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SEA FLOOR GEOTHERMAL MEASUREMENTS FROM VEMA CRUISE 24

by

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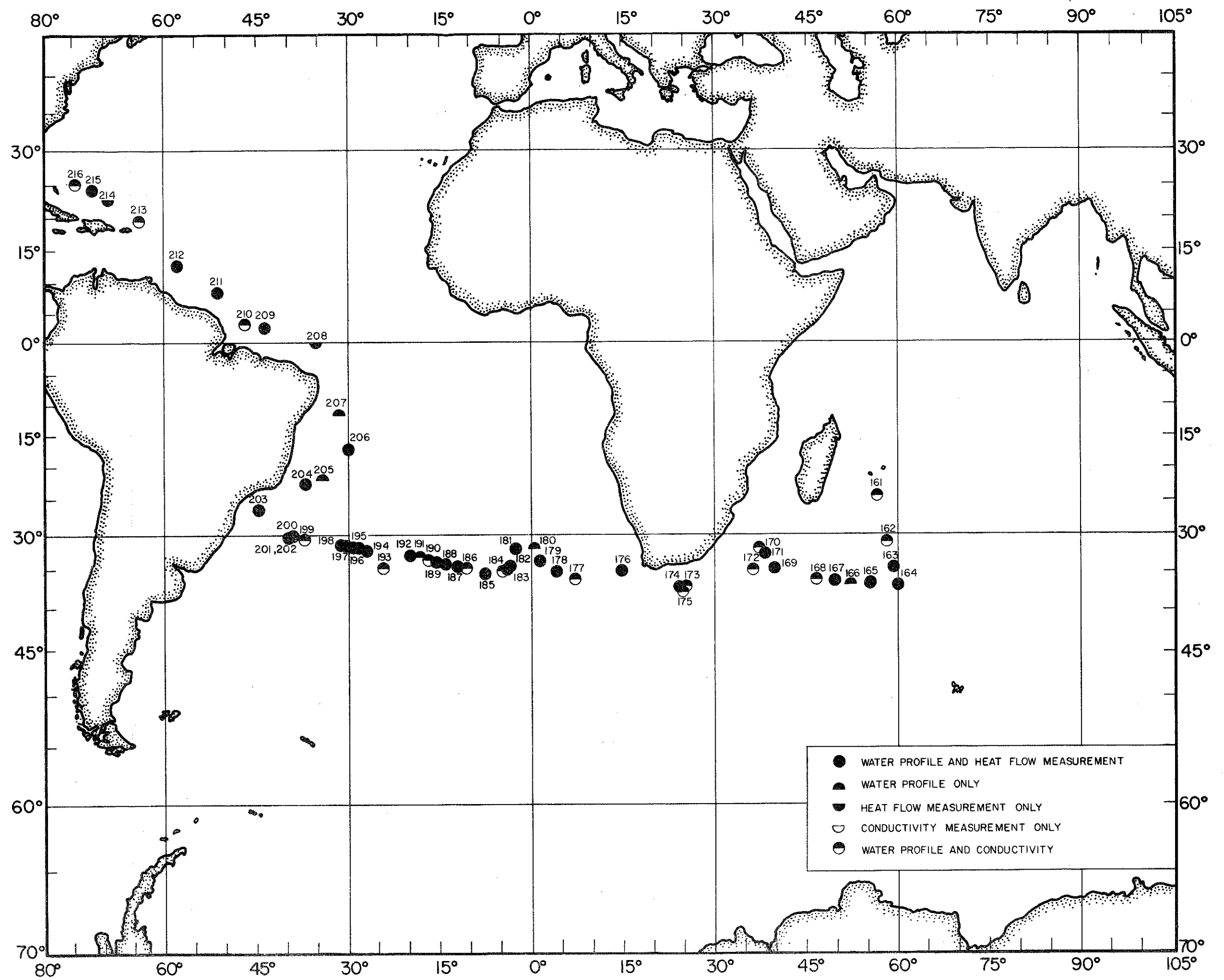
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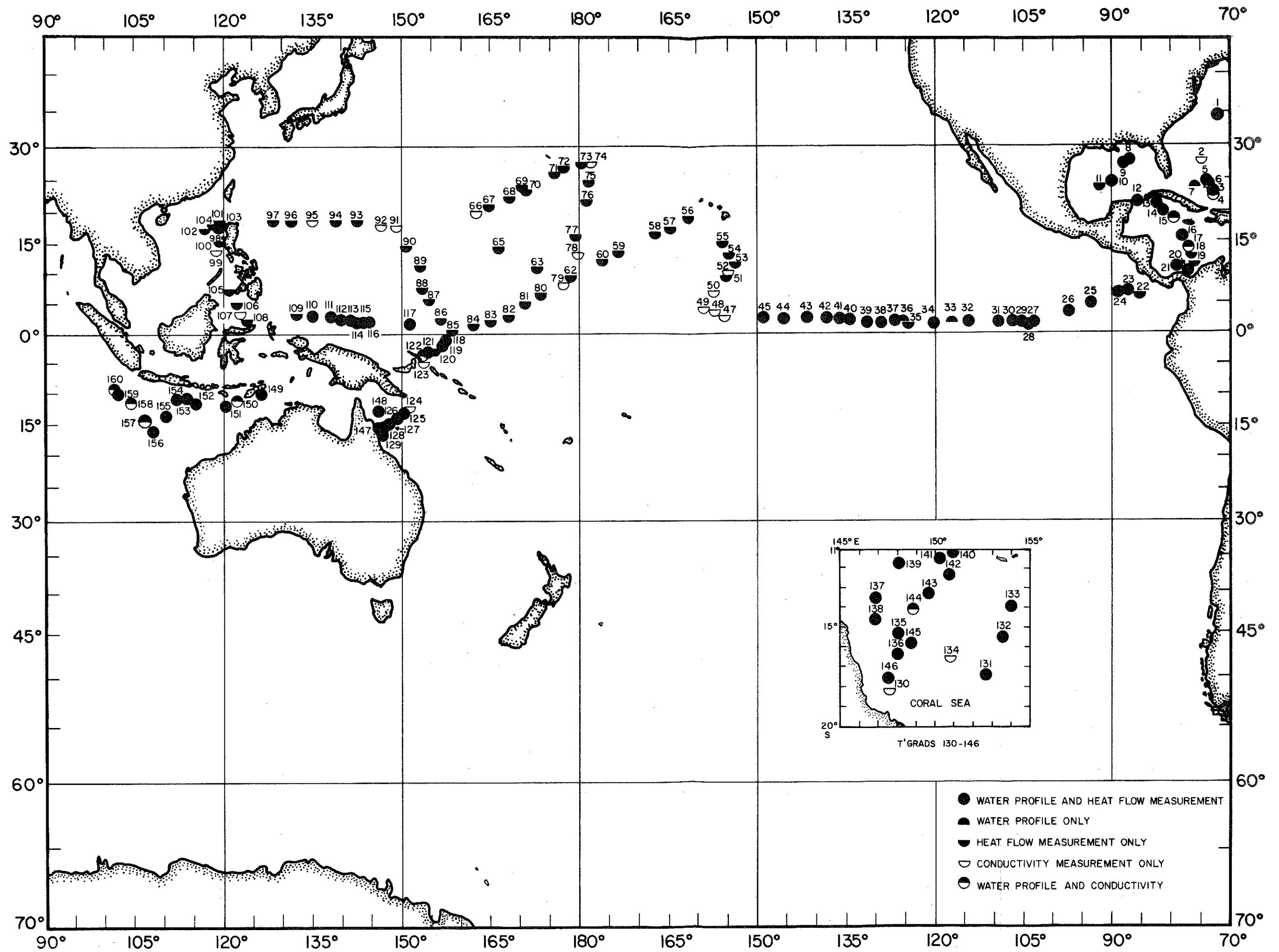
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## INTRODUCTION

This report gives results of temperature measurements in the deep-ocean water and sea-floor sediment, and results of conductivity measurements on sediment cores taken with the temperature measurements. These measurements were made on VEMA Cruise 24 that left New York City January 1967 and ended in Miami in December 1967. During this yearlong cruise, the VEMA circumnavigated the earth making observations in the three major world oceans. The principal objective of the measurements reported here is to determine the geothermal heat flux through the sea floor (see for example, Bullard, 1954). These measurements are also pertinent to studies of deep and near bottom water temperature in the ocean, as well as steady-state and transient thermal processes at the sediment-water interface. We have attempted, in this report, to present the data in form that is useful to scientists interested in the thermal regime of the deep ocean.

## INSTRUMENT TECHNIQUES

For a complete description of the instruments and techniques used to measure temperature and conductivity in the deep sea, see Gerard et al. (1960) and Langseth (1965). A summary of the measurement techniques is given below so that the reader can better assess the data.

The Ewing Thermograd: All of the temperature data reported was measured with the Ewing thermograd. This instrument uses an array of 3 to 5 thermistor probes mounted along a coring tube to measure sediment temperatures, a thermistor probe to measure water temperature, and a pressure

gauge to indicate the depth of the instrument in the water. The temperature and pressure are recorded on 70 mm film as analog traces. The recorder is placed inside of a pressure case that is secured inside the weight at the top of the piston corer.

Water Temperature Measurements: Water temperatures are measured during lowering and hoisting of the thermograd with a bead-type thermistor that is mounted in a watertight stainless steel probe. The diameter of the probe is about 1.25 mm and its length is 2.5 cm. The probe has a time constant of about 0.5 sec in flowing water. This probe is mounted on the pressure vessel. During lowering, the water probe points downward so that relatively undisturbed water is continually flowing past it. (Lowering rates vary from 100 to 200 meters/minute.) Upon hoisting, the probe is in the wake of the core weight. (Hoisting rates are usually 50 to 100 meters/minute.)

The water temperature trace on the 70 mm film record has a displacement of about 2.5 cm per degree centigrade, and the film record is read with a precision of about 0.1 mm. The water probe is calibrated prior to use at sea in a constant-temperature bath at 5 or 6 points with an absolute accuracy of  $\pm 0.05^\circ \text{C}$ . The relative accuracy of calibration between temperature points is about  $\pm 0.005^\circ \text{C}$ .

Instrument Depth Measurements: The depth of the instrument below the sea surface is measured by a pressure gauge. This gauge consists of a cavity exposed to the ambient sea pressure and surrounded by strain-sensitive wires. The linearity of the gauge is about 0.35%. The pressure detected

by the gauge is recorded as a separate trace on the 70 mm film record, which has a sensitivity of 1500 m per centimeter displacement. Thus the resolution of the record is about 15 m. Depths during lowering are found by a linear interpolation between the surface and bottom readings which results in an accuracy of depth measurement of about  $\pm 25$  m.

Sediment Temperatures: Temperatures at up to five points below the sediment-water interface are measured by means of thermistor probes mounted along the core tube. The thermistor is in the end of a stainless steel probe 0.317 cm in diameter. This probe is pressure proof and mounted on a steel fin so that it is held about 5 cm from the core tube. The probe itself is secured in a plastic (PVC) collar that provides thermal insulation from the fin. The tip of the probe projects about one inch beyond this collar.

To measure sediment temperatures the corer is lowered to within about a hundred meters of the bottom and held for a few minutes to allow the probes to equilibrate in the nearly isothermal near bottom water. The corer is then lowered until bottom contact is made. Upon contact, the corer free-falls about 10 ft., penetrating the sediment to depths up to 25 meters. The corer is left undisturbed in the sediment for about 5 minutes, while temperatures are recorded as the probes equilibrate with the sediment. The corer is then extracted from the sediment and hoisted back up to the ship.

The sediment probes are calibrated in the same way as the water probe

described earlier. Temperature gradients in the sediment, which are of prime interest, are determined by taking the difference between measurements in the water near the bottom and in the sediment after equilibration. Thus in determining gradients we depend only on the relative calibration accuracy which is  $\pm 0.005^\circ \text{C}$ .

Conductivity Measurements: Measurements of thermal conductivity are made on the sediment core samples aboard the research ship about one hour after the core has been extruded from the core tube. A thin probe is imbedded in the sediment and the temperature measured while the probe is heated at a constant rate. We use a probe about 6 cm in length and 0.8 mm in diameter that contains a 50  $\Omega$  heater wire and a thermistor. The probe is inserted into the 2 1/2" sediment sample at an angle of about  $45^\circ$  to the long axis of the core. Six volts is applied to the heater and the temperature rise is recorded on a Varian strip-chart recorder for about two minutes.

Reduction of thermograd and conductivity data: The trace displacements on the 70 mm thermograd film record are measured on a projected image of the film on the surface of a digitizing table. The magnification is about 4 times. The minimum digitizing increment of this table is 0.01". The digitized trace displacements corresponding to water and mud temperatures and instrument depth are entered on computer punch cards, which are converted into temperature versus depth information with an IBM 1130 computer.

The conductivity measurements are reduced by manually reading displacements from the strip chart records. Displacement versus resistance

calibration, made on board ship, and temperature versus resistance calibration of the thermistor are used to convert displacements into temperature. Readings are taken approximately every 10 seconds after the probe heater is turned on. These temperatures are then plotted versus the logarithm of time. The slope of these semi-log plots can be interpreted in terms of conductivity by means of the following relation.

$$K = \frac{Q \cdot \ln(t_2/t_1)}{4\pi (T_2 - T_1)}$$

where:

Q = the heater power per unit length in cal/cm sec

t<sub>2</sub> and t<sub>1</sub> are times after heater turn-on usually 10 and 100 seconds

T<sub>2</sub> and T<sub>1</sub> are temperatures at t<sub>1</sub> and t<sub>2</sub>.

#### PRESENTATION OF THE DATA:

Summary Table: The thermal data relevant to the geothermal heat flux is given for each station in Table 1.

The depths are given in corrected meters, determined by taking the depth indicated by the Precision Depth Recorder at the time of the core contact and correcting for the velocity of sound in water using Matthews (1969) tables.

The gradient refers to the vertical gradient in the sediment determined from temperature measurements in the sediment. Units are °C/10 m.

The listed conductivity value is the harmonic mean,  $N / \sum_{i=1}^N (1/X_i)$

where  $N$  is the total number of measurements and  $X_i$ 's are conductivity values, of all measurements within the interval of gradient measurement. Units are  $\text{mcal}/^\circ\text{C sec cm}$ .

Each conductivity measurement is followed by an "M" or "A" which indicates whether the value is based on measurements (M) or is assumed from nearby stations (A).

Heat flow is the product of the gradient and the conductivity. The units are  $\mu\text{cal}/\text{cm}^2\text{sec}$ .

The evaluation is a subjective index applied by the authors to indicate our appraisal of the reliability of the temperature and conductivity measurements. The numbers are interpreted in Table 2.

TABLE 1: VEMA 24 GEOTHERMAL DATA

Latitude	Longitude	Depth Meters	Gradient	Conduct.	Heat Flow	Eval.	T' Grad Number	Core Number	Year
<u>NORTH ATLANTIC</u>									
34° 26'N	71° 42'W	4569	0.41	2.48	1.02	3	1	2	1967
27° 46'N	74° 39'W	4726	-	2.11	-	0	2	4	1967
22° 42'N	72° 40'W	4776	0.32	2.07	0.66	5	3	10	1967
22° 47'N	72° 57'W	4783	-	2.32	-	0	4	11	1967
24° 39'N	73° 50'W	5327	-	2.14	-	0	5	12	1967
24° 44'N	73° 41'W	5321	-	2.18	-	0	6	13	1967
24° 44'N	73° 42'W	5343	-	-	-	0	7	14	1967
<u>CARIBBEAN</u>									
27° 28'N	86° 49'W	3027	0.49	2.01	0.98	6	8	19	1967
27° 17'N	87° 57'W	2652	0.21	2.18	0.46	8	9	20	1967
24° 23'N	90° 06'W	3642	0.39	2.31	0.90	8	10	21	1967
23° 35'N	92° 08'W	3740	0.90	2.20	1.98	9	11	22	1967
21° 27'N	85° 42'W	2078	0.52	2.71	1.40	7	12	23	1967
20° 45'N	82° 30'W	4454	0.55	2.42	1.33	10	13	24	1967
19° 57'N	81° 07'W	4155	0.59	2.39	1.41	8	14	25	1967
19° 02'N	80° 32'W	6976	-	2.58	-	0	15	26	1967
15° 19'N	77° 57'W	3618	1.00	2.52	2.52	5	16	28	1967
13° 50'N	77° 18'W	4038	-	2.89	-	0	17	29	1967
12° 26'N	76° 43'W	3742	0.48	2.74	1.32	8	18	30	1967
11° 12'N	76° 06'W	2707	0.39	2.67	1.01	8	19	32	1967
10° 00'N	77° 04'W	3131	0.58	2.77	1.61	7	20	33	1967
10° 40'N	79° 06'W	3539	0.73	2.17	1.58	7	21	34	1967

TABLE 1: (Continued) VEMA 24 GEOTHERMAL DATA

Latitude	Longitude	Depth Meters	Gradient	Conduct.	Heat Flow	Eval.	T' Grad Number	Core Number	Year
<u>EAST PACIFIC</u>									
6° 30'N	85° 13'W	1878	1.04	2.20	2.29	5	22	36	1967
6° 56'N	87° 21'W	3155	1.59	1.89	3.00	6	23	37	1967
6° 19'N	90° 37'W	3647	0.49	1.78	0.87	5	24	38	1967
4° 53'N	93° 34'W	3415	0.34	2.05	0.69	9	25	39	1967
3° 04'N	97° 08'W	3206	0.60	2.27	1.36	8	26	40	1967
1° 33'N	103° 02'W	3246	1.22	2.17	2.65	8	27	44	1967
1° 38'N	103° 56'W	3457	0.78	2.10	1.64	8	28	45	1967
1° 40'N	105° 09'W	3574	0.31	1.99	0.62	8	29	46	1967
1° 43'N	106° 54'W	3654	0.17	2.10	0.35	8	30	47	1967
1° 43'N	109° 20'W	3722	0.14	2.16	0.30	9	31	48	1967
1° 48'N	114° 32'W	3859	1.23	2.25	2.77	6	32	50	1967
1° 46'N	117° 12'W	4065	-	-	-	0	33	51a	1967
1° 40'N	120° 20'W	4412	0.20	2.04	0.41	8	34	51	1967
1° 54'N	124° 49'W	4702	0.37	2.19(A)	0.81	7	35	52b	1967
1° 54'N	125° 25'W	4600	-	-	-	0	36	52c	1967
1° 49'N	127° 00'W	4481	0.02	2.23	0.04	7	37	52	1967
1° 51'N	129° 01'W	4476	0.73	1.98	1.45	10	38	53	1967
1° 51'N	131° 42'W	4479	0.14	2.12	0.30	8	39	54	1967
2° 03'N	134° 38'W	4190	0.47	2.47	1.16	5	40	55	1967
2° 14'N	136° 15'W	4344	0.22	2.29	0.50	8	41	56	1967
2° 16'N	138° 36'W	4252	0.21	2.42	0.51	8	42	57	1967
2° 16'N	141° 40'W	4492	0.27	2.24	0.59	10	43	58	1967
2° 34'N	145° 32'W	4664	0.43	2.08	0.89	10	44	59	1967

TABLE 1: (Continued) VEMA 24 GEOTHERMAL DATA

Latitude	Longitude	Depth Meters	Gradient	Conduct.	Heat Flow	Eval.	T' Grad Number	Core Number	Year
<u>EAST PACIFIC (Continued)</u>									
2° 48'N	149° 00'W	4860	0.86	1.81	1.55	8	45	60	1967
3° 04'N	153° 35'W	4836	-	1.62	-	0	47	62	1967
3° 45'N	157° 07'W	4490	-	2.41	-	0	48	63	1967
4° 10'N	159° 04'W	3934	-	2.69	-	0	49	64	1967
6° 40'N	157° 32'W	4728	-	2.10	-	0	50	65	1967
9° 18'N	155° 37'W	5235	0.56	1.86	1.04	7	51	66	1967
10° 13'N	155° 01'W	5297	-	1.71	-	0	52	67	1967
11° 46'N	154° 02'W	5209	0.70	1.82	1.27	6	53	68	1967
13° 08'N	154° 32'W	5454	0.54	1.94	1.05	10	54	69	1967
14° 57'N	155° 18'W	3029	0.73	1.90	1.39	8	55	70	1967
<u>WEST PACIFIC</u>									
19° 18'N	161° 19'W	5092	1.28	2.00(A)	2.56	3	56	71	1967
17° 31'N	164° 41'W	5474	0.62	1.87	1.16	8	57	72	1967
16° 29'N	166° 47'W	5235	0.62	2.11	1.31	10	58	73	1967
13° 18'N	172° 55'W	5683	0.72	1.95	1.40	8	59	76	1967
12° 01'N	175° 37'W	5280	0.82	1.96	1.61	8	60	77	1967
9° 17'N	178° 57'E	5706	0.93	1.86	1.73	10	62	79	1967
10° 53'N	173° 03'E	5377	0.80	1.72	1.38	10	63	80	1967
14° 08'N	166° 48'E	5589	-	2.53	-	0	65	82	1967
19° 52'N	162° 58'E	4810	-	2.00	-	0	66	88	1967
20° 52'N	165° 07'E	5547	0.63	1.91	1.19	8	67	89	1967
22° 12'N	168° 02'E	5589	-	2.07	-	0	68	90	1967

TABLE 1: (Continued) VEMA 24 GEOTHERMAL DATA

Latitude	Longitude	Depth Meters	Gradient	Conduct.	Heat Flow	Eval.	T' Grad Number	Core Number	Year
WEST PACIFIC (Continued)									
23° 59'N	170° 52'E	5937	0.58	2.13	1.24	8	69	91	1967
23° 30'N	171° 15'E	5911	0.55	2.28	1.25	9	70	92	1967
25° 48'N	176° 13'E	5785	0.55	1.97	1.08	10	71	93	1967
26° 34'N	177° 46'E	5703	0.69	2.20(A)	1.52	8	72	94	1967
27° 36'N	179° 42'E	5288	0.58	2.12	1.23	10	73	95	1967
27° 46'N	177° 59'E	3305	-	2.27	-	0	74	96	1967
24° 48'N	178° 04'W	5449	0.61	2.14	1.31	10	75	97	1967
21° 47'N	178° 47'W	5445	0.74	2.10(A)	1.55	8	76	98	1967
16° 08'N	179° 44'E	5336	0.64	2.07	1.32	10	77	100	1967
13° 04'N	179° 55'E	3332	-	3.02	-	0	78	101	1967
8° 19'N	177° 26'E	5097	-	2.15	-	0	79	102	1967
6° 34'N	173° 30'E	4993	0.78	2.41	1.88	8	80	103	1967
4° 51'N	170° 55'E	4503	0.49	2.22	1.09	9	81	104	1967
2° 49'N	168° 11'E	4412	0.71	2.40(A)	1.70	8	82	105	1967
2° 04'N	164° 19'E	4163	0.49	2.50	1.22	9	83	107	1967
1° 13'N	162° 12'E	4115	0.46	2.78	1.28	10	84	108	1967
0° 26'N	158° 48'E	2350	0.40	2.75	1.10	10	85	109	1967
2° 20'N	156° 48'E	2614	0.36	3.14	1.13	7	86	110	1967
5° 38'N	155° 00'E	4042	0.47	3.04	1.43	8	87	111	1967
7° 56'N	153° 32'E	4966	0.69	2.23	1.54	7	88	112	1967
11° 19'N	153° 05'E	5862	0.58	2.03	1.18	10	89	113	1967
14° 42'N	150° 33'E	5999	0.50	2.17	1.08	8	90	114	1967
17° 54'N	149° 11'E	5547	-	2.24	-	0	91	115	1967
17° 55'N	146° 01'E	2683	-	2.33	-	0	92	116	1967

TABLE 1: (Continued) VEMA 24 GEOTHERMAL DATA

Latitude	Longitude	Depth Meters	Gradient	Conduct.	Heat	Eval.	T'Grad Number	Core Number	Year
<u>PHILIPPINE SEA</u>									
18° 36'N	142° 22'E	3702	0.49	2.06	1.01	9	93	117	1967
18° 42'N	138° 44'E	5125	0.44	2.03	0.89	8	94	118	1967
18° 39'N	135° 00'E	5631	-	2.42	-	0	95	119	1967
18° 31'N	131° 39'E	5946	0.60	2.36	1.42	10	96	120	1967
18° 30'N	128° 23'E	5432	1.06	2.38	2.54	9	97	121	1967
17° 23'N	119° 30'E	2947	0.35	2.87	1.00	8	98	123	1967
<u>SOUTH CHINA SEA</u>									
14° 00'N	118° 52'E	4068	-	2.11	-	0	99	124	1967
15° 30'N	119° 30'E	2332	1.13	2.48	2.80	4	100	125	1967
18° 18'N	119° 48'E	2465	0.49	2.40	1.16	7	101	130	1967
17° 33'N	117° 00'E	4177	-	3.40	-	3	102	131	1967
18° 47'N	119° 30'E	4181	-	3.19	-	3	103	132	1967
18° 33'N	118° 55'E	3962	-	2.28	-	3	104	133	1967
<u>SULU SEA</u>									
7° 21'N	120° 31'E	4201	1.08	2.04	2.21	8	105	135	1967
<u>CELEBES SEA</u>									
5° 17'N	122° 18'E	4512	0.92	1.96	1.80	10	106	136	1967
3° 47'N	122° 59'E	4993	-	2.10	-	0	107	137	1967
2° 42'N	123° 47'E	4836	0.55	2.01	1.11	4	108	138	1967
<u>CAROLINE BASIN</u>									
3° 31'N	132° 26'E	3353	0.23	2.21	0.51	8	109	139	1967

TABLE 1: (Continued) VEMA 24 GEOTHERMAL DATA

Latitude	Longitude	Depth Meters	Gradient	Conduct.	Heat Flow	Eval.	T'Grad Number	Core Number	Year
<u>CORAL SEA (Continued)</u>									
17° 22'S	152° 33'E	1326	0.55	2.69	1.48	9	131	162	1967
15° 27'S	153° 34'E	4660	0.82	2.31	1.89	10	132	163	1967
13° 52'S	153° 58'E	4513	0.81	2.12	1.72	10	133	164	1967
16° 31'S	150° 47'E	817	-	2.36	-	0	134	166	1967
15° 17'S	148° 03'E	1182	0.70	2.27	1.59	8	135	167	1967
16° 20'S	146° 52'E	1783	0.55	2.43	1.34	8	136	168	1967
13° 31'S	146° 53'E	2235	0.75	2.36	1.77	8	137	170	1967
14° 41'S	146° 49'E	1720	0.78	2.35	1.83	7	138	172	1967
11° 46'S	148° 06'E	3363	0.74	2.06	1.52	8	139	173	1967
11° 07'S	150° 52'E	993	0.38	2.21	0.84	6	140	174	1967
11° 25'S	150° 18'E	2635	0.74	2.01	1.25	8	141	175	1967
12° 14'S	150° 49'E	4420	0.66	2.20	1.45	7	142	176	1967
13° 12'S	149° 40'E	4515	0.71	2.54	1.80	8	143	177	1967
14° 06'S	148° 50'E	4008	-	2.05	-	0	144	178	1967
15° 49'S	148° 49'E	1053	0.69	2.34	1.62	8	145	179	1967
17° 31'S	147° 30'E	1368	0.67	2.28	1.53	5	146	182	1967
15° 20'S	146° 15'E	2206	0.94	2.26	2.12	9	147	183	1967
12° 52'S	146° 12'E	3001	0.66	2.40	1.58	8	148	184	1967
<u>TIMOR SEA</u>									
9° 38'S	126° 35'E	2708	0.80	2.04	1.63	9	149	185	1967
10° 53'S	122° 06'E	1284	-	2.46	-	0	150	186	1967
11° 43'S	120° 12'E	4312	0.65	2.44	1.59	8	151	187	1967

TABLE 1: (Continued) VEMA 24 GEOTHERMAL DATA

Latitude	Longitude	Depth Meters	Gradient	Conduct.	Heat Flow	Eval.	T' Grad Number	Core Number	Year
<u>CAROLINE BASIN (Continued)</u>									
3° 04'N	135° 33'E	4466	1.08	2.18(A)	2.35	7	110	140	1967
2° 52'N	138° 28'E	4388	1.12	2.15	2.41	10	111	141	1967
2° 30'N	139° 58'E	4221	1.10	2.04	2.24	9	112	142	1967
2° 04'N	141° 18'E	3192	0.95	2.23	2.12	10	113	143	1967
1° 53'N	142° 23'E	3168	0.92	2.42	2.23	8	114	144	1967
1° 49'N	143° 46'E	4291	1.30	2.03	2.64	10	115	145	1967
1° 50'N	144° 53'E	4529	0.11	2.05	0.23	10	116	146	1967
1° 40'N	151° 25'E	4920	0.69	2.09	1.44	10	117	147	1967
<u>SOLOMON PLATEAU</u>									
0° 50'S	157° 22'E	1908	0.36	2.36	0.85	7	118	148	1967
1° 41'S	156° 49'E	1661	0.37	2.37	0.88	7	119	149	1967
2° 11'S	155° 42'E	1851	0.39	2.54	0.98	7	120	150	1967
2° 25'S	154° 57'E	2594	0.38	2.31	0.88	7	121	151	1967
3° 18'S	153° 32'E	2416	-	2.55	-	0	122	152	1967
<u>CORAL SEA</u>									
4° 30'S	153° 28'E	4113	-	2.68	-	0	123	153	1967
12° 03'S	151° 14'E	4236	-	2.24	-	0	124	154	1967
12° 52'S	150° 12'E	4562	0.66	2.34	1.55	6	125	155	1967
13° 49'S	149° 04'E	4519	0.74	2.43	1.80	9	126	156	1967
14° 57'S	147° 55'E	1214	0.66	2.42	1.59	7	127	157	1967
15° 15'S	146° 51'E	1756	0.95	2.51	2.38	6	128	158	1967
16° 33'S	146° 24'E	1405	0.89	2.49	2.22	7	129	159	1967
18° 07'S	147° 36'E	1010	-	2.53	-	0	130	160	1967

TABLE 1: (Continued) VEMA 24 GEOTHERMAL DATA

Latitude	Longitude	Depth Meters	Gradient	Conduct.	Heat Flow	Eval.	T' Grad Number	Core Number	Year
<u>JAVA TRENCH</u>									
11° 18'S	115° 40'E	6949	0.41	2.00	0.82	10	152	188	1967
10° 15'S	113° 56'E	3623	0.21	1.75	0.38	7	153	189	1967
10° 28'S	112° 08'E	4060	0.47	1.85	0.87	10	154	190	1967
<u>INDIAN OCEAN</u>									
13° 29'S	110° 26'E	5354	0.67	1.82	1.22	10	155	191	1967
16° 02'S	108° 08'E	5376	0.63	1.98	1.25	4	156	192	1967
14° 07'S	106° 32'E	4609	-	1.79	-	0	157	193	1967
11° 09'S	104° 21'E	5262	-	1.94	-	0	158	194	1967
9° 38'S	102° 34'E	5495	0.78	1.74	1.36	7	159	195	1967
9° 11'S	102° 00'E	5440	-	1.69	-	0	160	196	1967
24° 28'S	56° 37'E	4685	-	1.88	-	0	161	199	1967
30° 55'S	58° 10'E	2919	-	2.62	-	0	162	201	1967
34° 21'S	59° 13'E	5532	0.88	1.74	1.53	10	163	202	1967
36° 59'S	59° 59'E	4998	0.91	1.66	1.51	10	164	203	1967
36° 50'S	55° 17'E	4453	0.14	1.76	0.24	9	165	204	1967
36° 51'S	52° 17'E	5577	-	-	-	0	166	205	1967
36° 30'S	49° 34'E	3356	0.28	2.25	0.63	7	167	206	1967
36° 18'S	46° 13'E	3447	-	2.53	-	0	168	207	1967
34° 45'S	39° 44'E	5165	0.57	2.30	1.31	8	169	209	1967
31° 52'S	37° 13'E	4953	-	2.15	-	0	170	210	1967
32° 37'S	38° 05'E	5176	0.54	2.19	1.18	7	171	211	1967
34° 39'S	36° 24'E	5130	-	2.09	-	0	172	212	1967
36° 59'S	25° 07'E	3786	-	2.57	-	0	173	213	1967

TABLE 1: (Continued) VEMA 24 GEOTHERMAL DATA

Latitude	Longitude	Depth Meters	Gradient	Conduct.	Heat Flow	Eval.	T'Grad Number	Core Number	Year
<u>INDIAN OCEAN (Continued)</u>									
37° 07'S	24° 06'E	3702	-	2.82	-	6	174	215	1967
37° 19'S	24° 46'E	3706	-	2.39	-	0	175	216	1967
<u>ATLANTIC OCEAN</u>									
34° 34'S	14° 39'E	4521	0.49	2.38	1.17	7	176	217	1967
35° 58'S	7° 09'E	5055	-	1.83	-	0	177	218	1967
34° 51'S	4° 09'E	5169	0.67	1.84	1.23	10	178	219	1967
33° 06'S	1° 29'E	2681	0.15	2.88	0.45	5	179	220	1967
32° 11'S	0° 21'W	2369	-	-	-	0	180	221A	1967
32° 02'S	2° 49'W	4166	0.36	2.73	0.98	10	181	221	1967
34° 13'S	3° 12'W	3937	0.64	2.51	1.60	7	182	222	1967
34° 12'S	3° 29'W	3255	0.38	2.73	1.04	8	183	223	1967
34° 12'S	3° 51'W	2461	-	2.38	-	0	184	224	1967
34° 56'S	7° 48'W	4087	0.60	1.94	1.17	7	185	228	1967
34° 27'S	10° 36'W	4202	-	2.91	-	0	186	229	1967
34° 13'S	11° 59'W	3545	0.44	2.55	1.17	7	187	230	1967
33° 57'S	13° 50'W	3435	1.72	3.03	5.20	5	188	231	1967
33° 46'S	15° 07'W	3129	1.36	2.50(A)	3.40	6	189	232	1967
33° 32'S	16° 42'W	3228	-	2.42	-	0	190	233	1967
33° 22'S	17° 56'W	3268	-	-	-	0	191	234	1967
33° 15'S	19° 33'W	3737	0.82	2.11	1.73	5	192	235	1967
34° 42'S	24° 05'W	4085	-	2.30	-	0	193	236	1967
32° 12'S	26° 44'S	4182	0.99	2.13	2.11	8	194	237	1967
31° 47'S	29° 00'W	3590	0.98	2.14	2.10	9	195	238	1967

TABLE 1: (Continued) VEMA 24 GEOTHERMAL DATA

Latitude	Longitude	Depth Meters	Gradient	Conduct.	Heat Flow	Eval.	T'Grad Number	Core Number	Year
ATLANTIC OCEAN (Continued)									
31° 44'S	28° 12'W	4327	0.66	1.87	1.23	8	196	240	1967
31° 38'S	30° 16'W	3946	0.66	1.96	1.29	10	197	241	1967
31° 32'S	30° 51'W	4089	0.58	1.92	1.11	10	198	242	1967
30° 39'S	36° 59'W	2094	-	1.79	-	0	199	248	1967
30° 07'S	38° 59'W	4186	0.63	1.64	1.03	10	200	249	1967
30° 11'S	39° 22'W	4808	0.61	1.49	0.91	8	201	250	1967
30° 08'S	39° 28'W	3994	-	1.55	-	0	202	251	1967
25° 57'S	44° 41'W	2069	0.51	1.98	1.01	4	203	253	1967
22° 58'S	36° 43'W	3847	0.47	2.65	1.25	5	204	254	1967
22° 30'S	33° 50'W	4942	-	-	-	0	205	255	1967
17° 32'S	29° 53'W	4898	0.70	2.50(A)	1.75	8	206	256A	1967
12° 00'S	31° 30'W	4786	-	-	-	0	207	256	1967
00° 04'N	35° 03'W	4463	0.60	1.88	1.13	10	208	257	1967
2° 21'N	43° 18'W	4255	0.61	1.94	1.19	9	209	258	1967
3° 07'N	46° 08'W	3404	-	2.05	-	0	210	259	1967
8° 02'N	51° 06'W	4470	0.65	2.50(A)	1.65	6	211	260A	1967
12° 24'N	57° 31'W	4215	-	2.86	-	4	212	260	1967
19° 45'N	64° 38'W	7427	-	1.98	-	0	213	261	1967
22° 31'N	68° 58'W	5504	0.75	2.13	1.60	10	214	262	1967
24° 21'N	71° 34'W	5524	0.29	2.99	0.87	6	215	263	1967
24° 52'N	73° 49'W	5347	-	2.29	-	0	216	264	1967

TABLE 2: DEFINITION OF EVALUATION INDEX

Index	Estimated Error Range	Reliability	Remarks (Typical Diagnostics)
9-10	5-10%	High	Three or more sediment temps.
7-8	10-15%	Good	Only two probes in sediment. Conductivity may be assumed.
5-6	15-50%	Fair	Corer moved in sediment. Apparent shunting of thermistors.
4	>30%	Poor	Only one probe in sediment.
<3	-	Unacceptable	

Listings of the Data: Individual listings of the temperature and depth data are given for each station. Depths and corresponding in situ and potential temperatures (computed from Wüst, 1961) are given. At some stations malfunction of either the water probe or pressure gauge obviated any measurement, in such cases the listing of water temperatures is omitted.

Sediment conductivity values are listed with the depth of measurement in the sediment. Conductivity values followed by an "F" are measurements made in sediment sucked into the pipe by the piston after full penetration was reached. This sediment, "flow-in," is highly disturbed and measurements in it should not be used in calculating heat-flow values.

Plots of Geothermal Data: The listed data for each station is presented graphically on the page adjacent to the listing. A note about the conductivity presentation: each value is printed out at a depth corresponding to the distance from the top of the core to the point of measurement. This usually represents the true depth in the sediment within  $\pm 10$  cm.

## NOTES ON VEMA 24 GEOTHERMAL DATA

For convenience we have divided the large number of stations reported here into several regions for the purposes of description. This brief description of the data is intended to point out special features of the data which we feel may be of interest and also to comment on the general reliability of the measurements at various points during the cruise. During the yearlong cruise, the operation of the instrument varied considerably due to failure of specific components or repairs and improvements made on the instrument. On the two figures presented in the frontispiece notice that the type of measurements made at each station are indicated by coded symbols. Note for example in the Pacific that no water profiles were taken between stations 47 and 109. During this time the pressure gauge which measures the instrument depth in the water was broken, preventing the required water depth measurements. The data will be described more or less chronologically as the cruise proceeded from one region of the ocean to the next.

Northwest Atlantic: Stations 1 thru 7 were made along the continental margin of the United States. Most of the measurements in the sediment were unreliable and the heat flow values obtained are considered to have large errors. The conductivity measurements obtained are of good quality and are reliable. The water profiles which were obtained are also reliable. There is a very interesting thin layer of cold water corresponding to the Antarctic Bottom Water; seen in the water profiles of stations 5, 6 and 7.

Gulf of Mexico and the Caribbean: Stations numbers 8 through 21 were taken in the Gulf of Mexico and in the western Caribbean. These results have been published in a recent paper by Epp et al. (1970). In some places there are differences between the data presented here and the data as listed in that paper. This difference results from the fact that the gradient values used to measure heat flow in the paper by Epp et al. were determined using the two deepest temperature measurements in the sediment, whereas in this report the gradient is determined between the two points with the greatest separation in the sediment. In terms of heat flow measurement this series of stations is generally reliable, however the water temperature profiles are not very reliable because the water temperature data channel was very near the top of its range. One very interesting profile showing the nearly adiabatic gradient in the Caribbean is seen at station 15. The heat flow values determined are generally uniform, relatively low values were observed in the Gulf of Mexico and a single high value at station 16 was observed on the Nicaragua Rise, however this value is not considered to be very reliable.

The Eastern Equatorial Pacific: Stations numbers 22 through 55 form a chain of generally reliable heat flow measurements across the equatorial east Pacific from Panama to Hawaii. The heat flow values determined at these stations were used in a compilation of world heat flow data by Langseth and Von Herzen (1971). The heat flow values determined are highly variable. Two very high values (numbers 22 and 23) were observed in the Gulf of Panama, a broad region of generally high heat flow.

Stations 25 through 29 show anomalous temperature profiles in the

sediment, which have a temperature gradient in the upper 5 m, nearly twice that in the lower 5 m. Since the conductivities at these stations are generally uniform with depth, this implies a variation in the heat flux with depth in the sediment. The cause of this nonsteady-state heat flow is not known. Stations 24 through 44 form a long profile over the East Pacific Rise. The values of heat flow obtained are predominantly low, however, they are mixed with isolated values of high heat flow.

From station 47 to station 55 difficulties with the sediment thermistor probes lead to results of low reliability, however the conductivity measurements made at these stations are good and show interesting regional variability. The cores taken in conjunction with stations 27 through 45 are along thick lens of sediment associated with the equatorial high biological productivity zone. The measurements of conductivity on these cores yield higher than normal values and also show considerable variability with depth.

Western Pacific: Stations 56 through 92 are in the central western Pacific and as noted before no water temperature profiles were obtained, but the gradient measurements in the sea floor sediment are considered reliable. The heat flows determined from these measurements are generally uniform; in accord with other measurements in the western Pacific which show it has a remarkably uniform heat flow; however in some areas the conductivity measurements on sediment are relatively high, values 50% higher than the average thermal conductivity of sea floor sediment (about  $2 \times 10^{-3}$  cal cm °C sec) were observed. Stations 92 to 97 form a short profile across the Philippine Sea Basin. Like most of the measurements in the Philippine Sea, the heat flows determined are highly variable. A few

observations were also made in the South China Sea. A single high value was observed in the Sulu Sea and two normal values, stations 106 and 108, were observed in the Celebes Sea. A closely spaced east-west line across the Caroline Basin showed the western part of this basin to be a broad region of uniformly high heat flow. Heat flows at stations 116 and 117 however showed low values and suggest that the boundary of high heat flow in the western part of the basin is sharply delineated and that values to the east may be low. Stations 90 through 116 will be published in Epp et al. (in preparation). Another line of stations, 118 through 122, were made on the Solomon Plateau. These usually indicate normal to somewhat below normal heat flow values.

The Coral Sea: Stations 123 through 148 were made largely in the Coral Sea north and east of Australia. The location of these measurements is more clearly shown in the inset. The average of these heat flow values is somewhat above the world average of 1.5 and the heat flow is relatively uniform over the Coral Sea Basin. As in the Caribbean, the water temperature profiles measured in the Coral Sea are generally low reliability due to the fact that the water temperature measuring channel was near the top of its range.

The Indian Ocean: Stations 149 through 160 are made in the eastern Indian Ocean south of the islands of Java and Sumatra. Stations 152 through 154 were made in and near the Java Trench. Station 152 is made in the floor of the trench. Note that all three of these stations have relatively low heat flow values. The water temperature profile for

station 152 in the trench is also interesting, showing an adiabatic increase of temperature with depth.

Southwestern Indian Ocean: Station numbers 161 through 175 were made on a leg of the cruise from Mauritius Island in the central Indian Ocean to Cape Town, South Africa. Stations 161 through 168 are in close vicinity to the southwest branch of the mid-Indian Ocean Ridge. Note that stations 165 through 167 show low heat flow values near the axis in accord with earlier results which showed the flanks of this ridge to have predominantly low heat flow. Stations 169 through 172 are made in the Madagascar Basin. Note in the water temperature profiles at these stations that there are very steep temperature gradients in the lower 2000 m giving evidence of the relatively strong currents which flow in this basin. Stations 172 through 175 have no sediment temperature measurements but the water temperature profiles are reliable. Note in the water profile in station 175 a thin layer of cold water right at the bottom.

The South Atlantic: Stations 176 through 203 form a relatively high density profile across the mid-Atlantic Ridge axis at about 33° S. Stations 176 through 178 were taken south of the Walvis Ridge and the water temperature profile show very clearly a thick layer of cold Antarctic bottom water in the basin. Stations 179 through 184 are on or near the crest of the Walvis Ridge. Considerable difficulty was experienced in measuring sediment temperatures at stations on the ridge, and earlier evidence (see for example Langseth *et al.*, 1966) indicated that large temperature fluctuations may cause transient heat flow in the near surface sediment on this ridge.

Stations 188 and 189 are taken right at the axis of the Mid-Atlantic Ridge and both show higher than normal values. The stations on the flank, stations 190 through 194 show average to normal heat flow. A line of very closely spaced stations were made in the eastern part of the Argentine Basin. These stations show heat flow that is quite uniform and very near normal; the water temperature profile for these stations clearly show the steep gradient in temperature between 3500 and 4400 meters that characterizes the upper boundary of the Antarctic bottom water.

Eastern Margin of South America: Leaving Brazil the VEMA followed a track just to the east of the continental margin. Heat flow measurements made along this track show nearly normal heat flow. Water temperature profiles again show the effects of Antarctic bottom water with steep gradients appearing on stations 204 through 206 and 207 and 209. In the past these steep gradients have been associated with transient heat flow in the near surface sediment; perhaps reflecting current induced movement in the bottom water. On the last part of the trip into Miami a very interesting water temperature profile was measured in the Puerto Rico Trench showing an adiabatic water column to the bottom.

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Chief scientists during the VEMA 24 Cruise were J. Lamar Worzel, George Bryan, William Ludwig, Robert Houtz, Thomas Aitken, and Robert Gerard. The measurements throughout the cruise were made by Lawrence Sullivan. H. C. Kohler, Captain of the VEMA, as usual made an important contribution to the success of the scientific program of the cruise.

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## TGRAD STATION V24 1

## WATER TEMPERATURES

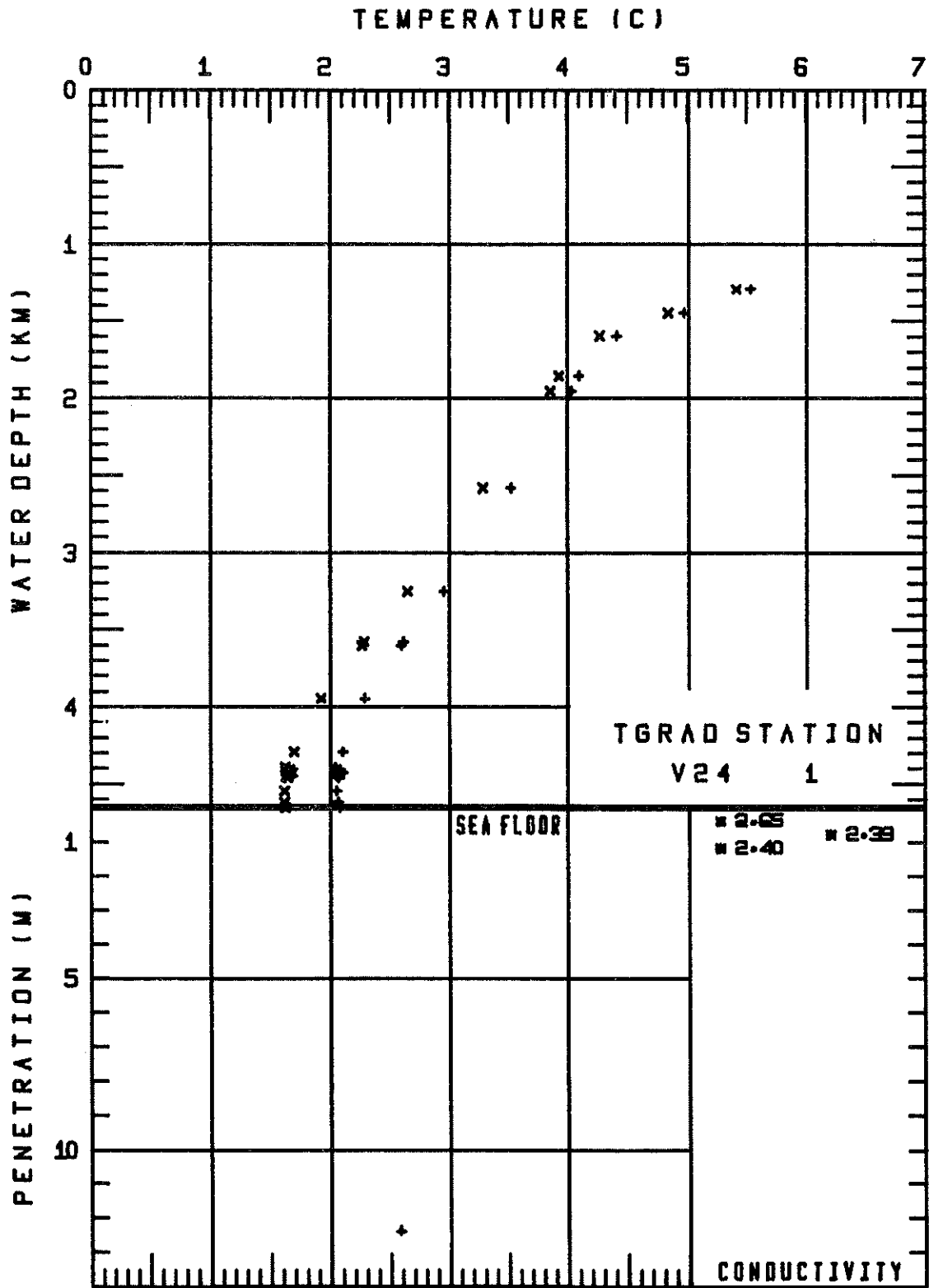
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1290.	5.53	5.40
1446.	4.97	4.83
1596.	4.41	4.27
1854.	4.09	3.93
1956.	4.03	3.86
2579.	3.52	3.29
3249.	2.95	2.65
3603.	2.60	2.26
3574.	2.61	2.28
3941.	2.29	1.92
4287.	2.10	1.70
4443.	2.06	1.64
4442.	2.05	1.63
4455.	2.07	1.64
4416.	2.06	1.64
4389.	2.03	1.62
4425.	2.10	1.68
4429.	2.08	1.66
4403.	2.08	1.66
4413.	2.07	1.65
4414.	2.04	1.62
4542.	2.05	1.61
4617.	2.06	1.61
4651.	2.07	1.62

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
12.37	2.58

## SEDIMENT CONDUCTIVITIES

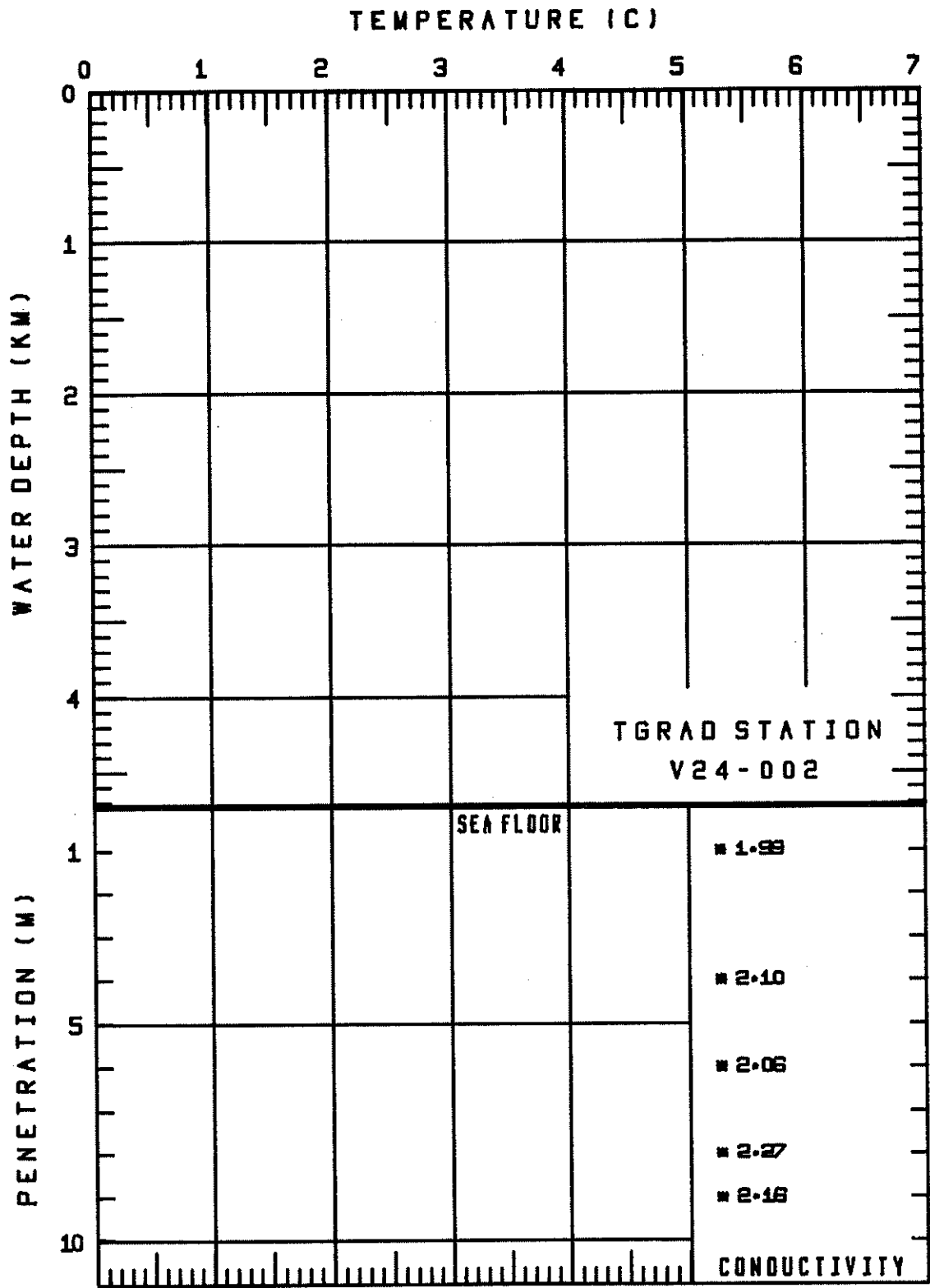
DEPTH	CONDUCTIVITY
0.40	2.65
0.80	2.39
1.20	2.40



## TGRAD STATIONV24-002

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.99
4.00	2.10
6.00	2.06
8.00	2.27
9.00	2.16



## TGRAD STATION V24 3

## WATER TEMPERATURES

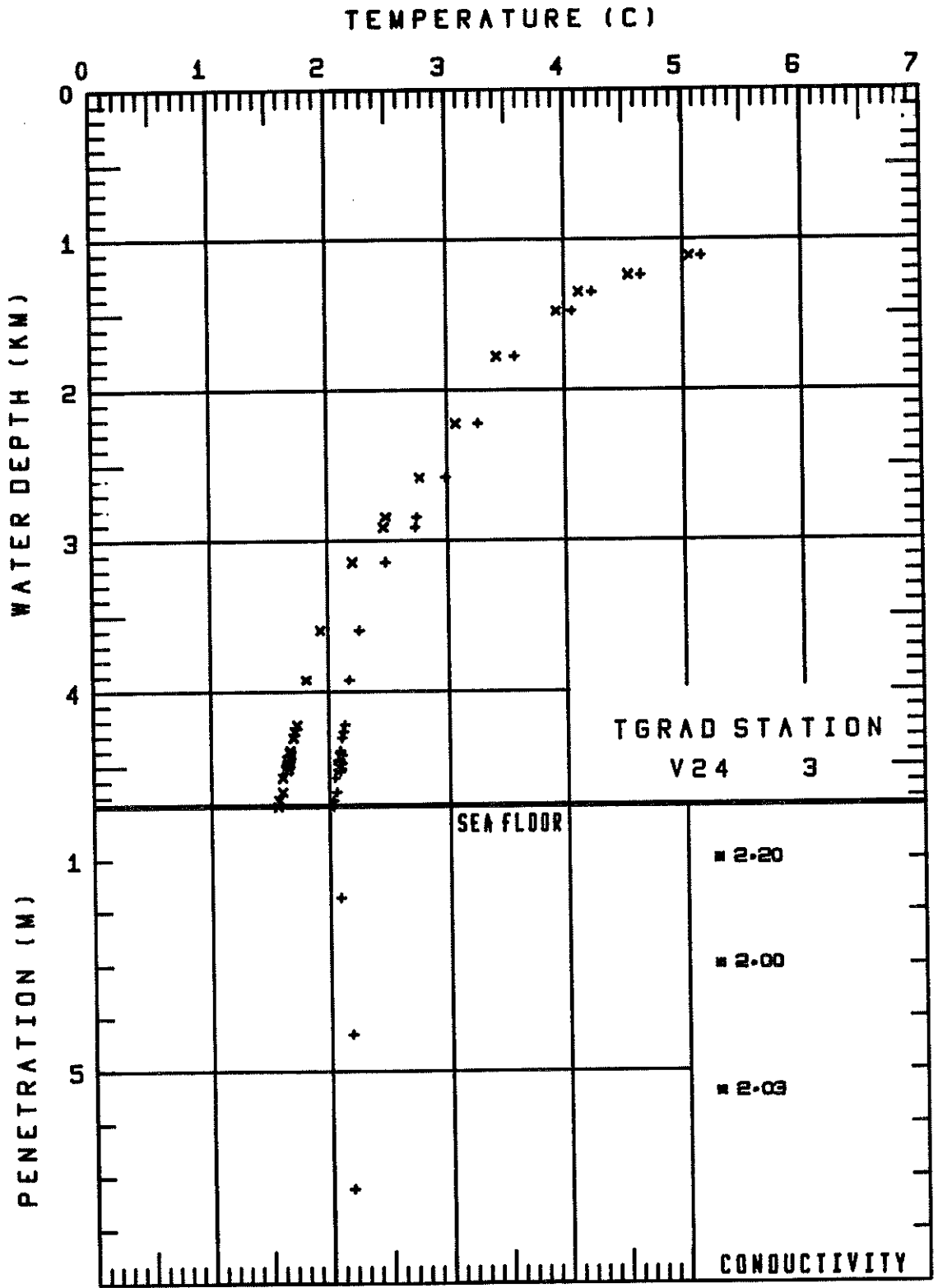
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1113.	5.16	5.06
1238.	4.65	4.54
1347.	4.23	4.12
1478.	4.06	3.93
1778.	3.57	3.42
2223.	3.26	3.07
2583.	2.99	2.76
2908.	2.73	2.47
2842.	2.74	2.49
3140.	2.48	2.21
3590.	2.26	1.94
3921.	2.17	1.81
4221.	2.13	1.73
4265.	2.12	1.72
4303.	2.11	1.70
4517.	2.07	1.64
4512.	2.10	1.66
4529.	2.09	1.65
4512.	2.09	1.66
4479.	2.07	1.64
4447.	2.08	1.65
4480.	2.09	1.66
4474.	2.10	1.67
4472.	2.10	1.67
4455.	2.09	1.66
4417.	2.10	1.68
4403.	2.09	1.67
4392.	2.09	1.68
4442.	2.09	1.67
4569.	2.05	1.61
4664.	2.06	1.60
4719.	2.03	1.57
4760.	2.03	1.56

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
1.73	2.09
4.31	2.17
7.21	2.17

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.20
3.00	2.00
5.40	2.03



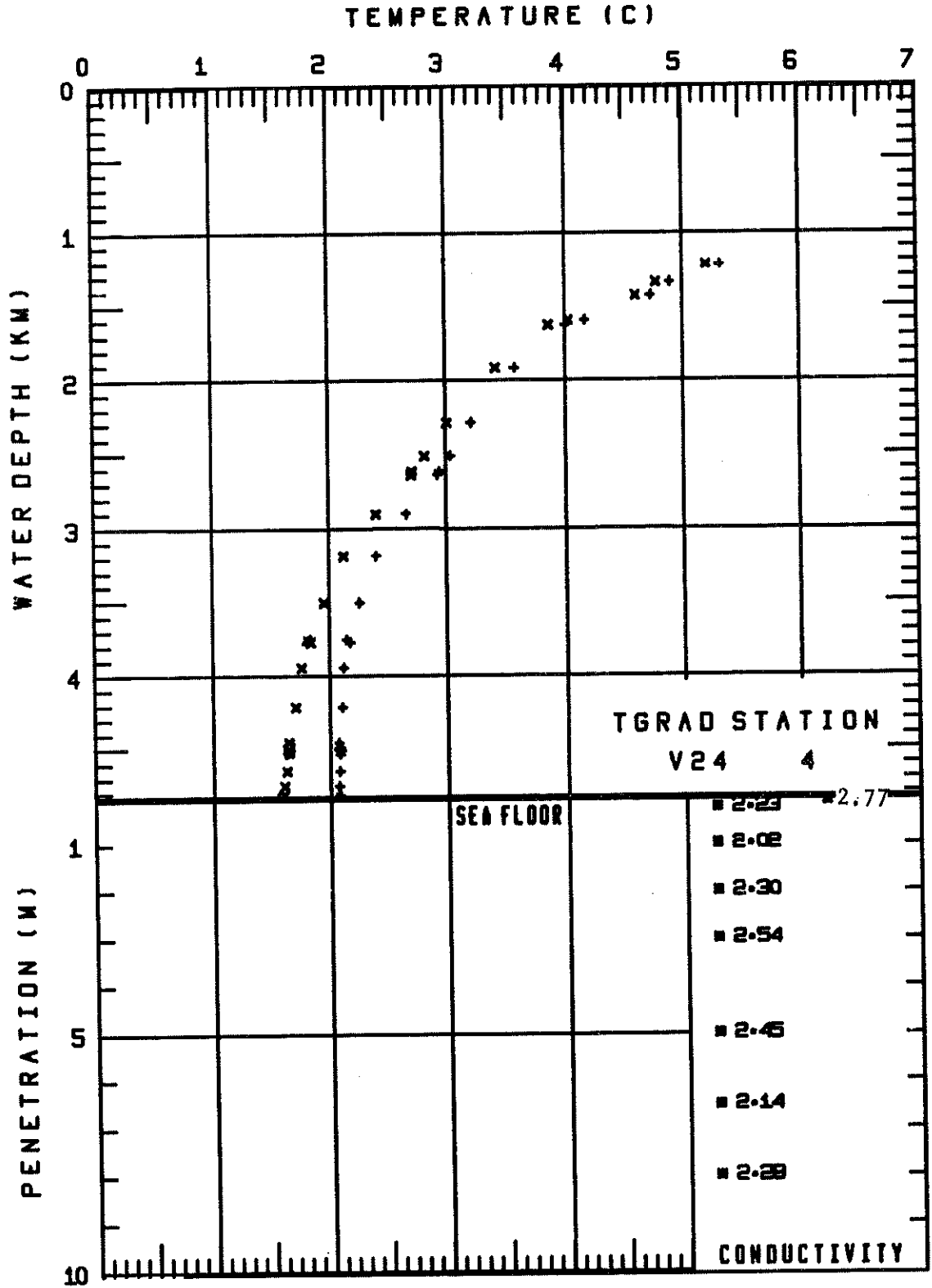
## TGRAD STATION V24-004

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1223.	5.33	5.21
1342.	4.90	4.78
1433.	4.74	4.60
1596.	4.17	4.03
1630.	4.01	3.87
1918.	3.58	3.42
2289.	3.21	3.01
2513.	3.04	2.82
2645.	2.94	2.70
2615.	2.94	2.72
2907.	2.66	2.41
3189.	2.41	2.13
3506.	2.26	1.95
3772.	2.18	1.84
3756.	2.14	1.81
3948.	2.12	1.76
4216.	2.10	1.71
4485.	2.08	1.65
4511.	2.08	1.65
4498.	2.06	1.63
4454.	2.07	1.65
4530.	2.08	1.65
4489.	2.08	1.65
4647.	2.08	1.63
4748.	2.08	1.61
4811.	2.08	1.60
4825.	2.06	1.58

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
0.10	2.77
0.24	2.23
1.00	2.02
2.00	2.30
3.00	2.54
5.00	2.45
6.50	2.14
8.00	2.28



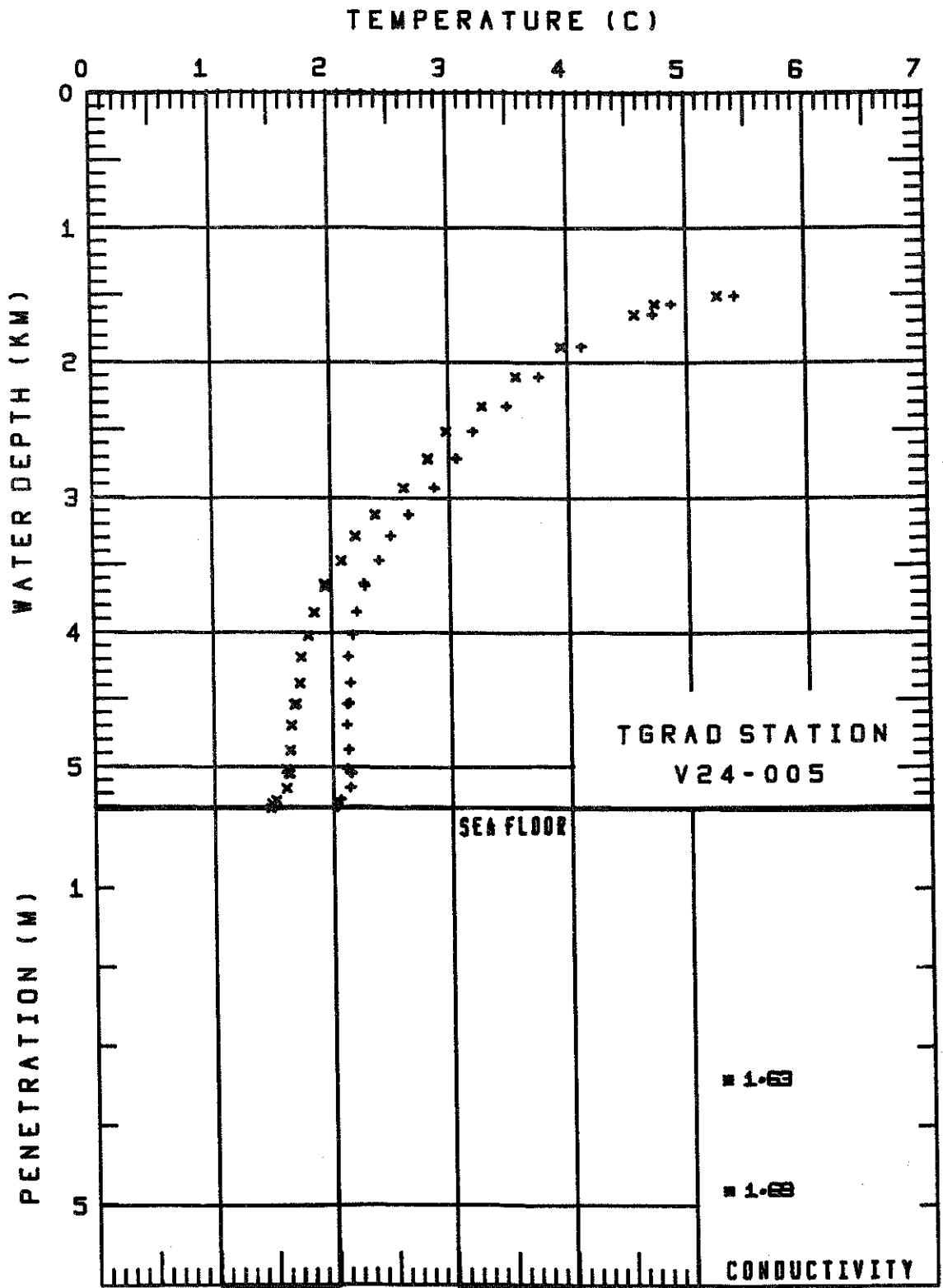
## TGRAD STATION V24-005

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1505.	5.40	5.26
1567.	4.88	4.74
1647.	4.72	4.57
1881.	4.12	3.95
2106.	3.76	3.57
2322.	3.49	3.28
2512.	3.20	2.98
2709.	3.06	2.82
2716.	3.07	2.82
2932.	2.88	2.61
3130.	2.65	2.37
3292.	2.50	2.21
3472.	2.40	2.08
3645.	2.28	1.95
3659.	2.28	1.95
3855.	2.21	1.85
4027.	2.17	1.80
4187.	2.13	1.74
4381.	2.14	1.73
4530.	2.13	1.69
4537.	2.12	1.68
4694.	2.11	1.65
4878.	2.13	1.64
5050.	2.14	1.63
5039.	2.13	1.62
5017.	2.11	1.61
5051.	2.14	1.63
5161.	2.13	1.61
5245.	2.05	1.52
5277.	2.02	1.49
5305.	2.02	1.47

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
3.40	1.63
4.80	1.69



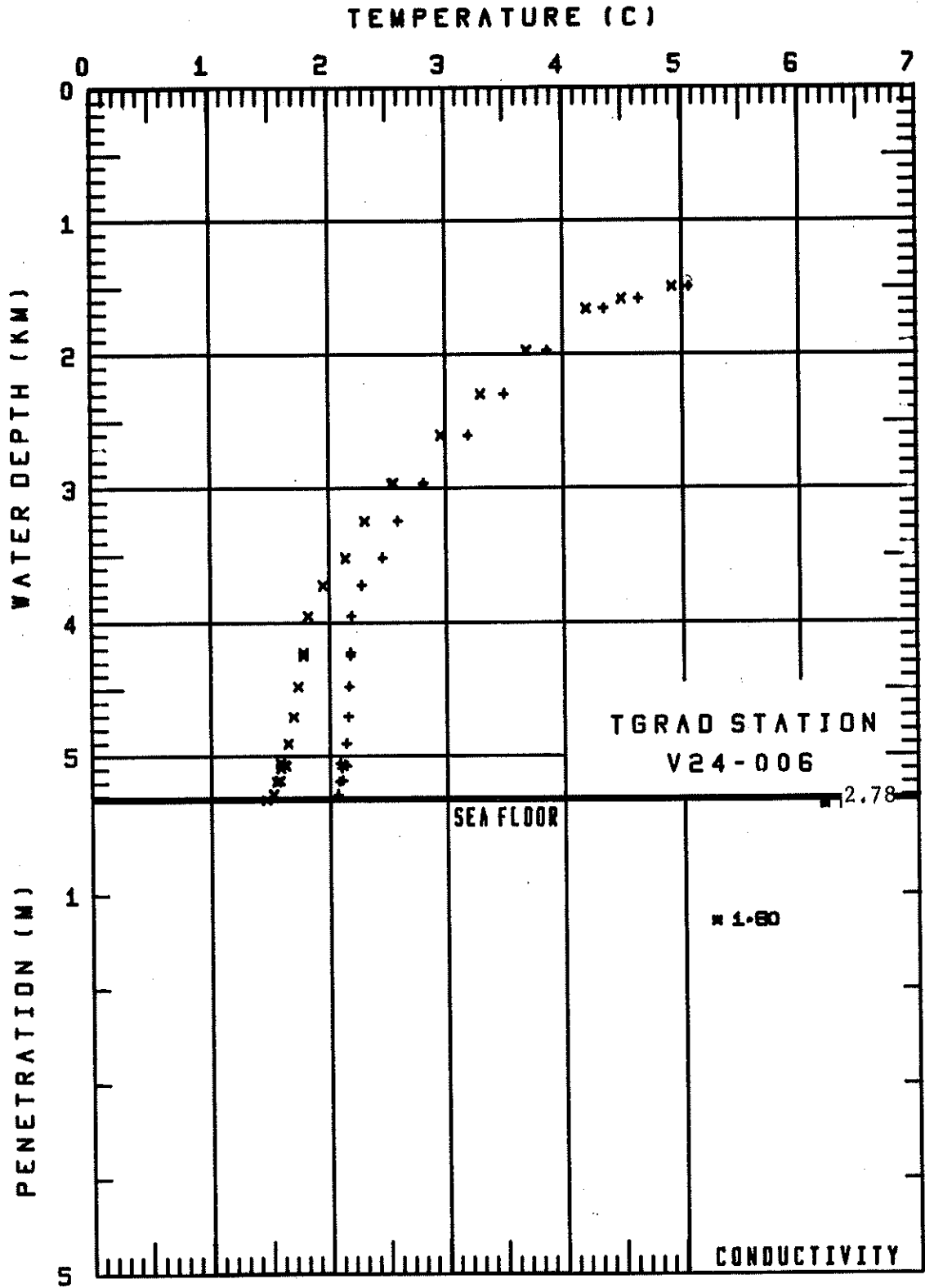
## TGRAD STATION V24-006

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1492.	5.06	4.92
1577.	4.64	4.50
1653.	4.35	4.20
1969.	3.87	3.69
2293.	3.50	3.30
2603.	3.19	2.96
2965.	2.81	2.54
2959.	2.81	2.55
3243.	2.60	2.30
3521.	2.46	2.14
3719.	2.28	1.94
3953.	2.19	1.82
4244.	2.18	1.78
4222.	2.18	1.78
4476.	2.17	1.73
4705.	2.16	1.70
4905.	2.14	1.65
5065.	2.13	1.61
5066.	2.14	1.63
5064.	2.13	1.61
5087.	2.10	1.58
5049.	2.09	1.58
5178.	2.10	1.57
5187.	2.08	1.55
5279.	2.06	1.52
5323.	2.01	1.46

## SEDIMENT CONDUCTIVITIES

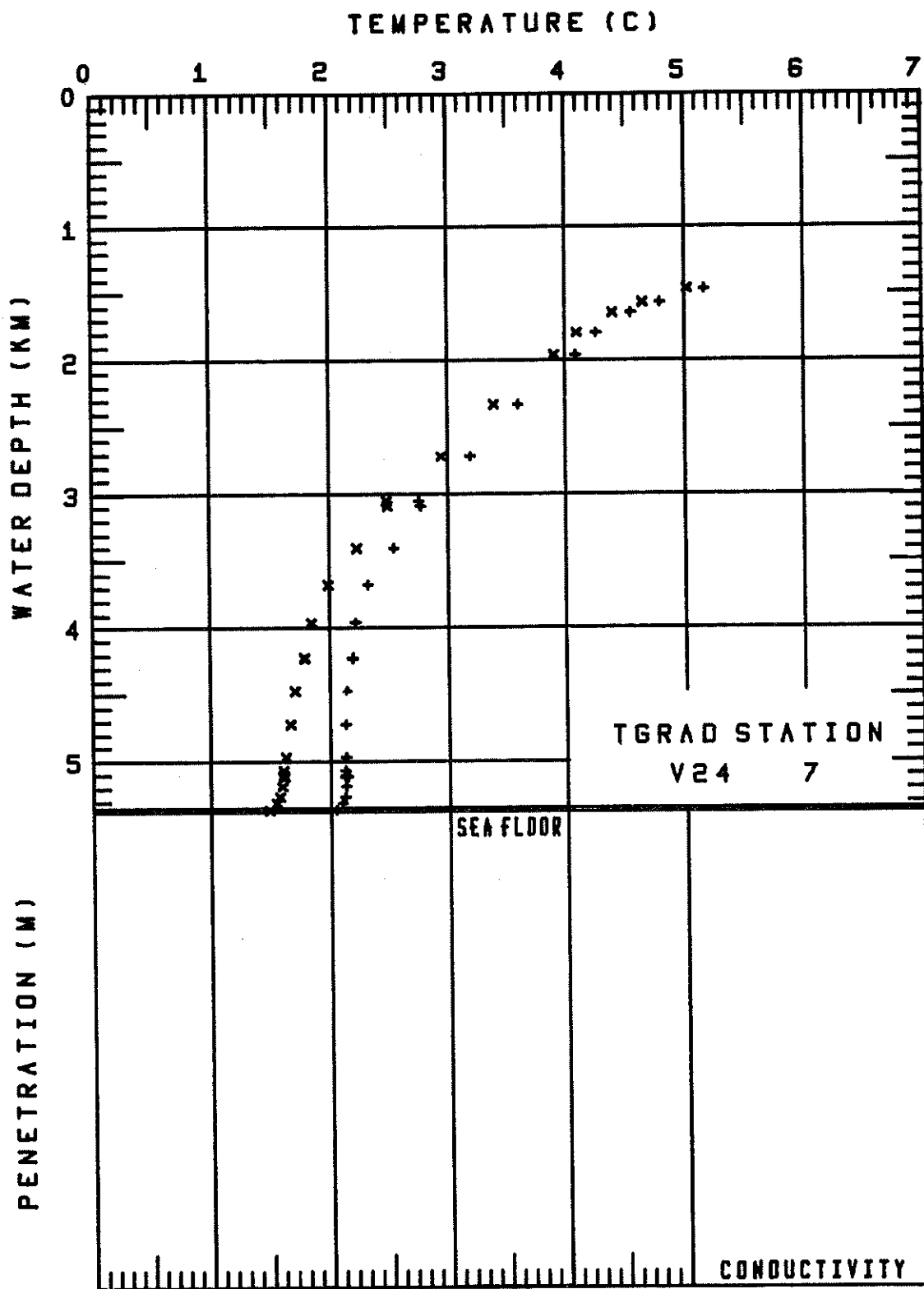
DEPTH	CONDUCTIVITY
0.05	2.78
1.28	1.80



## TGRAD STATION V24 7

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1465.	5.17	5.03
1568.	4.80	4.65
1642.	4.55	4.40
1794.	4.26	4.10
1963.	4.09	3.91
2331.	3.60	3.39
2714.	3.19	2.94
3084.	2.77	2.49
3051.	2.75	2.48
3404.	2.54	2.23
3674.	2.32	1.99
3955.	2.21	1.85
4227.	2.19	1.79
4218.	2.19	1.79
4467.	2.13	1.70
4720.	2.13	1.66
4962.	2.12	1.63
5063.	2.12	1.61
5109.	2.12	1.60
5100.	2.13	1.61
5114.	2.14	1.61
5099.	2.13	1.61
5182.	2.13	1.59
5263.	2.12	1.58
5306.	2.09	1.54
5362.	2.04	1.49



## TGRAD STATION V24 8

## WATER TEMPERATURES

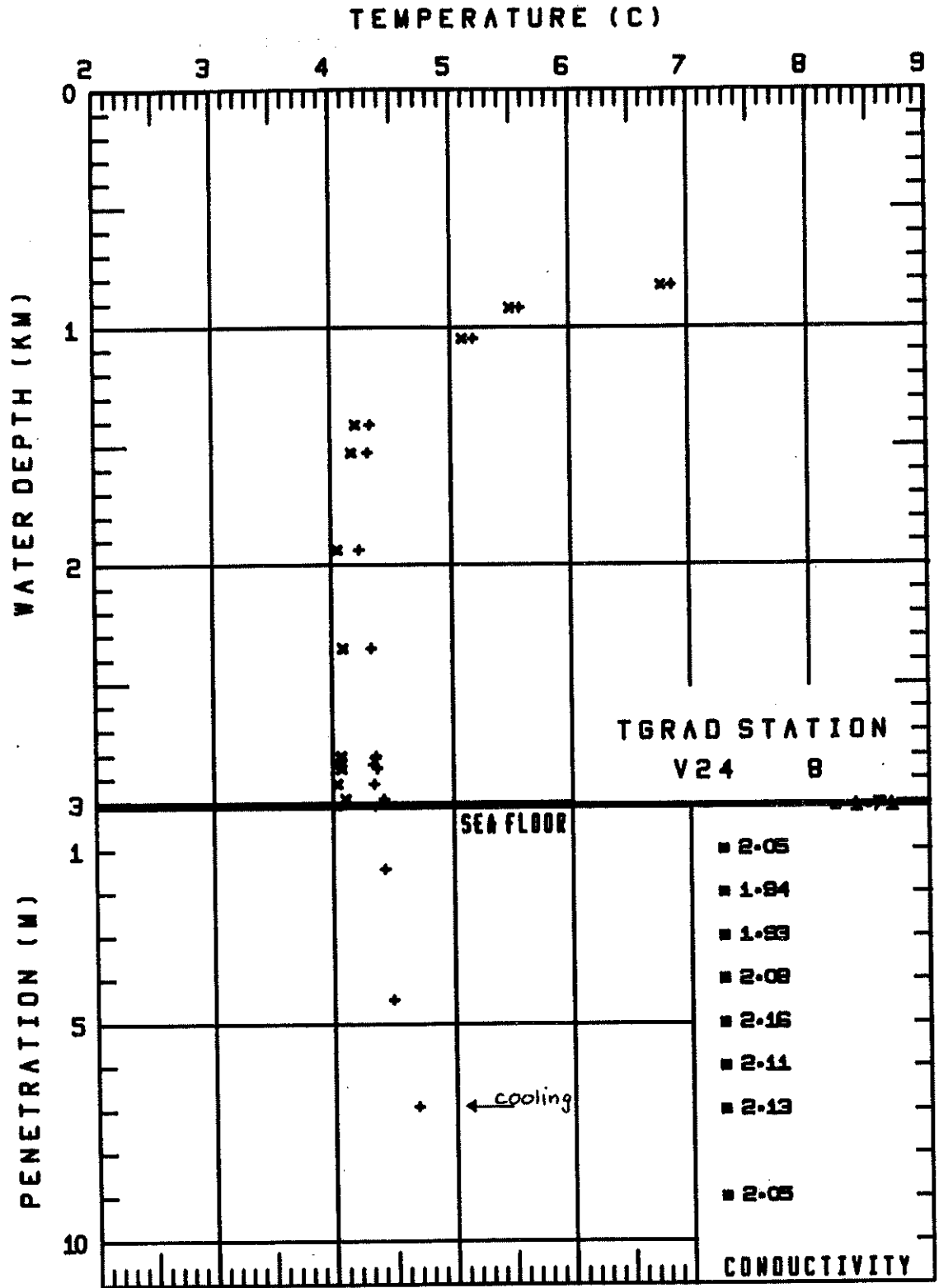
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
824.	6.86	6.77
917.	5.58	5.50
1049.	5.19	5.09
1410.	4.32	4.20
1528.	4.30	4.17
1937.	4.23	4.05
2351.	4.32	4.09
2803.	4.35	4.07
2837.	4.33	4.04
2857.	4.36	4.07
2809.	4.34	4.06
2921.	4.34	4.03
2984.	4.41	4.10
3014.	4.34	4.03

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
1.45	4.42
4.46	4.48
6.92	4.68

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
0.04	1.71
1.00	2.05
2.00	1.94
3.00	1.93
4.00	2.08
5.00	2.16
6.00	2.11
7.00	2.13
9.00	2.05



## WATER TEMPERATURES

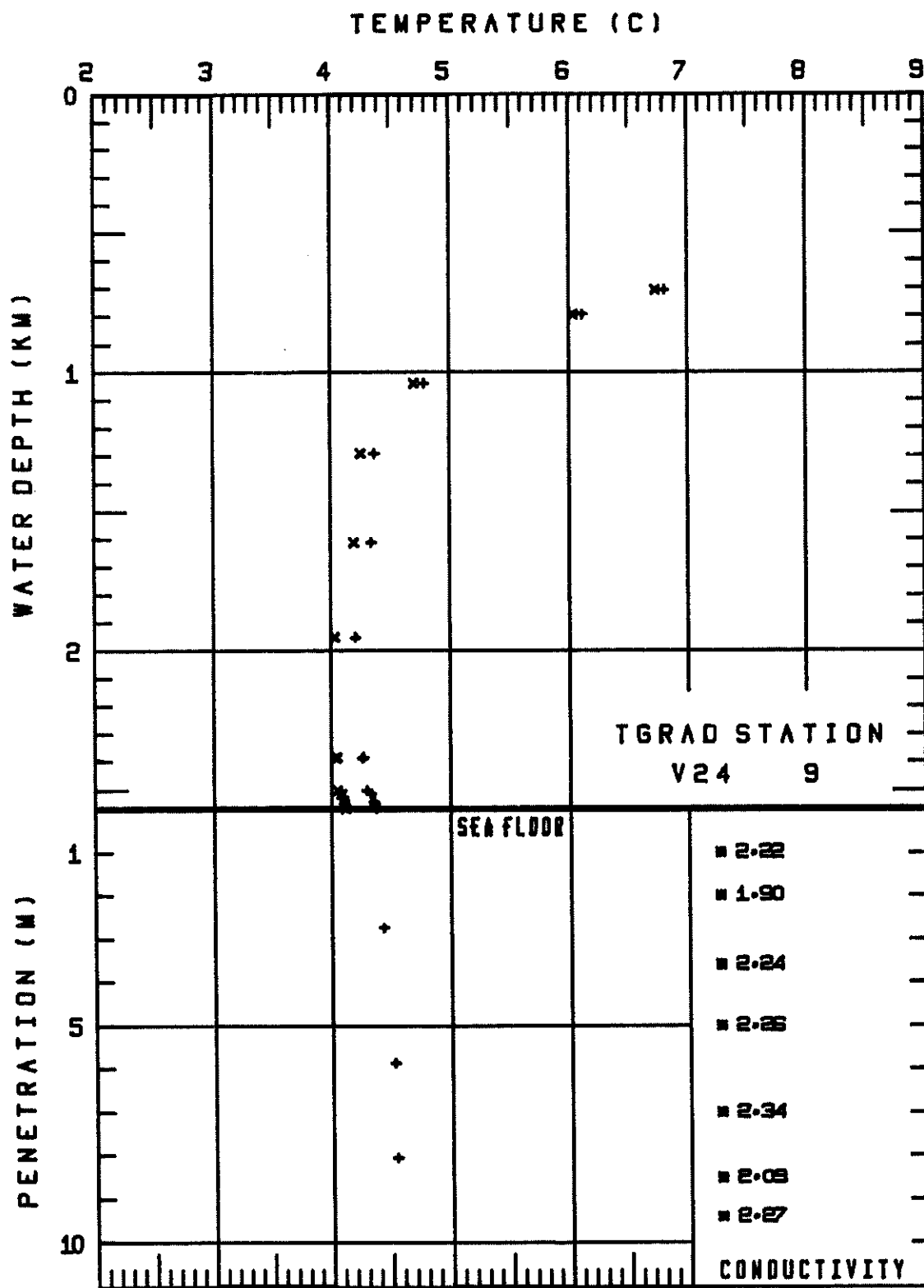
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
705.	6.80	6.73
793.	6.11	6.04
1040.	4.80	4.71
1293.	4.37	4.26
1613.	4.35	4.20
1950.	4.21	4.03
2385.	4.27	4.04
2382.	4.28	4.04
2501.	4.30	4.05
2539.	4.36	4.11
2512.	4.33	4.08
2549.	4.37	4.11
2567.	4.38	4.12

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.75	4.44
5.87	4.52
8.05	4.54

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.22
2.00	1.90
3.60	2.24
5.00	2.26
7.00	2.34
8.50	2.09
9.40	2.27



## TGRAD STATION V24-010

## WATER TEMPERATURES

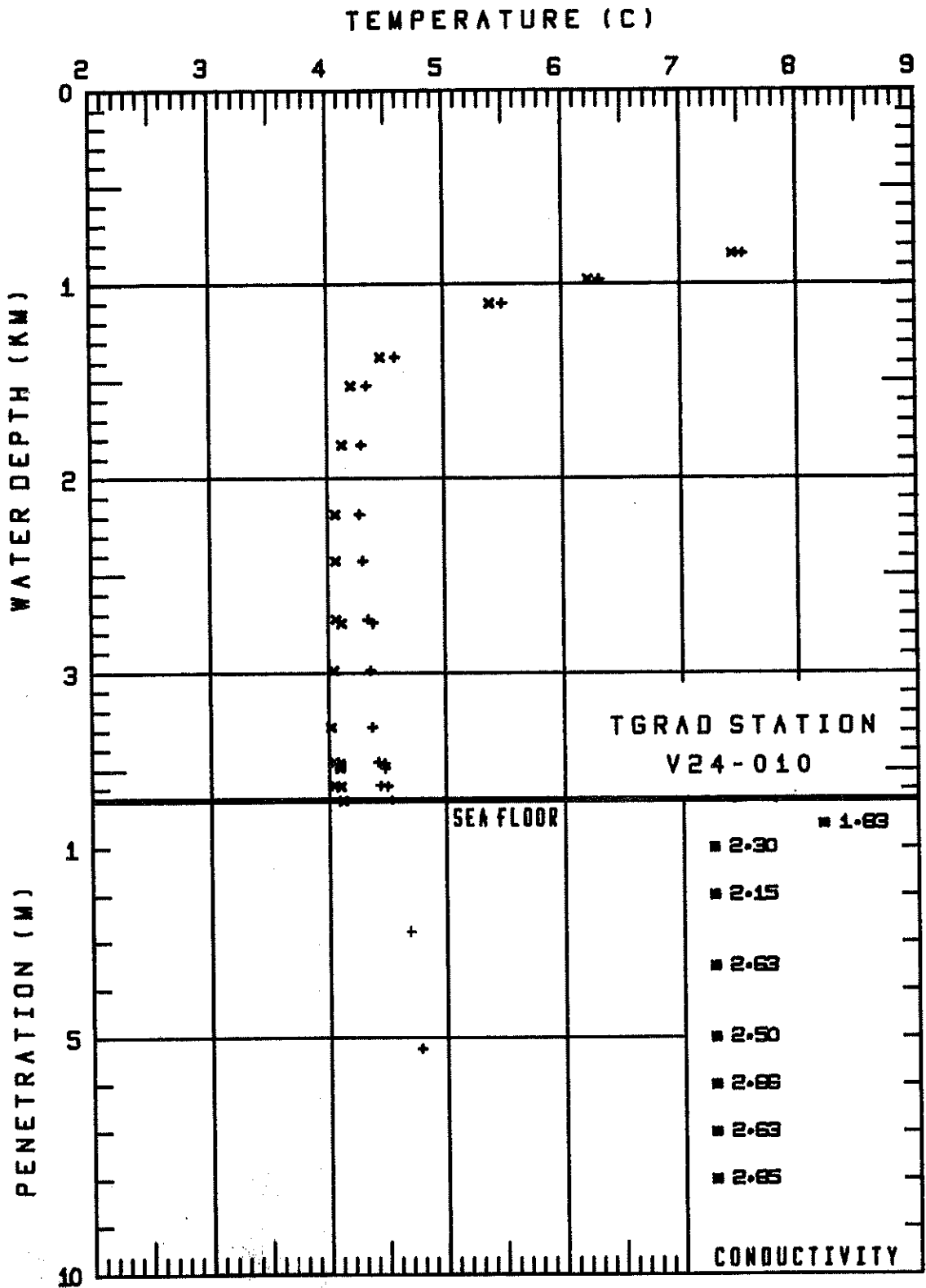
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
842.	7.54	7.45
976.	6.31	6.22
1099.	5.50	5.40
1374.	4.58	4.46
1521.	4.34	4.21
1824.	4.30	4.13
2179.	4.27	4.07
2421.	4.30	4.07
2744.	4.39	4.11
2720.	4.34	4.06
2984.	4.36	4.05
3279.	4.37	4.02
3491.	4.48	4.09
3466.	4.47	4.09
3476.	4.47	4.09
3459.	4.42	4.05
3581.	4.50	4.10
3577.	4.44	4.05
3656.	4.53	4.12

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.80	4.68
5.23	4.78

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
0.50	1.83
1.00	2.30
2.00	2.15
3.50	2.63
5.00	2.50
6.00	2.66
7.00	2.63
8.00	2.85



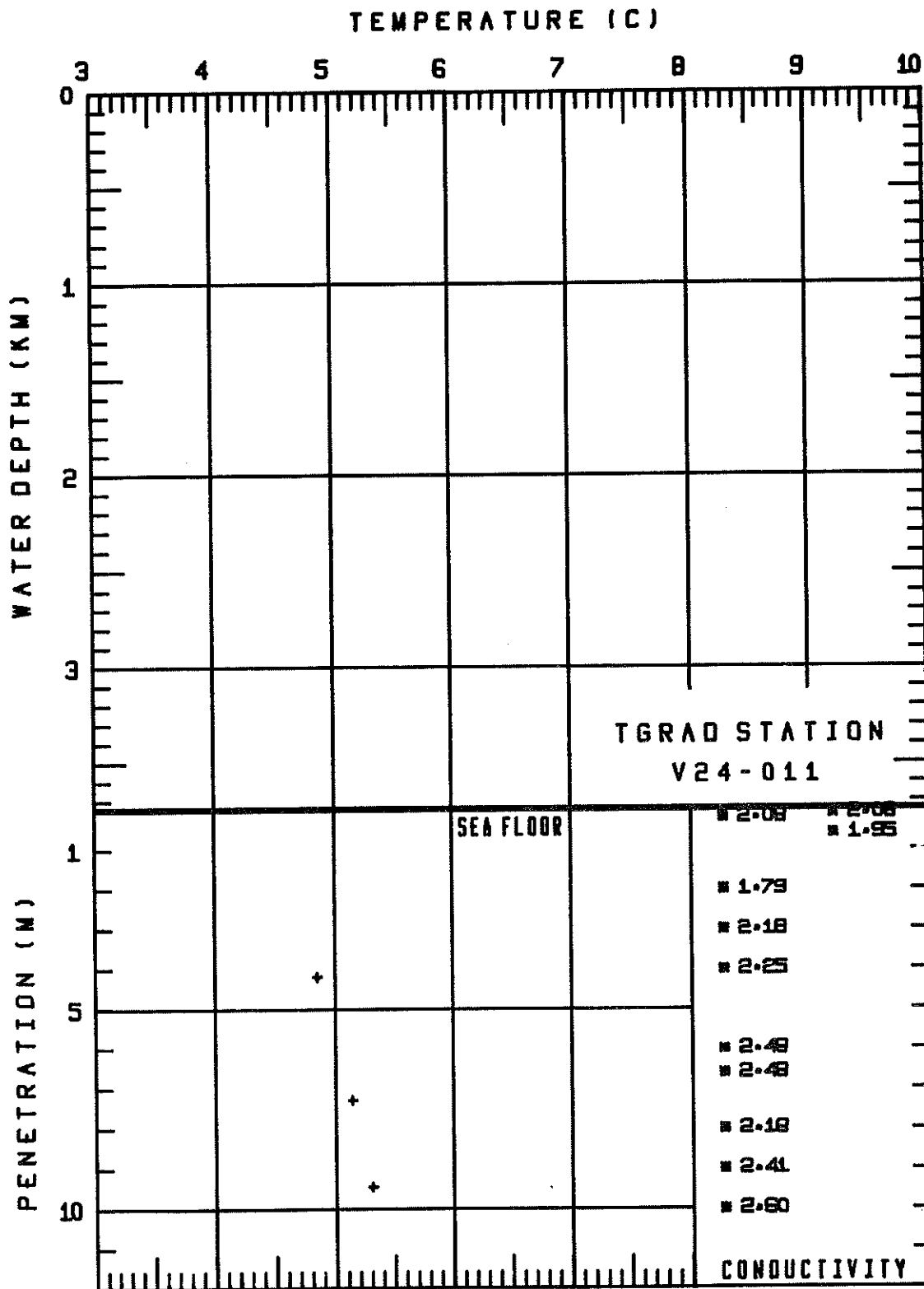
## TGRAD STATIONV24-011

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
4.17	4.85
7.28	5.14
9.45	5.31

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
0.10	2.08
0.20	2.08
0.60	1.95
2.00	1.79
3.00	2.18
4.00	2.25
6.00	2.48
6.60	2.48
8.00	2.18
9.00	2.41
10.00	2.60



## TGRAD STATION V24-012

## WATER TEMPERATURES

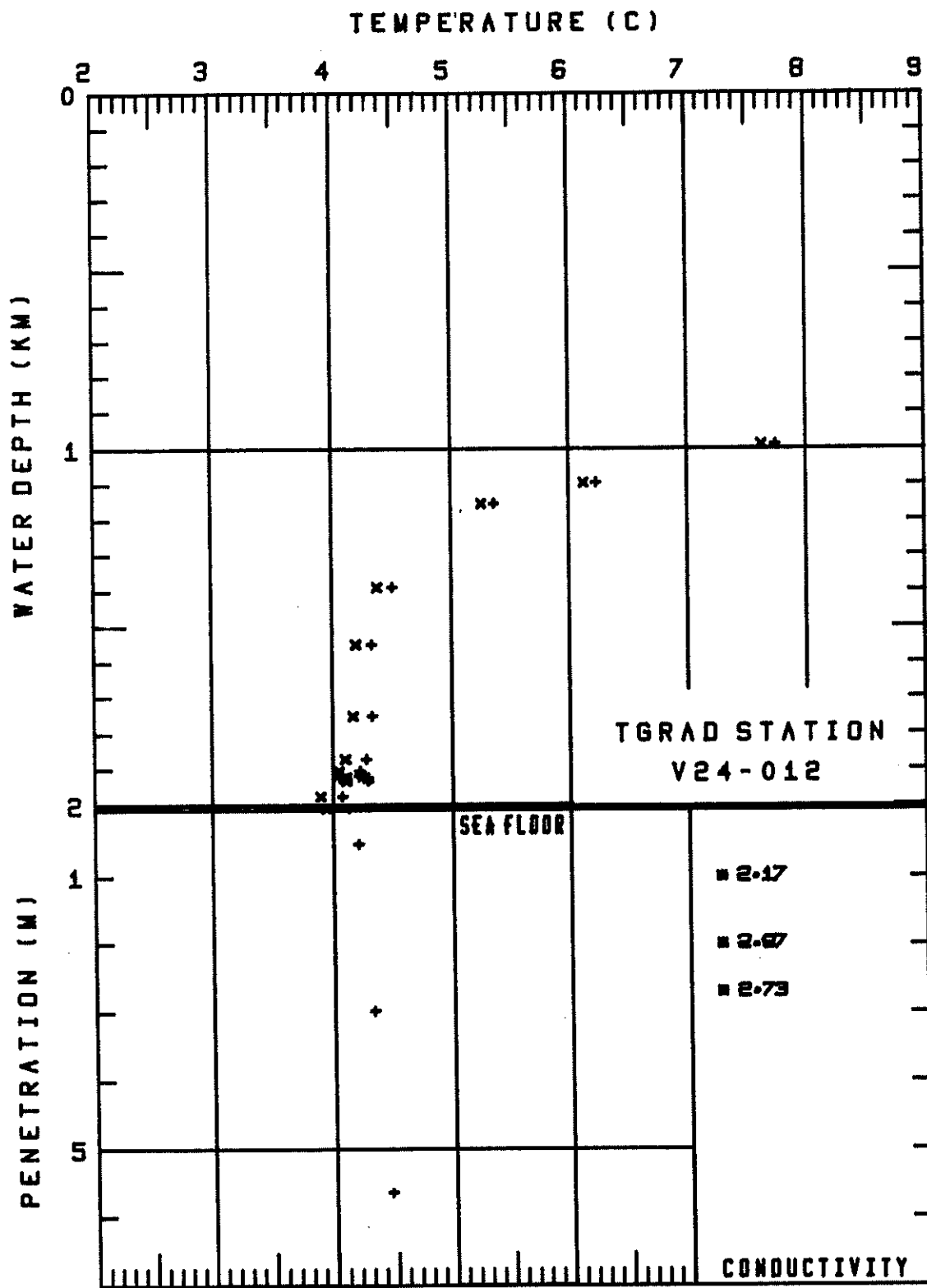
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
989.	7.74	7.63
1097.	6.24	6.13
1155.	5.36	5.26
1389.	4.50	4.38
1550.	4.33	4.19
1751.	4.32	4.17
1925.	4.26	4.09
1905.	4.22	4.05
1922.	4.28	4.11
1871.	4.27	4.10
1933.	4.28	4.11
1917.	4.21	4.04
1975.	4.07	3.89
2009.	4.13	3.94

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.52	4.20
2.98	4.33
5.64	4.46

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.17
2.00	2.87
2.70	2.73



## TGRAD STATION V24-013

## WATER TEMPERATURES

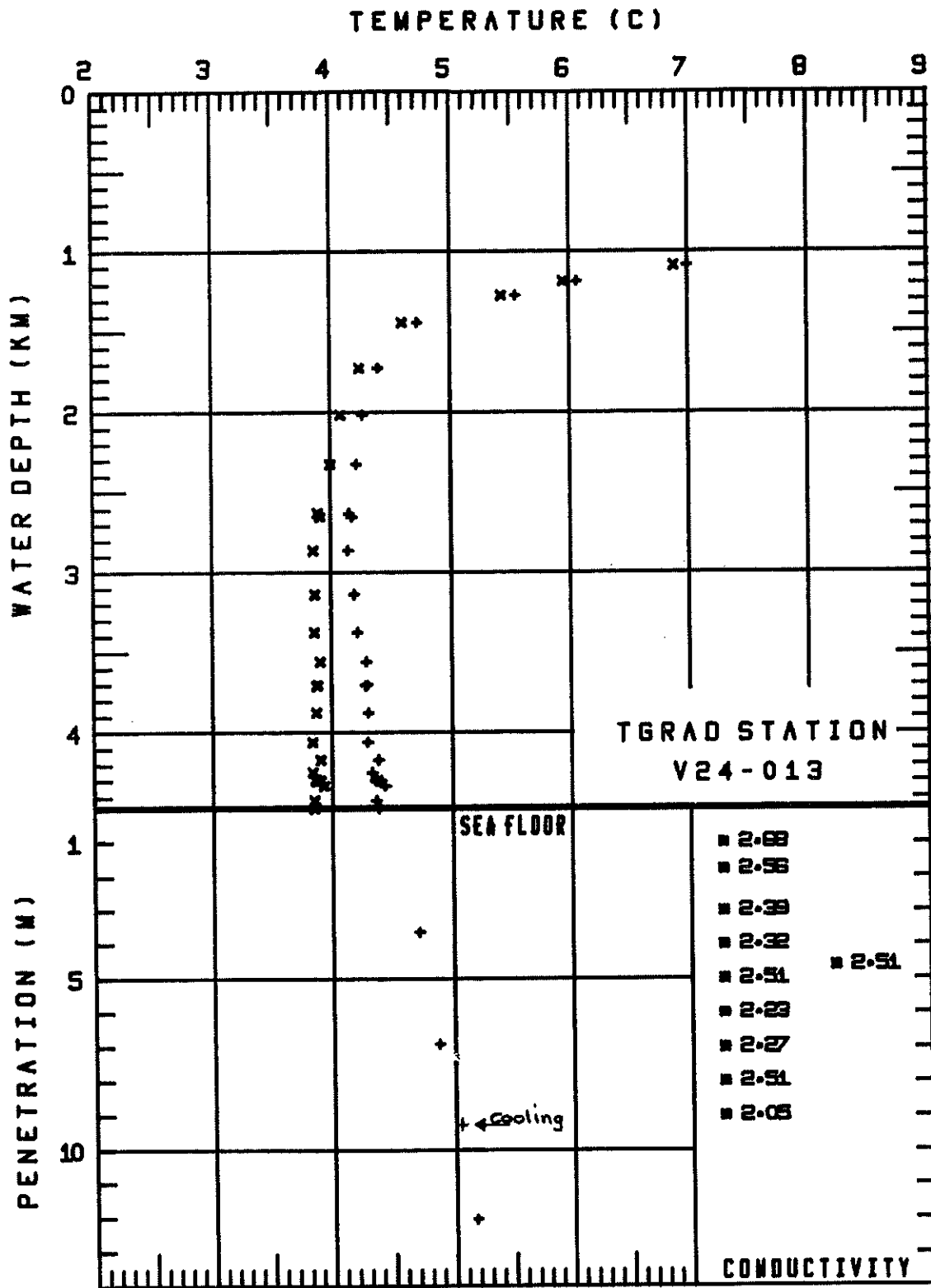
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1084.	6.99	6.88
1180.	6.06	5.94
1271.	5.54	5.42
1439.	4.72	4.59
1722.	4.39	4.24
2016.	4.27	4.08
2322.	4.22	3.99
2628.	4.14	3.89
2652.	4.17	3.91
2860.	4.14	3.85
3132.	4.18	3.86
3370.	4.21	3.85
3557.	4.28	3.90
3701.	4.29	3.88
3703.	4.28	3.87
3873.	4.30	3.86
4057.	4.30	3.83
4165.	4.38	3.90
4292.	4.36	3.86
4330.	4.43	3.93
4295.	4.37	3.87
4300.	4.37	3.87
4296.	4.40	3.90
4246.	4.32	3.83
4294.	4.35	3.85
4418.	4.36	3.84
4460.	4.38	3.85
4470.	4.38	3.85

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.64	4.71
6.91	4.87
9.40	5.05
12.04	5.17

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.68
1.80	2.56
3.00	2.39
4.00	2.32
4.60	2.51
5.00	2.51
6.00	2.23
7.00	2.27
8.00	2.51
9.00	2.05



## TGRAD STATION V24-014

## WATER TEMPERATURES

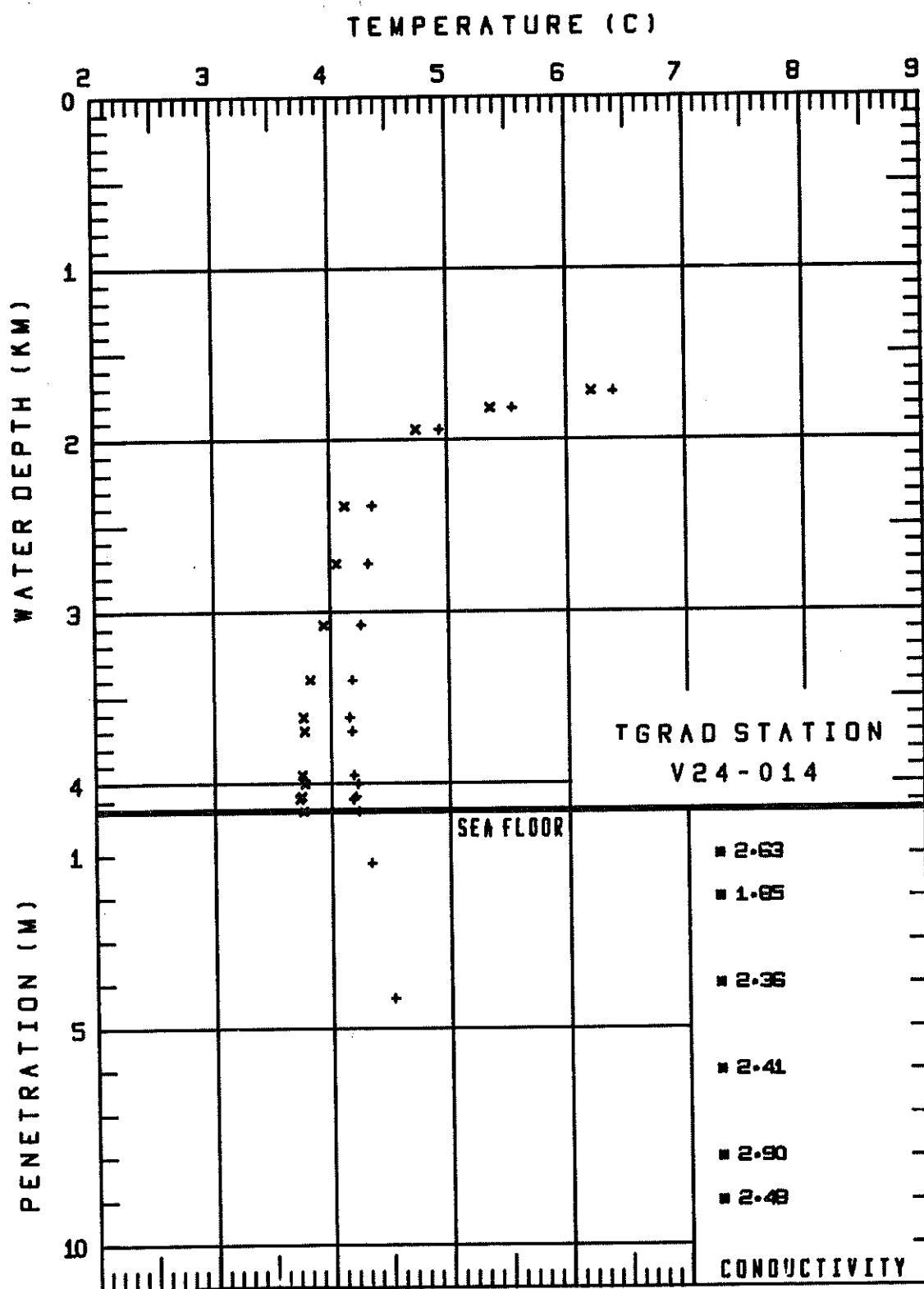
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1715.	6.39	6.20
1810.	5.54	5.36
1937.	4.93	4.74
2380.	4.36	4.13
2720.	4.32	4.05
3072.	4.26	3.94
3394.	4.18	3.82
3609.	4.15	3.76
3691.	4.17	3.77
3950.	4.18	3.74
4000.	4.22	3.77
4074.	4.20	3.74
4087.	4.18	3.72
4160.	4.22	3.75

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
1.19	4.34
4.30	4.52

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.63
2.00	1.85
4.00	2.36
6.00	2.41
8.00	2.90
9.00	2.48

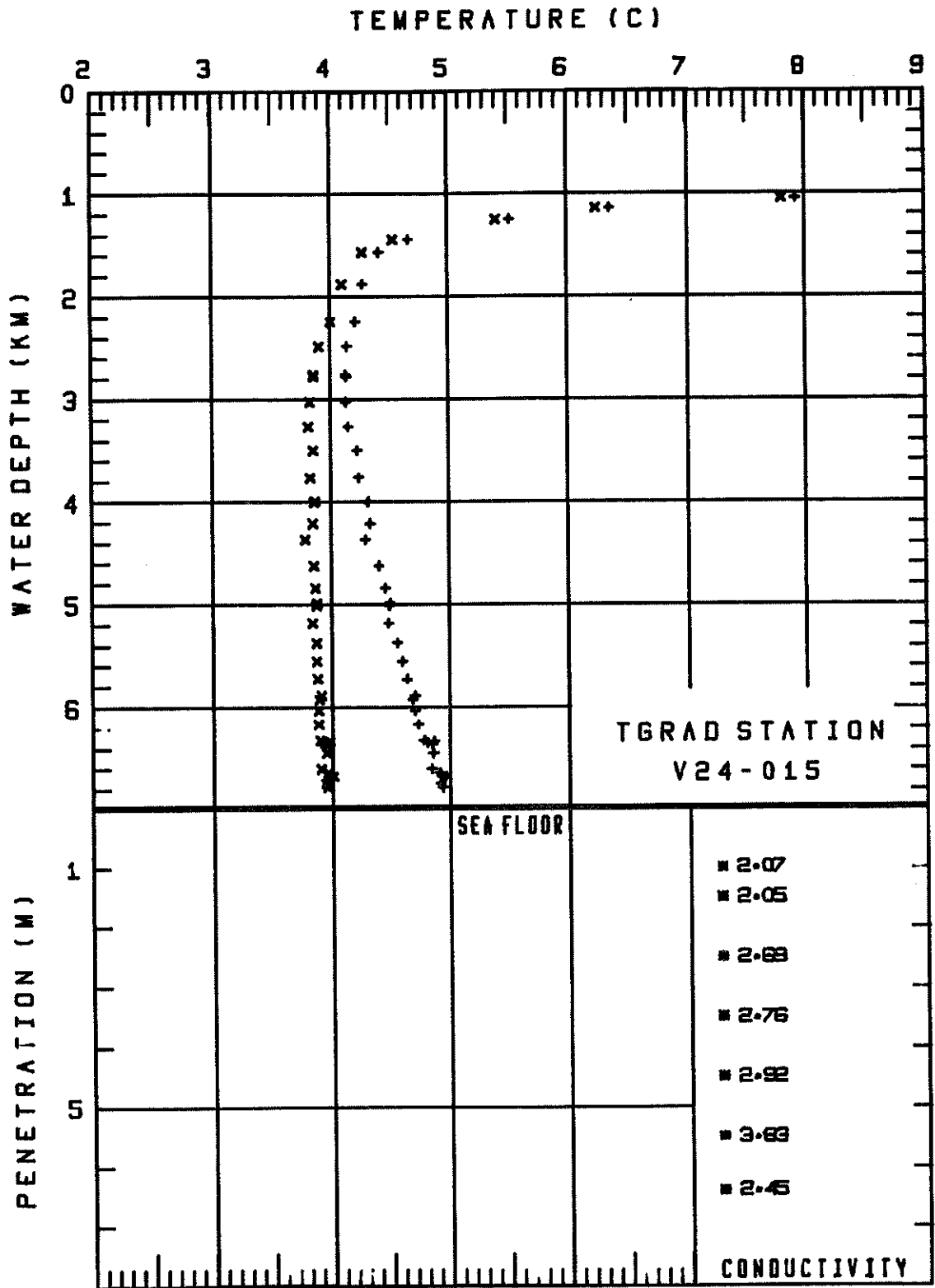


## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1049.	7.92	7.80
1136.	6.35	6.24
1245.	5.52	5.40
1443.	4.67	4.54
1564.	4.42	4.27
1876.	4.27	4.10
2239.	4.21	4.00
2482.	4.14	3.90
2760.	4.13	3.85
2772.	4.13	3.85
3020.	4.13	3.82
3263.	4.15	3.81
3492.	4.22	3.85
3760.	4.23	3.82
4002.	4.30	3.85
3990.	4.31	3.86
4212.	4.33	3.84
4363.	4.28	3.78
4623.	4.40	3.85
4837.	4.45	3.86
5005.	4.49	3.86
4987.	4.49	3.87
5178.	4.48	3.83
5375.	4.55	3.86
5551.	4.59	3.87
5719.	4.63	3.88
5918.	4.68	3.89
5882.	4.70	3.91
6027.	4.70	3.88
6166.	4.72	3.88
6357.	4.85	3.96
6315.	4.77	3.89
6323.	4.86	3.97
6338.	4.80	3.92
6443.	4.85	3.94
6593.	4.84	3.90
6631.	4.91	3.96
6668.	4.96	4.00
6666.	4.93	3.97
6735.	4.91	3.94
6775.	4.94	3.96

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.07
1.50	2.05
2.50	2.69
3.50	2.76
4.50	2.92
5.50	3.83
6.40	2.45



## IGRAD STATION V24-016

## WATER TEMPERATURES

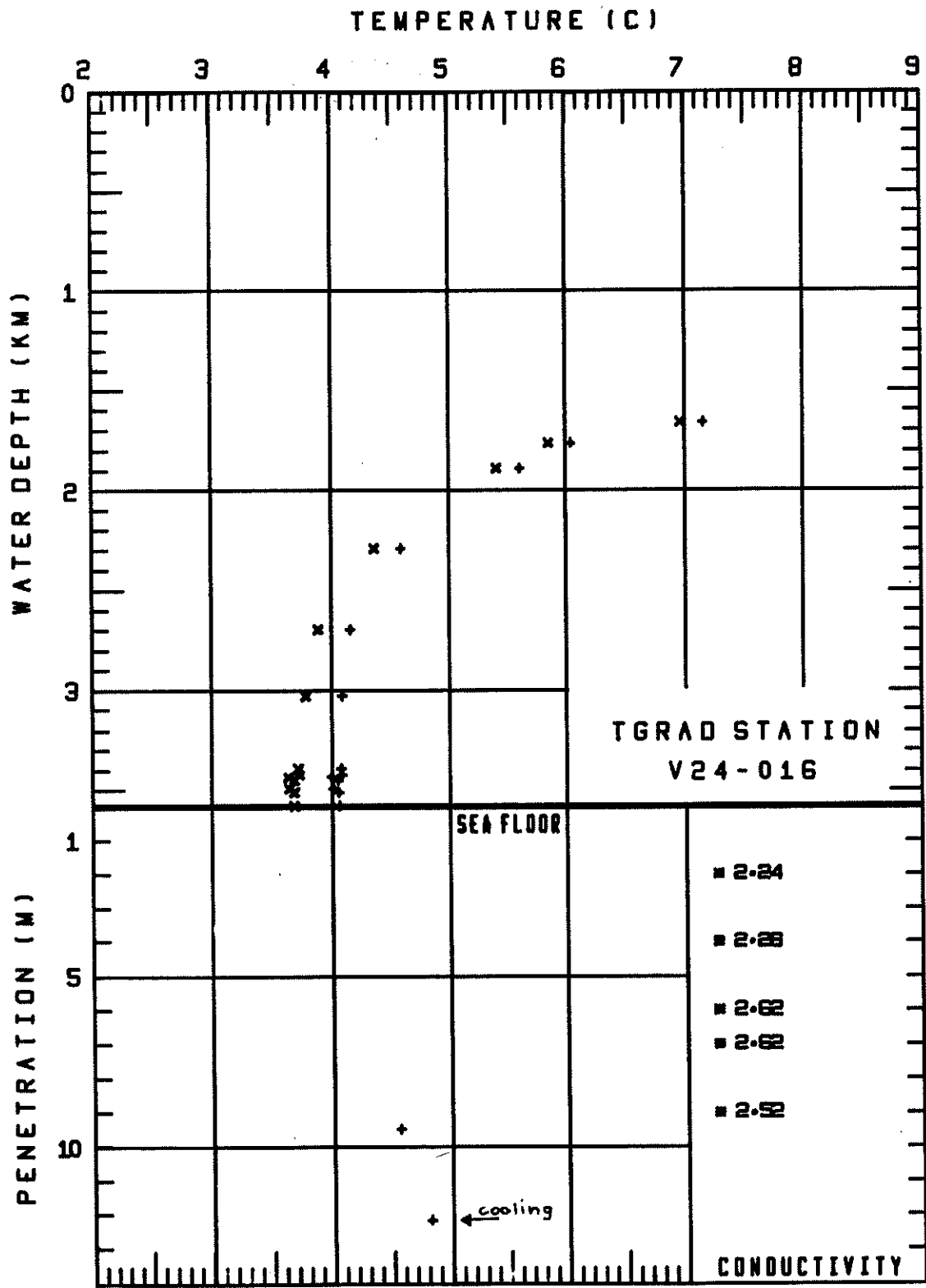
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1658.	7.15	6.96
1764.	6.04	5.85
1891.	5.60	5.41
2290.	4.59	4.36
2697.	4.15	3.88
3029.	4.08	3.78
3435.	3.99	3.63
3425.	4.08	3.72
3451.	4.05	3.68
3391.	4.07	3.72
3490.	4.01	3.64
3510.	4.05	3.68
3579.	4.06	3.68

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
9.50	4.56
12.15	4.82

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
2.00	2.24
4.00	2.26
6.00	2.62
7.00	2.62
9.00	2.52



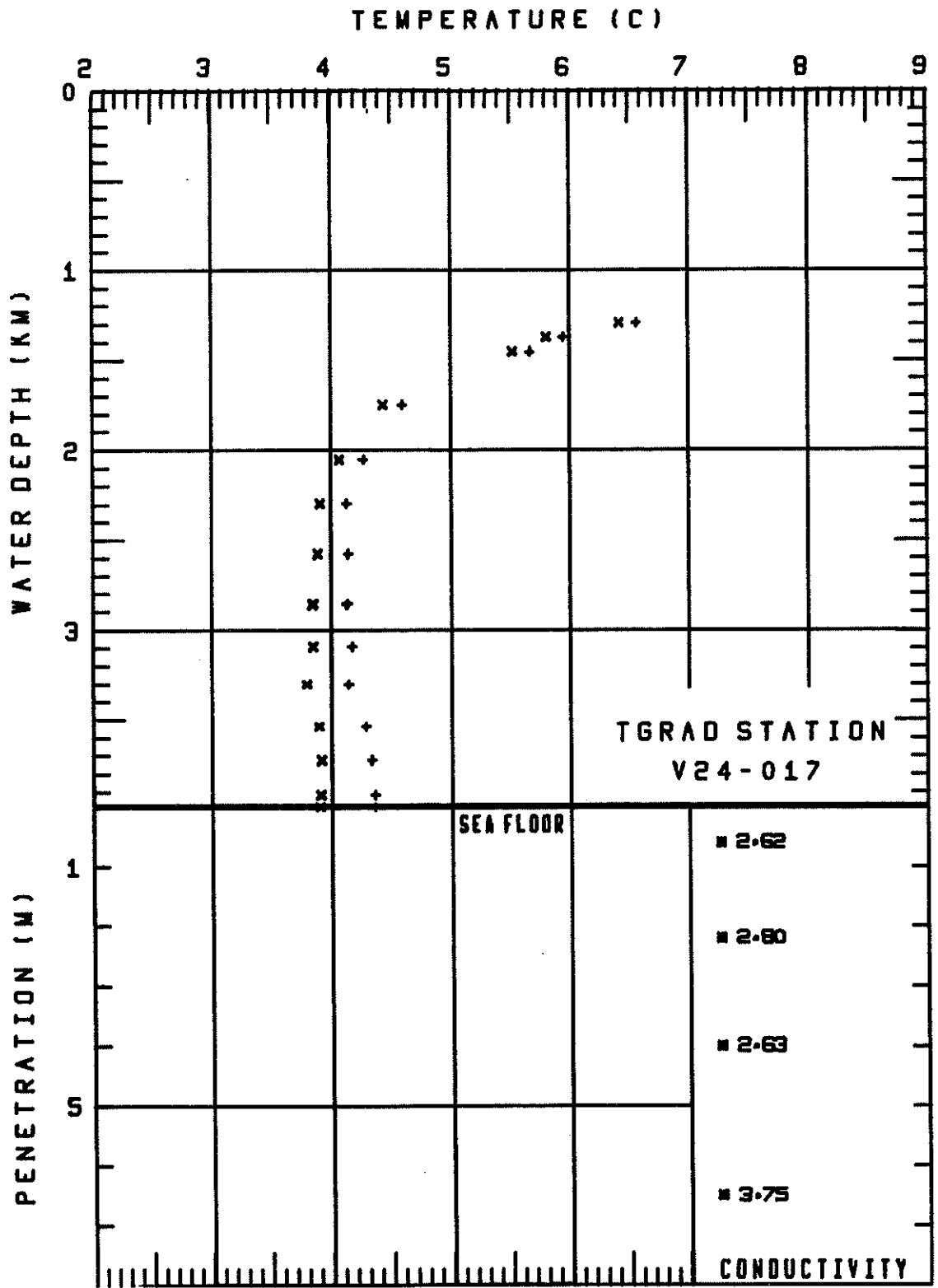
## TGRAD STATION V24-017

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1294.	6.56	6.42
1371.	5.95	5.81
1451.	5.67	5.52
1748.	4.60	4.43
2055.	4.26	4.07
2298.	4.13	3.91
2574.	4.14	3.89
2860.	4.13	3.84
2852.	4.14	3.85
3095.	4.17	3.85
3302.	4.14	3.80
3538.	4.28	3.90
3722.	4.33	3.92
3914.	4.36	3.92
3982.	4.36	3.91

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
0.60	2.62
2.20	2.80
4.00	2.63
6.50	3.75



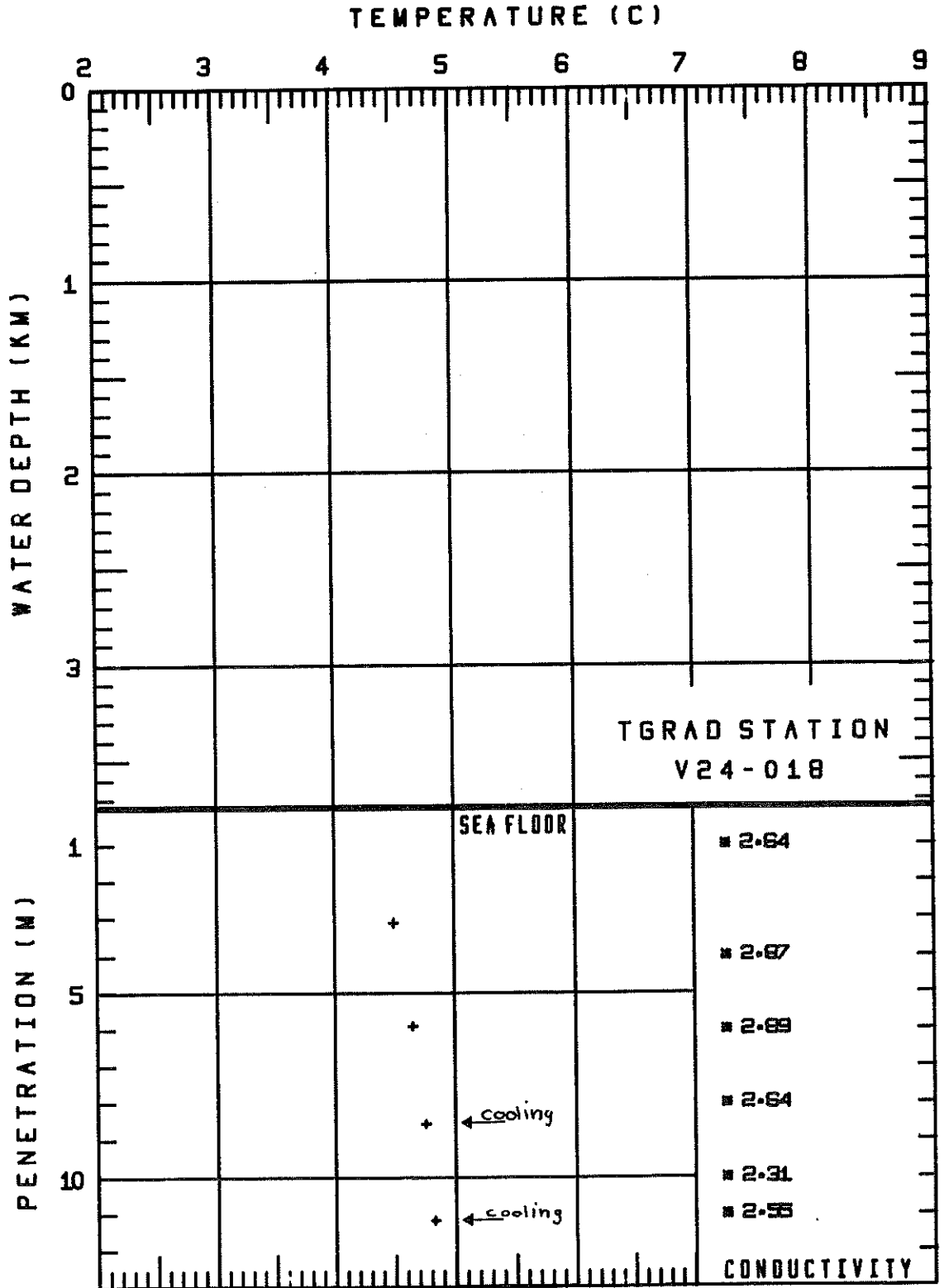
## TGRAD STATIONV24-018

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.13	4.50
5.92	4.64
8.56	4.75
11.19	4.83

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.64
4.00	2.87
6.00	2.89
8.00	2.64
10.00	2.31
11.00	2.55



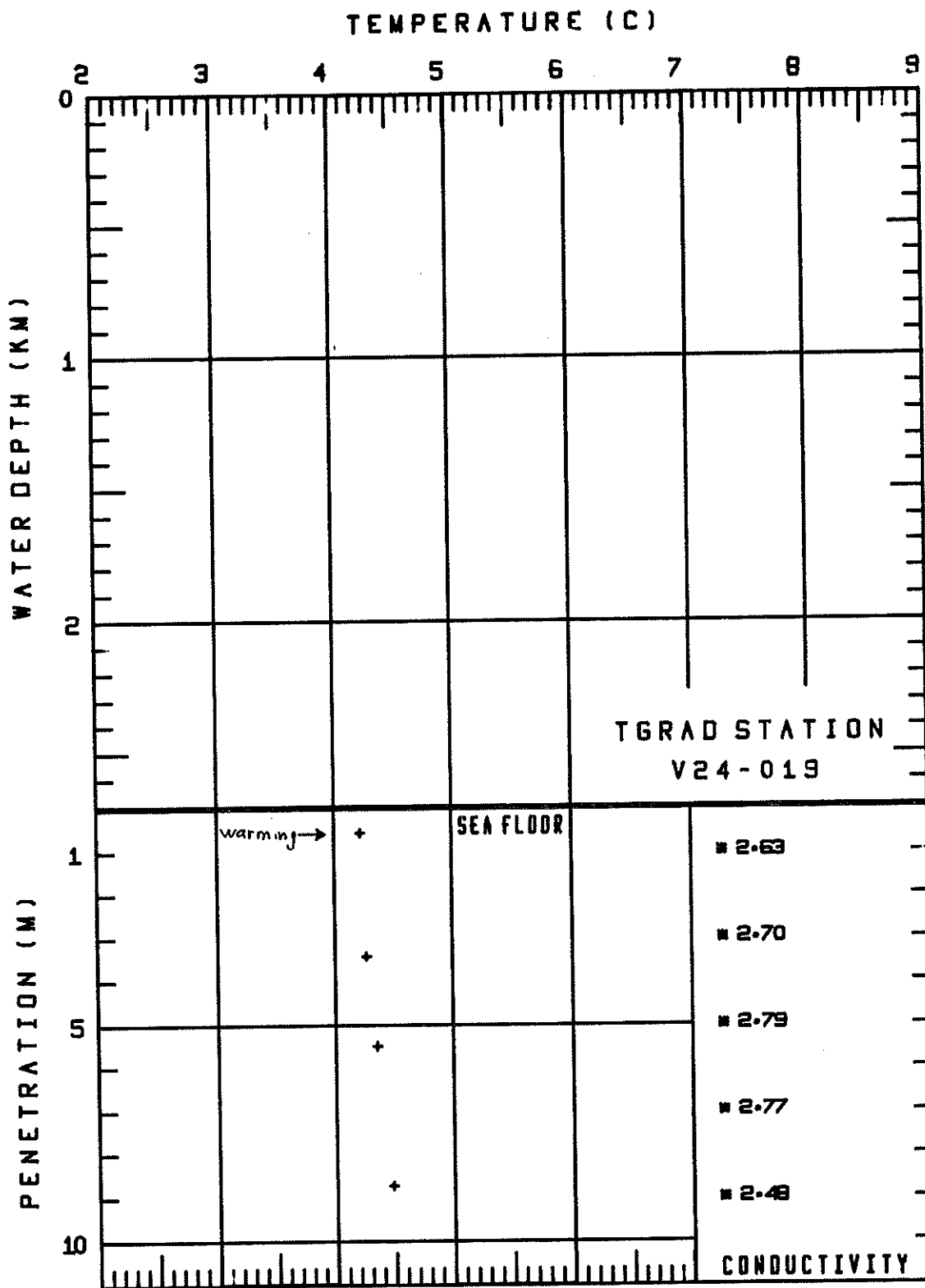
## TGRAD STATIONV24-019

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.56	4.22
3.43	4.26
5.50	4.35
8.72	4.48

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.63
3.00	2.70
5.00	2.79
7.00	2.77
9.00	2.48



## TGRAD STATION V24 20

## WATER TEMPERATURES

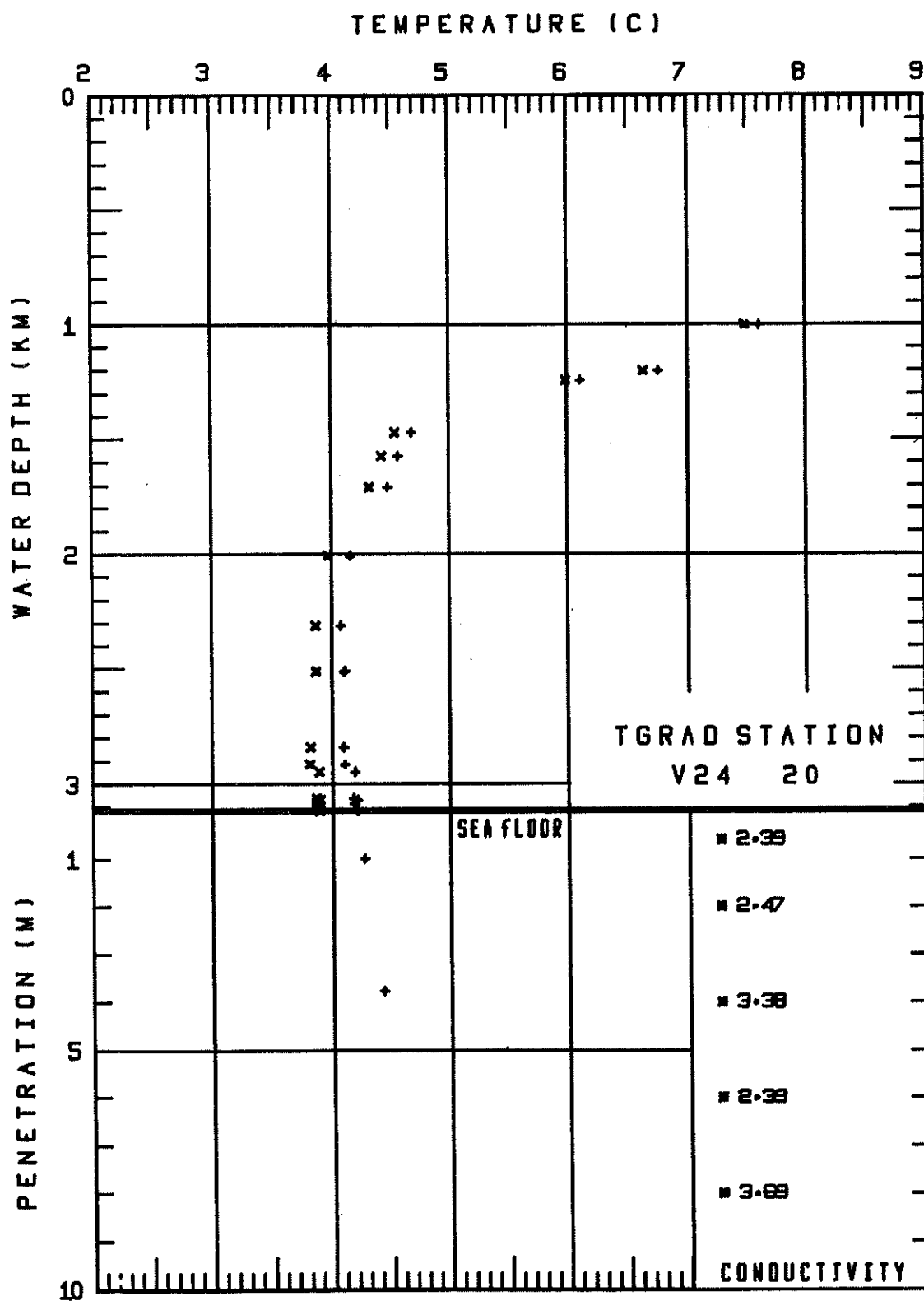
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1002.	7.60	7.49
1201.	6.76	6.63
1243.	6.11	5.98
1471.	4.68	4.54
1573.	4.57	4.43
1708.	4.48	4.32
2007.	4.15	3.97
2310.	4.07	3.86
2512.	4.10	3.86
2511.	4.11	3.87
2842.	4.10	3.81
2948.	4.19	3.89
2915.	4.10	3.81
3070.	4.21	3.89
3065.	4.17	3.86
3084.	4.18	3.86
3119.	4.21	3.89

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
1.00	4.27
3.77	4.43

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
0.60	2.39
2.00	2.47
4.00	3.38
6.00	2.39
8.00	3.69



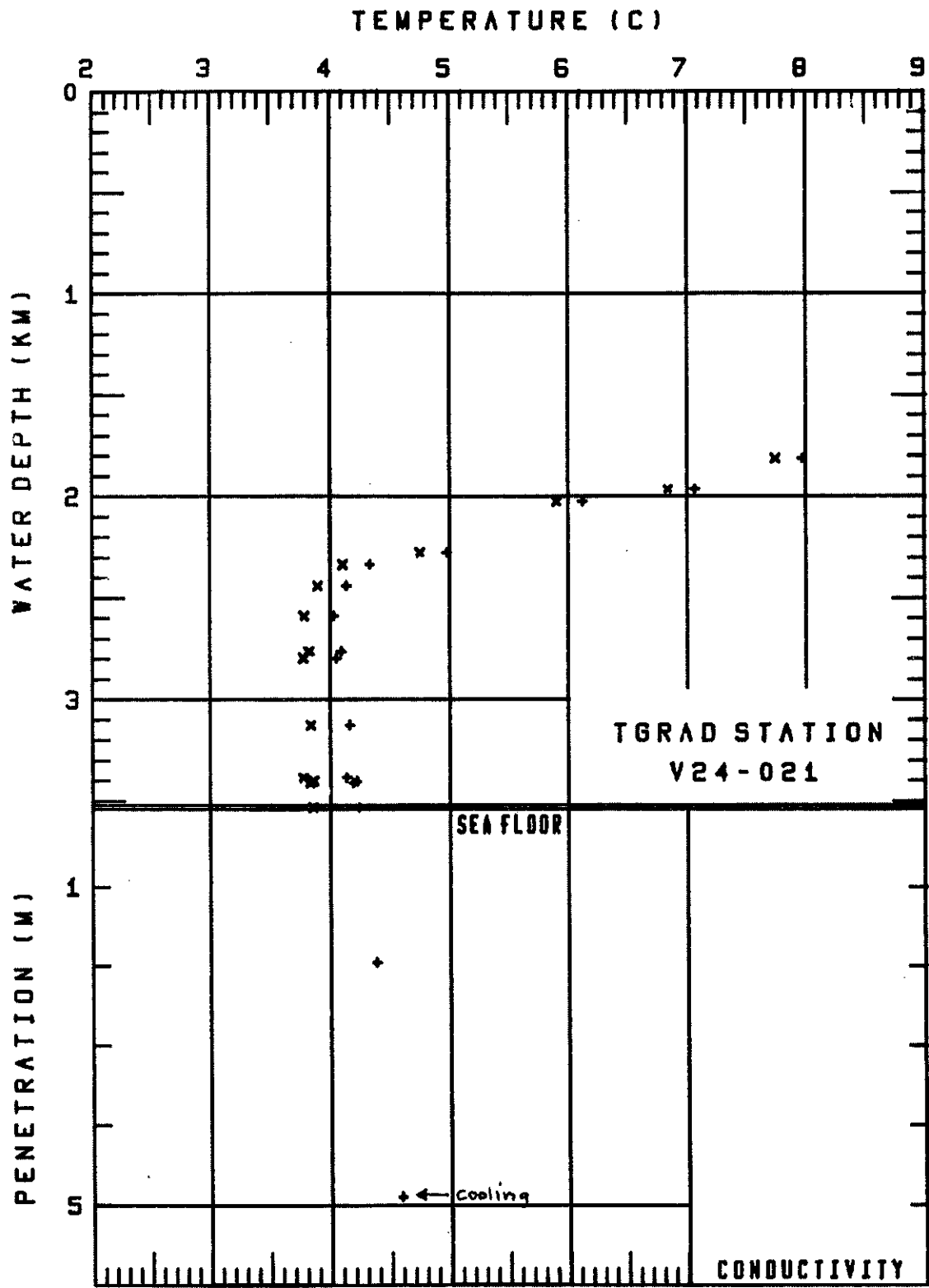
## TGRAD STATION V24-021

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1811.	7.96	7.74
1965.	7.07	6.84
2024.	6.12	5.90
2272.	4.98	4.74
2334.	4.33	4.10
2440.	4.13	3.90
2589.	4.03	3.78
2793.	4.05	3.77
2760.	4.09	3.82
3125.	4.16	3.83
3382.	4.13	3.77
3399.	4.22	3.86
3397.	4.21	3.85
3406.	4.19	3.83
3528.	4.23	3.85

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
1.95	4.38
4.89	4.59



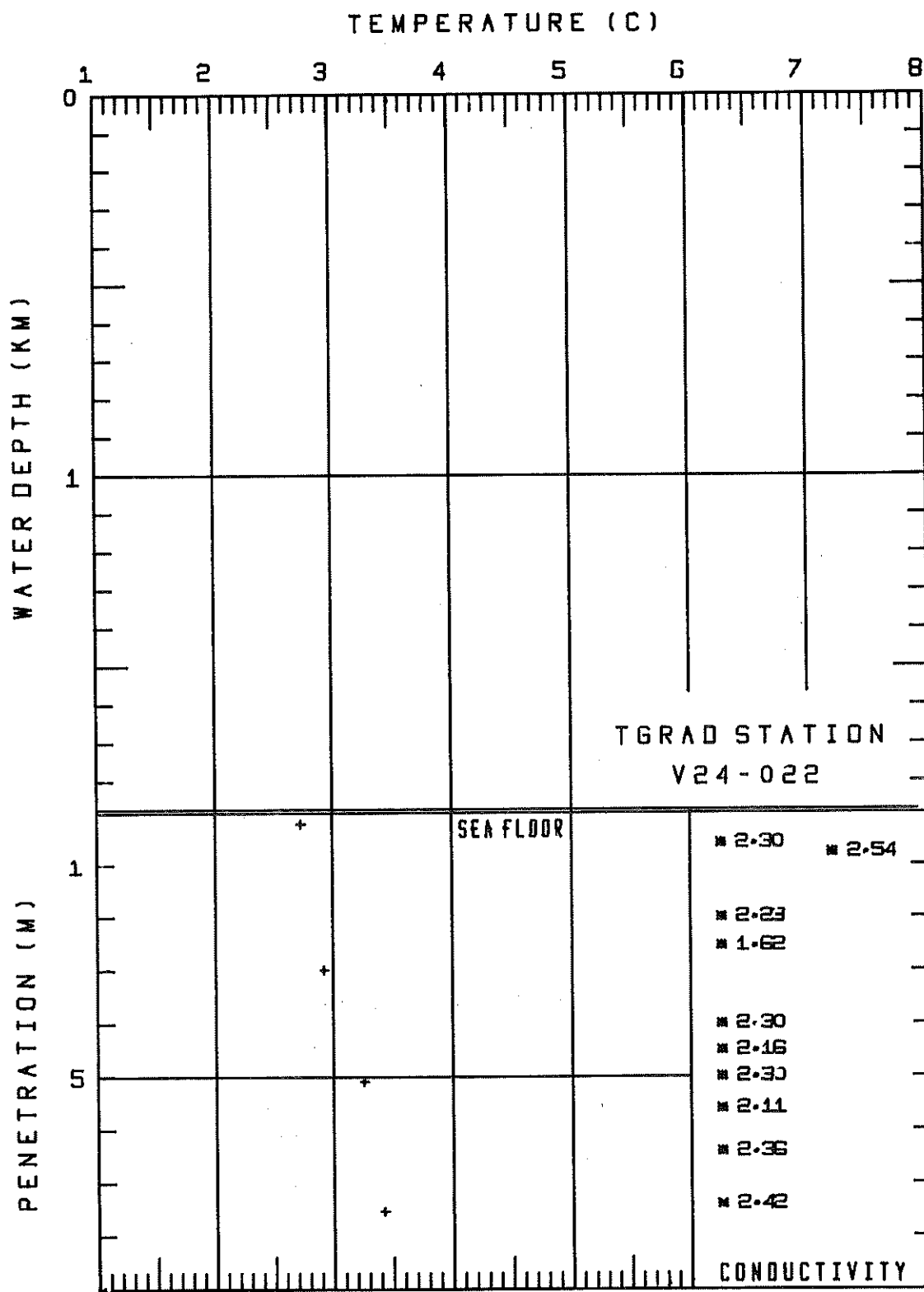
## TGRAC STATIONV24-022

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.24	2.73
2.99	2.93
5.09	3.26
7.53	3.43

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
0.60	2.30
0.78	2.54
2.00	2.23
2.53	1.62
4.00	2.30
4.50	2.16
5.00	2.30
5.60	2.11
6.40	2.36
7.40	2.42



## TGRAD STATION V24 23

## WATER TEMPERATURES

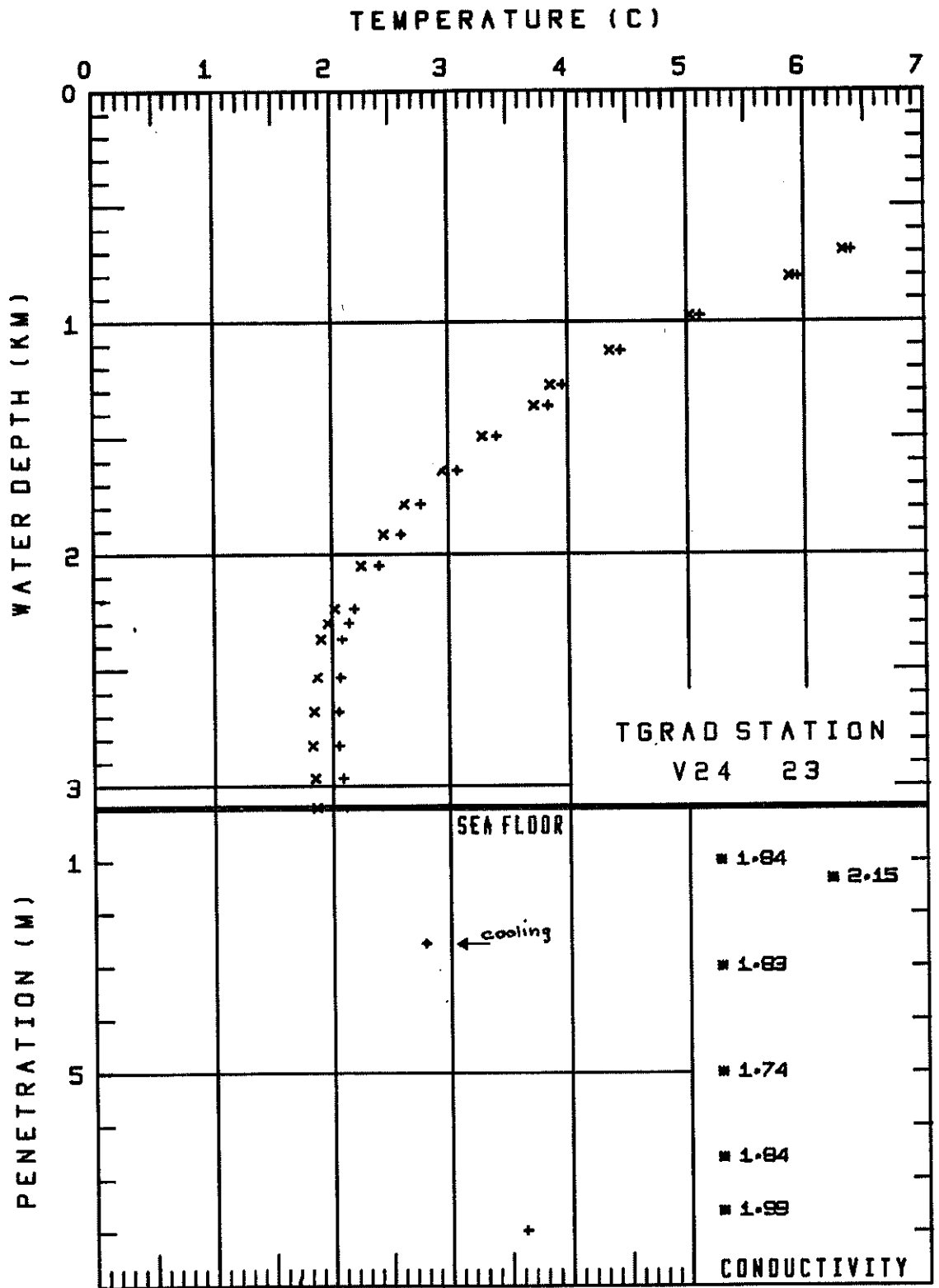
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
689.	6.39	6.32
804.	5.95	5.88
973.	5.11	5.02
1125.	4.44	4.35
1273.	3.96	3.85
1362.	3.83	3.72
1493.	3.41	3.29
1641.	3.07	2.95
1782.	2.76	2.62
1915.	2.59	2.44
2049.	2.40	2.24
2233.	2.19	2.02
2295.	2.14	1.96
2365.	2.08	1.90
2529.	2.06	1.87
2677.	2.05	1.84
2824.	2.05	1.82
2965.	2.09	1.84
3093.	2.12	1.86

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.57	2.79
7.97	3.62

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.84
1.35	2.15
3.00	1.83
5.00	1.74
6.60	1.84
7.60	1.99



## TGRAD STATION V24-024

## WATER TEMPERATURES

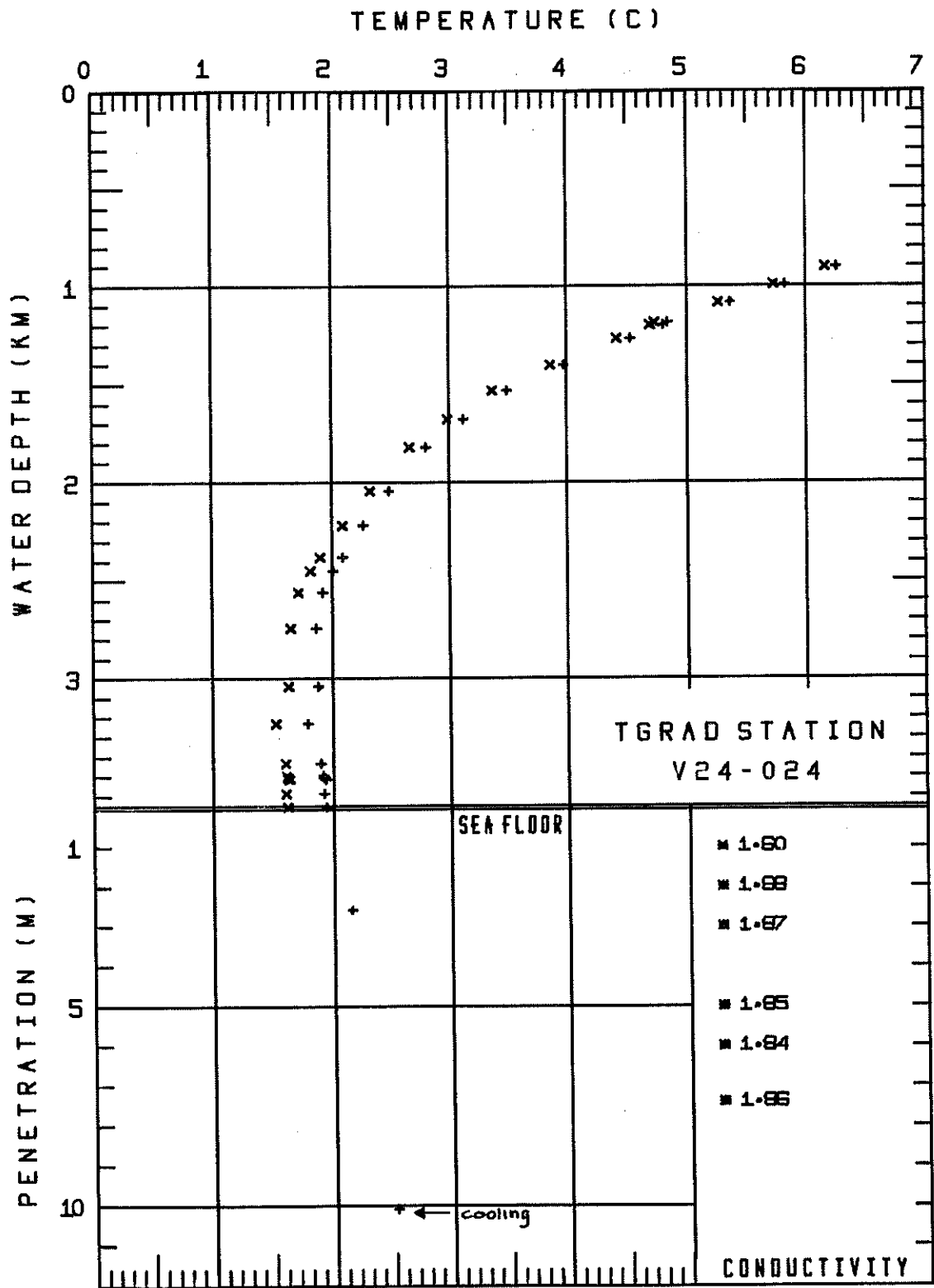
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
903.	6.25	6.16
992.	5.82	5.73
1084.	5.36	5.26
1186.	4.84	4.73
1201.	4.80	4.69
1270.	4.53	4.42
1402.	3.98	3.86
1532.	3.49	3.37
1678.	3.12	2.99
1821.	2.80	2.66
2046.	2.48	2.32
2218.	2.26	2.09
2380.	2.08	1.90
2452.	2.01	1.82
2559.	1.92	1.72
2743.	1.87	1.65
3039.	1.88	1.63
3230.	1.79	1.53
3433.	1.90	1.60
3507.	1.92	1.62
3516.	1.94	1.63
3506.	1.93	1.63
3496.	1.91	1.61
3589.	1.92	1.61
3658.	1.94	1.62

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.57	2.15
10.09	2.51

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.60
2.00	1.68
3.00	1.87
5.00	1.85
6.00	1.84
7.40	1.86



## TGRAD STATION V24 25

## WATER TEMPERATURES

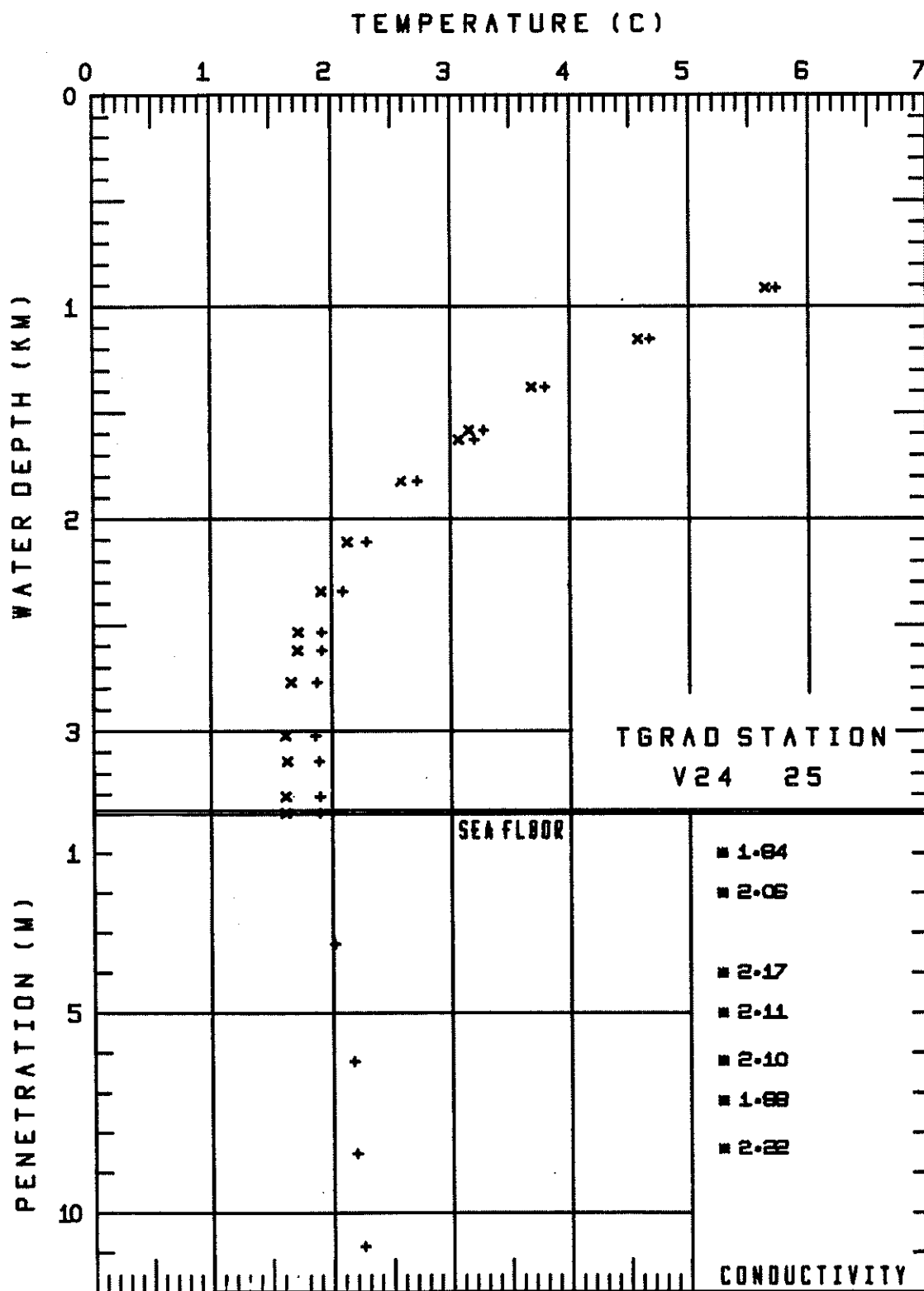
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
912.	5.72	5.64
1152.	4.67	4.57
1377.	3.79	3.68
1578.	3.28	3.15
1626.	3.20	3.07
1822.	2.72	2.58
2108.	2.29	2.13
2340.	2.10	1.92
2531.	1.92	1.72
2618.	1.92	1.72
2767.	1.88	1.66
3020.	1.87	1.62
3141.	1.89	1.63
3307.	1.90	1.62
3386.	1.90	1.62

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.28	2.02
6.21	2.17
8.51	2.19
10.83	2.25

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.84
2.00	2.06
4.00	2.17
5.00	2.11
6.20	2.10
7.20	1.88
8.40	2.22



## TGRAD STATION V24 26

## WATER TEMPERATURES

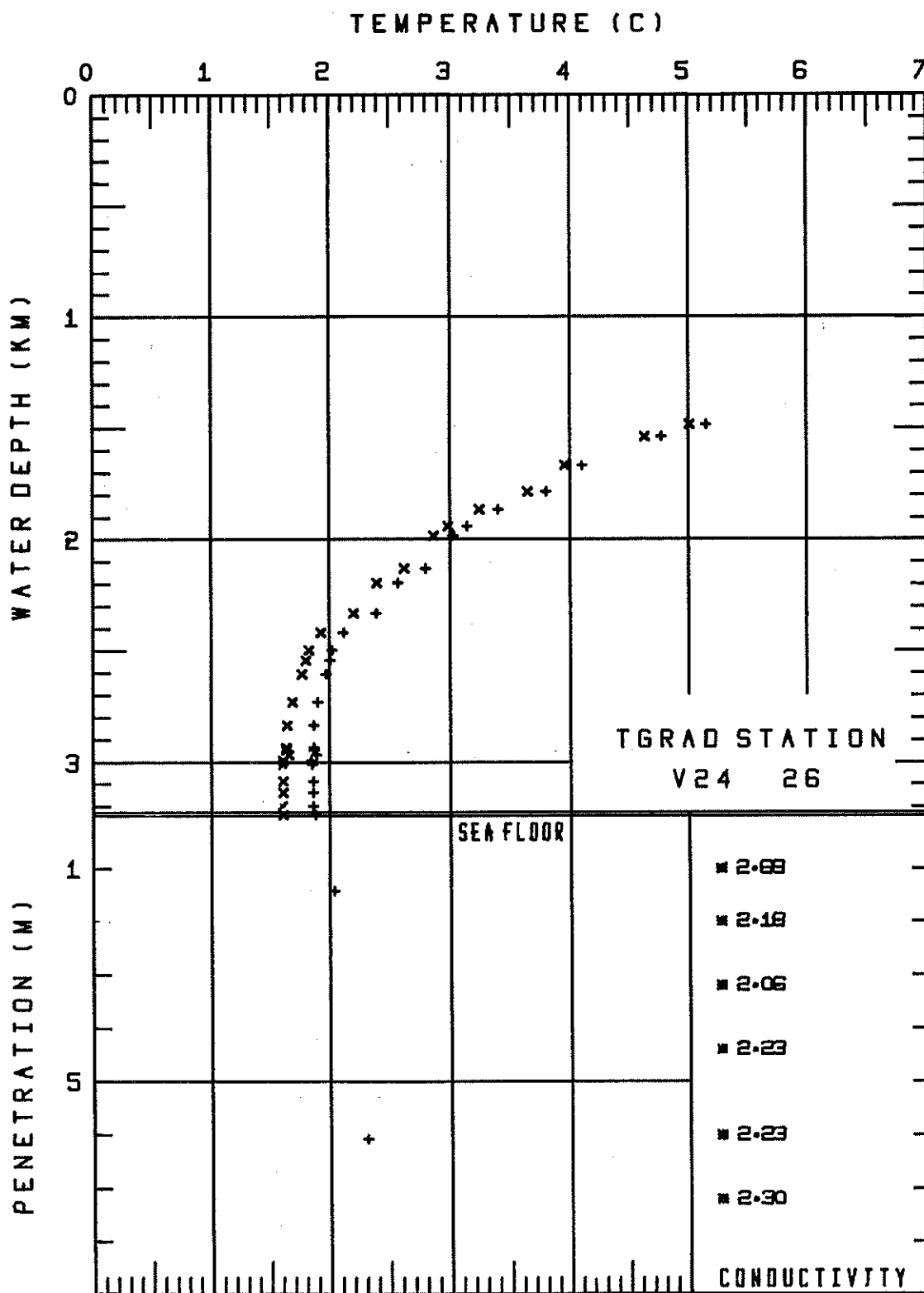
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1479.	5.14	5.00
1535.	4.77	4.63
1664.	4.10	3.96
1784.	3.80	3.64
1863.	3.40	3.24
1936.	3.14	2.98
1980.	3.02	2.86
2129.	2.79	2.62
2194.	2.56	2.39
2331.	2.39	2.20
2416.	2.11	1.93
2494.	2.02	1.82
2540.	2.00	1.80
2601.	1.97	1.77
2730.	1.90	1.69
2833.	1.87	1.64
2943.	1.87	1.63
2932.	1.87	1.63
2966.	1.89	1.65
2992.	1.85	1.61
3009.	1.85	1.61
3085.	1.86	1.61
3134.	1.86	1.60
3196.	1.86	1.60
3235.	1.88	1.61

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
1.42	2.03
6.07	2.31

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.68
2.00	2.18
3.20	2.06
4.40	2.23
6.00	2.23
7.20	2.30



## TGRAD STATION V24-027

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
979.	4.33	4.25
983.	4.22	4.14
1019.	4.07	3.99
1114.	3.83	3.75
1441.	3.17	3.06
1590.	3.06	2.93
1567.	3.03	2.91
1769.	2.74	2.61
2045.	2.39	2.23
2307.	2.20	2.02
2543.	2.04	1.85
2550.	2.04	1.85
2886.	1.97	1.74
3099.	1.89	1.64
3323.	1.86	1.58
3376.	1.89	1.60
3360.	1.91	1.62

## SEDIMENT TEMPERATURES

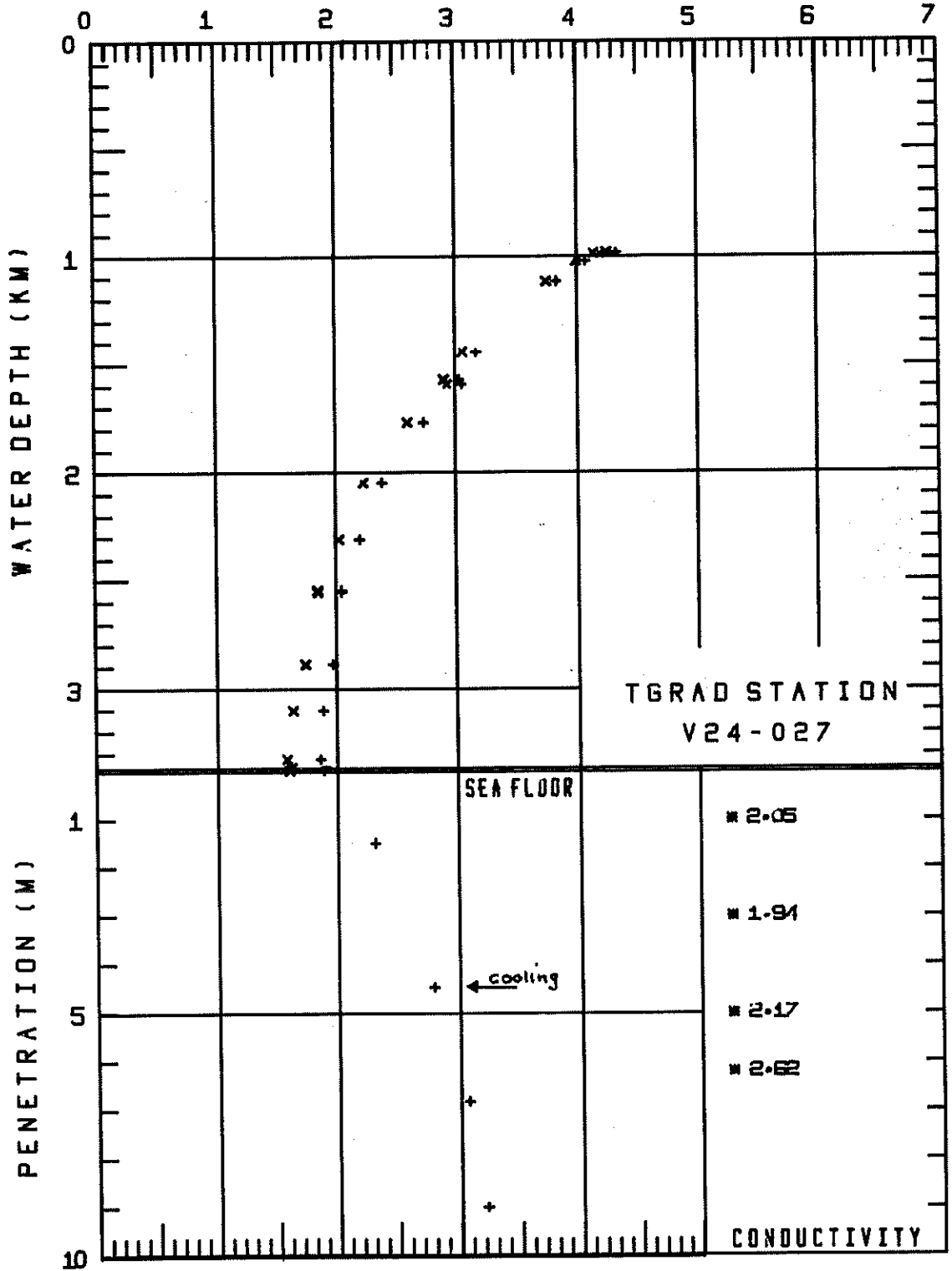
DEPTH	TEMPERATURE
1.50	2.31
4.47	2.79
6.81	3.07
8.99	3.22

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.05
3.00	1.94
5.00	2.17
6.20	2.62

TEMPERATURE (C)

82



## TGRAC STATION V24-028

## WATER TEMPERATURES

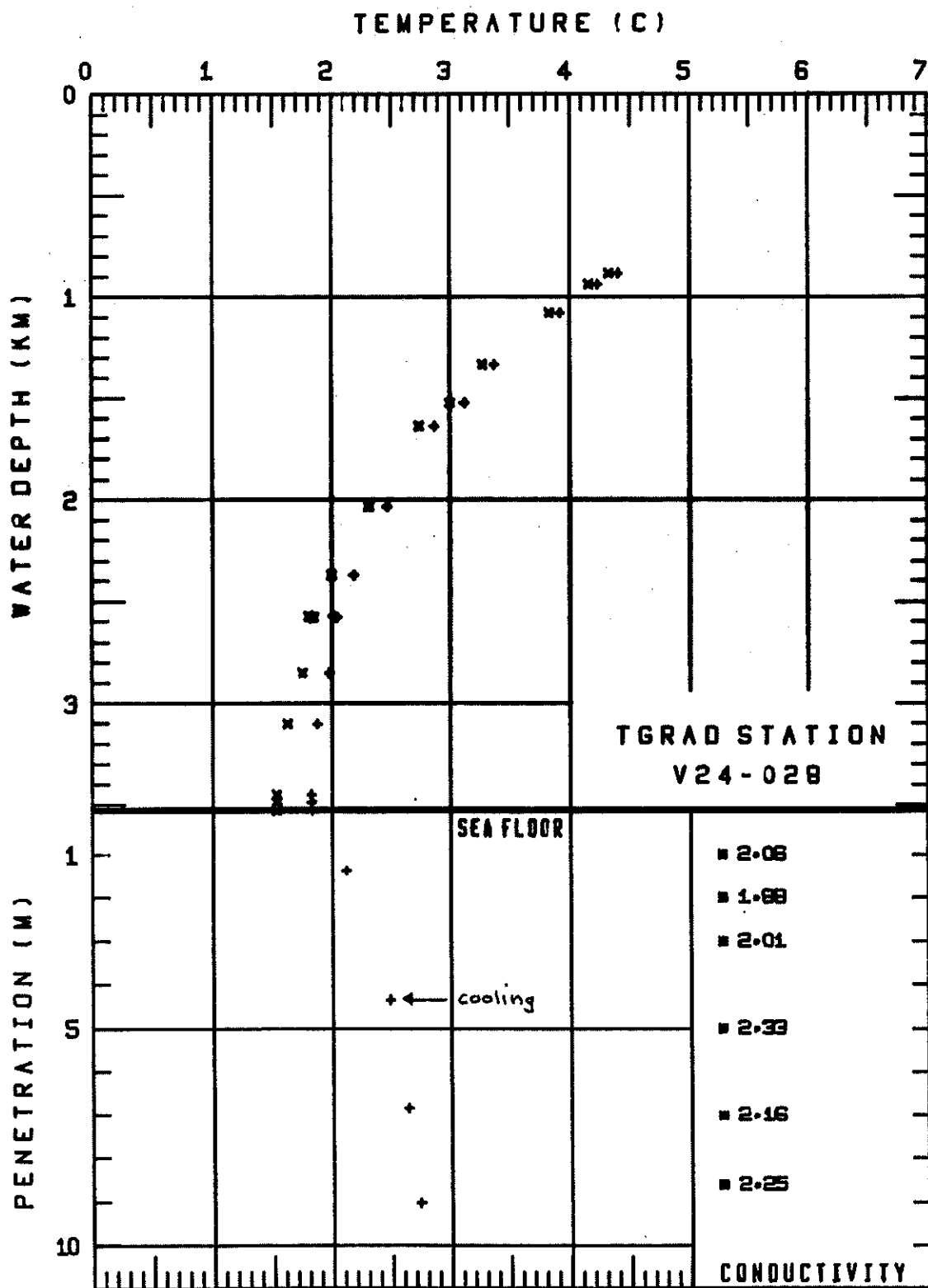
DEPTH	IN SITU TEMPERATURE	PCTENTIAL TEMPERATURE
882.	4.39	4.32
936.	4.23	4.15
1079.	3.91	3.83
1331.	3.37	3.27
1521.	3.11	2.99
1633.	2.86	2.74
2031.	2.46	2.30
2368.	2.18	2.00
2573.	2.04	1.84
2572.	2.00	1.80
2849.	1.98	1.75
3101.	1.88	1.62
3450.	1.82	1.53
3486.	1.82	1.52
3527.	1.83	1.53

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
1.38	2.12
4.35	2.48
6.84	2.63
9.02	2.73

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.06
2.00	1.88
3.00	2.01
5.00	2.33
7.00	2.16
8.60	2.25



## TGRAD STATION V24 29

## WATER TEMPERATURES

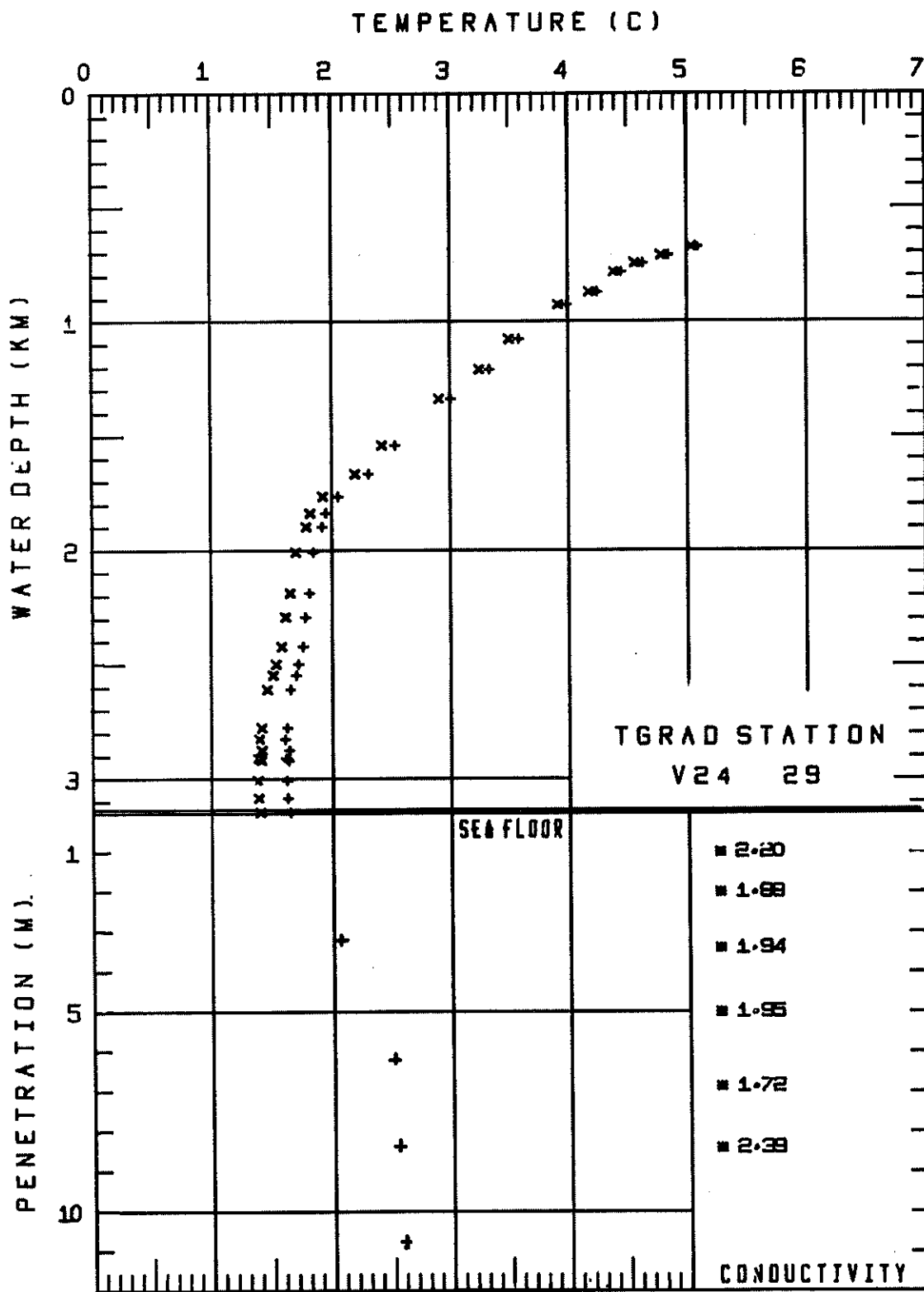
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
666.	5.10	5.04
707.	4.85	4.79
741.	4.64	4.58
780.	4.46	4.40
868.	4.25	4.18
923.	4.00	3.93
1073.	3.59	3.51
1204.	3.34	3.25
1335.	3.01	2.91
1536.	2.54	2.43
1662.	2.32	2.20
1761.	2.06	1.93
1834.	1.96	1.83
1891.	1.93	1.79
2006.	1.85	1.71
2184.	1.82	1.66
2289.	1.78	1.62
2418.	1.76	1.58
2493.	1.73	1.54
2542.	1.71	1.52
2606.	1.66	1.47
2773.	1.63	1.42
2822.	1.61	1.40
2871.	1.64	1.42
2908.	1.63	1.41
2915.	1.64	1.42
2903.	1.62	1.40
3003.	1.62	1.39
3080.	1.64	1.39
3143.	1.66	1.41

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.21	2.05
6.21	2.47
8.39	2.49
10.78	2.57

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.20
2.00	1.88
3.40	1.94
5.00	1.95
6.85	1.72
8.40	2.39



## TGRAD STATION V24 30

## WATER TEMPERATURES

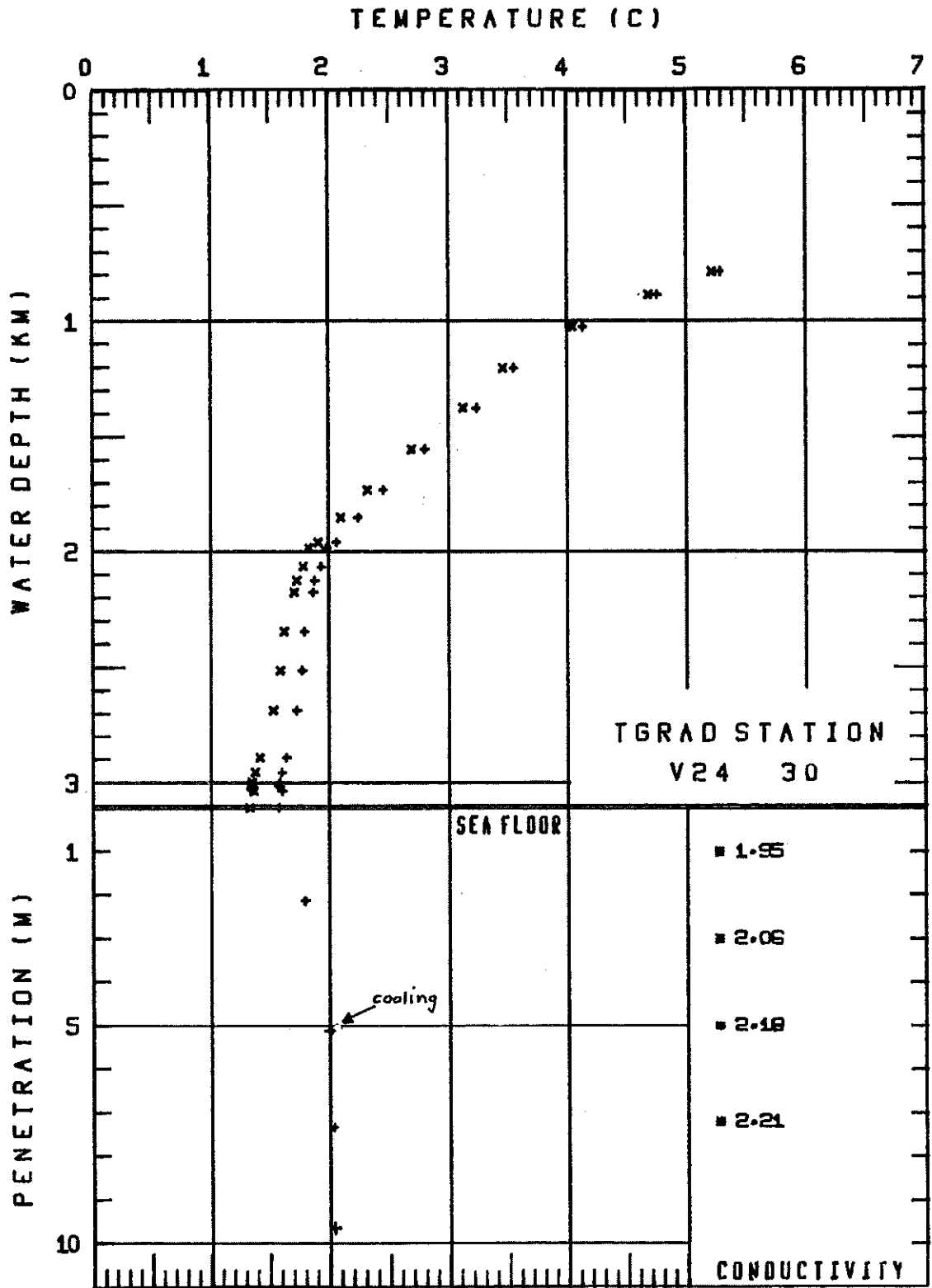
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
787.	5.28	5.21
887.	4.76	4.68
1026.	4.13	4.04
1204.	3.54	3.45
1379.	3.23	3.12
1557.	2.80	2.69
1734.	2.45	2.32
1851.	2.24	2.10
1959.	2.06	1.92
1981.	1.98	1.84
2061.	1.94	1.79
2121.	1.89	1.74
2176.	1.87	1.71
2342.	1.80	1.63
2512.	1.78	1.59
2684.	1.74	1.53
2890.	1.65	1.42
2950.	1.61	1.38
2996.	1.58	1.35
3017.	1.59	1.35
3033.	1.60	1.37
3001.	1.58	1.35
3011.	1.58	1.34
3107.	1.58	1.34

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.14	1.99
5.08	2.05
7.34	2.04
9.60	

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.95
3.00	2.06
5.00	2.18
7.20	2.21



## TGRAD STATION V24-031

## WATER TEMPERATURES

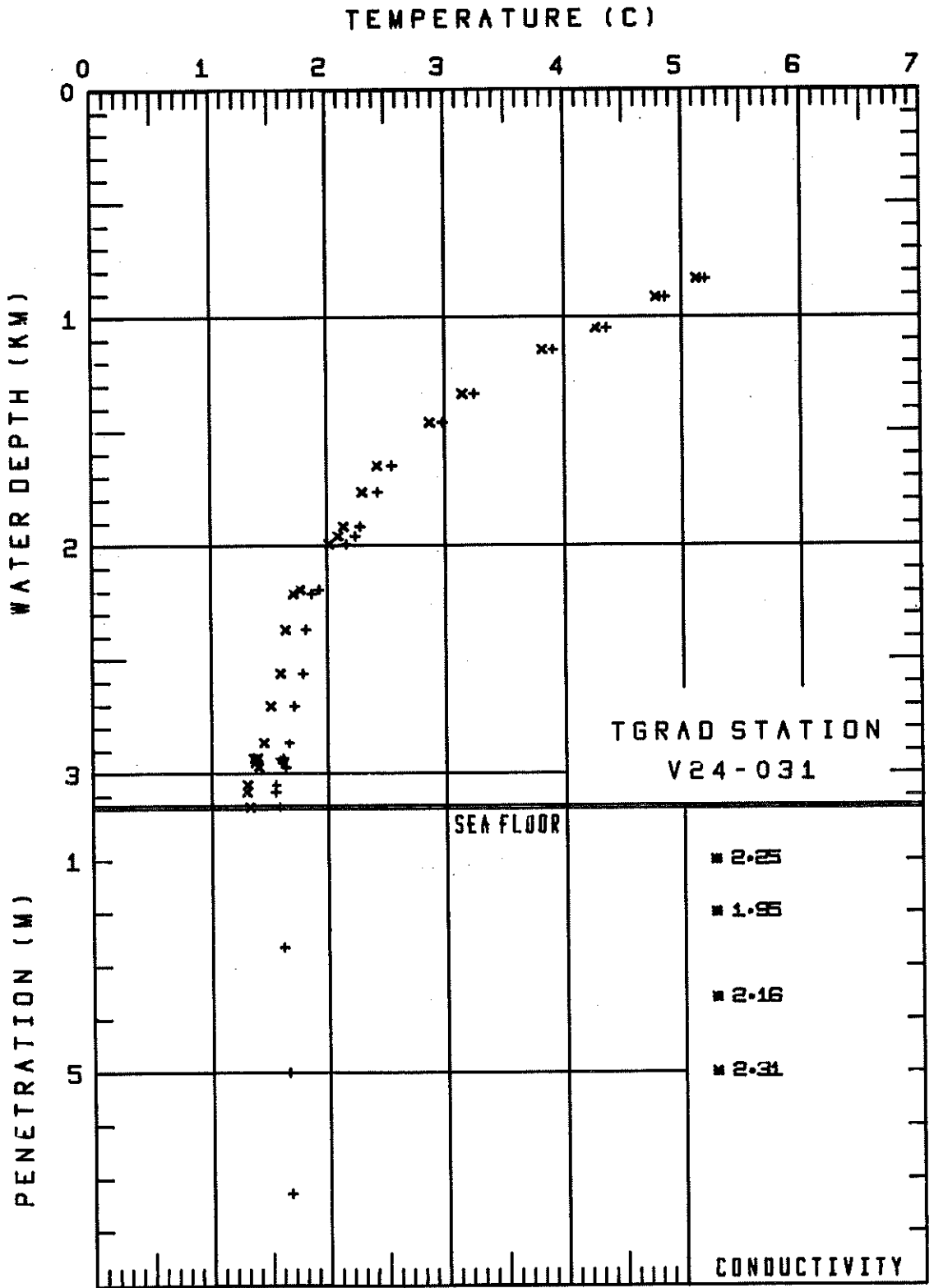
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
832.	5.20	5.13
913.	4.86	4.78
1050.	4.36	4.27
1143.	3.91	3.81
1335.	3.25	3.14
1461.	2.98	2.87
1651.	2.55	2.43
1764.	2.43	2.30
1914.	2.28	2.14
1958.	2.24	2.09
1992.	2.16	2.01
2192.	1.93	1.77
2209.	1.87	1.70
2366.	1.81	1.64
2558.	1.79	1.60
2701.	1.71	1.51
2863.	1.67	1.45
2934.	1.59	1.36
2969.	1.63	1.40
2941.	1.61	1.38
2928.	1.62	1.39
2931.	1.61	1.39
2950.	1.60	1.37
3048.	1.54	1.31
3079.	1.54	1.30
3145.	1.58	1.33

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.64	1.61
5.00	1.66
7.27	1.67

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.25
2.00	1.95
3.60	2.16
5.00	2.31



## TGRAD STATION V24-032

## WATER TEMPERATURES

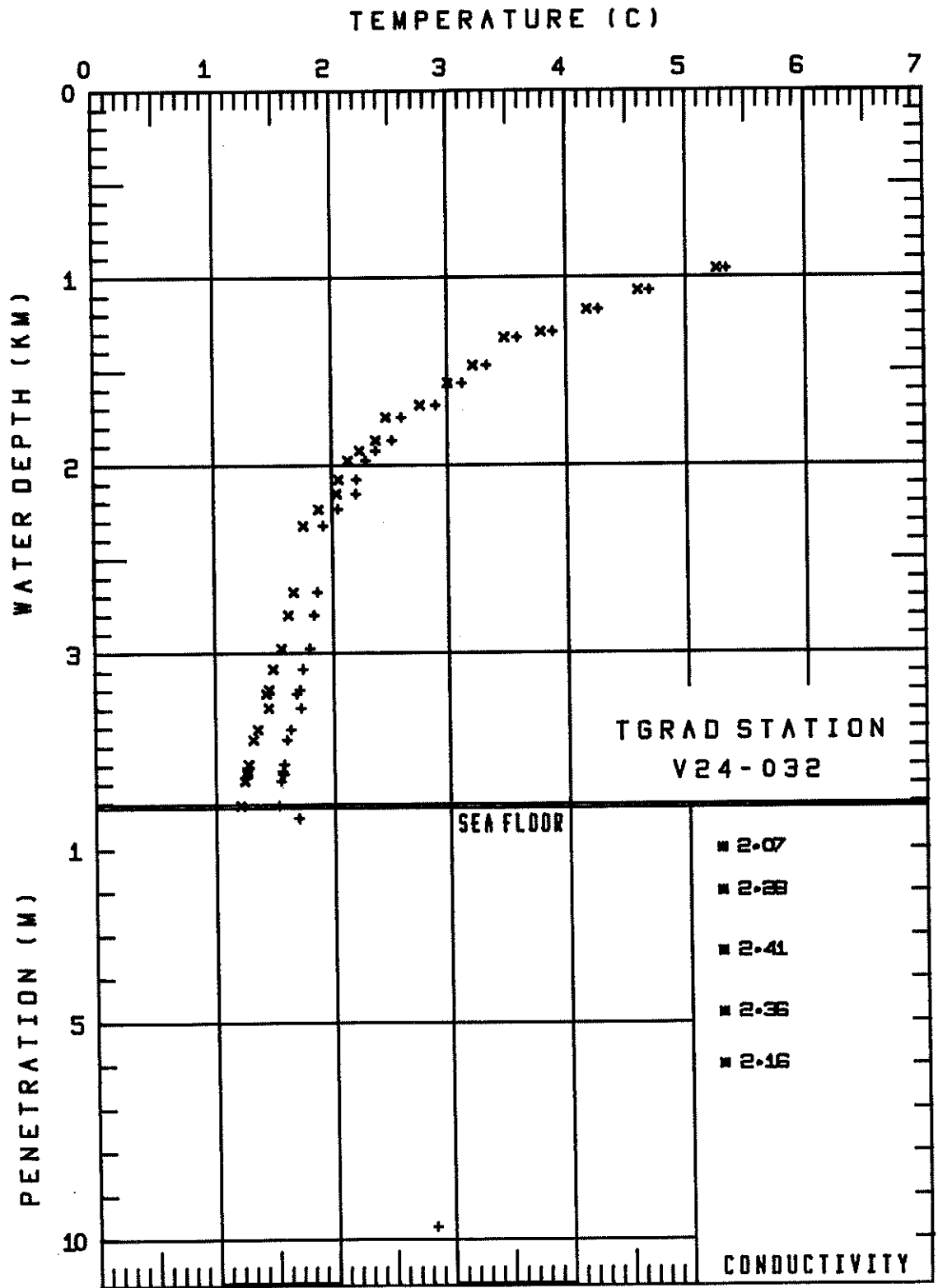
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
958.	5.34	5.26
1074.	4.69	4.60
1172.	4.27	4.17
1293.	3.89	3.78
1321.	3.59	3.48
1472.	3.33	3.21
1562.	3.12	3.00
1682.	2.89	2.76
1745.	2.60	2.47
1871.	2.52	2.38
1924.	2.38	2.24
1975.	2.29	2.14
2076.	2.21	2.06
2152.	2.20	2.04
2231.	2.06	1.89
2321.	1.93	1.76
2674.	1.88	1.67
2798.	1.84	1.62
2973.	1.80	1.56
3086.	1.74	1.49
3195.	1.71	1.45
3217.	1.68	1.42
3294.	1.72	1.45
3405.	1.63	1.35
3460.	1.60	1.32
3593.	1.57	1.27
3630.	1.56	1.26
3645.	1.56	1.26
3684.	1.55	1.24
3813.	1.53	1.21

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.30	1.70
9.72	2.84

## SEDIMENT CONDUCTIVITIES

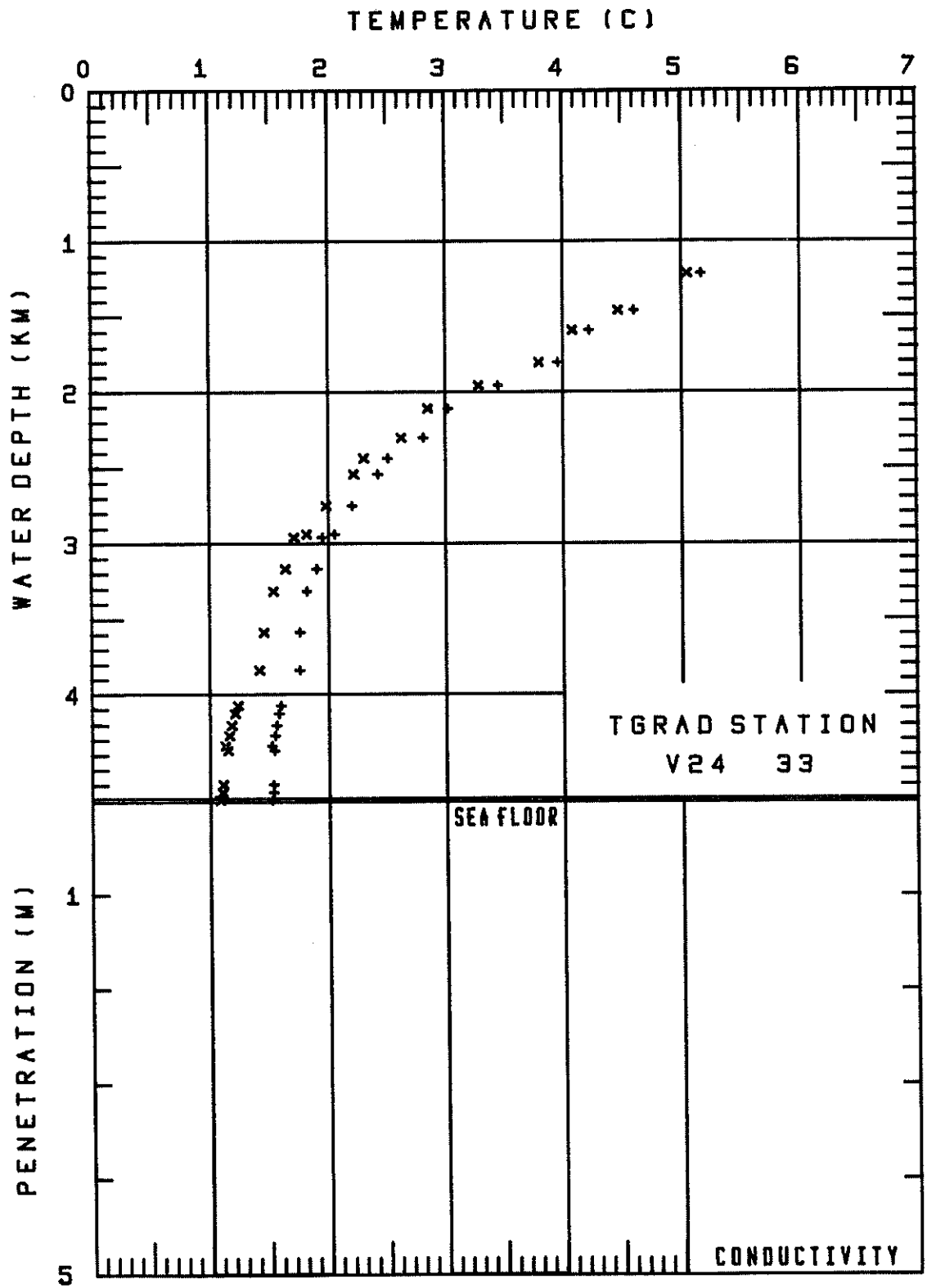
DEPTH	CONDUCTIVITY
1.00	2.07
2.00	2.28
3.40	2.41
4.80	2.36
6.00	2.16



## TGRAD STATION V24 33

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1216.	5.17	5.05
1463.	4.60	4.47
1591.	4.23	4.09
1806.	3.96	3.80
1955.	3.45	3.29
2109.	3.03	2.85
2303.	2.81	2.62
2439.	2.51	2.31
2544.	2.43	2.22
2751.	2.21	1.98
2940.	2.06	1.82
2962.	1.95	1.71
3167.	1.90	1.64
3317.	1.82	1.54
3584.	1.76	1.46
3835.	1.75	1.42
4069.	1.60	1.24
4122.	1.58	1.22
4204.	1.56	1.19
4270.	1.54	1.17
4339.	1.52	1.14
4367.	1.54	1.15
4592.	1.53	1.11
4647.	1.53	1.10
4698.	1.52	1.09



## TGRAD STATION V24-034

## WATER TEMPERATURES

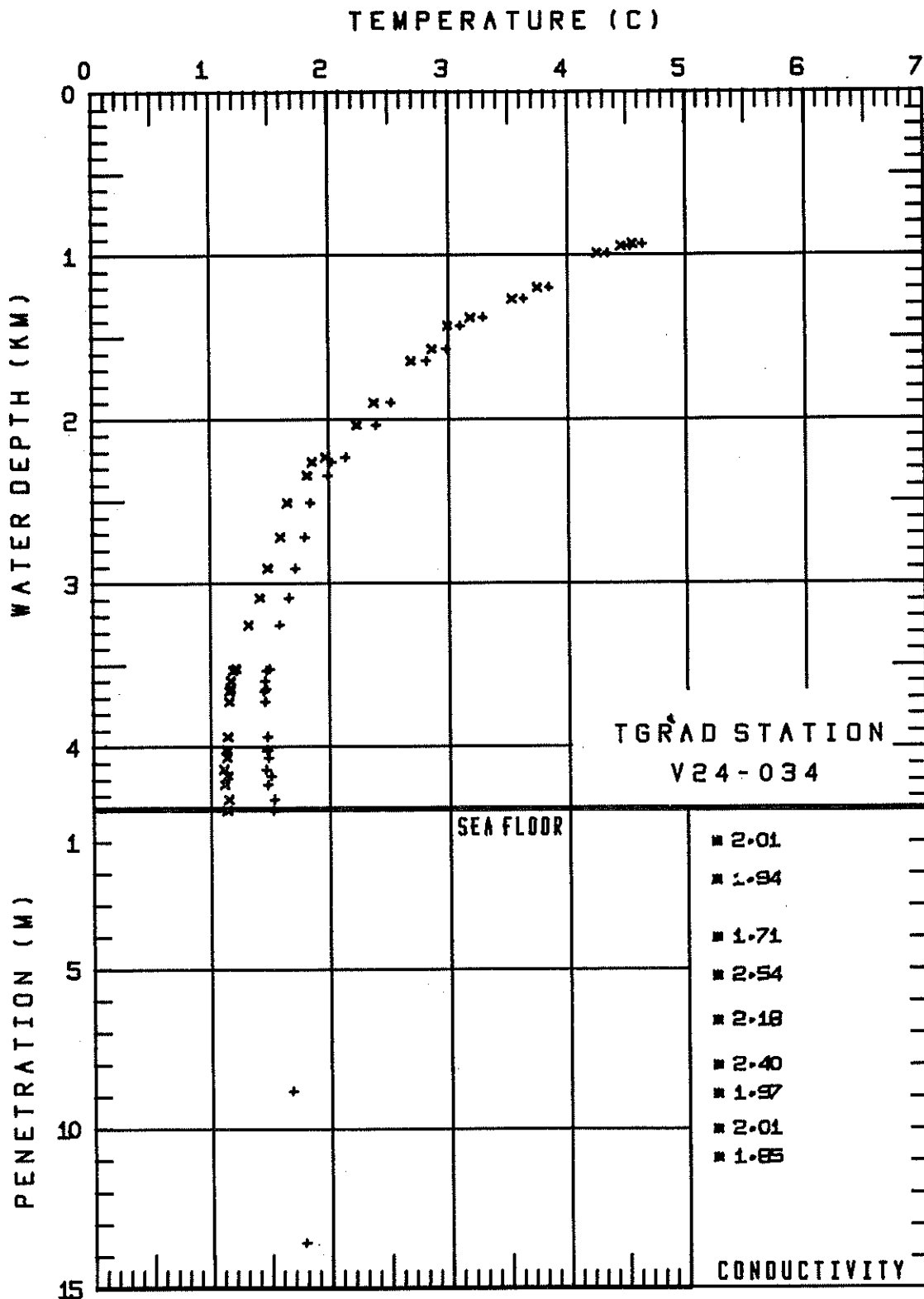
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
929.	4.64	4.56
944.	4.54	4.46
987.	4.35	4.27
1197.	3.86	3.76
1266.	3.65	3.55
1377.	3.30	3.20
1426.	3.12	3.01
1569.	3.00	2.88
1640.	2.83	2.71
1892.	2.54	2.40
2032.	2.42	2.26
2225.	2.17	2.00
2253.	2.06	1.89
2337.	2.02	1.84
2503.	1.87	1.68
2711.	1.83	1.62
2903.	1.74	1.52
3084.	1.69	1.45
3247.	1.61	1.35
3514.	1.53	1.24
3527.	1.50	1.21
3591.	1.49	1.19
3640.	1.49	1.19
3651.	1.48	1.18
3715.	1.49	1.18
3928.	1.50	1.17
4014.	1.51	1.16
4010.	1.50	1.16
4056.	1.51	1.16
4127.	1.49	1.13
4167.	1.53	1.17
4222.	1.51	1.14
4315.	1.56	1.17
4382.	1.55	1.16

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.35	1.63
8.79	1.70
13.56	1.81

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.01
2.20	1.94
4.00	1.71
5.20	2.54
6.60	2.18
8.00	2.40
8.90	1.97
10.00	2.01
10.90	1.85



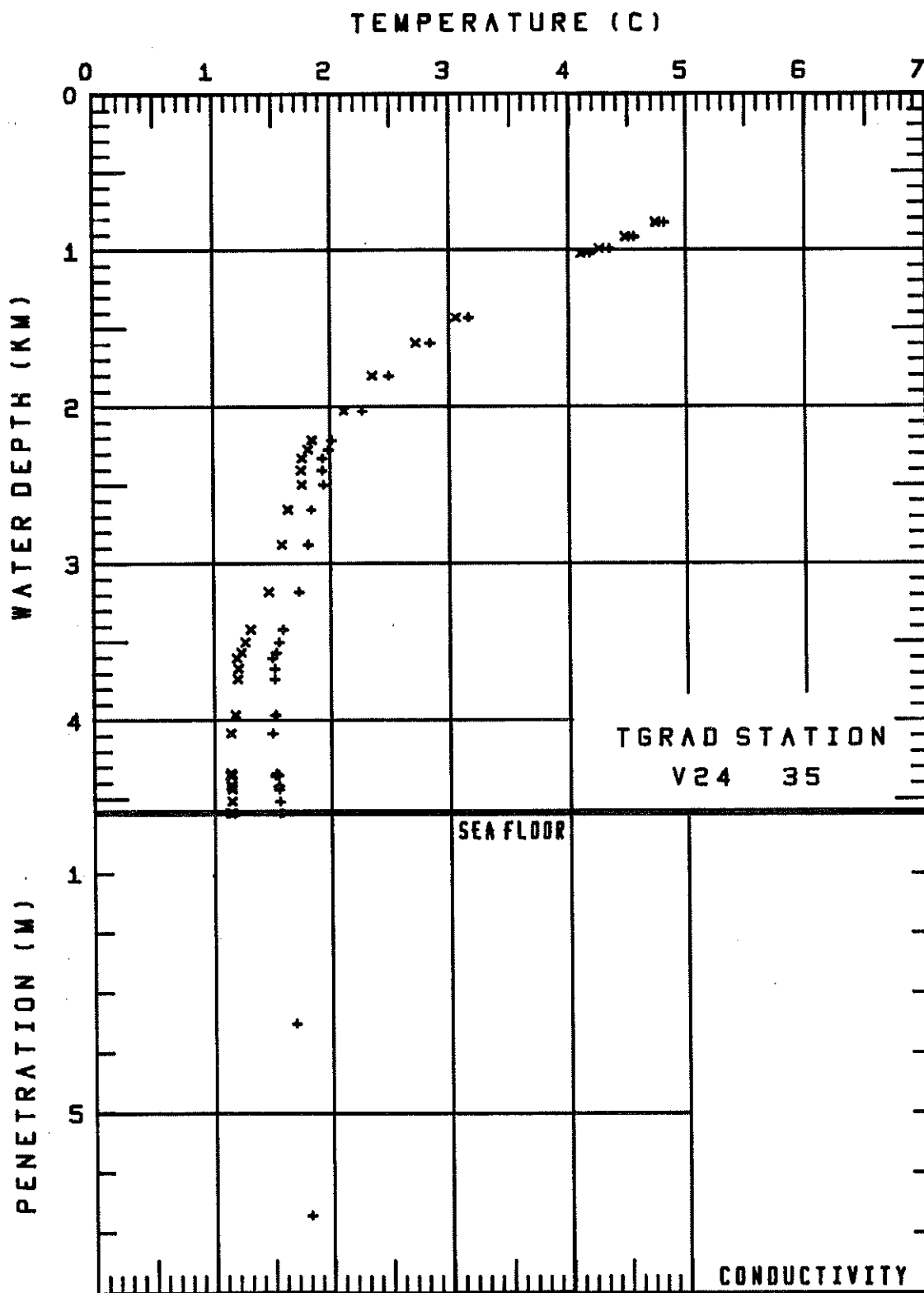
## TGRAD STATION V24 35

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
822.	4.81	4.74
913.	4.56	4.48
989.	4.34	4.26
1021.	4.18	4.10
1429.	3.16	3.05
1593.	2.84	2.72
1801.	2.49	2.36
2022.	2.26	2.11
2209.	2.01	1.84
2270.	1.98	1.81
2325.	1.93	1.75
2400.	1.93	1.74
2494.	1.94	1.75
2650.	1.84	1.63
2874.	1.81	1.58
3177.	1.73	1.47
3415.	1.59	1.31
3496.	1.55	1.27
3566.	1.53	1.23
3597.	1.49	1.20
3668.	1.51	1.21
3733.	1.51	1.20
3964.	1.52	1.18
4081.	1.49	1.14
4351.	1.52	1.13
4345.	1.54	1.15
4334.	1.53	1.14
4347.	1.53	1.14
4413.	1.54	1.15
4418.	1.54	1.14
4439.	1.54	1.14
4512.	1.56	1.15
4588.	1.57	1.15
4589.	1.55	1.13

## SEDIMENT TEMPERATURES

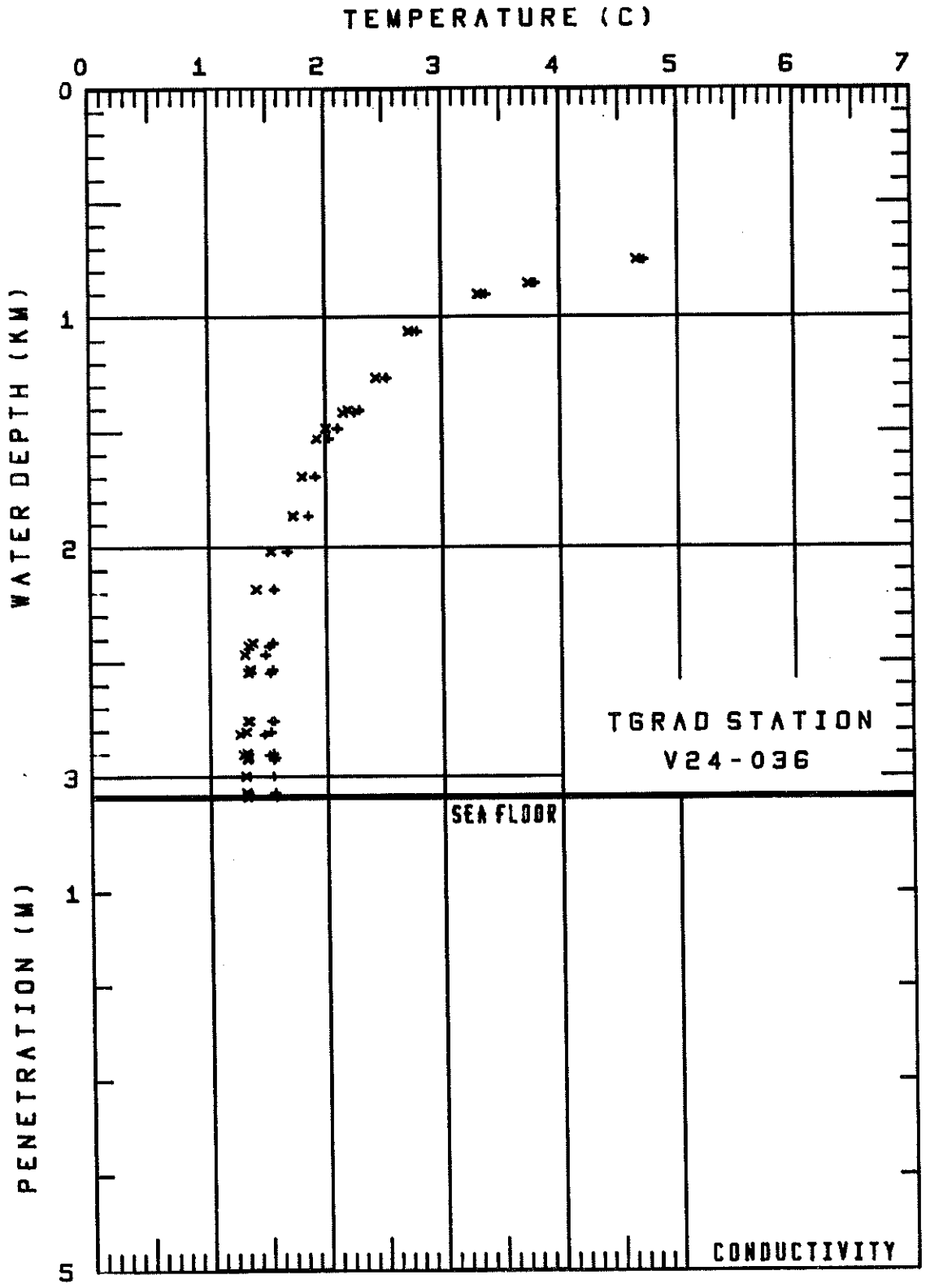
DEPTH	TEMPERATURE
3.51	1.68
6.97	1.80



## TGRAD STATION V24-036

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
748.	4.72	4.65
852.	3.80	3.74
899.	3.38	3.31
1061.	2.79	2.72
1262.	2.53	2.44
1404.	2.29	2.20
1415.	2.25	2.15
1481.	2.11	2.01
1528.	2.03	1.93
1691.	1.92	1.80
1863.	1.85	1.72
2017.	1.67	1.53
2183.	1.56	1.40
2416.	1.54	1.37
2428.	1.51	1.34
2466.	1.47	1.30
2547.	1.51	1.33
2532.	1.53	1.35
2755.	1.53	1.32
2757.	1.54	1.33
2803.	1.52	1.30
2814.	1.46	1.25
2923.	1.54	1.31
2895.	1.53	1.31
2917.	1.54	1.31
2913.	1.55	1.32
2903.	1.50	1.28
2996.	1.53	1.30
3088.	1.56	1.31
3080.	1.56	1.32
3067.	1.54	1.30
3080.	1.56	1.31



## TGRAD STATION V24 37

## WATER TEMPERATURES

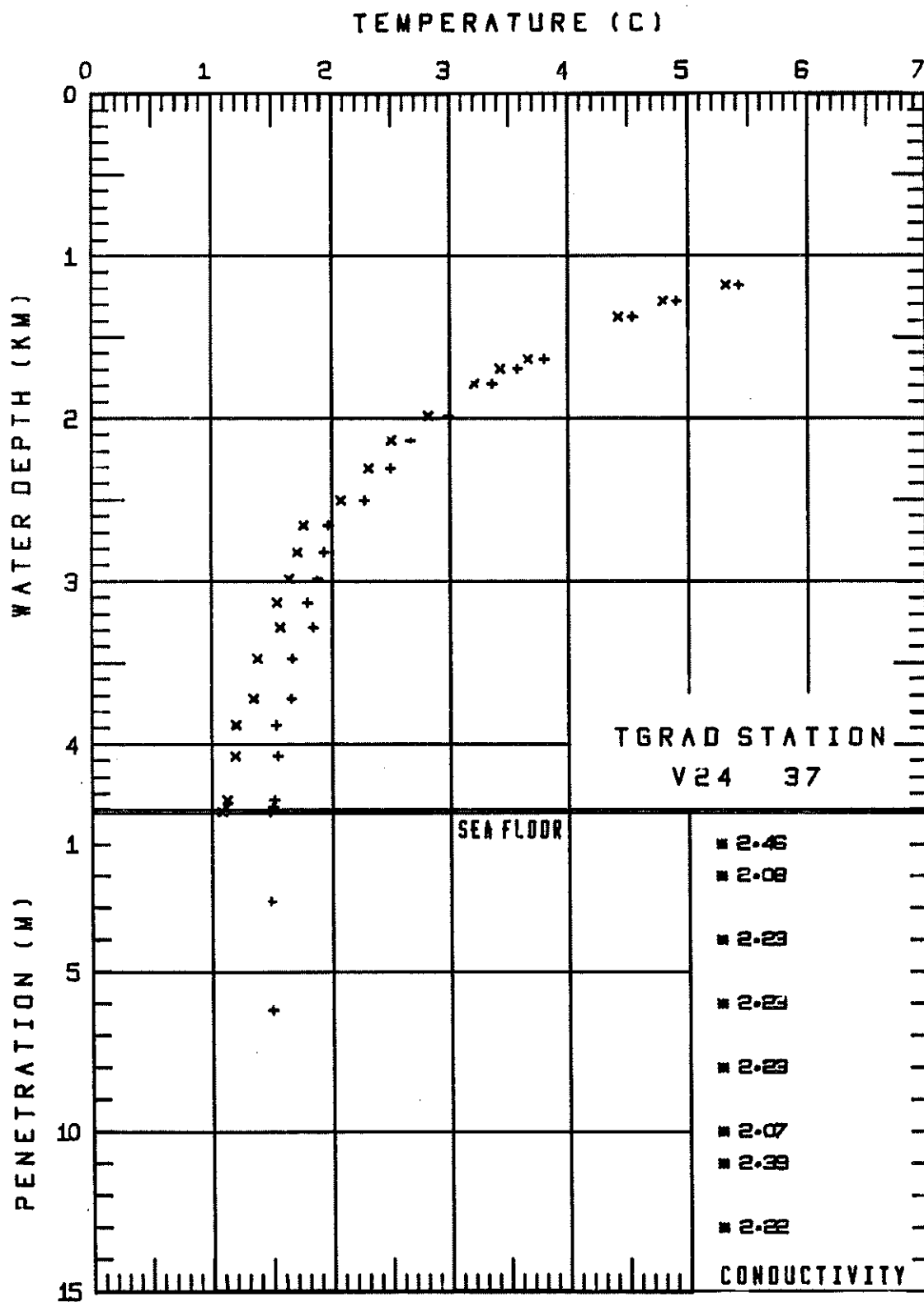
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1178.	5.42	5.31
1274.	4.91	4.79
1374.	4.54	4.42
1633.	3.80	3.66
1693.	3.57	3.43
1787.	3.36	3.21
1981.	2.98	2.82
2134.	2.67	2.50
2302.	2.49	2.31
2499.	2.27	2.07
2655.	1.97	1.76
2819.	1.93	1.71
2981.	1.88	1.64
3129.	1.79	1.54
3279.	1.84	1.57
3473.	1.67	1.38
3716.	1.66	1.34
3878.	1.53	1.20
4072.	1.55	1.19
4341.	1.52	1.13
4386.	1.51	1.12
4413.	1.48	1.08

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.46
2.00	2.08
4.00	2.23
6.00	2.23
8.00	2.23
10.00	2.07
11.00	2.39
13.00	2.22

## SEDIMENT TEMPERATURES

Depth	Temperature
2.80	1.49
6.21	1.50



## TGRAD STATION V24-038

## WATER TEMPERATURES

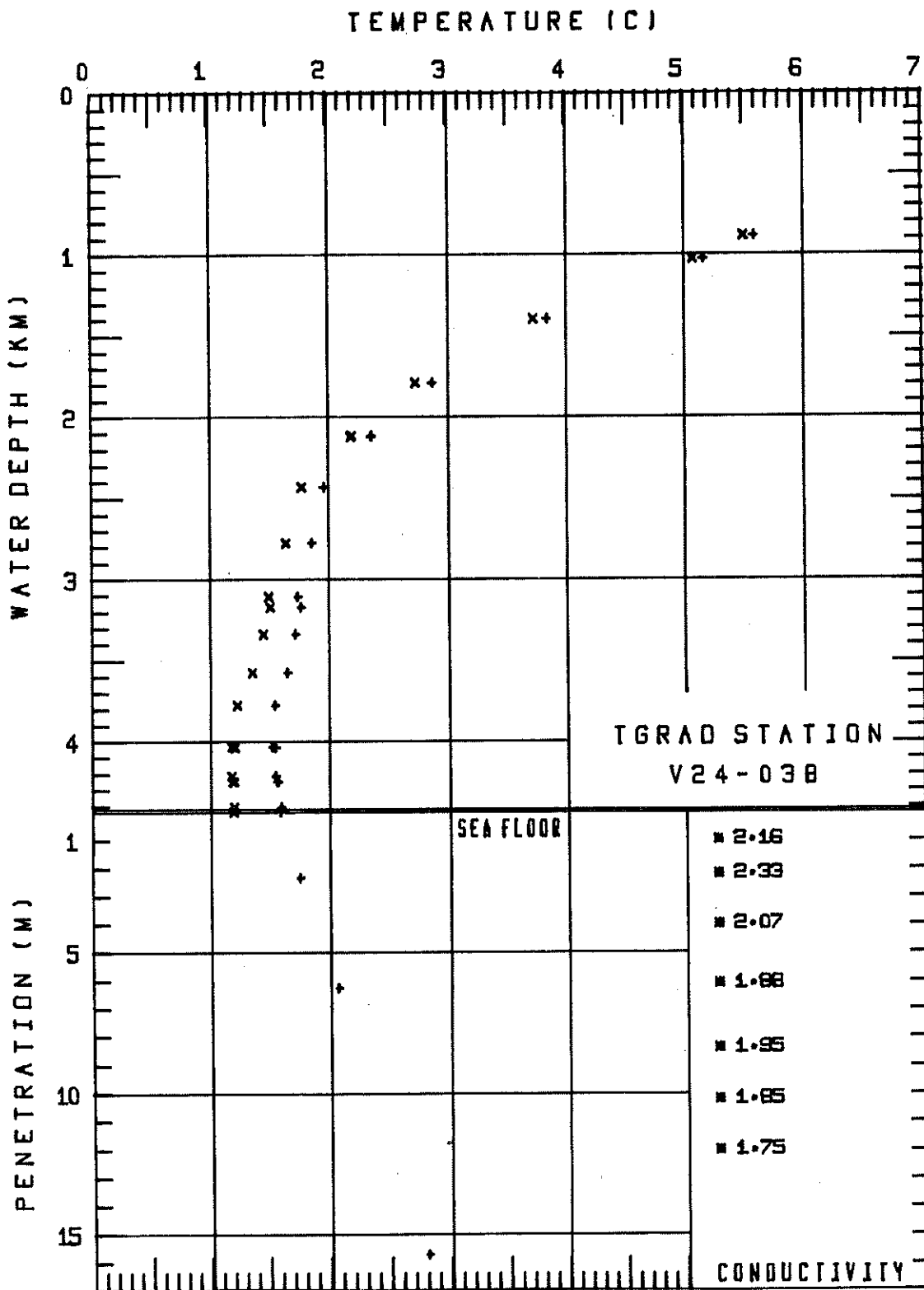
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
880.	5.59	5.51
1024.	5.17	5.08
1395.	3.84	3.73
1787.	2.88	2.73
2117.	2.36	2.19
2113.	2.36	2.20
2429.	1.97	1.78
2773.	1.87	1.65
3101.	1.75	1.50
3166.	1.78	1.52
3334.	1.74	1.46
3573.	1.66	1.36
3775.	1.56	1.24
4030.	1.53	1.19
4035.	1.56	1.21
4213.	1.56	1.19
4247.	1.58	1.20
4247.	1.57	1.20
4401.	1.61	1.21
4433.	1.60	1.20

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.34	1.76
6.27	2.07
15.72	2.81

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.16
2.20	2.33
4.00	2.07
6.10	1.88
8.40	1.95
10.20	1.85
12.00	1.75



## TGRAD STATION V24-039

## WATER TEMPERATURES

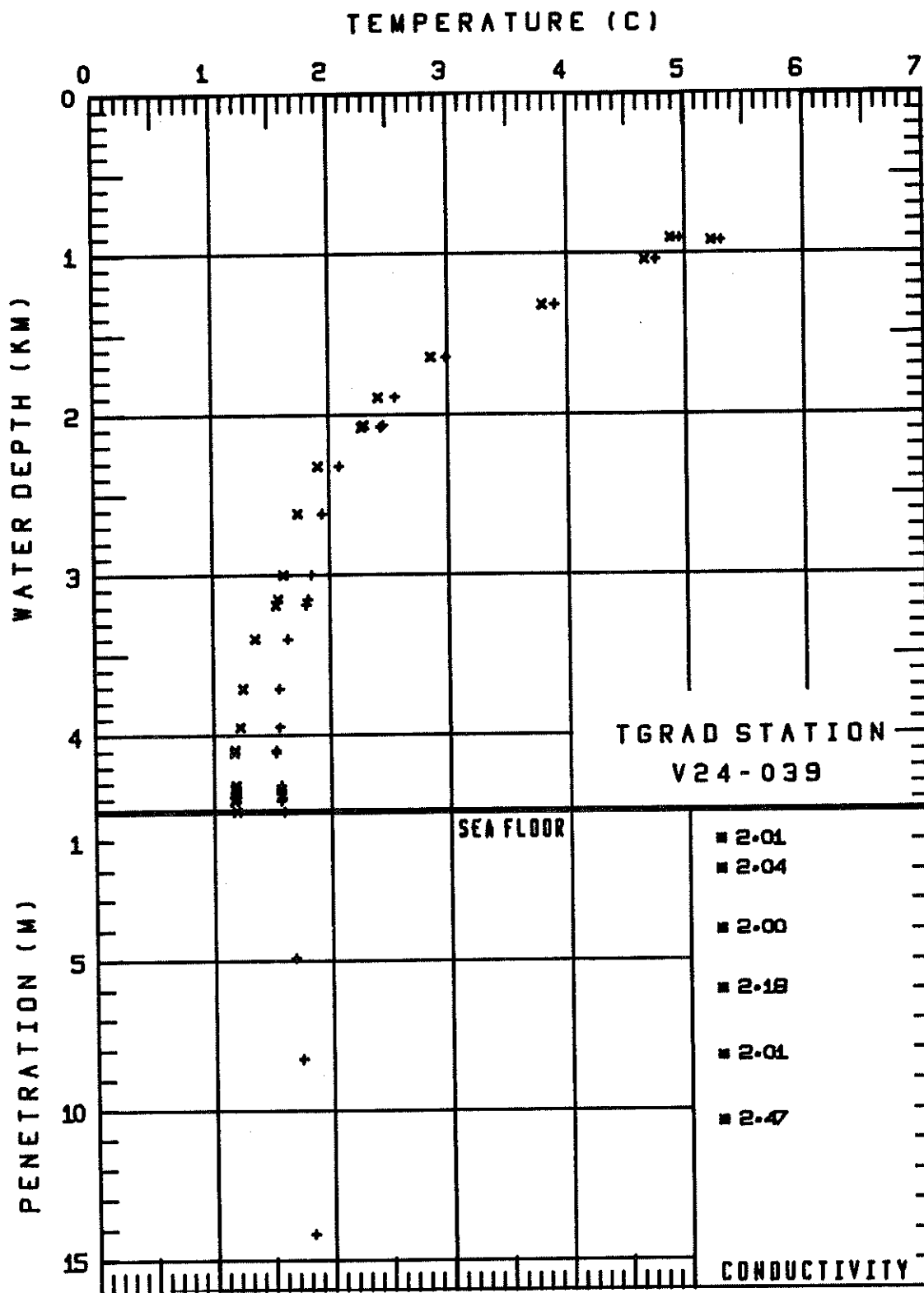
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
917.	5.31	5.22
905.	4.96	4.88
1037.	4.75	4.66
1319.	3.89	3.78
1646.	2.99	2.86
1896.	2.56	2.42
2067.	2.46	2.30
2080.	2.44	2.28
2322.	2.08	1.91
2617.	1.94	1.73
3000.	1.85	1.61
3145.	1.81	1.56
3187.	1.80	1.54
3396.	1.64	1.36
3709.	1.57	1.25
3950.	1.57	1.23
4108.	1.53	1.17
4094.	1.54	1.18
4310.	1.57	1.19
4343.	1.57	1.19
4337.	1.57	1.18
4391.	1.58	1.19
4362.	1.58	1.18
4403.	1.57	1.18
4475.	1.60	1.19

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
4.90	1.69
8.28	1.74
14.12	1.83

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.01
2.00	2.04
4.00	2.00
6.00	2.18
8.20	2.01
10.40	2.47



## TGRAD STATION V24-040

## WATER TEMPERATURES

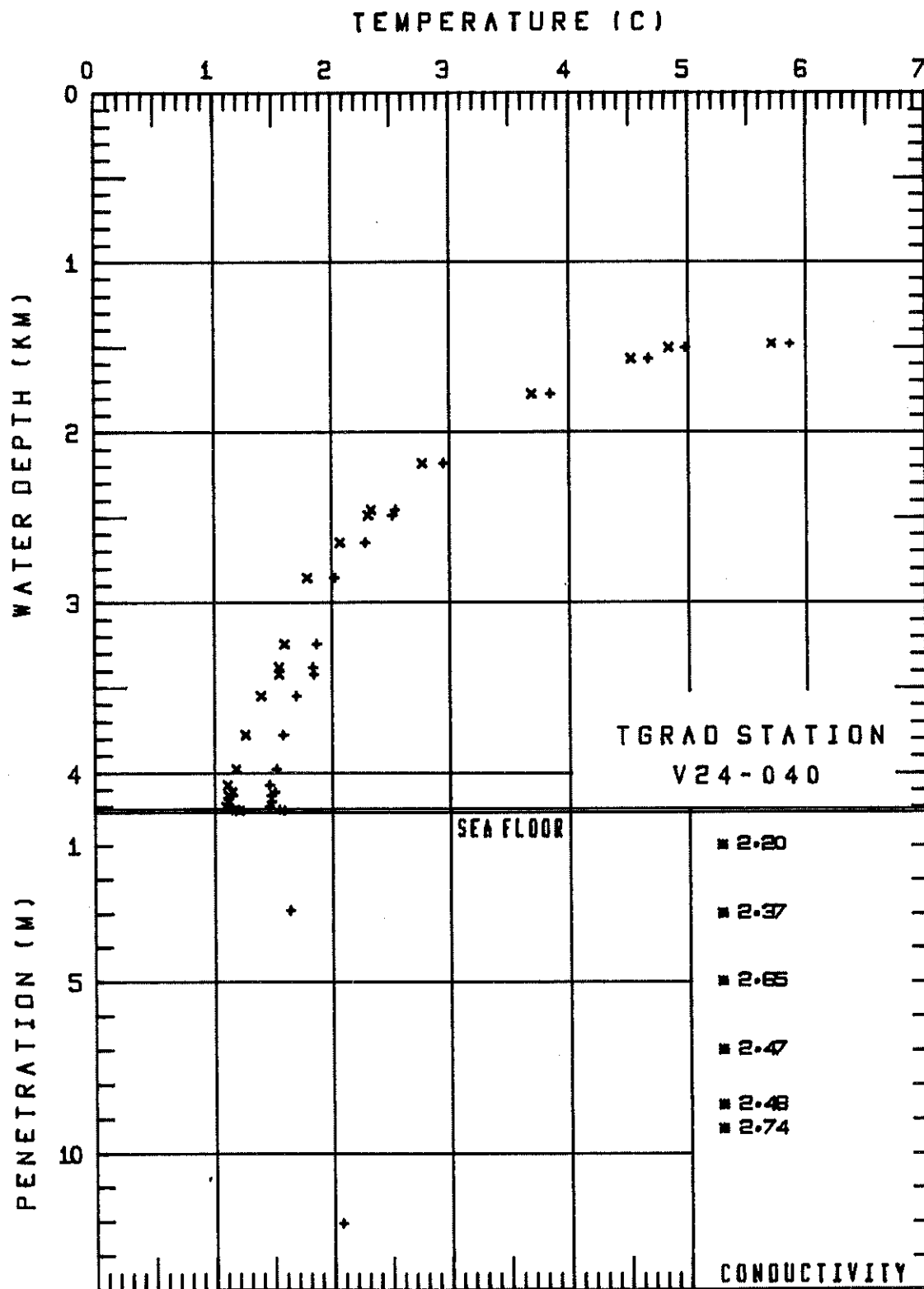
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1479.	5.84	5.69
1500.	4.97	4.83
1567.	4.65	4.51
1775.	3.84	3.68
2180.	2.95	2.77
2455.	2.53	2.33
2489.	2.51	2.31
2644.	2.28	2.06
2855.	2.02	1.79
3242.	1.86	1.59
3420.	1.84	1.55
3380.	1.83	1.55
3545.	1.69	1.40
3777.	1.58	1.26
3977.	1.52	1.18
4116.	1.50	1.15
4216.	1.54	1.17
4223.	1.58	1.21
4073.	1.46	1.11
4131.	1.47	1.11
4171.	1.48	1.11
4198.	1.46	1.09

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.92	1.64
12.07	2.07

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.20
3.00	2.37
5.00	2.65
7.00	2.47
8.60	2.48
9.30	2.74



## TGRAD STATION V24-041

## WATER TEMPERATURES

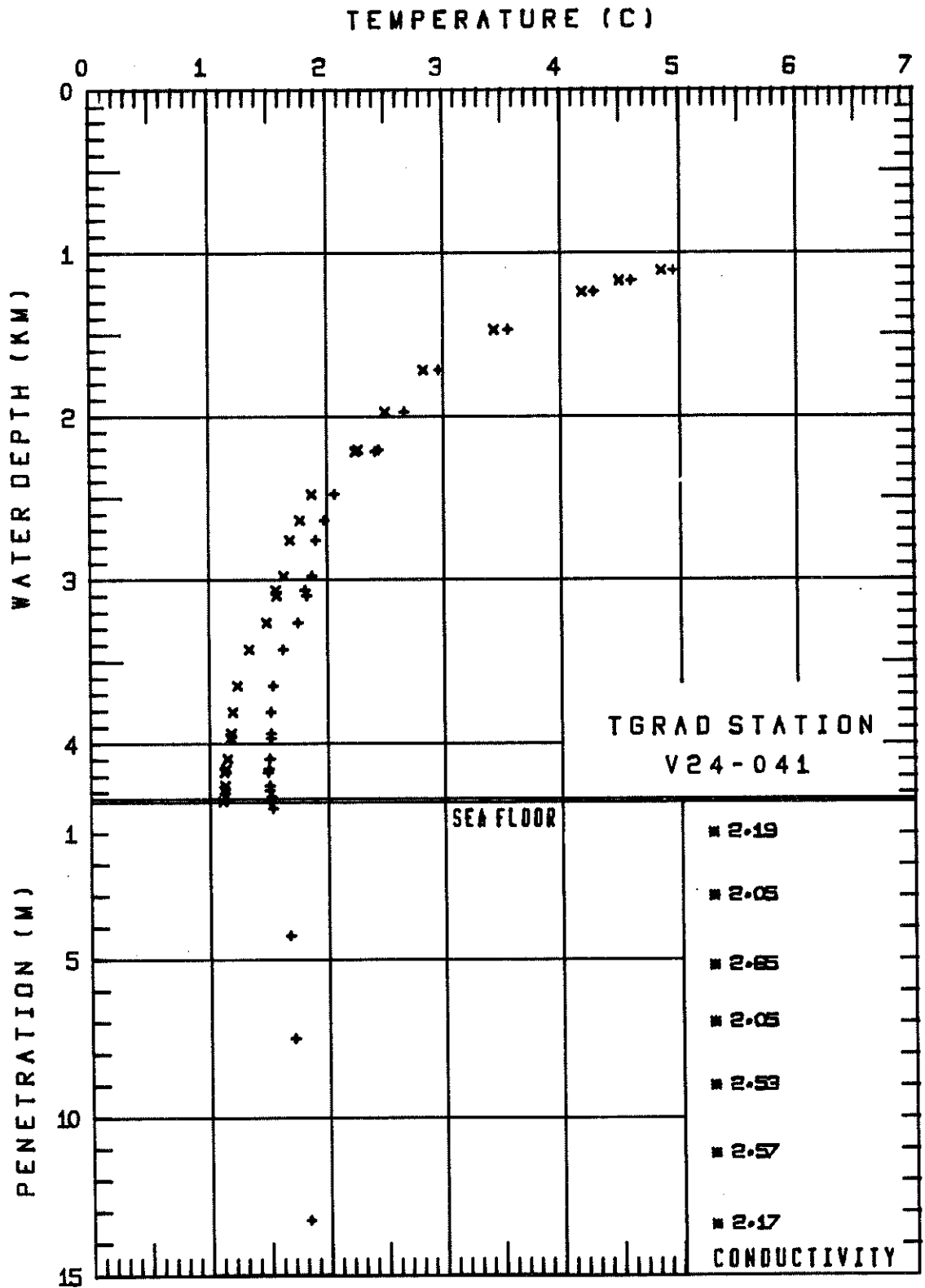
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1109.	4.94	4.85
1169.	4.60	4.50
1240.	4.28	4.18
1469.	3.55	3.44
1718.	2.96	2.83
1972.	2.66	2.50
2207.	2.44	2.27
2214.	2.41	2.24
2475.	2.06	1.87
2637.	1.97	1.77
2756.	1.90	1.68
2973.	1.86	1.63
3062.	1.81	1.56
3096.	1.82	1.57
3257.	1.74	1.48
3425.	1.62	1.34
3645.	1.53	1.23
3807.	1.51	1.19
3937.	1.51	1.18
3963.	1.51	1.17
4093.	1.50	1.15
4156.	1.49	1.13
4175.	1.49	1.12
4254.	1.50	1.13
4286.	1.50	1.12
4321.	1.51	1.13
4352.	1.50	1.11

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.23	1.53
4.24	1.67
7.50	1.70
13.26	1.82

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.19
3.00	2.05
5.20	2.65
7.00	2.05
9.00	2.53
11.15	2.57
13.40	2.17



## TGRAD STATION V24 42

## WATER TEMPERATURES

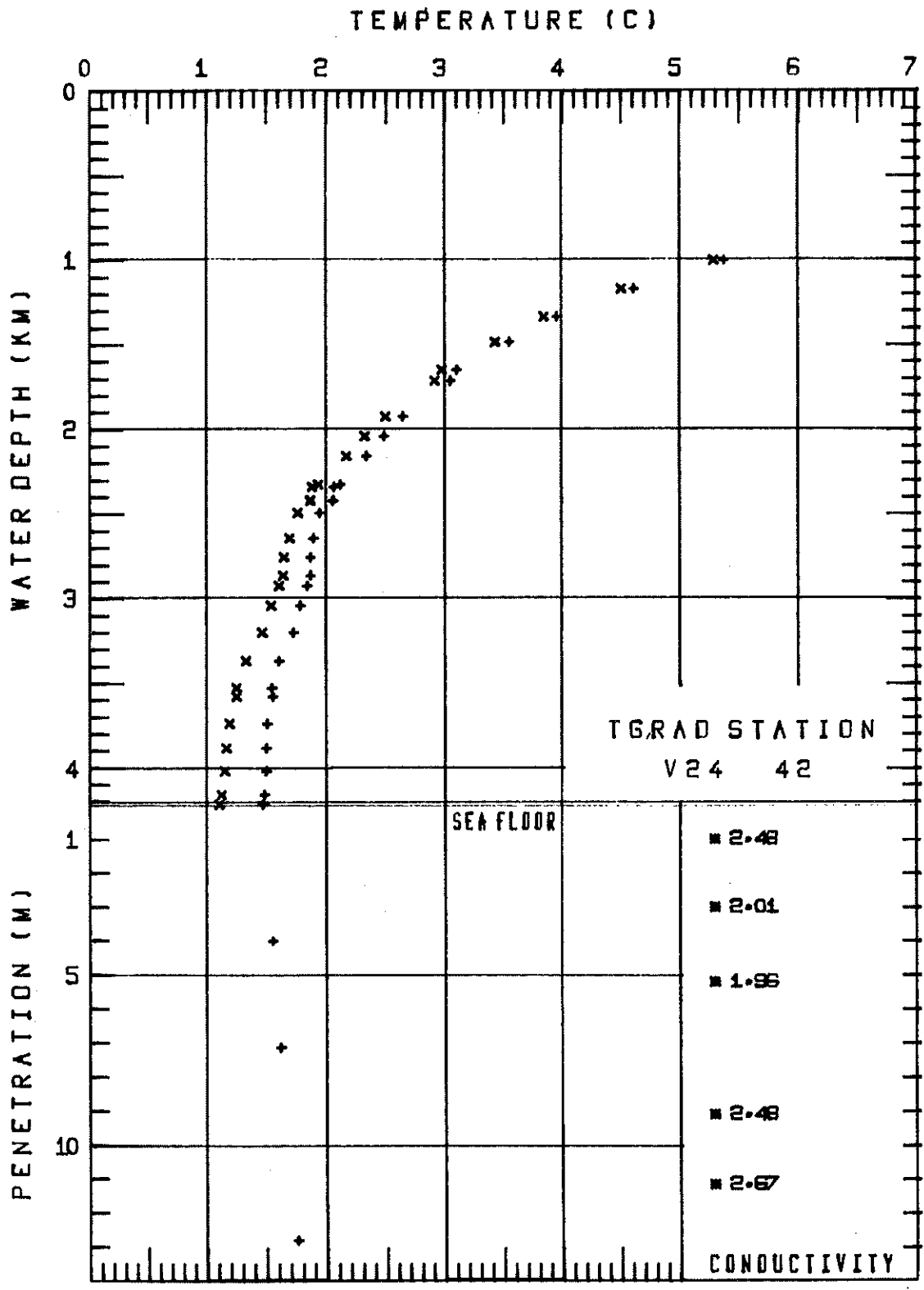
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1000.	5.35	5.26
1165.	4.58	4.48
1330.	3.93	3.82
1479.	3.53	3.41
1643.	3.08	2.95
1712.	3.03	2.89
1923.	2.62	2.47
2037.	2.46	2.30
2157.	2.31	2.15
2322.	2.09	1.91
2339.	2.04	1.86
2420.	2.03	1.85
2423.	2.03	1.85
2493.	1.93	1.74
2643.	1.88	1.67
2754.	1.84	1.63
2862.	1.84	1.62
2923.	1.82	1.59
3043.	1.76	1.52
3200.	1.70	1.45
3368.	1.59	1.31
3530.	1.52	1.23
3581.	1.53	1.24
3741.	1.48	1.17
3883.	1.48	1.15
4021.	1.48	1.14
4164.	1.47	1.11
4217.	1.46	1.09

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
4.01	1.54
7.13	1.60
12.80	1.74

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.48
3.00	2.01
5.20	1.96
9.10	2.48
11.15	2.67



## TGRAD STATION V24-043

## WATER TEMPERATURES

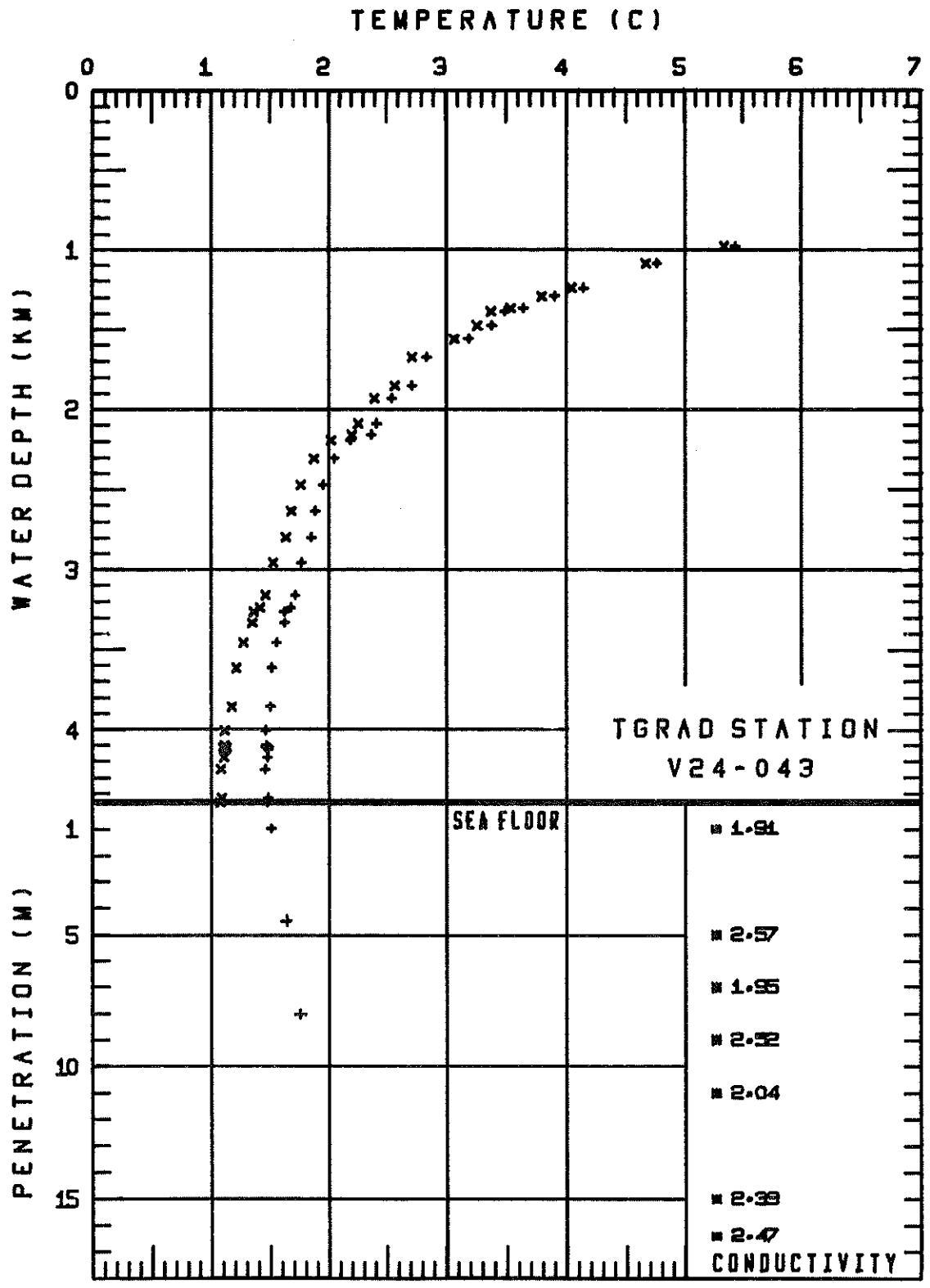
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
977.	5.43	5.34
1085.	4.76	4.66
1237.	4.14	4.04
1293.	3.90	3.79
1367.	3.64	3.53
1387.	3.49	3.38
1477.	3.38	3.26
1561.	3.19	3.06
1674.	2.84	2.71
1850.	2.71	2.57
1933.	2.54	2.39
2091.	2.41	2.25
2160.	2.37	2.20
2192.	2.18	2.02
2308.	2.05	1.87
2473.	1.95	1.76
2632.	1.88	1.68
2795.	1.85	1.64
2958.	1.76	1.53
3159.	1.71	1.46
3237.	1.67	1.41
3265.	1.62	1.36
3331.	1.62	1.35
3458.	1.56	1.27
3615.	1.51	1.22
3858.	1.50	1.17
4005.	1.46	1.12
4126.	1.48	1.12
4110.	1.46	1.10
4111.	1.49	1.13
4097.	1.47	1.11
4174.	1.48	1.11
4249.	1.45	1.08
4426.	1.48	1.08
4456.	1.47	1.07

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
1.00	1.51
4.62	1.63
8.13	1.75

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.91
5.00	2.57
7.00	1.95
9.00	2.52
11.00	2.04
15.00	2.39
16.40	2.47



## TGRAD STATION V24-044

## WATER TEMPERATURES

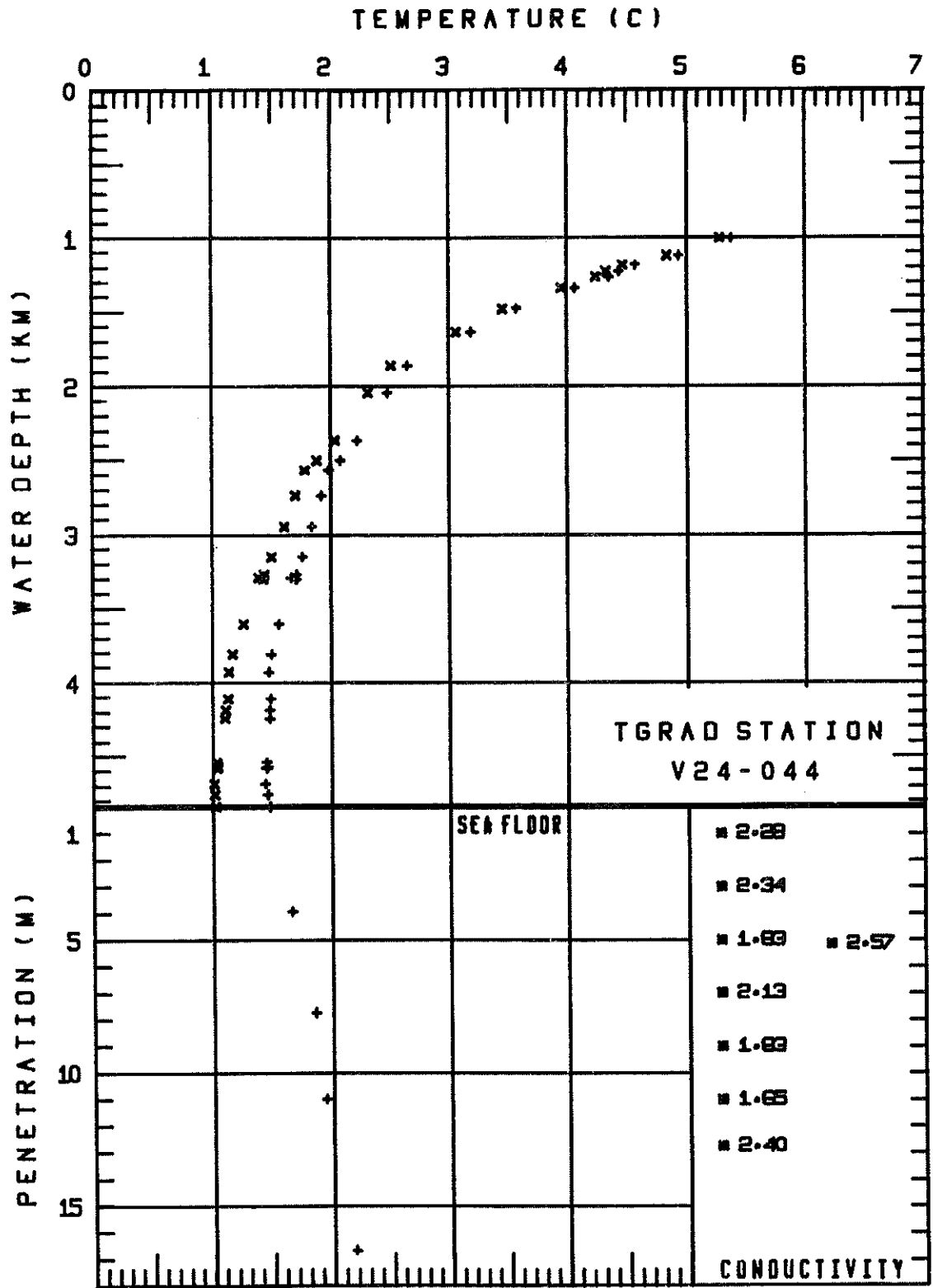
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1000.	5.37	5.28
1117.	4.93	4.83
1181.	4.57	4.47
1226.	4.43	4.33
1262.	4.35	4.24
1340.	4.06	3.95
1478.	3.57	3.45
1637.	3.19	3.06
1862.	2.65	2.50
2042.	2.47	2.31
2368.	2.22	2.04
2502.	2.08	1.88
2568.	1.98	1.78
2736.	1.92	1.70
2947.	1.84	1.61
3154.	1.76	1.50
3272.	1.71	1.44
3305.	1.71	1.44
3293.	1.66	1.39
3603.	1.56	1.26
3807.	1.50	1.17
3927.	1.48	1.14
4108.	1.49	1.13
4188.	1.48	1.11
4244.	1.48	1.11
4541.	1.45	1.04
4573.	1.46	1.05
4580.	1.45	1.04
4688.	1.44	1.01
4753.	1.46	1.02
4842.	1.48	1.03

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.94	1.66
7.75	1.85
10.97	1.94
16.64	2.18

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.28
3.00	2.34
5.00	1.83
5.17	2.57
7.00	2.13
9.00	1.83
11.00	1.65
12.75	2.40



## TGRAD STATION V24 45

## WATER TEMPERATURES

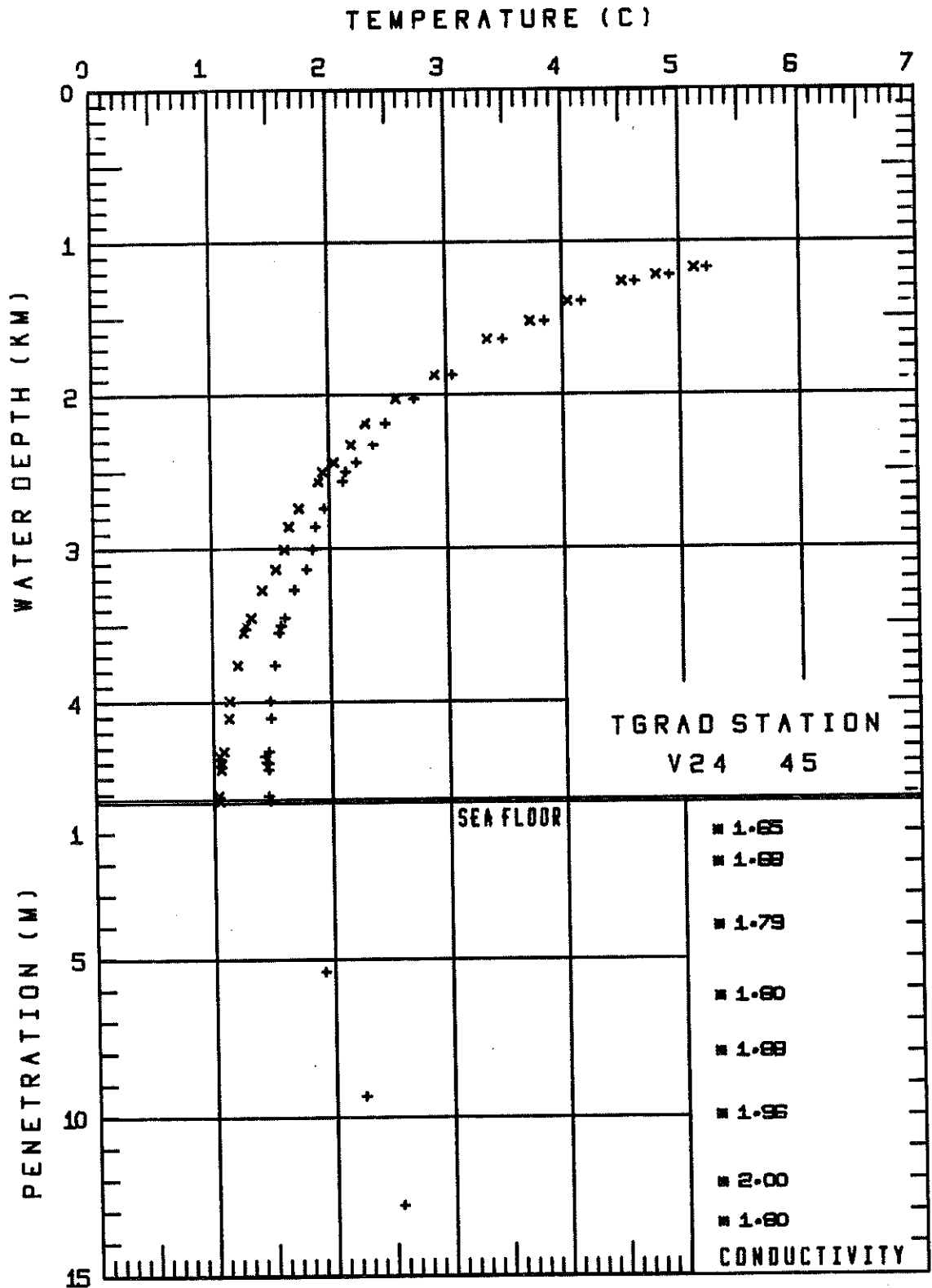
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1173.	5.24	5.13
1220.	4.92	4.81
1259.	4.62	4.51
1389.	4.17	4.05
1520.	3.85	3.72
1637.	3.49	3.35
1867.	3.05	2.90
2024.	2.73	2.57
2186.	2.48	2.31
2324.	2.37	2.19
2438.	2.23	2.04
2498.	2.14	1.94
2563.	2.11	1.91
2739.	1.96	1.74
2857.	1.88	1.66
3005.	1.85	1.61
3132.	1.80	1.54
3269.	1.69	1.43
3451.	1.61	1.33
3500.	1.58	1.29
3545.	1.56	1.27
3758.	1.53	1.21
3993.	1.48	1.14
4107.	1.49	1.13
4322.	1.47	1.08
4354.	1.43	1.05
4399.	1.46	1.07
4396.	1.45	1.05
4443.	1.46	1.06
4612.	1.46	1.04
4647.	1.47	1.05

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
5.41	1.92
9.35	2.25
12.80	2.56

## SEDIMENT CONDUCTIVITIES

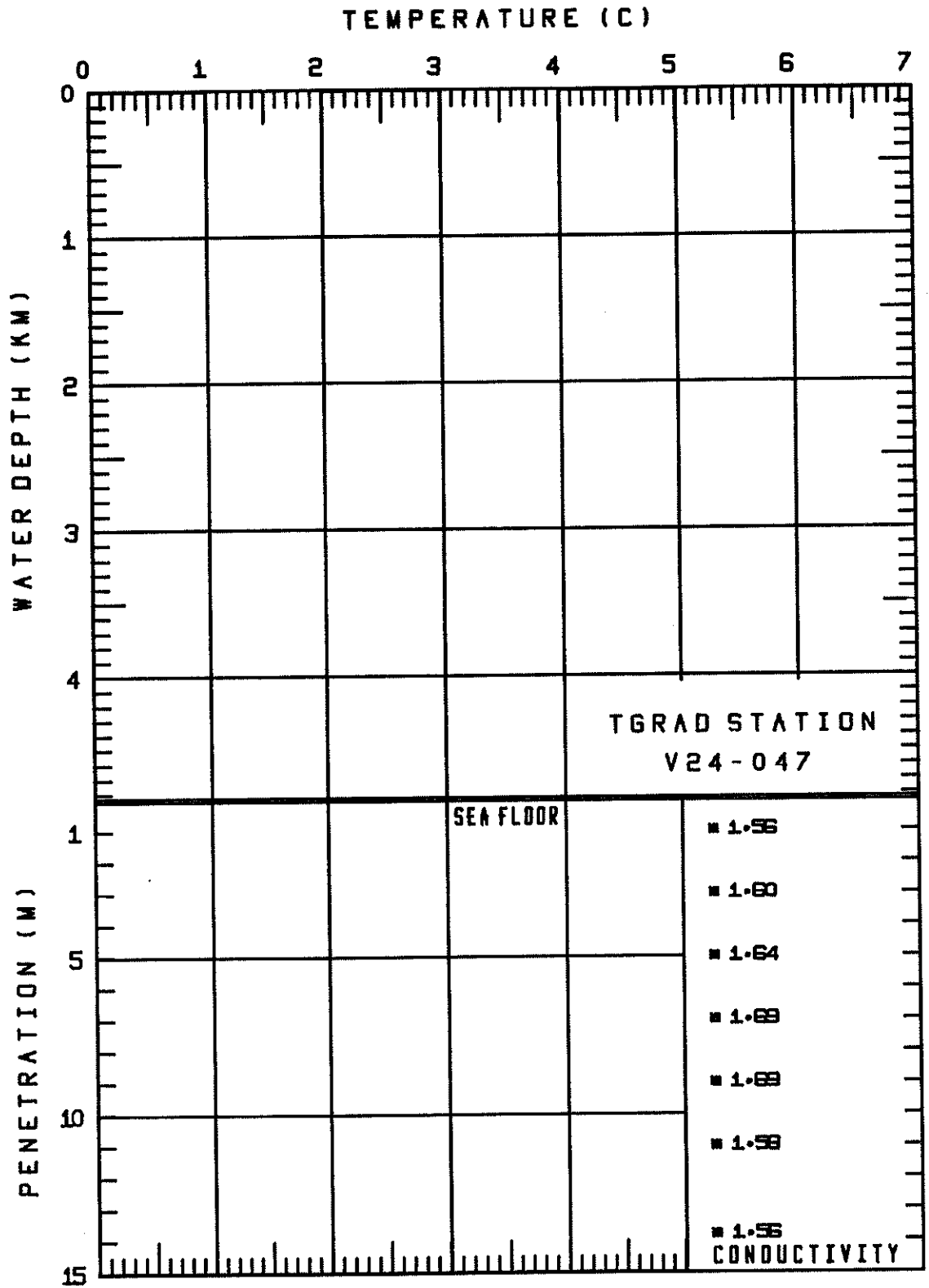
DEPTH	CONDUCTIVITY
1.00	1.65
2.00	1.68
4.00	1.79
6.25	1.80
8.00	1.88
10.00	1.96
12.15	2.00
13.40	1.80



## TGRAD STATIONV24-047

## SEDIMENT CONDUCTIVITIES

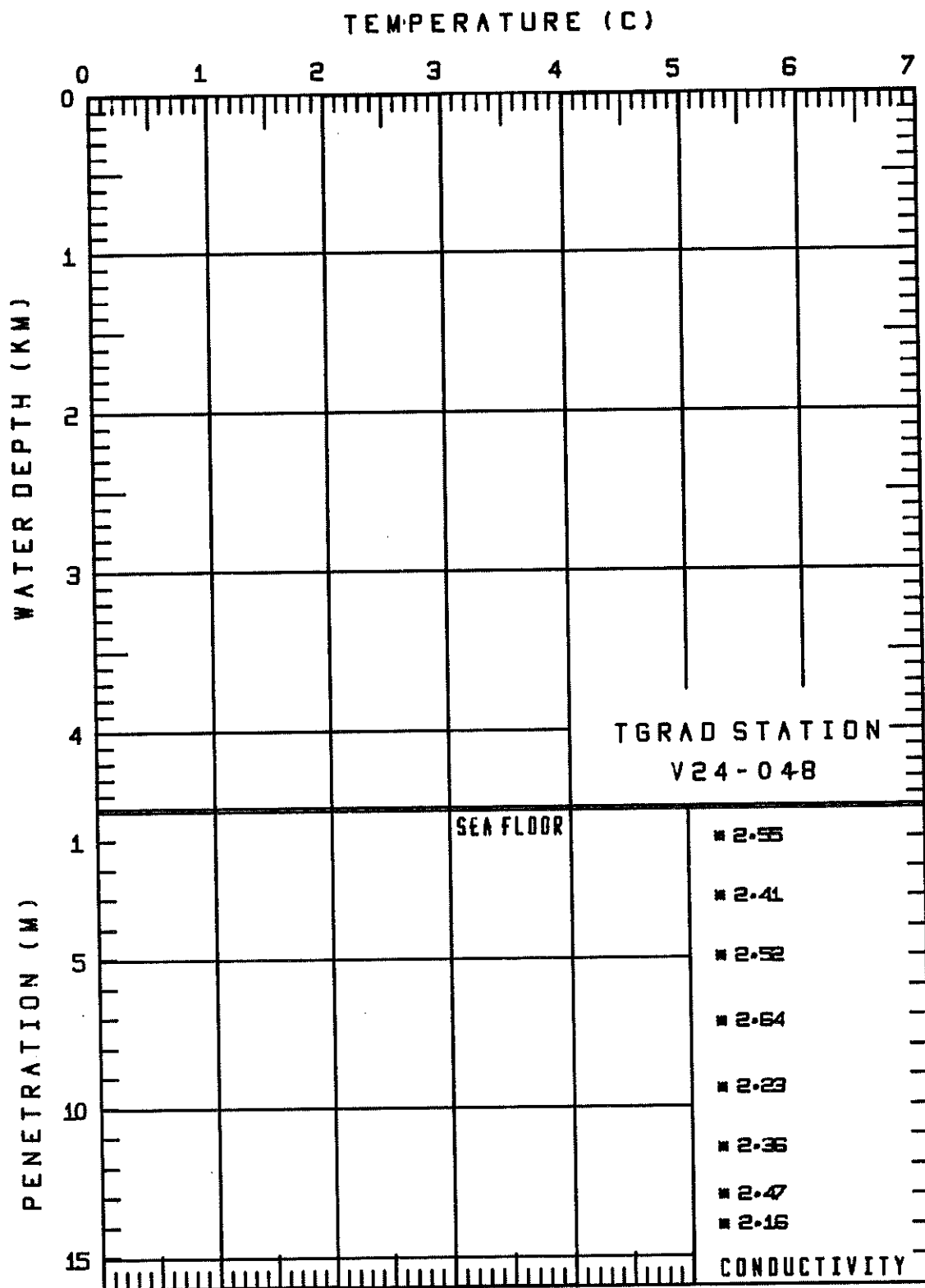
DEPTH	CONDUCTIVITY
1.00	1.56
3.00	1.60
5.00	1.64
7.00	1.69
9.00	1.69
11.00	1.58
13.80	1.56



## TGRAD STATIONV24-048

## SEDIMENT CONDUCTIVITIES

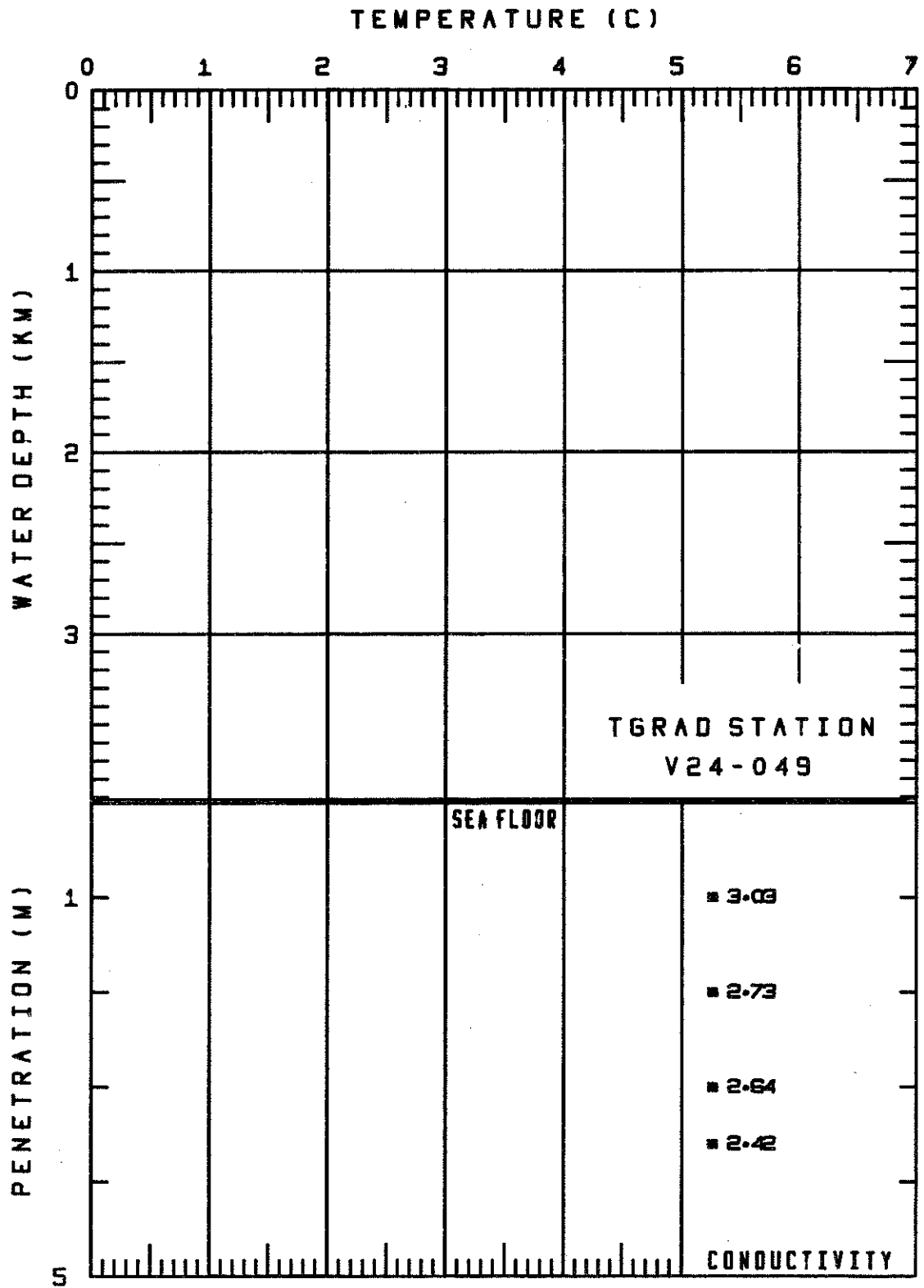
DEPTH	CONDUCTIVITY
1.00	2.55
3.00	2.41
5.00	2.52
7.20	2.64
9.40	2.23
11.40	2.36
13.00	2.47
14.00	2.16



## TGRAD STATIONV24-049

## SEDIMENT CONDUCTIVITIES

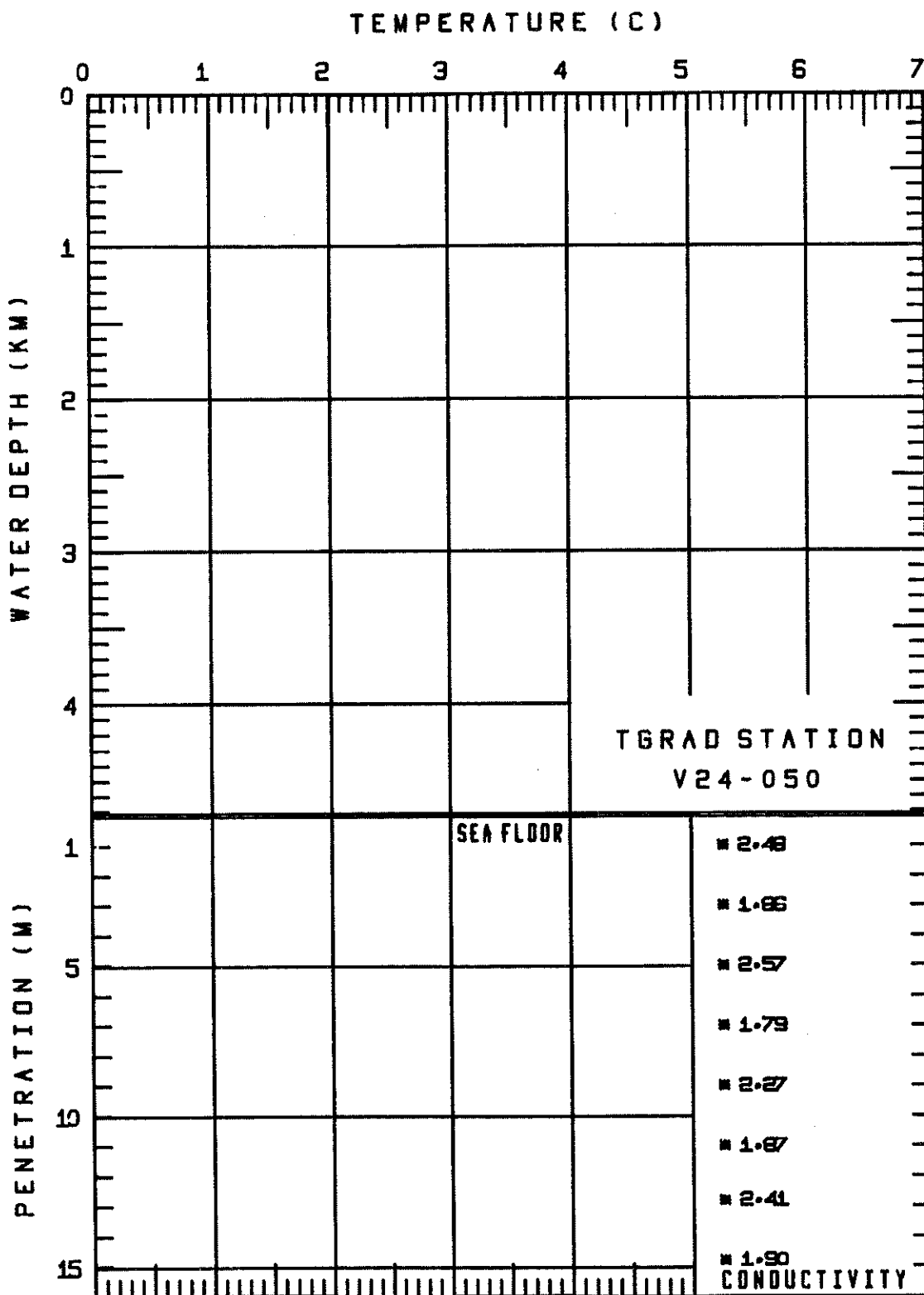
DEPTH	CONDUCTIVITY
1.00	3.03
2.00	2.73
3.00	2.64
3.60	2.42



## TGRAD STATIONV24-050

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.48
3.00	1.86
5.00	2.57
7.00	1.79
9.00	2.27
11.00	1.87
12.80	2.41
14.80	1.90



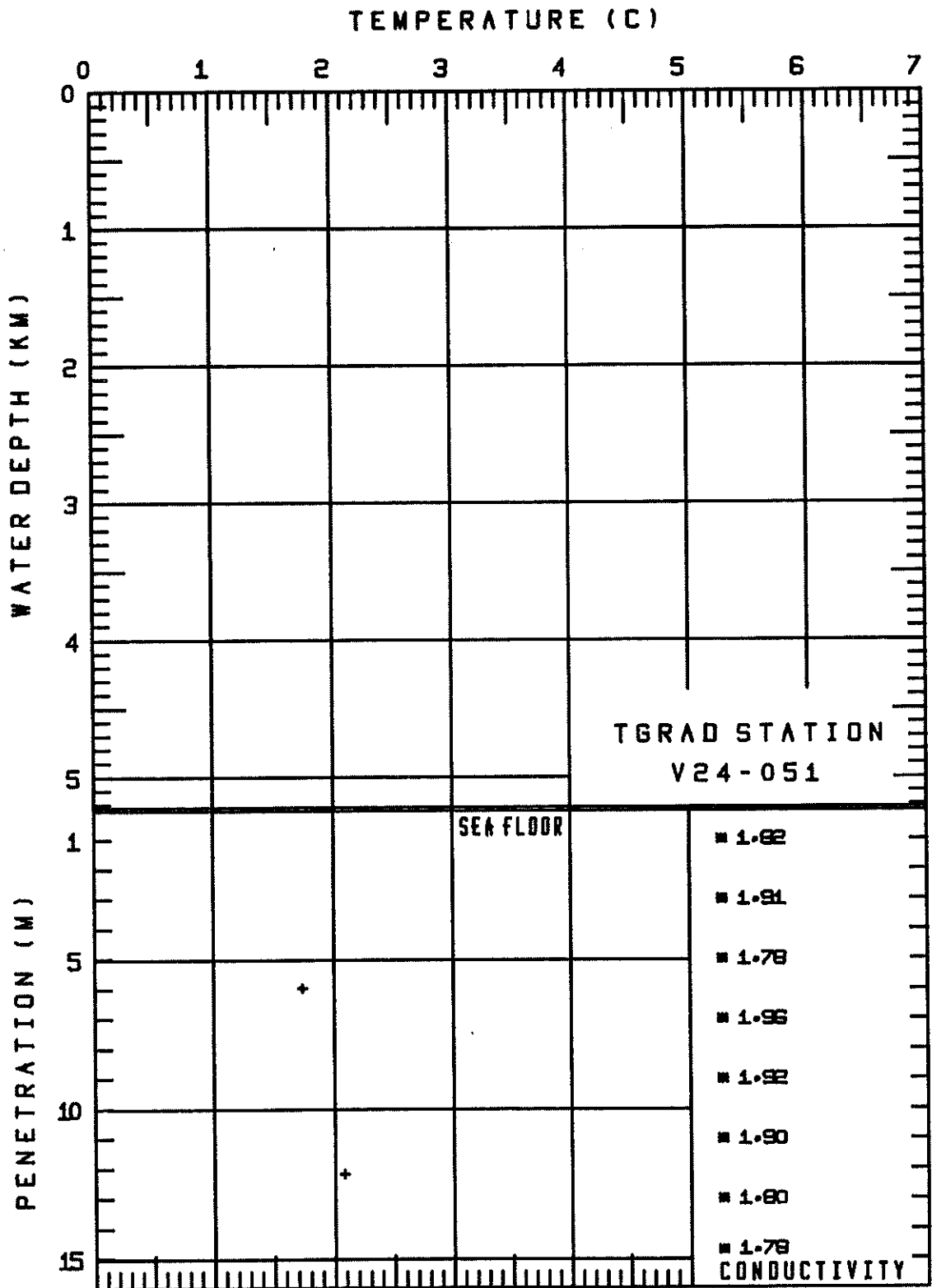
## TGRAD STATIONV24-051

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
5.95	1.74
12.15	2.08

## SEDIMENT CONDUCTIVITIES

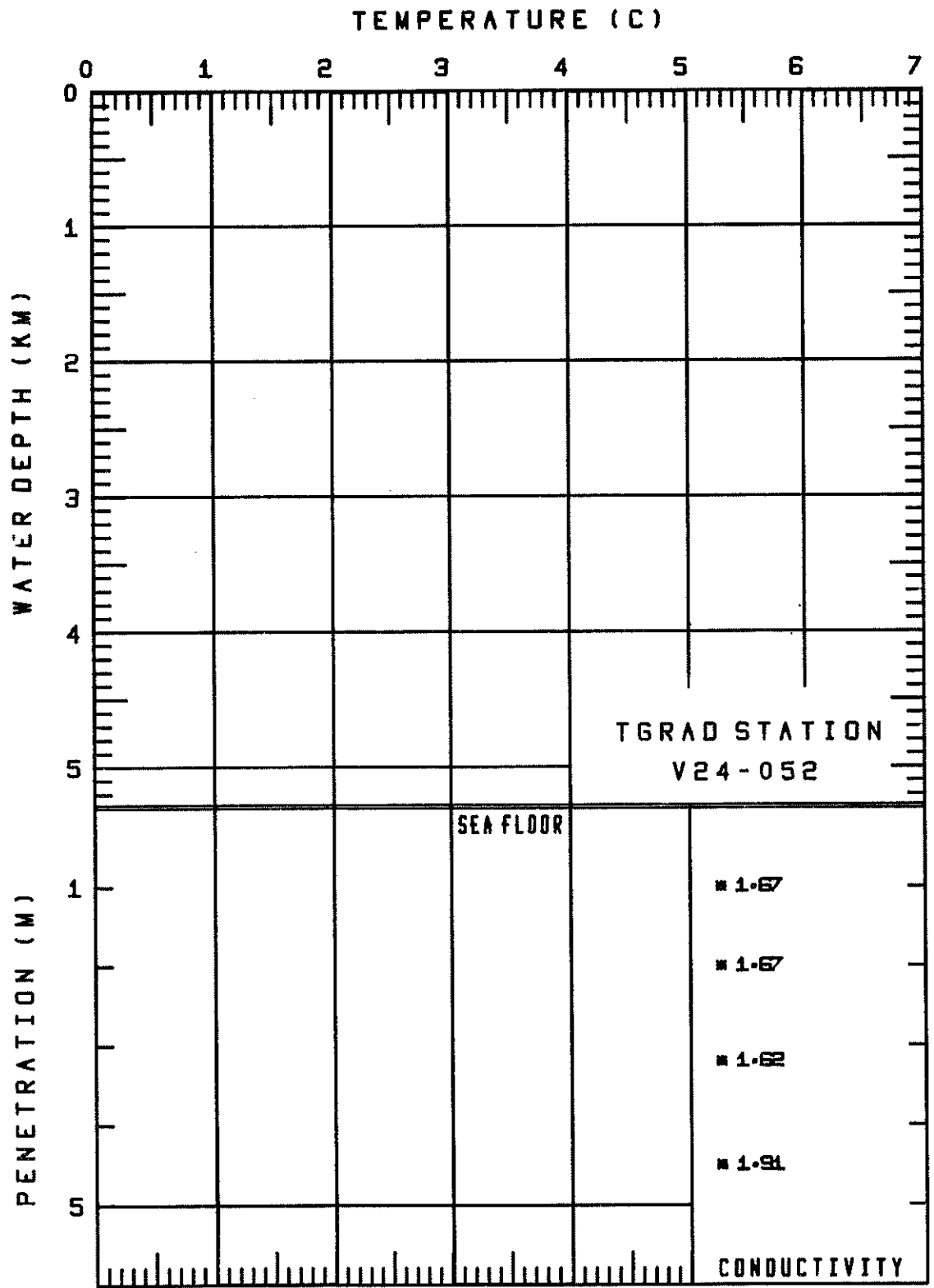
DEPTH	CONDUCTIVITY
1.00	1.82
3.00	1.91
5.00	1.78
7.00	1.96
9.00	1.92
11.00	1.90
13.00	1.80
14.70	1.78



## TGRAD STATIONV24-052

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.67
2.00	1.67
3.20	1.62
4.50	1.91



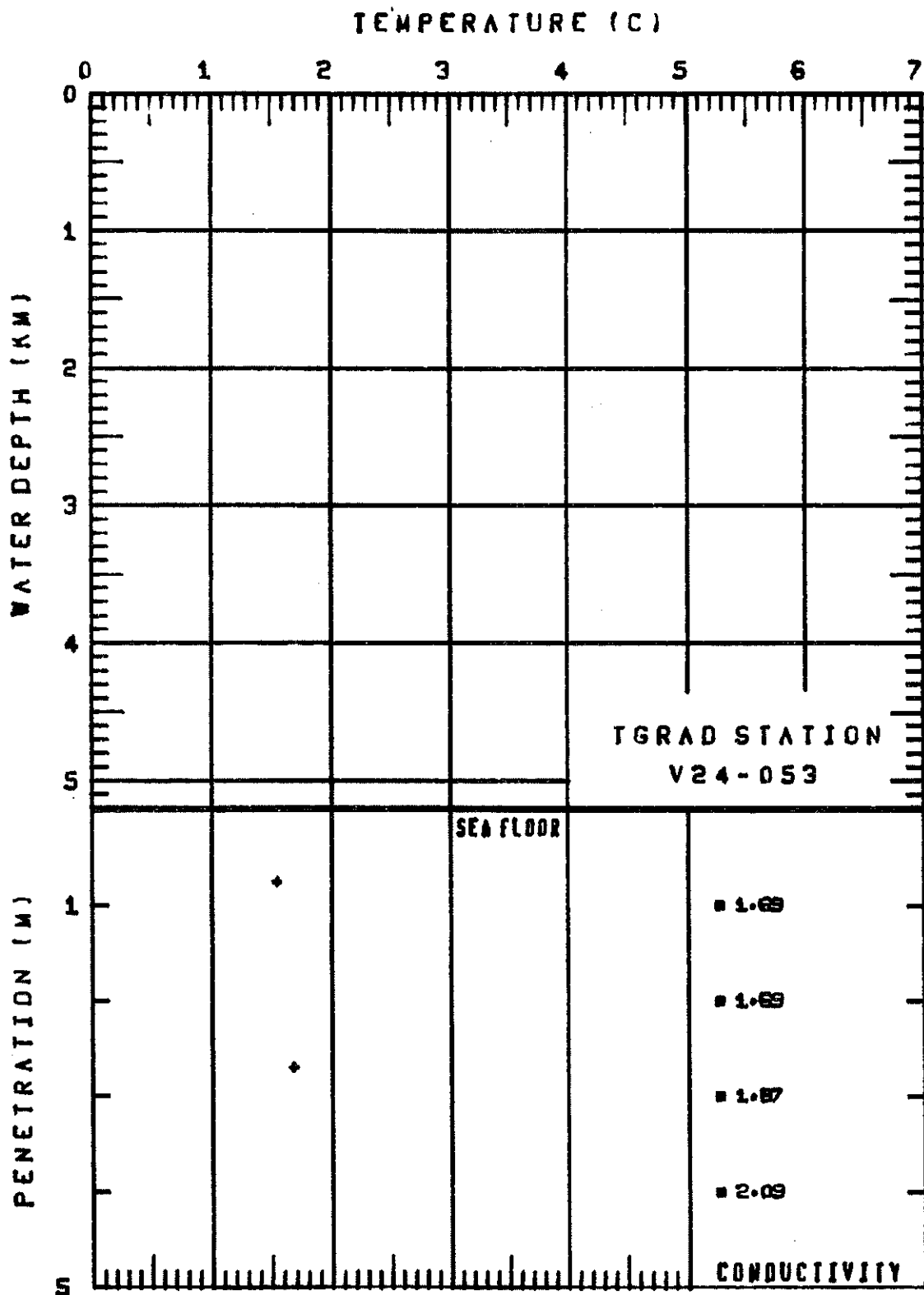
## TGRAD STATIONV24-053

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.75	1.55
2.70	1.68

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.69
2.00	1.69
3.00	1.87
4.00	2.09



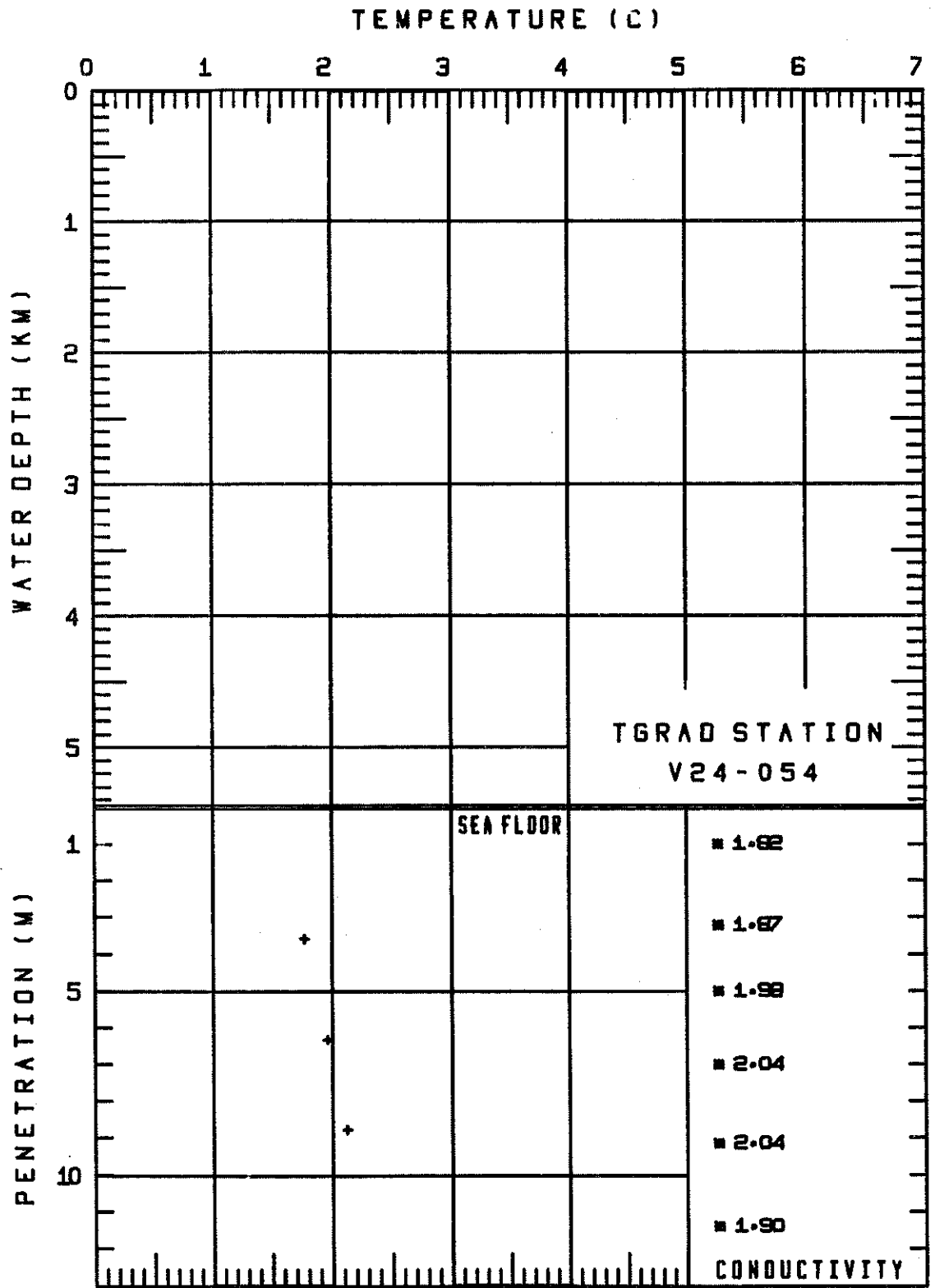
## TGRAD STATIONV24-054

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.58	1.77
6.32	1.96
8.78	2.12

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.82
3.20	1.87
5.00	1.98
7.00	2.04
9.15	2.04
11.40	1.90



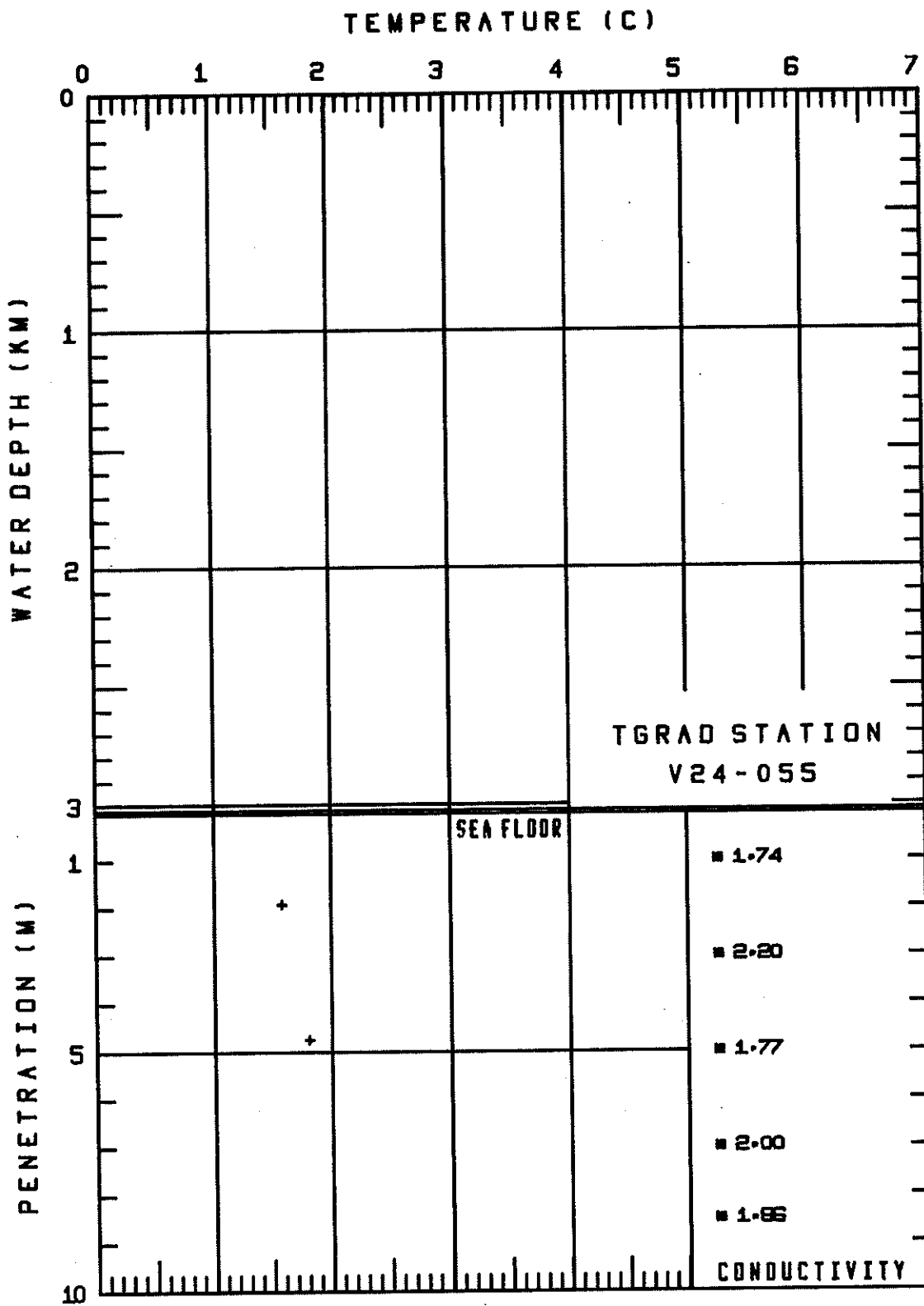
## TGRAD STATIONV24-055

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
1.91	1.58
4.75	1.81

## SEDIMENT CONDUCTIVITIES

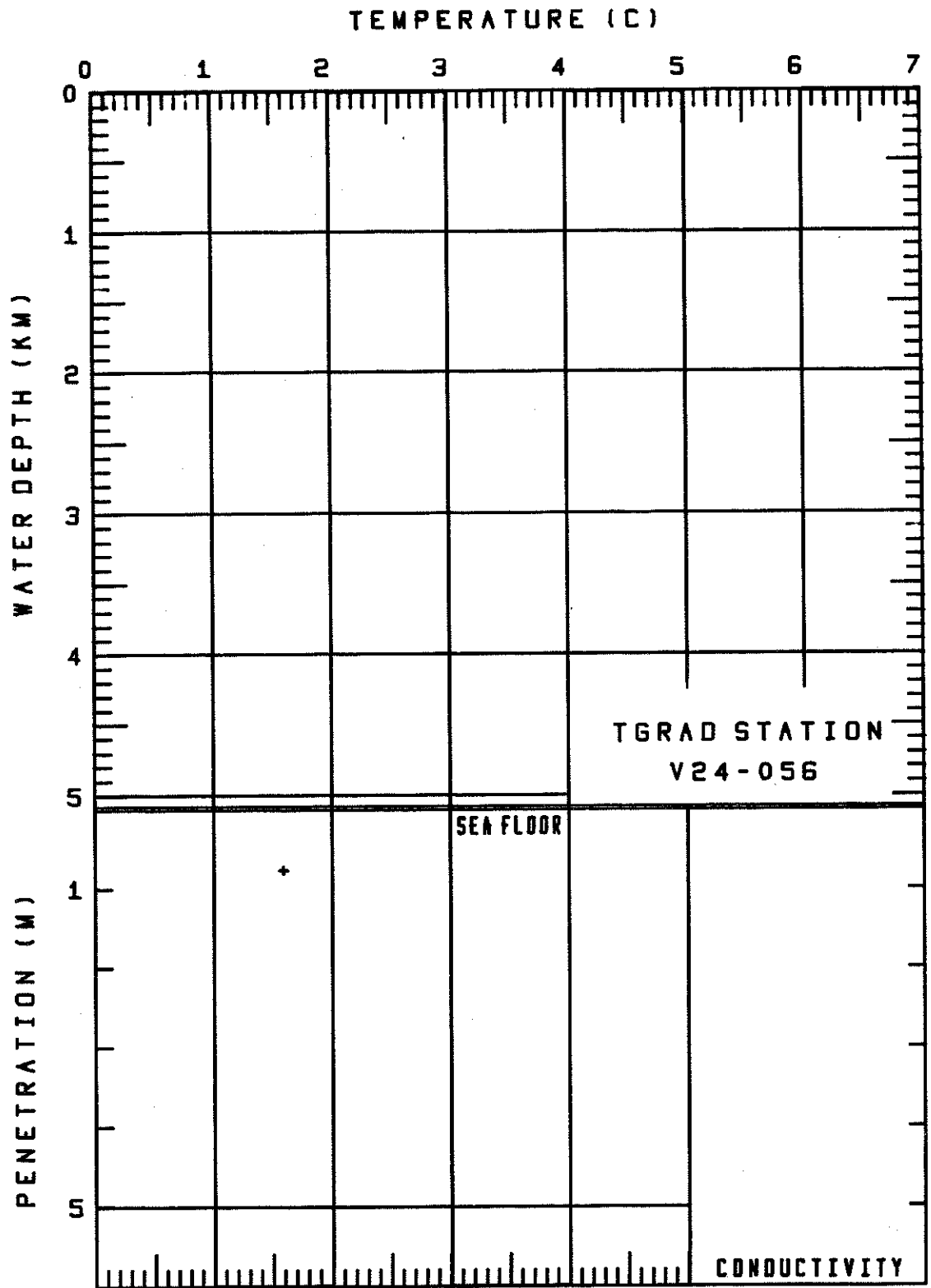
DEPTH	CONDUCTIVITY
1.00	1.74
3.00	2.20
5.00	1.77
7.00	2.00
8.50	1.86



TGRAD STATIONV24-056

SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.77	1.58



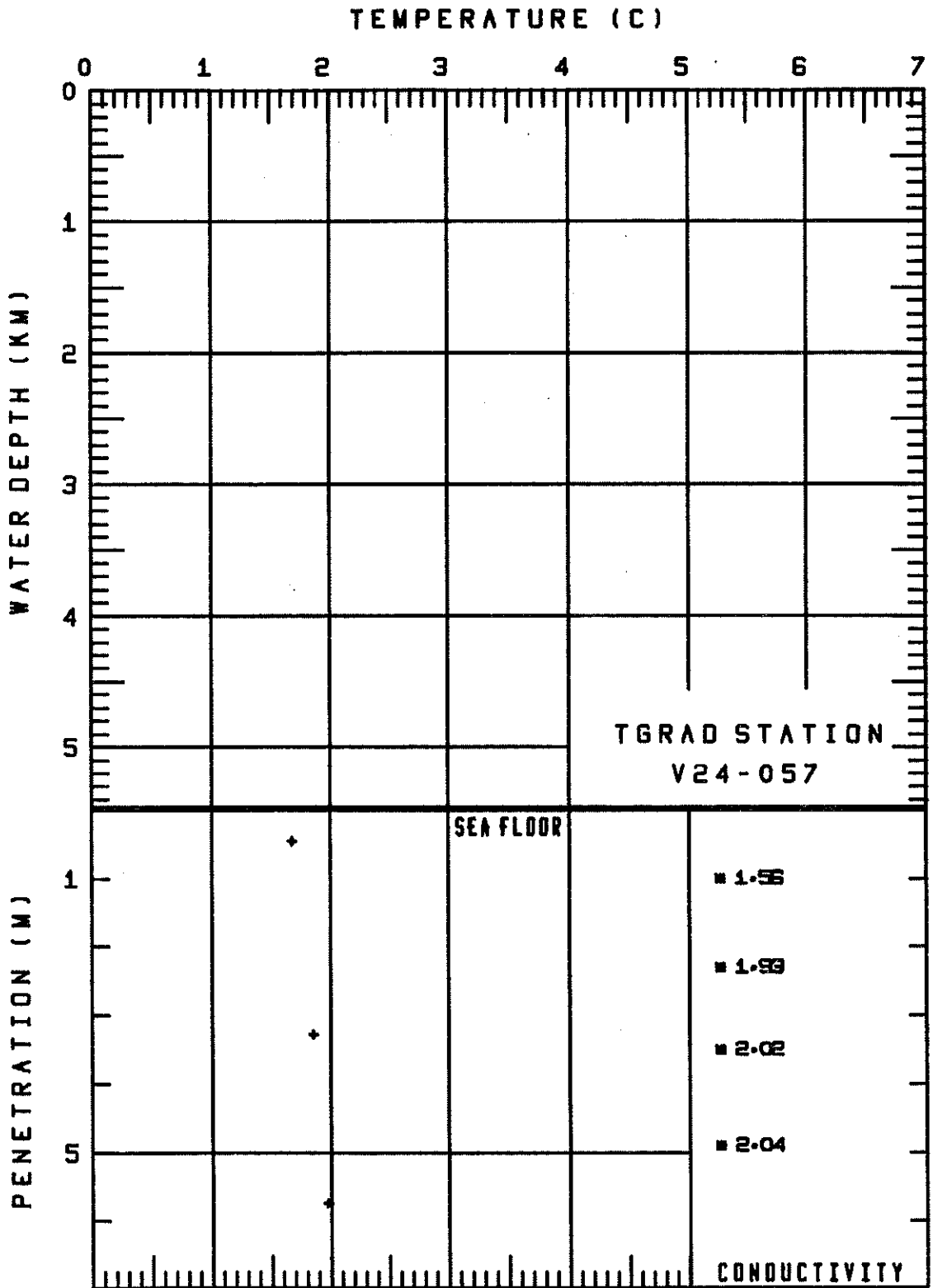
## TGRAD STATIONV24-057

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.46	1.67
3.28	1.85
5.74	1.97

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.56
2.30	1.93
3.50	2.02
4.90	2.04



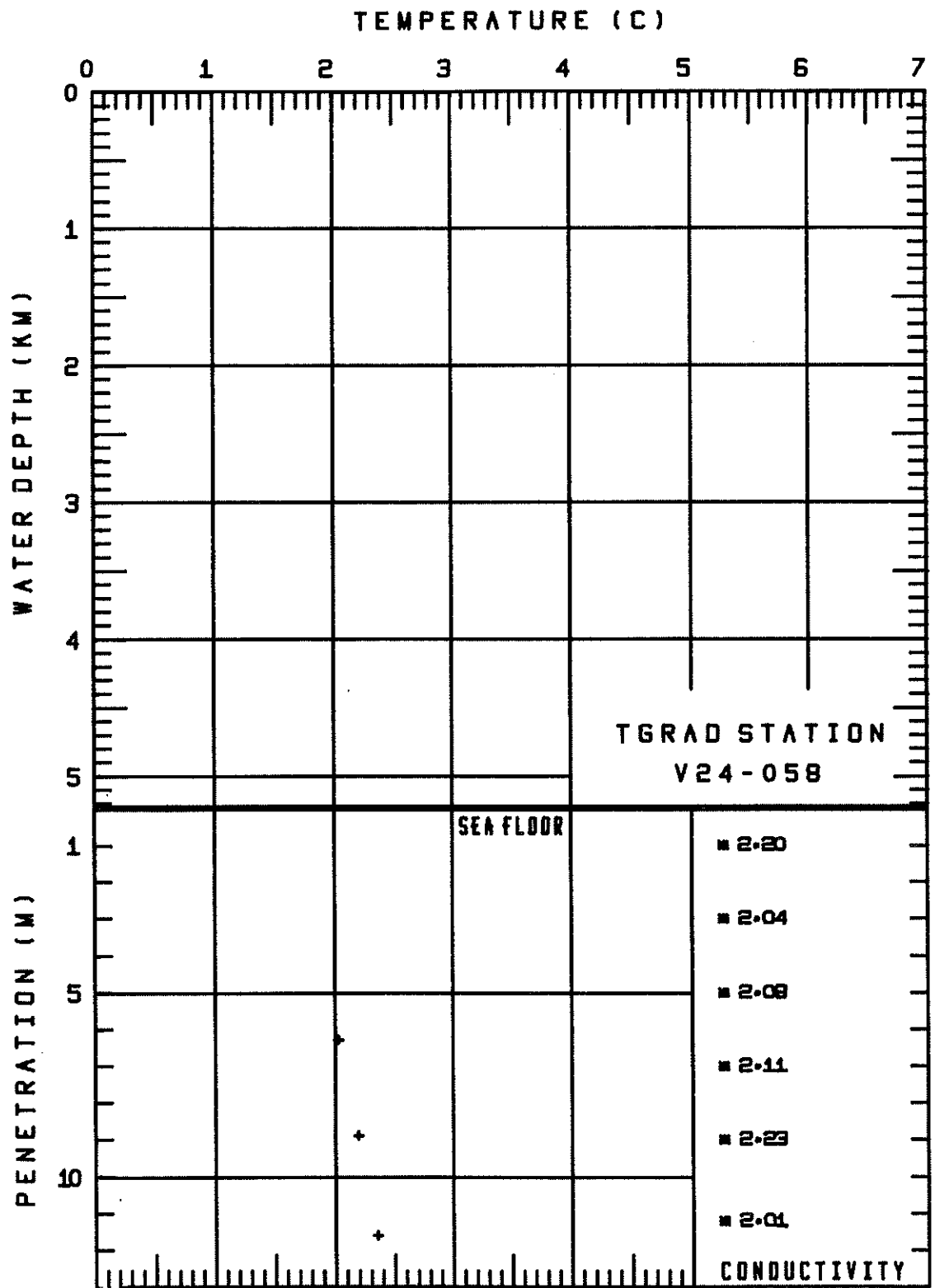
## TGRAD STATIONV24-058

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
6.29	2.03
8.88	2.19
11.59	2.35

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.20
3.00	2.04
5.00	2.08
7.00	2.11
9.00	2.23
11.20	2.01



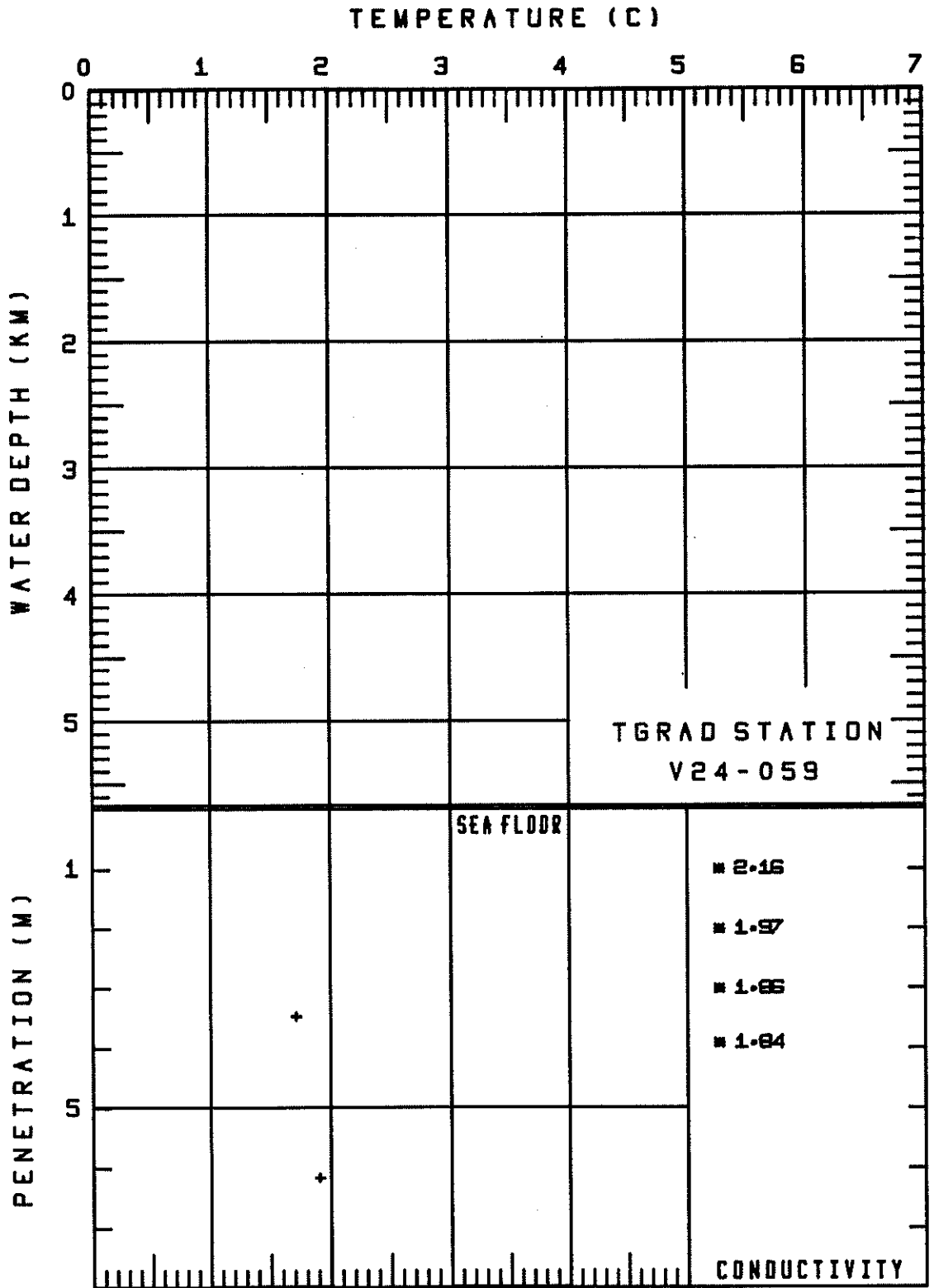
## TGRAD STATIONV24-059

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.45	1.71
6.14	1.91

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.16
2.00	1.97
3.00	1.86
3.90	1.84



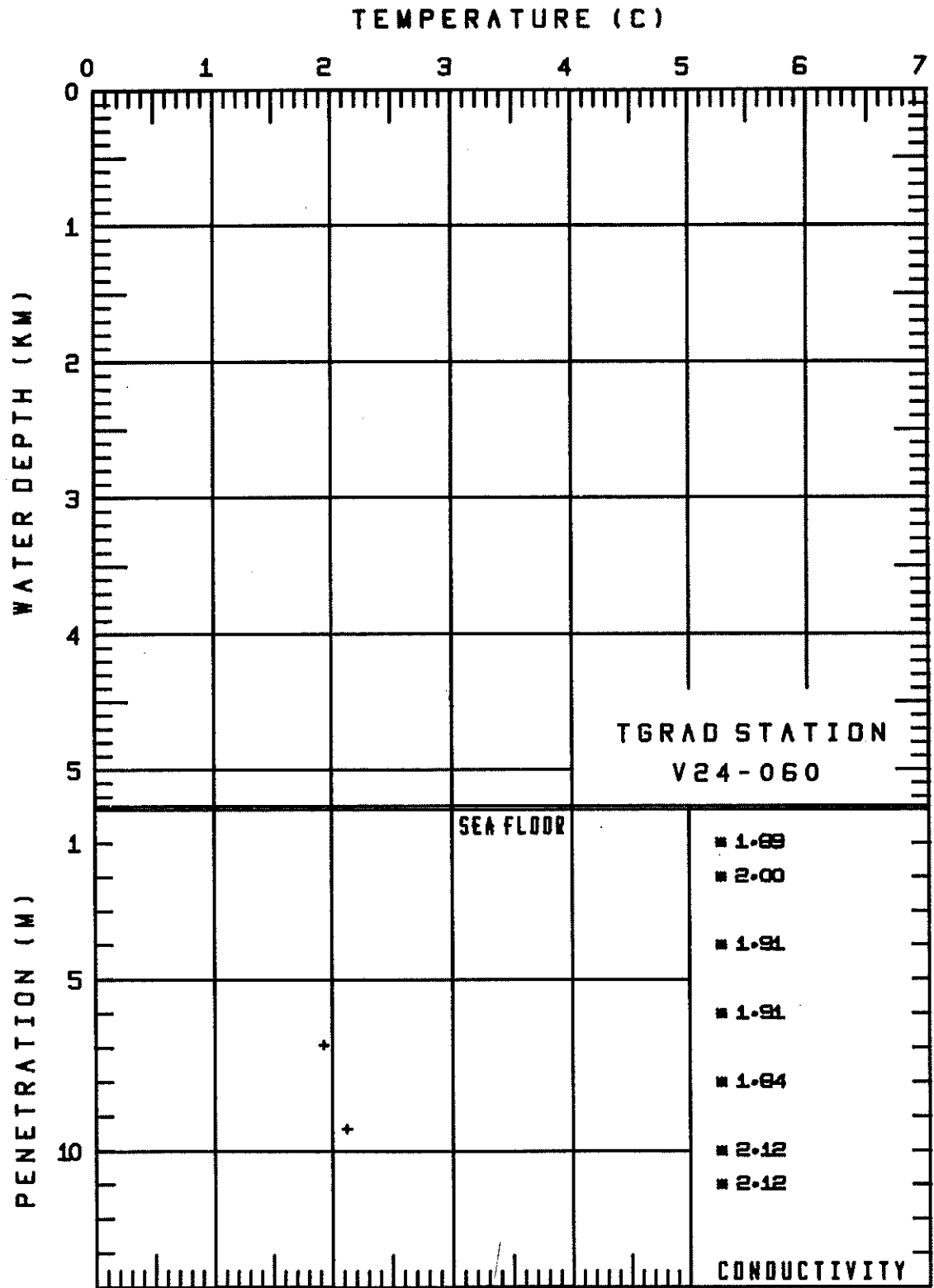
## TGRAD STATIONV24-060

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
6.91	1.93
9.35	2.12

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.89
2.00	2.00
4.00	1.91
6.00	1.91
8.00	1.84
10.00	2.12
11.00	2.12



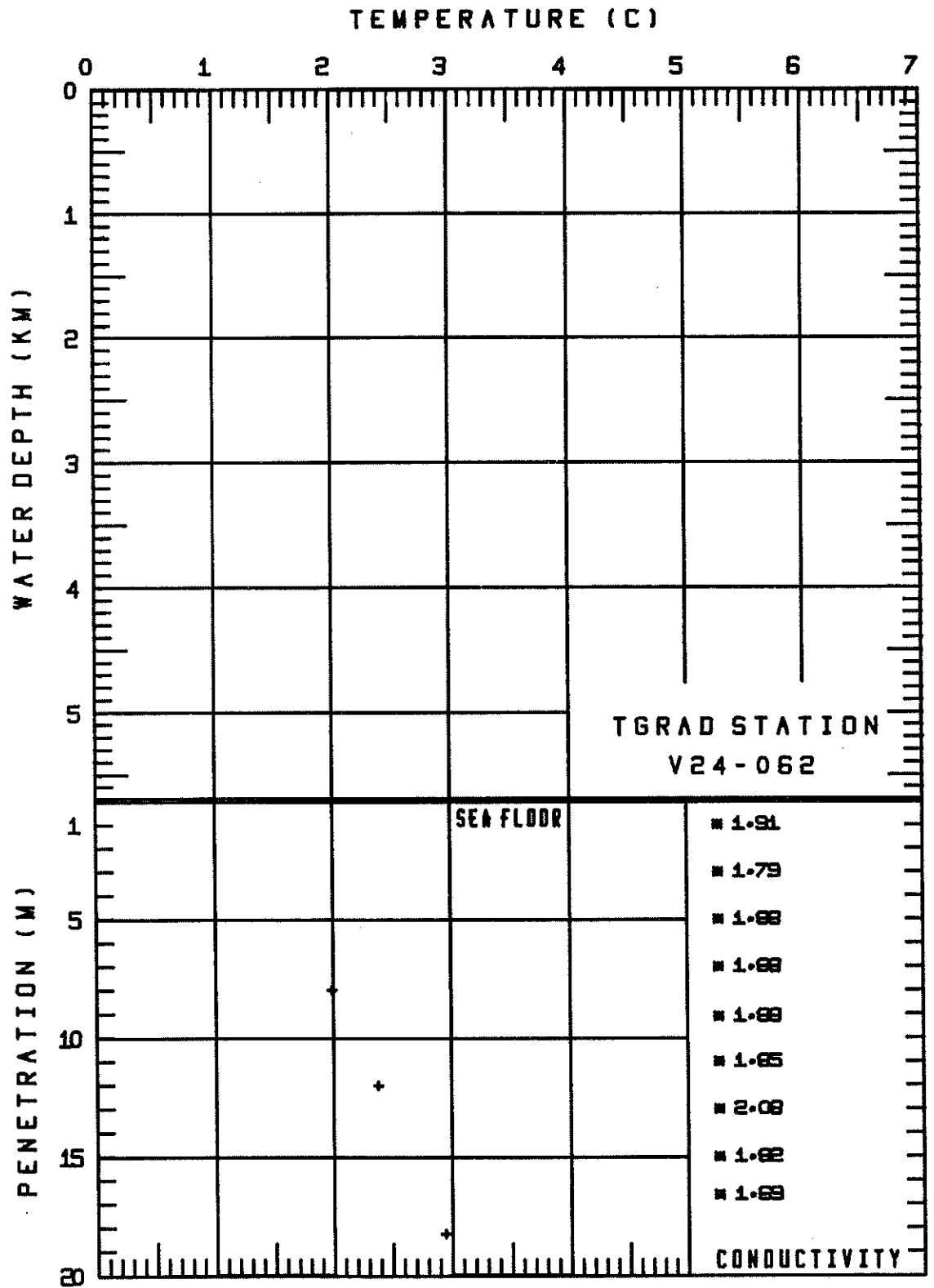
## TGRAD STATIONV24-062

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
7.96	1.99
12.00	2.38
18.22	2.95

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.91
3.00	1.79
5.00	1.88
7.00	1.88
9.10	1.88
11.00	1.85
13.00	2.08
15.00	1.82
16.60	1.69



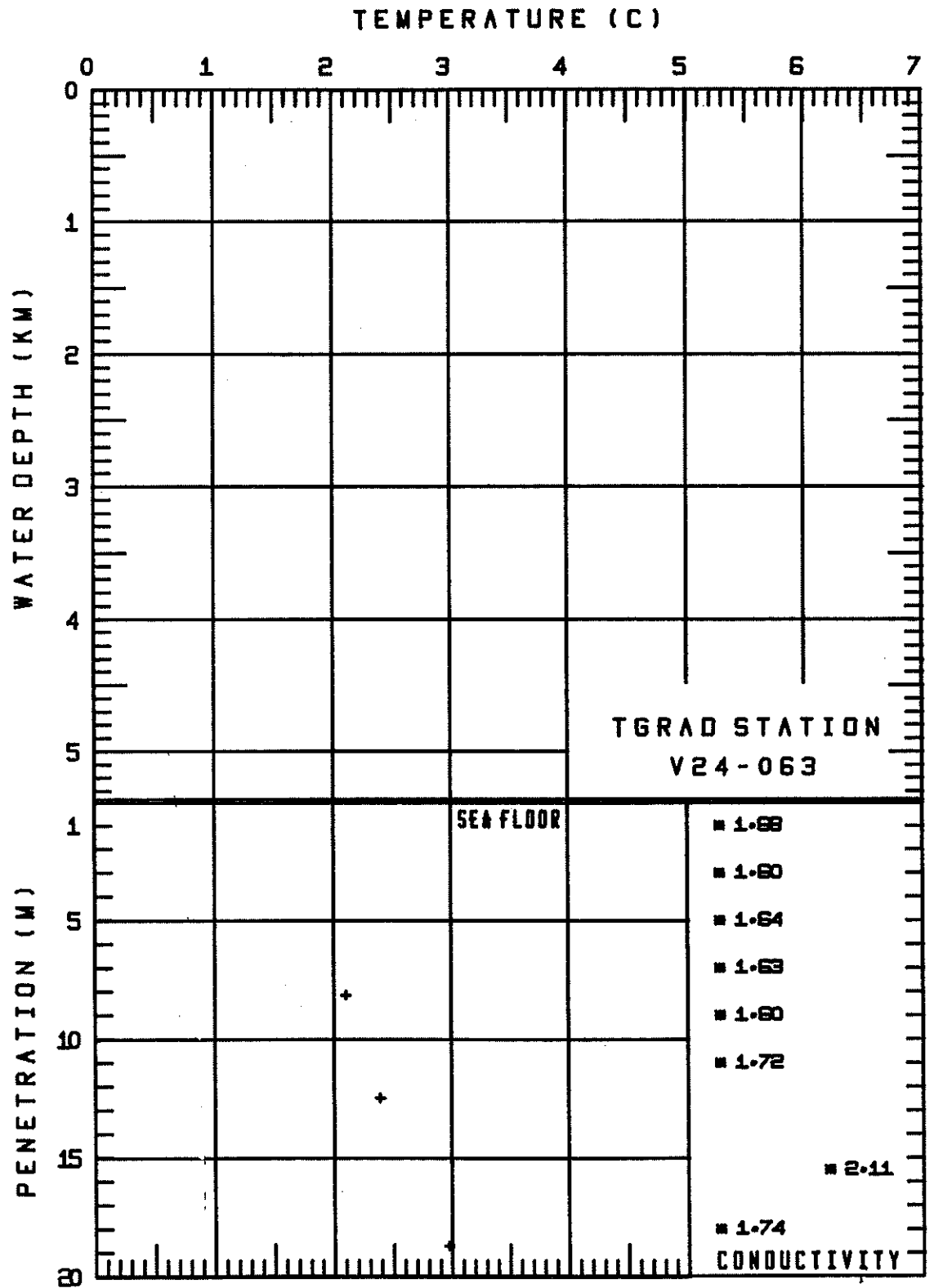
## TGRAD STATIONV24-063

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
8.15	2.10
12.47	2.39
18.69	2.97

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.68
3.00	1.60
5.00	1.64
7.00	1.63
9.00	1.60
11.00	1.72
15.50	2.11
18.00	1.74



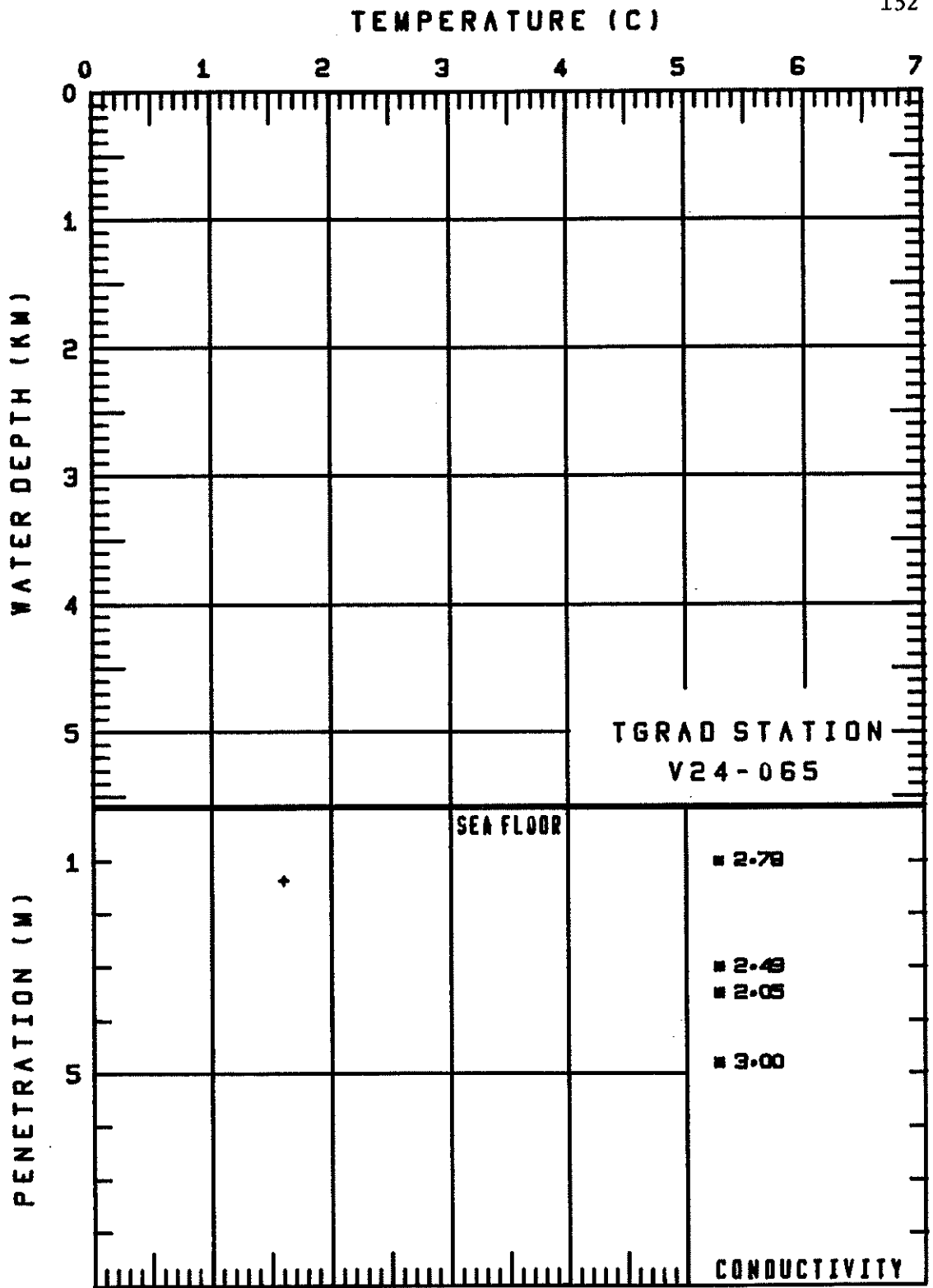
## TGRAD STATIONV24-065

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
1.37	1.60

## SEDIMENT CONDUCTIVITIES

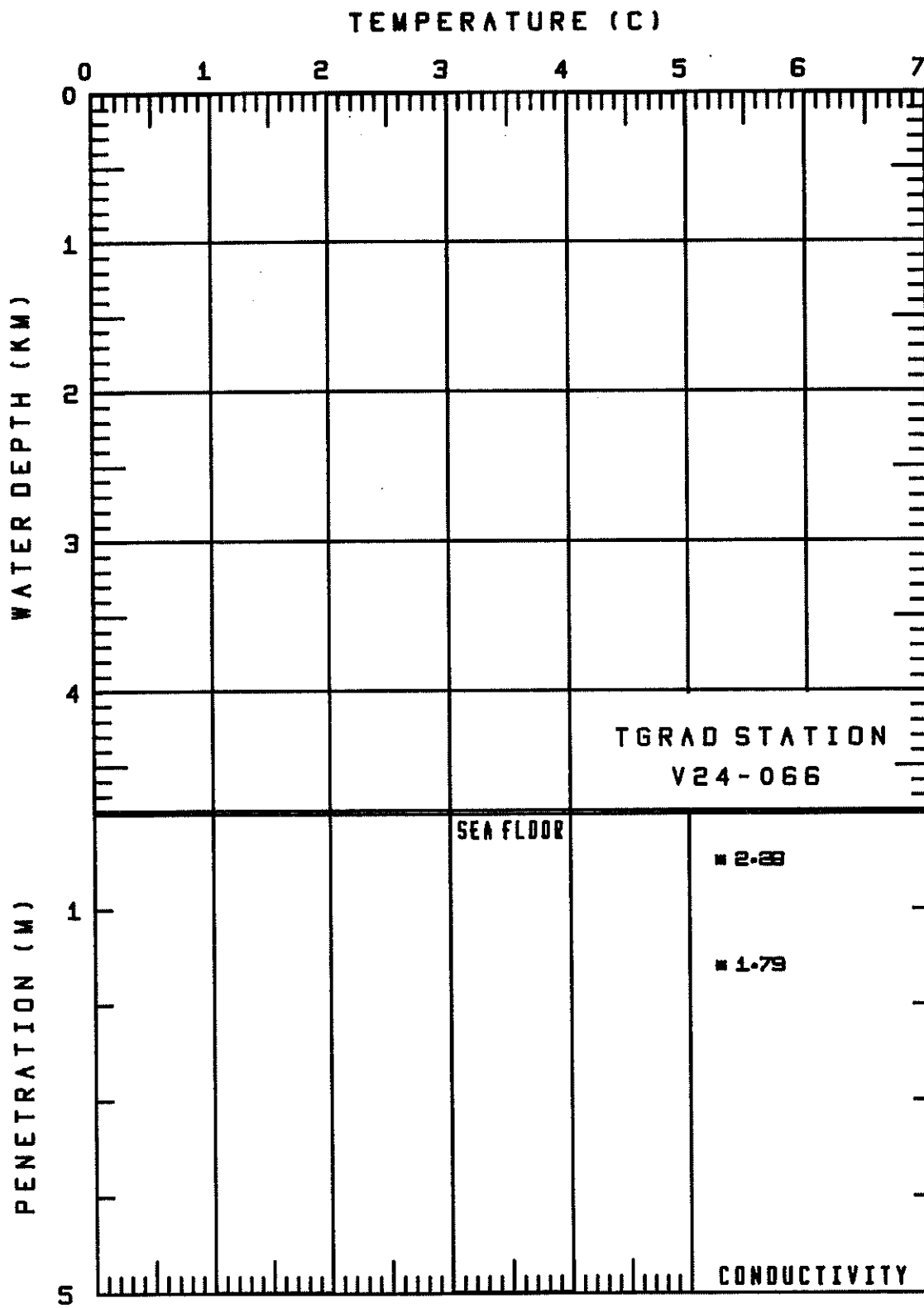
DEPTH	CONDUCTIVITY
1.00	2.78
3.00	2.49
3.50	2.05
4.80	3.00



TGRAD STATIONV24-066

SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
0.50	2.28
1.60	1.79



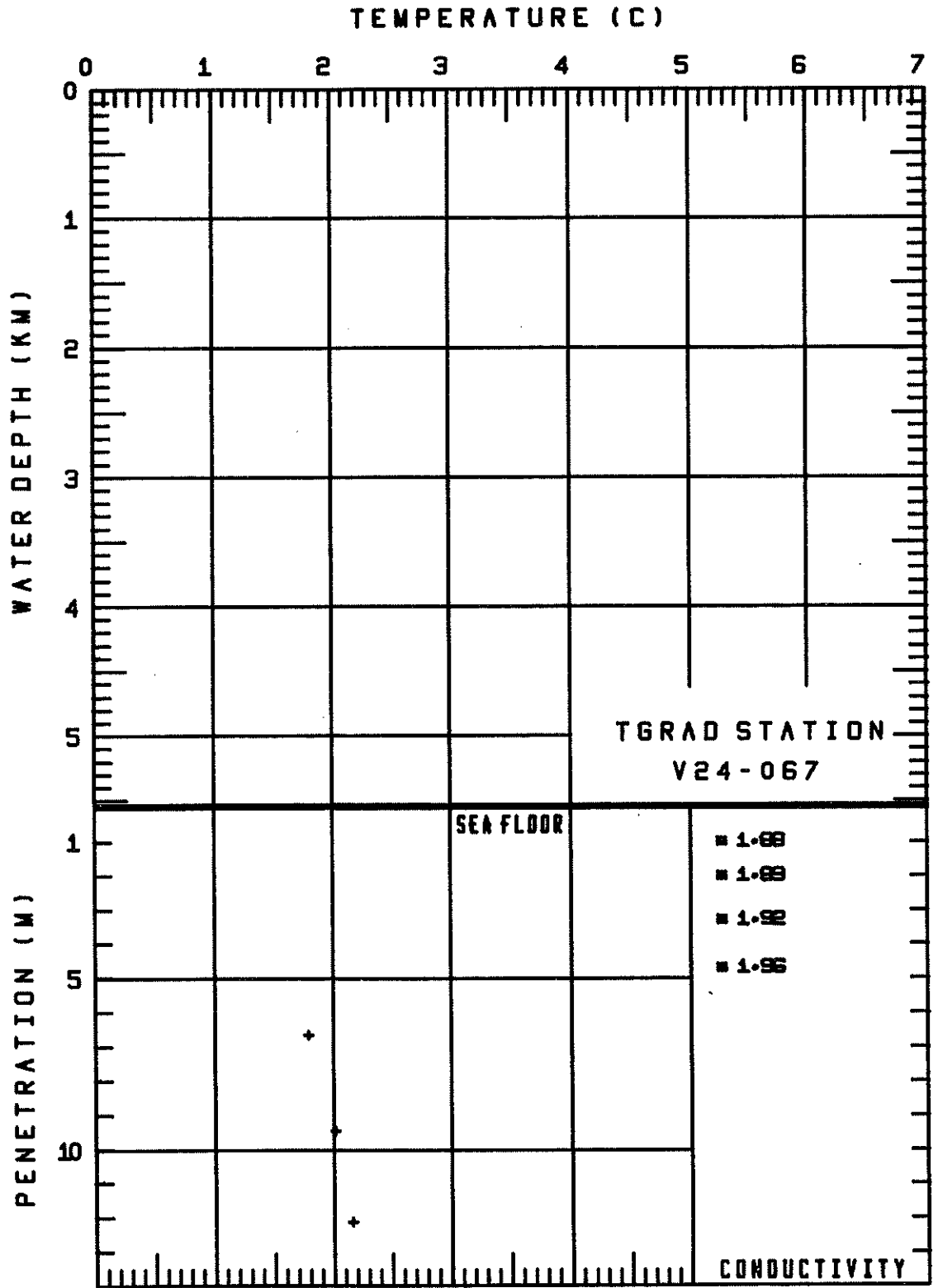
## TGRAD STATIONV24-067

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
6.65	1.78
9.45	2.01
12.11	2.16

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.88
2.00	1.89
3.30	1.92
4.70	1.96



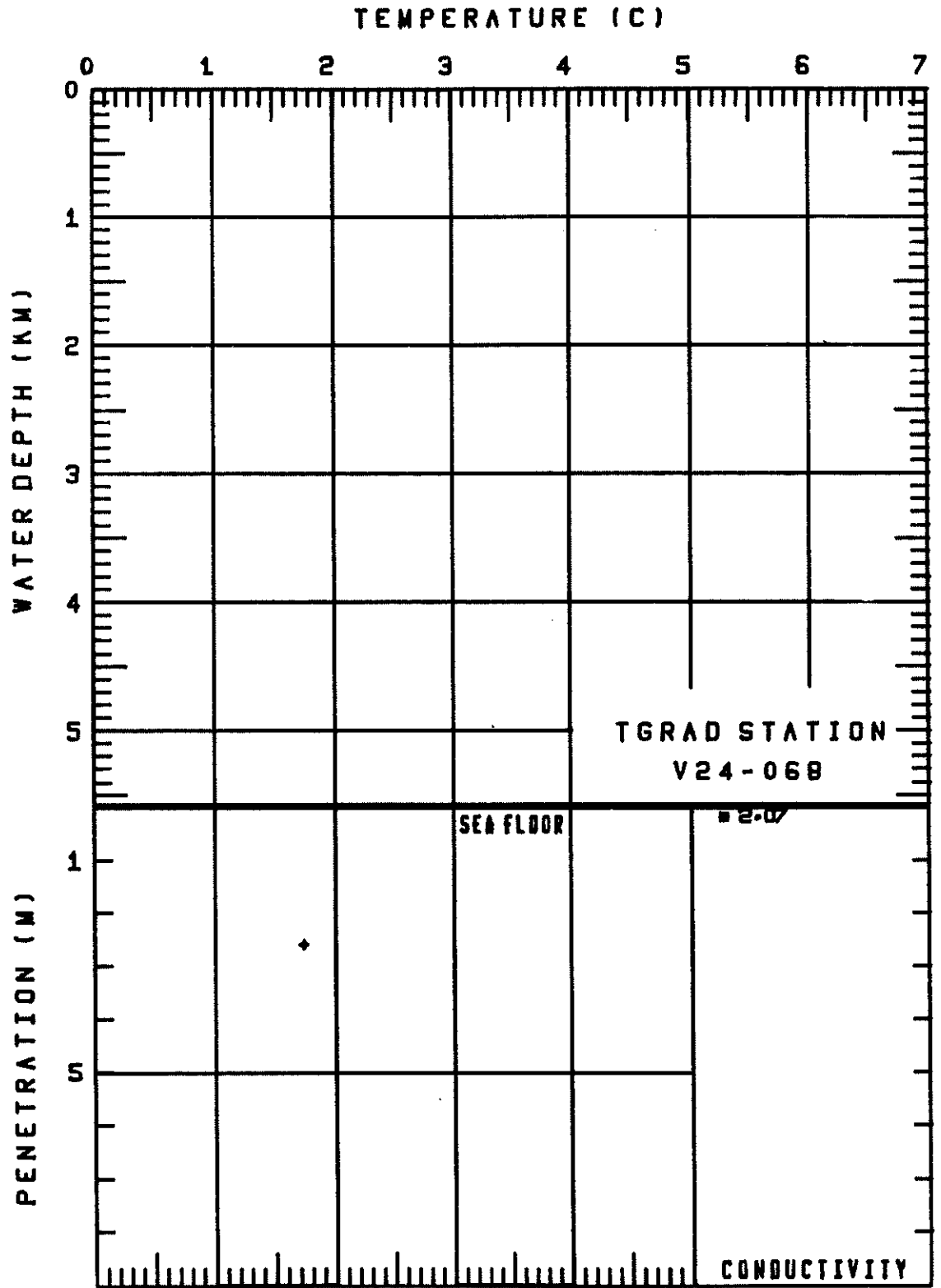
## TGRAD STATIONV24-068

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.59	1.73

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
0.20	2.07



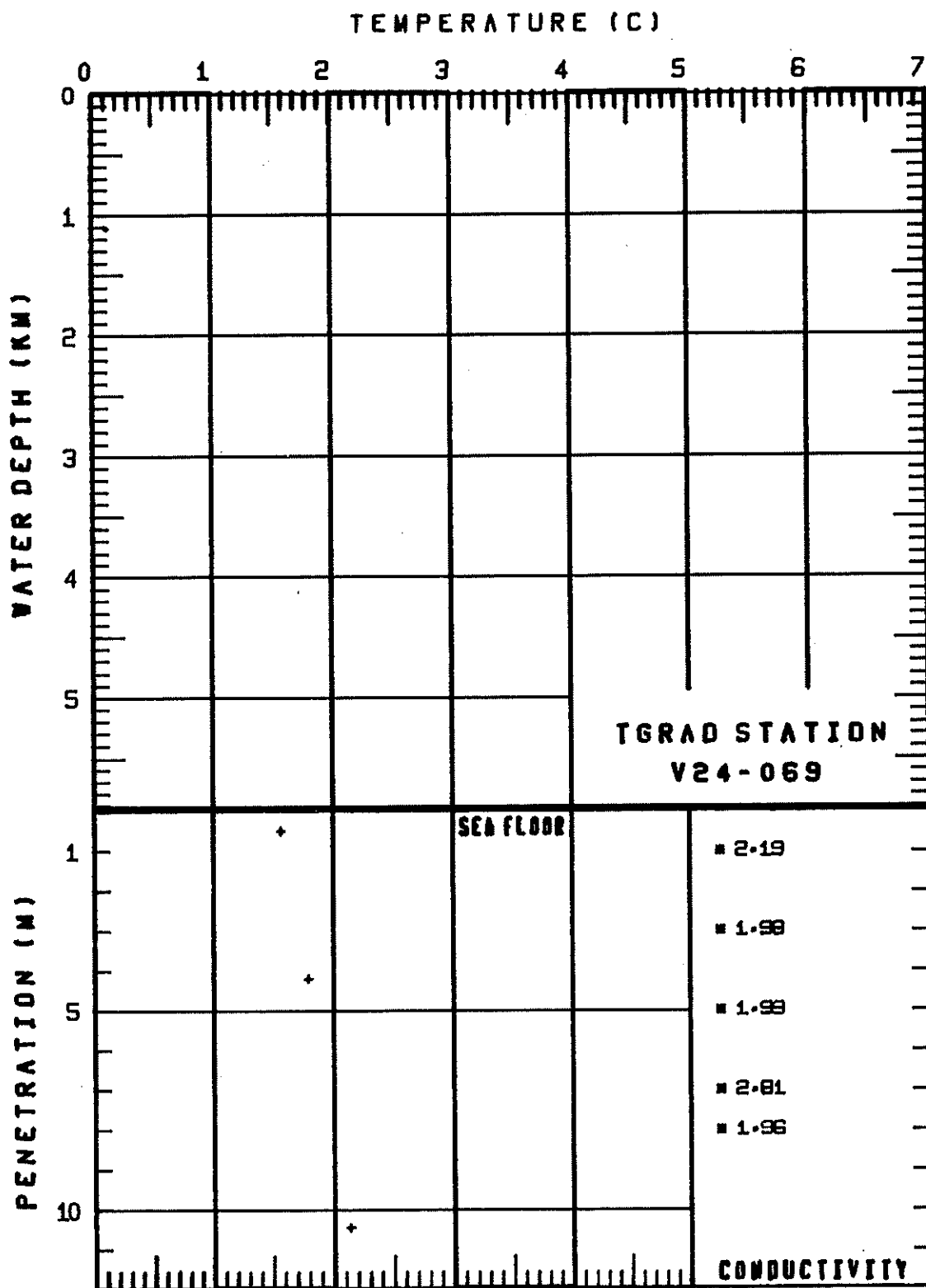
## TGRAD STATIONV24-069

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.50	1.58
4.19	1.80
10.43	2.15

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.19
3.00	1.98
5.00	1.99
7.00	2.81
8.00	1.96



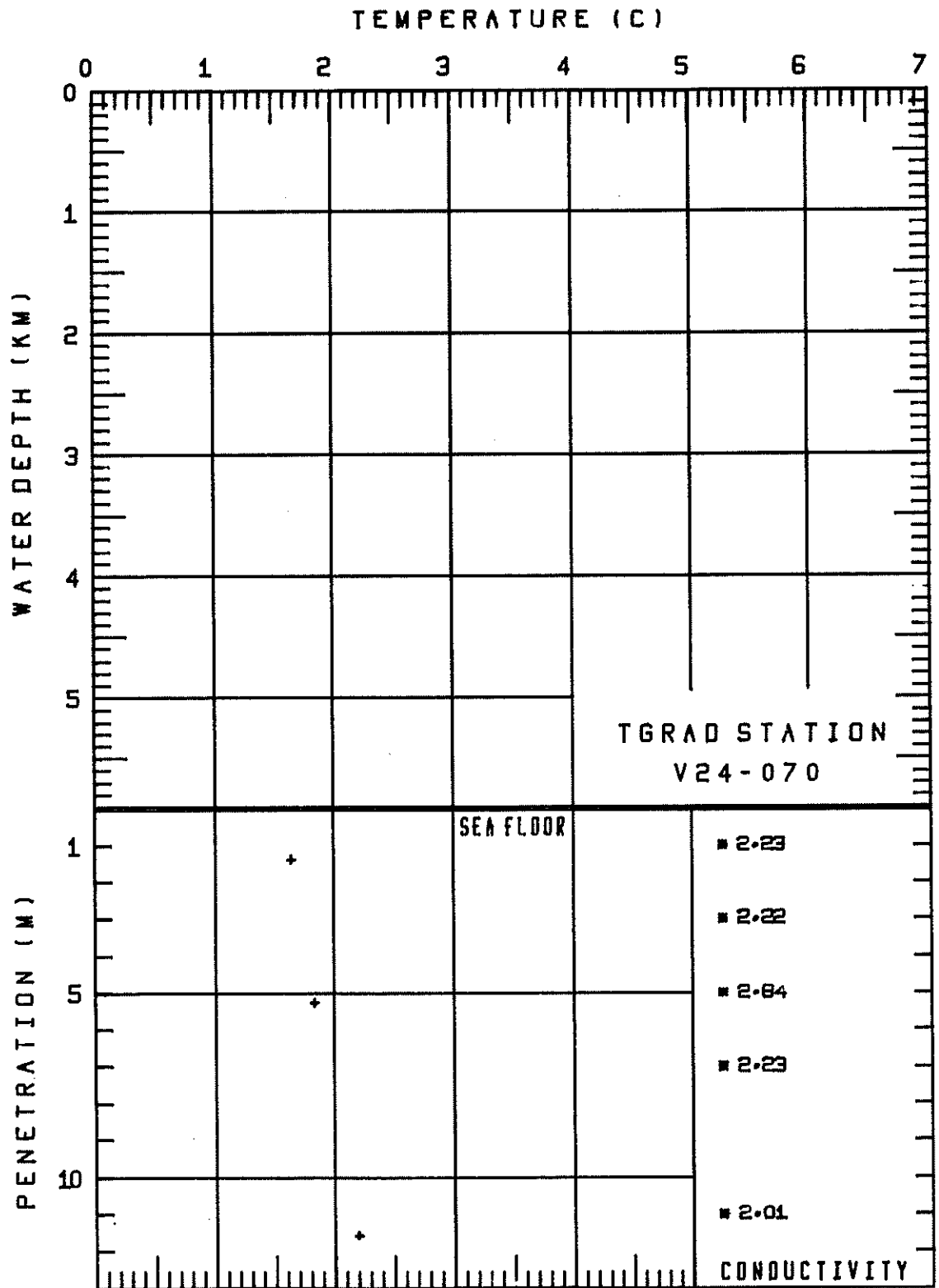
## TGRAD STATIONV24-070

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
1.37	1.64
5.26	1.83
11.58	2.20

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.23
3.00	2.22
5.00	2.84
7.00	2.23
11.00	2.01



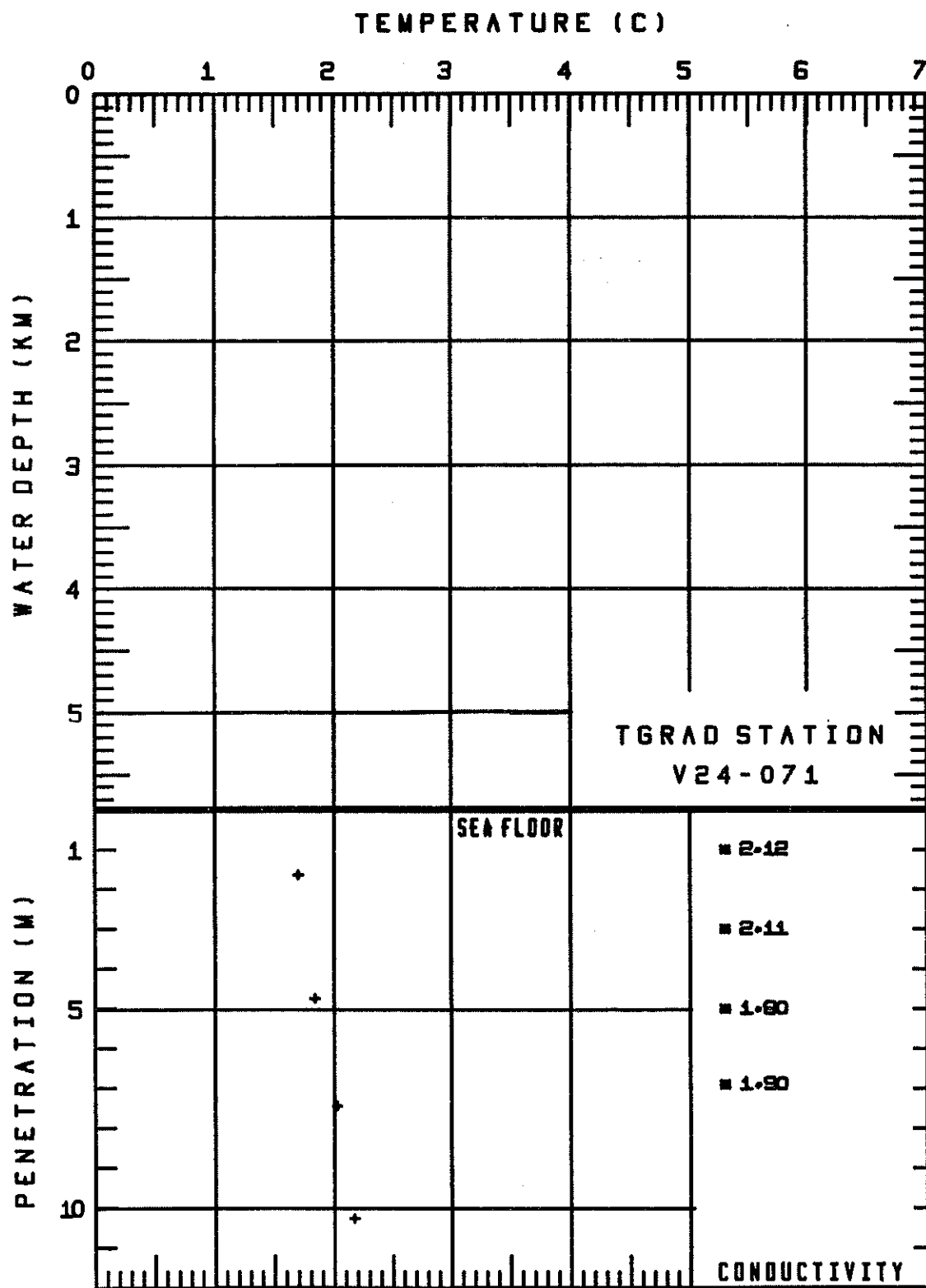
## TGRAD STATIONV24-071

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
1.63	1.67
4.73	1.80
7.43	1.99
10.27	2.14

## SEDIMENT CONDUCTIVITIES

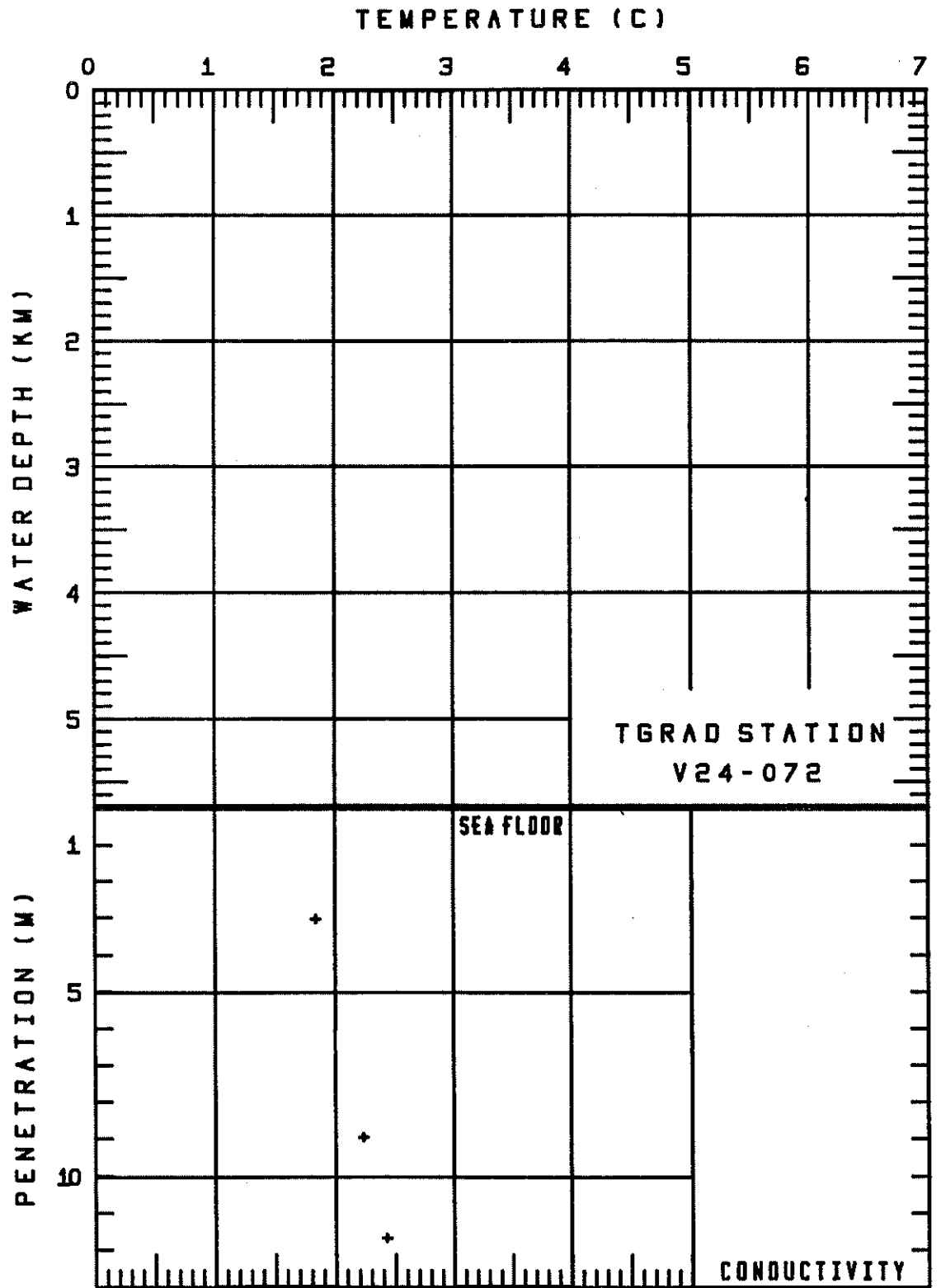
DEPTH	CONDUCTIVITY
1.00	2.12
3.00	2.11
5.00	1.80
6.90	1.90



## TGRAD STATIONV24-072

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.02	1.83
8.94	2.24
11.68	2.43



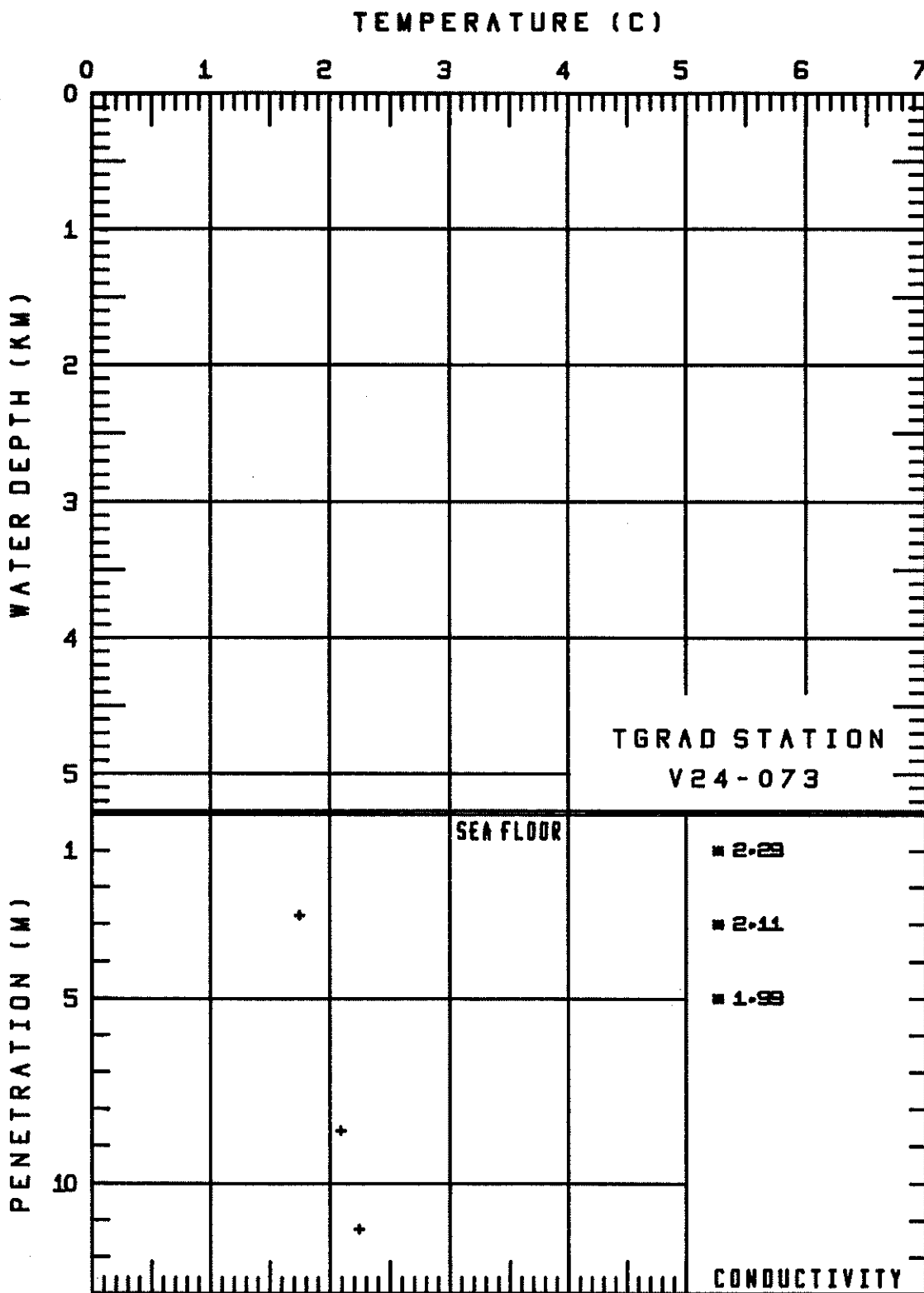
## TGRAD STATIONV24-073

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.76	1.74
8.57	2.09
11.24	2.24

## SEDIMENT CONDUCTIVITIES

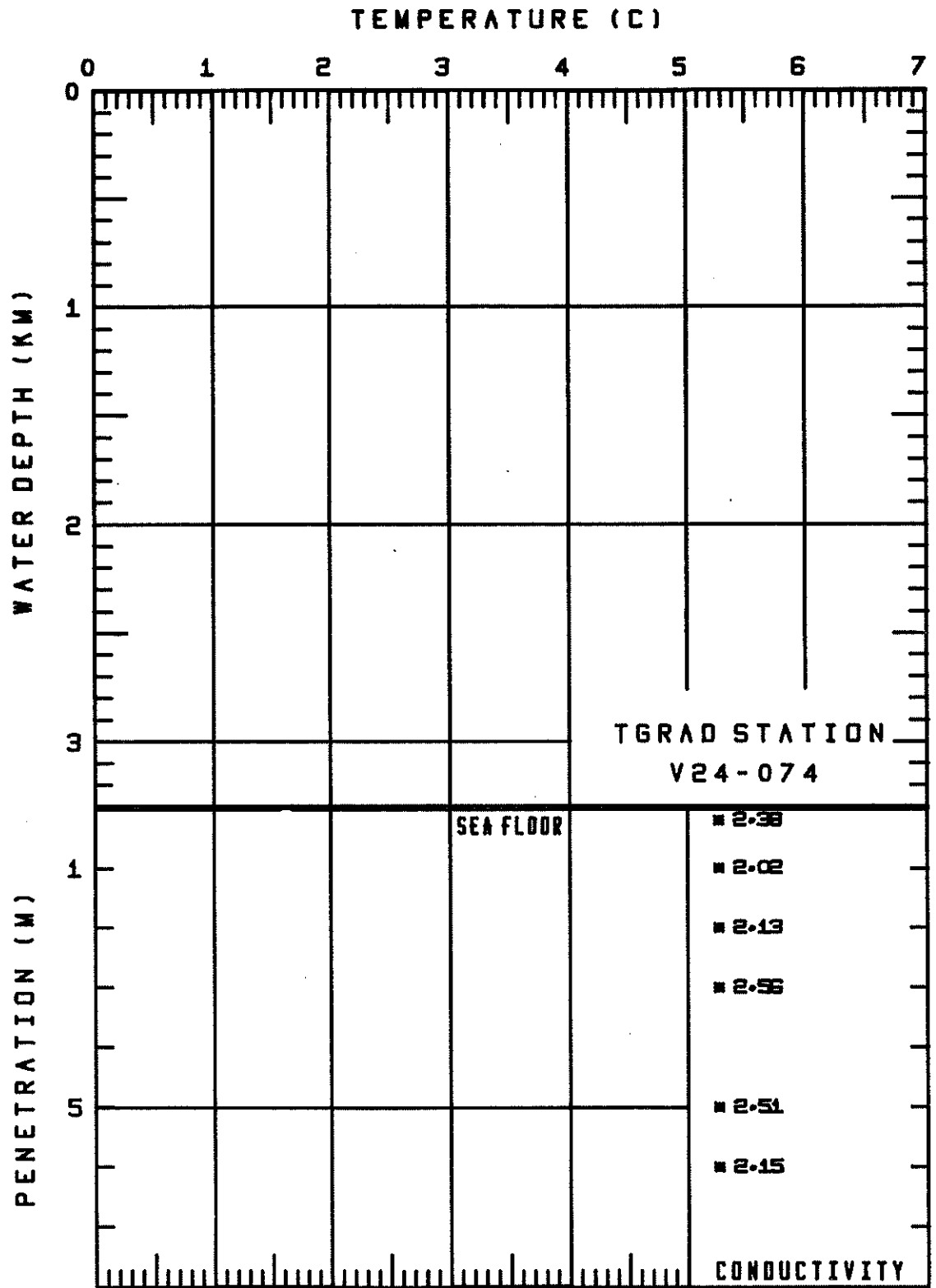
DEPTH	CONDUCTIVITY
1.00	2.29
3.00	2.11
5.00	1.99



## TGRAD STATIONV24-074

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
0.20	2.38
1.00	2.02
2.00	2.13
3.00	2.56
5.00	2.51
6.00	2.15



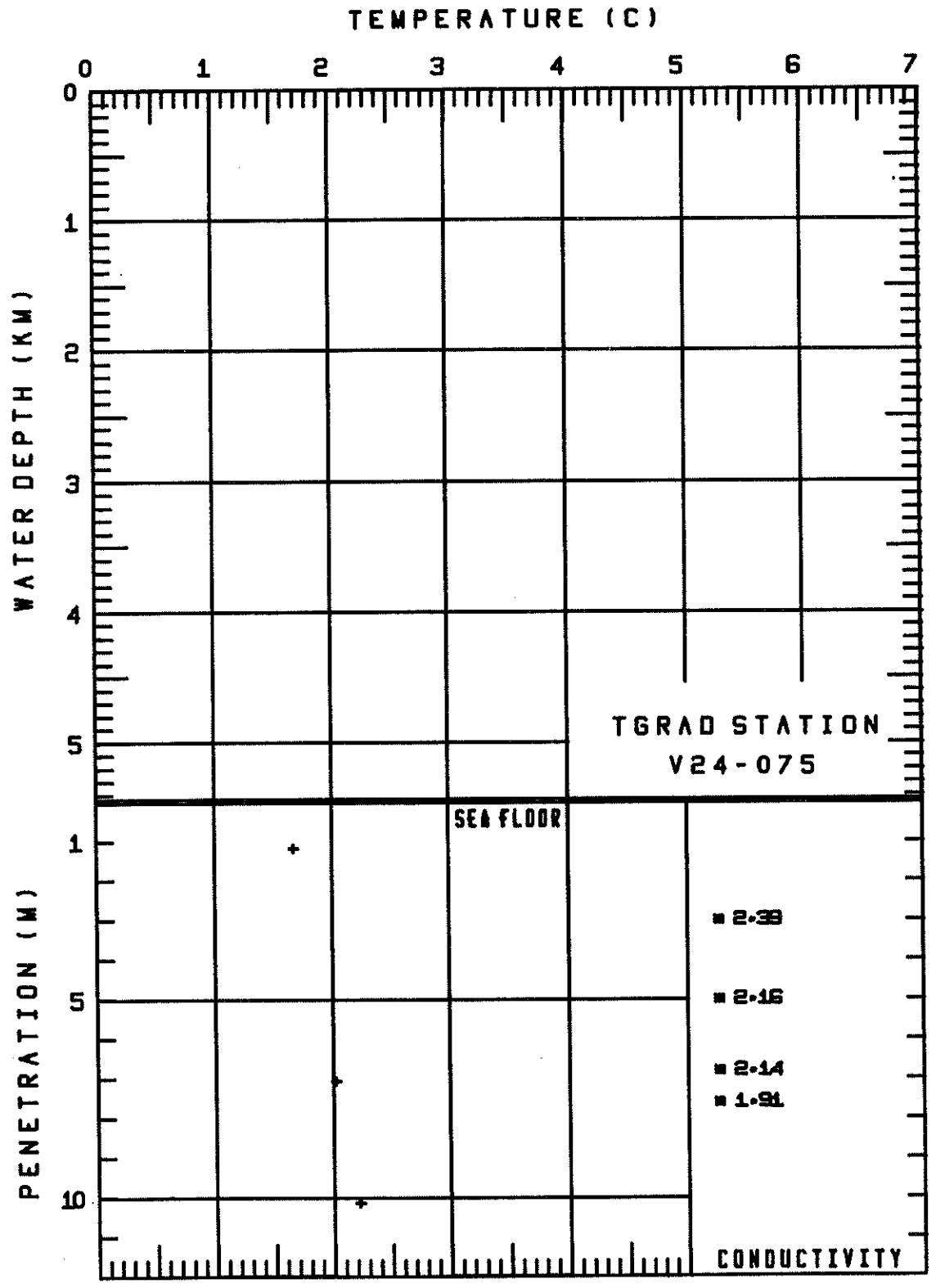
## TGRAD STATIONV24-075

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
1.17	1.67
7.06	2.02
10.14	2.22

## SEDIMENT CONDUCTIVITIES

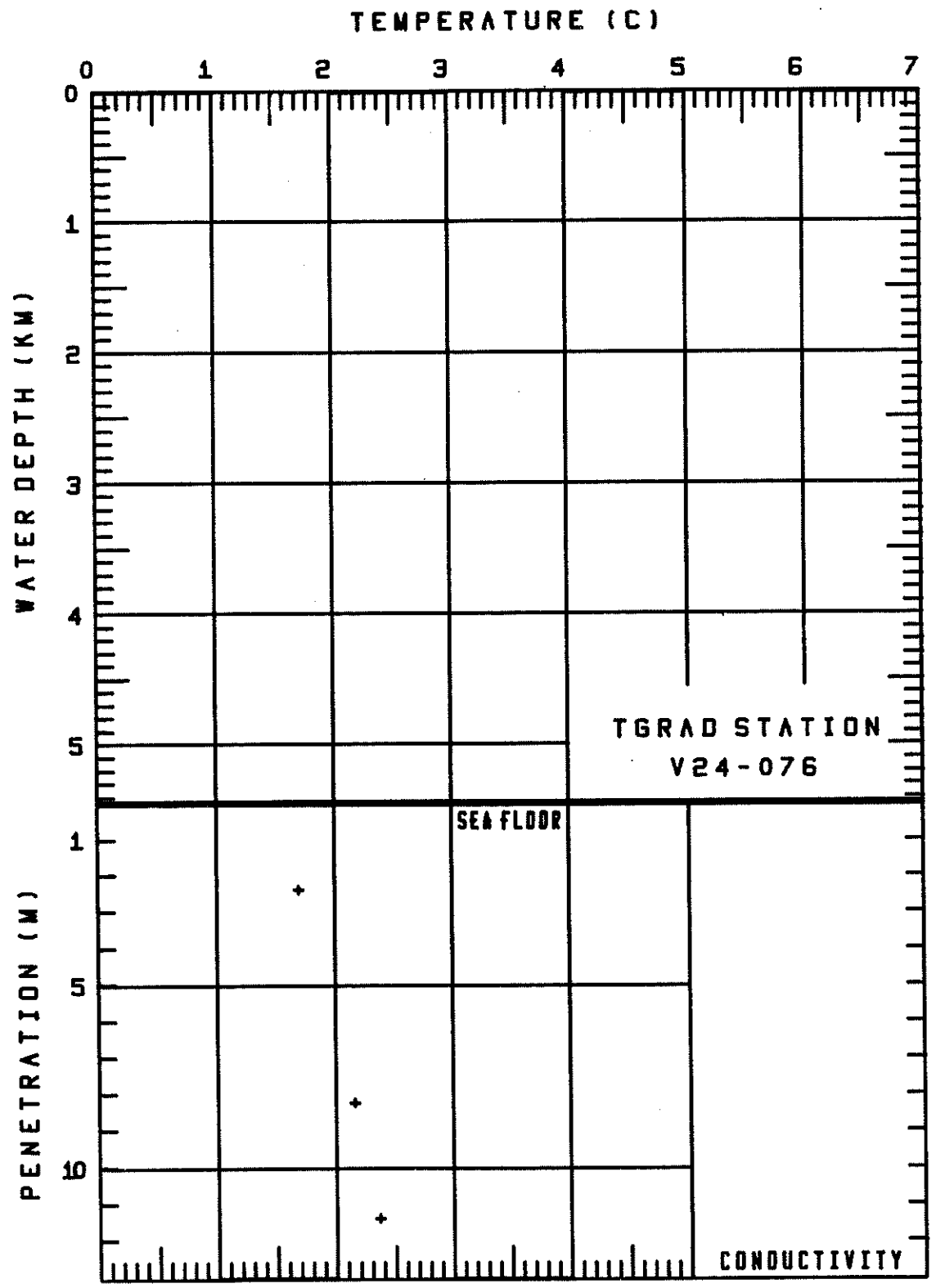
DEPTH	CONDUCTIVITY
3.00	2.39
5.00	2.16
6.80	2.14
7.60	1.91



## TGRAD STATIONV24-076

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.39	1.70
8.23	2.16
11.39	2.37



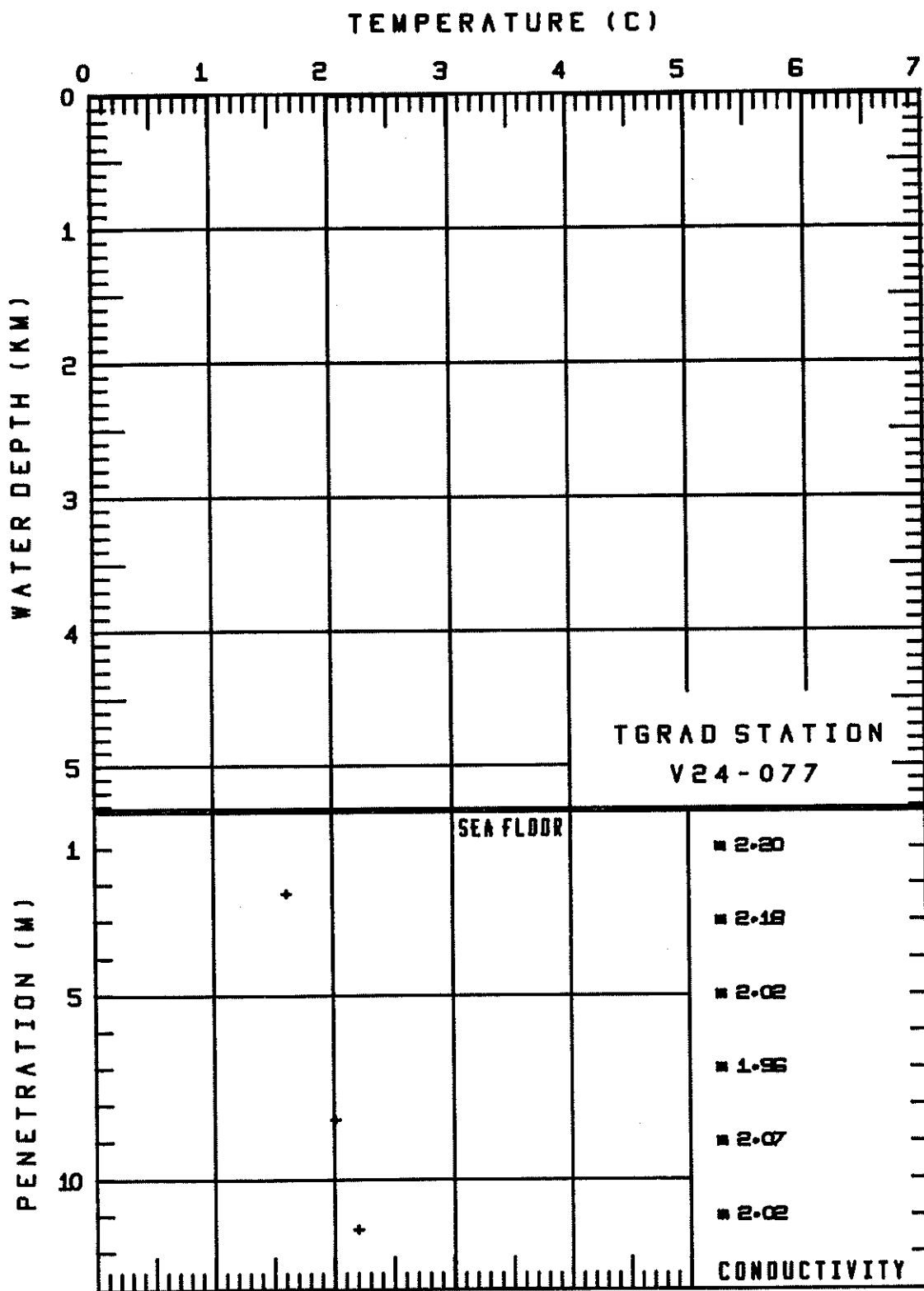
## TGRAD STATIONV24-077

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.23	1.62
8.38	2.01
11.37	2.20

## SEDIMENT CONDUCTIVITIES

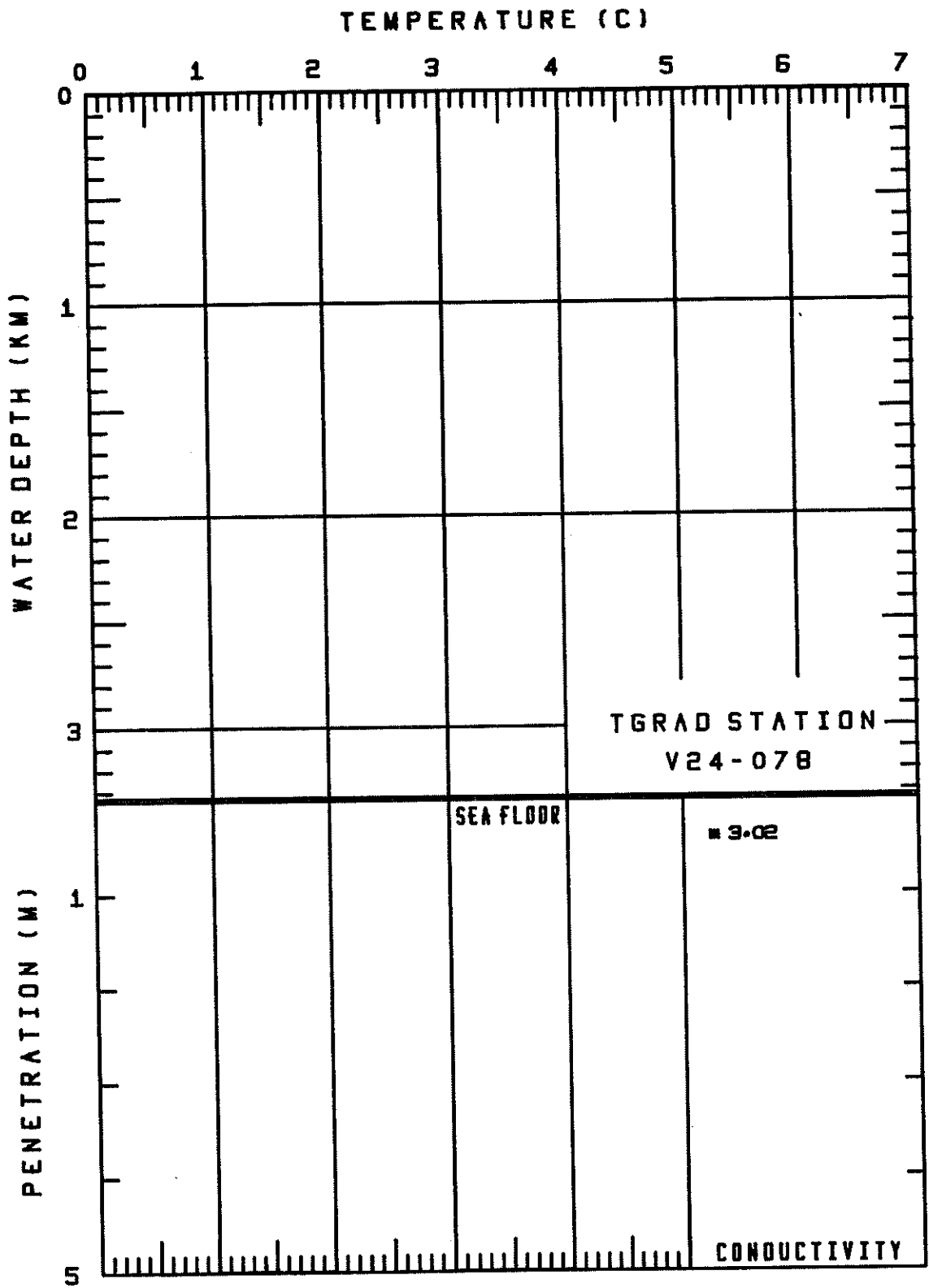
DEPTH	CONDUCTIVITY
1.00	2.20
3.00	2.18
5.00	2.02
7.00	1.96
9.00	2.07
11.00	2.02



## TGRAD STATIONV24-078

## SEDIMENT CONDUCTIVITIES

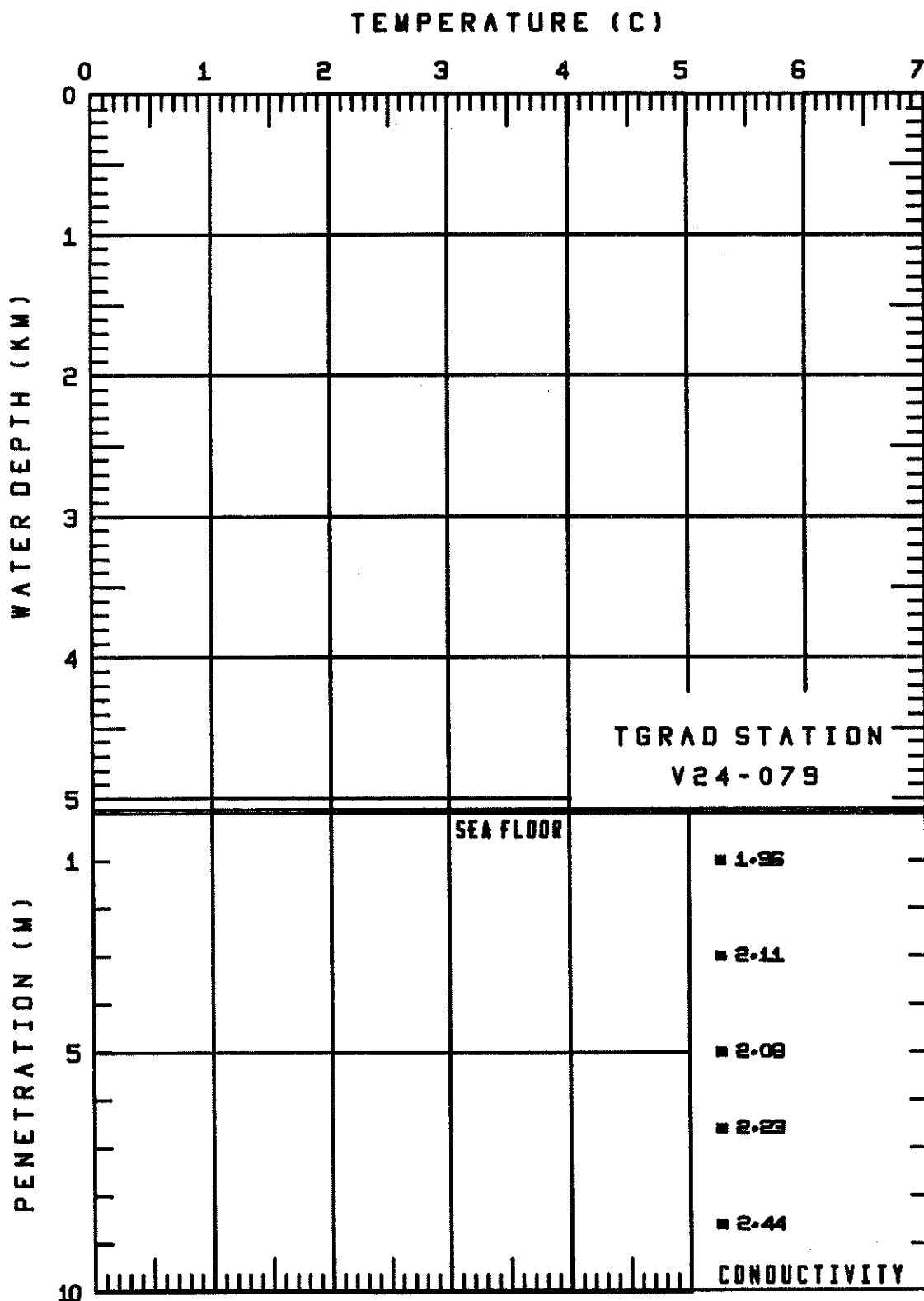
DEPTH	CONDUCTIVITY
0.40	3.02



## TGRAD STATIONV24-079

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.96
3.00	2.11
5.00	2.08
6.60	2.23
8.60	2.44



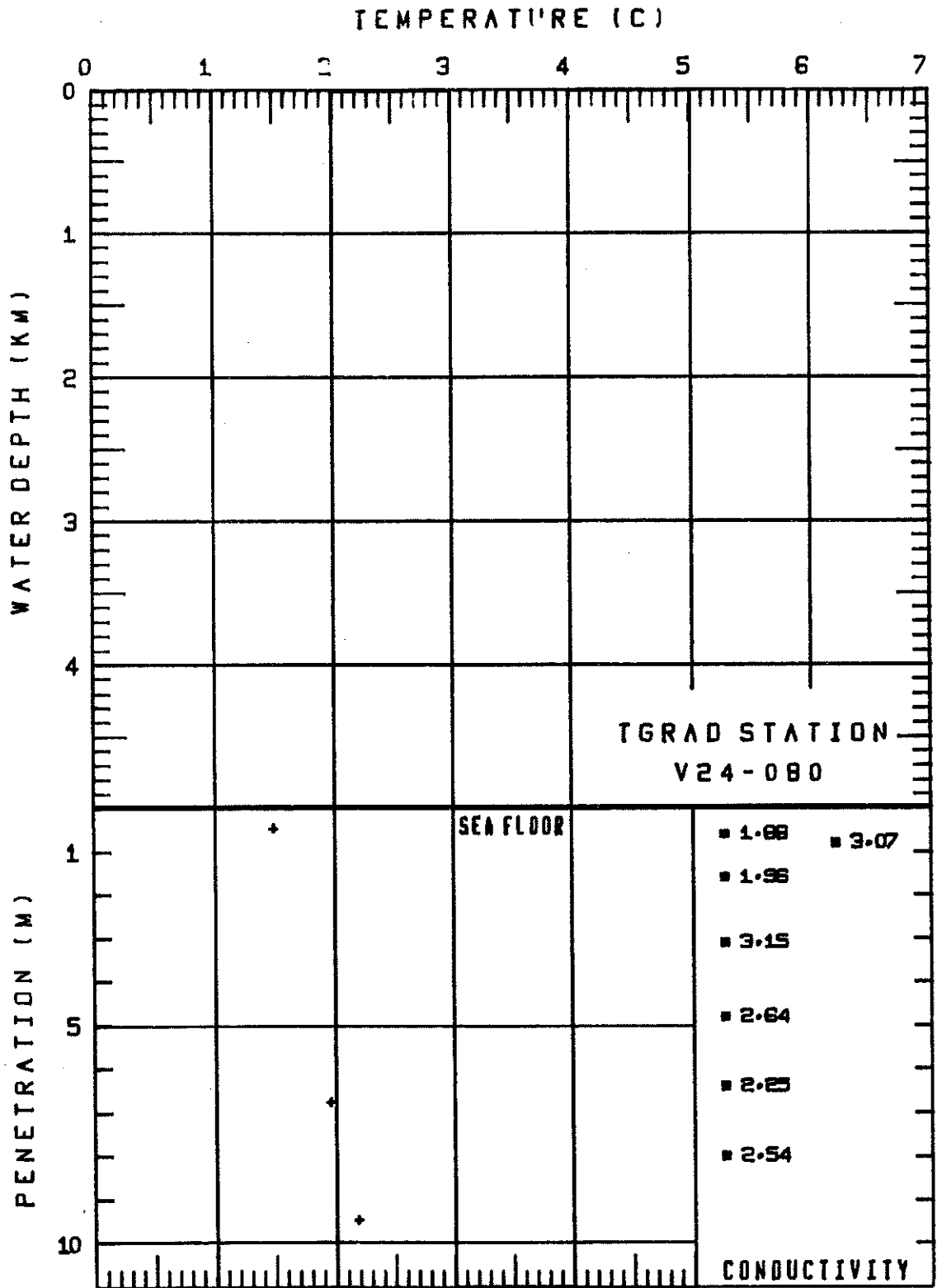
## TGRAD STATIONV24-080

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.45	1.49
6.77	1.96
9.46	2.19

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
0.60	1.88
0.80	3.07
1.60	1.96
3.10	3.15
4.80	2.64
6.40	2.25
8.00	2.54



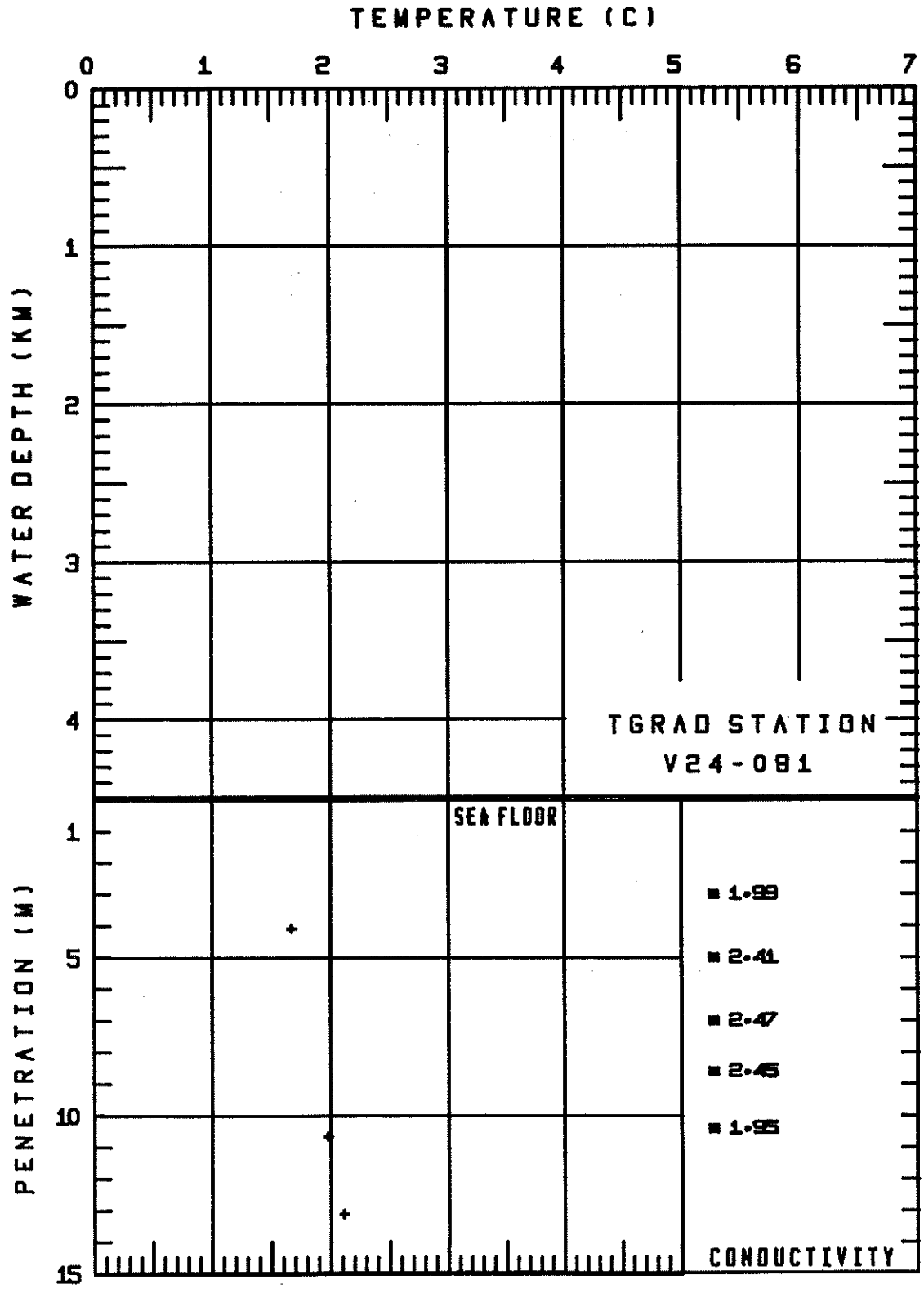
## TGRAD STATIONV24-081

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
4.08	1.67
10.66	1.98
13.09	2.12

## SEDIMENT CONDUCTIVITIES

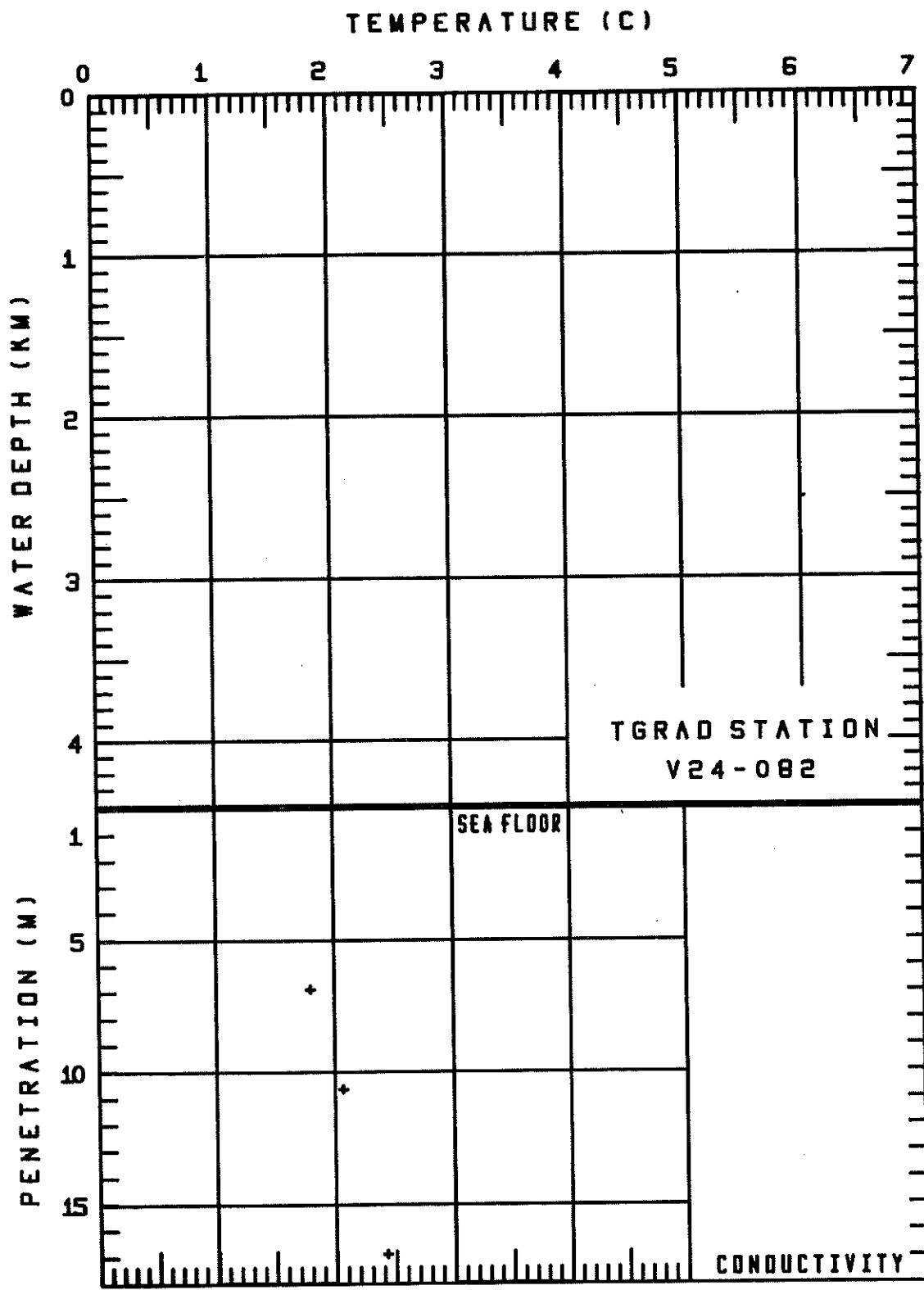
DEPTH	CONDUCTIVITY
3.00	1.99
5.00	2.41
7.00	2.47
8.60	2.45
10.40	1.95



## TGRAD STATIONV24-082

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
6.88	1.80
10.64	2.07
16.89	2.43



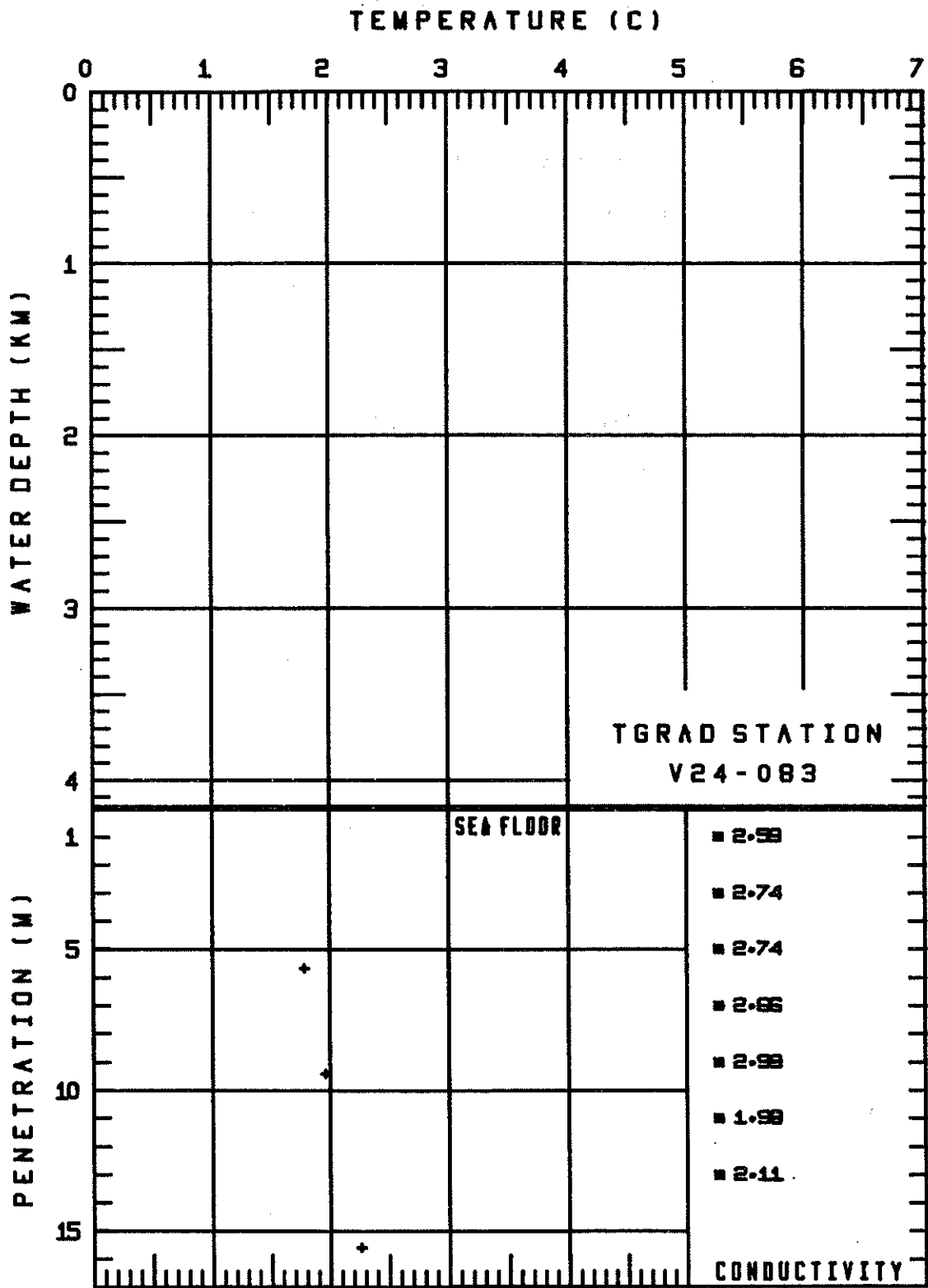
## TGRAD STATIONV24-083

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
5.68	1.78
9.42	1.96
15.59	2.26

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.59
3.00	2.74
5.00	2.74
7.00	2.66
9.00	2.99
11.00	1.98
13.00	2.11



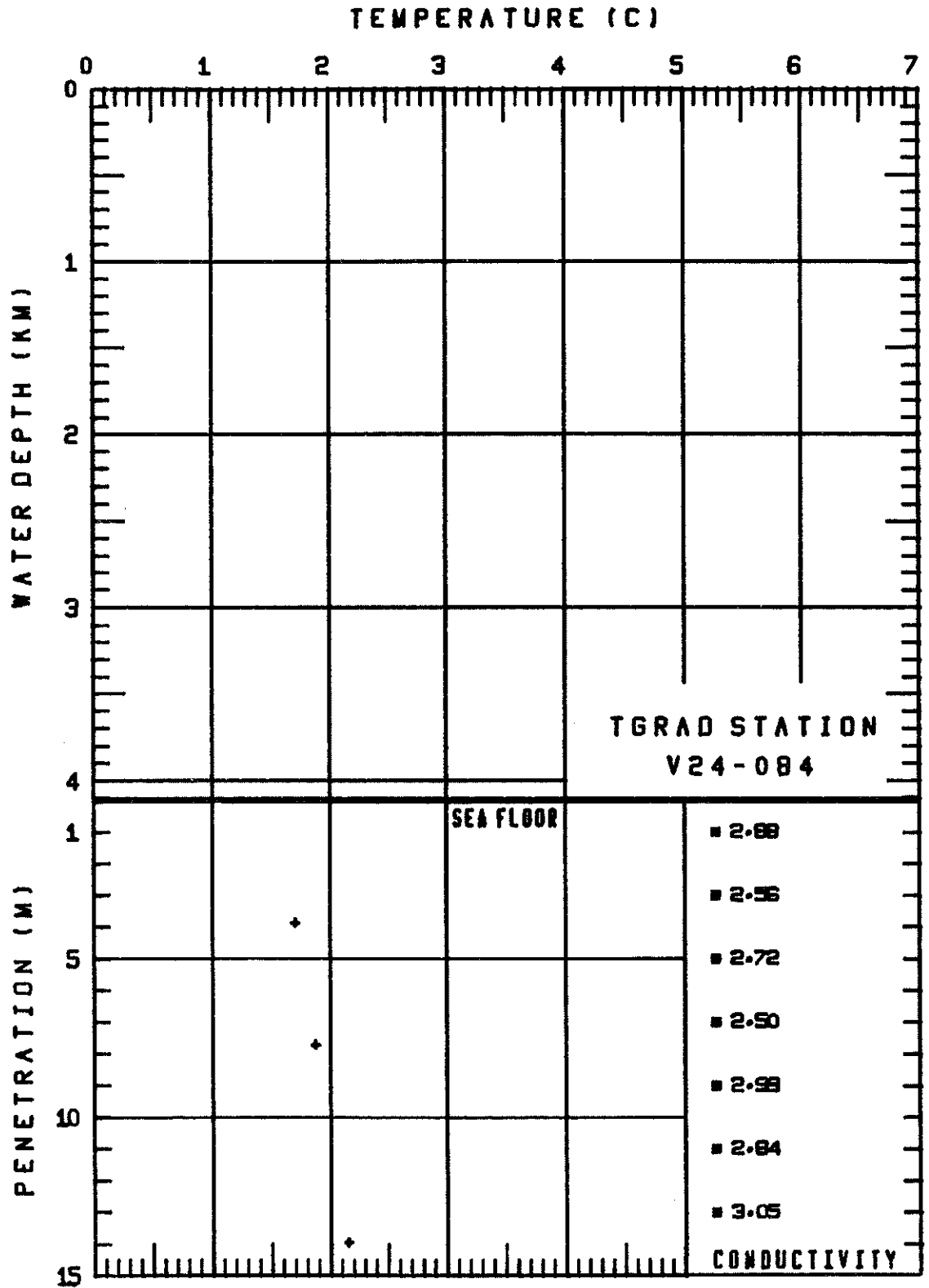
## TGRAD STATIONV24-084

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.84	1.70
7.71	1.87
13.95	2.15

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.88
3.00	2.56
5.00	2.72
7.00	2.50
9.00	2.99
11.00	2.84
13.00	3.05



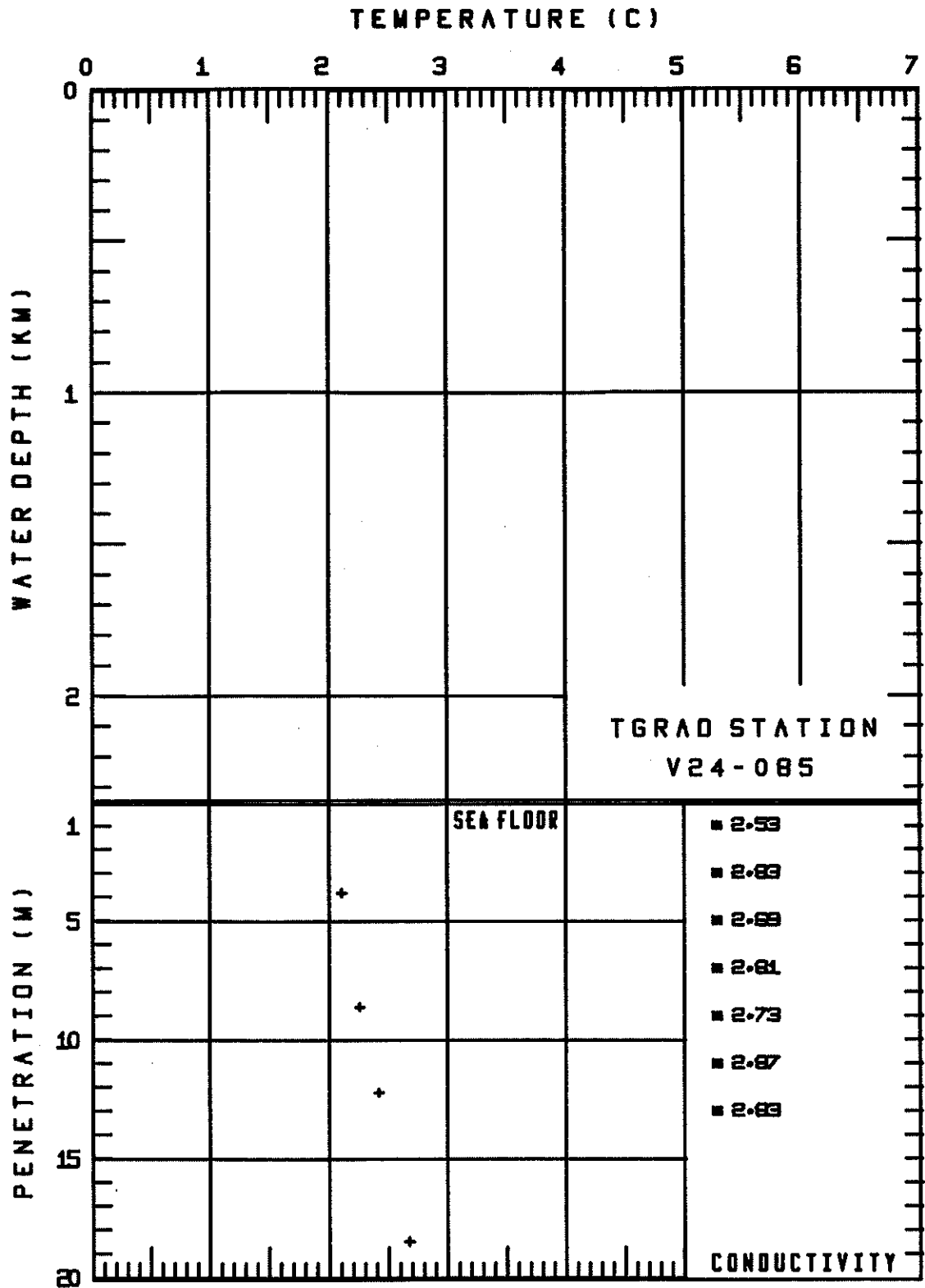
## TGRAD STATIONV24-085

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.84	2.09
8.64	2.24
12.25	2.40
18.49	2.66

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.53
3.00	2.83
5.00	2.69
7.00	2.81
9.00	2.73
11.00	2.87
13.00	2.83



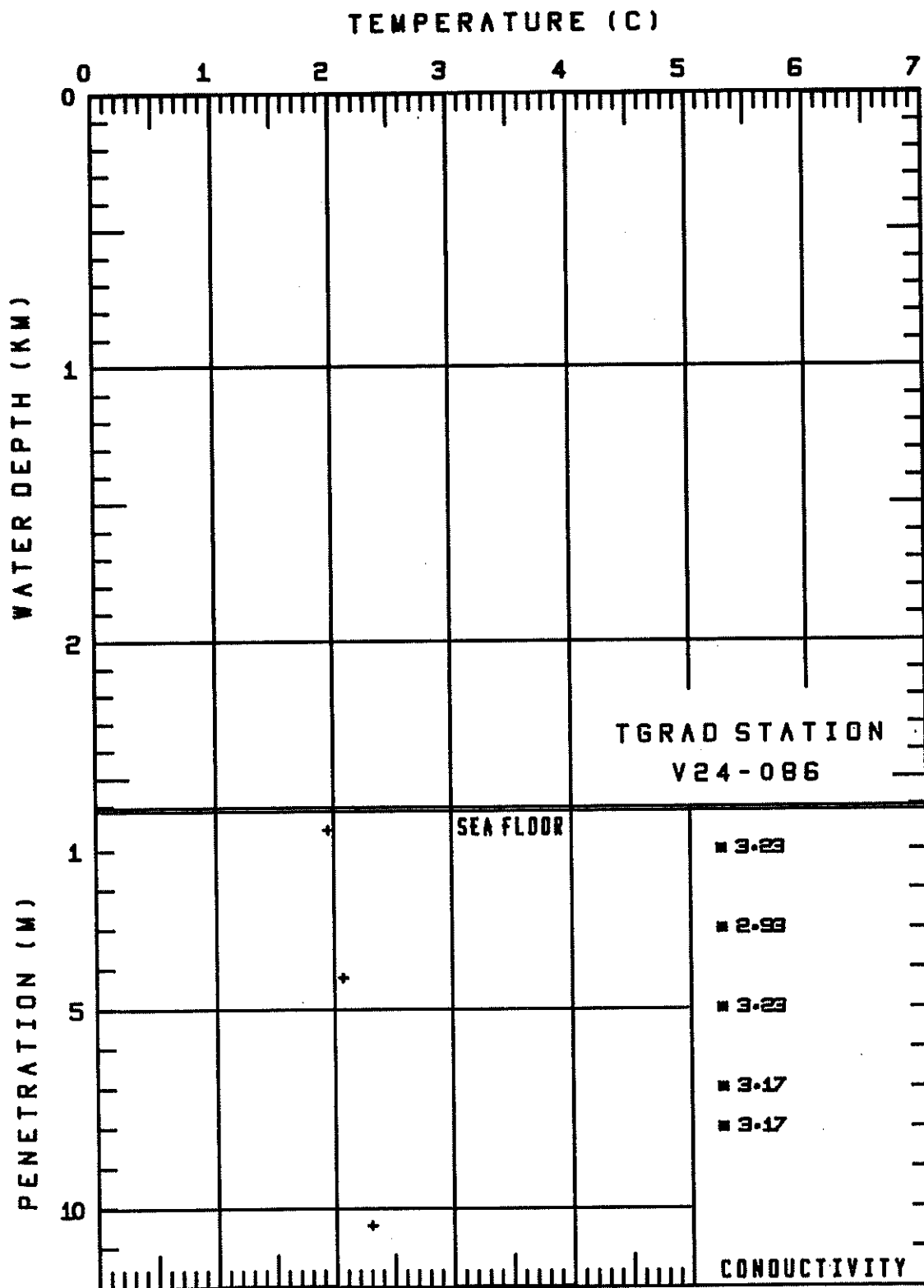
## TGRAD STATION V24-086

## SEDIMENT TEMPERATURES

DEPTH METERS	TEMPERATURE
0.50	1.956
4.21	2.080
10.43	2.310

## SEDIMENT CONDUCTIVITIES

DEPTH METERS	CONDUCTIVITY CGS
1.00	3.23
3.00	2.93
5.00	3.23
7.00	3.17
8.00	3.17



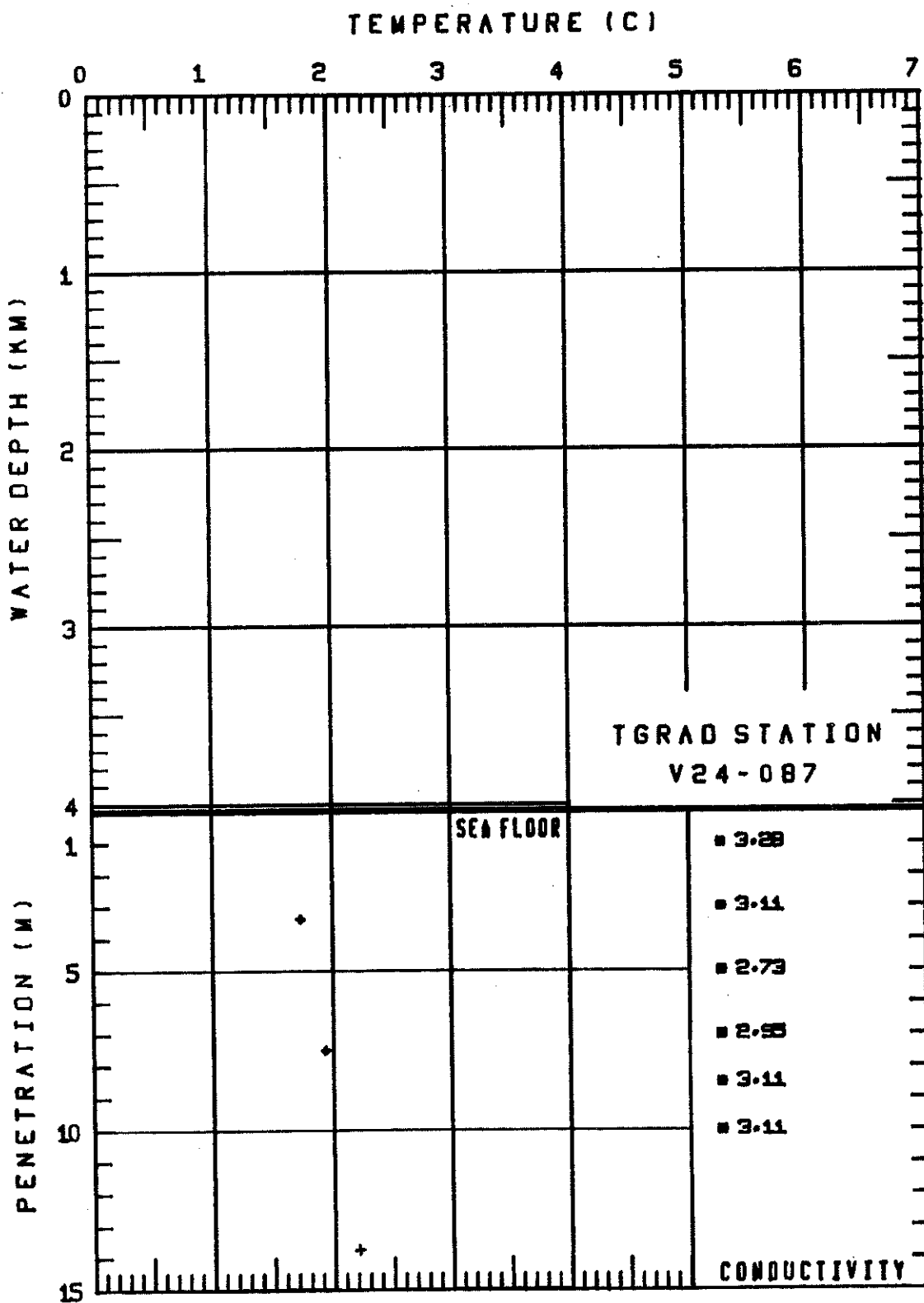
## TGRAD STATIONV24-087

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.37	1.73
7.49	1.93
13.76	2.22

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	3.28
3.00	3.11
5.00	2.73
7.00	2.95
8.50	3.11
10.00	3.11



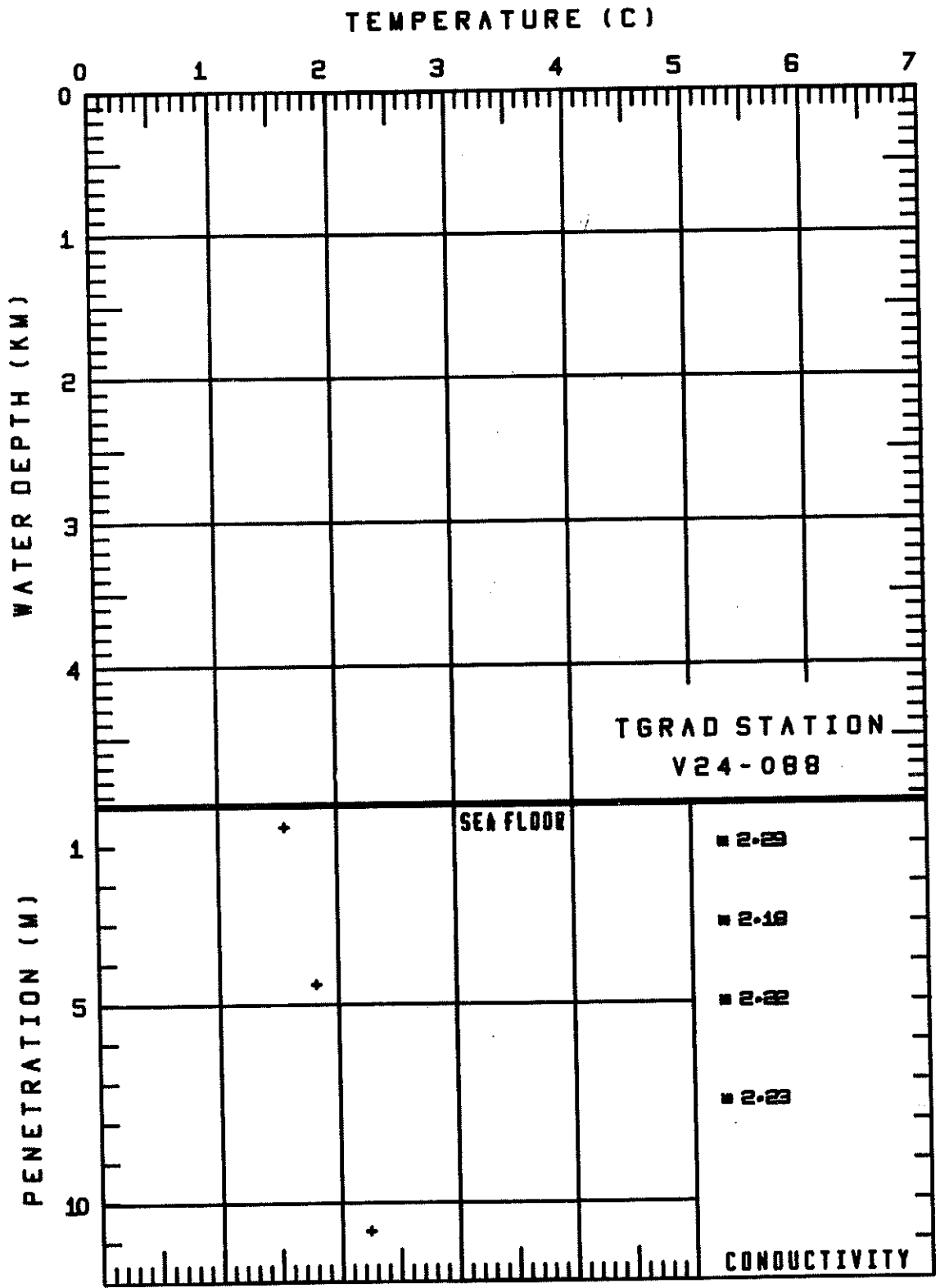
## TGRAD STATIONV24-088

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.51	1.56
4.50	1.82
10.72	2.25

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.29
3.00	2.18
5.00	2.22
7.50	2.23



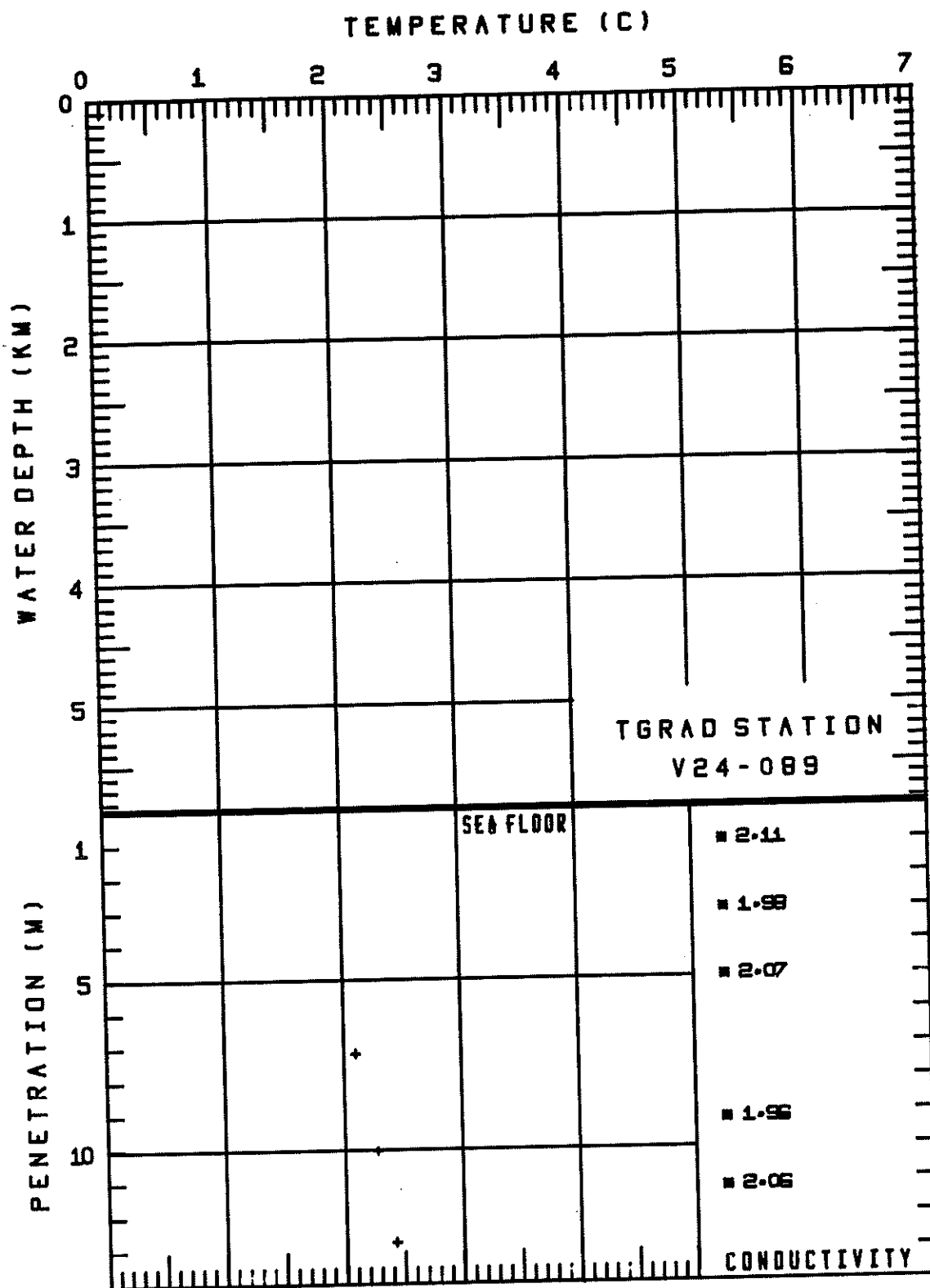
## TGRAD STATIONV24-089

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
7.18	2.10
10.05	2.28
12.77	2.43

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.11
3.00	1.98
5.00	2.07
9.20	1.96
11.20	2.06



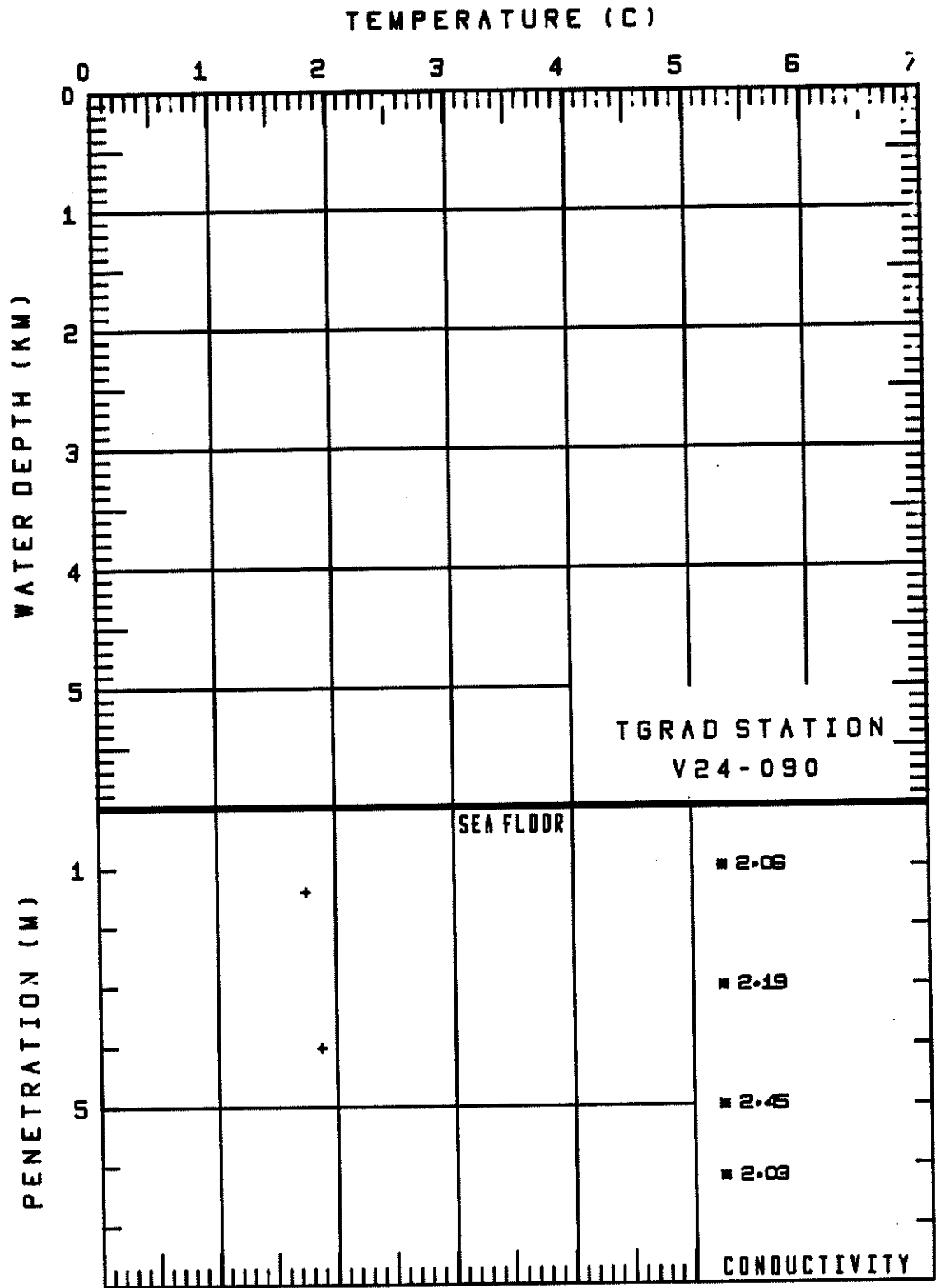
## TGRAD STATIONV24-090

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
1.40	1.75
4.01	1.88

## SEDIMENT CONDUCTIVITIES

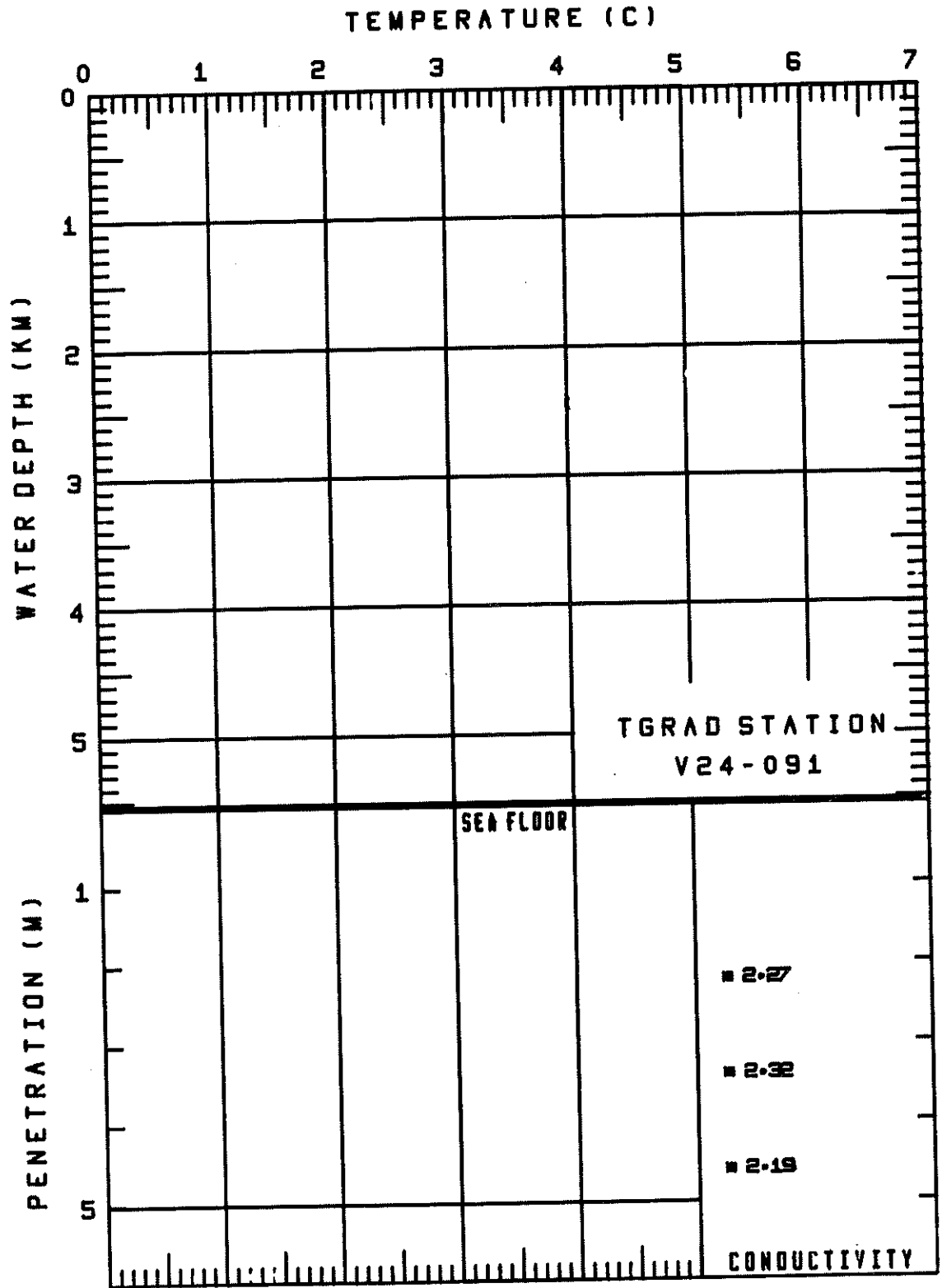
DEPTH	CONDUCTIVITY
1.00	2.06
3.00	2.19
5.00	2.45
6.20	2.03



TGRAD STATIONV24-091

SEDIMENT CONDUCTIVITIES

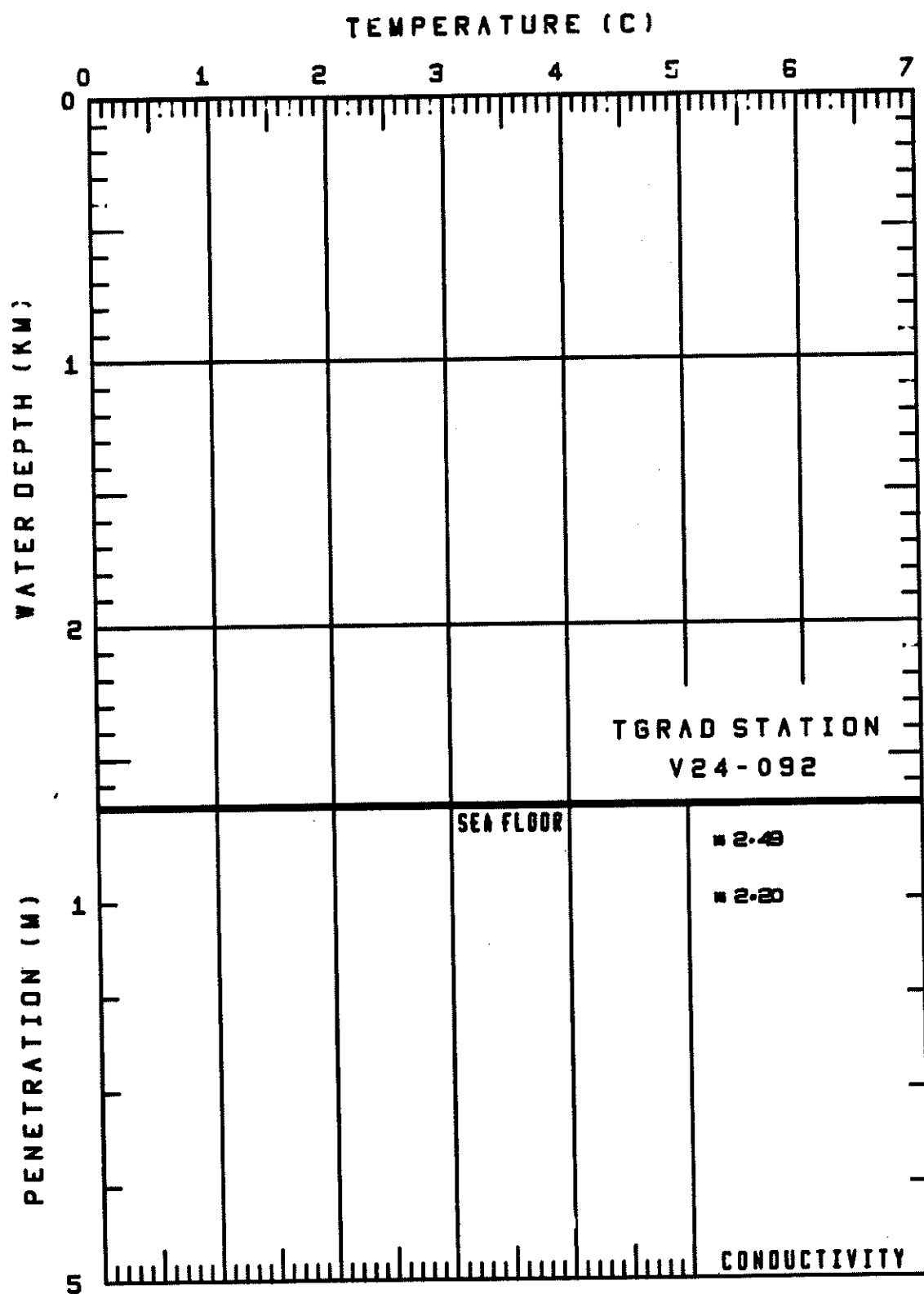
DEPTH	CONDUCTIVITY
2.20	2.27
3.40	2.32
4.60	2.19



TGRAD STATIONV24-092

SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
0.40	2.49
1.00	2.20



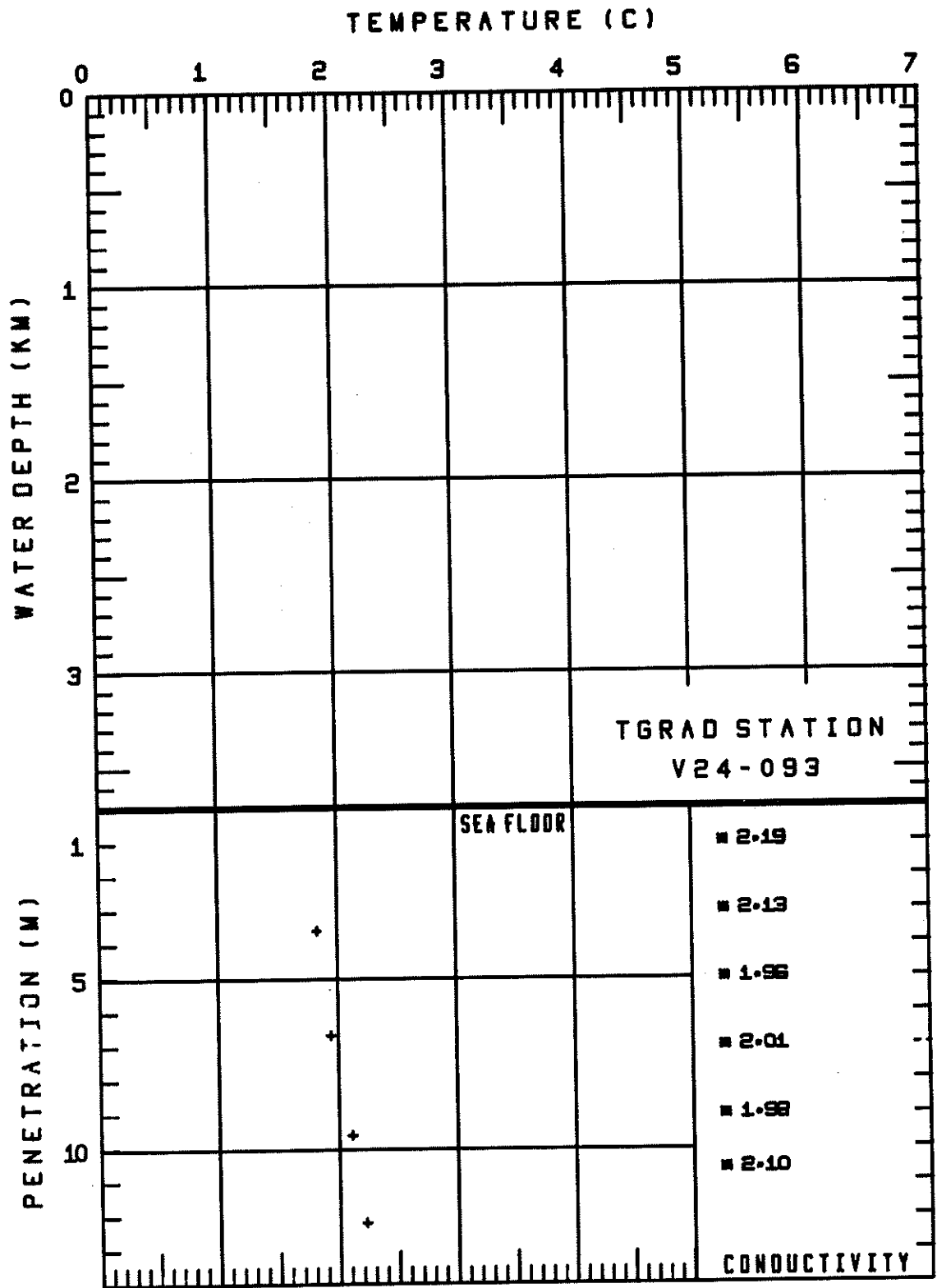
## TGRAD STATIONV24-093

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.60	1.82
6.68	1.94
9.62	2.11
12.19	2.22

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.19
3.00	2.13
5.00	1.96
7.00	2.01
9.00	1.98
10.60	2.10



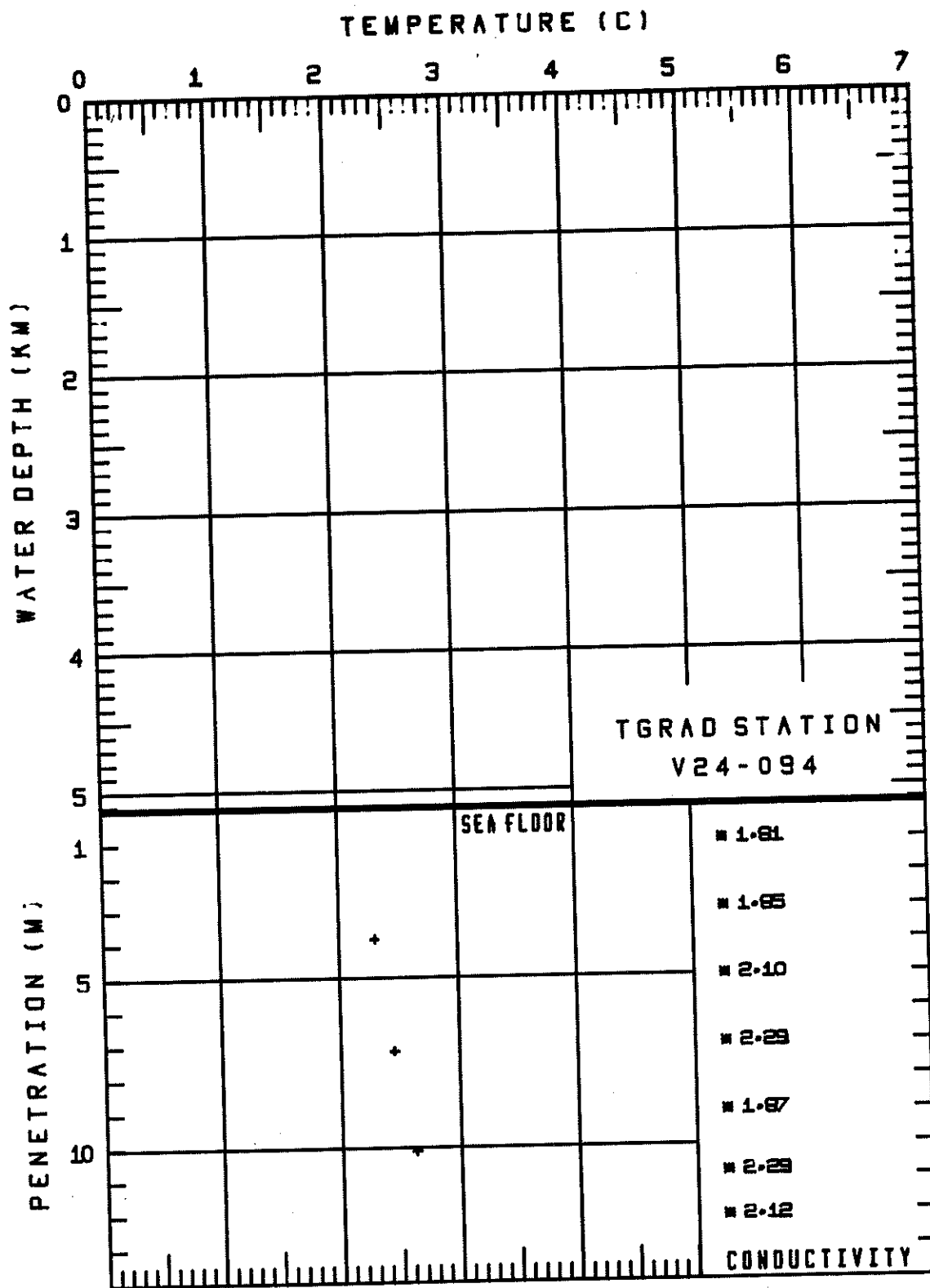
## TGRAD STATIONV24-094

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.86	2.29
7.16	2.44
10.13	2.62

## SEDIMENT CONDUCTIVITIES

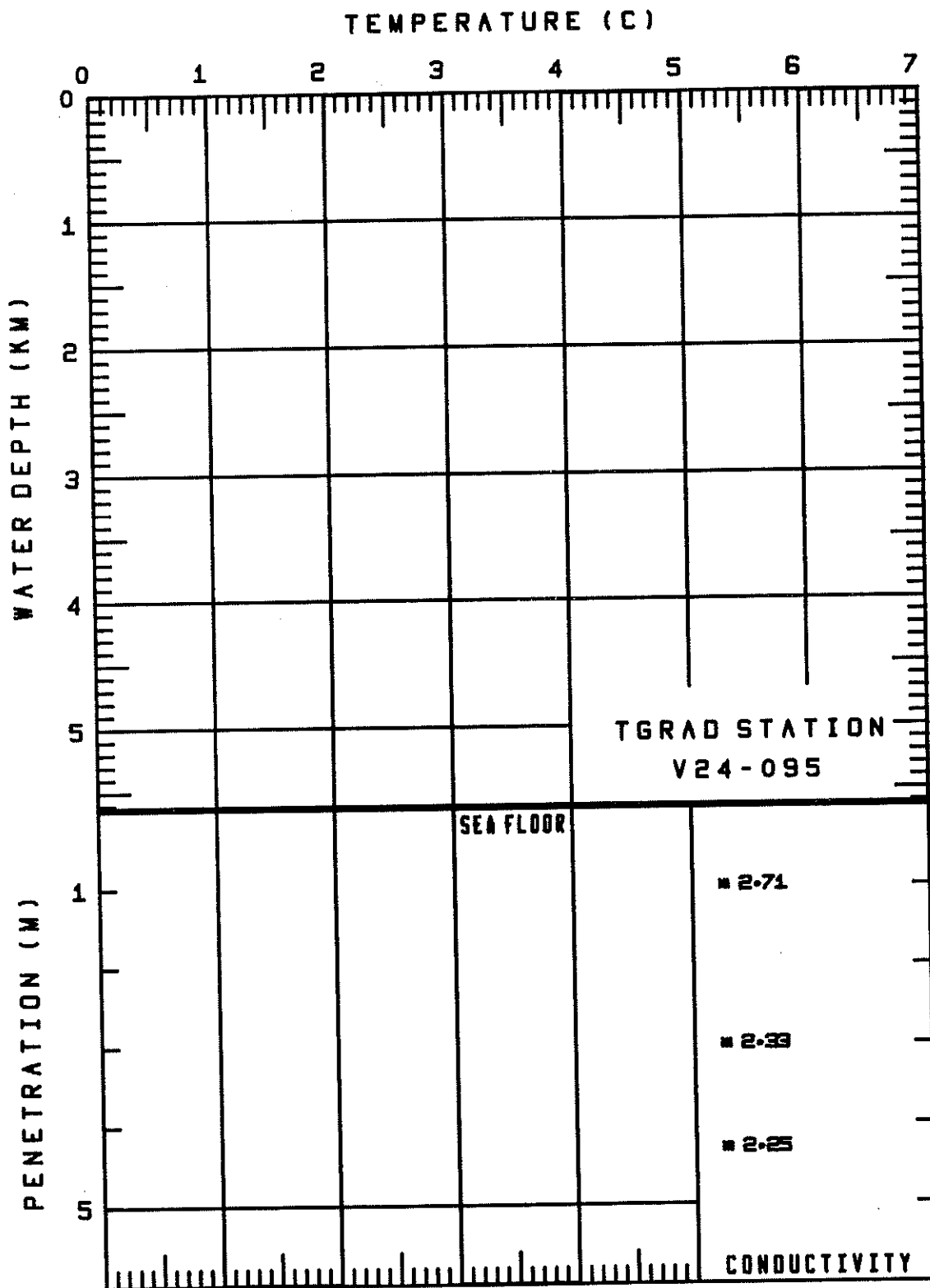
DEPTH	CONDUCTIVITY
1.00	1.81
3.00	1.85
5.00	2.10
7.00	2.29
9.00	1.87
10.80	2.29
12.10	2.12



## TGRAD STATIONV24-095

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.71
3.00	2.33
4.30	2.25



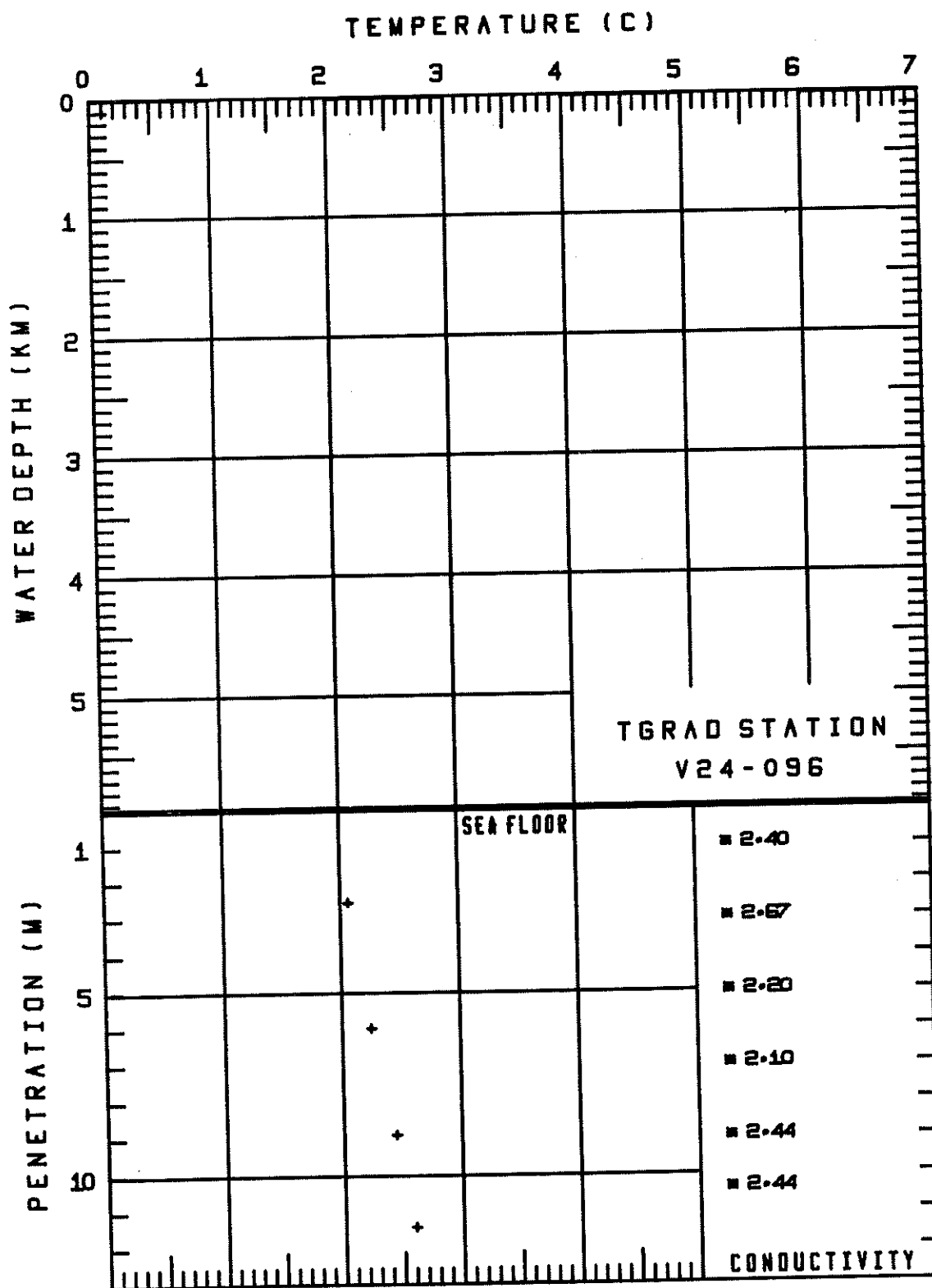
## TGRAD STATIONV24-096

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.53	2.07
5.98	2.24
8.90	2.45
11.41	2.60

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.40
3.00	2.67
5.00	2.20
7.00	2.10
9.00	2.44
10.40	2.44



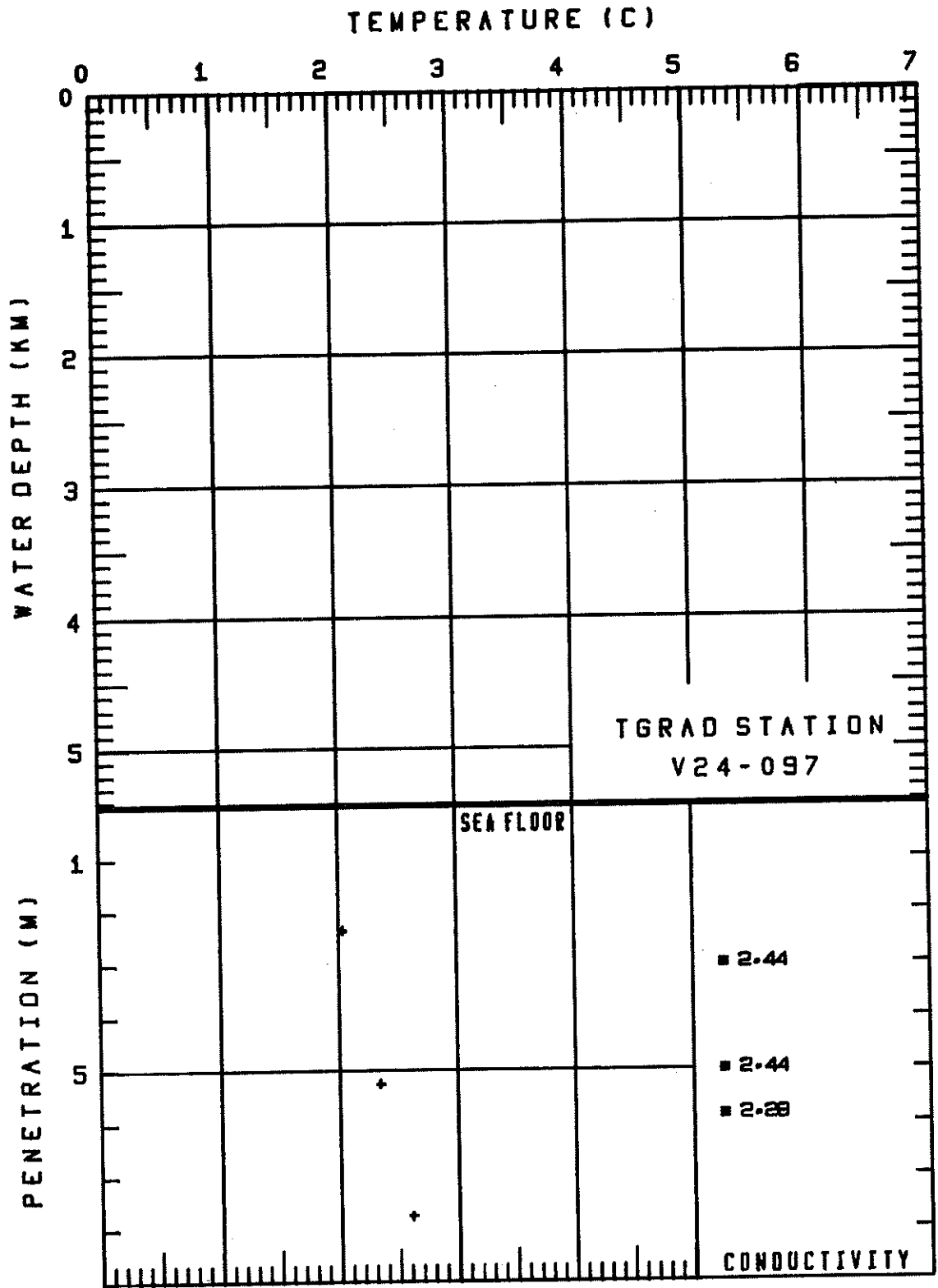
## TGRAD STATIONV24-097

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.35	2.04
5.25	2.34
7.76	2.61

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
3.00	2.44
5.00	2.44
5.85	2.28



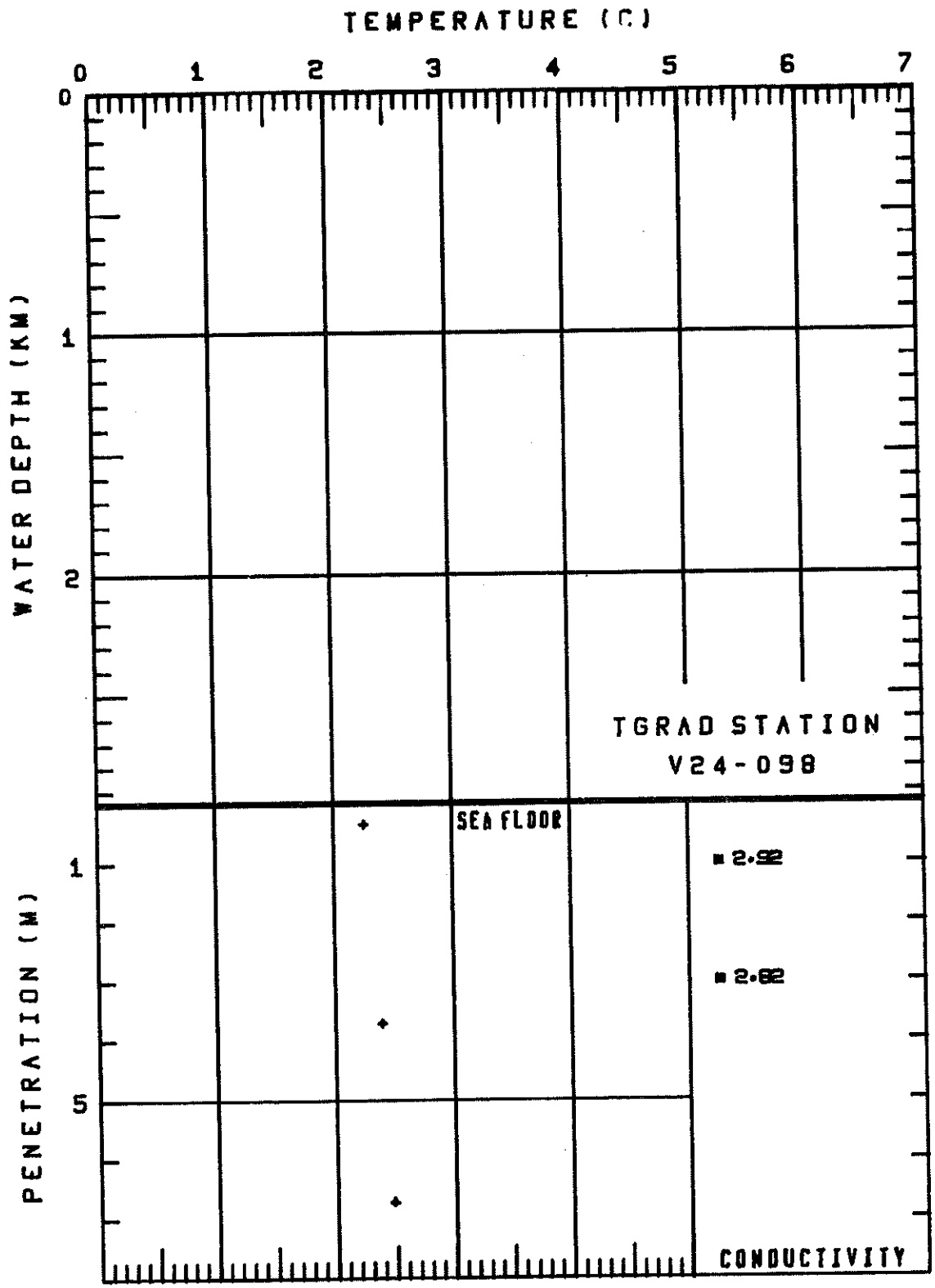
## TGRAD STATIONV24-098

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.35	2.25
3.71	2.40
6.71	2.48

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.92
3.00	2.82



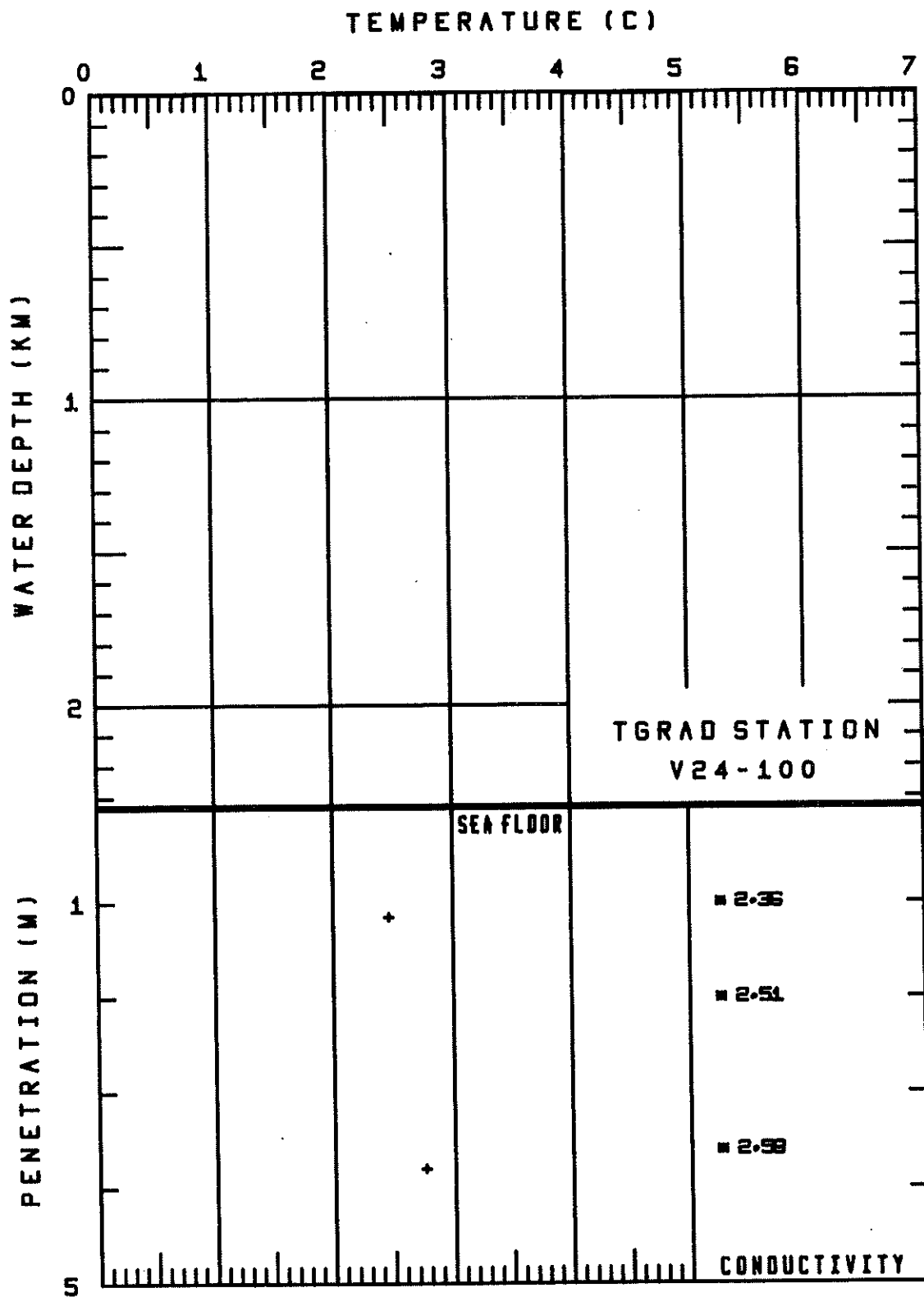
## TGRAD STATIONV24-100

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
1.15	2.47
3.79	2.76

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.36
2.00	2.51
3.60	2.58



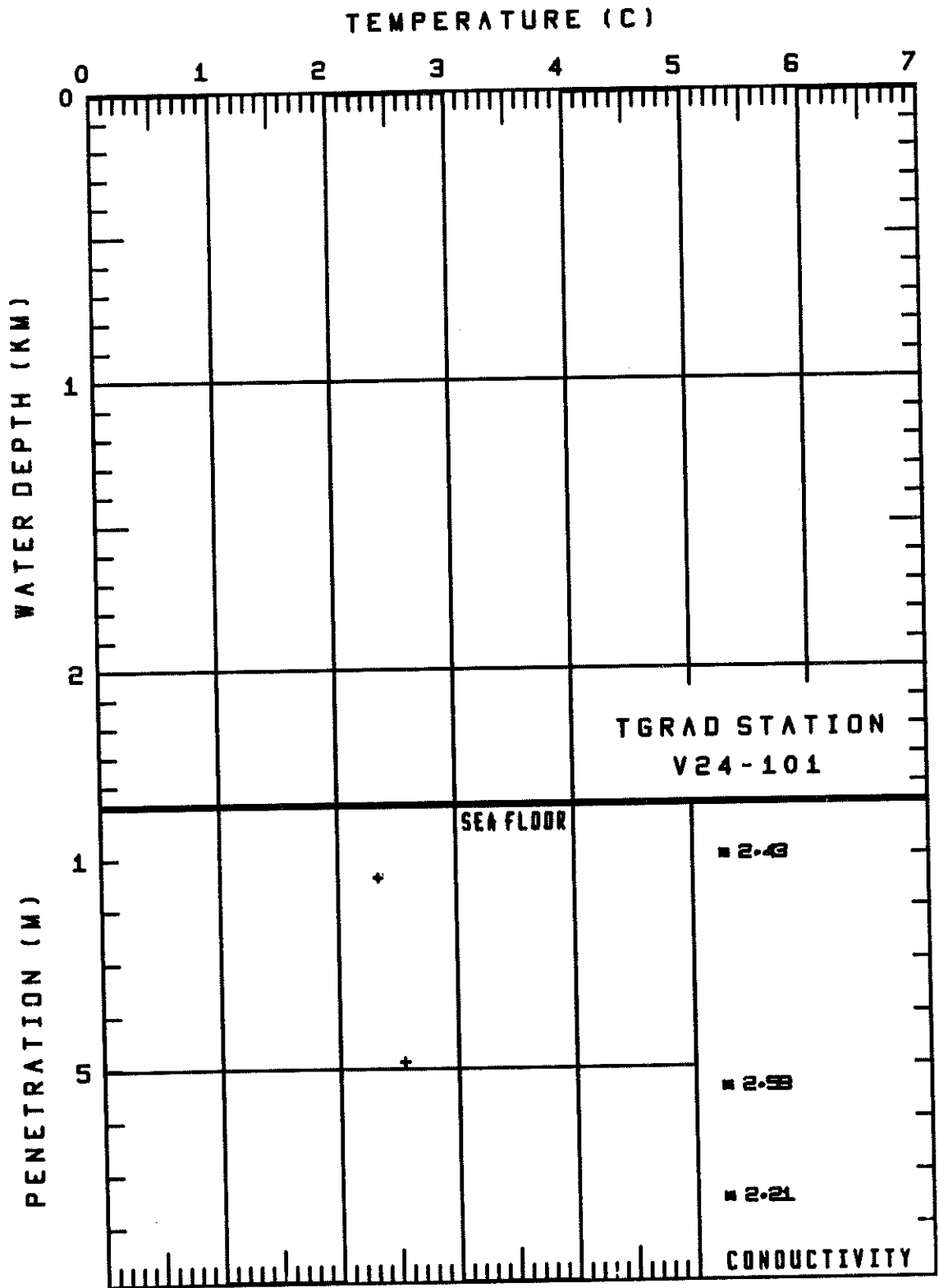
## TGRAD STATIONV24-101

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
1.42	2.38
4.88	2.54

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.43
5.40	2.59
7.50	2.21



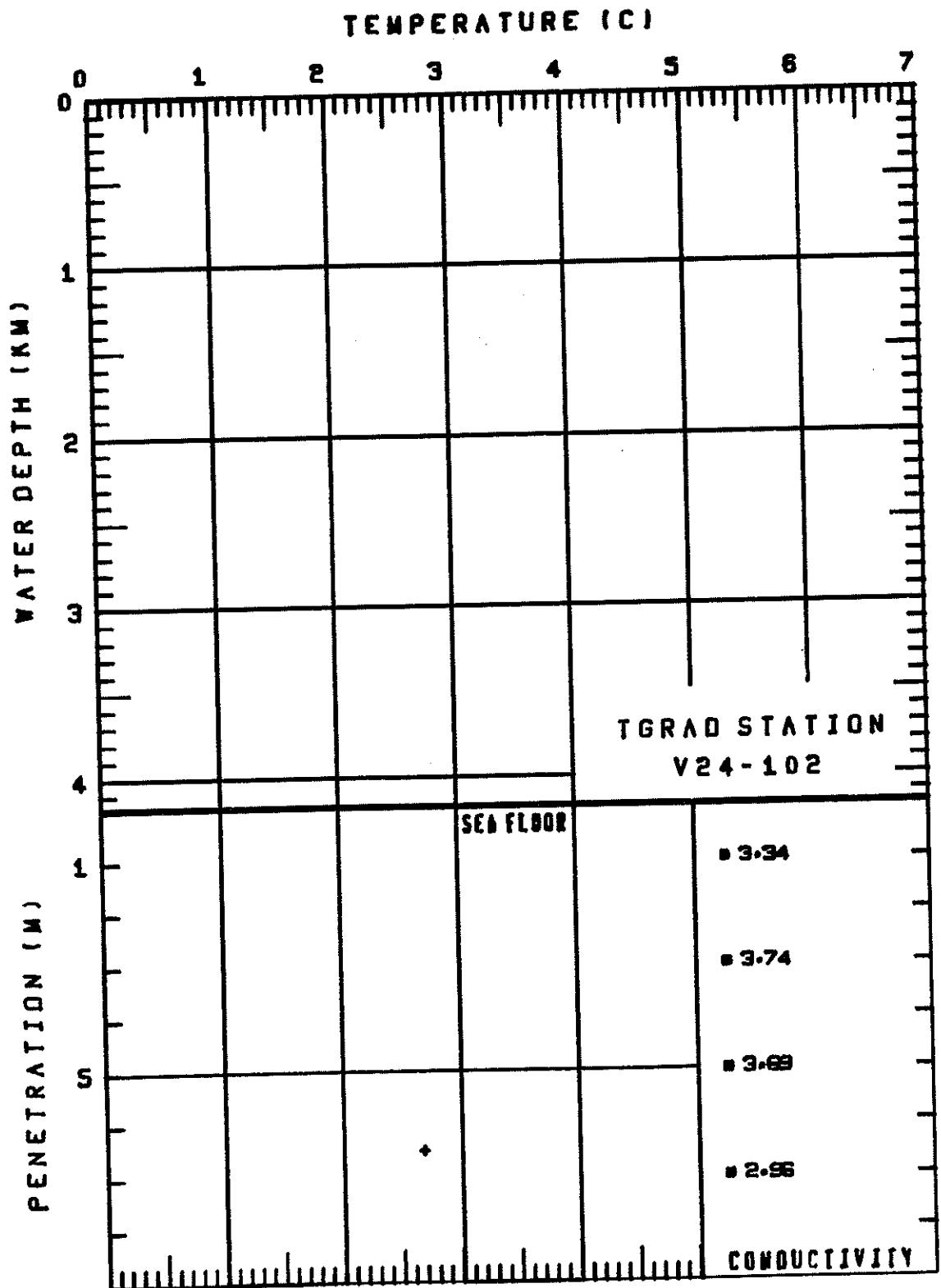
## TGRAD STATIONV24-102

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
6.50	2.69

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	3.34
3.00	3.74
5.00	3.69
7.00	2.96



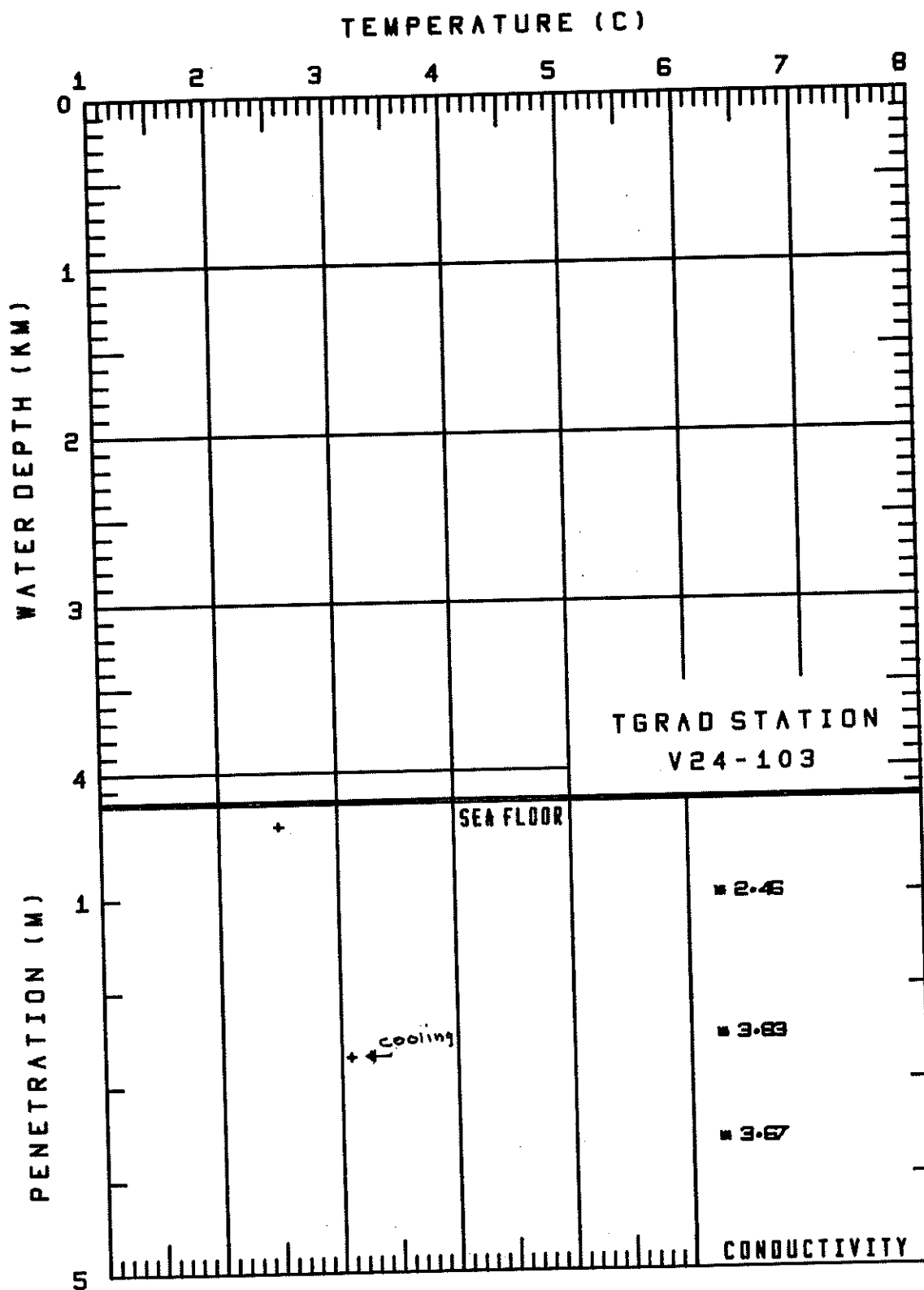
## TGRAD STATIONV24-103

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.23	2.50
2.69	3.08

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.46
2.50	3.83
3.60	3.67



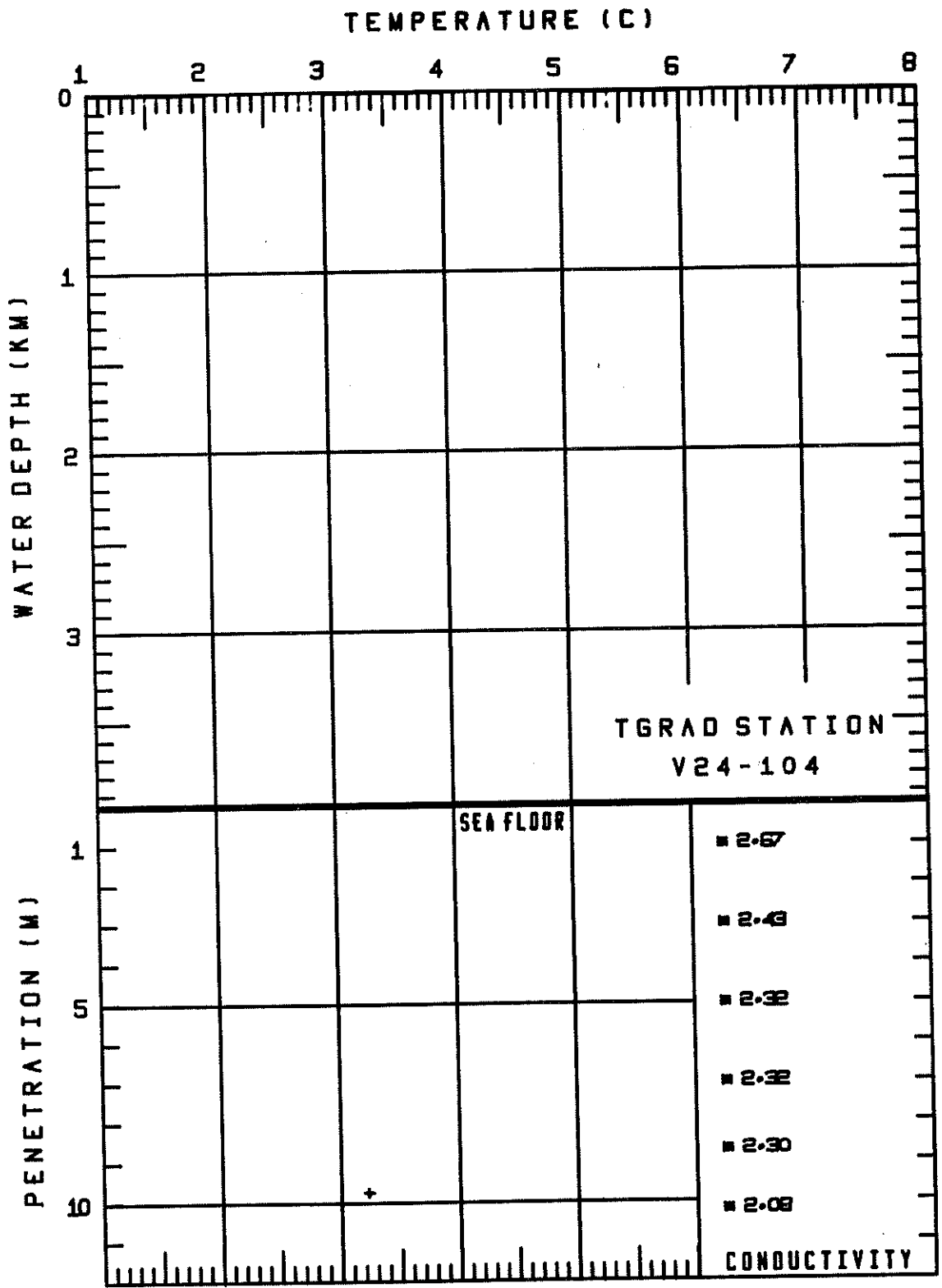
## TGRAD STATIONV24-104

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
9.75	3.23

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.67
3.00	2.43
5.00	2.32
7.00	2.32
8.70	2.30
10.20	2.08



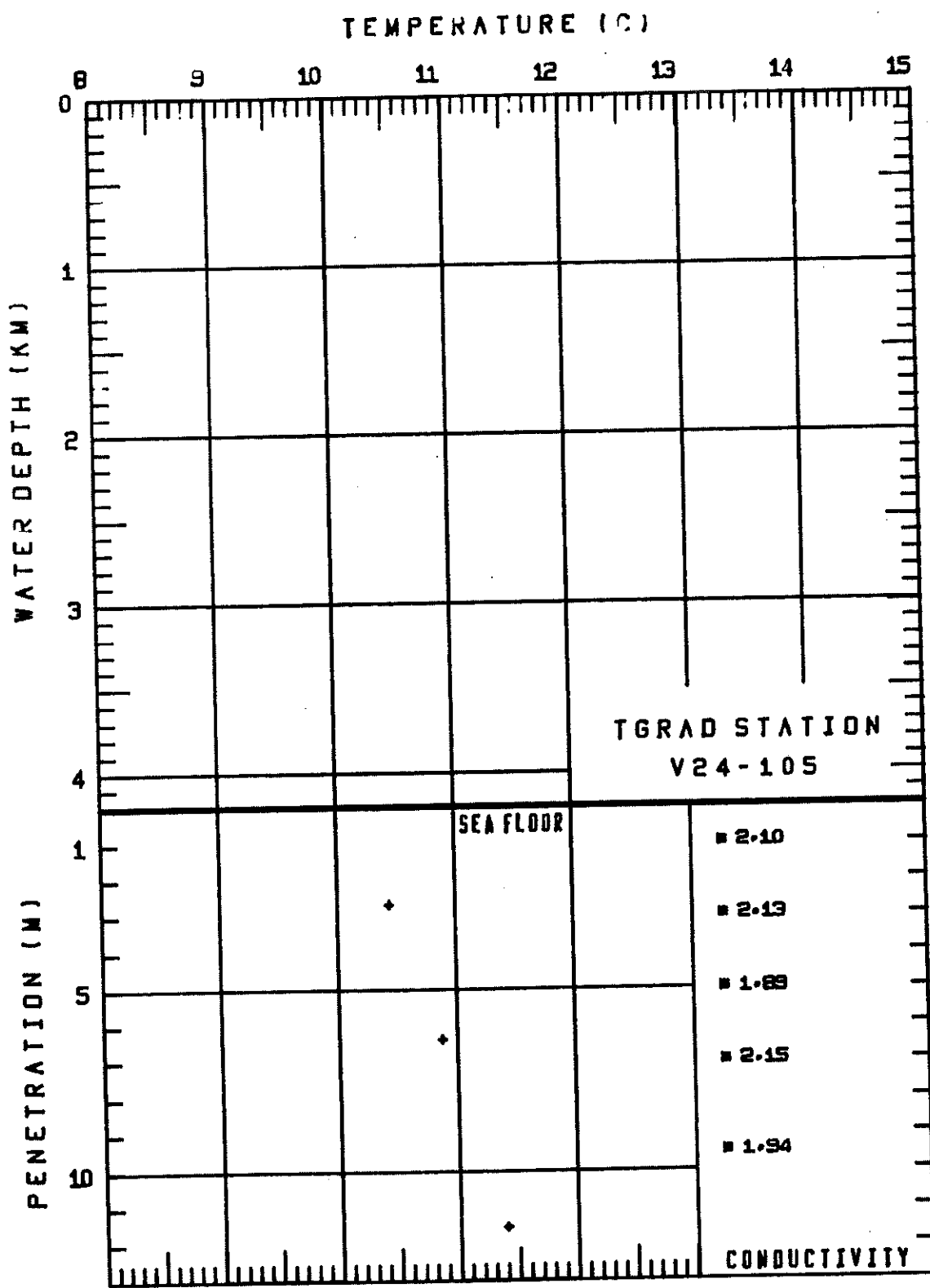
## TGRAD STATIONV24-105

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.69	10.44
6.40	10.88
11.54	11.40

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.10
3.00	2.13
5.00	1.89
7.00	2.15
9.50	1.94



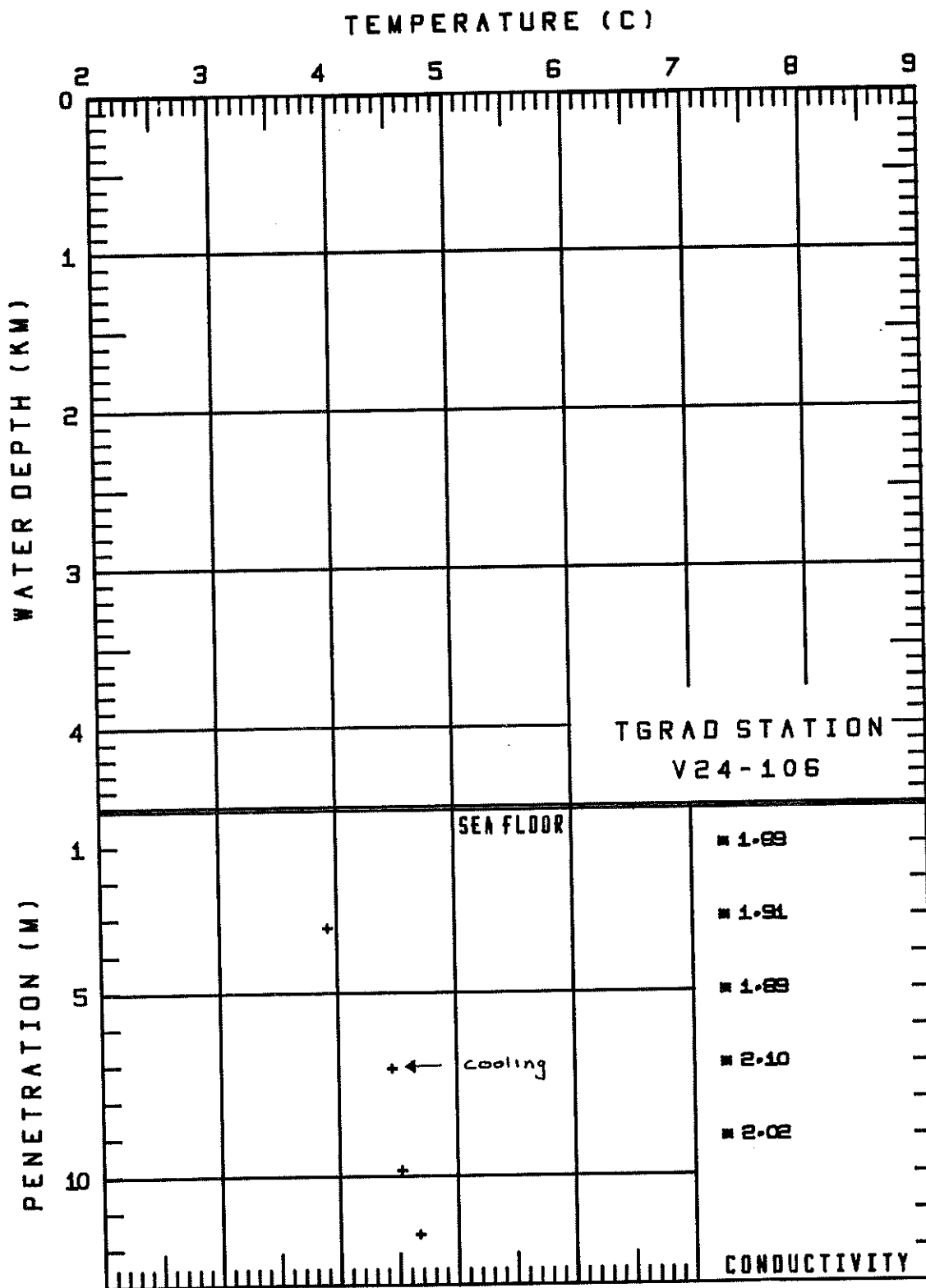
## TGRAD STATIONV24-106

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.22	3.92
7.08	4.46
9.85	4.53
11.62	4.67

## SEDIMENT CONDUCTIVITIES

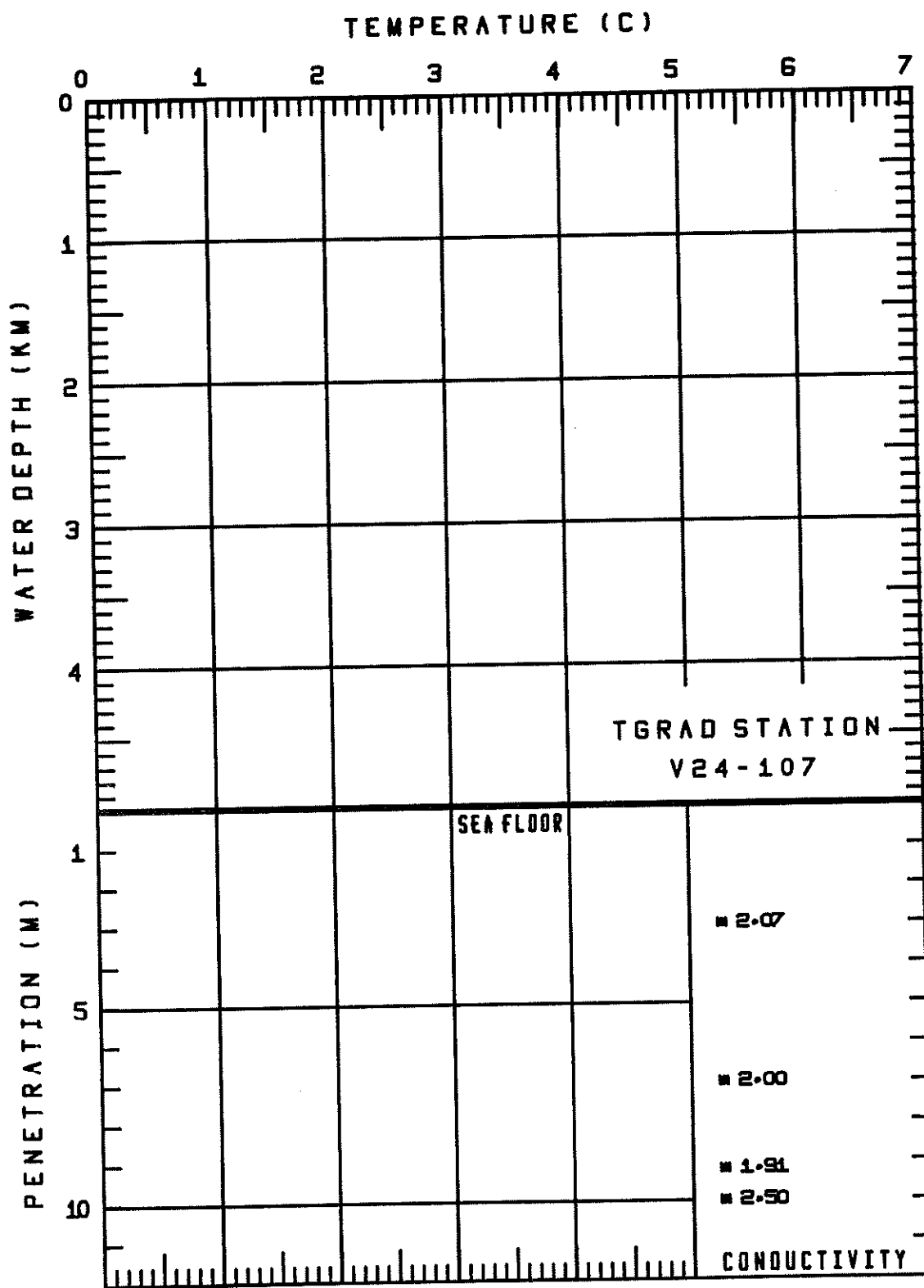
DEPTH	CONDUCTIVITY
1.00	1.89
3.00	1.91
5.00	1.89
7.00	2.10
9.00	2.02



## TGRAD STATIONV24-107

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
3.00	2.07
7.00	2.00
9.20	1.91
10.00	2.50



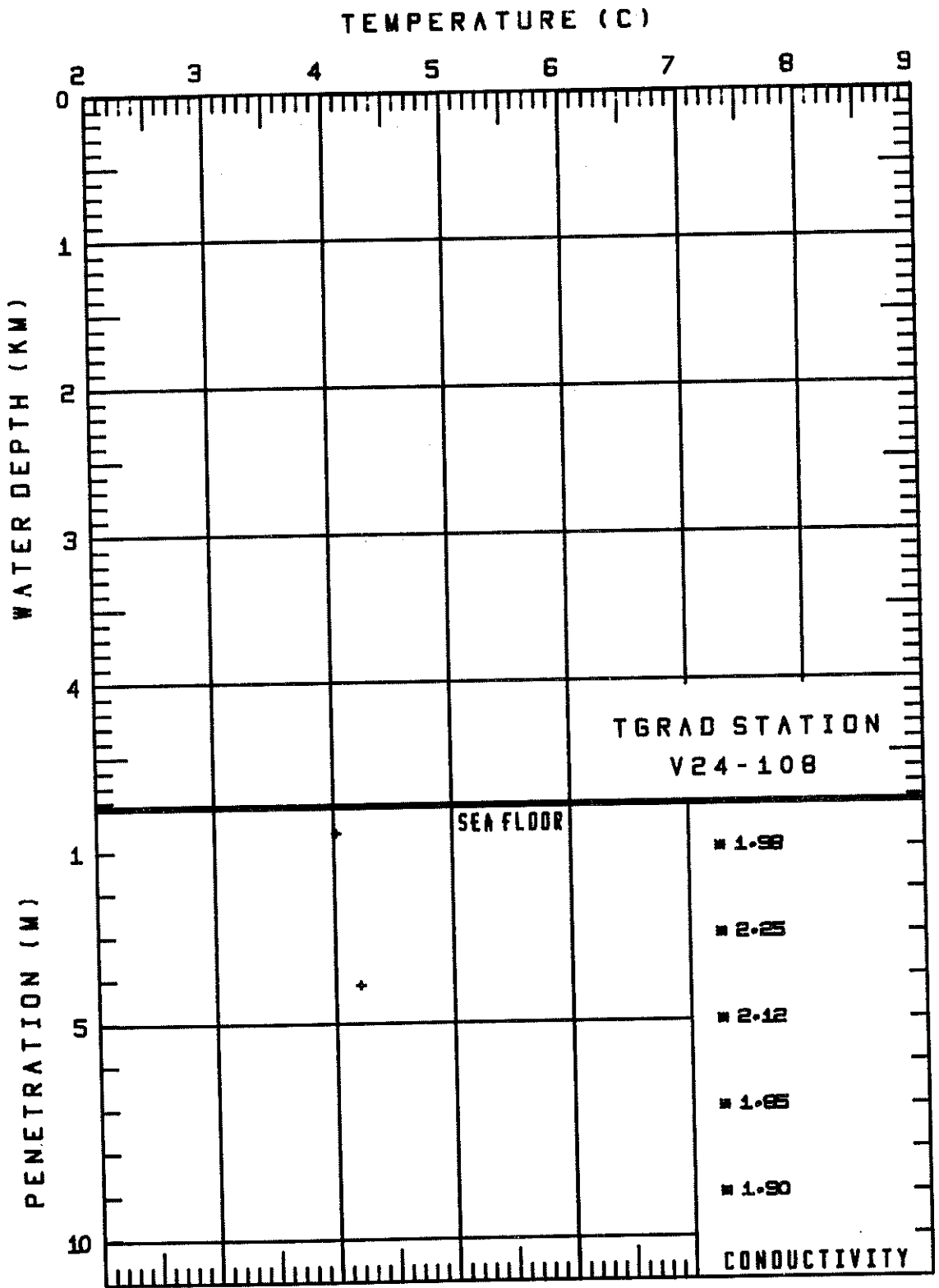
## TGRAD STATIONV24-108

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.60	4.02
4.13	4.21

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.98
3.00	2.25
5.00	2.12
7.00	1.85
9.00	1.90



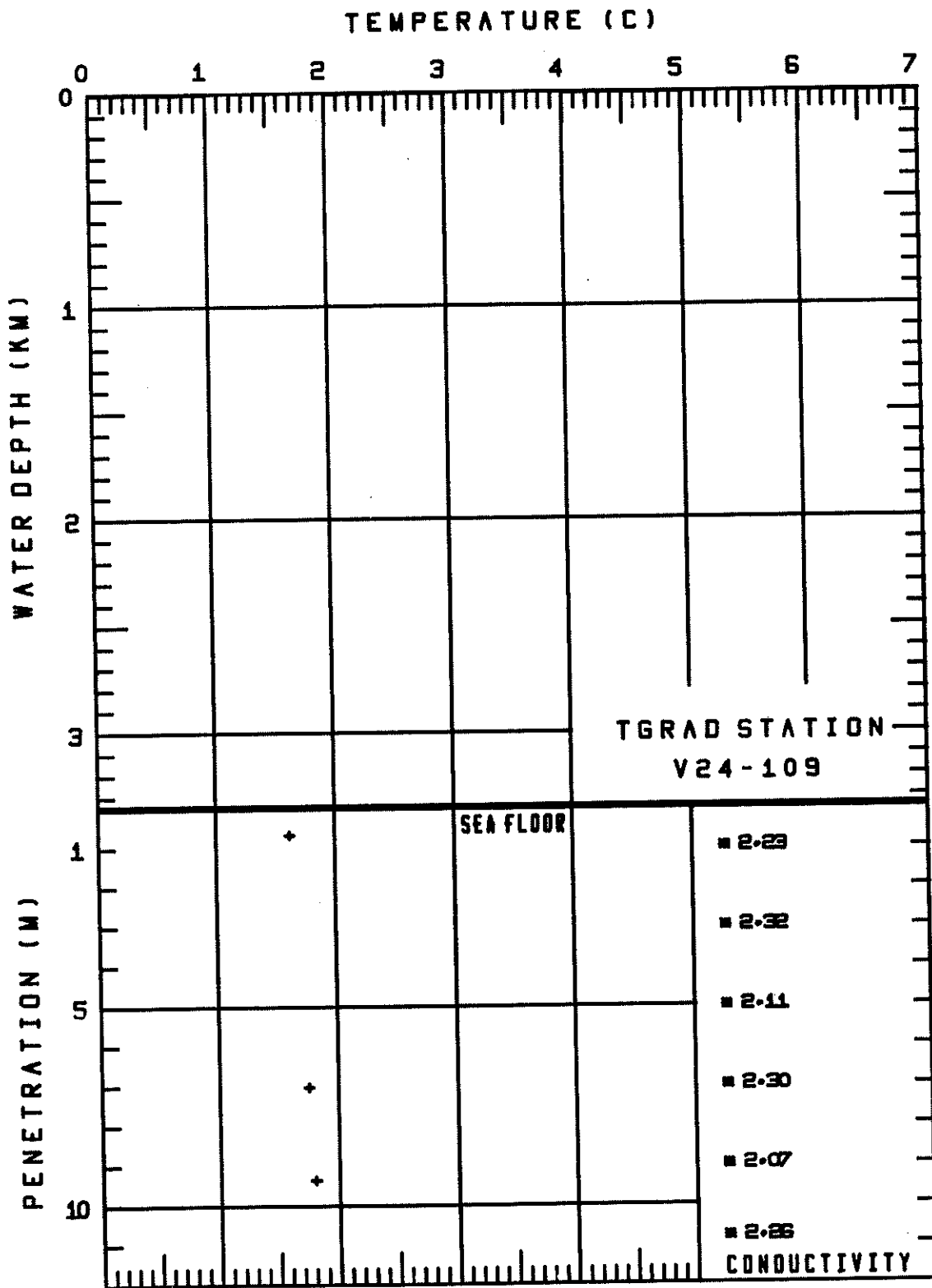
## TGRAD STATIONV24-109

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.68	1.62
7.01	1.75
9.35	1.80

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.23
3.00	2.32
5.00	2.11
7.00	2.30
9.00	2.07
10.80	2.26



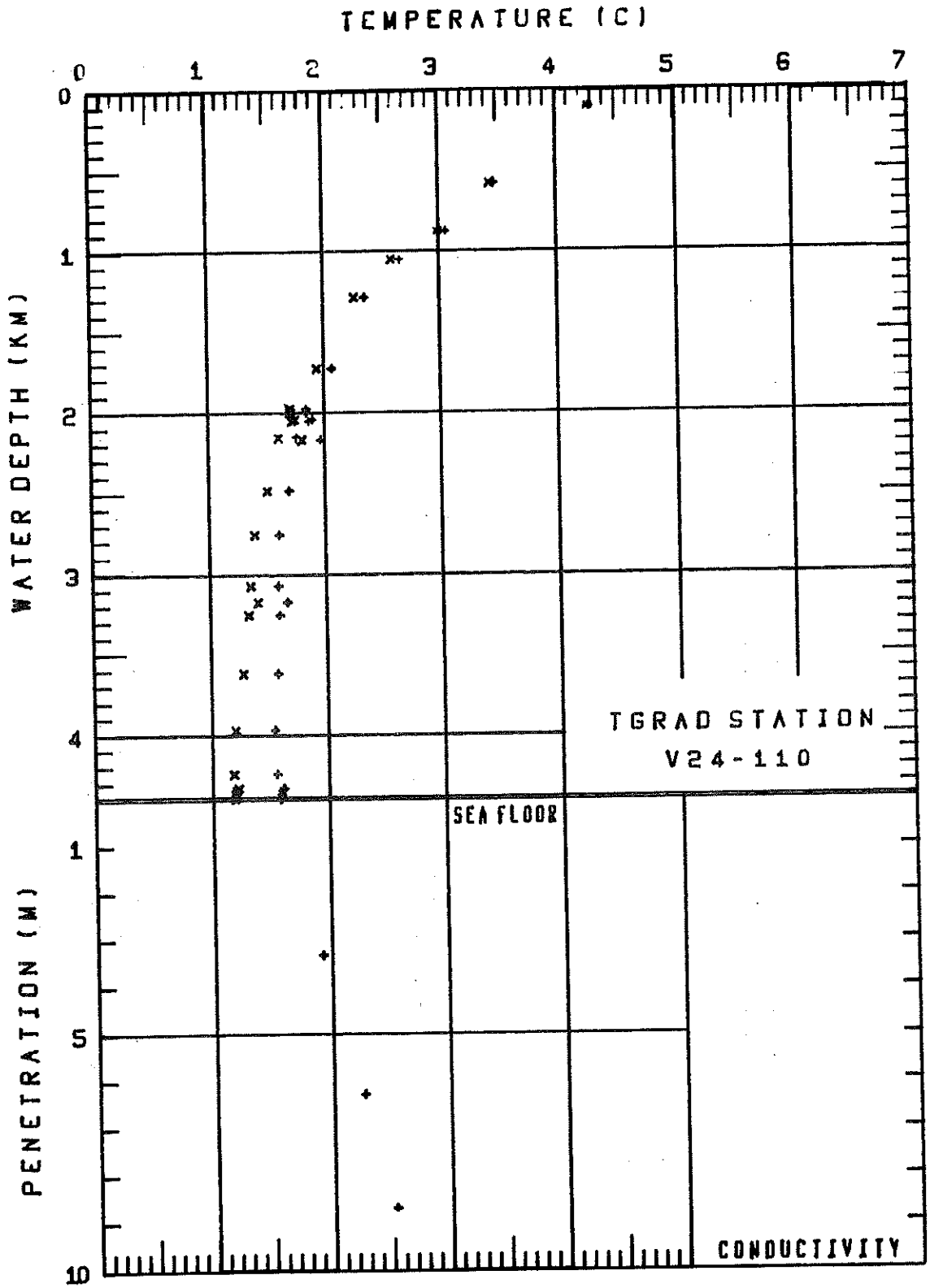
## TGRAD STATION V24-110

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
102.	4.28	4.27
575.	3.47	3.43
877.	3.05	2.99
1052.	2.66	2.59
1284.	2.35	2.26
1723.	2.06	1.94
2044.	1.89	1.74
2000.	1.85	1.70
1973.	1.85	1.71
2168.	1.97	1.81
1996.	1.85	1.71
2052.	1.87	1.72
2153.	1.76	1.60
2483.	1.69	1.51
2754.	1.60	1.40
3073.	1.60	1.35
3177.	1.67	1.41
3253.	1.60	1.33
3617.	1.58	1.28
3966.	1.55	1.21
4240.	1.56	1.19
4344.	1.60	1.21
4328.	1.61	1.23
4367.	1.59	1.20
4397.	1.59	1.19

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.31	1.93
6.26	2.27
8.67	2.52



## TGRAD STATION V24-111

## WATER TEMPERATURES

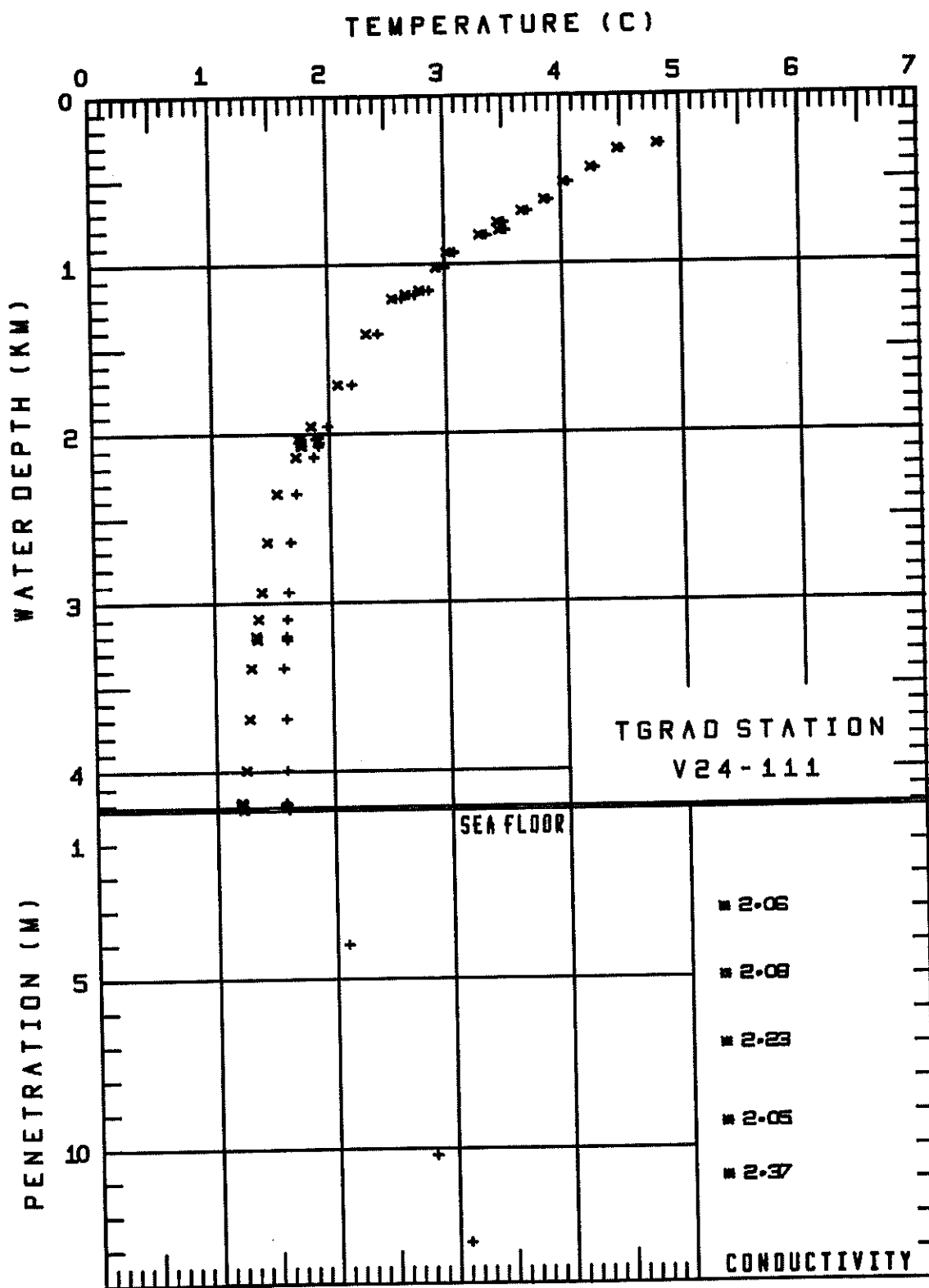
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
289.	4.83	4.81
324.	4.50	4.47
433.	4.28	4.25
516.	4.05	4.01
622.	3.89	3.84
686.	3.71	3.65
749.	3.50	3.45
796.	3.51	3.46
825.	3.35	3.29
927.	3.08	3.01
1019.	2.99	2.92
1152.	2.86	2.78
1178.	2.74	2.66
1202.	2.63	2.55
1407.	2.42	2.32
1706.	2.19	2.07
1954.	1.98	1.84
2026.	1.88	1.73
2069.	1.90	1.75
2020.	1.90	1.75
2050.	1.90	1.76
2133.	1.86	1.71
2351.	1.71	1.54
2637.	1.66	1.46
2935.	1.63	1.40
3094.	1.61	1.37
3195.	1.60	1.35
3214.	1.61	1.35
3384.	1.58	1.30
3683.	1.59	1.28
3989.	1.59	1.25
4189.	1.58	1.21
4206.	1.57	1.20
4181.	1.58	1.21
4194.	1.57	1.20
4223.	1.60	1.22

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.98	2.09
10.22	2.81
12.79	3.09

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
3.00	2.06
5.00	2.08
7.00	2.23
9.30	2.05
10.90	2.37



## TGRAD STATION V24-112

## WATER TEMPERATURES

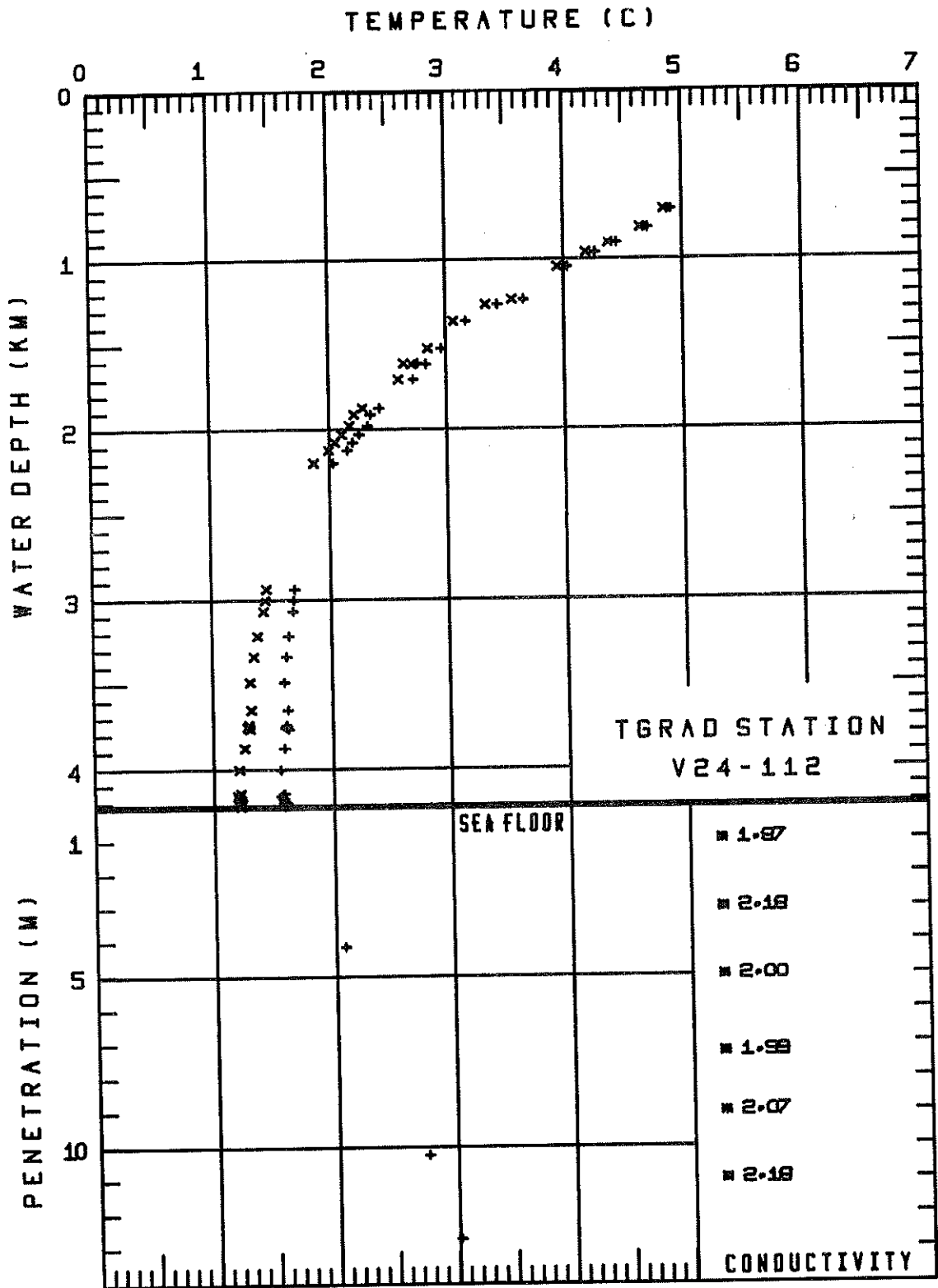
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
704.	4.90	4.85
813.	4.71	4.65
901.	4.45	4.38
959.	4.26	4.19
1043.	4.03	3.95
1232.	3.66	3.56
1263.	3.44	3.34
1362.	3.17	3.07
1522.	2.96	2.84
1612.	2.83	2.71
1608.	2.76	2.64
1703.	2.72	2.59
1871.	2.43	2.29
1908.	2.35	2.21
1972.	2.32	2.18
2024.	2.26	2.10
2074.	2.20	2.05
2117.	2.15	1.99
2196.	2.03	1.87
2935.	1.69	1.46
3000.	1.68	1.45
3065.	1.68	1.44
3210.	1.64	1.38
3333.	1.62	1.35
3485.	1.60	1.32
3650.	1.63	1.32
3739.	1.62	1.30
3759.	1.63	1.31
3752.	1.60	1.29
3873.	1.59	1.26
3998.	1.56	1.22
4143.	1.59	1.22
4167.	1.57	1.21
4184.	1.59	1.22
4199.	1.60	1.23
4170.	1.58	1.21
4154.	1.56	1.20
4197.	1.59	1.21
4221.	1.59	1.22

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
4.14	2.08
10.26	2.76
12.71	3.02

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.87
3.00	2.18
5.00	2.00
7.25	1.99
9.00	2.07
11.00	2.18



## TGRAD STATION V24-113

## WATER TEMPERATURES

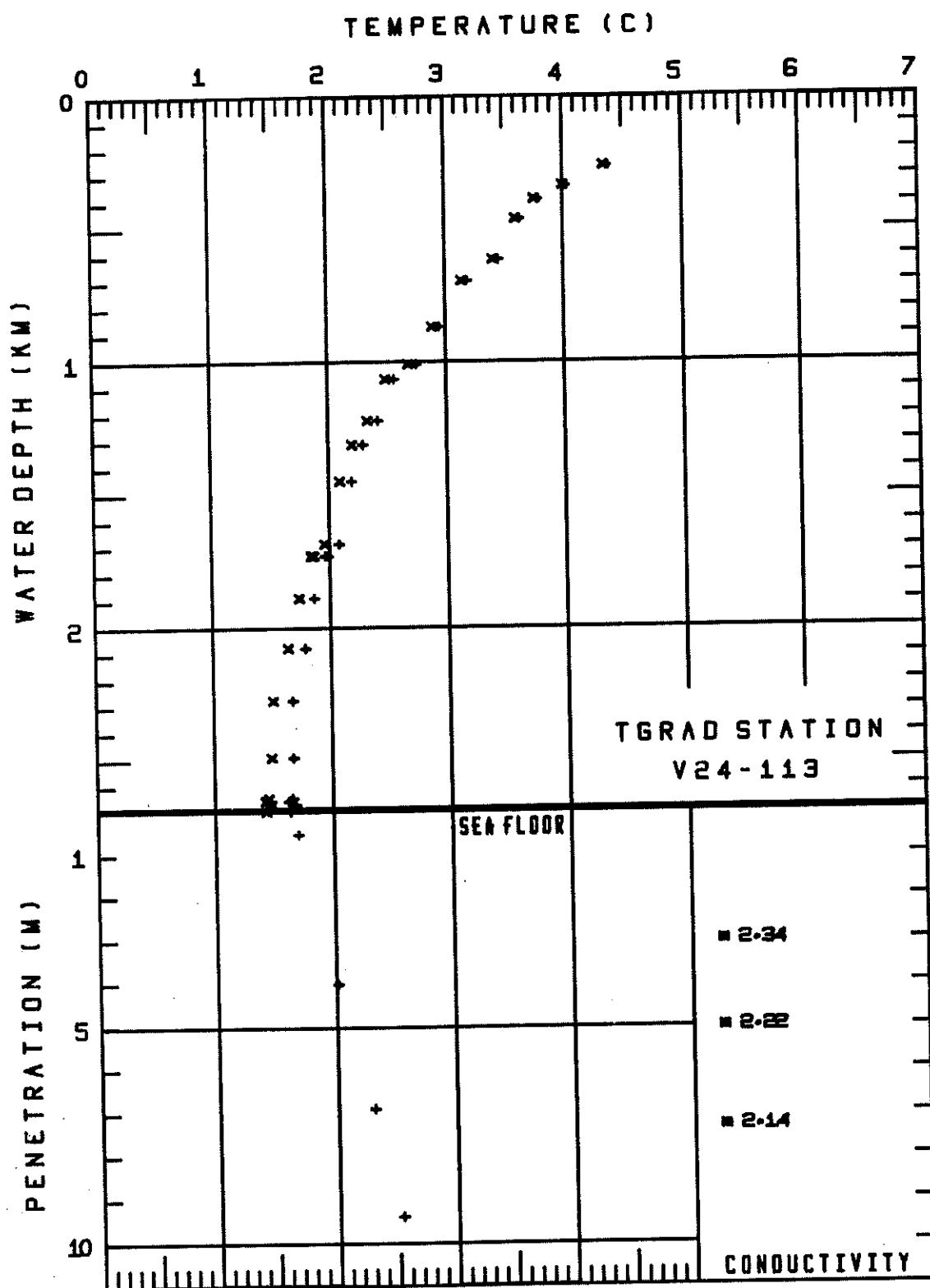
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
259.	4.36	4.35
334.	4.02	4.00
384.	3.79	3.76
459.	3.63	3.60
613.	3.45	3.41
693.	3.19	3.14
866.	2.95	2.89
1006.	2.75	2.68
1065.	2.56	2.49
1220.	2.42	2.33
1308.	2.29	2.20
1446.	2.19	2.09
1681.	2.08	1.96
1725.	1.99	1.87
1727.	1.97	1.85
1884.	1.87	1.74
2073.	1.79	1.64
2271.	1.67	1.51
2484.	1.67	1.49
2636.	1.66	1.46
2646.	1.64	1.44
2663.	1.68	1.48
2660.	1.66	1.46
2649.	1.63	1.43
2646.	1.64	1.44
2688.	1.64	1.44

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.53	1.70
3.99	2.02
6.87	2.30
9.36	2.53

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
3.00	2.34
5.00	2.22
7.30	2.14



## TGRAD STATION V24-114

## WATER TEMPERATURES

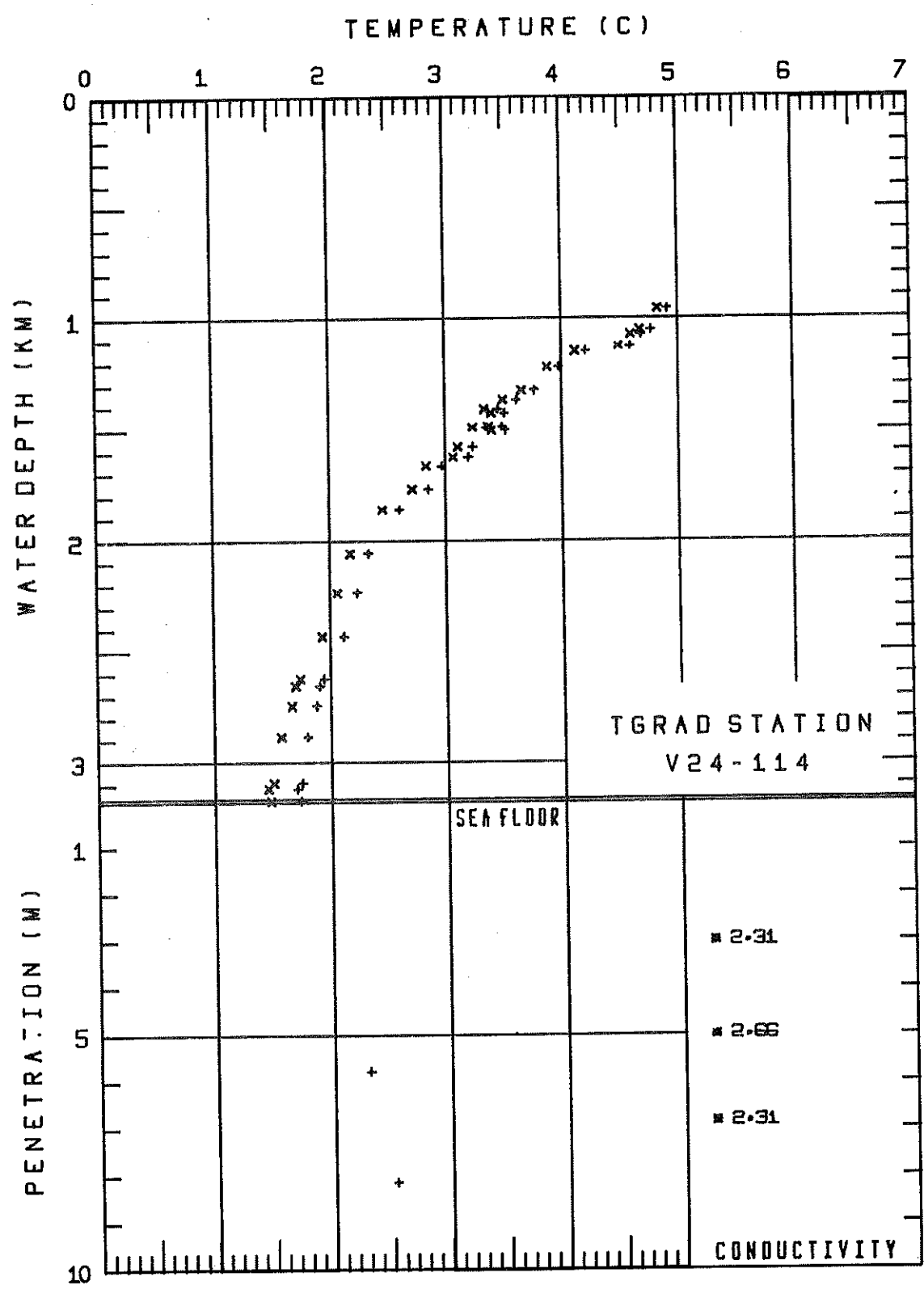
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
959.	4.92	4.83
1055.	4.77	4.68
1075.	4.69	4.60
1128.	4.59	4.50
1147.	4.21	4.12
1220.	3.98	3.88
1324.	3.77	3.66
1367.	3.61	3.50
1408.	3.45	3.34
1503.	3.52	3.40
1488.	3.50	3.38
1427.	3.51	3.40
1492.	3.36	3.24
1578.	3.24	3.11
1623.	3.20	3.07
1661.	2.97	2.84
1767.	2.86	2.72
1862.	2.60	2.46
2059.	2.34	2.18
2233.	2.24	2.07
2430.	2.12	1.93
2620.	1.94	1.74
2654.	1.91	1.70
2740.	1.88	1.67
2883.	1.80	1.57
3091.	1.75	1.51
3114.	1.71	1.46
3171.	1.74	1.48

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
5.77	2.31
8.14	2.52

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
3.00	2.31
5.00	2.66
6.85	2.31



## TGRAD STATION V24-115

## WATER TEMPERATURES

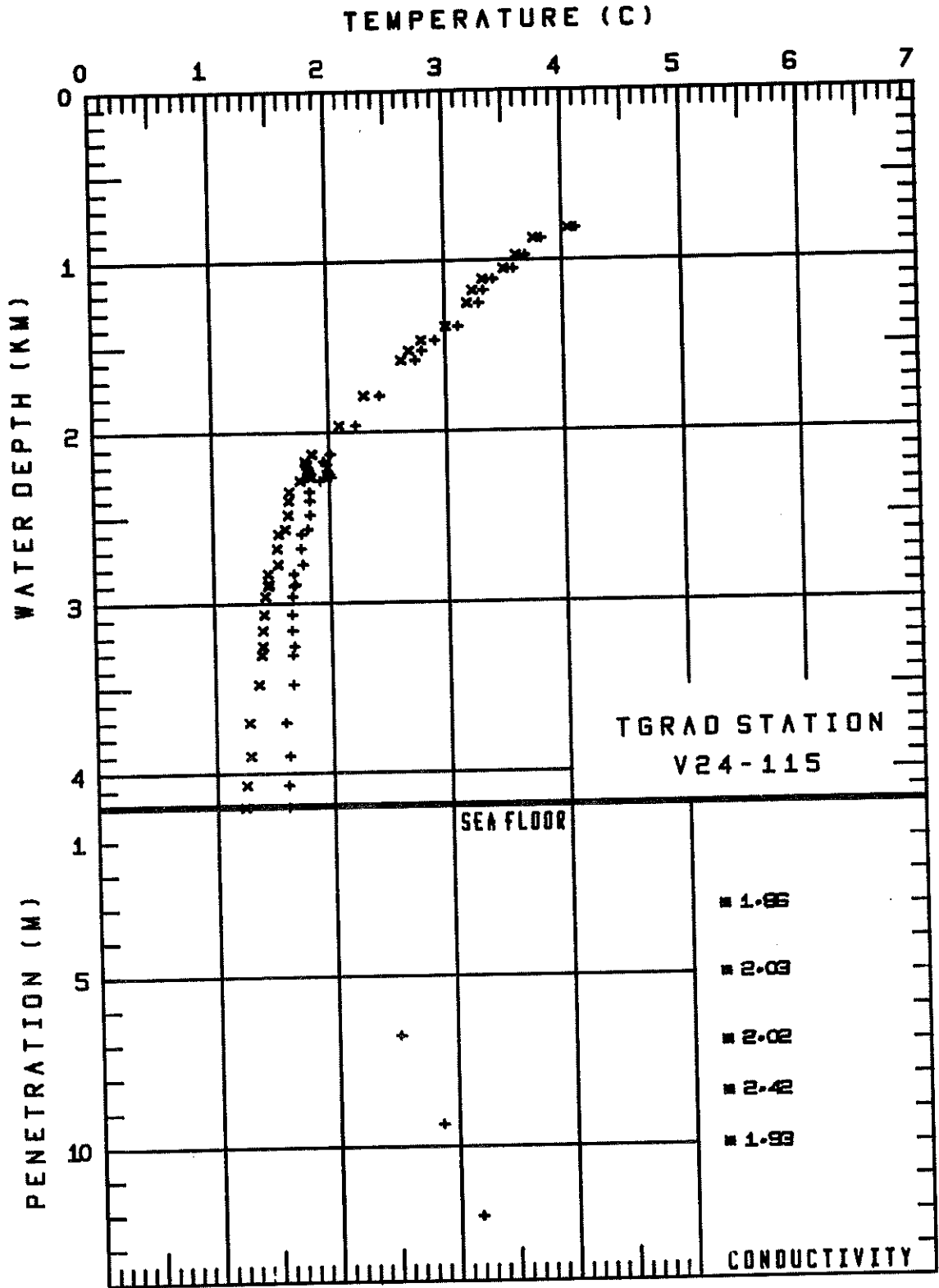
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
812.	4.11	4.05
870.	3.82	3.75
969.	3.68	3.61
1047.	3.58	3.50
1111.	3.41	3.32
1175.	3.32	3.24
1250.	3.28	3.19
1383.	3.10	3.00
1465.	2.91	2.80
1526.	2.80	2.69
1578.	2.74	2.62
1783.	2.43	2.30
1958.	2.23	2.08
2125.	2.01	1.85
2166.	1.95	1.79
2185.	1.97	1.81
2260.	2.01	1.84
2242.	1.99	1.82
2258.	1.99	1.82
2225.	1.98	1.82
2281.	1.92	1.75
2345.	1.83	1.65
2397.	1.82	1.65
2478.	1.83	1.64
2563.	1.81	1.61
2593.	1.75	1.56
2674.	1.75	1.54
2768.	1.76	1.55
2823.	1.68	1.46
2884.	1.69	1.47
2895.	1.68	1.46
2955.	1.67	1.44
3063.	1.66	1.42
3154.	1.66	1.41
3250.	1.67	1.41
3298.	1.66	1.39
3470.	1.66	1.37
3695.	1.59	1.28
3890.	1.62	1.28
4062.	1.60	1.25
4194.	1.61	1.23

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
6.74	2.51
9.35	2.86
12.07	3.18

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
3.00	1.86
5.00	2.03
7.00	2.02
8.50	2.42
10.00	1.93



## TGRAD STATION V24-116

## WATER TEMPERATURES

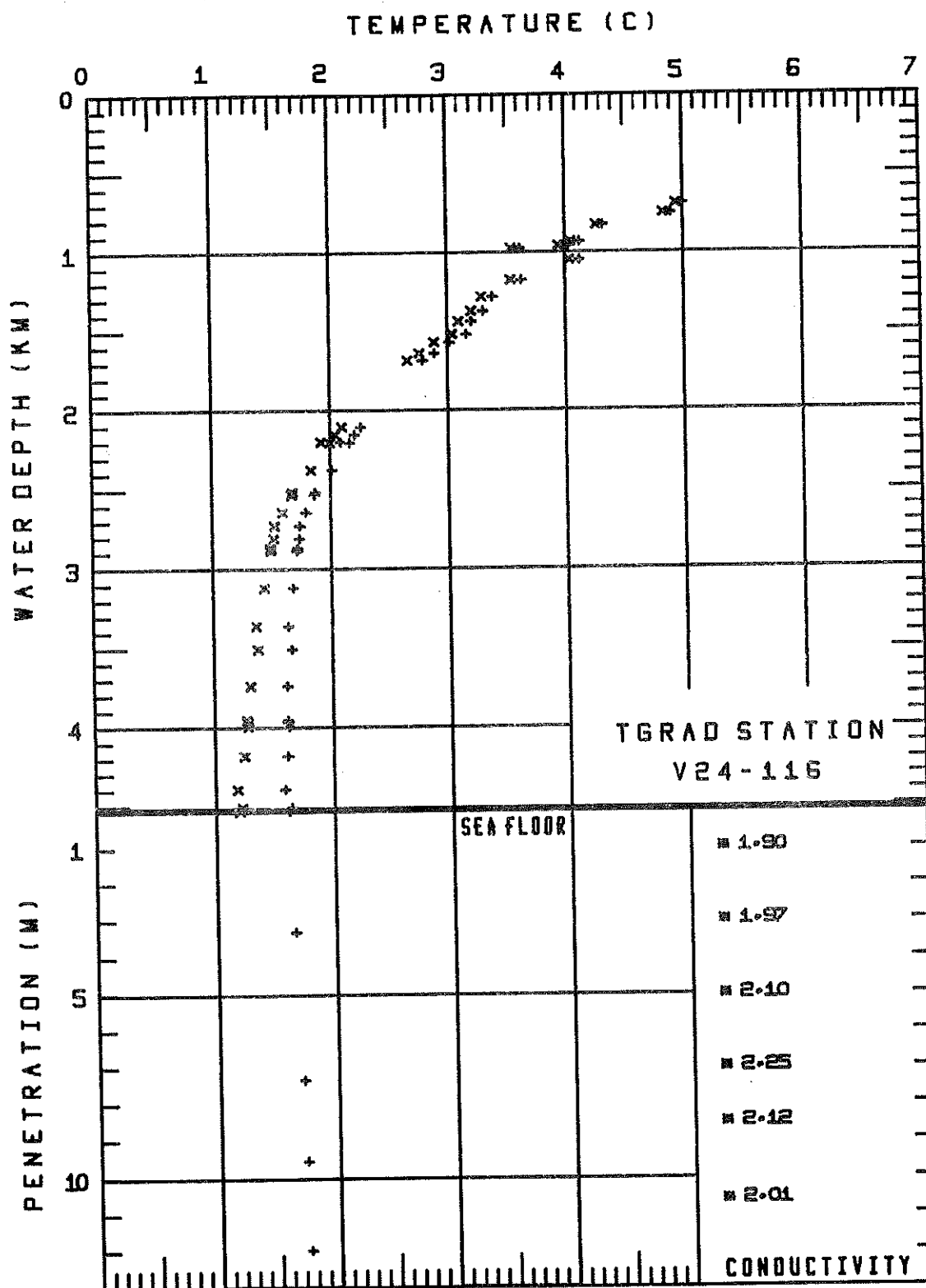
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
688.	5.00	4.94
750.	4.90	4.83
826.	4.33	4.26
930.	4.12	4.05
955.	4.02	3.94
1044.	4.12	4.03
970.	3.62	3.54
1173.	3.63	3.53
1277.	3.38	3.28
1369.	3.30	3.20
1435.	3.20	3.09
1513.	3.16	3.04
1566.	3.01	2.89
1637.	2.89	2.76
1679.	2.79	2.66
2097.	2.26	2.10
2151.	2.20	2.04
2202.	2.16	2.00
2196.	2.09	1.92
2370.	2.01	1.83
2509.	1.87	1.68
2525.	1.86	1.67
2638.	1.79	1.59
2724.	1.73	1.52
2804.	1.73	1.51
2865.	1.71	1.49
2881.	1.71	1.48
3116.	1.68	1.43
3358.	1.63	1.36
3503.	1.66	1.36
3732.	1.61	1.30
3951.	1.61	1.27
3988.	1.62	1.27
3961.	1.61	1.27
4178.	1.61	1.24
4387.	1.58	1.18
4504.	1.63	1.22
4529.	1.61	1.20

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.29	1.66
7.33	1.71
9.54	1.73
11.95	1.75

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.90
3.00	1.97
5.00	2.10
7.00	2.25
8.50	2.12
10.60	2.01



## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
578.	5.13	5.08
684.	4.84	4.78
706.	4.71	4.65
953.	3.92	3.84
1129.	3.59	3.50
1231.	3.28	3.19
1359.	2.97	2.87
1504.	2.69	2.58
1582.	2.62	2.51
1811.	2.32	2.19
2003.	2.14	2.00
2085.	2.10	1.95
2118.	2.08	1.92
2298.	1.95	1.78
2447.	1.80	1.61
2599.	1.74	1.55
2717.	1.69	1.49
2720.	1.71	1.50
2753.	1.73	1.52
2734.	1.72	1.51
2749.	1.70	1.49
2770.	1.69	1.48
2897.	1.65	1.42
3103.	1.65	1.41
3361.	1.65	1.37
3582.	1.62	1.32
3779.	1.60	1.28
3813.	1.60	1.27
3842.	1.62	1.29
3854.	1.60	1.27
4071.	1.58	1.23
4252.	1.61	1.23
4459.	1.62	1.21
4643.	1.64	1.21
4757.	1.63	1.18
4818.	1.67	1.22
4794.	1.68	1.22
4740.	1.61	1.16
4824.	1.67	1.21
4820.	1.63	1.18
4820.	1.63	1.17
4837.	1.60	1.15
4869.	1.63	1.17
4888.	1.63	1.17

## SEDIMENT CONDUCTIVITIES

SEDIMENT TEMPERATURES		SEDIMENT CONDUCTIVITIES	
DEPTH	TEMPERATURE	DEPTH	CONDUCTIVITY
		1.00	1.94
		3.00	2.02
3.60	1.91	5.00	2.01
7.57	2.19	7.00	2.18
9.83	2.36	9.00	2.43
12.26	2.51	10.00	2.04



## TGRAD STATION V24-118

## WATER TEMPERATURES

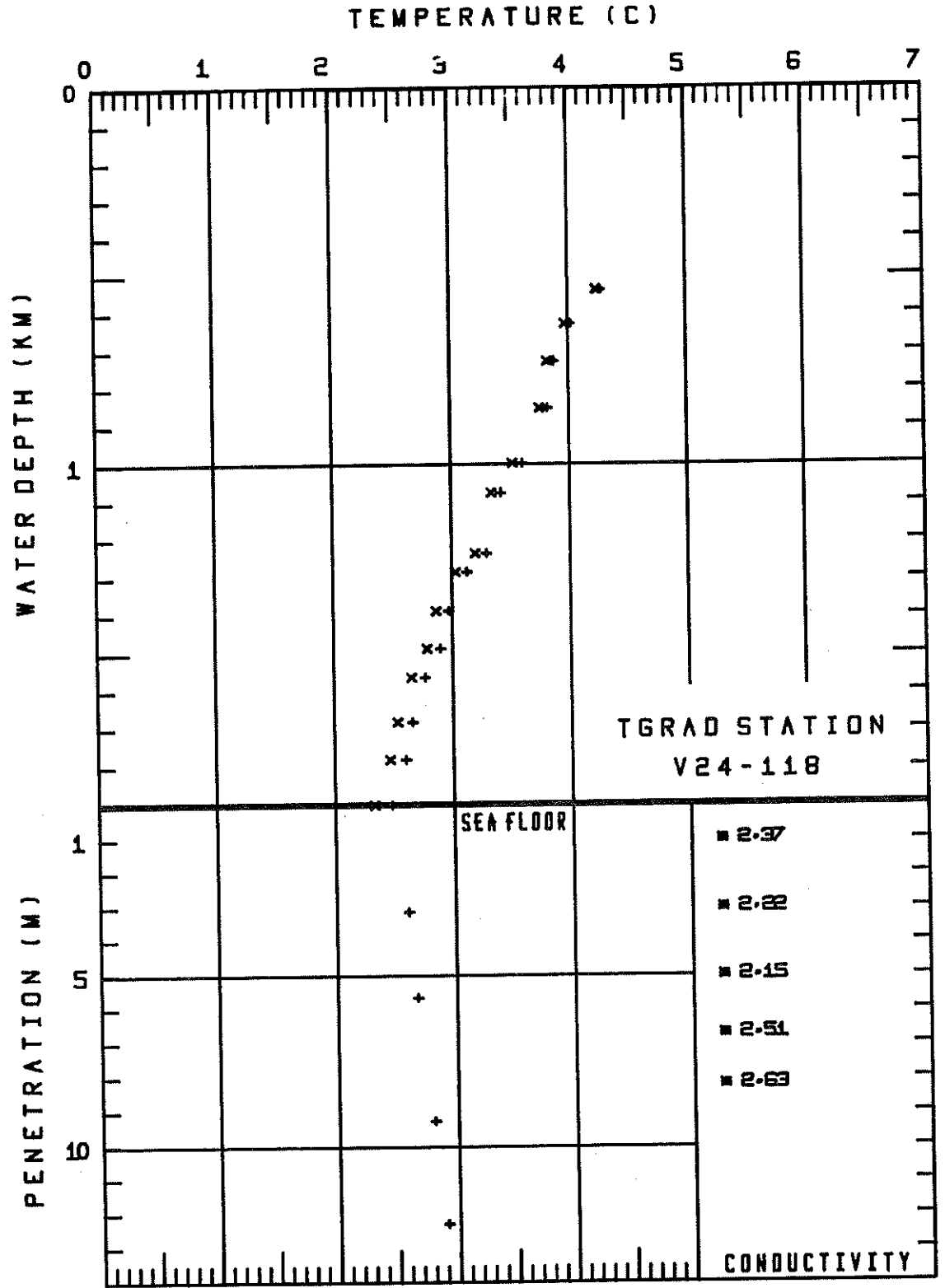
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
537.	4.28	4.24
627.	4.02	3.97
726.	3.87	3.82
851.	3.82	3.75
997.	3.60	3.52
1074.	3.42	3.34
1235.	3.29	3.20
1284.	3.13	3.03
1387.	2.97	2.87
1487.	2.90	2.79
1562.	2.77	2.65
1681.	2.66	2.53
1780.	2.60	2.47
1900.	2.48	2.33

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.13	2.61
5.64	2.67
9.27	2.81
12.27	2.90

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.37
3.00	2.22
5.00	2.15
6.70	2.51
8.20	2.63



## TGRAD STATION V24-119

## WATER TEMPERATURES

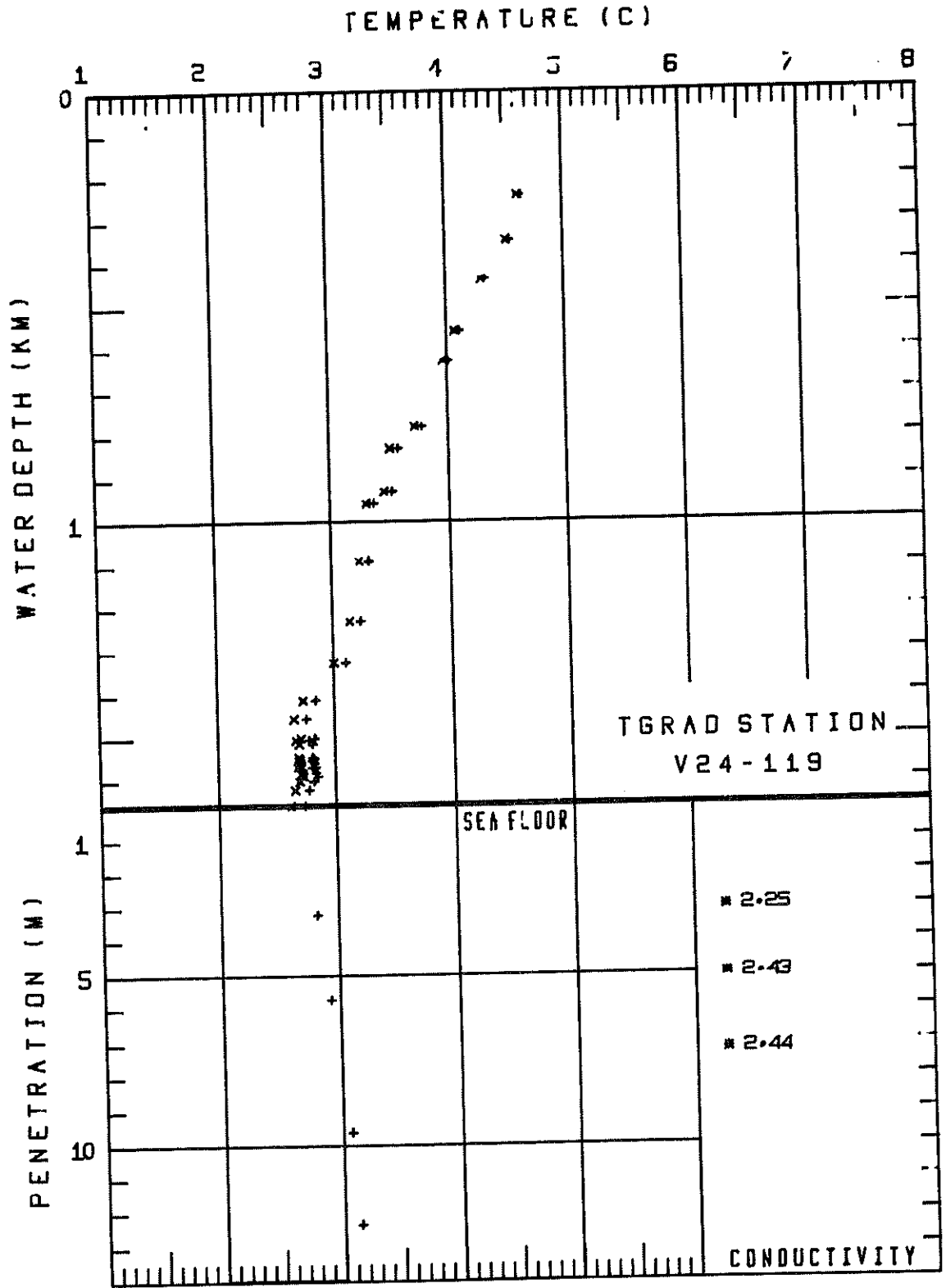
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
243.	4.63	4.62
348.	4.54	4.52
438.	4.33	4.30
558.	4.10	4.06
627.	4.01	3.96
779.	3.77	3.71
830.	3.57	3.51
929.	3.52	3.45
956.	3.37	3.30
1089.	3.31	3.23
1229.	3.24	3.14
1326.	3.10	3.00
1412.	2.84	2.74
1500.	2.83	2.71
1543.	2.81	2.69
1581.	2.83	2.71
1567.	2.82	2.71
1552.	2.81	2.69
1589.	2.85	2.73
1599.	2.81	2.69
1547.	2.82	2.71
1454.	2.76	2.65
1513.	2.81	2.69
1558.	2.82	2.70
1503.	2.78	2.67
1548.	2.80	2.69
1566.	2.80	2.68
1551.	2.80	2.68
1619.	2.78	2.65
1657.	2.74	2.61

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.23	2.82
5.72	2.92
9.62	3.07
12.34	3.14

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
3.00	2.25
5.00	2.43
7.20	2.44



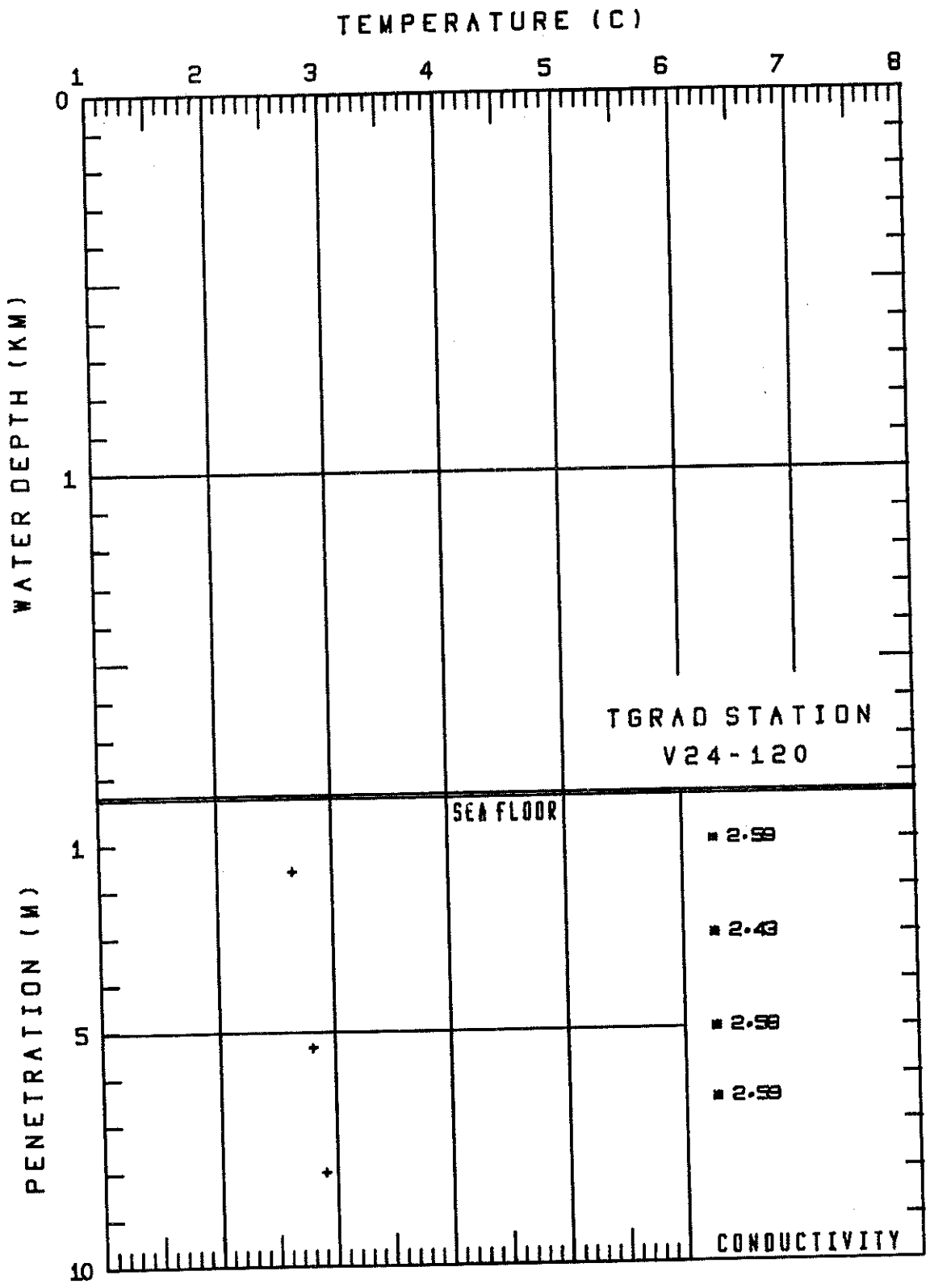
## TGRAD STATIONV24-120

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
1.58	2.65
5.35	2.81
8.00	2.90

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.59
3.00	2.43
5.00	2.58
6.50	2.59



## TGRAD STATION V24-121

## WATER TEMPERATURES

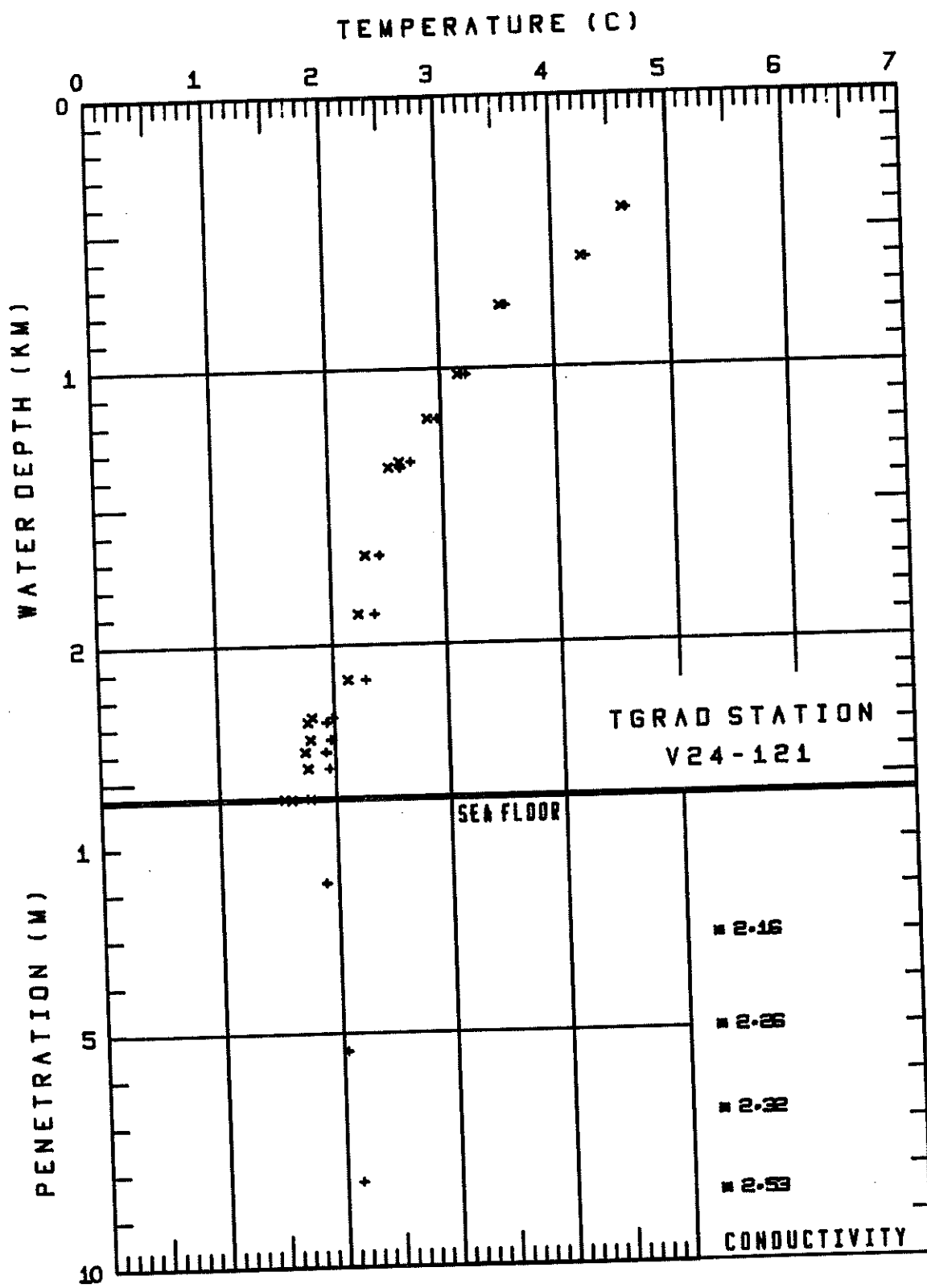
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
418.	4.64	4.61
596.	4.29	4.25
769.	3.59	3.53
1018.	3.23	3.15
1179.	2.97	2.88
1336.	2.72	2.63
1354.	2.63	2.53
1675.	2.43	2.31
1888.	2.38	2.24
2126.	2.29	2.13
2263.	1.98	1.81
2448.	1.95	1.76
2343.	1.96	1.79
2282.	1.93	1.76
2390.	1.92	1.74
2562.	1.81	1.61
2560.	1.74	1.55

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
1.79	1.90
5.39	2.03
8.19	2.13

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
3.00	2.16
5.00	2.26
6.80	2.32
8.50	2.53



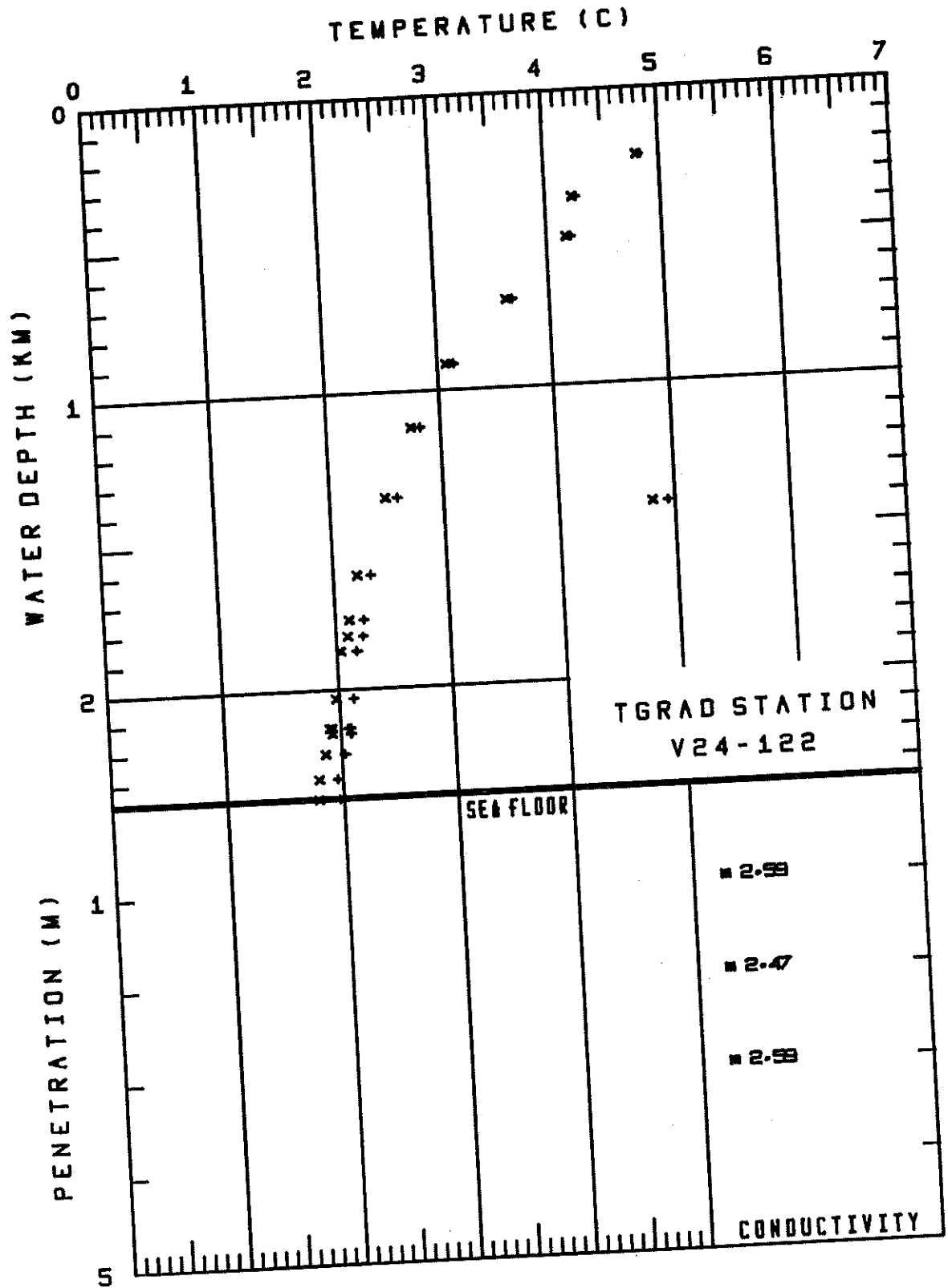
## TGRAD STATION V24-122

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
229.	4.81	4.80
362.	4.25	4.23
497.	4.20	4.16
699.	3.67	3.61
911.	3.13	3.07
1121.	2.81	2.74
1355.	2.58	2.48
1404.	4.93	4.80
1615.	2.32	2.20
1762.	2.24	2.11
1819.	2.23	2.09
1870.	2.17	2.03
2029.	2.12	1.97
2129.	2.07	1.92
2129.	2.08	1.92
2149.	2.08	1.92
2129.	2.06	1.90
2217.	2.02	1.86
2302.	1.96	1.78
2369.	1.96	1.78

## SEDIMENT CONDUCTIVITIES

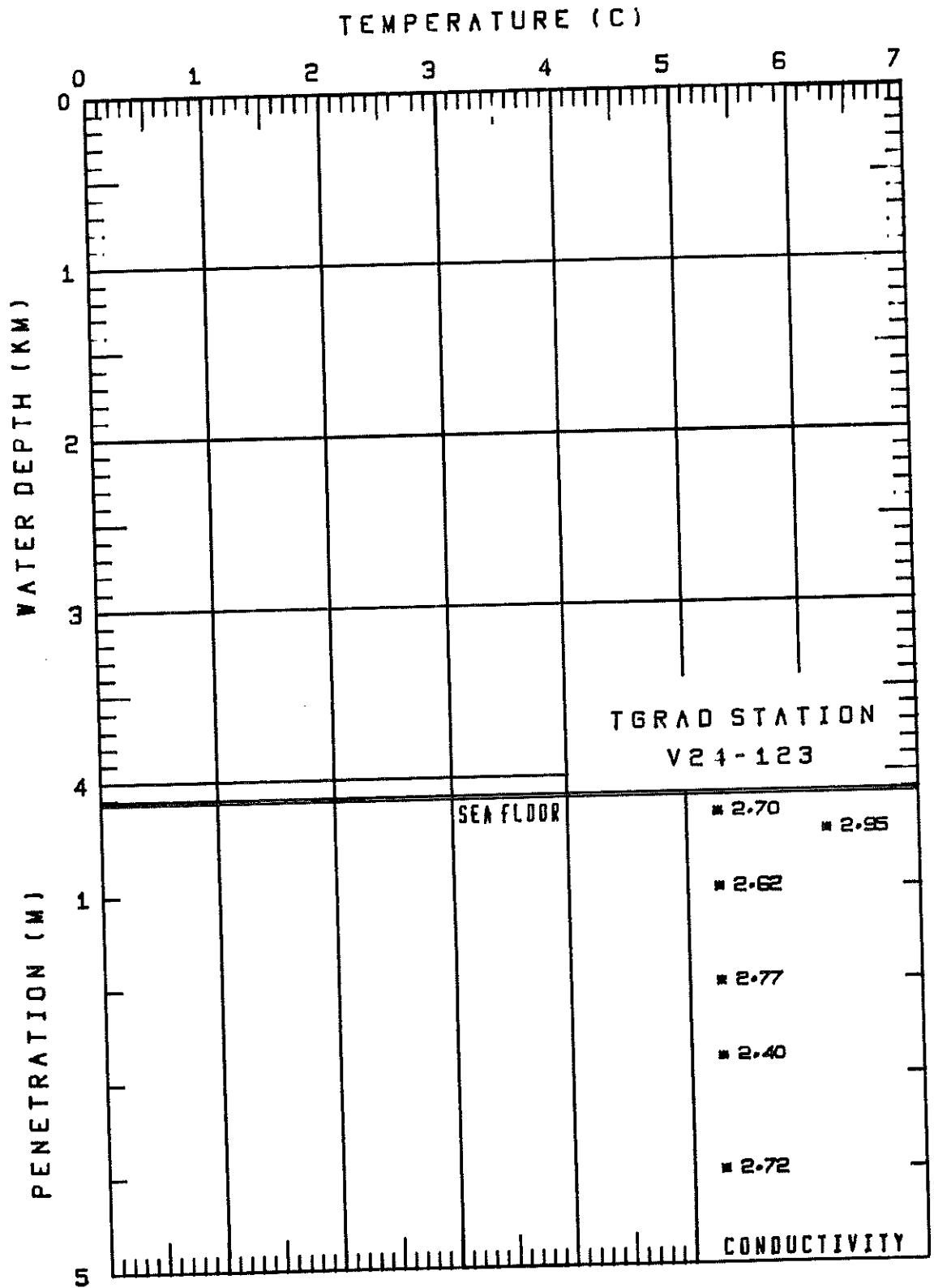
DEPTH	CONDUCTIVITY
1.00	2.59
2.00	2.47
3.00	2.59



## TGRAD STATIONV24-123

## SEDIMENT CONDUCTIVITIES

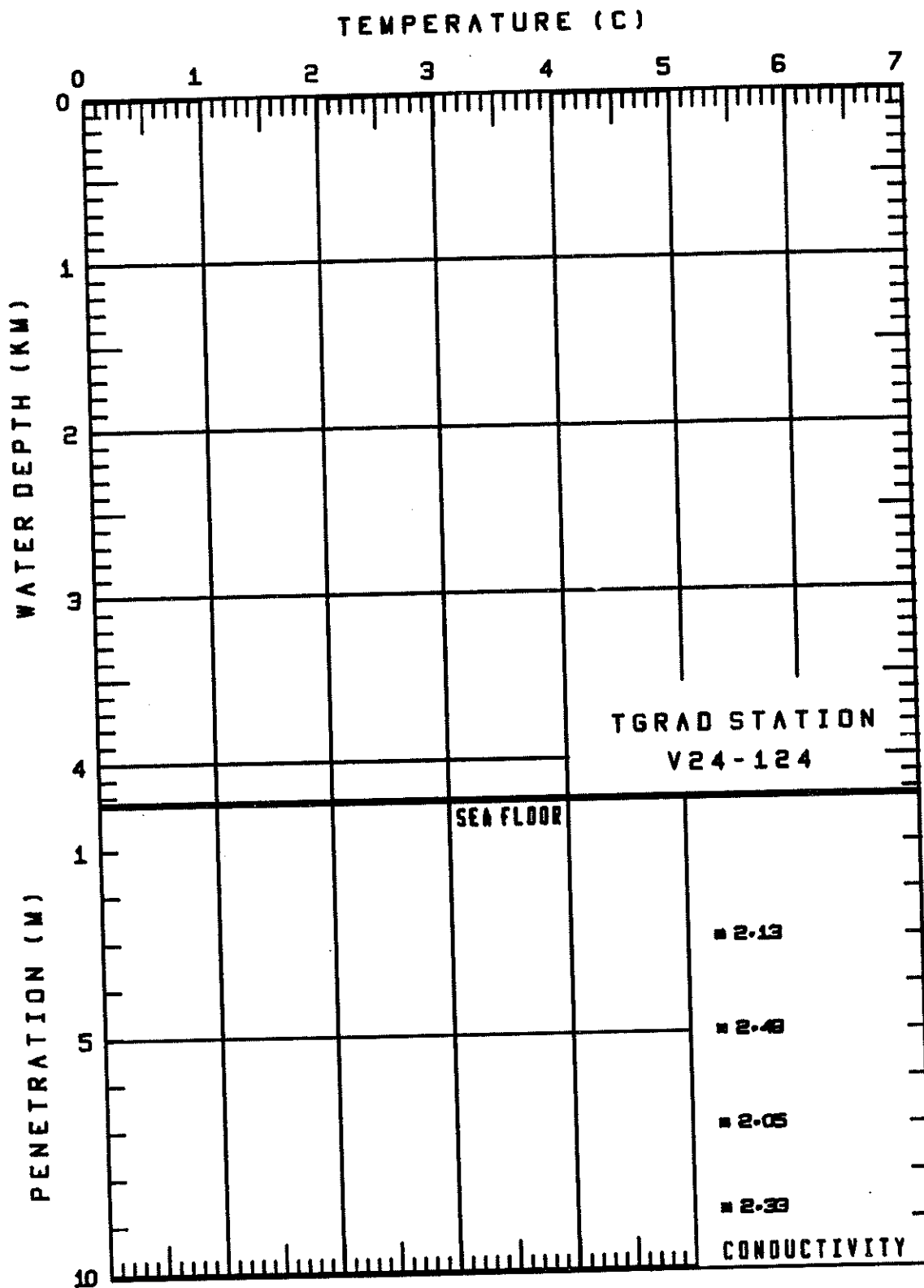
DEPTH	CONDUCTIVITY
0.20	2.70
0.40	2.95
1.00	2.62
2.00	2.77
2.80	2.40
4.00	2.72



## TGRAD STATIONV24-124

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
3.00	2.13
5.00	2.48
7.00	2.05
8.80	2.33



## TGRAD STATION V24-125

## WATER TEMPERATURES

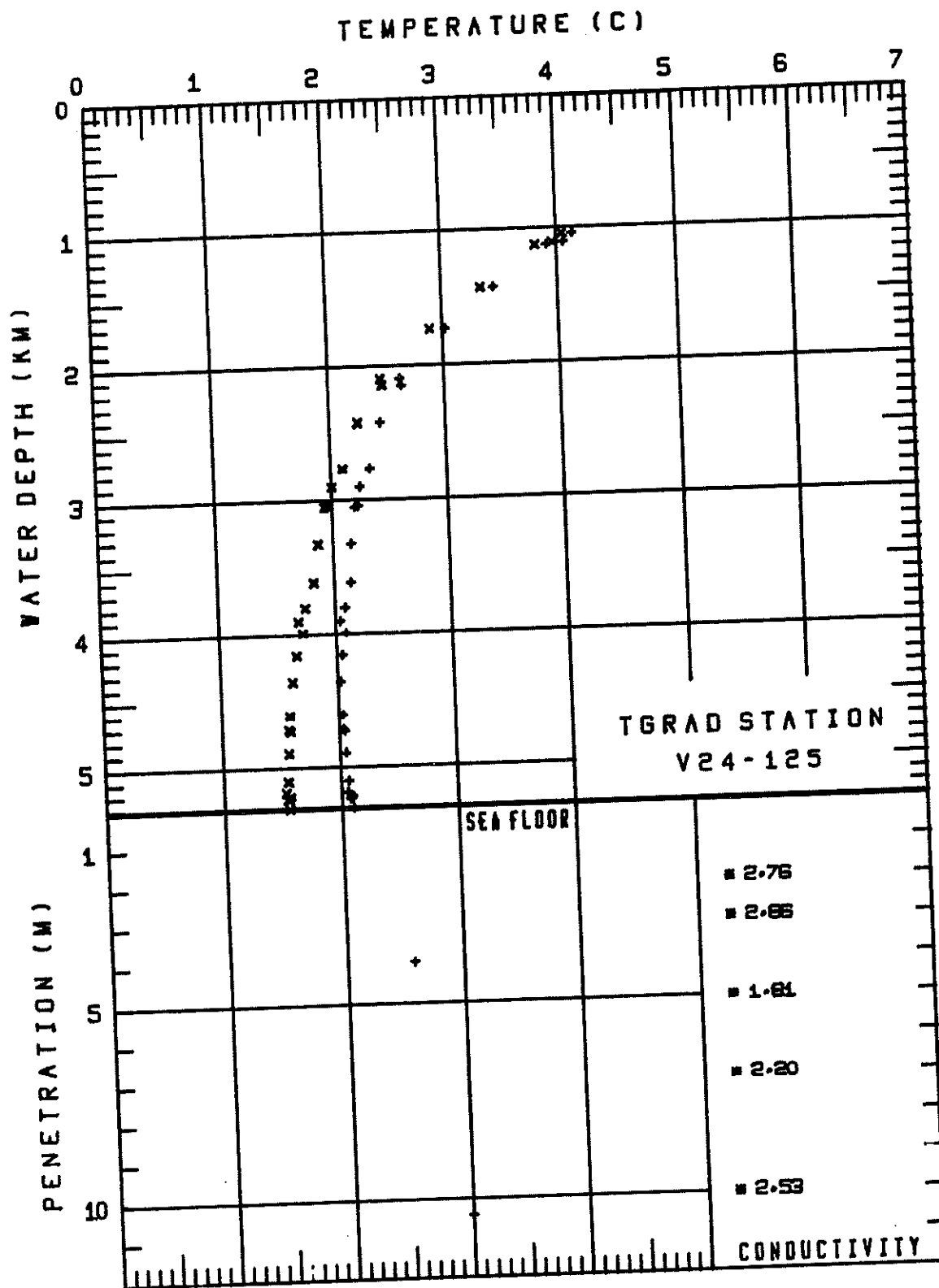
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1045.	4.13	4.04
1107.	4.05	3.96
1128.	3.91	3.82
1434.	3.45	3.33
1735.	3.02	2.88
2143.	2.63	2.46
2097.	2.61	2.44
2425.	2.43	2.24
2763.	2.33	2.10
2901.	2.24	2.00
3050.	2.19	1.94
3042.	2.22	1.96
3326.	2.15	1.86
3610.	2.14	1.82
3804.	2.08	1.74
3987.	2.08	1.72
3899.	2.03	1.68
4153.	2.04	1.66
4354.	2.02	1.61
4602.	2.03	1.58
4718.	2.04	1.58
4708.	2.03	1.57
4889.	2.04	1.56
5098.	2.06	1.54
5178.	2.06	1.53
5210.	2.10	1.56
5097.	2.06	1.54
5236.	2.09	1.55
5232.	2.07	1.54
5304.	2.10	1.55

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.96	2.57
10.41	3.00

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
2.00	2.76
3.00	2.66
5.00	1.81
7.00	2.20
10.00	2.53



## TGRAD STATION V24-127

## WATER TEMPERATURES

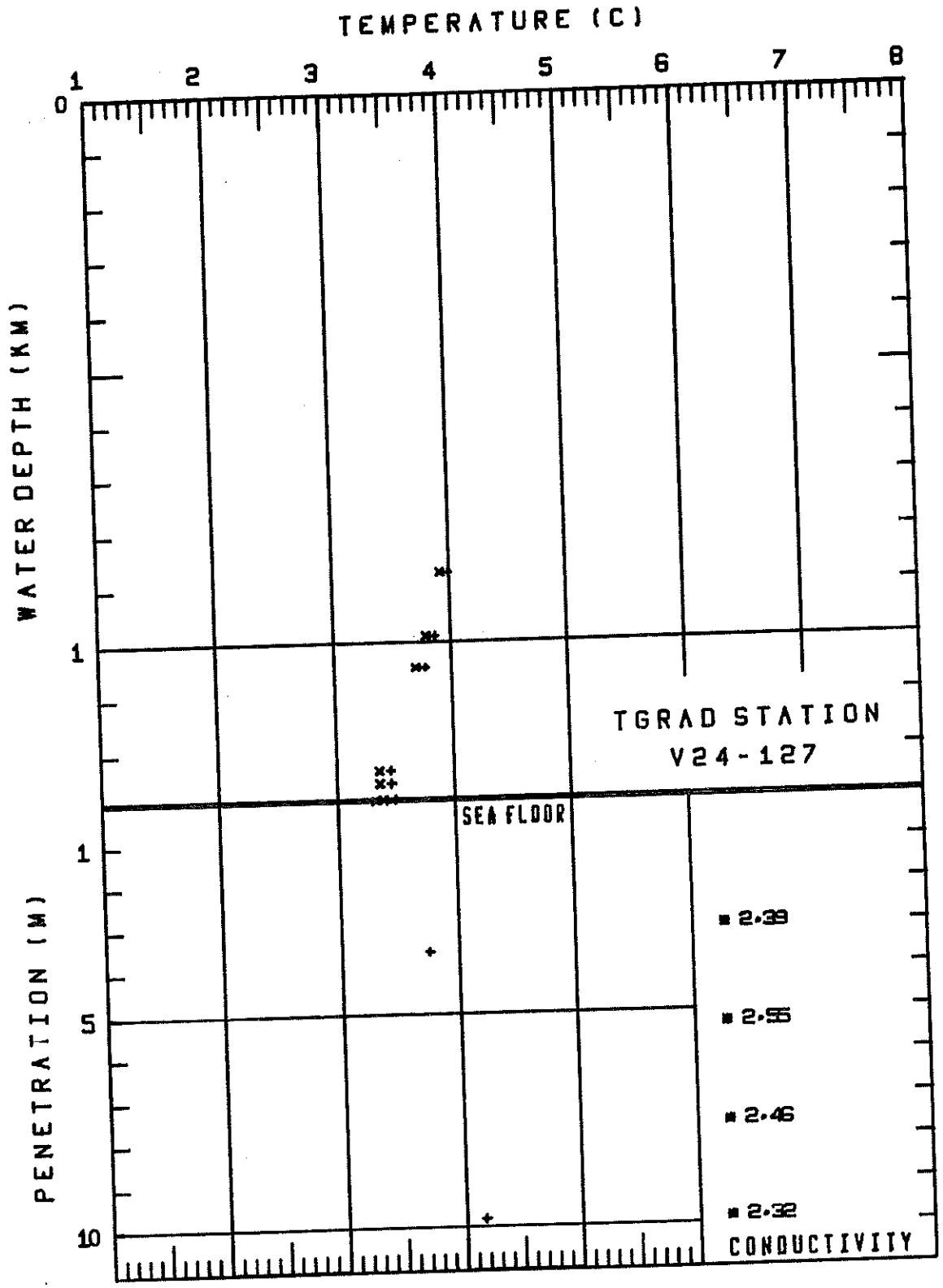
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
872.	3.99	3.92
988.	3.86	3.78
1045.	3.77	3.69
1232.	3.46	3.36
1286.	3.49	3.39
1256.	3.46	3.36
1287.	3.42	3.32

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.56	3.75
9.81	4.17

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
3.00	2.39
5.30	2.55
7.60	2.46
9.85	2.32



## TGRAD STATION V24-128

## WATER TEMPERATURES

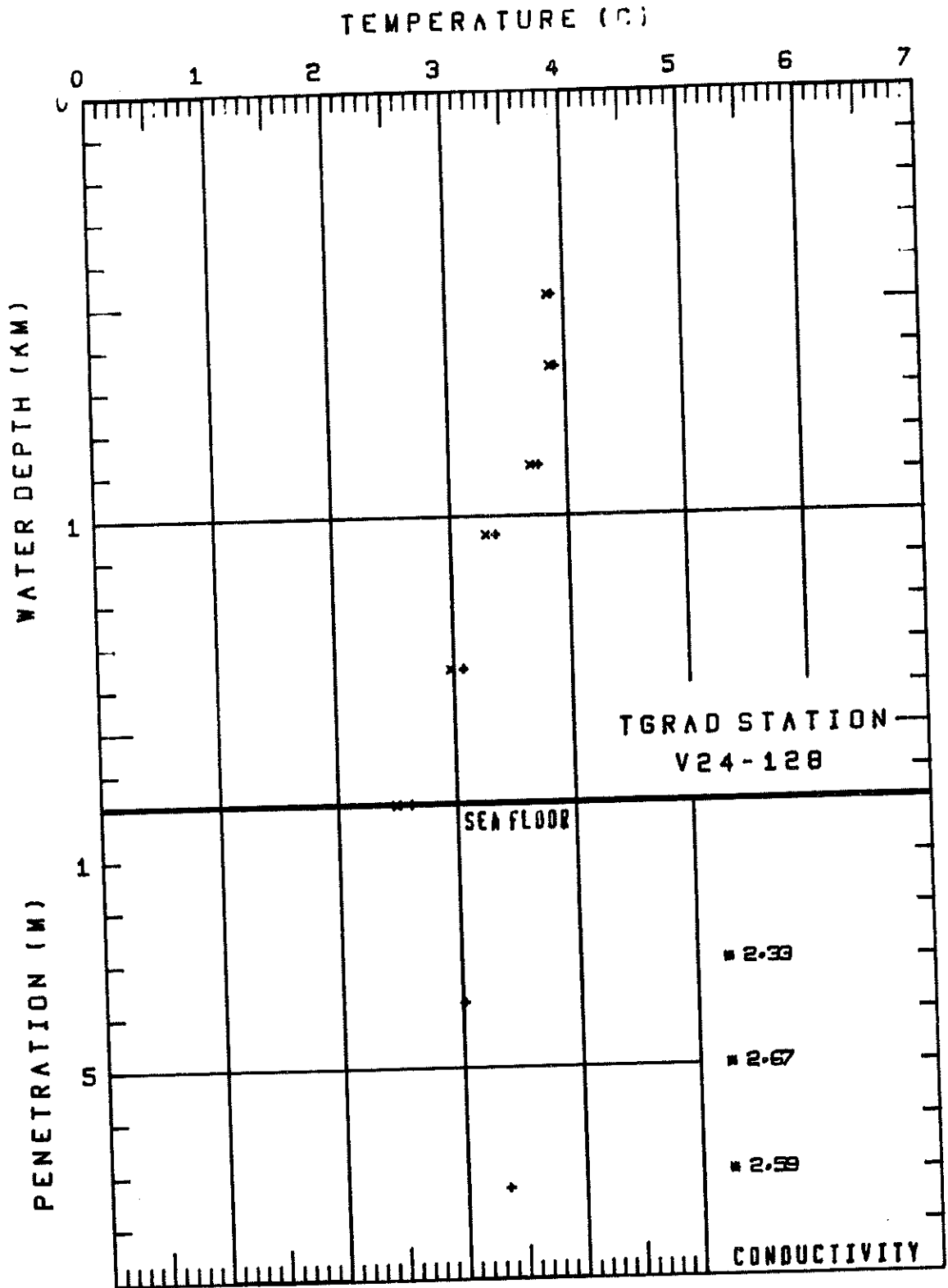
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
481.	3.89	3.86
650.	3.91	3.86
882.	3.75	3.69
1043.	3.38	3.30
1358.	3.08	2.97
1674.	2.61	2.49

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.76	3.02
7.29	3.36

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
3.00	2.33
5.00	2.67
7.00	2.59



## TGRAD STATION V24-129

## WATER TEMPERATURES

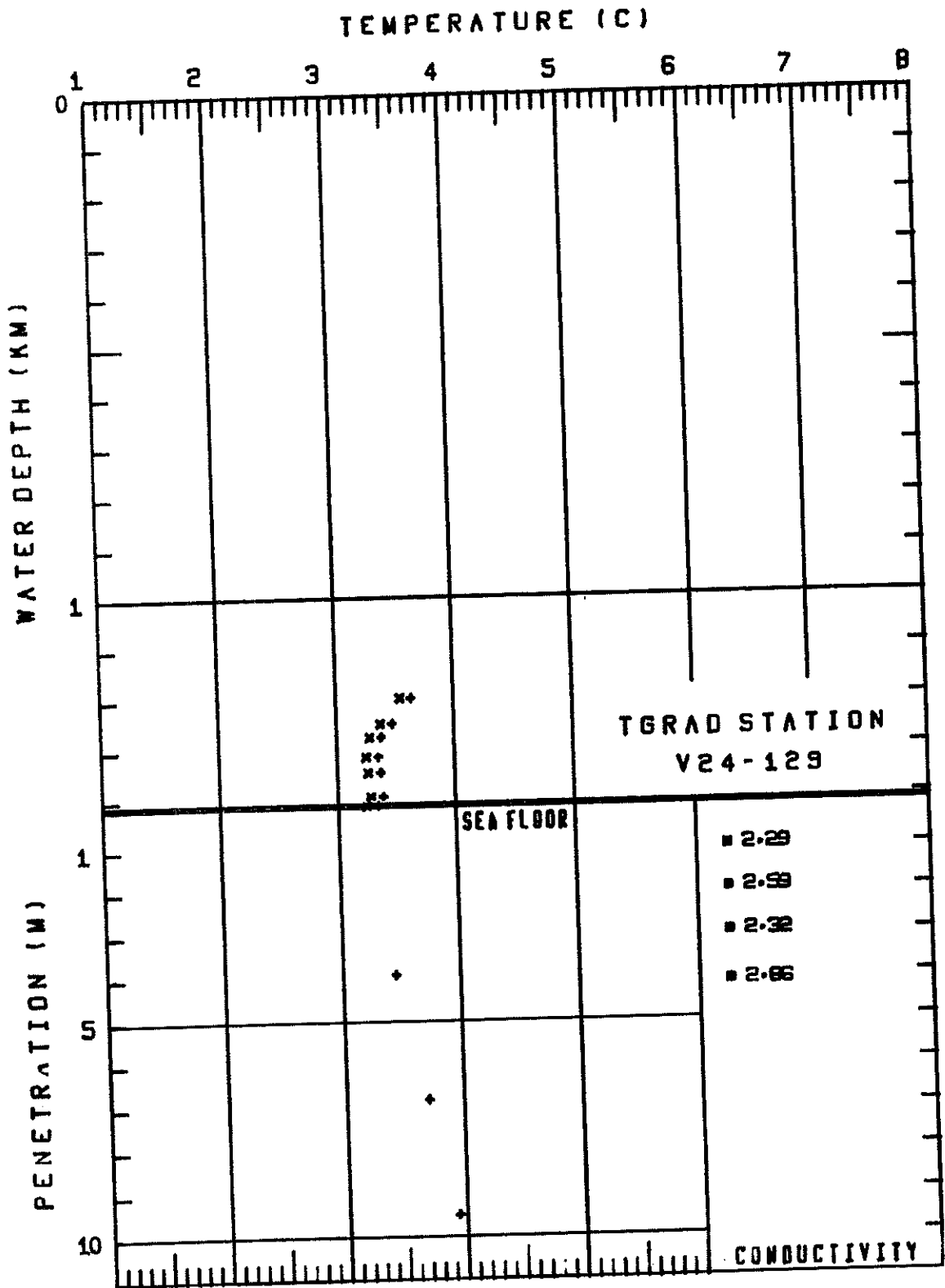
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1199.	3.63	3.54
1249.	3.47	3.37
1275.	3.38	3.28
1315.	3.34	3.24
1346.	3.36	3.25
1392.	3.38	3.27
1412.	3.34	3.23

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.92	3.45
6.82	3.70
9.50	3.94

## SEDIMENT CONDUCTIVITIES

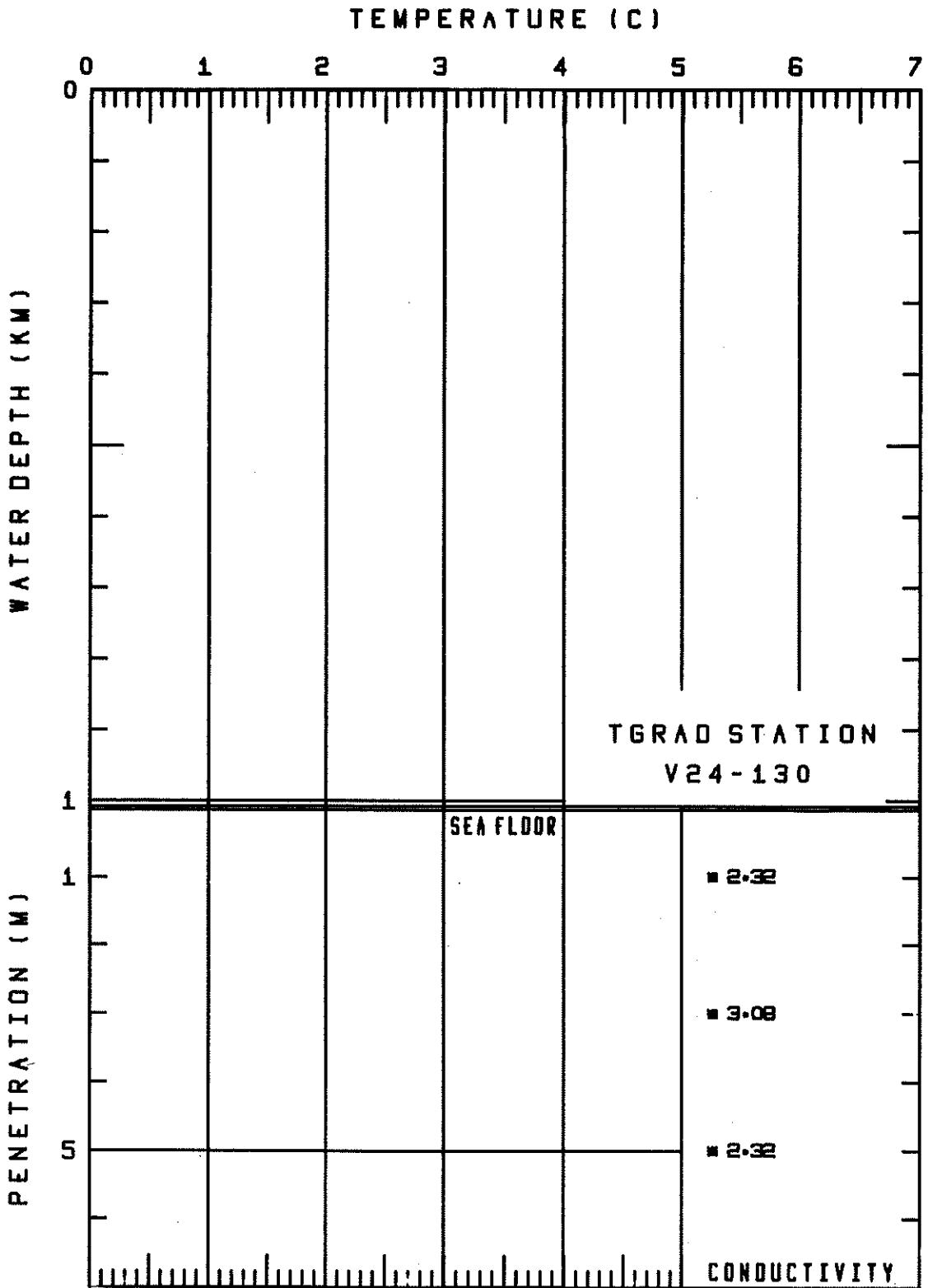
DEPTH	CONDUCTIVITY
1.00	2.29
2.00	2.59
3.00	2.32
4.15	2.86



## TGRAD STATIONV24-130

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.32
3.00	3.08
5.00	2.32



## TGRAD STATION V24-131

## WATER TEMPERATURES

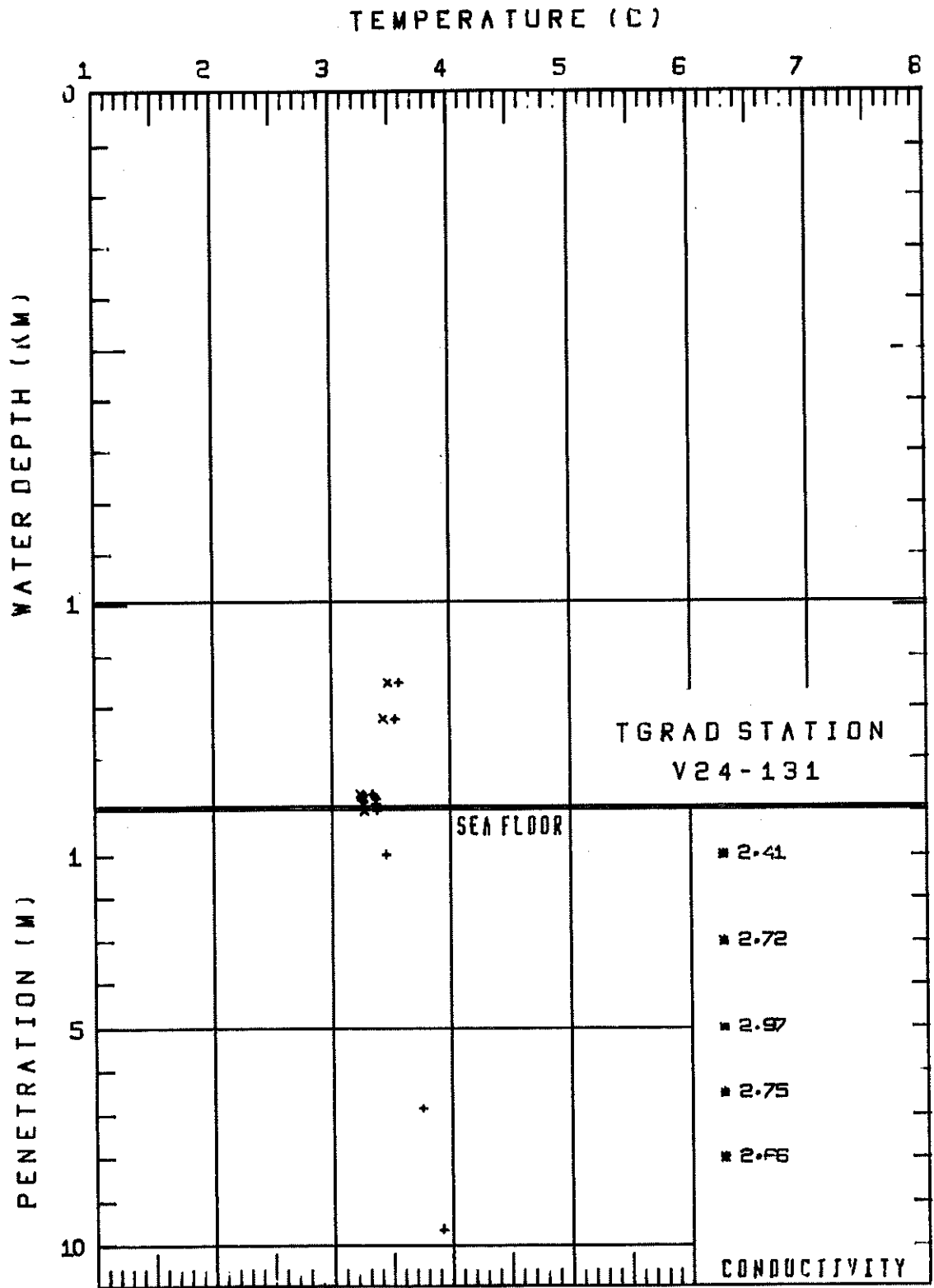
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1161.	3.77	3.68
1151.	3.56	3.47
1223.	3.52	3.43
1379.	3.36	3.25
1390.	3.36	3.25
1374.	3.34	3.24
1402.	3.37	3.26
1369.	3.33	3.23

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
1.01	3.44
6.84	3.75
9.62	3.91

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.41
3.00	2.72
5.00	2.97
6.50	2.75
8.00	2.66



## TGRAD STATION V24-132

## WATER TEMPERATURES

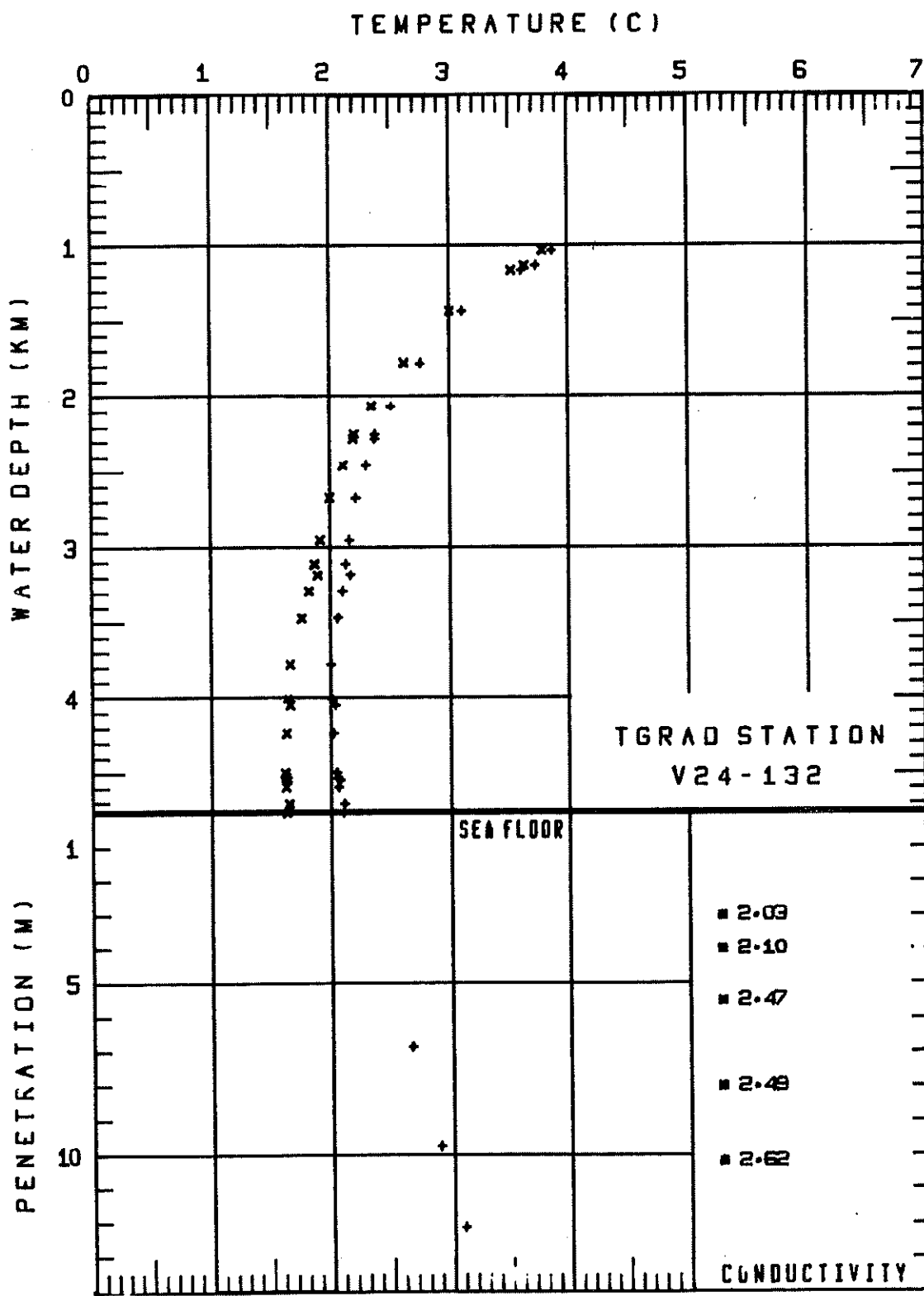
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1032.	3.87	3.78
1130.	3.72	3.63
1163.	3.61	3.52
1433.	3.11	3.00
1777.	2.75	2.62
2065.	2.51	2.34
2279.	2.37	2.19
2250.	2.37	2.20
2453.	2.30	2.11
2673.	2.21	2.00
2951.	2.16	1.91
3113.	2.13	1.87
3184.	2.17	1.89
3292.	2.10	1.82
3469.	2.06	1.76
3776.	2.00	1.66
4047.	2.03	1.66
4004.	2.01	1.64
4233.	2.02	1.63
4499.	2.05	1.61
4526.	2.05	1.62
4496.	2.04	1.61
4543.	2.07	1.64
4591.	2.06	1.62
4702.	2.11	1.65
4761.	2.10	1.63

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
6.86	2.66
9.76	2.89
12.14	3.09

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
3.00	2.03
4.00	2.10
5.50	2.47
8.00	2.49
10.20	2.62



TGRAD STATION V24-133

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WATER TEMPERATURES

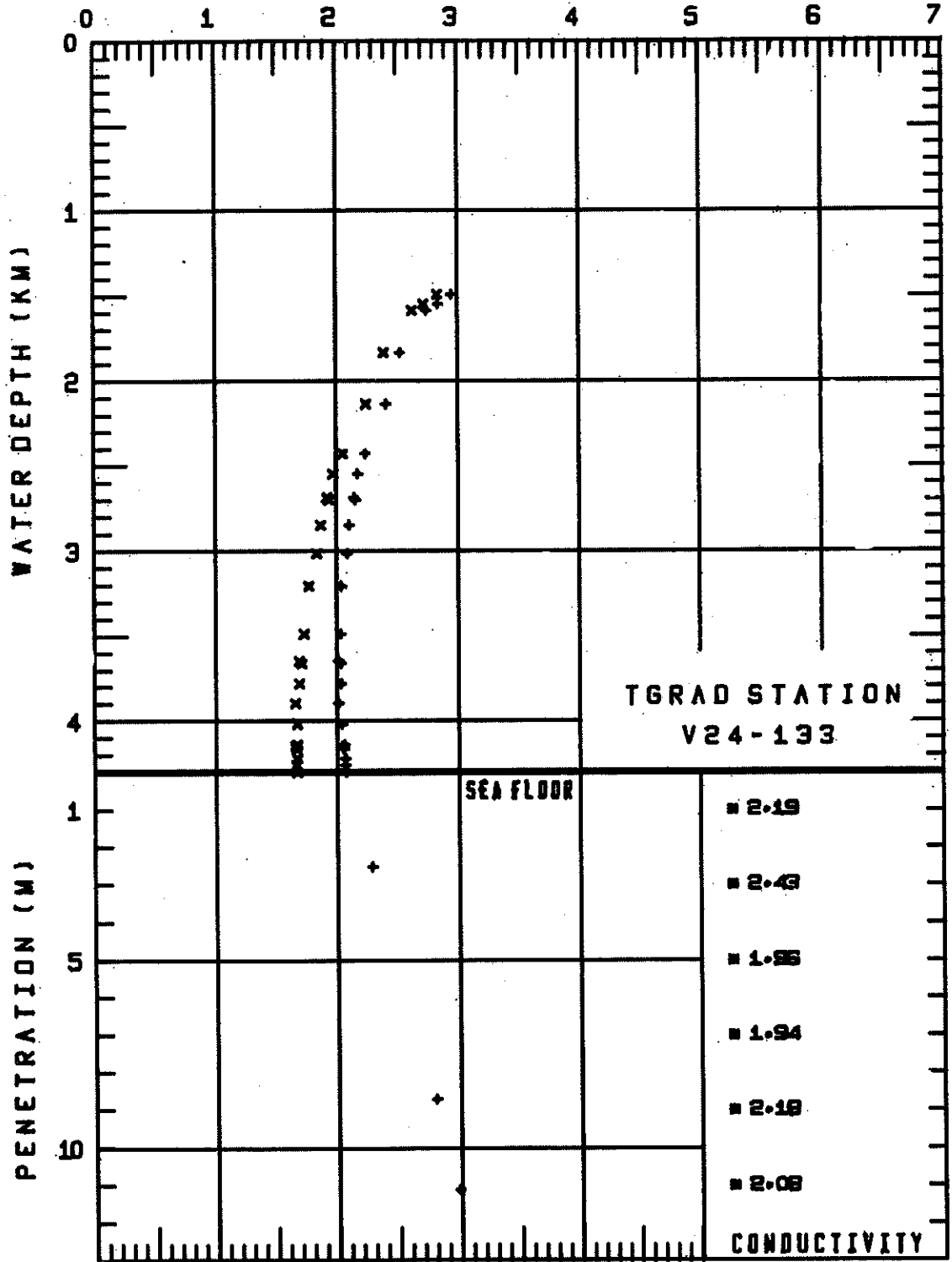
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1489.	2.95	2.84
1549.	2.84	2.72
1585.	2.74	2.63
1835.	2.53	2.39
2136.	2.41	2.25
2427.	2.24	2.05
2548.	2.18	1.98
2685.	2.14	1.93
2699.	2.16	1.94
2845.	2.11	1.88
3015.	2.09	1.84
3204.	2.04	1.77
3486.	2.03	1.73
3644.	2.02	1.70
3658.	2.03	1.71
3781.	2.03	1.69
3893.	2.01	1.66
4019.	2.04	1.67
4138.	2.06	1.67
4160.	2.05	1.67
4143.	2.04	1.66
4218.	2.07	1.67
4259.	2.07	1.67
4299.	2.08	1.67

SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.51	2.29
8.71	2.80
11.12	2.98

SEDIMENT CONDUCTIVITIES

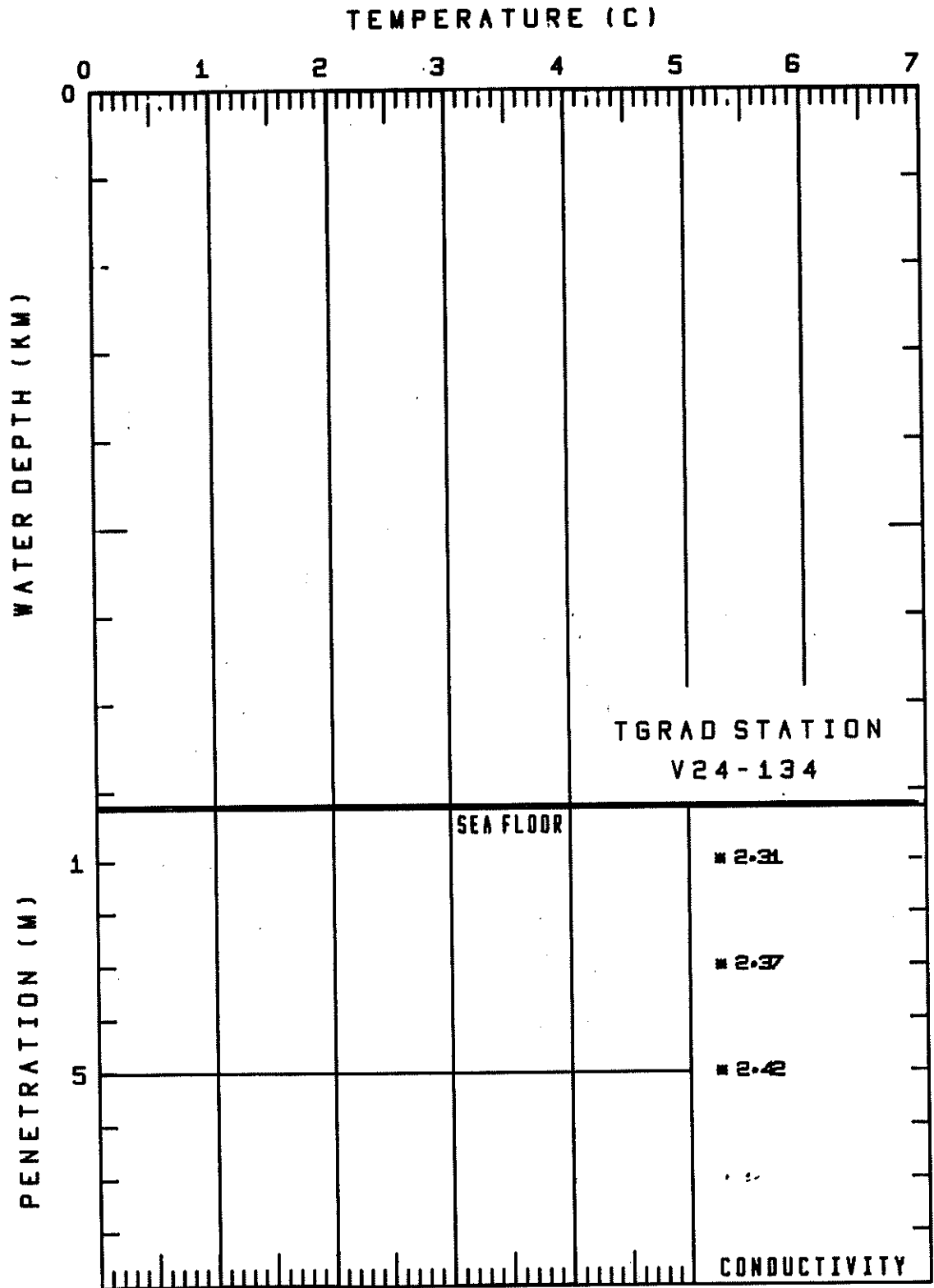
DEPTH	CONDUCTIVITY
1.00	2.19
3.00	2.43
5.00	1.96
7.00	1.94
9.00	2.18
11.00	2.08



## TGRAD STATIONV24-134

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
3.00	2.37
5.00	2.42
7.00	2.50



## TGRAD STATION V24-135

## WATER TEMPERATURES

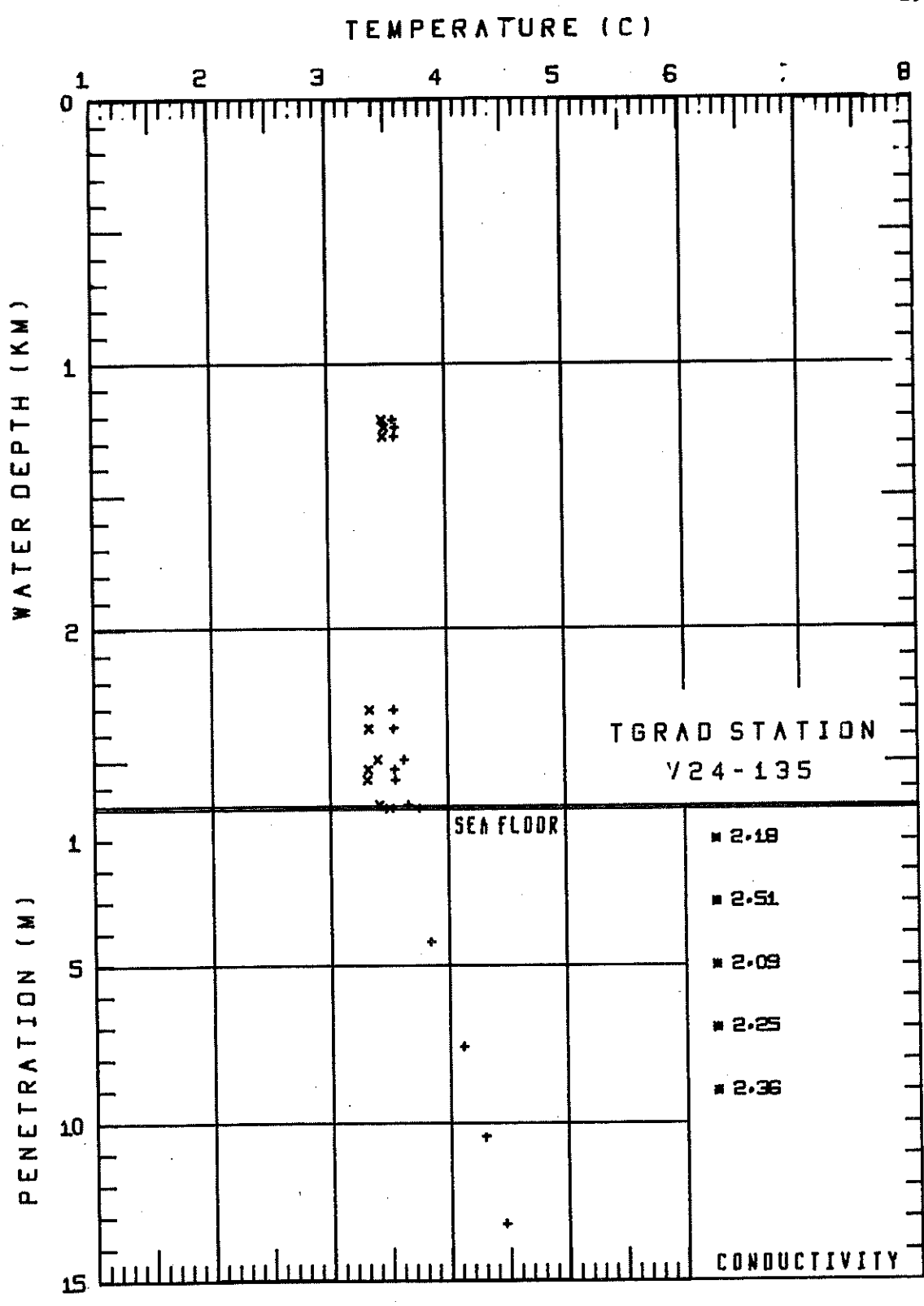
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
2673.	3.75	3.50
2658.	3.66	3.41
2565.	3.55	3.31
2526.	3.55	3.32
2488.	3.63	3.40
2372.	3.54	3.32
2302.	3.54	3.34
1272.	3.57	3.47
1208.	3.55	3.46
1240.	3.57	3.48

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
4.26	3.84
7.58	4.12
10.45	4.30
13.19	4.47

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.18
3.00	2.51
5.00	2.09
7.00	2.25
9.00	2.36



TGRAD STATION V24-136

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WATER TEMPERATURES

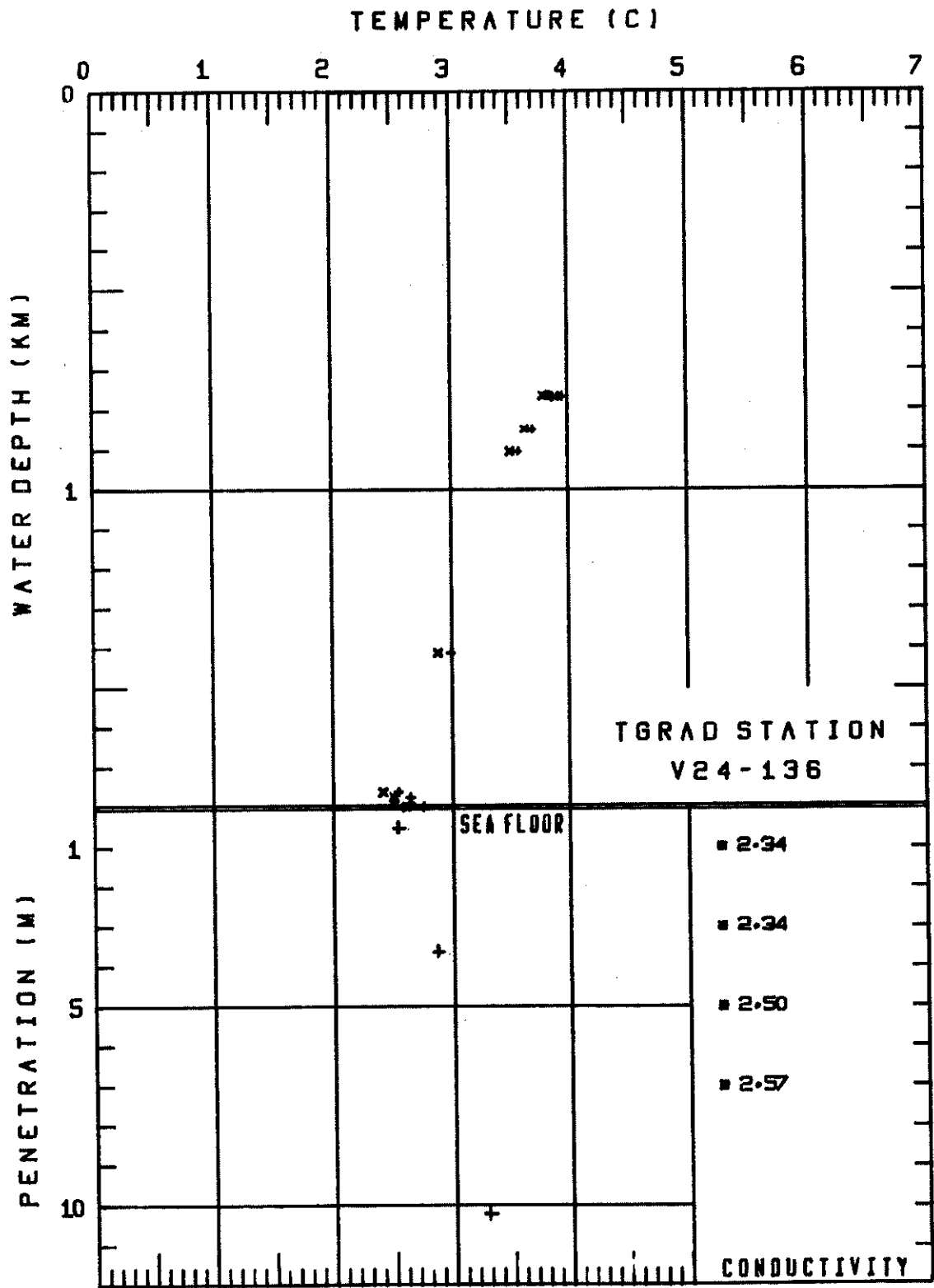
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
767.	3.94	3.88
765.	3.84	3.78
849.	3.69	3.63
905.	3.57	3.50
1411.	2.98	2.88
1799.	2.74	2.60
1791.	2.64	2.50
1774.	2.64	2.50
1762.	2.54	2.41

SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.53	2.55
3.66	2.88
10.23	3.30

SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.34
3.00	2.34
5.00	2.50
7.00	2.57



## TGRAD STATION V24-137

## WATER TEMPERATURES

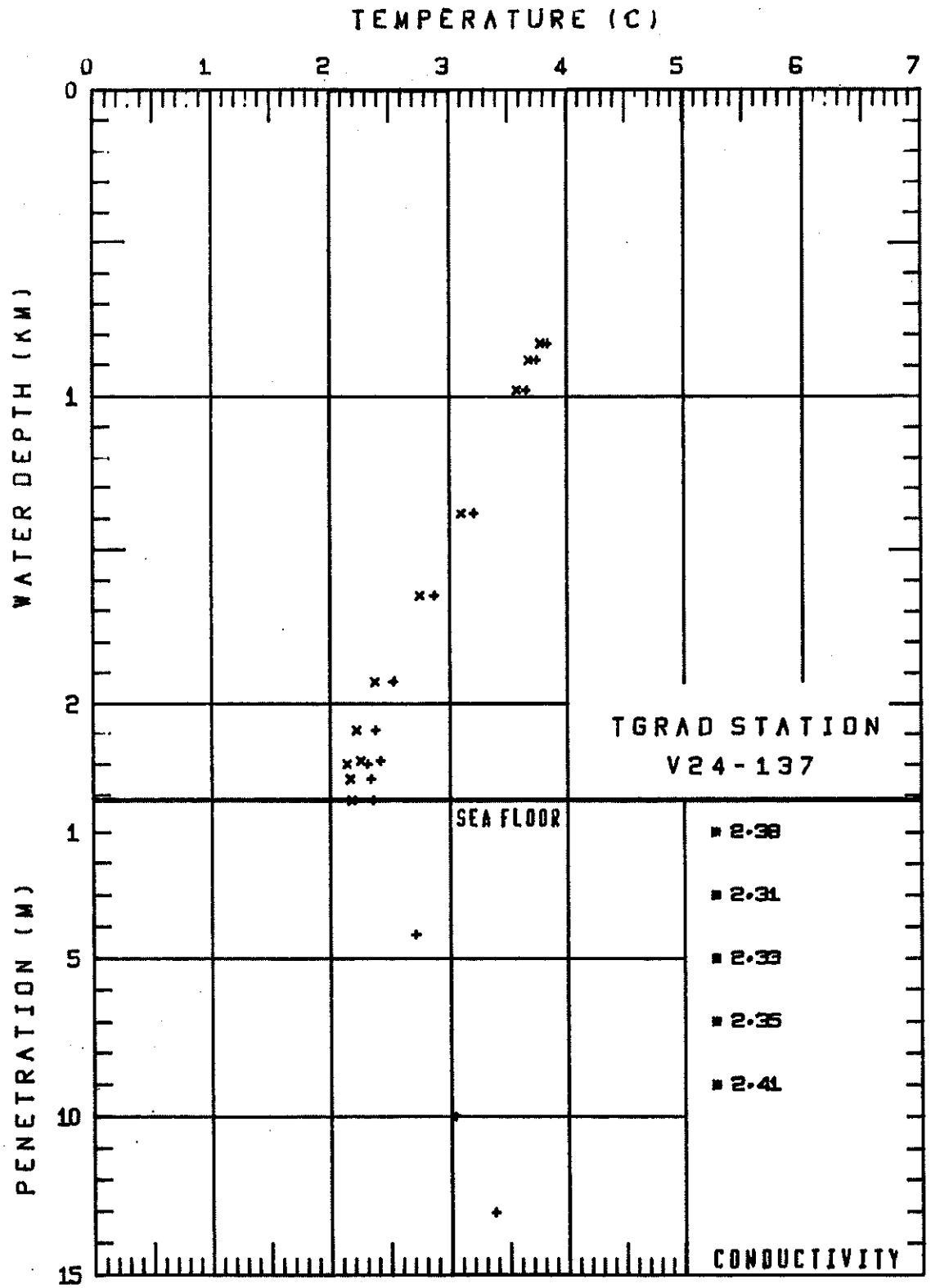
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
827.	3.84	3.77
883.	3.74	3.67
981.	3.65	3.58
1382.	3.21	3.10
1648.	2.88	2.75
1929.	2.52	2.38
2186.	2.42	2.25
2085.	2.38	2.22
2196.	2.31	2.14
2246.	2.34	2.16
2315.	2.36	2.18

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
4.26	2.71
10.00	3.04
13.02	3.37

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.38
3.00	2.31
5.00	2.33
7.00	2.35
9.00	2.41



## TGRAD STATION V24-138

## WATER TEMPERATURES

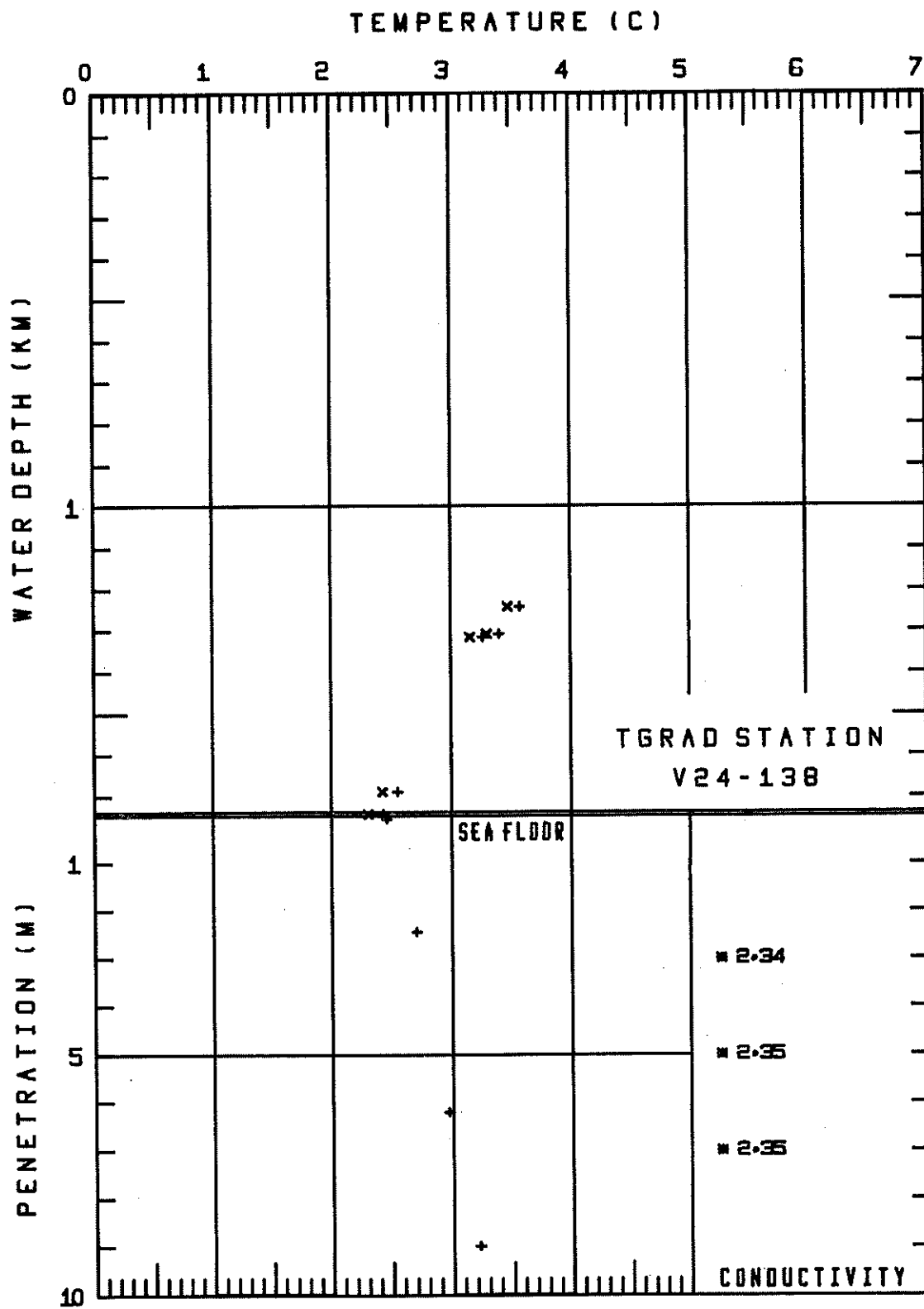
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1242.	3.57	3.48
1307.	3.40	3.30
1315.	3.26	3.16
1690.	2.55	2.43
1743.	2.44	2.31

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.10	2.46
2.45	2.71
6.20	2.97
8.99	3.22

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
3.00	2.34
5.00	2.35
7.00	2.35



## TGRAD STATION V24-139

## WATER TEMPERATURES

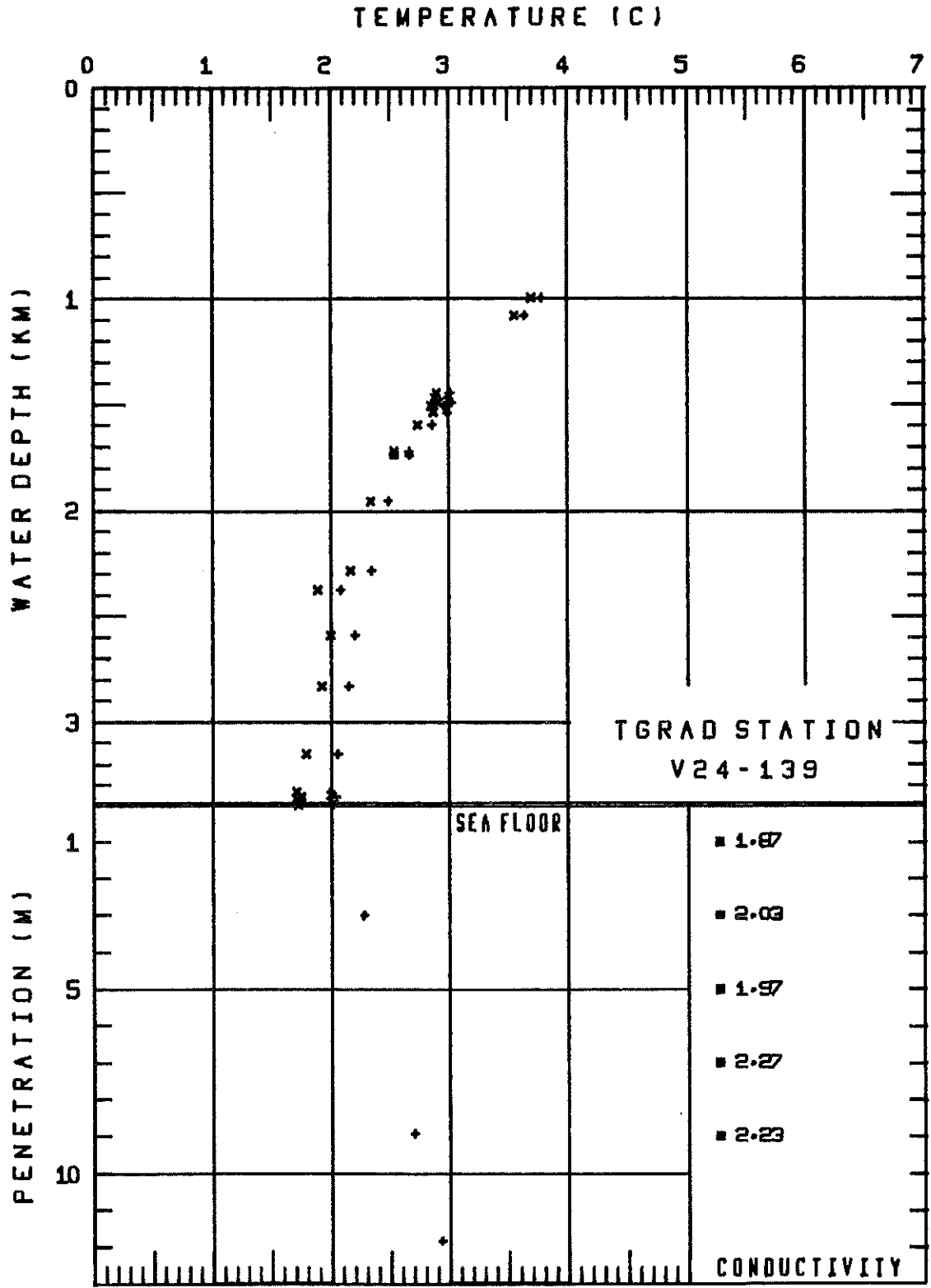
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
994.	3.77	3.69
1079.	3.63	3.55
1442.	3.00	2.90
1533.	2.98	2.87
1505.	2.96	2.85
1491.	3.02	2.91
1465.	2.99	2.88
1595.	2.85	2.73
1737.	2.66	2.53
1719.	2.66	2.53
1958.	2.48	2.33
2283.	2.34	2.16
2374.	2.07	1.89
2589.	2.20	2.00
2829.	2.15	1.92
3151.	2.05	1.79
3332.	1.99	1.71
3355.	2.03	1.75
3386.	2.01	1.72
3371.	2.01	1.72
3360.	2.00	1.71
3363.	2.00	1.71
3393.	2.01	1.72

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.01	2.27
8.93	2.70
11.84	2.93

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.87
3.00	2.03
5.00	1.97
7.00	2.27
9.00	2.23



## TGRAD STATIONV24-140

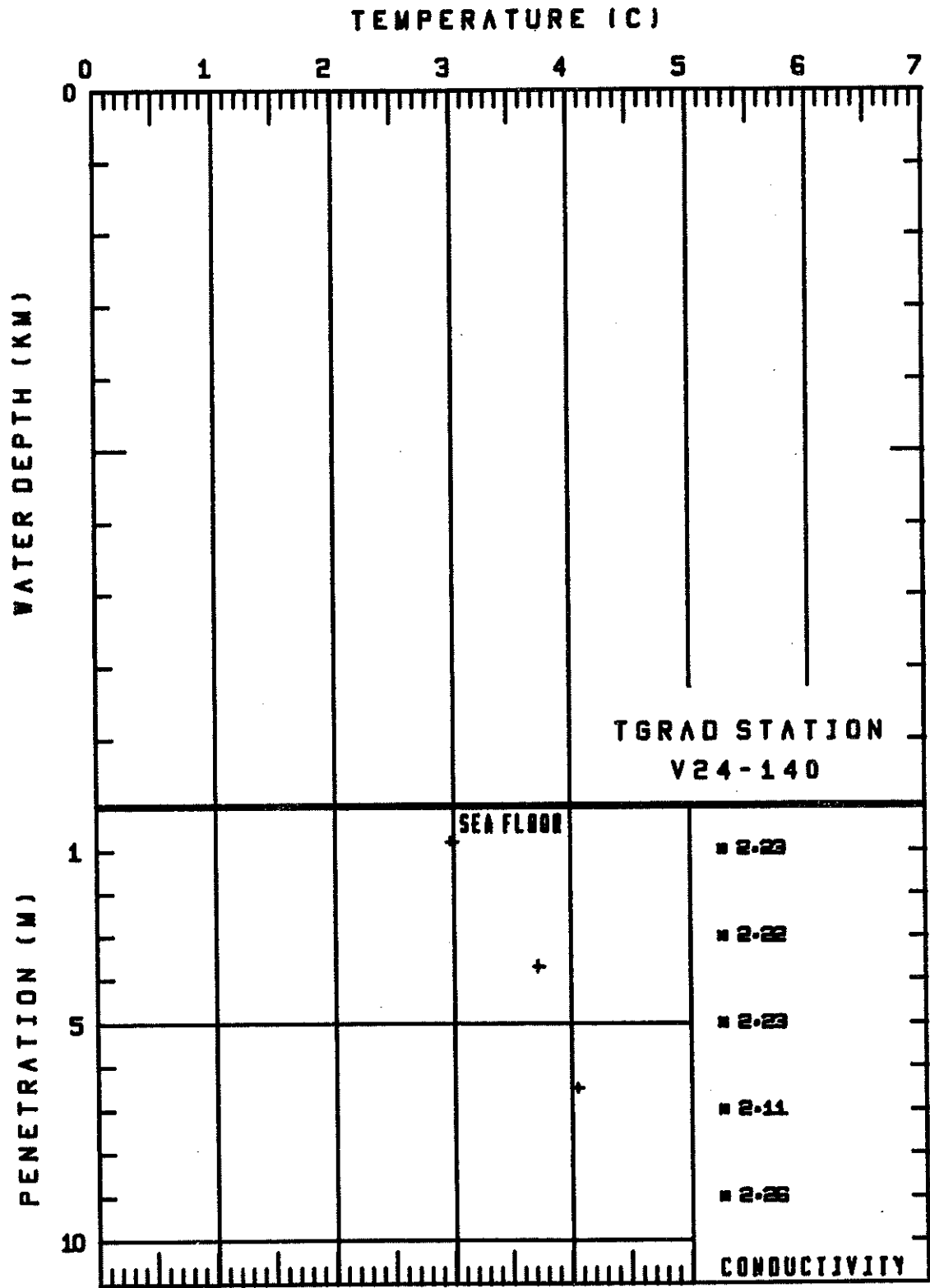
## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.23
3.00	2.22
5.00	2.23
7.00	2.11
9.00	2.26

## Sediment Temperatures

Depth	Temperature
89	2.97
374	3.72
650	4.03

Water temperature assumed from preceding station.



## TGRAD STATION V24-141

## WATER TEMPERATURES

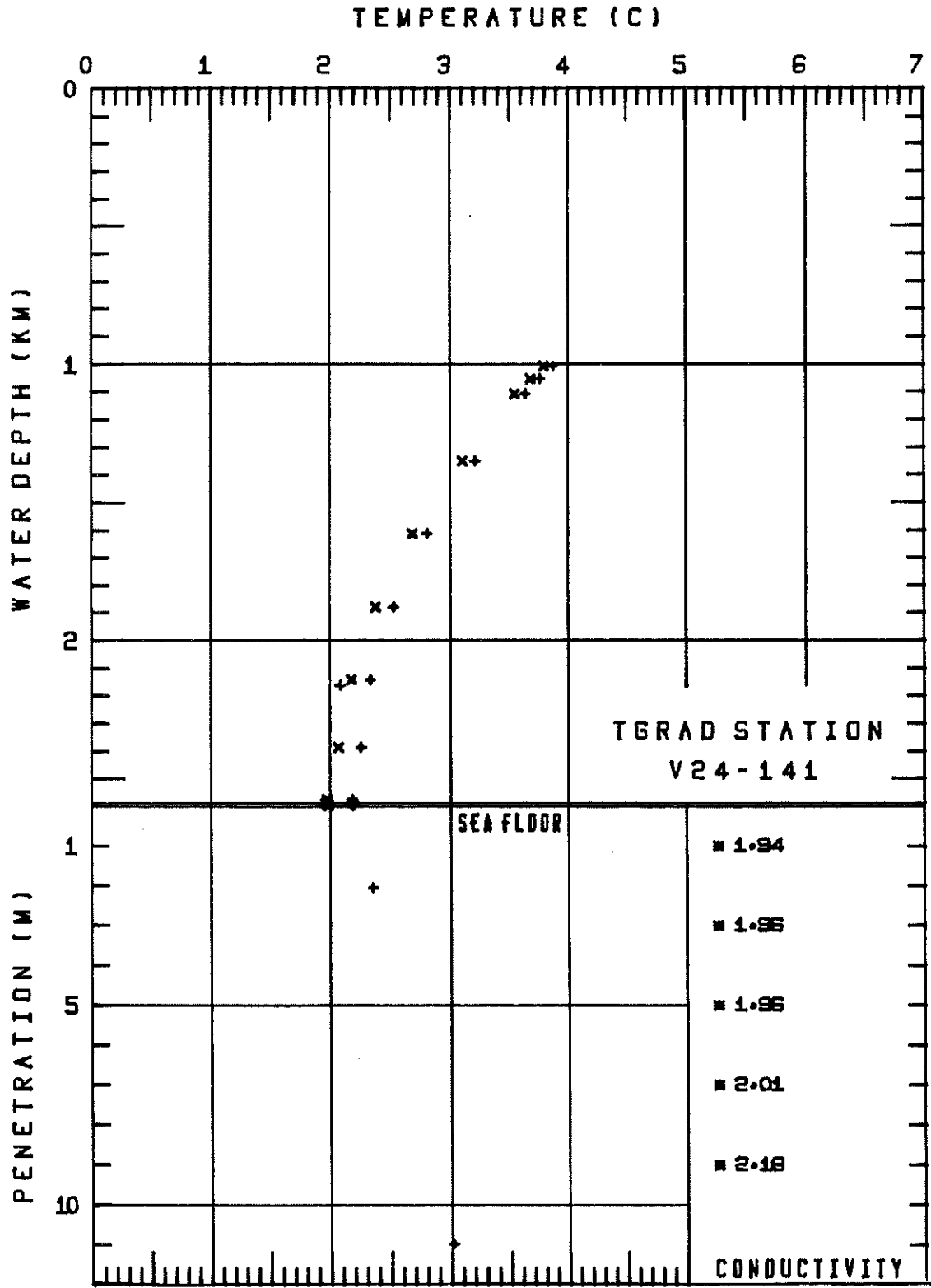
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1007.	3.86	3.79
1053.	3.76	3.67
1109.	3.63	3.54
1351.	3.21	3.10
1614.	2.80	2.68
1878.	2.52	2.38
2161.	2.08	1.92
2142.	2.33	2.17
2385.	2.26	2.07
2587.	2.18	1.97
2597.	2.19	1.98
2587.	2.16	1.96
2575.	2.18	1.97
2587.	2.17	1.97

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.06	2.35
10.97	3.01

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.94
3.00	1.96
5.00	1.96
7.00	2.01
9.00	2.18



## TGRAD STATION V24-142

## WATER TEMPERATURES

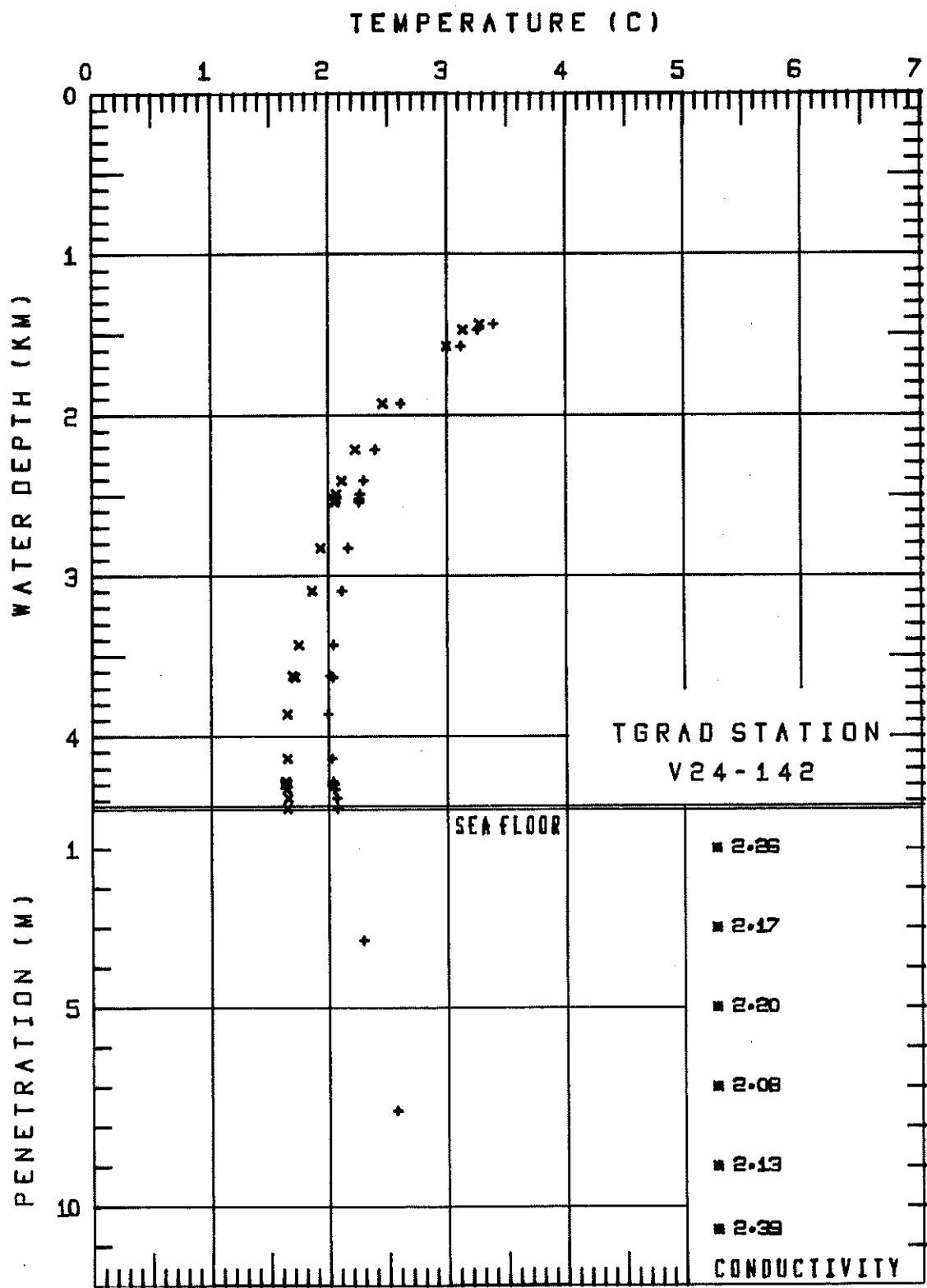
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1432.	3.38	3.26
1470.	3.25	3.13
1574.	3.11	2.98
1927.	2.60	2.45
2215.	2.39	2.22
2406.	2.29	2.10
2489.	2.26	2.06
2519.	2.25	2.05
2541.	2.25	2.05
2830.	2.16	1.93
3096.	2.11	1.85
3430.	2.03	1.74
3621.	2.00	1.69
3631.	2.03	1.71
3859.	1.99	1.64
4135.	2.02	1.64
4298.	2.04	1.64
4303.	2.02	1.62
4281.	2.03	1.63
4331.	2.04	1.63
4385.	2.06	1.65
4449.	2.06	1.64

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.32	2.29
7.60	2.56

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.26
3.00	2.17
5.00	2.20
7.00	2.08
9.00	2.13
10.60	2.39



## TGRAD STATION V24-143

## WATER TEMPERATURES

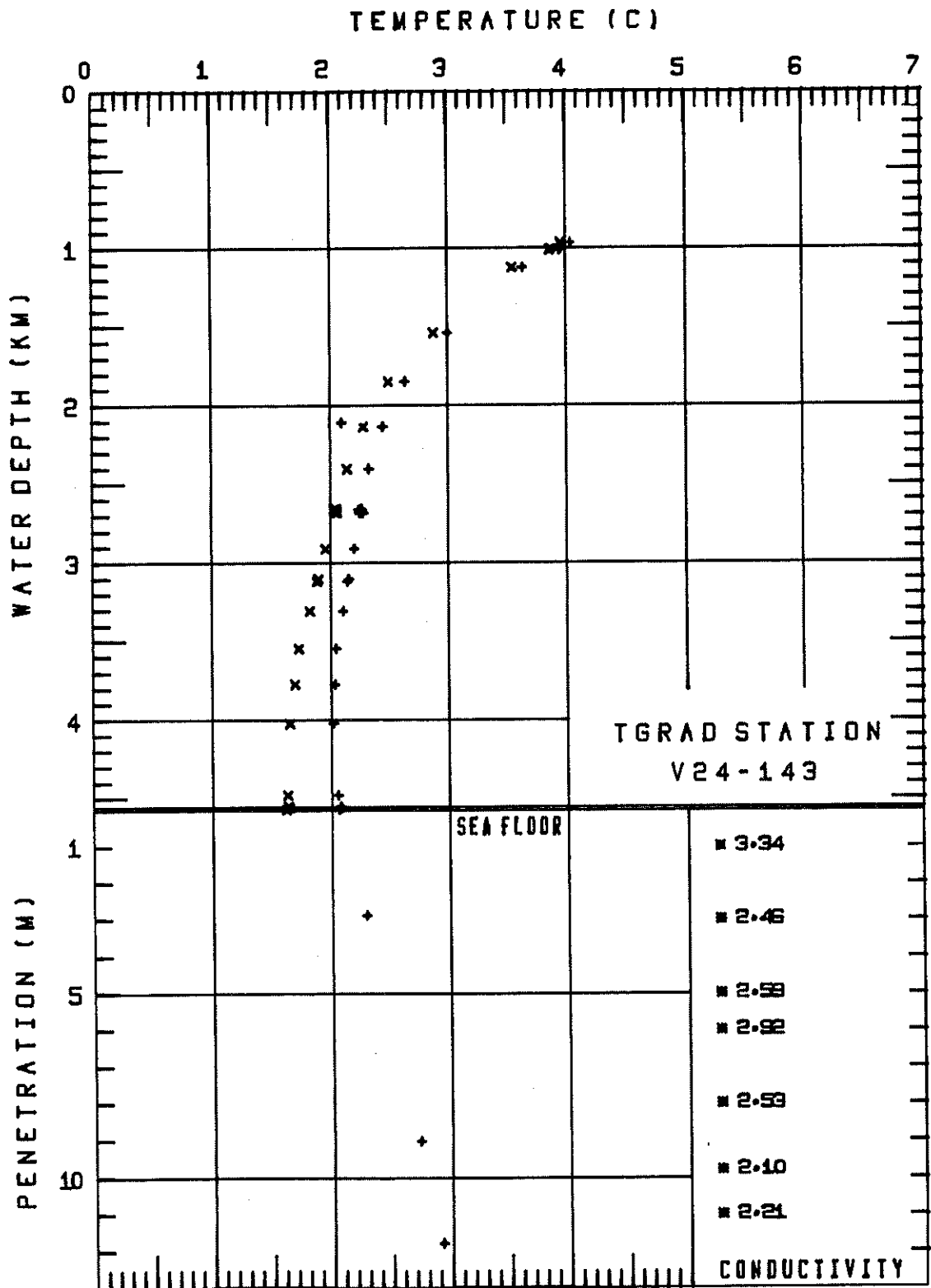
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
966.	4.03	3.95
1011.	3.94	3.86
1007.	3.95	3.87
1120.	3.63	3.55
1537.	3.00	2.88
1849.	2.64	2.49
2108.	2.09	1.94
2134.	2.45	2.28
2403.	2.33	2.14
2673.	2.25	2.04
2666.	2.26	2.05
2660.	2.24	2.03
2679.	2.25	2.03
2678.	2.27	2.05
2652.	2.26	2.04
2909.	2.20	1.96
3103.	2.16	1.90
3117.	2.14	1.88
3306.	2.10	1.82
3544.	2.04	1.73
3773.	2.03	1.69
4020.	2.02	1.65
4477.	2.05	1.63
4569.	2.06	1.62
4556.	2.08	1.64
4547.	2.07	1.63

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.89	2.29
9.01	2.73
11.78	2.92

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	3.34
3.00	2.46
5.00	2.59
6.00	2.92
8.00	2.53
9.80	2.10
11.00	2.21



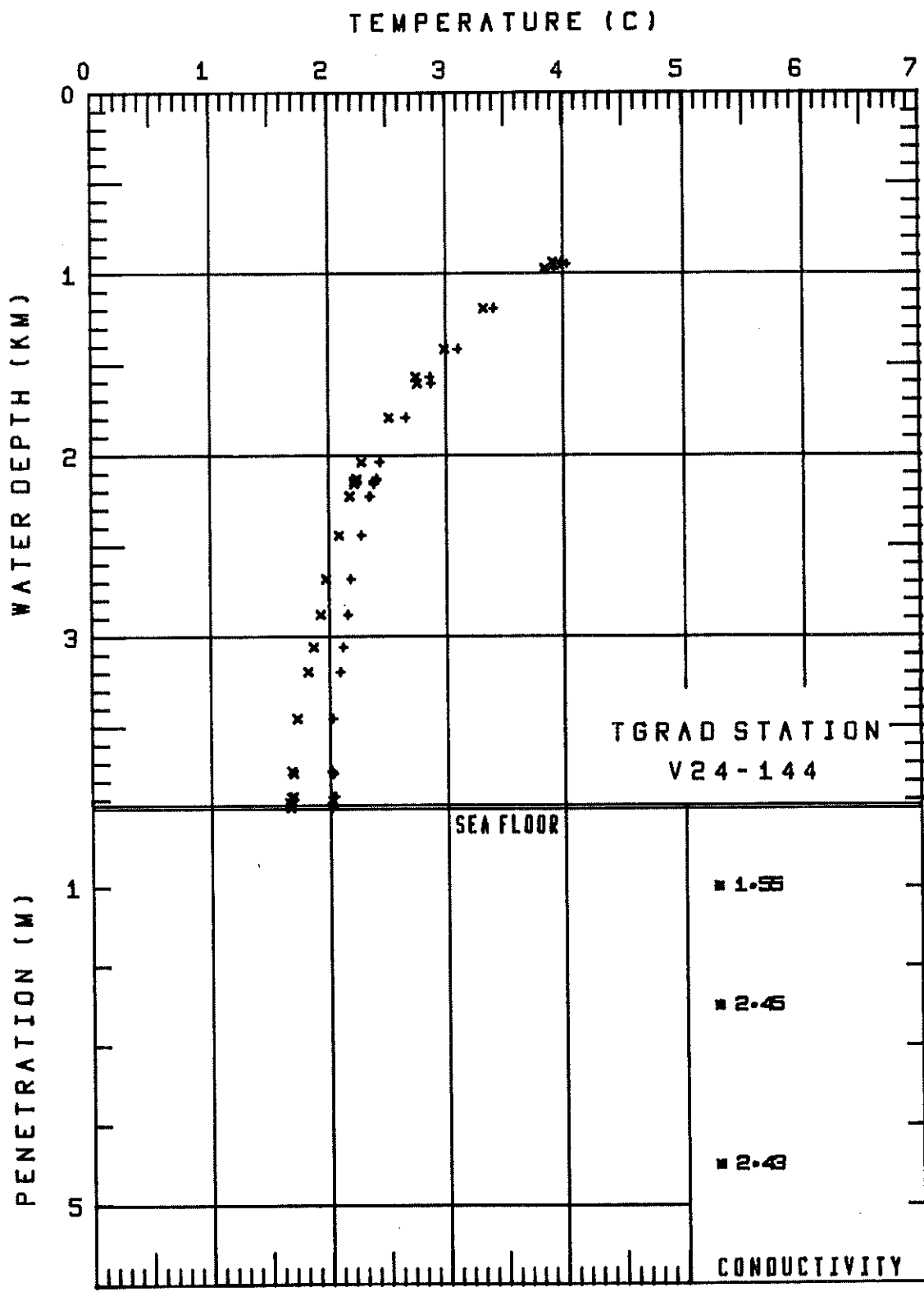
## TGRAD STATION V24-144

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
948.	4.02	3.95
935.	3.99	3.91
973.	3.92	3.85
1189.	3.41	3.32
1412.	3.10	2.99
1569.	2.86	2.74
1601.	2.87	2.75
1789.	2.65	2.51
2037.	2.44	2.28
2140.	2.38	2.22
2153.	2.38	2.22
2136.	2.41	2.24
2127.	2.41	2.24
2224.	2.35	2.18
2226.	2.35	2.18
2437.	2.28	2.09
2681.	2.19	1.97
2875.	2.16	1.92
3057.	2.12	1.87
3193.	2.09	1.82
3452.	2.03	1.73
3740.	2.01	1.68
3752.	2.03	1.70
3880.	2.04	1.69
3885.	2.03	1.68
3885.	2.02	1.67
3914.	2.01	1.66
3941.	2.02	1.67

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.55
2.50	2.45
4.50	2.43



## TGRAD STATION V24-145

## WATER TEMPERATURES

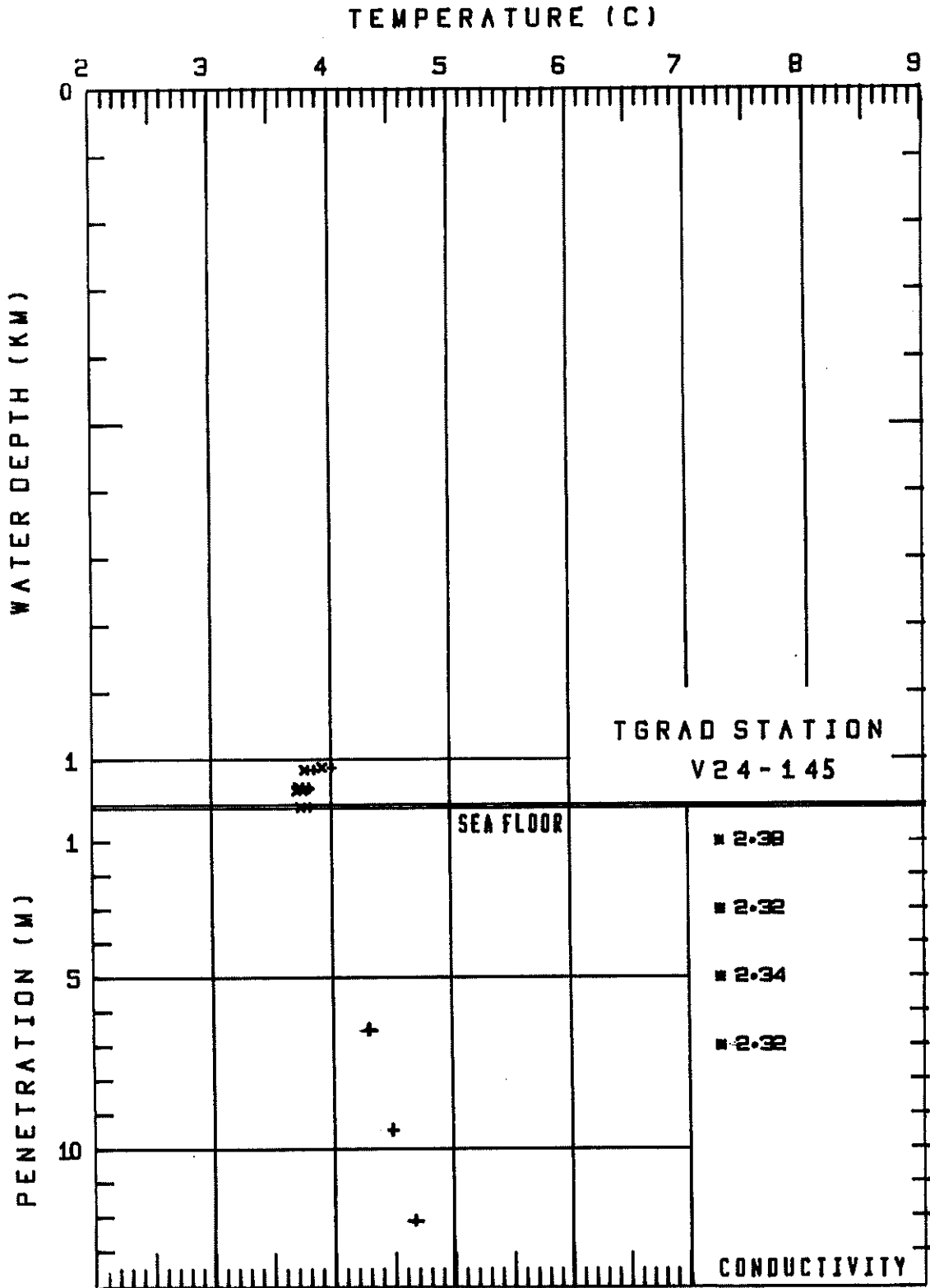
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1010.	4.00	3.92
1014.	3.85	3.77
1070.	3.82	3.74
1042.	3.81	3.73
1040.	3.81	3.73
1045.	3.79	3.71

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
6.55	4.27
9.46	4.47
12.14	4.64

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.38
3.00	2.32
5.00	2.34
7.00	2.32



## TGRAD STATION V24-146

## WATER TEMPERATURES

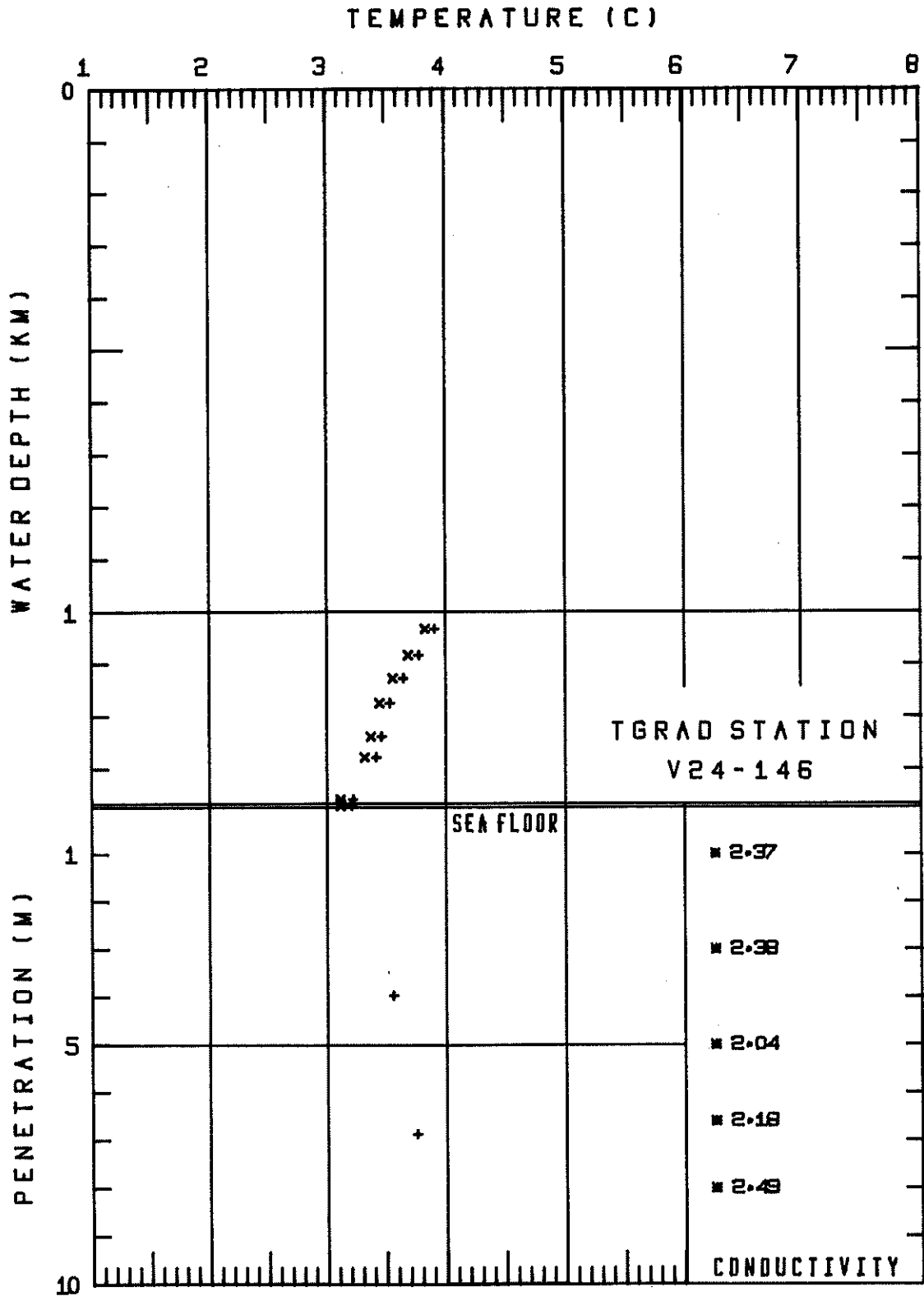
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1033.	3.91	3.83
1082.	3.77	3.69
1126.	3.65	3.56
1174.	3.54	3.44
1237.	3.47	3.37
1278.	3.42	3.32
1359.	3.22	3.12
1370.	3.22	3.11
1367.	3.22	3.11
1366.	3.22	3.11

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.96	3.56
6.86	3.75

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.37
3.00	2.38
5.00	2.04
6.60	2.18
8.00	2.49



## TGRAD STATION V24-147

## WATER TEMPERATURES

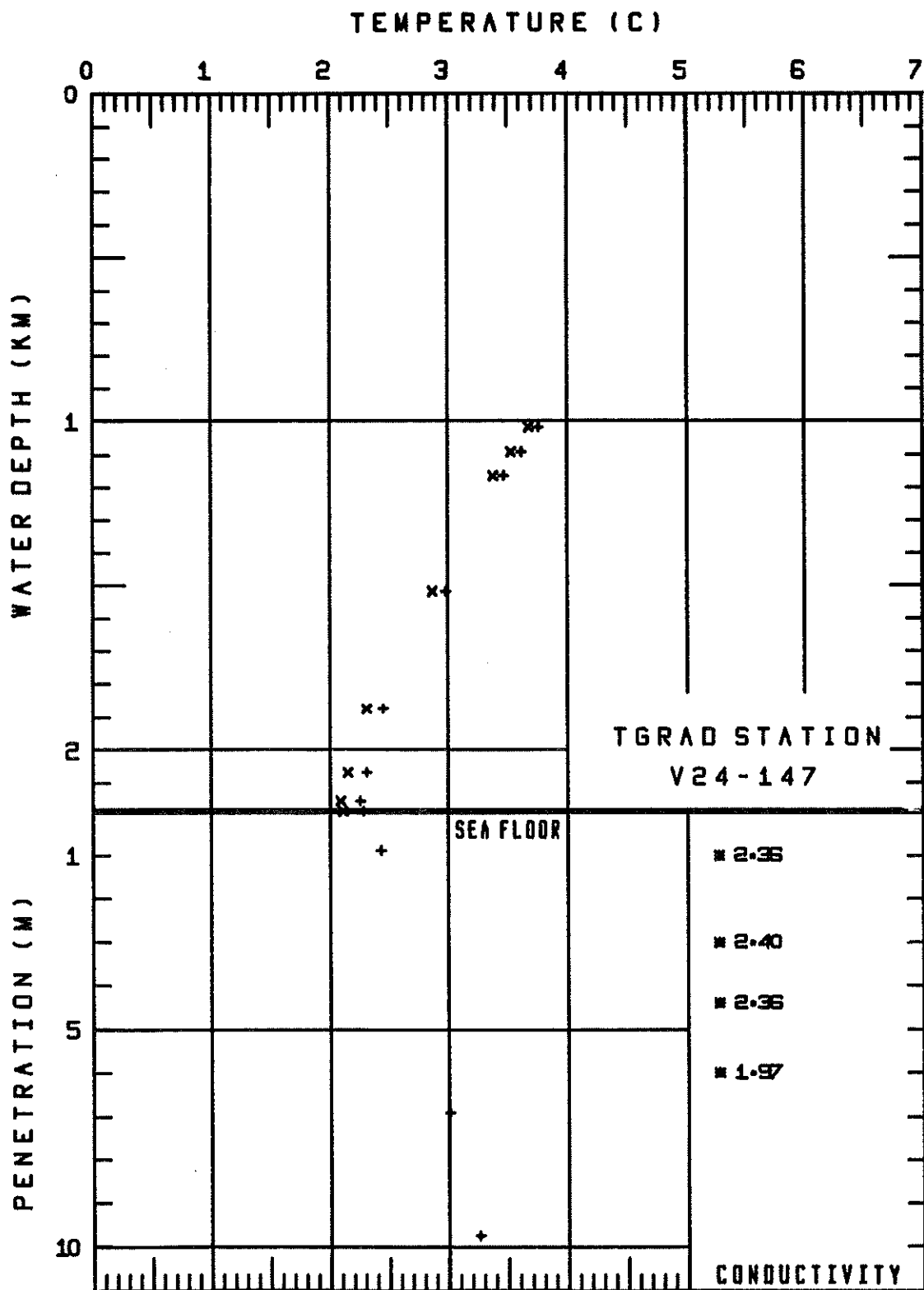
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1016.	3.75	3.67
1090.	3.61	3.53
1164.	3.47	3.38
1517.	2.98	2.86
1874.	2.45	2.31
2068.	2.30	2.15
2157.	2.25	2.09
2188.	2.28	2.11

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.89	2.43
6.91	3.01
9.73	3.26

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.36
3.00	2.40
4.40	2.36
6.00	1.97



## TGRAD STATION V24-148

## WATER TEMPERATURES

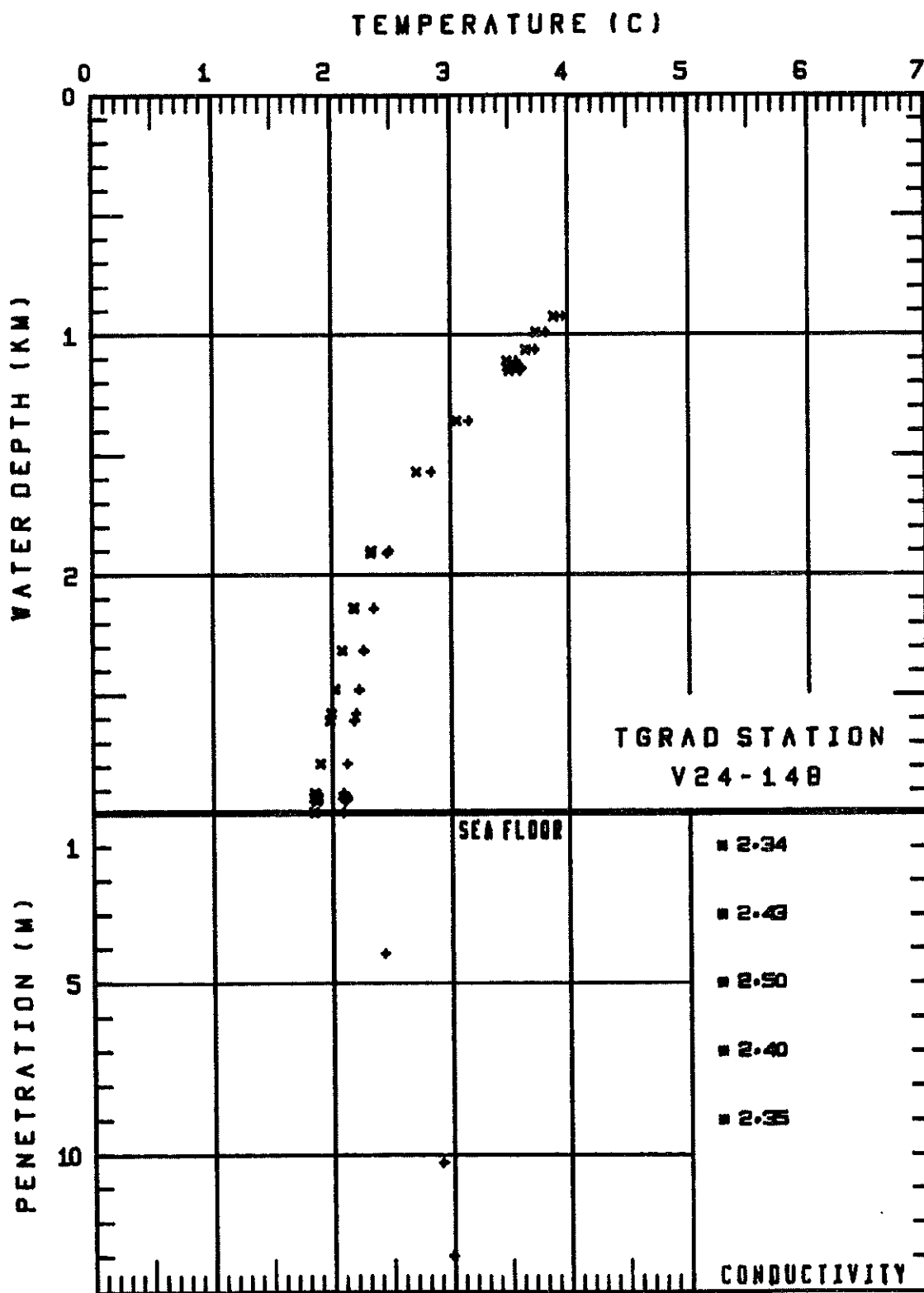
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
923.	3.95	3.88
991.	3.81	3.73
1061.	3.72	3.64
1147.	3.59	3.50
1138.	3.61	3.52
1110.	3.56	3.48
1132.	3.58	3.49
1360.	3.16	3.05
1569.	2.83	2.71
1900.	2.48	2.33
1911.	2.47	2.32
2139.	2.35	2.19
2314.	2.27	2.09
2475.	2.23	2.03
2576.	2.20	2.00
2607.	2.19	1.98
2787.	2.12	1.90
2912.	2.10	1.86
2910.	2.09	1.86
2943.	2.11	1.86
2925.	2.12	1.88
2930.	2.09	1.85
2936.	2.12	1.88
2988.	2.09	1.84

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
4.13	2.43
10.25	2.91
12.97	2.99

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.34
3.00	2.43
5.00	2.50
7.00	2.40
9.00	2.35



## TGRAD STATION V24-149

## WATER TEMPERATURES

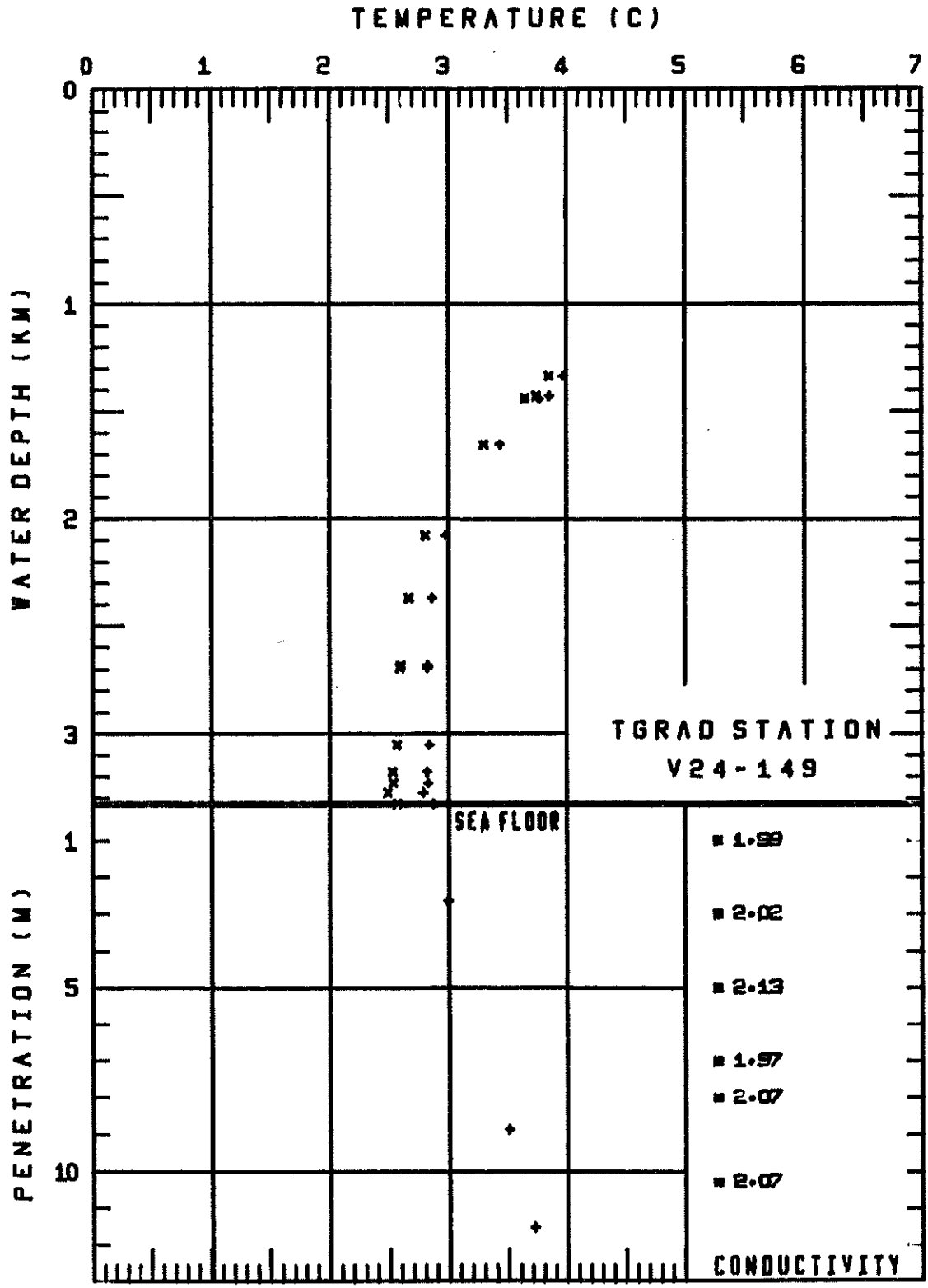
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1333.	3.95	3.84
1425.	3.85	3.73
1437.	3.76	3.64
1653.	3.43	3.29
2076.	2.97	2.80
2369.	2.86	2.66
2695.	2.82	2.59
2684.	2.82	2.59
3052.	2.84	2.56
3179.	2.81	2.52
3229.	2.82	2.53
3326.	2.87	2.56
3273.	2.78	2.48

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.64	2.99
8.86	3.50
11.53	3.71

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.99
3.00	2.02
5.00	2.13
7.00	1.97
8.00	2.07
10.30	2.07



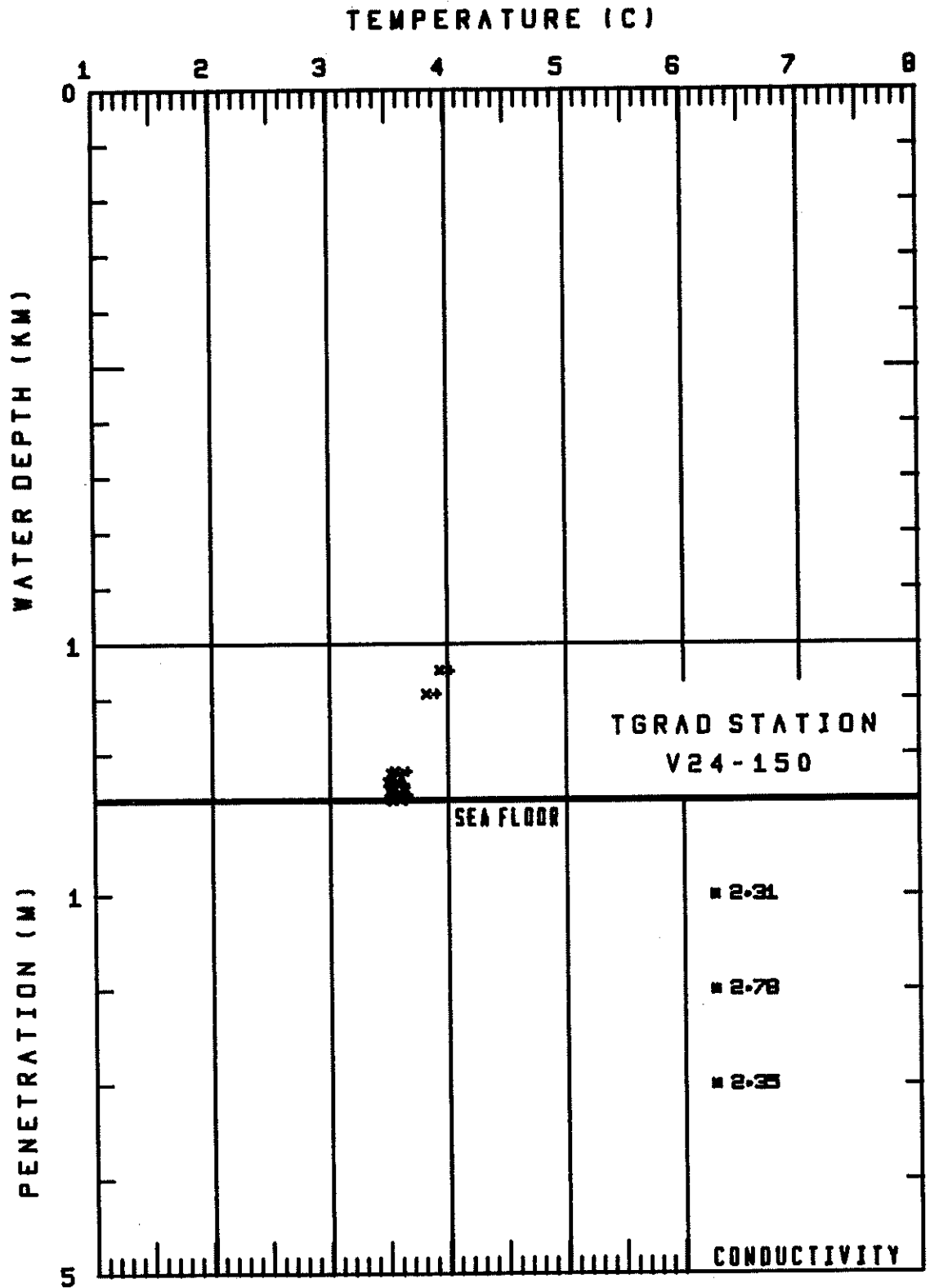
## TGRAD STATION V24-150

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1047.	4.02	3.94
1091.	3.90	3.82
1275.	3.62	3.52
1283.	3.64	3.53
1279.	3.61	3.51
1281.	3.63	3.53
1254.	3.63	3.53
1256.	3.62	3.52
1258.	3.63	3.53
1230.	3.65	3.55
1235.	3.61	3.52
1274.	3.66	3.56
1250.	3.59	3.49
1267.	3.63	3.52
1256.	3.62	3.52

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.31
2.00	2.78
3.00	2.35



## TGRAD STATION V24-151

## WATER TEMPERATURES

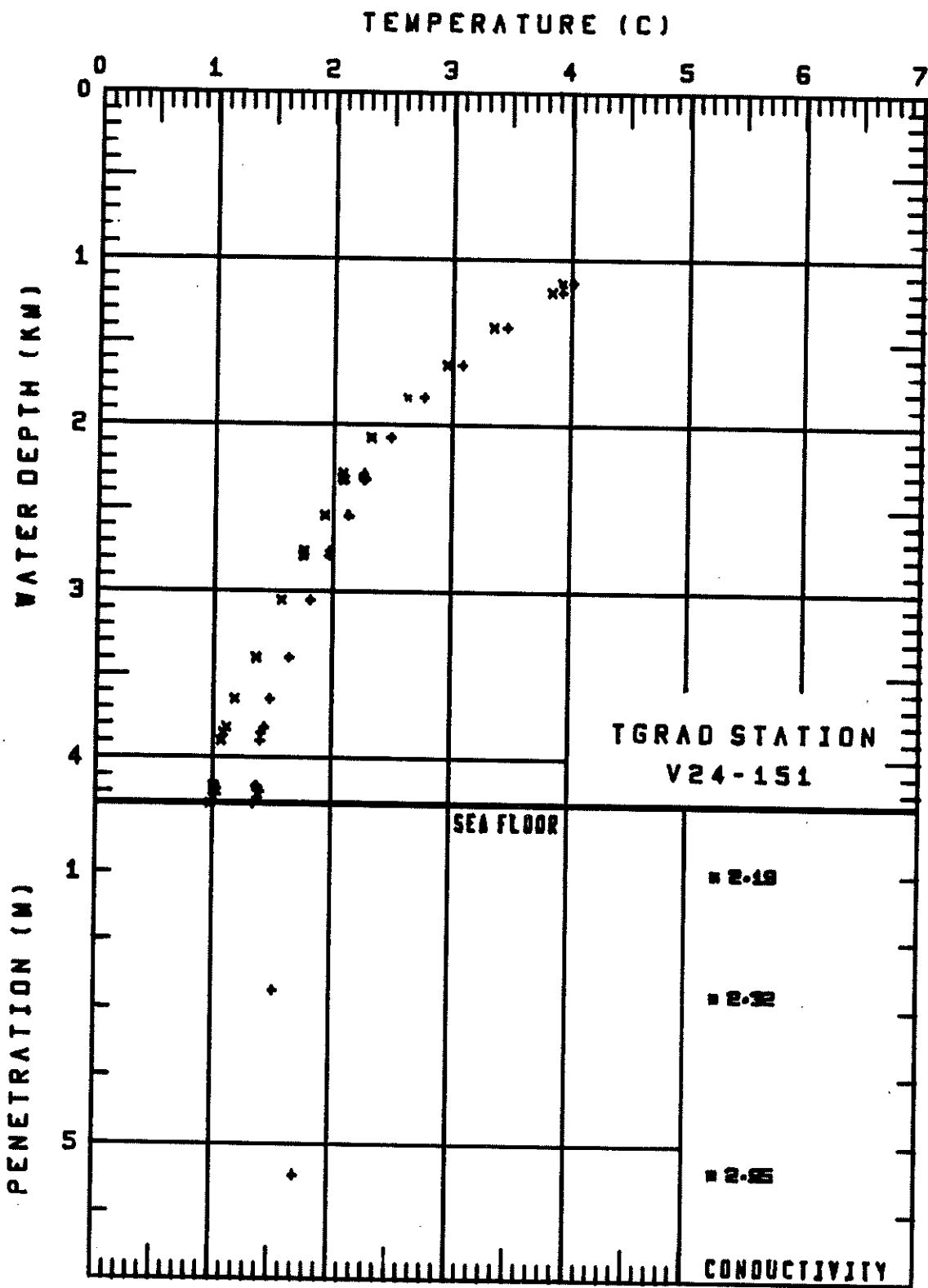
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1137.	4.02	3.92
1195.	3.93	3.83
1412.	3.46	3.35
1638.	3.08	2.95
1833.	2.76	2.62
2077.	2.48	2.32
2294.	2.26	2.08
2327.	2.27	2.09
2329.	2.26	2.08
2318.	2.25	2.07
2547.	2.13	1.93
2757.	1.97	1.75
2789.	1.97	1.75
3055.	1.81	1.57
3400.	1.64	1.36
3646.	1.48	1.18
3817.	1.43	1.11
3848.	1.41	1.09
3897.	1.40	1.07
4169.	1.37	1.01
4190.	1.38	1.01
4178.	1.38	1.02
4171.	1.37	1.01
4203.	1.40	1.03
4173.	1.38	1.02
4170.	1.37	1.01
4238.	1.38	1.01
4273.	1.35	0.98

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.75	1.53
5.47	1.71

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.19
2.80	2.32
5.40	2.95



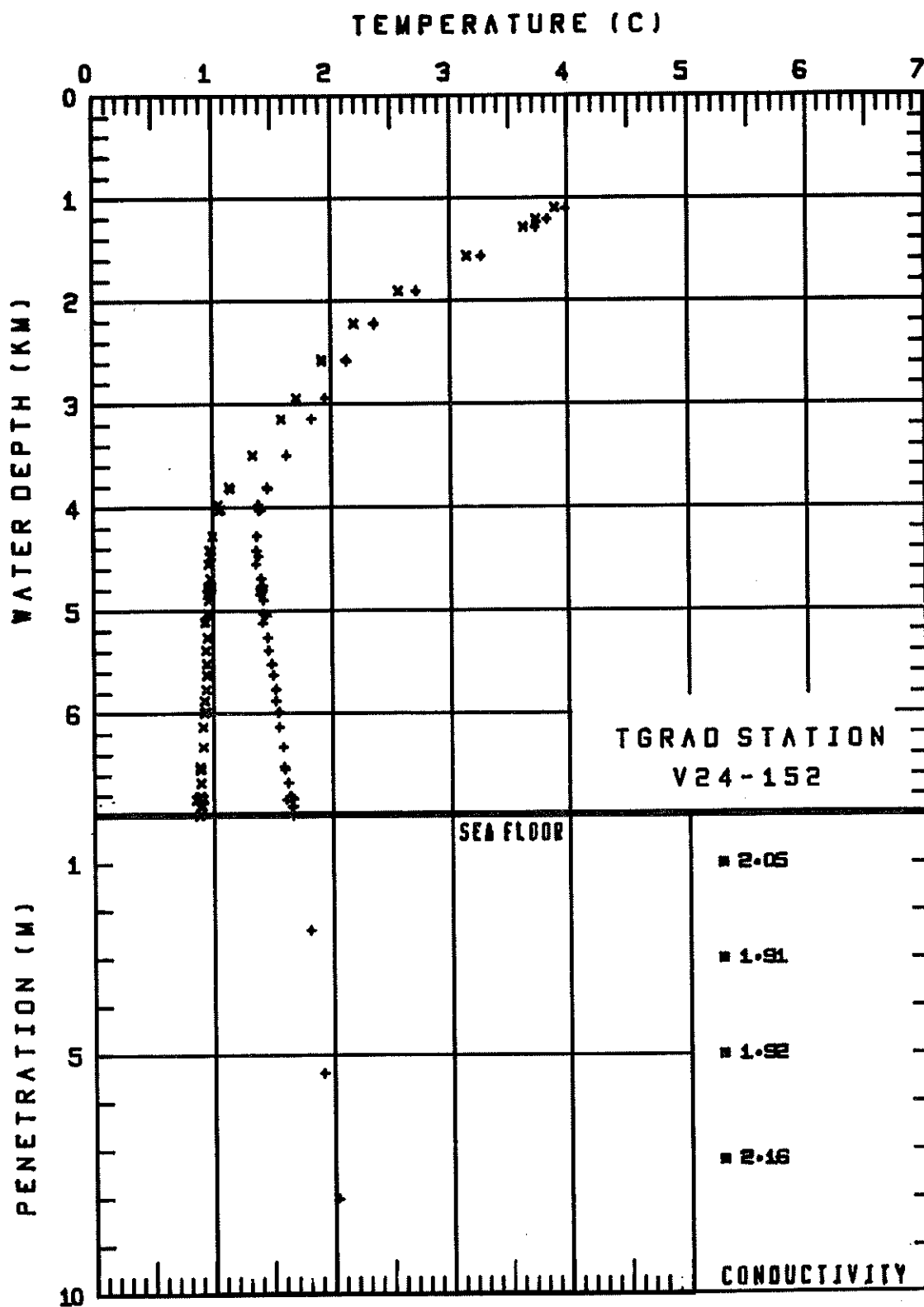
## TGRAD STATION V24-152

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1099.	3.97	3.88
1201.	3.82	3.73
1280.	3.72	3.62
1561.	3.26	3.14
1895.	2.71	2.56
2214.	2.36	2.18
2563.	2.12	1.92
2579.	2.12	1.92
2938.	1.95	1.71
3141.	1.84	1.58
3485.	1.63	1.34
3813.	1.47	1.15
3800.	1.46	1.14
3971.	1.38	1.05
4015.	1.41	1.07
	1.40	1.05
	1.37	1.00
	1.36	0.97
	1.38	0.99
	1.39	0.99
	1.37	0.96
	1.40	0.98
	41	0.97
	1	0.97
		0.97
		0.98
		0.98
		0.98
		0.98
		0.97
		0.97
		0.96
		0.97
		0.97
		0.95
		0.94
		95
		4

CONDUCTIVITY	IES
2.05	
1.91	
1.92	
2.16	



## TGRAD STATION V24-153

## WATER TEMPERATURES

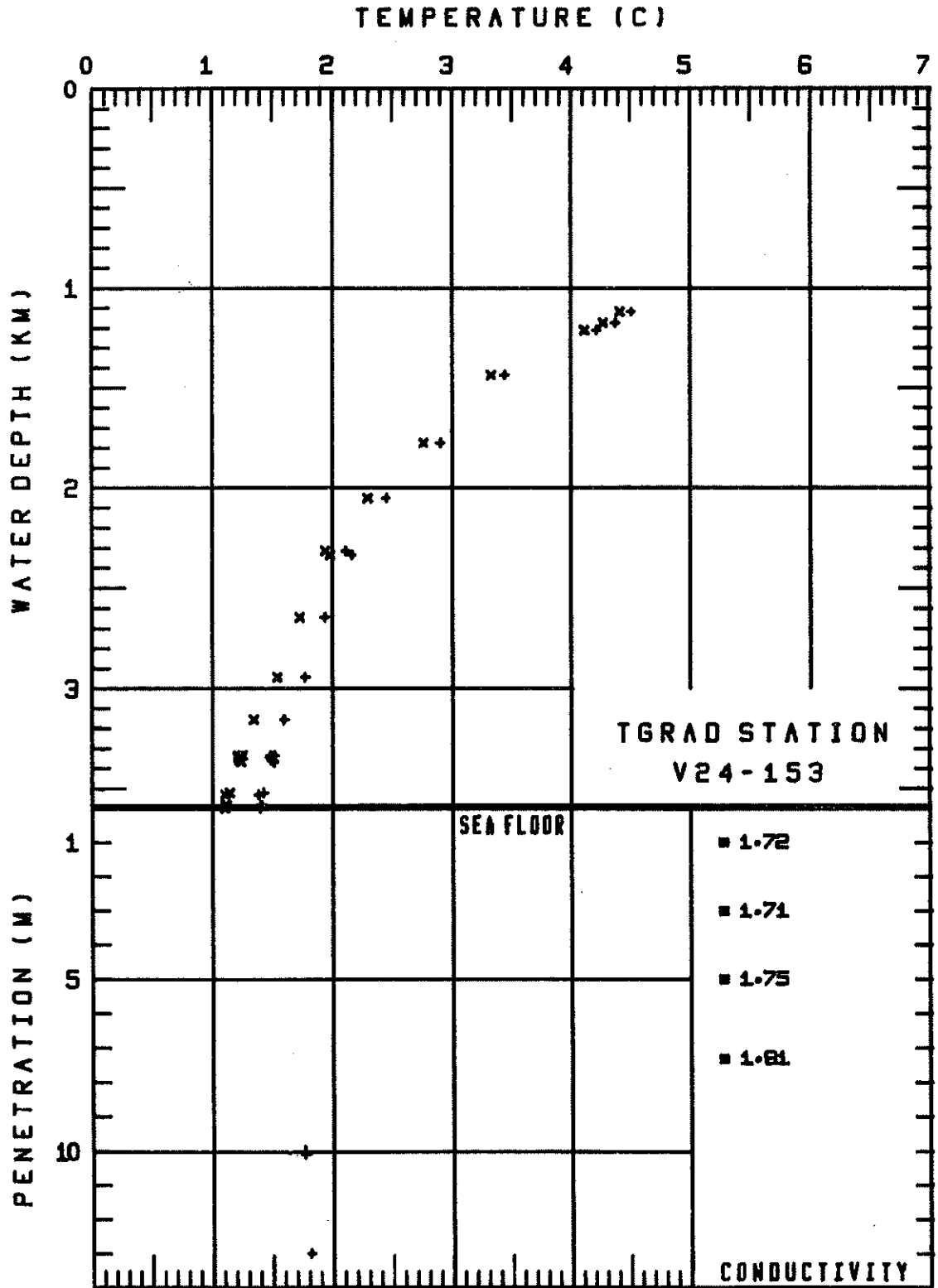
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1116.	4.50	4.41
1170.	4.37	4.27
1206.	4.21	4.10
1432.	3.43	3.32
1770.	2.89	2.75
2047.	2.44	2.28
2332.	2.15	1.97
2308.	2.11	1.93
2640.	1.93	1.72
2940.	1.77	1.53
3154.	1.59	1.34
3335.	1.51	1.25
3340.	1.47	1.21
3335.	1.48	1.21
3365.	1.51	1.24
3357.	1.49	1.22
3519.	1.42	1.14
3589.	1.40	1.11
3583.	1.41	1.11
3580.	1.40	1.11
3531.	1.38	1.10
3597.	1.40	1.10

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
10.07	1.75
12.97	1.81

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.72
3.00	1.71
5.00	1.75
7.30	1.81



## TGRAD STATION V24-154

## WATER TEMPERATURES

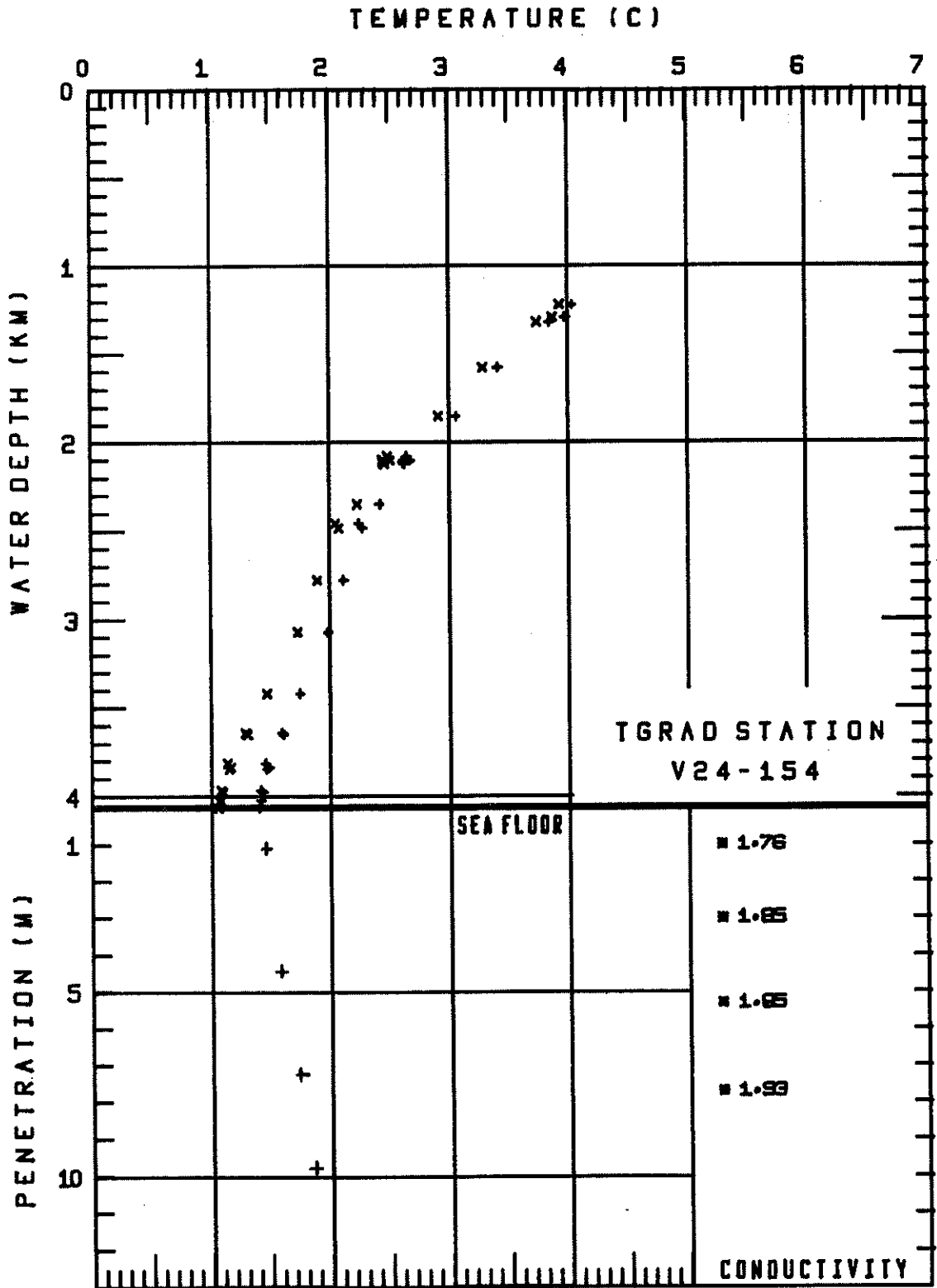
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1220.	4.02	3.92
1290.	3.96	3.86
1320.	3.83	3.73
1577.	3.40	3.27
1849.	3.05	2.90
2113.	2.61	2.44
2118.	2.61	2.45
2101.	2.60	2.44
2113.	2.61	2.44
2100.	2.66	2.49
2078.	2.64	2.47
2345.	2.41	2.22
2483.	2.27	2.07
2456.	2.23	2.04
2778.	2.11	1.88
3070.	1.98	1.72
3415.	1.74	1.46
3637.	1.59	1.28
3648.	1.60	1.29
3841.	1.46	1.14
3834.	1.48	1.15
3810.	1.44	1.12
3973.	1.42	1.08
3965.	1.41	1.07
4023.	1.41	1.06
4063.	1.39	1.04

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
1.02	1.43
4.31	1.59
7.23	1.73
9.90	1.85

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.76
3.00	1.85
5.30	1.85
7.70	1.93



## TGRAD STATION V24-155

## WATER TEMPERATURES

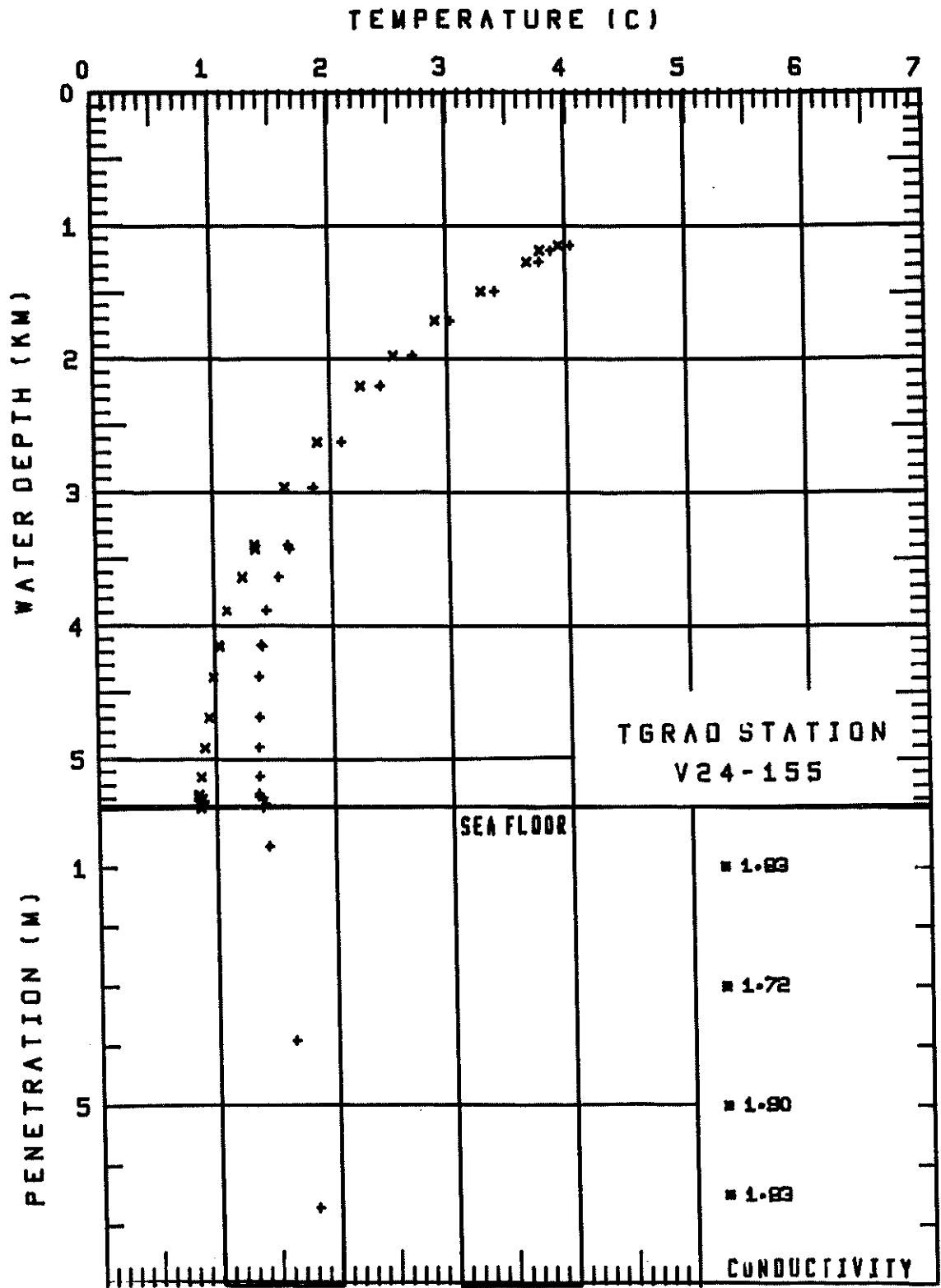
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1148.	4.04	3.94
1180.	3.88	3.79
1269.	3.78	3.68
1488.	3.41	3.29
1709.	3.04	2.90
1974.	2.70	2.54
2198.	2.43	2.26
2618.	2.09	1.89
2956.	1.85	1.61
3390.	1.63	1.35
3423.	1.64	1.36
3633.	1.54	1.24
3880.	1.44	1.11
4142.	1.39	1.03
4155.	1.40	1.04
4381.	1.37	0.98
4689.	1.37	0.95
4913.	1.36	0.90
5136.	1.36	0.88
5295.	1.39	0.88
5281.	1.35	0.85
5264.	1.36	0.85
5342.	1.41	0.89
5366.	1.39	0.87

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.65	1.43
3.91	1.64
6.71	1.81

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.83
3.00	1.72
5.00	1.90
6.50	1.83



## TGRAD STATION V24-156

## WATER TEMPERATURES

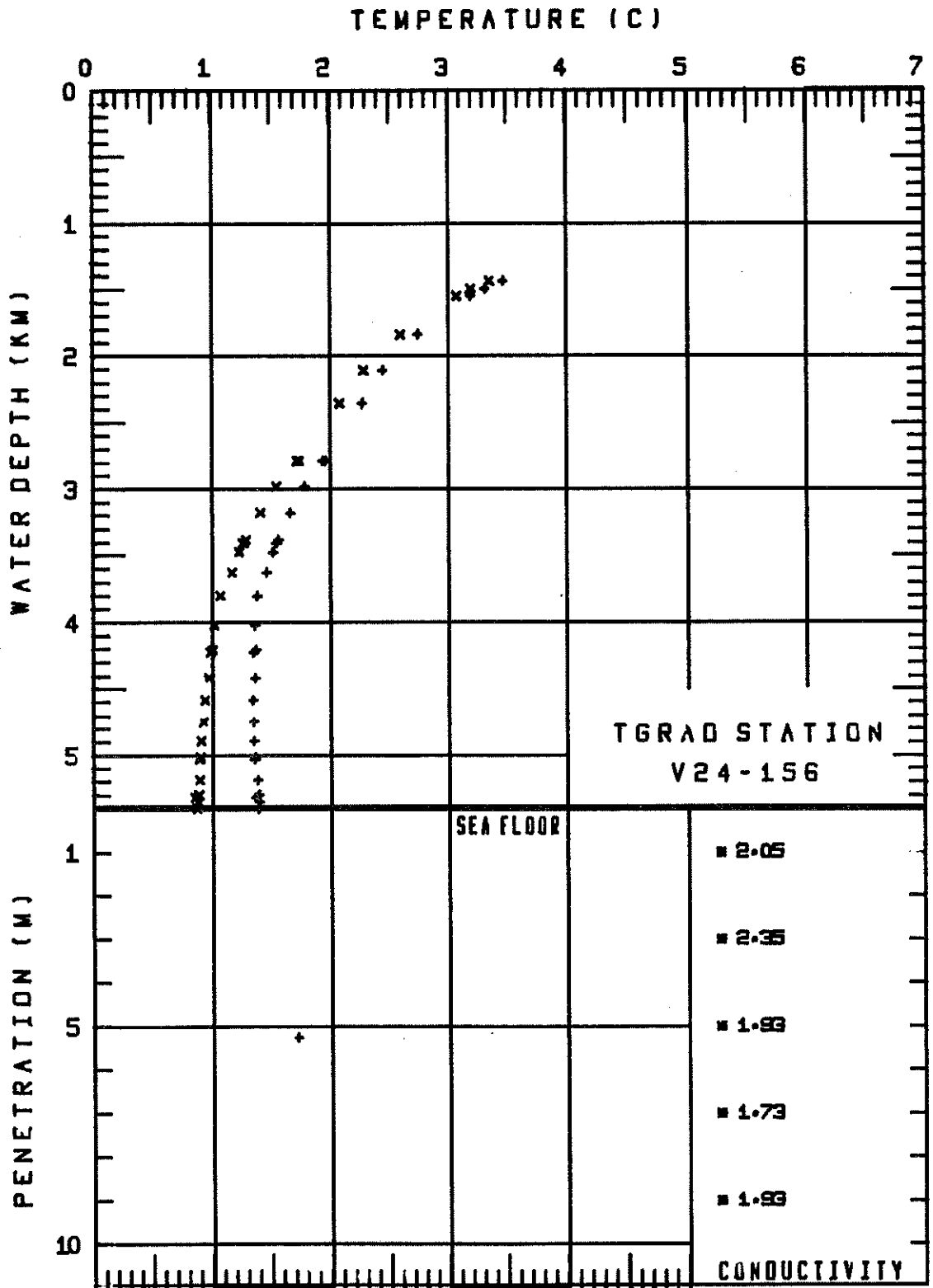
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1434.	3.47	3.35
1494.	3.31	3.20
1548.	3.19	3.07
1837.	2.74	2.59
2107.	2.44	2.28
2353.	2.26	2.08
2783.	1.96	1.74
2783.	1.94	1.72
2975.	1.78	1.55
3173.	1.67	1.41
3380.	1.57	1.29
3400.	1.55	1.27
3401.	1.55	1.27
3466.	1.52	1.24
3625.	1.47	1.17
3796.	1.39	1.07
4020.	1.36	1.02
4207.	1.37	1.01
4222.	1.35	0.99
4413.	1.36	0.98
4581.	1.35	0.94
4742.	1.36	0.93
4892.	1.36	0.90
5026.	1.36	0.89
5012.	1.37	0.90
5184.	1.39	0.89
5298.	1.39	0.89
5314.	1.36	0.86
5295.	1.40	0.89
5352.	1.40	0.88
5399.	1.40	0.87

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
5.27	1.72

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.05
3.00	2.35
5.00	1.93
7.00	1.73
9.00	1.93



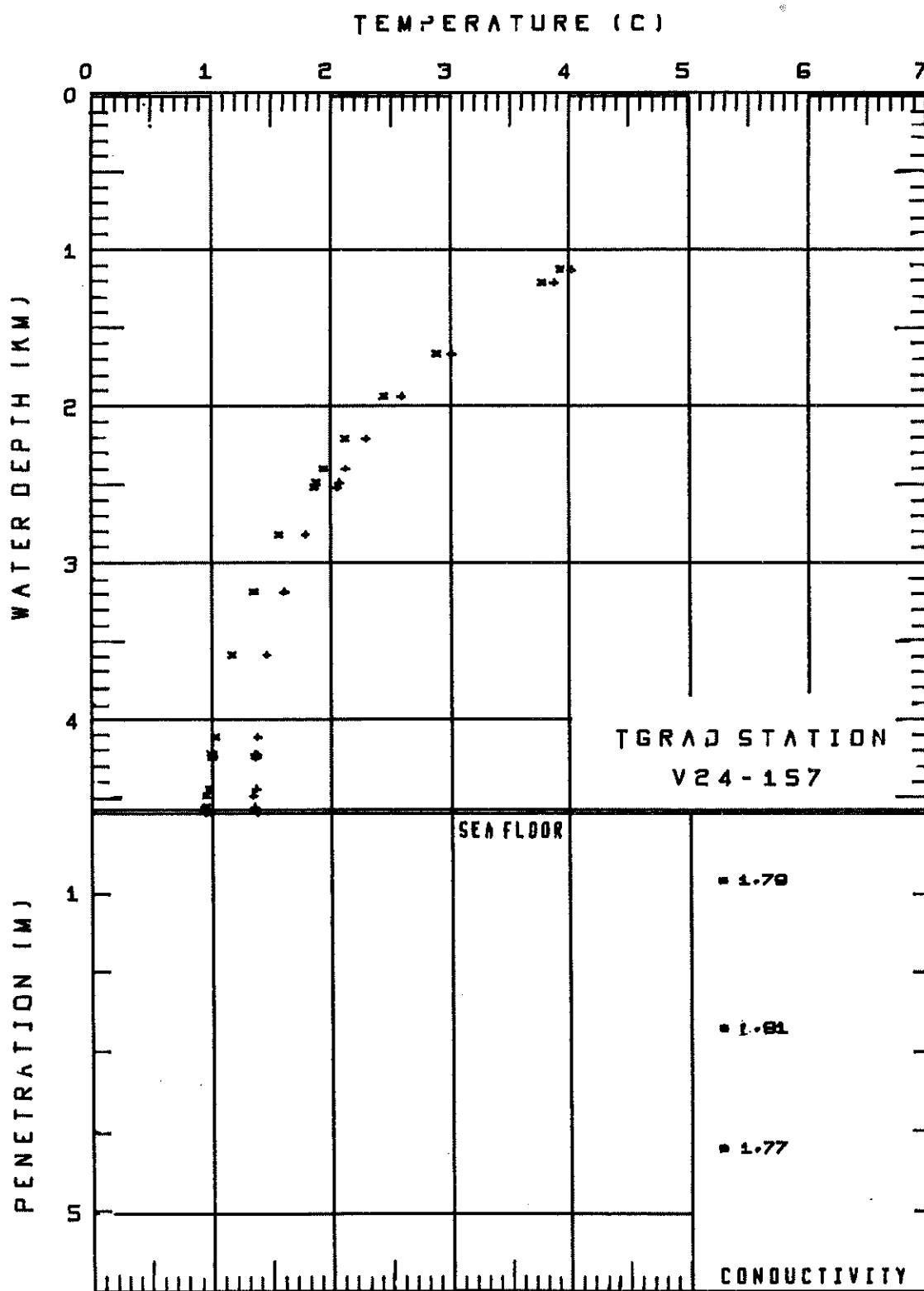
## TGRAD STATION V24-157

## WATER TEMPERATURES

DEPTH METERS	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1115	4.016	3.927
1202	3.869	3.772
1659	3.013	2.882
1929	2.588	2.440
2201	2.289	2.119
2393	2.121	1.937
2480	2.073	1.881
2511	2.050	1.855
2818	1.782	1.562
3173	1.611	1.358
3179	1.608	1.355
3581	1.467	1.173
4108	1.381	1.029
4215	1.378	1.013
4237	1.368	1.001
4209	1.358	0.995
4225	1.380	1.013
4439	1.371	0.979
4472	1.346	0.951
4558	1.355	0.949
4591	1.384	0.972
4573	1.351	0.942
4568	1.348	0.941

## SEDIMENT CONDUCTIVITIES

DEPTH METERS	CONDUCTIVITY
0.85	1.78
2.70	1.81
4.20	1.77



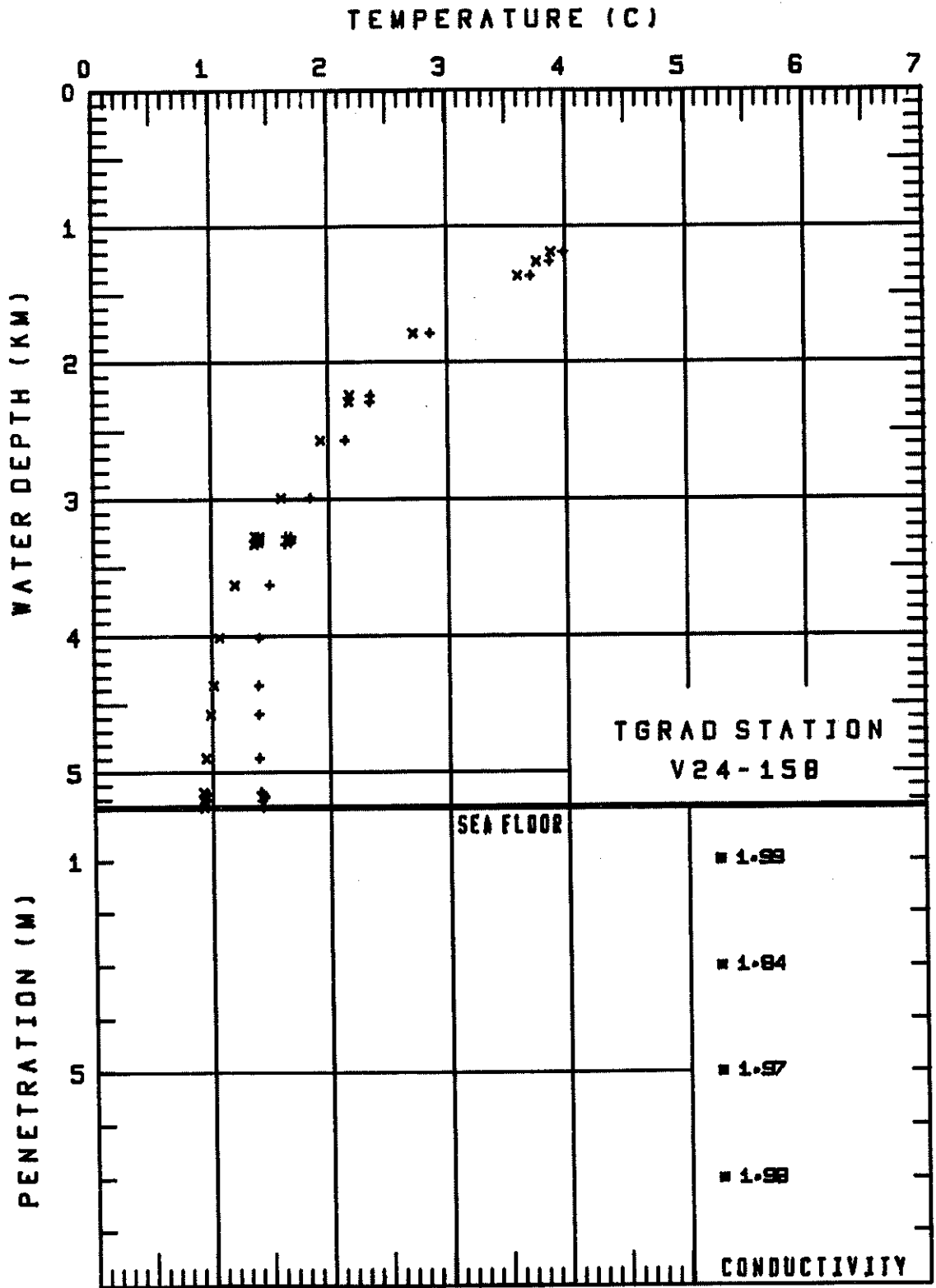
## TGRAD STATION V24-158

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1193.	3.98	3.88
1260.	3.86	3.76
1367.	3.71	3.60
1787.	2.86	2.72
2245.	2.35	2.18
2288.	2.35	2.17
2570.	2.14	1.94
2990.	1.84	1.60
3277.	1.68	1.42
3279.	1.68	1.42
3314.	1.68	1.41
3295.	1.68	1.41
3270.	1.64	1.38
3297.	1.67	1.41
3326.	1.64	1.37
3628.	1.50	1.20
4014.	1.41	1.07
4361.	1.40	1.02
4570.	1.40	0.99
4893.	1.40	0.95
5148.	1.41	0.92
5178.	1.44	0.95
5158.	1.43	0.93
5205.	1.42	0.92
5256.	1.43	0.93

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.99
3.00	1.84
5.00	1.97
7.00	1.98



## TGRAD STATION V24-159

## WATER TEMPERATURES

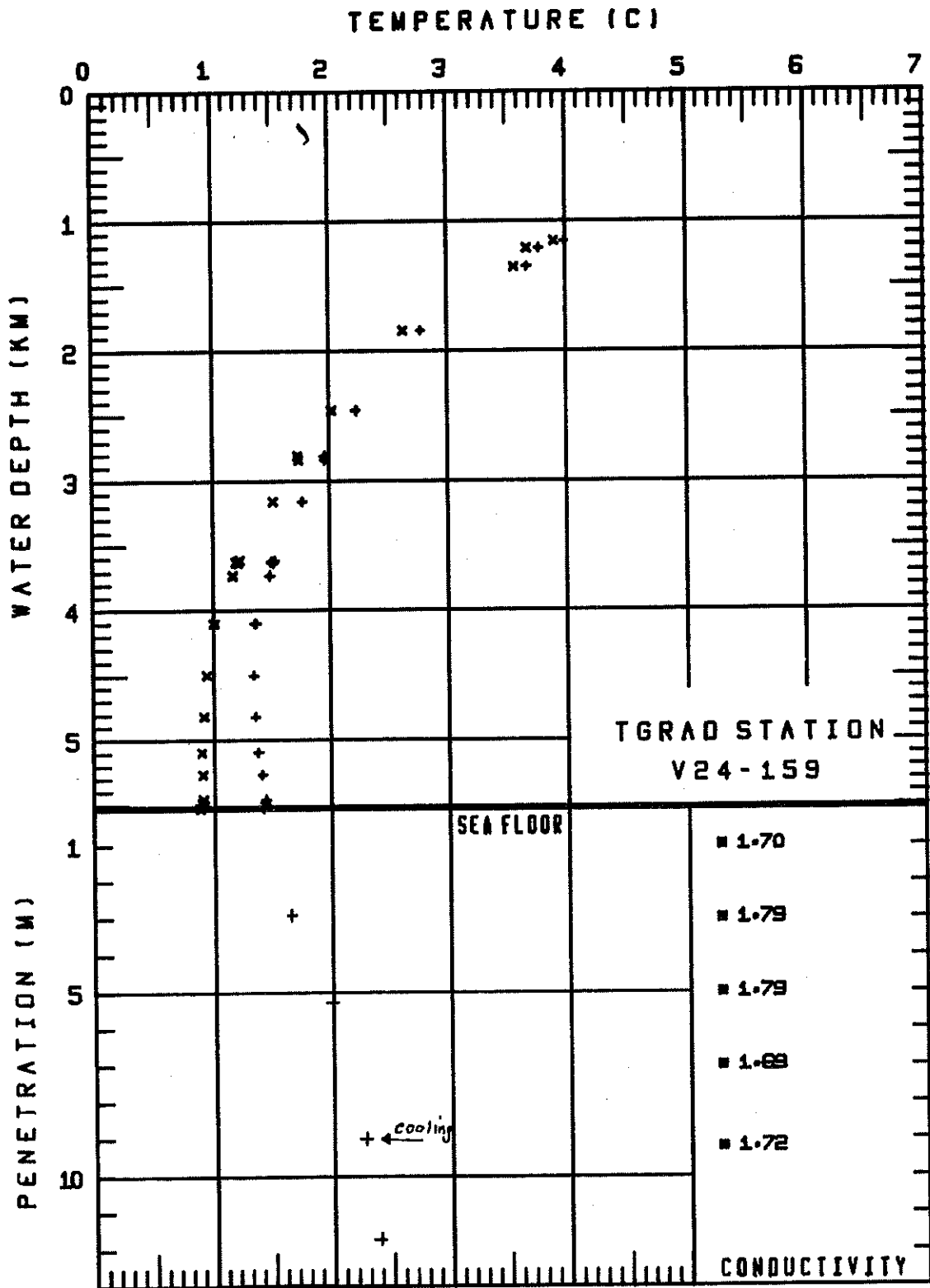
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1152.	3.99	3.90
1211.	3.77	3.67
1352.	3.68	3.57
1844.	2.77	2.63
2457.	2.22	2.02
2804.	1.95	1.73
2839.	1.96	1.73
3155.	1.77	1.51
3628.	1.51	1.21
3620.	1.50	1.20
3625.	1.49	1.19
3609.	1.53	1.23
3729.	1.48	1.17
4099.	1.36	1.01
4095.	1.35	1.00
4496.	1.34	0.94
4813.	1.35	0.91
5090.	1.37	0.90
5262.	1.40	0.90
5527.	1.42	0.88
5518.	1.41	0.87
5502.	1.46	0.91
5475.	1.43	0.89
5455.	1.44	0.90

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.90	1.63
5.24	1.99
9.03	2.22
11.69	2.34

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.70
3.00	1.79
5.00	1.79
7.00	1.69
9.20	1.72



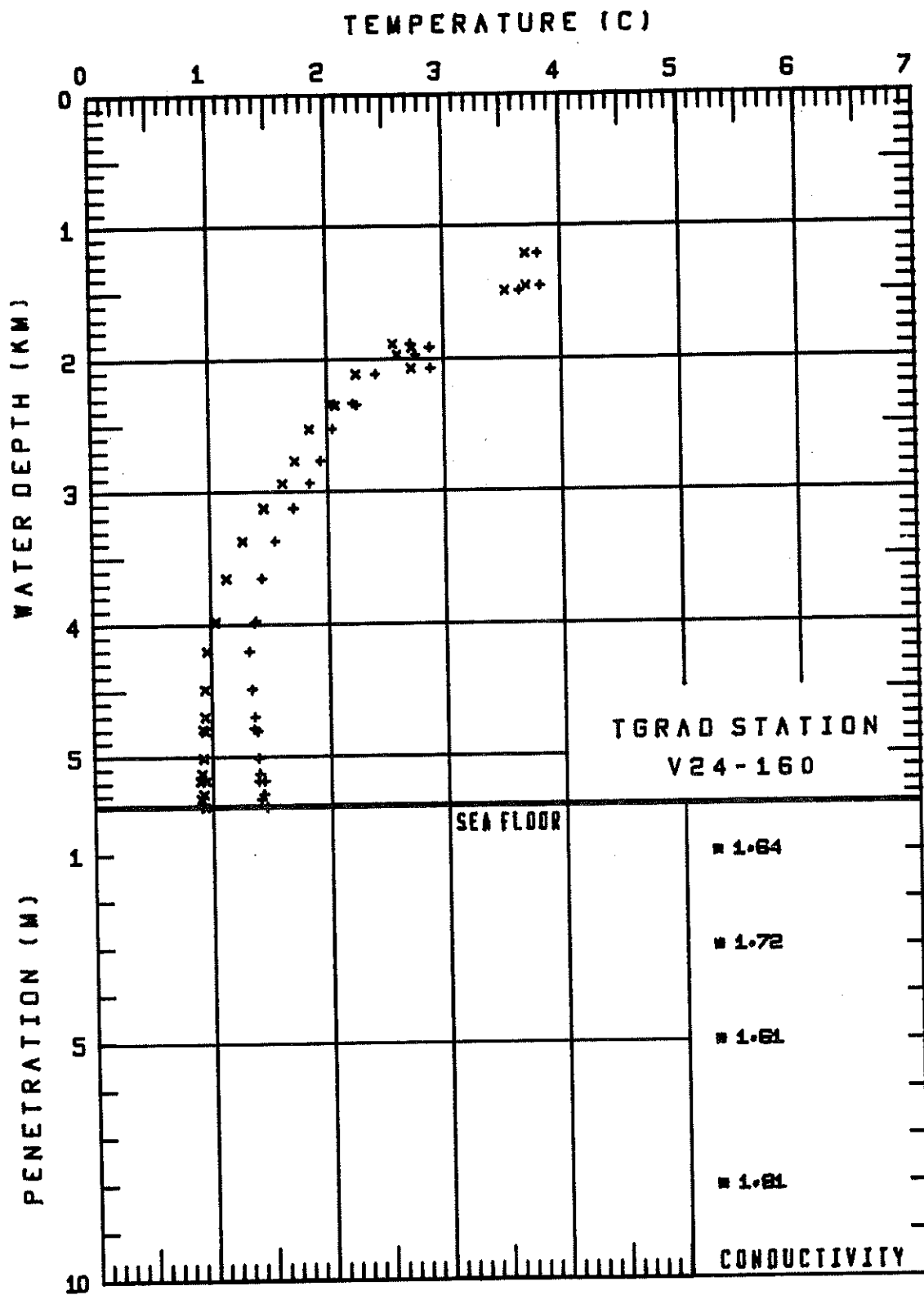
## TGRAD STATION V24-160

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1208.	3.80	3.70
1451.	3.83	3.71
1487.	3.65	3.53
1915.	2.88	2.73
1971.	2.76	2.60
2071.	2.89	2.72
1889.	2.72	2.57
2111.	2.41	2.25
2337.	2.21	2.03
2344.	2.25	2.07
2526.	2.04	1.85
2762.	1.94	1.72
2930.	1.85	1.61
3119.	1.71	1.46
3124.	1.71	1.46
3371.	1.55	1.27
3648.	1.43	1.13
3971.	1.38	1.04
3986.	1.37	1.03
4201.	1.32	0.96
4485.	1.34	0.94
4694.	1.36	0.94
4801.	1.38	0.94
4784.	1.35	0.92
5003.	1.39	0.92
5125.	1.39	0.91
5177.	1.44	0.94
5180.	1.39	0.90
5279.	1.43	0.92
5312.	1.41	0.90
5375.	1.45	0.93

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.64
3.00	1.72
5.00	1.61
8.05	1.81



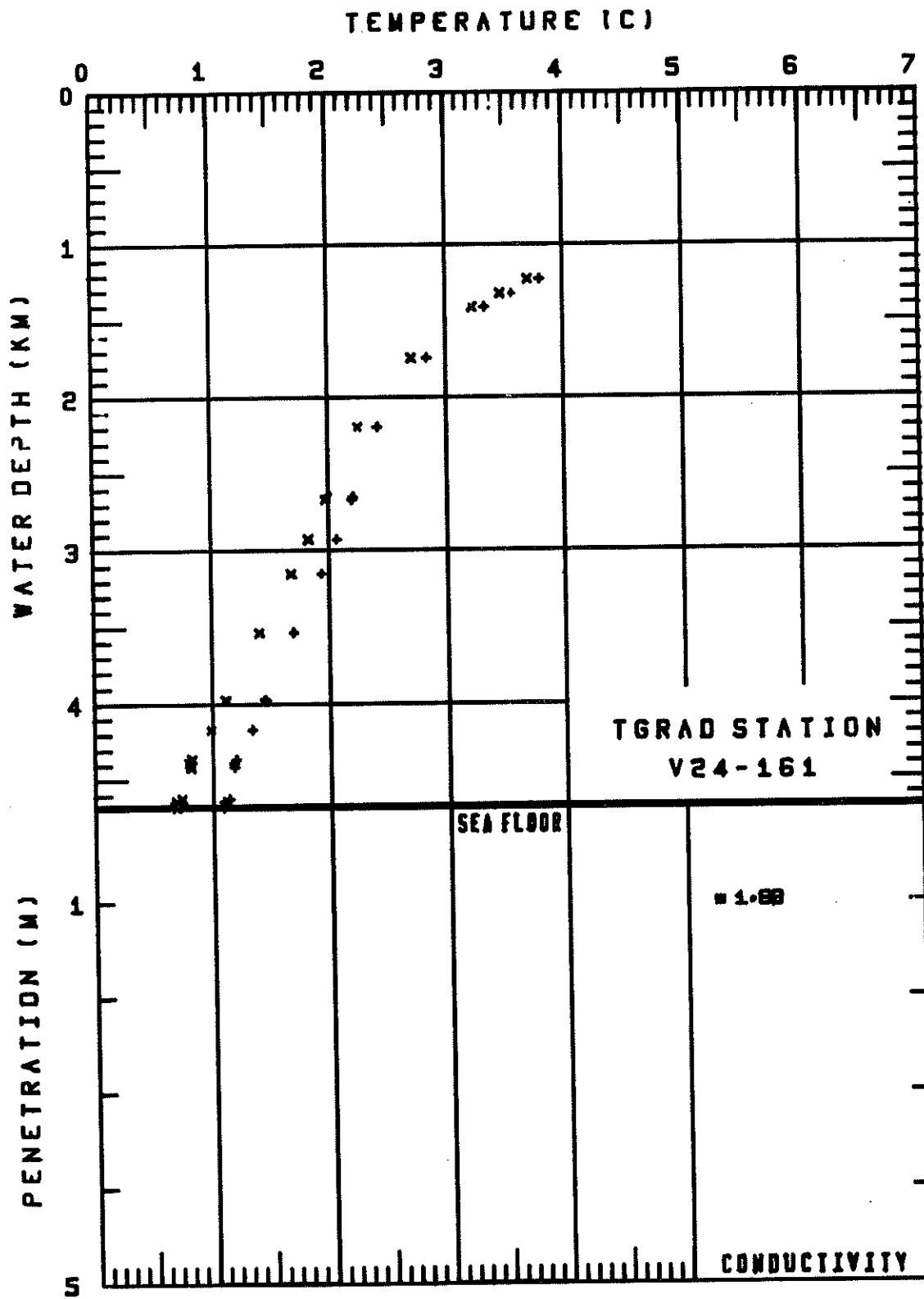
## TGRAD STATION V24-161

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1224.	3.80	3.70
1321.	3.57	3.46
1407.	3.33	3.22
1740.	2.84	2.71
2191.	2.42	2.25
2653.	2.20	1.99
2667.	2.19	1.98
2926.	2.07	1.83
3149.	1.94	1.68
3533.	1.70	1.41
3974.	1.46	1.12
3972.	1.45	1.11
4167.	1.34	0.99
4362.	1.20	0.82
4384.	1.18	0.80
4409.	1.19	0.81
4619.	1.14	0.73
4634.	1.09	0.69
4677.	1.09	0.68
4664.	1.11	0.70
4661.	1.08	0.68

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.88



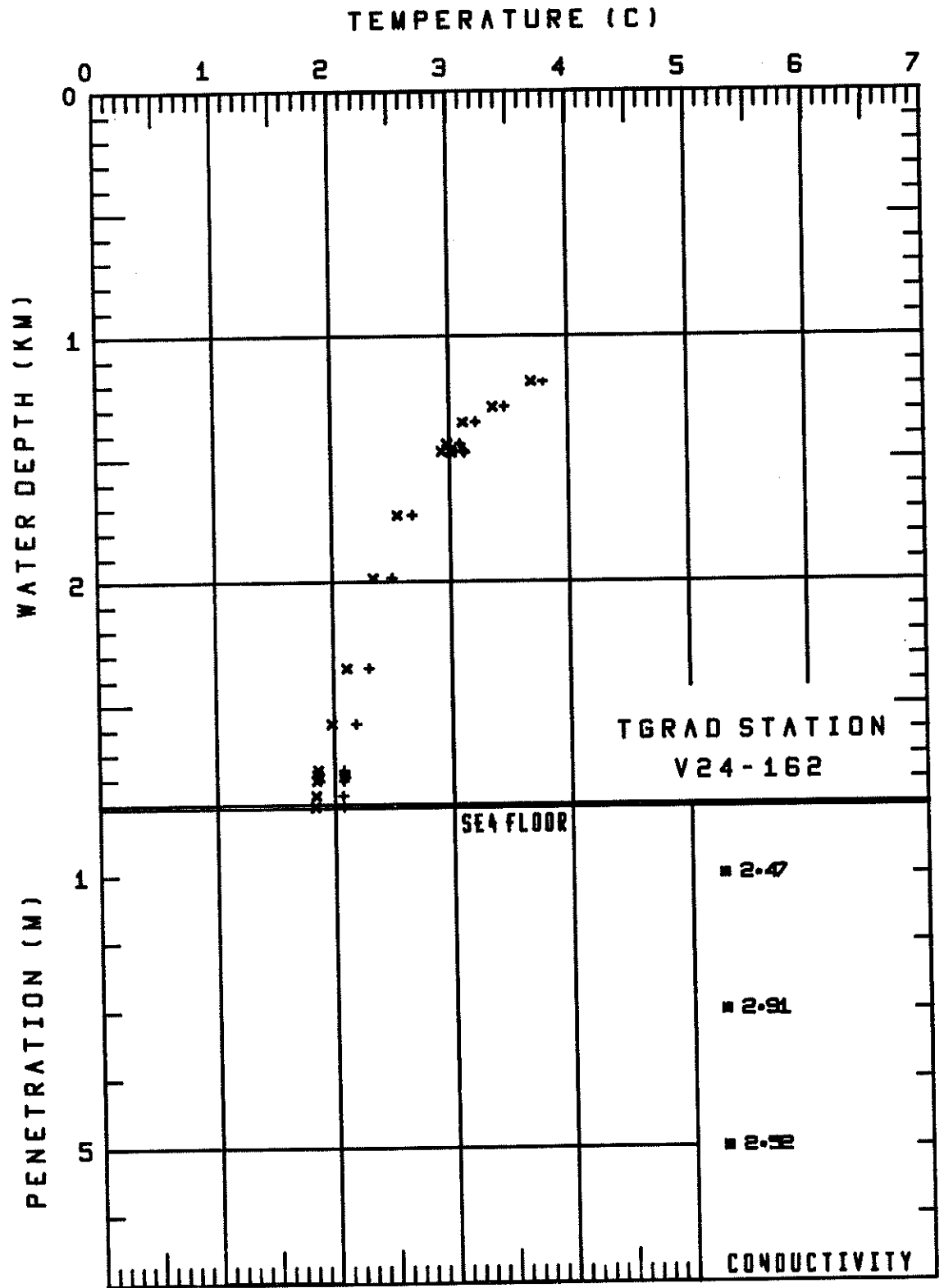
## TGRAD STATION V24-162

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1184.	3.78	3.69
1287.	3.46	3.36
1349.	3.21	3.11
1470.	3.12	3.01
1464.	3.11	3.00
1437.	3.08	2.97
1468.	3.04	2.93
1727.	2.67	2.54
1984.	2.49	2.34
2349.	2.29	2.11
2575.	2.18	1.98
2760.	2.07	1.85
2790.	2.08	1.86
2777.	2.07	1.85
2803.	2.07	1.84
2865.	2.06	1.83
2910.	2.06	1.83

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.47
3.00	2.91
5.00	2.52



## TGRAD STATION V24-163

## WATER TEMPERATURES

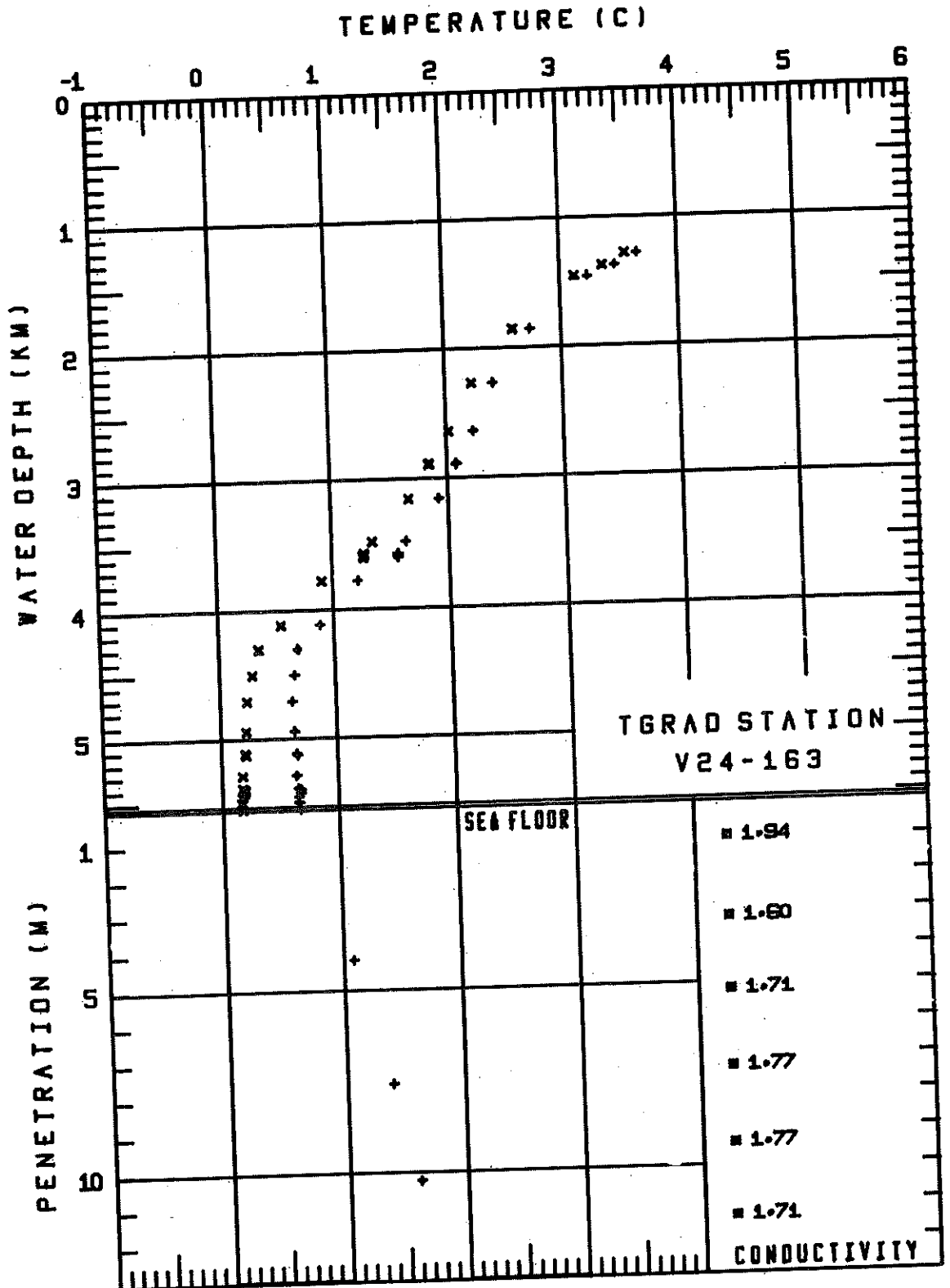
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1277.	3.65	3.55
1372.	3.46	3.35
1451.	3.23	3.11
1848.	2.72	2.58
2265.	2.40	2.22
2632.	2.23	2.01
2879.	2.07	1.84
2886.	2.07	1.84
3149.	1.92	1.66
3481.	1.63	1.34
3600.	1.56	1.26
3587.	1.56	1.26
3572.	1.56	1.26
3586.	1.56	1.27
3771.	1.21	0.90
4114.	0.87	0.54
4299.	0.68	0.34
4303.	0.69	0.34
4505.	0.65	0.28
4705.	0.62	0.23
4941.	0.63	0.21
5122.	0.65	0.21
5111.	0.65	0.20
5285.	0.64	0.18
5385.	0.65	0.18
5419.	0.67	0.19
5394.	0.68	0.19
5390.	0.67	0.19
5453.	0.66	0.17
5493.	0.65	0.16
5550.	0.67	0.16

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
4.18	1.08
7.58	1.39
10.25	1.60

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.94
3.20	1.60
5.20	1.71
7.30	1.77
9.40	1.77
11.40	1.71



## TGRAD STATION V24-164

## WATER TEMPERATURES

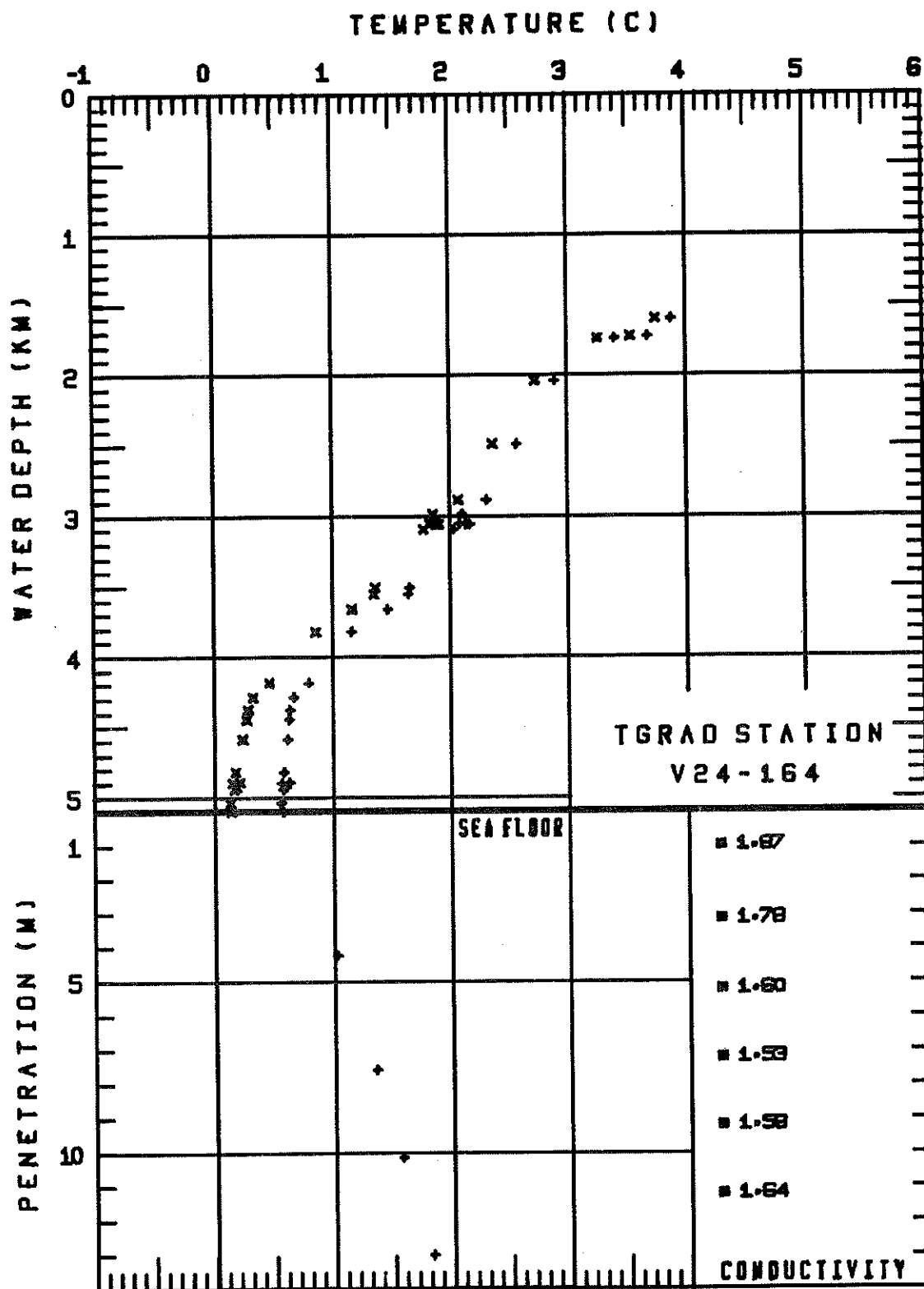
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
2040.	2.89	2.72
2881.	2.31	2.07
2986.	2.10	1.85
3045.	2.13	1.88
3061.	2.17	1.91
3061.	2.14	1.88
3052.	2.08	1.83
1596.	3.88	3.75
2490.	2.57	2.36
1725.	3.68	3.53
1742.	3.40	3.26
3090.	2.03	1.77
3549.	1.64	1.35
3507.	1.65	1.36
3657.	1.46	1.16
3816.	1.16	0.85
4180.	0.79	0.46
4282.	0.66	0.32
4441.	0.63	0.27
4376.	0.63	0.28
4584.	0.61	0.24
4817.	0.58	0.18
4921.	0.60	0.18
4890.	0.62	0.21
4893.	0.56	0.15
4940.	0.58	0.16
5035.	0.56	0.13
5098.	0.57	0.14

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
4.23	1.02
7.58	1.34
10.15	1.57
12.99	1.82

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.87
3.15	1.78
5.20	1.60
7.20	1.53
9.20	1.58
11.20	1.64



## TGRAD STATION V24-165

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1209.	4.57	4.46
1287.	4.25	4.14
1257.	3.70	3.60
1611.	3.15	3.02
1860.	2.75	2.61
2215.	2.54	2.36
2515.	2.31	2.11
2658.	2.14	1.93
2653.	2.17	1.96
2616.	2.14	1.93
2626.	2.13	1.92
2619.	2.10	1.89
2686.	2.01	1.80
2857.	1.89	1.66
2917.	1.90	1.67
3138.	1.56	1.31
3501.	1.19	0.92
3787.	0.89	0.59
3988.	0.70	0.39
4267.	0.67	0.32
4131.	0.69	0.36
4453.	0.61	0.25
4509.	0.70	0.33
4444.	0.61	0.25
4498.	0.63	0.27
4542.	0.59	0.22
4639.	0.62	0.24

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.76

## SEDIMENT TEMPERATURES

Depth	Temperature
7.35	.72
11.36	.77
16.72	.85

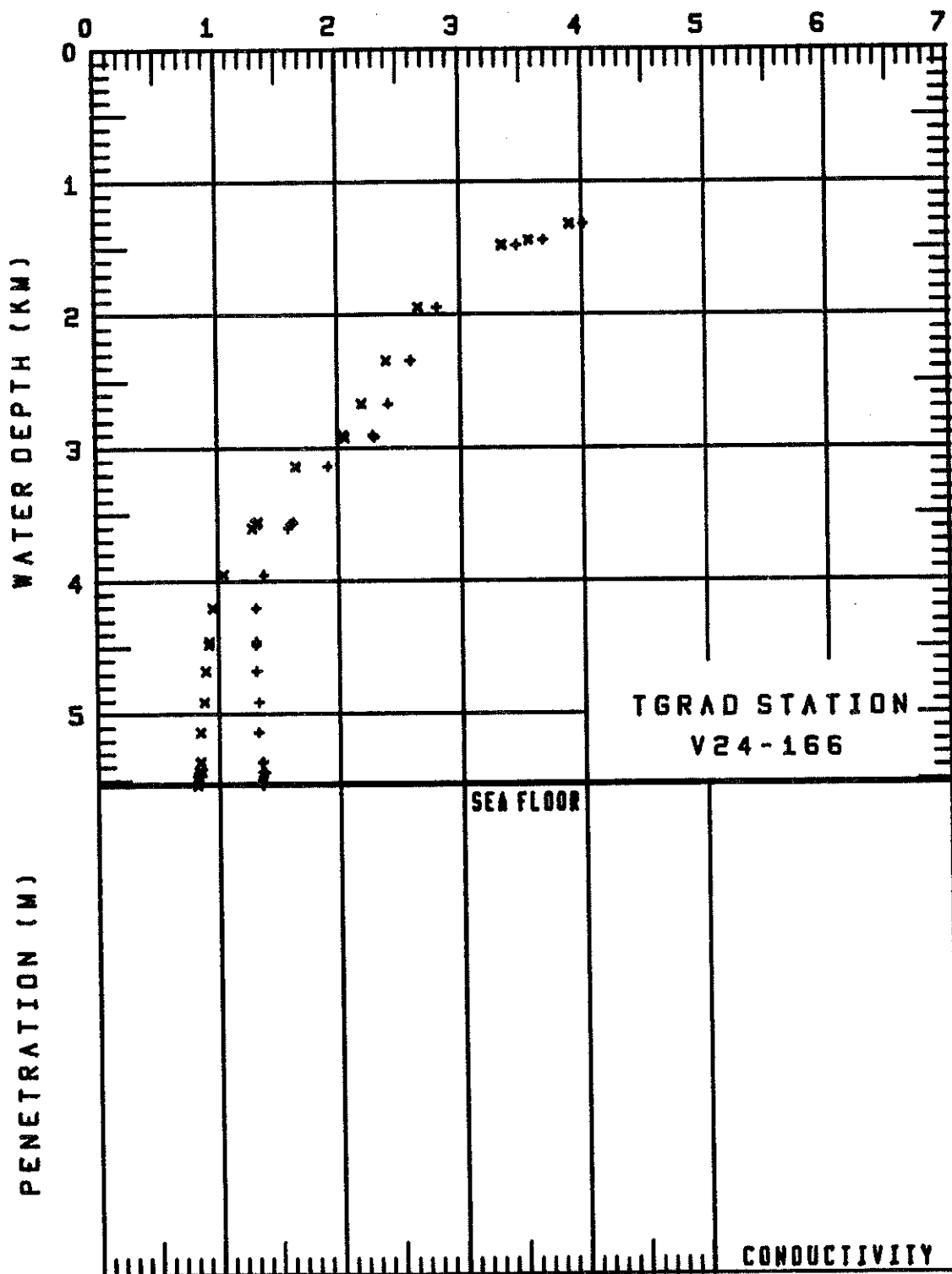


## TGRAD STATION V24-166

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1317.	4.00	3.90
1438.	3.68	3.56
1473.	3.46	3.34
1942.	2.81	2.66
2342.	2.59	2.40
2669.	2.41	2.19
2918.	2.30	2.05
2904.	2.28	2.04
3136.	1.91	1.65
3550.	1.63	1.33
3567.	1.61	1.31
3558.	1.63	1.33
3597.	1.59	1.29
3944.	1.38	1.05
4195.	1.31	0.95
4477.	1.31	0.92
4452.	1.32	0.92
4673.	1.32	0.90
4906.	1.33	0.88
5134.	1.33	0.85
5357.	1.36	0.84
5354.	1.36	0.85
5429.	1.36	0.83
5434.	1.38	0.86
5464.	1.36	0.83
5490.	1.35	0.82
5532.	1.36	0.82

TEMPERATURE (C)



## TGRAD STATION V24-167

## WATER TEMPERATURES

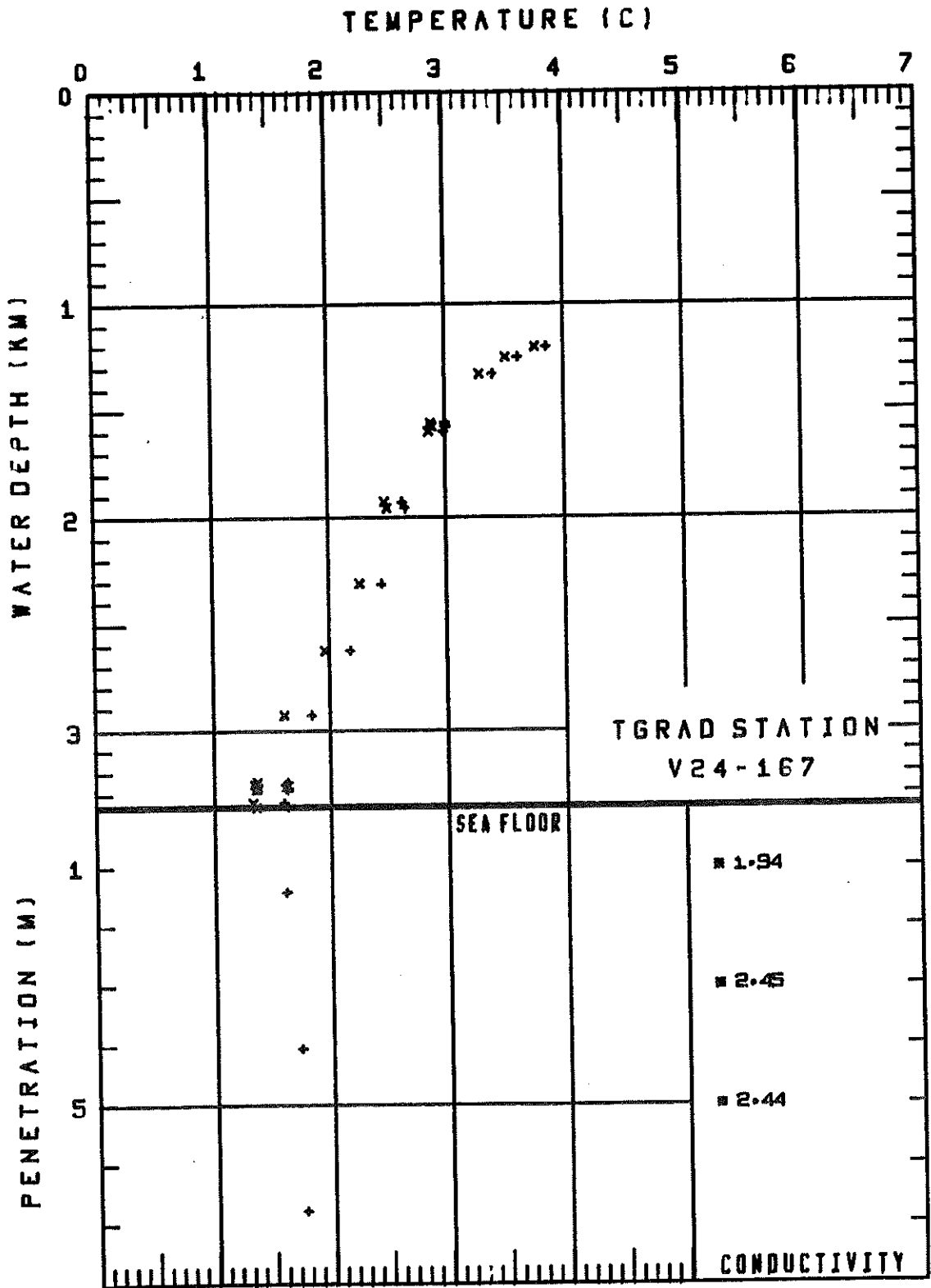
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1201.	3.86	3.76
1251.	3.62	3.52
1328.	3.41	3.30
1556.	3.01	2.89
1577.	3.02	2.89
1598.	2.99	2.87
1957.	2.66	2.51
1925.	2.64	2.49
2312.	2.45	2.27
2624.	2.18	1.97
2928.	1.85	1.61
3278.	1.64	1.38
3267.	1.64	1.38
3239.	1.64	1.38
3252.	1.62	1.35
3276.	1.63	1.36
3360.	1.64	1.36
3338.	1.61	1.34

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
1.43	1.62
4.05	1.73
6.77	1.76

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.94
3.00	2.45
5.00	2.44



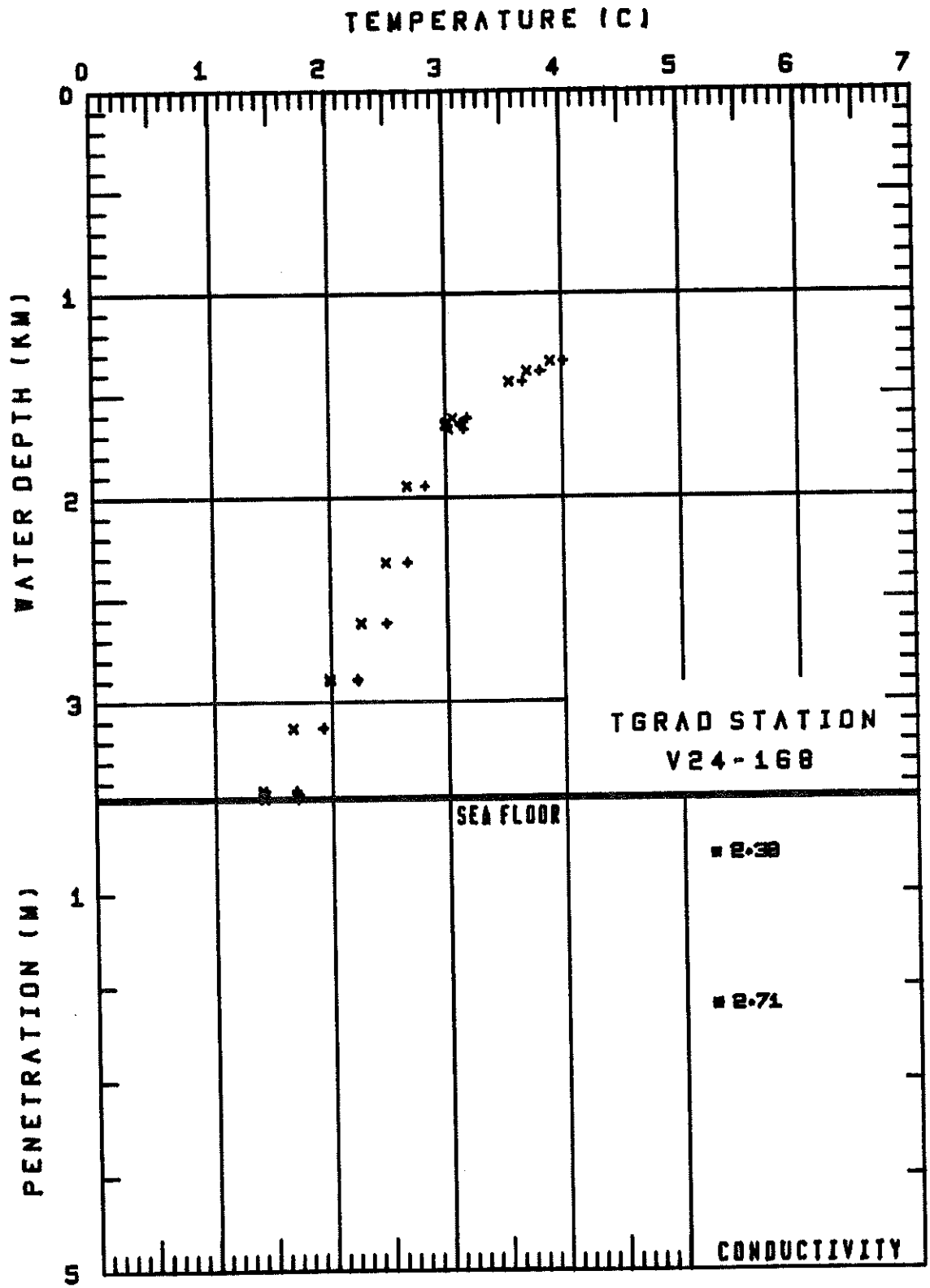
## TGRAD STATION V24-168

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1332.	4.01	3.90
1383.	3.81	3.70
1433.	3.66	3.55
1610.	3.19	3.06
1665.	3.16	3.03
1632.	3.13	3.01
1647.	3.13	3.00
1640.	3.13	3.00
1945.	2.82	2.67
2317.	2.67	2.48
2616.	2.48	2.26
2898.	2.23	1.99
2890.	2.23	1.99
3130.	1.93	1.67
3453.	1.71	1.43
3444.	1.69	1.41
3435.	1.69	1.41
3468.	1.69	1.41
3476.	1.71	1.42

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
0.60	2.38
2.20	2.71



## TGRAD STATION V24-169

## WATER TEMPERATURES

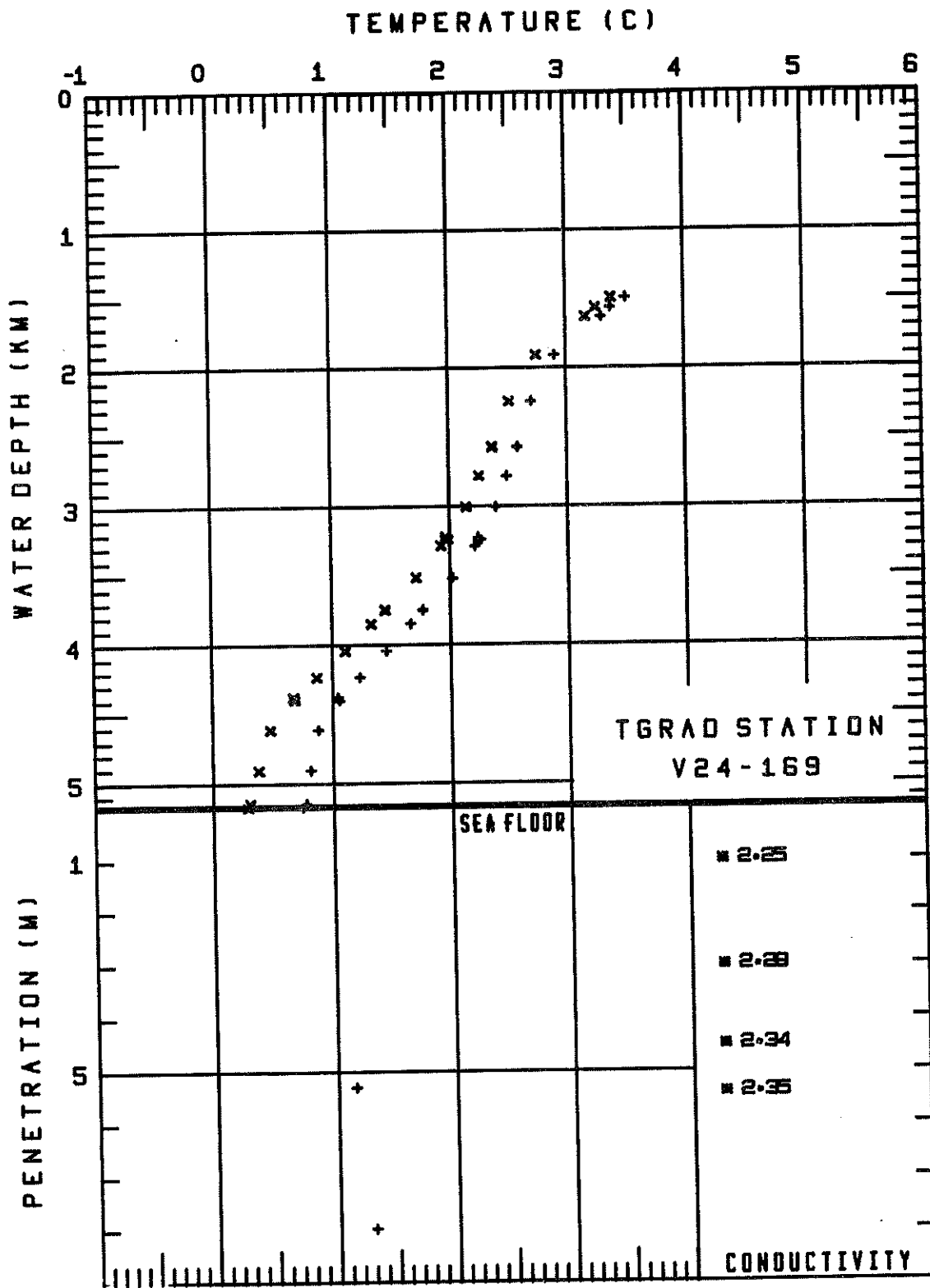
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
5172.	0.74	0.28
5143.	0.76	0.31
4902.	0.81	0.38
4610.	0.87	0.48
4394.	1.05	0.68
4372.	1.04	0.67
4227.	1.23	0.87
4040.	1.45	1.10
3844.	1.66	1.33
3740.	1.77	1.45
3748.	1.77	1.45
3512.	2.02	1.72
3278.	2.21	1.93
3216.	2.24	1.97
3234.	2.26	1.98
3238.	2.25	1.97
2998.	2.40	2.14
2773.	2.49	2.25
2569.	2.58	2.36
2565.	2.58	2.37
2237.	2.70	2.51
1902.	2.90	2.75
1626.	3.30	3.17
1559.	3.38	3.25
1489.	3.51	3.39

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
5.29	1.15
7.97	1.30

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.25
3.00	2.28
4.50	2.34
5.40	2.35



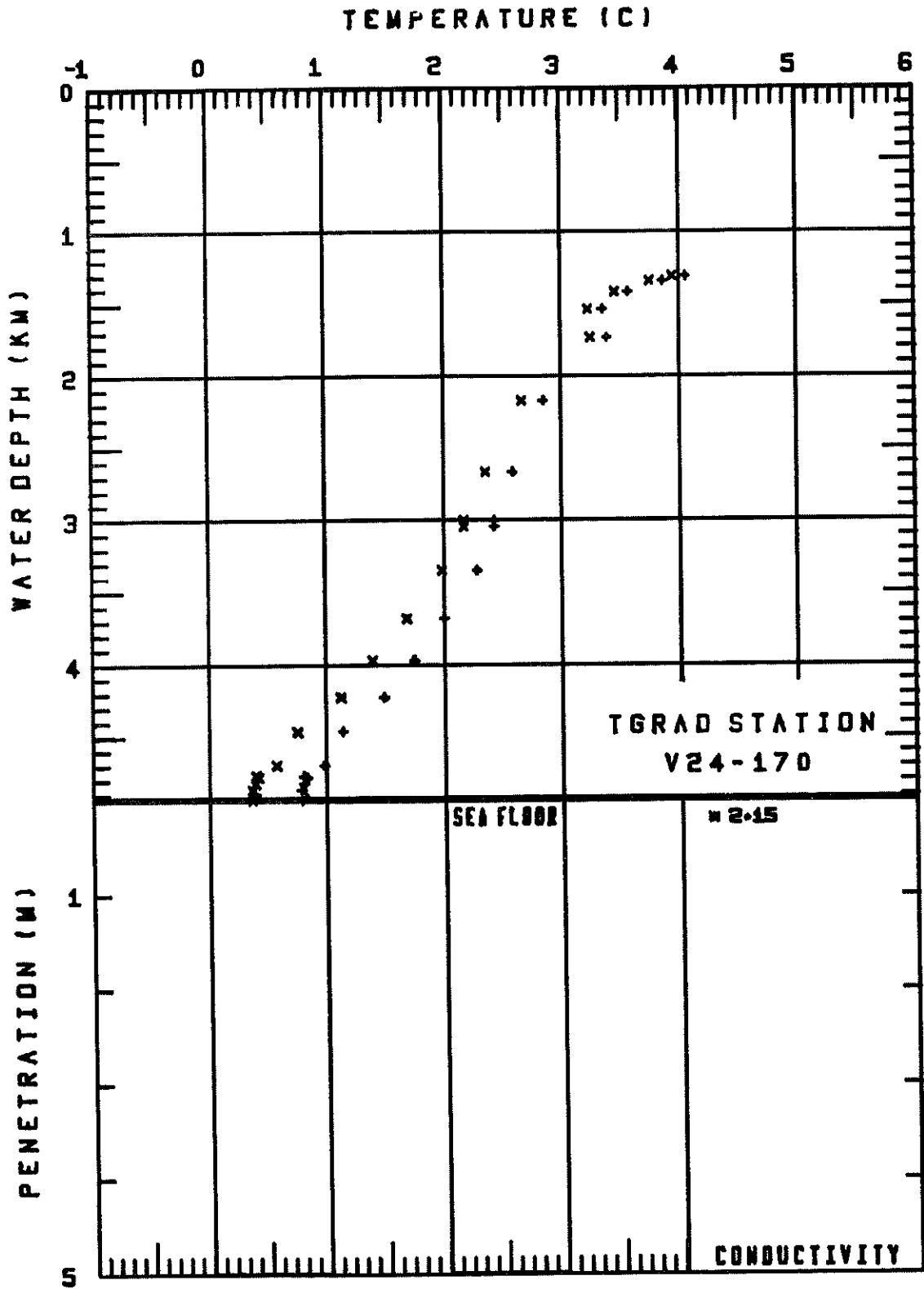
## TGRAD STATION V24-170

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1303.	4.05	3.94
1338.	3.86	3.75
1415.	3.57	3.46
1536.	3.35	3.23
1732.	3.39	3.25
2168.	2.84	2.67
2666.	2.58	2.35
3040.	2.43	2.16
2998.	2.43	2.17
3342.	2.28	1.98
3681.	2.00	1.68
3969.	1.74	1.39
4223.	1.49	1.12
4223.	1.49	1.12
4455.	1.14	0.75
4694.	0.98	0.57
4919.	0.82	0.40
4777.	0.83	0.42
4763.	0.81	0.40
4817.	0.81	0.39
4862.	0.79	0.37
4934.	0.80	0.37

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
0.20	2.15



## TGRAD STATION V24-171

## WATER TEMPERATURES

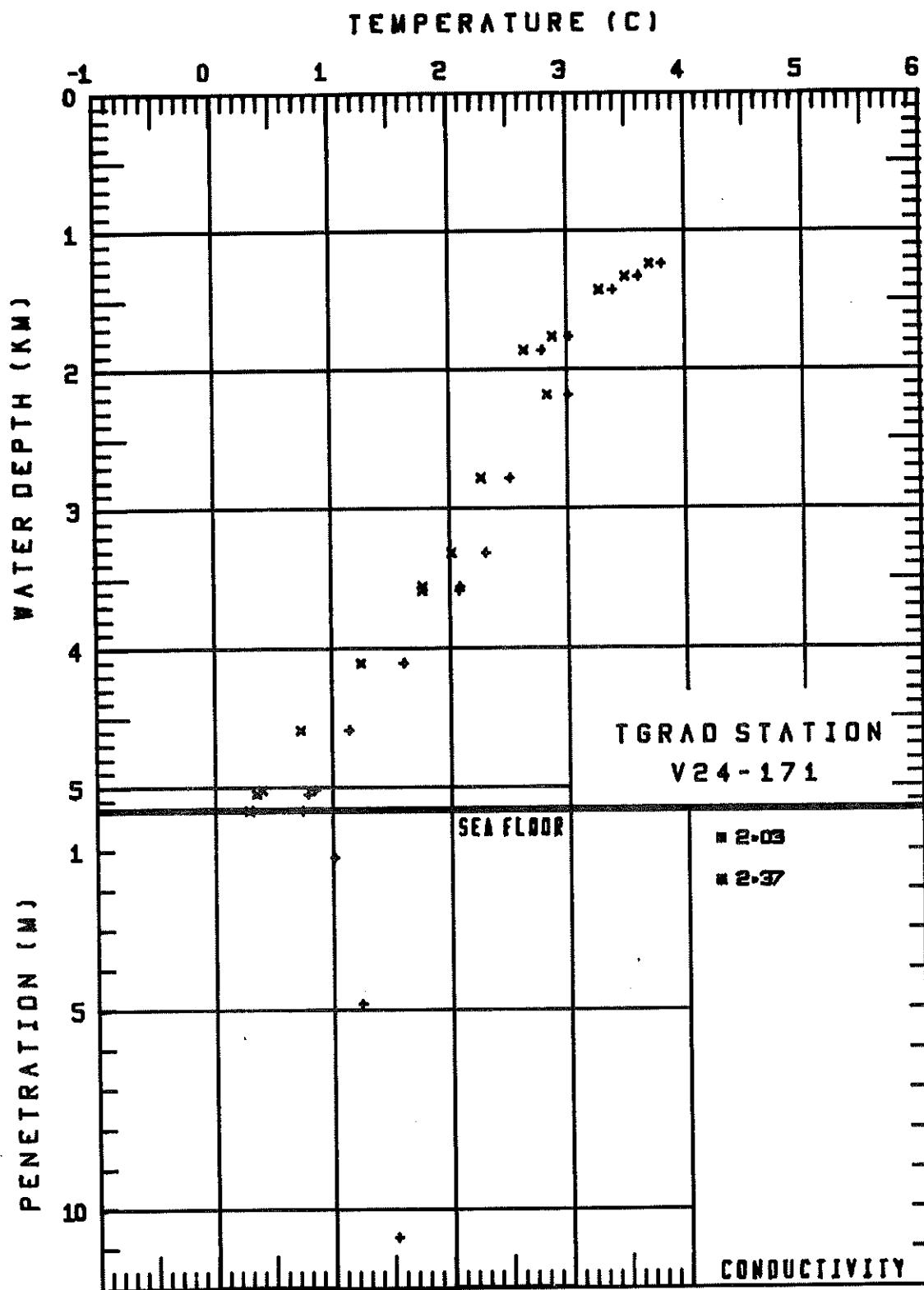
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1232.	3.80	3.70
1325.	3.60	3.49
1423.	3.39	3.27
1755.	3.01	2.88
1853.	2.78	2.63
2179.	3.01	2.83
2774.	2.50	2.27
3314.	2.30	2.01
3553.	2.09	1.77
3581.	2.08	1.77
4104.	1.61	1.25
4588.	1.14	0.74
5017.	0.85	0.41
5046.	0.80	0.35
5168.	0.75	0.29

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
1.17	1.01
4.86	1.24
10.72	1.53

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
0.75	2.03
1.80	2.37



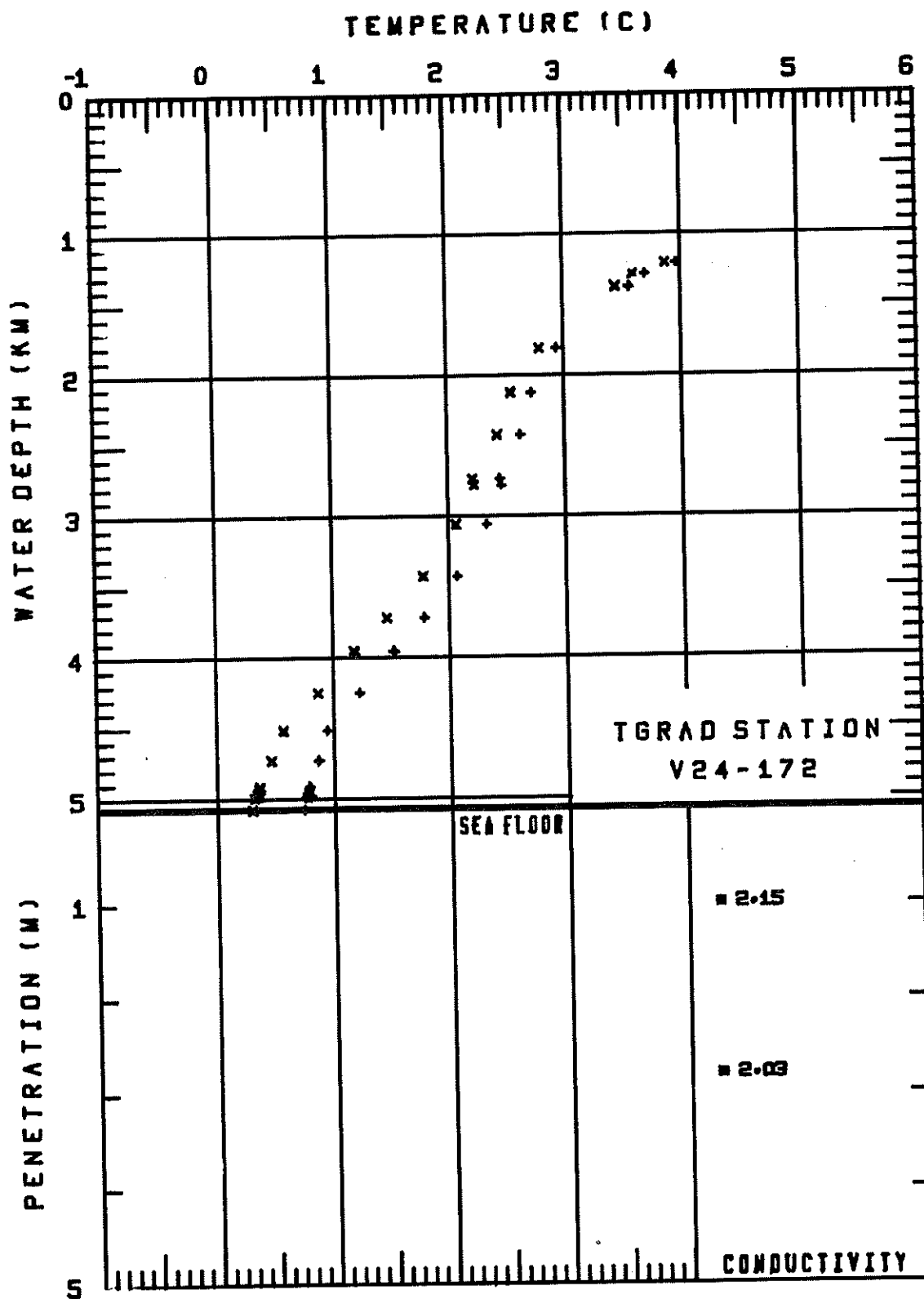
## TGRAD STATION V24-172

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1205.	3.97	3.87
1284.	3.70	3.60
1374.	3.56	3.45
1811.	2.94	2.80
2126.	2.72	2.55
2422.	2.63	2.43
2737.	2.44	2.22
2783.	2.46	2.23
3057.	2.33	2.07
3425.	2.08	1.78
3715.	1.78	1.46
3954.	1.53	1.19
3950.	1.52	1.18
4249.	1.23	0.86
4513.	0.95	0.57
4727.	0.87	0.46
4911.	0.78	0.36
4928.	0.78	0.35
4984.	0.77	0.34
4959.	0.77	0.34
4966.	0.77	0.34
4982.	0.80	0.36
4993.	0.75	0.31
5075.	0.74	0.29

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.15
2.80	2.03



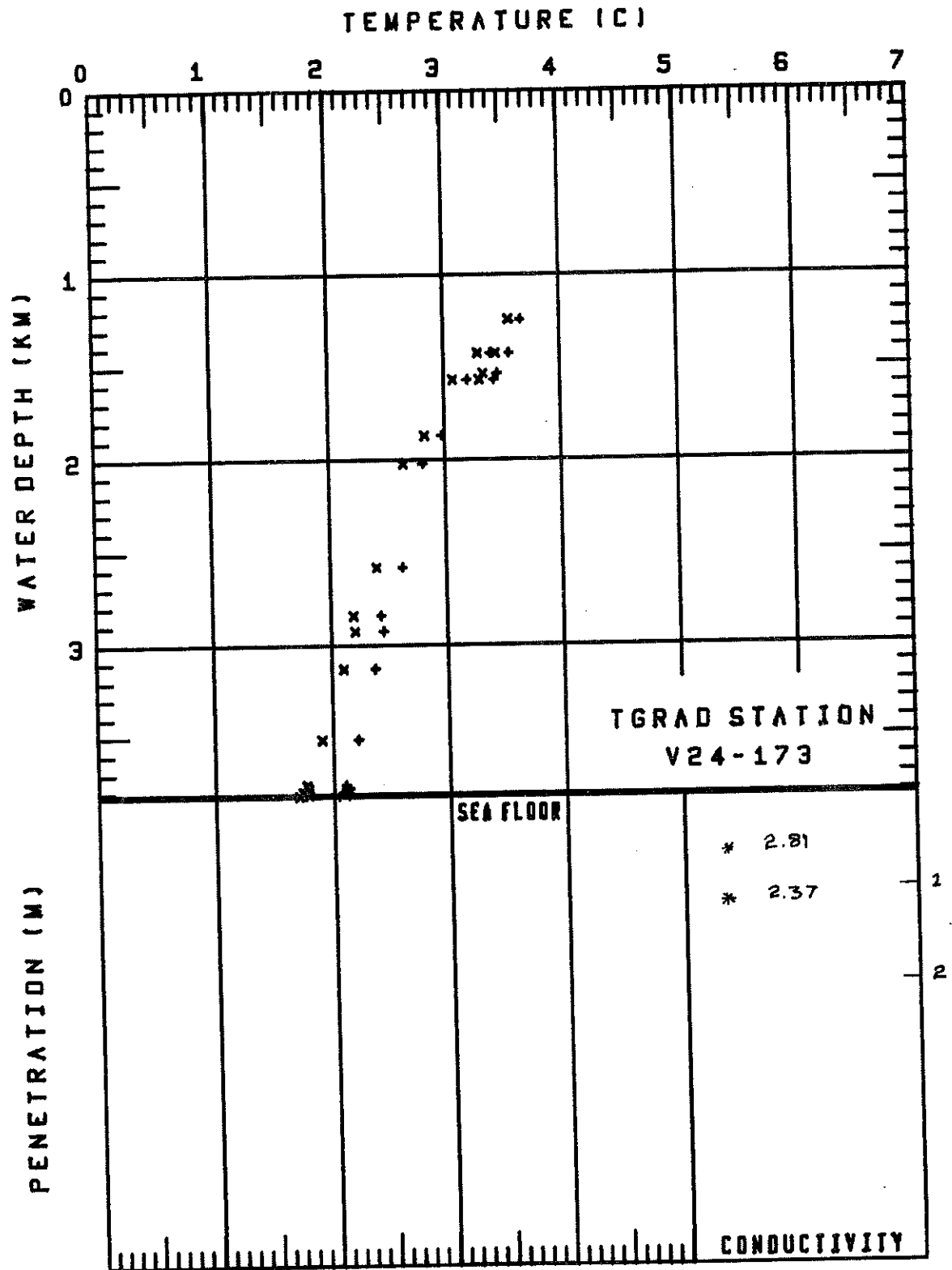
## TGRAD STATION V24-173

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1244.	3.66	3.56
1425.	3.56	3.45
1423.	3.41	3.30
1537.	3.46	3.34
1571.	3.43	3.30
1571.	3.20	3.08
1870.	2.98	2.83
2024.	2.80	2.64
2583.	2.62	2.40
2843.	2.43	2.19
2925.	2.45	2.20
3130.	2.37	2.10
3510.	2.22	1.91
3757.	2.11	1.77
3799.	2.13	1.79
3774.	2.13	1.79
3794.	2.08	1.74
3814.	2.13	1.79
3816.	2.05	1.70

## Sediment Conductivities

Depth	Conductivity
65	2.81
120	2.37



## TGRAD STATION V24-174

## WATER TEMPERATURES

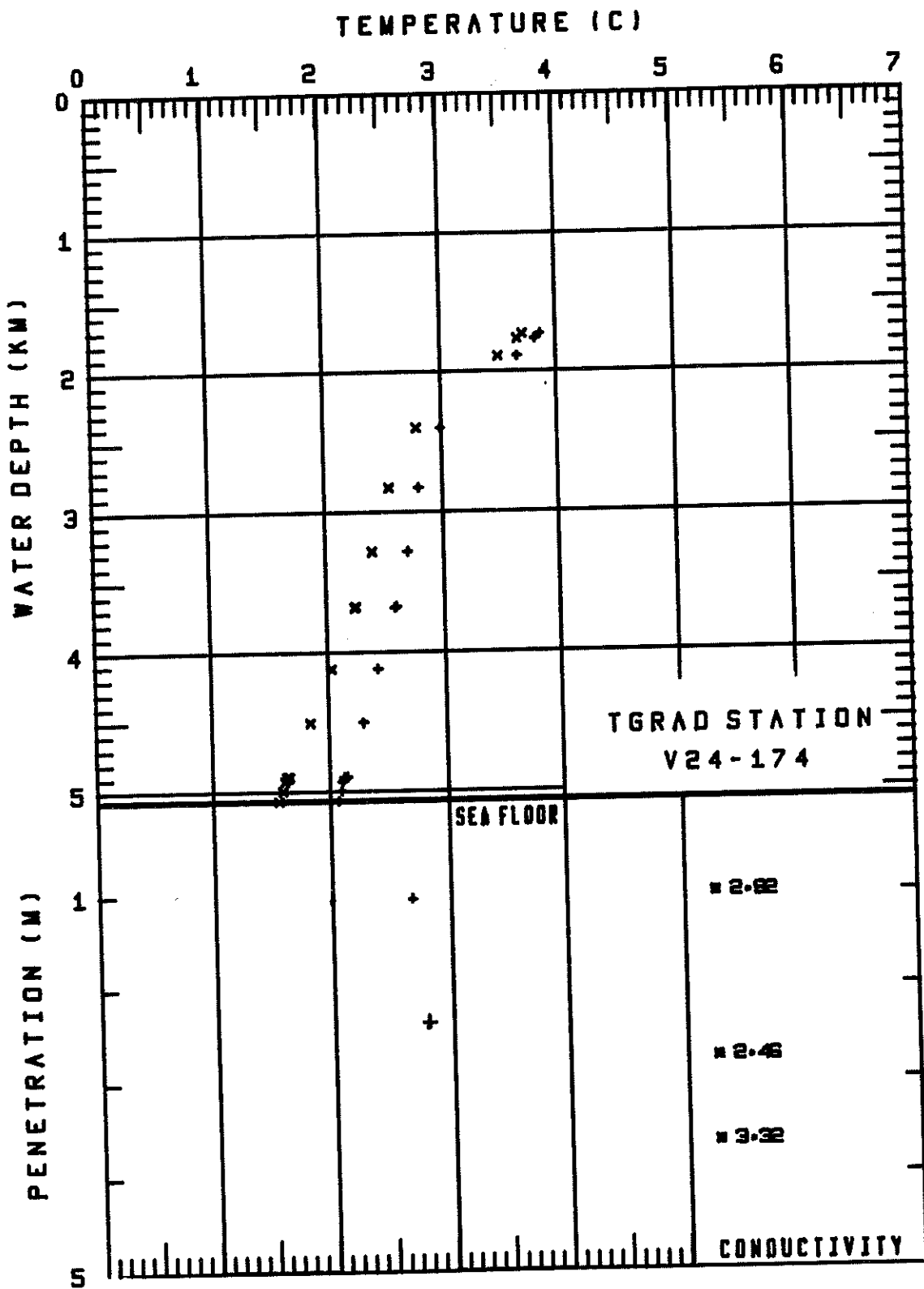
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1730.	3.86	3.71
1760.	3.82	3.67
1887.	3.67	3.50
3280.	2.69	2.39
3673.	2.59	2.25
3679.	2.58	2.24
4118.	2.43	2.03
4503.	2.29	1.85
4904.	2.14	1.64
4893.	2.15	1.66
4902.	2.13	1.64
4890.	2.13	1.64
4925.	2.11	1.62
4990.	2.10	1.60
5066.	2.08	1.56
2397.	2.99	2.79
2828.	2.80	2.55

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
1.05	2.71
2.35	2.80

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.82
2.75	2.46
3.65	3.32



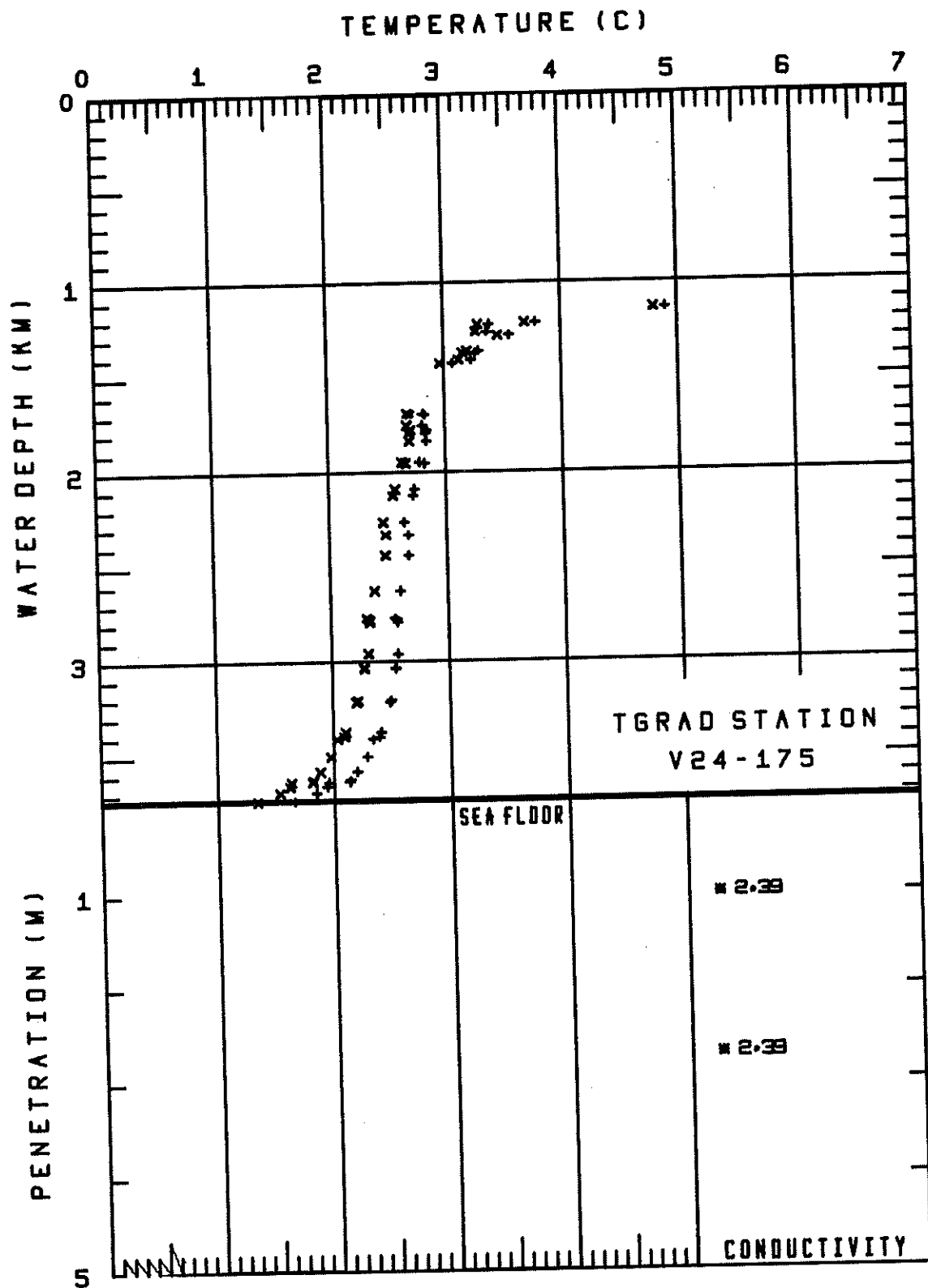
## TGRAD STATION V24-175

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1137.	4.90	4.80
1210.	3.79	3.69
1277.	3.56	3.46
1362.	3.30	3.20
1408.	3.23	3.12
1688.	2.81	2.68
1794.	2.83	2.69
1833.	2.84	2.69
1948.	2.78	2.63
2086.	2.73	2.56
2261.	2.64	2.46
2435.	2.67	2.47
2768.	2.54	2.31
2777.	2.56	2.32
2955.	2.57	2.31
3205.	2.50	2.21
3408.	2.34	2.03
3367.	2.41	2.10
3395.	2.40	2.09
3575.	2.20	1.88
3631.	2.13	1.81
3656.	1.94	1.62
3734.	1.66	1.34
3686.	1.85	1.53
3636.	1.95	1.64
3621.	2.14	1.82
3496.	2.28	1.97
3211.	2.48	2.20
3028.	2.54	2.27
3031.	2.54	2.27
2789.	2.57	2.33
2622.	2.60	2.38
2326.	2.67	2.48
2121.	2.72	2.55
1949.	2.82	2.66
1750.	2.81	2.67
1777.	2.84	2.70
1691.	2.83	2.70
1422.	3.07	2.96
1368.	3.27	3.16
1256.	3.37	3.27
1221.	3.39	3.29

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.09
2.80	2.04
3.90	2.25
5.70	2.36



## TGRAD STATION V24-176

## WATER TEMPERATURES

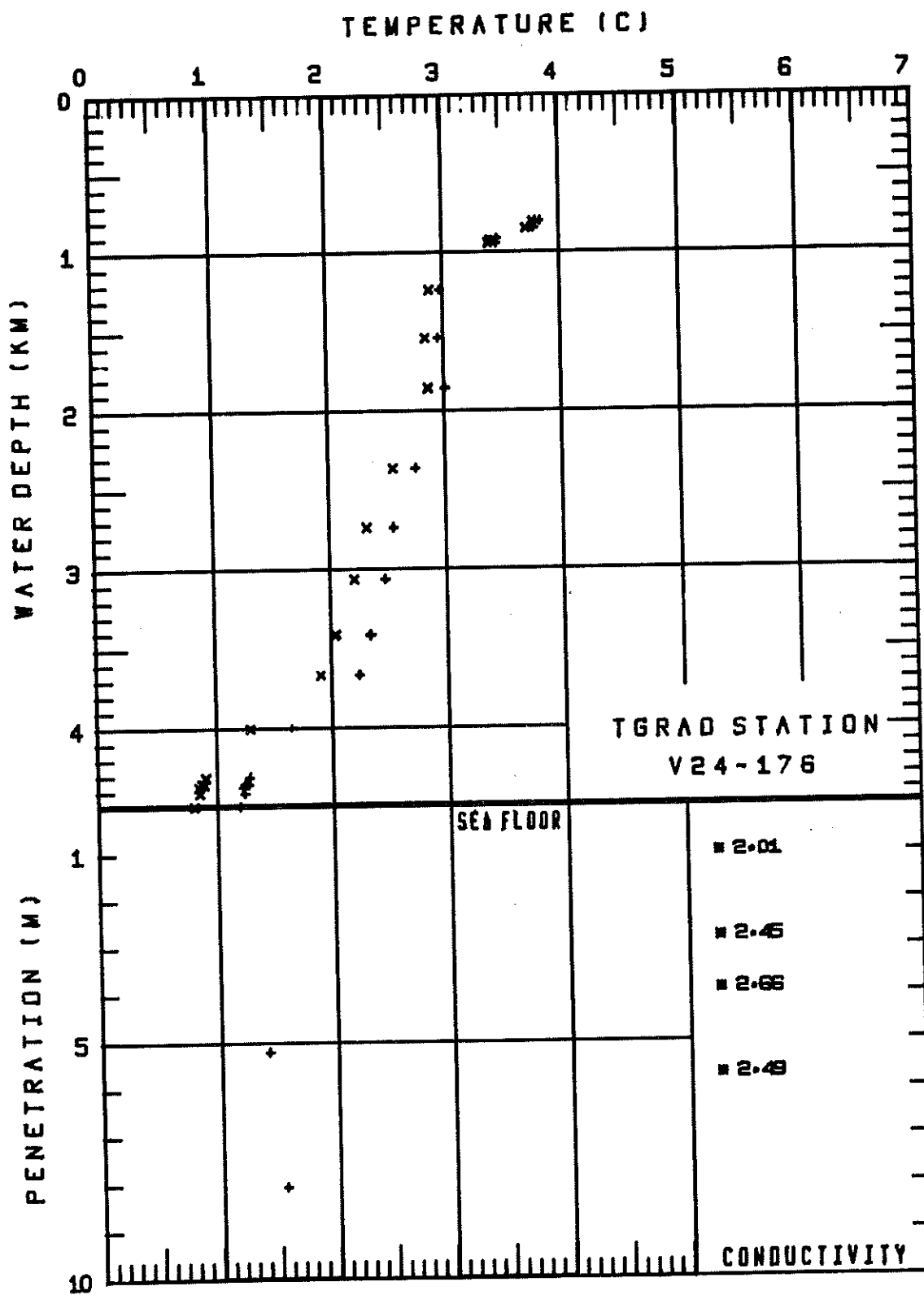
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
796.	3.84	3.78
842.	3.79	3.73
937.	3.47	3.40
908.	3.48	3.42
1233.	2.99	2.90
1538.	2.97	2.85
1850.	3.02	2.87
1856.	3.02	2.87
2358.	2.76	2.56
2735.	2.56	2.33
3056.	2.48	2.21
3407.	2.35	2.05
3412.	2.35	2.04
3660.	2.25	1.92
3998.	1.65	1.30
4302.	1.29	0.91
4344.	1.26	0.88
4348.	1.28	0.90
4343.	1.25	0.88
4366.	1.23	0.86
4404.	1.25	0.86
4489.	1.20	0.81

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
5.20	1.42
8.05	1.55

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.01
2.80	2.45
3.90	2.66
5.70	2.49



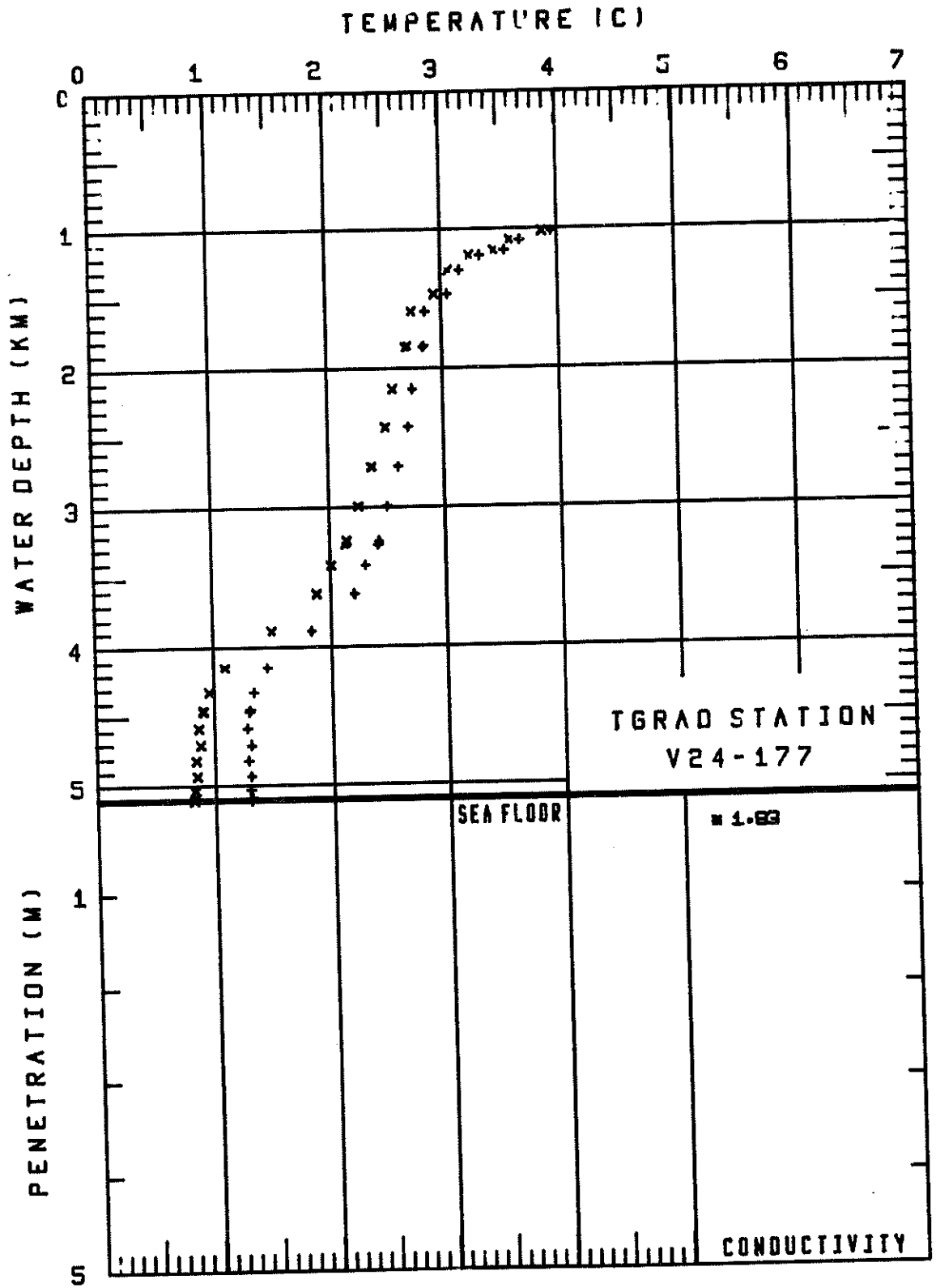
## TGRAD STATION V24-177

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
5100.	1.30	0.82
5076.	1.31	0.84
5028.	1.29	0.83
4924.	1.30	0.85
4809.	1.28	0.84
4699.	1.30	0.88
4580.	1.27	0.87
4460.	1.30	0.90
4451.	1.30	0.91
4317.	1.33	0.96
4142.	1.46	1.10
3883.	1.84	1.49
3614.	2.21	1.88
3411.	2.31	2.01
3235.	2.43	2.15
3262.	2.42	2.13
2987.	2.51	2.25
2702.	2.60	2.38
2421.	2.70	2.50
2148.	2.74	2.57
1837.	2.85	2.70
1848.	2.83	2.69
1584.	2.86	2.74
1459.	3.05	2.94
1293.	3.16	3.06
1184.	3.34	3.25
1151.	3.55	3.46
1075.	3.69	3.60
1012.	3.96	3.88

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
0.30	1.83



## TGRAD STATION V24-178

## WATER TEMPERATURES

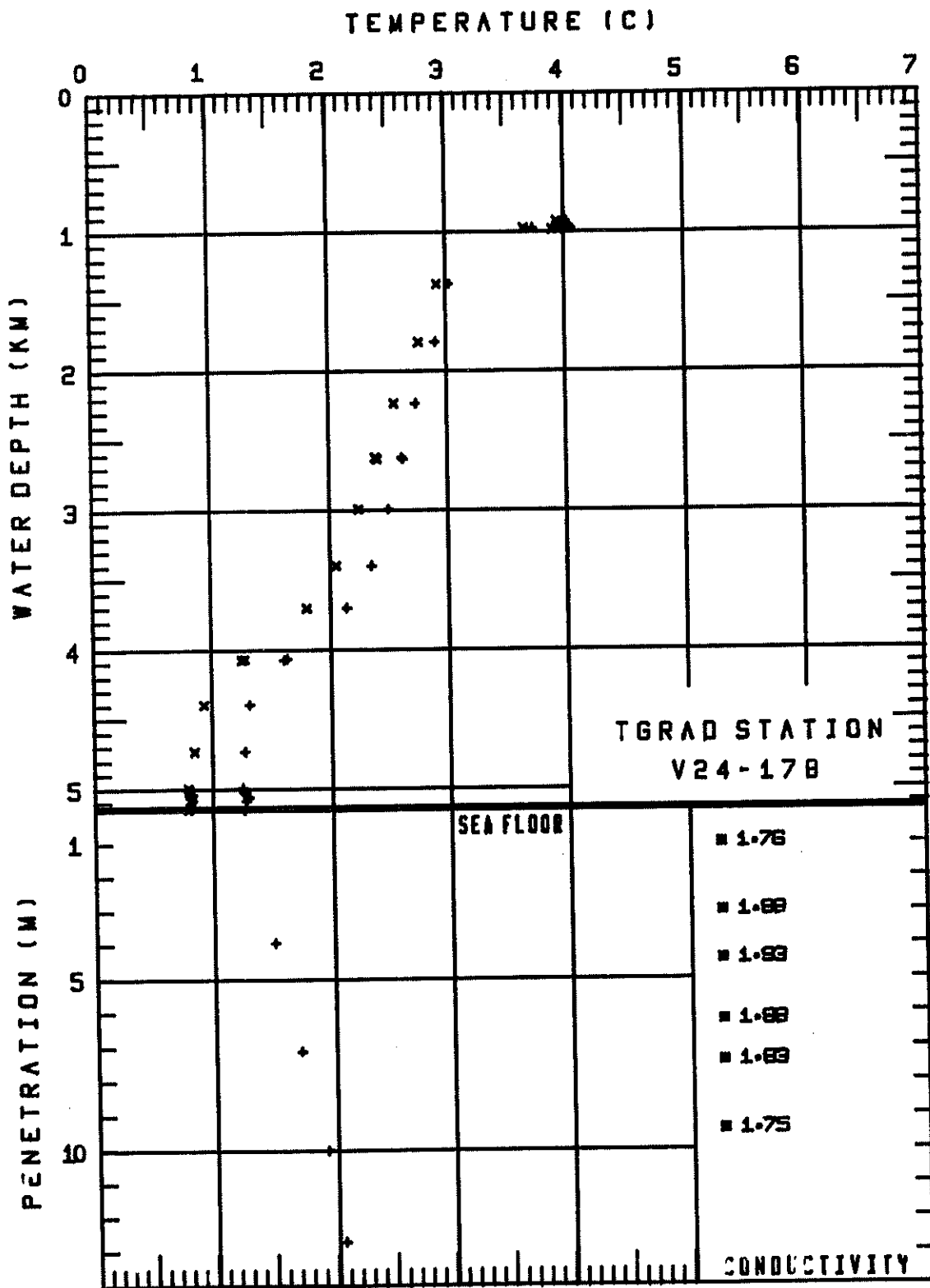
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
919.	4.01	3.94
956.	4.04	3.96
972.	4.06	3.98
984.	3.98	3.91
971.	3.74	3.67
1374.	3.03	2.93
1790.	2.90	2.76
2229.	2.73	2.55
2630.	2.63	2.41
2619.	2.62	2.40
2992.	2.50	2.24
3392.	2.35	2.05
3698.	2.14	1.81
4066.	1.64	1.28
4072.	1.62	1.26
4391.	1.33	0.94
4727.	1.28	0.85
4991.	1.26	0.80
5012.	1.27	0.80
5016.	1.28	0.82
5027.	1.28	0.81
5057.	1.30	0.83
5082.	1.28	0.81
5144.	1.27	0.79

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.91	1.51
7.10	1.72
10.01	1.93
12.69	2.06

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.76
3.00	1.88
4.40	1.93
6.20	1.88
7.40	1.83
9.40	1.75



## TGRAD STATION V24-179

## WATER TEMPERATURES

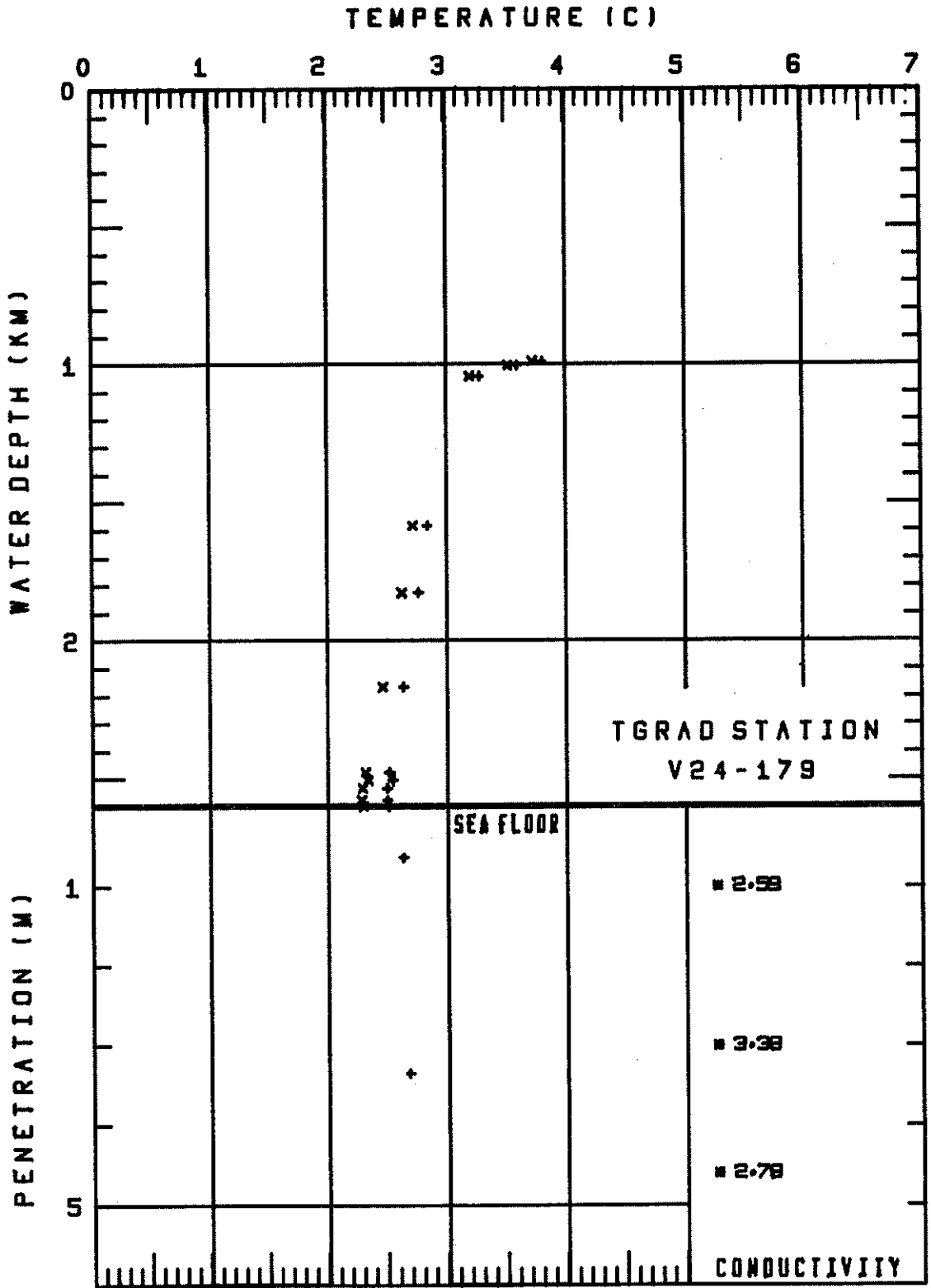
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
988.	3.81	3.73
1002.	3.60	3.52
1043.	3.28	3.20
1583.	2.84	2.72
1825.	2.76	2.62
2168.	2.64	2.46
2476.	2.52	2.32
2504.	2.55	2.34
2576.	2.50	2.29
2535.	2.50	2.29
2600.	2.51	2.30

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.64	2.63
3.35	2.68

## SEDIMENT CONDUCTIVITIES

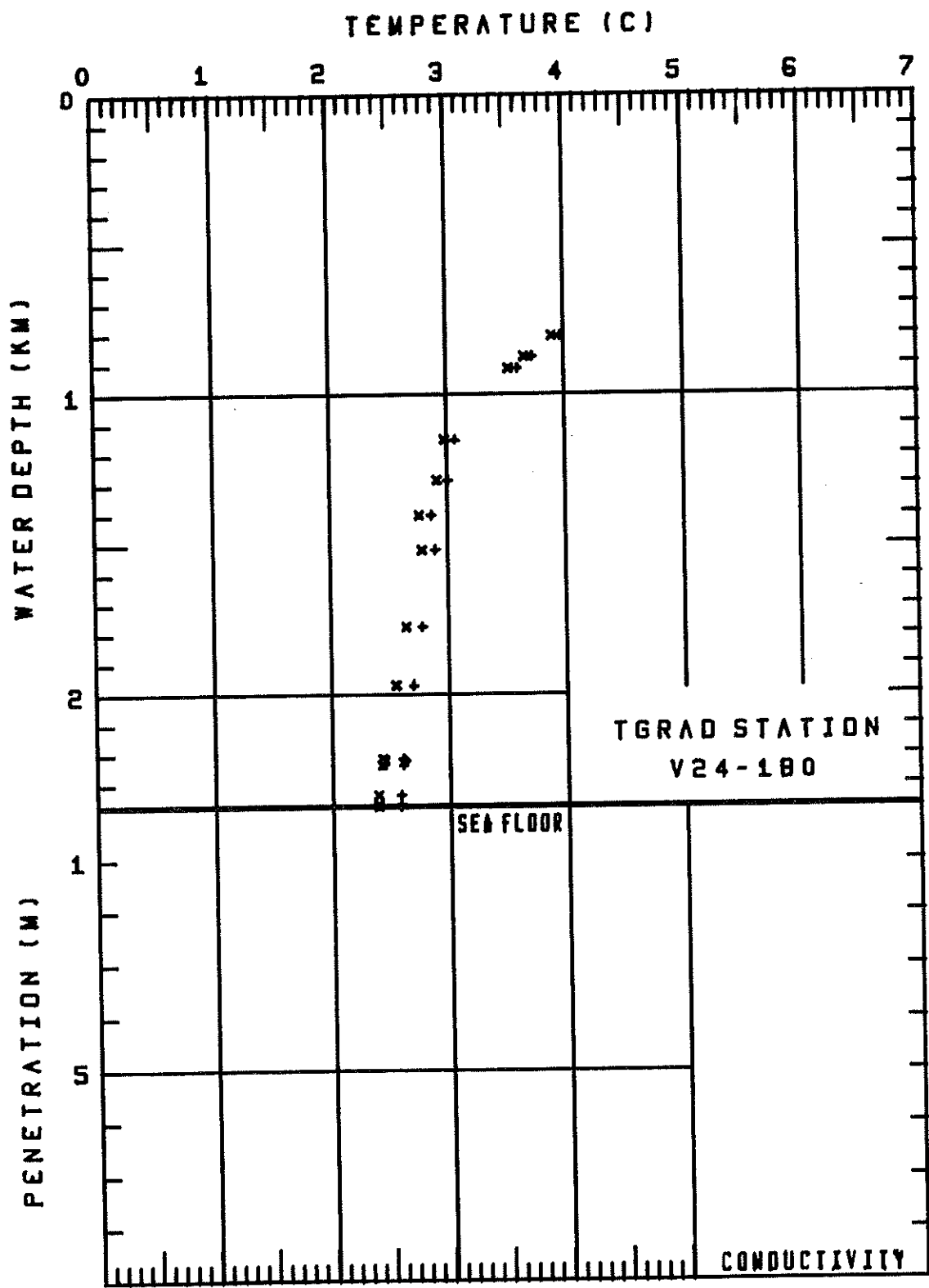
DEPTH	CONDUCTIVITY
1.00	2.59
3.00	3.38
4.60	2.78



## TGRAD STATION V24-180

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
804.	3.96	3.90
873.	3.73	3.66
913.	3.60	3.53
1151.	3.07	2.98
1283.	3.01	2.91
1401.	2.86	2.76
1517.	2.90	2.78
1773.	2.78	2.64
1968.	2.70	2.54
2215.	2.61	2.44
2222.	2.62	2.44
2213.	2.60	2.43
2233.	2.60	2.42
2335.	2.58	2.39
2365.	2.58	2.39
2374.	2.58	2.38



## TGRAD STATION V24-181

## WATER TEMPERATURES

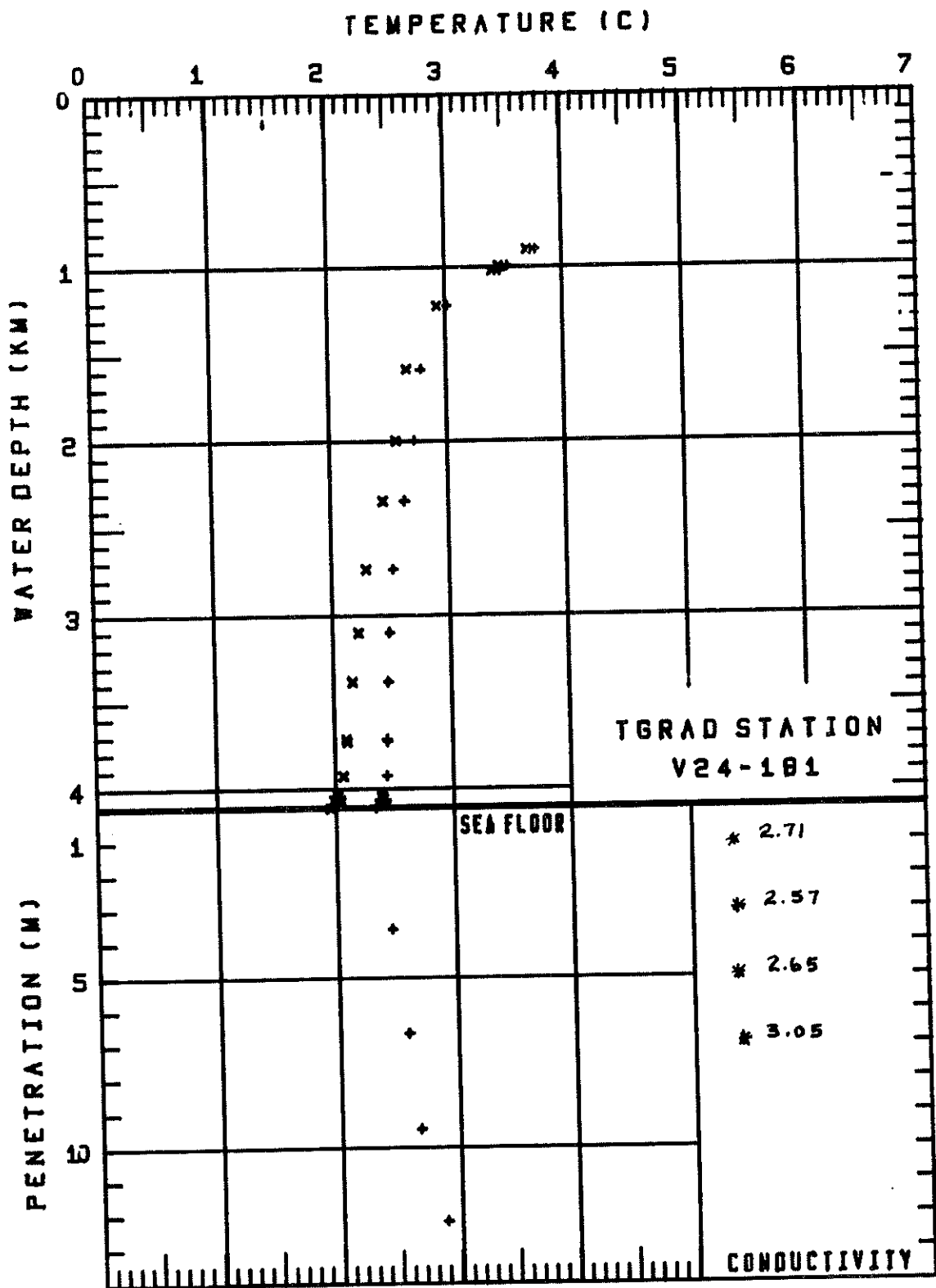
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
895.	3.78	3.71
993.	3.54	3.46
1016.	3.48	3.40
1218.	3.02	2.93
1583.	2.79	2.67
1993.	2.73	2.57
2343.	2.63	2.44
2343.	2.63	2.44
2736.	2.52	2.29
3103.	2.49	2.22
3384.	2.47	2.16
3725.	2.45	2.11
3711.	2.44	2.10
3920.	2.44	2.07
4075.	2.43	2.04
4038.	2.40	2.02
4063.	2.42	2.04
4020.	2.39	2.01
4061.	2.38	1.99
4109.	2.34	1.95

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.58	2.46
6.66	2.58
9.48	2.67
12.19	2.88

## Sediment Conductivities

Depth	Conductivity
1.00	2.71
3.00	2.57
5.00	2.65
7.00	3.05



## TGRAD STATION V24-182

## WATER TEMPERATURES

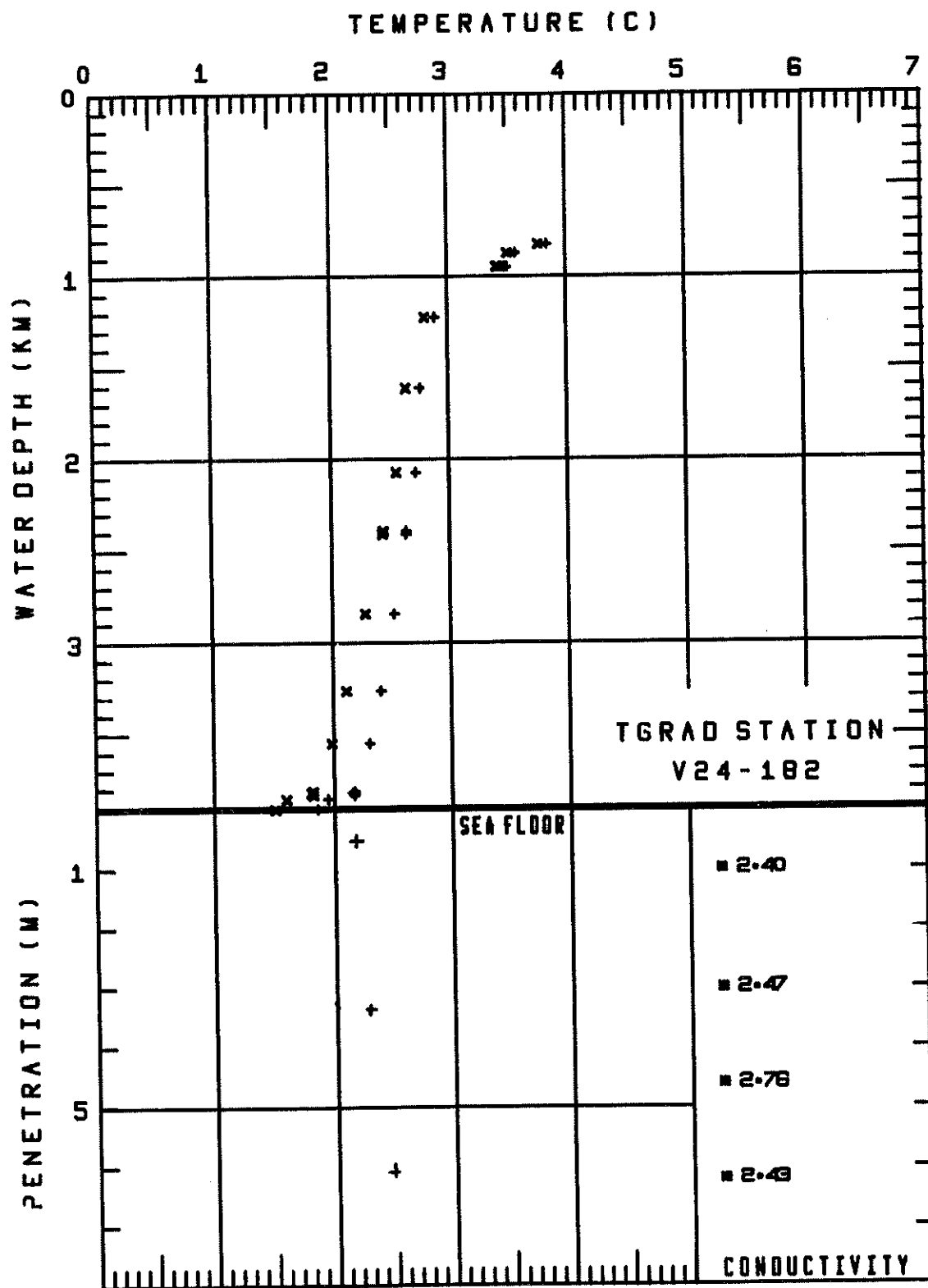
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
820.	3.83	3.77
870.	3.57	3.51
942.	3.50	3.43
943.	3.48	3.41
1220.	2.89	2.80
1606.	2.76	2.63
2069.	2.71	2.55
2392.	2.63	2.43
2407.	2.63	2.43
2841.	2.52	2.28
3264.	2.40	2.11
3551.	2.30	1.98
3822.	2.16	1.82
3830.	2.17	1.82
3811.	2.16	1.82
3817.	2.15	1.81
3855.	1.95	1.60
3910.	1.85	1.50

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.50	2.14
3.30	2.24
6.04	2.41

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.40
3.00	2.47
4.60	2.76
6.20	2.43



## TGRAD STATION V24-183

## WATER TEMPERATURES

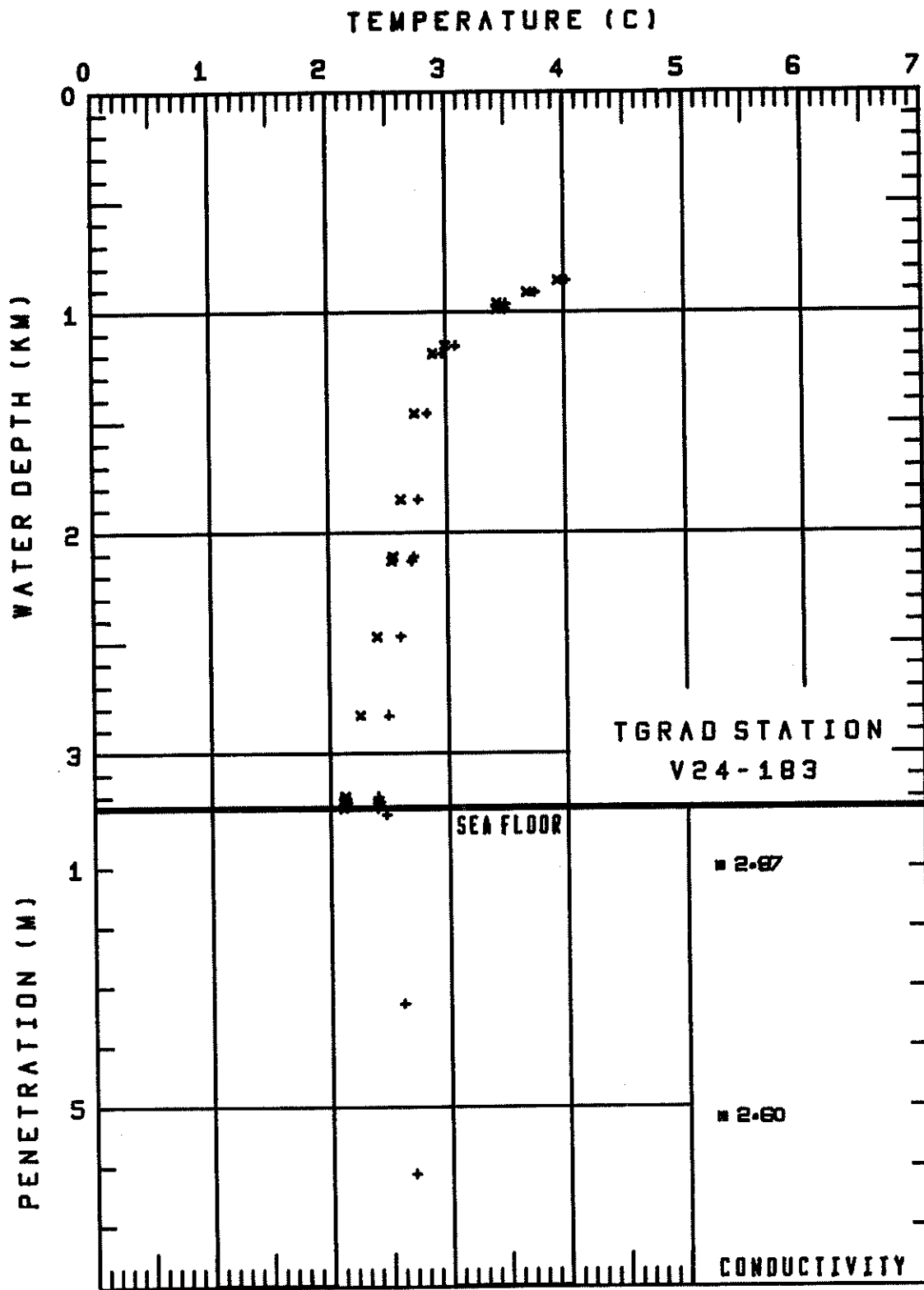
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
854.	4.01	3.95
909.	3.75	3.69
960.	3.51	3.44
987.	3.50	3.42
1152.	3.08	2.99
1187.	2.97	2.88
1458.	2.83	2.73
1848.	2.75	2.61
2107.	2.71	2.54
2127.	2.69	2.52
2469.	2.60	2.40
2828.	2.49	2.25
3194.	2.40	2.12
3209.	2.39	2.11
3237.	2.42	2.13
3220.	2.42	2.13
3224.	2.39	2.11
3249.	2.39	2.10

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.10	2.46
3.27	2.60
6.12	2.68

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.87
5.20	2.60



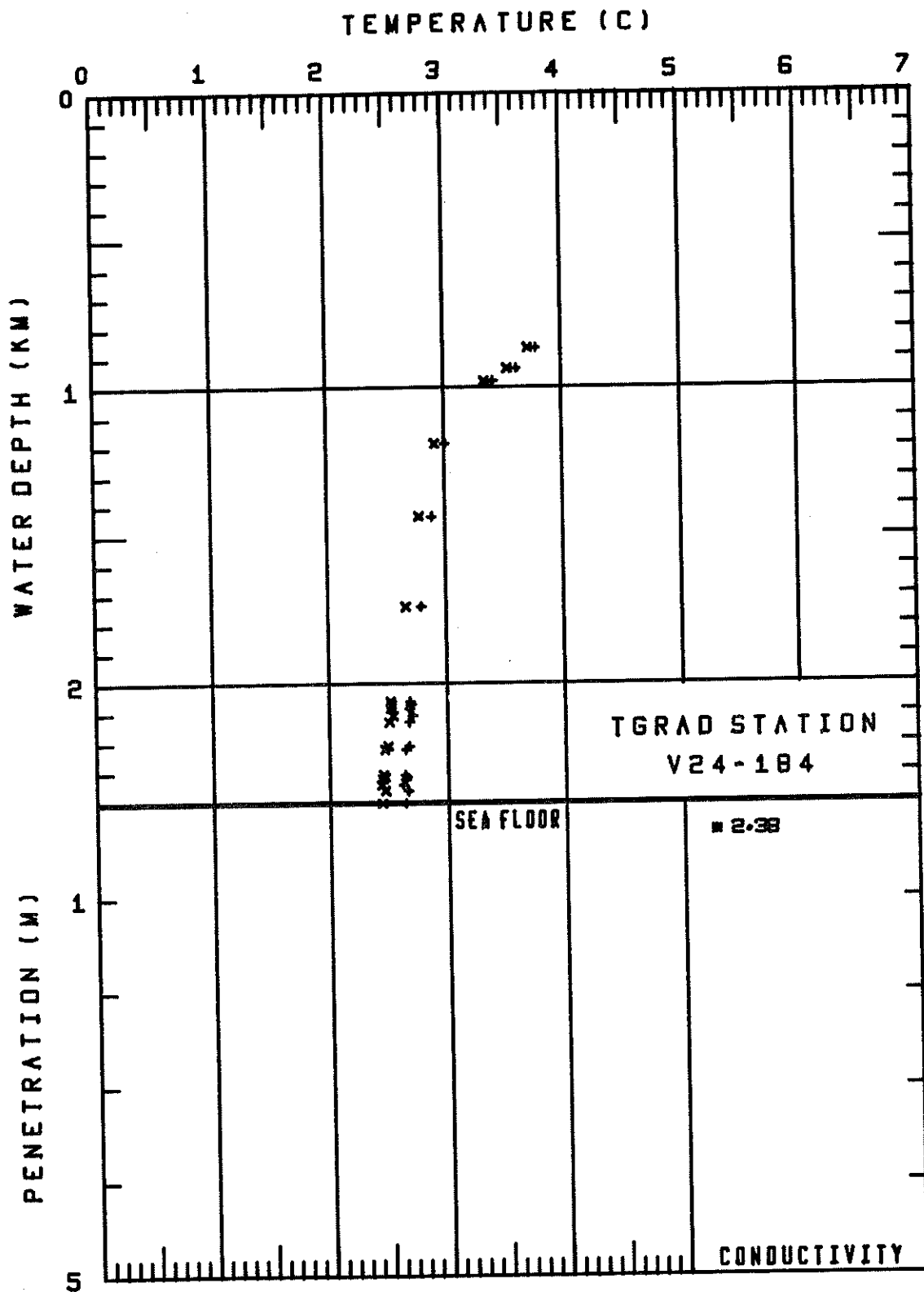
## TGRAD STATION V24-184

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
866.	3.78	3.71
934.	3.61	3.54
979.	3.42	3.35
1187.	3.00	2.92
1434.	2.89	2.78
1737.	2.80	2.66
2107.	2.71	2.54
2068.	3.24	3.06
2210.	2.67	2.49
2222.	2.65	2.47
2324.	2.64	2.45
2317.	2.65	2.46
2360.	2.66	2.46
2128.	2.68	2.51
2058.	2.69	2.52
2069.	2.69	2.53
2084.	2.68	2.52
2306.	2.64	2.45
2341.	2.62	2.43
2404.	2.64	2.44

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
0.30	2.38



## TGRAD STATION V24-185

## WATER TEMPERATURES

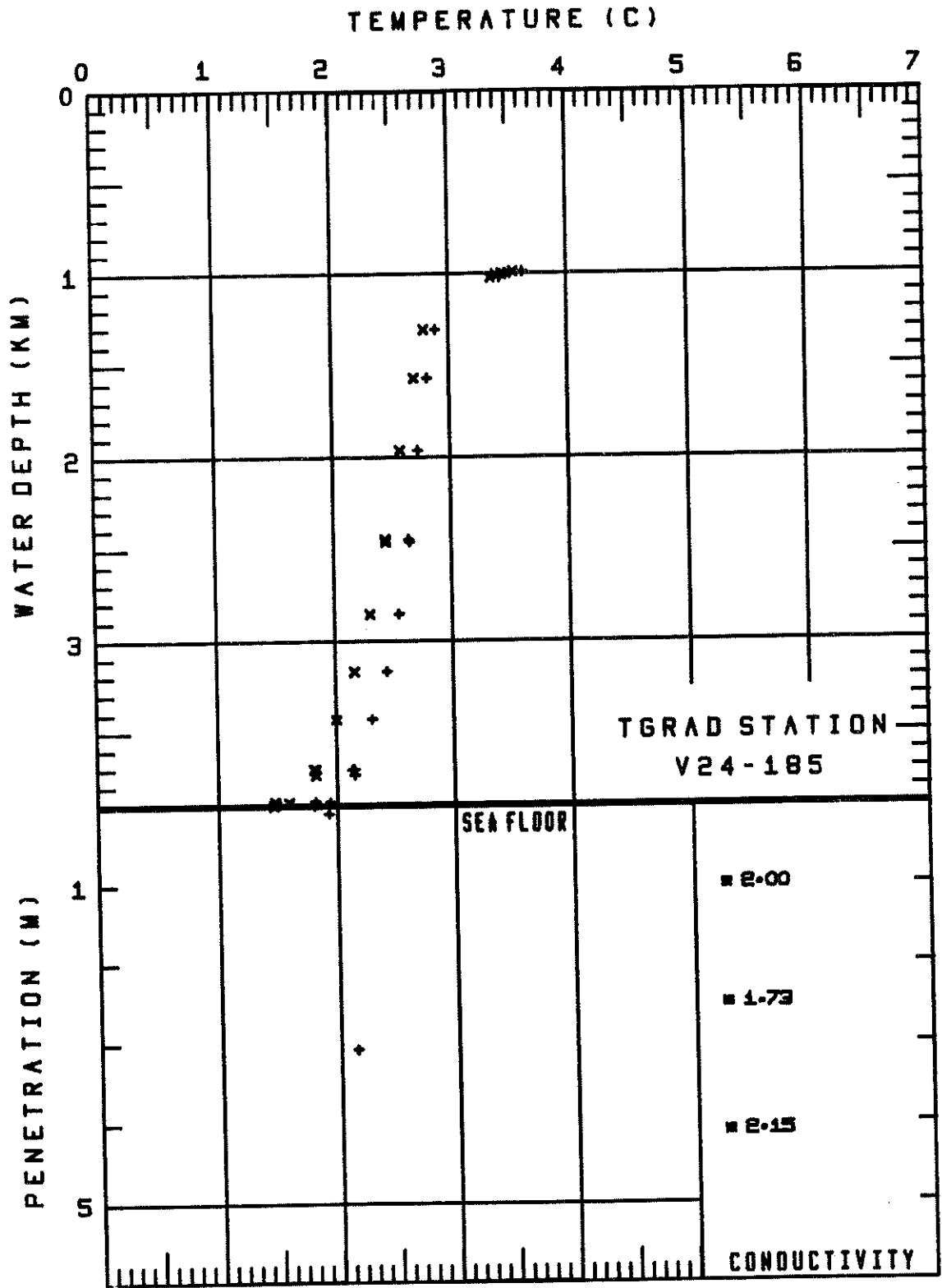
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
990.	3.63	3.55
998.	3.53	3.45
1006.	3.48	3.41
1021.	3.44	3.36
1302.	2.88	2.79
1566.	2.81	2.70
1963.	2.73	2.57
2448.	2.64	2.44
2460.	2.65	2.44
2856.	2.55	2.30
3167.	2.44	2.16
3426.	2.31	2.00
3699.	2.15	1.82
3731.	2.16	1.82
3698.	2.14	1.80
3875.	1.94	1.59
3891.	1.82	1.48
3874.	1.81	1.47
3898.	1.80	1.46

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.10	1.93
3.07	2.14

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.00
2.50	1.73
4.10	2.15



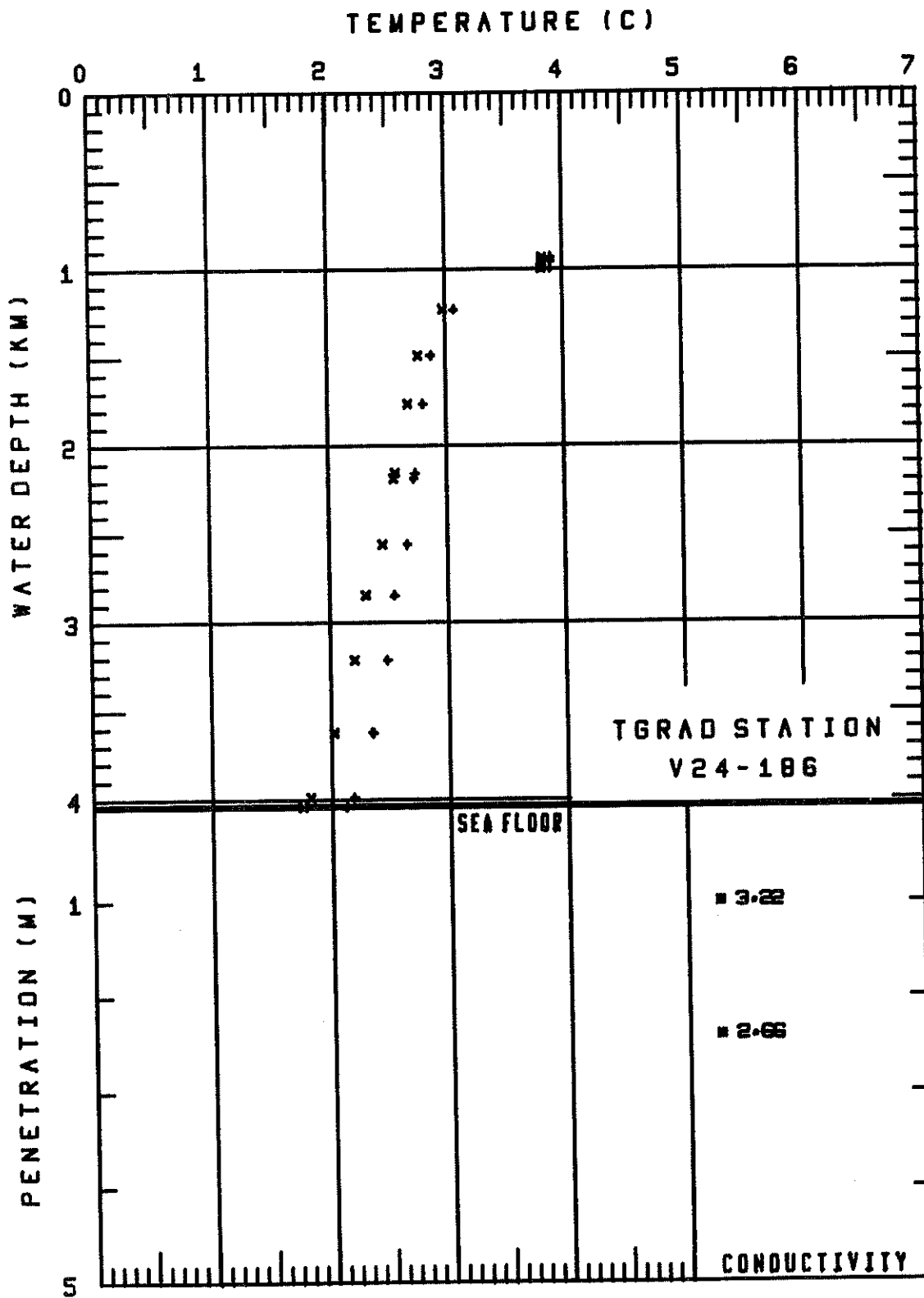
## TGRAD STATION V24-186

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
998.	3.89	3.81
956.	3.90	3.82
934.	3.89	3.82
1224.	3.07	2.98
1487.	2.88	2.76
1759.	2.81	2.67
2184.	2.72	2.54
2150.	2.73	2.56
2554.	2.66	2.44
2842.	2.54	2.30
3209.	2.48	2.20
3617.	2.35	2.02
3623.	2.35	2.02
3987.	2.19	1.82
4041.	2.12	1.75

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	3.22
2.40	2.66



## TGRAD STATION V24-187

## WATER TEMPERATURES

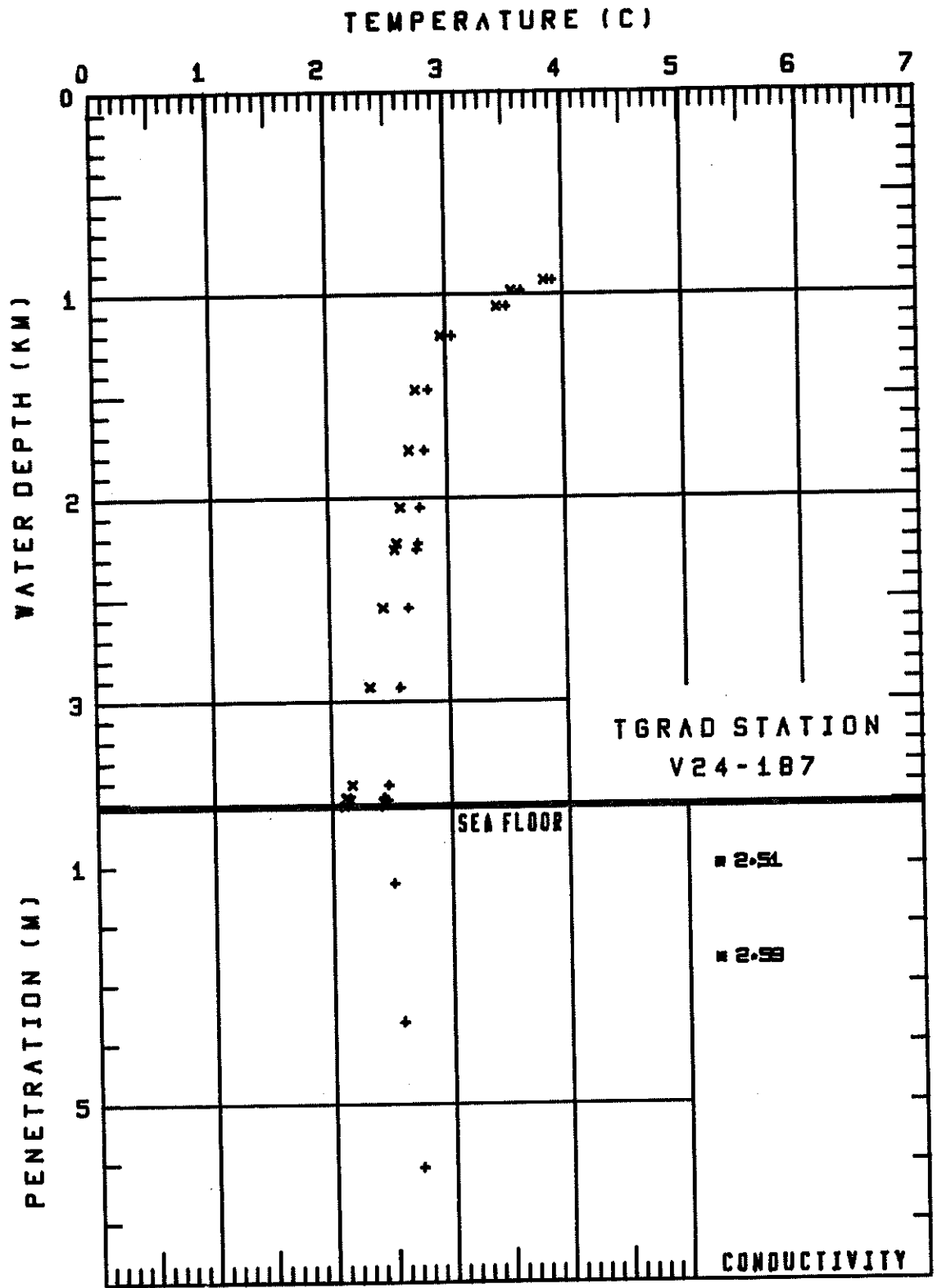
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
929.	3.92	3.84
981.	3.64	3.57
1058.	3.52	3.44
1204.	3.05	2.96
1470.	2.85	2.74
1764.	2.82	2.68
2049.	2.76	2.60
2224.	2.75	2.57
2253.	2.73	2.55
2539.	2.66	2.45
2929.	2.58	2.32
3411.	2.47	2.16
3481.	2.43	2.12
3484.	2.46	2.15
3472.	2.43	2.12
3477.	2.43	2.11
3517.	2.42	2.10

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
1.29	2.51
3.63	2.57
6.07	2.72

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.51
2.60	2.59



## TGRAD STATION V24-188

## WATER TEMPERATURES

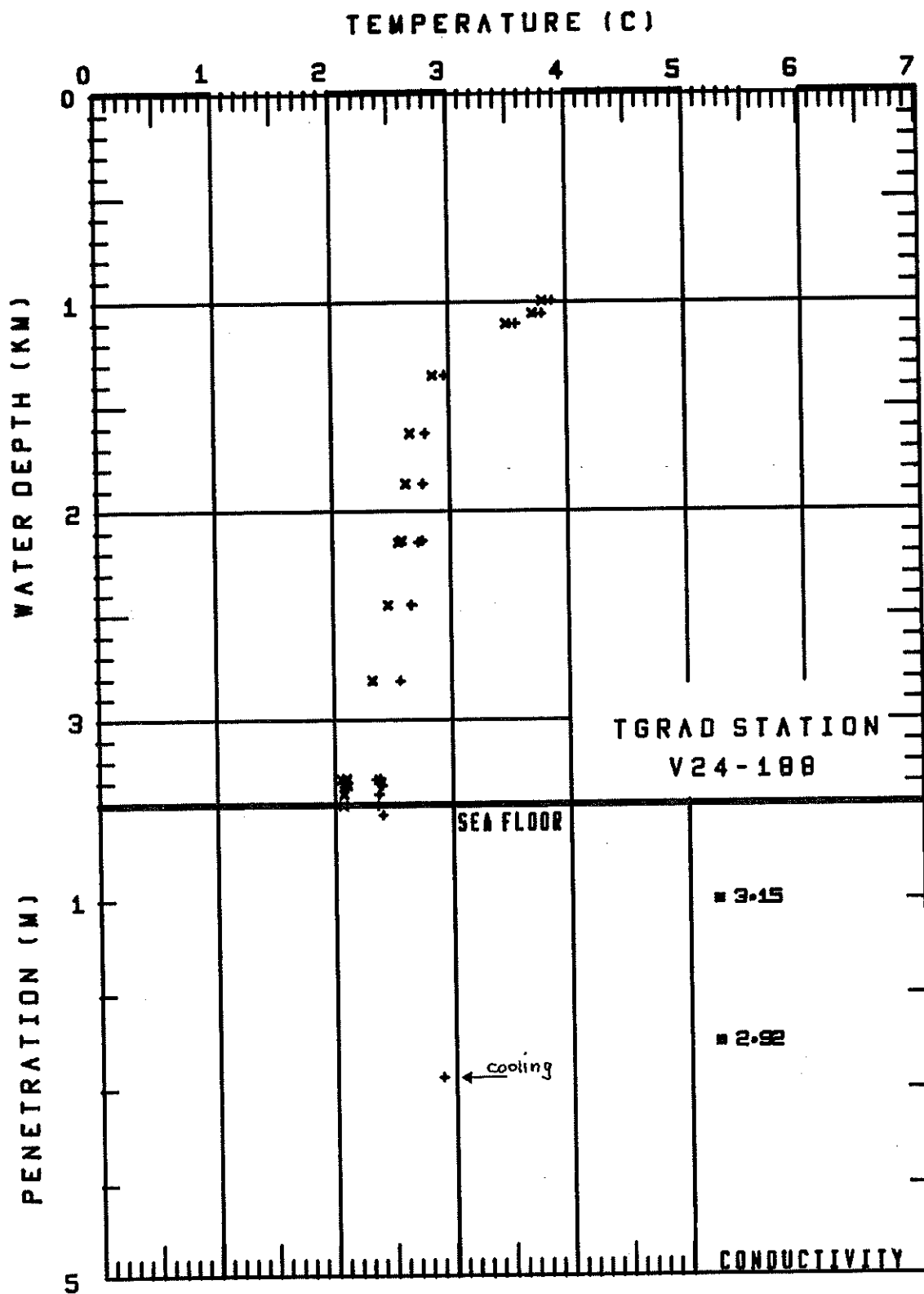
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
991.	3.89	3.82
1053.	3.81	3.73
1103.	3.59	3.50
1346.	2.98	2.88
1625.	2.81	2.69
1867.	2.79	2.65
2148.	2.75	2.58
2140.	2.78	2.61
2444.	2.69	2.48
2809.	2.59	2.35
3280.	2.41	2.12
3287.	2.40	2.11
3282.	2.36	2.08
3299.	2.39	2.10
3311.	2.42	2.13
3352.	2.39	2.09
3407.	2.39	2.09

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.10	2.43
2.87	2.91

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	3.15
2.50	2.92



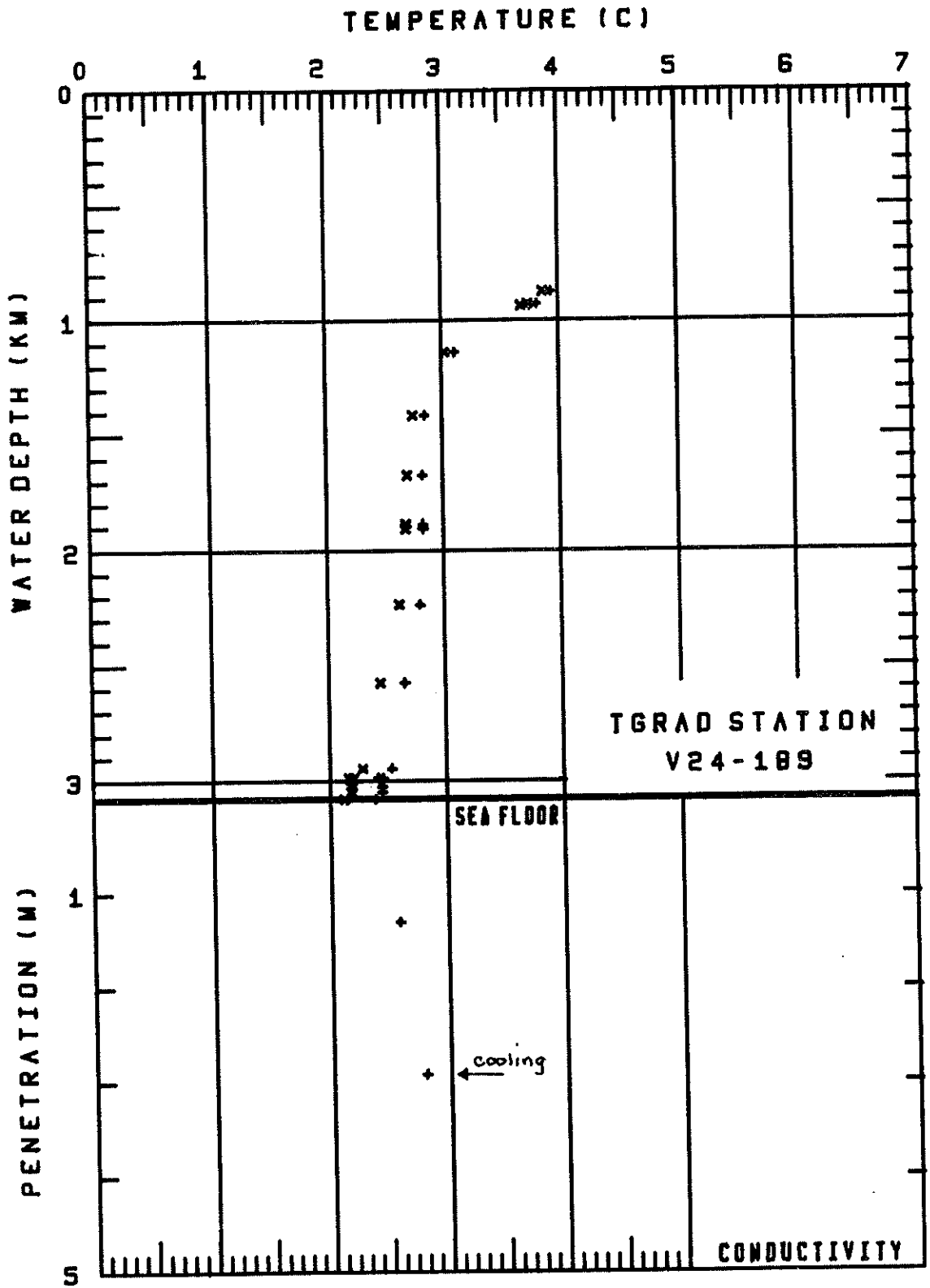
## TGRAD STATION V24-189

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
875.	3.92	3.85
931.	3.80	3.73
936.	3.74	3.67
1139.	3.10	3.01
1412.	2.83	2.73
1672.	2.81	2.68
1886.	2.81	2.66
1904.	2.81	2.66
2233.	2.78	2.60
2574.	2.64	2.42
2945.	2.52	2.27
2987.	2.40	2.15
2993.	2.42	2.16
3024.	2.43	2.17
2987.	2.44	2.18
2995.	2.43	2.17
3047.	2.43	2.17
3079.	2.37	2.10

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
1.30	2.57
2.92	2.78



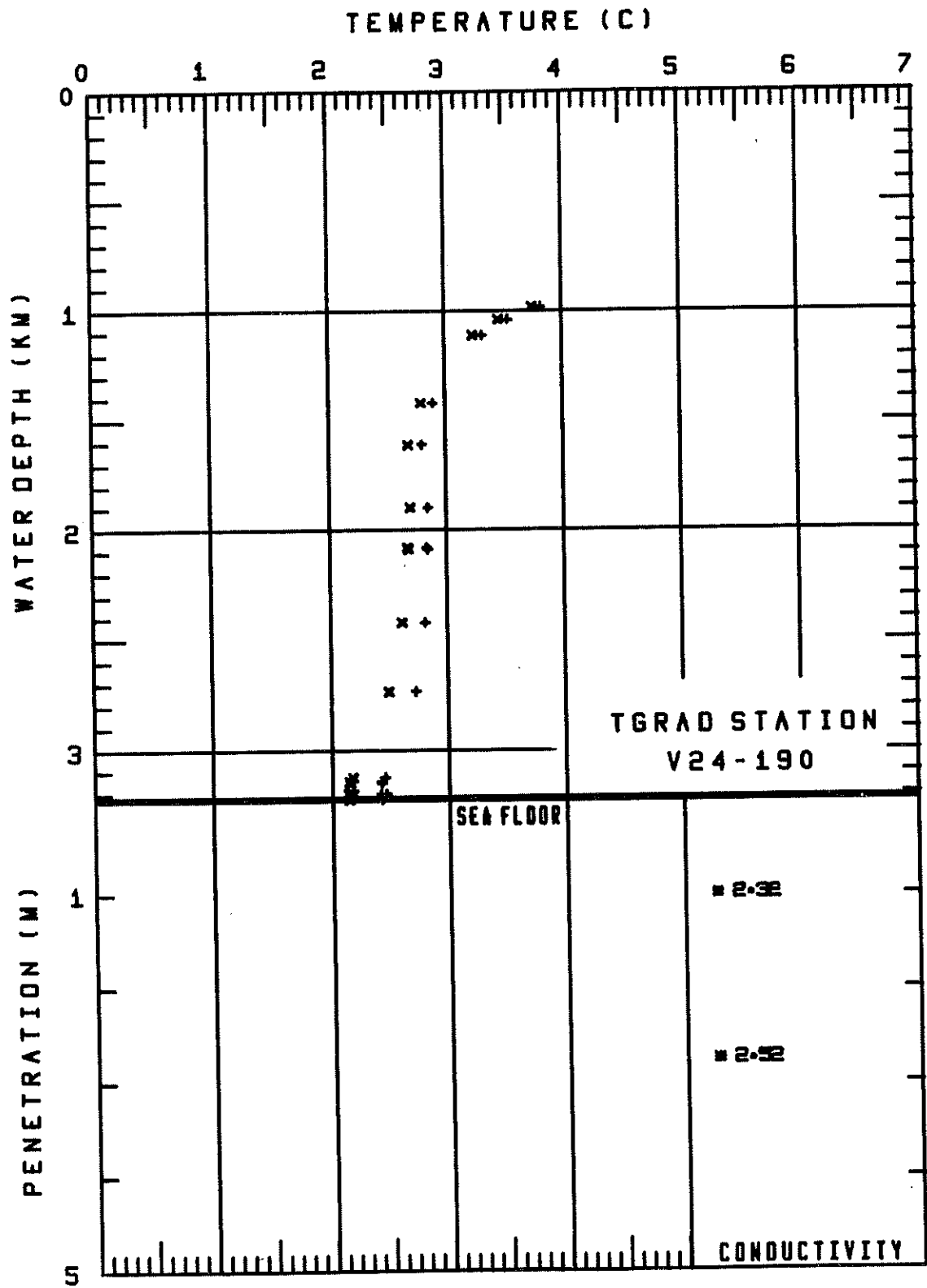
## TGRAD STATION V24-190

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
981.	3.81	3.74
1040.	3.53	3.45
1112.	3.32	3.23
1417.	2.89	2.78
1609.	2.79	2.67
1893.	2.84	2.69
2078.	2.83	2.66
2086.	2.83	2.67
2416.	2.81	2.61
2733.	2.72	2.48
3125.	2.44	2.17
3199.	2.41	2.13
3199.	2.46	2.17
3149.	2.42	2.15
3141.	2.42	2.15
3224.	2.42	2.14

## SEDIMENT CONDUCTIVITIES

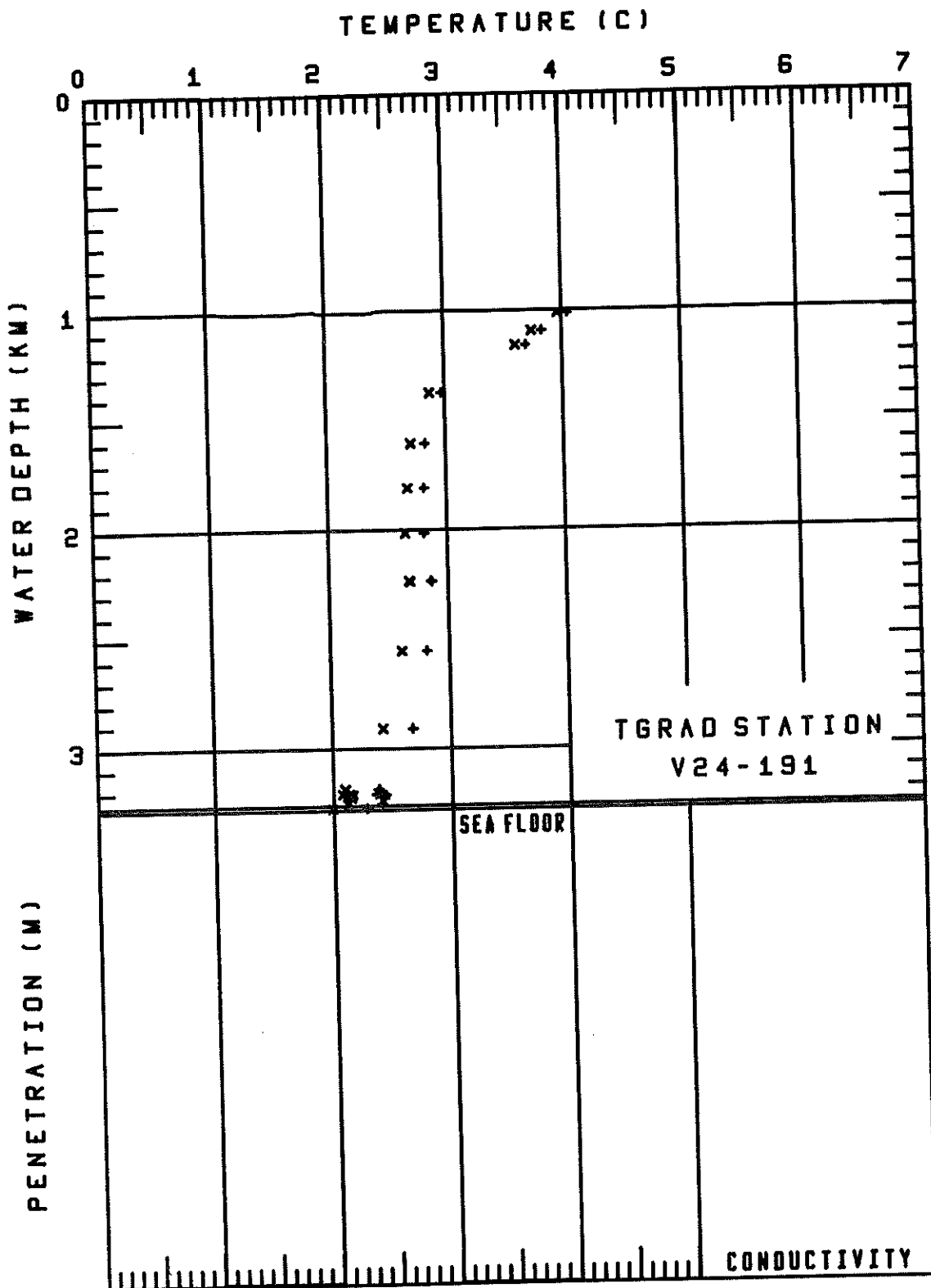
DEPTH	CONDUCTIVITY
1.00	2.32
2.75	2.52



## TGRAD STATION V24-191

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1013.	4.05	3.97
1091.	3.83	3.75
1158.	3.69	3.60
1370.	2.98	2.87
1605.	2.83	2.71
1810.	2.82	2.67
2016.	2.81	2.65
2233.	2.86	2.67
2238.	2.86	2.68
2555.	2.81	2.60
2912.	2.68	2.42
3187.	2.38	2.10
3253.	2.41	2.12
3212.	2.44	2.16
3210.	2.42	2.14
3228.	2.43	2.15
3209.	2.36	2.08
3274.	2.28	1.99



## TGRAD STATION V24-192

## WATER TEMPERATURES

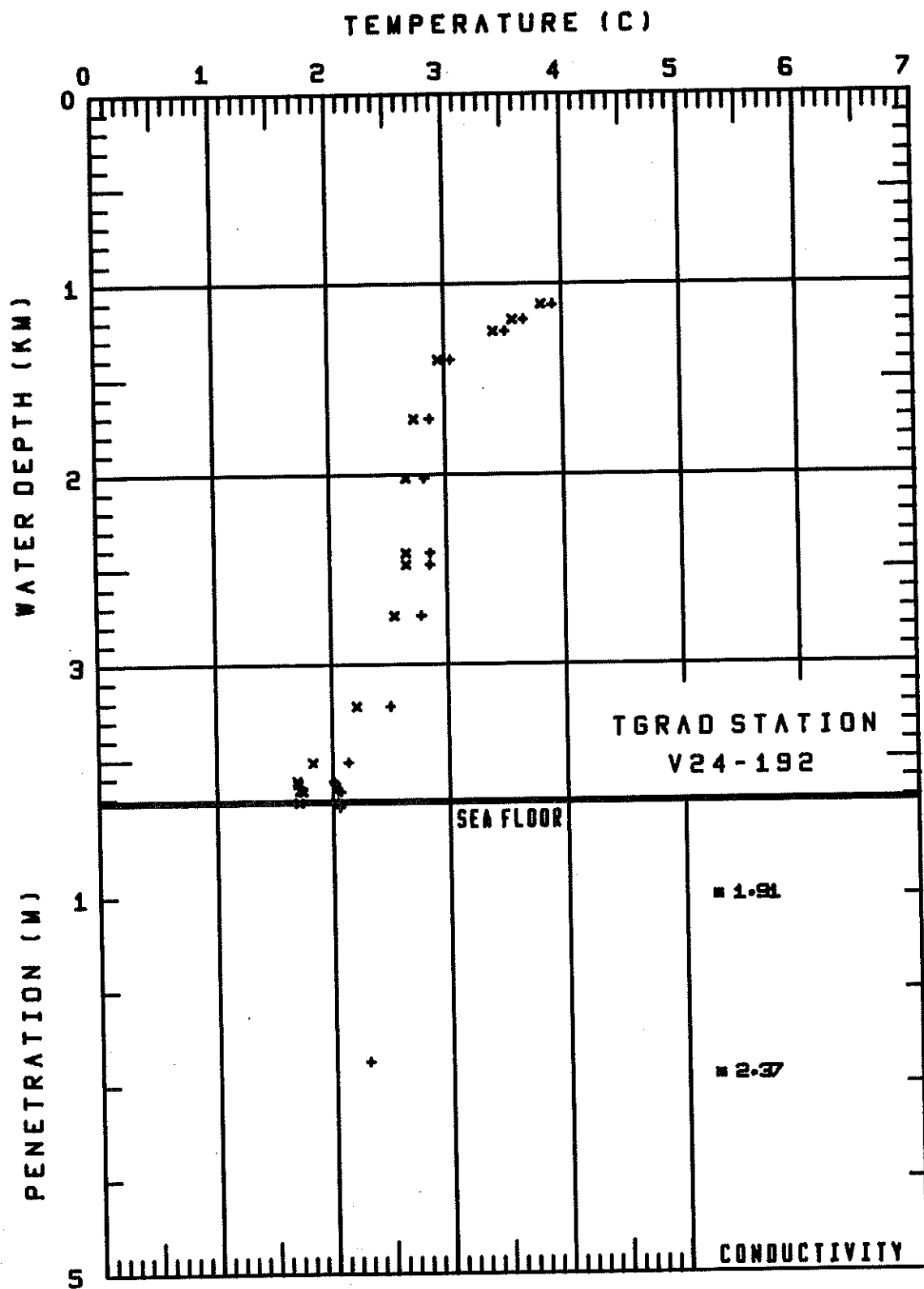
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1109.	3.91	3.82
1187.	3.67	3.58
1248.	3.51	3.42
1400.	3.06	2.95
1708.	2.87	2.74
2020.	2.82	2.66
2475.	2.86	2.65
2409.	2.86	2.65
2741.	2.78	2.54
3219.	2.50	2.21
3513.	2.13	1.82
3658.	2.04	1.71
3609.	2.01	1.69
3624.	2.02	1.70
3664.	2.06	1.74
3625.	2.02	1.70
3723.	2.04	1.71

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.05	2.06
2.75	2.28

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.91
2.90	2.37



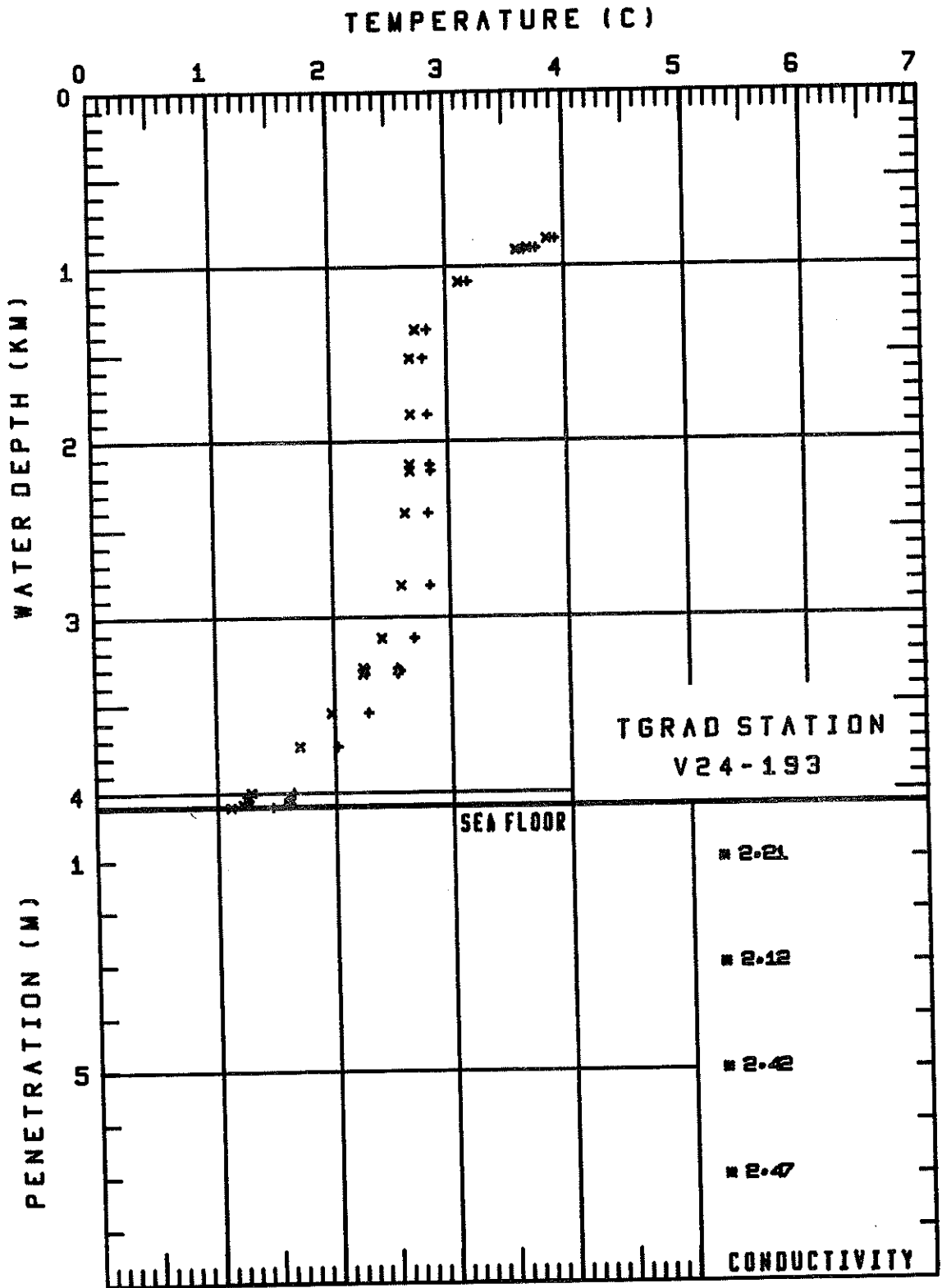
## TGRAD STATION V24-193

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
843.	3.92	3.86
896.	3.76	3.70
908.	3.67	3.60
1089.	3.19	3.11
1360.	2.83	2.73
1521.	2.80	2.69
1843.	2.83	2.69
2167.	2.85	2.68
2128.	2.85	2.67
2405.	2.83	2.63
2817.	2.83	2.59
3117.	2.69	2.41
3288.	2.55	2.25
3304.	2.57	2.27
3320.	2.54	2.25
3543.	2.29	1.97
3734.	2.03	1.70
3997.	1.64	1.29
4057.	1.62	1.26
4023.	1.61	1.26
4034.	1.60	1.25
4067.	1.57	1.22
4078.	1.47	1.12

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.21
3.00	2.12
5.00	2.42
7.00	2.47



## TGRAD STATION V24-194

## WATER TEMPERATURES

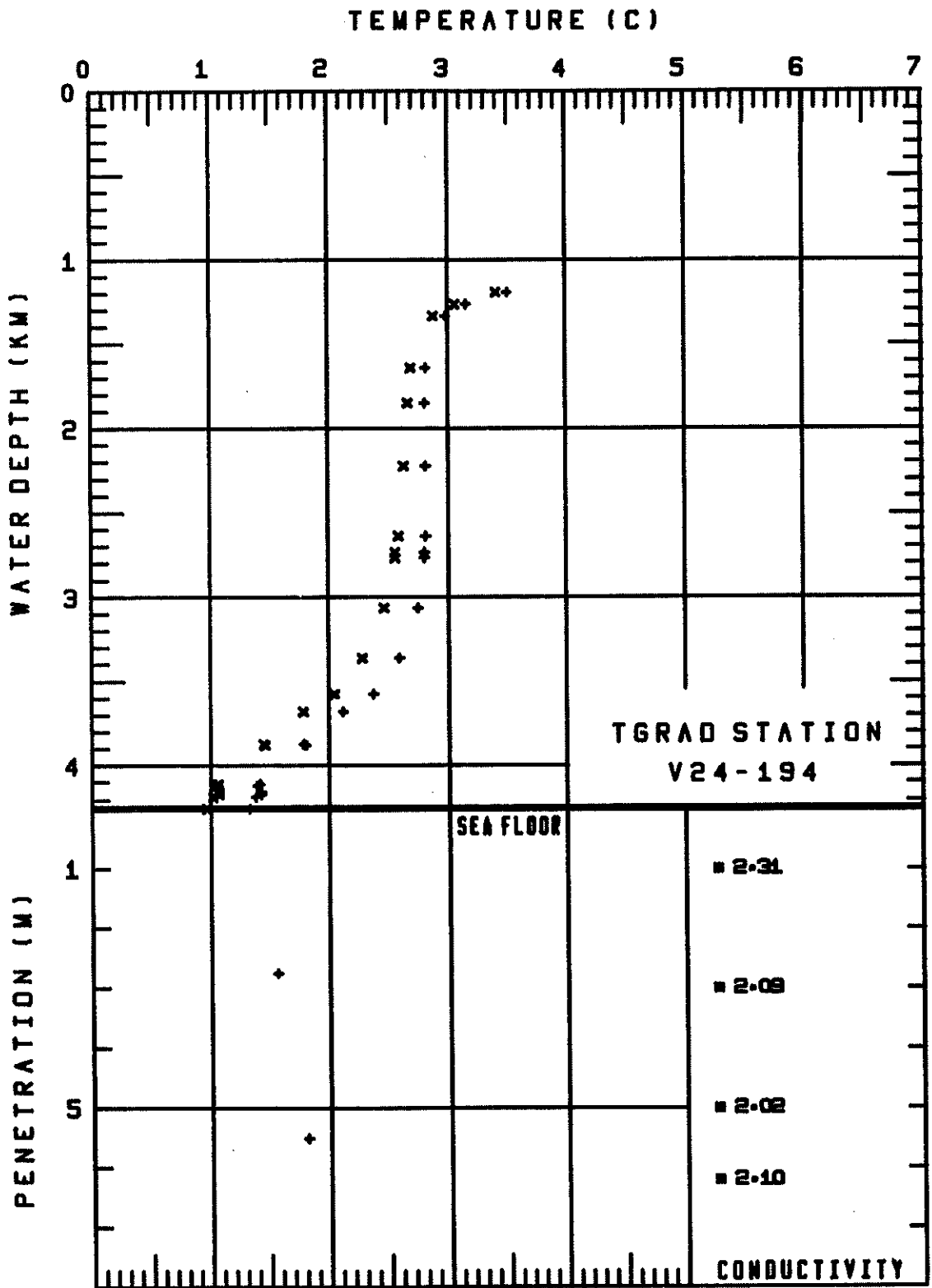
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1192.	3.49	3.40
1261.	3.15	3.06
1333.	2.97	2.87
1638.	2.81	2.69
1848.	2.80	2.66
2220.	2.81	2.63
2638.	2.81	2.58
2767.	2.79	2.55
2734.	2.79	2.55
3062.	2.74	2.46
3358.	2.59	2.28
3572.	2.37	2.05
3678.	2.12	1.79
3871.	1.80	1.46
3877.	1.81	1.47
4109.	1.42	1.06
4117.	1.40	1.05
4152.	1.44	1.07
4167.	1.43	1.07
4184.	1.38	1.02
4254.	1.33	0.96

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.74	1.56
5.51	1.81

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.31
3.00	2.09
5.00	2.02
6.20	2.10



## TGRAD STATION V24-195

## WATER TEMPERATURES

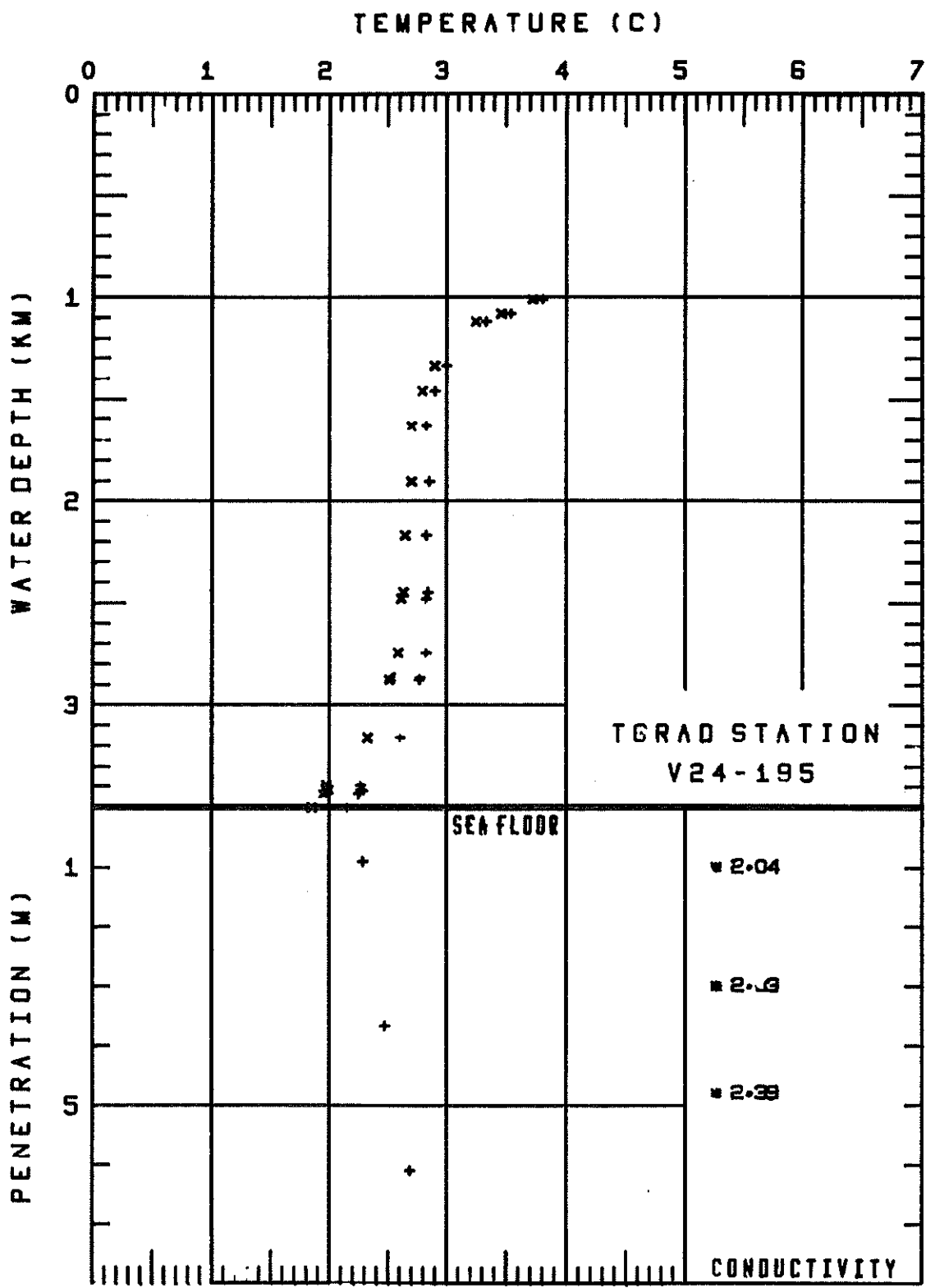
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1006.	3.80	3.72
1077.	3.54	3.46
1117.	3.33	3.25
1335.	3.00	2.90
1458.	2.90	2.79
1628.	2.83	2.70
1902.	2.85	2.70
2166.	2.82	2.65
2447.	2.84	2.63
2476.	2.82	2.61
2743.	2.83	2.59
2862.	2.77	2.52
2874.	2.77	2.52
3158.	2.60	2.32
3414.	2.29	1.99
3413.	2.27	1.97
3391.	2.27	1.97
3433.	2.25	1.94
3500.	2.15	1.85

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.91	2.29
3.66	2.47
6.09	2.69

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.04
3.00	2.03
4.80	2.39



## TGRAD STATION V24-196

## WATER TEMPERATURES

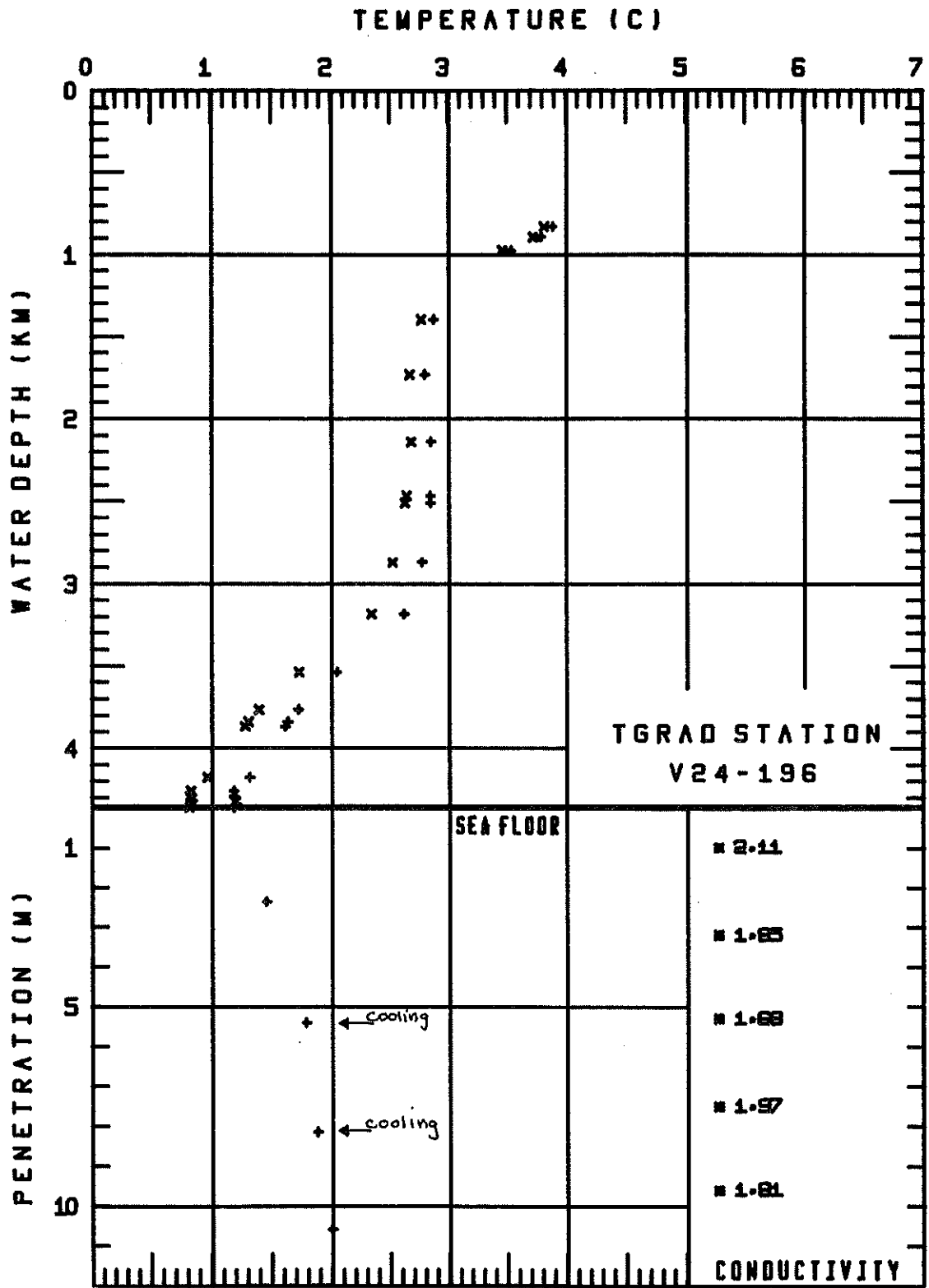
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
828.	3.88	3.82
891.	3.79	3.72
973.	3.53	3.46
1396.	2.87	2.77
1730.	2.80	2.67
2135.	2.85	2.68
2463.	2.85	2.64
2510.	2.84	2.63
2865.	2.77	2.52
3179.	2.62	2.34
3537.	2.04	1.73
3761.	1.72	1.39
3865.	1.61	1.28
3836.	1.63	1.30
4173.	1.32	0.96
4255.	1.19	0.83
4289.	1.19	0.82
4299.	1.20	0.83
4336.	1.21	0.84
4358.	1.19	0.81

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.35	1.46
5.39	1.78
8.14	1.88
10.57	2.00

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.11
3.20	1.85
5.30	1.68
7.50	1.97
9.60	1.81



## TGRAD STATION V24-197

## WATER TEMPERATURES

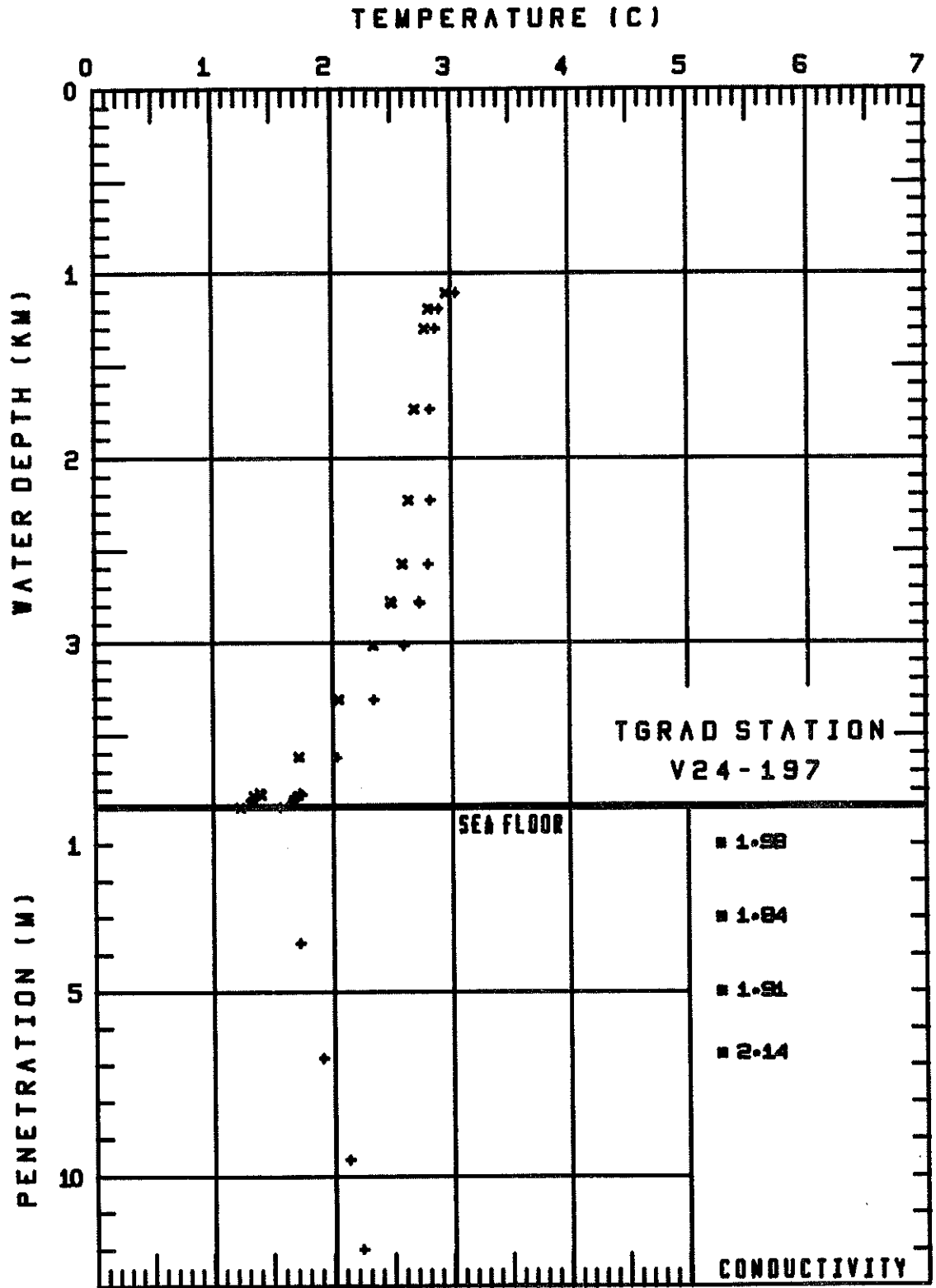
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1102.	3.04	2.96
1190.	2.90	2.81
1297.	2.88	2.78
1733.	2.83	2.70
2225.	2.82	2.64
2572.	2.80	2.58
2783.	2.73	2.49
2774.	2.73	2.49
3012.	2.60	2.34
3309.	2.35	2.05
3617.	2.04	1.72
3822.	1.75	1.41
3815.	1.73	1.40
3858.	1.67	1.34
3830.	1.68	1.35
3870.	1.65	1.32
3891.	1.57	1.23

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.69	1.73
6.81	1.91
9.56	2.13
11.99	2.23

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.98
3.00	1.84
5.00	1.91
6.70	2.14



## TGRAD STATION V24-198

## WATER TEMPERATURES

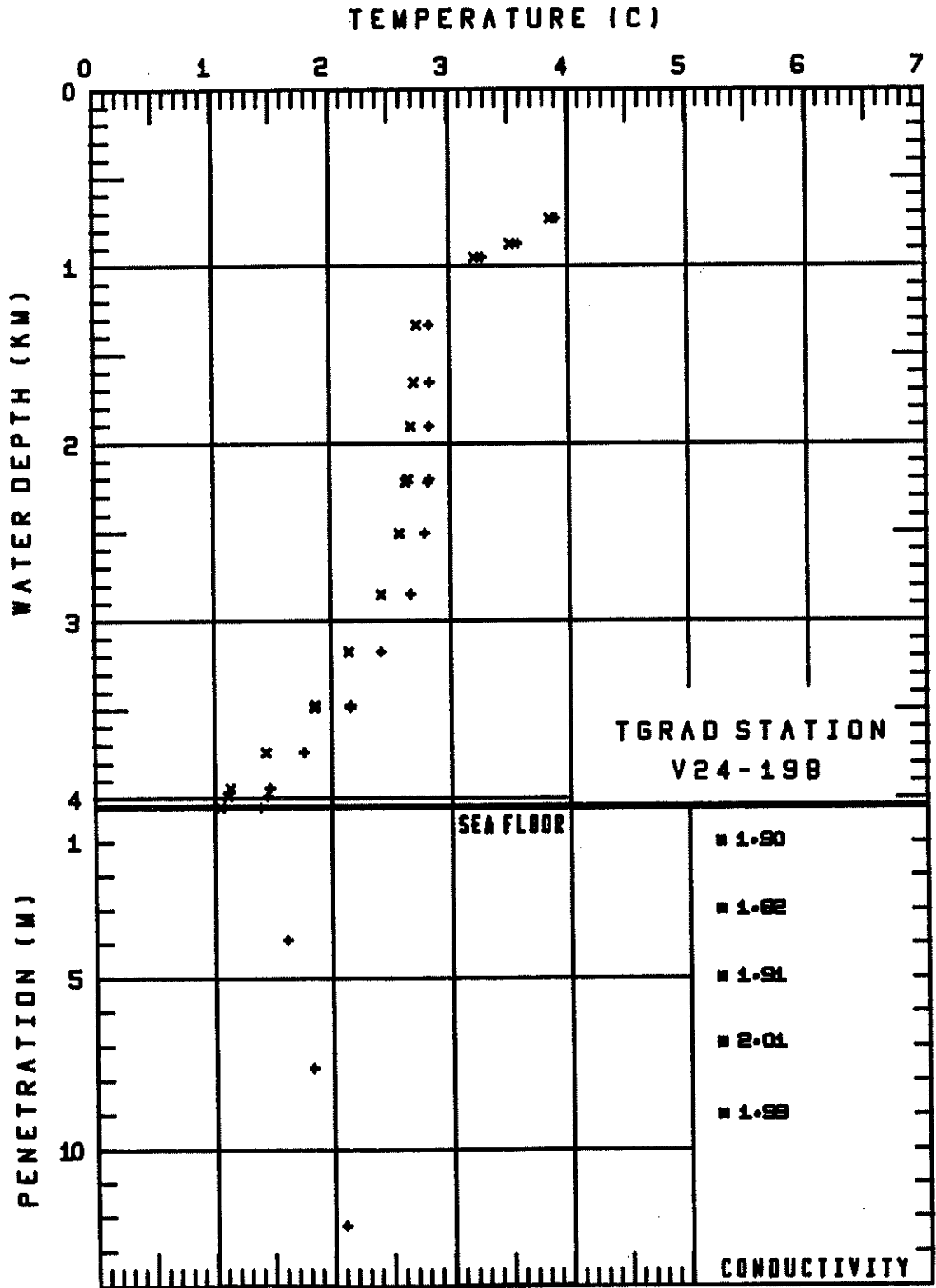
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
728.	3.90	3.85
873.	3.58	3.51
950.	3.28	3.21
1332.	2.83	2.73
1655.	2.84	2.71
1903.	2.83	2.68
2197.	2.84	2.66
2217.	2.82	2.63
2504.	2.79	2.58
2847.	2.67	2.43
3172.	2.43	2.15
3485.	2.17	1.86
3470.	2.17	1.86
3737.	1.77	1.45
3939.	1.48	1.14
3984.	1.46	1.12
4048.	1.40	1.05

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.87	1.62
7.62	1.83
12.22	2.10

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.90
3.00	1.82
5.00	1.91
6.90	2.01
9.00	1.99



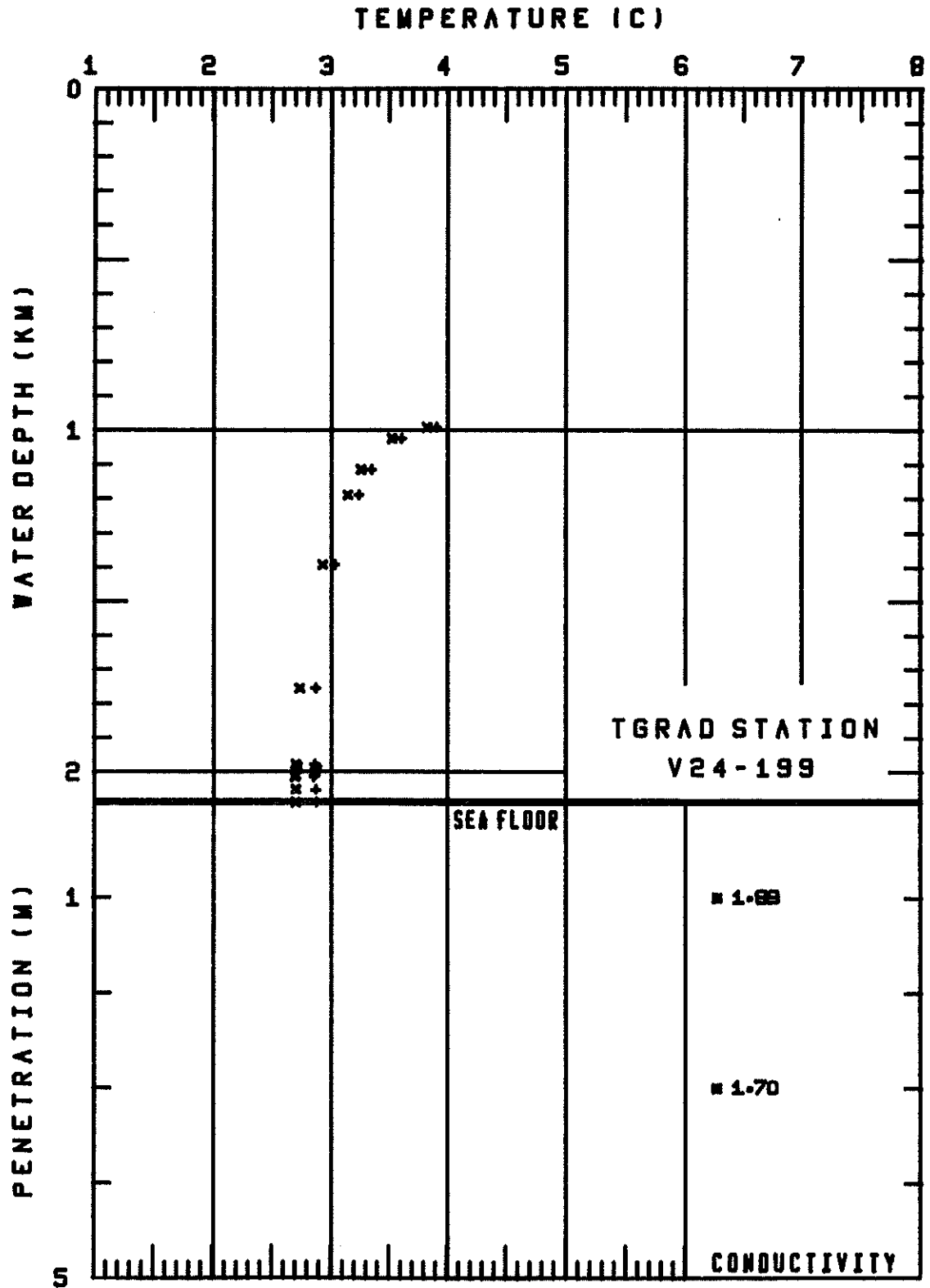
## TGRAD STATION V24-199

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
990.	3.90	3.82
1022.	3.60	3.52
1114.	3.34	3.25
1188.	3.23	3.14
1391.	3.03	2.92
1752.	2.87	2.73
2013.	2.85	2.69
1989.	2.86	2.71
1983.	2.87	2.71
1975.	2.86	2.70
2009.	2.86	2.70
2050.	2.87	2.70
2087.	2.87	2.70

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.89
3.00	1.70



## TGRAD STATION V24-200

## WATER TEMPERATURES

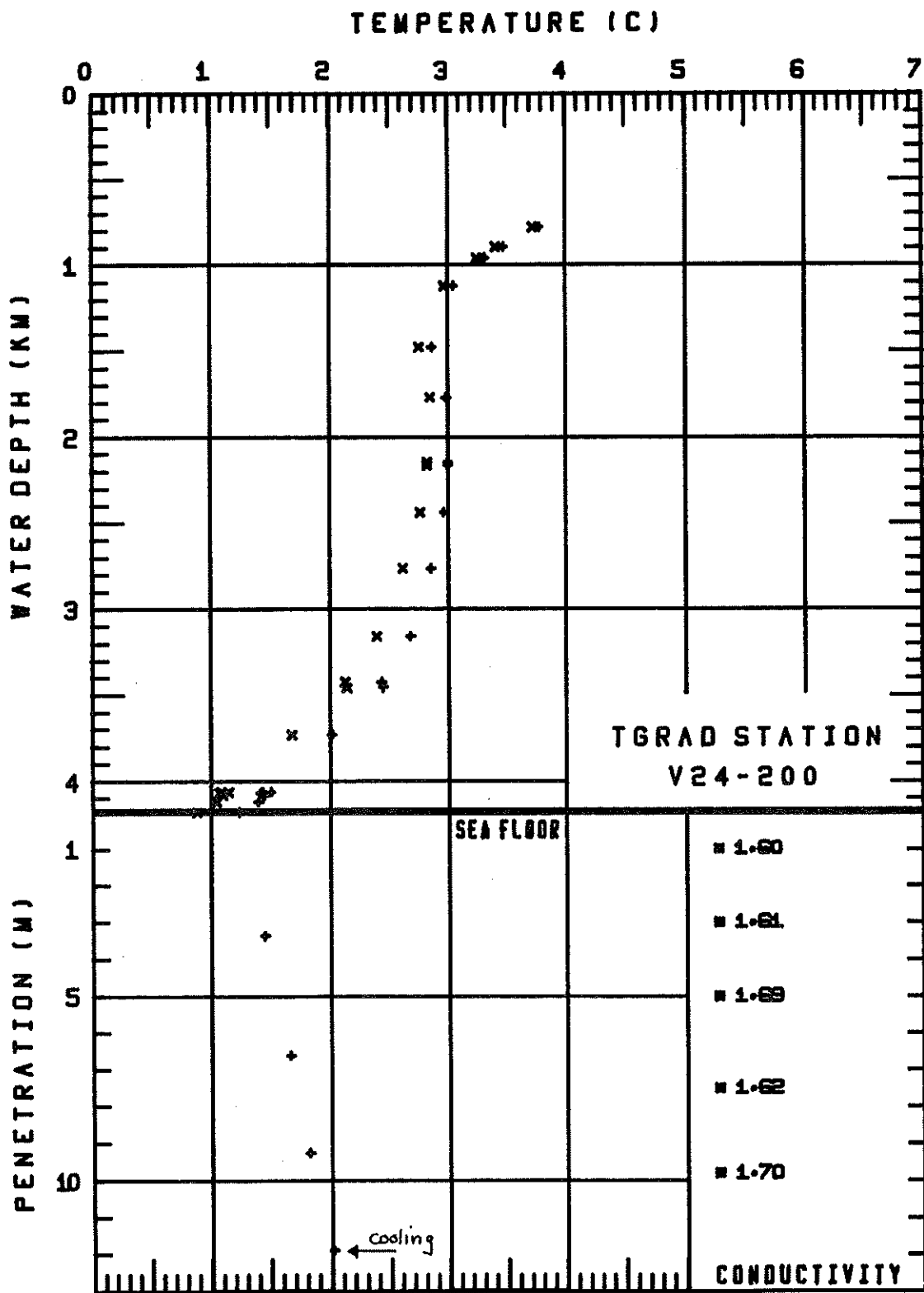
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
777.	3.78	3.72
891.	3.47	3.41
956.	3.31	3.24
1118.	3.05	2.97
1478.	2.86	2.75
1767.	2.99	2.85
2145.	3.00	2.82
2162.	3.00	2.82
2439.	2.97	2.76
2763.	2.85	2.61
3156.	2.68	2.40
3452.	2.45	2.14
3419.	2.43	2.12
3729.	2.01	1.68
4064.	1.50	1.15
4063.	1.44	1.09
4064.	1.42	1.07
4119.	1.40	1.04
4078.	1.45	1.10
4178.	1.24	0.89

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.36	1.45
6.61	1.66
9.25	1.82
11.89	2.01

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.60
3.00	1.61
5.00	1.69
7.50	1.62
9.80	1.70



## TGRAD STATION V24-201

## WATER TEMPERATURES

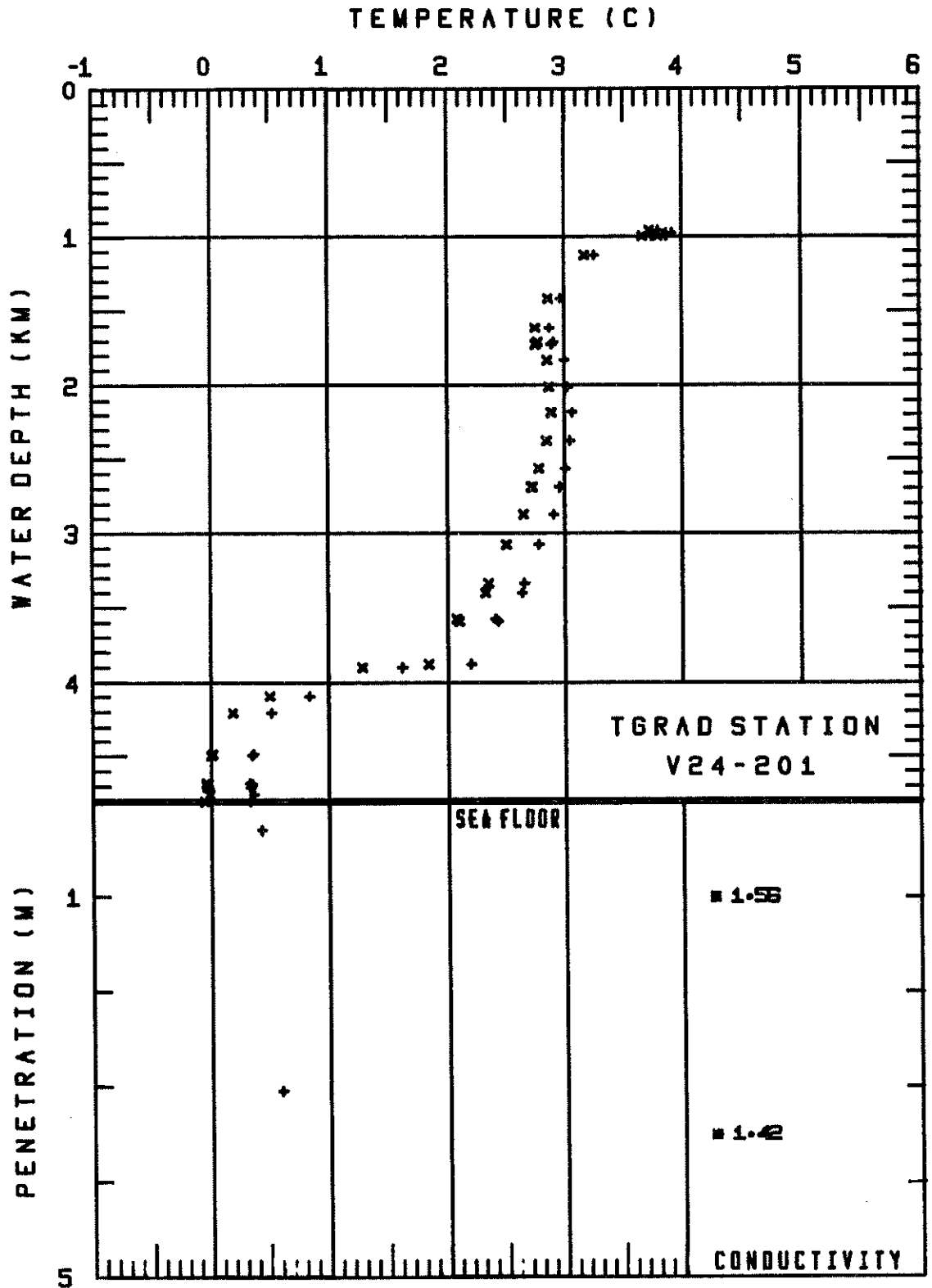
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
969.	3.92	3.84
953.	3.80	3.73
991.	3.88	3.80
994.	3.75	3.67
1123.	3.25	3.17
1413.	2.96	2.85
1609.	2.87	2.74
1705.	2.90	2.76
1723.	2.88	2.75
1832.	2.99	2.85
2013.	3.02	2.86
2184.	3.06	2.88
2373.	3.04	2.84
2561.	3.00	2.77
2684.	2.96	2.72
2684.	2.95	2.71
2869.	2.90	2.64
3074.	2.77	2.50
3336.	2.65	2.34
3399.	2.62	2.31
3575.	2.40	2.07
3594.	2.42	2.09
3882.	2.19	1.83
3903.	1.62	1.28
4093.	0.84	0.51
4207.	0.52	0.19
4485.	0.36	0.01
4493.	0.35	0.00
4684.	0.35	-0.01
4695.	0.35	-0.02
4683.	0.34	-0.03
4705.	0.34	-0.02
4757.	0.37	-0.00
4803.	0.33	-0.04

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.30	0.43
3.04	0.60

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.56
3.50	1.42



## TGRAD STATION V24-202

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
951.	4.05	3.98
1008.	3.78	3.70
1045.	3.79	3.71
1042.	3.81	3.73
1021.	3.78	3.70
1025.	3.75	3.67
1014.	3.73	3.66
1003.	3.69	3.62
1315.	3.00	2.91
1454.	2.91	2.80
1503.	2.93	2.81
1548.	2.89	2.77
1846.	2.89	2.74
1820.	2.90	2.75
2077.	3.07	2.90
2277.	3.08	2.89
2334.	3.08	2.88
2548.	3.02	2.80
2809.	2.93	2.68
2775.	2.89	2.64
3140.	2.78	2.50
3364.	2.68	2.37
3570.	2.50	2.17
3754.	2.07	1.73
3768.	2.07	1.73
3907.	1.69	1.35
3982.	1.25	0.92
4003.	1.23	0.89

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.30	1.38
1.83	1.57
3.65	1.94

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.58
3.30	1.53



## TGRAD STATION V24-203

## WATER TEMPERATURES

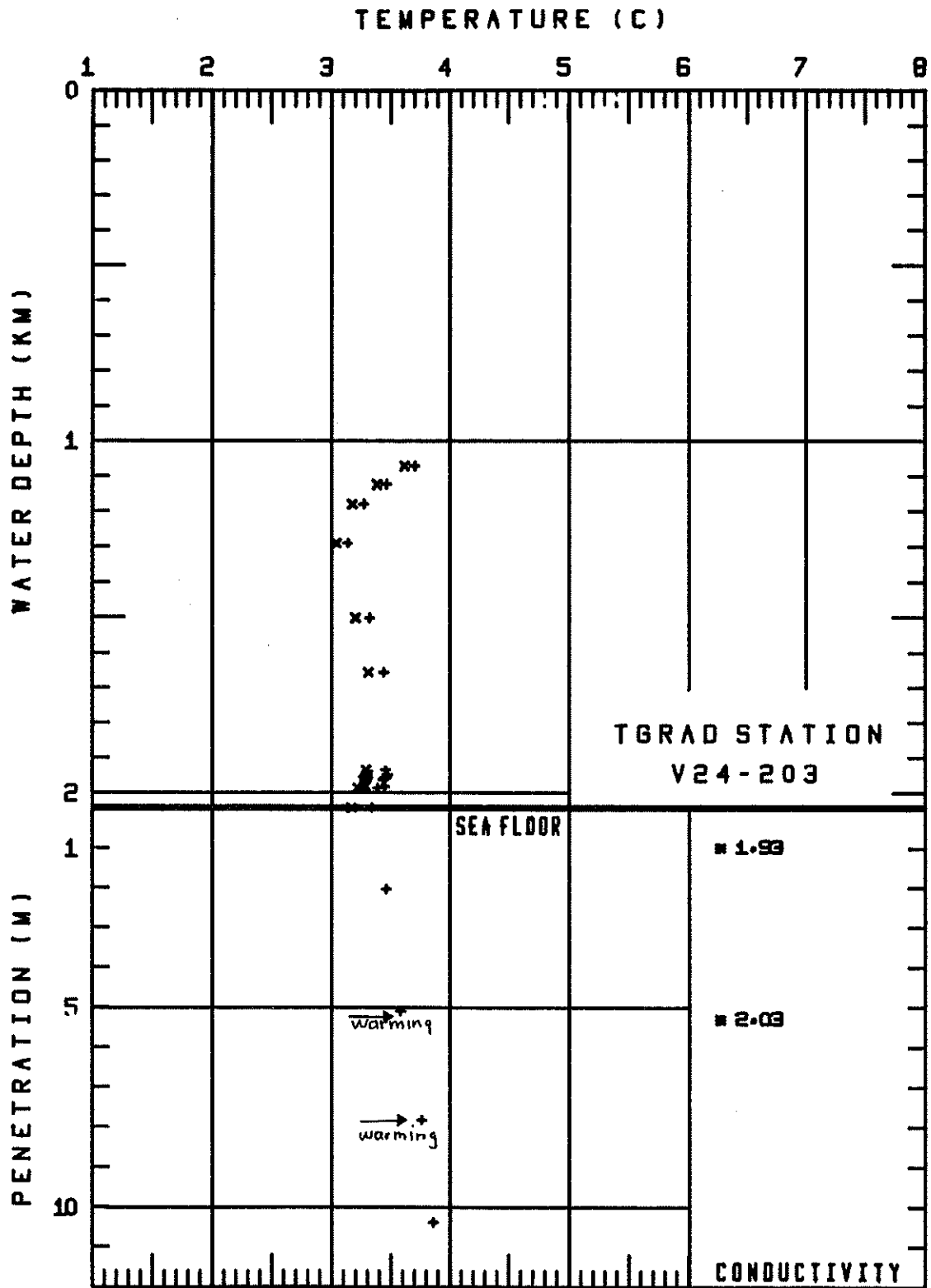
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1069.	3.70	3.61
1122.	3.46	3.38
1178.	3.26	3.17
1289.	3.14	3.04
1504.	3.32	3.20
1658.	3.44	3.31
1964.	3.43	3.27
1949.	3.47	3.30
1983.	3.45	3.28
1958.	3.44	3.28
1958.	3.46	3.29
1934.	3.45	3.29
1987.	3.39	3.22
2044.	3.34	3.17

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.03	3.46
5.10	3.58
7.82	3.76
10.38	3.86

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.93
5.30	2.03



## TGRAD STATION V24 204

## WATER TEMPERATURES

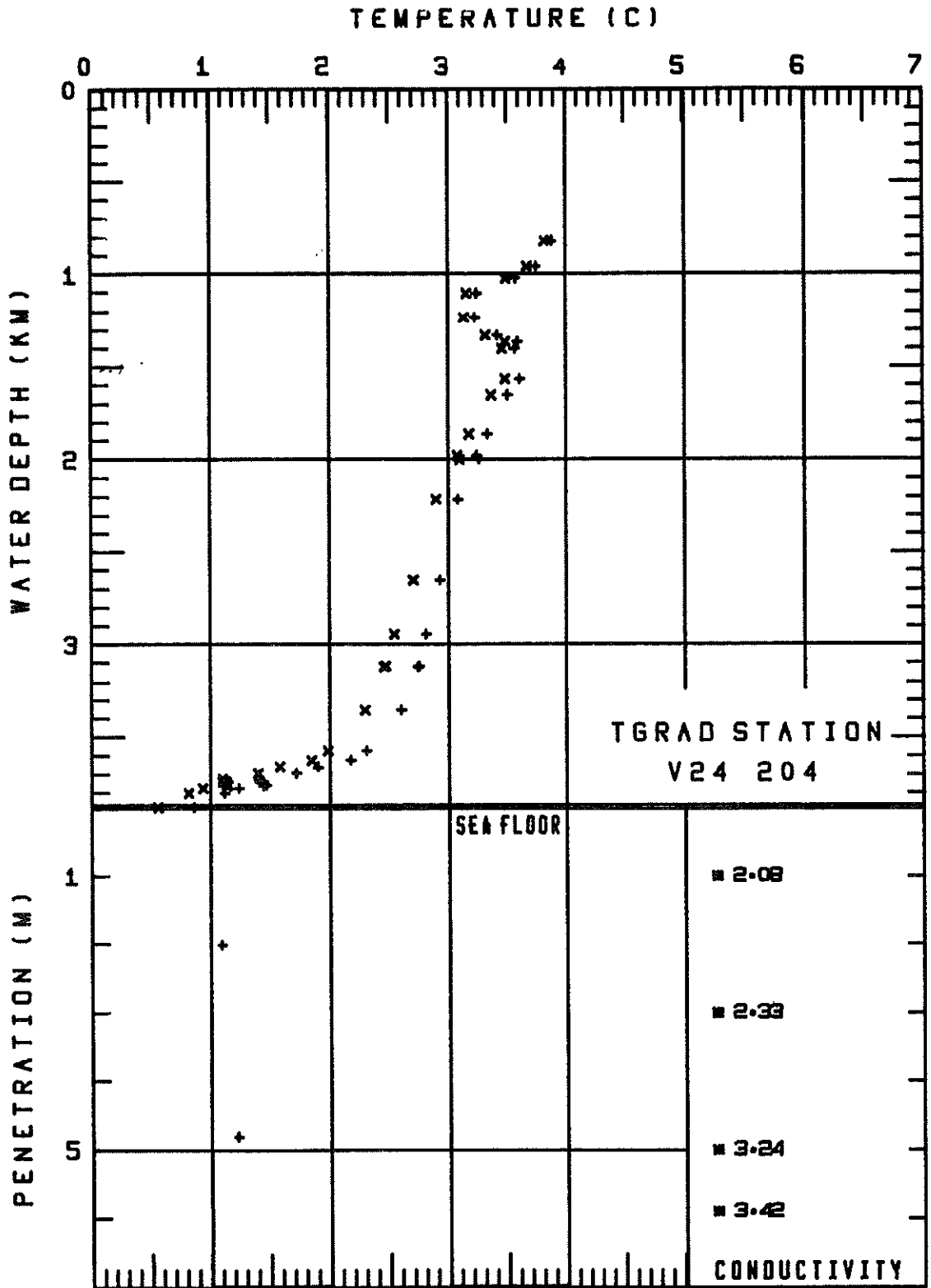
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
820.	3.88	3.81
955.	3.74	3.67
1022.	3.57	3.49
1101.	3.24	3.15
1233.	3.23	3.13
1327.	3.41	3.31
1364.	3.59	3.48
1400.	3.56	3.45
1564.	3.61	3.48
1651.	3.50	3.36
1862.	3.33	3.17
2001.	3.26	3.09
1980.	3.24	3.08
2214.	3.08	2.89
2652.	2.93	2.70
2943.	2.80	2.54
3118.	2.74	2.46
3113.	2.75	2.46
3353.	2.60	2.29
3571.	2.30	1.98
3623.	2.17	1.85
3660.	1.90	1.58
3692.	1.72	1.40
3723.	1.41	1.10
3742.	1.41	1.10
3747.	1.45	1.14
3735.	1.44	1.13
3763.	1.45	1.13
3759.	1.46	1.15
3774.	1.24	0.94
3801.	1.12	0.82
3878.	0.86	0.56

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.01	1.10
4.81	1.23

## SEDIMENT CONDUCTIVITIES

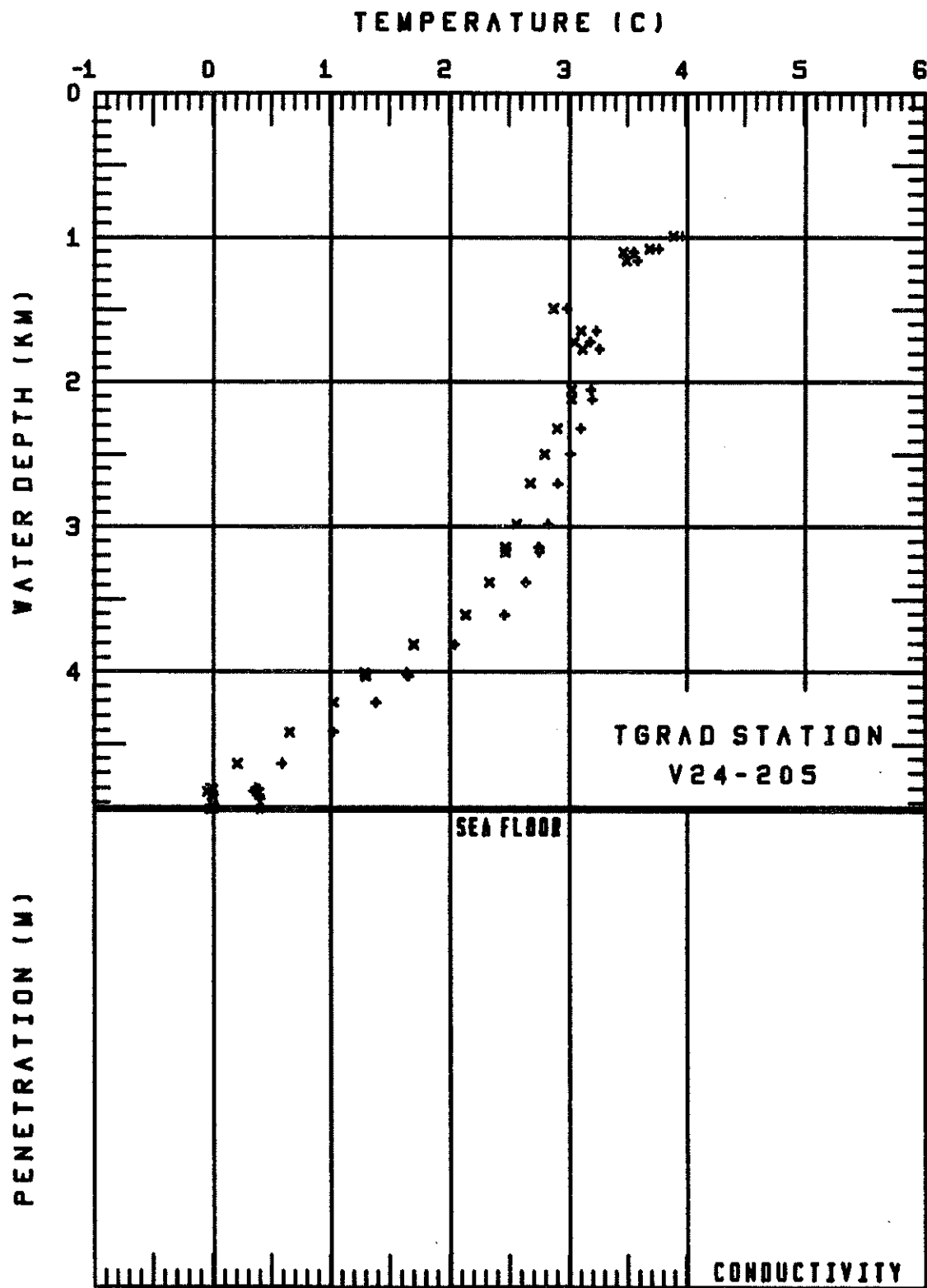
DEPTH	CONDUCTIVITY
1.00	2.08
3.00	2.33
5.00	3.24
5.90	3.42



## TGRAD STATION V24-205

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
990.	3.96	3.88
1078.	3.76	3.68
1098.	3.55	3.46
1158.	3.58	3.49
1489.	2.98	2.87
1645.	3.23	3.10
1720.	3.18	3.04
1769.	3.26	3.11
2114.	3.20	3.02
2047.	3.19	3.02
2316.	3.10	2.90
2494.	3.01	2.79
2700.	2.91	2.67
2977.	2.82	2.56
3168.	2.75	2.46
3138.	2.75	2.46
3381.	2.64	2.33
3605.	2.46	2.13
3806.	2.04	1.70
4003.	1.64	1.29
4028.	1.65	1.30
4207.	1.39	1.02
4410.	1.03	0.65
4632.	0.59	0.20
4800.	0.37	-0.01
4822.	0.35	-0.04
4858.	0.39	0.00
4852.	0.39	-0.00
4810.	0.39	0.00
4876.	0.40	0.00
4939.	0.42	0.01
4945.	0.38	-0.02



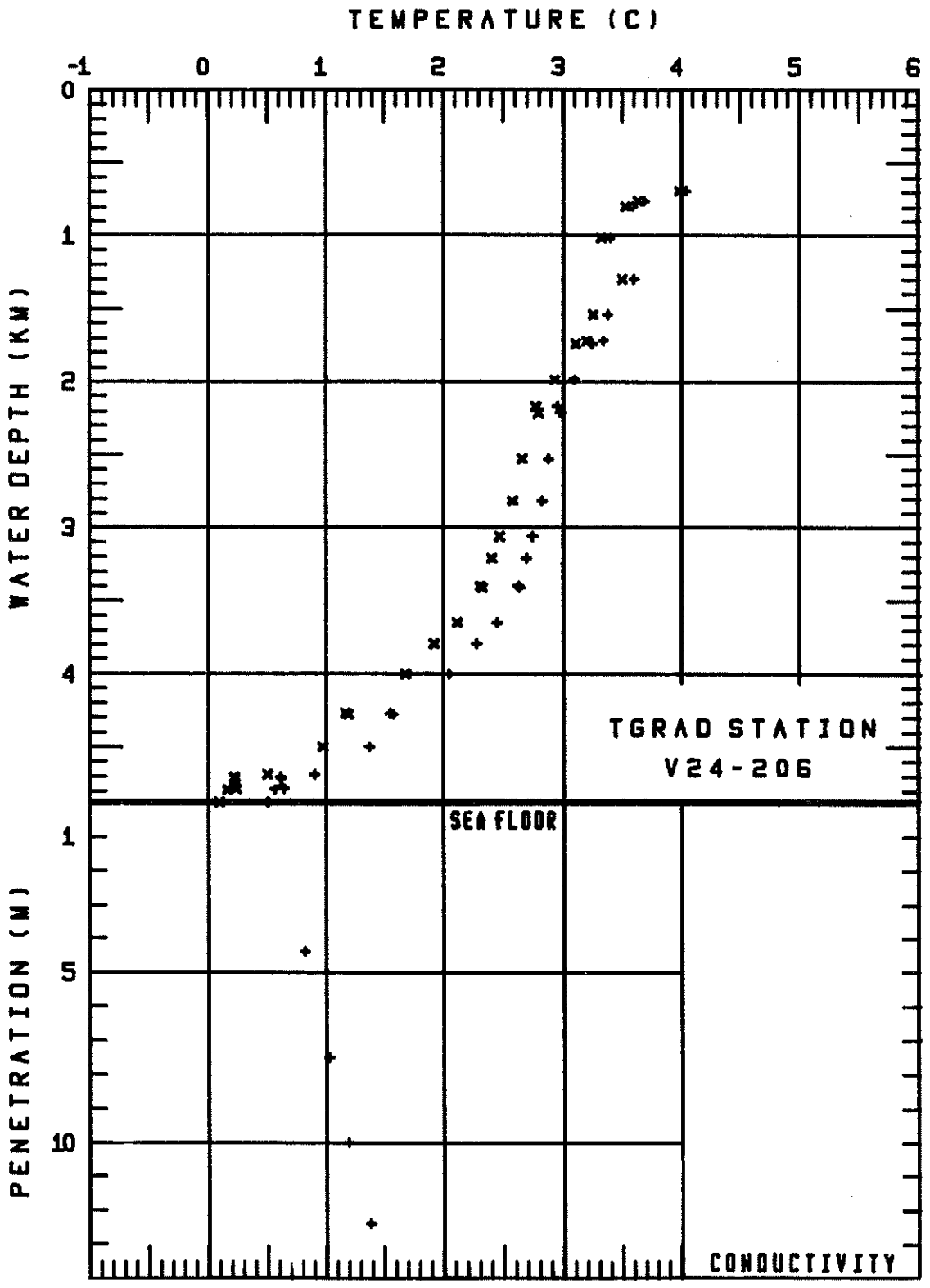
## TGRAD STATION V24-206

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
687.	4.03	3.98
758.	3.68	3.63
795.	3.58	3.52
1015.	3.39	3.31
1295.	3.60	3.49
1538.	3.37	3.24
1716.	3.33	3.19
1742.	3.24	3.10
1985.	3.09	2.93
2211.	2.97	2.79
2170.	2.94	2.76
2529.	2.87	2.65
2812.	2.82	2.57
3059.	2.74	2.46
3210.	2.69	2.40
3409.	2.63	2.32
3400.	2.62	2.31
3649.	2.45	2.11
3793.	2.27	1.92
4002.	2.05	1.68
4275.	1.57	1.19
4273.	1.55	1.17
4501.	1.37	0.97
4687.	0.90	0.50
4786.	0.64	0.24
4715.	0.61	0.22
4707.	0.61	0.22
4766.	0.62	0.22
4792.	0.56	0.16
4879.	0.50	0.10

## SEDIMENT TEMPERATURES

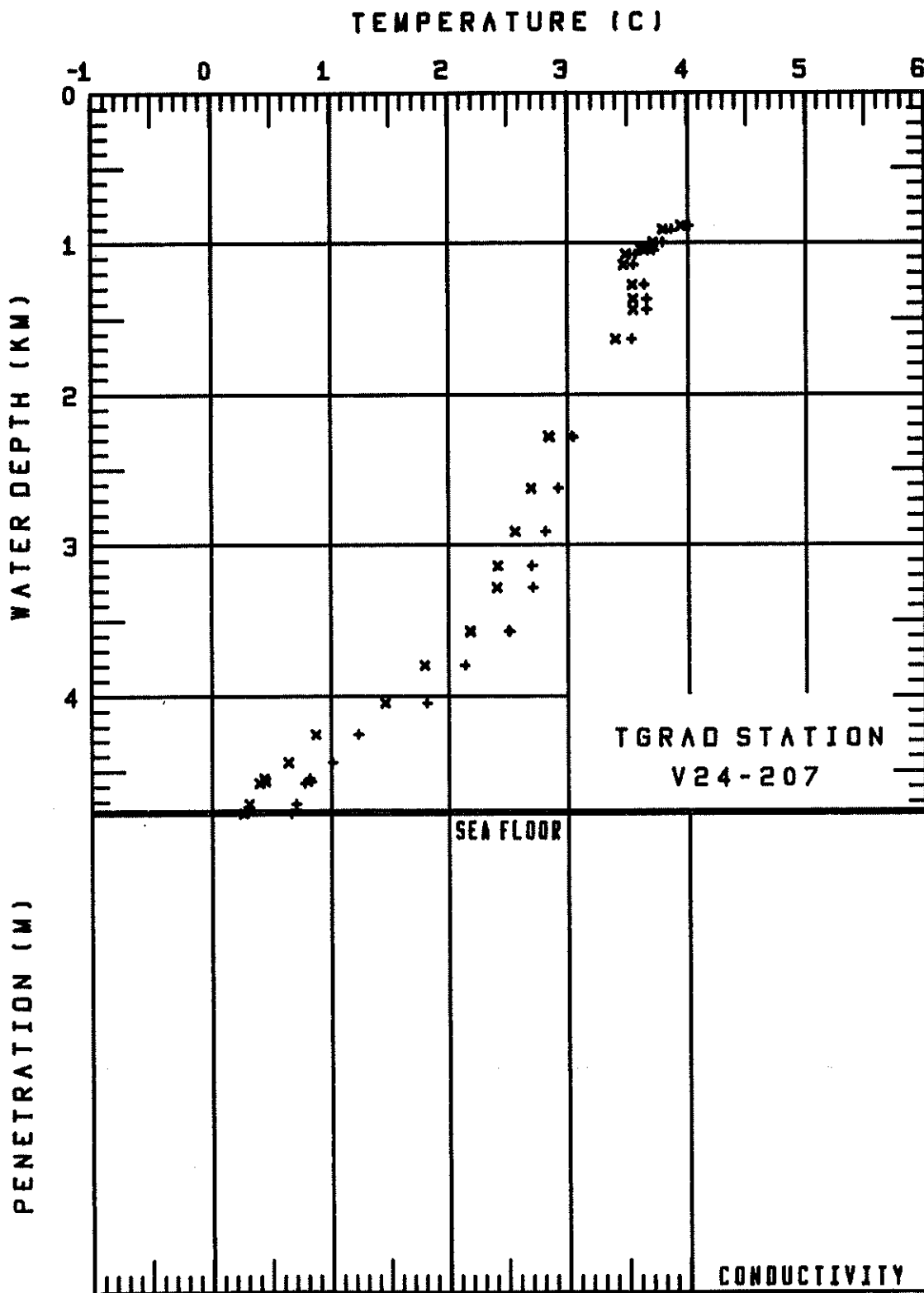
DEPTH	TEMPERATURE
4.39	0.82
7.51	1.02
10.01	1.20
12.40	1.38



## TGRAD STATION V24-207

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
881.	4.01	3.94
910.	3.86	3.79
990.	3.79	3.72
1043.	3.72	3.64
1035.	3.69	3.61
1072.	3.57	3.49
1142.	3.56	3.47
1272.	3.64	3.54
1371.	3.66	3.55
1435.	3.66	3.55
1632.	3.53	3.40
2281.	3.05	2.86
2276.	3.04	2.85
2620.	2.93	2.70
2906.	2.82	2.56
3138.	2.71	2.42
3281.	2.72	2.42
3566.	2.51	2.18
3570.	2.52	2.19
3794.	2.14	1.80
4042.	1.82	1.46
4248.	1.24	0.87
4438.	1.02	0.64
4542.	0.82	0.44
4561.	0.83	0.45
4572.	0.78	0.40
4713.	0.71	0.31
4756.	0.71	0.30
4775.	0.67	0.26



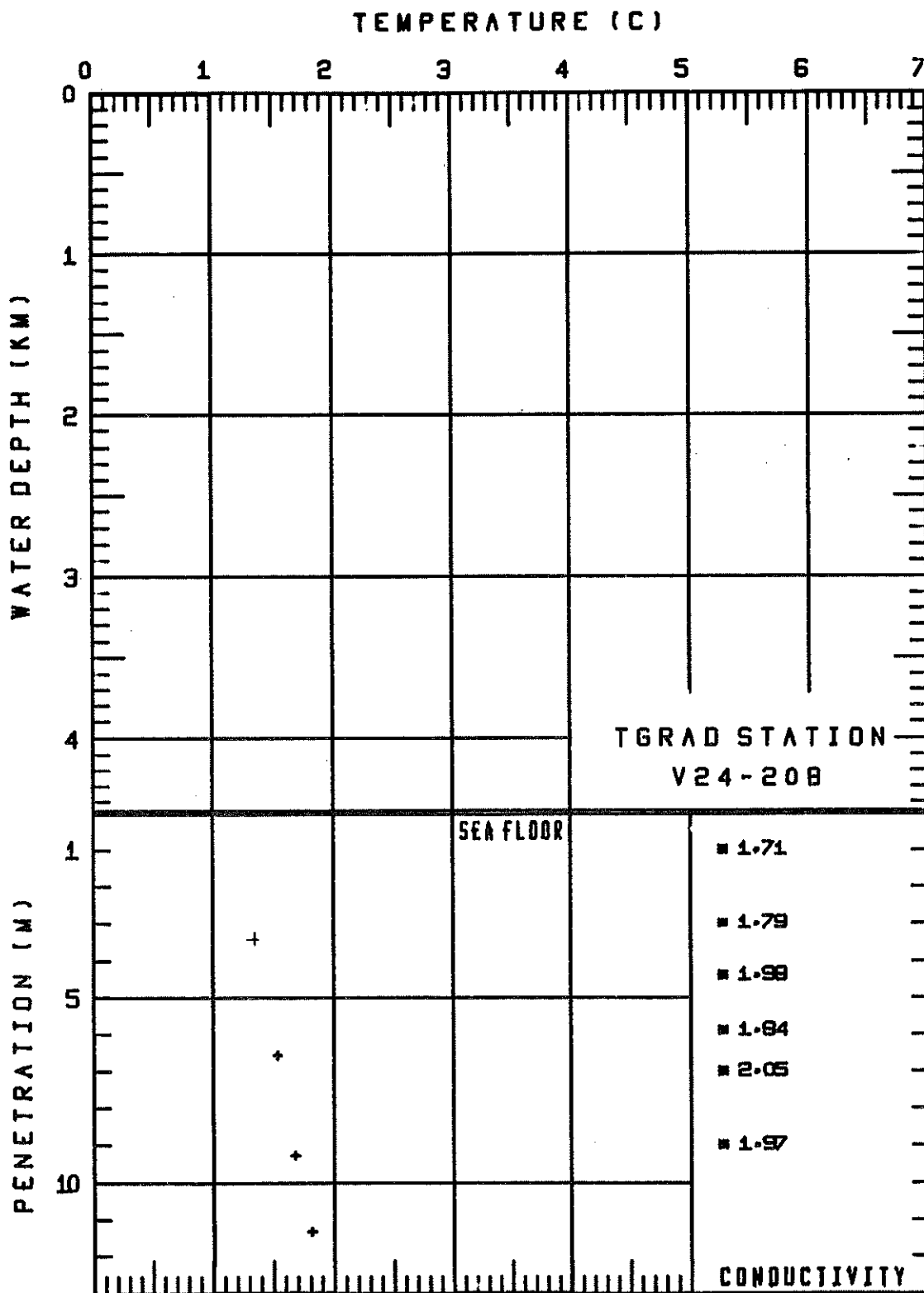
## TGRAD STATIONV24-208

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
3.47	1.33
6.56	1.53
9.28	1.68
11.34	1.81

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.71
3.00	1.79
4.40	1.98
5.90	1.84
7.00	2.05
9.00	1.97



## TGRAD STATION V24-209

## WATER TEMPERATURES

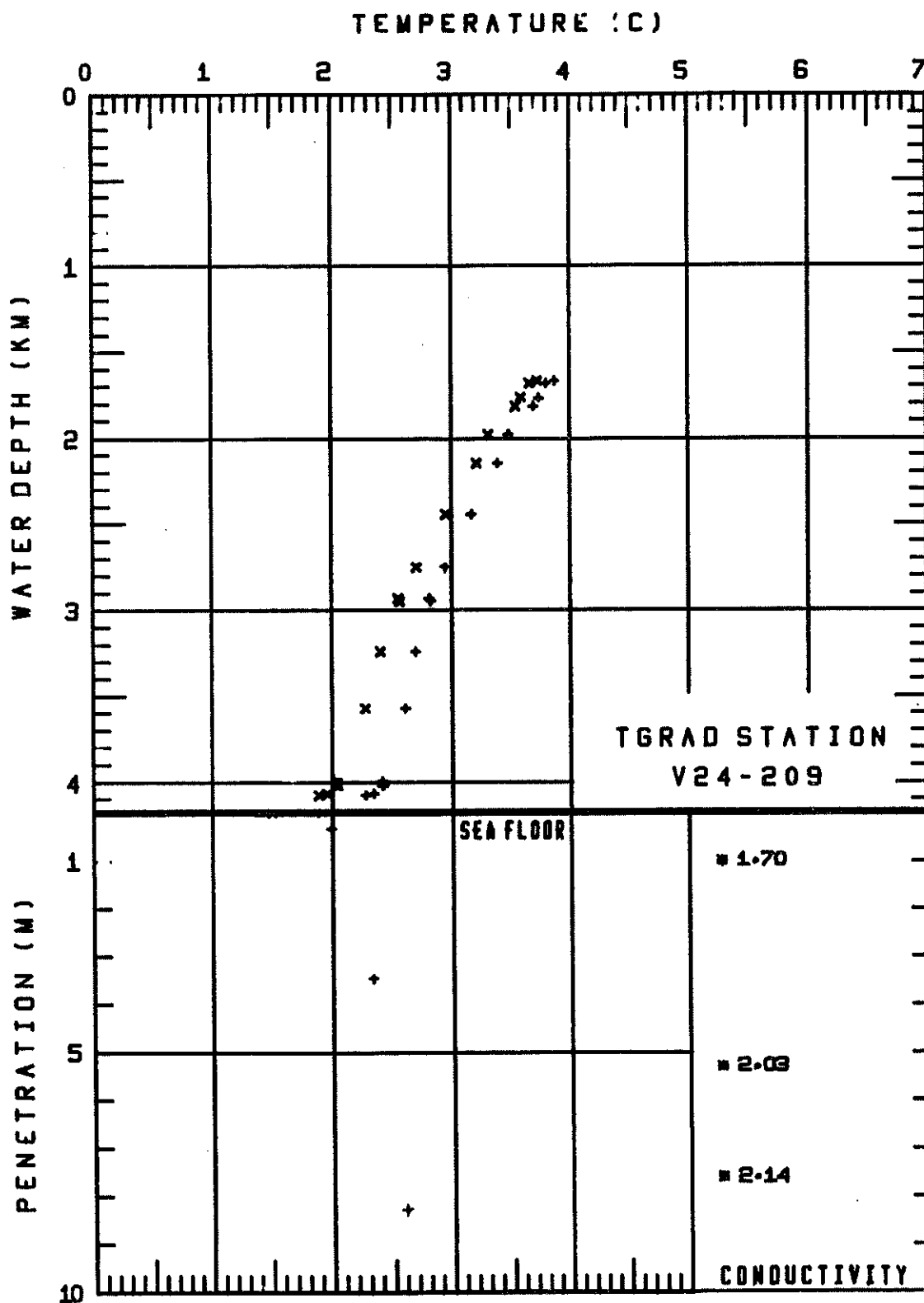
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1667.	3.87	3.72
1681.	3.80	3.65
1766.	3.73	3.58
1816.	3.69	3.53
1980.	3.48	3.31
2144.	3.39	3.21
2440.	3.16	2.95
2748.	2.94	2.70
2942.	2.82	2.56
2931.	2.81	2.55
3243.	2.70	2.40
3569.	2.60	2.27
3959.	2.07	1.71
4019.	2.42	2.04
3995.	2.41	2.03
4022.	2.41	2.03
4069.	2.34	1.95
4078.	2.27	1.89
4179.	1.88	1.50

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.34	1.98
3.46	2.33
8.29	2.57

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.70
5.30	2.03
7.60	2.14



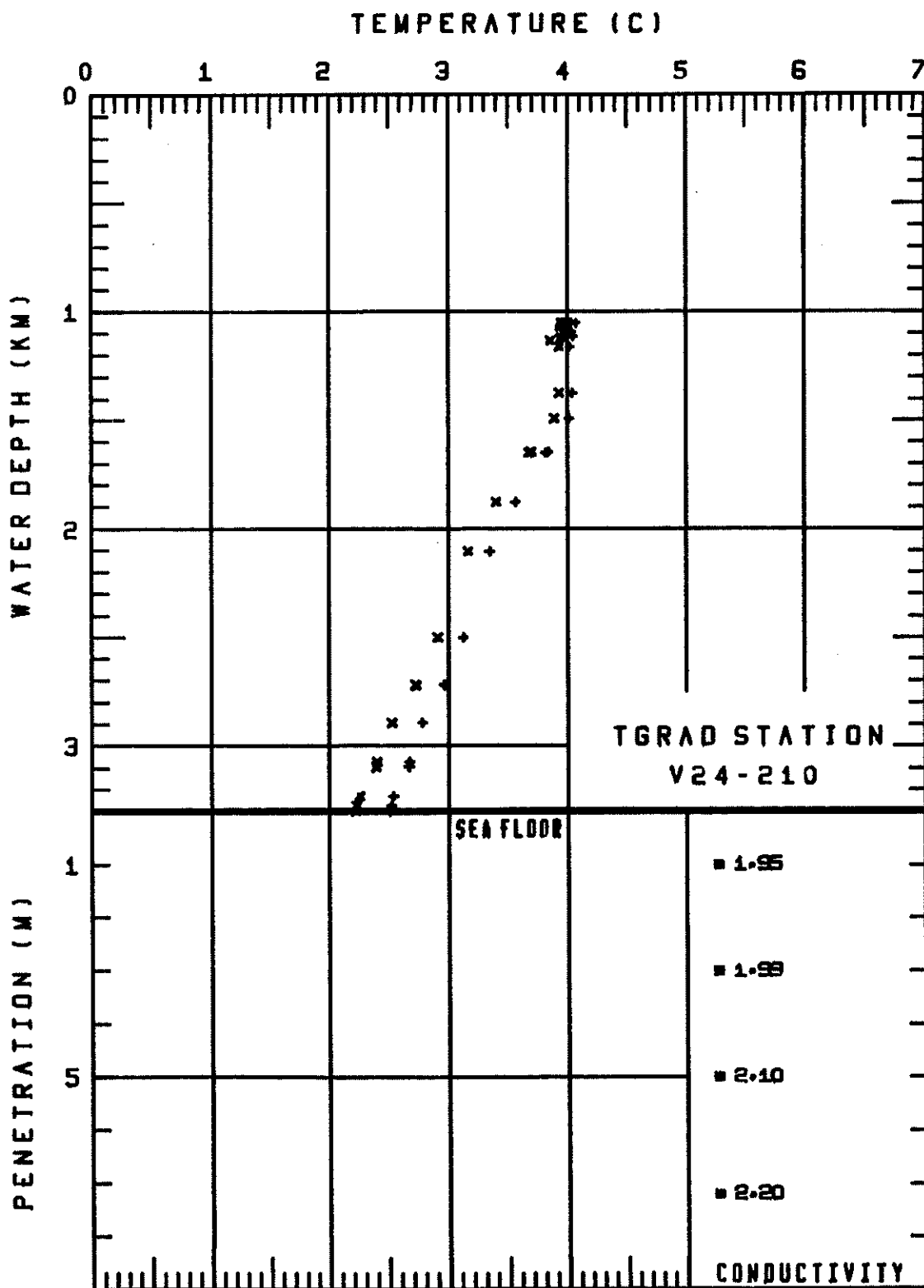
## TGRAD STATION V24-210

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1051.	4.06	3.97
1115.	4.04	3.95
1163.	4.01	3.92
1092.	4.03	3.94
1049.	4.02	3.93
1097.	4.01	3.92
1052.	4.03	3.94
1132.	3.94	3.85
1375.	4.03	3.92
1492.	4.01	3.88
1646.	3.82	3.69
1652.	3.81	3.67
1875.	3.55	3.39
2105.	3.34	3.16
2499.	3.12	2.90
2721.	2.97	2.73
2715.	2.96	2.72
2892.	2.78	2.53
3073.	2.68	2.40
3093.	2.67	2.39
3230.	2.54	2.25
3273.	2.52	2.23
3300.	2.51	2.22

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	1.95
3.00	1.99
5.00	2.10
7.20	2.20



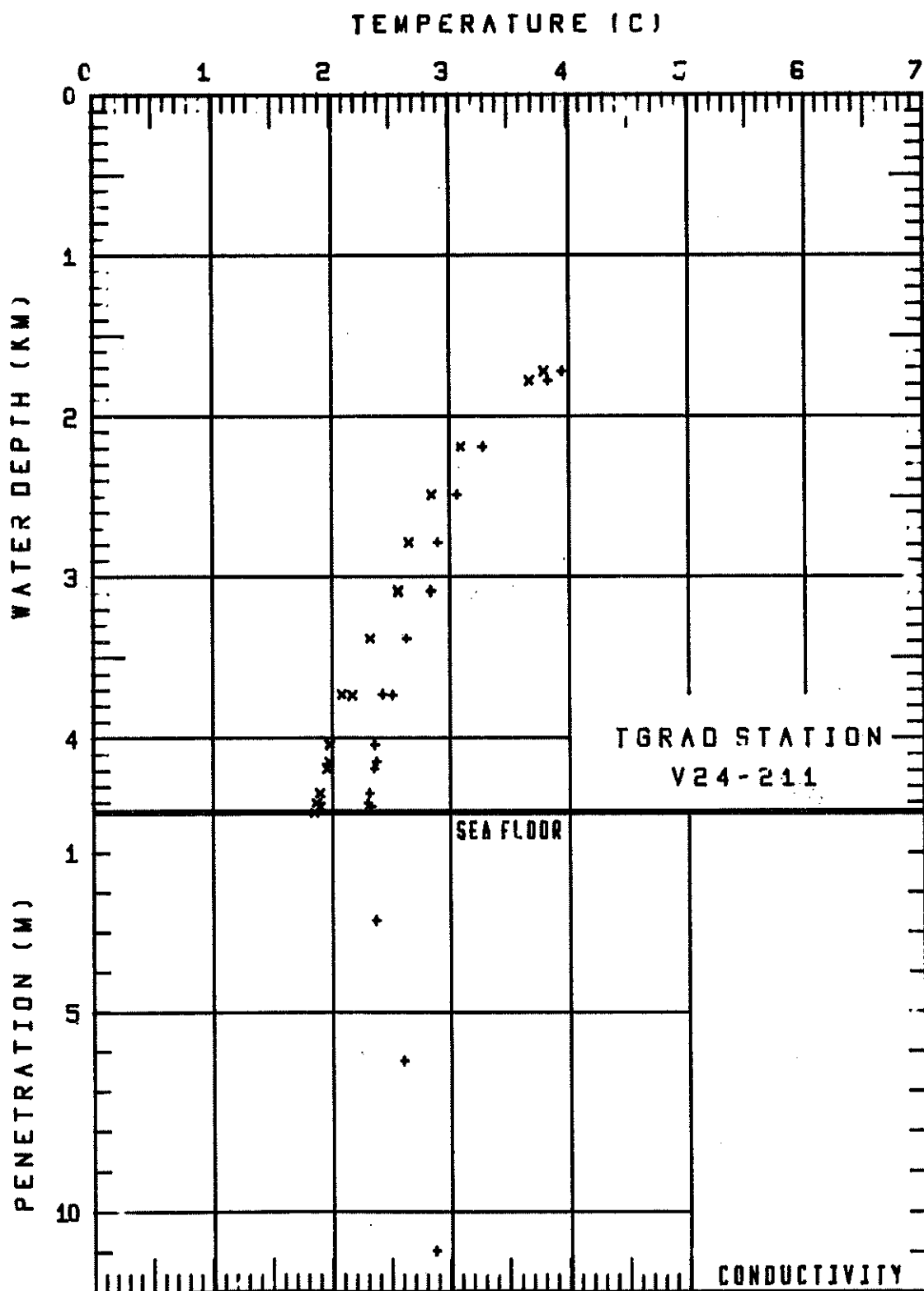
## TGRAD STATION V24-211

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1721.	3.95	3.80
1779.	3.83	3.68
2189.	3.29	3.10
2489.	3.07	2.85
2786.	2.91	2.66
3083.	2.85	2.57
3086.	2.85	2.57
3379.	2.64	2.33
3730.	2.52	2.17
3725.	2.43	2.09
4038.	2.37	1.98
4037.	2.37	1.98
4141.	2.38	1.98
4186.	2.36	1.96
4341.	2.32	1.90
4402.	2.31	1.88
4422.	2.34	1.90
4459.	2.29	1.85

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.70	2.38
6.22	2.61
10.97	2.88



## TGRAD STATION V24-212

## WATER TEMPERATURES

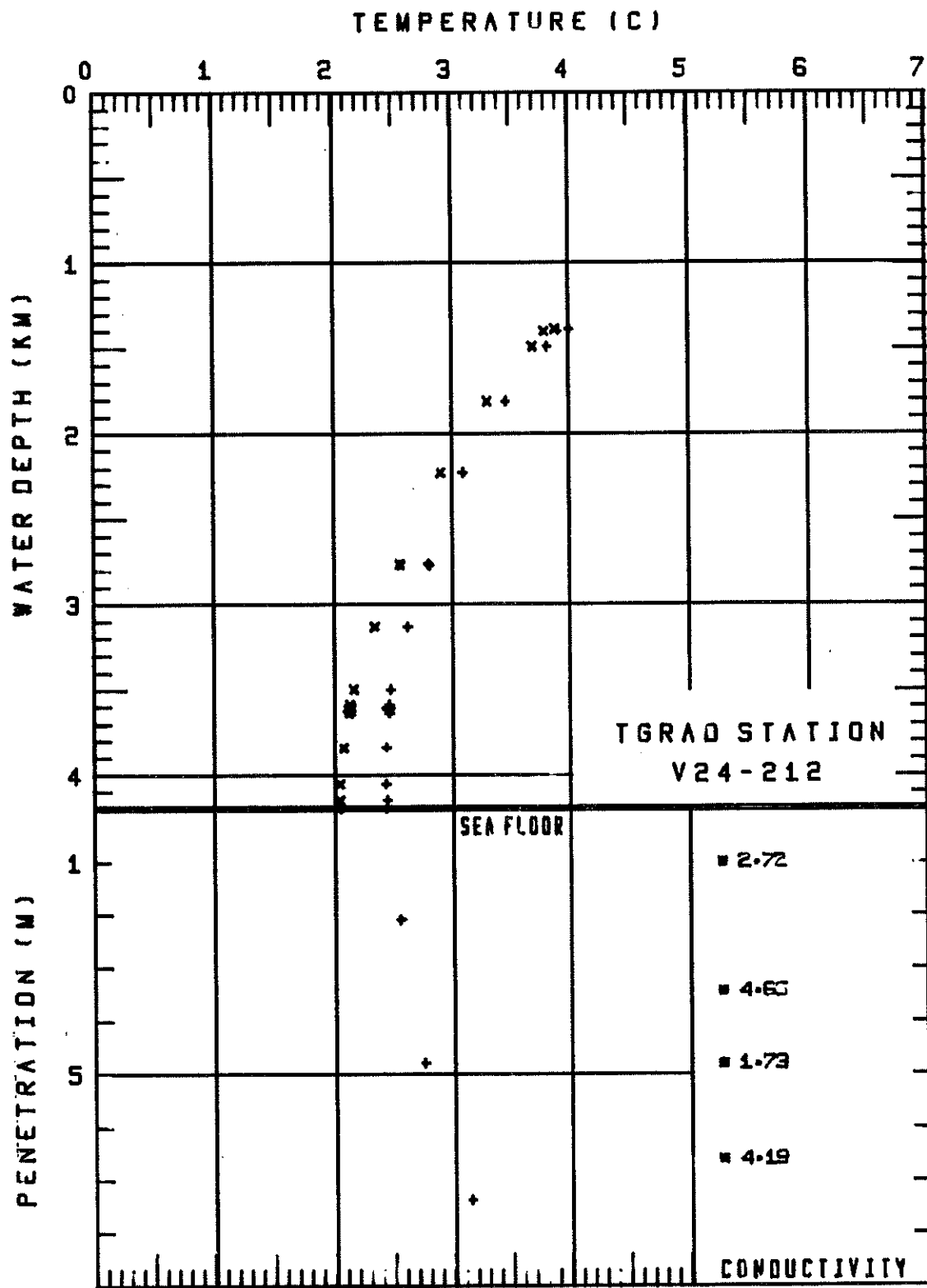
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1383.	4.00	3.88
1398.	3.91	3.79
1488.	3.81	3.69
1811.	3.45	3.30
2223.	3.09	2.90
2771.	2.80	2.56
2761.	2.79	2.55
3127.	2.62	2.34
3495.	2.48	2.16
3608.	2.46	2.13
3587.	2.46	2.13
3606.	2.47	2.14
3635.	2.46	2.12
3604.	2.44	2.10
3625.	2.47	2.13
3612.	2.45	2.12
3836.	2.43	2.07
4051.	2.43	2.04
4146.	2.44	2.04
4196.	2.43	2.03

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
2.09	2.55
4.78	2.74
7.37	3.14

## SEDIMENT CONDUCTIVITIES

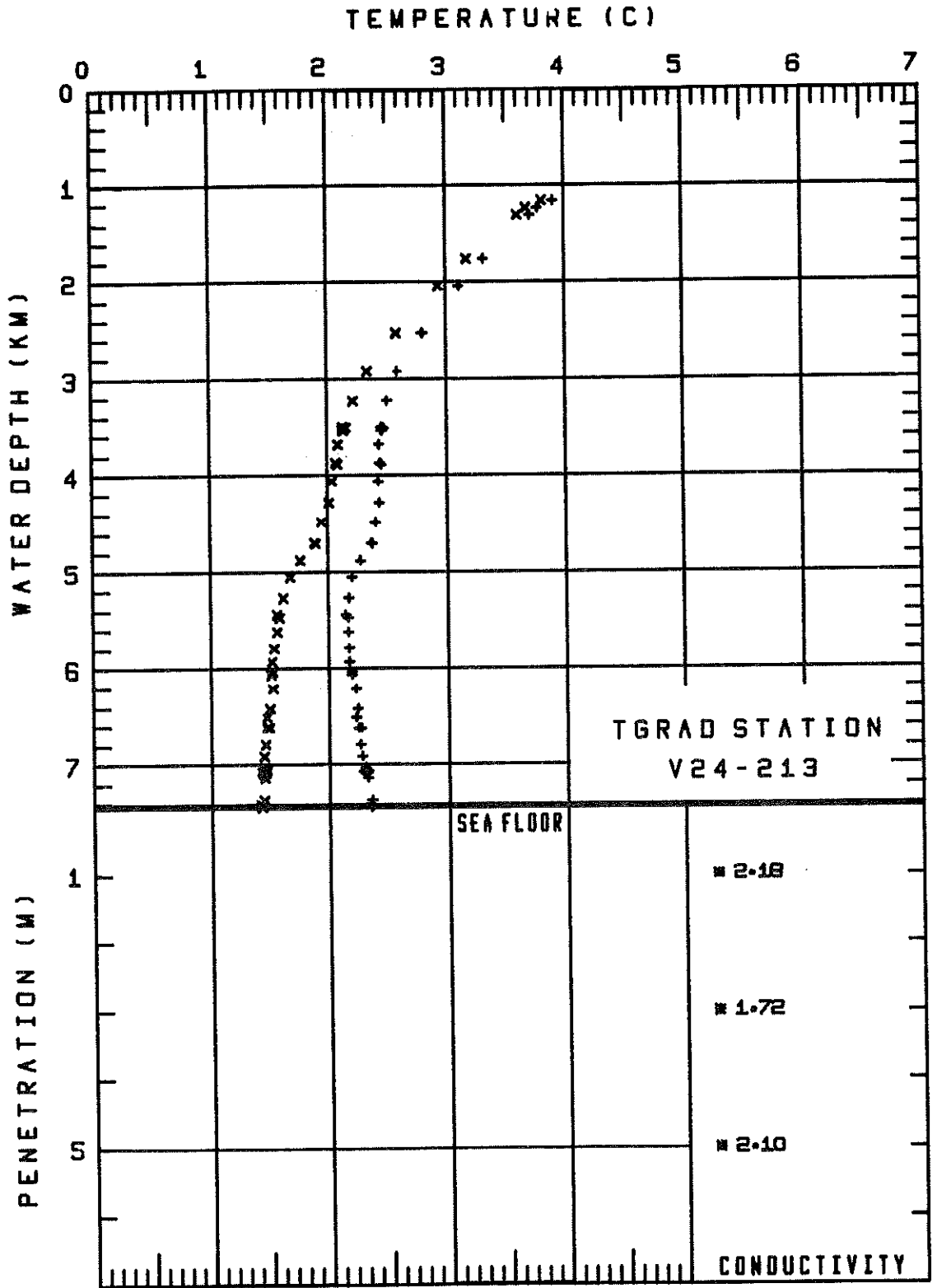
DEPTH	CONDUCTIVITY
1.00	2.72
3.44	4.65
4.60	1.73
6.60	4.19



## TGRAD STATION V24-213

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1156.	3.90	3.80
1226.	3.77	3.67
1306.	3.71	3.60
1757.	3.32	3.17
2042.	3.10	2.94
2526.	2.79	2.58
2522.	2.80	2.58
2918.	2.59	2.34
3223.	2.50	2.21
3505.	2.47	2.15
3501.	2.44	2.13
3530.	2.45	2.13
3529.	2.46	2.13
3679.	2.42	2.09
3883.	2.45	2.08
	2.43	2.07
	2.42	2.03
	2.42	2.01
	2.39	1.95
	2.37	1.89
	2.36	1.89
	2.26	1.77
	2.19	1.68
	17	1.62
		1.59
		1.57
		1.56
		1.54
		1.52
		1.51
		1.52
		1.53
		1.50
		1.47
		1.49
		.47
		56



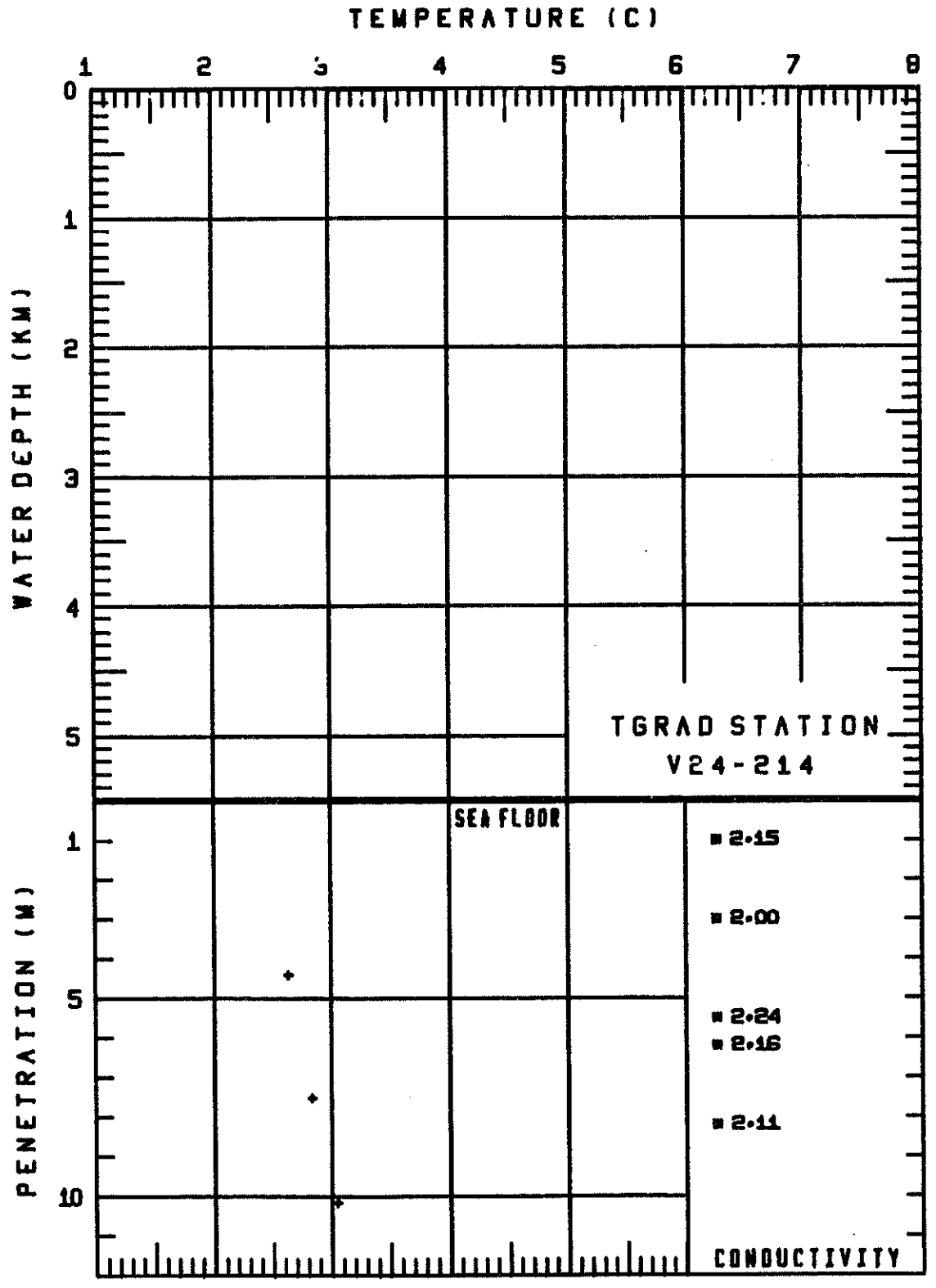
## TGRAD STATIONV24-214

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
4.39	2.63
7.52	2.84
10.16	3.05

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.15
3.00	2.00
5.50	2.24
6.20	2.16
8.20	2.11



## TGRAD STATION V24-215

## WATER TEMPERATURES

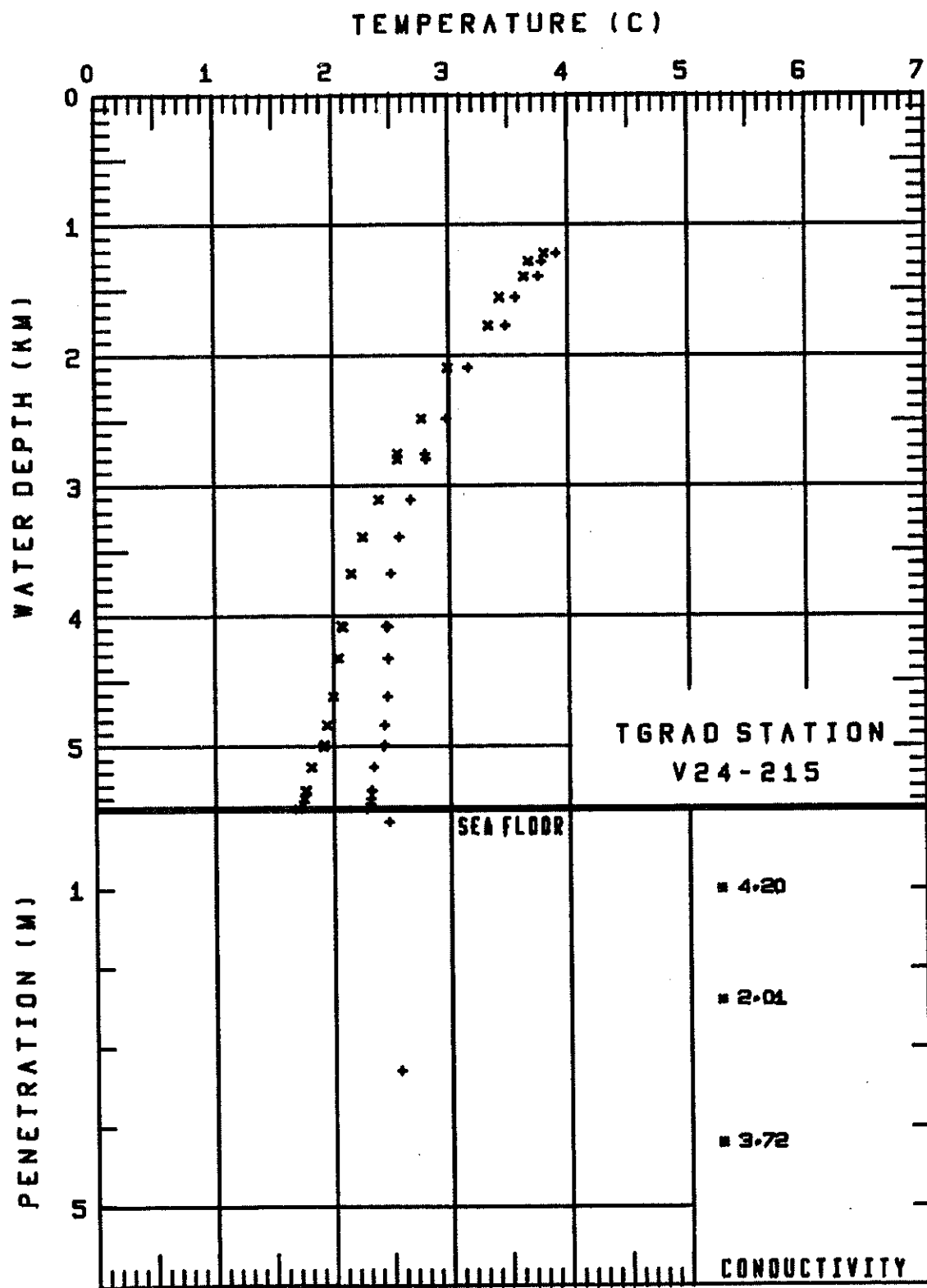
DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1218.	3.90	3.80
1281.	3.78	3.67
1395.	3.75	3.64
1552.	3.56	3.43
1773.	3.48	3.33
2093.	3.16	2.98
2484.	2.97	2.76
2792.	2.80	2.55
2754.	2.79	2.55
3104.	2.67	2.39
3390.	2.56	2.26
3670.	2.49	2.15
4081.	2.47	2.08
4070.	2.46	2.06
4321.	2.46	2.04
4615.	2.46	2.00
4834.	2.43	1.94
4988.	2.44	1.92
4996.	2.43	1.91
5154.	2.34	1.80
5333.	2.32	1.76
5339.	2.32	1.76
5339.	2.32	1.75
5398.	2.31	1.74
5438.	2.31	1.73
5479.	2.28	1.70

## SEDIMENT TEMPERATURES

DEPTH	TEMPERATURE
0.16	2.47
3.29	2.56

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	4.20
2.40	2.01
4.20	3.72



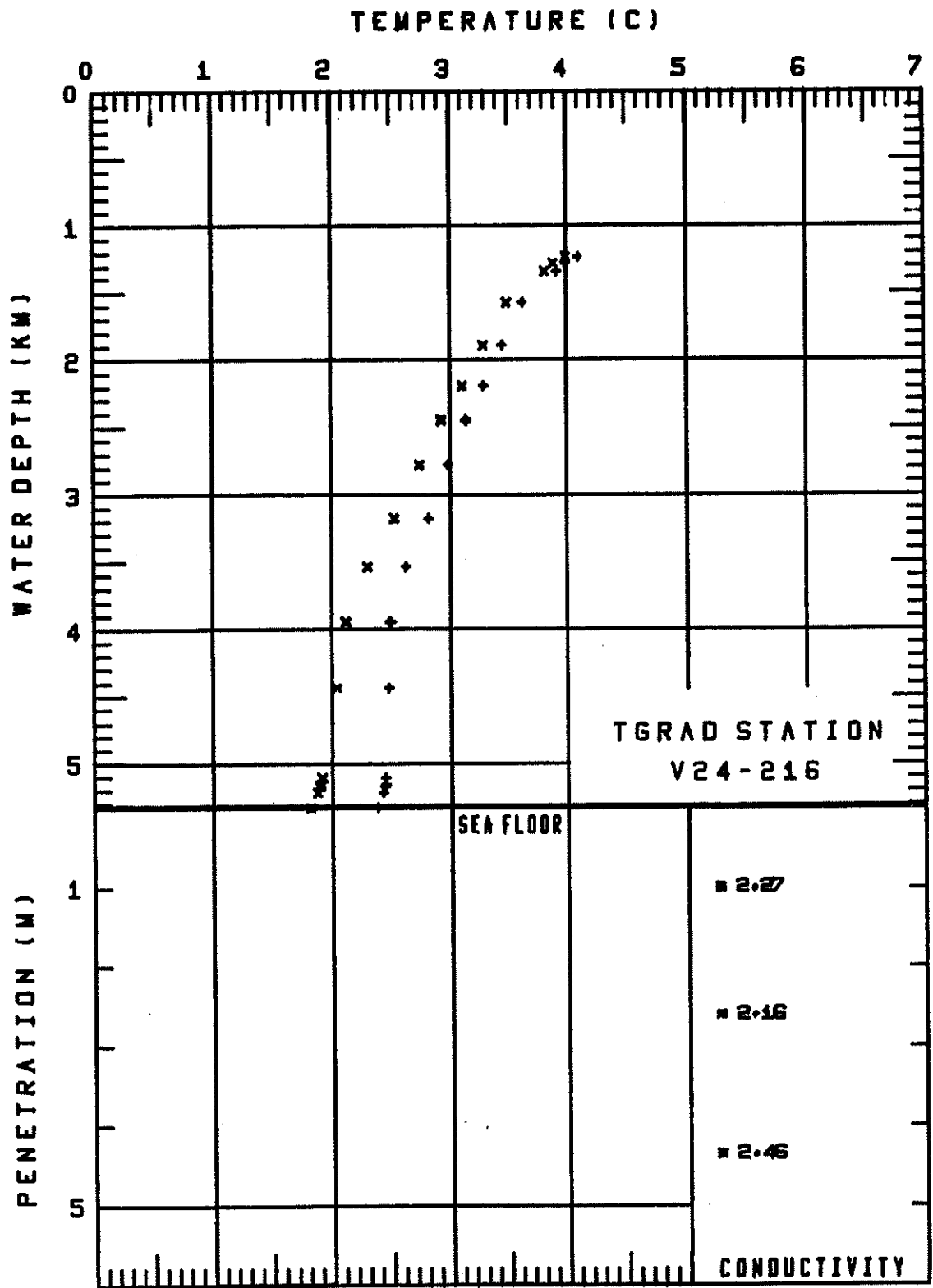
## TGRAD STATION V24-216

## WATER TEMPERATURES

DEPTH	IN SITU TEMPERATURE	POTENTIAL TEMPERATURE
1233.	4.10	3.99
1280.	3.99	3.89
1340.	3.92	3.81
1568.	3.62	3.49
1891.	3.45	3.29
2188.	3.29	3.10
2441.	3.14	2.93
2449.	3.14	2.92
2778.	2.99	2.74
3171.	2.82	2.53
3532.	2.63	2.30
3946.	2.50	2.12
3943.	2.49	2.11
4433.	2.48	2.04
5102.	2.45	1.91
5156.	2.45	1.90
5162.	2.44	1.90
5171.	2.44	1.89
5214.	2.42	1.87
5329.	2.38	1.82

## SEDIMENT CONDUCTIVITIES

DEPTH	CONDUCTIVITY
1.00	2.27
2.60	2.16
4.35	2.46





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1. The first part of the document discusses the importance of maintaining accurate records of all transactions. This is essential for ensuring the integrity of the financial statements and for providing a clear audit trail. The records should be kept up-to-date and should be easily accessible to all relevant parties.

2. The second part of the document outlines the various methods used to collect and analyze data. These methods include interviews, surveys, and focus groups. Each method has its own strengths and weaknesses, and it is important to choose the most appropriate method for the specific research objectives.

3. The third part of the document describes the process of data analysis. This involves identifying patterns and trends in the data, and then interpreting these findings in the context of the research objectives. It is important to be objective and unbiased in this process, and to avoid drawing conclusions that are not supported by the data.

4. The fourth part of the document discusses the importance of reporting the results of the research. This involves writing a clear and concise report that summarizes the findings and provides recommendations for future action. The report should be written in a way that is easy to understand and that is accessible to all relevant parties.

5. The fifth part of the document discusses the importance of ethical considerations in research. This involves ensuring that the research is conducted in a way that is respectful of the rights and privacy of the participants. It is important to obtain informed consent from all participants and to ensure that the data is kept confidential and secure.

6. The sixth part of the document discusses the importance of ongoing evaluation and improvement of the research process. This involves regularly reviewing the progress of the research and making adjustments as needed. It is important to be open to feedback and to be willing to learn from mistakes.

7. The seventh part of the document discusses the importance of collaboration and teamwork in research. This involves working closely with colleagues and sharing ideas and resources. It is important to have a clear understanding of each other's roles and responsibilities and to communicate effectively throughout the process.

8. The eighth part of the document discusses the importance of staying up-to-date on the latest research and developments in the field. This involves regularly reading journals and articles and attending conferences and workshops. It is important to be open to new ideas and to be willing to learn from others.

9. The ninth part of the document discusses the importance of maintaining a positive attitude and staying motivated throughout the research process. This involves setting realistic goals and deadlines and celebrating small successes along the way. It is important to be resilient and to persevere through challenges and setbacks.

10. The tenth part of the document discusses the importance of being transparent and honest in the research process. This involves sharing the results of the research and being open to criticism and feedback. It is important to be honest about the limitations of the research and to avoid making claims that are not supported by the data.

