

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	2	
AIT-3	Alternate Tunnel Align- ment	19848N 82720E	- 0.2	32.5	292.0	23 Oct '73	2	
AIT-4	Alternate Tunnel Align- ment	19556N 83798E	+ 5.2	64.0	290.0	14 Nov '73	2	
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 86222E	- 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	2	
AIT-13	Alternate Tunnel Align- ment	17981N 89610E	+10.3	125.0	275.0	03 Oct '73	2	
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	17366N 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	17195N 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	2	
AIT-34	Alternate Tunnel Align- ment	16780N 91515E	-19.6	59.0	230.0	05 Mar '74	2	
AIT-35	Alternate Tunnel Align- ment	16770N 92578E	-33.5	30.0	45.5	28 Mar '74	2	
AIT-36	Alternate Tunnel Align- ment	16912N 93045E	-39.1	55.4	69.5	27 Mar '74	2	
AIT-37	Alternate Tunnel Align- ment	16766N 93042E	-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	3	
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 96900E	-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	3	
AIT-45C	Intake Tunnel Extension	17865N 96601E	-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 92707E	-33.8	46.5	210.0	23 Jan '74	2	
AAIT-24	Alternate Tunnel Align- ment	16663N 92221E	-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	210.7	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	20166N 80848E	+07.2	15.0	300.0	05 Oct '73	2	
ADT-3	Intake Tunnel	19853N 81686E	+05.4	31.5	300.0	27 Nov '73	2	
ADT-4	Intake Tunnel	19539N 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 84242E	- 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 86427E	- 1.5	110.0	323.0	20 Aug '73	2	
ADT-10	Intake Tunnel	18410N 85422E	- 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	18269N 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	17662N 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	16553N 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 90219E	- 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	15462N 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	14637N 94752E	-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 94915E	-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	13891N 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	19 Mar '74	2	Boring Inclined 33°
ADT-34	Discharge Tunnel	19977N 81201E	+ 5.3	19.0	368.0	20 Mar '74	2	Boring Inclined 34°
ADT-35	Discharge Tunnel	19608N 81992E	- 3.0	40.5	40.5	26 Feb '74	2	
ADT-35A	Discharge Tunnel	19631N 81974E	- 2.3	37.5	300.0	07 Mar '74	2	
ADT-36	Discharge Tunnel	19364N 82706E	- 3.1	4.0	289.7	20 Mar '74	2	
ADT-37	Discharge Tunnel and Intake Tunnel	18947N 83394E	+ 5.3	84.0	354.0	22 Apr '74	2	Boring Inclined 33°
ADT-37A	Discharge Tunnel	18969N 83729E	+ 5.1	----	-----	15 Mar '74	2	Boring Abandoned
ADT-37B	Discharge Tunnel	18963N 83740E	+ 4.8	118.0	350.0	12 Apr '74	2	Boring Inclined 31°
ADT-38	Discharge Tunnel	18962N 84445E	- 1.0	78.0	198.0	23 Apr '74	2	
ADT-39	Discharge Tunnel	18470N 85030E	- 1.5	102.0	280.5	19 Feb '74	2	
ADT-40	Discharge Tunnel and Intake Tunnel	17384N 88389E	+12.4	52.0	360.0	26 Apr '74	2	Boring Inclined 37°
ADT-41	Discharge Tunnel	17974N 86307E	- 1.3	60.0	275.0	21 Feb '74	2	
ADT-42	Discharge Tunnel	17616N 87273E	-13.5	40.0	260.0	29 Jan '74	2	

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<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 79350E	+ 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-7	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 79620E	+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 79760E	+ 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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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	0.0	20.0	24 Jan '69	1	
B-26	Just SW of SW Pumphouse	20320N 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	1	
B-29	Approximately 250' E of Turbine Bldg. I	20830N 80240E	+ 5.8	42.6	62.5	24 Jan '69	1	
B-30	W side Control Bldg. II	20270N 78970E	+18.5	7.0	27.0	10 Mar '69	1	
B-31	Containment I NE quadrant	20440N 79720E	+29.9	3.0	23.0	13 Mar '69	1	
B-32	NW of Turbine Bldg. II	20680N 78750E	+19.0	9.3	29.8	24 Feb '69	1	
B-33	Approximately 50' N of Rubine Bldg. I	20920N 79470E	+10.0	18.0	37.8	29 Jan '69	1	
B-34	Approximately 200' N of Admin. Bldg.	21010N 79210E	+06.3	49.6	69.8	05 Feb '69	1	
B-35	Approximately Center Turbine Bldg. I	20650N 79540E	+21.5	2.5	41.5	12 Mar '69	1	
B-36	SE Corner of Turbine Bldg. I	20540N 79575E	+27.4	2.0	67.5	02 Apr '69	1	
B-37	Containment I NW quadrant	20420N 79625E	+24.4	6.0	46.5	19 Mar '69	1	
B-38	NE of Containment I CW Trench	20550N 79750E	+32.6	2.3	150.0	13 Mar '69	1	
B-39	E of Containment I	20455N 79780E	+31.9	1.5	70.5	28 Mar '69	1	
B-40	E of Turbine Bldg. I	20680N 79700E	+26.2	2.5	66.5	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>
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 83275E	+ 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	1	
C-22	Old Cooling System Design	18000N 88040E	+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 84170E	+ 4.0	50.0	50.0	08 Feb '69	1	
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 80780E	+ 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	+ 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 81650E	+ 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	+ 2.7	34.0	34.0	28 Mar '69	1	
C-46	Old Cooling System Design	19830N 83320E	+ 4.0	33.3	33.3	31 Mar '69	1	
C-47	Old Cooling System Design	19740N 83550E	+ 4.0	43.0	43.0	31 Mar '69	1	
C-48	Old Cooling System Design	19650N 83800E	+ 4.1	50.0	50.0	01 Apr '69	1	

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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 82885E	+ 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 84485E	+ 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	1	
C-64	Old Cooling System Design	17900N 88270E	+17.8	50.0	50.0	31 Mar '69	1	
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	1	
C-69	Old Cooling System Design	19345N 83130E	+ 4.1	39.9	39.9	09 Apr '69	1	
C-70	Old Cooling System Design	19125N 83595E	+ 4.0	50.0	50.0	09 Apr '69	1	
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	1	
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	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-77	Old Cooling System Design	18690N 83650E	- 1.0	52.5	52.5	14 July '69	1	
C-78	Old Cooling System Design	18910N 84050E	- 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	79310E 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	79250E 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	" "	
D1-7	Fuel Storage Bldg. II, center	79110E 20192N	+14.3	14.5	118.7	11 Nov '72	" "	
D1-8	Center of Contain- ment II	79213E 20245N	+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	79116E 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 20360N	+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 20450 N	+21.4	6.5	27.2	12 Dec '72	" " "	
E1-3	W side DG Bldg. I	79350E 20400 N	+15.2	16.5	42.0	13 Dec '72	" " "	
E1-4	Fuel Storage Bldg. I, Center	79698 E 20297 N	+20.2	1.5	105.0	19 Dec '72	" " "	
E1-5	Center of Primary Auxiliary Bldg.	79551 E 20296 N	+16.0	6.5	108.0	19 Dec '72	" " "	
E1-6	N end of Waste Process Bldg.	79400 E 20300 N	+14.3	1.5	24.0	19 Dec '72	" " "	
E2-1	Containment II, Center	79201 E 20247 N	+15.9	6.5	159.2	13 Dec '72	" " "	
E2-2	NE of Containment II	79272 E 20355 N	+13.7	11.5	32.5	14 Dec '72	" " "	
E2-3	W side of Turbine Bldg. II	79002 E 20409 N	+19	35.0	52.0	04 Dec '73	1	
E2-4	E side of Turbine Bldg. II	79170 E 20508 N	+18	5.0	26.0	05 Dec '73	1	
E2-5	NE quad Contain- ment II	79212 E 20277 N	+18	8.0	97.8	29 Apr '74	1	
E2-6	SW corner of PAB I	79551 E 20203 N	+12	16.9	42.5	06 May '74	1	
E2-7	N end of PAB I	79552E 20374 N	+17	13.5	115.2	13 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>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 79611N	+25.0	17.7	168.0	27 June '74	FSAR Appendix 2F	Boring Inclined About 40°
E2-12	Containment I Perimeter	20334E 79642N	+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 79179N	+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	79158E 19990N	+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 2I	
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 2I	
G-4	Settling Basin	21571N 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 78291E	+16.4	----	----	-----	FSAR Appendix 2I	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	" " "	

<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
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	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'				

PROJECT SEABROOK STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 34.3'

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

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

DDH B-8

PAGE 1 of 1

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
Breaks @ chips to .8' pieces	CHIPS	Rock is fresh with only minor rusty staining, slight mineral discoloration on some joints	4.2' Top of Rock COARSE Diorite, fine-grained, Dark-grey, massive, with local intermix of coarse-grained light grey porphyritic diorite.
CHIPS TO .6' pieces	CHIPS	Slight to moderate weathering, Rust, DISCOLORED	COARSE COARSE At base fine diorite is discolored to dull brown, (mod. weathering)
25.4' Bottom of Hole			

STATION

ELEVATION

INCLINATION

DEPTH 28.0'

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

	CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0'				
				8' Top of Rock
10'	Breaks @ Chips to 1.2' pieces RUSTY CHIPS CHIPS		Rock is fairly fresh, with only slight weathering on veinlets, and minor rusty stains on joints X	Diorite, Dark-grey, Fine-grained type predominates
20'	.1' to .8' pieces CHIPS		Rock is fresh COARSE COARSE COARSE COARSE X X X X X X X X X X X X X X X X X X	Diorite, mixed dark grey, Fine-grained in light grey, Coarse-grained porphyritic
30'				28' Bottom of Hole.
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)	May be boulder zone, rock is moderately weathered with dark brown rusty staining	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'
15' .5' to 1.5' pieces 70° joint 60° joint Rusty	Rock is fresh, No rust, joints not slickensided	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' Breaks @ .1' to 1' intervals	Rock is fresh minor rust as shown	x x x x x x x x x x x x	80° Min. Silicified zone
30' Rusty pitted		x x x x x	
			31' Bottom of Hole
40'			

DDH B-17

PAGE 1 of 2

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 160.0'

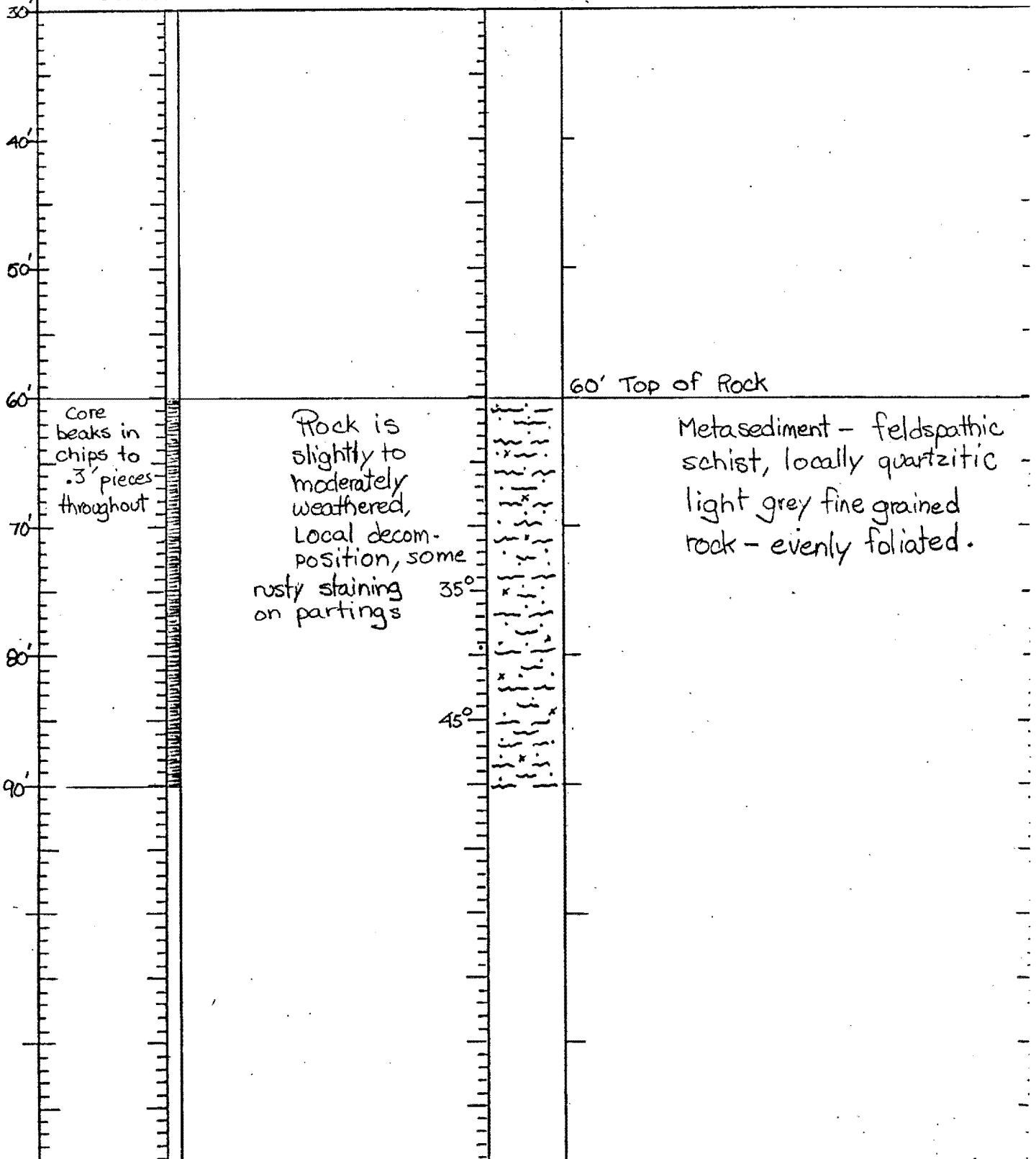
Logged By: J. R. Rand

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES



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			Metasediment - fine-grained feldspathic schist, locally light grey quartzitic
100'			
110'			
Breaks @ chips to .4' pieces throughout			
Chips through out			
120'			
130'			
Breaks @ chips to .8' pieces			
CHIPS			
140'			
150'			
Chips to .6' pieces			
CHIPS			
160'			

Rock is moderately weathered throughout, somewhat softened, bleached, with dull iron staining on joints, tan bleaching in micas.
Poor coring rock

Moderately weathered rock, somewhat bleached, Vuggy along foliation planes, Some light rusty staining
Not a strong rock inherently

Moderately to slightly weathered rock

Rock become fairly fresh

Rock is fairly fresh, minor rust on partings

Fine-grained, light grey feldspathic schist - Fairly evenly foliated rock

Feldspathic schist - locally interlayered with 1/4" quartzite beds

Feldspathic schist, light grey, fine grained.

160' Bottom of Hole

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 67.0'

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

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0' 10' 20' 30' 40' 50' 60' 70'	Foliation Dip ↘		47' Top of Rock Metasedimentary Rock Feldspathic (quartzitic?) schist. Foliation wavy, variable. Light grey, fine-grained — Rock breaks both on foliation and across core. 67' 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'			
32'			
40'			
45'			
50'			
50' Base of Boulders - Top of Rock			
55'			
60'			
65'			
70'			
75'			
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

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

45°

Quartzitic

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

Chips to 1' pieces

CHIPS

SLICKENSIDES

CHIPS

CHIPS

CHIPS

CHIPS

Rock is fairly fresh throughout minor powdery stains on partings

50°

Feldspathic

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

Minor slickensides on joints

PROJECT SEABROOK STATION

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
130'		CHIPS	Some joints show slickensides covered with powder coating	Rock is evenly foliated Quartzitic/Feldspathic
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. Rand 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 CHIPS VUGS 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
chips to .8' pieces	CHIPS	Rock is fairly fresh. Minor staining and minor local feldspar discolor- ation	Schist, feldspathic and quartzitic. Light-grey, fine-grained, evenly foliated
Chips to .7' pieces	CHIPS CHIPS		FELDSPATHIC FELDSPATHIC
110'		55°	
120'			

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 121.0'

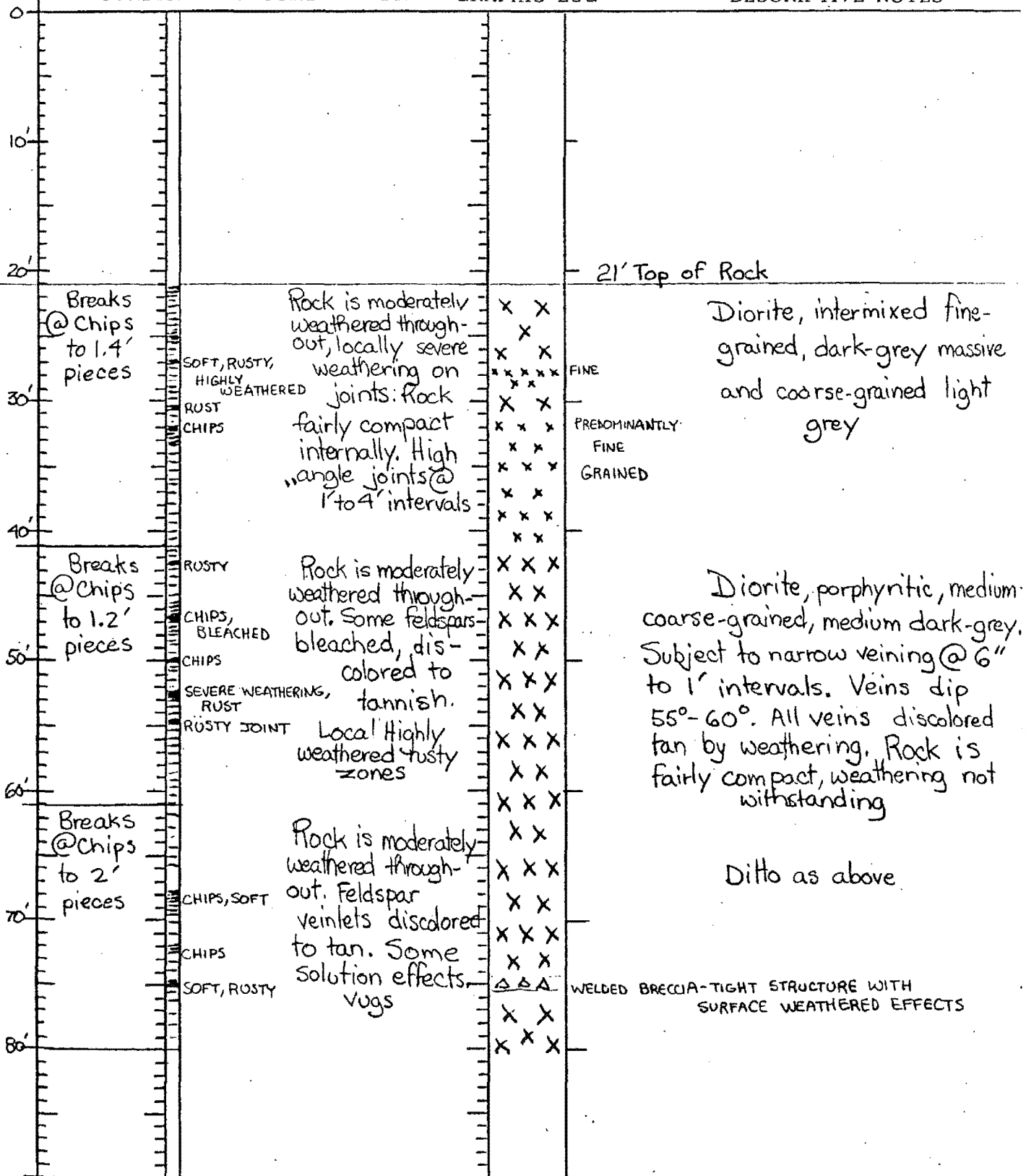
Logged By: J. R. Rand 7/11/72
7/12/72

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES



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'			
110'			
Chips to 1.5' pieces	MODERATE WEATHERING, MODERATE 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.
120'			(SLIGHT TO MODERATE WEATHERING - COMPACT)
			121' Bottom of Hole
130'			

STATION

ELEVATION

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 CHIPS, RUSTY CHIPS, RUSTY CHIPS, RUSTY		x x	FINE FINE FINE FINE FINE FINE FINE FINE FINE
				Diorite - Fine-grained, dark-grey, intermixed with light-grey, coarse-grained granitic rock (Diorite?)
20'				23' Bottom of Hole
30'				

PROJECT SEABROOK

STATION

DDH B-28

PAGE 1 of 1

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 23.7'

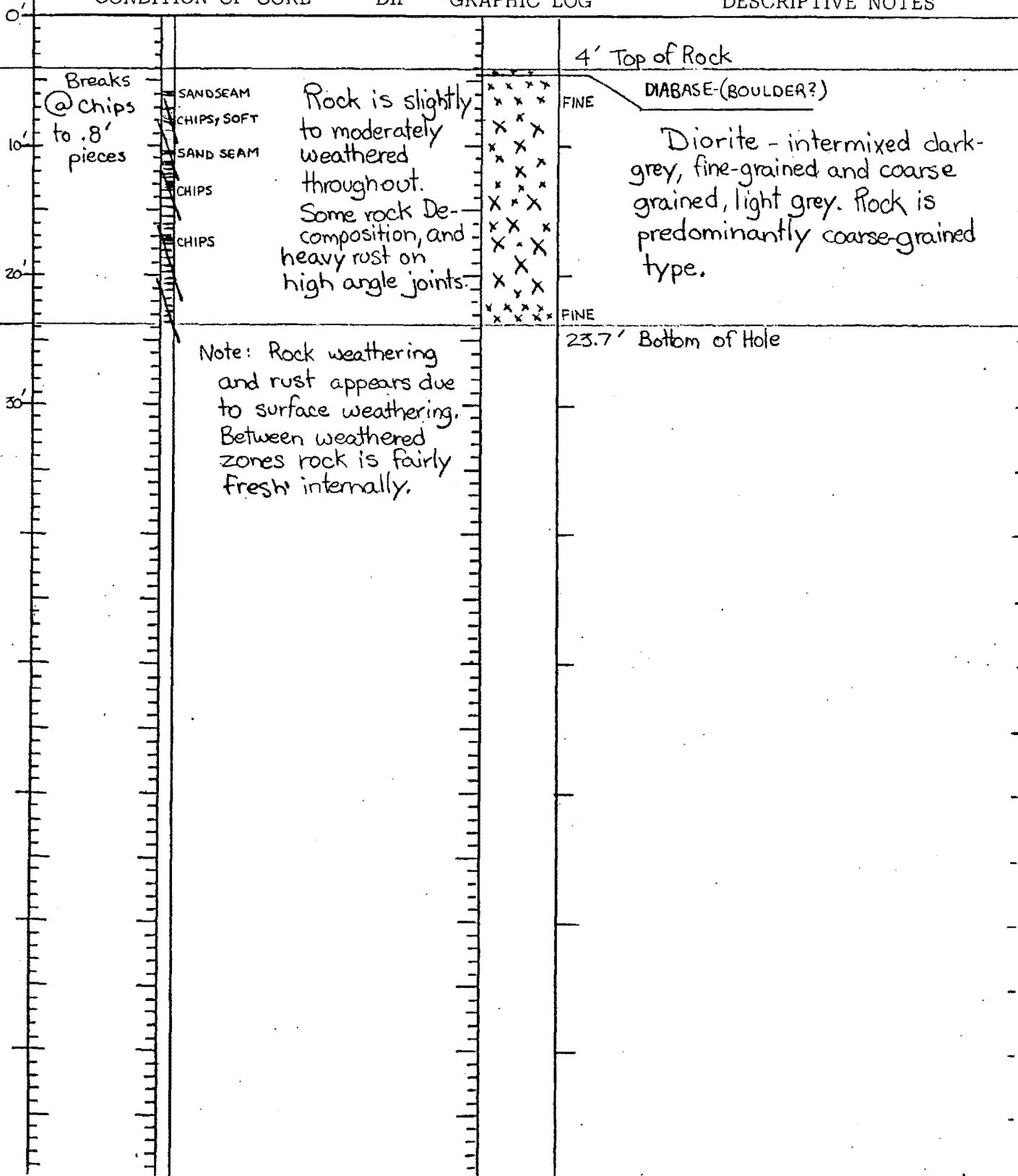
Logged By: J. R. Rand 7/12/72

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES



PROJECT SEABROOK STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 27.0'

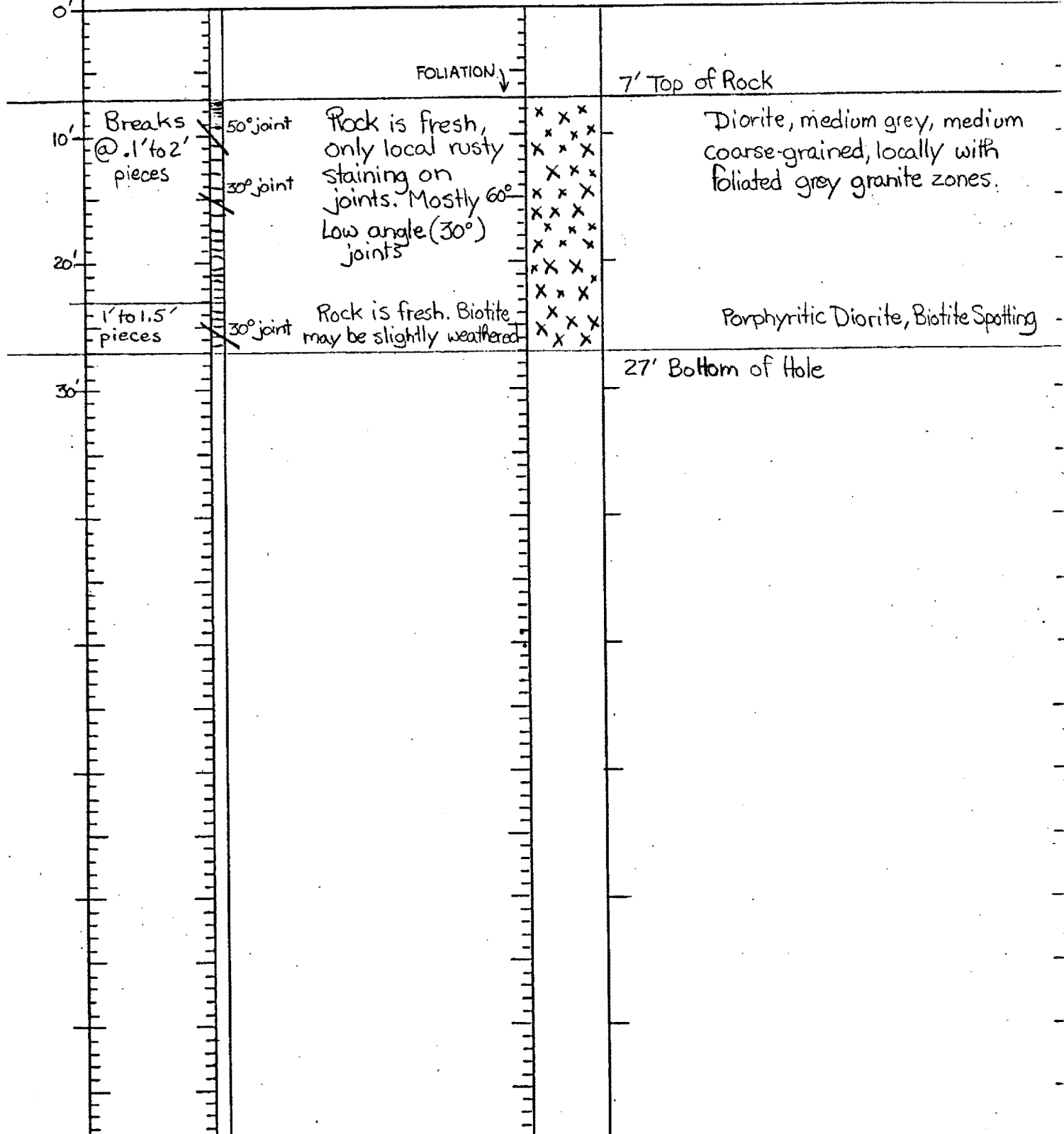
Logged By: J. R. Rand 7/10/72

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES



PROJECT SEABROOK STATION

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
Breaks @ Chips to 1' pieces	CHIPS	Rock is slightly weathered, subject to brown iron staining on joints @ 6" to 1' intervals	COARSE COARSE COARSE COARSE FINE-GRAINED DIORITE
10'	CHIPS		Diorite - intermixed dark-grey fine-grained and light-grey coarse-grained types. Coarser-grained rock tends to weather more than fine-grained
20'	CHIPS		Porphyrific Diorite
.1' to .8' pieces	RUSTY VERTICAL JOINT		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		Diorite-fine-grained, medium-dark grey Occasional small white phenocrysts
10'			
20'			
Breaks @ .2' to 1' intervals	CHIPS		
25° joint			Generally fine-grained, medium-light grey Diorite with local zones of porphyritic Diorite
50° joint			
60° joint (minor pyrite)			
MINOR RUST			
.2' to 1.2' intervals			DRUSY QUARTZ AND CALCITE LINED VUG
40'			41.6' Bottom of Hole
50'			

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 44.0'

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

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0'			6' Top of Rock
Breaks @ chips to 1' pieces	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
Breaks @ chips to 1' pieces	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
Breaks @ chips to 1' pieces	MINOR RUST 65° joint	Rock is fresh. No rust except as shown. No slickenside	High angle joints @ about 1' intervals
Breaks @ chips to 1' pieces	CHIPS	Rock is fresh Not rusty on joints	PEGMATITE WITH GARNET, TOURMALINE(?) AND FINE SULPHIDE STRINGERS
44'			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
0'			2.3' Top of Rock
Chips to 6' pieces	CHIPS	Rock is mostly fresh, with local moderately weathered zones adjacent to joints	Fine Grained medium grey diorite
10'	SLIGHT WEATHERING		Coarse grained Diorite, light grey with rare patches of fine-grained grey diorite
2' pieces	SLIGHT WEATHERING	Rock is Fresh except as noted	
20'	CHIPS	Minor local rust on joints	Coarse grained rock appears a little later than the fine-grained rock
30'	CHIPS, RUSTY		
40'			
Rock Breaks @ .1' to 1.5' intervals		CONTACT 65°	DIABASE CUTS DIORITE ON INTRUSIVE CONTACT
		CHILLED	Diabase, Dark grey, fine-grained with dark green phenocryst speckling and occasional patches of epidote
50'		CONTACT 50°-70°	DIORITE CHILLED
60'	CHIPS	CONTACT 60°	Diorite - mixed coarse and fine grained rock
		CONTACT 65°	Diabase Dike
70'			Diorite, Mixed coarse and fine grained rocks
80'			

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 50°	Diorite, fine-grained, medium light grey, with local zones of coarser-grained feldspathic rock 15' VEIN RELICT BANDING AFTER META-SEDIMENTS PEGMATITE
90' Breaks @.3'to2' intervals		Rock is fresh Minor locally rusty on some joints	Medium-coarse grained Diorite
100' Breaks @.5'to1.5' intervals	RUSTY STAIN 105.2'	Rock is fresh through out. Only occasional minor staining on joints 60° joint Rock not closely jointed. No slickensides	Diorite, massive dark grey medium-fine grained with local zone of coarser- grained light grey porphyritic Diorite Occasional feldspathic veining
120' Breaks @ Chips to 2' pieces	RUSTED, PITTED, 125.2' WEATHERED CHIPS, MINOR RUST	Rock is fresh Minor rusty staining on some joint surfaces.	Diorite, dark grey, fine- grained, with occasional coarse grained light grey zones COARSE COARSE COARSE
140' 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 7/11/72

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	pegmatite, quartz, feldspar with bull quartz in center Diorite dark grey fine grained, as above
40'	Breaks @ 1' to 2' pieces	Rock is fresh minor staining on joints	pegmatite veinlet Diorite, Dark grey, fine grained, with occasional coarse-grained zones
60'	Breaks @ chips to 3.5' pieces	Rock is fresh only minor rusty staining locally on joints slight weathering @ 64' as shown	coarse coarse coarse Diorite dark grey, fine-grained, with occasional zones of intermixed light grey, coarse grained diorite
70'	chips Slight weathering chips		coarse
80'			72' Bottom of Hole

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 66.5'

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

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES

0'					2.5' Top of Rock
Breaks @ chips to .8' pieces	chips	Rock is slightly weathered, with local rusty staining on joints	coarse		Diorite - intermixed fine-grained, dark grey and coarse-grained light grey. fine-grained rock predominates
20'					
Breaks @ .1' to 3' pieces		Rock is fresh, not stained	coarse		
30'					
Breaks @ chips to .5'	chips	Rock is fresh, locally weathered on joints (?) as shown (Rusty and some vug development adjacent to joints)	coarse		Diorite - mixed dark-grey fine-grained and light-grey coarse grained.
SAND	SOFT SAND SEAM				
40'	Breaks @ chips to 2.5' pieces	chips, vuggy	coarse		
50'	Breaks @ .1' to 4' pieces	Driller breaks?	coarse		Diorite (granitic) coarse grained, light grey speckled, massive
60'		Rock is fresh only very minor light rusty stains on some joints	Fine-grained Diorite		Diorite, medium fine grained, light grey foliated
70'					66.5' Bottom of Hole

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 67.5'

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

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 fine Diorite light-grey types as shown
40'	Rusty		
50'	Breaks @ .1 to 1.5' pieces	Rock is fresh, only very minor rusty stains locally on joints. joints @ 30°-40°	fine Coarse fine Coarse Diorite, mixed fine-grained dark-grey massive and coarse grained light grey
60'	Chips		
70'	Breaks @ .3 to 1.8' pieces	Rock is fresh, No rust on joints	fine Coarse fine Mixed fine and coarse diorite
			67.5' Bottom of Hole

PROJECT SEABROOK

STATION

HOLE LOCATION

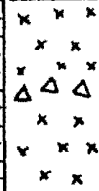
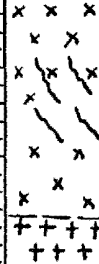
ELEVATION

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'			Top of Rock 44'
Chips to .3' pieces			Apparently a weathered Diorite(?) Locally shows fine angular (cemented) breccia texture
Breaks @ .1' to .8' intervals	minor rusty stains on joints	Rock is fresh, with local minor weathering of feldspar phenocrysts. Joints show minor rusty staining. Jointing @ 1' intervals 	Fine 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
60'			
70'			
80'			

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 164.4'

Logged By: J. R. Rand 7/10-11/72

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
60'			
70'			
Chips to .4' pieces			Diabase Dike (?)
Chips			Chill zone (?) aphanitic
Chips			65° CONTACT
			Diorite (?) light grey (bleached)
	70°		Shear zone - welded, high angle with micro displacements. Rock is compact, breaks across core and not notably on high angle shear planes.
Chips to .7' pieces			Rock locally foliated (Relict schistosity) maybe feldspathized meta sediment.
Chips	55°		
Chips			Chill zone
Rock breaks @ .4' to .8' pieces			Diabase, fine-grained, dark grey, with dark green phenocryst (small). Only very minor veining
No High Angle Joints			
			Diabase
Rock breaks @ .4' to .6' pieces			
Chips			Chill zone
			Welded breccia in Diabase chill
			Silicified contact
	70°		
	40°		
	50°		
Chips			Metasedimentary rock, Quartzitic schist, minor feldspathization
139.35			

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 164.4'

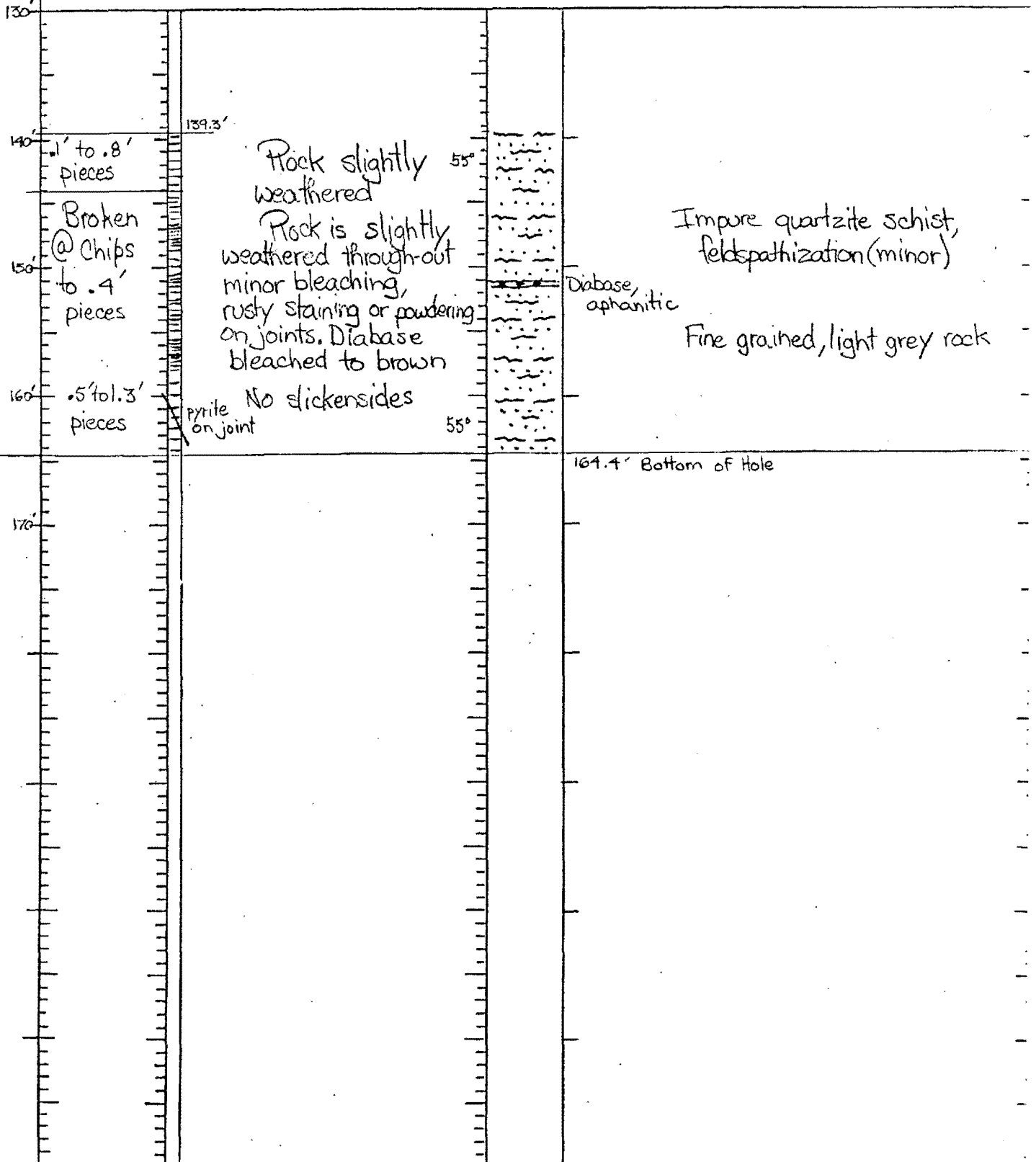
Logged By: J. R. Rand

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES



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'			8.5' Top of Rock
Rock breaks @ .1' to 2' pieces	minor rusty		Diorite, mixed fine-grained, dark-grey and coarse-grained light-grey
20'	75° joint		coarse coarse Rock is predominantly fine-grained diorite
chips			
30'			28.5' Bottom of Hole

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 124'

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

	CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0'				
10'				
20'	CHIPS	most joints low angle at 20°-30°		TOP OF ROCK 18'
		60° jt.		
	CHIPS	50° jt. - minor slicks - chlorite		
30'	CHIPS	80°-90° jt. with slicks, chlorite dev't. high angle curved joints - chlorite dev't. throughout on joints		
40'	CHIPS	Rock is fairly fresh but locally shows vug development on joints and in phenocrysts		
		(briller) vugs		
50'		(briller) vugs		
60'		CORE Breaks at 6" to 2' intervals on low angle joints @ 20°-30° dips		
		ROCK IS FRESH		
70'				
80'				

Diorite, fine-grained Dark grey, massive - closely joined at 3" to 1' intervals joints have slickenside-like smearing with chlorite development = slippery

Diorite, fine-grained, Dark grey as above massive

Diorite, fine-grained, Dark grey, massive - locally speckled with whitish, rounded phenocrysts

DIABASE DIKE

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 65.5'

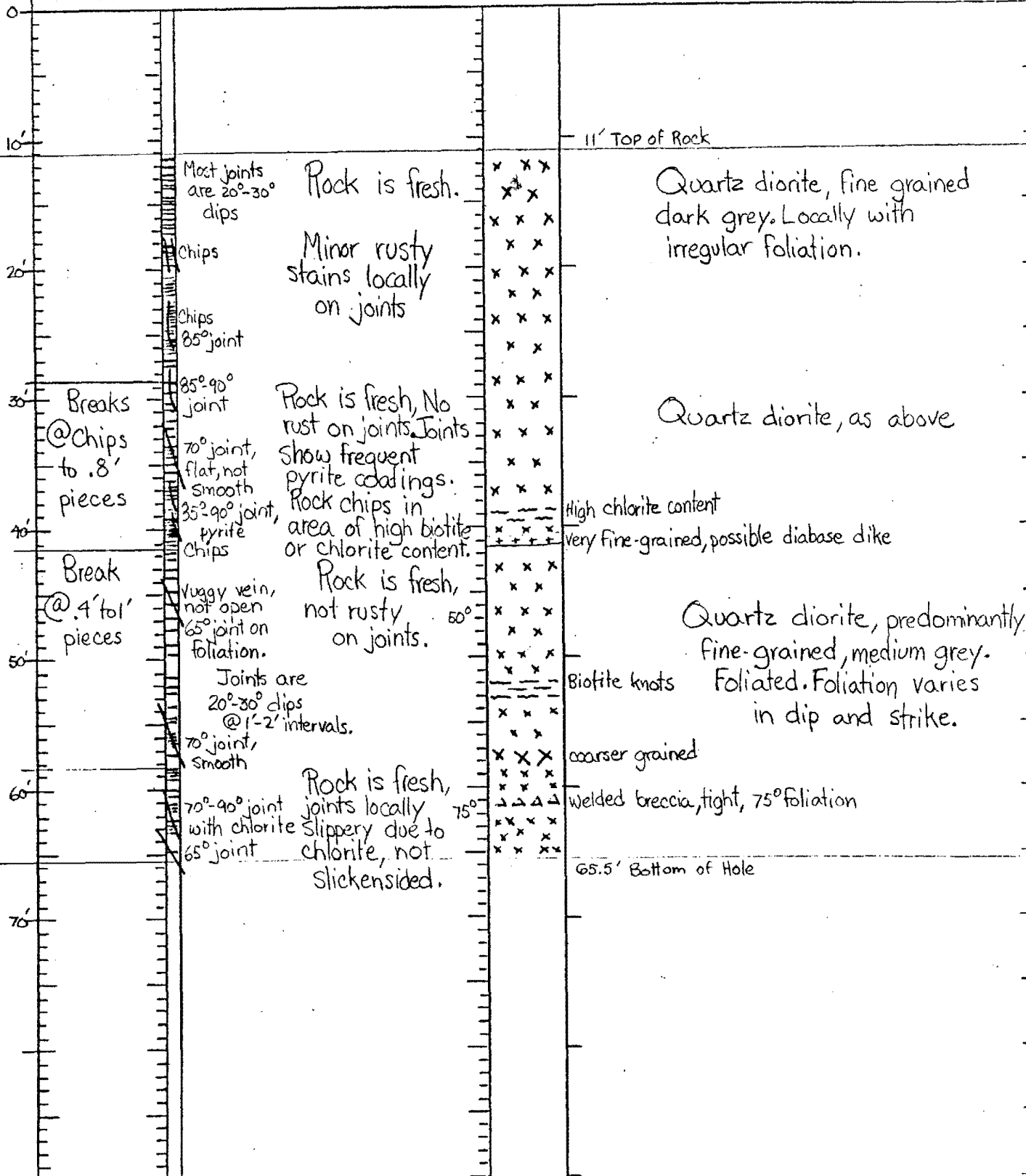
Logged By: J. R. Rand 12/11/72

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES



PROJECT SEABROOK STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 169'

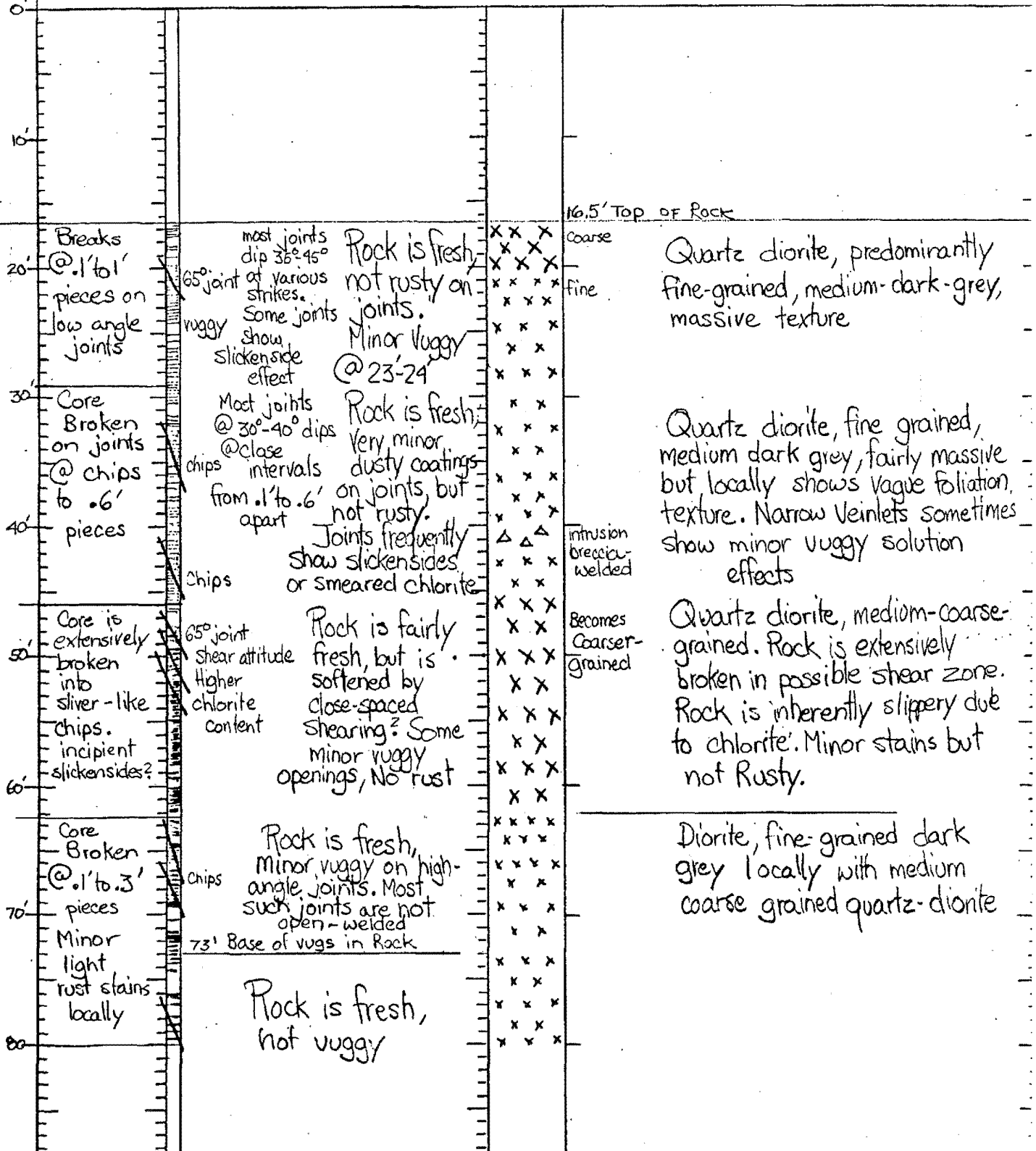
Logged By: J. R. Rand 11/24/72

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES



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 smear 70° joint irregular 70° joint	Rock is fresh throughout No rust or weather stains 50° contact	Medium coarse quartz diorite Diorite, fine grained, dark-grey. Local coarser grained zones
90'				
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	Diorite, predominantly fine-grained, dark grey. Some minor local coarser-grained patches. Rock is fresh throughout
110'		65° joint		
120'	Core broken as shown	70° joint, smooth, clean 75° joint, smooth, clean 70° joint	Rock is fresh, Core is broken closely on 30° joints and occasional 70°-75°. Some manganese and pyrite on joints. Sharp angular breaks	Diorite, fine-grained, dark-grey. Quite massive texture with local foliation ghosts. Rock is fresh, closely jointed at .2' to 1' intervals at varying attitudes and bearings of dip
130'				
140'	Core broken as shown	45° joint, minor stains 75° joint, clean	Rock is fresh throughout 30° dipping joints are characteristic. Some manganese and pyrite staining on joints.	Diorite, fine grained, dark grey, locally vaguely foliated. Rock is fresh, not weathered throughout.
150'				

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'			
150'			
Core Broken as shown Breaks @ .1' to .8' intervals	thin pyrite smears 60° joint, clean Chips on some joints No Rust or weather staining	Rock is fresh. 55° Locally joint surfaces are slippery with chlorite development. Most breaks in core on 25° to 30° low angle joints.	Quartz diorite, medium grey, medium coarse grained. Fine grained, dark grey, massive diorite
		X X	
		1673'	INTRUSIVE CONTACT Quartz diorite, medium coarse grained
170'			169' Bottom

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'			
15.3'			Boulder- Quartz diorite, micaceous, foliated
20'			15.3' Top of Rock
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	predominantly fine-grained Quartz diorite, mixture of coarse and fine grained rock types
30'	70° joint, rusty, vuggy	At 25'-27' rock is subjected to vuggy solution effects.	predominantly coarse-grained
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	High angle (70°-75°) intrusive contact, welded
40'	70° joint		Diabase dike, dark grey to sub-black, fine grained, massive with pyrite specks and knots.
	65° joints		Rock closely jointed at various strikes and dips. Low angle (10°-30°) joints predominate.
	80°-90° joint, chlorite smeared moderate weathering, heavy rust		
	70° joint, rusty		
50'	rusty 75° joint, rust coated	Rock is fresh. Rusty coatings on low angle and high angle joints at widespread intervals as shown.	
60'	75° joint, rust coated		Diabase dike, as above, massive, sub-black, fine grained rock.
65.3'			65.3' Bottom of Hole
70'			

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'	30° dipping joints @ 3"-6" intervals, slightly rusty 70° joints, rusty Joints not rusty, pyrite smeared	Rock is fairly fresh, rather highly jointed, which causes considerable chipping of core. Rock locally rusty on joints as shown x x x x x x x x x x x x x x x x x x x x	9' 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

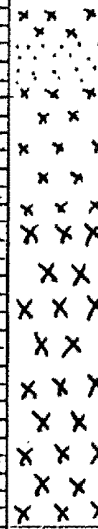
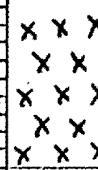
CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0'			
			Boulders
			12' Top of Rock
Broken @ Chips to 1' pieces	65° joint 60°-70° joints Chips 30° joint	Rock is fresh. Rusty staining on some joints, not on all joints. Rock breaks normally on 30°-40° dipping joints @ 1' intervals	Quartz diorite, medium-coarse grained, light medium grey. Locally foliated @ high angle (60°-70°) dips.
			VERY FINE GRAINED ROCK Relict quartzite layer, partially recrystallized by diorite(?)
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	Quartz diorite, medium-coarse grained, medium light grey. Locally some foliation @ steep dips. Finer grained near top of section.
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	Finer grained
Breaks @ .3' to 3' intervals	65° joint	Rock is fresh, not rusty on joints. Most breaks on low-angle 20°-30° joints.	Finer grained
			Quartz diorite, fine-grained medium grey, foliated. Foliation is steep, 60°-90° and wavy

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 Broken on smooth 85°-90° joint 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 70°-90° rough joint	High angle joints are curved, have chlorite or biotite smooth surfaces with pyrite		112' Bottom of Hole

PROJECT SEABROOK

STATION

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 SEABROOK

STATION

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'			
6'			9.5' Top of Rock
Rock Breaks @ .3' to 1' pieces	Joints @ 30°-40° dips throughout	Rock is fresh. Minor rusty staining on some joints	Micaceous Quartz diorite, fine grained, quite micaceous (biotite) in zones and knots, enclosed in coarse-grained quartz diorite matrix.
20'			
Breaks @ .1' pieces	Rusty, slight weathering on joints	Rock is fresh, subject to minor weathering and rusty staining on joints.	Micaceous rock
5' to 1.3' pieces	65° joint	Rock is Fresh, Not Rusty	Micaceous rock type is not apparently metasedimentary. Has rather massive texture
30'			29.5' Bottom of Hole

PROJECT SEABROOK

STATION

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'			
1'			
2'			
3'			
4'			
5'			
6'			
7'			
8'			
9'			
10'			
11'			
12'			
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91'			
92'			
93'			
94'			
95'			
96'			
97'			
98'			
99'			
100'			

PROJECT SEABROOK STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 60.0'

Logged By: J. R. Rand

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0'			
10'			
20'			
25.2'			Top of Rock
Core breaks on joints @ Chips to .5 pieces	Chips, minor rust 65° joint, rusty Rusty 60° joint RUSTY	Rock is slightly weathered to about 31'. Fresh below 31'. Joints show local rust coatings and some slight rock weathering	DIABASE DIKE, WELDED CONTACTS DIP 60° Quartz diorite, fairly coarse-grained, medium-grey micaceous
40'	Core Breaks @ Chips to 1' pieces	Chips, minor rust Most joints @ 30°-40° dips 65° joint	35° intrusive contact, welded Diabase dike, sub-black, fine-grained
50'		Rock is fairly fresh to fresh. Some dusty coating on joints. Feldspars a little discolored	45° intrusive contact, welded Quartz diorite, predominantly coarse-grained QUARTZITE INCLUSION(?)
60'	Chips to 3.3' piece	chips, minor rust 65° joint, powder coating	25° intrusive contact, welded Diabase dike, sub-black, fine grained, crystalline Chill zone at base - Near a contact(?) 60.0' Bottom of Hole

PROJECT SEABROOK

STATION

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'			
10'			
20'			21.5' Top of Rock
30'	Core is Broken @ places shown in "Condition" column	Rock is fresh, not weathered. 30° joint, smooth, clean, no rust. 30° joint, no rust. 30° joint, clean on 30° dip. Very thin veinlets. No slickensides. 65° foliation.	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.
40'	Breaks in Core as shown	slight bleaching, Rock is strong. 60° foliation.	Mixed coarse and fine diorite.
50'		30° dip on veinlets in Breccia zone. Rock is fresh, as above.	Fine-grained. 52.1' to 53.5' is welded, healed, solid breccia zone.
60'		Core breaks are characteristically @ 30° dip attitudes.	Diorite, as above, mixed coarse-grained light grey quartz diorite matrix, enclosing fine-grained, dark grey diorite inclusions.
70'	Breaks in Core as shown	Rock is fresh, as above. Tends to part on 30° dipping joints, or very thin 30° veinlets. Driller break.	Rock becomes predominantly coarse-grained, with relatively small zones of fine-grained diorite.
80'			

PROJECT SEABROOK

STATION

HOLE LOCATION

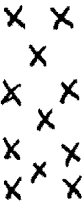
ELEVATION

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.
171' Bottom of Hole			

PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH 125'

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

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0'			
10'			
20'			
25'			25' Top
30'	70° joint	Rock is fresh, only minor staining locally on joints	Diabase dike, very fine-grained, very dark grey to sub black
35'	JOINTS AT 20° TO 40° DIPS AT 3" TO 1' INTERVALS		50° contact, intrusive, welded
40'	CHIPS		Quartz diorite, medium coarse-grained with fine-grained diorite inclusions
45'	CHIPS		40° contact, welded, intrusive
50'	Core is broken to chips through-out	Rock does not appear highly weathered, but is apparently weakened somewhat, drills very poorly	Diabase dike, very fine-grained sub black green olivine speckled
55'			DIABASE DIKE
60'	Core is broken on low angle	Rock is fresh	Quartz diorite, medium coarse-grained with local bands of finer grained diorite giving a broad foliated effect. Steeply dipping foliation as shown.
65'	20° to 30° joints		FINER GRAINED
70'	MINOR VUGS ON JOINTS		65° intrusive contact
75'	70° JOINT MINOR RUST		Diabase dike, very fine-grained sub black with local white speckling
80'			

PROJECT 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' Breaks @ .1' to 1.5' pieces on low angle joints 80' 90' Broken on low angle joints @ .5' to 1' intervals 100' 110' Good drilling Breaks @ wide intervals 120' 130'	MOST JOINTS @ 20° TO 30° DIPS, @ .5' 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 28.9'

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 @ Chips to 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 65° 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

ELEVATION 28.9'

BEARING

INCLINATION

DEPTH 150.1'

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

	CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
70'				
80'	Breaks @ wide spaces @ .5' to 3' pieces	60° joint set minor rust slightly weathered	Rock is fresh. Low angle joints @ wide intervals, up to 3' apart. Minor rust and slight weathering localized on high angle joints.	Quartz diorite, mixed fine grained dark grey patches in coarse grained lighter grey matrix. Become fine grained below 87.5'
90'				FINE GRAINED
100'	Breaks @ .5' to 3' pieces	60° joint, minor rust 1' Heavy rust, severely weathered 50° dip	Rock is fresh, joints are clean. 0.1' of soft severely weathered zone @ 95.0' to 95.4' depth	Low angle joints @ 30° to 40° dips @ .5' to 3' intervals
				COARSE GRAINED
				FINE GRAINED
110'	Breaks @ chips to .8' pieces	vertical joint clean	Rock is fresh, locally rusty on joints. 119.7' to 120.8' is severely weathered zone. Soft, rusty, Rock in place but decomposed zone dips 45°	50° Foliation
				70° Contact, TIGHT, WELDED, WITH CHILL ZONE
				Diabase Dike, very fine grained, sub-black, dark olivine speckling
120'	WEATHERED →	65° joints rusty severe weathering on foliation for 1.1' of core minor rust ruggy 60° joint		65° CONTACT, TIGHT, WELDED, WITH CHILL ZONE
				Quartz diorite, medium-fine-grained medium grey. Fairly massive texture
130'	Breaks @ .1' to 3.5' pieces	70° joint clean	Low angle joints @ about 30° dips Rock is fresh, not rusty on joints. Joints @ 30°	
140'	Breaks @ .3' to 1.6' pieces	55° joint clean	Rock is fresh, No rust on joints.	Low angle joints @ 1' to 2' intervals. Rock Drills well
				COARSE
150'				150.1' Bottom of Hole

PROJECT SEABROOK

STATION

HOLE LOCATION 20.450 N 79.500 E

ELEVATION 21.4'

BEARING

INCLINATION

DEPTH

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

CONDITION OF CORE	DIP	GRAPHIC LOG	DESCRIPTIVE NOTES
0			
10'	Breaks @ .1' to .22' 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 Porphyritic
20'			
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

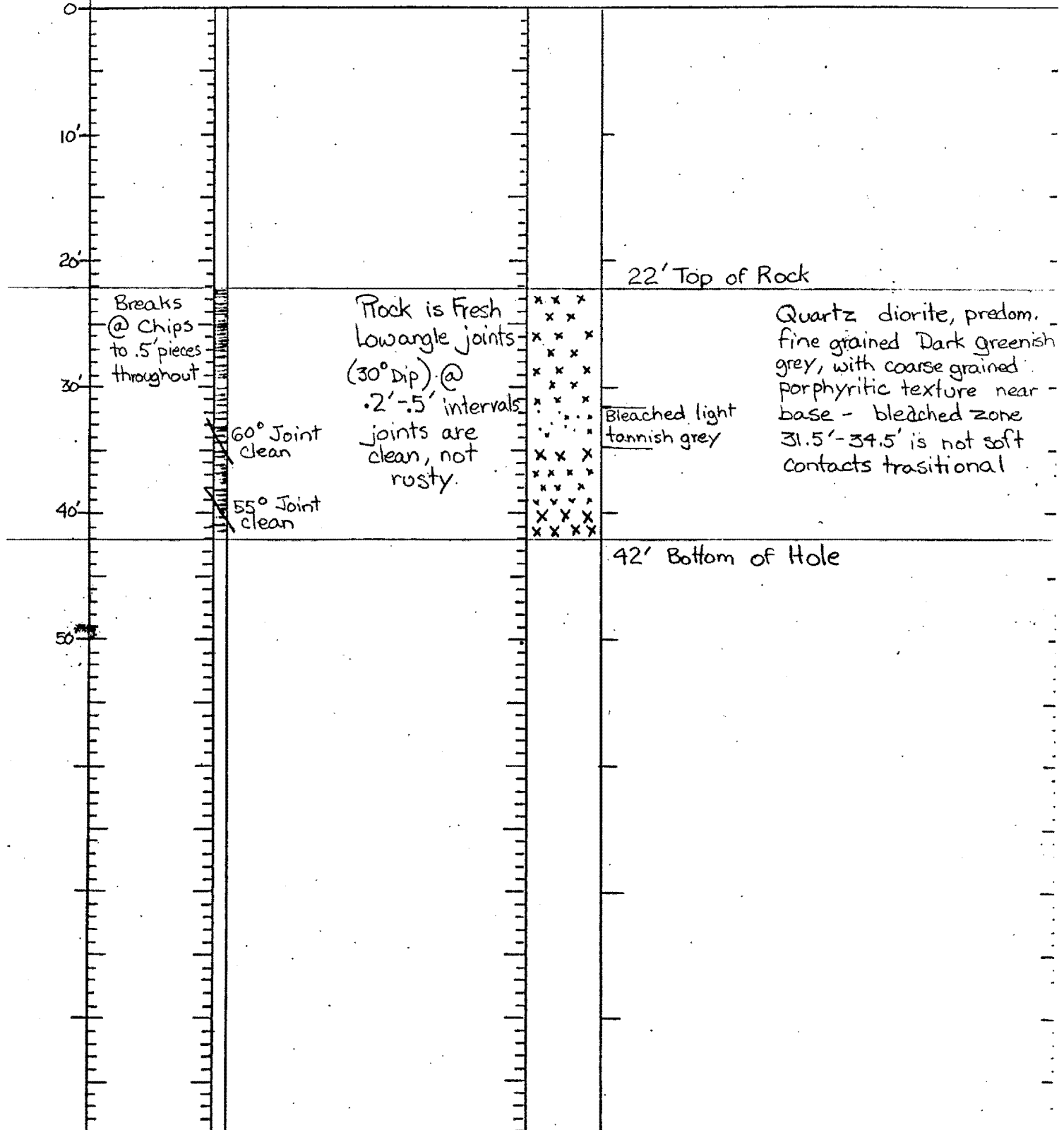
Logged By: J. R. Rand 12/27/72

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				
			OO	Boulders 5' Top of rock
10'	CHIPS Breaks @ .2' to .25' 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	Quartz Diorite, mixed fine-grained dark grey and coarse grained light grey matrix - locally foliated at 55°-60° Dips
20'				
30'	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
40'		minor rust on Jt.		
50'				
60'				

PROJECT SEABROOK

STATION

HOLE LOCATION 20.300 N 79.700 E

ELEVATION 20.2'

BEARING

INCLINATION

DEPTH

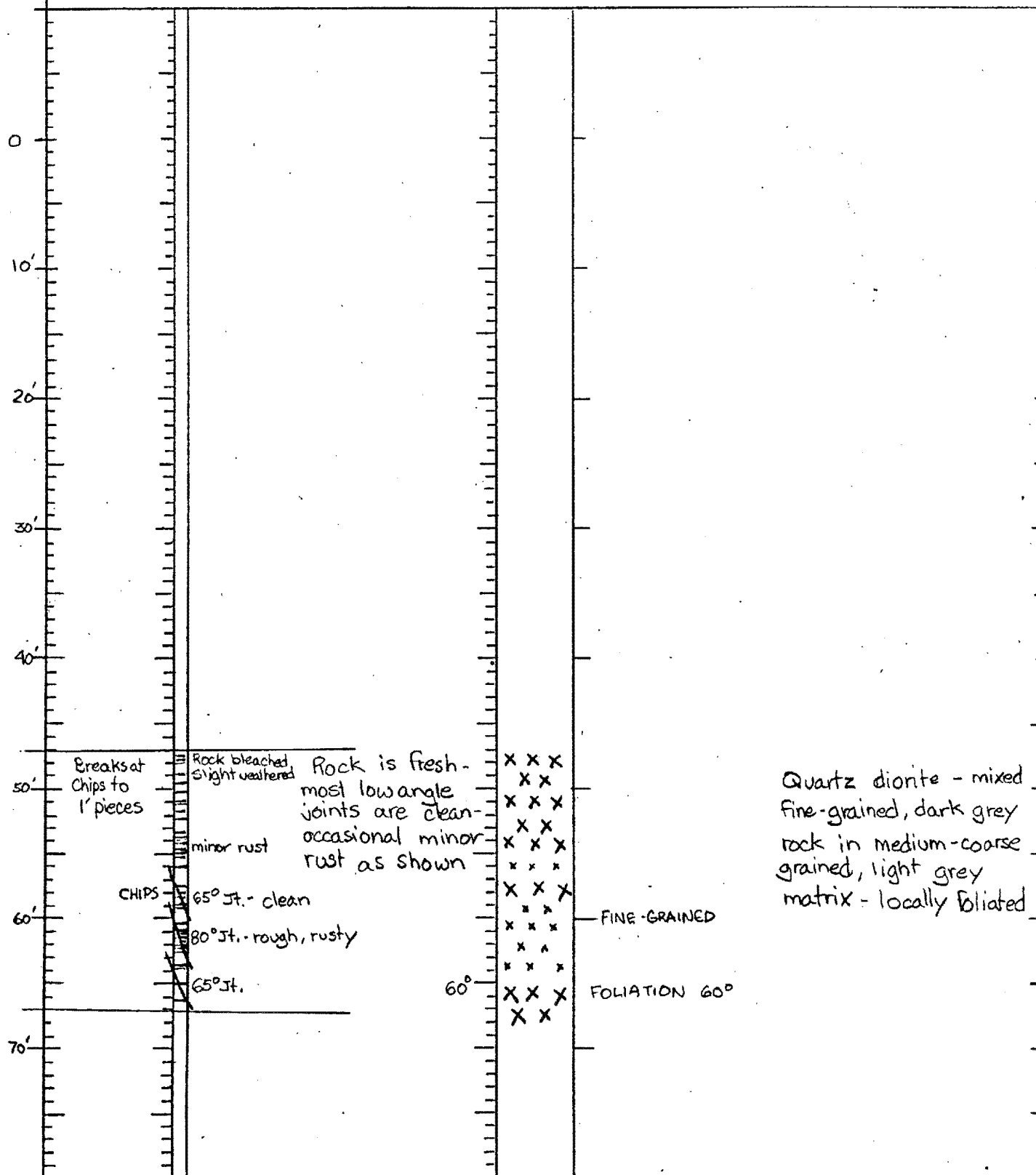
Logged By: J. R. Rand 12/26/72

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES



PROJECT SEABROOK

STATION

HOLE LOCATION 20.300N 79.550 E

ELEVATION 16.0'

BEARING

INCLINATION

DEPTH

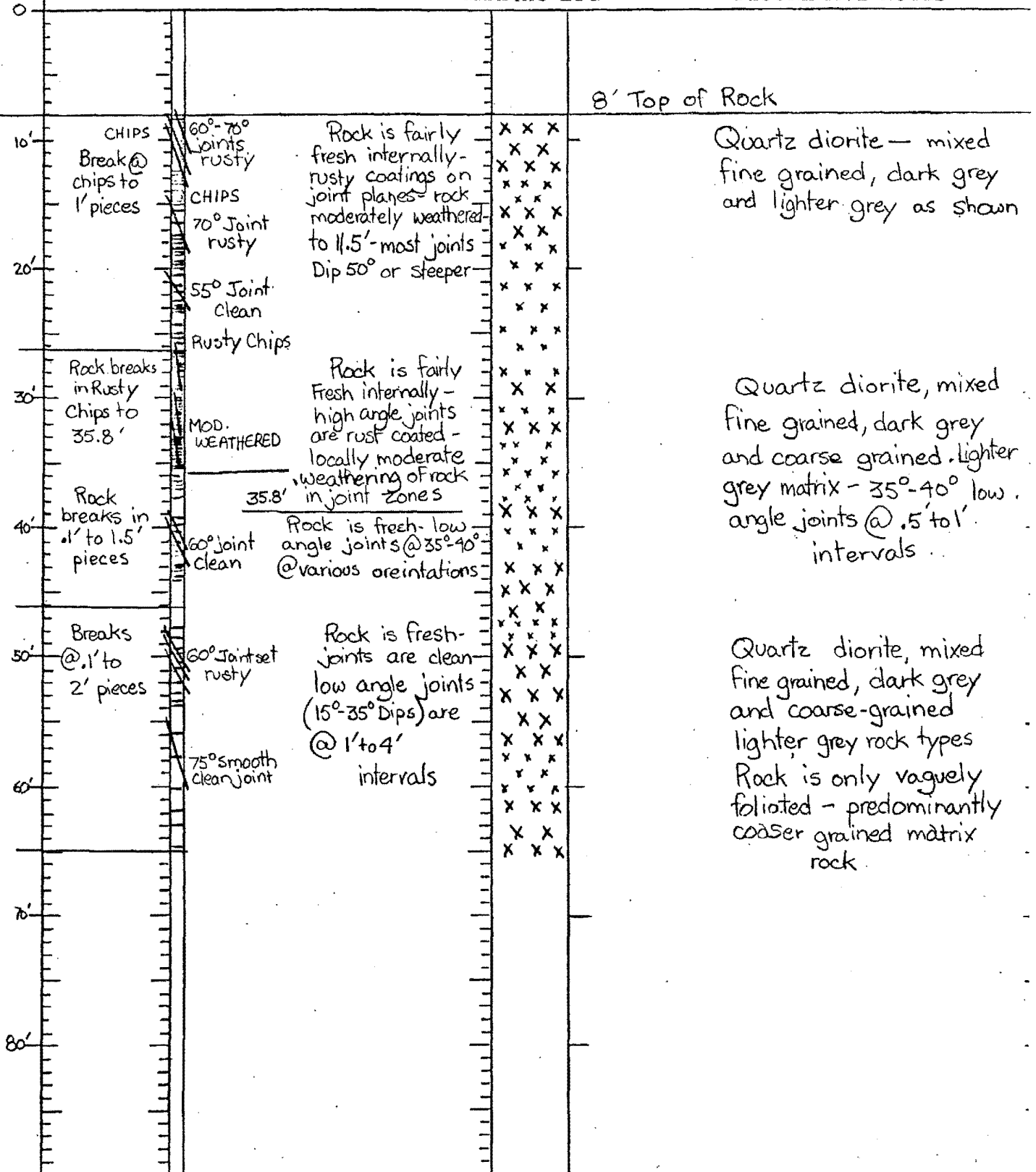
Logged By: J. R. Rand 12/26/72

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES



PROJECT SEABROOK

STATION

HOLE LOCATION

ELEVATION 16.0'

BEARING

INCLINATION

DEPTH

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

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

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

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

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

Quartz diorite, mixed
fine and coarse-grained
rock types

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

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

108' Bottom of hole

PROJECT SEABROOK STATION

HOLE LOCATION

ELEVATION 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	Rock is fresh breaks on 30°-40° joints with a few 60°-70° 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'	65° joint 65° joint 70° joint	Not rusty on joints	
50'	70° joint pyrite smear	Rock is fresh no rust	Quartz diorite, as above.
60'	DRILLER 70° joint pyrite smear	Rock breaks on 30°-40° joints @ 6" to 12" intervals good drilling	Becoming a little coarser-grained with depth. Less obviously foliated, more massive texture.
70'	70°-75° 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.
80'	65° joint 65° joint smooth		

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			HIGH ANGLE FABRIC 70°-90° DIPS
slickenside			WELDED FAULT ZONE - PRESENCE OF BIOTITE ON ZONE MAKES IT WEAK, DIFFICULT TO DRILL - NO RUST OR GOUGE - PYRITE ON SLIP PLANE
70°-90° smooth jt.			Breccia-welded
Most breaks @ 30° dips	70° jt. smooth	Rock is fresh - tends to break up on drilling in zones where Biotite rich - local slickenside striations on joints joints run @	Quartz diorite as above
CHIPS - soft			Rock is generally foliated and high angle joints with smooth surfaces tend to occur along foliation
Core ground	66° jt. smooth		Breccia welded
High angle joints on weak zone	Apparent fault zone, polished slickenside in Biotite - rock soft not rusty, no gouge	Various orientations	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
CHIPS			
CHIPS			
Most breaks @ 30°-45° dips	85°-90° jt.	Slickenside zone does not appear open or subject to groundwater movement	
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-dark grey - resembles "granitized" meta-quartzite - well foliated throughout @ 40°-60° dips
			Rock parts (joints) on foliation were somewhat micaceous
.3' to 1' intervals		Rock is Fresh	Quartz diorite - coarser grained - foliated @ 50°
	60°		welded breccia
	50°		
160'			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
20'	85° joint	Breaks in core @ .1 to 1' pieces 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	CHIPS	
40'			32.5' Bottom of Hole

PROJECT SEABROOK NUCLEAR STATION

HOLE LOCATION Hampton Harbor

ELEVATION

BEARING vertical

INCLINATION

DEPTH 143 10

Wx = weathered, weathering

J.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 70° Rusty joint adjacent to joints Slight to moderate weathering, rusty on 70° joint Minor rusty	ROCK IS ESSENTIALLY FRESH, WITH MINOR RUSTY COATINGS ON PARTINGS, AND LOCALLY SLIGHT TO MODERATE WEATHERING ADJACENT TO JOINTS ROCK IS FRESH- MINOR RUSTY STAINING AS SHOWN	QUARTZ DIORITE, INTERMIXED FINE-GRAINED DARK GREY DIORITE ENCLOSED IN MATRIX OF MEDIUM-COARSE GRAINED LIGHT GREY QUARTZ DIORITE. LOCALLY FOLIATED. FOLIATION AT ABOUT 45° DIP NEAR TOP, GOING TO 50° AS SHOWN
BOX 2 36'-54'	70° continuous joint broken by filler for storage Minor rusty Minor rusty		WELDED OR FUSED CONTACTS THROUGHOUT
BOX 3 54'-74'	30° joints - minor rusty 60° Rough joint - Minor rusty		AMPHIBOLITIC - MASSIVE, MEDIUM-COARSE, DARK GREENISH GREY CRYSTALLINE QUARTZ DIORITE, DARK GREY FINE-GRAINED DIORITE IN MEDIUM COARSE LIGHT GREY QUARTZ DIORITE MATRIX

JUNE 1973

PROJECT SEABROOK NUCLEAR STATION

HOLE LOCATION

ELEVATION

BEARING

INCLINATION

DEPTH

J.R.Rand

Logged By: 5/16/73

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

JUNE 1973

PROJECT SEABROOK NUCLEAR STATION

HOLE LOCATION Hampton Harbor

ELEVATION

BEARING Vertical

INCLINATION

DEPTH 264 5

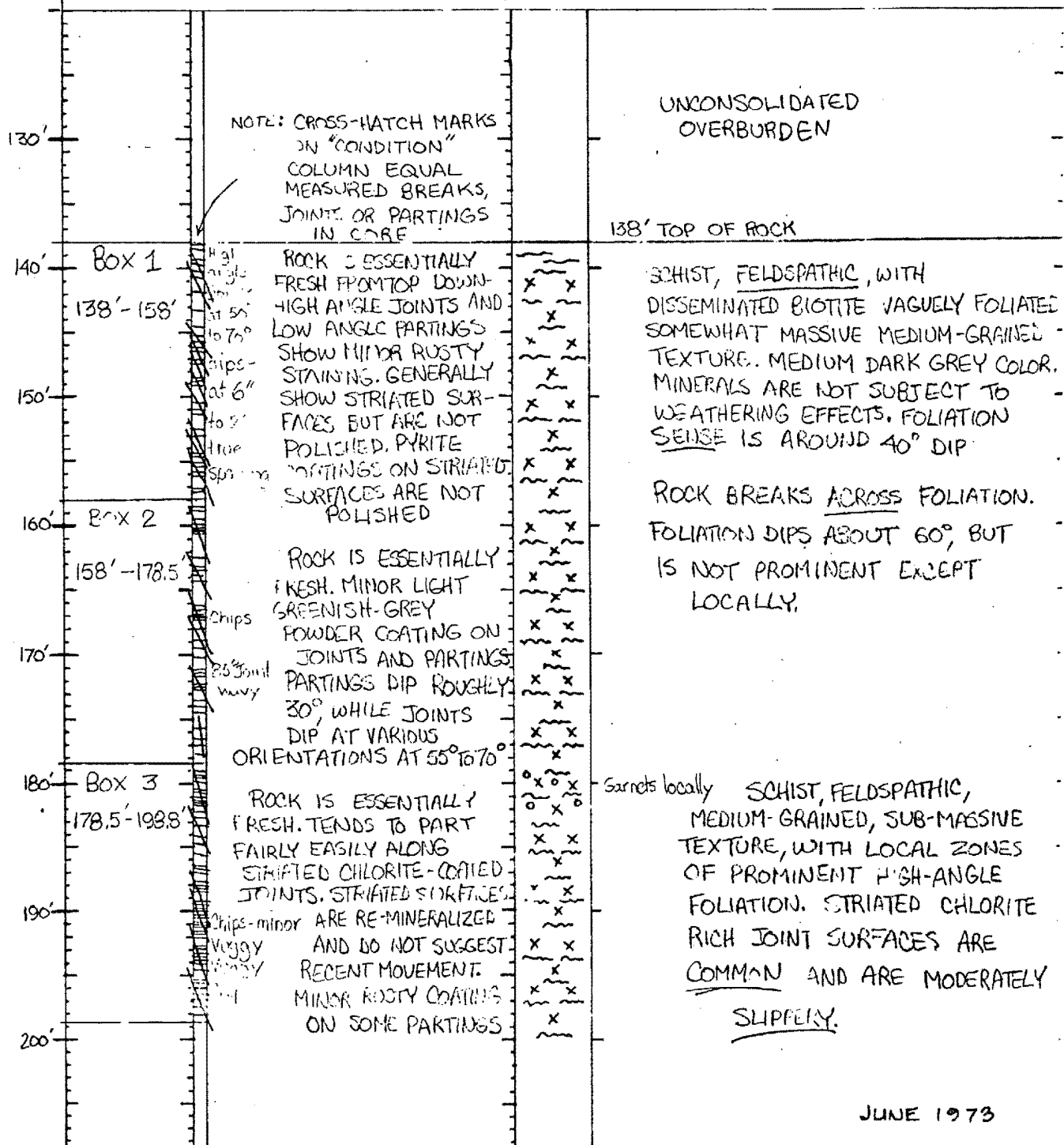
Logged By: J.R. Rand
5/14/73

CONDITION OF CORE

DIP

GRAPHIC LOG

DESCRIPTIVE NOTES



JUNE 1973

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'		SCHIST, AS ABOVE, BECOMING MORE MORE BIOTITE-RICH, FINER-GRAINED BELOW 227'. HIGHLY CONTORTED FOLIATION, BUT RESISTANT TO BREAKING.
230'			
240'	Box 6 236' - 255' 3"		
250'			
260'	Box 7 255' 3" - 264' 5"		
270'			

Rock is essentially
fresh. Joints have
minor staining and
pyrite crusts. Joints are
striated, with chlorite.
Partings dip 30°-40°
across foliation. Joints
are not notably
rust-stained

Rock is fresh.
Chlorite-rich partings
are slippery, but
are coated with
pyrite and/or
powder and do not
show recent
slippage.

Rock is fresh.
Joints and partings
are locally quite
slippery, striated.

Rock is fresh.
Partings are
slippery.

① SAMPLES FOR
PHYSICAL TESTING -
GEOTECHNICAL
ENGINEERS INC.
5/23/73

Biogenic
veinlet

SCHIST, FELDSPATHIC, BIOTITE-RICH,
HIGHLY CONTORTED FOLIATION.
MEDIUM-TO MEDIUM-FINE GRAINED,
MEDIUM-DARK GREY. CHLORITE
AND PYRITE ON JOINTS.

264' 5" BOTTOM OF HOLE

JUNE 1973

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 Boring, T. Paquette</u>	
GROUND EL (MSL) <u>16.8</u> ft		DEPTH TO WATER/DATE <u>15.2</u> ft / <u>July 2, 1973</u>		LOGGED BY <u>Soil - K. Polk; Rock - J. R. Rand</u>			

EL. MSL ft	Depth ft	SAMPLE Type and No.	N or Rec.	RATE OF ADV. min/ft	WATER CONTENT or RQD		PRESSURE TEST		STRIKE, DIP F = Foliation J = Joint C = Contact B = Bedding	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.) (Type, texture, mineralogy, color, hardness, etc.)
					%	Graphic	gpm psi	Computed 10 ⁻⁴ k cm/sec			
16.8		A1									Brown fine to medium sand with gravel pieces up to 4" in size (Fill).
		A2									Light brown medium sand. Clean; uniform; subrounded grains
10		S3	6								Similar to Sample A2, but brown.
0		S4	41								Light brown fine to medium sand. Clean; uniform.
-20		S5	69								Similar to Sample S4.
		S6	34								Light brown medium sand. Clean; uniform; subrounded grains; contains a trace of coarse sand and fine gravel.
-30		S7	52								Similar to Sample S6.
-20		S8	54								Similar to Sample S6.
-40		S9	57								Similar to Sample S6.
		S10	60								Gray fine to medium sand. Clean; uniform; subrounded grains with a trace of coarse sand.
-50		S11	74								Gray fine sand. Clean; uniform; contains one 10 mm size gravel and a few black silty sand layers 4 mm thick.
-40		S12	80								Similar to Sample S10, but contains a 15 mm thick layer of gray-brown silty sand having a slight organic odor.
-60		S13	58								Similar to Sample S10.
		S14	29								Similar to Sample S10, but gray-brown.
		S14A	15					TOP	OF CLAY		Gray fine to medium sand. Clean; uniform.
-70		S15	11			43.3					Gray silty clay. Soft; medium plasticity and sensitivity; contains several silt and silty fine sand layers up to 75 mm thick and one 20 mm thick black organic silt layer. Silt and fine sand layers give a very fast reaction to shaking test. $s_u(tor) = 0.13-0.15$ tsf
-80		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. $s_u(tor) = 0.10-0.13$ tsf
-80		S17	0			41.9					Similar to Sample S16. $s_u(tor) = 0.17$ tsf
		S18	0			44.6					Similar to Sample S16. $s_u(tor) = 0.16-0.18$ tsf
-90		S19	0			36.8					Similar to Sample S16. $s_u(tor) = 0.18$ tsf
-80		S20	0			36.7					Similar to Sample S16. $s_u(tor) = 0.19-0.21$ tsf
-100		S21	0			34.3					Similar to Sample S16. $s_u(tor) = 0.20$ tsf
		S22	0			34.2					Similar to Sample S16. $s_u(tor) = 0.17-0.19$ tsf
-110		S23	0			28.8					Similar to Sample S16. $s_u(tor) = 0.23-0.30$ tsf
-100		S24	0			34.8					Similar to Sample S16. $s_u(tor) = 0.19$ tsf
-120		S25	0			30.9					Similar to Sample S16. $s_u(tor) = 0.15-0.18$ tsf. [Lost 20 cu. ft mud @ 125 ft]
		S26	102								Gray silty gravelly fine to medium sand. Widely graded; contains angular gravel pieces up to 3/8" in size. Possible fill material. $s_u(tor) = 0.12-0.15$ tsf
-130		NX-1	100			0					Chips - moderate wx. May be boulder in Roller till bit, no recovery
								TOP	OF ROCK		135'4" Top of good rock.
-120		NX-2	97	4.1	67						Fairly fresh. Slight wx ten- Minor rust decay in feldspar, and locally powdery on joints. Schist, gneissic. Medium to medium coarse grained, medium gray. Not prominently foliated. Feldspathic.

LEGEND N - Standard penetration resistance, blows/ft Rec - Length recovered/length cored, % RQD - Length of sound core 4 in. and longer/length cored, % S - Split spoon sample U - Undisturbed samples S - Shelby tube F - Fixed piston O - Osterberg D - Drilling break wx - Weathered, weathering N - Denison P - Pitcher G - GEI k - Coefficient of permeability	NOTES A - Auger sample 1) - $s_u(tor)$ = Shear strength measured with Torvane.	SEABROOK STATION PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE YANKEE ATOMIC ELECTRIC COMPANY A Subsidiary of Raytheon Company Date: October 4, 1973 Project 7286 PAGE 1 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 Boring, T. Paquette</u>	
GROUND EL (MSL) <u>16.8</u> ft		DEPTH TO WATER/DATE <u>15.2</u> ft / <u>July 2, 1973</u>		LABGED BY <u>Soil - K. Polk; Rock - J. R. Rand</u>			

EL. MSL ft	SAMPLE		RATE OF ADV. min/ft	WATER CONTENT or RQD		PRESSURE TEST		STRIKE, DIP F = Foliation J = Joint C = Contact B = Bedding	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.) (Type, texture, mineralogy, color, hardness, etc.)	
	Depth ft	Type and No.		%	Graphic	gpm psi	Computed k 10 ⁻⁴ cm/sec				
-27.2	284	NX-39	73	9.0	16						
-290		NX-40	76	6.7	42					Extreme wx	+
-280		NX-41	102	5.0	56					Fairly fresh. Drills fairly well.	+
-300		NX-42	90	5.4	73					Most breaks across core	+
-310		NX-43	107	6.7	78					20° polished slickensides	+
-300		NX-44	100	4.7	94					60° Chlorite coated-striated	+
-320		NX-45	98	5.0	87					Curved joint-highly chloritic, slickensided	+
-312.8	329.6									75° Joint-chlorite smeared	+
BOTTOM OF BORING											

LEGEND

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

S - Shelby tube
F - Fixed piston
O - Osterberg

D - Drilling break
wx - Weathered, weathering

N - Denison
P - Pitcher
G - GEI

k - Coefficient of permeability

NOTES

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

United Engineers
a subsidiary of Heathman Company

Date: October 4, 1973 Project 7286

PAGE 3 of 3 LOG OF BORING F4

BORING LOCATION <u>N16553, E90235; Offshore</u>		INCLINATION <u>Vertical</u>		BEARING _____		DATE START/FINISH <u>Nov. 10, 1973</u> / <u>Nov. 14, 1973</u>	
CASING ID <u>3 in.</u>		CORE SIZE <u>1-7/8 in.</u>		TOTAL DEPTH <u>243.6</u> ft		DRILLED BY <u>Warren George, mo. P. Schaeble, J. Harris</u>	
GROUND EL. (MSL) <u>-9.1</u> ft		DEPTH TO WATER/DATE <u>Tidal</u> ft / _____		LOGGED BY <u>Soil - K. Polk; Rock - J. R. Rand</u>			

EL. MSL ft	SAMPLE		RATE OF ADV. min/ft	WATER CONTENT %	OR RQD	PRESSURE TEST		STRIKE, DIP F = Foliation J = Joint C = Contact B = Bedding	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.) (Type, texture, mineralogy, color, hardness, etc.)
	Depth ft	Type and No.				Graphical	Computed k cm/sec			
-9.1		S1	33		2) None					Light gray fine sand. Uniform; clean.
		S2	51							Gray medium to coarse sand. Uniform; clean; subangular to subrounded grains.
-10		S3	*145							Gray-brown gravelly sand. Widely graded; slightly silty; subangular to subrounded grains; contains several gravel pieces up to 25 mm in size.
-20		S4	67							Similar to S3, but sand is mostly fine to medium grained.
-20		S5	69							Light gray fine to medium sand. Uniform; clean.
-20		S6	65							Similar to Sample S5.
-38.6		S7	43/6"							TOP OF TILL
-40		S7A	*87							Brown silty sandy gravel. Widely graded; fines are nonplastic; angular to subangular grains; contains gravel pieces up to 30 mm in size.
-40		S8	*123							Light gray gravelly very silty fine sand. Uniform; fines nonplastic; contains several angular gravel pieces up to 15 mm in size.
-41.7										Similar to Sample S7A, but contains gravel pieces up to 35 mm in size.
-40		NQ-1	83	10.0	29					Hard, but is affected throughout by slight to moderate bleaching (presume hydrothermal). Joints show minor wx effects. Bleaching does not seem to degrade rock strength.
-50		NQ-2	97	6.0	50					Diortite. Fine-grained. Fused contact dips 55°
-60		NQ-3	94	5.0	49					Diabase. Greenish tan, bleached. Diortite. Fine-grained medium tannish-gray. Moderately bleached. Quartz diortite.
-60		NQ-4	102	5.0	55					
-70		NQ-5	100	4.0	85					66.0' Fused intrusive contact Bleached Diabase. Bleached at top. Dark gray below.
-80		NQ-6	99	6.0	97					71.9' Fused contact dips about 65° Diortite. Fine-grained, medium tannish gray. Some minor bleaching.
-80		NQ-7	100	8.0	81					
-90		NQ-8	100	6.0	96					Diortite (?) or feldspathized quartzite (?). Fine-grained, quartzose, prominent foliation showing high, but quite variable dips.
-100		NQ-9	100	4.0	90					
-100		NQ-10	100	6.0	70					Diortite. Quartzose and locally foliated. Fine-grained, medium gray. Local minor bleaching.
-120		NQ-11	100	6.0	50					111.4' Contact dips about 25° Bleached Diabase. Fine-grained, grades to dark gray below bleached zone.
-120		NQ-12	98	5.0	97					
-120		NQ-13	100	4.0	65					117.6' Diortite. Fine-grained, medium dark gray. Irregularly foliated throughout.
-130		NQ-14	100	5.0	83					
-140		NQ-15	100	5.0	85					
-140		NQ-16	100	6.0	100					
-140		NQ-17	75	6.0	0					
-140		NQ-18	98	6.0	88					Fused, welded breccia
-140		NQ-19	98	5.0	88					
-152.9										

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 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 used.	SEABROOK STATION PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE YANKEE ATOMIC ELECTRIC COMPANY  Date: November 23, 1973 Project 7286 PAGE 1 of 2 LOG OF BORING ADT 18
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BORING LOCATION N16553, E90235 Offshore INCLINATION Vertical BEARING DATE START/FINISH Nov. 10, 1973 / Nov. 14, 1973
 CASING ID 3 in. CORE SIZE 1-7/8 in. ft TOTAL DEPTH 243.6 ft DRILLED BY Warren George, Inc.; P. Schaeble, J. Harris
 GROUND EL (MSL) -9.1 ft DEPTH TO WATER/DATE Tidal ft / LOGGED BY Soll - K. Polk; Rock - J. R. Rand

EL. MSL ft	SAMPLE		RATE OF ADV. min/ft	WATER CONTENT or RQD		PRESSURE TEST		STRIKE, DIP F = Foliation J = Joint C = Contact B = Bedding	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.) (Type, texture, mineralogy, color, hardness, etc.)	
	Depth ft	Type and No.		%	Graphic	gpm psi	Computed 10 ⁻⁴ k cm/sec				
										CONTINUED FROM PREVIOUS PAGE	
-143.8		NQ-20	100	5.0	70			N81E, 35SE J			
-150		NQ-21	100	4.0	97			N42W, 50NE J N 5W, 78NE S N 0E, 44NE J		Fresh and hard. Drills well. Only very minor wx effects on joints and partings.	Diorite. Fine-grained, medium dark gray. Irregularly foliated throughout.
-160		NQ-22	100	5.0	88						Diabase
-160		NQ-23	100	5.0	94			N78W, 60SW F N26E, 71NW F			
-170		NQ-24	100	5.0	100			N80W, 78NE F N16W, 52SW F N73W, 68SW S		Fresh and hard. Drills well. Diabase is tan-bleached, but adjacent diorite is not bleached. Sharp contacts.	166.5' Diabase. Unbleached. 168.5' Intrusive contact dips 50° 170.3' Diabase. Bleached tan. Fine-grained. Hard 173.8' Fused contact dips 80°
-180		NQ-25	100	5.0	69			N20E, 70SE C N30W, 40NE J			Diorite. Fine-grained, medium gray.
-180		NQ-26	100	5.0	100			N82W, 48NE F N73W, 30NE J			Irregular fused intrusive contact
-190		NQ-27	100	6.0	87			N21W, 49NE C			183.5' Fine Diabase. Tan(bleached)throughout
-190		NQ-28	100	4.0	61			N55E, 80NW C		Moderately to severely wx. Softened. Locally weak.	Coarse High angle, fused fault (?)Contact
-200		NQ-29	100	5.0	80			N88E, 34NW S			Fused Quartzite(?) Thinly foliated, variable dips. Fine-grained, medium gray.
-200		NQ-30	99	5.0	90			N15E, 72SE S N20E, 35SE J N20E, 64NW J		Fresh and hard. Local slickensided zones appear to be old. Related to folding.	Quartzite, as above. Well foliated.
-200		NQ-31	100	6.0	88			N58E, 46NW J N75E, 27SE J N98E, 44NW S			202.0' Fused feldspathized contact Tan aphanitic rock-quartz eyes.
-210		NQ-32	97	5.0	80			N12E, 55NW J N57E, 12NW S N75E, 57SE J			Quartzite Bleached (hydrothermal?). Diorite. Mixed medium fine quartz diorite. Coarse-grained quartz diorite and bleached quartzite.
-220		NQ-33	100	5.0	67			N64W, 64NE S N10E, 65NW J N16E, 34NE S			217.6' Diorite. Bleached throughout to light greenish tan. Fine-grained quartzose.
-220		NQ-34	100	5.0	82			N32E, 32SE S N41W, 38NE J N57E, 88NW J			226.0' Fused contact dips about 60° Diabase. Bleached to light greenish tan. Fine-grained with darker green mineral speckling.
-230		NQ-35	100	5.0	87			N44W, 74SW S N90E, 35S J N45E, 42NW J			
-240		NQ-36	100	5.0	92			N23E, 76SE C			
-240		NQ-37	100	5.0	52						
-240		NQ-38	98	5.0	91						
-240		NQ-39	100	5.0	100						
-243.6								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

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

NOTES

X - Oriented core.

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

united engineers
a subsidiary of Raytheon Company

Date: November 23, 1973 Project 7286

PAGE 2 of 2 LOG OF BORING ADT 16

BORING LOCATION <u>N16571, E90280; Offshore</u>		INCLINATION <u>Vertical</u>		BEARING _____		DATE START/FINISH <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</u> ft		DRILLED BY <u>Warren George, Inc.; P. Schaeble, J. Harris</u>	
GROUND EL. (MSL) <u>-4.0</u> ft		DEPTH TO WATER/DATE _____		Tidal ft/ _____		LOGGED BY <u>Soil - K. Polk; Rock - J. R. Rand</u>	

E.L. MSL ft	SAMPLE		RATE OF ADV. min/ft	WATER CONTENT		or RQD %	PRESSURE TEST Computed psi 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.)	
	Depth ft	Type No.		N or Rec.	%					Graphic	
-4.0											
-10											
-20											
-30											
-33.5											
-40											
-40		NQ-1	100	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					Slight wx	
-60		NQ-4	100	4)	83						Open contact dips 36° Diabase. Fine, dark gray
-65		NQ-5	100		100						Open contact dips 25° Diabase. Fine, feldspar spots. Open contact dips 30°
-70		NQ-6	100		100						
-75		NQ-7	100		63						
-80		NQ-8	100		100						
-85		NQ-9	100		80						
-90		NQ-10	100		80						
-95		NQ-11	100		75						
-100		NQ-12	100		75						
-105		NQ-13	100		98						
-110		NQ-14	100	5)	82						
-115		NQ-15	100		98						
-120		NQ-16	100		87						
-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 bit to 34.8 ft.

3) No clays present, therefore, no water contents were determined.

4) Drilling rates for NQ-4 through NQ-13 are 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

a subsidiary of Raytheon Company

Date: January 14, 1974 Project 7286

PAGE 1 of 2 LOG OF BORING ADT 16A

BORING LOCATION <u>N16571, E90280; Offshore</u>		INCLINATION <u>Vertical</u>		BEARING _____		DATE START/FINISH <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</u> ft		DRILLED BY <u>Warren George, Inc.; P. Schaeble, J. Harris</u>	
GROUND EL (MSL) <u>-4.0</u> ft		DEPTH TO WATER/DATE _____ Tidal		ft/ _____		LOGGED BY <u>Soil - K. Polk; Rock - J. R. Rand</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 KPM psi	Computed k cm/sec	STRIKE, DIP F = Foliation J = Joint C = Contact B = Bedding	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.) (Type, texture, mineralogy, color, hardness, etc.)	
S = Slickenside CONTINUED FROM PREVIOUS PAGE												
-145.1		NQ-17	100		94				N20W, 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, dark gray quartzose. Irregularly foliated throughout.
-150		NQ-18	100		100				N60W, 25SW J			
-160		NQ-19	100		100				N25W, 56NE J			
-160		NQ-20	92		92				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.
-170		NQ-21	85		85				N25E, 76SE J N 5E, 34NW J N50W, 26NE J			
-180		NQ-22	98		94				N74W, 60NE J	Foliation		Minor Diorite. Coarse-grained, light greenish gray granodiorite. Some minor hydrothermal alteration.
-180		NQ-23	100		100				N11E, 11NW J N 6W, 24NE J		Shows minor greenish hydrothermal bleaching. Hard.	Diorite(?) Fine-grained, medium dark gray. May be quartzite(?)
-190		NQ-24	100		97				N21E, 20NW J N71W, 37NE J	On foliation	Fresh and hard. Bleached locally hydrothermally. Joints and partings are not slickensided.	190.1 Diabase. Fine grained, bleached. Bleach tannish gray. Bleaching digs out at about 196.3'
-200		NQ-25	100		100				N36W, Vert. J			Becomes Diabase. Fine-med. dark dark gray. Fused contact dips 60°
-200		NQ-26	100		100				N 9W, 63NE N19E, 53SE F N45E, 52NW J N35E, 62NW J		Not wx. Subject to hydrothermal alteration. Bleaching. Joints and partings not slickensided.	198.8 Granodiorite. Medium coarse-grained, light tannish gray.
-210		NQ-27	88		66				N36W, 60NE F N28W, 52SW S	Grout tail		Possible fault-tight
-220		NQ-28	102		63				N 1W, 51SW F			Bleach Fused fault (?) Quartzite
-220		NQ-29	100		98				N49W, 29SW J N35E, 24NW J N68E, 27SE J N58W, 58NE C		Fresh and hard. Drills well.	(?)Diorite. Fine-grained light brownish gray. Diorite-granodiorite. Medium to medium-fine grained, light tannish gray (due to hydrothermal alteration). Locally unbleached.
-230		NQ-30	100		97				N32W, 36SW J N 5E, 66SE J N55E, 73NW J N57E, 30SE J		Locally bleached (hydrothermal alteration) but is not materially softened.	Bleached Bleached Pegmatite Bleached diabase Fused contact dips 37°
-240		NQ-31	98		96				N24E, 40SW C N76E, 62SE J			230.7 Bleached Diabase. Fine-grained, light tannish gray.
-240		NQ-32	100		100				N72E, 65SE J	Fresh	Fresh and hard.	Not Bleached Diabase. Dark gray.
-240.4		NQ-33	93		89							
-240.4		NQ-34	98		78							
-240.4		NQ-35	92		83							
-240.4		NQ-36	100		100							
-240.4		NQ-37	83		85							
BOTTOM OF BORING												

LEGEND N - Standard penetration resistance, blows/ft Rec - Length recovered/length cored, % RQD - Length of sound core 4 in. and longer/length cored, % S - Split spoon sample U - Undisturbed samples S - Shelby tube F - Fixed piston O - Osterberg D - Drilling break wx - Weathered, weathering N - Denison P - Pitcher G - GEI k - Coefficient of permeability	NOTES 6) This is only a partial list of dip and strike data. x - Oriented core.	SEABROOK STATION PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE YANKEE ATOMIC ELECTRIC COMPANY  Date: January 14, 1974 Project 7286 PAGE 2 of 2 LOG OF BORING ADT 16A
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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. Schaeble, J. Harris</u>	
GROUND EL (MSL) <u>-8.3</u> ft		DEPTH TO WATER/DATE _____		Tidal _____		LOGGED BY <u>Soil - K. Polk; Rock - J. R. Rand</u>	

EL. MSL ft	SAMPLE			RATE OF ADV. min/ft	WATER CONTENT or RQD		PRESSURE TEST		STRIKE, DIP F = Foliation J = Joint C = Contact B = Bedding	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.) (Type, texture, mineralogy, color, hardness, etc.)
	Depth ft	Type and No.	N or Res.		%	Graphic	SRM psi	Computed 10 ⁻⁴ k cm/sec			
-8.3											
-10											
-20											
-30											
-40											
-42.4											
-44											
-46											
-48											
-50											
-52											
-54											
-56											
-58											
-60											
-62											
-64											
-66											
-68											
-70											
-72											
-74											
-76											
-78											
-80											
-82											
-84											
-86											
-88											
-90											
-92											
-94											
-96											
-98											
-100											
-102											
-104											
-106											
-108											
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-116											
-118											
-120											
-122											
-124											
-126											
-128											
-130											
-132											
-134											
-136											
-138											
-140											
-142											
-144											
-146											
-148											
-150											

LEGEND N - Standard penetration resistance, blows/ft Rec - Length recovered/length cored, % RQD - Length of sound core 4 in. and longer/length cored, % S - Split spoon sample U - Undisturbed samples S - Shelby tube N - Denison F - Fixed piston P - Pitcher O - Osterberg G - GEI D - Drilling break k - Coefficient of permeability wx - Weathered, weathering	NOTES 1) No samples taken. 2) Roller bit to 38.0 ft. 3) No clays present; therefore no water contents were determined. 4) Drill time for entire boring from 8 to 15 minutes per foot. x - Oriented core	SEABROOK STATION PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE YANKEE ATOMIC ELECTRIC COMPANY  Date: April 11, 1974 Project 7286 PAGE 1 of 2 LOG OF BORING ADT 16B
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[illegible]

BORING LOCATION <u>N16493, E90257; Offshore</u>		INCLINATION <u>Vertical</u>		BEARING _____		DATE START/FINISH <u>Jan. 14, 1974</u> / <u>Jan. 17, 1974</u>	
CASING ID <u>3 in.</u>		CORE 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 ft</u>		DEPTH TO WATER/DATE <u>Tidal</u> ft / _____		LOGGED BY <u>Soil - K. Polk; Rock - J. R. Rand</u>			

EL. MSL ft	SAMPLE			RATE OF ADV. min/ft	WATER or RQD CONTENT		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.)
	Depth ft	Type and No.	N or Rec.		%	Graphic	APM psi	Computed 10 ⁻⁴ k/cm/sec			
-5.5											
-10											
-20											
-23											
-30											
-40											
-50											
-60											
-70											
-80											
-90											
-100											
-110											
-120											
-130											
-140											
-140											

LEGEND

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

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

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

NOTES

1) - Washed through soil 0-23'. 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

United Engineers a subsidiary of Raytheon Company

Date: April 17, 1974 Project 7286

PAGE 1 of 2 LOG OF BORING ADT 16C

BORING LOCATION		N16493, E90257; Offshore		INCLINATION		Vertical		BEARING		DATE START/FINISH		Jan. 14, 1974 / Jan. 17, 1974			
CASING ID		3 in.		CORE SIZE		1-7/8 in.		TOTAL DEPTH		236.5 ft		DRILLED BY		Warren George, Inc.; P. Schaeble, J. Harris	
GROUND EL. (MSL)		-5.5 ft		DEPTH TO WATER/DATE		Tidal		ft /		-		LOGGED BY		Soil - K. Polk; Rock - J. R. Rand	

EL. MSL ft	SAMPLE Depth ft	Type and No.	N or Rec.	RATE OF ADV. min/ft	WATER CONTENT %	or RQD Graphic	PRESSURE TEST SPM psi	Computed k 10 ⁻⁴ cm/sec	STRIKE, DIP F = Foliation J = Joint C = Contact B = Bedding	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.) (Type, texture, mineralogy, color, hardness, etc.)	
CONTINUED FROM PREVIOUS PAGE												
143.6	x	NQ-29	100	10.0	82				N82E, 22SE S N20E, 56SE J N69W, 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	96						Feldspar spots throughout	
160	x	NQ-31	100	9.4	37				N50W, 43NE J N66W, 69NE F		Fresh and hard. Drills well. Joints and part- ings locally show striations, minor slickensides.	Diabase. Fine-grained, dark gray.
180		NQ-32	100	9.0	73							
		NQ-33	100	8.2	82							
170		NQ-34	100	9.0	65						Striated. Striated	Open contact dips 35° 166.9°
180		NQ-35	100	7.2	87							Diabase. Fine-grained, medium gray. Quartzose diabase inclusion is irreg- ular, fused.
190	x	NQ-36	100	8.5	79				N53E, 28SE J N69W, 57NE S N26E, 60NW J N26E, 64NW J		Fresh and hard. Drills very well. Joints and partings fresh.	6" granodiorite at base. Fused contact dips 70° 177.0°
200	x	NQ-37	100	9.6	98						Open joint Calcite coated	Diabase. Fine-grained, dark gray with calcite phenocrysts 183' to 188'.
210	x	NQ-38	100	8.2	80				N54W, 62NE S		Fresh and hard. Drills well. Some striated chlorite on joints and partings.	Calcite speckling Diabase, as above.
220	x	NQ-39	100	8.5	47				N58W, 44NE J N63W, 68SW J N41E, 71NW J N 4W, 18NE J N41E, 35NW J N44W, 84NE J N63W, 55SW F		Chlorite Chlorite Slippery Chlorite Rough Irregular joints	Open contact dips 14° 194.5° Pegmatite
230	x	NQ-40	100	8.7	50							Diabase. Fine-grained, medium dark gray quart- zose. Fairly well foli- ated throughout.
240	x	NQ-41	100	8.9	23							
250	x	NQ-42	100	9.0	45				N45E, 73NW J N32E, 34SE J N16E, 39SE J N63E, 35SW J N62W, 43SW J N58E, 18NW C N83W, 10NW J		Fresh and hard throughout. Joints and partings show only minor surface wx effects. Fresh and hard. Minor sur- face wx effects on partings.	Prominent pyrite min- eralization with calcite. Fused breccia at 208.8 210.4'. Fused contact dips 5° 217.4° Brown chill zone. Not bleached.
260	x	NQ-43	100	9.1	58							Diabase. Fine at top.
270	x	NQ-44	98	9.7	90						Striated chlorite- slickensided	Diabase. Medium-fine grained, dark gray with hair- line calcite veinlets.
280	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.	
290	x	NQ-46	100	9.5	90				N53W, 70NE J N46E, 45SE S		Calcite lined	235.5' Rock gradually becomes bleached, transitional contact bleach over .5' core
300	x	NQ-47	93	9.1	93				N 1E, 34NE J		Quartz-feldspar veinlet-no calcite	
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 - Denton F - Fixed piston P - Pitcher O - Osterberg G - GEI D - Drilling break k - Coefficient of wx - Weathered, weathering permeability	NOTES x - Oriented core. x - Oriented core.	SEABROOK STATION PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE YANKEE ATOMIC ELECTRIC COMPANY  Date: April 17, 1974 Project 7288 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>241.4</u> ft		DRILLED BY <u>Warren George, Inc. (P. Schaeble, J. Harris)</u>	
GROUND EL. (MSL) <u>-7.8</u> ft		DEPTH TO WATER/DATE <u>Tidal</u> ft / _____		LOGGED BY <u>Soil - K. Polk; Rock - J. R. Rand</u>			

EL. MSL ft	SAMPLE		RATE OF ADV. min/ft	WATER CONTENT or RQD		PRESSURE TEST		STRIKE, DIP F = Foliation J = Joint C = Contact B = Bedding	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.) (Type, texture, mineralogy, color, hardness, etc.)	
	Depth ft	Type and No.		%	Graphite	gpm psi	Computed k 10 ⁻⁴ cm/sec				
-7.8				2)							
-10				None							
-20		1)									
-30											
-40											
-45											
-48											
-50											
-52											
-54											
-56											
-58											
-60											
-62											
-64											
-66											
-68											
-70											
-72											
-74											
-76											
-78											
-80											
-82											
-84											
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-100											
-102											
-104											
-106											
-108											
-110											
-112											
-114											
-116											
-118											
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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
W - Weathered, weathering

NOTES

1) - Washed through soil 0-38'. 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

 **United Engineers & Constructors Inc.**
a subsidiary of Seabrook Company

Date: April 18, 1974 Project 7286

PAGE 1 of 2 LOG OF BORING ADT 16D

BORING LOCATION		N16600, E90219; Offshore		INCLINATION		Vertical		BEARING		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. Schauble, J. Harris											
GROUND EL (MSL)		-7.8 ft		DEPTH TO WATER/DATE		Tidal		ft		LOGGED BY		Soil - K. Polk; Rock - J. R. Rand	

EL MSL ft	SAMPLE		RATE OF ADV. min/ft	WATER CONTENT		or RQD	PRESSURE TEST		STRIKE, DIP F = Follation J = Joint C = Contact B = Bedding	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.) (Type, texture, mineralogy, color, hardness, etc.)	
	Depth ft	Type and No.		%	Graphic		gpm psi	Computed k 10 ⁻³ cm/sec			(Weathering, defects, etc.)	(Type, texture, mineralogy, color, hardness, etc.)
CONTINUED FROM PREVIOUS PAGE												
144.5												
150	NQ-19	100	7.0	83					N76W, 67NE S N64W, 52NE J N38W, 24SW J N89E, 32SE J N48E, 13NW J 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.
160	NQ-20	100	9.0	85								Diabase. Fine-grained, dark gray with fine calcite specks scattered throughout.
170	NQ-21	100	9.0	88								
180	NQ-22	100	9.0	93								
190	NQ-23	98	9.0	72					N47E, 19SE J N 8W, 30NE J			Diabase. Fine-grained dark gray with prominent white calcite phenocrysts.
200	NQ-24	100	9.0	92					N62E, 22SE J N34W, 72SW J N48E, 69NW C	Calcite coating		Fused, chilled contact dips 60°
210	NQ-25	100	9.0	97					N34E, 37SE F N33E, 40SE S N90E, 23E J N15E, 16NW J			Diorite. Medium grained.
220	NQ-26	100	10.0	42					N62E, 57NW S N87W, 49NE J N70E, 14NW J N55W, 18NE J	Calcite filling		Open contact dips 25-30° - Calcite
230	NQ-27	100	10.0	48					N24E, 75NW C N66W, 60NE F N65W, 63NE S			Diabase. Fine-grained, near black. Diorite inclusion at base.
240	NQ-28	100	12.0	92					N15E, 46SE F			Fused contact-80-85° dip-calcite
250	NQ-29	98	11.0	72					N38W, 65W J N 5W, 41NE S N60W, 70NE J			Brown chill zone
260	NQ-30	100	10.0	58					N34E, 56NW J			Diabase. Fine-grained, dark gray.
270	NQ-31	98	13.0	78					N56W, 52NE J			Fused, undulating contact
280	NQ-32	100	13.0	87					N62W, 58SW F N18E, 50SE J	Minor striated		50° Vein-fused fault
290	NQ-33	97	12.0	65					N21E, 46SE J N89W, 72NE J N33E, 46SE F			Diorite. Medium-coarse grained; medium grained quartzose.
300	NQ-34	100	15.0	54					N56E, 20SE J			Fine
310	NQ-35	100	14.0	49					N57E, 71SE J			Diorite. Predominantly medium coarse grained, notably quartzose medium gray. Local zones of fine-grained quartzose diorite. Granodiorite, locally porphyritic.
320	NQ-36	100	12.0	41					N18E, 57NW J N21E, 52SE F N56W, 50NE J N11W, 66NE J N35E, 69NW J			Fine
330	NQ-37	100	12.0	48								Welded breccia
340	NQ-38	100	12.0	17								Pink feldspar
350												Diiorite. Fine-grained, dark gray.
BOTTOM OF BORING												

LEGEND

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

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

NOTES

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

united engineers & CONSTRUCTORS INC.
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, E83940</u>		INCLINATION <u>Vertical</u>		BEARING _____		DATE START/FINISH <u>June 15, 1975</u> / <u>June 16, 1975</u>	
CASING ID <u>3-8 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 _____		Tidal ft / _____		LOGGED BY <u>Soil/Rock - F. X. Bellini</u>	

EL. ft	SAMPLE Depth Type No.	N or Rec.	RATE OF ADV. min/ft	WATER CONTENT % or RQD	PRESSURE TEST psi Computed 10 ⁻⁴ k cm/sec	STRIKE, DIP F = Follation J = Joint C = Contact S = Slickensides	CORE BREAKS	SOIL AND ROCK DESCRIPTIONS (Weathering, defects, etc.) (Type, texture, mineralogy, color, hardness, etc.)
-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.
14.5	S3	81						Similar to Sample 2.
-60	S4	2						Layered gray fine grained silty sand and gray silty clay (small recovery).
20	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.
38.5	S8B	0						Layered gray clay, silt and silty fine sand, 2-15mm thick. Silt shows fast reaction to shaking test.
40	S8C	46						Gray to grayish 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.
51.0								TOP OF ROCK
-100	1) NQ-1	100	2-1/2 2-1/2 2-1/2 2-1/2 3-1/2 3-1/2	70		57° F 60° J 70° J		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=45
60	NQ-2	100	2-1/2 2-1/2 3-1/2 3-1/2	73				Chips Sl wx Pyrite
	NQ-3	100	3-1/2 3 3 3 3	82				Irregular surface Chlorite R=43
-120	NQ-4	100	3-1/2 3 3 3 3	64				Chips Wx, slick- ed surfaces R=35-39 (broke)
80	NQ-5	98	3 3 3 3 3	79		80° J		D Fresh, hard, drills very well. Joint surfaces clean to slightly wx. R=44 (broke)
	NQ-6	100	3 3 3 3 3	94				Sl wx Fresh, hard. Does not tend to break along fabric. R=40 (broke)
-140	NQ-7	97	3-1/2 3 3 3 3	74				Sl wx R=44 (broke)
100	NQ-8	100	3 3 3 3 3					Clean R=46
	NQ-9	90	3-1/2 3 3 3 3	78		70° J		Clean Fresh, hard, drills very well R=0 (broke)
-160	NQ-10	100	3 3 3 3 3	73				Sl wx R=51 (broke)
120						70° J		Pyrite
								Sl wx Fresh, hard, drills very well R=35 (broke)
-180								Epidote?
140						70° J		D R=44
								Clean Fresh, hard, drills very well. Joint surfaces clean to sl wx. R=44 (broke)
-187.6						75° J 50° F		Minor fault, healed, at 142.5 ft. R=39 (broke)
145.2								Sl wx R=48 (broke)

LEGEND

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N - Denison

P - Pitcher

G - GEI

k - Coefficient of permeability

NOTES

1) Roller Bitted Rock 51.0-56.0 ft.

SEABROOK STATION

PUBLIC SERVICE COMPANY OF NEW HAMPSHIRE

YANKEE ATOMIC ELECTRIC COMPANY

united engineers & construction, inc.

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Date: August 6, 1975 Project 7286

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