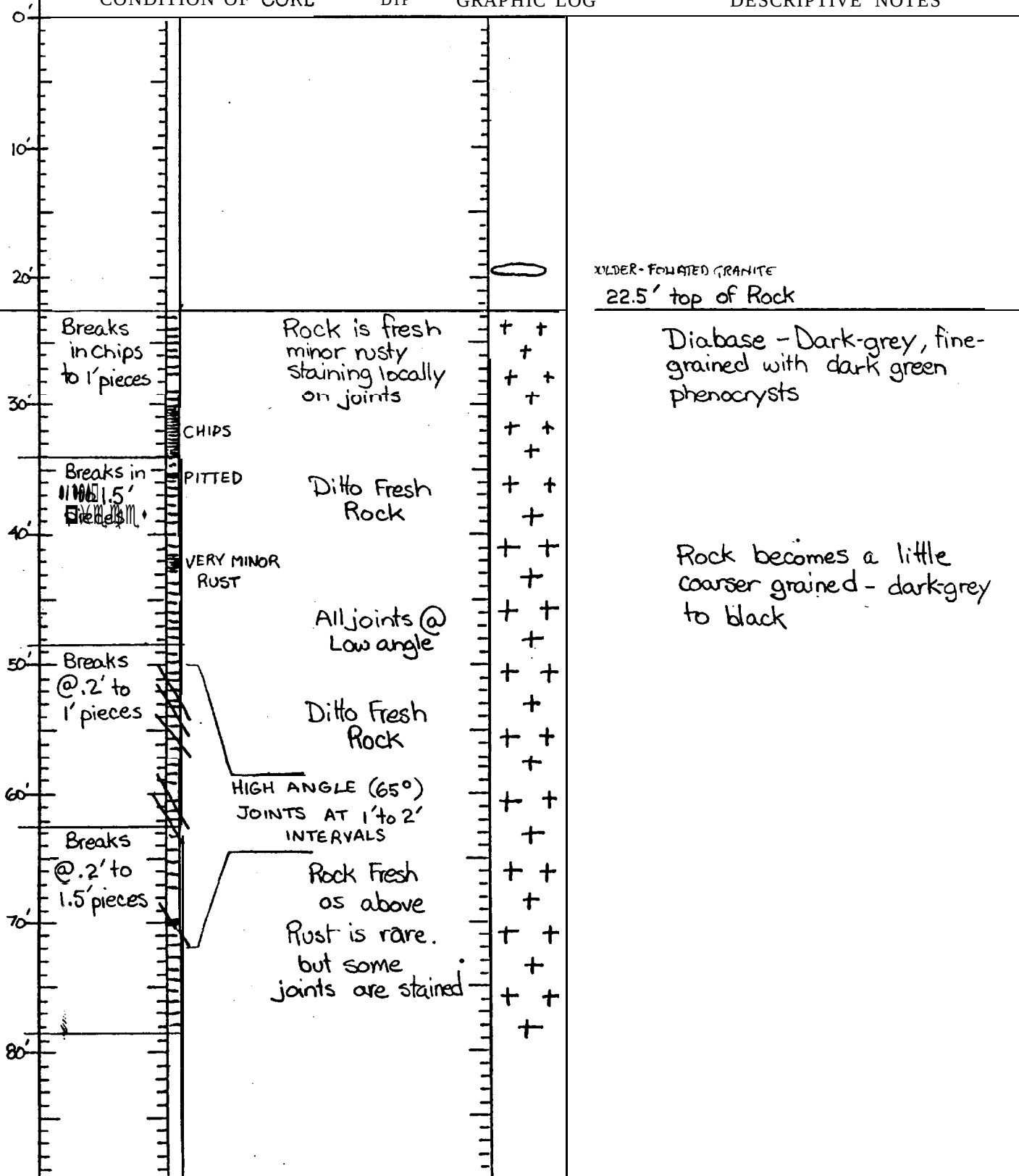
Logged By: J. R. Rand 7/10/72

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES



DDH B 1

PAGE 2 of 2

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 99.2'

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

	CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
60'				
70'				
80'	Breaks @ .1' to 1.5' pieces	Rusty	Rock is fresh. Good drilling. locally is minor rust. Stained on joints	Diabase - Dark-grey, fine-grained with small dark green phenocryst speckling
90'	Breaks @ chips to .8' pieces	Rusty Rusty Rusty Rusty	Rock is fairly fresh to fresh. local rust on joints	Diabase - Dark-grey, fine grained with small dark- green phenocryst speckling
100'				99.2' Bottom of Hole
110'				

DEPTH 34.3'
Logged By: J. R. Rand 7/12/72

CONDITION OF CORE		DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0'				
10'				
20'	Breaks @ chips to 1.4' pieces	CHIPS	Rock moderately weathered. Rusty stained. Minerals discolored. Rock is fairly fresh, showing rusty staining only on partings.	13' Top of Rock Diorite - coarse grained, light grey Porphyritic
30'	Breaks @ 1' to 1' pieces	CHIPS	Rock is fresh with only minor rusty staining on some joints.	Mica Schist - very fine grained Grey. wavy foliation. Steep dip to foliation. (80°) Locally fine quartzitic rock. Schist - fine grained grey mica Schist - sub-vertical foliation
40'				34.3' Bottom of Hole

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 25.4'

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

	CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0'				4.2' Top of Rock
Breaks @ chips to .8' pieces	CHIPS		X X X	COARSE Diorite, fine-grained, Dark-grey, massive, with local intermix of coarse-grained light grey porphyritic diorite
	CHIPS		x x x	
	CHIPS		x x x	
	CHIPS TO .6' pieces	Slight to moderate weathering Rust, DISCOLORED	X X X	At base fine diorite is dis-colored to dull brown, (mod. weathering)
	CHIPS		x x x	COARSE
			x x x	COARSE
			x x x	25.4' Bottom of Hole
30"				
40"				

PROJECT SEABROOK STATION DDH B-13 PAGE 1 of 1

HOLE LOCATION _____ ELEVATION _____

BEARING _____ INCLINATION _____ DEPTH 31.0'

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

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0'			
10'			11' Top of Rock
Breaks @.1' to 2' pieces	Rock is fresh, Only minor rusty staining locally on joints. Joints @ 30° and 60° dips Rock is fresh Minor Rust Stains		Diorite, intermixed dark grey, fine grained rock and coarser grained, porphyritic light grey rock.
20'	Rusty		COARSE
Rusty			COARSE
30'	2' to 6' pcs.		Predominantly a fine-grained rock type.
			MEDIUM DARK GREY FINE-GRAIN DIORITE
			31' Bottom of Hole
40'			

PROJECT SEABROOK

STATION

DDH B-14

PAGE 1 of 1

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 28.0'

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

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES

8' Top of Rock

10'

Breaks
@ Chips
to 12'
piecesRUSTY
CHIPS

CHIPS

CHIPS

Rock is fairly
fresh, with only
slight weathering
on veinlets, and
minor rusty stains
on jointsx 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

COARSE

COARSE

COARSE

COARSE

Diorite, Dark-grey,
Fine-grained type predominatesDiorite, mixed dark grey,
Fine-grained in light grey,
Coarse-grained porphyritic

20'

.1' to .8'
pieces

Rock is fresh

8' Bottom of Hole.

30'

40'

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 31.0'

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

CONDITION OF CORE		DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0				Top of Rock 4' (?)
CHIPS ONLY (may be boulder zone)			x x x x x x x x x	Porphyritic Diorite (boulder?)
10'	chips to .2'		+ + + + +	Diabase Dike(?) or Diabase boulder(?)
			+ + +	POSSIBLE TRUE TOP OF ROCK: 13'
.5 to 1.5' pieces	70° joint 60° joint Rusty		x x x x x x x x x x x x x x	Bedrock: porphyritic diorite with local zones of medium grey, fine grained diorite.
20'	Drake @ .1' to 1' intervals		x x x x x x x x x x x x x x x x x x	80° Min. Silicified zone
30'	Rusty pitted		x x x x x x x x x x x x	
				31' Bottom of Hole
40'				

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 160.0'

Logged By: J . R . Rand

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
30'			
40'			
50'			
60'			50' Top of Rock
Core breaks in chips to .3' pieces throughout	Rock is slightly to moderately weathered, Local decomposition, some rusty staining on partings	35° 45°	Metasediment - feldspathic schist, locally quartzitic light grey fine grained rock - evenly foliated.
70'			
80'			
90'			

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 160.0'

Logged By: J. R. Rand

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
80'			
90'			
Breaks @ chips to .2' pieces throughout		Rock is moderately weathered throughout, somewhat softened, bleached, with dull iron staining on joints, tan bleaching in micas. Poor coring rock	Metasediment - fine-grained feldspathic schist, locally light grey quartzitic
100'	40°		
110'	45°		
Breaks @ chips to .4' pieces throughout		Moderately weathered rock, somewhat bleached, Vuggy along foliation planes, Some light rusty staining	Fine-grained, light grey feldspathic schist - Fairly evenly foliated rock
120'	45°	Chips throughout	
130'	50°		
Breaks @ chips to .8' pieces		Moderately to slightly weathered rock	Feldspathic schist - locally interlayered with 1/4" quartzite beds
140'	50°	CHIPS	
150'	50°		
Chips to .6' pieces		Rock become fairly fresh	Feldspathic schist, light grey, fine grained.
160'	55°	CHIPS	
		Rock is fairly fresh, minor rust on partings	
			160' Bottom of Hole

PROJECT SEABROOK

STATION

HOLE LOCATION

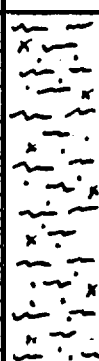
ELEVATION

BEARING

INCLINATION

DEPTH 67.0'

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

0'	CONDITION OF CORE	OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
10'					
20'					
30'					
40'					
50'					
60'					
70'					
	Rock Broken @ Chips to .3' pieces	OCCASIONALLY VUGGY	Rock is slightly weathered, discolored throughout, minor staining on joints and partings		47' Top of Rock
					Metasedimentary Rock feldspathic (quartzitic?) schist. Foliation wavy, variable. Light grey, fine-grained — Rock breaks both on foliation and across core.
					7' Bottom of Hole

PROJECT SEABROOK STATION _____

HOLE LOCATION _____ ELEVATION _____

BEARING _____ INCLINATION _____ DEPTH 1000 b'

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

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
20'			
30'			
40'			34' Top of Rock
CHIPS TO 4' pieces throughout	Rock is moderately to severely weathered throughout, bleached to light tannish grey. Soft, crumbly	50°	Predominantly metasediment. Quartzitic to feldspathic schist, fine-grained (bleached due to weathering), locally interlayered with bleached decomposed coarse-grained diorite(?)
50'	No appreciable rusty staining		
60'	Rock has little strength	50°	TRANSITIONAL (INTRUSIVE) CONTACT Diorite, coarse-grained porphyritic. Bleached to light tannish grey, locally layered,
Breaks @ chips to .5' pieces throughout	Rock is moderately weathered, breaks on and across foliation. No rust, but dull powdery stain on joints.	45°	Gradational into feldspathic, quartzitic schist, light-grey fine to medium fine grained
80'		50°	
Breaks @ chips to .6' pieces	Rock appears slightly weathered. Some bleaching of feldspars, very minor rust on parting	50°	Metasediment - feldspathic schist, fairly fine-grained, evenly foliated. light to medium grey micas locally discolored to tan brown
100'			100' Bottom of Hole

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 150.0'

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

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0'			
10'			
20'			
30'			
40'			
50'			
60'			
70'			
80'			

Note: Smooth or polished surfaces seen on occasional joint planes. Not characteristic of whole rock.

Boulder zone: mixed diorite, granite and dark-grey massive quartzite boulders

32'

50' Base of Boulders - Top of Rock

Breaks @ Chips to .5' pieces

CHIPS

Rock is slightly weathered, some rusty staining on joints and partings, minor solution effects

Schist - feldspathic, locally quartzitic. Light-grey, fine-grained evenly foliated rock

HIPS

SLICKENSIDES

HIPS

CHIPS

CHIPS

CHIPS

Quartzitic

Feldspathic

Chips to 1' pieces

Rock is fairly fresh throughout minor powdery stains on partings

Schist - quartzitic Fine-grained, light grey evenly foliated.

Minor slickensides on joints

PROJECT SEABROOK STATION _____

DDH B-21

PAGE 2 of 2

HOLE LOCATION _____

ELEVATION _____

BEARING _____ INCLINATION _____

DEPTH 150.0'

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

70	CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
80'	Breaks @ Chips to .2' pieces throughout	CHIPS	Rock is fairly fresh but poor drilling — Parts on both joints and partings	Schist, feldspathic as below
90'		CHIPS	Local minor rust staining	
100'	Breaks @ Chips to .6' pieces throughout	CHIPS	Rock is fairly fresh throughout locally subject to Rusty staining on joints and partings	Schist, feldspathic, may be quartzitic locally. Fine-grained, light grey Evenly foliated
110'		CHIPS		
120'	Breaks @ Chips to .8' pieces	CHIPS	Rock is fairly fresh throughout, subject to light staining on joints and partings	Schist, feldspathic, light grey, fine grained. Local feldspar stringers Rock is evenly foliated Quartzitic/Feldspathic
130'		CHIPS STAINED SLICKENSIDES	Some joints show slickensides covered with powder coating	
140'	Breaks @ Chips to .6' pieces	CHIPS	Rock is fresh, minor staining on joints, breaks on both joints and partings	Feldspathic schist, light-medium-grey, fine grained, Evenly foliated rock
150'	Chips to .8' pieces	CHIPS	Rock is fairly fresh through out.	
	Notes: some minor polishing on joints — not characteristically fault slickensides			150' Bottom of Hole

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 176.0'

Logged By: J.R.R and 7/12/72

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
40'			
50'			50.2'
60'			Boulder zone: mixed diorite, diabase and grey massive quartzite boulders. Not much weathering
70'			67'
80'			76' Top of Rock
Breaks @ chips to .5' pieces	CHIPS MODERATE WEATHERING CHIPS	Rock is slightly weathered, minor discolor- ation, local rusty staining and solution effects on joints and partings	Schist, feldspathic and quartzitic. Light-grey fine-grained, evenly foliated
90'	CHIPS VUGS		
100'	CHIPS chips to 8' pieces	Rock is fairly fresh. Minor staining and minor local feldspar discolor- ation	Schist, feldspathic and quartzitic. Light-grey, fine-grained, evenly foliated
110'	CHIPS 4 chips to .7' pieces		
120'			

PROJECT SEABROOK STATION DDH 8-23 PAGE 2 of 2

HOLE LOCATION _____ ELEVATION _____

BEARING _____ INCLINATION _____ DEPTH 176.0'

Logged By: J. R. Rand

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
100' CHIPS to .5' pieces CHIPS CHIPS CHIPS CHIPS, VUGGY CHIPS Breaks @ Chips to .5' pieces CHIPS, BLEACHED CHIPS Breaks @ Chips to .4' pieces CHIPS CHIPS CHIPS .1' to .6' pieces 180'	55° 58° 50° 45°	Rock is slightly weathered locally. Stain on joints Occasional solution effects Rock fairly fresh to slightly weathered. Rusty staining on some joints Slightly weathered in meta sediment Rock is fairly fresh to slightly weathered. Some powdery staining on joints and partings. Some rust stains locally Rock is fresh	ELDSPATHIC ELDSPATHIC Schist - feldspathic, Quartzitic, light-grey, fine-grained, evenly foliated (NO MOVEMENT ON DIABASE CONTACTS) 2. INTRUSIVE CONTACT. NO DISPLACEMENT EVIDENCE Diabase - fine grained, Sub-black, phenocryst speckling ROCK IS BLEACHED (CHILLED ZONE ?) TO TAN CONTACT DIPS 55° NORMAL TO SCHISTOCITY NO DISPLACEMENT EVIDENCE ON CONTACT EGMATITE VENELET Schist - Quartzitic, Somewhat feldspathic, fine-grained, medium light-grey. Evenly foliated Diabase - fine grained dark-grey to black. Speckled phenocrysts. 176' Bottom of Hole

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 121.0'

Logged By: J. R

Rand 1/7/1
27/1

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES

0					
10'					
20'					21' Top of Rock
30'	Breaks @ Chips to 1.4' pieces	SOFT, RUSTY, HIGHLY WEATHERED RUST CHIPS	Rock is moderately weathered throughout, locally severe weathering on joints. Rock fairly compact internally. High angle joints @ 1' to 4' intervals	x x x x x x x x x x x x x x x x x x x x	Diorite, intermixed fine-grained, dark-grey massive and coarse-grained light grey
40'					
50'	Breaks @ Chips to 1.2' pieces	RUSTY CHIPS, BLEACHED CHIPS SEVERE WEATHERING, RUST RUSTY JOINT	Rock is moderately weathered throughout. Some feldspars bleached, discolored to tannish. Local highly weathered rusty zones	x x x x x x x x x x x x x x x x x x	Diorite, porphyritic, medium coarse-grained, medium dark-grey. Subject to narrow veining @ 6" to 1' intervals. Veins dip 55°-60°. All veins discolored tan by weathering. Rock is fairly compact, weathering not withstanding
60'					
70'	Breaks @ Chips to 2' pieces	CHIPS, SOFT CHIPS SOFT, RUSTY	Rock is moderately weathered throughout. Feldspar veinlets discolored to tan. Some solution effects. Vugs	x x x x x x x x x x x x x x x x	Ditto as above
80'					
					WELDED BRECCIA-TIGHT STRUCTURE WITH SURFACE WEATHERED EFFECTS

D D H B-24

PAGE 2 of 2

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 121.0'

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

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
70'			
80'			
Breaks @ .3' to 1.5' pieces	RUSTY, WEATHERING	Rock is slightly to moderately weathered. Minor pitting; veinlets discolored to tan. Local rusty zones on joints	Intermixed fine-grained Dark-grey Diorite and light grey coarse-grained Diorite
90'			Fine-grained rock type predominates. Rock discolored a little by weathering.
Breaks @ Chips to 1.5' pieces	CHIPS	Rock is slightly to moderately weathered. Minor pitting. Feldspar veinlets are discolored to tan. Rock not notably weak.	
100'			
Chips to 1.5' pieces	MODERATE WEATHERING, RUST MODERATE WEATHERING, RUST	Rock is slightly to moderately weathered through out. Feldspars discolored in veinlets. Local rusty zones on joints	Intermixed fine-and coarse-grained Diorite. High angles veining at 6" to 1' intervals. Rock is discolored by weathering.
110'			(SLIGHT TO MODERATE WEATHERING - COMPACT)
120'			121' Bottom of Hole
130'			

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 23.0'

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

CONDITION OF CORE		DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0'				3' Top of Rock
Breaks @ Chips to 2.5' pieces	CHIPS, RUSTY		x x x x	FINE
	CHIPS, RUSTY		x x x x	FINE
10'	CHIPS, RUSTY		x x x x	FINE
	CHIPS, RUSTY		x x	FINE
			x x x x	FINE
20'			x x x x	FINE
			x x x x	FINE
			x x x x	
				23' Bottom of Hole

DDH B-28

PAGE 1 of 1

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 23.7'

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

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0'			4' Top of Rock
Breaks @ chips to .8' pieces	SANDSEAM CHIPS, SOFT SAND SEAM CHIPS CHIPS	Rock is slightly to moderately weathered throughout. Some rock De-composition, and heavy rust on high angle joints.	DIABASE-(BOULDER?) Diorite - intermixed dark-grey, fine-grained and coarse grained, light grey. Rock is predominantly coarse-grained type.
10'			FINE
20'			FINE
30'			23.7' Bottom of Hole

PROJECT SEABROOK STATION DDH B-30 PAGE 1 of 1

HOLE LOCATION _____ ELEVATION _____

BEARING _____ INCLINATION _____ DEPTH 27.0'

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

CONDITION OF CORE DIP GRAPHIC LOG DESCRIPTIVE NOTES

0'					
			FOLIATION ↓		7' Top of Rock
10'	Breaks @ .1' to 2' pieces	50° joint 30° joint	Rock is fresh, only local rusty staining on joints. Mostly 60° low angle (30°) joints		Diorite, medium grey, medium coarse-grained, locally with foliated grey granite zones.
20'	1' to 1.5' pieces	30° joint	Rock is fresh. Biotite may be slightly weathered		Porphyritic Diorite, Biotite Spotting
30'					27' Bottom of Hole

PROJECT SEABROOK STATION

DDH 8-31

PAGE 1 of 1

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 23.0'

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

CONDITION OF CORE		DIP	GRAPHIC LOG	DESCRIPTIVE NOTES	
0'				3' Top of Rock	
10'	Breaks @ Chips to 1' pieces	CHIPS	Rock is slightly weathered, subject to brown iron staining on joints @ 6" to 1' intervals	COARSE	Diorite - intermixed dark-grey fine-grained and light-grey coarse-grained types. Coarser-grained rock tends to weather more than Fine-grained
		CHIPS		COARSE	
		CHIPS		COARSE	
20'	1' to .8' pieces	RUSTY VERTICAL JOINT		COARSE FINE-GRAINED DIORITE	Porphyritic Diorite
				23' Bottom OF Rock	
30'			Rock is fresh but rusty staining on joints to bottom. Biotite is slightly weathered to show rusty brown streak No slickensides		

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 41.6'

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

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0'			2.5' Top of Rock
Rock Broken @ chips to 1' pieces		CHIPS	Rock is fresh internally. Iron and manganese staining on closely spaced joints
15'		CHIPS	
20'		CHIPS	
25'		CHIPS	
Breaks @ .2' to 1' intervals		25° joint	Rock is fresh
30'		50° joint	Minor rusty staining locally on joints.
35'		60° joint (minor pyrite)	Joints not slickensided
40'		MINOR RUST	
.2' to 1.2' intervals			DRUSY QUARTZ AND CALCITE LINED VUG
41.6'			41.6' Bottom of Hole
50'			

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0'			6' Top of Rock
10'	CHIPS 70° joint	Rock is fresh Some slight weathering and iron staining on joints. Joints @ 30° dip @ 1'-4' intervals	COARSE Diorite - medium fine-grained medium dark-grey, massive
20'	CHIPS MODERATE WEATHERING WITH RUSTY JOINTS 65° joint	Rock is generally fresh with thin rusty staining on joints.	PEGMATITE Medium fine grained medium grey massive Diorite
30'	MINOR RUST 65° joint	Rock is fresh. No rust except as shown. No slickenside	High angle joints @ about 1' intervals
40'	CHIPS	Rock is fresh Not rusty on joints	PEGMATITE WITH GARNET, TOURMALINE(?) AND FINE SULPHIDE STRINGERS
44'			Bottom of Hole
50'			

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	72.5'	Rock is fresh. Only very minor slight staining on joints	15' VEIN RELICT BANDING AFTER META-SEDIMENTS Diorite, fine-grained, medium light grey, with local zones of coarser-grained feldspathic rock
80'	50°		
90' Breaks @.3'to2' intervals		EGMATITE	Medium-coarse grained Diorite
100'			
110' Breaks @.5'to1.5' intervals	60° joint	Rock is fresh through out. Only occasional minor staining on joints	Diorite, massive dark grey medium-fine grained with local zone of coarser- grained light grey porphyritic Diorite Occasional feldspathic veining
120'		Rock not closely jointed. No slickensides	
130' Breaks @ Chips to 2' pieces	RUSTY STAIN 105.2'	Rock is fresh Minor rusty staining on some joint surfaces.	Diorite, dark grey, fine- grained, with occasional coarse grained light grey zones
140'	RUSTED, PITTED, 125.2' WEATHERED CHIPS, MINOR RUST		COARSE COARSE COARSE
150' Breaks @.4'to2' pieces	145.2'	Rock is fresh	Predominantly fine-grained Diorite
			COARSE 152.5' Bottom Of Hole

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 72'

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

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0			1.5' Top of Rock -
Breaks @ chips to .8' pieces	chips chips	Rock is slightly weathered, pitted with weak rust staining on joints 60° to 70° joints @ 2' intervals	Diorite - light grey coarse grained
20'	chips chips		Diorite - medium dark grey, fine grained, massive
Breaks @ chips to 1.5' pieces	chips in veg Rusty	Rock is fresh - only occasional very minor rust staining on joints	Diorite dark grey fine grained, as above
40'			pegmatite, quartz, feldspar with bull quartz in center
Breaks @ .1' to 2' pieces		Rock is fresh minor staining on joints	pegmatite veinlet
50'			Diorite, Dark grey, fine grained, with occasional coarse-grained zones
Breaks @ chips to 3.5' pieces	chips	Rock is fresh only minor rusty staining locally on joints	
60'	slight weathering chips	slight weathering @ 64'	Diorite dark grey, fine-grained, with occasional zones of intermixed light grey, coarse grained diorite
70'			
80'			2066 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'	Breaks @ Chips to 2' pieces	Rock is fairly fresh, subject to rusty staining, some weakening on joints	FINE Diorite, mixed fine-grained dark-grey and coarse-grained light-grey. Coarse grained predominates
20'	Chips		
30'	Breaks @ Chips to .8' pieces	Rock is fairly fresh internally, except as shown. joints (50°-70°) @ 1' to 4' intervals	FINE Diorite, mixed fine-grained dark-grey and coarse-grained light-grey types as shown
40'	Breaks @ .1' to 1.5' pieces	Rock is fresh, only very minor rusty stains locally on joints. joints @ 30°-40°	FINE Diorite
50'	Breaks @ .3' to 1.8' pieces		Coarse Diorite, mixed fine-grained dark-grey massive and coarse grained light grey
60'			FINE Mixed fine and coarse diorite
70'			67.5' Bottom of Hole

PROJECT SEABROOK

STATION

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' intervalsx x x
x x x
x x x
x x x
x x x

Breccia

x x x
x x x
x x x
x x x
x x x

veining

+ + +
+ + +

Top of Rock 44'

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

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 164.4'

Logged BY: J. R. Rand

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
130'			
140'			
140' to 139.3'			
1' to .8' pieces			
Broken @ Chips to .4' pieces			
150'			
150' to 149.3'			
Rock slightly weathered	55°		
Rock is slightly weathered through-out minor bleaching, rusty staining or powdering on joints. Diabase bleached to brown			
160'			
.5' to 1.3' pieces			
No slickensides			
pyrite on joint	55°		
164.4' Bottom of Hole			
170'			

PROJECT SEABROOK

STATION

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'			3.5' Top of Rock
Rock breaks @ .1' to 2' pieces	minor rusty	Rock is fresh Very minor (calcite?) coating on some joints. Mostly not rusty.	ne Diorite, mixed fine-grained, dark-grey and coarse-grained light-grey
20'	75° joint		Rock is predominantly fine-grained diorite
Chips			
28.5'			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°		Diorite, fine-grained Dark grey, massive - closely joined at 3" to 1' intervals joints have slickenside-like smearing with chlorite development = <u>slippery</u>
CHIPS	60° Jt.		
CHIPS	50° Jt. - minor slicks - chlorite		
CHIPS	80°-90° Jt. with slicks, chlorite dev't. high angle curved joints - chlorite dev't. throughout on joints		
CHIPS			
40'			Diorite, fine-grained, <u>Dark</u> grey as above massive
	(griller) vugs		
50'			
	(griller) vugs		
60'			Diorite, fine-grained, <u>Dark</u> grey, massive - locally speckled with whitish, rounded phenocrysts
	Core Breaks at 6" to 2' intervals on low angle joints @ 20°-30° dips		
70'			
80'			DIABASE DIKE

PROJECT SEABROOK

STATION

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 80' Chlorite development 70° vein, Filled 90' Joints are low angle 65° joint 100' chips 45° joint 60° joints 110' Core breaks on wide-spaced joints 120' driller breaks Joints are low angle at 20° average dip driller breaks 130'	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.	80° 55° 45° 24' Bottom of Hole	Diabase dike 124' 80° intrusive, chilled tight contact Quartz diorite, fine grained, medium grey ← May be a faulted contact (?) Rock becomes medium-coarse grained Quartz diorite, intermixed coarse- and fine rock types. 97.6' Apparent fault zone, softened by weathering but not rusty or slicken sided. 45° dip Quartz diorite, massive texture, medium coarse grained, not foliated, medium grey.

PROJECT SEABROOK STATION

DDH D1-3

PAGE 1 of 1

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 65.5'

Logged By: J

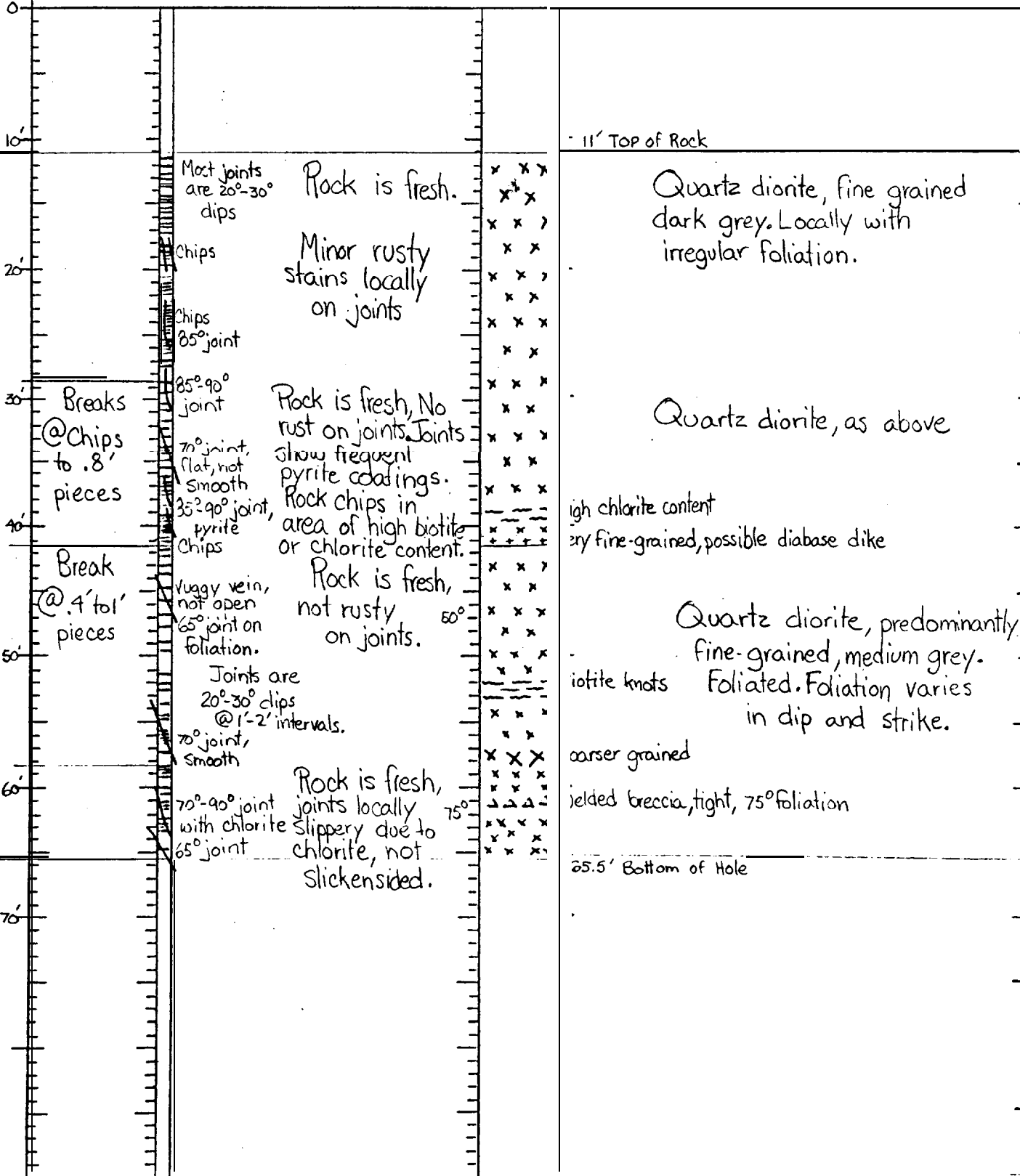
R. Rand 12/11/72

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES



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
90'			Medium coarse quartz diorite Diorite, fine grained, dark grey. Local coarser grained zones
100'	Core broken as shown predominantly high angle joints	60° joint, minor coating, smooth Sub-vertical joint 70° joint Smooth, clean	Rock is fresh, minor manganese and pyrite smearing on some joints
110'			Diorite, predominantly fine-grained, dark grey. Some minor local coarser-grained patches. Rock is fresh throughout
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
130'			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
140'	Core broken as shown	45° joint, minor stains 75° joint, clean	Rock is fresh throughout 30° dipping joints are characteristic. Some manganese and pyrite staining on joints.
150'			Diorite, fine grained, dark grey, locally vaguely foliated. Rock is fresh, not weathered throughout.

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
140' Core Broken as shown Breaks @ .1' to .8' intervals thin pyrite smears 60° joint, clean Chips on some joints No Rust or weather staining	55°	Rock is fresh. Locally joint surfaces are slippery with chlorite development. Most breaks in core on 25° to 30° low angle joints. 573'	Quartz diorite, medium grey, medium coarse grained. Fine grained, dark grey, massive diorite INTRUSIVE CONTACT Quartz diorite, medium coarse grained - 169' Bottom
150'			
160'			
170'			

PROJECT SEABROOK E/ STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH- 65.3'

Logged By: J. R. Rand 12/13/72

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0'			
10'			
20'			boulder- Quartz diorite, micaceous, foliated
Core is broken @ chips to 1' pieces on low- and high-angle joints	Rusty 70° joint, rusty	Rock is fresh. Minor rusty staining on joints	5.3' Top of Rock
30'	70° joint, rusty, vuggy	At 25'-27' rock is subjected to vuggy solution effects.	Quartz diorite, mixture of coarse and fine grained rock types
Core breaks @ chips to .3' pieces on low- and high-angle joints	75° joint	Rock is fresh. Prominent rust formation on joints. Joints occur at .1 to .3' intervals	dominantly fine-grained
40'	70° joint		dominantly coarse-grained
50'	65° joints		high angle (70°-75°) intrusive contact, welded
Core breaks @ .1' to 2' pieces on 20°-30° low angle joints	80°-90° joint, chlorite smeared moderate weathering, heavy rust		Diabase dike, dark grey to sub-black, fine grained, massive with pyrite specks and knots.
60'	70° joint, rusty		Rock closely jointed at various strikes and dips. Low angle (10°-30°) joints predominate.
	rusty 75° joint, rust coated	Rock is fresh. Rusty coatings on low angle and high angle joints at widespread intervals as shown.	Diabase dike, as above, massive, sub-black, fine grained rock.
	75° joint, rust coated		
70'			5.3' Bottom of Hole

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 33.0'

Logged By: J. R. Rand 12/13/72

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE	NOTES
0'				
10'				
Core Breaks on 30° joints @ 6" to 2' intervals	Rusty Rusty	Rock is fresh, Joints normally are clean, but locally have rusty coating as shown. Joints dip 30° to 40°. No high angle joints.	x x	3.0' Top of Rock Quartz diorite, medium grained, medium-dark greenish grey, speckled texture, massive.
30'	Rusty		x x x x x x	Transitional Contact Quartz diorite, coarse grained light grey
40'				3.0' Bottom of Hole

PROJECT SEABROOK STATION

DDH D1-7

PAGE 1 of 2

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 118.7'

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

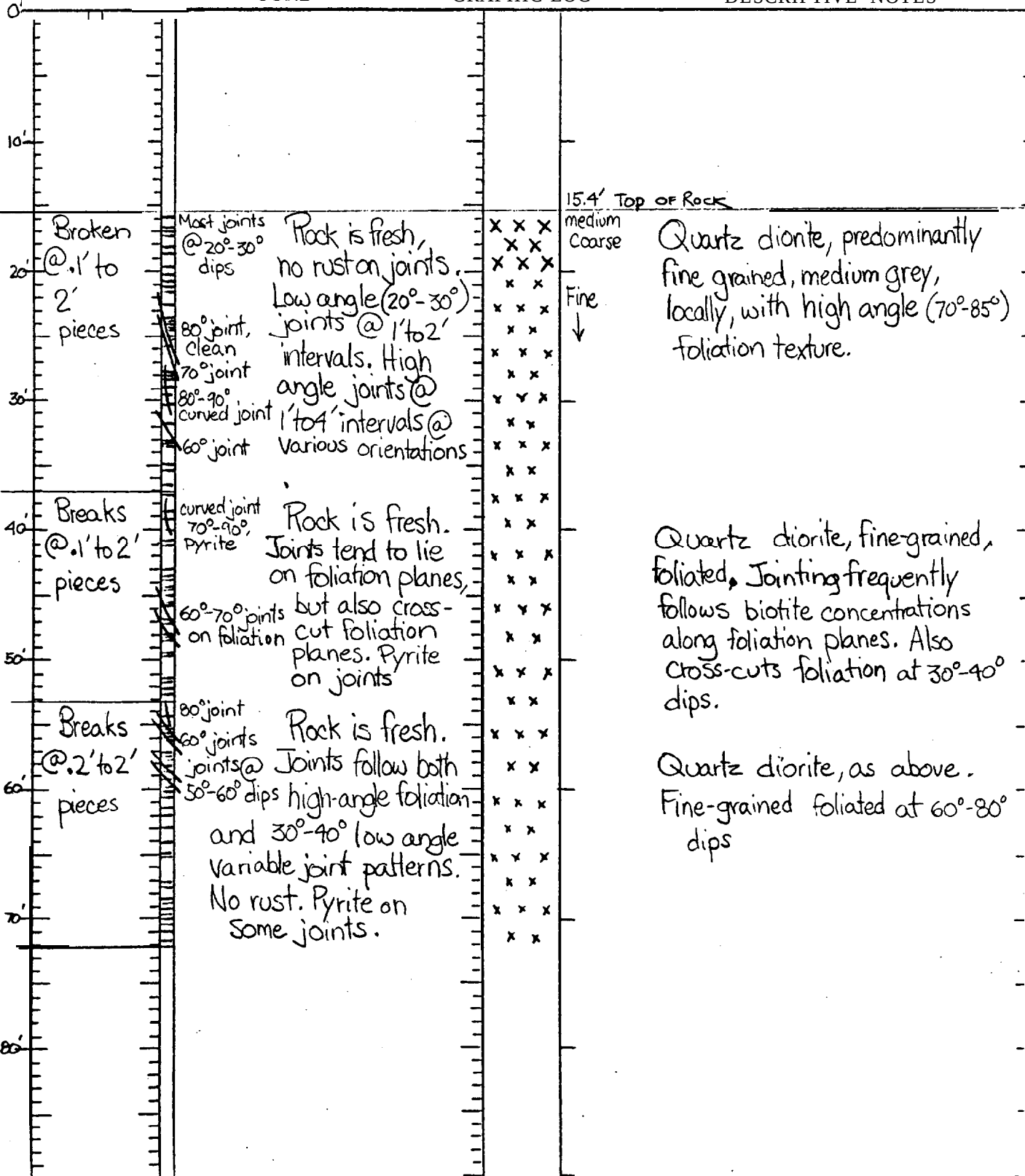
CONDITION

1 OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES



PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 29.5

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

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0' 10' 20' 30' Core Broken into chips CHIPS → CHIPS → 30° dipping joints @ 3"-6" intervals, slightly rusty 70° joints, rusty Joints not rusty, pyrite smeared		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	3' Top of Rock Quartz diorite, predominantly medium-fine-grained, locally foliated. Medium-grey color. Some minor vug development to about 20' depth. Foliation is very steep to vertical. 29.5' Bottom of Hole

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH

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

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0'			
10'			Boulders
12'			Top of Rock
Broken @ Chips to 1' pieces	65° joint 60°-70° joints 30° joint	Rock is fresh. Rusty staining on some joints, not on all joints. Rock breaks normally on 30°-40° dipping joints @ 1' intervals	Quartz diorite, medium-coarse grained, light medium grey. Locally foliated @ high angle (60°-70°) dips.
Breaks @ .3' to 2' intervals on 30°-40° joints	Rusty joint 60°-90° joint with pyrite	Rock is fresh. No rust on joints. High angle joints infrequent. Most breaks on 30°-40° joints	VERY FINE GRAINED ROCK Relict quartzite layer, partially recrystallized by diorite(?)
Breaks @ .2' to 1.5' intervals	70°-90° joint with pyrite Smooth 60° joint with pyrite	Rock is fresh. Not rusty on joints. Most joints are @ 30° dips, not smooth. Some pyrite coatings on high angle joints	Quartz diorite, medium-coarse grained, medium light grey. Locally some foliation @ steep dips. Finer grained near top of section.
Breaks @ .3' to 3' intervals	65° joint	Rock is fresh, not rusty on joints. Most breaks on low-angle 20°-30° joints.	finer grained finer grained Quartz diorite, fine-grained medium grey, foliated. Foliation is steep, 60°-90° and wavy
80'			

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 112'

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

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
Breaks @ Chips to 1' pieces chips	Rock is fresh. Breaks on low angle (10° - 30°) joints High angle (85° - 90°) joint set @ 90' depth has pyrite coating		very fine-grained rock, massive, welded Quartz diorite, fine- grained, medium-grey, foliated Becomes coarse- grained rock
Breaks @ .1' to .6' pieces throughout	High angle joints are curved, have chlorite or biotite smooth surfaces with pyrite		
			112' Bottom of Hole

PROJECT SEABROOK STATION DDH D1-11 PAGE 1 of 1

HOLE LOCATION _____ ELEVATION _____

BEARING _____ INCLINATION _____ DEPTH 65.5'

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

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0'			
10'			
12.5' Top of Rock			
Broken @ Chips to .6' pieces throughout	85° joint Joints are mostly low-angle @ 10°-30° dips	Rock is slightly weathered to 15' Rock is fresh, with minor rusty stains on joints locally to 18.7' Pyrite coatings on joints below 18.7'	Coarser grained Finer ↓ Quartz diorite. Predominantly fine-medium grained, medium-grey with local foliation textures. Foliation @ 80° or steeper
Breaks @ .2' to 1.5' pieces	85° joint 85° joint 70° joint	Rock is fresh. Breaks mostly on 10°-30° Low angle joints @ 1'-2' intervals	Coarser dark-greenish diorite
Breaks @ .3' to 2' pieces		Rock is fresh. Joints @ 30°-40° dips @ 1' to 2' intervals	Coarser dark-greenish Quartz diorite, predominantly fine-grained, not notably foliated. Local zones of coarser grained, dark greenish diorite.
65.5' Bottom of Hole			
70'			

PROJECT SEABROCK STATION DDH DI-12 PAGE 1 of 1
 HOLE LOCATION _____ ELEVATION _____
 BEARING _____ INCLINATION _____ DEPTH 29.5'
 Logged By: J R. Rand 12/13/72

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0' 15' Rock Breaks @ .3' to 1' pieces 20' Breaks @ .1' pieces 25' .5' to 1.3' pieces 30'	30°-40° dips throughout 65° joint	Rock is fresh. Minor rusty staining on some joints Rock is fresh, subject to minor weathering and rusty staining on joints. Rock is Fresh, Not Rusty	15' Top of Rock micaceous Quartz diorite, fine grained, quite micaceous (biotite) in zones and knots, enclosed in coarse-grained quartz diorite matrix. micaceous rock Micaceous rock type is not apparently metasedimentary. Has rather massive texture 29.5' Bottom of Hole

PROJECT SEABROOK STATION DDH D2-1 PAGE 1 of 1

HOLE LOCATION _____ ELEVATION _____

BEARING _____ INCLINATION _____ DEPTH 31.0'

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

	CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0'				
6'				Boulders - quartz diorite
				11' Top of Rock
20'	Rock Breaks @ .1' to 1.5' pieces on low angle (30°) joints	85° joint Rock is moderately weathered, rusty, raggy	x x	Quartz diorite, predominantly fine-grained medium grey, with occasional zones of coarser- grained, light-medium-grey matrix.
30'	.1' to .4' pcs.	2' severe weathering, soft MINOR RUST ON ONE JOINT	x x x x x x x x x	Rock becomes a little coarser grained
40'				11' Bottom of Hole

PROJECT SEABROOK

STATION

DDH D-2-4

PAGE 1 of 3

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 171.0'

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

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES

0'

1d

20'

30'

40'

50'

60'

70'

80'

Core is
Broken @
places
Shown in
"Condition"
column

Breaks
in
Core
as
Shown

Breaks
in
Core
as
Shown

Rock is fresh, not
weathered.
30° joint, smooth,
clean, no rust
30° joint, no rust
20° joint, clean on 30° dip.
Rock parts
Very thin veinlets.
No slickensides

slight bleaching.
Rock is strong.
60° foliation

30° dip on
veinlets in
Breccia
zone
Rock is fresh,
as above

Core breaks are
characteristically @ 30°
dip attitudes

Rock is fresh,
as above. Tends
to part on 30°
dipping joints,
or very thin 30°
veinlets

driller break

21.5' Top of Rock

Quartz diorite, medium-grey,
medium-coarse-grained,
with local fine-grained
dark grey diorite zones
as shown. Rock is predominantly
finer-grained diorite.
Fresh, crystalline

mixed coarse and
fine diorite

Fine-grained

52.1' to 53.5' is welded, healed, solid breccia zone

Diorite, as above, mixed
coarse-grained light grey quartz
diorite matrix, enclosing fine-
grained, dark grey diorite inclusions.

Rock becomes predominantly
coarse-grained, with relatively
small zones of fine-grained
diorite.

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 171'

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

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES

Core
Broken
as
shown

Rock is fresh,
not weathered

Porphyritic quartz-diorite,
massive, coarse-grained, medium-
grey.

Bottom Of Hole

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 65.0'

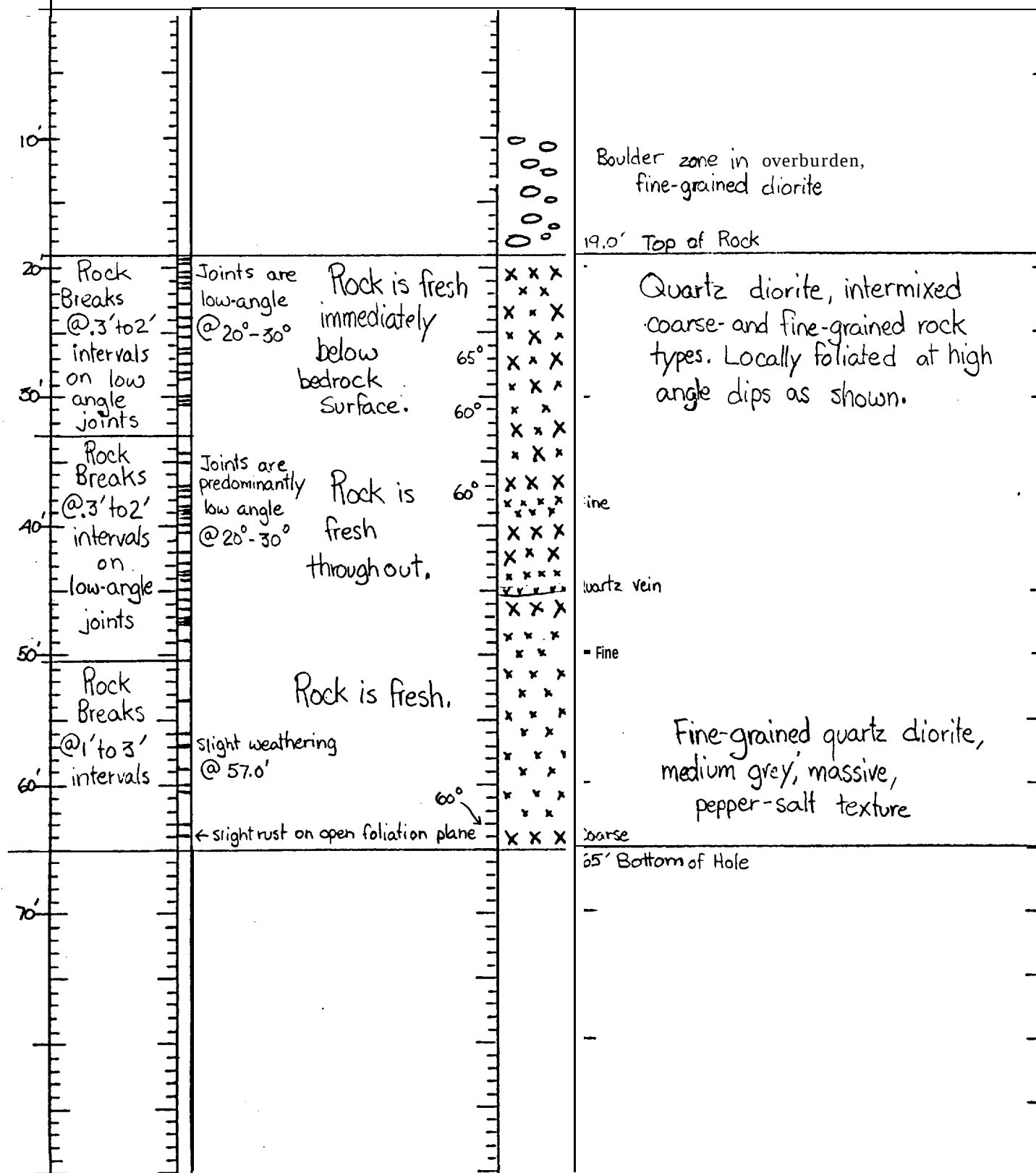
Logged By: J. R. Rand 12/11/72

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES



PROTECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 125.0'

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

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
70' 80' Breaks @ .1' to 1.5' pieces on low-angle joints 90' 100' Broken on low angle joints @ .5' to 1' intervals 110' Good drilling Breaks @ wide intervals 120' 130'	MOST JOINTS @ 20° TO 30° DIPS, @ .3' TO 1' INTERVALS 85° TO 90° JOINT JOINTS ARE CLEAN, LOW ANGLE @ 20° TO 30° 85° JOINT CALCITE FILLED NO SLICKENSIDES CLEAN LOW ANGLE JOINTS DRILLER	Rock is fresh. Not rusty on joints. Some pyrite coatings on joints Rock is fresh through-out Rock is fresh through-out	Quartz diorite, predominantly micaceous (chloritic) fine-grained, dark-greenish grey DARK MICACEOUS ROCK NOT METASEDIMENTARY Quartz diorite, medium-coarse-grained, medium grey. locally intermixed with fine-grained diorite near top of section. Quartz diorite, intermixed coarse and fine grained rock types 125' Bottom of Hole,

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
NO OVERBURDEN			
0.0' Top of Rock			
Core Breaks on low angle (30°) joints @ 1' intervals	Rusty 70° joint even chips - Rusty 70° joint CHIPS, RUSTY MODERATE WEATHERING MINOR VUGGY	Rock is fresh. Locally affected by slight to moderate weathering on joints as shown. Most joints dip about 30° at .3' to 1' intervals	Quartz diorite, medium fine grained, medium grey. Massive texture (not notably foliated). Locally intruded by pegmatite veinlets as shown.
Breaks on low angle joints @ .5' to 1.5' intervals	60° joint minor rust 60° joint slight weathering 65° joint clean minor rust	Rock is fresh. Slight weathering to minor rusty coatings on some joints.	Quartz diorite, as above, Massive, medium fine grained, medium grey.
Breaks @ .5' to 2' pieces	70° joint, minor rust 70° joint, rough slight weathering 1/2 moderately weathered	Rock is fresh. Low angle joints @ 30° to 35° dips. Joints not rusty except as shown	Quartz diorite as above. Massive medium fine grained, medium grey, low angle (30° to 35°) joints @ .5' to 2' intervals
Breaks @ .3' to 3' pieces	slight weathering slightly weathered, rusty 70° joint, rusty moderately weathered on joint plane 60° joint slightly weathered, rusty	Rock is fresh. Slight to moderate weathering, rust on occasional joints as shown	Rock becomes coarse-grained Quartz diorite @ 72.6' depth. 50° dip on intrusive, welded contact.
			COARSE GRAINED Low angle joints dip 30° to 40° @ .5' to 3' intervals

PROJECT SEABROOK STATION
HOLE LOCATION 20.450 N 79.500 E
BEARING _____ INCLINATION _____ DEPTH _____

DDH E1-2 PAGE 1 of 1

ELEVATION 21.4'

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

	CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0				
10'	Breaks @.1'to2.2' pieces	Rusty 70° Jts. minor rust	Rock is fresh - minor rusty stains on joints to 14' depth - Low angle joints dip about 30° throughout	7.2' Top of Rock Quartz diorite, mixed fine-grained, dark grey and coarse-grained light grey matrix rock - porphyritic toward base
20'				Porphyritic
30'				27.2' Bottom of Hole
40'				

PROJECT SEABROOK

STATION

HOLE LOCATION SITE #2 • 79.350 E 20,400 N

ELEVATION 15.2'

BEARING

INCLINATION

DEPTH

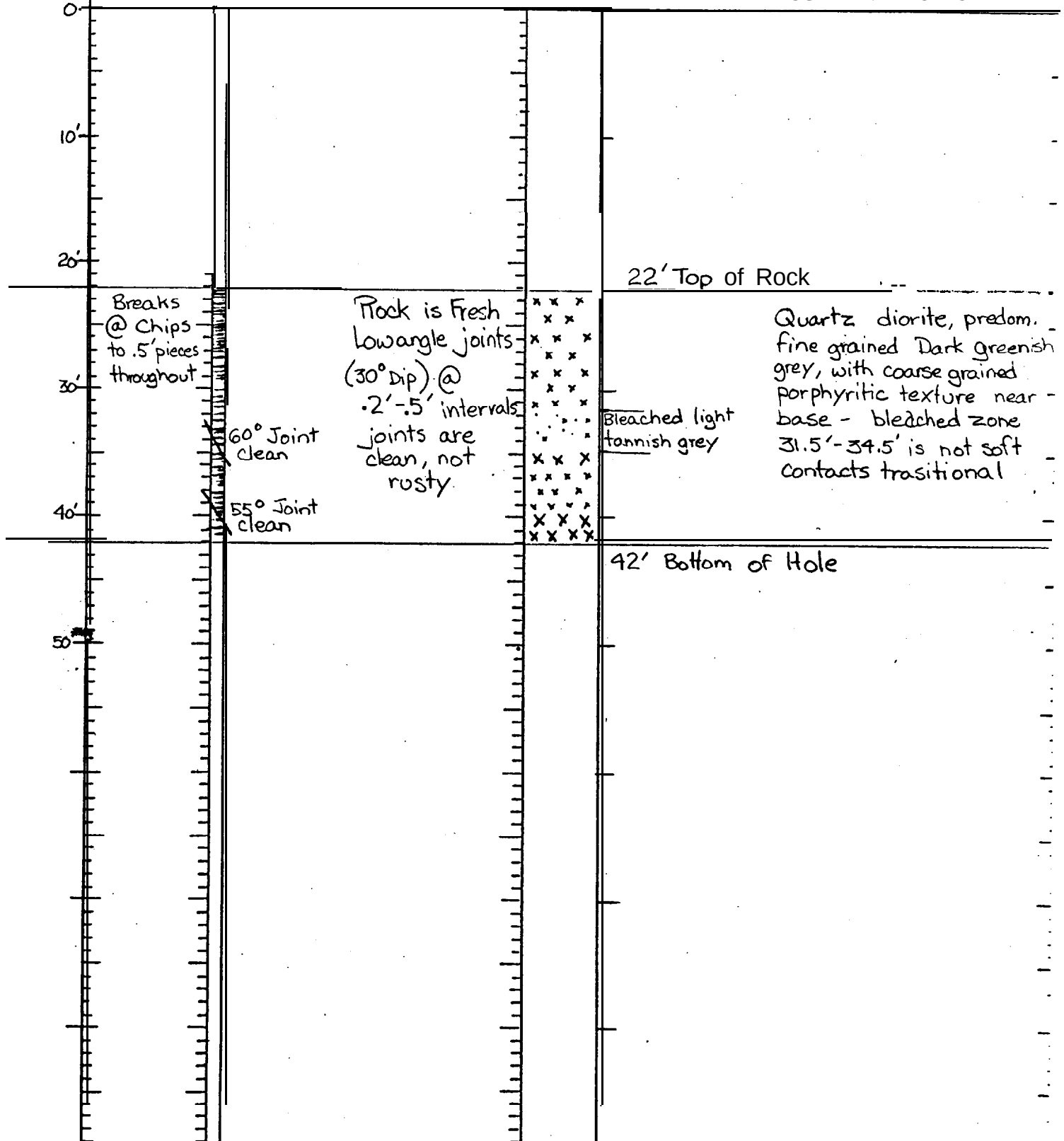
Logged By: J. R. Rand 12/27/72

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES



PROJECT SEABROOK

STATION

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. 50° 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
30'			
40'			
50'			
60'			

PROJECT SEABROOK

STATION

HOLE LOCATION 20.300 N 79.700 E

ELEVATION 20.2'

BEARING

INCLINATION

DEPTH

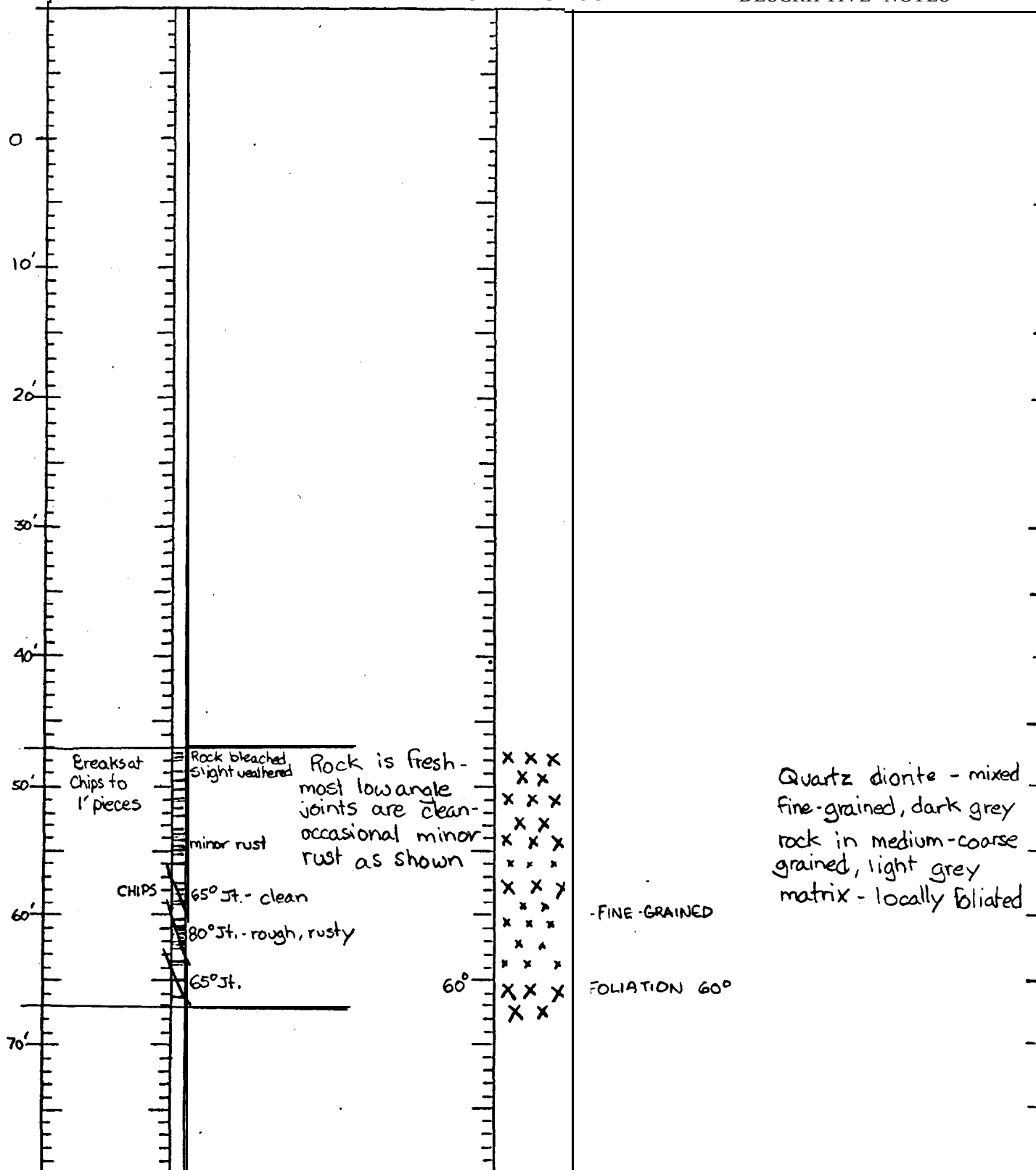
Logged By: J. R. Rand 12/26/72

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES



PROJECT SEABROOK STATION

HOLE LOCATION

ELEVATION 20 2'

BEARING

INCLINATION

DEPTH

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

	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'. Predominant coarse-grained below
100'		Rough uneven 65° Jt.		
110'				
				05' 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

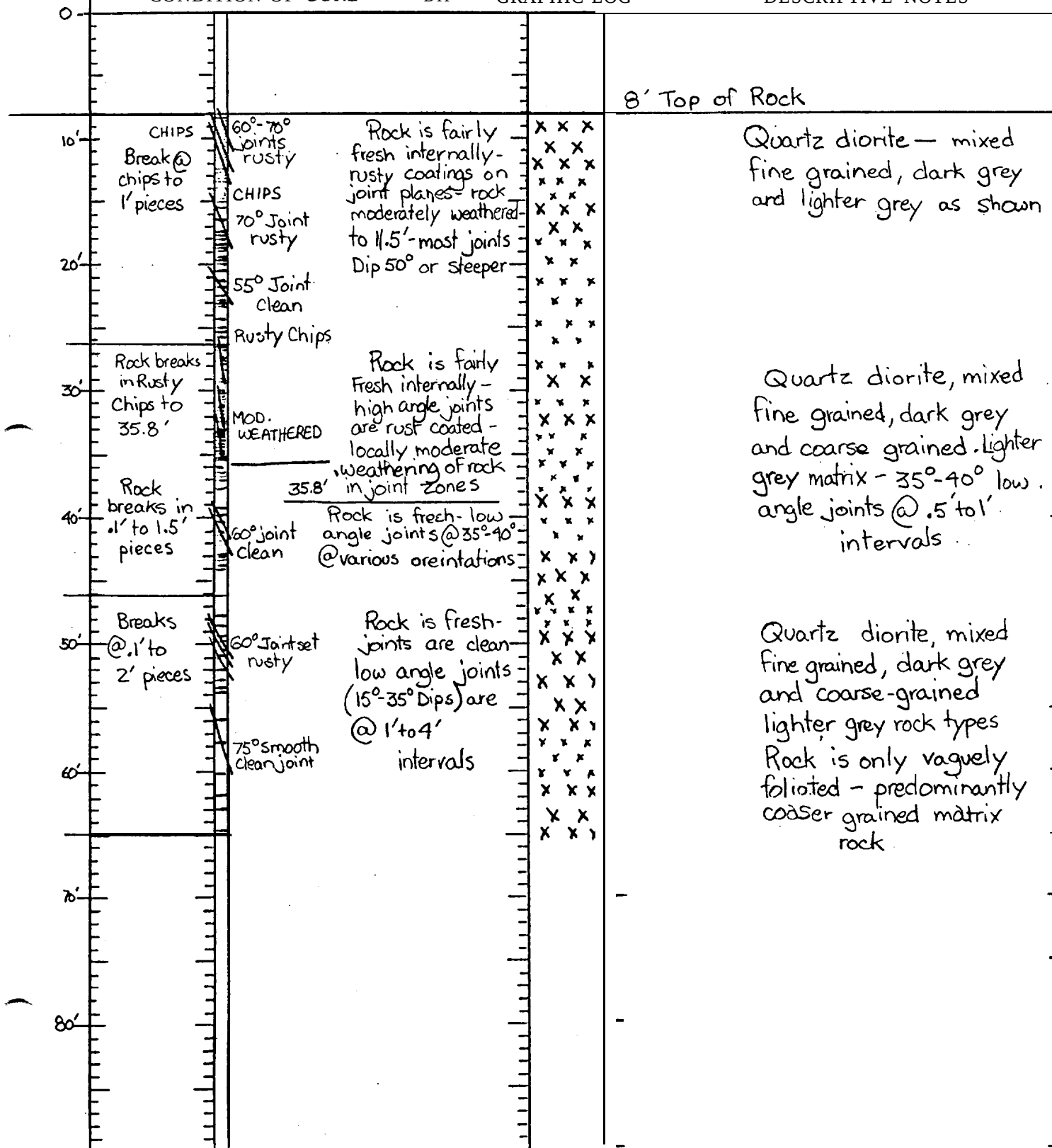
Logged By: J. R. Rand 12/26/72

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES



PROJECT SEABROOK

STATION

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 @ 50°-70° Dips but variable in direction. Finer grained medium-dark grey diorite patches enclosed in medium fine-grained matrix.
40'	70° joint 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'				

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'			
Most breaks in core @ 30°-40° dips SOFT	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 - some joints are slickenside	Quartz diorite medium-fine grained, medium grey, foliated
Core ground in soft zone Slickenside	70°-90° smooth jt.	Rock is fresh - tends to break up on drilling in zones where Biotite rich - local slickenside striations on joints joints run @	WELDED FAULT ZONE - PRESENCE OF BIOTITE ON ZONE MAKES IT WEAK, DIFFICULT TO DRILL - NO RUST OR GOUGE - PYRITE ON SLIP PLANE
Most breaks @ 30° dips	70° jt. smooth	CHIPS - soft core ground	Breccia-welded
65° jt. smooth			
High angle joints on weak zone CHIPS	Apparent fault zone polished slickenside in Biotite - rock soft not rusty, no gouge	Various orientations	Quartz diorite as above
Most breaks @ 30°-45° dips	85°-90° jt.	Slickenside zone does not appear open or subject to groundwater movement	Rock is generally foliated and high angle joints with smooth surfaces tend to occur along foliation
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, 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
.3' to 1' intervals		Rock is Fresh	Quartz diorite, fine grained, medium-dark grey - resembles "granitized" meta-quartzite - well foliated through out @ 40°-60° dips Rock parts (joints) on foliation were somewhat micaceous
	60° 50°	Δ Δ Δ x x x	welded breccia
			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
0'			
10'			
12.5'			Top of Rock
Breaks in core @ .1 to 1' pieces	85° joint	Rock is fresh, not rusty on joints Some minor powdery coating on some joints Low angle joints @ 20°-30° dips	Quartz diorite, medium-fine grained, medium-grey, massive texture — locally minor porphyritic, 20°-30° low angle joints @ .2'-.5' intervals
30'	65° joint		
32.5'			Bottom of Hole
40'			

PROJECT SEABROOK NUCLEAR STATIONHOLE LOCATION Hampton Harbor

ELEVATION _____

BEARING vertical

INCLINATION _____

DEPTH 143 10

Wx = weathered, wrathering

J.L.R. Rand
Logged By: 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, clean 60° rough joint adjacent to joints	ROCK IS ESSENTIALLY FRESH, WITH MINOR RUSTY COATINGS ON PARTINGS, AND LOCALLY SLIGHT TO MODERATE WEATHERING JOINTS	QUARTZ DIORITE, INTERMIXED FINE-GRAINED DARK GREY DIORITE ENCLOSED IN MATRIX OF MEDIUM-COARSE GRAINED LIGHT GREY QUARTZ DIORITE.
BOX 2 36'-54'	70° rough joint, clean 60° rough joint adjacent to joints Minor rusty Minor rusty 70° rough joint, clean 60° rough joint adjacent to joints 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 60° rough joint - Minor rusty	ROCK IS FRESH- MINOR RUSTY STAINING LOCALLY AS SHOWN ON JOINT SURFACES	WELDED OR FUSED CONTACTS THROUGHOUT
60'			AMPHIBOLITIC - MASSIVE, MEDIUM-COARSE, DARK GREENISH GREY CRYSTALLINE
70'			QUARTZ DIORITE, DARK GREY FINE-GRAINED DIORITE IN MEDIUM COARSE LIGHT GREY QUARTZ DIORITE MATRIX
80'			

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		x x	
	Rock is fresh, with some minor rusty staining as shown		x x	QUARTZ DIORITE AS ABOVE, GRADING TO MEDIUM GRAINED SUB-MASSIVE QUARTZ-DIORITE WITH SCATTERED FELDSPAR SPECKLING LOCALLY IS SLIGHTLY FOLIATED
80'	Minor rust stain		x x	
90'			x x	
Box 5 94'-114'			x x	
	Rough 70° joint minor rust		x x	
	Rock is fresh		x x	COARSE GRAINED SUB-MASSIVE QUARTZ - DIORITE, FELDSPAR SPECKLING BECOMES PROMINENT
100'			x x	
	Driller break Minor rust		x x	
110'			x x	
Box 6 114'-133'10"	112' - Smooth Rusty Chips - rusty	SLIGHT ROCK WEATHERING. MINOR VUGGY TEXTURE	x x	QUARTZ DIORITE, INTERMIXED FINE DIORITE IN MEDIUM-COARSE QUARTZ DIORITE MATRIX
120'	Chips	Rock is notably vuggy - breaks on chlorite- rich high angle partings	x x	
	① 124.5'		x x	Pegmatite Rock appears chlorite-rich, and is weakened by jointing and moderate weathering
130'	Minor rusty	Rock is fresh	x x	QUARTZ DIORITE, INTERMIXED FINE DIORITE AND MEDIUM- COARSE QUARTZ DIORITE MATRIX
	200° joint		x x	
Box 7 133'10" 143'10"	Minor rusty stain Slight vug development on joint		x x	
140'			x x	TENDS TO MEDIUM-FINE GRAINED ROCK TOWARDS BASE
			x x	
150'			x x	
	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

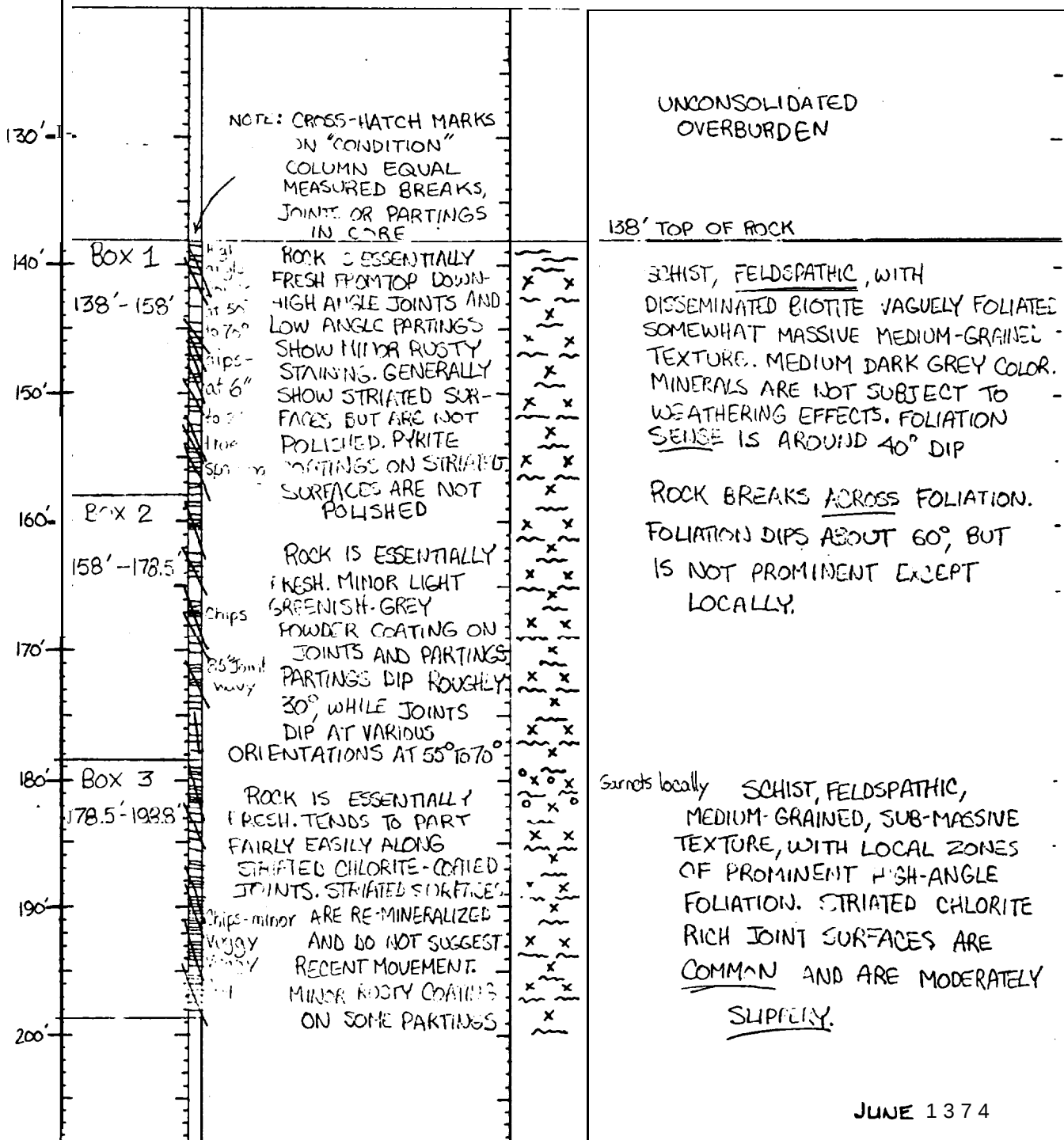
Logged By: J.R. Rand
5/14/73

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES



JUNE 1374

PROJECT SEABROOK NUCLEAR STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH

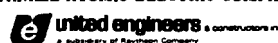
J.R. Rand
Logged By: 5/14/73

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
190'			
200'	BOX 4 198.8' - 216'		SCHIST FELDSPATHIC, AS ABOVE. POSSIBLY A LITTLE COARSER-GRAINED THAN ABOVE.
210'			BECOMING MOTTLED WITH BIOTITE KNOTS AND MASSES ENCLOSED IN FELDSPATHIC MATRIX. CONTORTED FOLIATION. (META-VOLCANIC UNIT?)
220'	BOX 5 216' - 236'		
230'	chips		SCHIST, AS ABOVE, BECOMING MORE MORE BIOTITE-RICH, FINER-GRAINED BELOW 227'. HIGHLY CONTORTED FOLIATION, BUT RESISTANT TO BREAKING.
240'	BOX 6 236' - 255' 3"		
250'	slickensides		SCHIST, FELDSPATHIC, BIOTITE-RICH, HIGHLY CONTORTED FOLIATION. MEDIUM-TO MEDIUM-FINE GRAINED, MEDIUM-DARK GREY. CHLORITE AND PYRITE ON JOINTS.
260'	BOX 7 255' 3" - 264' 5"		
270'	Polished-pyrite smeared Polished		
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 ID 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 E.L. (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	Depth ft	SAMPLE Type N No. and Rec.	RATE OF AD. min/ft	WATER CONTENT or RQD		PRESSURE TEST		STRIKE, DIP F = Foliation J = Joint C = Contact B = Bedding S = Slickenside	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.) (Type, texture, mineralogy, color, hardness, etc.)
				%	Graphic	gpm psi	Computed k 10 ⁻⁴ cm/sec			
16.9		A1								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. Similar to Sample S6.
-30		S7	52							
-20		S8	54							Similar to Sample S6.
		S9	57							Similar to Sample S6.
-40		S10	60							Gray fine to medium sand. Clean: uniform: subrounded grains with a trace of coarse sand.
		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.
		S13	58							Similar to Sample S10.
-60		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. $s_u(tor) = 0.13-0.15 \text{ tsf}$
-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. $s_u(tor) = 0.10-0.13 \text{ tsf}$
-80		S17	0		41.9					Similar to Sample S16. $s_u(tor) = 0.11 \text{ tsf}$
		S18	0		44.6					Similar to Sample S16. $s_u(tor) = 0.16-0.18 \text{ tsf}$
-90		S19	0		36.8					Similar to Sample S16. $s_u(tor) = 0.18 \text{ tsf}$
-80		S20	0		36.7					Similar to Sample S16. $s_u(tor) = 0.19-0.21 \text{ tsf}$
-100		S21	0		34.3					Similar to Sample S16. $s_u(tor) = 0.20 \text{ tsf}$
		S22	0		34.2					Similar to Sample S16. $s_u(tor) = 0.17-0.19 \text{ tsf}$
-110		S23	0		28.8					Similar to Sample S16. $s_u(tor) = 0.33-0.30 \text{ tsf}$
-100		S24	0		34.8					Similar to Sample S16. $s_u(tor) = 0.19 \text{ tsf}$
-120		S25	0		30.9					Similar to Sample S16. $s_u(tor) = 0.16-0.18 \text{ tsf}$. (Lost 20 cu. ft mud @ 125 ft)
		S26	102				TOP	OF TILL		
-130		NX-1	100		0					Gray silty gravelly fine to medium sand. Widely graded: contains angular gravel pieces up to 35 mm in size. Possible till material. $128'10"$ May be top of rock. Chips - moderate wx. May be boulder in $129'6"$ Boulder till bit, no recovery
-120		NX-2	97	4.1	67					135'4" Top of good rock. D Fairly fresh. Slight wx ten- Minor rust decay in feldspar, and lo- stain cally powdery on joints. $129'6"$ 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.		TOTALDEPTH 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			

F.L. ISL ft	SAMPLE Depth ft	Type N and or Rec.	RATE OF AD. prin/ft	WATER CONTENT %	OR RQD Graphic	PRESSURE TEST gpm psi	Computed 10 ⁻⁴ k cm/sec	STRIKE, DIP F = Foliation c = Joint B = Bedding	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.) (Type, texture, mineralogy, color, hardness, etc.)	
										CONTINUED FROM PREVIOUS PAGE	
	NX-3	106	2.6	64						Chips	No rusty staining. Most partings cut across foliation-dip 20°-35°. Many low-angle partings are smooth.
	NX-4	99	2.7	35						Chips- angular	Fairly fresh. May be slight wx of feldspars. Partings are powdery, but not rusty.
	NX-5	100	2.4	43						Dips NE?	
	NX-6	75	2.6	54						Angular chips- zone of intersect- ing smooth even	Even joints intersect at about 90°
	NX-7	93	5.4	25						Chips	Rock slightly vuggy. Becomes moderately weathered, vuggy.
	NX-8	82	2.5	0						Extreme wx- sandy	Weathered, moderate to extreme wx at discontinuous intervals as shown. Not rusty. Extreme wx-decomposed to soft granular, unconsolidated. Rock crumbles at extreme wx; is sectile, soft at severe wx.
	NX-9	110	4.5	0						Chips	Extremely fresh internally, but subject to moderate wx on joints.
	NX-10	61	8.9	3						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-11	63	5.8	0						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-12	95	5.7	10						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-13	102	3.4	42						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-14	35	4.9	0						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-15	74	5.5	0						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-16	67	9.3	0						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-17	50	8.0	0						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-18	11	12.0	0						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-19	7	12.0	0						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-20	45	12.0	0						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-21	70	10.7	9						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-22	93	9.0	0						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-23	100	7.3	0						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-24	100	8.3	57						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-25	42	7.0	0						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-26	95	7.2	62						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-27	96	8.3	17						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-28	87	7.0	0						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-29	67	6.0	0						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-30	100	8.0	0						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-31	87	9.0	16						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-32	165	8.0	0						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-33	100	5.2	30						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-34	60	8.2	0						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-35	59	7.7	14						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-36	100	12.0	0						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-37	67	12.0	0						Chips	Locally fresh internally, but subject to moderate wx on joints.
	NX-38	71	19.0	0						Chips	Locally fresh internally, but subject to moderate wx on joints.

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 a subsidiary of American Company Date: October 4, 1973 Project 7281 Page 2 of 3 LOG OF BORING F4
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BORING LOCATION <u>N18311, E88393:</u>		INCLINATION <u>Vertical</u>		BEARING _____		DATE START/FINISH <u>June 8, 1973</u> / <u>July 2, 1973</u>	
CASING ID <u>5 in. to 4 in. to 3 in.</u>		CORE SIZE <u>2-1/8 in.</u>		TOTAL DEPTH <u>329.6</u> ft		DRILLED BY <u>American Drilling and Raring. T. Paquette</u>	
GROUND EL. (MSL) <u>16.8</u> ft		DEPTH TO WATER/DATE <u>11.2</u> ft / <u>July 2, 1973</u>		LOGGED BY <u>Soil - K. Polk; Rock - J. R. Rand</u>			

E.L. ISL ft	SAMPLE		RATE OF ADV. min/ft	WATER CONTENT %	OR RQD	PRESSURE TEST gpm psi Computed 10 ⁻⁴ cm/sec	STRIKE, Dip F = Foliation J = Joint C = Contact P = Bedding	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.) (Type, texture, mineralogy, color, hardness, etc.)	
	Depth ft	Type and No.								
284									CONTINUED FROM PREVIOUS PAGE	
284		NX-39	73	9.0	16				Extreme wx	
290		NX-40	76	6.7	42				Fairly fresh. Drills fairly well.	
280		NX-41	102	5.0	56					
300		NX-42	90	5.4	73				Most breaks across core	
310		NX-43	107	6.7	78				80°-polished slickensides	Fresh. Some minor powdering of feldspar phenocrysts. Minor powdering on joints.
320		NX-44	100	4.7	94				60°-Chlorite coated-striated	
329.6		NX-45	98	5.0	87				Curved joint-highly chloritic, slickensided	Fresh. Drills well. Parts on chlorite-smear, striated, slippery joints.
12.8									75° Joint-chlorite smeared	
									POTOM OF BORING	

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

NOTES

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

 Date: October 4, 1973 Project 7299
 PAGE 3 OF 3 LOG OF BORING F4

BORING LOCATION		INCLINATION		BEARING		DATE START/FINISH			
N16553, E90235; Offshore		Vertical				Nov. 10, 1973 / Nov. 14, 1973			
CASING ID		CORE SIZE		TOTAL DEPTH		DRILLED BY			
3 in.		1-7/8 in.		243.6 ft		Warren George, Inc. P. Schaeble, J. Harris			
GROUND EL. (MSL) -9.1		DEPTH TO WATER/DATE		Tidal		LOGGED BY			
				ft /		Soil = K. Polk; Rock = J. R. Rand			
EL. MSL	DEPTH	SAMPLE	RATE OF ADV.	WATER CONTENT	OR RQD	PRESSURE TEST	STRIKE, DIP	SOIL MD ROCK	DESCRIPTIONS
ft	ft	Type and No.	N or Rec.	%	Graphical	Computed	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.
		S4	67						Similar to S3, but sand is mostly fine to medium grained.
-20	20	S5	69						Light gray fine to medium sand. Uniform; clean.
		S6	65						Similar to Sample S5.
-38.0	30	S7	87				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.
-40	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	40	S8	123				TOP OF ROCK		Similar to Sample S7A, but contains gravel pieces up to 35 mm in size.
		NQ-1	83	0.0	29			Minor wx	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.
		NQ-2	97	6.0	50			Talc	42.1' Diorite. Fine-grained. Fused contact dips 55°
		NQ-3	94	5.0	49			Pyrite	46.8' Diorite. Fine-grained medium tannish-gray. Moderately bleached. Quartz diorite.
		NQ-4	102	5.0	55				
		NQ-5	100	4.0	85				66.0' Fused intrusive contact Bleached Diabase. Bleached at top. Dark gray below.
		NQ-6	99	6.0	97				71.9' Fused contact dips about 65°
		NQ-7	100	8.0	81				Diorite. Fine-grained, medium tannish gray. Some minor bleaching.
		NQ-8	100	6.0	96				
		NQ-9	100	1.0	90				Diorite (?) or feldspathized quartzite (?). Fine-grained, quartzose, prominent foliation showing high, but quite variable dips.
		NQ-10	100	5.0	70				Diorite. Quartzose and locally foliated. Fine-grained, medium gray. Local minor bleaching.
		NQ-11	100	5.0	50				
		NQ-12	98	5.0	97				111.4' Contact dips about 25°
		NQ-13	100	1.0	65				Bleached Diabase. Fine-grained, grades to dark gray below bleached zone.
		NQ-14	100	5.0	83				117.6' Diorite. Fine-grained, medium dark gray. Irregularly foliated throughout.
		NQ-15	100	5.0	85				
		NQ-16	100	5.0	88				
		NQ-17	98	6.0	88				Fused, welded breccia
		NQ-18	98	5.1	88				
-152.9	143.6	M3.6							

LEGEND

Rec - Standard penetration resistance, blows/ft

RQD - Length recovered/length cored, %

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

U - 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

NOTES

1) - Roller bit to 40.5 ft

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

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

• 300 lb. hammer wed.

SEABROOK STATION

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

YANKEE ATOMIC ELECTRIC COMPANY

 **United Engineers**

Date: November 23, 1973 Project 7286

PAGE 2 1 of LOG OF BORING ADT 16

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

EL. MSL ft	SAMPLE Depth ft	Type and No.	N or Rec.	RATE OF ADV. min/ft	WATER CONTENT %	or RQD Graphic	PRESSURE TEST Compu pel 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.,	
-4.0											
-10											
-20											
-30											
-33.5											
-40	NQ-1	100	2)	5.0	53					Pyrite	Fresh and hard. Drills well. Minor surface wx effects on joints and partings
-45	NQ-2	100		5.2	68					Slight wx	Fresh and hard. Drills well. Local slight wx on partings. Partings dip 10° to 20°. Few high angle joints.
-55	NQ-3	100		5.3	71					D	
-60	NQ-4	100	4)		83					Slight wx	
-65	NQ-5	100			100					D	
-70	NQ-6	100			100					D	
-75	NQ-7	100			83					D	
-80	NQ-8	100			100					D	
-85	NQ-9	100			80					D	
-90	NQ-10	100			80					D	
-95	NQ-11	100			78					D	
-100	NQ-12	100			75					D	
-105	NQ-13	100			98					D	
-110	NQ-14	100	5)		82					D	
-115	NQ-15	100			98					D	
-120	NQ-16	100			87					D	
-125											
-130											
-135											
-140											
-145											

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 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 to 33.5 ft. No sample taken.
- 2) Roller bitted to 34.8 ft.
- 3) No clays present, therefore, no water contents were determined.
- 4) Drilling rates for NQ-4 through NQ-13 are 5 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

 **United Engineers** CORPORATION
a subsidiary of Parsons Company

Date: January 14, 1974 Project 7286

PAGE 1 of 2 LOG OF BORING ADT 16A

BORING LOCATION		INCLINATION		BEARING		DATE START/FINISH						
CMWG ID		CORE SIZE		TOTAL DEPTH		DRILLED BY						
GROUND EL (MSL)		DEPTH TO WATER/DATE		Tidal		LOGGED BY						
N16571, E90280; Offshore		1-7/8 in.		240.3 ft		Warren George, Inc.; P. Schaeble, J. Harris						
-4.0 ft				ft/		Soil - K. Polk; Rock - J. R. Rand						
EL. MSL ft	SAMPLE Depth ft	Type No.	N or Rec.	RATE OF ADV. min/ft	WATER CONTENT %	RQD Graphical	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.,	
							SPM psi	Computed -4 k 10 cm/sec				
S = Slick CONTINUED FROM PREVIOUS PAGE												
-150	100	NQ-17	100	94					N28W, 22SW J N10E, 50SE F N45W, 27SW J		Fresh and hard. Drills very well. Joints and partings are fresh, not slickensided.	Orient Diorite. Fine-grained, gray quartzose. Irregularly foliated throughout.
-160	100	NQ-18	100	100					N60W, 25SW J			
-170	100	NQ-19	100	100								
-180	62	NQ-20	62	92					N25W, 56NE J			
-190	85	NQ-21	85	85					N61W, 35SW J N84E, 67SE F N11W, 18SW S N23E, 50SE F N47E, 76SE F		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.
-200	98	NQ-22	98	94					N25E, 76SE J			
-210	100	NQ-23	100	100					N 5E, 34NW J N50W, 26NE J			
-220	100	NQ-24	100	97					N74W, 60NE J			
-230	100	NQ-25	100	100					N11E, 11NW J			
-240	100	NQ-26	100	100					N 6W, 24NE J			
-250	98	NQ-27	98	86					N21E, 20NW J N71W, 37NE J			
-260	102	NQ-28	102	83					N36W, Vert. J			
-270	100	NQ-29	100	86					N 9W, 63NE N19E, 53SE F N19E, 53NE F N33E, 82NW J N36W, 60NE F N28W, 52SW S		Shows minor greenish hydrothermal bleaching. Hard.	Minor Diorite. Coarse-grained, Bleach light greenish gray granodiorite. Some minor hydrothermal alteration
-280	100	NQ-30	100	87					N 1W, 51SW F			
-290	98	NQ-31	98	88					N49W, 29SW J			
-300	100	NQ-32	100	89					N35E, 24NW J N66E, 27SE J N58W, 58NE J			
-310	93	NQ-33	93	89					N32W, 36SW J			
-320	98	NQ-34	98	78					N 5E, 66SE J N55E, 73NW J N57E, 30SE J			
-330	92	NQ-35	92	83					N24E, 40SW J N74E, 62SE J			
-340	100	NQ-36	100	80					N72E, 65SE J			
-350	83	NQ-37	83	82								
BOTTOM CIP BORING												

LEGEND

N - Standard penetration resistance, blows/ft
RQD - Length of sound core 4 in. and longer/length cored, %
S - Split spoon sample
U - Undisturbed samples

S - Shelby tube N - Danisco
F - Fixed piston P - Pflüger
O - Osterberg G - GEI

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

NOTES

(6) This is only partial list of dip and strike data.

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

united engineers & consultants PC

Date: January 14, 1974 Project 7284

PAGE 2 of 2 LOG OF BORING ADT16A

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

E L MSL ft	SAMPLE			WATER CONTENT %	OR RQD Graphic	PRESSURE psi	TEST Computed 10 ⁻⁴ cm/sec	STRIKE, DIP F = Foliation J = Joint C = Contact B = Bedding S = Slickenside	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc., (Type, texture, mineralogy, color, hardness, etc.,)
	Depth ft	Type No.	N or Rec.							
-8.3										
-10										
-20										
-36.3										
-40										
-50										
-60										
-70										
-80										
-90										
-100										
-110										
-120										
-130										
-140										
-150										
-160										
-170										
-180										
-190										
-200										
-210										
-220										
-230										
-240										

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 - Osterberg D - Drilling break W - Weathered... weathering N - Denison P - Pitcher G - GE k - Coefficient of permeability	NOTES 1) No samples taken. 2) Roller bitted to 38.0 ft. 3) NC clays present; therefore no water contents were determined. 4) Drill time for entire boring 1mm 8 to 15 minutes per foot. x - Oriented core	SEABROOK STATION PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE YANKEE ATOMIC ELECTRIC COMPANY united engineers a subsidiary of Northern Company Date: April 11, 1974 Project 7286 PAGE _____ of 2. LOG OF BORING - ADT-16B
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BORING LOCATION N16546, 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) -8.3 ft		DEPTH TO WATER/DATE Tidal		ft /		LOGGED BY Soil • K. Polk; Rock • J. R. Rand	

EL. MSL ft	SAMPLE Depth ft	Type No.	N or Rec.	RATE OF ADV. min/ft	WATER CONTENT %	or RQD Graphic	PRESSURE TEST apex psi	Computed k 10 ⁻³ 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												
162.4												
		NQ-14	100		100				N36W, 58NE S N35W, 34SW C			47.5' Open contact dips 29°
150		NQ-15	100		100				N13W, 38SW J N26E, 53NW J	Fresh. Hard. Drills well. Joints and partings are not slickensided.		50.4' Diabase. Dark gray. Open contact dips 35°
		NQ-16	100		100				N72W, 51SW F			Diorite. Quartzose. Fine grained, medium dark gray. Wavy, foliated. Steep dips.
160		NQ-17	100		88				N36W, 41NE S N26W, 51NE S N82E, 52NWS N78E, 68SE J N 6W, 21NE S	Graphite-polished		
170		NQ-18	100		93				N82W, 76SW F	Minor polish	Fresh and hard. Drills well. Joints and partings show only very minor surface wx effects. Minor bleaching at 169-170'.	Fused, welded breccia
180		NQ-19	100		73				N31E, 34NW S N 6W, 41NE F N29W, 32SW S N50W, 52NE S N59E, 76SE F	Graphite		Bleach
		NQ-20	100		100				N41E, 43NW J N 0E, 58NE F			Diorite. Fine-grained dark gray. Irregular wavy foliation. Slightly bleached, medium-grained at 168' and 169'. Fused contacts.
180		NQ-21	97		97				N63W, 50SW J			
		NQ-22	100		97				N72W, 71NE J N86W, 35SW F N89E, 80NE S N89E, 51SW F		Fresh and hard. Drills very well. Not slickensided.	Diorite. Fine-grained, medium dark gray quartz diorite. Vaguely to widely foliated throughout.
200		NQ-23	100		100				N46E, 60SE J			
		NQ-24	100		88				N85W, 79NE S N64E, 59SE F N25W, 42SW J			
200		NQ-25	100		95				N32E, 57SE J			
		NQ-26	100		100				N79W, 47SW J N75E, 49NW F N22E, 31NW J		Fresh and hard. Not slickensided. Drills well. Only very minor surface wx effects on joints and partings.	Diorite. Mixed fine-grained dark gray quartz diorite and medium-coarse, medium gray granodiorite. Locally foliated.
210		NQ-27	100		90				N52W, 33NE J	Minor slickensides		
		NQ-28	100		98				N32E, 41SE S N52E, 52SE J	Pyrrite		Fine-grained, dark gray.
220		NQ-29	100		58					Minor wx		
		NQ-30	92		90					Surface powder	Fresh, but bleached by hydrothermal alteration. Not wx. Not slickensided	225.9' Fused contact dips about 60°
230		NQ-31	100		97				N41E, 36SE F N80E, 71NW J			Quartz diorite. Granodiorite. Medium coarse-grained, medium light greenish-gray. Feldspar veining is tight.
240		NQ-32	100		100				N31E, 33SE J N52E, 57NW S		Fresh. Bleached. High-angle veinlets.	Bleached throughout
		NQ-33	100		94					Striated-slickensides		Bleached
240									BOTTOM OF BORING	Not polished		

LEGEND

N - Standard penetration resistance, blows/ft

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
a subsidiary of Northern Company

Date: April 11, 1974 Project 7286

PAGE 2 2 of LOG OF BORING ADT 16B

BORING LOCATION N16493. E90257; Offshore

INCLINATION Vertical

BEARING

DATE START/FINISH Jan. 14, 1974 , Jan. 17, 1974

CASING m 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

LOGGED BY Soil - K. Polk; Rock - J. R. Rand

EL. ASL	SAMPLE			RATE OF ADV. min/ft	WATER CONTENT %	OR RQD	PRESSURE TEST		STRIKE, DIP F = Foliation J = Joint C = Contact B = Bedding	CORE LOGS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.) (Type, texture, mineralogy, color, hardness, etc.)
	Depth ft	Type and No	N or Rec				rpm	Computed k/10 ⁻⁴ cm/sec			
5.5									S = Slickenside		
10											
20											
30											
40											
50											
60											
70											
80											
90											
100											
110											
120											
130											
140											
150											
160											
170											
180											
190											
200											
210											
220											
230											
238.5											

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 # 00 = Groundwater

U - Undisturbed samples

S - Shelby tube

F - Fixed piston

O - Osterberg

D - Drilling break

WX - Weathered, weathering

N - Denison

P - Pitcher

C - GEI

k - Coefficient of permeability

NOTES

1) Washed through soil O-33". 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 17, 1974

Project 7286

PAGE 2 1 of LOG OF BORING ADT 16C

BORING LOCATION <u>N16493, E90257; 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>		CONE SIZE <u>1-7/8 in.</u>		TOTAL DEPTH <u>238.5</u> ft		DRILLED BY <u>Warren George, Inc.; P. Schaeble, J. Harris</u>	
GROUND EL. (MSL) <u>-5.5</u> ft		DEPTH TO WATER/DATE <u>Tidal</u> ft /		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 = Folliation 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	x NQ-29	100	10.0	92				N82E, 22SE S N20E, 56SE J N59W, 52NE J N69E, 33SE J		Joints and partings not slickensided.	Diabase. Fine-grained, dark gray. Grades to medium-grained at 145'. Becomes white feldspar speckled at 151'.
150	x NQ-30	98	8.8	95						Feldspar specs throughout	
160	x NQ-31	100	9.4	37				N50W, 43NE J N66W, 69NE J		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		
170	NQ-33	100	8.2	82					Striated		
170	NQ-34	100	9.0	65						166.9' Open contact dips 38°	Diorite. Fine-grained, medium gray. Quartzose, diabase inclusion is irregular, fused.
180	NQ-35	100	7.2	87						Fresh and hard. Drills very well. Joints and partings fresh.	177.0' 8" granodiorite at base. Fused contact dips 70°
180	x NQ-36	100	8.5	79				N53E, 29SE J N39W, 57NE J N26E, 66NW J N26E, 64NW J	Open joint Calcite coated		Diabase. Fine-grained, dark gray with calcite phenocrysts 183' to 186'.
190	x NQ-37	100	9.6	98						Calcite speckling	
190	NQ-38	100	8.2	80				N54W, 62NE S		Fresh and hard. Drills well. Some striated chlorite on joints and partings.	Diabase, as above.
200	x NQ-39	100	9.5	47				N58W, 44NE J N63W, 69SW J N41E, 74NW J	Chlorite Chlorite Slippery		194.5' Open contact dips 14°
200	x NQ-40	100	9.7	50				N 4W, 18NE J N41E, 35NW J	Chlorite		Diorite. Fine-grained, medium dark gray quartzose. Fairly well foliated throughout.
210	x NQ-41	100	8.9	23				N44W, 84NE J N63W, 55SW J	Rough Irregular joints		
210	x NQ-42	100	9.0	45				N45E, 73NW J N32E, 34SE J N16E, 39SE J N63E, 35SW J N62W, 43SW J	Calcite, pyrite on foliation		Prominent pyrite mineralization with calcite. Fused breccia at 208.8 to 210.4'.
220	x NQ-43	100	9.1	58				N58E, 18NW J		Fresh and hard. Minor surface wx effects on partings.	217.4' Fused contact dips 5°
220	x NQ-44	98	9.7	90				N83W, 10NW J	Striated calcite-slickensided		Brown chert some. Not bleached.
230	x NQ-45	100	8.6	82				N78E, 65SE J N17E, 41SE S		Fresh and hard. Drills very well. At 235.5' becomes bleached gradually.	Diabase. Fine at top. Diabase. Medium-fine grained, dark gray with hair-line calcite veinlets.
240	x NQ-46	100	9.5	90				N53W, 70NE J N46E, 45SE J	Calcite lined		235.5' Rock gradually becomes bleached, transitional contact bleach over .5' core
240	x NQ-47	93	9.1	93				N 1E, 34NE J		Quartz-feldspar veinlet-no calcite	
BOTTOM OF BORING											

LEGEND R - 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	NOTES x - Oriented core. x - Oriented core.	SEABROOK STATION PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE YANKEE ATOMIC ELECTRIC COMPANY Date: April 17, 1974 Project 7286 PAGE 2 of 2 LOG OF BORING ADT 16C
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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> <u>A</u>		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> <u>ft/</u> <u>-</u>		LOGGED BY <u>Soil - K. Polk; Bock - J. R. Rand</u>			

EL. 4SL ft	SAMPLE		RATE OF ADV. min/ft	WATER CONTENT or RQD		PRESSURE TEST		STRIKE, DIP F = Foliation J = Joint C = Contact B = Bedding	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc., (Type, texture, mineralogy, color, hardness, etc.))	
	Depth ft	Type and No.		N or Rec.	%	Graphic	gpm psi		Computed k 10 ⁻⁴ cm/sec	Ca
9.8										S = Slickenside
10				2)						
20				None						
20		1)								
30										
40										
38.0										
40		NQ-1	00	7.0	19					TOP OF ROCK
40		NQ-1	00	7.0	46					Minor polish
40		NQ-1	00	7.0	46					Minor polish
40		NQ-1	00	5.0	52					Fresh and hard. Closely spaced high-angle joints. Joints are polished at 42.3' and 44.5'.
40		NQ-1	00	6.0	48					Vertical joint
40		NQ-1	00	6.0	48					
40		NQ-1	82	5.0	53					
40		NQ-1	99	7.0	35					Fresh and hard. Drills well. Polished surface shiny at 70.1'.
40		NQ-1	00	6.0	76					Polished slickensides at 70.1'
40		NQ-1	99	6.0	79					Fresh and hard. Drills well. High-angle joints are smooth, planar. Not polished. Minor surface wx effects.
40		NQ-1	00	6.0	74					
40		NQ-1	00	6.0	79					Smooth
40		NQ-1	00	6.0	79					
40		NQ-1	97	7.0	67					Pyrite-minor polish
40		NQ-1	96	8.0	62					Smooth joints
40		NQ-1	100	8.0	88					Fresh and hard. Not bleached. Joints are characteristically planar. Smooth locally show high polish.
40		NQ-1	100	1.0	33					55° joints-high polish-smooth 65° joints-smooth 65° joints-smooth Vertical joint
40		NQ-1	100	8.0	80					Thin chlorite coating on non-polished joints.
40		NQ-1	100	8.0	72					Chlorite
40		NQ-1	100	8.0	27					Fresh, hard. Not bleached. Some smooth joints. Not highly polished.
40		NQ-1	100	8.0	27					Calcite filling
40		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

a subsidiary of Raytheon Company

Date: April 16, 1974
Project 7286

PAGE 1 of 2
LOG OF BORING A D T 160

BORING LOCATION N16600, E90219; Offshore		INCLINATION Vertical		B E A R I N G		DATE START/FINISH Nov. 10, 1974 / Nov. 14, 1974	
CASING ID 3 in.		CORE SIZE 1-7/8 in.		TOTAL DEPTH 241.4 ft		DRILLED BY Warren George, Inc.; P. Schaeble, J. Harris	
GROUND EL (MSL) -7.8 ft		DEPTH TO WATER/DATE Tidal		ft /		LOGGED BY Soil K. Pout; Rock - J. R. Rand	

EL. 68L ft	SAMPLE Depth ft	Type and No.	N or Rec.	RATE OF ADV. in./ft	WATER CONTENT %	or RQD	PRESSURE TEST Compu psi	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	10 ⁻³ cm/sec
S = Slickenside CONTINUED FROM PREVIOUS PAGE											
144.5	NQ-19		100	7.0	63			N76W, 67NE N64W, 52NE N38W, 24SW J N89E, 32SE J N48E, 13NW N66E, 13NW J N55E, 24NW J N 6W, 23NE J		Fresh and hard. Drills very well. Joints and partings are clean. Local minor calcite coating on joints. Not smooth or slickensided.	Fused contact dips 56° Diabase. Fine-grained, dark gray with fine calcite specks scattered throughout.
150	NQ-20		100	9.0	85						
160	NQ-21		100	9.0	66						
160	NQ-22		100	9.0	93						
170	NQ-23		98	9.0	72			N47E, 19SE J N 8W, 30NE J		Fresh and hard. Drills very well. Joints and partings are not smooth or slickensided. No bleaching.	Diabase. Fine-grained dark gray with prominent white calcite phenocrysts.
180	NQ-24		100	9.0	92			N62E, 22SE N34W, 72SW J N48E, 69NW C	Calcite coating		Fused, chilled contact dips 60° Diorite. Medium grained.
180	NQ-25		100	9.0	51			N34E, 37SE F N33E, 40SE S N90E, 23S J N15E, 16NW J		Fresh and hard. Drills well. Joints and partings are fairly fresh. Calcite fillings in some joints.	Open contact dips 25-30° - Calcite Diabase. Fine-grained, near black. Diorite inclusion at base. Fused contact-80-85° dip-calcite
190	NQ-26		100	10.0	62			N52E, 57NW S N87W, 49NE J N70E, 14NW J N55W, 18NE J	Calcite filling		Brown chill zone Diabase. Fine-grained, dark gray. Fused, undulating contact
200	NQ-27		100	10.0	48			N24E, 75NW C N66W, 60NE F N65W, 63NE S N15E, 45SE F			50° Vein-fused fault Diorite. Medium-coarse grained; medium grained quartzose.
210	NQ-28		100	12.0	22					Fresh and hard. Drills well. Only very minor local surface wx effects on joints and partings. Not slickensided.	Fine Diorite. Predominantly medium coarse grained, notably quartzose medium gray. Local zones of fine-grained quartzose diorite. Granodiorite, locally porphyritic.
220	NQ-29		98	11.0	72						
230	NQ-30		100	10.0	66			N38W, 6SW N73W, 41NE S N80W, 70NE J			Fine Diorite. Predominantly medium coarse grained, with white feldspathic spotting locally. Welded Medium gray. Not bleached. breccia
240	NQ-31		98	13.0	78			N34E, 56NW J N56W, 52NE J N62W, 58SW F N18E, 50SE J N21E, 48SE J N33E, 42SE J N56E, POSE J N57E, 71SE J	Minor striated		
250	NQ-32		100	13.0	87					Fresh and hard. Drills well. Minor surface wx effects on joints and partings.	Pink feldspar Diorite. Fine-grained, dark gray.
260	NQ-33		9	12.0	85						
270	NQ-34		100	15.0	54						
280	NQ-35		100	14.0	49						
290	NQ-36		100	12.0	41			N18E, 57NW J N21E, 52SE F N56W, 50NE J N11W, 68NE J N35E, 69NW J			
300	NQ-37		100	12.0	46						
310	NQ-38		100	12.0	17						
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 N - Denison
F - Fixed piston P - Pitcher
O - Osterberg G - GEI

b - Drilling break
wx - Weathered, weathering

k - Coefficient of permeability

NOTES

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

united engineers a subsidiary of Raytheon Company

Date: April 18, 1974 Project 7286

PAGE 2 of 2 LOG OF BORING ADT 16D

BORING LOCATION <u>Offshore N17552, E93840</u>		INCLINATION <u>Vertical</u>		BEARING _____		DATE START/FINISH <u>June 15, 1975</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/Rock - F. X. Bellini</u>			

EL. ft	SAMPLE		RATE OF ADV. min/ft	WATER CONTENT or RQD		PRESSURE TEST		STRIKE, DIP F = Foliation J = Joint C = contact S = Slickensides	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc., Type, texture, mineralogy, color, hardness, etc.,)
	Depth ft	Type and No.		N or Rec.	Graphic	gpm	Computed psi 10 ⁻⁴ in. cm/sec			
-42.4		S1A	28							Light brown, uniform, clean fine sand. Dark gray sandy, slightly silty gravel. Widely graded. Fines are non-plastic. Contains angular to subangular medium to coarse sand and gravel pieces up to 30mm long, and few shell fragments.
		S2	63							Light gray, fine to medium grained sand, clean and uniform. Rounded to subrounded grains.
		S3	81							Similar to Sample 2.
-60		S4	2							Layered gray fine grained silty sand and gray silty clay (small recovery).
		S5	0							Gray silty clay. Medium plasticity, very slow reaction to shaking test. medium to high dry strength. Contains a few pockets of fine sand up to 5mm thick.
		S6	0							Similar to Sample 5, but with 10-30mm light and dark gray layers and a 4mm fine sand layer.
		S7	0							Similar to Sample 6.
-80		S8A	0							Similar to Sample 6.
		S8C	46							Layered gray clay, silt and silty fine sand, 2-15mm thick. silt shows fast reaction to gray gravelly silty sand to sandy silt, widely graded. Fines are non-plastic. Contains angular to subrounded gravel up to 15mm long.
		S9	102							Similar to Sample 8C, but with gravel up to 30mm long.
		S10	39							Similar to Sample 8C, but with gravel up to 35mm long.
-100		1)								
		NQ-1	100	2-1/2		70		57° F		Sl wx Fresh, hard, drills well. Localized zones of very broken rock. Minor fault with displacement evident at 59'. Sl wx of feldspathic coatings. Some healed joints evident. R=43
		NQ-2	100	2-1/2		73		60° J		Chips Sl wx Pyrite Irregular surface R=43
		NQ-3	100	3-1/2		82		70° J		Chips Sl wx Chlorite Moderately to severely wx zone 74.5 - 75.5 ft R=35-39 (broke)
-120		NQ-4	100	3-1/2		64				Chips Sl wx Bleached surfaces
		NQ-5	98	4		79	0.0	80° J		D Sl wx Irreg. jts Fresh, hard, drills very well. Joint surfaces clean to slightly wx. R=44 (broke) Fresh, hard. Does not tend to break along fabric. R=40 (broke) R=44 (broke)
-140		NQ-6	100	3		94	1.1			Clean R=46
		NQ-7	91	4		74	1.2			Clean Fresh, hard, drills very well R=0 (broke)
		NQ-8	00	4		78		70° J		Clean to sl wx R=51 (broke) Pyrite
-160		NQ-9	90	4		1.8	1.4			Sl wx Fresh, hard, drills very well R=35 (broke) Epidote?
-180		NQ-10	00	4		13	1.4	70° J		D R=44 Fresh, hard, drills very well. Jts. clean to sl wx. R=44 (broke) Minor fault, healed at 142.5 ft. R=39 (broke) R=48 (broke)
-195.3							10.0	75° J		Sl wx

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

NOTES

1) Roller Bitted Rock 5X.0-56.0 ft.

SEABROOK STATION

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

YANKEE ATOMIC ELECTRIC COMPANY

United Engineers a construction inc.

Date: August 6, 1975 Project 7286

PAGE 1 of 2 LOG OF BORING m-39

BORING LOCATION <u>Offshore N17552, F93840</u>		INCLINATION <u>Vertical</u>		B E A R I N G		DATE START/FINISH <u>June 15, 1975</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</u> ft		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>Sell/Rack - F. X. Bellini</u>			

EL. ft	SAMPLE		RATE OF ADV. min/ft	WATER CONTENT or RQD		PRESSURE TEST		STRIKE, DIP F = Foliation J = Joint C = Contact S = Slickensides	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS	
	Depth ft	Type and No.		Graphic	gpm psi	Computed -4 k 10 cm/sec	(Weathering, defects, etc.)			(Type, texture, mineralogy, color, hardness, etc.)	
CONTINUED FROM PREVIOUS PAGE											
187.6-145.5		NQ-11 98	4					80° J		R=36 (broke)	Bleaching
			4	93				40° F		R=34 (broke)	Quartzite, as above, but showing general minor bleaching, heavy where indicated.
			4					40° F		Fresh, hard, drills very well. Minor, healed faults at 150.0, 151.5, 152.0 and 154.5 ft.	Bleaching
200		NQ-12 100	5					50° F		No slicks	Weak gneissosity
			5					30° F			Sheared?
			5					60° J			Bleaching
160		NQ-13 100	6			6.8	0.45	90° J		Chips	
			6			172.4		80° J		Core lost	R=53
			6							Fresh, hard, jts. generally sl wx to clean, some localized zones of very broken rock. R=50	Diabase, very dark gray to black, fine grained near contacts, fine to med. grained near center. Internal contacts suggest composite origin. Locally bleached to light brown or tan.
		NQ-14 92	5	55				60° J		Sl wx	
			5					65° J			
			5					60° J			
220		NQ-15 100	6	20				90° J		Sl wx	R=49
			6					65° J			
		NQ-16 99	5	75				70° J		No slicks	R=0 (broke)
			4			11.6	1.01	80° J		Chips, core lost?	Fresh, hard, drills well, jts. clean to sl wx
			4			131.6		40° C		D	
		NQ-17 100	5	89							Fused, internal contact
			5								Schistose lens
			5								Diabase, as above, with occasional dark gray schistose lenses.
			5								Schistose lens
237.6-195.3	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	NOTES N - Denison P - Pitcher G - GEI k - Coefficient of permeability	SEABROOK STATION PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE YANKEE ATOMIC ELECTRIC COMPANY  Date: August 6, 1975 Project 7286 PAGE 2 of 2 LOG OF BORING AIT-39
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