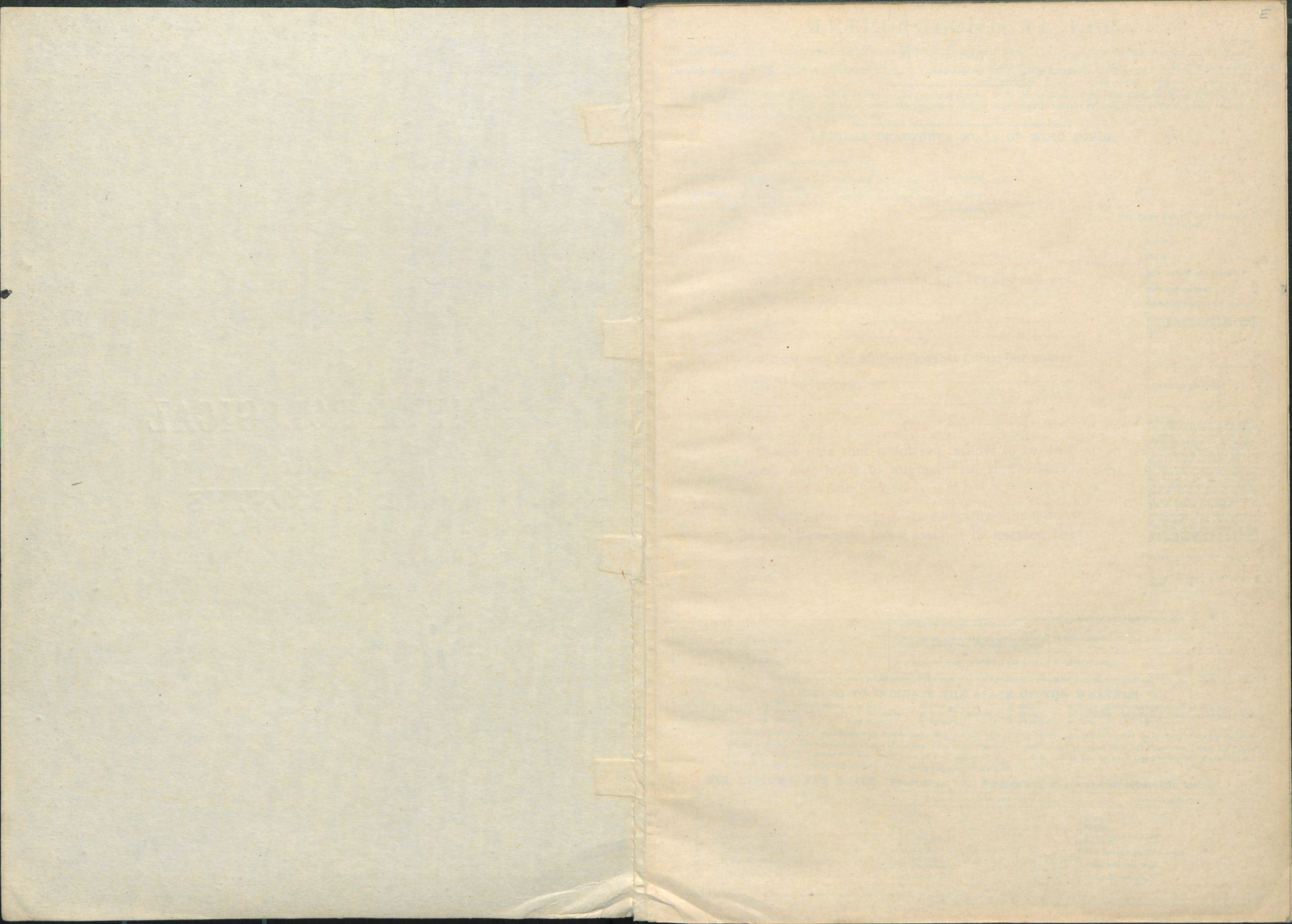




METEOROLOGICAL  
LOG  
FOR 4 MONTHS

BRE  
07







See Remarks pasted in log

previous to this.

Form 131.

# METEOROLOGICAL LOG.

Name of Vessel "Terra Nova" R/V Steam or Sail Barqued Rig Gross Register Tonnage 399  
Captain's Name Lieut. H.H. Pennell Log kept by Asst Paymaster Francis R.H. Drake R.N.  
assisted by Lieutenants Hede P. Reumisk R.N.  
Wm. Bruce R.N.R.

When filled, or nearly full, this log is to be returned, as quickly as possible, to the Meteorological Office, 63, Victoria Street, London, S.W., whence it will be duly acknowledged. Should a considerable interval be likely to occur between successive voyages, owing to the ship being laid up or a similar cause, the log is to be returned without delay.

## ADMIRAL BEAUFORT'S SCALE OF WIND FORCE.

- 0 Calm.  
1 Light air - - Just sufficient to give steerage way.  
2 Light breeze - { With which a well-conditioned ship-of-war of 1 to 2 knots.  
3 Gentle breeze - { Admiral Beaufort's time (1800-1850), with all 3 to 4 knots.  
4 Moderate breeze - { sail set, would go in smooth water, and "clean" full," from - - - - - 5 to 6 knots.  
5 Fresh breeze - - - - -

## FOR SHIPS RIGGED WITH DOUBLE TOPSAILS.\*

t sails.  
jib, &c.  
pper topsails and courses.  
sails and courses.  
in-topsail and reefed foresail.  
ations were made to meet the require-  
able topsails, introduced since Admiral  
ime.

Criteria for steamships.

consideration is required for the specif-  
the scale for use on board steamships.  
purpose it is recommended that as  
ity occurs use be made of the equiv-  
ven in Col. 2. Thus, when the ship is  
in a calm at 15 knots, the wind felt  
posed position on board will be a  
breeze, which, according to the table,  
en 4 and 5 on the Beaufort scale, and,  
ilar breeze is felt when the ship is  
at 15 knots right before the wind, the  
peed of the wind will be 30 knots,  
6 and 7 on the Beaufort scale,  
g to the table of equivalents.  
rtunities occur from time to time for  
ag the speed of the wind with the  
the ship. A hand anemometer may  
yed if used judiciously and if proper  
se be made for the motion of the ship.

River.

How was the screen containing the dry and wet  
bulbs situated ?

Where was the Meteorological Office barometer  
located ?

Please note that a dot (.) is now to be used  
under any letter to augment its significance ;  
instead of a bar (-).

In the space marked—Log kept by—the names  
of all those who have assisted in keeping the  
Log should be noted.

14767—500.

		generally visible at working distances.	Objects indistinct, but navigation unimpeded.
f 2 )	...	Lights, passing vessels, and landmarks generally	Navigation impeded, additional caution required.
f 3 )	Moderate Fog ...	indistinct under a mile. Fog signals are sounded.	
f 4 )	...		
f 5 )	Thick Fog ...	Ships' lights and vessels invisible at 1/4 mile or less ...	Navigation suspended.

\* If the horizon is indistinct, but still just visible, the symbol "m," for mist, should be used exclusively in the weather column.

## LETTERS TO INDICATE THE STATE OF THE WEATHER.

b Blue Sky. e Wet without rain. h Hail. o Overcast. r Rain. u Ugly (threatening appearance of Weather).  
c Clouds (detached). f Foggy. l Lightning. p Passing Showers. s Snow. v Visibility. Objects at a distance unusually visible.  
d Drizzling Rain. g Gloomy. m Misty. q Squally. t Thunder. w Dew. z Haze.

NOTE.—A dot (.) under any letter augments its signification : thus, r heavy rain ; r very heavy rain ; but to express the intensity of the fog the scale should be used. A figure preceding a letter shows how many hours that style of weather had prevailed since last observation : thus, 4 r means four hours' rain ; 2 1/2 l means two and a half hours of vivid lightning, &c., &c. It is well to bear in mind that w=dew, but d=drizzle and e=wet without rain ; p=passing showers of rain, and q=squalls, but s=snow.

## SEA DISTURBANCE SCALE (Provisional. See Explanatory memorandum separately issued).

Scale.	Description.	Height of Waves in feet from crest to trough.	Condition of Surface.
0	Calm ...	...	Glassy.
1	Smooth ...	...	Rippled.
2	...	...	...
3	...	...	...
4	Slight to moderate ...	Under 5 feet ...	Rocks buoy or small boat. Furrowed.
5	...	...	...
6	Rough to very rough ...	5 to 10 feet ...	Much disturbed ; deeply furrowed.
7	...	...	...
8	High to very high ...	11 to 15 feet ...	Rollers with steep fronts.
9	...	16 to 35 feet ...	...
10	Phenomenal ...	36 feet and above ...	Precipitous ; towering.

NOTE.—The same scale numbers and the corresponding heights from crest to trough may be used for Waves or for Swell, for which separate columns are provided. Care should be taken that the respective directions and amounts of disturbance are entered in their proper columns. If confused, write "Confused" in its respective direction column, stating its chief direction or directions ; thus, "Confused N.E. and S.E.," "Confused S.W."



## METEOROLOGICAL LOG.

Name of Vessel "Terra Nova" R/V Steam or Sail Barqued Rig Gross Register Tonnage 399  
Captain's Name Lieut. H. H. Pennell Log kept by Asst Paymaster Francis R. H. Drake R.N.  
assisted by Lieutenants H. E. P. Reunick R.N.

When filled, or nearly full, this log is to be returned, as quickly as possible, to the Meteorological Office, 63, Victoria Street, London, S.W., whence it will be duly acknowledged. Should a considerable interval be likely to occur between successive voyages, owing to the ship being laid up or a similar cause, the log is to be returned without delay.

## ADMIRAL BEAUFORT'S SCALE OF WIND FORCE.

0 Calm.

1 Light air - Just sufficient to give steerage way.

2 Light breeze - With which a well-conditioned ship-of-war of 1 to 2 knots.  
3 Gentle breeze - Admiral Beaufort's time (1800-1850), with all 3 to 4 knots.  
4 Moderate breeze - sail set, would go in smooth water, and "clean" full, from - - - - - 5 to 6 knots.

5 Fresh breeze -

6 Strong breeze -

7 Moderate gale - To which she could just carry in chase, "full and by"

8 Fresh gale -

9 Strong gale -

10 Whole gale - With which she could scarcely bear close-reefed main-topsail and reefed foresail.

11 Storm - Which would reduce her to storm-stay-sails.

12 Hurricane - Which no canvas could withstand.

FOR SHIPS RIGGED WITH DOUBLE TOPSAILS.\*

Topgallant sails.

Topsails, jib, &amp;c.

Reefed upper topsails and courses.

Lower topsails and courses.

Lower main-topsail and reefed foresail.

\* These modifications were made to meet the requirements of double topsails, introduced since Admiral Beaufort's time.

## ALTERNATIVE SPECIFICATION.

Admiral Beaufort's Numbers.	Description of Wind.	Probable actual velocity of the wind in statute miles per hour.	Probable equivalent pressure in pounds upon a circular disc one square foot in area.	Mode of estimating on board Sailing Vessels.	Criteria for steamships.
0	Calm ... ..	Under 1 ... ..	Less than .01 ... ..	—	Special consideration is required for the specification of the scale for use on board steamships. For this purpose it is recommended that as opportunity occurs use be made of the equivalents given in Col. 2. Thus, when the ship is running in a calm at 15 knots, the wind felt in an exposed position on board will be a moderate breeze, which, according to the table, is between 4 and 5 on the Beaufort scale, and, if a similar breeze is felt when the ship is running at 15 knots <i>right before the wind</i> , the actual speed of the wind will be 30 knots, between 6 and 7 on the Beaufort scale, according to the table of equivalents.  Other opportunities occur from time to time for comparing the speed of the wind with the speed of the ship. A hand anemometer may be employed if used judiciously and if proper allowance be made for the motion of the ship.
1	Light breeze ...	From 1 to 12 inclusive, average about 7 ...	Between .001 and .04 ...	Sufficient wind for working ship.	
2					
3					
4	Moderate breeze ...	" 13 to 24 " " " 19 ...	" .05 " .18 }	Forces most advantageous for sailing with leading wind and all sail drawing.	
5					
6	Strong wind ...	" 25 to 38 " " " 32 ...	" .19 " .44 }	Reduction of sail becomes necessary even with a leading wind.	
7					
8	Gale force ... ..	" 39 to 54 " " " 47 ...	" .45 " .89 }	Considerable reduction of sail necessary even with wind quartering.	
9					
10	Storm force... ..	" 55 to 75 " " " 65 ...	" .90 " 1.70 }	Close reefed sail when running; or hoist to under storm sail.	
11					
12	Hurricane ... ..	Above 75 ... ..	More than 17 ... ..	No sail can stand even when running.	

## SCALE OF FOG INTENSITY.

Scale.	Name.	On Sea.	On River.
0	No Fog or Mist ... ..	Horizon clear.	
1	Light Fog or Mist* ... ..	Horizon invisible, but lights and landmarks generally visible at working distances.	Objects indistinct, but navigation unimpeded.
f 2 f 3	Moderate Fog ... ..	Lights, passing vessels, and landmarks generally indistinct under a mile. Fog signals are sounded.	Navigation impeded, additional caution required.
f 4 f 5	Thick Fog ... ..	Ships' lights and vessels invisible at ½ mile or less ...	Navigation suspended.

\* If the horizon is indistinct, but still just visible, the symbol "m," for mist, should be used exclusively in the weather column.

## LETTERS TO INDICATE THE STATE OF THE WEATHER.

b Blue Sky. e Wet without rain. h Hail. o Overcast. r Rain. u Ugly (threatening appearance of Weather).  
c Clouds (detached). f Foggy. l Lightning. p Passing Showers. s Snow. v Visibility. Objects at a distance unusually visible.  
d Drizzling Rain. g Gloomy. m Misty. q Squally. t Thunder. w Dew. z Haze.

NOTE.—A dot (·) under any letter augments its signification: thus, r heavy rain; r· very heavy rain; but to express the intensity of the fog the scale should be used. A figure preceding a letter shows how many hours that state of weather had prevailed since last observation: thus, 4 r means four hours' rain; 2½ l means two and a half hours of vivid lightning, &c., &c. It is well to bear in mind that w=dew, but d=drizzle and e=wet without rain; p=passing showers of rain, and q=squalls, but s=snow.

## SEA DISTURBANCE SCALE (Provisional. See Explanatory memorandum separately issued).

Scale.	Description.	Height of Waves in feet from crest to trough.	Condition of Surface.
0	Calm ... ..	...	Glassy.
1	Smooth ... ..	...	Rippled.
2	Slight to moderate ... ..	Under 5 feet ... ..	Rocks buoy or small boat. Furrowed.
3			
4	Rough to very rough ... ..	5 to 10 feet ... ..	Much disturbed; deeply furrowed.
5			
6	High to very high ... ..	{ 11 to 15 feet ... .. 16 to 35 feet ... ..	Rollers with steep fronts.
7			
8	Phenomenal ... ..	36 feet and above ... ..	Precipitous; towering.
9			
10			

NOTE.—The same scale numbers and the corresponding heights from crest to trough may be used for Waves or for Swell, for which separate columns are provided. Care should be taken that the respective directions and amounts of disturbance are entered in their proper columns. If confused, write "Confused" in its respective direction column, stating its chief direction or directions; thus, "Confused N.E. and S.E.," "Confused S.W."



Meteorological Log kept on board *P. & O. Steamship "China."*

DATE.		Latitude.		Longitude.		Course and Distance.		Total Compass Error.	Ship's Head.	Wind, at the time of observation.	Barometer.* No. 361		Thermometers.		
Year 1902.						Each four hours.		Of Compass used for Wind, being Variation and Deviation combined.	By same Compass as Wind.	Direction. State if true, or subject to Compass Error, or only to Variation.	Force 0 to 12.	Height of Cistern above Sea 39 feet.		Dry	Wet
Month VII.		Observed.	Dead Reckoning.	Observed.	Dead Reckoning.	True Course.	Distance by Log.					Uncorrected Reading.	Att. Therm.	No. 5237	No. 1931
Day. Civil Time.	Hour.														
25	4									True			In Chart Room in good		In the screen
	8									throughout the voyage.			position. Ship's Mercurial given for comparison		which is fixed o the after-side of
	NOON	{ Current in last 24 hours											each day at noon below the M.O. reading.		the Chart Room well protected
	4					Various				S. S.W.	4	30.00	62		from sun, rain, and spray.
	8					by				S.S.W.	3	30.02	62	63	59
	MIDT.					Coast Line.				S.S.E.	4	29.98	62	62	60
26	4					S. 87° W. Various.	14 12			S.	4	29.76	60	60	59
	8					S. 18 W. S. 62 W. S. 69 W.	4 10 51	19° W.	S. 86° W.	S.	5	29.61	61	60	58
	NOON	{ 49 40 N. 49 40 N. 4 40 W. 4 29 W. Current in last 9 hours				S. 68 W.	61			S. S.S.W.	5 6	29.48 (29.60)	62 62	63	60
	4					S. 25 W.	48			S.S.W. S.W.	7 8	29.52	62	61	60
	8					S. 25 W.	48			S.W. S.W.byW.	8 8	29.62	61	60	59
	MIDT.					S. 25 W. S. 28 W.	6 49	19° W.	S. 47° W.	W.S.W. W.	8 8	29.72 29.80	62 61	60	58
27	4					S. 28 W.	51			W. W.	8 8	29.89 29.94	60	59	56
	8					S. 28 W.	54	19° W.	S. 47° W.	W.	7	30.10	63	63	59
	NOON	{ 45 15 N. 45 7 N. 7 30 W. 8 4 W. Current in last 24 hours				S. 28 W.	60			W.S.W. N.W.byW.	6 6	30.17 30.26 (30.40)	65 65 64	65	60
	4					S. 35 W.	53			N.W.byW.	6	30.34	65	64	59
	8					S. 35 W.	58	20° W.	S. 55° W.	N.W.byW.	4	30.41	63	62	58
	MIDT.					S. 35 W. S. 1 W.	46 13			Calm N.E.byN.	0 3	30.40	63	61	59
28	4					S. 1 W.	60	19° W.	S. 20° W.	N.E. N.byE.	4 5	30.32	62	61	57
	8					S. 1 W.	60			N.N.W.	6	30.29	67	68	62
	NOON	{ 39 47 N. 39 47 N. 9 32 W. 9 30 W. Current in last 24 hours				S. 1 W. S. 8 E.	5 62			N.N.E. N.E.	4 4	30.28 (30.39)	68 66	70	64
	4					S. 8 E. S. 7 W. S. 12 E.	16 42 2			N.E.	4	30.24	67	72	67
	8					S. 12 E.	62			N.byW.	4	30.21	69	70	66
	MIDT.					S. 42 E. S. 71 E.	12 19	17° W.	S. 54° E.	N.W.byW. Calm	3 0	30.20 30.20	68 66	66	62
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

\* Please give Readings of the Ship's Barometer, say at Noon, at various times during the voyage, noting whether it is mercurial or aneroid.  
 † In the Form of Log now issued separate columns are given for the Names of Upper and Lower Clouds.

Captain *T. S. Angus,*from *London*to *Australia.*

Hour.	Clouds.†		Weather.		Sea Surface.				Remarks.			
	When Lower Clouds do not move with the Wind, give the Direction they come from in the "Remarks." (For Plates see "Instructions.")	Names.	According to Beaufort Notation.	Fog Intensity. 0 to 5.	Waves.	Swells.	Temp. by No.	Spec. Grav. by No.	Time of Remark.	Here give any important Remarks as to phenomena, with the times of their occurrence; especially the times of Changes in Direction and Force of Wind, as well as the Direction, Veering or Backing, Force and Duration of Squalls; the direction from which upper clouds are moving; the Position of Ice and of Derelicts. Also note the hour at which the Ship arrives in or leaves Port. (See "Instructions" for further particulars.)		
4												
8												
NOON												
4	Cum.-s.	6	cb		—	0	—	—	1.33	Left Tilbury.		
8	Cum.	8	c		—	0	—	—	3.7	Passed Nore L.V.		
MIDT.	Cum.   Nim.	10	or		—	0	—	—	4.35	Passed Tongue. 6.2. East Goodwin, French coast and distant objects remarkably clear and distinct. Rainy appearance to W. and N.W.		
									10.30	Passed Beachy Head.		
4	Cum.   Nim.	3	bd		S.	3	—	0 57	3.7	Rainy appearance. St. Catherine's Light N. 25° W., 4 miles. Sky clearing.		
8	Cum.-s.	7	c		S.S.W.	4	—	0 58				
NOON	Cum.-s.	7	cm	1	S.S.W.	5	—	0 58	29	Wind and sea increasing.		
4	Cum.-s.	10	or		S.W.	6	W.	4 58		Steep head sea. Ship pitching and rolling heavily.		
8	Cum.-s. Nim.	10	op		S.W.	7	W.	5 58	8.0	Ushant Light N. 87° E., 10 miles. Cum.-s. rapidly from S.W.		
MIDT.	Cum.	4	bcpq		S.W.	7	W.	5 60		Detached cum. moderately from Westward.		
4	Cum.-s. Cum.	4	bcp		W.	5	N.W.	3 60		Cum. from S.W. slowly.		
8	Cir. Cum. Cum.-s.	3	bc		W.	5	N.W.	3 61		Cum. round horizon.		
NOON	Cum.	4	bc		W.	4	—	— 64	28	Cir. from N.W.		
4	Cum.	3	bc		W.N.W.	4	N.W.	3 63				
8	Cir.-c. Cum.	2	bc		W.N.W.	4	N.	3 61	8.0	Villano Light S. 16° W. Cir.-c. from N.E.		
MIDT.	Cum.	1	bw		W.	3	Confused	4 60	11.40	Finisterre S. 89° W., 16 miles. Stars very clear and bright.		
4	—	0	bw		N.E.	3	W. and N.W.	3 62				
8	—	0	b		N.N.E.	3	W. and N.W.	1 66				
NOON	—	0	b		N.N.E.	3	N.W.	3 67	27			
4	—	0	b		N.N.E.	3	N.N.W.	4 67				
8	—	0	bm		N.N.W.	3	—	— 67	10.15	St. Vincent Light N. 48° E., 3 miles.		
MIDT.	—	0	bw		—	0	W.	2 65				
2a	17	18	19	19a	20	21	20a	21a	22	23	24	25

so that in the event of the Office Barometer being broken, the Ship's can be taken into use, and its error can be ascertained.



# Meteorological Log kept on board *Sy. Terra Nova*

DATE.		Latitude.		Longitude.		Course and Distance.	Total Compass Error.	Ship's Head.	Wind, at the time of observation.	Barometer.* No. 1163	Thermometers.
Year 1912	Month <i>March</i>	Observed.	Dead Reckoning.	Observed.	Dead Reckoning.	Each four hours.	Of Compass used for Wind, being Variation and Deviation combined.	By same Compass as Wind.	Direction. State if true, or subject to Compass Error, or only to Variation.	Force. 0 to 12.	Height of Cistern above Sea 9 feet.
		The D.R. position is needed daily, in addition to that by Observation, but it should be the result of careful calculation, in order to give any value to the estimation of the current.				Cohu Sea	E				
Day.	Civil Time.	Current in last hours				Distance by Log.					
Hour.											
22 <sup>nd</sup>	4										
	8										
	NOON										
	4										
	8										
	MIDT.										
23 <sup>rd</sup>	4						25		SW 6-7	28.78	43
	8								WSW 6	28.85	43
	NOON	57	20	163	16	405			WSW 6-7	28.86	48
	4						23		WSW 6-7	28.88	50
	8								WSW 8	28.84	54
	MIDT.								WSW 8-10	28.75	50
	4									28.72	
	8										
	NOON										
	4										
	8										
	MIDT.										
24 <sup>th</sup>	4						23		SW 8-10	28.73	47
	8								WSW 8	28.72	49
	NOON	55	51	165	49	404			WSW 8-9	28.68	50
	4								SW 8-10	28.68	52
	4.30								SSW 8-10	28.72	54
	8								SSW 9-11		
	MIDT.										

\* Please give Readings of the Ship's Barometer, say at Noon, at various times during the voyage noting whether it is mercurial or aneroid.

Captain *H. H. Pennell* from *Antarctic* to *New Zealand*.

Hour.	Clouds.		Weather.		Sea Surface.				Remarks.	
	Upper.	Lower.	Direction from.	Force.	Waves.	Swells.	Temp. by No.	Spec. Grav. by No.	Time of Remark.	Here give any important Remarks as to phenomena, with the times of their occurrence; especially the times of Changes in Direction and Force of Wind, as well as the Direction, Veering or Backing, Force and Duration of Squalls; the direction from which upper clouds are moving; the Position of Ice and of Derelicts. Also note the hour at which the Ship arrives in or leaves Port. (See "Instructions" for further particulars.)
4										end of watch. Slight snow sleet accompanying squalls force 8 to 9.
8										3.30 pm. Wind West increased to force 8. Squalls of 9, 9-10.
NOON										First Wind falling about 11 pm.
4										Intermittent rain all the watch of mod. intensity.
8										10 to midt. Aurora lightening right through sky completely covered with clouds.
MIDT.										
4		W	4	bcg.						Midt. Squalls less frequent & less severe after 2. am. the wind backed fair & mild & decreased in strength, while the sky cleared; afterwards clouding over further squalls & clearing again. Aurora lighting the night whole watch.
8		cu	10	cgs	SW 7	SW 8	40.1			Aurora showing perfectly.
NOON		cu	10	cgs	SW 7	SW 8	41.2			SW (true) altitude of lower edge 20° (estimated) extending horizontally over about an arc of 120° & consisting of an irregular band sending shafts of light towards the zenith. Below dark or cloud impossible to say which. light greenish white.
4		cu	9	cgs	SW 7	SW 8	41.4			Rain (moderate) accompanying the squalls.
8		cu	10	cgs	WSW 7	WSW 8				Forenoon. Passing squalls - very heavy 8-9 in force. Sleet & hail accompanying squalls.
MIDT.		cu	10	cgs						Reps. Squalls frequent & heavy with moderate rain.
4										First Squalls frequent & heavy with mod. rain.
8										
NOON										
4										
8										
MIDT.										
4										1.45. Squalls not heavy, slight rain out.
8										3.30. Very heavy squalls, lasting 15 mins. Force 10 moving. Few squalls but very heavy force 10 accompanied by hail.
NOON										Forenoon. Several waves over 30 feet in height. Squalls with hail & sleet.
4										Afternoon. Squalls frequent force 10 with hail changing to snow & sleet.
4.30										2.0 Wind backed to SW W.
8										5.0 Wind backed in a squall to SW W.
MIDT.										Reps. Heavy squalls force 10 with hail sleet & snow.
2a										First Wind increasing both in squalls & in intervals between. Squalls becoming more frequent towards 2 of watch & wind of force 11 in them. A little hail & snow in them. Sky clearing between squalls.

so that in the event of the Office Barometer being broken, the Ship's can be taken into use, and its error can be ascertained.



# Meteorological Log kept on board

*St. Teresa R/V*

DATE.		Latitude.		Longitude.		Course and Distance.		Total Compass Error.	Ship's Head.	Wind, at the time of observation.	Barometer.* No. 1163	Thermometers.			
Year 19 12		Observed.	Dead Reckoning.	Observed.	Dead Reckoning.	Each four hours.		Of Compass used for Wind, being Variation and Deviation combined.	By same Compass as Wind.	Direction. State if true, or subject to Compass Error, or only to Variation.	Force. 0 to 12.	Height of Cistern above Sea 9 feet.		Dry	Wet
Month <i>June</i>												Uncorrected Reading.	Att. Therm.	Bulb.	Bulb.
Day, Civil Time.	Hour.	The D.R. position is needed daily, in addition to that by Observation, but it should be the result of careful calculation, in order to give any value to the estimation of the current.												No.	No.
						Color True Course.	Distance by Log.								
25	4									SSW 9-11	29.03	43		37.0	
	8									SW 9	29.01	42		38.4	
	NOON	54	03	167	18	405	24			WSW 8	29.17	46		39.6	
	4	Current in last hours								WSW 8-9	29.31	49		40.2	
	8									SSW 7	29.36	52		41.4	
	MIDT.									SSW 6-9	29.49	50		43	
26	4									SSW 6	29.52	49		42.2	
	8									SSW 5	29.62	47		42.8	
	NOON	52	21	167	35	405	27			SSW 4	29.72	49		43.6	
	4	Current in last hours								SSW 2	29.75	50		44.2	
	8									SSW 0-1	29.77	54		45.6	
	MIDT.									SSW 0-2	29.79	54		46.9	
27	4									SSW 1	29.80	51		43.8	
	8									SSW 1	29.79	50		44.4	
	NOON	52	16	167	31	429	24			SSW 1	29.78	50		47.1	
	4	Current in last hours								SSW 3	29.78	50		47.2	
	8									SSW 1-2	29.78	51		48.1	
	MIDT.						21			SSW -	29.77	52		44.6	
28	4									SSW 1	29.77	49		45.0	
	8									SSW 1-2	29.76	49		46.2	
	NOON	51	54	167	42	429	18			SSW 3	29.75	50		47.9	
	4	Current in last hours								SSW 3	29.76	50		—	
	8									SSW 4	29.75	52		47.8	
	MIDT.									SSW 4-5	29.79	49		48.2	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16



Meteorological Log kept on board

S. Y. Terra Nova. R.N.S.

Time lost on Greenwich 12 hours.  
Captain H.H. Pennell. from Antarctic to New Zealand.

DATE.		Latitude.		Longitude.		Course and Distance.	Total Compass Error.	Ship's Head.	Wind, at the time of observation.	Barometer.*	Thermometers.	
Year 1912		Observed.		Observed.		Each four hours.	Of Compass used for Wind, being Variation and Deviation combined.	By same Compass as Wind.	Direction. State if true, or subject to Compass Error, or only to Variation.	Height of Cistern above Sea.	Bulb.	Bulb.
Month		Dead Reckoning.		Dead Reckoning.		Distance by Log.			Force. 0 to 12.	Uncorrected Reading.	Att. Therm.	
Day, Civil Time.												
Hour.												
<p>The D.R. position is needed daily, in addition to that by Observation, but it should be the result of careful calculation, in order to give any value to the estimation of the current.</p>												
19 <sup>th</sup>	4											
	8											
NOON		63	55	158	31							
4		Current in last hours										
8												
MIDT.												
20 <sup>th</sup>	4											
	8											
NOON		61	49	160	04							
4		Current in last hours										
8												
MIDT.												
21 <sup>st</sup>	4											
	8											
NOON		60	29	162	10							
4		Current in last hours										
8												
MIDT.												
22 <sup>nd</sup>	4											
	8											
NOON		58	38	161	31							
4		Current in last hours										
8												
MIDT.												

Clouds.		Weather.		Sea Surface.		Remarks.	
The direction from which the upper clouds are moving, and also that of the lower clouds when they do not move with the wind, should be noted when determinable.		According to Beaufort Notation.		Waves.		Here give any important Remarks as to phenomena, with the times of their occurrence; especially the times of Changes in Direction and Force of Wind, as well as the Direction, Veering or Backing, Force and Duration of Squalls; the direction from which upper clouds are moving; the Position of Ice and of Derelicts. Also note the hour at which the Ship arrives in or leaves Port. (See "Instructions" for further particulars.)	
Names.		Fog Intensity.		Swell.			
Upper.		0 to 5.		Direction from.			
				Disturbance.			
				0 to 10.			
				Temp. by No.			
				Spec. Grav. by No.			
				Also record when Confused.			
4	st	10	02S	n	3	W	-
8	st	10	040	-	3	E	5 31.0
NOON	st	10	040	SE	5	SE	6 328
4	acu	cu	4	bgc	5	5	6 338
8	acu	cu	6	bgc	5	5	7 345
MIDT.	acu	10	050				
4	st	10	02				
8	st	10	02	SW	5	SW	7 346
NOON	st	10	045	W	5	W	7 348
4	st	10	045	W	6	W	7 348
8	st	10	02	W	6	SW	7 350
MIDT.	st	10	0235				
4	st	10	045				
8	cu	10	02	W	5	W	6 368
NOON	acu	cu	9	C	W	5	SW 6 370
4	acu	cu	9	C 3/4	W	5	SW 6 395
8	cu	10	C	W	5	SW	7 405
MIDT.	st	9	0215				
4	st	9	C 3/4	S	6	S	8
8	st	9	C	S	6	SW	8 369
NOON	st	10	9C 3/4	SW	6	SW	8 400
4	cu	10	C 3/4	SW	6	SW	8 405
8	st	10	0215	SW	7	SW	8 -
MIDT.	st	10	0215	SW	7	SW	8

\* Please give Readings of the Ship's Barometer, say at Noon, at various times during the voyage noting whether it is mercurial or aneroid.

so that in the event of the Office Barometer being broken, the Ship's can be taken into use, and its error can be ascertained.



# Meteorological Log kept on board

Sy Terra Nova

DATE.		Latitude.		Longitude.		Course and Distance.		Total Compass Error.		Ship's Head.		Wind, at the time of observation.		Barometer.*		Thermometers.	
Year 1912		Observed.		Observed.		Each four hours.		Of Compass used for Wind, being Variation and Deviation combined.		By same Compass as Wind.		Direction, State if true, or subject to Compass Error, or only to Variation.		Height of Cistern above Sea.		Dry Bulb.	
Month March		Dead Reckoning.		Dead Reckoning.		Colour of Sky.		Distance by Log.		Force, 0 to 12.		Uncorrected Reading.		Att. Therm.		No.	
Day, Civil Time.		Hour.		Hour.		The D.R. position is needed daily, in addition to that by Observation, but it should be the result of careful calculation, in order to give any value to the estimation of the current.		The D.R. position is needed daily, in addition to that by Observation, but it should be the result of careful calculation, in order to give any value to the estimation of the current.		The D.R. position is needed daily, in addition to that by Observation, but it should be the result of careful calculation, in order to give any value to the estimation of the current.		The D.R. position is needed daily, in addition to that by Observation, but it should be the result of careful calculation, in order to give any value to the estimation of the current.		The D.R. position is needed daily, in addition to that by Observation, but it should be the result of careful calculation, in order to give any value to the estimation of the current.		The D.R. position is needed daily, in addition to that by Observation, but it should be the result of careful calculation, in order to give any value to the estimation of the current.	
29 <sup>th</sup>	4											W 5	29.88	49		49.0	
	8											WNW 5	29.91	50		49.2	
NOON		50	07	169	11	429	18					W 5.6	29.95	52		50.0	
4												WNW 6	29.96	54		50.0	
8												W 6	29.98	54		50.1	
MIDT.												W 6.8	30.03	55		51.4	
30 <sup>th</sup>	4											W 7.8	30.07	53		50.0	
	8											W 6.7	30.15	54		50.9	
NOON		47	04	171	33	429	18					W 6	30.23	55		52.0	
4												SW 6	30.17				
8												S 6	30.31	55		51.5	
MIDT.													30.35	57		51.8	
31 <sup>st</sup>	4											SW 2.3	30.38	57		52.8	
	8											Calme 0	30.40	56		51.8	
NOON		44	56	172	53	377	18					NE 2	30.42	57		52.0	
4												NE 2	30.42	58		52.0	
8												NE 4	30.36	58		52.5	
MIDT.												NE 5	30.35	60		53.4	
April 1 <sup>st</sup>	4											NE 7	30.33	61		53.0	
	8																
NOON		43	56	173	01	352	17					SW 5	30.29	64		57.5	
4																	
8																	
MIDT.												SW 3.4	30.37	58		53.6	

\* Please give Readings of the Ship's Barometer, say at Noon, at various times during the voyage noting whether it is mercurial or aneroid.

Captain H.H. Pennell from Antarctic to New Zealand

Clouds.		Weather.		Sea Surface.		Remarks.	
The direction from which the upper clouds are moving, and also that of the lower clouds when they do not move with the wind, should be noted when determinable.		According to Beaufort Notation.		Waves.		Swell.	
Names.		Direction from.		Direction from.		Direction from.	
Upper.		Lower.		Direction from.		Direction from.	
4	Sc	9	cc	W 4			
8	Sc	10	c	W 4	W 4	4 4.6	
NOON	Sc	10	c	W 4	W 4	4 4.2	
4	Sc	8	c	W 5	SW 4		
8	Sc	-	cp	W 5	SW 5		
MIDT.	Sc	9	cp	W 6	SW 7		
4	Sc	10	cc	W 6	SW 7		
8	Sc	7	cp	W 6	SW 7		
NOON	Sc	6	bc	W 6	SW 6		
4	Sc	2	cc				
8	Sc	2	bc				
MIDT.	Sc	9	cp	SW 3	SW 6		
4	Sc	9	cc				
8	Sc	-	-	2	SW 4	52.9	
NOON	Sc	1	b	2	SW 6	53.6	
4	Sc	3	bc	2	SW 5		
8	Sc	3	bc	-	W 4	54.9	
MIDT.	Sc	5	bc				
4							
8							
NOON		10	bc	4			
4							
8							
MIDT.		10	bc	2			

so that in the event of the Office Barometer being broken, the Ship's can be taken into use, and its error can be ascertained.



# Meteorological Log kept on board *Sy Tena hova Rys*

DATE.		Latitude. <i>S</i>		Longitude. <i>E</i>		Course and Distance.	Total Compass Error.	Ship's Head.	Wind, at the time of observation.		Barometer.* No. <i>1163</i>		Thermometers.	
Year <i>1912</i>	Month <i>Apr.</i>	Observed.	Dead Reckoning.	Observed.	Dead Reckoning.				Direction.	Force.	Height of Cistern above Sea <i>9</i> feet.	Uncorrected Reading.	Att. Therm.	Dry Bulb. No.
Day. Civil Time.	Hour.	The D.R. position is needed daily, in addition to that by Observation, but it should be the result of careful calculation, in order to give any value to the estimation of the current.				Each four hours.	Of Compass used for Wind, being Variation and Deviation combined.	By same Compass as Wind.	State if true, or subject to Compass Error, or only to Variation.	Force. 0 to 12.				
<i>2nd</i>	<i>4</i>								<i>South</i>	<i>2</i>	<i>30.36</i>	<i>58</i>	<i>54.5</i>	
	<i>8</i>								<i>SSW</i>		<i>30.27</i>		<i>54.8</i>	
NOON		<i>43</i>	<i>49</i>	<i>173</i>	<i>16'</i>		<i>17</i>							
	<i>4</i>	{ Current in last hours }												
	<i>8</i>													
MIDT.									<i>Nly</i>	<i>1 1/2</i>	<i>30.41</i>	<i>61</i>	<i>56</i>	
<i>3rd</i>	<i>4</i>								<i>Var. 1/2</i>	<i>1</i>	<i>30.38</i>	<i>60</i>	<i>56.8</i>	
	<i>8</i>										<i>30.28</i>			
NOON		{ Current in last hours }												
	<i>4</i>	{ Current in last hours }												
	<i>8</i>													
MIDT.														
	<i>4</i>													
	<i>8</i>													
NOON		{ Current in last hours }												
	<i>4</i>	{ Current in last hours }												
	<i>8</i>													
MIDT.														
	<i>4</i>													
	<i>8</i>													
NOON		{ Current in last hours }												
	<i>4</i>	{ Current in last hours }												
	<i>8</i>													
MIDT.														

\* Please give Readings of the Ship's Barometer, say at Noon, at various times during the voyage noting whether it is mercurial or aneroid.

Captain *H. H. Pennell* from *Wintarbi* to *New Zealand*

Hour.	Clouds.		Weather.	Sea Surface.				Remarks.			
	The direction from which the upper clouds are moving, and also that of the lower clouds when they do not move with the wind, should be noted when determinable.			Waves.		Swell.		Here give any important Remarks as to phenomena, with the times of their occurrence; especially the times of Changes in Direction and Force of Wind, as well as the Direction, Veering or Backing, Force and Duration of Squalls; the direction from which upper clouds are moving; the Position of Ice and of Derelicts. Also note the hour at which the Ship arrives in or leaves Port. (See "Instructions" for further particulars.)			
	Upper.	Lower.		Direction from.	Disturbance 0 to 10.	Direction from.	Disturbance 0 to 10.	Temp. by No.	Spec. Grav. by No.	Time of Remark.	
<i>4</i>	<i>11</i>	<i>8</i>	<i>0</i>	<i>1 1/2</i>	<i>2</i>	<i>1 1/2</i>	<i>3</i>				
<i>8</i>											
NOON											
<i>4</i>											
<i>8</i>											
MIDT.	<i>11</i>	<i>1/2</i>	<i>0</i>								
<i>4</i>	<i>11</i>	<i>8</i>	<i>0</i>								<i>Reached Lyttelton</i>
<i>8</i>											
NOON											
<i>4</i>											
<i>8</i>											
MIDT.											
<i>4</i>											
<i>8</i>											
NOON											
<i>4</i>											
<i>8</i>											
MIDT.											
<i>2a</i>	<i>17</i>	<i>18</i>	<i>19</i>	<i>19a</i>	<i>20</i>	<i>21</i>	<i>20a</i>	<i>21a</i>	<i>22</i>	<i>23</i>	<i>24</i>

so that in the event of the Office Barometer being broken, the Ship's can be taken into use, and its error can be ascertained.



# Meteorological Log kept on board

DATE.		Latitude.		Longitude.		Course and Distance.		Total Compass Error.		Ship's Head.		Wind, at the time of observation.		Barometer.*		Thermometers.												
Year 19	Month	Observed.	Dead Reckoning.	Observed.	Dead Reckoning.	Each four hours.		Of Compass used for Wind, being Variation and Deviation combined.		By same Compass as Wind.		Direction. State if true, or subject to Compass Error, or only to Variation.		Force. 0 to 12.		Height of Cistern above Sea. feet.												
Day.	Civil Time.	Hour.	The D.R. position is needed daily, in addition to that by Observation, but it should be the result of careful calculation, in order to give any value to the estimation of the current.														True Course.		Distance by Log.		Uncorrected Reading.		Att. Therm.		Dry Bulb. No.		Wet Bulb. No.	
		4																										
		8																										
		NOON	Current in last hours mls.																									
		4																										
		8																										
		MIDT.																										
		4																										
		8																										
		NOON	Current in last hours mls.																									
		4																										
		8																										
		MIDT.																										
		4																										
		8																										
		NOON	Current in last hours mls.																									
		4																										
		8																										
		MIDT.																										
		4																										
		8																										
		NOON	Current in last hours mls.																									
		4																										
		8																										
		MIDT.																										

\* Please give Readings of the Ship's Barometer, say at Noon, at various times during the voyage noting whether it is mercurial or aneroid.

Captain

from

to

Hour.	Clouds.		Weather.		Sea Surface.				Remarks.			
	The direction from which the upper clouds are moving, and also that of the lower clouds when they do not move with the wind, should be noted when determinable.		According to Beaufort Notation.		Fog Intensity. 0 to 5.		Waves.		Swell.		Temp. by No. Spec. Grav. by No.	
	Names.		Direction from.		Disturbance. 0 to 10.		Direction from.		Disturbance. 0 to 10.		Time of Remark.	
	Upper.	Lower.	Prop. of Sky Obscured. 0 to 10.	Also record when Confused.								
4												
8												
NOON												
4												
8												
MIDT.												
4												
8												
NOON												
4												
8												
MIDT.												
4												
8												
NOON												
4												
8												
MIDT.												
4												
8												
NOON												
4												
8												
MIDT.												
2a	17	18	19	19a	20	21	20a	21a	22	23	24	25

so that in the event of the Office Barometer being broken, the Ship's can be taken into use, and its error can be ascertained.



# Meteorological Log kept on board

DATE.		Latitude.		Longitude.		Course and Distance.	Total Compass Error.	Ship's Head.	Wind, at the time of observation.	Barometer.*	Thermometers.	
Year 19	Month	Observed.	Dead Reckoning.	Observed.	Dead Reckoning.	Each four hours.	Of Compass used for Wind, being Variation and Deviation combined.	By same Compass as Wind.	Direction. State if true, or subject to Compass Error, or only to Variation.	Force. 0 to 12.	Height of Cistern above Sea. feet.	
Day, Civil Time.	Hour.	The D.R. position is needed daily, in addition to that by Observation, but it should be the result of careful calculation, in order to give any value to the estimation of the current.				True Course.					Distance by Log.	Uncorrected Reading.
	4											
	8											
	NOON	Current in last hours mls.										
	4											
	8											
	MIDT.											
	4											
	8											
	NOON	Current in last hours mls.										
	4											
	8											
	MIDT.											
	4											
	8											
	NOON	Current in last hours mls.										
	4											
	8											
	MIDT.											
	4											
	8											
	NOON	Current in last hours mls.										
	4											
	8											
	MIDT.											

\* Please give Readings of the Ship's Barometer, say at Noon, at various times during the voyage noting whether it is mercurial or aneroid.

Captain

from

to

Hour.	Clouds.		Weather.	Sea Surface.				Remarks.				
	The direction from which the upper clouds are moving, and also that of the lower clouds when they do not move with the wind, should be noted when determinable.			Waves.		Swell.		Here give any important Remarks as to phenomena, with the times of their occurrence; especially the times of Changes in Direction and Force of Wind, as well as the Direction, Veering or Backing, Force and Duration of Squalls; the direction from which upper clouds are moving; the Position of Ice and of Derelicts. Also note the hour at which the Ship arrives in or leaves Port. (See "Instructions" for further particulars.)				
	Names.			According to Beaufort Notation.	Fog Intensity. 0 to 5.	Direction from.	Disturbance. 0 to 10.	Direction from.	Disturbance. 0 to 10.	Temp. by No.	Spec. Grav. by No.	Time of Remark.
	Upper.	Lower.										
4												
8												
NOON												
4												
8												
MIDT.												
4												
8												
NOON												
4												
8												
MIDT.												
4												
8												
NOON												
4												
8												
MIDT.												
4												
8												
NOON												
4												
8												
MIDT.												

so that in the event of the Office Barometer being broken, the Ship's can be taken into use, and its error can be ascertained.



# Meteorological Log kept on board

DATE.		Latitude.		Longitude.		Course and Distance.		Total Compass Error.	Ship's Head.	Wind, at the time of observation.		Barometer.* No.		Thermometers.	
Year 19	Month	Observed.	Dead Reckoning.	Observed.	Dead Reckoning.	Each four hours.		Of Compass used for Wind, being Variation and Deviation combined.	By same Compass as Wind.	Direction. State if true, or subject to Compass Error, or only to Variation.	Force. 0 to 12.	Height of Cistern above Sea. feet.		Dry Bulb.	Wet Bulb.
Day, Civil Time.	Hour.	The D.R. position is needed daily, in addition to that by Observation, but it should be the result of careful calculation, in order to give any value to the estimation of the current.				True Course.	Distance by Log.					Uncorrected Reading.	Att. Therm.	No.	No.
	4														
	8														
	NOON	{													
	4	Current in last hours													
	8														
	MIDT.														
	4														
	8														
	NOON	{													
	4	Current in last hours													
	8														
	MIDT.														
	4														
	8														
	NOON	{													
	4	Current in last hours													
	8														
	MIDT.														
	4														
	8														
	NOON	{													
	4	Current in last hours													
	8														
	MIDT.														
	4														
	8														
	NOON	{													
	4	Current in last hours													
	8														
	MIDT.														

\* Please give Readings of the Ship's Barometer, say at Noon, at various times during the voyage noting whether it is mercurial or aneroid.



Booked by H. H. H. H.  
Punches & Mitchell  
Vancouver & White



