

S.O. Wiyen

JOINT COMMITTEE ON OCEANOGRAPHY

DATA RECORD

CURRENT MEASUREMENTS

HECATE PROJECT

1954

R

Pacific Oceanographic Group

Nanaimo, B.C.

March 1, 1955

PACIFIC OCEANOGRAPHIC GROUP

Nanaimo, B.C.

DATA RECORD

CURRENT MEASUREMENTS

HECATE PROJECT

QUEEN CHARLOTTE SOUND

HECATE STRAIT

DIXON ENTRANCE

1954

File N 6-4

March 1, 1955.

INTRODUCTION

The current data presented in this record were obtained on three cruises into the Queen Charlotte Sound, Hecate Strait and Dixon Entrance area (Figure 1) and were observed as part of an overall exploratory oceanographic survey. The physical and chemical data record of these cruises has already been published (1).

The tabulated data are divided into two main divisions, Ekman Current Meter Observations (2) and Current Drag Observations. Observations of wind speed and direction are also recorded.

GENERAL

The data are presented as observed and no attempt has been made to interpret or adjust any values.

The entire record is in chronological order; Pacific Standard Time is used throughout. Station numbers do not occur consecutively and only serve to locate the approximate position of each with reference to Figure 1.

The period of observation at each station usually extends over four tidal cycles (50 hours) while the vessel was anchored, the observations being made hourly or half-hourly. Bathythermograph casts were made hourly at a majority of the anchor stations.

The general procedure followed when using the Ekman Current Meter was to allow two or three minutes, depending on the current velocity, between messenger times. The interval was measured with a stop watch.

The current drag observations were made using a crossed metal vane buoyed up with four-inch glass balls. The dimensions of one face of the vane being 1 1/2 feet square. One hundred feet of stray line was used and the current speed was measured over 30 or 50 meters of line depending on the strength of the current. This operation was also timed with a stop watch.

Observations of wind were made on H.M.C.S. Cedarwood using a wind meter which indicated both speed and direction. The anemometer is about 46 feet above the water line. On C.N.A.V. Ehkoli a hand-held indicator was used, care being taken to observe from a relatively unobstructed portion of the deck.

The presentation of data in this report is subject to modification and correction at a later date. The original data are on file at the Pacific Oceanographic Group at Nanaimo, British Columbia.

REFERENCES

- (1) Physical and Chemical Data Record, Hecate Project, 1954, January 15, 1955. Joint Committee on Oceanography, MS Report, Pacific Oceanographic Group, Nanaimo, B.C.

- (2) Ekman, V.W. 1932. An Improved Type of Current Meter. J. Conseil Expl. Mer. 7, 3-10.

Explanation of Data Record Headings

1. Ekman Current Meter Observations

<u>Time (P.S.T.)</u>	Mean time of release of the start and stop messengers.
<u>Depth (m)</u>	Depth in meters of current meter as indicated by a meter wheel.
<u>Speed (cm/sec)</u>	Speed of the current in centimeters per second.
<u>Dir. (°T)</u>	The true direction towards which the current was flowing.

2. Current Drag Observations

<u>Time (P.S.T.)</u>	Mean time of observation of the controlled drag.
<u>Depth (m)</u>	Depth in meters of the centre of the vane below the surface.
<u>Speed (cm/sec)</u>	Speed of the current in centimeters per second.
<u>Dir. (°T)</u>	The true direction towards which the current was flowing.
<u>Wind</u>	
<u>Speed (knots)</u>	Speed of wind in knots
<u>Dir. (°T)</u>	True direction from which the wind was blowing.

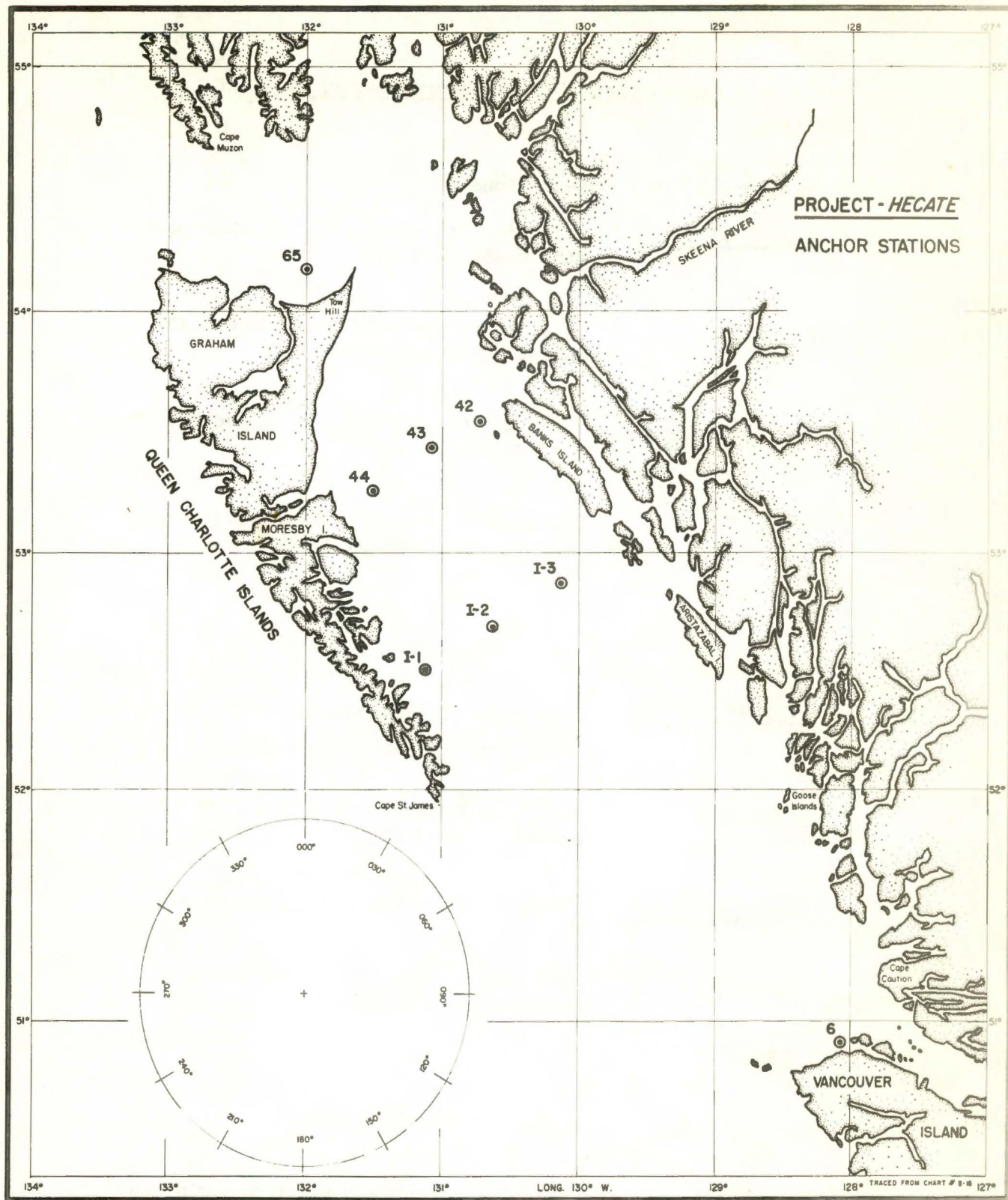


Figure 1

Chart showing the location of the
current measurements stations

H-54-1

Ship: H.M.C.S. Cedarwood

Station 44

Period: 0935 May 19 to 1129 May 21, 1954.

Position: 53° 15.5' N
131° 30.3' W

Depth: 11 fathoms

At this station the vessel was anchored bow and stern, head about 170°.

Observations were made at 10 and 17 meters with an Ekman current meter and at the surface, 5 and 10 meters with the controlled drag.

EKMAN CURRENT METER OBSERVATIONS

CURRENT DRAG OBSERVATIONS

Station No. 44

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Wind	
								Speed (Knots)	Dir. (°T)
				0935-19-V	0	56	348	18	168
				0938	5	50	336		
				0948	10	43	342		
				1005	20	46	336		
1002-19-V	10	54	319	1019	0	47	342	18	168
1016	10	57	-	1025	5	55	334		
1028	10	60	318	1032	10	59	336		
1038	10	61	318	1040	20	81	334		
1050	-	-	-	1050	0	59	334		
1054	10	64	317	1115	0	60	348	16	156
1118	10	47	320	1124	5	60	338	16	156
1129	10	67	326	1130	10	67	323	18	163
				1138	0	64	328	18	163
				1144	5	64	312	18	163
				1153	10	56	306	20	163
1158	17	52	317	1200	0	60	315	18	163
1206	9	62	319	1206	5	61	312		
				1217	10	67	305		
1229	10	60	317	1224	0	63	314	17	168
1234	17	57	316	1230	5	58	313		
				1237	10	58	299		
				1250	0	56	308	18	178
1257	17	49	309	1257	5	54	318		
1303	10	50	319	1303	10	49	307		
1326	17	42	317	1322	0	45	328	17	162
1330	10	46	312	1409	5	21	295	18	170
				1417	10	20	-	17	162
1358	17	34	305						
1403	10	36	290						
1426	17	18	004	1425	0	27	260	17	175
1431	10	28	281	1437	5	16	329		
				1448	10	8	337		
1456	17	19	210						
1501	10	21	070						
				1517	0	-	-	18	170

EKMAN CURRENT METER OBSERVATIONS

CURRENT DRAG OBSERVATIONS

Station No. 44 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Wind	
								Speed (Knots)	Dir. (°T)
1528-19-V	17	14	205						
1532	10	22	107						
1558	17	24	185						
1604	10	23	110						
1628	17	32	127	1615-19-V	0	-	-	18	170
1636	10	33	114						
1656	17	26	129						
1702	10	48	113						
1730	17	39	135						
1736	10	43	121						
1758	17	39	120					16	180
1804	10	40	123						
1832	17	32	127	1800	0	18	122	16	178
1835	10	41	117	1832	5	17	131	18	181
1856	17	30	123	1847	10	25	126	17	181
1901	10	35	121					16	180
1926	17	19	117	1922	0	12	128	15	180
1932	10	21	125	1938	5	15	115	16	192
1957	17	6	167	1954	10	9	120	15	190
2002	10	11	142					16	180
2030	17	21	327	2015	0	-	-	13	190
2036	10	24	309					16	180
2059	17	30	321	2048	0	18	336	14	191
2104	10	30	319	2110	5	25	323	15	186
2128	17	37	323	2121	10	38	329	13	187
2132	10	44	317					16	180
2158	17	47	320	2153	0	44	338	14	183
2203	10	49	317	2206	5	59	345	11	184
2228	17	45	317	2223	10	26	339	11	184
2232	10	55	319					14	180
2257	17	51	319					14	180
2302	10	56	317						

EKMAN CURRENT METER OBSERVATIONS

CURRENT DRAG OBSERVATIONS

Station No. 44 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Wind	
								Speed (Knots)	Dir. (°T)
2328-19-V	17	50	322	2310-19-V	0	47	323	7	186
2333	10	59	314	2320	5	33	300		
2358	17	49	320	2330	10	55	300		
0004-20-V	10	49	323	000-20-V	0	46	314	6	212
0029	17	43	315	0010	5	49	298		
0032	10	46	304	0020	10	42	299		
0058	17	39	313	0051	0	28	312	3	220
0102	10	37	312	0059	5	29	295		
0128	17	29	329	0108	10	24	285		
0133	10	29	323						
0157	17	20	324	0142	0	18	308	0	262
0203	10	15	354	0153	5	16	322		
0229	17	-	-	0206	10	14	311		
0233	17	8	117						
0236	10	10	127						
0258	17	19	141						
0306	10	23	132						
0327	17	30	125	0328	0	13	116	0	315
0332	10	34	121	0344	5	23	117		
0359	17	40	129	0352	10	23	141		
0404	10	38	115						
0427	17	44	153	0422	0	-	-	3	321
0432	10	50	080						
0455	17	49	132						
0500	10	52	143						
0528	17	48	137	0515	0	79	115	7	330
0532	10	56	137	0530	5	71	130	8	350
				0540	10	63	131	8	350
0559	17	48	139						
0603	10	60	139	0605	0	76	132	9	331
0629	17	45	136	0615	5	73	133	9	351
0632	10	58	138	0625	10	60	133	9	352

EKMAN CURRENT METER OBSERVATIONS

CURRENT DRAG OBSERVATIONS

Station No. 44 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Wind	
								Speed (Knots)	Dir. (°T)
0704-20-V	17	43	145	0705-20-V	0	54	133	6	348
0708	10	51	148	0715	5	52	138	6	343
				0725	10	49	143	6	343
0729	17	34	145						
0733	10	45	145						
0758	17	37	115						
0802	10	35	125						
0828	17	-	-						
0831	17	24	145						
0835	10	48	136						
0858	17	15	132						
0902	10	15	137	0903	0	12	145	8	316
0929	17	10	292	0927	0	-	-	5	316
0933	10	10	287						
0956	17	20	312						
1000	10	21	322	1015	0	19	302	5	025
1027	17	30	313	1020	5	27	302		
1030	10	33	307	1027	10	40	310		
1057	17	40	317						
1101	10	42	315	1109	0	45	293	0	282
1129	17	43	316	1120	5	53	305		
1134	10	48	311	1129	10	59	296		
1157	17	43	314	1152	0	67	295	0	201
1202	10	47	316	1208	5	56	311		
1225	17	39	320	1216	10	55	307		
1230	10	42	313						
1256	17	36	317	1247	0	51	300	1	148
1300	10	40	313	1255	5	51	300		
1326	17	35	314	1305	10	52	302		
1331	10	35	312						
1357	17	25	307	1331	0	45	300	0	165
1402	10	24	307	1339	5	36	286		
				1349	10	31	297		

EKMAN CURRENT METER OBSERVATIONS

CURRENT DRAG OBSERVATIONS

Station No. 44 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Wind	
								Speed (Knots)	Dir. (°T)
1425-20-V	17	16	297	1419-20-V	0	24	304	1	173
1429	10	18	312	1428	5	22	303		
1456	17	9	267	1437	10	19	295		
1502	10	7	277						
1526	17	7	177						
1532	10	9	172						
1556	17	15	160						
1602	10	17	142	1619	0	23	110	0	227
1626	17	23	142	1627	5	34	124		
1632	10	25	140	1635	10	34	128		
1655	17	29	147						
1659	10	32	141						
1726	17	31	145	1723	0	47	137	0	-
1730	10	36	137	1730	5	49	139	0	-
1758	17	32	141	1740	10	46	143	0	-
1802	10	39	135	1815	0	60	148	5	248
1828	17	31	139	1825	5	60	153	0	-
1831	10	40	131	1830	10	46	153	0	-
1858	17	29	137						
1902	10	34	137	1910	0	58	157	0	-
1928	17	24	137	1917	5	45	159	0	-
1932	10	31	135	1927	10	40	155	0	-
1958	17	21	130						
2002	10	24	135	2008	0	36	161	9	348
2029	17	8	142	2017	5	29	151	7	330
2031	10	14	132	2028	10	23	152	7	330
2059	17	2	-						
2105	17	3	-						
2110	10	5	277	2110	0	-	-	7	332
2128	17	13	327						
2132	10	10	317						

EKMAN CURRENT METER OBSERVATIONS

CURRENT DRAG OBSERVATIONS

Station No. 44 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Wind	
								Speed (Knots)	Dir. (°T)
2158-20-V	17	21	007						
2202	10	21	337						
2226	17	30	355	2210-20-V	0	20	292	3	257
2230	10	28	329	2220	5	24	315	4	230
2301	17	34	311	2230	10	24	312	3	202
2306	10	39	302						
2325	17	-	-	2313	0	43	307	7	281
2331	17	37	317	2324	5	44	298		
2336	10	42	317	2334	10	46	305		
2357	17	39	334						
0002-21-V	10	39	317						
0027	17	30	317	0016-21-V	0	50	320	8	263
0031	10	-	-	0026	5	45	305		
0036	10	37	314	0034	10	52	314		
0059	17	28	307						
0103	10	33	313						
0124	17	27	315	0115	0	45	315	11	269
0128	10	27	307	0126	5	37	293		
0157	17	15	310	0137	10	30	292		
0202	10	17	314						
0226	17	9	317	0219	0	15	342	14	177
0232	10	6	307	0231	5	14	339		
0258	17	3	-	0245	10	-	-		
0302	10	8	117						
0328	17	15	142						
0334	10	18	122						
0357	17	25	129						
0402	10	29	121						
0427	17	36	132	0416	0	32	052	9	276
0431	10	40	127	0430	5	36	062		
0455	17	32	133	0437	10	47	062		
0506	10	46	126						

EKMAN CURRENT METER OBSERVATIONS

CURRENT DRAG OBSERVATIONS

Station No. 44 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Wind	
								Speed (Knots)	Dir. (°T)
0528-21-V	17	40	141						
0531	10	52	138	0535-21-V	0	52	129	8	281
0558	17	47	138	0540	5	65	128	8	277
0602	10	51	138	0550	10	58	128	8	277
0627	17	41	139	0615	0	55	130	6	283
0631	10	53	143	0620	5	67	131	6	273
0700	17	38	139	0625	10	58	137	7	281
0705	10	51	140						
0728	17	49	139	0715	0	57	131	4	282
0731	10	54	138	0725	5	64	134	5	287
0753	17	43	138	0735	10	61	134		
0802	10	44	141						
0827	17	40	137	0815	0	50	131	airs	
0831	10	40	143	0825	5	46	132		
0858	17	24	140	0835	10	48	135		
0902	10	25	141						
0927	17	14	137	0920	0	24	134	airs	
0930	10	14	152	0930	5	21	142		
0955	17	4	157	0942	10		135		
0958	10	0	-						
1027	17	22	317						
1032	10	14	327						
1056	17	25	312						
1100	10	29	317	1110	0	49	300	7	149
1125	17	34	317	1118	5	50	313		
1129	10	38	317	1122	10	50	296		

Station 43

Period: 1524 May 21 to 1658 May 23, 1954.

Position: 53° 26.6' N
131° 04.2' W

Depth: 33 fathoms

At this station the vessel was anchored to a single anchor, the ship's anchor cable and bow anchor being used. Scope 2.0.

Observations were made at 10, 20, 30 and 50 meters using the Ekman meter and at the surface, 10 and 20 meters with the drag.

Southeasterly winds prevailed during most of the observation period and during the latter part the sea caused the vessel to roll quite heavily.

EKMAN CURRENT METER OBSERVATIONS

CURRENT DRAG OBSERVATIONS

Station No. 43

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Wind	
								Speed (Knots)	Dir. (°T)
1524-21-V	50	15	257						
1529	30	9	347						
1534	20	23	340						
1538	10	21	337						
1546	50	10	217						
1551	30	6	327						
1556	20	17	314	1556-21-V	0	40	344	12	167
1600	10	20	017	1607	10	32	342		
				1617	20	41	027		
1624	50	16	142						
1630	30	10	197						
1636	20	9	257						
1640	10	17	045						
1648	50	20	141	1638	0	37	307	13	167
1654	30	12	147	1649	10	18	007		
1700	20	6	117	1709	20	19	080		
1704	10	17	035						
1722	50	21	160						
1726	30	11	157						
1730	20	17	124						
1733	10	18	077						
1752	50	25	157						
1758	30	17	157						
1802	20	23	129						
1805	10	22	067	1805	0	23	057	12	162
				1810	10	24	077	12	162
1822	50	30	159	1823	20	26	107	14	184
1826	30	21	132						
1830	20	28	117						
1833	10	32	079						
1851	50	34	157						
1856	30	24	137						
1859	20	27	133						
1902	10	26	102	1900	0	29	094	13	175
				1910	10	21	112	14	175
1922	50	33	162	1915	20	22	127	14	175
1926	30	21	120						
1929	20	31	145						
1933	10	31	090						

EKMAN CURRENT METER OBSERVATIONS

CURRENT DRAG OBSERVATIONS

Station No. 43 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Wind	
								Speed (Knots)	Dir. (°T)
1953-21-V	50	22	177	1955-21-V	0	32	099	13	160
1957	30	25	141	2000	10	35	103	12	155
2001	20	23	124	2010	20	33	112	11	157
2004	10	36	106						
2023	50	20	157						
2030	30	22	157						
2034	20	18	147	2035	20	17	128	10	160
2038	10	25	107	2050	10	24	110	9	165
				2105	0	15	067	9	160
2052	50	10	112						
2056	30	28	167						
2059	20	9	112						
2102	10	20	137						
2122	50	4	217						
2126	30	20	177						
2130	20	7	317	2125	0	16	080	8	145
2133	10	13	122	2135	10	-	-	7	143
2152	50	9	297						
2156	30	13	207						
2200	20	10	247						
2204	10	8	297						
2222	50	12	327						
2226	30	23	267						
2229	20	9	287	2225	10	12	004	9	145
2233	10	9	317	2245	0	13	002	9	133
				2255	20	12	343	10	140
2253	50	21	320						
2257	30	27	297						
2300	20	15	297						
2304	10	14	292						
2323	50	27	311						
2327	30	33	307						
2331	20	26	317	2326	20	32	321	10	136
2335	10	15	327	2335	10	29	330		
				2349	0	39	331		
2353	50	25	317						
2357	30	27	311						
2359	20	28	315						
0005-22-V	10	27	310						

EKMAN CURRENT METER OBSERVATIONS

CURRENT DRAG OBSERVATIONS

Station No. 43 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Wind	
								Speed (Knots)	Dir. (°T)
0023-22-V	50	29	343						
0027	30	31	309	0019-22-V	0	44	311	12	149
0031	20	33	305	0029	10	46	316		
0036	10	28	317	0035	20	41	318		
0053	50	24	317						
0057	30	36	327						
0101	20	28	317						
0106	10	29	315						
0122	50	20	324	0108	20	44	313	15	150
0126	30	28	333	0116	10	45	317		
0130	20	25	307	0124	0	40	318		
0134	10	27	331						
0152	50	21	347						
0156	30	24	315	0149	0	48	344	15	165
0201	20	27	342	0157	10	41	330		
0205	10	30	295	0203	20	43	335		
0222	50	16	350						
0226	30	17	314						
0230	20	23	329	0229	20	17	-	14	147
0234	10	30	337	0254	10	26	320	13	148
0250	50	6	007	0330	0	17	299	14	142
0254	30	15	322						
0256	20	19	360						
0302	10	19	320						
0322	50	10	232						
0326	30	25	029						
0330	20	19	265						
0334	10	20	024						
0353	50	12	132						
0357	30	16	077						
0401	20	10	047						
0406	10	7	287	0410	0	14	336	14	140
0424	50	25	122	0425	10	10	355		
0428	30	18	120	0441	20	6	058		
0432	20	13	092						
0436	10	15	052						

EKMAN CURRENT METER OBSERVATIONS

CURRENT DRAG OBSERVATIONS

Station No. 43 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (*T)	Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (*T)	Wind	
								Speed (Knots)	Dir. (*T)
0450-22-V	50	23	119						
0454	30	28	111						
0458	20	19	114						
0503	10	19	080						
0525	50	30	135						
0529	30	37	127						
0534	20	31	119						
0538	10	27	083						
0555	50	34	139	0555-22-V	20	29	106	13	130
0559	30	36	139	0605	10	26	106	11	115
0603	20	32	113	0620	0	22	120	13	120
0606	10	28	111						
0621	50	44	137						
0626	30	34	143						
0630	20	40	119						
0634	10	37	102						
0658	50	33	147						
0702	30	47	136						
0706	20	45	125	0700	0	26	109	13	120
0710	10	49	112	0710	10	31	120	13	120
0723	50	34	142	0720	20	47	112	14	120
0727	30	54	147						
0730	20	51	117						
0733	10	51	109						
0758	50	33	147						
0802	30	59	150	0755	20	57	129	15	120
0806	20	56	128	0805	10	35	132	14	119
0809	10	49	115	0815	0	31	129	13	120
0824	50	42	147						
0828	30	40	176						
0831	20	37	135						
0835	10	45	137						
0853	50	23	140						
0857	30	49	179						
0902	20	51	172	0855	0	37	171	15	127
0905	10	51	157	0905	10	58	148		
				0910	20	52	149		

EKMAN CURRENT METER OBSERVATIONS

CURRENT DRAG OBSERVATIONS

Station No. 43 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (*T)	Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (*T)	Wind	
								Speed (Knots)	Dir. (*T)
0924-22-V	50	27	139						
0929	30	39	155						
0933	20	51	169						
0937	10	44	164						
0954	50	29	155	0940-22-V	20	58	144	17	123
0958	30	50	175	0947	10	30	146	16	127
1001	20	47	167	1000	0	21	132	15	140
1004	10	39	171						
1023	50	21	180						
1027	30	35	195						
1031	20	30	187						
1034	10	27	202	1030	0	17	207	15	138
1050	50	19	224	1045	10	15	203	17	135
1052	30	33	207	1050	20	21	189	17	135
1057	20	30	197						
1101	10	22	225						
1125	50	14	252	1125	0	-	-	17	136
1129	30	28	239	1150	10	18	249	19	140
1133	20	34	242	1155	20	36	248	19	140
1137	10	28	239						
1153	50	13	304						
1157	30	35	267						
1201	20	41	267						
1205	10	40	265	1221	20	63	274	20	140
1226	50	23	262	1227	10	31	245	20	140
1230	30	40	271	1228	0	33	259	20	140
1234	20	36	297						
1238	10	42	281						
1255	50	35	264						
1259	30	43	307						
1303	20	45	306	1301	0	36	341	17	180
1307	10	45	279	1309	10	38	304	17	180
				1314	20	59	303	17	180
1322	50	31	309						
1326	30	42	308						
1330	20	46	299						
1334	10	38	289						

EKMAN CURRENT METER OBSERVATIONS

CURRENT DRAG OBSERVATIONS

Station No. 43 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Wind	
								Speed (Knots)	Dir. (°T)
1352-22-V	50	37	310	1344-22-V	20	31	307	19	149
1356	30	54	293	1349	10	28	302	19	149
1400	20	43	295	1355	0	36	329	19	149
1404	10	37	-						
1421	50	36	271						
1424	30	37	324						
1428	20	52	297						
1430	10	47	324						
1451	50	30	271						
1454	30	27	357						
1456	20	44	282						
1458	10	33	327						
1522	50	19	337	1517	0	38	334	14	154
1526	30	23	319	1526	10	31	317	14	154
1530	20	38	280	1534	20	38	267	14	154
1534	10	25	335						
1554	50	17	317						
1558	30	28	322						
1602	20	30	277						
1606	10	22	007	1605	20	23	275	15	159
1622	50	12	067	1610	10	25	317	15	159
1626	30	10	297	1625	0	24	303	15	159
1628	20	25	272						
1634	10	25	332						
1646	50	12	117						
1650	30	9	357						
1654	20	20	267						
1658	10	16	021						
1725	50	9	147						
1729	30	13	307	1730	0	11	030	14	140
1733	20	12	167	1745	10	13	058		
1736	10	16	044	1800	20	-	-		
1753	50	25	167						
1757	30	13	127						
1801	20	10	127						
1804	10	18	080						

EKMAN CURRENT METER OBSERVATIONS

CURRENT DRAG OBSERVATIONS

Station No. 43 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Wind	
								Speed (cm/sec)	Dir. (°T)
1823-22-V	50	19	167						
1827	30	19	130						
1830	20	13	122						
1833	10	21	074						
1851	50	25	155						
1855	30	23	142	1840-22-V	20	11	131	14	142
1858	20	18	130	1850	10	17	079	15	139
1901	10	25	077	1900	0	22	083	15	140
1923	50	25	157						
1926	30	22	125						
1930	20	25	125						
1933	10	27	091						
1952	50	25	157	1945	0	22	095	15	135
1957	30	28	135	1955	10	21	102	15	138
2000	20	23	117	2000	20	15	125	15	139
2003	10	28	087						
2022	50	26	149						
2026	30	30	157						
2029	20	21	117						
2032	10	28	097						
2053	50	24	159						
2057	30	30	159	2045	20	20	108	15	132
2100	20	21	104	2055	10	21	122		
2104	10	23	089	2110	0	21	089		
2124	50	18	212						
2128	30	24	157						
2131	20	20	125						
2134	10	15	067						
2153	50	18	197	2150	0	15	090	15	130
2158	30	20	140		10	0	-		
2209	20	15	100	2230	20	0			
2204	10	10	082						
2224	50	12	137						
2228	30	17	197						
2232	20	13	042						
2236	10	8	037						

EKMAN CURRENT METER OBSERVATIONS

CURRENT DRAG OBSERVATIONS

Station No. 43 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Wind	
								Speed (Knots)	Dir. (°T)
2253-22-V	50	9	137						
2257	30	20	210						
2300	20	13	024						
2304	10	19	320						
2323	50	15	312						
2327	30	15	244	2321-22-V	20	11	315	17	125
2331	20	11	287	2332	10	14	321		
2335	10	19	310	2341	0	19	035		
2353	50	23	305						
2357	30	25	262						
0001-23-V	20	17	032						
0005	10	14	302						
0022	50	28	337						
0026	30	34	277						
0030	20	23	280						
0034	10	18	340	0036-23-V	0	24	314	18	117
0053	50	35	317	0044	10	22	310		
0057	30	29	323	0052	20	33	313		
0101	20	38	280						
0105	10	25	332						
0123	50	39	333	0129	20	29	324	18	128
0127	30	38	277	0136	10	30	338		
0131	20	25	337	0142	0	36	326		
0135	10	34	337						
0153	50	38	357						
0155	30	38	285						
0159	20	34	347						
0207	10	31	347						
0223	50	26	347	0218	0	32	317	17	128
0227	30	28	297	0224	10	37	315		
0229	20	10	317	0229	20	35	318		
0235	10	58	347						
0253	50	27	334						
0257	30	29	289						
0301	20	20	302						
0305	10	23	349						

EKMAN CURRENT METER OBSERVATIONS

CURRENT DRAG OBSERVATIONS

Station No. 43 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Wind			
								Speed (Knots)	Dir. (°T)		
0324-23-V	50	35	327	0316-23-V	20	26	328	18	125		
0328	30	28	293	0324	10	28	333				
0332	20	28	345	0334	0	24	035				
0336	10	33	322								
0354	50	14	022								
0358	30	25	282								
0402	20	12	327								
0406	10	27	009								
0424	50	6	-								
0429	30	11	177	0415	0	15	049	17	122		
0434	20	17	094	0426	10	14	037				
0438	10	23	039	0435	20	10	049				
0447	50	16	060								
0451	30	14	277								
0455	20	13	257								
0459	10	25	067								
0524	50	29	095								
0528	30	19	112								
0536	20	19	142								
0539	10	24	045								
0555	50	38	130	0555	0	22	075	18	125		
0559	30	29	139	0610	10	23	105			20	125
0602	20	25	142	0620	20	38	125			16	126
0605	10	29	061								
0621	50	42	148								
0625	30	37	136								
0629	20	38	121								
0632	10	44	100								
0658	50	42	122								
0702	30	49	131								
0705	20	36	135	0700	20	30	114	21	130		
0709	10	39	099	0710	10	35	118			16	133
				0735	0	29	110			18	124
0729	50	44	144								
0733	30	53	141								
0736	20	46	132								
0739	10	44	101								

EKMAN CURRENT METER OBSERVATIONS

CURRENT DRAG OBSERVATIONS

Station No. 43 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Wind	
								Speed (Knots)	Dir. (°T)
0754-23-V	50	43	136						
0758	30	47	143						
0802	20	21	137						
0808	10	42	097	0805-23-V	0	29	098	18	115
				0820	10	46	130	18	115
0825	50	51	145	0825	20	59	126	20	133
0829	30	53	143						
0833	20	51	134						
0836	10	46	119						
0852	50	45	151						
0856	30	52	159	0855	20	55	163	22	133
0900	20	10	057	0900	10	38	153		
0903	10	50	140	0915	0	28	159	22	133
0923	50	35	154						
0927	30	51	146						
0931	20	51	150						
0934	10	47	135						
0952	50	30	149	0945	0	39	156	20	125
0958	30	45	151	0950	10	46	157	20	125
1002	20	50	169	1000	20	51	151	18	130
1005	10	48	155						
1022	50	34	182						
1026	30	38	176	1025	20	28	162	20	136
1031	20	41	168	1030	10	27	152	19	137
1034	10	32	151	1045	0	16	161	20	135
1051	50	25	177						
1055	30	35	195						
1058	20	32	179						
1102	10	30	195						
1125	50	17	207	1125	0	-	-	21	141
1129	30	31	249						
1133	20	32	228						
1137	10	25	224						
1155	50	15	280	1145	0	22	267	20	136
1159	30	39	230	1154	10	23	241		
1204	20	27	241	1200	20	29	242		
1208	10	36	231						

EKMAN CURRENT METER OBSERVATIONS

CURRENT DRAG OBSERVATIONS

Station No. 43 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Wind	
								Speed (Knots)	Dir. (°T)
1225-23-V	50	24	277						
1229	30	40	269						
1233	20	33	261	1235-23-V	20	40	249	18	141
1238	10	35	265	1242	10	35	254	18	141
				1249	0	28	266	18	141
1254	50	25	295						
1258	30	38	275						
1303	20	45	269						
1307	10	41	286						
				1326	0	35	271	16	146
1325	50	32	-	1331	10	52	276	16	146
1329	30	48	270	1337	20	37	272	16	146
1335	20	41	269						
1339	10	31	282						
1355	50	39	280						
1359	30	44	278						
1403	20	50	308	1407	20	48	264	18	145
1407	10	52	279	1413	10	34	287	18	145
				1419	0	40	263	18	145
1420	50	34	295						
1424	30	40	310						
1428	20	48	287						
1432	10	42	308						
1455	50	38	284						
1459	30	27	315						
1503	20	40	286	1513	0	44	295	17	145
1507	10	37	295	1519	10	38	310	17	145
				1523	20	41	320	17	145
1524	50	34	324						
1528	30	34	297						
1532	20	30	311						
1536	10	41	297						
1554	50	38	285						
1558	30	27	327						
1602	20	42	330	1601	0	33	311	17	150
1606	10	44	307	1606	10	30	304	17	150
				1611	20	34	331		
1624	50	23	327						
1628	30	27	313						
1632	20	36	302						
1636	10	35	339	1637	20	30	315	15	150
				1642	10	27	330	15	150
1646	50	34	281	1647	0	35	315	15	150
1650	30	25	269						
1654	20	26	357						
1658	10	36	317						

Station 42

Period: 2114 May 23 to 2138 May 25, 1954.

Position: 53° 36.3' N
130° 43.8' W

Depth: 100 fathoms

A single anchor and wire rope was used at this station, scope 2.0.

Observations were made at 20, 30, 50, 100 and 150 meters using the Ekman meter, and at the surface and 10 meters using the drag.

EKMAN CURRENT METER OBSERVATIONS

CURRENT DRAG OBSERVATIONS

Station No. 42

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Wind	
								Speed (Knots)	Dir. (°T)
2114-23-V	100	-	-						
2120	20	61	188						
2126	30	51	197						
2142	50	48	167	2145-23-V	0	44	143	10	130
					10	27	165		
				2304	10	28	184	13	149
				2316	0	34	203	8	142
2339	20	37	193						
2341	30	21	177						
2349	50	26	167						
2354	100	23	142						
2359	150	27	177	0016-24-V	10	22	162	8	127
0038-24-V	20	22	220						
0043	30	15	343						
0051	50	9	257						
0056	100	13	352						
0100	150	14	012						
0132	20	21	274	0133	10	13	307	8	150
0136	30	16	327	0151	0	17	265		
0141	50	10	087						
0146	100	8	067						
0153	150	34	004						
0233	20	15	317						
0237	30	17	312						
0242	50	12	007						
0246	100	17	012	0246	0	21	303	1	133
0256	150	30	342	0258	10	17	298		
0334	20	16	287						
0338	30	14	017						
0342	50	9	017						
0348	100	14	352						
0354	150	21	347	0351	10	14	290	1	180
				0401	0	25	312		
0431	20	15	300						
0435	30	15	027						
0439	50	5	117						
0446	100	7	317						
0452	150	10	010						

EKMAN CURRENT METER OBSERVATIONS

CURRENT DRAG OBSERVATIONS

Station No. 42 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (*T)	Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (*T)	Wind	
								Speed (Knots)	Dir. (*T)
0532-24-V	20	7	217						
0536	30	10	177						
0538	50	17	164						
0545	100	25	223						
0550	150	20	264	0552-24-V	0	0	-	4	270
				0559	10	0	-		
0634	20	20	090						
0640	30	24	120						
0645	50	26	155						
0649	100	21	212						
0655	150	21	165						
0736	20	25	184	0705	10	14	135	2	280
0739	30	34	167	0710	0	21	140		
0744	50	36	179						
0748	100	31	-	0750	0	26	148	lt	airs
0758	150	19	187	0800	10	25	136		
0831	20	36	162						
0836	30	45	165						
0839	50	41	185						
0844	99	27	202						
0848	147	25	161	0855	10	23	155	1	310
0932	20	42	167	0900	0	20	155		
0936	30	40	180						
0941	50	-	-						
0945	50	44	193						
0950	100	33	213						
0956	148	33	173	1000	0	38	152	lt	airs
1031	20	33	171	1005	10	34	147		
1035	30	29	187						
1038	50	33	187						
1041	100	31	217	1034	10	33	156	4	342
1048	148	33	187	1045	0	25	167		
1133	20	24	205	1128	0	30	195	11	305
1137	30	24	207	1134	10	35	161		
1144	50	25	200						
1147	100	15	227						
1154	150	21	182						

EKMAN CURRENT METER OBSERVATIONS

CURRENT DRAG OBSERVATIONS

Station No. 42 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (*T)	Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (*T)	Wind	
								Speed (Knots)	Dir. (*T)
1233-24-V	20	16	234	1206-24-V	10	24	200	4	312
1238	30	14	254	1216	0	20	223		
1243	50	15	257						
1250	100	12	052						
1258	150	-	-						
1306	150	27	347						
1332	20	16	297	1319	0	10	190	11	300
1338	30	17	304	1330	10	0	-		
1342	50	5	017						
1346	100	24	011						
1351	150	51	359						
1426	20	-	-	1418	10	0	-	8	290
1434	30	15	017	1433	0	0	-		
1443	50	16	312						
1447	100	34	011						
1456	150	42	006						
1532	20	15	020						
1539	30	26	027	1536	0	0	-	lt airs	
1542	50	27	007	1601	10	17	-		
1544	100	51	346						
1554	150	33	027						
1631	20	27	341						
1636	30	28	360						
1641	50	13	050						
1647	100	38	016	1644	10	12	340	lt airs	
1653	150	12	007	1652	0	6	350		
1729	20	19	017						
1732	30	23	027	1730	0	0	-	lt airs	
1735	50	17	092						
1740	100	25	354						
1745	150	21	335						
1831	20	19	120	1830	0 & 10	0	-	lt airs	
1836	30	19	104						
1839	50	27	157						
1843	100	13	224						
1849	150	10	307						

EKMAN CURRENT METER OBSERVATIONS

CURRENT DRAG OBSERVATIONS

Station No. 42 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Wind	
								Speed (Knots)	Dir. (°T)
1932-24-V	20	23	137						
1936	30	34	135	1930-24-V	10	16	149	lt	airs
1940	50	38	187	1945	0	0	-		
1944	100	22	214						
1950	150	10	012	2030	0	0	-		
2032	20	28	157						
2035	30	33	161						
2042	50	35	175						
2047	100	22	212						
2058	150	10	277	2100	10	0	-		
2136	20	25	147						
2140	30	23	147						
2144	50	26	177						
2148	100	27	207	2145	10	18	139	lt	airs
2153	150	15	092	2155	0	16	125		
2232	20	19	180						
2235	30	27	177						
2239	50	24	177						
2243	100	17	207	2240	0	17	133	lt	airs
2250	150	13	132	2250	10	20	110		
2338	20	22	162	2336	10	22	147	6	039
2342	30	20	187	2347	0	20	142		
2347	50	17	187						
2352	100	17	210						
2358	150	11	162						
0032-25-V	20	16	184						
0036	30	16	212	0038-25-V	0	14	142	4	289
0040	50	10	192	0050	10	17	135		
0048	100	10	252						
0055	150	9	157						
0133	20	10	162						
0137	30	3	-						
0142	50	8	207						
0148	100	18	034	0143	10	13	112	4	057
0154	150	15	027	0157	0	-	-		

EKMAN CURRENT METER OBSERVATIONS

CURRENT DRAG OBSERVATIONS

Station No. 42 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (*T)	Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (*T)	Wind	
								Speed (Knots)	Dir. (*T)
0237-25-V	20	15	292	0234-25-V	0	0	-	1	087
0241	30	24	287	0239	10	0	-		
0248	50	14	252						
0252	100	15	000						
0256	150	31	329						
0334	20	16	327						
0338	30	21	330	0338	10	15	277	3	215
0343	50	9	357	0350	0	17	354		
0348	100	23	005						
0352	150	30	347						
0434	20	12	347	0430	0	0	-	3	233
0438	30	25	347	0436	10	0	-		
0442	50	10	312						
0446	100	25	345						
0456	150	15	317						
0537	20	27	347	0530	0	0	-	6	210
0541	30	17	007						
0545	50	7	277						
0549	100	17	357						
0555	150	12	317						
0628	20	8	327	0625	0 & 10	0	-	5	200
0631	30	15	027						
0635	50	16	067						
0640	100	6	097						
0645	150	13	217						
0732	20	5	127	0730	0 & 10	0	-	6	210
0736	30	19	107						
0739	50	26	172						
0743	100	25	217						
0748	150	14	187						
0830	20	20	194						
0833	30	23	167						
0836	50	27	177	0835	10	22	183	6	175
0841	100	28	207	0850	0	19	193		
0846	150	20	180						

EKMAN CURRENT METER OBSERVATIONS

CURRENT DRAG OBSERVATIONS

Station No. 42 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Wind	
								Speed (Knots)	Dir. (°T)
0932-25-V	20	26	147						
0935	30	33	149						
0938	50	39	143						
0943	100	33	207	0940-25-V	0	17	150	6	160
0948	150	27	147	0950	10	13	158		
1031	20	30	177						
1034	30	30	172						
1037	50	46	187						
1041	100	31	207	1035	10	16	163	5	170
1046	150	36	159	1045	0	17	144		
1131	20	31	197						
1136	30	29	197						
1140	50	38	197	1138	0	25	197	2	185
1144	100	27	239	1147	10	25	175		
1151	150	37	187						
1231	20	30	197						
1235	30	35	182						
1240	50	37	144	1239	10	28	160	3	165
1245	100	13	232	1245	0	0	-		
1254	150	40	187						
1331	20	12	217	1330	0	0	-	8	170
1335	30	18	164	1352	10	10	279		
1340	50	23	149						
1346	100	9	337						
1351	150	6	287						
1426	20	7	007						
1435	30	9	267						
1438	50	5	137						
1443	100	11	037	1437	10	11	022	12	170
1449	150	17	029	1451	0	25	048		
1531	20	16	332	1531	0	21	336	13	170
1534	30	29	277	1542	10	24	021		
1538	50	13	077						
1543	100	23	017						
1549	150	33	339						

1043 20 25 177
 1044 30 29 172
 1037 50 46 187
 1041 100 31 207
 1046 150 36 159
 1131 20 31 197
 1136 30 29 197
 1140 50 38 197
 1144 100 27 239
 1151 150 37 187

1035 10 16 163
 1045 0 17 144
 1239 10 28 160
 1245 0 0 -
 1330 0 0 -
 1352 10 10 279
 1437 10 11 022
 1451 0 25 048
 1531 0 21 336
 1542 10 24 021

EKMAN CURRENT METER OBSERVATIONS

CURRENT DRAG OBSERVATIONS

Station No. 42 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Wind	
								Speed (Knots)	Dir. (°T)
1631-25-V	20	16	341						
1634	30	23	297	1633-25-V	10	20	348	12	170
1638	50	13	267	1641	0	25	021		
1643	100	26	025						
1649	150	35	327						
1739	20	20	347						
1743	30	23	337						
1746	50	14	227	1740	0	25	017	8	164
1750	100	27	007	1750	10	18	034		
1755	150	19	019						
1833	20	14	002						
1837	30	20	357						
1840	50	11	207						
1845	100	14	012	1835	10	12	034	6	170
1850	150	17	357	1850	0	11	053		
1931	20	10	322	1930	0 & 10	0	-	5	180
1935	30	9	307						
1940	50	17	192						
1945	100	4	-						
1951	150	15	264						
2032	20	4	-	2030	0	-	-	4	215
2036	30	9	112						
2040	50	27	209						
2044	100	12	227						
2048	150	10	327						
2130	20	24	137	2125	10	24	138	lt airs	
2134	30	31	132	2132	0	35	133		
2138	50	33	179						
2143	100	23	207						
2147	150	15	174						

H-54-2

Ship: C.N.A.V. Ehkoli

Station 65

Period: 0515 July 17 to 1140 July 19, 1954.

Position: 54° 10' 30" N
132° 00' 00" W

Depth: 44 fathoms

At this station the vessel was anchored to one anchor using steel wire rope, scope 1.4.

Observations were made at 10, 20, 30, 50 and 75 meters using the Ekman meter and at the surface with the drag.

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. 65

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
				0515-17-VII	23	262	airs	160
				0545	20	276	airs	160
				0615	31	261	airs	160
0620-17-VII	75	42	248					
0626	50	30	267					
0633	30	15	284					
0637	20	15	307					
0642	10	24	287					
				0645	26	266	airs	160
0725	75	18	307					
0734	50	13	267	0715	21	285	airs	160
0741	-	-	-					
0745	-	-	-	0745	12	290	airs	160
				0815	4	279	airs	160
				0845	0	-	airs	160
				0915	0	-	airs	160
0927	75	30	067					
0933	45	21	047					
0939	30	28	112					
0944	20	26	029	0945	9	055	airs	160
0948	10	9	087					
				1015	15	061	airs	160
1017	75	45	070					
1024	50	30	067					
1029	30	33	093					
1035	20	46	077					
1039	10	47	090					
				1045	35	076	airs	160
1116	75	39	069					
1123	50	38	097	1115	42	079	airs	160
1132	30	51	109					
1136	20	57	114					
1139	10	52	096					
				1145	49	083	airs	160
1216	75	49	067					
1223	50	67	111	1215	41	145	airs	160
1227	30	31	126					
1234	20	37	117					
1239	10	29	127					

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. 65 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (*T)	Time P.S.T.	Speed (cm/sec)	Dir. (*T)	Wind	
							Speed (Knots)	Dir. (*T)
1316-17-VII	75	44	087	1245-17-VII	21	086	airs	160
1323	50	45	117	1315	17	088	airs	160
1335	30	39	137					
1338	20	22	127					
1342	10	24	121	1404	13	061	airs	160
1418	75	44	117					
1425	50	30	115					
1431	30	32	197					
1444	20	13	172					
1448	10	6	147					
1516	75	35	185					
1522	50	20	197					
1529	30	15	127					
1533	20	11	347					
1537	10	9	172					
1619	75	36	227					
1628	50	29	282					
1633	30	16	297					
1638	20	12	167					
1647	10	16	052	1715	29	236	airs	160
1716	75	35	255					
1722	50	35	214					
1728	30	18	317					
1732	20	37	241					
1736	10	20	244	1745	8	313	airs	160
1817	75	33	245	1815	10	344	airs	160
1823	50	16	297					
1828	30	30	242					
1832	20	28	272					
1836	10	13	277	1845	15	025	airs	160
1917	75	25	277	1915	0	-	airs	160
1925	50	8	157					
1930	30	27	265					
1936	20	27	245					
1940	10	15	147	1945	0	-	airs	160

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. 65 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
2019-17-VII	75	17	334	2015-17-VII	0	-	7	160
2026	50	19	140					
2031	30	21	067					
2036	20	16	107					
2041	10	16	167	2045	0	-	7	160
2119	75	32	047	2115	0	-	5	160
2126	50	38	067					
2131	30	18	104					
2136	20	16	177					
2140	10	29	171	2145	20	227	5	160
2221	74	40	064	2220	25	047	4	160
2226	50	32	082					
2231	30	17	084					
2236	20	16	097					
2239	10	38	077	2245	46	066	4	160
2319	75	35	077	2315	50	085	3	160
2326	50	36	077					
2332	30	35	103					
2337	20	29	099					
2340	10	36	097	2345	41	091	3	160
0017-18-VII	75	43	057	0015-18-VII	49	097	2	160
0023	50	26	097					
0029	30	26	137					
0033	20	30	137					
0038	10	52	108	0045	44	103	4	160
0116	75	50	114	0115	12	074	3	160
0123	50	32	113					
0128	30	42	127					
0132	20	10	377					
0137	10	13	092	0145	14	022	9	210
0217	75	41	157	0215	22	044	11	210
0223	50	23	187					
0228	30	7	167					
0232	20	3	-					
0236	10	11	202	0245	8	350	15	210

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. 65 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
0317-18-VII	75	41	209	0315-18-VII	14	337	14	210
0323	50	22	221					
0329	30	28	261					
0333	20	21	287					
0338	10	18	347					
0416	75	41	227	0345	33	007	12	210
0421	50	43	257	0415	17	357	14	210
0425	30	37	277					
0429	20	29	299					
0434	10	24	327	0445	20	050	11	210
0521	72	50	270	0515	20	328	10	160
0528	50	41	283					
0532	30	42	270					
0537	20	34	327					
0540	10	26	242	0545	27	304	11	160
0618	72	63	257	0615	25	307	10	160
0624	50	49	275					
0629	30	32	284					
0633	20	39	274					
0637	10	22	302	0645	26	296	10	160
0724	75	30	257	0720	26	306	8	160
0730	50	34	290					
0734	30	26	257					
0739	20	15	272					
0744	10	10	227	0745	17	316	9	160
0819	75	42	249	0815	14	311	10	160
0826	50	23	307					
0831	30	19	272					
0836	20	19	070					
0840	10	10	167	0845	13	354	10	160
0920	75	15	332					
0925	50	13	017					
0930	30	19	062					
0935	20	13	102					
0939	10	35	192	0945	11	078	10	160

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. 65 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
1016-18-VII	75	28	079	1015-18-VII	12	043	10	160
1021	50	28	090					
1027	30	20	097					
1031	20	19	144					
1036	10	24	072					
1117	75	45	067	1045	25	036	10	160
1123	50	34	075	1121	47	101	11	160
1130	30	50	081					
1138	20	56	100					
1146	10	71	077	1145	60	095	10	160
1216	75	52	075	1215	57	094	9	160
1223	50	35	061					
1228	30	57	115					
1236	20	55	117					
1240	10	53	126					
-	-	53	-	1245	42	106	10	160
1259	10	32	157	1315	10	128	11	160
1318	75	51	059					
1324	50	33	091					
-	-	-	-	1345	14	143	10	160
1354	10	33	127	1415	21	069	10	160
1419	75	67	115					
1426	50	38	121					
1432	30	42	156					
1437	20	31	127					
1441	10	20	134	1445	0	-	10	160
1515	75	50	167	1515	38	017	11	140
1521	50	41	182					
1527	30	15	177					
1531	20	30	237					
1534	10	20	057					
1615	75	53	207	1545	15	354	11	140
1620	50	15	150	1615	12	314	12	140
1626	30	25	259					
1629	20	22	322					
1633	10	16	002	1645	16	338	10	140

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. 65 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
1718-18-VII	73.6	53	228	1715-18-VII	16	312	10	140
1724	50	13	227					
1729	30	27	252					
1732	20	35	291					
1735	10	30	003					
1818	73.3	40	244	1745	20	327	10	140
1823	65	45	261	1815	11	323	12	190
1828	50	52	247					
1832	30	14	277					
1836	20	23	284					
1839	10	20	327	1845	19	344	6	190
1916	74	35	239	1915	17	302	11	190
1921	50	19	287					
1926	30	26	247					
1929	20	15	274					
1933	10	13	057	1945	0	-	14	190
2016	75	22	255	2015	17	043	13	190
2022	50	26	297					
2026	30	25	-					
2030	30	20	347					
2035	20	16	037					
2038	10	11	047	2100	21	166	10	190
2116	75	17	062	2115	-	127	8	160
2122	50	9	287					
2127	30	15	227					
2131	20	18	077					
2134	10	22	072	2145	0	-	10	190
2217	75	28	044	2215	0	-	10	190
2223	50	16	150					
2228	30	28	050					
2234	20	39	062					
2238	10	32	076	2245	22	107	8	190
2316	75	39	067	2315	25	085	4	190
2320	-	-	-					
2331	-	-	-					
2341	30	44	086	2345	51	100	5	190
2346	50	30	069					
2352	30	37	091					
2358	20	44	085					
0004-19-VII	10	53	099					

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. 65 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
0018-19-VII	75	39	083	0015-19-VII	44	089	1	190
0025	50	33	067					
0032	30	59	110					
0039	20	63	108					
0044	10	65	127	0045	45	111	airs	
0117	75	33	059	0115	16	092	4	190
0124	50	36	097					
0129	30	50	127					
0136	20	41	137					
0144	-	-	-	0145	15	049	5	190
0217	75	30	114	0215	14	347	calm	
0223	50	35	130					
0229	30	33	148					
0236	20	27	117					
0240	10	19	087	0245	15	046	4	190
0317	75	23	187	0315	17	322	3	140
0323	50	27	181					
0329	30	14	214					
0335	20	12	284					
0339	10	27	355	0345	35	322	4	140
0416	75	30	204	0415	13	307	8	120
0421	50	25	252					
0428	30	29	265					
0433	20	24	321					
0438	10	19	305	0445	33	330	6	140
0516	75	44	232	0515	22	333	10	160
0524	50	27	289					
0529	30	32	279					
0533	20	28	312					
0536	10	27	317	0545	26	332	11	160
0616	75	47	267	0615	30	336	5	160
0623	50	35	257					
0627	30	40	284					
0630	20	29	317					
0633	10	19	320	0645	38	342	10	160

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. 65 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
0724-19-VII	74	42	287	0715-19-VII	29	335	10	190
0729	50	38	257					
0734	30	22	-					
0741	30	24	247					
0745	20	-	-	0745	-	-	-	-
0751	20	22	267					
0755	10	25	300					
0817	75	22	265	0815	29	339	8	190
0823	50	34	267					
0828	30	25	269					
0832	20	10	247					
0836	10	3	-					
0840	10	12	347					
0917	75	13	117	0845	23	351	9	190
0923	50	22	299					
0928	30	13	097	0915	22	350	11	190
0932	20	14	124					
0938	10	8	107					
1015	75	28	055	0945	18	028	13	190
1021	50	16	002					
1025	30	20	100	1015	21	027	15	190
1029	20	26	110					
1032	10	26	072					
1119	75	44	028	1045	36	046	13	190
1124	50	34	061					
1130	30	44	098	1115	42	051	11	190
1136	20	51	083					
1140	10	64	083					

H-54-3

Ship: H.M.C.S. Cedarwood

Station I-3

Period: 1931 August 30 to 2158 September 1, 1954

Position: 52° 53' N
130° 08' W

Depth: 128 fathoms

At this station the vessel was anchored singly,
using a steel wire rope, scope 1.4.

Observations were made at 10, 20, 50, 100 and
200 meters using an Ekman meter and at the surface with
a drag.

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. I-3

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
1931-30-VIII	10	26	116	1930-30-VIII	28	122	3	172
1936	20	45	108					
1940	50	41	116					
1945	100	31	142					
1953	200	22	164	2000	13	183	lt	airs
2031	10	6	126	2030	0	-	1	137
2035	20	15	146					
2039	50	24	133					
2044	100	21	128					
2052	200	10	096	2100	0	-	lt	airs
2131	10	14	021	2130	15	018	3	150
2135	20	13	346					
2140	50	3	006					
2146	100	17	013					
2156	202	17	023	2200	26	005	2	133
2231	10	32	006	2230	28	018	4	169
2235	20	32	358					
2239	50	26	316					
2244	100	14	003					
2252	200	29	001	2300	22	356	6	176
2333	10	46	016	2330	19	011	4	161
2337	20	44	022					
2342	50	26	018					
2346	100	19	001					
2356	200	28	358	2359	18	012	2	141
0034-31-VIII	10	43	009	0030-31-VIII	17	358	4	146
0038	20	39	010					
0042	50	30	-					
0048	100	10	306					
0056	200	22	343	0100	26	360	2	160
0130	10	50	016	0130	29	012	8	132
0134	20	39	026					
0138	50	19	006					
0142	100	20	248					
0151	200	17	346					

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. I-3 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
0231-31-VIII	10	47	044	0200-31-VIII	29	016	8	126
0235	20	29	051	0230	28	065	8	145
0238	50	13	036					
0243	100	22	206					
0252	200	-	-					
0301	200	8	046	0300	27	043	9	143
0332	10	54	065	0330	26	052	9	132
0336	20	26	089					
0340	50	16	086					
0344	100	26	174					
0354	200	18	156	0400	28	070	11	150
0432	10	51	095	0430	28	146	11	146
0436	20	30	116					
0458	50	29	134					
0503	100	37	178					
0506	200	27	166	0510	45	092	6	035
0532	10	54	310	0530	46	106	5	132
0537	20	35	124					
0542	50	30	126	0600	31	115	6	137
0633	10	37	121	0630	38	021	6	137
0639	20	29	136					
0644	50	26	126					
0649	100	26	144					
0656	200	28	170	0700	40	126	10	140
0731	10	28	133	0730	32	138	10	145
0735	20	28	146					
0739	50	21	146					
0743	100	24	139					
0750	200	15	221	0800	40	129	6	132
0831	10	23	171	0830	18	170	7	128
0836	20	27	163					
0840	50	18	163					
0844	100	20	146					
0848	200	15	161	0900	0	-	8	147

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. I-3 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
0931-31-VIII	10	17	036	0930-31-VIII	0	-	8	140
0937	20	13	331					
0940	50	14	326					
0944	100	17	071					
0950	200	15	339					
				1000	20	349	8	134
1033	10	32	004					
1038	20	38	008	1030	37	335	8	140
1042	50	17	016					
1046	100	17	360					
1053	200	12	011					
				1100	40	342	10	145
1146	10	44	016					
1152	20	44	001	1130	64	350	10	145
1158	30	42	016					
1201	50	29	353	1200	71	356	10	150
1210	100	18	021					
1213	200	28	-					
				1230	70	012	9	150
1234	10	44	016					
1238	20	44	016					
1243	50	27	339					
1248	100	15	331					
1255	200	24	016					
				1300	71	010	9	151
1331	10	58	026					
1335	20	-	-	1330	71	021	10	152
1341	20	32	028					
1345	50	27	358					
1351	100	-	-					
1357	100	5	-					
1401	200	15	016	1400	64	022	8	145
1431	10	55	030	1430	56	022	10	152
1435	20	41	134					
1439	50	20	006					
1444	100	13	216					
1452	200	7	-					
				1500	47	027	8	133
1531	10	-	-					
1534	10	36	046					
1538	20	26	056					
1542	50	12	086					
1547	100	23	176					
1554	200	23	149					
				1530	37	039	10	145

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. I-3 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
1631-31-VIII	10	39	076	1600-31-VIII	29	049	8	176
1636	20	28	088	1630	30	062	9	163
1642	50	18	133					
1646	100	34	166					
1653	200	29	166					
1731	10	43	101	1700	21	075	9	174
1735	20	25	126	1730	34	091	9	157
1739	50	27	136					
1744	100	30	151					
1751	200	33	166					
1831	10	35	111	1800	35	104	9	154
1834	20	14	126	1830	41	102	9	143
1839	50	30	116					
1844	100	40	156					
1851	201	34	166					
1931	10	28	133	1900	30	108	8	142
1935	20	27	144	1930	19	126	6	132
1939	50	29	138					
1943	100	30	128					
1949	200	29	154					
2031	10	37	116	2000	23	169	8	130
2035	20	16	111	2030	19	184	8	130
2038	50	32	146					
2041	100	29	166					
2048	200	49	228					
2131	10	19	033	2100	22	141	8	155
2134	20	25	003	2130	14	024	9	145
2138	50	19	033					
2142	100	7	346					
2148	200	8	-					
2231	10	26	016	2200	25	337	9	154
2234	20	40	016	2230	38	340	9	150
2238	50	13	016					
2243	100	13	021					
2247	200	24	356					
				2300	40	346	7	151

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. I-3 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
2333-31-VIII	10	33	006	2330-31-VIII	49	347	7	142
2337	20	18	006					
2340	50	21	339					
2344	100	20	323					
2348	200	30	006					
0031-1-IX	10	48	351	2359	54	358	7	132
0034	20	42	016	0030-1-IX	55	008	7	128
0037	50	26	343					
0041	100	16	356					
0045	200	29	006					
0131	10	53	016	0100	71	022	5	115
0135	20	37	010	0130	75	027	5	119
0139	50	28	346					
0142	100	15	346					
0145	200	21	011					
0231	10	51	027	0200	73	033	3	127
0234	20	53	027	0230	57	037	3	102
0237	50	22	346					
0240	100	14	286					
0246	200	15	049					
0331	10	45	043	0300	45	040	5	110
0334	20	40	046	0330	41	068	3	123
0337	50	23	006					
0340	100	10	216					
0346	200	17	116					
0431	10	43	066	0400	42	076	3	110
0434	20	28	088	0430	36	066	4	105
0437	50	15	031					
0441	100	28	161					
0446	200	30	154					
0531	10	39	079	0500	25	075	3	100
0536	20	29	104					
0540	50	25	063					
0544	100	33	161					
0549	200	33	166					
				0530	27	071	2	114

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. I-3 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
0631-1-IX	10	37	080	0600-1-IX	30	086	3	131
0635	20	30	096	0630	32	077	4	102
0638	50	26	091					
0642	100	-	-					
0646	100	24	156					
0651	200	34	180					
				0700	22	088	5	121
0731	10	24	098	0730	19	093	4	146
0735	20	29	136					
0744	50	37	126					
0747	100	34	166					
0752	200	20	169					
				0800	19	063	4	129
0831	10	15	061	0830	21	055	4	112
0840	20	17	136					
0848	50	28	146					
0855	100	10	106					
0904	200	7	136	0900	24	058	4	142
				0930	28	035	4	145
0931	10	17	346					
0938	20	17	359					
0944	50	19	031					
0951	100	10	076					
0959	200	17	004					
				1000	32	040	lt airs	138
1031	10	44	354	1030	45	022	lt airs	140
1034	20	38	012					
1039	50	13	341					
1048	100	16	061					
1054	200	23	358					
				1100	49	017	lt airs	180
1131	10	60	016	1130	75	022	lt airs	207
1134	20	52	006					
1151	50	22	009					
1155	100	16	006					
1200	200	28	006	1200	60	016	lt airs	136
1231	10	63	031					
1234	20	53	012					
1237	50	28	331	1238	70	017	lt airs	157
1245	100	21	016					
1251	200	26	021					

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. I-3 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (*T)	Time P.S.T.	Speed (cm/sec)	Dir. (*T)	Wind	
							Speed (Knots)	Dir. (*T)
1331-1-IX	10	75	331	1304-1-IX	60	017	lt airs	087
1335	20	59	015	1330	63	020	lt airs	267
1337	50	33	346					
1340	100	22	063					
1346	200	25	031					
1431	10	62	030	1400	58	035	lt airs	310
1434	20	48	026	1430	46	034	lt airs	309
1438	50	25	316					
1443	100	11	016					
1449	200	12	086					
1530	10	46	049	1500	52	056	lt airs	321
1533	20	36	041	1530	43	077	5	339
1536	50	23	346					
1538	100	14	106					
1546	200	20	136					
1631	10	36	056	1600	39	070	6	346
1634	20	33	066	1630	36	067	6	334
1637	50	20	029					
1641	100	15	086					
1650	200	20	161					
1731	10	36	080	1700	29	079	7	324
1734	20	27	086	1730	26	100	7	330
1737	50	31	116					
1742	100	30	166					
1750	200	29	166					
1831	10	20	066	1800	24	064	8	324
1835	20	26	126	1830	29	061	8	315
1840	50	25	106					
1846	100	23	136					
1853	200	27	166					
1931	10	28	074	1900	29	060	6	313
1935	20	21	121	1930	23	061	5	332
1940	50	27	124					
1946	100	26	136					
1952	200	25	179					

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. I-3 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
2031-1-IX	10	21	036	2000-1-IX	24	072	6	329
2034	20	18	101	2030	21	064	7	322
2037	50	25	111					
2042	100	20	126					
2049	200	11	166	2100	16	061	8	323
2131	9	27	036					
2135	18	17	023					
2143	50	17	061					
2147	100	17	076					
-	200	-	-					
2158	200	13	026					

Station I-2

Period: 0130 September 2 to 0446 September 4, 1954

Position: 52° 40.0' N
130° 40.0' W

Depth 75 fathoms

The method of anchoring at this station was the same as at I-3, scope 1.4.

Observations were made at 10, 20, 30, 50 and 100 meters using an Ekman meter and with a drag at the surface.

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. I-2

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (knots)	Dir. (°T)
0134-2-IX	10	14	143	0130-2-IX	26	198	10	003
0143	20	13	259					
0147	50	29	001					
0152	100	17	356					
0232	10	24	356	0200	0	-	11	347
0236	20	17	029	0230	0	-	12	005
0245	50	22	334					
0249	100	20	264					
0332	10	13	016	0310	0	-	13	027
0338	20	16	104	0330	0	-	10	054
0343	50	15	066					
0349	100	26	254					
0432	10	25	088	0400	11	156	10	026
0438	20	25	128	0430	26	143	10	043
0442	50	29	134					
0448	100	27	251					
0531	10	36	155	0500	31	165	10	042
0535	20	47	145	0530	31	172	10	024
0546	50	35	156					
0553	100	15	233					
0631	10	36	158	0600	42	170	10	032
0637	20	48	146	0630	43	170	10	027
0644	50	37	172					
0650	100	16	203					
0731	10	42	166	0700	46	165	11	035
0738	20	38	152	0730	41	194	13	048
0745	50	31	180					
0752	100	10	186					
0831	10	23	162	0800	41	192	12	046
0838	20	32	149	0830	17	181	12	035
0843	50	26	170					
0849	100	10	131					
0931	10	32	141	0900	25	158	12	025
0935	20	44	125	0930	21	182	11	037
0940	50	23	168					
0948	100	9	041					

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. I-2 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
1031-2-IX	10	32	143	1000-2-IX	14	196	13	010
1035	20	28	108	1030	10	151	11	014
1041	50	14	223					
1047	100	13	336	1100	11	121	10	024
1132	10	19	081	1130	0	-	9	023
1136	20	24	106					
1142	50	25	330	1200	0	-	10	019
1148	100	14	306	1230	0	-	10	056
1232	10	16	066	1300	0	-	7	355
1236	20	17	183	1330	11	279	5	355
1240	50	36	346	1400	11	281	7	351
1246	100	36	316	1430	20	357	7	342
1332	10	9	281	1500	22	350	7	350
1337	20	10	311	1530	21	016	7	050
1341	50	27	338	1600	20	047	7	077
1346	100	19	319	1630	17	076	7	096
1432	10	22	352	1700	23	086	3	180
1436	20	16	306	1730	26	120	3	090
1440	50	25	328	1800	36	129	3	094
1444	100	17	269	1830	44	133	6	095
1532	10	27	018					
1537	20	23	018					
1542	50	20	026					
1547	100	22	254					
1632	10	15	116					
1638	20	22	098					
1642	50	20	104					
1647	100	30	226					
1731	10	30	133					
1737	20	41	146					
1741	50	36	166					
1748	100	20	228					
1832	10	46	152					
1837	20	45	156					
1842	50	45	185					
1848	100	16	206					

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. I-2 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
1931-2-IX	10	51	156	1900-2-IX	55	148	7	098
1935	20	56	160	1930	58	143	9	053
1937	50	34	178					
1942	100	13	206	2000	55	149	10	066
2031	10	44	153	2030	46	163	6	073
2034	20	54	162					
2037	30	41	156					
2042	50	27	194					
2048	100	11	186	2100	23	137	5	068
2131	10	43	136	2130	30	148	5	067
2133	20	33	136					
2136	30	37	142					
2140	50	21	156					
2148	100	8	206	2200	22	144	5	066
2231	10	34	140	2230	17	150	5	073
2234	20	25	119					
2237	30	33	146					
2240	50	7	096					
2248	100	10	321	2300	20	160	8	120
2331	10	20	179	2330	18	135	8	085
2336	20	21	106					
2340	30	18	109					
2344	50	13	316					
-	100	-	-					
2352	100	13	353	0001-3-IX	24	161	10	321
0031-3-IX	10	8	036	0030	14	164	15	335
0036	20	29	101					
0041	30	20	296					
0045	50	7	116					
0054	100	18	298	0100	16	194	14	344
0131	10	10	136	0130	21	206	14	002
0139	20	15	001					
0141	30	14	251					
0145	50	27	331					
0150	100	18	299					

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. I-2 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
0231-3-IX	10	19	136	0200-3-IX	18	221	14	002
0237	20	26	013	0230	21	194	11	030
0241	30	17	001					
0244	50	29	331					
0247	100	16	221					
0331	10	21	343	0300	12	216	11	033
0336	20	19	089	0330	0	-	11	012
0339	30	34	028					
0345	50	12	126					
0350	100	29	251					
0431	10	13	086	0400	0	-	12	353
0434	20	13	256	0430	0	-	13	357
0441	30	41	108					
0444	50	19	136					
0450	100	25	249					
0531	10	24	114	0500	16	095	12	012
0536	20	23	102	0530	11	103	12	016
0541	30	-	-					
0545	30	33	130					
0550	50	30	163					
0556	100	19	254					
0631	10	33	144	0600	29	179	14	012
0634	20	38	128	0630	35	137	14	015
0637	30	42	150					
0640	50	30	166					
0646	100	15	250					
0731	10	38	138	0700	25	168	15	013
0735	20	60	156	0730	54	150	19	026
0738	30	54	146					
0741	50	29	168					
0745	100	13	176					
0831	10	39	163	0800	46	151	18	335
0835	20	52	139	0830	42	156	15	332
0841	30	46	158					
0846	50	34	180					
0850	100	14	091					

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. I-2 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
0931-3-IX	10	42	145	0900-3-IX	44	135	15	321
0933	20	39	143	0930	44	139	15	331
0936	30	39	138					
0941	50	21	113					
0948	100	13	191	1000	50	141	14	326
1031	10	35	166	1030	38	160	14	330
1034	20	42	120					
1037	30	32	106					
1043	50	13	056					
1049	100	16	056	1100	39	139	15	324
1131	10	19	166	1130	32	130	14	318
1134	20	44	116					
1138	30	24	186					
1142	50	35	045					
1147	100	19	319	1200	29	161	14	332
1231	10	27	143	1230	29	134	14	332
1234	20	29	118					
1239	30	23	153					
1243	50	23	359					
1248	100	24	006	1300	31	141	9	324
1331	10	19	196	1330	17	118	8	325
1334	20	14	336					
1337	30	15	091					
1340	50	21	359					
1344	100	23	349	1400	-	-	7	335
1431	10	15	046	1430	20	140	7	356
1435	20	6	236					
1438	30	-	-					
1442	30	13	016					
1446	50	-	-					
1450	50	22	353					
1454	100	17	331	1500	0	-	6	352
1531	10	14	031	1530	0	-	6	340
1534	20	-	-					
1537	20	15	221					
1549	30	15	043					
1553	50	16	051					
1557	100	21	226					

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. I-2 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
1631-3-IX	10	19	099	1600-3-IX	17	010	9	340
1634	20	6	156	1630	12	105	7	328
1637	30	16	116					
1640	50	26	140					
1646	100	25	264	1700	21	112	6	321
1732	10	36	116	1730	30	130	5	320
1736	20	27	136					
1740	30	39	127					
1745	50	33	162					
1750	100	20	238	1800	38	125	6	321
1831	10	-	-	1830	50	125	6	321
1831	10	48	136					
1834	20	42	146					
1838	30	47	138					
1844	50	40	168					
1850	100	20	238	1900	-	-	-	-
1931	10	61	156	1930	54	156	5	321
1935	20	43	146					
1938	30	52	146					
1943	50	41	176					
1948	100	13	226	2000	54	152	8	325
2031	10	56	152	2030	50	151	7	321
2034	20	50	148					
2037	30	48	147					
2041	50	38	193					
2046	100	11	106	2100	46	148	7	343
2131	10	58	146	2130	50	148	5	323
2136	20	57	136					
2137	30	42	145					
2142	50	26	196					
2148	100	11	096	2200	44	156	5	306
2231	10	48	147	2230	38	148	5	298
2234	20	47	150					
2237	30	34	156					
2241	50	24	196					
2244	100	12	066					

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. I-2 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
2331-3-IX	10	47	163	2300-3-IX	-	-	-	-
2334	20	39	166	2330	-	-	-	-
2340	30	27	151					
2344	50	18	263					
2348	100	11	021					
0031-4-IX	10	26	178	0001-4-IX	38	157	10	335
0034	20	34	176	0030	31	146	11	346
0037	30	18	179					
0040	50	25	268					
0047	100	23	046					
0131	10	27	196	0100	40	164	10	334
0134	20	22	196	0130	36	163	11	323
0137	30	22	199					
0142	50	22	013					
0148	100	10	011					
0231	10	26	201	0200	30	178	11	330
0234	20	15	206	0230	25	180	13	325
0239	30	21	211					
0244	50	18	041					
0250	100	16	323					
0331	10	18	259	0300	26	170	14	330
0334	20	13	241	0330	25	175	14	335
0337	30	17	301					
0338	50	16	046					
0344	100	12	281					
0431	10	20	236	0400	16	174	16	330
0434	20	19	033	0430	24	166	14	327
0437	30	16	253					
0440	50	29	121					
0446	100	31	240					

Station I-1

Period: 1130 September 4 to 1440 September 6, 1954

Position: 52° 31.2' N
131° 07.7' W

Depth: 48 fathoms

At this station the vessel was anchored to a single anchor, the ship's anchor cable and bow anchor being used.

Observations were made at 10, 20, 30, 50 and 75 meters with an Ekman meter and at the surface with a drag.

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. I-1

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
1136-4-IX	10	27	356	1130-4-IX	13	343	lt airs	358
1138	20	31	314					
1141	30	17	281					
1150	50	8	046					
1153	75	6	026					
1231	10	43	356	1200	12	350	2	002
1234	20	43	336	1230	19	321	lt airs	028
1238	30	33	310					
1242	50	15	001					
1245	75	10	326					
1331	10	47	357	1300	24	330	lt airs	040
1334	20	44	006	1330	31	325	lt airs	065
1339	30	46	337					
1345	50	29	016					
1350	75	-	-					
1355	75	25	331					
1432	10	47	017	1400	24	335	lt airs	050
1437	20	43	012	1430	21	345	lt airs	075
1440	30	47	348					
1445	50	35	336					
1450	75	24	336					
1531	10	33	026	1500	27	347	lt airs	100
1534	20	32	014	1530	30	354	lt airs	150
1537	30	42	002					
1540	50	18	339					
1546	75	19	303					
1631	10	22	026	1600	32	016	lt airs	149
1634	20	18	029	1630	18	006	lt airs	170
1637	30	26	026					
1640	50	15	021					
1643	75	18	246					
1731	10	19	076	1700	22	058	lt airs	318
1733	20	18	102	1730	20	062	lt airs	153
1736	30	20	063					
1740	50	21	093					
1744	100	-	-					
1752	75	13	196					

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. I-1 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
1831-4-IX	10	17	106	1800-4-IX	25	087	lt	airs 177
1834	20	26	134	1830	24	106	6	187
1838	30	25	099					
1844	50	20	124					
1850	75	18	176					
1931	10	25	136	1900	22	109	lt	airs 194
1934	20	24	134	1930	15	122	6	176
1937	30	28	126					
1941	50	24	136					
1946	75	21	163					
2031	10	27	146	2000	24	127	lt	airs 157
2034	20	29	146	2030	19	140	lt	airs 155
2038	30	39	151					
2042	50	30	142					
2048	75	23	108					
2131	10	22	156	2100	14	127	lt	airs 227
2134	20	35	153	2130	21	160	lt	airs 320
2137	30	38	151					
2142	50	24	126					
2148	75	19	109					
2231	10	10	176	2200	23	180	lt	airs 335
2236	20	19	166	2230	16	155	lt	airs 305
2240	30	23	144					
2245	50	16	146					
2251	75	10	046					
2331	10	10	186	2300	14	181	lt	airs 218
2334	20	19	186	2330	12	209	lt	airs 109
2337	30	17	156					
2340	50	17	086					
2345	75	10	086					
0031-5-IX	10	16	296	0001-5-IX	0	-	lt	airs 220
0034	20	16	303	0030	27	341	lt	airs 250
0037	30	2	-					
0040	30	3	-					
0044	50	17	074					
0047	75	11	336					

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. I-1 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (*T)	Time P.S.T.	Speed (cm/sec)	Dir. (*T)	Wind	
							Speed (Knots)	Dir. (*T)
				0100-5-IX	30	008	lt airs	278
0131-5-IX	10	35	359					
0134	20	24	346	0130	45	005	lt airs	269
0137	30	8	316					
0140	50	9	336					
0143	75	11	006					
				0200	46	010	lt airs	260
0231	10	33	016					
0234	20	32	346	0230	44	025	lt airs	263
0237	30	23	006					
0240	50	8	-					
0243	75	14	356					
				0300	38	009	lt airs	219
0331	10	39	026					
0334	20	28	016	0330	34	026	lt airs	225
0337	30	29	346					
0340	50	24	344					
0343	75	12	346					
				0400	32	035	lt airs	135
0431	10	24	036					
0434	20	32	010	0430	27	046	lt airs	190
0437	30	38	006					
0440	50	26	006					
0443	75	18	321					
				0500	27	037	lt airs	247
0531	10	22	024					
0534	20	15	036	0530	27	016	lt airs	186
0537	30	28	026					
0542	50	18	026					
0548	75	18	326					
				0600	26	007	lt airs	187
0631	10	15	046					
0634	20	10	116	0630	23	036	lt airs	197
0637	30	6	016					
0643	50	-	-					
0649	50	14	056					
0655	75	8	341	0700	0	-	lt airs	197
				0730	0	-	lt airs	174
0732	10	10	096					
0737	20	15	136					
0742	30	17	080					
0750	50	22	122					
0757	75	9	260					

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. I-1 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
0831-5-IX	10	17	099	0800-5-IX	0	-	lt airs	195
0836	20	19	151	0830	0	-	lt airs	167
0840	30	19	146					
0846	50	21	116					
0852	75	4	-					
0904	75	7	188	0900	0	-	lt airs	130
0931	10	17	106	0930	0	-	lt airs	157
0935	20	17	123					
0938	30	21	126					
0944	50	13	121					
0951	75	14	101	1000	0	-	lt airs	147
1031	10	8	186	1030	15	020	10	140
1034	20	16	134					
1038	30	14	133					
1043	50	11	066					
1047	75	10	101	1100	18	357	10	127
1130	10	18	268	1130	30	356	15	153
1134	20	15	103					
1140	30	11	163					
1144	50	18	079					
1150	75	15	049	1200	41	351	16	157
1230	10	29	332	1230	43	349	16	150
1234	20	14	296					
1238	30	13	061					
1244	50	15	249					
1250	75	19	294	1300	48	353	15	155
1330	10	27	341	1330	46	350	16	150
1333	20	22	334					
1338	30	21	308					
1342	50	15	319					
1348	75	12	306	1400	44	345	15	153
1430	10	40	009	1430	54	008	14	160
1433	20	25	351					
1437	30	24	311					
1442	50	20	346					
1446	75	15	331					

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. I-1 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
1530-5-IX	10	35	014	1500-5-IX	50	005	20	165
1533	20	26	004	1530	54	358	20	150
1537	30	37	331					
1542	50	24	358					
1546	75	22	309	1600	46	001	22	151
1629	10	33	020	1630	42	355	20	155
1632	20	30	032					
1636	30	37	002					
1640	50	13	066					
1645	75	20	283	1700	28	352	20	162
1731	10	32	016	1730	24	351	16	150
1734	20	28	018					
1738	30	28	038					
1742	50	14	136					
1748	75	27	232	1800	20	350	13	170
1842	10	26	028	1830	19	053	12	157
1845	20	23	070					
1850	30	33	046					
1856	50	9	106					
1859	75	30	246	1900	32	023	14	159
1931	10	31	048	1930	26	008	16	152
1937	20	17	-					
1941	30	21	100					
1946	50	21	146					
1950	75	8	266	2000	0	-	18	163
2031	10	23	084	2030	17	036	18	151
2034	20	22	212					
2038	30	40	119					
2046	50	30	163					
2050	75	14	126	2100	33	004	15	152
2131	10	22	091	2130	0	-	15	162
2136	20	27	146					
2140	30	28	151					
2144	50	23	101					
2150	75	11	181	2200	0	-	16	124
2231	10	18	106	2230	0	-	14	163
2234	20	20	189					
2237	30	33	182					
2242	50	34	103					
2248	75	15	179					

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. I-1 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
2331-5-IX	10	19	096	2300-5-IX	0	-	15	155
2334	20	20	306	2330	-	-	15	140
2337	30	25	211					
2340	50	20	099					
2344	75	16	086					
0031-6-IX	10	22	026	0000-6-IX	-	-	15	158
0034	20	30	274	0030	-	-	16	164
0037	30	11	076					
0040	50	37	052					
0044	75	20	090					
0131	10	28	026	0100	24	350	15	130
0134	20	25	338	0130	28	350	15	140
0137	30	30	270					
0140	50	27	026					
0144	75	8	341					
0231	10	31	358	0200	36	334	20	139
0234	20	39	003	0230	41	347	22	157
0237	30	23	269					
0240	50	17	-					
0243	50	23	326					
0247	75	31	312					
0331	10	42	356	0300	26	001	22	155
0334	20	46	011	0330	32	352	24	152
0337	30	48	332					
0340	50	31	308					
0344	75	28	318					
0431	10	46	016	0400	32	342	24	152
0434	20	46	006	0430	82	333	21	173
0437	30	62	339					
0440	50	50	355					
0443	75	38	346					
0533	10	59	015	0500	57	342	20	175
0537	20	35	006	0530	94	005	18	195
0541	30	43	005					
0546	50	30	320					
0552	75	28	302					

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. I-1 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
0631-6-IX	10	46	017	0600-6-IX	100	355	20	156
0635	20	20	346	0630	51	331	25	165
0639	30	41	006					
0643	50	52	008					
0650	75	19	329	0700	91	332	25	152
0731	10	47	010	0730	83	348	25	149
0735	20	31	312					
0738	30	32	006					
0743	50	29	331					
0749	75	30	286	0800	111	345	25	141
0834	10	30	316	0830	89	322	20	154
0838	20	-	-					
0840	30	27	056					
0848	50	15	309					
0852	75	21	249	0900	73	358	19	192
0932	10	37	011	0930	73	344	6	176
0936	20	14	351					
0941	30	15	246					
0950	50	22	041					
0952	75	9	286	1000	71	001	8	191
1031	10	32	358	1030	76	338	5	188
1034	20	19	294					
1038	30	10	166					
1045	50	18	160					
1051	75	21	264	1100	75	338	5	188
1131	10	19	333	1130	67	330	4	215
1134	20	26	314					
1138	30	16	276					
1142	50	15	326					
1146	75	16	231	1200	65	329	10	198
1228	10	14	329	1230	72	325	10	195
1231	20	30	316					
1234	30	12	301					
1239	50	15	316					
1244	75	16	316					

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. I-1 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
1329-6-IX	10	28	304	1300-6-IX	75	325	6	205
1332	20	36	308	1330	85	325	7	185
1335	30	22	296					
1339	50	24	326					
1344	75	15	021					
1425	10	30	332	1400	83	320	6	190
1428	20	51	330	1430	85	330	5	180
1431	30	40	322					
1435	50	24	298					
1440	75	22	356					

Station 6

Period: 0815 September 7 to 2224 September 7, 1954

Position: 50° 54.7' N

128° 04.6 W

Depth: 16 fathoms

The method of anchoring at this station was the same as at I-1, scope 3.0.

Observations were made at 10, 20 and 25 meters using an Ekman meter and at the surface with a drag.

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. 6

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
0816-7-IX	20	25	094					
0822	10	38	074					
0919	25	21	003	0840-7-IX	19	060	15	098
0924	20	14	056	0915	16	090	15	110
0927	10	23	116	0945	19	070	14	100
1017	25	32	004	1015	25	350	12	100
1022	20	8	056					
1027	10	9	-					
1032	10	9	246	1045	0	-	16	105
1121	25	15	321	1115	15	320	12	121
1126	20	25	-					
1129	20	25	321	1145	13	306	14	096
1133	10	12	286	1215	25	320	15	100
1221	25	11	326	1245	17	321	18	117
1224	20	20	323	1315	18	333	17	113
1228	10	19	296	1345	17	330	20	105
1321	25	5	246	1415	20	326	20	104
1324	20	20	359	1445	21	307	18	103
1328	10	15	271	1515	16	339	18	106
1421	25	8	076	1545	20	352	11	117
1424	20	16	019	1615	25	012	9	104
1428	10	15	341	1645	24	007	14	100
1521	25	18	076	1715	40	032	17	092
1524	20	21	066	1745	46	038	17	103
1527	10	23	039	1815	33	040	17	100
1621	25	22	086					
1624	20	27	074					
1627	10	35	061					
1716	25	27	086					
1722	20	28	091					
1725	10	46	086					
1816	25	29	088					
1821	20	38	113					
1824	10	48	096					

EKMAN CURRENT METER OBSERVATIONS

SURFACE CURRENT DRAG OBSERVATIONS

Station No. 6 (cont'd)

Time P.S.T.	Depth (m)	Speed (cm/sec)	Dir. (°T)	Time P.S.T.	Speed (cm/sec)	Dir. (°T)	Wind	
							Speed (Knots)	Dir. (°T)
1916-7-IX	25	30	096	1845-7-IX	28	080	17	090
1920	20	38	099	1915	28	063	17	095
1924	10	43	086	1945	13	060	12	095
2016	25	8	326	2015	17	055	10	100
2020	20	15	046	2045	17	048	11	128
2022	10	26	091	2115	18	040	18	130
2116	25	16	349	2145	13	015	20	115
2119	20	17	336	2215	14	002	10	107
2123	10	14	056	2245	13	011	14	106
2216	25	28	334					
2219	20	19	296					
2224	10	22	309					