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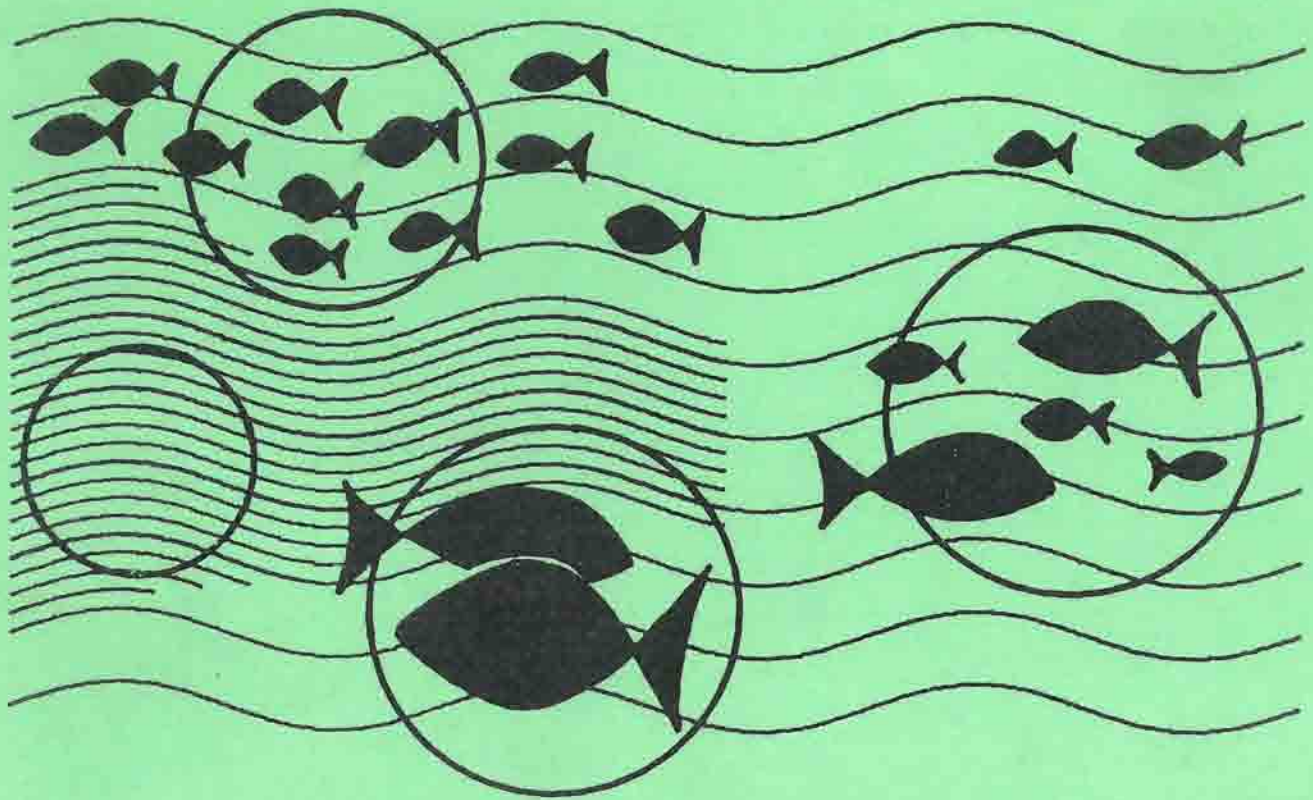
AUS DEM

INSTITUT FÜR SEEFISCHEREI

DER

BUNDESFORSCHUNGSANSTALT FÜR FISCHEREI • HAMBURG

NR. 27



1979

Antarctic Expedition of the
Federal Republic of Germany

1977/78

Oceanographic Data Report

Part I ¹⁾

by

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¹⁾ Results of the Antarctic Expedition 1977/78
of the Federal Republic of Germany.

Vorwort des Herausgebers

Von diesem Heft an erscheinen die "Mitteilungen aus dem Institut für Seefischerei" in einem etwas veränderten Gewand. Das bisher auf dem Umschlag verwendete Motiv der Boje aus der Herings-Treibnetzfisherei ist durch ein zeitgemäßerer ersetzt worden. Das neue Motiv versinnbildlicht die fischereibiologischen Forschungen des Instituts im Ozean und ihre engen Beziehungen zur Umwelt der Fische.

D. Sahrhage

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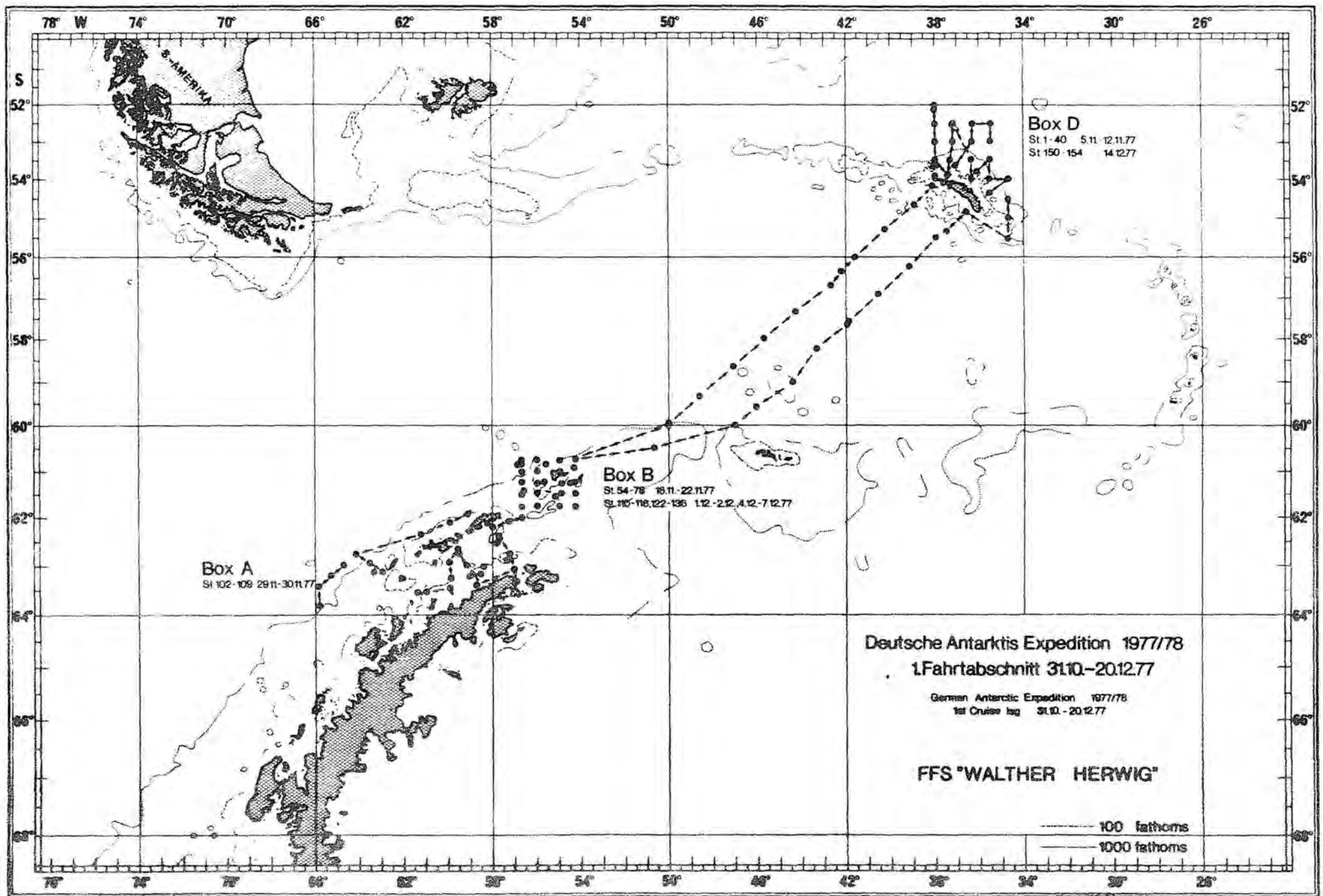


Fig. 1

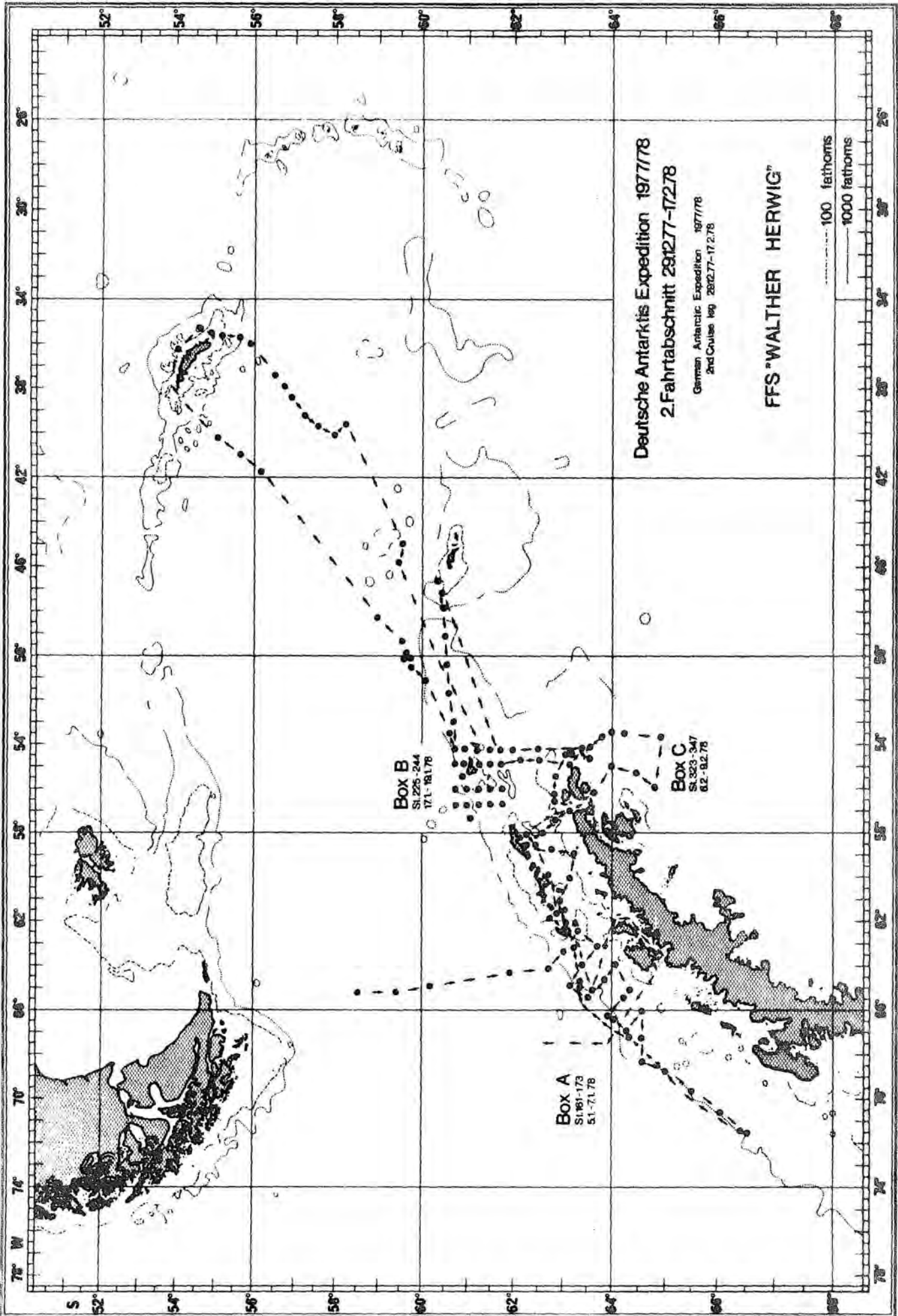


Fig. 2

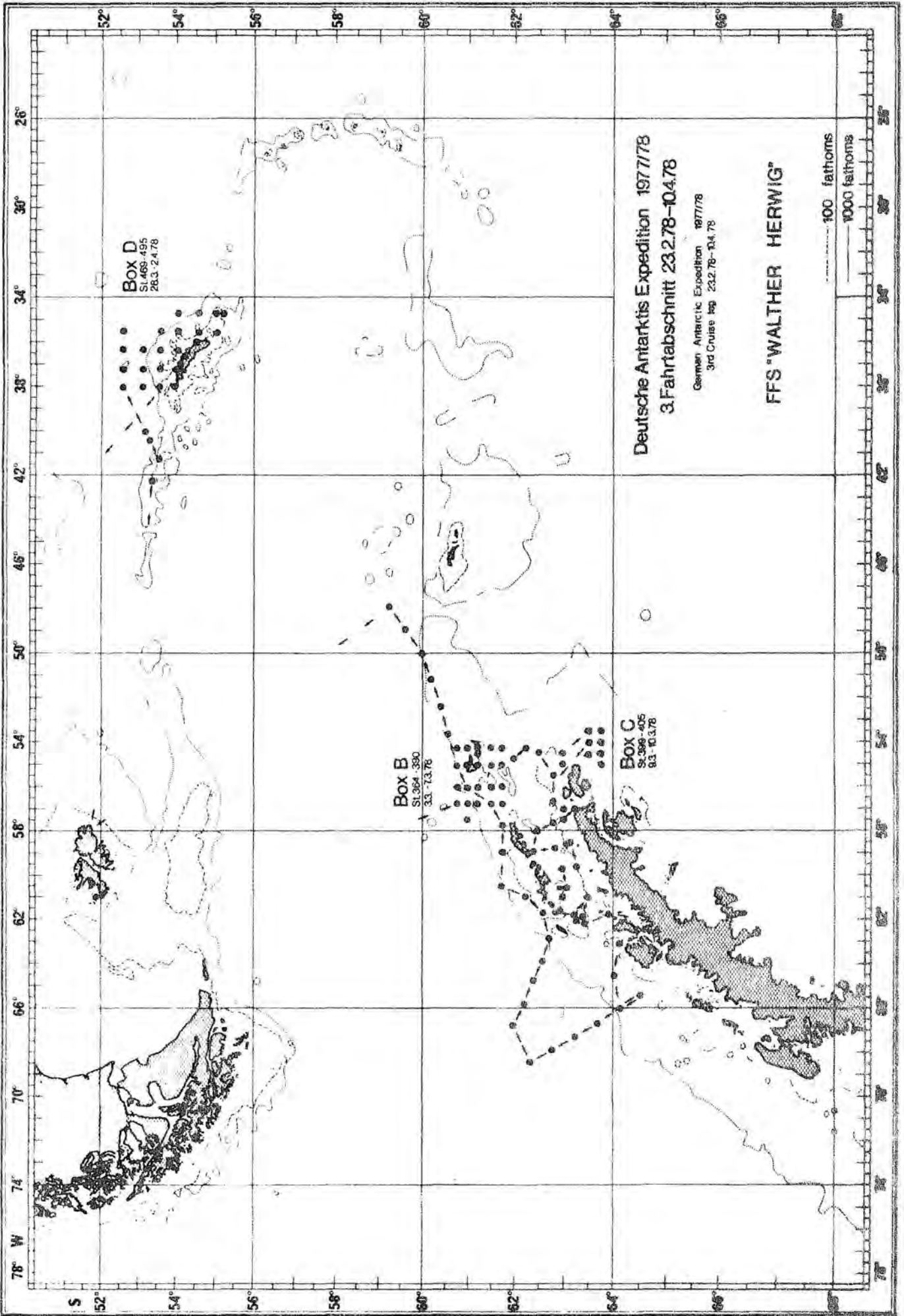


Fig. 3

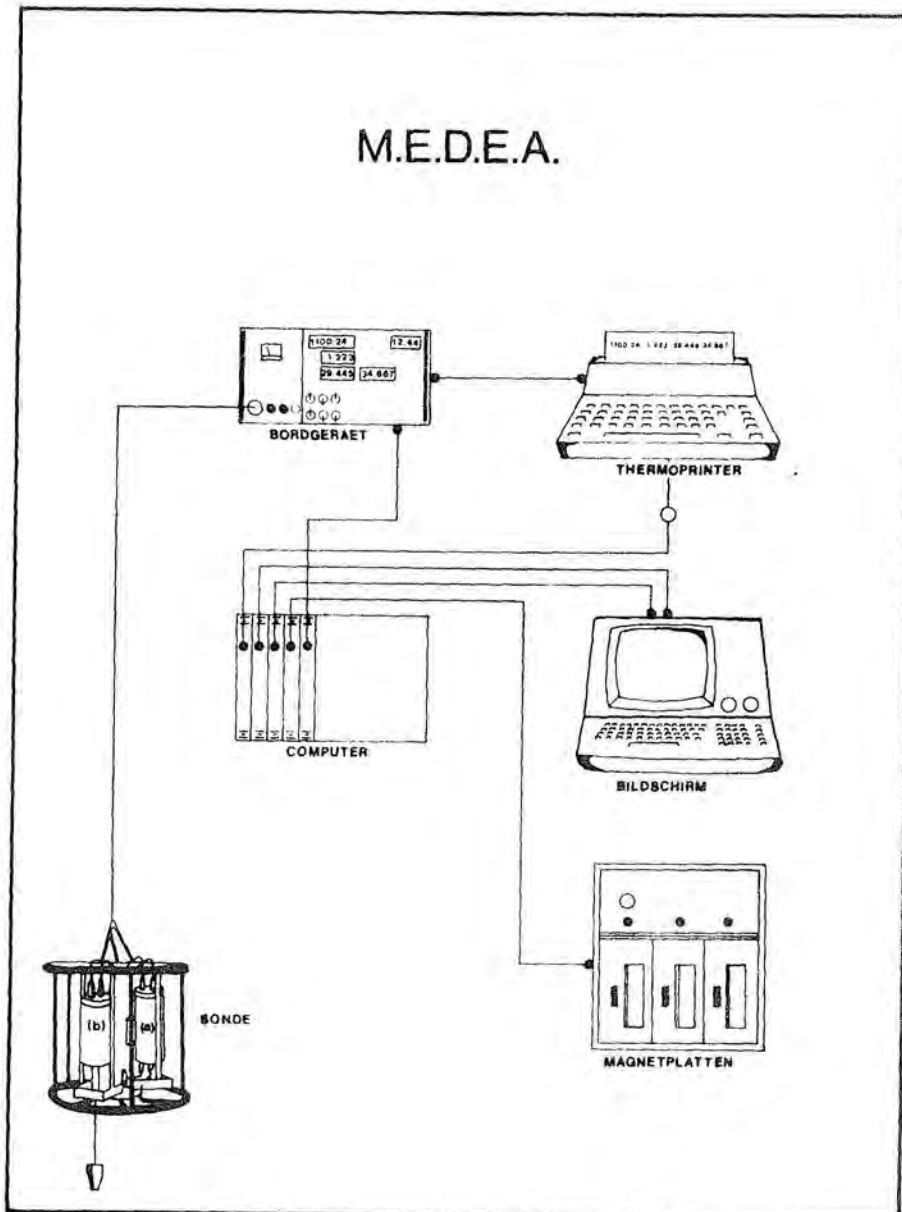


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VIII

Table 1: Oceanographic measurements carried out at the individual stations

STATION NR.	CTD	BT	HY	PCM	STATION NR.	CTD	BT	HY	PCM
7	X				63	X			
8	X				64	X			
9	X				65	X			
12	X				66	X			
13	X				67	X			
14	X				68	X			
15	X				69	X			
16	X				70	X			
19	X				71	X			
20	X				72	X			
22	X				73	X			
23	X				74	X			
24	X				75	X			
26	X				76	X			
27	X				78	X			X
28	X				79	X			
29	X				80	X			
30	X				81	X			
31	X				83	X			
32	X				84	X			
33	X				85	X			
34	X				86	X			
35	X				87	X			
36	X				88	X			
37	X				91		X		
38	X				92		X		
39	X				93		X		
40	X				94		X		
41	X				95		X		
42	X				96		X		
43	X				97		X		
44	X				98				X
45	X				99		X		
46	X				100		X		
47	X				101		X		
48	X				102		X		
49	X				103	X			
50	X				104	X			X
51	X				105	X			
52	X				106	X			
54	X				107	X			
55	X				108	X			
56	X				109	X			
57	X				110	X			
58	X				111	X			
59	X				112	X			
60	X				120		X		
61	X								
62	X				125	X			

Table 1 : continued

STATION NR.	CTD	BT	HY	PCM	STATION NR.	CTD	BT	HY	PCM
127	X				187		X		
128	X				189	X			
129	X				192	X			
130	X				193	X			X
132		X			194	X			
133	X				195		X		
134	X				196		X		
135	X				197		X		
136	X				198		X		
137	X				199		X		
139	X				200		X		X
140	X				202		X		
141	X				203				X
142	X				204		X		
143	X				205	X			
144	X				206	X			
145	X				208	X			
146	X				209	X			
147	X				210	X			
148	X				211	X			
149	X				212	X			
150	X				213	X			X
151	X				215	X			
152	X				218	X			
154	X				219	X			
156	X				220	X			
157	X				221	X			
158	X				222	X			
159	X				223	X			
161	X				224	X			
162	X				225	X			X
163	X				226	X			
164	X				227	X			
165	X				228	X			
166		X			229	X			
167		X			230	X			
169		X			231	X			X
170	X				232	X			
171	X				233	X			
172	X				234	X			X
173	X				235	X			
175		X			236	X			
176		X			237	X			
179	X				238	X			X
180	X				239	X			X
181	X				240	X			
182	X				241	X			
183	X				242	X			
185	X				243	X			
186		X			244	X			

X

Table 1 : continued

STATION NR.	CTD	BT	HY	PCM	STATION NR.	CTD	BT	HY	PCM
249	X				346	X			
254	X				347				
257	X			X	348	X			X
258	X				349	X			
264	X				350	X			
266	X				356	X			
267	X				357	X			
268	X				358	X			
272	X				359	X			
273	X				360	X			
276	X				361	X			
278	X				364	X			
282	X				365	X			
287	X				366	X			
290	X				367	X			
291	X				369	X			
292	X				370	X			
295	X				371	X			
296	X				372	X			
299	X				373	X			
301	X				376	X			
302	X				377	X			
303	X				378	X			
304	X				379	X			
305	X				380	X			
306	X				381	X			
307	X				382	X			
308	X				383	X			
309	X				384	X			
310	X				385	X			
312	X				386	X			
315	X				389	X			
316	X				390	X			
319	X				391	X			
320	X				392	X			
321	X				394	X			
322	X				395	X			
323	X				396	X			
324	X				397	X			
325	X				398	X			
326	X				399	X			
327	X				400	X			
328	X				402	X			
329	X				403	X			
330	X				404	X			
331	X				405	X			
332	X				406	X			
333	X				407	X			
338	X			X	408	X			
339	X				409	X			X

Table 1 : continued

STATION NR.	CTD	BT	HY	PCM	STATION NR.	CTD	BT	HY	PCM
411	X			X	472		X	X	
413			X		474		X	X	
414				X	475			X	
415	X				476		X	X	
417	X				477		X	X	
419	X				478		X	X	
420	X				480		X	X	
421	X				481		X	X	
422	X				482		X	X	
423	X				483		X	X	
425	X				484		X	X	
426	X				485		X	X	
427	X				486		X	X	
428	X				487		X	X	
430	X				488		X	X	
432	X				489		X	X	
434	X				490		X	X	
435	X				491		X	X	
436	X				492		X	X	
437	X				493		X	X	
438	X				495		X	X	
439	X								
440	X								
441	X								
442	X								
443	X								
444	X								
445	X								
446	X								
448	X								
449	X								
450	X		X						
451	X								
452	X								
453	X								
454	X								
456	X								
457	X								
458	X								
459	X								
460	X								
462	X								
463	X								
465	X								
466	X								
467	X								
468	X								
469		X	X						
470		X	X						
471		X	X						

Table 2a: List of stations and positions

STAT.	POSITION		DEPTH		DATE	TIME
	LATITUDE (DEGR./MIN)	LONGITUDE (DEGR./MIN)	BOTTOM (M)	MAX. OBS. (DBAR)	(DDMMYY)	(GMT)
7	52, 05, 85	37, 57, 4W	3660	1584	51177	1427
8	52, 30, 05	38, 00, 0W	1900	345	51177	1715
9	53, 00, 05	38, 00, 0W	3500	110	51177	2032
12	53, 30, 55	37, 27, 5W	1060	1009	61177	1300
13	53, 00, 35	37, 09, 7W	2760	2711	61177	1631
14	52, 30, 05	37, 09, 9W	2160	2148	61177	2115
15	53, 30, 05	36, 20, 0W	1260	1265	71177	1000
16	54, 00, 05	36, 20, 0W	195	190	71177	1318
19	53, 30, 05	35, 31, 0W	3500	3482	71177	2310
20	54, 00, 05	35, 30, 0W	750	471	81177	0900
22	54, 00, 05	34, 40, 0W	3290	3331	81177	1335
23	54, 29, 05	35, 30, 0W	290	257	81177	1900
24	53, 57, 05	37, 59, 0W	100	87	91177	1000
26	53, 36, 45	38, 00, 4W	170	160	91177	1503
27	53, 36, 55	38, 10, 0W	290	264	91177	1652
28	53, 37, 95	38, 04, 7W	155	136	91177	2046
29	53, 36, 25	37, 59, 2W	235	237	101177	1310
30	53, 36, 05	37, 03, 0W	260	280	101177	1707
31	53, 35, 65	37, 07, 6W	450	460	101177	1833
32	53, 38, 05	37, 04, 0W	155	161	101177	2010
33	54, 00, 05	37, 04, 6W	100	76	101177	2247
34	53, 00, 05	36, 20, 0W	2800	2743	111177	0856
35	52, 30, 05	36, 20, 0W	3280	3439	111177	1326
36	52, 30, 05	35, 30, 0W	3840	3871	111177	1832
37	52, 59, 05	35, 32, 0W	3560	3638	111177	2333
38	54, 29, 05	34, 39, 6W	90	1796	121177	1030
39	55, 00, 05	34, 40, 0W	90	87	121177	1432
40	55, 30, 05	34, 40, 0W	1500	1511	121177	1734
41	54, 50, 05	36, 36, 0W	200	172	131177	1002
42	55, 18, 05	37, 28, 0W	2560	192	131177	1555
43	55, 30, 05	37, 55, 0W	3760	1018	131177	1745
44	56, 13, 55	39, 12, 0W	3000	1033	131177	0036
45	56, 53, 05	40, 33, 0W	3200	1010	141177	0959
46	57, 34, 05	41, 55, 0W	3300	998	141177	1604
47	57, 37, 05	41, 52, 0W	3300	205	141177	1851
48	58, 14, 35	43, 18, 0W	3120	972	141177	0023
49	59, 00, 05	44, 25, 5W	1250	1015	151177	0957
50	59, 34, 05	46, 03, 0W	2900	1031	151177	1546
51	60, 00, 05	47, 00, 5W	2920	992	151177	1937
53	60, 27, 65	50, 33, 3W	2390	200	161177	1420
54	60, 44, 05	54, 15, 6W	2600	2811	161177	0032
55	60, 45, 05	54, 57, 0W	3120	3106	171177	1000
56	61, 01, 05	54, 57, 0W	480	403	171177	1546
57	60, 54, 05	54, 21, 3W	700	694	171177	1852
58	60, 45, 85	55, 59, 6W	2720	2673	171177	0015
59	60, 45, 05	56, 42, 0W	3080	3202	181177	0957
60	60, 59, 35	56, 42, 1W	2720	2744	181177	1430
61	61, 14, 05	56, 41, 0W	850	897	181177	1733
62	61, 28, 05	56, 39, 0W	460	454	181177	2135
63	61, 00, 05	56, 00, 0W	385	411	191177	0957

Table 2a: continued

STAT.	POSITION		DEPTH		DATE	TIME
	LATITUDE	LONGITUDE	BOTTOM	MAX. OBS.	(DDMMYY)	(GMT)
	(DEGR/MIN)	(DEGR/MIN)	(M)	(DBAR)		
64	61.15.35	56.00.0W	160	151	191177	1147
65	61.30.25	56.00.2W	175	180	191177	1400
66	61.45.35	56.01.0W	760	207	191177	1545
67	61.45.45	56.43.3W	440	426	191177	1816
68	61.13.75	54.51.4W	100	88	201177	1252
69	61.12.35	54.31.6W	580	631	201177	1435
70	61.28.05	54.53.6W	1000	1073	201177	1728
71	61.33.65	55.06.7W	1050	1046	201177	1958
72	61.12.45	55.43.8W	105	91	211177	1100
73	61.15.95	56.01.2W	205	186	211177	1241
74	61.13.75	56.09.9W	380	358	211177	1415
75	60.52.05	55.29.7W	240	224	211177	1940
76	60.49.55	56.48.6W	240	98	221177	1436
78	61.24.15	56.36.0W	405	382	221177	2042
79	61.59.65	56.40.9W	950	929	231177	0957
80	62.03.05	57.10.3W	880	90	231177	1330
81	62.10.05	57.59.7W	500	312	231177	1609
83	62.44.05	57.16.0W	310	337	231177	2102
84	63.04.35	57.02.6W	80	73	241177	1004
85	63.18.45	56.57.0W	275	255	241177	1250
86	63.23.55	58.48.3W	240	243	251177	1000
87	63.11.15	58.58.1W	122	104	251177	1205
88	62.56.05	59.15.0W	750	203	251177	1616
91	62.56.05	59.56.3W	1030	275	261177	0918
92	63.15.05	59.57.0W	810	275	261177	1133
93	63.27.25	59.55.3W	140	130	261177	1310
94	63.32.05	60.59.0W	680	275	261177	1555
95	63.33.05	61.24.5W	680	275	261177	1733
96	63.13.55	59.02.6W	115	110	271177	1100
97	63.11.65	58.54.0W	92	90	271177	1400
99	61.58.25	59.13.6W	143	130	281178	1112
100	62.01.05	60.01.0W	144	140	281177	1347
101	62.23.55	61.12.0W	240	245	281177	1830
102	62.46.05	64.09.8W	4000	265	291177	1032
103	62.57.25	63.34.2W	2800	688	291177	1243
104	63.08.05	63.02.0W	360	394	291177	1527
105	63.07.55	63.14.3W	430	97	291177	1850
106	63.50.45	66.13.7W	2400	672	301177	1025
107	63.27.25	65.54.3W	3200	684	301177	1320
108	63.13.05	65.20.0W	2700	681	301177	1546
109	62.59.25	64.46.0W	3000	679	301177	1825
110	60.45.35	56.35.0W	2700	2792	11277	1711
111	60.58.15	56.40.4W	2750	2759	11277	2008
112	61.16.05	56.42.3W	490	70	21277	1025
120	62.31.85	57.53.0W	1600	95	31277	1804
125	61.14.75	54.20.7W	250	298	51277	1215
127	61.00.05	54.13.4W	750	827	51277	1536
128	61.14.35	54.56.7W	80	73	51277	1837
129	61.29.85	54.57.4W	720	743	51277	2012
130	61.29.75	56.01.7W	250	263	61277	1032

Table 2a: continued

SRHT.	POSITION LATITUDE (DEGR./MIN)	LONGITUDE (DEGR./MIN)	BOTTOM (M)	DEPTH (DEBR)	MAX. OBS.	DATE	TIME
						(DDMMYY)	(GMT)
132	61, 00, 45	55, 85, 7M	290	275		61277	1359
133	60, 44, 05	55, 59, 0M	2800	266		61277	1556
134	60, 59, 55	54, 55, 3M	580	589		61277	2000
135	60, 43, 95	54, 53, 0M	3150	3239		71277	1027
136	60, 44, 65	54, 13, 6M	2600	2761		71177	1406
137	59, 59, 35	49, 59, 4M	3250	1022		81277	1024
139	59, 19, 35	48, 37, 8M	4000	1029		81177	1726
140	58, 38, 65	47, 05, 8M	3200	1025		91177	1020
141	58, 33, 85	46, 57, 6M	3100	101		91277	1221
142	57, 59, 65	45, 40, 7M	2800	1007		91277	1650
143	57, 20, 65	44, 16, 2M	3000	1024		101277	1022
144	56, 41, 05	42, 53, 3M	3700	1023		111277	1022
145	56, 22, 35	42, 15, 0M	3840	101		111277	1400
146	56, 00, 05	41, 37, 0M	3400	1030		111277	1640
147	55, 17, 05	40, 13, 4M	3500	1024		121277	1023
148	54, 37, 75	38, 52, 5M	220	228		121277	1538
149	54, 09, 65	38, 05, 3M	240	255		121277	1910
150	54, 14, 65	36, 35, 3M	190	207		141277	1147
151	54, 13, 75	36, 32, 9M	192	217		141277	1253
152	54, 08, 35	36, 47, 7M	120	133		141277	1524
154	54, 00, 05	36, 50, 6M	210	228		141277	1620
156	58, 32, 55	65, 10, 8M	9999	302		40178	1445
157	59, 26, 65	65, 10, 0M	3400	308		40178	2000
158	60, 10, 05	64, 53, 0M	9999	313		40178	0145
159	61, 56, 15	64, 19, 2M	3720	303		50178	1115
161	62, 45, 05	64, 10, 0M	9999	303		50178	1815
162	63, 02, 65	63, 18, 3M	350	365		50178	2120
163	63, 20, 15	62, 26, 9M	160	163		50178	0120
164	63, 43, 05	63, 08, 0M	400	392		60178	0510
165	63, 25, 05	64, 00, 0M	300	302		60178	0900
166	63, 08, 75	64, 51, 8M	2870	275		60178	1050
167	63, 31, 35	65, 27, 1M	2900	275		60178	1340
169	63, 49, 95	64, 39, 8M	310	275		60178	2040
170	64, 03, 95	63, 53, 4M	510	524		60178	0110
171	64, 19, 95	65, 07, 1M	525	480		70178	1010
172	64, 13, 15	65, 24, 6M	545	531		70178	1118
173	63, 53, 15	66, 13, 9M	760	807		70178	1440
175	64, 15, 75	66, 55, 6M	1500	275		70178	1725
178	64, 35, 15	66, 04, 6M	310	275		70178	2155
179	64, 35, 05	67, 13, 6M	480	436		70178	0340
180	64, 35, 05	68, 19, 0M	2700	1057		80178	0625
181	65, 01, 05	68, 43, 8M	1680	996		80178	1003
182	65, 30, 95	69, 39, 9M	1900	1004		80178	1315
183	66, 02, 05	70, 38, 0M	430	430		80178	1714
185	66, 28, 15	71, 35, 9M	1000	1102		80178	2305
186	66, 00, 05	68, 46, 2M	2000	255		90178	1130
187	64, 19, 85	67, 11, 8M	2200	265		90178	1920
189	63, 22, 85	64, 56, 0M	1760	1001		100178	1315
192	63, 21, 45	64, 47, 4M	1600	298		100178	2155
193	63, 12, 95	63, 11, 1M	500	492		100178	0150

Table 2a : continued

STAT.	POSITION		DEPTH		DATE	TIME
	LATITUDE	LONGITUDE	BOTTOM	MAX. OBS.	(DDMMYY)	(GMT)
	(DEGR/MIN)	(DEGR/MIN)	(M)	(DBAR)		
194	63, 05, 05	62, 05, 0W	950	931	110178	0630
195	62, 56, 05	61, 03, 0W	260	200	110178	0738
196	63, 07, 05	60, 00, 0W	830	265	110178	1045
197	63, 13, 05	58, 55, 0W	999	75	110178	1730
198	62, 45, 05	58, 44, 0W	1480	275	110178	2025
199	62, 17, 35	58, 29, 0W	110	85	120178	0600
200	62, 35, 05	58, 00, 0W	1680	240	120178	0945
202	62, 50, 05	57, 22, 9W	128	95	120178	2015
204	63, 10, 55	57, 01, 1W	85	85	120178	2320
205	63, 38, 45	56, 11, 2W	160	166	130178	0505
206	62, 49, 65	56, 35, 0W	100	98	130178	1235
208	62, 51, 05	55, 24, 0W	80	79	130178	1705
209	63, 06, 05	54, 29, 0W	430	422	130178	2025
210	63, 24, 05	54, 09, 7W	240	225	130178	0100
211	62, 30, 05	54, 15, 0W	450	459	140178	0630
212	62, 00, 05	54, 16, 0W	500	507	140178	0930
213	61, 45, 05	54, 15, 0W	330	377	140178	1135
215	61, 45, 05	54, 56, 0W	9999	1793	140178	1700
218	60, 27, 95	47, 13, 1W	410	448	150178	2240
219	60, 21, 95	46, 41, 4W	360	427	160178	1500
220	60, 27, 05	47, 53, 0W	9999	985	160178	1820
221	60, 29, 85	49, 04, 0W	1500	1040	160178	2255
222	60, 31, 25	50, 18, 7W	9999	1006	160178	0240
223	60, 35, 05	51, 40, 0W	9999	1014	170178	0615
224	60, 40, 15	52, 59, 9W	475	490	170178	1000
225	60, 44, 55	54, 14, 3W	2400	1036	170178	1425
226	60, 43, 65	54, 56, 0W	9999	633	170178	2040
227	61, 00, 05	54, 58, 7W	400	462	170178	2235
228	61, 00, 65	54, 17, 2W	460	581	170178	0050
229	61, 14, 45	54, 19, 1W	250	314	170178	0245
230	61, 29, 65	54, 15, 4W	500	505	170178	0415
231	61, 45, 05	54, 15, 0W	400	341	180178	0630
232	61, 45, 05	54, 56, 0W	1600	580	180178	0940
233	61, 30, 05	54, 57, 0W	1000	593	180178	1127
234	61, 16, 05	54, 55, 0W	200	203	180178	1350
235	61, 15, 05	55, 59, 0W	140	138	180178	1905
236	61, 30, 15	56, 02, 4W	280	280	180178	2116
237	61, 45, 35	55, 59, 8W	700	714	180178	2334
238	61, 47, 85	56, 43, 8W	430	411	180178	0310
239	60, 44, 85	56, 42, 2W	9999	608	190178	1005
240	60, 45, 05	55, 58, 0W	2750	603	190178	1425
241	61, 00, 05	56, 01, 0W	480	531	190178	1620
242	61, 00, 05	56, 41, 0W	2550	613	190178	1925
243	61, 15, 55	56, 41, 9W	900	617	190178	2110
244	61, 29, 75	56, 41, 1W	480	474	190178	0003
249	60, 36, 35	53, 28, 7W	2150	2205	200178	0200
254	59, 41, 05	49, 51, 0W	9999	998	210178	2235
257	59, 41, 05	49, 49, 8W	9999	1061	220178	1705
258	59, 40, 95	49, 49, 7W	3900	3575	220178	0123
264	59, 37, 05	49, 18, 0W	3800	616	230178	2205

Table 2a : continued

STAT.	POSITION		DEPTH		DATE	TIME
	LATITUDE	LONGITUDE	BOTTOM	MAX. OBS.		
	(DEGR/MIN)	(DEGR/MIN)	(M)	(DBAR)	(DDMMYY)	(GMT)
266	59, 40, 15	49, 51, 1W	3840	615	240178	1605
267	59, 35, 05	50, 07, 6W	3800	615	240178	1755
268	59, 45, 05	50, 08, 0W	3800	618	240178	1905
272	59, 41, 35	49, 50, 3W	3800	614	240178	0345
273	59, 40, 85	49, 51, 0W	3890	614	250178	1450
276	59, 40, 85	49, 50, 5W	9999	614	250178	2334
278/1	59, 41, 45	49, 50, 5W	9999	628	250178	0205
278/2	59, 41, 45	49, 50, 5W	3800	587	250178	0205
278/3	59, 41, 45	49, 50, 5W	3800	582	250178	0242
278/4	59, 41, 45	49, 50, 5W	3800	606	250178	0300
278/5	59, 41, 45	49, 50, 5W	3800	566	250178	0322
278/6	59, 41, 45	49, 50, 5W	3800	615	250178	0342
278/7	59, 41, 45	49, 50, 5W	3800	616	250178	0359
278/8	59, 41, 45	49, 50, 5W	3800	611	250178	0417
278/9	59, 41, 45	49, 50, 5W	3800	609	250178	0436
278/10	59, 41, 45	49, 50, 5W	3800	609	250178	0454
278/11	59, 41, 45	49, 50, 5W	3800	54	260178	0513
283	59, 41, 05	49, 51, 0W	3840	616	260178	0325
287	59, 01, 05	48, 13, 7W	3800	548	270178	1520
290	56, 11, 65	41, 40, 9W	9999	611	280178	1420
291	55, 45, 05	40, 55, 7W	3400	615	280178	1823
292	55, 07, 25	40, 10, 3W	3300	610	280178	2242
295	54, 04, 65	36, 14, 3W	260	263	300178	0225
296	54, 53, 55	35, 27, 5W	300	298	310178	1205
299	54, 41, 85	25, 14, 2W	275	286	310178	1620
301	54, 58, 05	35, 37, 0W	160	184	310178	2020
302	55, 10, 55	35, 37, 7W	160	160	310178	2208
303	55, 39, 85	35, 46, 5W	1750	617	310178	0042
304	55, 56, 35	35, 54, 9W	2800	617	310178	0310
305	56, 30, 05	37, 23, 6W	3440	617	10278	0950
306	56, 43, 55	37, 55, 0W	2600	618	10278	1215
307	56, 54, 05	38, 22, 0W	3300	604	10278	1430
308	57, 12, 15	39, 07, 7W	2640	617	10278	1720
309	57, 32, 55	39, 39, 0W	2800	615	10278	2125
310	57, 58, 15	40, 03, 0W	3000	612	10278	0255
312	58, 14, 45	39, 39, 9W	3440	617	20278	1455
315	59, 32, 15	45, 53, 1W	3000	617	30278	1425
316	59, 30, 05	45, 53, 0W	3000	217	30278	1955
319	61, 17, 85	54, 55, 3W	280	269	50278	1740
320	61, 46, 05	54, 45, 7W	910	610	50278	2103
321	62, 06, 85	54, 44, 4W	680	600	50278	2331
322	62, 29, 55	54, 40, 0W	280	287	50278	0230
323	63, 07, 05	55, 01, 0W	600	515	60278	0955
324	63, 09, 55	54, 31, 0W	120	115	60278	1340
325	63, 23, 55	54, 21, 6W	170	168	60278	1500
326	63, 35, 35	54, 06, 5W	255	266	60278	2100
327	63, 35, 25	54, 36, 4W	270	243	60278	2240
328	63, 34, 65	54, 34, 1W	190	219	60278	0333
329	63, 47, 25	53, 37, 4W	440	433	70278	1209
330	64, 00, 05	53, 25, 6W	1000	1026	70278	1752

Table 2a : continued

STAT.	POSITION		DEPTH		DATE	TIME
	LATITUDE	LONGITUDE	BOTTOM	MAX. OBS.		
	(DEGR./MIN)	(DEGR./MIN)	(M)	(DBAR)	(DDMMYY)	(GMT)
331	64, 17, 85	53, 29, 2W	1900	1963		
332	64, 58, 05	53, 40, 5W	9999	1028	70278	2130
333	64, 49, 05	55, 55, 5W	360	380	70278	0340
338	64, 29, 95	55, 18, 7W	310	340	80278	0950
339	64, 00, 75	54, 57, 6W	330	353	80278	1700
346	63, 59, 55	55, 03, 3W	360	369	80278	2032
348	63, 07, 85	57, 01, 3W	175	186	80278	0300
349	62, 26, 45	58, 32, 4W	1300	909	90278	0100
350/1	62, 16, 25	58, 03, 6W	1900	312	100278	1109
350/3	62, 15, 35	58, 01, 5W	1900	309	100278	1350
350/4	62, 15, 35	58, 01, 5W	1900	326	100278	1630
350/5	62, 14, 25	57, 48, 0W	1900	359	100278	1753
356	62, 58, 05	61, 35, 3W	480	482	100278	1812
357	62, 31, 95	61, 55, 8W	415	394	110278	2155
358	63, 04, 05	62, 18, 5W	375	353	110278	0110
359	63, 20, 05	62, 29, 8W	160	168	120278	1152
360	63, 25, 75	63, 59, 9W	360	350	120278	1730
361	63, 28, 75	65, 07, 1W	2600	611	120278	2205
364	60, 45, 05	56, 43, 8W	9999	605	120278	0200
365	60, 44, 85	55, 58, 3W	2840	610	30378	1858
366	61, 00, 05	56, 00, 0W	460	468	30378	1717
367	61, 15, 35	56, 46, 0W	1050	608	40378	0936
369	61, 30, 55	56, 46, 0W	470	479	40378	1226
370	61, 45, 45	56, 45, 1W	440	430	40378	1918
371	61, 45, 05	56, 02, 0W	750	611	40378	2206
372	61, 00, 05	57, 29, 0W	9999	611	40378	0118
373	61, 00, 05	56, 45, 1W	2600	609	50378	0943
376	61, 31, 05	56, 03, 0W	285	285	50378	1214
377	61, 15, 75	56, 00, 0W	160	163	50378	1953
378	61, 30, 55	55, 01, 6W	850	610	50378	2236
379	61, 45, 35	55, 00, 0W	2150	2108	50378	0200
380	61, 47, 95	54, 13, 0W	280	292	60378	1004
381	61, 30, 45	54, 08, 2W	490	523	60378	1350
382	61, 15, 25	54, 59, 2W	170	177	60378	1645
383	61, 15, 55	54, 29, 3W	520	545	60278	2046
384	61, 14, 65	54, 15, 6W	215	203	60378	2245
385	60, 44, 65	54, 13, 0W	2300	2171	60378	0152
386	60, 46, 05	55, 00, 0W	3200	1017	70378	0939
389	60, 00, 25	55, 00, 5W	320	331	70378	1350
390	61, 00, 45	54, 14, 3W	640	613	70378	2224
391	62, 01, 35	54, 43, 3W	1050	957	70378	0132
392	62, 15, 85	54, 17, 6W	640	598	80378	0939
394	62, 30, 45	54, 32, 0W	280	285	80378	1208
395	62, 43, 95	55, 28, 7W	155	159	80378	1728
396	63, 00, 05	55, 00, 0W	165	163	80378	2047
397	63, 00, 05	54, 30, 0W	280	306	80378	0002
398	63, 30, 05	53, 30, 0W	360	366	80378	0325
399	63, 30, 05	54, 01, 0W	240	245	90378	0936
400	63, 30, 05	54, 30, 1W	240	218	90378	1126
402	63, 44, 25	55, 02, 0W	260	283	90378	1521
						1914

Table 2a : continued

STAT.	POSITION		DEPTH		DATE	TIME
	LATITUDE	LONGITUDE	BOTTOM	MAX. OBS.		
	(DEGR./MIN)	(DEGR./MIN)	(M)	(DBAR)	(DDMMYY)	(GMT)
403	63, 46, 05	54, 30, 0W	220	222	90378	2045
404	63, 45, 65	54, 06, 5W	250	248	90378	2222
405	63, 45, 05	53, 30, 7W	440	426	100378	1017
406	62, 44, 05	56, 28, 0W	220	220	100378	0129
407	63, 00, 05	56, 59, 0W	60	59	110378	0941
408	63, 13, 05	57, 05, 0W	480	467	110378	1234
409	62, 59, 05	57, 30, 0W	125	122	110378	1626
411	62, 46, 65	57, 45, 4W	630	638	110378	1954
415	62, 50, 75	58, 45, 8W	1050	1001	120378	1300
417	63, 02, 45	58, 38, 2W	170	184	120378	1735
419	63, 16, 05	59, 36, 2W	230	229	120378	2206
420	63, 00, 05	59, 38, 0W	867	862	120378	0004
421	63, 05, 05	60, 34, 0W	460	425	130378	0932
422	62, 59, 55	61, 00, 0W	250	293	130378	1402
423	62, 56, 05	61, 38, 0W	150	154	130378	1705
425	62, 47, 35	61, 46, 3W	98	94	130378	2008
426	63, 14, 85	61, 50, 4W	800	979	130378	2227
427	63, 31, 15	61, 01, 5W	660	641	140378	0934
428	63, 26, 05	61, 51, 1W	100	105	140378	1302
430	63, 27, 85	62, 09, 3W	85	89	140378	1455
432	63, 53, 85	61, 45, 9W	155	154	140378	1848
434	64, 01, 05	64, 26, 0W	365	359	160378	1953
435	64, 30, 05	65, 26, 0W	577	578	160378	0238
436	64, 48, 05	65, 09, 0W	650	621	170378	1340
437	64, 13, 05	65, 50, 3W	500	477	170378	1410
438	63, 41, 35	66, 47, 0W	3000	1032	170378	2006
439	63, 15, 05	67, 14, 7W	9999	1022	170378	2338
440	62, 43, 55	67, 47, 1W	9999	1012	180378	1142
441	62, 19, 85	68, 24, 5W	9999	1018	180378	1511
442	61, 59, 05	66, 46, 4W	9999	1021	180378	2019
443	62, 09, 85	65, 49, 6W	9999	1023	180378	2323
444	62, 18, 75	65, 02, 0W	9999	1030	180378	0229
445	62, 34, 85	63, 57, 2W	9999	1019	190378	0930
446	62, 44, 75	62, 57, 5W	1200	1241	190378	1254
448	62, 40, 85	61, 51, 6W	156	148	190378	1911
449	62, 15, 85	60, 58, 1W	156	175	190378	0130
450	61, 43, 05	60, 22, 0W	3050	1022	200378	1018
451	61, 45, 65	59, 09, 8W	355	352	200378	1537
452	61, 45, 55	57, 51, 7W	300	295	200378	1950
453	61, 28, 65	56, 43, 0W	458	458	2100	0200
454	61, 00, 05	55, 59, 0W	290	324	210378	0935
456	60, 48, 95	55, 10, 4W	2500	916	210378	1612
457	60, 33, 75	53, 39, 7W	2600	1021	210378	2103
458	60, 21, 95	52, 24, 2W	1400	1479	210378	0135
459	60, 10, 15	51, 13, 3W	9999	580	220378	0928
460	60, 01, 65	50, 01, 1W	9999	628	220378	1307
462	59, 41, 05	49, 11, 0W	9999	601	220378	0026
463	59, 12, 05	47, 50, 0W	9999	600	230378	1226
465	53, 22, 55	42, 05, 1W	200	191	270378	1632
466	53, 33, 25	41, 14, 0W	240	253	270378	2041

XIX

Table 2a : continued

STAT.	POSITION		BOTTOM	DEPTH	DATE	TIME
	LATITUDE (DEGR/MIN)	LONGITUDE (DEGR/MIN)	(M)	MARK. OBS. (DBAR)	(DDMMYY)	(GMT)
467	53.18.75	40.28.5W	2800	954	270378	2351
468	53.10.85	40.40.1W	2800	346	270378	0217
469	52.30.25	38.02.0W	999	250	280378	1040
470	52.59.35	38.01.5W	3000	274	280378	1403
471	53.29.85	38.01.1W	1600	268	280378	1720
472	53.56.55	38.00.0W	93	90	280378	2015
474	53.52.05	37.17.0W	290	275	280378	0006
476	53.29.85	36.21.4W	1270	270	290378	1311
477	54.14.05	36.34.0W	208	205	290378	2010
478	53.59.45	36.20.7W	190	175	300378	1235
480	54.29.65	35.31.9W	280	270	300378	1811
481	54.01.15	35.31.3W	320	265	300378	2136
482	53.31.05	35.30.3W	3000	255	300378	0113
483	53.00.05	36.18.9W	3000	265	310378	0950
484	52.59.85	37.11.0W	2700	270	310378	1304
485	52.29.05	37.10.1W	2700	270	310378	1621
486	52.28.55	36.22.1W	2200	270	310378	2130
487	52.30.05	35.29.0W	4000	225	310378	0153
488	54.01.05	34.40.0W	3000	270	10478	1011
489	54.29.65	34.41.6W	1900	270	10478	1319
490	54.55.15	34.41.7W	134	125	10478	1625
491	55.13.45	34.41.6W	200	205	10478	1917
492	54.59.85	35.30.0W	125	110	10478	2225
493	54.32.05	35.59.0W	140	132	20478	1241
495	54.06.05	36.47.0W	152	145	20478	2158

Table 2b : List of stations, instrument type, temperature and salinity at the sea surface and at the max. obs. depth

STAT.	DATA TRANSFER	INSTRUMENT TYPE	TEMP. SURFACE (DEGR. C)	SAL. (PPT)	TEMP. MAX. OBS. DEPTH (DEGR. C)	SAL. DEPTH (PPT)
7	MANUALLY	CTD	+0.92		+1.16	
8	MANUALLY	CTD	+0.34		+2.00	
9	MANUALLY	CTD	+0.51		+0.03	
12	MANUALLY	CTD	+0.80		+1.74	
13	MANUALLY	CTD	+0.67		+0.48	
14	MANUALLY	CTD	+0.42		+0.62	
15	MANUALLY	CTD	+0.58		+1.67	
16	MANUALLY	CTD	+0.55		+0.88	
19	MANUALLY	CTD	+0.10		+0.18	
20	MANUALLY	CTD	+0.23		+2.05	
22	MANUALLY	CTD	+0.22		-0.01	
23	MANUALLY	CTD	+0.49		+0.99	
24	MANUALLY	CTD	+0.77		+0.38	
26	MANUALLY	CTD	+0.81		+0.65	
27	MANUALLY	CTD	+0.86		+1.64	
28	MANUALLY	CTD	+0.86		+0.47	
29	MANUALLY	CTD	+0.80		+1.10	
30	MANUALLY	CTD	+0.85		+1.72	
31	MANUALLY	CTD	+0.88		+2.04	
32	MANUALLY	CTD	+0.78		+1.10	
33	MANUALLY	CTD	+0.62		+0.07	
34	MANUALLY	CTD	+0.25		+0.38	
35	MANUALLY	CTD	+0.56		+0.11	
36	MANUALLY	CTD	+1.19		-0.01	
37	MANUALLY	CTD	+0.40		+0.07	
38	MANUALLY	CTD	+0.15		+1.18	
39	MANUALLY	CTD	+0.27		+0.26	
40	MANUALLY	CTD	+0.11		+1.22	
41	MANUALLY	CTD	+0.53		+0.49	
42	MANUALLY	CTD	+0.02		+1.57	
43	MANUALLY	CTD	+0.00		+1.73	
44	MANUALLY	CTD	+0.02		+1.42	
45	MANUALLY	CTD	-0.17		+1.71	
46	MANUALLY	CTD	+0.27		+0.85	
47	MANUALLY	CTD	-0.26		-0.13	
48	MANUALLY	CTD	-0.18		+1.03	
49	MANUALLY	CTD	-0.33		+1.00	
50	MANUALLY	CTD	-0.12		+0.96	
51	MANUALLY	CTD	-1.28		+0.16	
52	MANUALLY	CTD	-1.10		-1.13	
54	MANUALLY	CTD	-1.44		-0.11	
55	MANUALLY	CTD	-1.18		-0.11	
56	MANUALLY	CTD	-1.18		-0.82	
57	MANUALLY	CTD	-1.18		-0.71	
58	MANUALLY	CTD	-1.40		-0.01	
59	MANUALLY	CTD	-0.73		+0.11	
60	MANUALLY	CTD	-0.74		+0.25	
61	MANUALLY	CTD	-1.36		+0.51	
62	MANUALLY	CTD	-1.29		-0.03	
63	MANUALLY	CTD	-1.22		+0.47	

Table 2b : continued

STAT.	DATA TRANSFER	INSTRUMENT TYPE	TEMP. SURFACE (DEGR. C)	SAL. (PPT)	TEMP. MAX. OBS. DEPTH (DEGR. C)	SAL. (PPT)
64	MANUALLY	CTD	-1.05		-0.94	
65	MANUALLY	CTD	-1.32		-0.47	
66	MANUALLY	CTD	-0.93		-1.14	
67	MANUALLY	CTD	-1.07		-1.08	
68	MANUALLY	CTD	-1.12		-1.19	
69	MANUALLY	CTD	-1.17		-0.52	
70	MANUALLY	CTD	-1.01		-1.03	
71	MANUALLY	CTD	-1.10		-1.04	
72	MANUALLY	CTD	-1.11		-1.18	
73	MANUALLY	CTD	-0.98		-0.28	
74	MANUALLY	CTD	-1.17		+0.54	
75	MANUALLY	CTD	-1.04		-0.52	
76	MANUALLY	CTD	-0.23		-0.89	
78	MANUALLY	CTD	-0.95		+0.46	
79	MANUALLY	CTD	-1.04		-1.24	
80	MANUALLY	CTD	-0.83		-0.88	
81	MANUALLY	CTD	-0.67		-0.02	
83	MANUALLY	CTD	-0.89		-1.42	
84	MANUALLY	CTD	-1.36		-1.37	
85	MANUALLY	CTD	-1.58		-1.63	
86	MANUALLY	CTD	-1.29		-1.51	
87	MANUALLY	CTD	-0.81		-1.53	
88	MANUALLY	CTD	-0.84		-0.09	
91	MANUALLY	BT	-0.80		-1.10	
92	MANUALLY	BT	-0.60		-1.40	
93	MANUALLY	BT	-0.40		-0.70	
94	MANUALLY	BT	-0.30		-1.00	
95	MANUALLY	BT	-0.60		+0.00	
96	MANUALLY	BT	-0.40		-1.30	
97	MANUALLY	BT	+0.30		-0.50	
99	MANUALLY	BT	-0.60		-1.00	
100	MANUALLY	BT	-1.00		-1.20	
101	MANUALLY	BT	-1.20		+0.90	
102	MANUALLY	BT	-0.80		+1.70	
103	MANUALLY	CTD	-1.16		+1.32	
104	MANUALLY	CTD	-1.23		+0.94	
105	MANUALLY	CTD	-1.11		-1.30	
106	MANUALLY	CTD	-1.57		+1.07	
107	MANUALLY	CTD	-0.64		+1.79	
108	MANUALLY	CTD	-0.66		+1.76	
109	MANUALLY	CTD	-0.83		+1.07	
110	MANUALLY	CTD	-0.23		+0.44	
111	MANUALLY	CTD	-0.38		+0.30	
112	MANUALLY	CTD	-0.85		-1.49	
120	MANUALLY	BT	-0.50		-0.50	
125	MANUALLY	CTD	-0.52		-0.79	
127	MANUALLY	CTD	-0.71		-0.66	
128	MANUALLY	CTD	-0.47		-0.64	
129	MANUALLY	CTD	-0.52		-1.08	
130	MANUALLY	CTD	-0.84		+0.07	

Table 2b : continued

STAT.	DATA TRANSFER	INSTRUMENT TYPE	TEMP. SURFACE (DEGR. C)	SAL. (PPT)	TEMP. MAX. OBS. (DEGR. C)	SAL. DEPTH (PPT)
132	MANUALLY	BT	-0.70		+1.00	
133	MANUALLY	CTD	-0.81		-0.17	
134	MANUALLY	CTD	-0.54		+0.73	
135	MANUALLY	CTD	-0.68		-0.10	
136	MANUALLY	CTD	-0.47		-0.11	
137	MANUALLY	CTD	-0.38		+0.24	
139	MANUALLY	CTD	-0.01		+0.58	
140	MANUALLY	CTD	-0.03		+0.96	
141	MANUALLY	CTD	+0.07		-0.47	
142	MANUALLY	CTD	+0.39		+1.30	
143	MANUALLY	CTD	+0.87		+1.00	
144	MANUALLY	CTD	+1.04		+1.67	
145	MANUALLY	CTD	+1.32		-0.59	
146	MANUALLY	CTD	+1.66		+1.64	
147	MANUALLY	CTD	+1.26		+1.80	
148	MANUALLY	CTD	+1.72		+1.73	
149	MANUALLY	CTD	+1.83		+0.58	
150	MANUALLY	CTD	+4.46		+0.76	
151	MANUALLY	CTD	+4.07		+0.80	
152	MANUALLY	CTD	+4.18		+0.22	
154	MANUALLY	CTD	+2.89		+0.75	
156	MANUALLY	CTD	+3.70		+1.65	
157	MANUALLY	CTD	+2.16		+1.78	
158	MANUALLY	CTD	+2.27		+2.03	
159	MANUALLY	CTD	+1.26		+1.95	
161	MANUALLY	CTD	+1.33		+1.56	
162	MANUALLY	CTD	+1.09		+1.14	
163	MANUALLY	CTD	+0.23		+0.40	
164	COMPUTER	CTD	-1.00	32.832	+1.34	34.632
165	COMPUTER	CTD	+0.67	33.499	+1.30	34.607
166	MANUALLY	BT	+0.85		+1.85	
167	MANUALLY	BT	+0.75		+1.75	
169	MANUALLY	BT	+0.45		+1.45	
170	COMPUTER	CTD	-1.24	33.049	+1.25	34.629
171	COMPUTER	CTD	-1.64	33.378	+1.23	34.600
172	COMPUTER	CTD	-1.29	33.345	+1.25	34.607
173	COMPUTER	CTD	+0.68	33.764	+0.89	34.640
175	MANUALLY	BT	+0.60		+1.60	
178	MANUALLY	BT	-0.45		+1.55	
179	COMPUTER	CTD	+0.49	33.409	+1.24	34.614
180	COMPUTER	CTD	+0.30	33.731	+1.06	34.636
181	COMPUTER	CTD	+0.39	33.762	+1.09	34.643
182	COMPUTER	CTD	+0.02	33.710	+1.00	34.635
183	COMPUTER	CTD	+0.46	33.554	+1.38	34.571
185	COMPUTER	CTD	+0.36	33.756	+0.85	34.646
186	MANUALLY	BT	+0.80		+1.45	
187	MANUALLY	BT	+0.80		+1.30	
189	COMPUTER	CTD	+1.07	33.743	+1.00	34.632
192	COMPUTER	CTD	+1.05	33.749	+1.22	34.497
193	COMPUTER	CTD	+0.97	33.649	+1.15	34.578

Table 2b : continued

STAT.	DATA TRANSFER	INSTRUMENT TYPE	TEMP. SURFACE (DEGR. C)	SAL. (PPT)	TEMP. MAX. OBS. DEPTH (DEGR. C)	SAL. (PPT)
194	COMPUTER	CTD	+0.01	33.698	-0.31	34.531
195	MANUALLY	BT	+1.10		+1.00	
196	MANUALLY	BT	+0.30		-0.95	
197	MANUALLY	BT	-0.05		-0.65	
198	MANUALLY	BT	+1.00		+0.30	
199	MANUALLY	BT	+0.35		+0.25	
200	MANUALLY	BT	+0.60		-0.50	
202	MANUALLY	BT	-0.60		-1.00	
204	MANUALLY	BT	-0.65		-0.75	
205	COMPUTER	CTD	-0.92	34.341	-1.05	34.372
206	COMPUTER	CTD	-0.68	34.335	-0.80	34.350
208	COMPUTER	CTD	-0.63	34.317	-0.64	34.322
209	COMPUTER	CTD	-0.75	34.077	-1.48	34.408
210	COMPUTER	CTD	-1.00	34.263	-1.16	34.354
211	COMPUTER	CTD	-0.35	34.116	-0.46	34.517
212	COMPUTER	CTD	-0.38	34.301	-0.82	34.424
213	COMPUTER	CTD	-0.14	34.257	-0.89	34.404
215	COMPUTER	CTD	+0.62	34.121	-1.01	34.561
218	COMPUTER	CTD	+0.55	34.227	+0.03	34.528
219	COMPUTER	CTD	(-0.03)	34.061)	+0.15	33.613
220	COMPUTER	CTD	+0.61	34.236	+0.17	34.587
221	COMPUTER	CTD	+0.71	34.280	+0.03	34.582
222	COMPUTER	CTD	+0.87	34.309	-0.05	34.572
223	COMPUTER	CTD	+0.41	34.340	-0.02	34.572
224	COMPUTER	CTD	+0.77	34.031	+1.06	34.571
225	COMPUTER	CTD	+0.67	33.938	+0.83	34.615
226	COMPUTER	CTD	+0.76	34.026	+1.47	34.595
227	COMPUTER	CTD	+0.80	34.120	+0.53	34.565
228	COMPUTER	CTD	+0.67	34.139	-0.51	34.501
229	COMPUTER	CTD	+0.45	34.183	-0.42	34.403
230	COMPUTER	CTD	+0.93	34.120	-0.86	34.464
231	COMPUTER	CTD	+0.83	34.244	-0.85	34.395
232	COMPUTER	CTD	+0.91	34.128	-0.98	34.485
233	COMPUTER	CTD	+0.77	34.148	-1.05	34.489
234	COMPUTER	CTD	+0.86	34.073	+0.17	34.311
235	COMPUTER	CTD	+0.95	34.043	+0.20	34.285
236	COMPUTER	CTD	+1.10	34.076	+0.47	34.511
237	COMPUTER	CTD	+0.95	34.108	-1.13	34.508
238	COMPUTER	CTD	+0.70	33.946	-0.74	34.474
239	COMPUTER	CTD	+1.54	33.822	+2.01	34.582
240	COMPUTER	CTD	+0.69	34.075	+1.54	34.618
241	COMPUTER	CTD	+1.02	33.971	+0.59	34.554
242	COMPUTER	CTD	+1.51	33.847	+1.87	34.605
243	COMPUTER	CTD	+1.34	33.857	+0.64	34.534
244	COMPUTER	CTD	+0.99	34.066	-1.08	34.479
249	COMPUTER	CTD	+0.80	34.108	-0.13	34.667
254	COMPUTER	CTD	+0.89	34.038	+0.66	34.624
257	COMPUTER	CTD	+1.01	34.100	+0.53	34.613
258	COMPUTER	CTD	+1.31	34.110	-0.30	34.735
264	COMPUTER	CTD	+1.87	34.061	+0.96	34.589

Table 2b : continued

STAT.	DATA TRANSFER	INSTRUMENT TYPE	TEMP. SURFACE (DEGR. C)	SAL. (PPT)	TEMP. MAX. OBS. (DEGR. C)	SAL. DEPTH (PPT)
266	COMPUTER	CTD	+1.36	34.092	+0.36	34.546
267	COMPUTER	CTD	+0.83	34.232	+0.62	34.552
268	COMPUTER	CTD	+1.16	34.050	+0.50	34.546
272	COMPUTER	CTD	+1.26	34.099	+0.40	34.550
273	COMPUTER	CTD	+1.26	34.119	+0.43	34.553
276	COMPUTER	CTD	+1.29	34.283	+0.47	34.559
278/1	COMPUTER	CTD	+1.23	34.271	+0.41	34.563
278/2	MANUALLY	CTD	+0.89	34.301	+0.30	34.561
278/3	MANUALLY	CTD	+1.33	34.242	+0.33	34.561
278/4	MANUALLY	CTD	+1.42	34.275	+0.41	34.552
278/5	MANUALLY	CTD	+0.59	34.316	+0.72	34.595
278/6	MANUALLY	CTD	+1.23	34.217	+0.55	34.569
278/7	MANUALLY	CTD	+1.12	34.186	+0.95	34.600
278/8	MANUALLY	CTD	+1.22	34.139	+0.83	34.591
278/9	MANUALLY	CTD	+1.33	34.121	+1.00	34.611
278/10	MANUALLY	CTD	+1.37	34.032	+0.91	34.592
278/11	MANUALLY	CTD	+1.33	34.104	+0.48	34.309
283	COMPUTER	CTD	+1.33	34.147	+0.54	34.573
287	COMPUTER	CTD	+1.81	34.011	+1.13	34.580
290	COMPUTER	CTD	+3.30	33.853	+2.11	34.535
291	COMPUTER	CTD	+1.90	33.510	+2.19	34.532
292	COMPUTER	CTD	+2.23	33.679	+2.14	34.558
295	MANUALLY	CTD	+3.51	33.697	+1.86	34.349
296	MANUALLY	CTD	+2.48	33.808	+1.61	34.306
299	MANUALLY	CTD	+2.53	33.823	+1.51	34.271
301	MANUALLY	CTD	+2.80	33.687	+1.27	34.121
302	MANUALLY	CTD	+2.81	33.744	+0.83	34.090
303	MANUALLY	CTD	+2.19	33.882	+2.08	34.558
304	MANUALLY	CTD	+2.27	33.861	+2.07	34.566
305	MANUALLY	CTD	+2.46	33.898	+1.97	34.598
306	MANUALLY	CTD	+1.72	33.936	+1.10	34.584
307	MANUALLY	CTD	+2.11	33.925	+1.55	34.599
308	MANUALLY	CTD	+2.66	33.871	+1.95	34.598
309	MANUALLY	CTD	+2.46	33.864	+1.99	34.588
310	MANUALLY	CTD	+1.85	33.708	+1.27	34.568
312	MANUALLY	CTD	+2.03	33.947	+0.80	34.537
315	MANUALLY	CTD	+1.67	34.033	+0.85	34.566
316	MANUALLY	CTD	+1.57	34.074	+0.70	34.409
319	MANUALLY	CTD	+0.77	34.028	+0.32	34.409
320	COMPUTER	CTD	+1.16	34.153	-0.93	34.492
321	COMPUTER	CTD	+0.92	34.206	-0.40	34.554
322	COMPUTER	CTD	-0.14	34.084	-1.00	34.484
323	COMPUTER	CTD	-0.67	34.301	-1.41	34.434
324	COMPUTER	CTD	-0.76	34.311	-0.79	34.318
325	COMPUTER	CTD	-0.73	34.353	-0.89	34.360
326	COMPUTER	CTD	-0.42	34.226	-0.99	34.444
327	COMPUTER	CTD	-0.51	34.316	-1.01	34.397
328	COMPUTER	CTD	-0.58	34.323	-1.01	34.395
329	COMPUTER	CTD	-0.34	34.112	-0.71	34.519
330	COMPUTER	CTD	(-1.34	34.314)	-1.09	34.575

Table 2b : continued

STAT.	DATA TRANSFER	INSTRUMENT TYPE	TEMP. SURFACE (DEGR. C)	SAL. (PPT)	TEMP. MAX. OBS. (DEGR. C)	SAL. DEPTH (PPT)
331	COMPUTER	CTD	-0.90	33.624	-1.23	34.615
332	COMPUTER	CTD	-1.31	33.441	+0.22	34.616
333	COMPUTER	CTD	-0.20	33.240	-1.64	34.530
338	COMPUTER	CTD	+0.78	33.782	-1.67	34.473
339	COMPUTER	CTD	-0.03	34.159	-1.05	34.486
346	COMPUTER	CTD	-0.21	34.171	-1.21	34.466
348	COMPUTER	CTD	-0.57	34.347	-0.79	34.400
349	COMPUTER	CTD	+1.07	34.143	-1.27	34.520
350/1	COMPUTER	CTD	+0.54	33.806	+0.00	34.452
350/3	COMPUTER	CTD	(-0.68	33.964)	+0.17	34.478
350/4	COMPUTER	CTD	+0.57	33.869	+0.65	34.498
350/5	COMPUTER	CTD	+0.70	33.847	+0.47	34.521
356	MANUALLY	CTD	+1.06	33.789	+1.03	34.592
357	COMPUTER	CTD	+1.30	33.721	+1.36	34.564
358	COMPUTER	CTD	+0.97	33.733	+0.79	34.540
359	COMPUTER	CTD	+0.92	33.749	+0.79	34.483
360	COMPUTER	CTD	+1.14	33.547	+1.30	34.610
361	COMPUTER	CTD	+1.29	33.774	+1.37	34.634
364	MANUALLY	CTD	+2.61	33.822	+1.79	34.606
365	MANUALLY	CTD	+2.28	33.814	+1.73	34.614
366	MANUALLY	CTD	+0.95	33.967	+0.77	34.531
367	MANUALLY	CTD	+1.32	33.976	+0.91	34.600
368	MANUALLY	CTD	+1.10	33.978	+0.62	34.578
370	MANUALLY	CTD	+0.61	33.816	+0.10	34.499
371	MANUALLY	CTD	+0.65	34.068	-0.97	34.482
372	MANUALLY	CTD	+2.03	33.750	+1.77	34.608
373	MANUALLY	CTD	+1.79	33.760	+1.77	34.615
376	MANUALLY	CTD	+0.73	34.043	+0.52	34.523
377	MANUALLY	CTD	+1.36	34.010	+0.32	34.275
378	MANUALLY	CTD	+1.01	34.131	-0.96	34.485
379	MANUALLY	CTD	+0.82	34.165	-0.98	34.577
380	MANUALLY	CTD	+0.58	34.219	-0.47	34.449
381	MANUALLY	CTD	+0.95	34.151	-0.60	34.479
382	MANUALLY	CTD	+0.83	34.040	+0.61	34.197
383	MANUALLY	CTD	+0.73	34.044	-0.14	34.504
384	MANUALLY	CTD	+0.78	33.946	-0.03	34.410
385	MANUALLY	CTD	+0.78	33.968	+0.32	34.670
386	MANUALLY	CTD	+1.22	33.896	+0.72	34.600
389	MANUALLY	CTD	+0.90	34.124	-0.01	34.436
390	MANUALLY	CTD	+0.78	34.079	-0.38	34.524
391	MANUALLY	CTD	+0.90	34.175	-0.97	34.514
392	MANUALLY	CTD	-0.28	34.205	-0.38	34.558
394	MANUALLY	CTD	-0.44	34.311	-0.89	34.465
395	MANUALLY	CTD	-0.46	34.276	-0.50	34.284
396	MANUALLY	CTD	-0.59	34.258	-0.85	34.349
397	MANUALLY	CTD	-0.52	34.284	-0.98	34.379
398	MANUALLY	CTD	-0.17	34.217	-0.72	34.499
399	MANUALLY	CTD	-0.57	34.243	-1.01	34.427
400	MANUALLY	CTD	-0.71	34.230	-0.80	34.317
402	MANUALLY	CTD	-0.58	34.141	-1.09	34.379

Table 2b : continued

STAT.	DATA TRANSFER	INSTRUMENT TYPE	TEMP. SURFACE (DEGR. C)	SAL. (PPT)	TEMP. MAX. OBS. DEPTH (DEGR. C)	SAL. DEPTH (PPT)
403	MANUALLY	CTD	-0.48	34.077	-0.84	34.492
404	MANUALLY	CTD	-0.57	34.036	-0.78	34.486
405	MANUALLY	CTD	-0.45	33.944	-0.35	34.528
406	MANUALLY	CTD	-0.50	34.192	-0.51	34.279
407	MANUALLY	CTD	-0.40	34.219	-0.47	34.273
408	MANUALLY	CTD	-0.92	34.164	-1.05	34.340
409	MANUALLY	CTD	-0.86	34.222	-0.85	34.297
411	MANUALLY	CTD	+0.76	34.130	-0.73	34.484
415	MANUALLY	CTD	+0.02	34.207	-1.42	34.511
417	MANUALLY	CTD	-0.20	34.254	-0.80	34.386
419	MANUALLY	CTD	-0.03	34.234	-0.84	34.391
420	MANUALLY	CTD	+0.75	34.212	-1.27	34.504
421	MANUALLY	CTD	-0.12	34.004	+0.80	34.548
422	MANUALLY	CTD	+0.52	33.797	+0.90	34.491
423	MANUALLY	CTD	+0.74	33.738	-0.09	34.245
425	MANUALLY	CTD	+0.75	33.761	-0.16	34.138
426	MANUALLY	CTD	+0.20	33.670	-0.08	34.543
427	MANUALLY	CTD	-0.02	34.164	-0.53	34.485
428	MANUALLY	CTD	+0.08	33.622	+0.10	34.028
430	MANUALLY	CTD	-0.01	33.595	+0.19	34.061
432	MANUALLY	CTD	+0.21	33.686	+0.16	34.419
434	MANUALLY	CTD	-0.41	33.346	+1.36	34.563
435	MANUALLY	CTD	-0.46	33.423	+1.18	34.560
436	MANUALLY	CTD	-1.66	32.975	+1.19	34.562
437	MANUALLY	CTD	-0.23	33.470	+1.23	34.567
438	MANUALLY	CTD	+0.48	33.723	+1.46	34.637
439	MANUALLY	CTD	+0.97	33.759	+1.83	34.623
440	MANUALLY	CTD	+1.90	33.704	+1.85	34.620
441	MANUALLY	CTD	+1.83	33.702	+1.93	34.617
442	MANUALLY	CTD	+1.47	33.724	+1.92	34.619
443	MANUALLY	CTD	+1.49	33.721	+1.79	34.629
444	MANUALLY	CTD	+0.90	33.754	+1.55	34.633
445	MANUALLY	CTD	+0.36	33.609	+0.93	34.622
446	MANUALLY	CTD	+0.48	33.643	+0.67	34.624
448	MANUALLY	CTD	+0.63	33.757	+0.20	34.216
449	MANUALLY	CTD	+0.92	34.030	+0.19	34.263
450	MANUALLY	CTD	+0.70	33.793	+1.21	34.625
451	MANUALLY	CTD	+0.79	33.951	+0.44	34.475
452	MANUALLY	CTD	+0.69	33.960	+0.10	34.479
453	MANUALLY	CTD	+0.27	34.087	-0.45	34.497
454	MANUALLY	CTD	+0.67	33.966	+1.22	34.487
456	MANUALLY	CTD	+0.66	33.939	+1.13	34.620
457	MANUALLY	CTD	+0.75	34.036	+0.70	34.612
458	MANUALLY	CTD	+0.73	34.066	+0.26	34.617
459	MANUALLY	CTD	+0.89	34.068	+1.29	34.573
460	MANUALLY	CTD	+0.48	34.262	+0.95	34.577
462	MANUALLY	CTD	+1.24	34.088	+1.54	34.605
463	MANUALLY	CTD	+1.86	33.899	+1.87	34.593
465	MANUALLY	CTD	+3.85	33.843	+1.17	34.061
466	MANUALLY	CTD	+3.68	33.859	+1.72	34.236

Table 2b : continued

STAT.	DATA TRANSFER	INSTRUMENT TYPE	TEMP. SURFACE (DEGR. C)	SAL. (PPT)	TEMP. MAX. OBS. DEPTH (DEGR. C)	SAL. (PPT)
467	MANUALLY	CTD	+3.58	33.801	+1.79	34.616
468	MANUALLY	CTD	+3.45	33.840	+1.79	34.437
469	MANUALLY	BT	+3.40		+2.00	
470	MANUALLY	BT	+3.40		+2.00	
471	MANUALLY	BT	+2.90		+1.80	
472	MANUALLY	BT	+2.80		+2.20	
474	MANUALLY	BT	+3.10		+1.50	
476	MANUALLY	BT	+2.80		+2.00	
477	MANUALLY	BT	+3.20		+1.50	
478	MANUALLY	BT	(+2.70)		+1.20	
480	MANUALLY	BT	+2.70		+1.70	
481	MANUALLY	BT	+2.80		+1.60	
482	MANUALLY	BT	+2.00		+1.70	
483	MANUALLY	BT	+2.30		+2.00	
484	MANUALLY	BT	+2.70		+2.00	
485	MANUALLY	BT	+2.30		+1.60	
486	MANUALLY	BT	+2.20		+1.90	
487	MANUALLY	BT	+3.20		+1.50	
488	MANUALLY	BT	+1.90		+1.70	
489	MANUALLY	BT	+2.00		+2.00	
490	MANUALLY	BT	+2.80		+1.70	
491	MANUALLY	BT	+2.50		+1.20	
492	MANUALLY	BT	+3.10		+1.60	
493	MANUALLY	BT	+3.10		+2.00	
495	MANUALLY	BT	+3.20		+1.50	

XXVIII

Table 2c : List of stations and meteorological observations

STATION	TEMP. AIR DRY BULB (DEGR. C)	TEMP. AIR WET BULB (DEGR. C)	WIND DIR. (DEGR.)	WIND VEL. (KN.)	WEATHER	CLOUD	SEA ICE (ICES CODE)
7	+2.4	+2.1	265	22	1	2	4 9
8	+3.4	+2.4	265	22	1	1	4 9
9					9	9	9 9
12	+1.5	+1.5	265	21	4	4	4 9
13	+2.8	+2.7	315	30	2	0	4 9
14	+2.8	+2.8	305	28	4	0	4 9
15	+1.7	+1.7	285	18	4	0	W 9
16	+1.4	+1.4	295	11	4	0	W 9
19	+2.5	+2.4	305	26	5	0	5 9
20	+2.1	+2.1	305	32	2	0	5 9
22	+1.9	+1.9	305	30	4	0	5 9
23	+1.5	+1.4	305	20	4	0	4 9
24	+1.6	+1.4	295	20	2	0	5 9
26	+2.2	+1.5	305	28	2	0	4 9
27	+2.4	+2.1	315	22	1	7	4 9
28	+2.6	+2.1	305	20	2	0	5 9
29	+1.9	+1.7	295	25	2	0	4 9
30	+2.1	+1.7	285	24	2	0	4 9
31	+3.4	+2.3	275	24	1	0	4 9
32	+2.6	+1.6	285	24	1	0	4 9
33	+0.8	+0.6	285	18	1	0	4 9
34	+1.6	+0.9	345	8	1	7	W 9
35	+2.6	+2.1	345	10	4	0	W 9
36	+2.3	+2.3	345	18	4	0	W 9
37	+1.6	+1.2	15	10	6	0	W 9
38	+0.8	-1.3	285	34	2	7	W 9
39	-0.3	-0.6	285	30	1	7	4 9
40	+1.1	+0.1	245	34	1	7	4 9
41	+0.2	-0.8	295	18	2	0	W 9
42	+0.7	+0.4	315	18	7	0	W 9
43	+0.2	-0.6	315	20	2	0	W 9
44	+0.2		315	10	5	0	W 9
45	-0.2	-0.2	275	10	4	0	W 9
46	-0.3	-0.5	255	16	2	0	W 9
47	+0.2	-0.3	275	18	2	0	W 9
48	-0.4	-1.1	265	30	1	2	W 9
49	-0.8	-2.2	265	22	7	0	W 9
50	-0.2	-0.6	335	18	7	0	W 9
51	-0.3	-0.3	285	22	7	0	W 9
52	-0.2	-0.2	285	14	4	0	W 9
54	-0.2		305	18	6	0	W 9
55	-0.2	-0.2	295	12	4	0	W 9
56	-0.4	-0.4	275	10	4	0	W 9
57	-0.8	-0.8	275	14	4	0	W 9
58	-1.8	-1.6	265	7	2	7	4 9
59	-0.9	-0.9	95	2	7	0	2 9
60	-0.4	-0.4	75	8	2	0	2 9
61	-0.9	-1.4	95	9	2	0	W 9
62	-2.8	-2.2	75	14	2	0	W 9
63	-0.9	-1.1	235	14	1	7	W 9

Table 2c : continued

* * * * *																			
STAT.	TEMP. AIR		WIND		WEATHER	CLOUD	SEA	ICE	* * * * *										
	DRY BULB	WET BULB	DIR.	VEL.	(ICES CODE)														
	(DEGR. C)	(DEGR. C)	(DEGR.)	(KN.)															
64	-0.4	-0.8	15	12	1	7	2	2											
65	-1.4	-1.7	355	6	2	0	2	2											
66	-1.0	-1.0	355	5	2	7	2	2											
67	-0.7	-1.2	265	20	1	4	2	2											
68	-0.5	-0.8	95	3	2	0	2	2											
69	-0.8	-0.8	95	3	1	7	2	2											
70	-0.4	-0.7	95	3	2	0	2	2											
71	-1.2	-1.4	55	10	4	0	2	2											
72	-0.2	-0.4	25	22	2	0	2	2											
73	-1.4	-1.4	5	20	4	0	2	2											
74	-1.1	-1.1	15	22	4	0	2	2											
75	-1.2	-1.2	75	8	4	0	2	2											
76	+0.1	+0.1	355	12	4	0	2	2											
78	+0.6	+0.6	355	18	4	0	2	2											
79	+0.4	+0.3	335	14	4	0	2	2											
80	+0.4	+0.3	325	14	4	0	2	2											
81	+3.8	+3.1	335	12	1	5	2	2											
83	+0.2	+0.0	25	17	4	0	2	2											
84	+0.1	-0.6	325	20	1	4	2	2											
85	+0.7	+0.2	335	21	2	0	2	2											
86	-1.1	-1.7	95	2	2	0	2	2											
87	-1.6	-1.8	95	2	2	0	2	2											
88	-2.2	-2.2	175	10	7	0	2	2											
91	-2.4	-2.4	245	6	2	0	2	2											
92	-1.9	-2.1	95	2	2	0	2	2											
93	-1.0	-2.1	95	2	2	0	2	2											
94	-1.3	-1.9	15	4	2	0	2	2											
95	-1.4	-1.9	15	6	2	0	2	2											
96	+0.1	-0.9	95	1	1	6	2	2											
97	+1.2	+0.5	95	3	1	6	2	2											
99	-2.2	-3.1	235	16	2	0	2	2											
100	-2.1	-2.6	215	20	2	0	2	2											
101	-2.2	-2.9	235	20	2	0	2	2											
102	-1.4	-2.6	225	16	2	0	2	2											
103	-1.4	-2.2	205	14	2	0	2	2											
104	-2.3	-2.7	235	8	2	0	2	2											
105	-2.9	-3.6	205	7	2	0	2	2											
106	-0.5	-0.8	295	14	7	0	2	2											
107	-0.3	-0.6	315	12	2	0	2	2											
108	-0.3	-0.7	325	11	2	0	2	2											
109	-0.4	-0.5	305	16	7	0	2	2											
110	-0.3	-0.4	255	21	2	0	2	2											
111	+0.3	+0.2	235	24	7	7	2	2											
112	-0.5	-1.1	225	10	7	0	2	2											
120	-0.6	-0.6	75	24	7	0	2	2											
125	-0.1	-0.5	135	4	2	0	2	2											
127	-2.2	-2.9	115	34	2	0	2	2											
128	-1.6	-1.9	115	20	2	0	2	2											
129	-1.7	-1.7	105	30	2	0	2	2											
130	-2.1	-2.2	115	32	2	0	2	2											

Table 2c : continued

* * * * *									
STAT.	TEMP. AIR		WIND		WEATHER	CLOUD	SEA ICE	* * * * *	
	DRY BULB	WET BULB	DIR.	VEL.	(ICES CODE)				
	(DEGR. C)	(DEGR. C)	(DEGR.)	(KN.)					
194					4	9	2	1	
195	+1.2	+1.0	305	15	5	0	2	1	
196	+1.2		65	20	6	0	4	0	
197	+1.4	+0.0	105	15	2	0	4	0	
198	+1.4	-0.2	125	17	7	0	4	0	
199	+9.9		355	9	3	0	4	0	
200	+0.1	-1.2	105	22	1	7	3	1	
202	+0.5	-0.5	335	9	1	0	3	1	
204	-1.0	-1.5	335	13	2	0	3	1	
205					1	5	2	0	
206	+0.0	-0.7	275	10	2	7	2	0	
208	+1.2	+0.1	285	38	1	7	5	0	
209	+1.2	+0.2	265	36	1	7	5	0	
210	+0.5	-0.5	295	20	1	0	4	0	
211					1	7	4	0	
212					1	7	4	0	
213	+2.2	+1.1	315	13	1	0	4	0	
215	+2.0	+2.0	315	26	1	0	4	0	
218	+1.2	+0.6	325	8	4	9	4	1	
219	+1.1	+0.3	175	24	1	0	4	0	
220	+1.0	+0.1	225	13	0	0	2	0	
221					1	5	2	0	
222	+0.6	-0.3	45	10	1	7	1	0	
223					1	7	1	0	
224					7	0	4	0	
225	+1.0	+0.9	95	15	7	0	2	0	
226	+0.0	+0.0	115	17	7	0	3	0	
227	+0.4	+0.0	155	6	1	7	0	0	
228	+0.4	+0.0	155	6	7	0	0	0	
229	-0.0	-1.0	155	11	7	0	0	0	
230					7	7	0	0	
231					1	7	1	0	
232			985	1	1	0	1	0	
233	+1.1	+0.1	255	7	1	0	1	0	
234	+1.1	+0.1	255	7	1	0	1	0	
235	+1.2	-0.7	255	12	1	7	0	0	
236	+1.2	+0.0	165	13	7	0	0	0	
237	+0.5	-0.0	225	13	1	7	0	0	
238	+0.5	-1.3	235	9	1	7	0	0	
239					1	7	0	0	
240	+0.2	-1.0	175	10	2	0	0	0	
241	+0.2	-0.1	175	10	7	0	0	0	
242	+1.0	-0.4	195	17	1	7	1	0	
243	+1.6	+0.2	185	12	1	7	0	0	
244	+0.0	-0.3	165	26	2	0	4	0	
249	-0.3	-1.5	145	15	1	0	0	0	
254	+0.6	-0.9	265	8	1	7	1	0	
257	+2.3	+2.1	295	14	4	0	0	0	
258	+1.7	+1.5	275	8	4	0	0	0	
264					4	0	0	0	

Table 2c : continued

STAT.	TEMP. AIR (DEGR. C)	WET BULB (DEGR. C)	DIR. WIND (DEGR. C)	WIND VEL. (KN.)	WEATHER	CLOUD (ICES CODE)	SEA	ICE
266	+0.7	+0.4	245	6	4	9	1	0
267	+0.7	+0.4	325	4	4	9	1	0
268	+0.7	+0.4	325	4	4	9	1	0
272	+0.7	+0.4	325	4	1	8	1	0
273	+0.7	+0.4	325	4	1	1	1	2
276	+0.7	+0.4	325	4	1	7	1	2
278/1	+0.7	+0.4	325	4	1	8	1	2
278/2	+0.7	+0.4	325	4	1	8	1	2
278/3	+0.7	+0.4	325	4	1	8	1	2
278/4	+0.7	+0.4	325	4	1	8	1	2
278/5	+0.7	+0.4	325	4	1	8	1	2
278/6	+0.7	+0.4	325	4	1	8	1	2
278/7	+0.7	+0.4	325	4	1	8	1	2
278/8	+0.7	+0.4	325	4	1	8	1	2
278/9	+0.7	+0.4	325	4	1	8	1	2
278/10	+0.7	+0.4	325	4	1	8	1	2
278/11	+0.7	+0.4	325	4	1	8	1	2
283	+0.0	175	4	4	2	0	1	0
287	+1.5	75	2	2	0	0	1	0
290	+3.0	195	14	8	2	6	1	0
291		265	4	8	1	2	1	0
292		185	8	8	1	2	1	0
295		15	20	8	2	8	1	0
296		165	16	8	1	7	4	0
299		35	15	8	4	0	4	0
301	+3.9	5	4	8	4	0	4	2
302	+3.6			8	4	0	4	0
303	+3.3			8	4	0	4	0
304	+2.8			8	4	0	4	0
305	+3.0			8	4	0	4	0
306	+3.0			8	4	0	4	0
307	+2.6			8	4	0	4	0
308	+4.0			8	4	0	4	0
309	+2.1			8	4	0	4	0
310	+1.5			8	4	0	4	0
312	-0.8			8	4	0	4	0
315	-1.0			8	4	0	4	0
316				8	4	0	4	0
319				8	4	0	4	0
320	+1.9			8	4	0	4	0
321	+1.7			8	4	0	4	0
322	+0.6			8	4	0	4	0
323	+0.2			8	4	0	4	0
324	+0.9			8	4	0	4	0
325	+1.4			8	4	0	4	0
326	+1.3			8	4	0	4	0
327	+0.1			8	4	0	4	0
328	-0.9			8	4	0	4	0
329	-0.6			8	4	0	4	0
330	+0.9			8	4	0	4	0

Table 2c : continued

STAT.	TEMP. AIR		WIND		WEATHER	CLOUD	SEA ICE
	DRY BULB	WET BULB	DIR.	VEL.	(ICES CODE)		
	(DEGR. C)	(DEGR. C)	(DEGR.)	(KN.)			
331	+0.4		355	30	7	0	3
332	+0.9		325	40	1	7	5
333	-1.7				4	9	1
338	-0.8		225	18	2	0	2
339	-1.0		315	3	2	0	1
346	+0.9		275	21	1	7	3
348	-0.6		125	16	7	9	1
349	-1.1	-1.3	85	13	7	0	1
350/1					2	0	2
350/3					2	0	2
350/4					1	7	2
350/5					1	0	2
356					6	0	0
357					6	0	0
358	+3.2		355	16	1	7	3
359	+1.9		345	15	2	0	0
360	+2.8		285	23	1	0	0
361	+2.3		295	21	2	0	0
364	-0.1		65	4	1	7	0
365	-1.6		25	4	1	7	0
366	-1.0		255	9	2	0	0
367	-1.4		245	10	2	0	0
369	+2.9		235	18	2	0	0
370	+0.9		245	20	2	0	0
371	+1.2		295	20	2	0	0
372	+1.7		235	20	2	0	0
373	+1.9		265	20	2	0	0
376	+1.4		285	18	2	0	0
377	+2.7		295	20	2	0	0
378	+3.1		305	32	2	0	0
379	+4.4		285	34	2	0	0
380	+4.7		265	30	2	0	0
381	+4.4		305	28	2	0	0
382	+5.1		295	28	2	0	0
383	+3.6		45	28	2	0	0
384	+4.3		15	23	0	0	0
385	+2.8		225	24	1	7	4
386	+2.4		225	18	1	0	0
389	+2.4		265	12	4	0	4
390	+2.4		295	12	4	0	4
391	+1.3		275	18	4	0	4
392	+1.7		285	20	1	7	4
394	+2.4		285	20	4	0	4
395	+2.5		305	30	2	0	4
396	+2.3		205	16	2	0	4
397	+1.9		325	26	0	0	4
398	+1.0		355	20	2	0	3
399	+1.5		335	12	4	0	3
400	-3.0		195	34	4	0	5
402	-6.4		305	28	2	0	0

Table 2c : continued

STRT.	TEMP. AIR (DEGR. C)	WET BULB (DEGR. C)	DIR. WIND (DEGR.)	VEL. (KN.)	WEATHER (ICES CODE)	CLOUD	SEA	ICE
403	-6.7		215	36	2	0	6	3
404	-6.9		225	38	2	0	6	6
405	-7.4		225	44	2	0	5	6
406	-4.3		145	2	2	0	3	3
407	-1.4		115	4	2	0	1	3
408	-4.4		65	9	4	0	2	4
409	-2.1		45	3	2	0	2	3
411	-2.9		115	10	2	0	2	3
415	-0.2		235	12	2	0	3	3
417	+1.3		105	10	1	0	3	2
419	+1.4		235	10	1	0	3	2
420	+1.2		225	25	1	0	3	1
421	+1.6		255	16	2	0	3	0
422	+3.1		145	14	2	0	3	0
423	+2.5		205	18	5	0	3	2
425	+2.8		235	20	4	0	5	2
426	+1.9		255	25	4	0	5	2
427	+1.3		215	16	2	0	4	2
428	+1.8		245	6	2	0	3	2
430	+1.4		285	3	2	0	3	2
432	+0.9		35	8	4	0	3	2
434	-3.1		195	16	1	0	3	2
435	-2.8		185	6	0	1	3	2
436	-2.9		155	8	0	0	2	2
437	-1.2		125	6	0	1	2	2
438	+1.9				1	1	2	2
439	-2.3		55	7	1	1	2	2
440	-1.1		105	24	1	0	3	2
441	+1.8		105	16	2	0	5	0
442	+2.4		65	6	4	0	4	0
443	+2.4		25	6	4	0	3	0
444	+2.2		335	10	4	0	3	0
445	+0.6		335	8	4	0	3	0
446	+1.4		215	12	4	0	3	0
448	+1.1		235	14	2	0	3	2
449	-1.2		205	28	1	0	5	2
450	-1.3		215	11	2	0	4	2
451	+1.4		315	10	2	0	3	2
452	+0.9		25	10	2	0	3	2
453	-2.3		85	4	2	0	3	2
454	+1.0		185	18	1	0	3	0
455	+1.2		225	10	2	0	3	0
457	+1.9		225	26	2	0	5	2
458	+1.4		235	25	2	0	5	2
459	+2.4		245	10	2	0	4	0
460	+2.6		265	12	2	0	4	0
462	+3.1		305	18	6	0	4	0
463	+3.1		225	8	2	0	2	0
465	+6.9		335	18	4	0	4	0
466	+6.5		255	22	4	0	4	0

Table 2c : continued

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* * * * *
STAT.      TEMP. AIR      WIND      WEATHER CLOUD SEA ICE
          DRY BULB  WET BULB  DIR.  VEL.      (ICES CODE)
          (DEGR. C) (DEGR. C) (DEGR. ) (KN. )
* * * * *
467      +6. 2      315      16      2      0      4      0
468      +6. 5      185      18      1      7      4      0
469      +6. 2      185      18      1      0      4      3
470      +7. 5      355      30      1      0      4      2
471      +6. 2      5      30      1      0      4      0
472      +5. 0      345      20      1      0      5      0
474      +5. 2      345      24      1      0      5      9
476      +5. 0      345      25      1      0      7      0
477      +6. 3      65      10      5      0      2      0
478      +2. 0      115      3      3      9      4      9
480      +3. 0      345      14      4      0      5      0
481      +3. 0      305      14      4      0      5      0
482      +3. 0      285      22      1      0      6      0
483      +3. 5      15      16      1      0      4      2
484      +3. 4      35      4      1      0      4      0
485      +3. 4      95      13      5      0      5      0
486      +3. 5      75      8      2      0      5      0
487      +3. 3      195      22      4      0      5      0
488      +3. 0      175      10      2      0      4      0
489      +3. 0      305      20      1      7      4      2
490      +3. 5      305      18      1      6      4      2
491      +3. 0      5      2      1      7      4      2
492      +3. 5      35      6      2      0      4      2
493      +3. 1      95      0      1      4      2      1
495      +3. 5      165      8      1      7      2      0
    
```

TABLE 3: Errors given by manufacturer and errors induced by calibration

Parameter	Sensor Range	Type of error estimate	Error given by manufacturer	Calibration during data processing	Errors induced by calibration
P Pressure	0- 600 dbar 0-6000 dbar	reproducibility	+ 0.3% of range → + 1.8 dbar - 0.3% of range → - 18 dbar	no calibration	
T Temperature	-2°C to +40°C	reproducibility	+ 0.001°C	calibration against precision revering thermometers	+ 0.002°C
C electr. conductivity	5 to 55 m S/cm	reproducibility	+ 0.020 m S/cm	no calibration	
S Salinity				calibration against 'Autolab' salinometer	+ 0.025 ‰
D Density				no calibration	Instabilities due to 'spiking' + 4 * 10 ⁻⁵ g/cm ³

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Table 4 : Hydrographic casts

LAT.	LONG.	DATE	TIME(GMT)	STATION NO.	BOTTOM DEPTH (M)
61.00.40.3	54.14.3	7.03.78	1.49	390	540
N	DEPTH	TEMPERATURE	SALINITY	DENSITY	SEKTOR NR.
	(M)	(DEGR. C)	(PPT)		
8289	0.0	+0.80	34.145	27.3926	296
8293	83.0	+0.62	34.205	27.4517	296
8297	236.0	+0.34	34.374	27.6037	296
8301	398.0	-0.07	34.578	27.7898	296
LAT.	LONG.	DATE	TIME(GMT)	STATION NO.	BOTTOM DEPTH (M)
62.25.10.3	58.02.8	11.03.78	5.23	413	1950
N	DEPTH	TEMPERATURE	SALINITY	DENSITY	SEKTOR NR.
	(M)	(DEGR. C)	(PPT)		
8313	0.0	+0.70	34.327	27.5449	296
8317	150.0	+1.33	34.469	27.6178	297
8321	200.0	-0.66	34.500	27.7543	297
8325	250.0	-0.73	34.536	27.7863	297
LAT.	LONG.	DATE	TIME(GMT)	STATION NO.	BOTTOM DEPTH (M)
61.43.00.3	60.22.0	20.03.78	10.33	450	3050
N	DEPTH	TEMPERATURE	SALINITY	DENSITY	SEKTOR NR.
	(M)	(DEGR. C)	(PPT)		
8337	0.0	+0.70	33.809	27.1287	297
8341	139.0	+0.04	34.322	27.5779	297
8345	220.0	+1.75	34.668	27.7467	298
8349	511.0	+1.70	34.731	27.8010	298
LAT.	LONG.	DATE	TIME(GMT)	STATION NO.	BOTTOM DEPTH (M)
52.30.20.3	38.02.0	26.03.78	5.40	469	2600
N	DEPTH	TEMPERATURE	SALINITY	DENSITY	SEKTOR NR.
	(M)	(DEGR. C)	(PPT)		
8361	0.0	+3.40	33.804	26.9167	298
8365	50.0	+3.16	33.808	26.9422	298
8369	140.0	+0.48	34.031	27.3199	298
8373	200.0	+1.01	34.214	27.4348	299
LAT.	LONG.	DATE	TIME(GMT)	STATION NO.	BOTTOM DEPTH (M)
52.59.30.3	38.01.9	28.03.78	8.35	470	3000
N	DEPTH	TEMPERATURE	SALINITY	DENSITY	SEKTOR NR.
	(M)	(DEGR. C)	(PPT)		
8385	0.0	+3.40	33.796	26.9103	299
8389	50.0	-3.12	33.805	26.9434	299
8393	140.0	+1.02	34.020	27.2784	299
8397	200.0	+0.75	34.192	27.4334	299

LAT.	LONG.	DATE	TIME (GMT)	STATION NO.	BOTTOM DEPTH (M)
53, 29, 80.3	38, 01.1	28, 03, 78	17, 20	471	1600
N	DEPTH	TEMPERATURE	SALINITY	DENSITY	SEKTOR NR.
	(M)	(DEGR. C)	(PPT)		
8409	0.0	+3.10	33.781	26.9261	300
8413	50.0	+2.87	33.800	26.9618	300
8417	140.0	+0.92	34.129	27.3723	300
8421	200.0	+1.28	34.265	27.4577	300
LAT.	LONG.	DATE	TIME (GMT)	STATION NO.	BOTTOM DEPTH (M)
53, 56, 50.3	38, 00.0	28, 03, 78	20, 15	472	93
N	DEPTH	TEMPERATURE	SALINITY	DENSITY	SEKTOR NR.
	(M)	(DEGR. C)	(PPT)		
8433	0.0	+2.80	33.735	26.9161	301
8437	10.0	+2.78	33.735	26.9178	301
8441	40.0	+2.73	33.746	26.9309	301
8445	70.0	+2.34	33.828	27.0288	301
LAT.	LONG.	DATE	TIME (GMT)	STATION NO.	BOTTOM DEPTH (M)
53, 52, 00.3	37, 17.0	28, 03, 78	23, 06	474	290
N	DEPTH	TEMPERATURE	SALINITY	DENSITY	SEKTOR NR.
	(M)	(DEGR. C)	(PPT)		
8457	0.0	+3.10	33.691	26.8544	302
8461	50.0	+2.52	33.820	27.0077	302
8465	140.0	+1.93	33.894	27.1138	302
8469	200.0	+1.11	34.010	27.2646	302
LAT.	LONG.	DATE	TIME (GMT)	STATION NO.	BOTTOM DEPTH (M)
53, 29, 00.3	37, 07.0	29, 03, 78	9, 50	475	940
N	DEPTH	TEMPERATURE	SALINITY	DENSITY	SEKTOR NR.
	(M)	(DEGR. C)	(PPT)		
8481	0.0	+2.90	33.806	26.9639	303
8485	50.0	+2.86	33.808	26.9690	303
8489	140.0	+0.75	34.049	27.3185	303
8493	200.0	+1.19	34.216	27.4245	303
LAT.	LONG.	DATE	TIME (GMT)	STATION NO.	BOTTOM DEPTH (M)
53, 29, 80.3	36, 21.4	29, 03, 78	13, 11	476	1270
N	DEPTH	TEMPERATURE	SALINITY	DENSITY	SEKTOR NR.
	(M)	(DEGR. C)	(PPT)		
8505	0.0	+2.70	33.793	26.9709	303
8509	50.0	+2.53	33.809	26.9981	303
8513	140.0	+0.47	34.111	27.3848	304
8517	200.0	+1.14	34.259	27.4623	304

Table 4 : continued

XXXVIII

Table 4 : continued

LAT.	LONG.	DATE	TIME (GMT)	STATION NO.	BOTTOM DEPTH (M)
54.14.00.3	36.34.0	29.03.78	20.15	477	208
N	DEPTH	TEMPERATURE	SALINITY	DENSITY	SEKTOR NR.
	(M)	(DEGR. C)	(PPT)		
8529	0.0	+2.20	32.899	26.2150	304
8533	50.0	+2.95	33.699	26.8742	304
8537	200.0	+1.31	34.270	27.4597	304
LAT.	LONG.	DATE	TIME (GMT)	STATION NO.	BOTTOM DEPTH (M)
53.59.40.3	36.20.7	30.03.78	12.35	478	190
N	DEPTH	TEMPERATURE	SALINITY	DENSITY	SEKTOR NR.
	(M)	(DEGR. C)	(PPT)		
8549	0.0	+2.70	33.813	26.9869	305
8553	40.0	+2.50	33.813	27.8037	305
8557	173.0	+1.03	34.245	27.4583	305
LAT.	LONG.	DATE	TIME (GMT)	STATION NO.	BOTTOM DEPTH (M)
54.29.60.3	35.31.9	30.03.78	18.11	480	280
N	DEPTH	TEMPERATURE	SALINITY	DENSITY	SEKTOR NR.
	(M)	(DEGR. C)	(PPT)		
8569	0.0	+2.70	33.731	26.9215	306
8573	50.0	+2.61	33.739	26.9355	306
8577	140.0	+2.24	33.797	27.8121	306
8581	200.0	+1.38	33.985	27.2264	306
LAT.	LONG.	DATE	TIME (GMT)	STATION NO.	BOTTOM DEPTH (M)
54.01.10.3	35.31.3	30.03.78	21.36	481	320
N	DEPTH	TEMPERATURE	SALINITY	DENSITY	SEKTOR NR.
	(M)	(DEGR. C)	(PPT)		
8593	0.0	+2.80	33.679	26.8714	306
8597	50.0	+2.72	33.703	26.8974	307
8601	140.0	+0.27	34.032	27.3323	307
8605	200.0	+1.32	34.251	27.4438	307
LAT.	LONG.	DATE	TIME (GMT)	STATION NO.	BOTTOM DEPTH (M)
53.31.00.3	35.30.8	30.03.78	1.13	482	3000
N	DEPTH	TEMPERATURE	SALINITY	DENSITY	SEKTOR NR.
	(M)	(DEGR. C)	(PPT)		
8617	0.0	+2.00	33.917	27.1268	307
8621	50.0	+1.93	33.917	27.1322	307
8625	140.0	+0.42	34.100	27.3788	308
8629	200.0	+1.14	34.324	27.5145	308

Table 4 : continued

LAT.	LONG.	DATE	TIME(GMT)	STATION NO.	BOTTOM DEPTH (M)
53.00, 00.3	36.10.9	31.03.78	9.50	483	3000
N	DEPTH	TEMPERATURE	SALINITY	DENSITY	SEKTOR NR.
	(M)	(DEGR. C)	(PPT)		
8641	0.0	+2.30	33.898	27.0880	308
8645	50.0	+2.03	33.891	27.1037	308
8649	140.0	+0.64	34.161	27.4151	308
8653	200.0	+0.83	34.246	27.4718	309
LAT.	LONG.	DATE	TIME(GMT) <td>STATION NO. <td>BOTTOM DEPTH (M)</td> </td>	STATION NO. <td>BOTTOM DEPTH (M)</td>	BOTTOM DEPTH (M)
52.59, 00.3	37.11.0	31.03.78	13.04	484	2700
N	DEPTH	TEMPERATURE	SALINITY	DENSITY	SEKTOR NR.
	(M)	(DEGR. C)	(PPT)		
8665	0.0	+2.70	33.769	26.9518	309
8669	50.0	+2.44	33.851	27.0390	309
8673	140.0	+0.90	34.090	27.3422	309
8677	200.0	+1.08	34.267	27.4727	309
LAT.	LONG.	DATE	TIME(GMT) <td>STATION NO. <td>BOTTOM DEPTH (M)</td> </td>	STATION NO. <td>BOTTOM DEPTH (M)</td>	BOTTOM DEPTH (M)
52.29, 00.3	37.10.1	31.03.78	16.21	485	2700
N	DEPTH	TEMPERATURE	SALINITY	DENSITY	SEKTOR NR.
	(M)	(DEGR. C)	(PPT)		
8689	0.0	+2.30	33.817	27.0233	310
8693	50.0	+2.32	33.879	27.0712	310
8697	140.0	+0.71	34.083	27.3482	310
8701	200.0	+1.11	34.306	27.5020	310
LAT.	LONG.	DATE	TIME(GMT) <td>STATION NO. <td>BOTTOM DEPTH (M)</td> </td>	STATION NO. <td>BOTTOM DEPTH (M)</td>	BOTTOM DEPTH (M)
52.28, 50.3	36.22.1	31.03.78	21.30	486	2200
N	DEPTH	TEMPERATURE	SALINITY	DENSITY	SEKTOR NR.
	(M)	(DEGR. C)	(PPT)		
8713	0.0	+2.20	33.890	27.0896	311
8717	50.0	+2.02	33.921	27.1285	311
8721	140.0	+0.48	34.211	27.4646	311
8725	200.0	+1.24	34.419	27.5839	311
LAT.	LONG.	DATE	TIME(GMT) <td>STATION NO. <td>BOTTOM DEPTH (M)</td> </td>	STATION NO. <td>BOTTOM DEPTH (M)</td>	BOTTOM DEPTH (M)
52.30, 00.3	35.29.0	31.01.78	23.53	487	4000
N	DEPTH	TEMPERATURE	SALINITY	DENSITY	SEKTOR NR.
	(M)	(DEGR. C)	(PPT)		
8737	0.0	+3.20	33.882	26.9974	312
8741	50.0	+2.97	33.902	27.0342	312
8745	140.0	+0.24	34.152	27.4305	312
8749	200.0	+1.24	34.391	27.5615	312

Table 4 : continued

LAT	LONG.	DATE	TIME (GMT)	STATION NO.	BOTTOM DEPTH (M)
54, 01, 00, 3	34, 40, 0	1, 04, 78	9, 11	488	3000
N	DEPTH	TEMPERATURE	SALINITY	DENSITY	SEKTOR NR.
	(M)	(DEGR. C)	(PPT)		
8761	0, 0	+1, 90	33, 942	27, 1544	312
8765	50, 0	+1, 76	33, 946	27, 1681	313
8769	140, 0	+0, 46	34, 205	27, 4609	313
8773	200, 0	+1, 05	34, 385	27, 5694	313
LAT.	LONG.	DATE <td>TIME (GMT)</td> <td>STATION NO.</td> <td>BOTTOM DEPTH (M)</td>	TIME (GMT)	STATION NO.	BOTTOM DEPTH (M)
54, 29, 50, 3	34, 41, 6	1, 04, 78	12, 19	489	1900
N	DEPTH	TEMPERATURE	SALINITY	DENSITY	SEKTOR NR.
	(M)	(DEGR. C)	(PPT)		
8785	0, 0	+2, 00	33, 887	27, 1028	313
8789	50, 0	+1, 91	33, 903	27, 1225	313
8793	140, 0	+0, 52	34, 117	27, 3867	314
8797	200, 0	+1, 62	34, 378	27, 5242	314
LAT.	LONG.	DATE <td>TIME (GMT)</td> <td>STATION NO.</td> <td>BOTTOM DEPTH (M)</td>	TIME (GMT)	STATION NO.	BOTTOM DEPTH (M)
54, 55, 10, 3	34, 41, 7	1, 04, 78	15, 25	490	134
N	DEPTH	TEMPERATURE	SALINITY	DENSITY	SEKTOR NR.
	(M)	(DEGR. C)	(PPT)		
8809	0, 0	+2, 80	33, 731	26, 9129	314
8813	50, 0	+2, 42	33, 829	27, 0231	314
8817	140, 0	+1, 67	33, 989	27, 2091	314
LAT.	LONG.	DATE <td>TIME (GMT)</td> <td>STATION NO.</td> <td>BOTTOM DEPTH (M)</td>	TIME (GMT)	STATION NO.	BOTTOM DEPTH (M)
55, 13, 40, 3	34, 41, 6	1, 04, 78	18, 17	491	200
N	DEPTH	TEMPERATURE	SALINITY	DENSITY	SEKTOR NR.
	(M)	(DEGR. C)	(PPT)		
8829	0, 0	+2, 50	33, 844	27, 0285	315
8833	100, 0	+0, 99	34, 205	27, 4288	315
LAT.	LONG.	DATE <td>TIME (GMT)</td> <td>STATION NO.</td> <td>BOTTOM DEPTH (M)</td>	TIME (GMT)	STATION NO.	BOTTOM DEPTH (M)
54, 59, 80, 3	35, 30, 0	1, 04, 78	21, 25	492	125
N	DEPTH	TEMPERATURE	SALINITY	DENSITY	SEKTOR NR.
	(M)	(DEGR. C)	(PPT)		
8845	0, 0	+3, 10	33, 555	26, 7462	315
8849	45, 0	+2, 92	33, 637	26, 8275	316
8853	100, 0	+1, 60	33, 916	27, 1557	316

Table 4 : continued

LAT.	LONG.	DATE	TIME (GMT)	STATION NO.	BOTTOM DEPTH (M)
54, 32, 00, 3	35, 59, 0	2, 04, 78	9, 41	493	140
N	DEPTH (M)	TEMPERATURE (DEGR. C)	SALINITY (PPT)	DENSITY	SEKTOR NR.
8865	0, 0	+3, 10	32, 331	25, 7719	316
8869	50, 0	+3, 10	32, 983	26, 2908	316
8873	64, 0	+2, 89	33, 667	26, 8540	316
8877	129, 0	+2, 25	33, 695	26, 9299	317
LAT.	LONG.	DATE	TIME (GMT)	STATION NO.	BOTTOM DEPTH (M)
54, 06, 00, 3	36, 47, 0	2, 04, 78	20, 58	495	152
N	DEPTH (M)	TEMPERATURE (DEGR. C)	SALINITY (PPT)	DENSITY	SEKTOR NR.
8889	129, 0	+2, 25	33, 695	26, 9299	317
8893	143, 0	+1, 49	33, 894	27, 1459	317

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1. Introduction

It is the purpose of this data report to supply all colleagues being occupied with the evaluation of scientific material from the Antarctic Expedition 1977/78 with the oceanographic data collected during the entire cruise. The presentation in a plotted version was chosen to facilitate the user's insight into the vertical structure of the oceanographic parameters. If necessary, the plotting-size enables the user to read the particular value of a desired parameter directly from the plot. Beyond that the data itself can be made available by the authors.

The present data report deals with the oceanographic measurements made from R.V. "Walther Herwig" between October 31, 1977 and April 10, 1978 during the Antarctic Expedition of the Federal Republic of Germany. Part I of this data report gives a graphical presentation of all CTD (Conductivity Temperature Depth) - profiles, BT (Bathythermograph) - profiles and hydrographic casts. Part II of the data report deals with the current measurements; it will be published in a separate volume. A list of oceanographic measurements carried out at the individual stations is given in Table 1.

2. Instrumentation

a) CTD measurements

The vertical profiles of conductivity and temperature were obtained by means of a Kiel Multisonde (KROEBEL 1973; KROEBEL, DIEHL and RATHLEV 1976; RATHLEV 1977; STEIN 1978). The deckunit of this CTD is provided with interfaces to several output devices. Two of them were used (Fig. 4), that is the thermoprinter interface and the computer interface. The *thermoprinter* records every 10 sec. one measuring cycle of pressure, temperature, conductivity and, computed from these three measurements, salinity. By means of an 8-bit parallel interface the *computer* digitally receives the data. They are stored binary on floppy disks. These raw data

are processed after the profil measurement is terminated. The effective sampling rate yields approximately three cycles/meter. It was planned to store the CTD- data on floppy disks during all cruise legs. However, due to malfunction of different components of the measuring device and storage facilities a large number of profiles could not be stored on floppy disks. Those plots originating from thermoprinter records are indicated in Table . Due to failure of the conductivity sensor in the beginning of the cruise only temperature profiles were obtained with the CTD during leg one.

b) BT measurements

The BT-records were obtained and processed in the usual way. The profiles are plotted in the same shape as the temperature profiles of the CTD.

c) Hydrographic casts

The hydrographic casts were carried out by using metal Nansen bottles. Temperature was determined with special reversing thermometers having a measuring range of -2.4°C up to $+8^{\circ}\text{C}$ with a graduation of 0.02°C . They were used for checking the temperature readings of the CTD. The determination of conductivity was done by means of an Autolab inductive salinometer. Reduction into salinity was obtained with the UNESCO-tables.

3. Data processing and calibration

a) CTD measurements

Within five steps the processing of the CTD data was accomplished before plotting them.

1. Storage of the binary data on floppy disks during the profiling of the CTD device.
2. Decoding of the binary data.
3. Application of a monotony procedure on the pressure values, clearing of pressure spikes, calculation of salinity considering calibration against water samples.
4. Smoothing of profiles with a twentyonefold overlapping mean.
5. Interpolation to one decibar intervalls, calculation of density.

Steps two to five were applied to data which were stored on floppy disks. The CTD data of the thermoprinter registrations were fed manually into the computer. After that steps three and five were performed.

Calibration of the CTD data was done in the following way: Step three of the processing implicates the correction of pressure and salinity. As for the *pressure* the individual offset of each station profile was taken into account. A *temperature* correction was not applied to the data.

As a standard of comparison the precision reversing thermometers were used. Repeated checks against this standard revealed that the accuracy of the temperature sensor was in the given range (see Table 3). The *conductivity* measurements required a calibration against water samples. Consequently relative values were collected which covered the salinity range from 33.7 ‰ to 34.9 ‰. These comparative measurements were carried out in Antarctic waters as well as in North Atlantic waters. Linear regression of all values resulted in

$$S_{\text{corr}} = 5.808\ 49 + 0.825\ 55 * S_{\text{CTD}}$$

with S_{corr} being the corrected salinity and S_{CTD} being the salinity as obtained in step three of the data processing. Salinity was calculated according to BENNETT (1976).

The standard error of estimate yields

$$0.025 \text{ ‰}$$

Density (σ_t) was computed in step five of the data processing from T and S_{corr} .

The time constants of the temperature sensor and the conductivity sensor at a lowering rate of 1 m/sec. are 60 ms and 50 ms respectively. Therefore 1 m/sec. is an optimal lowering rate and the time delay between the response of the temperature sensor and the conductivity sensor is a minimum. Thus 'spiking' should not occur very often. Nevertheless at some stations the gradients of temperature or conductivity are so strong that 'spiking' occurs. The software for correcting the data by the dynamical method is not yet developed, but in preparation.

b) BT measurements

The BT profiles were corrected against the thermometer readings of a surface water sample. In order to plot these data the corrected values were fed manually into the computer.

c) Hydrographic casts

After the calculation of temperature and the determination of salinity were done, the P,T,S values were treated in the same manner as mentioned under 3b. The results are given in Table 4.

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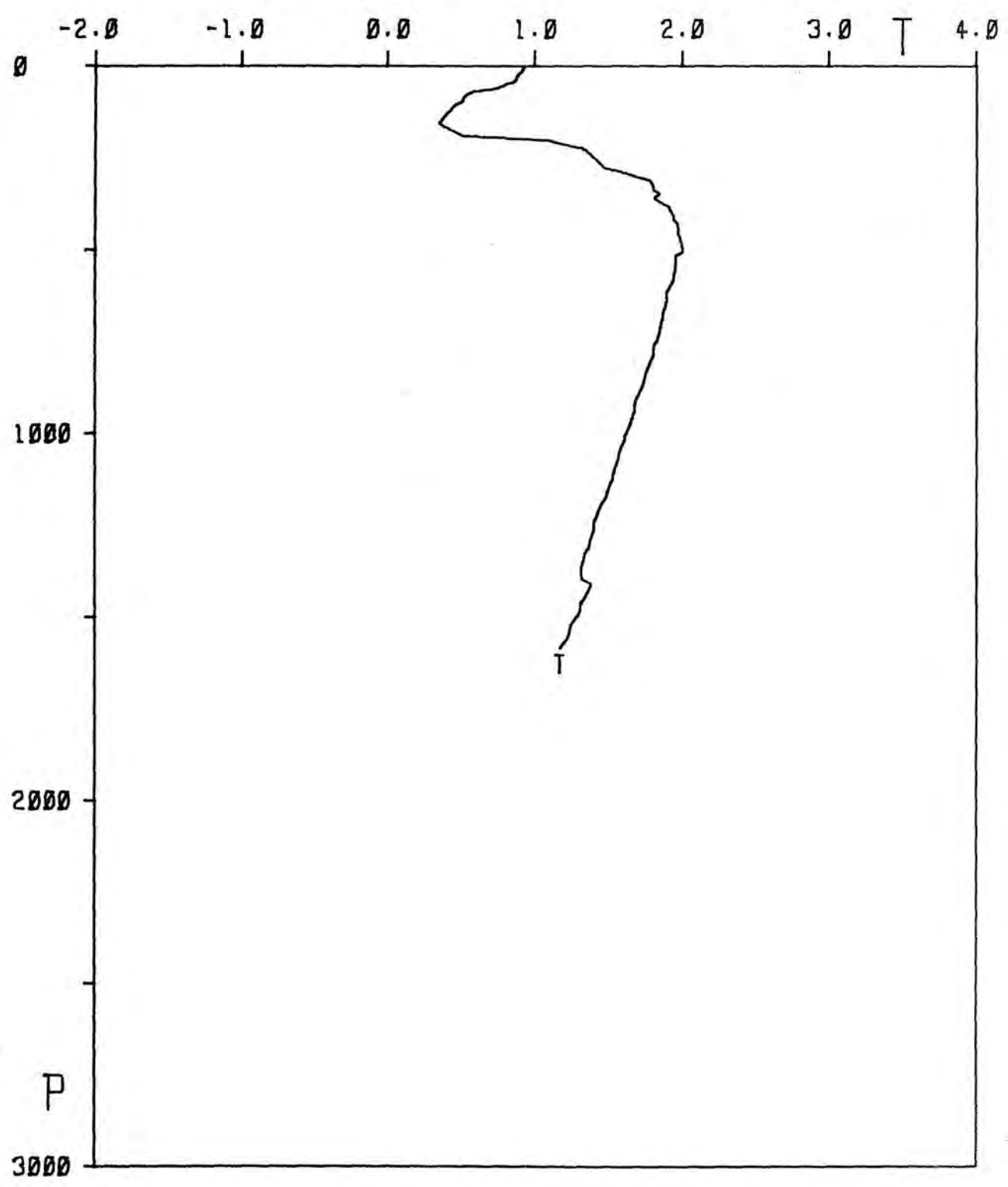
RATHLEV, J., 1977: Mikrocomputer steuert Bordgerät der Kieler Multisonde und berechnet den Salzgehalt. Dt. hydrogr. Z. 30, 131-136.

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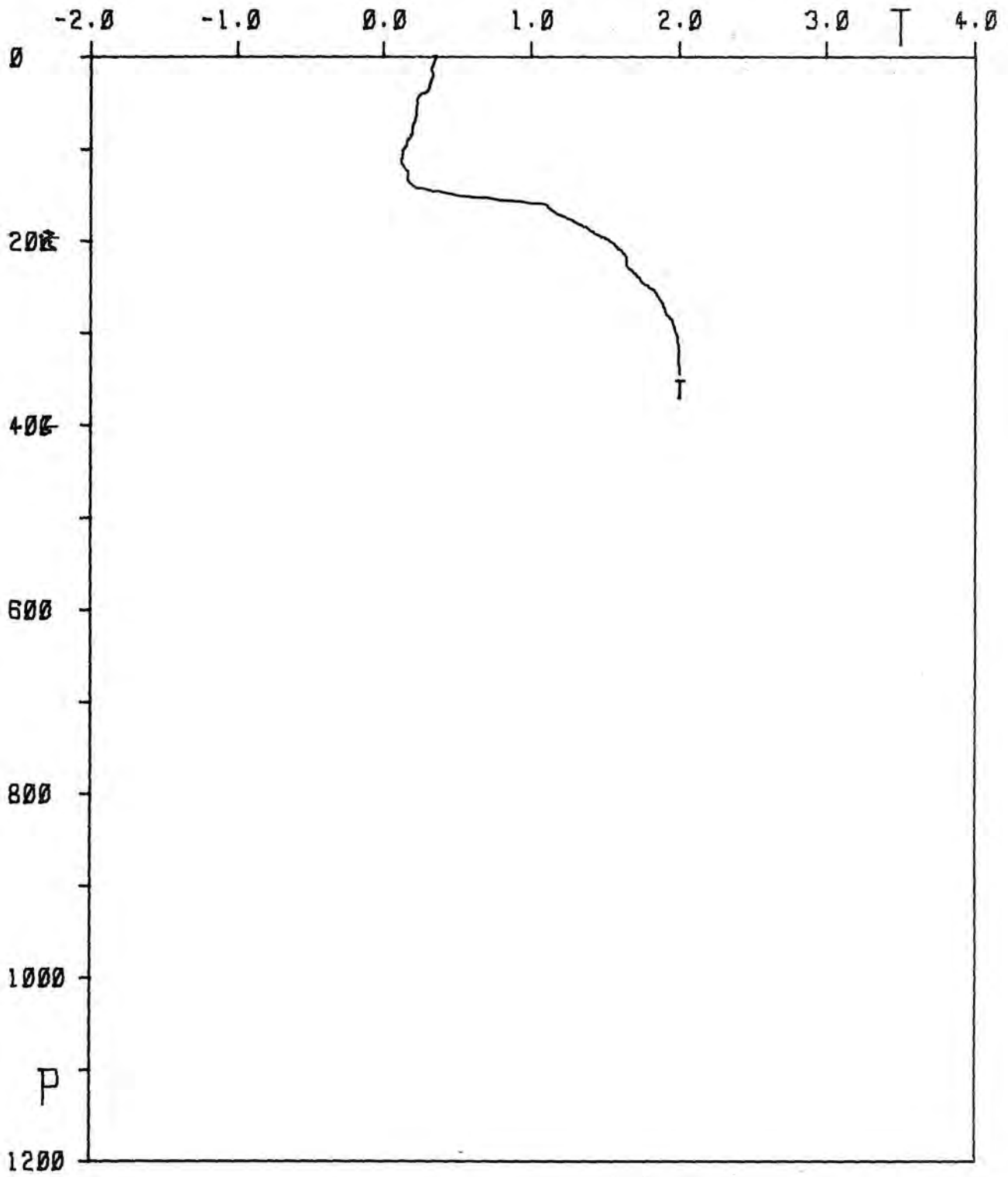
5. Data presentation

The following plots present the vertical profiles of temperature T, salinity S and density D. To obtain a clearly arranged figure only the station number is plotted. Additional information about position etc. is given in tables 2a-c. To facilitate a comparison with all other plots in this volume the plotting size of station 150, 151 and 152 has not been changed, although the temperature profiles is larger than 4°C.

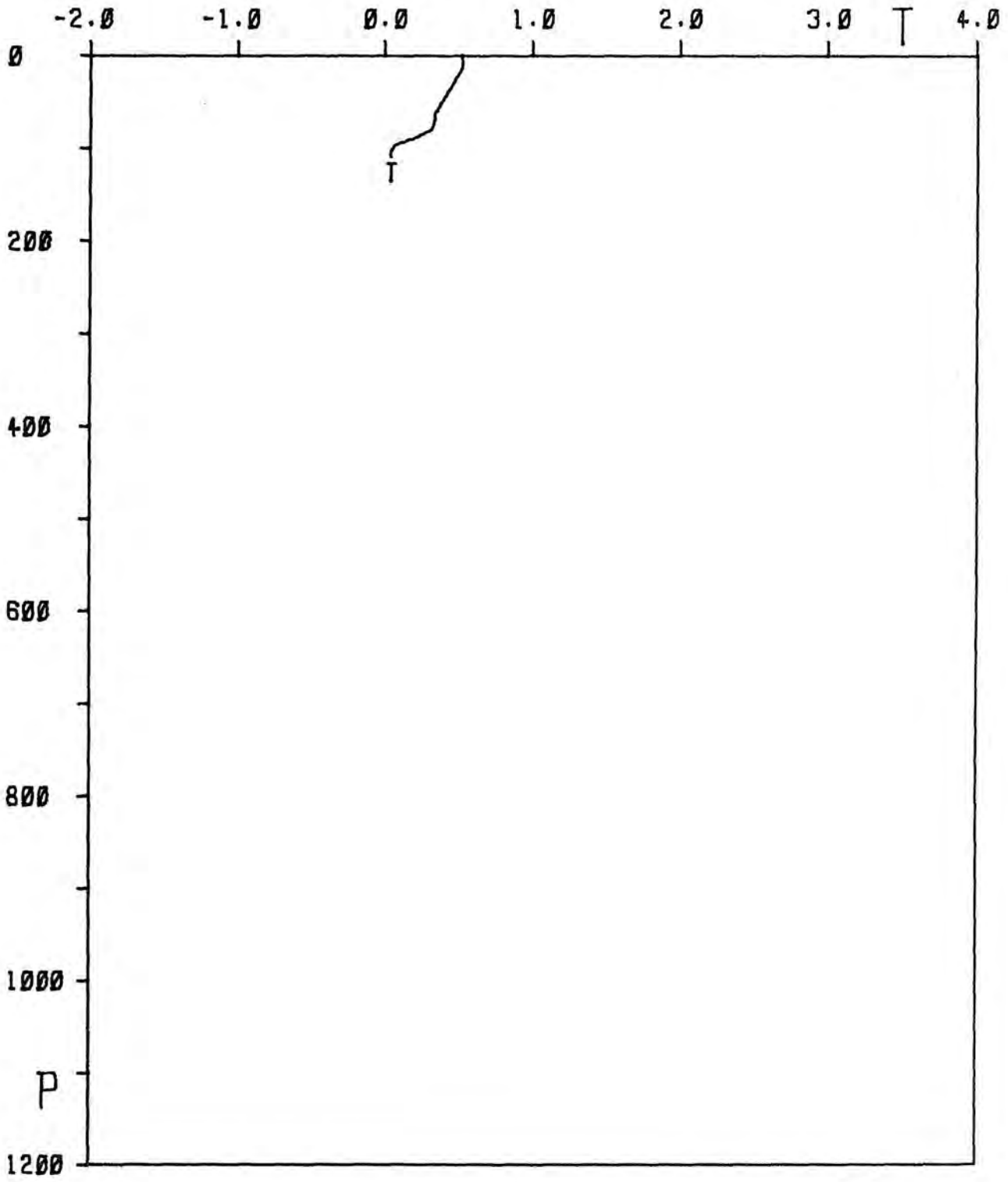
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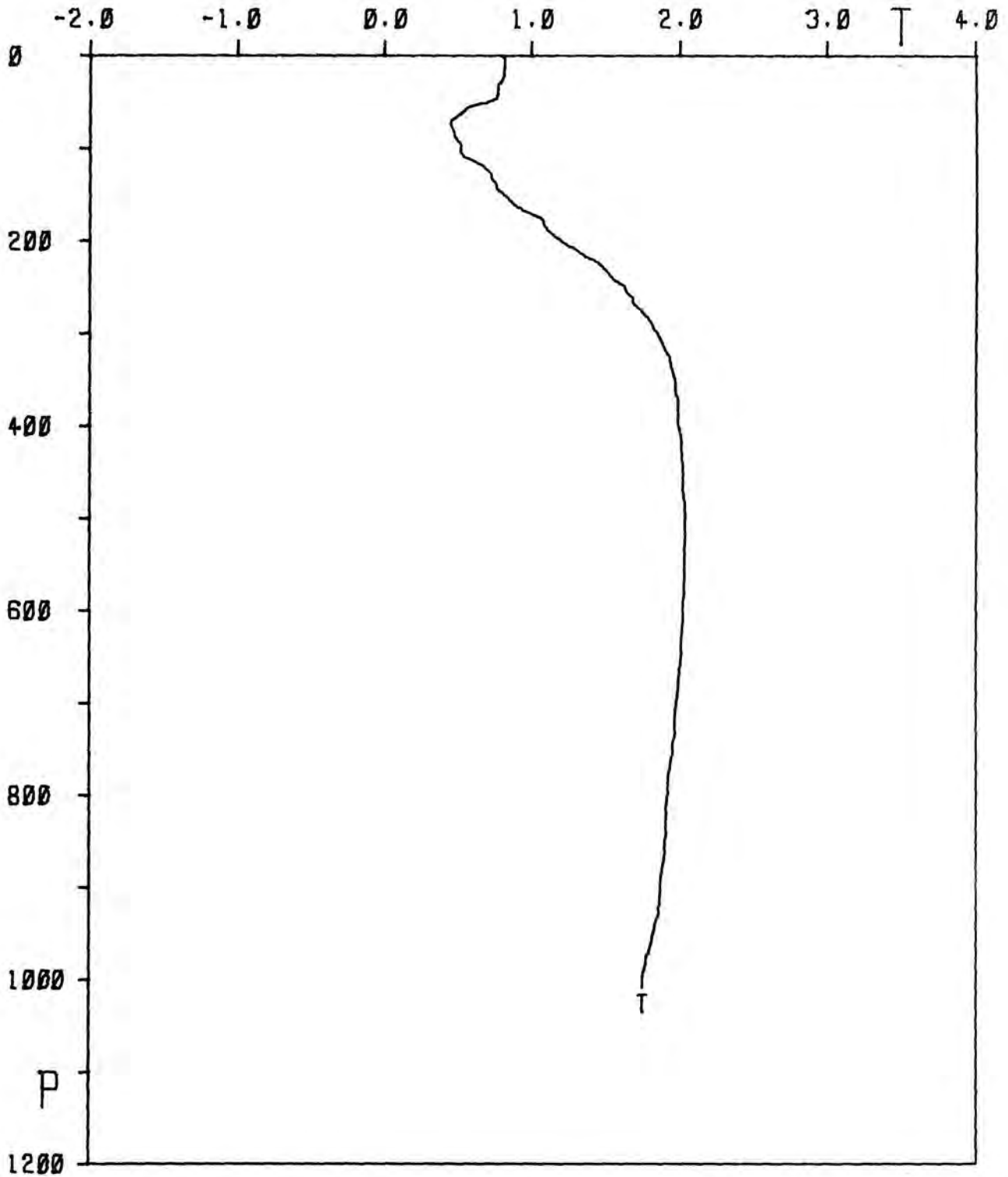
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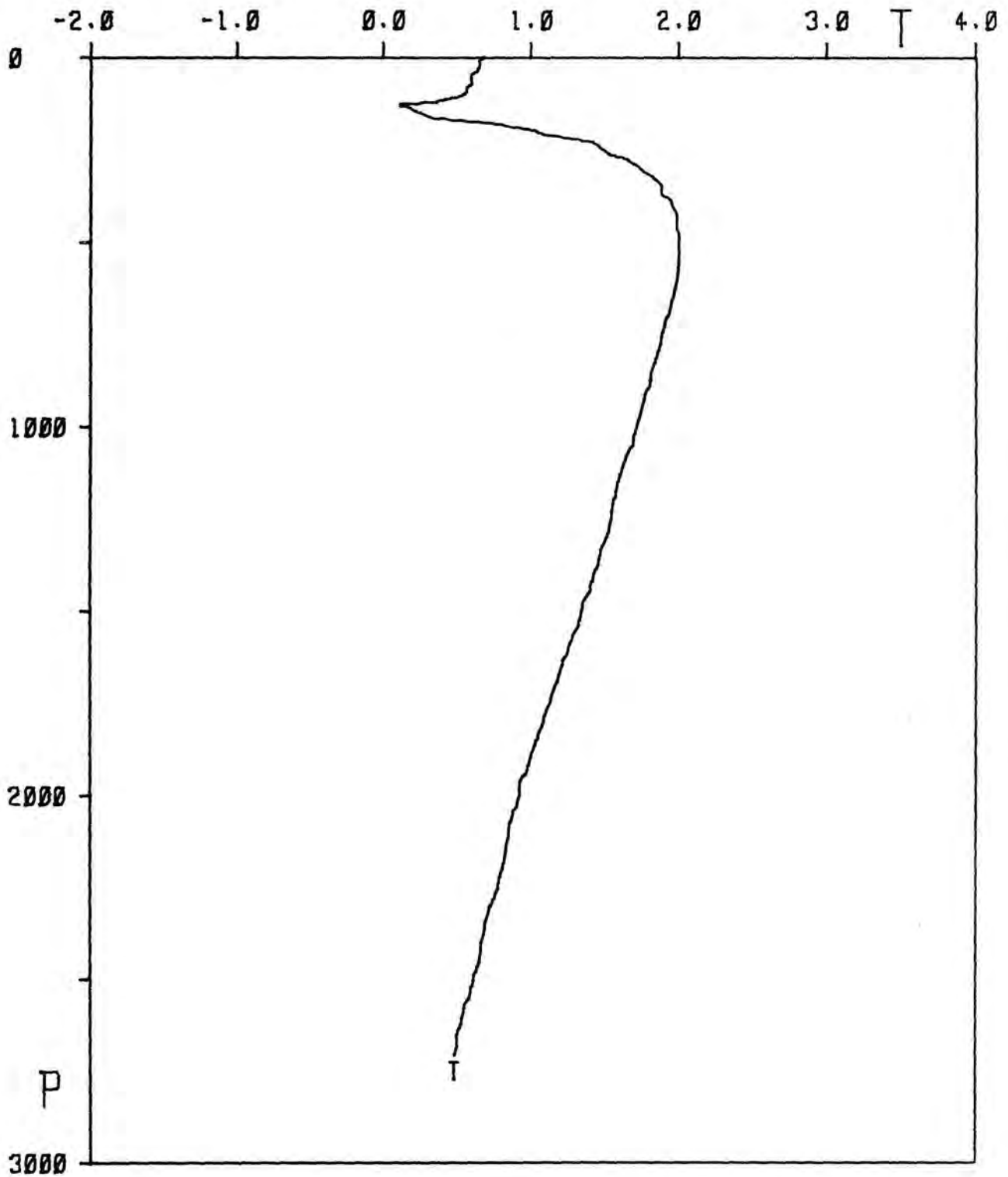
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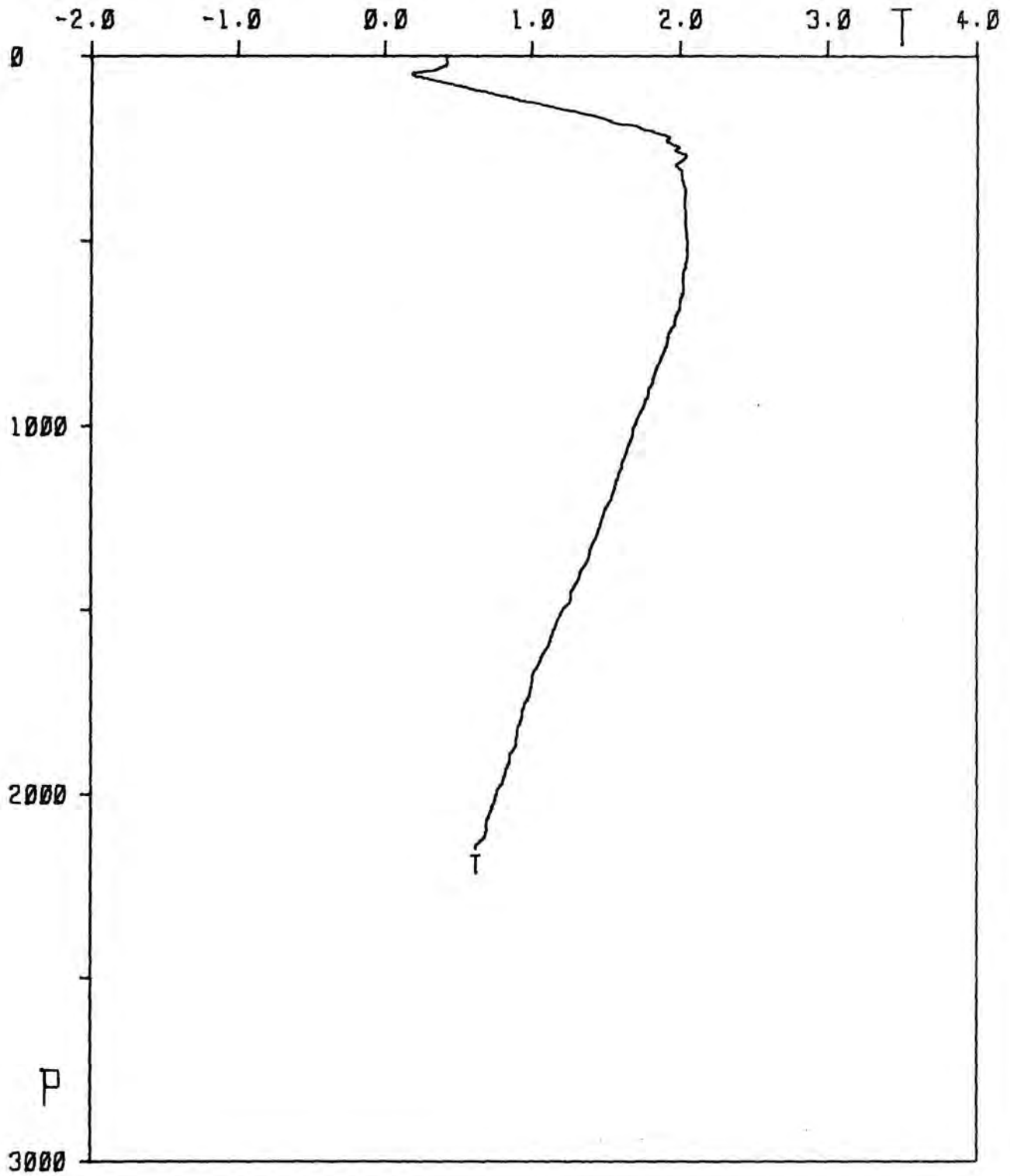
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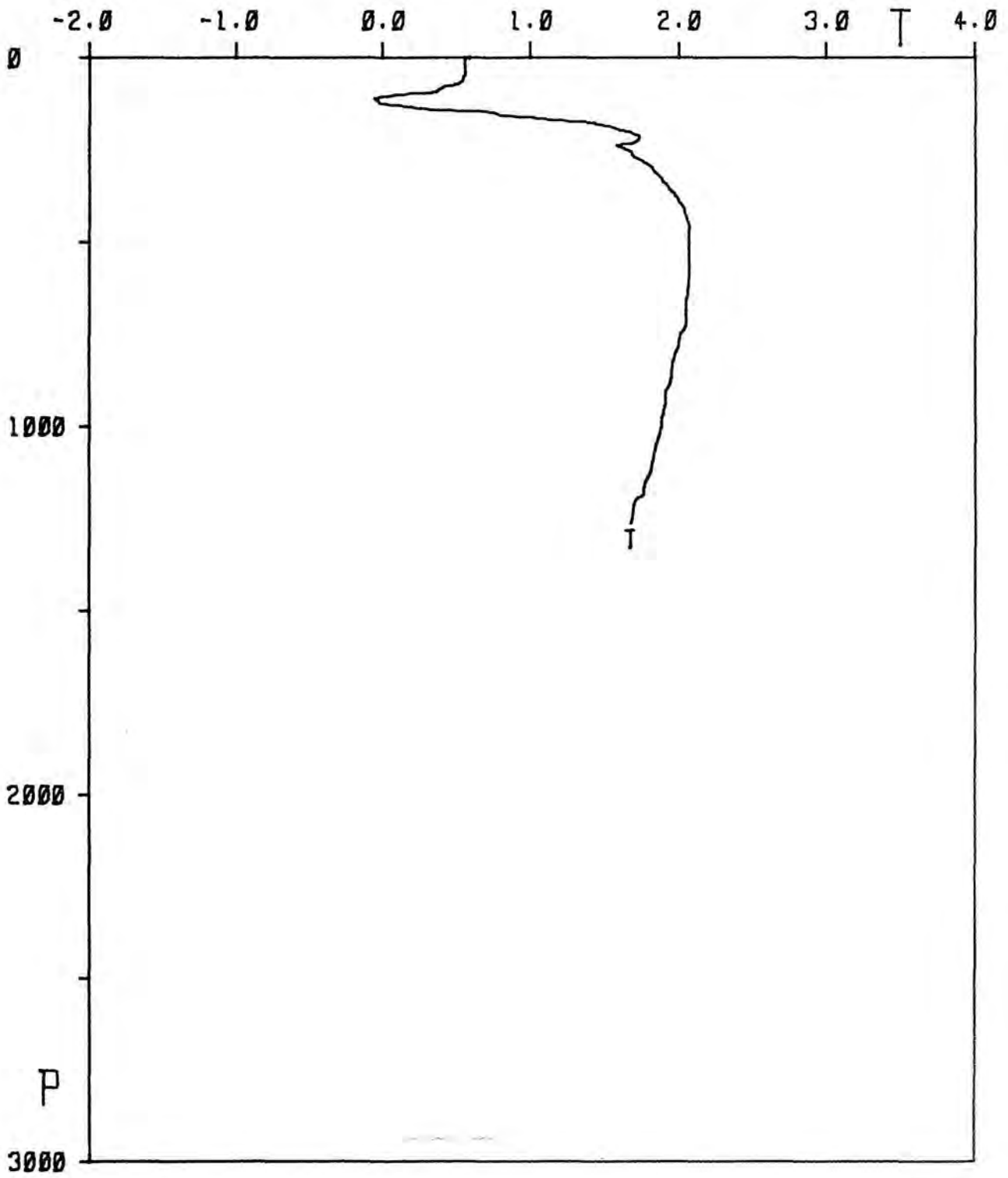
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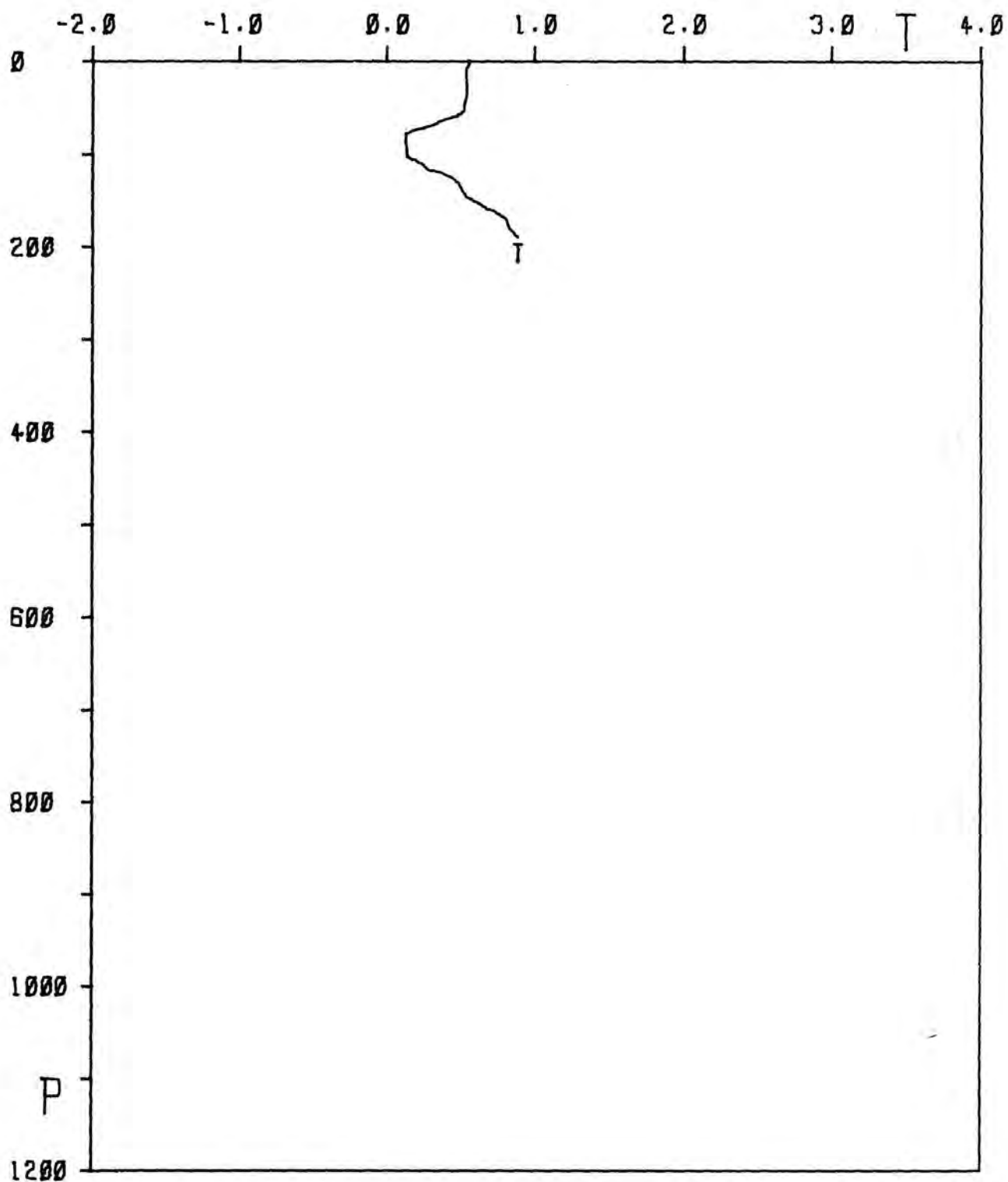
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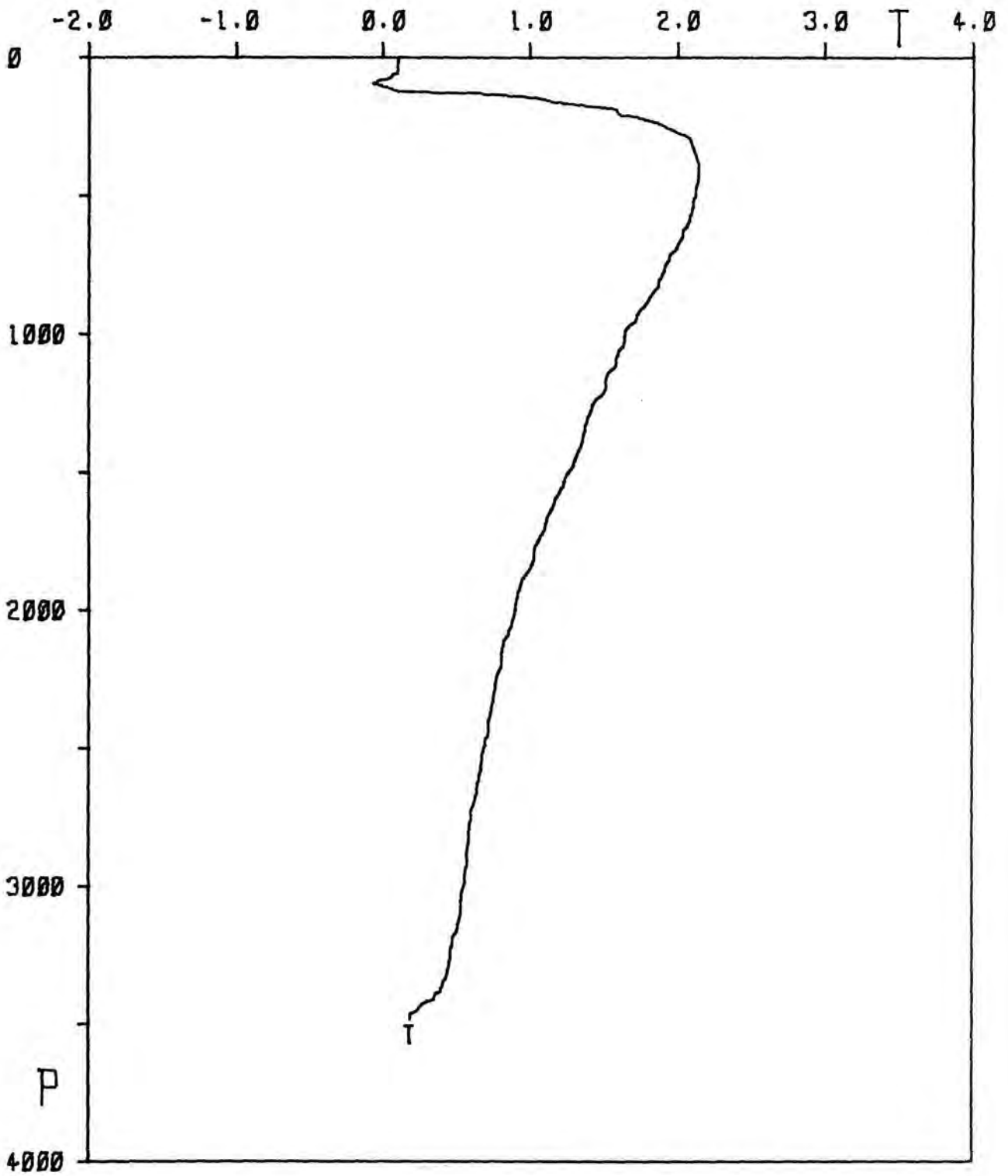
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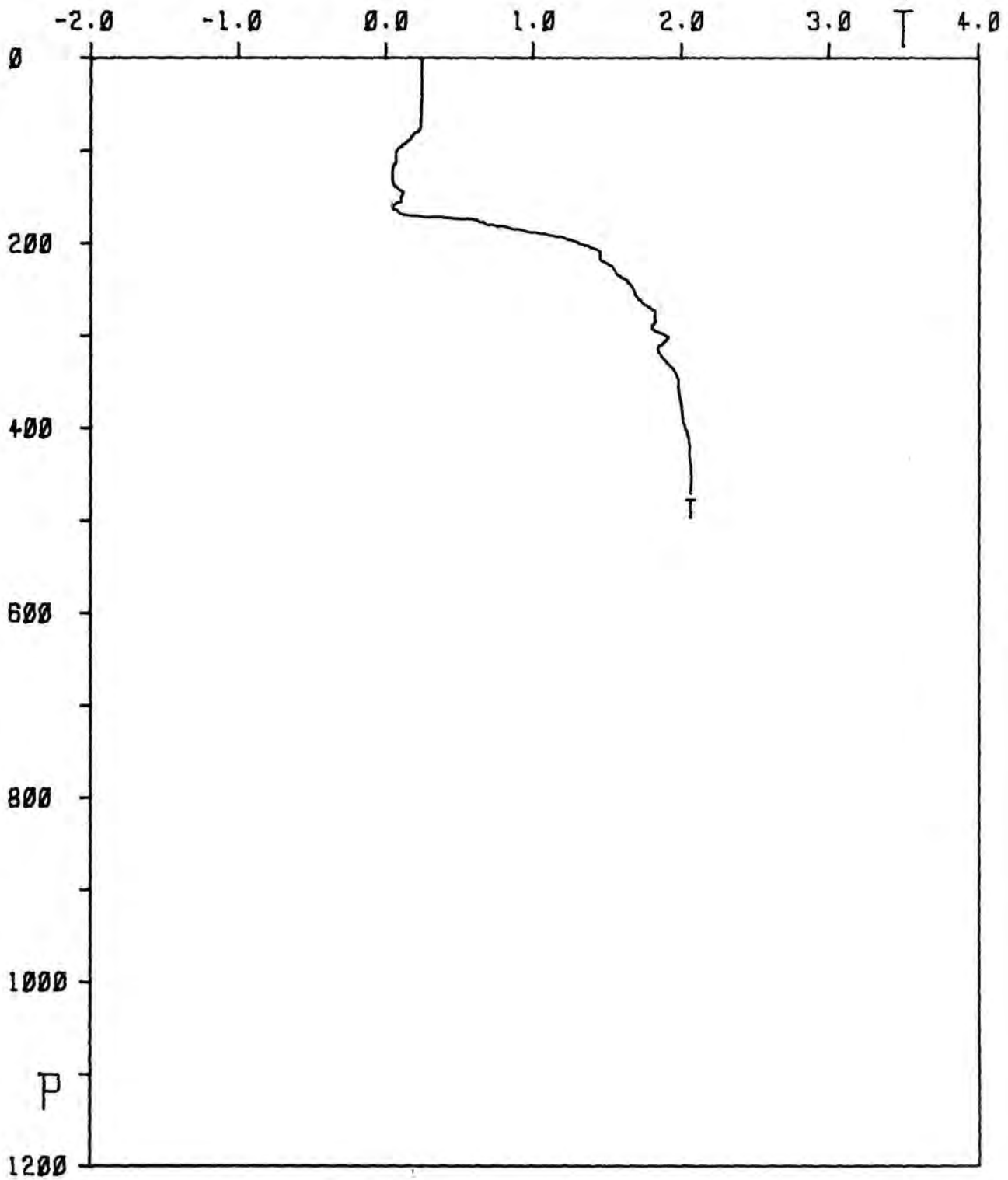
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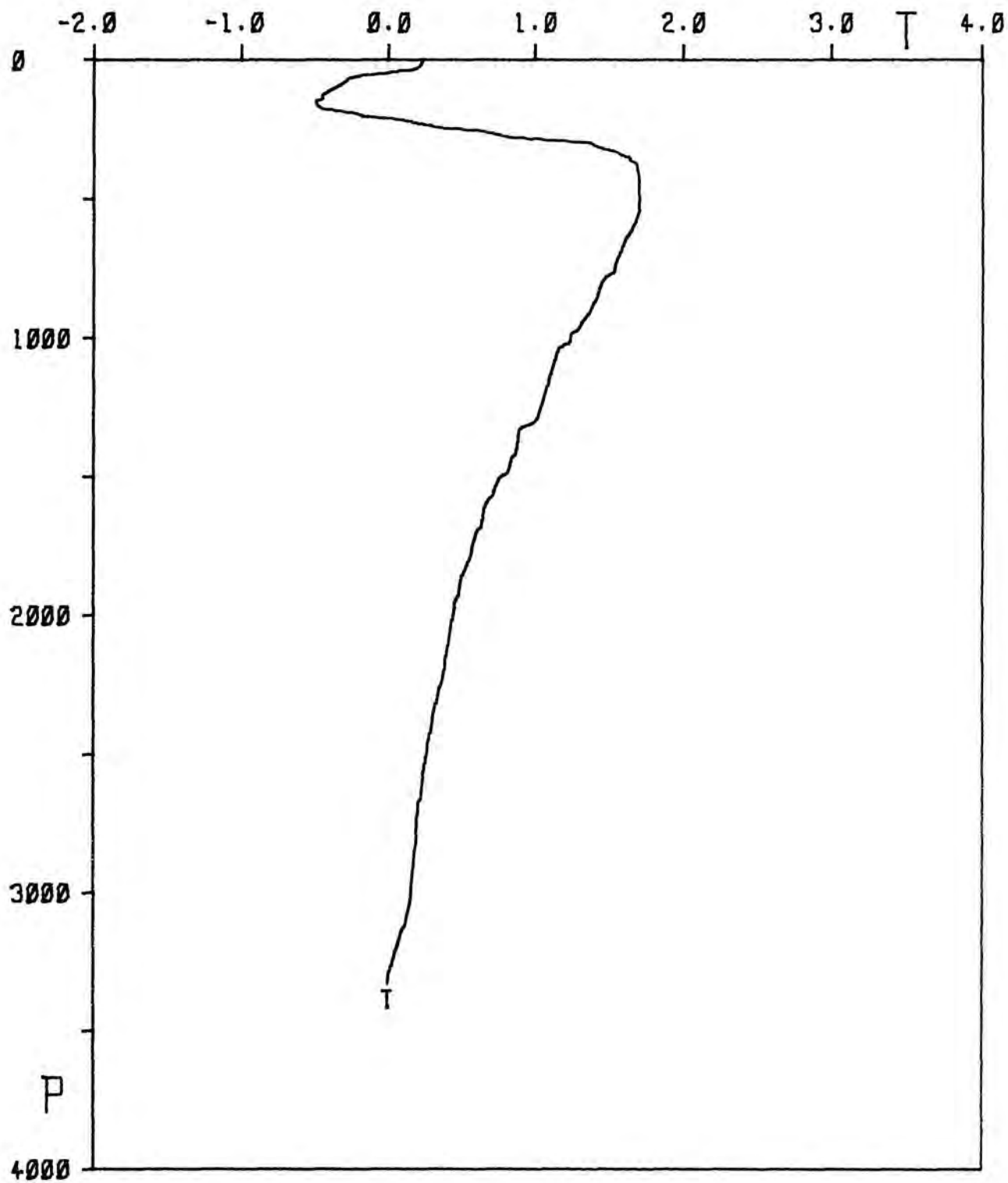
STATION 0019



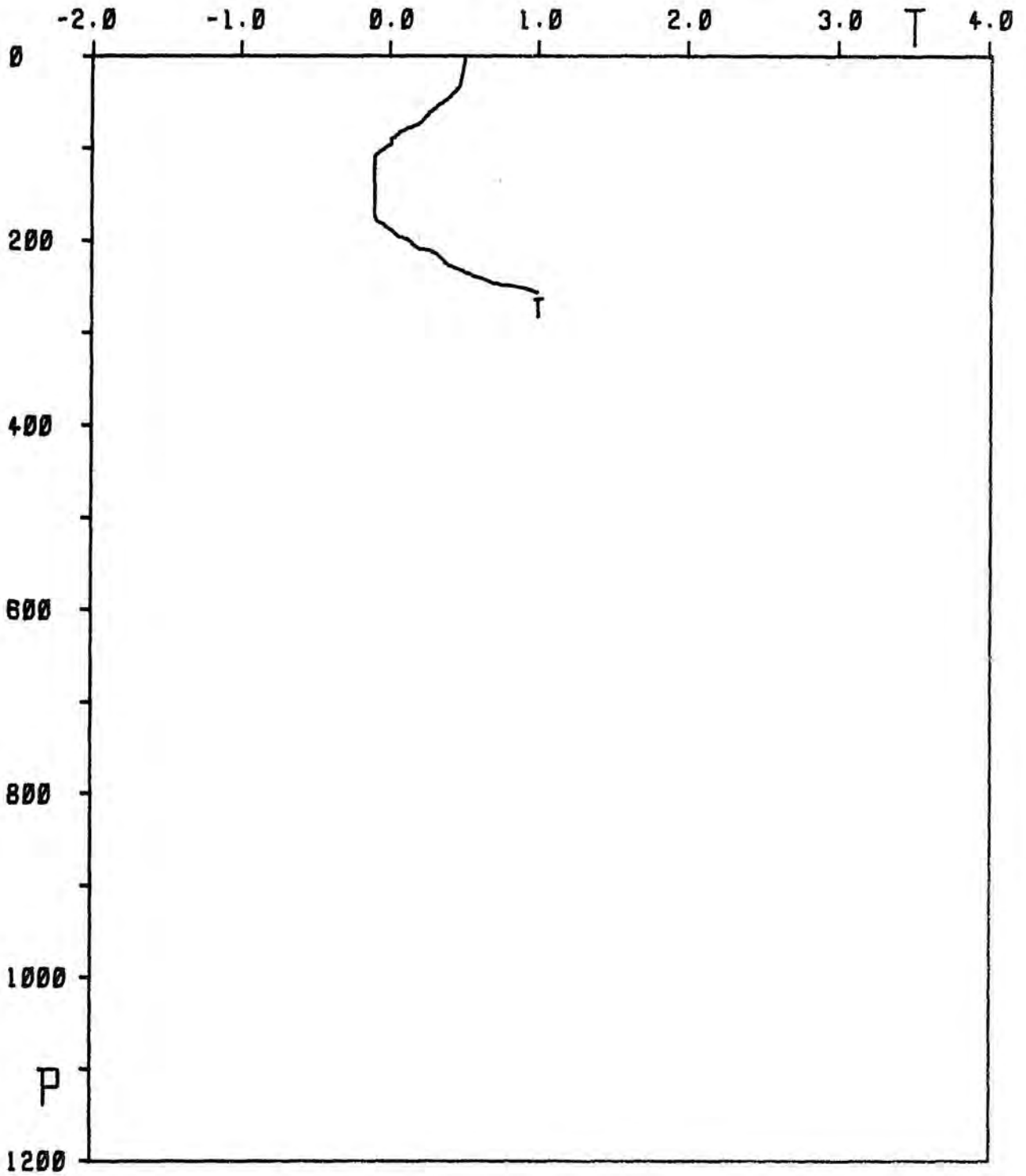
STATION 0020



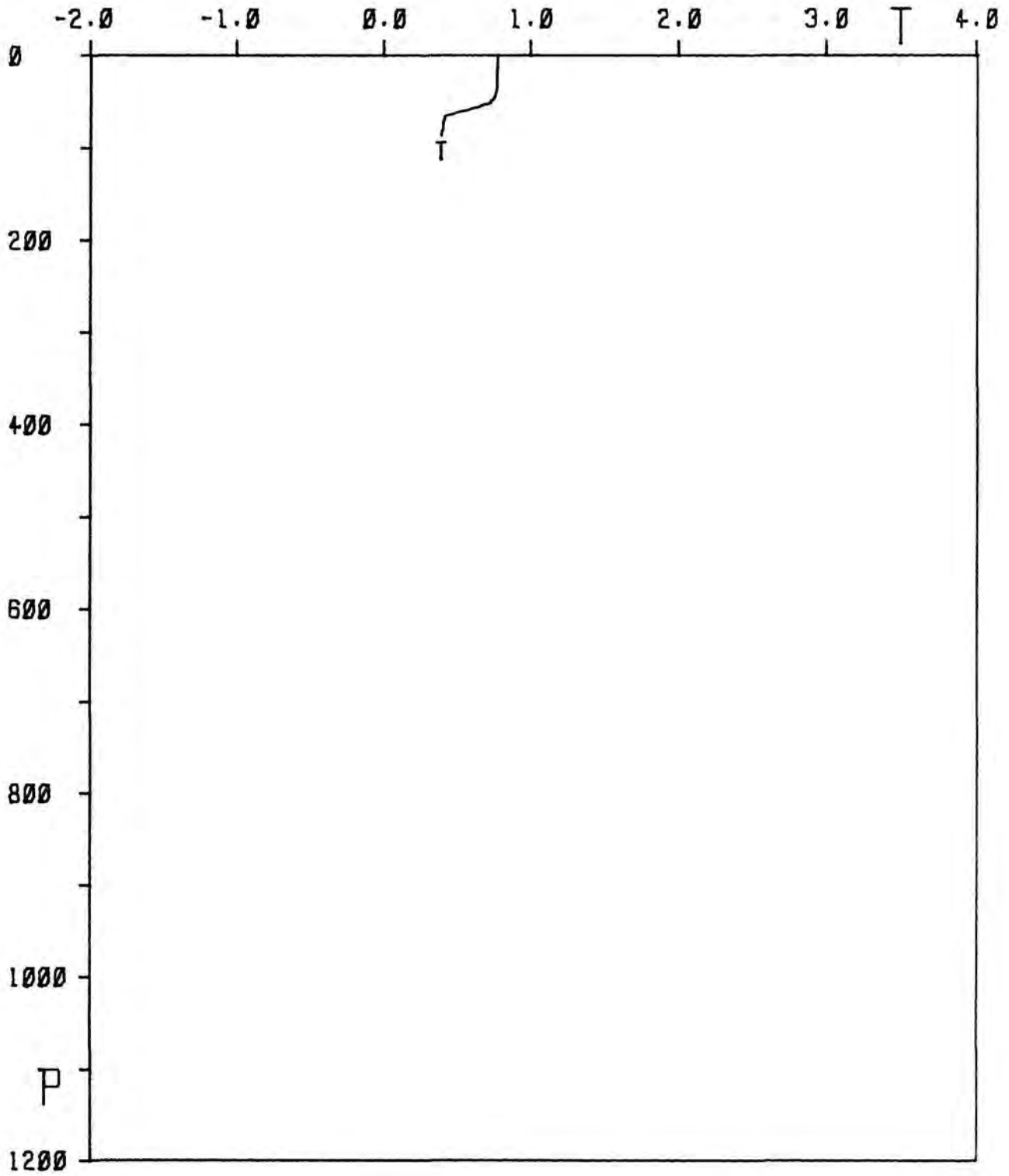
STATION 0022



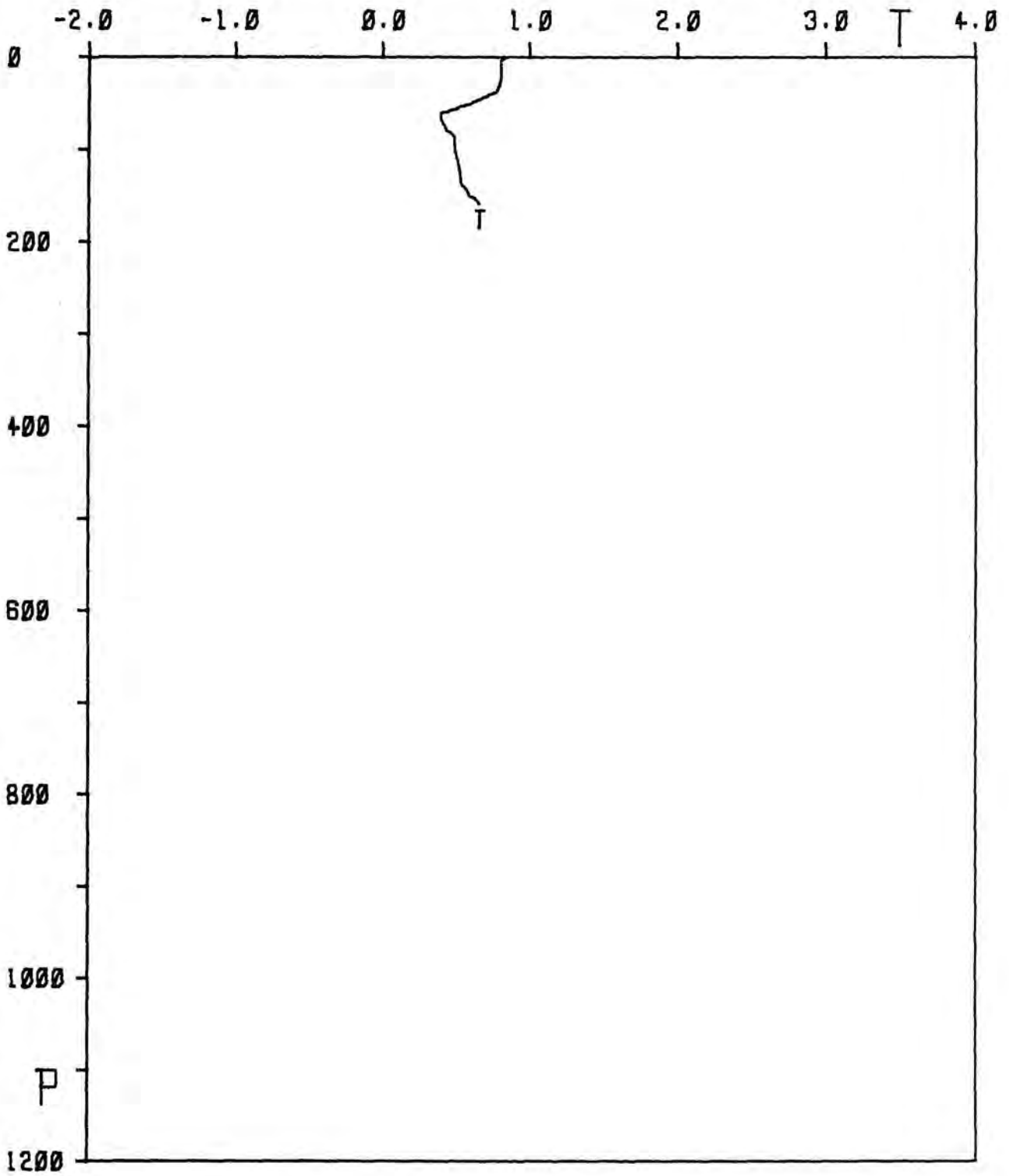
STATION 0023



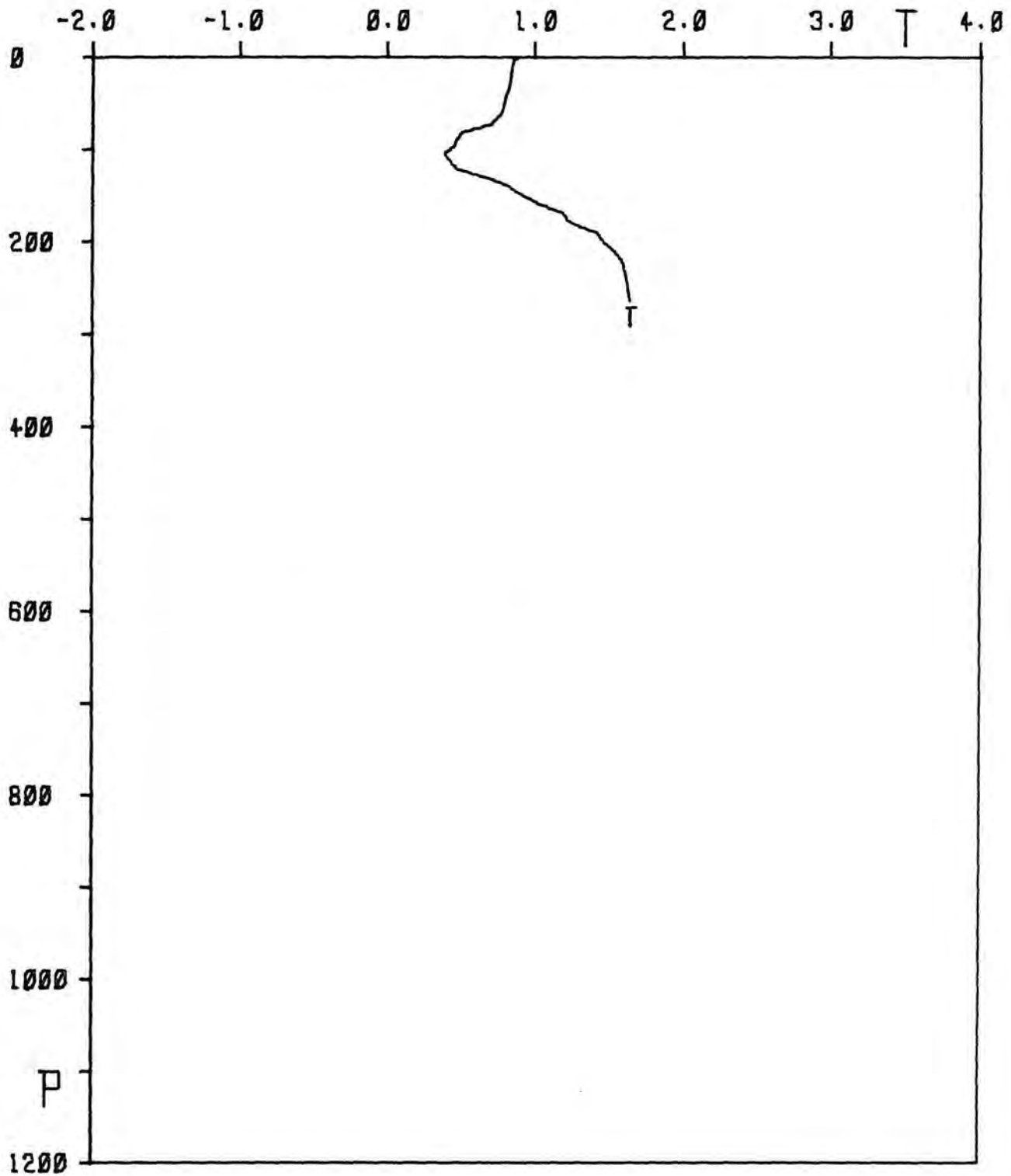
STATION 0024



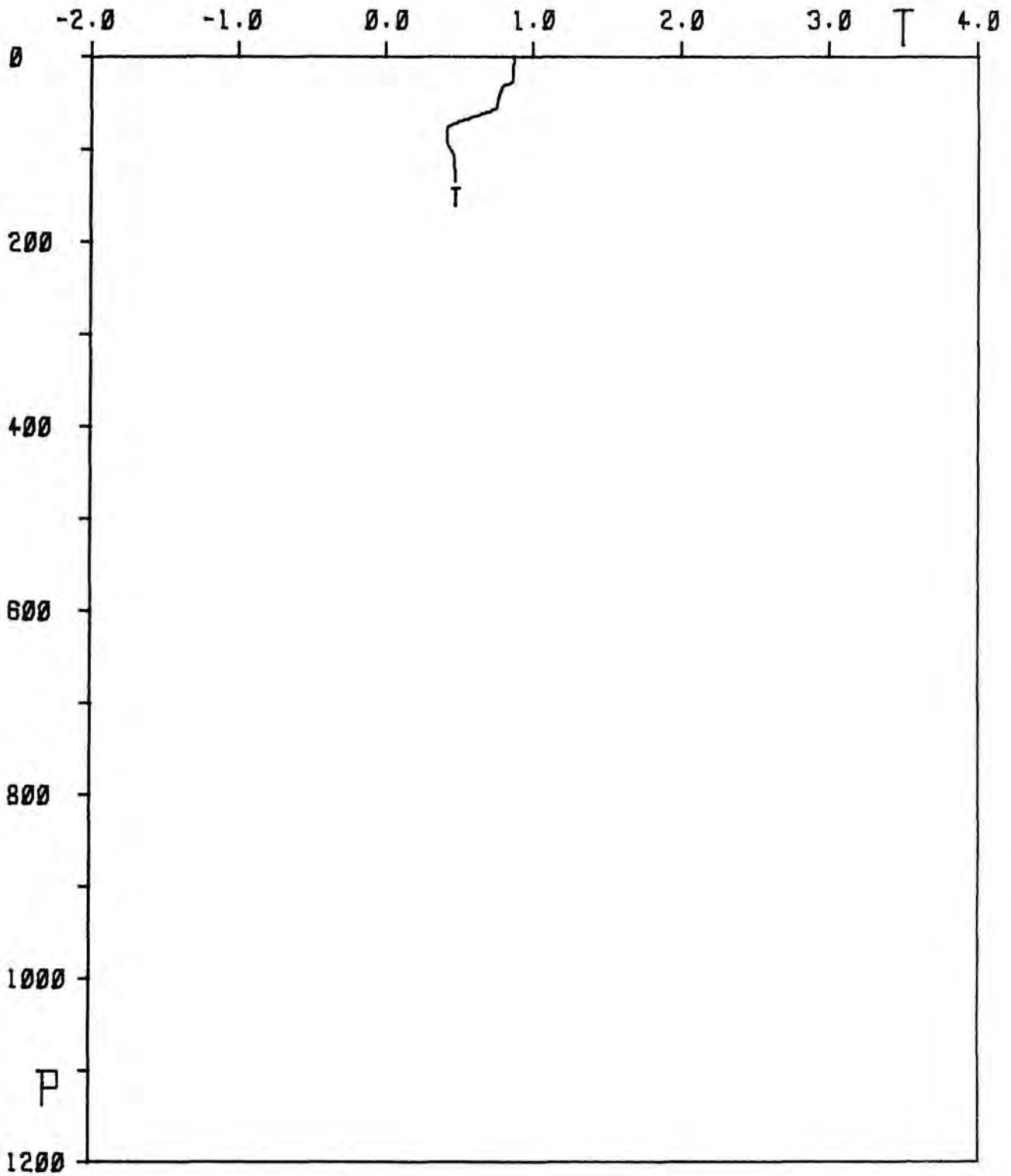
STATION 0026



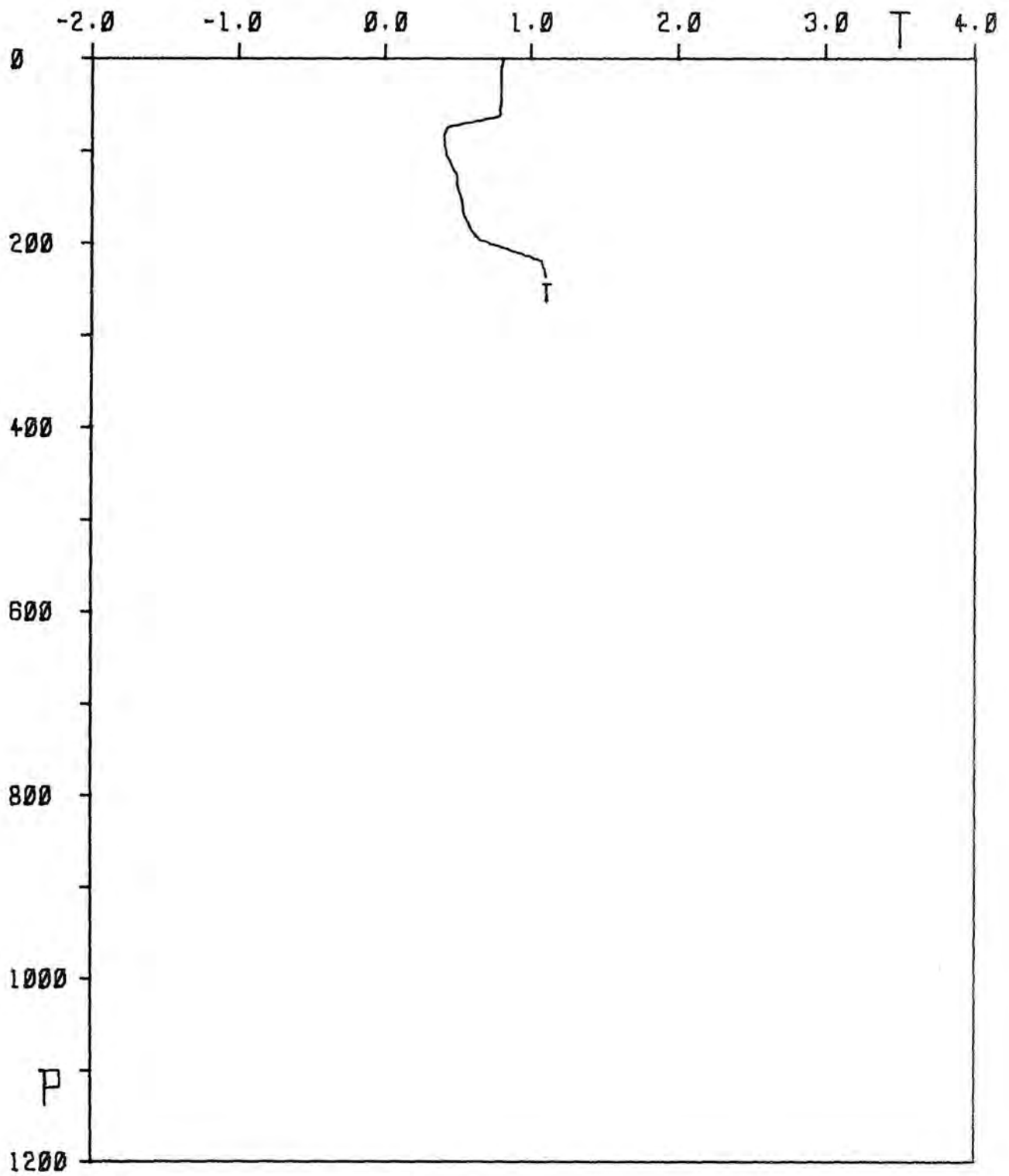
STATION 0027



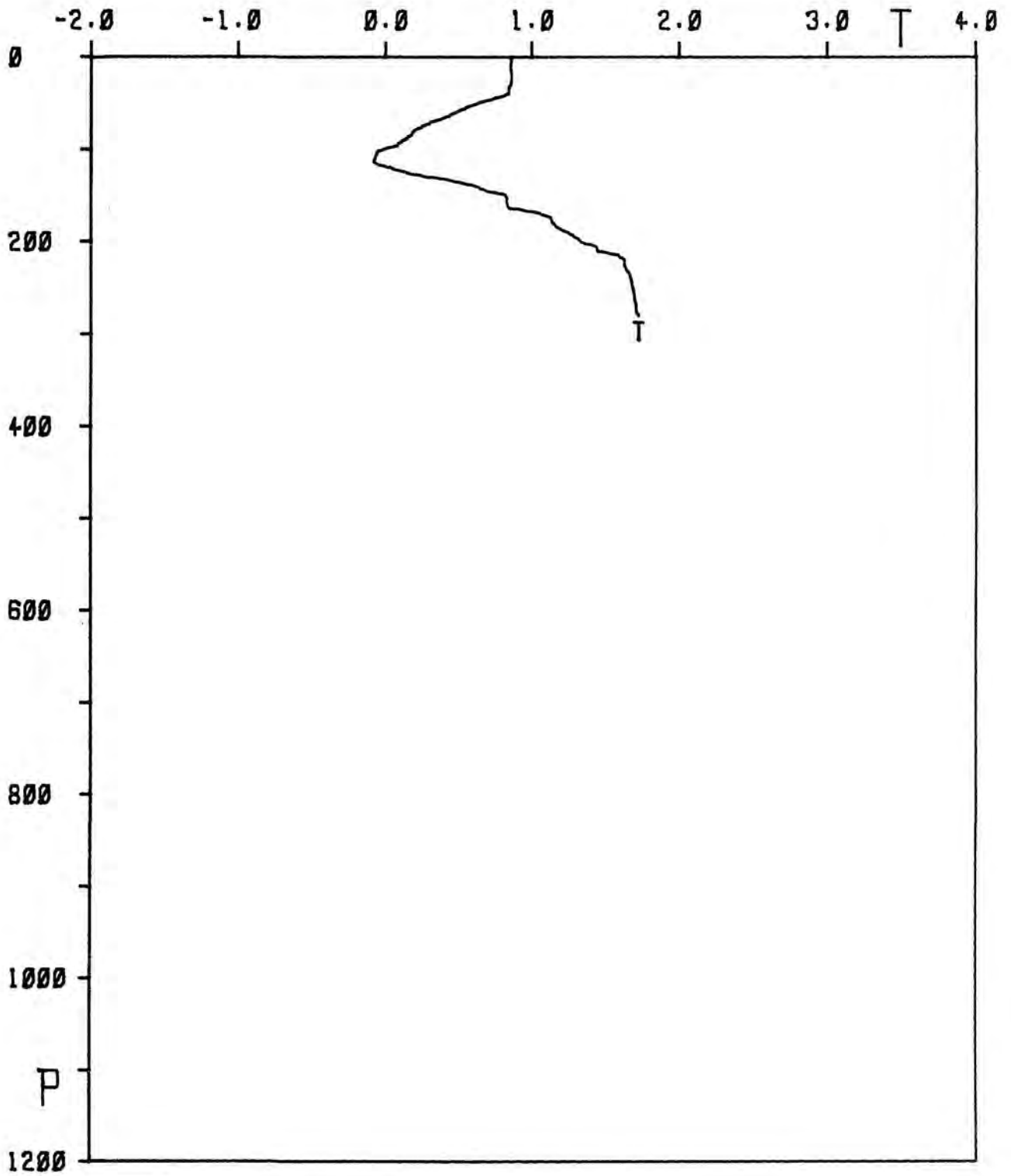
STATION 0028



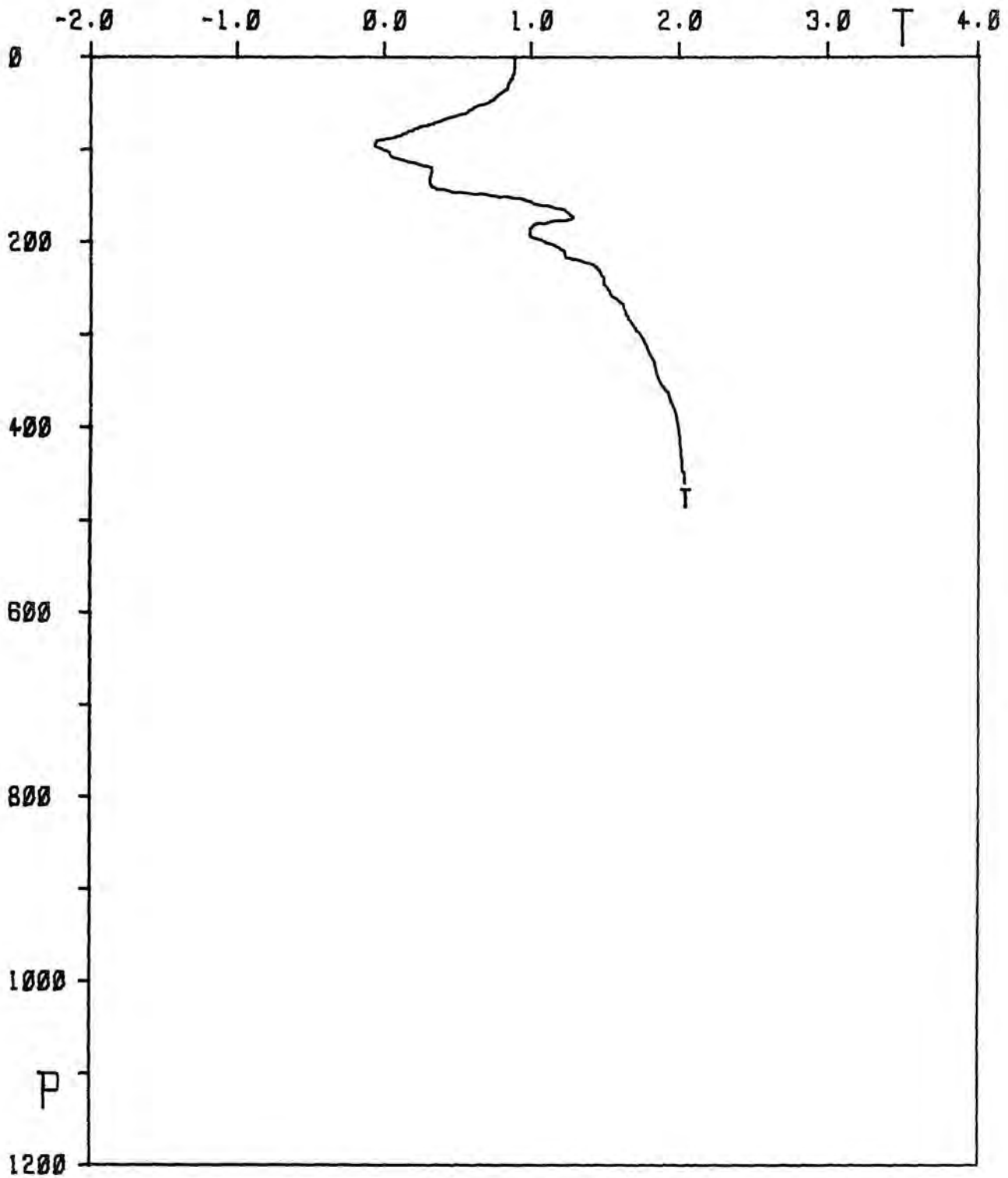
STATION 0029



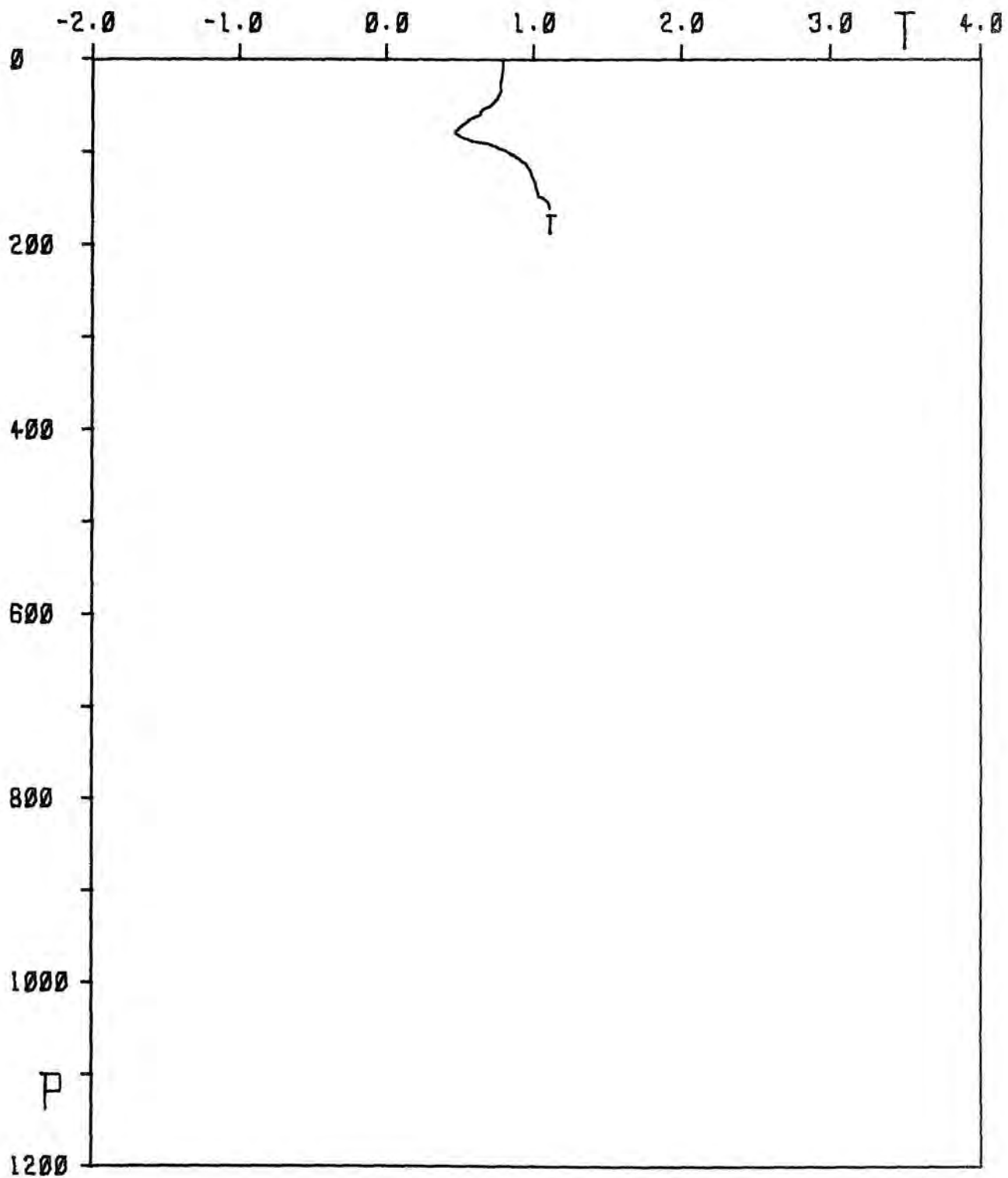
STATION 0030



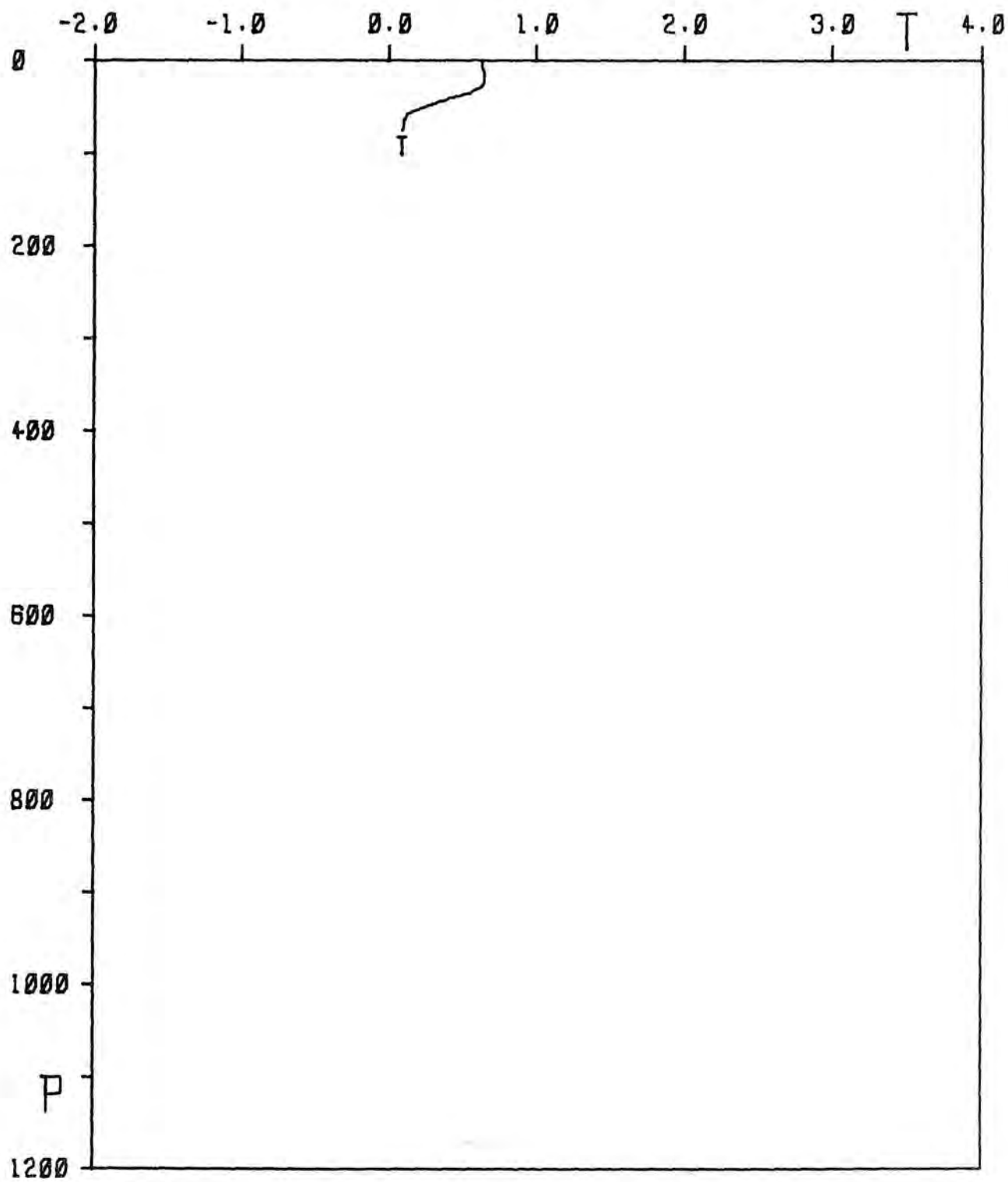
STATION 0031



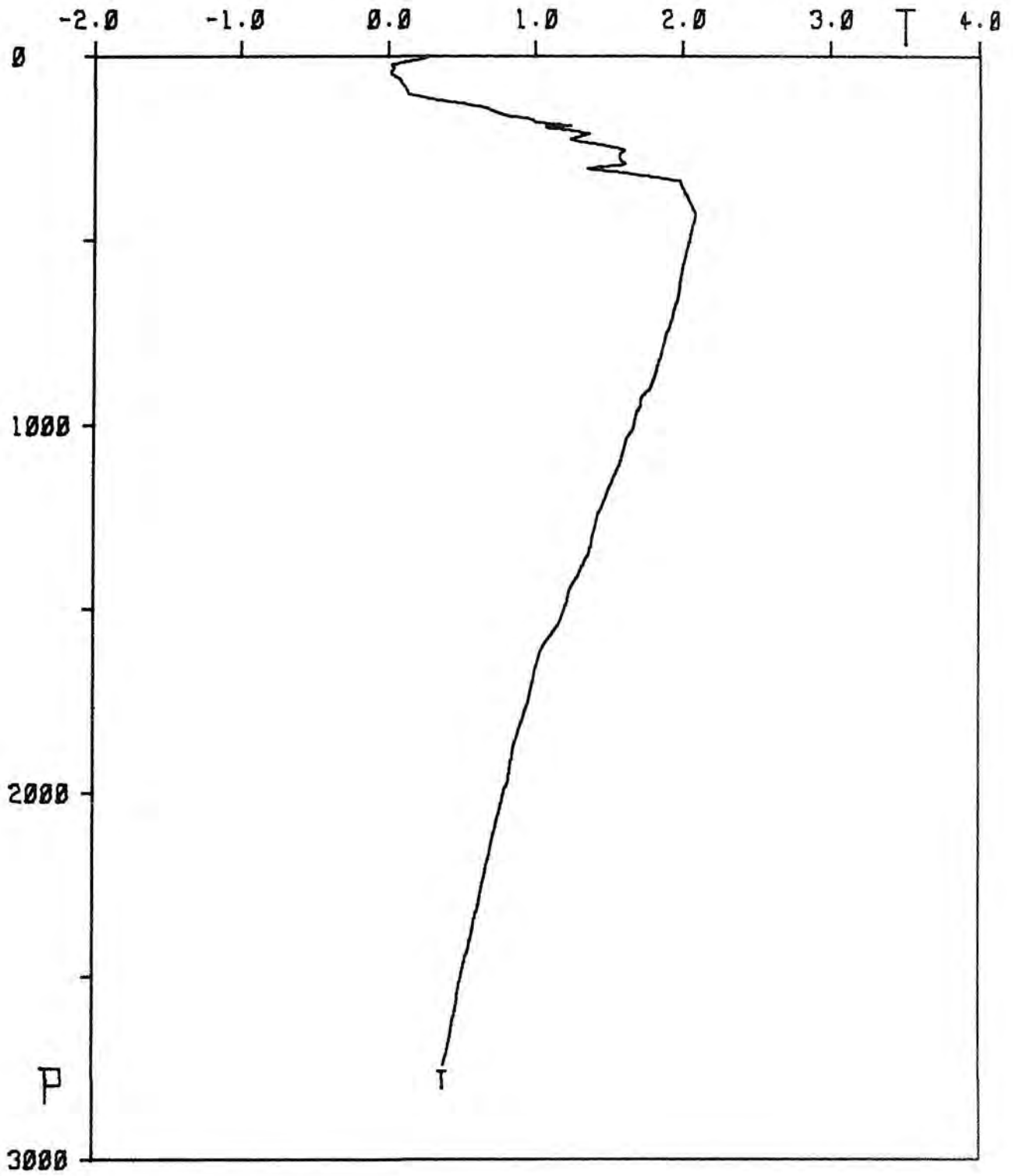
STATION 0032



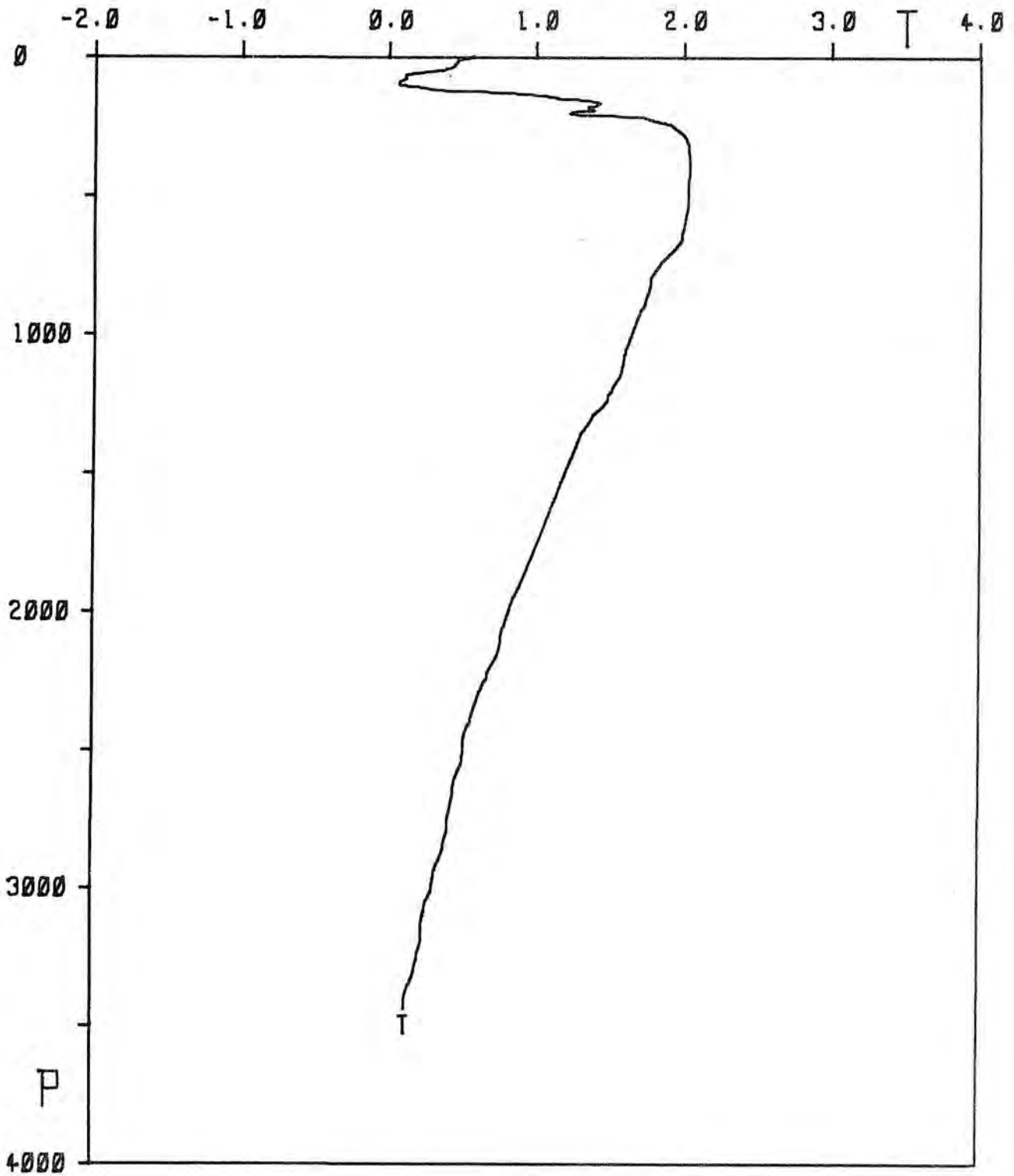
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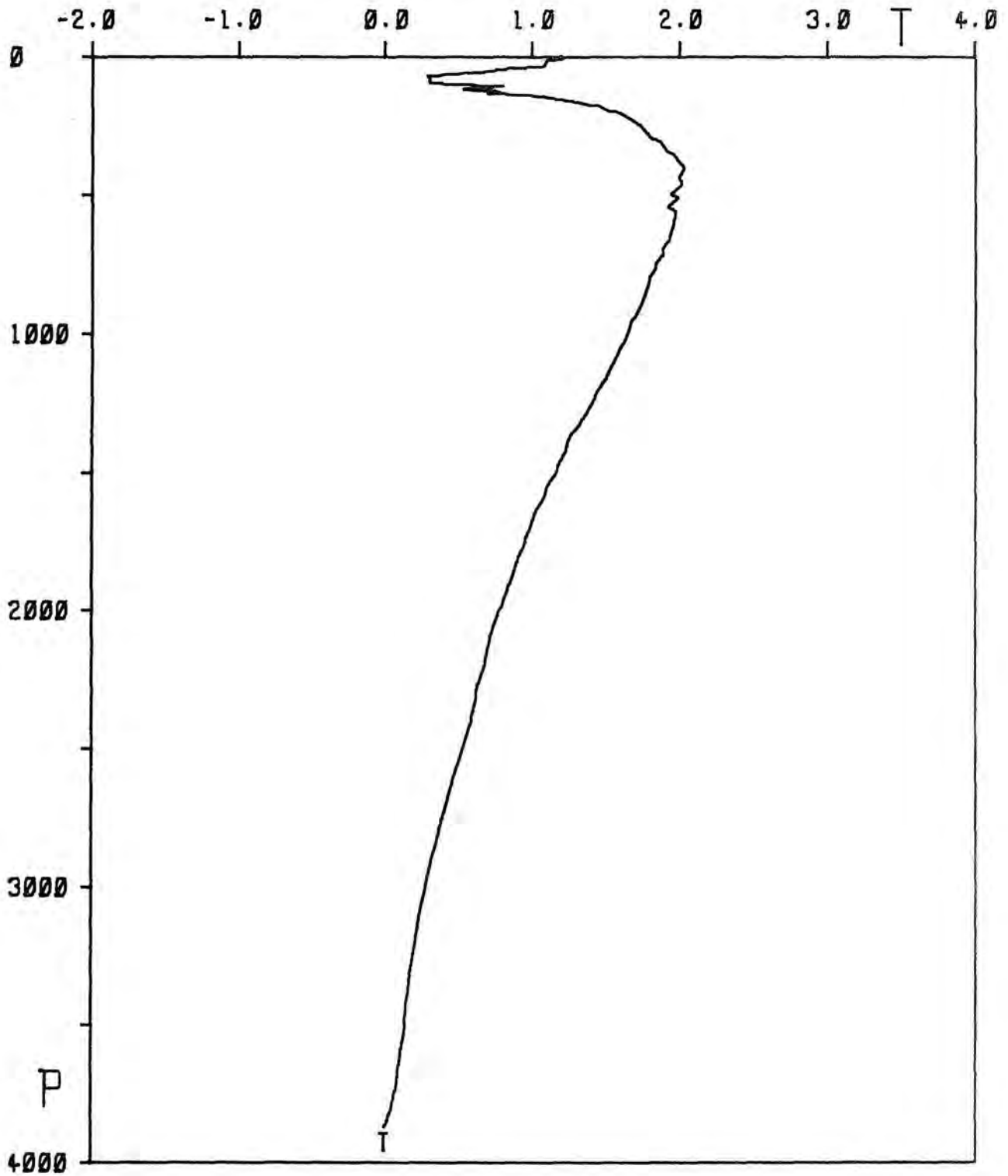
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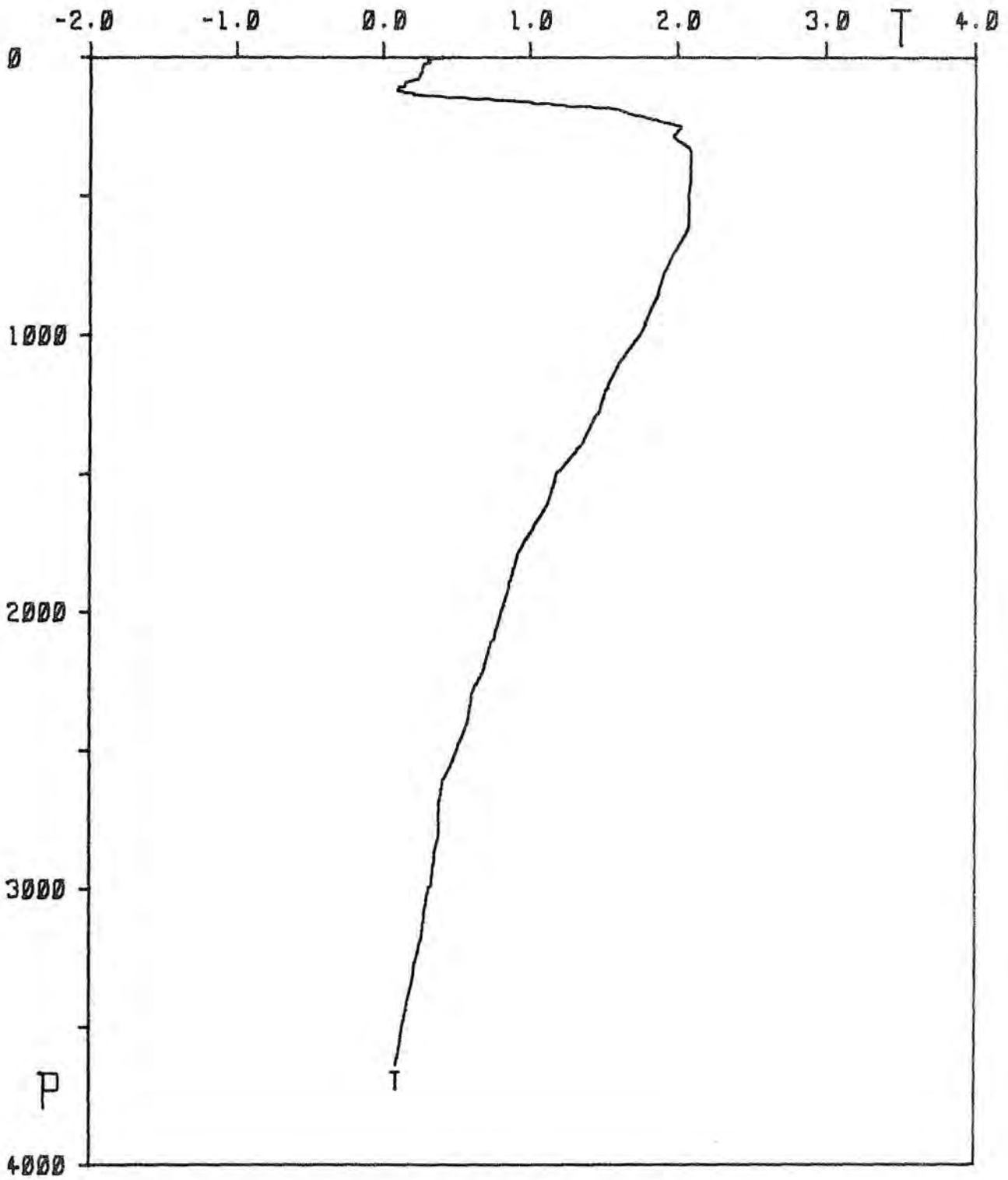
STATION 0035



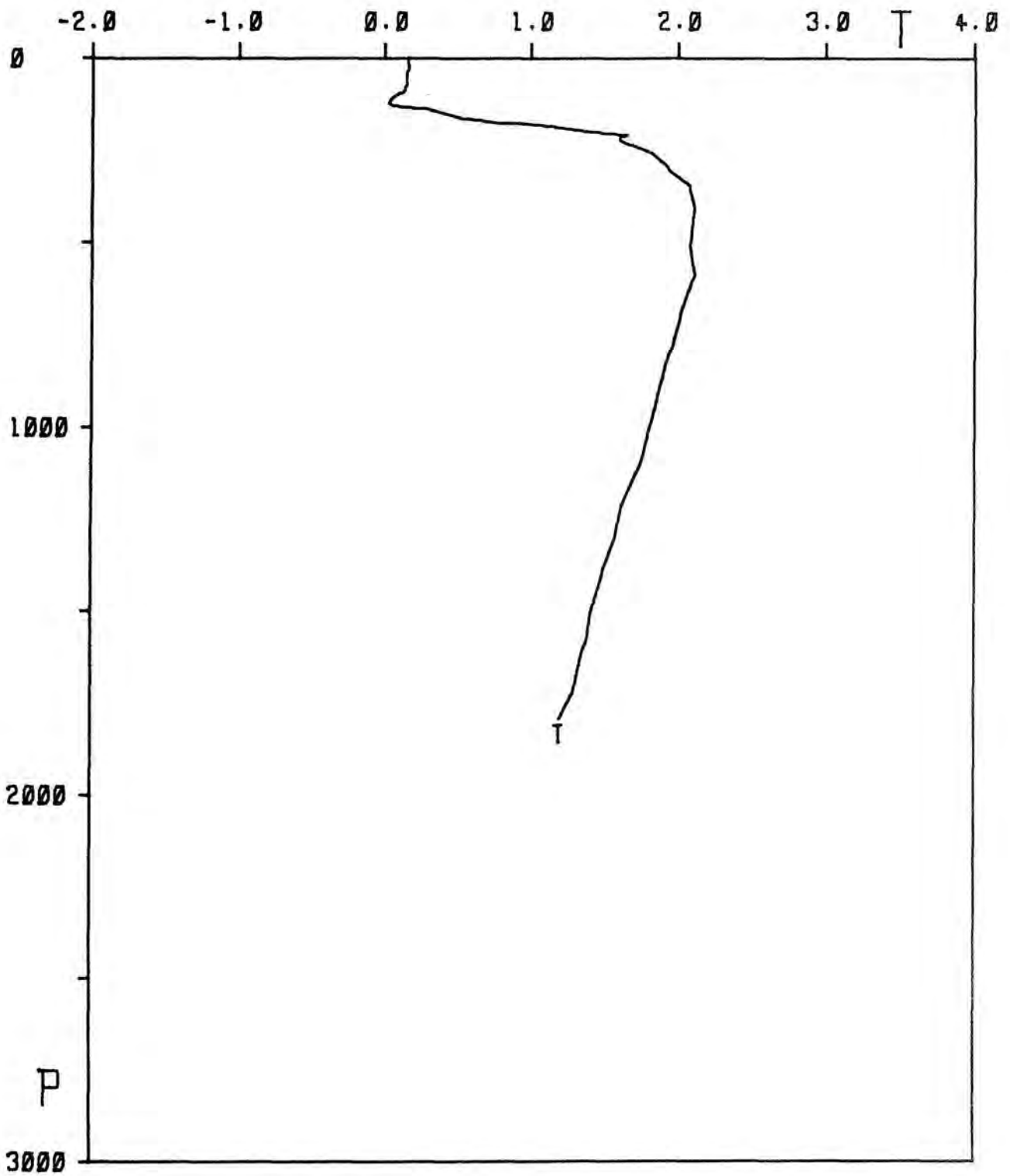
STATION 0036



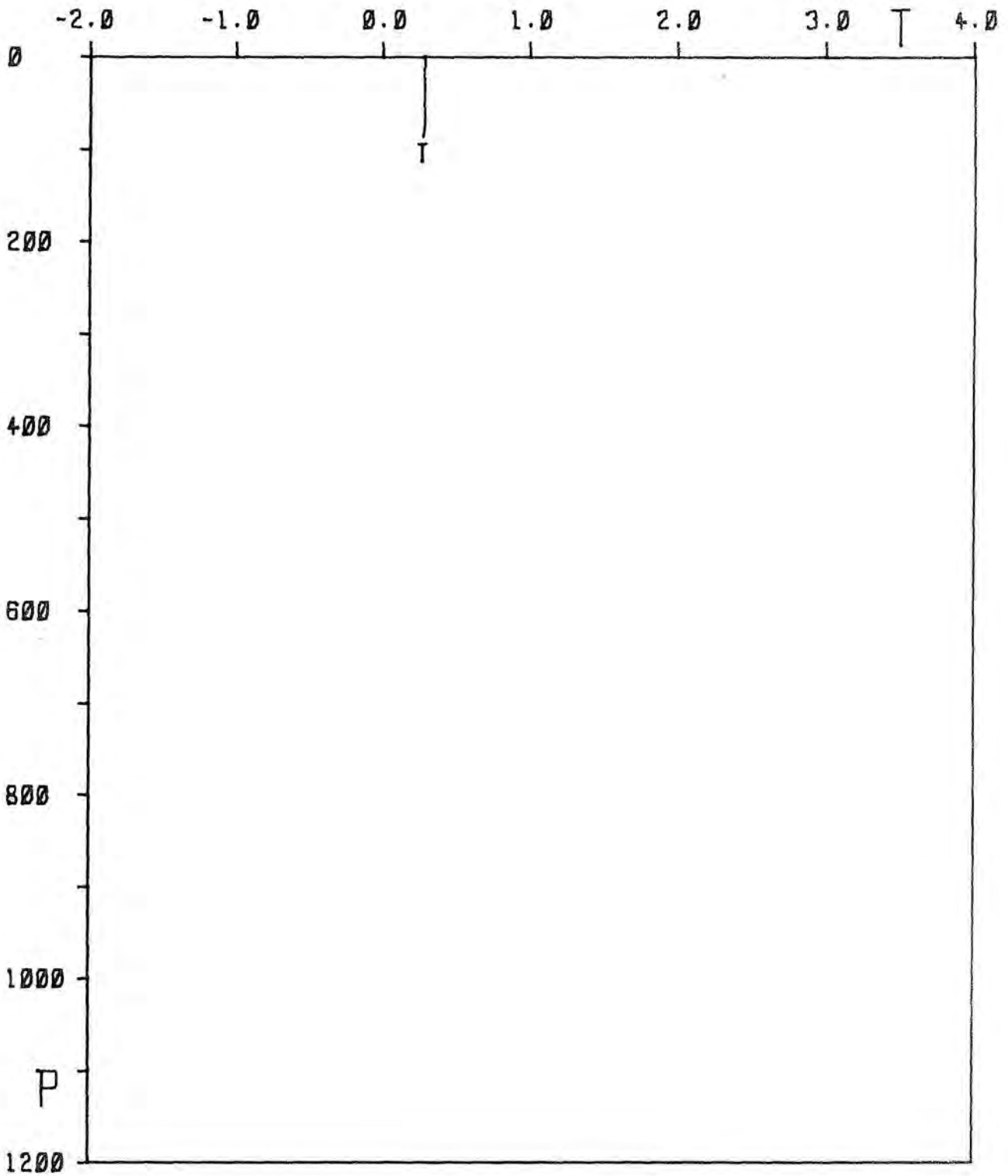
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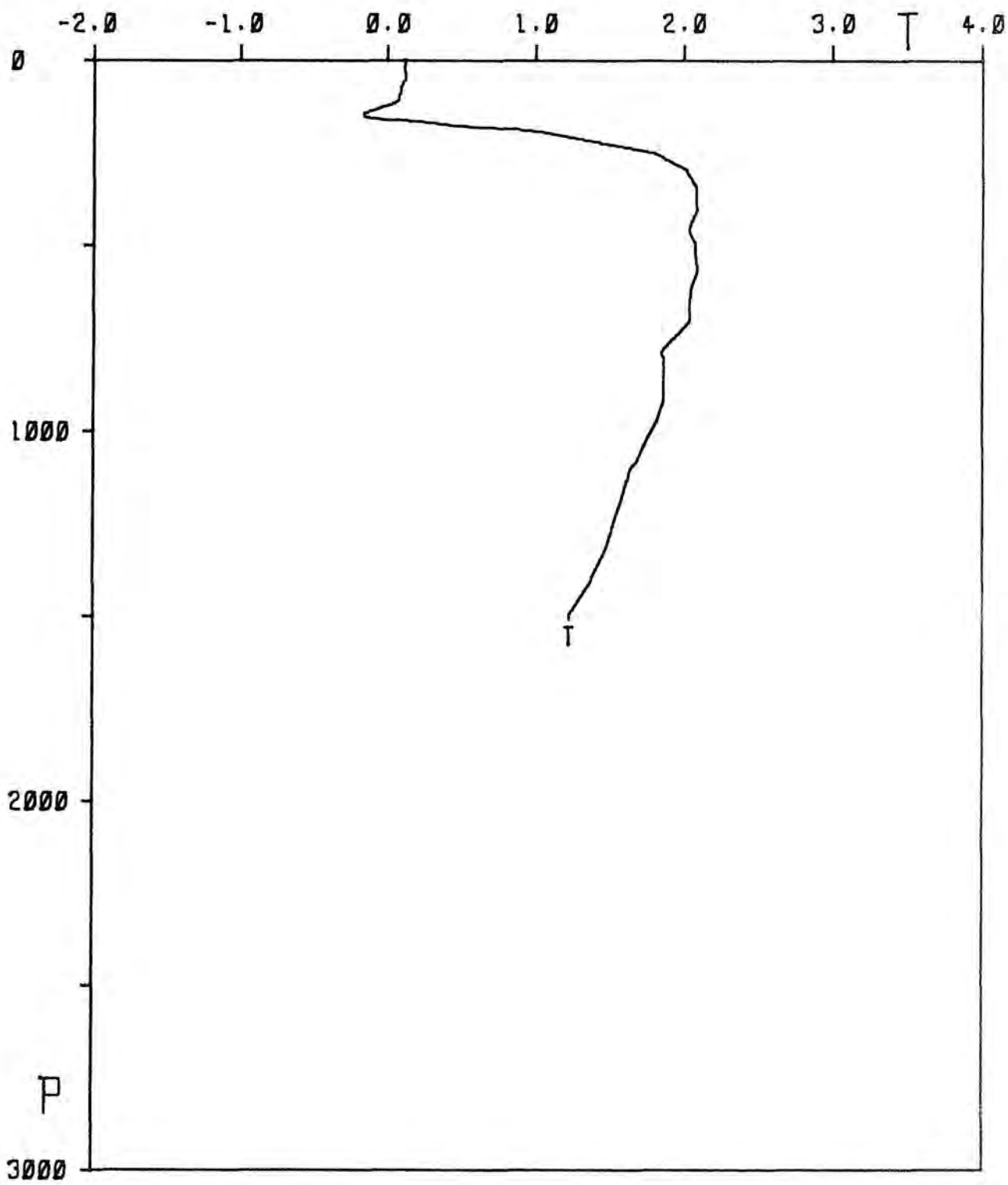
STATION 0038



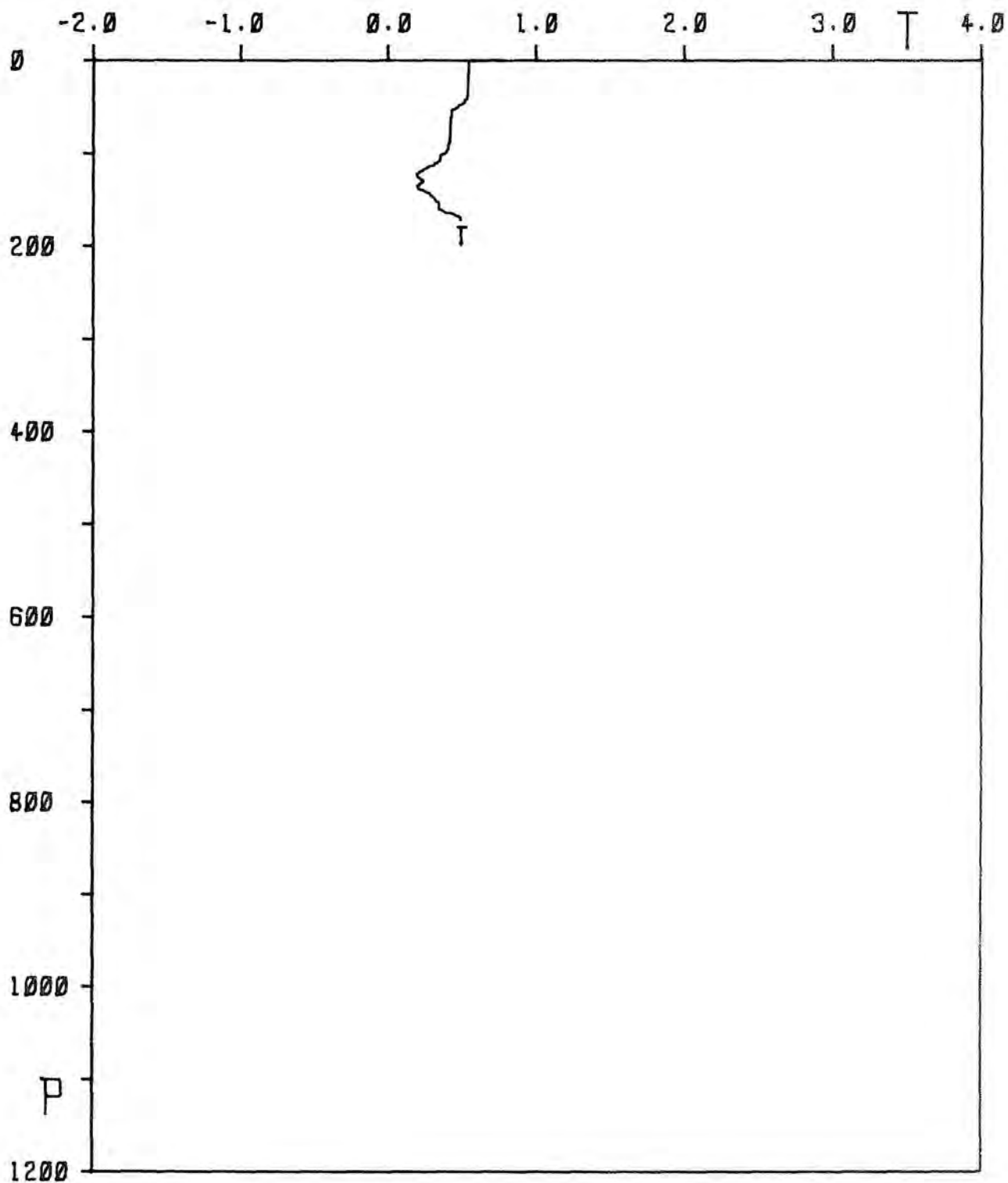
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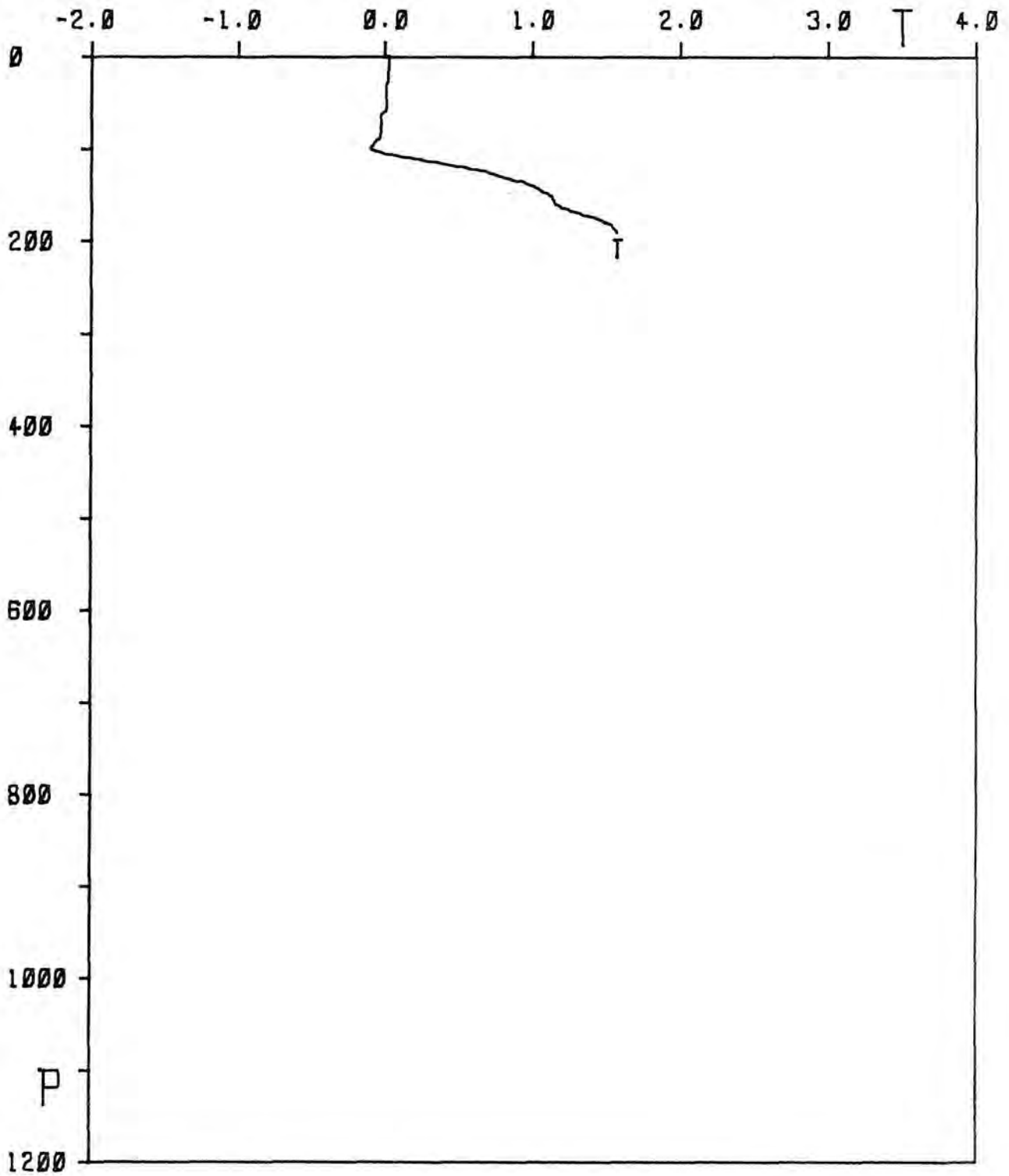
STATION 0040



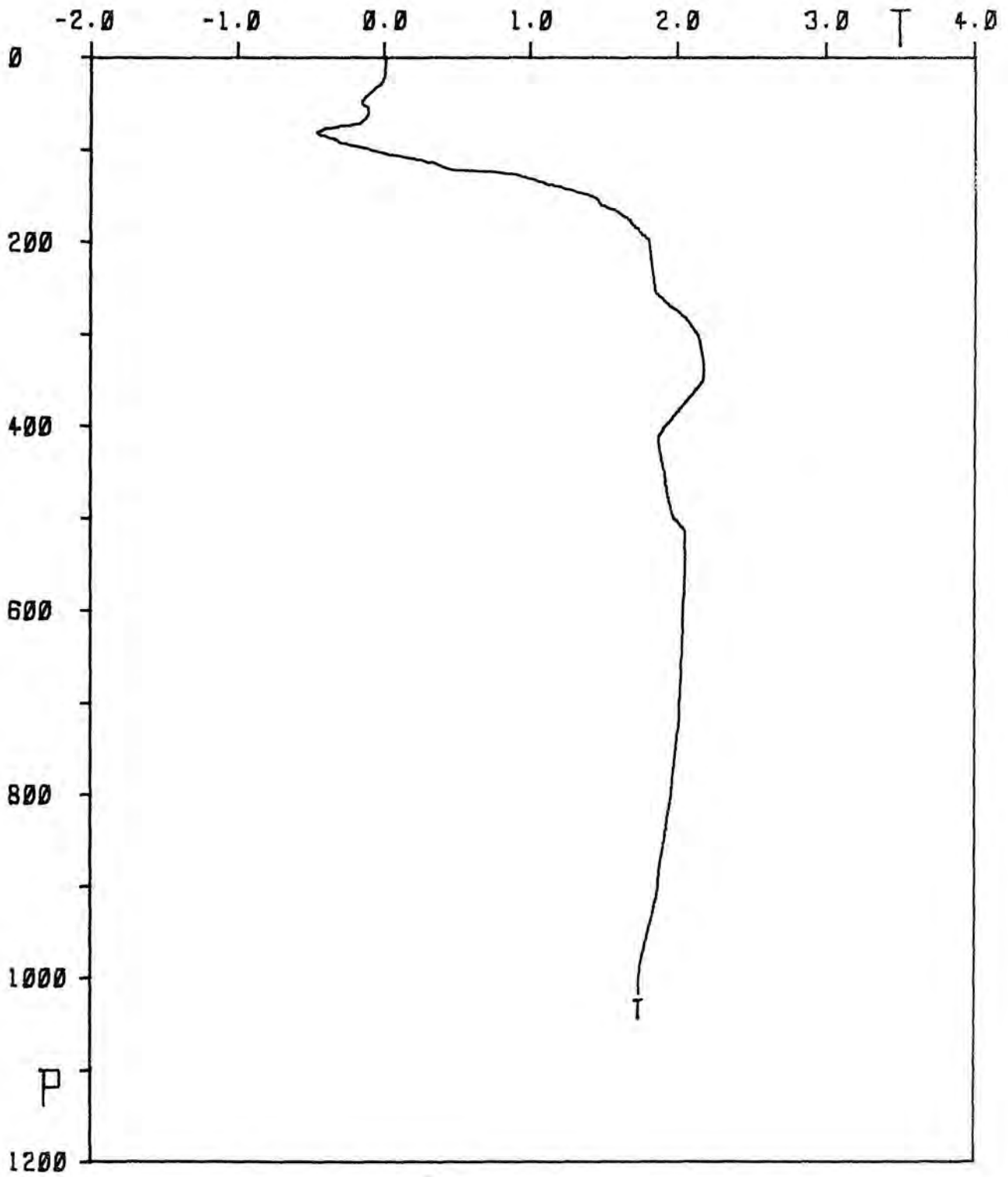
STATION 0041



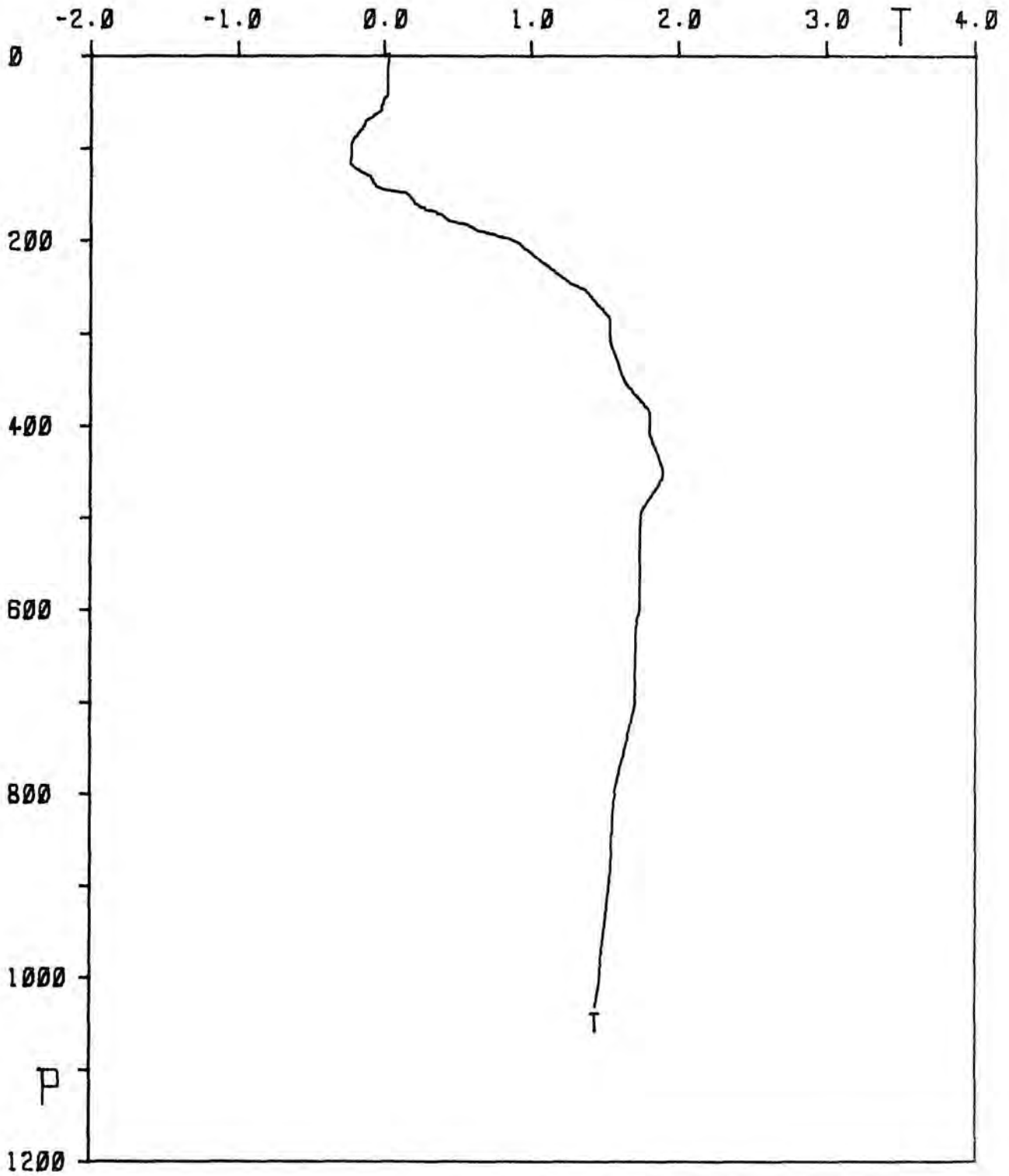
STATION 0042



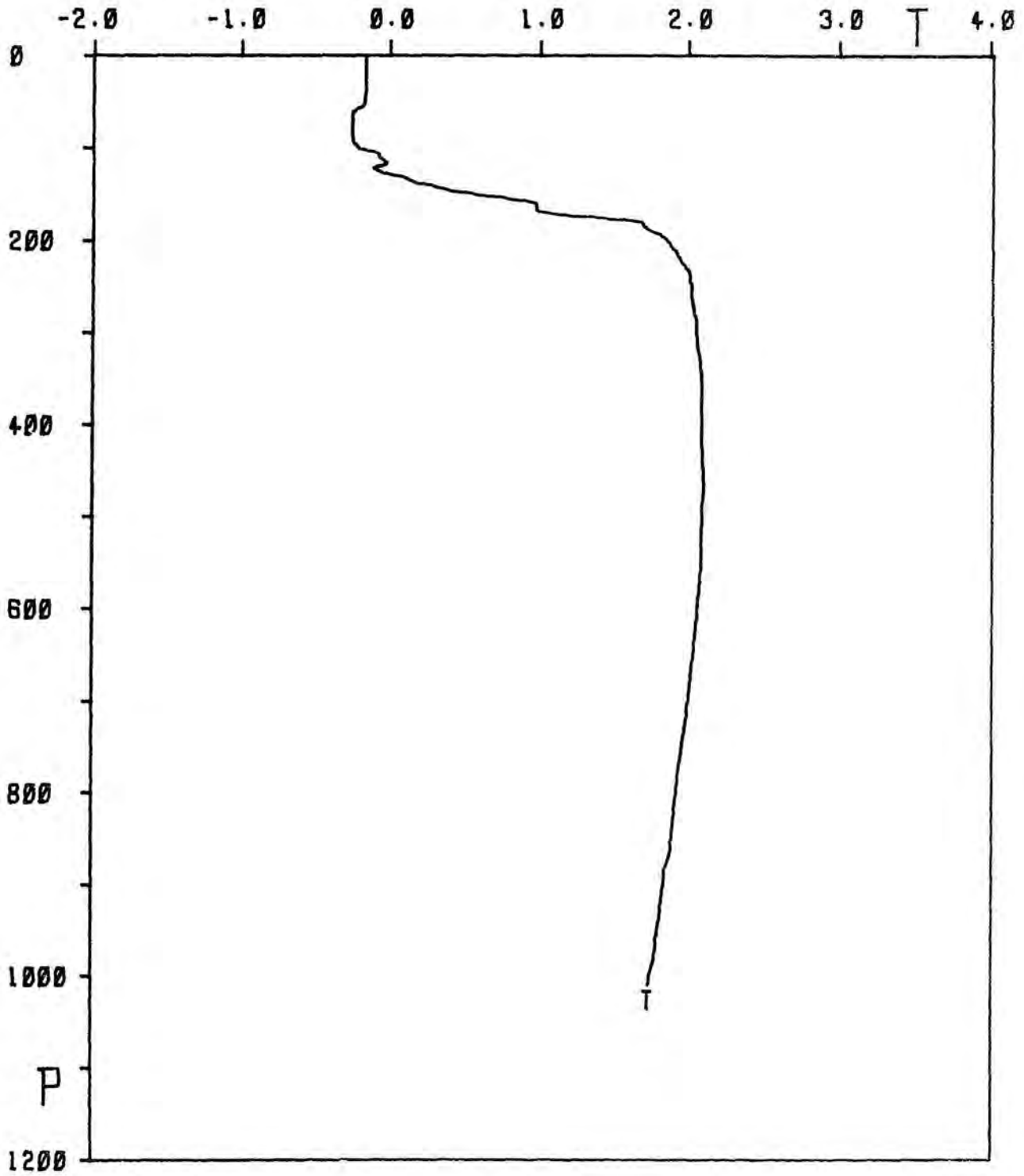
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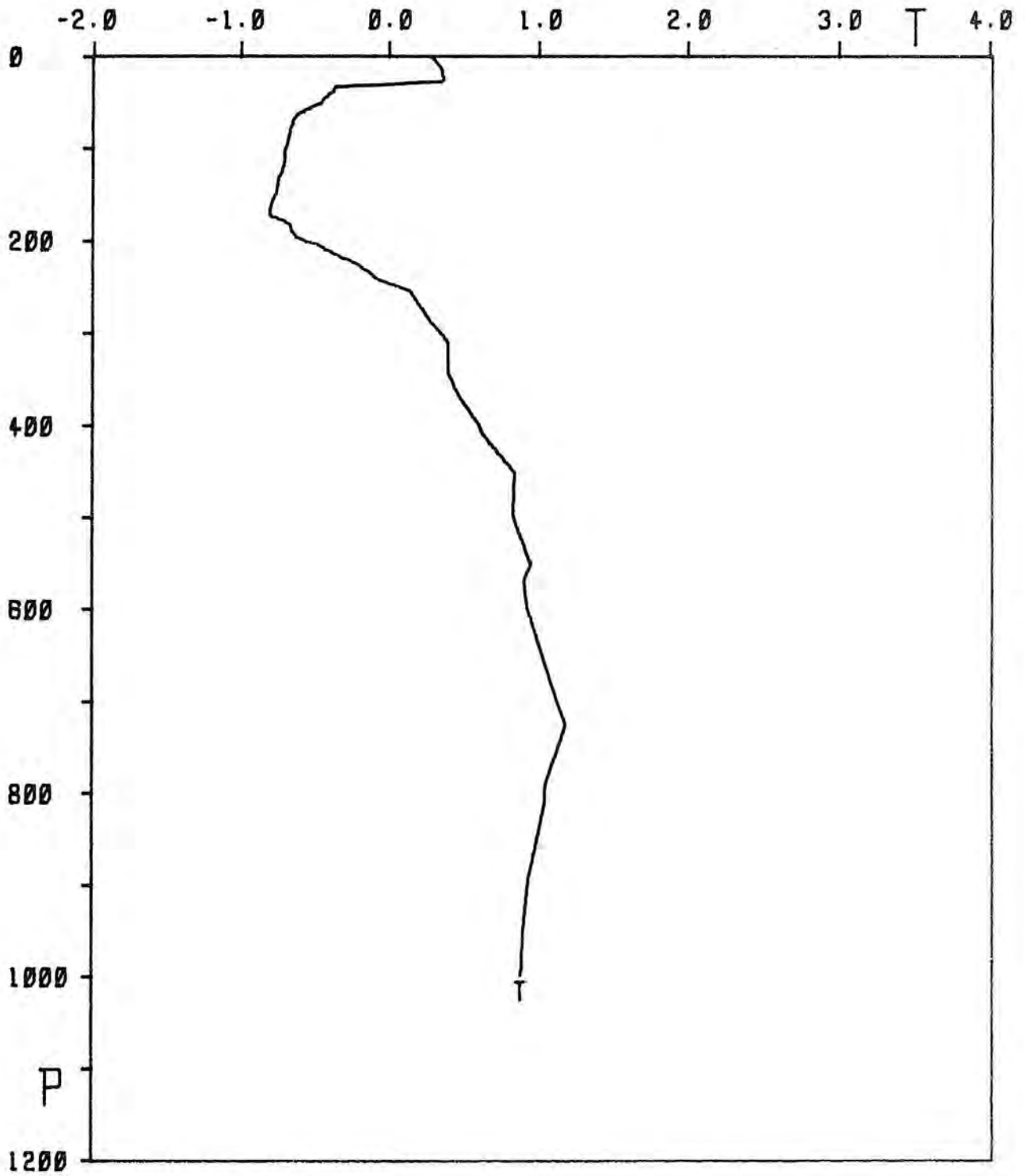
STATION 0044



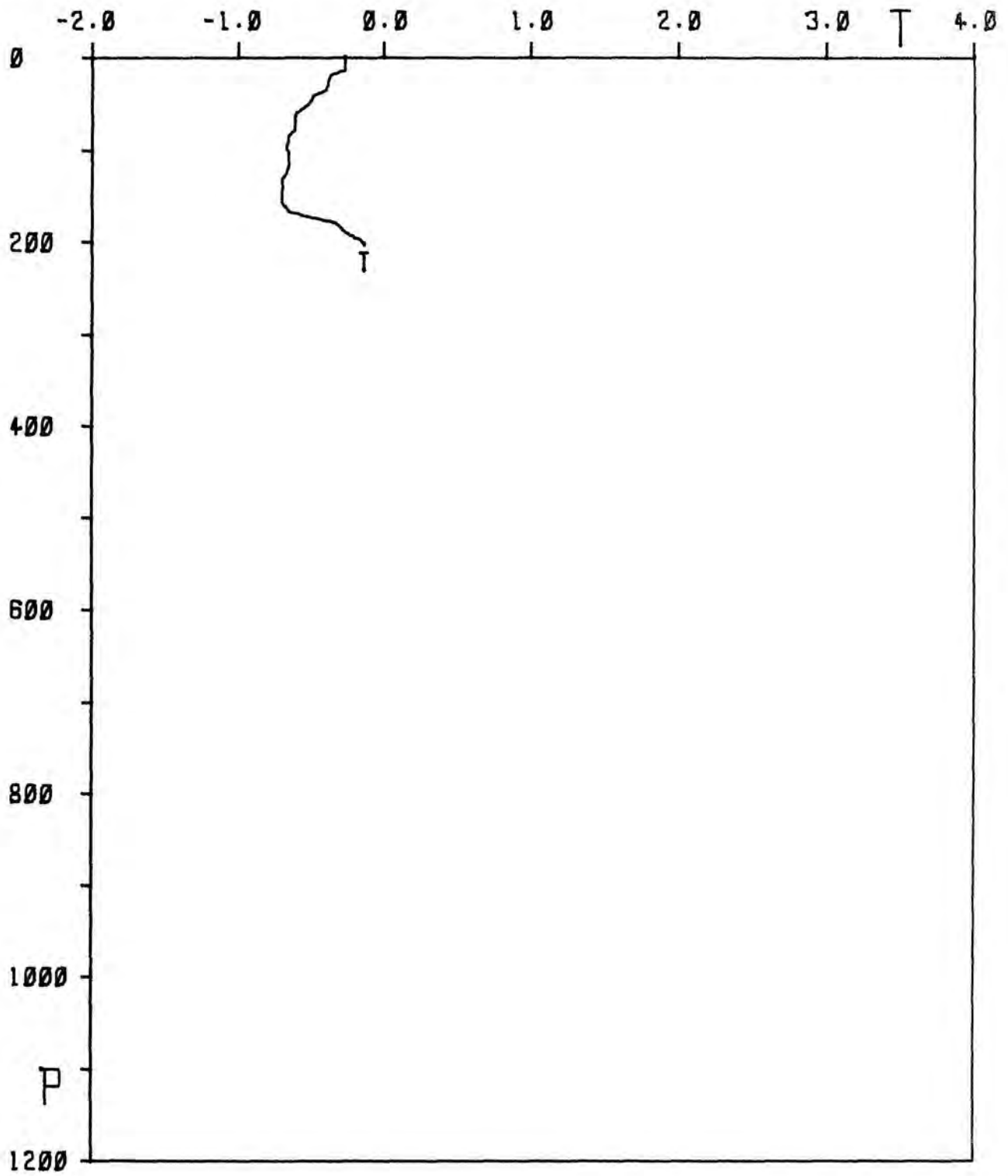
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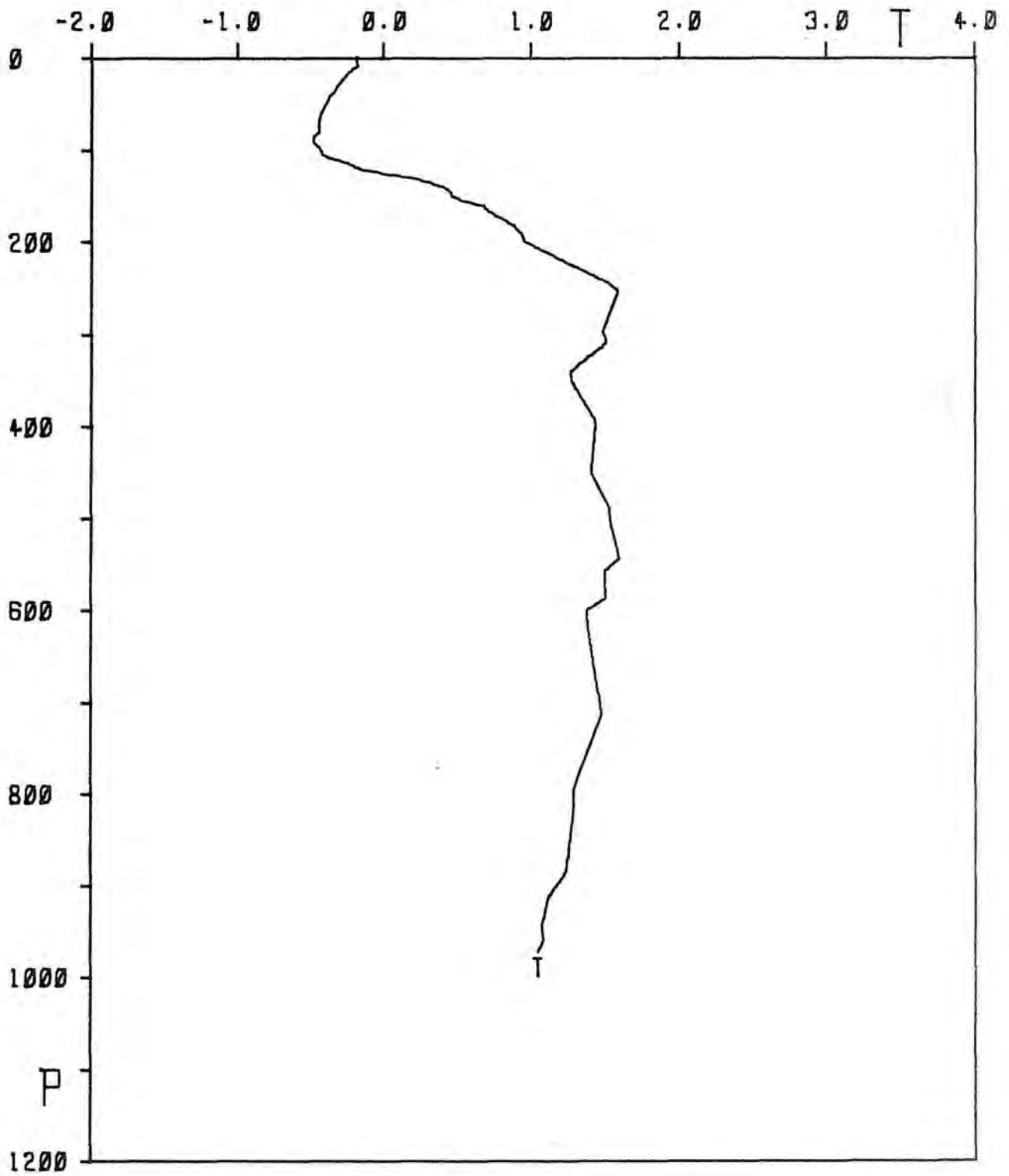
STATION 0046



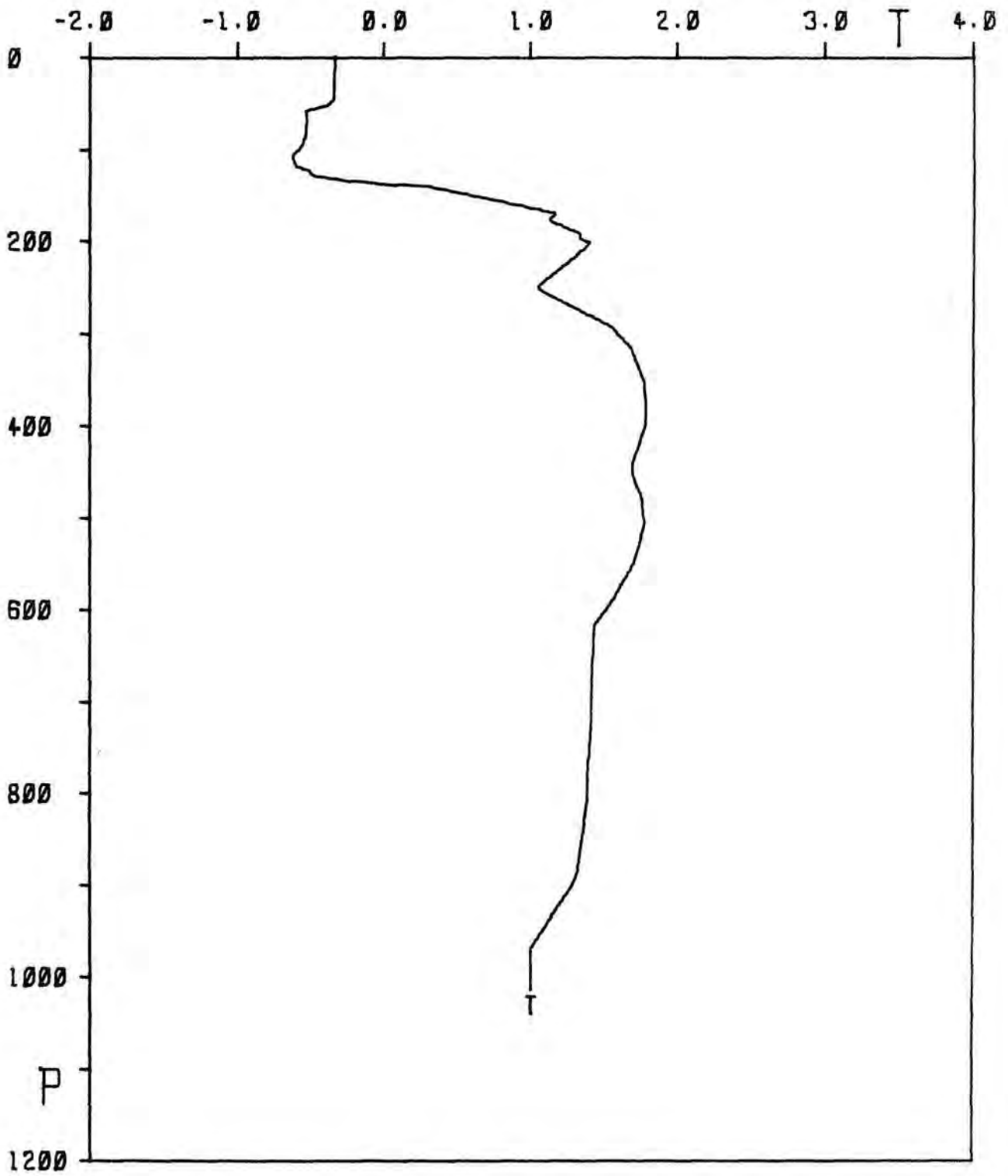
STATION 0047



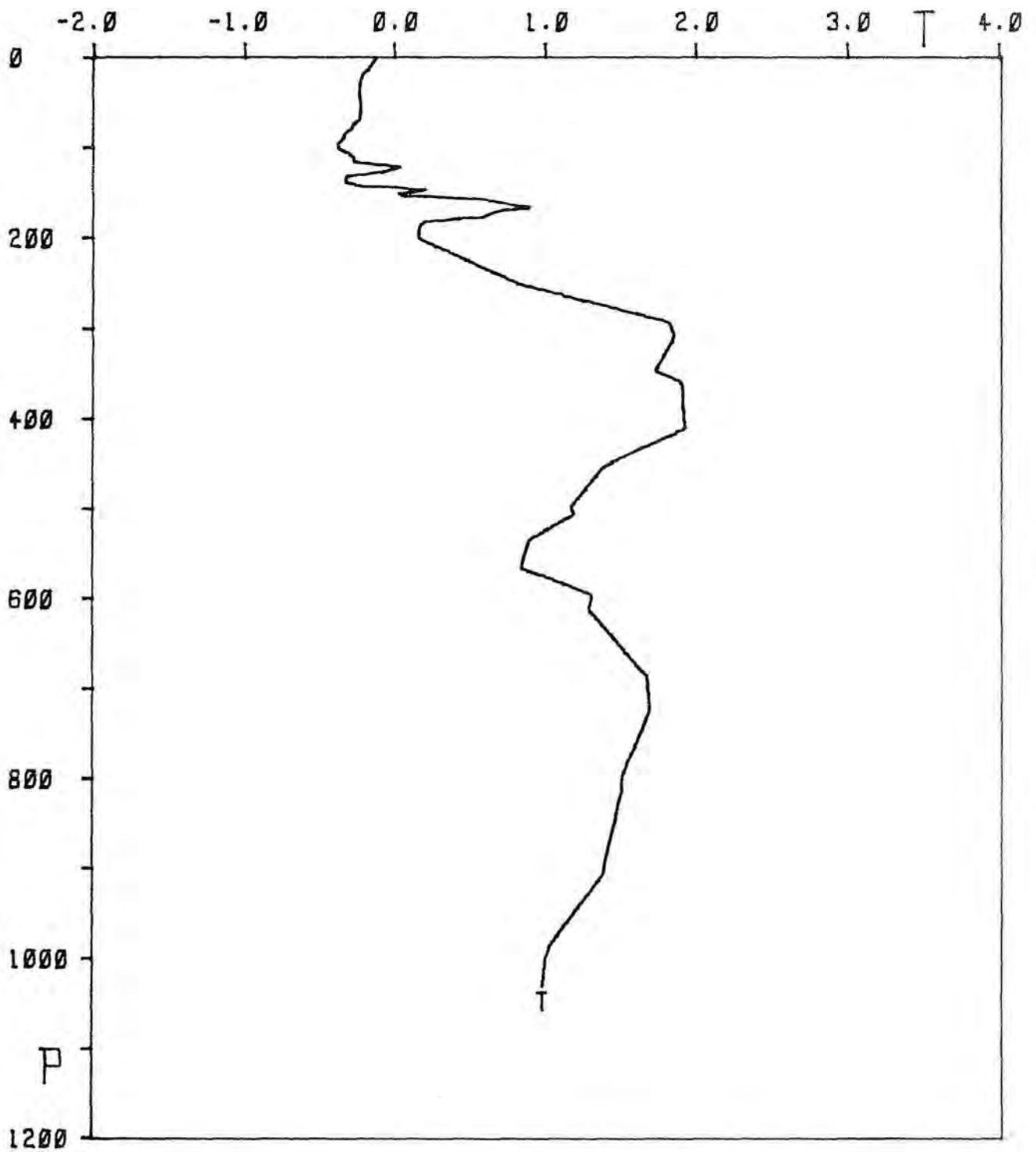
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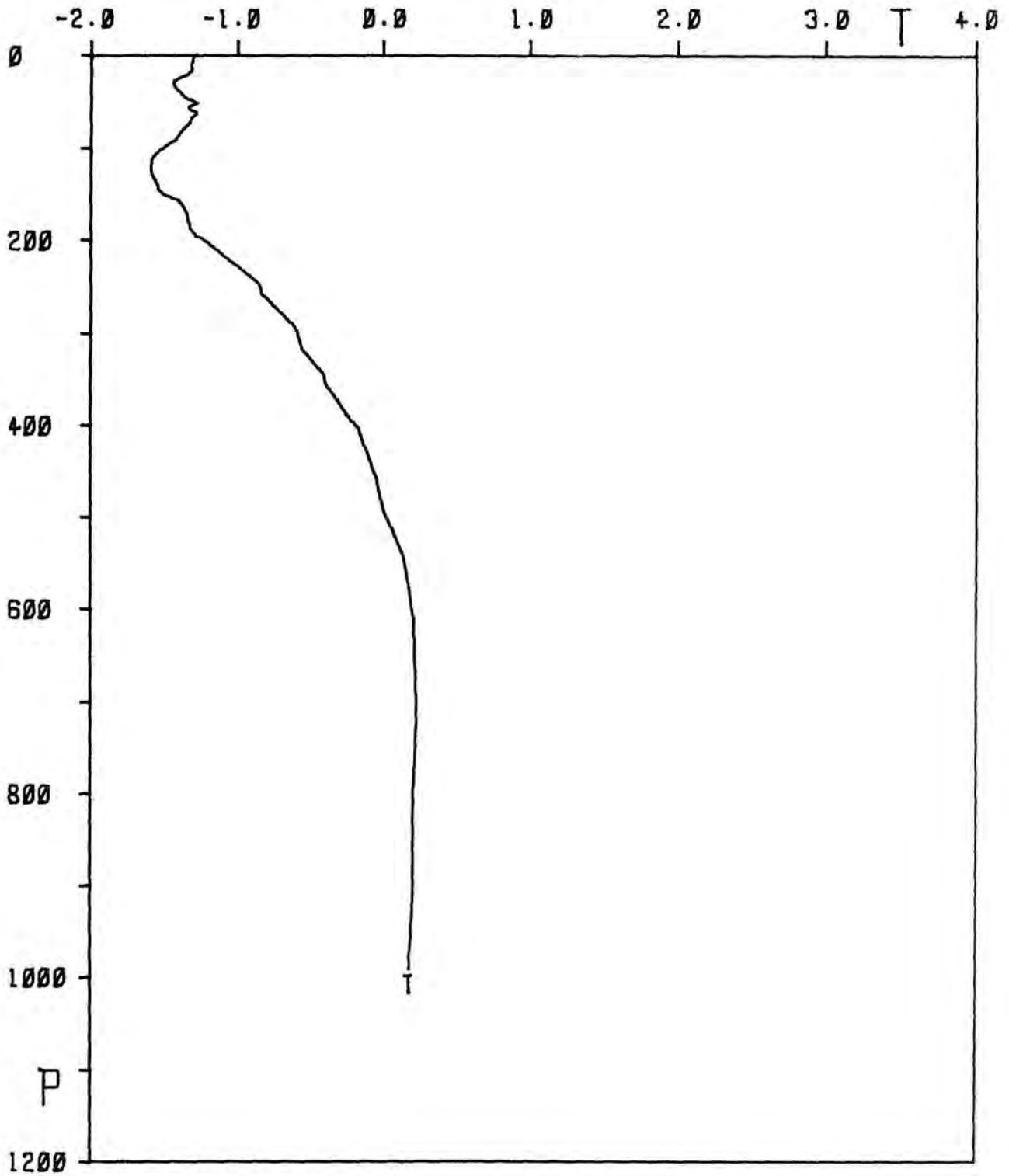
STATION 0049



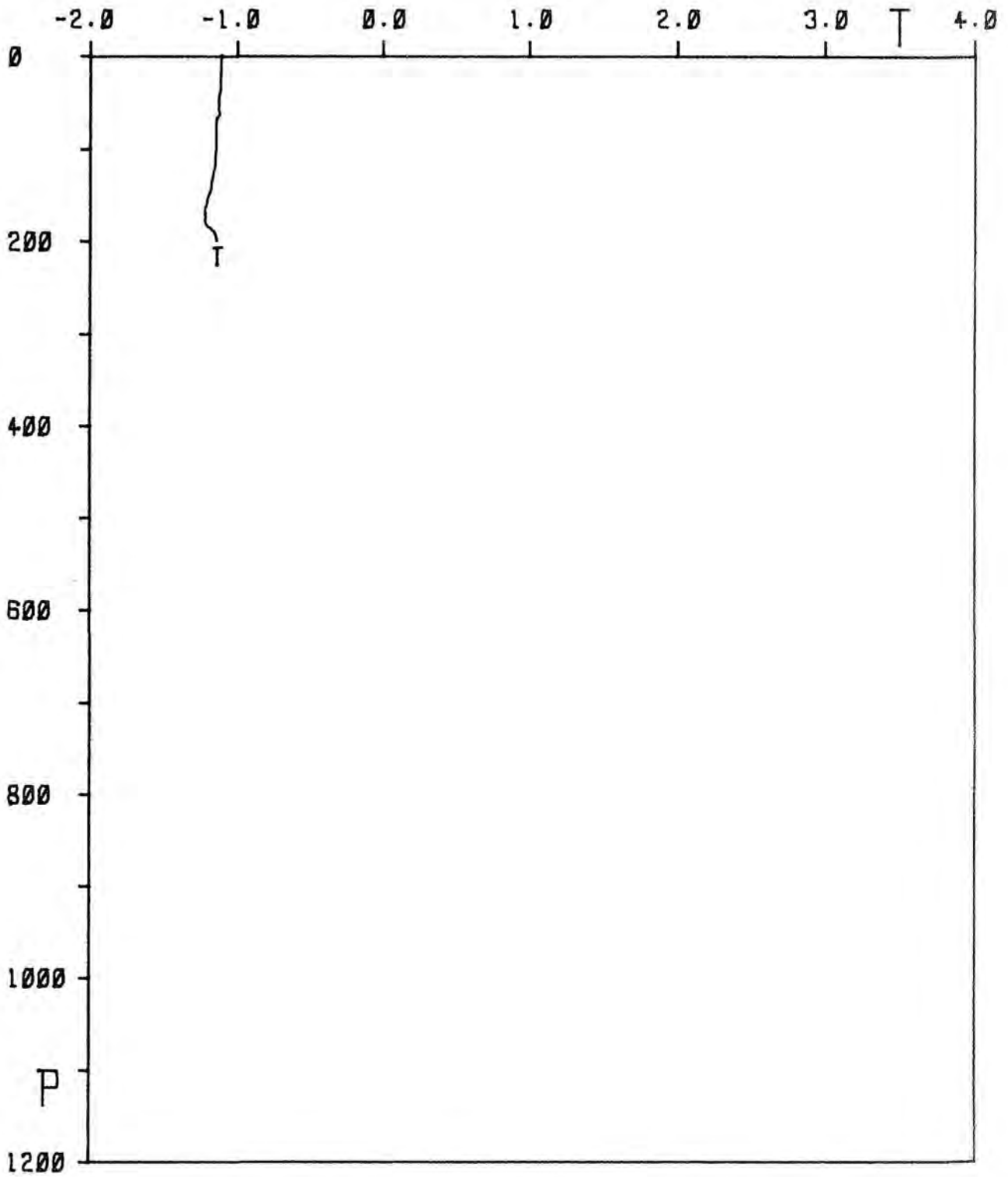
STATION 0050



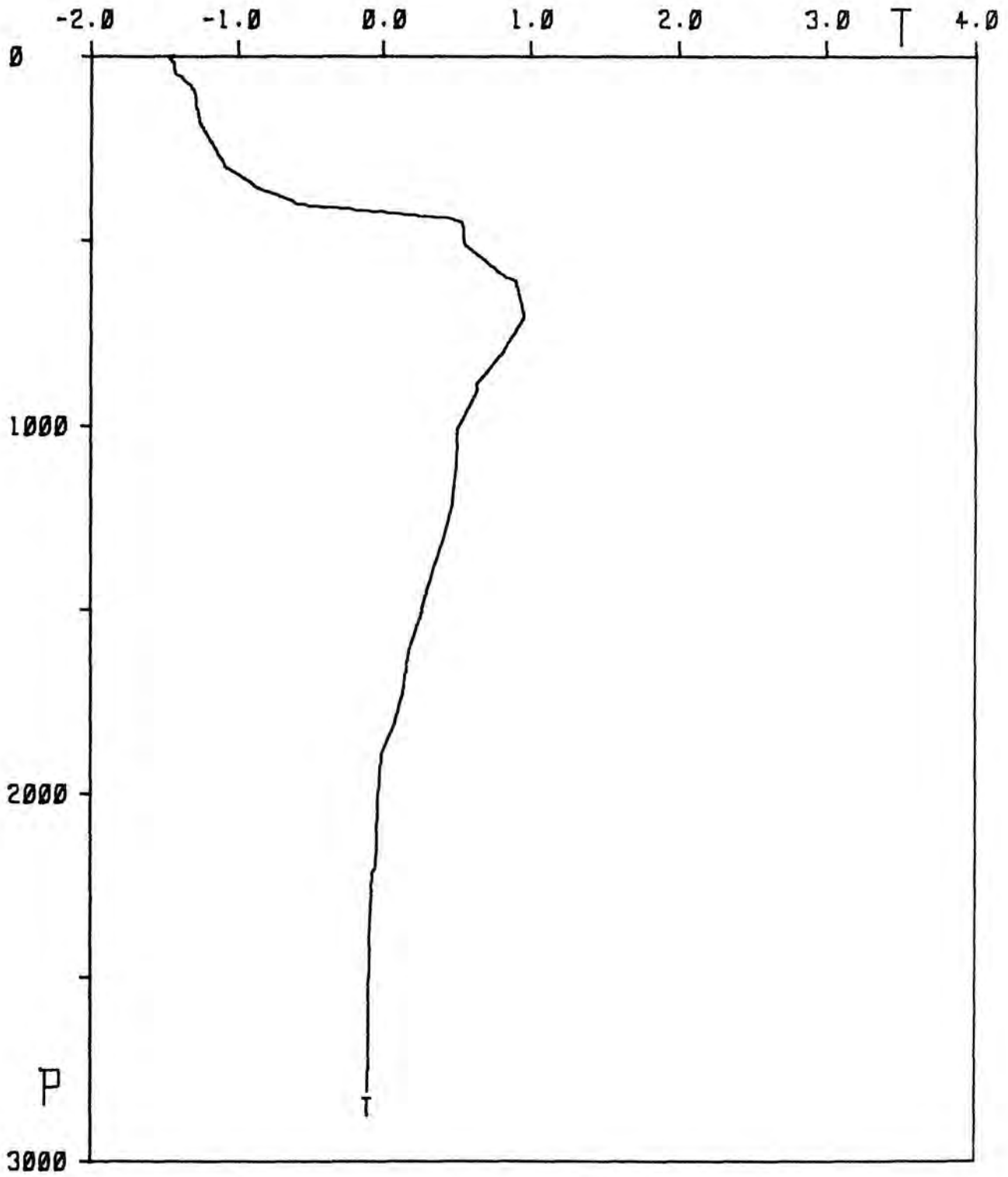
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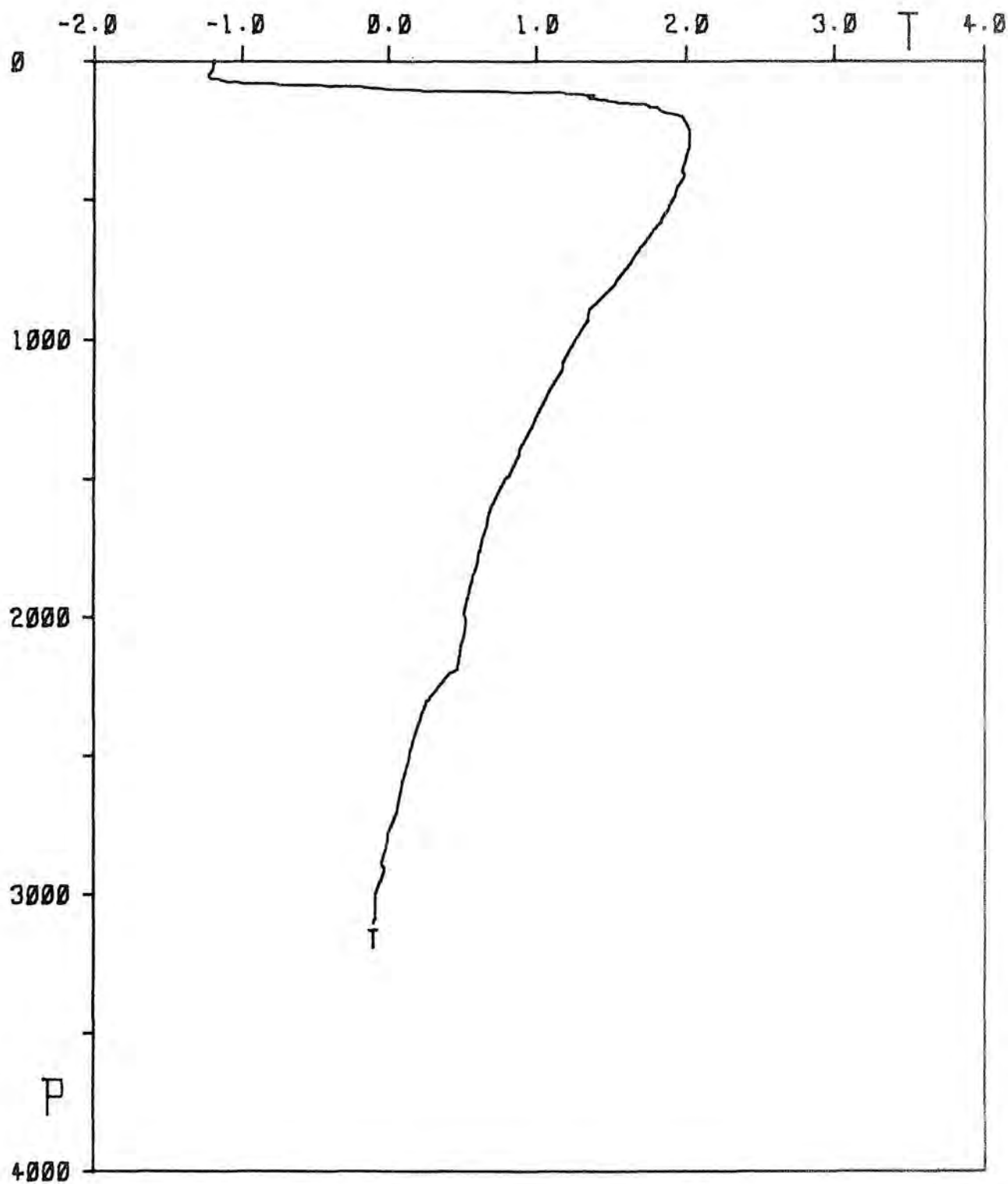
STATION 0053



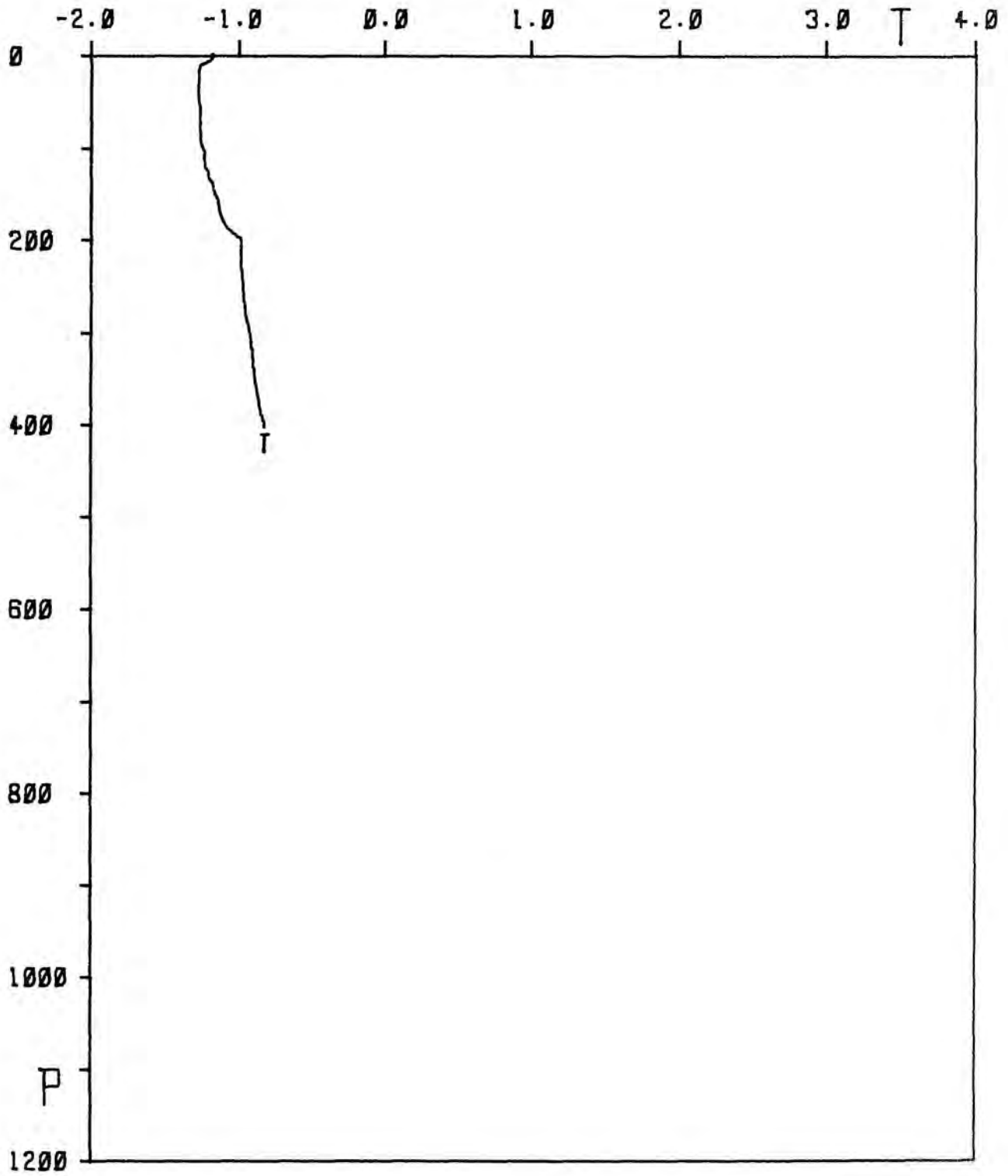
STATION 0054



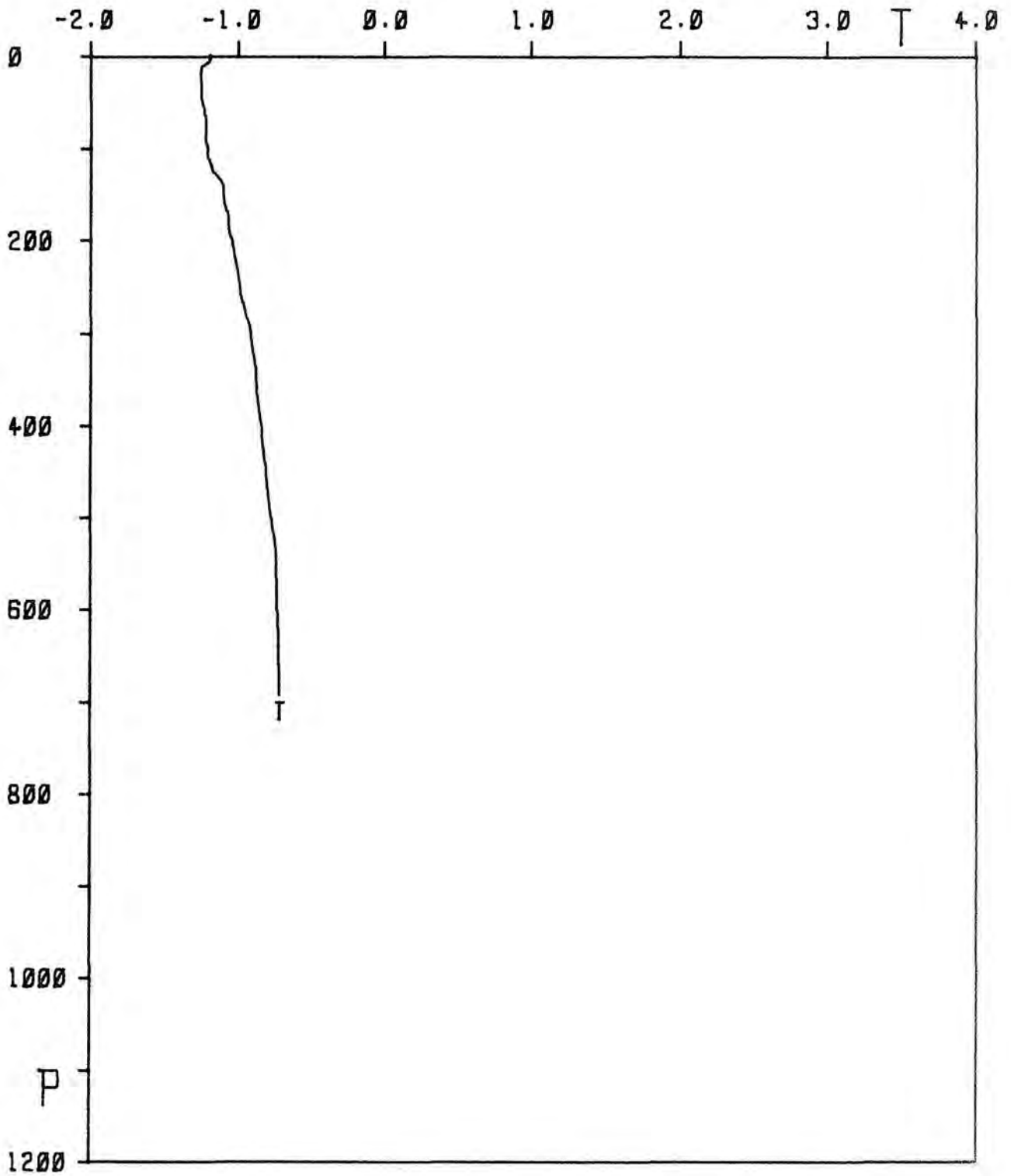
STATION 0055



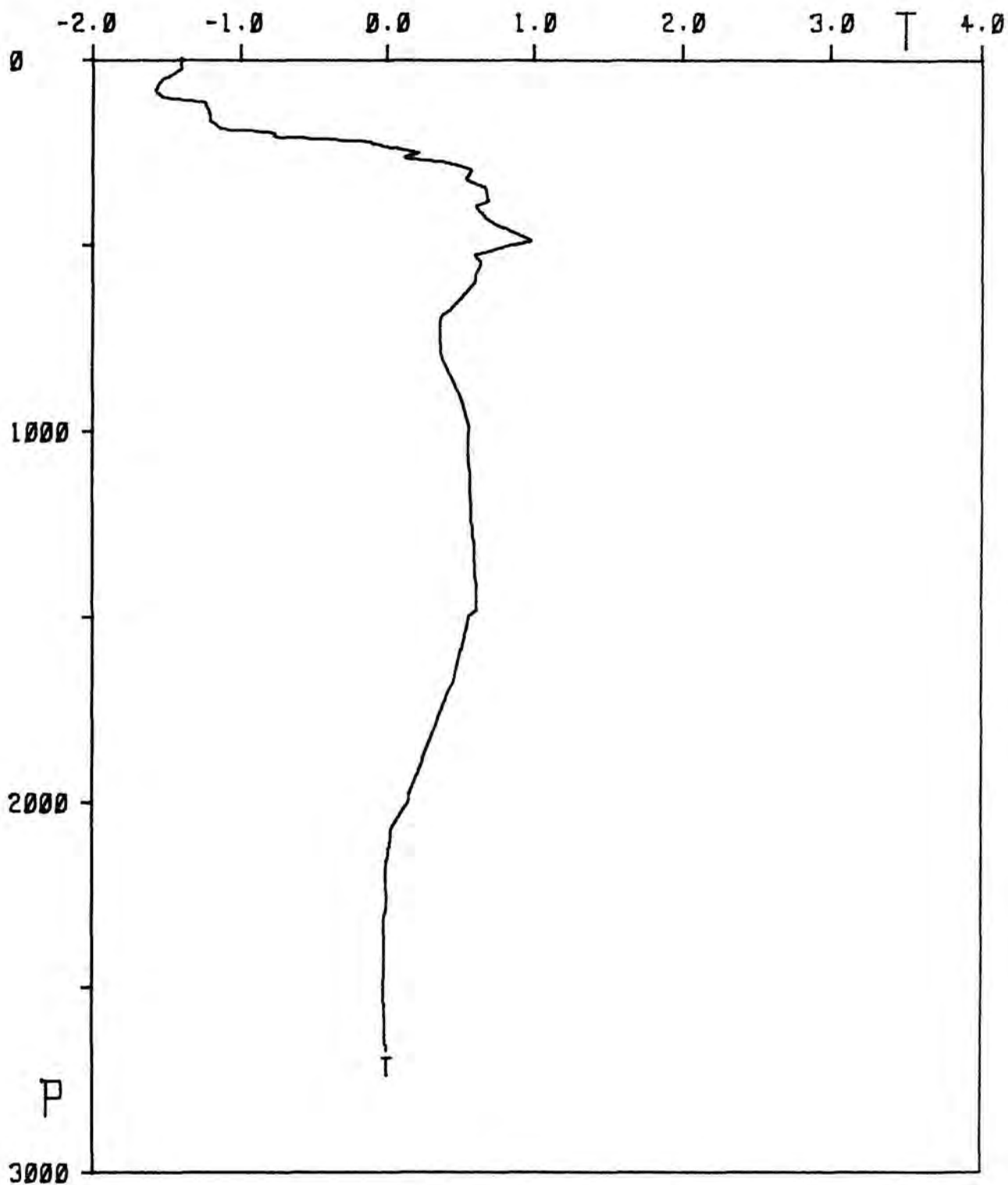
STATION 0056



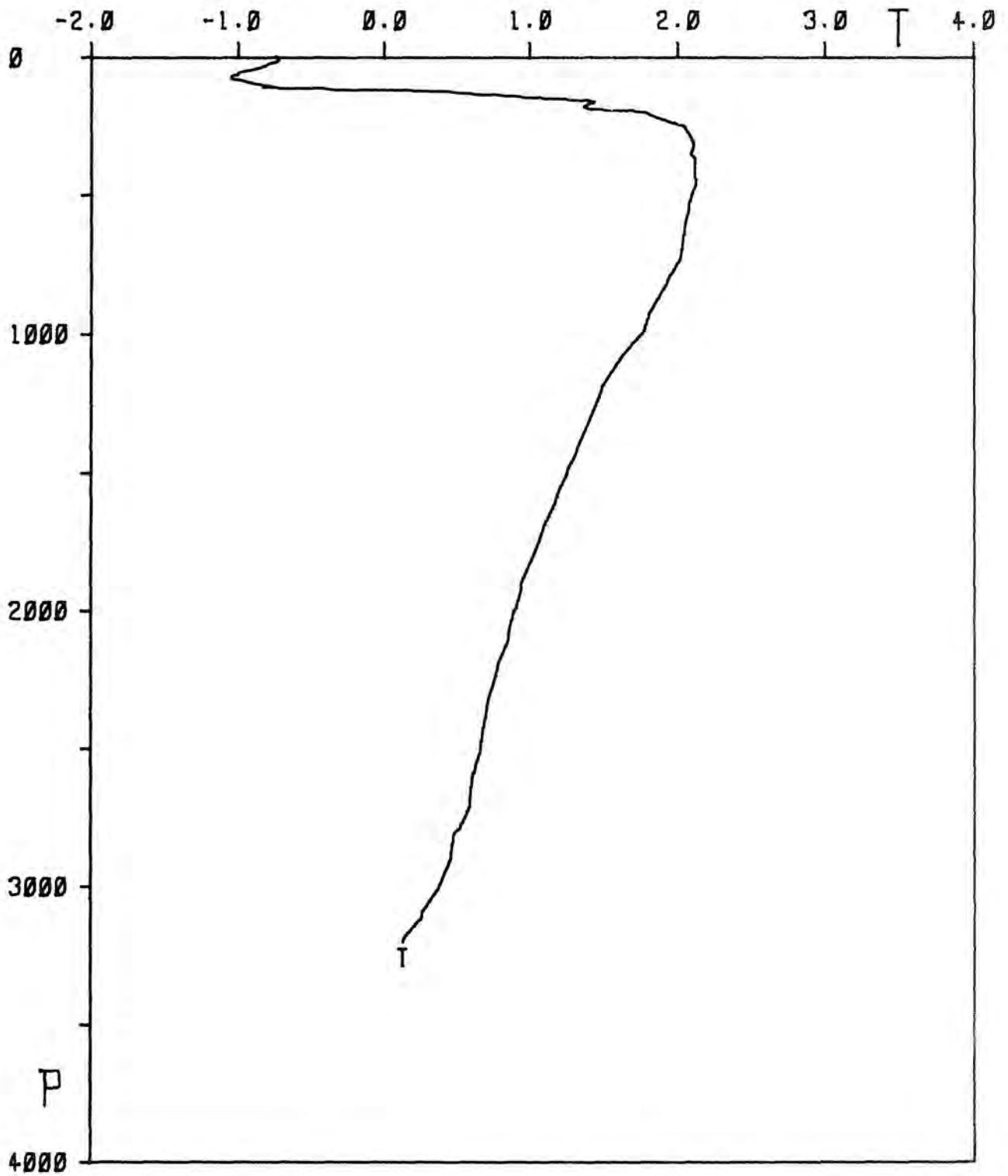
STATION 0057



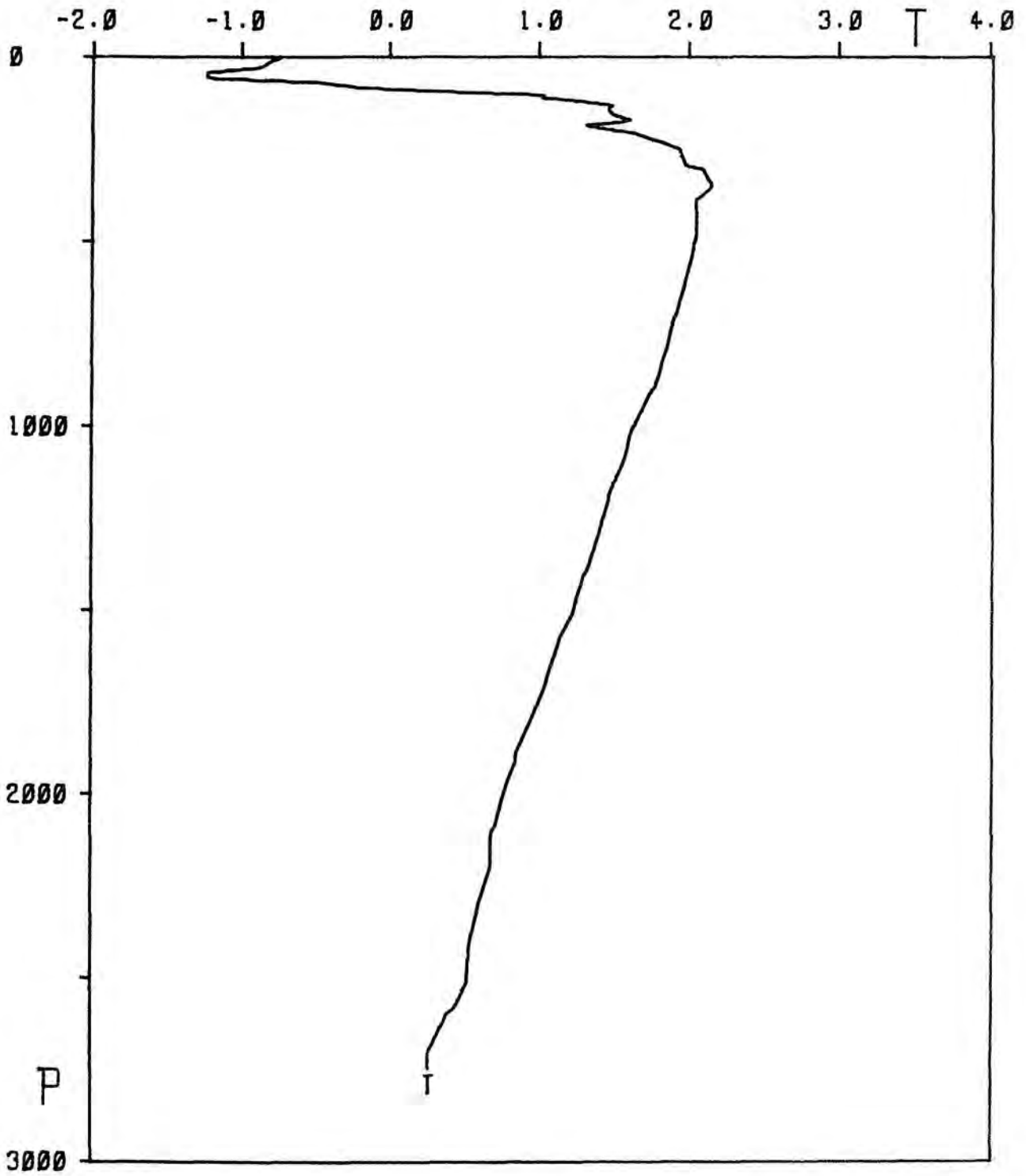
STATION 0058



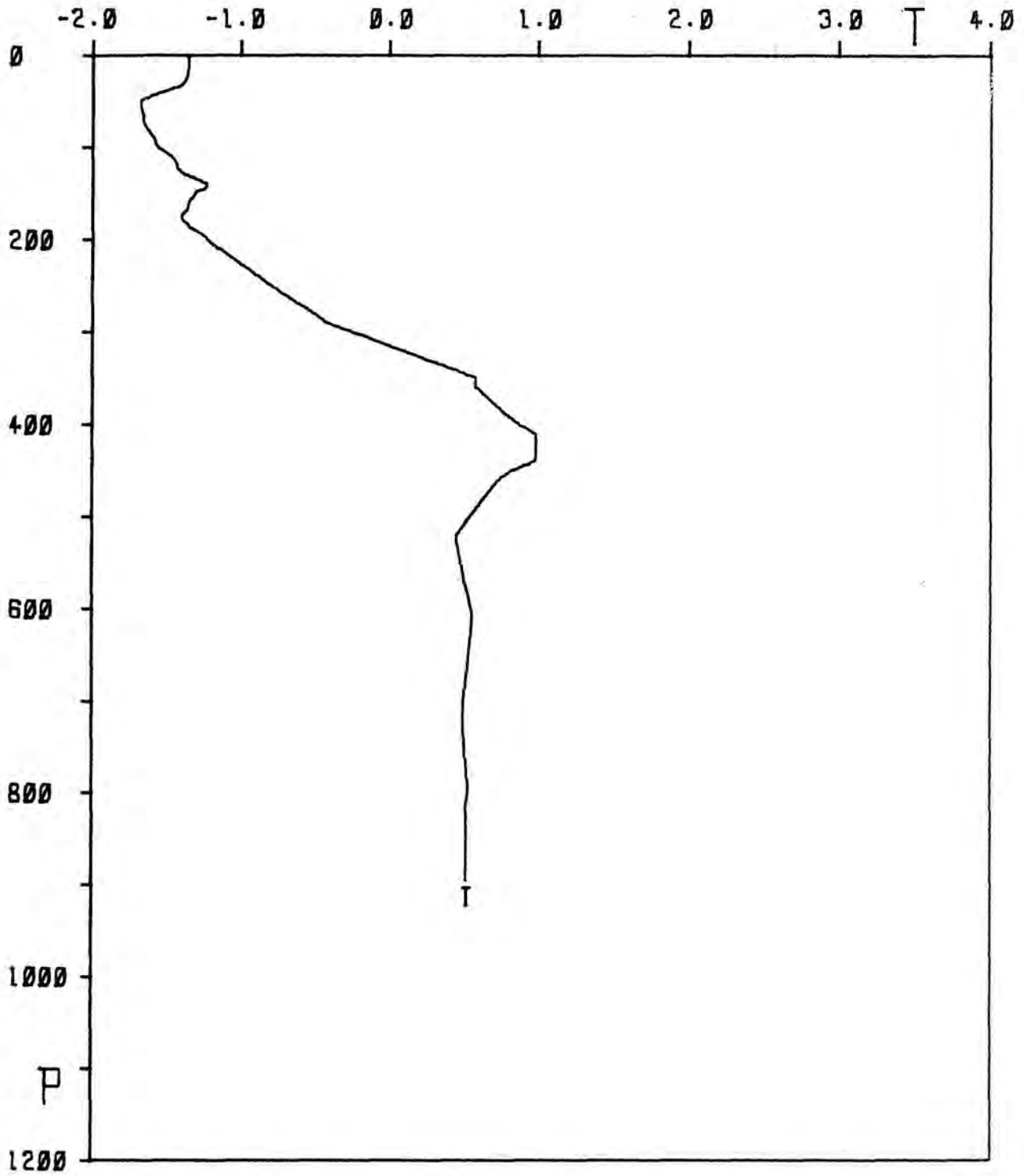
STATION 0059



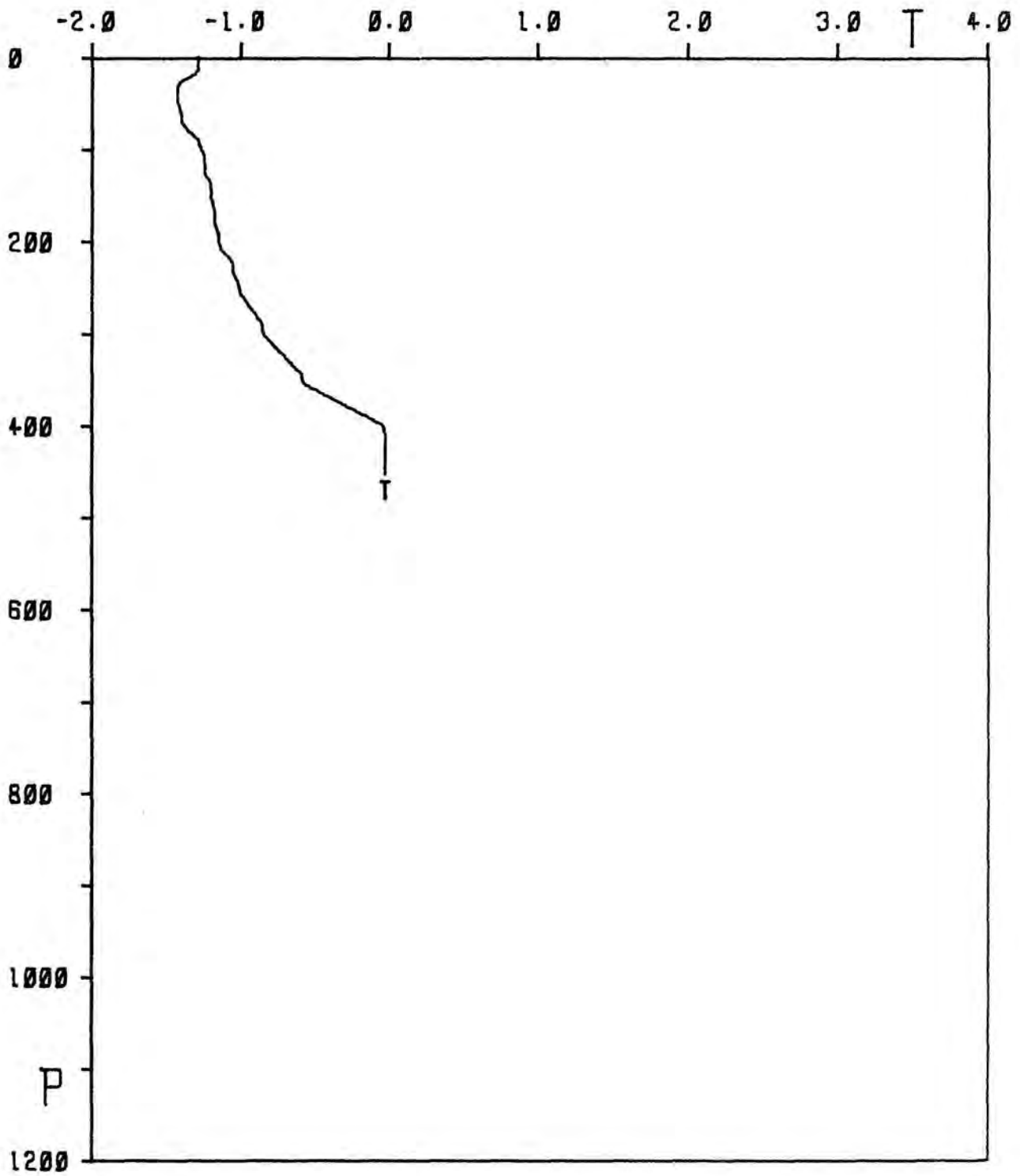
STATION 0060



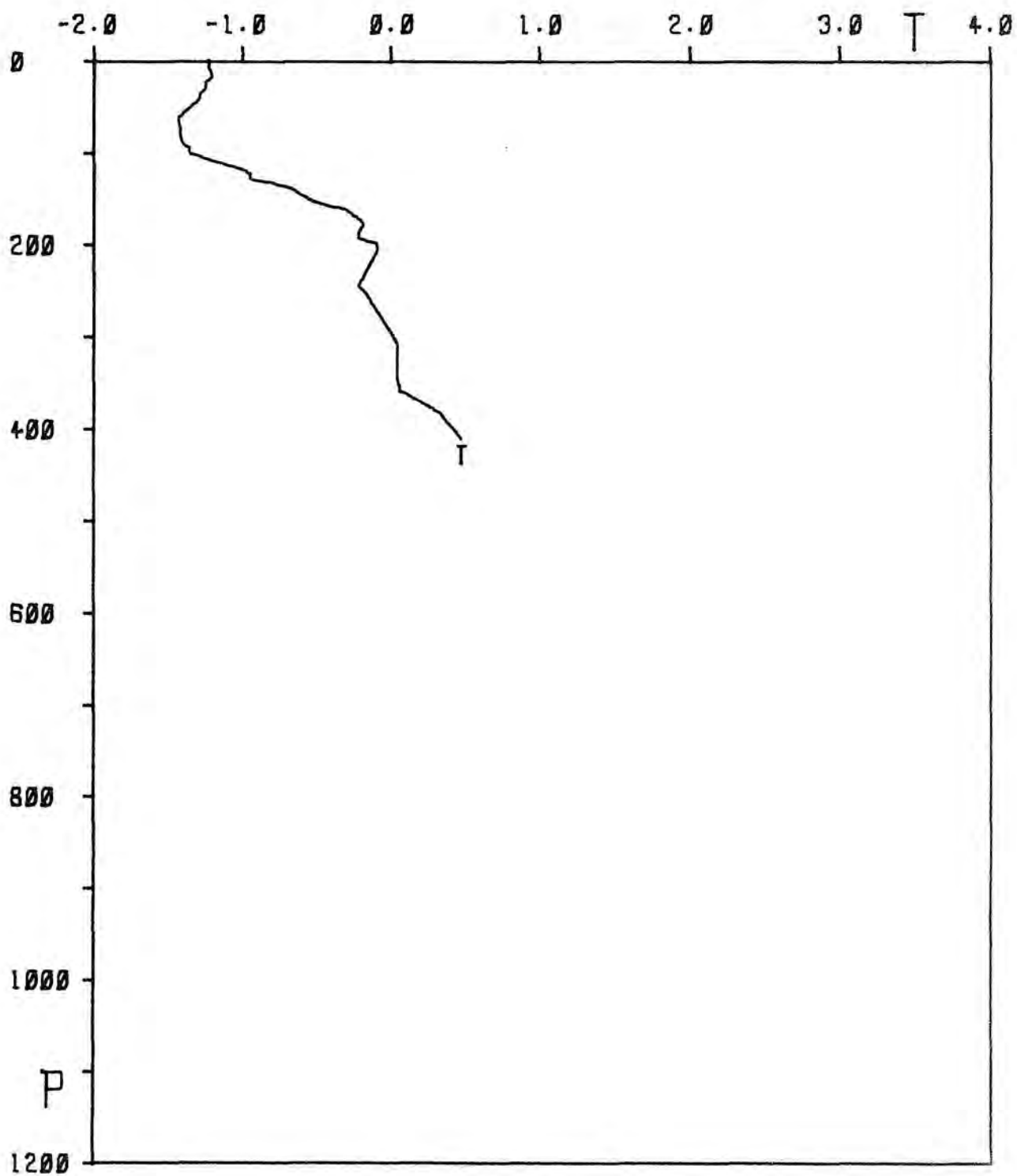
STATION 0061



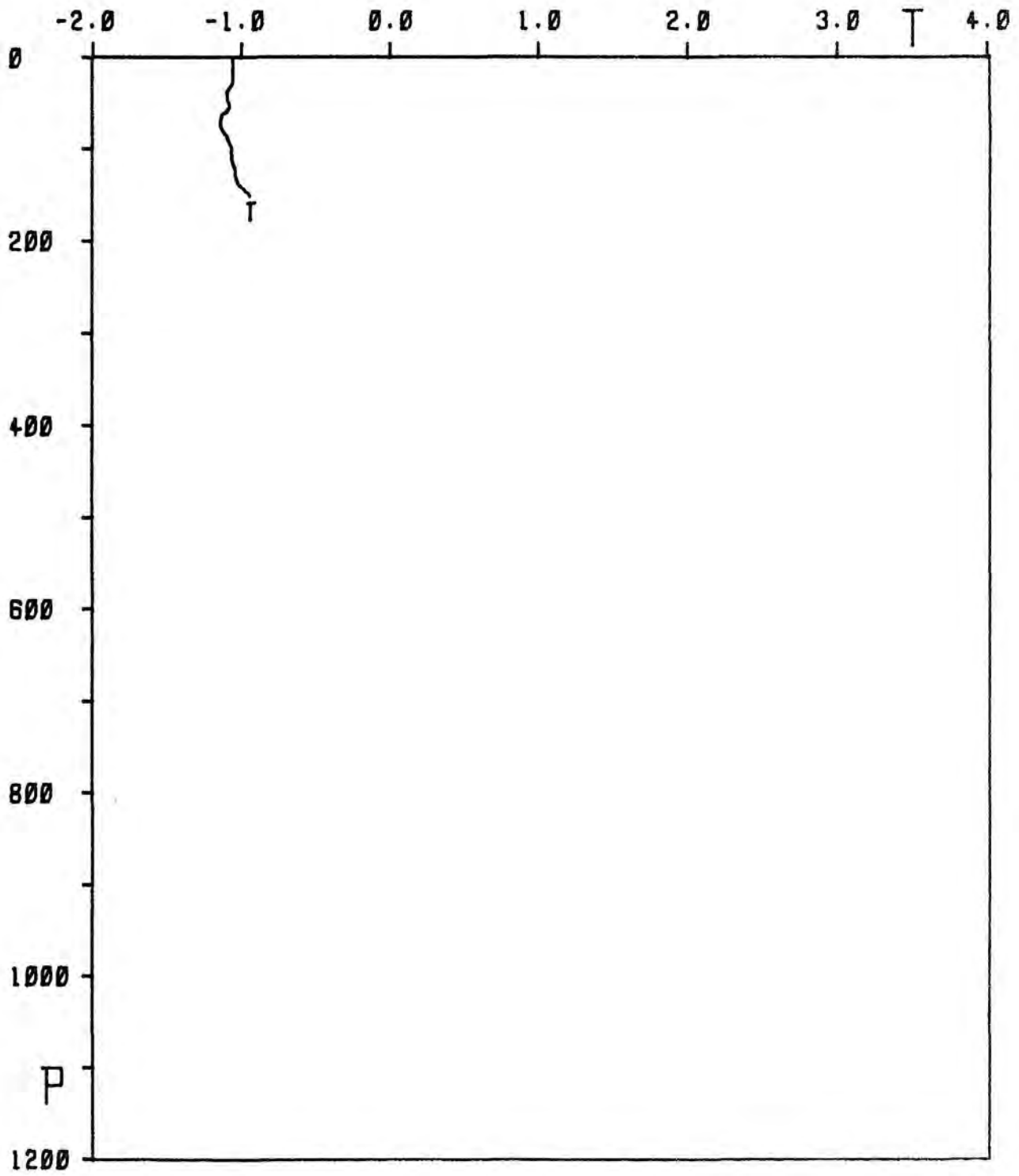
STATION 0062



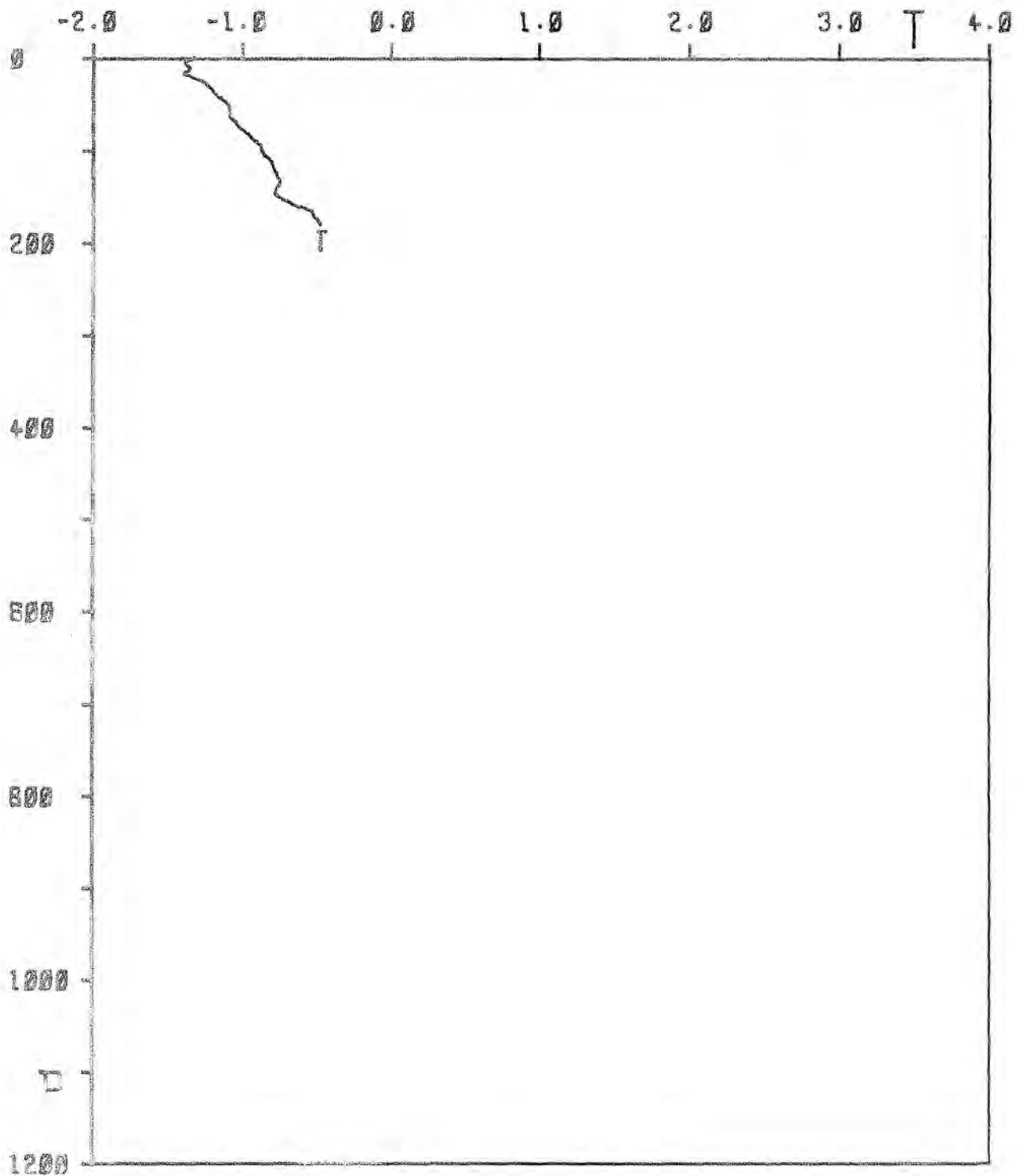
STATION 0063



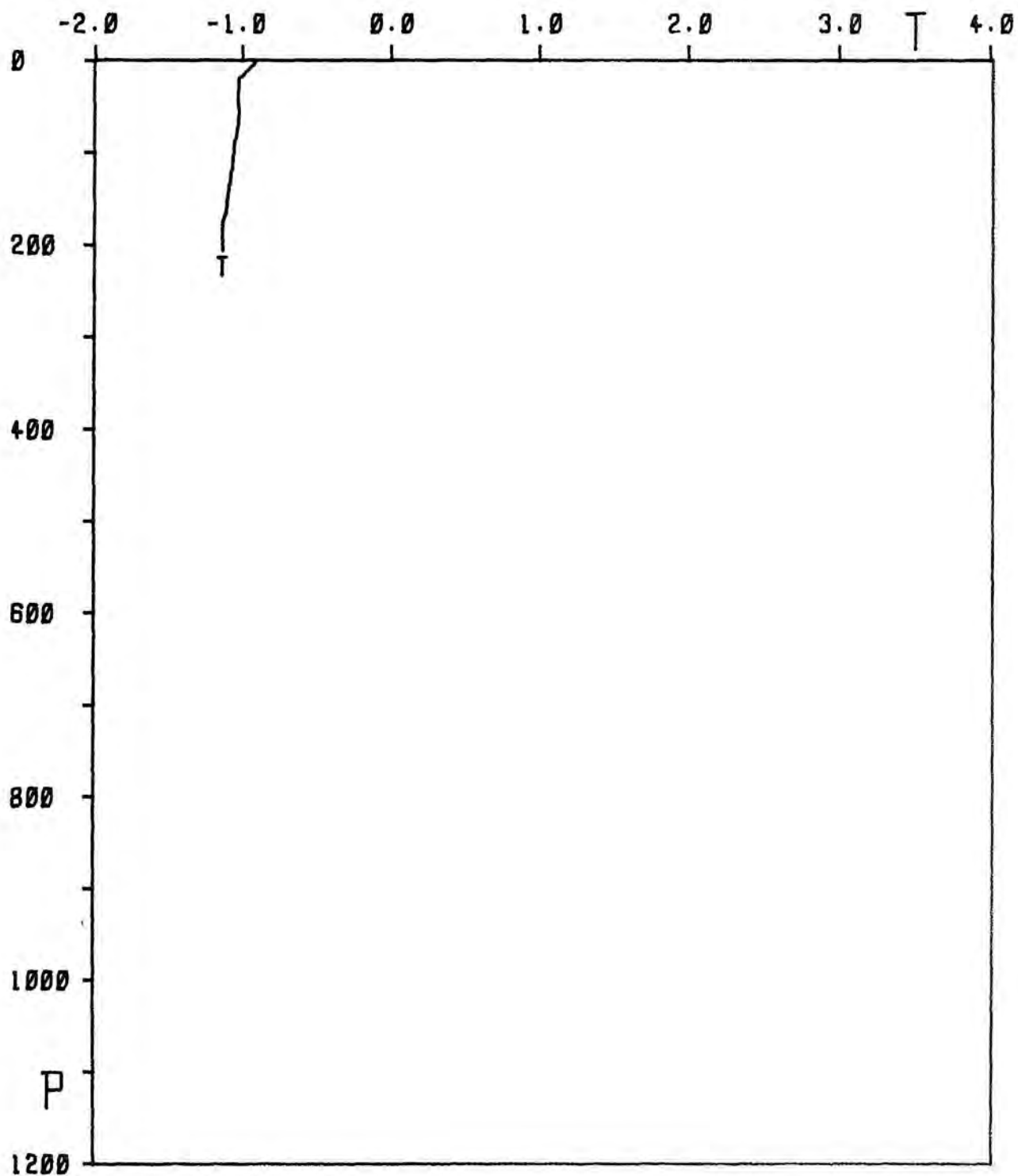
STATION 0064



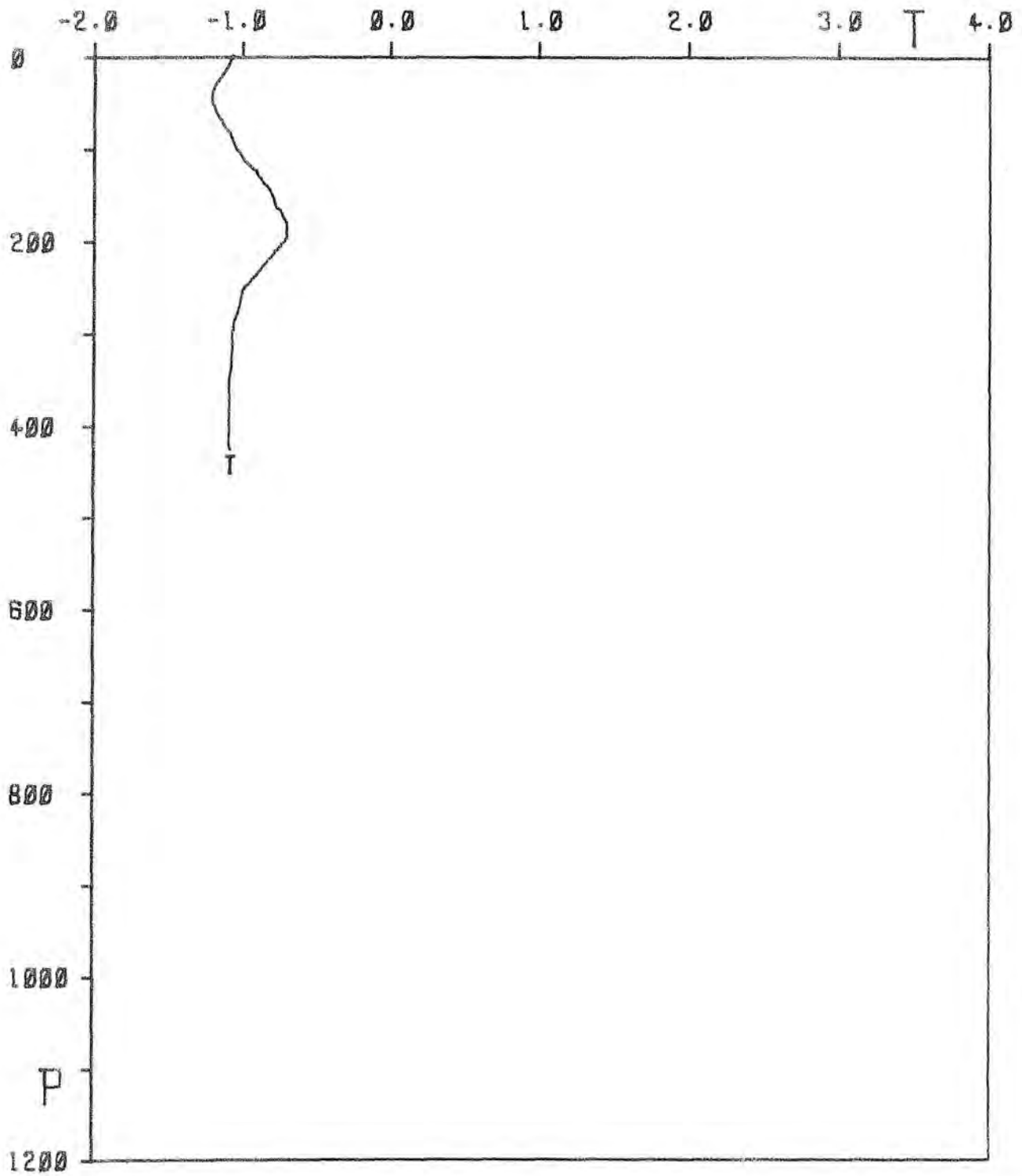
STATION 0065



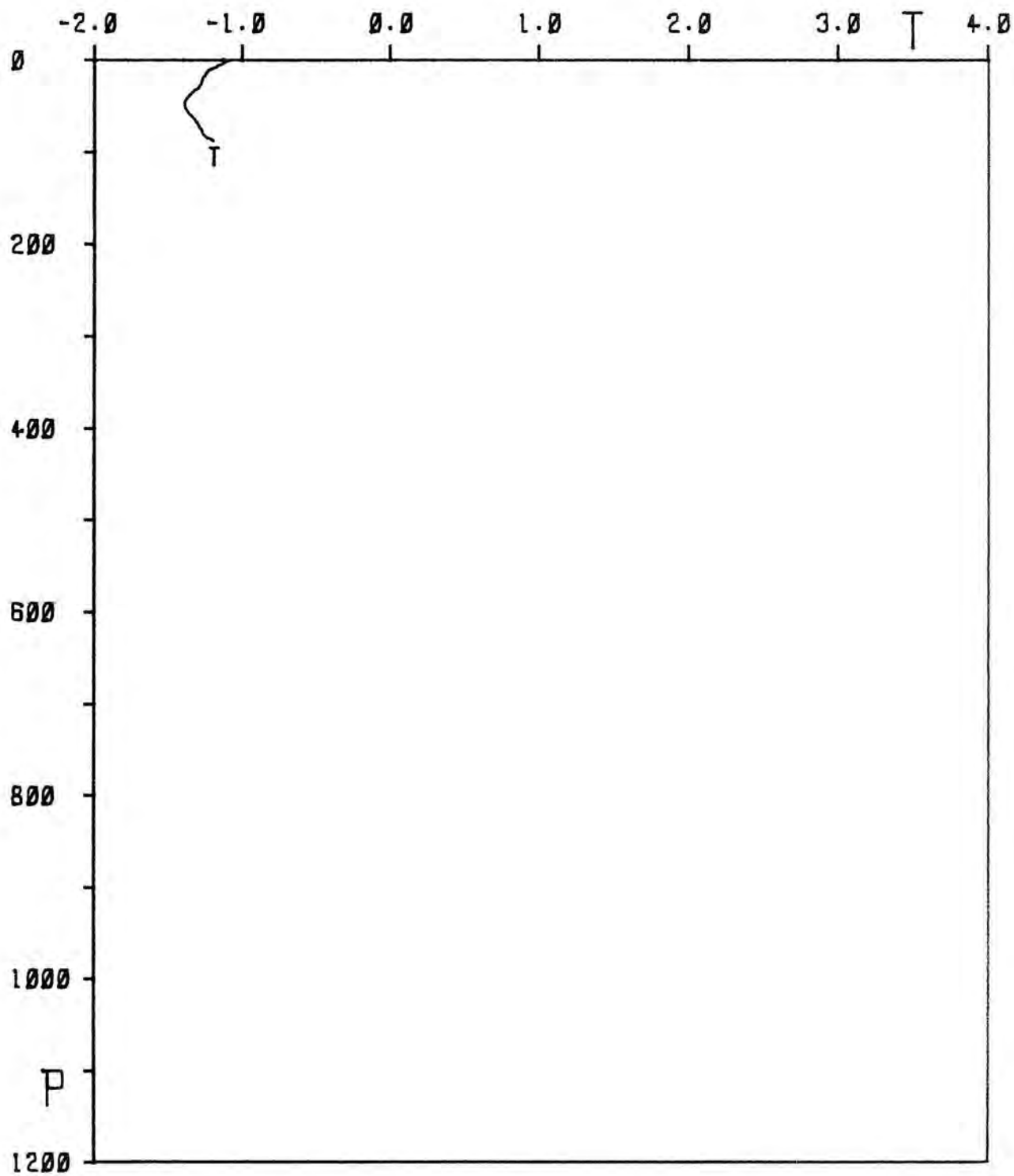
STATION 0066



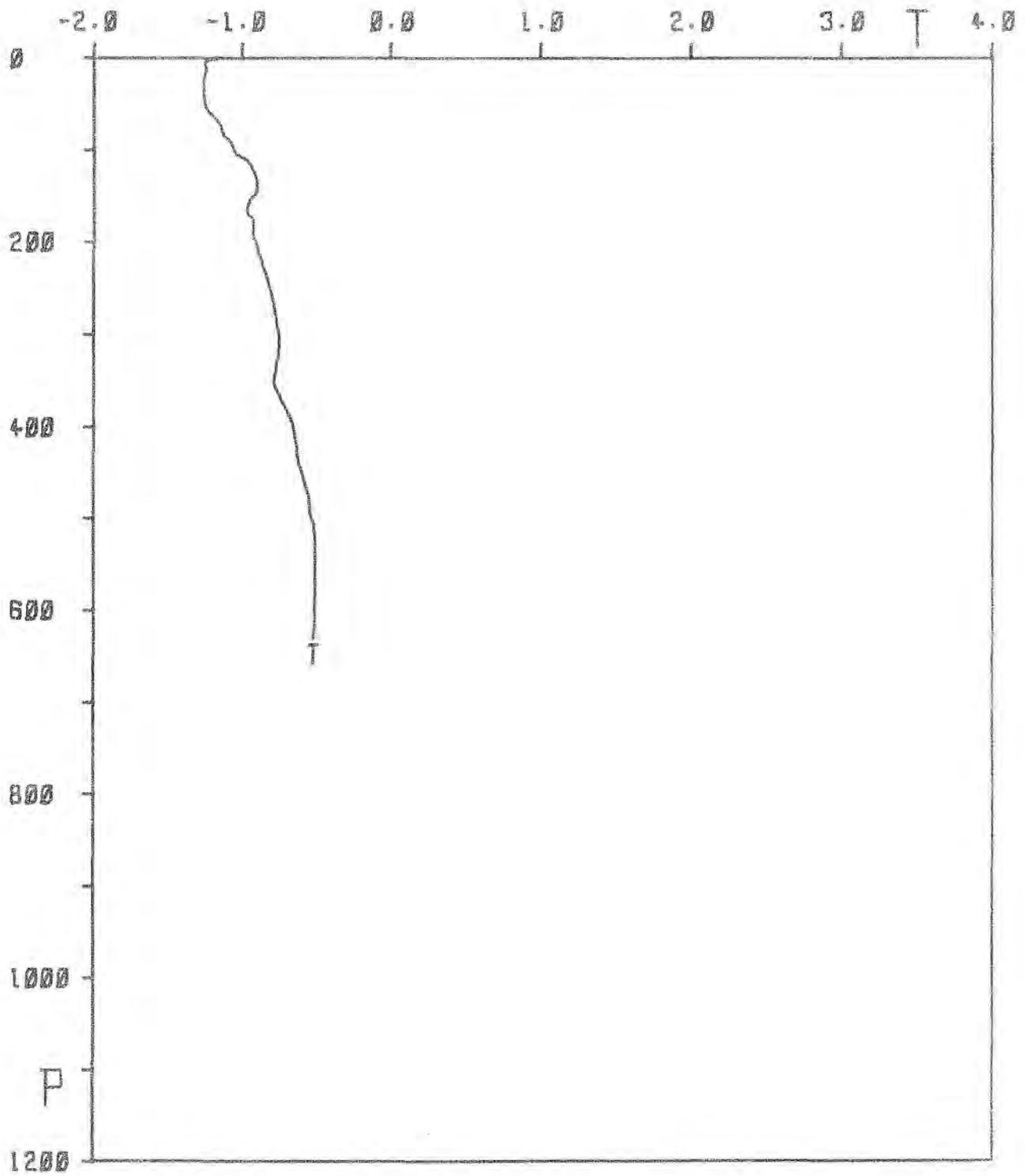
STATION 0067



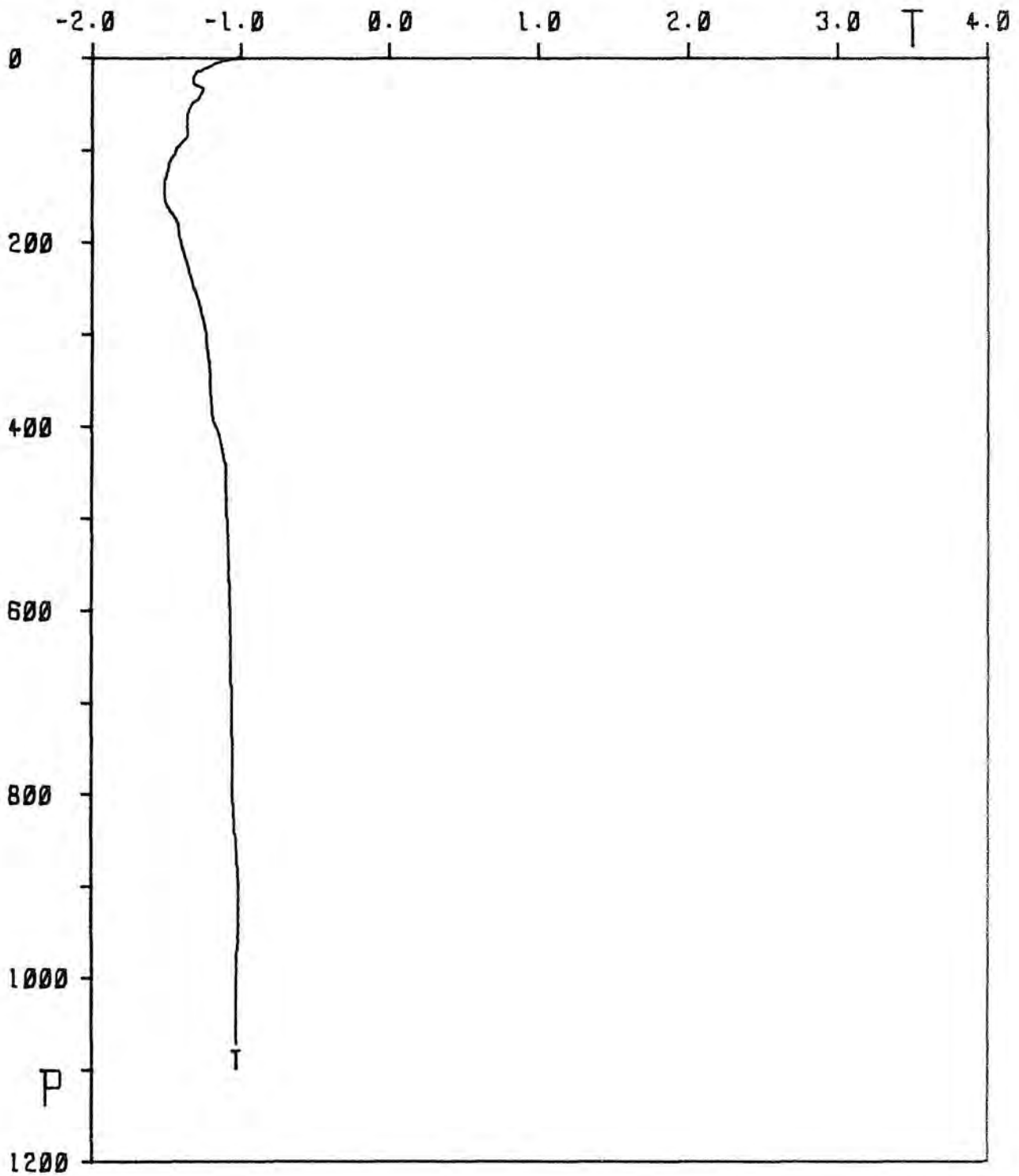
STATION 0068



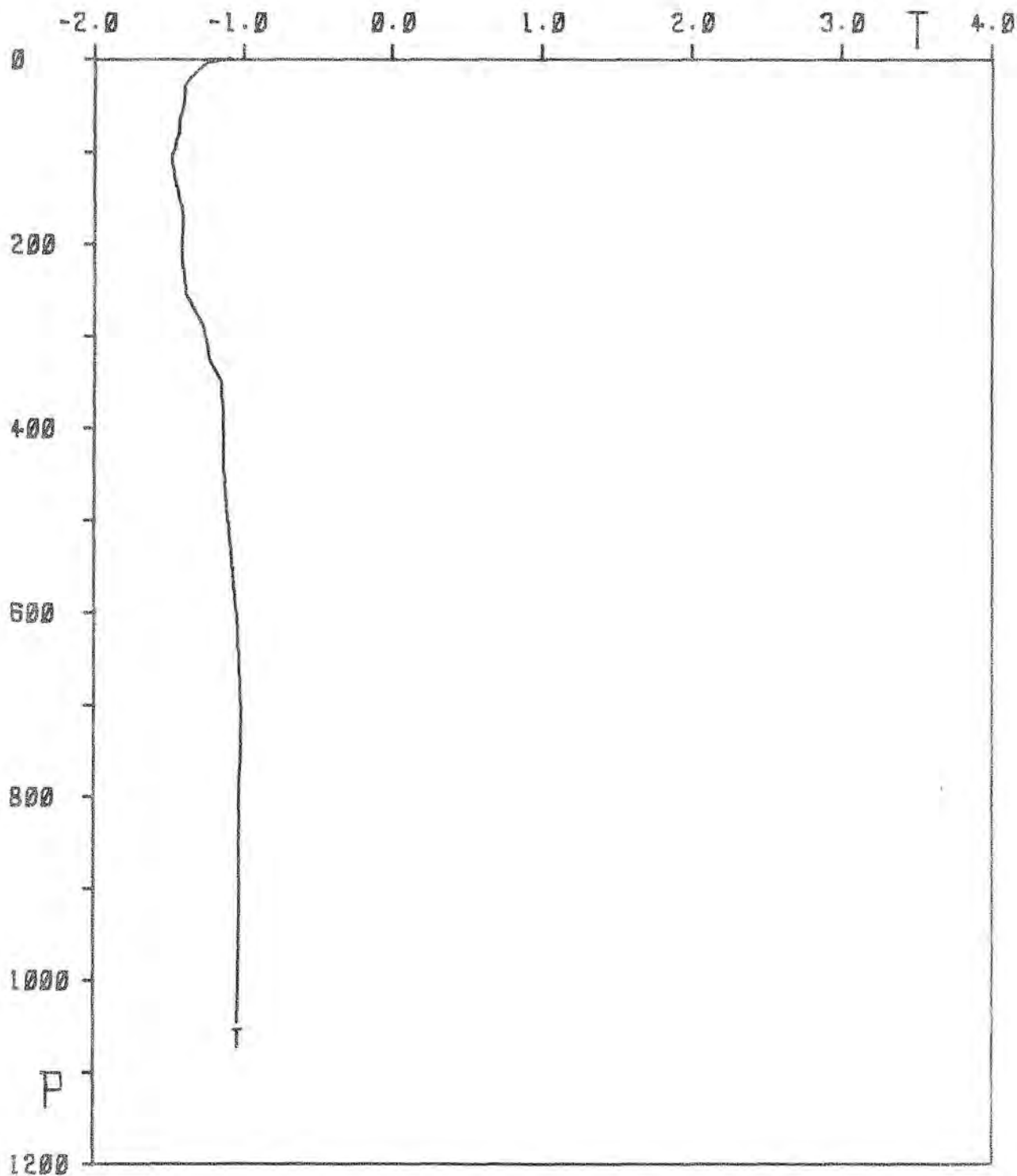
STATION 0069



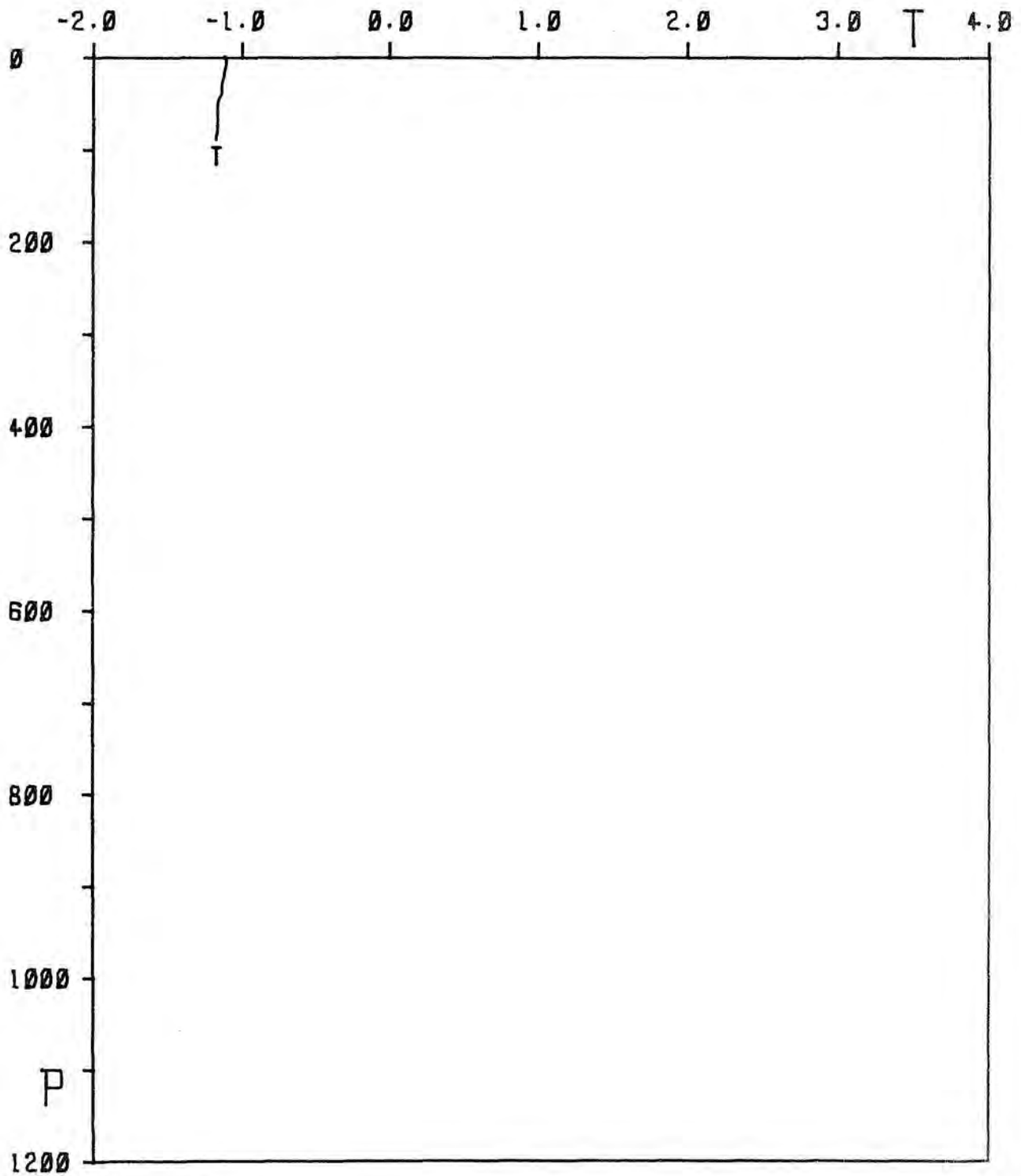
STATION 0070



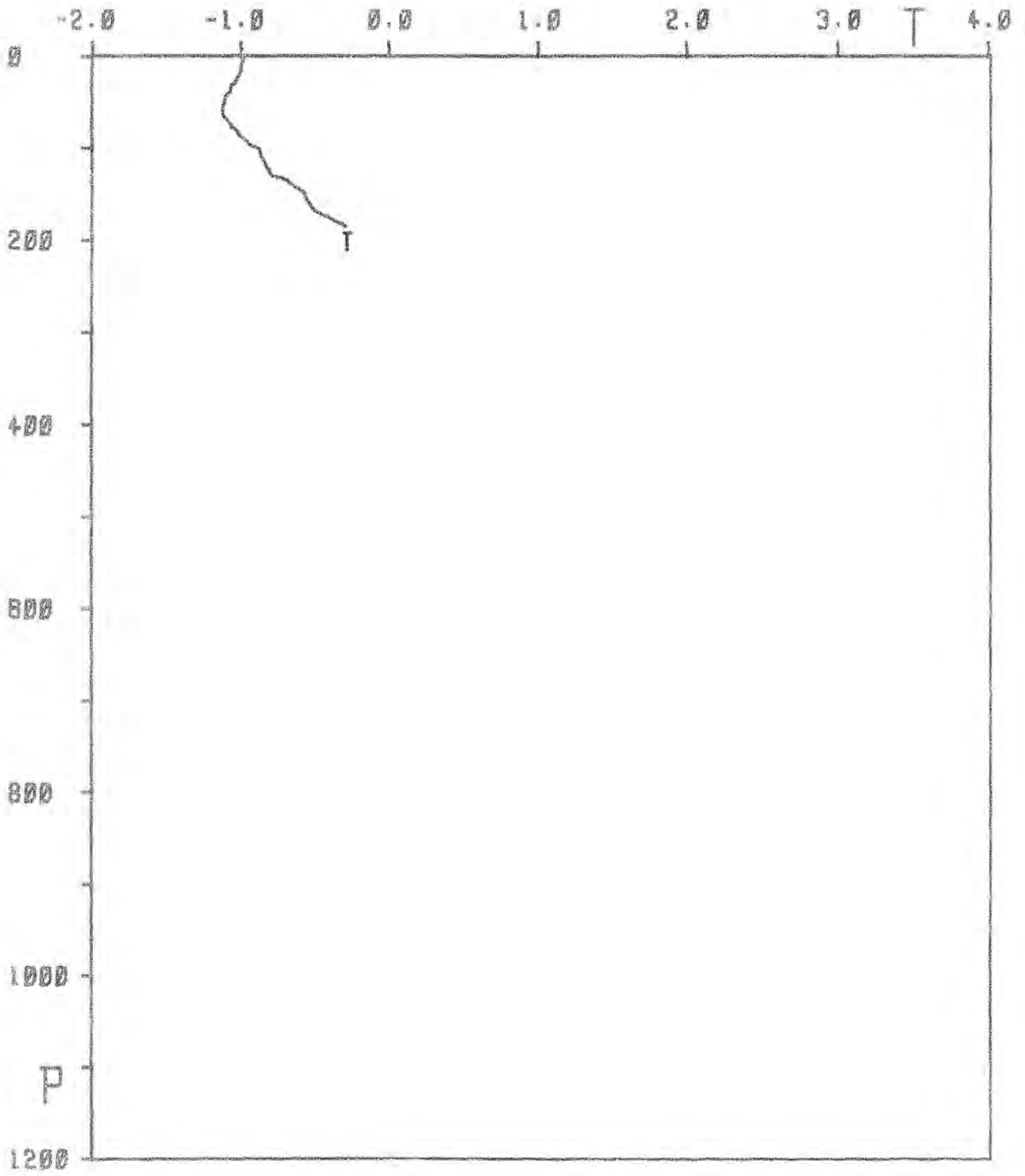
STATION 0071



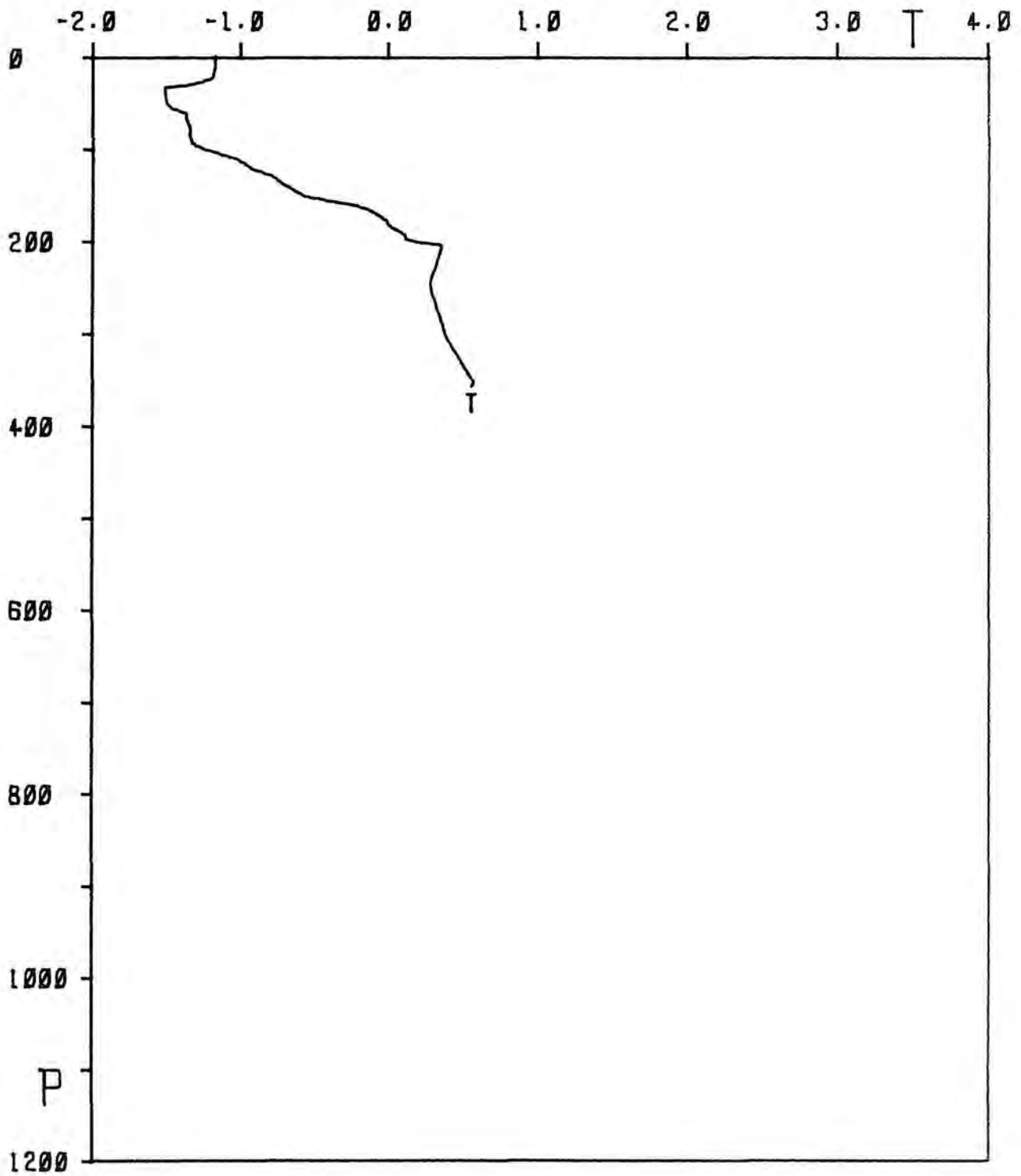
STATION 0072



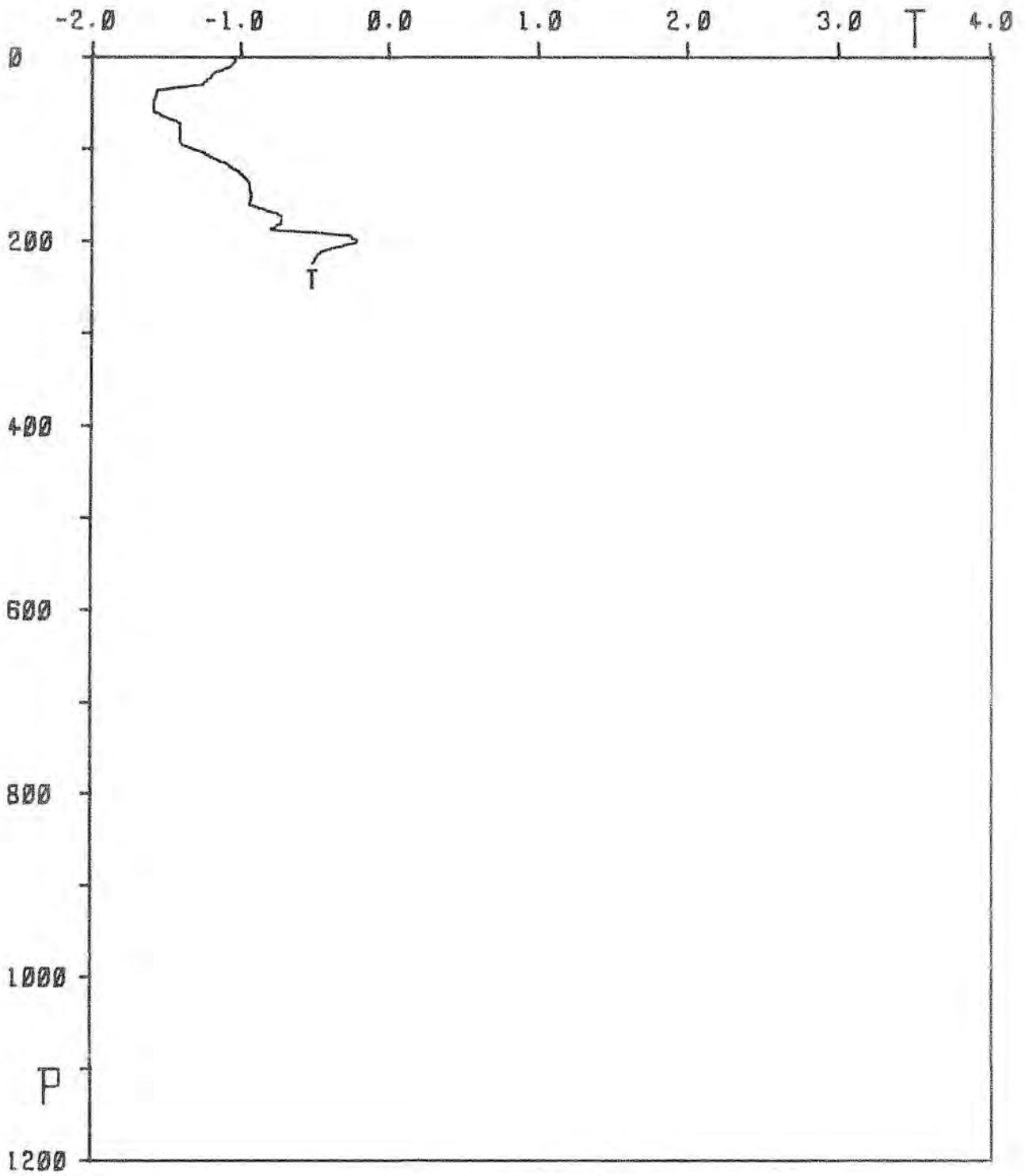
STATION 0073



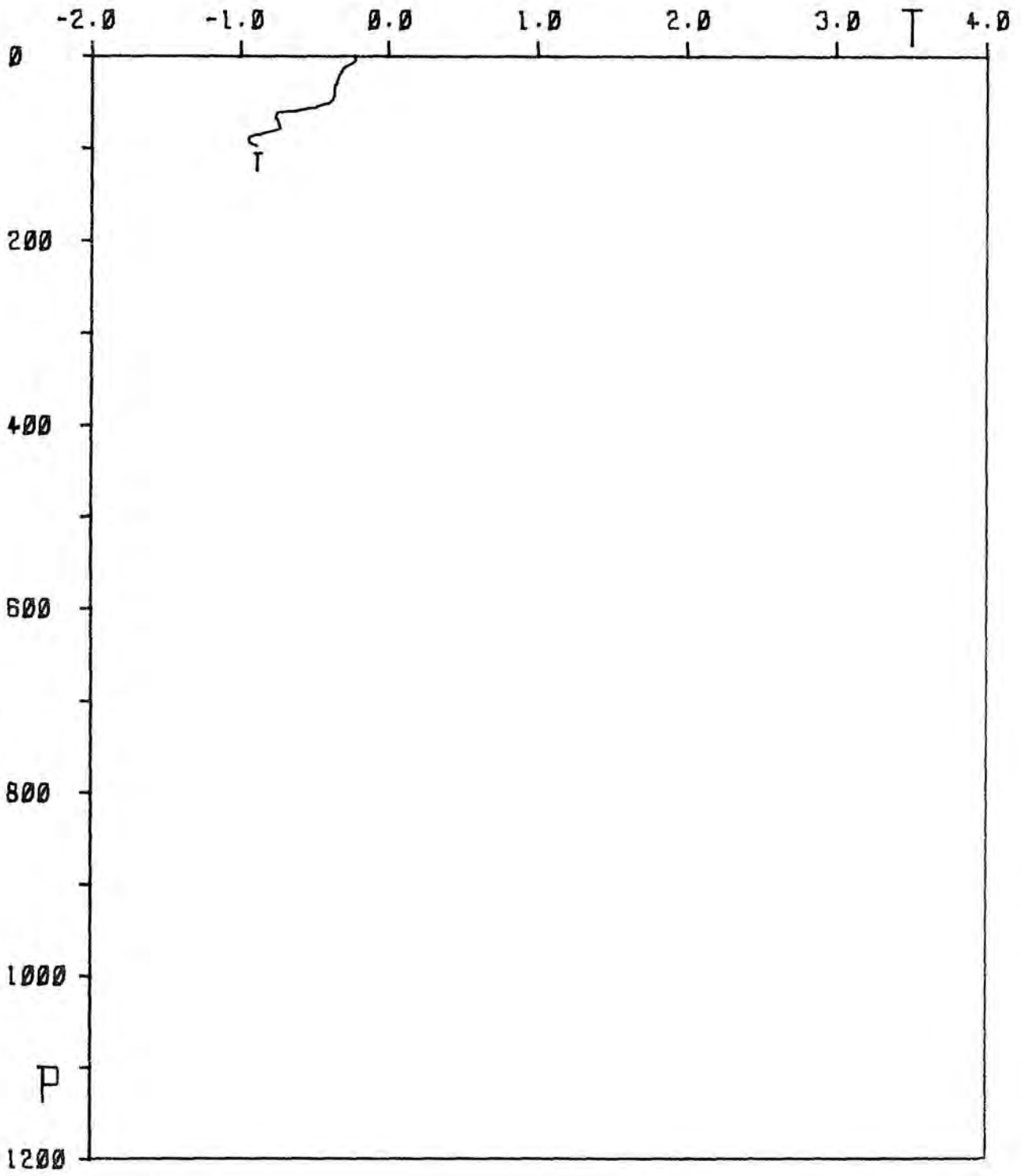
STATION 0074



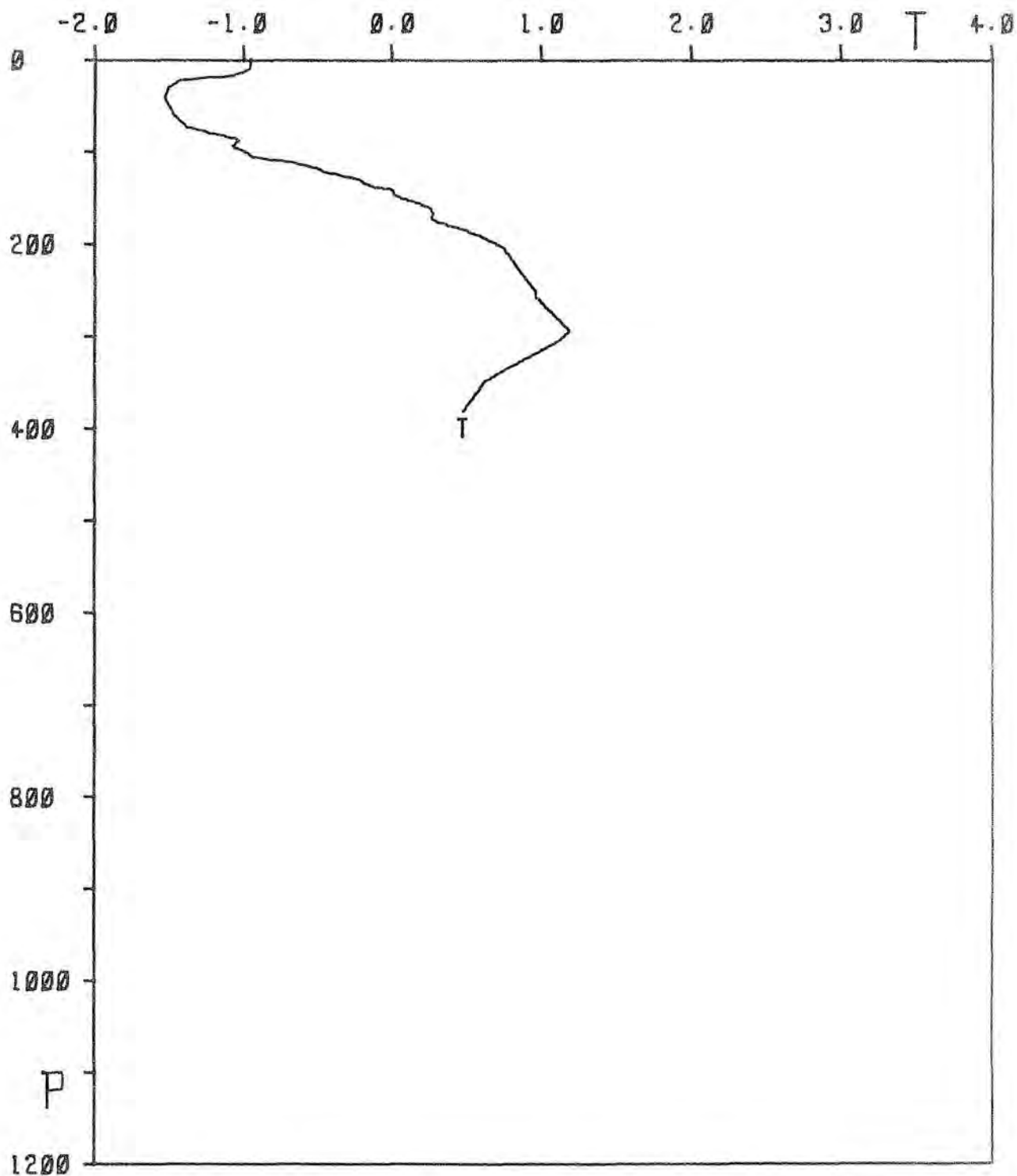
STATION 0075



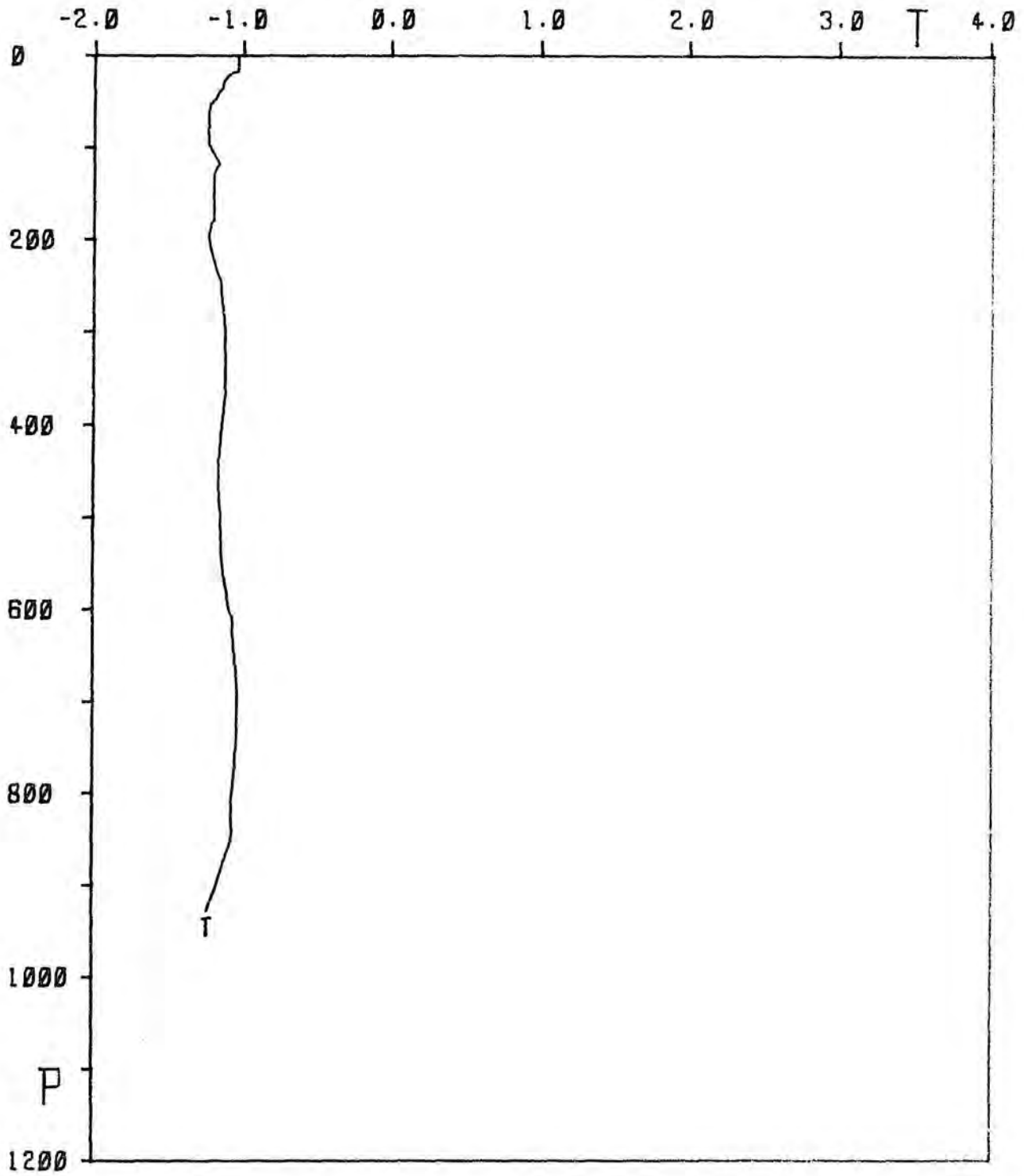
STATION 0076



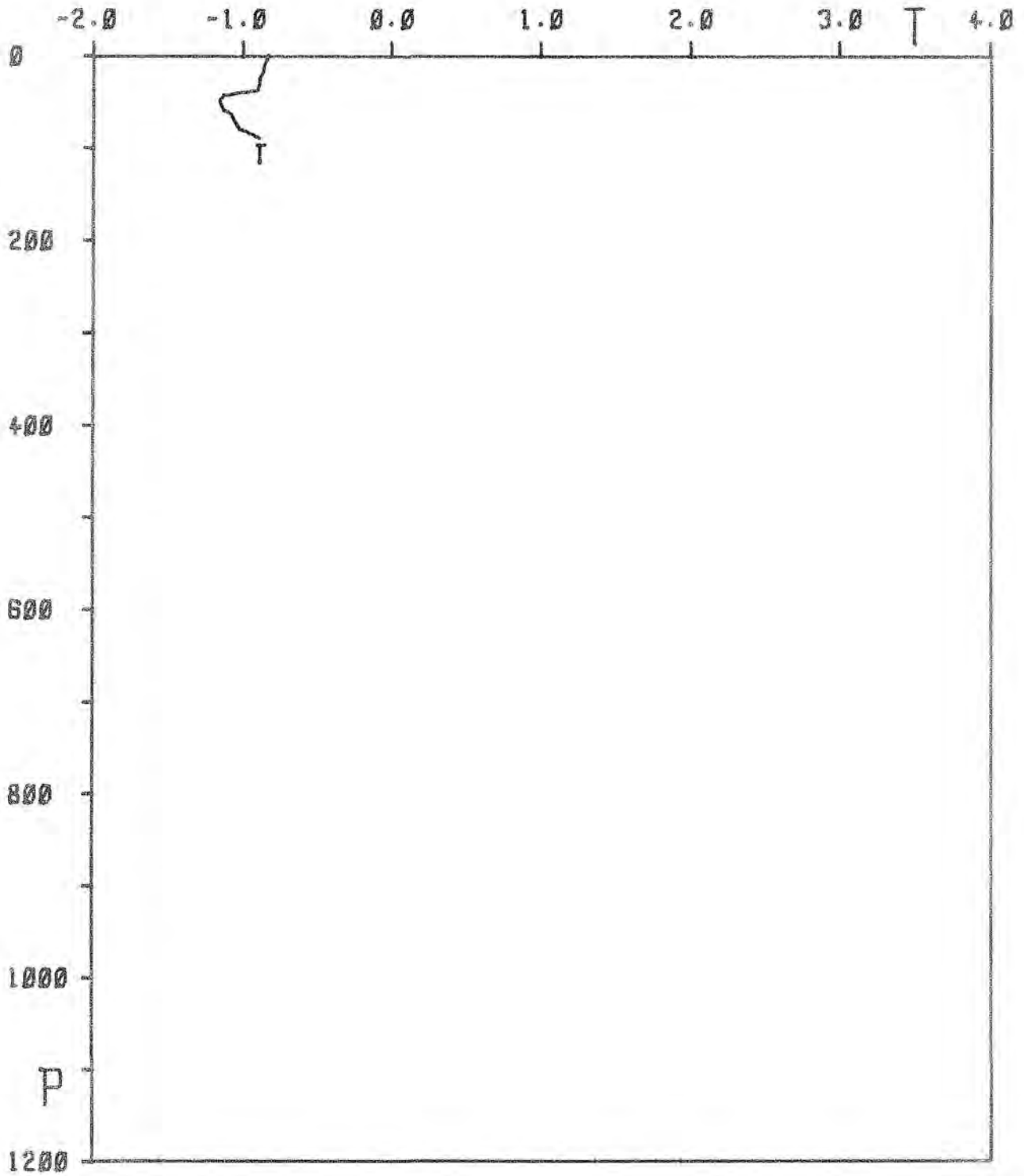
STATION 0078



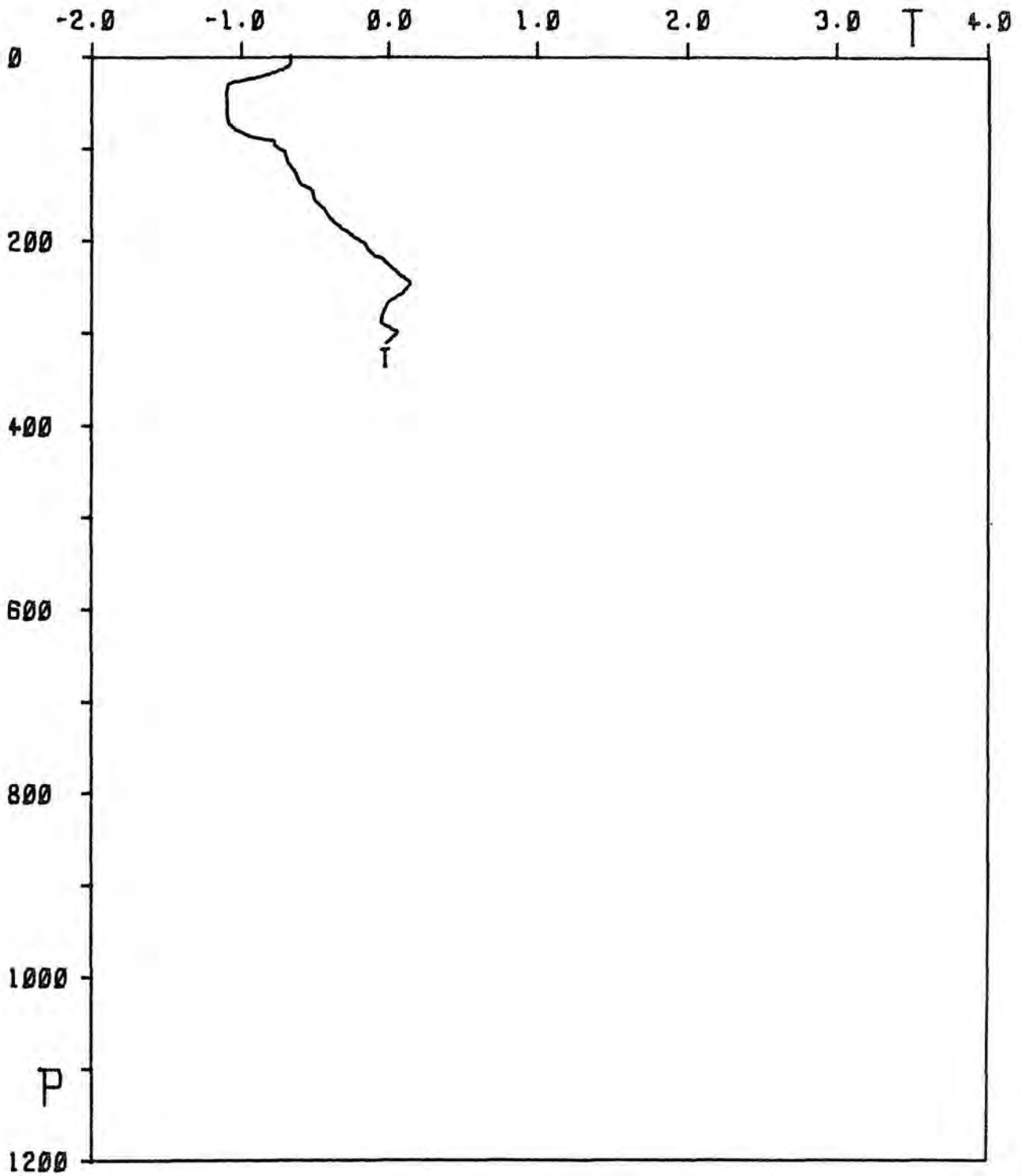
STATION 0079



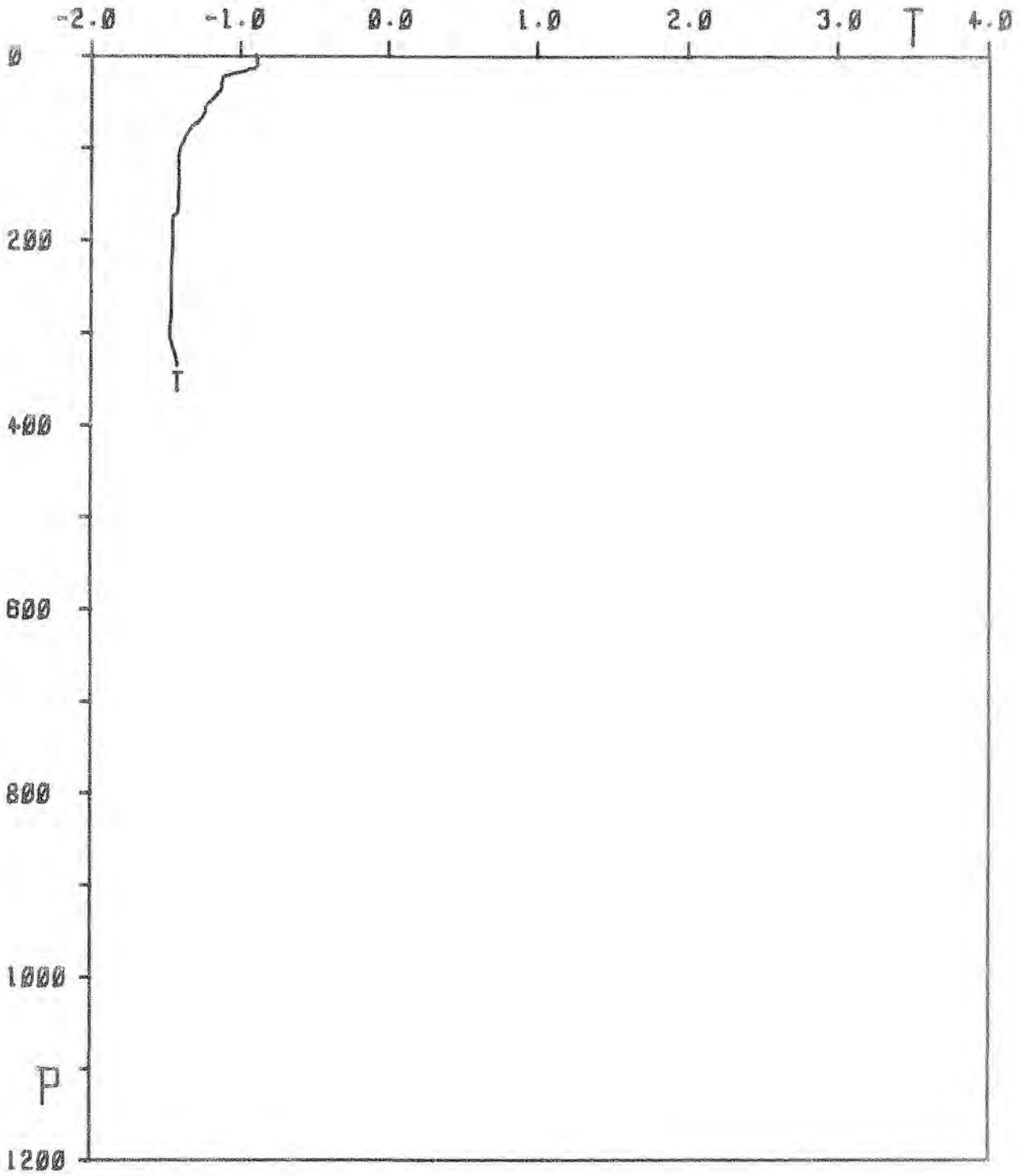
STATION 0080



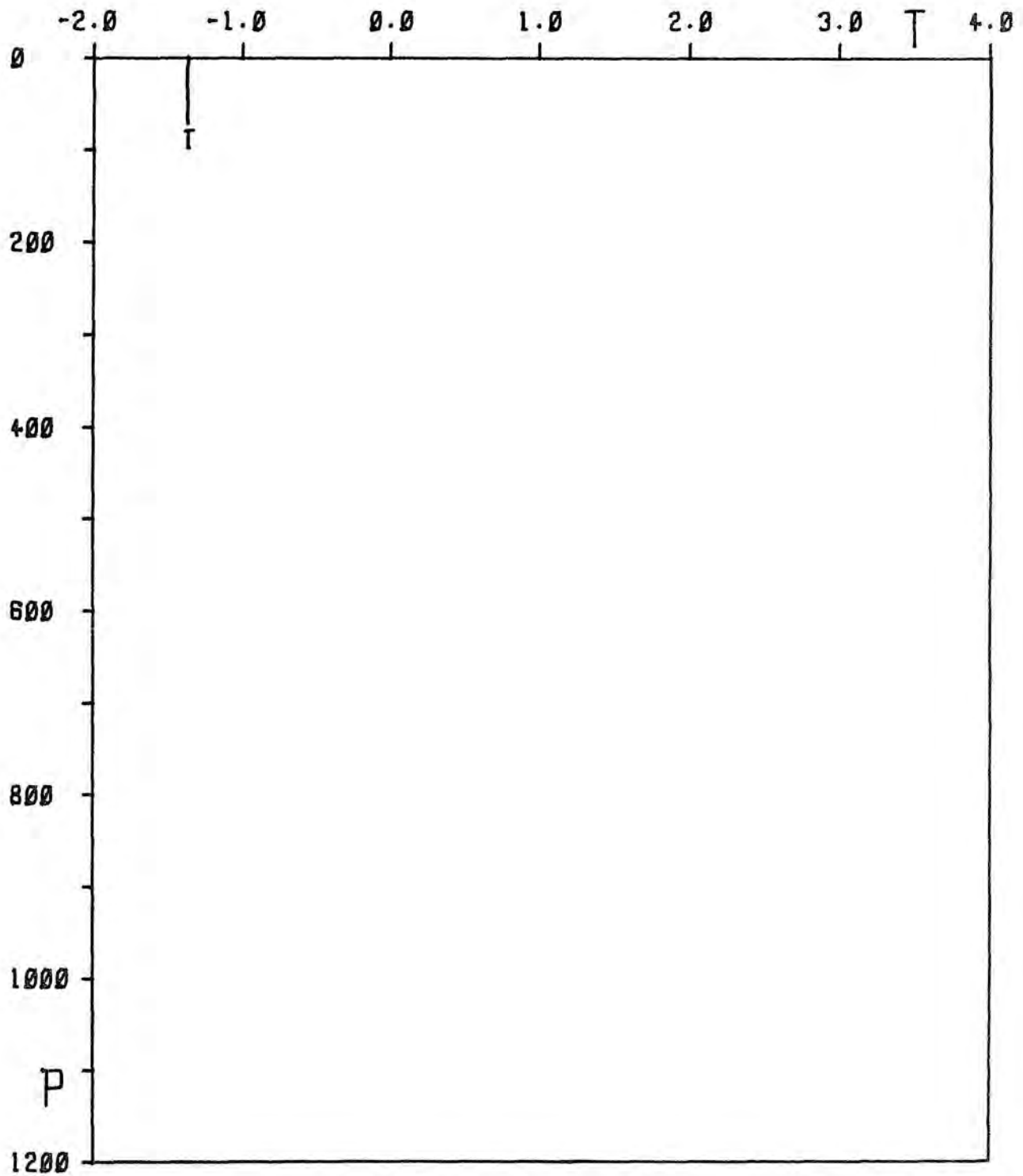
STATION 0081



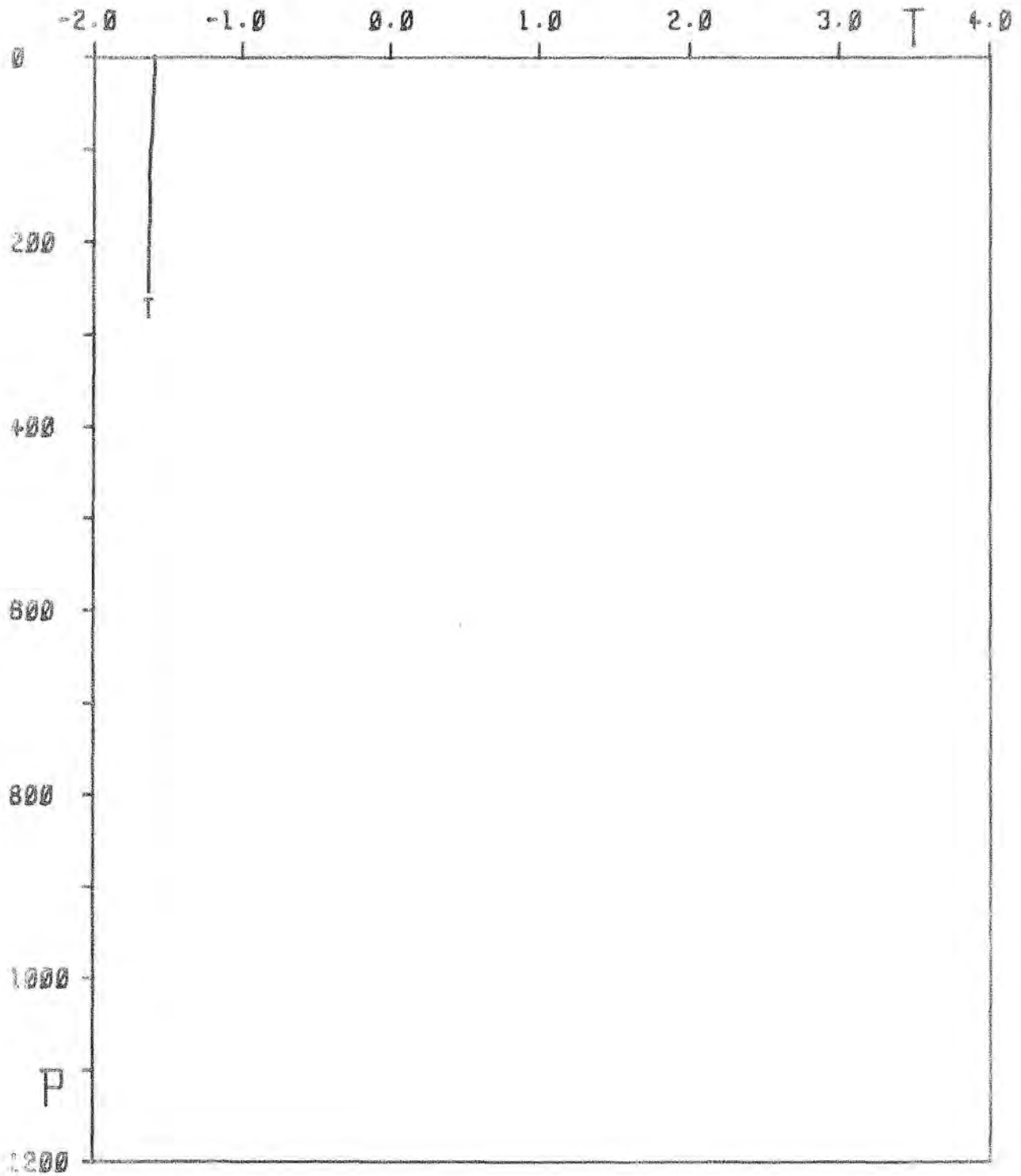
STATION 0083



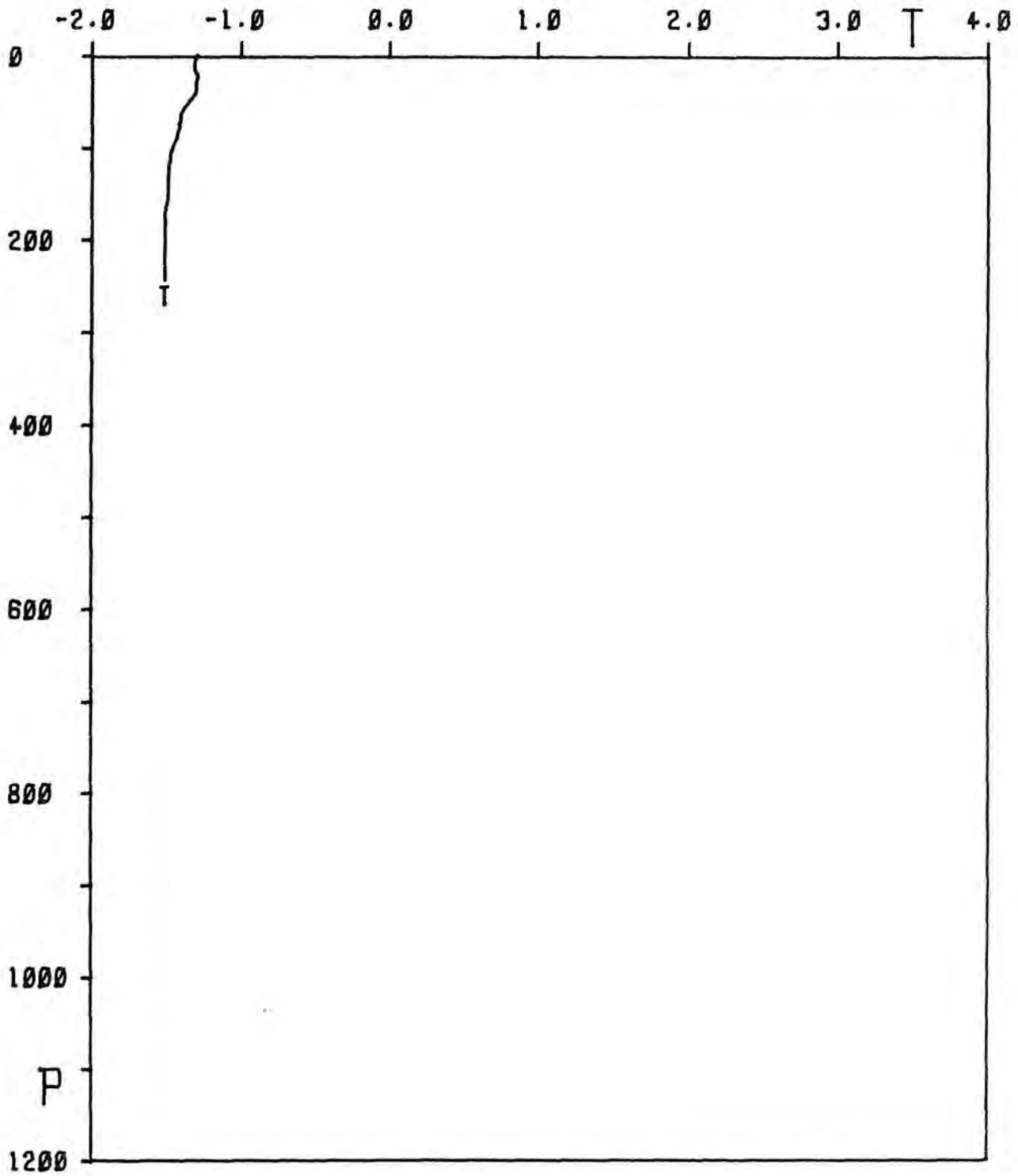
STATION 0084



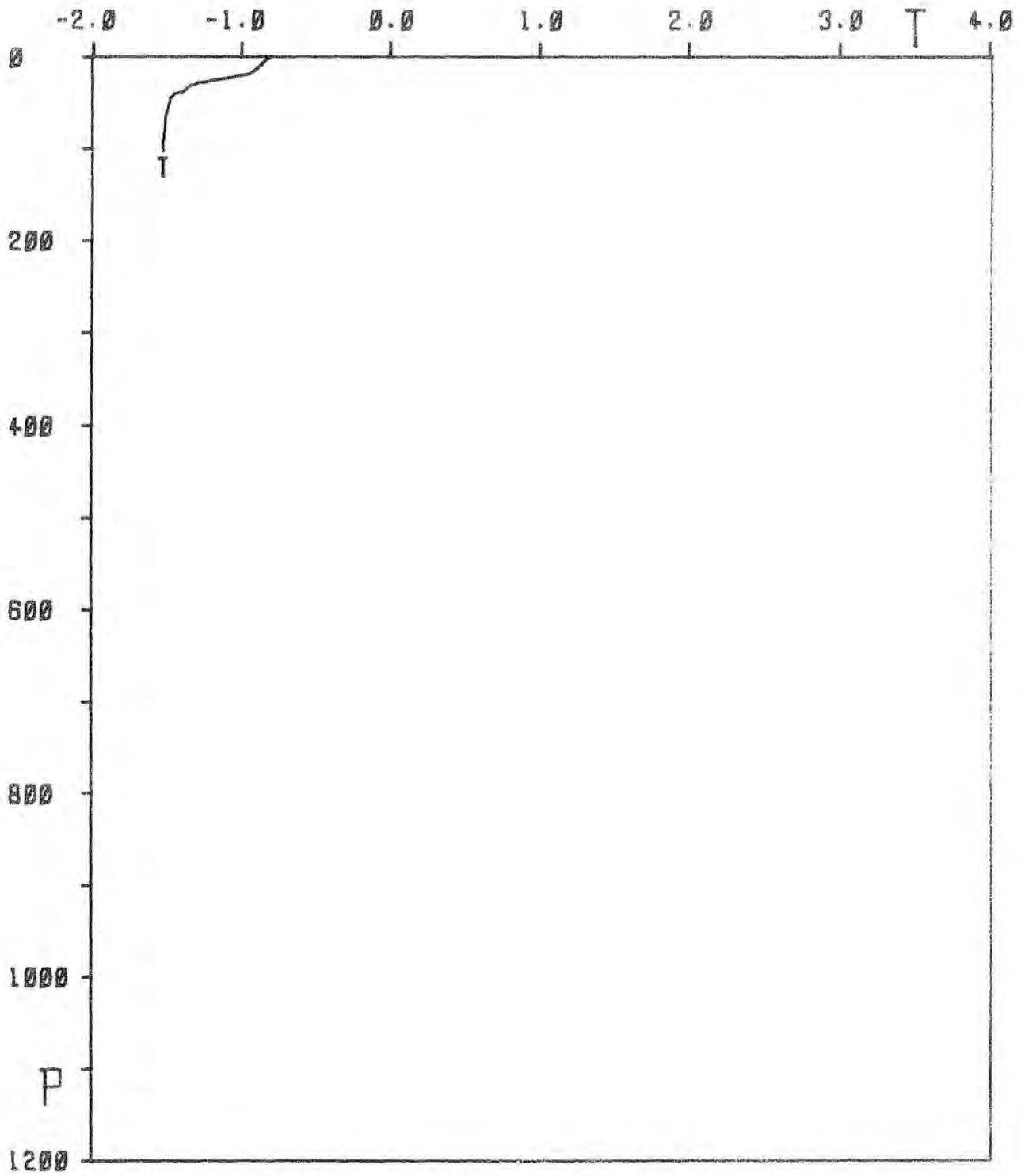
STATION 0085



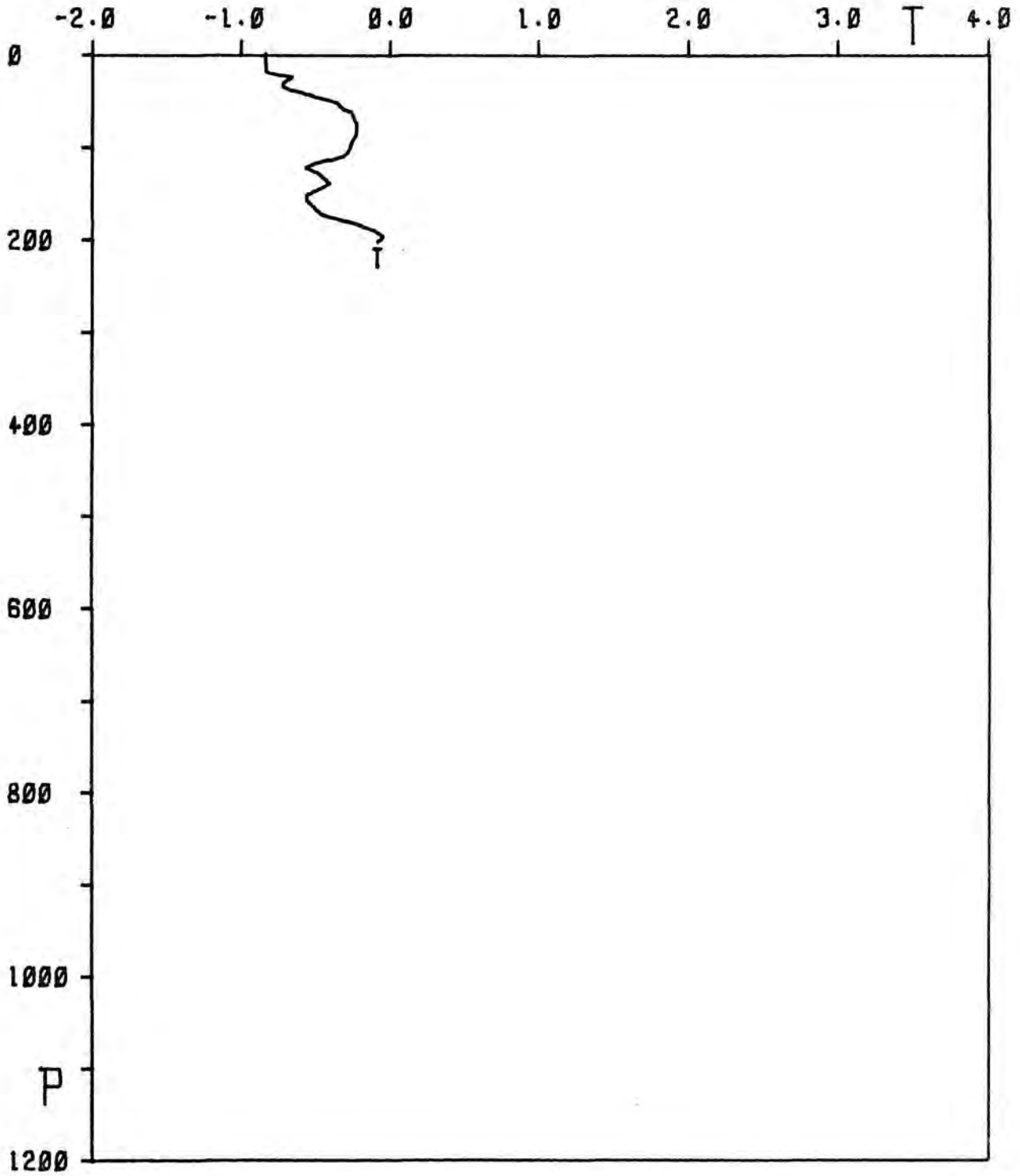
STATION 0086



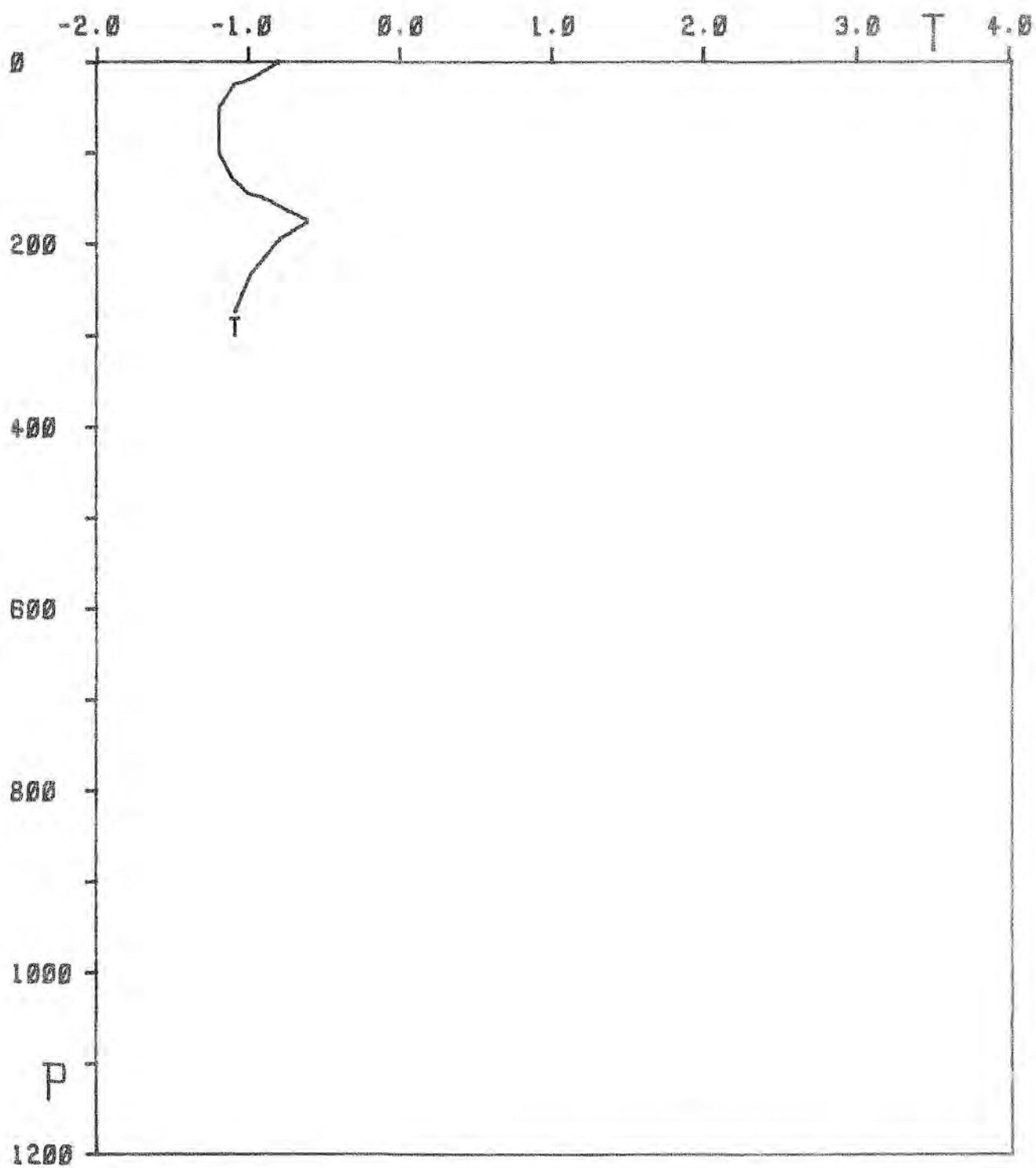
STATION 0087



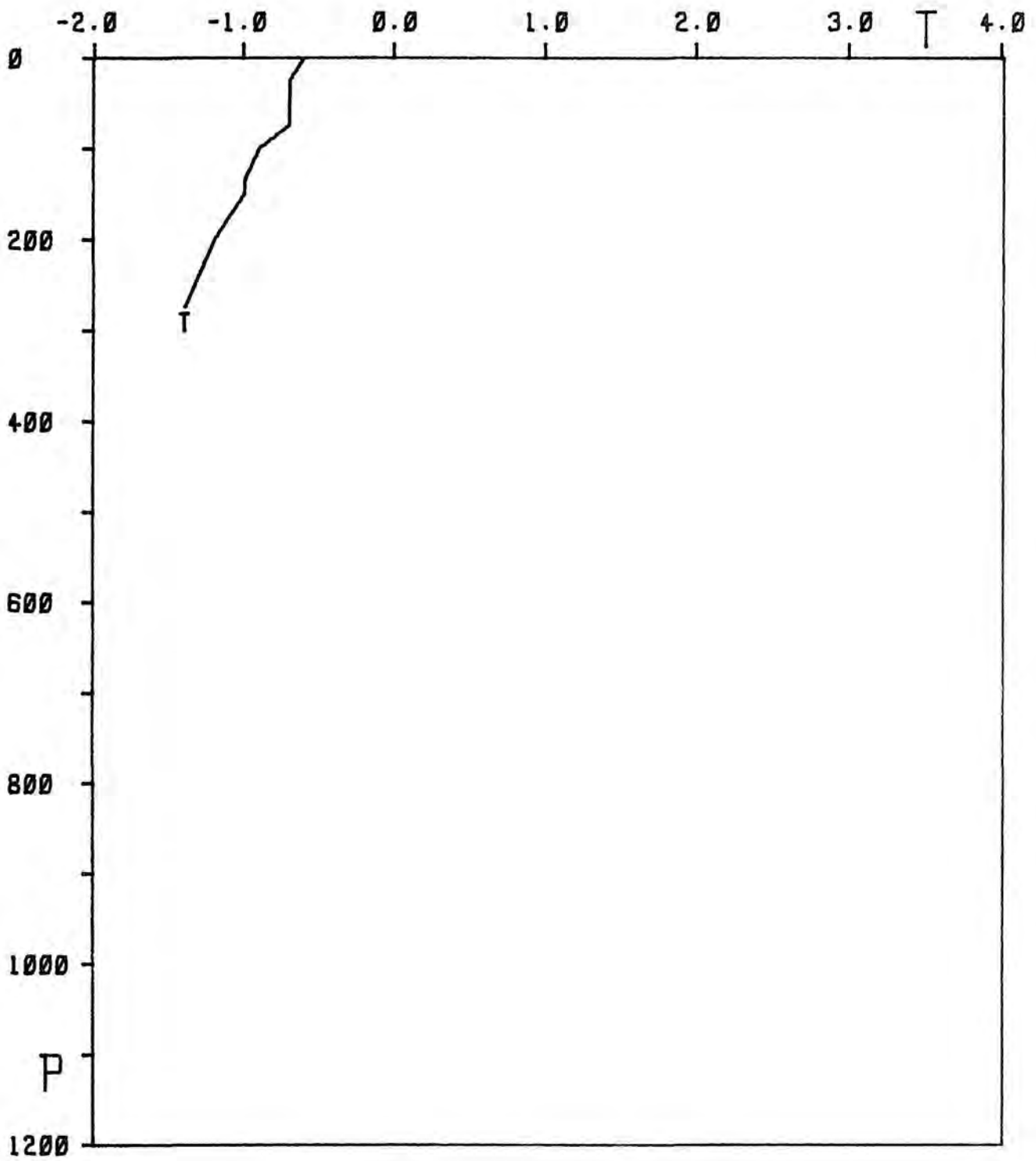
STATION 0088



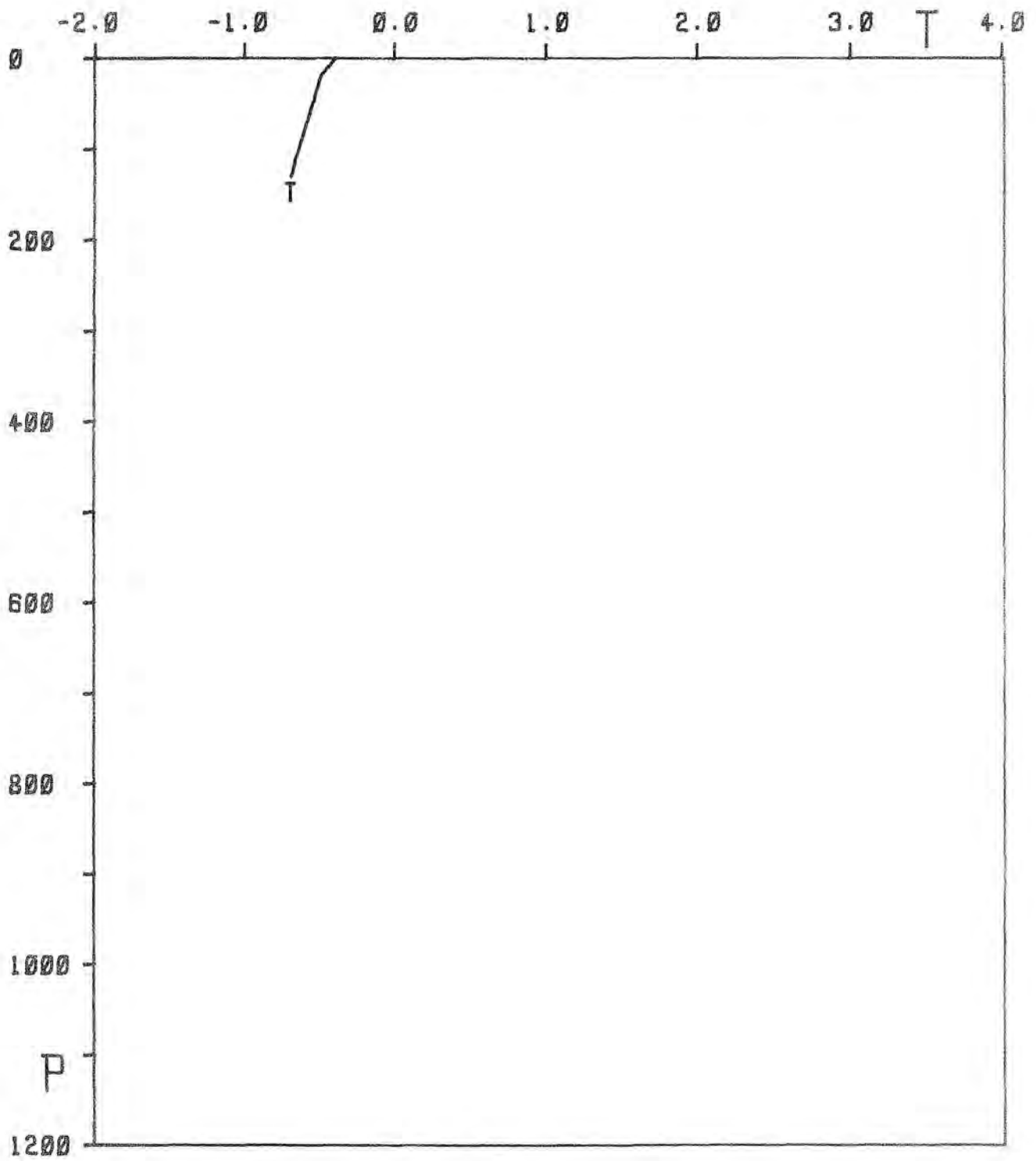
STATION 0091_{BT}



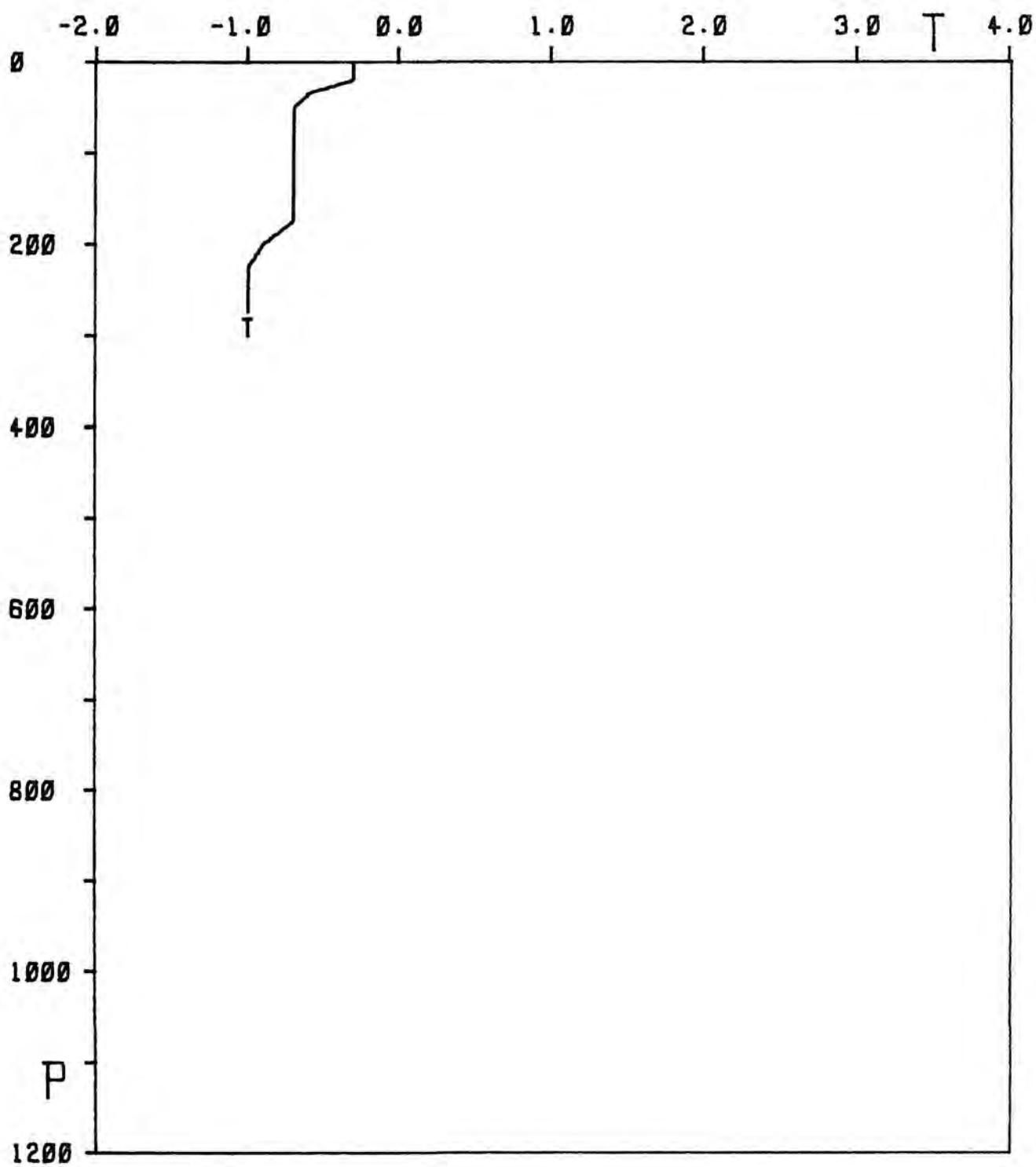
STATION 0092 BT



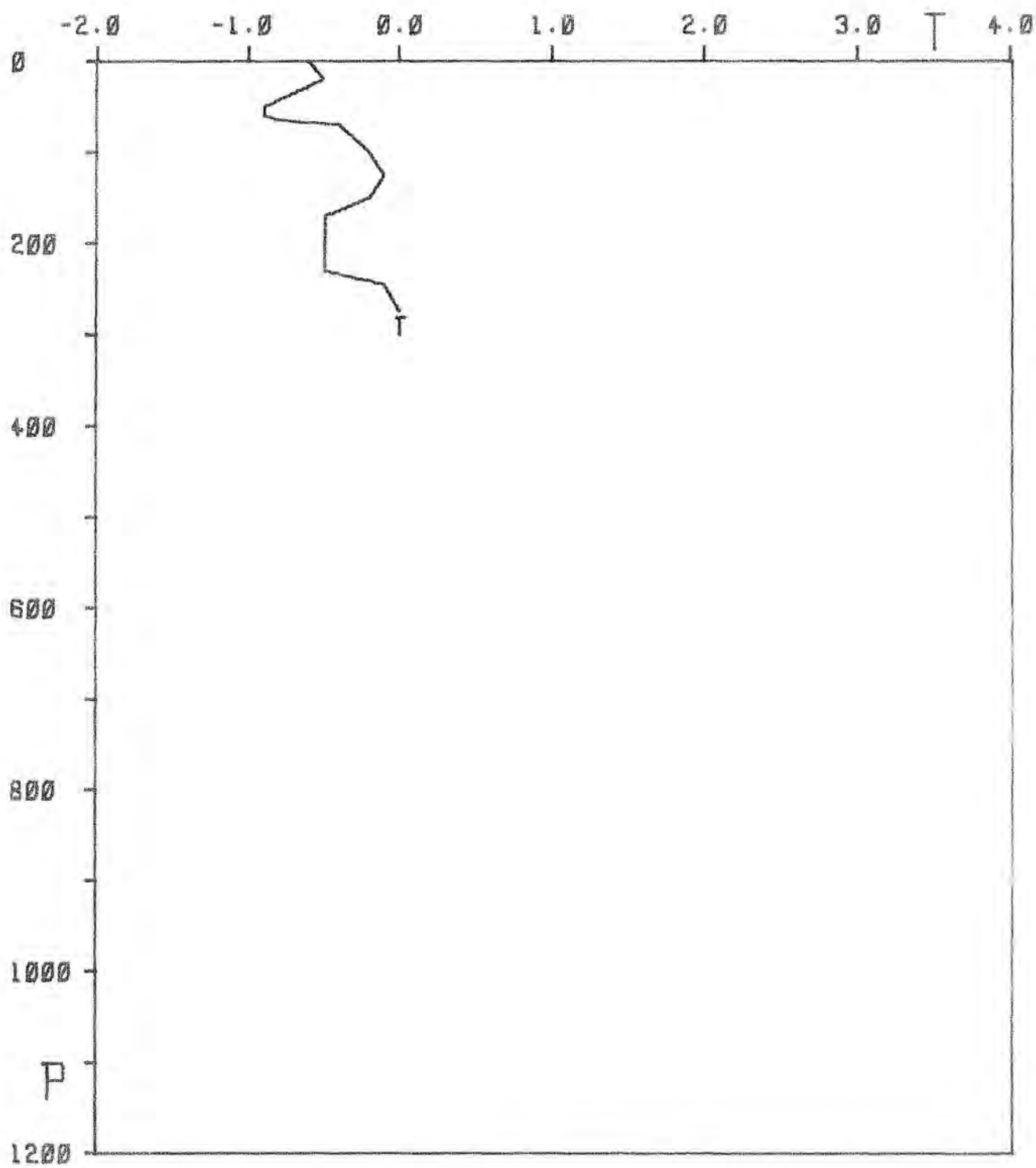
STATION 0093_{BT}



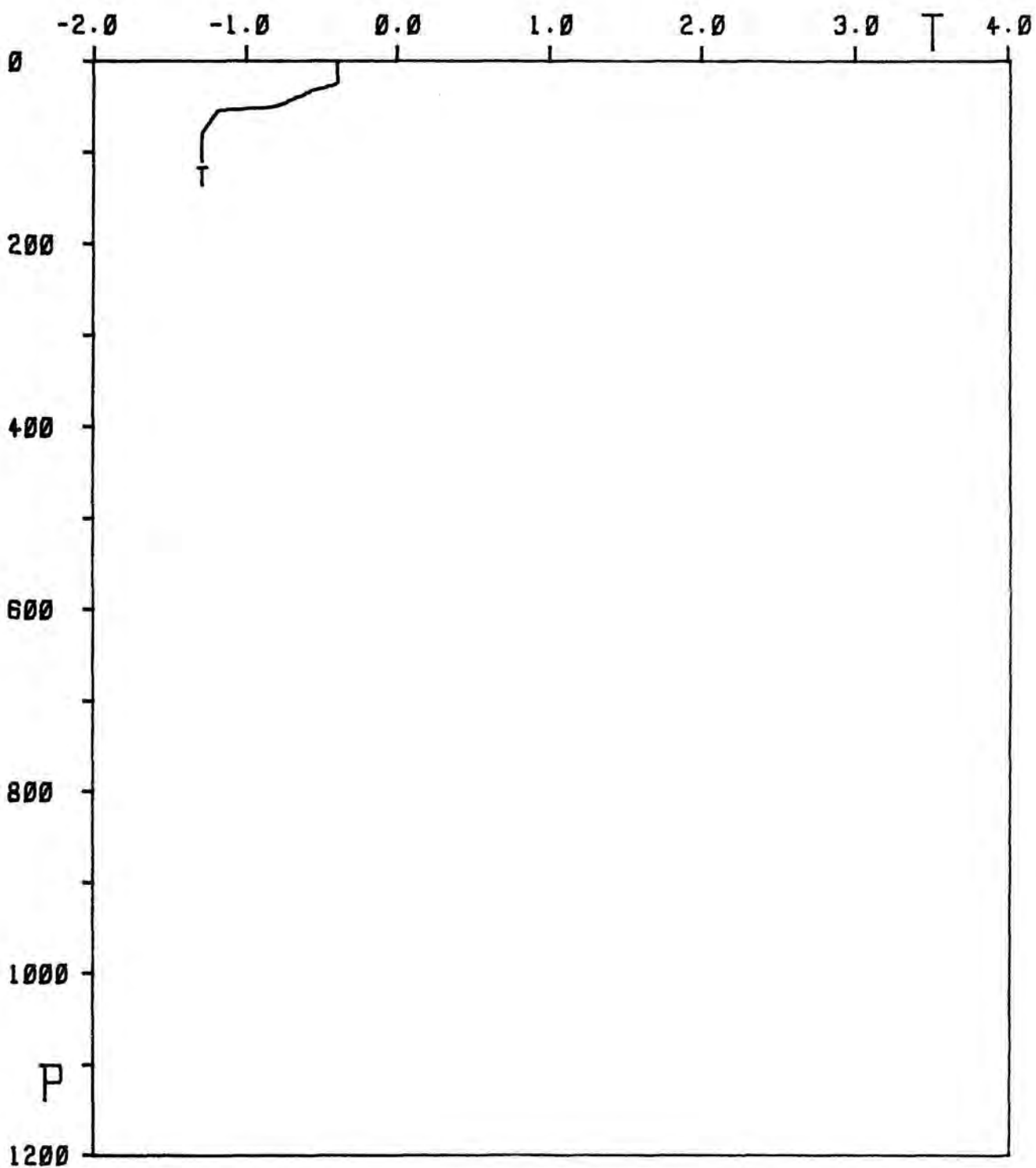
STATION 0094_{BT}



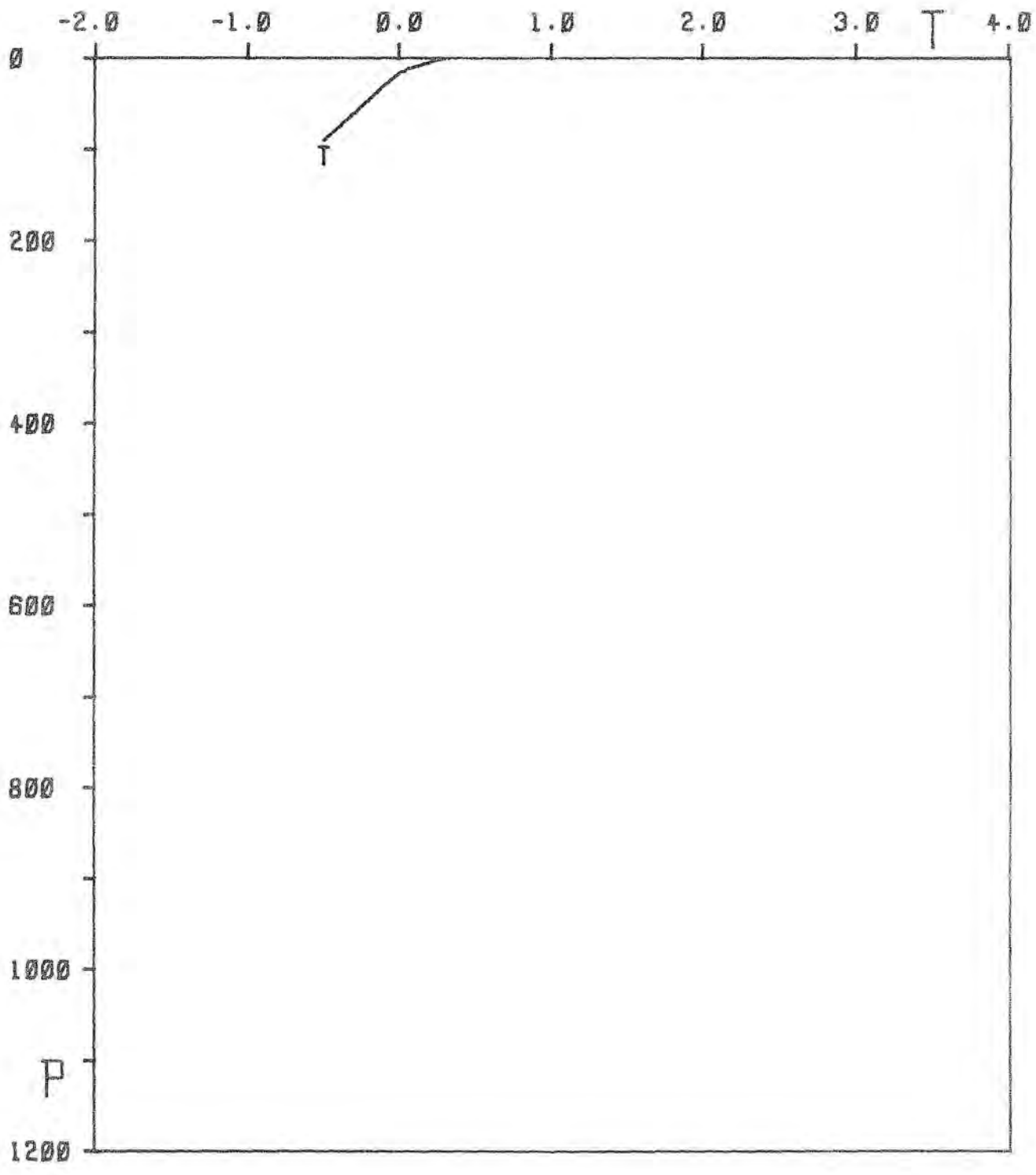
STATION 0095 BT



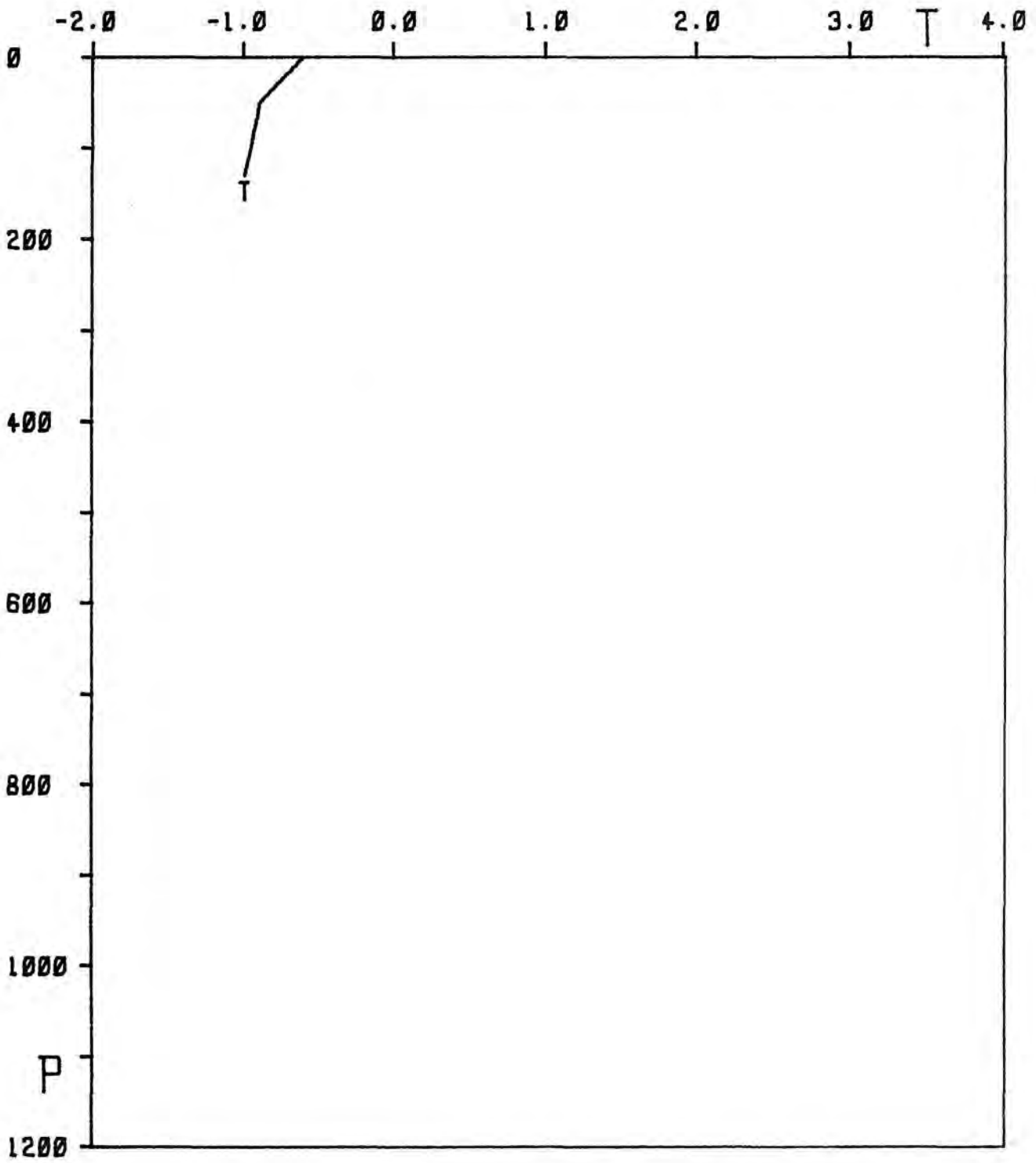
STATION 0096_{BT}



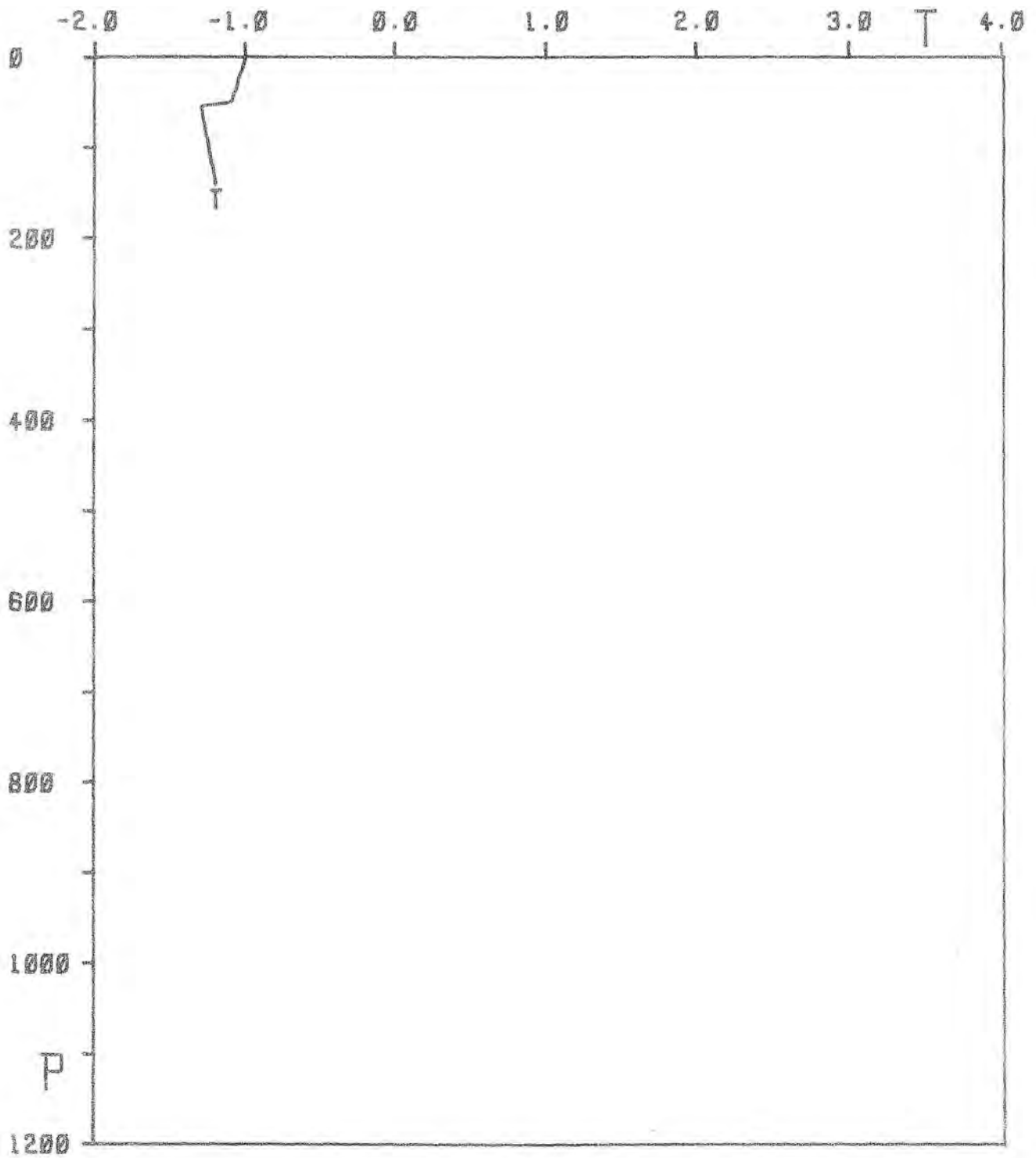
STATION 0097 RT



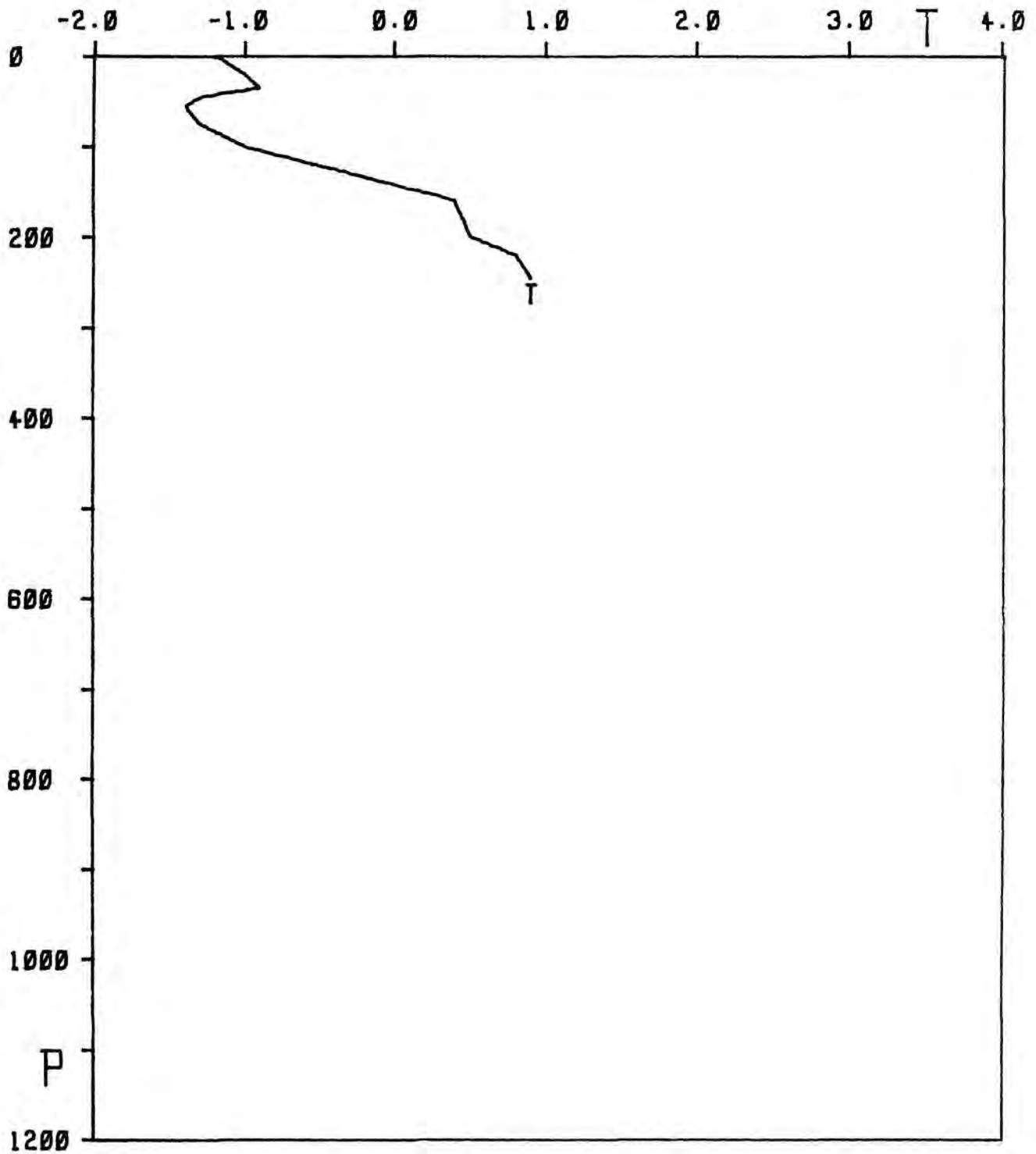
STATION 0099_{BT}



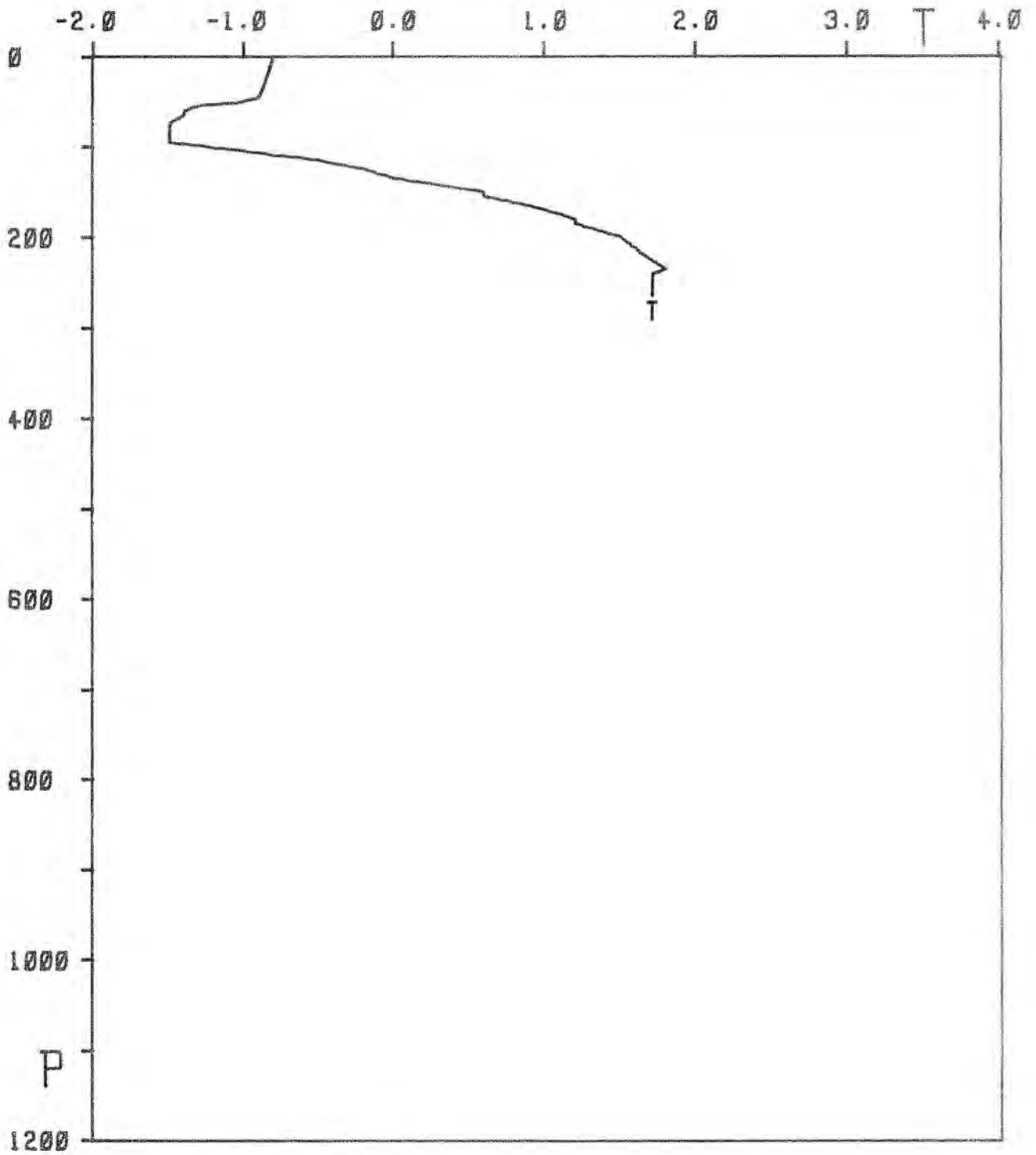
STATION 0100 BT



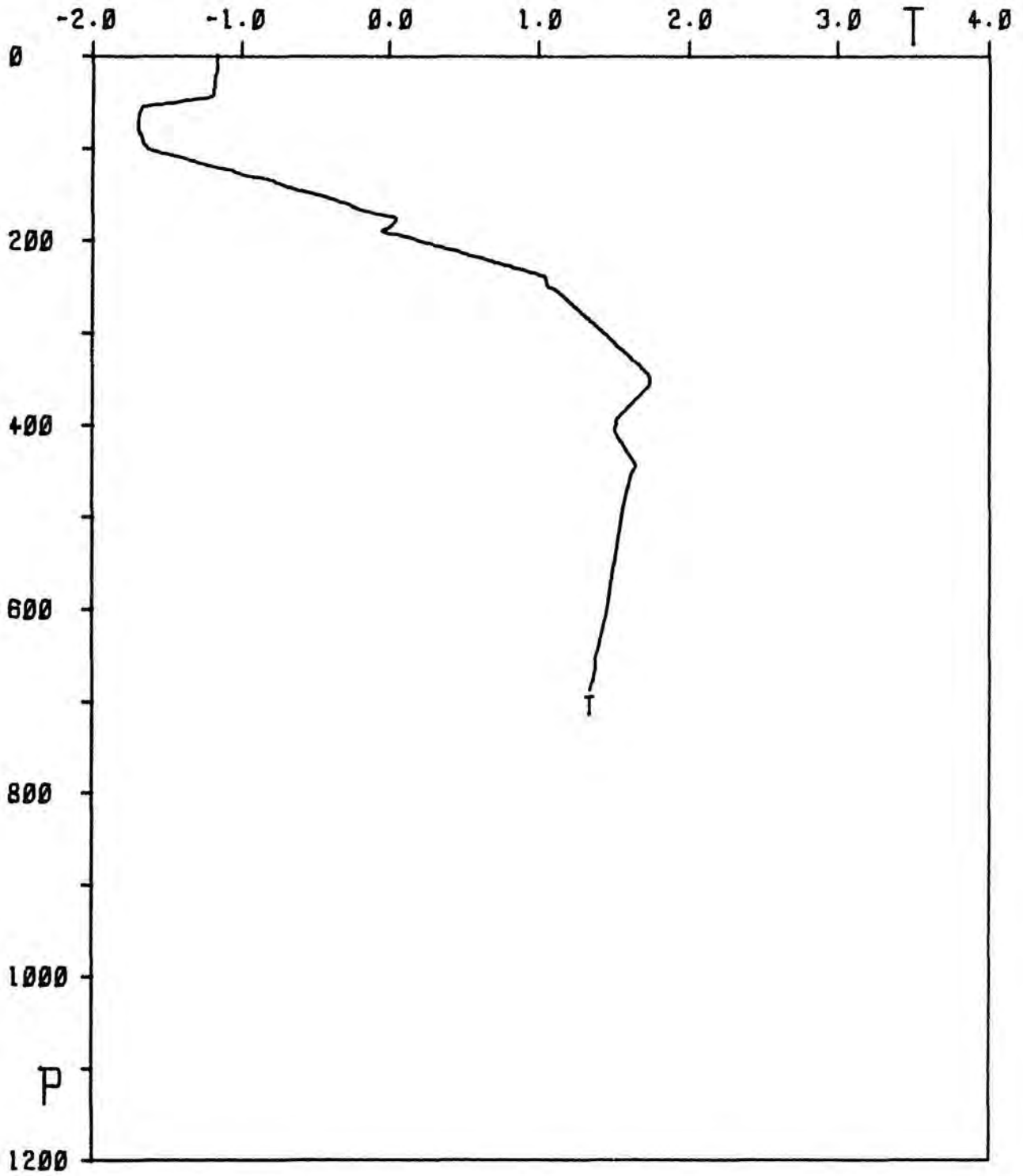
STATION Ø1Ø1 BT



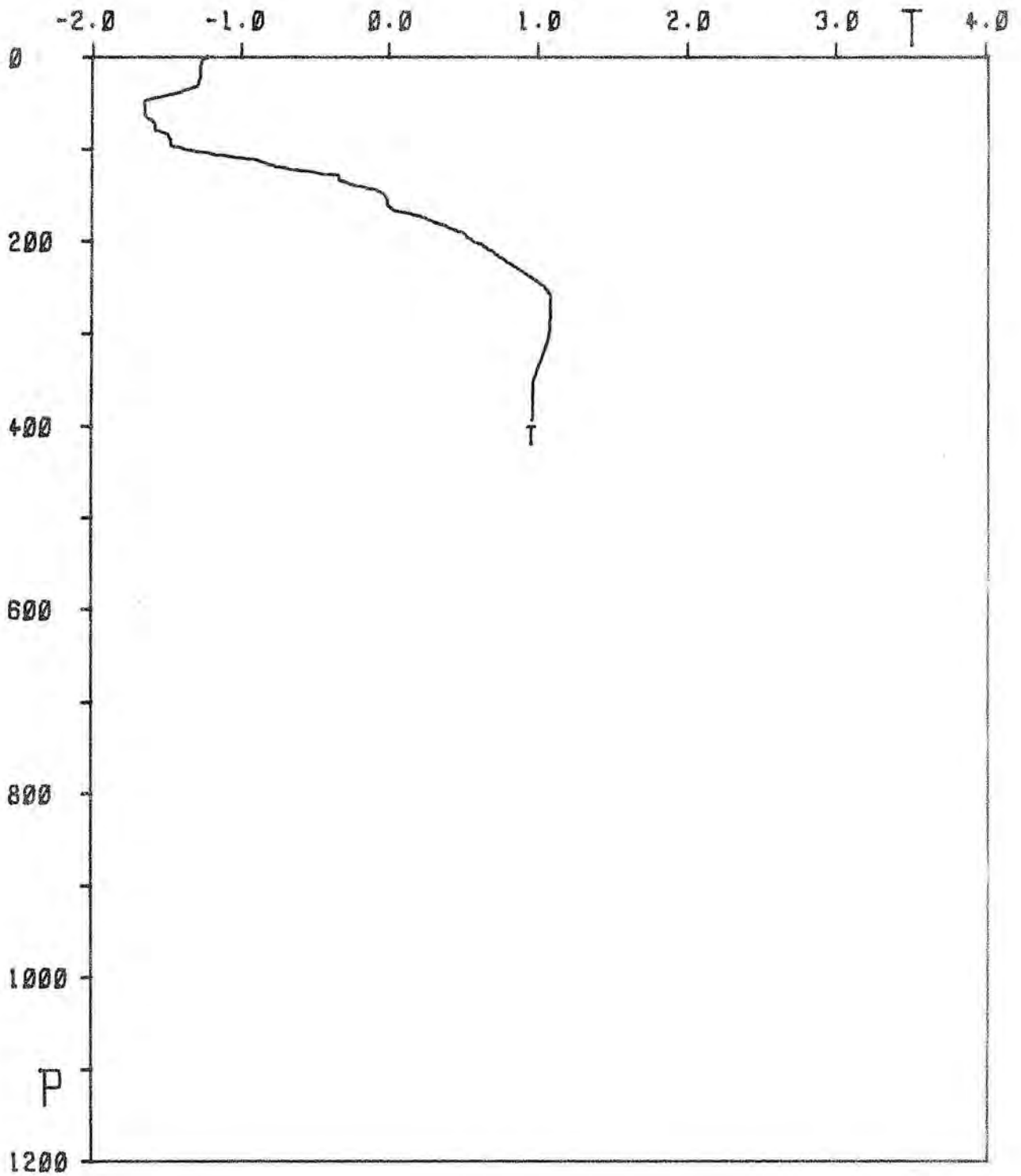
STATION 0102_{BT}



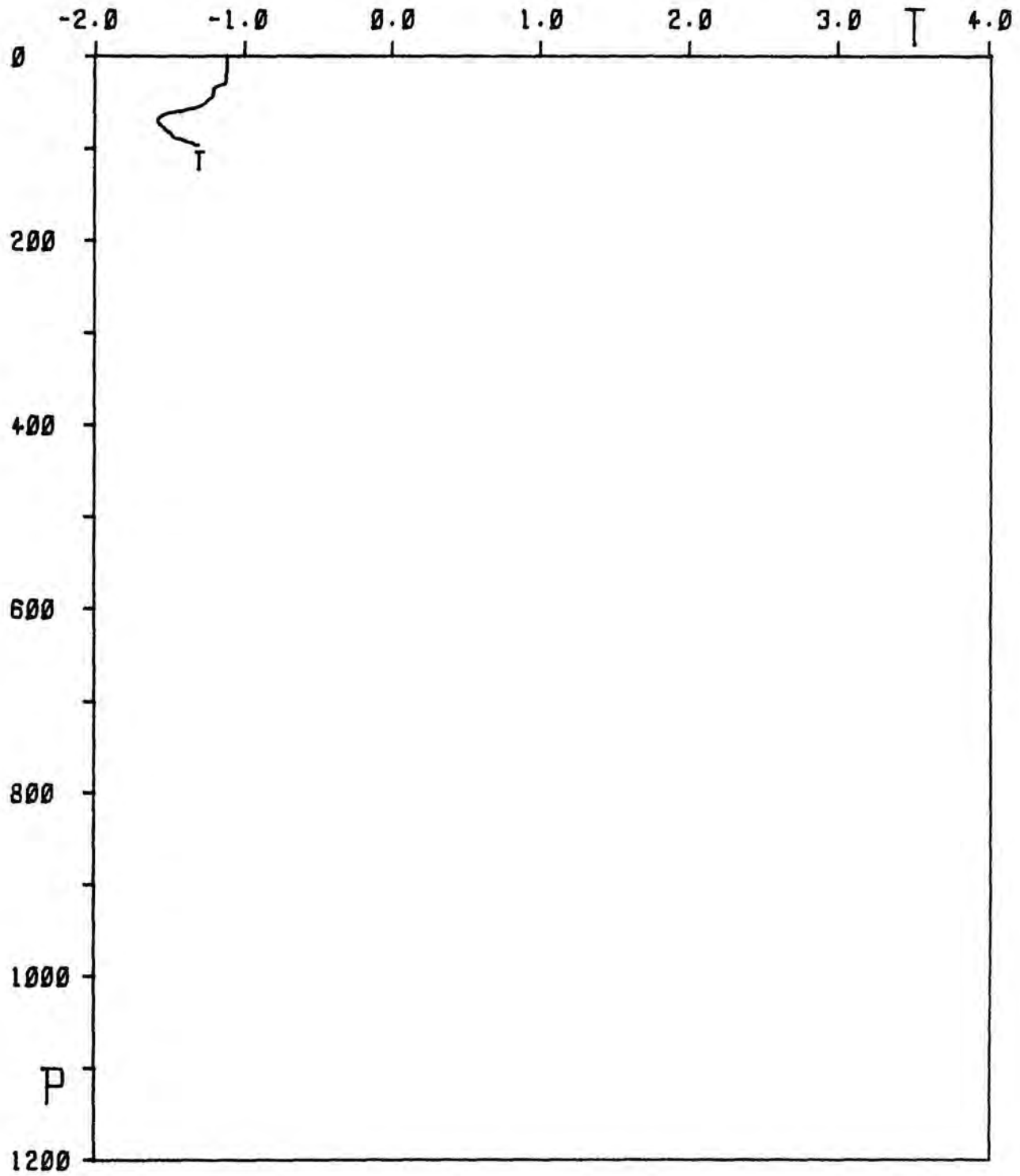
STATION 0103



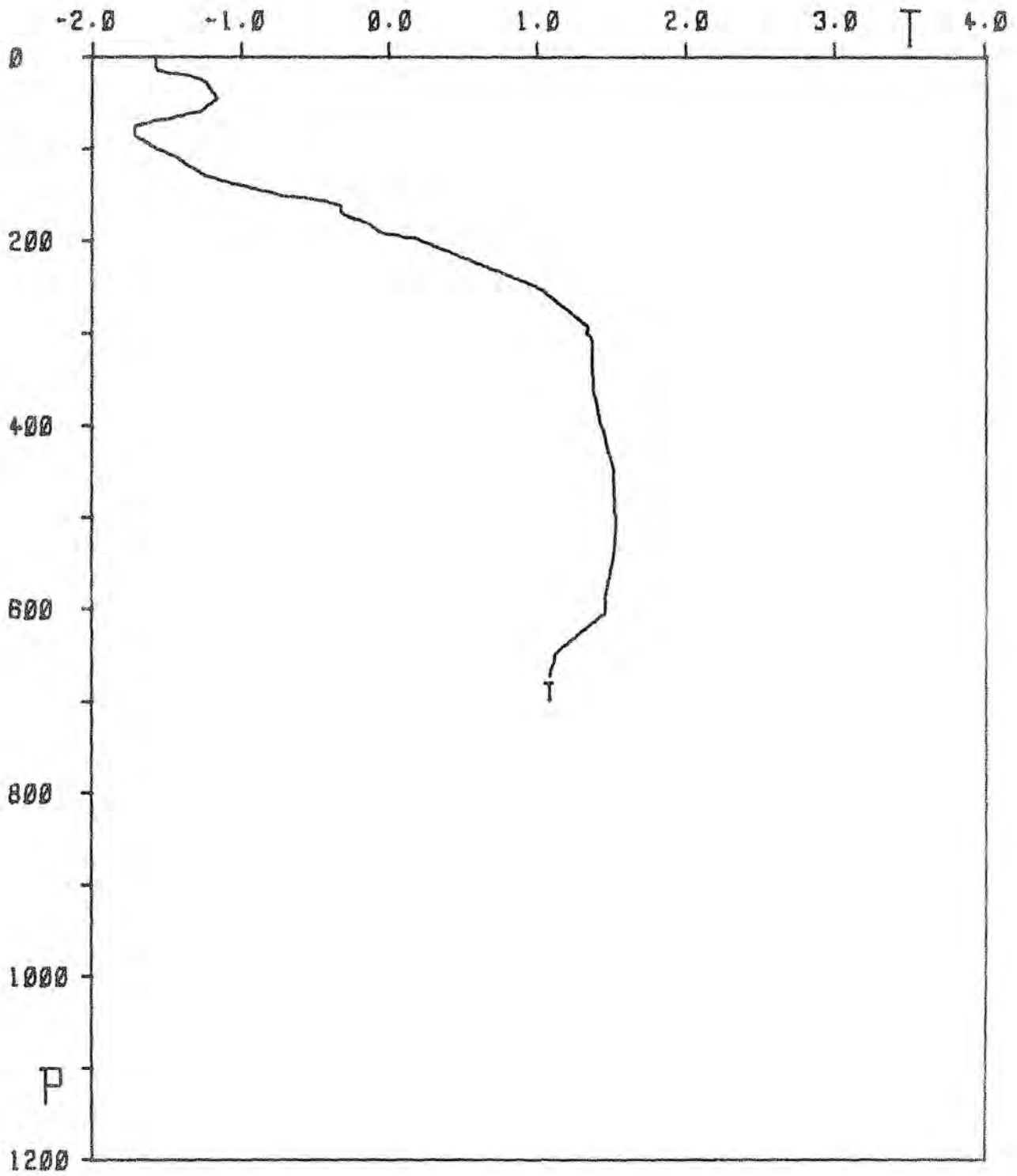
STATION 0104



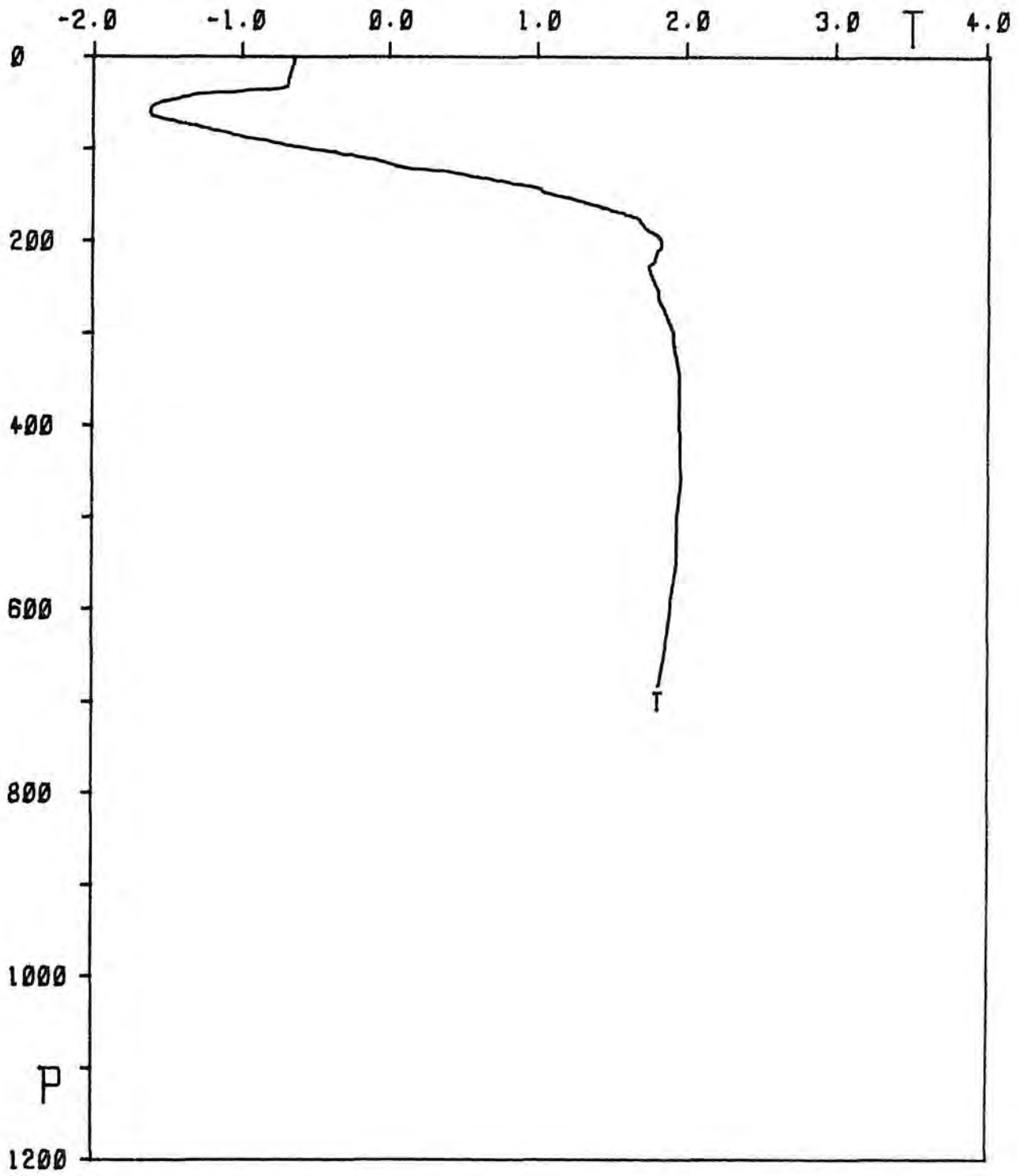
STATION Ø105



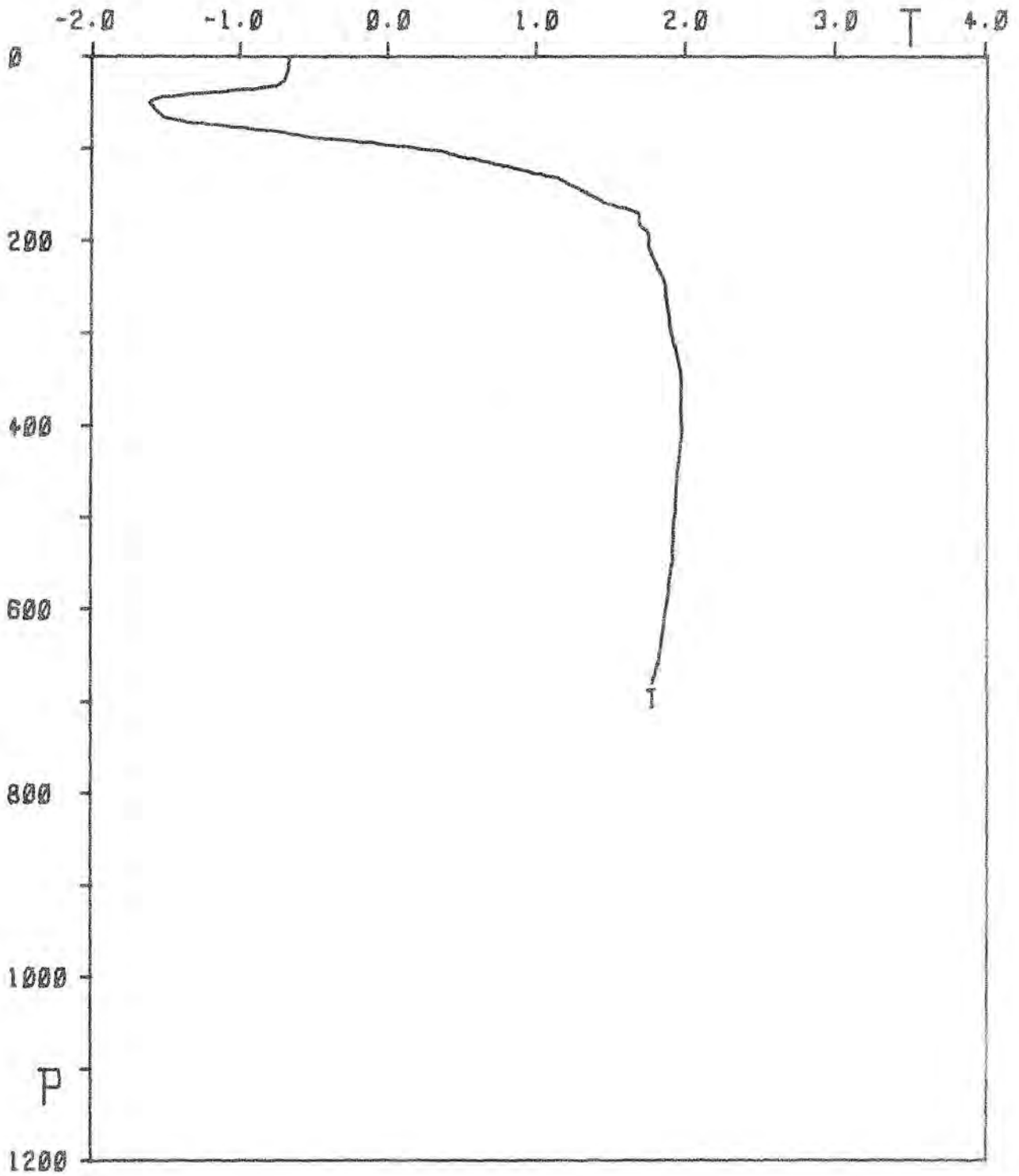
STATION 0106



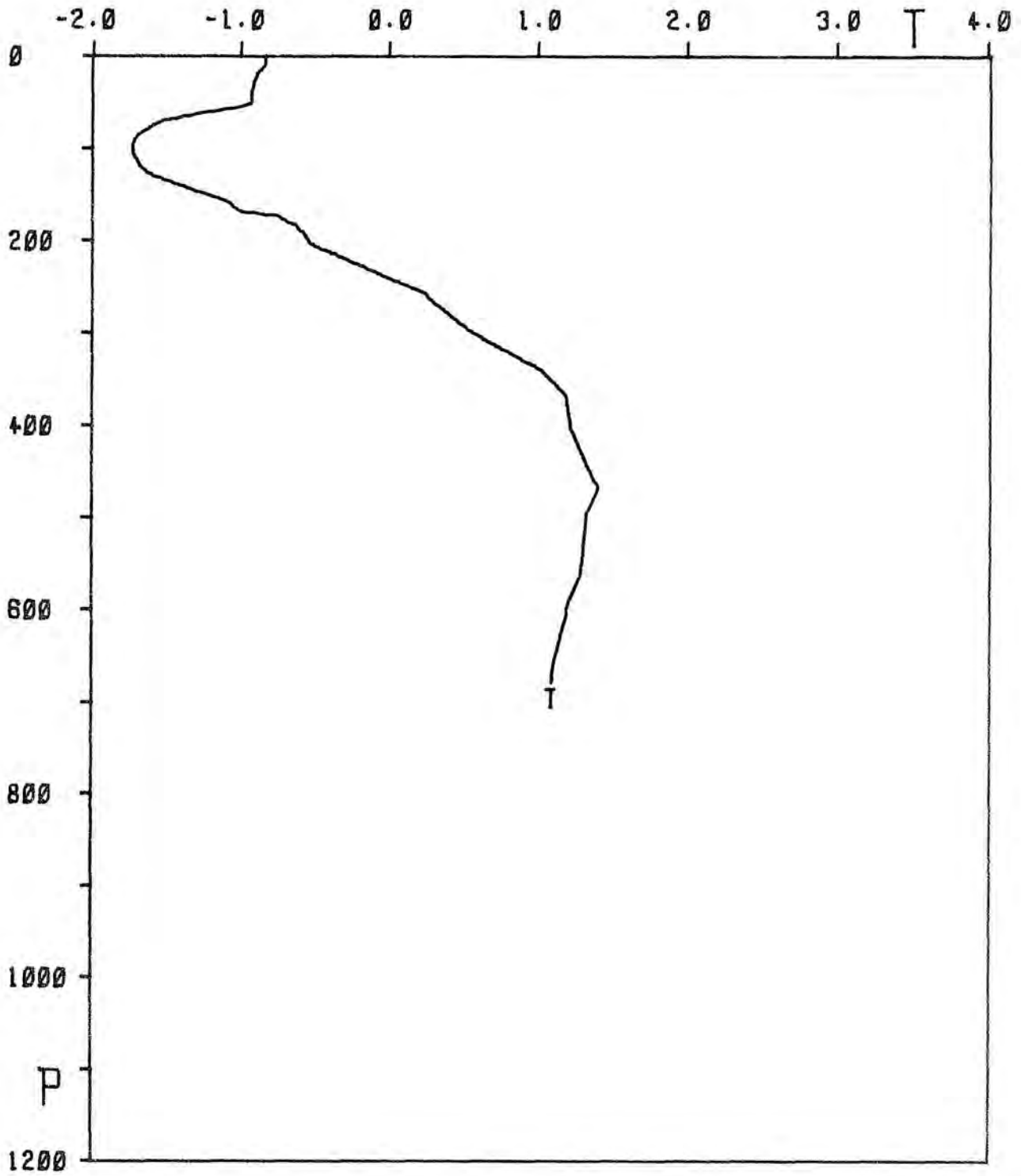
STATION 0107



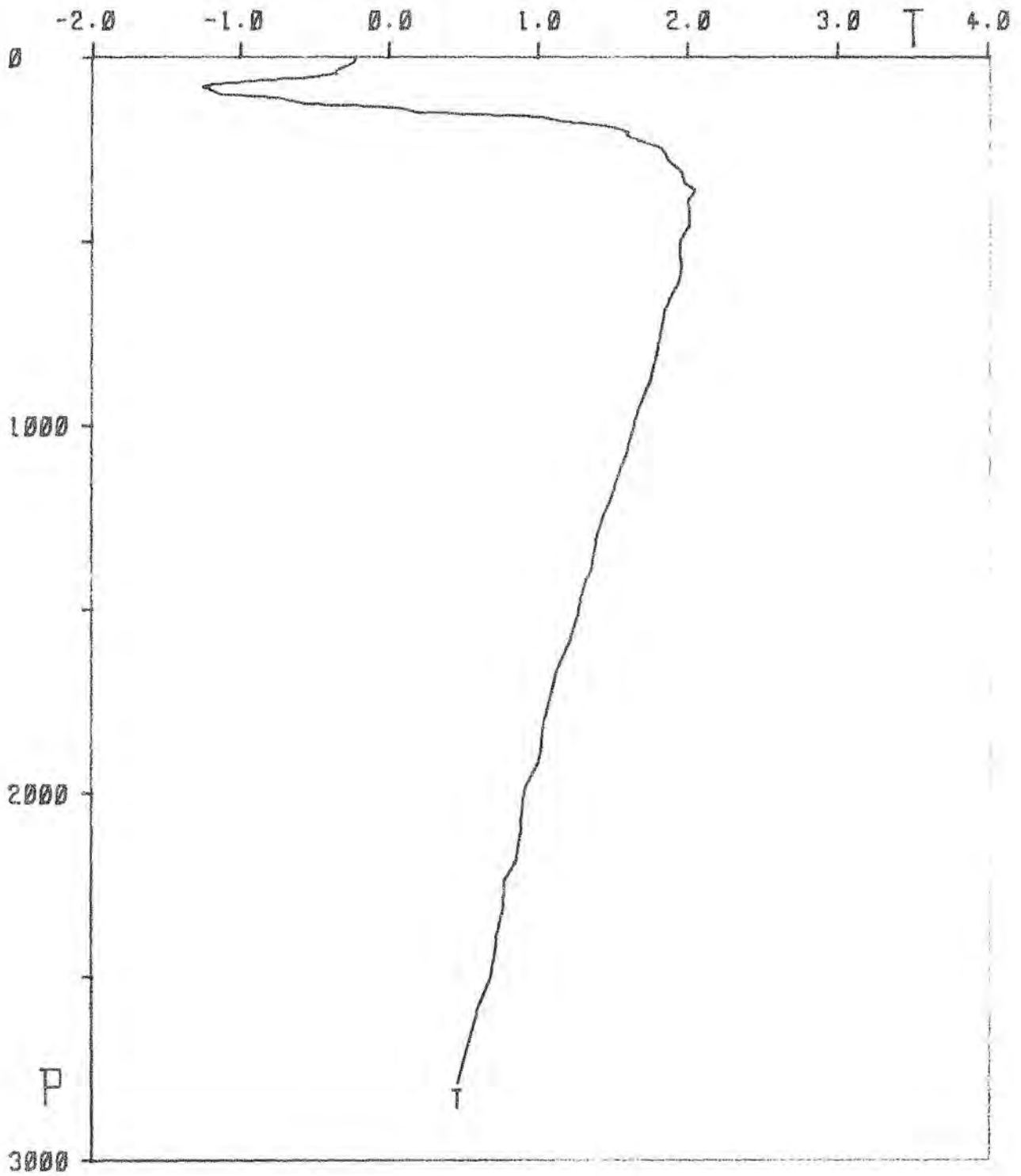
STATION 0108



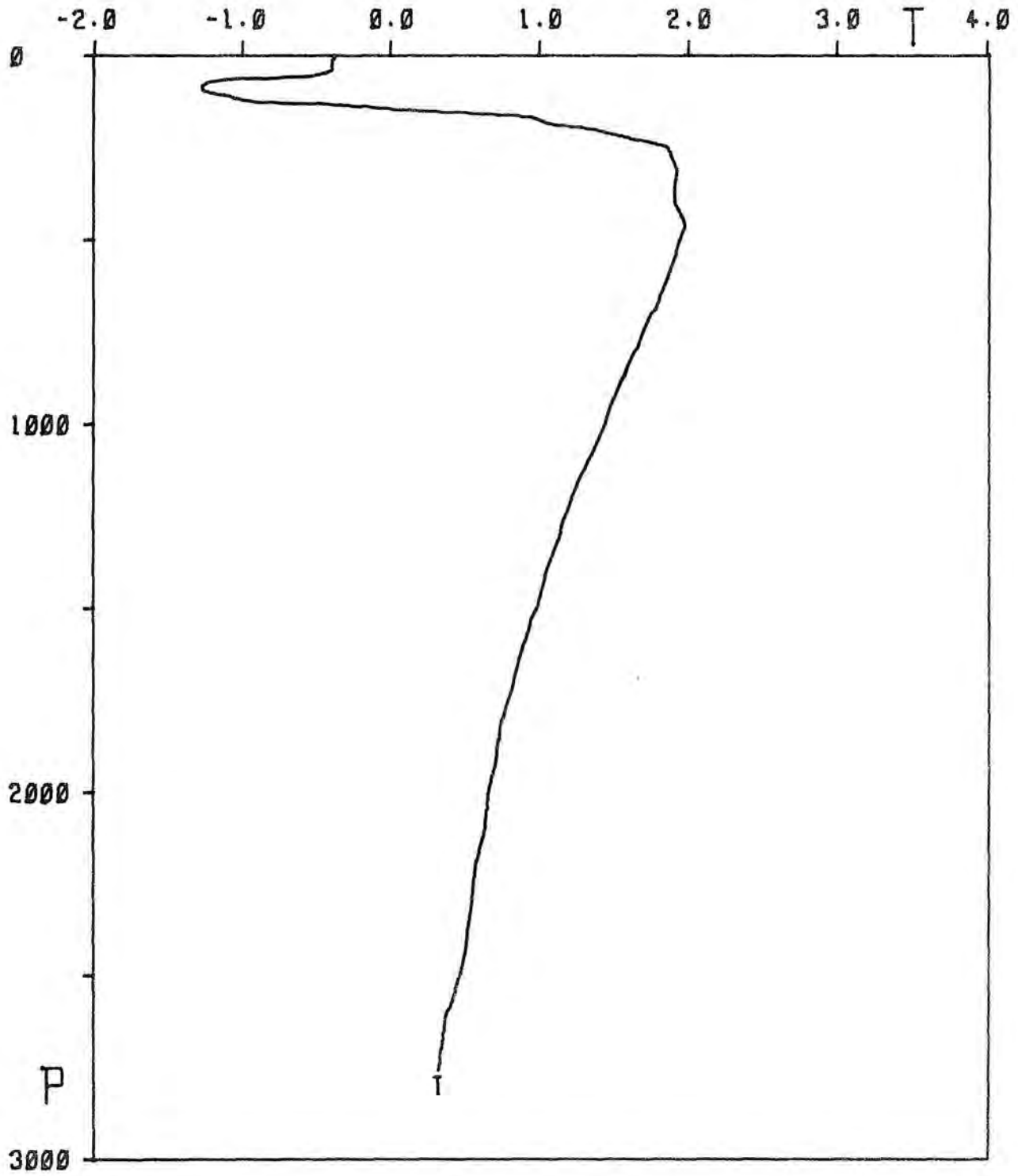
STATION 0109



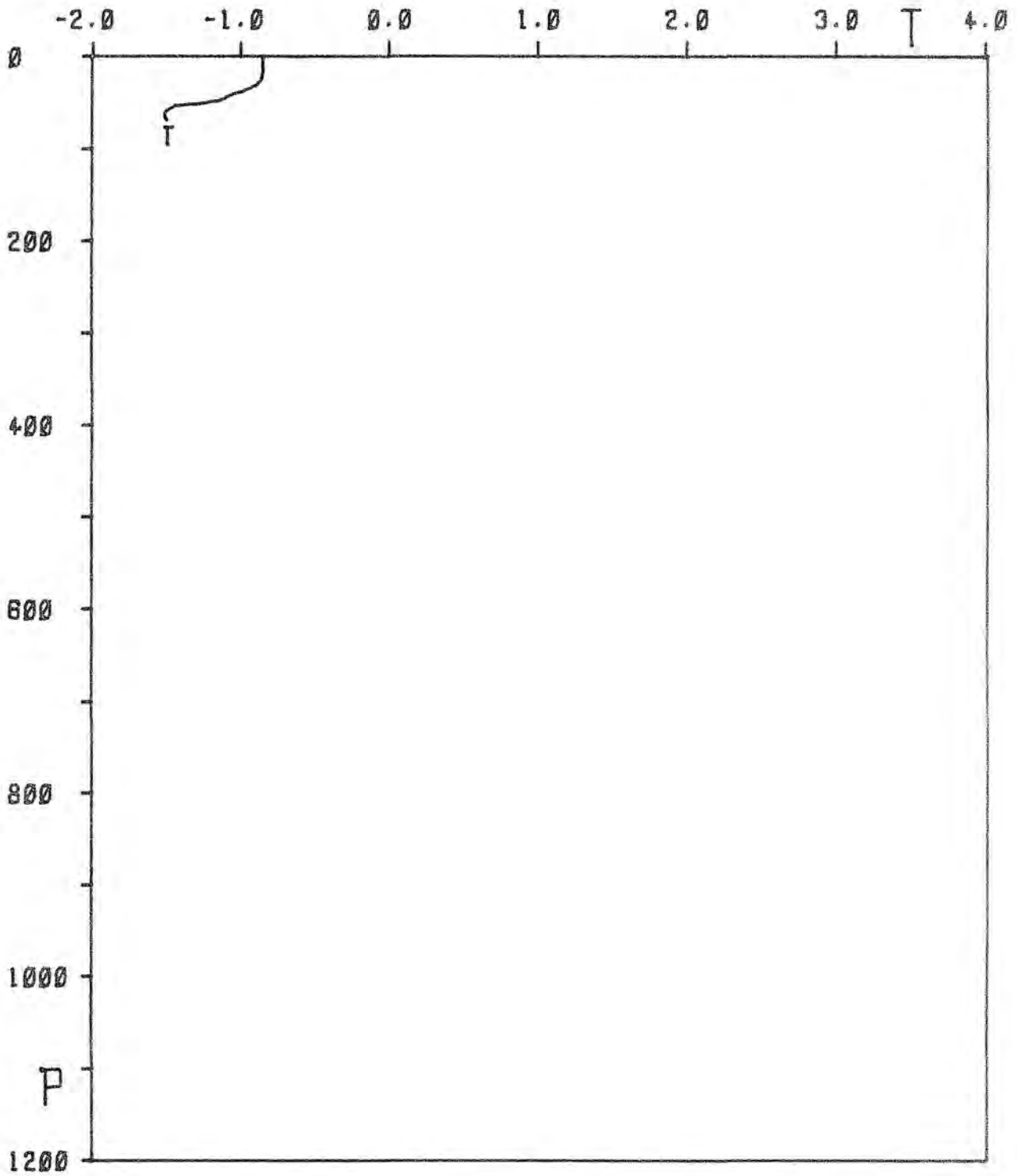
STATION 0110



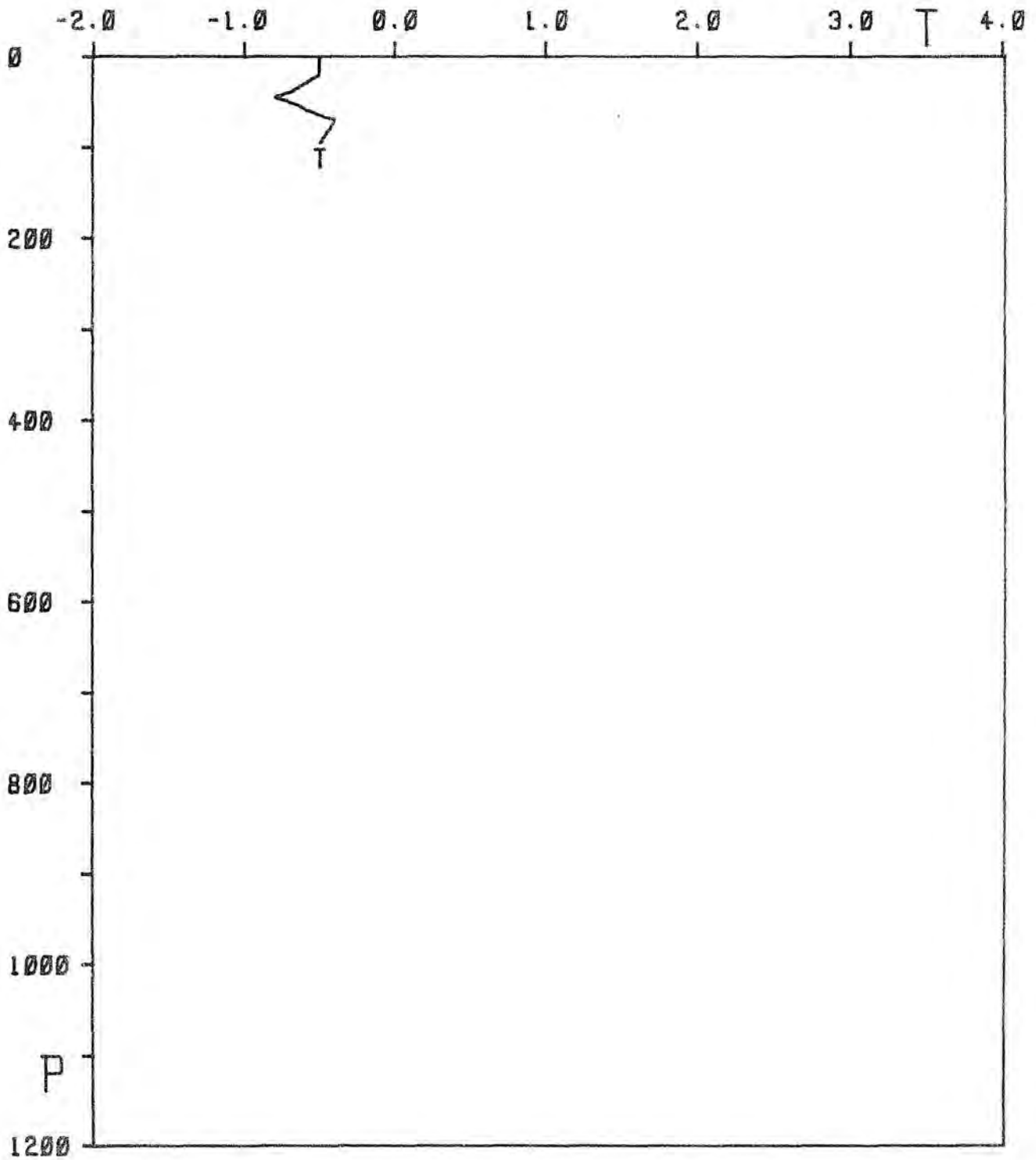
STATION Ø111



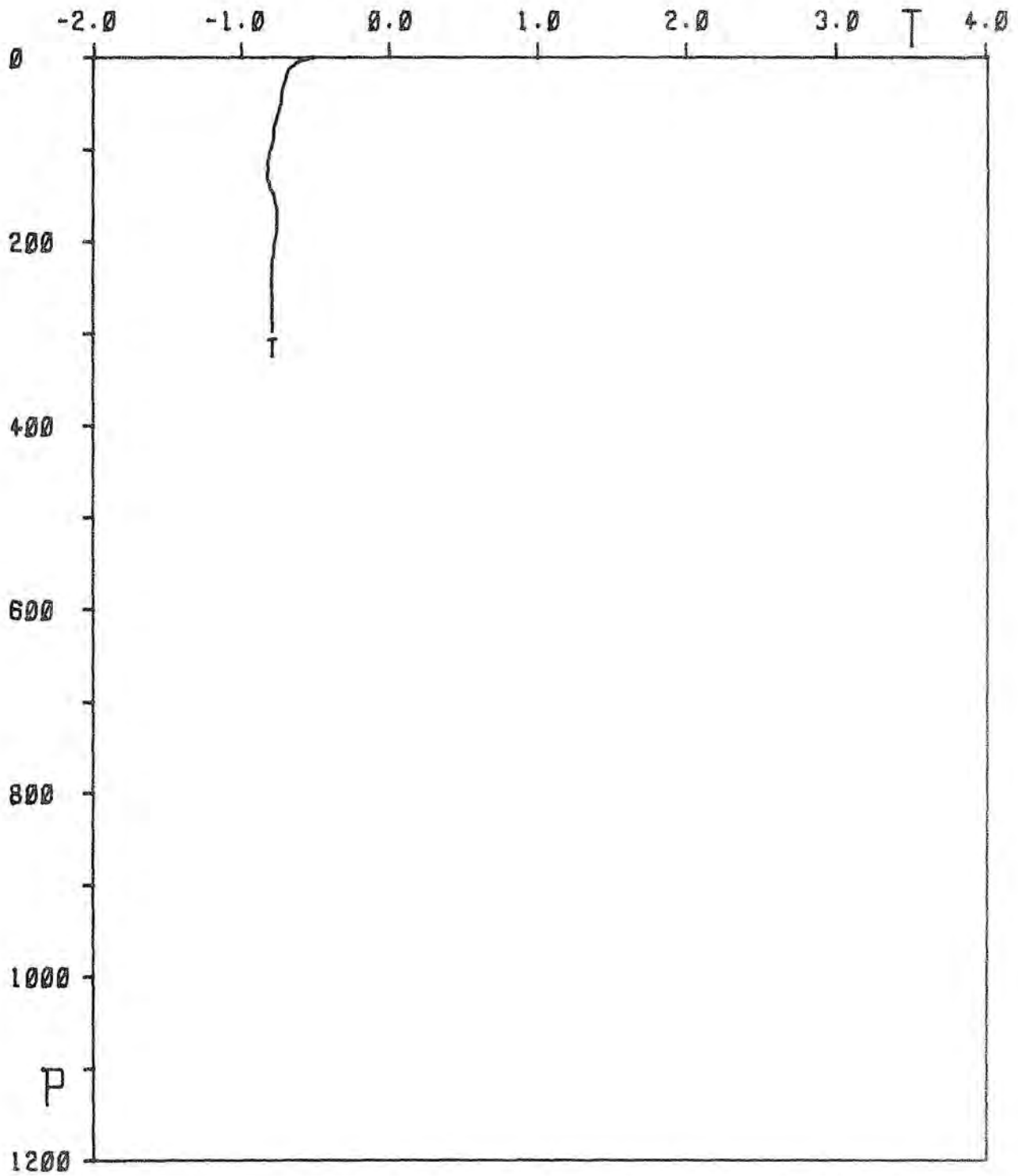
STATION Ø112



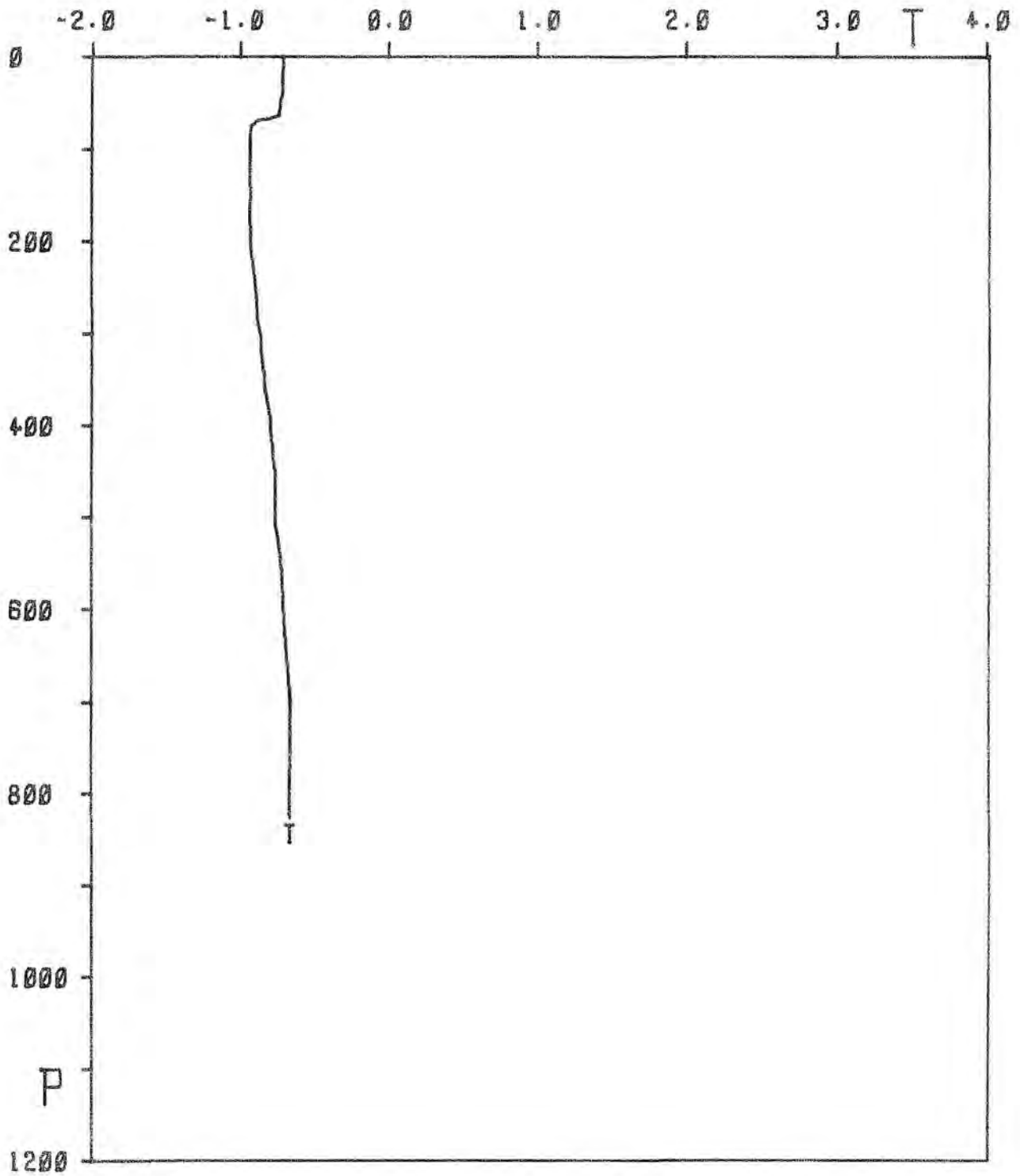
STATION Ø120_{BT}



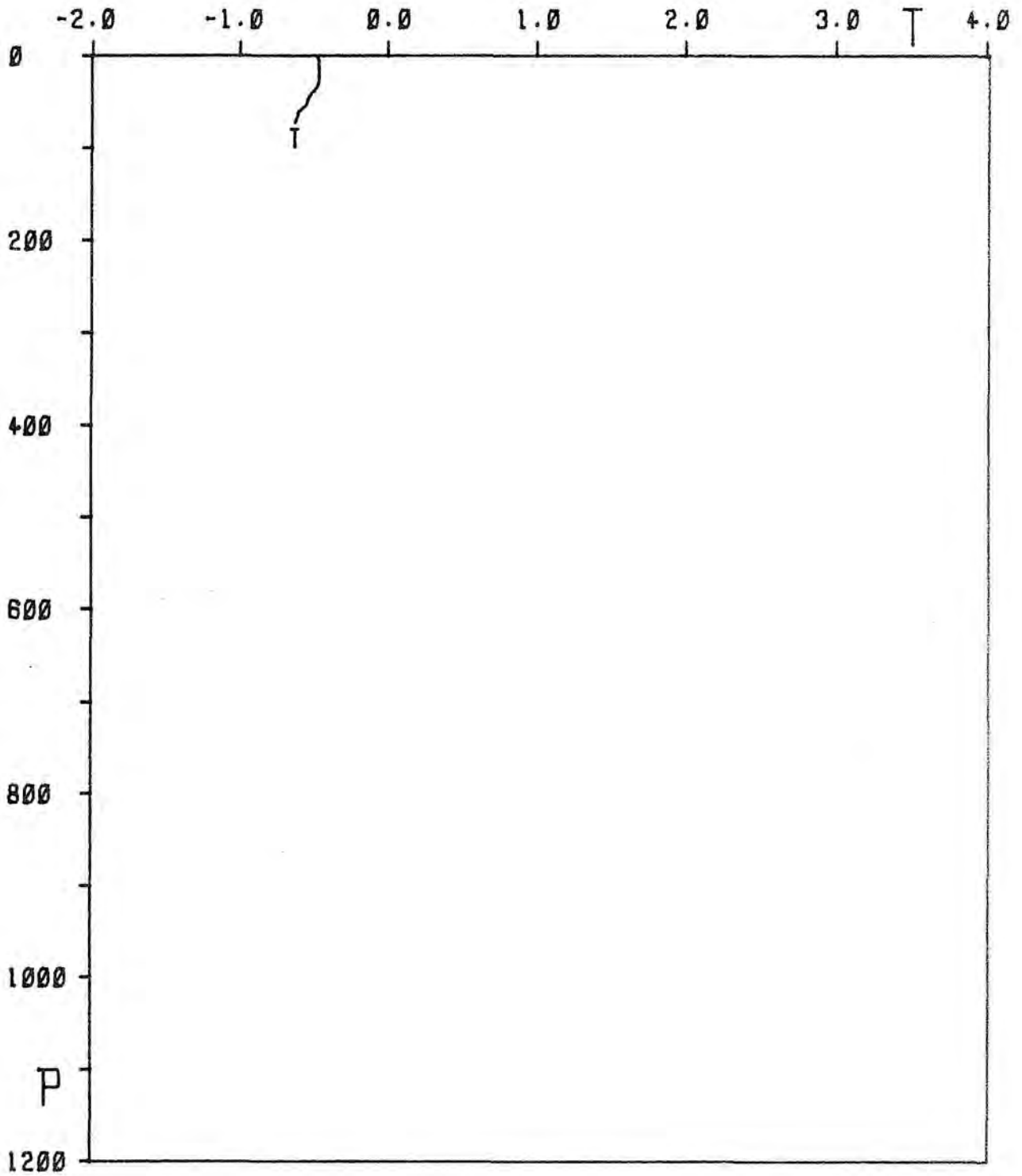
STATION Ø125



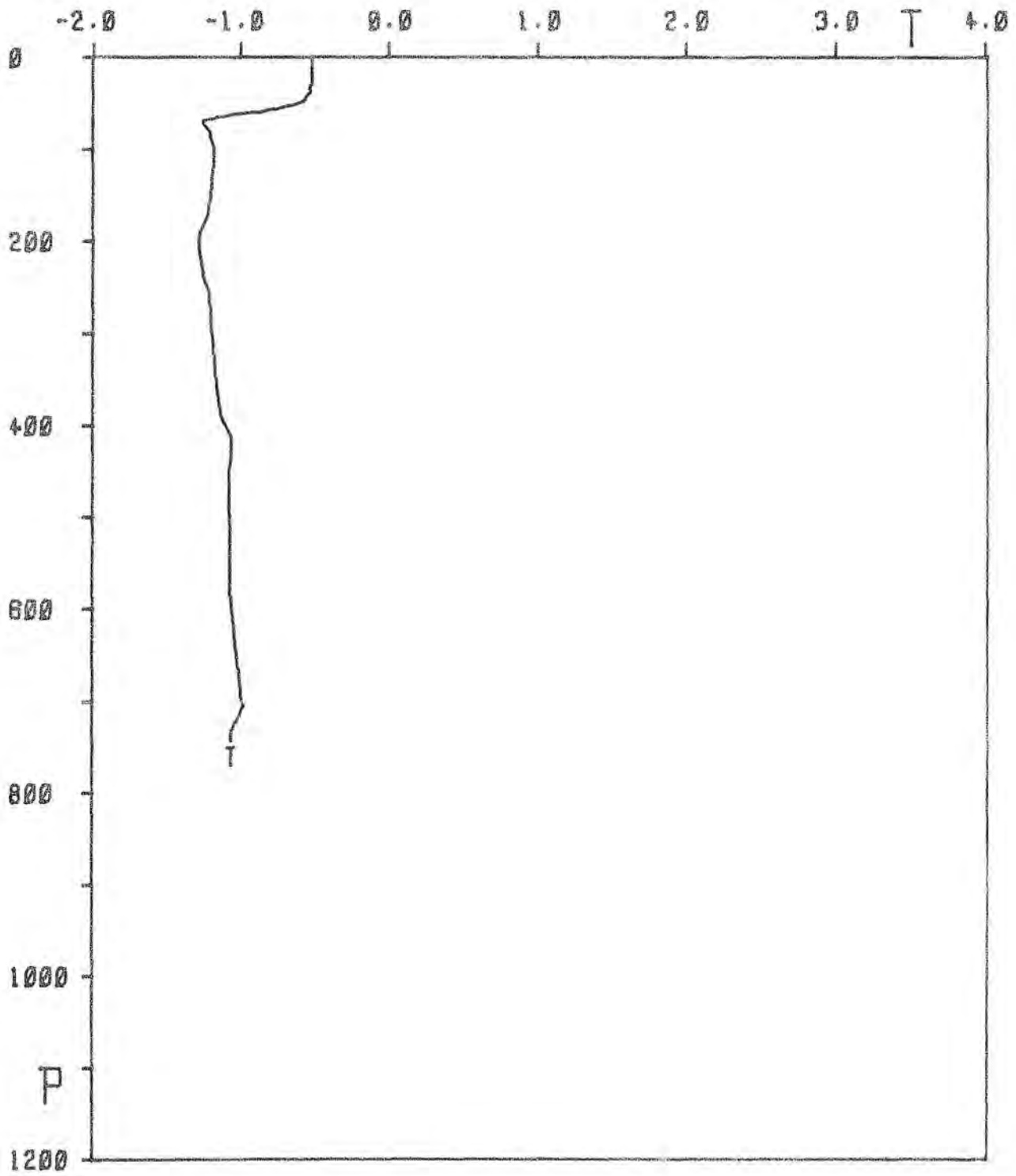
STATION Ø127



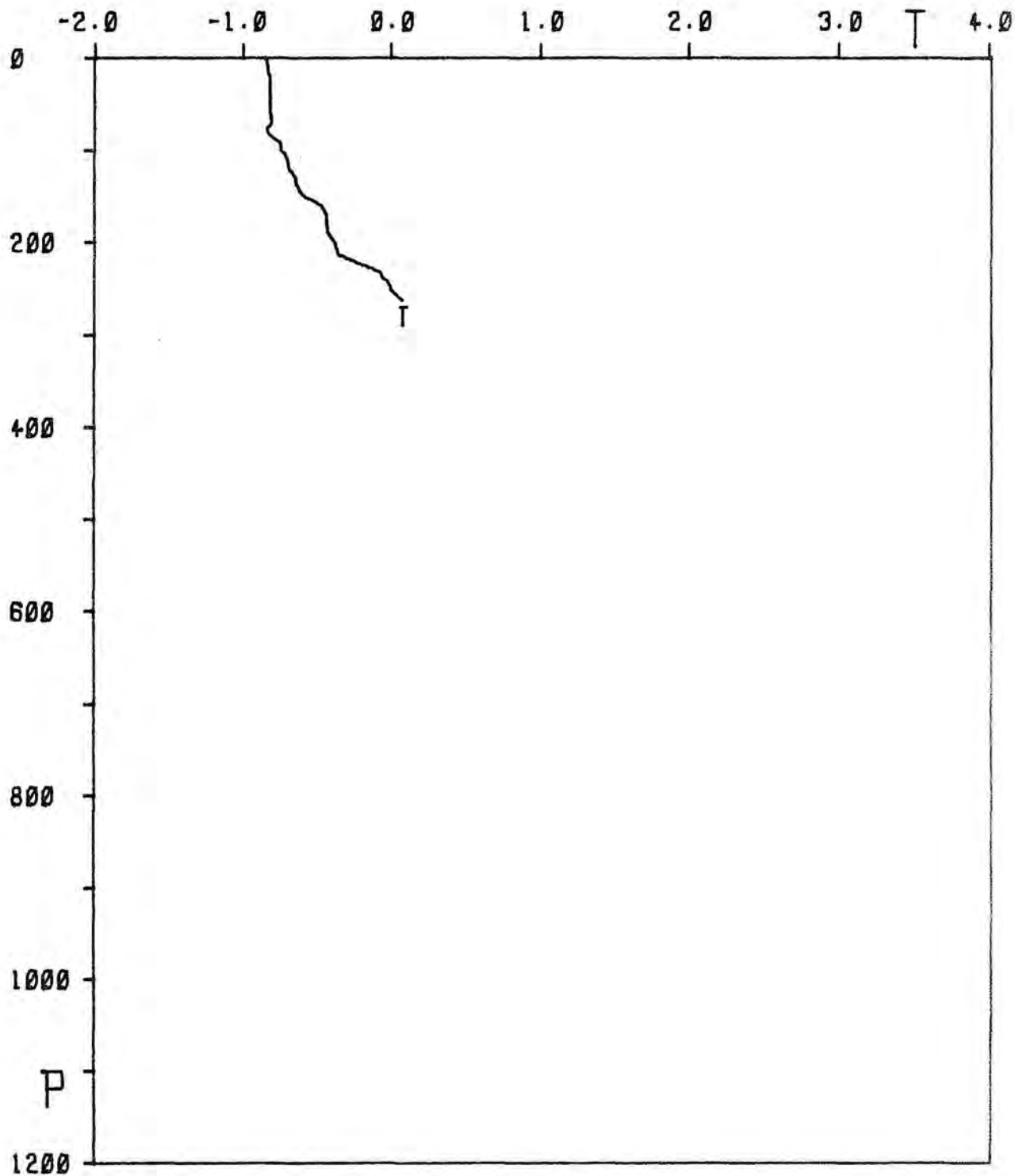
STATION Ø128



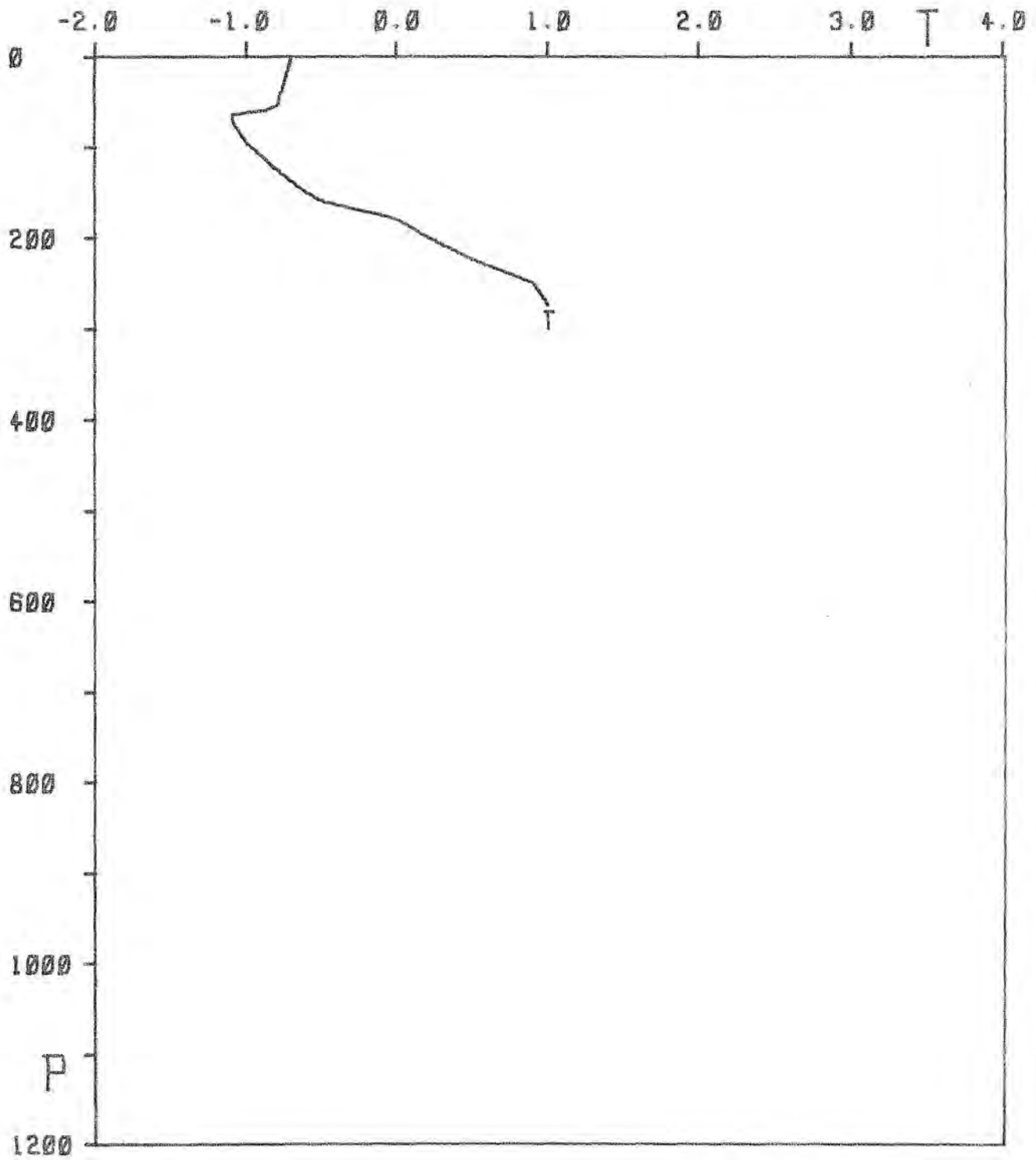
STATION 0129



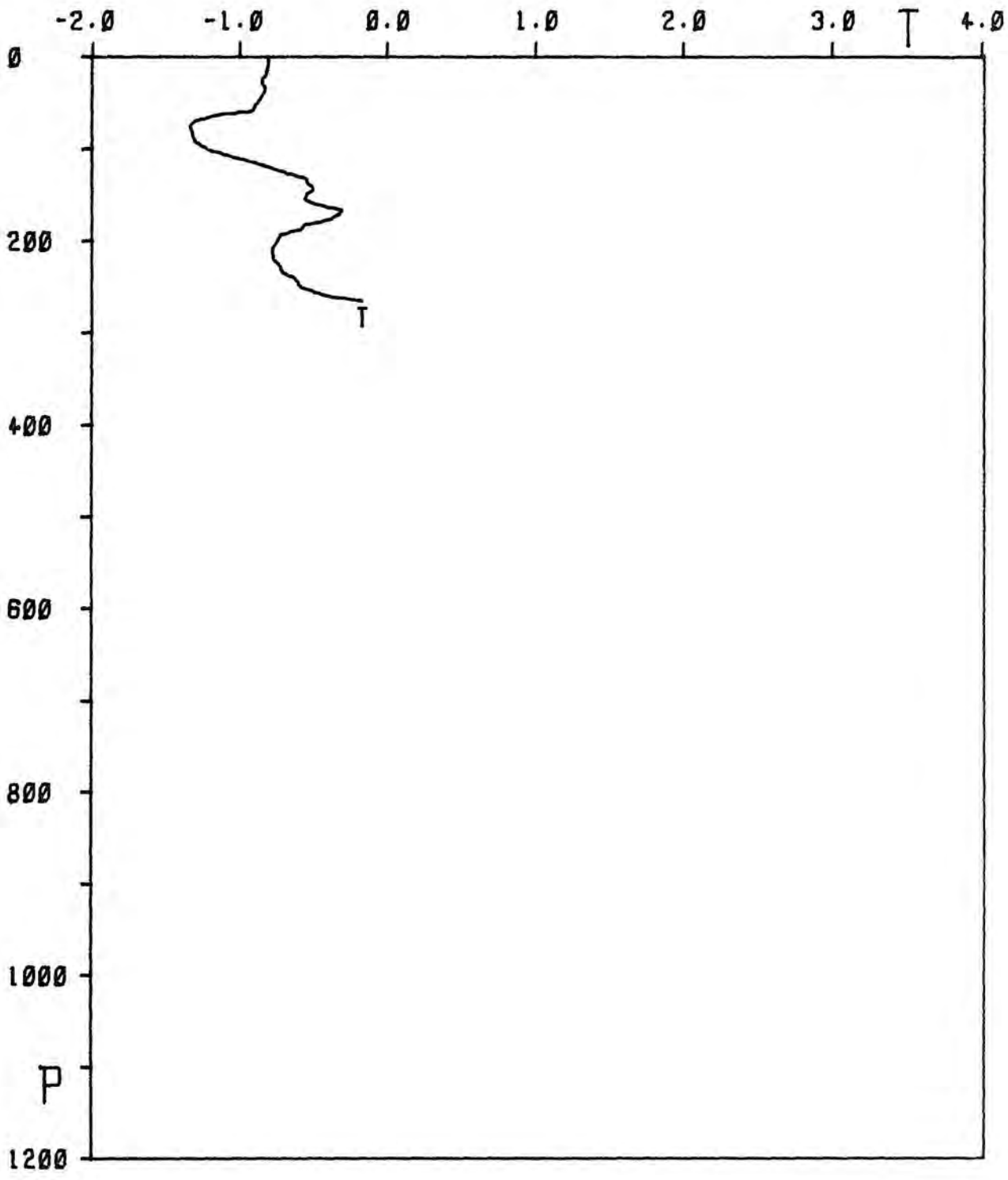
STATION Ø130



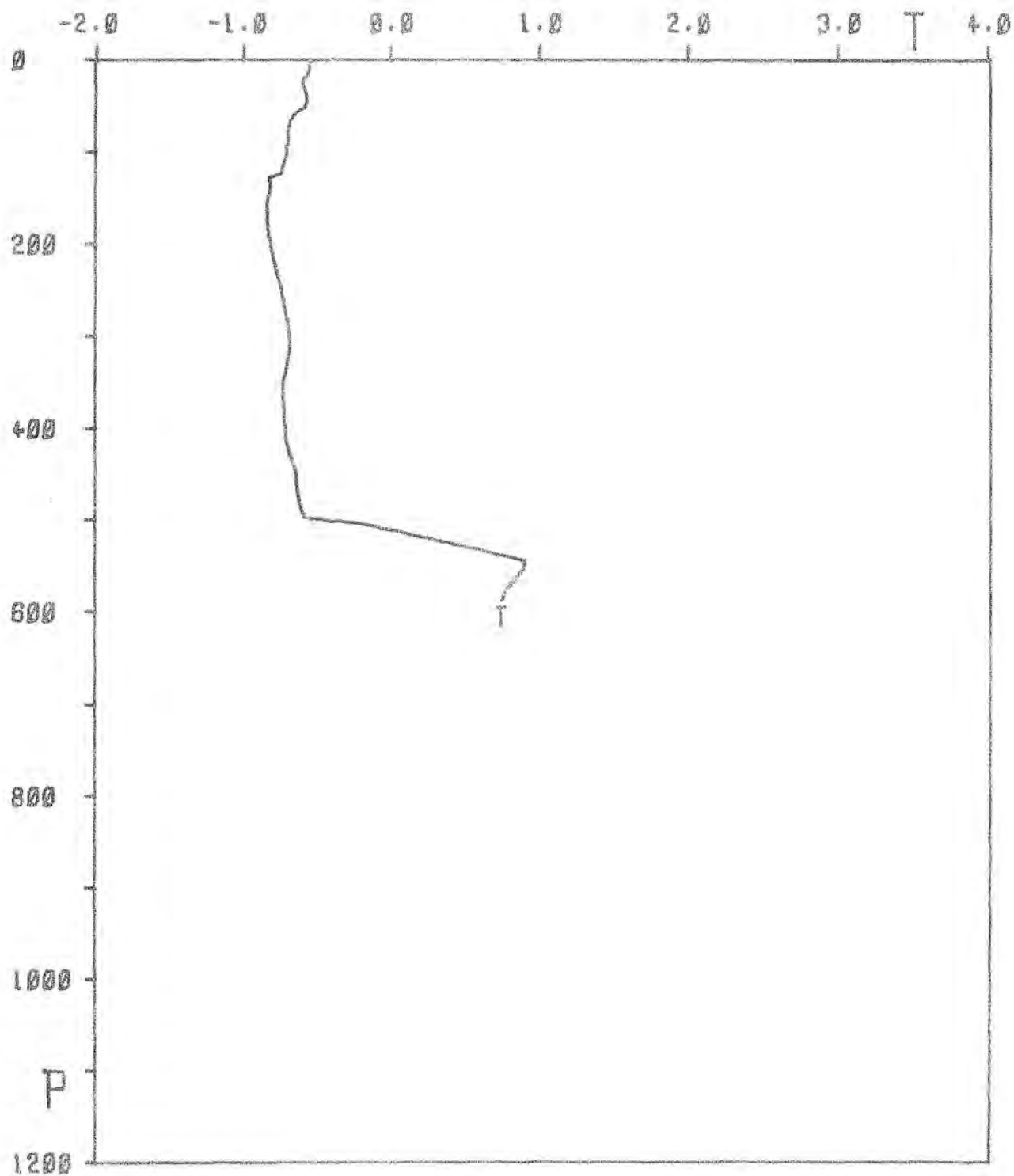
STATION Ø132_{BT}



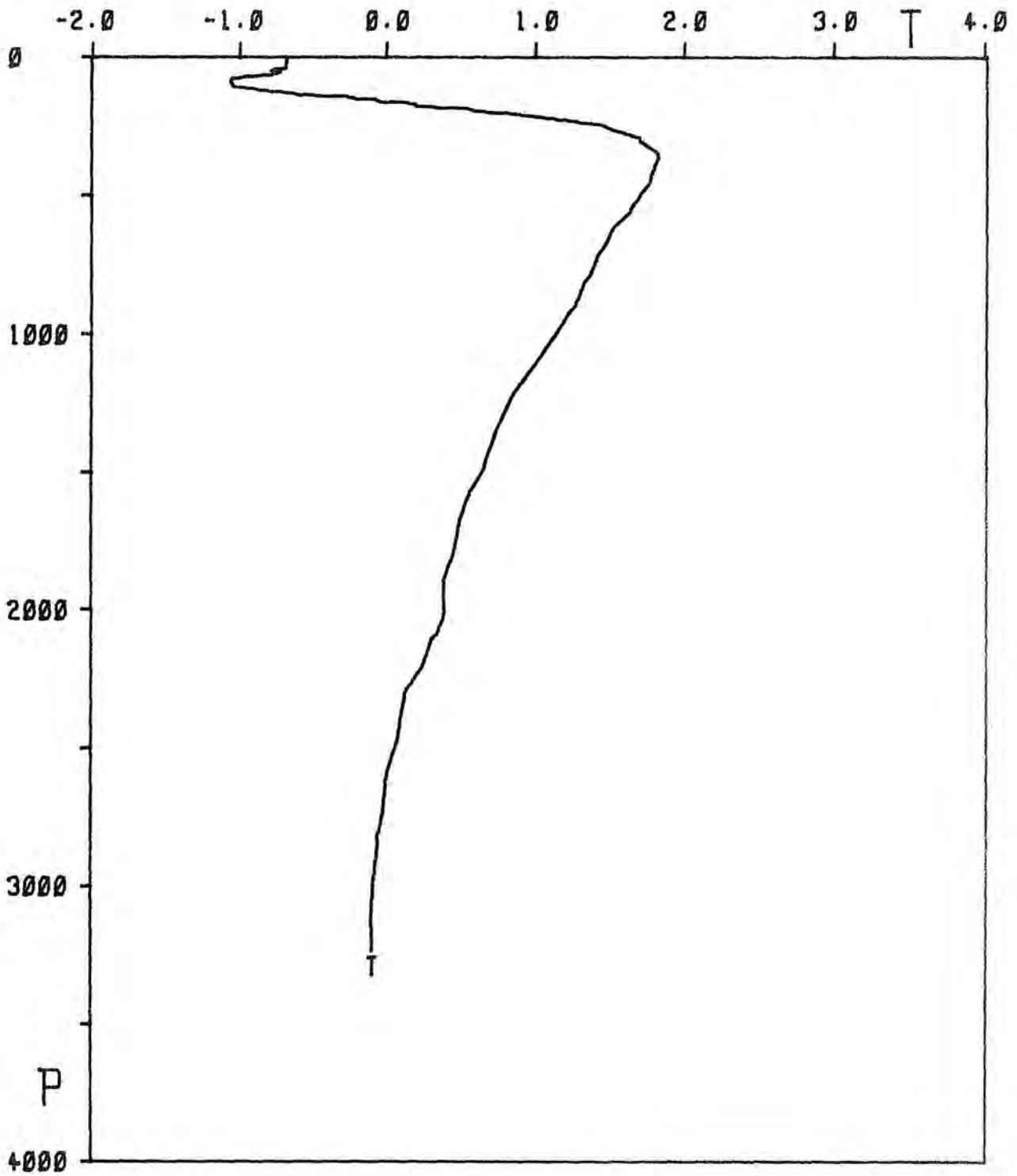
STATION Ø133



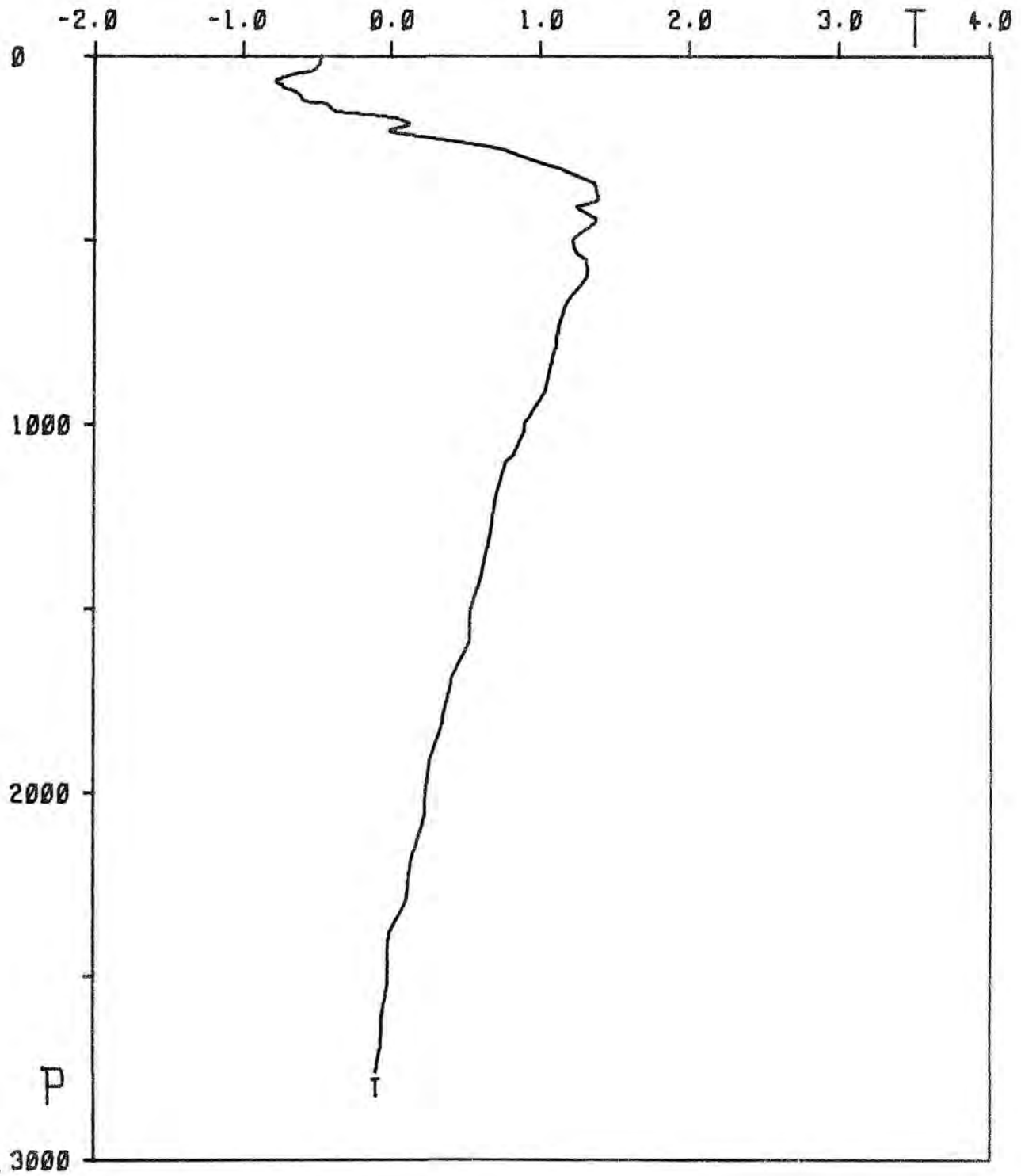
STATION Ø134



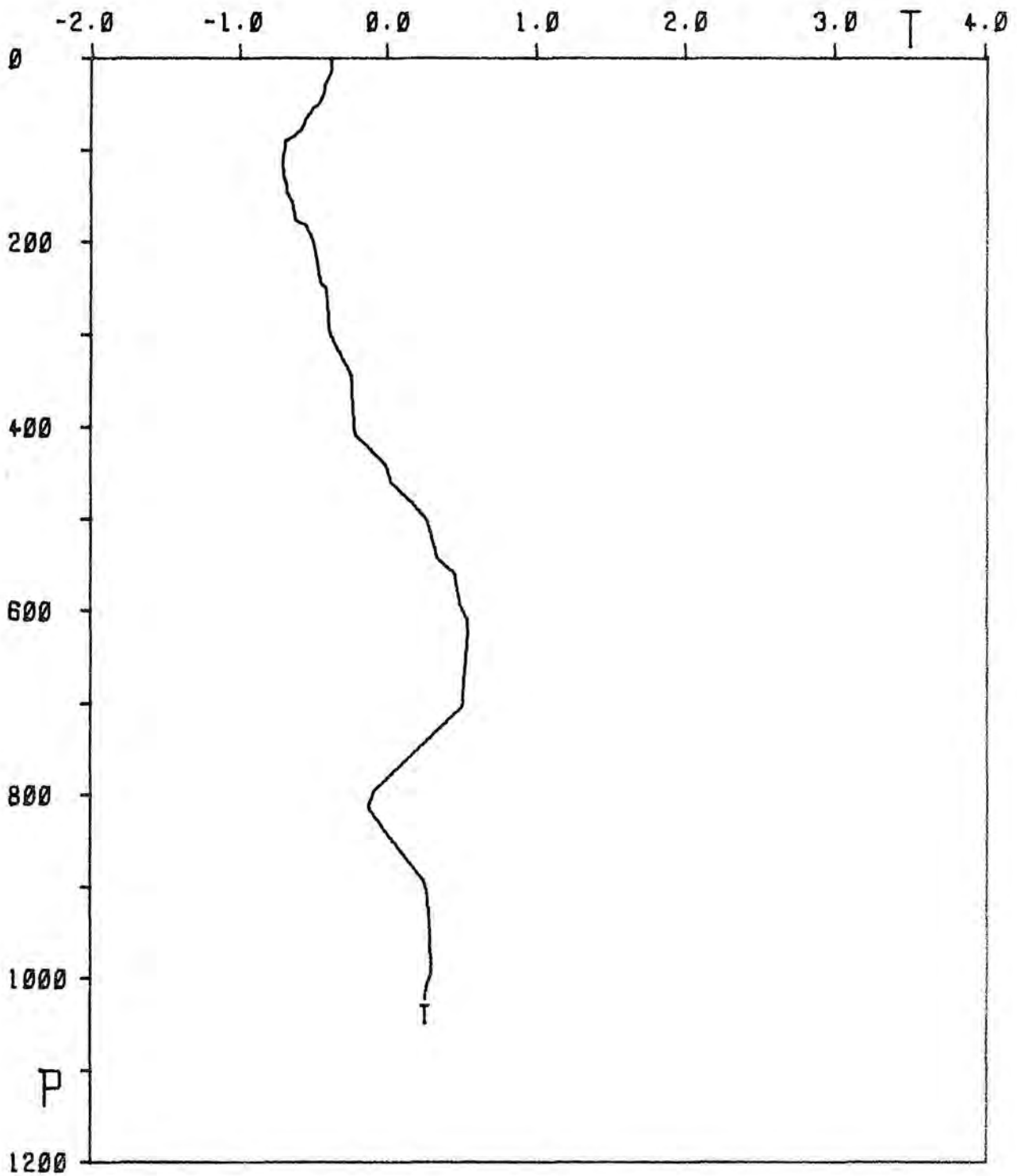
STATION Ø135



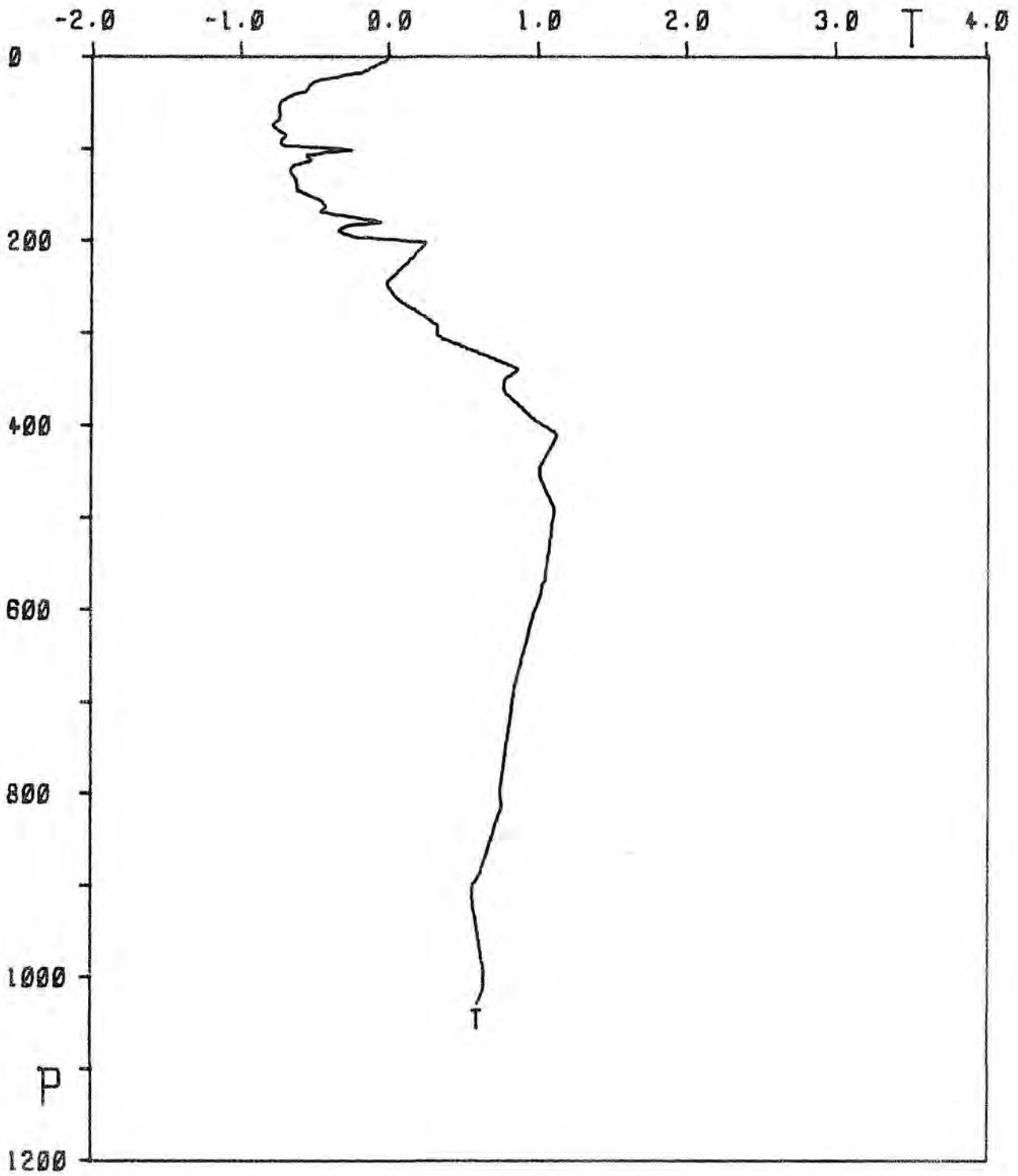
STATION 0136



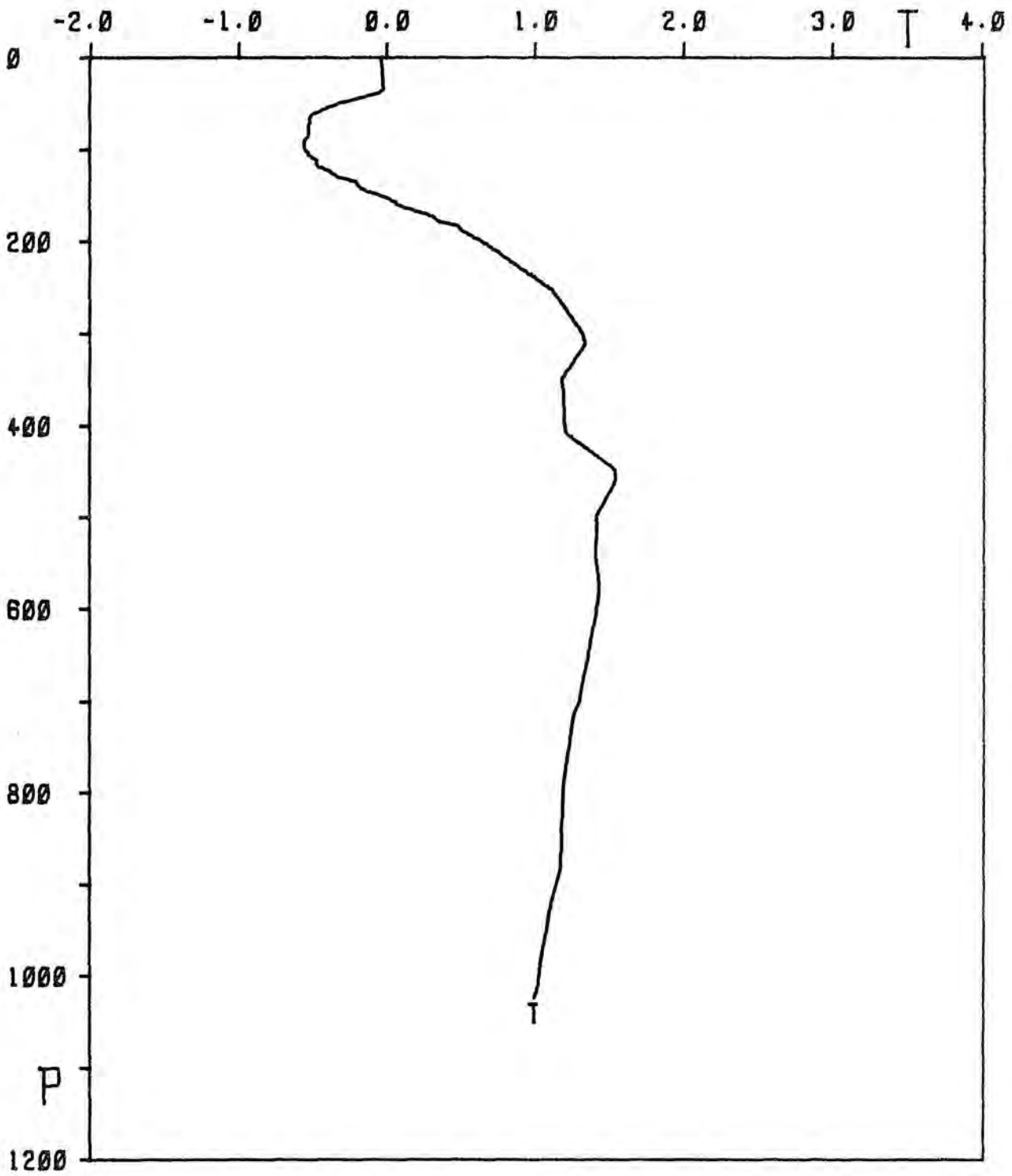
STATION Ø137



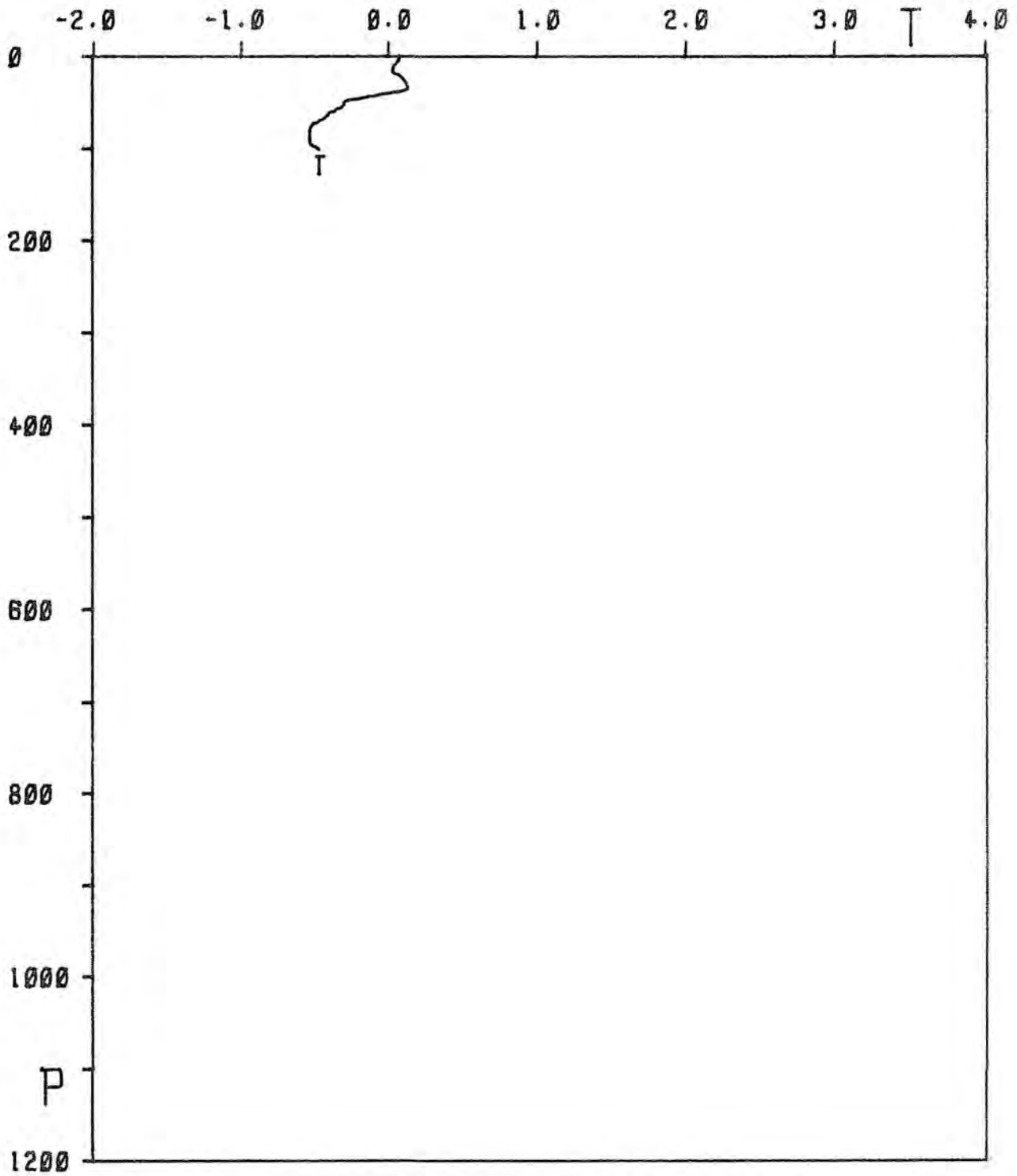
STATION 0139



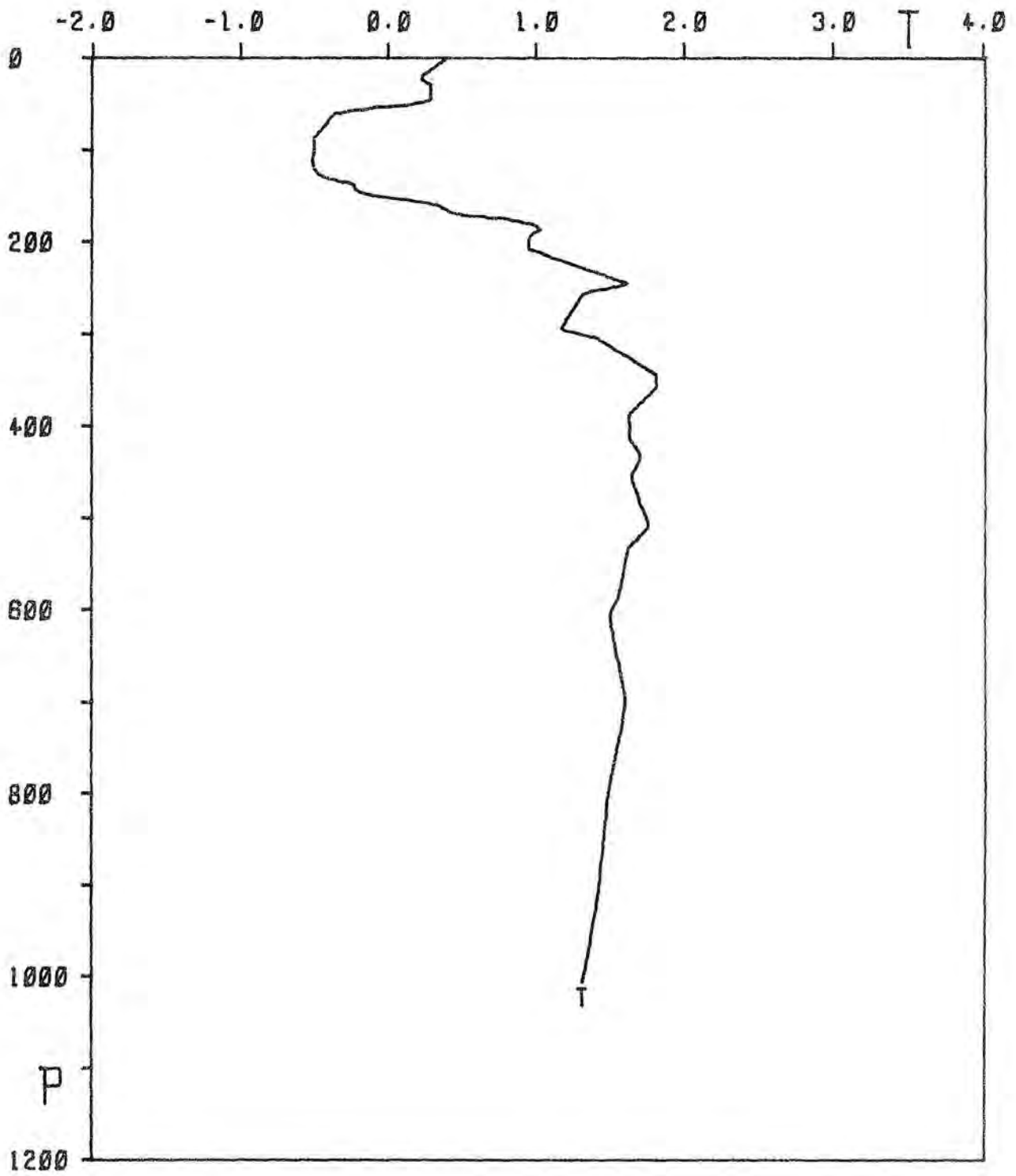
STATION Ø140



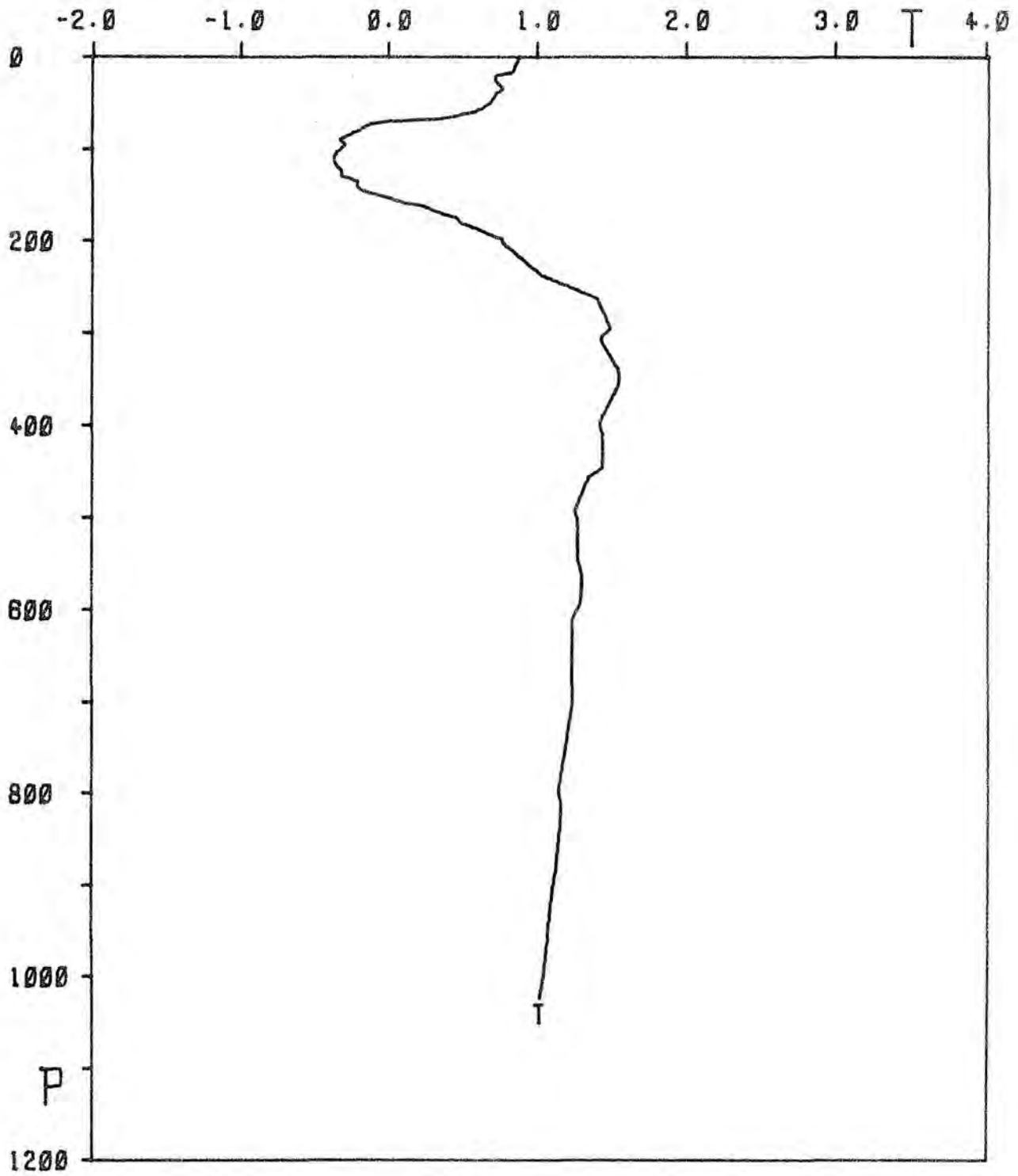
STATION Ø141



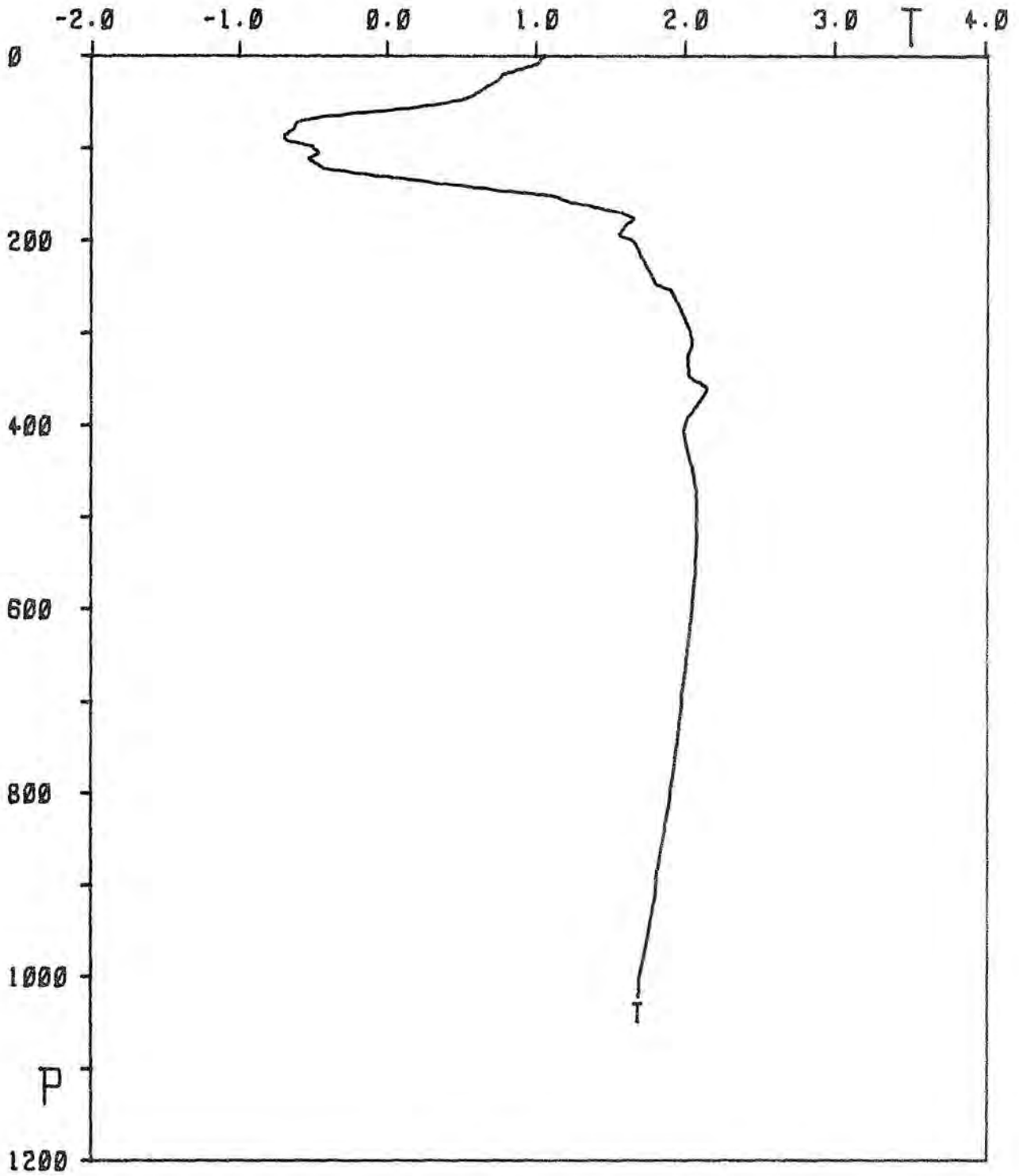
STATION Ø142



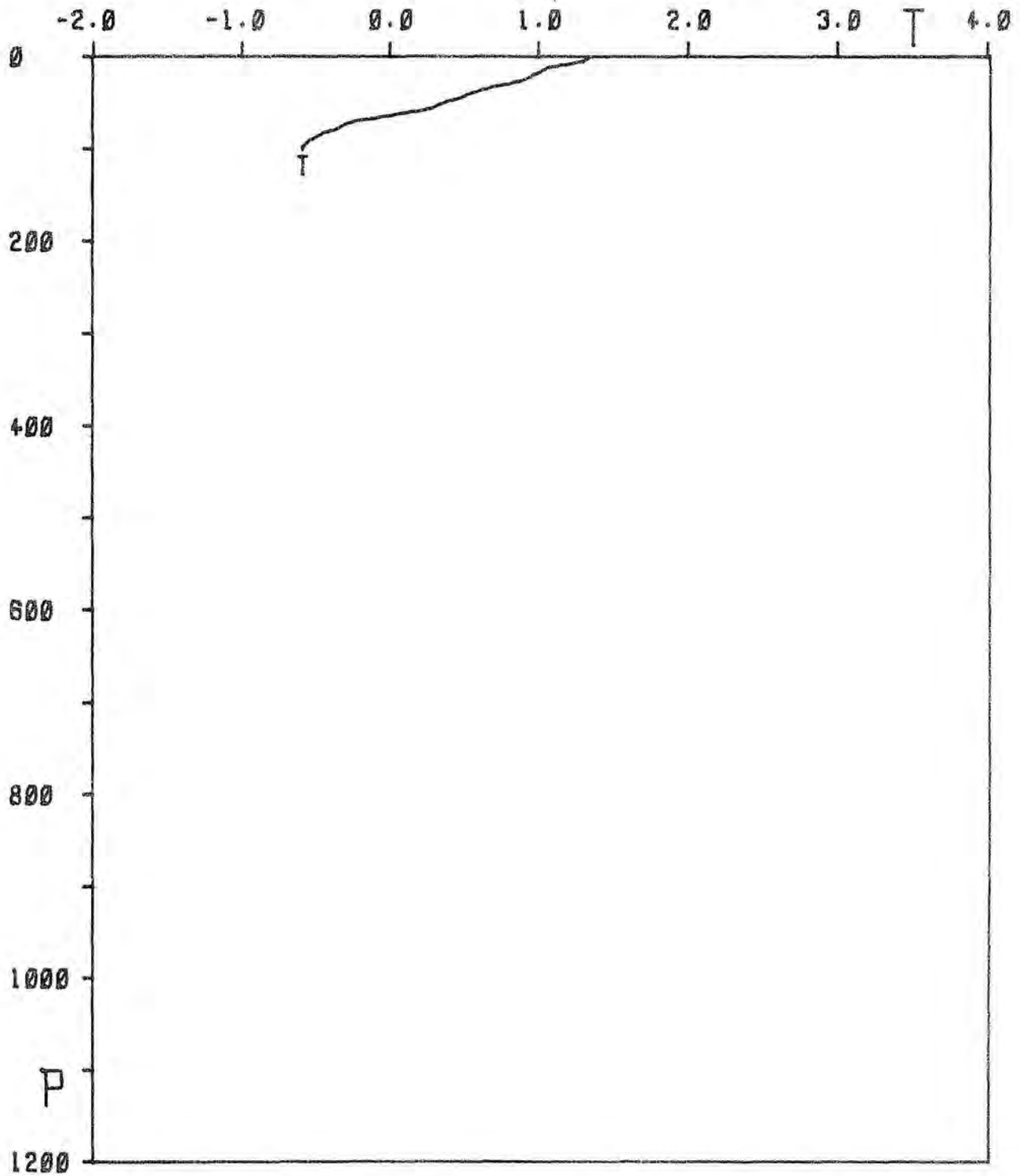
STATION 0143



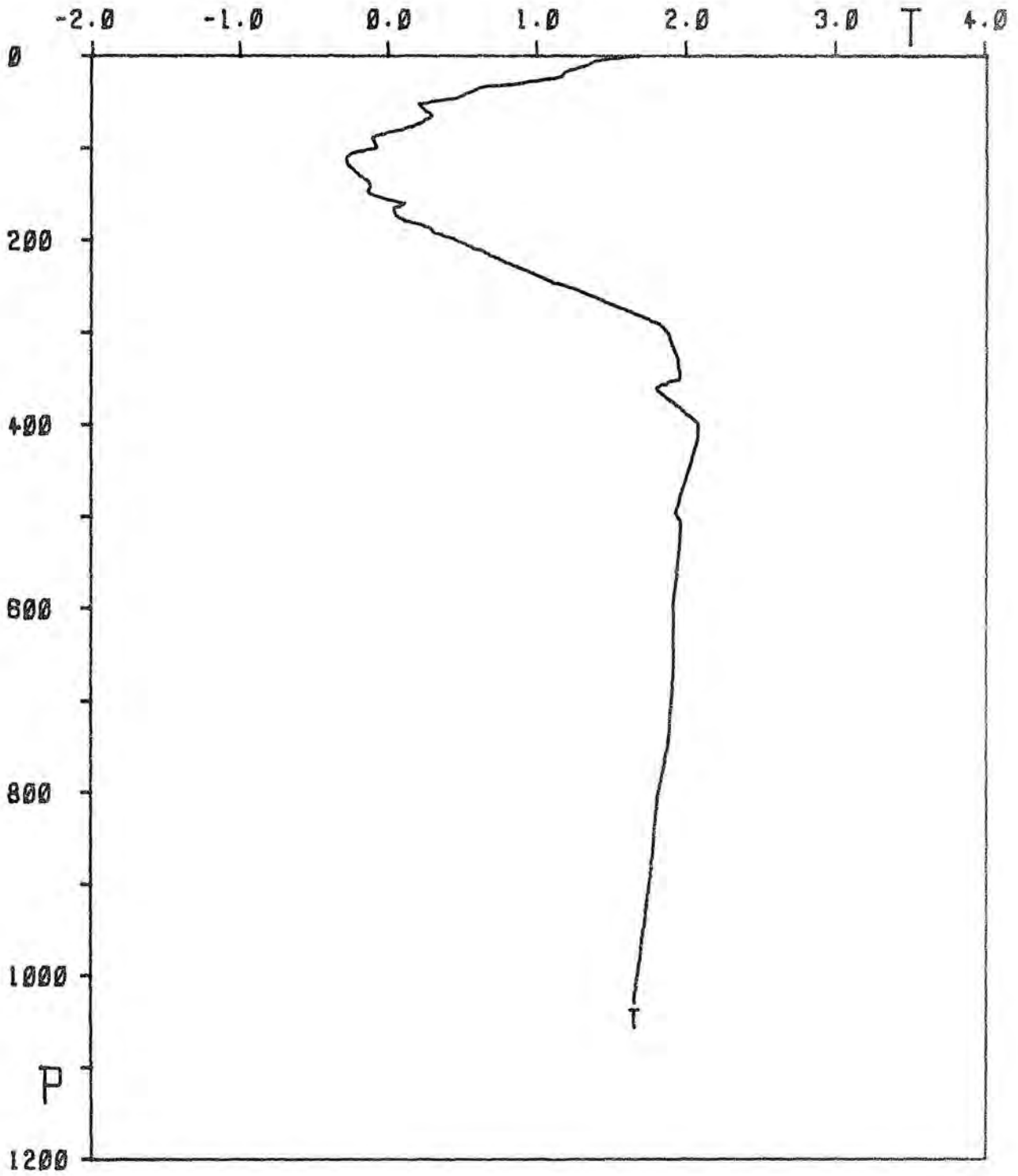
STATION Ø144



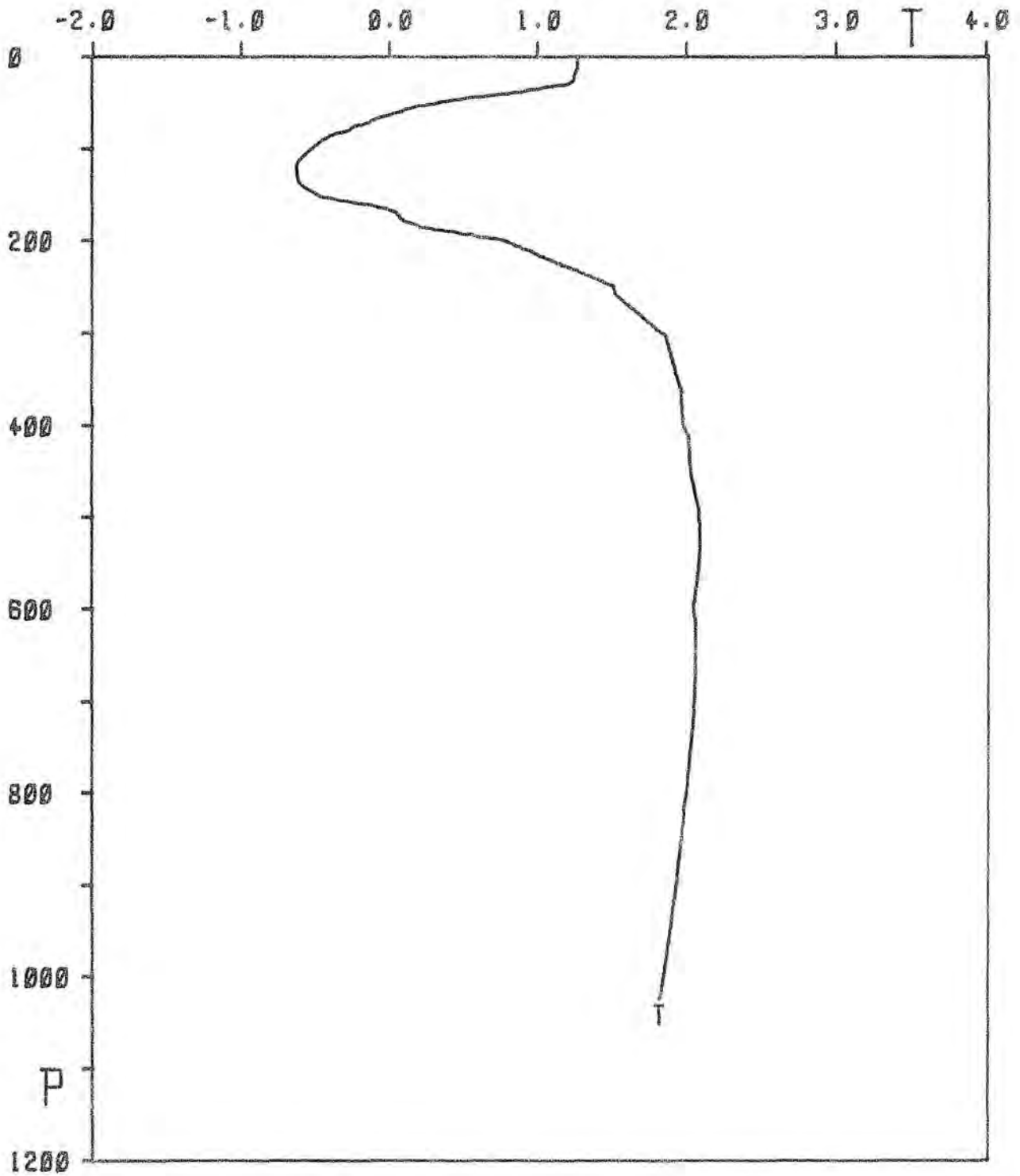
STATION Ø145



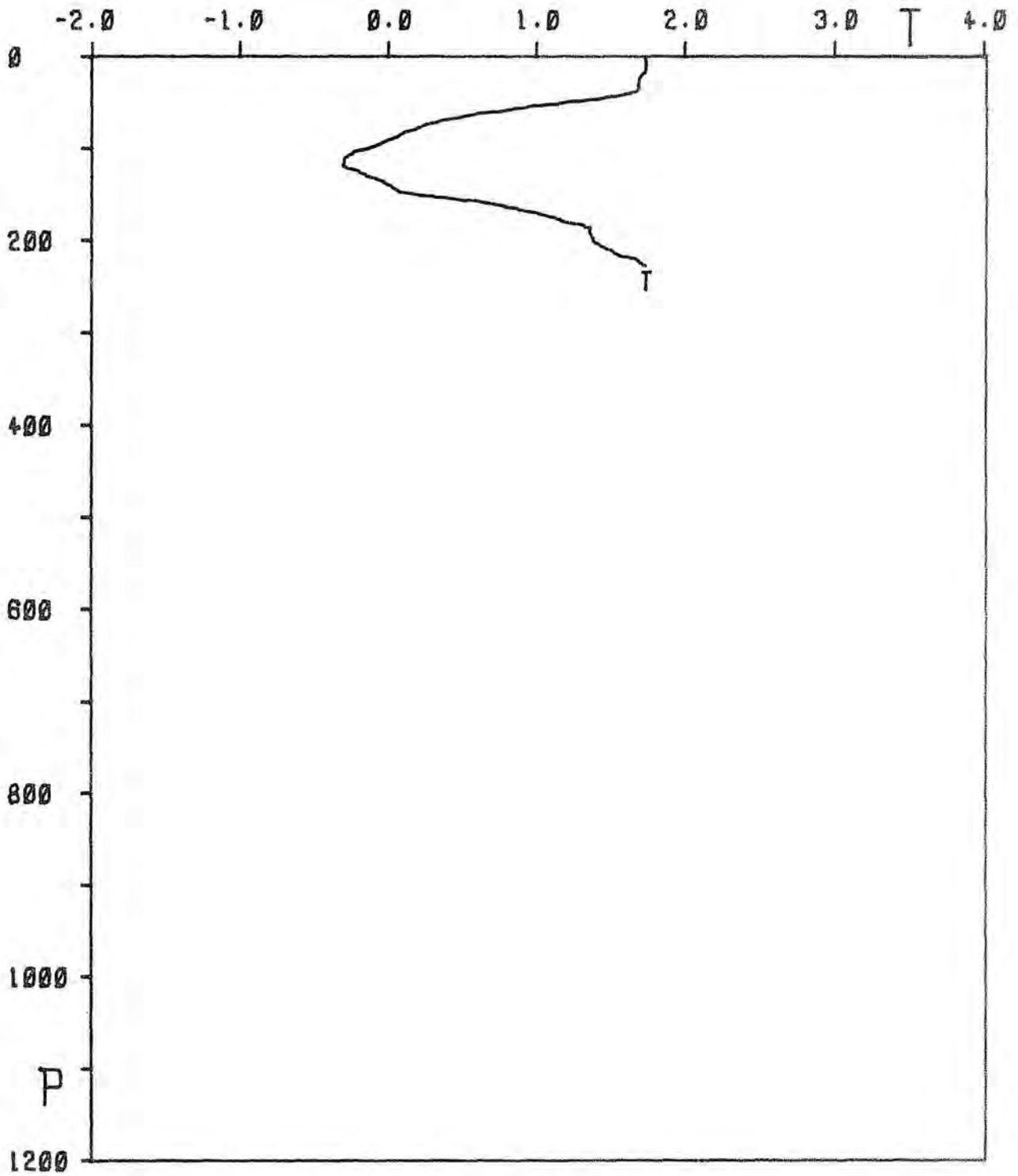
STATION Ø146



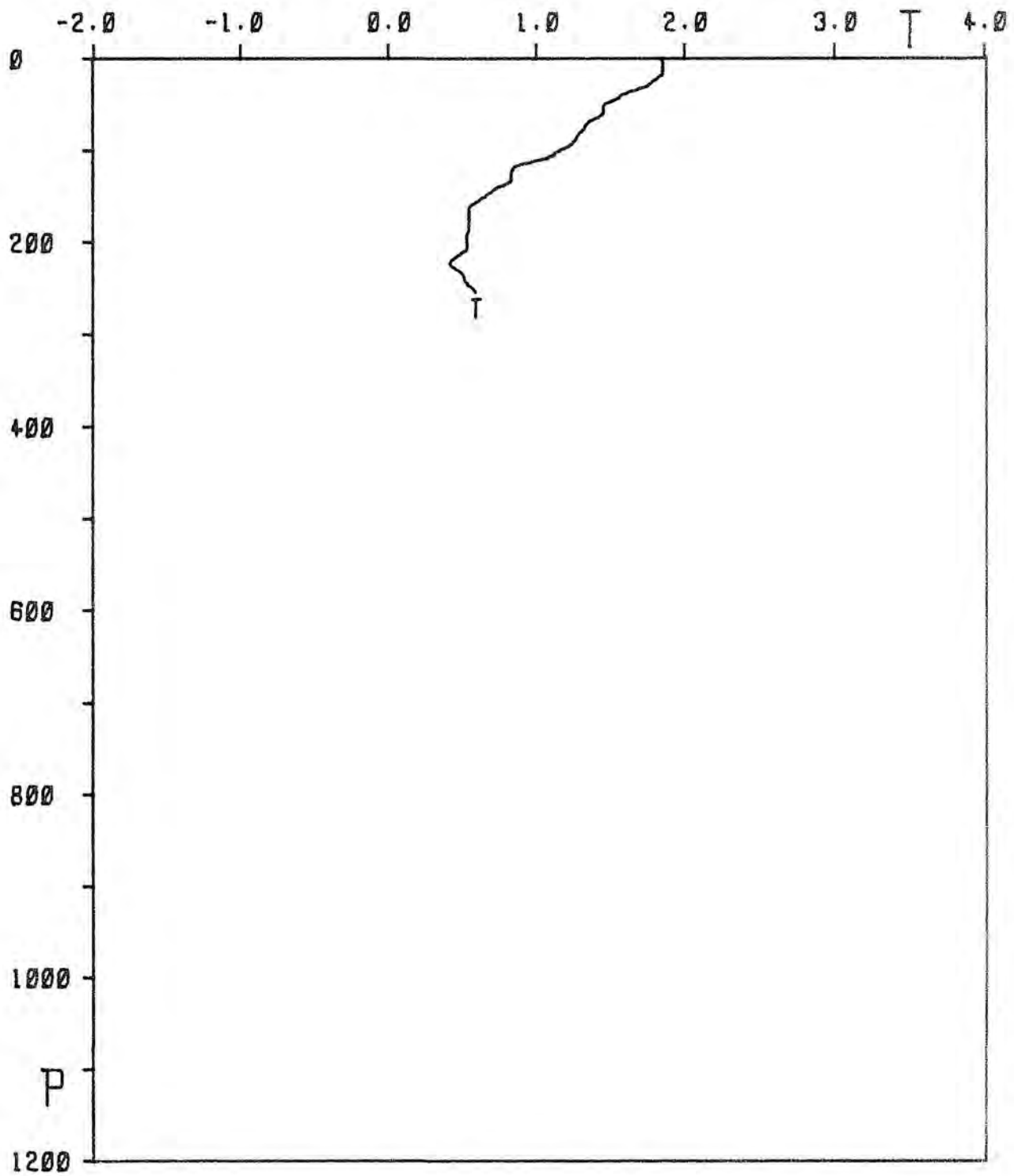
STATION Ø147



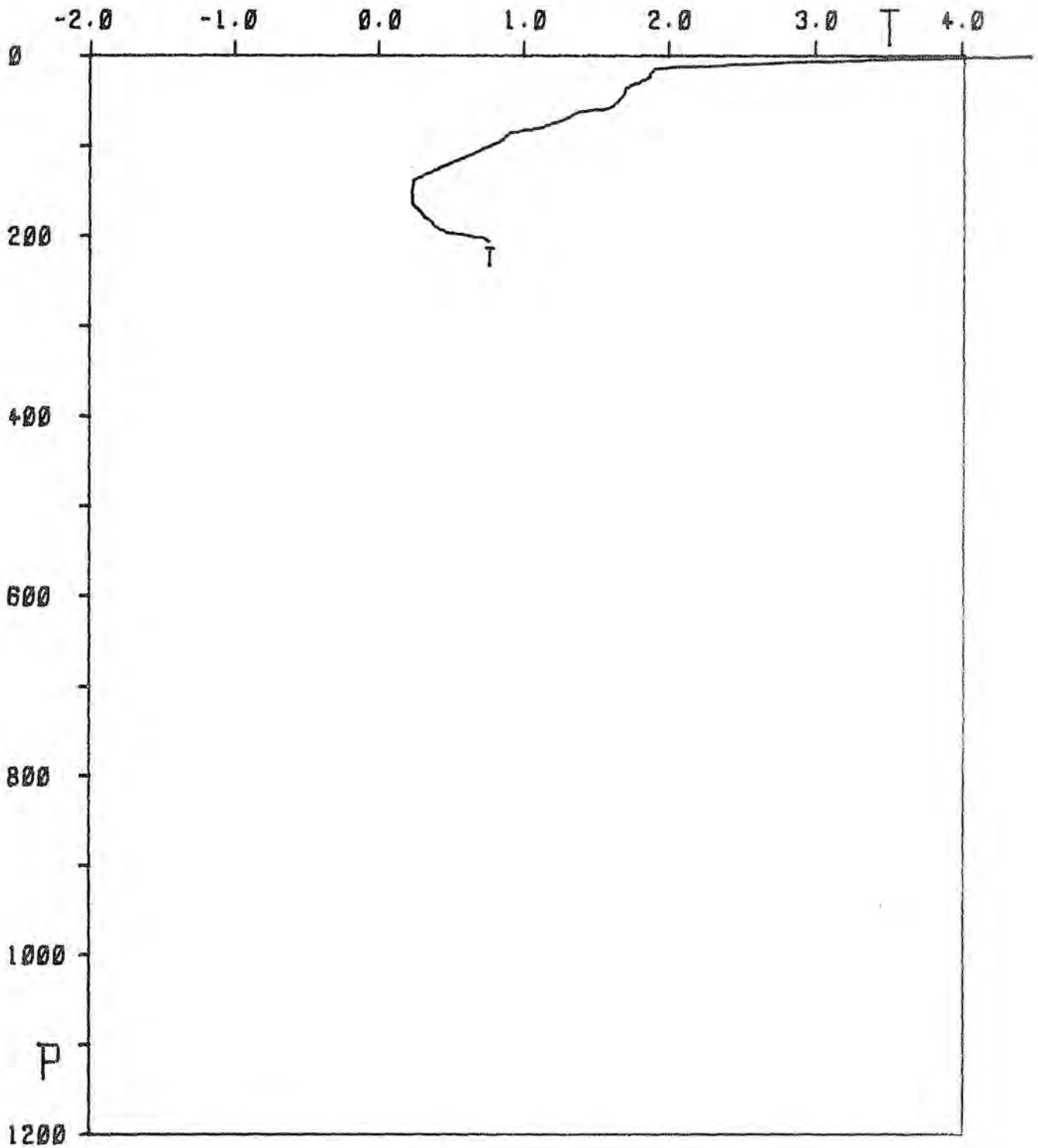
STATION 0148



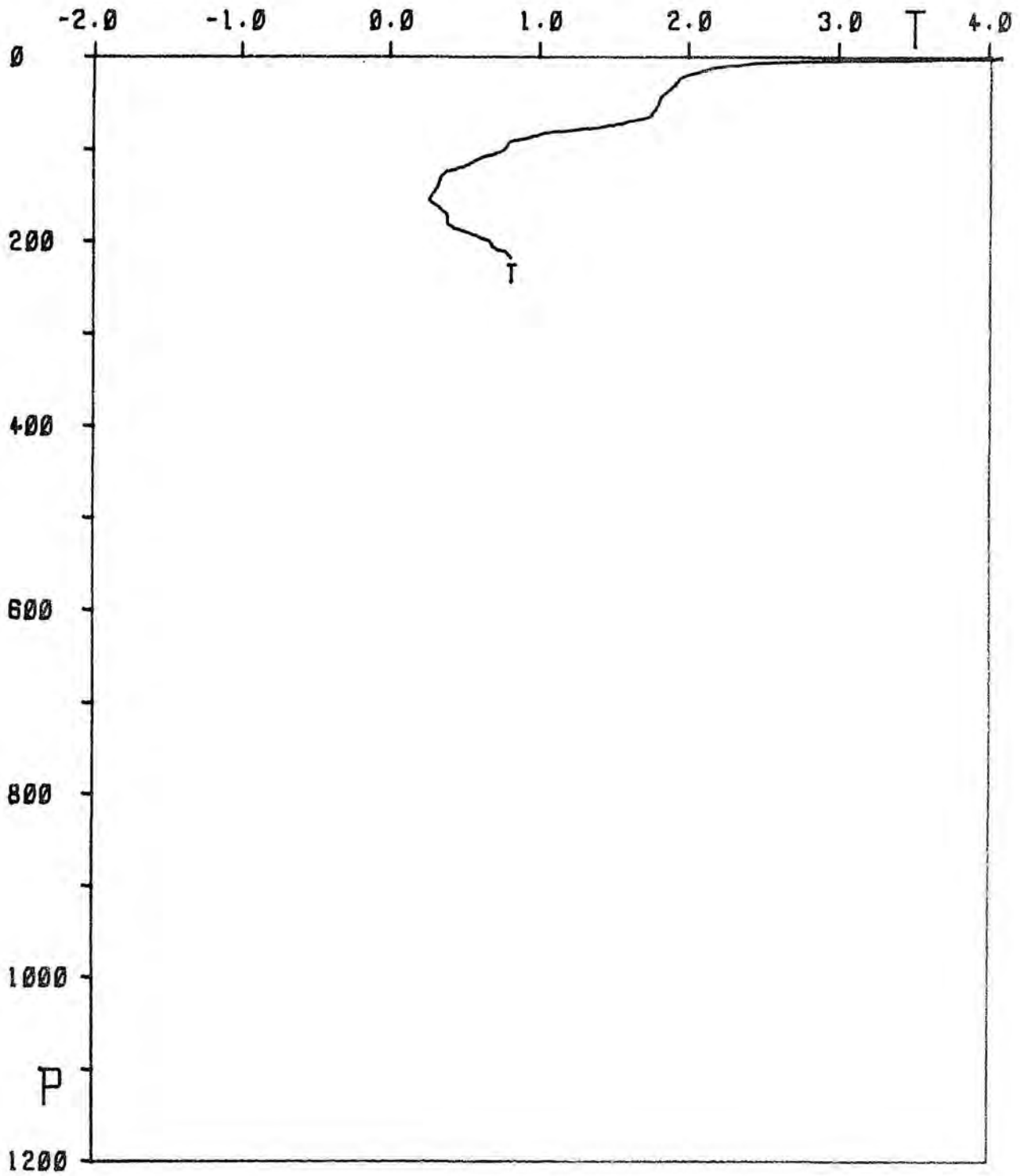
STATION Ø149



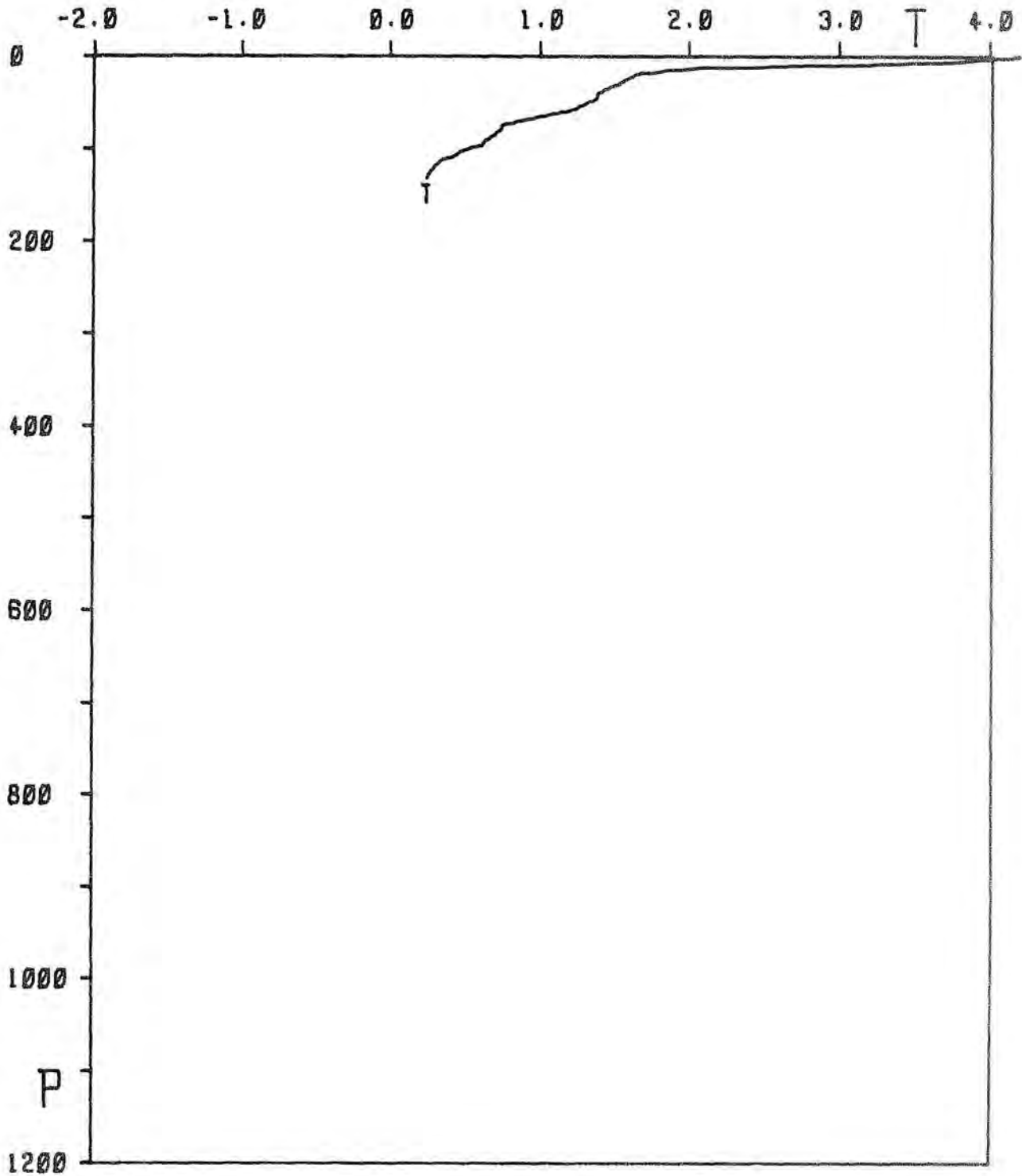
STATION Ø150



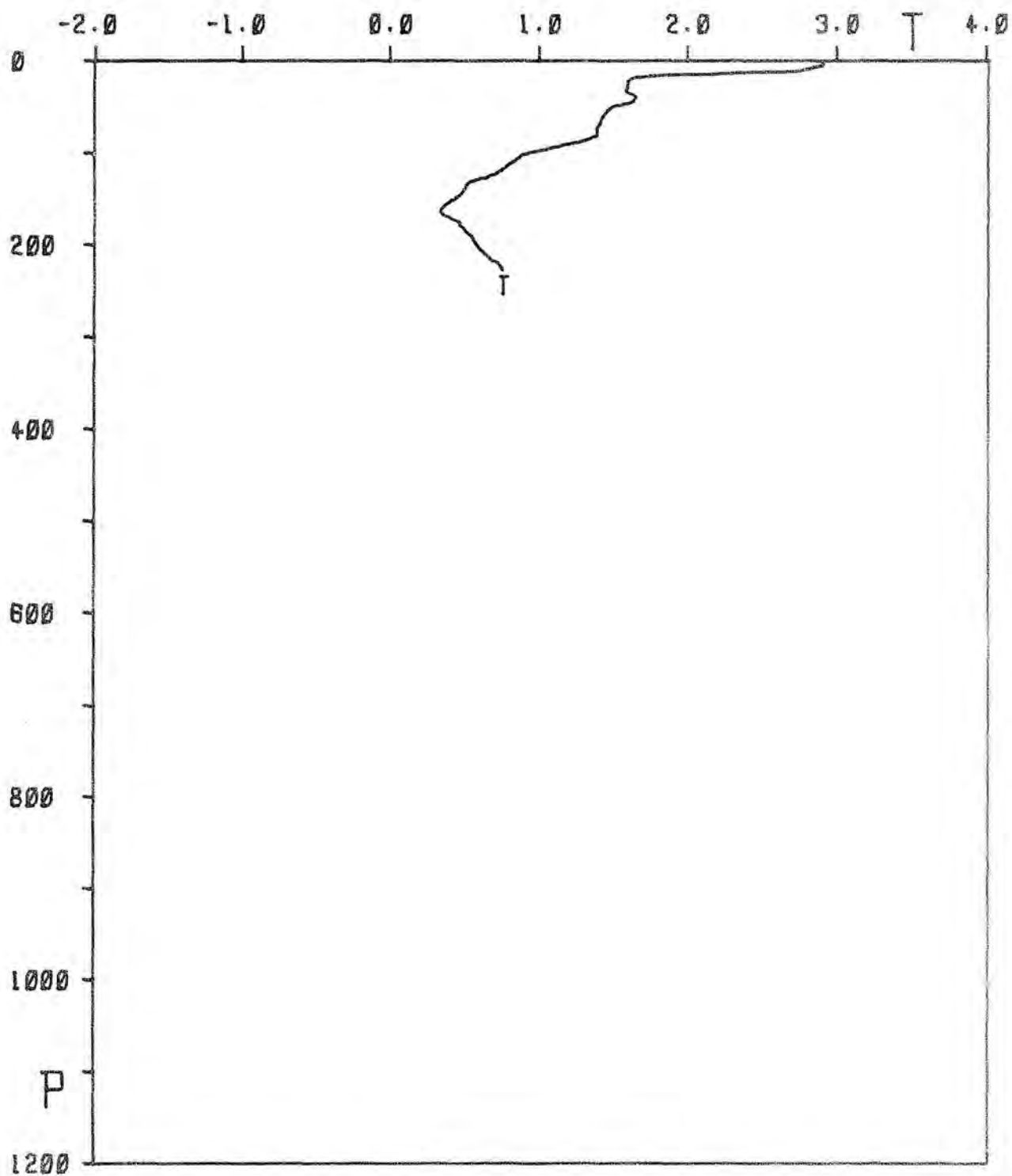
STATION Ø151



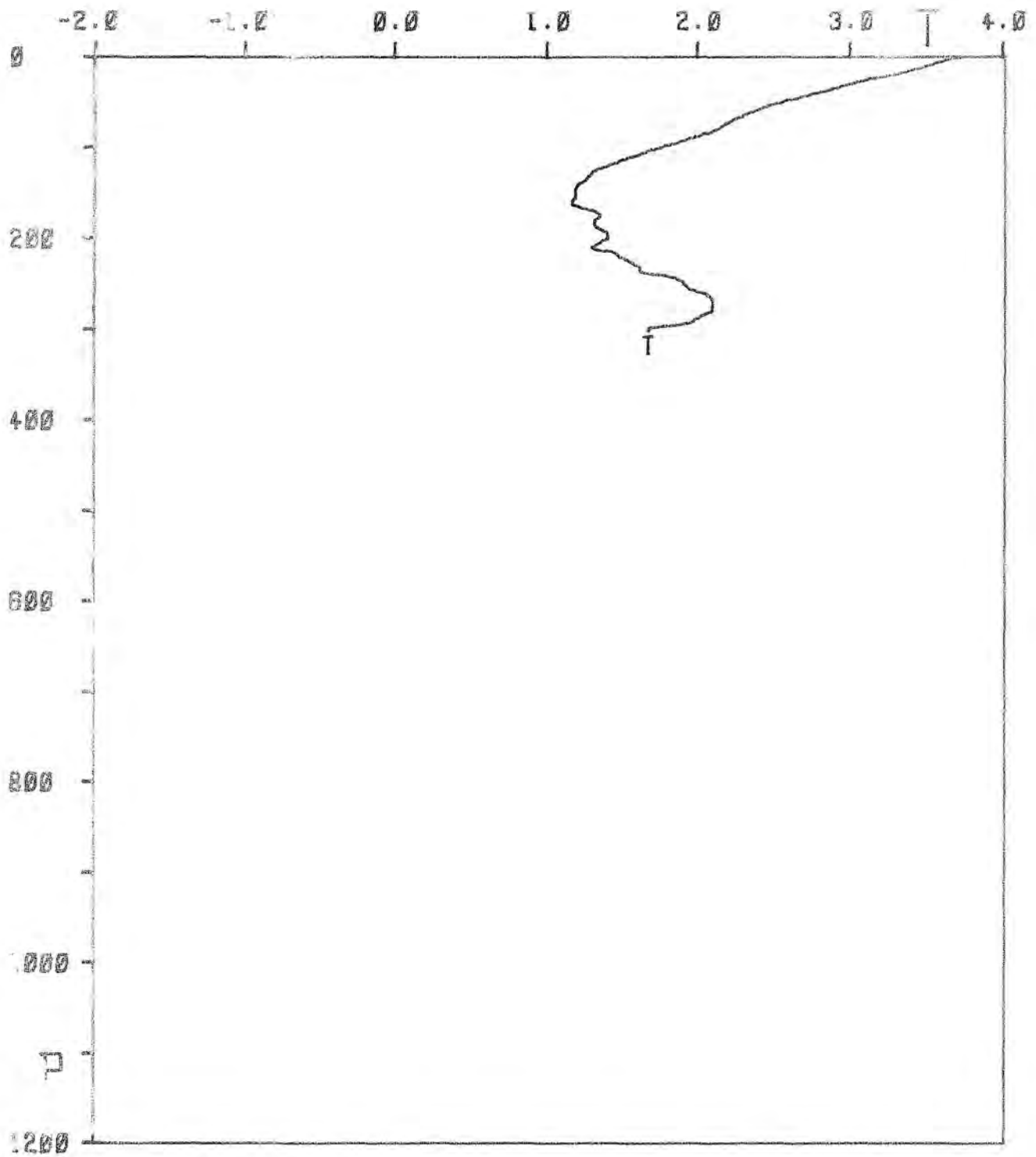
STATION Ø152



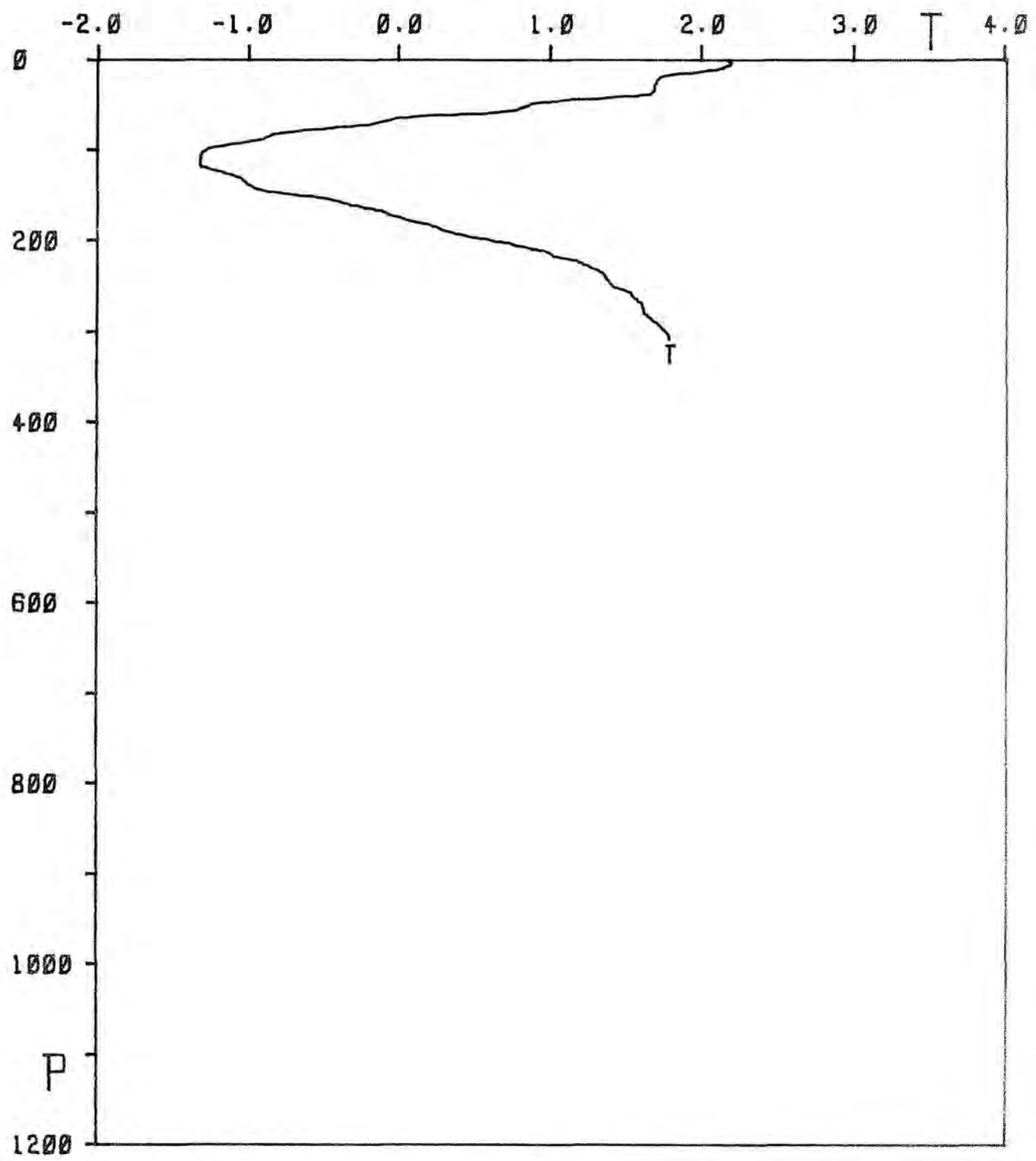
STATION Ø154



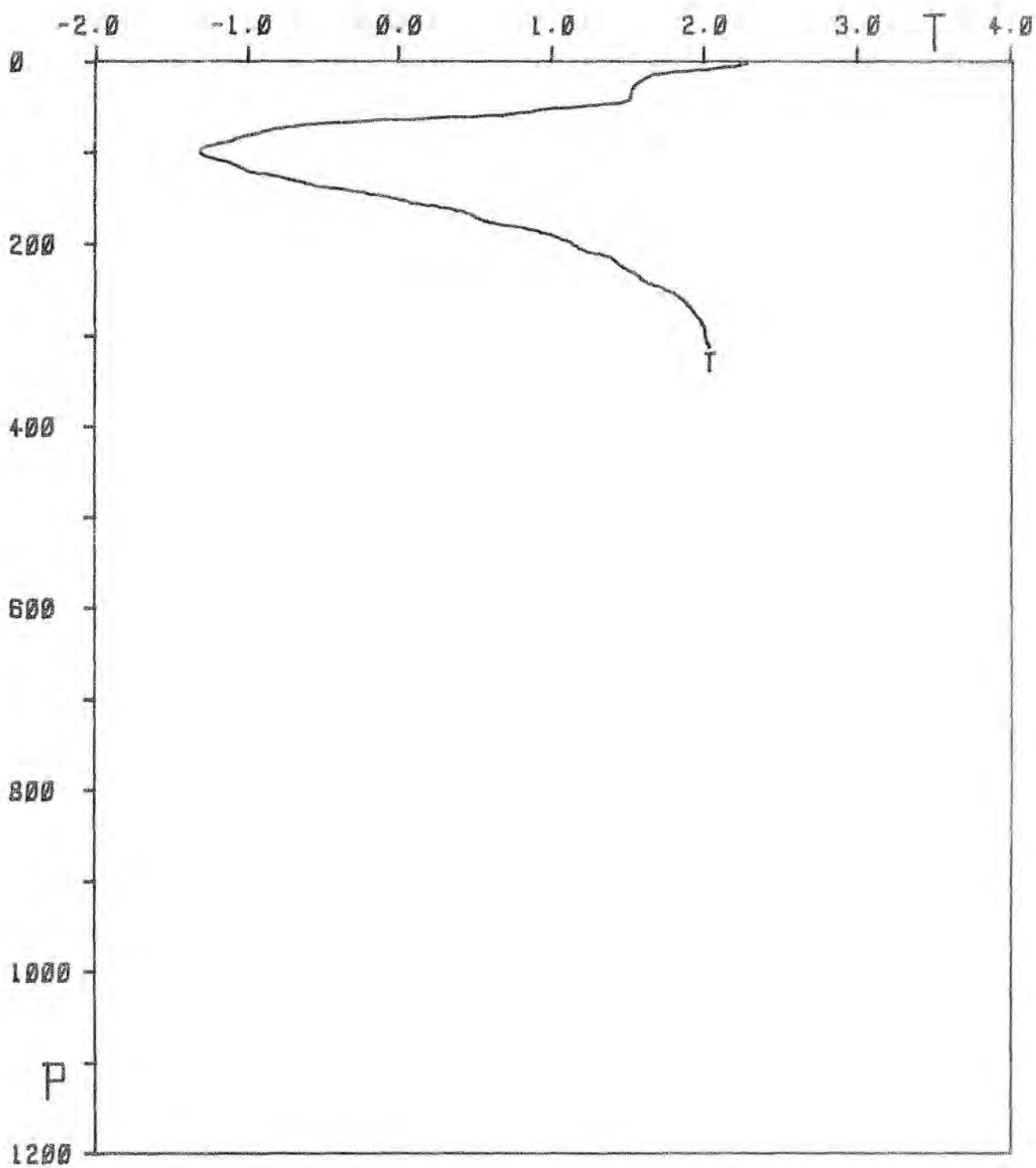
STATION Ø156



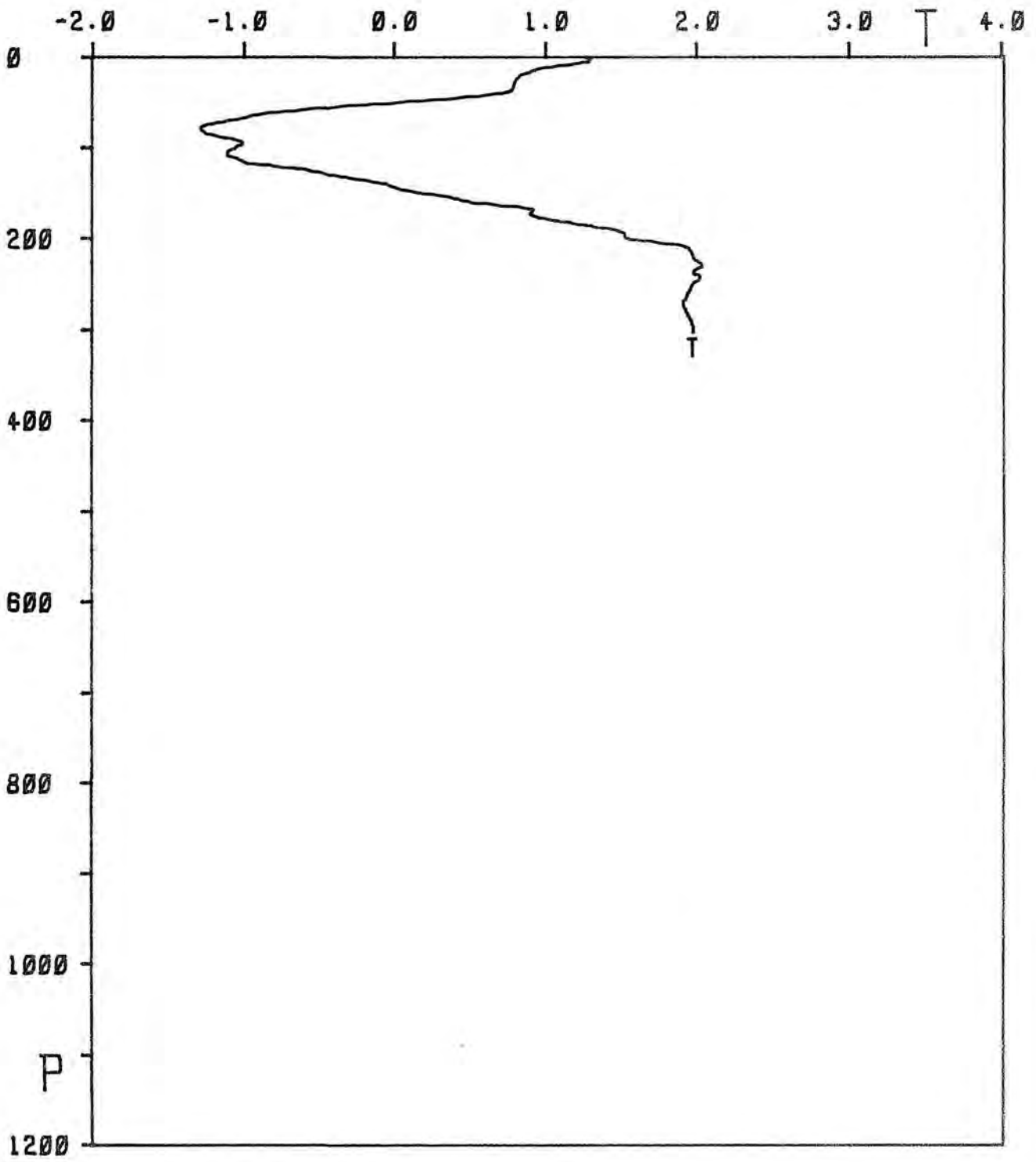
STATION Ø157



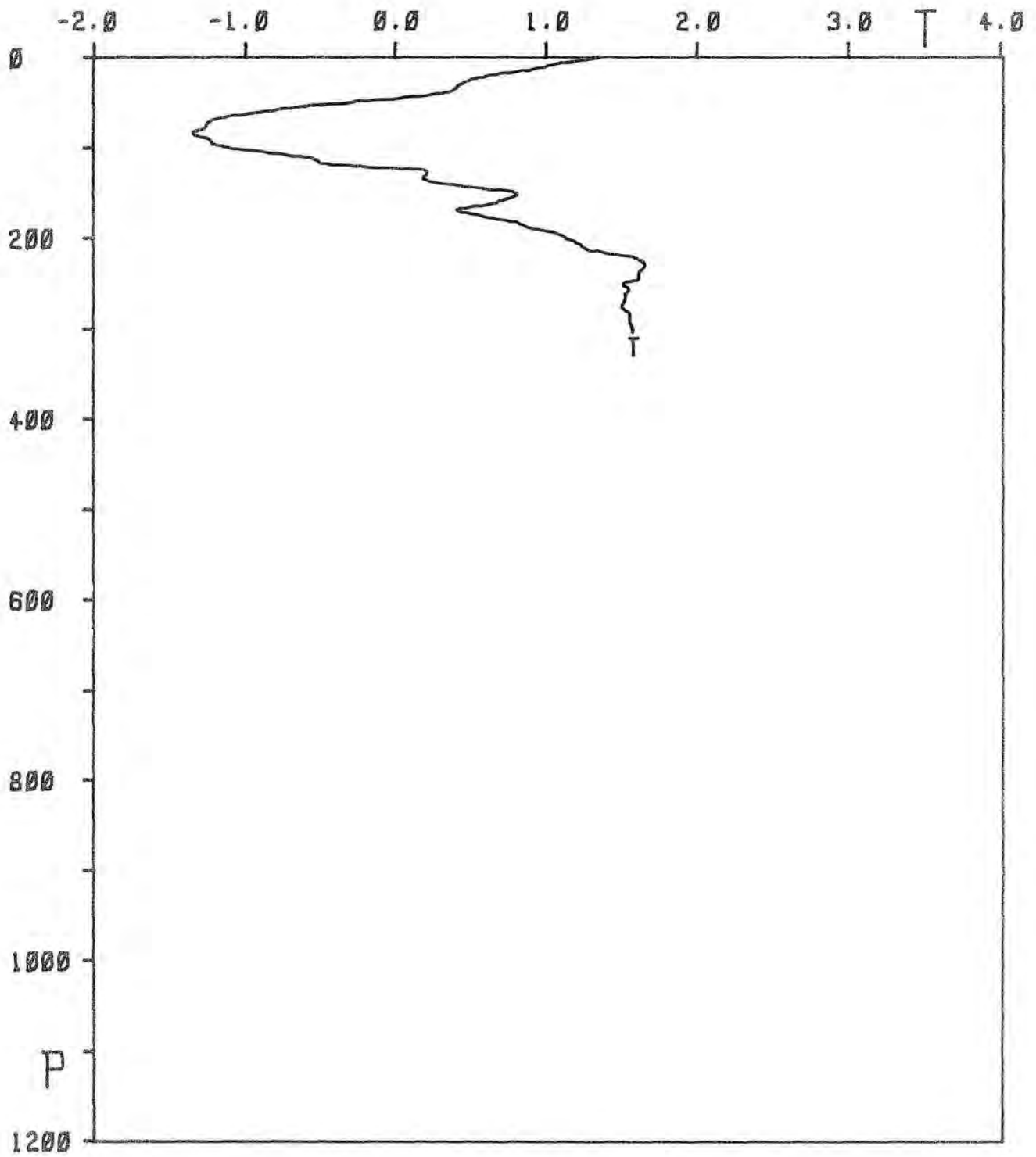
STATION Ø158



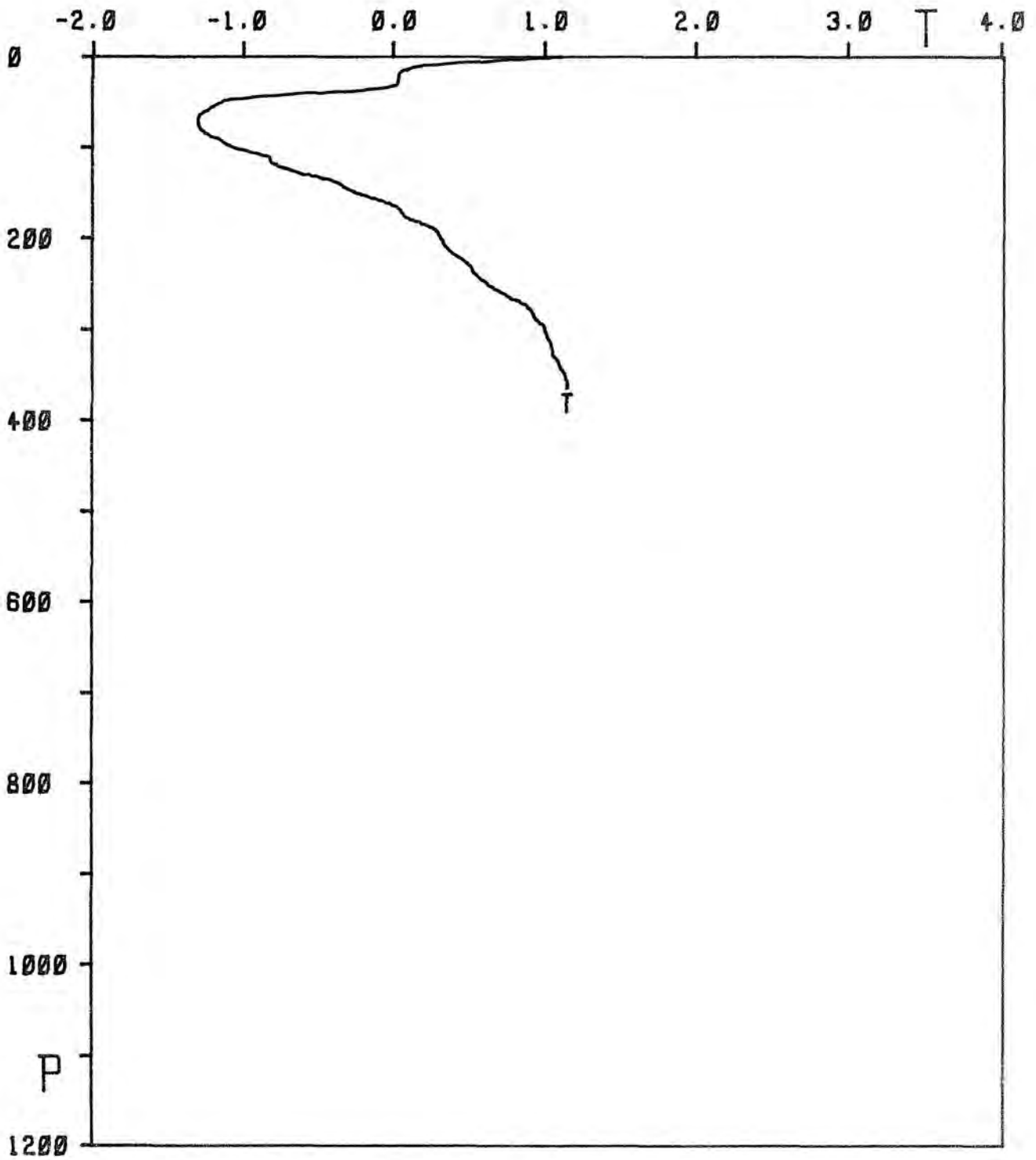
STATION 0159



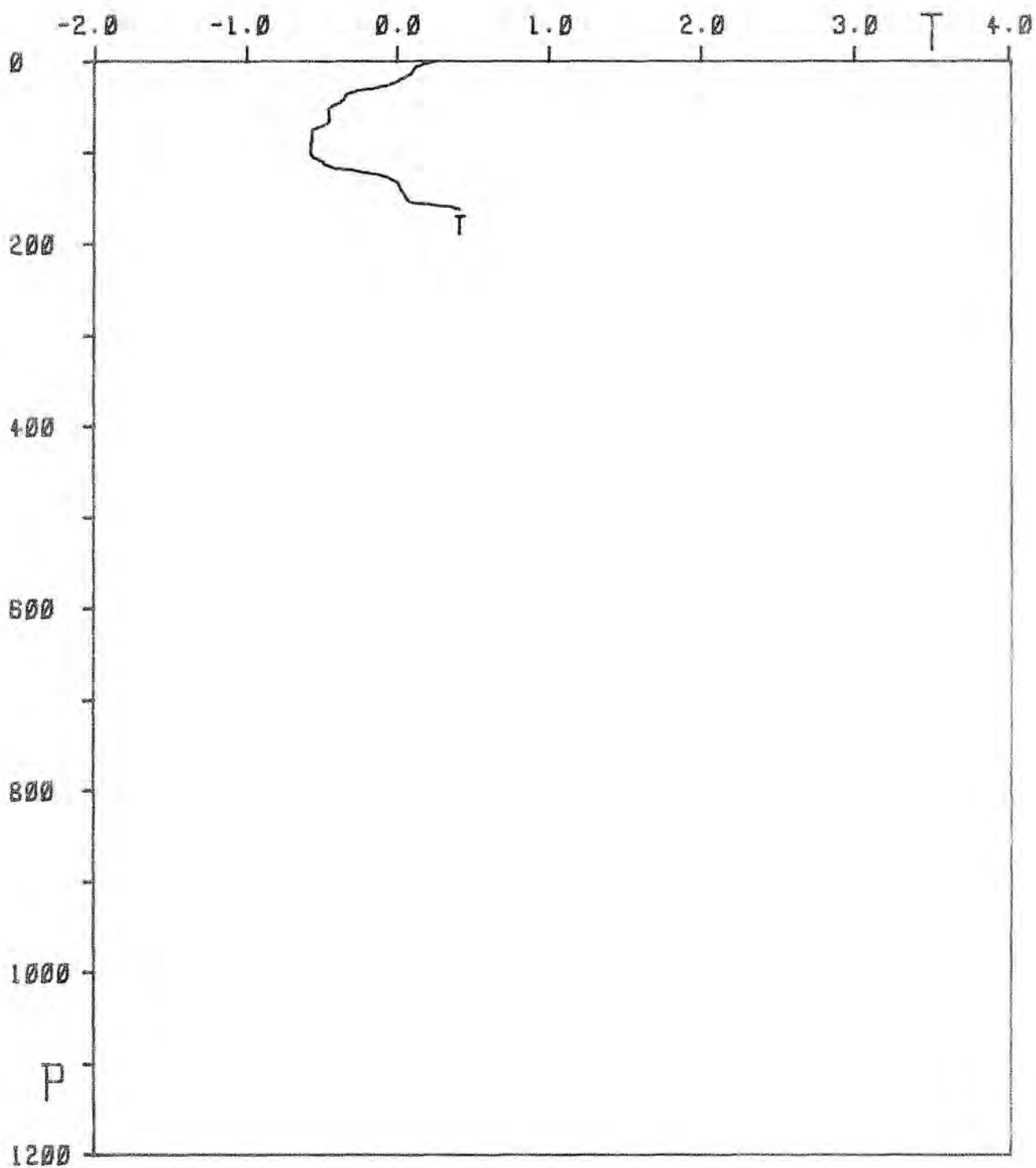
STATION 0161



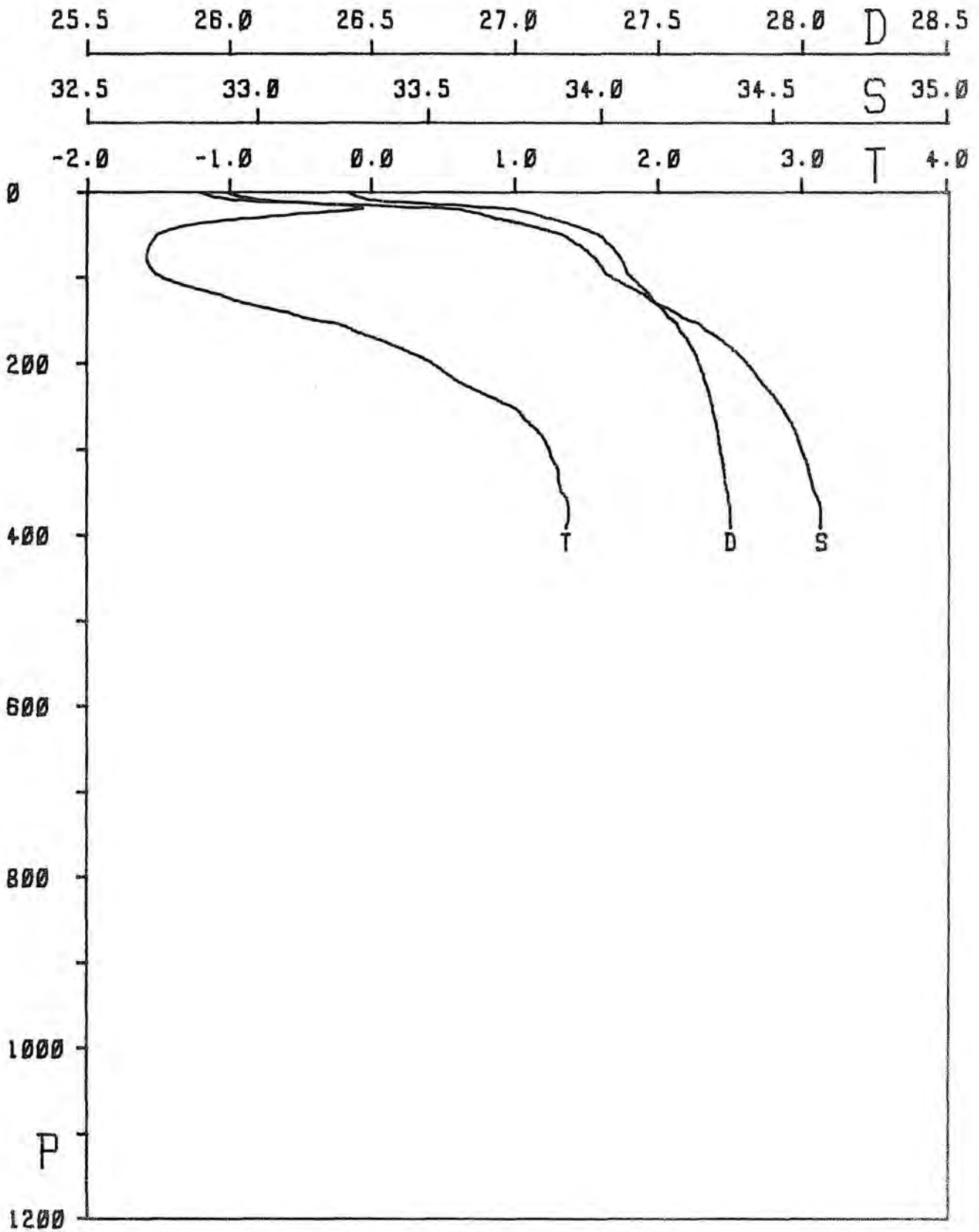
STATION 0162



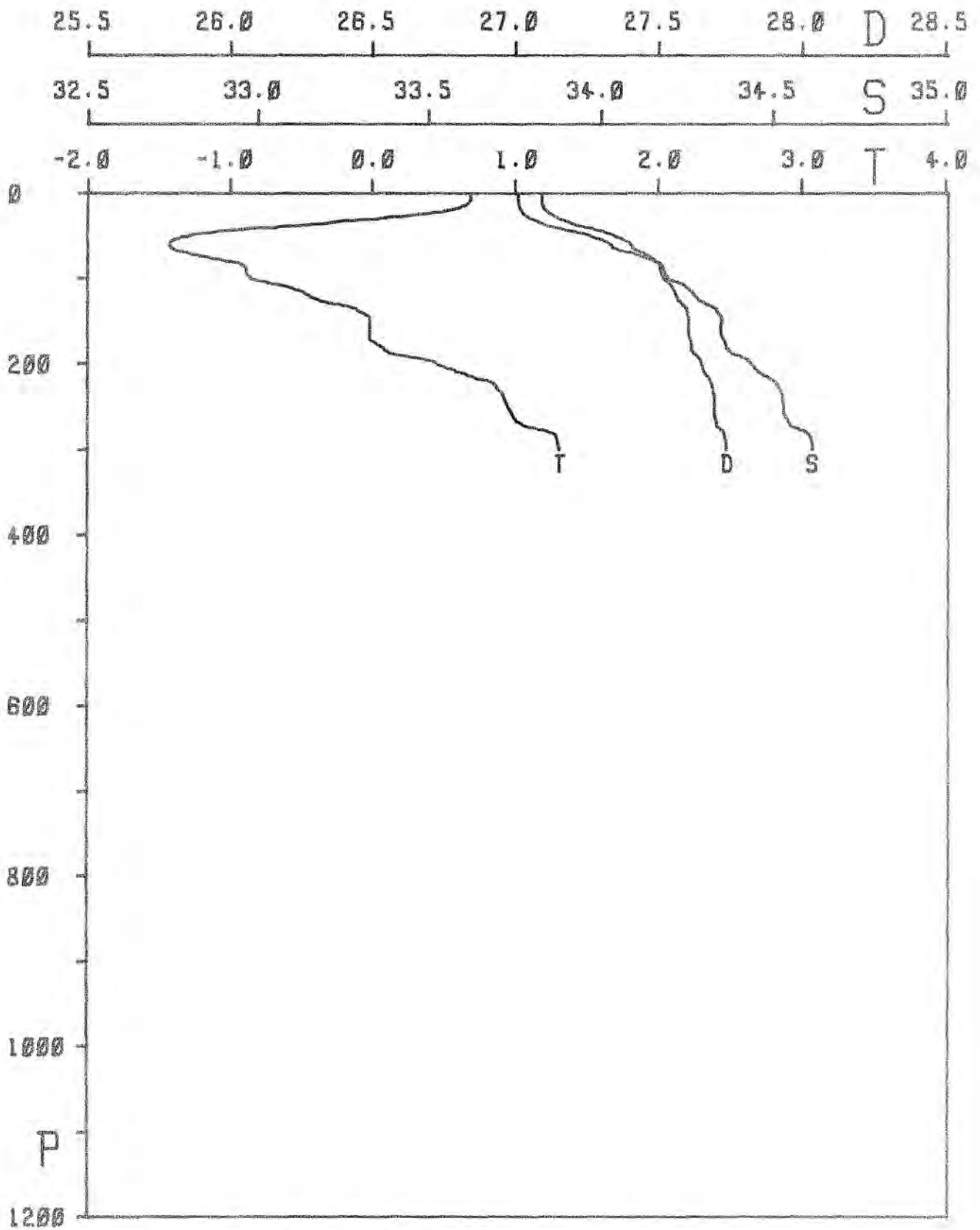
STATION Ø163



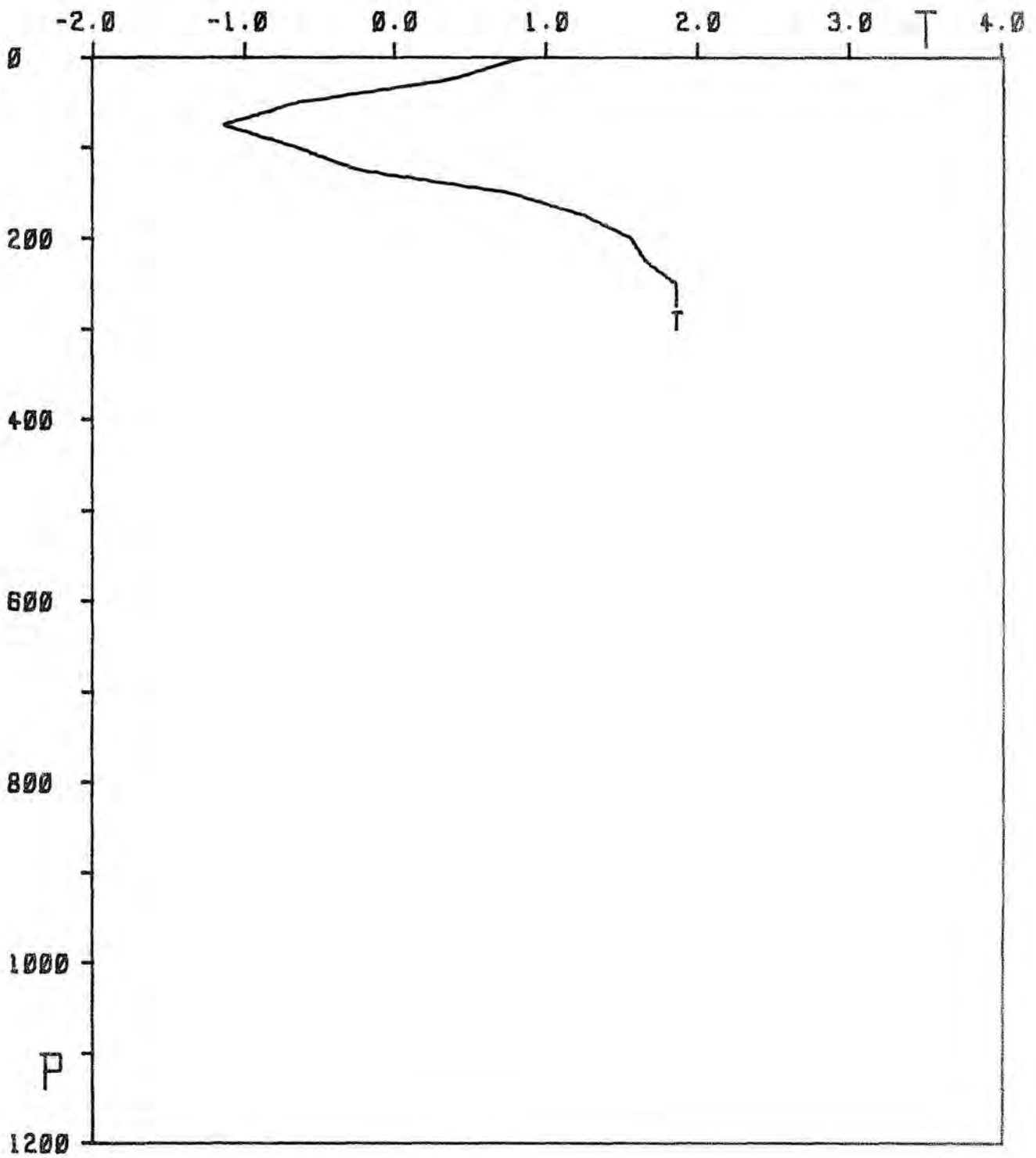
STATION Ø164



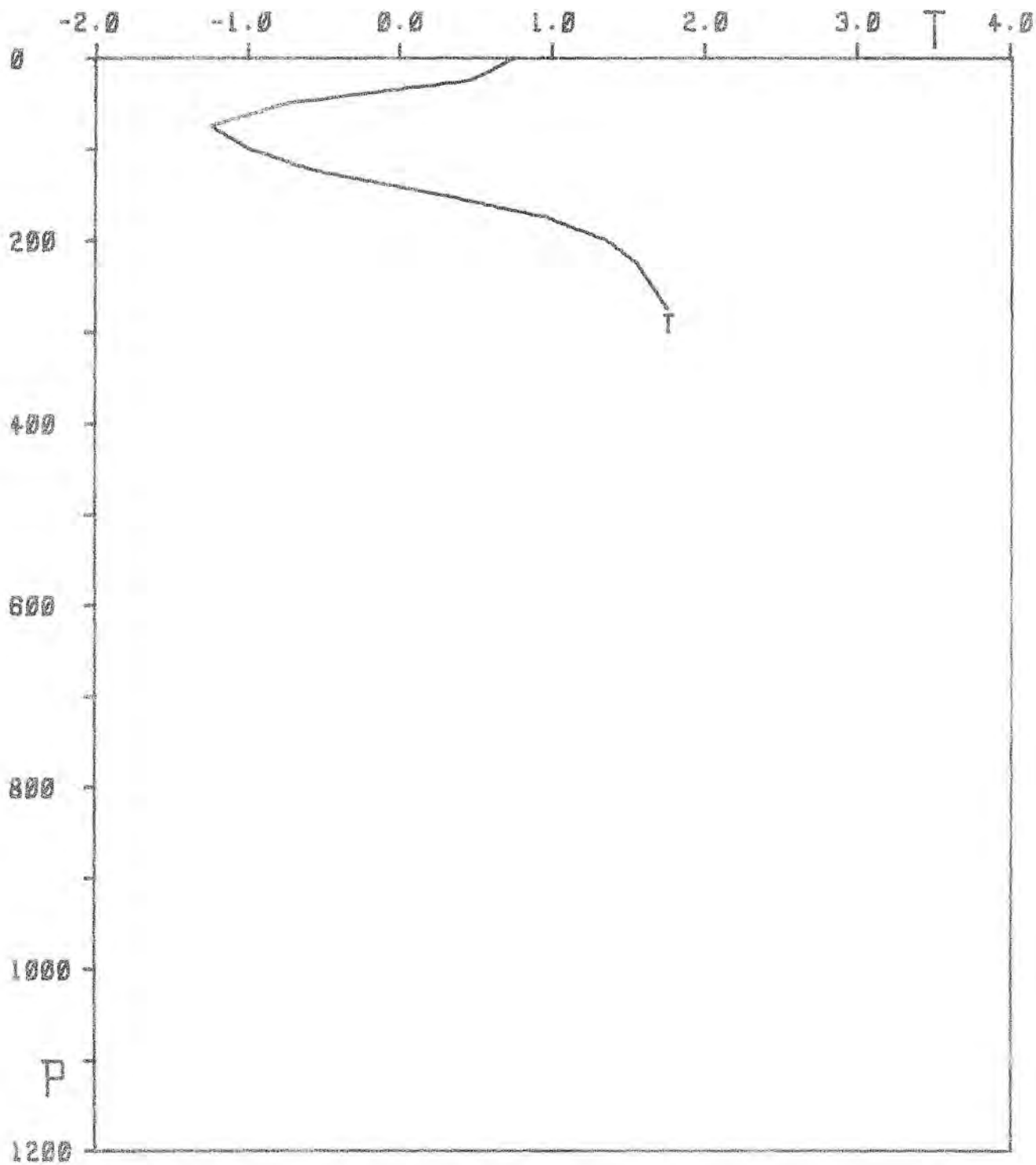
STATION Ø165



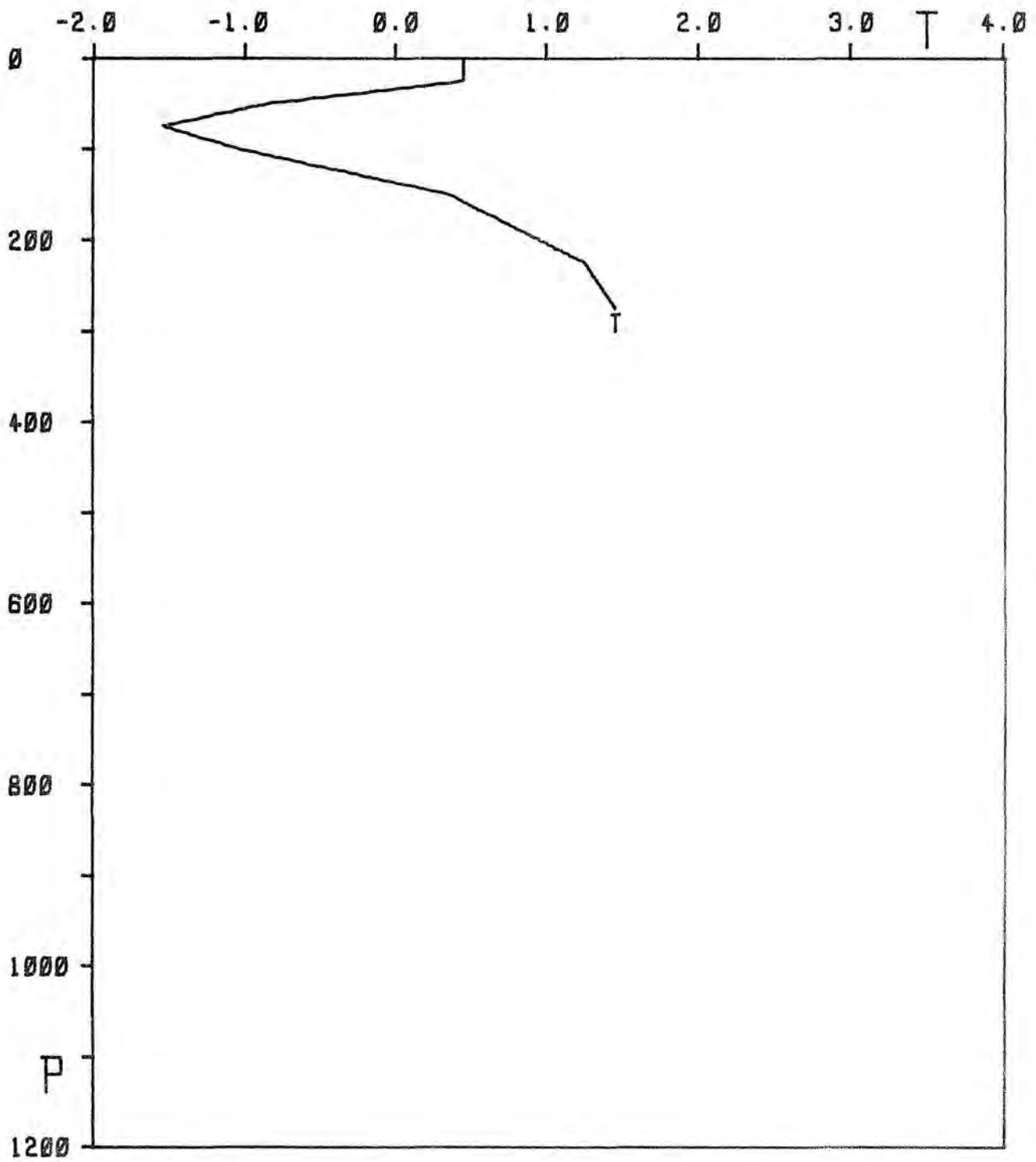
STATION Ø166_{BT}



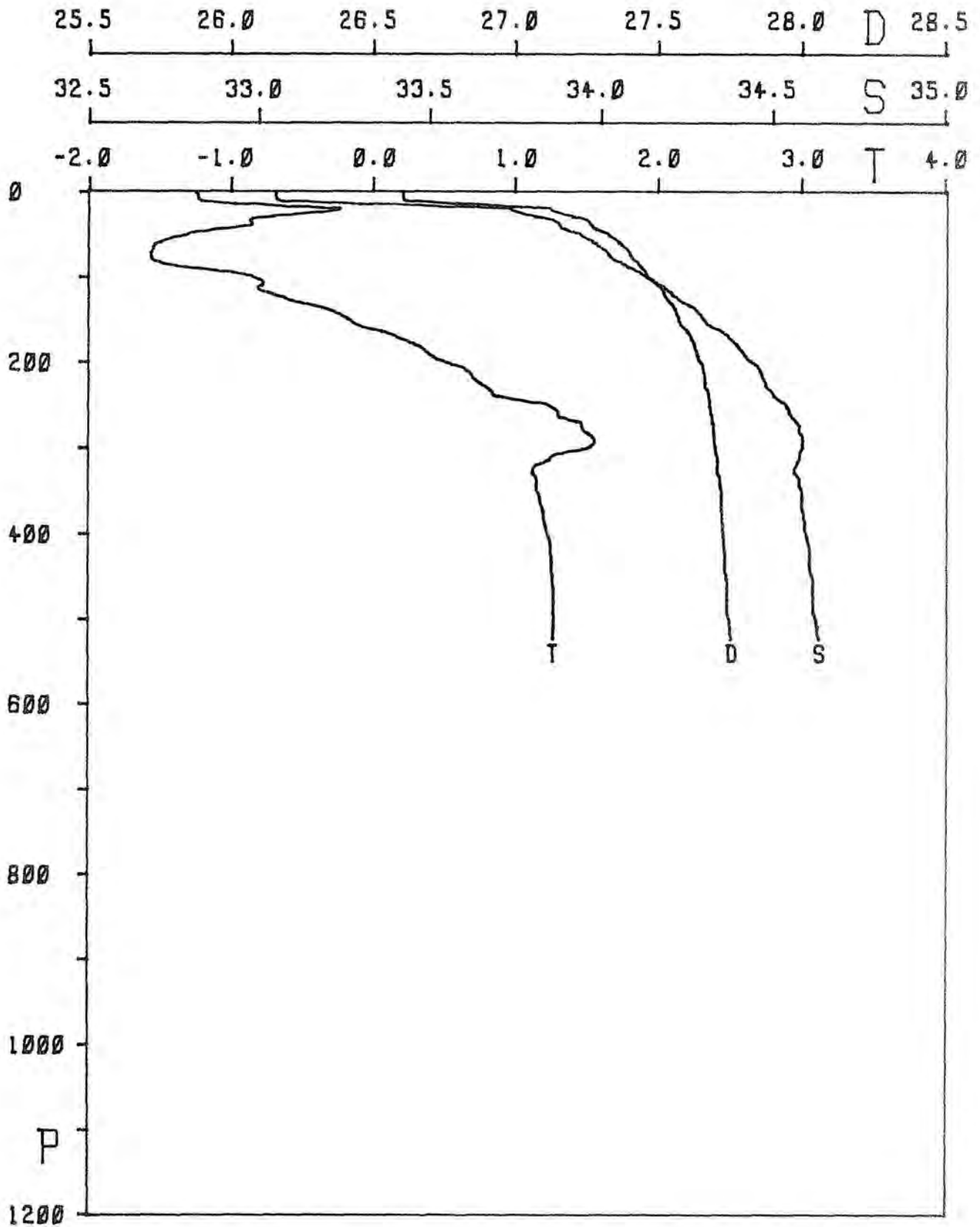
STATION Ø167_{BT}



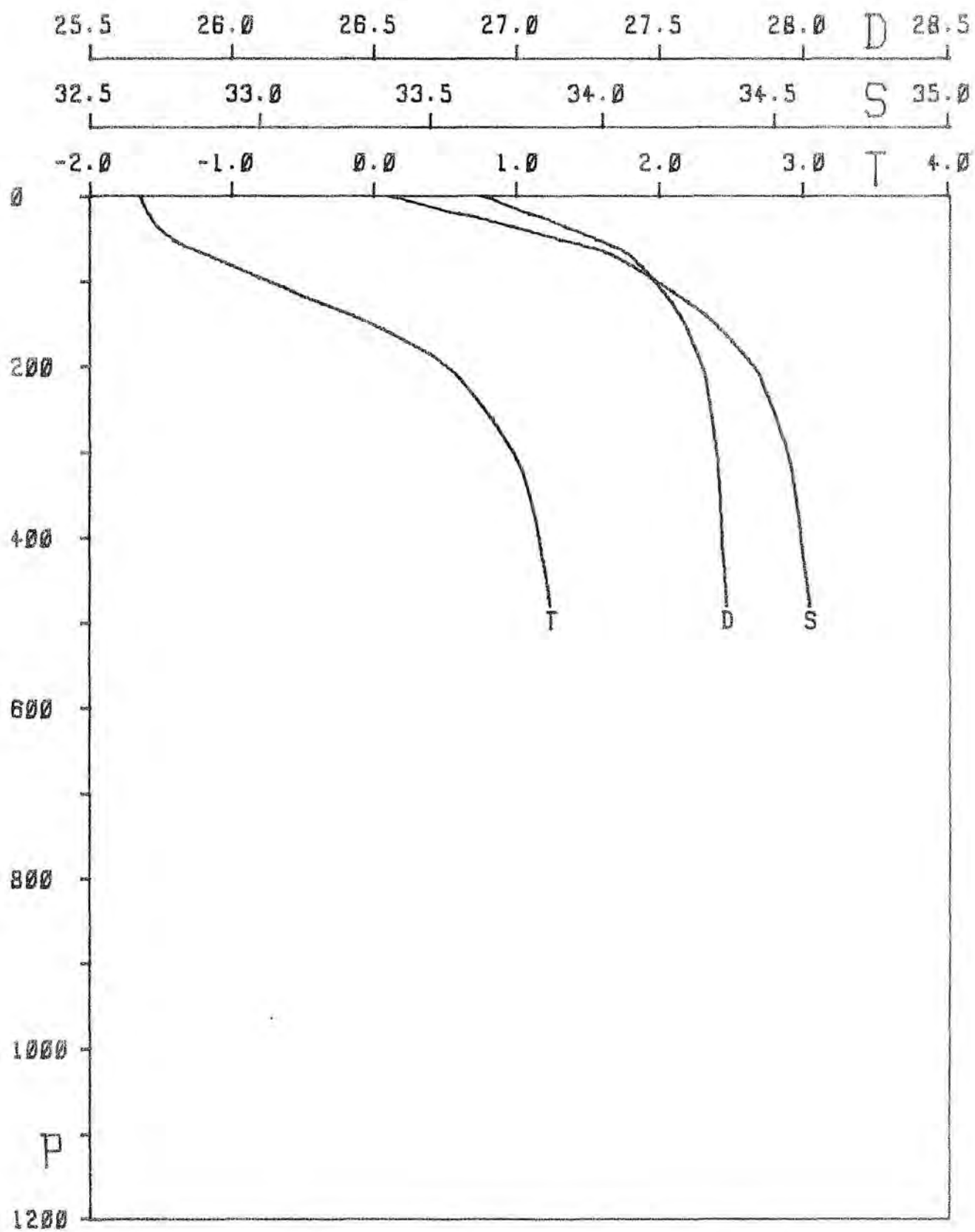
STATION Ø169_{BT}



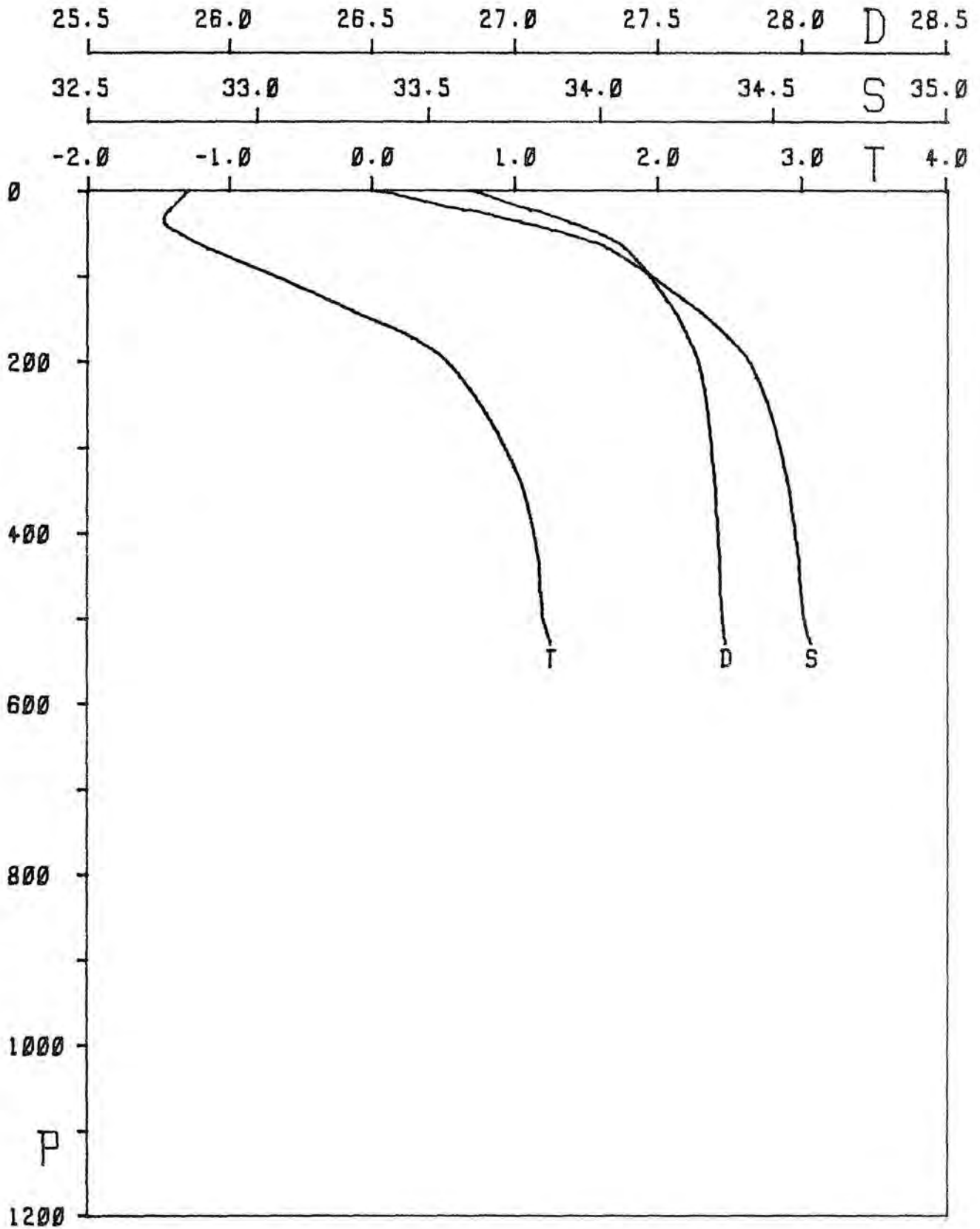
STATION Ø17Ø



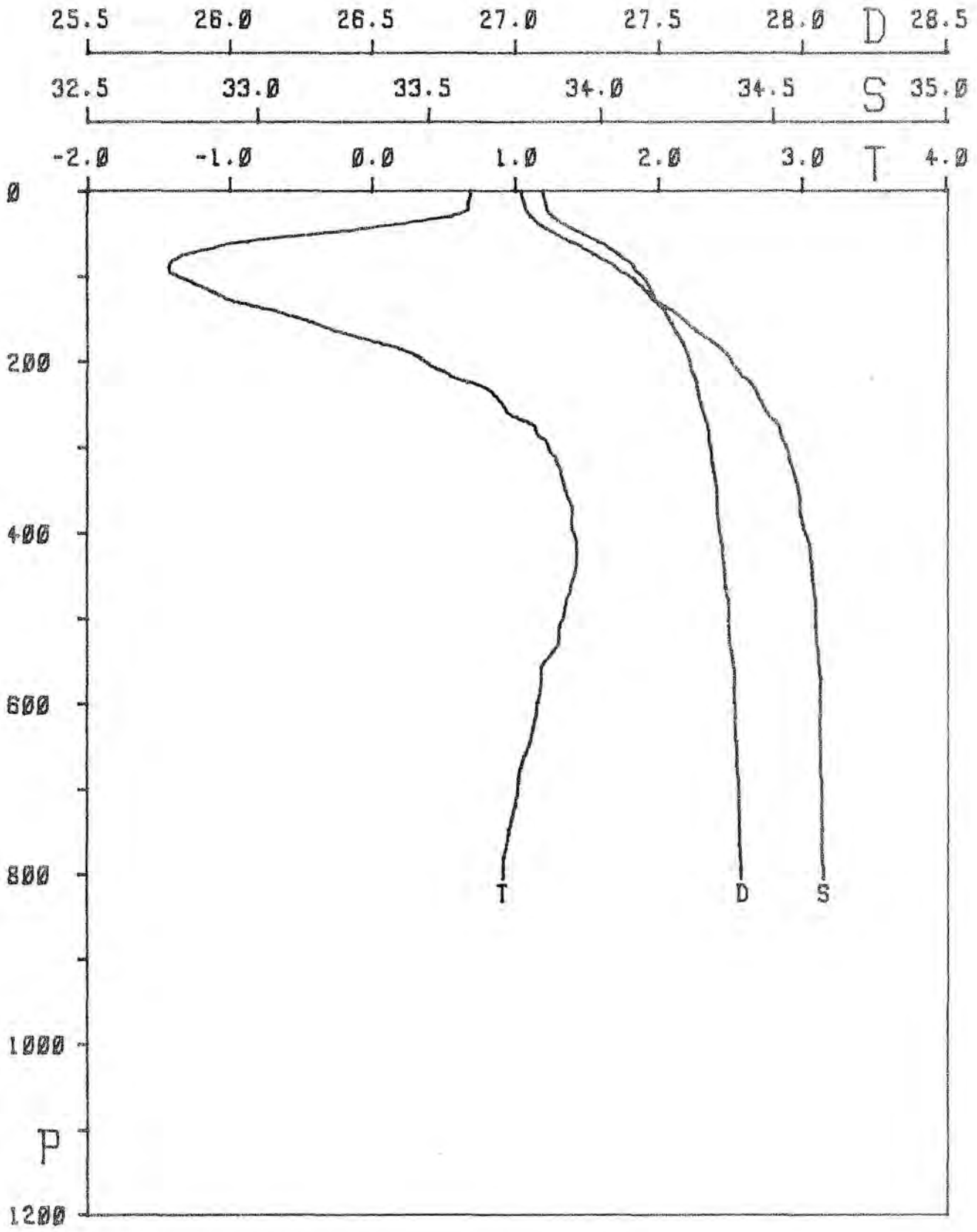
STATION Ø171



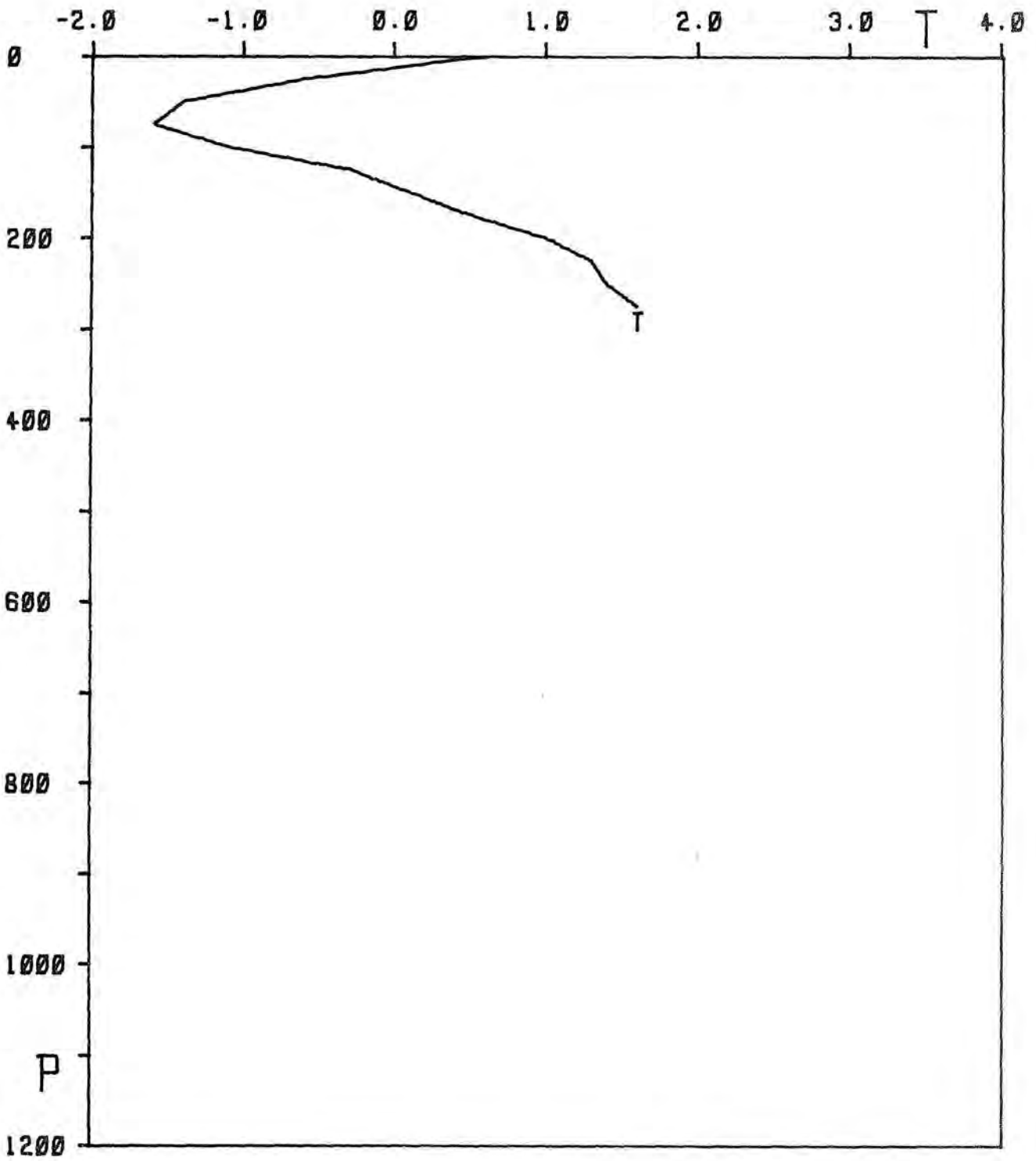
STATION Ø172



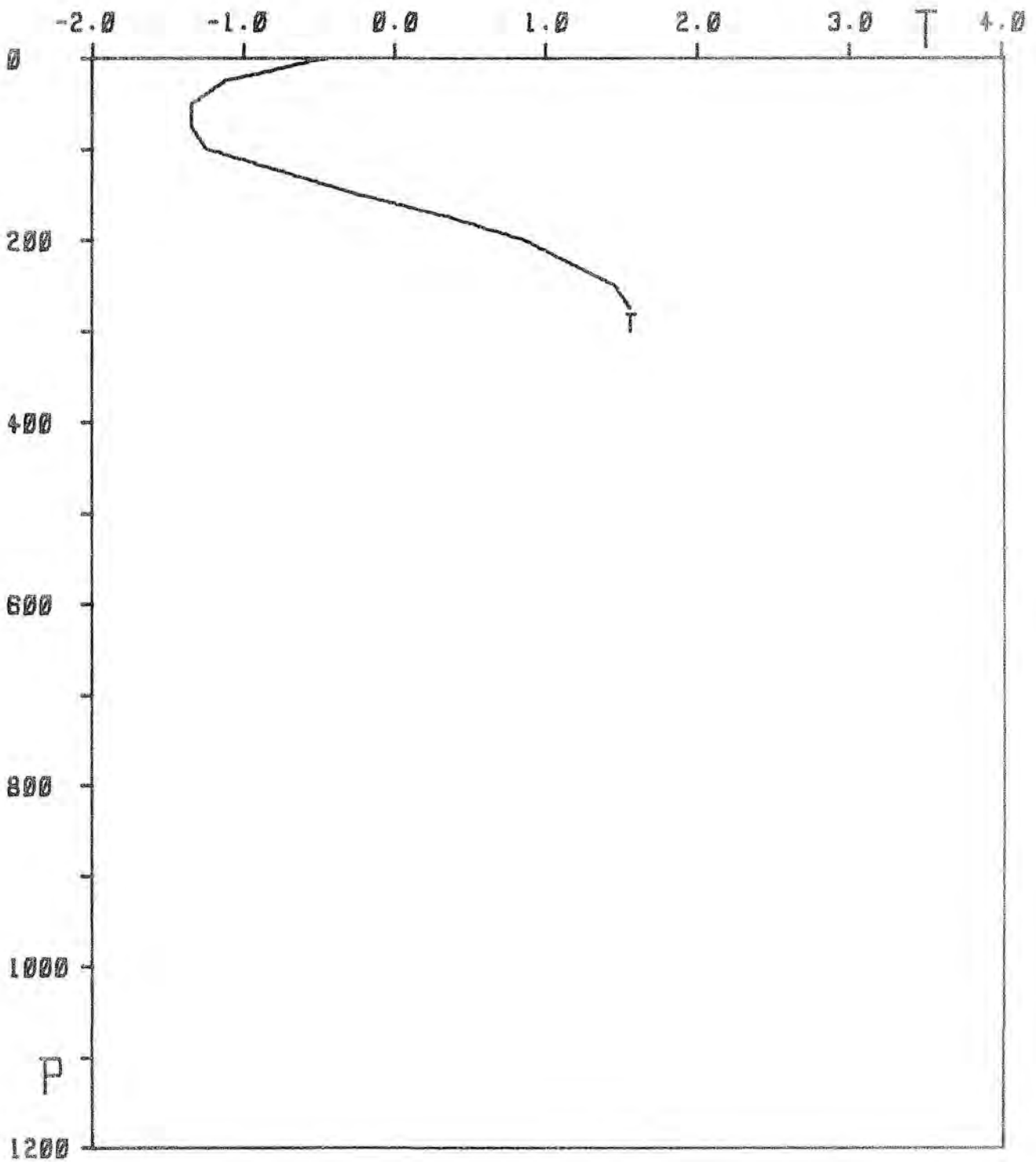
STATION Ø173



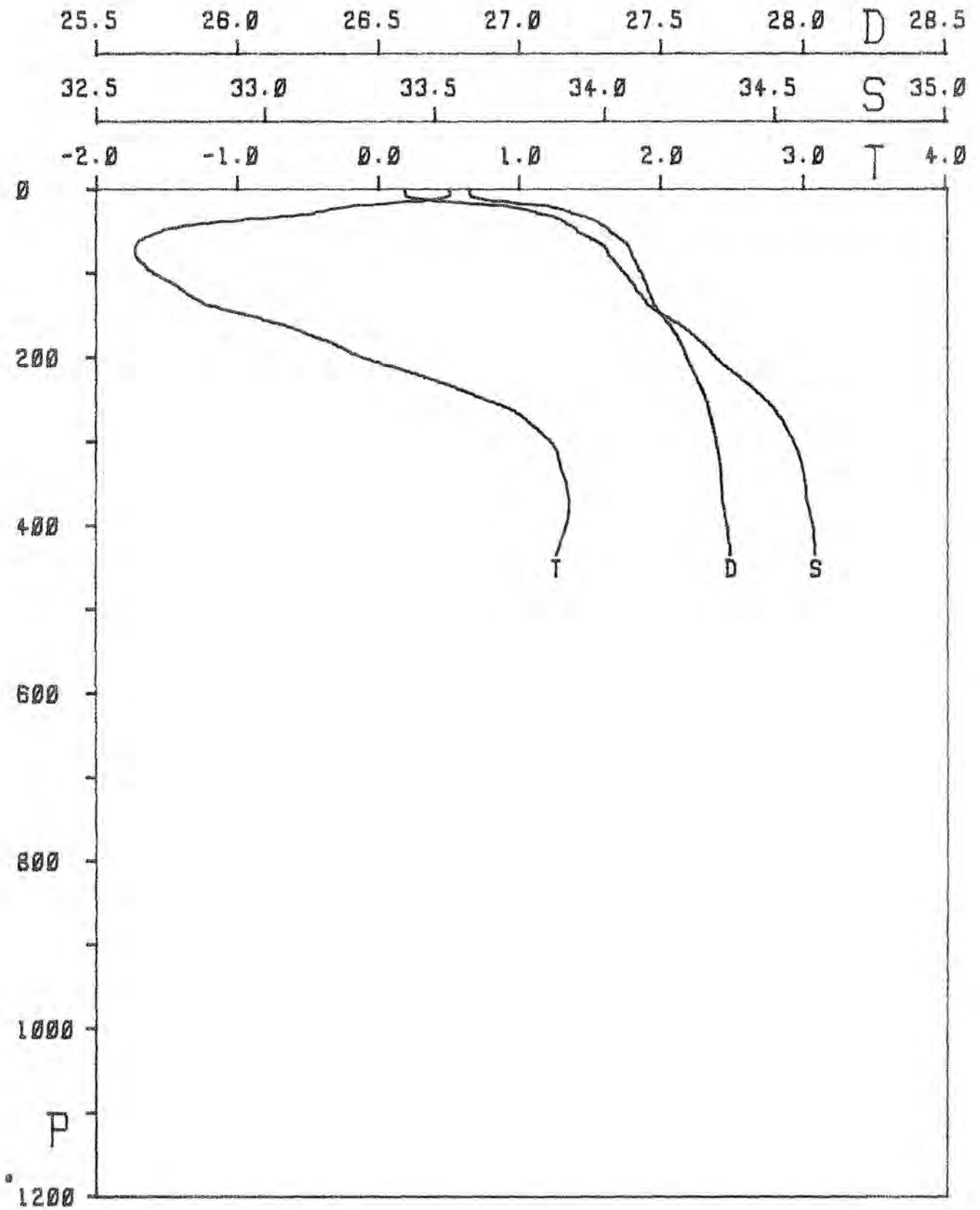
STATION Ø175_{BT}



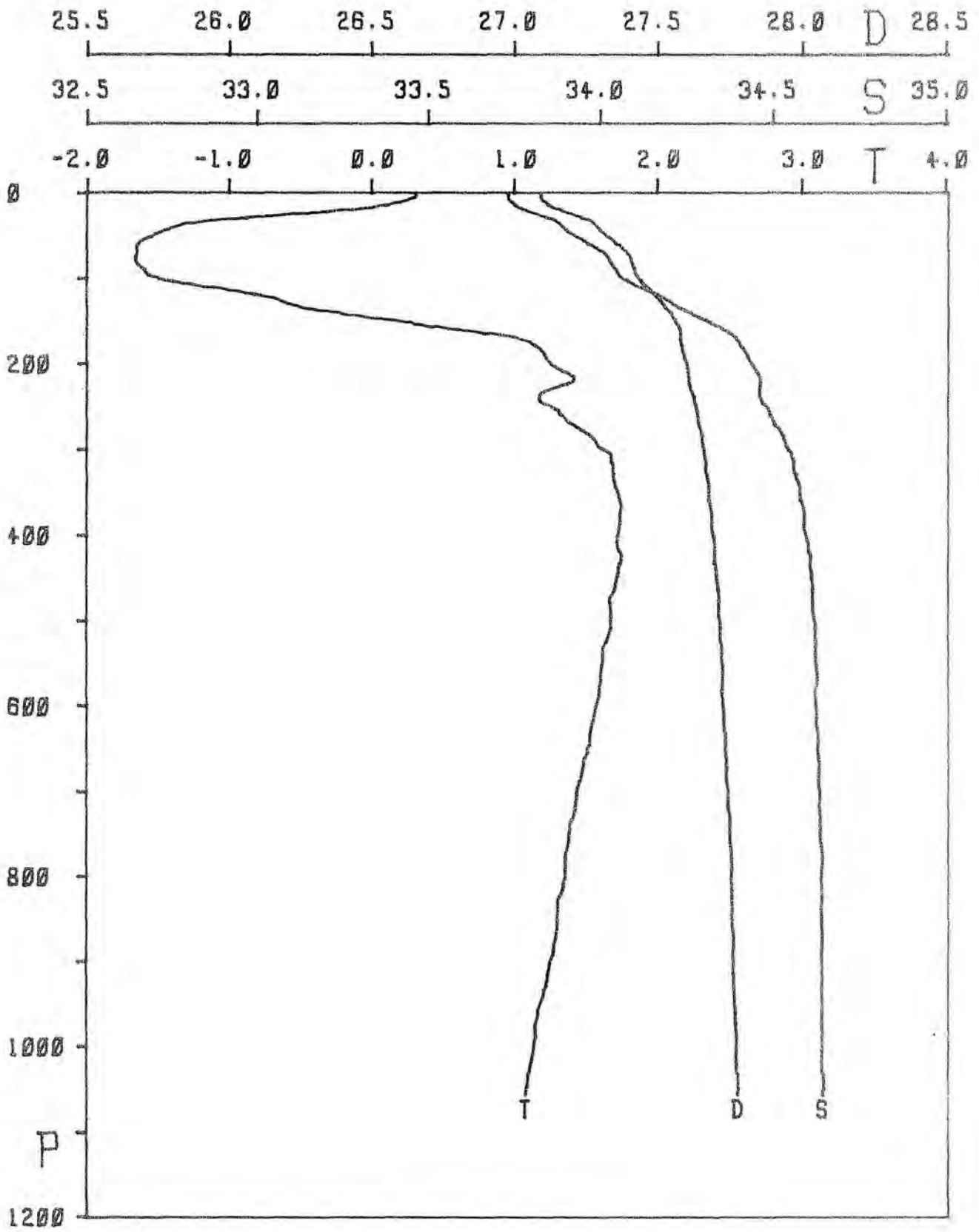
STATION Ø178_{BT}



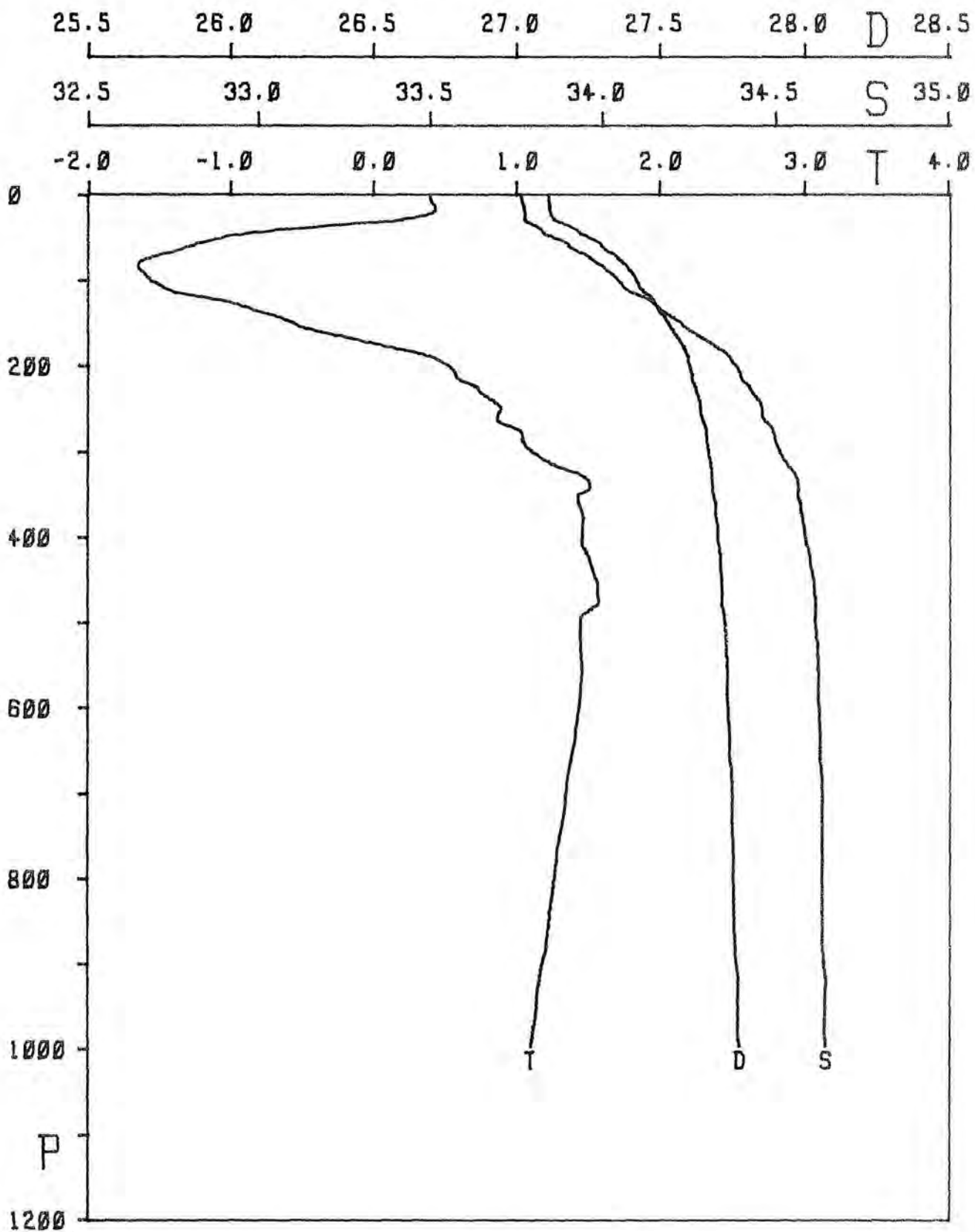
STATION Ø179



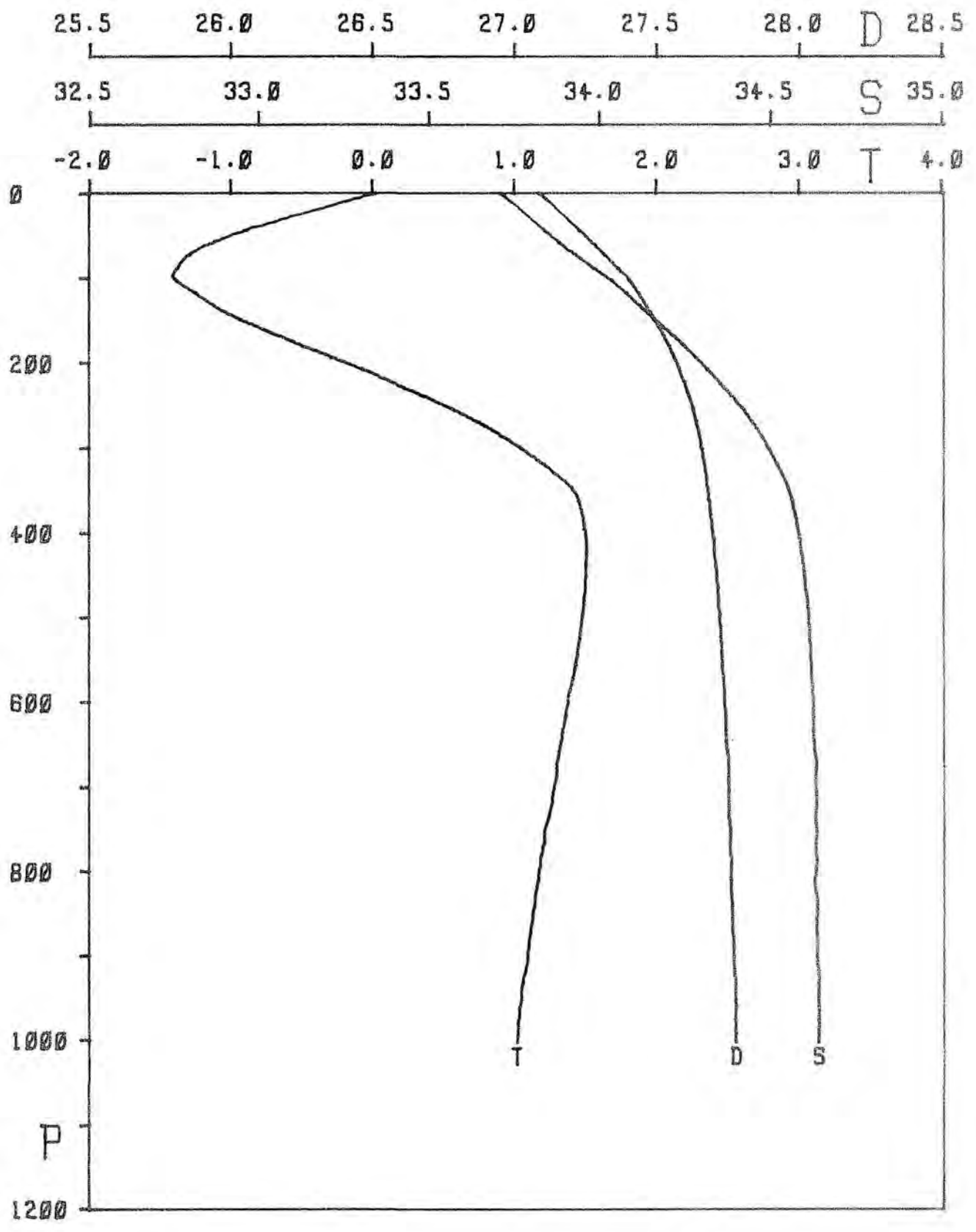
STATION Ø180



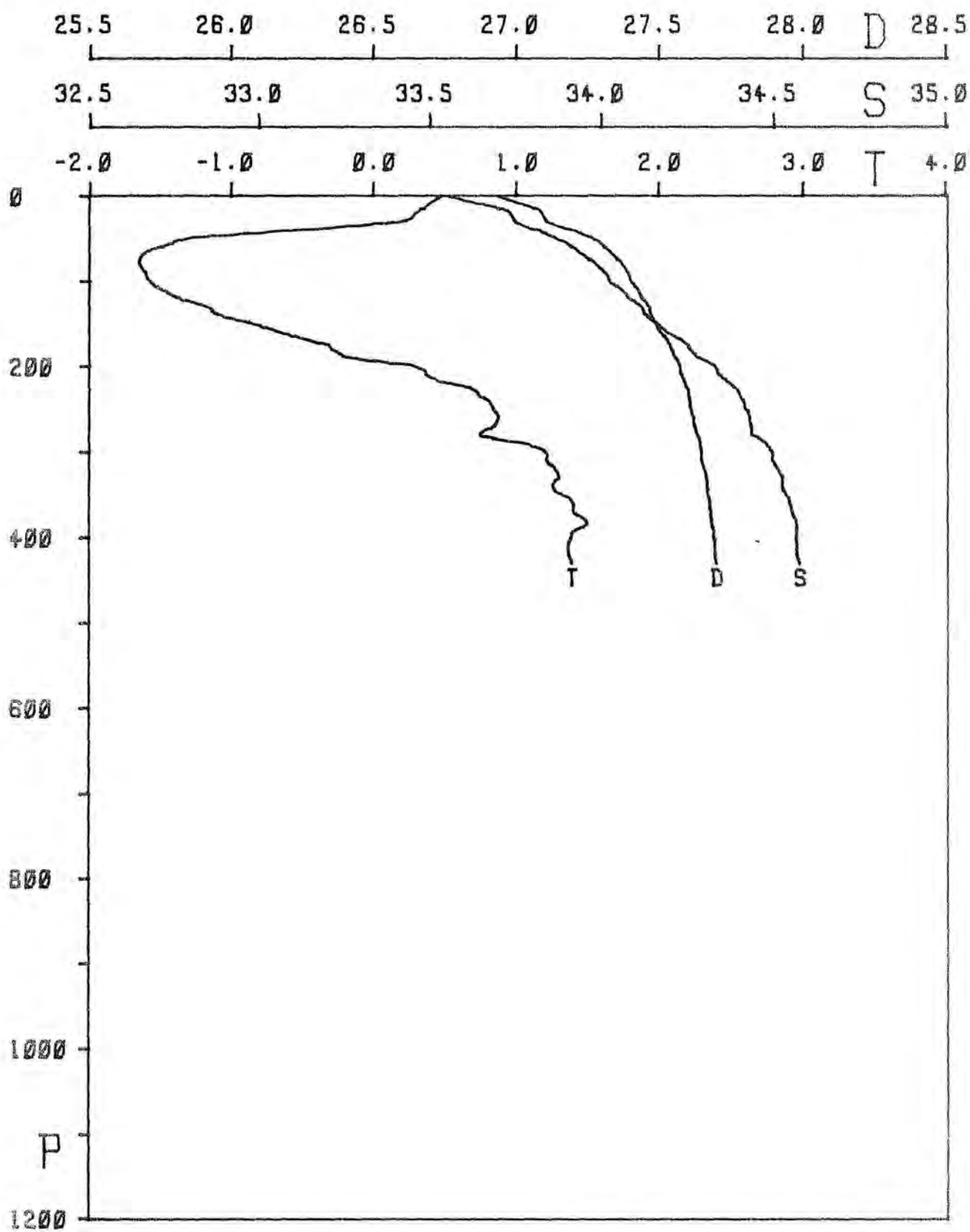
STATION Ø181



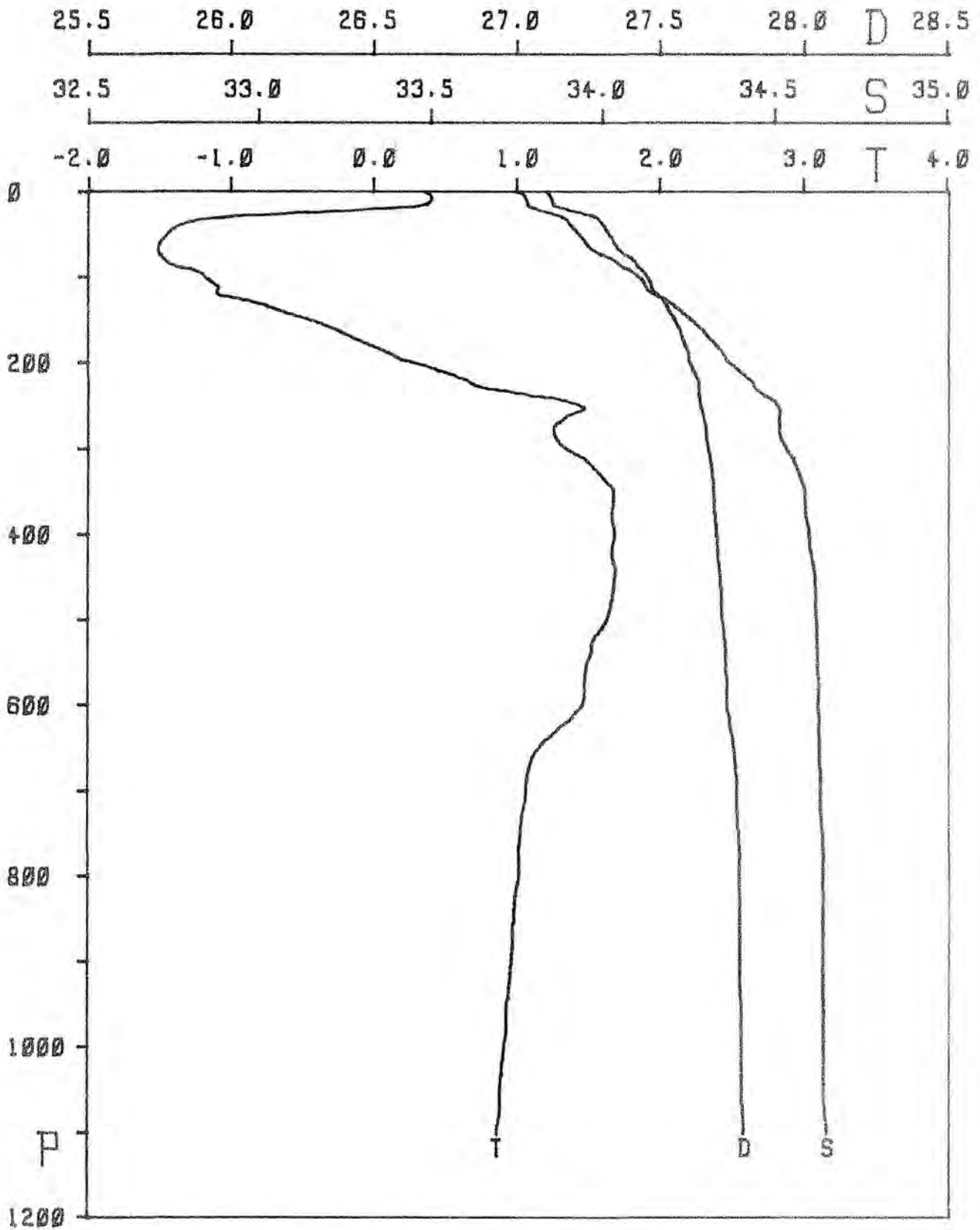
STATION 0182



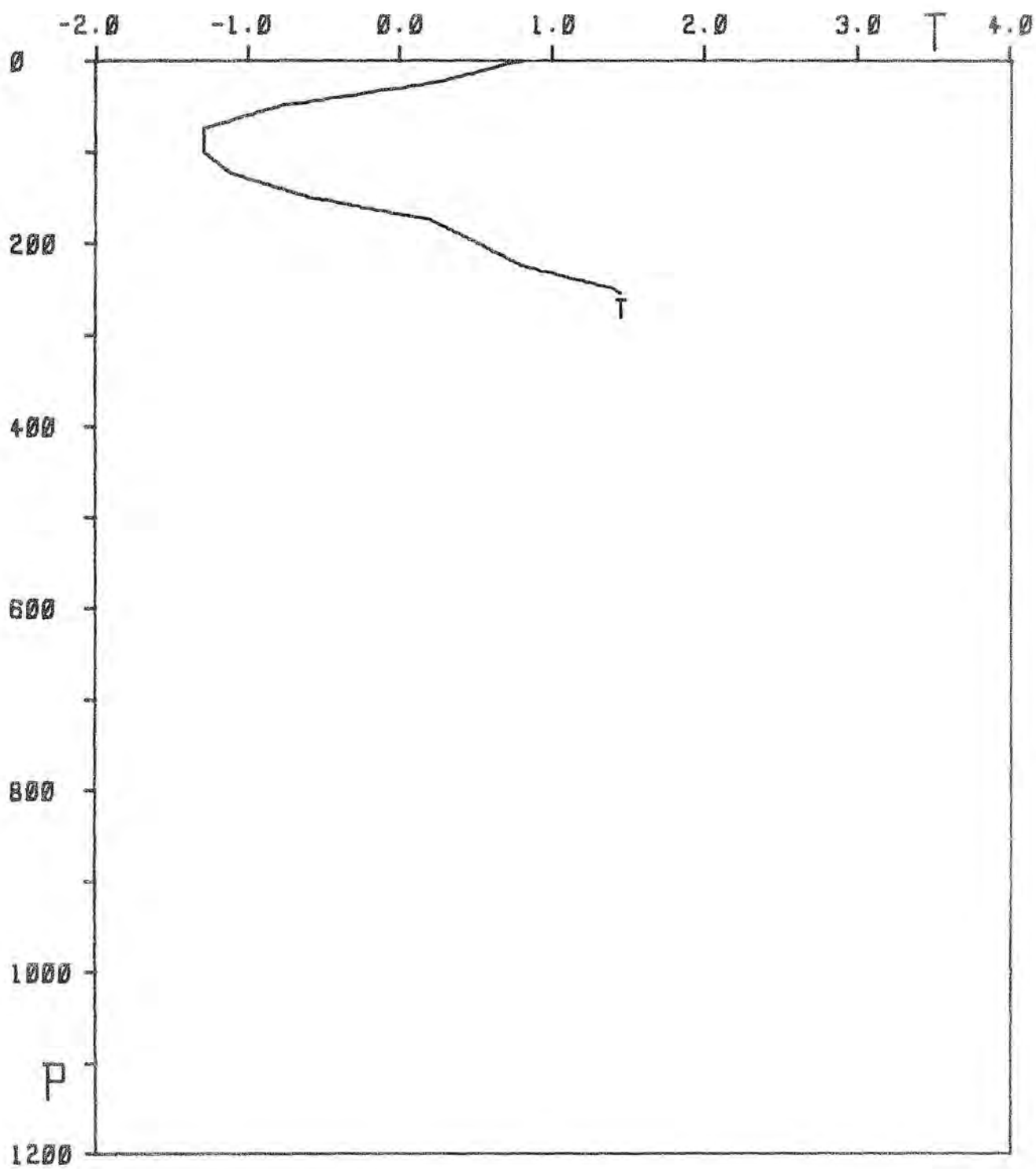
STATION Ø183



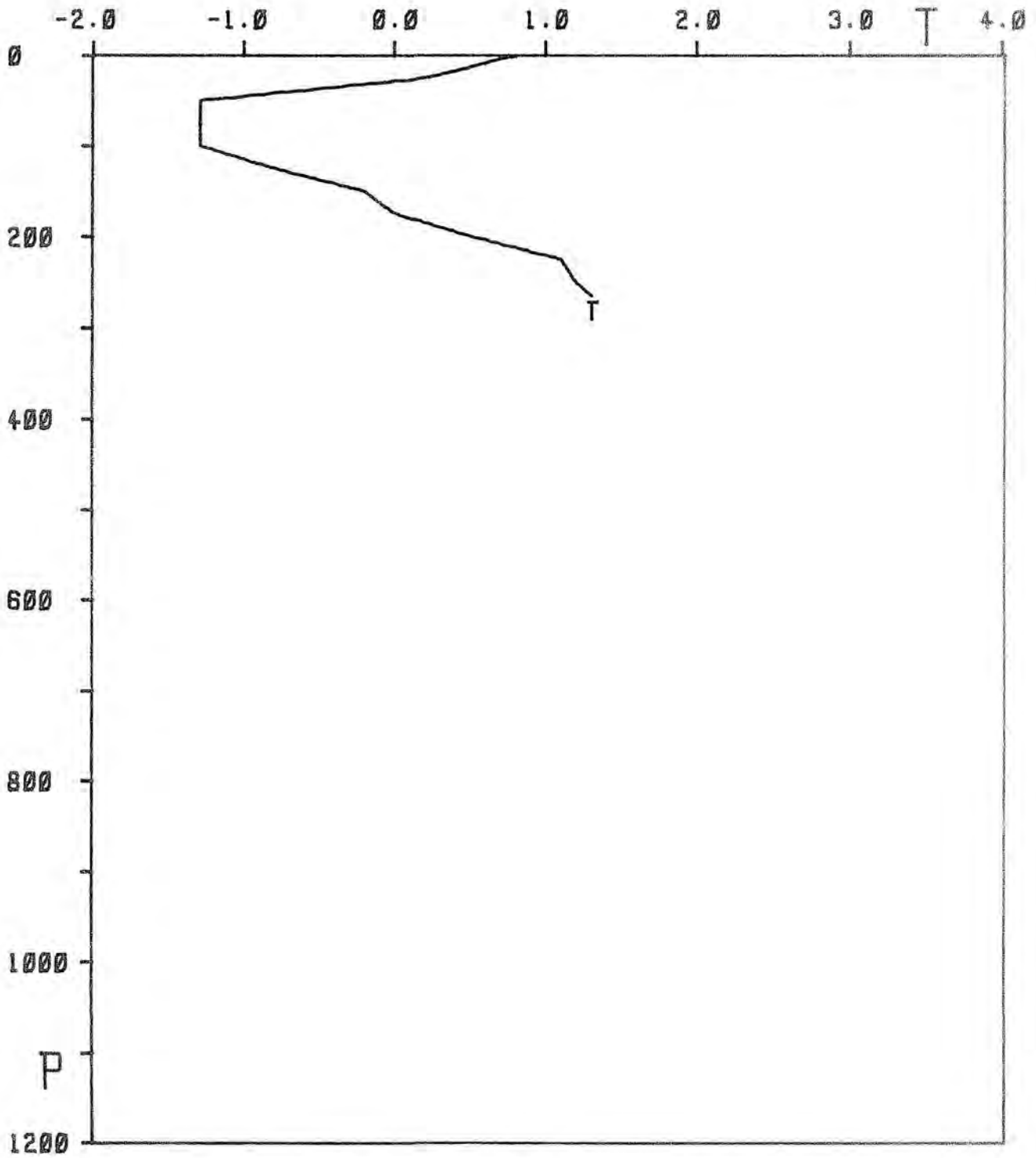
STATION 0185



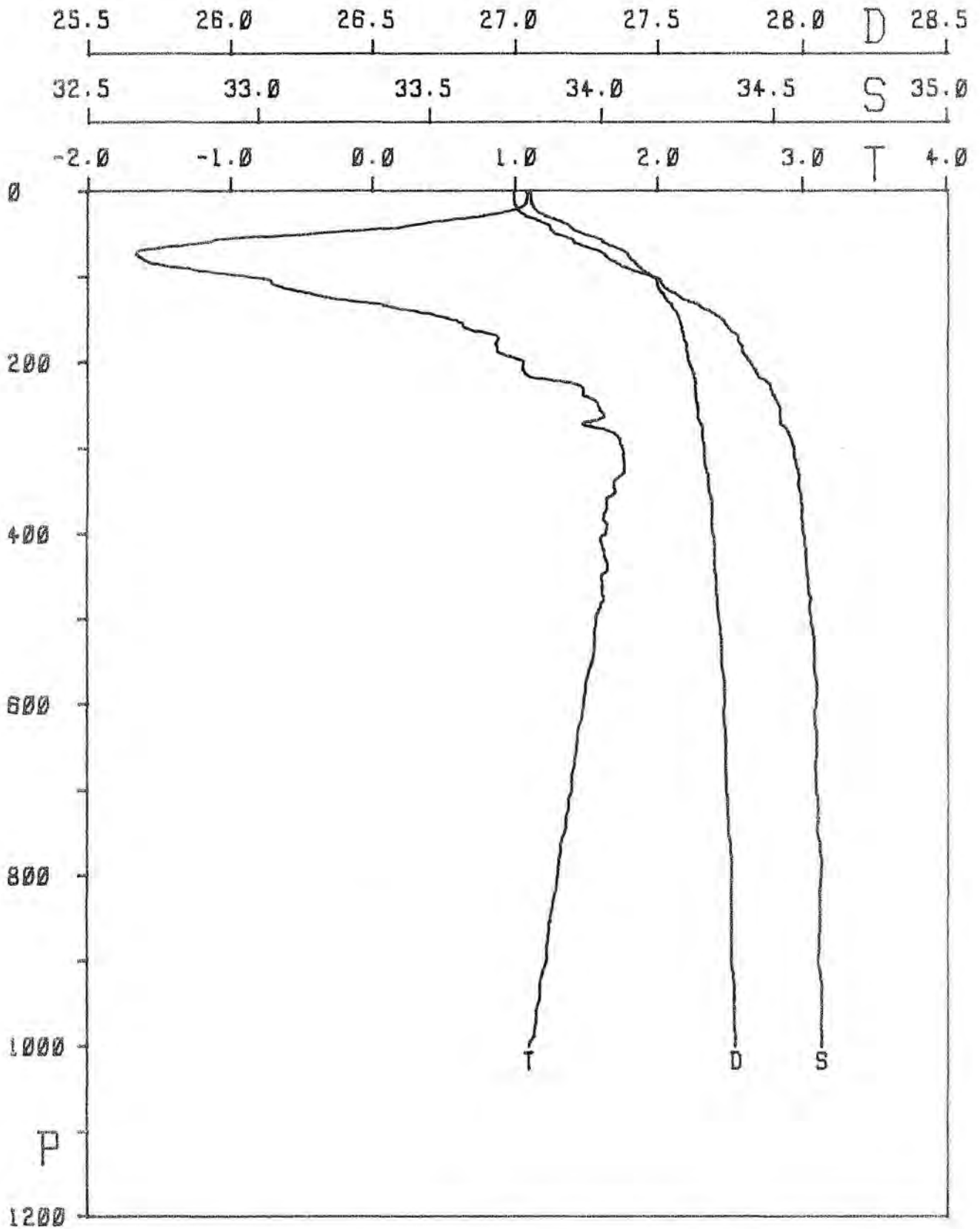
STATION Ø186 BT



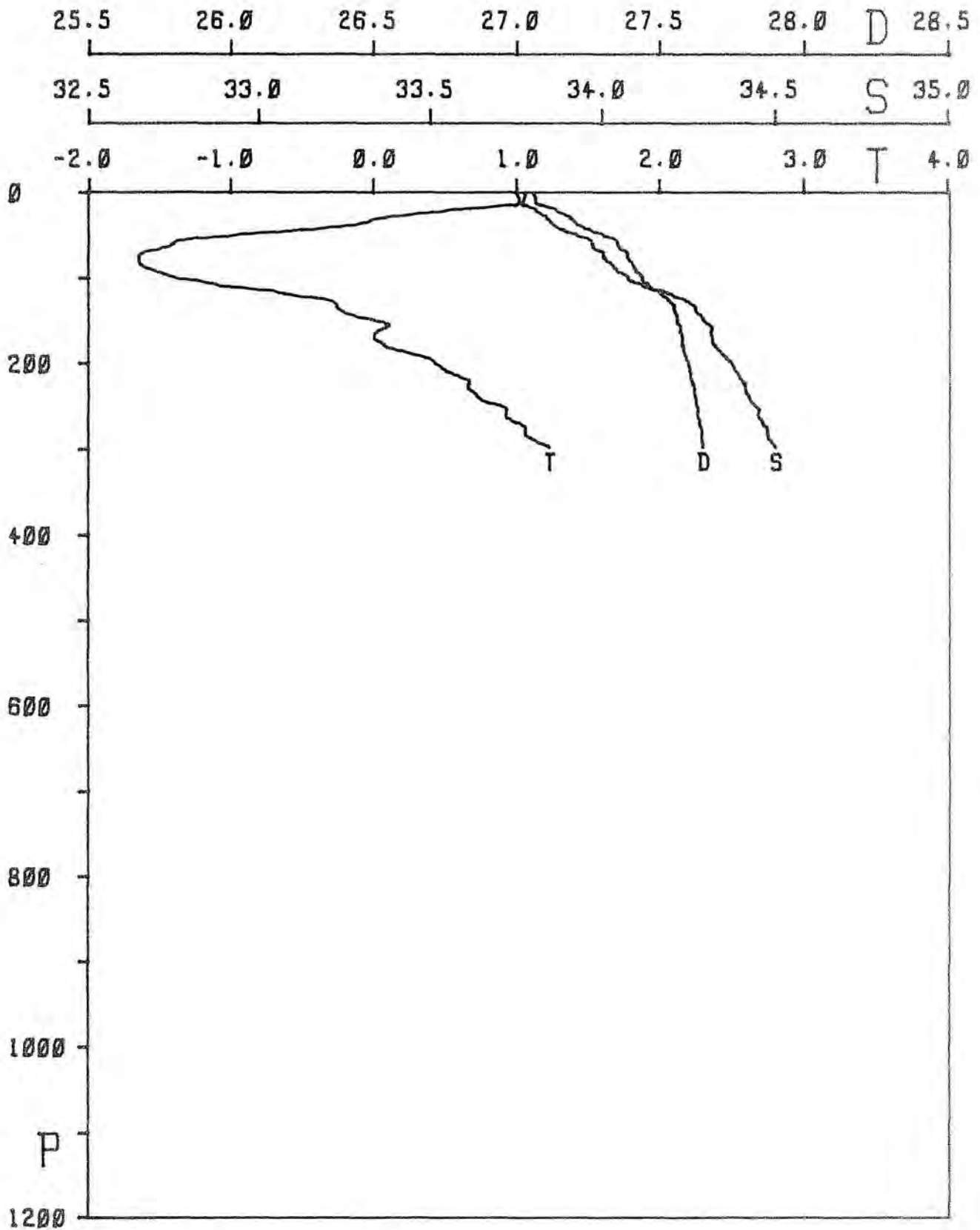
STATION 0187
BT



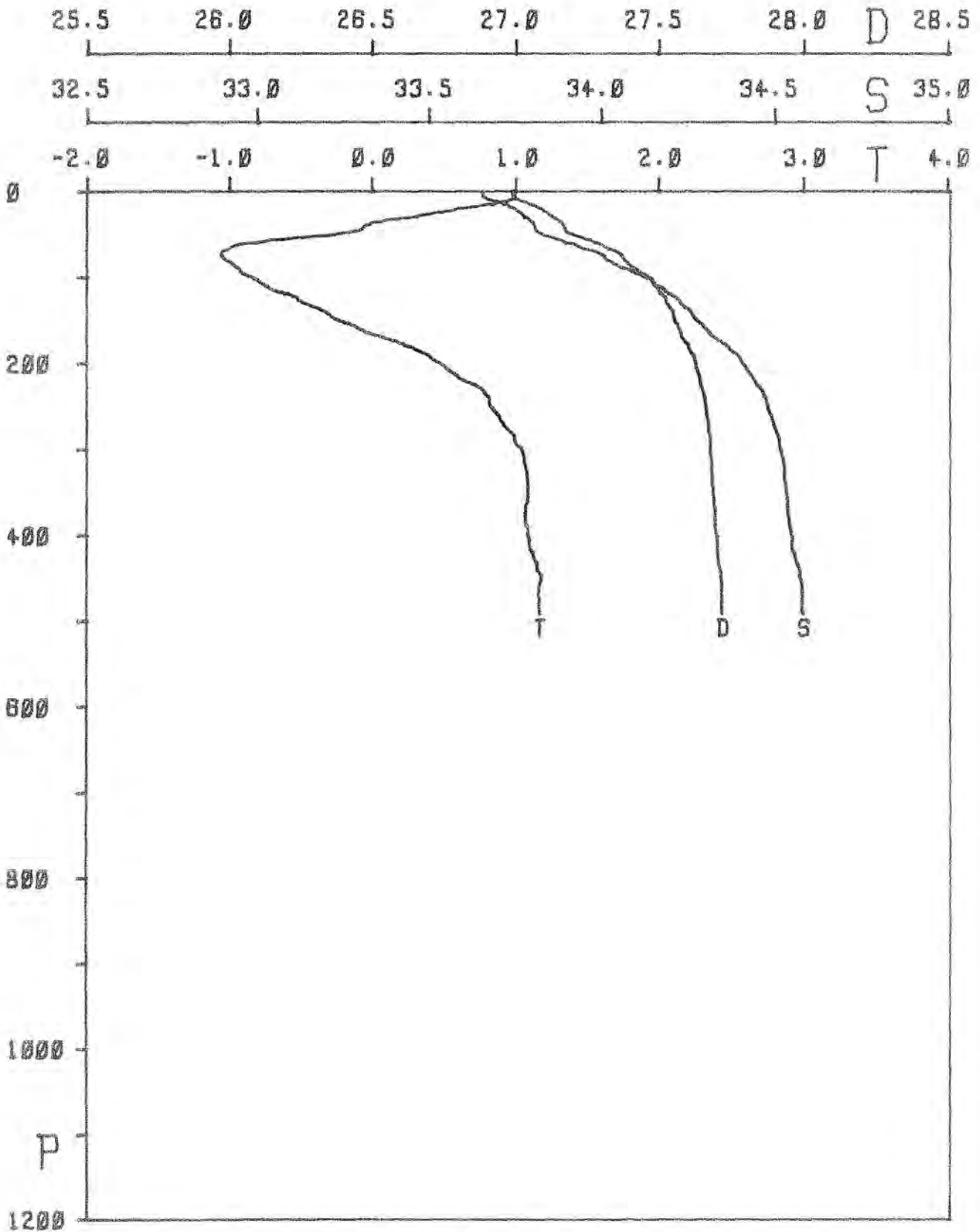
STATION 0189



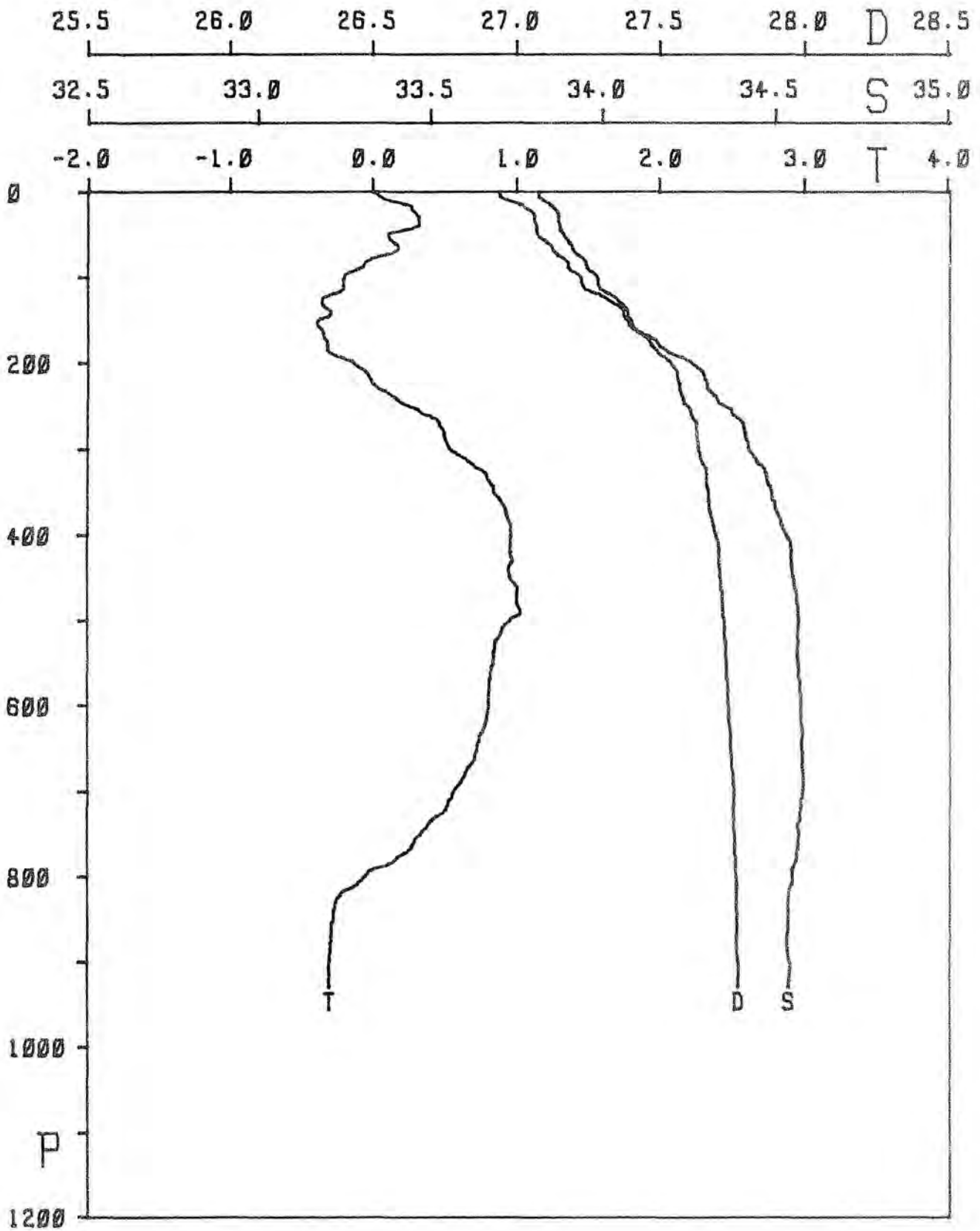
STATION Ø192



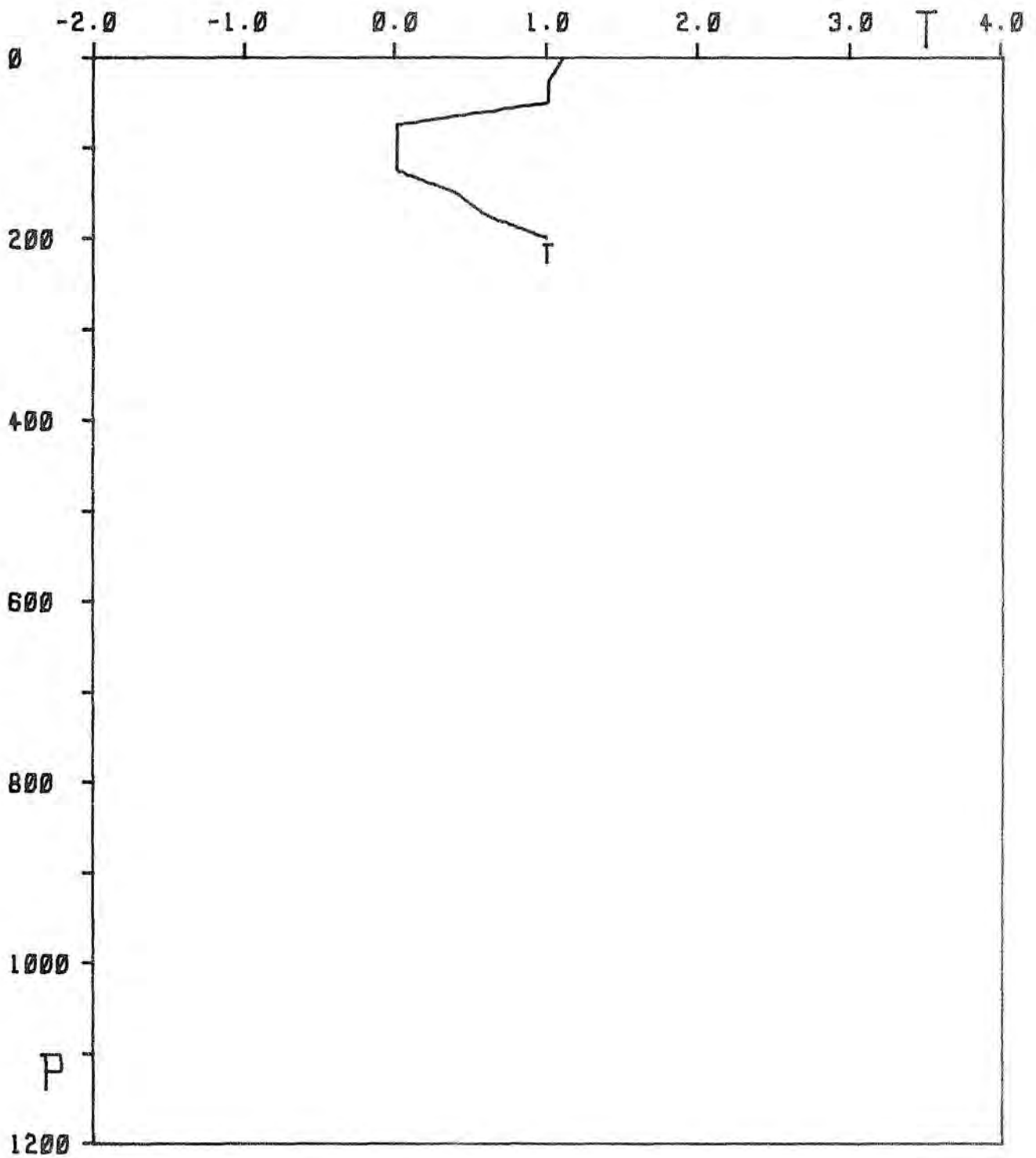
STATION Ø193



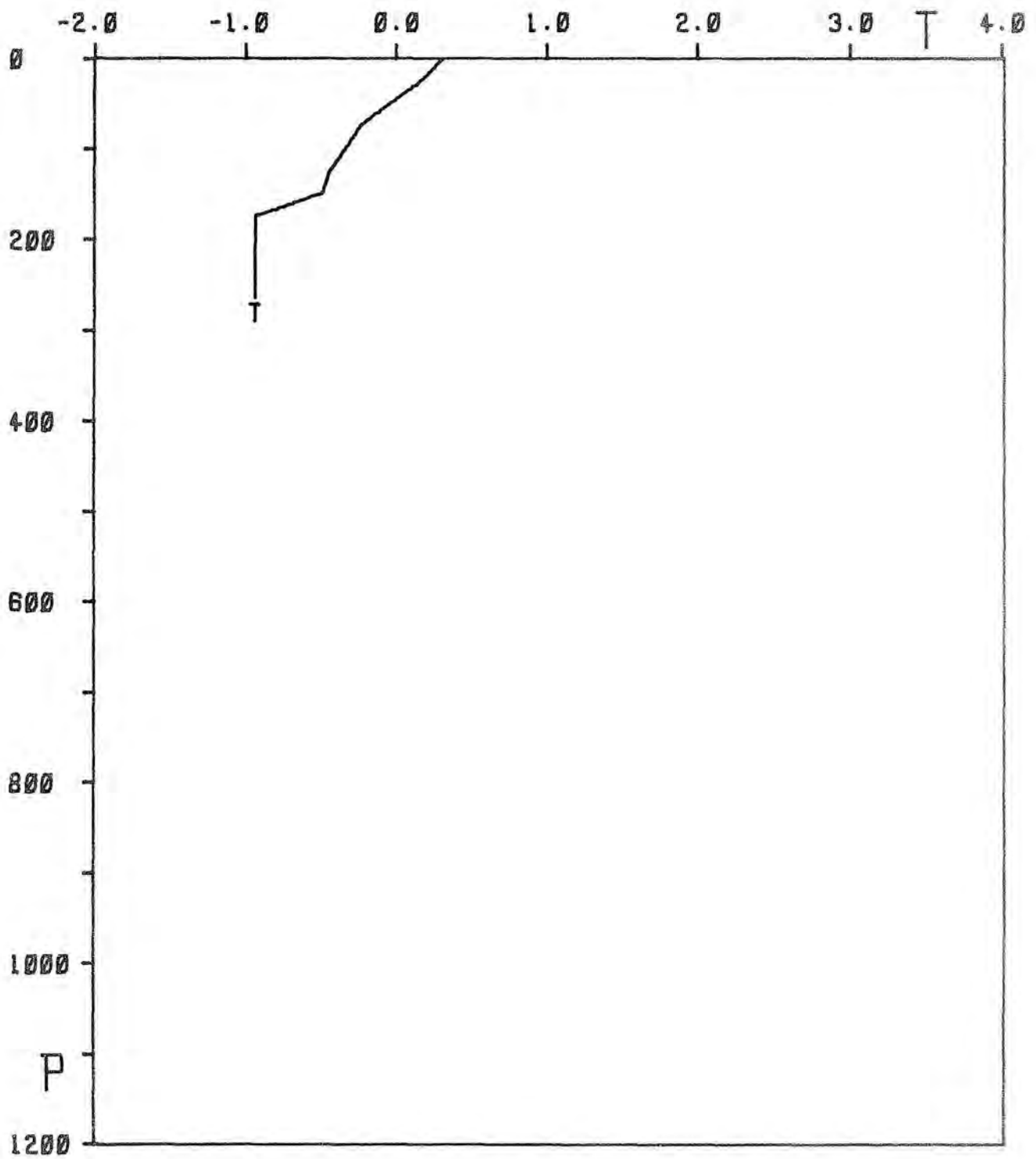
STATION Ø194



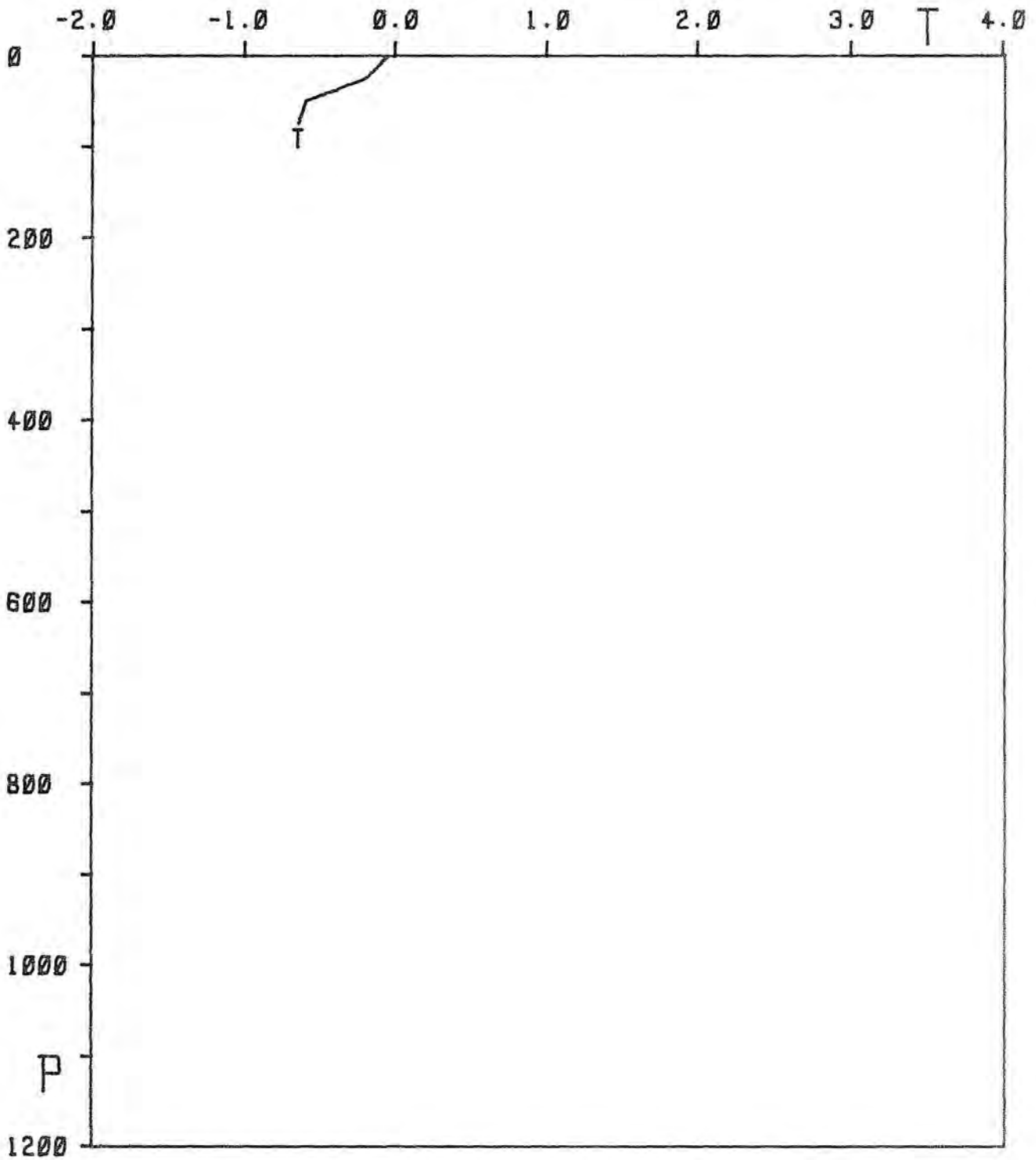
STATION Ø195_{BT}



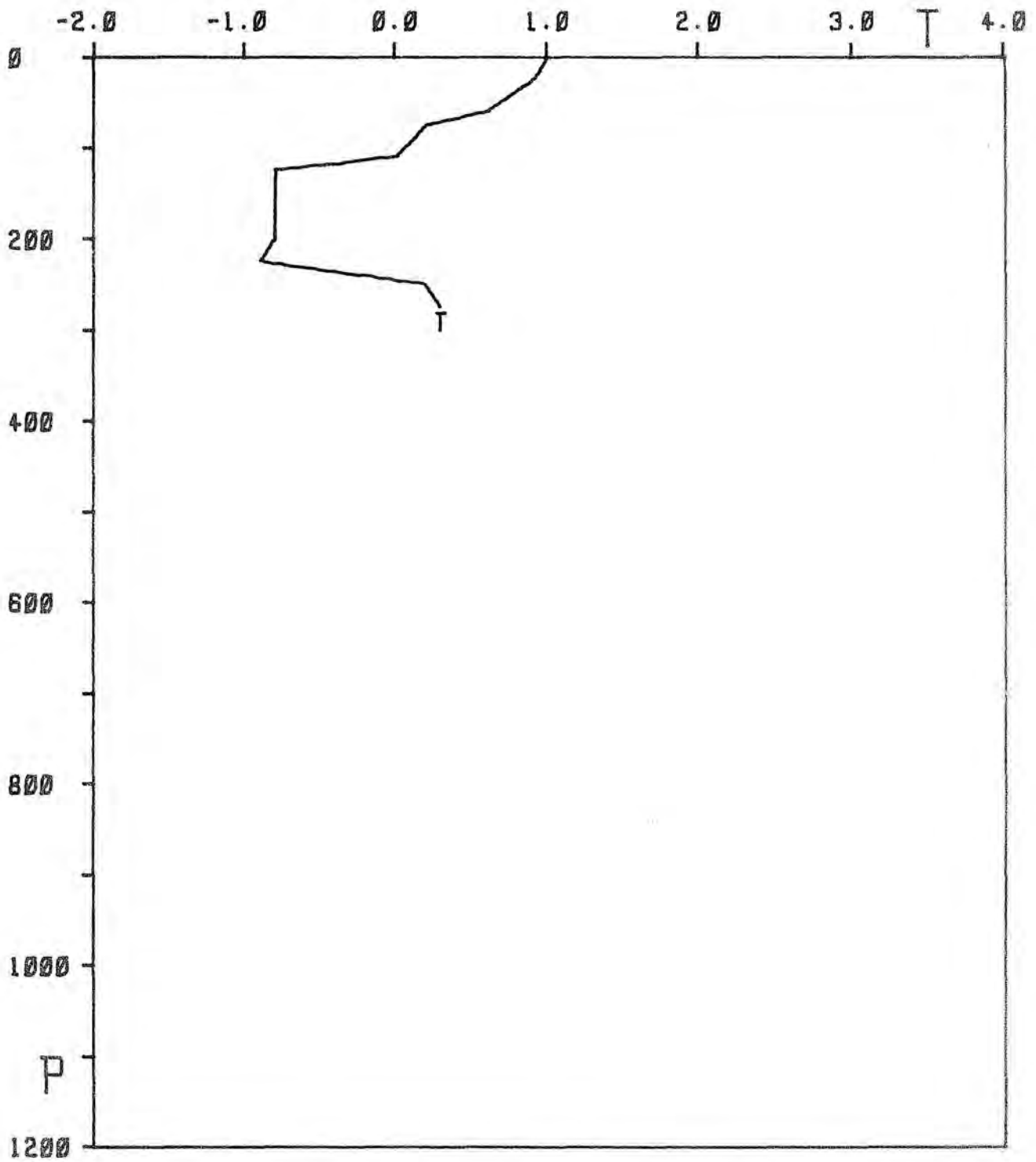
STATION 0196 BT



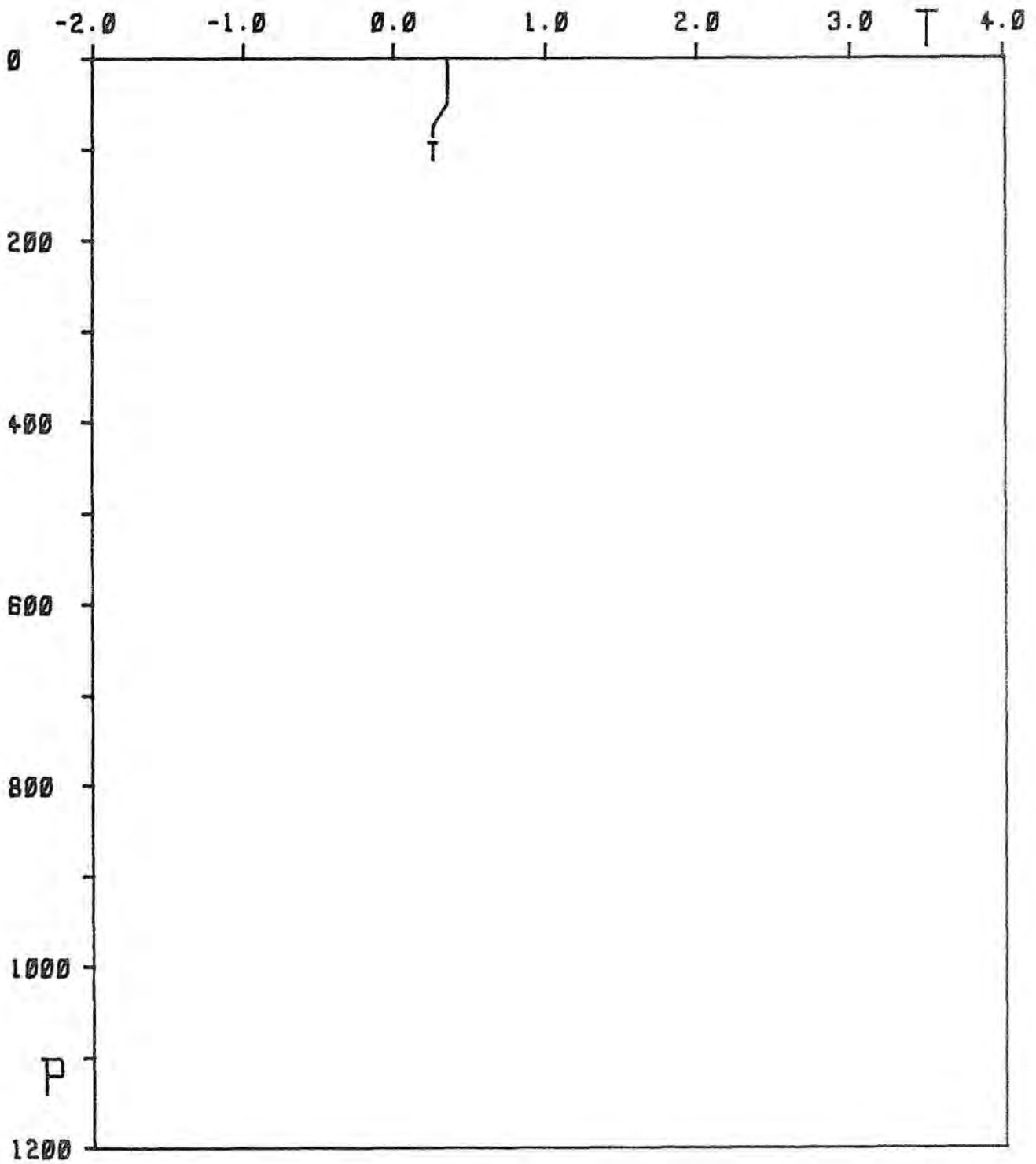
STATION Ø197_{BT}



STATION Ø198 BT

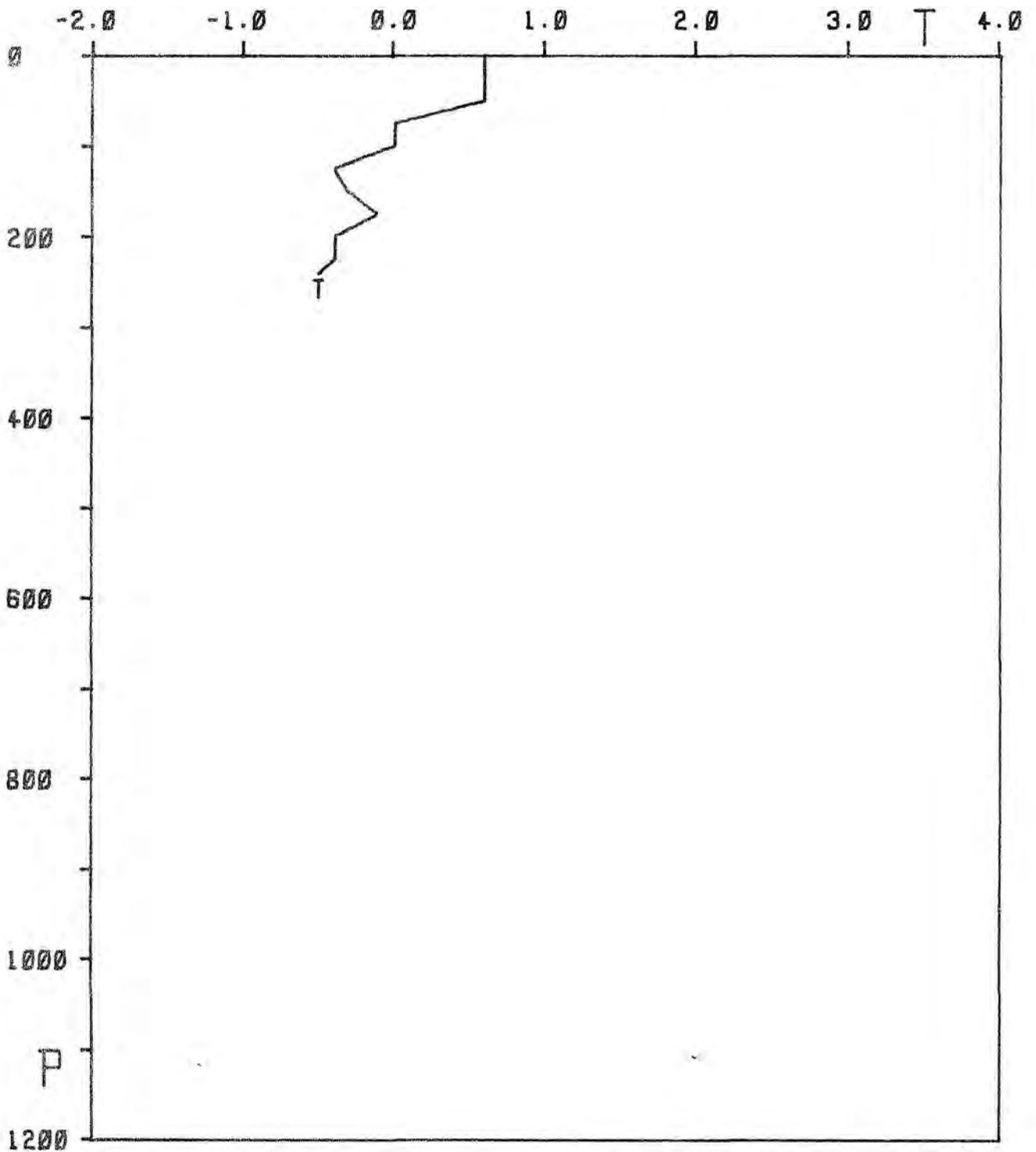


STATION 0199 BT

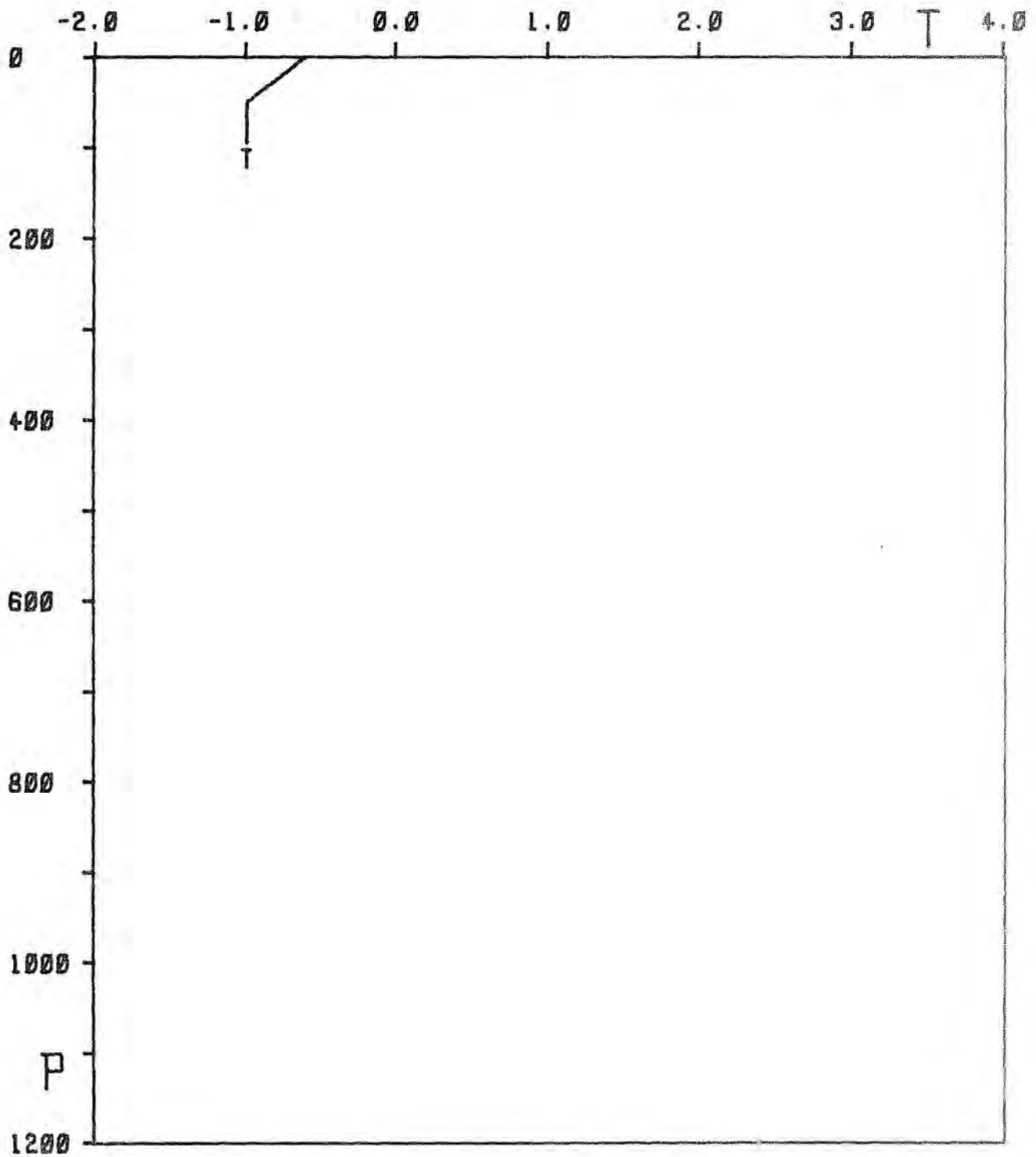


STATION 0200

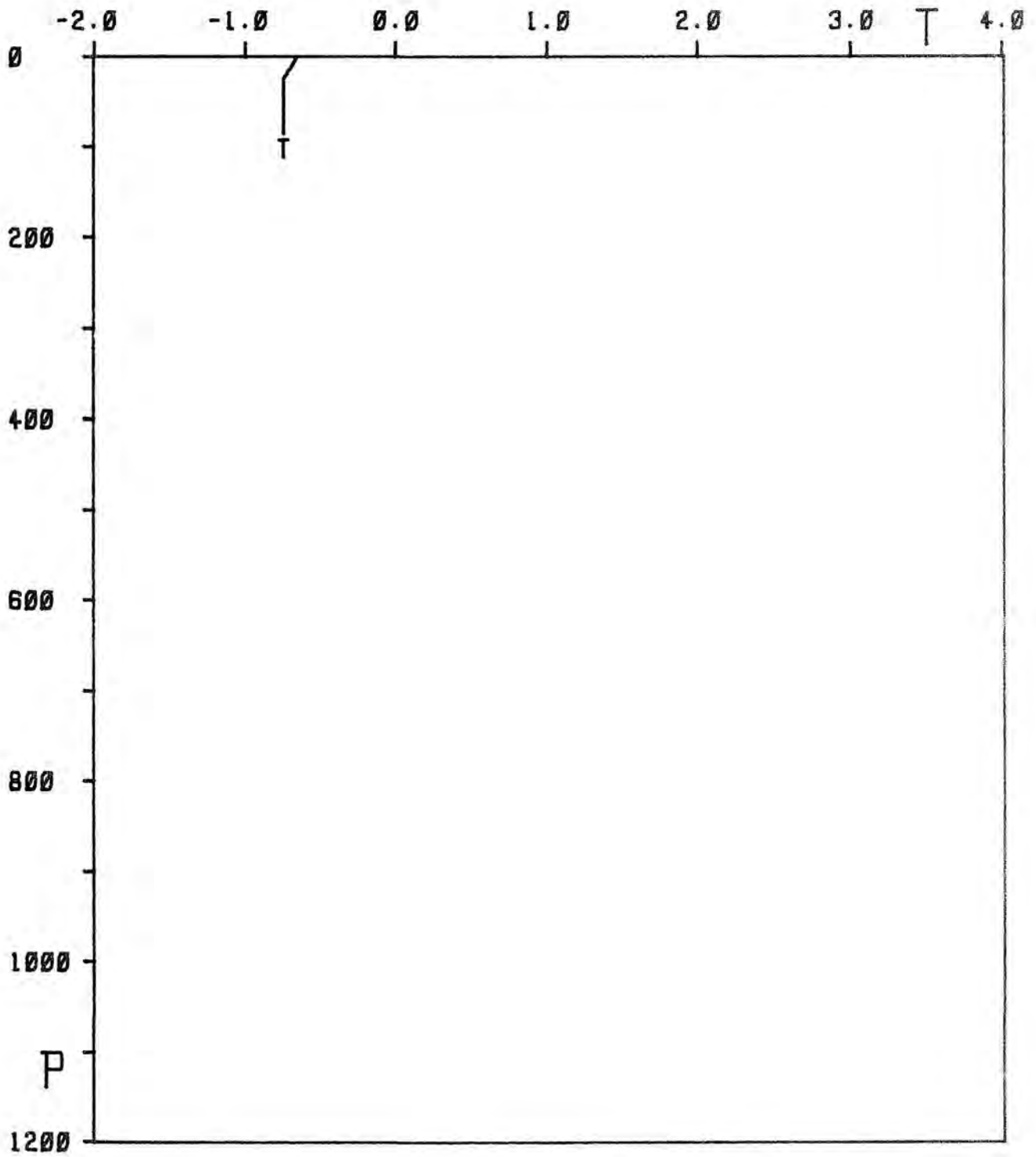
PT



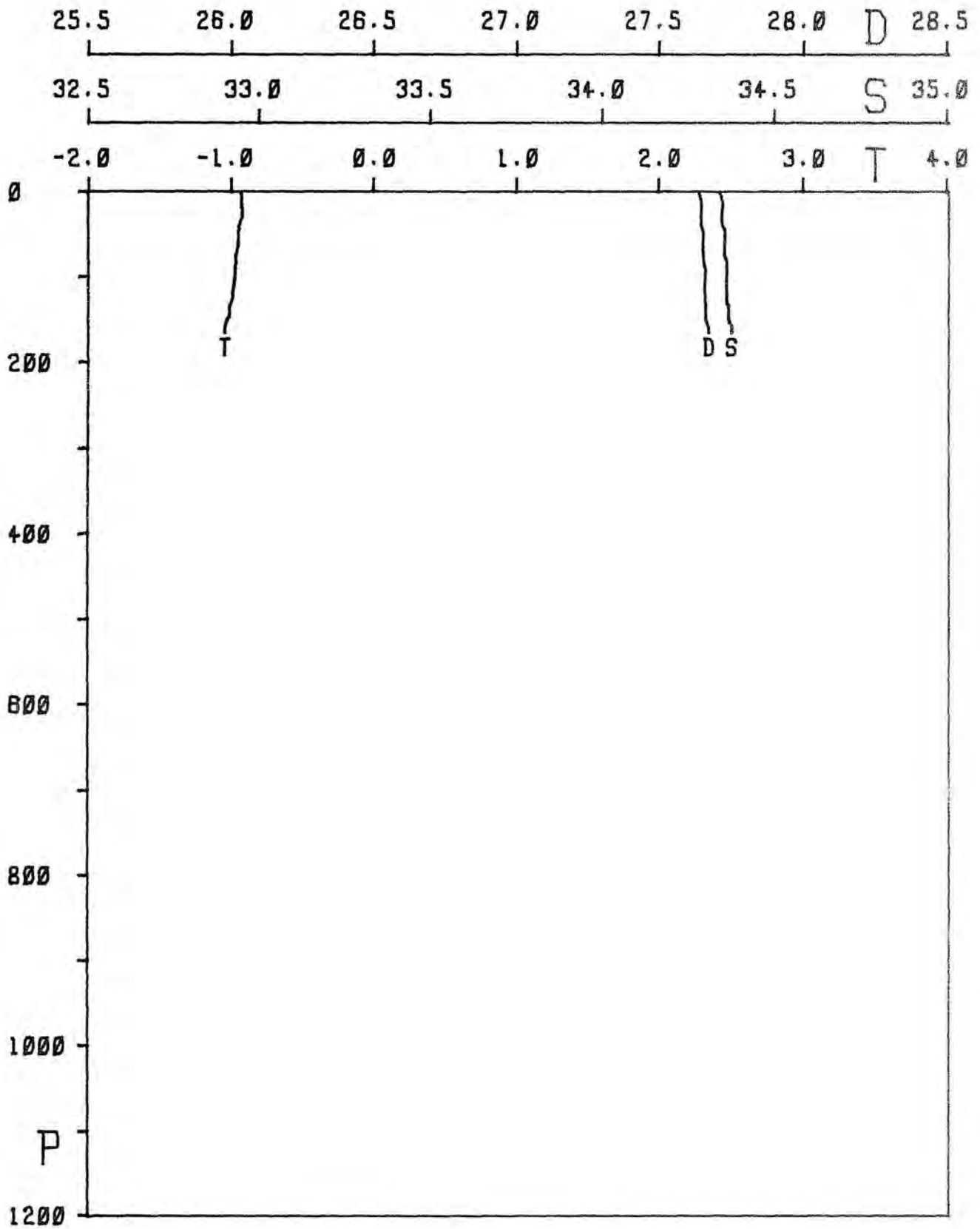
STATION 0202 BT



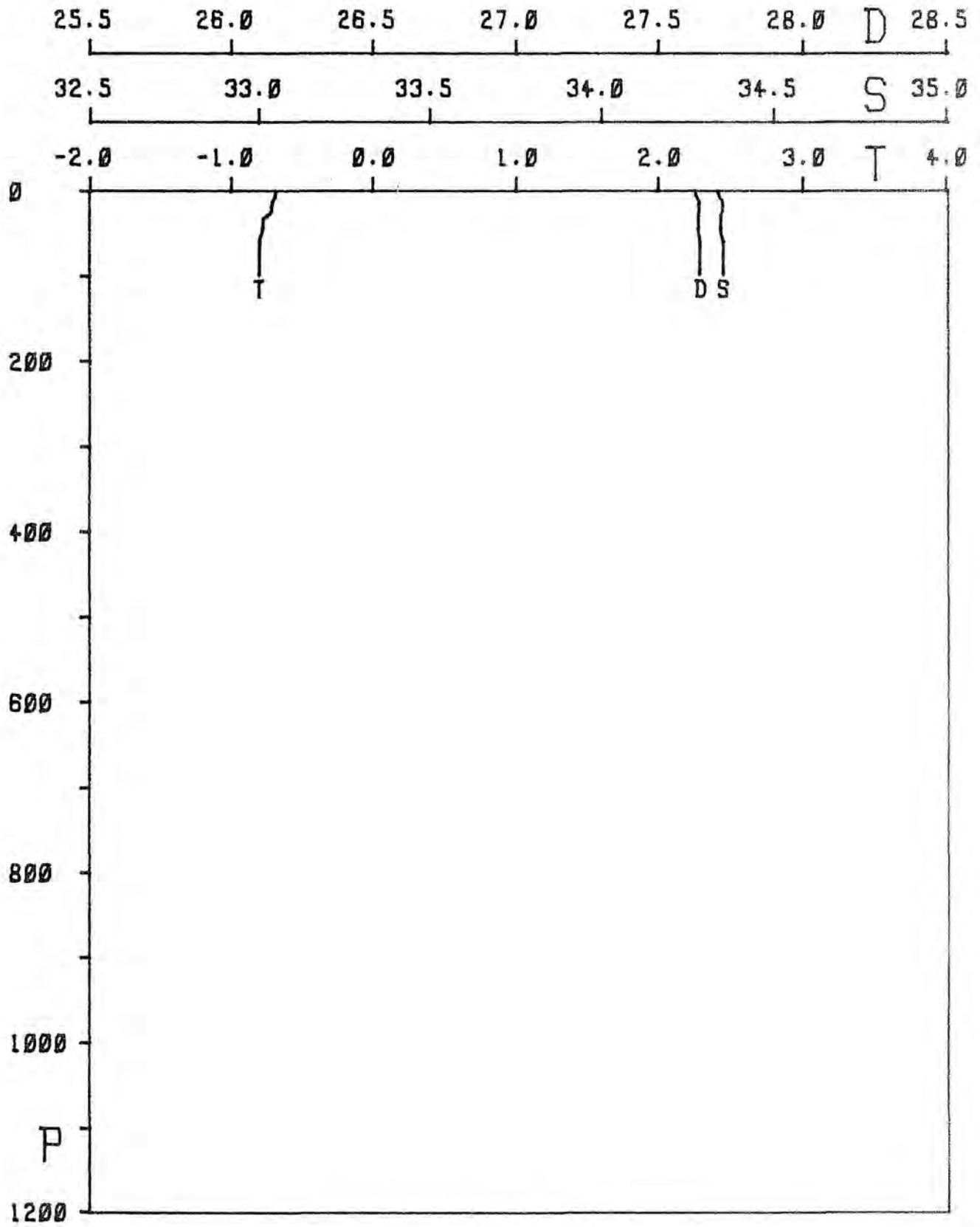
STATION 0204
BT



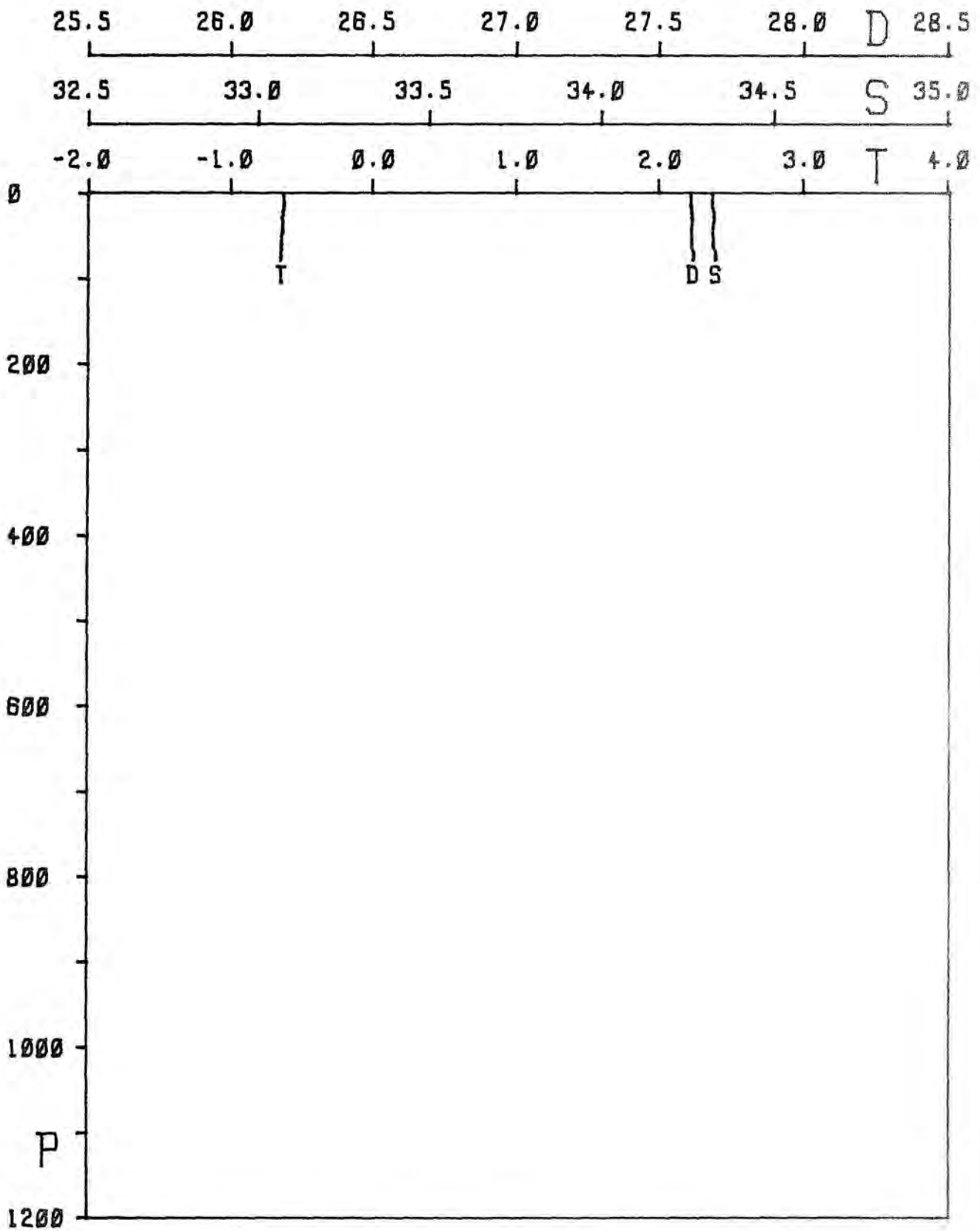
STATION 0205



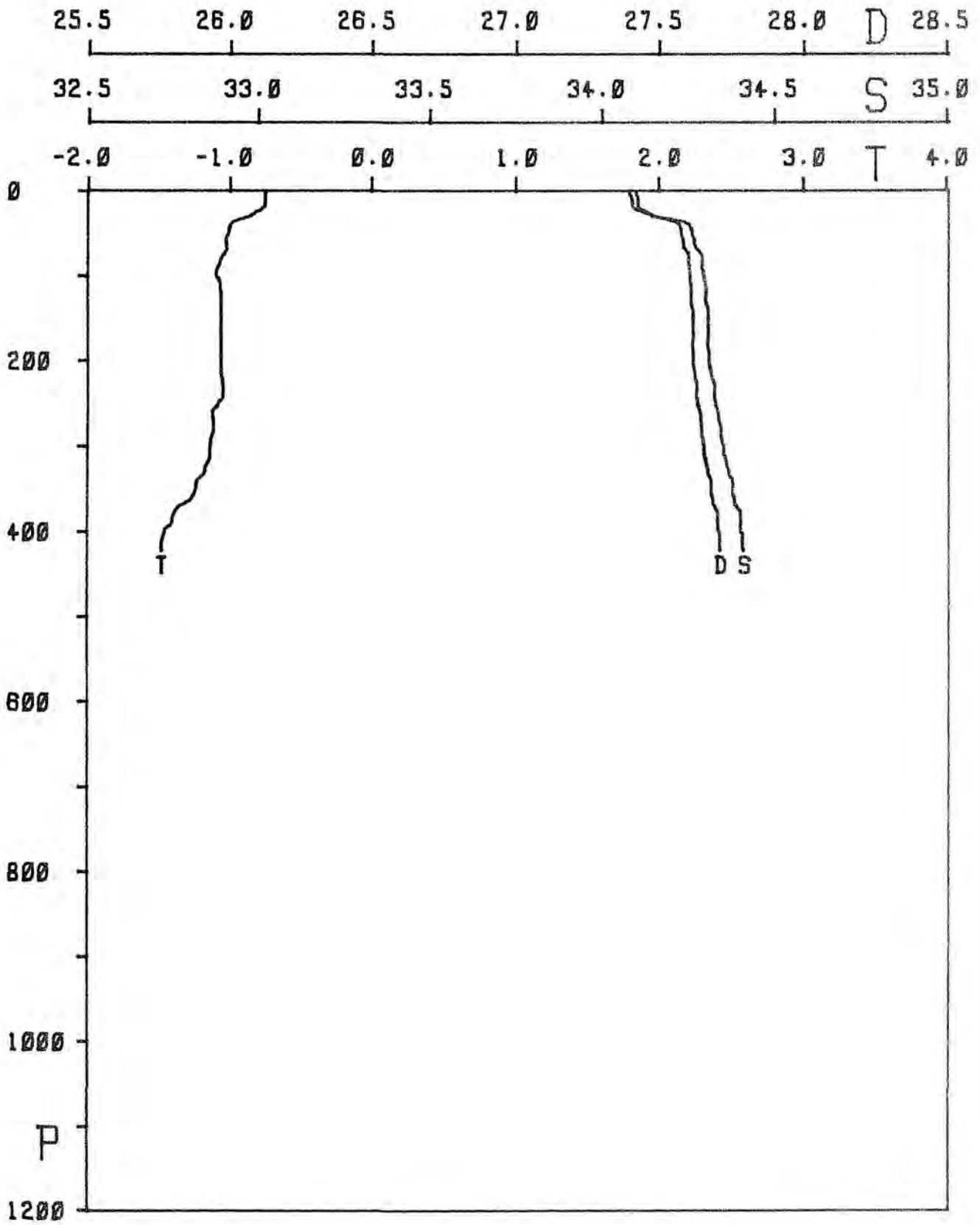
STATION 0206



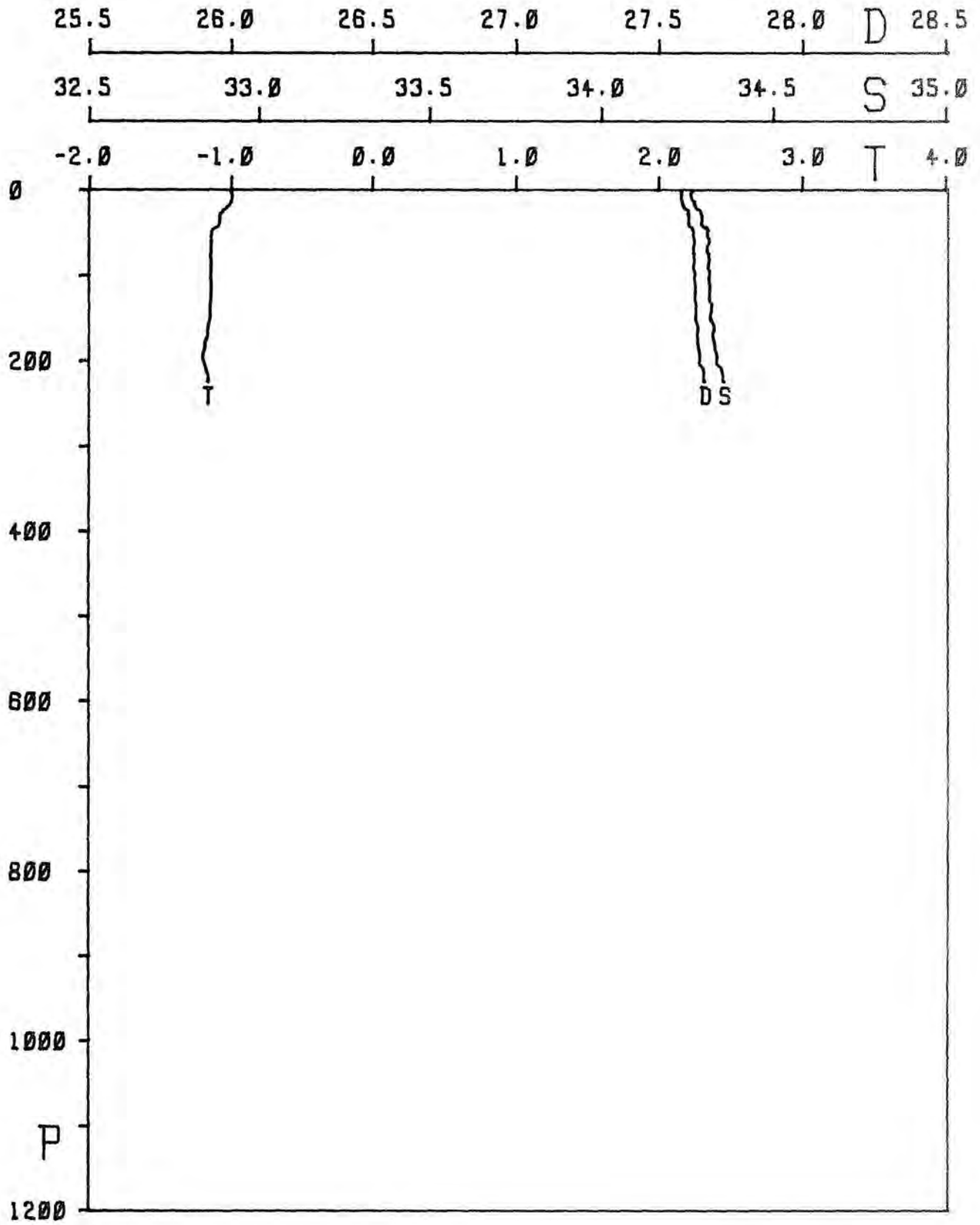
STATION 0208



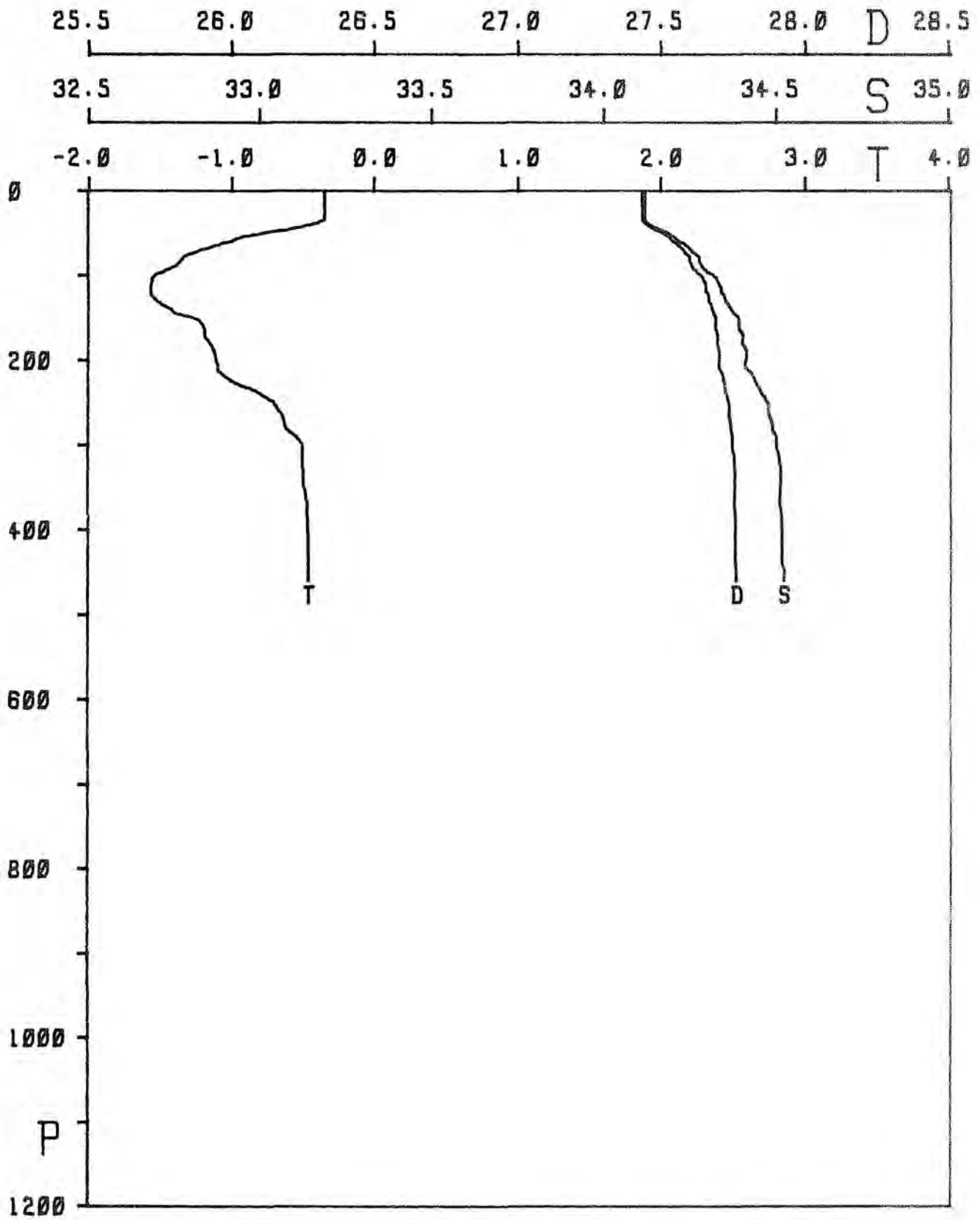
STATION 0209



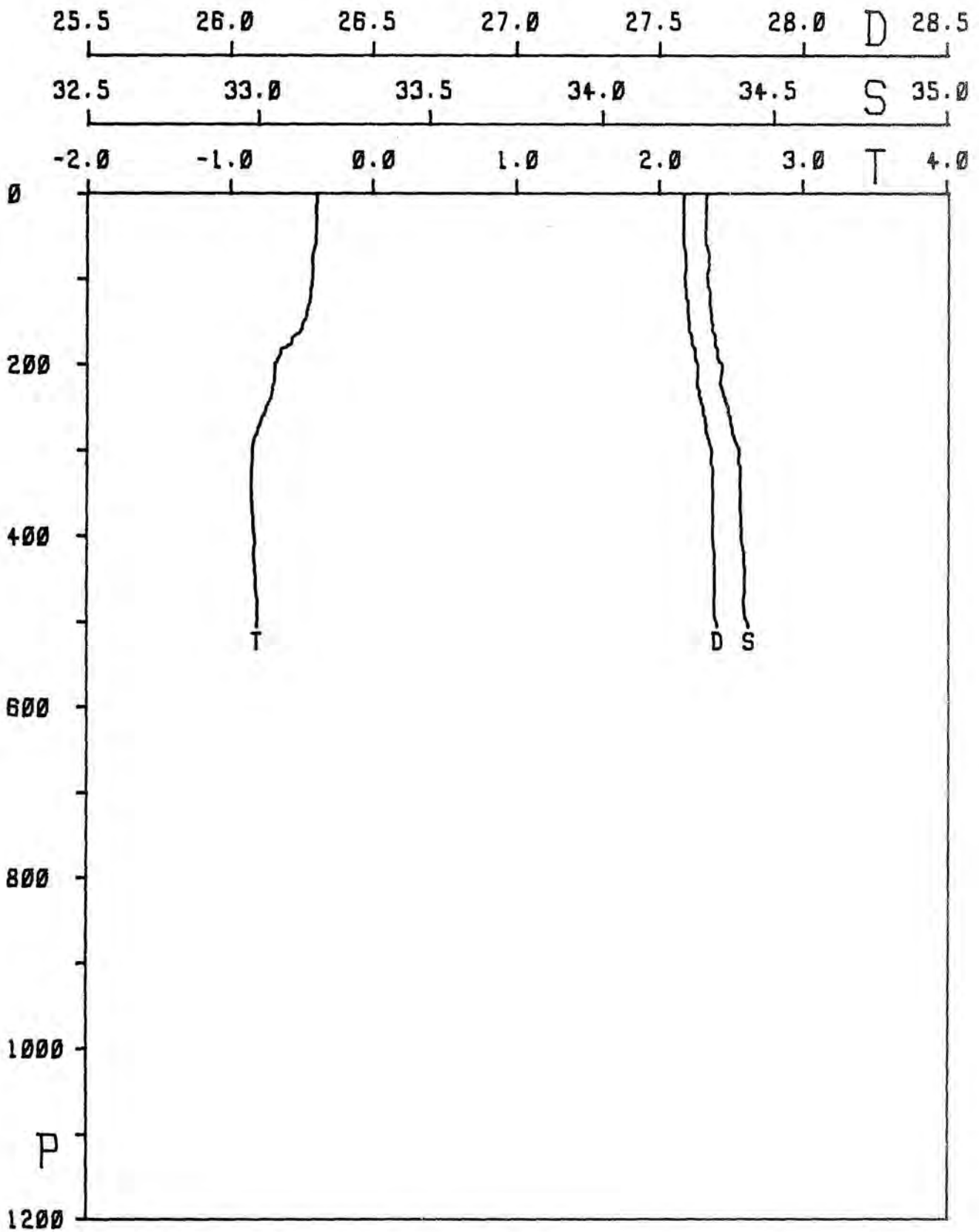
STATION Ø21Ø



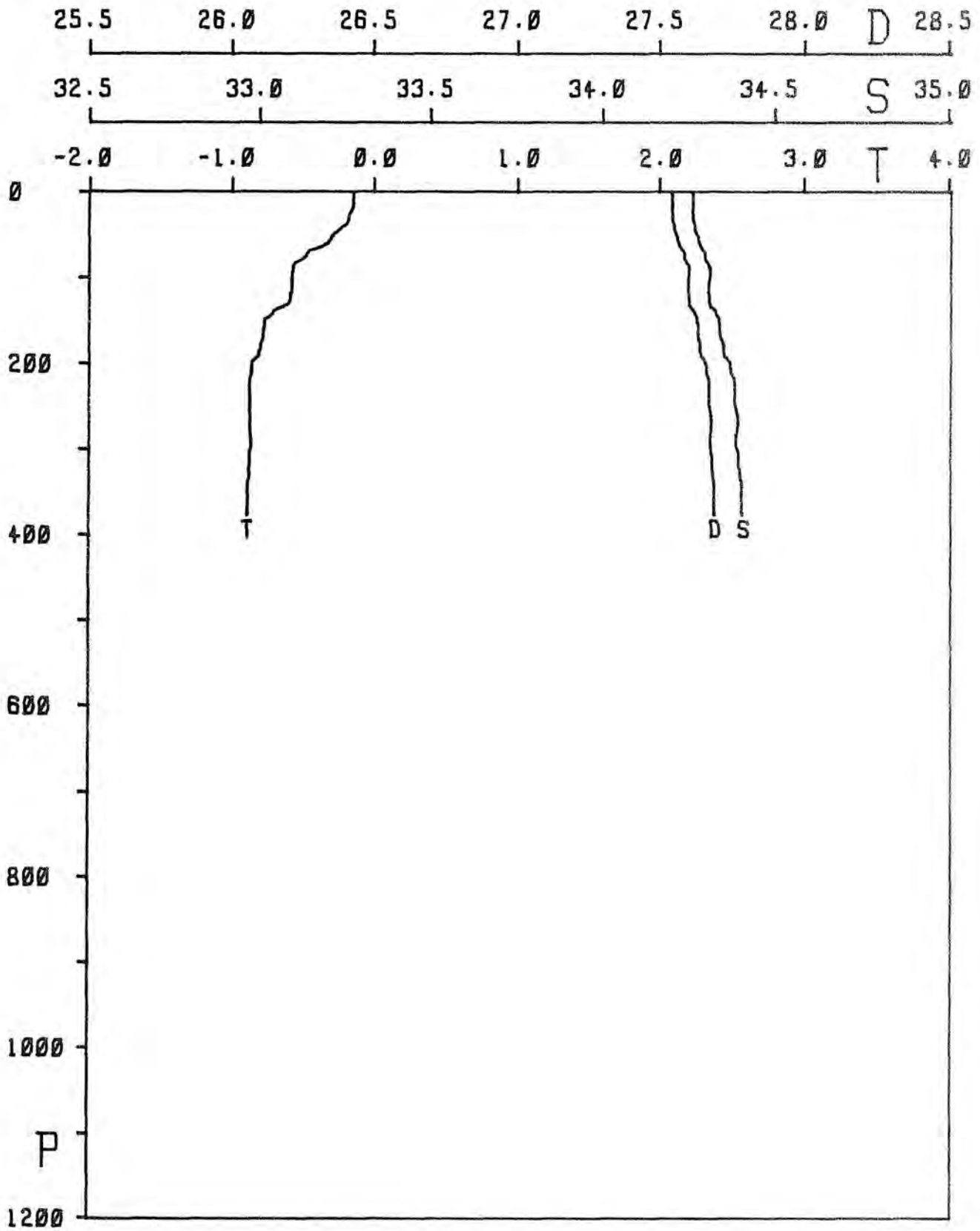
STATION 0211



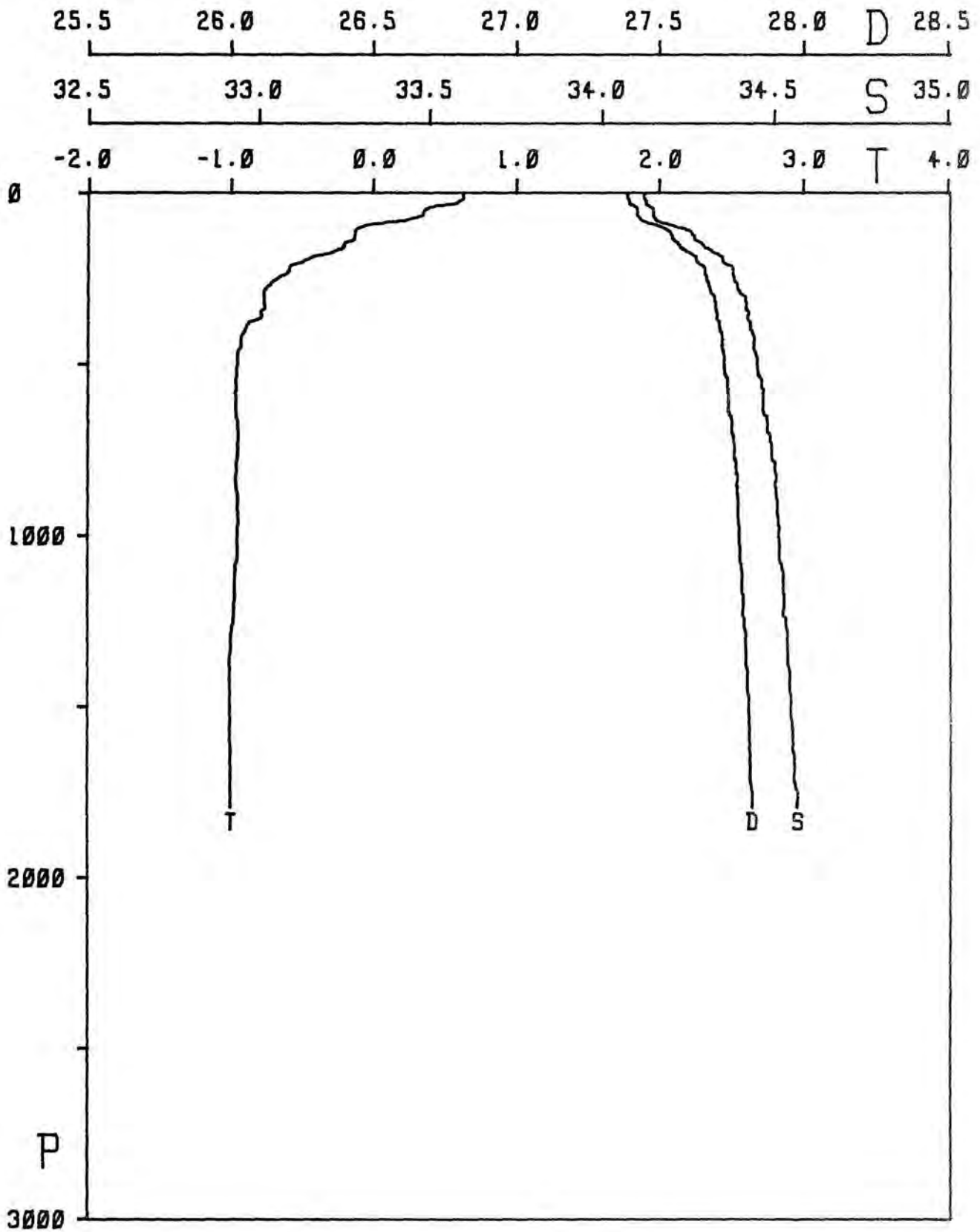
STATION 0212



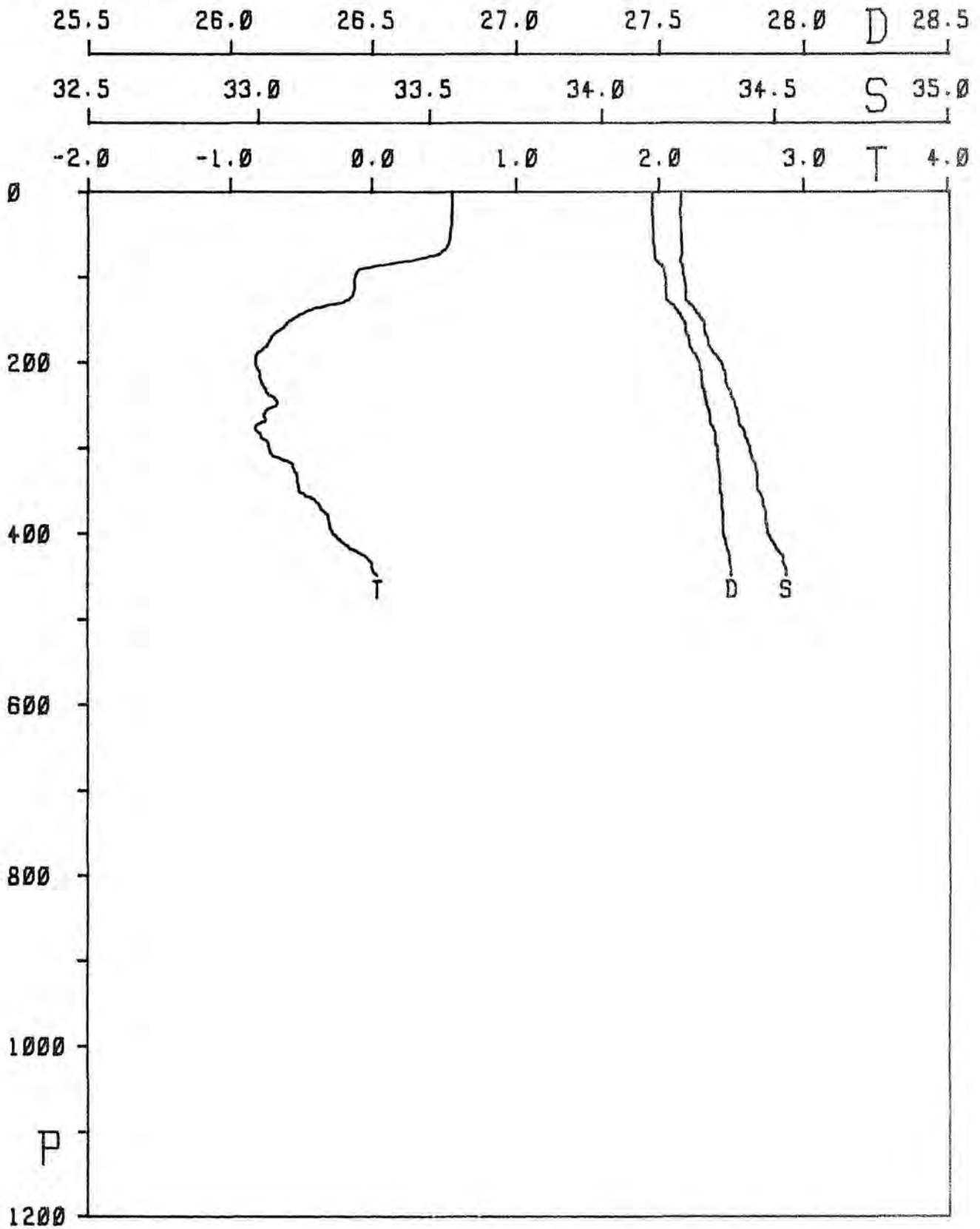
STATION 0213



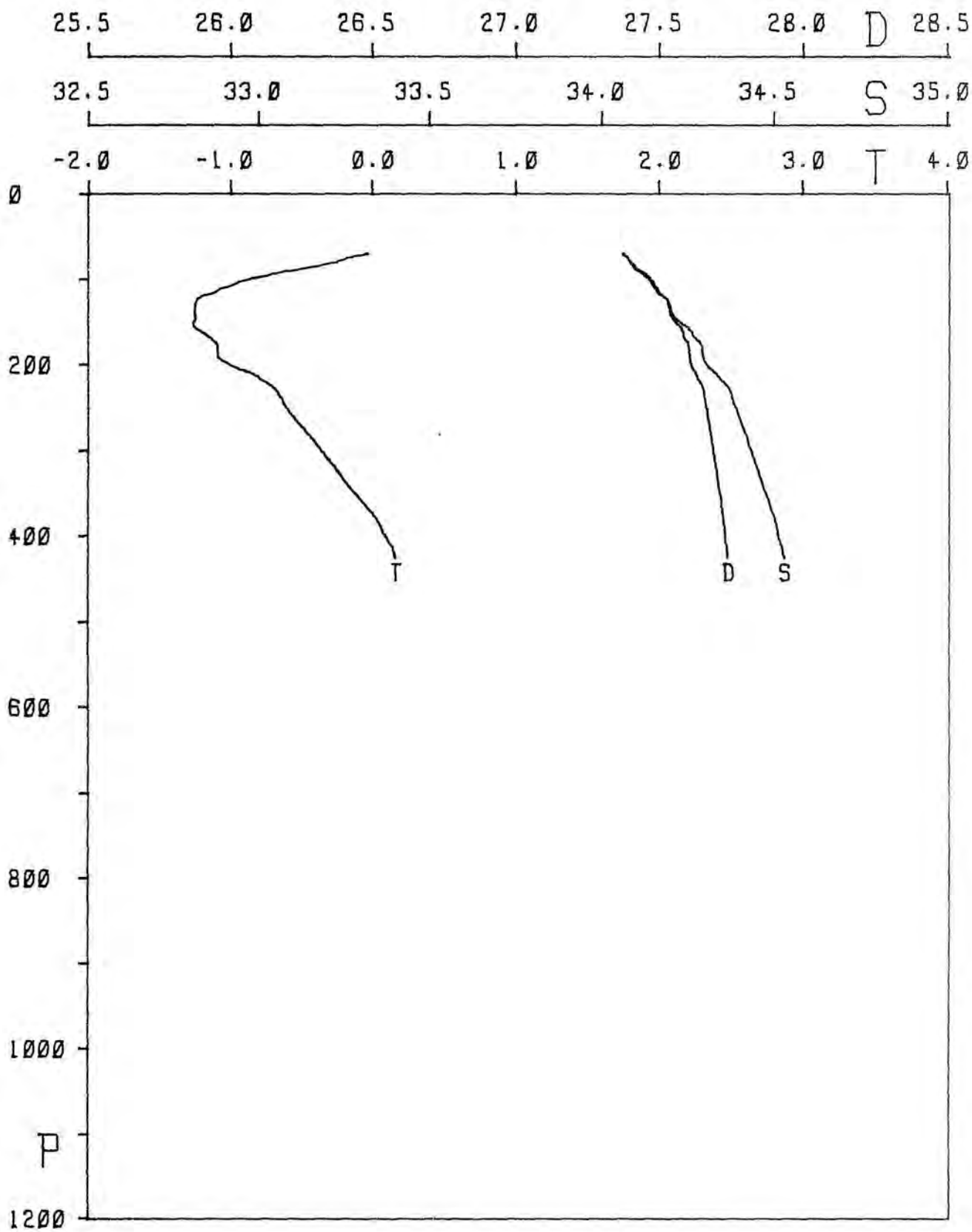
STATION 0215



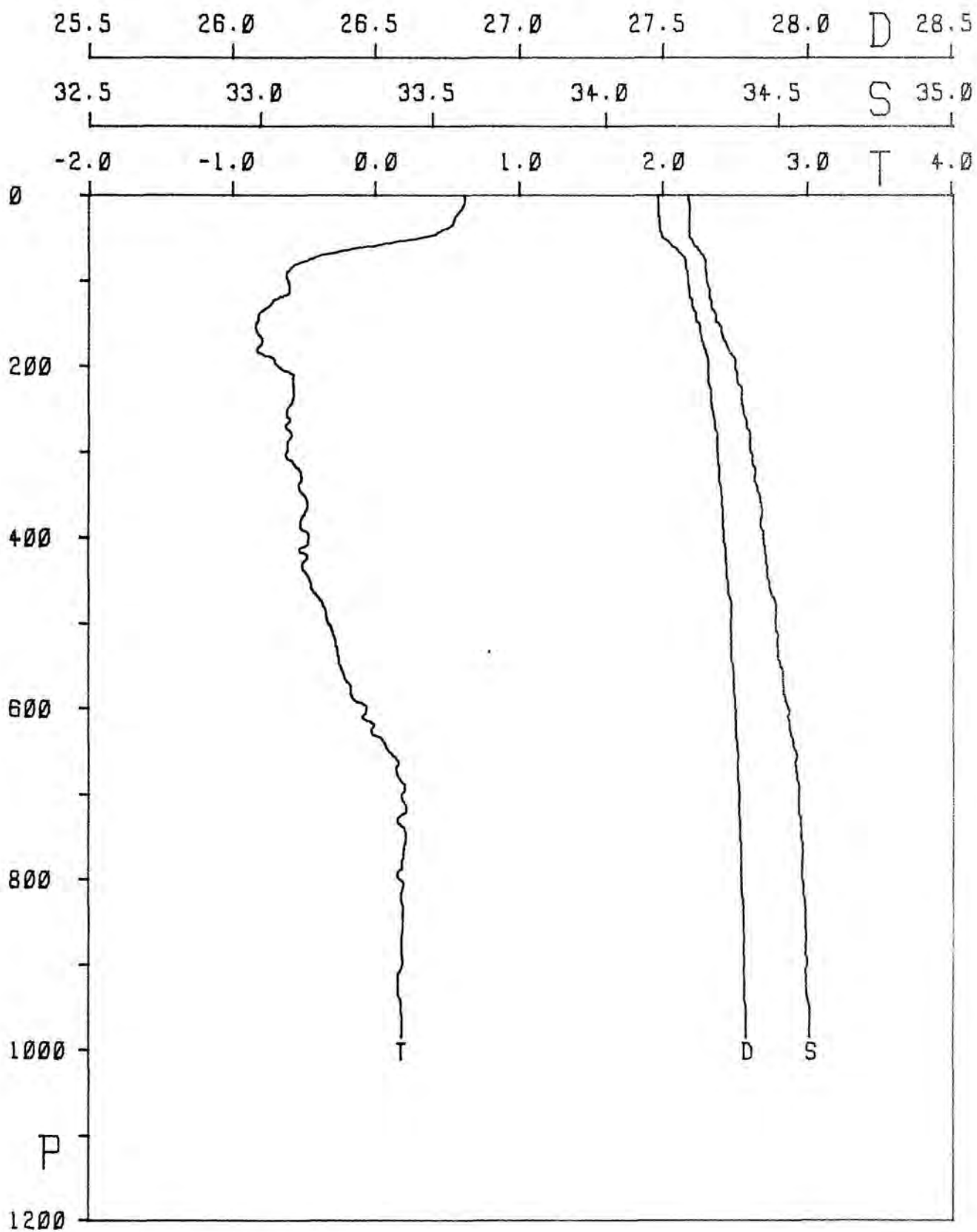
STATION 0218



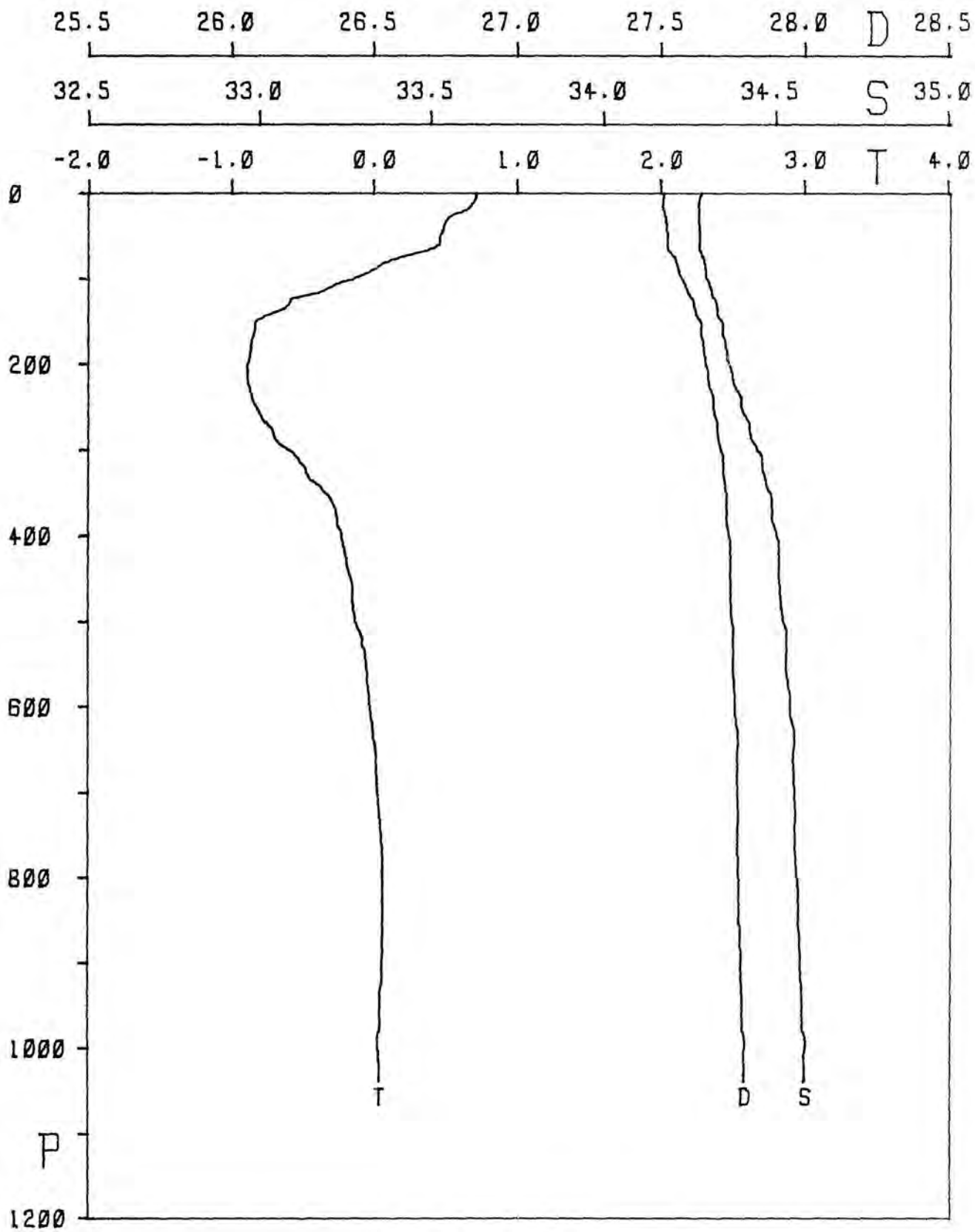
STATION 0219



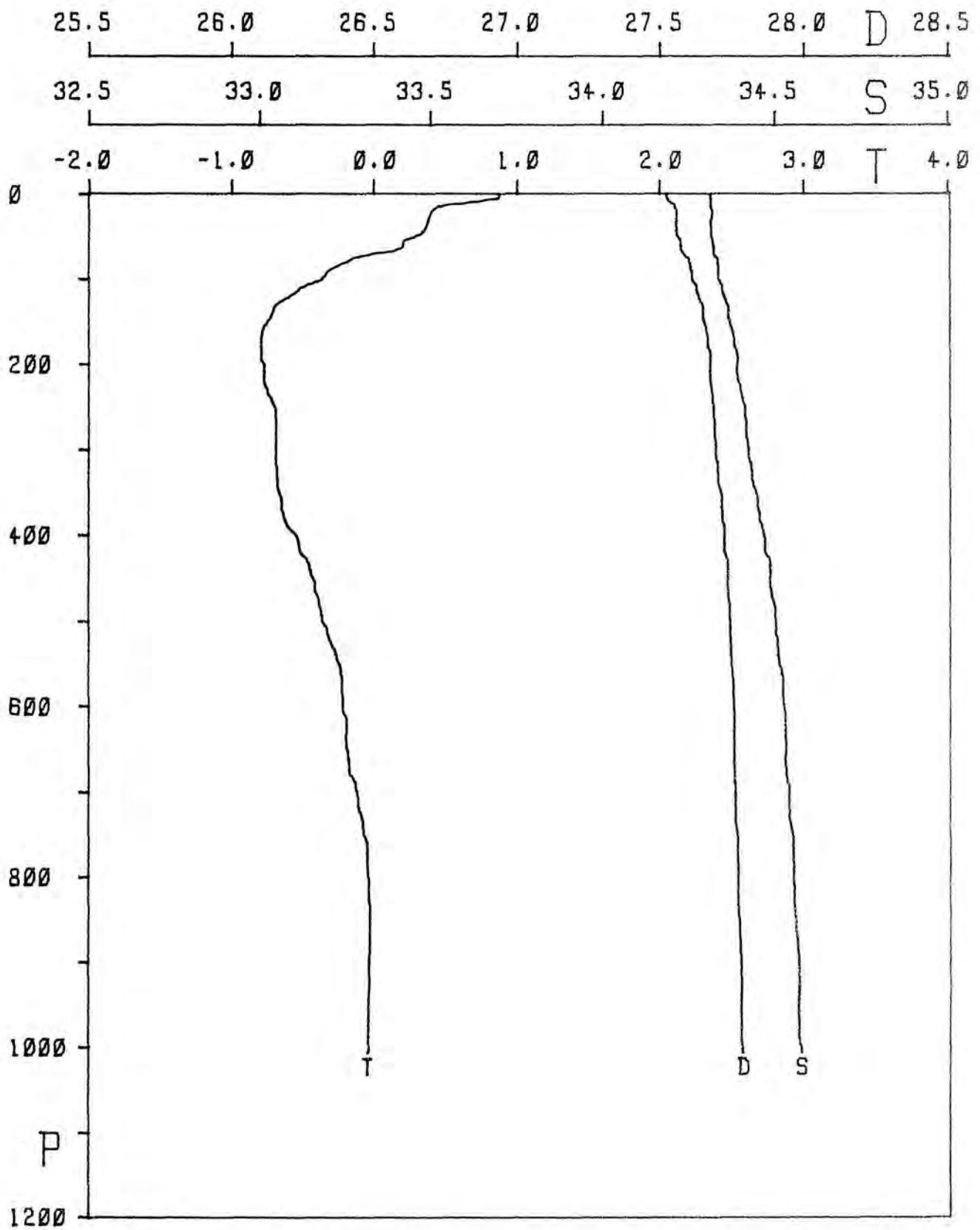
STATION 0220



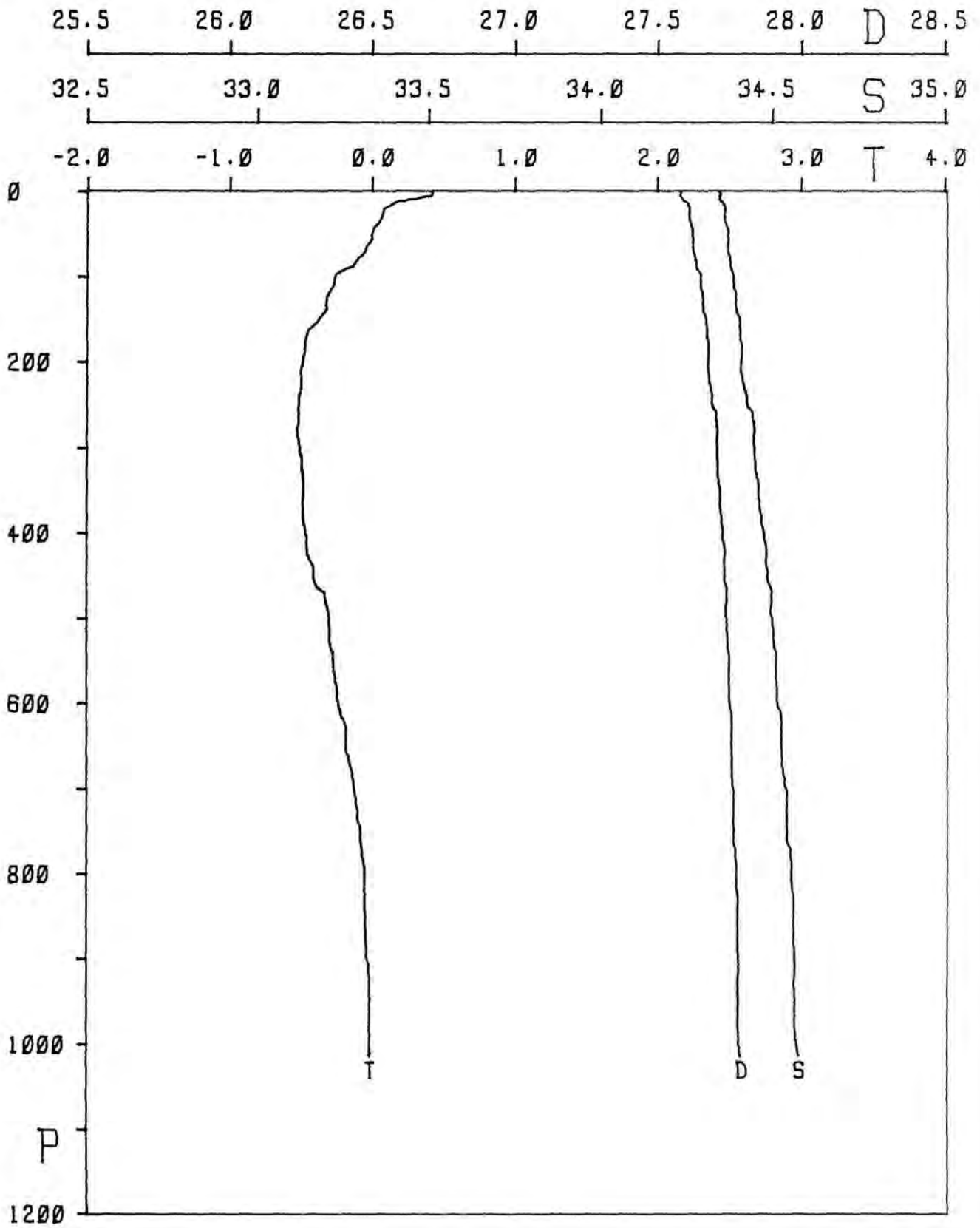
STATION 0221



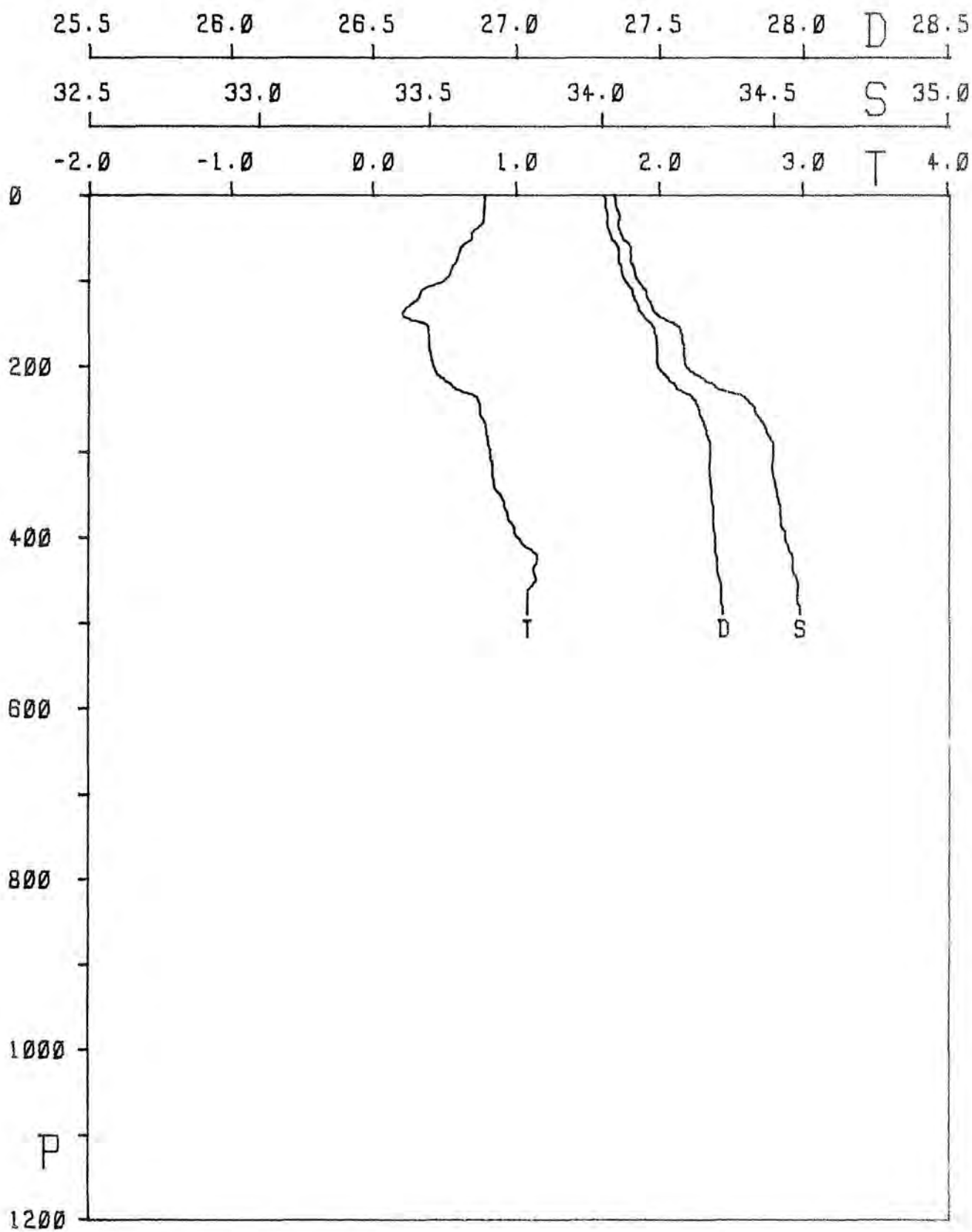
STATION 0222



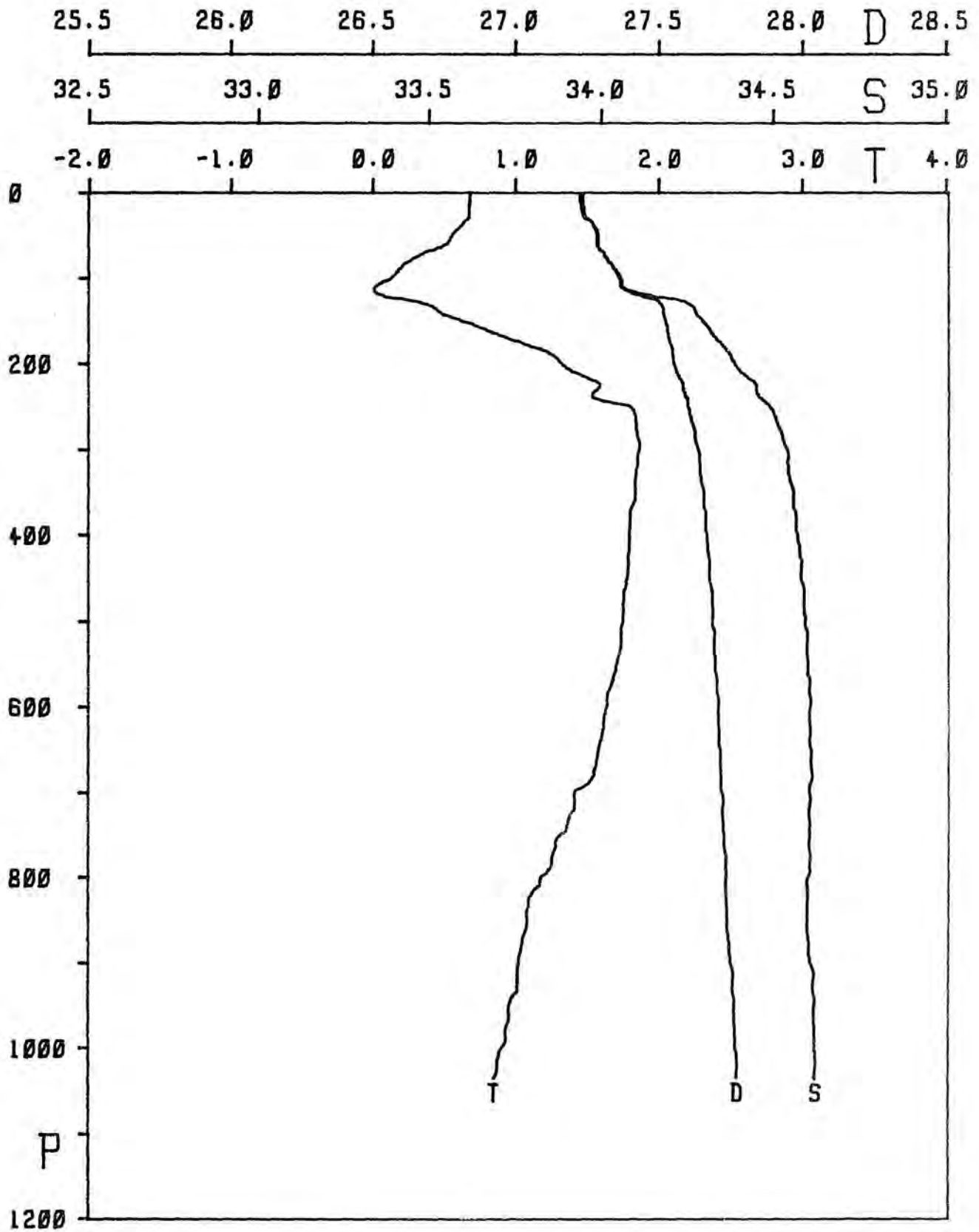
STATION 0223



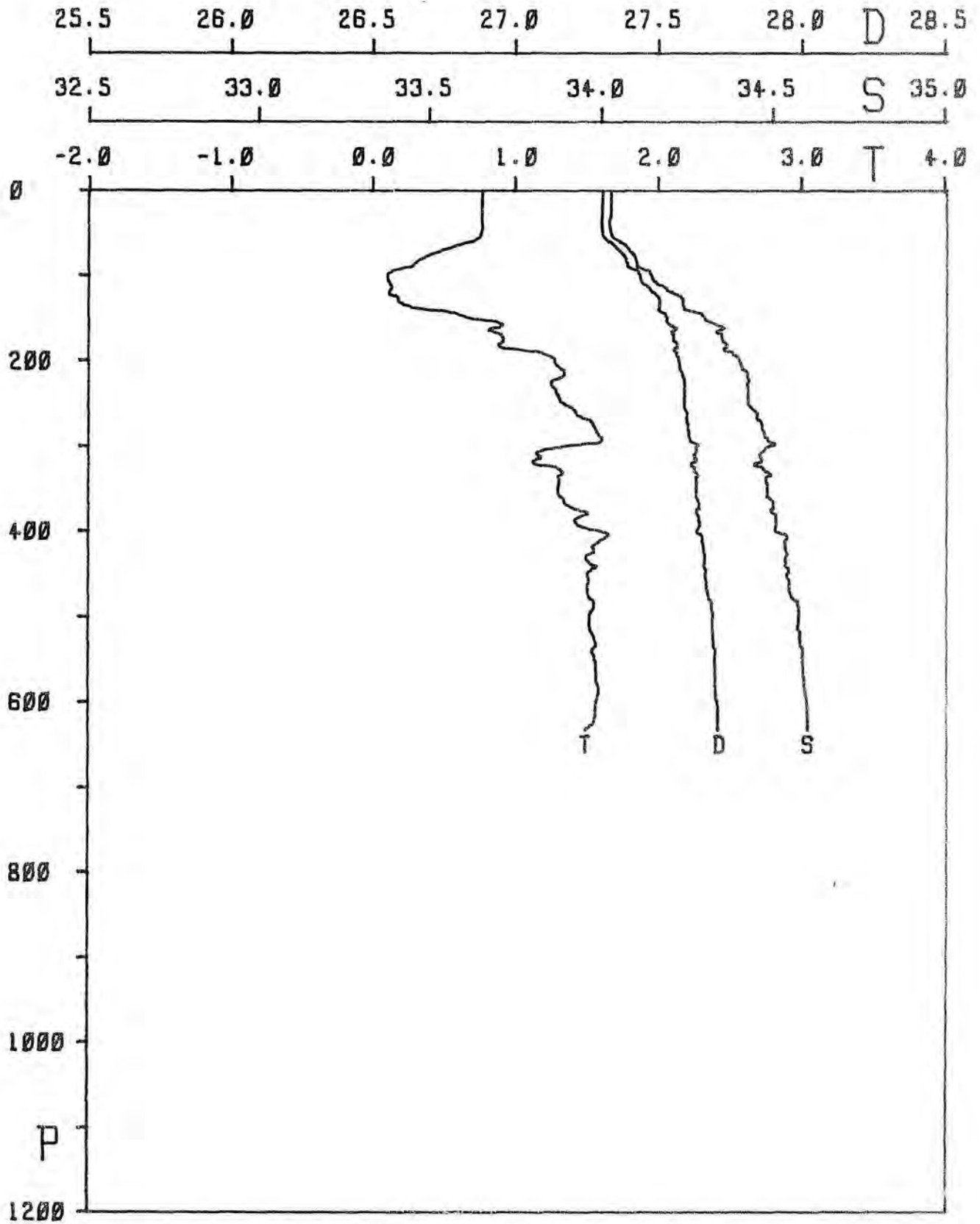
STATION 0224



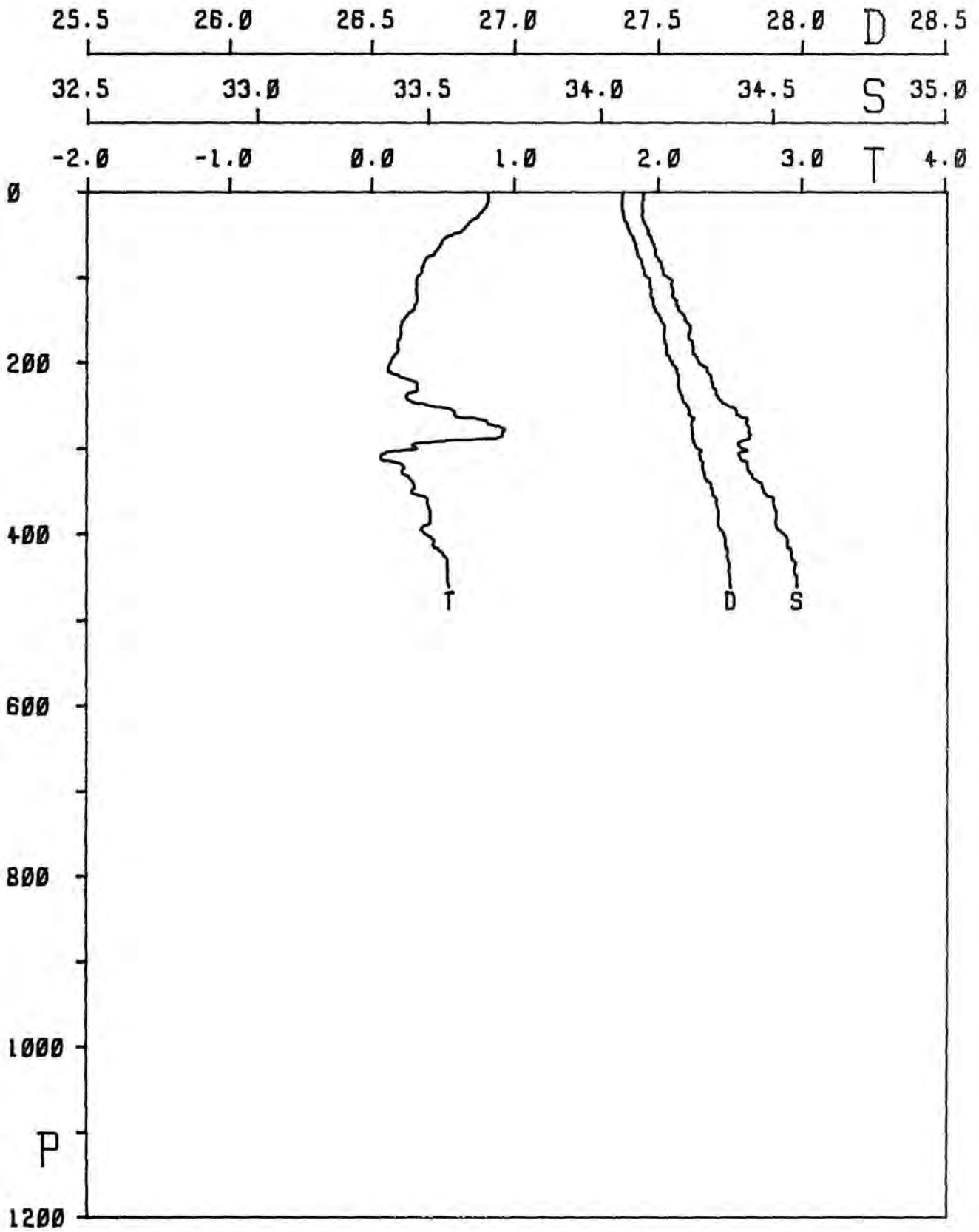
STATION 0225



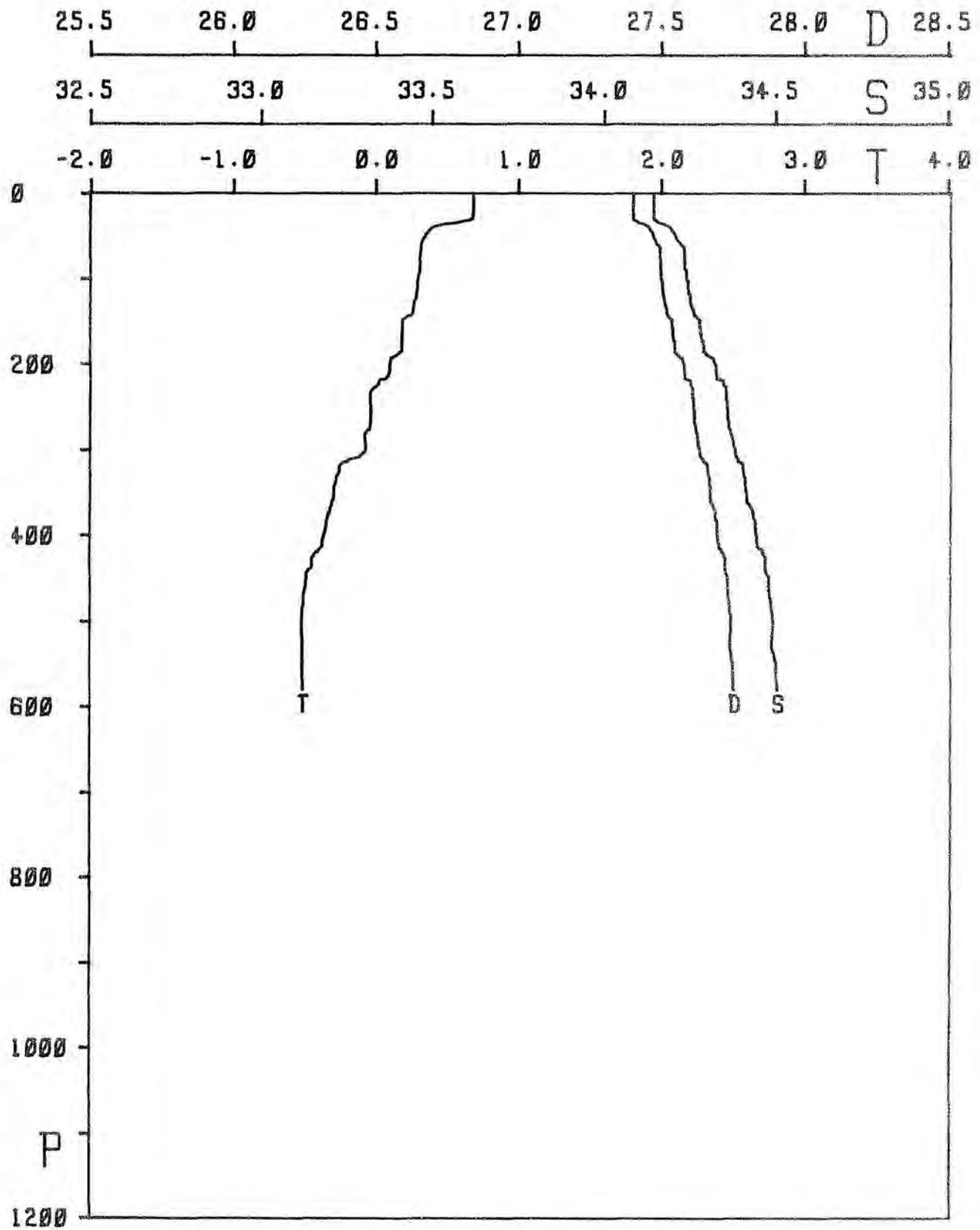
STATION 0226



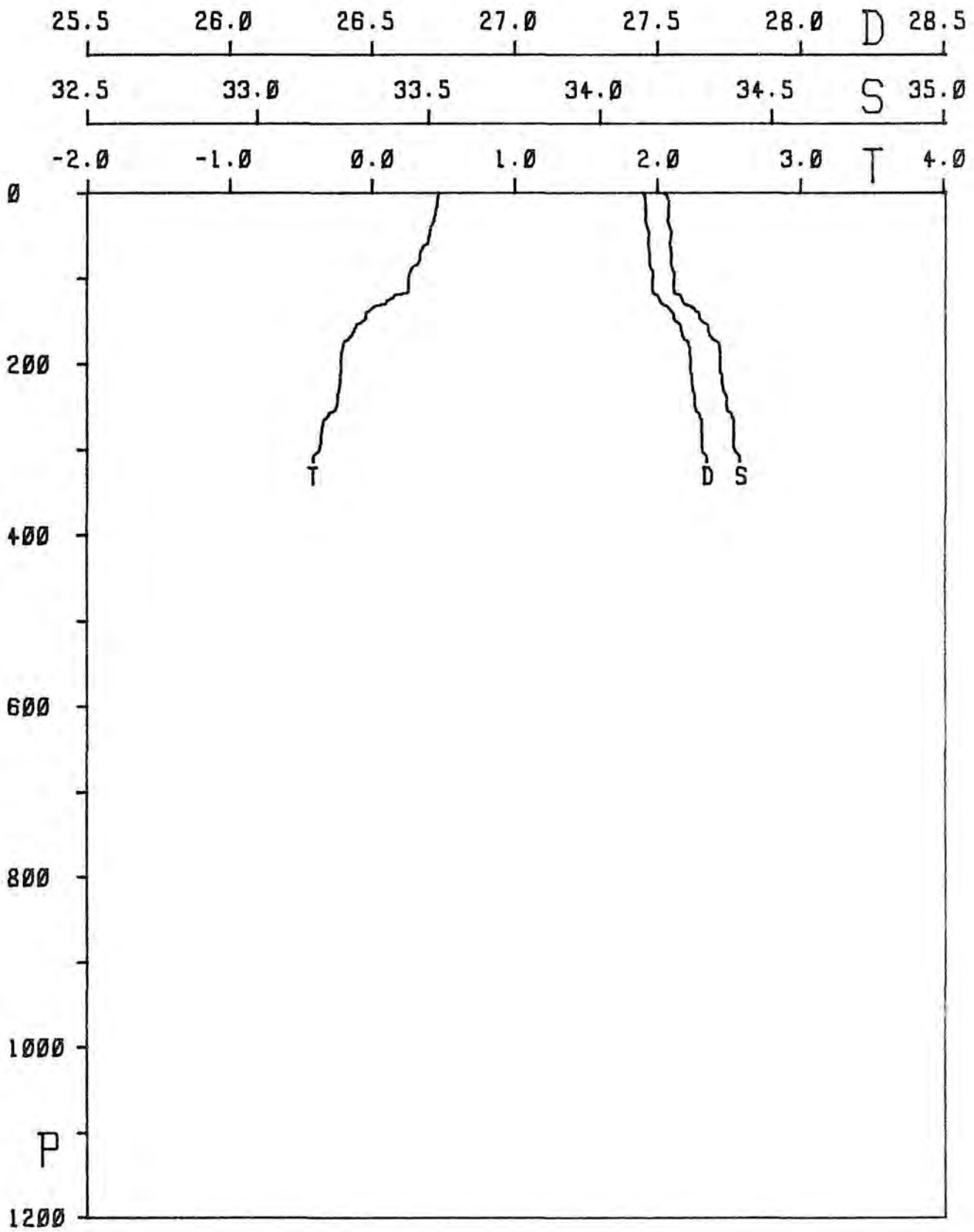
STATION 0227



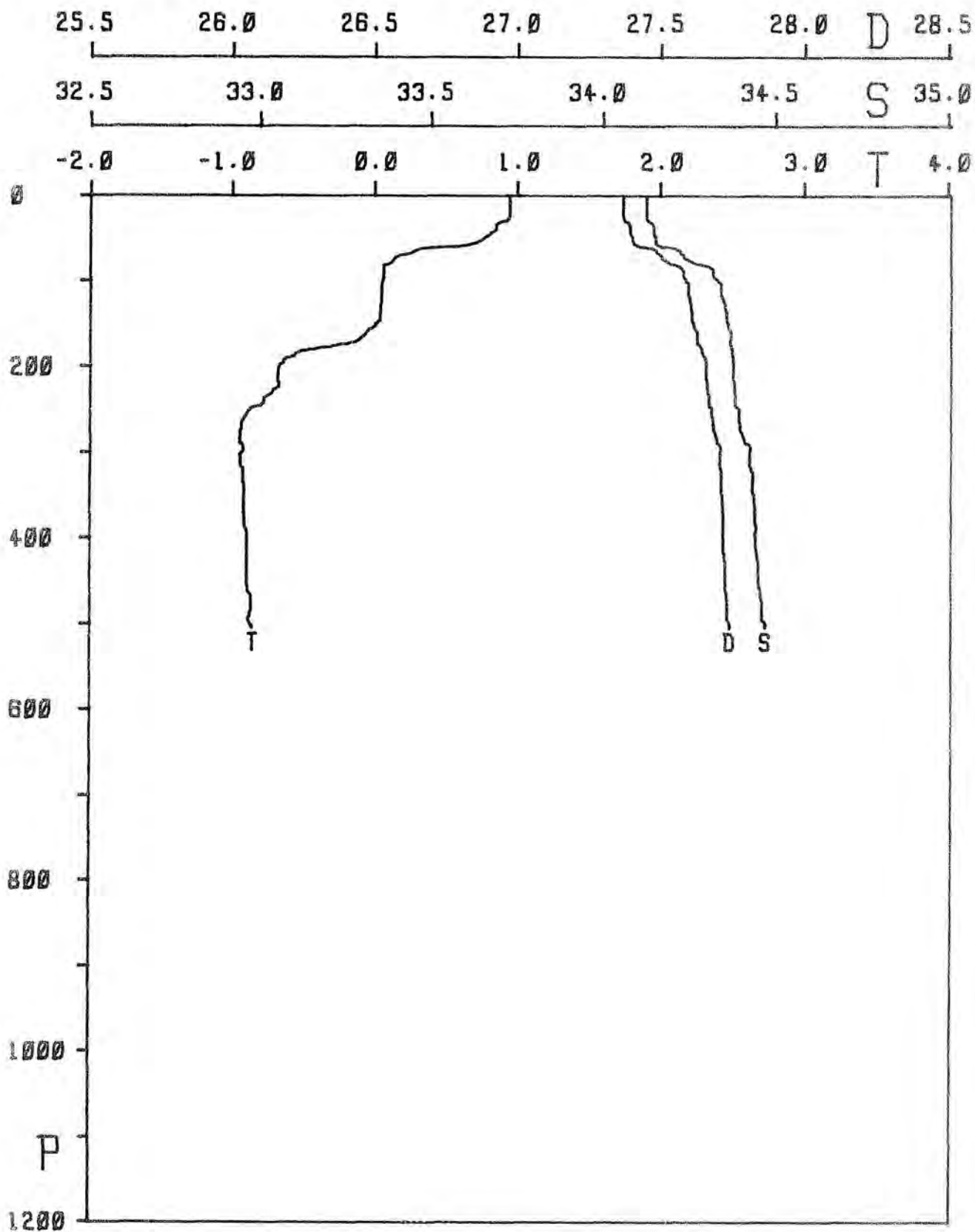
STATION 0228



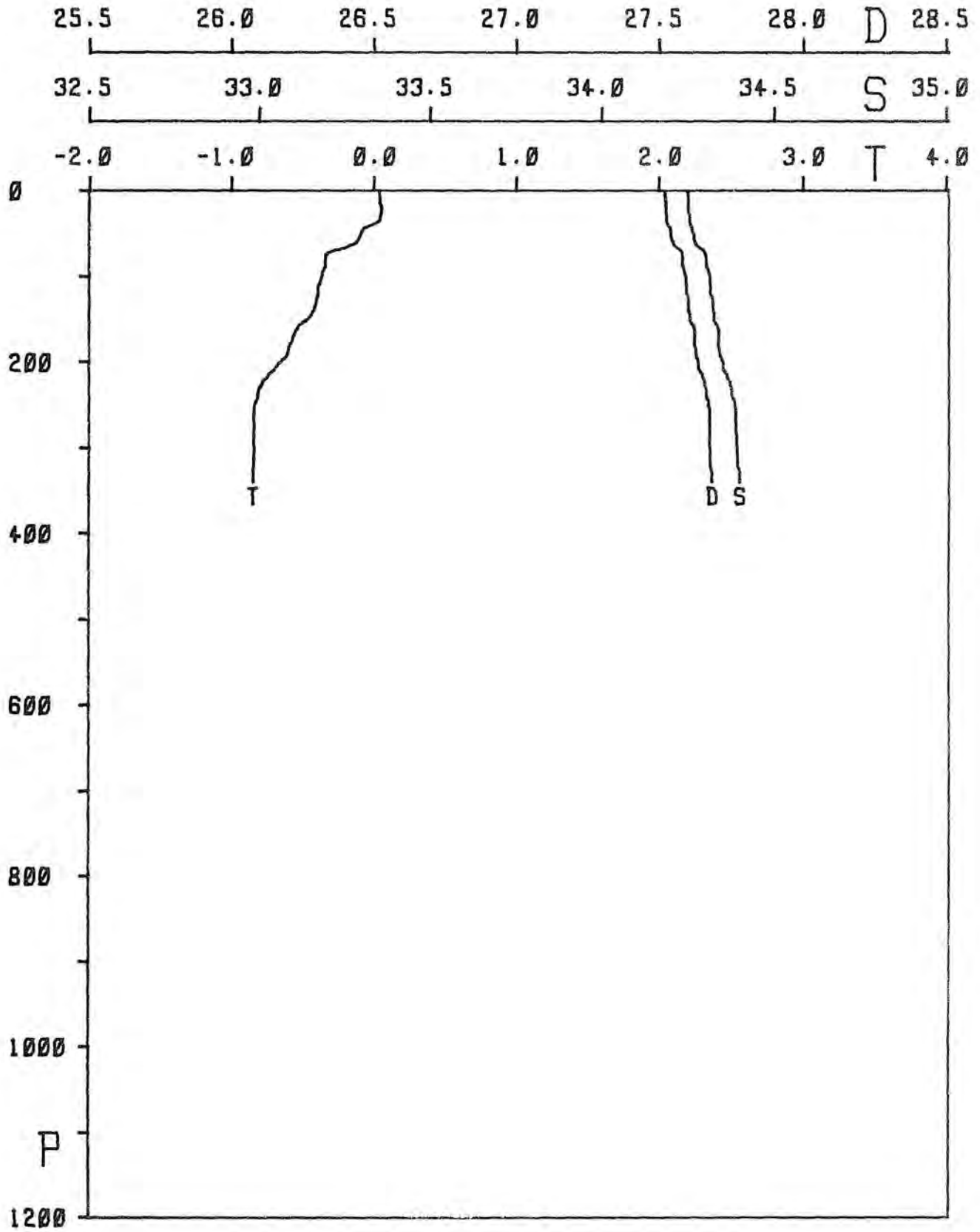
STATION 0229



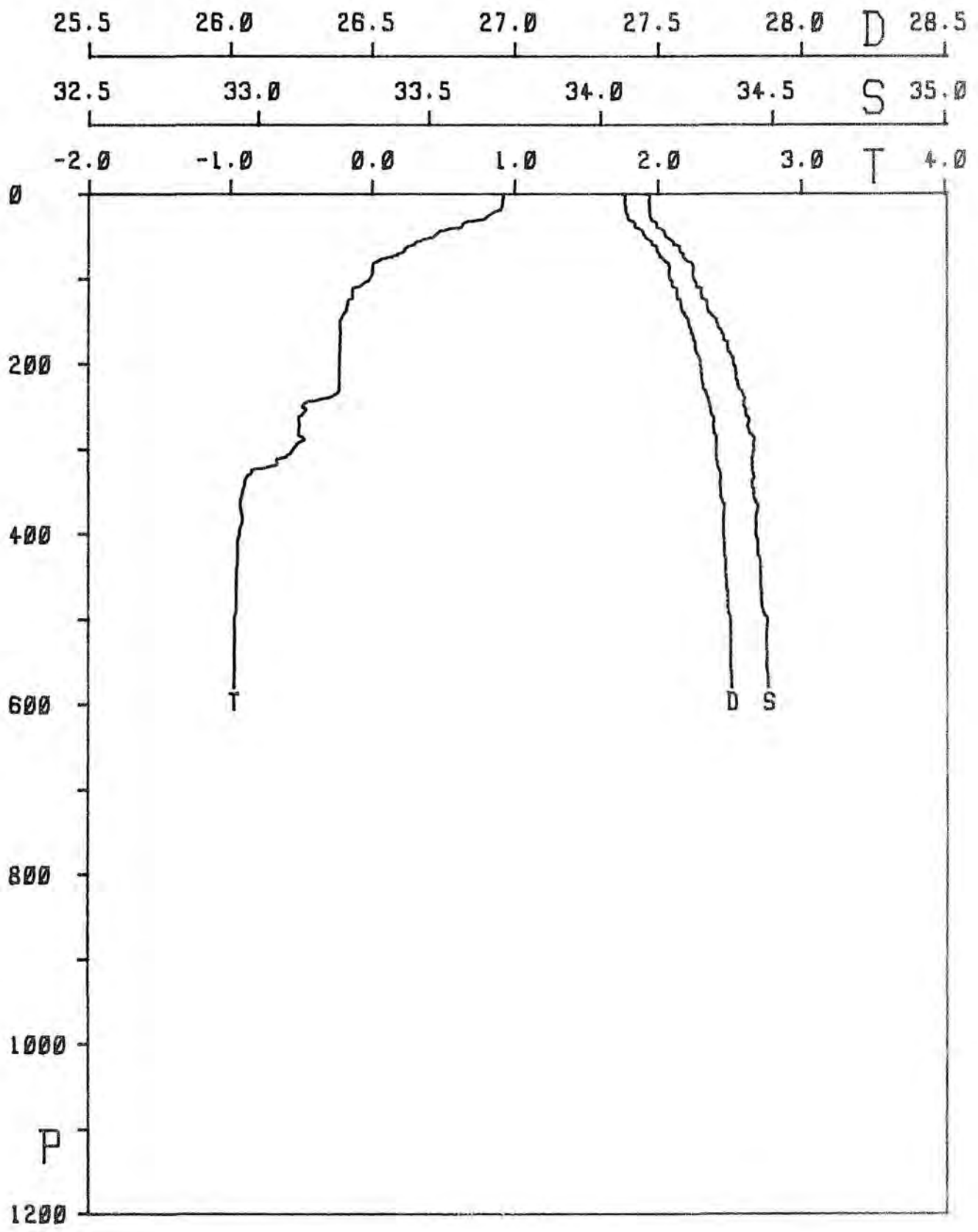
STATION 0230



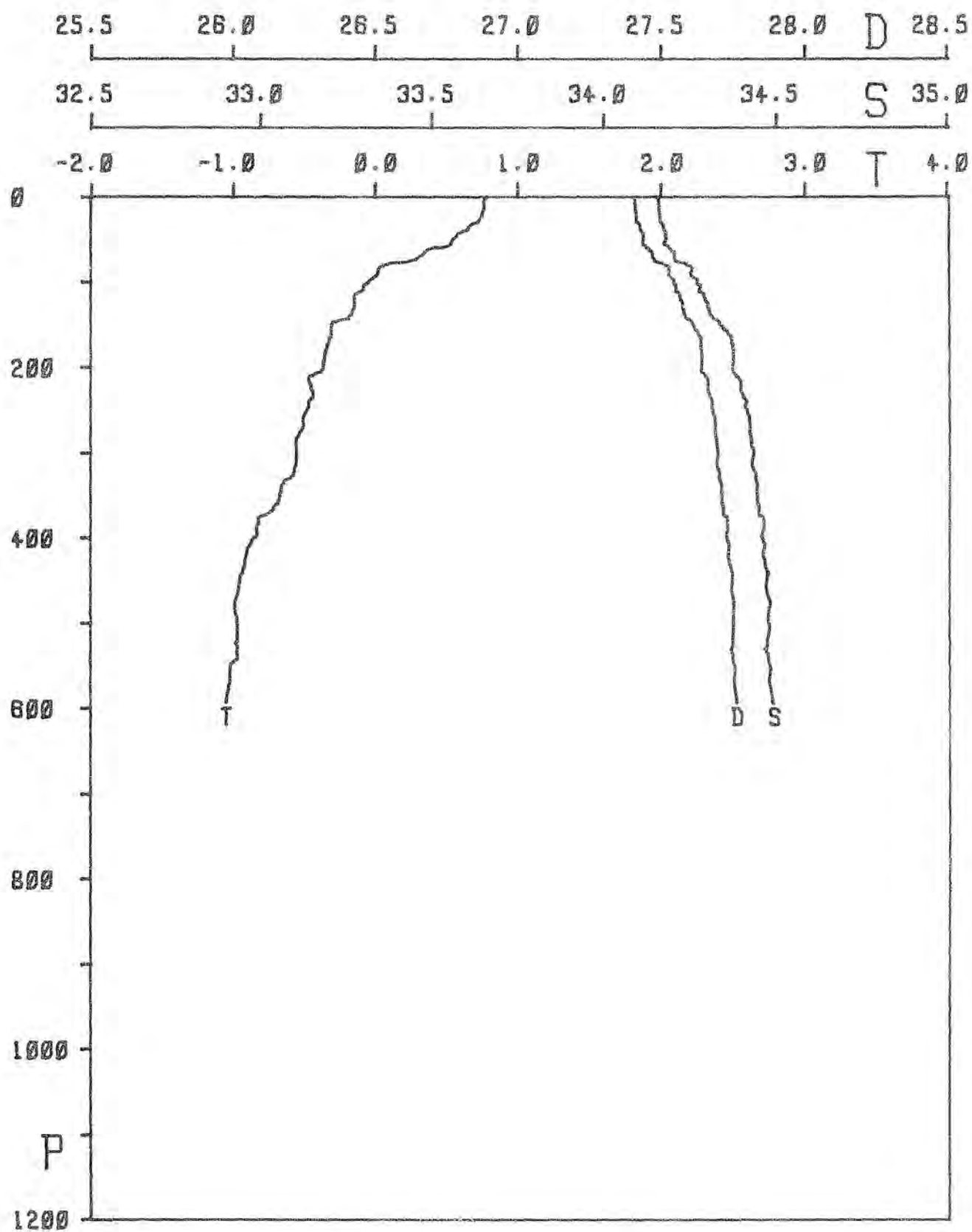
STATION 0231



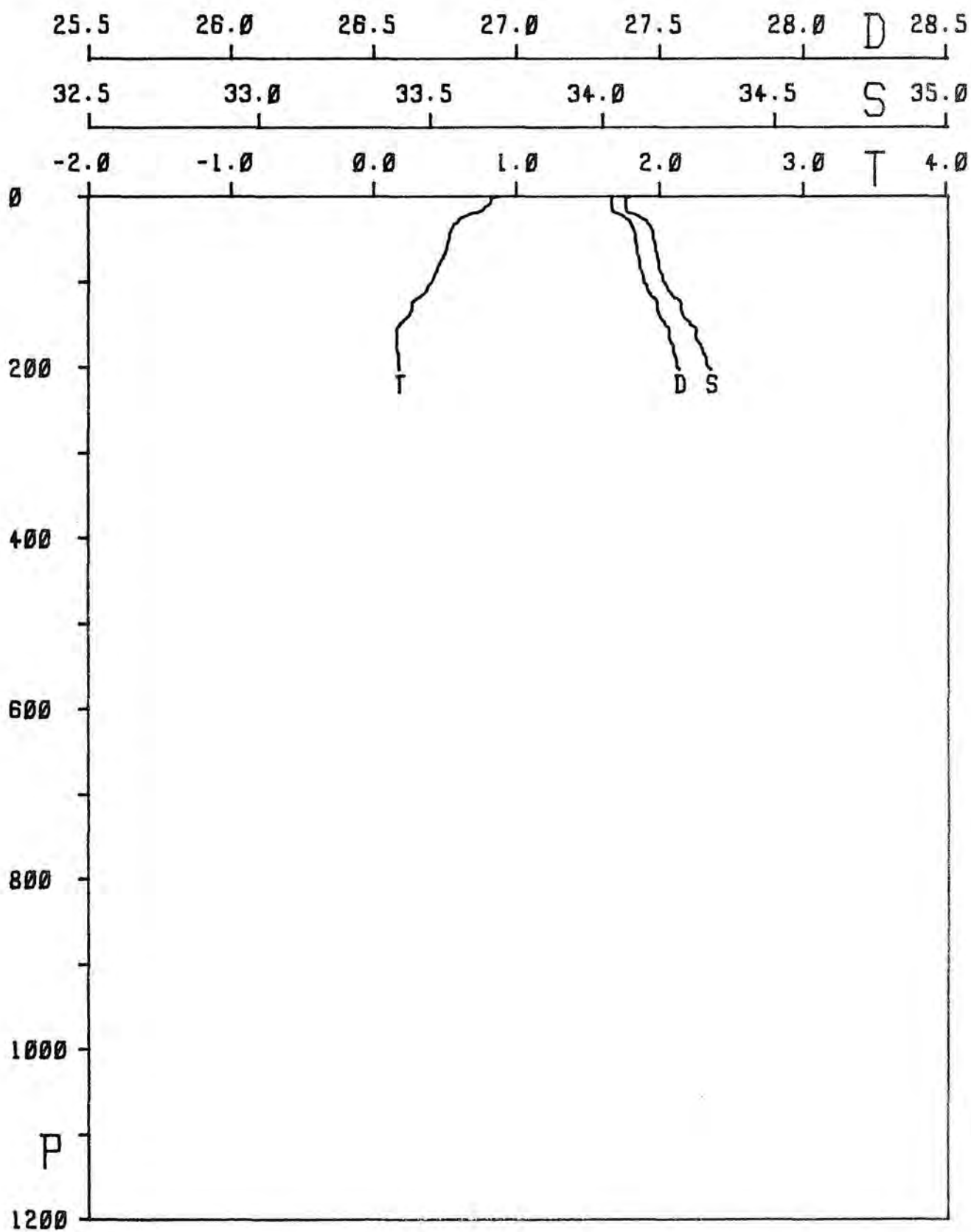
STATION 0232



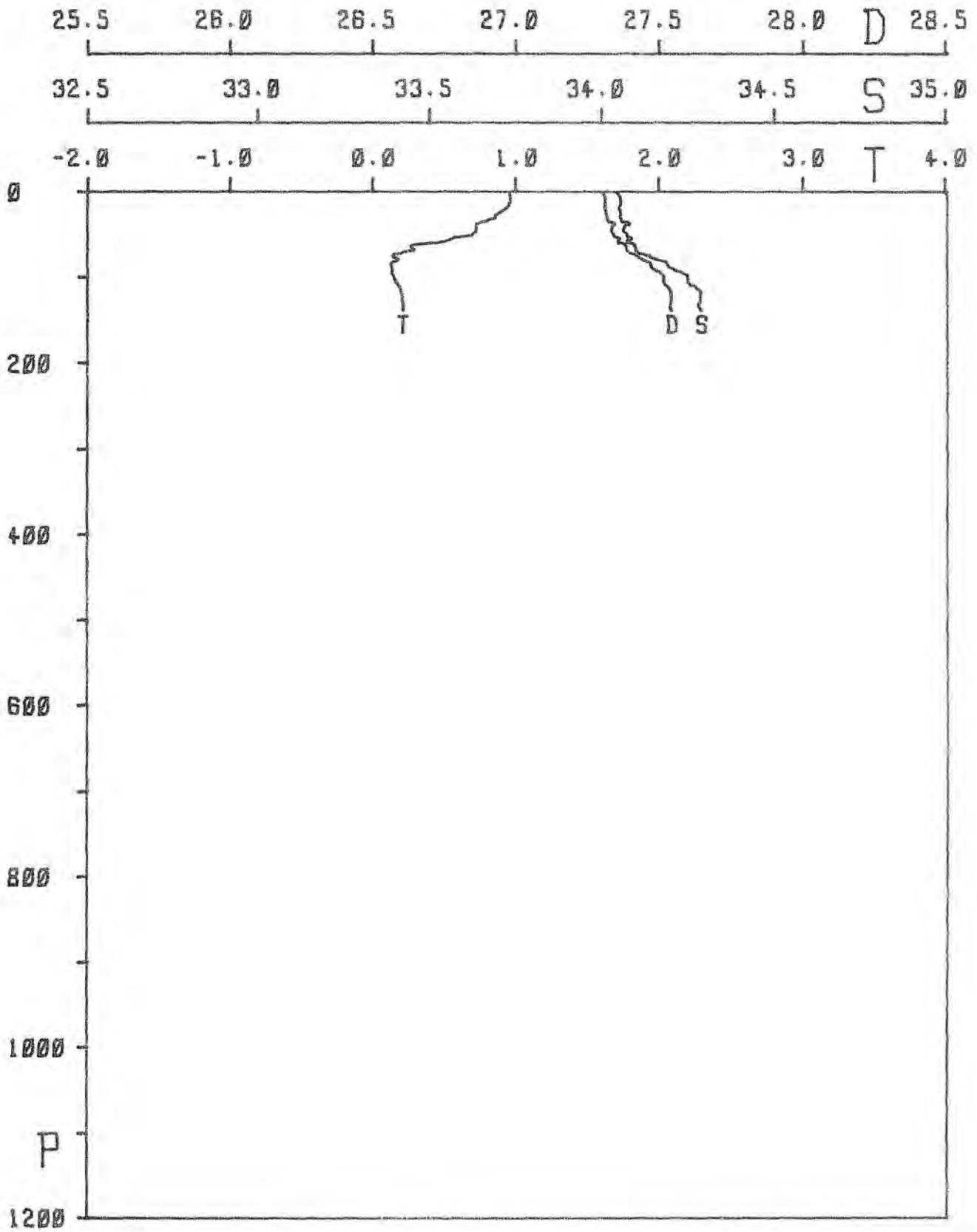
STATION Ø233



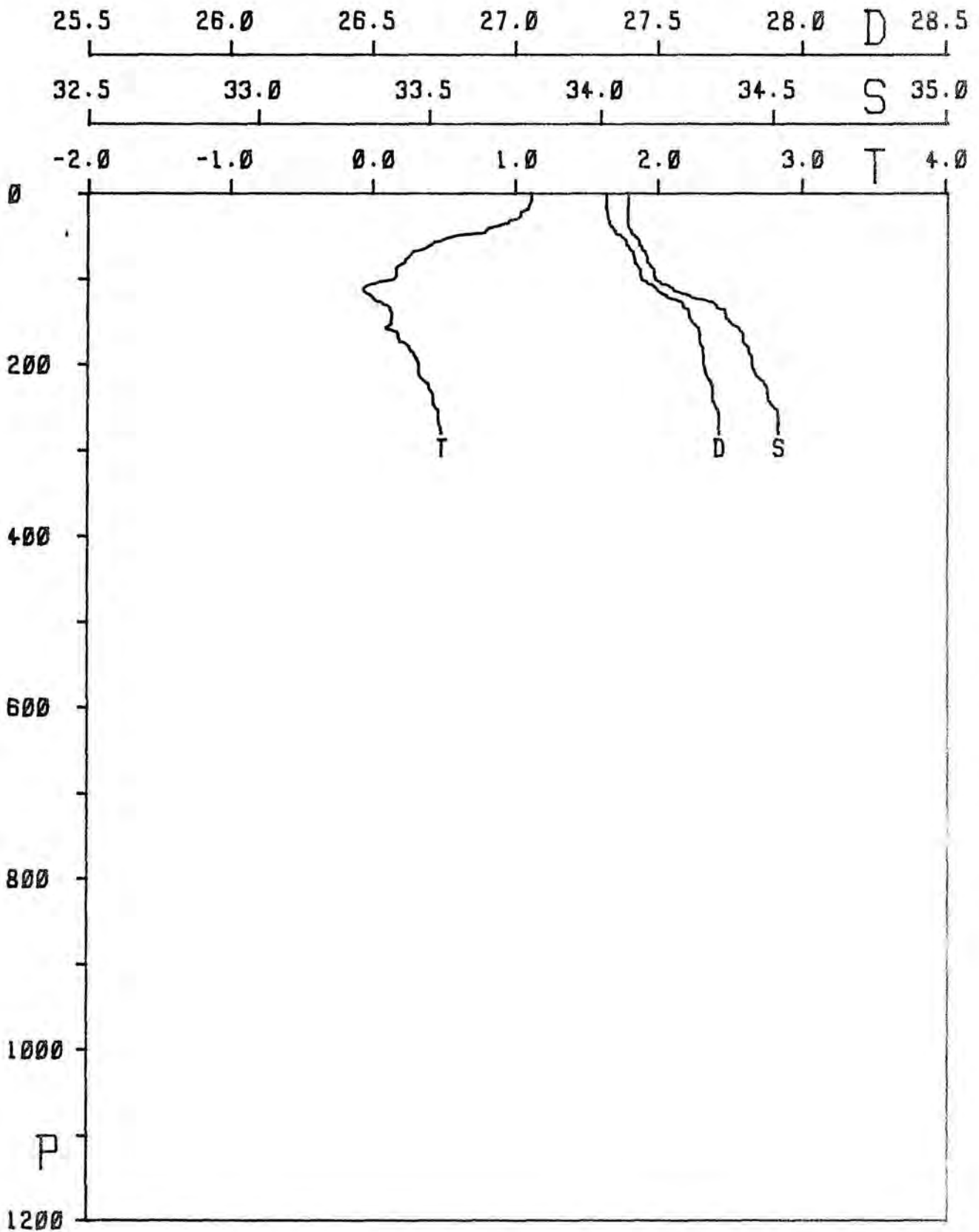
STATION 0234



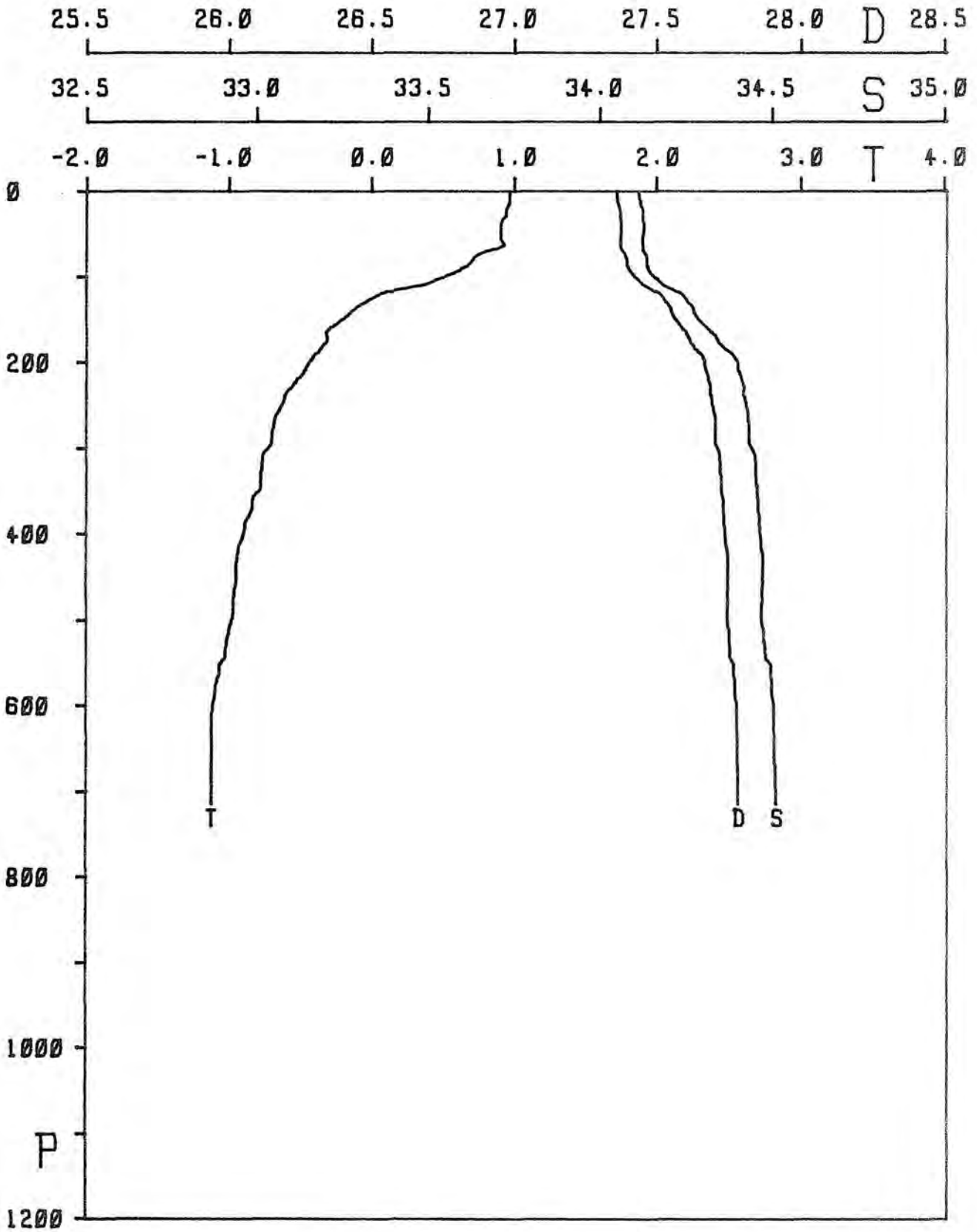
STATION 0235



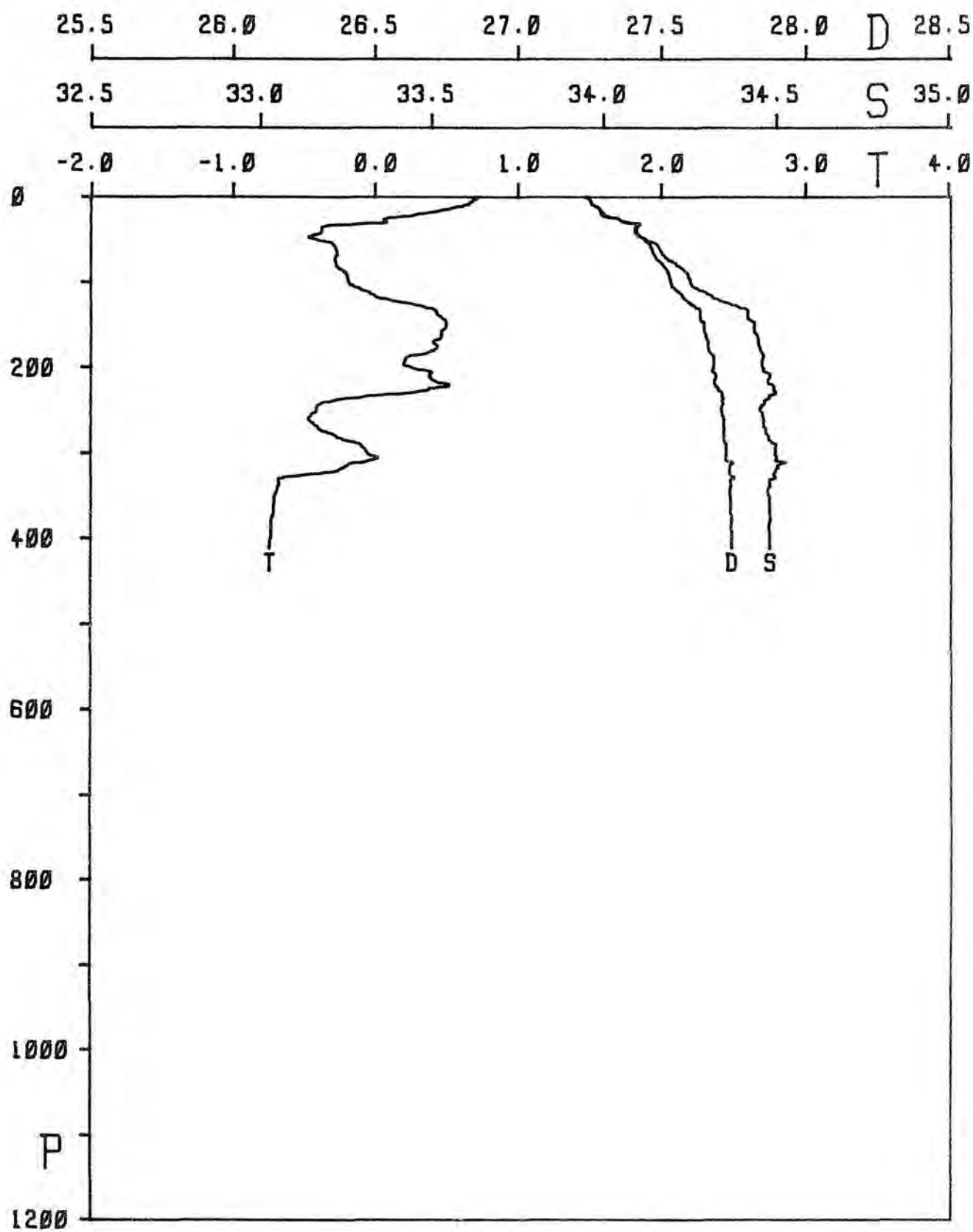
STATION 0236



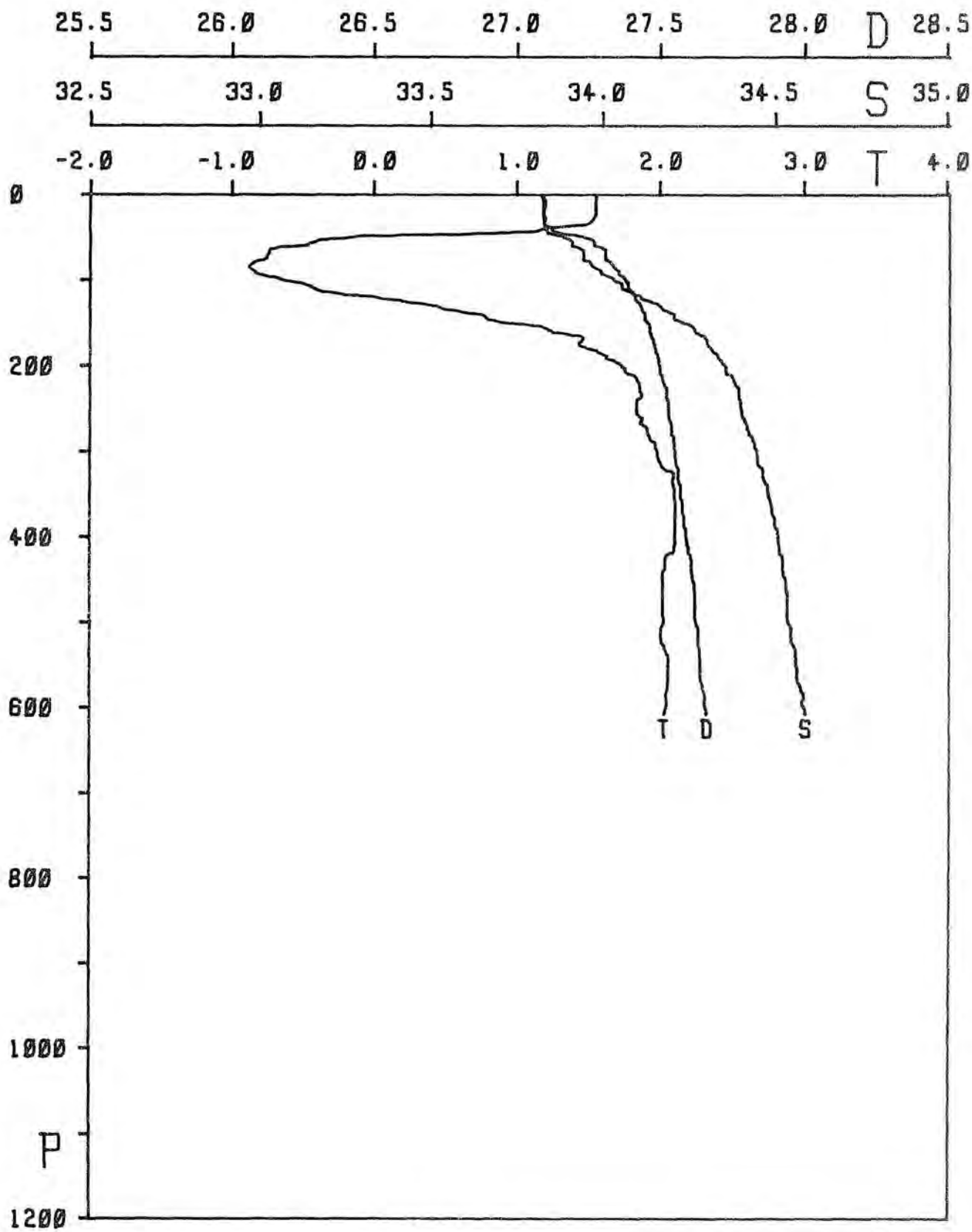
STATION Ø237



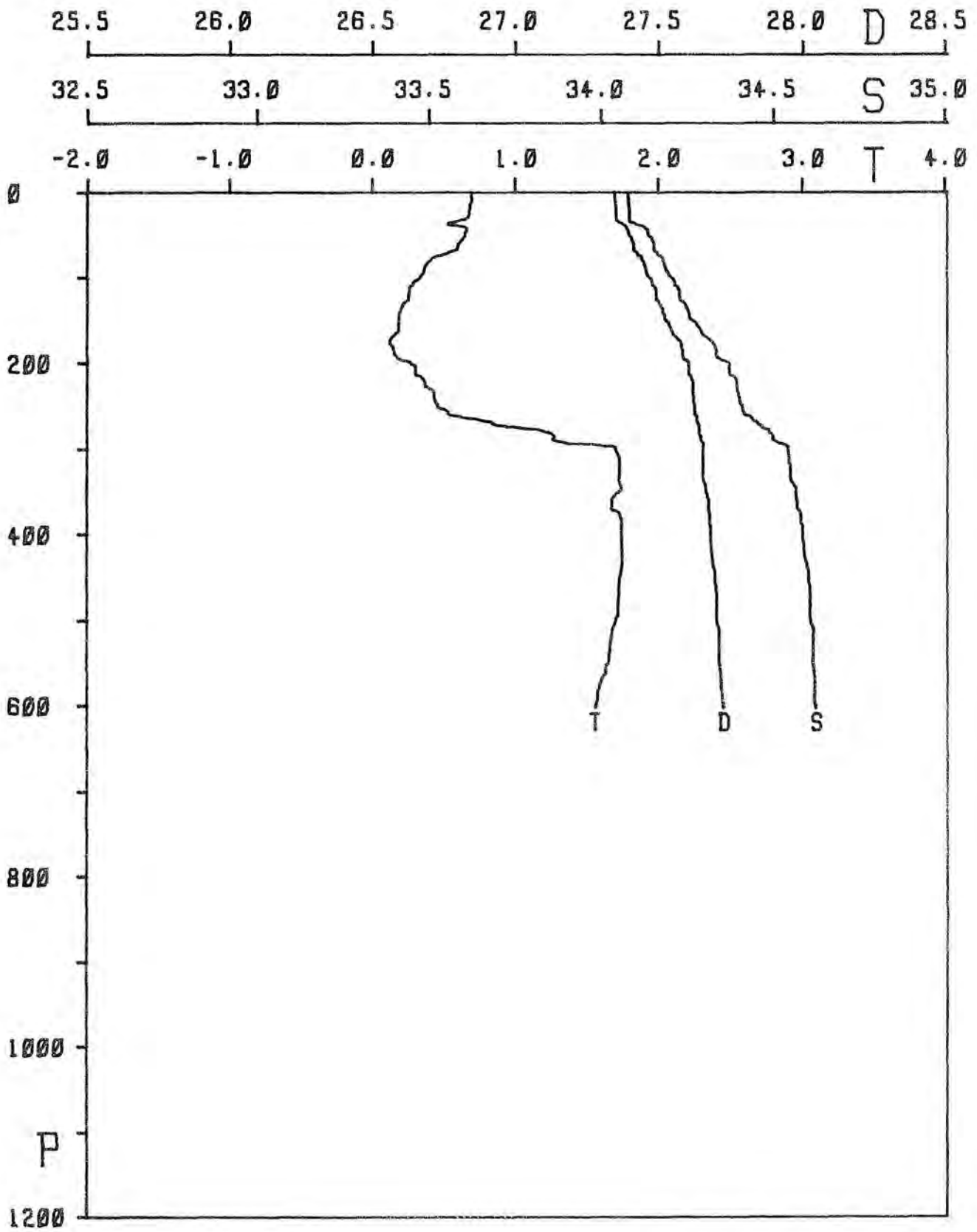
STATION 0238



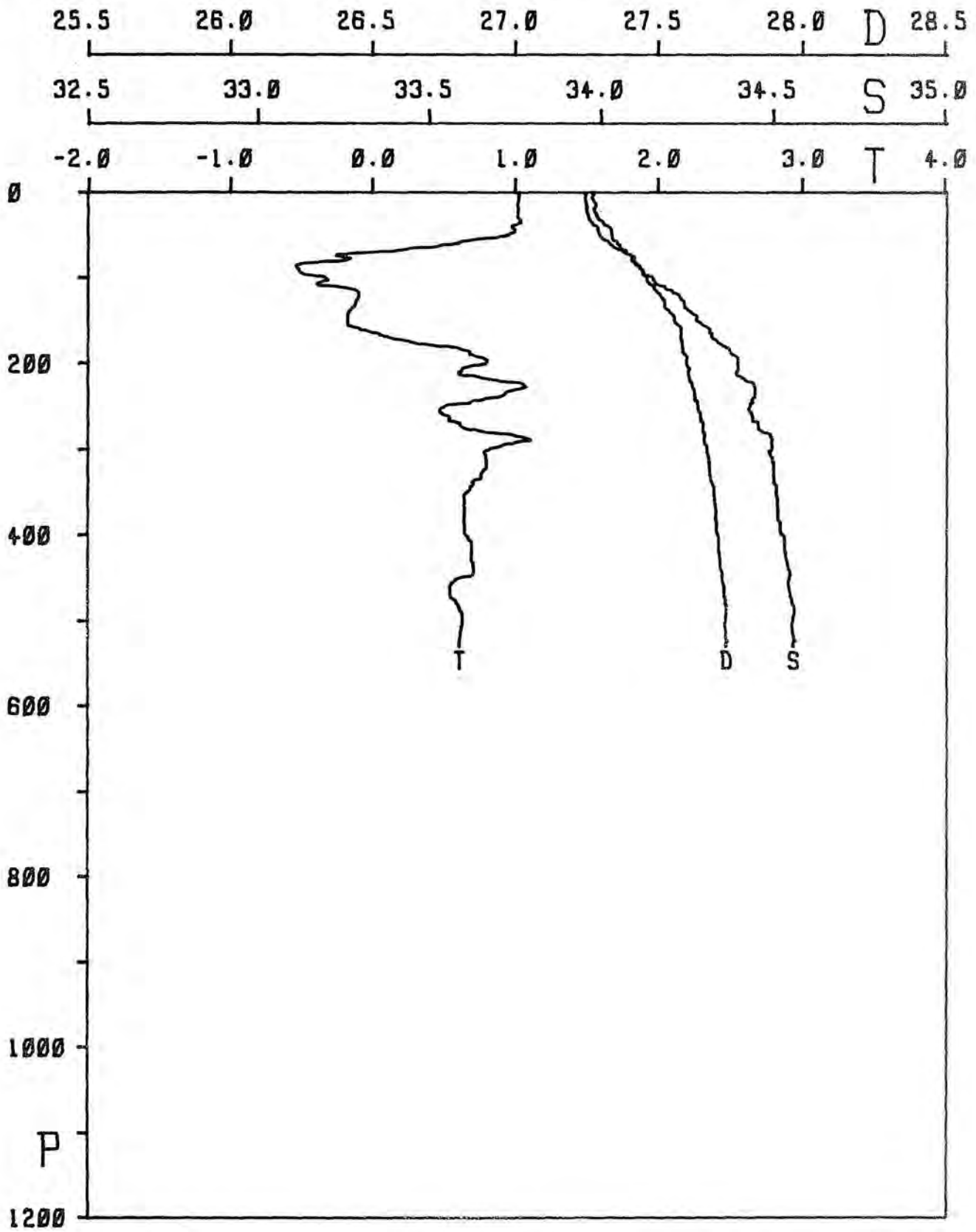
STATION 0239



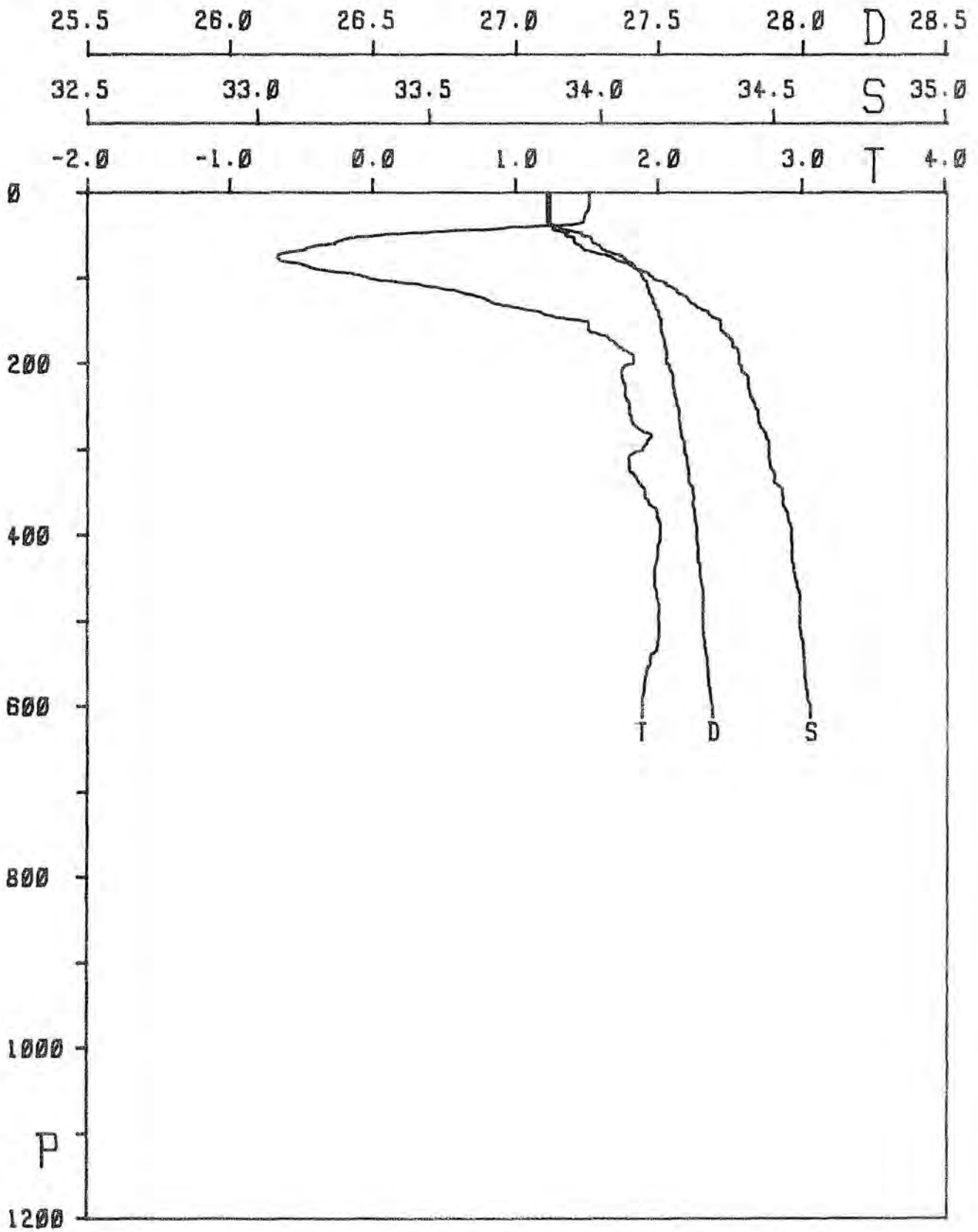
STATION 0240



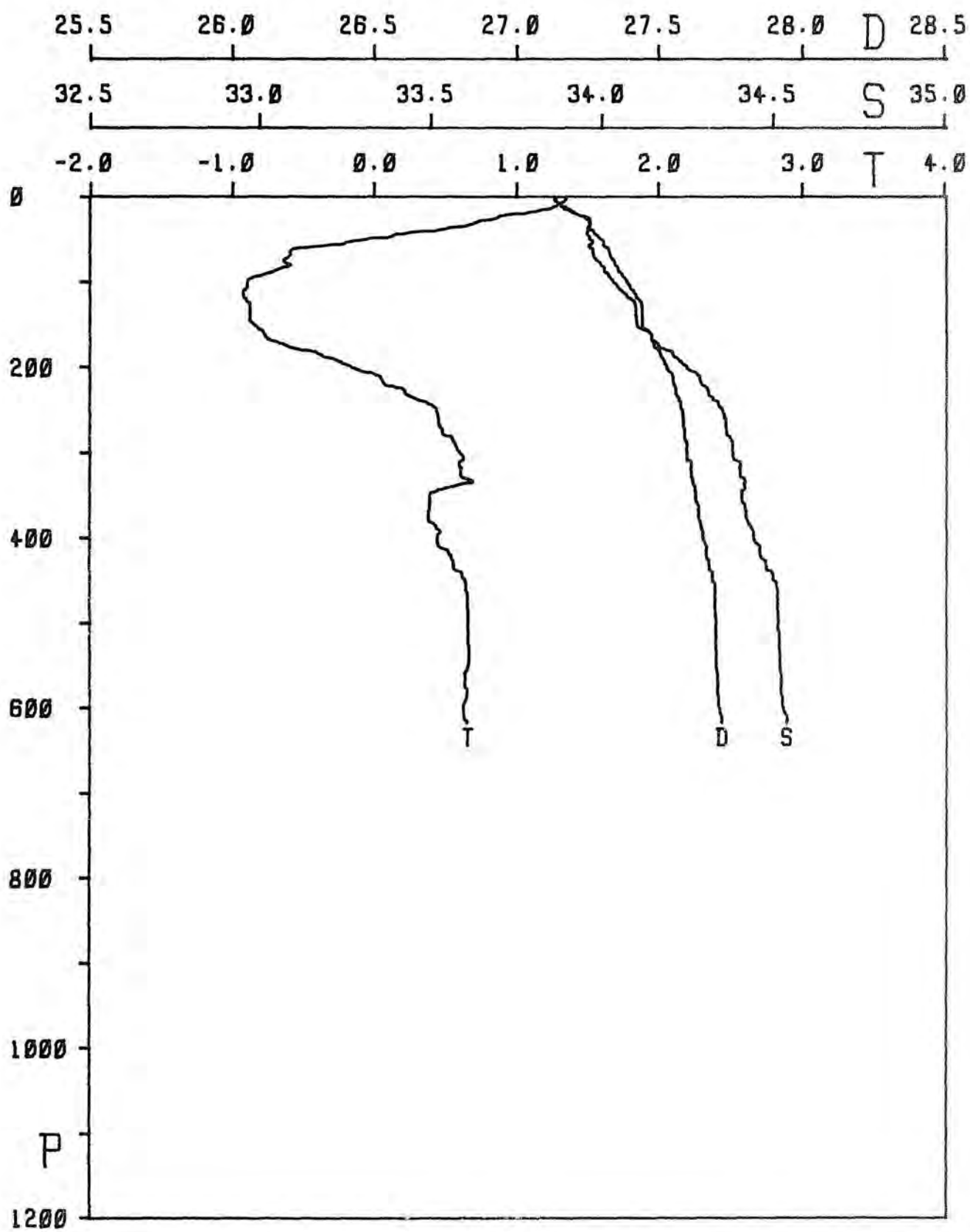
STATION 0241



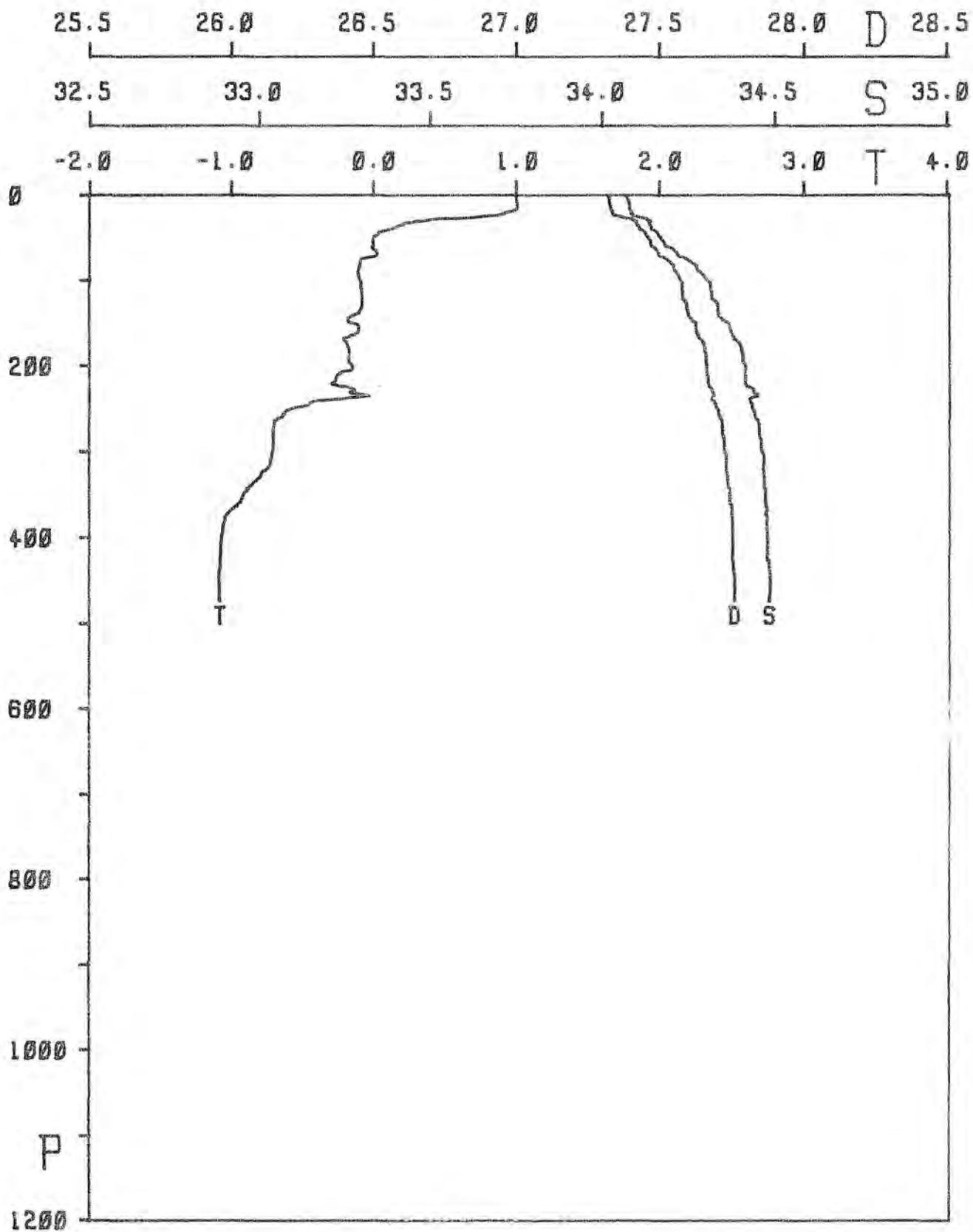
STATION 0242



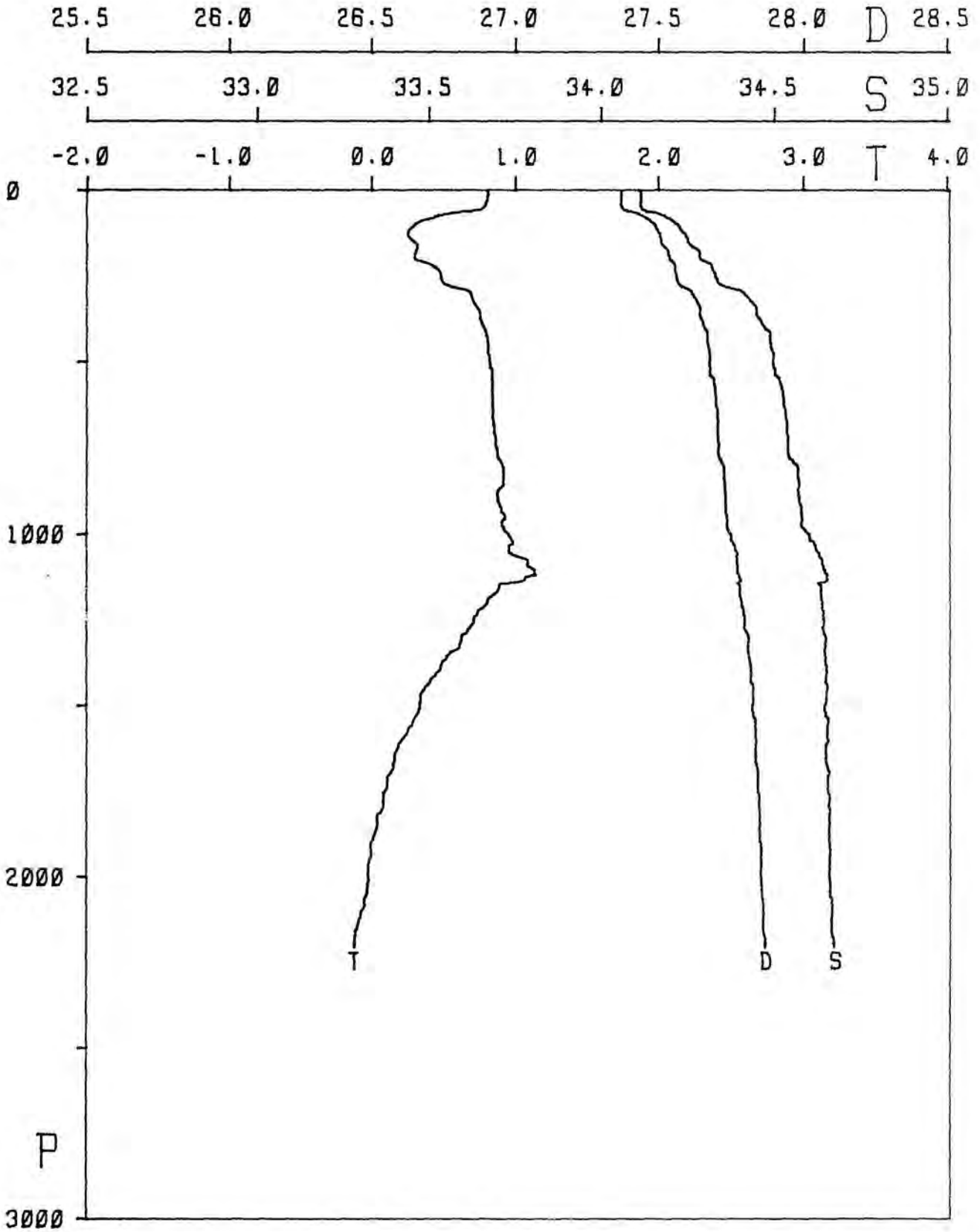
STATION 0243



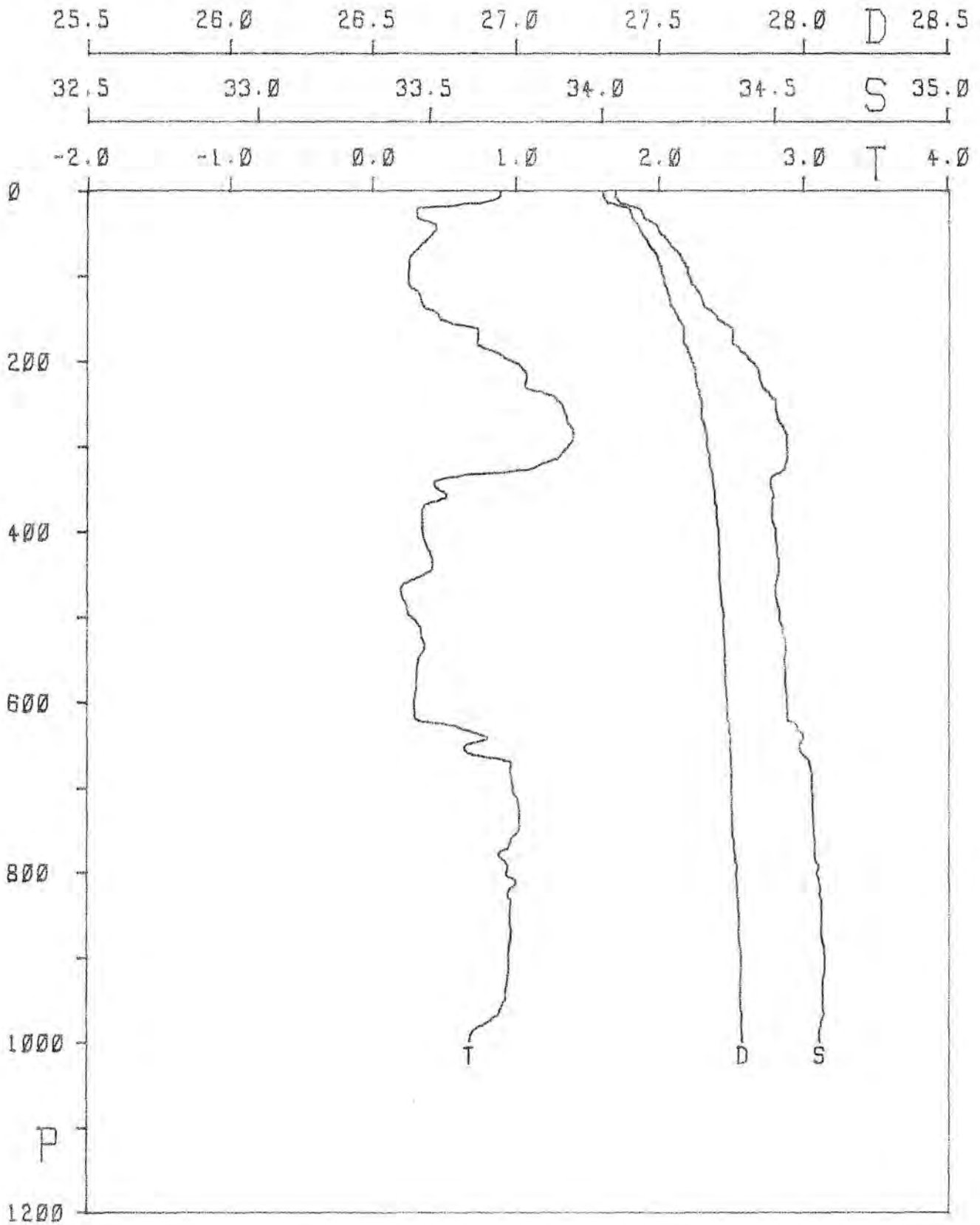
STATION 0244



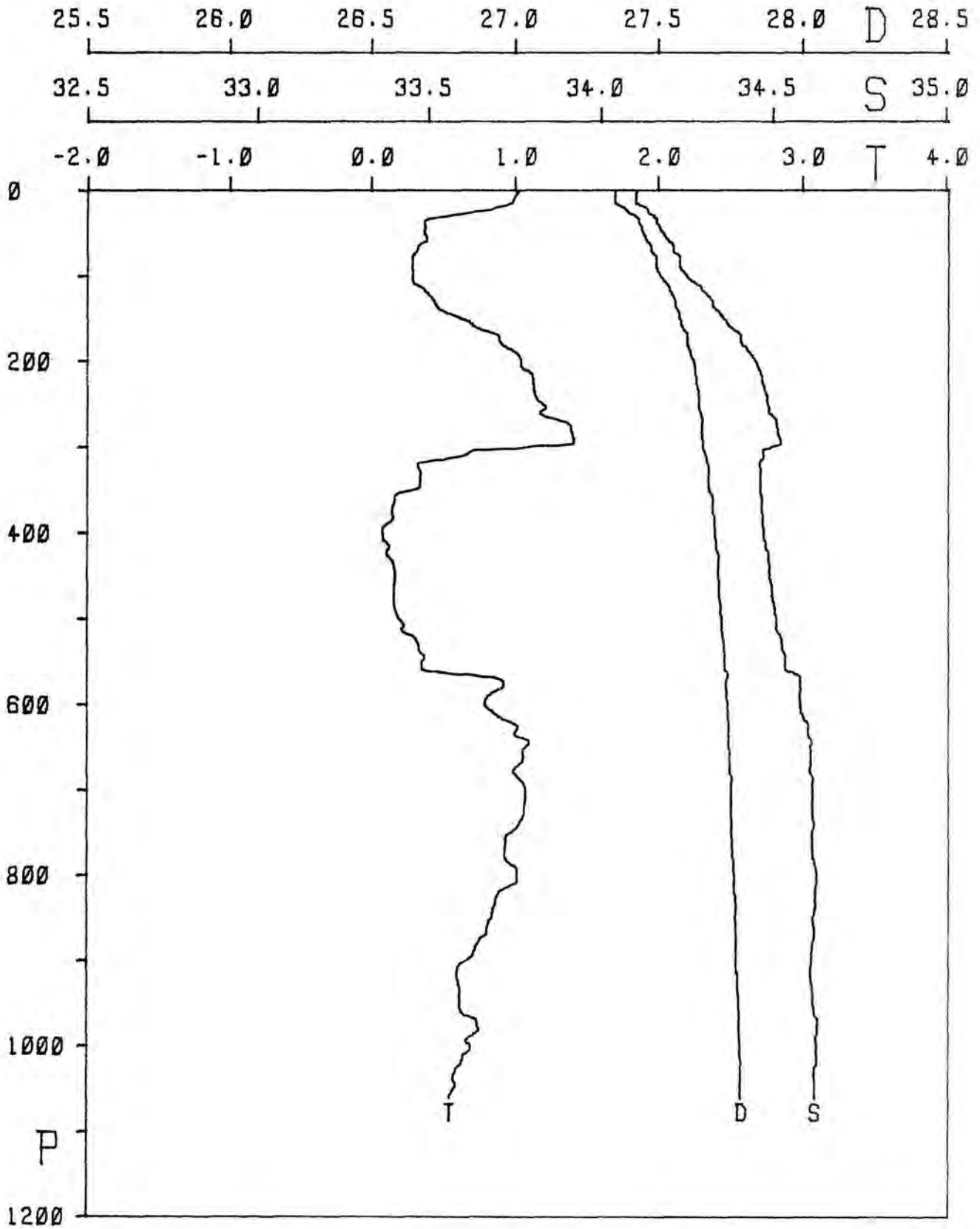
STATION 0249



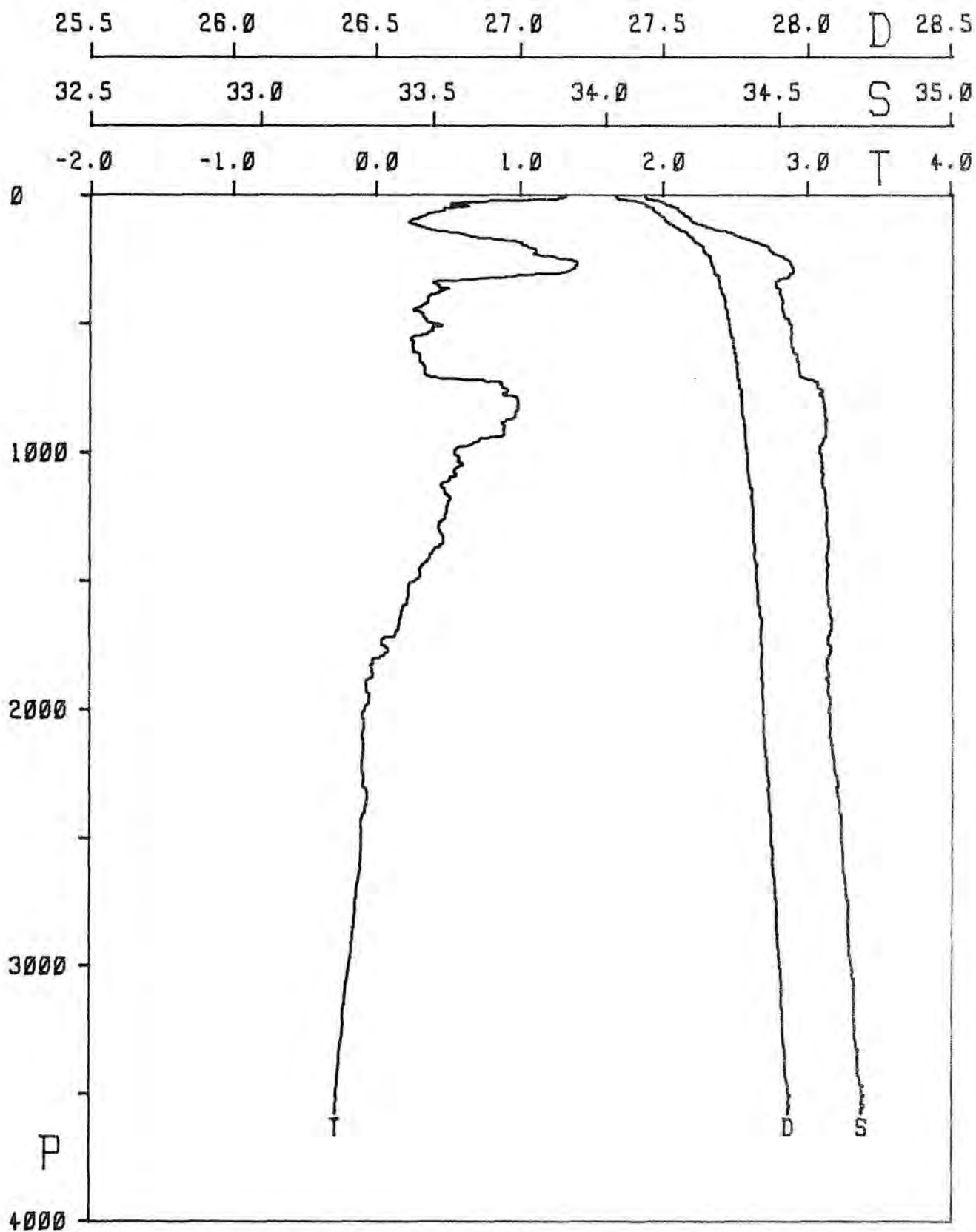
STATION 0254



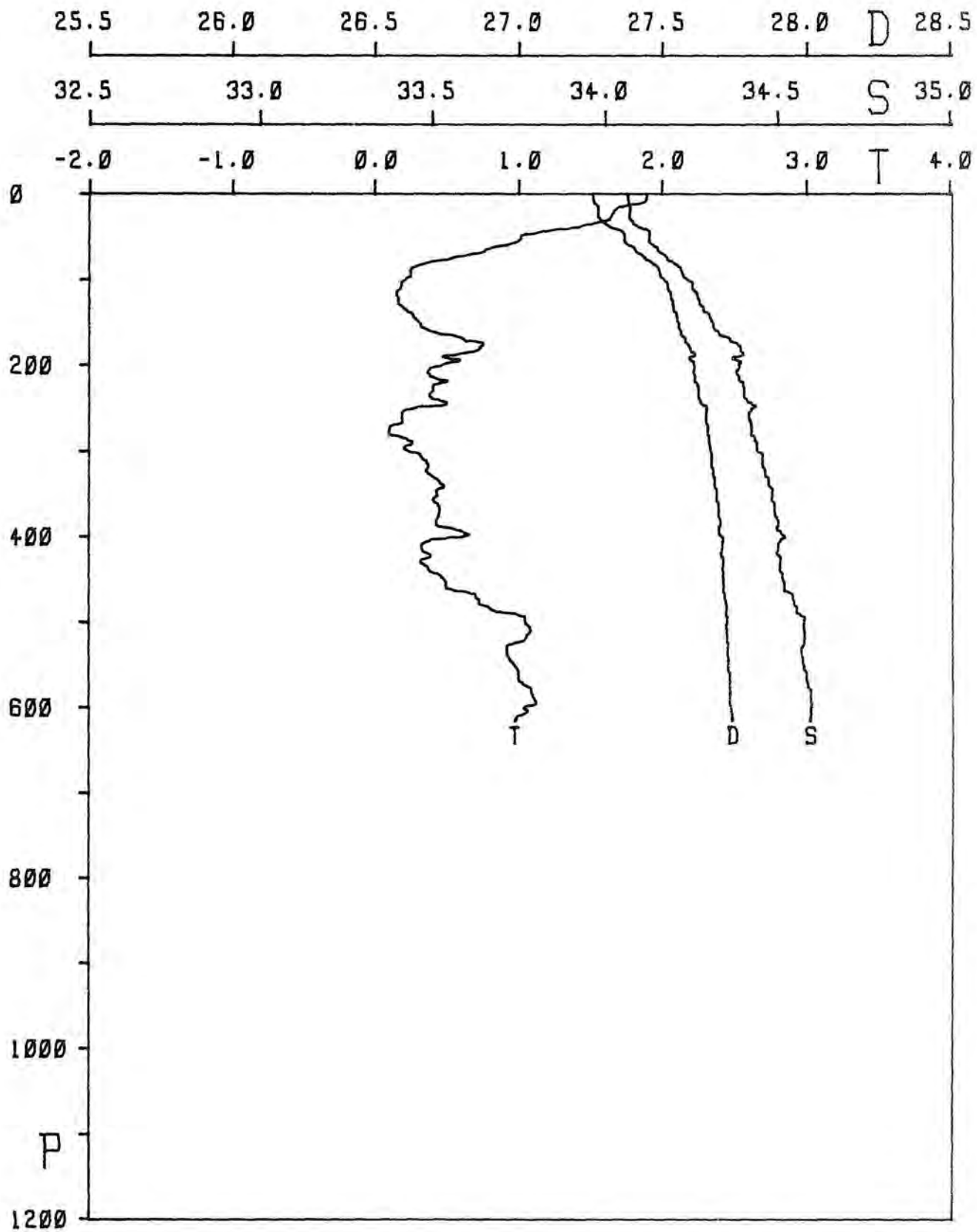
STATION Ø257



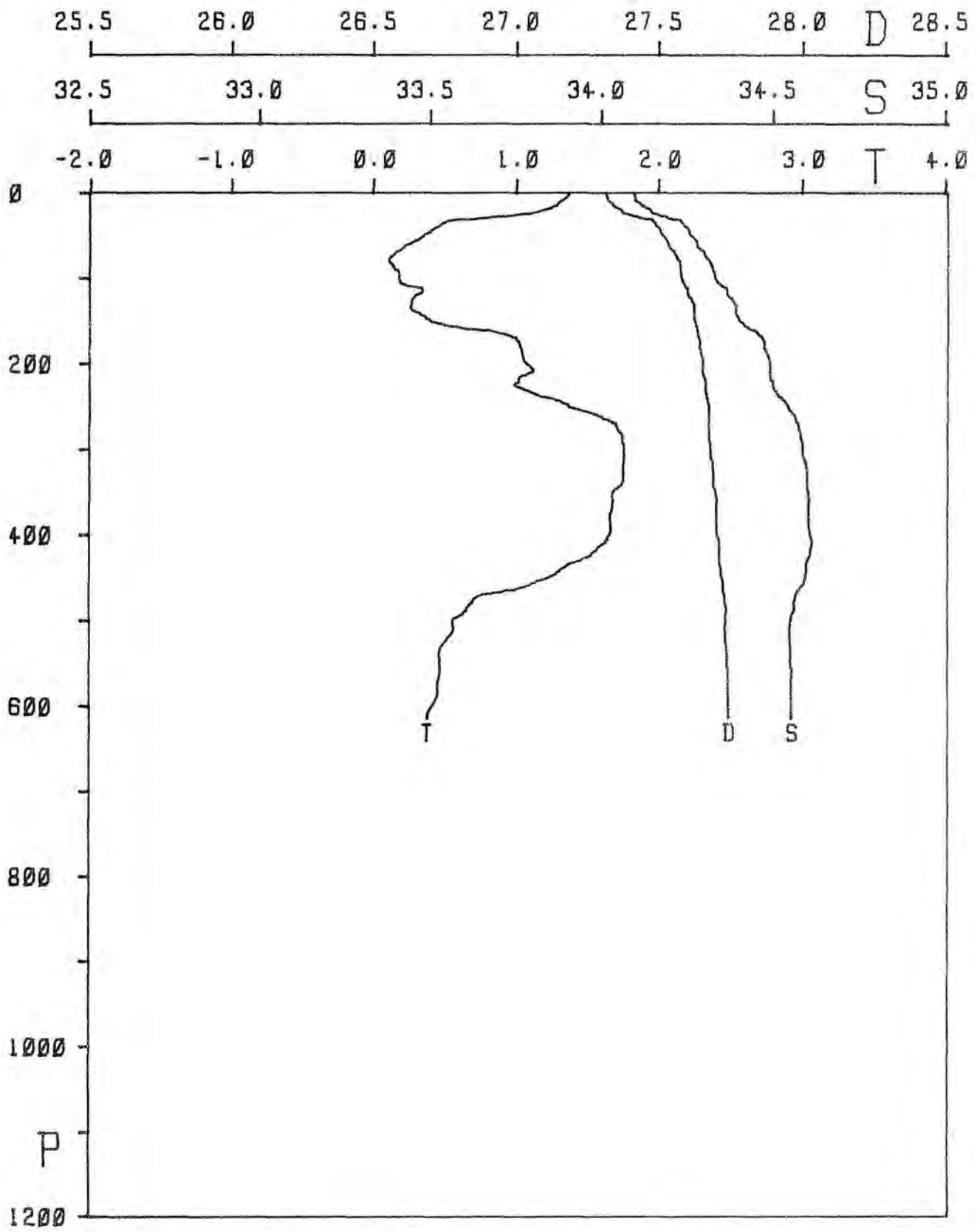
STATION 0258



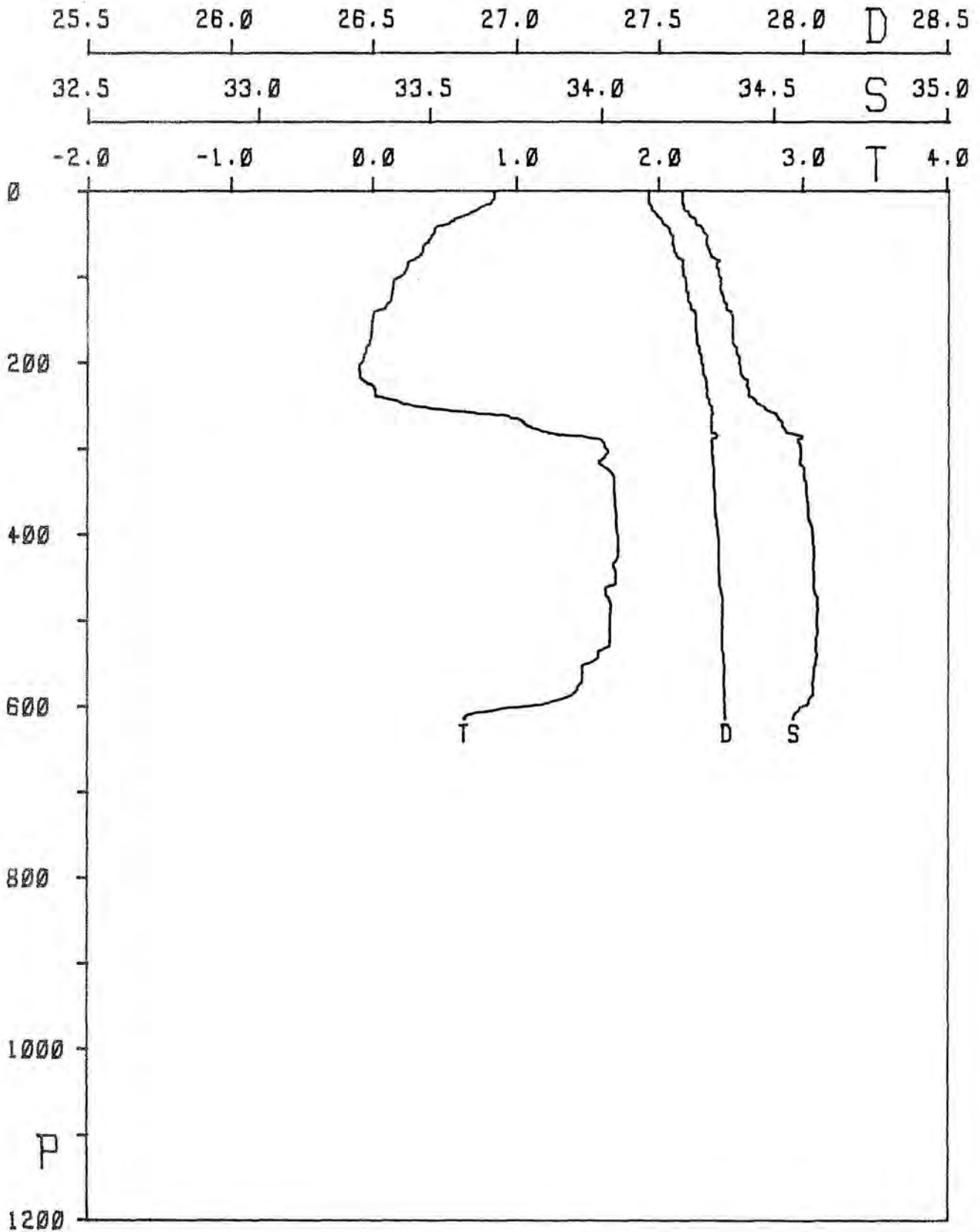
STATION 0264



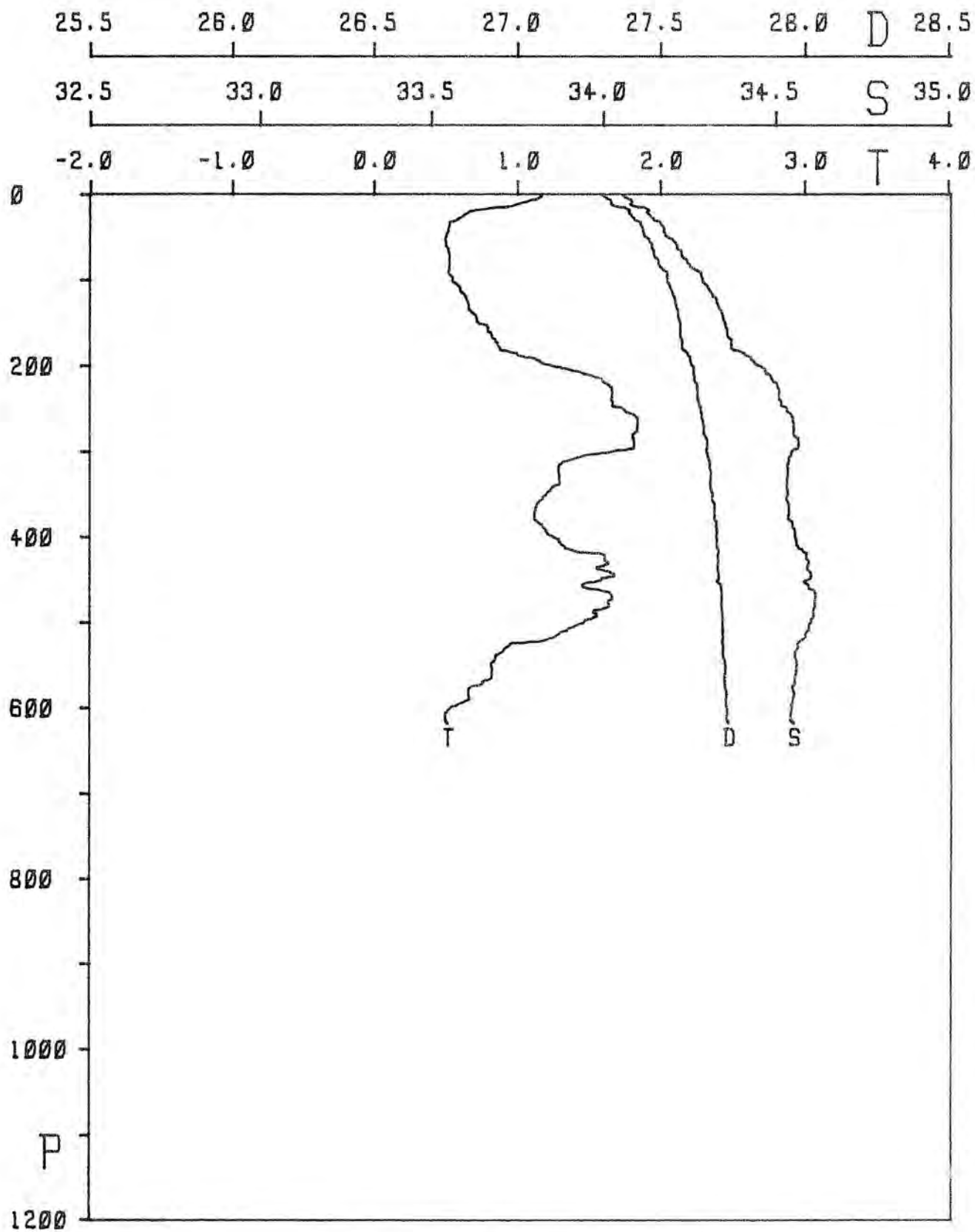
STATION 0266



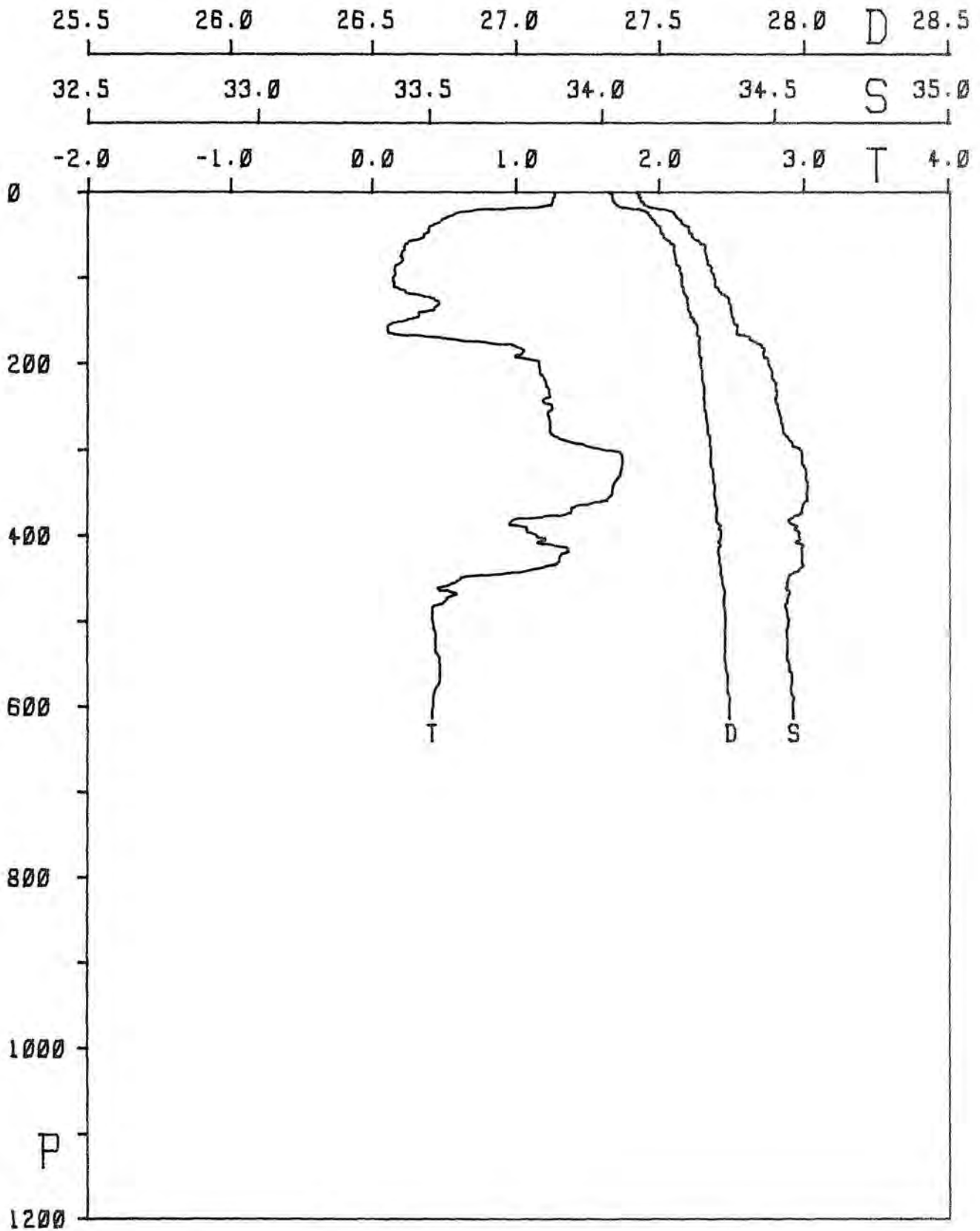
STATION 0267



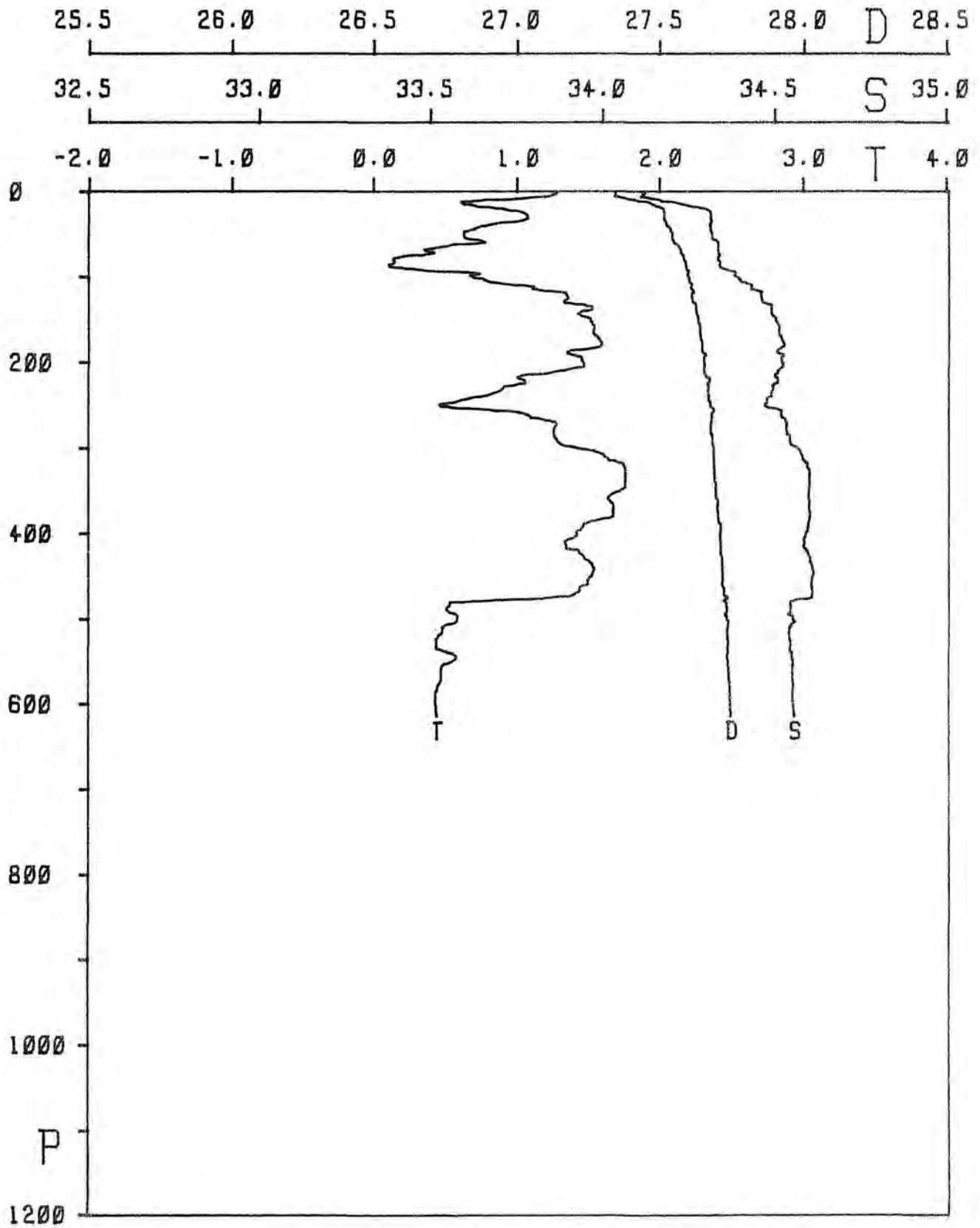
STATION 0268



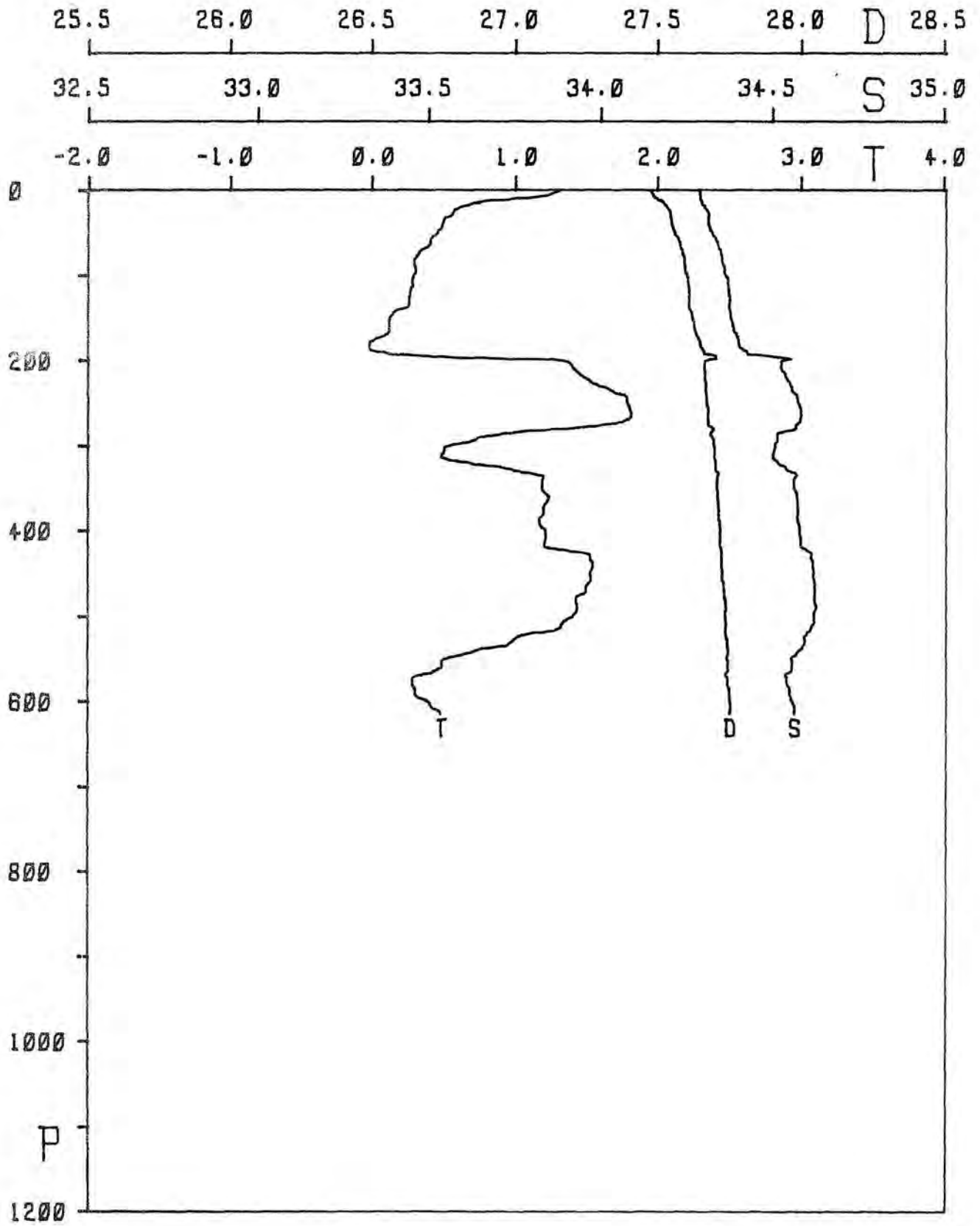
STATION Ø272



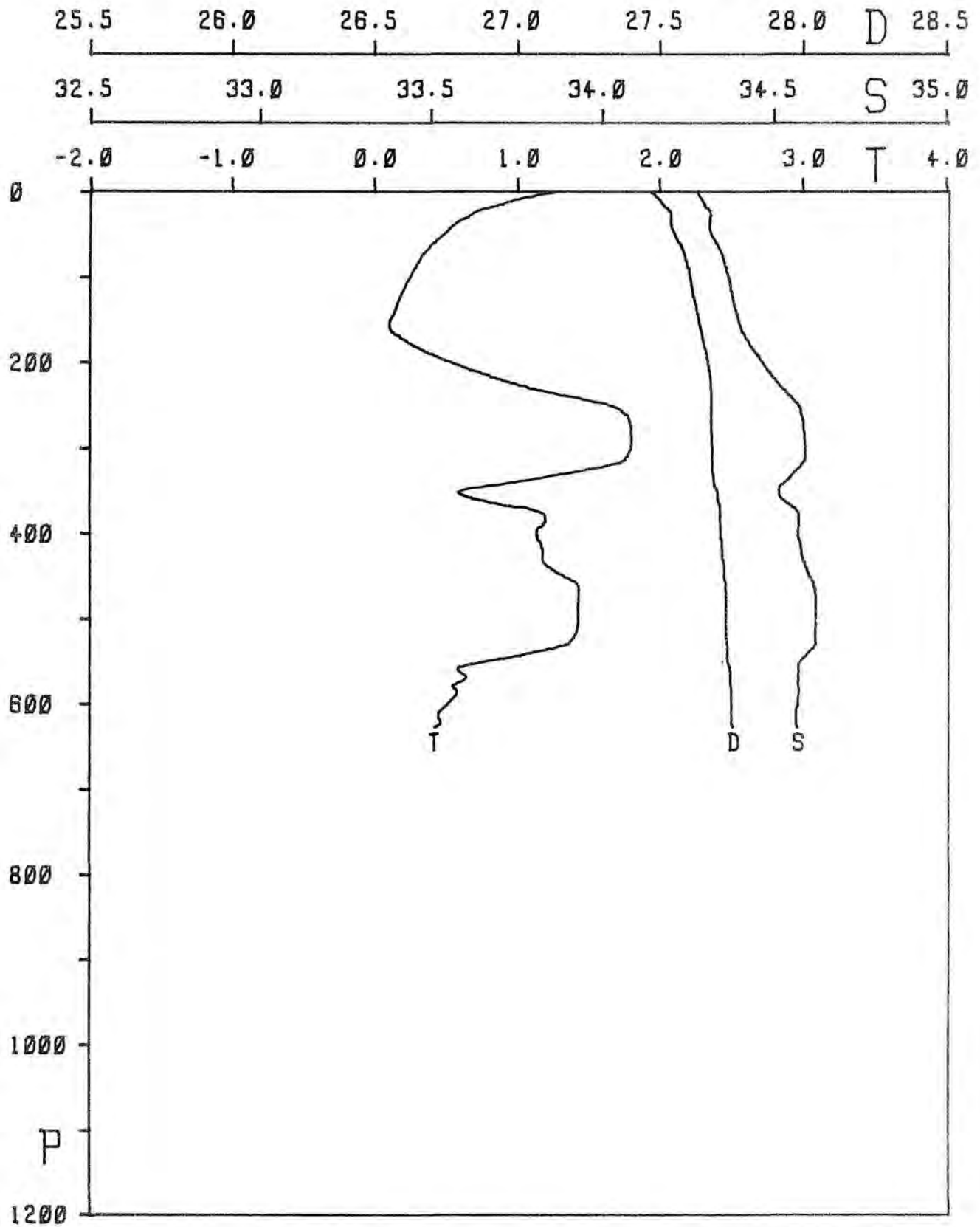
STATION 0273



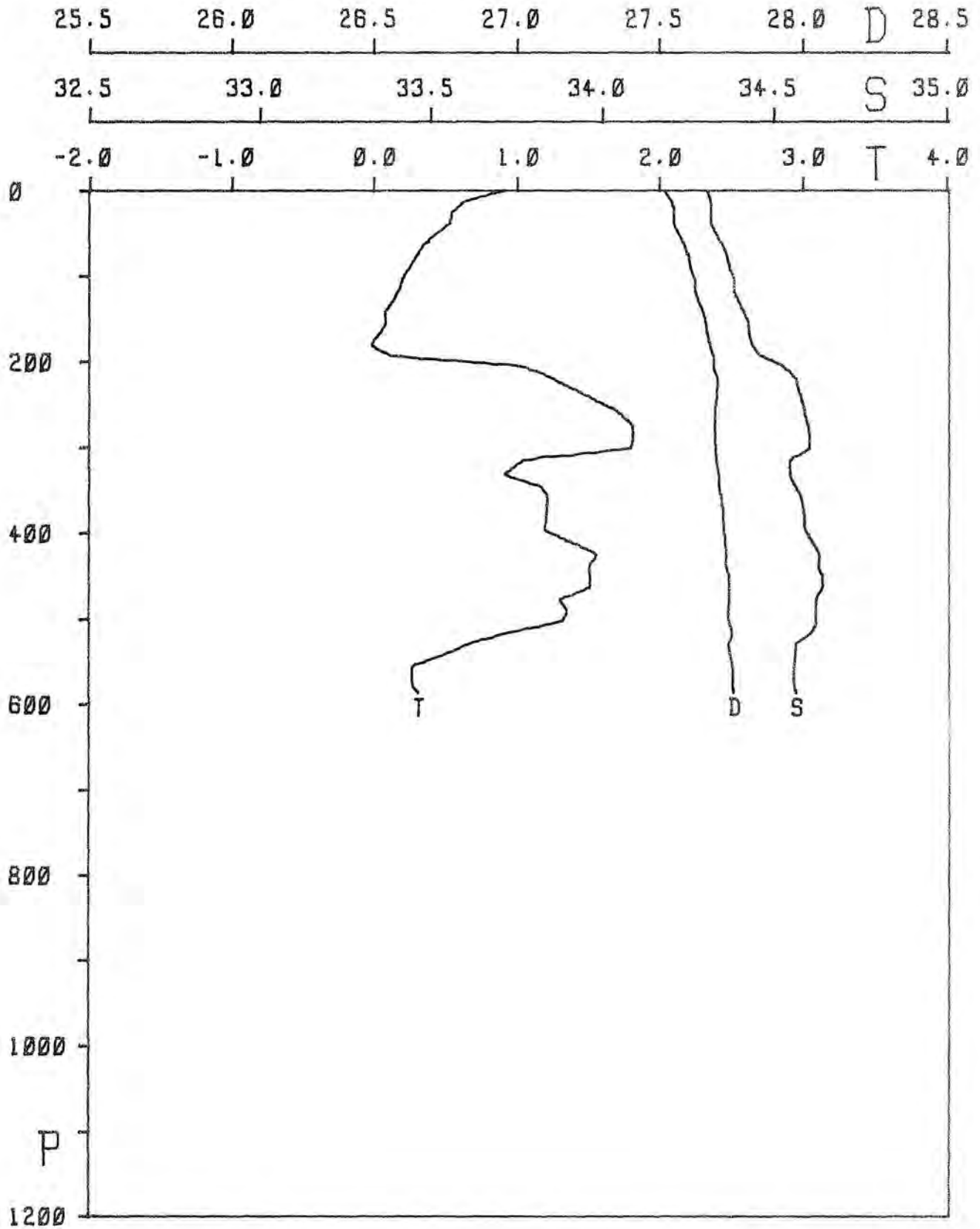
STATION 0276



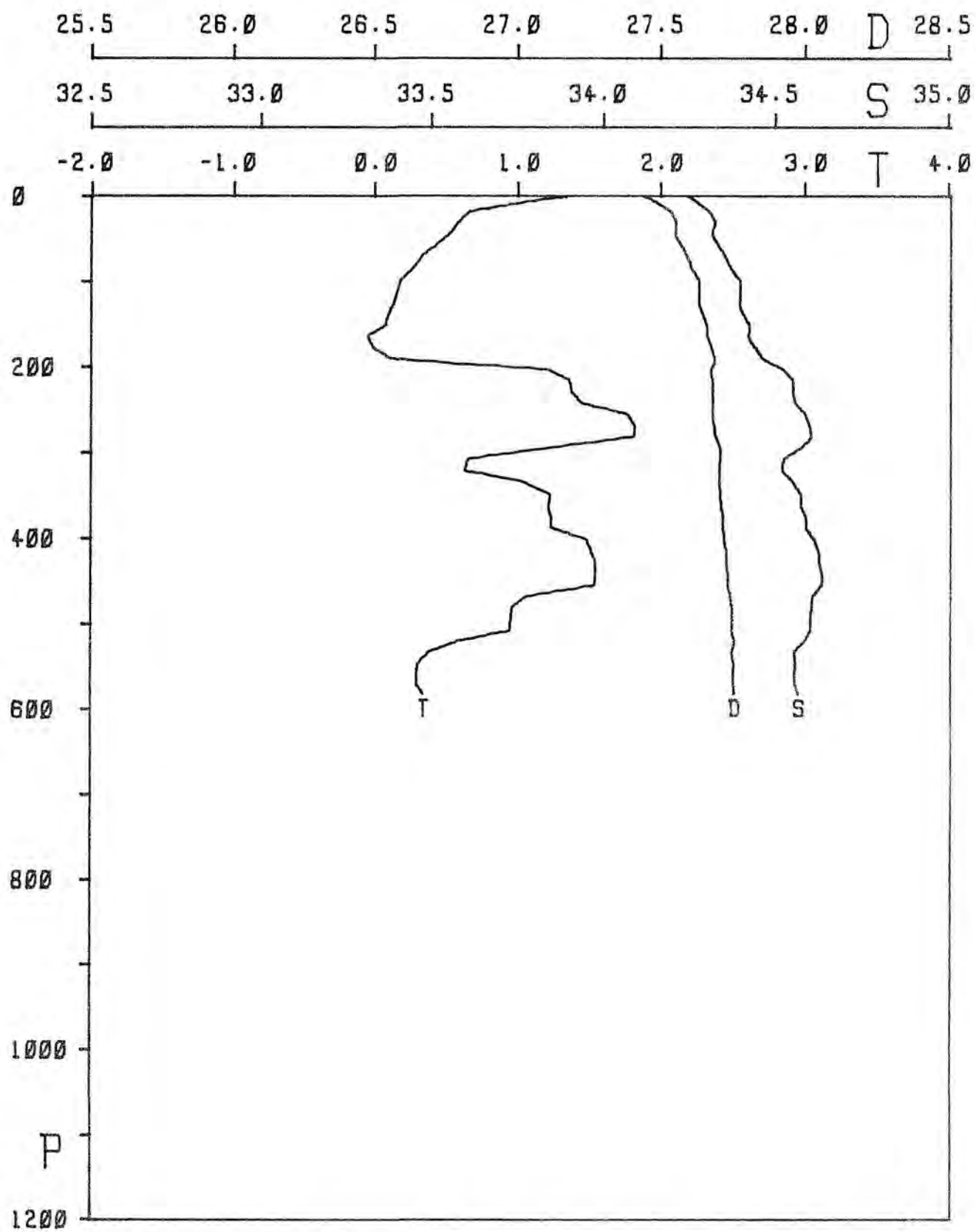
STATION 0278 /1



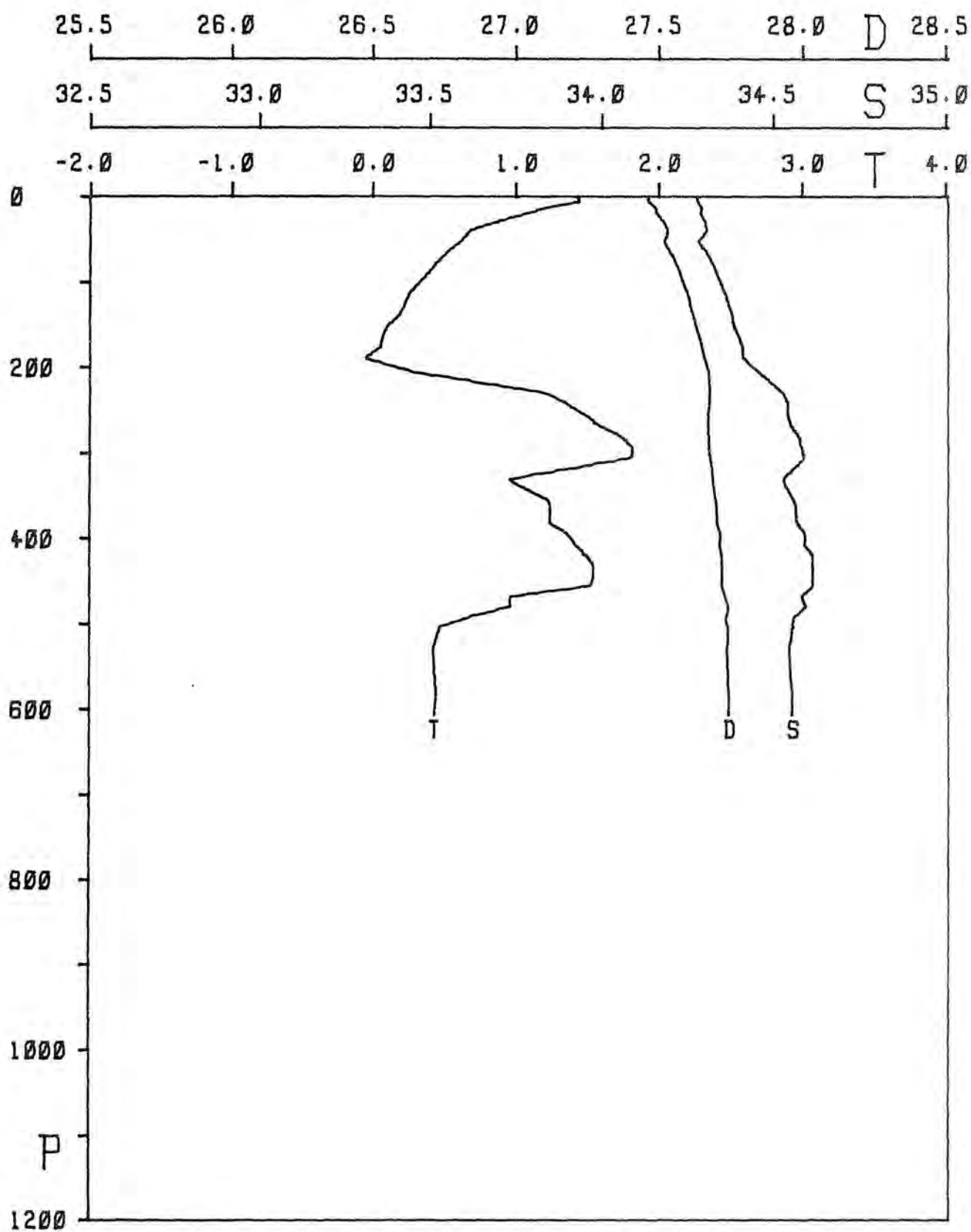
STATION 0278 1/2



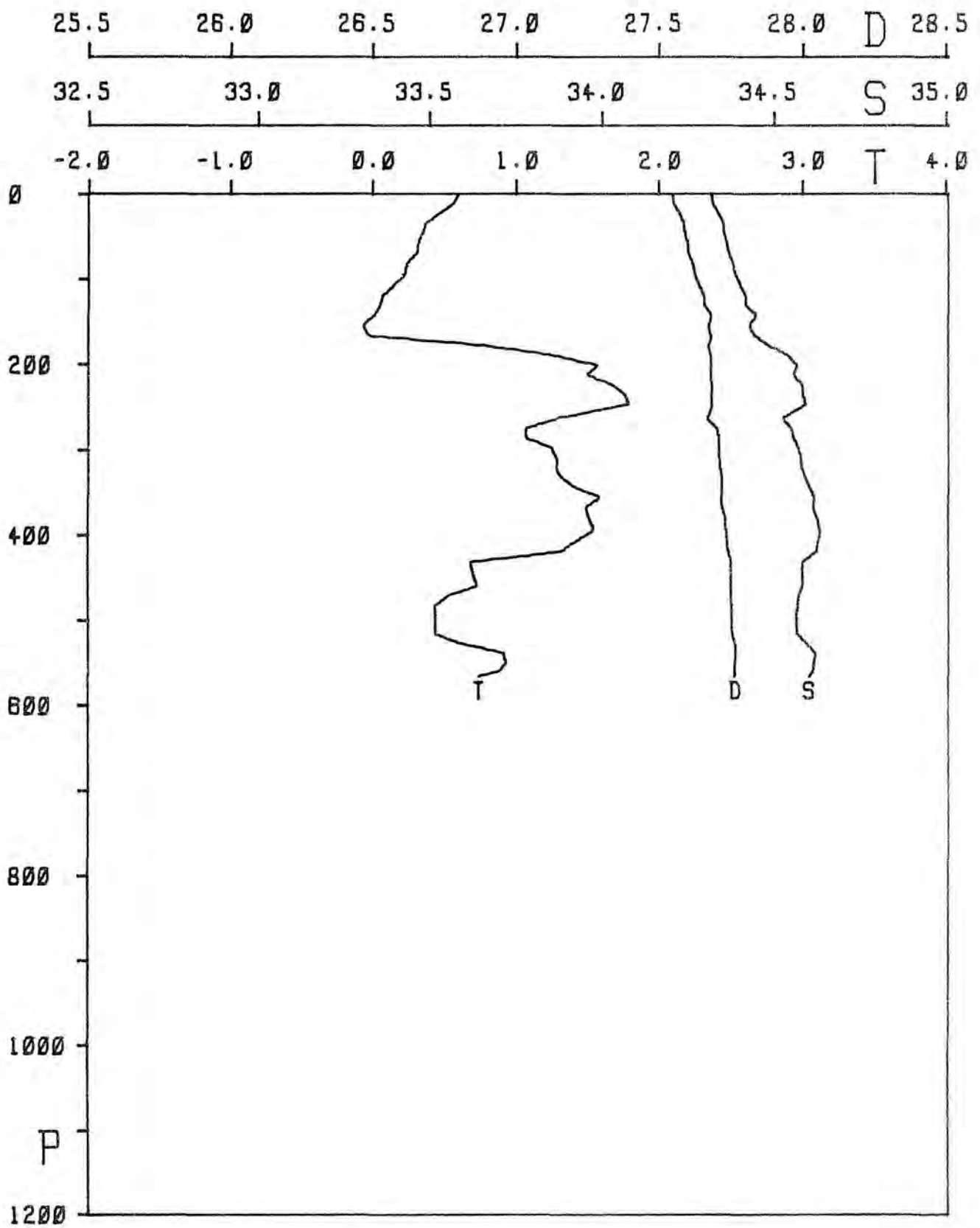
STATION 0278/3



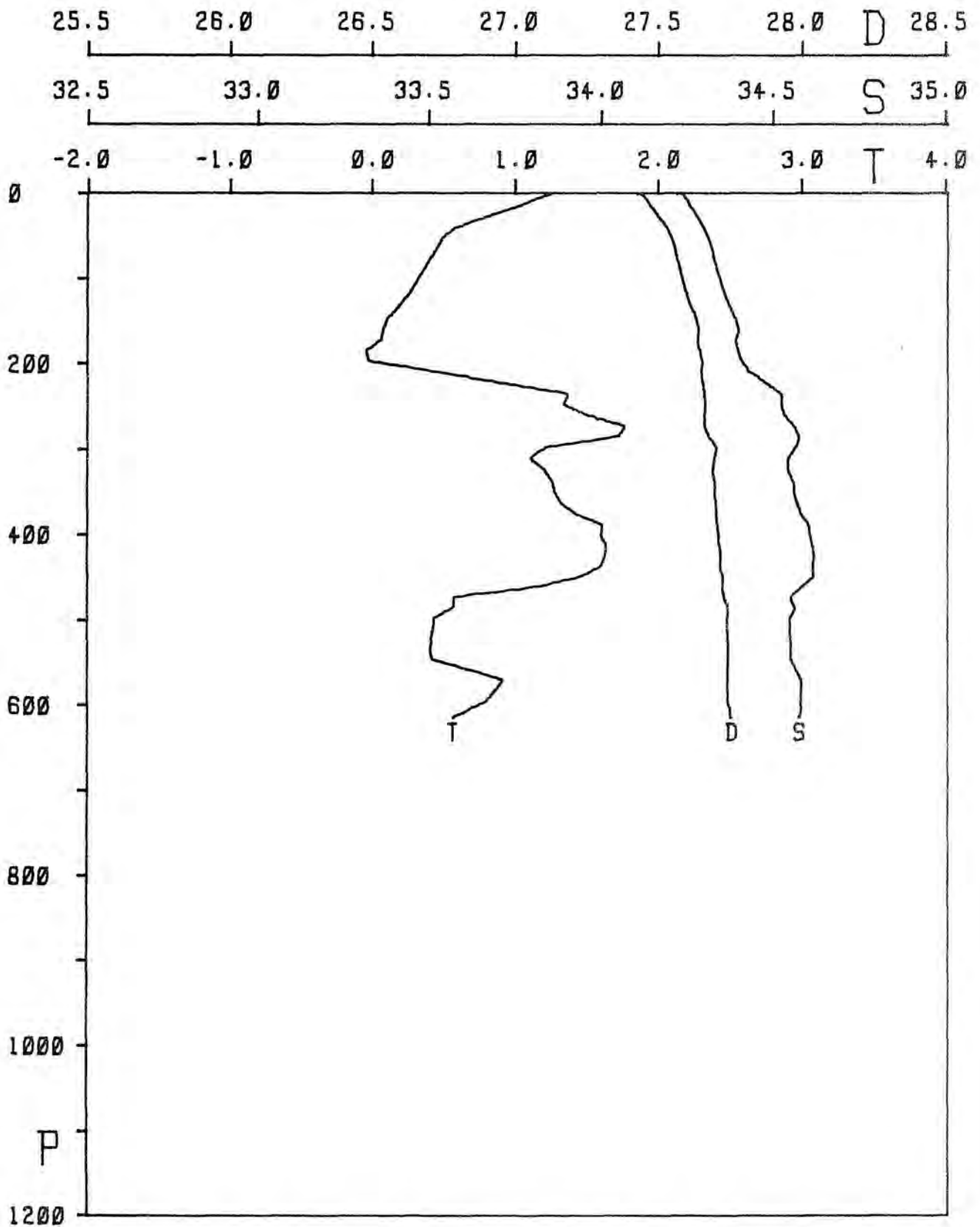
STATION Ø278 /4



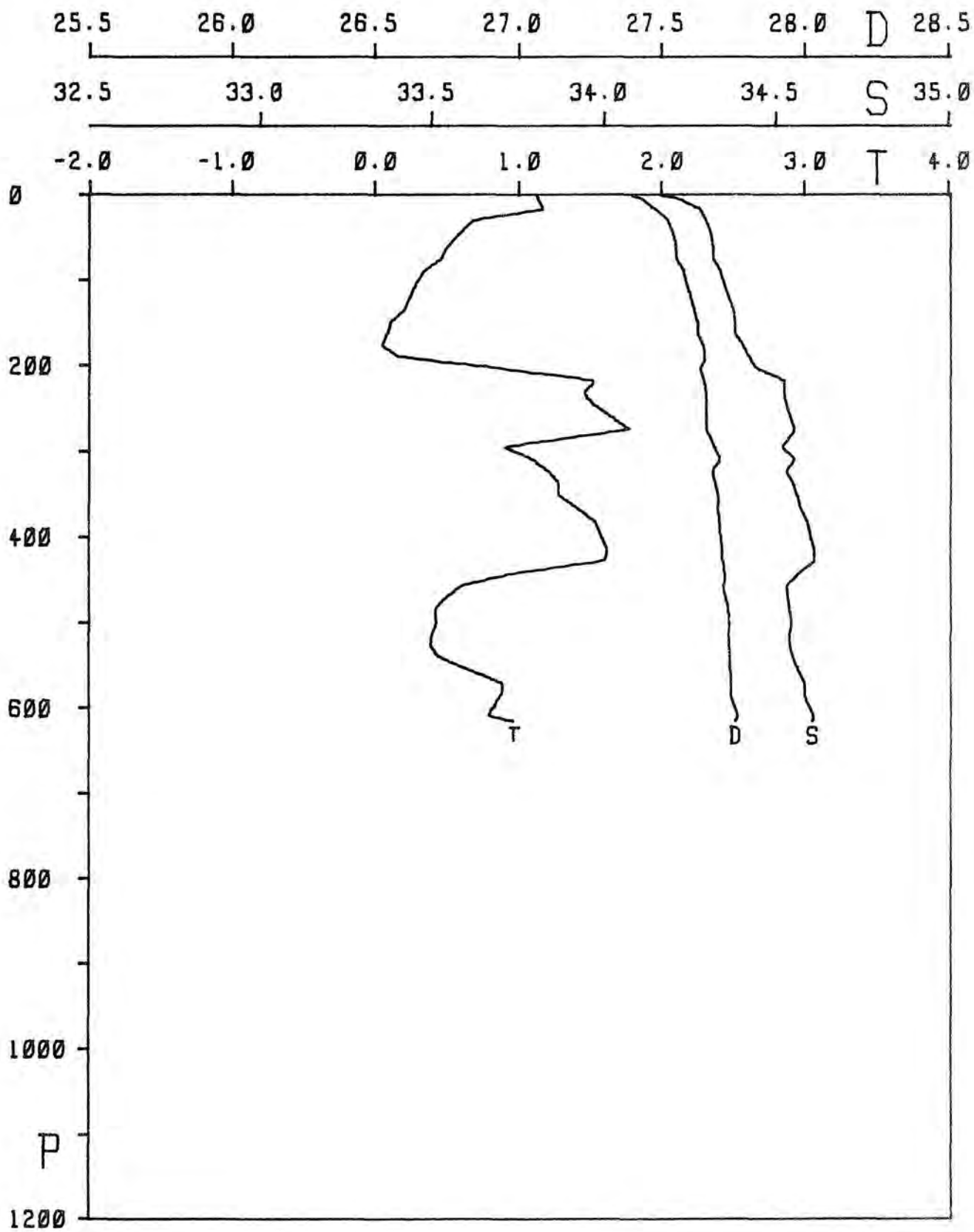
STATION 0278 /5



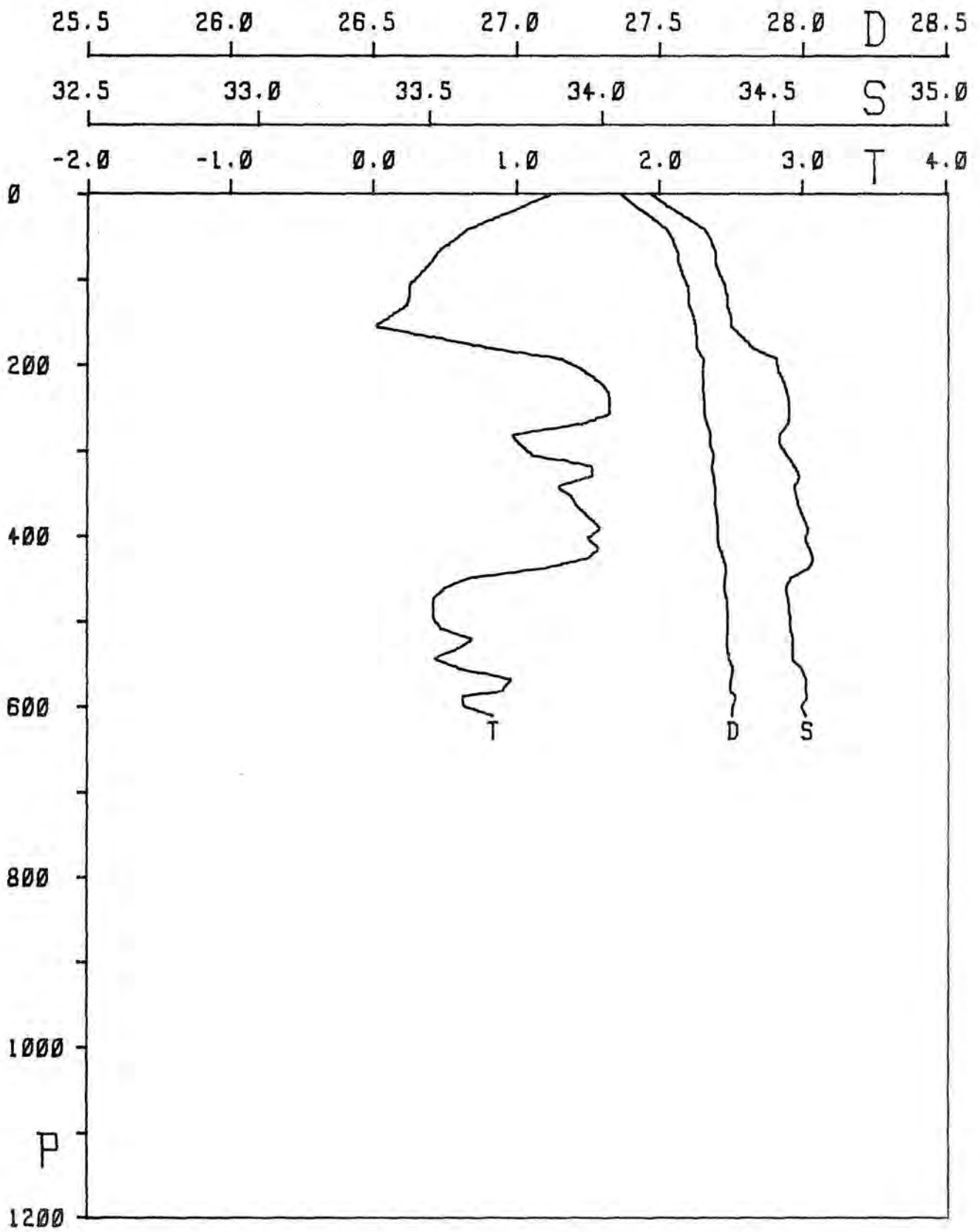
STATION 0278/6



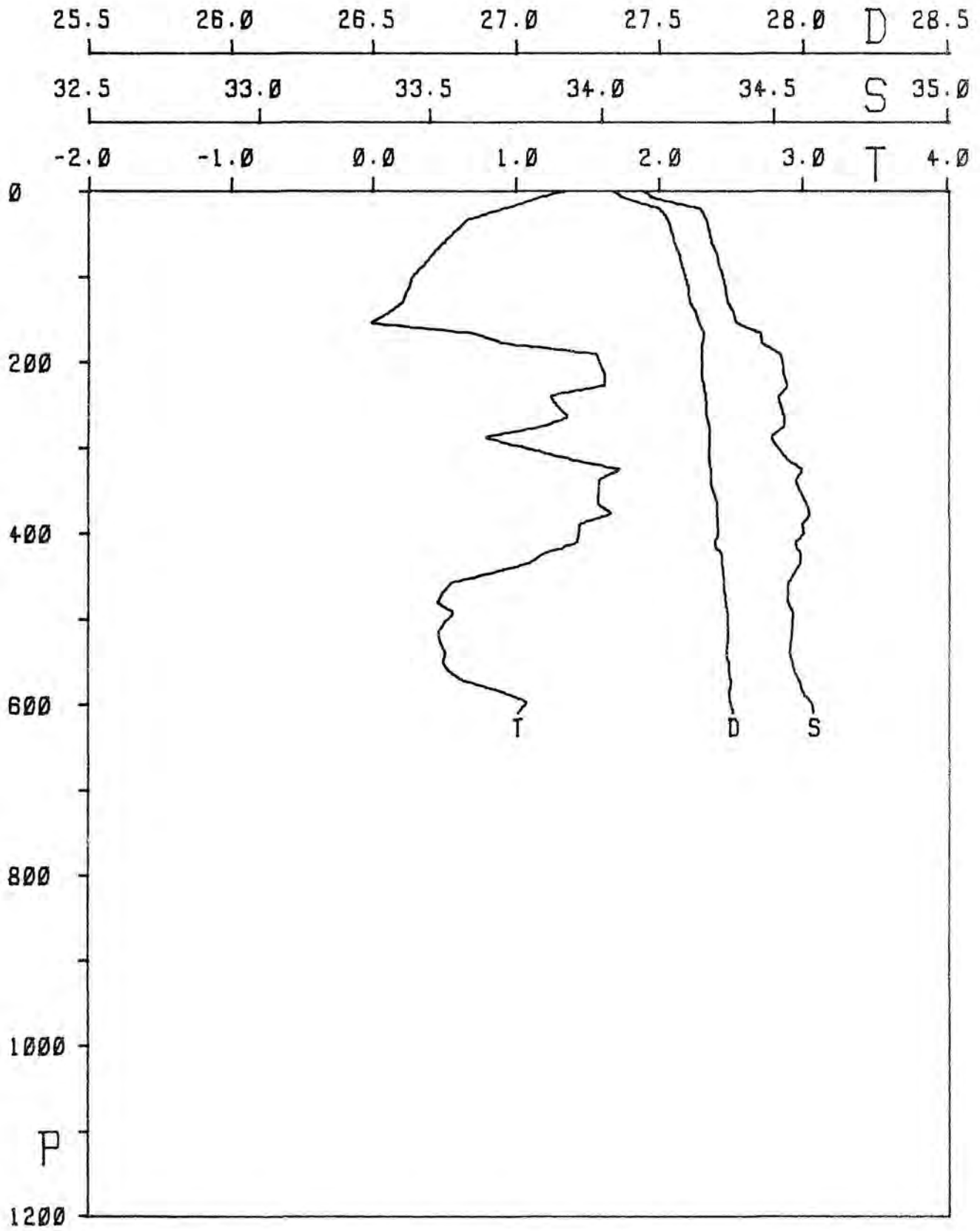
STATION 0278/7



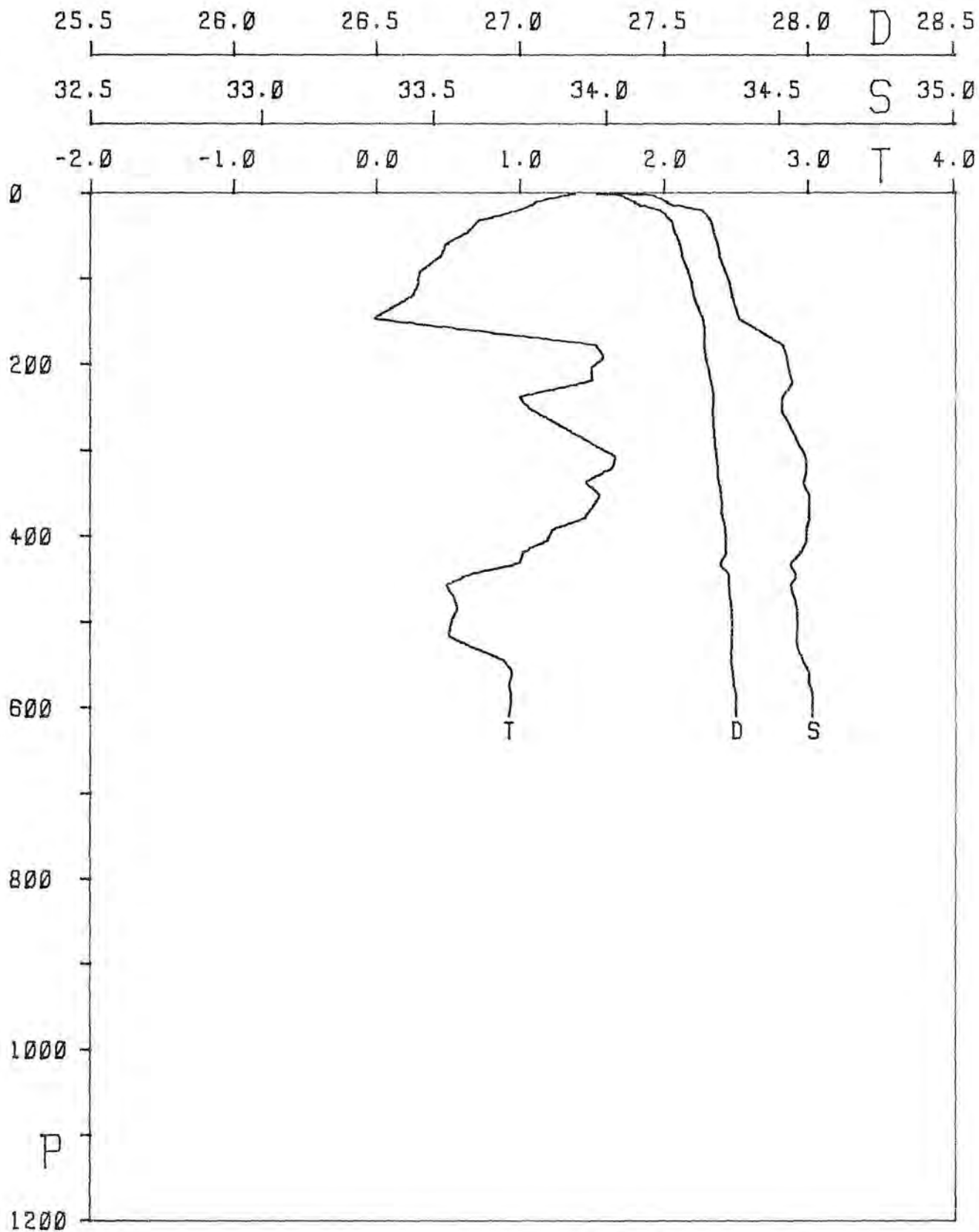
STATION 0278 /8



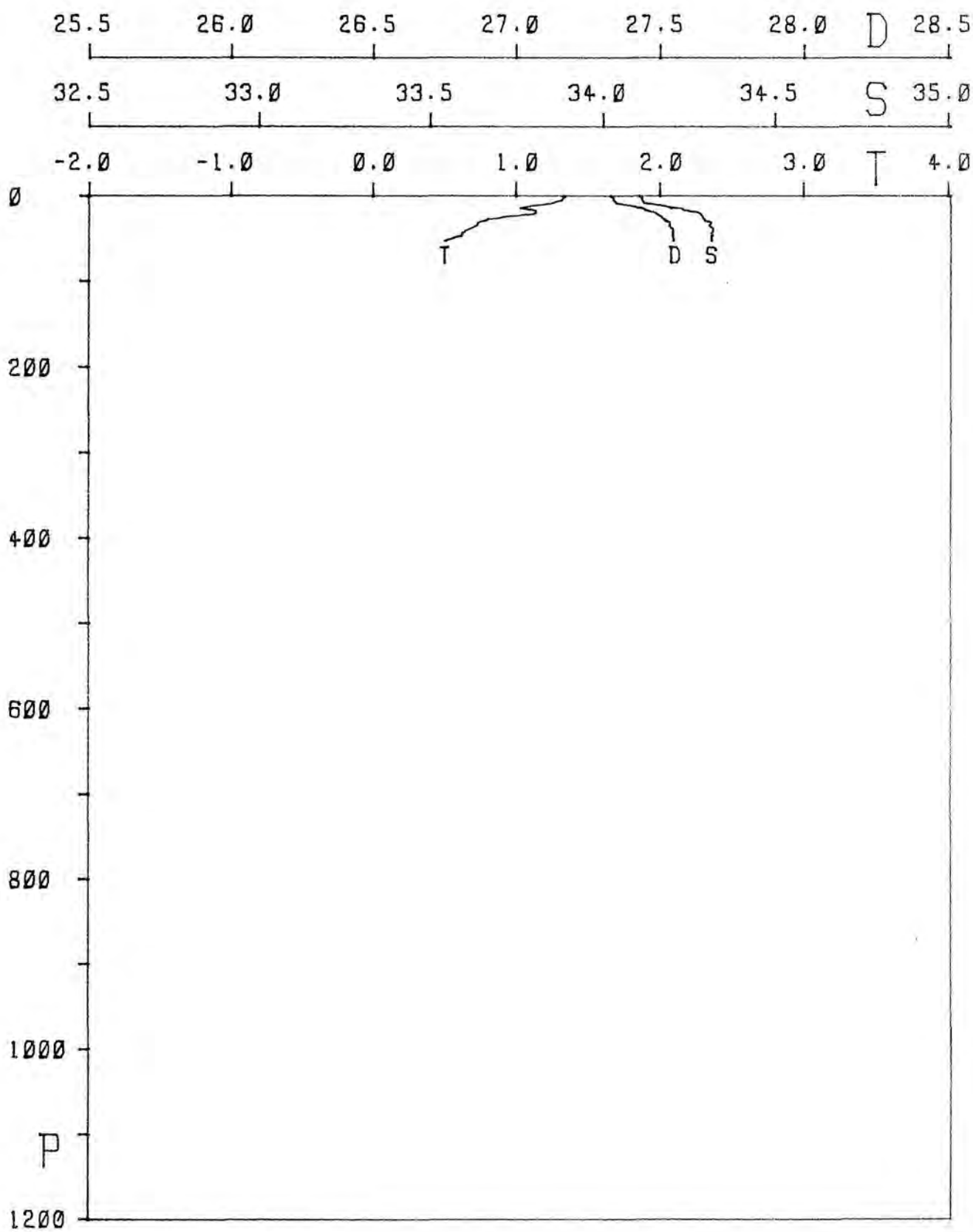
STATION 0278/9



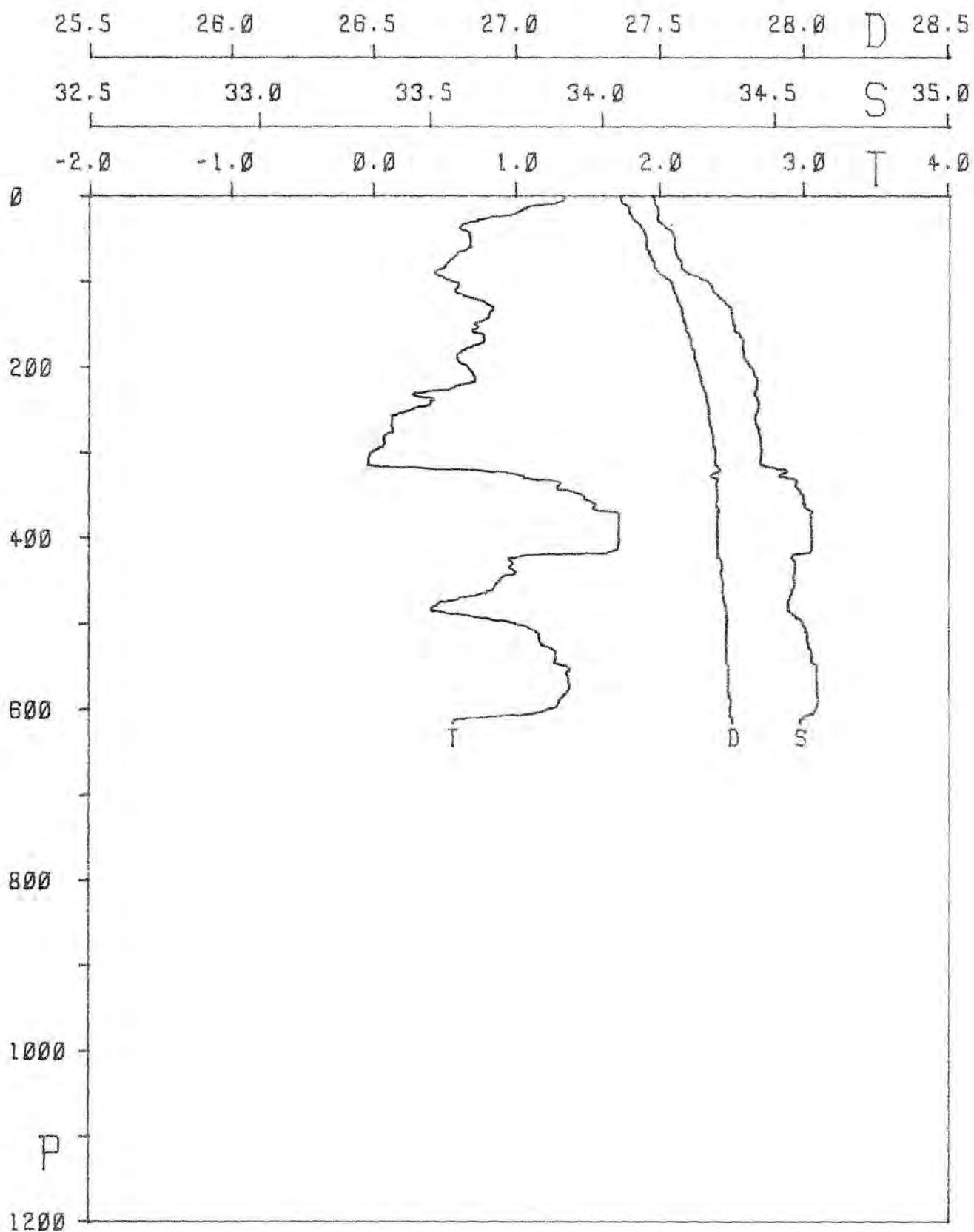
STATION Ø278_{/10}



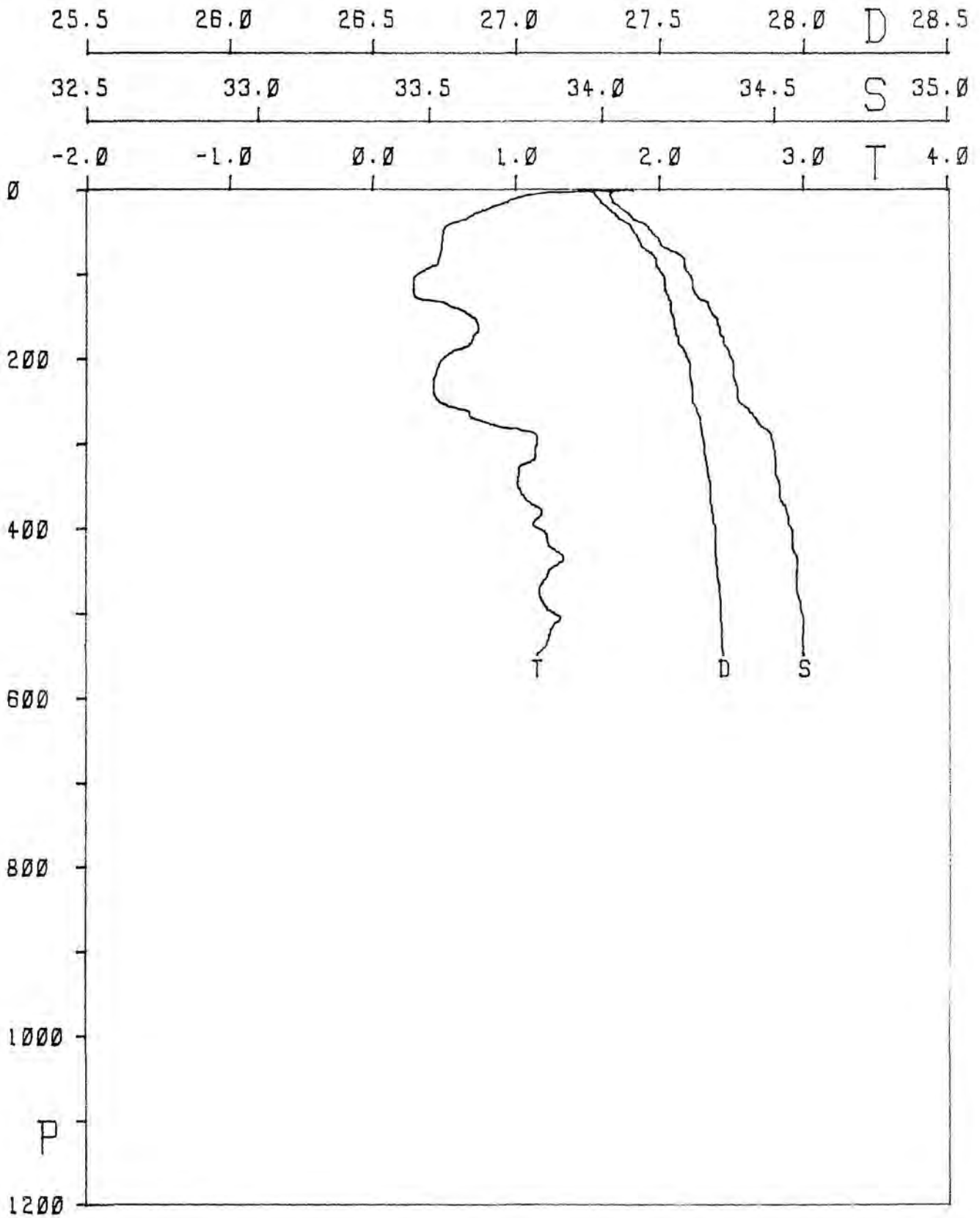
STATION 0278₁₁



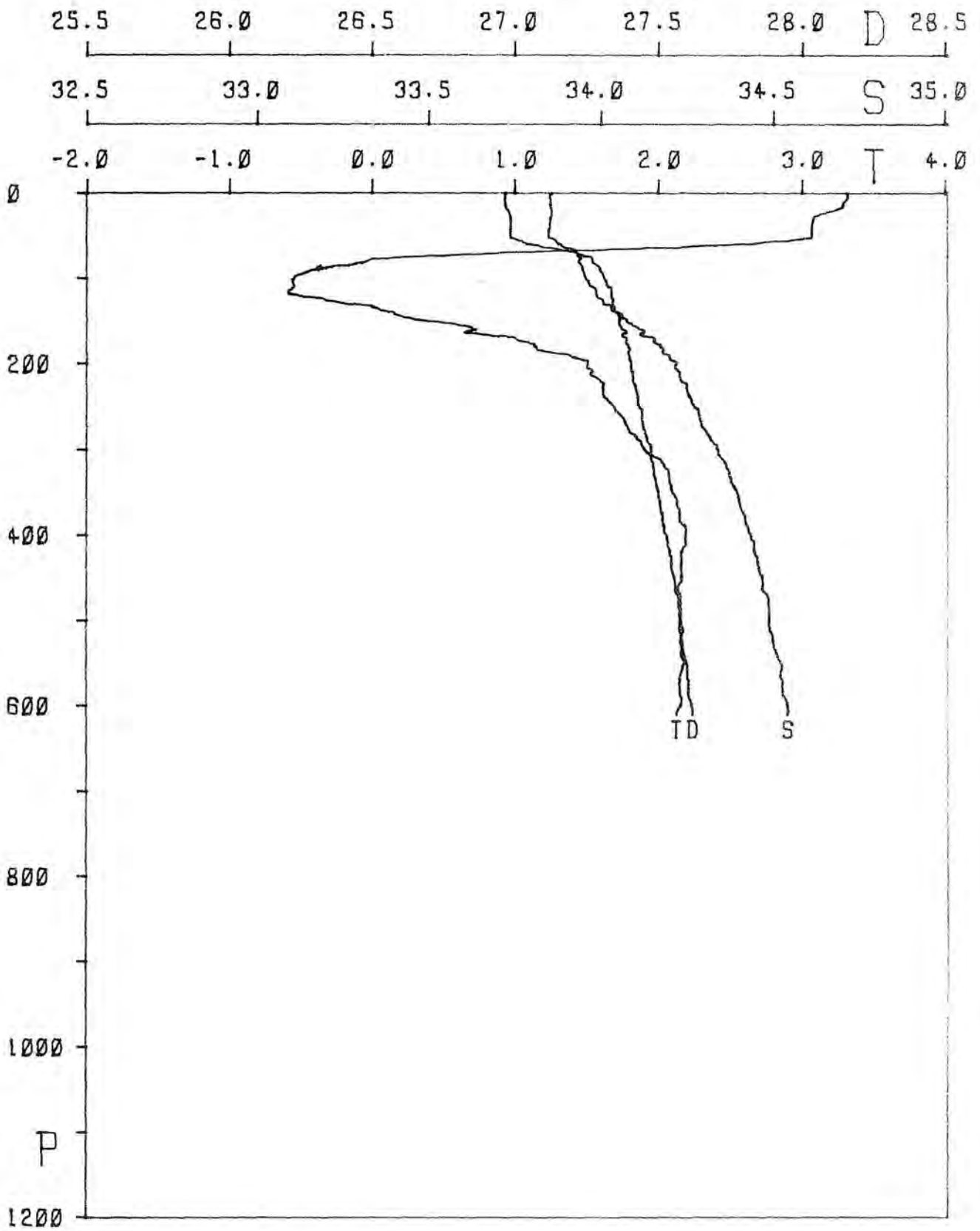
STATION Ø283



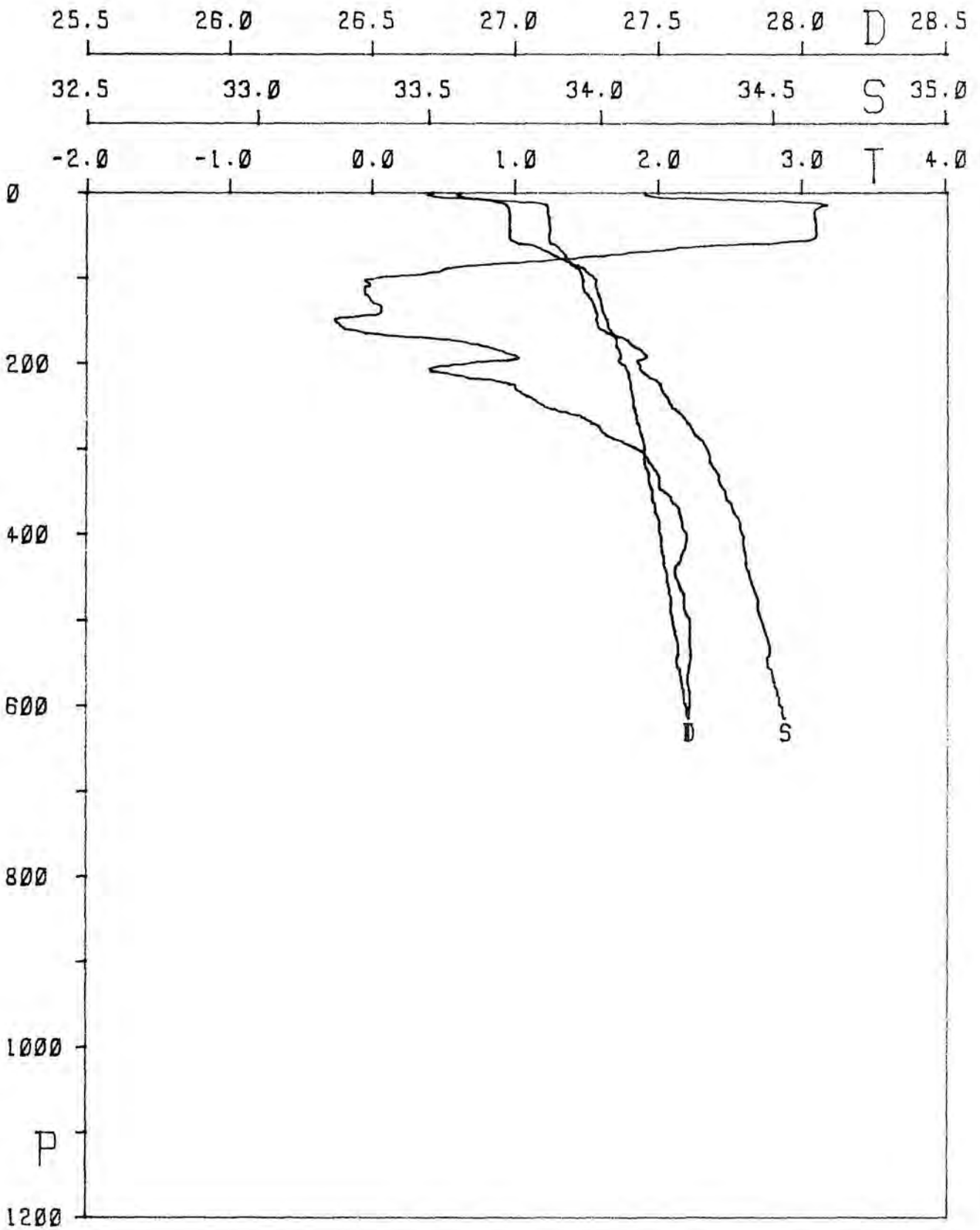
STATION 0287



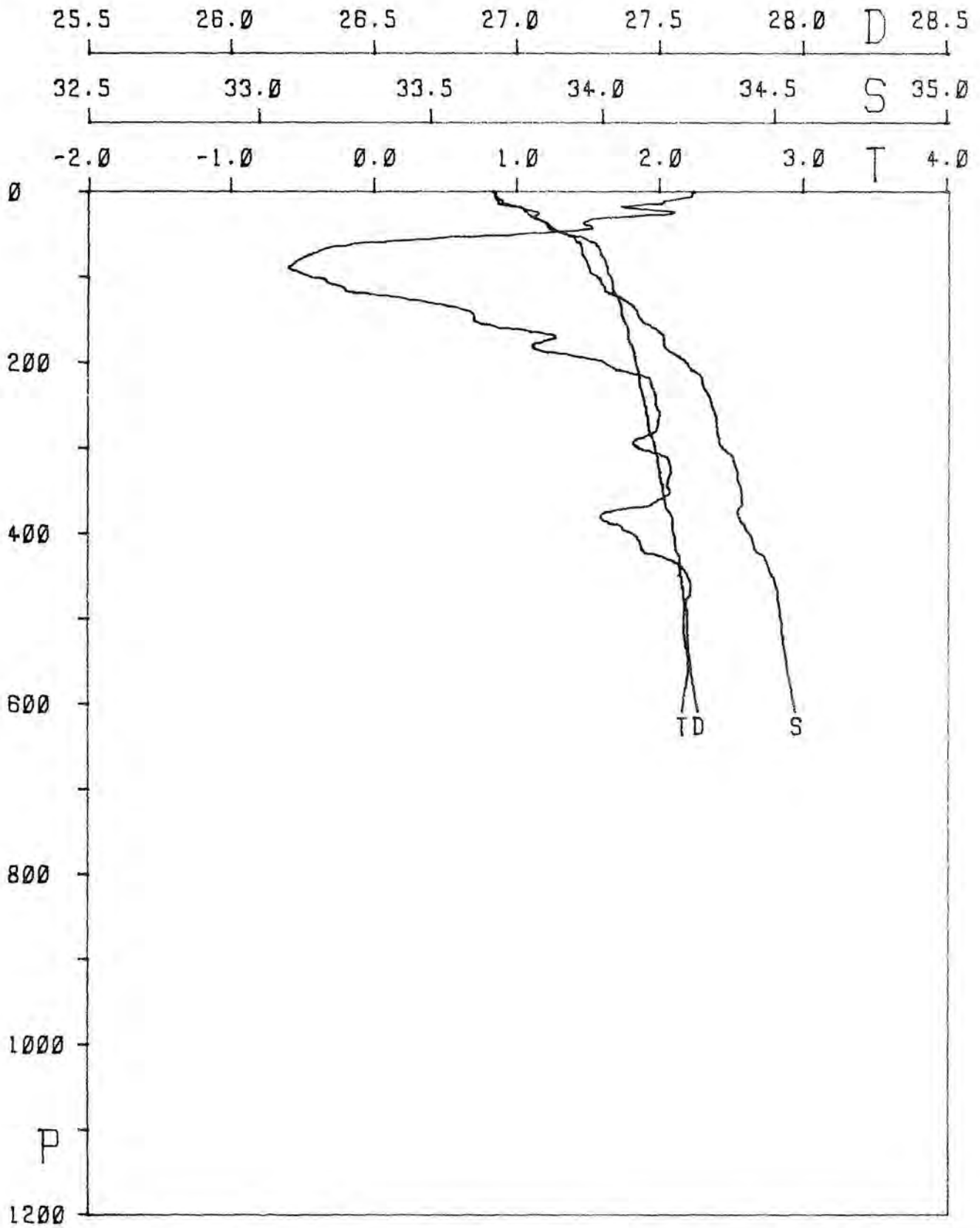
STATION 0290



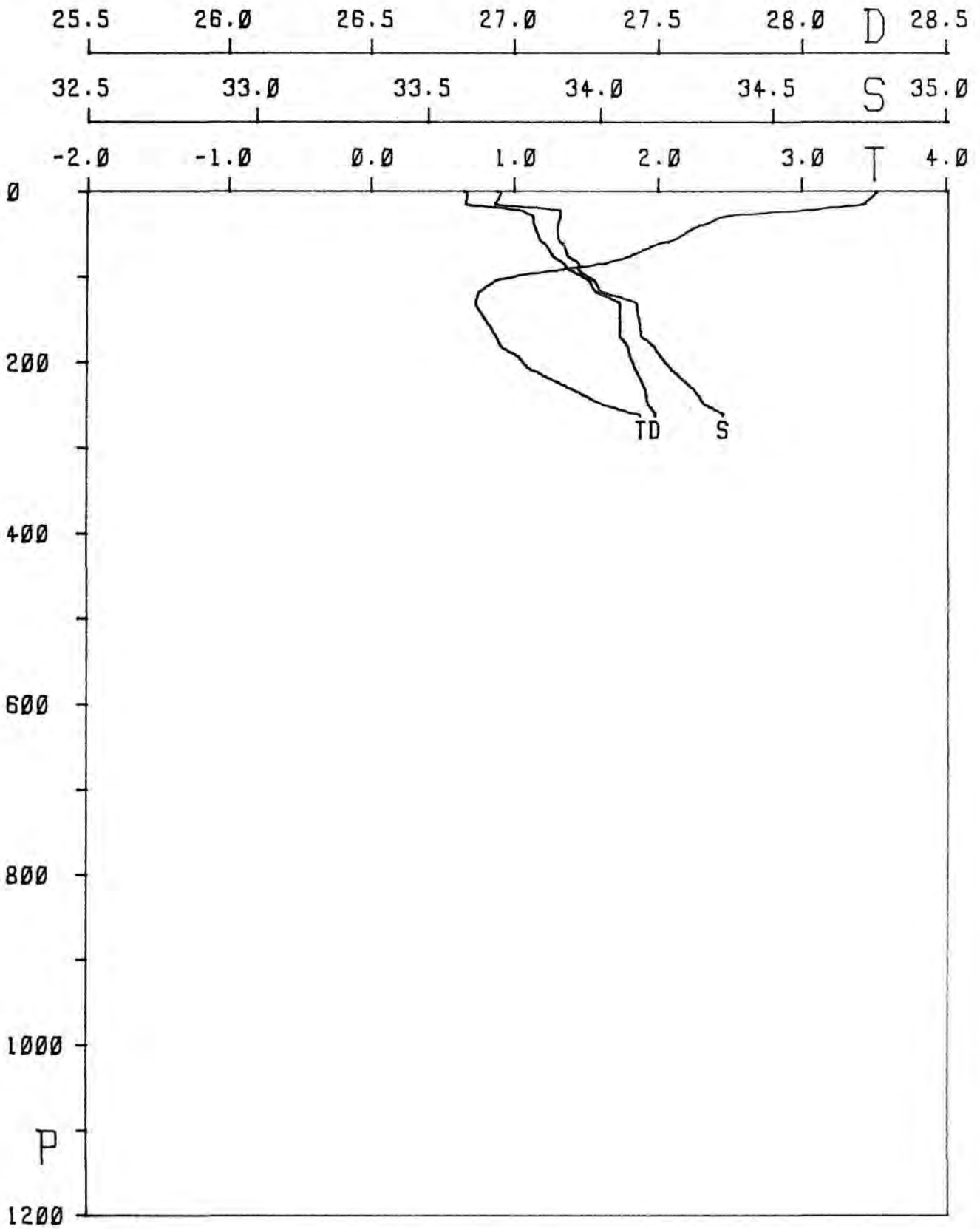
STATION 0291



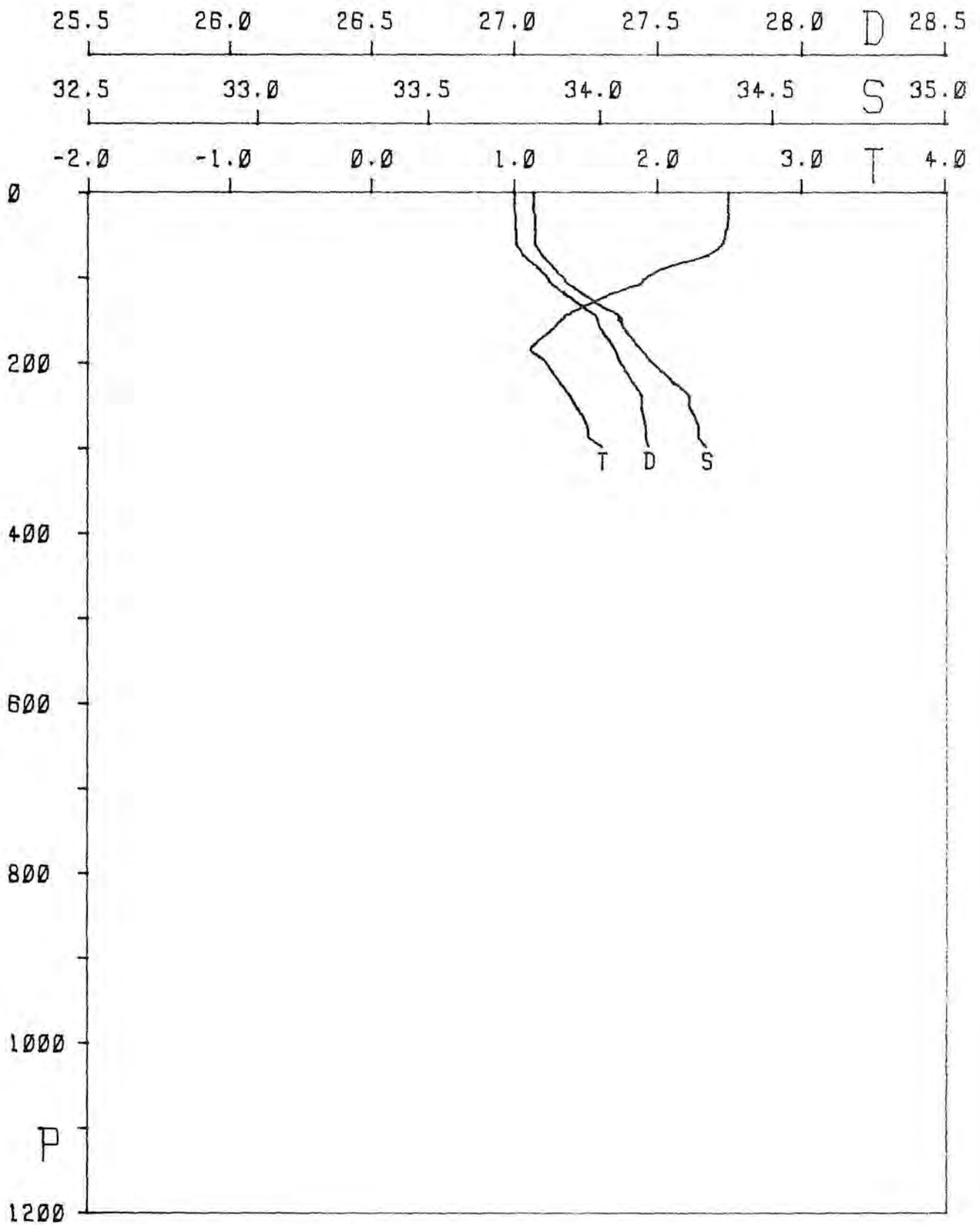
STATION 0292



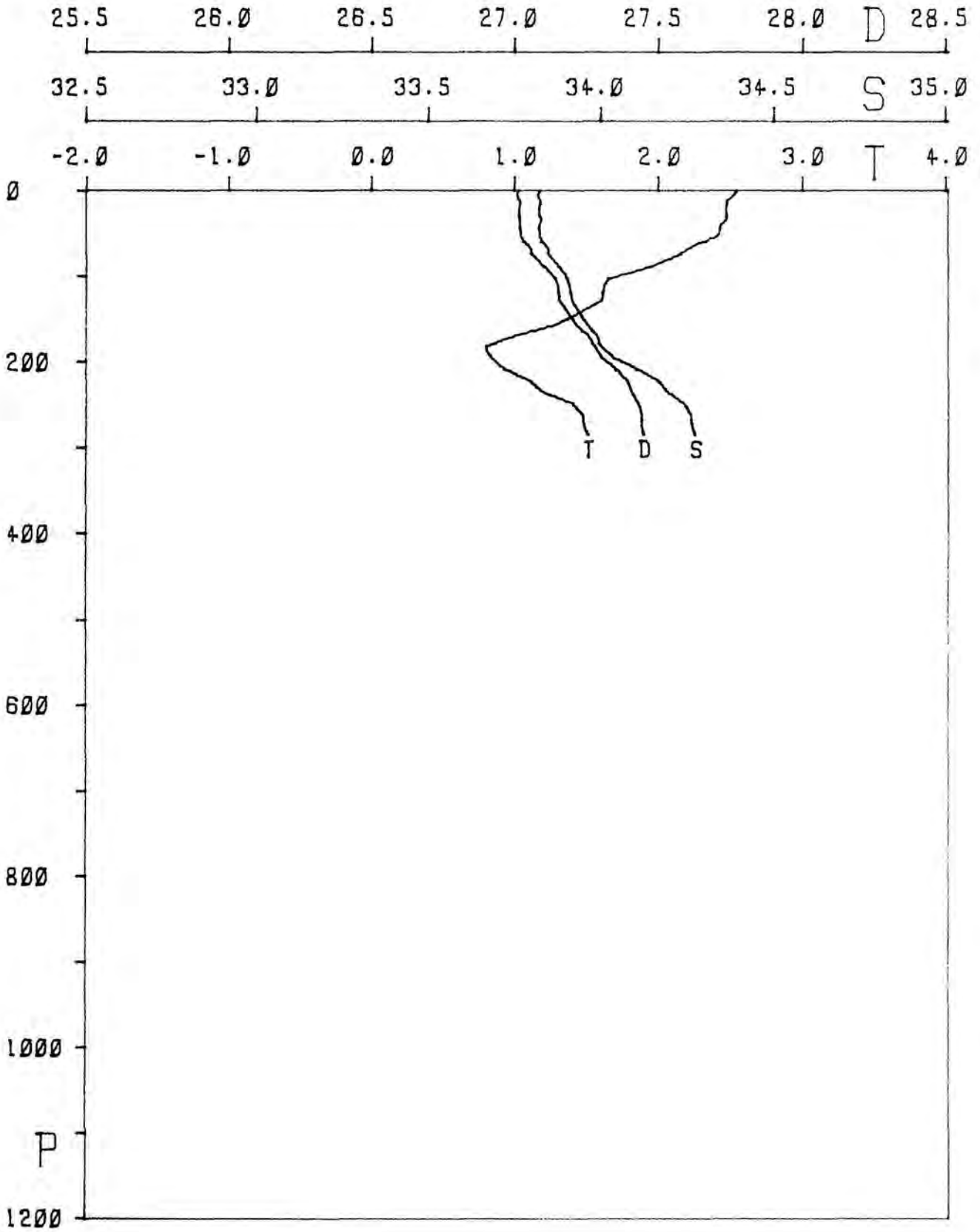
STATION 0295



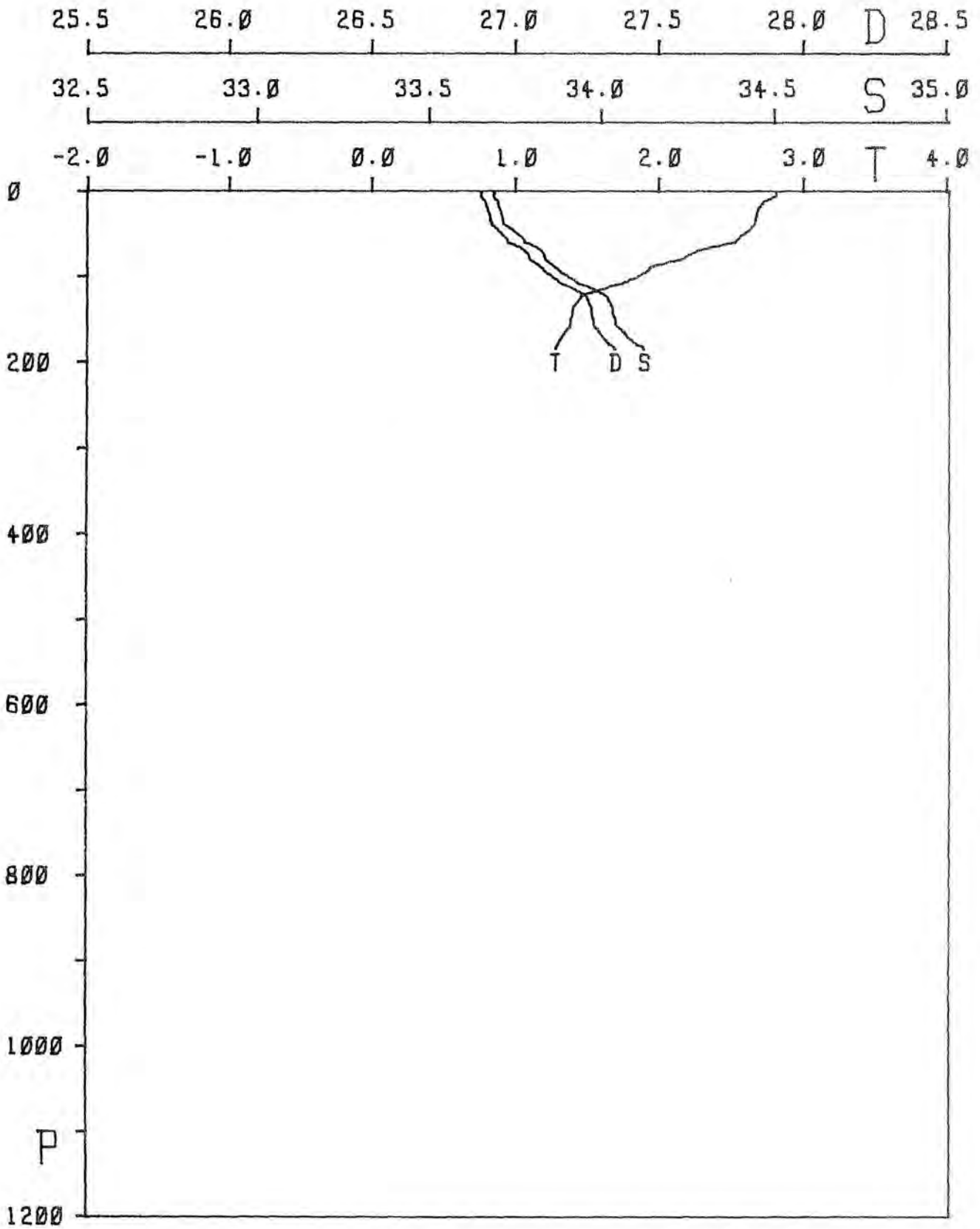
STATION 0296



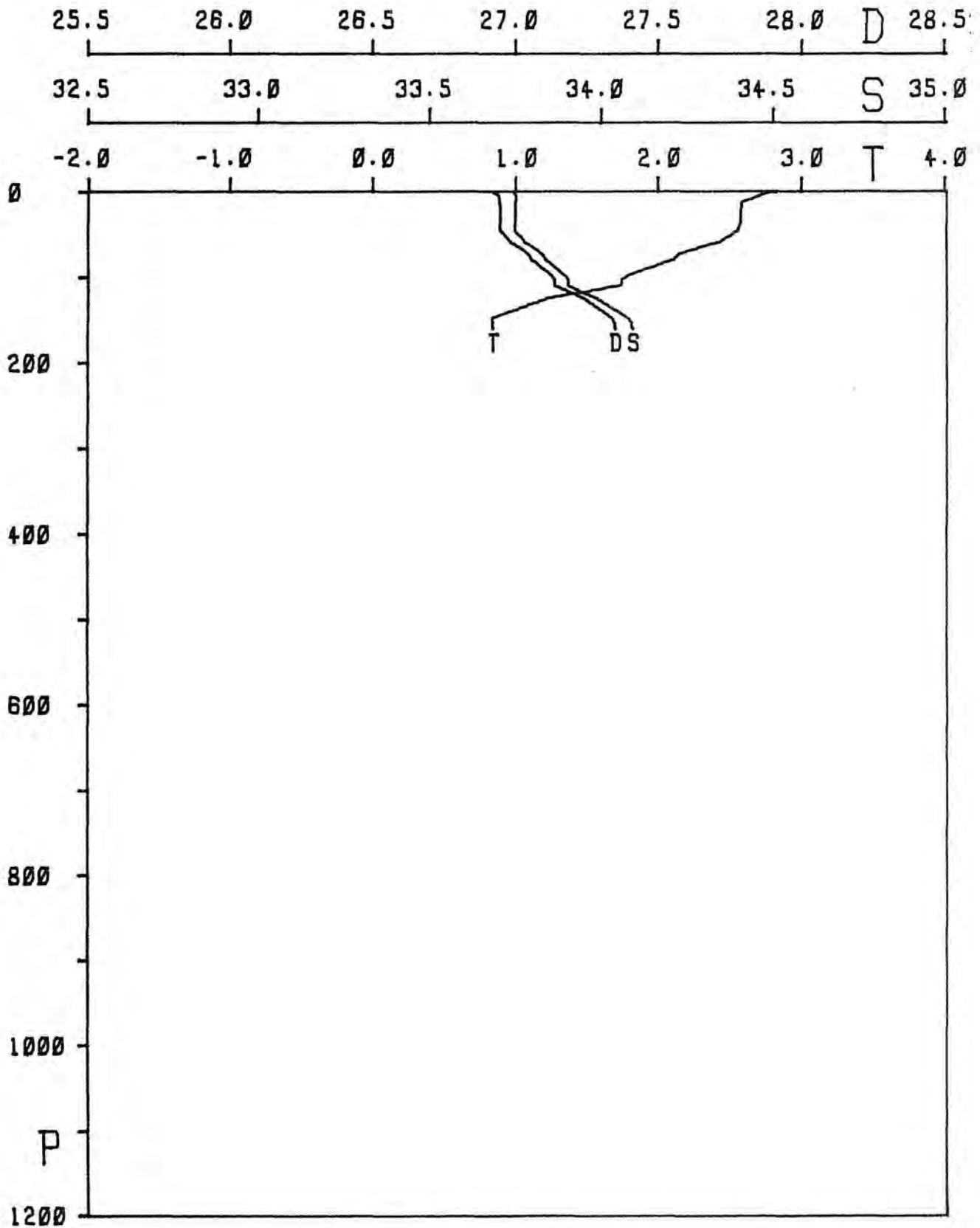
STATION 0299



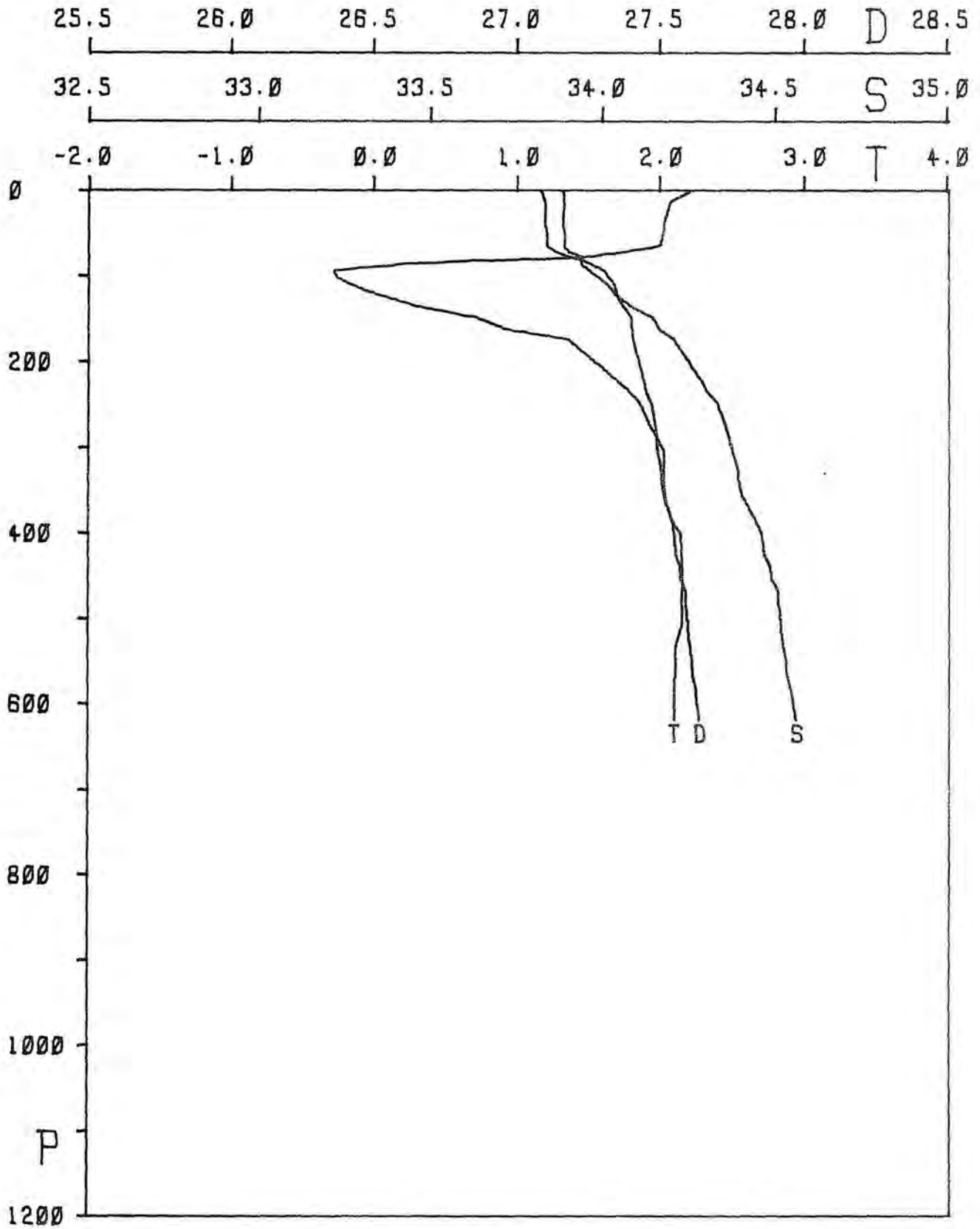
STATION 0301



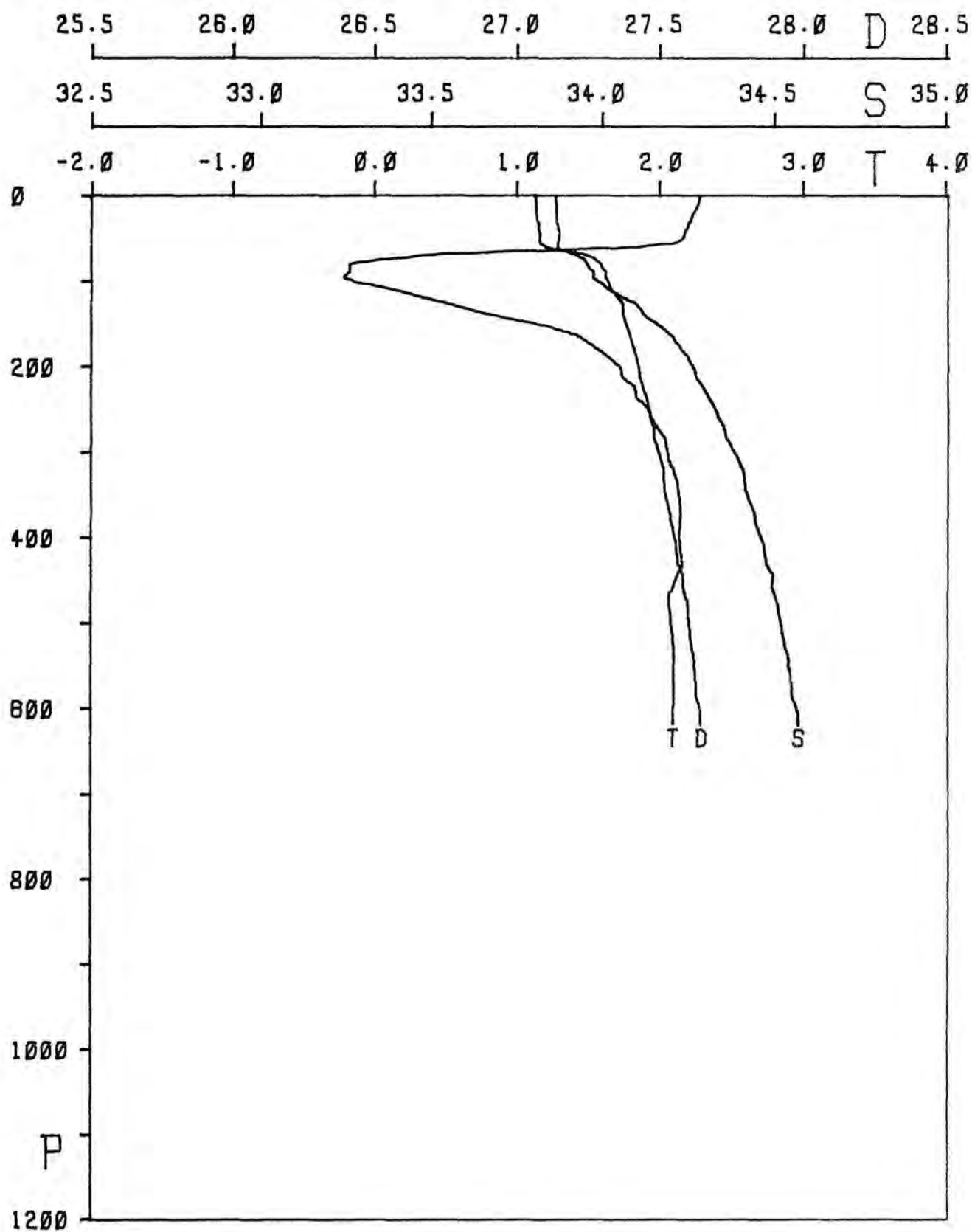
STATION 0302



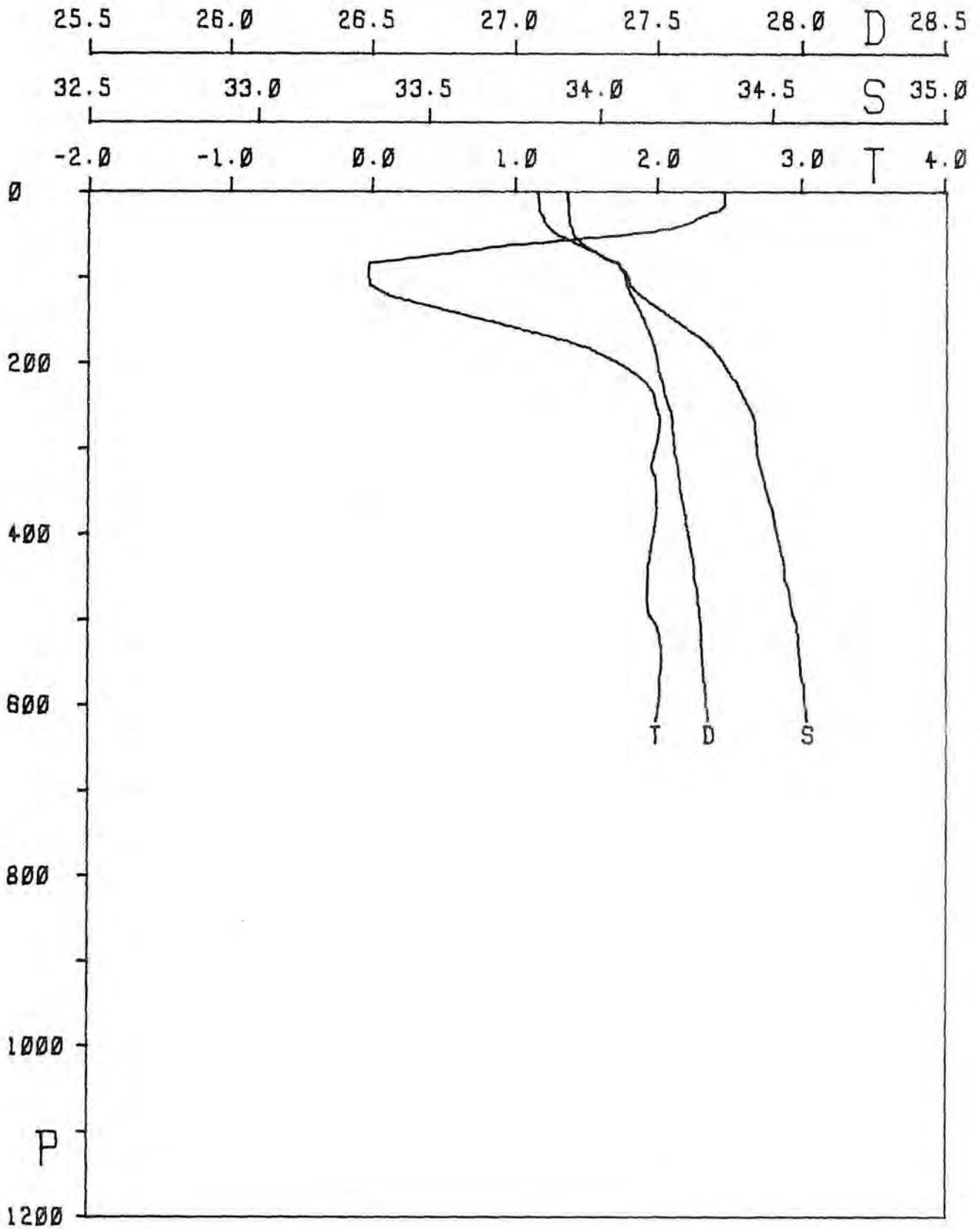
STATION 0303



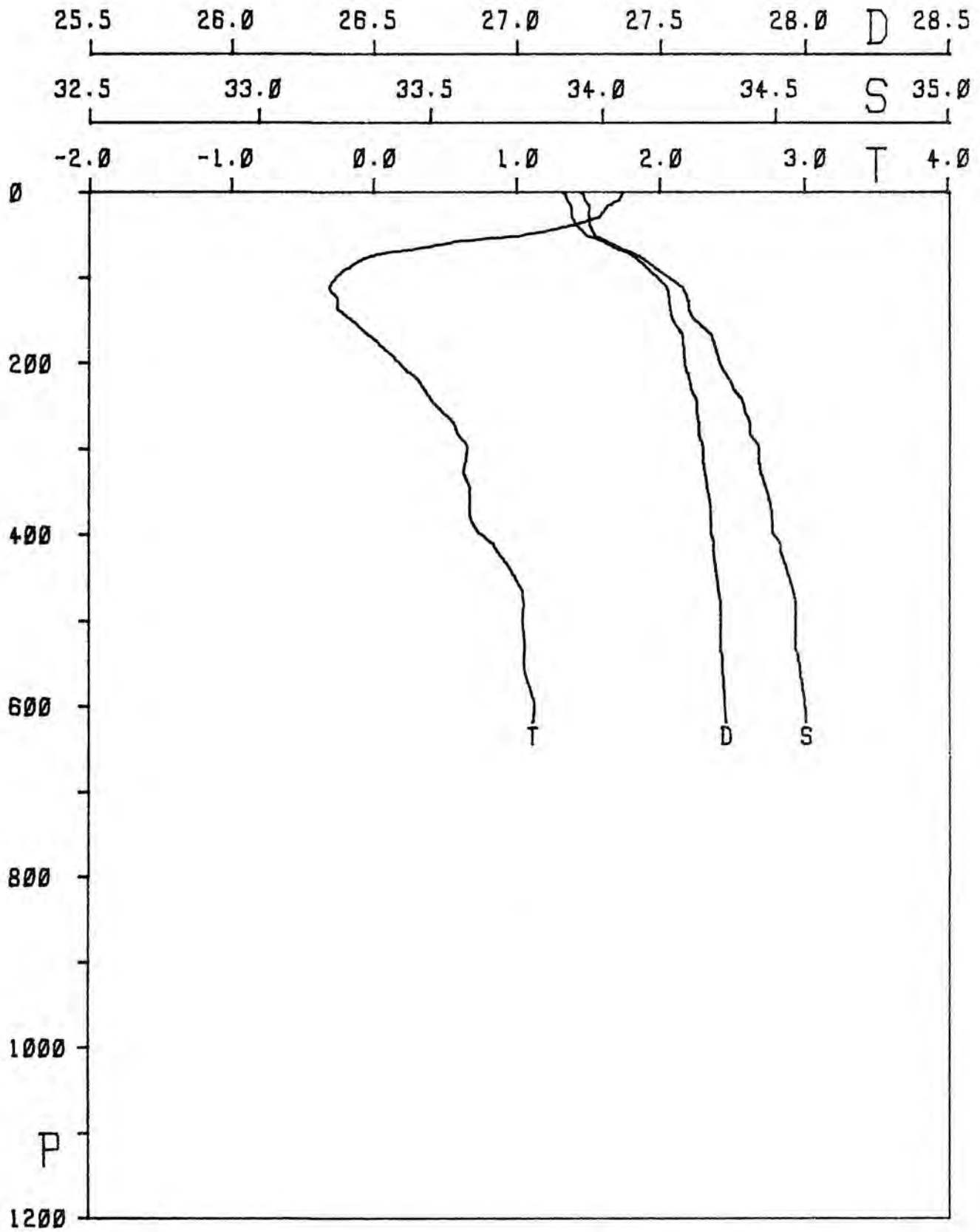
STATION 0304



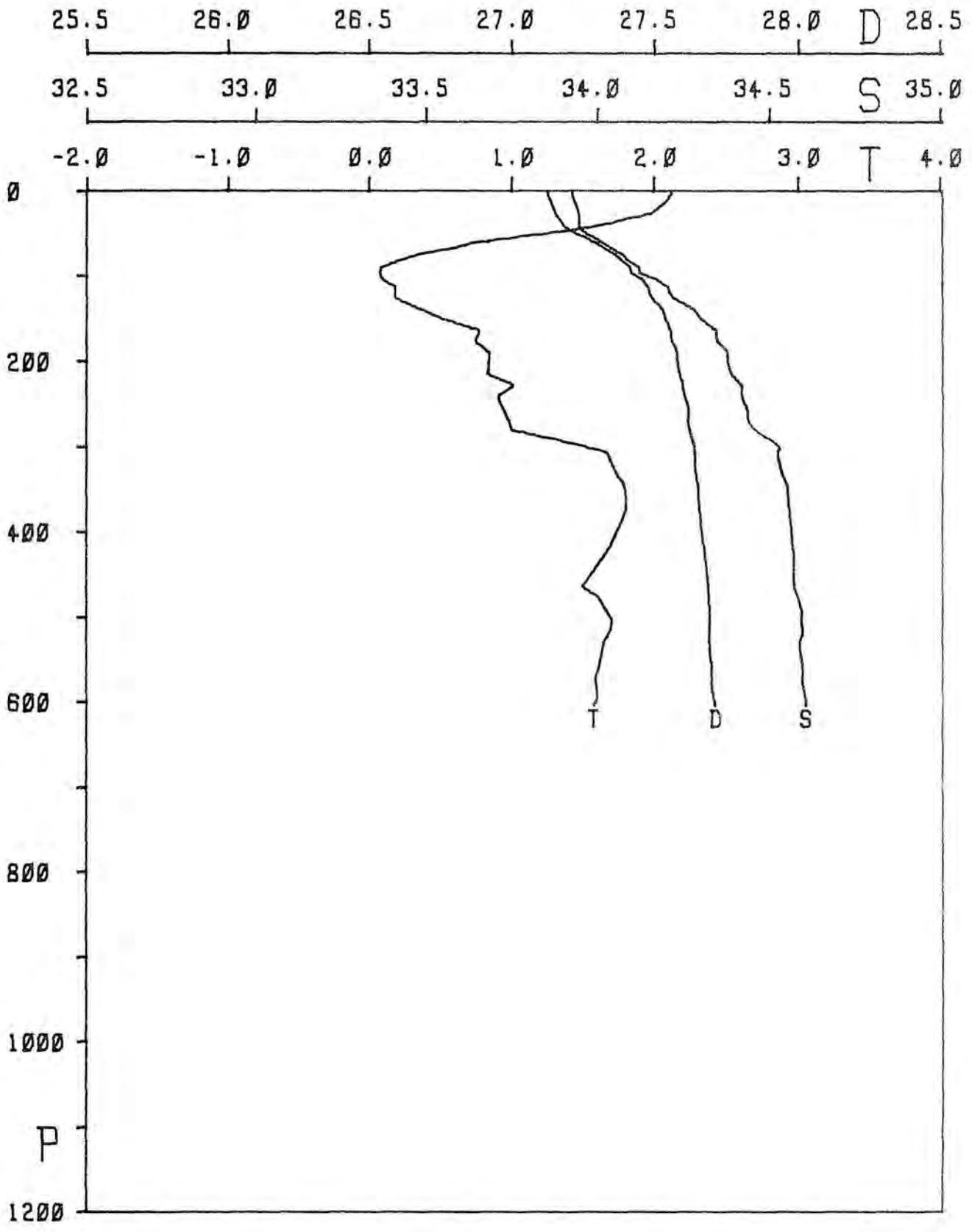
STATION 0305



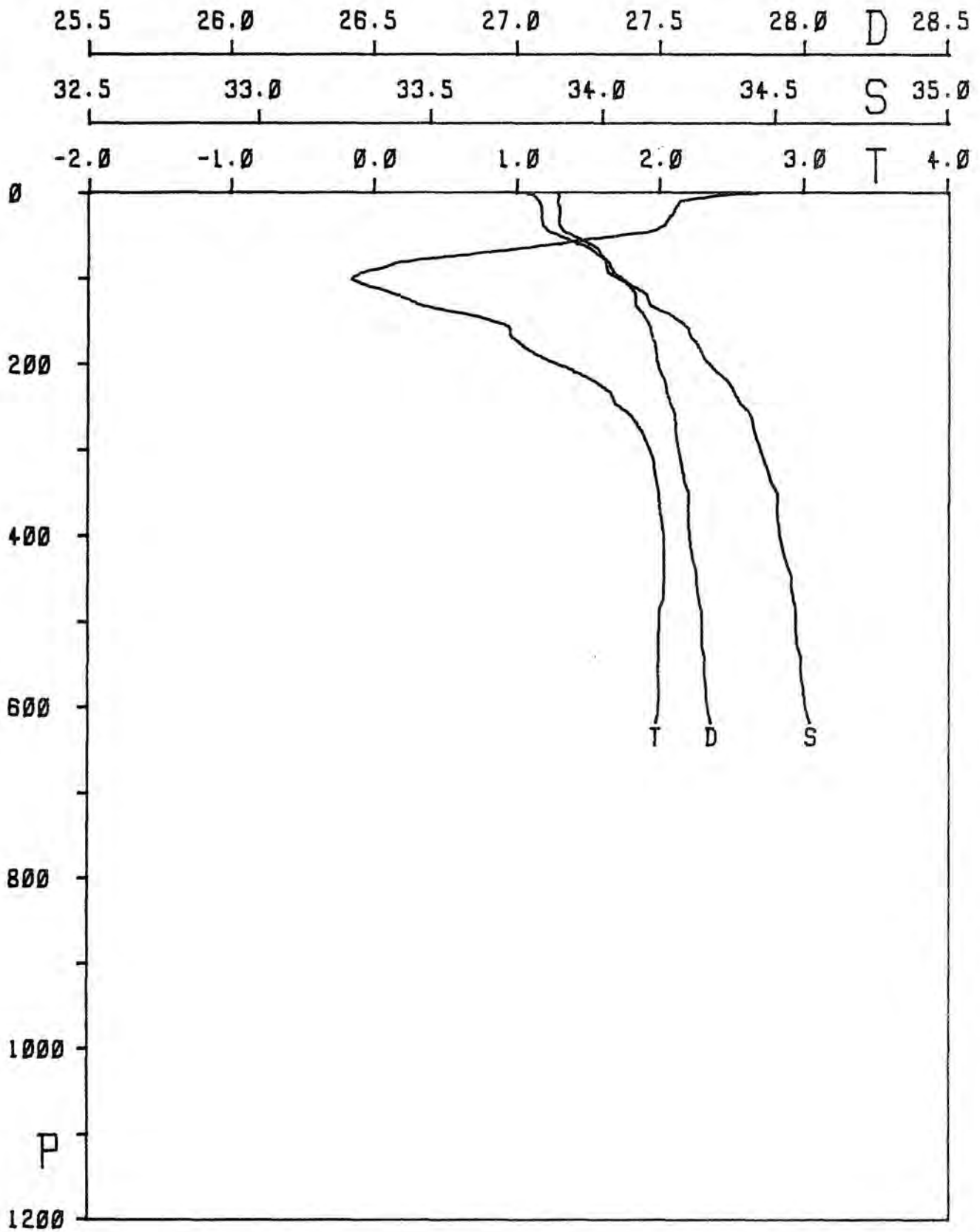
STATION 0306



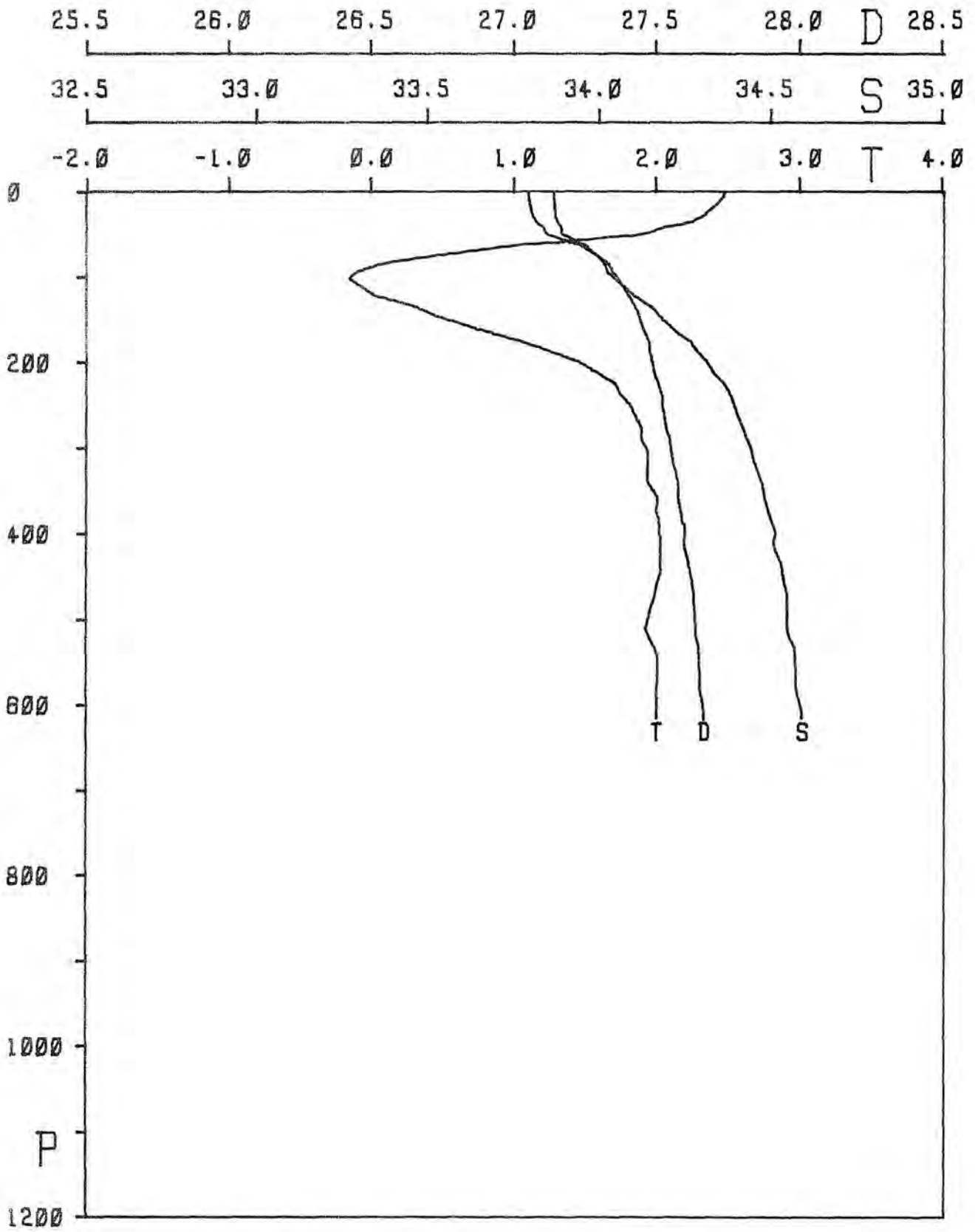
STATION 0307



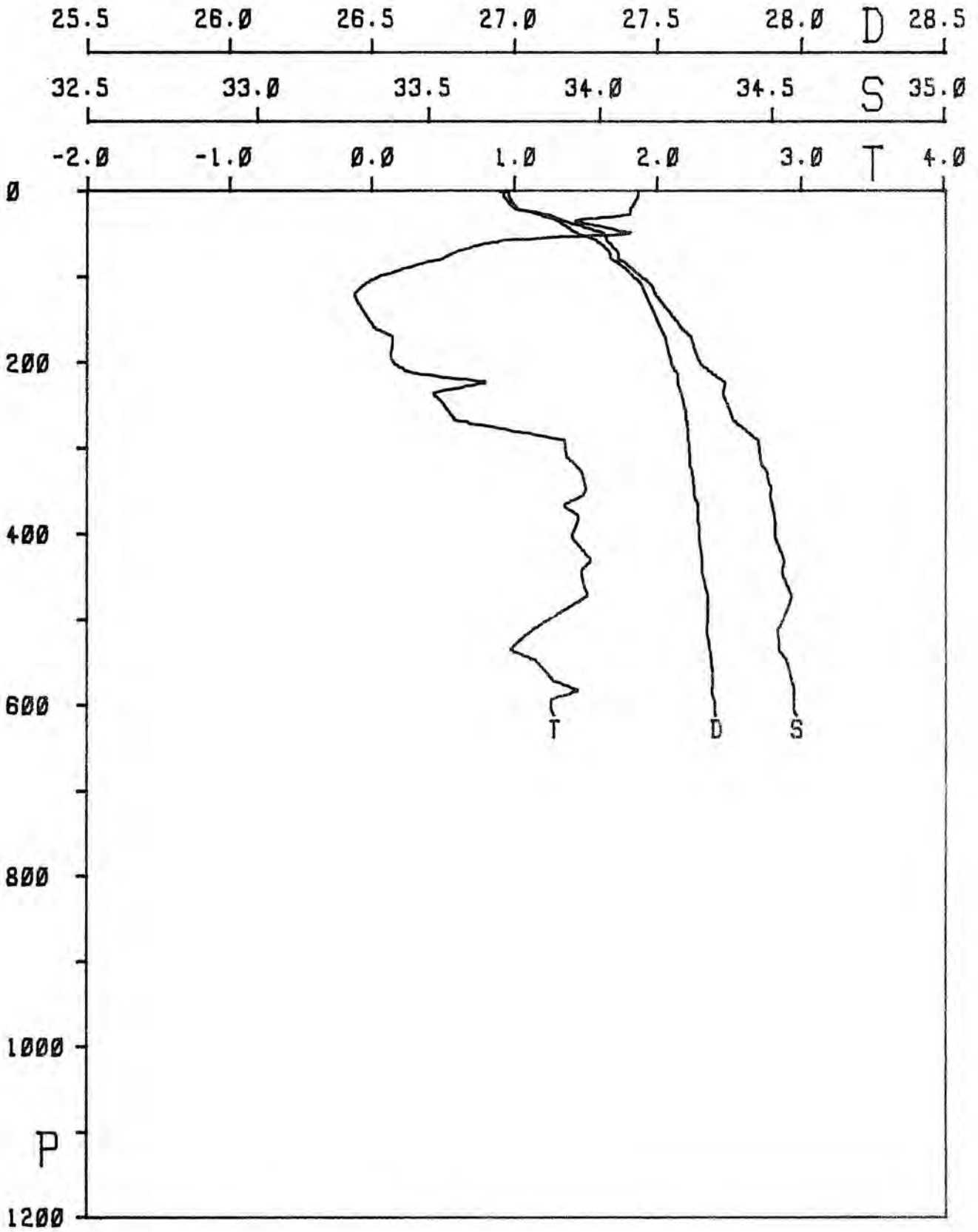
STATION 0308



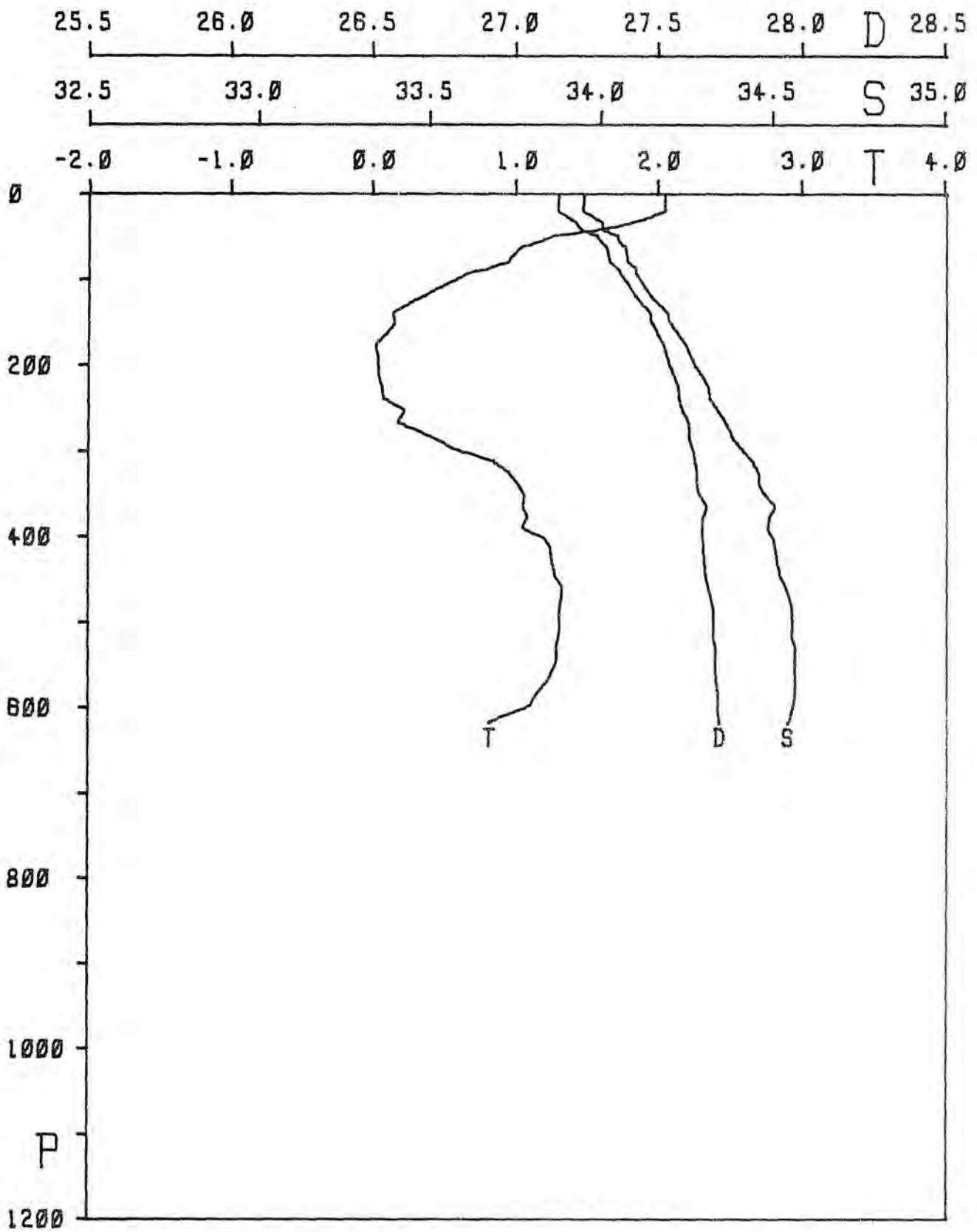
STATION 0309



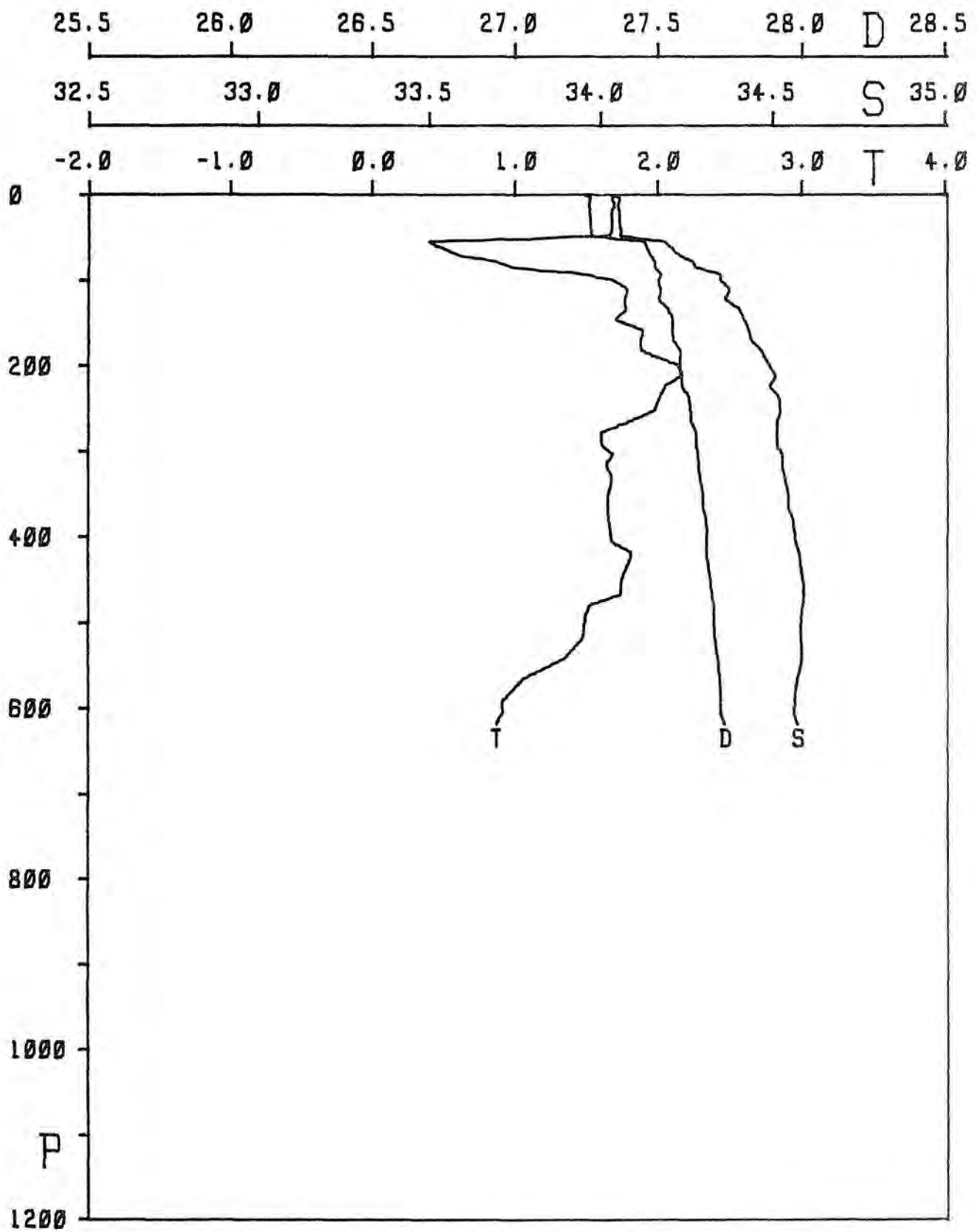
STATION 0310



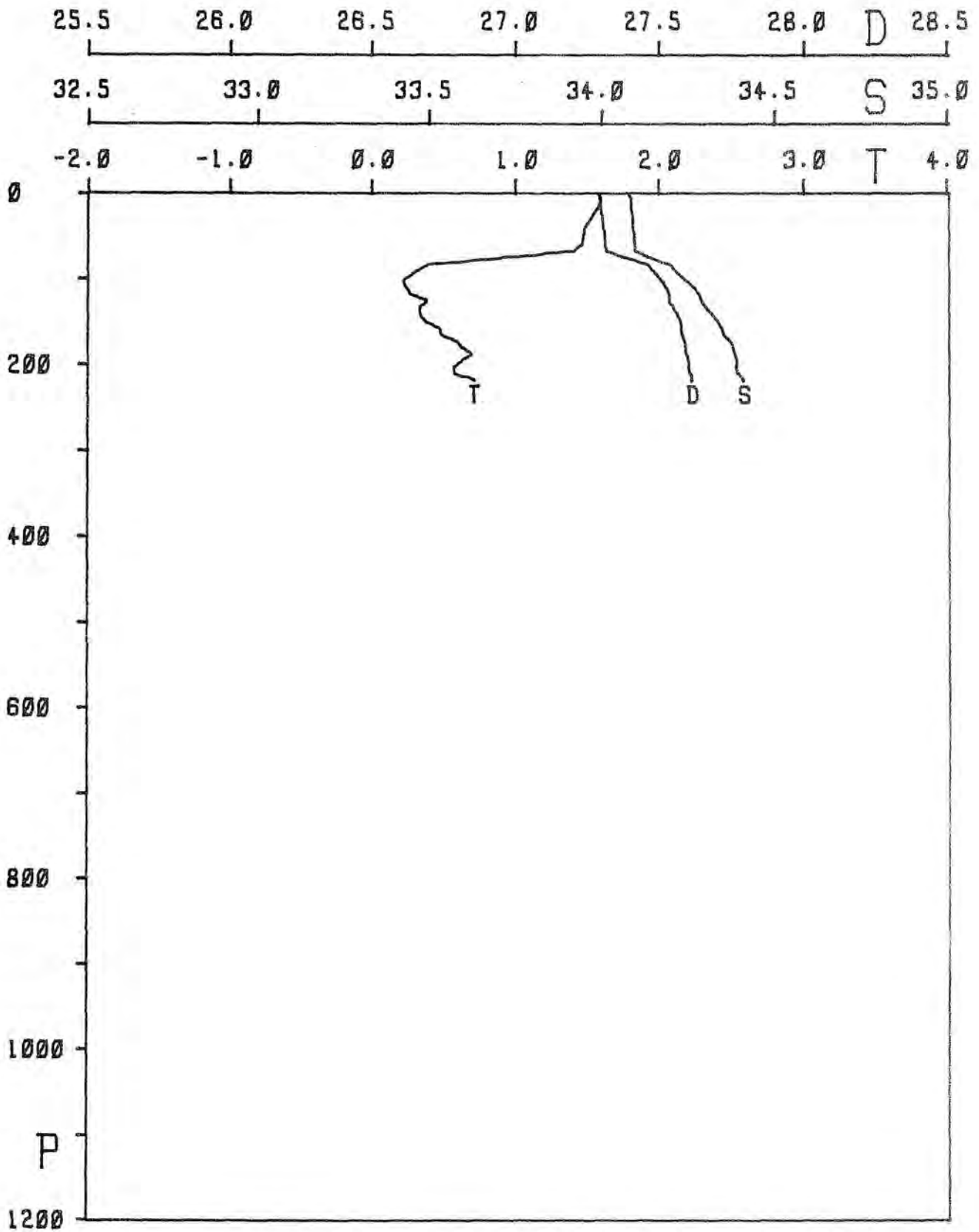
STATION Ø312



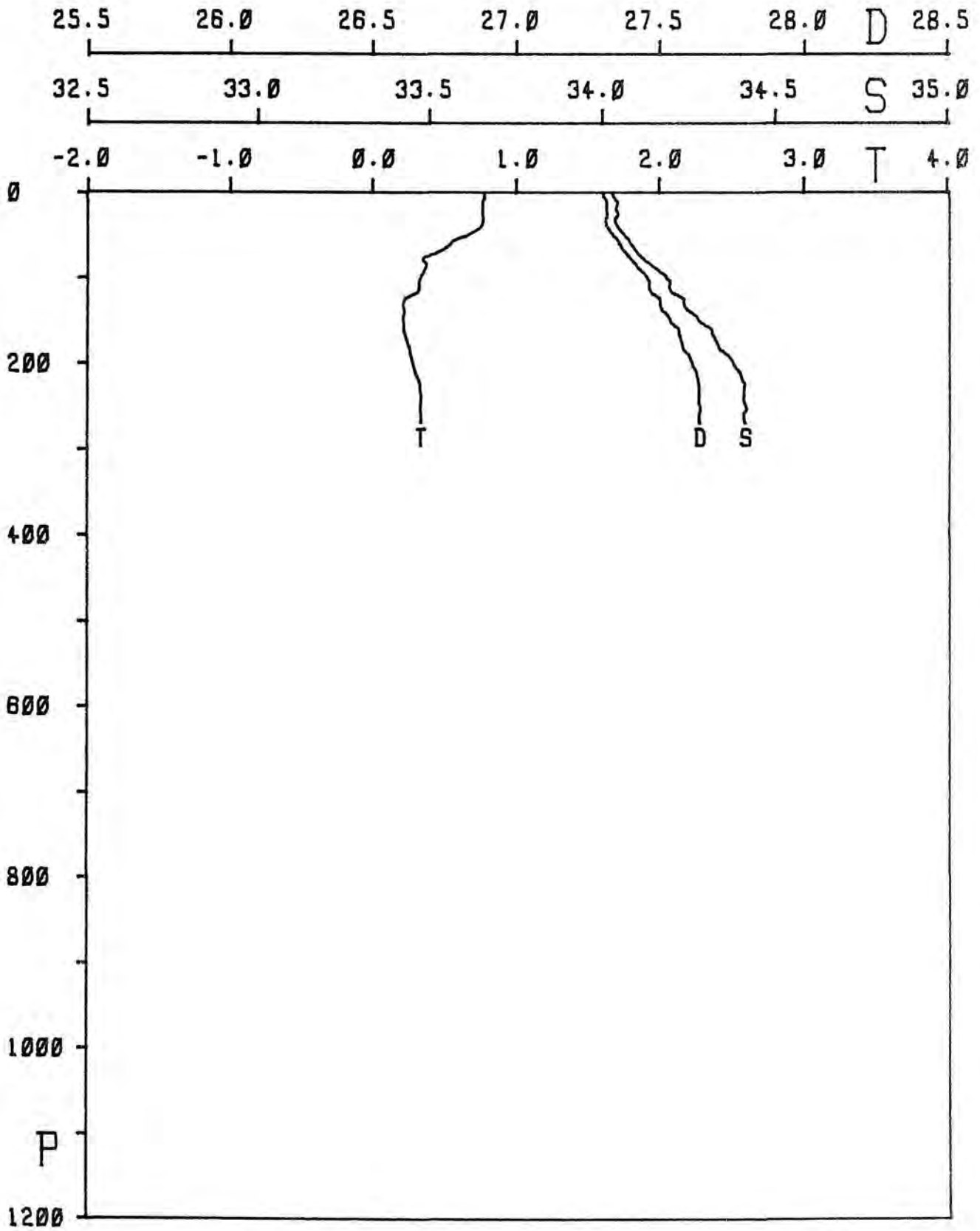
STATION Ø315



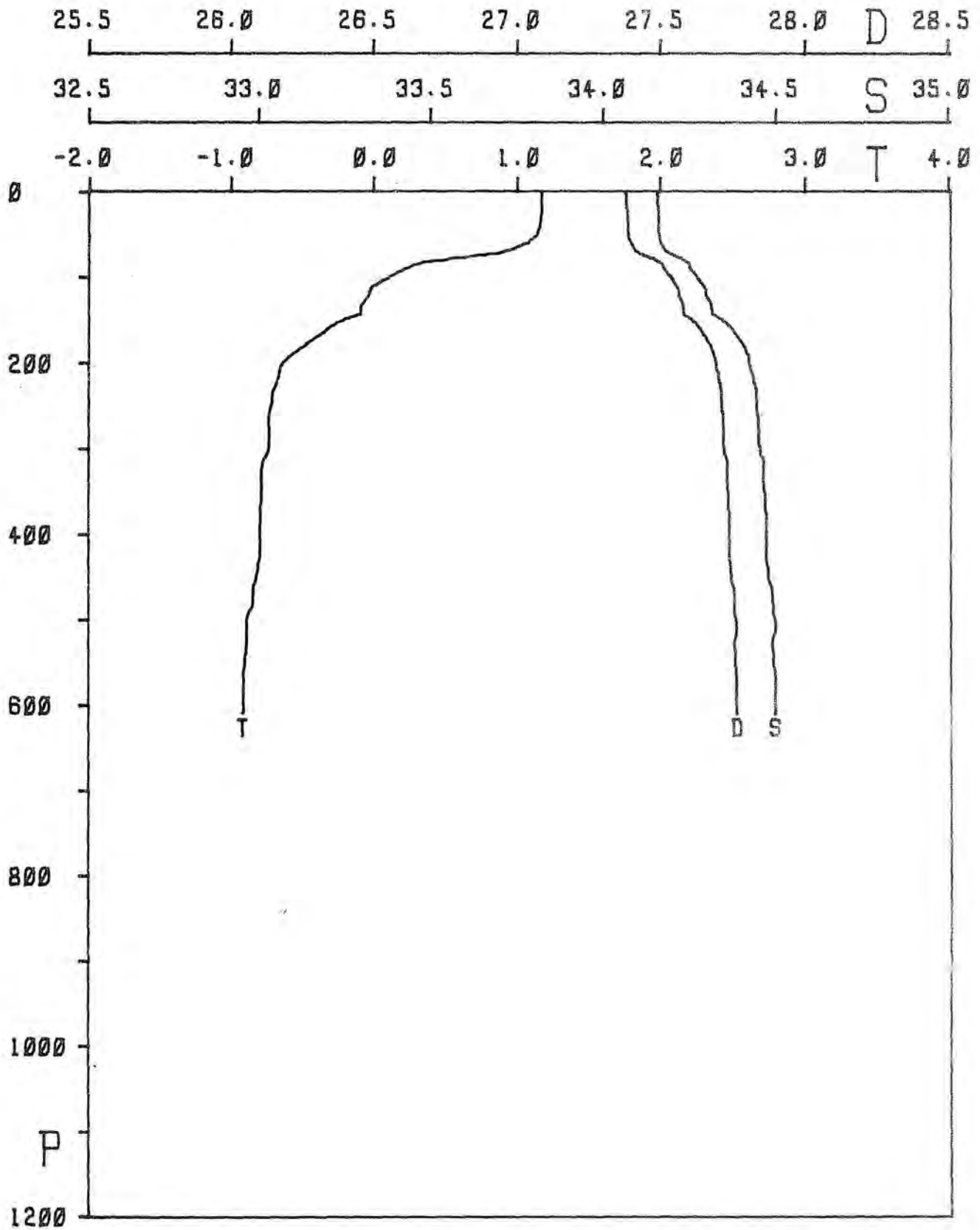
STATION 0316



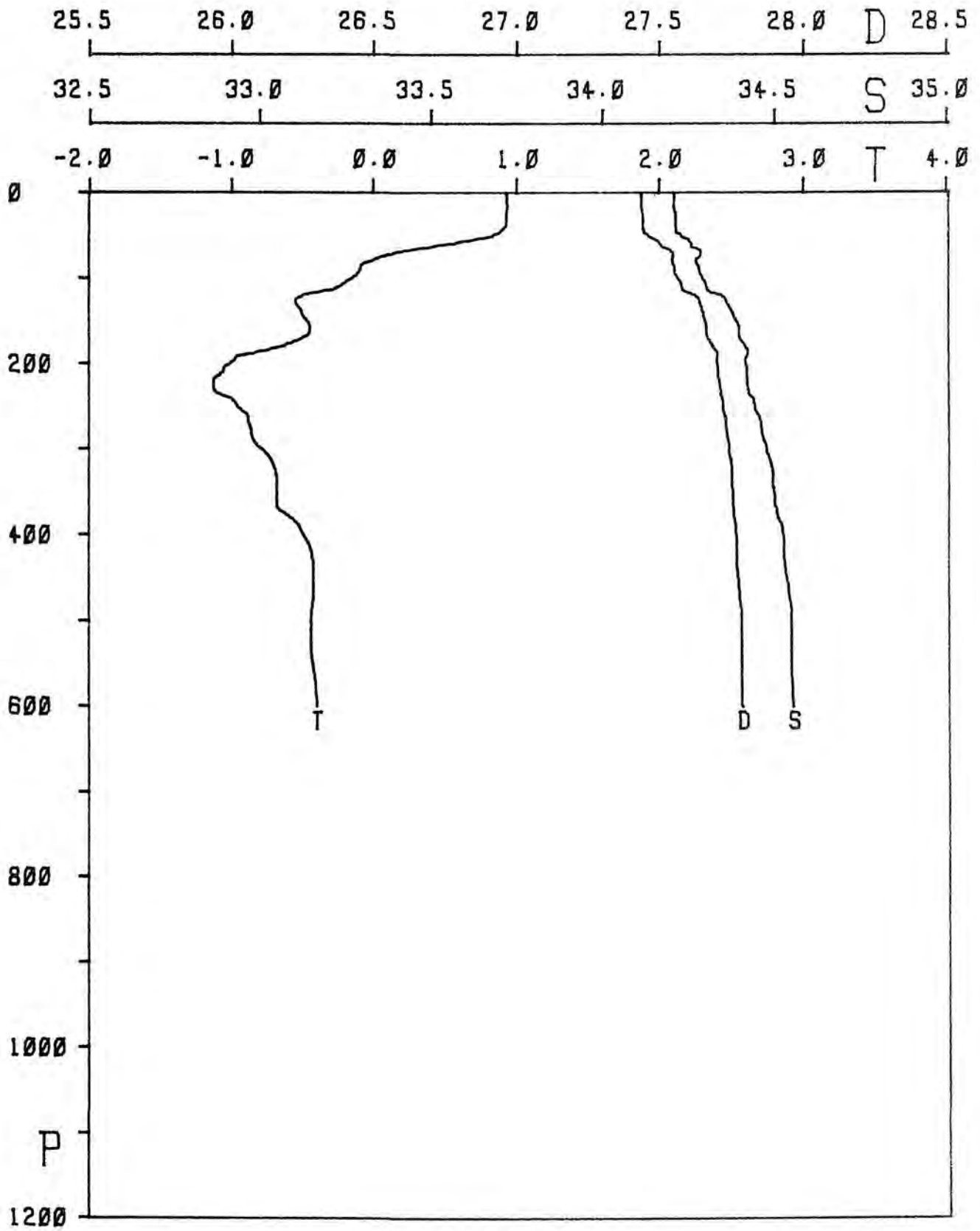
STATION 0319



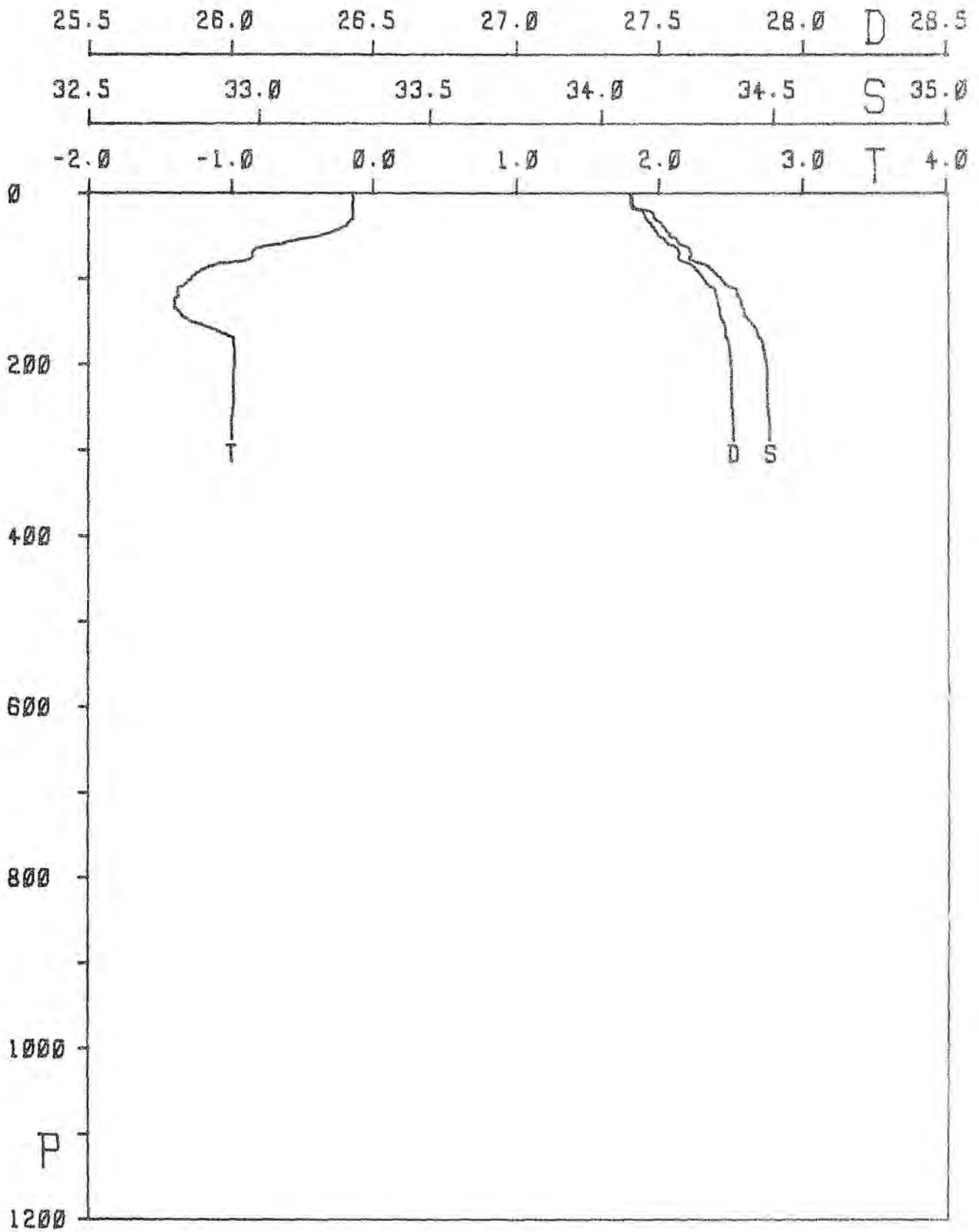
STATION 0320



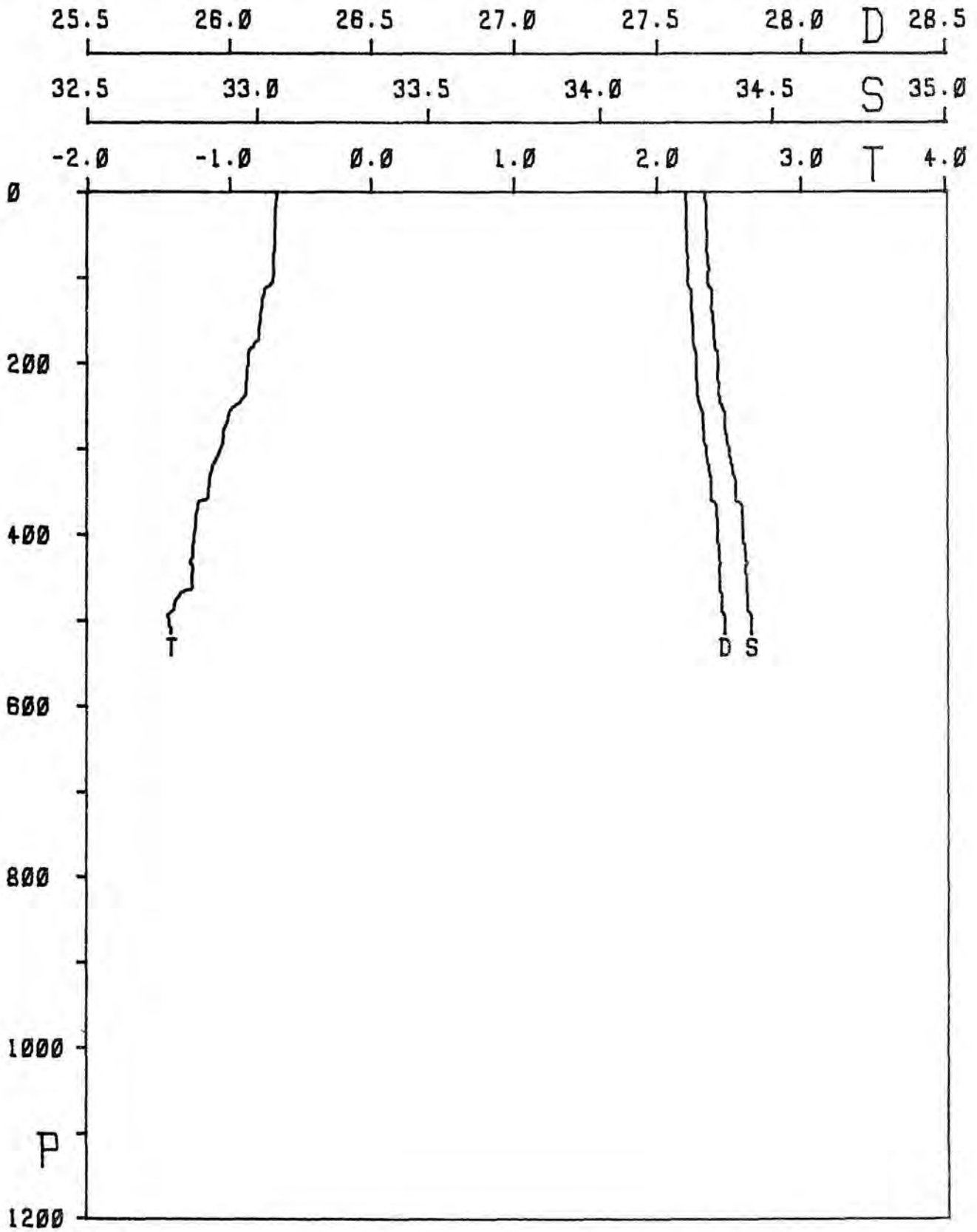
STATION 0321



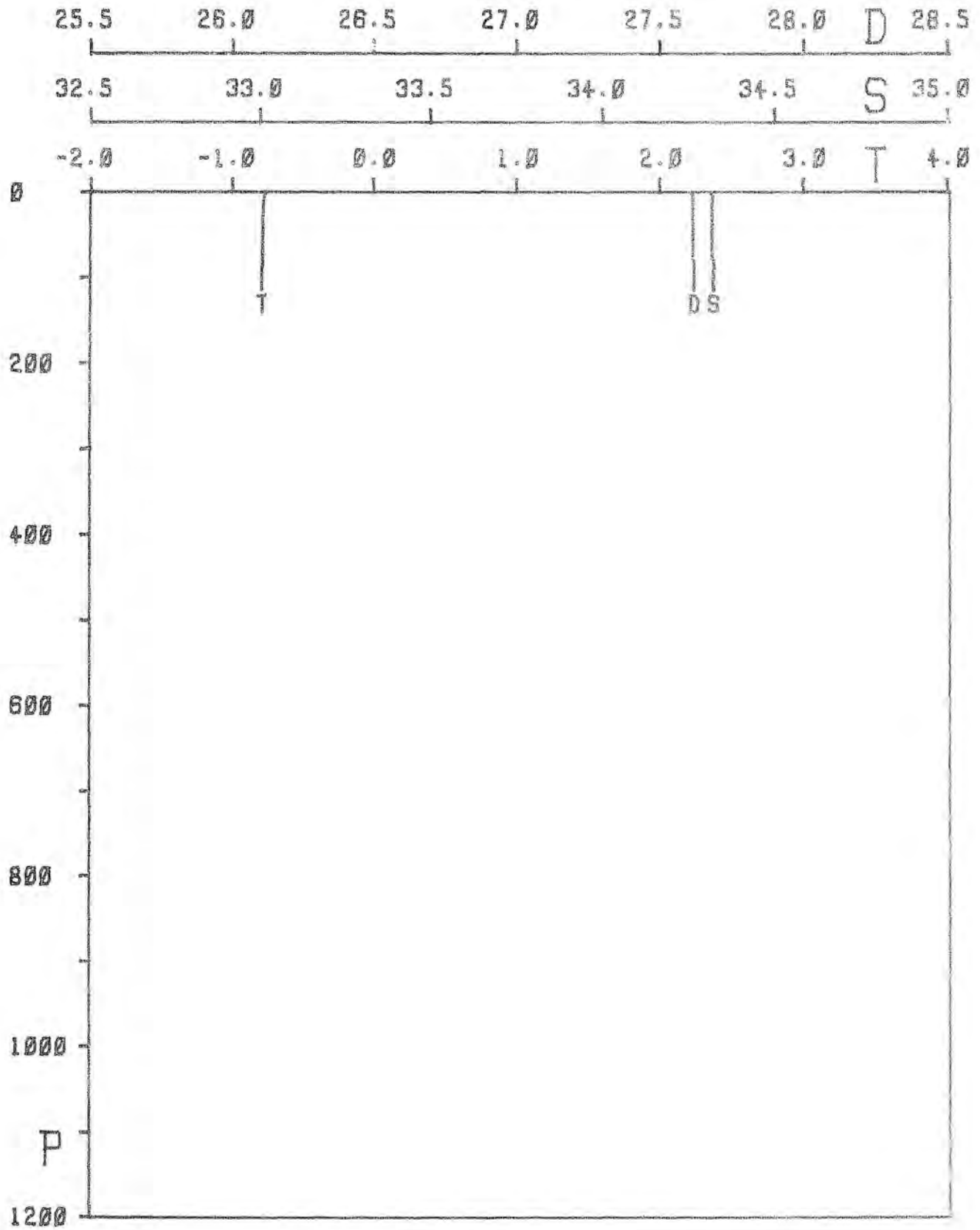
STATION 0322



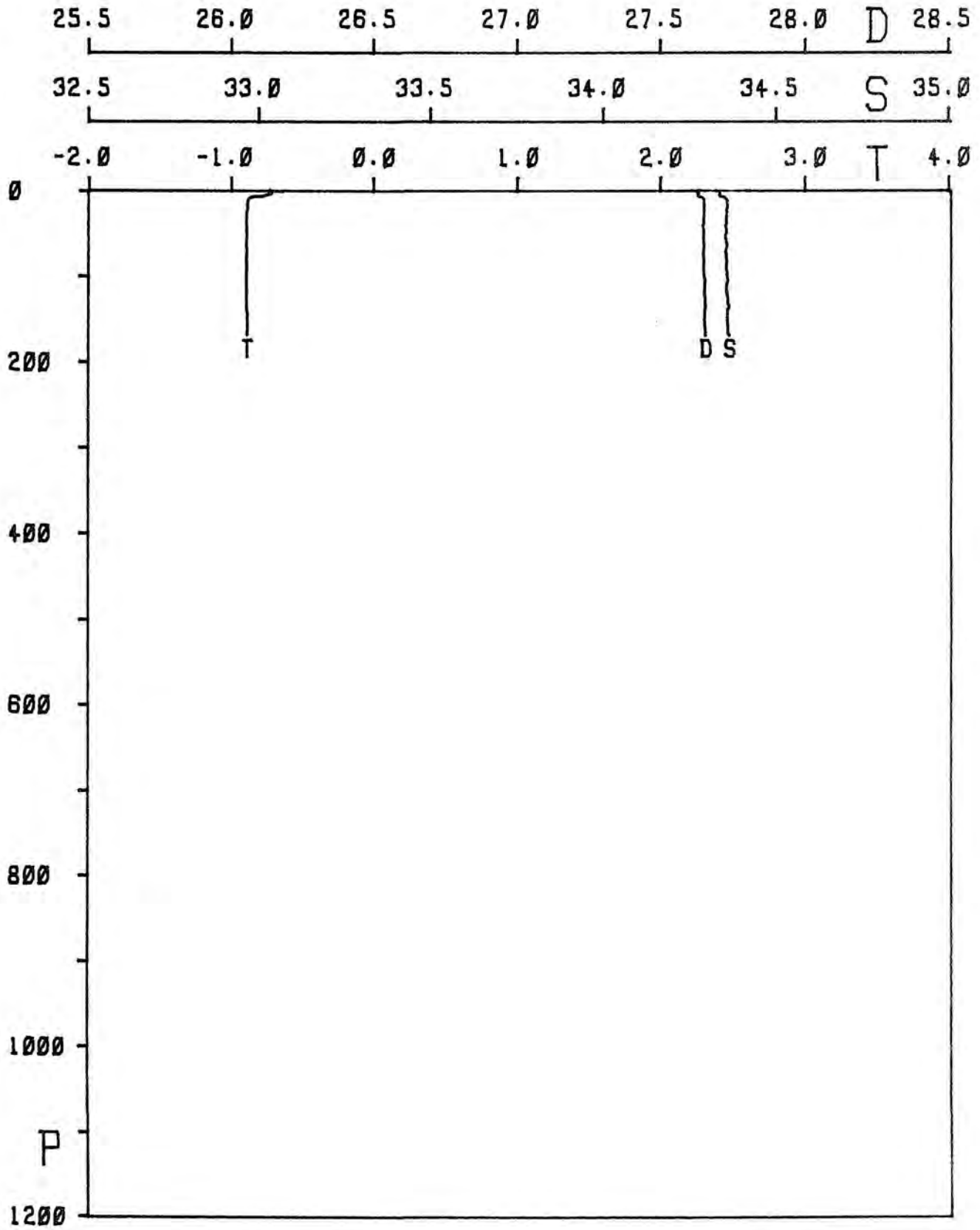
STATION 0323



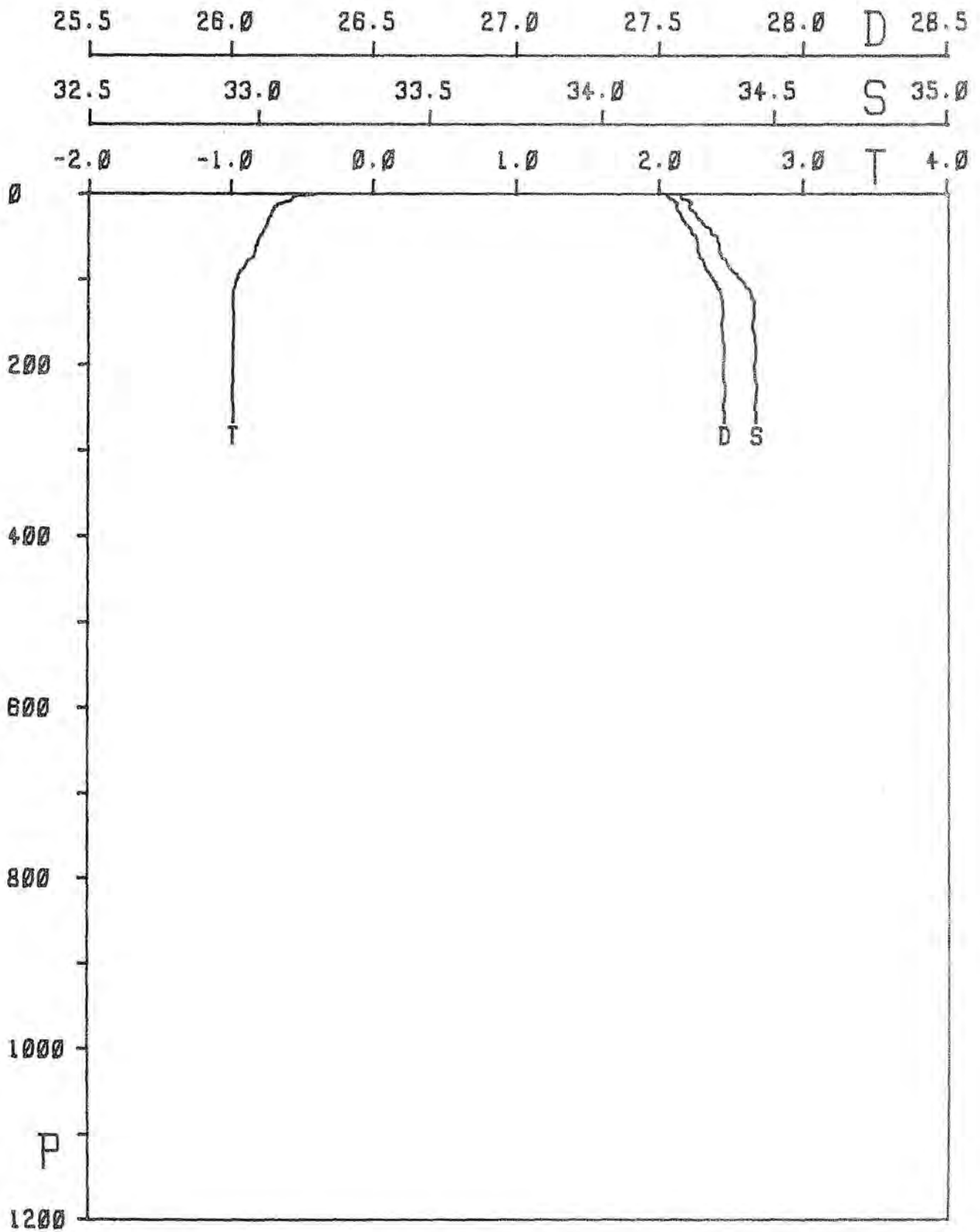
STATION 0324



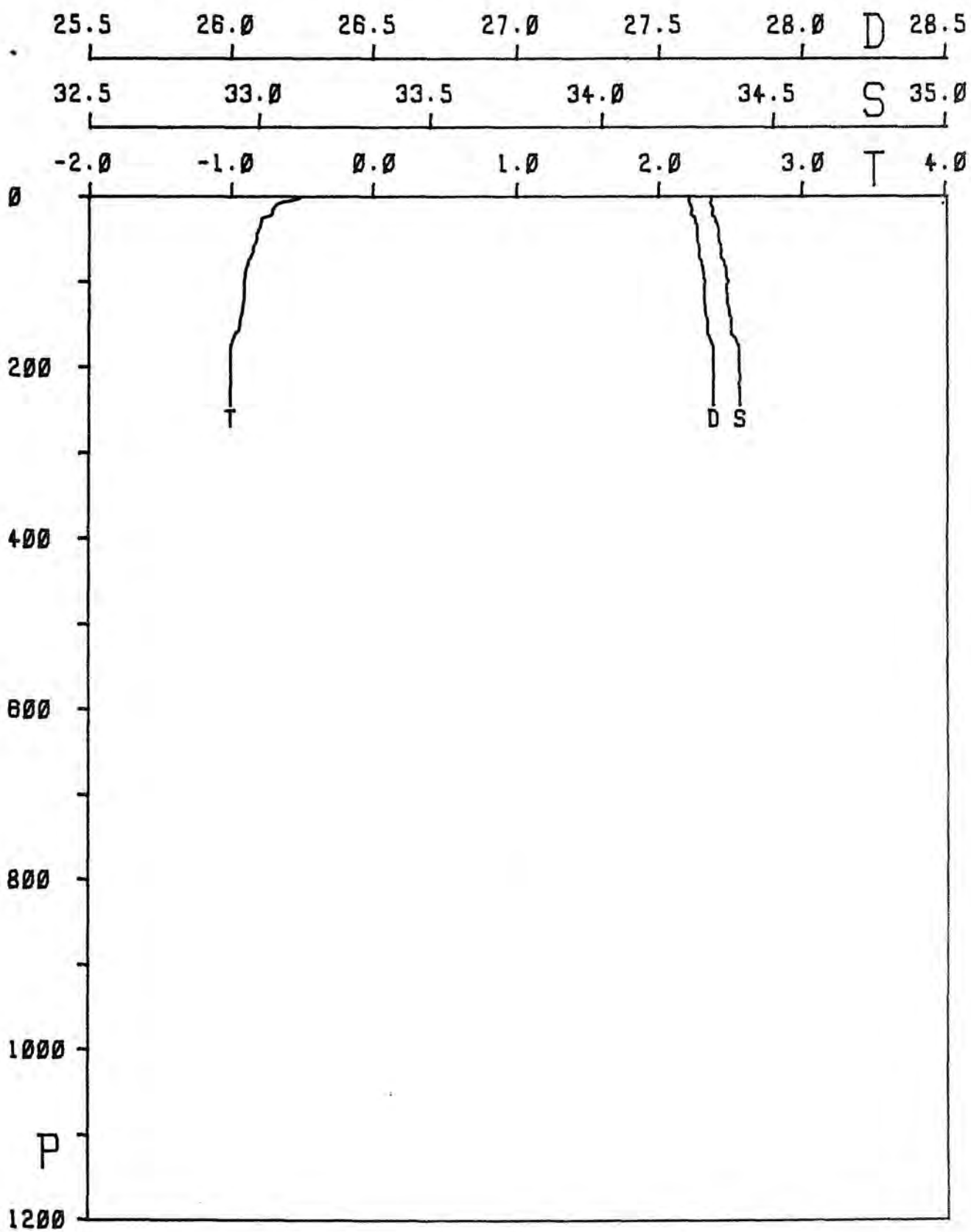
STATION 0325



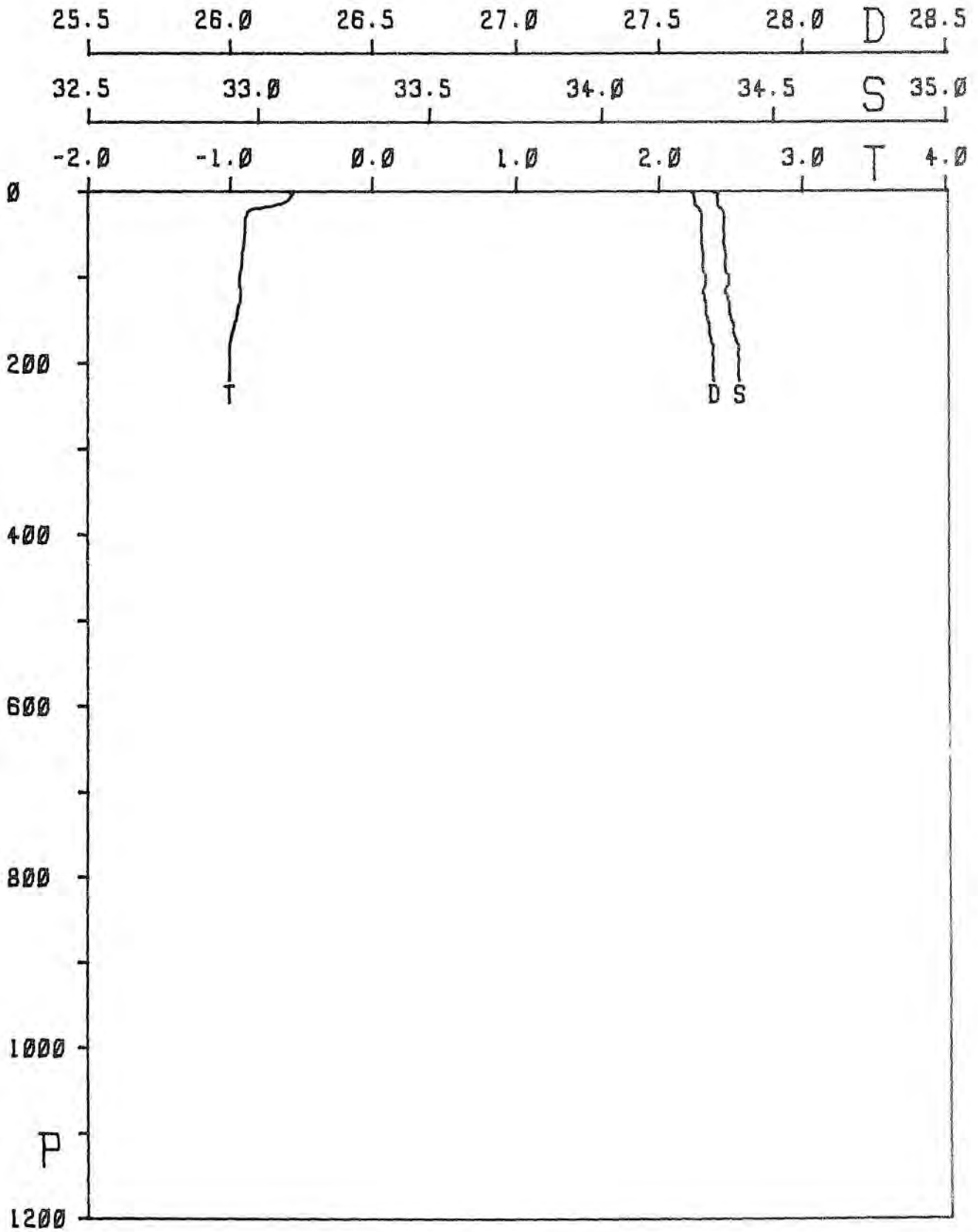
STATION 0326



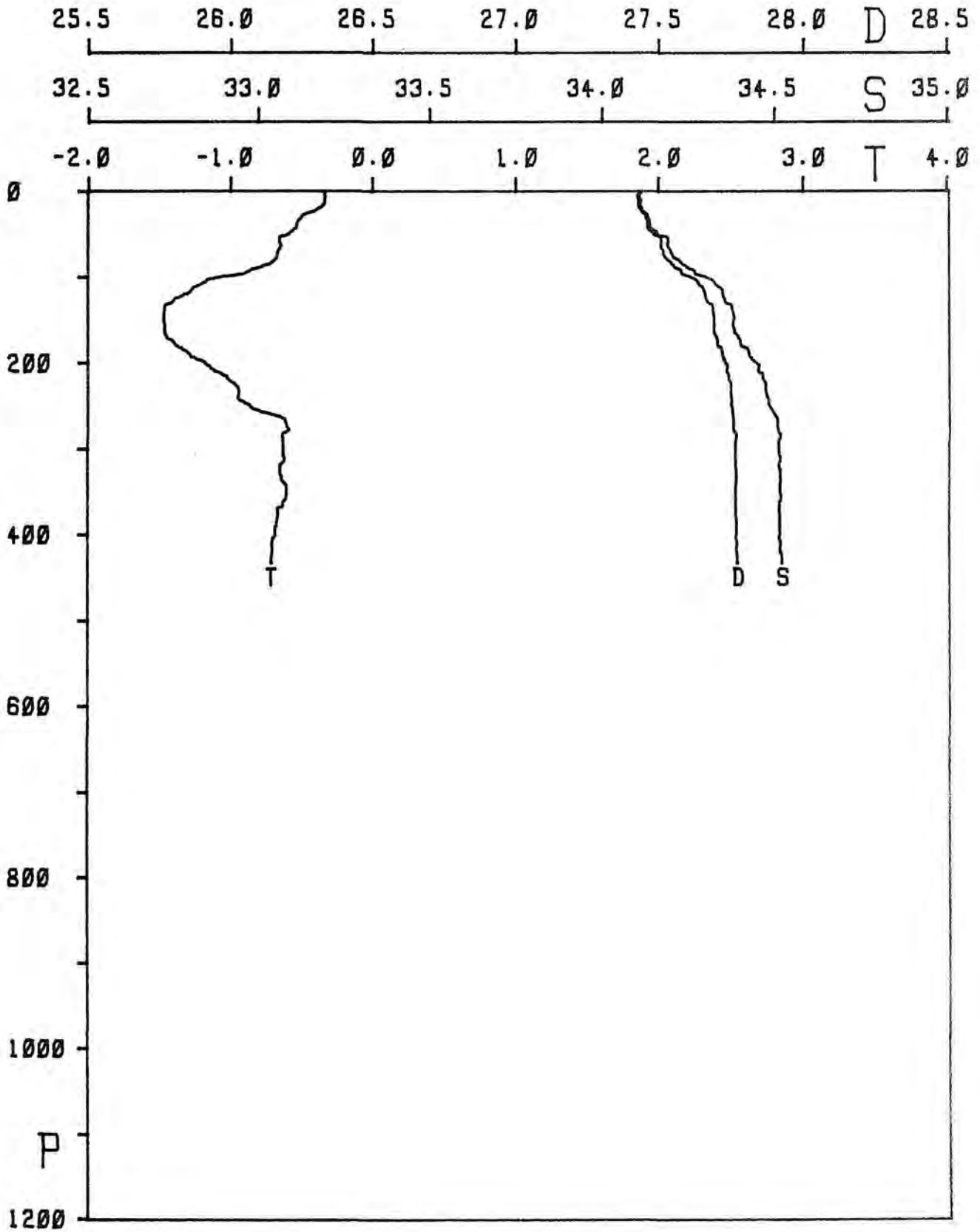
STATION 0327



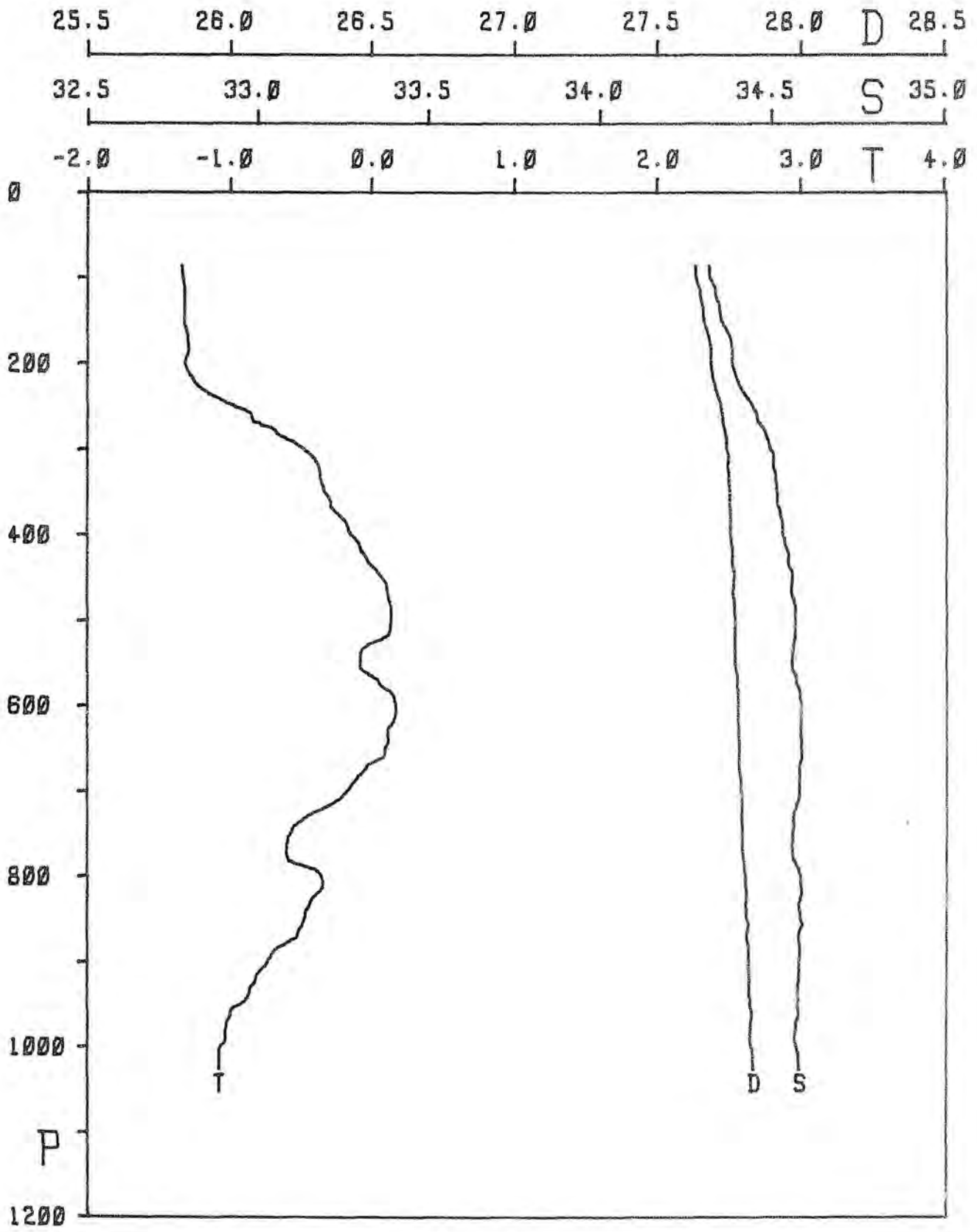
STATION 0328



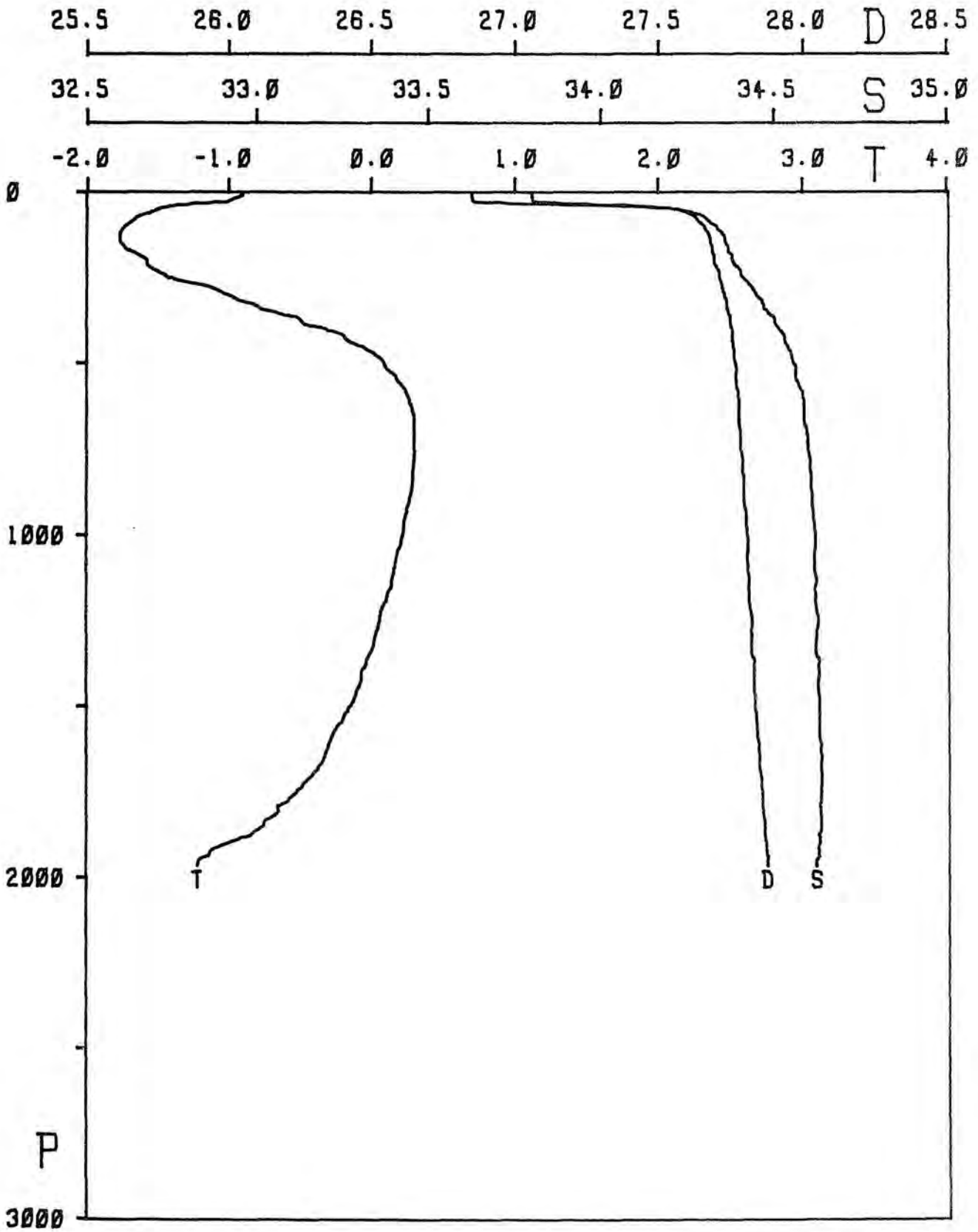
STATION 0329



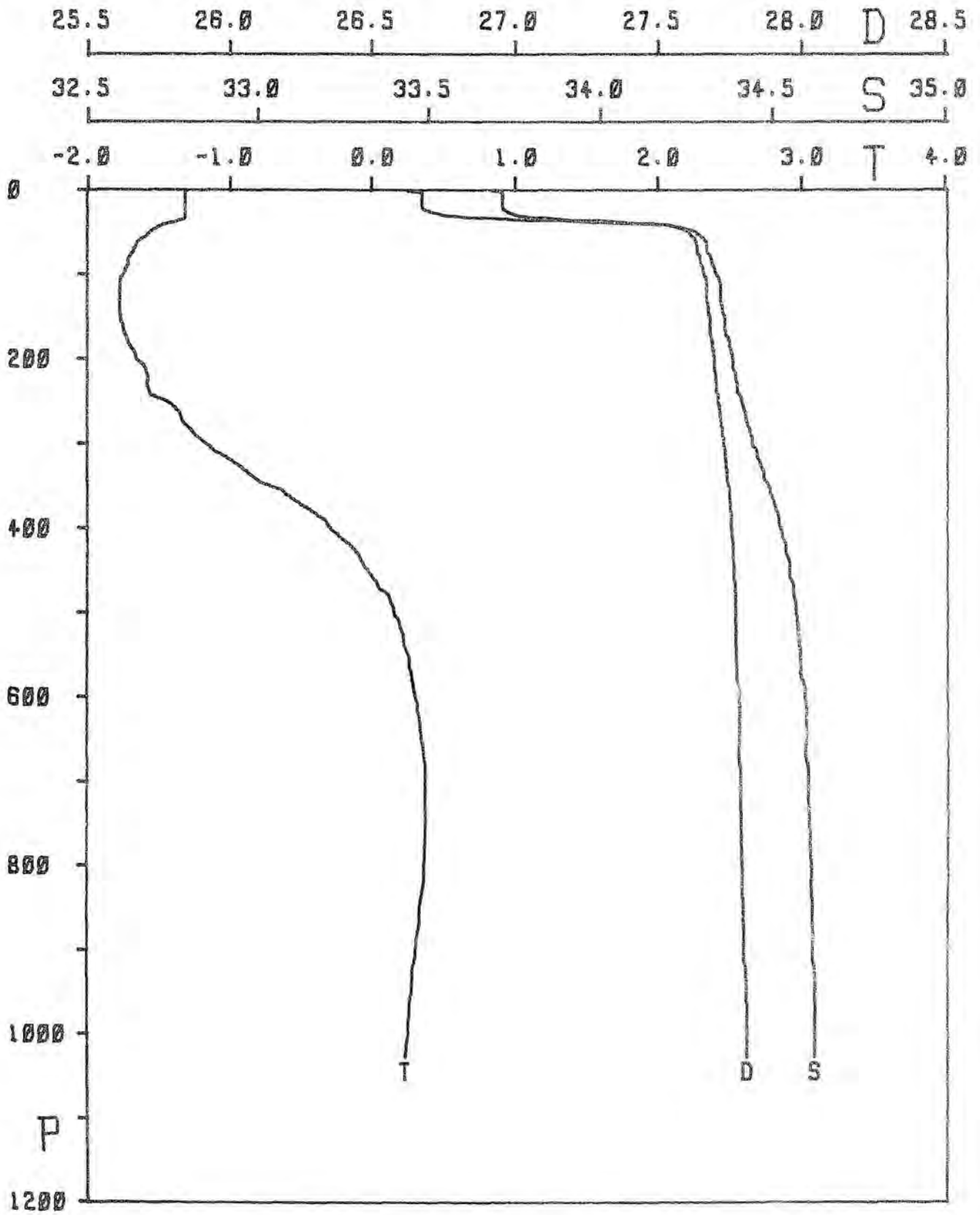
STATION 0330



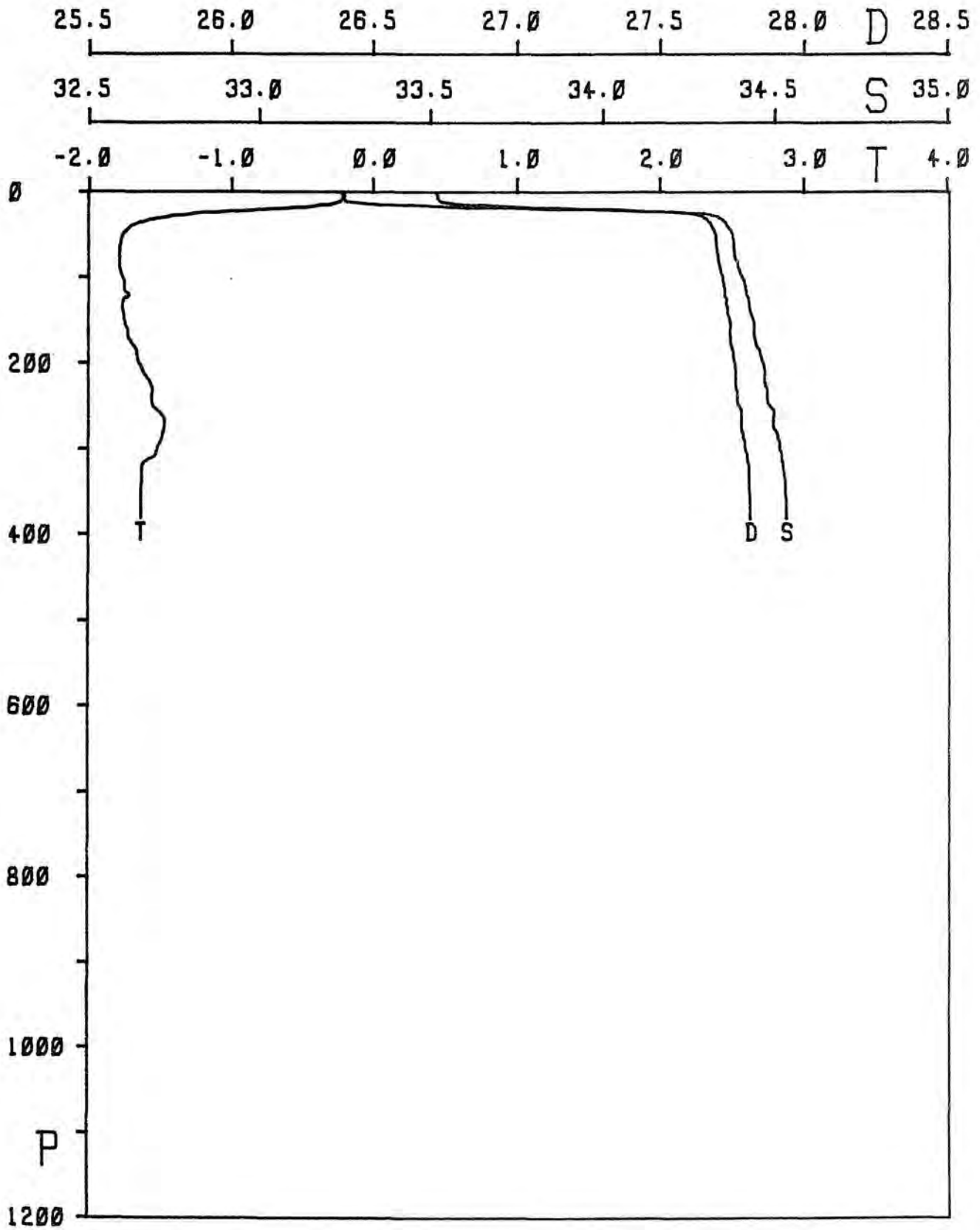
STATION 0331



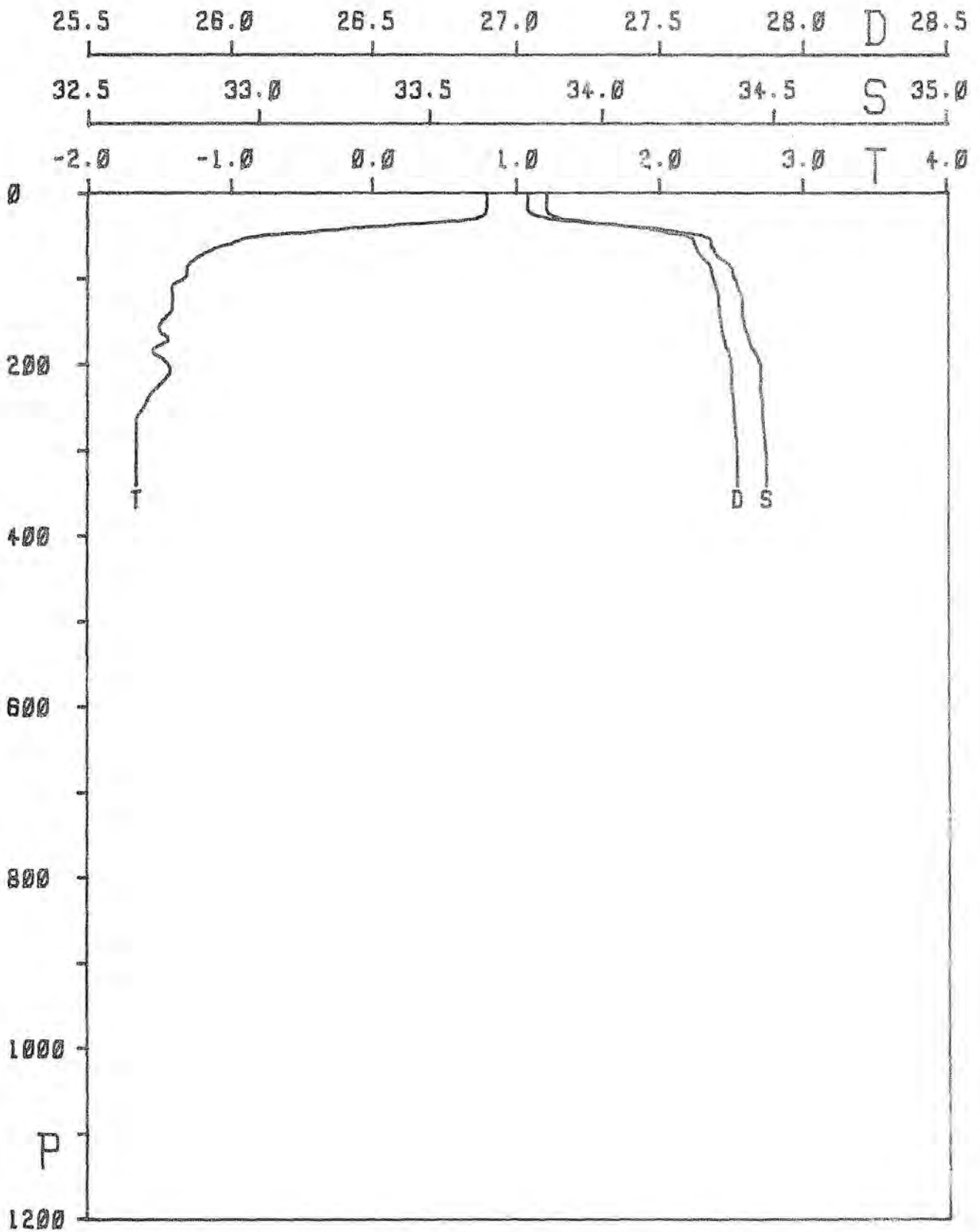
STATION 0332



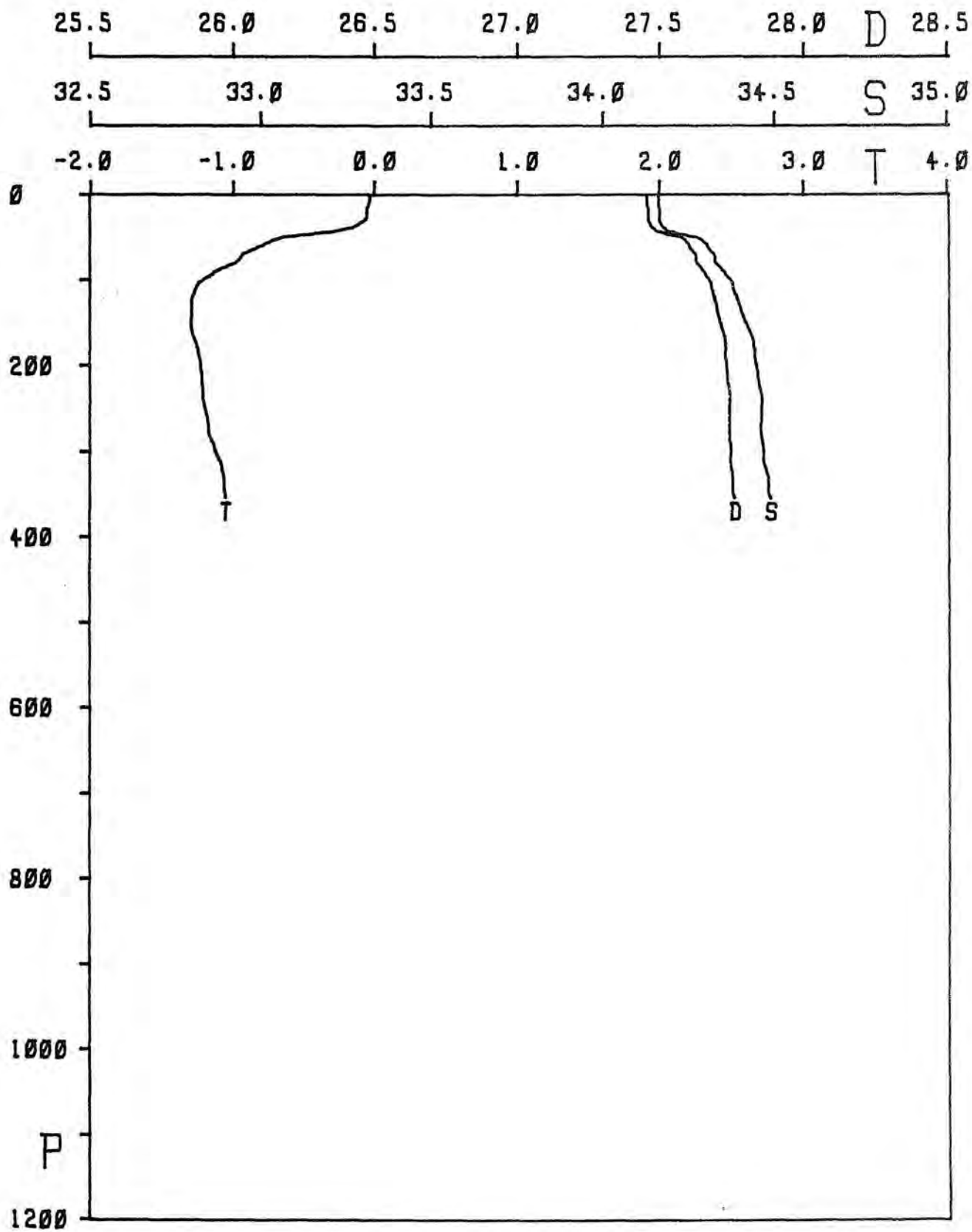
STATION 0333



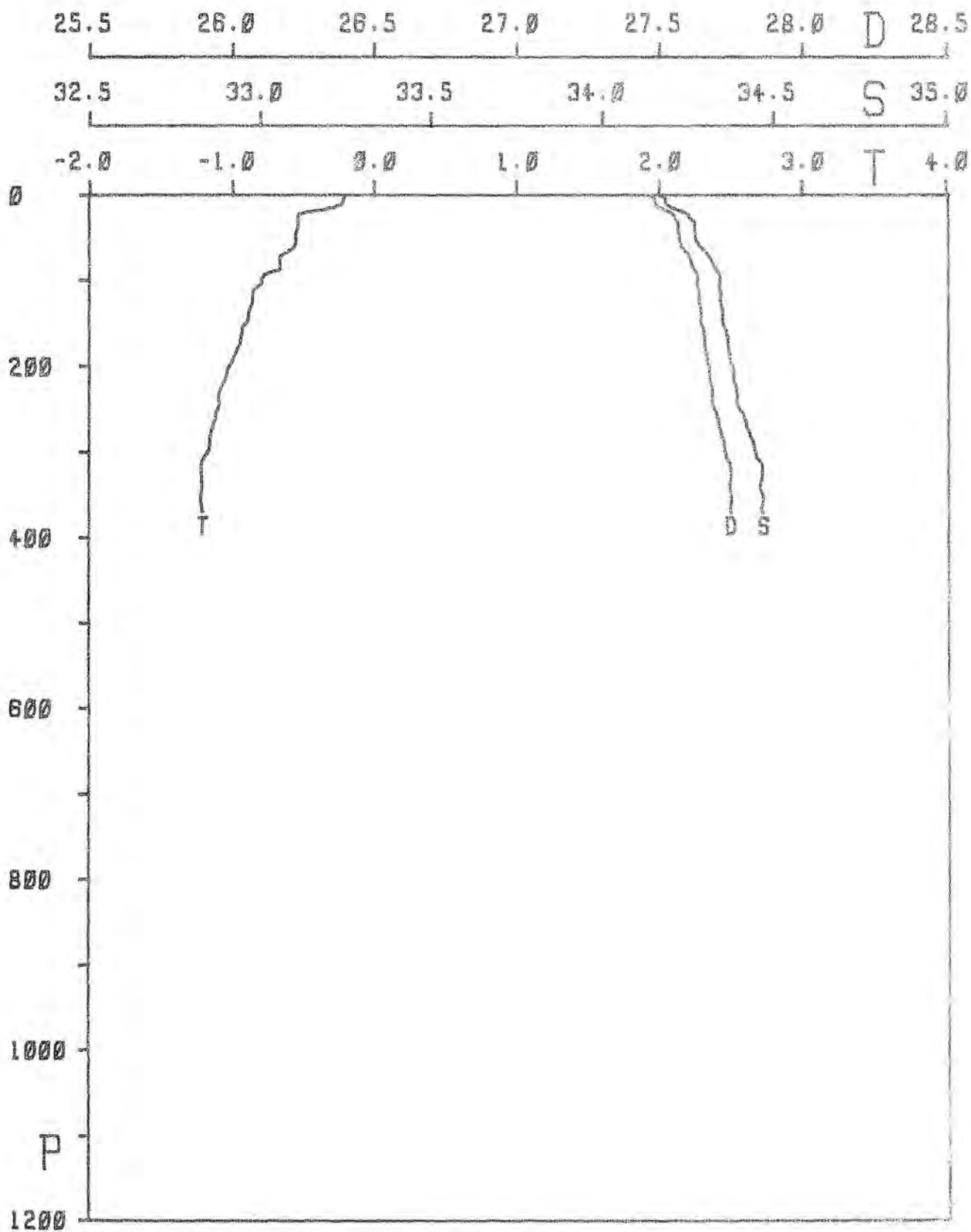
STATION 0338



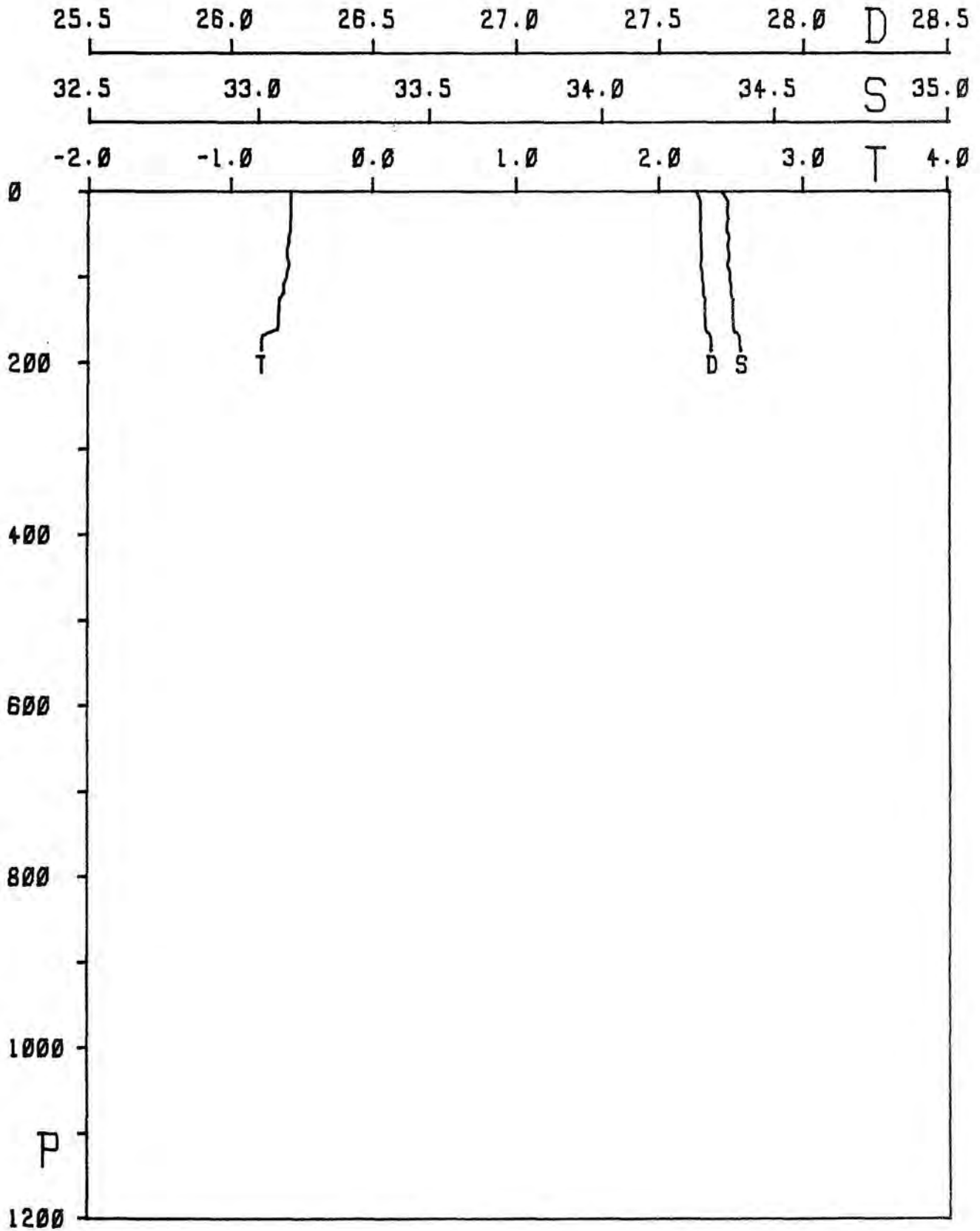
STATION 0339



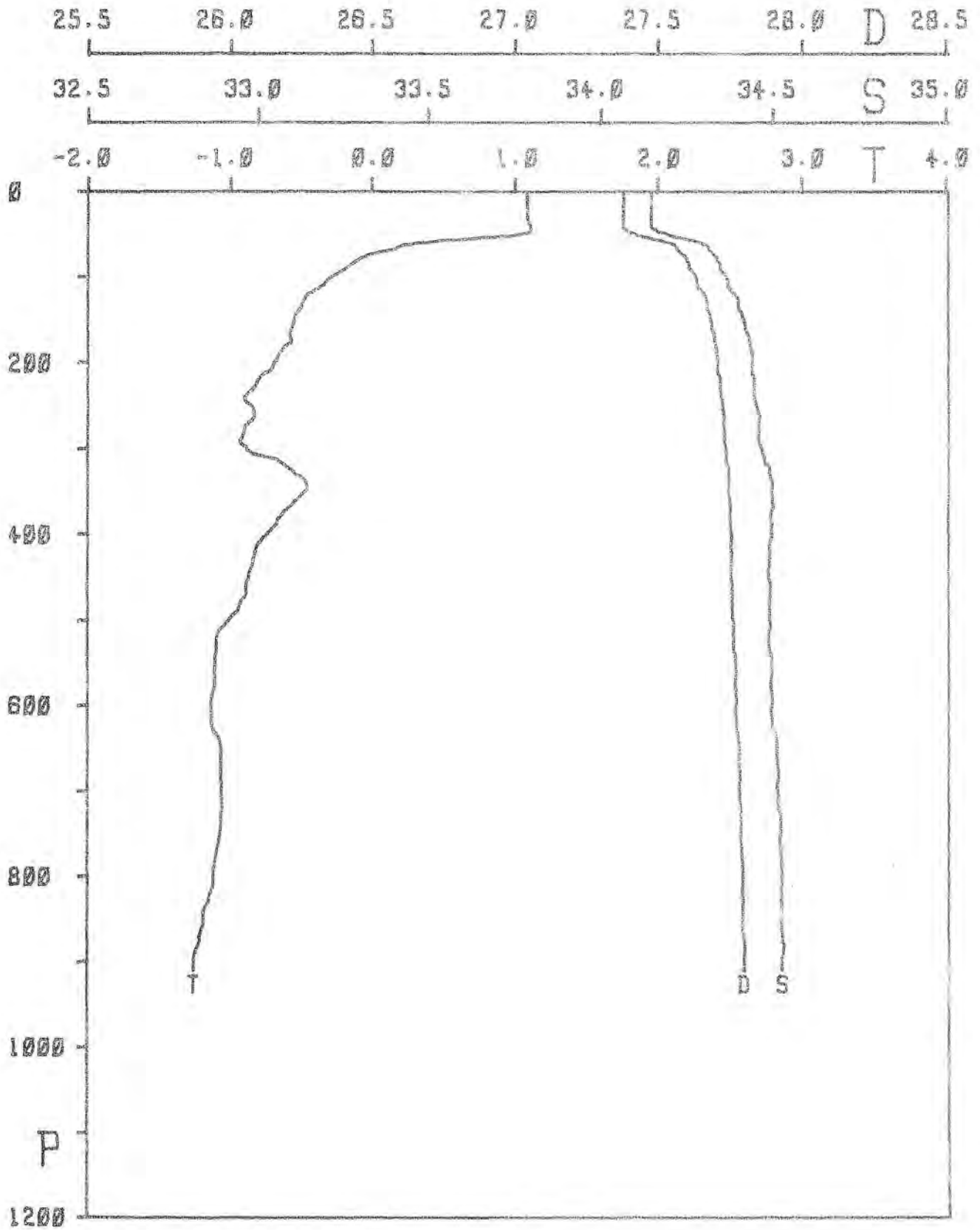
STATION 0346



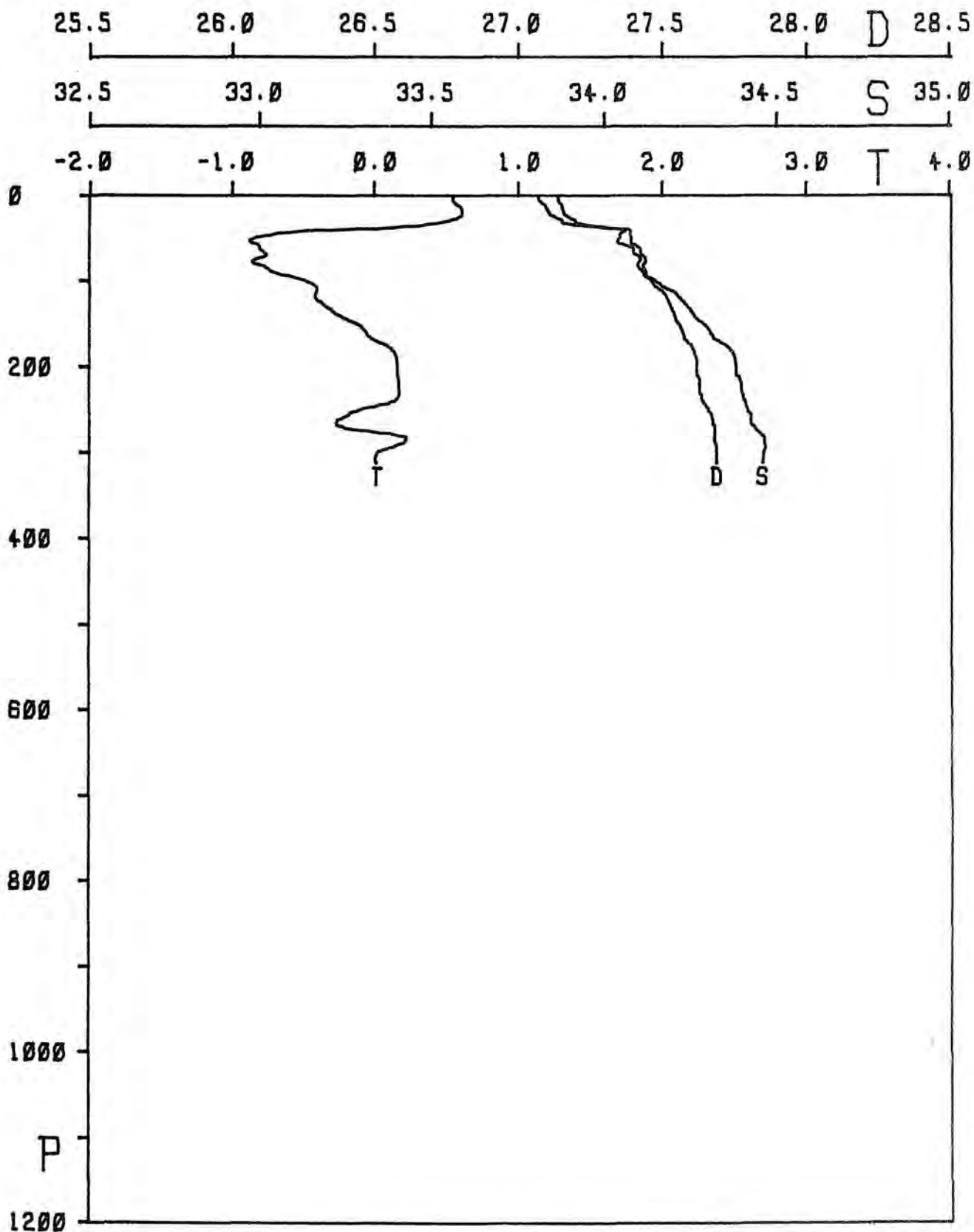
STATION 0348



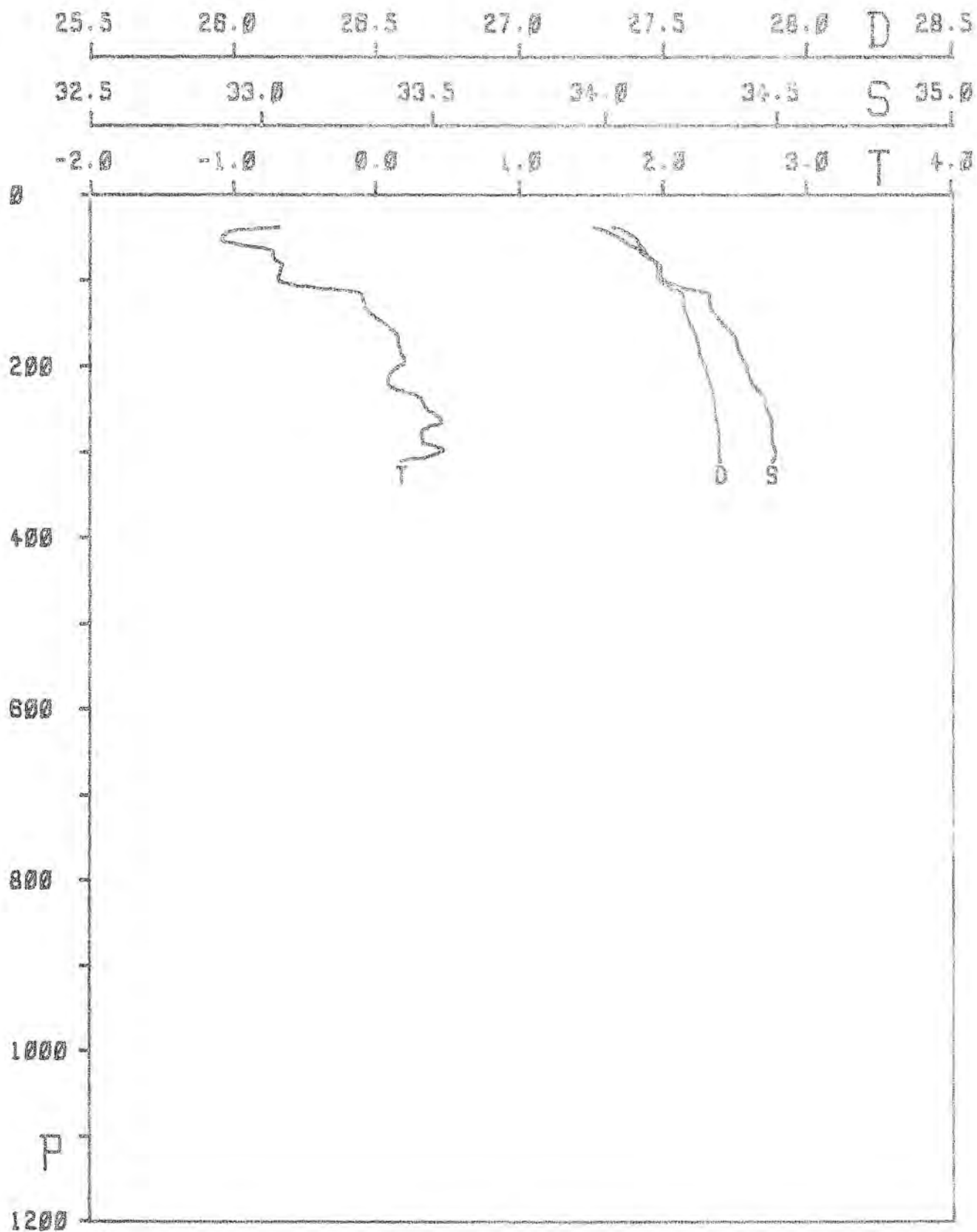
STATION 0349



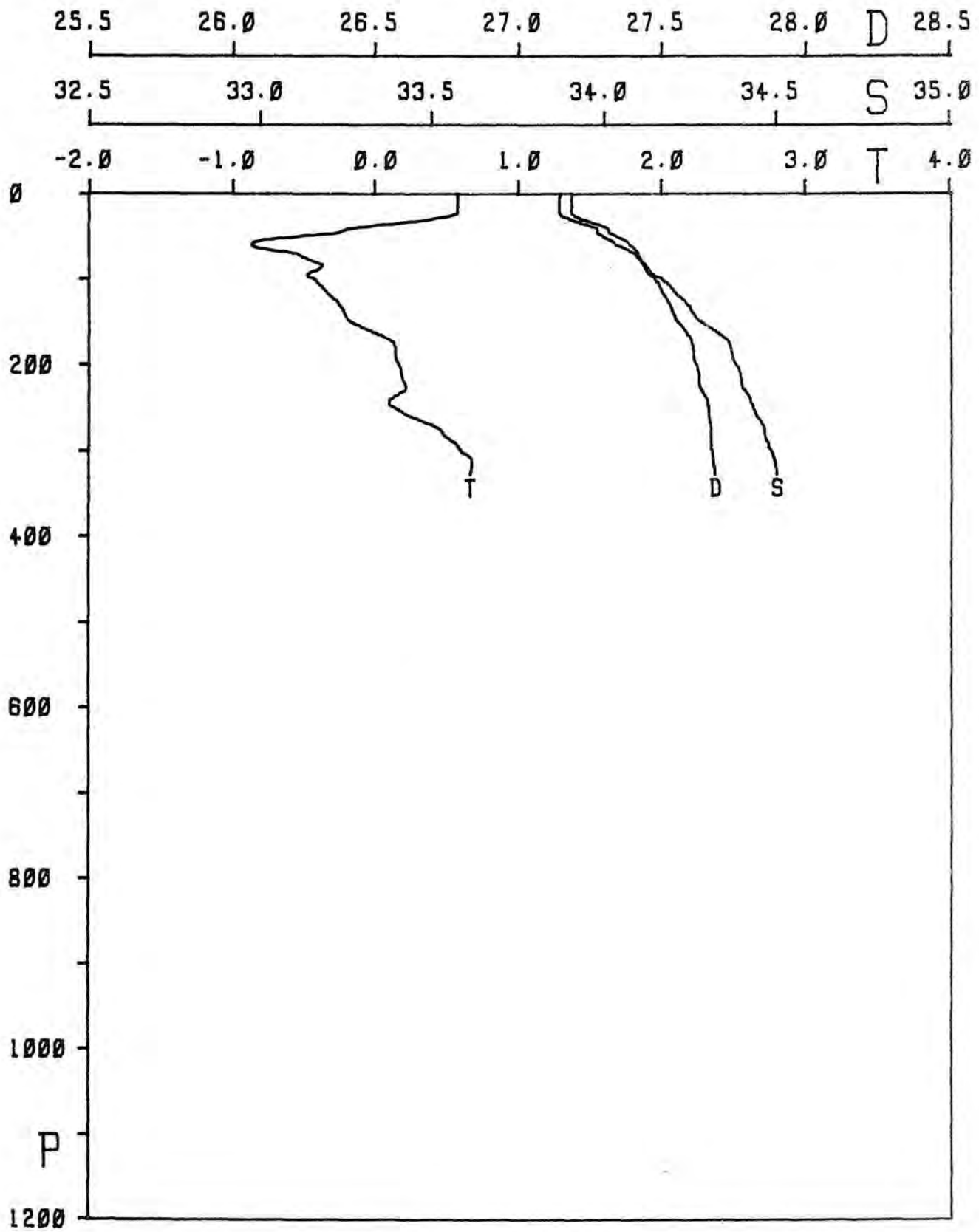
STATION 0350 /1



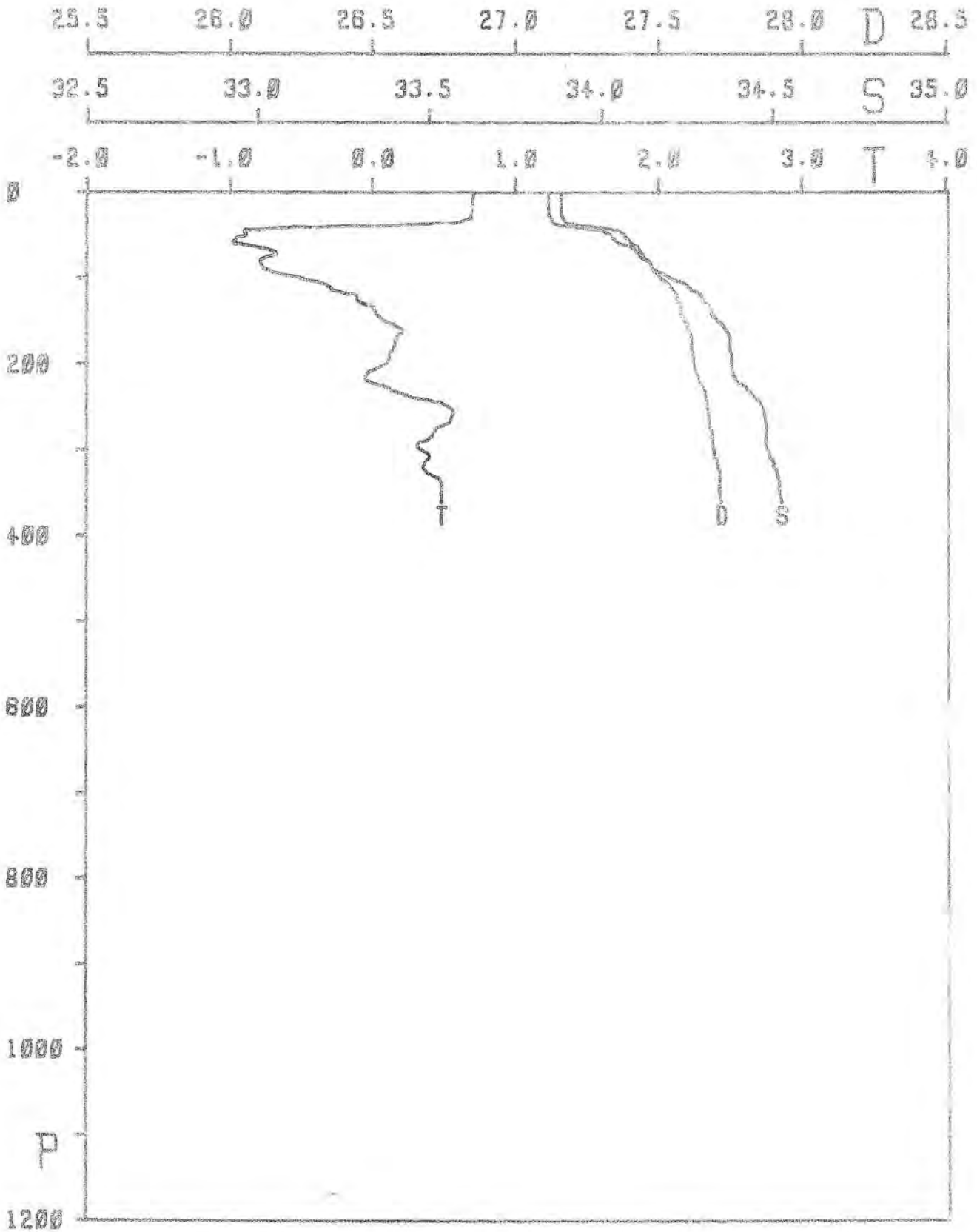
STATION 0350/3



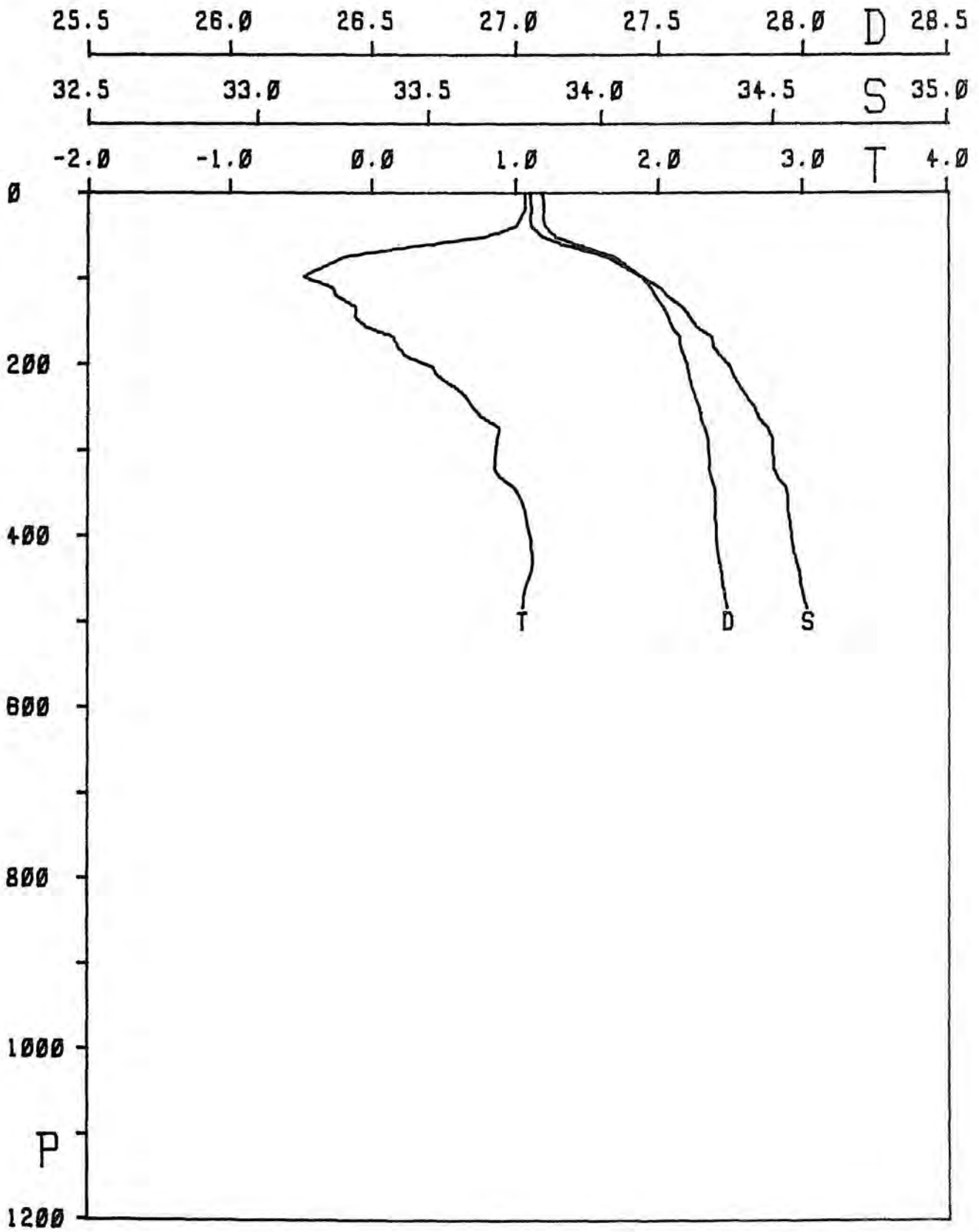
STATION 0350 / 4



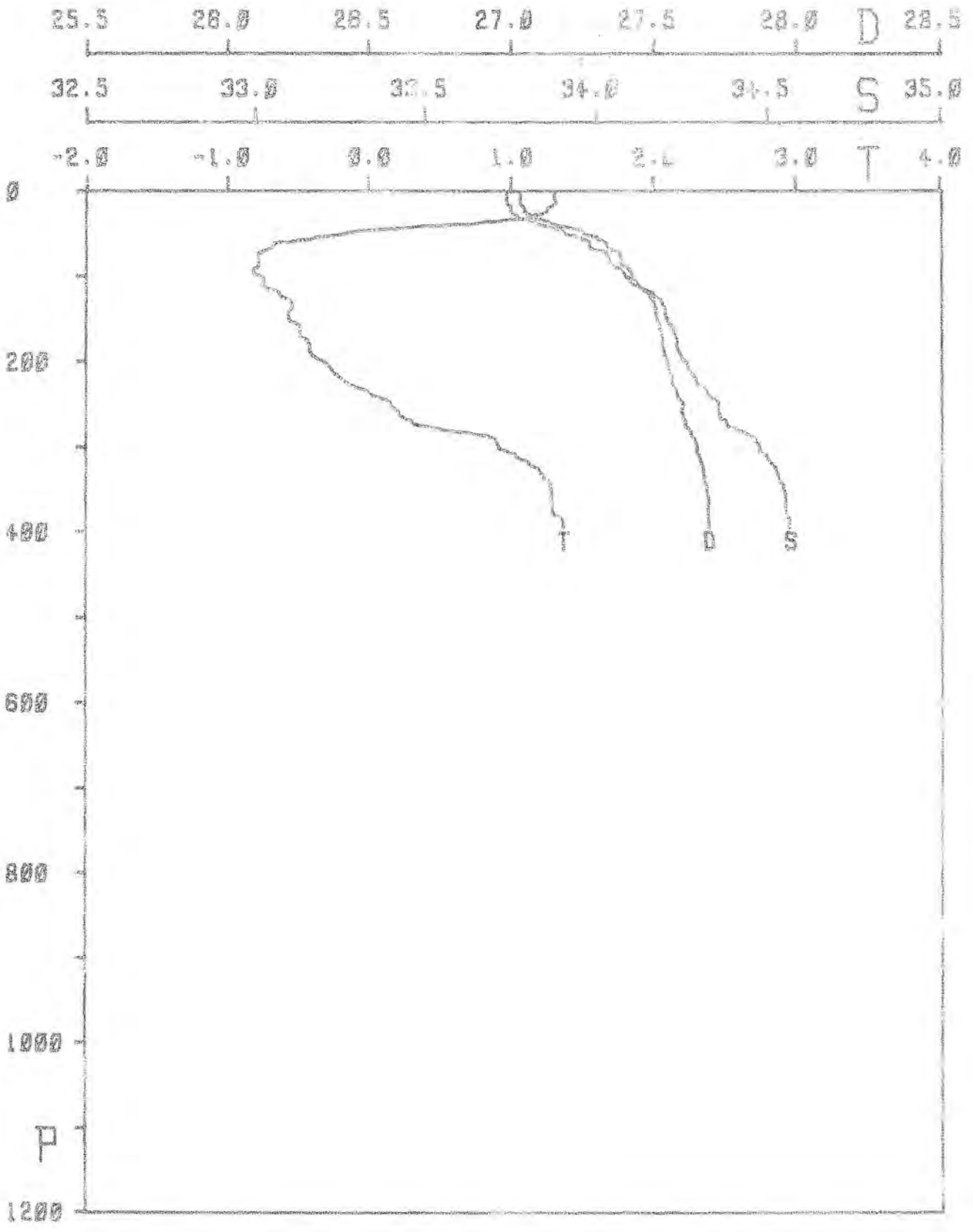
STATION 0350 /5



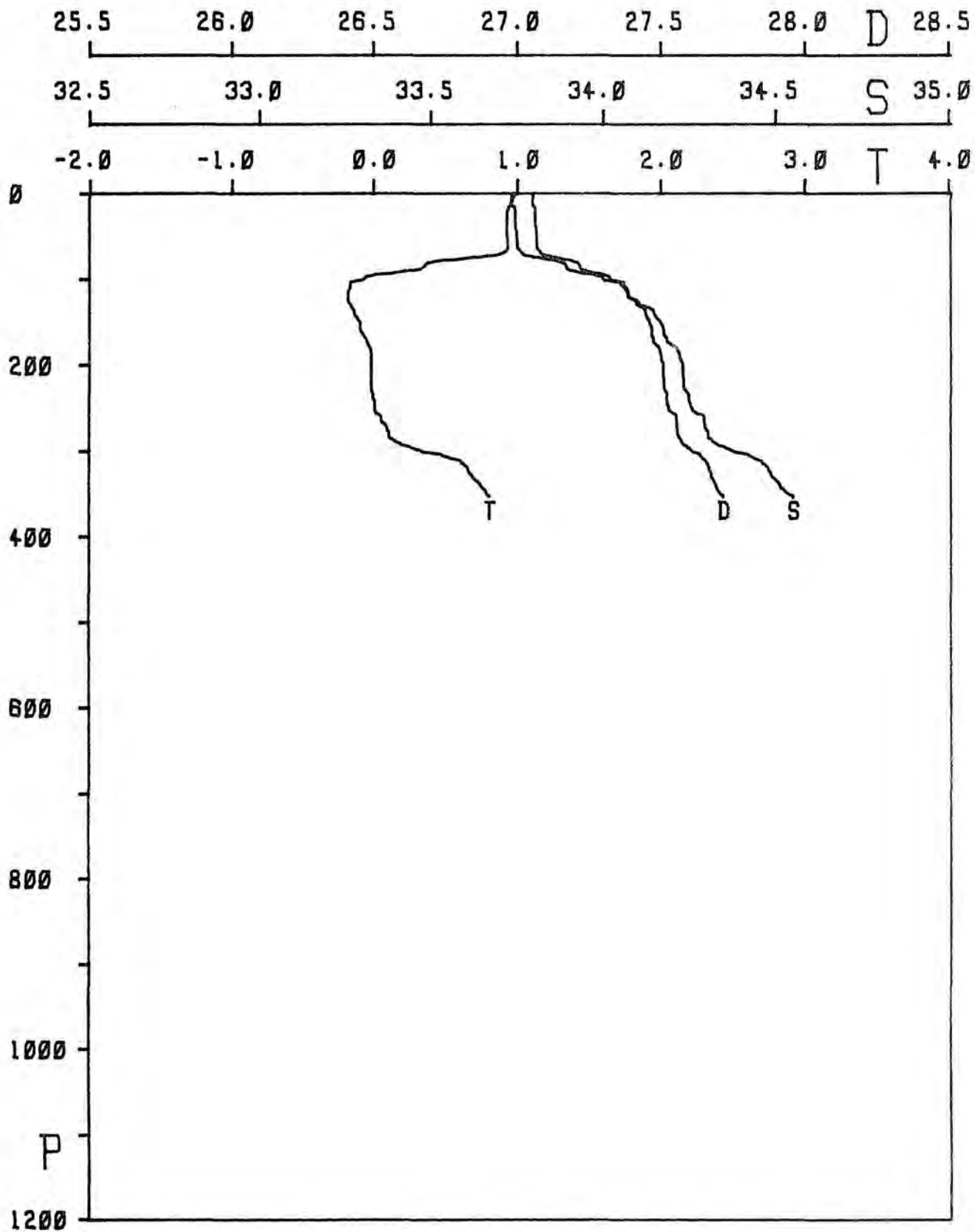
STATION 0356



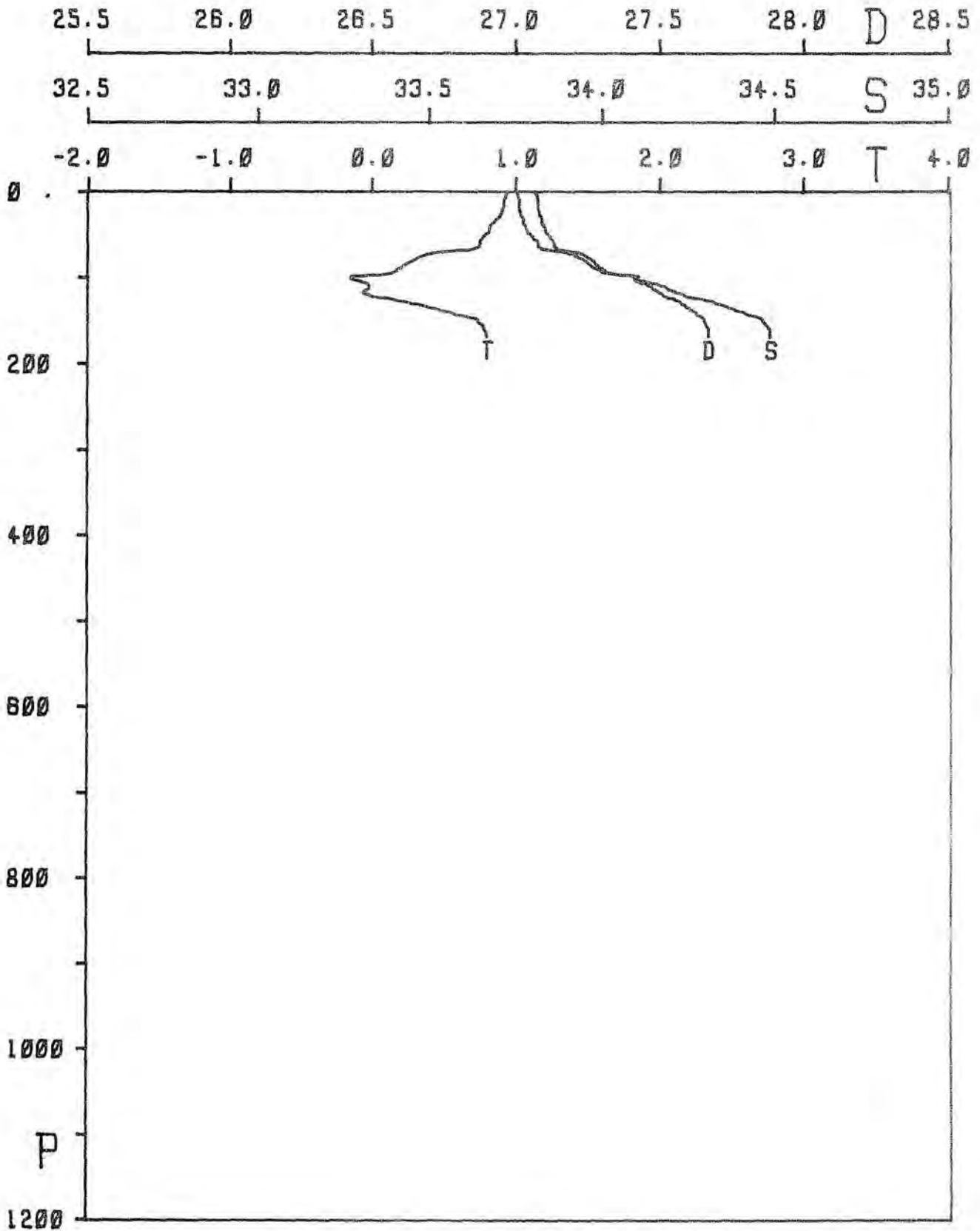
STATION 0357



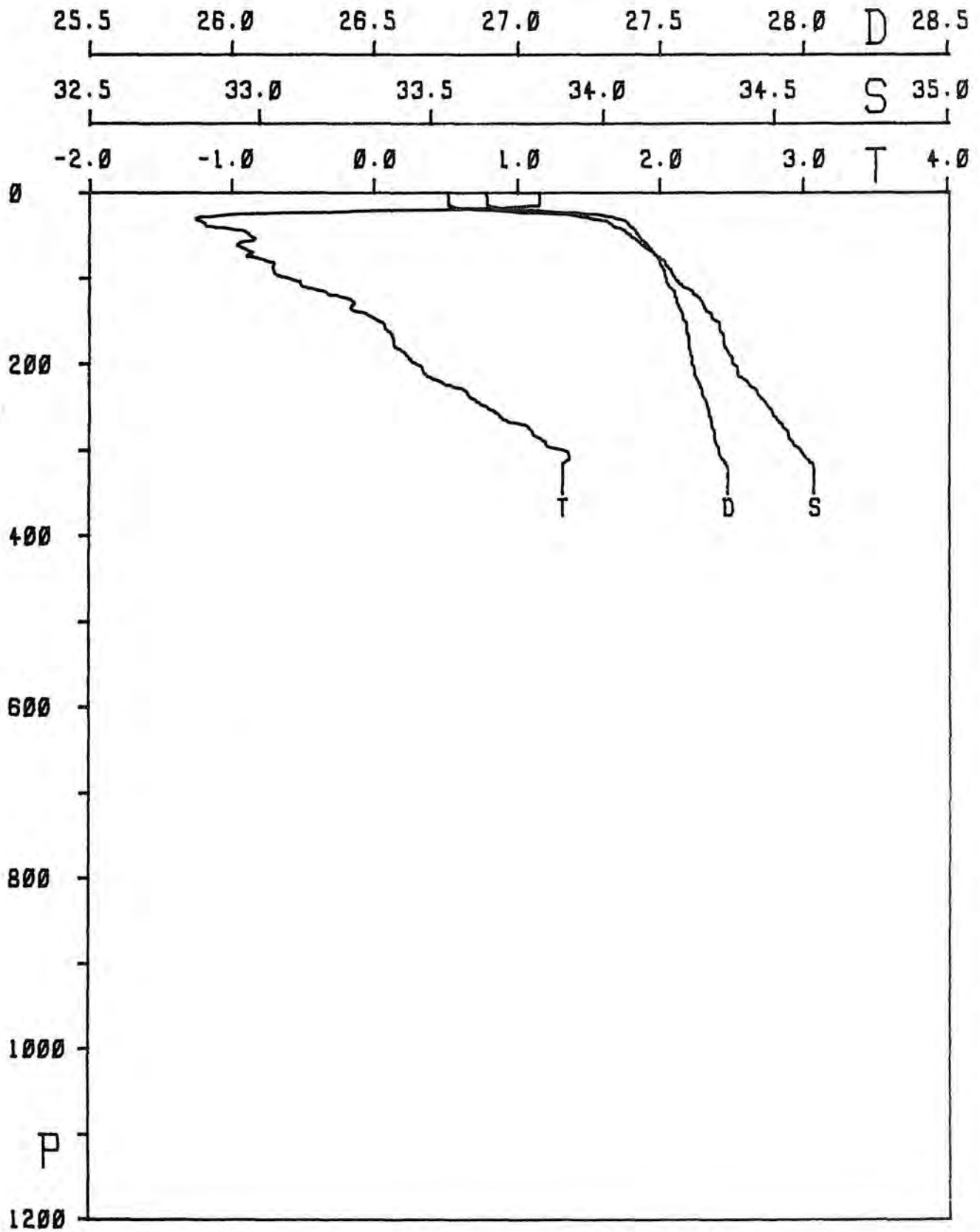
STATION Ø358



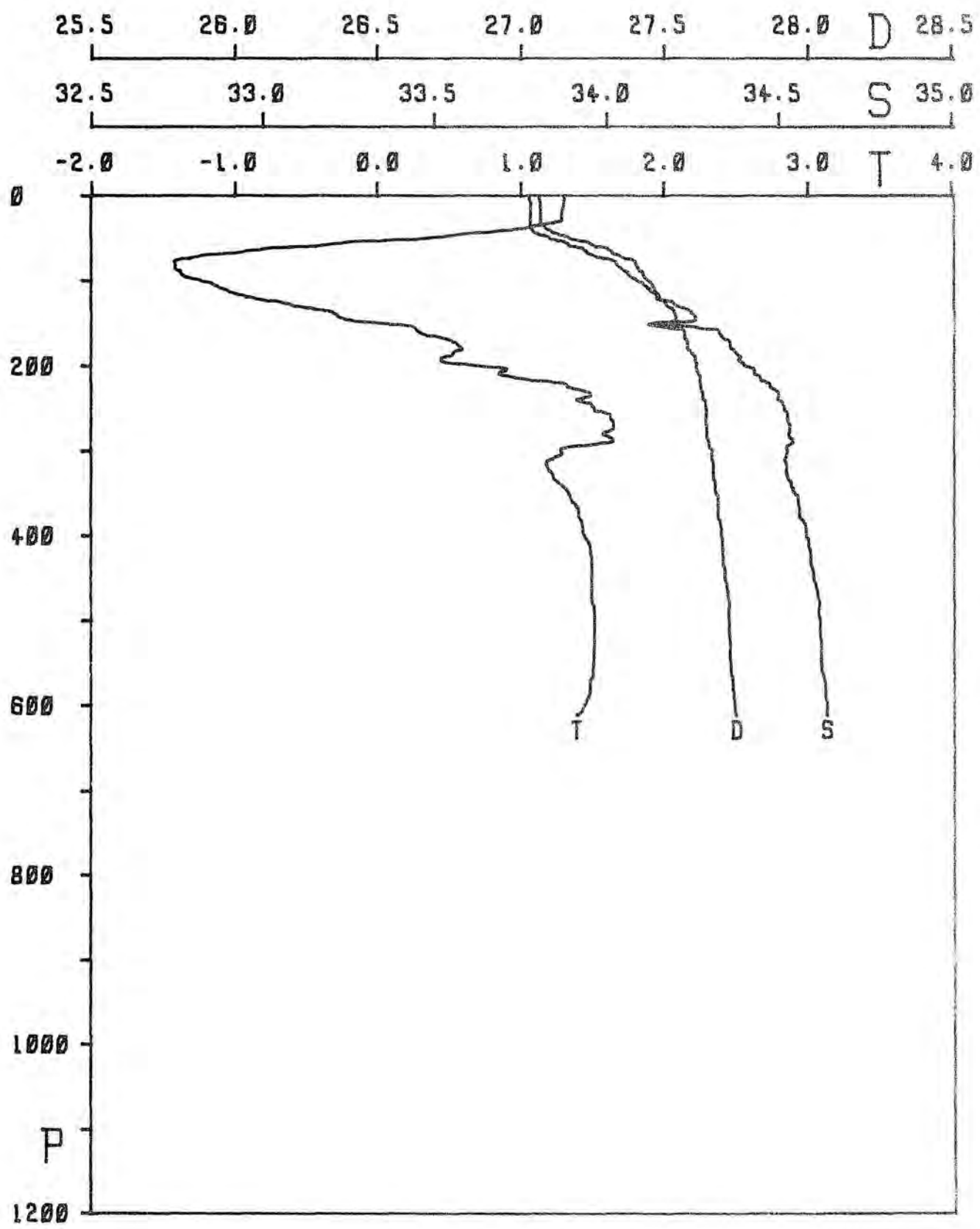
STATION 0359



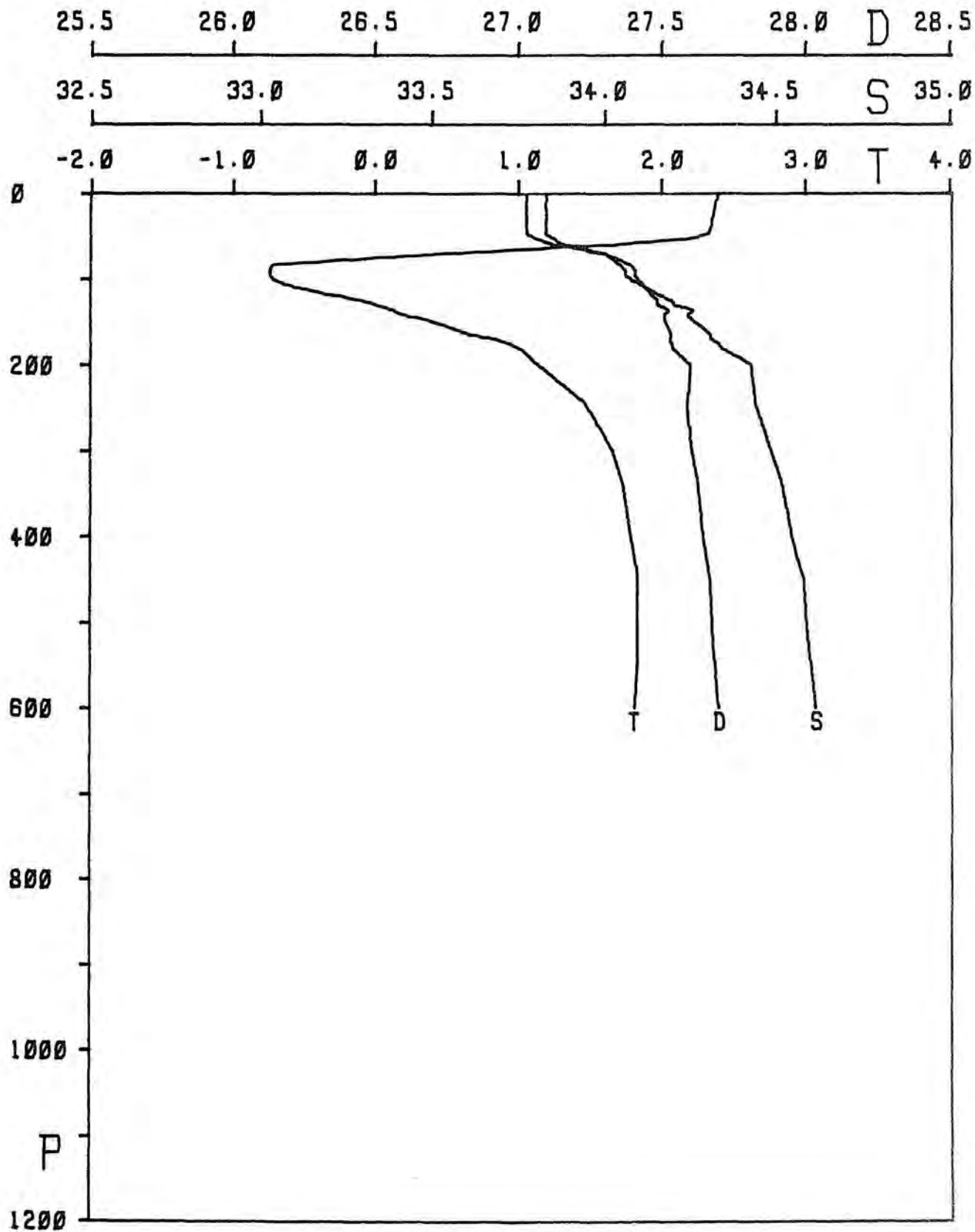
STATION 0360



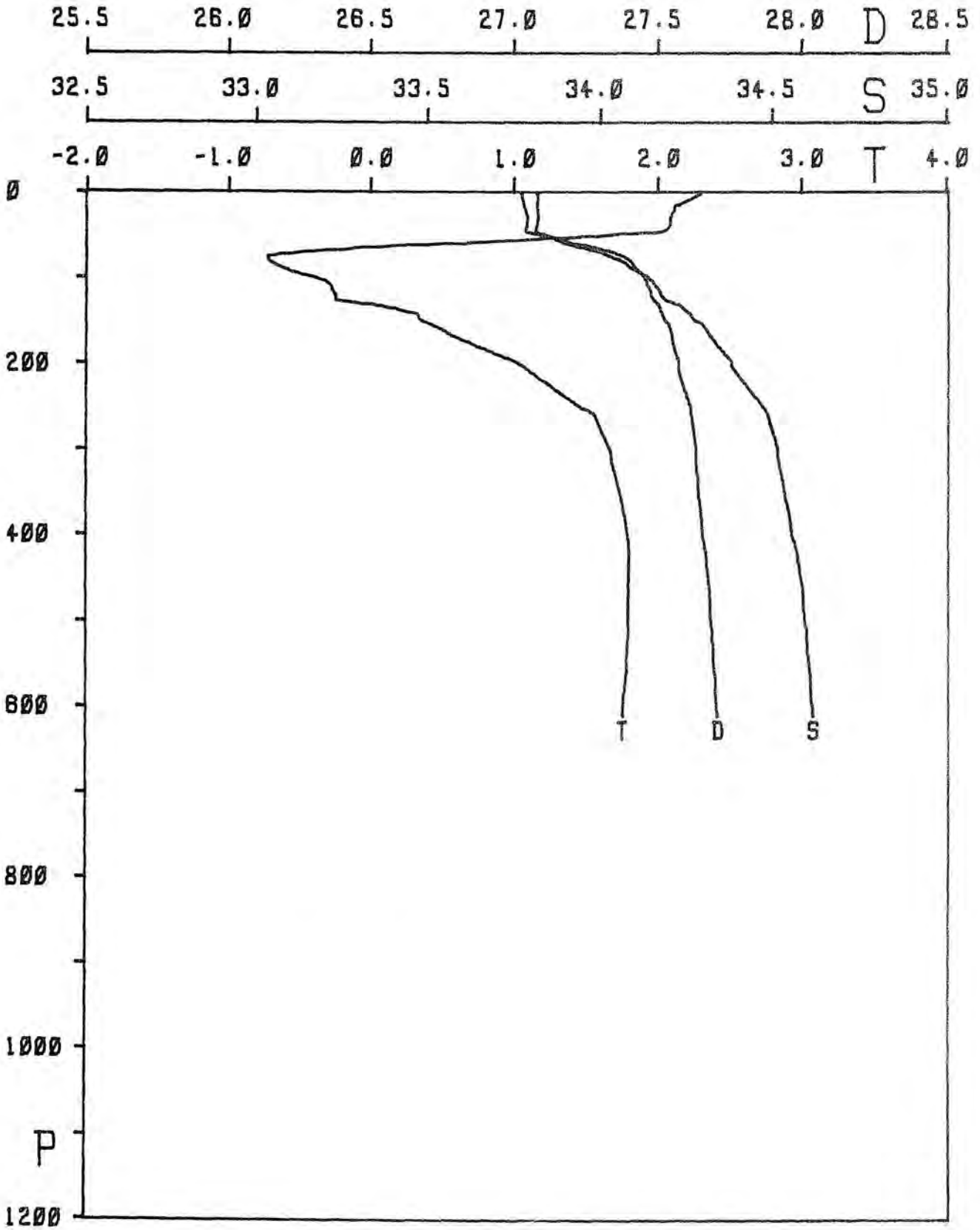
STATION 0361



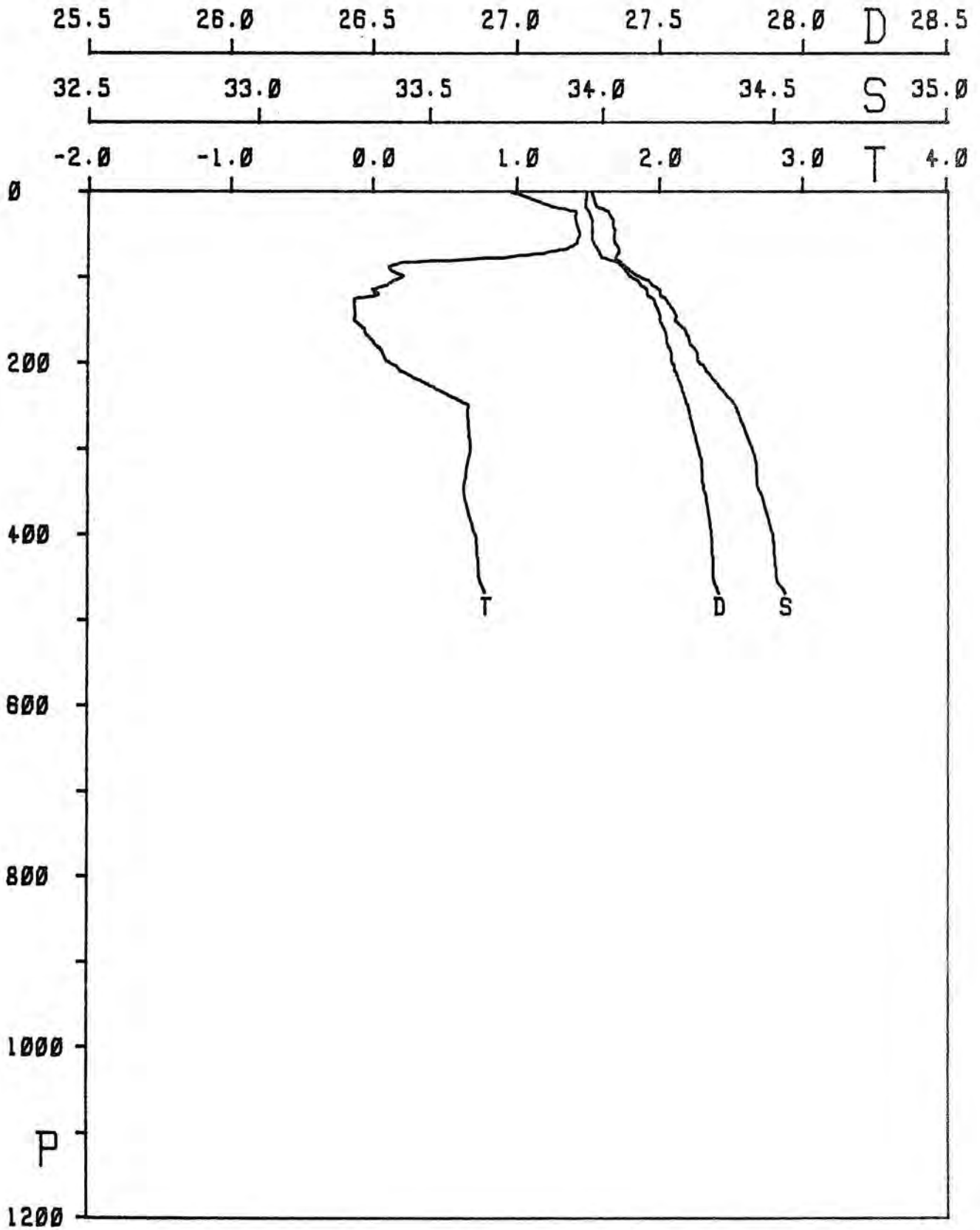
STATION 0364



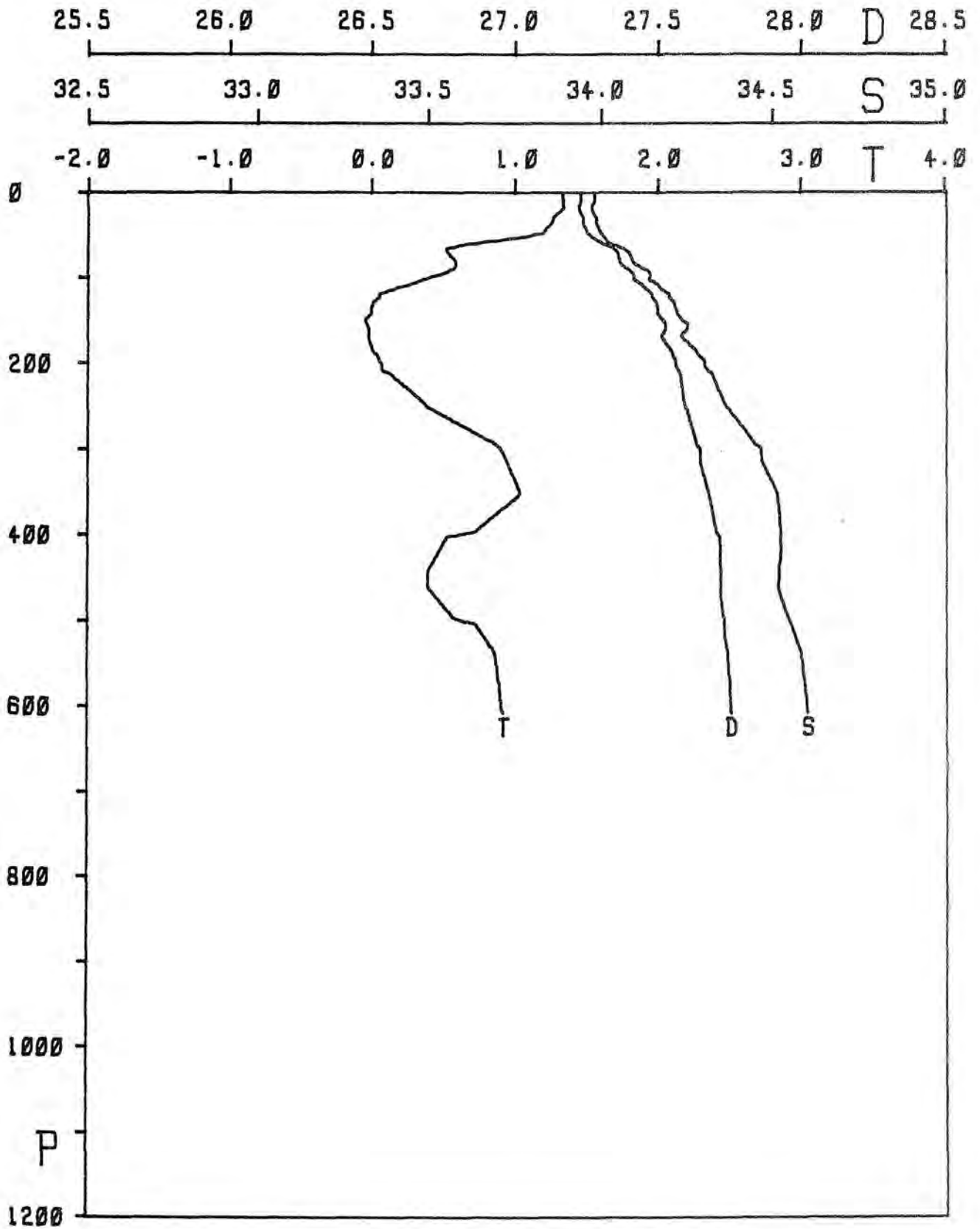
STATION 0365



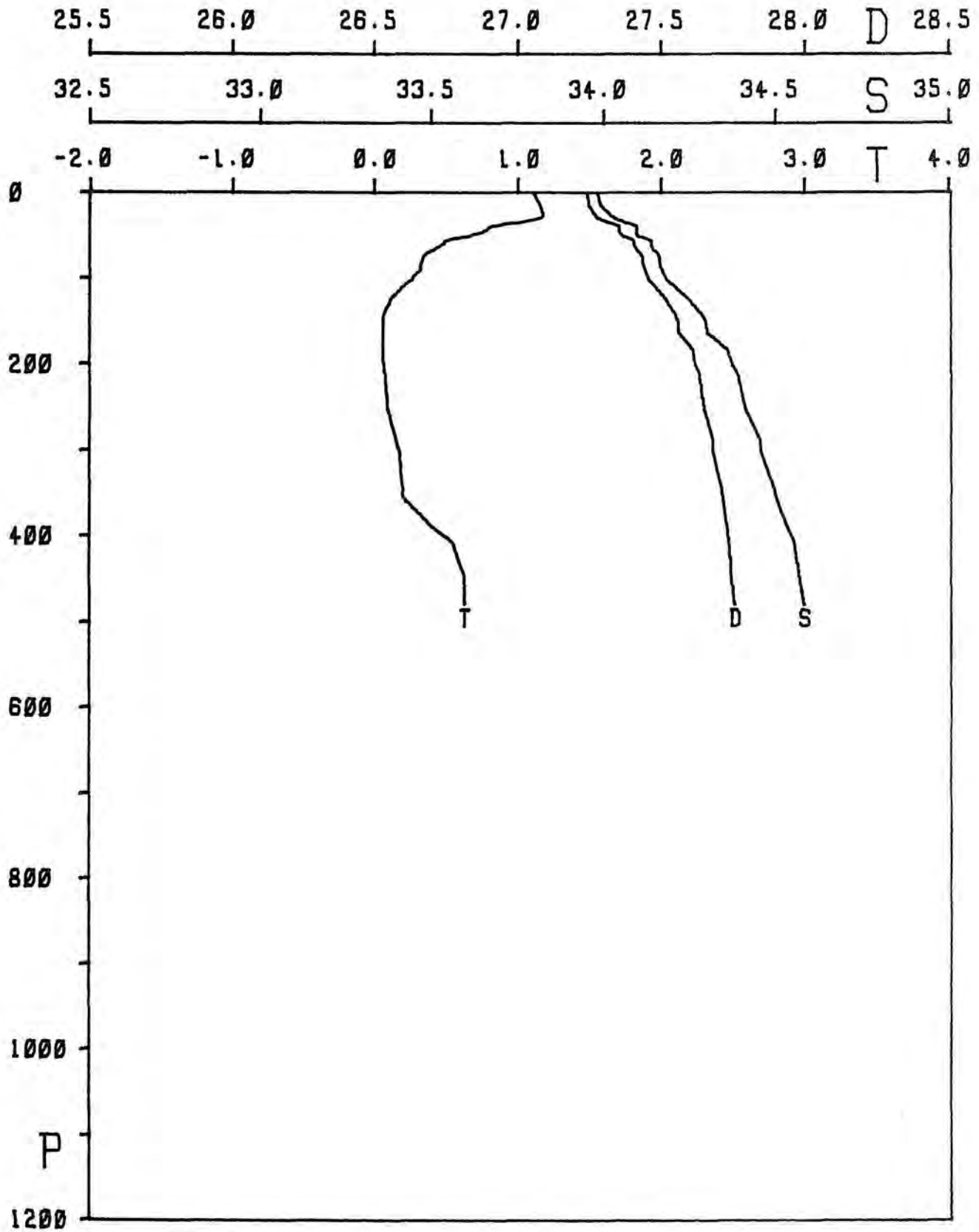
STATION 0366



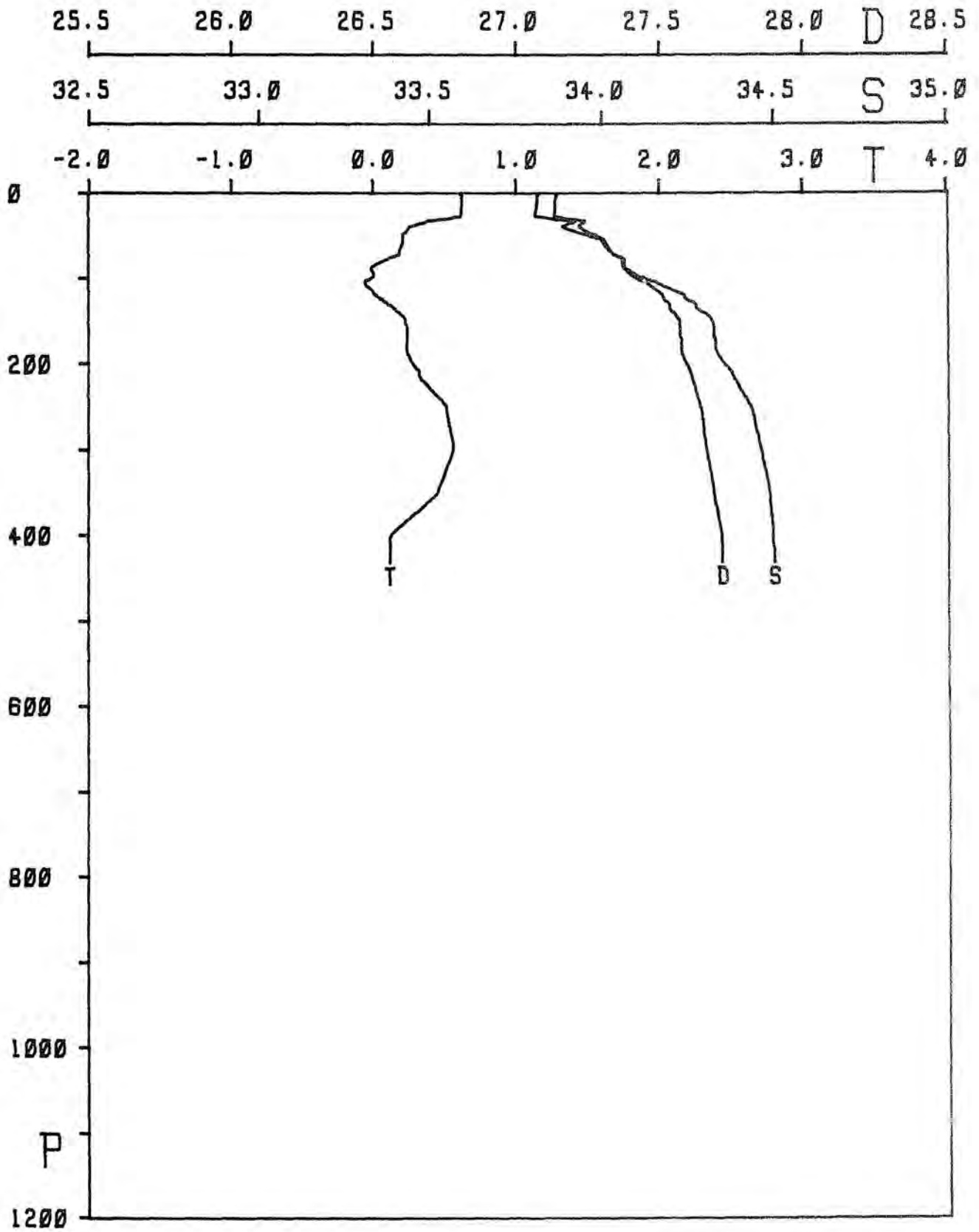
STATION 0367



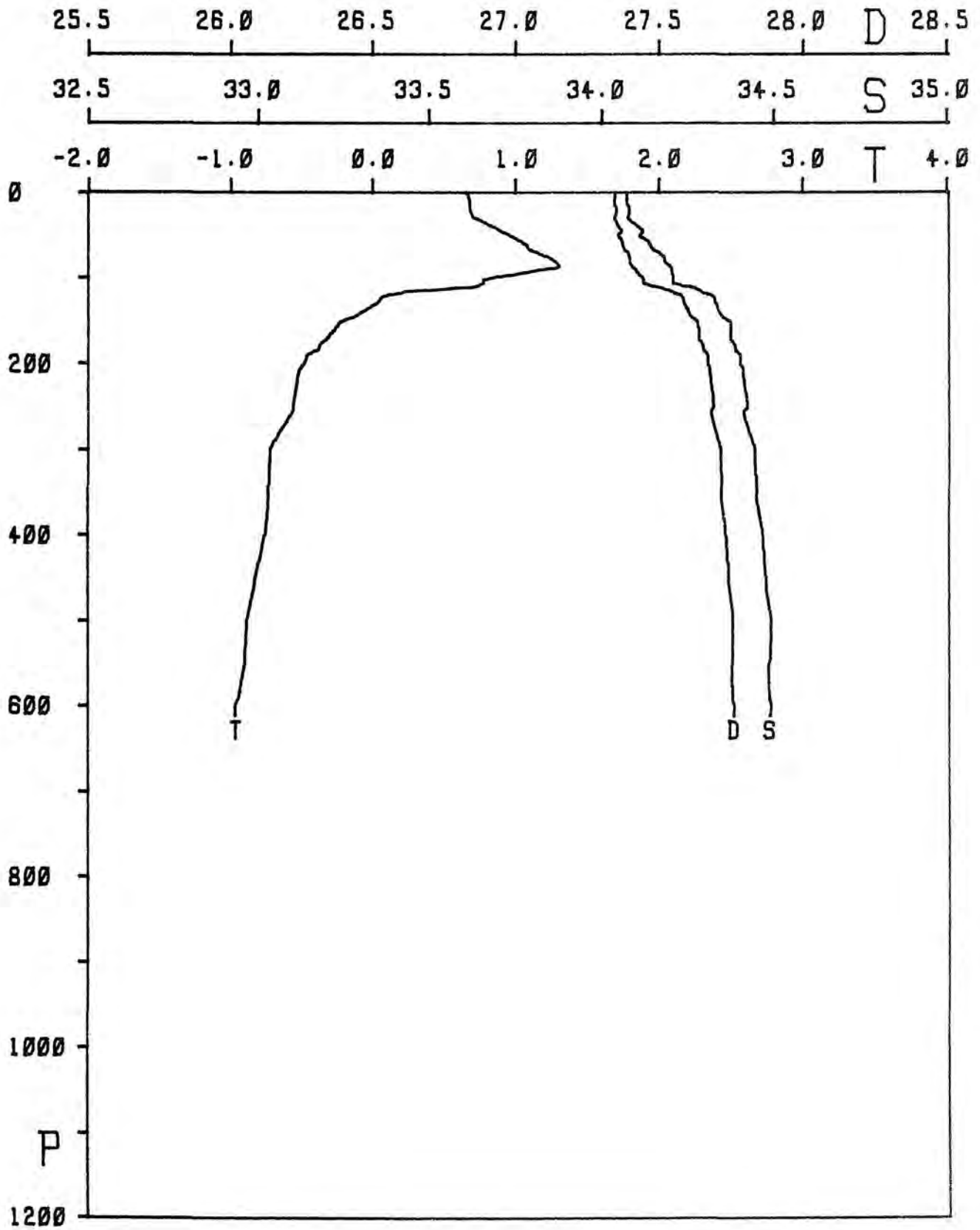
STATION 0369



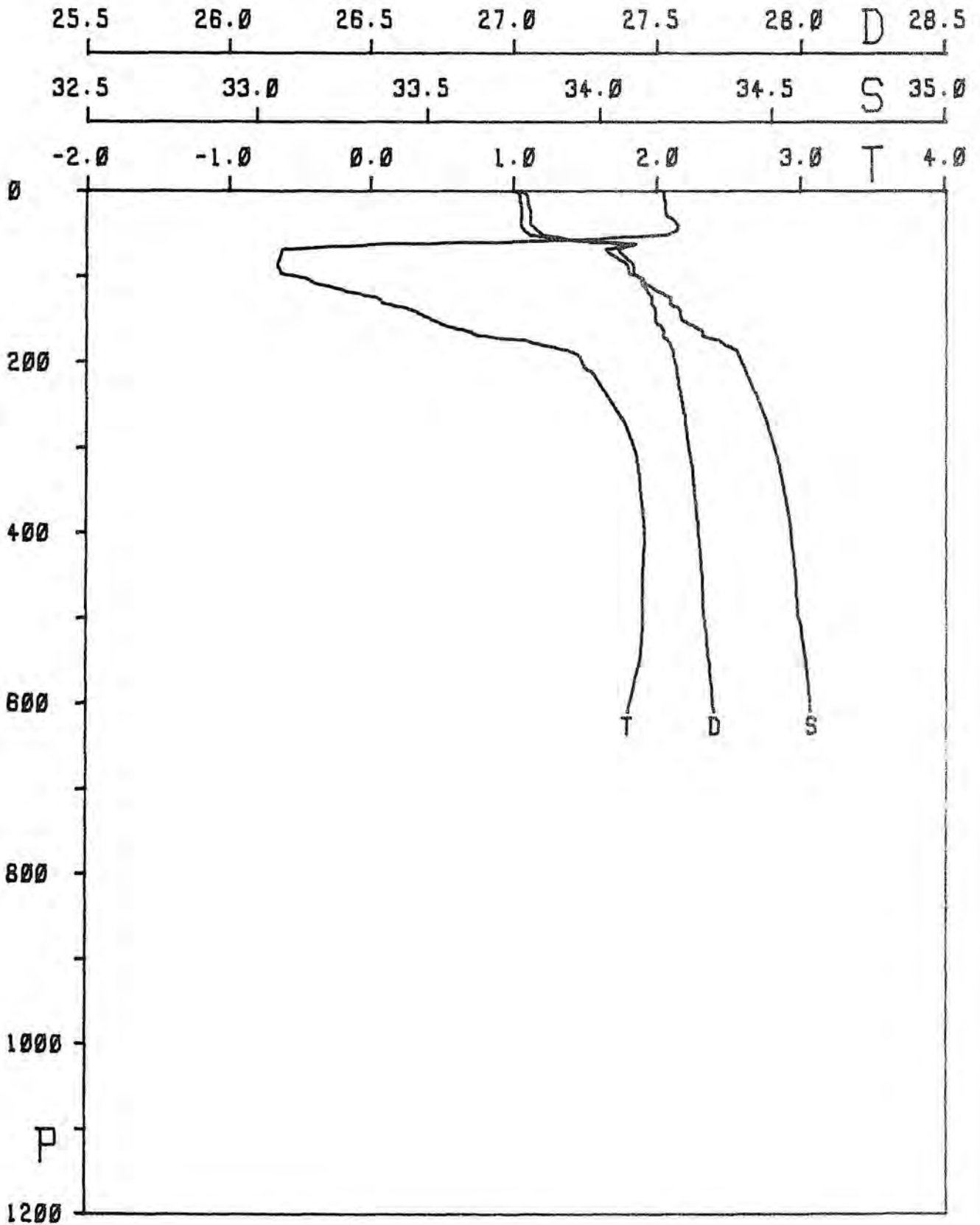
STATION 0370



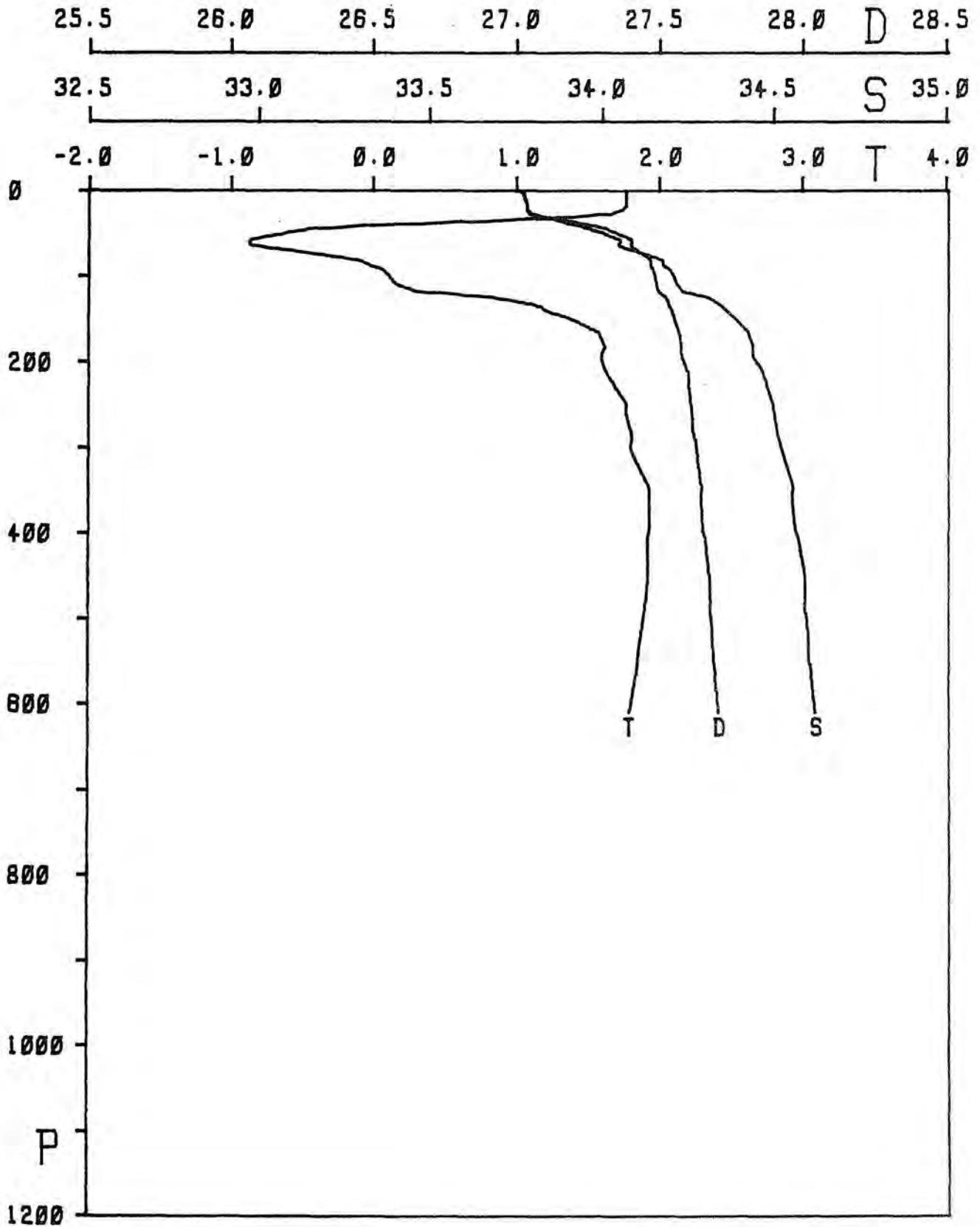
STATION Ø371



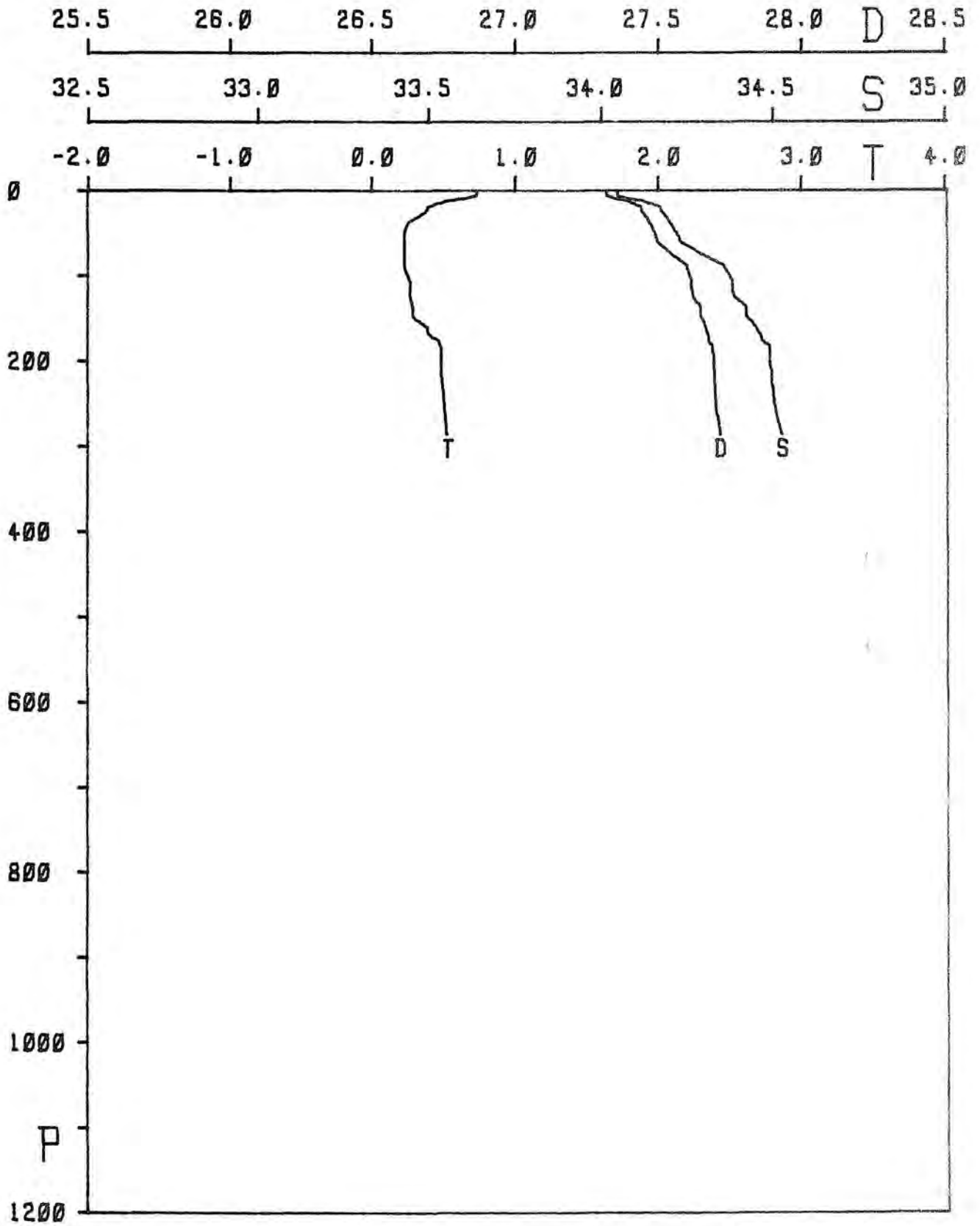
STATION 0372



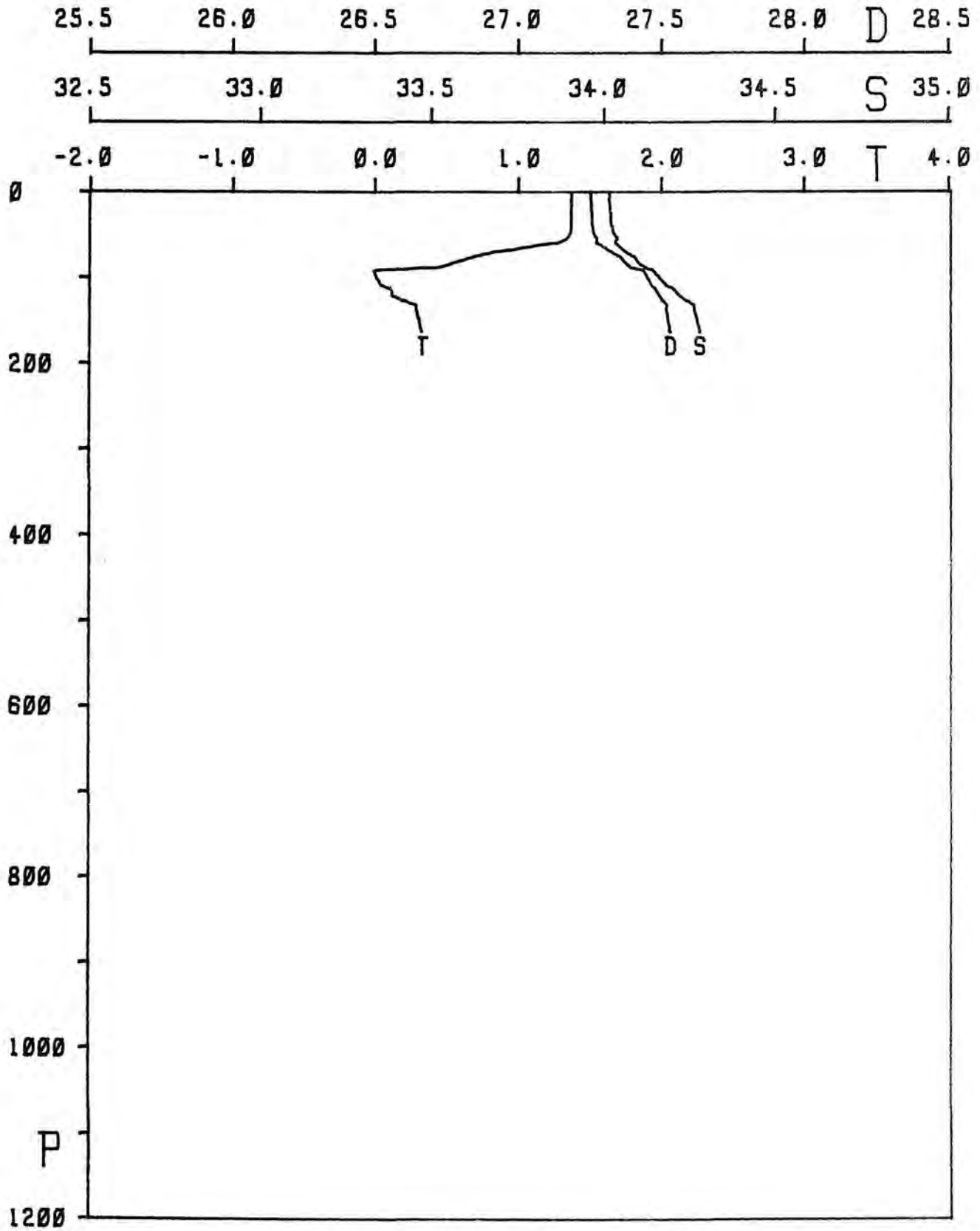
STATION 0373



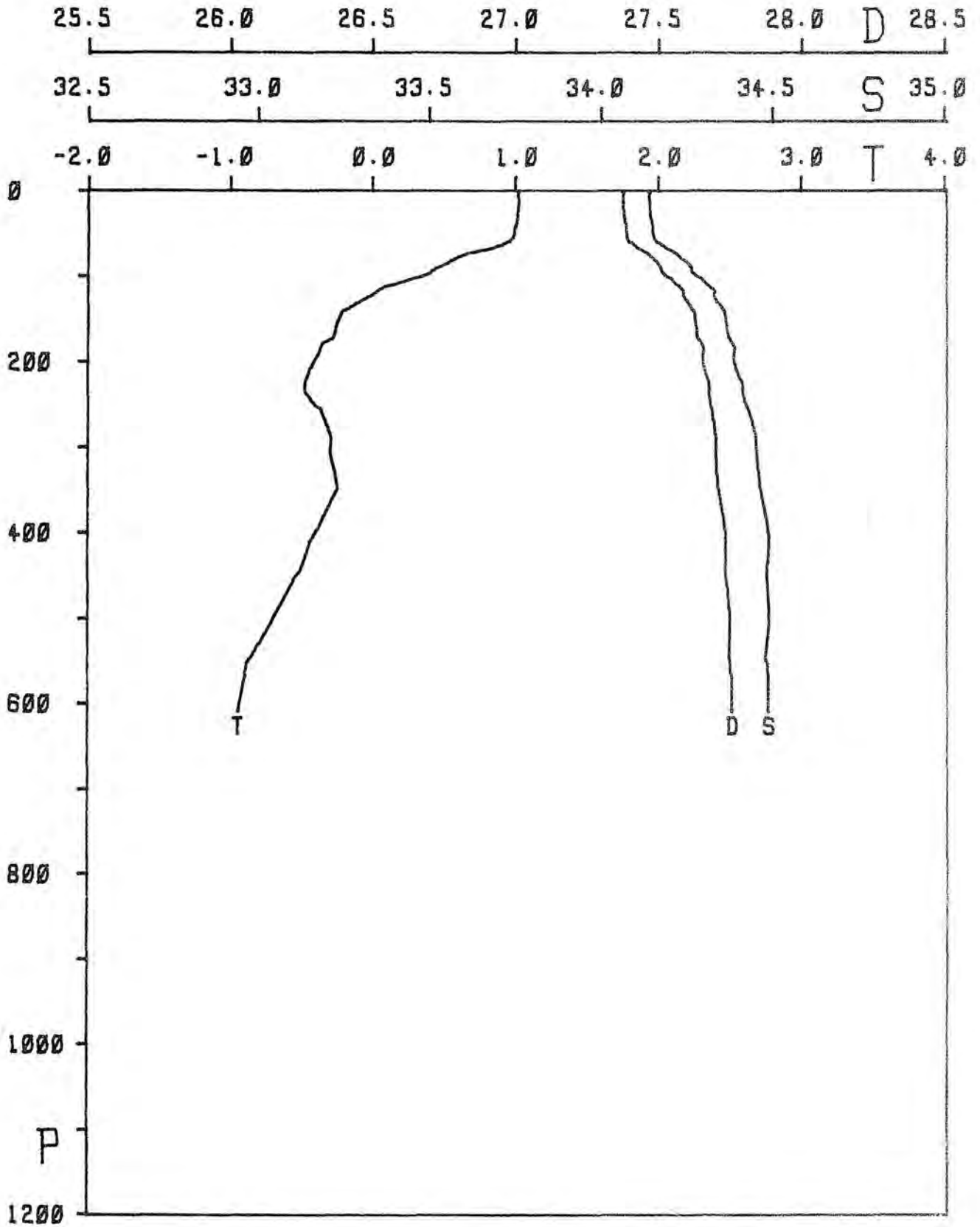
STATION 0376



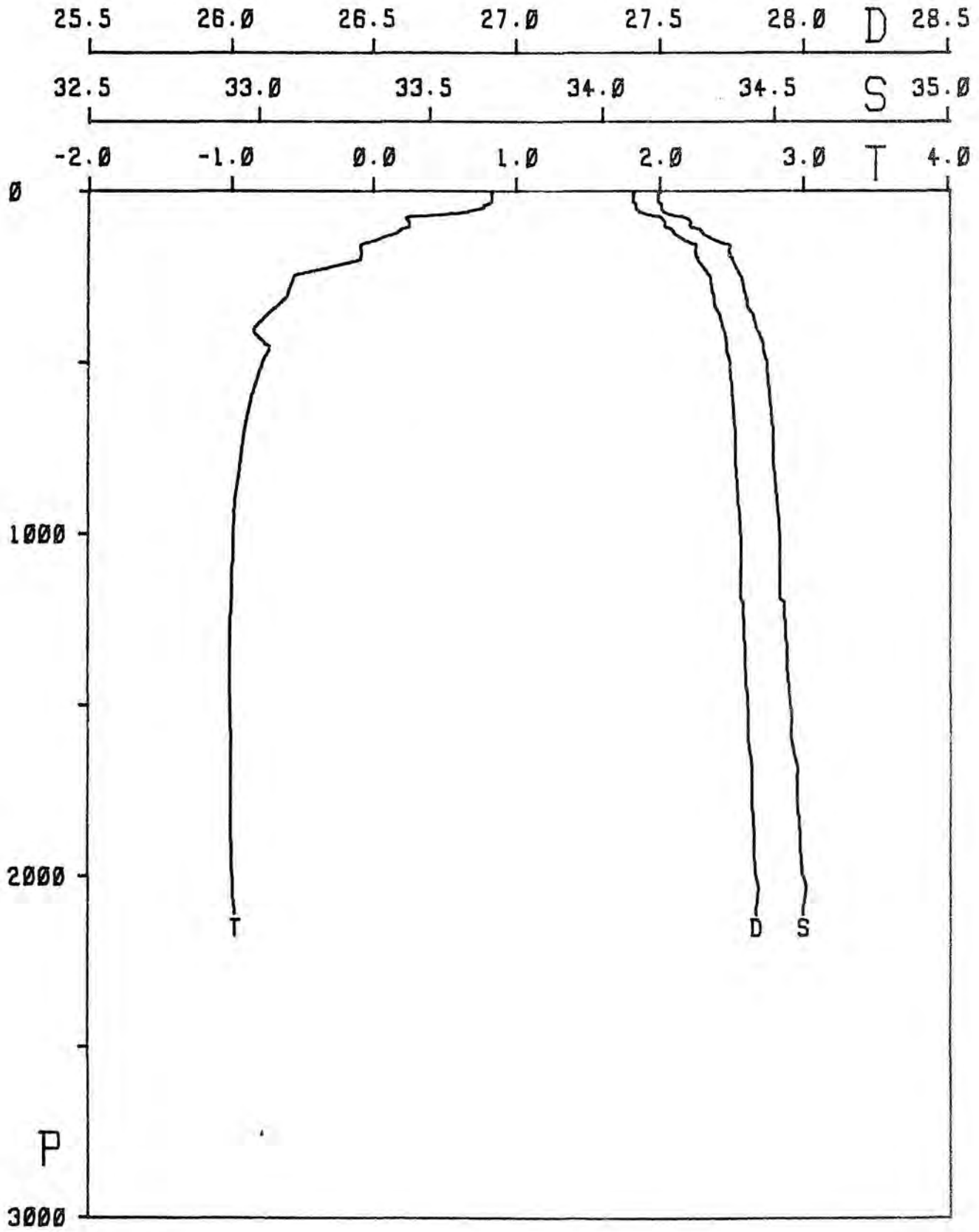
STATION Ø377



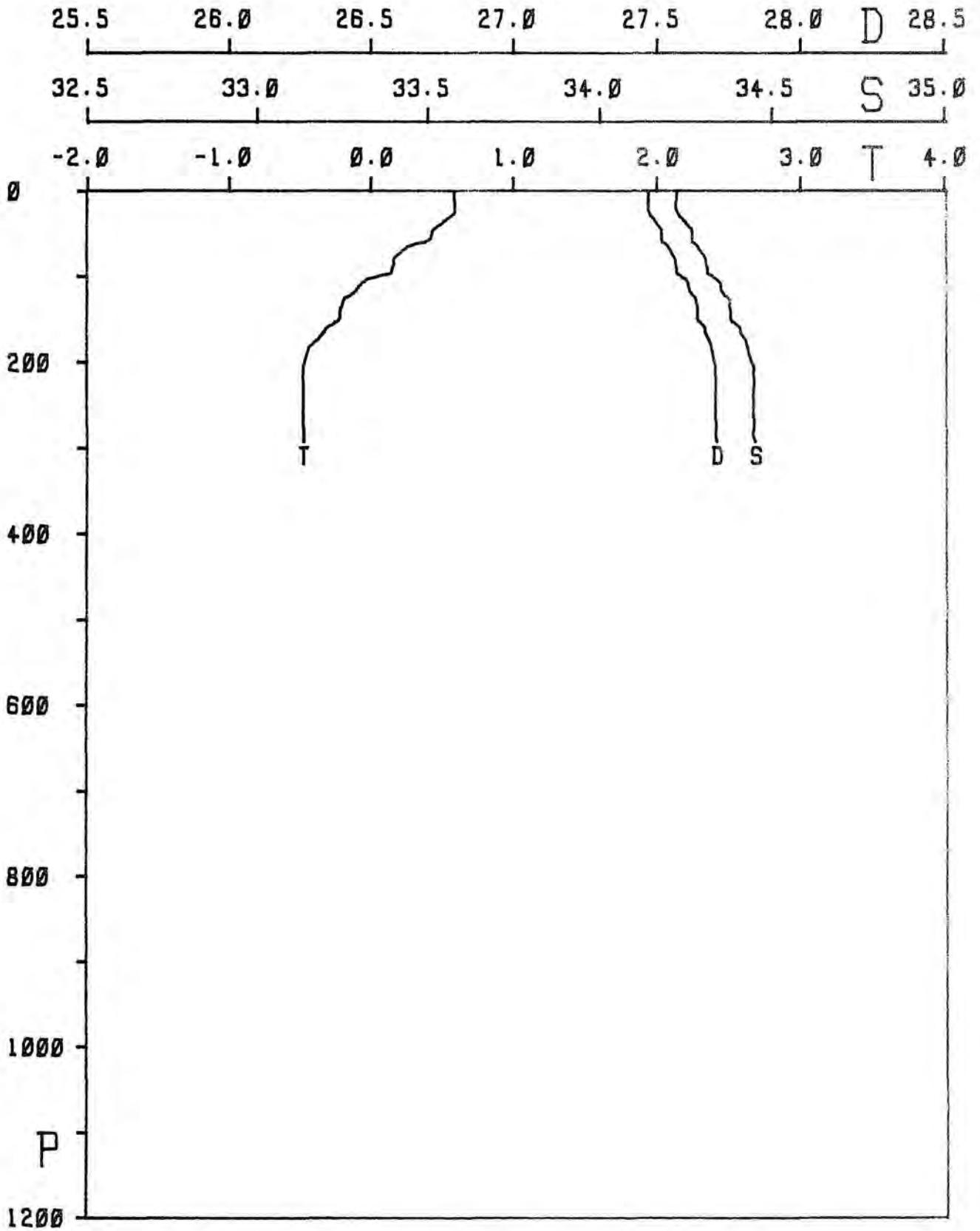
STATION Ø378



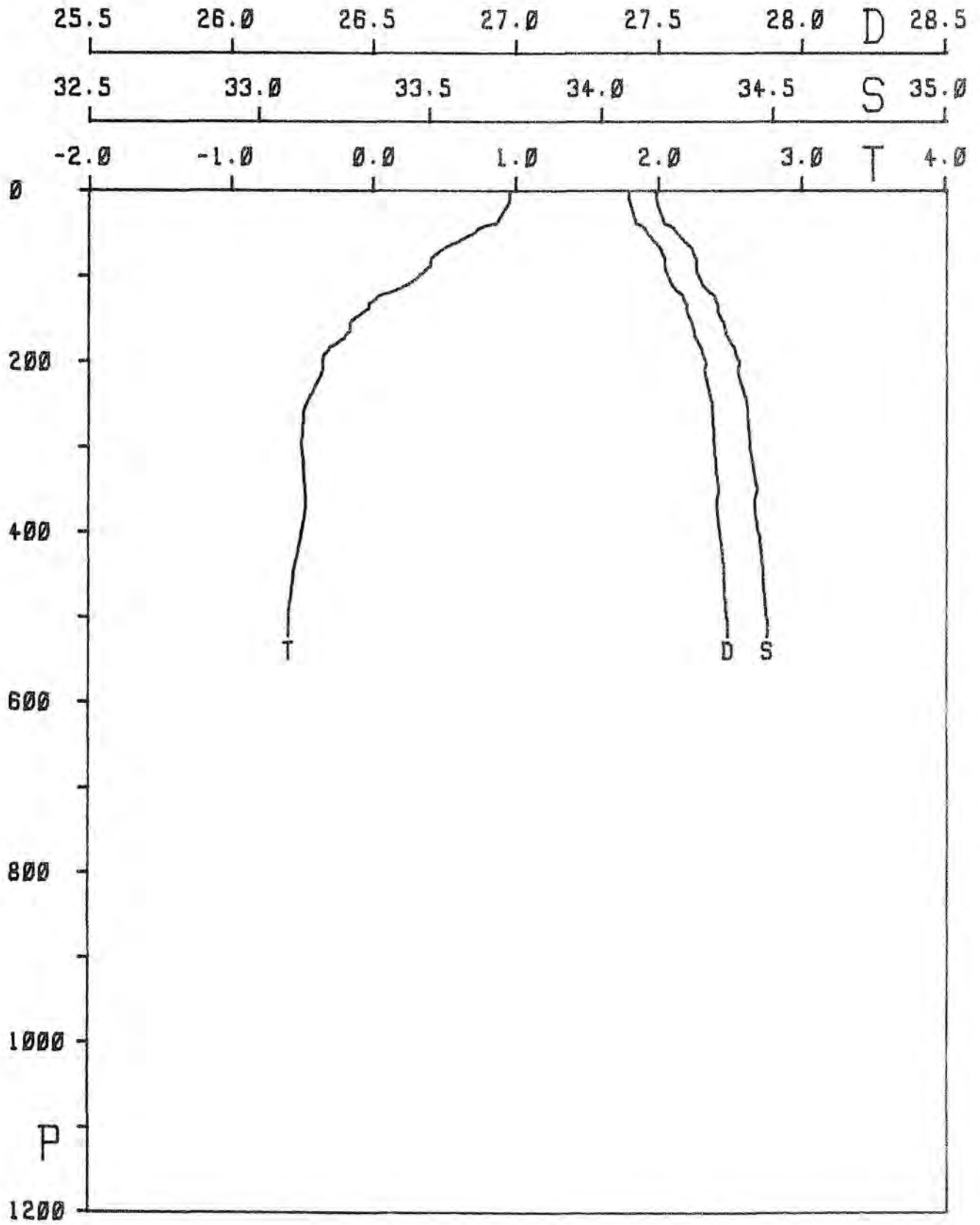
STATION 0379



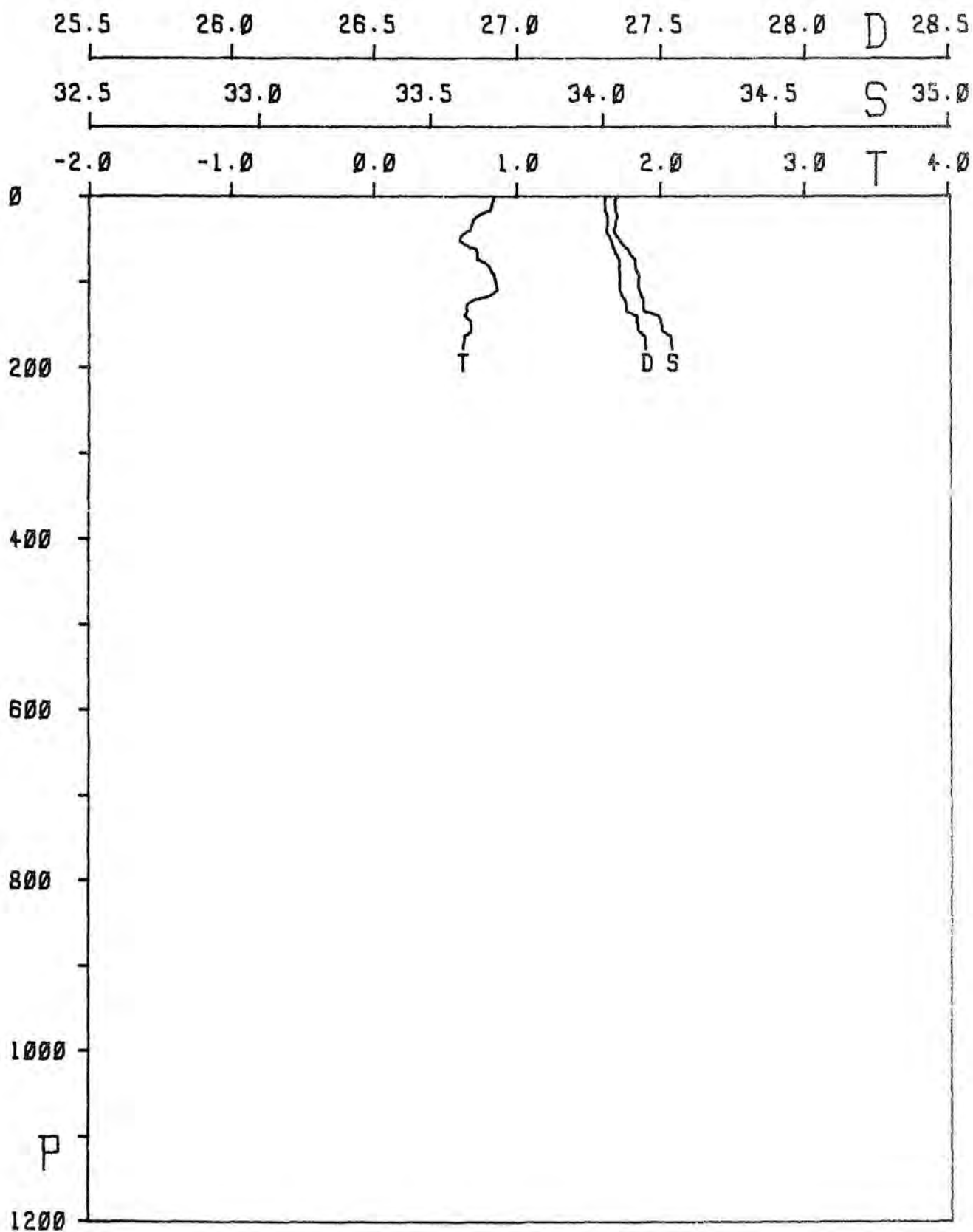
STATION 0380



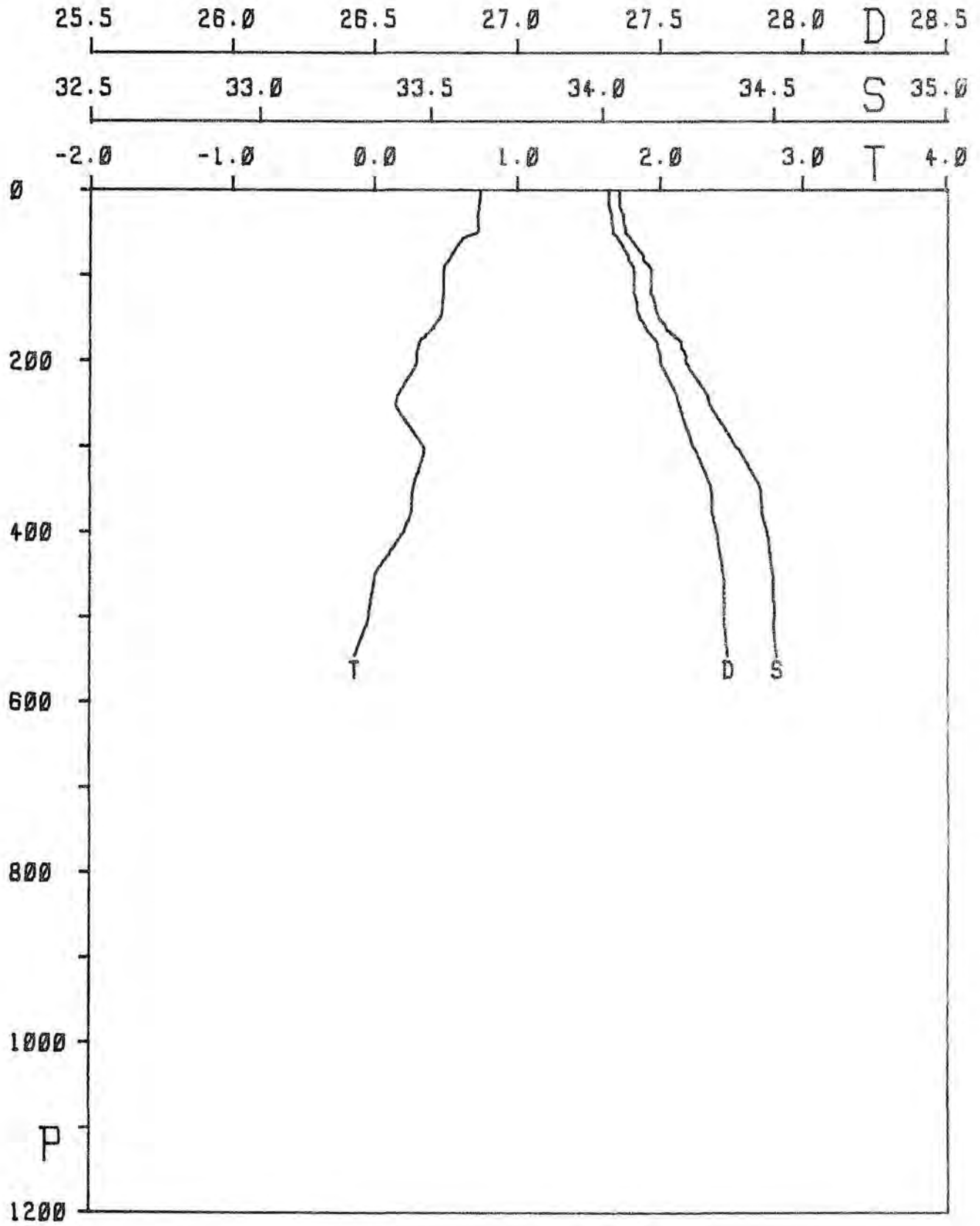
STATION 0381



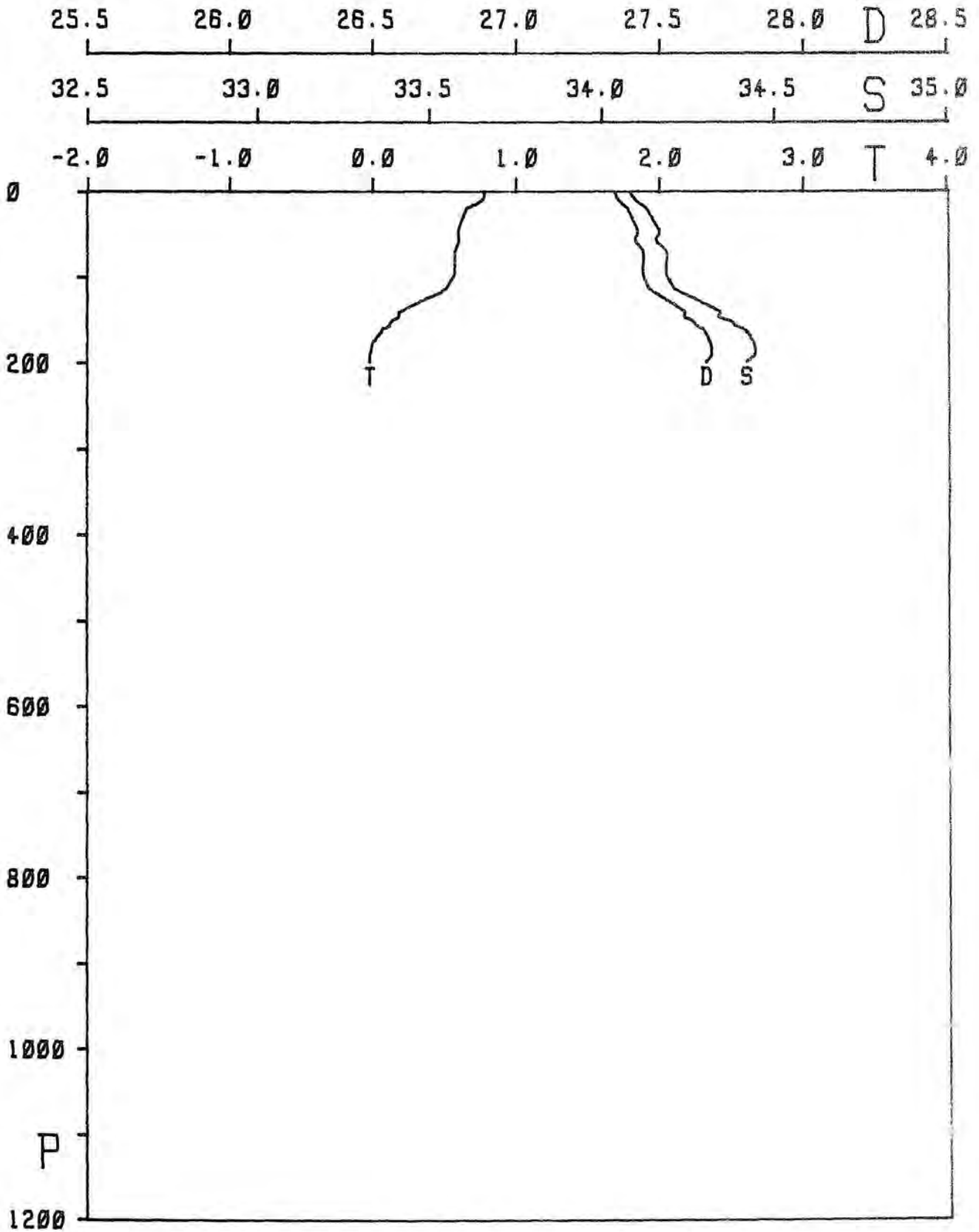
STATION 0382



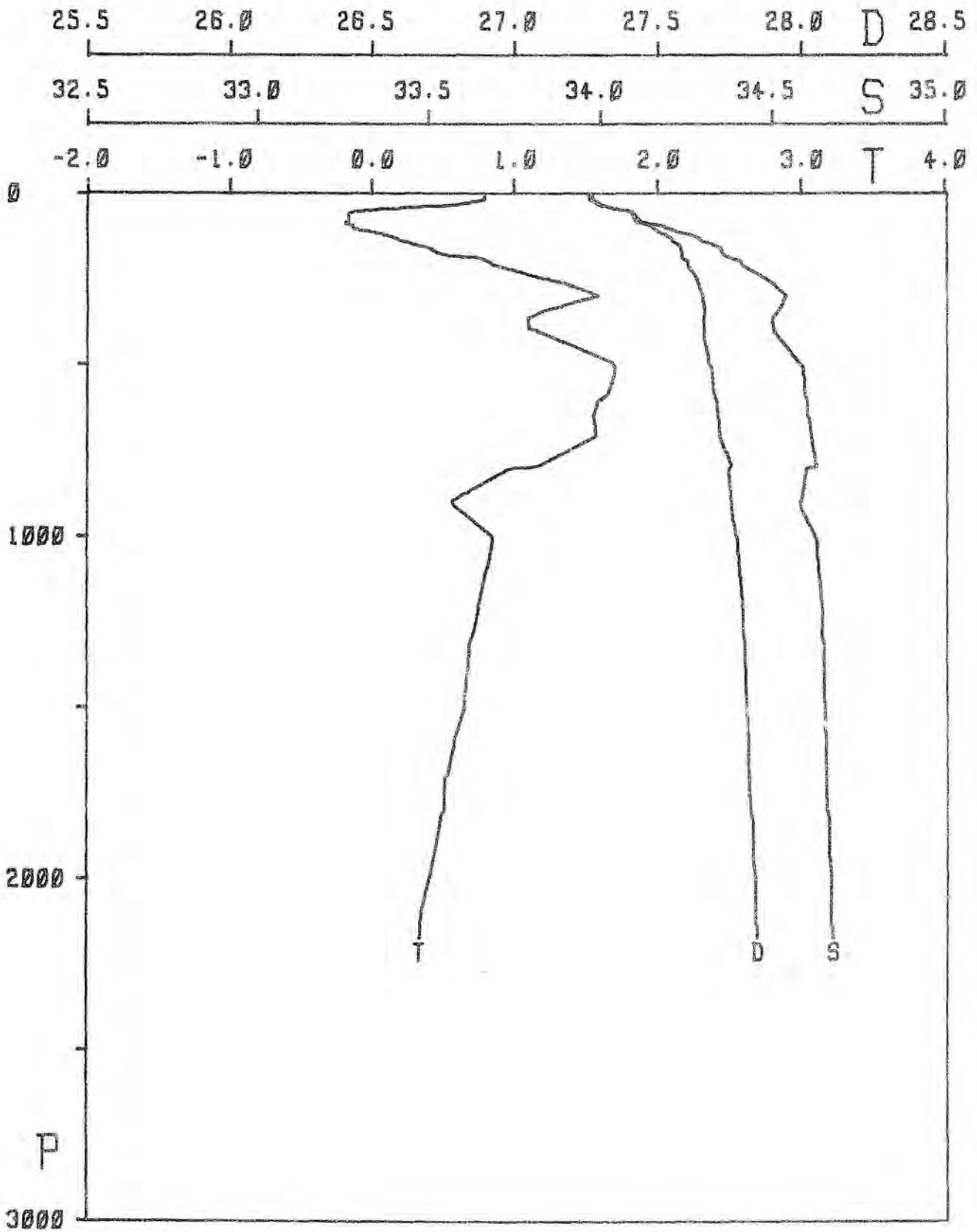
STATION 0383



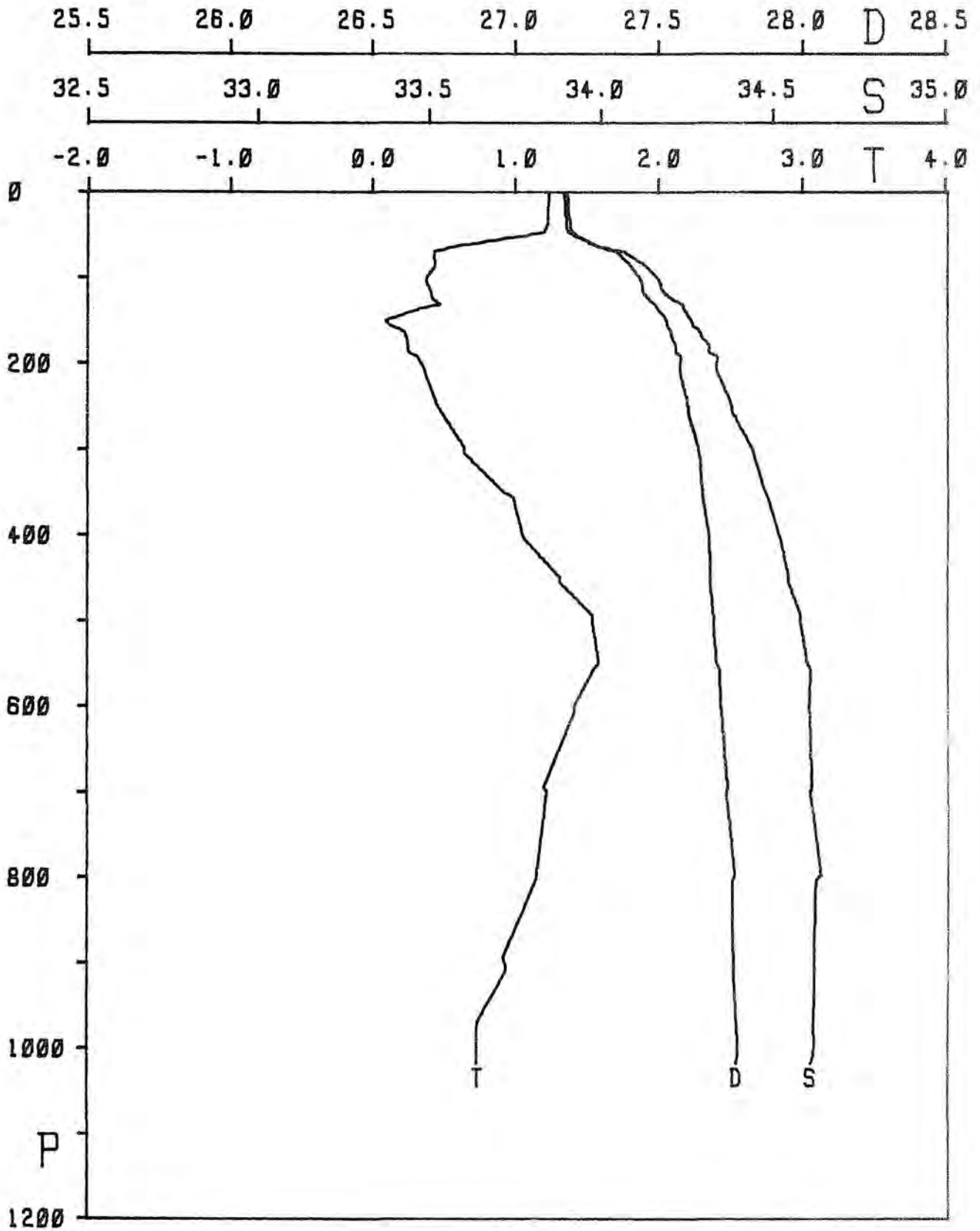
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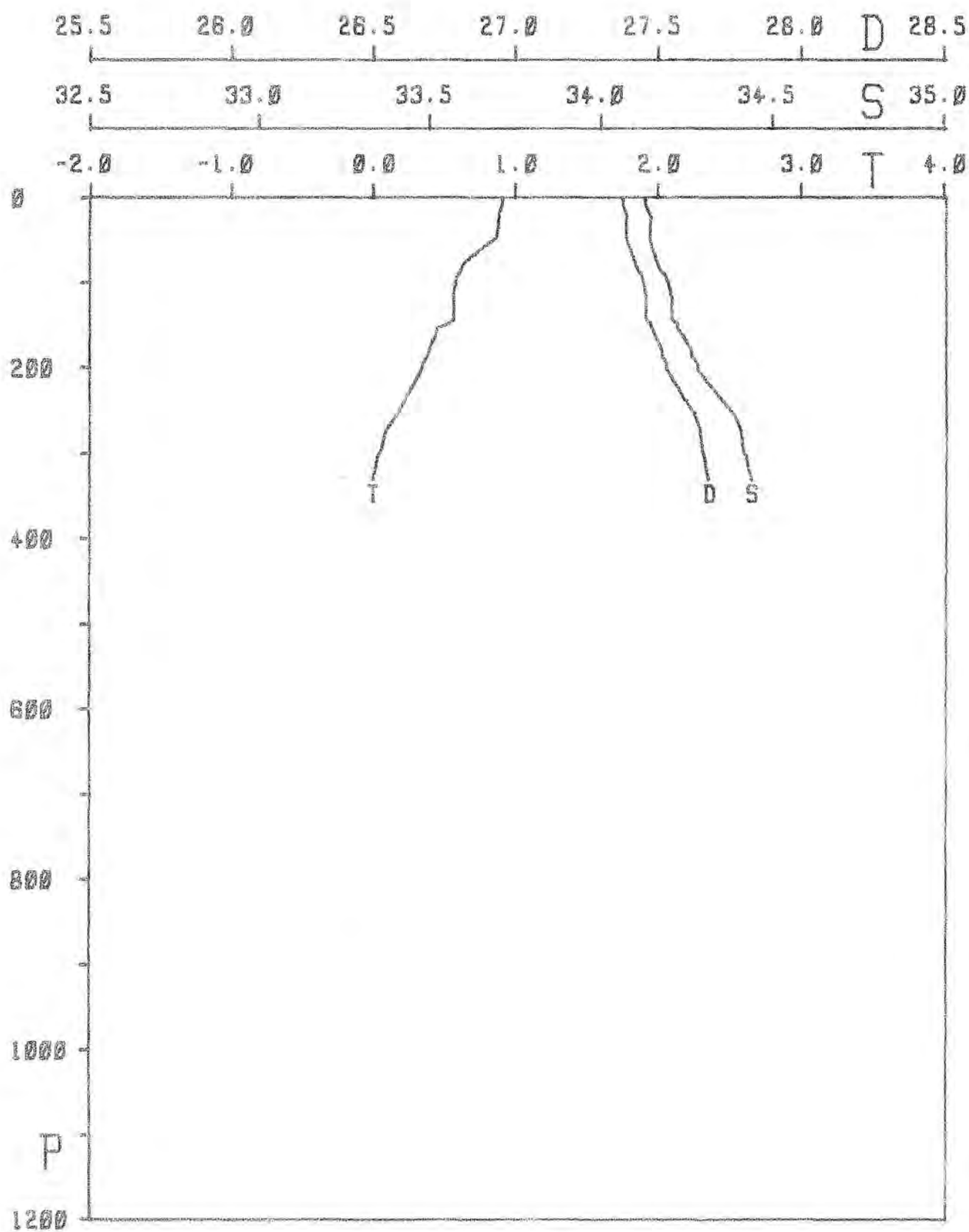
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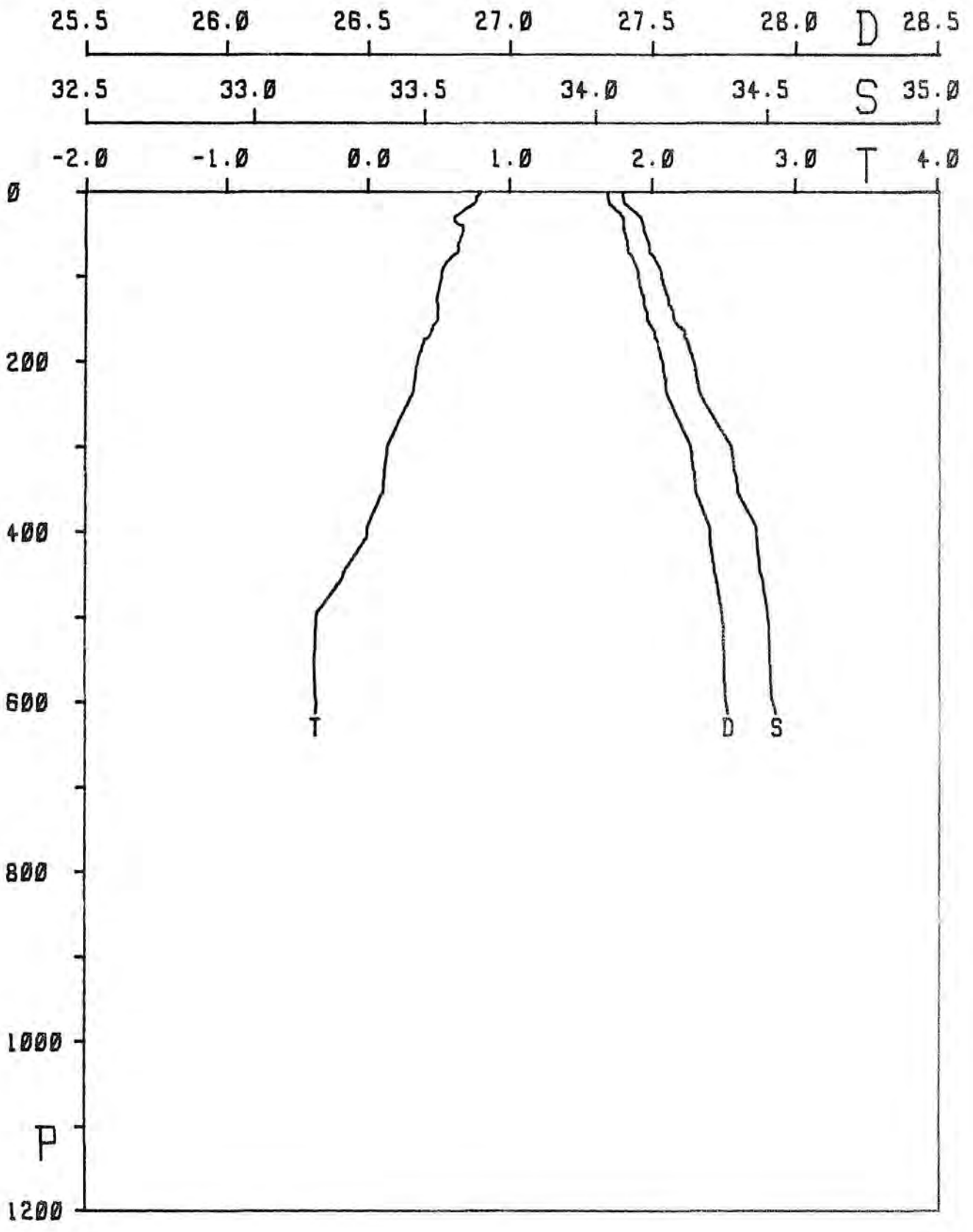
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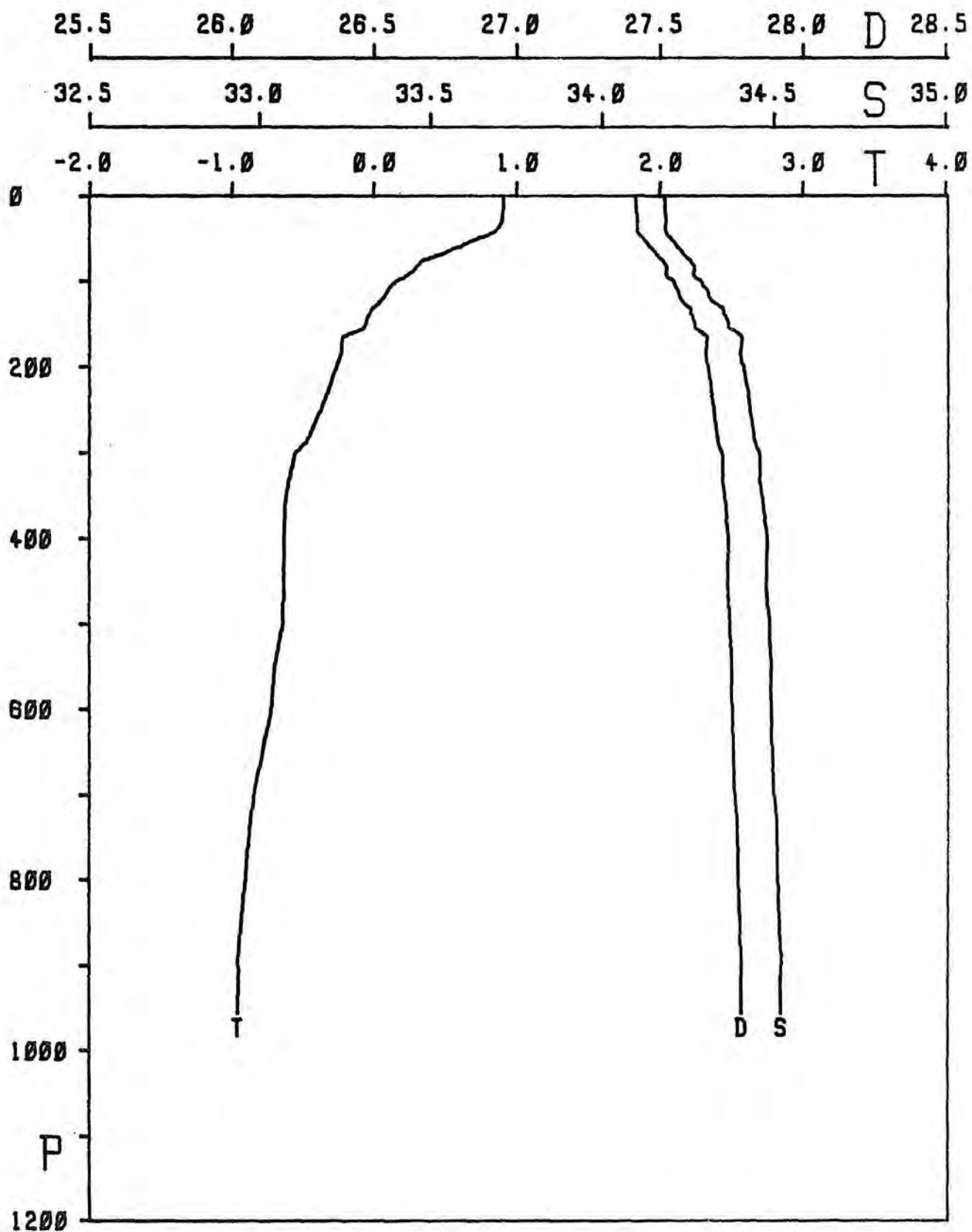
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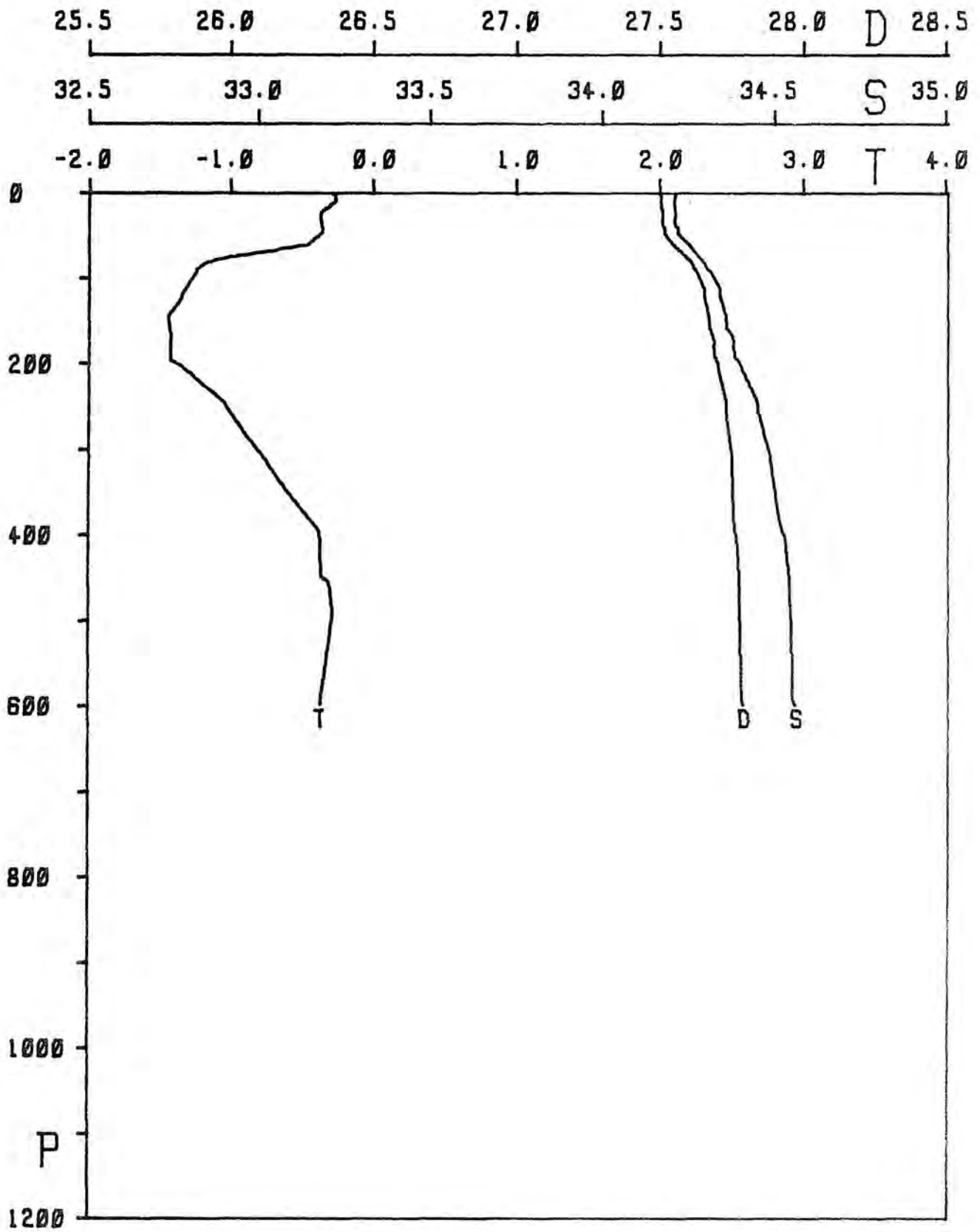
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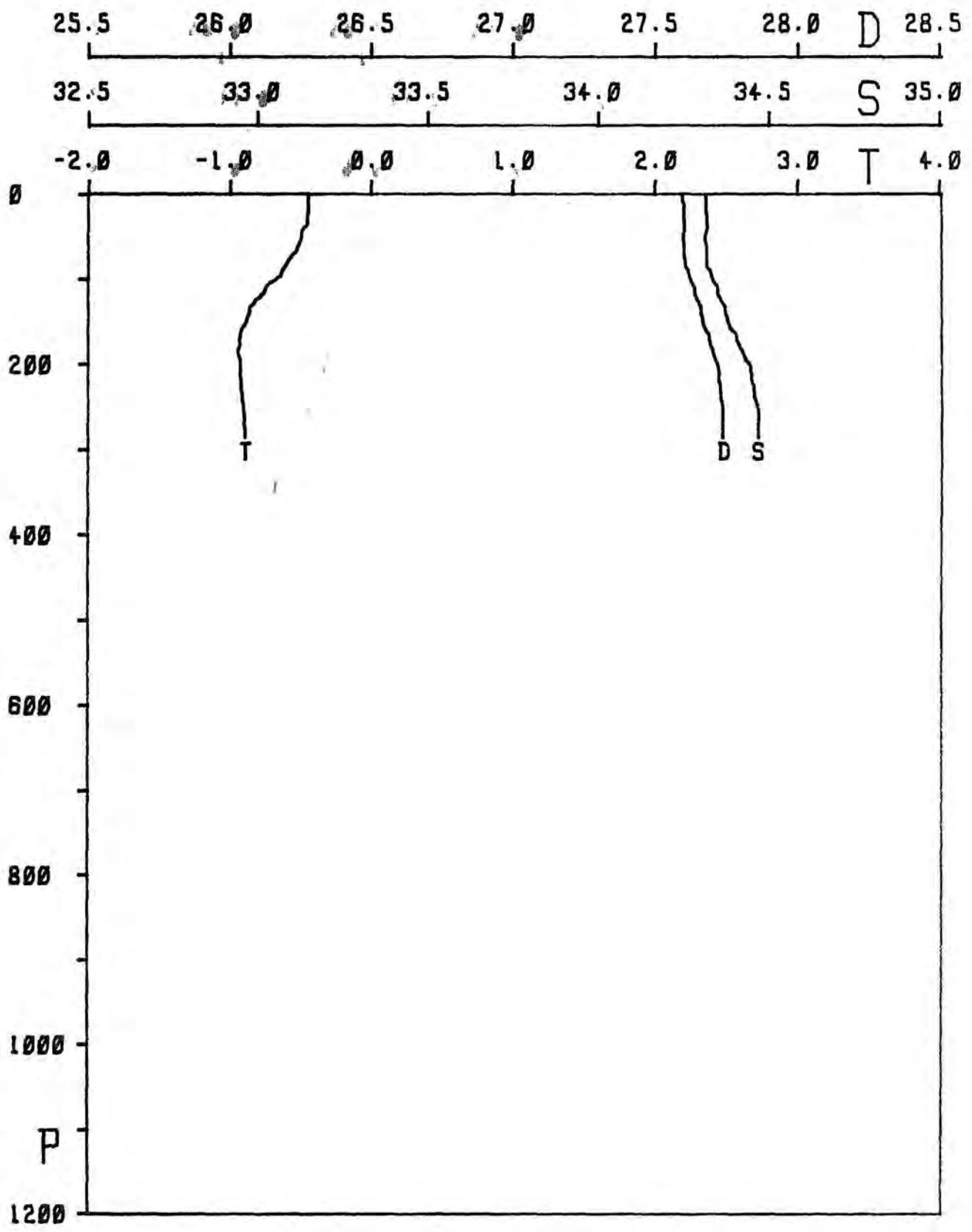
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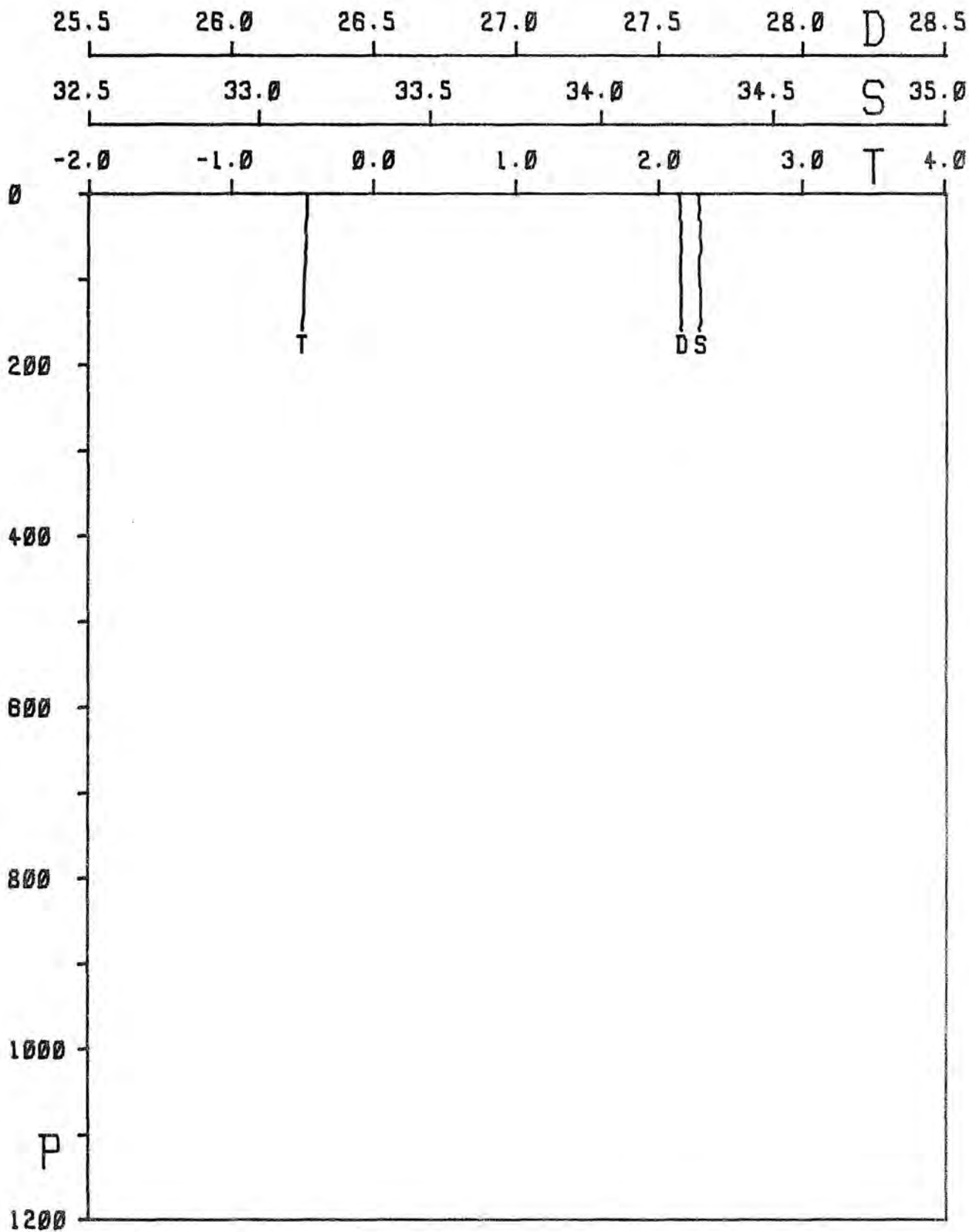
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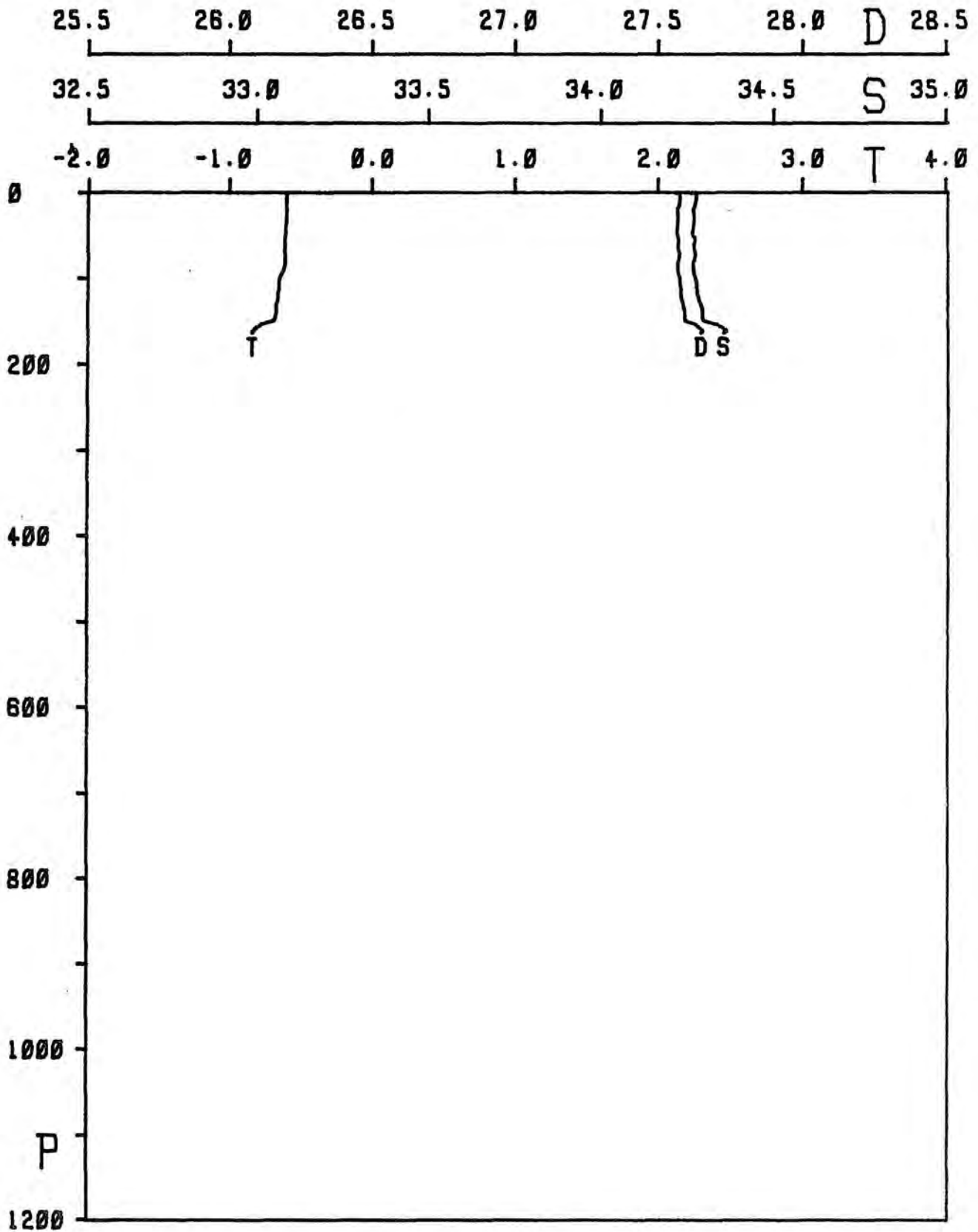
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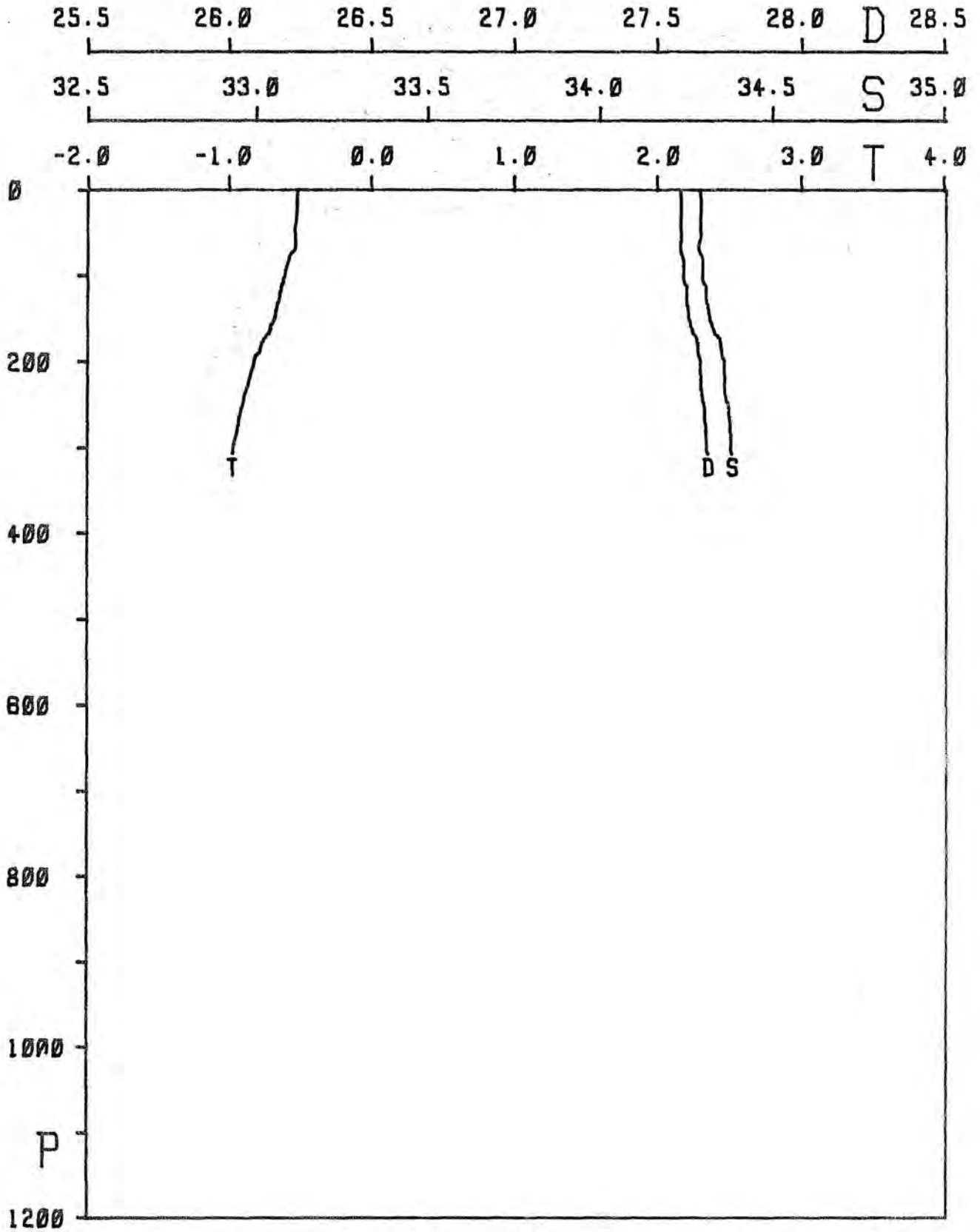
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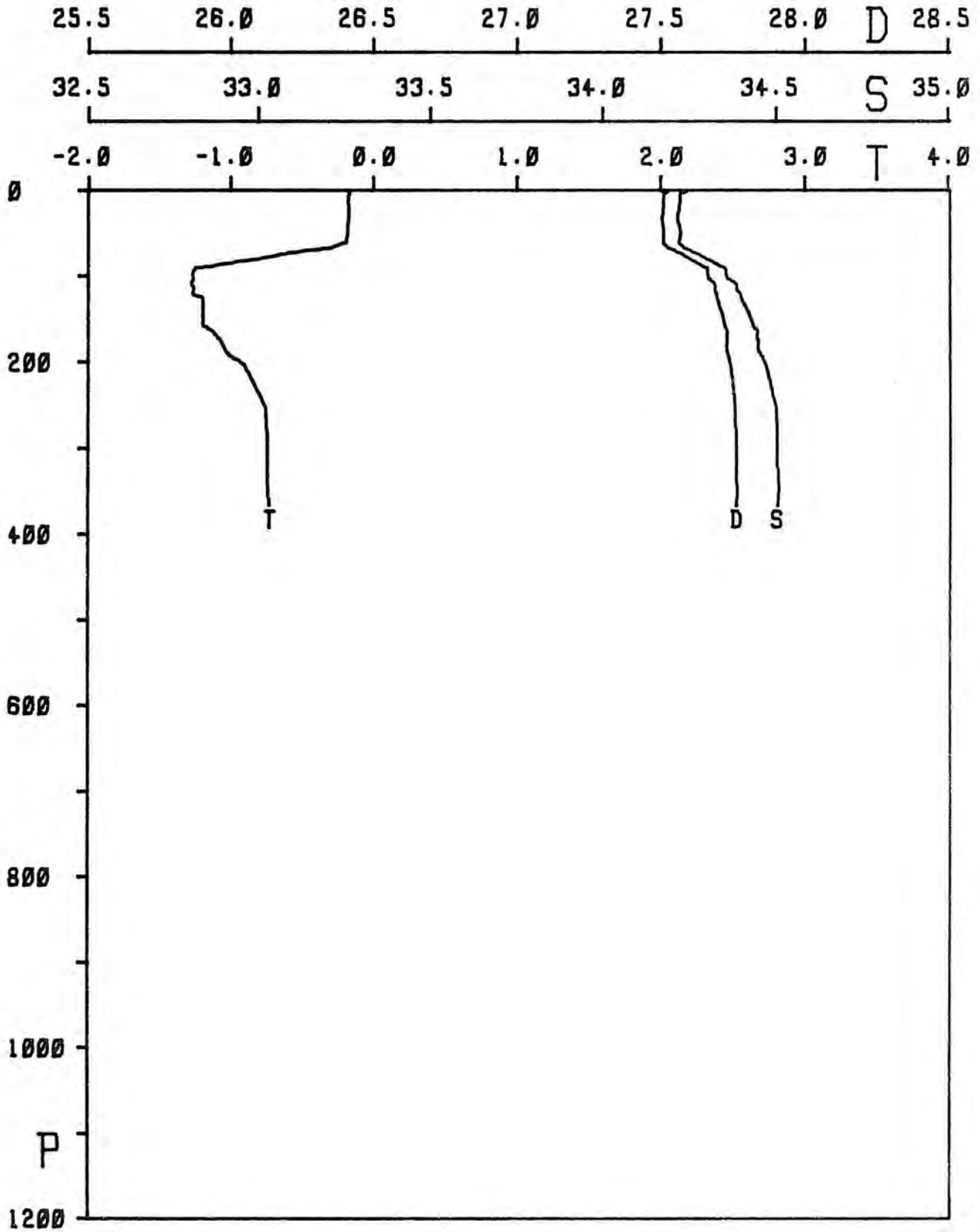
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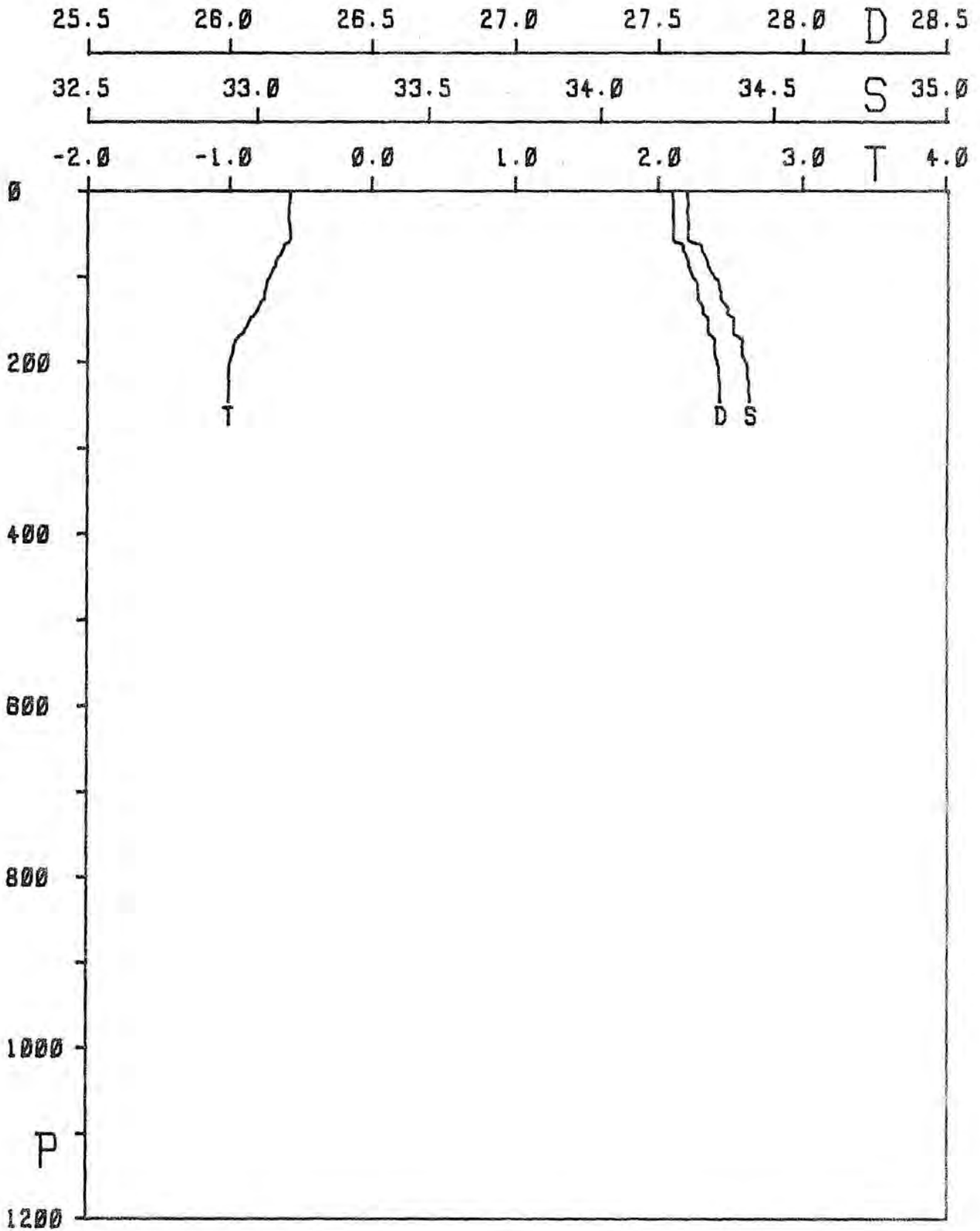
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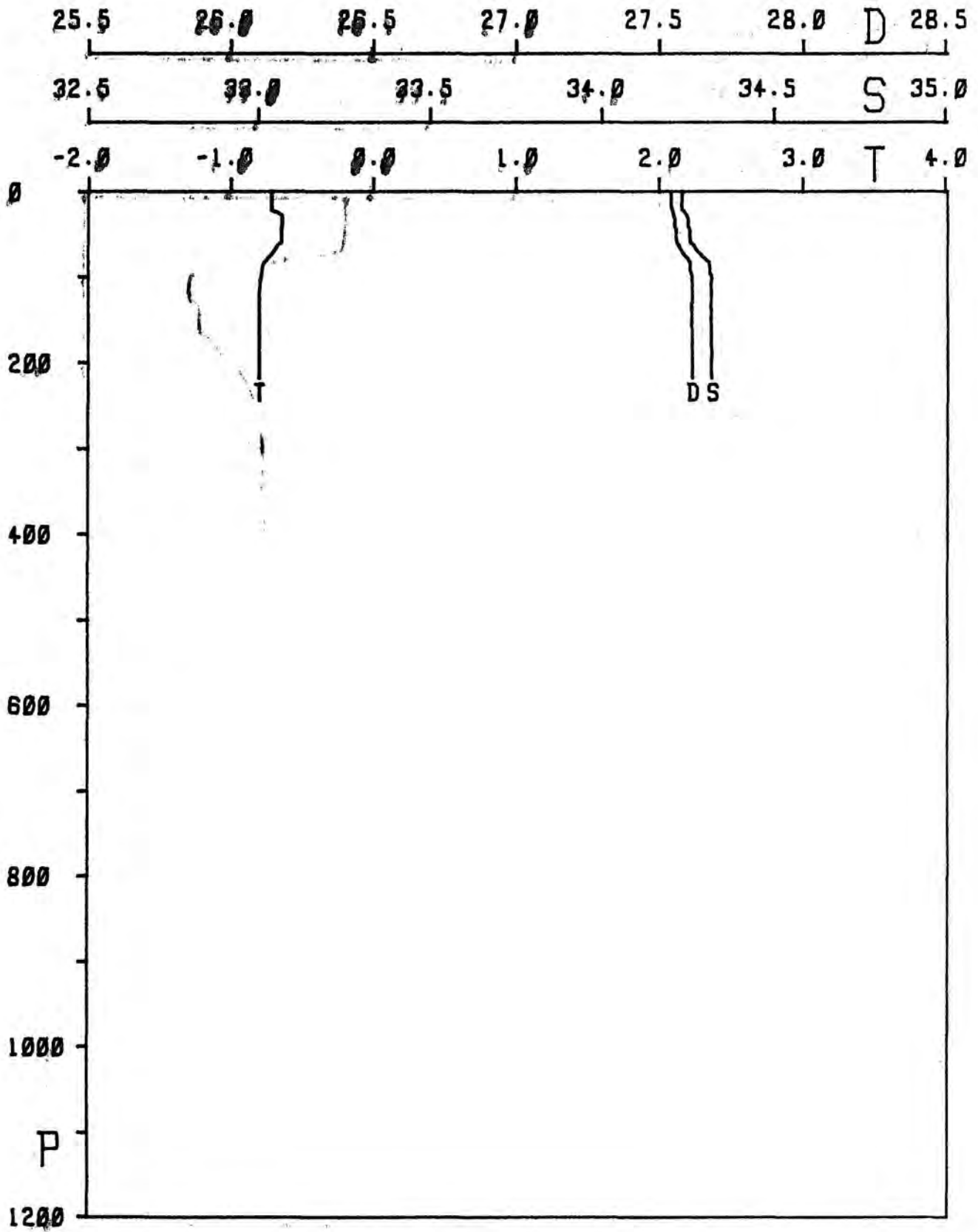
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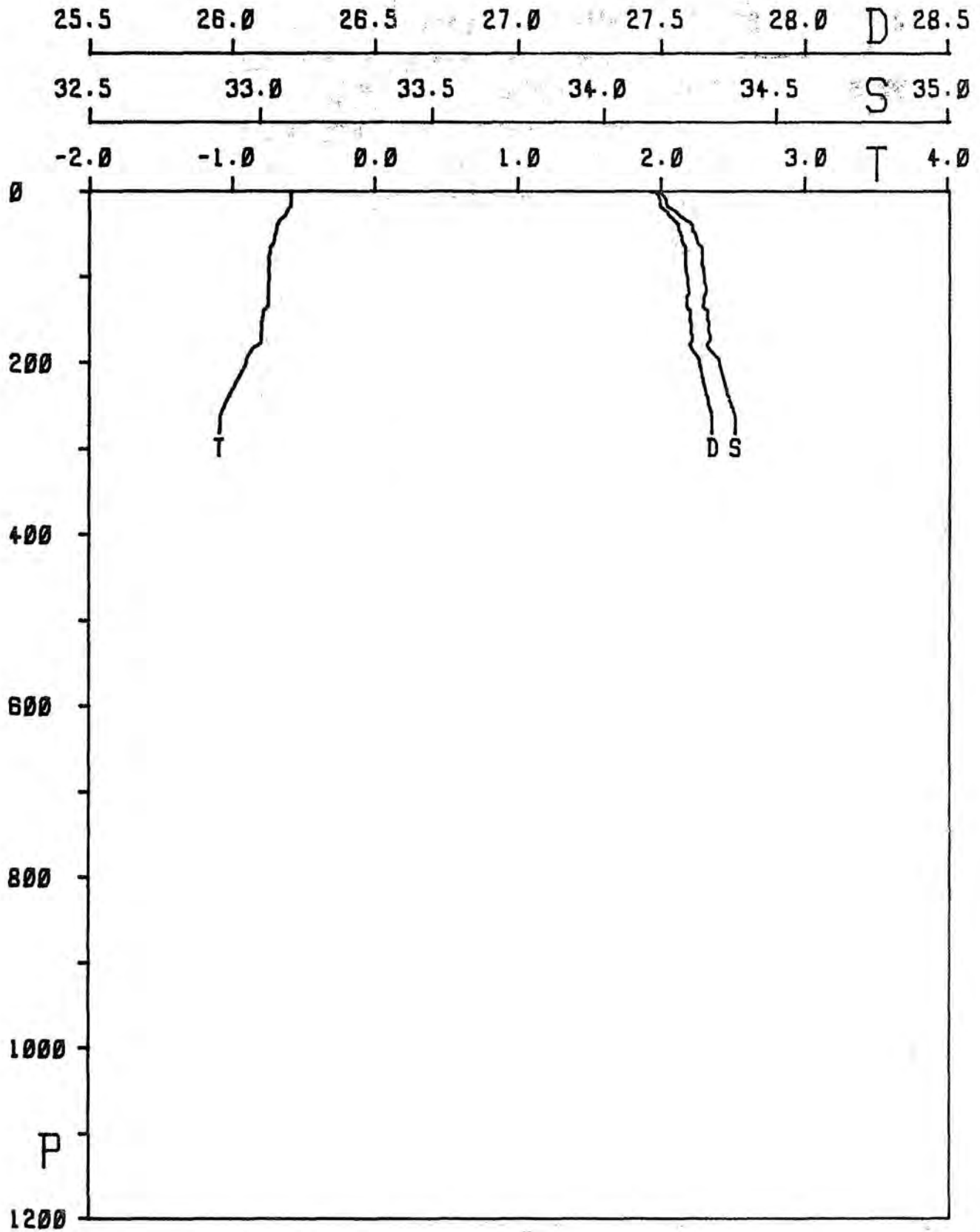
STATION 0399



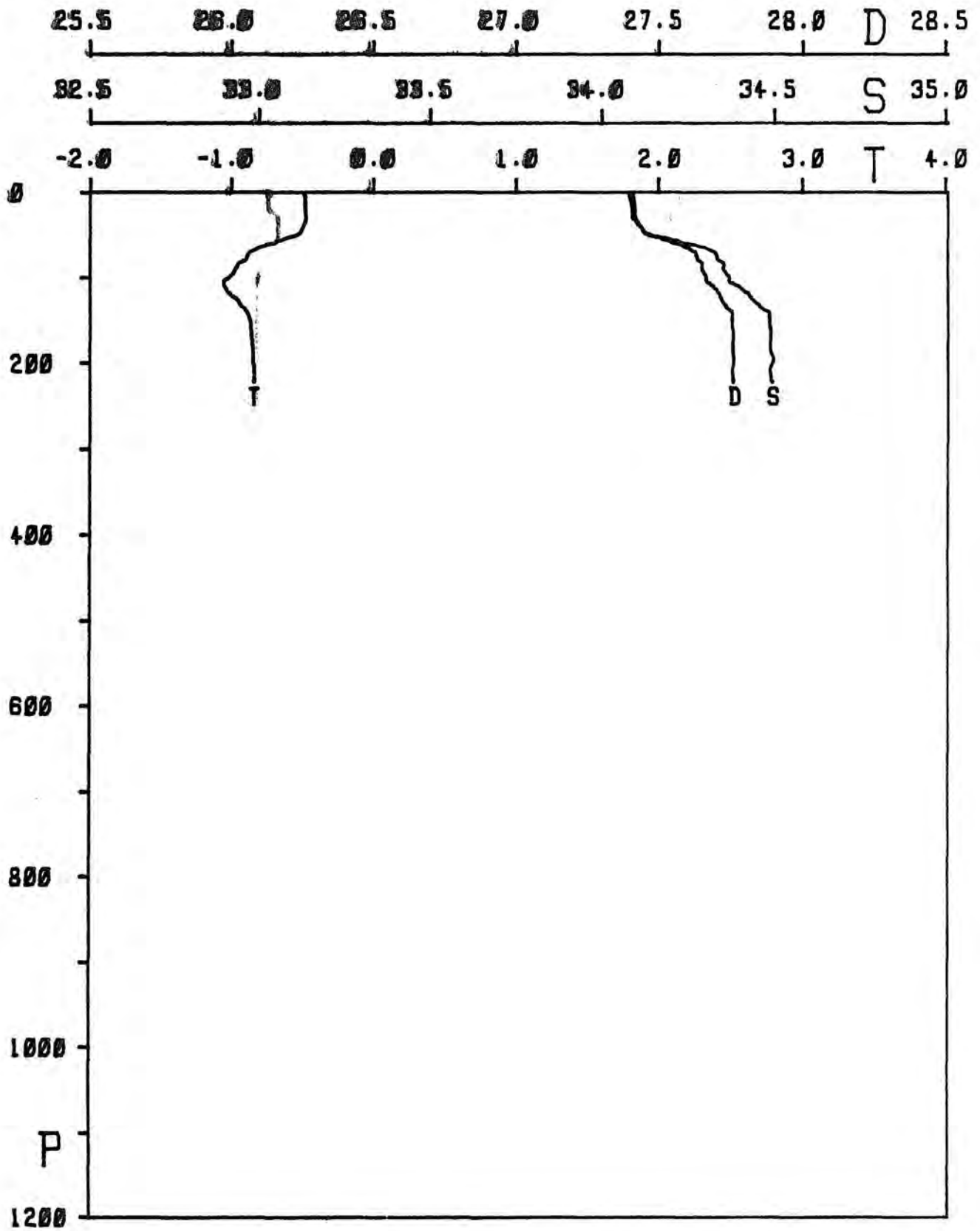
STATION 0400



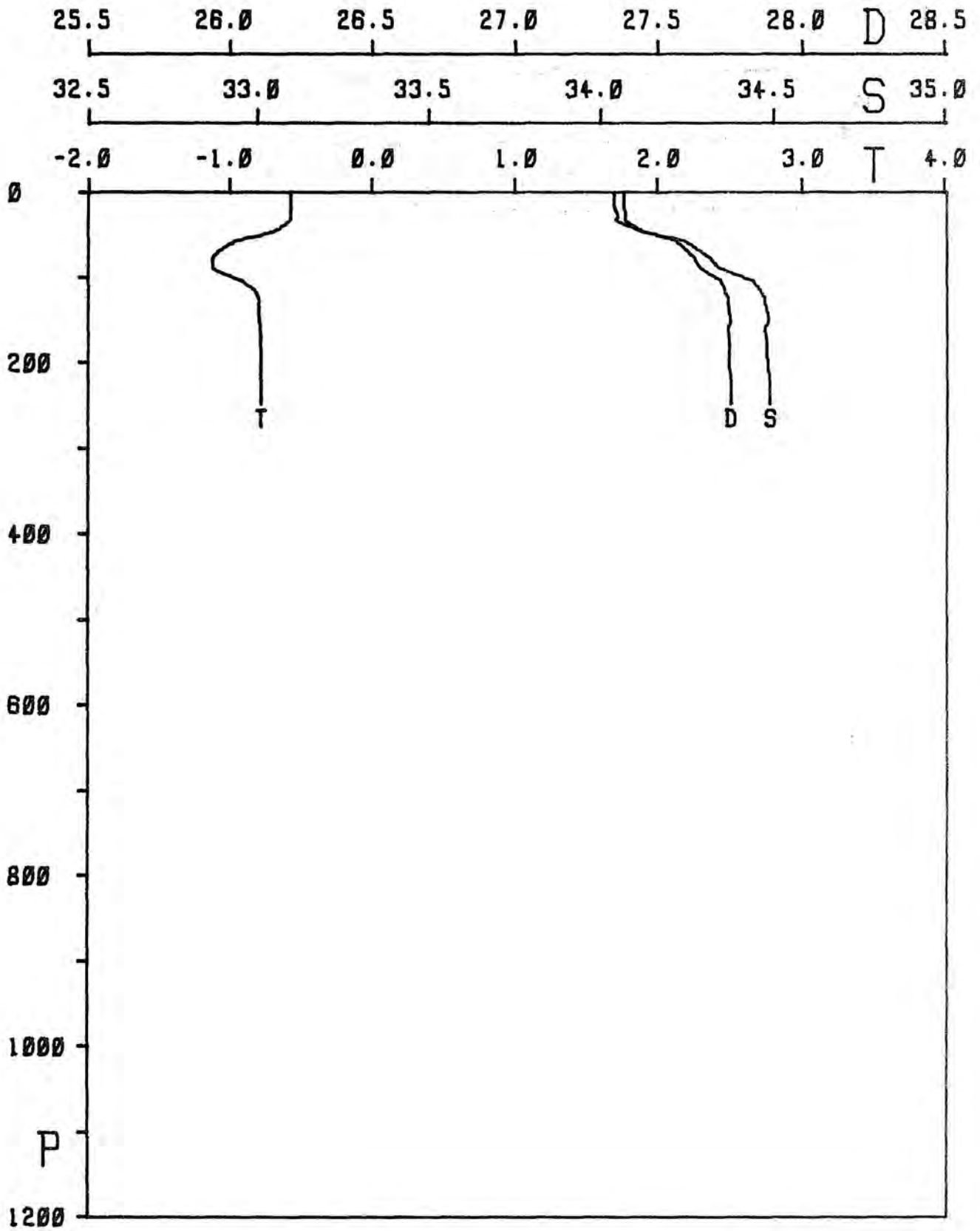
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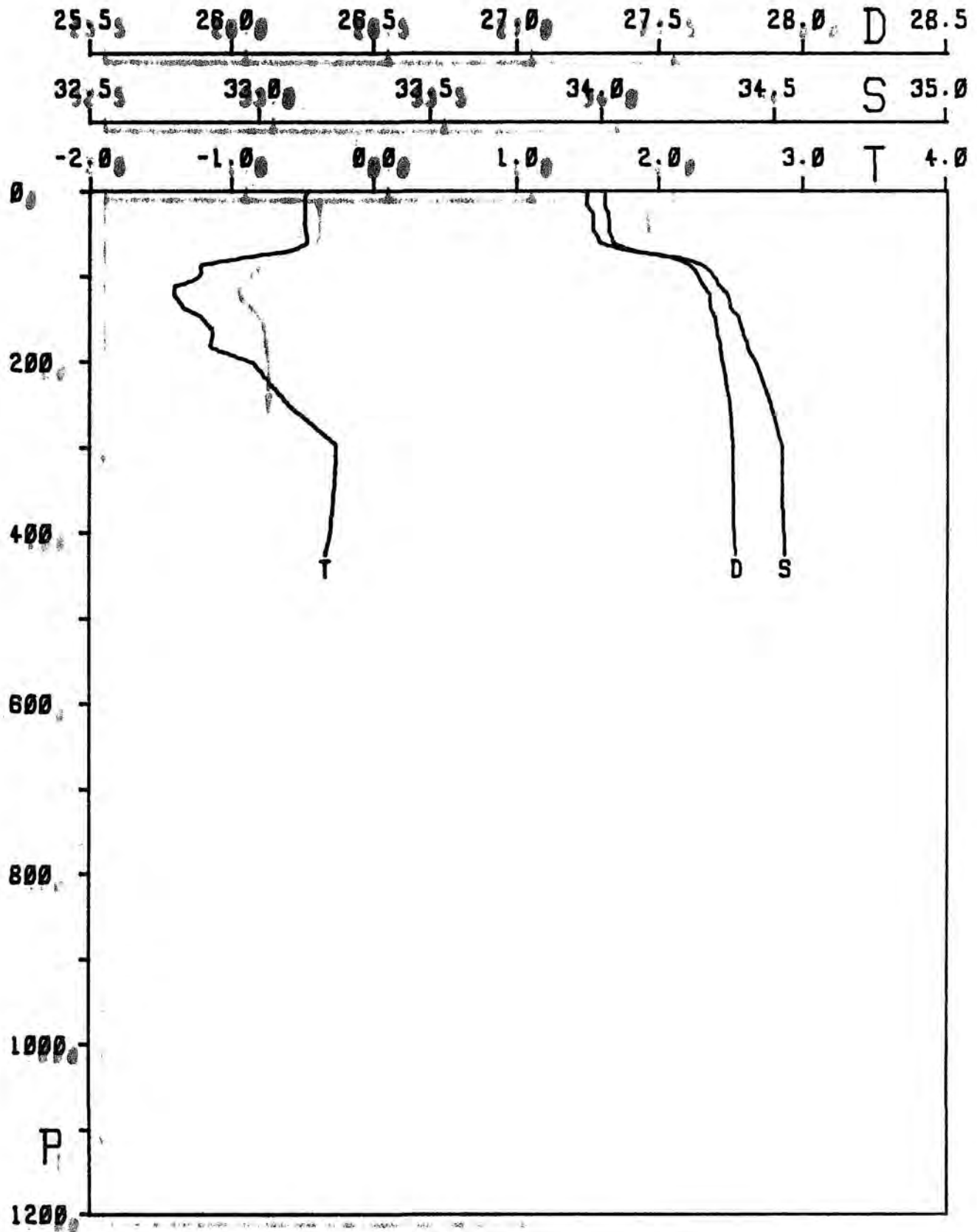
STATION 0403



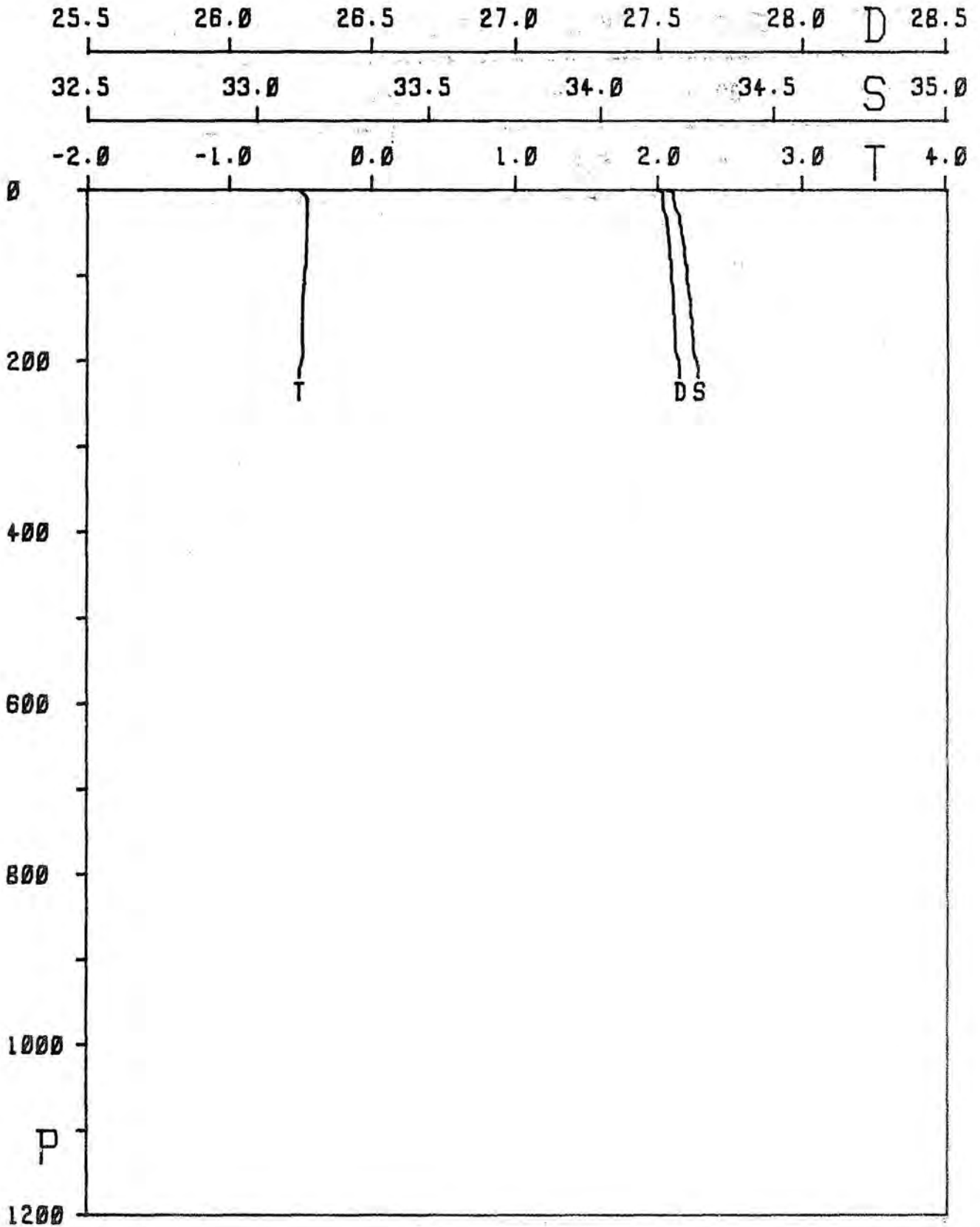
STATION 0404



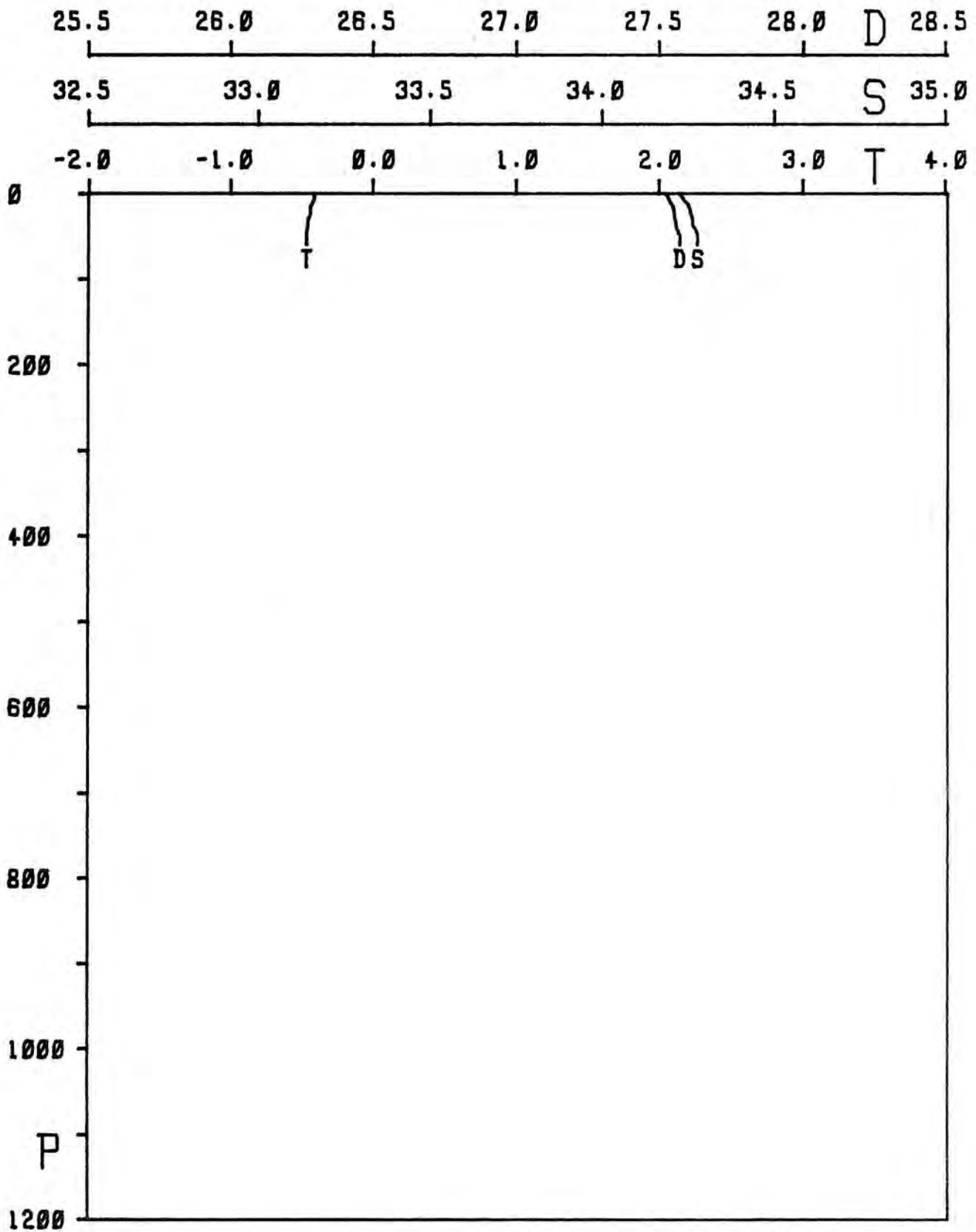
STATION 0405



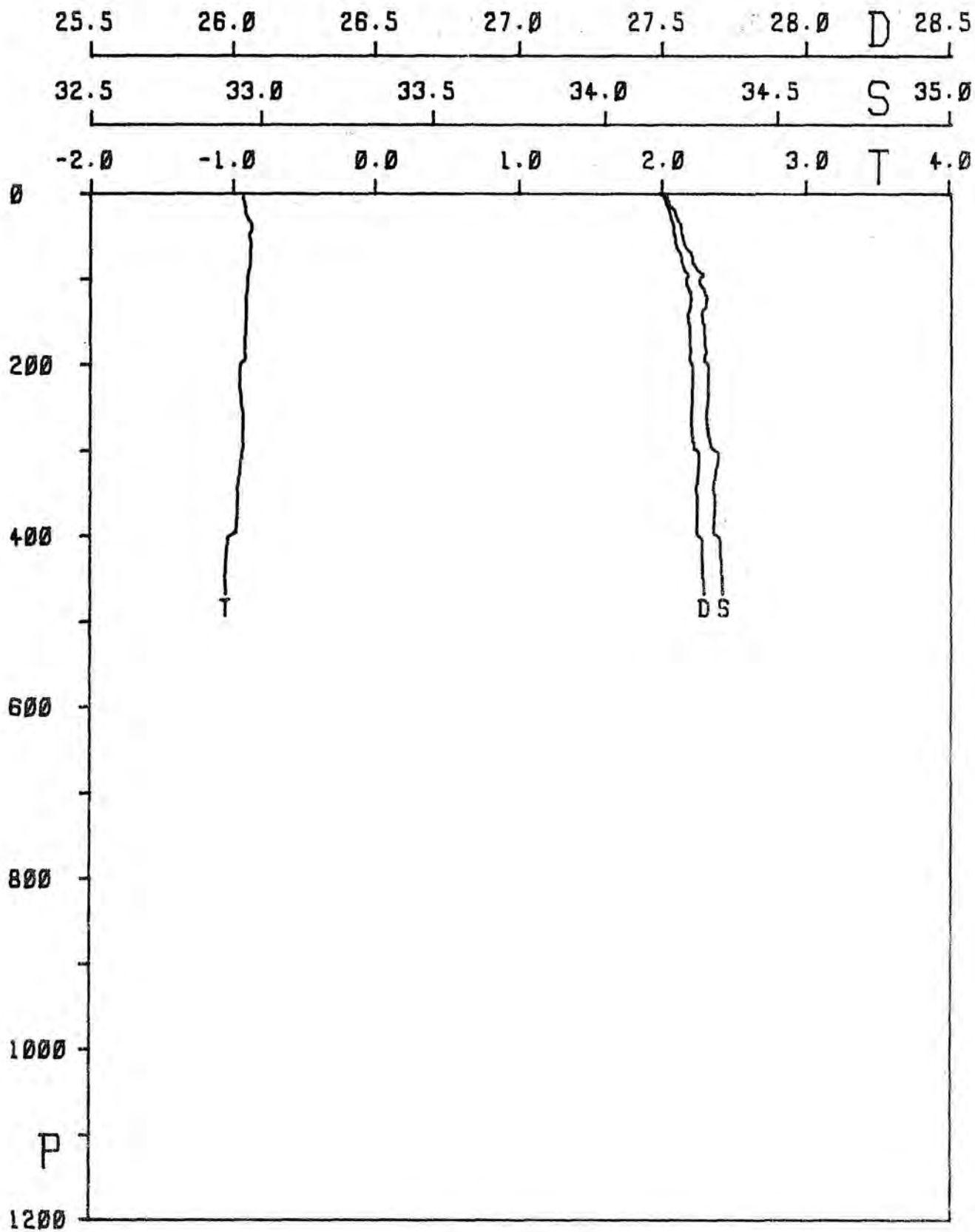
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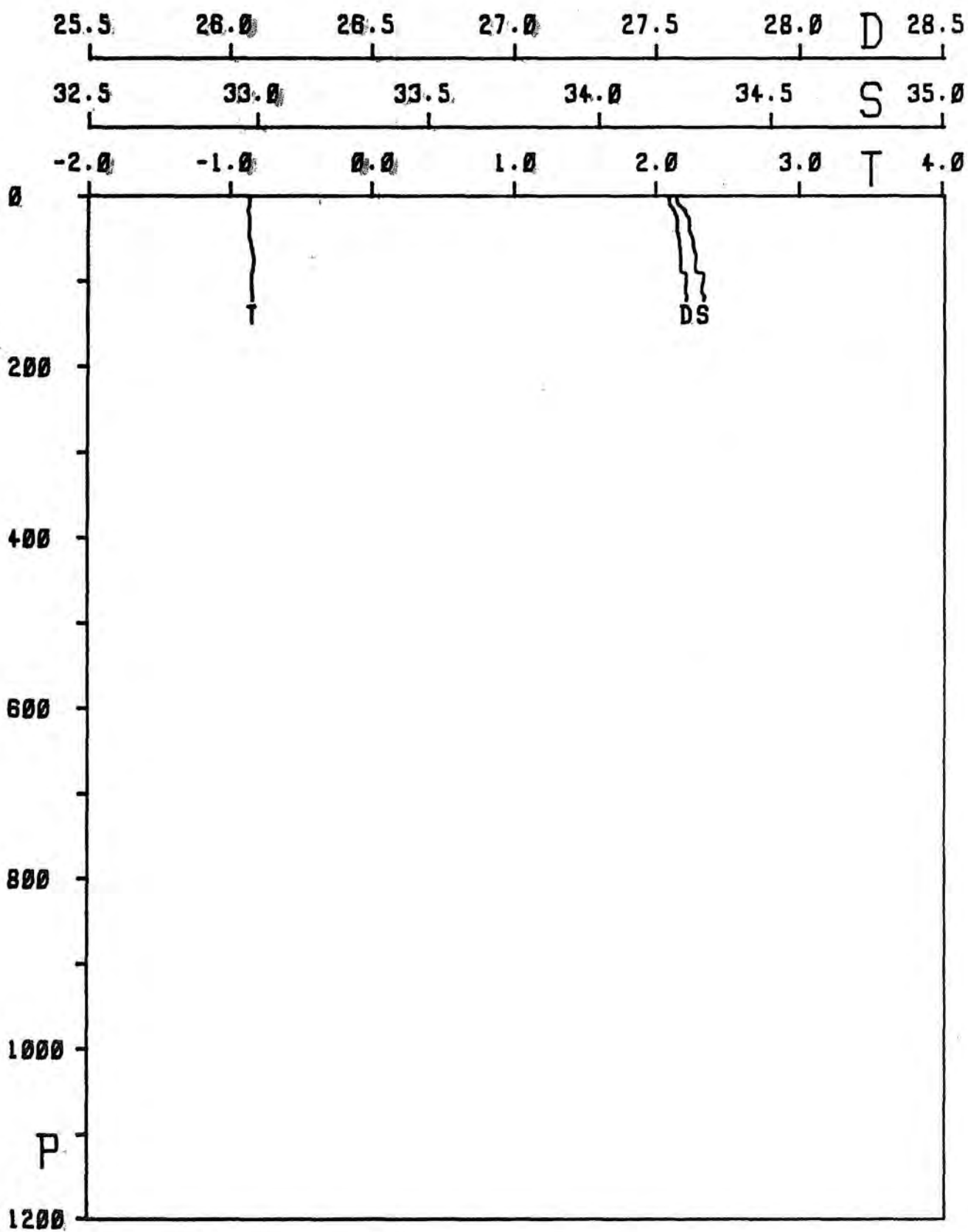
STATION 0407



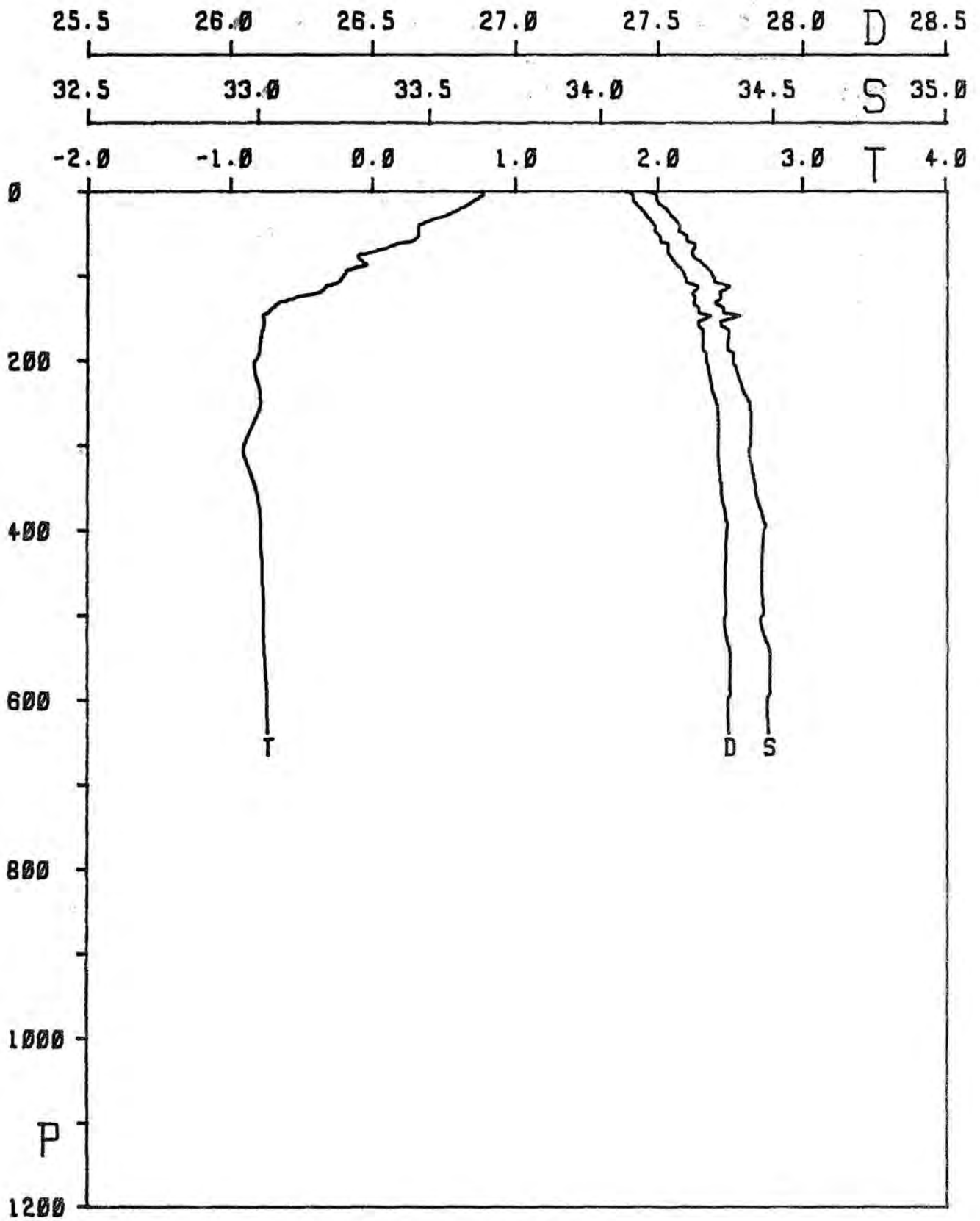
STATION 0408



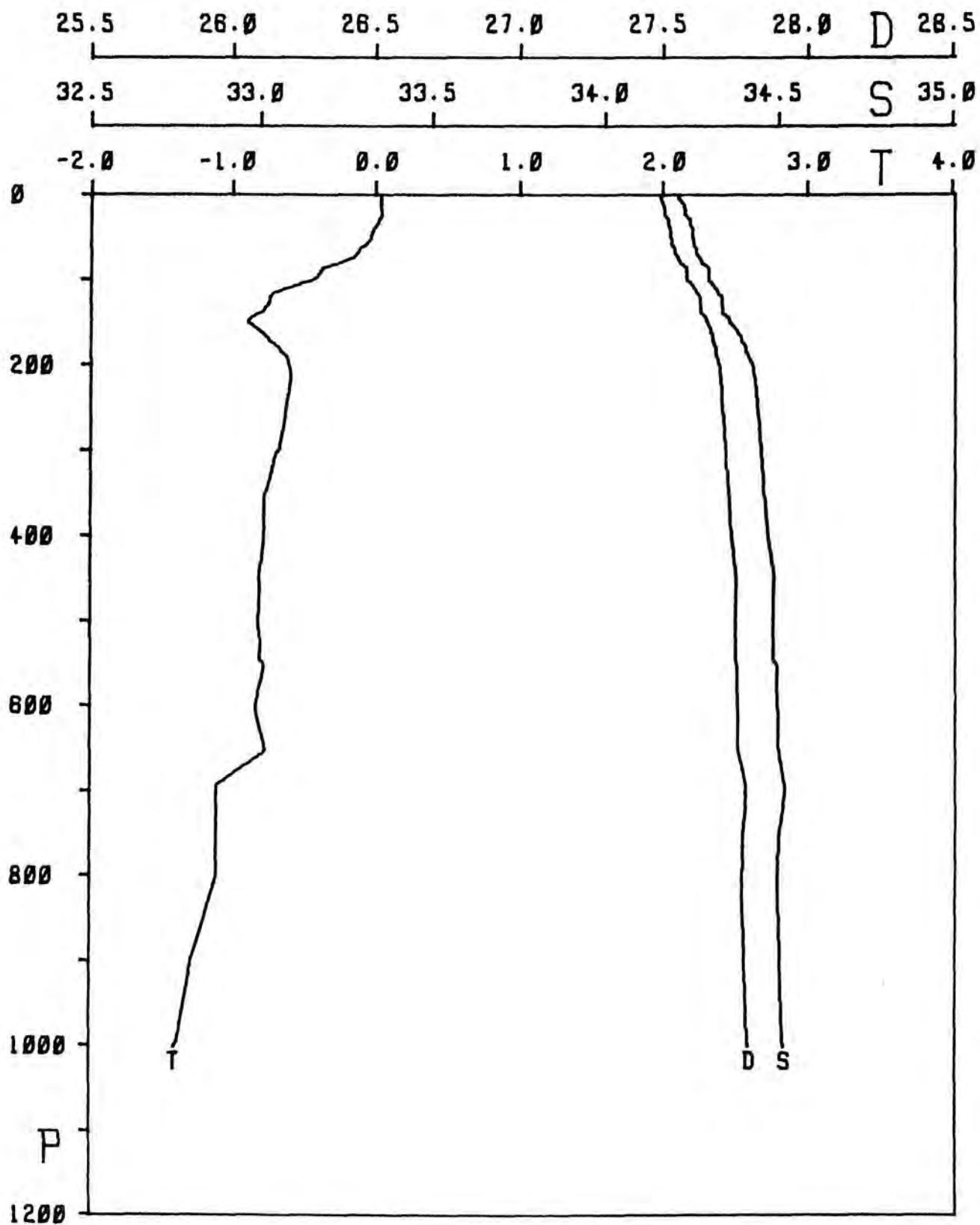
STATION 0409



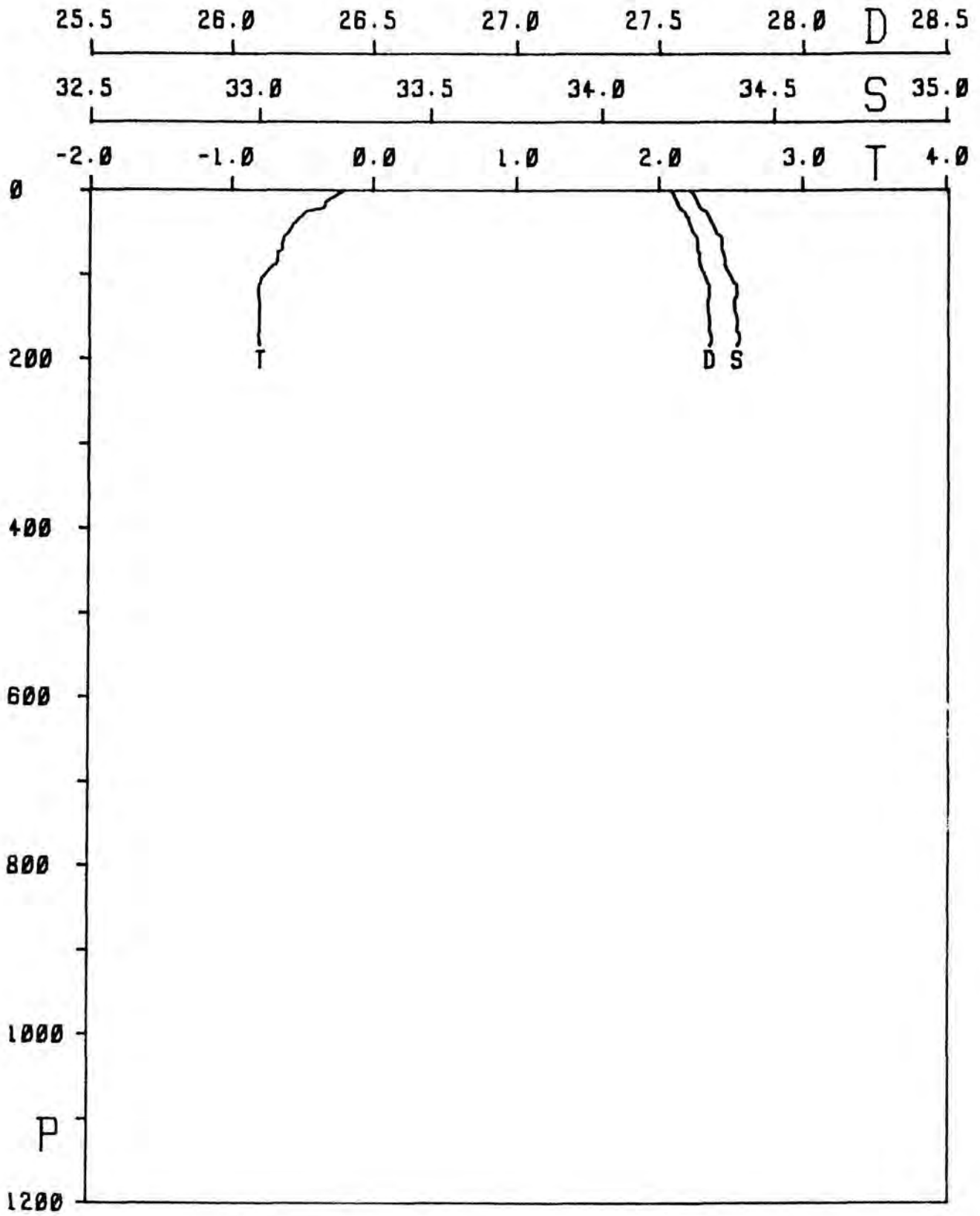
STATION 0411



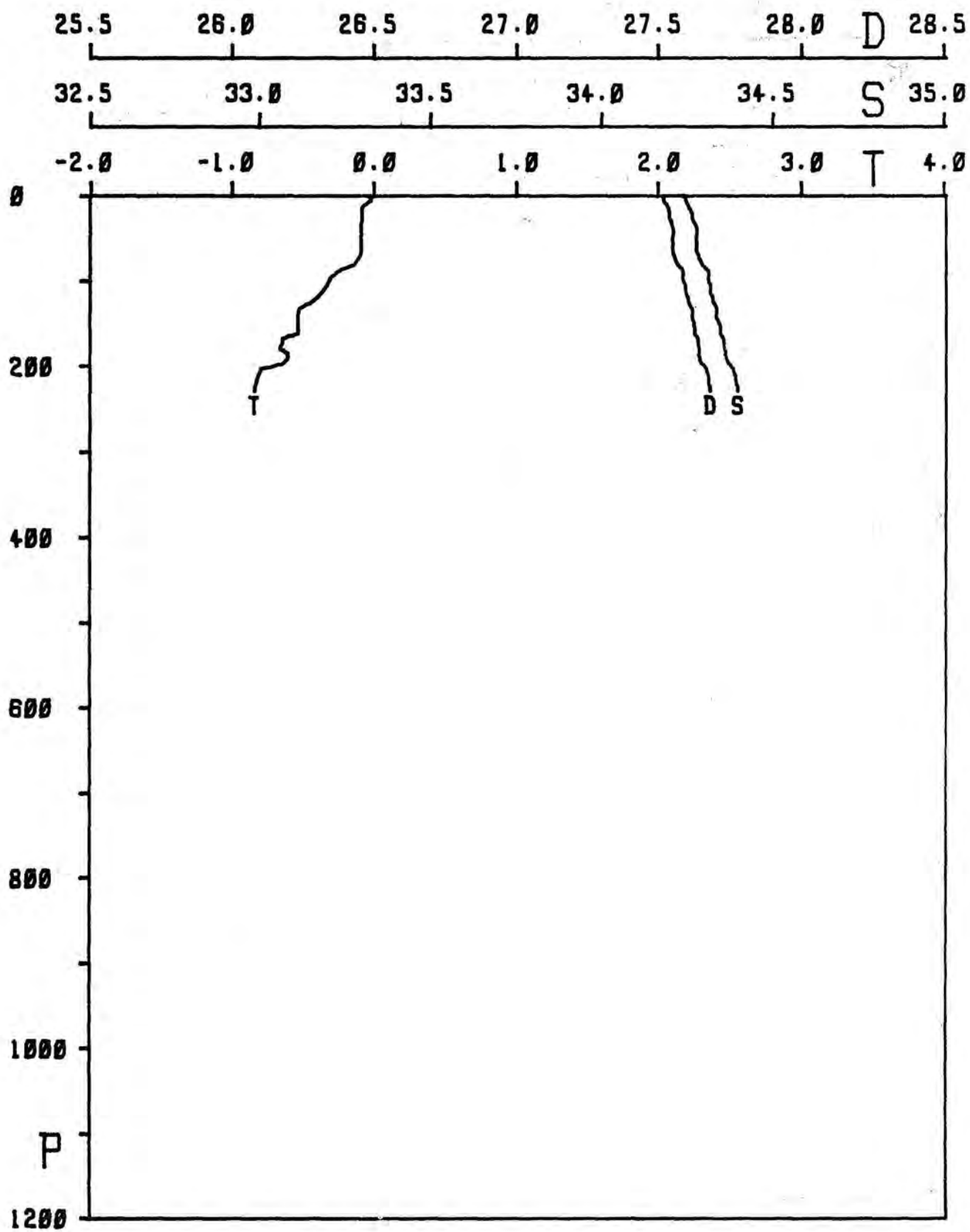
STATION 0415



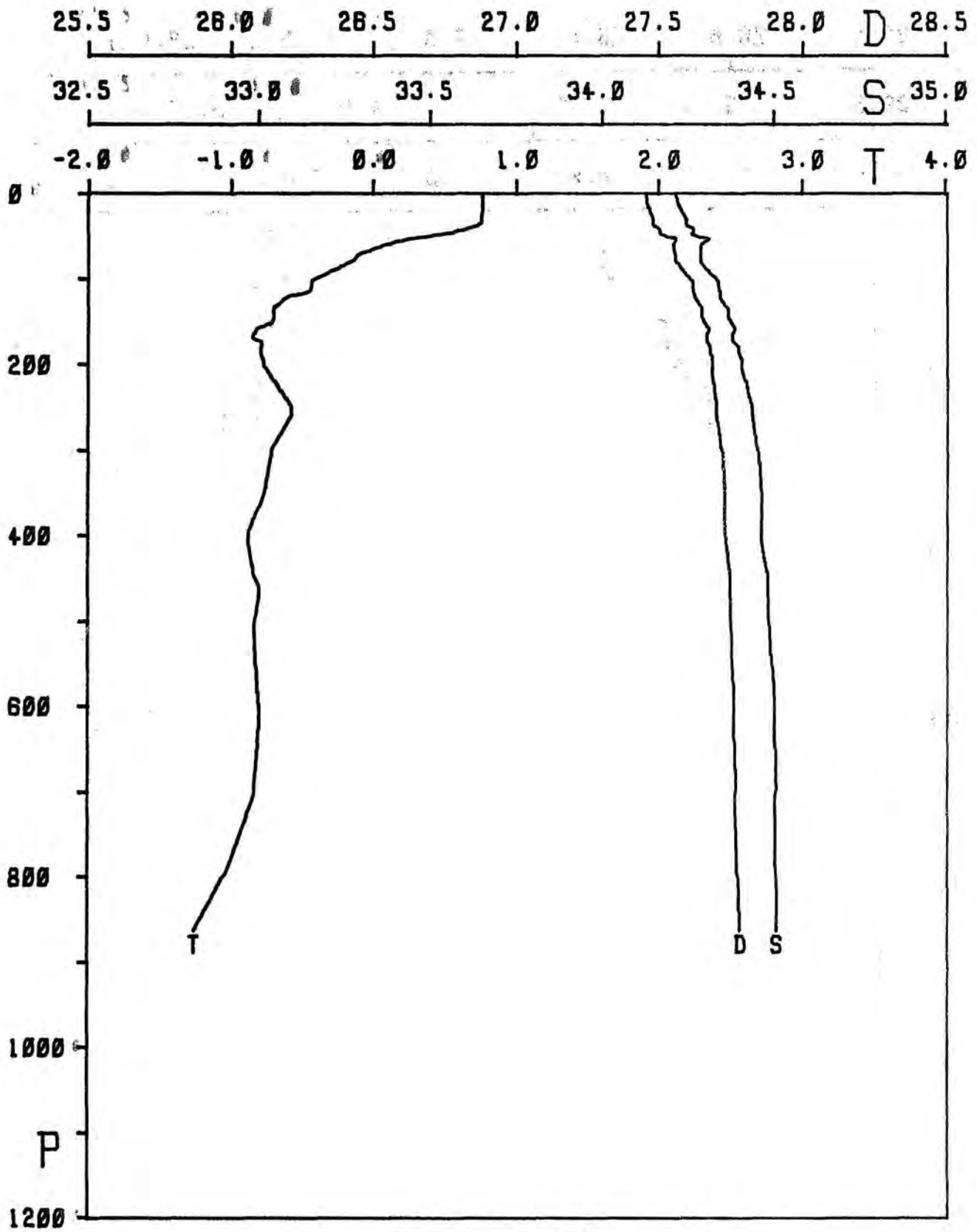
STATION 0417



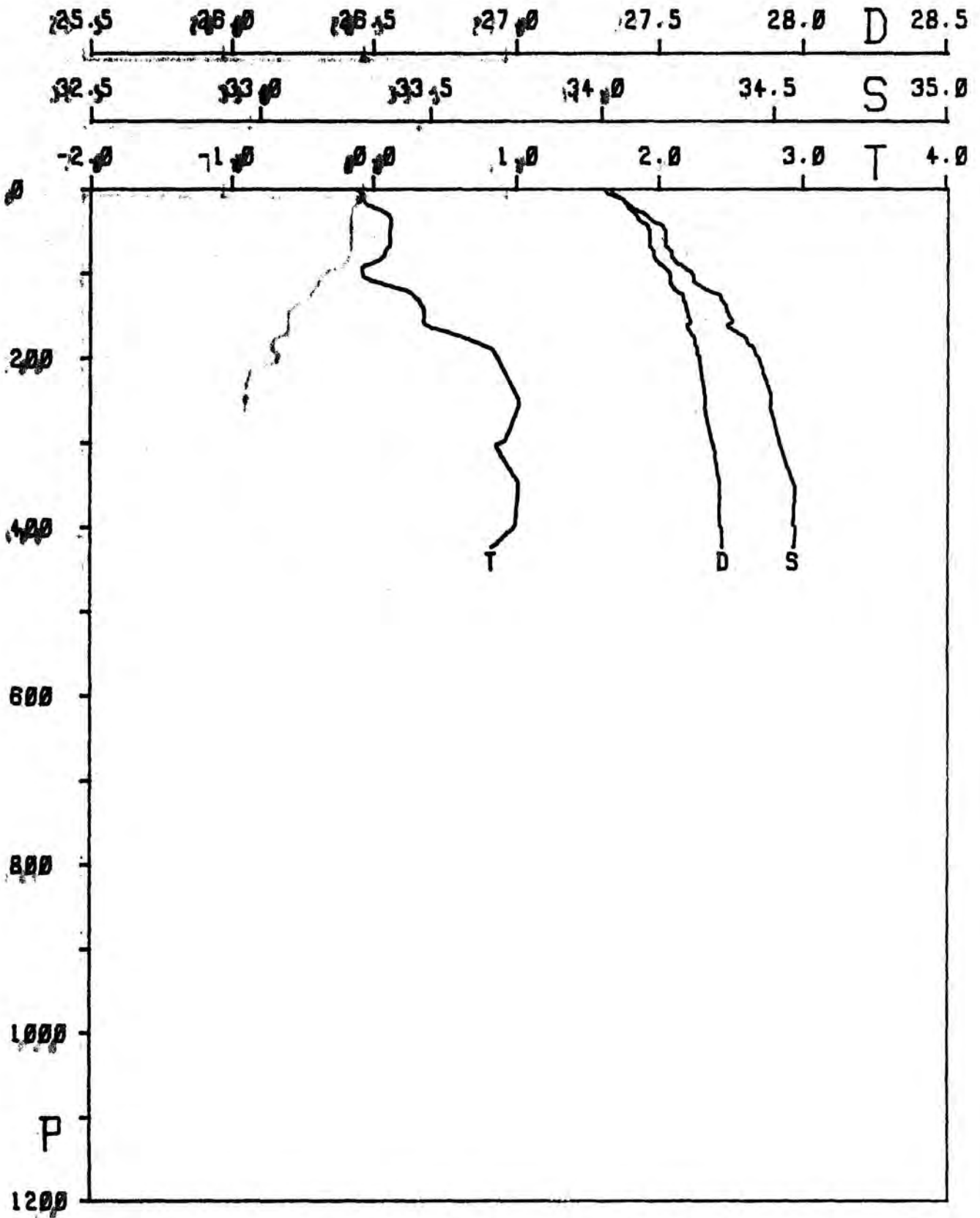
STATION 0419



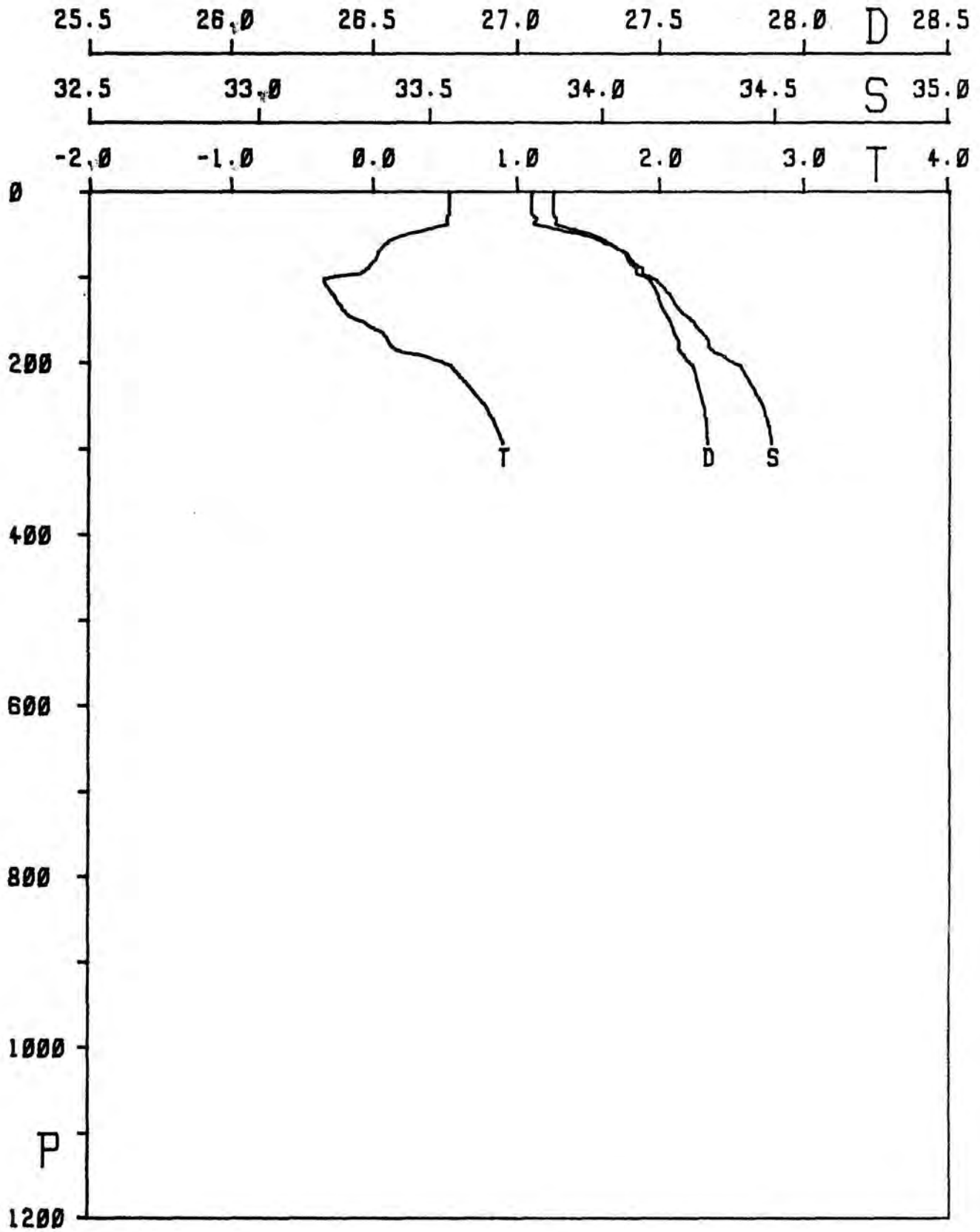
STATION 0420



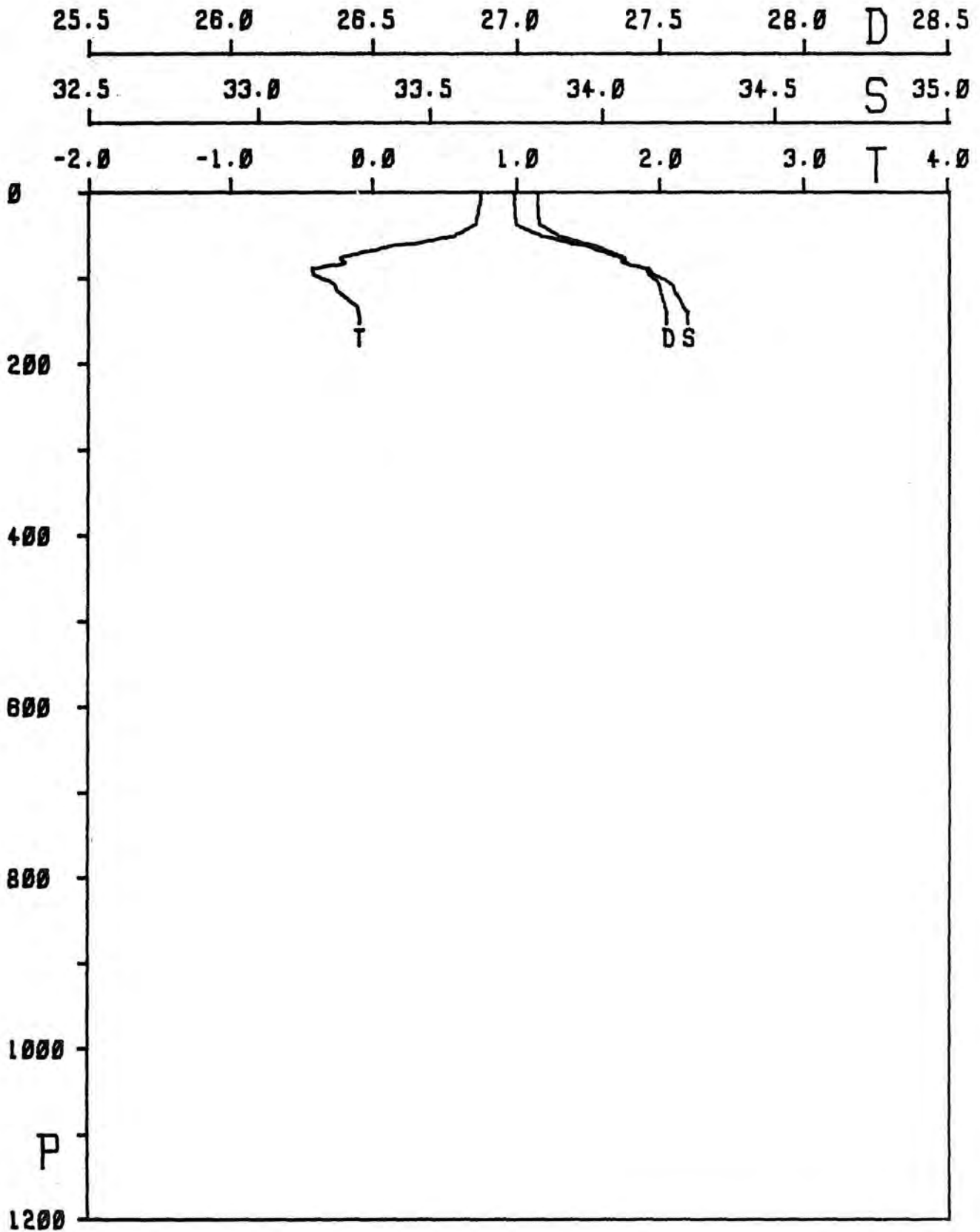
STATION 0421



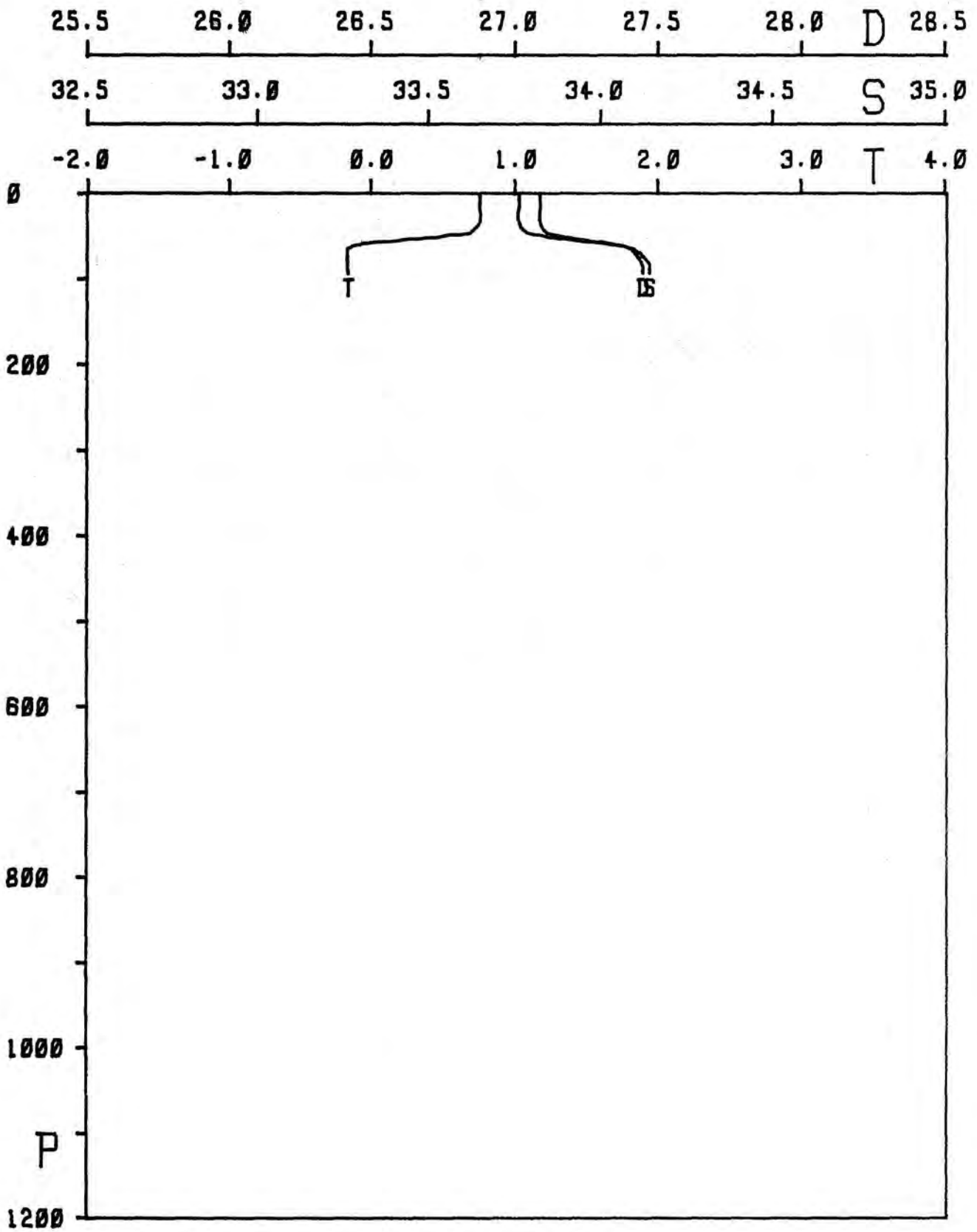
STATION 0422



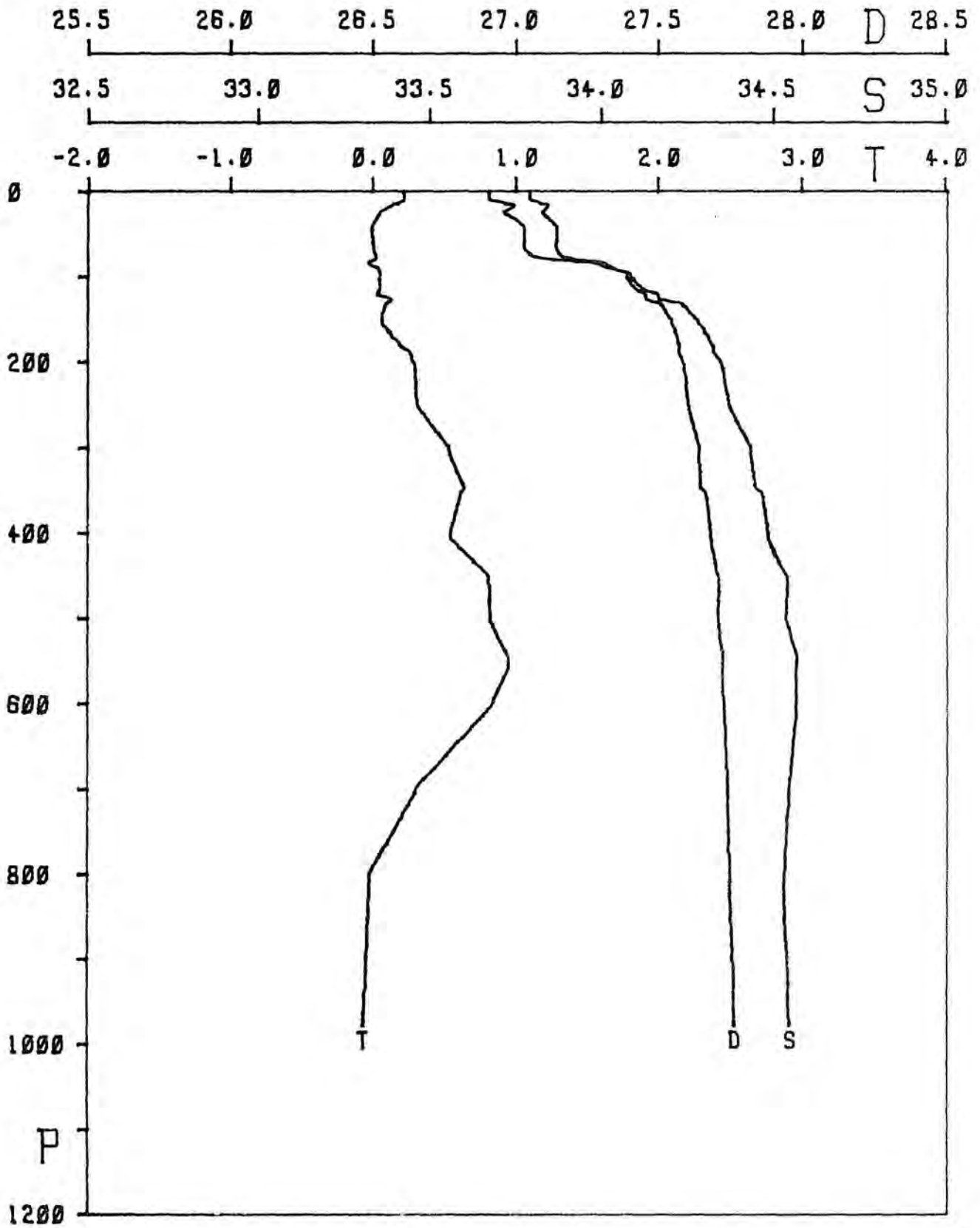
STATION 0423



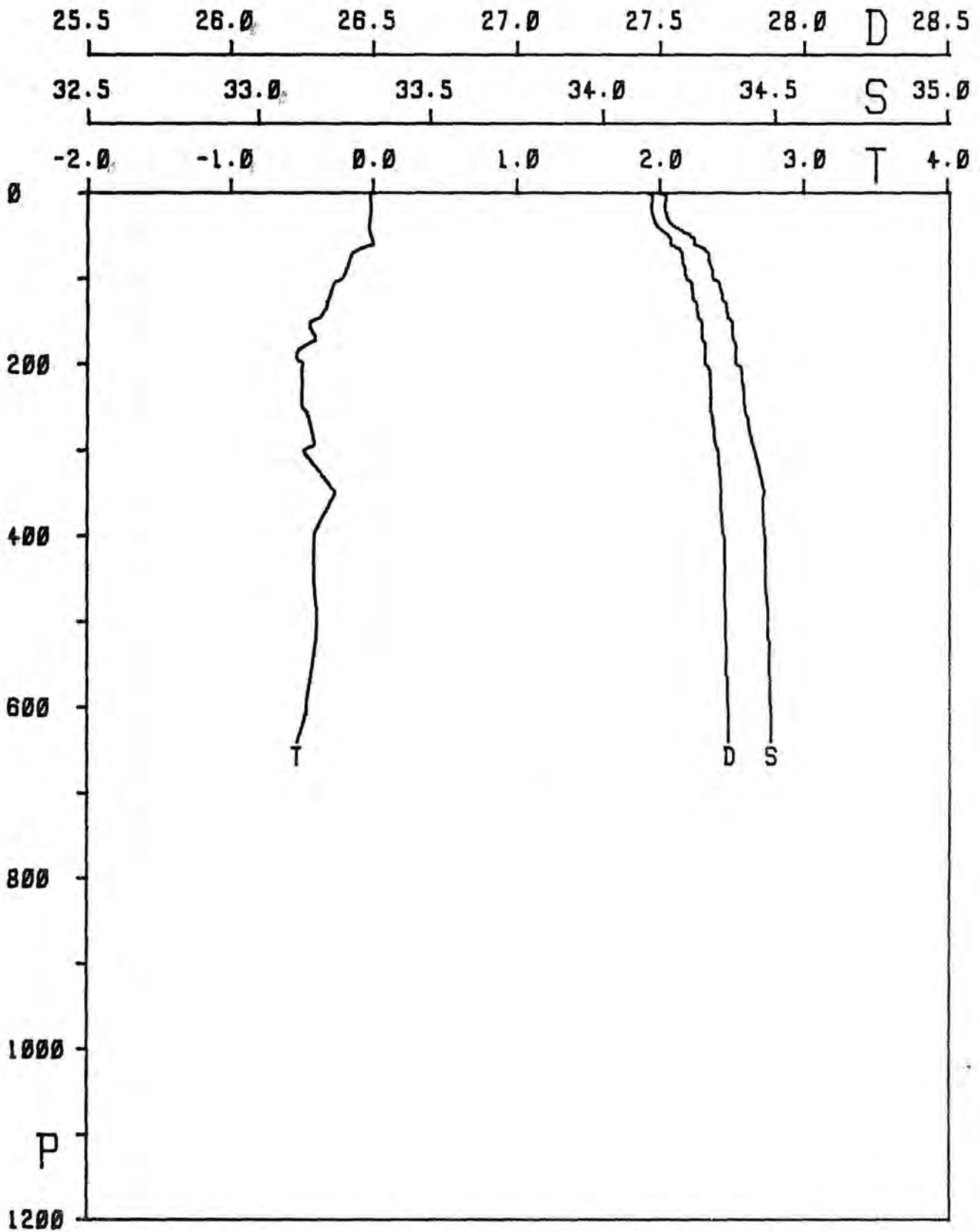
STATION 0425



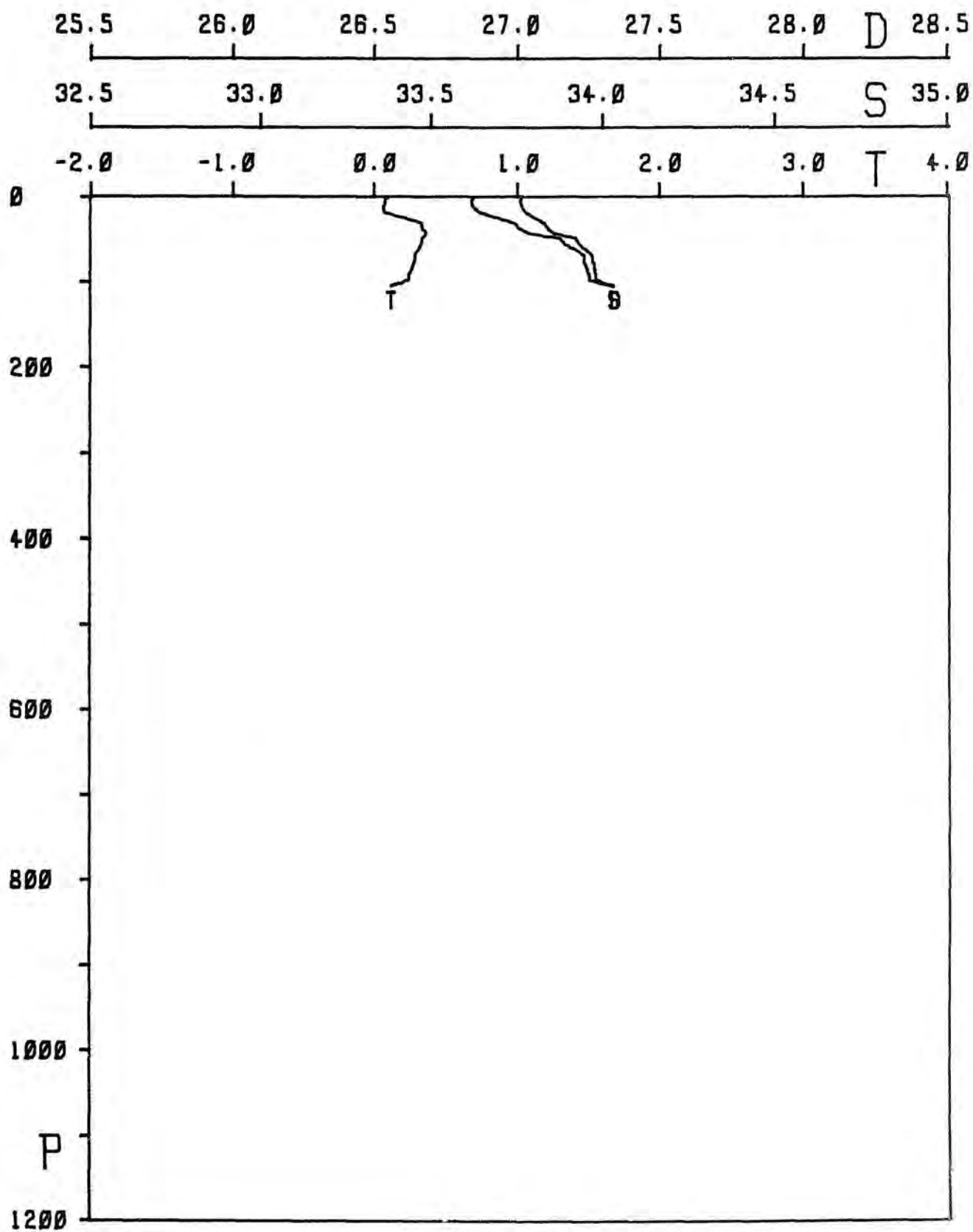
STATION 0426



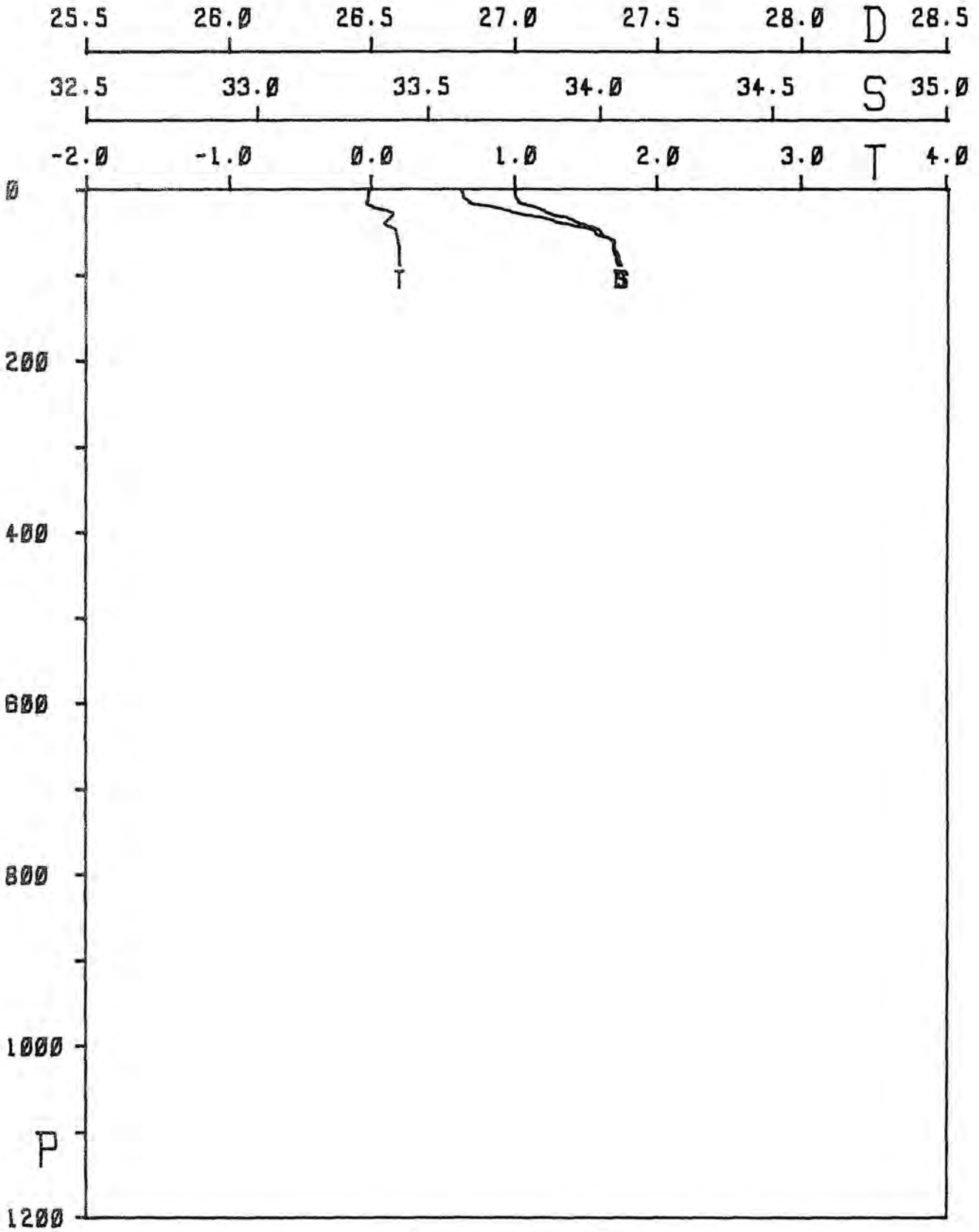
STATION 0427



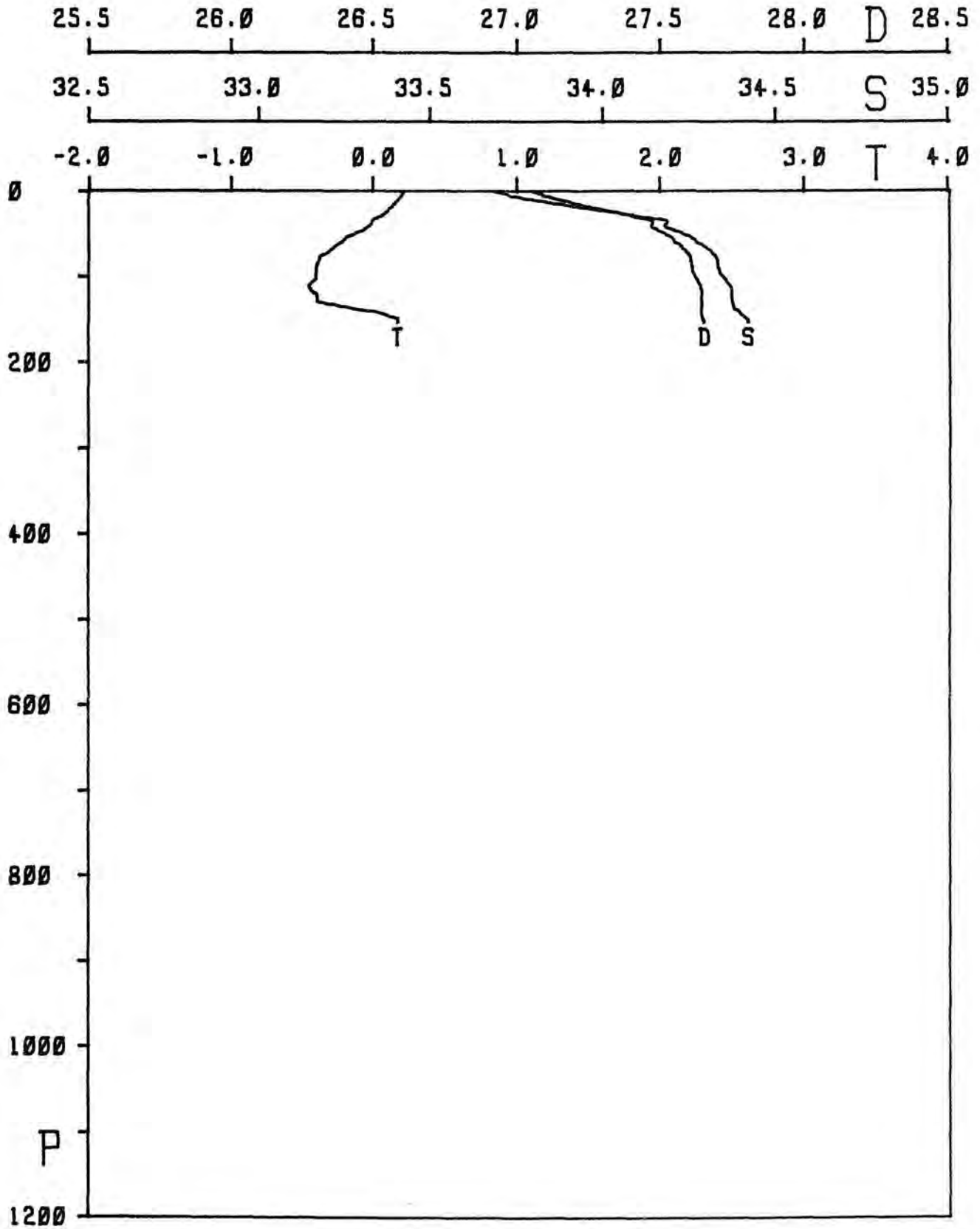
STATION 0428



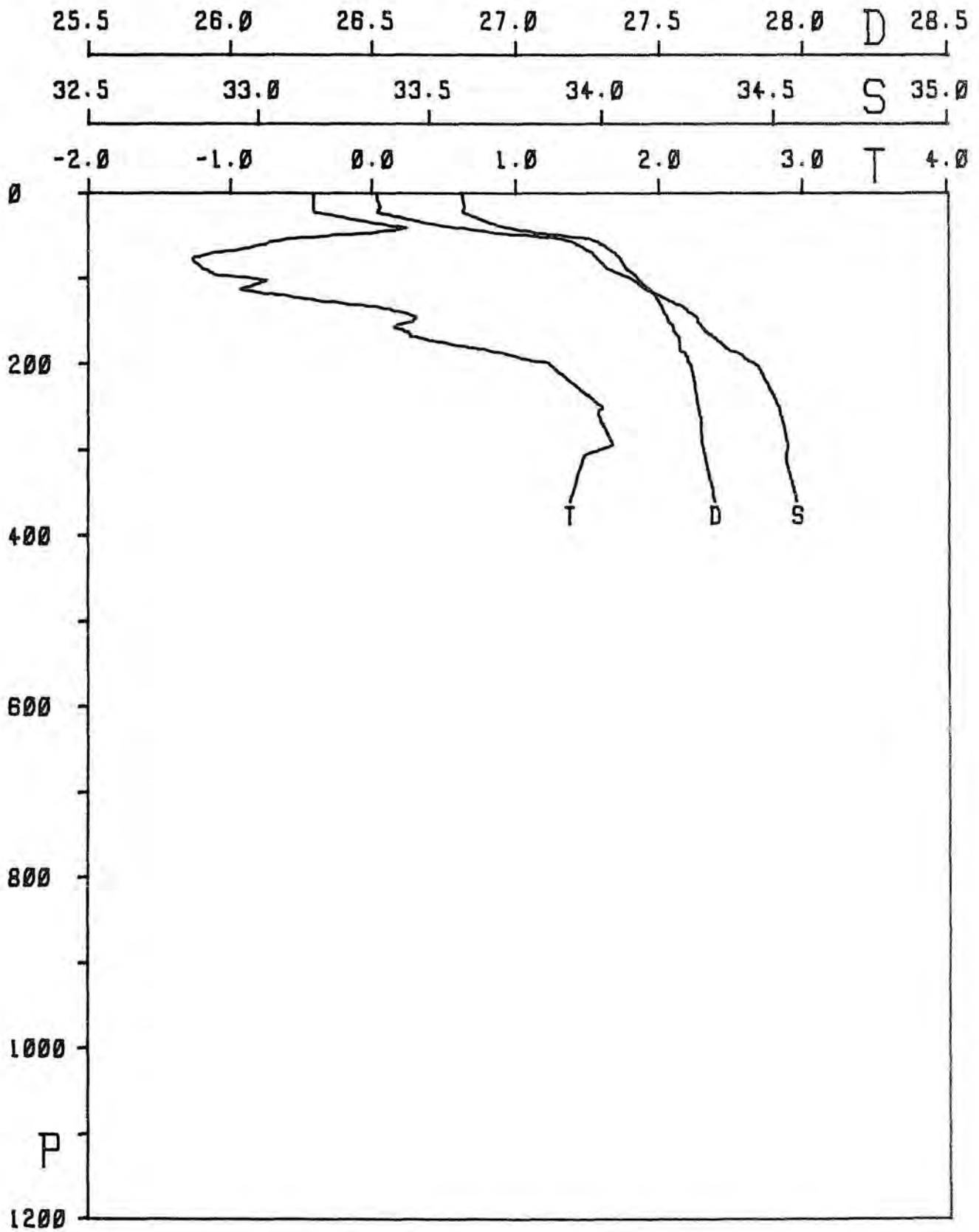
STATION 0430



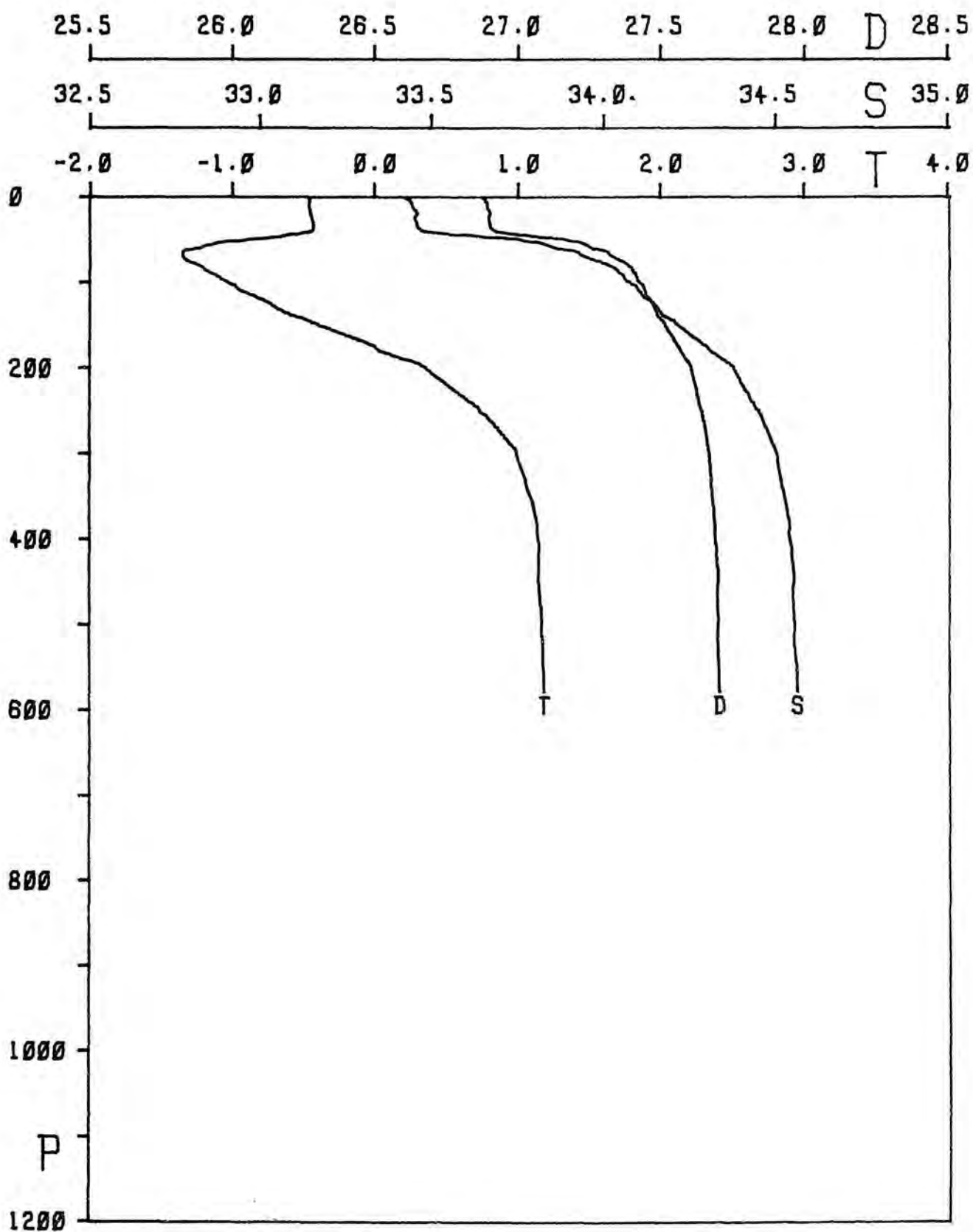
STATION 0432



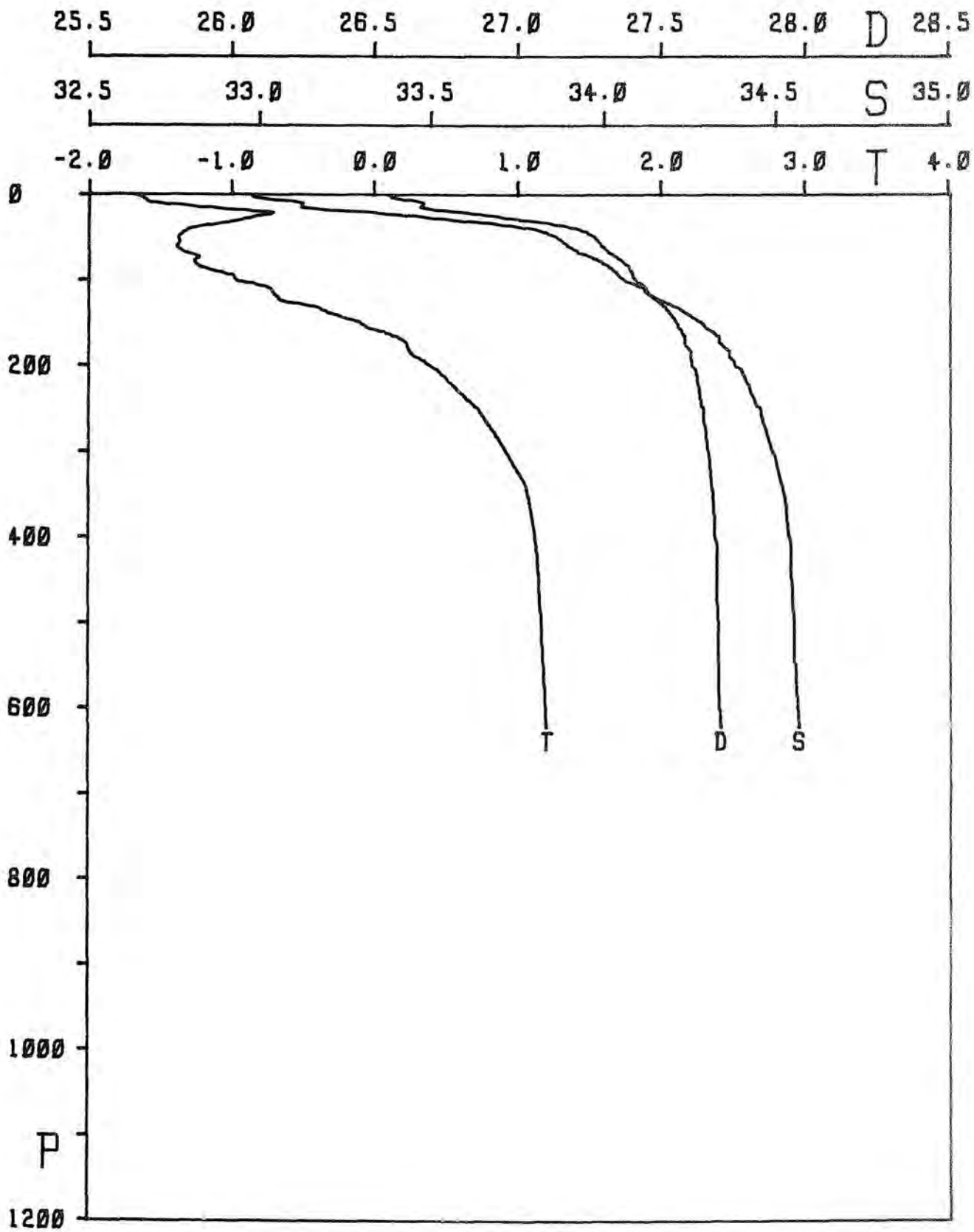
STATION 0434



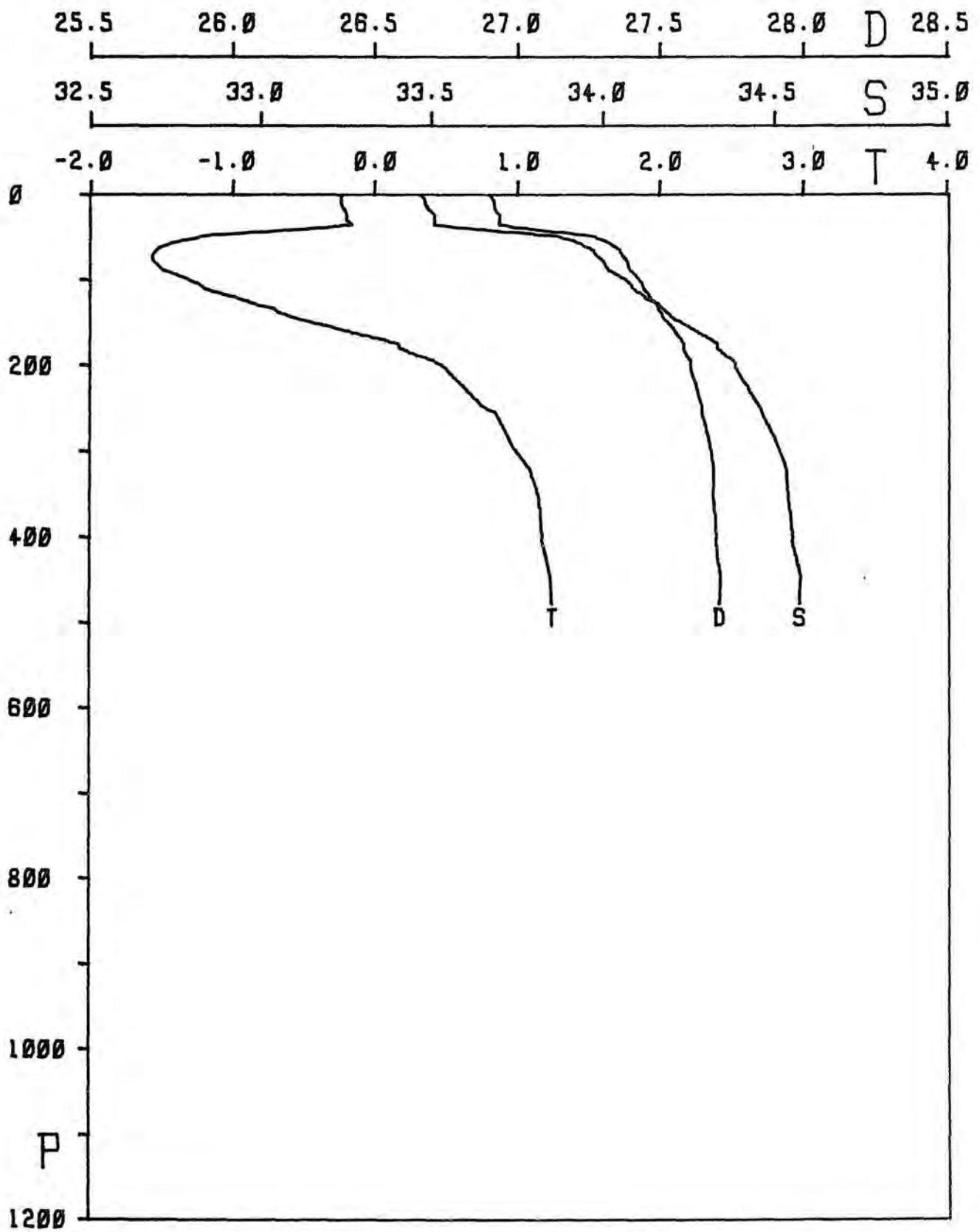
STATION Ø435



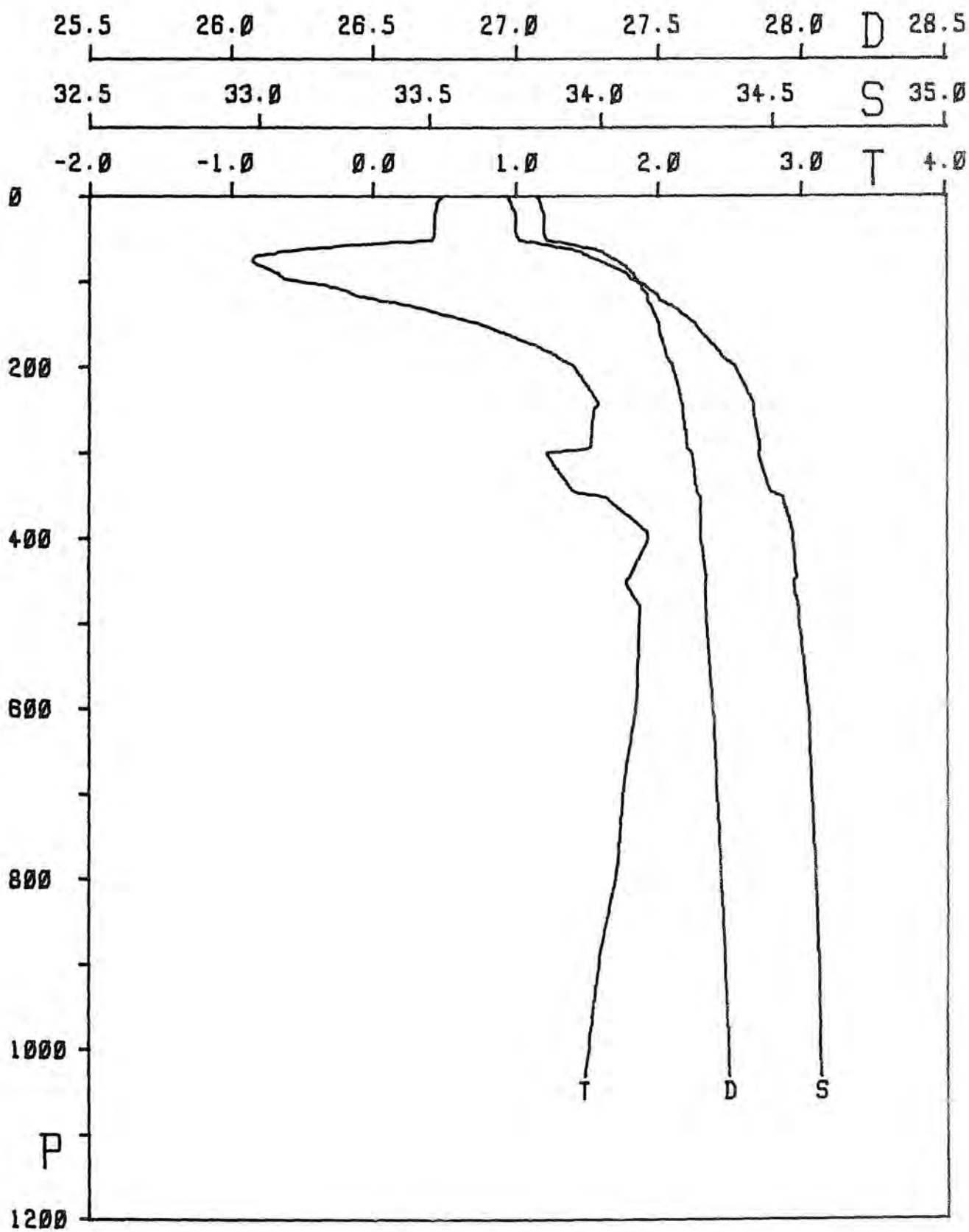
STATION 0436



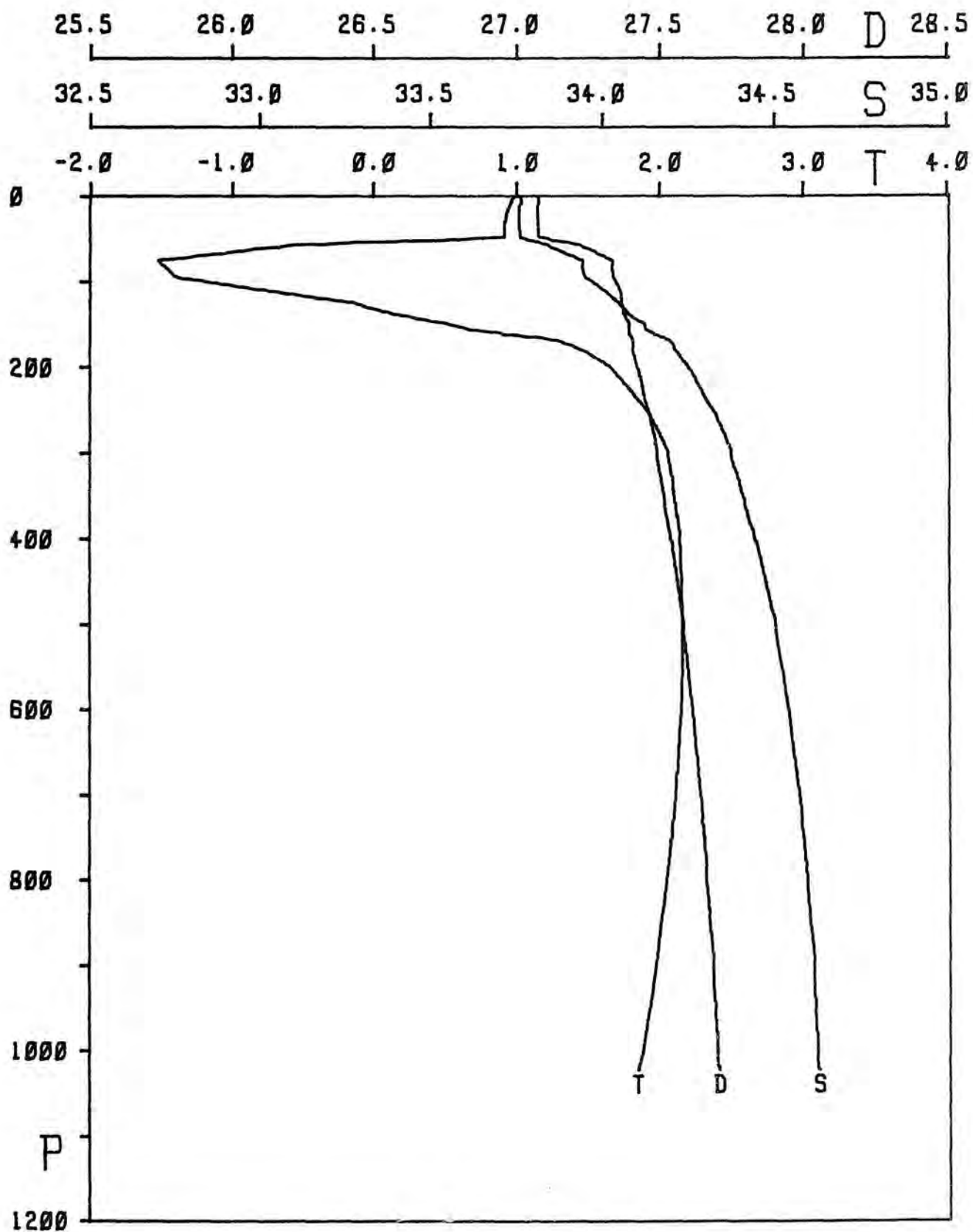
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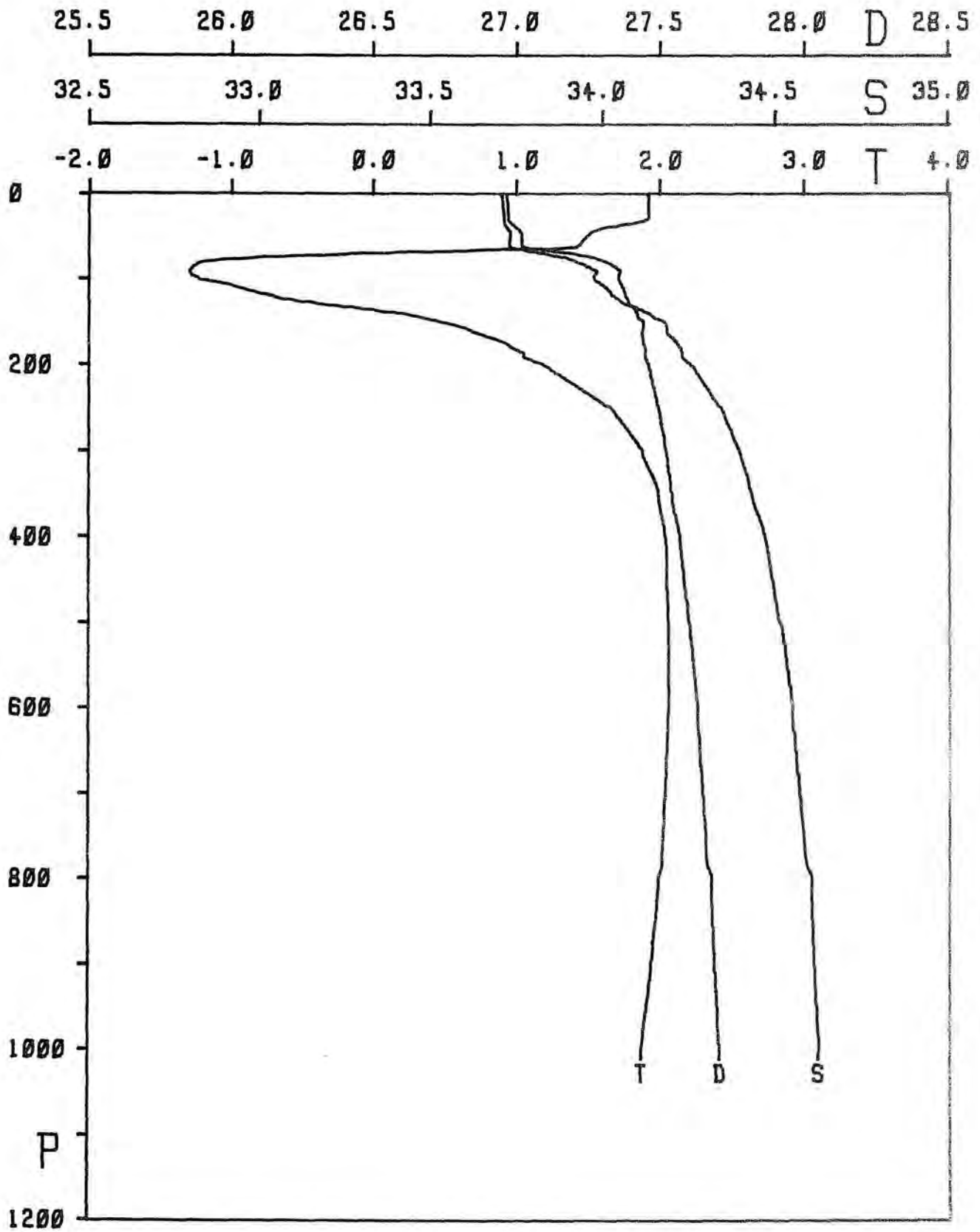
STATION 0438



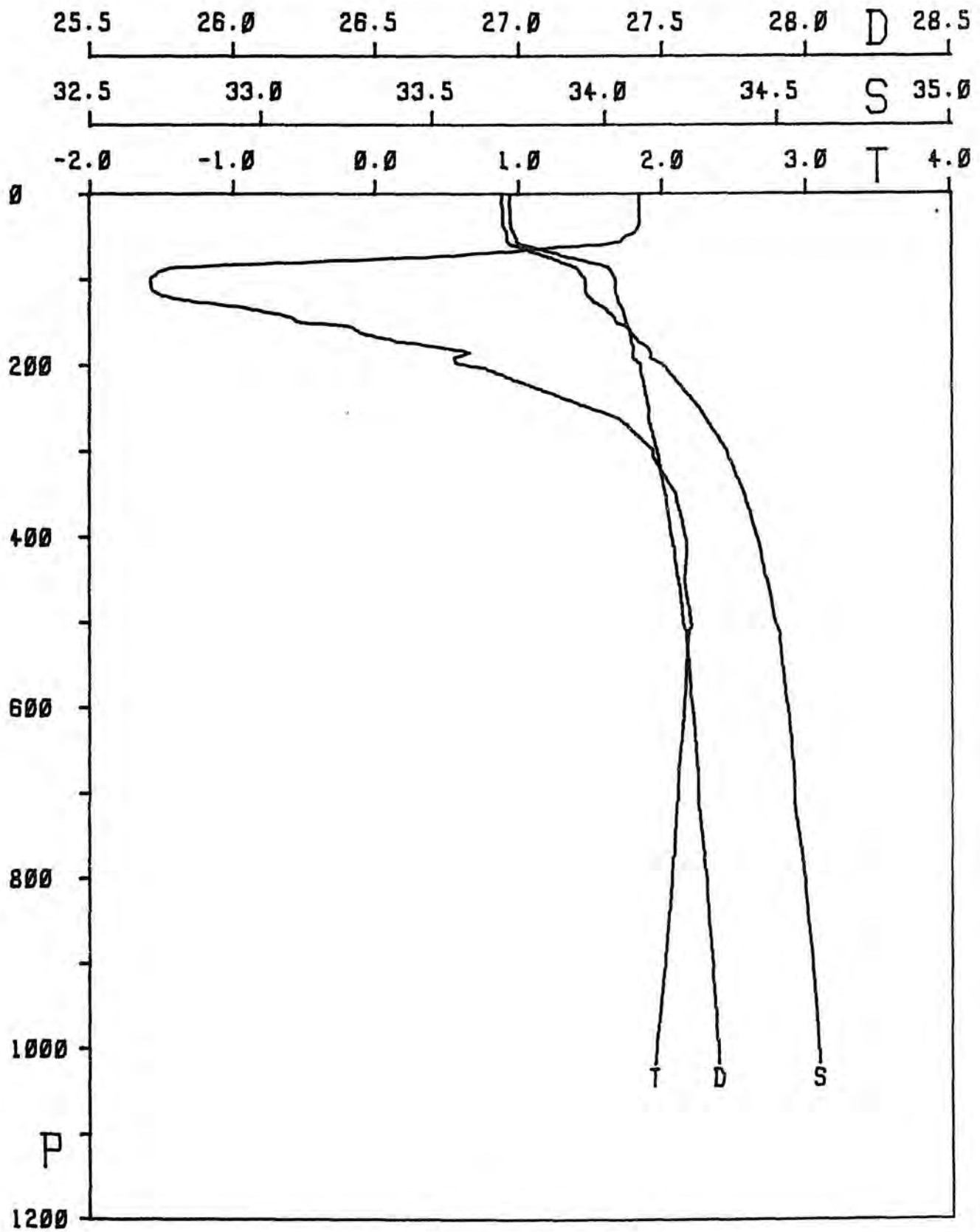
STATION 0439



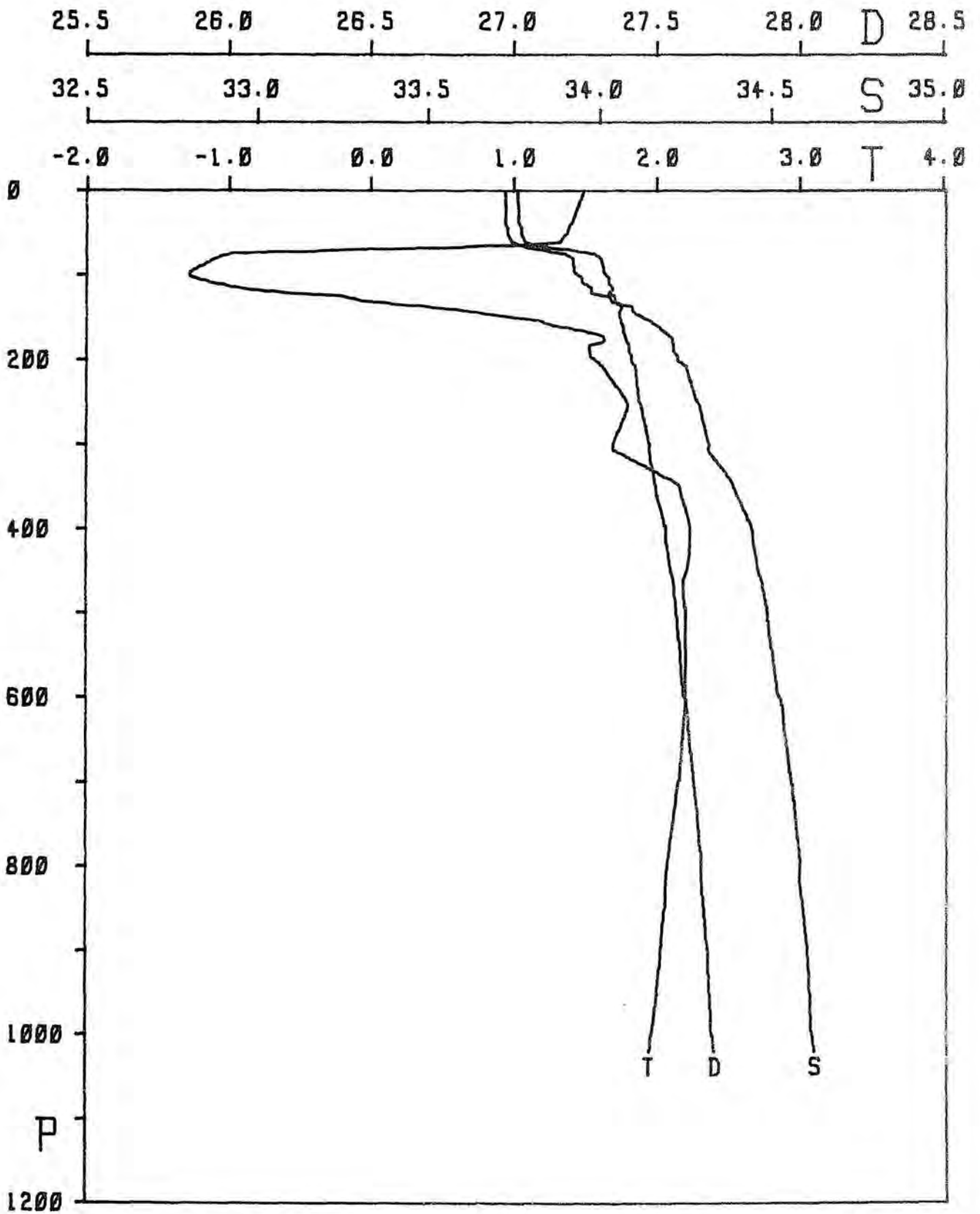
STATION 0440



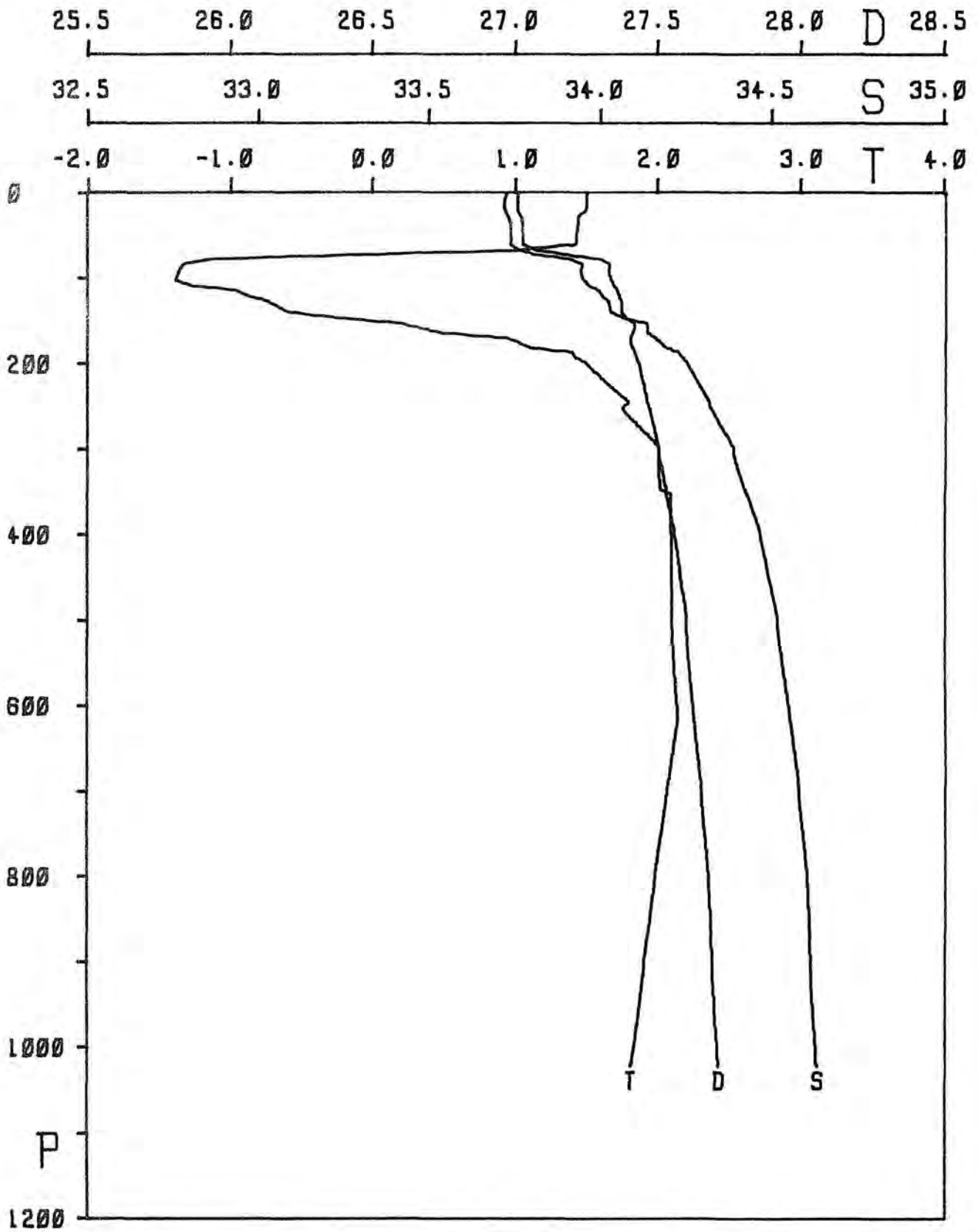
STATION 0441



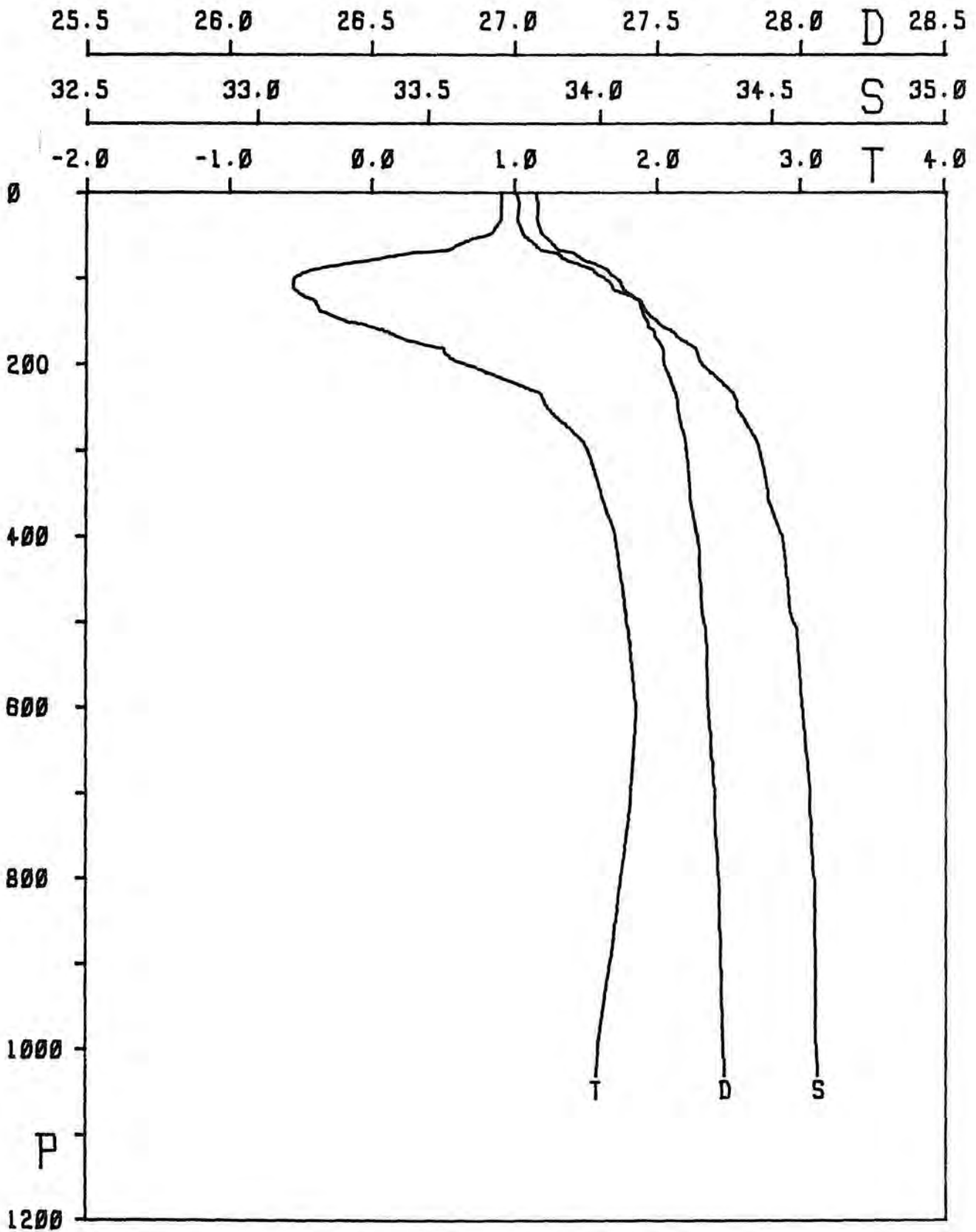
STATION 0442



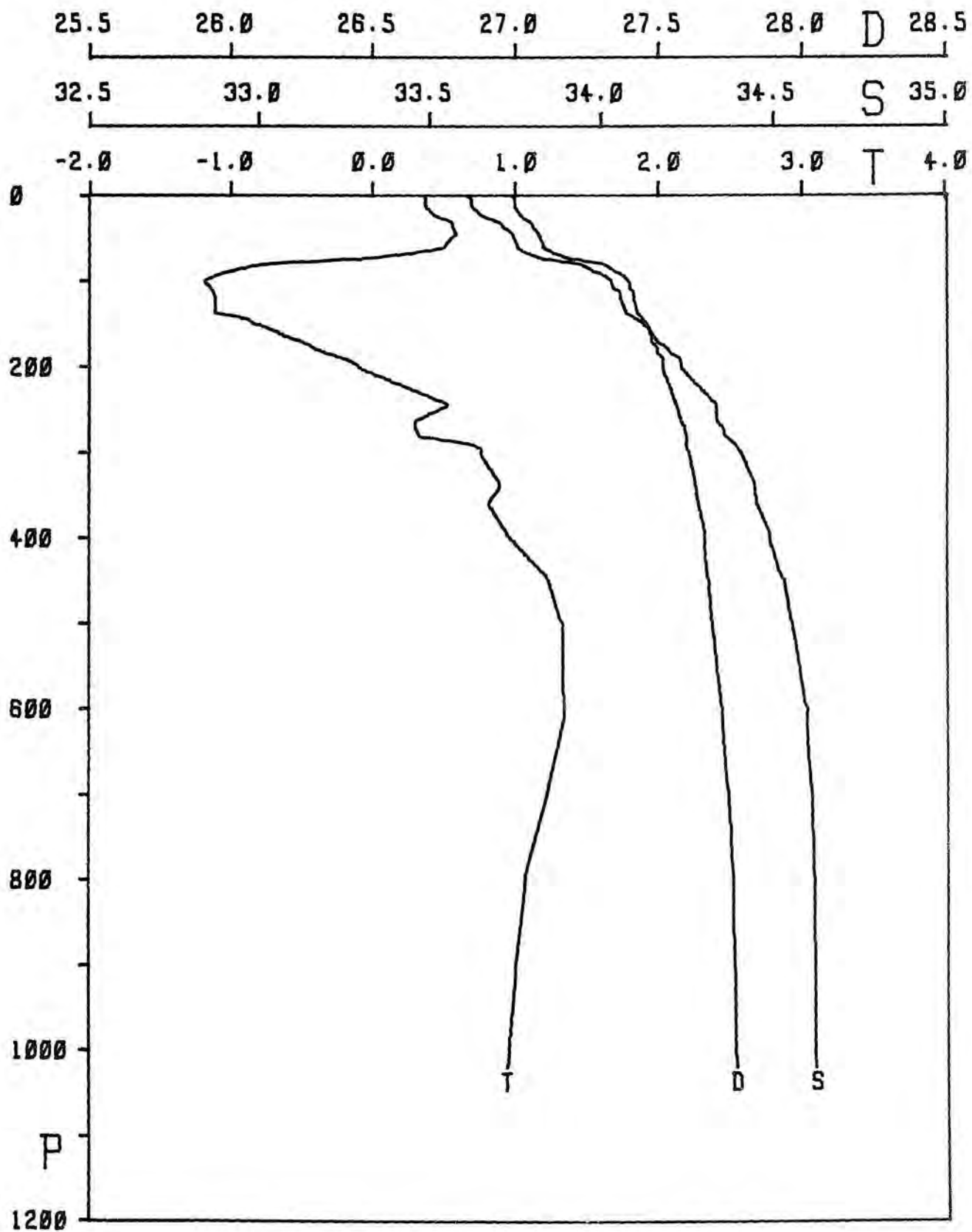
STATION 0443



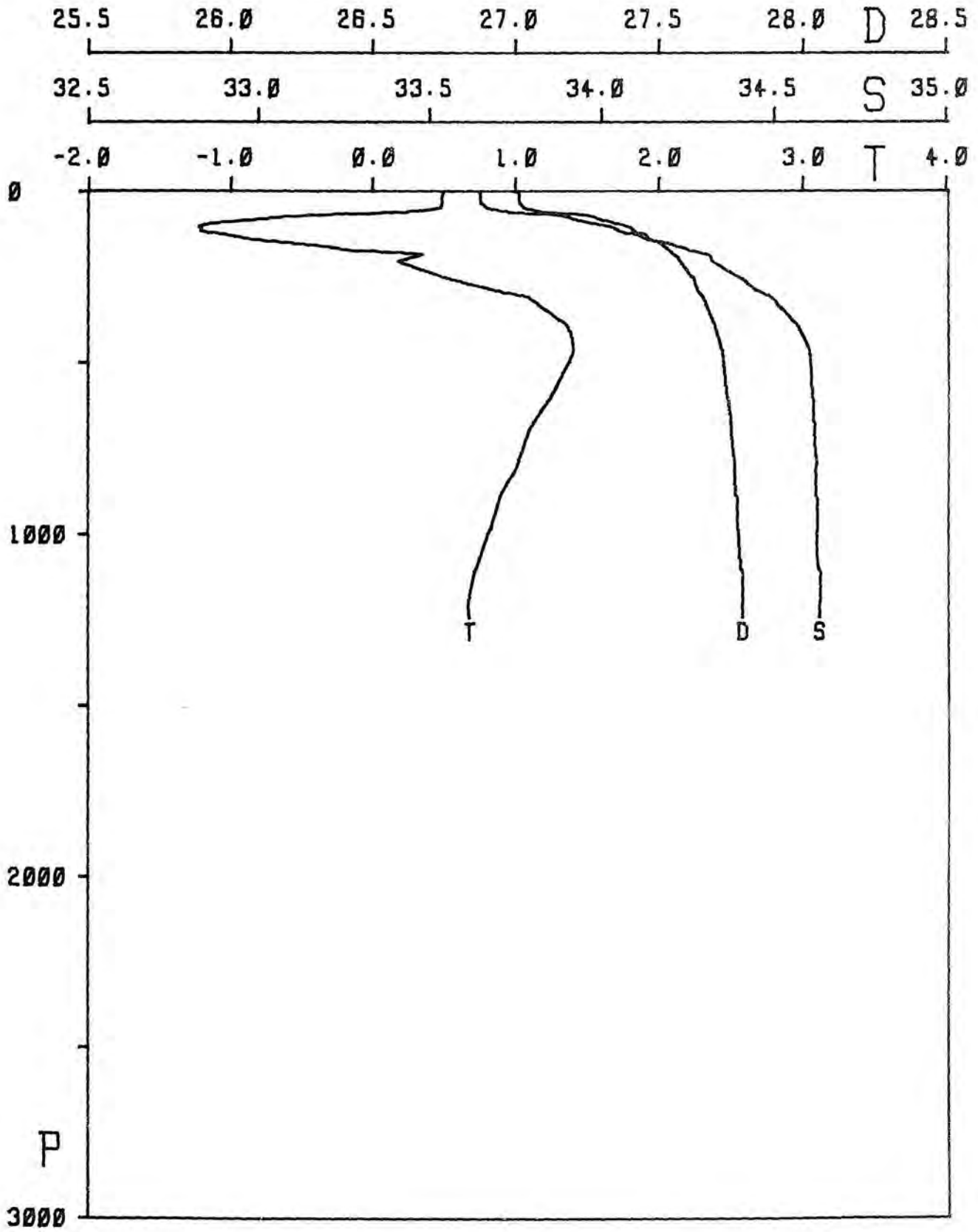
STATION 0444



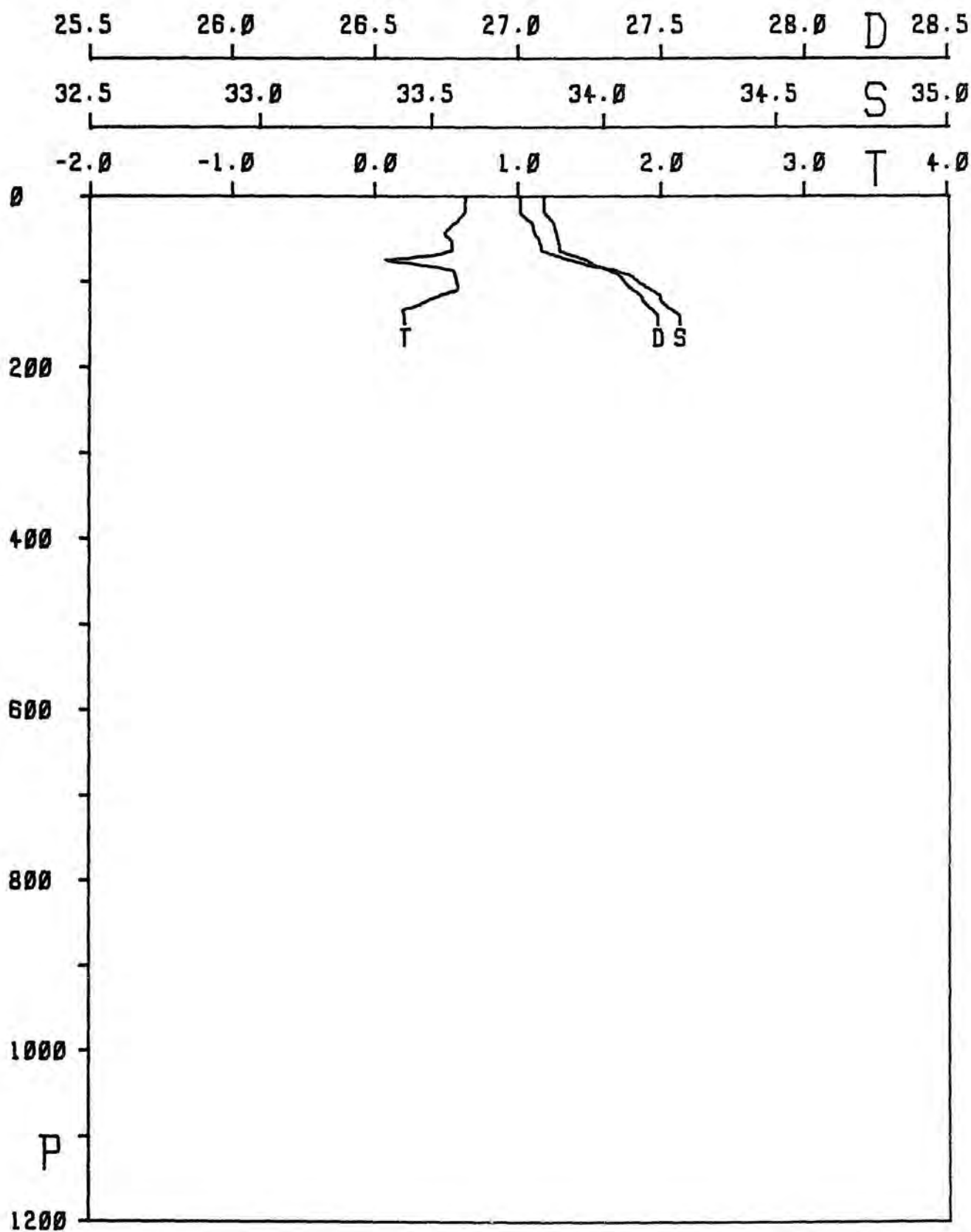
STATION 0445



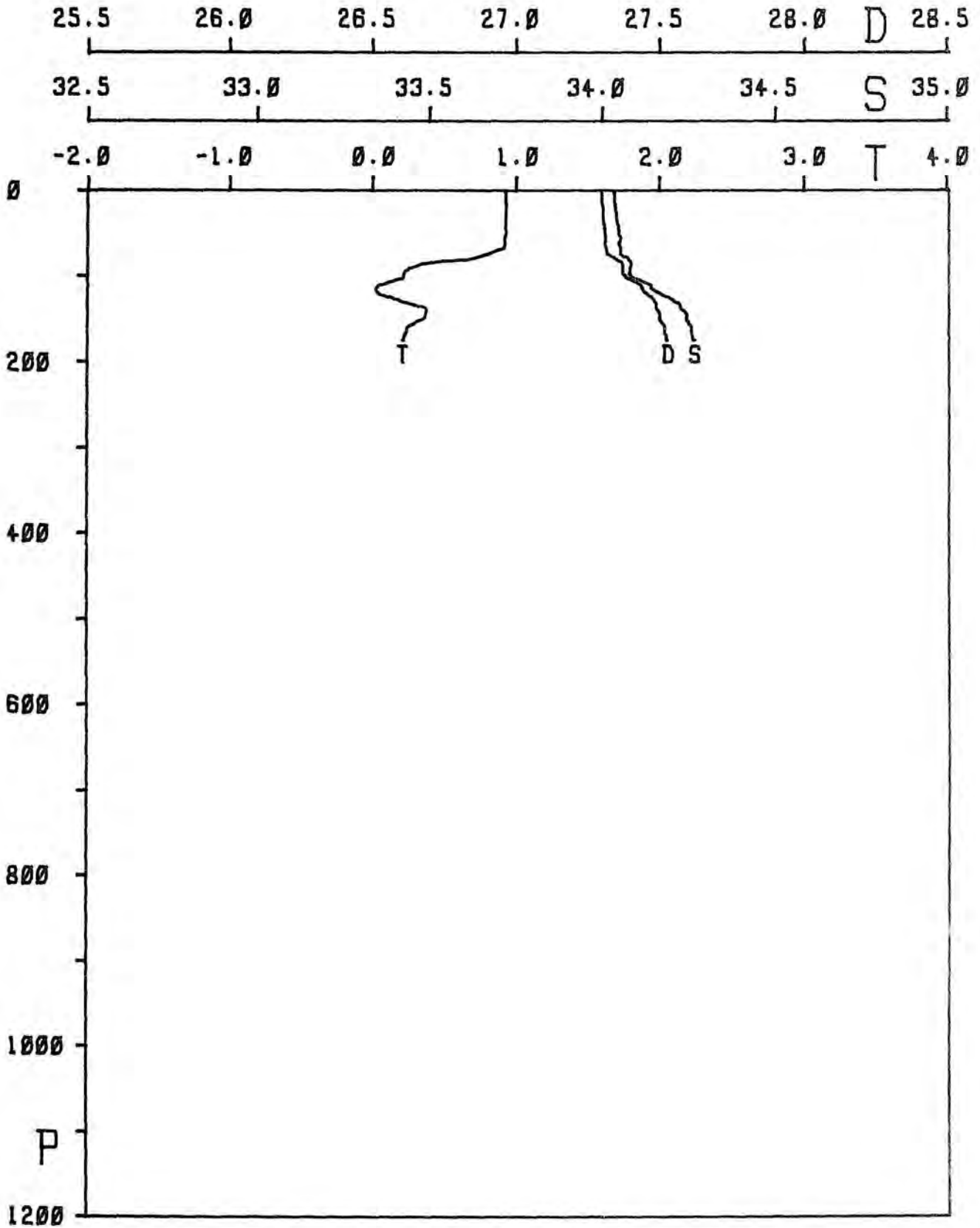
STATION 0446



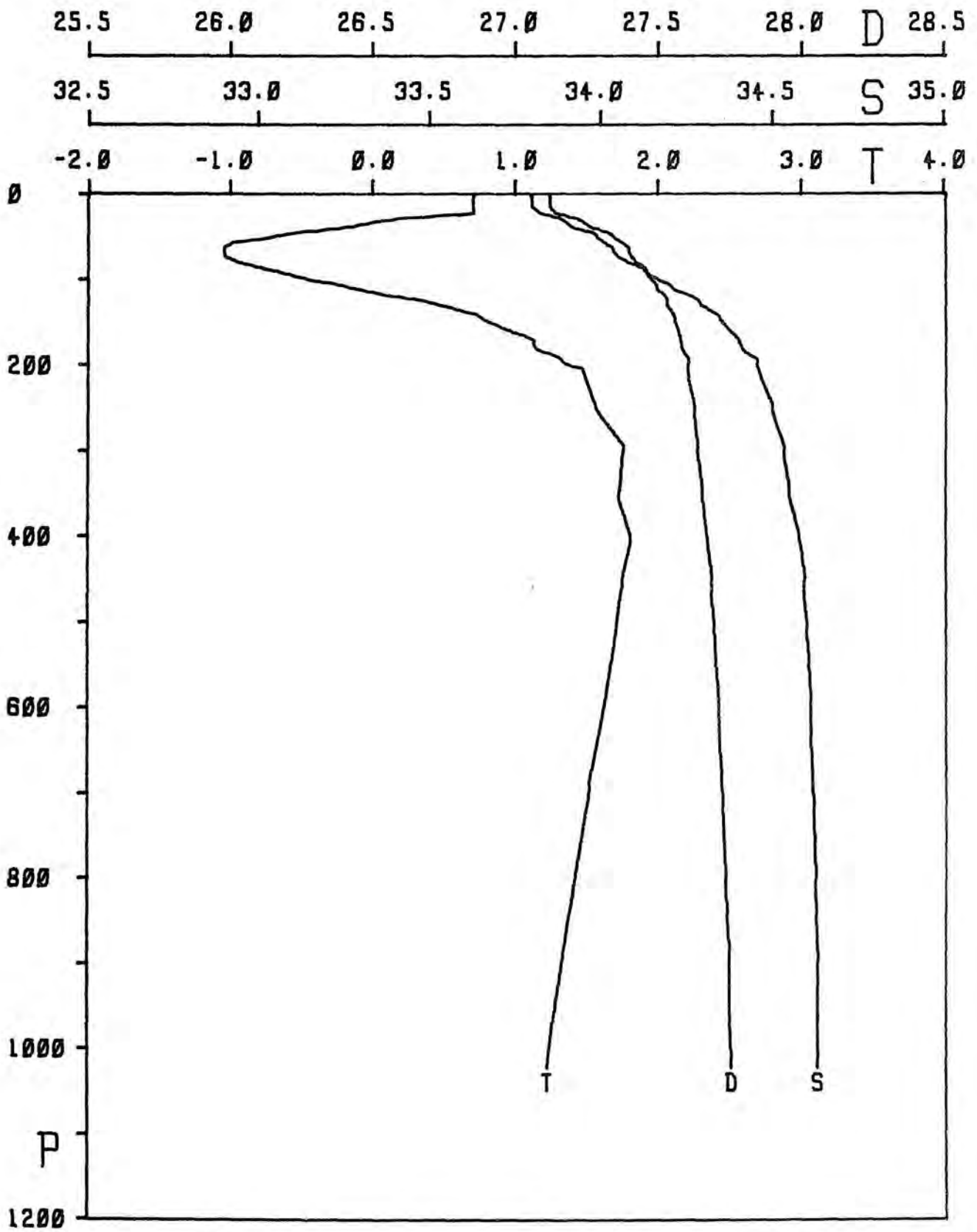
STATION 0448



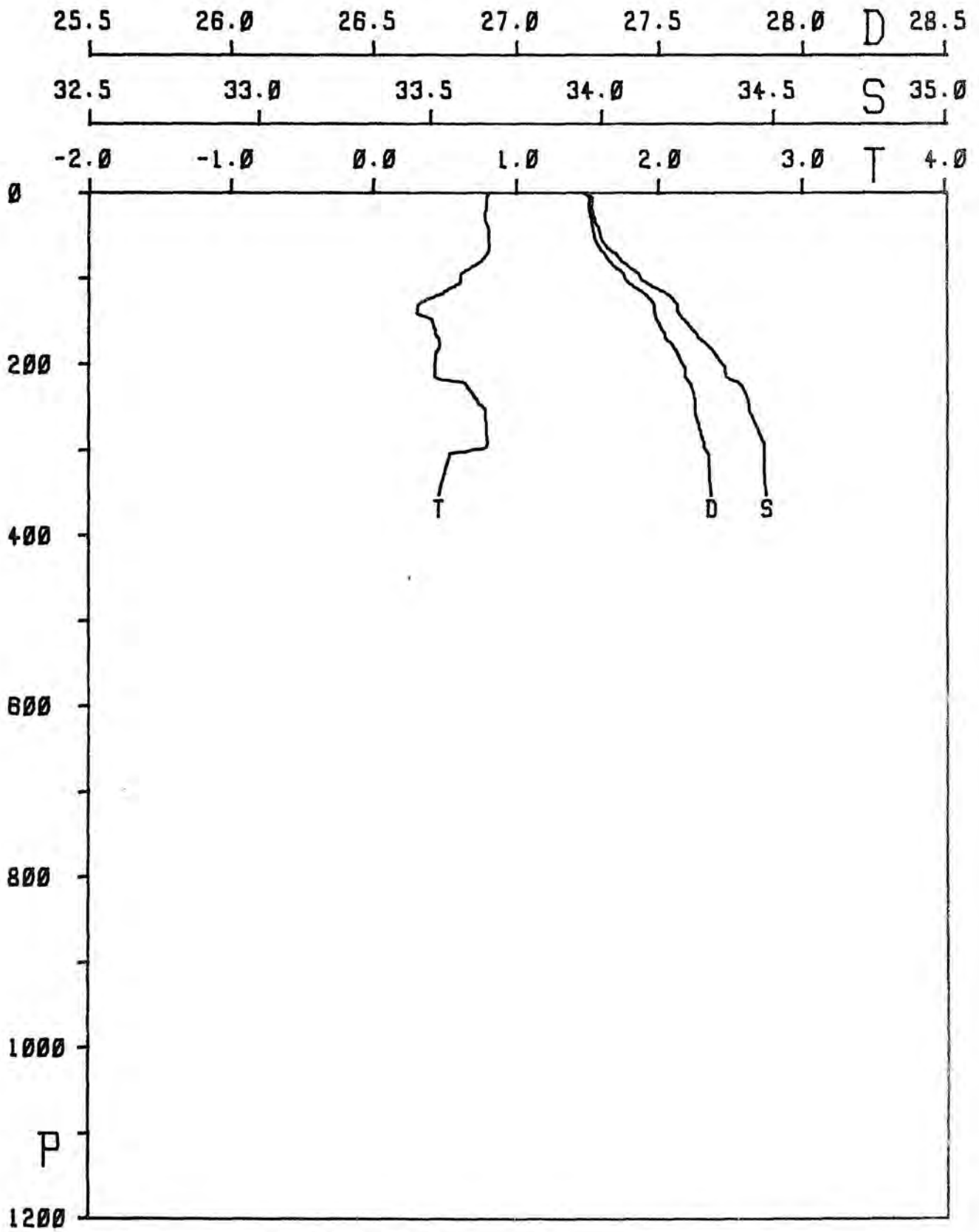
STATION 0449



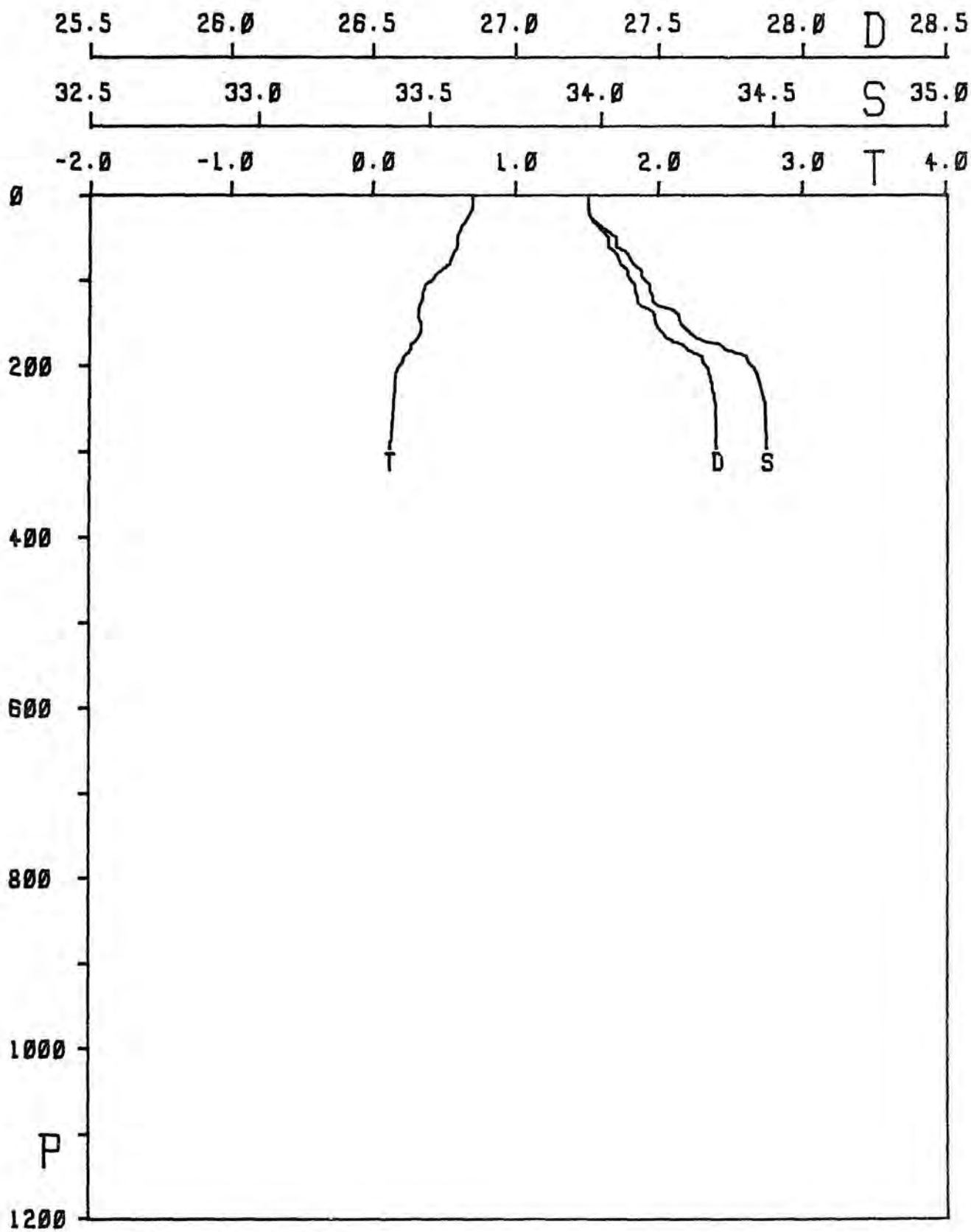
STATION 0450



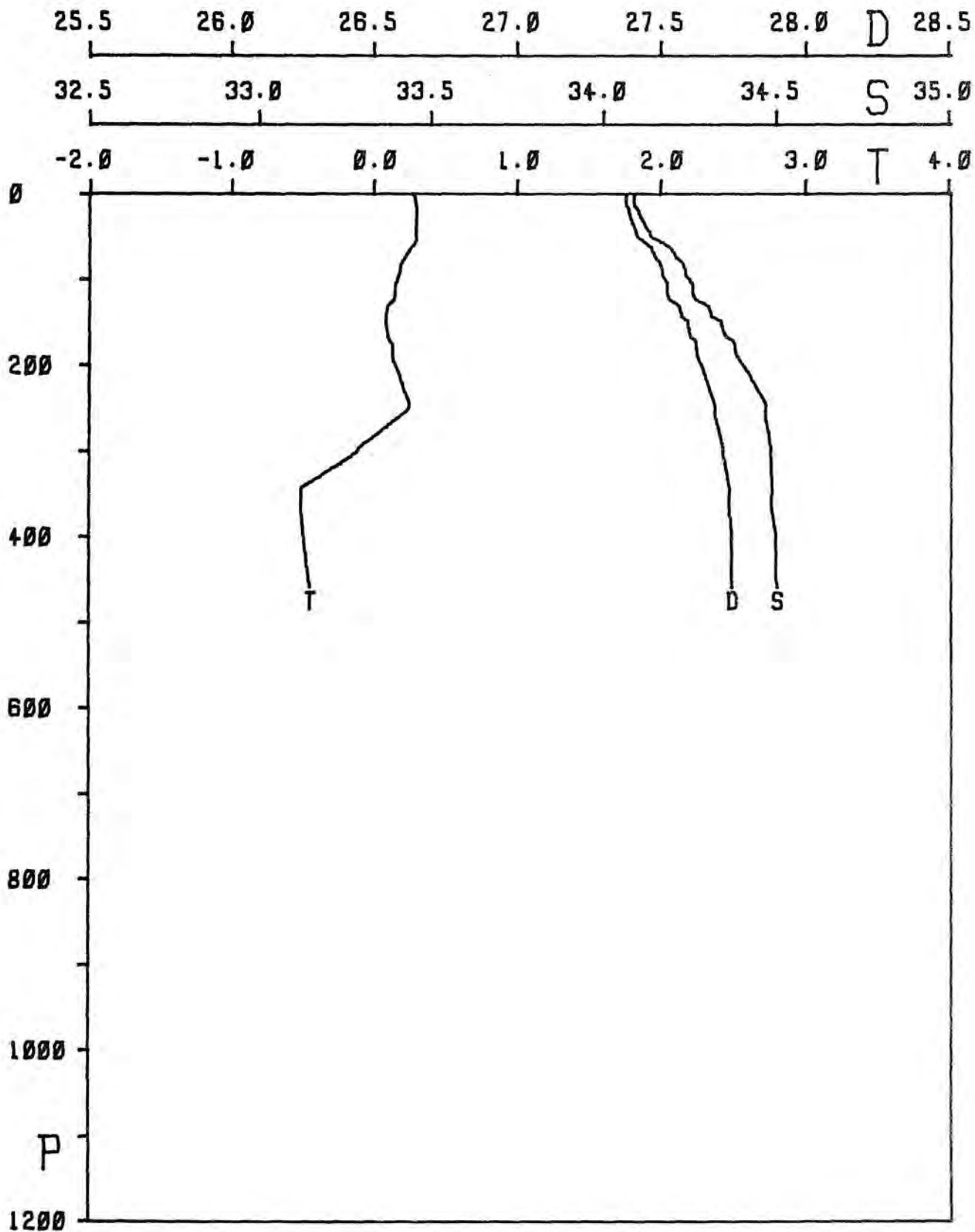
STATION 0451



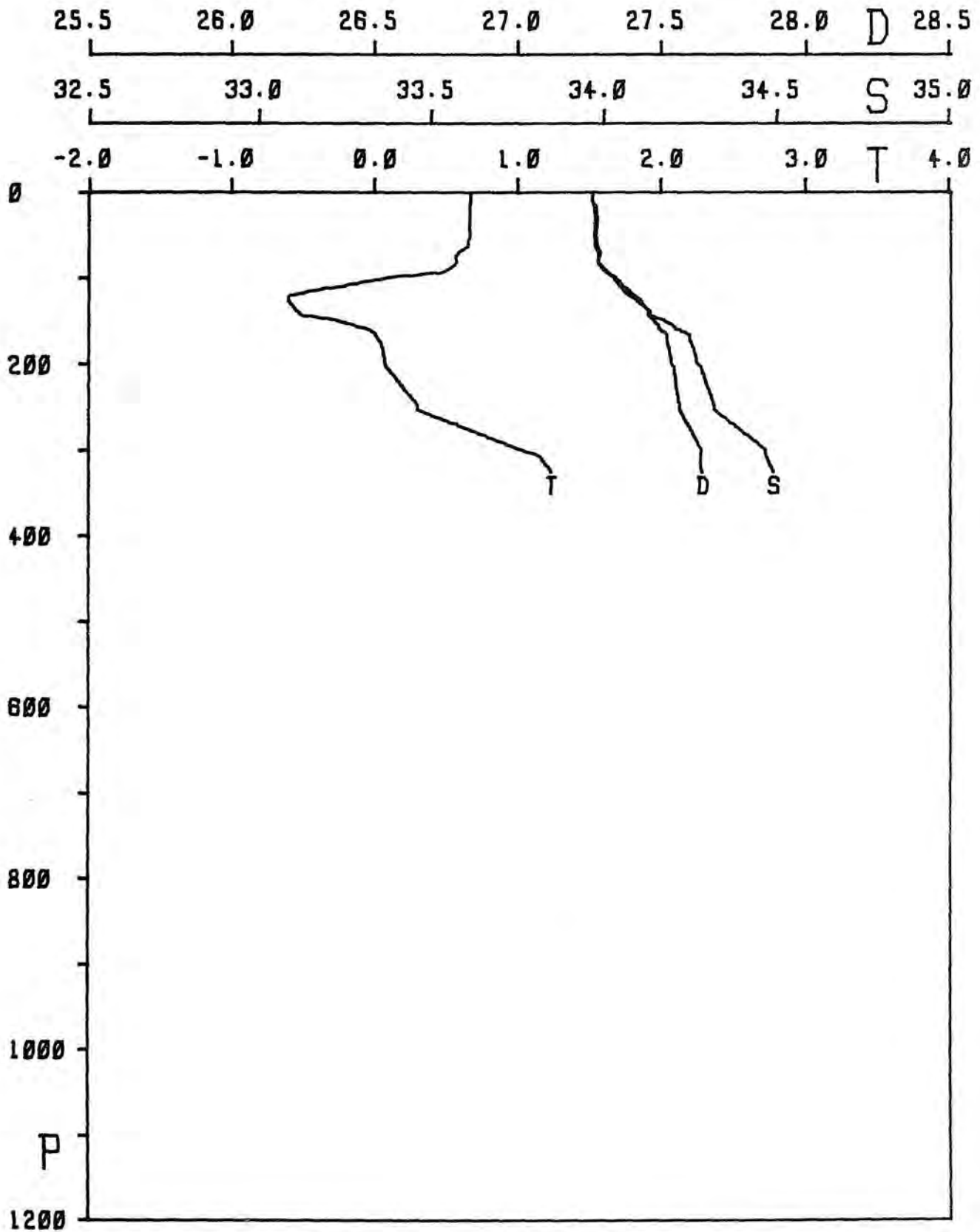
STATION 0452



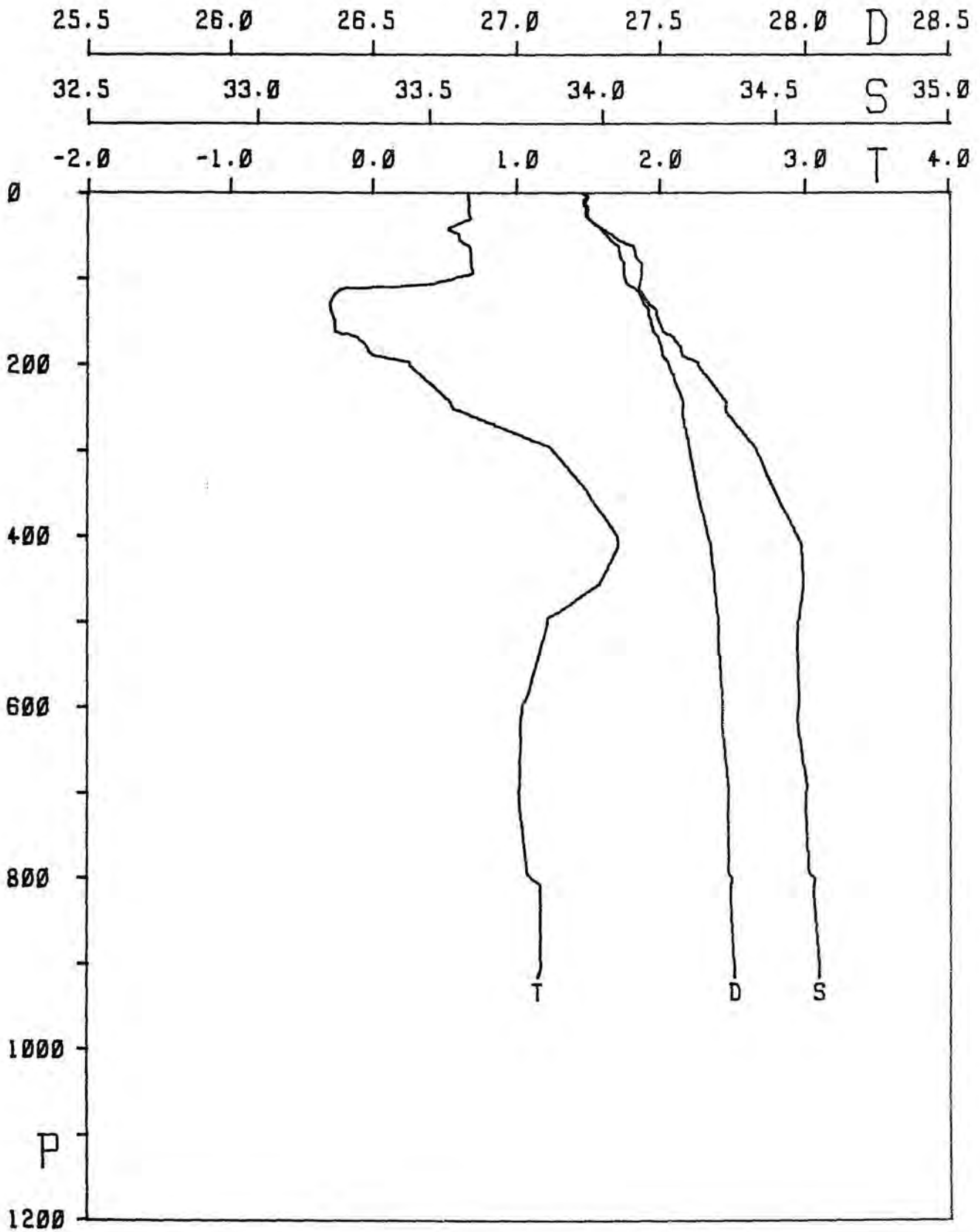
STATION 0453



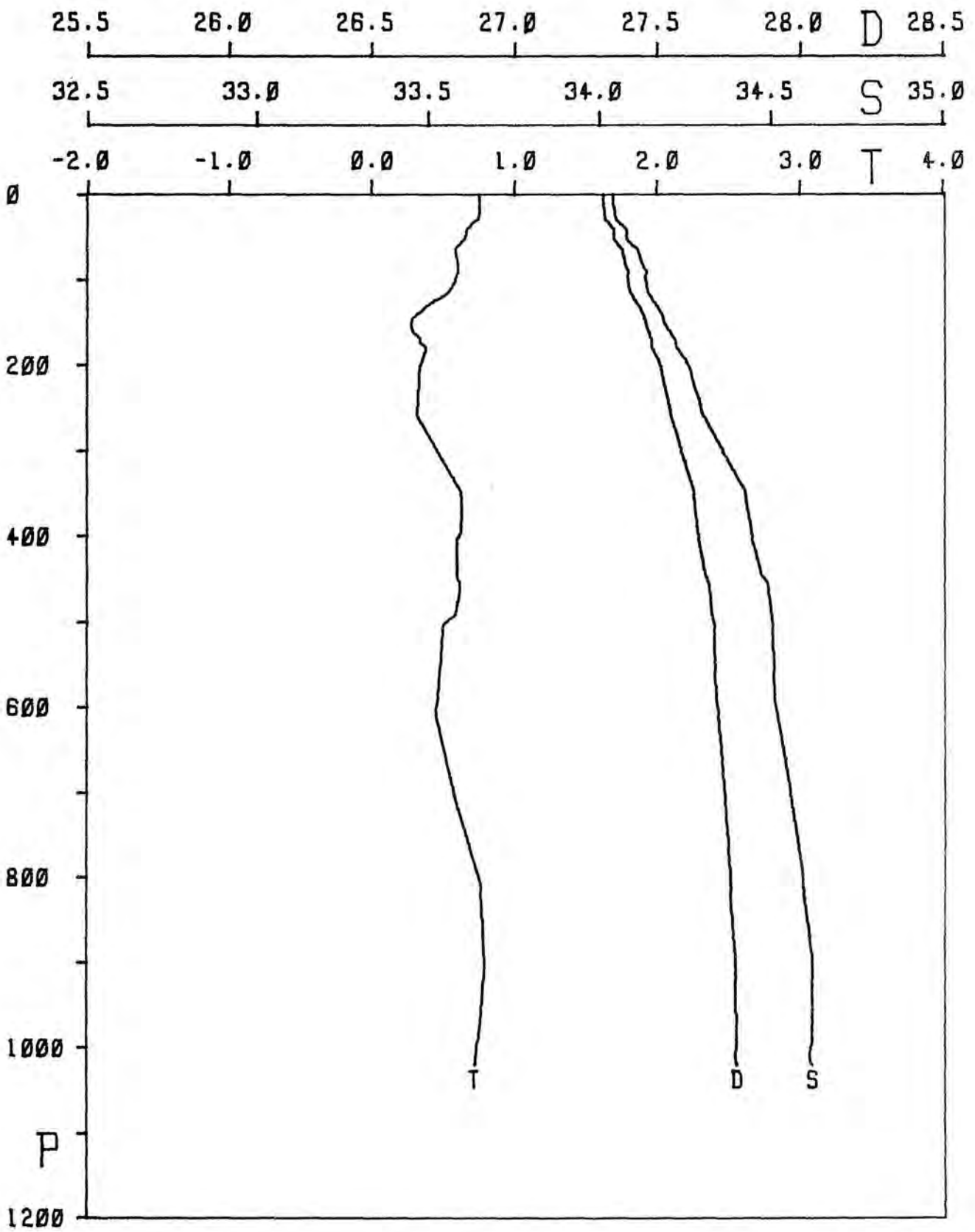
STATION 0454



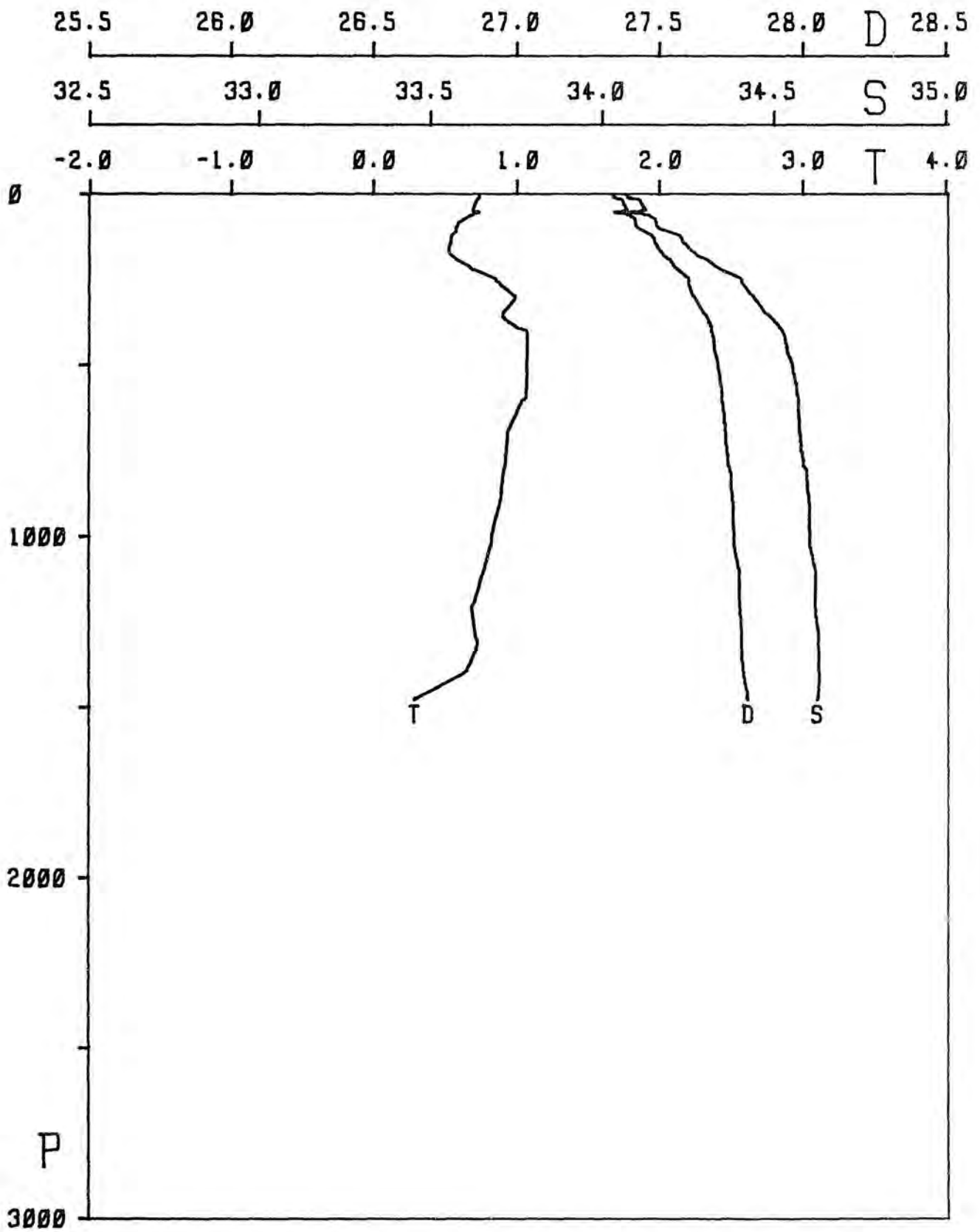
STATION 0456



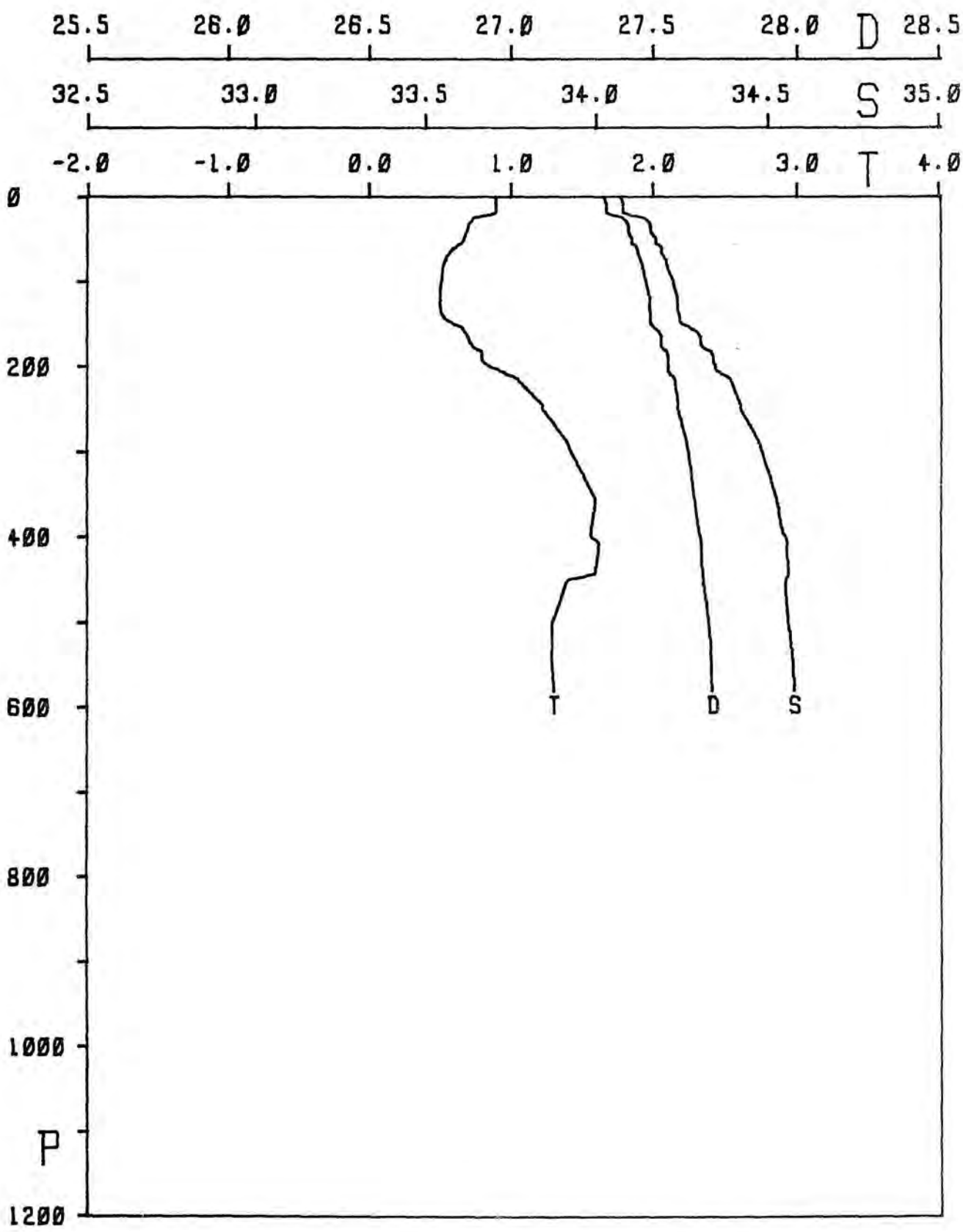
STATION 0457



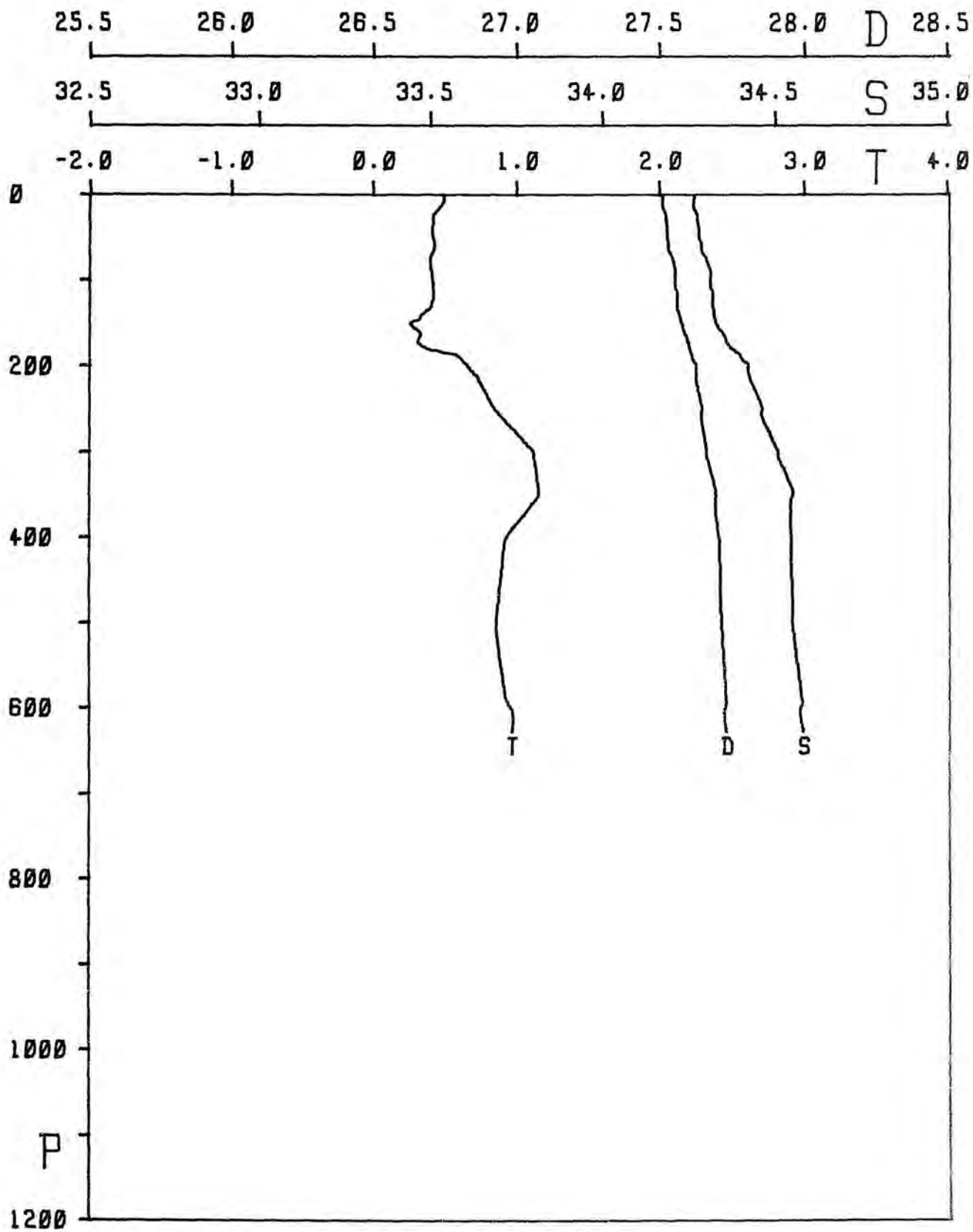
STATION 0458



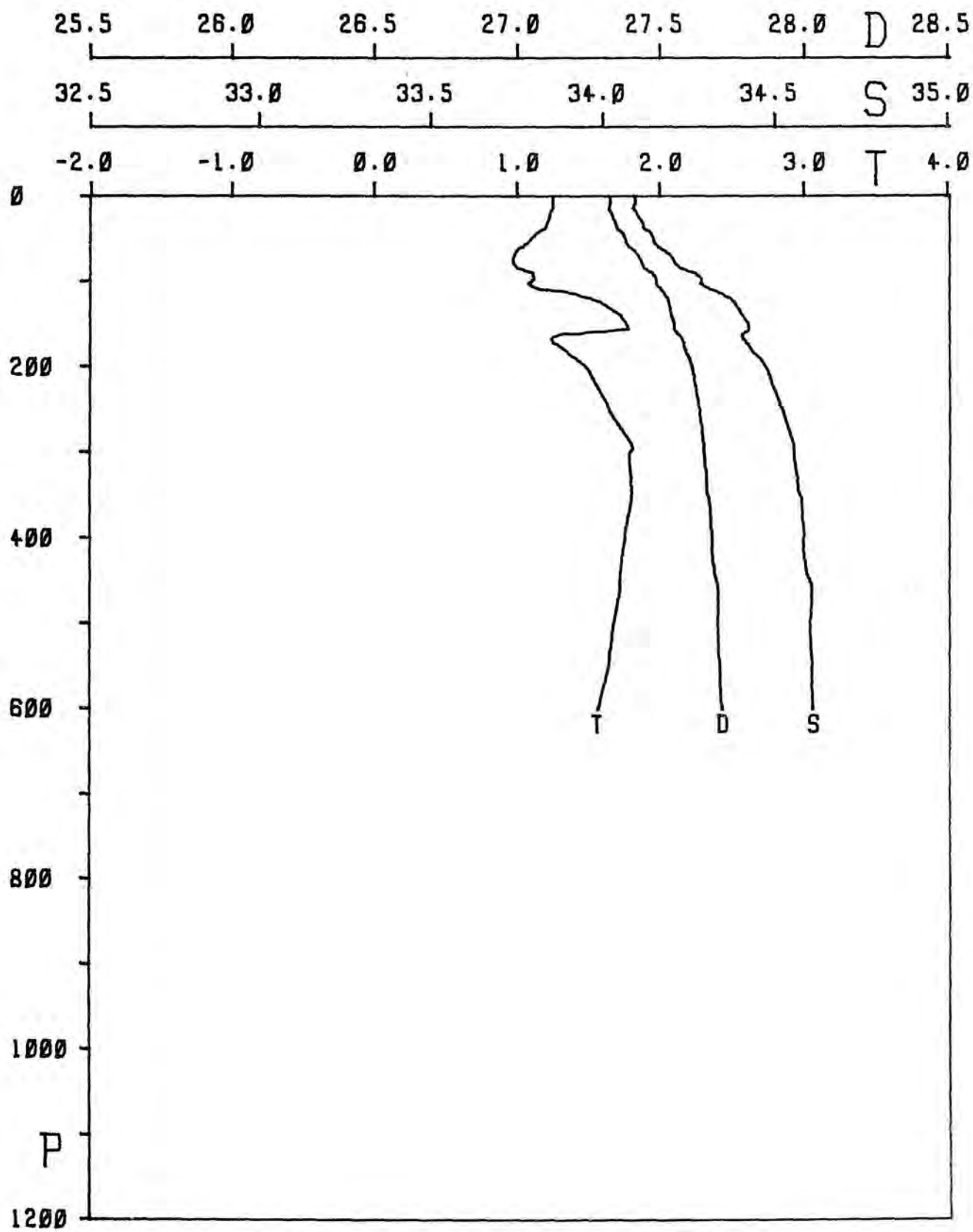
STATION 0459



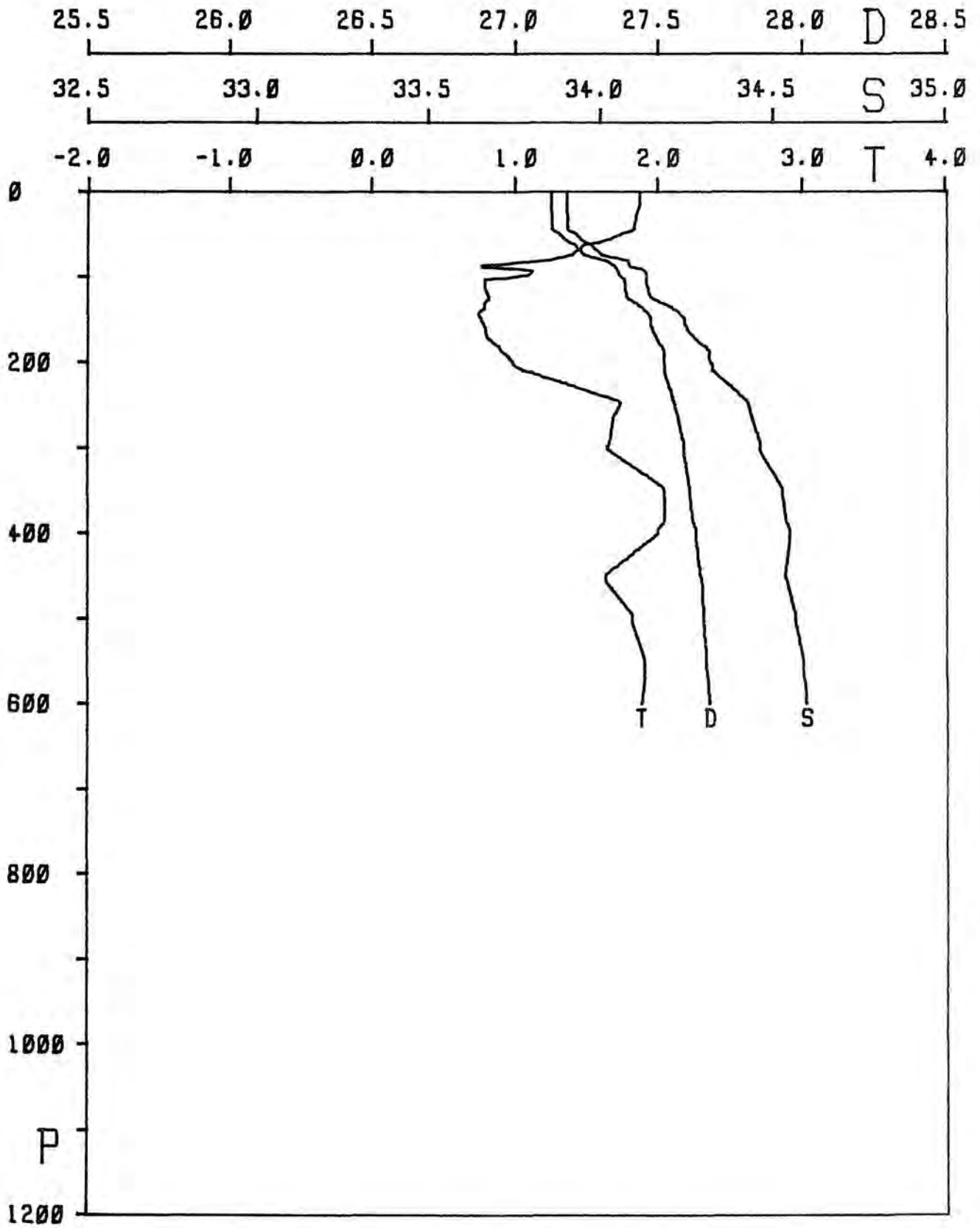
STATION 0460



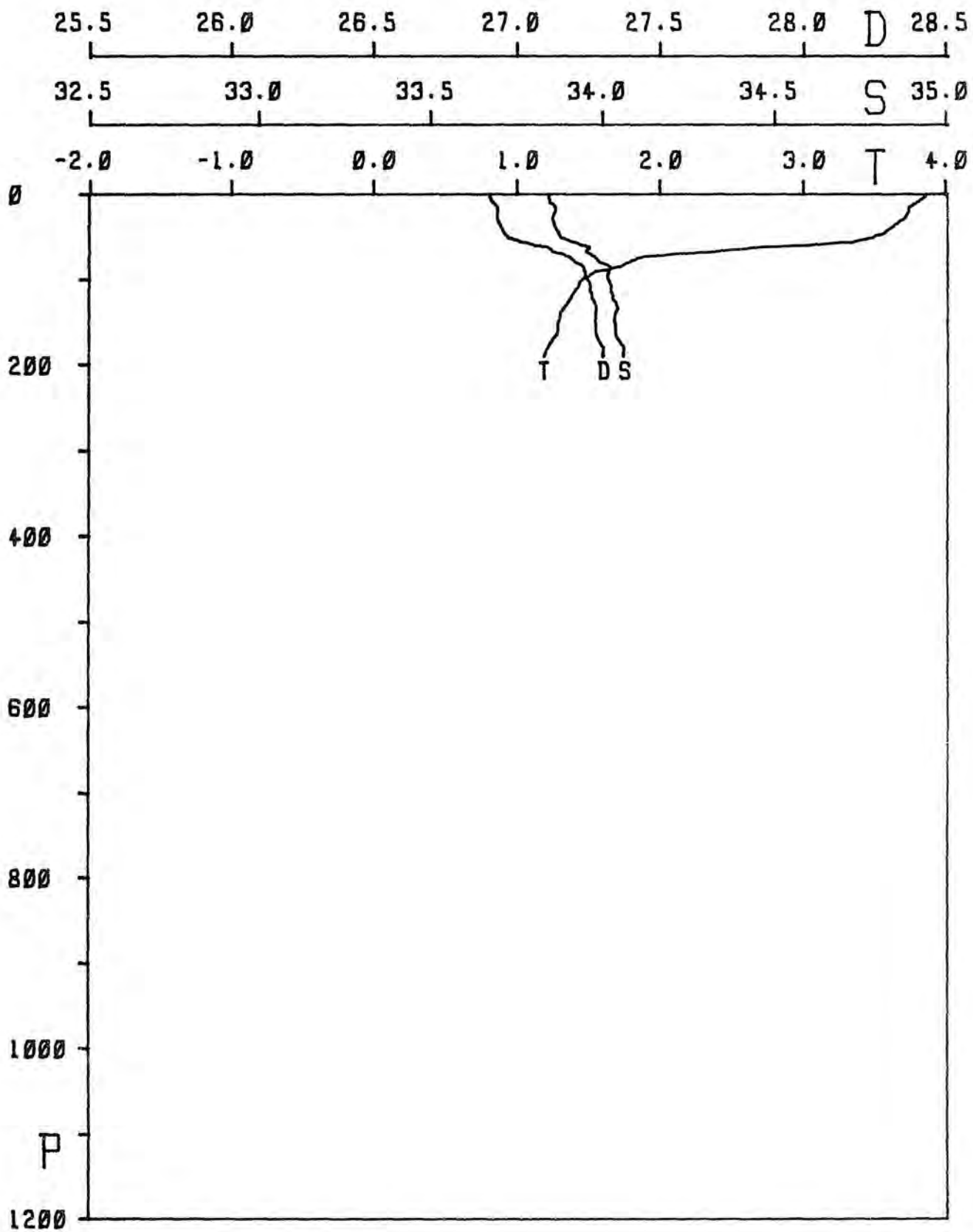
STATION 0462



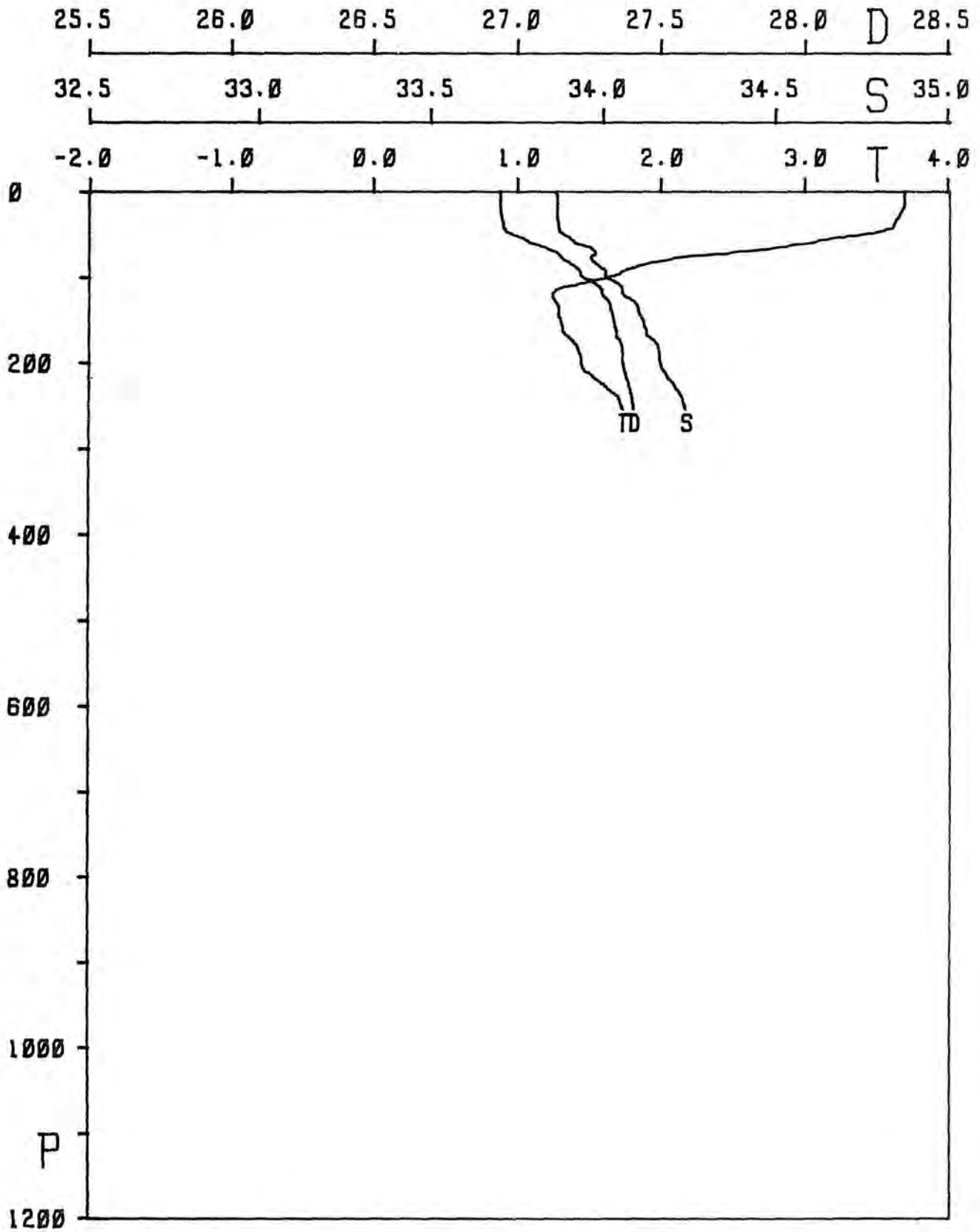
STATION 0463



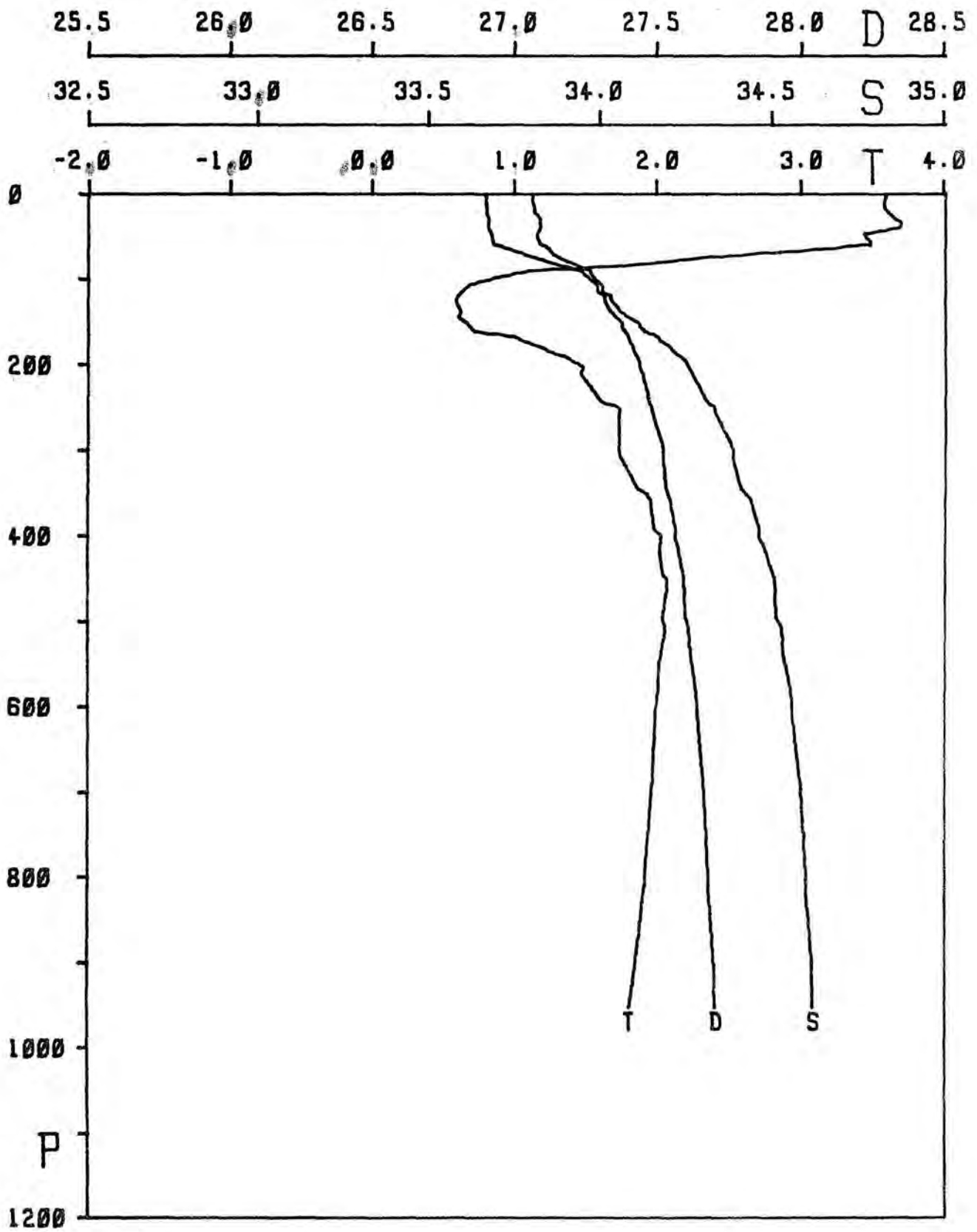
STATION 0465



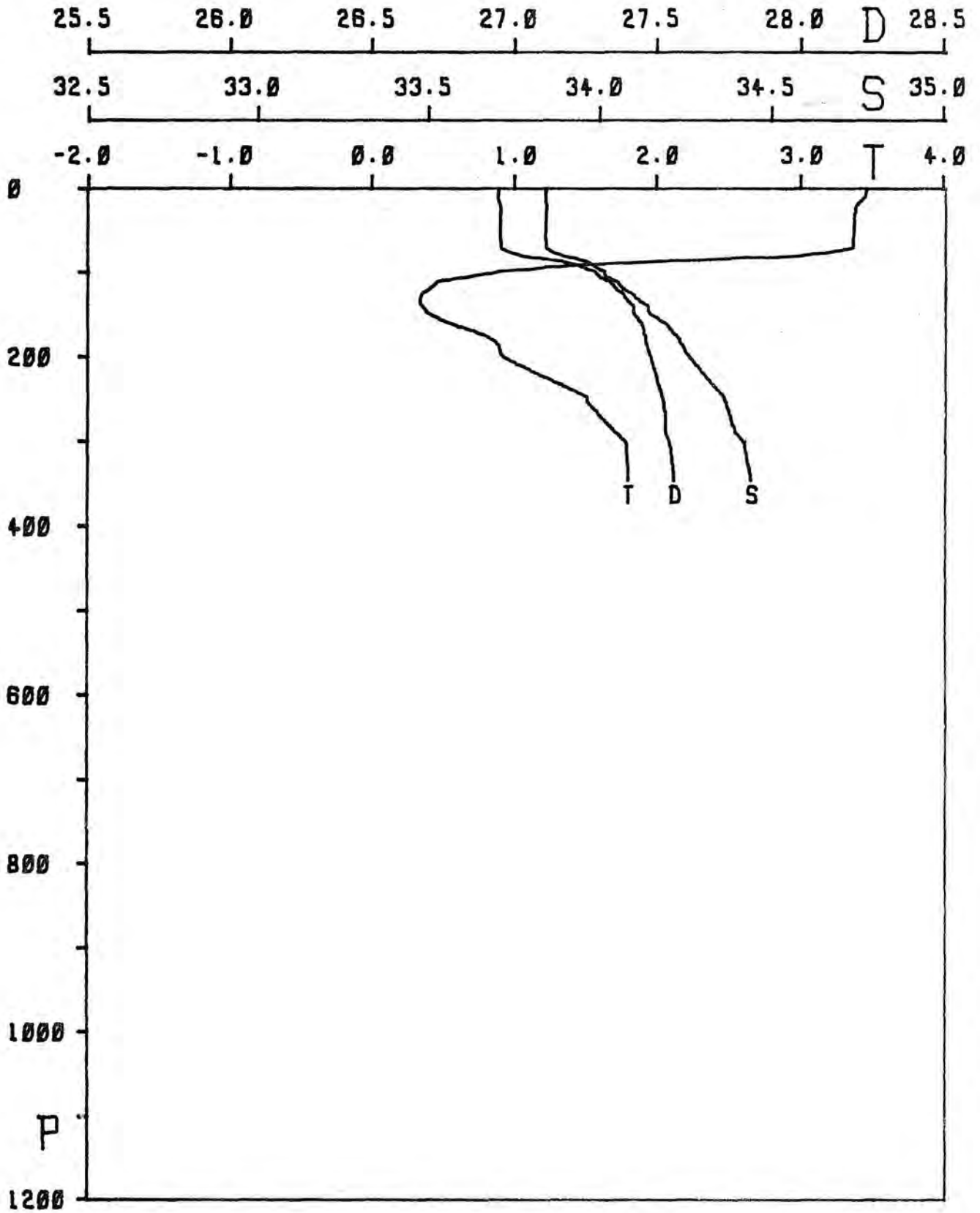
STATION 0466



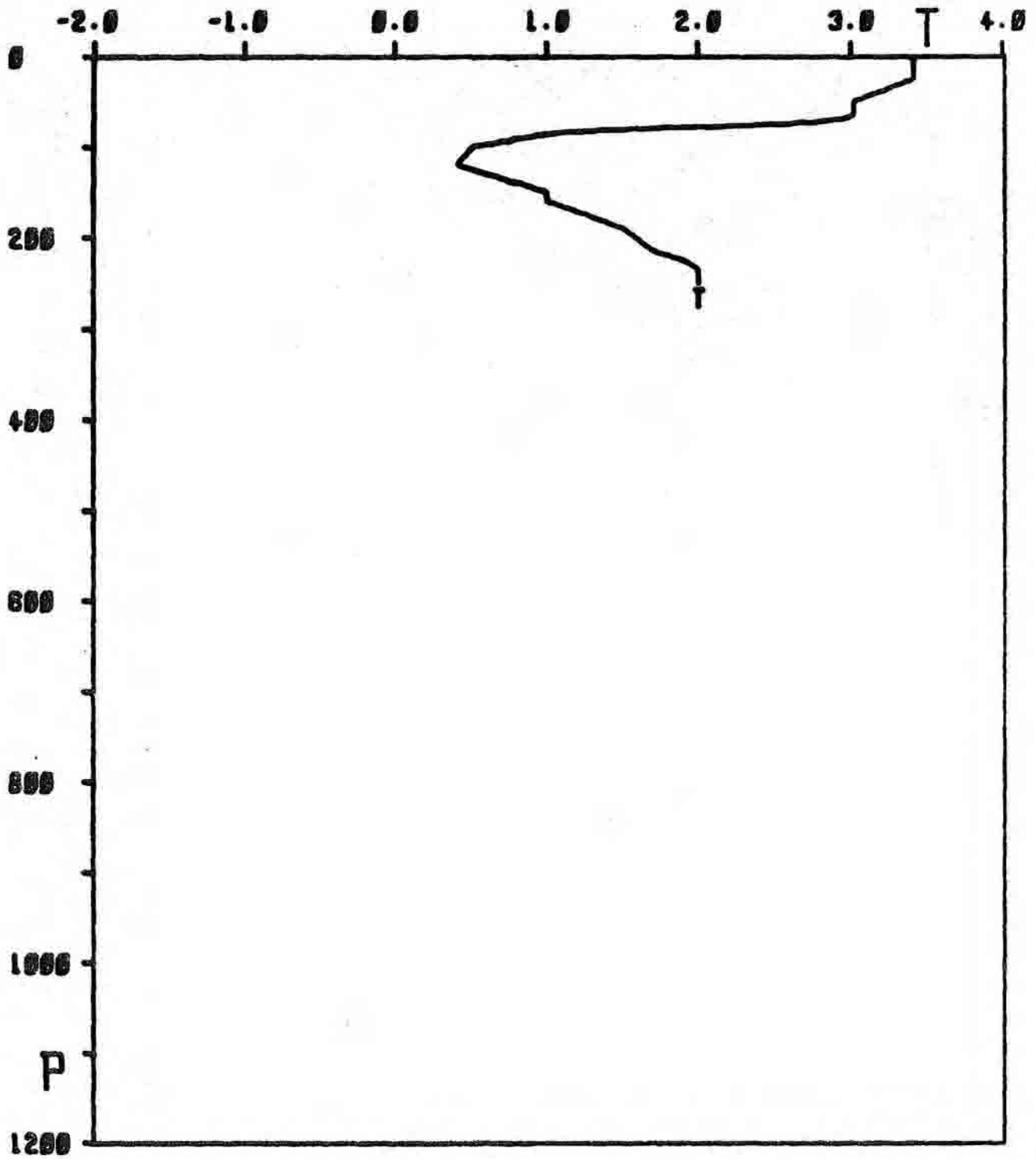
STATION 0467



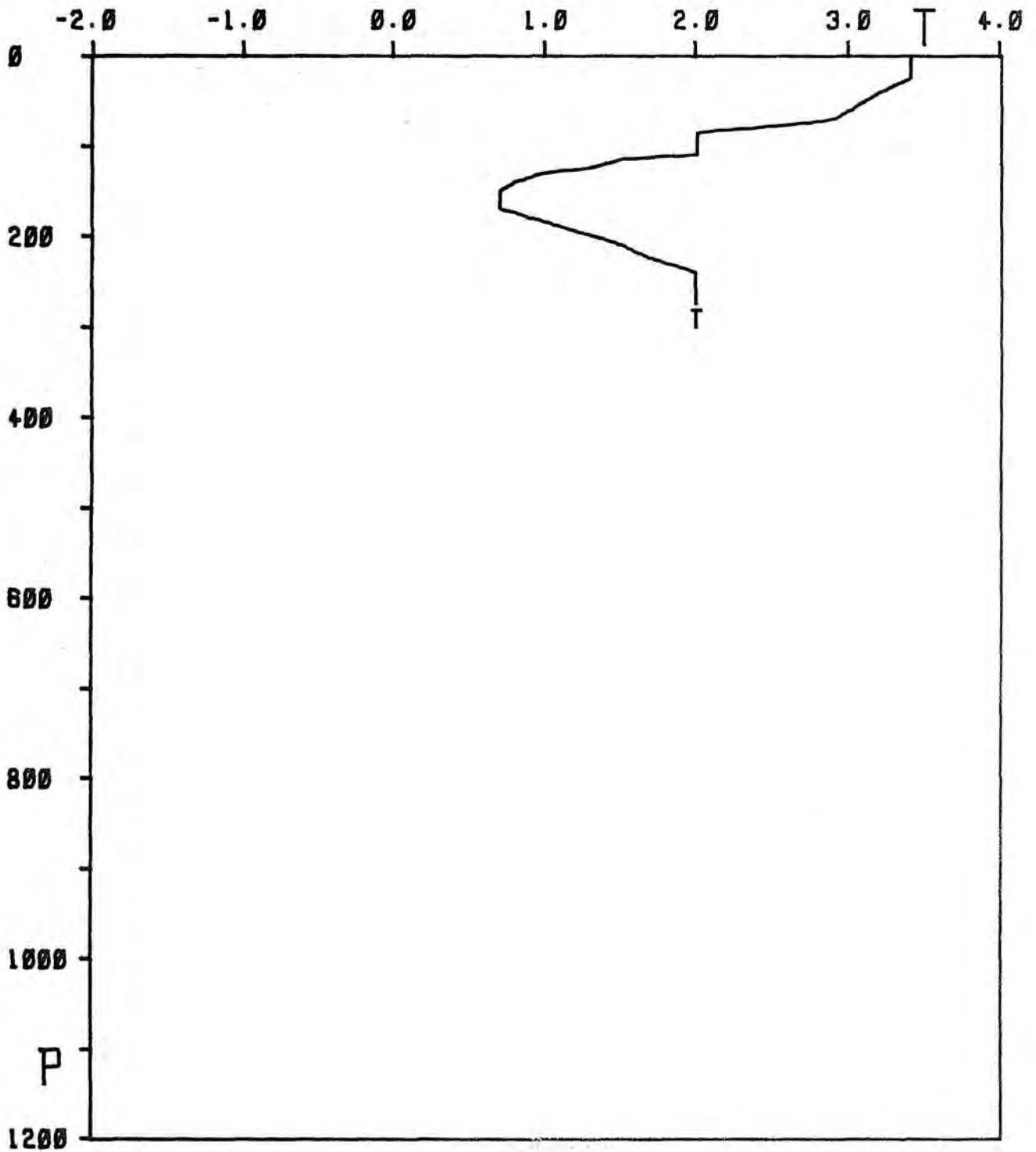
STATION 0468



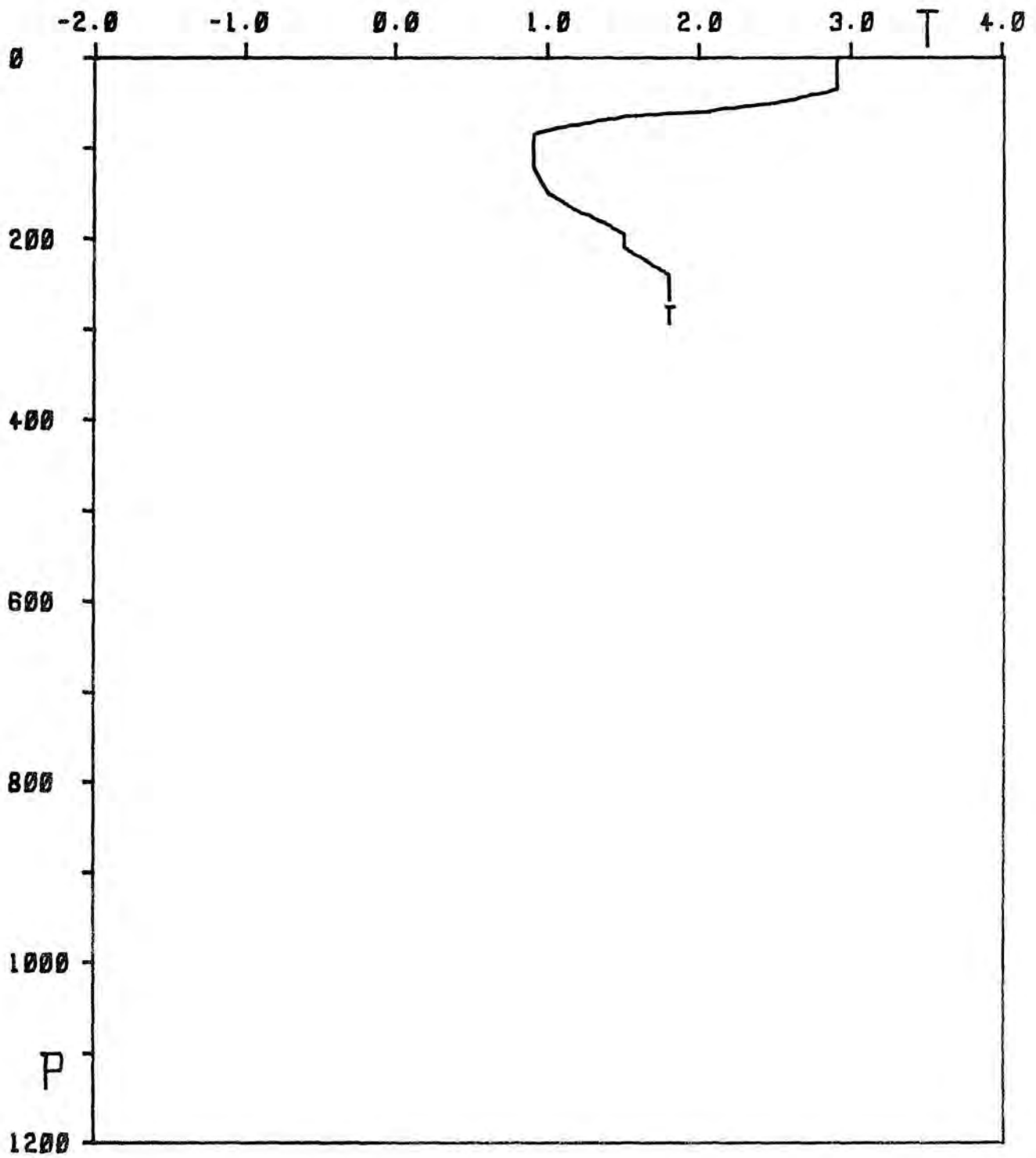
STATION 0469 BT



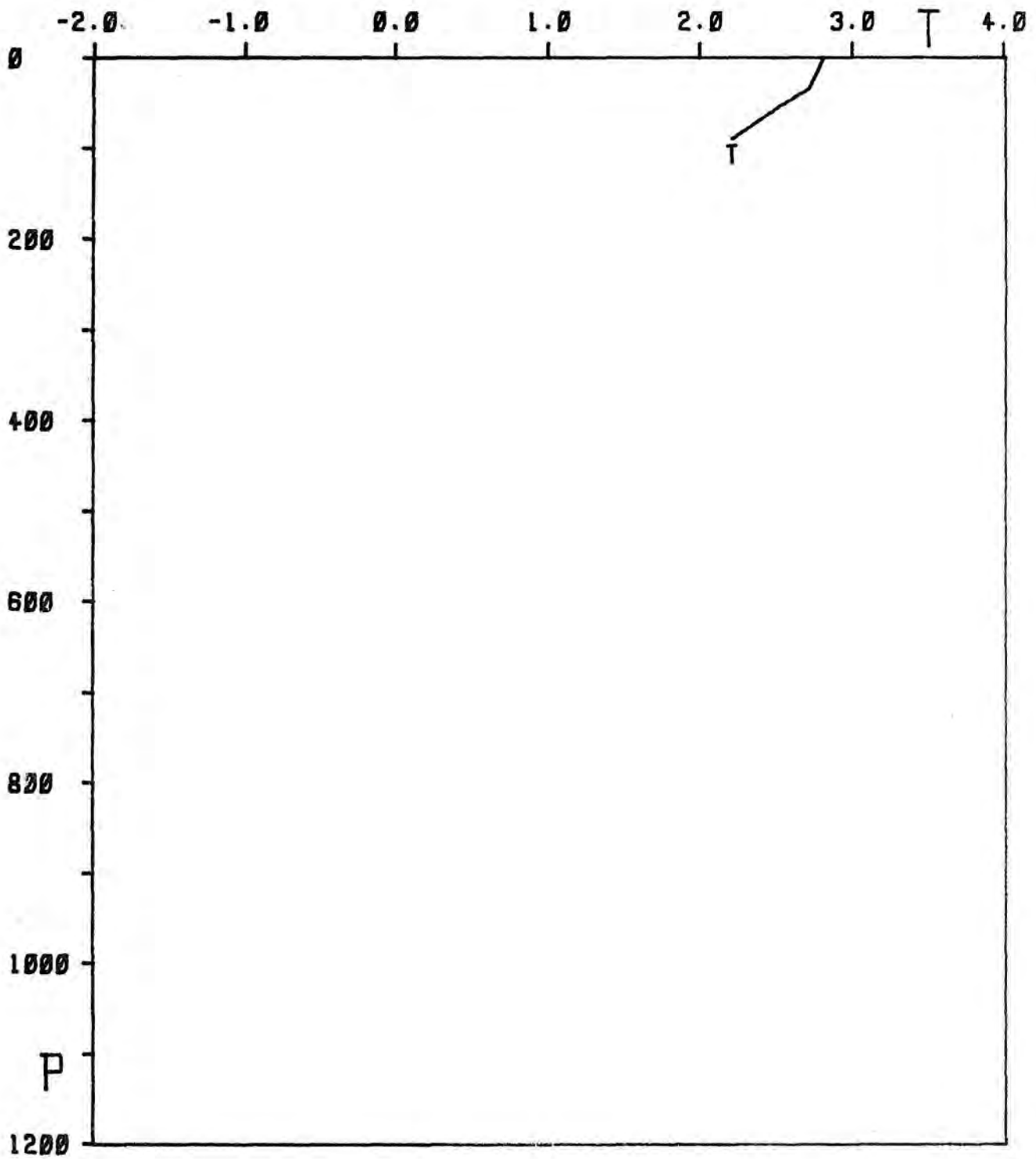
STATION 0470_{BT}



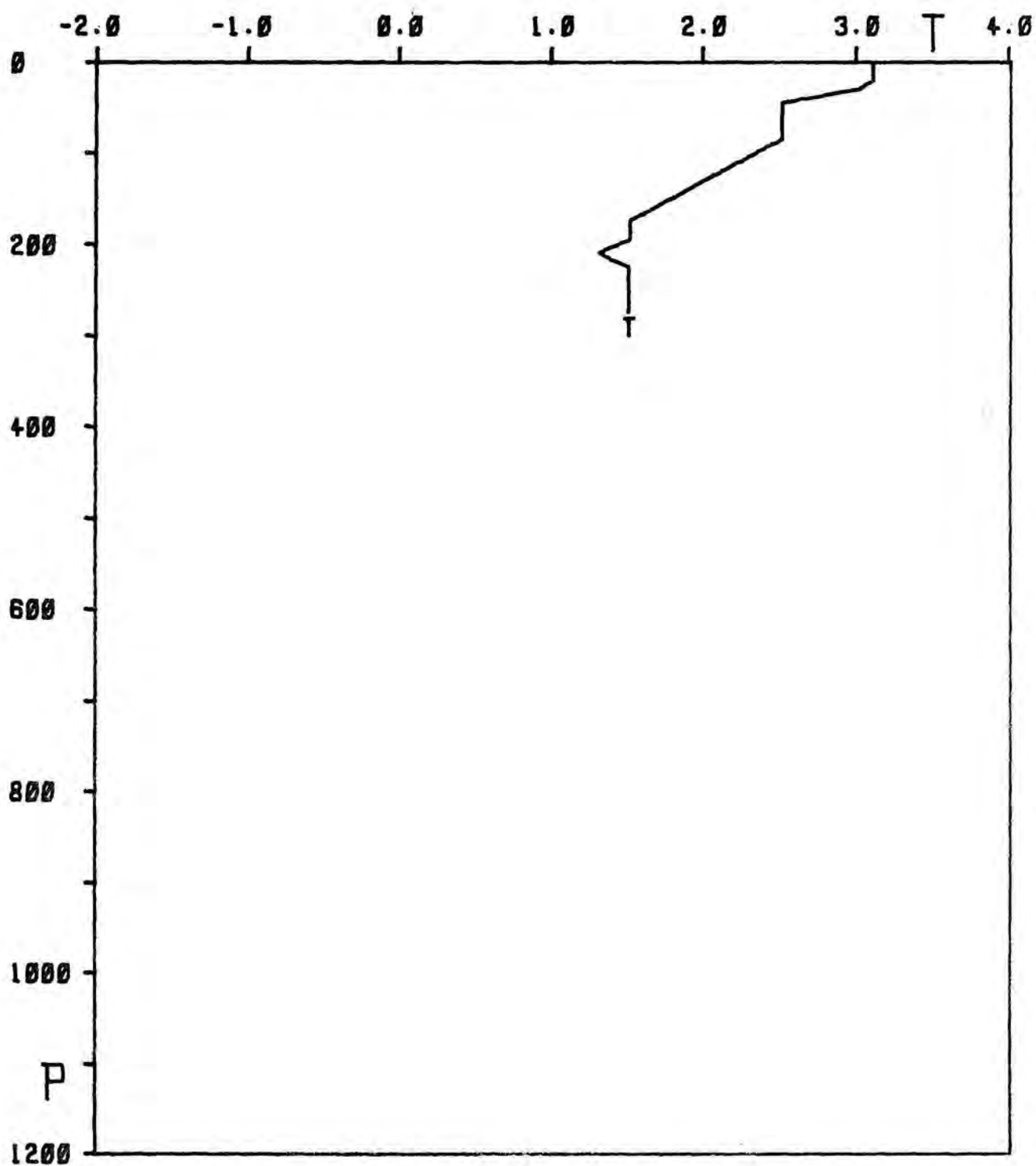
STATION 0471_{BT}



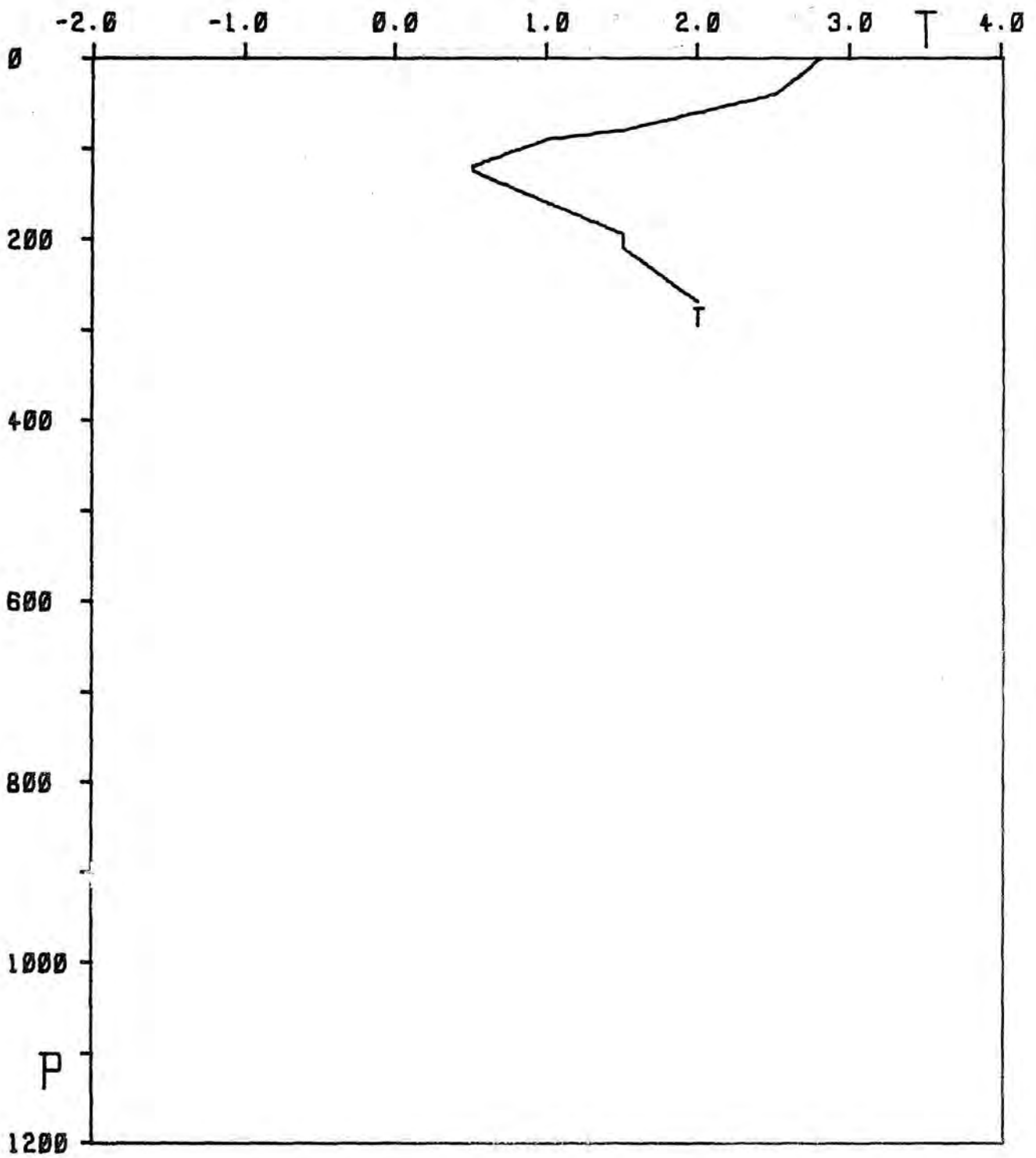
STATION 0472
BT



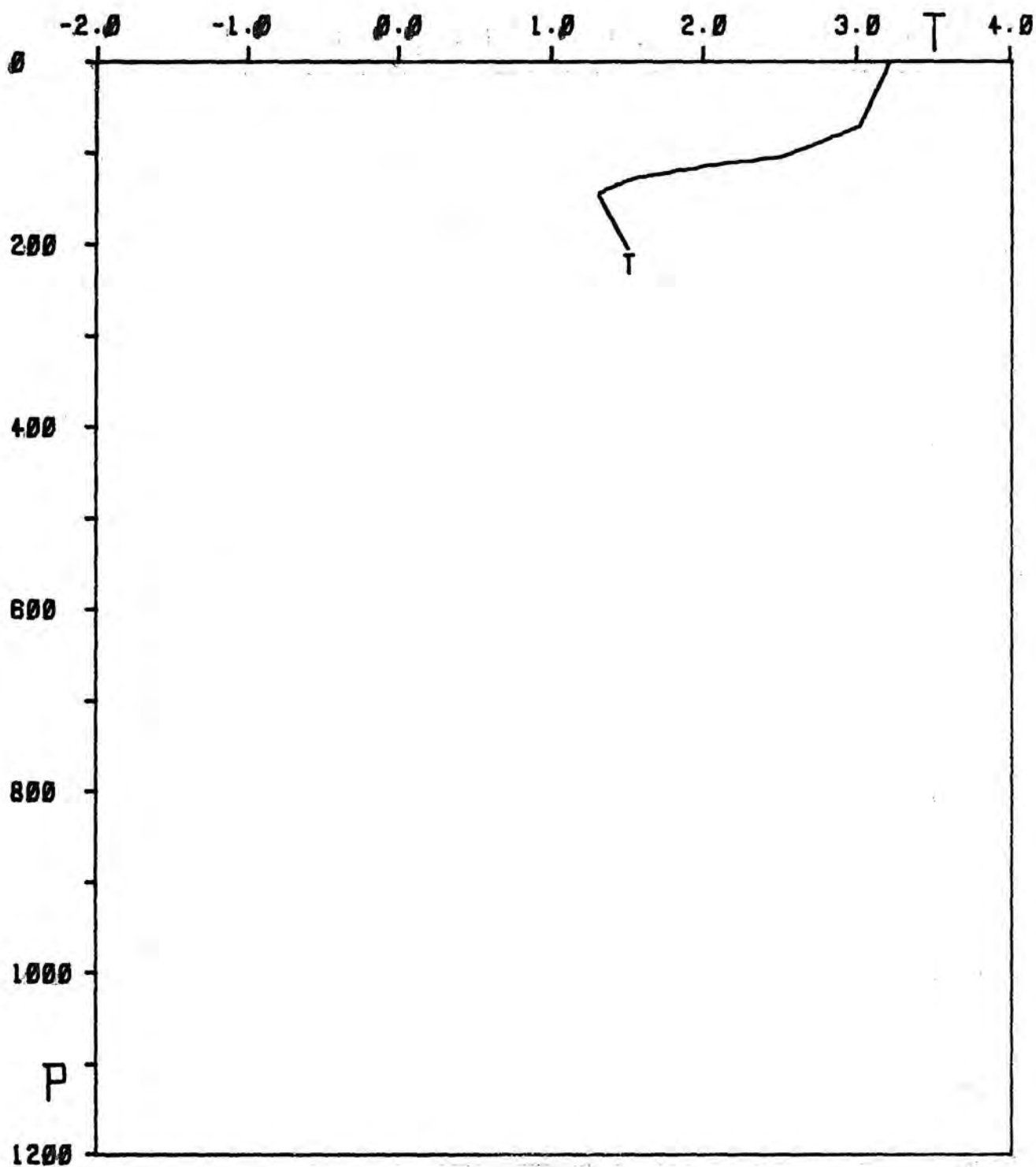
STATION 0474_{BT}



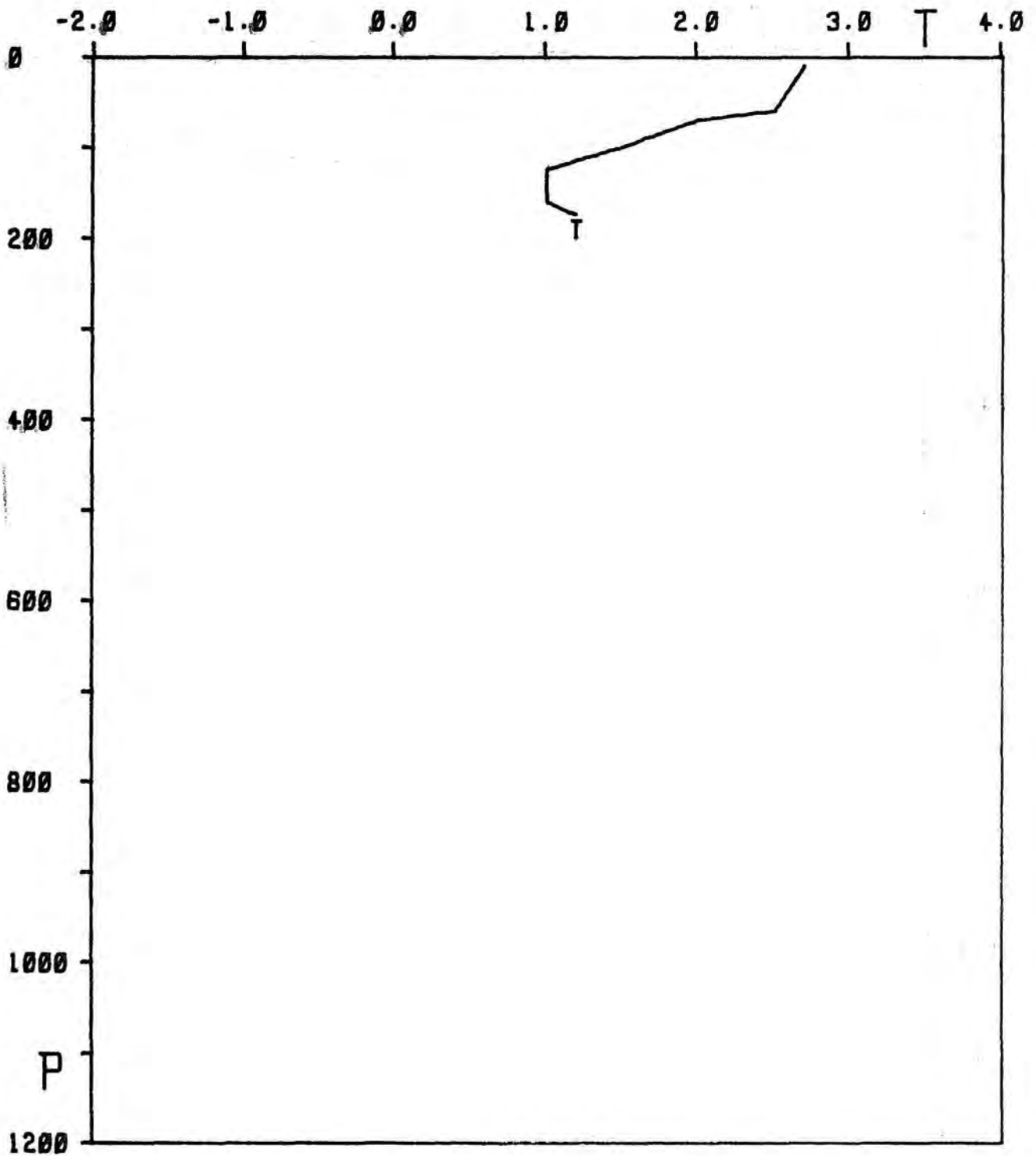
STATION 0476 BT



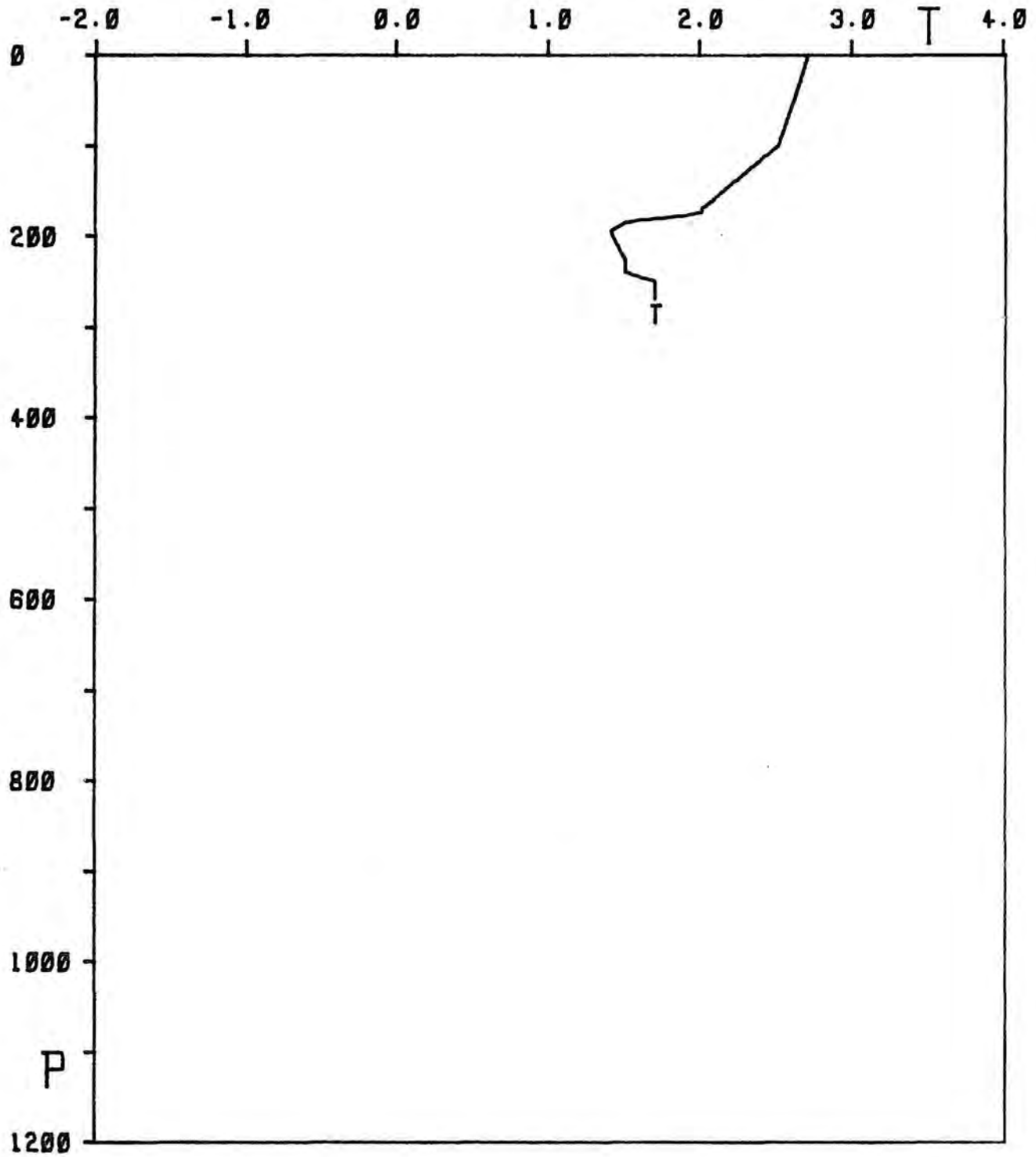
STATION 0477 BT



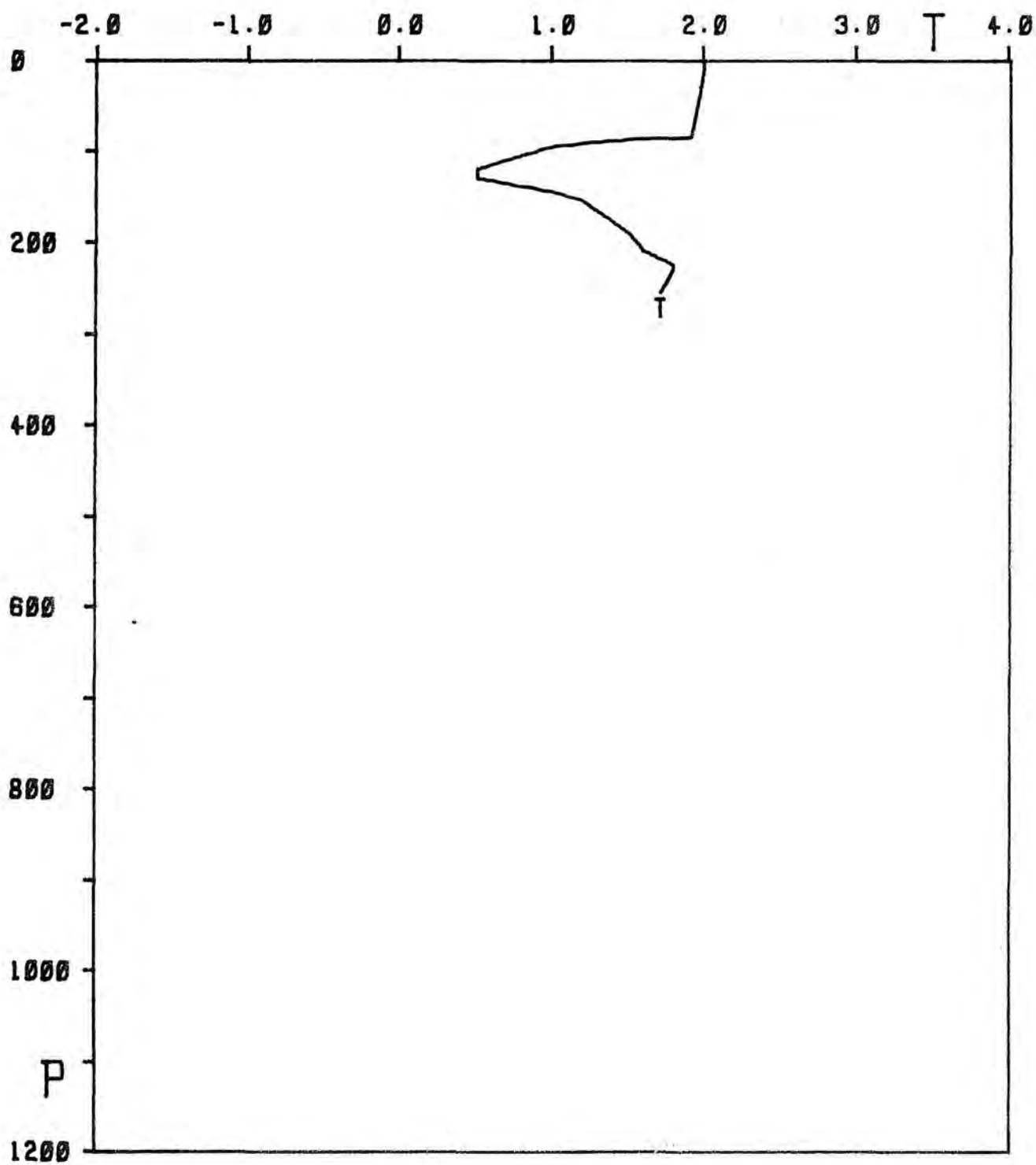
STATION 0478
BT



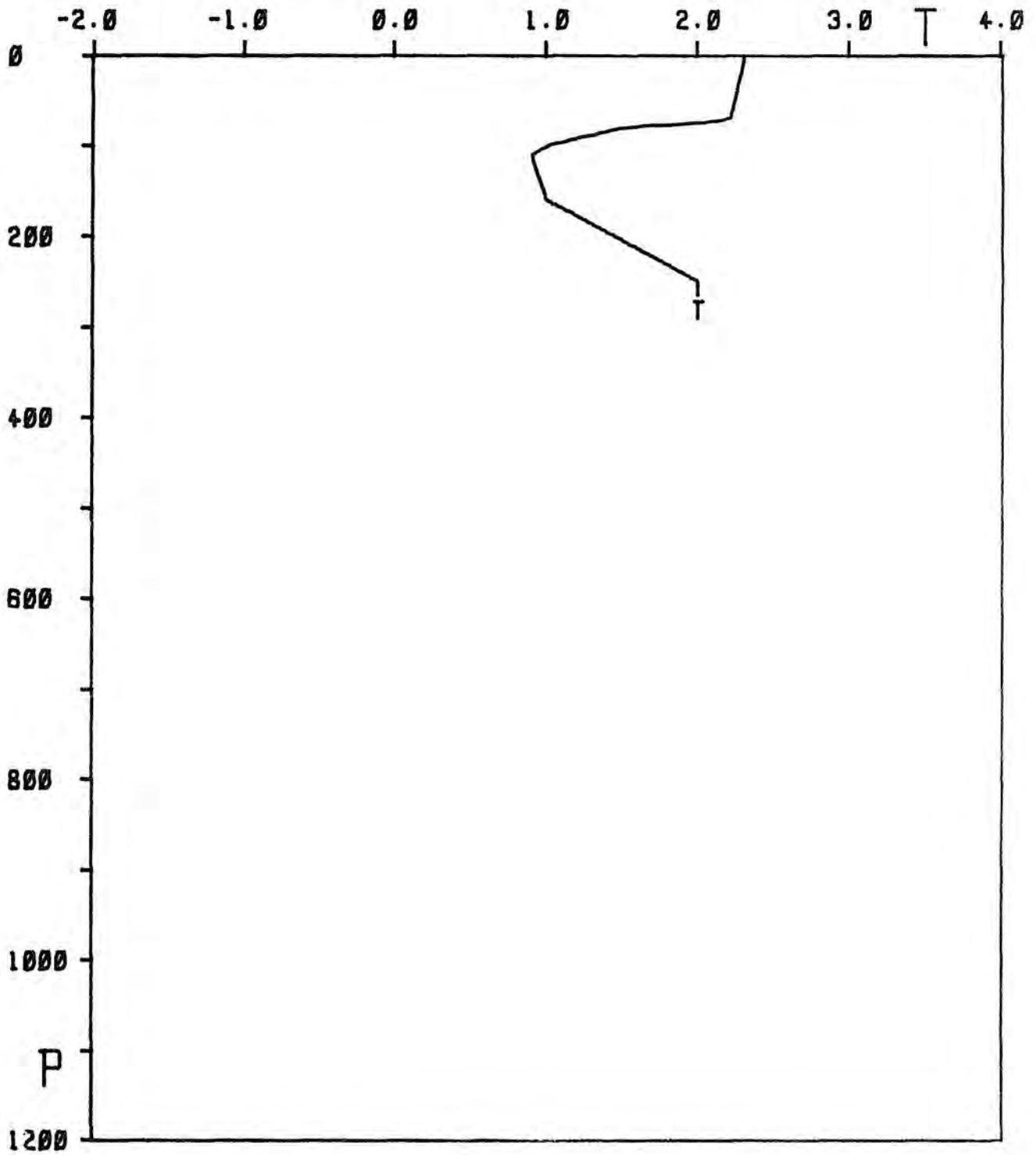
STATION 0480 BT



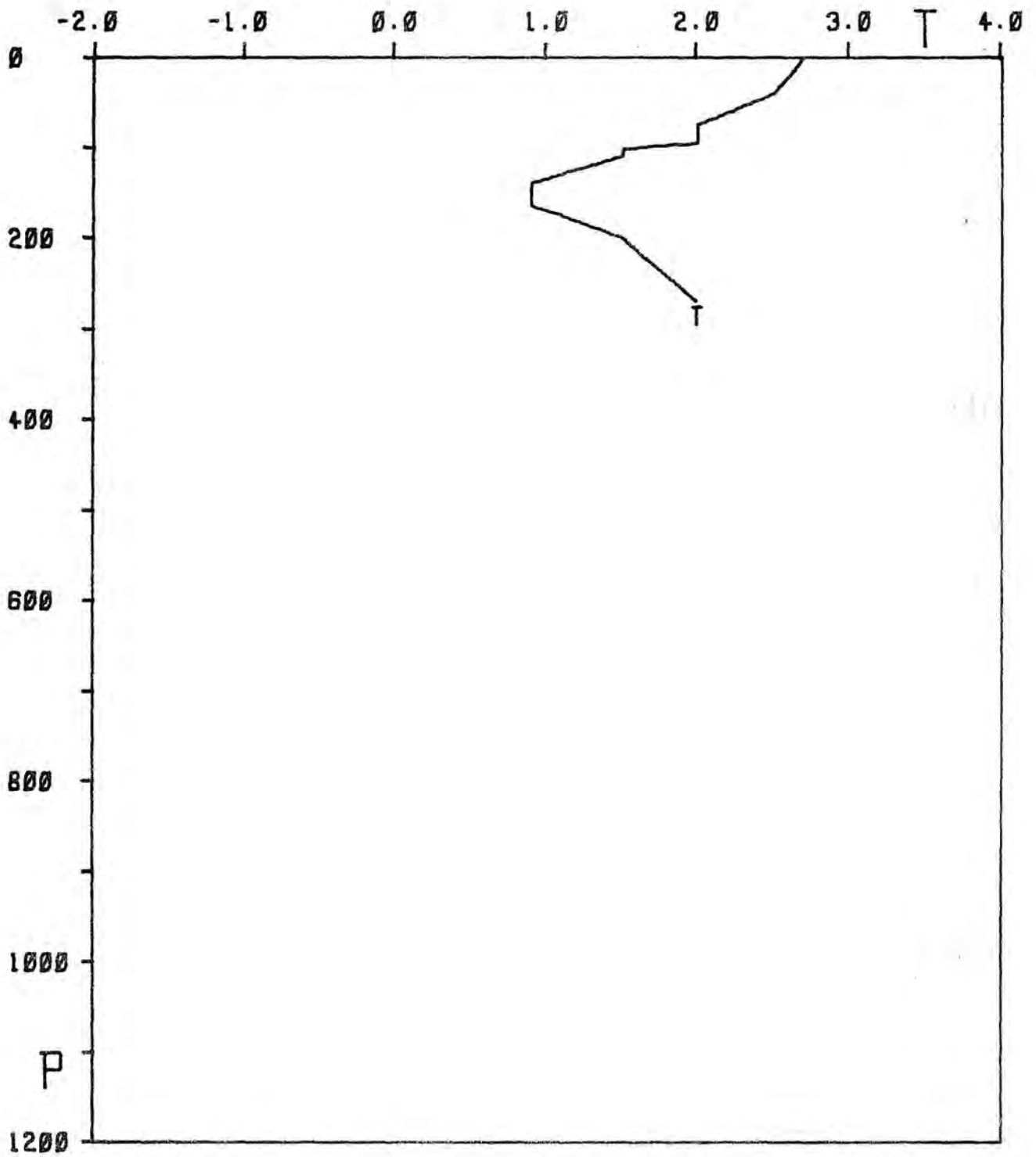
STATION 0482 BT



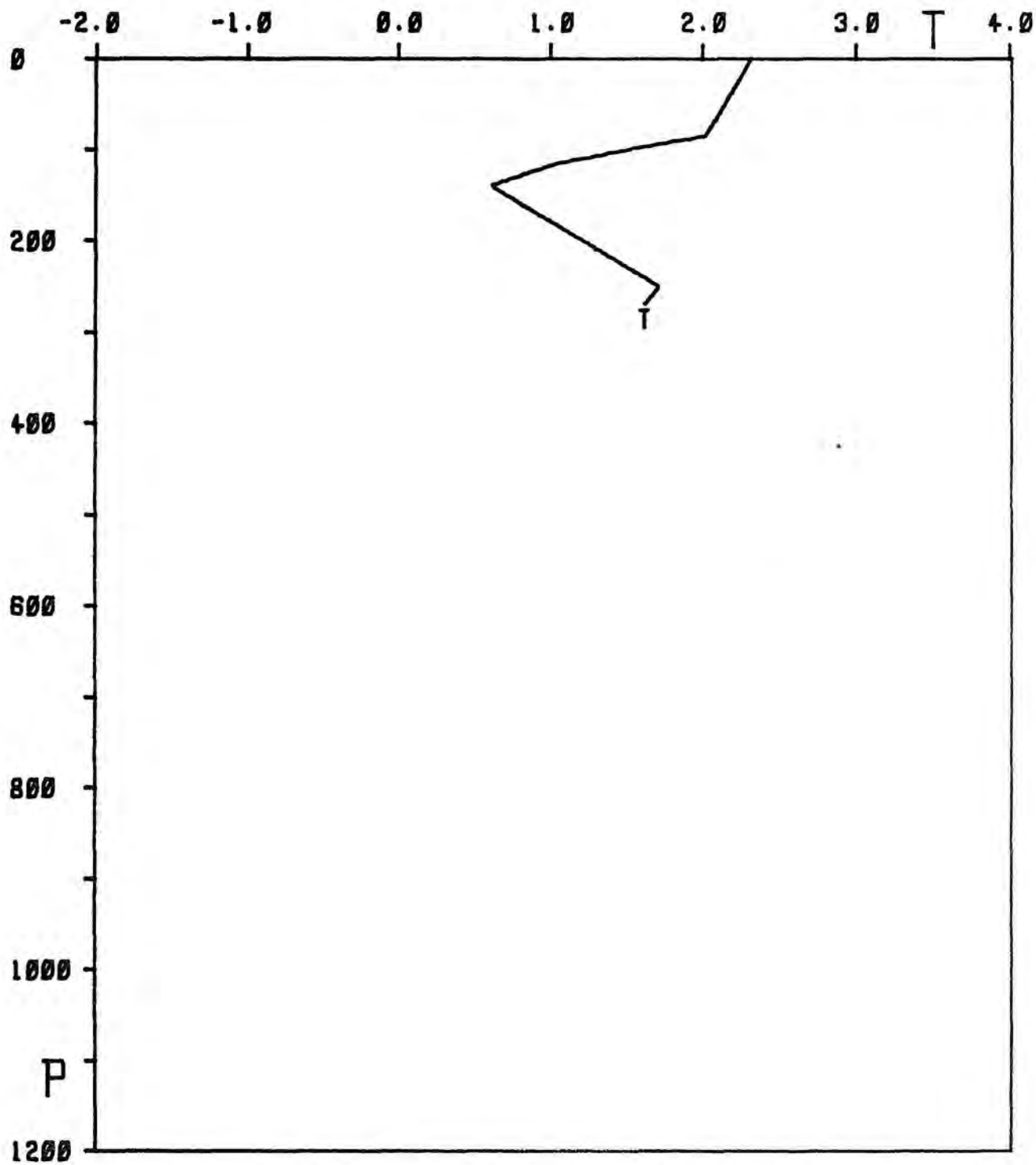
STATION 0483 BT



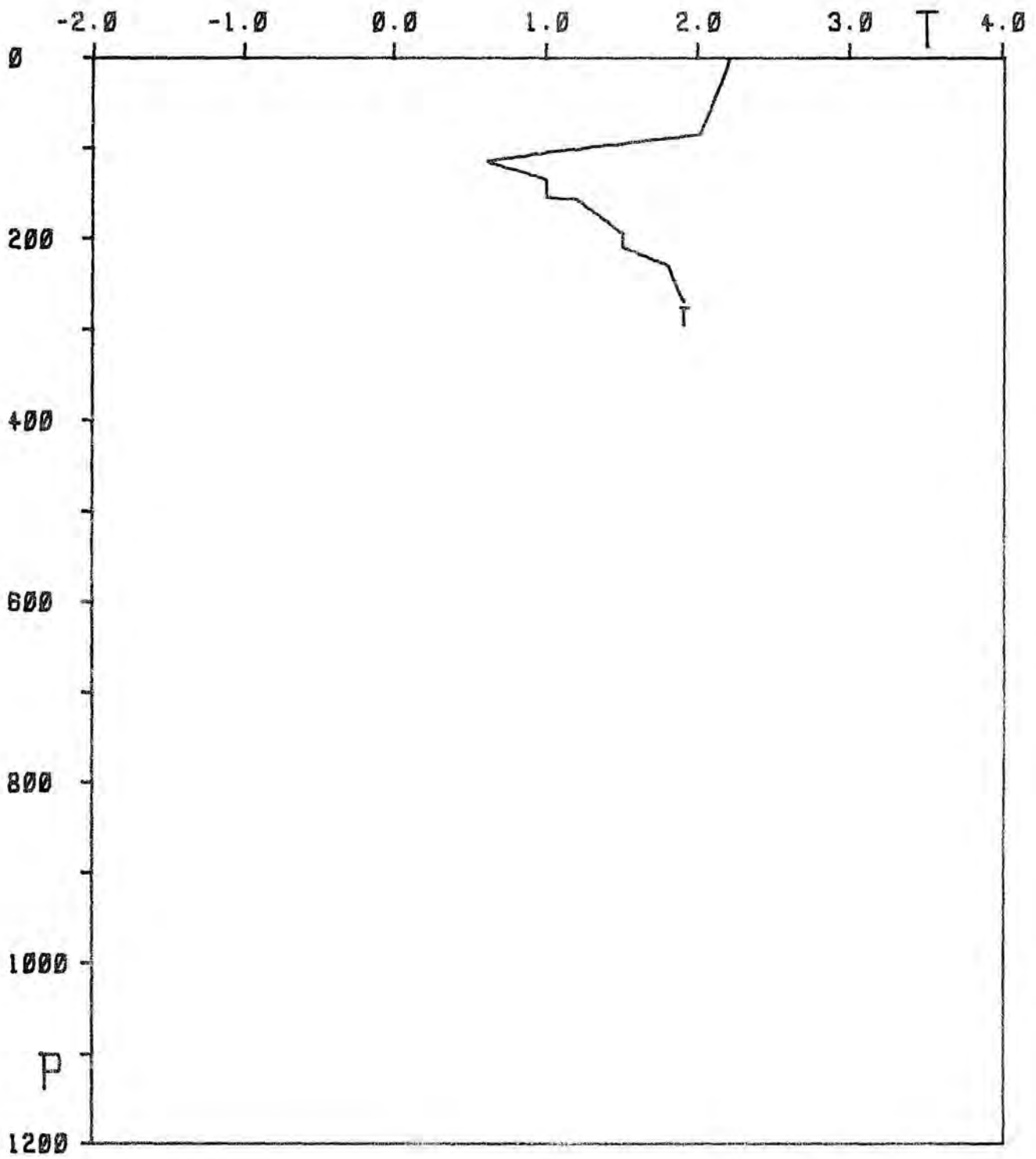
STATION 0484_{BT}



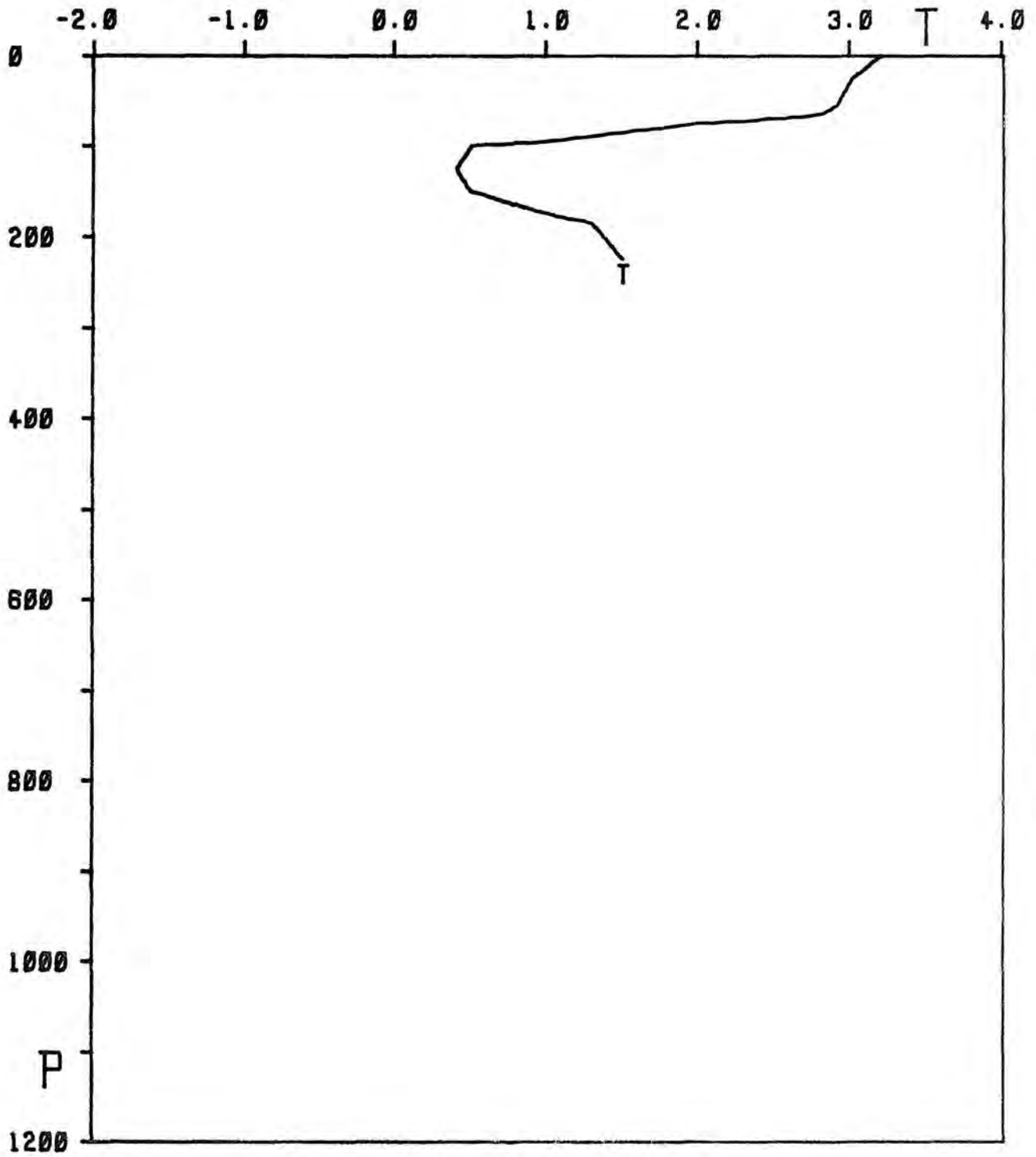
STATION 0485_{BT}



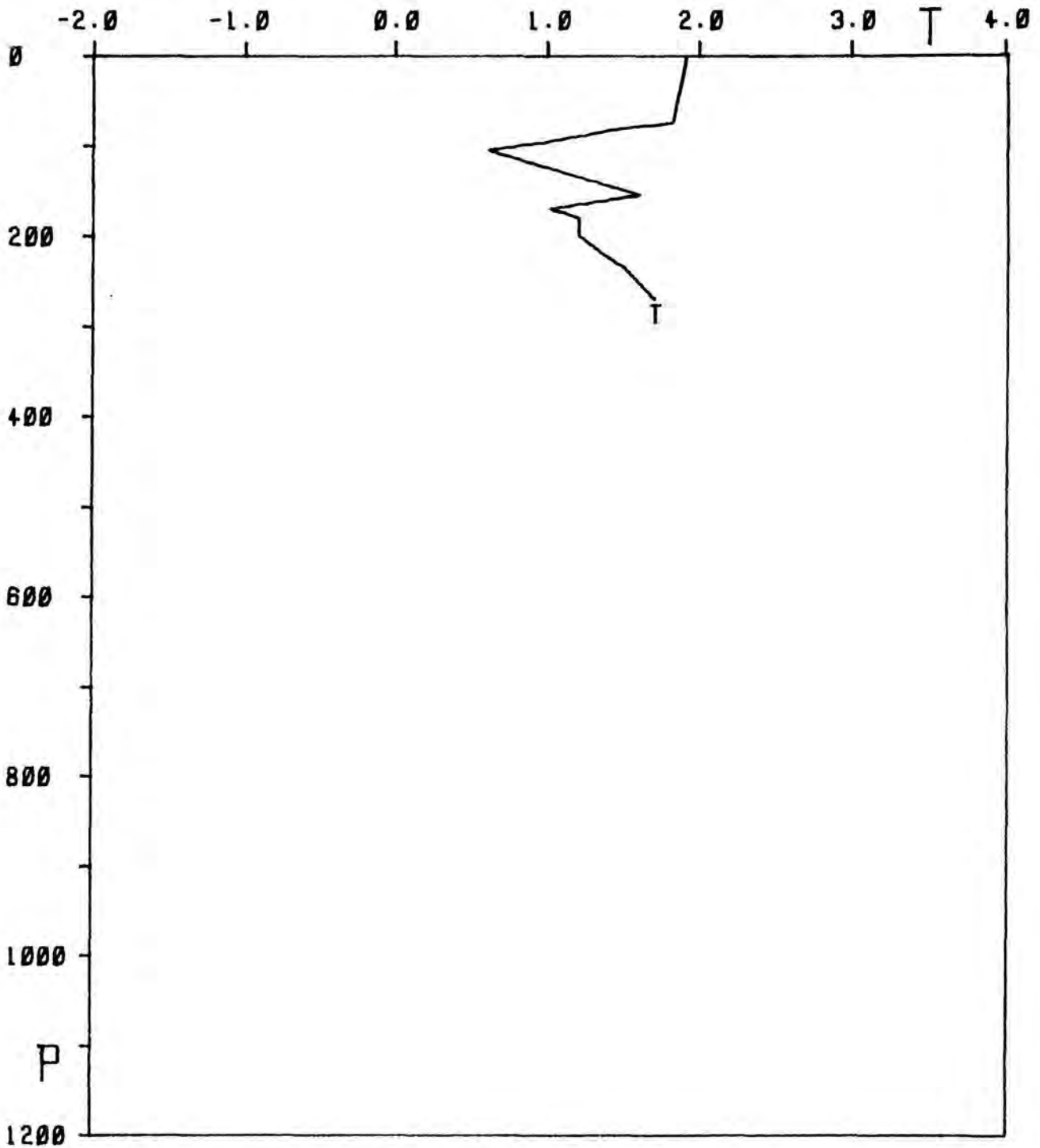
STATION 0486
BT



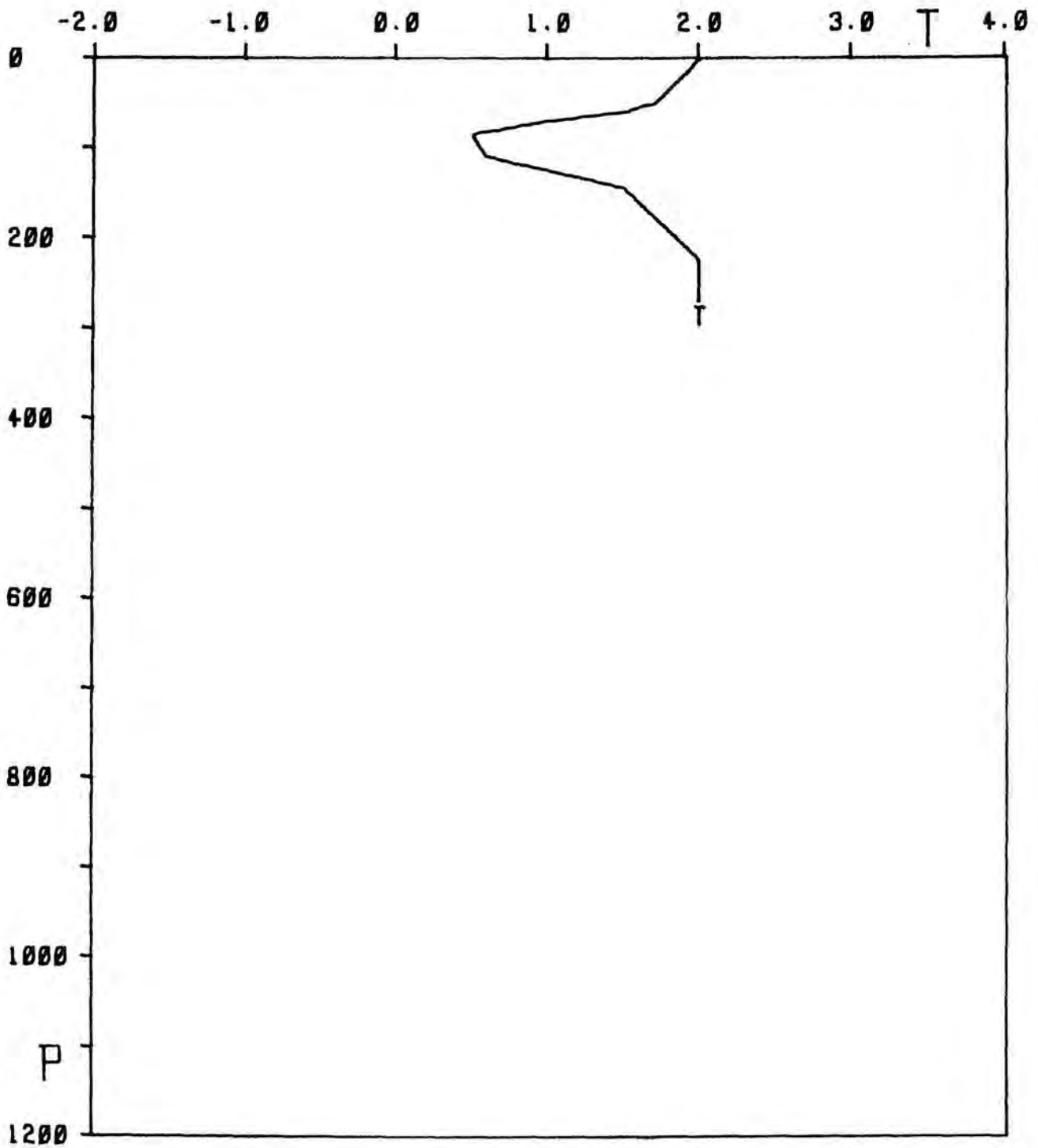
STATION 0487
BT



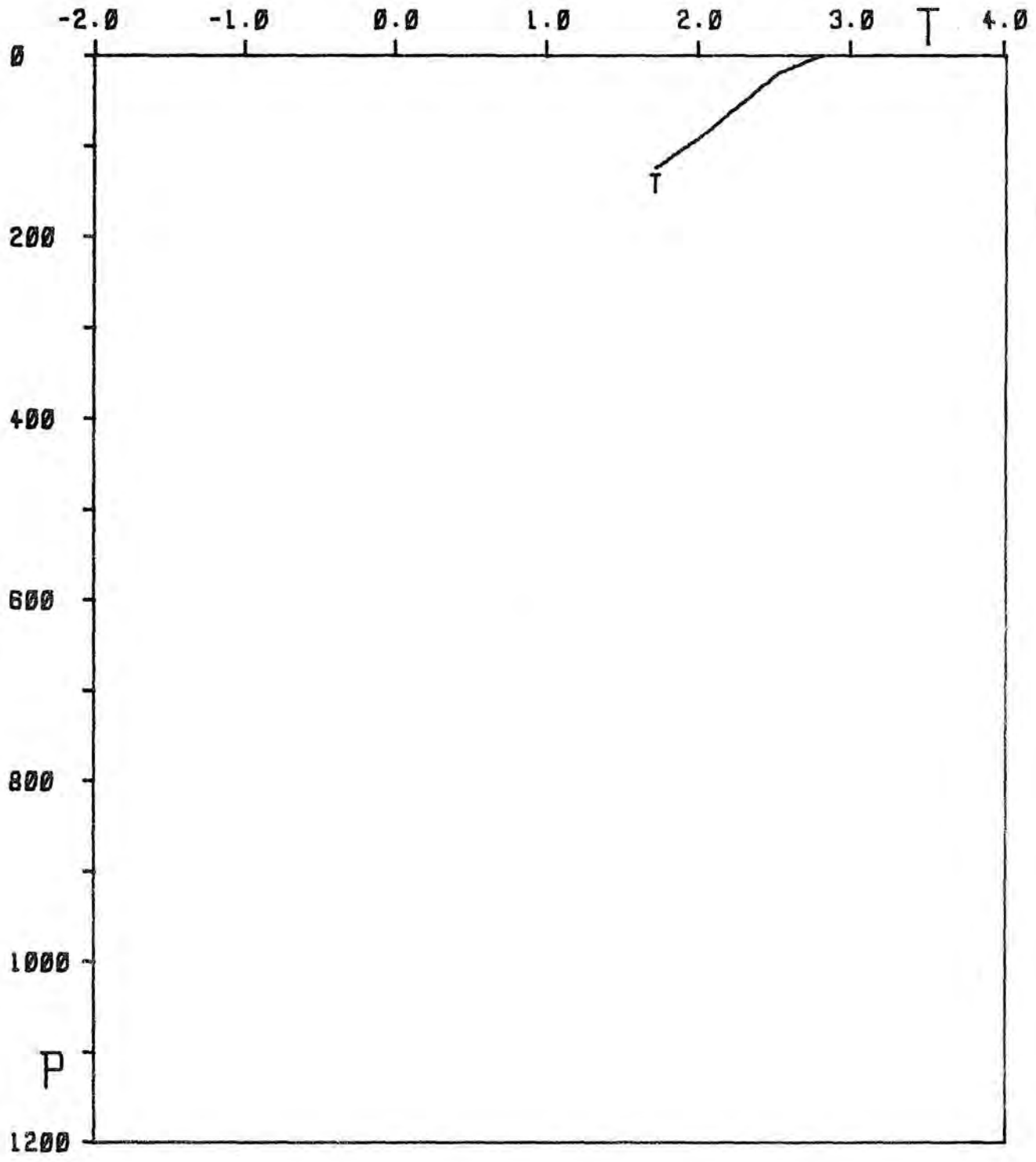
STATION 0488 BT



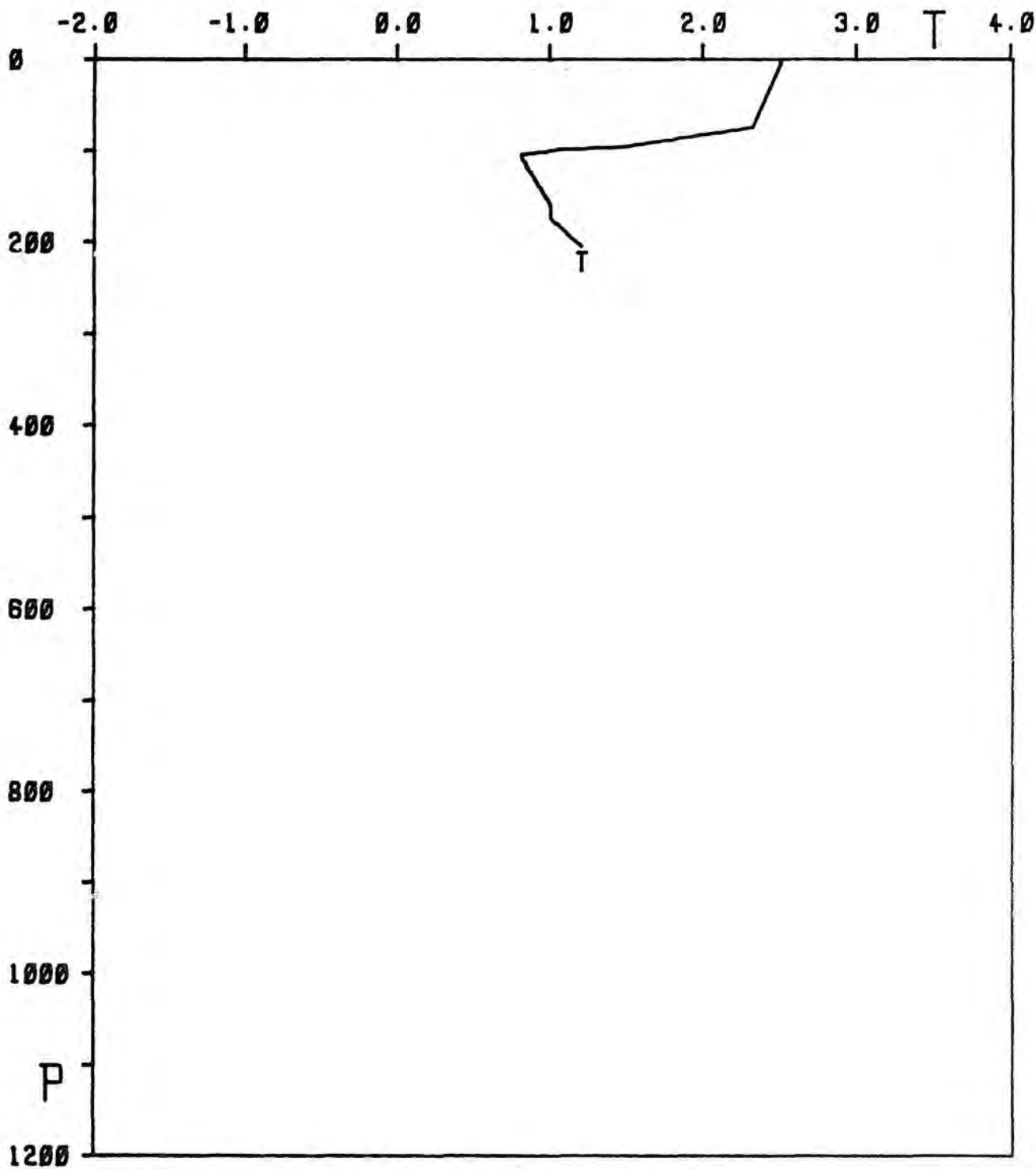
STATION 0489 BT



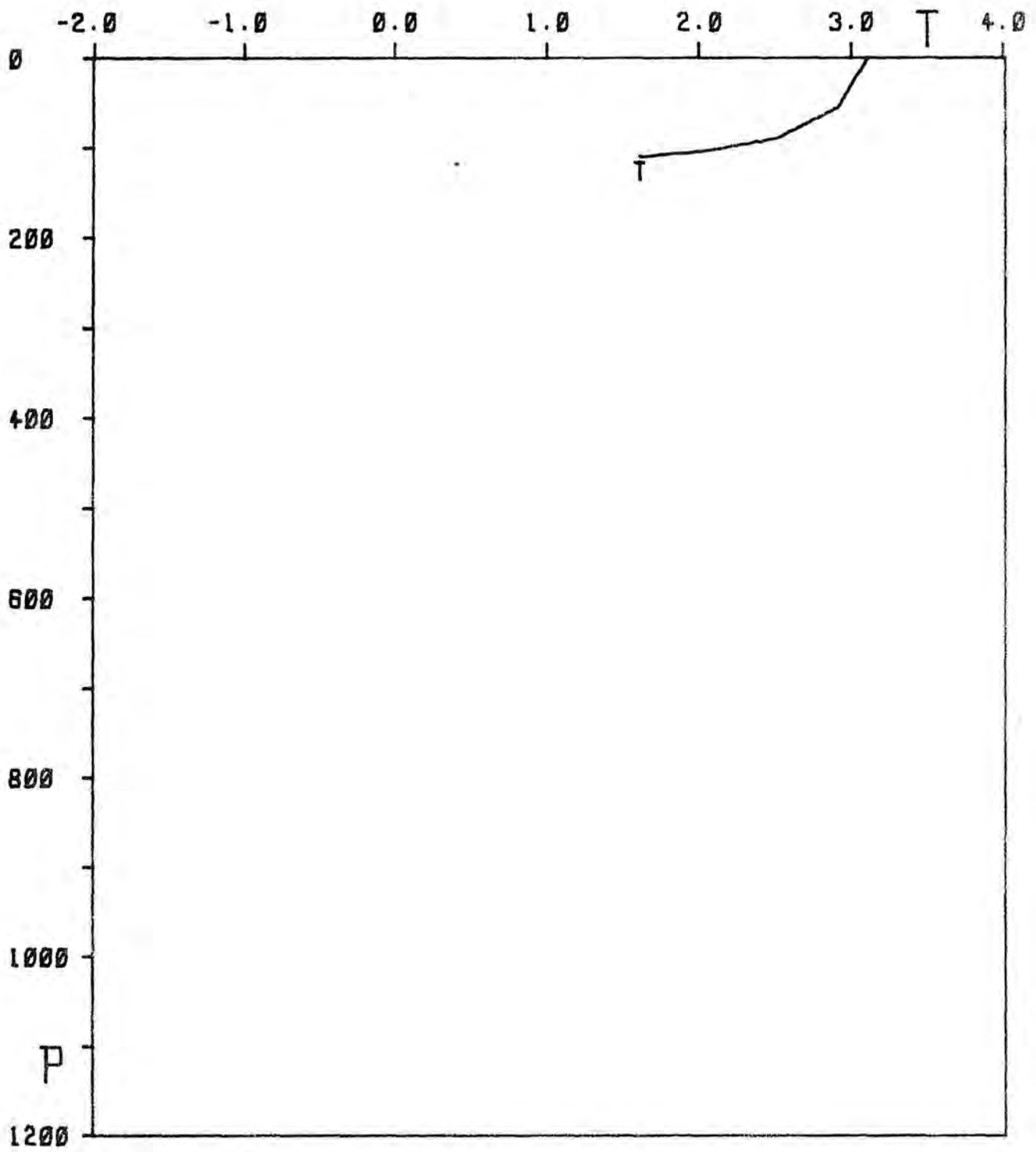
STATION 0490
BT



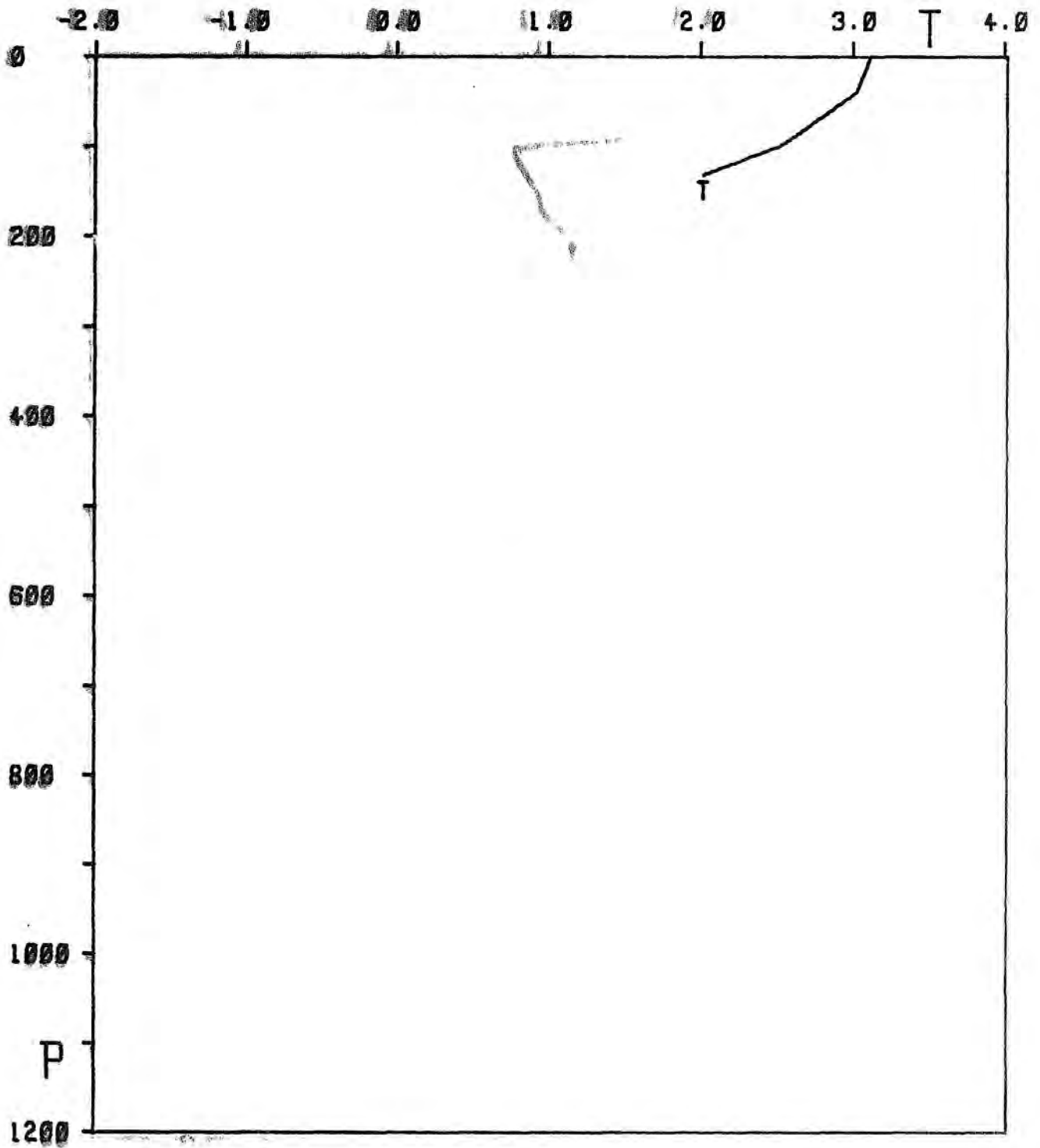
STATION 0491_{BT}



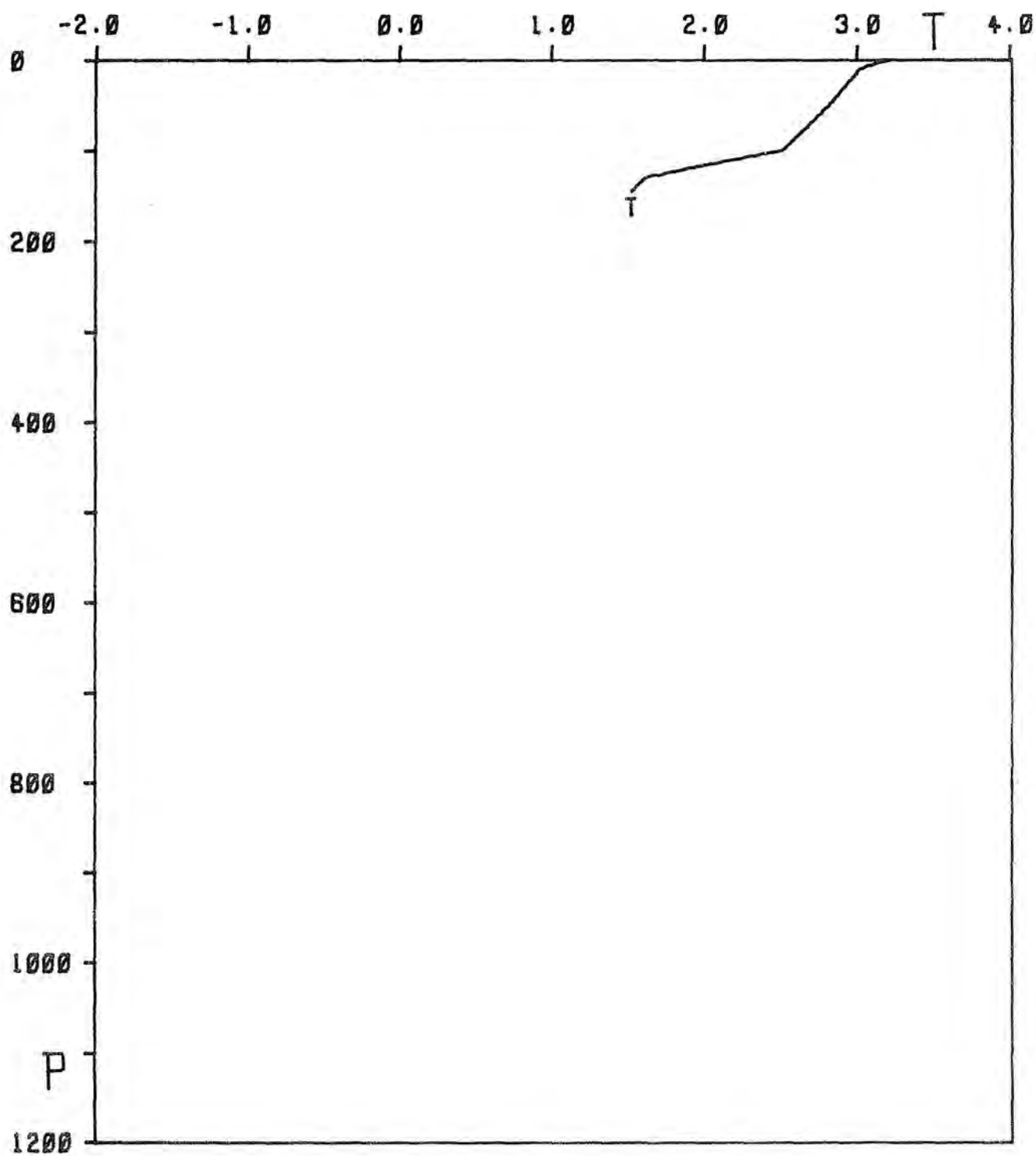
STATION 0492 BT



STATION 0493_{BT}



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