

Date	Time	Bar	Air (°C) Temp	WIND Dir	For	Sea Scale	COURSE True	Gyro	Lat	Lon	Comments
12/08	Depart From Yokohama, last line → 11:30am, Pilot off → 11:42am										
	1200	1005	09	W	2	1	166	163	35° 21.1' N	139° 42.0' E	
	1600	1004	08	WNW	4	3	105	120	34° 47.4' N	140° 03.8' E	
	2000	1004	09	NNW	4	3/4	105	119	34° 33.5' N	141° 03.0' E	
	2400	1003	11	NNW	4/5	3/4	105	106	34° 21.4' N	141° 58.9' E	
12/09	00	1003	11	NNW	4/5	3/4	105	106			
	04	1005	10	NE	6	5	105	106	34° 09.0' N	142° 52.9' E	
	08	1008	9	NW	7	6/7	350	350	34° 00.0' N	143° 27.7' E	changed course due to heavy weather
	12	1011	11	N	7	6	330	329	34° 08.5' N	143° 16.4' E	
	16	1014	10	N	6	5	105	105	34° 07.0' N	143° 42.7' E	
	20	1017	11	N	6/5	5	105	110	33° 53.0' N	144° 37.2' E	
	24	1019	13	N	5	4	105	111	33° 41.2' N	145° 17.9' E	
12/10	00	1019	13	N	5	4	105	111			
12/10	04	1019	13	N	4	3	105	110	33° 24.3' N	146° 12.6' E	+1 Hr
	08	1020	14	NW	3	3	105	101	33° 10.9' N	147° 07.5' E	
	12	1020	15	NE	4	3	105	101	32° 58.9' N	148° 00.2' E	
	16	1019	15	ENE	4	3	105	104	32° 47.1' N	148° 50.7' E	
	20	1018	15	E	5/6	4	105	107	32° 34.7' N	149° 44.2' E	
12/11	04	1015	17	ESE	5	4	105	112	32° 07.1' N	151° 44.2' E	
	08	1013	17	SSE	7/8	6	120	121	31° 58.4' N	152° 23.4' E	changed course & reduced speed b/c weather
	12	1013	19	SSE	8	7	120	125	31° 52.8' N	152° 50.5' E	
	16	1013	18	SSE	8/7	7/6	110	110	31° 37.2' N	153° 32.3' E	
	20	1012	16	SSE	7	6	110	110	31° 26.8' N	153° 59.8' E	
	24	1013	18	SSE	7	6	105	105	31° 17.0' N	154° 42.3' E	
12/12	04	1013	18	SE	7	6	105	105	31° 09.4' N	155° 39.9' E	+1 Hr
	08	1012	18	E	6/7	5	120°	119	31° 00.8' N	156° 22.5' E	
	12	1012	22	E	5	4	120°	117	30° 40.6' N	157° 08.5' E	
	16	1012	22	SSW	5	4	120	120	30° 17.5' N	158° 00.0' E	
	20	1013	20	S	4	3/4	120	119	29° 53.7' N	158° 50.7' E	
	24	1014	22	S	4	3	110	110	29° 36.9' N	159° 44.4' E	
12/13	04	1013	21	SSW	4	3	110	110	29° 21.4' N	160° 36.8' E	
	08	1014	22	SSW	4/6	3/4	110	109	29° 08.1' N	161° 29.5' E	
	12	1015	24	SSW	5	4	110	109	28° 52.8' N	162° 24.4' E	
	16	1014	23	SSW	4	3	110	110	28° 37.3' N	163° 18.0' E	
	20	1014	22	SW	3	2/3	110	109	28° 19.5' N	164° 10.1' E	
	24	1015	23	SW	4	3	110	109	28° 05.7' N	164° 50.5' E	



M/V Undarum

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YOK - HNL

12/08 - 12/21

43

Date	Time	Bar	Air Temp	WIND Dir	For	Sea Scale	COURSE True	Gyro	LAT	LONG	Comments
12/14	04	1014	22	SW	4	3	110	110	27° 50.3' N	165° 44.0' E	+ 1 Hr
	08	1015	22	S	4	3	110	109	27° 35.6' N	166° 38.4' E	
	12	1015	24	S	4	3	110	110	27° 20.9' N	167° 27.6' E	
	16	1013	24	S	5/4	4/3	110	112	27° 06.4' N	168° 21.8' E	
	20	1013	24	S	4	3/4	110	108	26° 50.6' N	169° 15.8' E	
	24	1014	23	S	5	4	110	108	26° 33.9' N	170° 09.4' E	
12/15	04	1014	22	S	5	4	110	110	26° 17.7' N	171° 00.1' E	
	08	1014	22	SSE	4	3	110	110	26° 01.2' N	171° 52.6' E	
	12	1016	25	SE	4	3	100	099	25° 51.4' N	172° 45.5' E	
	16	1015	25	SE	4	3	100	099	25° 45.2' N	173° 38.1' E	
	20	1016	22	SE	3/4	3	100	102	25° 36.5' N	174° 31.4' E	
	24	1017	23	SE	4	3	100	098	25° 28.1' N	175° 24.3' E	
12/16	04	1017	23	SE	4	3	100	098	25° 20.6' N	176° 19.0' E	
	08	1018	22	SE	3/4	3	100	099	25° 14.3' N	177° 16.1' E	
	12	1019	24	SE	4	3	100	101	25° 07.9' N	178° 06.8' E	+ 1 Hr
	16	1017	23	SE	4	3	100	100	25° 01.6' N	178° 59.9' E	
	20	1018	22	SE	4	3/4	100	099	24° 55.8' N	179° 51.6' E	20:37 Cross International Date Line.
	24	1018	23	SE	4	3	100	101	24° 48.2' N	179° 17.8' W	Same date because Date Line.
12/16	04	1017	23	SE	4	3	100	103	24° 39.6' N	178° 26.3' W	
	08	1017	23	SE	3	2	100	100	24° 31.1' N	177° 33.3' W	
	12	1016	24	ESE	3	2/3	100	100	24° 23.1' N	176° 41.7' W	
	16	1016	25	ESE	4	3	100	099	24° 15.4' N	175° 49.7' W	
	20	1016	22	ESE	3/4	3	103	106	24° 04.3' N	174° 59.0' W	
	24	1015	22	ESE	4	3	103	106	23° 54.4' N	174° 21.3' W	
12/17	04	1013	21	ESE	4	3	103	103	23° 42.1' N	173° 31.2' W	+ 1 Hr
	08	1013	20	E	4	3/4	103	106	23° 29.6' N	172° 41.0' W	+ 1 Hr
	12	1013	21	ENE	4	3	103	101	23° 16.9' N	171° 51.9' W	
	16	1011	21	ENE	4	3	103	102	23° 04.2' N	171° 00.7' W	
	20	1011	21	E	4	3/4	103	106	22° 52.3' N	170° 13.9' W	
	24	1012	22	E	5	4	103	103	22° 39.6' N	169° 24.1' W	
12/18	04	1011	22	E	5	4	103	102	22° 27.1' N	168° 35.0' W	
	08	1012	21	E	4	3/4	103	104	22° 14.7' N	167° 45.4' W	
	12	1013	24	ENE	4	3	103	105	22° 02.4' N	166° 57.0' W	
	16	1012	23	ENE	4	3	103	107	21° 49.7' N	166° 08.7' W	
	20	1013	22	ENE	4	3	103	105	21° 37.7' N	165° 21.0' W	
	24	1013	22	ENE	4	3	103	104	21° 25.8' N	164° 33.7' W	



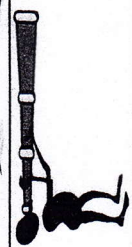


12/08 - 12/21

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# BEAUFORT SCALE OF WIND

Beaufort Number	Descriptive Term	Mean velocity		SPECIFICATION				Wave High in metres	
		Knots	m/s	Sea	Coast				
1	Light air	1 - 3	0,3 – 1,5	Ripples with the appearance of scales are formed, but without foam crests.	Fishing smack just has steerage way.		0,1		
2	Light breeze	4 – 6	1,6 – 3,3	Small wavelets, still short but more pronounced; crests have a glassy appearance and do not break.	Wind fills the sails of smacks which then travel at about 1-2 knots.		0,2 – 0,3		
3	Gentle breeze	7 - 10	3,4 – 5,4	Large wavelets; crests begin to break; foam of glassy appearance; perhaps scattered white horses.	Smacks begin to careen and travel about 3-4 knots.		0,6 - 1		
4	Moderate breeze	11-16	5,5 – 7,9	Small waves, becoming longer; fairly frequent white horses.	Good working breeze, smacks carry all canvas with good list.		1 –1 ,5		
5	Fresh breeze	17-21	8,0-10,7	Moderate waves, taking a more pronounced long form; many white horses are formed.	Smacks shorten sail		2 - 2,5		
6	Strong breeze	22-27	10,8-13,8	Large waves begin to form; the white foam crests are more extensive everywhere.	Smacks have double reef in mainsail.		3 - 4		
7	Near gale	28-33	13,9-17,1	Sea heaps up and white foam from breaking waves begins to be blown in streaks along the direction of the wind.	Smacks remain in harbour and those at sea lie-to.		4 -5,5		
8	Gale	34-40	17,2-20,7	Moderately high waves of greater length; edges of crests begin to break into the spindrift; foam blown in well-marked streaks along the direction of wind.	All smacks make for harbour, if near.		5,5 - 7,5		
9	Strong gale	41-47	20,8-24,4	High waves; dense streaks of foam along direction of wind; crests of waves begin to topple, tumble and roll over; spray may affect visibility.	-		7 – 10		
10	Storm	48-55	24,5-28,4	Very high waves with long overhanging crests; resulting foam, in great patches, is blown in dense white streaks along the direction of wind; on the whole, the surface of sea takes a white appearance; the tumbling of sea becomes heavy and shock-like; visibility affected.	-		9 – 12,5		
11	Violent storm	56-63	28,5-32,6	Exceptionally high waves; the sea is completely covered with long white patches of foam lying along the direction of wind; everywhere the edges of wave crests are blown into froth; Vis. effected.	-		11,5 - 16		
Weather	B – Blue sky	BC – Sky partly clouded		C – Cloudy	D – Drizzle	E – Wet air	F – Fog	R – Rain	S – Snow
Sea State	Calm 0 – 0,1	Smooth 0,1 – 0,5	Slight 0,5 – 1,25	Moderate 1,25 – 2,5	Rough 2,5 – 4	Very rough 4-6		High 6-9	Very High 9-14